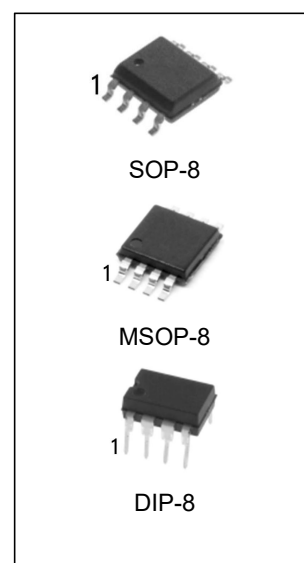

LINEAR INTEGRATED CIRCUIT DUAL OPERATIONAL AMPLIFIER
FEATURES

- 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.

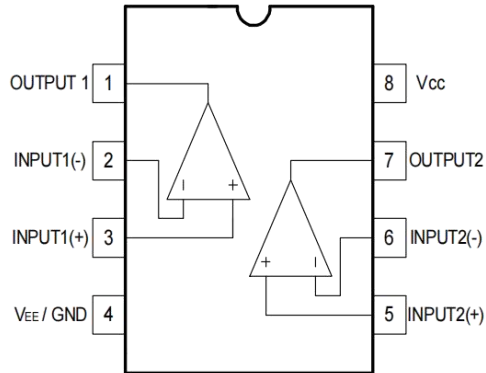

ORDERING INFORMATION

DEVICE	Package Type	MARKING	Packing	Packing Qty
LPV358CPG	DIP-8	LPV358C	TUBE	2000/box
LPV358CDRG	SOP-8	LPV358C	REEL	2500/reel
LPV358CDGKRG	MSOP-8	LPV358	REEL	3000/reel

DESCRIPTION

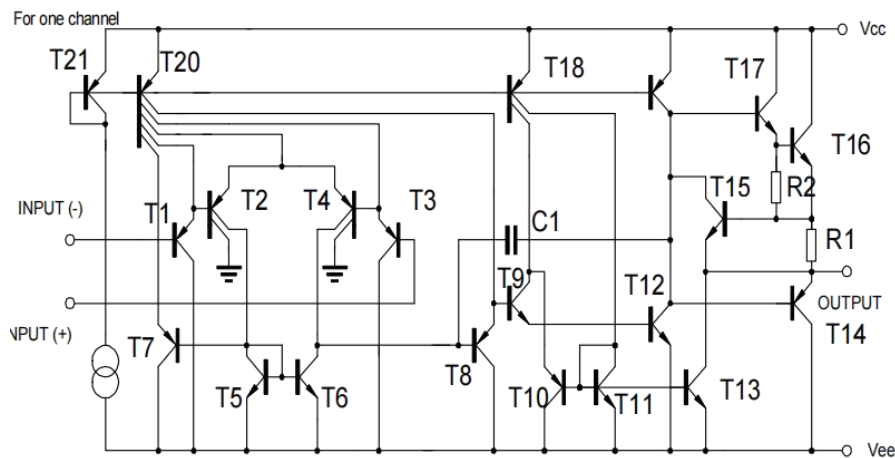
The LPV358 consists of two independent high gain, internally frequency compensated operational amplifier. It can be operated from a single power supply and also split power supplies.

PIN CONFIGURATIONS



DIP-8/SOP-8/MSOP-8

BLOCK DIAGRAM



ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	VALUE	UNIT
Supply Voltage	V _{CC}	±18 or 36	V
Differential Input Voltage	V _{I(DIFF)}	32	V
Input Voltage	V _I	-0.3 ~ +36	V
Output Short to Ground		Continuous	
Operating Temperature Range	TOPR	0 ~ +70	°C
Storage Temperature Range	TSTG	-65 ~ +150	°C
Lead Temperature (Soldering, 10 seconds)	T _L	245	°C

Note: Absolute Maximum Ratings indicate limits beyond which damage to the device may occur. Operating Ratings indicate conditions for which the device is intended to be functional, but specific performance is not ensured.

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

PARAMETER	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Input Offset Voltage	V _{IO}	V _{CM} =0V to V _{CC} -1.5V V _{O(P)} =1.4V, R _S =0		2.9	7.0	mV
Input Offset Current	I _{IO}			5	50	nA
Input Bias Current	I _{BIAS}			45	250	nA
Input Common Mode Voltage	V _{I(R)}	V _{CC} =30V	0		V _{CC} -1.5	V
Power Supply Current	I _{CC}	R _L =∞, V _{CC} =30V		0.8	2.0	mA
		R _L =∞, Full Temperature Range		0.5	1.2	mA
Large Signal Voltage Gain	GV	V _{CC} =15V, R _L ≥2K V _{O(P)} =1V to 11V	25	100		V/mV
Output Voltage Swing	V _{O(H)}	V _{CC} =30V, R _L =2K	26			V
		V _{CC} =30V, R _L =10K	27	28		V
	V _{O(L)}	V _{CC} =5V, R _L ≥10K		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	I _{SC}			40	60	mA
Output Current	I _{SOURCE}	V _{I(+)} =1V, V _{I(-)} =0V V _{CC} =15V, V _{O(P)} =2V	20	30		mA
	I _{SINK}	V _{I(+)} =0V, V _{I(-)} =1V V _{CC} =15V, V _{O(P)} =2V	10	15		mA
		V _{I(+)} =0V, V _{I(-)} =1V V _{CC} =15V, V _{O(P)} =200mV	12	100		mA
Differential Input Voltage	V _{I(DIFF)}				V _{CC}	V

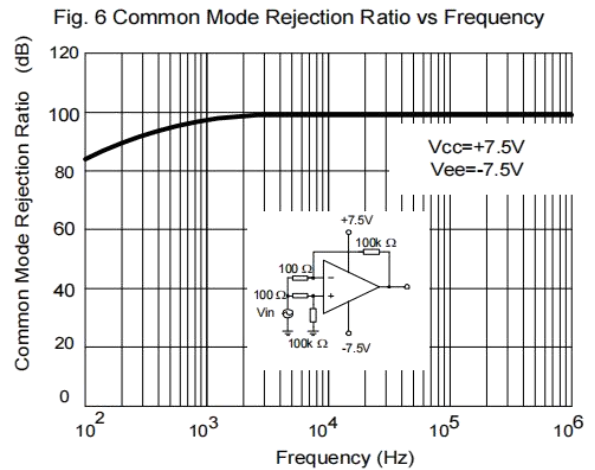
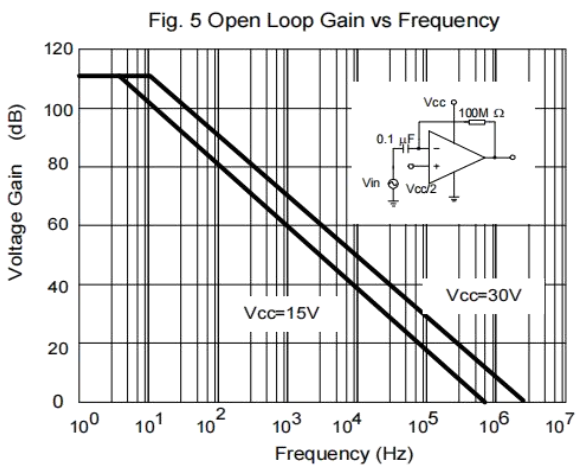
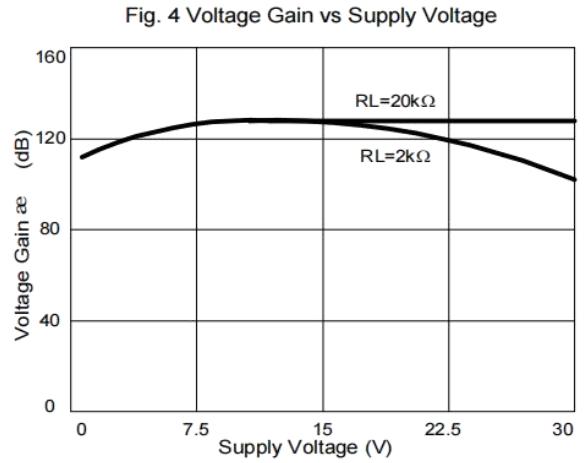
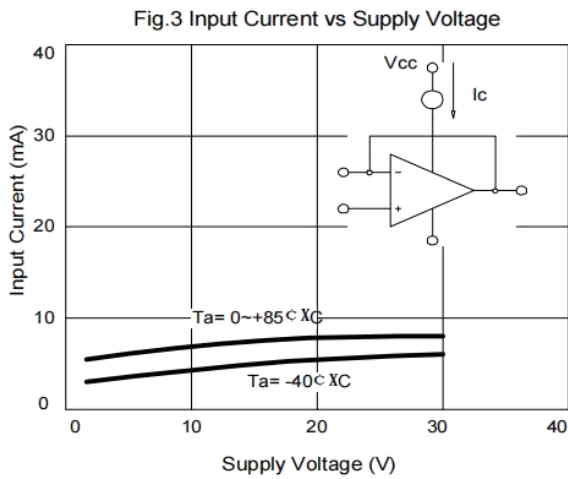
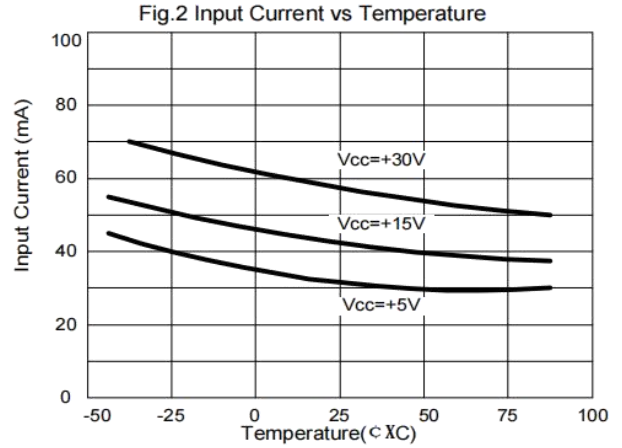
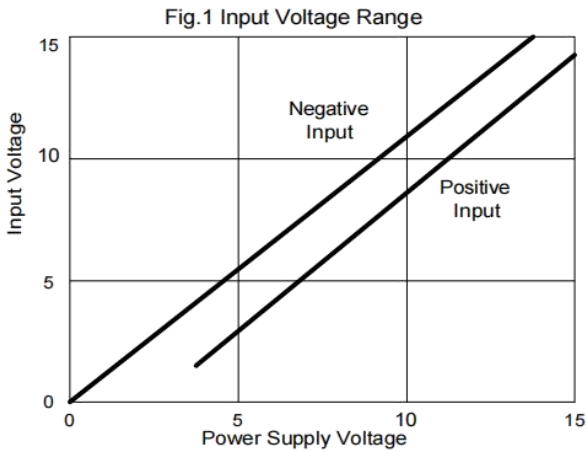
TYPICAL PERFORMANCE CHARACTERISTICS


Fig. 7 Voltage Follower Pulse Response

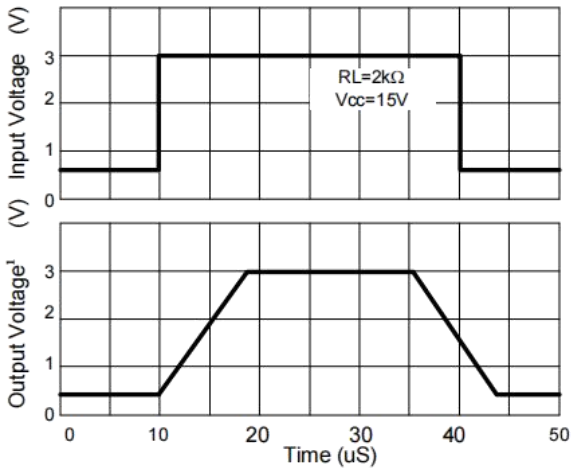


Fig. 8 Voltage Follower Response (Small Signal)

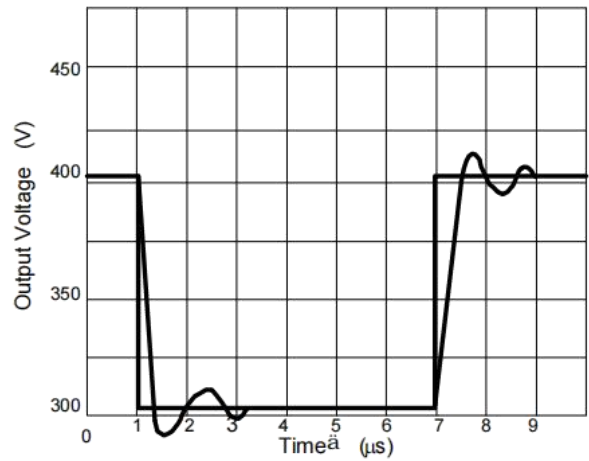


Fig. 9 Gain vs Large Signal Frequency

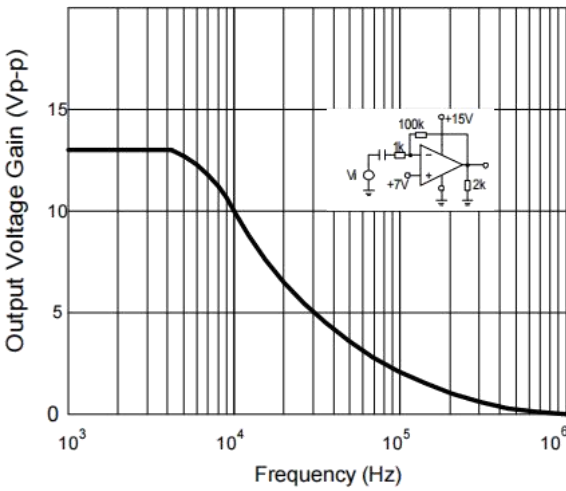


Fig. 10 Output Current Sinking vs Output Voltage

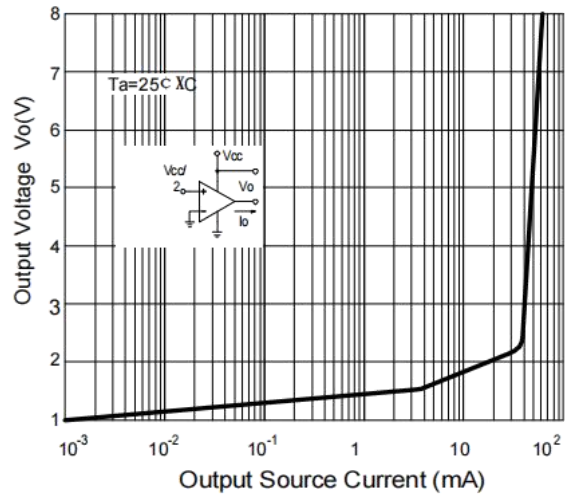


Fig. 11 Output Sink Current vs Output Voltage

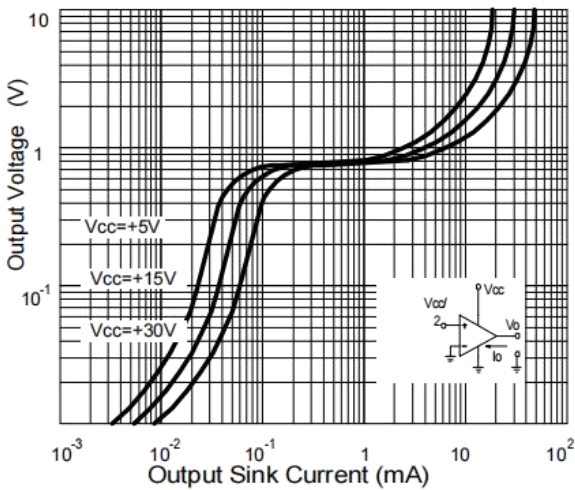
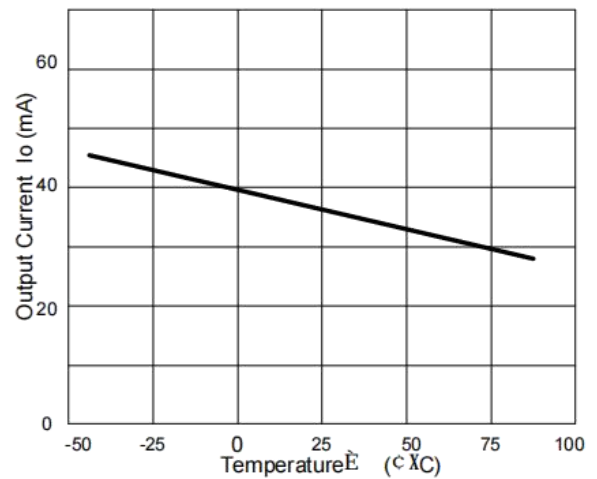
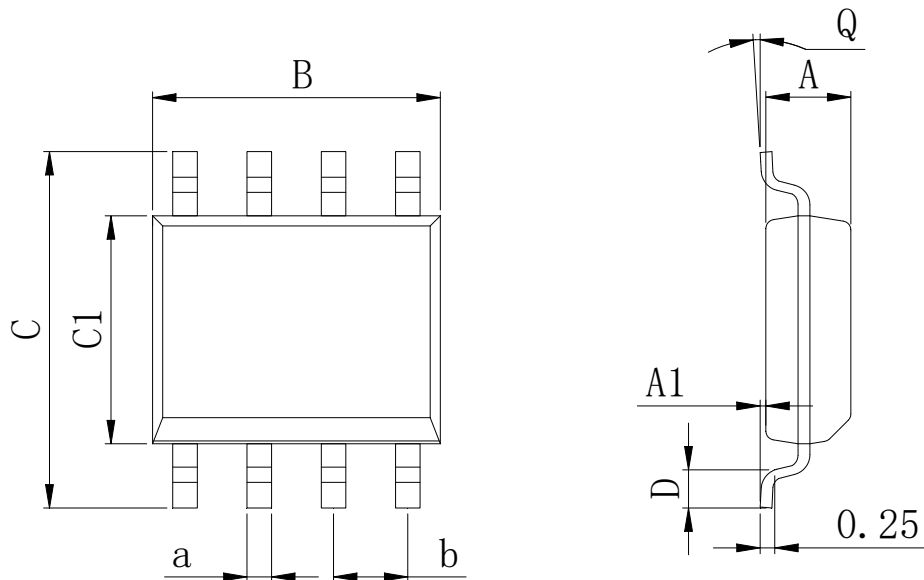
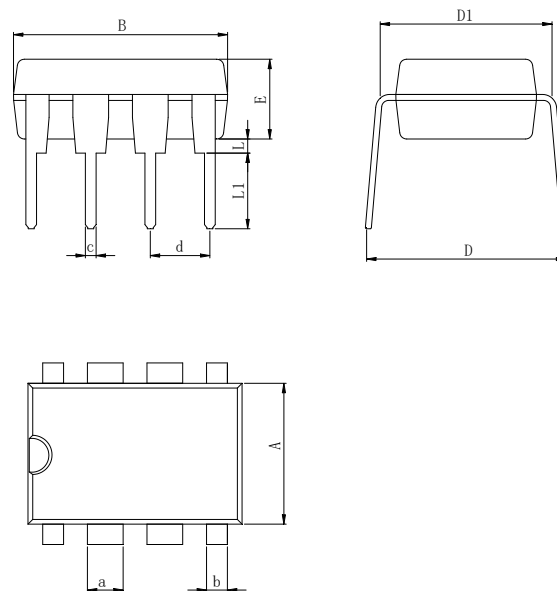


Fig. 12 Current Limiting vs Temperature



PHYSICAL DIMENSIONS
SOP-8

Dimensions In Millimeters(SOP-8)

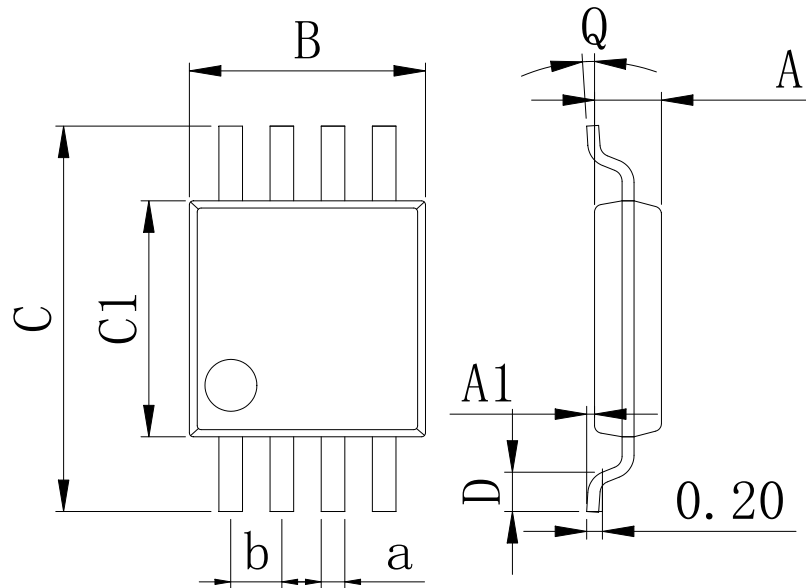
Symbol:	A	A1	B	C	C1	D	Q	a	b
Min:	1.35	0.05	4.90	5.80	3.80	0.40	0°	0.35	1.27 BSC
Max:	1.55	0.20	5.10	6.20	4.00	0.80	8°	0.45	

DIP-8

Dimensions In Millimeters(DIP-8)

Symbol:	A	B	D	D1	E	L	L1	a	b	c	d
Min:	6.10	9.00	8.10	7.42	3.10	0.50	3.00	1.50	0.85	0.40	2.54 BSC
Max:	6.68	9.50	10.9	7.82	3.55	0.70	3.60	1.55	0.90	0.50	

PHYSICAL DIMENSIONS

MSOP-8


Dimensions In Millimeters(MSOP-8)

Symbol:	A	A1	B	C	C1	D	Q	a	b
Min:	0.80	0.05	2.90	4.75	2.90	0.35	0°	0.25	0.65 BSC
Max:	0.90	0.20	3.10	5.05	3.10	0.75	8°	0.35	

REVISION HISTORY

DATE	REVISION	PAGE
2014-3-12	New	1-9
2023-9-14	Update encapsulation type 、 Update Lead Temperature 、 Updated DIP-8 dimension、 Add annotation for Maximum Ratings.	1、 3、 6

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