

# TYPES 1N1816 THROUGH 1N1836 DIFFUSED SILICON POWER REGULATORS



**10 WATTS • 13 to 91 VOLTS**

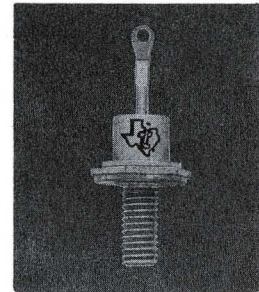
## Guaranteed Zener Impedance

Available in

- 5% and 10% tolerances
- conventional and reverse polarity
- double anode clipper

Designed to meet the most stringent military requirements.

–65 to +150°C operation

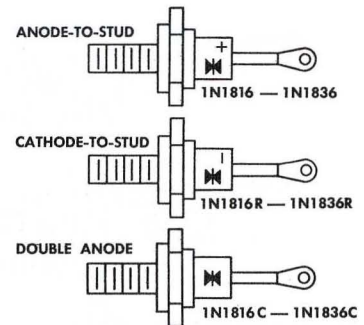
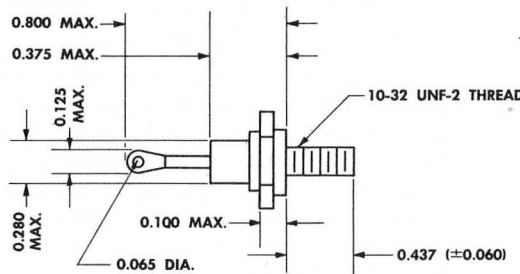


ACTUAL SIZE

TYPES 1N1816 THROUGH 1N1836  
BULLETIN NO. DL-S-1009, DECEMBER, 1958  
REPLACES BULLETIN NO. DL-S-971

### mechanical data

Welded case with glass-to-metal hermetic seal between case and anode lead. Approximate weight is 4.36 grams.



### electrical specifications

type	zener voltage $V_Z$ @ $I_Z$ volts	zener current $I_Z$ mA	zener impedance $Z_Z$ (max) @ $I_Z$ ohms	reverse current $I_{RB}$ 25°C $\mu A$		typical temperature coefficient %/°C
				@ -5V	@ -10V	
1N1816	13	500	2	25	—	0.07
1N1817	15	500	2	15	—	0.07
1N1818	16	500	3	10	—	0.07
1N1819	18	500	3	10	—	0.07
1N1820	20	250	3	—	10	0.08
1N1821	22	250	3	—	10	0.08
1N1822	24	250	3	—	10	0.08
1N1823	27	250	3	—	10	0.08
1N1824	30	250	4	—	10	0.08
1N1825	33	150	4	—	10	0.08
1N1826	36	150	5	—	10	0.09
1N1827	39	150	5	—	10	0.09
1N1828	43	150	6	—	10	0.09
1N1829	47	150	7	—	10	0.09
1N1830	51	150	8	—	10	0.10
1N1831	56	150	9	—	10	0.10
1N1832	62	50	12	—	10	0.10
1N1833	68	50	14	—	10	0.10
1N1834	75	50	20	—	10	0.11
1N1835	82	50	22	—	10	0.11
1N1836	91	50	35	—	10	0.12

LICENSED UNDER BELL SYSTEM PATENTS

SEMICONDUCTOR-COMPONENTS DIVISION

**TEXAS INSTRUMENTS**  
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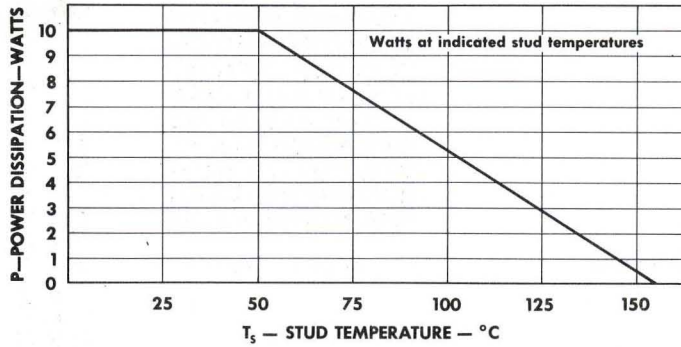
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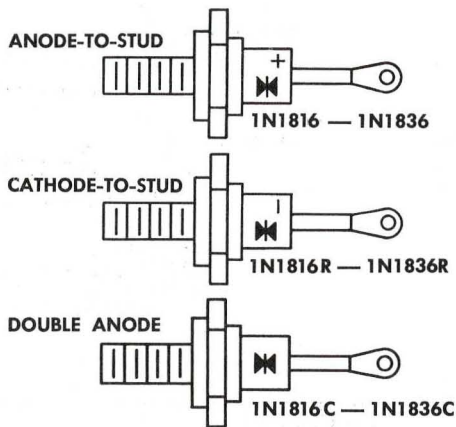
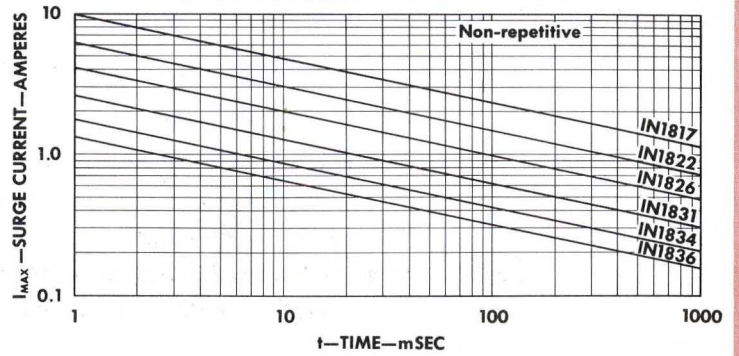
# TYPES 1N1816 THROUGH 1N1836

## TYPICAL CHARACTERISTICS

MAXIMUM ALLOWABLE DISSIPATION



MAXIMUM SURGE CURRENT VS. TIME

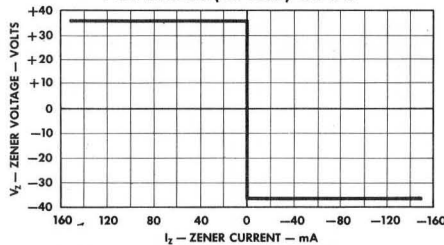


### ANODE-TO-STUD or CATHODE-TO-STUD CONFIGURATIONS

Types 1N1816 – 1N1836 exhibit polarity such that the regulated voltage taken off the solder lug is *positive* with respect to the threaded stud. For reverse polarity, specify 1N1816R – 1N1836R. The “R” series devices exhibit polarity such that the regulated voltage taken off the solder lug is *negative* with respect to the threaded stud.

Types 1N1816A – 1N1836A series have a tolerance of  $\pm 5\%$ . 1N1816 – 1N1836 have a tolerance of  $\pm 10\%$ . For cathode-to-stud configuration with  $\pm 5\%$  tolerance, specify 1N1816RA – 1N1836RA.

TYPE 1N1826C (36 VOLT) CLIPPER



### 1N1816C — 1N1836C CLIPPER

Types 1N1816C – 1N1836C are specifically designed to clip, and exhibit true double anode characteristics. Each zener is held within 10% tolerance of the specified voltage. See “Typical Clipper Characteristics” curve at left.

### DESIGN NOTES

Types 1N1816 – 1N1836 stud mounted power regulators are designed to meet or exceed the environmental requirements of MIL-T-19500A as follows:

Test	Paragraph
Solderability . . . . .	4.6.23
Temperature Cycling . . . . .	4.6.24
Moisture Resistance . . . . .	4.6.26
Drop . . . . .	4.6.27
Shock . . . . .	4.6.28

Test	Paragraph
Centrifuge . . . . .	4.6.29
Vibration Fatigue . . . . .	4.6.30
Vibration Noise . . . . .	4.6.31
Reduced Pressure . . . . .	4.6.32
Salt Spray . . . . .	4.6.35

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