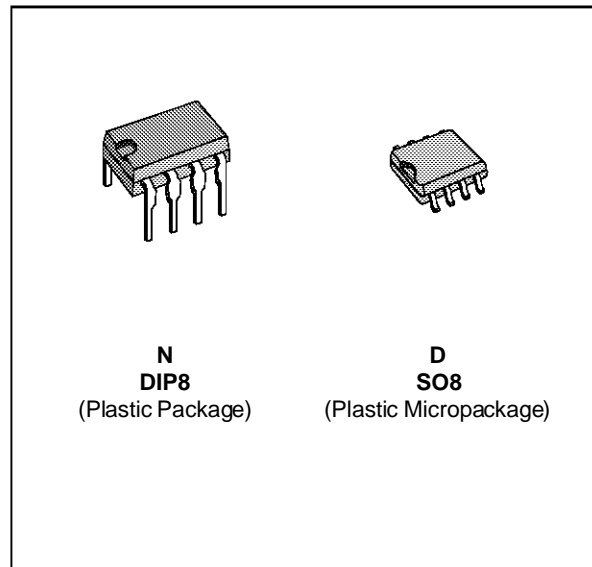


WIDE BANDWIDTH DUAL BIPOLAR OPERATIONAL AMPLIFIERS

- INTERNALLY COMPENSATED
- SHORT-CIRCUIT PROTECTION
- GAIN AND PHASE MATCH BETWEEN AMPLIFIERS
- LOW POWER CONSUMPTION
- PIN TO PIN COMPATIBLE WITH MC1458/LM358
- GAIN BANDWIDTH PRODUCT (at 100kHz) 5.5MHz



DESCRIPTION

The MC4558 is a high performance monolithic dual operational amplifier.

The circuit combines all the outstanding features of the MC1458 and, in addition, possesses three times the unity gain bandwidth of the industry standard.

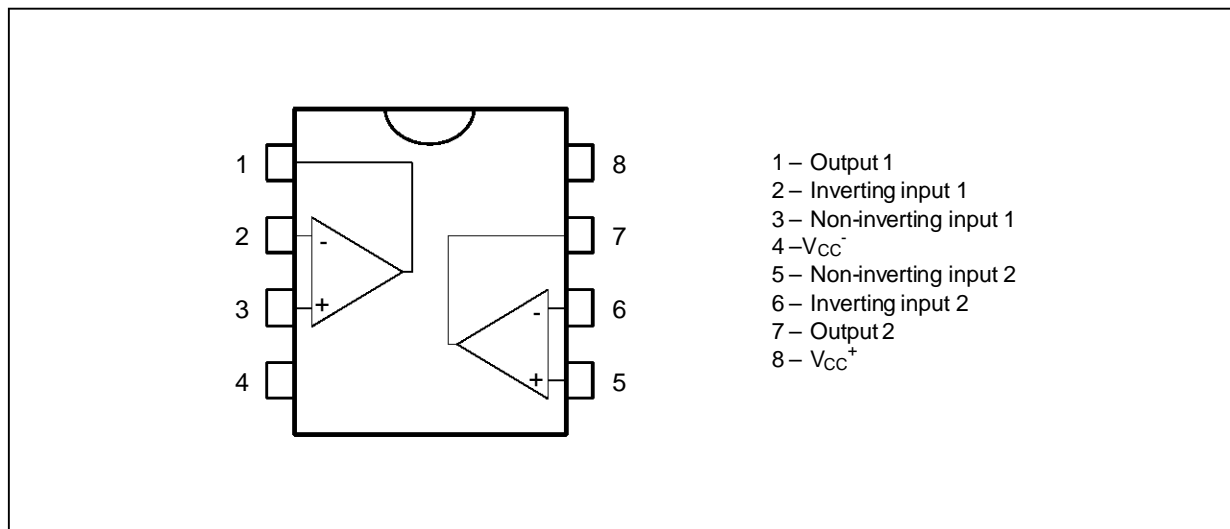
ORDER CODES

Part Number	Temperature Range	Package	
		N	D
MC4558C	0°C, +70°C	•	•
MC4558I	-40°C, +105°C	•	•

Example : MC4558CN

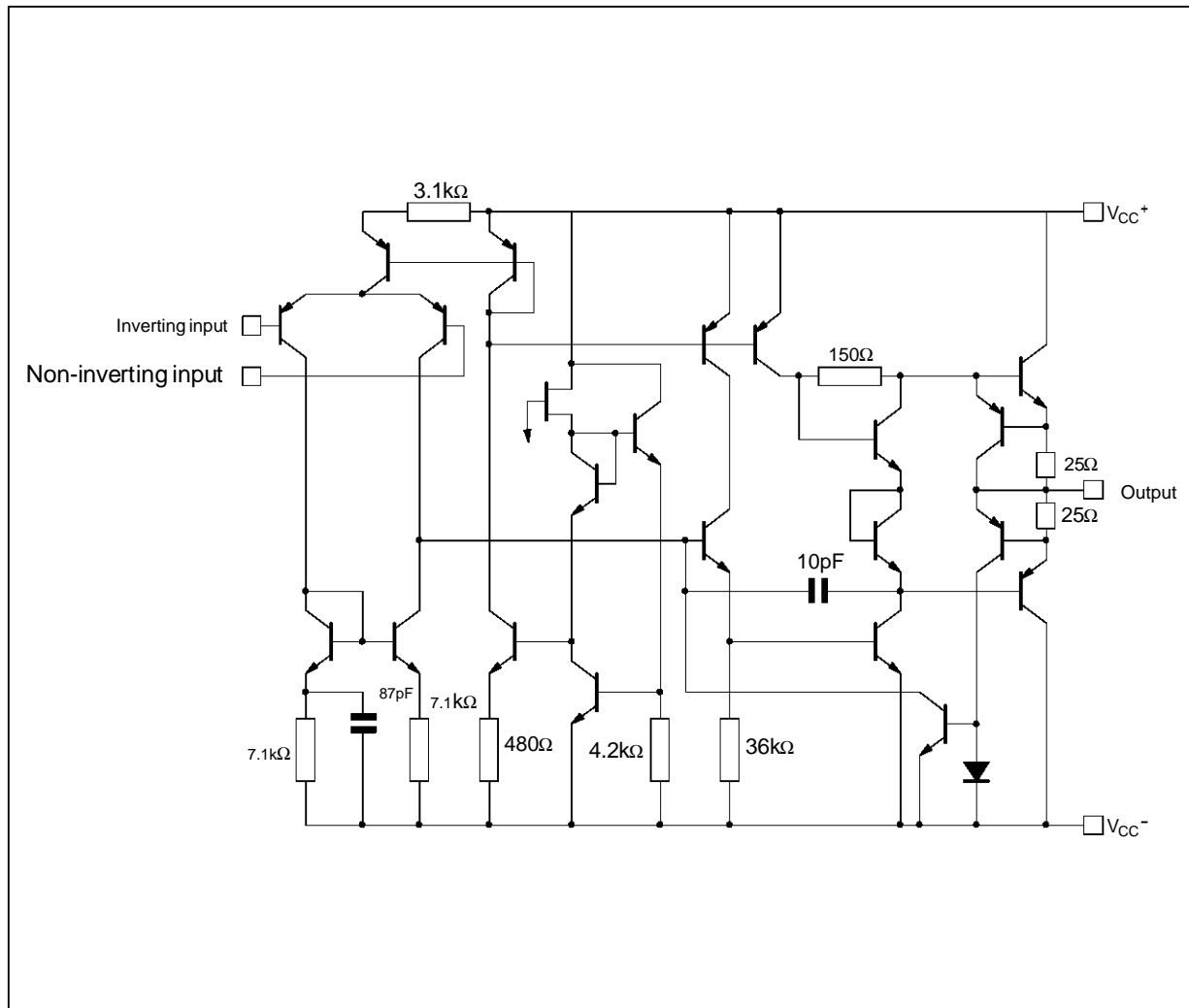
4558-01.TBL

PIN CONNECTIONS (top view)



MC4558

SCHEMATIC DIAGRAM (1/2 MC4558)



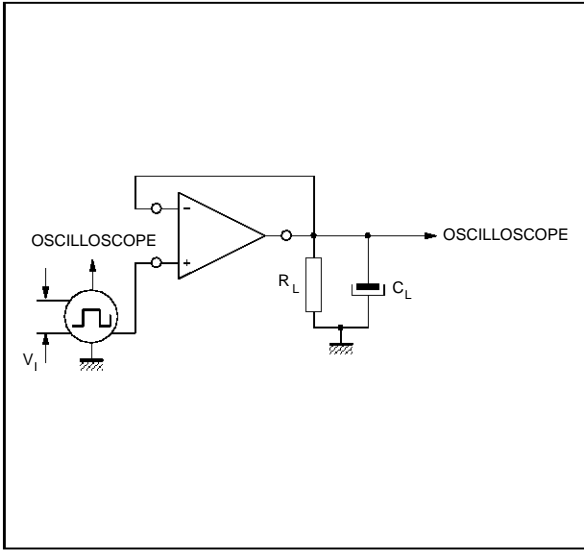
4558-03.EPS

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	MC4558I	MC4558C	Unit
V_{CC}	Supply Voltage	± 22	± 22	V
V_i	Input Voltage	± 15	± 15	V
V_{id}	Differential Input Voltage	± 30	± 30	V
P_{tot}	Power Dissipation	680	680	mW
	Output Short-circuit Duration	Infinite		
T_{oper}	Operating Free-air Temperature Range	-40 to +105	0 to +70	$^{\circ}C$
T_{stg}	Storage Temperature Range	-65 to +150	-65 to +150	$^{\circ}C$

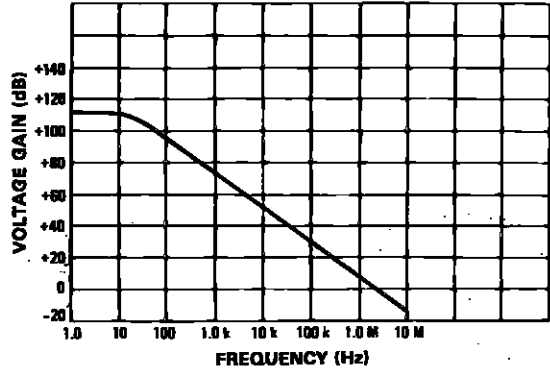
4558-02.TBL

TRANSIENT RESPONSE TEST CIRCUIT



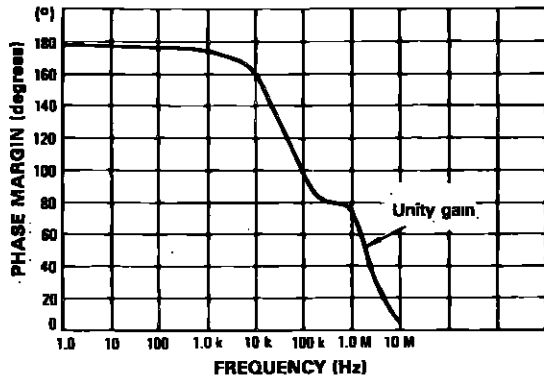
4558-04.EPS

OPEN LOOP FREQUENCY RESPONSE



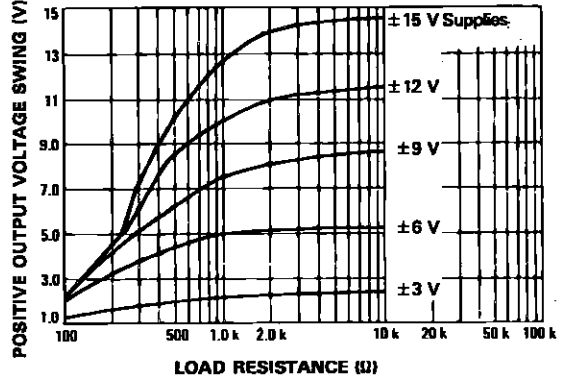
4558-05.EPS

PHASE MARGIN VERSUS FREQUENCY



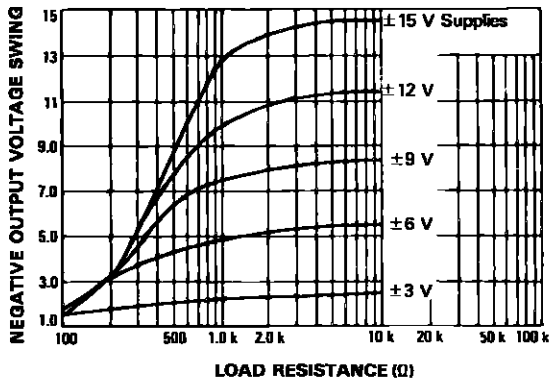
4558-06.EPS

POSITIVE OUTPUT VOLTAGE SWING VERSUS LOAD RESISTANCE



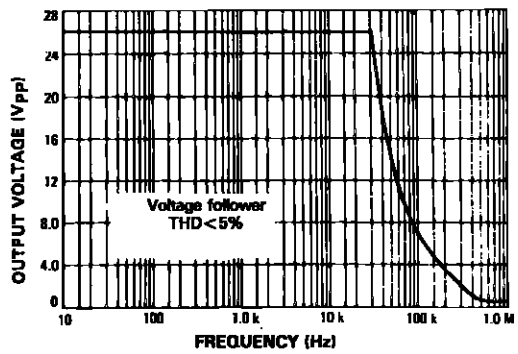
4558-07.EPS

NEGATIVE OUTPUT VOLTAGE SWING VERSUS LOAD RESISTANCE



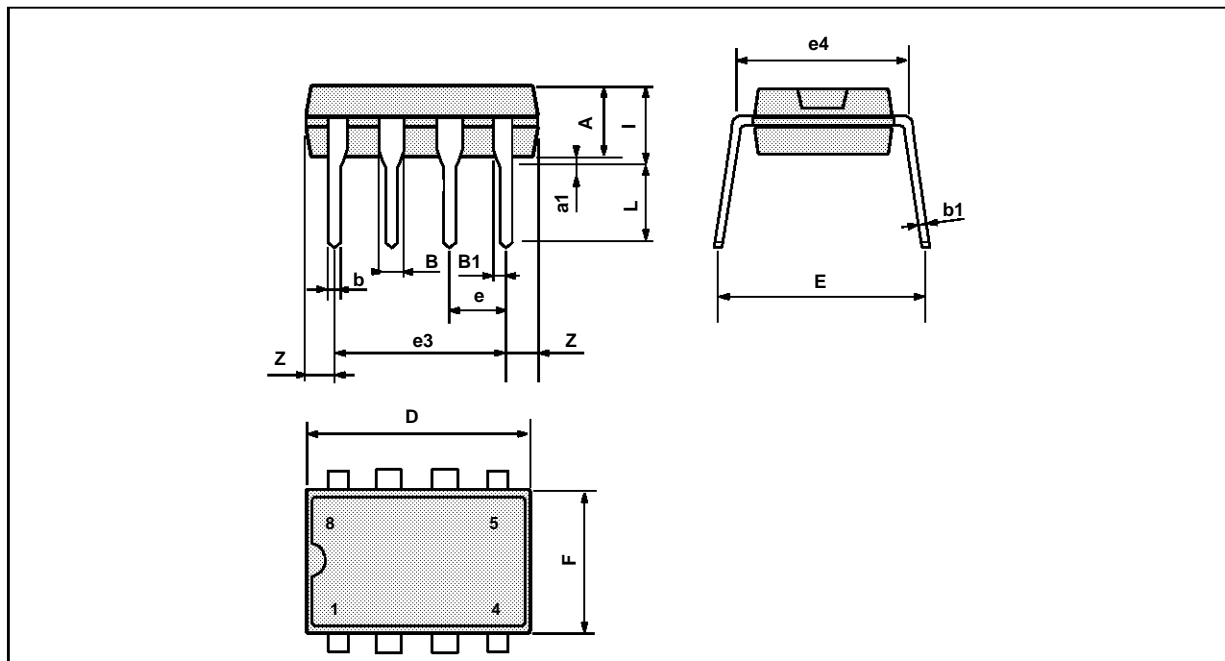
4558-08.EPS

POWER BANDWIDTH (Large signal swing versus frequency)



4558-09.EPS

PACKAGE MECHANICAL DATA
8 PINS – PLASTIC DIP OR CERDIP

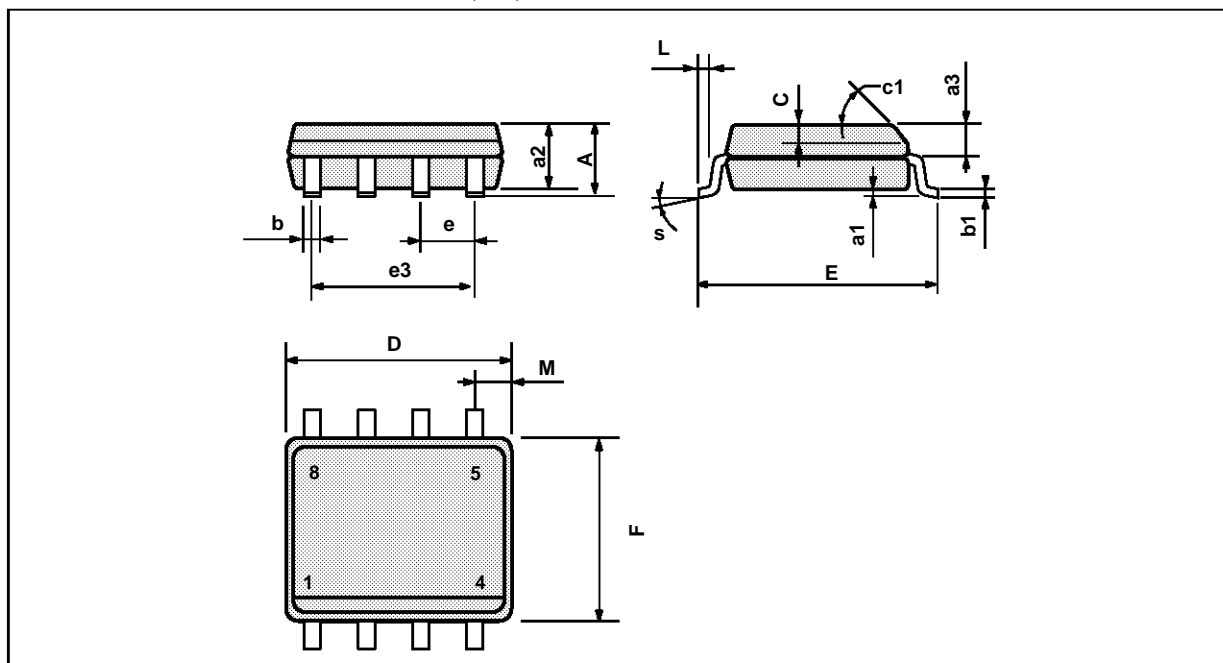


PM-DP8EFS

Dimensions	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A		3.32			0.131	
a1	0.51			0.020		
B	1.15		1.65	0.045		0.065
b	0.356		0.55	0.014		0.022
b1	0.204		0.304	0.008		0.012
D			10.92			0.430
E	7.95		9.75	0.313		0.384
e		2.54			0.100	
e3		7.62			0.300	
e4		7.62			0.300	
F			6.6			0.260
i			5.08			0.200
L	3.18		3.81	0.125		0.150
Z			1.52			0.060

DIP8.TBL

PACKAGE MECHANICAL DATA
8 PINS – PLASTIC MICROPACKAGE (SO)



PM-SO8-EPS

Dimensions	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A			1.75			0.069
a1	0.1		0.25	0.004		0.010
a2			1.65			0.065
a3	0.65		0.85	0.026		0.033
b	0.35		0.48	0.014		0.019
b1	0.19		0.25	0.007		0.010
C	0.25		0.5	0.010		0.020
c1	45° (typ.)					
D	4.8		5.0	0.189		0.197
E	5.8		6.2	0.228		0.244
e		1.27			0.050	
e3		3.81			0.150	
F	3.8		4.0	0.150		0.157
L	0.4		1.27	0.016		0.050
M			0.6			0.024
S	8° (max.)					

S08.TBL

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