

VOLTAGE CONTROLLED AMPLIFIER

DESCRIPTION

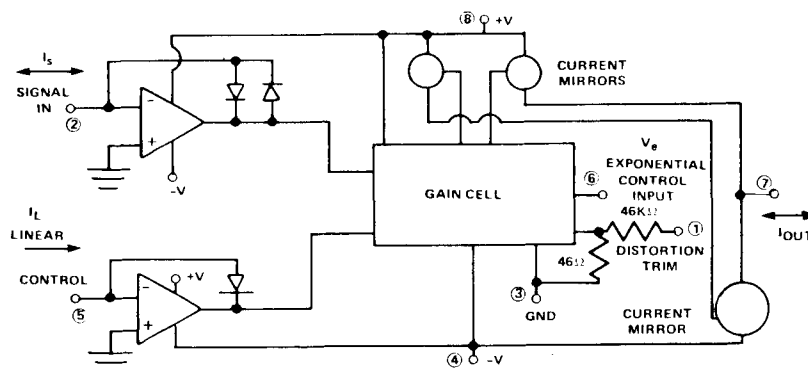
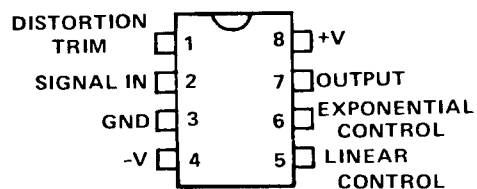
The SSM 2010 is a precision two quadrant multiplier designed for quality electronic music and P.A. systems. The device offers very low distortion and high signal/noise ratio, a minimum external parts count and a complete on-chip control circuit for simultaneous linear and exponential gain control. Other features include a wide dynamic range and ± 5 V to ± 18 V operation.

FEATURES

- Simultaneous Linear and Exponential Gain Control.
- Current Input
- Current Output
- 0.05% THD Distortion
- 0.2% IM Distortion
- 90db Signal-to-Noise
- ± 5 V to ± 18 V Operation
- Minimum External Parts Count

APPLICATIONS

- Voltage Controlled Amplifiers
- Volume Controls
- Automated Equalizers
- Limiters
- Electronic Music Systems
- P.A. Systems



PIN OUT

TOP VIEW

BLOCK DIAGRAM

SPECIFICATIONS

STORAGE TEMPERATURE

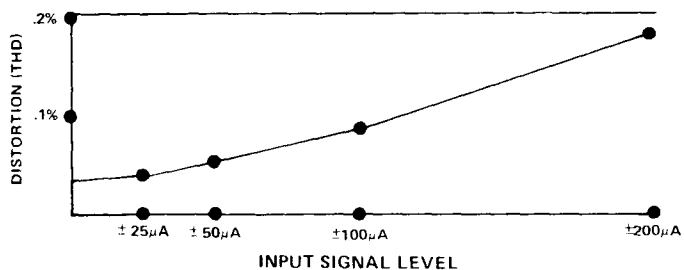
OPERATING TEMPERATURE

$V_S = \pm 15\text{ V}$, $T_A = 25^\circ\text{C}$ (unless otherwise specified).

$-55 - +125^\circ\text{C}$

$0\text{ to }75^\circ\text{C}$

PARAMETER	MIN	TYP	MAX	CONDITIONS
I_{CC}	3.0mA	5.0mA	10mA	$V_S = \pm 18\text{ V}$
Output offset	$-5\mu\text{A}$		$+5\mu\text{A}$	$I_S = 0$, $V_e = 0$ $I_L = 50\mu\text{A}$
Gain	0.75	1	1.25	$I_S = \pm 100\mu\text{A}$ $V_e = 0$, $I_L = 50\mu\text{A}$
Peak Output	$\pm 200\mu\text{A pp}$	$\pm 300\mu\text{A pp}$		$I_S = \pm 300\mu\text{A}$ $V_e = 0$, $I_L = 50\mu\text{A}$
Output Leakage	-100nA		$+100\text{nA}$	$I_S = 0$, $I_L = 0$ $V_e = 0$
Expo Control Sensitivity		$-6\text{db}/18\text{mV}$		



For best results, select R_{in} to give a $\pm 50\mu\text{A}$ input signal current for the maximum average input signal level.

R_{in}	MAXIMUM INPUT SIGNAL LEVEL
50K	$\pm 2.5\text{V}$
100K	$\pm 5.0\text{V}$
200K	$\pm 10.0\text{V}$

