

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

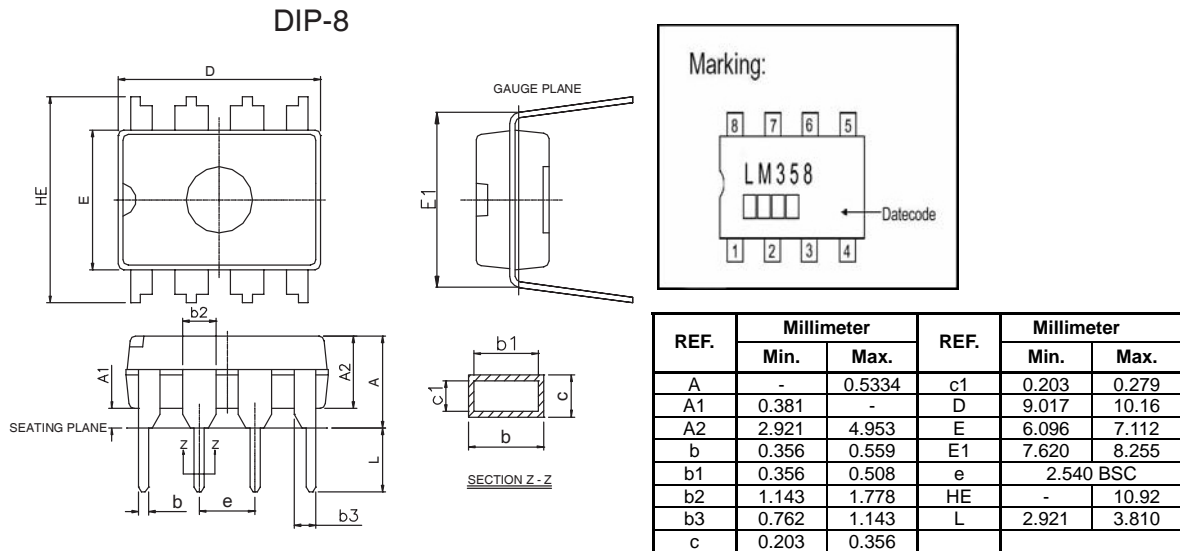
## DESCRIPTION

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

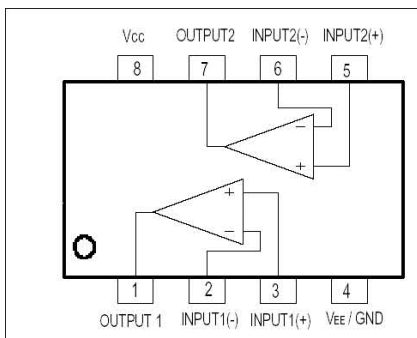
## PACKAGE DIMENSIONS



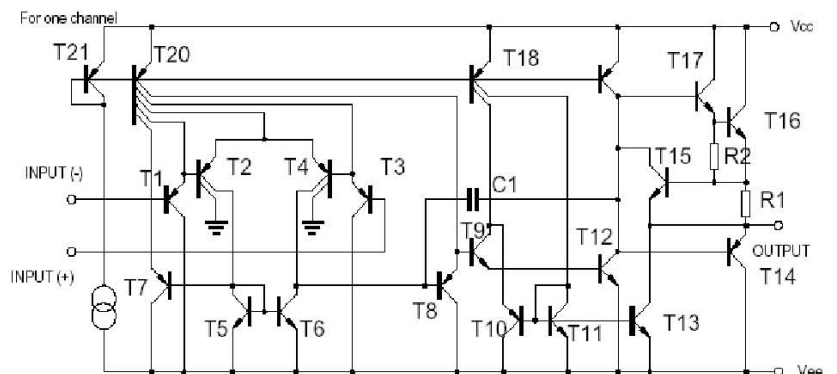
## APPLICATIONS

- General Purpose Amplifier
- Transducer Amplifier

## PIN CONFIGURATIONS



## BLOCK DIAGRAMS



## MAXIMUM RATINGS

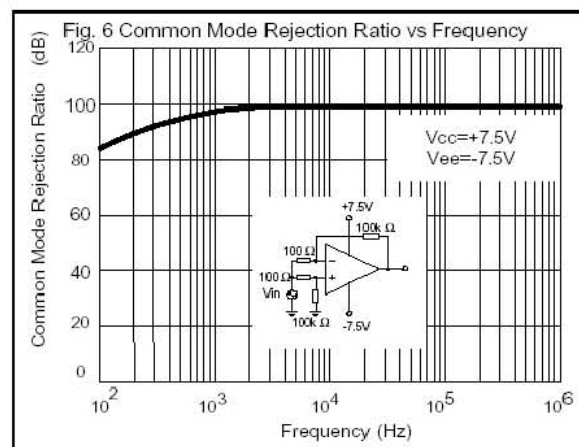
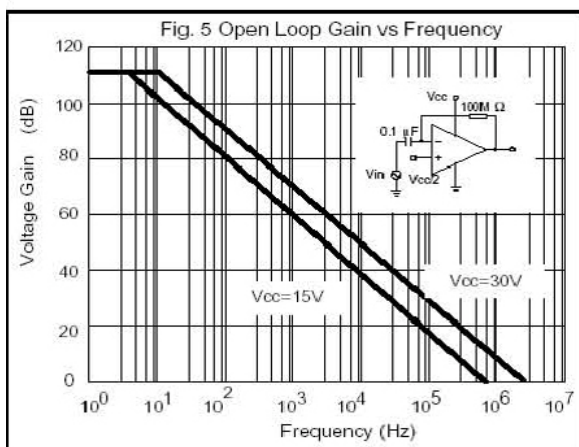
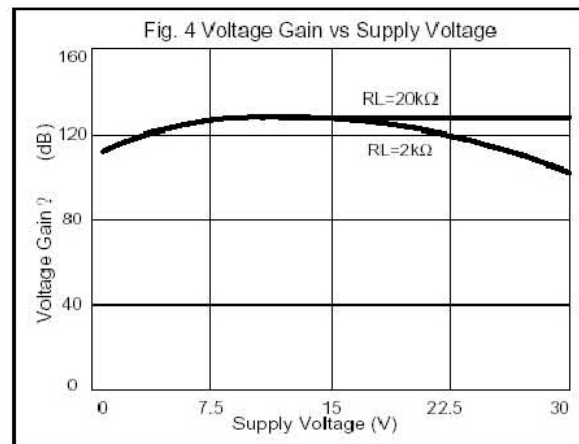
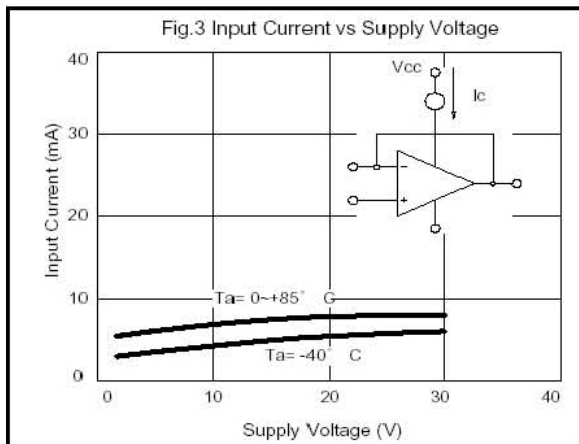
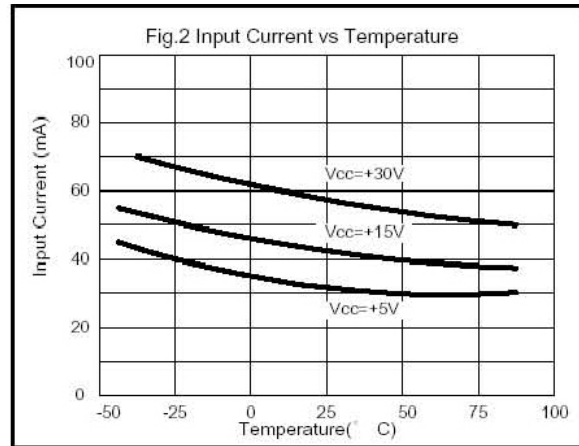
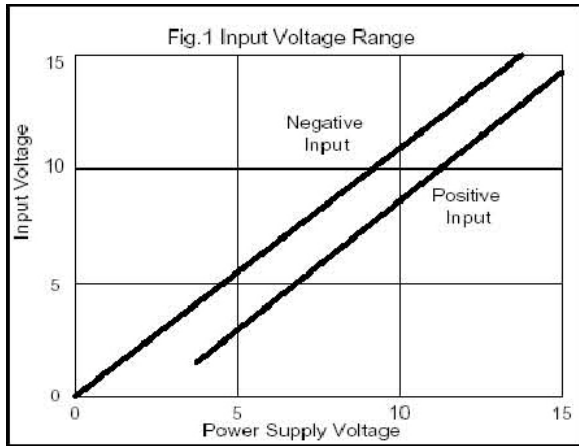
Parameter	Value	Units
Supply Voltage (V <sub>CC</sub> )	±16 or 32	V
Differential Input Voltage (V <sub>I(DIFF)</sub> )	±32	V
Input Voltage (V <sub>I</sub> )	-0.3 ~+32	V
Output Short to Ground	Continuous	
Operating & Junction Temperature (T <sub>OPR</sub> , T <sub>STG</sub> )	0~+70, -65~+150	°C

## RECOMMENDED OPERATING CONDITIONS

(V<sub>CC</sub>=5.0V V<sub>EE</sub>=GND, T<sub>A</sub>=25°C, unless otherwise specified)

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

**CHARACTERISTIC CURVE**



**CHARACTERISTIC CURVE (cont'd)**

