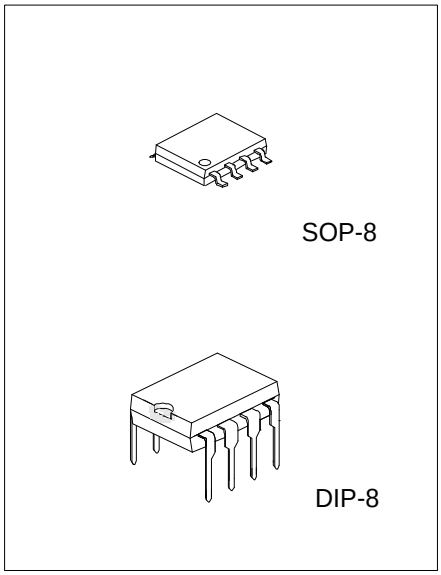
LINEAR INTEGRATED CIRCUIT

DUAL OPERATIONAL AMPLIFIER



DESCRIPTION

The LM358 consists of two independent high gain, internally frequency compensated operational amplifier. It can be operated from a single power supply and also split power supplies.

FEATURES

*Internally frequency compensated for unity gain.
*Wide power supply range 3V - 36V.
*Input common-mode voltage range include ground.
*Large DC voltage gain.

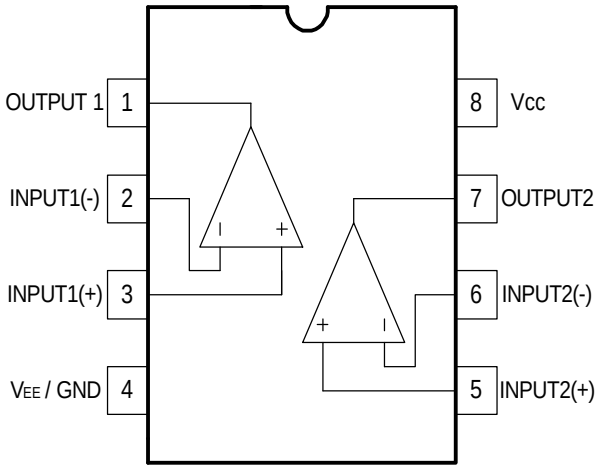
APPLICATIONS

*General purpose amplifier.
*Transducer amplifier.

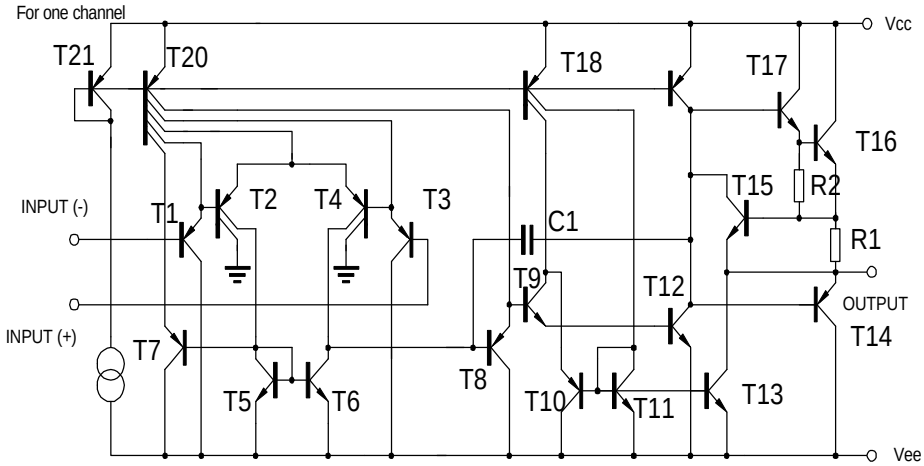
ORDERING INFORMATION

DEVICE	Package Type	MARKING	Packing	Packing Qty
LM358N	DIP8	LM358	TUBE	2000/box
LM358M/TR	SOP8	LM358	REEL	2500/reel

PIN CONFIGURATIONS



BLOCK DIAGRAM



ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	VALUE	UNIT
Supply Voltage	Vcc	±18 or 36	V
Differential Input Voltage	VI(DIFF)	32	V
Input Voltage	VI	-0.3 ~ +36	V
Output Short to Ground		Continuous	
Operating Temperature Range	TOPR	0 ~ +70	°C
Storage Temperature Range	TSTG	-65 ~ +150	°C

ELECTRICAL CHARACTERISTICS(Vcc=5.0V,VEE=GND,TA=25°C, unless otherwise specified £ ©

PARAMETER	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Input Offset Voltage	VIO	VCM=0V toVCC-1.5V VO(P)=1.4V,RS=0Ω		2.9	7.0	mV
Input Offset Current	IIO			5	50	nA
Input Bias Current	IBIAS			45	250	nA
Input Common Mode Voltage	VI(R)	VCC=30V	0		VCC-1.5	V
Power Supply Current	ICC	RL=∝,VCC=30V		0.8	2.0	mA
		RL=∝,Full Temperature Range		0.5	1.2	mA
Large Signal Voltage Gain	GV	VCC=15V,RL>=2KΩ VO(P)=1V to 11V	25	100		V/mV
Output Voltage Swing	VO(H)	VCC=30V,RL=2KΩ	26			V
		VCC=30V,RL=10KΩ	27	28		V
	VO(L)	VCC=5V,RL>=10KΩ		5	20	mV
Common Mode Rejection Ratio	CMRR		65	80		dB
Power Supply Rejection Ratio	PSRR		65	100		dB
Channel Separation	CS	f=1KHZ to 20KHZ		120		dB
Short Circuit Current to Ground	ISC			40	60	mA
Output Current	ISOURCE	VI(+)=1V,VI(-)=0V VCC=15V,VO(P)=2V	20	30		mA
	ISINK	VI(+)=0V,VI(-)=1V VCC=15V,VO(P)=2V	10	15		mA
		VI(+)=0V,VI(-)=1V VCC=15V,VO(P)=200mV	12	100		mA
Differential Input Voltage	VI(DIFF)				VCC	V

TYPICAL PERFORMANCE CHARACTERISTICS

Fig.1 Input Voltage Range

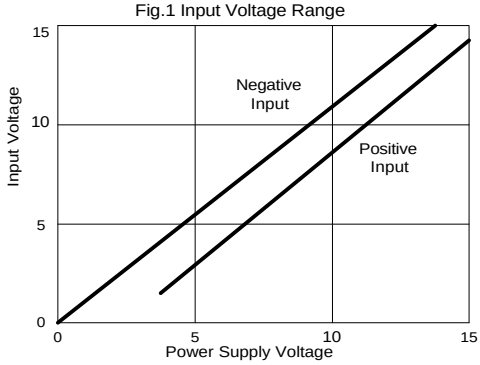


Fig.2 Input Current vs Temperature

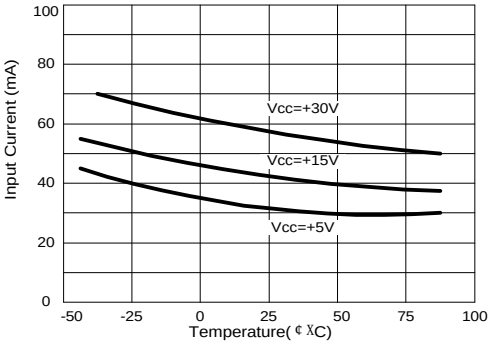


Fig.3 Input Current vs Supply Voltage

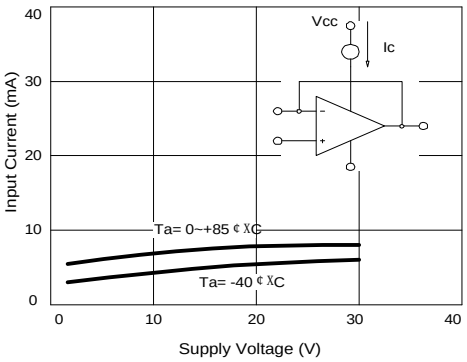


Fig. 4 Voltage Gain vs Supply Voltage

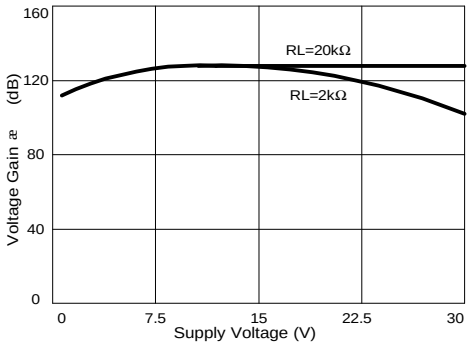


Fig. 5 Open Loop Gain vs Frequency

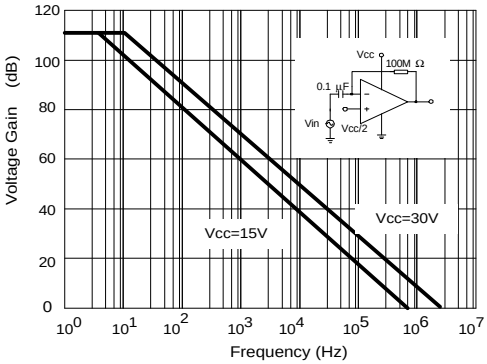


Fig. 6 Common Mode Rejection Ratio vs Frequency

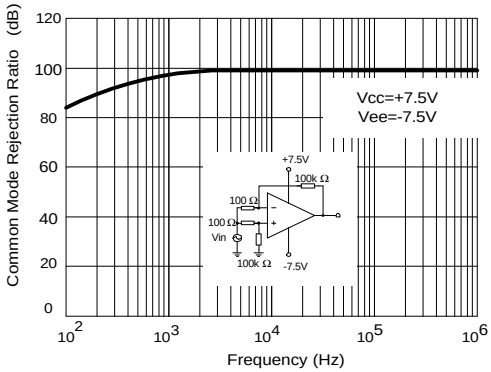


Fig. 7 Voltage Follower Pulse Response

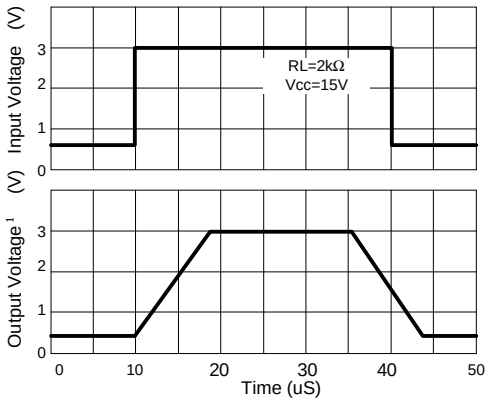


Fig. 8 Voltage Follower Response (Small Signal)

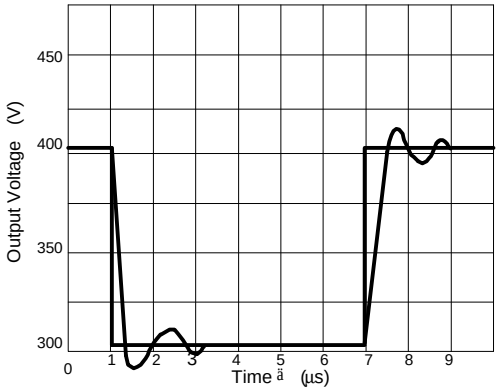


Fig. 9 Gain vs Large Signal Frequency

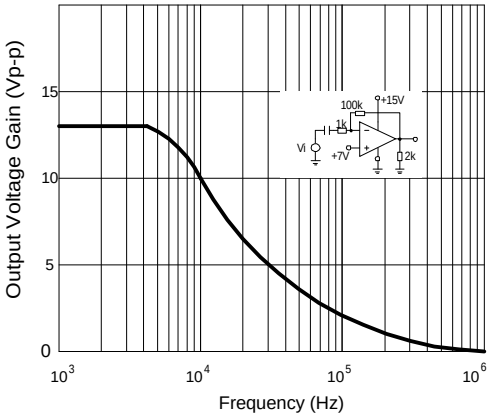


Fig. 10 Output Current Sinking vs Output Voltage

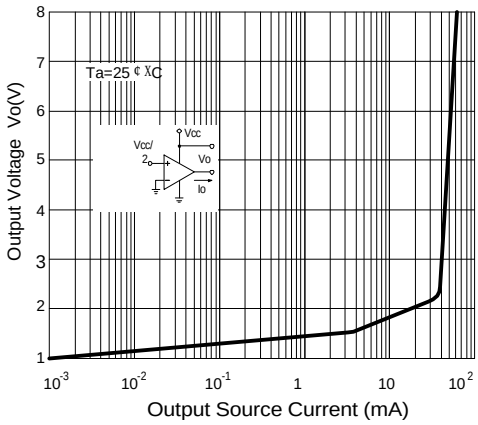


Fig. 11 Output Sink Current vs Output Voltage

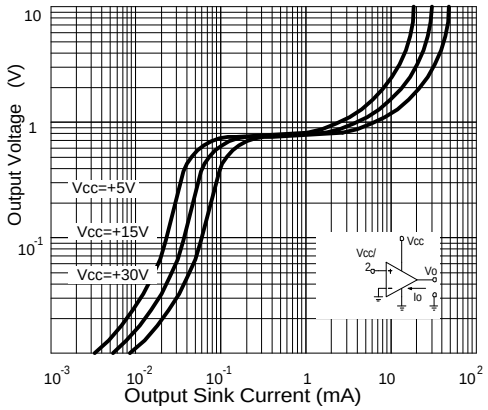
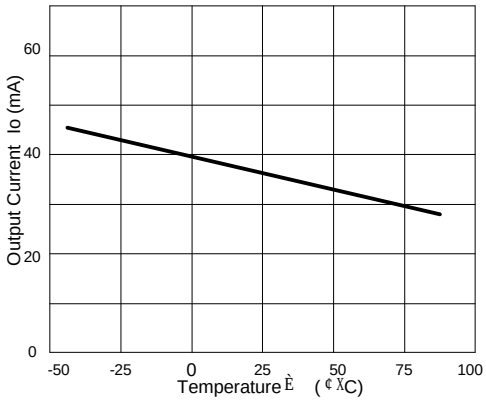
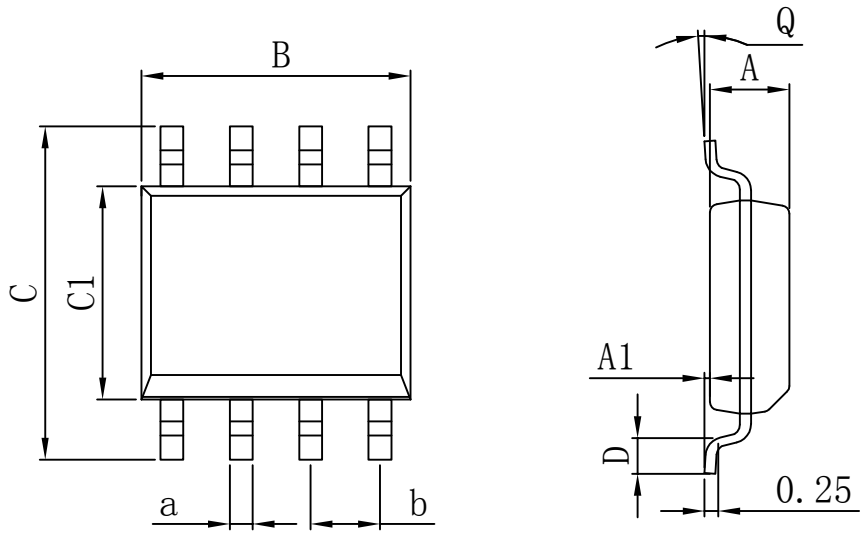


Fig.12 Current Limiting vs Temperature



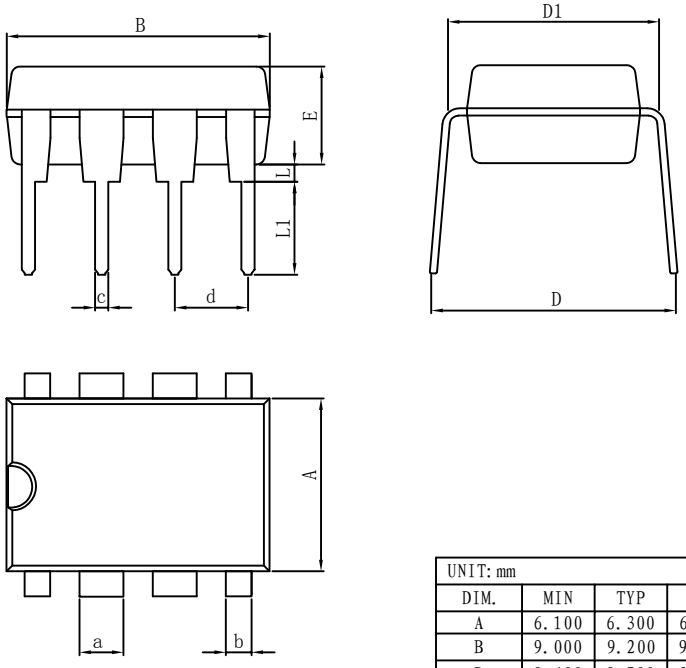
PACKAGE

SOP8



UNIT: mm							
DIM.	MIN	TYP	MAX	DIM.	MIN	TYP	MAX
A	4.520	4.570	4.620	a	0.400	0.420	0.440
A1	0.100	–	0.250	b	1.260	1.270	1.280
B	4.800	4.920	5.100	Q	0°	–	8°
C	5.800	6.100	6.250				
C1	3.800	3.900	4.000				
D	0.400	–	0.950				

DIP8



UNIT: mm							
DIM.	MIN	TYP	MAX	DIM.	MIN	TYP	MAX
A	6.100	6.300	6.680	a	1.504	1.524	1.544
B	9.000	9.200	9.500	b	–	0.889	–
D	8.400	8.700	9.000	c	0.437	0.457	0.477
D1	7.42	7.62	7.82	d	2.530	2.540	2.550
E	3.100	3.300	3.550	L	0.500	–	0.700
				L1	3.000	3.200	3.600

Important statement:

Huaguan Semiconductor Co,Ltd. reserves the right to change the products and services provided without notice. Customers should obtain the latest relevant information before ordering, and verify the timeliness and accuracy of this information.

Customers are responsible for complying with safety standards and taking safety measures when using our products for system design and machine manufacturing to avoid potential risks that may result in personal injury or property damage.

Our products are not licensed for applications in life support, military, aerospace, etc., so we do not bear the consequences of the application of these products in these fields.

Our documentation is only permitted to be copied without any tampering with the content, so we do not accept any responsibility or liability for the altered documents.

单击下面可查看定价，库存，交付和生命周期等信息

>>HGSEMI(华冠)