

RoHS Compliant Product

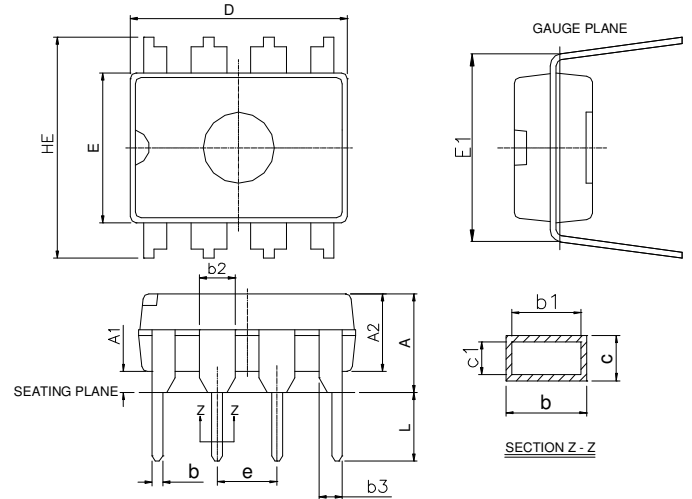
DIP-8

Description

The SPW4558D is a monolithic integrated circuit designed for dual operational amplifier.

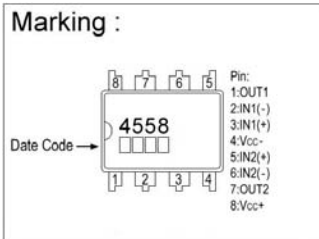
Features

- * Low Noise Input Transistors
- * Large Common Mode And Differential Voltage Range
- * No Latch-Up
- * Gain And Phase Match Between Amplifiers
- * Internally Frequency Compensated
- * No Frequency Compensated Required
- * Parameter Tracking Over Temperature Range

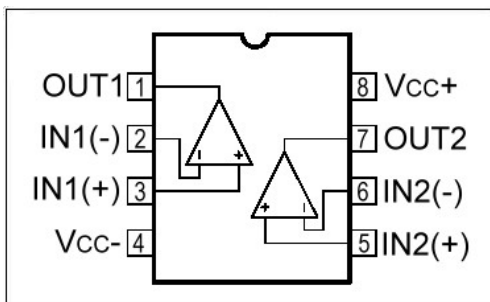


REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	-	0.5334	c1	0.203	0.279
A1	0.381	-	D	9.017	10.16
A2	2.921	4.953	E	6.096	7.112
b	0.356	0.559	E1	7.620	8.255
b1	0.356	0.508	e	2.540 BSC	
b2	1.143	1.778	HE	-	10.92
b3	0.762	1.143	L	2.921	3.810
c	0.203	0.356			

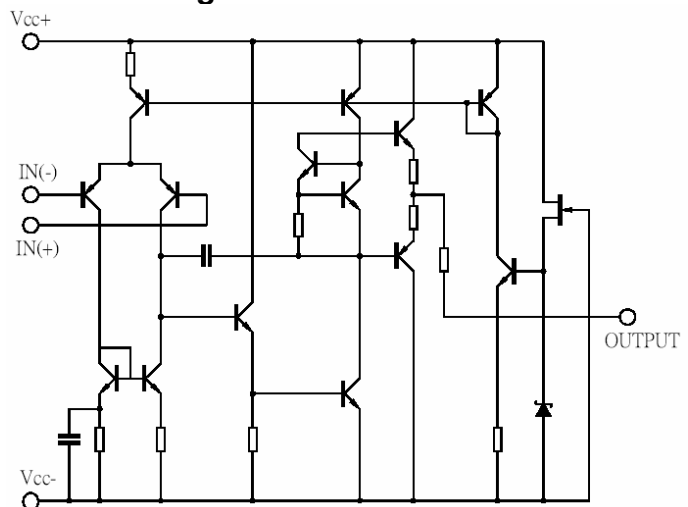
Marking :



Pin Configurations



Block Diagram



Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	VALUE	Unit
Supply Voltage	VCC	±22	V
Differential Input Voltage	VI(DIFF)	±18	V
Input Voltage	VI	±15	V
Power Dissipation	PD	600	mW
Operating Temperature Range	TOPR	0 ~ +70	°C
Storage Temperature Range	TSTG	-65 ~ +150	°C

Electrical Characteristics (VCC=15V Vee=-15V, TA=25°C)

Parameter	SYMBOL	Test Conditions	Min	Typ.	Max	Unit
Supply Current, all Amp, no load	ICC		-	2.3	4.5	mA
Input Offset Voltage	VIO	Rs<10kΩ	-	2	6	mV
Input Offset Current	IIO		-	5	200	nA
Input Bias Current	IBIAS		-	30	500	nA
Common Mode Input Voltage	VI(R)		±12	±13		V
Large Signal Voltage Gain	GV	VO(P-P)=±10V, RL≤2kΩ	20	200	-	V/mV
Output Voltage Swing	VO(P-P)	RL≥10kΩ	-	±12	±14	V
Common Mode Rejection Ratio	CMRR	Rs≤10kΩ	70	90	-	dB
Supply Voltage Rejection Ratio	PSRR	Rs≤10kΩ	76	90	-	dB
Power Consumption	Pc		-	70	170	mW
Slew Rate	SR	Vi=±10V, RL≥2kΩ, CL≤100pF	1.2	2.2	-	V/μs
Rise Time	TRIS	Vi=±20mV, RL≥2kΩ, CL≤100pF	-	0.3	-	μs
Overshoot	OS	Vi=±20mV, RL≥2kΩ, CL≤100pF	-	15	-	%
Input Resistance	Ri		0.3	2	-	MΩ
Output Resistance	Ro		-	75	-	Ω
Total Harmonic Distortion	THD	f=1kHz, AV=20dB, RL=2kΩ, VO= 2VPP, CL=100pF	-	0.008	-	%
Channel Separation	Vo1/Vo2		-	120	-	dB

Frequency Characteristics (VCC=15V Vee=-15V, TA=25°C)

Parameter	SYMBOL	Test Conditions	Min	Typ.	Max	Unit
Unity Gain Bandwidth	BW		2.0	2.8	-	MHz

Typical Performance Characteristics

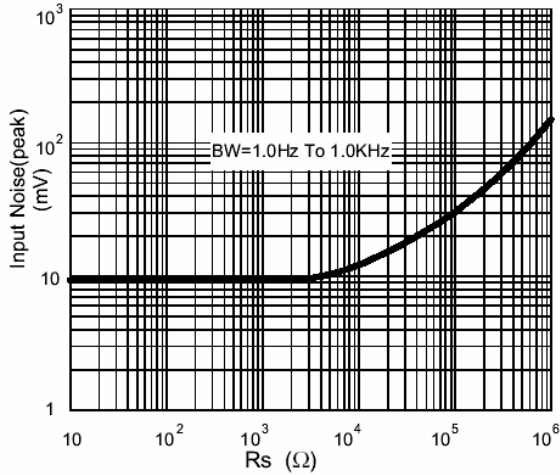


Fig 1. Burst Noise vs. Rs

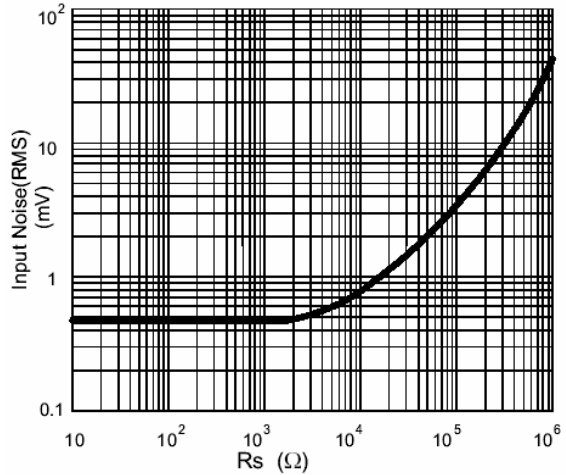


Fig 2. RMS Noise vs. Rs

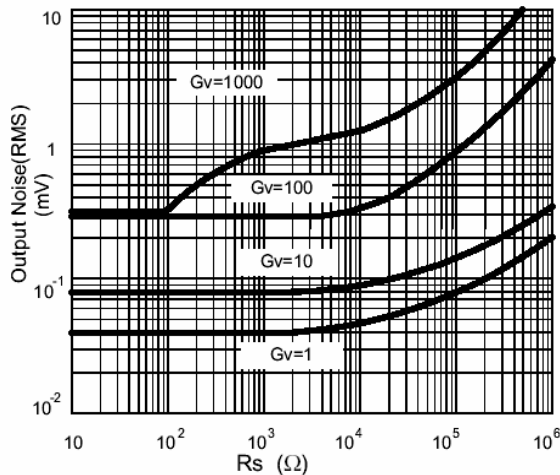


Fig 3. Output Noise vs. Rs

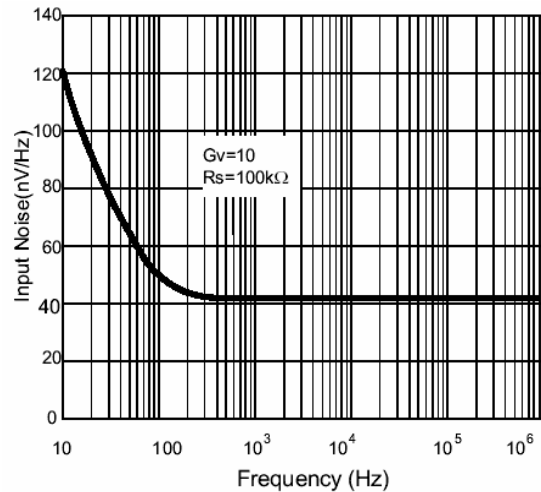


Fig 4. Spectral Noise vs. Density

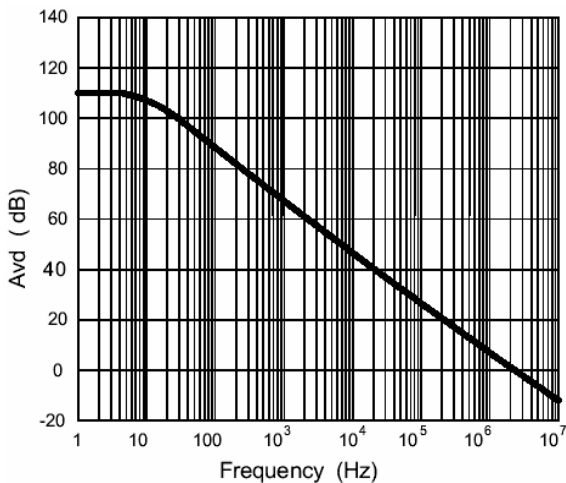


Fig 5. Open Loop Frequency Response

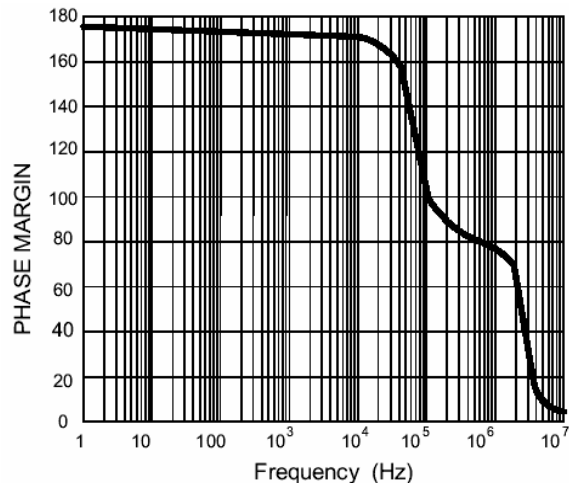


Fig 6. Phase Margin vs. Frequency

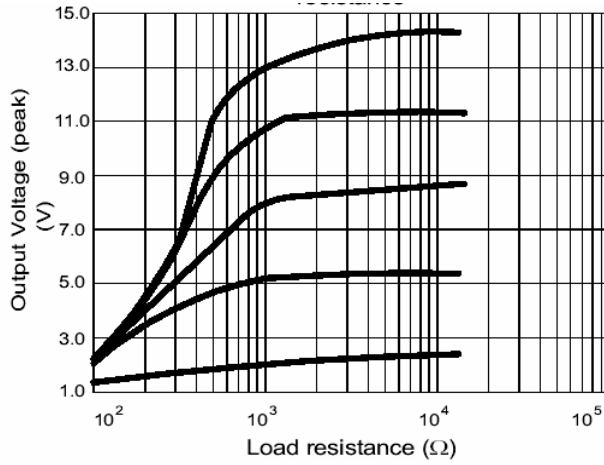


Fig 7. Positive Output Voltage Swing vs. Load Resistance

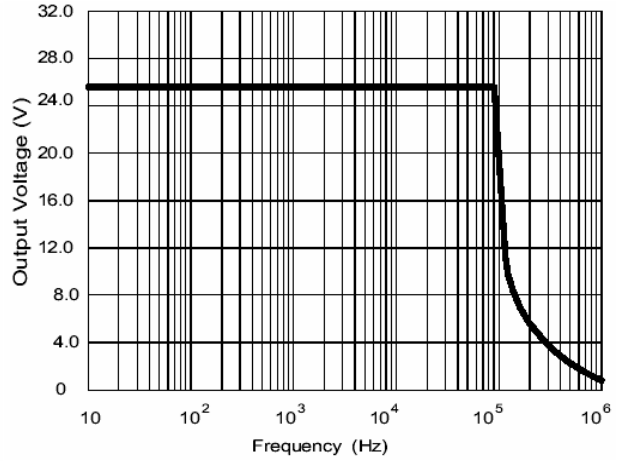


Fig 8. Power Bandwidth (Large Signal)