

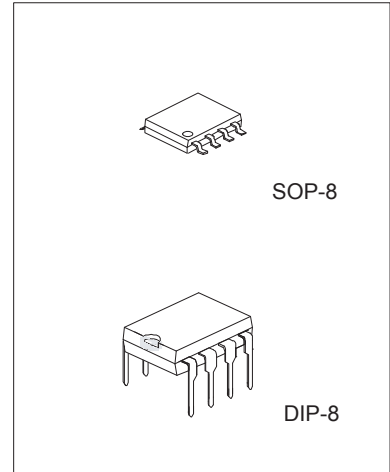
## Dual Operational Amplifier

### DESCRIPTION

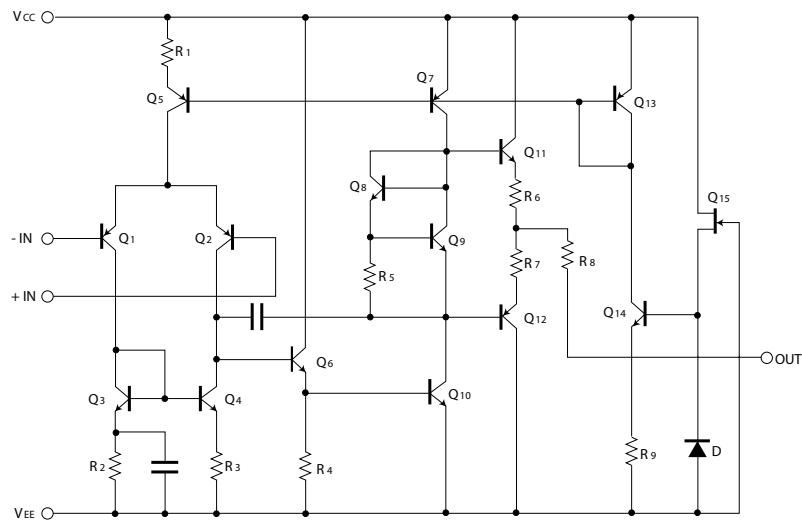
The TA4558 is a high performance monolithic dual operational amplifier

### FEATURES

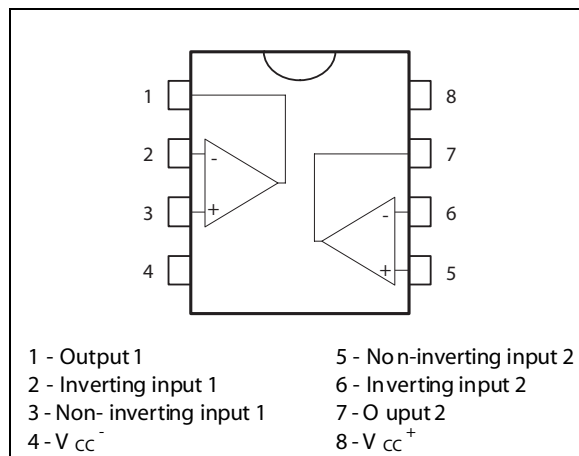
- No frequency compensation required
- No latch -up
- Large common mode and differential voltage range
- Parameter tracking over temperature range
- Gain and phase match between amplifiers
- Internally frequency compensated
- Low noise input transistors
- Pin to pin compatible with MC1458 / LM358



### BLOCK DIAGRAM (ONE SECTION ONLY)



### PIN CONFIGURATION



ORDERING INFORMATION

Device	Operating Temperature Range	Package
TA4558	T <sub>A</sub> = 0°C to +70°C	PDIP-8
TA4558	T <sub>A</sub> = 0°C to +70°C	SOP-8

MAXIMUM RATINGS

PARAMETER	SYMBOL	VALUE	UNIT
Supply Voltage	V <sub>cc</sub>	±22	V
Differential Input Voltage	V <sub>I(DIFF)</sub>	±18	V
Input Voltage	V <sub>I</sub>	±15	V
Operating Temperature	TOPR	0 ~ +70	°C
Power Dissipation	P <sub>D</sub>	600 400	mW
Storage Temperature Range	TSTG	-65 ~ +150	°C

ELECTRICAL CHARACTERISTICS (V<sub>cc</sub>=15.0V, V<sub>EE</sub>= -15V, T<sub>A</sub>=25° C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDUCTION	MIN	TYP	MAX	UNIT
Supply Current, all Amp, no load	I <sub>cc</sub>			2.3	4.5	mA
Input offset voltage	V <sub>io</sub>	R <sub>s</sub> <10k		2	6	mV
Input offset current	I <sub>io</sub>			5	200	nA
Input bias current	I <sub>BIAS</sub>			30	500	nA
Large signal voltage gain	G <sub>v</sub>	V <sub>o(p-p)</sub> =±10V, R <sub>L</sub> 2k	20	200		V/mV
Common Mode Input Voltage Range	V <sub>I(R)</sub>		±12	±13		V
Common Mode Rejection Ratio	CMRR	R <sub>s</sub> 10k	70	90		dB
Supply Voltage Rejection Ratio	PSRR	R <sub>s</sub> 10k	76	90		dB
Output Voltage swing	V <sub>o(p-p)</sub>	R <sub>L</sub> 10k		±12	±14	V
Power Consumption	P <sub>c</sub>			70	170	mW
Slew Rate	SR	V <sub>i</sub> = ±10V, R <sub>L</sub> 2k , C <sub>L</sub> 100pF	1.2	2.2		V/μs
Rise Time	T <sub>RISE</sub>	V <sub>i</sub> = ±20mV, R <sub>L</sub> 2k , C <sub>L</sub> 100pF		0.3		μs
Overshoot	OS	V <sub>i</sub> = ±20mV, R <sub>L</sub> 2k , C <sub>L</sub> 100pF		15		%
Input Resistance	R <sub>i</sub>		0.3	2		M
Output Resistance	R <sub>o</sub>			75		
Total Harmonic Distortion	THD	f=1kHz, A <sub>v</sub> =20dB, R <sub>L</sub> =2k , V <sub>o</sub> =2Vpp, C <sub>L</sub> =100pF		0.008		%
Channel Separation	V <sub>o1</sub> /V <sub>o2</sub>			120		dB

FREQUENCY CHARACTERISTICS (T<sub>a</sub>=25°C, V<sub>cc</sub>=15V, V<sub>ee</sub>=-15V)

PARAMETER	SYMBOL	TEST CONDUCTION	MIN	TYP	MAX	UNIT
Unity Gain Bandwidth	BW		2.0	2.8		MHz

TYPICAL PERFORMANCE CHARACTERISTICS

