Elektronische Bauelemente

SGPLM358

Dual Operational Amplifier

RoHS Compliant Product
A suffix of “-C” specifies halogen or lead -free

DESCRIPTION

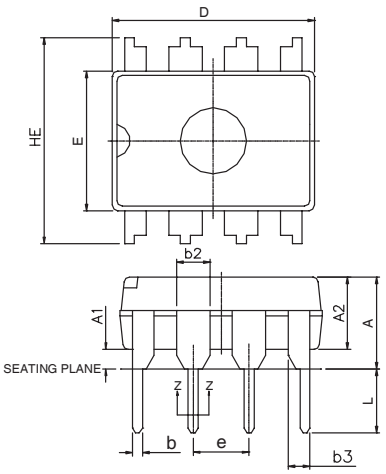
The SGPLM358 consists of two independent high gains, internally frequency compensated operational amplifier. It can be operated from a Single power supply and also split power supplies.

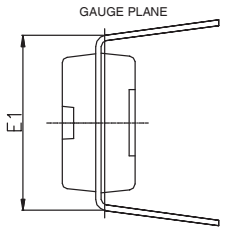
FEATURES

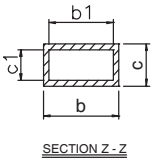
- Input Common-Mode Voltage Range Include Ground
- Large DC Voltage Gain
- Internally Frequency Compensated For Unity Gain
- Wide Power Supply Range 3V-32V

PACKAGE DIMENSIONS

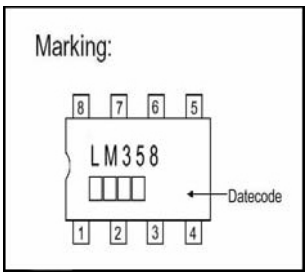
DIP-8







SECTION Z - Z

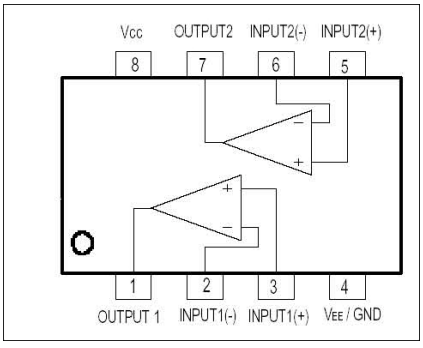


REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	-	0.5334	c1	0.203	0.279
A1	0.381	-	D	9.017	10.16
A2	2.921	4.953	E	6.096	7.112
b	0.356	0.559	E1	7.620	8.255
b1	0.356	0.508	e	2.540 BSC	
b2	1.143	1.778	HE	-	10.92
b3	0.762	1.143	L	2.921	3.810
c	0.203	0.356			

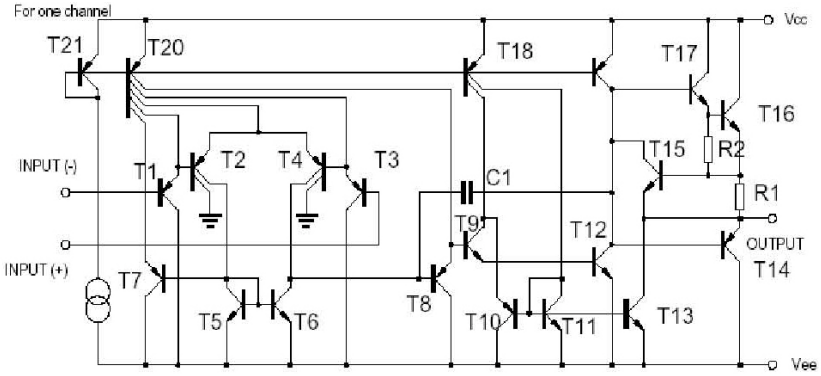
APPLICATIONS

- General Purpose Amplifier
- Transducer Amplifier

PIN CONFIGURATIONS



BLOCK DIAGRAMS



MAXIMUM RATINGS

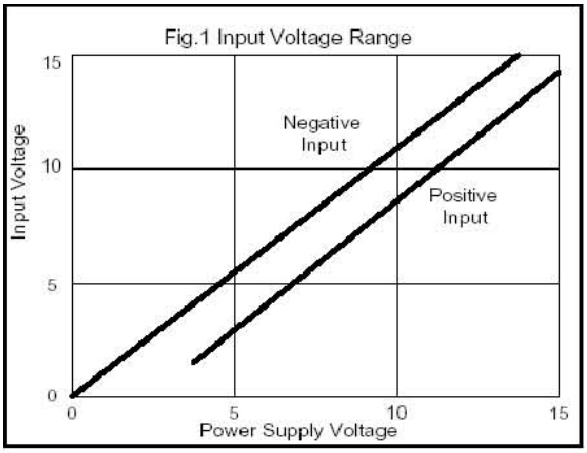
Parameter	Value	Units
Supply Voltage (Vcc)	±16 or 32	V
Differential Input Voltage ($V_{I(DIFF)}$)	±32	V
Input Voltage (V_I)	-0.3 ~+32	V
Output Short to Ground	Continuous	
Operating & Junction Temperature (T_{OPR}, T_{STG})	0~+70, -65~+150	°C

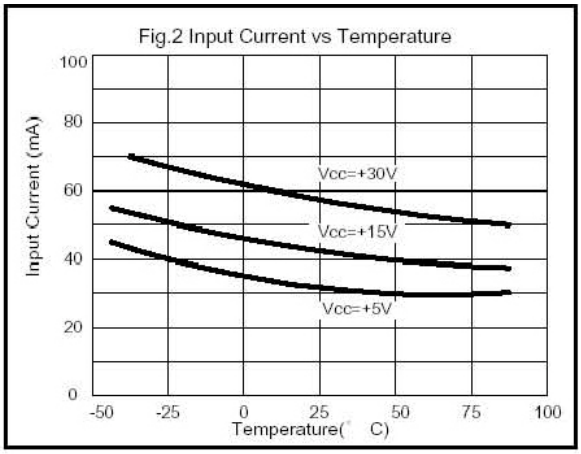
RECOMMENDED OPERATING CONDITIONS

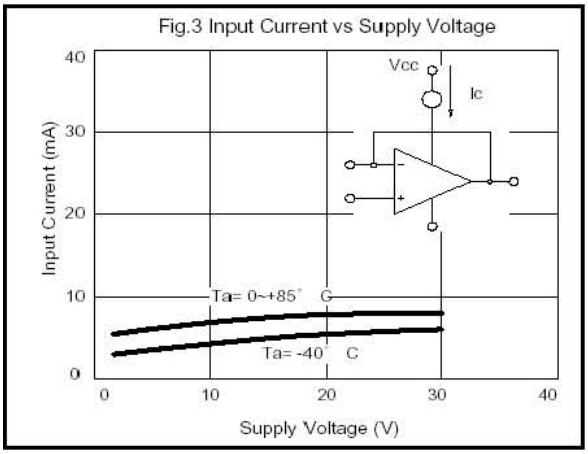
(Vcc=5.0V V_{EE}=GND,T_A=25°C,unless otherwise specified)

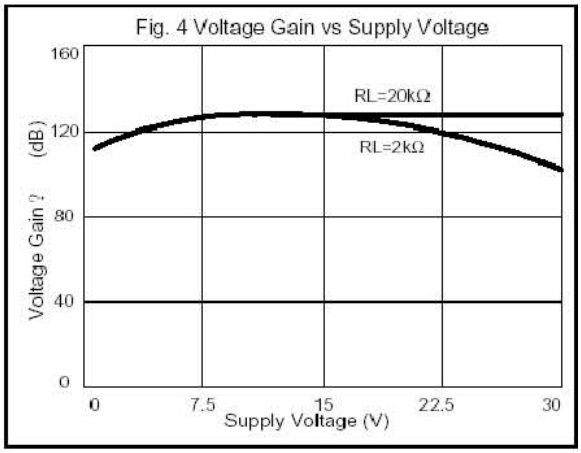
Characteristics	Symbol	Min.	Typ.	Max.	Units	Test Conditions
Input Offset Voltage	V_{IO}	-	2.9	7.0	mV	V_{CM}=0V to V_{CC}-1.5V VO(P)=1.4V, R_S=0Ω
Input Offset Current	I_{IO}	-	5	50	nA	
Input Bias Current	I_{BIAS}	-	45	250	nA	
Input Common Mode Voltage	$V_{I(R)}$	0	-	V_{CC}-1.5	V	V_{CC}=30V
Power Supply Current	I_{CC}	-	0.8	2.0	mA	R_L=∞, V_{CC}=30V
		-	0.5	1.2	mA	R_L=∞, Full Temperature
Large Signal Voltage Gain	GV	25	100	-	V/mV	V_{CC}=15V, R_L>=2KΩ, $V_{O(P)}$=1V to 11V
Output Voltage Swing	$V_{O(H)}$	26 27	- 28	- -	V	V_{CC}=30V, R_L=2KΩ V_{CC}=30V, R_L=10KΩ
	$V_{O(L)}$	-	5	20	mV	V_{CC}=5V, R_L>=10KΩ
Common Mode Rejection Ratio	CMRR	65	80	-	dB	
Power Supply Rejection Ration	PSRR	65	100	-	dB	
Channel Separation	CS	-	120	-	dB	F=1KHZ to 20KHZ
Short Circuit Current to Ground	I_{SC}	-	40	60	mA	
Output Current	I_{SOURCE}	10	30	-	mA	$V_{I(+)}$= 1V, $V_{I(-)}$=0V V_{CC}=15V, $V_{O(P)}$=2v
	I_{SINK}	10	15	-	mA	$V_{I(+)}$=0V,,$V_{I(-)}$=1V V_{CC}=15V,$V_{O(P)}$=2V
		12	100	-	μA	$V_{I(+)}$=0V, $V_{I(-)}$=1V V_{CC}=15V, $V_{O(P)}$=200mV
Differential Input Voltage	$V_{I(DIFF)}$	-	-	V_{CC}	V	

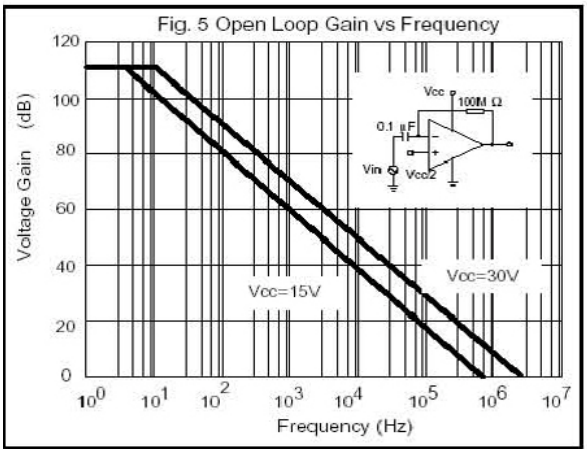
CHARACTERISTIC CURVE

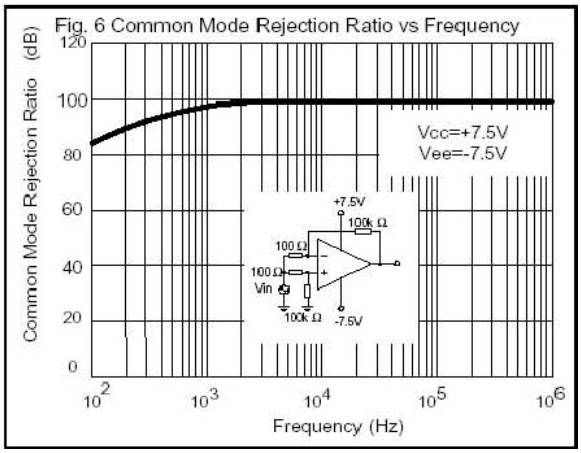












CHARACTERISTIC CURVE (cont'd)

Fig. 7 Voltage Follower Pulse Response

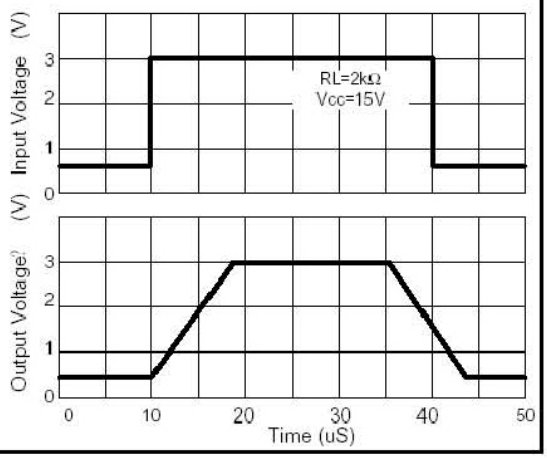


Fig. 8 Voltage Follower Response (Small Signal)

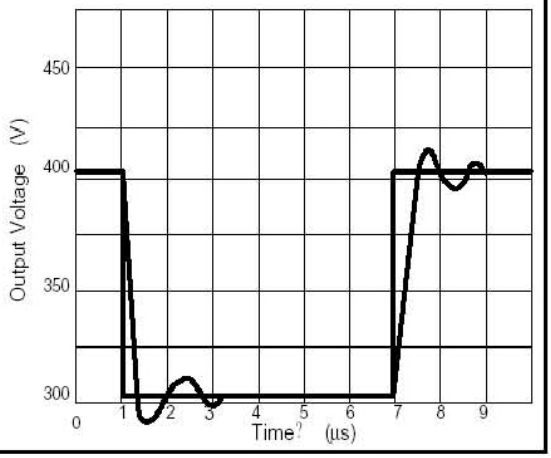


Fig. 9 Gain vs Large Signal Frequency

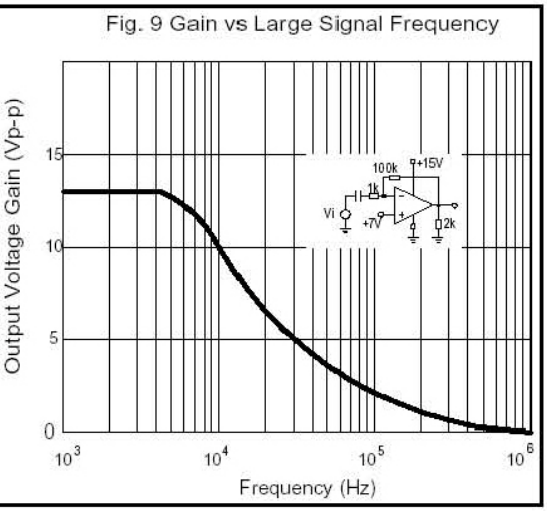


Fig. 10 Output Current Sinking vs Output Voltage

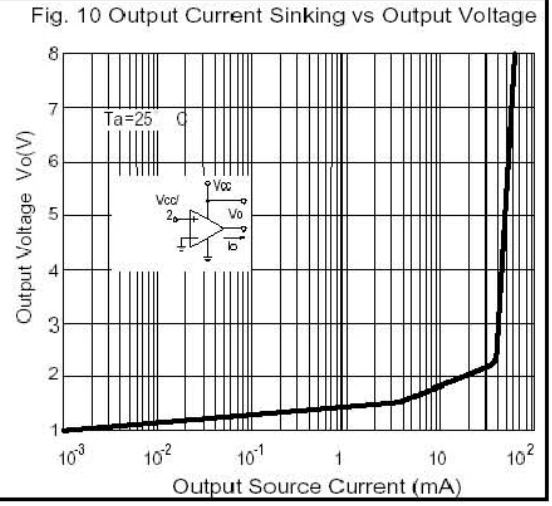


Fig. 11 Output Sink Current vs Output Voltage

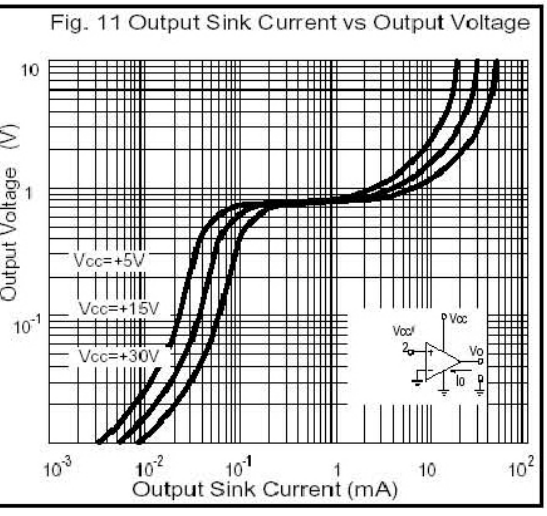


Fig.12 Current Limiting vs Temperature