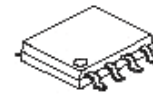


DESCRIPTION

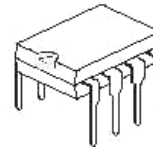
The jrc4558 is a high performance monolithic dual operational amplifier.

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

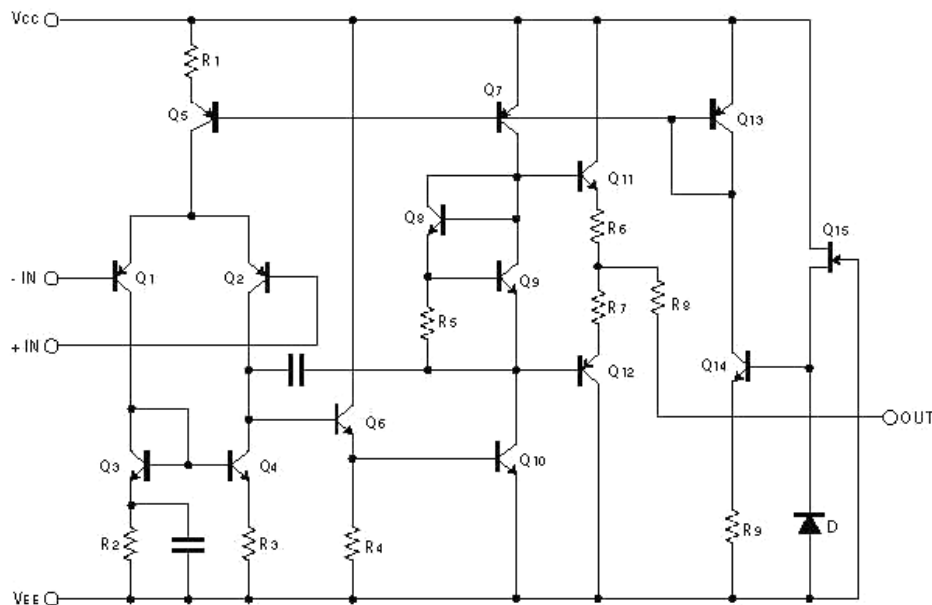


SOP-8

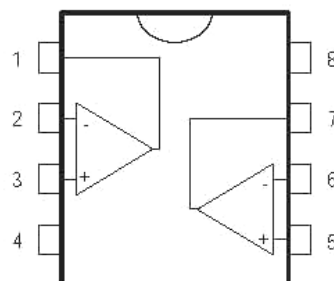


DIP-8

BLOCK DIAGRAM (ONE SECTION ONLY)



PIN CONFIGURATION



1-Output 1
2-Inverting input 1
3-Non-inverting input1
4-Vcc

5-Non-inverting input 2
6-Inverting input 2
7-Output 2
8-Vcc +

ORDERING INFORMATION

JRC4558N

Package

Blank SO-8
N=PDIP8
A=SO-8 & taping

MAXIMUM RATINGS

PARAMETER	SYMBOL	VALUE	UNIT
Supply Voltage	V _{CC}	±22	V
Differential Input Voltage	V _{I(DIFF)}	±18	V
Input Voltage	V _I	±15	V
Operating Temperature	TOPR	0~ +17	°C
Power Dissipation P-DIP 8 SOP 8	PD	600 400	mW
Storage Temperature Range	TSTG	-65~+150	°C

ELECTRICAL CHARACTERISTICS (V_{CC}=15.0V, V_{EE}=-15V, T_A=25°C, unless otherwise specified)

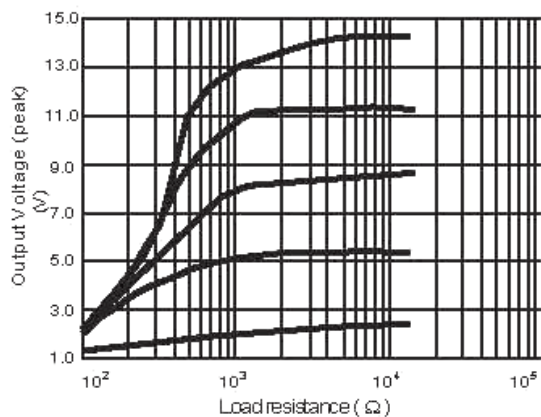
PARAMETER	SYMBOL	TEST CONDUCTION	MIN	TYP	MAX	UNIT
Supply Current, all Amp, no load	I _{CC}			2.3	4.5	mA
Input offset voltage	V _{IO}	R _s <10kΩ		2	6	mV
Input offset current	I _{IO}			5	200	nA
Input bias current	I _{BIAS}			30	500	nA
Large signal voltage gain	GV	V _o (p-p)= ±10V, R _L ≤2kΩ	20	200		V/mV
Common Mode Input Voltage Range	V _{I(R)}		±12	±13		V
Common Mode Rejection Ratio	CMRR	R _s ≤10kΩ	70	90		dB
Supply Voltage Rejection Ratio	PSRR	R _s ≤10kΩ	76	90		dB
Output Voltage swing	V _o (p-p)	R _L ≥10kΩ		±12	±14	V
Power Consumption	P _c			70	170	mW
Slew Rate	SR	V _i =±10V, R _L ≥2kΩ, C _L ≤100pF	1.2	2.2		V/μS
Rise Time	T _{RIS}	V _i =±20mV, R _L ≥2kΩ, C _L ≤100pF		0.3		μs
Overshoot	OS	V _i =±20mV, R _L ≥2kΩ, C _L ≤100pF		15		%
Input Resistance	R _i		0.3	2		MΩ
Output Resistance	R _o			75		Ω
Total Harmonic Distortion	THD	f=1KHz, A _v =20dB, R _L =2kΩ, V _o =2Vpp, C _L =100pF		0.008		%
Channel Separation	V _{o1} /V _{o2}			120		dB

FREQUENCY CHARACTERISTICS (T_a=25°C, V_{CC}=15V, V_{EE}=-15V)

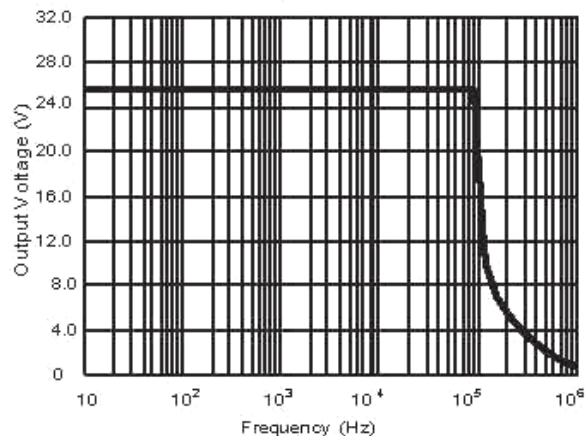
PARAMETER	SYMBOL	TEST CONDUCTION	MIN	TYP	MAX	UNIT
Unity Gain Bandwidth	BW		2.0	2.8		MHz

TYPICAL PERFORMANCE CHARACTERISTICS

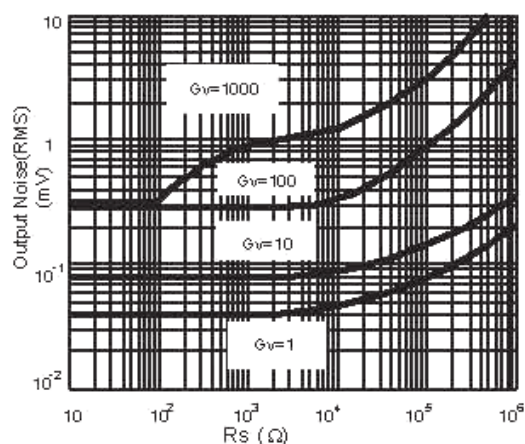
Positive output voltage swing vs load resistance



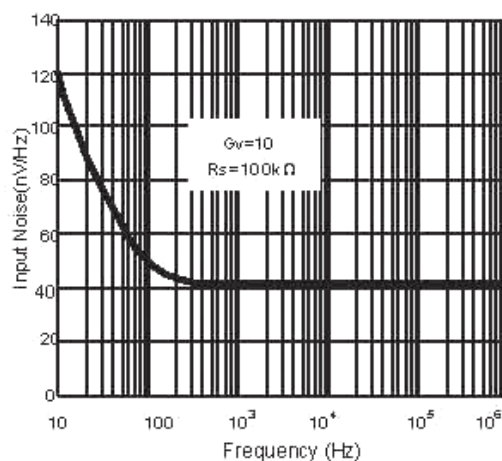
Power Bandwidth (Large Signal)



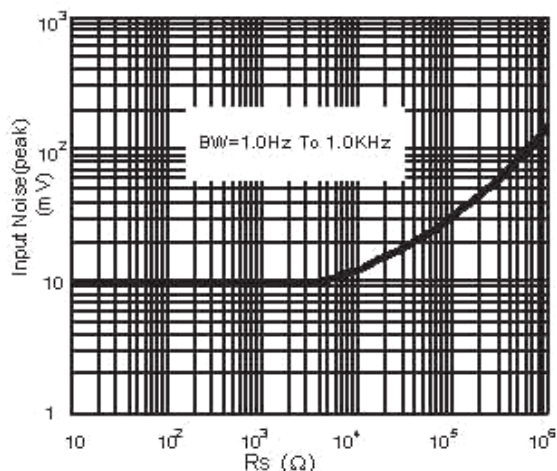
Output Noise vs R_s



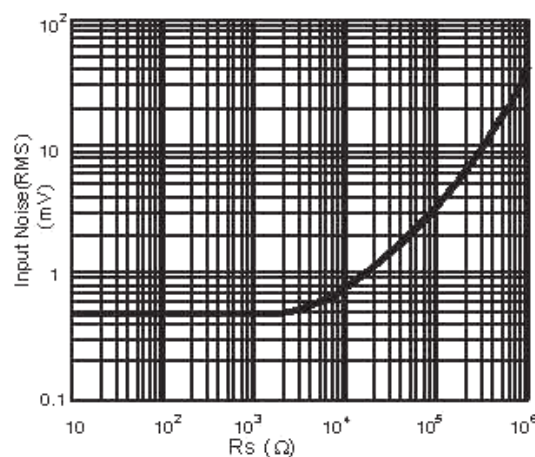
Spectral Noise Density

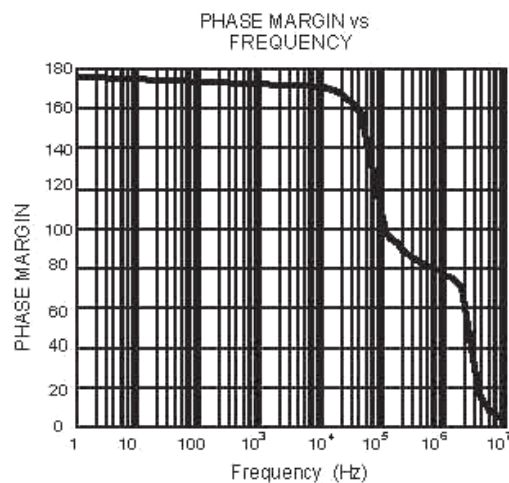
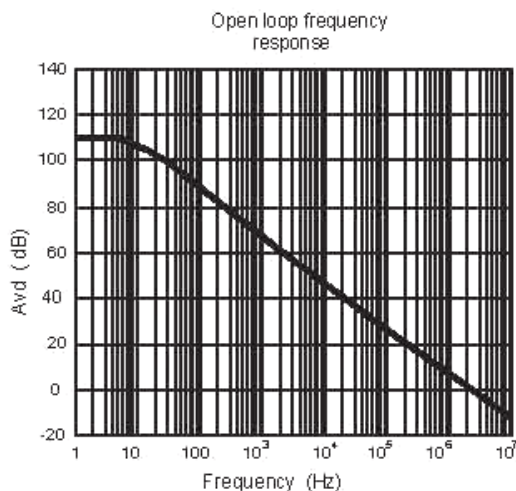


Burst Noise vs R_s

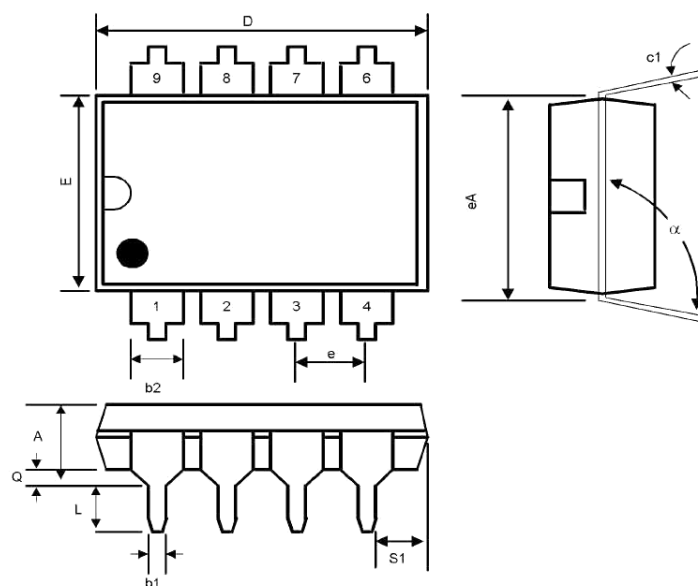


RMS Noise vs R_s



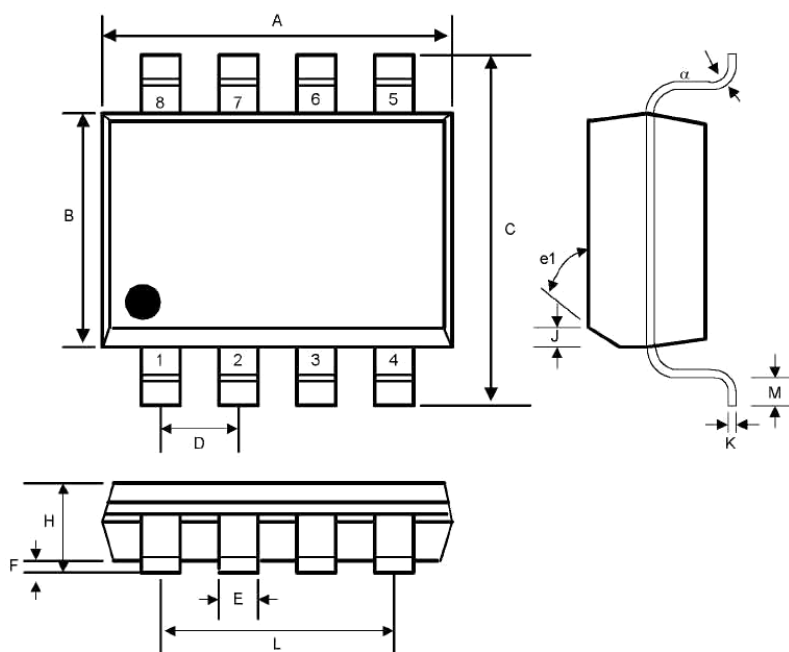


Package Outlines: DIP-8



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°	105°	90°	105°	-

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.