

Dual Operational Amplifiers

The HT4558A is dual general purpose operational amplifiers.

The high common-mode input voltage range and the absence of latch-up make these amplifiers ideal for voltage follower application.

The devices are short circuit protected and the internal frequency compensation ensures stability without external components.

Short Circuit Protection

Wide common-mode and differential ranges

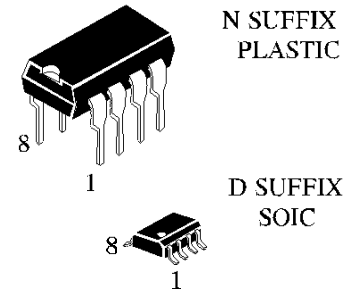
No frequency compensation required

Low power consumption

No latch-up

3 MHz unity gain bandwidth guaranteed

Gain and phase match between amplifiers



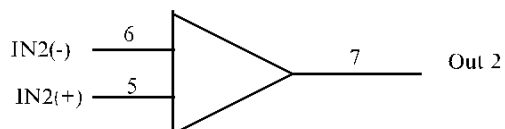
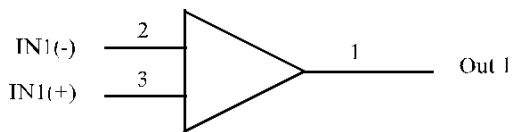
ORDERING INFORMATION

HT4558AN DIP8

HT4558AR SOP8

$T_A = 0$ to 70 °C for
all packages

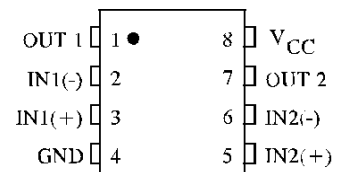
BLOCK DIAGRAM



PIN 4 = GND (V^-)

PIN 8 = V_{CC} (V^+)

PIN ASSIGNMENT



MAXIMUM RATINGS*

Symbol	Parameter	Value	Unit
V^+	Supply Voltage	18	V
V^-	Supply Voltage	-18	V
V_{IDR}	Differential Input Voltage	30	V
V_{IN}	Input Voltage	15	V
P_D	Power Dissipation in Still Air	570	mW
Tstg	Storage Temperature Range	-55 to 125	C

* Maximum Ratings are those values beyond which damage to the device may occur. Functional operation should be restricted to the Recommended Operating Conditions.

RECOMMENDED OPERATING CONDITIONS

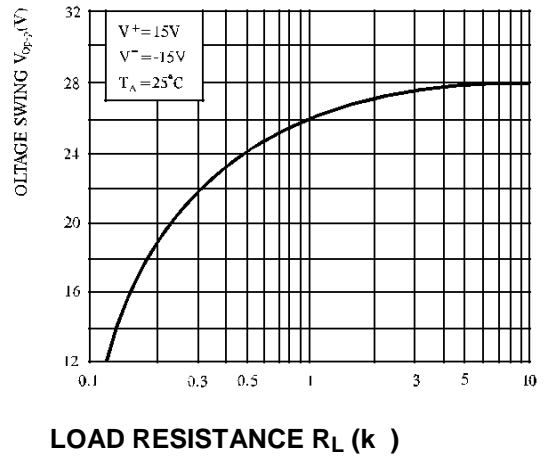
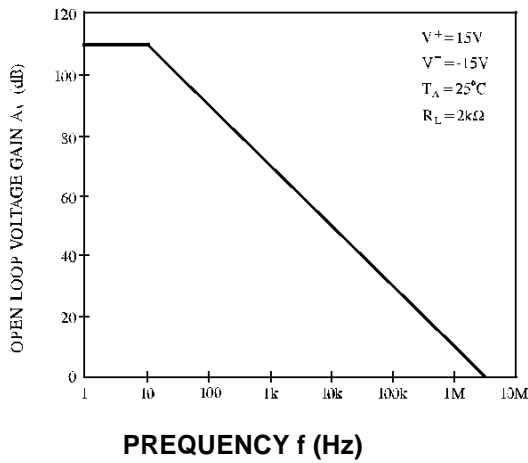
Symbol	Parameter	Min	Max	Unit
V^+	Supply Voltage		16	V
V^-	Supply Voltage		-16	V

ELECTRICAL CHARACTERISTICS ($T_A = 25\text{ C}$, $V^+ = +15\text{ V}$, $V^- = -15\text{ V}$)

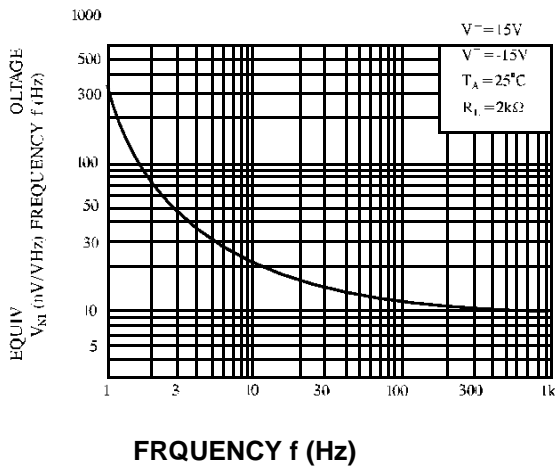
Symbol	Parameter	Test Conditions	Guaranteed Limits		Unit
			Min	Max	
V_{IO}	Input Offset Voltage	$R_S = 10K$		5.0	mV
I_{IO}	Input Offset Current			200	nA
I_{IB}	Input Bias Current			- 500	nA
r_i	Input Resistance		0.3		M
A_V	Large-Signal Voltage Gain	$R_L = 2K, V_C = 10V$	20		V/mV
V_{OM}	Output Voltage Swing	$R_L = 10K$	12		V
		$R_L = 2K$	10		V
V_{ICR}	Input Common-Mode Voltage Range		12		V
CMRR	Common Mode Rejection Ratio	$R_S = 10K$	70		dB
PSRR	Supply Voltage Rejection Ratio	$R_S = 10K$		150	V/V
SR	Slew Rate	$R_L = 2K$	0.8	1.6	
I^+, I^-	Supply Current			5.6	mA
SR	Slew Rate	$R_L = 2K$			V/ s
P_C	Power Consumption	$R_L =$		170	mW
V_N	Input Noise Voltage	$R_S = 1K$ $f = 30Hz \text{ } 30KHz$		3.5	Vrms
I_{source}	Source Current		- 20		mA
I_{sink}	Sink Current		20		mA

TYPICAL PERFORMANCE CURVES

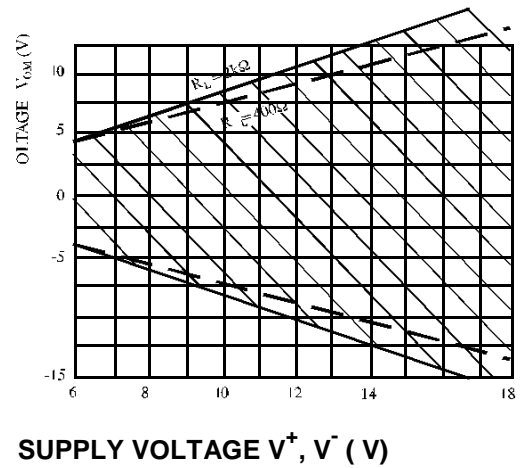
$V_{Op-p} - R_L$



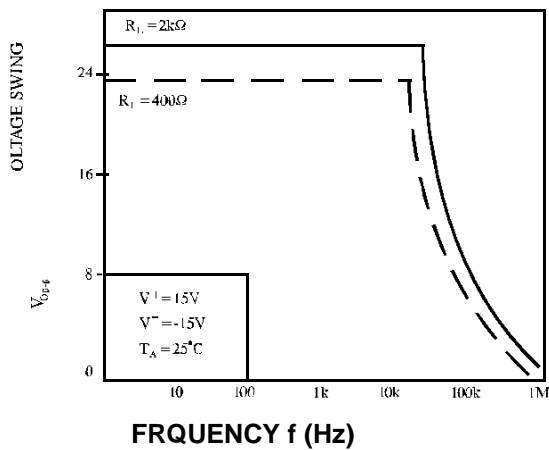
$V_{NI} - f$



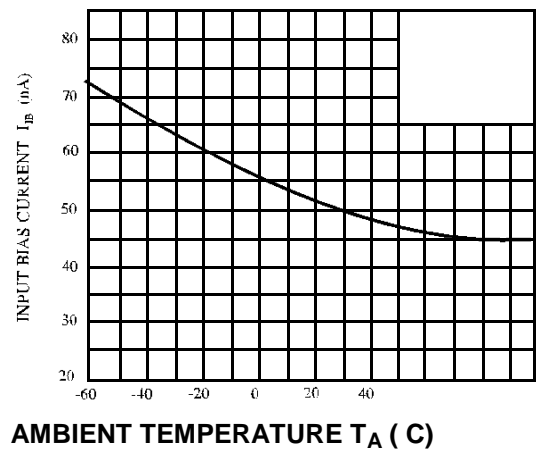
$V_{OM} - V_{CC}, V_{EE}$

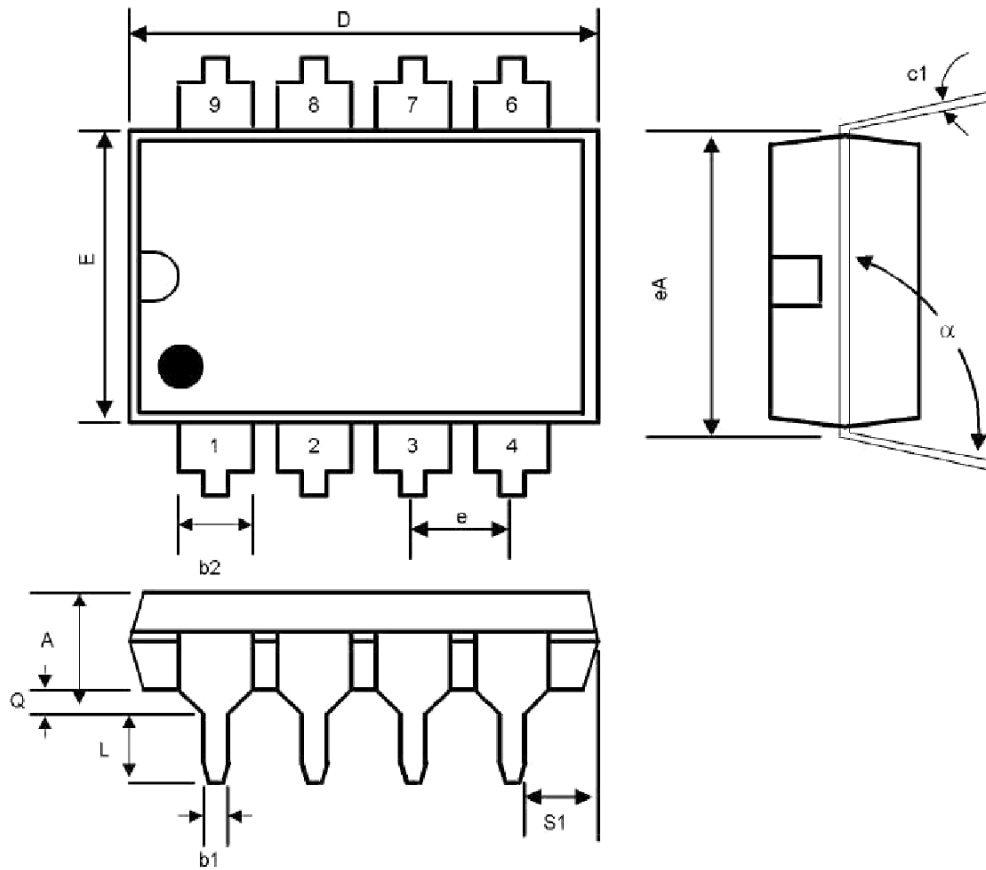


$V_{Op-p} - f$

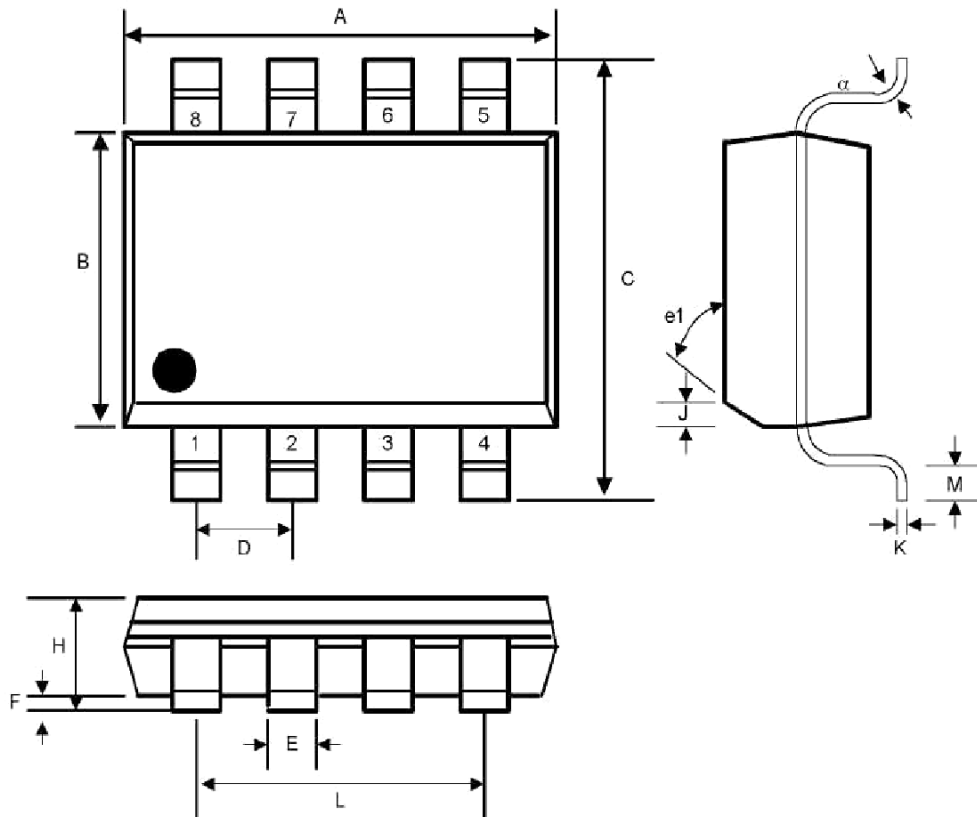


$I_I - T_A$



Package Outlines: DIP-8


SYMBOL	INCHES		MILLIMETERS		NOTES
	MIN	MAX	MIN	MAX	
A	-	0.200	-	5.08	-
b1	0.014	0.023	0.36	0.58	-
b2	0.045	0.065	1.14	1.65	-
c1	0.008	0.015	0.20	0.38	-
D	0.355	0.400	9.02	10.16	-
E	0.220	0.310	5.59	7.87	-
e	0.100 BSC		2.54 BSC		-
eA	0.300 BSC		7.62 BSC		-
L	0.125	0.200	3.18	5.08	-
Q	0.015	0.060	0.38	1.52	-
s1	0.005	-	0.13	-	-
α	90^0	105^0	90^0	105^0	-

Small Outline SOP-8


SYMBOL	INCHES		MILLIMETERS		NOTES
	MIN	MAX	MIN	MAX	
A	0.188	0.197	4.80	5.00	-
B	0.149	0.158	3.80	4.00	-
C	0.228	0.244	5.80	6.20	-
D	0.050 BSC		1.27 BSC		-
E	0.013	0.020	0.33	0.51	-
F	0.004	0.010	0.10	0.25	-
H	0.053	0.069	1.35	1.75	-
J	0.011	0.019	0.28	0.48	-
K	0.007	0.010	0.19	0.25	-
M	0.016	0.050	0.40	1.27	-
L	0.150 REF		3.81 REF		-
e1	45°		45°		-
α	0°	8°	0°	8°	-

*All specs and applications shown above subject to change without prior notice.