

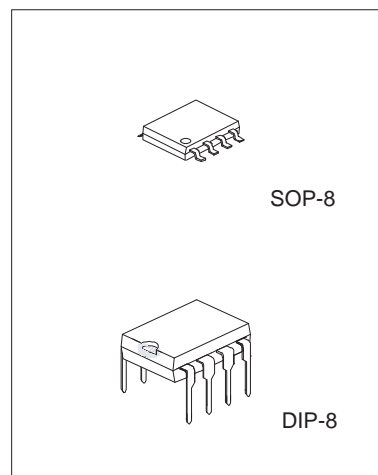
Low Power Dual Operational Amplifiers

DESCRIPTION

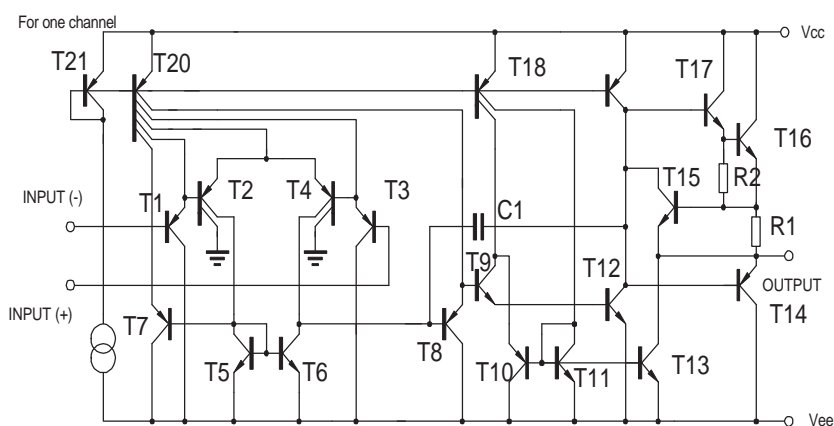
The CKD358 series consists of two independent, high gain, internally frequency compensated operational amplifiers which were designed specifically to operate from a single power supply over a wide range of voltages. Operation from split power supplies is also possible and the low power supply current drain is independent of the magnitude of the power supply voltage.

FEATURES

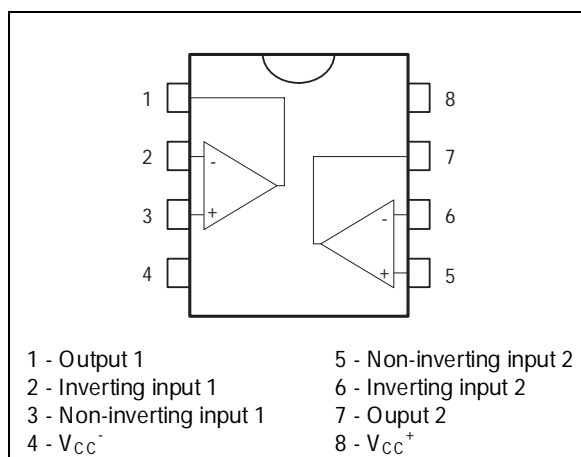
- *Internally frequency compensated for unity gain.
- *Wide power supply range 3V - 32V.
- *Input common-mode voltage range include ground.
- *Large DC voltage gain.
- *Pin to pin compatible with LM358



BLOCK DIAGRAM



PIN CONFIGURATION



ORDERING INFORMATION

Device	Operating Temperature Range	Package
CKD358D	T _A = 0°C to +70°C	PDIP-8
CKD358S	T _A = 0°C to +70°C	SOP-8

MAXIMUM RATINGS

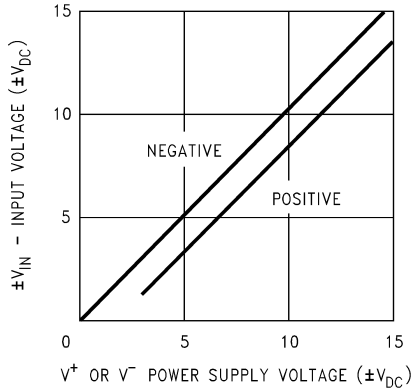
PARAMETER	SYMBOL	VALUE	UNIT
Supply Voltage	V _{CC}	±16 or 32	V
Differential Input Voltage	V _{I(DIFF)}	± 32	V
Input Voltage	V _I	-0.3 ~ +32	V
Output Short to Ground		Continuous	
Operating Temperature Range	TOPR	0 ~ +70	°C
Storage Temperature Range	TSTG	-55 ~ +125	°C

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

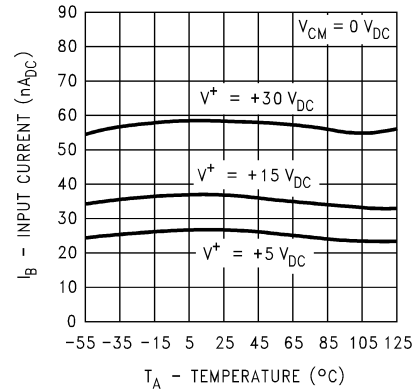
PARAMETER	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Input Offset Voltage	V _{IO}	V _{CM} =0V to V _{CC} -1.7V V _{O(P)} =1.4V, R _S =0		2.0	7.0	mV
Input Offset Current	I _{IO}			5	50	nA
Input Bias Current	I _{BIAS}			45	-250	nA
Input Common Mode Voltage	V _{I(R)}	V _{CC} =30V	0		28.3	V
Power Supply Current	I _{CC}	R _L = , V _{CC} =30V		1.5	3.0	mA
		R _L = , Full Temperature Range		0.7	1.2	mA
Large Signal Voltage Gain	G _V	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	70		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	40		mA
		V _{I(+)} =0V, V _{I(-)} =1V V _{CC} =15V, V _{O(P)} =2V	10	20		mA
	I _{SINK}	V _{I(+)} =0V, V _{I(-)} =1V V _{CC} =15V, V _{O(P)} =200mV	12	50		μA
Differential Input Voltage	V _{I(DIFF)}				V _{CC}	V

Typical Performance Characteristics

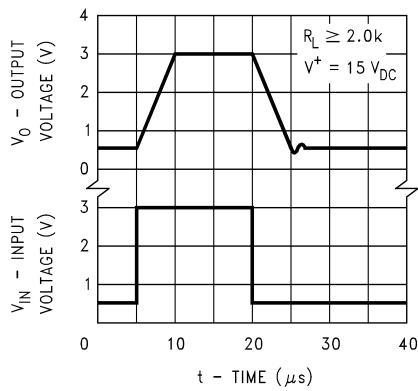
Input Voltage Range



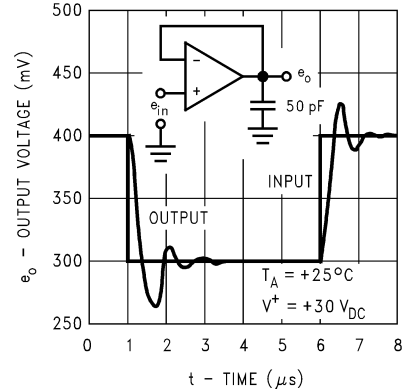
Input Current



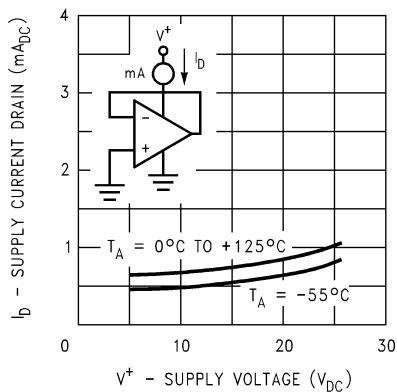
Voltage Follower Pulse Response



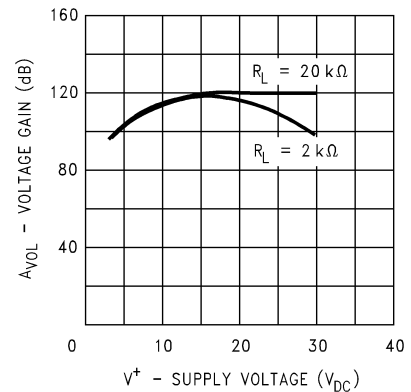
Voltage Follower Pulse Response (Small Signal)



Supply Current

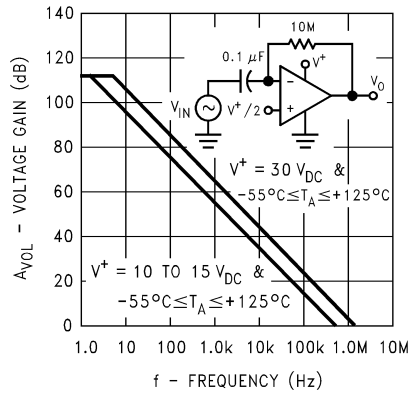


Voltage Gain

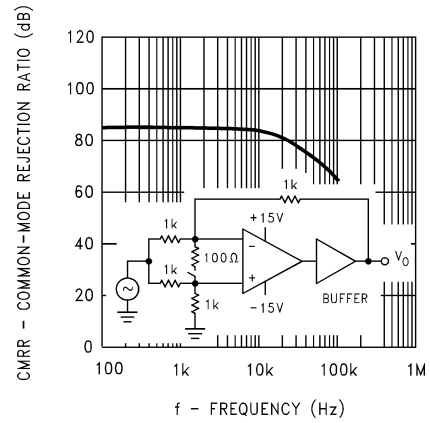


Typical Performance Characteristics

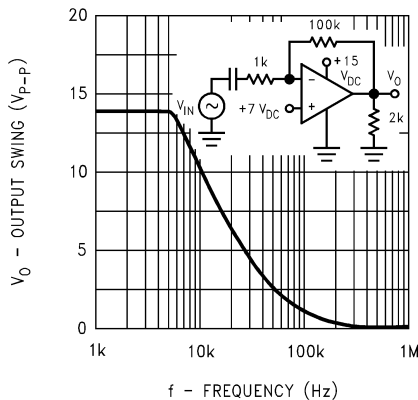
Open Loop Frequency Response



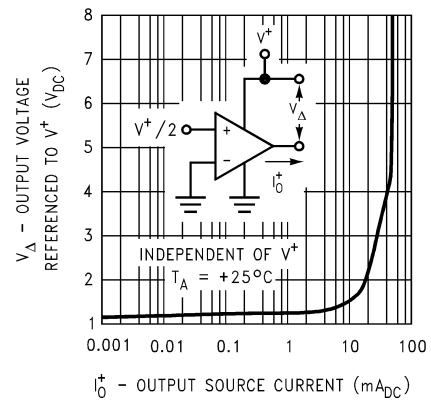
Common-Mode Rejection Ratio



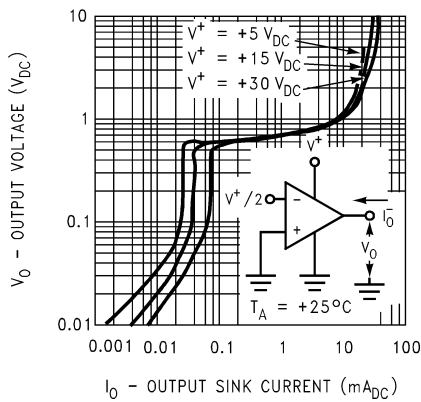
Large Signal Frequency Response



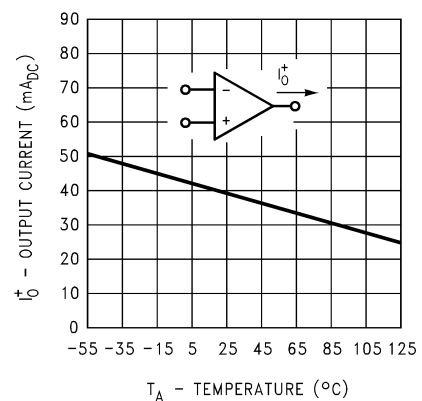
Output Characteristics Current Sourcing



Output Characteristics Current Sinking



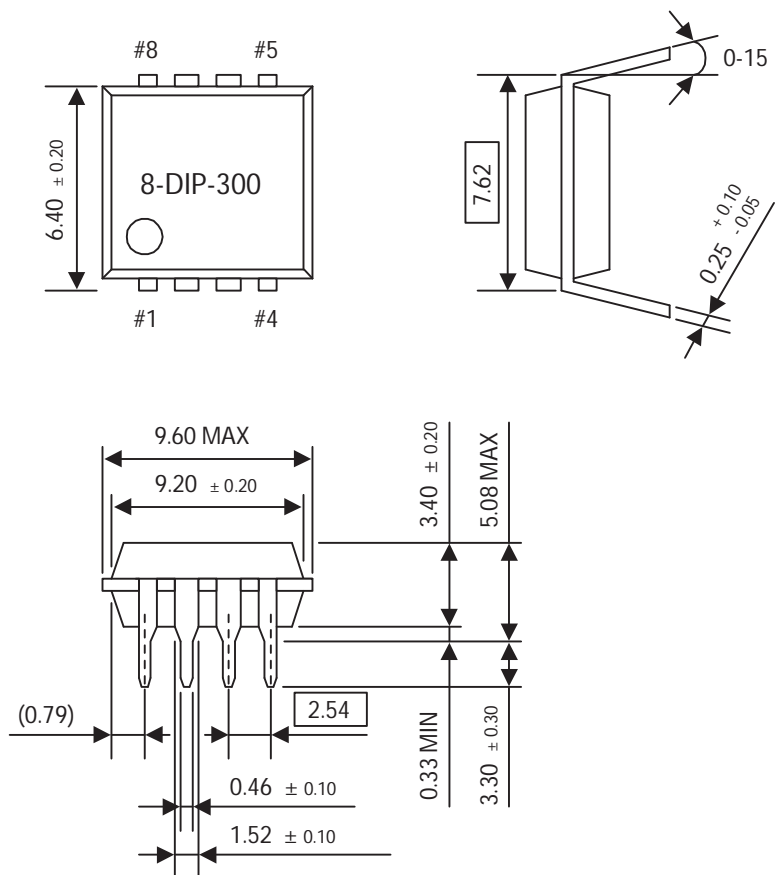
Current Limiting



Packaging Information

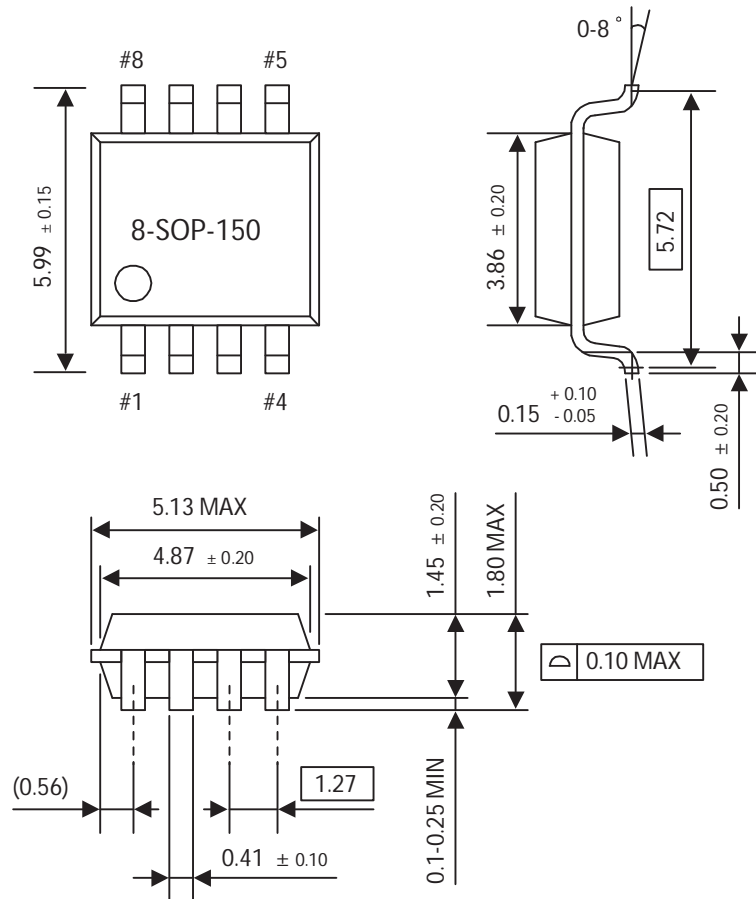
CKD358D

Data Sheet



NOTE : Dimensions are in millimeters.

8-DIP-300 Package Dimensions



NOTE : Dimensions are in millimeters.

8-SOP-150 Package Dimensions