SSM 2010

VOLTAGE CONTROLLED AMPLIFIER

DESCRIPTION

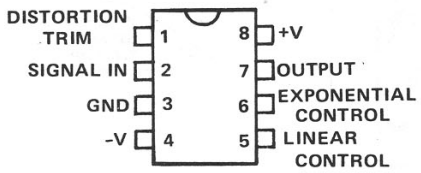
The SSM 2010 is a precision two quadrant multiplier designed for quality electronic music and P.A. systems. The device offers very low distortion and high signal/noise ratio, a minimum external parts count and a complete on-chip control circuit for simultaneous linear and exponential gain control. Other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

FEATURES

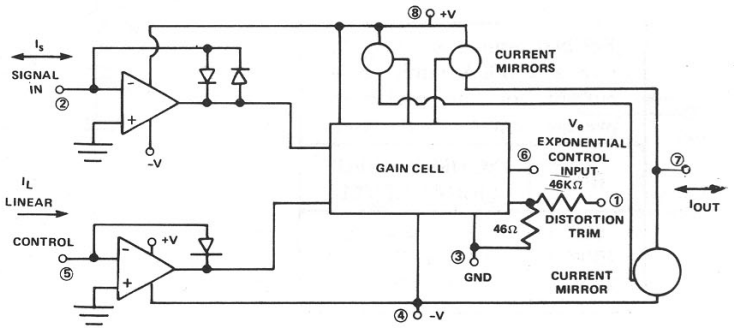
- Simultaneous Linear and Exponential Gain Control.
- Current Input
- Current Output
- 0.05% THD Distortion
- 0.2% IM Distortion
- 90db Signal-to-Noise
- ±5 V to ±18 V Operation
- Minimum External Parts Count

APPLICATIONS

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



PIN OUT TOP VIEW



BLOCK DIAGRAM

SPECIFICATIONS

V_S = ± 15 V, T_A = 25° C (unless otherwise specified).

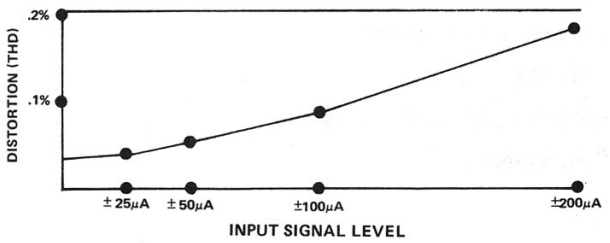
STORAGE TEMPERATURE

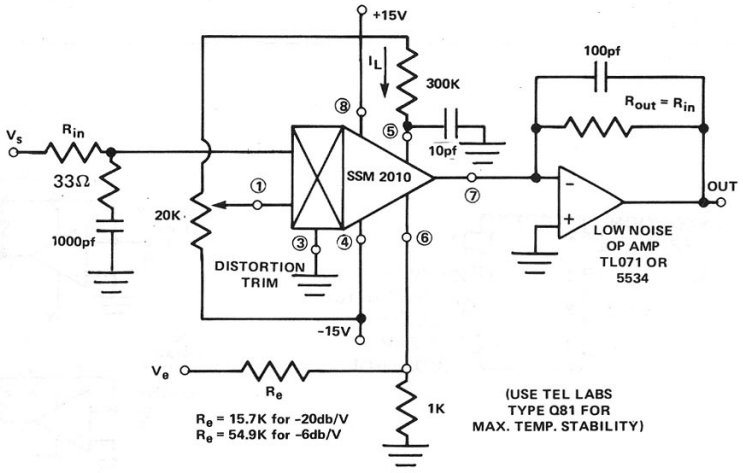
-55 - +125°C

OPERATING TEMPERATURE

0 to 75°C

PARAMETER	MIN	TYP	MAX	CONDITIONS
I_{cc}	3.0mA	5.0mA	10mA	V_S = ± 18 V
Output offset	-5μA		+5μA	I_s = 0 V_e = 0 I_L = 50μA
Gain	0.75	1	1.25	I_s = ±100μA V_e = O, I_L = 50μA
Peak Output	±200μA pp	±300μA pp		I_s = ± 300μA V_e = 0, I_L = 50μA
Output Leakage	-100nA		+100nA	I_s = 0, I_L = 0 V_e = 0
Expo Control Sensitivity		-6db/18mV		



For best results, select R_{in} to give a ± 50μA input signal current for the maximum average input signal level.

R_{in}	MAXIMUM INPUT SIGNAL LEVEL
50K	± 2.5V
100K	± 5.0V
200K	± 10.0V