

GENERAL INFORMATION	A
INDEXES Numerical • Functional • Cross-Reference	B
DISCRETE SEMICONDUCTORS AND COMPONENTS	C
ORDERING INSTRUCTIONS AND MECHANICAL DATA	1
MACH IV PROCUREMENT SPECIFICATION	2
LINEAR CIRCUITS	3
ECL CIRCUITS	4
SERIES 54S/74S CIRCUITS	5
SERIES 54/74 SSI CIRCUITS	6
SERIES 54H/74H SSI CIRCUITS	7
SERIES 54L/74L SSI CIRCUITS	8
TTL MSI CIRCUITS	9
RADIATION HARDENED CIRCUITS	10
DTL CIRCUITS SUMMARY	11
SERIES SNF/SNG CIRCUITS SUMMARY	12
HIGH-NOISE-IMMUNITY LOGIC (HNIL) SUMMARY	13
MOS/LSI CIRCUITS	14
HYBRID INTEGRATED CIRCUITS	15

TI world-wide sales offices

<p>ALABAMA Sahara Office Park Bldg., Suite 111 3313 Memorial Parkway, S.W. Huntsville, Alabama 35801 205-881-4061</p> <p>ARIZONA United Bank Bldg., Suite 1702 3550 North Central Avenue Phoenix, Arizona 85012 602-279-5531</p> <p>CALIFORNIA 1800 North Argyle Ave. Hollywood, California 90028 213-466-7251</p> <p>5005 West Century Blvd., Suite 208 Inglewood, California 90301 213-673-3943</p> <p>230 California Ave., Suite 201 Palo Alto, California 94306 415-326-6770</p> <p>1505 East 17th St., Suite 201 Santa Ana, California 92701 714-547-6506</p> <p>Balboa Towers Bldg., Suite 805 5252 Balboa Avenue San Diego, California 92117 714-279-2622</p> <p>COLORADO 2186 South Holly St., Suite 205 Denver, Colorado 80222 303-758-2151</p>	<p>CONNECTICUT 300 Amity Road Woodbridge, Connecticut 06525 203-389-4521</p> <p>FLORIDA 601 W. Oakland Park Blvd. Fort Lauderdale, Florida 33311 305-566-3294</p> <p>5400 Diplomat Circle Diplomat Bldg., Suite 252 Orlando, Florida 32810 305-644-3535</p> <p>300 Bldg. West, Suite 204 3151 Third Ave., North St. Petersburg, Florida 33713 813-898-0807</p> <p>ILLINOIS Suite 205, Executive Towers 5901 N. Cicero Ave. Chicago, Illinois 60646 312-286-1000</p> <p>INDIANA 8539 Encanto Way Ft. Wayne, Indiana 46805 219-485-1959</p> <p>MASSACHUSETTS 60 Hickory Drive Waltham, Mass. 02154 617-891-8450 Effective Oct. 30: 617-890-7400</p> <p>MICHIGAN Suite 706 West, Northland Towers Bldg. 15565 Northland Dr. Southfield, Michigan 48075 313-352-5720</p>	<p>MINNESOTA 7615 Metro Blvd. Suite 202, Analysis Inc., Bldg. Edina, Minn. 55435 612-941-4384</p> <p>NEW JERSEY 25 U.S. Highway #22 Springfield, New Jersey 07081 201-376-9400</p> <p>NEW MEXICO Suite 9, Marberry Plaza 6101 Marble Avenue, N.W. Albuquerque, New Mexico 87110 505-265-8491</p> <p>NEW YORK P.O. Box 618, 112 Nanticoke Ave. Endicott, New York 13760 607-785-9987</p> <p>245 Newtown Road Plainview, New York 11803 516-293-2560</p> <p>167 Main Street Fishkill, New York 12524 914-896-6793</p> <p>6563 Ridings Rd. Syracuse, New York 13206 315-463-9291</p> <p>NORTH CAROLINA 4310 Starmount Dr. Greensboro, N.C. 27410 919-299-9112</p>	<p>OHIO 23811 Chagrin Blvd., Suite 100 Cleveland, Ohio 44122 216-464-1192</p> <p>Suite 205, Paul Welch Bldg. 3300 South Dixie Dr. Dayton, Ohio 45439 513-298-7513</p> <p>PENNSYLVANIA 275 Commerce Drive Fort Washington, Pa. 19034 215-643-6450</p> <p>TEXAS MS366—P.O. Box 5012 Dallas, Texas 75222 214-238-6805</p> <p>3939 Ann Arbor Houston, Texas 77042 713-785-6906</p> <p>WASHINGTON 5801 Sixth Ave. S. Seattle, Washington 98108 206-762-4240</p> <p>WASHINGTON, D.C. 1875 Connecticut Ave., N.W., Suite 913 Washington, D.C. 20009 202-234-9320</p>
<p>ARGENTINA Texas Instruments Argentina S.A.I.C.F. C.C. Box 2296—Correo Central Buenos Aires, Argentina 744-1041</p> <p>ASIA Texas Instruments Asia Limited 5F Aoyama Tower Bldg. 24-15 Minami Aoyama Chome Minato-ku, Tokyo 107, Japan 402-6171</p> <p>Room 1502, Star House Harbour Center, Kowloon Hong Kong K673139</p> <p>AUSTRALIA Texas Instruments Australia Ltd. P.O. Box 63, 171-175 Philip Highway Elizabeth, South Australia 55 29 14</p> <p>Room 5, Rural Bank Bldg. 38 Railway Parade Burwood N.S.W. Australia 74-1859</p> <p>BRAZIL Texas Instrumentos Electronicos do Brasil Ltda. Rua Cesario Alvim 770 Caixa Postal 30.103 Sao Paulo 6, Brasil 93-8278</p>	<p>CANADA Texas Instruments Incorporated 2750 Pitfield Blvd. St. Laurent 386 Quebec, Canada 514-332-3550</p> <p>5F Caesar Avenue Ottawa 12 Ontario, Canada 613-825-3716</p> <p>280 Centre Str. East Richmond Hill (Toronto) Ontario, Canada 416-889-7373</p> <p>DENMARK Texas Instruments A/S 46D, Marielundvej 2730 Herlev, Denmark 91 74 00</p> <p>FINLAND Texas Instruments Finland OY Fredrikinkatu 56, D 38 Helsinki 10, Finland 44 12 75</p> <p>FRANCE Texas Instruments France 379 Av de la Liberation 92 Clamart, France 644 55 30</p> <p>30-31 Quai Rambaud 69 Lyon, France 42 78 50</p> <p>3, Rue Lafayette 35 Rennes, France 30 56 85</p> <p>20, Avenue Honore'Serres 31 Toulouse, France 62 82 85</p>	<p>GERMANY Texas Instruments Deutschland GmbH Arabellastrasse 4, Sternhaus/V 8000 Munchen 81, Germany 0811/91 10 61-9</p> <p>Lazarettstr., 19 4300 Essen, Germany 2141/20916</p> <p>Kuntzelstrasse 57 43 Essen, Gernay 02141/86 10 6</p> <p>Westendstrasse 52 6000 Frankfurt a.M., Germany 0611/72 64 41</p> <p>Am Mittelfelde 169 3000 Hanover, Germany 0511/86 10 16</p> <p>Im Kaisemer 5 7000 Stuttgart 1, Germany 0711/22 38 20</p> <p>ITALY Texas Instruments Italia SpA Viale Lunigiana 46 20125 Milano, Italy 688 31 41</p> <p>Via Val di Chiana 56 50127 Firenze, Italy 512 36 10</p> <p>Via Padre Semeria 00154 Roma, Italy 512 36 10</p> <p>Via Barbaroux 2 10122 Torino, Italy 54 06 93</p>	<p>MEXICO Texas Instruments de Mexico S.A. Poniente 116 #489 Col. Industrial Vallejo Mexico City, D.F., Mexico 567-92-00</p> <p>NETHERLANDS Texas Instruments Holland N.V. Entrepot Gebouw-Kamer 223 P.O. Box 7603 Schiphol-Centrum 020-15 92 93</p> <p>UNITED KINGDOM Texas Instruments Limited 165 Bath Road Slough, Buckinghamshire, England Slough 33411</p> <p>2259 Coventry Road Sheldon, Birmingham 26, England 021-743-5293</p> <p>24 Rutland Street Edinburgh EH12AN, Scotland 031-229-1481</p> <p>York House, 12 York Street Manchester 2, England 061-236-7282</p> <p>46 F. Nichols Road Southampton, Hants, England 0703-27267</p>

For Continuing Information on TI Integrated Circuits

This catalog provides technical descriptions and specifications on integrated circuits supplied by Texas Instruments. As the leading manufacturer of integrated circuits, TI is continually developing and introducing new products to the electronics industry.

So that we can register your name as a holder of this new IC catalog and to inform you of other catalogs as they become available, please complete and return the form provided below.

Texas Instruments Incorporated
Components Group, Market Communications Dept.
P. O. Box 5012, M. S. 84
Dallas, Texas 75222

- Please register my name as a recipient of *The Integrated Circuits Catalog for Design Engineers*.
- Please inform me of availability of other integrated circuit catalogs and supplements.

NAME _____

TITLE _____

FIRM _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

\$4⁹⁵

**The
Integrated
Circuits
Catalog
for
Design Engineers**

First Edition



**TEXAS INSTRUMENTS
INCORPORATED**

CC-401
10072-41-US

Printed in U.S.A.

IMPORTANT NOTICES

Texas Instruments reserves the right to make changes at any time in order to improve design and to supply the best product possible.

TI cannot assume any responsibility for any circuits shown or represent that they are free from patent infringement.

General Information

A

THE INTEGRATED CIRCUITS CATALOG

In this 1616-page data book, Texas Instruments is pleased to present important technical information on industry's broadest line of integrated circuits.

You'll find essential design information on TTL (including Standard 54/74, low-power, high-speed, and Schottky), Linear, MOS, ECL, Hybrid, and Radiation Hardened—plus Systems Interface circuits and line summaries of DTL, High-Noise-Immunity Logic and SNF/SNG.

The indexes are designed for ease in circuit selection with margin tabs to guide you quickly to general circuit categories, and numerical and functional indexes to help you locate specific circuits. Selection and cross-reference guides for many circuits are presented to help you identify TI's nearest equivalent to competitive circuits.

High reliability of ICs is covered in a section devoted to the MACH IV Procurement Specification in accordance with MIL STD 883 — a program initiated by TI to ensure that quality and reliability are *built* into, not *tested* into integrated circuits.

In addition to the circuits included in this catalog, TI's extensive custom capability is structured to manufacture circuits to individual customers' specification. For more information on how TI can design, build, and test circuits tailored to your specific requirements, contact your TI field sales engineer.

Although this volume offers design and specification data only for integrated circuits, we provide a listing of all TI standard discrete semiconductors and components in the section immediately following the IC indexes. The discrete listing includes a breakout by classification and application of the popular *Preferred* line of TI semiconductors and components. Complete technical data for any of these Preferred Semiconductors and Components are available from your nearest TI field sales office, local authorized TI distributor, or by writing direct to: Marketing and Information Services, Texas Instruments Incorporated, P. O. Box 5012, MS 308, Dallas, Texas. 75222.

We sincerely hope you will find The Integrated Circuits Catalog for Design Engineers a meaningful addition to your technical library. It represents fourteen years of continuing circuit innovation, refinement, and sophistication by TI engineers.

LETTER SYMBOLS, TERMS, AND DEFINITIONS FOR DIGITAL INTEGRATED CIRCUITS

The material which follows applies particularly to the following product lines: TTL, DTL, ECL, and interface circuits having TTL-compatible inputs or outputs.

When several letter symbols are shown, the first is the symbol used on the more recently issued data sheets; the symbol in parentheses was used on earlier data sheets and has the same meaning. Many of these older symbols contain a numeral one or zero which represents the binary logic level, assuming positive logic (1 = high level, 0 = low level). The newer symbols are in accordance with those currently agreed upon by the JEDEC Council of the Electronic Industries Association (EIA) for national use and by the International Electrotechnical Commission (IEC) for international use.

The final section contains definitions relating to the classification of circuits by degree of complexity. The definitions for MSI and LSI have been agreed by the JEDEC Council.

VOLTAGES

V_{IH} , ($V_{in(1)}$) High-level input voltage

An input voltage level within the more positive (less negative) of the two ranges of values used to represent the binary variables. A minimum value is specified which is the least-positive (most-negative) value of high-level input voltage for which operation of the logic element within specification limits is guaranteed.

V_{IL} , ($V_{in(0)}$) Low-level input voltage

An input voltage level within the less positive (more negative) of the two ranges of values used to represent the binary variables. A maximum value is specified which is the most-positive (least-negative) value of low-level input voltage for which operation of the logic element within specification limits is guaranteed.

V_{T+} Positive-going threshold voltage

The voltage level at a transition-operated input which, as the input voltage rises from the defined low level, causes operation of the logic element according to specification.

V_{T-} Negative-going threshold voltage

The voltage level at a transition-operated input which, as the input voltage falls from the defined high level, causes operation of the logic element according to specification.

V_{OH} , ($V_{out(1)}$) High-level output voltage

The voltage at an output terminal for a specified output current I_{OH} (I_{load}) with input conditions applied which according to the product specification will establish a high level at the output.

V_{OL} , ($V_{out(0)}$) Low-level output voltage

The voltage at an output terminal for a specified output current I_{OL} (I_{sink}) with input conditions applied which according to the product specification will establish a low level at the output.

$V_{O(on)}$, (V_{on}) On-state output voltage

The voltage at an output terminal for a specified output current with input conditions applied which according to the product specification will cause the output switching element to be in the on state.

Note: This characteristic is usually specified only for outputs not having internal pull-up elements.

$V_{O(off)}$, (V_{off}) Off-state output voltage

The voltage at an output terminal for a specified output current with input conditions applied which according to the product specification will cause the output switching element to be in the off state.

Note: This characteristic is usually specified only for outputs not having internal pull-up elements.

CURRENTS

 I_{IH} , ($I_{in(1)}$) High-level input current

The current flowing into* an input when a specified high-level voltage is applied to that input.

 I_{IL} , ($I_{in(0)}$) Low-level input current

The current flowing into* an input when a specified low-level voltage is applied to that input.

 I_{OH} , ($I_{out(1)}$) High-level output current

The current flowing into* the output with a specified high-level output voltage V_{OH} ($V_{out(1)}$) applied.

Note: This parameter is usually specified for outputs intended to drive other logic circuits.

 $I_{O(off)}$, (I_{off}) Off-state output current

The current flowing into* an output with a specified output voltage applied and input conditions applied which according to the product specification will cause the output switching element to be in the off state.

Note: This parameter is usually specified for outputs intended to drive devices other than logic circuits.

 I_{OS} Short-circuit output current

The current which flows into* an output when that output is short-circuited to ground (or other specified potential) with input conditions applied to establish the output logic level farthest from ground potential (or other specified potential).

 I_{CCH} , ($I_{CC(1)}$), I_{EEH} etc. Supply current, high-level output

The current flowing into* the indicated supply terminal of a microcircuit when the output is (or all outputs are) at a high-level voltage.

 I_{CCL} , ($I_{CC(0)}$), I_{EEL} etc. Supply current, low-level output

The current flowing into* the indicated supply terminal of a microcircuit when the output is (or all outputs are) at a low-level voltage.

DYNAMIC CHARACTERISTICS

 f_{max} Maximum clock frequency (previously shown as " f_{clock} " under "switching characteristics")

The highest rate at which the clock input of a bistable circuit can be driven through its required sequence while maintaining stable transitions of logic level at the output in accordance with the truth table or specified logic rules.

 t_{TLH} , (t_1) Transition time, low-to-high-level (step or output)

The time between a specified low-level voltage and a specified high-level voltage on a waveform which is changing from the defined low level to the defined high level.

 t_{THL} , (t_0) Transition time, high-to-low-level (step or output)

The time between a specified high-level voltage and a specified low-level voltage on a waveform which is changing from the defined high level to the defined low level.

 t_{PLH} , ($t_{pd(1)}$) Propagation delay time, low-to-high-level output

The time between the specified reference points on the input and output voltage waveforms with the output changing from the defined low level to the defined high level.

*Current flowing out of a terminal is a negative value.

DYNAMIC CHARACTERISTICS (continued) **t_{PHL} , ($t_{pd(0)}$) Propagation delay time, high-to-low-level output**

The time between the specified reference points on the input and output voltage waveforms with the output changing from the defined high level to the defined low level.

 t_w , (t_p) Average pulse width

The time between 50-percent-amplitude points (or other specified reference points) on the leading and trailing edges of a pulse.

 t_{hold} Hold time

The interval immediately following the active transition of the timing pulse (usually the clock pulse) during which interval the data to be recognized must be maintained at the input to ensure its continued recognition. For a dynamic (transition-operated) input, this is the interval immediately following the transition which constitutes the dynamic input, during which interval a steady-state logic level must be maintained at the input to ensure recognition of the transition.

 t_{setup} Setup time

The interval immediately preceding the active transition of the timing pulse (usually the clock pulse) during which interval the data to be recognized must be maintained at the input (unless release is specifically permitted) to ensure its recognition. For a dynamic (transition-operated) input, this is the interval immediately preceding the transition which constitutes the dynamic input, during which interval a steady-state logic level must be maintained at the input to ensure recognition of the transition.

 $t_{release}$ Release time

The interval between the release of data and the active transition of the timing pulse (usually the clock pulse), this interval being sufficiently short to ensure recognition of the released data.

Note: When specified, the interval designated "release time" falls within the setup interval and constitutes, in effect, a negative hold time.

CLASSIFICATION OF CIRCUIT COMPLEXITY**Gate equivalent circuit**

A basic unit-of-measure of relative digital-circuit complexity. The number of gate equivalent circuits is that number of individual logic gates that would have to be interconnected to perform the same function.

LSI Large-scale integration

A concept whereby a complete major subsystem or system function is fabricated as a single microcircuit. In this context a major subsystem or system, whether logical or linear, is considered to be one that contains 100 or more equivalent gates or circuitry of similar complexity.

MSI Medium-scale integration

A concept whereby a complete subsystem or system function is fabricated as a single microcircuit. The subsystem or system is smaller than for LSI, but whether digital or linear, is considered to be one that contains 12 or more equivalent gates or circuitry of similar complexity.

SSI Small-scale integration

Integrated circuits of less complexity than medium-scale integration (MSI).

THERMAL RESISTANCE OF INTEGRATED CIRCUIT PACKAGES

A

Typical thermal resistance values of standard integrated circuit packages are shown in the table below. The values shown do not imply any guarantee, but represent the latest and best available data. Steady-state thermal conditions are implied in the resistance measurements. Also, the following definitions apply:

$R_{\theta JC}$ — thermal resistance from junction to case using freon as a heat sink. This parameter offers good repeatability and a high degree ($\pm 5\%$) of correlation.

$R_{\theta JX}$ — thermal resistance from junction to still air (25°C ambient) with package in a specified socket. This parameter is highly dependent on test conditions which are difficult to reproduce accurately.

BIPOLAR PRODUCTS TYPICAL THERMAL RESISTANCES

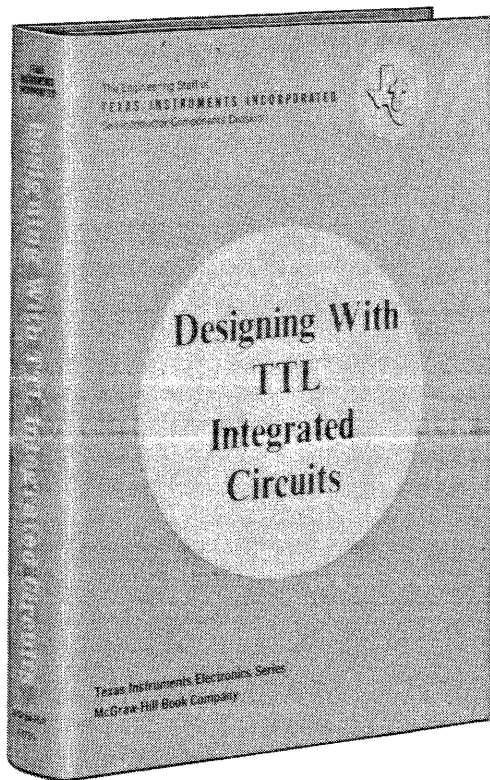
PACKAGE DESCRIPTION	PACKAGE DESIGNATION	°C/WATT		SOCKET USED FOR $R_{\theta JX}$ MEASUREMENT	POWER (mW)
		$R_{\theta JC} \pm 5\%$	$R_{\theta JX} \pm 15\%$		
8-Pin Plastic DIP	P	52	95	Augat	300
14- or 16-Pin Plastic DIP	N	45	90	Augat	300
24-Pin Plastic DIP	N	35	65	Barnes	500
14- or 16-Pin Ceramic DIP	J	20	70	Augat	300
14- or 16-Pin Ceramic Flat Pak (Alloy Mounted)	W, U	45	160	Barnes Carrier/Contactor	500
14-Pin Ceramic Flat Pak (Glass Mounted)	Z	70	190	Mech-Pak Carrier	300
8- or 10-Pin Plug-In (Alloy Mounted)	L	40	120	Barnes	400
8- or 10-Pin Plug-In (Glass Mounted)	L	90	170	Barnes	700

Special test chips were used to obtain the above information.

A

NEW IN 1971

DESIGNING WITH TTL INTEGRATED CIRCUITS



BY THE
IC APPLICATIONS STAFF
OF TEXAS INSTRUMENTS
INCORPORATED

384 Pages • 399 Illustrations • Hardback •
Shipping Weight 2-lb 10-oz • Price \$18.50

THIS IS THE ELEVENTH VOLUME in the TI-McGraw-Hill Electrical Engineering Series. Prepared by TI's practical theorists in IC applications, it's devoted exclusively to the implementation of a wide variety of logic functions using TTL. Circuit designers will find this text-and-reference book especially helpful because it offers more than a hundred complete logic designs that can be used with or without modification to solve industrial problems.

But more than that, the book is also designed to give managers, purchasing agents, value analysts, and technicians valuable background even without understanding the mathematics. "Designing With TTL Integrated Circuits" is an indispensable reference work for every electronics library.

CHAPTERS:

1. Introduction to Digital Logic
2. Series 54/74 Overview
3. Circuit Analysis and Characteristics of Series 54/74
4. Extended-Range Operation
5. Noise Considerations
6. Combinational Logic Design
7. Flip-Flops
8. Decoders
9. Arithmetic Elements
10. Counters
11. Shift Registers
12. Other Applications

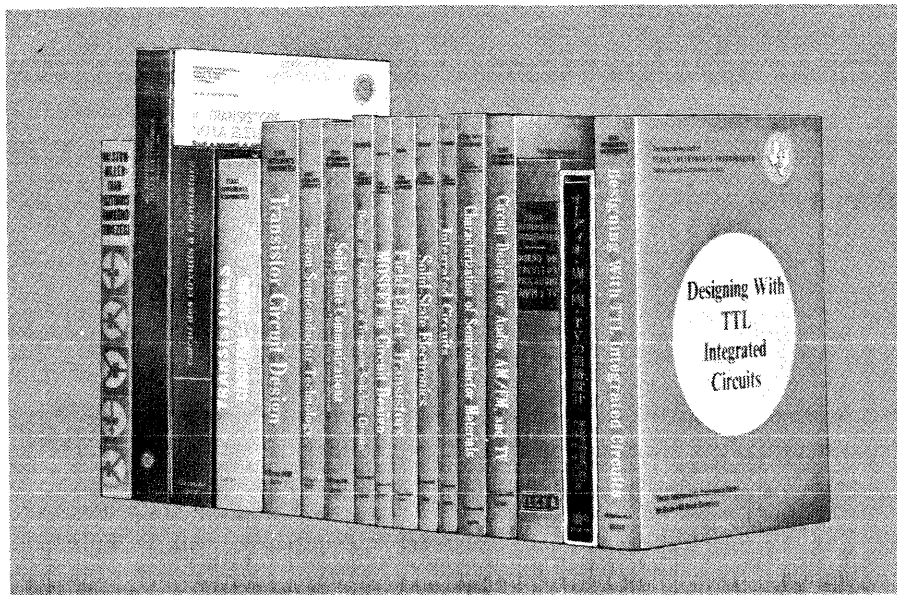
ORDERING INSTRUCTIONS

Source: Order from McGraw-Hill Book Company, either through a bookstore or by writing (with your name, address, company, and position) to:

McGraw-Hill Book Company
P.O. Box 400
Hightstown, N. J. 08520

Mail Order Terms: Ten days' examination on approval. If you remit price plus local tax with your order, McGraw-Hill pays the delivery cost. Otherwise, when book arrives you are billed for delivery cost in addition to the price and local tax, and payment or returned book is due at end of ten-day approval period.

TI-McGraw-Hill Books for Creative Circuit Designers



DESIGNING WITH TTL INTEGRATED CIRCUITS

384 Pages • 399 Illustrations •
Shipping Weight 2-lb 9-oz • \$18.50

SOLID STATE ELECTRONICS

170 Pages • 90 Illustrations •
Shipping Weight 1-lb 12-oz • \$9.50

INTEGRATED CIRCUITS: A BASIC COURSE

170 Pages • 133 Illustrations •
Shipping Weight 1-lb 10-oz • \$9.95

TRANSISTOR CIRCUIT DESIGN

523 Pages • 526 Illustrations •
Shipping Weight 3-lb 4-oz • \$16.50
(Also available in French, Italian, Spanish, Hungarian,
and Japanese)

FIELD-EFFECT TRANSISTORS

138 Pages • 173 Illustrations •
Shipping Weight 1-lb 10-oz • \$10.00

MOSFET IN CIRCUIT DESIGN

136 Pages • 100 Illustrations •
Shipping Weight 1-lb 10-oz • \$11.00

CIRCUIT DESIGN FOR AUDIO, AM/FM AND TV

352 Pages • 145 Illustrations •
Shipping Weight 2-lb 8-oz • \$16.50
(Also available in Spanish and Japanese)

SILICON SEMICONDUCTOR TECHNOLOGY

256 Pages • 301 Illustrations •
Shipping Weight 2-lb 9-oz • \$16.50

DESIGN AND APPLICATION OF TRANSISTOR SWITCHING CIRCUITS

278 Pages • 315 Illustrations •
Shipping Weight 2-lb • \$14.50

SOLID STATE COMMUNICATIONS

366 Pages • 417 Illustrations •
Shipping Weight 2-lb 9-oz • \$13.75

CHARACTERIZATION OF SEMICONDUCTOR MATERIALS

351 Pages • 221 Illustrations •
Shipping Weight 2-lb 9-oz • \$18.50

ORDERING INSTRUCTIONS

Source: Order from McGraw-Hill Book Company, either through a bookstore or by writing (with your name, address, company, and position) to:

McGraw-Hill Book Company
P.O. Box 400
Hightstown, N.J. 08520

Mail Order Terms: Ten days' examination on approval. If you remit price plus local tax with your order, McGraw-Hill pays the delivery cost. Otherwise, when book arrives you are billed for delivery cost in addition to the price and local tax, and payment or returned book is due at end of ten-day approval period.

Indexes

Numerical·Functional·Cross-Reference

B

NUMERICAL INDEX

TYPE NO.	SEC.-PAGE	TYPE NO.	SEC.-PAGE	TYPE NO.	SEC.-PAGE	TYPE NO.	SEC.-PAGE
ECL2500	4-1	RSN5410	10-6	SNF51	12-12	SNG51	12-4
ECL2501	4-1	RSN54H10	10-6	SNF52	12-12	SNG52	12-4
ECL2502	4-1	RSN54L10	10-32	SNF53	12-12	SNG53	12-4
ECL2503	4-1	RSN5420	10-6	SNF60	12-12	SNG60	12-4
ECL2504	4-1	RSN54H20	10-6	SNF61	12-12	SNG61	12-4
ECL2505	4-1	RSN54L20	10-32	SNF62	12-12	SNG62	12-4
ECL2506	4-13	RSN5431	10-6	SNF63	12-12	SNG63	12-4
ECL2507	4-13	RSN54H31	10-6	SNF100	12-12	SNG70	12-4
ECL2508	4-13	RSN5440	10-9	SNF101	12-12	SNG71	12-4
ECL2509	4-13	RSN54H40	10-9	SNF102	12-12	SNG72	12-4
ECL2510	4-13	RSN5456	10-10	SNF103	12-12	SNG73	12-4
ECL2511	4-1	RSN54H56	10-10	SNF110	12-12	SNG80	12-5
ECL2512	4-13	RSN5457	10-10	SNF111	12-12	SNG81	12-5
ECL2513	4-13	RSN54H57	10-10	SNF112	12-12	SNG82	12-5
ECL2515	4-33	RSN54L57	10-34	SNF113	12-12	SNG83	12-5
ECL2516	4-33	RSN5458	10-10	SNF120	12-12	SNG90	12-4
ECL2517	4-45	RSN54H58	10-10	SNF121	12-12	SNG91	12-4
ECL2520	4-53	RSN54L71	10-35	SNF122	12-12	SNG92	12-4
ECL2521	4-53	RSN54L72	10-38	SNF123	12-12	SNG93	12-4
ECL2522	4-53	RSN5474	10-12	SNF130	12-12	SNG100	12-4
ECL2523	4-53	RSN54H74	10-12	SNF131	12-12	SNG101	12-4
ECL2530	4-65	RSN54L74	10-41	SNF132	12-12	SNG102	12-4
ECL2531	4-65	RSN54H103	10-15	SNF133	12-12	SNG103	12-4
ECL2536	4-73	RSN54130L	10-32	SNF200	12-12	SNG110	12-4
ECL2537	4-73	RSN54131L	10-32	SNF201	12-12	SNG111	12-4
ECL2540	4-85	RSN55900	10-35	SNF202	12-12	SNG112	12-4
ECL2541	4-85	RSN55910	10-5	SNF203	12-12	SNG113	12-4
ECL2542	4-85	RSN55920	10-55	SNF210	12-12	SNG120	12-4
HIC037	15-1	SMA1001	14-286	SNF211	12-12	SNG121	12-4
HIC106	15-3	SMA2001	14-289	SNF212	12-12	SNG122	12-4
HIC107	15-6	SMA2002	14-294	SNF213	12-12	SNG123	12-4
RSN14097	10-57	SNF10	12-12	SNF250	12-12	SNG130	12-5
RSN14925	10-57	SNF11	12-12	SNF251	12-12	SNG131	12-5
RSN15930	10-57	SNF12	12-12	SNF252	12-12	SNG132	12-5
RSN15932	10-57	SNF13	12-12	SNF253	12-12	SNG133	12-5
RSN15944	10-57	SNF20	12-12	SNF260	12-12	SNG140	12-4
RSN15945	10-57	SNF21	12-12	SNF261	12-12	SNG141	12-4
RSN15962	10-57	SNF22	12-12	SNF262	12-12	SNG142	12-4
RSN52709	10-58	SNF23	12-12	SNF263	12-12	SNG143	12-4
RSN5400	10-6	SNF30	12-12	SNG40	12-4	SNG150	12-5
RSN54H00	10-6	SNF31	12-12	SNG41	12-4	SNG151	12-5
RSN54L00	10-32	SNF32	12-12	SNG42	12-4	SNG152	12-5
RSN5404	10-8	SNF33	12-12	SNG43	12-4	SNG153	12-5
RSN54H04	10-8	SNF50	12-12	SNG50	12-4	SNG160	12-5

B

NUMERICAL INDEX

B

TYPE NO.	SEC.-PAGE	TYPE NO.	SEC.-PAGE	TYPE NO.	SEC.-PAGE	TYPE NO.	SEC.-PAGE
SNG161	12-5	SNG271	12-5	SN15838	11-4	SN151810	11-5
SNG162	12-5	SNG272	12-5	SN15844	11-4	SN151812	11-5
SNG163	12-5	SNG273	12-5	SN15845	11-4	SN151900	11-5
SNG170	12-5	SNG280	12-5	SN15846	11-4	SN151901	11-5
SNG171	12-5	SNG281	12-5	SN15848	11-4	SN151902	11-5
SNG172	12-5	SNG282	12-5	SN15849	11-4	SN151903	11-5
SNG173	12-5	SNG283	12-5	SN15850	11-4	SN151904	11-5
SNG180	12-5	SNG290	12-5	SN15851	11-4	SN151905	11-5
SNG181	12-5	SNG291	12-5	SN15857	11-5	SN151906	11-5
SNG182	12-5	SNG292	12-5	SN15858	11-5	SN151907	11-5
SNG183	12-5	SNG293	12-5	SN15861	11-4	SN151908	11-5
SNG190	12-4	SNG300	12-4	SN15862	11-5	SN151909	11-5
SNG191	12-4	SNG301	12-4	SN15863	11-5	SN151910	11-5
SNG192	12-4	SNG302	12-4	SN15930	11-4	SN151911	11-5
SNG193	12-4	SNG303	12-4	SN15931	11-4	SN151912	11-5
SNG200	12-4	SNG310	12-4	SN15932	11-4	SN158093	11-5
SNG201	12-4	SNG311	12-4	SN15933	11-4	SN158094	11-5
SNG202	12-4	SNG312	12-4	SN15934	11-4	SN158097	11-5
SNG203	12-4	SNG313	12-4	SN15935	11-4	SN158099	11-5
SNG210	12-4	SNG320	12-4	SN15936	11-4	SN159093	11-5
SNG211	12-4	SNG321	12-4	SN15937	11-4	SN159094	11-5
SNG212	12-4	SNG322	12-4	SN15938	11-4	SN159097	11-5
SNG213	12-4	SNG323	12-4	SN15944	11-4	SN159099	11-5
SNG220	12-4	SNG351	12-5	SN15945	11-4	SN52101A	3-5
SNG221	12-4	SNG353	12-5	SN15946	11-4	SN52107	3-9
SNG222	12-4	SN15301	13-1	SN15948	11-4	SN52510	3-60
SNG223	12-4	SN15302	13-1	SN15949	11-4	SN52514	3-66
SNG230	12-5	SN15303	13-1	SN15950	11-4	SN52558	3-13
SNG231	12-5	SN15312	13-1	SN15951	11-4	SN52702	3-18
SNG232	12-5	SN15321	13-1	SN15957	11-5	SN52709	3-27
SNG233	12-5	SN15323	13-1	SN15958	11-5	SN52709A	3-27
SNG240	12-4	SN15324	13-1	SN15961	11-4	SN52710	3-68
SNG241	12-4	SN15325	13-1	SN15962	11-5	SN52711	3-72
SNG242	12-4	SN15326	13-1	SN15963	11-5	SN52720	3-77
SNG243	12-4	SN15342	13-1	SN151800	11-5	SN52733	3-94
SNG250	12-4	SN15370	13-1	SN151801	11-5	SN52741	3-34
SNG251	12-4	SN15830	11-4	SN151802	11-5	SN52747	3-39
SNG252	12-4	SN15831	11-4	SN151803	11-5	SN52748	3-43
SNG253	12-4	SN15832	11-4	SN151804	11-5	SN52770	3-47
SNG260	12-4	SN15833	11-4	SN151805	11-5	SN52771	3-53
SNG261	12-4	SN15834	11-4	SN151806	11-5	SN52810	3-79
SNG262	12-4	SN15835	11-4	SN151807	11-5	SN52811	3-85
SNG263	12-4	SN15836	11-4	SN151808	11-5	SN52820	3-91
SNG270	12-5	SN15837	11-4	SN151809	11-5	SN5400	6-5

NUMERICAL INDEX

TYPE NO.	SEC.-PAGE	TYPE NO.	SEC.-PAGE	TYPE NO.	SEC.-PAGE	TYPE NO.	SEC.-PAGE
SN54H00	7-5	SN5430	6-34	SN54H72	7-34	SN54H106	7-59
SN54L00	8-4	SN54H30	7-16	SN54L72	8-19	SN54107	6-52
SN54S00	5-4	SN54L30	8-12	SN5473	6-52	SN54H108	7-62
SN5401	6-6	SN5432	6-35	SN54H73	7-37	SN54110	6-66
SN54H01	7-6	SN5437	6-37	SN54L73	8-22	SN54111	6-69
SN54L01	8-5	SN5438	6-37	SN5474	6-55	SN54S112	5-17
SN5402	6-9	SN5440	6-39	SN54H74	7-40	SN54S113	5-21
SN54L02	8-6	SN54H40	7-17	SN54L74	8-25	SN54S114	5-21
SN5403	6-10	SN54S40	5-12	SN54S74	5-15	SN54121	6-79
SN54L03	8-5	SN5442	9-148	SN5475	9-213	SN54122	6-79
SN154S03	5-8	SN54L42	9-154	SN5476	6-58	SN54L122	8-31
SN5404	6-11	SN5443	9-148	SN54H76	7-44	SN54123	6-79
SN54H04	7-9	SN54L43	9-154	SN5477	9-213	SN54145	9-175
SN54L04	8-9	SN5444	9-148	SN54H78	7-47	SN54150	9-339
SN54S04	5-8	SN54L44	9-154	SN54L78	8-28	SN54151	9-339
SN405	6-12	SN5445	9-175	SN5480	9-255	SN54152	9-339
SN54H05	7-10	SN5446A	9-181	SN5481	9-221	SN54153	9-351
SN54S05	5-8	SN54L46	9-198	SN5482	9-264	SN54L153	9-358
SN5406	6-13	SN5447A	9-181	SN5483	9-271	SN54154	9-160
SN5407	6-15	SN54L47	9-198	SN5483	9-271	SN54155	9-167
SN5408	6-17	SN5448	9-181	SN54LS83	9-279	SN54156	9-167
SN5409	6-17	SN5449	9-181	SN5484	9-221	SN54160	9-41
SN5410	6-20	SN5450	6-40	SN5485	9-286	SN54161	9-41
SN54H10	7-11	SN54H50	7-18	SN5485	9-286	SN54162	9-41
SN54L10	8-10	SN5451	6-40	SN5486	9-296	SN54163	9-41
SN54S10	5-4	SN54H51	7-18	SN54L86	9-300	SN54164	9-122
SN54H11	7-12	SN54L51	8-13	SN54H87	9-304	SN43L164	9-126
SN54S11	5-10	SN54H52	7-20	SN5488A	9-235	SN54165	9-130
SN5412	6-21	SN54H52	7-20	SN5490	9-4	SN54166	9-134
SN5413	6-22	SN5453	6-42	SN54L90	9-9	SN54170	9-248
SN54S15	5-10	SN5453	6-42	SN5492	9-14	SN54180	9-309
SN5416	6-13	SN54H53	7-22	SN5493	9-19	SN54181	9-315
SN5417	6-15	SN5454	6-42	SN54L93	9-24	SN54182	9-326
SN5420	6-26	SN54H54	7-22	SN5494	9-58	SN54H183	9-332
SN54H20	7-13	SN54H55	7-24	SN5495A	9-72	SN54184	9-142
SN54L20	8-11	SN54L55	8-15	SN5496	9-79	SN54185A	9-142
SN54S20	5-4	SN5460	6-44	SN5496	9-86	SN54190	9-49
SN54H21	7-14	SN54H60	7-26	SN54L95	9-79	SN54191	9-49
SN54H22	7-15	SN54H61	7-28	SN5496	9-86	SN54192	9-57
SN54S22	5-8	SN54H62	7-29	SN54L98	9-90	SN54193	9-57
SN5423	6-27	SN54S64	5-13	SN54L99	9-96	SN54194	9-104
SN5425	6-27	SN54S65	5-13	SN54100	9-213	SN54195	9-108
SN5426	6-30	SN5470	6-46	SN54H101	7-50	SN54196	9-29
SN5427	6-32	SN5470	6-46	SN54H102	7-53	SN54197	9-29
		SN54H71	7-31	SN54H103	7-56		
		SN54L71	8-16	SN54104	7-61		
		SN5472	6-49	SN54105	6-61		

B

NUMERICAL INDEX

B

TYPE NO.	SEC.-PAGE	TYPE NO.	SEC.-PAGE	TYPE NO.	SEC.-PAGE	TYPE NO.	SEC.-PAGE
SN54198	9-134	SN7404	6-11	SN7443	9-148	SN74H76	7-44
SN54199	9-134	SN74H04	7-9	SN74L43	9-154	SN7477	9-213
SN5510	3-101	SN74L04	8-9	SN7444	9-148	SN74H78	7-47
SN5511	3-115	SN74S04	5-8	SN74L44	9-154	SN74L78	8-28
SN5512	3-121	SN7405	6-12	SN7445	9-175	SN7480	9-255
SN5514	3-121	SN74H05	7-10	SN7446A	9-181	SN7481	9-221
SN55107A	3-130	SN74S05	5-8	SN74L46	9-198	SN7482	9-264
SN55108A	3-130	SN7406	6-13	SN7447A	9-181	SN7483	9-271
SN55109	3-130	SN7407	6-15	SN74L47	9-198	SN74LS83	9-279
SN55110	3-130	SN7408	6-17	SN7448	9-181	SN7484	9-221
SN56502	3-277	SN7409	6-17	SN7449	9-181	SN7485	9-286
SN56514	3-284	SN7410	6-20	SN7450	6-40	SN74L85	9-289
SN72301A	3-5	SN74H10	7-11	SN74H50	7-18	SN7486	9-296
SN72307	3-9	SN74L10	8-10	SN7451	6-40	SN74L86	9-300
SN72400	3-270	SN74S10	5-4	SN74H51	7-18	SN74H87	9-304
SN72510	3-60	SN74H11	7-12	SN74L51	8-13	SN7488A	9-235
SN72514	3-66	SN74S11	5-10	SN74H52	7-20	SN7489	9-230
SN72558	3-13	SN7412	6-21	SN7453	6-42	SN7490	9-4
SN72702	3-18	SN7413	6-22	SN74H53	7-22	SN74L90	9-9
SN72709	3-27	SN74S15	5-10	SN7454	6-42	SN7492	9-14
SN72710	3-68	SN7416	6-13	SN74H54	7-22	SN7493	9-19
SN72711	3-72	SN7417	6-15	SN74H55	7-24	SN74L93	9-24
SN72720	3-77	SN7420	6-26	SN74L55	8-15	SN7494	9-58
SN72733	3-94	SN74H20	7-13	SN7460	6-45	SN7495A	9-72
SN72741	3-34	SN74L20	8-11	SN74H60	7-27	SN74L95	9-79
SN72747	3-39	SN74S20	5-4	SN74H61	7-28	SN7496	9-86
SN72748	3-43	SN74H21	7-14	SN74H62	7-30	SN7497	9-35
SN72770	3-47	SN74H22	7-15	SN74S64	5-13	SN74L98	9-90
SN72771	3-53	SN74S22	5-8	SN74S65	5-13	SN74L99	9-96
SN72810	3-79	SN7423	6-27	SN7470	6-46	SN74100	9-213
SN72811	3-85	SN7425	6-27	SN74H71	7-31	SN74H101	7-50
SN72820	3-91	SN7426	6-30	SN74L71	8-16	SN74H102	7-53
SN7400	6-5	SN7427	6-32	SN7472	6-49	SN74H103	7-56
SN74H00	7-5	SN7430	6-34	SN74H72	7-34	SN74104	6-61
SN74L00	8-4	SN74H30	7-16	SN74L72	8-19	SN74105	6-61
SN74S00	5-4	SN74L30	8-12	SN7473	6-52	SN74H106	7-59
SN7401	6-6	SN7432	6-35	SN74H73	7-37	SN74107	6-52
SN74H01	7-6	SN7437	6-37	SN74L73	8-22	SN74H108	7-62
SN74L01	8-5	SN7438	6-36	SN7474	6-55	SN74110	6-66
SN7402	6-9	SN7440	6-39	SN74H74	7-40	SN74111	6-69
SN74L02	8-6	SN74H40	7-17	SN74L74	8-25	SN74S112	5-17
SN7403	6-10	SN74S40	5-12	SN74S74	5-15	SN74S113	5-21
SN74L03	8-5	SN7442	9-148	SN7475	9-213	SN74S114	5-21
SN74S03	5-8	SN74L42	9-154	SN7476	6-58	SN74121	6-79

NUMERICAL INDEX

TYPE NO.	SEC.-PAGE	TYPE NO.	SEC.-PAGE	TYPE NO.	SEC.-PAGE	TYPE NO.	SEC.-PAGE
SN74122	6-79	SN7521	3-164	SN76530	3-289	TIDM166	9-365
SN74L122	8-31	SN7522	3-166	SN76532	3-289	TIDM168	9-365
SN74123	6-79	SN7523	3-166	SN76533	3-289	TIDM185	9-365
SN74141	9-208	SN7524	3-170	SN76540	3-289	TIDM186	9-365
SN74145	9-175	SN7525	3-170	SN76541	3-289	TIDM255	9-365
SN74150	9-339	SN7526	3-172	SN76542	3-289	TIDM266	9-365
SN74151	9-339	SN7527	3-172	SN76550	3-289	TIDM268	9-365
SN74152	9-339	SN7528	3-174	SN76552	3-289	TIDM285	9-365
SN74153	9-351	SN7529	3-174	SN76553	3-289	TIDM286	9-365
SN74L153	9-358	SN75100L	3-126	SN76564	3-289	TIH101	9-365
SN74154	9-160	SN75107A	3-130	SN76600	3-289	TMS 200	14-206
SN74155	9-167	SN75108A	3-130	SN76603	3-289	TMS 440	14-188
SN74156	9-167	SN75109	3-130	SN76619	3-289	TMS 1101	14-213
SN74160	9-41	SN75110	3-130	SN76630	3-289	TMS 1103	14-222
SN74161	9-41	SN75150	3-149	SN76640	3-289	TMS 2200	14-206
SN74162	9-41	SN75154	3-153	SN76641	3-289	TMS 2300	14-114
SN74163	9-41	SN75234	3-176	SN76642	3-289	TMS 2400	14-125
SN74164	9-122	SN75235	3-176	SN76643	3-289	TMS 2500	14-135
SN74L164	9-126	SN75238	3-178	SN76650	3-289	TMS 2600	14-139
SN74165	9-130	SN75239	3-178	SN76660	3-289	TMS 2602	14-148
SN74166	9-134	SN75303	3-212	SN76665	3-289	TMS 2603	14-151
SN74167	9-35	SN75308	3-217	SN76670	3-289	TMS 2604	14-154
SN74170	9-248	SN75324	3-222	SN76680	3-289	TMS 2605	14-157
SN74180	9-309	SN75325	3-230	TID21A	3-264	TMS 2700	14-160
SN74181	9-315	SN75450	3-245	TID22A	3-264	TMS 2800	14-167
SN74182	9-326	SN75451	3-245	TID23A	3-264	TMS 2801	14-173
SN74H183	9-332	SN75452	3-245	TID24A	3-264	TMS 3000	14-29
SN74184	9-142	SN75453	3-245	TID25A	3-264	TMS 3001	14-29
SN74185A	9-142	SN75454	3-245	TID26A	3-264	TMS 3002	14-35
SN74190	9-49	SN76001	3-289	TID29A	3-264	TMS 3003	14-35
SN74191	9-49	SN76003	3-289	TID30A	3-264	TMS 3012	14-41
SN74192	9-57	SN76005	3-289	TID121	3-264	TMS 3016	14-45
SN74193	9-57	SN76010	3-289	TID122	3-264	TMS 3028	14-41
SN74194	9-104	SN76013	3-289	TID123	3-264	TMS 3101	14-51
SN74195	9-108	SN76050	3-289	TID124	3-264	TMS 3102	14-51
SN74196	9-29	SN76104	3-289	TID125	3-264	TMS 3103	14-51
SN74197	9-29	SN76105	3-289	TID126	3-264	TMS 3112	14-56
SN74198	9-134	SN76110	3-290	TID129	3-264	TMS 3113	14-62
SN74199	9-134	SN76131	3-289	TID130	3-264	TMS 3114	14-62
SN7510	3-108	SN76242	3-289	TID131	3-264	TMS 3304	14-67
SN7511	3-115	SN76243	3-289	TID132	3-264	TMS 3305	14-67
SN7512	3-121	SN76246	3-289	TID133	3-264	TMS 3309	14-71
SN7514	3-121	SN76502	3-277	TID134	3-264	TMS 3314	14-77
SN7520	3-164	SN76514	3-284	TIDM155	9-365	TMS 3401	14-82

B

NUMERICAL INDEX

B

TYPE NO.	SEC.-PAGE
TMS 3402	14-82
TMS 3404	14-87
TMS 3406	14-92
TMS 3409	14-97
TMS 3412	14-101
TMS 3413	14-101
TMS 3414	14-101
TMS 4000	14-232
TMS 4003	14-239
TMS 4006	14-264
TMS 4020	14-245
TMS 4023	14-251
TMS 4025	14-256
TMS 4100	14-176
TMS 4400	14-188
TMS 6000	14-272
TMS 6002	14-276
TMS 6005	14-279

LINEAR CIRCUITS FUNCTIONAL INDEX

FUNCTION	OPERATING TEMPERATURE RANGE		PACKAGES*						SEC.-PAGE
	-55°C to 125°C	0°C to 70°C	Dual-In-Line		Plug-In		Flat		
OPERATIONAL AMPLIFIERS									
General Purpose Operational Amplifiers	SN52702A	SN72702		N		L	S		3-18
	SN52702		N		L	S		3-18	
High-Performance Operational Amplifiers	SN52101A	SN72301A	J	N	P	L	Z		3-5
	SN52107	SN72307	J	N	P	L	Z		3-9
	SN52709A	SN72709		N	P	L	S		3-27
	SN52709		N	P	L	S		3-27	
	SN52741	SN72741	J	N	P	L	Z		3-34
	SN52748	SN72748	J	N	P	L	Z		3-43
	SN52770	SN72770	J	N	P	L	Z		3-47
SN52771	SN72771	J	N	P	L	Z		3-53	
Dual High-Performance Operational Amplifiers	SN52558	SN72558			P	L			3-13
	SN52747	SN72747	J	N					3-39
DIFFERENTIAL COMPARATORS									
Differential Comparators	SN52710	SN72710	J	N		L	S		3-68
	SN52810	SN72810	J	N	P	L	Z		3-79
Differential Comparators with Strobes	SN52510	SN72510	J	N	P	L	Z		3-60
Dual-Channel Differential Comparators with Strobes	SN52711	SN72711	J	N		L	S		3-72
	SN52811	SN72811	J	N		L			3-85
Dual Differential Comparators		SN72720		N					3-77
	SN52820	SN72820	J	N					3-91
Dual Differential Comparators with Strobes	SN52514	SN72514	J	N					3-66
VIDEO AMPLIFIERS									
Differential Video Amplifiers	SN52733	SN72733		N		L			3-94
	SN5510	SN7510				L	F		3-101
			L	F		3-108			
	SN5511	SN7511		N		L	F		3-115
	SM5512	SM7512				L			3-121
	SN5514	SN7514				L			3-121
LINE CIRCUITS									
Dual Line Drivers	SN55109	SN75109	J						3-130
			J	N				3-130	
	SN55110	SN75110	J						3-130
			J	N				3-130	
Dual Line Receivers	SN55107A	SN75107A	J						3-130
			J	N				3-130	
	SN55108A	SN75108A	J						3-130
			J	N				3-130	
			J	N	P			3-149	
Dual Differential Line Receiver		SN75100L				L		3-126	
Quadruple Line Receiver		SN75154	J	N					3-153

*For outline drawings of all packages, see Section 1.

LINEAR CIRCUITS FUNCTIONAL INDEX

B

FUNCTION	OPERATING TEMPERATURE RANGE		PACKAGES*					SEC.-PAGE
	-55°C to 125°C	0°C to 70°C	Dual-In-Line	Plug-In	Flat			
SENSE AMPLIFIERS								
Dual-Channel Sense Amplifiers		SN7522	J	N				3-166
		SN7523	J	N				3-166
Dual-Channel Sense Amplifiers with Complementary Outputs		SN7520	J	N				3-164
		SN7521	J	N				3-164
Dual-Channel Sense Amplifiers with Output Registers		SN7526	J	N				3-172
		SN7527	J	N				3-172
Dual Sense Amplifiers		SN7524	J	N				3-170
		SN7525	J	N				3-170
		SN75234	J	N				3-176
		SN75235	J	N				3-176
Dual Sense Amplifiers with Preampifier Test Points		SN7528	J	N				3-174
		SN7529	J	N				3-174
		SN75238	J	N				3-178
		SN75239	J	N				3-178
MEMORY AND PERIPHERAL DRIVERS								
2 X 4 Transistor Arrays		SN75303		N			S	3-212
		SN75308	J	N				3-217
Memory Driver		SN75325						3-230
Memory Driver with Decode Inputs		SN75324						3-222
Dual Peripheral Drivers		SN75450A		N				3-247
		SN75451A			P			3-249
		SN75452		P	P			3-250
		SN75453			P			3-251
Diode Arrays	TID21A Series			N			F	3-264
VOLTAGE REGULATOR								
Voltage Regulator		SN72400		N		L		3-270
COMMUNICATIONS CIRCUITS								
Logarithmic Amplifiers	SN56502	SN76502	J	N				3-277
Balanced Mixers	SN56514	SN76514	J	N		L		3-284
CONSUMER CIRCUITS								
Consumer Circuits Summary								3-289
Stereo Demodulator		SN76110		N				3-290

*For outline drawings of all packages, see Section 1.

ECL CIRCUITS FUNCTIONAL INDEX

FUNCTION	TYPE	SEC.-PAGE
BASIC AND MULTIFUNCTIONAL LOGIC MODULES		
9-Input OR/NOR Gate	ECL2501	4-1
Dual 4-Input OR/NOR Gate	ECL2500	4-1
Triple 2-Input OR/NOR Gate	ECL2502	4-1
Triple 3-Input NOR Gate	ECL2505	4-1
Quadruple 2-Input NOR Gate	ECL2503	4-1
Quadruple Delay/Inverter Gate	ECL2504	4-1
Quadruple 2-Input OR Gate (Common Base)	ECL2511	4-1
4-Wide 2-Input OR-AND/NOR-OR Gate	ECL2509	4-13
4-Wide 3-Input NOR-OR Gate	ECL2506	4-13
4-Wide 3-3-2-Input OR-AND/NOR-OR Gate	ECL2510	4-13
5-Wide 2-Input NOR-OR Gate	ECL2507	4-13
6-Wide 2-Input NOR-OR Gate	ECL2508	4-13
Dual 2-Wide 2-Input OR-AND/NOR-OR Gate (Common Input)	ECL2513	4-13
Dual 3-Wide 2-Input NOR-OR Gate (Common Inputs)	ECL2512	4-13
ARITHMETIC AND DECODER MODULES		
4-Bit Group Carry	ECL2515	4-33
Full Sum-Carry Adder	ECL2516	4-33
3-Bit Decoder with Enable	ECL2517	4-45
MULTI-OUTPUT GATES (DRIVERS)		
Dual 2-Input OR/NOR Gate (3 OR Outputs per Gate, 1 NOR Output per Gate)	ECL2520	4-53
Dual 3-Input OR Gate (3 OR Outputs per Gate)	ECL2521	4-53
Dual 3-Input NOR Gate (3 NOR Outputs per Gate)	ECL2523	4-53
Dual 4-Input NOR Gate (2 NOR Outputs per Gate)	ECL2522	4-53
LINE RECEIVERS/DRIVERS		
Dual Differential-Amplifier Receiver	ECL2530	4-65
Dual Line Driver	ECL2531	4-65
CONVERTERS		
Dual HLL-to-ECL OR/NOR	ECL2536	4-73
Dual ECL-to-HLL OR/NOR	ECL2537	4-73
STORAGE (LATCHES)		
Dual D-Type Latch	ECL2540	4-85
Dual Single-Input Gated Clocked Latch	ECL2541	4-85
Dual 2-Input Gated Clocked Latch	ECL2542	4-85

B

SERIES 54S/74S CIRCUITS

FUNCTIONAL INDEX

SERIES 54S/74S

FEATURING 3-ns SPEED AND 20-mW-PER-GATE PERFORMANCE
SMALL SCALE INTEGRATION (SSI)

B

FUNCTION	OPERATING TEMPERATURE RANGE		PACKAGES*			
	-55°C to 125°C	0°C to 70°C	Dual-In-Line	Flat	PAGE	
NAND/NOR GATES						
Quadruple 2-Input Positive-NAND Gates	SN54S00	SN74S00	J	N	W	5-4
Quadruple 2-Input Positive-NAND Gates (with Open-Collector Output)	SN54S03	SN74S03	J	N	W	5-8
Hex Inverters	SN54S04	SN74S04	J	N	W	5-4
Hex Inverters (with Open-Collector Output)	SN54S05	SN74S05	J	N	W	5-8
Triple 3-Input Positive-NAND Gates	SN54S10	SN74S10	J	N	W	5-4
Triple 3-Input Positive-AND Gates	SN54S11	SN74S11	J	N	W	5-10
Triple 3-Input Position-AND Gates (with Open-Collector Output)	SN54S15	SN74S15	J	N	W	5-10
Dual 4-Input Positive-NAND Gates	SN54S20	SN74S20	J	N	W	5-4
Dual 4-Input Positive-NAND Gates (with Open-Collector Output)	SN54S22	SN74S22	J	N	W	5-8
Dual 4-Input Positive-NAND Buffers	SN54S40	SN74S40	J	N	W	5-12
Dual 4-Input Positive-NAND Line Drivers	SN54S140	SN74S140	J	N	W	5-12
AND-OR-INVERT GATES						
4-2-3-2-Input AND-OR-INVERT Gates	SN54S64	SN74S64	J	N	W	5-13
4-2-3-2-Input AND-OR-INVERT Gates (with Open-Collector Output)	SN54S65	SN74S65	J	N	W	5-13
FLIP-FLOPS						
Dual D-Type Edge-Triggered Flip-Flops	SN54S74	SN74S74	J	N	W	5-15
Dual J-K Negative Edge-Triggered Flip-Flops (80 MHz) with Preset and Clear	SN54S112	SN74S112	J	N	W	5-17
Dual J-K Negative Edge-Triggered Flip-Flops (80 MHz) with Preset	SN54S113	SN74S113	J	N	W	5-21
Dual J-K Negative Edge-Triggered Flip-Flops (80 MHz) Common Clock and Common Clear	SN54S114	SN74S114	J	N	W	5-21

* For outline drawings of all packages, see Section 1.

SERIES 54/74 CIRCUITS FUNCTIONAL INDEX

SERIES 54/74
FEATURING 10 ns SPEED AND 10 mW PER GATE PERFORMANCE
SMALL SCALE INTEGRATION (SSI)

B

FUNCTION	OPERATING TEMPERATURE RANGES		PACKAGES*			SEC.-PAGE
	-55°C to 125°C	0°C to 70°C	Dual-In-			
			Line	Flat		
NAND/NOR/AND/OR GATES AND BUFFERS						
Quadruple 2-Input Positive NAND Gates	SN5400	SN7400	J	N	W	6-5
Quadruple 2-Input Positive NAND Gates (with Open-Collector Output)	SN5401	SN7401	J	N	W	6-6
Quadruple 2-Input Positive NOR Gates	SN5402	SN7402	J	N	W	6-9
Quadruple 2-Input Positive NAND Gates (with Open-Collector Output)	SN5403	SN7403	J	N		6-10
Hex Inverters	SN5404	SN7404	J	N	W	6-11
Hex Inverters (with Open-Collector Output)	SN5405	SN7405	J	N	W	6-12
Hex Inverter Buffers/Drivers (with Open-Collector High-Voltage Output)	SN5406	SN7406	J	N	W	6-13
Hex Buffers/Drivers (with Open-Collector High-Voltage Output)	SN5407	SN7407	J	N	W	6-15
Quadruple 2-Input Positive AND Gates	SN5408	SN7408	J	N	W	6-17
Quadruple 2-Input Positive AND Gates	SN5409	SN7409	J	N	W	6-17
Triple 3-Input Positive NAND Gates	SN5410	SN7410	J	N	W	6-20
Triple 3-Input Positive NAND Gates (with Open-Collector Output)	SN5412	SN7412	J	N	W	6-21
Dual NAND Schmitt Triggers	SN5413	SN7413	J	N	W	6-22
Hex Inverter Buffers/Drivers (with Open-Collector High-Voltage Output)	SN5416	SN7416	J	N	W	6-13
Hex Buffers/Drivers (with Open-Collector High-Voltage Output)	SN5417	SN7417	J	N	W	6-15
Dual 4-Input Positive NAND Gates	SN5420	SN7420	J	N	W	6-26
Expandable Dual 4-Input Positive NOR Gates (with Strobe)	SN5423	SN7423	J	N	W	6-27
Dual 4-Input Positive NOR Gates	SN5425	SN7425	J	N	W	6-27
Quadruple 2-Input High-Voltage Interface NAND Gates	SN5426	SN7426	J	N		6-30
Triple 3-Input Positive NOR Gates	SN5427	SN7427	J	N	W	6-32
8-Input Positive NAND Gates	SN5430	SN7430	J	N	W	6-34
Quadruple 2-Input Positive OR Gates	SN5432	SN7432	J	N	W	6-35
Quadruple 2-Input Positive NAND Buffers	SN5437	SN7437	J	N	W	6-37
Quadruple 2-Input Positive NAND Buffers (with Open-Collector Output)	SN5438	SN7438	J	N	W	6-37
Dual 4-Input Positive NAND Buffers	SN5440	SN7440	J	N	W	6-39

*For outline drawings of all packages, see Section 1.

SERIES 54/74 CIRCUITS FUNCTIONAL INDEX

B

SERIES 54/74 FEATURING 10 ns SPEED AND 10 mW PER GATE PERFORMANCE SMALL SCALE INTEGRATION (SSI)

FUNCTION	OPERATING TEMPERATURE RANGES		PACKAGES*			SEC. PAGE
	-55°C to 125°C	0°C to 70°C	Line	Flat		
AND-OR-INVERT GATES						
Expandable Dual 2-Wide 2-Input AND-OR-INVERT Gates	SN5450	SN7450	J	N	W	6-40
Dual 2-Wide 2-Input AND-OR-INVERT Gates	SN5451	SN7451	J	N	W	6-40
Expandable 4-Wide 2-Input AND-OR-INVERT Gates	SN5453	SN7453	J	N	W	6-42
4-Wide 2-Input AND-OR-INVERT Gates	SN5454	SN7454	J	N	W	6-42
EXPANDERS						
Dual 4-Input Expander	SN5460		J	N	W	6-44
Dual 4-Input Expander		SN7460	J	N	W	6-45
FLIP-FLOPS						
Positive Edge-Triggered J-K Flip-Flops (AND Inputs)	SN5470	SN7470	J	N	W	6-46
J-K Master-Slave Flip-Flops (AND Inputs)	SN5472	SN7472	J	N	W	6-49
Dual J-K Master-Slave Flip-Flops	SN5473	SN7473	J	N	W	6-52
Dual D-Type Edge-Triggered Flip-Flops	SN5474	SN7474	J	N	W	6-55
Dual J-K Master-Slave Flip-Flops with Preset and Clear	SN5476	SN7476	J	N	W	6-58
Gated J-K Master-Slave Flip-Flops	SN54104	SN74104	J	N	W	6-61
Gated J-K Master-Slave Flip-Flops	SN54105	SN74105	J	N	W	6-61
Dual J-K Master-Slave Flip-Flops (V _{CC} -14, Gnd-7)	SN54107	SN74107	J	N		6-52
Gated J-K Master-Slave Flip-Flops with Data Lockout	SN54110	SN74110	J	N	W	6-66
Dual J-K Master-Slave Flip-Flops with Data Lockout	SN54111	SN74111	J	N	W	6-69
Monostable Multivibrators	SN54121	SN74121	J	N	W	6-72
Retriggerable Monostable Multivibrators with Clear	SN54122	SN74122	J	N	W	6-79
Dual Retriggerable Monostable Multivibrators with Clear	SN54123	SN74123	J	N	W	6-79

*For outline drawings of all packages, see Section 1.

SERIES 54H/74H CIRCUITS FUNCTIONAL INDEX

SERIES 54H/74H
FEATURING 6 ns SPEED AND 22 mW PER GATE PERFORMANCE
SMALL SCALE INTEGRATION (SSI)

B

FUNCTION	OPERATING TEMPERATURE		PACKAGES*			SEC.-PAGE
	RANGE		Dual-In-			
	-55° C to 125° C	0° C to 70° C	Line	Flat		
NAND/NOR GATES						
Quadruple 2-Input Positive NAND Gates	SN54H00	SN74H00	J	N	W	7-5
Quadruple 2-Input Positive NAND Gates (with Open-Collector Output)	SN54H01	SN74H01	J	N	W	7-6
Hex Inverters	SN54H04	SN74H04	J	N	W	7-9
Hex Inverters (with Open-Collector Output)	SN54H05	SN74H05	J	N	W	7-10
Triple 3-Input Positive NAND Gates	SN54H10	SN74H10	J	N	W	7-11
Triple 3-Input Positive AND Gates	SN54H11	SN74H11	J	N	W	7-12
Dual 4-Input Positive NAND Gates	SN54H20	SN74H20	J	N	W	7-13
Dual 4-Input Positive AND Gates	SN54H21	SN74H21	J	N	W	7-14
Dual 4-Input Positive NAND Gates (with Open-Collector Output)	SN54H22	SN74H22	J	N	W	7-15
8-Input Positive NAND Gates	SN54H30	SN74H30	J	N	W	7-16
Dual 4-Input Positive NAND Buffers	SN54H40	SN74H40	J	N	W	7-17
AND-OR/AND-OR-INVERT GATES						
Expandable Dual 2-Wide 2-Input AND-OR-INVERT Gates	SN54H50	SN74H50	J	N	W	7-18
Dual 2-Wide 2-Input AND-OR-INVERT Gates	SN54H51	SN74H51	J	N	W	7-18
Expandable 2-2-2-3-Input AND-OR Gates	SN54H52	SN74H52	J	N	W	7-20
Expandable 2-2-2-3-Input AND-OR-INVERT Gates	SN54H53	SN74H53	J	N	W	7-22
4-Wide 2-Input AND-OR-INVERT Gates	SN54H54	SN74H54	J	N	W	7-22
Expandable 2-Wide 4-Input AND-OR-INVERT Gates	SN54H55	SN74H55	J	N	W	7-24
EXPANDERS						
Dual 4-Input Expander	SN54H60		J	N	W	7-26
Dual 4-Input Expander		SN74H60	J	N	W	7-27
Triple 3-Input Expanders	SN54H61	SN74H61	J	N	W	7-28
3-2-2-3-Input AND-OR Expander	SN54H62		J	N	W	7-29
3-2-2-3-Input Expander		SN74H62	J	N	W	7-30

*For outline drawings of all packages, see Section 1.

SERIES 54H/74H CIRCUITS

FUNCTIONAL INDEX

B

SERIES 54H/74H
FEATURING 6 ns SPEED AND 22 mW PER GATE PERFORMANCE
SMALL SCALE INTEGRATION (SSI)

FUNCTION	OPERATING TEMPERATURE RANGE		PACKAGES*			SEC. PAGE
	-55°C to 125°C	0°C to 70°C	Line	Flat		
FLIP-FLOPS						
J-K Master-Slave Flip-Flops (AND-OR Inputs)	SN54H71	SN74H71	J	N	W	7-31
J-K Master-Slave Flip-Flops (AND Inputs)	SN54H72	SN74H72	J	N	W	7-34
Dual J-K Master-Slave Flip-Flops	SN54H73	SN74H73	J	N	W	7-37
Dual D-Type Edge-Triggered Flip-Flops	SN54H74	SN74H74	J	N	W	7-40
Dual J-K Master-Slave Flip-Flops with Preset and Clear	SN54H76	SN74H76	J	N	W	7-44
Dual J-K Master-Slave Flip-Flops (Common Clock)	SN54H78	SN74H78	J	N	W	7-47
J-K Negative Edge-Triggered Flip-Flops with AND-OR Inputs (50 MHz)	SN54H101	SN74H101	J	N	W	7-50
J-K Negative Edge-Triggered Flip-Flops with AND Inputs (50 MHz)	SN54H102	SN74H102	J	N	W	7-53
Dual J-K Negative Edge-Triggered Flip-Flops (50 MHz)	SN54H103	SN74H103	J	N	W	7-56
Dual J-K Negative Edge-Triggered Flip-Flops (50 MHz) with Preset and Clear	SN54H106	SN74H106	J	N	W	7-59
Dual J-K Negative Edge-Triggered Flip-Flops (50 MHz) (Common Clock)	SN54H108	SN74H108	J	N	W	7-62

*For outline drawings of all packages, see Section 1.

SERIES 54L/74L CIRCUITS FUNCTIONAL INDEX

SERIES 54L/74L FEATURING 1 mW AND 33 ns PER GATE PERFORMANCE SMALL SCALE INTEGRATION (SSI)

B

FUNCTION	OPERATING TEMPERATURE		PACKAGES*			
	RANGE		Dual-In-		SEC. PAGE	
	-55°C to 125°C	0°C to 70°C	Line	Flat		
NAND/NOR GATES						
Quadruple 2-Input Positive NAND Gates	SN54L00	SN74L00	J	N	T	8-4
Quadruple 2-Input Positive NAND Gates (with Open-Collector Output)	SN54L01	SN74L01	J	N	T	8-5
Quadruple 2-Input Positive NOR Gates	SN54L02	SN74L02	J	N	T	8-6
Quadruple 2-Input Positive NAND Gates (with Open-Collector Output)	SN54L03	SN74L03	J	N	T	8-5
Hex Inverters	SN54L04	SN74L04	J	N	T	8-9
Triple 3-Input Positive NAND Gates	SN54L10	SN74L10	J	N	T	8-10
Dual 4-Input Positive NAND Gates	SN54L20	SN74L20	J	N	T	8-11
8-Input Positive NAND Gates	SN54L30	SN74L30	J	N	T	8-12
AND-OR-INVERT GATES						
Dual 2-Wide AND-OR-INVERT Gates	SN54L51	SN74L51	J	N	T	8-13
4-Wide 3-2-2-3-Input AND-OR-INVERT Gates	SN54L54	SN74L54	J	N	T	8-14
2-Wide 4-Input AND-OR-INVERT Gates	SN54L55	SN74L55	J	N	T	8-15
FLIP-FLOPS						
R-S Master-Slave Flip-Flops	SN54L71	SN54L71	J	N	T	8-16
J-K Master-Slave Flip-Flops	SN54L72	SN74L72	J	N	T	8-19
Dual J-K Master-Slave Flip-Flops	SN54L73	SN74L73	J	N	T	8-22
Dual D-Type Edge-Triggered Flip-Flops	SN54L74	SN74L74	J	N	T	8-25
Dual J-K Master-Slave Flip-Flops (Common Clock)	SN54L78	SN74L78	J	N	T	8-28
Retriggerable Monostable Multivibrators with Clear	SN54L122	SN74L122	J	N	T	8-31

*For outline drawings of all packages, see Section 1.

TTL MSI CIRCUITS FUNCTIONAL INDEX

TTL MEDIUM SCALE INTEGRATION (MSI)

B

FUNCTION	OPERATING TEMPERATURE RANGE		PACKAGES*			SEC.-PAGE
	-55°C to 125°C	0°C to 70°C	Dual-In-Line	Flat		
ASYNCHRONOUS COUNTERS						
Decade Counters	SN5490	SN7490	J	N	W	9-4
Decade Counters (Low Power)	SN54L90	SN74L90	J	N	T	9-9
Divide-by-Twelve Counters	SN5492	SN7492	J	N	W	9-14
4-Bit Binary Counters	SN5493	SN7493	J	N	W	9-19
4-Bit Binary Counters (Low Power)	SN54L93	SN74L93	J	N	T	9-24
50-MHz Preset Table Decade Counters/Latches	SN54196	SN74196	J	N	W	9-29
50-MHz Preset Table 4-Bit Binary Counters/Latches	SN54197	SN74197	J	N	W	9-29
SYNCHRONOUS COUNTERS						
Synchronous 6-Bit Binary Rate Multiplier		SN7497	J	N	W	9-35
Synchronous Decade Counters	SN54160	SN74160	J	N	W	9-41
Synchronous 4-Bit Binary Counters	SN54161	SN74161	J	N	W	9-41
Fully Synchronous Decade Counters	SN54162	SN74162	J	N	W	9-41
Fully Synchronous 4-Bit Binary Counters	SN54163	SN74163	J	N	W	9-41
Synchronous Decade Decimal Rate Multiplier		SN74167	J	N	W	9-35
Synchronous Up/Down Decade Counters (Single Clock Line)	SN54190	SN74190	J	N	W	9-49
Synchronous Up/Down 4-Bit Binary Counters (Single Clock Line)	SN54191	SN74191	J	N	W	9-49
Synchronous Up/Down Decade Counters (Two Clock Lines)	SN54192	SN74192	J	N	W	9-57
Synchronous Up/Down 4-Bit Binary Counters (Two Clock Lines)	SN54193	SN74193	J	N	W	9-57
4-BIT, 5-BIT, 6-BIT SHIFT/STORAGE REGISTERS						
4-Bit Shift Registers (Parallel-In, Serial-Out)	SN5494	SN7494	J	N	W	9-58
4-Bit Universal Shift Registers (Parallel-In, Parallel-Out)	SN5495A	SN7495A	J	N	W	9-72
4-Bit Universal Shift Registers (Parallel-In, Parallel-Out) (Low Power)	SN54L95	SN74L95	J	N	T	9-79
5-Bit Shift Registers (Dual-Parallel-In, Parallel-Out)	SN5496	SN7496	J	N	W	9-86
4-Bit Data Selectors/Storage Registers (Low Power)	SN54L98	SN74L98	J	N		9-90
4-Bit Right-Shift Registers with J, K, and D (Low Power)	SN54L99	SN74L99	J	N		9-96
4-Bit Parallel-In, Parallel-Out Bidirectional Shift Registers	SN54194	SN74194	J	N	W	9-104
4-Bit Parallel-In, Parallel-Out Shift Register (J-K Inputs to First Stage)	SN54195	SN74195	J	N	W	9-108

*For outline drawings of all packages, see Section 1.

TTL MSI CIRCUITS FUNCTIONAL INDEX

TTL MEDIUM SCALE INTEGRATION (MSI)

B

FUNCTION	OPERATING TEMPERATURE RANGE		PACKAGES*			SEC.-PAGE
	-55°C to 125°C	0°C to 70°C	Dual-In-			
			Line	Flat		
8-BIT SHIFT REGISTERS						
8-Bit Shift Registers	SN5491A	SN7491A	J	N	W	9-112
8-Bit Shift Registers (Low Power)	SN54L91	SN74L91	J	N	T	9-117
8-Bit Parallel-Out Shift Registers	SN54164	SN74164	J	N	W	9-122
8-Bit Parallel-Out Shift Registers (Low Power)	SN54L164	SN74L164	J	N	T	9-126
Parallel-Load 8-Bit Shift Registers	SN54165	SN74165	J	N	W	9-130
Parallel-Load 8-Bit Shift Registers	SN54166	SN74166	J	N	W	9-134
8-Bit Parallel-In, Parallel-Out Bidirectional Shift Registers	SN54198	SN74198	J	N	W	9-134
8-Bit Parallel-In, Parallel-Out Shift Registers (J-K Inputs to First Stage)	SN54199	SN74199	J	N	W	9-134
CODE CONVERTERS						
BCD-to-Binary Converters	SN54184	SN74184	J	N	W	9-142
Binary-to-BCD Converters	SN54185A	SN74185A	J	N	W	9-142
DECODERS/DEMULTIPLEXERS						
BCD-to-Decimal Decoders	SN5442	SN7442	J	N	W	9-148
BCD-to-Decimal Decoders (Low Power)	SN54L42	SN74L42	J	N		9-154
Excess-3-to-Decimal Decoders	SN5443	SN7443	J	N	W	9-148
Excess-3-to-Decimal Decoders (Low Power)	SN54L43	SN74L43	J	N		9-154
Excess-3-Gray-to-Decimal Decoders	SN5444	SN7444	J	N	W	9-148
Excess-3-Gray-to-Decimal Decoders (Low Power)	SN54L44	SN74L44	J	N	W	9-154
4-Line-to-16-Line (1 of 16) Decoders/Demultiplexers	SN54154	SN74154	J	N	W	9-160
Dual 2-Line-to-4-Line Decoders/Demultiplexers	SN54155	SN74155	J	N	W	9-167
Dual 2-Line-to-4-Line Decoders/Demultiplexers (with Open-Collector Output)	SN54156	SN74156	J	N	W	9-167
DECODERS/LAMP DRIVERS/BUFFERS						
BCD-to-Decimal Decoders/Drivers with 30-V Output	SN5445	SN7445	J	N	W	9-175
BCD-to-Decimal Decoders/Drivers with 15-V Output	SN54145	SN74145	J	N	W	9-175
BCD-to-Seven-Segment Decoders/Drivers with 30-V Output	SN5446A	SN7446A	J	N	W	9-181
BCD-to-Seven-Segment Decoders/Drivers with 30-V Output (Low Power)	SN54L46	SN74L46	J	N		9-198
BCD-to-Seven-Segment Decoders/Drivers with 15-V Output	SN5447A	SN7447A	J	N	W	9-181
BCD-to-Seven-Segment Decoders/Drivers with 15-V Output (Low Power)	SN54L47	SN74L47	J	N		9-198
BCD-to-Seven-Segment Decoders	SN5448	SN7448	J	N	W	9-181
BCD-to-Seven-Segment Decoders (14-pin Function)	SN5449	SN7449	J	N	W	9-181
BCD-to-Decimal Decoder/Driver		SN74141	J	N	W	9-208

* For outline drawings of all packages, see Section 1.

TTL MSI CIRCUITS FUNCTIONAL INDEX

TTL MEDIUM SCALE INTEGRATION (MSI)

B

FUNCTION	OPERATING TEMPERATURE		PACKAGES*			SEC. PAGE
	RANGE		Dual-In-			
	-55°C to 125°C	0°C to 70°C	Line	Flat		
LATCHES						
Quadruple Bistable Latches	SN5475	SN7475	J	N	W	9-213
Quadruple Bistable Latches (14-pin Function)	SN5477	SN7477			W	9-213
8-Bit Bistable Latches	SN54100	SN74100	J	N	W	9-213
MEMORIES						
16-Bit Random-Access Memories (16W by 1B)	SN5481	SN7481	J	N	W	9-221
16-Bit Random-Access Memories with Gated Write Inputs (16W by 1B)	SN5484	SN7484	J	N	W	9-221
64-Bit Random-Access Memory (16W by 4B)		SN7489	J	N	W	9-230
256-Bit Read-Only Memories (32W by 8B)	SN5488A	SN7488A		N		9-235
1024-Bit Read-Only Memories (256W by 4B)	SN54187	SN74187	J	N	W	9-244
4-By-4 Register Files	SN54170	SN74170	J	N	W	9-248
ARITHMETIC ELEMENTS						
Gated Full Adders	SN5480	SN7480	J	N	W	9-255
2-Bit Binary Full Adders	SN5482	SN7482	J	N	W	9-264
4-Bit Binary Full Adders	SN5483	SN7483	J	N	W	9-271
4-Bit Binary Full Adders (Low-Power Schottky)	SN54LS83	SN74LS83	J	N		9-279
4-Bit Magnitude Comparators	SN5485	SN7485	J	N	W	9-286
4-Bit Magnitude Comparators (Low Power)	SN54L85	SN74L85	J	N		9-289
Quadruple 2-Input Exclusive-OR Gates	SN5486	SN7486	J	N	W	9-296
Quadruple 2-Input Exclusive-OR Gates (Low Power)	SN54L86	SN74L86	J	N	T	9-300
4-Bit True/Complement Zero-One Elements	SN54H87	SN74H87	J	N	W	9-304
8-Bit Odd/Even Parity Generators/Checkers	SN54180	SN74180	J	N	W	9-309
4-Bit Arithmetic Logic Unit (ALU) and Function Generators	SN54181	SN74181	J	N	W	9-315
Look-Ahead Carry Generators (for ALU)	SN54182	SN74182	J	N	W	9-326
Dual Carry-Save Full Adders	SN54H183	SN74H183	J	N	W	9-332
DATA SELECTORS/MULTIPLEXERS						
16-Bit Data Selectors/Multiplexers	SN54150	SN74150	J	N	W	9-339
8-Bit Data Selectors/Multiplexers with Strobe	SN54151	SN74151	J	N	W	9-339
8-Bit Data Selectors/Multiplexers	SN54152	SN74152			W	9-339
Dual 4-Line-to-1-Line Data Selectors/Multiplexers	SN54153	SN74153	J	N	W	9-351
Dual 4-Line-to-1-Line Data Selectors/Multiplexers (Low Power)	SN54L153	SN74L153	J	N		9-358
LOGIC DIODE MATRICES						
Series T1DM1, T1DM2 Monolithic Diode Matrices			J		F, W	9-365

* For outline drawings of all packages, see Section 1.

RADIATION HARDENED CIRCUITS FUNCTIONAL INDEX

B

FUNCTION	TYPE NO.	PACKAGE	SEC.-PAGE
LINEAR CIRCUITS			
High-Performance Operational Amplifier	RSN52709	H	10-58
Threshold Detector	RSN55909	H	10-55
Dual-Channel Switched Preamplifier	RSN55910	H	10-55
D-C Coupled 4-Channel Sense Amplifier	RSN55920	H	10-55
TTL CIRCUITS			
Quadruple 2-Input Positive-NAND Gates	RSN5400	H	10-6
	RSN54H00	H	10-6
	RSN54L00	H	10-32
Hex Inverters	RSN5404	H	10-8
	RSN54H04	H	10-8
Triple 3-Input Positive-NAND Gates	RSN5410	H	10-6
	RSN54H10	H	10-6
	RSN54L10	H	10-32
Dual 4-Input Positive-NAND Gates	RSN5420	H	10-6
	RSN54H20	H	10-6
	RSN54L20	H	10-32
11-Input Positive-NAND Gates	RSN5431	H	10-6
	RSN54H31	H	10-6
Dual 4-Input Positive-NAND Buffers	RSN5440	H	10-9
	RSN54H40	H	10-9
2-Wide 3-Input, 2-Wide 2-Input, Dual AND-OR-INVERT Gates	RSN5456	H	10-10
	RSN54H56	H	10-10
3-3-2-3-Input AND-OR-INVERT Gates	RSN5457	H	10-10
	RSN54H57	H	10-10
3-3-3-2-Input AND-OR-INVERT Gate	RSN54L57	H	10-34
2-Wide 4-Input AND-OR-INVERT Gates	RSN5458	H	10-10
	RSN54H58	H	10-10
R-S Master-Slave Flip-Flop	RSN54L71	H	10-35
J-K Master-Slave Flip-Flop	RSN54L72	H	10-38
Dual D-Type Edge-Triggered Flip-Flops	RSN5474	H	10-12
	RSN54H74	H	10-12
	RSN54L74	H	10-41
Dual J-K Edge-Triggered Flip-Flop	RSN54H103	H	10-15
Dual 3-Input Positive-NAND Gate	RSN54L130	H	10-32
Dual Expandable 3-Input Positive-NAND Gate	RSN54L131	H	10-32
DTL CIRCUITS			
Expandable Dual 4-Input NAND Gate	RSN15930	H	10-57
Expandable Dual 4-Input NAND Buffer Gate	RSN15932	H	10-57
Expandable Dual 4-Input NAND Power Gate	RSN15944	H	10-57
J-K/S-R Flip-Flop	RSN15945	H	10-57
Triple 3-Input NAND Gate	RSN15962	H	10-57
DIODE ARRAYS			
7-Diode Array	RSN14925	H	10-57
16-Diode Array	RSN14097	H	10-57

DTL CIRCUITS FUNCTIONAL INDEX

B

Function	Operating Temperature		Packages*		
	Ranges		Dual-In-		
	-55°C to 125°C	0°C to 75°C	Line	Flat	
GATES WITH 6-kΩ PULL-UP RESISTORS					
Expandable Dual 4-Input NAND Gates	SN15930	SN15830	J	N	U
Quadruple 2-Input NAND Gates	SN15946	SN15846	J	N	U
Triple 3-Input NAND Gates	SN15962	SN15862	J	N	U
Dual 5-Input NAND Gates	SN151900	SN151800	J	N	U
Expandable 8-Input NAND Gates	SN151902	SN151802	J	N	U
10-Input NAND Gates	SN151904	SN151804	J	N	U
Quadruple 2-Input AND Gates	SN151906	SN151806	J	N	U
Quadruple 2-Input OR Gates	SN151908	SN151808	J	N	U
Quadruple 2-Input NOR Gates	SN151910	SN151810	J	N	U
Quadruple 2-Input Exclusive-OR Gates	SN151912	SN151812	J	N	U
GATES WITH 2-kΩ PULL-UP RESISTORS					
Quadruple 2-Input NAND Gates	SN15949	SN15849	J	N	U
Expandable Dual 4-Input NAND Gates	SN15961	SN15861	J	N	U
Triple 3-Input NAND Gates	SN15963	SN15863	J	N	U
Dual 5-Input NAND Gates	SN151901	SN151801	J	N	U
Expandable 8-Input NAND Gates	SN151903	SN151803	J	N	U
10-Input NAND Gates	SN151905	SN151805	J	N	U
Quadruple 2-Input AND Gates	SN151907	SN151807	J	N	U
Quadruple 2-Input OR Gates	SN151909	SN151809	J	N	U
Quadruple 2-Input NOR Gates	SN151911	SN151811	J	N	U
POWER/BUFFER GATES					
Expandable Dual 4-Input NAND Buffer Gates	SN15932	SN15832	J	N	U
Expandable Dual 4-Input NAND Power Gates	SN15944	SN15844	J	N	U
Quadruple 2-Input NAND Buffer Gates	SN15957	SN15857	J	N	U
Quadruple 2-Input NAND Power Gates	SN15958	SN15858	J	N	U
HEX INVERTERS					
6-kΩ Pull-Up Resistors	SN15934	SN15834	J	N	U
Expandable (Open-Base) or Translator Inputs	SN15935	SN15835	J	N	U
6-kΩ Pull-Up Resistors	SN15936	SN15836	J	N	U
2-kΩ Pull-Up Resistors	SN15937	SN15837	J	N	U
Open-Collector Outputs	SN15938	SN15838	J	N	U
EXPANDERS					
Dual 4-Input Expanders	SN15933	SN15833	J	N	U
FLIP-FLOPS					
Gated J-K/R-S (6-kΩ Pull-Up Resistors)	SN15931	SN15831	J	N	U
Gated J-K/R-S (6-kΩ Pull-Up Resistors)	SN15945	SN15845	J	N	U
Gated J-K/R-S (2-kΩ Pull-Up Resistors)	SN15948	SN15848	J	N	U
Pulse-Triggered Binary (Active Pull-Up)	SN15950	SN15850	J	N	U
Dual J-K, Individual Clocks and Presets (6-kΩ Pull-Up Resistors)	SN159093	SN158093	J	N	U
Dual J-K, Individual Clocks and Presets (2-kΩ Pull-Up Resistors)	SN159094	SN158094	J	N	U
Dual J-K, Common Clocks and Clears (2-kΩ Pull-Up Resistors)	SN159097	SN158097	J	N	U
Dual J-K, Common Clocks and Clears (6-kΩ Pull-Up Resistors)	SN159099	SN158099	J	N	U
MONOSTABLE MULTIVIBRATORS					
Gated, Negative-Edge-Triggered	SN15951	SN15851	J	N	U

*For outline drawings of all packages, see Section 1.

SERIES SNF/SNG CIRCUITS FUNCTIONAL INDEX

FUNCTIONS	OPERATING TEMPERATURE RANGE -55°C to 125°C		OPERATING TEMPERATURE RANGE 0°C to 75°C		PACKAGES [†]		
	FAN-OUT	FAN-OUT	FAN-OUT	FAN-OUT	Dual-In-Line	Flat	
Dual 4-Input NAND Gates	SNG40 SNG41	15 7	SNG42 SNG43	12 6	J	N	U
Expandable 2-2-2-3-Input AND-OR-INVERT Gates	SNG50 SNG51	15 7	SNG52 SNG53	12 6	J	N	U
8-Input NAND Gates	SNG60 SNG61	15 7	SNG62 SNG63	12 6	J	N	U
Expandable Dual 2-Wide 2-Input AND-OR-INVERT Gates	SNG70 SNG71	15 7	SNG72 SNG73	12 6	J	N	U
Dual Pulse Shaper/Delay AND Gates	SNG80 SNG81	15 7	SNG82 SNG83	12 6	J	N	U
2-Wide 3-Input AND-OR-INVERT Gates with 2-Input Gated Complement	SNG90 SNG91	15 7	SNG92 SNG93	12 6	J	N	U
Expandable 3-Wide 3-Input AND-OR-INVERT Gates	SNG100 SNG101	15 7	SNG102 SNG103	12 6	J	N	U
Expandable 2-Wide 4-Input AND-OR-INVERT Gates	SNG110 SNG111	15 7	SNG112 SNG113	12 6	J	N	U
Expandable 8-Input NAND Gates	SNG120 SNG121	15 7	SNG122 SNG123	12 6	J	N	U
Dual 4-Input Line Drivers	SNG130 SNG131	30 15	SNG132 SNG133	24 12	J	N	U
Quadruple 2-Input NAND Gates	SNG140 SNG141	15 7	SNG142 SNG143	12 6	J	N	U
3-2-2-3-Input Expanders for AND-OR-INVERT Gates	SNG150 SNG151		SNG152 SNG153		J	N	U
Triple 2-Input NAND Drivers	SNG160 SNG161	15 7	SNG162 SNG163	12 6	J	N	U
Dual 4-Input Expanders for AND-OR-INVERT Gates	SNG170 SNG171		SNG172 SNG173		J	N	U
Dual 4-Input Expanders for NAND Gates	SNG180 SNG181		SNG182 SNG183		J	N	U
Triple 3-Input NAND Gates	SNG190 SNG191	15 7	SNG192 SNG193	12 6	J	N	U
Expandable 8-Input NAND Gates	SNG200 SNG201	11 6	SNG202 SNG203	9 5	J	N	U
Expandable 2-Wide 4-Input AND-OR-INVERT Gates	SNG210 SNG211	11 6	SNG212 SNG213	9 5	J	N	U
Quadruple 2-Input NAND Gates	SNG220 SNG221	11 6	SNG222 SNG223	9 5	J	N	U
3-2-2-3-Input Expanders for AND-OR-INVERT Gates	SNG230 SNG231		SNG232 SNG233		J	N	U
Dual 4-Input NAND Gates	SNG240 SNG241	11 6	SNG242 SNG243	9 5	J	N	U
Expandable 2-2-2-3-Input AND-OR-INVERT Gates	SNG250 SNG251	11 6	SNG252 SNG253	9 5	J	N	U
8-Input NAND Gates	SNG260 SNG261	11 6	SNG262 SNG263	9 5	J	N	U
Dual 4-Input Expanders for AND-OR-INVERT Gates	SNG270 SNG271		SNG272 SNG273		J	N	U
OR-Expandable Dual 4-Input AND Gates	SNG280 SNG281	15 7	SNG282 SNG283	12 6	J	N	U
Dual 2-3-Input Expanders for OR Expandable AND Gates	SNG290 SNG291		SNG292 SNG293		J	N	U
Expandable 3-Wide 3-Input AND-OR-INVERT Gates	SNG300 SNG301	11 6	SNG302 SNG303	9 5	J	N	U
Expandable Dual 2-Wide 2-Input AND-OR-INVERT Gates	SNG310 SNG311	11 6	SNG312 SNG313	9 5	J	N	U
Triple 3-Input NAND Gates	SNG320 SNG321	11 6	SNG322 SNG323	9 5	J	N	U
Quadruple 2-Input NAND Lamp/Line Drivers	SNG351	30	SNG353	24	J	N	U

B

MOS/LSI CIRCUITS FUNCTIONAL INDEX

B

INTRODUCTION	14-5
MOS/LSI NUMBERING SYSTEM	14-6
MOS/LSI PACKAGING	14-7
MOS/LSI SYSTEM COMPATIBILITY	14-16
SHIFT REGISTERS	14-20
TMS 3000 LR—DUAL 25-BIT STATIC SHIFT REGISTER	
TMS 3001 LR—DUAL 32-BIT STATIC SHIFT REGISTER	14-29
TMS 3002 LR—DUAL 50-BIT SHIFT REGISTER	
TMS 3003 LR—DUAL 100-BIT SHIFT REGISTER	14-35
TMS 3012 JC, NC—DUAL 128-BIT ACCUMULATOR	
TMS 3028 LC—DUAL 128-BIT SHIFT REGISTER	14-41
TMS 3016 LR—DUAL 16-BIT STATIC SHIFT REGISTER	14-45
TMS 3101 LC, NC—DUAL 100-BIT STATIC SHIFT REGISTER	
TMS 3102 LC, NC—DUAL 80-BIT STATIC SHIFT REGISTER	
TMS 3103 LC, NC—DUAL 64-BIT STATIC SHIFT REGISTER	14-51
TMS 3112 JC, TMS 3112 NC—HEX 32-BIT STATIC SHIFT REGISTER	14-56
TMS 3113 JC, NC—DUAL 133-BIT STATIC ACCUMULATOR	
TMS 3114 JC, NC—DUAL 128-BIT STATIC ACCUMULATOR	14-62
TMS 3304 LR—TRIPLE 66-BIT DYNAMIC SHIFT REGISTER	
TMS 3305 LR—TRIPLE 64-BIT DYNAMIC SHIFT REGISTER	14-67
TMS 3309 JC—TWIN 512-BIT DYNAMIC SHIFT REGISTER/ACCUMULATOR	14-71
TMS 3314 JC, TMS 3314 NC—TRIPLE (60 + 4) DYNAMIC SHIFT REGISTER	14-77
TMS 3401 LC, NC—512-BIT DYNAMIC SHIFT REGISTER	
TMS 3402 LC, NC—500-BIT DYNAMIC SHIFT REGISTER	14-82
TMS 3404 JC, TMS 3404 NC—DUAL 512-BIT DYNAMIC SHIFT REGISTER	14-87
TMS 3406 LR—DUAL 100-BIT DYNAMIC SHIFT REGISTER	14-92
TMS 3409 JC, TMS 3409 NC—QUADRUPLE 80-BIT DYNAMIC SHIFT REGISTER	14-97
TMS 3412 JC, NC; TMS 3413 LC, NC; TMS 3414 LC, NC	
1024-BIT DYNAMIC SHIFT REGISTER	14-101
READ-ONLY MEMORIES	14-107
CUSTOM BIT PATTERNS	14-112
TMS 2300 JC, TMS 2300 NC—2560-BIT DYNAMIC READ-ONLY MEMORY	14-114
TMS 2400 JC, TMS 2400 NC—ROW OUTPUT CHARACTER GENERATOR	14-125
TMS 2500 JC, TMS 2500 NC—2560-BIT STATIC READ-ONLY MEMORY	14-135
TMS 2600 JC, TMS 2600 NC—2048-BIT STATIC READ-ONLY MEMORY	14-139
TMS 2602 JC, TMS 2602 NC—USASCII-TO-SELECTRIC/SELECTRIC TO USASCII	
CODE CONVERTER	14-148
TMS 2603 JC, TMS 2603 NC—EBCDIC-TO-USASCII CODE CONVERTER	14-151
TMS 2604 JC, TMS 2604 NC—USASCII-TO-EBCDIC/SELECTRIC-TO-EBCDIC	
CODE CONVERTER	14-154
TMS 2605 JC, TMS 2605 NC—USASCII, BAUDOT, SELECTRIC, EBCDIC	
CODE GENERATOR	14-157
TMS 2700 JC, TMS 2700 JM, TMS 2700 NC—3072-BIT STATIC READ-ONLY MEMORY	14-160
TMS 2800 JC, TMS 2800 NC—1024-BIT STATIC READ-ONLY MEMORY	14-167
TMS 2801 JC, TMS 2801 NC—EIGHT-LEVEL PRIORITY ENCODER	14-173
TMS 4100 JC, TMS 4100 NC—SERIES CHARACTER GENERATOR	14-176
TMS 4400 JC, TMS 4400 NC—4095-BIT STATIC READ-ONLY MEMORY	14-188

MOS/LSI CIRCUITS FUNCTIONAL INDEX

PROGRAMMABLE LOGIC ARRAYS	14-200
TMS 200 JC, NC; TMS 2200 JC, NC—PROGRAMMABLE LOGIC ARRAYS	14-206
RANDOM-ACCESS MEMORIES	14-213
TMS 1101 JC, TMS 1101 NC—256-BIT RANDOM-ACCESS MEMORY	14-222
TMS 1103 NC—FULLY-DECODED 1024-BIT RAM	14-228
TMS 4000 JC, TMS 4000 NC—HIGH-SPEED CONTENT-ADDRESSABLE MEMORY	14-232
TMS 4003 JR, TMS 4003 NC—256-BIT RANDOM-ACCESS MEMORY	14-239
TMS 4020 NC—2048-BIT DYNAMIC RANDOM-ACCESS MEMORY	14-245
TMS 4023 NC—1024-BIT RANDOM-ACCESS MEMORY	14-251
TMS 4025 NC—2048-BIT DYNAMIC RANDOM-ACCESS MEMORY	14-256
SPECIAL PURPOSE DEVICES	14-263
TMS 4006 JC, TMS 4006 NC—DIGITAL STORAGE BUFFER	14-264
TMS 6000 JR, TMS 6000 NC—COMMON-SOURCE 10-CHANNEL ANALOG SWITCH	14-272
TMS 6002 JR, TMS 6002 NC—SIX-CHANNEL ANALOG SWITCHES	14-276
TMS 6005 JR, NC; TMS 6009 JR, NC—SIX-CHANNEL ANALOG SWITCHES	14-279
CUSTOM MOS/LSI	14-283
SC MEMORIES	14-285
SMA 1001—2048-BIT SEMICONDUCTOR MEMORY ARRAY	14-286
SMA 2001—2048-BIT SEMICONDUCTOR MEMORY ARRAY	14-289
SMA 2002—2048-BIT SEMICONDUCTOR MEMORY ARRAY	14-294

B

CROSS-REFERENCE GUIDE

(alphabetically by manufacturers)

Direct replacements were selected as pin-for-pin equivalent circuits based on similarity of electrical and mechanical characteristics as shown in currently published data. Interchangeability in particular applications is not guaranteed. Before using a substitute, the user should compare the specifications of the substitute device with the detailed specifications of the original device.

B

TI makes no warranty as to the information furnished and buyer assumes all risk in the use thereof. No liability is assumed for damages resulting from the use of the information contained in this list.

LINEAR CIRCUITS

Fairchild

Type Number	Direct TI Replacement	Nearest TI Replacement	Sec.	Type Number	Direct TI Replacement	Nearest TI Replacement	Sec.
UA702	SN52702		3	UA739C	SN76131		3
UA702C	SN72702		3	UA740		SN52770	3
UA703		SN76603	3	UA740C		SN72770	3
UA703C	SN76603		3	UA741	SN52741		3
UA708		SN76665	3	UA741C	SN72741		3
UA709	SN52709		3	UA746C	SN76246		3
UA709C	SN72709		3	UA747	SN52747		3
UA709A	SN52709A		3	UA747C	SN72747		3
UA710	SN52710		3	UA748	SN52748		3
UA710C	SN72710		3	UA748C	SN72748		3
UA710A		SN52810	3	UA749		SN52747	3
UA711	SN52711		3	UA749C		SN72747	3
UA711C	SN72711		3	UA751C		SN7510	3
UA715		SN5511	3	UA754C		SN76665	3
UA715C		SN7511	3	UA761C	SN7524		3
UA719		SN76619	3	UA767	SN76110		3
UA719C	SN76619		3	UA796		SN56514	3
UA723		SN72400	3	UA796C		SN76514	3
UA723C		SN72400	3	9614	SN75114		3
UA729C		SN76110	3	9615	SN75115		3
UA730		SN5510	3	9620	SN75120		3
UA730C		SN7510	3	9621		SN75109	3
UA732C		SN76110	3	9622		SN75107	3
UA733	SN52733		3	9624		SN75450	3
UA733C	SN72733		3	9625		SN75450	3

Motorola

Type Number	Direct TI Replacement	Nearest TI Replacement	Sec.	Type Number	Direct TI Replacement	Nearest TI Replacement	Sec.
MC130L		SN76131	3	MC1441		SN7520	3
MC1304P	SN76104		3	MC1454G		SN76010	3
MC1305P	SN76105		3	MC1455G	SN72771		3
MC1306P		SN76010	3	MC1458	SN72558		3
MC1307P	SN76110		3	MC1460		SN72400	3
MC1316P		SN76003	3	MC1461		SN72400	3
MC1325P		SN76246	3	MC1488L		SN75150	3
MC1326P		SN76246	3	MC1489L		SN75154	3
MC1328P	SN76246		3	MC1509		SN5510	3
MC1330P	SN76530		3	MC1510	SN5510		3
MC1350P	SN76600		3	MC1514L	SN52514		3
MC1351P		SN76665	3	MC1520		SN5511	3
MC1352P	SN76650		3	MC1524G		SN76010	3
MC1357	SN76642		3	MC1525G		SN52733	3
MC1410	SN7510		3	MC1526G		SN52733	3
MC1414L	SN72514		3	MC1529G		SN5511	3
MC1429G		SN7511	3	MC1530		SN52702	3
MC1430		SN72702	3	MC1531		SN52702	3
MC1431		SN72702	3	MC1533		SN52709	3
MC1433		SN72709	3	MC1539		SN52748	3
MC1439		SN72748	3	MC1540		SN5524	3
MC1440		SN7524	3	MC1541		SN5520	3

CROSS-REFERENCE GUIDE

LINEAR CIRCUITS

Motorola, Cont.

Type Number	Direct TI Replacement	Nearest TI Replacement	Sec.	Type Number	Direct TI Replacement	Nearest TI Replacement	Sec.
MC1552G		SN52733	3	MC1712C	SN72702		3
MC1553G		SN52733	3	MC1723		SN72400	3
MC1554G		SN76010	3	MC1741	SN52741		3
MC1556G	SN52771		3	MC1741C	SN72741		3
MC1558	SN52558		3	MC7520	SN7520		3
MC1560		SN72400	3	MC7521	SN7521		3
MC1561		SN72400	3	MC7524	SN7524		3
MC1580L		SN55107-110	3	MC7525	SN7525		3
MC1582L		SN55109-110	3	MCH1439G		SN72741	3
MC1583L		SN55108	3	MCH1539G		SN52741	3
MC1584L		SN55107	3	MFC4000P		SN76010	3
MC1590G	SN76600		3	MFC4010P		SN7514	3
MC1596G		SN56514L	3	MFC6000		SN76010	3
MC1709	SN52709		3	MFC6010		SN76641	3
MC1709C	SN72709		3	MFC8000P		SN76131	3
MC1710	SN52710		3	MFC8001P		SN76131	3
MC1710C	SN72710		3	MFC8002P		SN76010	3
MC1711	SN52711		3	MFC8010		SN76005	3
MC1711C	SN72711		3	MFC9000		SN76005	3
MC1712	SN52702		3	MFC9010		SN76005	3

B

National

Type Number	Direct TI Replacement	Nearest TI Replacement	Sec.	Type Number	Direct TI Replacement	Nearest TI Replacement	Sec.
LH101	SN52741		3	LM711	SN52711		3
LM101	SN52748		3	LM711C	SN72711		3
LM101A	SN52101A		3	LM711CN	SN72711N		3
LM106	SN52106		3	LM723		SN72400	3
LM107	SN52107		3	LM723C		SN72400	3
LM108		SN52770	3	LM741	SN52741		3
LM111		SN52810	3	LM741C	SN72741		3
LM112		SN52771	3	LM741CN	SN72741N		3
LH201	SN52741		3	LM747	SN52747		3
LM201	SN52748		3	LM747D	SN52747J		3
LM201A	SN52101A		3	LM747C	SN72747		3
LM205		SN72400	3	LM747CD	SN72747J		3
LM206	SN52106		3	LM747CN	SN72747N		3
LM207	SN52107		3	LM748	SN52748		3
LM208		SN52770	3	LM748C	SN72748		3
LM211		SN52810	3	LM5520D	SN5520J		3
LM212		SN52771	3	LM5521D	SN5521J		3
LM301A	SN72301A		3	LM5522D	SN5522J		3
LM305		SN72400	3	LM5523D	SN5523J		3
LM305A		SN72400	3	LM5524D	SN5524J		3
LM306	SN72306		3	LM5525D	SN5525J		3
LM307	SN72307		3	LM5528D	SN5528J		3
LM308		SN72770	3	LM5529D	SN5529J		3
LM311		SN72810	3	LM7520D	SN7520J		3
LM312		SN72771	3	LM7520N	SN7520N		3
LM1304	SN76104		3	LM7521D	SN7521J		3
LM1458	SN72558		3	LM7521N	SN7521N		3
LM1558	SN52558		3	LM7522D	SN7522J		3
LM3065	SN76665		3	LM7522N	SN7522N		3
LM709	SN52709		3	LM7523D	SN7523J		3
LM709A	SN52709A		3	LM7523N	SN7523N		3
LM709C	SN72709		3	LM7524D	SN7524J		3
LM709CN	SN72709N		3	LM7524N	SN7524N		3
LM710	SN52710		3	LM7525D	SN7525J		3
LM710A		SN52810	3	LM7525N	SN7525N		3
LM710C	SN72710		3	LM7528D	SN7528J		3
LM710CN	SN72710N		3	LM7528N	SN7528N		3

CROSS-REFERENCE GUIDE

LINEAR CIRCUITS

National, Cont.

B

Type Number	Direct TI Replacement	Nearest TI Replacement	Sec.	Type Number	Direct TI Replacement	Nearest TI Replacement	Sec.
LM7529D	SN7529J		3	DM8832		SN75150	3
LM7529N	SN7529N		3	NH0002	HIC037		15
LM7534	SN75234		3	NH0006		SN75451	3
LM7535	SN75235		3	NH0006C		SN75451L	3
LM7538	SN75238		3	NH0006CN		SN75451P	3
LM7539	SN75239		3	NH0008		HIC040	15
DM7800		SN75450	3	NH0008C		HIC040	15
DM7820		SN55115	3	NH0008CN		HIC040	15
DM7830		SN55114	3	NH0011		SN75451	3
DM8800		SN75450	3	NH0011C		SN75451	3
DM8820		SN75115	3	NH0011CN		SN75451	3
DM8822		SN75154	3	NH0016CN		SN75451	3
DM8830		SN75114	3	NH0017CN		HIC040	15
DM8831		SN75113	3	NH0018CN		HIC040	15

Signetics

Type Number	Direct TI Replacement	Nearest TI Replacement	Sec.	Type Number	Direct TI Replacement	Nearest TI Replacement	Sec.
N5101A	SN72748N		3	S5101T	SN52748L		3
N5101T	SN72748L		3	S5556T	SN52771L		3
N5101V	SN72748P		3	S5558T	SN52558L		3
N5111A	SN76643		3	S5596T		SN56514L	3
N5556T	SN72771L		3	S5709T	SN52709L		3
N5556V	SN72771P		3	S5710T	SN52710L		3
N5558T	SN72558L		3	S5711T	SN52711L		3
N5558V	SN72558P		3	S5723L		SN72400N	3
N5596A		SN76514N	3	S5733K	SN52733L		3
N5709A	SN72709N		3	S5741T	SN52741L		3
N5709T	SN72709L		3	S5748T	SN52748L		3
N5710A	SN72710N		3	NE501		SN7511	3
N5710T	SN72710L		3	NE510		SN76600	3
N5711A	SN72711N		3	NE511B		SN76600	3
N5711T	SN72711L		3	NE515		SN7511	3
N5723A		SN72400N	3	NE516		SN7511	3
N5723L		SN72400N	3	NE518		SN75107	3
N5733A	SN72733N		3	NE525		SN7524	3
N5733K	SN72733L		3	NE526		SN75107	3
N5741A	SN72741N		3	NE550L		SN72400N	3
N5741T	SN72741L		3	SE501		SN5511	3
N5741V	SN72741P		3	SE510		SN76600	3
N5748A	SN72748N		3	SE511B		SN76600	3
N5748T	SN72748L		3	SE515		SN5511	3
N5748V	SN72748P		3	SE516		SN5511	3
N7520B	SN7520N		3	SE518		SN55107	3
N7521B	SN7521N		3	SE526		SN55107	3
N7522B	SN7522N		3	SE550L		SN72400N	3
N7523B	SN7523N		3	8T15		SN75150	3
N7524B	SN7524N		3	8T16		SN75154	3
N7525B	SN7525N		3				

CROSS-REFERENCE GUIDE

DTL/TTL CIRCUITS

Fairchild DTL

B

Type Number	Direct Replacement	Recommended for New Designs	Sec.	Type Number	Direct Replacement	Recommended for New Designs	Sec.
U31909351X	SN 159093U	SN5473W	6	U6A909351X	SN 159093J, N	SN5473J, N	6
U31909359X	SN 158093U	SN7473W	6	U6A909359X	SN 158093J, N	SN7473J, N	6
U31909451X	SN 159094U	SN5473W	6	U6A909451X	SN 159094J, N	SN5473J, N	6
U31909459X	SN 158094U	SN7473W	6	U6A909459X	SN 158094J, N	SN7473J, N	6
U31909751X	SN 159097U	SN5476W	6	U6A909751X	SN 159097J, N	SN5476J, N	6
U31909759X	SN 158097U	SN7476W	6	U6A909759X	SN 158097J, N	SN7476J, N	6
U31909951X	SN 159099U	SN5476W	6	U6A909951X	SN 159099J, N	SN5476J, N	6
U31909959X	SN 158099U	SN7476W	6	U6A909959X	SN 158099J, N	SN7476J, N	6
U31993051X	SN 15930U	SN5420W	6	U6A993051X	SN 15930J, N	SN5420J, N	6
U31993059X	SN 15830U	SN7420W	6	U6A993059X	SN 15830J, N	SN7420J, N	6
U31993151X	SN 15931U	SN54110W	6	U6A993151X	SN 15931J, N	SN54110J, N	6
U31993159X	SN 15831U	SN74110W	6	U6A993159X	SN 15831J, N	SN74110J, N	6
U31993251X	SN 15932U	SN5440W	6	U6A993251X	SN 15932J, N	SN5440J, N	6
U31993259X	SN 15832U	SN7440W	6	U6A993259X	SN 15832J, N	SN7440J, N	6
U31993351X	SN 15933U	SN5460W	6	U6A993351X	SN 15933J, N	SN5460J, N	6
U31993359X	SN 15833U	SN7460W	6	U6A993359X	SN 15833J, N	SN7460J, N	6
U31993551X	SN 15935U	SN5405W	6	U6A993551X	SN 15935J, N	SN5405J, N	6
U31993559X	SN 15835U	SN7405W	6	U6A993559X	SN 15835J, N	SN7405J, N	6
U31993651X	SN 15936U	SN5405W	6	U6A993651X	SN 15936J, N	SN5405J, N	6
U31993659X	SN 15836U	SN7405W	6	U6A993659X	SN 15836J, N	SN7405J, N	6
U31993751X	SN 15937U	SN5405W	6	U6A993751X	SN 15937J, N	SN5405J, N	6
U31993759X	SN 15837U	SN7405W	6	U6A993759X	SN 15837J, N	SN7405J, N	6
U31994451X	SN 15944U	SN5440W	6	U6A994451X	SN 15944J, N	SN5440J, N	6
U31994459X	SN 15844U	SN7440W	6	U6A994459X	SN 15844J, N	SN7440J, N	6
U31994551X	SN 15945U	SN54110W	6	U6A994551X	SN 15945J, N	SN54110J, N	6
U31994559X	SN 15845U	SN74110W	6	U6A994559X	SN 15845J, N	SN74110J, N	6
U31994651X	SN 15946U	SN5400W	6	U6A994651X	SN 15946J, N	SN5400J, N	6
U31994659X	SN 15846U	SN7400W	6	U6A994659X	SN 15846J, N	SN7400J, N	6
U31994851X	SN 15948U	SN54110W	6	U6A994851X	SN 15948J, N	SN54110J, N	6
U31994859X	SN 15848U	SN74110W	6	U6A994859X	SN 15848J, N	SN74110J, N	6
U31994951X	SN 15949U	SN5400W	6	U6A994951X	SN 15949J, N	SN5400J, N	6
U31994959X	SN 15849U	SN7400W	6	U6A994959X	SN 15849J, N	SN7400J, N	6
U31995051X	SN 15950U	SN54H101W	7	U6A995051X	SN 15950J, N	SN54H101J, N	7
U31995059X	SN 15850U	SN74H101W	7	U6A995059X	SN 15850J, N	SN74H101J, N	7
U31995151X	SN 15951U	SN54121W	6	U6A995151X	SN 15951J, N	SN54121J, N	6
U31995159X	SN 15851U	SN74121W	6	U6A995159X	SN 15851J, N	SN74121J, N	6
U31996151X	SN 15961U	SN5420W	6	U6A996151X	SN 15961J, N	SN5420J, N	6
U31996159X	SN 15861U	SN7420W	6	U6A996159X	SN 15861J, N	SN7420J, N	6
U31996251X	SN 15962U	SN5410W	6	U6A996251X	SN 15962J, N	SN5410J, N	6
U31996259X	SN 15862U	SN7410W	6	U6A996259X	SN 15862J, N	SN7410J, N	6
U31996351X	SN 15963U	SN5410W	6	U6A996351X	SN 15963J, N	SN5410J, N	6
U31996359X	SN 15863U	SN7410W	6	U6A996359X	SN 15863J, N	SN7410J, N	6

Fairchild TTL

Type Number	Direct Replacement	Recommended for New Designs	Sec.	Type Number	Direct Replacement	Recommended for New Designs	Sec.
A319033512	SN5481W	SN5489W	9	U31540851X	SN5408W	SN5408W	6
A319033591	SN7481W	SN7489W	9	U315410451X	SN54104W	SN54104W	6
A319033592	SN7481W	SN7489W	9	U31541051X	SN5410W	SN5410W	6
A4L410359X	SN7489W	SN7489W	9	U315410551X	SN54105W	SN54105W	6
A6A9033512	SN5481W	SN5489W	9	U31542051X	SN5420W	SN5420W	6
A6A9033591	SN7481W	SN7489W	9	U31543051X	SN5430W	SN5430W	6
A6A9033592	SN7481W	SN7489W	9	U31544051X	SN5440W	SN5440W	6
A7B410359X	SN7489J, N	SN7489J, N	9	U31544951X	SN5449W	SN5449W	9
A7B9034A1B	SN5488AW	SN5488AW	9	U31545051X	SN5450W	SN5450W	6
A7B9034A9B	SN7488AW	SN7488AW	9	U31545151X	SN5451W	SN5451W	6
U31540051X	SN5400W	SN5400W	6	U31545351X	SN5453W	SN5453W	6
U31540151X	SN5401W	SN5401W	6	U31545451X	SN5454W	SN5454W	6
U31540251X	SN5402W	SN5402W	6	U31546051X	SN5460W	SN5460W	6
U31540451X	SN5404W	SN5404W	6	U31547051X	SN5470W	SN5470W	6
U31540551X	SN5405W	SN5405W	6	U31547251X	SN5472W	SN5472W	6

CROSS-REFERENCE GUIDE

DTL/TTL CIRCUITS

Fairchild TTL, Cont.

B

Type Number	Direct Replacement	Recommended for New Designs	Sec.	Type Number	Direct Replacement	Recommended for New Designs	Sec.
U31547351X	SN5473W	SN5473W	6	U319N5151X	SN5451W	SN5451W	6
U31547451X	SN5474W	SN5474W	6	U319N5159X	SN7451W	SN7451W	6
U31547751X	SN5477W	SN5477W	9	U319N5351X	SN5453W	SN5453W	6
U31548051X	SN5480W	SN5480W	9	U319N5359X	SN7453W	SN7453W	6
U31548251X	SN5482W	SN5482W	9	U319N5451X	SN5454W	SN5454W	6
U31548651X	SN5486W	SN5486W	9	U319N5459X	SN7454W	SN7454W	6
U31549051X	SN5490W	SN5490W	9	U319N6051X	SN5460W	SN5460W	6
U31549151X	SN5491AW	SN5491AW	9	U319N6059X	SN7460W	SN7460W	6
U31549251X	SN5492W	SN5492W	9	U319N7051X	SN5470W	SN5470W	6
U31549351X	SN5493W	SN5493W	9	U319N7059X	SN7470W	SN7470W	6
U31549551X	SN5495AW	SN5495AW	9	U319N7251X	SN5472W	SN5472W	6
U31740059X	SN7400W	SN7400W	6	U319N7259X	SN7472W	SN7472W	6
U31740159X	SN7401W	SN7401W	6	U319N7351X	SN5473W	SN5473W	6
U31740459X	SN7404W	SN7404W	6	U319N7359X	SN7473W	SN7473W	6
U31740559X	SN7405W	SN7405W	6	U319N7451X	SN5474W	SN5474W	6
U31740859X	SN7408W	SN7408W	6	U319N7459X	SN7474W	SN7474W	6
U317410459X	SN74104W	SN74104W	6	U319N8651X	SN5486W	SN5486W	9
U317410559X	SN74105W	SN74105W	6	U319N8659X	SN7486W	SN7486W	9
U317410659X	SN7410W	SN7410W	6	U31900051X	SN54104W	SN54104W	6
U31742059X	SN7420W	SN7420W	6	U31900059X	SN74104W	SN74104W	6
U31743059X	SN7430W	SN7430W	6	U31900151X	SN54105W	SN54105W	6
U31744059X	SN7440W	SN7440W	6	U31900159X	SN74105W	SN74105W	6
U31744959X	SN7449W	SN7449W	9	U31900251X		SN5400W	6
U31745059X	SN7450W	SN7450W	6	U31900259X		SN7400W	6
U31745159X	SN7451W	SN7451W	6	U31900351X		SN5410W	6
U31745359X	SN7453W	SN7453W	6	U31900359X		SN7410W	6
U31745459X	SN7454W	SN7454W	6	U31900451X		SN5420W	6
U31746059X	SN7460W	SN7460W	6	U31900459X		SN7420W	6
U31747059X	SN7470W	SN7470W	6	U3190051X		SN5450W	6
U31747259X	SN7472W	SN7472W	6	U31900559X		SN7450W	6
U31747359X	SN7473W	SN7473W	6	U31900651X		SN5460W	6
U31747459X	SN7474W	SN7474W	6	U31900659X		SN7460W	6
U31747759X	SN7477W	SN7477W	9	U31900751X		SN5430W	6
U31748059X	SN7480W	SN7480W	9	U31900759X		SN7430W	6
U31748259X	SN7482W	SN7482W	9	U31900851X		SN5453W	6
U31748659X	SN7486W	SN7486W	9	U31900859X		SN7453W	6
U31749059X	SN7490W	SN7490W	9	U31900951X		SN5440W	6
U31749159X	SN7491AW	SN7491AW	9	U31900959X		SN7440W	6
U31749259X	SN7492W	SN7492W	9	U31901251X		SN5401W	6
U31749359X	SN7493W	SN7493W	9	U31901259X		SN7401W	6
U31749559X	SN7495AW	SN7495AW	9	U31901651X		SN5404W	6
U319N0051X	SN5400W	SN5400W	6	U31901659X		SN7404W	6
U319N0059X	SN7400W	SN7400W	6	U31901751X		SN5405W	6
U319N0151X	SN5401W	SN5401W	6	U31901759X		SN7405W	6
U319N0159X	SN7401W	SN7401W	6	U31935951X	SN5449W	SN5449W	9
U319N0251X	SN5402W	SN5402W	6	U31935959X	SN7449W	SN7449W	9
U319N0259X	SN7402W	SN7402W	6	U31937751X	SN5477W	SN5477W	9
U319N0451X	SN5404W	SN5404W	6	U31937759X	SN7477W	SN7477W	9
U319N0459X	SN7404W	SN7404W	6	U31938051X	SN5480W	SN5480W	9
U319N0551X	SN5405W	SN5405W	6	U31938059X	SN7480W	SN7480W	9
U319N0559X	SN7405W	SN7405W	6	U31938251X	SN5482W	SN5482W	9
U319N0851X	SN5408W	SN5408W	6	U31938259X	SN7482W	SN7482W	9
U319N0859X	SN7408W	SN7408W	6	U31939051X	SN5490W	SN5490W	9
U319N10451X	SN54104W	SN54104W	6	U31939059X	SN7490W	SN7490W	9
U319N10459X	SN74104W	SN74104W	6	U31939151X	SN5491AW	SN5491AW	9
U319N1051X	SN5410W	SN5410W	6	U31939159X	SN7491AW	SN7491AW	9
U319N10551X	SN54105W	SN54105W	6	U31939251X	SN5492W	SN5492W	9
U319N10559X	SN74105W	SN74105W	6	U31939259X	SN7492W	SN7492W	9
U319N1069X	SN7410W	SN7410W	6	U31939351X	SN5493W	SN5493W	9
U319N2051X	SN5420W	SN5420W	6	U31939359X	SN7493W	SN7493W	9
U319N2059X	SN7420W	SN7420W	6	U31939551X	SN5495AW	SN5495AW	9
U319N3051X	SN5430W	SN5430W	6	U31939559X	SN7495W	SN7495W	9
U319N3059X	SN7430W	SN7430W	6	U31960051X		SN54122W	6
U319N4051X	SN5440W	SN5440W	6	U31960059X		SN74122W	6
U319N4059X	SN7440W	SN7440W	6	U31960151X	SN54122W	SN54122W	6
U319N5051X	SN5450W	SN5450W	6	U31960159X	SN74122W	SN74122W	6
U319N5059X	SN7450W	SN7450W	6	U4L5418251X	SN54182W	SN54182W	9

CROSS-REFERENCE GUIDE

DTL/TTL CIRCUITS

Fairchild TTL, Cont.

B

Type Number	Direct Replacement	Recommended for New Designs	Sec.	Type Number	Direct Replacement	Recommended for New Designs	Sec.
U4L5419251X	SN54192W	SN54192W	9	U4L960259X		SN74123W	6
U4L5419351X	SN54193W	SN54193W	9	U4M5418151X	SN54181W	SN54181W	9
U4L548351X	SN5483W	SN5483W	9	U4M7418159X	SN74181W	SN74181W	9
U4L549451X	SN5494W	SN5494W	9	U4M931151X		SN54150W	9
U4L549651X	SN5496W	SN5496W	9	U4M931159X		SN74150W	9
U4L7418259X	SN74182W	SN74182W	9	U4M934051X		SN54181W	9
U4L7419259X	SN74192W	SN74192W	9	U4M934059X		SN74181W	9
U4L7419359X	SN74193W	SN74193W	9	U4M934151X	SN54181W	SN54181W	9
U4L901451X		SN5486W	9	U4M934159X	SN74181W	SN74181W	9
U4L901459X		SN7486W	9	U6A540051X	SN5400J, N	SN5400J, N	6
U4L902051X		SN54111W	6	U6A540151X	SN5401J, N	SN5401J, N	6
U4L902059X		SN74111W	6	U6A540251X	SN5402J, N	SN5402J, N	6
U4L902251X		SN54111W	6	U6A540351X	SN5403J, N	SN5403J, N	6
U4L902259X		SN74111W	6	U6A540451X	SN5404J, N	SN5404J, N	6
U4L902451X		SN54111W	6	U6A540551X	SN5405J, N	SN5405J, N	6
U4L902459X		SN74111W	6	U6A540851X	SN5408J, N	SN5408J, N	6
U4L930051X	SN54195W	SN54195W	9	U6A5410451X	SN54104J, N	SN54104J, N	6
U4L930059X	SN74195W	SN75195W	9	U6A541051X	SN5410J, N	SN5410J, N	6
U4L930151X		SN5442W	9	U6A5410551X	SN54105J, N	SN54105J, N	6
U4L930159X		SN7442W	9	U6A5410751X	SN54107J, N	SN54107J, N	6
U4L930451X		SN5482W	9	U6A542051X	SN5420J, N	SN5420J, N	6
U4L930459X		SN7482W	9	U6A543051X	SN5430J, N	SN5430J, N	6
U4L930651X		SN54190W	9	U6A544051X	SN5440J, N	SN5440J, N	6
U4L930659X		SN74190W	9	U6A545051X	SN5450J, N	SN5450J, N	6
U4L930751X	SN5448W	SN5448W	9	U6A545151X	SN5451J, N	SN5451J, N	6
U4L930759X	SN7448W	SN7448W	9	U6A545351X	SN5453J, N	SN5453J, N	6
U4L930951X		SN54153W	9	U6A545451X	SN5454J, N	SN5454J, N	6
U4L930959X		SN74153W	9	U6A546051X	SN5460J, N	SN5460J, N	6
U4L931051X	SN54160W	SN54160W	9	U6A547051X	SN5470J, N	SN5470J, N	6
U4L931059X	SN74160W	SN74160W	9	U6A547251X	SN5472J, N	SN5472J, N	6
U4L931251X		SN54151W	9	U6A547351X	SN5473J, N	SN5473J, N	6
U4L931259X		SN74151W	9	U6A547451X	SN5474J, N	SN5474J, N	6
U4L931451X		SN5475W	9	U6A548051X	SN5480J, N	SN5480J, N	9
U4L931459X		SN7475W	9	U6A548251X	SN5482J, N	SN5482J, N	9
U4L931559X	SN74141W	SN74141W	9	U6A548651X	SN5486J, N	SN5486J, N	9
U4L931651X	SN54161W	SN54163W	9	U6A549051X	SN5490J, N	SN5490J, N	9
U4L931659X	SN74161W	SN74163W	9	U6A549151X	SN5491AJ, N	SN5491AJ, N	9
U4L931751X	SN5446AW	SN5446AW	9	U6A549251X	SN5492J, N	SN5492J, N	9
U4L9317512	SN5447AW	SN5447AW	9	U6A549351X	SN5493J, N	SN5493J, N	9
U4L9317513	SN5446AW	SN5446AW	9	U6A549551X	SN5495AJ, N	SN5495AJ, N	9
U4L9317514	SN5447AW	SN5447AW	9	U6A740059X	SN7400J, N	SN7400J, N	6
U4L9317591	SN7446AW	SN7446AW	9	U6A740159X	SN7401J, N	SN7401J, N	6
U4L9317592	SN7447AW	SN7447AW	9	U6A740259X	SN7402J, N	SN7402J, N	6
U4L9317593	SN7446AW	SN7446AW	9	U6A740359X	SN7403J, N	SN7403J, N	6
U4L9317594	SN7447AW	SN7447AW	9	U6A740459X	SN7404J, N	SN7404J, N	6
U4L932151X		SN54153W	9	U6A740559X	SN7405J, N	SN7405J, N	6
U4L932159X		SN74153W	9	U6A740859X	SN7408J, N	SN7408J, N	6
U4L932251X		SN54153W	9	U6A7410459X	SN74104J, N	SN74104J, N	6
U4L932259X		SN74153W	9	U6A7410559X	SN74105J, N	SN74105J, N	6
U4L932451X		SN5485W	9	U6A741059X	SN7410J, N	SN7410J, N	6
U4L932459X		SN7485W	9	U6A7410759X	SN74107J, N	SN74107J, N	6
U4L932559X	SN74141W	SN74141W	9	U6A742059X	SN7420J, N	SN7420J, N	6
U4L9327511	SN5448W	SN5448W	9	U6A743059X	SN7430J, N	SN7430J, N	6
U4L9327512	SN5448W	SN5448W	9	U6A744059X	SN7440J, N	SN7440J, N	6
U4L9327591	SN7448W	SN7448W	9	U6A745059X	SN7450J, N	SN7450J, N	6
U4L9327592	SN7448W	SN7448W	9	U6A745159X	SN7451J, N	SN7451J, N	6
U4L932851X		SN5491AW	9	U6A745359X	SN7453J, N	SN7453J, N	6
U4L932859X		SN7491AW	9	U6A745459X	SN7454J, N	SN7454J, N	6
U4L934251X	SN54182W	SN54182W	9	U6A746059X	SN7460J, N	SN7460J, N	6
U4L934259X	SN74182W	SN74182W	9	U6A747059X	SN7470J, N	SN7470J, N	6
U4L934851X		SN54180W	9	U6A747259X	SN7472J, N	SN7472J, N	6
U4L934859X		SN74180W	9	U6A747359X	SN7473J, N	SN7473J, N	6
U4L936051X	SN54192W	SN54192W	9	U6A747459X	SN7474J, N	SN7474J, N	6
U4L936059X	SN74192W	SN74192W	9	U6A748059X	SN7480J, N	SN7480J, N	9
U4L936651X	SN54193W	SN54193W	9	U6A748259X	SN7482J, N	SN7482J, N	9
U4L936659X	SN74193W	SN74193W	9	U6A748659X	SN7486J, N	SN7486J, N	9
U4L960251X		SN54123W	6	U6A749059X	SN7490J, N	SN7490J, N	9

CROSS-REFERENCE GUIDE

DTL/TTL CIRCUITS

Fairchild TTL, Cont.

B

Type Number	Direct Replacement	Recommended for New Designs	Sec.	Type Number	Direct Replacement	Recommended for New Designs	Sec.
U6A749159X	SN7491AJ, N	SN7491AJ, N	9	U6A900759X		SN7430J, N	6
U6A749259X	SN7492J, N	SN7492J, N	9	U6A900851X	SN54H53J, N	SN5453J, N	6
U6A749359X	SN7493J, N	SN7493J, N	9	U6A900859X	SN74H53J, N	SN7453J, N	6
U6A749559X	SN7495AJ, N	SN7495AJ, N	9	U6A900951X	SN5440J, N	SN5440J, N	6
U6A9N0051X	SN5400J, N	SN5400J, N	6	U6A900959X	SN7440J, N	SN7440J, N	6
U6A9N0059X	SN7400J, N	SN7400J, N	6	U6A901251X	SN5403J, N	SN5401J, N	6
U6A9N0151X	SN5401J, N	SN5401J, N	6	U6A901259X	SN7403J, N	SN7401J, N	6
U6A9N0159X	SN7401J, N	SN7401J, N	6	U6A901651X	SN5404J, N	SN5404J, N	6
U6A9N0251X	SN5402J, N	SN5402J, N	6	U6A901659X	SN7404J, N	SN7404J, N	6
U6A9N0259X	SN7402J, N	SN7402J, N	6	U6A901751X	SN5405J, N	SN5405J, N	6
U6A9N0351X	SN5403J, N	SN5403J, N	6	U6A901759X	SN7405J, N	SN7405J, N	6
U6A9N0359X	SN7403J, N	SN7403J, N	6	U6A938051X	SN5480J, N	SN5480J, N	9
U6A9N0451X	SN5404J, N	SN5404J, N	6	U6A938059X	SN7480J, N	SN7480J, N	9
U6A9N0459X	SN7404J, N	SN7404J, N	6	U6A938251X	SN5482J, N	SN5482J, N	9
U6A9N0551X	SN5405J, N	SN5405J, N	6	U6A938259X	SN7482J, N	SN7482J, N	9
U6A9N0559X	SN7405J, N	SN7405J, N	6	U6A939051X	SN5490J, N	SN5490J, N	9
U6A9N0851X	SN5408J, N	SN5408J, N	6	U6A939059X	SN7490J, N	SN7490J, N	9
U6A9N0859X	SN7408J, N	SN7408J, N	6	U6A939151X	SN5491AJ, N	SN5491AJ, N	9
U6A9N10451X	SN54104J, N	SN54104J, N	6	U6A939159X	SN7491AJ, N	SN7491AJ, N	9
U6A9N10459X	SN74104J, N	SN74104J, N	6	U6A939251X	SN5492J, N	SN5492J, N	9
U6A9N1051X	SN5410J, N	SN5410J, N	6	U6A939259X	SN7492J, N	SN7492J, N	9
U6A9N10551X	SN54105J, N	SN54105J, N	6	U6A939351X	SN5493J, N	SN5493J, N	9
U6A9N10559X	SN74105J, N	SN74105J, N	6	U6A939359X	SN7493J, N	SN7493J, N	9
U6A9N1059X	SN7410J, N	SN7410J, N	6	U6A939551X	SN5495AJ, N	SN5495AJ, N	9
U6A9N10751X	SN54107J, N	SN54107J, N	6	U6A939559X	SN7495AJ, N	SN7495AJ, N	9
U6A9N10759X	SN74107J, N	SN74107J, N	6	U6A960051X		SN54122J, N	6
U6A9N2051X	SN5420J, N	SN5420J, N	6	U6A960059X		SN74122J, N	6
U6A9N2059X	SN7420J, N	SN7420J, N	6	U6A960151X	SN54122J, N	SN54122J, N	6
U6A9N3051X	SN5430J, N	SN5430J, N	6	U6A960159X	SN74122J, N	SN74122J, N	6
U6A9N3059X	SN7430J, N	SN7430J, N	6	U6B9N7651X	SN5476J, N	SN5476J, N	6
U6A9N4051X	SN5440J, N	SN5440J, N	6	U6B9N7659X	SN7476J, N	SN7476J, N	6
U6A9N4059X	SN7440J, N	SN7440J, N	6	U6B547551X	SN5475J, N	SN5475J, N	9
U6A9N4059X	SN5450J, N	SN5450J, N	6	U6B547551X	SN5476J, N	SN5476J, N	6
U6A9N5051X	SN7450J, N	SN7450J, N	6	U6B547651X	SN5483J, N	SN5483J, N	9
U6A9N5059X	SN5451J, N	SN5451J, N	6	U6B7414159X	SN74141J, N	SN74141J, N	9
U6A9N5151X	SN5451J, N	SN5451J, N	6	U6B744159X	SN74141J, N	SN74141J, N	9
U6A9N5159X	SN5453J, N	SN5453J, N	6	U6B747559X	SN7475J, N	SN7475J, N	9
U6A9N5351X	SN7453J, N	SN7453J, N	6	U6B747559X	SN7476J, N	SN7476J, N	6
U6A9N5359X	SN5454J, N	SN5454J, N	6	U6B748359X	SN7483J, N	SN7483J, N	9
U6A9N5451X	SN7454J, N	SN7454J, N	6	U6B901451X		SN5486J, N	9
U6A9N5459X	SN5460J, N	SN5460J, N	6	U6B901459X		SN7486J, N	9
U6A9N6051X	SN7460J, N	SN7460J, N	6	U6B901551X		SN5402J, N	6
U6A9N6059X	SN5470J, N	SN5470J, N	6	U6B901559X		SN7402J, N	6
U6A9N7051X	SN7470J, N	SN7470J, N	6	U6B930451X		SN5482J, N	9
U6A9N7059X	SN5472J, N	SN5472J, N	6	U6B930459X		SN7482J, N	9
U6A9N7251X	SN7472J, N	SN7472J, N	6	U6B930751X	SN5448J, N	SN5448J, N	9
U6A9N7259X	SN5473J, N	SN5473J, N	6	U6B930759X	SN7448J, N	SN7448J, N	9
U6A9N7351X	SN7473J, N	SN7473J, N	6	U6B930951X		SN54153J, N	9
U6A9N7359X	SN5474J, N	SN5474J, N	6	U6B930959X		SN74153J, N	9
U6A9N7451X	SN7474J, N	SN7474J, N	6	U6B931559X	SN74141J, N	SN74141J, N	9
U6A9N7459X	SN5486J, N	SN5486J, N	9	U6B932559X	SN74141J, N	SN74141J, N	9
U6A9N8651X	SN7486J, N	SN7486J, N	9	U6B934851X		SN54180J, N	9
U6A9N8659X	SN54104J, N	SN54104J, N	6	U6B934859X		SN74180J, N	9
U6A900051X	SN74104J, N	SN74104J, N	6	U6B937551X	SN5475J, N	SN5475J, N	9
U6A900059X	SN54105J, N	SN54105J, N	6	U6B937559X	SN7475J, N	SN7475J, N	9
U6A900151X	SN74105J, N	SN74105J, N	6	U6B938351X	SN5483J, N	SN5483J, N	9
U6A900159X	SN5400J, N	SN5400J, N	6	U6B938359X	SN7483J, N	SN7483J, N	9
U6A900251X	SN7400J, N	SN7400J, N	6	U6N5418151X	SN54181J, N	SN54181J, N	9
U6A900259X	SN5410J, N	SN5410J, N	6	U6N7418159X	SN74181J, N	SN74181J, N	9
U6A900351X	SN7410J, N	SN7410J, N	6	U6N930651X		SN54190J, N	9
U6A900359X	SN5420J, N	SN5420J, N	6	U6N930659X		SN74190J, N	9
U6A900451X	SN7420J, N	SN7420J, N	6	U6N931151X	SN54154J, N	SN54154J, N	9
U6A900459X	SN5450J, N	SN5450J, N	6	U6N931159X	SN74154J, N	SN74154J, N	9
U6A900551X	SN7450J, N	SN7450J, N	6	U6N934051X		SN54181J, N	9
U6A900559X	SN5460J, N	SN5460J, N	6	U6N934059X		SN74181J, N	9
U6A900651X	SN7460J, N	SN7460J, N	6	U6N934151X	SN54181J, N	SN54181J, N	9
U6A900659X	SN5430J, N	SN5430J, N	6	U6N934159X	SN74181J, N	SN74181J, N	9

CROSS-REFERENCE GUIDE

DTL/TTL CIRCUITS

Fairchild TTL, Cont.

B

Type Number	Direct Replacement	Recommended for New Designs	Sec.	Type Number	Direct Replacement	Recommended for New Designs	Sec.
U7A935061X		SN5490J, N	9	U7B9317511	SN5446AJ, N	SN5446AJ, N	9
U7A935059X		SN7490J, N	9	U7B9317512	SN5447AJ, N	SN5447AJ, N	9
U7A935651X		SN5493J, N	9	U7B9317513	SN5446AJ, N	SN5446AJ, N	9
U7A935659X		SN7493J, N	9	U7B9317514	SN5447AJ, N	SN5447AJ, N	9
U7B5418251X	SN54182J, N	SN54182J, N	9	U7B9317591	SN7446AJ, N	SN7446AJ, N	9
U7B5419251X	SN54192J, N	SN54192J, N	9	U7B9317592	SN7447AJ, N	SN7447AJ, N	9
U7B5419351X	SN54193J, N	SN54193J, N	9	U7B9317593	SN7446AJ, N	SN7446AJ, N	9
U7B544251X	SN5442J, N	SN5442J, N	9	U7B9317594	SN7447AJ, N	SN7447AJ, N	9
U7B544351X	SN5443J, N	SN5443J, N	9	U7B932151X		SN54153J, N	9
U7B544451X	SN5444J, N	SN5444J, N	9	U7B932159X		SN74153J, N	9
U7B544651X	SN5446J, N	SN5446J, N	9	U7B932251X		SN54153J, N	9
U7B544751X	SN5447J, N	SN5447J, N	9	U7B932259X		SN74153J, N	9
U7B544851X	SN5448J, N	SN5448J, N	9	U7B932451X		SN5485J, N	9
U7B549451X	SN5494J, N	SN5494J, N	9	U7B932459X		SN7485J, N	9
U7B549651X	SN5496J, N	SN5496J, N	9	U7B9327511	SN5448J, N	SN5448J, N	9
U7B7418259X	SN74182J, N	SN74182J, N	9	U7B9327512	SN5448J, N	SN5448J, N	9
U7B7419259X	SN74192J, N	SN74192J, N	9	U7B9327591	SN7448J, N	SN7448J, N	9
U7B7419359X	SN74193J, N	SN74193J, N	9	U7B9327592	SN7448J, N	SN7448J, N	9
U7B744259X	SN7442J, N	SN7442J, N	9	U7B932851X		SN5491AJ, N	9
U7B744359X	SN7443J, N	SN7443J, N	9	U7B932859X		SN7491AJ, N	9
U7B744459X	SN7444J, N	SN7444J, N	9	U7B934251X	SN54182J, N	SN54182J, N	9
U7B744659X	SN7446J, N	SN7446J, N	9	U7B934259X	SN74182J, N	SN74182J, N	9
U7B744759X	SN7447J, N	SN7447J, N	9	U7B935251X	SN5442J, N	SN5442J, N	9
U7B744859X	SN7448J, N	SN7448J, N	9	U7B935259X	SN7442J, N	SN7442J, N	9
U7B749459X	SN7494J, N	SN7494J, N	9	U7B935351X	SN5443J, N	SN5443J, N	9
U7B749659X	SN7496J, N	SN7496J, N	9	U7B935359X	SN7443J, N	SN7443J, N	9
U7B902051X		SN54111J, N	6	U7B935451X	SN5444J, N	SN5444J, N	9
U7B902059X		SN74111J, N	6	U7B935459X	SN7444J, N	SN7444J, N	9
U7B902251X		SN54111J, N	6	U7B9357511	SN5446AJ, N	SN5446AJ, N	9
U7B902259X		SN74111J, N	6	U7B9357512	SN5447AJ, N	SN5447AJ, N	9
U7B902451X		SN54111J, N	6	U7B9357591	SN7446AJ, N	SN7446AJ, N	9
U7B902459X		SN74111J, N	6	U7B9357592	SN7447AJ, N	SN7447AJ, N	9
U7B930051X	SN54195J, N	SN54195J, N	9	U7B935851X	SN5448J, N	SN5448J, N	9
U7B930059X	SN74195J, N	SN74195J, N	9	U7B935859X	SN7448J, N	SN7448J, N	9
U7B930151X		SN5442J, N	9	U7B936051X	SN54192J, N	SN54192J, N	9
U7B930159X		SN7442J, N	9	U7B936059X	SN74192J, N	SN74192J, N	9
U7B931051X	SN54160J, N	SN54160J, N	9	U7B936651X	SN54193J, N	SN54193J, N	9
U7B931059X	SN74160J, N	SN74160J, N	9	U7B936659X	SN74193J, N	SN74193J, N	9
U7B931251X		SN54151J, N	9	U7B939451X	SN5494J, N	SN5494J, N	9
U7B931259X		SN74151J, N	9	U7B939459X	SN7494J, N	SN7494J, N	9
U7B931451X		SN5475J, N	9	U7B939651X	SN5496J, N	SN5496J, N	9
U7B931459X		SN7475J, N	9	U7B939659X	SN7496J, N	SN7496J, N	9
U7B931651X	SN54161J, N	SN54161J, N	9	U7B960251X		SN54123J, N	6
U7B931659X	SN74161J, N	SN74161J, N	9	U7B960259X		SN74123J, N	6

Motorola DTL

Type Number	Direct Replacement	Recommended for New Designs	Sec.	Type Number	Direct Replacement	Recommended for New Designs	Sec.
MC830F	SN15830U	SN7420W	6	MC836L, P	SN15836J, N	SN7405J, N	6
MC830L, P	SN15830J, N	SN7420J, N	6	MC837F	SN15837U	SN7405W	6
MC831F	SN15831U	SN74110W	6	MC837L, P	SN15837J, N	SN7405J, N	6
MC831L, P	SN15831J, N	SN74110J, N	6	MC838F		SN74162W	9
MC832F	SN15832U	SN7440W	6	MC838L, P		SN74162J, N	9
MC832L, P	SN15832J, N	SN7440J, N	6	MC839F		SN74163W	9
MC833F	SN15833U	SN7460W	6	MC839L, P		SN74163J, N	9
MC833L, P	SN15833J, N	SN7460J, N	6	MC840F	SN15835U	SN7405W	6
MC834F	SN15834U	SN7405W	6	MC840L, P	SN15835J, N	SN7405J, N	6
MC834L, P	SN15834J, N	SN7405J, N	6	MC842F		SN7474W	6
MC835F	SN15835U	SN7405W	6	MC842L, P		SN7474J, N	6
MC835L, P	SN15835J, N	SN7405J, N	6	MC844F	SN15844U	SN7440W	6
MC836F	SN15836U	SN7405W	6	MC844L, P	SN15844J, N	SN7440J, N	6

CROSS-REFERENCE GUIDE

DTL/TTL CIRCUITS

Motorola DTL, Cont.

B

Type Number	Direct Replacement	Recommended for New Designs	Sec.	Type Number	Direct Replacement	Recommended for New Designs	Sec.
MC845F	SN15845U	SN74110W	6	MC930F	SN15930U	SN5420W	6
MC845L, P	SN15846J, N	SN74110J, N	6	MC930L	SN15930J, N	SN5420J, N	6
MC846F	SN15846W	SN7400W	6	MC931F	SN15931U	SN54110W	6
MC846L, P	SN15846J, N	SN7400J, N	6	MC931L	SN15931J, N	SN54110J, N	6
MC848F	SN15848U	SN74110W	6	MC932F	SN15932U	SN5440W	6
MC848L, P	SN15848J, N	SN74110J, N	6	MC932L	SN15932J, N	SN5440J, N	6
MC849F	SN15849U	SN7400W	6	MC933F	SN15933U	SN5460W	6
MC849L, P	SN15849J, N	SN7400J, N	6	MC933L	SN15933J, N	SN5460J, N	6
MC850F	SN15850U	SN74110W	6	MC934F	SN15934U	SN5405W	6
MC850L, P	SN15850J, N	SN74110J, N	6	MC934L	SN15934J, N	SN5405J, N	6
MC851F	SN15851U	SN74121W	6	MC935F	SN15935U	SN5405W	6
MC851L, P	SN15851J, N	SN74121J, W	6	MC935L	SN15935J, N	SN5405J, N	6
MC852F	SN158099U	SN7476W	6	MC936F	SN15936U	SN5405W	6
MC852L, P	SN158099J, N	SN7476J, N	6	MC936L	SN15936J, N	SN5405J, N	6
MC853F	SN158093U	SN7473W	6	MC937F	SN15937U	SN5405W	6
MC853L, P	SN158093J, N	SN7473J, N	6	MC937L	SN15937J, N	SN5405J, N	6
MC855F	SN158097U	SN7476W	6	MC938F		SN54162W	9
MC855L, P	SN158097J, N	SN7476J, N	6	MC938L		SN54162J, N	9
MC856F	SN158094U	SN7473W	6	MC939F		SN54163W	9
MC856L, P	SN158094J, N	SN7473J, N	6	MC939L		SN54163J, N	9
MC857F	SN15857U	SN7437W	6	MC940F	SN15935U	SN5405W	6
MC857L, P	SN15857J, N	SN7437J, N	6	MC940L	SN15935J, N	SN5405J, N	6
MC858F	SN15858U	SN7437W	6	MC842F		SN5474W	6
MC858L, P	SN15858J, N	SN7437J, N	6	MC842L		SN5474J, N	6
MC860F		SN74H103W	7	MC944F	SN15944U	SN5440W	6
MC860L, P		SN74H103J, N	7	MC944L	SN15944J, N	SN5440J, N	6
MC861F	SN15861U	SN7420W	6	MC945F	SN15945U	SN54110W	6
MC861L, P	SN15861J, N	SN7420J, N	6	MC945L	SN15945J, N	SN54110J, N	6
MC862F	SN15862U	SN7410W	6	MC946F	SN15946U	SN5400W	6
MC862L, P	SN15862J, N	SN7410J, N	6	MC946L	SN15946J, N	SN5400J, N	6
MC863F	SN15863U	SN7410W	6	MC948F	SN15948U	SN54110W	6
MC863L, P	SN15863J, N	SN7410J, N	6	MC948L	SN15948J, N	SN54110J, N	6
MC1800F	SN151800U	SN7420W	6	MC949F	SN15949U	SN5400W	6
MC1800L, P	SN151800J, N	SN7420J, N	6	MC949L	SN15949J, N	SN5400J, N	6
MC1801F	SN151801U	SN7420W	6	MC950F	SN15950U	SN54110W	6
MC1801L, P	SN151801J, N	SN7420J, N	6	MC950L	SN15950J, N	SN54110J, N	6
MC1802F	SN151802U	SN7430W	6	MC951F	SN15951U	SN54121W	6
MC1802L, P	SN151802J, N	SN7430J, N	6	MC951L	SN15951J, N	SN54121J, N	6
MC1803F	SN151803U	SN7430W	6	MC952F	SN159099U	SN5476W	6
MC1803L, P	SN151803J, N	SN7430J, N	6	MC952L	SN159099J, N	SN5476J, N	6
MC1804F	SN151804U	SN7430W	6	MC953F	SN159093U	SN5473W	6
MC1804L, P	SN151804J, N	SN7430J, N	6	MC953L	SN159093J, N	SN5473J, N	6
MC1805F	SN151805U	SN7430W	6	MC955F	SN159097U	SN5476W	6
MC1805L, P	SN151805J, N	SN7430J, N	6	MC955L	SN159097J, N	SN5476J, N	6
MC1806F	SN151806U	SN7408W	6	MC956F	SN159094U	SN5473W	6
MC1806L, P	SN151806J, N	SN7408J, N	6	MC956L	SN159094J, N	SN5473J, N	6
MC1807F	SN151807U	SN7408W	6	MC957F	SN15957U	SN5437W	6
MC1807L, P	SN151807J, N	SN7408J, N	6	MC957L	SN15957J, N	SN5437J, N	6
MC1808F	SN151808U	SN7432W	6	MC958F	SN15958U	SN5437W	6
MC1808L, P	SN151808J, N	SN7432J, N	6	MC958L	SN15958J, N	SN5437J, N	6
MC1809F	SN151809U	SN7432W	6	MC860F		SN54H103W	7
MC1809L, P	SN151809J, N	SN7432J, N	6	MC860L		SN54H103J, N	7
MC1810F	SN151810U	SN7402W	6	MC961F	SN15961U	SN5420W	6
MC1810L, P	SN151810J, N	SN7402J, N	6	MC961L	SN15961J, N	SN5420J, N	6
MC1811F	SN151811U	SN7402W	6	MC962F	SN15962U	SN5410W	6
MC1811L, P	SN151811J, N	SN7402J, N	6	MC962L	SN15962J, N	SN5410J, N	6
MC1812F	SN151812U	SN7486W	9	MC963F	SN15963U	SN5410W	6
MC1812L, P	SN151812J, N	SN7486J, N	9	MC963L	SN15963J, N	SN5410J, N	6
MC1813L, P		SN7475J, N	9	MC1900F	SN151900U	SN5420W	6
MC1814F		SN7475W	9	MC1900L	SN151900J, N	SN5420J, N	6
MC1814L, P		SN7475J, N	9	MC1901F	SN151901U	SN5420W	6
MC1815F		SN74H101W	7	MC1901L	SN151901J, N	SN5420J, N	6
MC1815L, P		SN74H101J, N	7	MC1902F	SN151902U	SN5430W	6
MC1816F		SN74H101W	7	MC1902L	SN151902J, N	SN5430J, N	6
MC1816L, P		SN74H101J, N	7	MC1903F	SN151903U	SN5430W	6
MC1818F		SN7403W	6	MC1903L	SN151903J, N	SN5430J, N	6
MC1820L, P		SN7403J, N	6	MC1904F	SN151904U	SN5430W	6
MC1820L, P	SN151820J, N	SN7406J, N	6	MC1904L	SN151904J, N	SN5430J, N	6

CROSS-REFERENCE GUIDE

DTL/TTL CIRCUITS

Motorola DTL, cont.

B

Type Number	Direct Replacement	Recommended for New Designs	Sec.	Type Number	Direct Replacement	Recommended for New Designs	Sec.
MC1905F	SN151905U	SN5430W	6	MC1912L	SN151912U	SN5486W	9
MC1905L	SN151905J, N	SN5430J, N	6	MC1912L	SN151912J, N	SN5486J, N	9
MC1906F	SN151906U	SN5408W	6	MC1913F		SN5475W	9
MC1906L	SN151906J, N	SN5408J, N	6	MC1913L		SN5475J, N	9
MC1907F	SN151907U	SN5408W	6	MC1914F		SN5475W	9
MC1907L	SN151907J, N	SN5408J, N	6	MC1914L		SN5475J, N	9
MC1908F	SN151908U	SN5432W	6	MC1915F		SN54H101W	7
MC1908L	SN151908J, N	SN5432J, N	6	MC1915L		SN54H101J, N	7
MC1909F	SN151909U	SN5432W	6	MC1916F		SN54H101W	7
MC1909L	SN151909J, N	SN5432J, N	6	MC1916L		SN54H101J, N	7
MC1910F	SN151910U	SN5402W	6	MC1918F		SN5403W	6
MC1910L	SN151910J, N	SN5402J, N	6	MC1918L		SN5403J, N	6
MC1911F	SN151911U	SN5402W	6	MC1918L	SN151920J, N	SN5406J, N	6
MC1911L	SN151911J, N	SN5402J, N	6	MC1920L			

Motorola TTL

Type Number	Direct Replacement	Recommended For New Designs	Sec. Page	Type Number	Direct Replacement	Recommended for New Designs	Sec.
MC400F	SNG42U	SN7420W	6	MC423F	SNF102U	SN7473W	6
MC400L, P	SNG42J, N	SN7420J, N	6	MC423L, P	SNF102J, N	SN7473J, N	6
MC401F	SNG52U	SN7453W	6	MC424F	SNF112U	SN7476W	6
MC401L, P	SNG52J, N	SN7453J, N	6	MC424L, P	SNF112J, N	SN7476J, N	6
MC402F	SNG62U	SN7430W	6	MC425F		SN7404W	6
MC402L, P	SNG62J, N	SN7430J, N	6	MC425L, P		SN7404J, N	6
MC403F	SNG92U	SN7486W	9	MC426F	SNG82U	SN7413W	6
MC403L, P	SNG92J, N	SN7486J, N	9	MC426L, P	SNG82J, N	SN7413J, N	6
MC404F	SNG102U	SN7453W	6	MC427F	SNG282U	SN74H52W	7
MC404L, P	SNG102J, N	SN7453J, N	6	MC427L, P	SNG282J, N	SN74H52J, N	7
MC405F	SNG112U	SN74H55W	7	MC428F		SN74H61W	7
MC405L, P	SNG112J, N	SN74H55J, N	6	MC428L, P		SN74H61J, N	7
MC406F	SNG122U	SN7430W	6	MC450F	SNG43U	SN7420W	6
MC406L, P	SNG122J, N	SN7430J, N	6	MC450L, P	SNG43J, N	SN7420J, N	6
MC407F	SNG132U	SN74S140W	5	MC451F	SNG53U	SN7453J, N	6
MC407L, P	SNG132J, N	SN74S140J, N	5	MC451L, P	SNG53J, N	SN7453J, N	6
MC408F	SNG142U	SN7400W	6	MC452F	SNG63U	SN7430W	6
MC408L, P	SNG142J, N	SN7400J, N	6	MC452L, P	SNG63J, N	SN7430J, N	6
MC409F	SNG152U	SN74H62W	7	MC453F	SNG93U	SN7486W	9
MC409L, P	SNG152J, N	SN74H62J, N	7	MC453L, P	SNG93J, N	SN7486J, N	9
MC410F	SNG172U	SN7460W	6	MC454F	SNG103U	SN7453W	6
MC410L, P	SNG172J, N	SN7460J, N	6	MC454L, P	SNG103J, N	SN7453J, N	6
MC411F	SNG182U	SN7430W	6	MC455F	SNG113U	SN74H55W	7
MC411L, P	SNG182J, N	SN7430J, N	6	MC455L, P	SNG113J, N	SN74H55J, N	7
MC412F	SNG192U	SN7410W	6	MC456F	SNG123U	SN7430W	6
MC412L, P	SNG192J, N	SN7410J, N	6	MC456L, P	SNG123J, N	SN7430J, N	6
MC413F	SNF12U	SN7472W	6	MC457F	SNG133U	SN75S140W	5
MC413L, P	SNF12J, N	SN7472J, N	6	MC457L, P	SNG133J, N	SN74S140J, N	5
MC414F	SNF22U	SN7472W	6	MC458F	SNG143U	SN7400W	6
MC414L, P	SNF22J, N	SN7472J, N	6	MC458L, P	SNG143J, N	SN7400J, N	6
MC415F	SNF52U	SN7472W	6	MC459F	SNG153U	SN74H62W	7
MC415L, P	SNF52J, N	SN7472J, N	6	MC459L, P	SNG153J, N	SN74H62J, N	7
MC416F	SNF62U	SN74H101W	7	MC460F	SNG173U	SN7460W	6
MC416L, P	SNF62J, N	SN74H101J, N	7	MC460L, P	SNG173J, N	SN7460J, N	6
MC417F		SN74105W	6	MC461F	SNG183U	SN7430W	6
MC417L, P		SN74105J, N	6	MC461L, P	SNG183J, N	SN7430J, N	6
MC419F	SNG162U	SN7438W	6	MC462F	SNG193U	SN7410W	6
MC419L, P	SNG162J, N	SN7438J, N	6	MC462L, P	SNG193J, N	SN7410J, N	6
MC420F	SNG72U	SN7450W	6	MC463F	SNF13U	SN7472W	6
MC420L, P	SNG72J, N	SN7450J, N	6	MC463L, P	SNF13J, N	SN7472J, N	6
MC421F	SNF32U	SN74104W	6	MC464F	SNF23U	SN7472W	6
MC421L, P	SNF32J, N	SN74104J, N	6	MC464F	SNF23J, N	SN7472J, N	6
MC422F		SN7474W	6	MC465F	SNF53U	SN7472W	6
MC422L, P		SN7474J, N	6	MC465L, P	SNF53J, N	SN7472J, N	6

CROSS-REFERENCE GUIDE

DTL/TTL CIRCUITS

Motorola TTL, Cont

B

Type Number	Direct Replacement	Recommended for New Designs	Sec.	Type Number	Direct Replacement	Recommended for New Designs	Sec.
MC466F	SNF63U	SN74H101W	7	MC522L		SN5474J, N	6
MC466L, P	SNF63J, N	SN74H101J, N	7	MC523F	SNF100U	SN5473W	6
MC467F		SN74105W	6	MC523L	SNF100J, N	SN5473J, N	6
MC467L, P		SN74105J, N	6	MC524F	SNF110U	SN5476W	6
MC469F	SNG163U	SN7438W	6	MC524L	SNF110J, N	SN5476J, N	6
MC469L, P	SNG163J, N	SN7438J, N	6	MC525F		SN5404W	6
MC470F	SNG73U	SN7450W	6	MC525L		SN5404J, N	6
MC470L, P	SNG73J, N	SN7450J, N	6	MC526F	SNG80U	SN5413W	6
MC471F	SNF33U	SN74104W	6	MC526L	SNG80J, N	SN5413J, N	6
MC471L, P	SNF33J, N	SN74104J, N	6	MC527F	SNG280U	SN54H52W	7
MC472F		SN7474W	6	MC527L	SNG280J, N	SN54H52J, N	7
MC472L, P		SN7474J, N	6	MC528F		SN54H61W	7
MC473F	SNF103U	SN7473W	6	MC528L		SN54H61J, N	7
MC473L, P	SNF103J, N	SN7473J, N	6	MC550F	SNG41U	SN5420W	6
MC474F	SNF113U	SN7476W	6	MC550L	SNG41J, N	SN5420J, N	6
MC474L, P	SNF113J, N	SN7476J, N	6	MC551F	SNG51U	SN5453W	6
MC475F		SN7404W	6	MC551L	SNG51J, N	SN5453J, N	6
MC475L, P		SN7404J, N	6	MC552F	SNG61U	SN5430W	6
MC476F	SNG83U	SN7413W	6	MC552L	SNG61J, N	SN5430J, N	6
MC476L, P	SNG83J, N	SN7413J, N	6	MC553F	SNG91U	SN5486W	9
MC477F	SNG283U	SN74H52W	7	MC553L	SNG91J, N	SN5486J, N	9
MC477L, P	SNG283J, N	SN74H52J, N	7	MC554F	SNG101U	SN5453W	6
MC478F		SN74H61W	7	MC554L	SNG101J, N	SN5453J, N	6
MC478L, P		SN74H61J, N	7	MC55F	SNG111U	SN54H55W	7
MC500F	SNG40U	SN5420W	6	MC55L	SNG111J, N	SN54H55J, N	7
MC500L	SNG40J, N	SN5420J, N	6	MC556F	SNG121U	SN5430W	6
MC501F	SNG50U	SN5453W	6	MC556L	SNG121J, N	SN5430J, N	6
MC501L	SNG50J, N	SN5453J, N	6	MC557F	SNG131U	SN54S140W	5
MC502F	SNG60U	SN5430W	6	MC557L	SNG131J, N	SN54S140J, N	5
MC502L	SNG60J, N	SN5430J, N	6	MC558F	SNG141W	SN5400W	6
MC503F	SNG90U	SN5486W	9	MC558L	SNG141J, N	SN5400J, N	6
MC503L	SNG90J, N	SN5486J, N	9	MC559F	SNG151U	SN54H62W	7
MC504F	SNG100U	SN5453W	6	MC559L	SNG151J, N	SN54H62J, N	7
MC504L	SNG100J, N	SN5453J, N	6	MC560F	SNG171U	SN5460W	6
MC505F	SNG110U	SN54H55W	7	MC560L	SNG171J, N	SN5460J, N	6
MC505L	SNG110J, N	SN54H55J, N	7	MC561F	SNG181U	SN5430W	6
MC506F	SNG120U	SN5430W	6	MC561L	SNG181J, N	SN5430J, N	6
MC506L	SNG120J, N	SN5430J, N	6	MC562F	SNG191U	SN5410W	6
MC507F	SNG130U	SN54S140W	5	MC562L	SNG191J, N	SN5410J, N	6
MC507L	SNG130J, N	SN54S140J, N	5	MC563F	SNF11U	SN5472W	6
MC508F	SNG140U	SN5400W	6	MC563L	SNF11J, N	SN5472J, N	6
MC508L	SNG140J, N	SN5400J, N	6	MC564F	SNF21U	SN5472W	6
MC509F	SNG150U	SN54H62W	7	MC564L	SNF21J, N	SN5472J, N	6
MC509L	SNG150J, N	SN54H62J, N	7	MC565F	SNF51U	SN5472W	6
MC510F	SNG170U	SN5460W	6	MC565L	SNF51J, N	SN5472J, N	6
MC510L	SNG170J, N	SN5460J, N	6	MC566F	SNF61U	SN54H101W	7
MC511F	SNG180U	SN5430W	6	MC566L	SNF61J, N	SN54H101J, N	7
MC511L	SNG180J, N	SN5430J, N	6	MC567F		SN54105W	6
MC512F	SNG190U	SN5410W	6	MC567L		SN54105J, N	6
MC512L	SNG190J, N	SN5410J, N	6	MC569F	SNG161U	SN5438W	6
MC513F	SNF10U	SN5472W	6	MC569L	SNG161J, N	SN5438J, N	6
MC513L	SNF10J, N	SN5472J, N	6	MC570F	SNG71U	SN5450W	6
MC514F	SNF20U	SN5472W	6	MC570L	SNG71J, N	SN5450J, N	6
MC514L	SNF20J, N	SN5472J, N	6	MC571F	SNF31U	SN54104W	6
MC515F	SNF50U	SN5472W	6	MC571L	SNF31J, N	SN54104J, N	6
MC515L	SNF50J, N	SN5472J, N	6	MC572F		SN5474W	6
MC516F	SNF60U	SN54H101W	7	MC572L		SN5474J, N	6
MC516L	SNF60J, N	SN54H101J, N	7	MC573F	SNF101U	SN5473W	6
MC517F		SN54105W	6	MC573L	SNF101J, N	SN5473J, N	6
MC517L		SN54105J, N	6	MC574F	SNF111U	SN5476W	6
MC519F	SNG160U	SN5438W	6	MC574L	SNF111J, N	SN5476J, N	6
MC519L	SNG160J, N	SN5438J, N	6	MC575F		SN5404W	6
MC520F	SNG70U	SN5450W	6	MC575L		SN5404J, N	6
MC520L	SNG70J, N	SN5450J, N	6	MC576F	SNG81U	SN5413W	6
MC521F	SNF30U	SN54104W	6	MC576L	SNG81J, N	SN5413J, N	6
MC521L	SNF30J, N	SN54104J, N	6	MC577F	SNG281U	SN54H52W	7
MC522F		SN5474W	6	MC577L	SNG281J, N	SN54H52J, N	7

CROSS-REFERENCE GUIDE

DTL/TTL CIRCUITS

Motorola TTL, Cont.

B

Type Number	Direct Replacement	Recommended for New Designs	Sec.	Type Number	Direct Replacement	Recommended for New Designs	Sec.
MC578F		SN54H61W	7	MC2073F	SNF 123U	SN74H103W	7
MC578L		SN54H61J, N	7	MC2073L, P	SNF 123J, N	SN74H103J, N	7
MC2000F	SNG212U	SN74H55W	7	MC2074F	SNF 133U	SN74H108W	7
MC2000L, P	SNG212J, N	SN74H55J, N	7	MC2074L, P	SNF 133J, N	SN74H108J, N	7
MC2001F	SNG222U	SN74H00W	7	MC2075F	SNF 203U	SN74H102W	7
MC2001L, P	SNG222J, N	SN74H00J, N	7	MC2075L, P	SNF 203J, N	SN74H102J, N	7
MC2002F	SNG232U	SN74H62W	7	MC2076F	SNF 213U	SN74H101W	7
MC2002L, P	SNG232J, N	SN74H62J, N	7	MC2076L, P	SNF 213J, N	SN74H101J, N	7
MC2003F	SNG242U	SN74H20W	7	MC2078F		SN74H101W	7
MC2003L, P	SNG242J, N	SN74H20J, N	7	MC2078L, P		SN74H101J, N	7
MC2004F	SNG252U	SN74H53W	7	MC2100F	SNG210U	SN54H55W	7
MC2004L, P	SNG252J, N	SN74H53J, N	7	MC2100L	SNG210J, N	SN54H55J, N	7
MC2005F	SNG262U	SN74H30W	7	MC2101F	SNG220U	SN54H00W	7
MC2005L, P	SNG262J, N	SN74H30J, N	7	MC2101L	SNG220J, N	SN54H00J, N	7
MC2006F	SNG272U	SN74H60W	7	MC2102F	SNG230U	SN54H62W	7
MC2006L, P	SNG272J, N	SN74H60J, N	7	MC2102L	SNG230J, N	SN54H62J, N	7
MC2007F	SNG322U	SN74H10W	7	MC2103F	SNG240U	SN54H20W	7
MC2007L, P	SNG322J, N	SN74H10J, N	7	MC2103L	SNG240J, N	SN54H20J, N	7
MC2008F		SN74H04W	7	MC2104F	SNG250U	SN54H53W	7
MC2008L, P		SN74H04J, N	7	MC2104L	SNG250J, N	SN54H53J, N	7
MC2009F	SNF252U	SN74H102W	7	MC2105F	SNG260U	SN54H30W	7
MC2009L, P	SNF252J, N	SN74H102J, N	7	MC2105L	SNG260J, N	SN54H30J, N	7
MC2010F	SNF262U	SN74H101W	7	MC2106F	SNG270U	SN54H60W	7
MC2010L, P	SNF262J, N	SN74H101J, N	7	MC2106L	SNG270J, N	SN54H60J, N	7
MC2011F	SNG202U	SN74H30W	7	MC2107F	SNG370U	SN54H10W	7
MC2011L, P	SNG202J, N	SN74H30J, N	7	MC2107L	SNG320J, N	SN54H10J, N	7
MC2012F	SNG302U	SN74H53W	7	MC2108F		SN54H04W	7
MC2012L, P	SNG302J, N	SN74H53J, N	7	MC2108L		SN54H04J, N	7
MC2013F	SNG312U	SN74H50W	7	MC2109F	SNF250U	SN54H102W	7
MC2013L, P	SNG312J, N	SN74H50J, N	7	MC2109L	SNF250J, N	SN54H102J, N	7
MC2023F	SNF122U	SN74H103W	7	MC2110F	SNF260U	SN54H101W	7
MC2023L, P	SNF122J, N	SN74H103J, N	7	MC2110L	SNF260J, N	SN54H101J, N	7
MC2024F	SNF132U	SN74H108W	7	MC2111F	SNG200U	SN54H30W	7
MC2024L, P	SNF132J, N	SN74H108J, N	7	MC2111L	SNG200J, N	SN54H30J, N	7
MC2025F	SNF202U	SN74H102W	7	MC2112F	SNG300U	SN54H53W	7
MC2025L, P	SNF202J, N	SN74H102J, N	7	MC2112L	SNG300J, N	SN54H53J, N	7
MC2026F	SNF212U	SN74H101W	7	MC2113F	SNG310U	SN54H50W	7
MC2026L, P	SNF212J, N	SN74H101J, N	7	MC2113L	SNG310J, N	SN54H50J, N	7
MC2028F		SN74H101W	7	MC2123F	SNF120U	SN54H103W	7
MC2028L, P		SN74H101J, N	7	MC2123L	SNF120J, N	SN54H103J, N	7
MC2050F	SNG213U	SN74H55W	7	MC2124F	SNF130U	SN54H108W	7
MC2050L, P	SNG213J, N	SN74H55J, N	7	MC2124L	SNF130J, N	SN54H108J, N	7
MC2051F	SNG223U	SN74H00W	7	MC2125F	SNF200U	SN54H102W	7
MC2051L, P	SNG223J, N	SN74H00J, N	7	MC2125L	SNF200J, N	SN54H102J, N	7
MC2052F	SNG233U	SN74H62W	7	MC2126F	SNF210U	SN54H101W	7
MC2052L, P	SNG233J, N	SN74H62J, N	7	MC2126L	SNF210J, N	SN54H101J, N	7
MC2053F	SNG243U	SN74H20W	7	MC2128F		SN54H101W	7
MC2053L, P	SNG243J, N	SN74H20J, N	7	MC2128L		SN54H101J, N	7
MC2054F	SNG253U	SN74H53W	7	MC2150F	SNG211U	SN54H55W	7
MC2054L, P	SNG253J, N	SN74H53J, N	7	MC2150L	SNG211J, N	SN54H55J, N	7
MC2055F	SNG263U	SN74H30W	7	MC2151F	SNG221U	SN54H00W	7
MC2055L, P	SNG263J, N	SN74H30J, N	7	MC2151L	SNG221J, N	SN54H00J, N	7
MC2056F	SNG273U	SN74H60W	7	MC2152F	SNG231U	SN54H62W	7
MC2056L, P	SNG273J, N	SN74H60J, N	7	MC2152L	SNG231J, N	SN54H62J, N	7
MC2057F	SNG323U	SN74H10W	7	MC2153F	SNG241U	SN54H20W	7
MC2057L, P	SNG323J, N	SN74H10J, N	7	MC2153L	SNG241J, N	SN54H20J, N	7
MC2058F		SN74H04W	7	MC2154F	SNG251U	SN54H53W	7
MC2058L, P		SN74H04J, N	7	MC2154L	SNG251J, N	SN54H53J, N	7
MC2059F	SNF253U	SN74H102W	7	MC2155F	SNG251U	SN54H30W	7
MC2059L, P	SNF253J, N	SN74H102J, N	7	MC2155L	SNG261J, N	SN54H30J, N	7
MC2060F	SNF263U	SN74H101W	7	MC2156F	SNG271U	SN54H60W	7
MC2060L, P	SNF263J, N	SN74H101J, N	7	MC2156L	SNG271J, N	SN54H60J, N	7
MC2061F	SNG203U	SN74H30W	7	MC2157F	SNG321U	SN54H10W	7
MC2061L, P	SNG203J, N	SN74H30J, N	7	MC2157L	SNG321J, N	SN54H10J, N	7
MC2062F	SNG303U	SN74H53W	7	MC2158F		SN54H04W	7
MC2062L, P	SNG303J, N	SN74H53J, N	7	MC2158L		SN54H04J, N	7
MC2063F	SNG313U	SN74H50W	7	MC2159F	SNF251U	SN54H102W	7
MC2063L, P	SNG313J, N	SN74H50J, N	7	MC2159L	SNF251J, N	SN54H102J, N	7

CROSS-REFERENCE GUIDE

DTL/TTL CIRCUITS

Motorola TTL, Cont.

B

Type Number	Direct Replacement	Recommended for New Designs	Sec.	Type Number	Direct Replacement	Recommended for New Designs	Sec.
MC2160F	SNF261U	SN54H101W	7	MC3051F		SN74H102W	7
MC2160L	SNF261J, N	SN54H101J, N	7	MC3051L, P		SN74H102J, N	7
MC2161F	SNG201U	SN54H30W	7	MC3052F		SN74H102W	7
MC2161L	SNG201J, N	SN54H30J, N	7	MC3052L, P		SN74H102J, N	7
MC2162F	SNG301U	SN54H53W	7	MC3054F	SN74H71W	SN74H71W	7
MC2162L	SNG301J, N	SN54H53J, N	7	MC3054L, P	SN74H71J, N	SN74H71J, N	7
MC2163F	SNG311U	SN54H50W	7	MC3055F	SN74H72W	SN74H72W	7
MC2163L	SNG311J, N	SN54H50J, N	7	MC3055L, P	SN74H72J, N	SN74H72J, N	7
MC2173F	SNF121U	SN54H103W	7	MC3060F	SN74H74W	SN74H74W	7
MC2173L	SNF121J, N	SN54H103J, N	7	MC3060L, P	SN74H74J, N	SN74H74J, N	7
MC2174F	SNF131U	SN54H108W	7	MC3061F	SN74S114W	SN74S114W	5
MC2174L	SNF131J, N	SN54H108J, N	7	MC3061L, P	SN74S114J, N	SN74S114J, N	5
MC2175F	SNF201U	SN54H102W	7	MC3062F	SN74S113W	SN74S113W	5
MC2175L	SNF201J, N	SN54H102J, N	7	MC3062L, P	SN74S113J, N	SN74S113J, N	5
MC2176F	SNF211U	SN54H101W	7	MC3100F	SN54H00W	SN54H00W	7
MC2176L	SNF211J, N	SN54H101J, N	7	MC3100L	SN54H00J, N	SN54H00J, N	7
MC2178F		SN54H101W	7	MC3104F	SN54H01W	SN54H01W	7
MC2178L		SN54H101J, N	7	MC3104L	SN54H01J, N	SN54H01J, N	7
MC3000F	SN74H00W	SN74H00W	7	MC3105F	SN54H10W	SN54H10W	7
MC3000L	SN74H00J, N	SN74H00J, N	7	MC3105L	SN54H10J, N	SN54H10J, N	7
MC3004F	SN74H01W	SN74H03W	7	MC3106F	SN54H11W	SN54H11W	7
MC3004L, P	SN74H01J, N	SN74H03J, N	7	MC3106L	SN54H11J, N	SN54H11J, N	7
MC3005F	SN74H10W	SN74H10W	7	MC3108F	SN54H04W	SN54H04W	7
MC3005L, P	SN74H10J, N	SN74H10J, N	7	MC3108L	SN54H04J, N	SN54H04J, N	7
MC3006F	SN74H11W	SN74H11W	7	MC3109F	SN54H05W	SN54H05W	7
MC3006L, P	SN74H11J, N	SN74H11J, N	7	MC3109L	SN54H05J, N	SN54H05J, N	7
MC3008F	SN74H04W	SN74H04W	7	MC3110F	SN54H20W	SN54H20W	7
MC3008L	SN74H04J, N	SN74H04J, N	7	MC3110L	SN54H20J, N	SN54H20J, N	7
MC3009F	SN74H05W	SN74H05W	7	MC3111F	SN54H21W	SN54H21W	7
MC3009L, P	SN74H05J, N	SN74H05J, N	7	MC3111L	SN54H21J, N	SN54H21J, N	7
MC3010F	SN74H20W	SN74H20W	7	MC3112F	SN54H22W	SN54H22W	7
MC3010L, P	SN74H20J, N	SN74H20J, N	7	MC3112L	SN54H22J, N	SN54H22J, N	7
MC3009F	SN74H05W	SN74H05W	7	MC3116F	SN54H30W	SN54H30W	7
MC3009L, P	SN74H05J, N	SN74H05J, N	7	MC3116L	SN54H30J, N	SN54H30J, N	7
MC3010F	SN74H20W	SN74H20W	7	MC3118F	SN54H62W	SN54H62W	7
MC3010L, P	SN74H20J, N	SN74H20J, N	7	MC3118L	SN54H62J, N	SN54H62J, N	7
MC3011F	SN74H21W	SN74H21W	7	MC3119F	SN54H61W	SN54H61W	7
MC3011L, P	SN74H21J, N	SN74H21J, N	7	MC3119L	SN54H61J, N	SN54H61J, N	7
MC3012F	SN74H22W	SN74H22W	7	MC3120F	SN54H50W	SN54H50W	7
MC3012L, P	SN74H22J, N	SN74H22J, N	7	MC3120L	SN54H50J, N	SN54H50J, N	7
MC3016F	SN74H30W	SN74H30W	7	MC3121F	SN5486W	SN5486W	9
MC3016L, P	SN74H30J, N	SN74H30J, N	7	MC3121L	SN5486J, N	SN5486J, N	9
MC3018F	SN74H62W	SN74H62W	7	MC3123F	SN54H51W	SN54H51W	7
MC3018L, P	SN74H62J, N	SN74H62J, N	7	MC3123L	SN54H51J, N	SN54H51J, N	7
MC3019F	SN74H61W	SN74H61W	7	MC3124F	SN54H40W	SN54H40W	7
MC3019L, P	SN74H61J, N	SN74H61J, N	7	MC3124L	SN54H40J, N	SN54H40J, N	7
MC3020F	SN74H50W	SN74H50W	7	MC3125F	SN54H40W	SN54H40W	7
MC3020L, P	SN74H50J, N	SN74H50J, N	7	MC3125L	SN54H40J, N	SN54H40J, N	7
MC3021F	SN7486W	SN7486W	9	MC3130F	SN54H60W	SN54H60W	7
MC3021L, P	SN7486J, N	SN7486J, N	9	MC3130L	SN54H60J, N	SN54H60J, N	7
MC3023F	SN74H51W	SN74H51W	7	MC3131F	SN54H52W	SN54H52W	7
MC3023L, P	SN74H51J, N	SN74H51J, N	7	MC3131L	SN54H52J, N	SN54H52J, N	7
MC3024F	SN74H40W	SN74H40W	7	MC3132F	SN54H53W	SN54H53W	7
MC3024L, P	SN74H40J, N	SN74H40J, N	7	MC3132L	SN54H53J, N	SN54H53J, N	7
MC3025F	SN74H40W	SN74H40W	7	MC3133F	SN54H54W	SN54H54W	7
MC3025L, P	SN74H40J, N	SN74H40J, N	7	MC3133L	SN54H54J, N	SN54H54J, N	7
MC3030F	SN74H60W	SN74H60W	7	MC3134F	SN54H55W	SN54H55W	7
MC3030L, P	SN74H60J, N	SN74H60J, N	7	MC3134L	SN54H55J, N	SN54H55J, N	7
MC3031F	SN74H52W	SN74H52W	7	MC3150F		SN54H72W	7
MC3031L, P	SN74H52J, N	SN74H52J, N	7	MC3150L		SN54H72J, N	7
MC3032F	SN74H53W	SN74H53W	7	MC3151F		SN54H102W	7
MC3032L, P	SN74H53J, N	SN74H53J, N	7	MC3151L		SN54H102J, N	7
MC3033F	SN74H54W	SN74H54W	7	MC3152F		SN54H102W	7
MC3033L, P	SN74H54J, N	SN74H54J, N	7	MC3152L		SN54H102J, N	7
MC3034F	SN74H55W	SN74H55W	7	MC3154F	SN54H71W	SN54H71W	7
MC3034L, P	SN74H55J, N	SN74H55J, N	7	MC3154L	SN54H71J, N	SN54H71J, N	7
MC3050F	SN74H72W	SN74H72W	7	MC3155F	SN54H72W	SN54H72W	7
MC3050L, P	SN74H72J, N	SN74H72J, N	7	MC3155L	SN54H72J, N	SN54H72J, N	7

CROSS-REFERENCE GUIDE

DTL/TTL CIRCUITS

Motorola TTL, Cont.

B

Type Number	Direct Replacement	Recommended for New Designs	Sec.	Type Number	Direct Replacement	Recommended for New Designs	Sec.
MC3160F	SN54H74W	SN54H74W	7	MC54192L	SN54192J, N	SN54192J, N	9
MC3160L	SN54H74J, N	SN54H74J, N	7	MC54193L	SN54193J, N	SN54193J, N	9
MC3161F	SN54S114W	SN54S114W	5	MC7400F	SN7400W	SN7400W	6
MC3161L	SN54S114J, N	SN54S114J, N	5	MC7400L, P	SN7400J, N	SN7400J, N	6
MC3162F	SN54S113W	SN54S113W	5	MC7401F	SN7401W	SN7401W	6
MC3162L	SN54S113J, N	SN54S113J, N	5	MC7401L, P	SN7401J, N	SN7401J, N	6
MC5400F	SN5400W	SN5400W	6	MC7402F	SN7402W	SN7402W	6
MC5400L	SN5400J, N	SN5400J, N	6	MC7402L, P	SN7402J, N	SN7402J, N	6
MC5401F	SN5401W	SN5401W	6	MC7403L, P	SN7403J, N	SN7403J, N	6
MC5401L	SN5401J, N	SN5401J, N	6	MC7404F	SN7404W	SN7404W	6
MC5402F	SN5402W	SN5402W	6	MC7404L, P	SN7404J, N	SN7404J, N	6
MC5402L	SN5402J, N	SN5402J, N	6	MC7405F	SN7405W	SN7405W	6
MC5403L	SN5403J, N	SN5403J, N	6	MC7405L, P	SN7405J, N	SN7405J, N	6
MC5404F	SN5404W	SN5404W	6	MC7410F	SN7410W	SN7410W	6
MC5404L	SN5404J, N	SN5404J, N	6	MC7410L, P	MC7410J, N	SN7410J, N	6
MC5405F	SN5405W	SN5405W	6	MC7420F	SN7420W	SN7420W	6
MC5405L	SN5405J, N	SN5405J, N	6	MC7420L, P	SN7420J, N	SN7420J, N	6
MC5410F	SN5410W	SN5410W	6	MC7430F	SN7430W	SN7430W	6
MC5410L	SN5410J, N	SN5410J, N	6	MC7430L, P	SN7430J, N	SN7430J, N	6
MC5420F	SN5420W	SN5420W	6	MC7440F	SN7440W	SN7440W	6
MC5420L	SN5420J, N	SN5420J, N	6	MC7440L, P	SN7440J, N	SN7440J, N	6
MC5430F	SN5430W	SN5430W	6	MC7441AL, P	SN74141J, N	SN74141J, N	9
MC5430L	SN5430J, N	SN5430J, N	6	MC7442L, P	SN7442J, N	SN7442J, N	9
MC5440F	SN5440W	SN5440W	6	MC7443L, P	SN7443J, N	SN7443J, N	9
MC5440L	SN5440J, N	SN5440J, N	6	MC7444L, P	SN7444J, N	SN7444J, N	9
MC5442L	SN5442J, N	SN5442J, N	9	MC7445L, P	SN7445J, N	SN7445J, N	9
MC5443L	SN5443J, N	SN5443J, N	9	MC7446L, P	SN7446J, N	SN7446AJ, N	9
MC5444L	SN5444J, N	SN5444J, N	9	MC7447L, P	SN7447AJ, N	SN7447AJ, N	9
MC5445L	SN5445J, N	SN5445J, N	9	MC7450F	SN7450W	SN7450W	6
MC5446L	SN5446AJ, N	SN5446AJ, N	9	MC7450L, P	SN7450J, N	SN7450J, N	6
MC5447L	SN5447AJ, N	SN5447AJ, N	9	MC7451F	SN7451W	SN7451W	6
MC5450F	SN5450W	SN5450W	6	MC7451L, P	SN7451J, N	SN7451J, N	6
MC5450L	SN5450J, N	SN5450J, N	6	MC7453F	SN7453W	SN7453W	6
MC5451F	SN5451W	SN5451W	6	MC7453L, P	SN7453J, N	SN7453J, N	6
MC5451L	SN5451J, N	SN5451J, N	6	MC7454F	SN7454W	SN7454W	6
MC5453F	SN5453W	SN5453W	6	MC7454L, P	SN7454J, N	SN7454J, N	6
MC5453L	SN5453J, N	SN5453J, N	6	MC7460F	SN7460W	SN7460W	6
MC5454F	SN5454W	SN5454W	6	MC7460L, P	SN7460J, N	SN7460J, N	6
MC5454L	SN5454J, N	SN5454J, N	6	MC7472F	SN7472W	SN7472W	6
MC5460F	SN5460W	SN5460W	6	MC7472L, P	SN7472J, N	SN7472J, N	6
MC5460L	SN5460J, N	SN5460J, N	6	MC7473F	SN7473W	SN7473W	6
MC5472F	SN5472W	SN5472W	6	MC7473L, P	SN7473J, N	SN7473J, N	6
MC5472L	SN5472J, N	SN5472J, N	6	MC7480L, P	SN7480J, N	SN7480J, N	9
MC5473F	SN5473W	SN5473W	6	SN7483L, P	SN7483J, N	SN7483J, N	9
MC5473L	SN5473J, N	SN5473J, N	6	MC7490F	SN7490W	SN7490W	9
MC5480L	SN5480J, N	SN5480J, N	9	MC7490L, P	SN7490J, N	SN7490J, N	9
SN5483L	SN5483J, N	SN5483J, N	9	MC7491AL, P	SN7491AJ, N	SN7491AJ, N	9
MC5490L	SN5490W	SN5490W	9	MC7492F	SN7492W	SN7492W	9
MC5490L	SN5490J, N	SN5490J, N	9	MC7492L, P	SN7492J, N	SN7492J, N	9
MC5491AL	SN5491AJ, N	SN5491AJ, N	9	MC7493L, P	SN7493J, N	SN7493J, N	9
MC5492F	SN5492W	SN5492W	9	SN7494L, P	SN7494J, N	SN7494J, N	9
MC5492L	SN5492J, N	SN5492J, N	9	SN7495F	SN7495AW	SN7495AW	9
MC5493L	SN5493J, N	SN5493J, N	9	SN7495L, P	SN7495AJ, N	SN7495AJ, N	9
MC5494L	SN5494J, N	SN5494J, N	9	SN7496L, P	SN7496J, N	SN7496J, N	9
MC5495F	SN5495AW	SN5495AW	9	MC17482L	SN7482J, N	SN7482J, N	9
MC5495L	SN5495AJ, N	SN5495AJ, N	9	MC74107L, P	SN74107J, N	SN74107J, N	6
MC5496L	SN5496J, N	SN5496J, N	9	MC74121F	SN74121W	SN74121W	6
MC15842L	SN5482J, N	SN5482J, N	9	MC74121L, P	SN74121J, N	SN74121J, N	6
MC54107L	SN54107J, N	SN54107J, N	6	MC74150L	SN74150J, N	SN74150J, N	9
MC54121F	SN54121W	SN54121W	6	MC74151L, P	SN74151J, N	SN74151J, N	9
MC54121L	SN54121J, N	SN54121J, N	6	MC74192L, P	SN74192J, N	SN74192J, N	9
MC54150L	SN54150J, N	SN54150J, N	9	MC74193L, P	SN74193J, N	SN74193J, N	9
MC54151L	SN54151J, N	SN54151J, N	9				

CROSS-REFERENCE GUIDE

DTL/TTL CIRCUITS

Motorola Complex Functions

B

Type Number	Direct Replacement	Recommended For New Designs	Sec.	Type Number	Direct Replacement	Recommended for New Designs	Sec.
MC4000F		SN74153W	9	MC4037L, P		SN7415J, N	9
MC4000L, P		SN74153J, N	9	MC4039P		SN7448J, N	9
MC4001L, P		SN74184J, N or	9	MC4304F	SN5481W	SN5481W	9
		SN74185A, J, N	9	MC4304L	SN5481J, N	SN5481J, N	9
MC4002F		SN74155W	9	MC4305F	SN5481W	SN5481W	9
MC4002L, P		SN74155J, N	9	MC4305L	SN5481J, N	SN5481J, N	9
MC4004F	SN7481W	SN7481W	9	MC316L, P		SN54190J, N	9
MC4004L, P	SN7481J, N	SN7481J, N	9	MC4318L, P		SN54191J, N	9
MC4005F	SN7481W	SN7481W	9	MC4326F		SN54H183W	9
MC4005L, P	SN7481J, W	SN7481J, N	9	MC4326L		SN54H183J, N	9
MC4006F		SN74155W	9	MC4327F		SN54H183W	9
MC4006L, P		SN74155J, N	9	MC4327L		SN54H183J, N	9
MC4007L, P		SN74155J, N	9	MC4328F		SN54181W	9
MC4008F		SN74180W	9	MC4328L		SN54181J, N	9
MC4008L, P		SN74180J, N	9	MC4329F		SN54181W	9
MC4010F		SN74180W	9	MC4329L		SN54181J, N	9
MC4010L, P		SN74180J, N	9	MC4330F		SN54181W	9
MC4012F		SN7495AW	9	MC4330L		SN54181J, N	9
MC4012L, P		SN7495AJ, N	9	MC4331F		SN54181W	9
MC4015L, P		SN7475J, N	9	MC4331L		SN54181J, N	9
MC4016L, P		SN74190J, N	9	MC4332F		SN54182W	9
MC4018L, P		SN74191J, N	9	MC4332L		SN54182J, N	9
MC4023F		SN7492W	9	MC4335F		SN5475W	9
MC4023L, P		SN7492J, N	9	MC4335L, P		SN5475J, N	9
MC4026F		SN74H183W	9	MC4337F		SN5475W	9
MC4026L, P		SN74H183J, N	9	MC4337L, P		SN5475J, N	9
MC4027F		SN74H183W	9	MC8300L, P	SN74195J, N	SN74195J, N	9
MC4027L, P		SN74H183J, N	9	MC8301L, P		SN7442J, N	9
MC4028F		SN74181W	9	MC8304L, P		SN7482J, N	9
MC4028L, P		SN74181J, N	9	MC8309L, P		SN74153J, N	9
MC4029F		SN74181W	9	MC8312L, P		SN74151J, N	9
MC4029L, P		SN74181J, N	9	MC8601F	SN74122W	SN74122W	6
MC4030F		SN74181W	9	MC8601L, P	SN74122J, N	SN74122J, N	6
MC4030L, P		SN74181J, N	9	MC9300L	SN54195J, N	SN54195J, N	9
MC4031F		SN74181W	9	MC9301L		SN5442J, N	9
MC4031L, P		SN74181J, N	9	MC9304L		SN5482J, N	9
MC4032F		SN74182W	9	MC9309L		SN54153J, N	9
MC4032L, P		SN74182J, N	9	MC9312L		SN54151J, N	9
MC4035F		SN7475W	9	MC9601F	SN54122W	SN54122W	6
MC4035L, P		SN7475J, N	9	MC9601L	SN54122J, N	SN54122J, N	6
MC4037F		SN7475W	9				

National DTL

Type Number	Direct Replacement	Recommended For New Designs	Sec.	Type Number	Direct Replacement	Recommended for New Designs	Sec.
DM930N	SN15830J, N	SN7420J, N	6	DM957N	SN15857J, N	SN7437J, N	6
DM932N	SN15832J, N	SN7440J, N	6	DM958N	SN15858J, N	SN7437J, N	6
DM933N	SN15833J, N	SN7460J, N	6	DM961N	SN15861J, N	SN7420J, N	6
DM935N	SN15840J, N	SN7405J, N	6	DM962N	SN15862J, N	SN7410J, N	6
DM936N	SN15836J, N	SN7405J, N	6	DM963N	SN15863J, N	SN7410J, N	6
DM937N	SN15837J, N	SN7405J, N	6	DM1800N	SN151800J, N	SN7420J, N	6
DM944N	SN15844J, N	SN7440J, N	6	DM1801N	SN151801J, N	SN7420J, N	6
DM945N	SN15845J, N	SN74110J, N	6	DM9093N	SN158093J, N	SN7473J, N	6
DM946N	SN15846J, N	SN7400J, N	6	DM9094N	SN158094J, N	SN7473J, N	6
DM948N	SN15848J, N	SN74110J, N	6	DM9097N	SN158097J, N	SN7476J, N	6
DM949N	SN15849J, N	SN7400J, N	6	DM9099N	SN158099J, N	SN7476J, N	6

CROSS-REFERENCE GUIDE

DTL/TTL CIRCUITS

National TTL

B

Type Number†	Direct Replacement	Recommended for New Designs	Sec.	Type Number†	Direct Replacement	Recommended for New Designs	Sec.
DM5400D, N (7000)	SN5400J, N	SN5400J, N	6	DM7442D, N (8842)	SN7442J, N	SN7442J, N	9
DM5401D, N (7001)	SN5401J, N	SN5401J, N	6	DM7446D, N (8846)	SN7446AJ, N	SN7446AJ, N	9
DM5402D, N (7002)	SN5402J, N	SN5402J, N	6	DM7447D, N (8847)	SN7447AJ, N	SN7447AJ, N	9
DM5403D, N (7003)	SN5403J, N	SN5403J, N	6	DM7448D, N (8848)	SN7448J, N	SN7448J, N	9
DM5404D, N (7004)	SN5404J, N	SN5404J, N	6	DM7450D, N (8050)	SN7450J, N	SN7450J, N	6
DM5405D, N (7005)	SN5405J, N	SN5405J, N	6	DM7451D, N (8051)	SN7451J, N	SN7451J, N	6
DM5408D, N (7008)	SN5408J, N	SN5408J, N	6	DM7453D, N (8053)	SN7453J, N	SN7453J, N	6
DM5409D, N (7009)	SN5409J, N	SN5409J, N	6	DM7454D, N (8054)	SN7454J, N	SN7454J, N	6
DM5410D, N (7010)	SN5410J, N	SN5410J, N	6	DM7460D, N (8060)	SN7460J, N	SN7460J, N	6
DM5420D, N (7020)	SN5420J, N	SN5420J, N	6	DM7472D, N (8540)	SN7472J, N	SN7472J, N	6
DM5430D, N (7030)	SN5430J, N	SN5430J, N	6	DM7473D, N (8501)	SN7473J, N	SN7473J, N	6
DM5440D, N (7040)	SN5440J, N	SN5440J, N	6	DM7474D, N (8510)	SN7474J, N	SN7474J, N	6
DM5442D, N (7842)	SN5442J, N	SN5442J, N	9	DM7475D, N (8550)	SN7475J, N	SN7475J, N	9
DM5446D, N (7846)	SN5446AJ, N	SN5446AJ, N	9	DM7476D, N (8500)	SN7476J, N	SN7476J, N	6
DM5447D, N (7847)	SN5447AJ, N	SN5447AJ, N	9	DM7483D, N (8283)	SN7483J, N	SN7483J, N	9
DM5448D, N (7848)	SN5448J, N	SN5448J, N	9	DM7486D, N (8086)	SN7486J, N	SN7486J, N	9
DM5450D, N (7050)	SN5450J, N	SN5450J, N	6	DM7488D, N (8588)	SN7488J, N	SN7488J, N	9
DM5451D, N (7051)	SN5451J, N	SN5451J, N	6	DM7490D, N (8530)	SN7490J, N	SN7490J, N	9
DM5453D, N (7053)	SN5453J, N	SN5453J, N	6	DM7491AD, N	SN7491AJ, N	SN7491AJ, N	9
DM5454D, N (7054)	SN5454J, N	SN5454J, N	6	DM7492D, N (8532)	SN7492J, N	SN7492J, N	9
DM5460D, N (7060)	SN5460J, N	SN5460J, N	6	DM7493D, N (8533)	SN7493J, N	SN7493J, N	9
DM5472D, N (7540)	SN5472J, N	SN5472J, N	6	DM7495D, N (8580)	SN7495AJ, N	SN7495AJ, N	9
DM5473D, N (7501)	SN5473J, N	SN5473J, N	6	DM74107D, N (8502)	SN74107J, N	SN74107J, N	6
DM5474D, N (7510)	SN5474J, N	SN5474J, N	6	DM74121D, N	SN74121J, N	SN74121J, N	6
DM5475D, N (7550)	SN5475J, N	SN5475J, N	6	DM74153D, N (8212)	SN74153J, N	SN74153J, N	9
DM5476D, N (7500)	SN5476J, N	SN5476J, N	9	DM74154D, N (8213)	SN74154J, N	SN74154J, N	9
DM5483D, N (7283)	SN5483J, N	SN5483J, N	9	DM7520D, N		SN5497J, N	9
DM5486D, N (7086)	SN5486J, N	SN5486J, N	9	DM7551D, N		SN5475J, N	9
DM5488D, N (7588)	SN5488J, N	SN5488J, N	9	DM7560D, N	SN54192J, N	SN54192J, N	9
DM5490D, N (7530)	SN5490J, N	SN5490J, N	9	DM7563D, N	SN54193J, N	SN54193J, N	9
DM5491AD, N	SN5491AJ, N	SN5491AJ, N	9	DM7570D, N	SN54164J, N	SN54164J, N	9
DM5492D, N (7532)	SN5492J, N	SN5492J, N	9	DM7588D, N	SN5488J, N	SN5488J, N	9
DM5493D, N (7533)	SN5493J, N	SN5493J, N	9	DM7590D, N	SN54165J, N	SN54165J, N	9
DM5495D, N (7580)	SN5495AJ, N	SN5495AJ, N	9	DM7598D, N		SN5488J, N	9
DM54107D, N (7502)	SN54107J, N	SN54107J, N	6	DM7599D, N		SN5489J, N	9
DM54121D, N	SN54121J, N	SN54121J, N	6	DM8200D, N		SN7485J, N	9
DM54153D, N (7212)	SN54153J, N	SN54153J, N	9	DM8210D, N		SN74151J, N	9
DM54154D, N (7213)	SN54154J, N	SN54154J, N	9	DM8220D, N		SN74180J, N	9
DM7200D, N		SN5485J, N	9	DM8280D, N (7680)		SN54196J, N	9
DM7210D, N		SN54151J, N	9	DM8281D, N (7681)		SN54197J, N	9
DM7220D, N		SN54180J, N	9	DM8288D, N (7688)		SN54197J, N	9
DM7280D, N (8680)		SN54196J, N	9	DM8300D, N (8600)	SN74195J, N	SN74195J, N	9
DM7281D, N (8681)		SN54197J, N	9	DM8311D, N (8213)	SN74154J, N	SN74154J, N	9
DM7288D, N (8688)		SN54197J, N	9	DM8520D, N		SN7497J, N	9
DM7400D, N (8000)	SN7400J, N	SN7400J, N	6	DM8551D, N		SN7475J, N	9
DM7401D, N (8001)	SN7401J, N	SN7401J, N	6	DM8560D, N	SN74192J, N	SN74192J, N	9
DM7402D, N (8002)	SN7402J, N	SN7402J, N	6	DM8563D, N	SN74193J, N	SN74193J, N	9
DM7403D, N (8003)	SN7403J, N	SN7403J, N	6	DM8570D, N	SN74164J, N	SN74164J, N	9
DM7404D, N (8004)	SN7404J, N	SN7404J, N	6	DM8588D, N	SN7488J, N	SN7488J, N	9
DM7405D, N (8005)	SN7405J, N	SN7405J, N	6	DM8590D, N	SN74165J, N	SN74165J, N	9
DM7408D, N (8008)	SN7408J, N	SN7408J, N	6	DM8598D, N		SN7488J, N	9
DM7409D, N (8009)	SN7409J, N	SN7409J, N	6	DM8599D, N		SN7489J, N	9
DM7410D, N (8010)	SN7410J, N	SN7410J, N	6	DM8601D, N (8850)	SN74122J, N	SN74122J, N	6
DM7420D, N (8020)	SN7420J, N	SN7420J, N	6	DM9300D, N (7600)	SN54195J, N	SN54195J, N	9
DM7430D, N (8030)	SN7430J, N	SN7430J, N	6	DM9311D, N (7213)	SN54154J, N	SN54154J, N	9
DM7440D, N (8040)	SN7440J, N	SN7440J, N	6	DM9601D, N (7850)	SN54122J, N	SN54122J, N	6
DM7441D, N (8841)	SN74141J, N	SN74141J, N	9				

†Number in parentheses is an obsolete type number.

CROSS-REFERENCE GUIDE

DTL/TTL CIRCUITS

Raytheon DTL

B

Type Number	Direct Replacement	Recommended For New Designs	Sec.	Type Number	Direct Replacement	Recommended for New Designs	Sec.
RC930D, P	SN 15830J, N	SN7420J, N	6	RM930D, P	SN 15930J, N	SN5420J, N	6
RC930J	SN 15830U	SN7420W	6	RM930J	SN 15930U	SN5420J, N	6
RC932D, P	SN 15832J, N	SN7440J, N	6	RM932D, P	SN 15932J, N	SN5440J, N	6
RC932J	SN 15832U	SN7440W	6	RM932J	SN 15932U	SN5440W	6
RC933D, P	SN 15833J, N	SN7460J, N	6	RM933D, P	SN 15933J, N	SN5460J, N	6
RC933J	SN 15833U	SN7460W	6	RM933J	SN 15933U	SN5460W	6
RC934D, P	SN 15834J, N	SN7405J, N	6	RM934D, P	SN 15934J, N	SN5405J, N	6
RC934J	SN 15834U	SN7405W	6	RM934J	SN 15934U	SN5405W	6
RC935D, P	SN 15838J, N	SN7405J, N	6	RM935D, P	SN 15938J, N	SN5405J, N	6
RC935J	SN 15838U	SN7405W	6	RM935J	SN 15938U	SN5405W	6
RC936D, P	SN 15836J, N	SN7405J, N	6	RM936D, P	SN 15936J, N	SN5405J, N	6
RC936J	SN 15836U	SN7405W	6	RM936J	SN 15936U	SN5405W	6
RC937D, P	SN 15837J, N	SN7405J, N	6	RM937D, P	SN 15937J, N	SN5405J, N	6
RC937J	SN 15837U	SN7405W	6	RM937J	SN 15937U	SN5405W	6
RC940D, P	SN 15835J, N	SN7405J, N	6	RM940D, P	SN 15935J, N	SN5405J, N	6
RC940J	SN 15835U	SN7405W	6	RM940J	SN 15935U	SN5405W	6
RC941D, P	SN 15841J, N		11	RM941D, P	SN 15941J, N		11
RC941J	SN 15841U		11	RM941J	SN 15941U		11
RC944D, P	SN 15844J, N	SN7440J, N	6	RM944D, P	SN 15944J, N	SN5440J, N	6
RC944J	SN 15844U	SN7440W	6	RM944J	SN 15944U	SN5440W	6
RC945D, P	SN 15845J, N	SN74110J, N	6	RM945D, P	SN 15945J, N	SN54110J, N	6
RC945J	SN 15845U	SN74110W	6	RM945J	SN 15945U	SN54110W	6
RC946D, P	SN 15846J, N	SN7400J, N	6	RM946D, P	SN 15946J, N	SN5400J, N	6
RC946J	SN 15846U	SN7400W	6	RM946J	SN 15946U	SN5400W	6
RC948D, P	SN 15848J, N	SN74110J, N	6	RM948D, P	SN 15948J, N	SN54110J, N	6
RC948J	SN 15848U	SN74110W	6	RM948J	SN 15948U	SN54110W	6
RC949D, P	SN 15849J, N	SN7400J, N	6	RM949D, P	SN 15949J, N	SN5400J, N	6
RC949J	SN 15849U	SN7400W	6	RM949J	SN 15949U	SN5400W	6
RC950D, P	SN 15850J, N	SN74110J, N	6	RM950D, P	SN 15950J, N	SN54110J, N	6
RC950J	SN 15850U	SN74110W	6	RM950J	SN 15950U	SN54110W	6
RC951D, P	SN 15851J, N	SN74121J, N	6	RM951D, P	SN 15951J, N	SN54121J, N	6
RC951J	SN 15851U	SN74121W	6	RM951J	SN 15951U	SN54121W	6
RC957J	SN 15857J, N	SN7437J, N	6	RM957D, P	SN 15957J, N	SN5437J, N	6
RC957J	SN 15857U	SN7437W	6	RM957J	SN 15957U	SN5437W	6
RC958D, P	SN 15858J, N	SN7437J, N	6	RM958D, P	SN 15958J, N	SN5437J, N	6
RC958J	SN 15858U	SN7437W	6	RM958J	SN 15958U	SN5437W	6
RC961D, P	SN 15861J, N	SN7420J, N	6	RM961D, P	SN 15961J, N	SN5420J, N	6
RC961J	SN 15861U	SN7420W	6	RM961J	SN 15961U	SN5420W	6
RC962D, P	SN 15862J, N	SN7410J, N	6	RM962D, P	SN 15962J, N	SN5410J, N	6
RC962J	SN 15862U	SN7410W	6	RM962J	SN 15962U	SN5410W	6
RC9630D, P	SN 15863J, N	SN7410J, N	6	RM963D, P	SN 15963J, N	SN5410J, N	6
RC963J	SN 15863U	SN7410W	6	RM963J	SN 15963U	SN5410W	6
RC993D, P	SN 158093J, N	SN7473J, N	6	RM993D, P	SN 159093J, N	SN5473J, N	6
RC993J	SN 158093U	SN7473W	6	RM993J	SN 159093U	SN5473W	6
RC994D, P	SN 158094J, N	SN7473J, N	6	RM994D, P	SN 159094J, N	SN5473J, N	6
RC994J	SN 158094U	SN7473W	6	RM994J	SN 159094U	SN5473W	6
RC997D, P	SN 158097J, N	SN7476J, N	6	RM997D, P	SN 159097J, N	SN5476J, N	6
RC997J	SN 158097U	SN7476W	6	RM997J	SN 159097U	SN5476W	6
RC999D, P	SN 158099J, N	SN7476J, N	6	RM999D, P	SN 159099J, N	SN5476J, N	6
RC999J	SN 158099U	SN7476W	6	RM999J	SN 159099U	SN5476W	6
RC1900D, P	SN 151800J, N	SN7420J, N	6	RM1900D, P	SN 151900J, N	SN5420J, N	6
RC1900J	SN 151800U	SN7420W	6	RM1900J	SN 151900U	SN5420W	6
RC1901D, P	SN 151801J, N	SN7420J, N	6	RM1901D, P	SN 151901J, N	SN5420J, N	6
RC1901J	SN 151801U	SN7420W	6	RM1901J	SN 151901U	SN5420W	6
RC1902D, P	SN 151802J, N	SN7430J, N	6	RM1902D, P	SN 151902J, N	SN5430J, N	6
RC1902J	SN 151802U	SN7430W	6	RM1902J	SN 151902U	SN5430W	6
RC1903D, P	SN 151803J, N	SN7430J, N	6	RM1903D, P	SN 151903J, N	SN5430J, N	6
RC1903J	SN 151803U	SN7430W	6	RM1903J	SN 151903U	SN5430W	6
RC1904D, P	SN 151804J, N	SN7430J, N	6	RM1904D, P	SN 151904J, N	SN5430J, N	6
RC1904J	SN 151804U	SN7430W	6	RM1904J	SN 151904U	SN5430W	6
RC1905D, P	SN 151805J, N	SN7430J, N	6	RM1905D, P	SN 151905J, N	SN5430J, N	6
RC1905J	SN 151805U	SN7430W	6	RM1905J	SN 151905U	SN5430W	6

CROSS-REFERENCE GUIDE

DTL/TTL CIRCUITS

Raytheon TTL

Type Number	Direct Replacement	Recommended for New Designs	Sec.	Type Number	Direct Replacement	Recommended for New Designs	Sec.
RF10D, P	SNF10J, N	SN5472J, N	6	RF131K	SNF131U	SN54H108W	7
RF10K	SNF10U	SN5472W	6	RF132D, P	SNF132J, N	SN74H108J, N	7
RF11D, P	SNF11J, N	SN5472J, N	6	RF132K	SNG132U	SN74H108W	7
RF11K	SNF11U	SN5472W	6	RF133D, P	SNF133J, N	SN74H108J, N	7
RF12D, P	SNF12J, N	SN7472J, N	6	RF133K	SNF133U	SN74H108W	7
RF12K	SNF12U	SN7472W	6	RF200D, P	SNF200J, N	SN54H102J, N	7
RF13D, P	SNF13J, N	SN7472J, N	6	RF200K	SNF200U	SN54H102W	7
RF13K	SNF13U	SN7472W	6	RF201D, P	SNF201J, N	SN54H102J, N	7
RF20D, P	SNF20J, N	SN5472J, N	6	RF201K	SNF201U	SN54H102W	7
RF20K	SNF20U	SN5472W	6	RF202D, P	SNF202J, N	SN74H102J, N	7
RF21D, P	SNF21J, N	SN5472J, N	6	RF202K	SNF202U	SN74H102W	7
RF21K	SNF21U	SN5472W	6	RF203D, P	SNF203J, N	SN74H102J, N	7
RF22D, P	SNF22J, N	SN7472J, N	6	RF203K	SNF203U	SN74H102W	7
RF22K	SNF22U	SN7472W	6	RF210D, P	SNF210J, N	SN54H101J, N	7
RF23D, P	SNF23J, N	SN7472J, N	6	RF210K	SNF210U	SN54H101W	7
RF23K	SNF23U	SN7472W	6	RF211D, P	SNF211J, N	SN54H101J, N	7
RF30D, P	SNF30J, N	SN54104J, N	6	RF211K	SNF211U	SN54H101W	7
RF30K	SNF30U	SN54104W	6	RF212D, P	SNF212J, N	SN74H101J, N	7
RF31D, P	SNF31J, N	SN54104J, N	6	RF212K	SNF212U	SN74H101W	7
RF31K	SNF31U	SN54104W	6	RF213D, P	SNF213J, N	SN74H101J, N	7
RF32D, P	SNF32J, N	SN74104J, N	6	RF213K	SNF213U	SN74H101W	7
RF32K	SNF32U	SN74104W	6	RF250D, P	SNF250J, N	SN54H102J, N	7
RF33D, P	SNF33J, N	SN74104J, N	6	RF250K	SNF250U	SN54H102W	7
RF33K	SNF33U	SN74104W	6	RF251D, P	SNF251J, N	SN54H102J, N	7
RF50D, P	SNF50J, N	SN5470J, N	6	RF251K	SNF251U	SN54H102W	7
RF50K	SNF50U	SN5470W	6	RF252D, P	SNF252J, N	SN74H102J, N	7
RF51D, P	SNF51J, N	SN5470J, N	6	RF252K	SNF252U	SN74H102W	7
RF51K	SNF51U	SN5470W	6	RF253D, P	SNF253J, N	SN74H102J, N	7
RF52D, P	SNF52J, N	SN7470J, N	6	RF253K	SNF253U	SN74H102W	7
RF52K	SNF52U	SN7470W	6	RF260D, P	SNF260J, N	SN54H101J, N	7
RF53D, P	SNF53J, N	SN7470J, N	6	RF260K	SNF260U	SN54H101W	7
RF53K	SNF53U	SN7470W	6	RF261D, P	SNF261J, N	SN54H101J, N	7
RF60D, P	SNF60J, N	SN54H101J, N	7	RF261K	SNF261U	SN54H101W	7
RF60K	SNF60U	SN54H101W	7	RF262D, P	SNF262J, N	SN74H101J, N	7
RF61D, P	SNF61J, N	SN54H101J, N	7	RF262K	SNF262U	SN74H101W	7
RF61K	SNF61U	SN54H101W	7	RF263D, P	SNF263J, N	SN74H101J, N	7
RF62D, P	SNF62J, N	SN74H101J, N	7	RF263K	SNF263U	SN74H101W	7
RF62K	SNF62U	SN74H101W	7	RF3120D, P		SN54S112J, N	5
RF63D, P	SNF63J, N	SN74H101J, N	7	RF3120K		SN54S112W	5
RF63K	SNF63U	SN74H101W	7	RF3122D, P		SN74S112J, N	5
RF100D, P	SNF100J, N	SN54H103J, N	7	RF3122K		SN74S112W	5
RF100K	SNF100U	SN54H103W	7	RF3130D, P		SN54S114J, N	5
RF101D, P	SNF101J, N	SN54H103J, N	7	RF3130K		SN54S114W	5
RF101K	SNF101U	SN54H103W	7	RF3132D, P		SN74S114J, N	5
RF102D, P	SNF102J, N	SN74H103J, N	7	RF3132K		SN74S114W	5
RF102K	SNF102U	SN74H103W	7	RF3200D, P		SN54S112J, N	5
RF103D, P	SNF103J, N	SN74H103J, N	7	RF3200K		SN54S112J, N	5
RF103K	SNF103U	SN74H103W	7	RF3202D, P		SN74S112J, N	5
RF110D, P	SNF110J, N	SN54H108J, N	7	RF3202K		SN74S112W	5
RF110K	SNF110U	SN54H108W	7	RF3210D, P		SN54S112J, N	5
RF111D, P	SNF111J, N	SN54H108J, N	7	RF3210K		SN54S112W	5
RF111K	SNF111U	SN54H108W	7	RF3212D, P		SN74S112J, N	5
RF112D, P	SNF112J, N	SN74H108J, N	7	RF3212K		SN74S112W	5
RF112K	SNF112U	SN74H108W	7	RF3220D, P		SN54S74J, N	5
RF113K, P	SNF113J, N	SN74H108J, N	7	RF3220K		SN54S74W	5
RF113K, P	SNF113U	SN74H108W	7	RF3222D, P		SN74S74J, N	5
RF120D, P	SNF120J, N	SN54H103J, N	7	RF3222K		SN74S74W	5
RF120K	SNF120U	SN54H103W	7	RG40D, P	SNG40J, N	SN5420J, N	6
RF121D, P	SNF121J, N	SN54H103J, N	7	RG40K	SNG40U	SN5420W	6
RF121K	SNF121U	SN54H103W	7	RG41D, P	SNG41J, N	SN5420J, N	6
RF122D, P	SNF122J, N	SN74H103J, N	7	RG41K	SNG41U	SN5420W	6
RF122K	SNF122U	SN74H103W	7	RG42D, P	SNG42J, N	SN7420J, N	6
RF123D, P	SNF123J, N	SN74H103J, N	7	RG42K	SNG42U	SN7420W	6
RF123K	SNF123U	SN74H103W	7	RG43D, P	SNG43J, N	SN7420J, N	6
RF130D, P	SNF130J, N	SN54H108J, N	7	RG43K	SNG43U	SN7420W	6
RF130K	SNF130U	SN54H108W	7	RG50D, P	SNG50J, N	SN5453J, N	6
RF131D, P	SNF131J, N	SN54H108J, N	7	RG50K	SNG50U	SN5453W	6

B

CROSS-REFERENCE GUIDE

DTL/TTL CIRCUITS

Raytheon TTL, Cont.

B

Type Number	Direct Replacement	Recommended for New Designs	Sec.	Type Number	Direct Replacement	Recommended for New Designs	Sec.
RG51D, P	SNG51J, N	SN5453J, N	6	RG133D, P	SNG133J, N	SN74S140J, N	5
RG51K	SNG51U	SN5453W	6	RG133K	SNG133U	SN74S140W	5
RG52D, P	SNG52J, N	SN7453J, N	6	RG140D, P	SNG140J, N	SN5400J, N	6
RG52K	SNG52U	SN7453W	6	RG140K	SNG140U	SN5400W	6
RG53D, P	SNG53J, N	SN7453J, N	6	RG141D, P	SNG141J, N	SN5400J, N	6
RG53K	SNG53U	SN7453W	6	RG141K	SNG141U	SN5400W	6
RG60D, P	SNG60J, N	SN5430J, N	6	RG142D, P	SNG142J, N	SN7400J, N	6
RG60K	SNG60U	SN5430W	6	RG142K	SNG142U	SN7400W	6
RG61D, P	SNG61J, N	SN5430J, N	6	RG143D, P	SNG143J, N	SN7400J, N	6
RG61K	SNG61U	SN5430W	6	RG143K	SNG143U	SN7400W	6
RG62D, P	SNG62J, N	SN7430J, N	6	RG150D, P	SNG150J, N	SN54H62J, N	7
RG62K	SNG62U	SN7430W	6	RG150K	SNG150U	SN54H62W	7
RG63D, P	SNG63J, N	SN7430J, N	6	RG151D, P	SNG151J, N	SN54H62J, N	7
RG63K	SNG63U	SN7430W	6	RG151K	SNG151U	SN54H62W	7
RG70D, P	SNG70J, N	SN5450J, N	6	RG152D, P	SNG152J, N	SN74H62J, N	7
RG70K	SNG70U	SN5450W	6	RG152K	SNG152U	SN74H62W	7
RG71D, P	SNG71J, N	SN5450J, N	6	RG153D, P	SNG153J, N	SN74H62J, N	7
RG71K	SNG71U	SN5450W	6	RG153K	SNG153U	SN74H62W	7
RG72D, P	SNG72J, N	SN7450J, N	6	RG160D, P	SNG160J, N	SN5438J, N	6
RG72K	SNG72U	SN7450W	6	RG160K	SNG160U	SN5438W	6
RG73D, P	SNG73J, N	SN7450J, N	6	RG161D, P	SNG161J, N	SN5438J, N	6
RG73K	SNG73U	SN7450W	6	RG161K	SNG161U	SN5438W	6
RG80D, P	SNG80J, N	SN5413J, N	6	RG162D, P	SNG162J, N	SN7438J, N	6
RG80K	SNG80U	SN5413W	6	RG162K	SNG162U	SN7438W	6
RG81D, P	SNG81J, N	SN5413J, N	6	RG163D, P	SNG163J, N	SN7438J, N	6
RG81K	SNG81U	SN5413W	6	RG163K	SNG163U	SN7438W	6
RG82D, P	SNG82J, N	SN7413J, N	6	RG170D, P	SNG170J, N	SN5460J, N	6
RG82K	SNG82U	SN7413W	6	RG170K	SNG170U	SN5460W	6
RG83D, P	SNG83J, N	SN7413J, N	6	RG171D, P	SNG171J, N	SN5460J, N	6
RG83K	SNG83U	SN7413W	6	RG171K	SNG171U	SN5460W	6
RG90D, P	SNG90J, N	SN5486J, N	9	RG172D, P	SNG172J, N	SN7460J, N	6
RG90K	SNG90U	SN5486W	9	RG172K	SNG172U	SN7460W	6
RG91D, P	SNG91J, N	SN5486J, N	9	RG173D, P	SNG173J, N	SN7460J, N	6
RG91K	SNG91U	SN5486W	9	RG173K	SNG173U	SN7460W	6
RG92D, P	SNG92J, N	SN7486J, N	9	RG180D, P	SNG180J, N	SN5430J, N	6
RG92K	SNG92U	SN7486W	9	RG180K	SNG180U	SN5430W	6
RG93D, P	SNG93J, N	SN7486J, N	9	RG181D, P	SNG181J, N	SN5430J, N	6
RG93K	SNG93U	SN7486W	9	RG181K	SNG181U	SN5430W	6
RG100D, P	SNG100J, N	SN5453J, N	6	RG182D, P	SNG182J, N	SN7430J, N	6
RG100K	SNG100U	SN5453W	6	RG182K	SNG182U	SN7430W	6
RG101D, P	SNG101J, N	SN5453J, N	6	RG183D, P	SNG183J, N	SN7430J, N	6
RG101K	SNG101U	SN5453W	6	RG183K	SNG183U	SN7430W	6
RG102D, P	SNG102J, N	SN5453J, N	6	RG190D, P	SNG190J, N	SN5410J, N	6
RG102K	SNG102U	SN5453W	6	RG190K	SNG190U	SN5410W	6
RG103D, P	SNG103J, N	SN7454J, N	6	EG191D, P	SNG191J, N	SN5410J, N	6
RG103K	SNG103U	SN7453W	6	RG191K	SNG191U	SN5410W	6
RG110D, P	SNG110J, N	SN54H55J, N	7	RG192D, P	SNG192J, N	SN7410J, N	6
RG110K	SNG110U	SN54H55W	7	RG192K	SNG192U	SN7410W	6
RG111D, P	SNG111J, N	SN54H55J, N	7	RG193D, P	SNG193J, N	SN7410J, N	6
RG111K	SNG111U	SN54H55W	7	RG193K	SNG193U	SN7410W	6
RG112D, P	SNG112J, N	SN74H55J, N	7	RG200D, P	SNG200J, N	SN54H30J, N	7
RG112K	SNG112U	SN74H55W	7	RG200K	SNG200U	SN54H30W	7
RG113D, P	SNG113J, N	SN74H55J, N	7	RG201D, P	SNG201J, N	SN54H30J, N	7
RG113K	SNG113U	SN74H55W	7	RG201K	SNG201U	SN54H30W	7
RG120D, P	SNG120J, N	SN5430J, N	6	RG202D, P	SNG202J, N	SN74H30J, N	7
RG120K	SNG120U	SN5430W	6	RG202K	SNG202U	SN74H30W	7
RG121D, P	SNG121J, N	SN5430J, N	6	RG203D, P	SNG203J, N	SN74H30J, N	7
RG121K	SNG121U	SN5430W	6	RG203K	SNG203U	SN74H30W	7
RG122D, P	SNG122J, N	SN7430J, N	6	RG210D, P	SNG210J, N	SN54H55J, N	7
RG122K	SNG122U	SN7430W	6	RG210K	SNG210U	SN54H55W	7
RG123D, P	SNG123J, N	SN7430J, N	6	RG211D, P	SNG211J, N	SN54H55J, N	7
RG123K	SNG123U	SN7430W	6	RG211K	SNG211U	SN54H55W	7
RG130D, P	SNG130J, N	SN54S140J, N	5	RG212D, P	SNG212J, N	SN74H55J, N	7
RG130K	SNG130U	SN54S140W	5	RG212K	SNG212U	SN74H55W	7
RG131D, P	SNG131J, N	SN54S140J, N	5	RG213D, P	SNG213J, N	SN74H55J, N	7
RG131K	SNG131U	SN54S140W	5	RG213K	SNG213U	SN74H55W	7
RG132D, P	SNG132J, N	SN74S140J, N	5	RG220D, P	SNG220J, N	SN54H00J, N	7
RG132K	SNG132U	SN74S140W	5	RG220K	SNG220U	SN54H00W	7

CROSS-REFERENCE GUIDE

DTL/TTL CIRCUITS

Raytheon TTL, Cont.

Type Number	Direct Replacement	Recommended for New Designs	Sec.	Type Number	Direct Replacement	Recommended for New Designs	Sec.
RG221D, P	SNG221J, N	SN54H00J, N	7	RG302K	SNG302U	SN74H53W	7
RG221K	SNG221U	SN54H00W	7	RG303D, P	SNG303J, N	SN74H53J, N	7
RG222D, P	SNG222J, N	SN74H00J, N	7	RG303K	SNG303U	SN74H53W	7
RG222K	SNG222U	SN74H00W	7	RG310D, P	SNG310J, N	SN54H50J, N	7
RG223D, P	SNG223J, N	SN74H00J, N	7	RG310K	SNG310U	SN54H50W	7
RG223K	SNG223U	SN74H00W	7	RG311D, P	SNG311J, N	SN54H50J, N	7
RG230D, P	SNG230J, N	SN74H62J, N	7	RG311K	SNG311U	SN54H50W	7
RG230K	SNG230U	SN74H62W	7	RG312D, P	SNG312J, N	SN74H50J, N	7
RG231D, P	SNG231J, N	SN54H62J, N	7	RG312K	SNG312U	SN74H50W	7
RG231K	SNG231U	SN54H62W	7	RG313D, P	SNG313J, N	SN74H50J, N	7
RG232D, P	SNG232J, N	SN74H62J, N	7	RG313K	SNG313U	SN74H50W	7
RG232K	SNG232U	SN74H62W	7	RG320D, P	SNG320J, N	SN54H10J, N	7
RG233D, P	SNG233J, N	SN74H62J, N	7	RG320K	SNG320U	SN54H10W	7
RG233K	SNG233U	SN74H62W	7	RG321D, P	SNG321J, N	SN54H10J, N	7
RG240D, P	SNG240J, N	SN54H20J, N	7	RG321K	SNG321U	SN54H10W	7
RG240K	SNG240U	SN54H20W	7	RG322D, P	SNG322J, N	SN74H10J, N	7
RG241D, P	SNG241J, N	SN54H20J, N	7	RG322K	SNG322U	SN74H10W	7
RG241K	SNG241U	SN54H20W	7	RG323D, P	SNG323J, N	SN74H10J, N	7
RG242D, P	SNG242J, N	SN74H20J, N	7	RG323K	SNG323U	SN74H10W	7
RG242K	SNG242U	SN74H20W	7	RG370D, P	SNG370J, N	SN5404J, N	6
RG243D, P	SNG243J, N	SN74H20J, N	7	RG370K	SNG370U	SN5404W	6
RG243K	SNG243U	SN74H20W	7	RG371D, P	SNG371J, N	SN5404J, N	6
RG250D, P	SNG250J, N	SN54H53J, N	7	RG371K	SNG371U	SN5404W	6
RG250K	SNG250U	SN54H53W	7	RG372D, P	SNG372J, N	SN7404J, N	6
RG251D, P	SNG251J, N	SN54H53J, N	7	RG372K	SNG372U	SN7404W	6
RG251K	SNG251U	SN54H53W	7	RG373D, P	SNG373J, N	SN7404J, N	6
RG252D, P	SNG252J, N	SN74H53J, N	7	RG373K	SNG373U	SN7404W	6
RG252K	SNG252U	SN74H53W	7	RG380D, P	SNG380J, N	SN54H04J, N	7
RG253D, P	SNG253J, N	SN74H53J, N	7	RG380K	SNG380U	SN54H04W	7
RG253K	SNG253U	SN74H53W	7	RG381D, P	SNG381J, N	SN54H04J, N	7
RG260D, P	SNG260J, N	SN54H30J, N	7	RG381K	SNG381U	SN54H04W	7
RG260K	SNG260U	SN54H30W	7	RG382D, P	SNG382J, N	SN74H04J, N	7
RG261D, P	SNG261J, N	SN54H30J, N	7	RG382K	SNG382U	SN74H04W	7
RG261K	SNG261U	SN54H30W	7	RG383D, P	SNG383J, N	SN74H04J, N	7
RG262D, P	SNG262J, N	SN74H30J, N	7	RG383K	SNG383U	SN74H04W	7
RG262K	SNG262U	SN74H30W	7	RG3180D, P		SN54S15J, N	5
RG263D, P	SNG263J, N	SN74H30J, N	7	RG3180K		SN54S15W	5
RG263K	SNG263U	SN74H30W	7	RG3182D, P		SN74S15J, N	5
RG270D, P	SNG270J, N	SN54H60J, N	7	RG3182K		SN74S15W	5
RG270K	SNG270U	SN54H60W	7	RG3200D, P		SN54H30J, N	7
RG271D, P	SNG271J, N	SN54H60J, N	7	RG3200K		SN54H30W	7
RG271K	SNG271U	SN54H60W	7	RG3202D, P		SN74H30J, N	7
RG272D, P	SNG272J, N	SN74H60J, N	7	RG3202K		SN74H30W	7
RG272K	SNG272U	SN74H60W	7	RG3210D, P		SN54S65J, N	5
RG273D, P	SNG273J, N	SN74H60J, N	7	RG3210K		SN54S65W	5
RG273K	SNG273U	SN74H60W	7	RG3212D, P		SN74S65J, N	5
RG280D, P	SNG280J, N	SN54H52J, N	7	RG3212K		SN74S65W	5
RG280K	SNG280U	SN54H52W	7	RG3220D, P		SN54S00J, N	5
RG281D, P	SNG281J, N	SN54H52J, N	7	RG3220K		SN54S00W	5
RG281K	SNG281U	SN54H52W	7	RG3222D, P		SN74S00J, N	5
RG282D, P	SNG282J, N	SN74H52J, N	7	RG3222K		SN74S00W	5
RG282K	SNG282U	SN74H52W	7	RG3230D, P		SN54S65J, N	5
RG283D, P	SNG283J, N	SN74H52J, N	7	RG3230K		SN54S65W	5
RG283K	SNG283U	SN74H52W	7	RG3232D, P		SN74S65J, N	5
RG290D, P	SNG290J, N	SN54H62J, N	7	RG3232K		SN74S65W	5
RG290K	SNG290U	SN54H62W	7	RG3240D, P		SN54S20J, N	5
RG291D, P	SNG291J, N	SN54H62J, N	7	RG3240K		SN54S20W	5
RG291K	SNG291U	SN54H62W	7	RG3242D, P		SN74S20J, N	5
RG292D, P	SNG292J, N	SN74H62J, N	7	RG3242K		SN74S20W	5
RG292K	SNG292U	SN74H62W	7	RG3250D, P		SN54S65J, N	5
RG293D, P	SNG293J, N	SN74H62J, N	7	RG3250K		SN54S65W	5
RG293K	SNG293U	SN74H62W	7	RG3252D, P		SN74S65J, N	5
RG300D, P	SNG300J, N	SN54H53J, N	7	RG3252K		SN74S65W	5
RG300K	SNG300U	SN54H53W	7	RG3260D, P		SN54H30J, N	7
RG301D, P	SNG301J, N	SN54H53J, N	7	RG3260K		SN54H30W	7
RG301K	SNG301U	SN54H53W	7	RG3262D, P		SN74H30J, N	7
RG302D, P	SNG302J, N	SN74H53J, N	7	RG3262K		SN74H30W	7

B

CROSS-REFERENCE GUIDE

DTL/TTL CIRCUITS

Raytheon TTL, Cont.

B

Type Number	Direct Replacement	Recommended for New Designs	Sec.	Type Number	Direct Replacement	Recommended for New Designs	Sec.
RG3270D, P		SN54S65J, N	5	RL22D, P	SNG22J, N	SN74181J, N	9
RG3270K		SN54S65W	5	RL22K	SNG22U	SN74181W	9
RG3272D, P		SN74S65J, N	5	RL23D, P	SNG23J, N	SN74181J, N	9
RG3272K		SN74S65W	5	RL23K	SNG23U	SN74181W	9
RG3310D, P		SN54S65J, N	5	RL30D, P	SNG30J, N	SN54181J, N	9
RG3310K		SN54S65W	5	RL30K	SNG30U	SN54181W	9
RG3312D, P		SN74S65J, N	5	RL31D, P	SNG31J, N	SN54181J, N	9
RG3312K		SN74S65W	5	RL31K	SNG31U	SN54181W	9
RG3320D, P		SN54S10J, N	5	RL32D, P	SNG32J, N	SN74181J, N	9
RG3320K		SN54S10W	5	RL32K	SNG32U	SN74181W	9
RG3322D, P		SN74S10J, N	5	RL33D, P	SNG33J, N	SN74181J, N	9
RG3322K		SN74S10W	5	RL33K	SNG33U	SN74181W	9
RG3380D, P		SN54S04J, N	5	RL40D, P	SNG40J, N	SN54182J, N	9
RG3380K		SN54S04W	5	RL40K	SNG40U	SN54182W	9
RG3382D, P		SN74S04J, N	5	RL41D, P	SNG41J, N	SN54182W	9
RG3382K		SN74S04W	5	RL41K	SNG41U	SN74182J, N	9
RG3390D, P		SN54S15J, N	5	RL42D, P	SNG42J, N	SN74182W	9
RG3390K		SN54S15W	5	RL42K	SNG42U	SN74182J, N	9
RG3392D, P		SN74S15J, N	5	RL43D, P	SNG43J, N	SN74182J, N	9
RG3392K		SN74S15W	5	RL43K	SNG43U	SN74182W	9
RG3400D, P		SN54S15J, N	5	RL60D, P	SNG60J, N	SN5475J, N	9
RG3400K		SN54S15W	5	RL60K	SNG60U	SN5475W	9
RG3402D, P		SN74S15J, N	5	RL61D, P	SNG61J, N	SN5475J, N	9
RG3402K		SN74S15W	5	RL61K	SNG61U	SN5475W	9
RG3420D, P		SN54S22J, N	5	RL62D, P	SNG62J, N	SN7475J, N	9
RG3420K		SN54S22W	5	RL62K	SNG62U	SN7475W	9
RG3422D, P		SN74S22J, N	5	RL63D, P	SNG63J, N	SN7475J, N	9
RG3422K		SN74S22W	5	RL63K	SNG63U	SN7475W	9
RG3440D, P		SN54S65J, N	5	RL70D, P	SNG70J, N	SN5475J, N	9
RG3440K		SN54S65W	5	RL70K	SNG70U	SN5475W	9
RG3442D, P		SN74S65J, N	5	RL71D, P	SNG71J, N	SN5475J, N	9
RG3442K		SN74S65W	5	RL71K	SNG71U	SN5475W	9
RL10D, P		SN54H183J, N	9	RL72D, P	SNG72J, N	SN7475J, N	9
RL10K		SN54H183W	9	RL72K	SNG72U	SN7475W	9
RL11D, P		SN54H183J, N	9	RL73D, P	SNG73J, N	SN7475J, N	9
RL11K		SN54H183W	9	RL73K	SNG73U	SN7475W	9
RL12D, P		SN74H183J, N	9	RL80D, P	SNG80J, N	SN5489J, N	9
RL12K		SN74H183W	9	RL80K	SNG80U	SN5489W	9
RL13D, P		SN74H183J, N	9	RL81D, P	SNG81J, N	SN5489J, N	9
RL13K		SN74H183W	9	RL81K	SNG81U	SN5489W	9
RL20D, P	SNG20J, N	SN54181J, N	9	RL82D, P	SNG82J, N	SN7489J, N	9
RL20K	SNG20U	SN54181W	9	RL82K	SNG82U	SN7489W	9
RL21D, P	SNG21J, N	SN54181J, N	9	RL83D, P	SNG83J, N	SN7489J, N	9
RL21K	SNG21U	SN54181W	9	RL83K	SNG83U	SN7489W	9

Signetics DCL

Type Number	Direct Replacement	Recommended for New Designs	Sec.	Type Number	Direct Replacement	Recommended for New Designs	Sec.
N8H16A	SN74H20J, N	SN74H20J, N	7	N8T04R		SN7447AJ, N	9
N8H16J		SN74H20W	7	N8T05B		SN7448J, N	9
N8H20Q		SN74H103W	7	N8T05R		SN7448W	9
N8H21A		SN74H108J, N	7	N8T13B		SN74S140J, N	5
N8H21Q		SN74H108W	7	N8T13R		SN74S140W	5
N8H22B		SN74H106J, N	7	N8T14B		SN7413J, N	6
N8H70A	SN74H11J, N	SN74H11J, N	7	N8T14R		SN7413W	6
N8H70J		SN74H11W	7	N8T80A		SN7426J, N	6
N8H80A	SN74H00J, N	SN74H00J, N	7	N8T80J		SN7426W	6
N8H80J		SN74H00W	7	N8T90A		SN7406J, N	6
N8H90A	SN74H04J, N	SN74H04J, N	7	N8T90J		SN7406W	6
N8H90J	SN74H04W	SN74H04W	7	N1283A		SN7484J, N	9
N8T01B		SN74141J, N	9	N8162A		SN74121J, N	6
N8T04B		SN7447AJ, N	9	N8162J		SN74121W	6

CROSS-REFERENCE GUIDE

DTL/TTL CIRCUITS

Signetics DCL, Cont.

Type Number	Direct Replacement	Recommended for New Designs	Sec.	Type Number	Direct Replacement	Recommended for New Designs	Sec.
N8200P		SN74198W	9	N8416A	SN15830J, N	SN7420J, N	6
N8200Y		SN74198J, N	9	N8416J		SN7420J, N	6
N8201P		SN74198W	9	N8417A		SN7410J, N	6
N8201Y		SN74198J, N	9	N8417J		SN7410W	6
N8202P		SN74198W	9	N8424A		SN74111J, N	6
N8202Y		SN74198J, N	9	N8424J		SN74111W	6
N8203P		SN74198W	9	N8425A		SN74111J, N	6
N8203Y		SN74198J, N	9	N8425J		SN74111W	6
N8224B	SN7488AJ, N	SN7488AJ, N	9	N8440A		SN7450J, N	6
N8224R	SN7488W	SN7488W	9	N8440J		SN7450W	6
N8230B		SN74151J, N	9	N8455A	SN7440J, N	SN7440J, N	6
N8231B		SN74151J, N	9	N8455J		SN7440W	6
N8232B		SN74151J, N	9	N8470A, F	SN7410J, N	SN7410J, N	6
N8233B		SN74153J, N	9	N8470J		SN7410J, N	6
N8234B		SN74153J, N	9	N8471A	SN7412J, N	SN7412J, N	6
N8235B		SN74153J, N	9	N8471J		SN7412W	6
N8241A		SN7486J, N	9	N8480A	SN7400J, N	SN7400J, N	6
N8241Q		SN7486W	9	N8480J		SN7400J, N	6
N8242A		SN7485J, N	9	N8481A	SN7403J, N	SN7403J, N	6
N8242Q		SN7485W	9	N8481J		SN7403W	6
N8243P		SN74198W	9				
N8243Y		SN74198J, N	9	N8490A	SN7404J, N	SN7404J, N	6
N8250A		SN7442J, N	9	N8490J	SN7404W	SN7404W	6
N8250J		SN7442W	9	N8706A		SN7460J, N	6
N8251B		SN7442J, N	9	N8706J		SN7460W	6
N8260P		SN74181W	9	N8731A		SN7460J, N	6
N8261A		SN74182J, N	9	N8731J		SN7460W	6
N8261Q		SN74182W	9	N8806J	SN7460W	SN7460W	6
N8262A		SN74180J, N	9	N8808A	SN7430J, N	SN7430J, N	6
N8262Q		SN74180W	9	N8808J	SN7430W	SN7430W	6
N8263P		SN74153W	9	N8815A	SN7425J, N	SN7425J, N	6
N8263Y		SN74153J, N	9	N8815J		SN7425W	6
N8264P		SN74153W	9	N8816A		SN7420J, N	6
N8264Y		SN74153J, N	9	N8816J	SN7420W	SN7420W	6
N8266B		SN74153J, N	9	N8821J		SN7476W	6
N8266R		SN74153J, N	9	N8822A		SN7473J, N	6
N8267B		SN74153J, N	9	N8822J	SN7473W	SN7473W	6
N8267R		SN74153W	9	N8824B		SN7476J, N	6
N8268A	SN7480J, N	SN74181J, N	9	N8825A	SN7470J, N	SN7470J, N	6
N8268Q	SN7480W	SN74181W	9	N8825J	SN7470W	SN7470W	6
N8270A		SN74194J, N	9	N8826A		SN74107J, N	6
N8270J		SN74194W	9	N8826J		SN7473W	6
N8271B		SN74194J, N	9	N8827A		SN7476J, N	6
N8275B		SN7475J, N	9	N8827J		SN7476W	6
N8275R		SN7475W	9	N8824A	SN7474J, N	SN7474J, N	6
N8276A		SN7491AJ, N	9	N8824J	SN7474W	SN7474W	6
N8276Q		SN7491A, W	9	N8829A	SN74110J, N	SN74110J, N	6
N8280A		SN74196J, N	9	N8829J		SN74110W	6
N8280J		SN74196W	9	N8840A	SN7450J, N	SN7450J, N	6
N8281A		SN74197J, N	9	N8840J	SN7450W	SN7450W	6
N8281J		SN74197W	9	N8848A	SN74H54J, N	SN74H54J, N	7
N8284A		SN74191J, N	9	N8848J	SN74H54W	SN74H54W	7
N8284Q		SN74191W	9	N8855A		SN7440J, N	6
N8285A		SN74190J, N	9	N8855J	SN7440W	SN7440W	6
N8285Q		SN74190W	9	N8870A		SN7410J, N	6
N8288A		SN74163J, N	9	N8870J		SN7410W	6
N8288Q		SN74163W	9	N8875A	SN7427J, N	SN7427J, N	6
N8290A	SN74196J, N	SN74196J, N	9	N8875J		SN7427W	6
N8290Q	SN74196W	SN74196W	9	N8880A		SN7400J, N	6
N8291A	SN74197J, N	SN74197J, N	9	N8880J	SN7400W	SN7400W	6
N8291Q	SN74197W	SN74197W	9	N8881A	SN7401J, N	SN7401J, N	6
N8292A		SN74L90J, N	9	N8881J	SN7401W	SN7401W	6
N8292Q		SN74L90W	9	N8885A		SN7402J, N	6
N8293A		SN74197J, N	9	N8885J		SN7402W	6
N8293Q		SN74197R	9	N8890A	SN7404J, N	SN7404J, N	6
N8415A	SN151800J, N	SN7420J, N	6	N8890Q	SN7404W	SN7404W	6
N8415J		SN7420W	6	N8891A	SN7405J, N	SN7405J, N	6

B

CROSS-REFERENCE GUIDE

DTL/TTL CIRCUITS

Sgnetics DCL, Cont.

B

Type Number	Direct Replacement	Recommended for New Designs	Sec.	Type Number	Direct Replacement	Recommended for New Designs	Sec.
N8891Q	SN7405W	SN7405W	6	S8270J		SN54194W	9
S8H16A, F	SN54H20J, N	SN54H20J, N	7	S8271B		SN54194J, N	9
S8H16J		SN54H20W	7	S8275B, E		SN5475J, N	9
S8H20Q		SN54H103W	7	S8275R		SN5475W	9
S8H21A, F		SN54H108J, N	7	S8276A, F		SN5491J, N	9
S8H21Q		SN54H108W	7	S8276Q		SN5491A, W	9
S8H22B, E		SN54H106J, N	7	S8280A		SN54196J, N	9
S8H70A, F	SN54H11J, N	SN54H11J, N	7	S8280J		SN54196W	9
S8H70J		SN54H11W	7	S8281A		SN54197J, N	9
S8H80A, F	SN54H00J, N	SN54H00J, N	7	S8281J		SN54197W	9
S8H80J		SN54H00W	7	S8284A		SN54191J, N	9
S8H90A, F	SN54H04J, N	SN54H04J, N	7	S8284Q		SN54191W	9
S8H90J	SN54H04W	SN54H04W	7	S8285A		SN54190J, N	9
S8T01B		SN74141J, N	9	S8285Q		SN54190W	9
S8T04B, E		SN5447AJ, N	9	S8288A		SN54163J, N	9
S8T04R		SN5447AJ, N	9	S8288Q		SN54163W	9
S8T05B, E		SN5448J, N	9	S8290A	SN54196J, N	SN54196J, N	9
S8T05R		SN5448W	9	S8290Q	SN54196W	SN54196W	9
S8T13B, E		SN54S14QJ, N	5	S8291A	SN54197J, N	SN54197J, N	9
S8T13R		SN54S14QW	5	S8291Q	SN54197W	SN54197W	9
S8T14B		SN5413J, N	6	S8292A		SN54L90J, N	9
S8T14R		SN5413W	6	S8292Q		SN54L90R	9
S8T80A, F		SN5426J, N	6	S8293A		SN54197J, N	9
S8T80J		SN5426W	6	S8293Q		SN54197R	9
S8T90A, F		SN5406J, N	6	S8415A	SN151900J, N	SN5420J, N	6
S8T90J		SN5406W	6	S8415J		SN5420W	6
S8162A, F		SN54121J, N	6	S8416A	SN15930J, N	SN5420J, N	6
S8162J		SN54121W	6	S8416J		SN5420J, N	6
S8200P		SN54198W	9	S8417A		SN5410J, N	6
S8200Y		SN54198J, N	9	S8417J		SN5410W	6
S8201P		SN54198W	9	S8424A		SN54111J, N	6
S8201Y		SN54198J, N	9	S8424J		SN54111W	6
S8202P		SN54198W	9	S8425A		SN54111J, N	6
S8202Y		SN54198J, N	9	S8425J		SN54111W	6
S8203P		SN54198W	9	S8440A, F		SN5450J, N	6
S8203Y		SN54198J, N	9	S8440J		SN5450W	6
S8224B	SN5488AJ, N	SN7488AJ, N	9	S8455A, F	SN5440J, N	SN5440J, N	6
S8224R	SN5488W	SN5488W	9	S8455J		SN5440W	6
S8230B, E		SN54151J, N	9	S8470A, F	SN5410J, N	SN5410J, N	6
S8231B, E		SN54151J, N	9	S8470J		SN5410J, N	6
S8232B, E		SN54151J, N	9	S8471A, F	SN5412J, N	SN5412J, N	6
S8233B, E		SN54153J, N	9	S8471J		SN5412W	6
S8234B, E		SN54153J, N	9	S8480A, F	SN5400J, N	SN5400J, N	6
S8235B, E		SN54153J, N	9	S8480J		SN5400J, N	6
S8241A, F		SN5486J, N	9	S8481A, F	SN5403J, N	SN5403J, N	6
S8241Q		SN5486W	9	S8481J		SN5403W	6
S8242A, F		SN5485J, N	9	S8490A, F	SN5404J, N	SN5404J, N	6
S8242Q		SN5485W	9	S8490J	SN5404W	SN5404W	6
S8243P		SN54198W	9	S8706A, F		SN5460J, N	6
S8243Y		SN54198J, N	9	S8706J		SN5460W	6
S8250A		SN5442J, N	9	S8731A, F		SN5460J, N	6
S8250J		SN5442W	9	S8731J		SN5460W	6
S8251B		SN5442J, N	9	S8806A, F	SN5460J, N	SN5460J, N	6
S8260P		SN54181W	9	S8806J	SN5460W	SN5460W	6
S8261A, F		SN54182J, N	9	S8808A, F	SN5430J, N	SN5430J, N	6
S8261Q		SN54182W	9	S8808J	SN5430W	SN5430W	6
S8262A, F		SN54180J, N	9	S8815A, F	SN5425J, N	SN5425J, N	6
S8262Q		SN54180W	9	S8815J		SN5425W	6
S8263P		SN54153W	9	S8816A, F		SN5420J, N	6
S8263Y		SN54153J, N	9	S8816J	SN5420W	SN5420W	6
S8264P		SN54153W	9	S8821J		SN5476W	6
S8264Y		SN54153J, N	9	S8822A, F		SN5473J, N	6
S8266B, E		SN54153J, N	9	S8822J	SN5473W	SN5473W	6
S8267R		SN54153W	9	S8824B		SN5476J, N	6
S8268A, F	SN5480J, N	SN54181J, N	9	S8825A, F	SN5470J, N	SN5470J, N	6
S8268Q	SN5480W	SN54181W	9	S8825J	SN5470W	SN5470W	6
S8270A		SN54194J, N	9	S8826A, F		SN54107J, N	6

CROSS-REFERENCE GUIDE

DTL/TTL CIRCUITS

Signetics DCL, Cont.

Type Number	Direct Replacement	Recommended for New Designs	Sec.	Type Number	Direct Replacement	Recommended for New Designs	Sec.
S8826J		SN5473W	6	S8870J		SN5410W	6
S8827A, F		SN5476J, N	6	S8875A, F	SN5427J, N	SN5427J, N	6
S8827J		SN5476W	6	S8875J		SN5427W	6
S8824A, F	SN5474J, N	SN5474J, N	6	S8880A, F		SN5400J, N	6
S8824J	SN5474W	SN5474W	6	S8880J	SN5400W	SN5400W	6
S8829A, F	SN54110J, N	SN54110J, N	6	S8881A, F	SN5401J, N	SN5401J, N	6
S8829J		SN54110W	6	S8881J	SN5401W	SN5401W	6
S8840A, F	SN5450J, N	SN5450J, N	6	S8885A, F		SN5402J, N	6
S8840J	SN5450W	SN5450W	6	S8885J		SN5402W	6
S8848A, F	SN54H54J, N	SN54H54J, N	7	S8890A, F	SN5404J, N	SN5404J, N	6
S8848J	SN54H54W	SN54H54W	7	S8890Q	SN5404W	SN5404W	6
S8855A, F		SN5440J, N	6	S8891A, F	SN5405J, N	SN5405J, N	6
S8855J	SN5440W	SN5440W	6	S8891Q	SN5405W	SN5405W	6
S8870A, F		SN5410J, N	6				

B

Signetics TTL

Type Number	Direct Replacement	Recommended for New Designs	Sec.	Type Number	Direct Replacement	Recommended for New Designs	Sec.
N7400A	SN7400J, N	SN7400J, N	6	N7480Q	SN7480W	SN7480W	9
N7400J	SN7400W	SN7400W	6	N7490A	SN7490J, N	SN7490J, N	9
N7401A	SN7401J, N	SN7401J, N	6	N7490Q	SN7490W	SN7490W	9
N7401J	SN7401W	SN7401W	6	N7491A	SN7491J, N	SN7491J, N	9
N7402A	SN7402J, N	SN7402J, N	6	N7491Q	SN7491W	SN7491W	9
N7402Q	SN7402W	SN7402W	6	N7492A	SN7492J, N	SN7492J, N	9
N7403A	SN7403J, N	SN7403J, N	6	N7492Q	SN7492W	SN7492W	9
N7404A	SN7404J, N	SN7404J, N	6	N7493A	SN7493J, N	SN7493J, N	9
N7404Q	SN7404W	SN7404W	6	N7493Q	SN7493W	SN7493W	9
N7405A	SN7405J, N	SN7405J, N	6	N74107A	SN74107J, N	SN74107J, N	6
N7405Q	SN7405W	SN7405W	6	N74H00A	SN74H00J, N	SN74H00J, N	7
N7408A	SN7408J, N	SN7408J, N	6	N74H00Q	SN74H00W	SN74H00W	7
N7408Q	SN7408W	SN7408W	6	N74H01A	SN74H01J, N	SN74H01J, N	7
N7410A	SN7410J, N	SN7410J, N	6	N74H01Q	SN74H01W	SN74H01W	7
N7410J	SN7410W	SN7410W	6	N74H04A	SN74H04J, N	SN74H04J, N	7
N7420A	SN7420J, N	SN7420J, N	6	N74H04Q	SN74H04W	SN74H04W	7
N7420J	SN7420W	SN7420W	6	N74H05A	SN74H05J, N	SN74H05J, N	7
N7430A	SN7430J, N	SN7430J, N	6	N74H05Q	SN74H05W	SN74H05W	7
N7430J	SN7430W	SN7430W	6	N74H10A	SN74H10J, N	SN74H10J, N	7
N7440A	SN7440J, N	SN7440J, N	6	N74H10Q	SN74H10W	SN74H10W	7
N7440Q	SN7440W	SN7440W	6	N74H11A	SN74H11J, N	SN74H11J, N	7
N7441B	SN7441J, N	SN7441J, N	9	N74H11Q	SN74H11W	SN74H11W	7
N7450A	SN7450J, N	SN7450J, N	6	N74H20A	SN74H20J, N	SN74H20J, N	7
N7450J	SN7450W	SN7450W	6	N74H20Q	SN74H20W	SN74H20W	7
N7451A	SN7451J, N	SN7451J, N	6	N74H21A	SN74H21J, N	SN74H21J, N	7
N7451J	SN7451W	SN7451W	6	N74H21Q	SN74H21W	SN74H21W	7
N7453A	SN7453J, N	SN7453J, N	6	N74H22A	SN74H22J, N	SN74H22J, N	7
N7453J	SN7453W	SN7453W	6	N74H22Q	SN74H22W	SN74H22W	7
N7454A	SN7454J, N	SN7454J, N	6	N74H30A	SN74H30J, N	SN74H30J, N	7
N7454J	SN7454W	SN7454W	6	N74H30Q	SN74H30W	SN74H30W	7
N7460A	SN7460J, N	SN7460J, N	6	N74H40A	SN74H40J, N	SN74H40J, N	7
N7460J	SN7460W	SN7460W	6	N74H40Q	SN74H40W	SN74H40W	7
N7470A	SN7470J, N	SN7470J, N	6	N74H50A	SN74H50J, N	SN74H50J, N	7
N7470J	SN7470W	SN7470W	6	N74H50Q	SN74H50W	SN74H50W	7
N7472A	SN7472J, N	SN7472J, N	6	N74H51A	SN74H51J, N	SN74H51J, N	7
N7472J	SN7472W	SN7472W	6	N74H51Q	SN74H51W	SN74H51W	7
N7473A	SN7473J, N	SN7473J, N	6	N74H52A	SN74H52J, N	SN74H52J, N	7
N7473J	SN7473W	SN7473W	6	N74H52Q	SN74H52W	SN74H52W	7
N7474A	SN7474J, N	SN7474J, N	6	N74H53A	SN74H53J, N	SN74H53J, N	7
N7474J	SN7474W	SN7474W	6	N74H53Q	SN74H53W	SN74H53W	7
N7475B	SN7475J, N	SN7475J, N	9	N74H54A	SN74H54J, N	SN74H54J, N	7
N7476B	SN7476J, N	SN7476J, N	6	N74H54Q	SN74H54W	SN74H54W	7
N4777Q	SN7477W	SN7477W	9	N74H55A	SN74H55J, N	SN74H55J, N	7
N7480A	SN7480J, N	SN7480J, N	9	N74H55Q	SN74H55W	SN74H55W	7

CROSS-REFERENCE GUIDE

DTL/TTL CIRCUITS

Signetics TTL, Cont.

B

Type Number	Direct Replacement	Recommended for New Designs	Sec.	Type Number	Direct Replacement	Recommended for New Designs	Sec.
N74H60A	SN74H60J, N	SN74H60J, N	7	S5480Q	SN5480W	SN5480W	9
N74H60J	SN74H60W	SN74H60W	7	S5490A	SN5490J, N	SN5490J, N	9
N74H61A	SN74H61J, N	SN74H61J, N	7	S5490Q	SN5490W	SN5490W	9
N74H61J	SN74H61W	SN74H61W	7	S5491A	SN5491J, N	SN5491J, N	9
N74H62A	SN74H62J, N	SN74H62J, N	7	S5491Q	SN5491W	SN5491W	9
N74H62J	SN74H62W	SN74H62W	7	S5492A	SN5492J, N	SN5492J, N	9
N74H72A	SN74H72J, N	SN74H72J, N	7	S5492Q	SN5492W	SN5492W	9
N74H72Q	SN74H72W	SN74H72W	7	S5493A	SN5493J, N	SN5493J, N	9
N74H73A	SN74H73J, N	SN74H73J, N	7	S5493Q	SN5493W	SN5493W	9
N74H73Q	SN74H73W	SN74H73W	7	S54107A	SN54107J, N	SN54107J, N	7
N74H74A	SN74H74J, N	SN74H74J, N	7	S54H00A	SN54H00J, N	SN54H00J, N	7
N74H74Q	SN74H74W	SN74H74W	7	S54H00Q	SN54H00W	SN54H00W	7
N74H76B	SN74H76J, N	SN74H76J, N	7	S54H01A	SN54H01J, N	SN54H01J, N	7
S5400A	SN5400J, N	SN5400J, N	6	S54H01Q	SN54H01W	SN54H01W	7
S5400J	SN5400W	SN5400W	6	S54H04A	SN54H04J, N	SN54H04J, N	7
S5401A	SN5401J, N	SN5401J, N	6	S54H04Q	SN54H04W	SN54H04W	7
S5401J	SN5401W	SN5401W	6	S54H05A	SN54H05J, N	SN54H05J, N	7
S5402A	SN5402J, N	SN5402J, N	6	S54H05Q	SN54H05W	SN54H05W	7
S5402Q	SN5402W	SN5402W	6	S54H10A	SN54H10J, N	SN54H10J, N	7
S5403A	SN5403J, N	SN5403J, N	6	S54H10Q	SN54H10W	SN54H10W	7
S5404A	SN5404J, N	SN5404J, N	6	S54H11A	SN54H11J, N	SN54H11J, N	7
S5404Q	SN5404W	SN5404W	6	S54H11Q	SN54H11W	SN54H11W	7
S5405A	SN5405J, N	SN5405J, N	6	S54H20A	SN54H20J, N	SN54H20J, N	7
S5405Q	SN5405W	SN5405W	6	S54H20Q	SN54H20W	SN54H20W	7
S5408A	SN5408J, N	SN5408J, N	6	S54H21A	SN54H21J, N	SN54H21J, N	7
S5408Q	SN5408W	SN5408W	6	S54H21Q	SN54H21W	SN54H21W	7
S5410A	SN5410J, N	SN5410J, N	6	S54H22A	SN54H22J, N	SN54H22J, N	7
S5410J	SN5410W	SN5410W	6	S54H22Q	SN54H22W	SN54H22W	7
S5420A	SN5420J, N	SN5420J, N	6	S54H30A	SN54H30J, N	SN54H30J, N	7
S5420J	SN5420W	SN5420W	6	S54H30Q	SN54H30W	SN54H30W	7
S5430A	SN5430J, N	SN5430J, N	6	S54H50A	SN54H50J, N	SN54H50J, N	7
S5430J	SN5430W	SN5430W	6	S54H50Q	SN54H50W	SN54H50W	7
S5440A	SN5440J, N	SN5440J, N	6	S54H51A	SN54H51J, N	SN54H51J, N	7
S5440J	SN5440W	SN5440W	6	S54H51Q	SN54H51W	SN54H51W	7
S5450A	SN5450J, N	SN5450J, N	6	S54H52A	SN54H52J, N	SN54H52J, N	7
S5450J	SN5450W	SN5450W	6	S54H52Q	SN54H52W	SN54H52W	7
S5451A	SN5451J, N	SN5451J, N	6	S54H53A	SN54H53J, N	SN54H53J, N	7
S5451J	SN5451W	SN5451W	6	S54H53Q	SN54H53W	SN54H53W	7
S5453A	SN5453J, N	SN5453J, N	6	S54H54A	SN54H54J, N	SN54H54J, N	7
S5453J	SN5453W	SN5453W	6	S54H54Q	SN54H54W	SN54H54W	7
S5454A	SN5454J, N	SN5454J, N	6	S54H55A	SN54H55J, N	SN54H55J, N	7
S5354J	SN5454W	SN5454W	6	S54H55J	SN54H55W	SN54H55W	7
S5460A	SN5460J, N	SN5460J, N	6	S54H60A	SN54H60J, N	SN54H60J, N	7
S5460J	SN5460W	SN5460W	6	S54H60Q	SN54H60W	SN54H60W	7
S5470A	SN5470J, N	SN5470J, N	6	S54H61A	SN54H61J, N	SN54H61J, N	7
S5470J	SN5470W	SN5470W	6	S54H61J	SN54H61W	SN54H61W	7
S5472A	SN5472J, N	SN5472J, N	6	S54H62A	SN54H62J, N	SN54H62J, N	7
S5472J	SN5472W	SN5472W	6	S54H62J	SN54H62W	SN54H62W	7
S5473A	SN5473J, N	SN5473J, N	6	S54H72A	SN54H72J, N	SN54H72J, N	7
S5473J	SN5473W	SN5473W	6	S54H72Q	SN54H72W	SN54H72W	7
S5474A	SN5474J, N	SN5474J, N	6	S54H73A	SN54H73J, N	SN54H73J, N	7
S5474J	SN5474W	SN5474W	6	S54H73Q	SN54H73W	SN54H73W	7
S5475B	SN5475J, N	SN5475J, N	9	S54H74A	SN54H74J, N	SN54H74J, N	7
S5476B	SN5476J, N	SN5476J, N	6	S54H74Q	SN54H74W	SN54H74W	7
S5477Q	SN5477W	SN5477W	9	S54H76B	SN54H76J, N	SN54H76J, N	7
S5480A	SN5480J, N	SN5480J, N	9				

CROSS-REFERENCE GUIDE

DTL/TTL CIRCUITS

Sprague TTL

Type Number	Direct Replacement	Recommended for New Designs	Sec.	Type Number	Direct Replacement	Recommended for New Designs	Sec.
US5400A	SN5400J, N	SN5400J, N	6	US5475A	SN5475J, N	SN5475J, N	9
US5400J	SN5400W	SN5400W	6	US5476A	SN5476J, N	SN5476J, N	6
US5401A	US5401J, N	SN5401J, N	6	US5477J	SN5477W	SN5477W	9
US5401J	US5401W	SN5401W	6	US5480A	SN5480J, N	SN5480J, N	9
US5402A	SN5402J, N	SN5402J, N	6	US5480J	SN5480W	SN5480W	9
US5402J	SN5402W	SN5402W	6	US5481A	SN5481J, N	SN5481J, N	9
US5403A	SN5403J, N	SN5403J, N	6	US5481J	SN5481W	SN5481W	9
US5404A	SN5404J, N	SN5404J, N	6	US5482A	SN5482J, N	SN5482J, N	9
US5404J	SN5404W	SN5404W	6	US5482J	SN5482W	SN5482W	9
US5405A	SN5405J, N	SN5405J, N	6	US5483A	SN5483J, N	SN5483J, N	9
US5405J	SN5405W	SN5405W	6	US5484A	SN5484J, N	SN5484J, N	9
US5408A	SN5408J, N	SN5408J, N	6	US5484J	SN5484W	SN5484W	9
US5408J	SN5408W	SN5408W	6	US5486A	SN5486J, N	SN5486J, N	9
US5409A	SN5409J, N	SN5409J, N	6	US5486J	SN5486W	SN5486W	9
US5409J	SN5409W	SN5409W	6	US5490A	SN5490J, N	SN5490J, N	9
US5410A	SN5410J, N	SN5410J, N	6	US5490J	SN5490W	SN5490W	9
US5410J	SN5410W	SN5410W	6	US5491A	SN5491AJ, N	SN5491AJ, N	9
US5420A	SN5420J, N	SN5420J, N	6	US5491J	SN5491AW	SN5491AW	9
US5420J	SN5420W	SN5420W	6	US5492A	SN5492J, N	SN5492J, N	9
US5426A	SN5426J, N	SN5426J, N	6	US5492J	SN5492W	SN5492W	9
US5427A	SN5427J, N	SN5427J, N	6	US5493A	SN5493J, N	SN5493J, N	9
US5427J	SN5427W	SN5427W	6	US5493J	SN5493W	SN5493W	9
US5429A	SN5425J, N	SN5425J, N	6	US5494A	SN5494J, N	SN5494J, N	9
US5429J	SN5425W	SN5425W	6	US5494J	SN5494W	SN5494W	9
US5430A	SN5430J, N	SN5430J, N	6	US5495A	SN5495AJ, N	SN5495AJ, N	9
US5430J	SN5430W	SN5430W	6	US5495J	SN5495AW	SN5495AW	9
US5432A	SN5432J, N	SN5432J, N	6	US5496A	SN5496J, N	SN5496J, N	9
US5432J	SN5432W	SN5432W	6	US5496J	SN5496W	SN5496W	9
US5438A	SN5438J, N	SN5438J, N	6	US5496W	SN54107J, N	SN54107J, N	6
US5438J	SN5438W	SN5438W	6	US54107A	SN54121J, N	SN54121J, N	6
US5439A	SN5438J, N	SN5438J, N	6	US54121A	SN54121W	SN54121W	6
US5439J	SN5438W	SN5438W	6	US54121J	SN54122J, N	SN54122J, N	6
US5440A	SN5440J, N	SN5440J, N	6	US54122A	SN54122W	SN54122W	6
US5440J	SN5440W	SN5440W	6	US54122J	SN54123J, N	SN54123J, N	6
US5442A	SN5442J, N	SN5442J, N	9	US54123A	SN54123W	SN54123W	6
US5442J	SN5442W	SN5442W	9	US54123J	SN54145J, N	SN54145J, N	9
US5443A	SN5443J, N	SN5443J, N	9	US54145A	SN54145W	SN54145W	9
US5443J	SN5443W	SN5443W	9	US54145J	SN54150J, N	SN54150J, N	9
US5444A	SN5444J, N	SN5444J, N	9	US54150A	SN54150W	SN54150W	9
US5444J	SN5444W	SN5444W	9	US54150J	SN54151J, N	SN54151J, N	9
US5445A	SN5445J, N	SN5445J, N	9	US54151A	SN54151W	SN54151W	9
US5445J	SN5445W	SN5445W	9	US54151J	SN54153J, N	SN54153J, N	9
US5446A	SN5446AJ, N	SN5446AJ, N	9	US54153A	SN54153W	SN54153W	9
US5446J	SN5446AW	SN5446AW	9	US54153J	SN54154J, N	SN54154J, N	9
US5447A	SN5447AJ, N	SN5447AJ, N	9	US54154A	SN54154W	SN54154W	9
US5447J	SN5447AW	SN5447AW	9	US54154J	SN54164J, N	SN54164J, N	9
US5448A	SN5448J, N	SN5448J, N	9	US54164A	SN54164W	SN54164W	9
US5448J	SN5448W	SN5448W	9	US54164J	SN54165A, N	SN54165A, N	9
US5450A	SN5450J, N	SN5450J, N	6	US54165A	SN54165W	SN54165W	9
US5450J	SN5450W	SN5450W	6	US54165J	SN54180J, N	SN54180J, N	9
US5451A	SN5451J, N	SN5451J, N	6	US54180A	SN54180W	SN54180W	9
US5451J	SN5451W	SN5451W	6	US54180J	SN54181J, N	SN54181J, N	9
US5453A	SN5453J, N	SN5453J, N	6	US54181A	SN54181W	SN54181W	9
US5453J	SN5453W	SN5453W	6	US54181J	SN54182J, N	SN54182J, N	9
US5454A	SN5454J, N	SN5454J, N	6	US54182A	SN54182W	SN54182W	9
US5454J	SN5454W	SN5454W	6	US54182J	SN54192J, N	SN54192J, N	9
US5459A	SN5451J, N	SN5451J, N	6	US54192A	SN54192W	SN54192W	9
US5459J	SN5451W	SN5451W	6	US54192J	SN54193J, N	SN54193J, N	9
US5460A	SN5460J, N	SN5460J, N	6	US54193A	SN54193W	SN54193W	9
US5460J	SN5460W	SN5460W	6	US54193J	SN7400J, N	SN7400J, N	6
US5470A	SN5470J, N	SN5470J, N	6	US54193W	SN7400W	SN7400W	6
US5470J	SN5470W	SN5470W	6	US7400A	SN7401J, N	SN7401J, N	6
US5472A	SN5472J, N	SN5472J, N	6	US7400J	SN7401W	SN7401W	6
US5472J	SN5472W	SN5472W	6	US7401A	SN7402J, N	SN7402J, N	6
US5473A	SN5473J, N	SN5473J, N	6	US7401J	SN7402W	SN7402W	6
US5473J	SN5473W	SN5473W	6	US7402A	SN7403J, N	SN7403J, N	6
US5474A	SN5474J, N	SN5474J, N	6	US7402J	SN7404J, N	SN7404J, N	6
US5474J	SN5474W	SN5474W	6	US7403A	SN7404W	SN7404W	6

B

CROSS-REFERENCE GUIDE

DTL/TTL CIRCUITS

Sprague TTL, Cont.

B

Type Number	Direct Replacement	Recommended for New Designs	Sec.	Type Number	Direct Replacement	Recommended for New Designs	Sec.
US7405A	SN7405J, N	SN7405J, N	6	US7482J	SN7482W	SN7482W	9
US7405J	SN7405W	SN7405W	6	US7483A	SN7483J, N	SN7483J, N	9
US7408A	SN7408J, N	SN7408J, N	6	US7484A	SN7484J, N	SN7484J, N	9
US7408J		SN7408W	6	US7484J	SN7484W	SN7484W	9
US7409A	SN7409J, N	SN7409J, N	6	US7486A	SN7486J, N	SN7486J, N	9
US7409J		SN7409W	6	US7486J	SN7486W	SN7486W	9
US7410A	SN7410J, N	SN7410J, N	6	US7490A	SN7490J, N	SN7490J, N	9
US7410J	SN7410W	SN7410W	6	US7490J	SN7490W	SN7490W	9
US7420A	SN7420J, N	SN7420J, N	6	US7491A	SN7491A, J, N	SN7491A, J, N	9
US7420J	SN7420W	SN7420W	6	US7491J	SN7491AW	SN7491AW	9
US7426J	SN7426J, N	SN7426J, N	6	US7492A	SN7492J, N	SN7492J, N	9
US7427A	SN7427J, N	SN7427J, N	6	US7492J	SN7492W	SN7492W	9
US7427J		SN7427W	6	US7493A	SN7493J, N	SN7493J, N	9
US7429A	SN7425J, N	SN425J, N	6	US7493J	SN7493W	SN7493W	9
US7429J		SN425W	6	US7494A	SN7494J, N	SN7494J, N	9
US7430A	SN7430J, N	SN7430J, N	6	US7494J	SN7494W	SN7494W	9
US7430J	SN7430W	SN7430W	6	US7495A	SN7495A, J, N	SN7495A, J, N	9
US7432A	SN7432J, N	SN7432J, N	6	US7495J	SN7495AW	SN7495AW	9
US7432J		SN7432W	6	US7496A	SN7496J, N	SN7596J, N	9
US7438A	SN7438J, N	SN7438J, N	6	US7496J	SN7496W	SN7496W	9
US7438J		SN7438W	6	US74107A	SN74107J, N	SN74107J, N	6
US7439A		SN7438J, N	6	US74121A	SN74121J, N	SN74121J, N	6
US7439J		SN7438W	6	US74121J	SN74121W	SN74121W	6
US7440A	SN7440J, N	SN7440J, N	6	US74122A	SN74122J, N	SN74122J, N	6
US7440J	SN7440W	SN7440W	6	US75122J	SN74122W	SN74122W	6
US7441A	SN74141J, N	SN74141J, N	9	US74123A	SN74123J, N	SN74123J, N	6
US7442A	SN7442J, N	SN7442J, N	9	US74123J	SN74123W	SN74123W	6
US7442J	SN7442W	SN7442W	9	US74145A	SN74145J, N	SN74145J, N	9
US7443A	SN7443J, N	SN7443J, N	9	US74150A	SN74150J, N	SN74150J, N	9
US7443J	SN7443W	SN7443W	9	US74150J	SN74150W	SN74150W	9
US7444A	SN7444J, N	SN7444J, N	9	US74151A	SN74151J, N	SN74151J, N	9
US7444J	SN7444W	SN7444W	9	US74151J	SN74151W	SN74151W	9
US7445A	SN7445J, N	SN7445J, N	9	US74153A	SN74153J, N	SN74153J, N	9
US7445J	SN7445W	SN7445W	9	US74153J	SN74153W	SN74153W	9
US7446A	SN7446A, J, N	SN7446A, J, N	9	US74154A	SN74154J, N	SN74154J, N	9
US7446J	SN7446AW	SN7446AW	9	US74154J	SN74154W	SN74154W	9
US7447A	SN7447A, J, N	SN7447A, J, N	9	US74164A	SN74164J, N	SN74164J, N	9
US7447J	SN7447AW	SN7447AW	9	US74164J	SN74164W	SN74164W	9
US7448A	SN7448J, N	SN7448J, N	9	US74165A	SN74165J, N	SN74165J, N	9
US7448J	SN7448W	SN7448W	9	US74165J	SN74165W	SN74165W	9
US7450A	SN7450J, N	SN7450J, N	6	US74180A	SN74180J, N	SN74180J, N	9
US7450J	SN7450W	SN7450W	6	US74180J	SN74180W	SN74180W	9
US7451A	SN7451J, N	SN7451J, N	6	US74181A	SN74181J, N	SN74181J, N	9
US7451J	SN7451W	SN7451W	6	US74181J	SN74181W	SN74181W	9
US7453A	SN7453J, N	SN7453J, N	6	US74182A	SN74182J, N	SN74182J, N	9
US7453J	SN7453W	SN7453W	6	US74182J	SN74182W	SN74182W	9
US7454A	SN7454J, N	SN7454J, N	6	US74192A	SN74192J, N	SN74192J, N	9
US7454J	SN7454W	SN7454W	6	US74192J	SN74192W	SN74192W	9
US7459A	SN7451J, N	SN7451J, N	6	US74193A	SN74193J, N	SN74193J, N	9
US7459J	SN7451W	SN7451W	6	US74193J	SN74193W	SN74193W	9
US7460A	SN7460J, N	SN7460J, N	6	US54H00A	SN54H00J, N	SN54H00J, N	7
US7460J	SN7460W	SN7460W	6	US54H00J	SN54H00W	SN54H00W	7
US7470A	SN7470J, N	SN7470J, N	6	US54H01A	SN54H01J, N	SN54H01J, N	7
US7470J	SN7470W	SN7470W	6	US54H01J	SN54H01W	SN54H01W	7
US7472A	SN7472J, N	SN7472J, N	6	US54H04A	SN54H04J, N	SN54H04J, N	7
US7472J	SN7472W	SN7472W	6	US54H04J	SN54H04W	SN54H04W	7
US7473A	SN7473J, N	SN7473J, N	6	US54H05A	SN54H05J, N	SN54H05J, N	7
US7473J	SN7473W	SN7473W	6	US54H05J	SN54H05W	SN54H05W	7
US7474A	SN7474J, N	SN7474J, N	6	US54H10A	SN54H10J, N	SN54H10J, N	7
US7474J	SN7474W	SN7474W	6	US54H10J	SN54H10W	SN54H10W	7
US7475A	SN7475J, N	SN7475J, N	6	US54H11A	SN54H11J, N	SN54H11J, N	7
US7476A	SN7476J, N	SN7476J, N	6	US54H11J	SN54H11W	SN54H11W	7
US7477J	SN7477W	SN7477W	9	US54H20A	SN54H20J, N	SN54H20J, N	7
US7480A	SN7480J, N	SN7480J, N	9	US54H20J	SN54H20W	SN54H20W	7
US7480J	SN7480W	SN7480	9	US54H21A	SN54H21J, N	SN54H21J, N	7
US7481A	SN7481J, N	SN7481J, N	9	US54H21J	SN54H21W	SN54H21W	7
US7481J	SN7481W	SN7481W	9	US54H22A	SN54H22J, N	SN54H22J, N	7
US7482A	SN7482J, N	SN7482J, N	9	US54H22J	SN54H22W	SN54H22W	7

CROSS-REFERENCE GUIDE

DTL/TTL CIRCUITS

Sprague TTL, Cont.

Type Number	Direct Replacement	Recommended for New Designs	Sec.	Type Number	Direct Replacement	Recommended for New Designs	Sec.
US54H30A	SN54H30J, N	SN54H30J, N	7	US74H10J	SN74H10W	SN74H10W	7
US54H30J	SN54H30W	SN54H30W	7	US74H11A	SN74H11J, N	SN74H11J, N	7
US54H40A	SN54H40J, N	SN54H40J, N	7	US74H11J	SN74H11W	SN74H11W	7
US54H40J	SN54H40W	SN54H40W	7	US74H20A	SN74H20J, N	SN74H20J, N	7
US54H50A	SN54H50J, N	SN54H50J, N	7	US74H20J	SN74H20W	SN74H20W	7
US54H50J	SN54H50W	SN54H50W	7	US74H21A	SN74H21J, N	SN74H21J, N	7
US54H51A	SN54H51J, N	SN54H51J, N	7	US74H21J	SN74H21W	SN74H21W	7
US54H51J	SN54H51W	SN54H51W	7	US74H22A	SN74H22J, N	SN74H22J, N	7
US54H52A	SN54H52J, N	SN54H52J, N	7	US74H22J	SN74H22W	SN74H22W	7
US54H52J	SN54H52W	SN54H52W	7	US74H30A	SN74H30J, N	SN74H30J, N	7
US54H53A	SN54H53J, N	SN54H53J, N	7	US74H30J	SN74H30W	SN74H30W	7
US54H53J	SN54H53W	SN54H53W	7	US74H40A	SN74H40J, N	SN74H40J, N	7
US54H54A	SN54H54J, N	SN54H54J, N	7	US74H40J	SN74H40W	SN74H40W	7
US54H54J	SN54H54W	SN54H54W	7	US74H50A	SN74H50J, N	SN74H50J, N	7
US54H55A	SN54H55J, N	SN54H55J, N	7	US74H50J	SN74H50W	SN74H50W	7
US54H55J	SN54H55W	SN54H55W	7	US74H51A	SN74H51J, N	SN74H51J, N	7
US54H60A	SN54H60J, N	SN54H60J, N	7	US74H51J	SN74H51W	SN74H51W	7
US54H60J	SN54H60W	SN54H60W	7	US74H52A	SN74H52J, N	SN74H52J, N	7
US54H61A	SN54H61J, N	SN54H61J, N	7	US74H52J	SN74H52W	SN74H52W	7
US54H61J	SN54H61W	SN54H61W	7	US74H53A	SN74H53J, N	SN74H53J, N	7
US54H62A	SN54H62J, N	SN54H62J, N	7	US74H53J	SN74H53W	SN74H53W	7
US54H62J	SN54H62W	SN54H62W	7	US74H54A	SN74H54J, N	SN74H54J, N	7
US54H71A	SN54H71J, N	SN54H71J, N	7	US74H54J	SN74H54W	SN74H54W	7
US54H71J	SN54H71W	SN54H71W	7	US74H55A	SN74H55J, N	SN74H55J, N	7
US54H72A	SN54H72J, N	SN54H72J, N	7	US74H55J	SN74H55W	SN74H55W	7
US54H72J	SN54H72W	SN54H72W	7	US74H60A	SN75H60J, N	SN74H60J, N	7
US54H73A	SN54H73J, N	SN54H73J, N	7	US74H60J	SN74H60W	SN74H60W	7
US54H73J	SN54H73W	SN54H73W	7	US74H61A	SN74H61J, N	SN74H61J, N	7
US54H76A	SN54H76J, N	SN54H76J, N	7	US74H61J	SN74H61W	SN74H61W	7
US54H76J	SN54H76W	SN54H76W	7	US74H62A	SN74H62J, N	SN74H62J, N	7
US54H78A	SN54H78J, N	SN54H78J, N	7	US74H62J	SN74H62W	SN74H62W	7
US54H78J	SN54H78W	SN54H78W	7	US74H71A	SN74H71J, N	SN74H71J, N	7
US74H00A	SN74H00J, N	SN74H00J, N	7	US74H71J	SN74H71W	SN74H71W	7
US74H00J	SN74H00W	SN74H00W	7	US74H72A	SN74H72J, N	SN74H72J, N	7
US74H01A	SN74H01J, N	SN74H01J, N	7	US74H72J	SN74H72W	SN74H72W	7
US74H01J	SN74H01W	SN74H01W	7	US74H73A	SN74H73J, N	SN74H73J, N	7
US74H04A	SN74H04J, N	SN74H04J, N	7	US74H73J	SN74H73W	SN74H73W	7
US74H04J	SN74H04W	SN74H04W	7	US74H76A	SN74H76J, N	SN74H76J, N	7
US74H05A	SN74H05J, N	SN74H05J, N	7	US75H76J	SN74H76W	SN74H76W	7
US74H05J	SN74H05W	SN74H05W	7	US74H78A	SN74H78J, N	US74H78J, N	7
US74H10A	SN74H10J, N	SN74H10J, N	7	US74H78J	SN74H78W	US74H78W	7

B

Transitron TTL

Type Number	Direct Replacement	Recommended for New Designs	Sec.	Type Number	Direct Replacement	Recommended for New Designs	Sec.
SN5400F	SN5400W	SN5400W	6	SN5440J, N	SN5440J, N	SN5440J, N	6
SN5400J, N	SN5400J, N	SN5400J, N	6	SN5441AJ, N	SN54141J, N	SN54141J, N	9
SN5401F	SN5401W	SN5401W	6	SN5442J, N	SN5442J, N	SN5442J, N	9
SN5401J, N	SN5401J, N	SN5401J, N	6	SN5443J, N	SN5443J, N	SN5443J, N	9
SN5402F	SN5402W	SN5402W	6	SN5444J, N	SN5444J, N	SN5444J, N	9
SN5402J, N	SN5402J, N	SN5402J, N	6	SN5450F	SN5450W	SN5450W	6
SN5404F	SN5404W	SN5404W	6	SN5450J, N	SN5450J, N	SN5450J, N	6
SN5404J, N	SN5404J, N	SN5404J, N	6	SN5451F	SN5451W	SN5451J, N	6
SN5405F	SN5405W	SN5405W	6	SN5451J, N	SN5451J, N	SN5451J, N	6
SN5405J, N	SN5405J, N	SN5405J, N	6	SN5453F	SN5453W	SN5453W	6
SN5410F	SN5410W	SN5410W	6	SN5453J, N	SN5453J, N	SN5453J, N	6
SN5410J, N	SN5410J, N	SN5410J, N	6	SN5454F	SN5454W	SN5454W	6
SN5420F	SN5420W	SN5420W	6	SN5454J, N	SN5454J, N	SN5454J, N	6
SN5420J, N	SN5420J, N	SN5420J, N	6	SN5460F	SN5460W	SN5460W	6
SN5430F	SN5430W	SN5430W	6	SN5460J, N	SN5460J, N	SN5460J, N	6
SN5430J, N	SN5430J, N	SN5430J, N	6	SN5470F	SN5470W	SN5470W	6
SN5440F	SN5440W	SN5440W	6	SN5470J, N	SN5470J, N	SN5470J, N	6

CROSS-REFERENCE GUIDE

DTL/TTL CIRCUITS

Transitron TTL, Cont.

B

Type Number	Direct Replacement	Recommended for New Designs	Sec.	Type Number	Direct Replacement	Recommended for New Designs	Sec.
TA21E, J	SNE21J, N	SN54181J, N	9	TF110E, J	SNF110J, N	SN54H108J, N	7
TA21F	SNE21U	SN54181W	9	TF110F	SNF110U	SN54H108W	7
TA22E, J	SNE22J, N	SN74181J, N	9	TF111E, J	SNF111J, N	SN54H108J, N	7
TA22F	SNE22U	SN74181W	9	TF111F	SNF111U	SN54H108W	7
TA23E, J	SNE23J, N	SN74181J, N	9	TF112E, J	SNF112J, N	SN74H108J, N	7
TA23F	SNE23U	SN74181W	9	TF112F	SNF112U	SN74H108W	7
TA30E, J	SNE30J, N	SN54181J, N	9	TF113E, J	SNF113J, N	SN74H108J, N	7
TA30F	SNE30U	SN54181W	9	TF113F	SNF113U	SN74H108W	7
TA31E, J	SNE31J, N	SN54181J, N	9	TF120E, J	SNF120J, N	SN54H103J, N	7
TA31F	SNE31U	SN54181W	9	TF120F	SNF120U	SN54H103W	7
TA32E, J	SNE32J, N	SN74181J, N	9	TF121E, J	SNF121J, N	SN54H103J, N	7
TA32F	SNE32U	SN74181W	9	TF121F	SNF121U	SN54H103W	7
TA33E, J	SNE33J, N	SN74181J, N	9	TF122E, J	SNF122J, N	SN74H103J, N	7
TA33F	SNE33U	SN74181W	9	TF122F	SNF122U	SN74H103W	7
TC11E, J		SN54163J, N	9	TF123E, J	SNF123J, N	SN74H103J, N	7
TC11F		SN54163W	9	TF123F	SNF123U	SN74H103W	7
TC12E, J		SN74163J, N	9	TF130E, J	SNF130J, N	SN54H108J, N	7
TC12F		SN74163W	9	TF130F	SNF130U	SN54H108W	7
TC13E, J		SN54163J, N	9	TF131E, J	SNF131J, N	SN54H108J, N	7
TC13F		SN54163W	9	TF131F	SNF131U	SN54H108W	7
TC14E, J		SN74163J, N	9	TF132E, J	SNF132J, N	SN74H108J, N	7
TC14F		SN74163W	9	TF132F	SNF132U	SN74H108W	7
TC15E, J		SN54162J, N	9	TF133E, J	SNF133J, N	SN74H108J, N	7
TC15F		SN54162W	9	TF133F	SNF133U	SN74H108W	7
TC16E, J		SN74162J, N	9	TF200E, J	SNF200J, N	SN54H102J, N	7
TC16F		SN74162W	9	TF200F	SNF200U	SN54H102W	7
TC17E, J		SN54162J, N	9	TF201E, J	SNF201J, N	SN54H102J, N	7
TC17F		SN54162W	9	TF201F	SNF201U	SN54H102W	7
TC18E, J		SN74162J, N	9	TF202E, J	SNF202J, N	SN74H102J, N	7
TC18F		SN74162W	9	TF202F	SNF202U	SN74H102W	7
TD40E, J	SNE40J, N	SN54182J, N	9	TF203E, J	SNF203J, N	SN74H102J, N	7
TD40F	SNE40U	SN54182W	9	TF203F	SNF203U	SN74H102W	7
TD42E, J	SNE42J, N	SN74182J, N	9	TF210E, J	SNF210J, N	SN54H101J, N	7
TD42F	SNE42U	SN74182W	9	TF210F	SNF210U	SN54H101W	7
TF20E, J	SNF20J, N	SN5472J, N	6	TF211E, J	SNF211J, N	SN54H101J, N	7
TF20F	SNF20U	SN5472W	6	TF211F	SNF211U	SN54H101W	7
TF21E, J	SNF21J, N	SN5472J, N	6	TF212E, J	SNF212J, N	SN74H101J, N	7
TF21F	SNF21U	SN5472W	6	TF212F	SNF212U	SN74H101W	7
TF22E, J	SNF22J, N	SN7472J, N	6	TF213E, J	SNF213J, N	SN74H101J, N	7
TF22F	SNF22U	SN7472W	6	TF213F	SNF213U	SN74H101W	7
TF23E, J	SNF23J, N	SN7472J, N	6	TF250E, J	SNF250J, N	SN54H102J, N	7
TF23F	SNF23U	SN7472W	6	TF250F	SNF250U	SN54H102W	7
TF50E, J	SNF50J, N	SN5470J, N	6	TF251E, J	SNF251J, N	SN54H102J, N	7
TF50F	SNF50U	SN5470W	6	TF251F	SNF251U	SN54H102W	7
TF51E, J	SNF51J, N	SN5470J, N	6	TF252E, J	SNF252J, N	SN74H102J, N	7
TF51F	SNF51U	SN5470W	6	TF252F	SNF252U	SN74H102W	7
TF52E, J	SNF52J, N	SN7470J, N	6	TF253E, J	SNF253J, N	SN74H102J, N	7
TF52F	SNF52U	SN7470W	6	TF253F	SNF253U	SN74H102W	7
TF53E, J	SNF53J, N	SN7470J, N	6	TF260E, J	SNF260J, N	SN54H101J, N	7
TF53F	SNF53U	SN7470W	6	TF260F	SNF260U	SN54H101W	7
TF60E, J	SNF60J, N	SN54H101J, N	7	TF261E, J	SNF261J, N	SN54H101J, N	7
TF60F	SNF60U	SN54H101W	7	TF261F	SNF261U	SN54H101W	7
TF61E, J	SNF61J, N	SN54H101J, N	7	TF262E, J	SNF262J, N	SN74H101J, N	7
TF61F	SNF61U	SN54H101W	7	TF262F	SNF262U	SN74H101W	7
TF62E, J	SNF62J, N	SN74H101J, N	7	TF263E, J	SNF263J, N	SN74H101J, N	7
TF62F	SNF62U	SN74H101W	7	TF263F	SNF263U	SN74H101W	7
TF63E, J	SNF63J, N	SN74H101J, N	7	TG40E, J	SNG40J, N	SN5420J, N	6
TF63F	SNF63U	SN74H101W	7	TG40F	SNG40U	SN5420W	6
TF100E, J	SNF100J, N	SN54H103J, N	7	TG41E, J	SNG41J, N	SN5420J, N	6
TF100F	SNF100U	SN54H103W	7	TG41F	SNG41U	SN5420W	6
TF101E, J	SNF101J, N	SN54H103J, N	7	TG42E, J	SNG42J, N	SN7420J, N	6
TF101F	SNF101U	SN54H103W	7	TG42F	SNG42U	SN7420W	6
TF102E, J	SNF102J, N	SN74H103J, N	7	TG43E, J	SNG43J, N	SN7420J, N	6
TF102F	SNF102U	SN74H103W	7	TG43F	SNG43U	SN7420W	6
TF103E, J	SNF103J, N	SN74H103J, N	7	TG50E, J	SNG50J, N	SN5453J, N	6
TF103F	SNF103U	SN74H103W	7	TG50F	SNG50U	SN5453W	6

CROSS-REFERENCE GUIDE

DTL/TTL CIRCUITS

Transitron TTL, Cont.

B

Type Number	Direct Replacement	Recommended for New Designs	Sec.	Type Number	Direct Replacement	Recommended for New Designs	Sec.
TG51E, J	SNG51J, N	SN5453J, N	6	TG133E, J	SNG133J, N	SN74S140J, N	5
TG51F	SNG51U	SN5453W	6	TG133F	SNG133U	SN74S140W	5
TG52E, J	SNG52J, N	SN7453J, N	6	TG140E, J	SNG140J, N	SN5400J, N	6
TG52F	SNG52U	SN7453W	6	TG140F	SNG140U	SN5400W	6
TG53E, J	SNG53J, N	SN7453J, N	6	TG141E, J	SNG141J, N	SN5400J, N	6
TG53F	SNG53U	SN7453W	6	TG141F	SNG141U	SN5400W	6
TG60E, J	SNG60J, N	SN5430J, N	6	TG142E, J	SNG142J, N	SN7400J, N	6
TG60F	SNG60U	SN5430W	6	TG142F	SNG142U	SN7400W	6
TG61E, J	SNG61J, N	SN5430J, N	6	TG143E, J	SNG143J, N	SN7400J, N	6
TG61F	SNG61U	SN5430W	6	TG143F	SNG143U	SN7400W	6
TG62E, J	SNG62J, N	SN7430J, N	6	TG150E, J	SNG150J, N	SN54H62J, N	7
TG62F	SNG62U	SN7430W	6	TG150F	SNG150U	SN54H62W	7
TG63E, J	SNG63J, N	SN7430J, N	6	TG151E, J	SNG151J, N	SN54H62J, N	7
TG63F	SNG63U	SN7430W	6	TG151F	SNG151U	SN54H62W	7
TG70E, J	SNG70J, N	SN5450J, N	6	TG152E, J	SNG152J, N	SN74H62J, N	7
TG70F	SNG70U	SN5450W	6	TG152F	SNG152U	SN74H62W	7
TG71E, J	SNG71J, N	SN5450J, N	6	TG153E, J	SNG153J, N	SN74H62J, N	7
TG71F	SNG71U	SN5450W	6	TG153F	SNG153U	SN74H62W	7
TG72E, J	SNG72J, N	SN7450J, N	6	TG160E, J	SNG160J, N	SN5438J, N	6
TG72F	SNG72U	SN7450W	6	TG160F	SNG160U	SN5438W	6
TG73E, J	SNG73J, N	SN7450J, N	6	TG161E, J	SNG161J, N	SN5438J, N	6
TG73F	SNG73U	SN7450W	6	TG161F	SNG161U	SN5438W	6
TG80E, J	SNG80J, N	SN5413J, N	6	TG162E, J	SNG162J, N	SN7438J, N	6
TG80F	SNG80U	SN5413W	6	TG162F	SNG162U	SN7438W	6
TG81E, J	SNG81J, N	SN5413J, N	6	TG163E, J	SNG163J, N	SN7438J, N	6
TG81F	SNG81U	SN5413W	6	TG163F	SNG163U	SN7438W	6
TG82E, J	SNG82J, N	SN7413J, N	6	TG170E, J	SNG170J, N	SN5460J, N	6
TG82F	SNG82U	SN7413W	6	TG170F	SNG170U	SN5460W	6
TG83E, J	SNG83J, N	SN7413J, N	6	TG171E, J	SNG171J, N	SN5460J, N	6
TG83F	SNG83U	SN7413W	6	TG171F	SNG171U	SN5460W	6
TG90E, J	SNG90J, N	SN5486J, N	9	TG172E, J	SNG172J, N	SN7460J, N	6
TG90F	SNG90U	SN5486W	9	TG172F	SNG172U	SN7460W	6
TG91E, J	SNG91J, N	SN5486J, N	9	TG173E, J	SNG173J, N	SN7460J, N	6
TG91F	SNG91U	SN5486W	9	TG173F	SNG173U	SN7460W	6
TG92E, J	SNG92J, N	SN7486J, N	9	TG180E, J	SNG180J, N	SN5430J, N	6
TG92F	SNG92U	SN7486W	9	TG180F	SNG180U	SN5430W	6
TG93E, J	SNG93J, N	SN7486J, N	9	TG181E, J	SNG181J, N	SN5430J, N	6
TG93F	SNG93U	SN7486W	9	TG181F	SNG181U	SN5430W	6
TG100E, J	SNG100J, N	SN5453J, N	6	TG182E, J	SNG182J, N	SN7430J, N	6
TG100F	SNG100U	SN5453W	6	TG182F	SNG182U	SN7430W	6
TG101E, J	SNG101J, N	SN5453J, N	6	TG183E, J	SNG183J, N	SN7430J, N	6
TG101F	SNG101U	SN5453W	6	TG183F	SNG183U	SN7430W	6
TG102E, J	SNG102J, N	SN7453J, N	6	TG190E, J	SNG190J, N	SN5410J, N	6
TG102F	SNG102U	SN7453W	6	TG190F	SNG190U	SN5410W	6
TG103E, J	SNG103J, N	SN7453J, N	6	TG191E, J	SNG191J, N	SN5410J, N	6
TG103F	SNG103U	SN7453W	6	TG191F	SNG191U	SN5410W	6
TG110E, J	SNG110J, N	SN54H55J, N	7	TG192E, J	SNG192J, N	SN7410J, N	6
TG110F	SNG110U	SN54H55W	7	TG192F	SNG192U	SN7410W	6
TG111E, J	SNG111J, N	SN54H55J, N	7	TG193E, J	SNG193J, N	SN7410J, N	6
TG111F	SNG111U	SN54H55W	7	TG193F	SNG193U	SN7410W	6
TG112E, J	SNG112J, N	SN74H55J, N	7	TG200E, J	SNG200J, N	SN54H30J, N	7
TG112F	SNG112U	SN74H55W	7	TG200F	SNG200U	SN54H30W	7
TG113E, J	SNG113J, N	SN74H55J, N	7	TG201E, J	SNG201J, N	SN54H30J, N	7
TG113F	SNG113U	SN74H55W	7	TG201F	SNG201U	SN54H30W	7
TG120E, J	SNG120J, N	SN5430J, N	6	TG202E, J	SNG202J, N	SN74H30J, N	7
TG120F	SNG120U	SN5430W	6	TG202F	SNG202U	SN74H30W	7
TG121E, J	SNG121J, N	SN5430J, N	6	TG203E, J	SNG203J, N	SN74H30J, N	7
TG121F	SNG121U	SN5430W	6	TG203F	SNG203U	SN74H30W	7
TG122E, J	SNG122J, N	SN7430J, N	6	TG210E, J	SNG210J, N	SN5455J, N	7
TG122F	SNG122U	SN7430W	6	TG210F	SNG210U	SN5455W	7
TG123E, J	SNG123J, N	SN7430J, N	6	TG211E, J	SNG211J, N	SN54H55J, N	7
TG123F	SNG123U	SN7430W	6	TG211F	SNG211U	SN54H55W	7
TG130E, J	SNG130J, N	SN54S140J, N	5	TG212E, J	SNG212J, N	SN74H55J, N	7
TG130F	SNG130U	SN54S140W	5	TG212F	SNG212U	SN74H55W	7
TG131E, J	SNG131J, N	SN54S140J, N	5	TG213E, J	SNG213J, N	SN74H55J, N	7
TG131F	SNG131U	SN54S140W	5	TG213F	SNG213U	SN74H55W	7
TG132E, J	SNG132J, N	SN74S140J, N	5	TG220E, J	SNG220J, N	SN54H00J, N	7
TG132F	SNG132U	SN74S140W	5	TG220F	SNG220U	SN54H00W	7

CROSS-REFERENCE GUIDE

DTL/TTL CIRCUITS

Transitron TTL, Cont.

B

Type Number	Direct Replacement	Recommended for New Designs	Sec.	Type Number	Direct Replacement	Recommended for New Designs	Sec.
TG221E, J	SNG221J, N	SN54H00J, N	7	TG273F	SNG273U	SN74H60W	7
TG221F	SNG221U	SN54H00W	7	TG280E, J	SNG280J, N	SN54H52J, N	7
TG222E, J	SNG222J, N	SN74H00J, N	7	TG280F	SNG280U	SN54H52W	7
TG222F	SNG222U	SN74H00W	7	TG281E, J	SNG281J, N	SN54H52J, N	7
TG223E, J	SNG223J, N	SN74H00J, N	7	TG281F	SNG281U	SN54H52W	7
TG223F	SNG223U	SN74H00W	7	TG282E, J	SNG282J, N	SN74H52J, N	7
TG230E, J	SGN230J, N	SN54H62J, N	7	TG282F	SNG282U	SN74H52W	7
TG230F	SNG230U	SN54H62W	7	TG283E, J	SNG283J, N	SN74H52J, N	7
TG231E, J	SNG231J, N	SN54H62J, N	7	TG283F	SNG283U	SN74H52W	7
TG231F	SNG231U	SN54H62W	7	TG290E, J	SNG290J, N	SN54H62J, N	7
TG232E, J	SNG232J, N	SN74H62J, N	7	TG290F	SNG290U	SN54H62W	7
TG232F	SNG232U	SN74H62W	7	TG291E, J	SNG291J, N	SN54H62J, N	7
TG233E, J	SNG233J, N	SN74H62J, N	7	TG291F	SNG291U	SN54H62W	7
TG233F	SNG233U	SN74H62W	7	TG292E, J	SNG292J, N	SN74H62J, N	7
TG240E, J	SNG240J, N	SN54H20J, N	7	TG292F	SNG292U	SN74H62W	7
TG240F	SNG240U	SN54H20W	7	TG293E, J	SNG293J, N	SN74H62J, N	7
TG241E, J	SNG241J, N	SN54H20J, N	7	TG293F	SNG293U	SN74H62W	7
TG241F	SNG241U	SN54H20W	7	TG300E, J	SNG300J, N	SN54H53J, N	7
TG242E, J	SNG242J, N	SN74H20J, N	7	TG300F	SNG300U	SN54H53W	7
TG242F	SNG242U	SN74H20W	7	TG301E, J	SNG301J, N	SN54H53J, N	7
TG243E, J	SNG243J, N	SN74H20J, N	7	TG301F	SNG301U	SN54H53W	7
TG243F	SNG243U	SN74H20W	7	TG302E, J	SNG302J, N	SN74H53J, N	7
TG250E, J	SNG250J, N	SN54H53J, N	7	TG302F	SNG302U	SN74H53W	7
TG250F	SNG250U	SN54H53W	7	TG303E, J	SNG303J, N	SN74H53J, N	7
TG251E, J	SNG251J, N	SN54H53J, N	7	TG303F	SNG303U	SN74H53W	7
TG251F	SNG251U	SN54H53W	7	TG310E, J	SNG310J, N	SN54H50J, N	7
TG252E, J	SNG252J, N	SN74H53J, N	7	TG310F	SNG310U	SN54H50W	7
TG252F	SNG252U	SN74H53W	7	TG311E, J	SNG311J, N	SN54H50J, N	7
TG253E, J	SNG253J, N	SN74H53J, N	7	TG311F	SNG311U	SN54H50W	7
TG253F	SNG253U	SN74H53W	7	TG312E, J	SNG312J, N	SN74H50J, N	7
TG260E, J	SNG260J, N	SN54H30J, N	7	TG312F	SNG312U	SN74H50W	7
TG260F	SNG260U	SN54H30W	7	TG313E, J	SNG313J, N	SN74H50J, N	7
TG261E, J	SNG261J, N	SN54H30J, N	7	TG313F	SNG313U	SN74H50W	7
TG261F	SNG261U	SN54H30W	7	TG320E, J	SNG320J, N	SN54H10J, N	7
TG262E, J	SNG262J, N	SN74H30J, N	7	TG320F	SNG320U	SN54H10W	7
TG262F	SNG262U	SN74H30W	7	TG321E, J	SNG321J, N	SN54H10J, N	7
TG263E, J	SNG263J, N	SN74H30J, N	7	TG321F	SNG321U	SN54H10W	7
TG263F	SNG263U	SN74H30W	7	TG322E, J	SNG322J, N	SN74H10J, N	7
TG270E, J	SNG270J, N	SN54H60J, N	7	TG322F	SNG322U	SN74H10W	7
TG270F	SNG270U	SN54H60W	7	TG323E, J	SNG323J, N	SN74H10J, N	7
TG271E, J	SNG271J, N	SN54H60J, N	7	TG323F	SNG323U	SN74H10W	7
TG271F	SNG271U	SN54H60W	7	TG350E, J	SNG351J, N	SN54S140J, N	5
TG272E, J	SNG272J, N	SN74H60J, N	7	TG350F	SNG351U	SN54S140W	5
TG272F	SNG272U	SN74H60W	7	TG352E, J	SNG353J, N	SN74S140J, N	5
TG273E, J	SNG273J, N	SN74H60J, N	7	TG352F	SNG353U	SN74S140W	5

CROSS-REFERENCE GUIDE

MOS/LSI CIRCUITS

AMI

B

Type Number	Direct Replacement	Recommended for New Designs	Sec.
RD55		TMS 3002 LR	14
RD57		TMS 3002 LR	14
RD58		TMS 3002 LR	14
RD60		TMS 3002 LR	14
RD62		TMS 3104 LC/NC	14
RD63	TMS 3304 LR	TMS 3304 LR	14
RD64		TMS 3114 JC/NC	14
RD65		TMS 3401 LC/NC	14
MA51	TMS 2300 JC/NC	TMS 2300 JC/NC	14
MB51		TMS 2600 JC/NC	14
MX52		TMS 6009 JC/NC	14
MX53		TMS 6000 JC/NC	14
MX54		TMS 6009 JC/NC	14

A.M.S.

Type Number	Direct Replacement	Recommended for New Designs	Sec.
AMD 91600111		TMS 4023 NC	14

CMI

Type Number	Direct Replacement	Recommended for New Designs	Sec.
CM1101	TMS 1101 JC	TMS 1101 JC/NC	14

Electronic Arrays

Type Number	Direct Replacement	Recommended for New Designs	Sec.
EA1003		TMS 3112 JC/NC	14
EA1007		TMS 3112 JC/NC	14
EA1004		TMS 3101 LC/NC	14
EA1005		TMS 3101 LC/NC	14
EA1200		TMS 3112 JC/NC	14
EA1201		TMS 3112 JC/NC	14
EA1204		TMS 3114 JC/NC	14
EA1205		TMS 3114 JC/NC	14
EA1206		TMS 3413 LC/NC	14
EA1208		TMS 3016 LR	14
EA1210		TMS 3412 JC/NC	14
EA1212		TMS 3412 JC/NC	14
EA1221		TMS 3101 JC/NC	14
EA1400		TMS 1101 JC/NC	14
EA1800		TMS 2200 JC/NC	14
EA1801		TMS 2200 JC/NC	14
EA1804		TMS 2200 JN/NC	14
EA1806		TMJ 2200 JC/NC	14
EA3001		TMS 2500 JC/NC	14
EA3101		TMS 2602 JC/NC	14
EA3300		TMS 4400 JC/NC	14
EA3307		TMS 2604 JC/NC	14
EA3500		TMS 2500 JC/NC	14

Electronic Arrays, Cont.

Type Number	Direct Replacement	Recommended for New Designs	Sec.
EA3501		TMS 2501 JC/NC	14
EA3700		TMS 4100 JC/NC	14
EA3701		TMS 4103 JC/NC	14
EA4000		TMS 4400 JC/NC	14

Fairchild

Type Number	Direct Replacement	Recommended for New Designs	Sec.
3250		TMS 2500 JC/NC	14
3251		TMS 4400 JC/NC	14
3254		TMS 2500 JC/NC	14
3255		TMS 4100 JC/NC	14
3256		TMS 4100 JC/NC	14
3257		TMS 4100 JC/NC	14
3258		TMS 2500 JC/NC	14
3300		TMS 3000 LR	14
3303		TMS 3000 LR	14
3304		TMS 3016 LR	14
3305		TMS 3016 LR	14
3306		TMS 3016 LR	14
3307		TMS 3101 LC/NC	14
3320		TMS 3103 LC/NC	14
3325		TMS 3417 JC/NC	14
3326	TMS 3304 LC	TMS 3304 LC/NC	14
3330		TMS 3403 LC	14
3331		TMS 3402 LC/NC	14
3332		TMS 3305 LC	14
3377		TMS 3401 LC	14
3383		TMS 3412 JC/NC	14
3501		TMS 2800 JC/NC	14
3507		TMS 2600 JC/NC	14
3512		TMS 2500 JC/NC	14
3513		TMS 2500 JC/NC	14
3514		TMS 2500 JC/NC	14
3530		TMS 1101 JC/NC	14
3532		TMS 1101 JC/NC	14
3580	TMS 2600 JC	TMS 2600 JC/NC	14
3584	TMS 2600 JC	TMS 2600 JC/NC	14
3700		TMS 6005 JC/NC	14
3701		TMS 6005 JC/NC	14
3810		TMS 2700 JC/NC	14

GI

Type Number	Direct Replacement	Recommended for New Designs	Sec.
DL-5-0406	TMS 3406 LC	TMS 3101 LC/NC	14
DL-5-1200		TMS 3101 LC/NC	14
DL-7-1200		TMS 3101 LC/NC	14
DL-5-1512		TMS 3401 LC/NC	14
DL-7-1512		TMS 3401 LC/NC	14
SL-6-2050		TMS 3002 LR	14
SL-6-2064		TMS 3103 LC/NC	14
DL-6-2100		TMS 3101 LC/NC	14
RO-1-2240		TMS 2500 JC/NC	14
MU-6-2281		TMS 6000 JC/NC	14
DL-0-3066	TMS 3304 LR	TMS 3304 LR	14

CROSS-REFERENCE GUIDE

MOS/LSI CIRCUITS

B

GI, Cont.

Type Number	Direct Replacement	Recommended for New Designs	Sec.
SL-7-4025		TMS 3000 LR	14
SL-7-4032		TMS 3112 JC/NC	14
SS-6-8211		TMS 3016 LR	14
SS-6-8211		TMS 3016 LR	14
MEM2009		TMS 6003 JC/NC	14
MEM2017		TMS 6009 JC/NC	14
MEM3016	TMS 3016 LR	TMS 3016 LR	14
MEM3021	TMS 3021 LR	TMS 3021 LR	14
MEM3032-D2		TMS 3112 JC/NC	14
MEM3032-D5		TMS 3112 JC/NC	14
MEM3025		TMS 3000 LR	14
MEM3064		TMS 3103 LC/NC	14
MEM3064 LR	TMS 3027 JC	TMS 3027 JC	14
MEM3064-2B		TMS 3103 LC/NC	14
MEM3100		TMS 3002 LR	14
MEM3100A2		TMS 3002 LR	14
MEM3128		TMS 3114 JC/NC	14
MEM3128-2		TMS 3114 JC/NC	14
MEM5021		TMS 5700 JC/NC	14

Intel

Type Number	Direct Replacement	Recommended for New Designs	Sec.
1101	TMS 1101 JC	TMS 1101 JC/NC	14
11001	TMS 1101 JC	TMS 1101 JC/NC	14
1103	TMS 1103 NC	TMS 1103 JC/NC	14
1301		TMS 2600 JC/NC	14
1402	TMS 3412 JC/NC	TMS 3412 JC/NC	14
1403	TMS 3413 JC	TMS 3413 JC/NC	14
1404	TMS 3414 JC	TMS 3414 JC/NC	14
1405		TMS 3401 LC/NC	14
1406	TMS 3406 LC	TMS 3101 LC/NC	14
1407	TMS 3407 LC	TMS 3101 LC/NC	14
1506	TMS 3406 LM	TMS 3101 LC/NC	14
1507	TMS 3407 LM	TMS 3101 LC/NC	14

Mostek

Type Number	Direct Replacement	Recommended for New Designs	Sec.
MK1001L	TMS 3304 LR	TMS 3304 LR	14
MK1002P	TMS 3414 JC	TMS 3414 JC/NC	14
MK1003P		TMS 3412 LC/NC	14
MK2000P		TMS 4100 JC/NC	14
MK2001P		TMS 4103 JC/NC	14
MK2100P		TMS 2500 JC/NC	14
MK2101P		TMS 2501 JC/NC	14
MKB2300P		TMS 4100 JC/NC	14
TMS2302P		TMS 4103 JC/NC	14
TMS2400P	TMS 2300 JC/NC	TMS 2300 JC/NC	14
MK3100P		TMS 2500 JC/NC	14
MK3101P		TMS 2501 JC/NC	14
MK4001P	TMS 4003 JC	TMS 4003 JC/NC	14
MK4003P		TMS 4024 JC/NC	14

Motorola

Type Number	Direct Replacement	Recommended for New Designs	Sec.
MCM1110	TMS 2600 JC	TMS 2600 JC/NC	14
MCM1120	TMS 2400 JC	TMS 2500 JC/NC	14
MCM1121	TMS 2400 JC	TMS 2500 JC/NC	14
MCM1122	TMS 2403 JC	TMS 2501 JC/NC	14
MC1124L		TMS 3802 LC	14
MC1125L		TMS 3802 LC	14
MCM1130	TMS 4100 JC	TMS 4100 JC/NC	14
MCM1131	TMS 4100 JC	TMS 4100 JC/NC	14
MCM1132	TMS 4103 JC	TMS 4103 JC/NC	14
MC1141G	TMS 3305 LR	TMS 3305 LR	14
MC1142G		TMS 3401 LC/NC	14
MC1150L		TMS 6000 JC/NC	14
MCM1150	TMS 2300 JC	TMS 2300 JC/NC	14
MC1160G	TMS 3003 LR	TMS 3101 LC/NC	14
MC1161G	TMS 3002 LR	TMS 3002 LR	14
MCM1170		TMS 1101 JC/NC	14
MCM1173		TMS 4023 NC	14
MC2244G		TMS 3401 LC/NC	14
MC2246		TMS 3417 JC/NC	14
MCM2340		TMS 4400 JC/NC	14
MC2360G		TMS 3101 LC/NC	14
MC2362G		TMS 3412 JC/NC	14
MC2363G		TMS 3114 JC/NC	14
MCM2372	TMS 1103 NC	TMS 1103 NC	14
MC2380G		TMS 3101 LC/NC	14
MC2381G		TMS 3101 LC/NC	14
MC2384L	TMS 3412 JC	TMS 3412 JC/NC	14
MC2385G	TMS 3413 JC	TMS 3414 LC/NC	14
MC2386G	TMS 3414 JC	TMS 3414 LC/NC	14

National

Type Number	Direct Replacement	Recommended for New Designs	Sec.
MM400/500		TMS 3000 LR	14
MM403/503		TMS 3002 LR	14
MM404/504		TMS 3016 LR	14
MM405/505		TMS 3112 JC/NC	14
MM406/506	TMS 3406 LC	TMS 3101 LC/NC	14
MM410/510		TMS 3103 LC/NC	14
MM421/521	TMS 2800 JC	TMS 2800 JC/NC	14
MM422/522		TMS 2600 JC/NC	14
MM422/522AP		TMS 2605 JC/NC	14
MM422BL/522BL		TMS 2607 JC/NC	14
MM422BN/522BN		TMS 2608 JC/NC	14
MM422DE/522DE		TMS 2605 JC/NC	14
MM422EK/522EK		TMS 2606 JC/NC	14
MM423/523	TMS 2600 JC	TMS 2600 JC/NC	14
MM423BO/523BO	TMS 2609 JC	TMS 2609 JC/NC	14
MM423FE/523FE	TMS 2610 JC	TMS 2610 JC/NC	14
MM4001/5001		TMS 3102 LC/NC	14
MM4006/5006		TMS 3101 LC/NC	14
MM400GD/500GD		TMS 3101 LC/NC	14
MM4010/5010		TMS 3103 LC/NC	14
MM4015A/5015A		TMS 3314 JC/NC	14
MM4016/5016		TMS 3401 LC/NC	14
MM4016D/5016D		TMS 3401 LC/NC	14
MM4018/5018		TMS 3103 LC/NC	14
MM4040/5040		TMS 3016 LR	14

CROSS-REFERENCE GUIDE

MOS/LSI CIRCUITS

B

National, Cont.

Type Number	Direct Replacement	Recommended for New Designs	Sec.
MM4050/5050		TMS 3112 JC/NC	14
MM4051/5051		TMS 3112 JC/NC	14
MM4051D/5051D		TMS 3112 JC/NC	14
MM4052/5052		TMS 3102 LC/NC	14
MM4053/5053		TMS 3101 LC/NC	14
MM5105		TMS 3403 LC/NC	14
MM4210/5210		TMS 2800 JC/NC	14
MM4211/5211		TMS 2600 JC/NC	14
MM4230/5230		TMS 2500 JC/NC	14
MM4231/5231		TMS 2500 JC/NC	14
MM4232/5232		TMS 4400 JC/NC	14
MM4240/5240		TMS 2500 JC/NC	14
MM4241/5241		TMS 2700 JC/NC	14
MM4250/5250	TMS 1101 JC	TMS 1101 JC/NC	14

Signetics

Type Number	Direct Replacement	Recommended for New Designs	Sec.
2001	TMS 3016 LR	TMS 3016 LR	14
2002	TMS 3000 LR	TMS 3000 LR	14
2003	TMS 3000 LR	TMS 3112 JC/NC	14
2004	TMS 3002 LR	TMS 3002 LR	14
2005	TMS 3003 LR	TMS 3101 LC/NC	14
2501	TMS 1101 JC	TMS 1101 JC/NC	14
2502	TMS 3412 JC	TMS 3412 JC/NC	14
2503	TMS 3413 LC	TMS 3413 LC/NC	14
2504	TMS 3414 LC	TMS 3414 LC/NC	14
2505		TMS 3401 LC/NC	14
2506		TMS 3101 LC/NC	14
2507		TMS 3101 LC/NC	14
2508		TMS 1103 NC	14
2509		TMS 3002 LR	14
2510		TMS 3101 LC/NC	14
2511		TMS 3101 LC/NC	14
2512		TMS 3414 LC/NC	14
2513		TMS 2500 JC/NC	14
2514		TMS 2500 JC/NC	14

Solitron

Type Number	Direct Replacement	Recommended for New Designs	Sec.
UC6525/7525		TMS 2600 JC/NC	14
UC6548/7548		TMS 2600 JC/NC	14
UC6550/7550	TMS 4026 JC	TMS 4026 JC/NC	14
UC6572/7572	TMS 2700 JC	TMS 2700 JC/NC	14
UC6596/7596		TMS 4400 JC/NC	14
UC6596S/7596		TMS 4400 JC/NC	14
UC6577/7577		TMS 2500 JC/NC	14
UC7310		TMS 3413 JC/NC	14
UC7315		TMS 3112 JC/NC	14
UC7316		TMS 3016 LR	14
UC7320		TMS 3002 LR	14
UC7350		TMS 3417 JC/NC	14

Unisem

Type Number	Direct Replacement	Recommended for New Designs	Sec.
UA2524/3524		TMS 1103 NC	14
UA2525/3525		TMS 2600 JC/NC	14
UA2548/3548		TMS 2600 JC/NC	14
UA2552/3552		TMS 3113 LC/NC	14
UA2556/3556	TMS 1101 JC	TMS 1101 JC/NC	14
UA2564/3564		TMS 4026 JC/NC	14
UA2572/3572	TMS 2700 JC/NC	TMS 2700 JC/NC	14
UA2596/3596		TMS 4400 JC/NC	14
UA2664/3664	TMS 4026 JC	TMS 4026 JC/NC	14
UA3540		TMS 2500 JC/NC	14

Discrete Semiconductors and Components

c

DISCRETE SEMICONDUCTORS AND COMPONENTS MANUFACTURED BY TEXAS INSTRUMENTS

In addition to its leadership position in integrated circuits, Texas Instruments is the world's largest supplier of discrete semiconductors and components.

Devices shown below represent TI's standard discrete semiconductors beginning with the 1N series, followed by 2N, in-house, and the resistor product lines. Note that consecutive type numbers are shown in condensed form: e.g. 1N253, 1N254, 1N255, and 1N256 devices are listed as 1N253-1N256.



1N251	2N317A	2N1141A-2N1143A	2N2919A-2N2920A
1N253-1N256	2N332-2N336	2N1149-2N1156	2N2944-2N2946
1N332-1N349	2N332A-2N336A	2N1195	2N2944A-2N2946A
1N440B-1N445B	2N337-2N341	2N1273-2N1274	2N2972-2N2979
1N456-1N459	2N342	2N1276-2N1279	2N2987-2N2994
1N456A-1N459A	2N343	2N1302-2N1309	2N2996-2N3008
1N461-1N464	2N377	2N1370-2N1383	2N3010-2N3015
1N461A-1N464A	2N388-2N389	2N1404	2N3036-2N3040
1N482-1N485	2N388A-2N389A	2N1420	2N3043-2N3053
1N482A-1N485A	2N395-2N397	2N1507	2N3114
1N482B-1N485B	2N398	2N1529-2N1548	2N3117
1N530-1N540	2N398A	2N1586-2N1599	2N3146-2N3147
1N547	2N398B	2N1605	2N3244-2N3245
1N550-1N555	2N404	2N1613	2N3250-2N3251
1N599-1N606	2N404A	2N1671	2N3250A-2N3251A
1N599A-1N606A	2N424	2N1671A	2N3252-2N3253
1N607-1N614	2N424A	2N1671B	2N3328-2N3336
1N607A-1N614A	2N426-2N428	2N1690-2N1691	2N3347-2N3352
1N607R-1N614R	2N438	2N1711	2N3371
1N607AR-1N614AR	2N438A	2N1714-2N1721	2N3375
1N625-1N629	2N439-2N440	2N1722	2N3418-2N3421
1N643	2N456A-2N458A	2N1722A	2N3444
1N645	2N456B-2N458B	2N1723	2N3458-2N3460
1N645A	2N470-2N480	2N1724	2N3467-2N3468
1N646-1N649	2N489-2N493	2N1724A	2N3485-2N3486
1N646A-1N649A	2N489A-2N493A	2N1725	2N3485A-2N3486A
1N658-1N663	2N489B-2N493B	2N1889-2N1893	2N3494-2N3497
1N702-1N716	2N494	2N1907-2N1908	2N3502-2N3505
1N702A-1N716A	2N494A	2N1936-2N1937	2N3551-2N3562
1N746-1N759	2N494B	2N1973-2N1975	2N3570-2N3576
1N746A-1N759A	2N497-2N498	2N1993-2N2001	2N3632
1N761-1N766	2N497A-2N498A	2N2060	2N3680
1N914-1N916	2N508	2N2102	2N3702-2N3716
1N914A-1N916A	2N511-2N512	2N2102A	2N3724-2N3725
1N914B-1N916B	2N511A-2N512A	2N2150-2N2151	2N3724A-2N3725A
1N917	2N511B-2N512B	2N2160	2N3733
1N957-1N961	2N520	2N2188-2N2191	2N3789-2N3792
1N957A-1N961A	2N520A	2N2192-2N2194	2N3798-2N3799
1N957B-1N961B	2N522A	2N2192A-2N2194A	2N3806-2N3811
1N1095-1N1096	2N541-2N543	2N2217	2N3819-2N3824
1N1100-1N1105	2N581-2N582	2N2218-2N2219	2N3829
1N1115-1N1120	2N587	2N2218A-2N2219A	2N3833-2N3835
1N1124A-1N1128A	2N594-2N596	2N2220	2N3838
1N1124AR-1N1128AR	2N634A-2N636A	2N2221-2N2223	2N3846-2N3847
1N1487-1N1492	2N656-2N657	2N2221A-2N2223A	2N3866
1N1581-1N1587	2N656A-2N657A	2N2243A	2N3903-2N3906
1N1612-1N1616	2N658-2N662	2N2270	2N3909
1N1692-1N1697	2N696-2N699	2N2303	2N3909A
1N1816-1N1836	2N705	2N2322-2N2326	2N3962-2N3966
1N1816A-1N1836A	2N706	2N2369	2N3970-2N3972
1N1816C-1N1836C	2N706A	2N2369A	2N3980
1N1816CA-1N1836CA	2N706B	2N2386	2N3993-2N3994
1N2069-1N2071	2N708-2N710	2N2386A	2N3993A-2N3994A
1N2069A-1N2071A	2N711	2N2387-2N2390	2N3996-2N4005
1N2175	2N711A	2N2393-2N2396	2N4040-2N4041
1N2970-1N3011	2N717	2N2411-2N2412	2N4058-2N4062
1N2970A-1N3011A	2N718-2N720	2N2415-2N2416	2N4091-2N4093
1N2970B-1N3011B	2N718A-2N720A	2N2432	2N4104
1N3064	2N721-2N722	2N2432A	2N4138
1N3070	2N730-2N731	2N2453	2N4220-2N4222
1N3506-1N3517	2N743-2N744	2N2481	2N4220A-2N4222A
1N3518-1N3520	2N797	2N2483-2N2484	2N4223-2N4224
1N4001-1N4007	2N849-2N852	2N2497-2N2500	2N4252-2N4253
1N4099	2N870-2N871	2N2537-2N2540	2N4300-2N4301
1N4100-1N4106	2N910-2N912	2N2552-2N2567	2N4391-2N4393
1N4148-1N4154	2N914	2N2586	2N4398-2N4399
1N4305	2N917-2N918	2N2604-2N2605	2N4416
1N4360	2N929-2N930	2N2608-2N2609	2N4418-2N4423
1N4370-1N4372	2N956	2N2635	2N4851-2N4855
1N4370A-1N4372A	2N956A-2N957A	2N2639-2N2644	2N4856-2N4861
1N4444	2N985	2N2646-2N2647	2N4856A-2N4861A
1N4446-1N4449	2N997	2N2659-2N2670	2N4874-2N4876
1N4454	2N1021-2N1022	2N2802-2N2807	2N4891-2N4894
1N4531-1N4534	2N1021A-2N1022A	2N2861-2N2862	2N4901-2N4906
1N4536	2N1038-2N1045	2N2880	2N4913-2N4915
1N4606	2N1046-2N1050	2N2894	2N4947-2N4949
1N4727	2N1046A-2N1050A	2N2904-2N2907	2N4994-2N4997
1N4938	2N1046B-2N1050B	2N2904A-2N2907A	2N5043-2N5047
2N117-2N120	2N1131-2N1132	2N2913-2N2914	2N5058-2N5059
2N123	2N1141-2N1143	2N2915-2N2916	2N5245-2N5248
2N243-2N244		2N2915A-2N2916A	2N5273-2N5275
2N250-2N251		2N2917-2N2918	2N5301-2N5303
2N250A-2N251A		2N2919-2N2920	2N5332-2N5333
2N263-2N264			
2N315A			



DISCRETE SEMICONDUCTORS AND COMPONENTS
MANUFACTURED BY TEXAS INSTRUMENTS (Contd)

2N5384-2N5390
2N5399
2N5447-2N5451
2N5543-2N5549
2N5938-2N5940
2N5949-2N5953
3N34-3N35
3N74-3N79
3N108-3N111
3N160-3N161
3N174
3N201-3N203
600C-601C
604C
606C
608C
610C
612C
614C
616C
618C
620C
622C
624C
650-653
650C0-650C7
651
651C0-651C9
652
652C0-652C9
653
653C0-653C9
654C9
655C9
A3T918
A3T929
A3T930
A3T2221-A3T2222
A3T2221A-A3T2222A
A3T2484
A3T2894
A3T2906-A3T2907
A3T2906A-A3T2907A
A3T3011
A4T918
A4T930
A4T1893
A4T2219A
A4T2243
A4T2369
A4T2432
A4T2484
A4T2605
A4T2894
A4T2907A
A4T2945
A4T3013
A4T3015

A4T3251A
A4T3570
A4T3702-A4T3716
A4T3725
A4T3822-A4T3823
A4T3829
A4T3890
A4T3993
A4T4058-A4T4062
A4T4416
A4T4496-A4T4497
A4T4857
A5T2222
A5T2907
A5T3644-A5T3645
A5T3903-A5T3906
A5T5058-A5T5059
A516-A517
A600-A602
A610-A612
A706-A713
A900-A903
A905-A908
G129-G130
H11
H35
H38
H60-H62
LSX400
LSX600
LSX900
T151-T160
T171-T175
SERIES T1145
T1156
T1156L
T1159-T1162
T1363-T1365
T1390-T1391
T1395
T1397-T1403
T1480-T1484
T1486-T1487
T1492-T1496
T1550-T1551
T11121-T11126
T11131-T11136
T11141-T11146
T11151-T11156
T13027-T13031
TIC35-TIC36
TIC44-TIC47
SERIES TIC250
SERIES TIC252
SERIES TIC260
SERIES TIC262
SERIES TIC270
SERIES TIC272

T1D17-T1D20
T1D21A-T1D26A
T1D29A-T1D30A
T1D31-T1D45
T1D121-T1D126
T1D129-T1D134
T1L23-T1L24
T1L58
T1L63-T1L67
T1L102-T1L103
T1L107-T1L108
T1L201-T1L208
T1L601-T1L616
TIP29-TIP36
TIP29A-TIP36A
TIP29B-TIP36B
TIP29C-TIP36C
TIP41-TIP42
TIP41A-TIP42A
TIP41B-TIP42B
TIP41C-TIP42C
TIP3055
TIS05
TIS14
TIS25-TIS27
TIS37-TIS39
TIS43
TIS56-TIS59
TIS62-TIS64
TIS68-TIS70
TIS73-TIS75
TIS78-TIS79
TIS84
TIS86-TIS87
TIS90-TIS93
TIS90M-TIS93M
TIS97-TIS101
TIS104-TIS119
TIV306-TIV308
TIXL05-TIXL06
TIXL12-TIXL22
TIXL26-TIXL30
TIXL51-TIXL53
TIXL55-TIXL57
TIXL59
TIXL68-TIXL76
TIXL104-TIXL106
TIXL109
TIXL151-TIXL152
TIXL301-TIXL302
TIXM101
TIXS33
TIXS35-TIXS36
TIXS80-TIXS81
TIXV01-TIXV04
XD500-XD502

RESISTORS AND
SENSISTOR[®] RESISTORS

CD1/2MR-RN20X
CD1/2MR-RN20X
CD1/2MR-RN20X
CG1/8-RN55G
CG1/8-RN550-G
CG1/8-RN550-G
CG1/4-RN60D-G
CG1/4-RN60D-G
CG1/2-RN65D-G
CG1/2-RN65D-G
CG1/2-RN65D-G
MC50C-RN50C
MC50D
MC50E
MC55C-RN55C
MC55D-RN55D
MC55D-RC07
MC55E-RN55E
MC58C
MC58D
MC58E
MC58E
MC60C-RN60C
MC60D-RN60D
MC60E-RN60E
MC61C
MC61D
MC61D-RL20
MC61E
MC65C-RN65C
MC65D-RN65D
MC65E-RN65E
MC65F-RN65F
MC66C
MC66D
MC66D-RL32
MC66E
MM60C-RN60C
MM60D
MM60E
MM65C-RN65C
MM65D
MM65E-RN65E
MM70C-RN70C
MM70D
MM70E-RN70E
P100 10 PCT
P100 5 PCT
TG1/8 10 PCT
TG1/8 5 PCT
TM1/8 10 PCT
TM1/8 5 PCT
TM1/4 10 PCT
TM1/4 5 PCT

**LISTING OF PREFERRED SEMICONDUCTORS AND COMPONENTS
BY DEVICE CLASSIFICATION**

SILICON LOW-POWER N-P-N		2N3250	2209*	2N5245	6703*	2N2987	16401*
		2N3702	2225	2N5246	6703	2N2988	16401
		2N3703	2225	2N5247	6703	2N2989	16401
TIS62	1025*	2N3829	2235	2N5248	6711	2N2990	16401
TIS63	1025	2N4058	2301			2N2991	16401
TIS84	1033	2N4059	2301	SILICON UNIJUNCTION		2N2992	16401
TIS86	1041	2N4060	2301	2N491A	7101	2N2993	16401
TIS87	1041	2N4061	2301	2N492A	7101	2N2994	16401
TIS97	1053	2N4062	2301	2N1671B	7109	2N3418	16501
TIS98	1053	2N5447	2305	2N3980	7201	2N3419	16501
TIS99	1053	2N5448	2305			2N3420	16501
TIS100	1061			GERMANIUM LOW-POWER ALLOY-JUNCTION TRANSISTORS		2N3421	16501
TIS101	1061	SILICON UHF TRANSISTORS		2N398	9101	2N3551	16507
TIS108	1033	2N918	3201	2N404	9105	2N3552	16507
2N697	1201	A3T918	3203	2N1302	9205	2N3713	16511
2N930	1263	2N3570	3401	2N1303	9205	2N3714	16511
2N1613	1201	2N3866	3501	2N1304	9205	2N3715	16511
2N2219	1305	2N4875	3701	2N1305	9205	2N3716	16511
A3T2221	1313			2N1306	9205	2N3789	16557
A3T2221A	1317	SILICON MULTIPLE AND MULTI-ELEMENT TRANSISTORS		2N1307	9205	2N3790	16557
2N2222	1305	3N79	4101	2N1308	9205	2N3791	16557
A3T2222	1313	TIS92	4015	2N1309	9205	2N3792	16557
A3T2222A	1317	TIS92M	4105	2N1377	9213	2N3846	16579
2N2243A	1301	TIS93	4105	2N1997	9301	2N3847	16579
2N2369A	1327	TIS93M	4105	2N2000	9307	2N3996	16601
2N2432	1337	3N111	4109			2N3997	16601
2N2484	1349	2N997	4301	GERMANIUM MESA AND PLANAR SWITCHING TRANSISTORS		2N3998	16601
A3T2484	1269	2N2060	4401	2N797	12101	2N3999	16601
A3T3011	1405	2N2223	4401	2N964	12105	2N4000	16607
2N3013	1409	2N2639	4405	2N2635	12301	2N4001	16607
2N3015	1413	2N2642	4405			2N4002	16613
2N3704	1433	2N2643	4405	GERMANIUM UHF/MICROWAVE TRANSISTORS		2N4003	16613
2N3705	1433	2N2920	4409	2N5043	14401	2N4300	16625
2N3706	1433	2N2977	4409			2N4301	16631
2N3707	1435	2N2979	4409			2N4398	16645
2N3708	1435	2N3350	4507			2N4399	16645
2N3709	1435	2N3680	4509			2N5301	16687
2N3710	1435	2N3838	4517			2N5302	16687
2N3711	1435	2N4854	4701			2N5303	16687
2N3725	1437			SILICON POWER TRANSISTORS		2N5333	16701
2N4252	1445	SILICON FIELD-EFFECT TRANSISTORS		TIP29A,B,C	16101	2N5384	16707
2N4994	1503	TIS58	6091	TIP30A,B,C	16105	2N5385	16707
2N4995	1503	TIS59	6091	TIP31A,B,C	16109	2N5386	16711
2N4996	1511	TIS73	6103	TIP32A,B,C	16113	2N5387	16715
2N4997	1511	TIS74	6103	TIP33A,B,C	16117	2N5388	16715
2N5449	1701	TIS75	6103	TIP34A,B,C	16121		
2N5450	1701	3N160	6201	TIP35A,B,C	16125	GERMANIUM POWER TRANSISTORS	
2N5451	1701	2N2386	6301	TIP36A,B,C	16129	2N456A	17101
		2N2498	6303			2N1038	17201
SILICON LOW-POWER P-N-P		2N3330	6305			2N1539	17223
		2N3819	6401			2N1907	17231
TIS37	2001	2N3820	6403			T13027	17301
TIS38	2001	2N3822	6405			GENERAL PURPOSE DIODES	
2N2605	2119	2N3823	6407			1N456	18101
2N2894	2125	2N3909	6413			1N457	18101
A3T2894	2127	2N3993A	6501			1N458	18101
2N2905	2131	2N4416	6503			1N459	18101
A3T2906	2135	2N4857	6511			1N482	18109
A3T2906A	2135	2N5045	6601				
2N2907	2131			TIP3055	16301		
A3T2907	2135						
A3T2907A	2135						
2N2945	2139						

* Page number of Preferred Semiconductors and Components Catalog — CC201

C

**LISTING OF PREFERRED SEMICONDUCTORS AND COMPONENTS
BY DEVICE CLASSIFICATION (Cont'd.)**

C

GENERAL PURPOSE DIODES (Cont'd.)		1N756A	23109*	TIL606	27503*
		1N757	23109	TIL607	27503
		1N757A	23109	TIL608	27503
1N483	18109*	1N758	23109	1N2175	27801
1N484	18109	1N758A	23109		
1N485	18109	1N759	23109		
1N645	18113	1N759A	23109	PRECISION FILM RESISTORS	
1N646	18113	1N4370	23601		
1N647	18113	1N4370A	23601	CG1/8	28201
1N648	18113	1N4371	23601	CG1/4	28201
1N649	18113	1N4371A	23601	CG1/2	28201
		1N4372	23601	MC50	28401
		1N4372A	23601	MC55	28401
				MC60	28401
				MC65	28401
SWITCHING DIODES		THYRISTORS AND TRIGGER DIODES		TEMPERATURE-SENSING SILICON RESISTORS	
1N251	19101	TI42A	24105	TG1/8	29001
1N661	19151	TI43A	24105	TM1/8	29001
1N914	19201	TIC44	24109	TM1/4	29001
1N914B	19201	TIC45	24109		
1N3070	19303	TIC46	24109		
1N4148	19401	TIC47	24109		
1N4154	19403	2N3001	24401		
1N4448	19401	2N3002	24401		
1N4454	19405	2N3003	24401		
		2N3004	24401		
MULTIPLE DIODES		2N3005	24407		
TID21	20005	2N3006	24407		
TID22	20005	2N3007	24407		
TID23	20005	2N3008	24407		
TID24	20005	2N3555	24417		
TID25	20009	2N3556	24417		
TID26	20009	2N3557	24417		
TID29	20013	2N3558	24417		
TID30	20013	2N3559	24425		
		2N3560	24425		
TUNING DIODES		2N3561	24425		
TIV306	21205	2N3562	24425		
TIV307	21205				
TIV308	21205	SILICON RECTIFIERS			
		1N4001	25401		
REGULATOR DIODES		1N4002	25401		
1N746	23109	1N4003	25401		
1N746A	23109	1N4004	25401		
1N747	23109	1N4005	25401		
1N747A	23109	1N4006	25401		
1N748	23109	1N4007	25401		
1N748A	23109				
1N749	23109	OPTOELECTRONIC DEVICES			
1N749A	23109	TIL01	27001		
1N750	23109	TIL09	27009		
1N750A	23109	LS400	27401		
1N751	23109	LS600	27501		
1N751A	23109	TIL601	27503		
1N752	23109	TIL602	27503		
1N752A	23109	TIL603	27503		
1N753	23109	TIL604	27503		
1N753A	23109	TIL605	27503		
1N754	23109				
1N754A	23109				
1N755	23109				
1N755A	23109				
1N756	23109				

* Page number of Preferred Semiconductors and Components Catalog — CC201

**APPLICATIONS GUIDE TO
PREFERRED SEMICONDUCTORS AND COMPONENTS**

APPLICATION	DEVICE RECOMMENDATION							
	BIPOLAR				FET			
	N-P-N		P-N-P		N-CHANNEL		P-CHANNEL	
	Type No.	Page No.*	Type No.	Page No.*	Type No.	Page No.*	Type No.	Page No.*
Small-Signal Transistor: Amplifier:	•A3T2484	1269	•A3T2906	2135	TIS58	6091	2N2386	6301
	•TIS92	4105	•A3T2907	2135	TIS59	6091	•2N2498	6303
DC to 1 MHz	•TIS92M	4105	•A3T2906A	2135	•2N3819	6401	•2N3330	6305
	•TIS97	1053	•A3T2907A	2135	•2N3822	6405	•2N3820	6403
	•TIS98	1053	•TIS93	4105			2N3909	6413
	TIS99	1053	•TIS93M	4105				
	2N697	1201	2N404	9105				
	2N930	1263	2N1303	9205				
	•2N997	4301	2N1305	9205				
	•2N1302	9205	2N1307	9205				
	•2N1304	9205	2N1309	9205				
	•2N1306	9205	2N2000	9307				
	•2N1308	9205	2N2605	2119				
	•2N2484	1349	•2N2905	2131				
	2N3704	1433	•2N2907	2131				
	2N3705	1433	2N3702	2225				
	2N3706	1433	2N3703	2225				
	2N3707	1435	•2N4058-62	2301				
	2N3708	1435	•2N5447	2305				
	2N3709	1435	2N5448	2305				
	2N3710	1435						
	2N3711	1435						
	•2N5449	1701						
	•2N5450	1701						
	•2N5451	1701						
1 MHz to 10 MHz	•A3T2484	1269	•TIS37	2001	TIS58	6091	2N2386	6301
	2N697	1201	2N404	9105	TIS59	6091	•2N2498	6303
	2N930	1263	2N1303	9205	•2N3819	6401	•2N3330	6305
	2N1302	9205	2N1305	9205	•2N3822	6405	•2N3820	6403
	2N1304	9205	2N1307	9205	•2N3823	6407	2N3909	6413
	2N1306	9205	2N1309	9205	•2N4416	6503		
	2N1308	9205	2N1377	9213	•2N5245	6703		
	2N1613	1201	2N1997	9301	•2N5246	6703		
	•2N2484	1349	2N2605	2119	•2N5247	6703		
	2N3704	1433	•2N2905	2131	•2N5248	6711		
	2N3705	1433	2N3702	2225				
	2N3706	1433	2N3703	2225				
	2N4994	1503	2N5447	2305				
	•2N4995	1503	2N5448	2305				
	•2N4996	1511						
	•2N4997	1511						
	2N5449	1701						
	2N5450	1701						
	2N5451	1701						
10 MHz to 50 MHz	TIS63	1025	•TIS37	2001	TIS58	6091	•2N2498	6303
	•TIS84	1033	•2N5043	14401	TIS59	6091	•2N3330	6305
	•TIS86	1041			•2N3819	6401		
	•TIS87	1041			•2N3822	6405		
	•TIS108	1033			•2N3823	6407		
	2N918	3201			•2N4416	6503		
	•2N2219	1305			•2N5245	6703		
	•2N2222	1305			•2N5246	6703		
	•2N2243A	1301			•2N5247	6703		
	2N4252	1445			•2N5248	6711		
	•2N4996	1511						
	•2N4997	1511						
50 MHz to 100 MHz	•TIS63	1025	•2N2905	2131	•2N3823	6407	•2N2498	6303
	•TIS86	1041	•2N2907	2131	•2N4416	6503	•2N3330	6305
	•TIS87	1041	•2N5043	14401	•2N5245	6703		
	•TIS108	1033			•2N5246	6703		
	2N918	3201			•2N5247	6703		
	•2N2219	1305						
	•2N2222	1305						
	2N4252	1445						
	•2N4875	3701						
	•2N4996	1511						
	•2N4997	1511						

- Devices especially recommended for new design
- * Preferred Semiconductors and Components Catalog

C

**APPLICATIONS GUIDE TO
PREFERRED SEMICONDUCTORS AND COMPONENTS (Cont'd.)**

APPLICATION	DEVICE RECOMMENDATION			
	BIPOLAR		FET	
	N-P-N	P-N-P	N-CHANNEL	P-CHANNEL
	Type No. Page No.*	Type No. Page No.*	Type No. Page No.*	Type No. Page No.*
100 MHz to 5 GHz	•TIS84 1033 2N918 3201 •2N3570 3401 2N4252 1445 •2N4875 3701	•2N5043 14401	•2N3823 6407 •2N4416 6503 •2N5245 6703 •2N5246 6703 •2N5247 6703	
Low-Noise Amplifier: 0 to 10 MHz	•A3T2484 1269 •TIS97 1053 2N930 1263 •2N2484 1349 2N3707 1435	•TIS37 2001 2N2605 2119 •2N4058-62 2301	•2N3822 6405 •2N4416 6503 •2N5248 6711	•2N2498 6303 •2N3330 6305
10 MHz to 50 MHz	•A3T918 3203 •TIS62 1025 •TIS86 1041 2N918 3201 •2N4252 1445 •2N4875 3701 •2N4997 1511	•TIS37 2001	•2N3822 6405 •2N3823 6407 •2N4416 6503 •2N5245 6703 •2N5246 6703 •2N5247 6703 •2N5248 6711	
50 MHz to 100 MHz	•A3T918 3203 •TIS62 1025 •TIS86 1041 2N918 3201 •2N3570 3401 2N4252 1445 •2N4875 3701 •2N4997 1511	•2N5043 14401	•2N3823 6407 •2N4416 6503 •2N5245 6703 •2N5246 6703 •2N5247 6703 •2N5248 6711	
100 MHz to 1 GHz	•A3T918 3203 •TIS86 1041 2N918 3201 •2N3570 3401 •2N4875 3701	•2N5043 14401	•2N3823 6407 •2N4416 6503 •2N5245 6703 •2N5246 6703 •2N5247 6703	
Mixer and Converter: 0 to 10 MHz	2N918 3201 •2N4995 1503	•TIS37 2001	TIS58 6091 TIS59 6091 •2N3823 6407 •2N4416 6503	•2N2498 6303 •2N3330 6305
10 MHz to 50 MHz	•TIS63 1025 •TIS86 1041 2N4252 1445 •2N4875 3701 •2N4994 1503 •2N4995 1503	•TIS37 2001	TIS58 6091 TIS59 6091 •2N3823 6407 •2N4416 6503 •2N5245 6703 •2N5246 6703 •2N5247 6703 •2N5248 6711	•2N3820 6403
50 MHz to 100 MHz	•TIS63 1025 •TIS86 1041 •2N3570 3401 2N4252 1445 •2N4875 3701 •2N4997 1511	•2N5043 14401	•2N3823 6407 •2N4416 6503 •2N5245 6703 •2N5246 6703 •2N5247 6703 •2N5248 6711	
100 MHz to 5 GHz	•A3T918 3203 •TIS86 1041 2N918 3201 •2N3570 3401 2N4252 1445 •2N4875 3701 •2N4997 1511	•2N5043 14401	•2N3823 6407 •2N4416 6503 •2N5246 6703 •2N5247 6703 •2N5248 6711	
Oscillator: 0 to 10 MHz	•TIS98 1053 2N697 1201 2N1613 1201 •2N2484 1349 2N3704 1433 2N3711 1435 •2N5449 1701	•TIS38 2001 •2N2905 2131 2N3702 2225 •2N5447 2305	•2N3819 6401 •2N3822 6405 •2N3823 6407 •2N4416 6503 •2N5248 6711	•2N2498 6303 •2N3330 6305

- Devices especially recommended for new design
- Preferred Semiconductors and Components Catalog

**APPLICATIONS GUIDE TO
PREFERRED SEMICONDUCTORS AND COMPONENTS (Cont'd.)**

APPLICATION	DEVICE RECOMMENDATION			
	BIPOLAR		FET	
	N-P-N	P-N-P	N-CHANNEL	P-CHANNEL
	Type No. Page No.*	Type No. Page No.*	Type No. Page No.*	
10 MHz to 50 MHz	<ul style="list-style-type: none"> ●A3T918 3203 ●TIS63 1025 ●TIS98 1053 2N918 3201 ●2N2219 1305 ●2N2222 1305 2N3704 1433 ●2N4875 3701 ●2N4994 1503 ●2N5449 1701 	<ul style="list-style-type: none"> ●TIS38 2001 ●2N2905 2131 ●2N2907 2131 ●2N5447 2305 	<ul style="list-style-type: none"> ●2N3822 6405 ●2N3823 6407 ●2N4416 6503 ●2N5245 6703 ●2N5246 6703 ●2N5247 6703 ●2N5248 6711 	
50 MHz to 100 MHz	<ul style="list-style-type: none"> ●A3T918 3203 ●TIS63 1025 ●TIS86 1041 2N918 3201 2N3704 1433 ●2N4875 3701 ●2N5449 1701 	<ul style="list-style-type: none"> 2N3702 2225 ●2N5043 14401 ●2N5447 2305 	<ul style="list-style-type: none"> ●2N3823 6407 ●2N4416 6503 ●2N5245 6703 ●2N5246 6703 ●2N5247 6703 ●2N5248 6711 	
100 MHz to 5 GHz	<ul style="list-style-type: none"> ●A3T918 3203 ●TIS63 1025 ●TIS86 1041 2N918 3201 ●2N3570 3401 ●2N4875 3701 ●2N4997 1511 	<ul style="list-style-type: none"> ●2N5043 14401 	<ul style="list-style-type: none"> ●2N3823 6407 ●2N4416 6503 ●2N5245 6703 ●2N5246 6703 ●2N5247 6703 	
Power Oscillator:	<ul style="list-style-type: none"> ●2N3866 3501 			
Power Amplifier: Radio Frequency	<ul style="list-style-type: none"> ●2N3866 3501 ●2N4875 3701 			
Audio Frequency	<ul style="list-style-type: none"> ●TIP29 16101 ●TIP29A,B,C16101 ●TIP31 16109 ●TIP31A,B,C16109 ●TIP33 16117 ●TIP33A,B,C16117 ●TIP35 16125 ●TIP35A,B,C16125 2N697 1201 2N1613 1201 ●2N5301 16687 ●2N5302 16687 ●2N5303 16687 	<ul style="list-style-type: none"> ●TIP30 16105 ●TIP30A,B,C16105 ●TIP32 16113 ●TIP32A,B,C16113 ●TIP34 16121 ●TIP34A,B,C16121 ●TIP36 16129 ●TIP36A,B,C16129 2N456A 17101 2N1038 17201 ●2N2905 2131 ●2N2907 2131 T13027 17301 ●2N3789 16557 ●2N3790 16557 ●2N3791 16557 ●2N3792 16557 ●2N3846 16579 ●2N4398 16645 	<ul style="list-style-type: none"> ●2N4857 6511 	
	BIPOLAR		OTHER DEVICES	
	N-P-N	P-N-P		
	Type No. Page No.*	Type No. Page No.*	Type No. Page No.*	Classification
Switching: Multivibrator, Pulse Generator, Schmitt Trigger	<ul style="list-style-type: none"> ●A3T2221 1313 ●A3T2221A 1317 ●A3T2222 1313 ●A3T2222A 1317 ●A3T3011 1405 2N1302 9205 2N1304 9205 2N1306 9205 2N1308 9205 ●2N2219 1305 ●2N2222 1305 ●2N2369A 1327 	<ul style="list-style-type: none"> ●A3T2894 2127 ●A3T2906 2135 ●A3T2906A 2135 ●A3T2907 2135 ●A3T2907A 2135 2N404 9105 2N1303 9205 2N1305 9205 2N1307 9205 2N1309 9205 2N1997 9301 2N2000 9307 	<ul style="list-style-type: none"> ●2N3980 7201 ●2N4416 6503 ●2N4857 6511 	<ul style="list-style-type: none"> UJT N-FET N-FET

- Devices especially recommended for new design
- Preferred Semiconductors and Components Catalog.

C

**APPLICATIONS GUIDE TO
PREFERRED SEMICONDUCTORS AND COMPONENTS (Cont'd.)**

APPLICATION	DEVICE RECOMMENDATION			
	BIPOLAR		OTHER DEVICES	
	N-P-N	P-N-P	Type No. Page No.	Classification
	Type No. Page No.*	Type No. Page No.*		
	•2N3013 1409	2N2635 12301		
	•2N3725 1437	•2N2894 2125		
		•2N2905 2131		
		•2N2907 2131		
		•2N3829 2235		
Ring Counter/ Latching Amplifier	2N930 1263	•2N2894 2125	•2N3001-4 24401	SCR
	•2N2369A 1327	•2N2905 2131	•2N3555-8 24417	SCR
	•2N3013 1409	•2N3250 2209	•2N4416 6503	N-FET
	2N3704 1433	2N3702 2225	•2N4857 6511	N-FET
	•2N5449 1701	•2N3829 2235	•TIS73 6103	N-FET
		•2N4058-62 2301	TIS74 6103	N-FET
		•2N5447 2305	TIS75 6103	N-FET
Relaxation Oscillator			•TI42A 24105	Trigger Diode
			•TI43A 24105	Trigger Diode
			2N1671B 7109	UJT
			•2N3980 7201	UJT
Pulse Amplifier	•2N2243A 1301	2N1907 17231	•2N4857 6511	N-FET
	•2N2369A 1327	•2N2894 2125		
		•2N2905 2131		
		•2N3829 2235		
		•2N5333 16701		
		•2N5384 16707		
		•2N5386 16711		
Chopper	•TIP29 16101	•TIP30 16105	2N3993A 6501	P-FET
	•TIP29A,B,C16101	•TIP30A,B,C16105	•2N4857 6511	N-FET
	•TIP31 16109	•TIP32 16113		
	•TIP31A,B,C16109	•TIP32A,B,C16113		
	•TIP33 16117	•TIP34 16121		
	•TIP33A,B,C16117	•TIP34A,B,C16121		
	•TIP35 16125	•TIP36 16129		
	•TIP35A,B,C16125	•TIP36A,B,C16129		
	•2N2432 1337	•2N2945 2139		
	•2N5301 16687	•2N3789 16557		
	•2N5302 16687	•2N3790 16557		
	•2N5303 16687	•2N3791 16557		
	•3N79 4101	•2N3792 16557		
		•2N4398 16645		
		•2N4399 16645		
		•3N111 4109		
Computer Memory Driver	•2N3013 1409		•TIS73 6103	N-FET
	•2N3015 1413		TIS74 6103	N-FET
	•2N3725 1437		TIS75 6103	N-FET
			•2N4857 6511	N-FET
Power Control/ Regulator (See Selection Guide on pages 11-14)	•TIP29 16101	•TIP30 16105	•TIC44-7 24109	SCR
	•TIP29A,B,C16101	•TIP30A,B,C16105	•2N3001-4 24401	SCR
	•TIP31 16109	•TIP32 16113	•2N3005-8 24407	SCR
	•TIP31A,B,C16109	•TIP32A,B,C16113	•2N3555-8 24417	SCR
	•TIP33 16117	•TIP34 16121	•2N3559-62 24425	SCR
	•TIP33A,B,C16117	•TIP34A,B,C16121		
	•TIP35 16125	•TIP36 16129		
	•TIP35A,B,C16125	•TIP36A,B,C16129		
	2N1724 16301	2N456A 17101		
	•2N2987-94 16401	2N1539 17223		
	•2N3418-21 16501	2N1907 17231		
	•2N3551,2 16507	T13027 17301		
	•2N3713-16 16511	•2N3789 16557		
	•2N3996-9 16601	•2N3790 16557		
	•2N4000,1 16607	•2N3791 16557		
	•2N4002,3 16613	•2N3792 16557		
	•2N4300 16625	•2N4398 16645		
	•2N4301 16631	•2N4399 16645		
	•2N5301 16687	•2N5333 16701		

- Devices especially recommended for new design
- Preferred Semiconductors and Components Catalog

**APPLICATIONS GUIDE TO
PREFERRED SEMICONDUCTORS AND COMPONENTS (Cont'd.)**

APPLICATION	DEVICE RECOMMENDATION						
	BIPOLAR				OTHER DEVICES		
	N-P-N		P-N-P		Type No.	Page No.*	Classification
Type No.	Page No.*	Type No.	Page No.*	Type No.	Page No.*		
Computer Logic Switch	•2N5302	16687	•2N5384	16707			
	•2N5303	16687	•2N5385	16707			
	•2N5387,8	16715	•2N5386	16711			
	2N797	12101	2N404	9105	•TIS73	6103	N-FET
	2N1302	9205	2N964	12105	TIS74	6103	N-FET
	2N1304	9205	2N1303	9205	TIS75	6103	N-FET
	2N1306	9205	2N1305	9205	•2N4857	6511	N-FET
	2N1308	9205	2N1307	9205			
	•2N2369A	1327	2N1309	9205			
	•2N3013	1409	2N1997	9301			
			2N2635	12301			
			•2N2894	2125			
			•2N3250	2209			
			•2N3829	2235			
	Series Shunt Regulator	•TIP29	16101	•TIP30	16105	•2N4857	6511
•TIP29A,B,C		16101	•TIP30A,B,C	16105			
•TIP31		16109	•TIP32	16113			
•TIP31A,B,C		16109	•TIP32A,B,C	16113			
•TIP33		16117	•TIP34	16121			
•TIP33A,B,C		16117	•TIP36	16125			
•TIP35		16125	•TIP36A,B,C	16129			
•TIP35A,B,C		16125	2N456A	17101			
2N1724		16301	2N1038	17201			
•2N2987-94		16401	2N1539	17223			
•2N3418-21		16501	2N1907	17231			
•2N3551,2		16507	T13027	17301			
•2N3713-16		16511	•2N5333	16701			
•2N3996-9		16601	•2N5384	16707			
•2N4000,1		16607	•2N5385	16707			
•2N4002,3		16613	•2N5386	16711			
•2N4300		16625					
•2N4301		16631					
•2N5387,8	16715						
Lamp Driver (Nixie Driver) High Voltage	•TIS100	1061	2N398	9101	•2N4857	6511	N-FET
	•TIS101	1061					
	•2N2243A	1301					
Linear Application: Demodulator	•3N79	4101	2N1907	17231	•2N4857	6511	N-FET
	•2N2432	1337					
Differential Amplifier	•2N2060	4401	•2N3350	4507	•2N5045	6601	N-FET
	•2N2642	4405					
	•2N3680	4509					
	•2N3838	4517					
	•2N2920	4409					
	•2N2977	4409					
	•2N2979	4409					
Operational Amplifier	•2N2060	4401	•2N3350	4507	•2N4854	4701	NPN-PNP
	•2N2223	4401			•2N5045	6601	N-FET
	•2N2642	4405					
	•2N3680	4509					
Servo Amplifier	•2N2060	4401	2N1038	17201	•2N5045	6601	N-FET
	•2N2223	4401	2N1907	17231			
	•2N2642	4405	•2N3350	4507			
	•2N3680	4509					
Sense Amplifier/Comparator	•2N2060	4401	•2N3350	4507	•2N4416	6503	N-FET
	•2N2642	4405			•2N5045	6601	N-FET
	•2N3680	4509					
	•2N3838	4517					
	•2N2920	4409					
	•2N2977	4409					
	•2N2979	4409					
Waveform Generator/Clipper/Compressor	2N930	1263	2N3702	2225	•2N4416	6503	N-FET
	2N3707	1435	•2N5447	2305	•2N4857	6511	N-FET

- Devices especially recommended for new design
- Preferred Semiconductors and Components Catalog

C

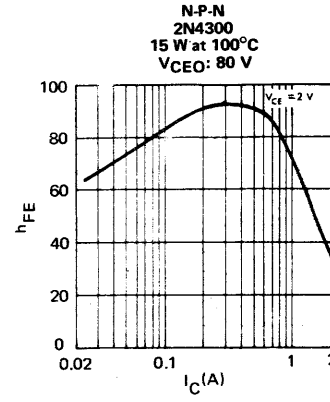
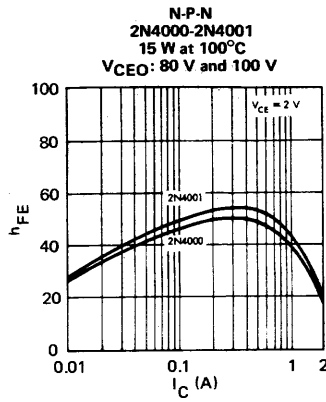
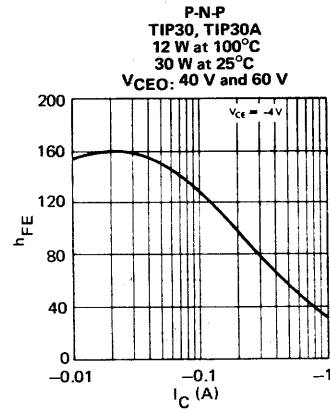
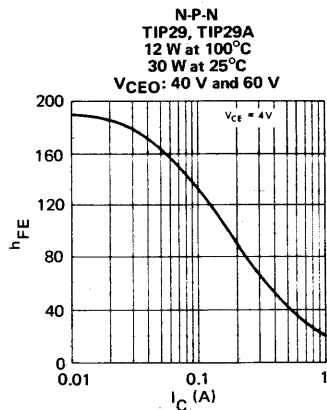
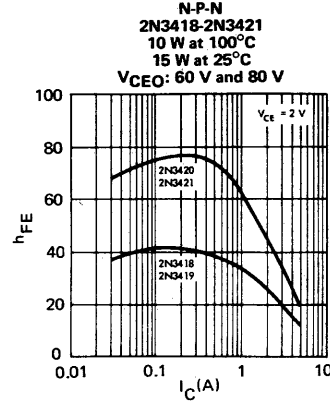
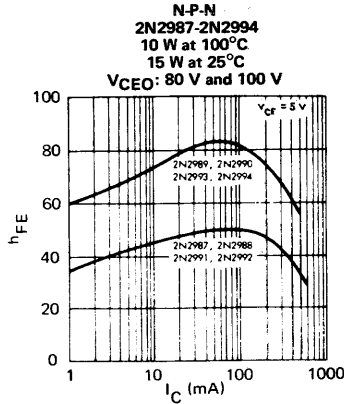
**APPLICATIONS GUIDE TO
PREFERRED SEMICONDUCTORS AND COMPONENTS (Cont'd.)**

APPLICATION	DEVICE RECOMMENDATION				
	BIPOLAR		OTHER DEVICES		
	N-P-N	P-N-P	Type No.	Page No.*	Classification
	Type No. Page No.*	Type No. Page No.*	Type No.	Page No.*	
	2N3704 1433		•2N5245	6703	N-FET
	2N3708 1435		•2N5246	6703	N-FET
	2N3709 1435		•2N5247	6703	N-FET
	2N3711 1435		•2N5248	6711	N-FET
	•2N5449 1701		•2N492A	7101	UJT
Diode: Mixer/Converter			1N456-9	18101	
			1N482-5	18109	
			1N914	19201	
Detector			1N456-8	18101	
			•1N459	18101	
			1N914	19201	
			•1N4148	19401	
			•1N4448	19401	
Switch			•1N251	19101	
			•1N661	19151	
			1N914	19201	
			•1N3070	19303	200 V
			•1N4148	19401	
			•1N4448	19401	
			•1N4154	19403	
Tuning			•T1V306-8	21205	Voltage Variable
Voltage Regulator			1N746-		
			1N759	23109	
			•1N746A-		
			1N759A	23109	
			1N4370	23601	
			•1N4370A	23601	
Rectifier			1N456-9	18101	
			1N482-5	18109	
			•1N645-9	18113	
			•1N4001-7	25401	
Computer			•T1D21-24	20005	8-Diode Array
			•T1D25-26	20009	16-Diode Array
			•T1D29-30	20013	20-Diode Array
			1N914	19201	
Transistor Biasing			•1N746A-		
			1N759A	23109	
TV "Color Killer"			•1N3070	19303	
Power Supply			•1N645-9	18113	
Logarithmic			•1N645-9	18113	
			•1N746A-		
			1N759A	23109	
Light Sensor			•LS400	27401	
			•LS600	27501	
			•T1L601	27503	
			•T1L602	27503	
			•T1L603	27503	
			•T1L604	27503	
			•T1L605	27503	
			•T1L606	27503	
			•T1L607	27503	
			•T1L608	27503	
			•1N2175	27801	
Infrared Source			•T1L01	27001	
			•T1L09	27009	

- Devices especially recommended for new design
- Preferred Semiconductors and Components Catalog

SELECTION GUIDE SILICON POWER TRANSISTORS

The following curves, arranged in ascending order of rated power dissipation at 100°C case temperature, show typical h_{FE} versus collector current at 25°C case temperature. Listed above each curve are the standard open-base collector-emitter voltage ratings available from among the device types listed.



C

SELECTION GUIDE SILICON POWER TRANSISTORS

C

P-N-P
2N5333
15 W at 100°C
V_{CE0}: 80 V

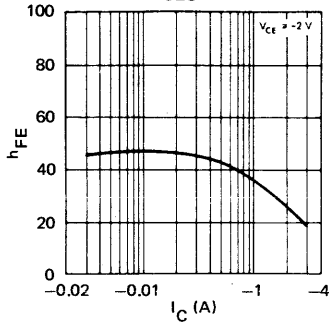


FIGURE 7

N-P-N
TIP31, TIP31A
16 W at 100°C
40 W at 25°C
V_{CE0}: 40 V and 60 V

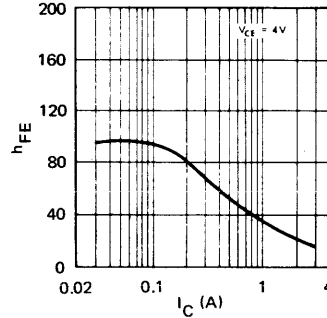


FIGURE 8

P-N-P
TIP32, TIP32A
16 W at 100°C
40 W at 25°C
V_{CE0}: 40 V and 60 V

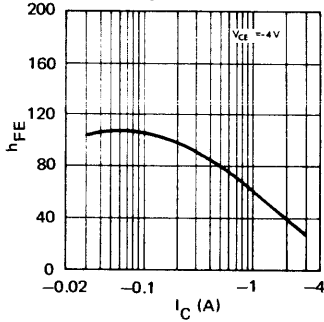


FIGURE 9

N-P-N
2N3996-2N3999
30 W at 100°C
V_{CE0}: 80 V

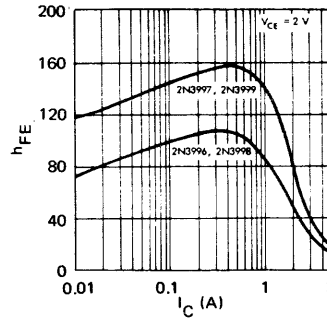


FIGURE 10

N-P-N
TIP33, TIP33A
32 W at 100°C
80 W at 25°C
V_{CE0}: 40 V and 60 V

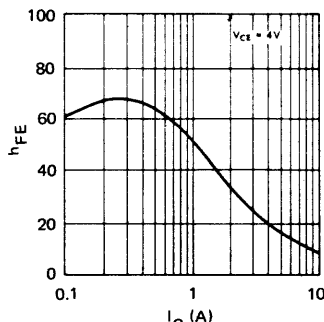


FIGURE 11

P-N-P
TIP34, TIP34A
32 W at 100°C
80 W at 25°C
V_{CE0}: 40 V and 60 V

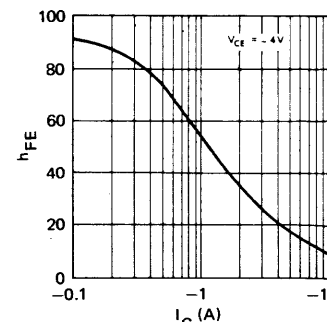


FIGURE 12

SELECTION GUIDE SILICON POWER TRANSISTORS

C

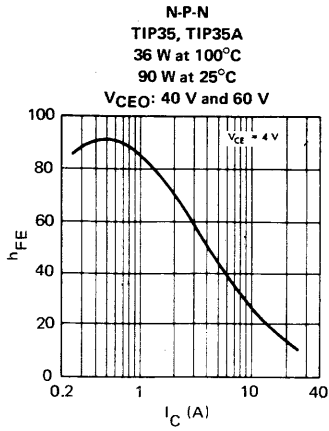


FIGURE 13

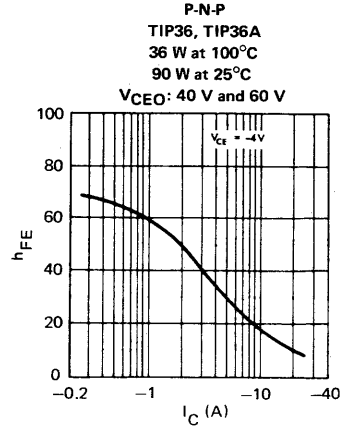


FIGURE 14

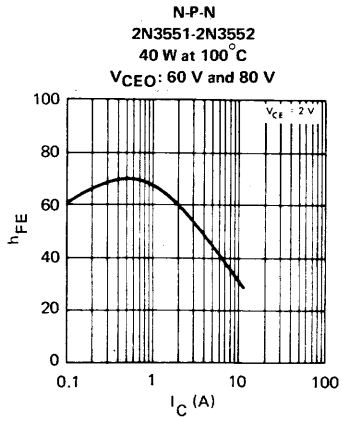


FIGURE 15

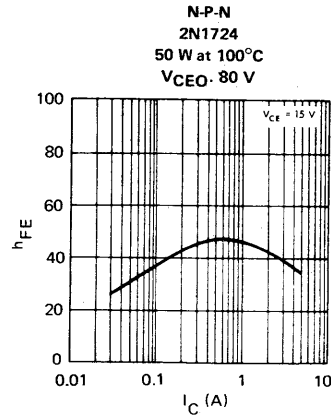


FIGURE 16

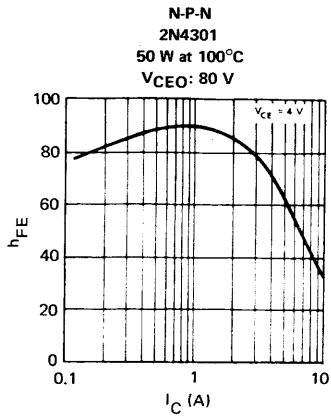


FIGURE 17

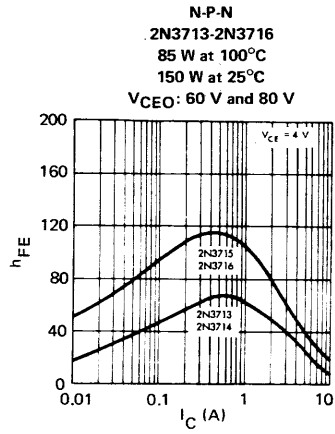


FIGURE 18

SELECTION GUIDE SILICON POWER TRANSISTORS

C

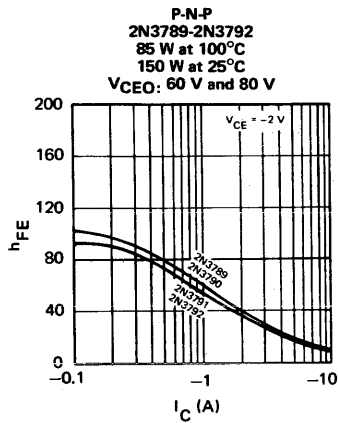


FIGURE 19

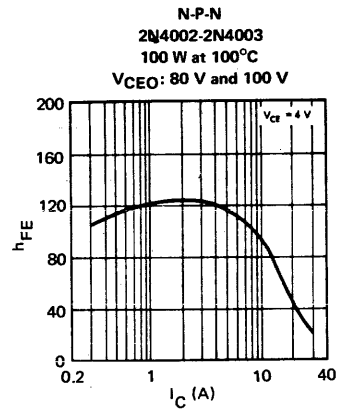


FIGURE 20

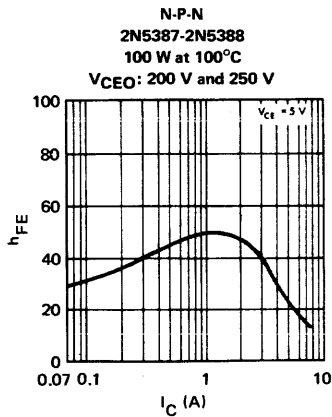


FIGURE 21

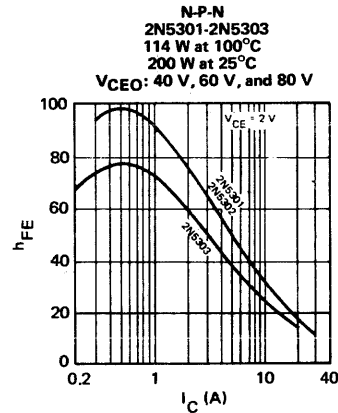


FIGURE 22

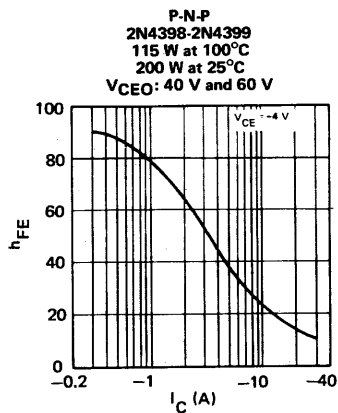


FIGURE 23

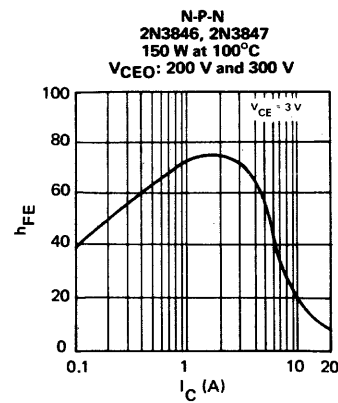


FIGURE 24