

Description

The S4558 is a monolithic Integrated Circuit designed for dual operational amplifier.

Features

- Power consumption as small as about 50mW (typ.)
- Built-in output short-circuit protecting circuit.
- Internal phase consumption type.
- No latch-up
- Wide same phase mode and differential voltage ranges
- High gain. low noise

Applications

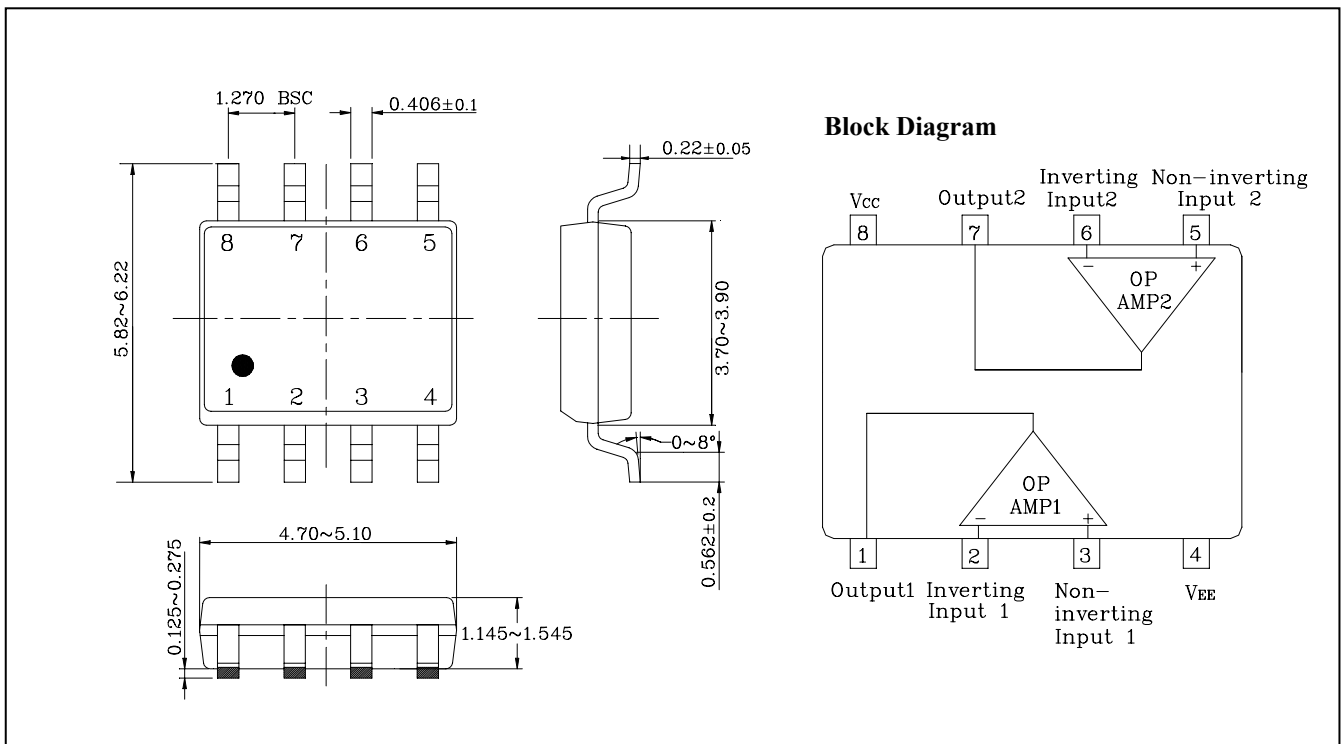
- Active filters
- Audio amplifiers
- VCOs
- Other electronic circuits

Ordering Information

Type NO.	Marking	Package Code
S4558	S4558	SOP-8

Outline Dimensions

unit : mm



Absolute maximum ratings

Characteristic	Symbol	Ratings	Unit
Supply voltage	V_{CC}	36 or ± 18	V
Differential input voltage	V_{IND}	30	V
Input voltage	V_{IN}	± 15	V
Power Dissipation	P_D	300	mW
Operating temperature	T_{opr}	-45 ~ +85	$^{\circ}C$
Storage temperature	T_{stg}	-55 ~ +150	$^{\circ}C$

Electrical Characteristics

(Unless otherwise specified. $V_{CC} = +15V$, $V_{EE} = -15V$ and $T_a = 25^{\circ}C$)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Input offset voltage	V_{IOS}	$R_g \leq 10\text{ k}\Omega$	-	0.5	6	mV
Input offset current	I_{IOS}	-	-	5	200	nA
Input bias current	I_{IB}	-	-	60	500	nA
Input common mode Voltage Range	V_{ICR}	-	± 12	± 14	-	V
Maximum Output Voltage	V_{OM}	$R_L \geq 10\text{ k}\Omega$	± 12	± 14	-	V
		$R_L \geq 2\text{ k}\Omega$	± 10	± 13	-	V
Large signal Voltage Gain	G_V	$V_{out} = \pm 10V$, $R_L \geq 2\text{ k}\Omega$	86	100	-	dB
Common mode rejection ratio	CMRR	$R_g \leq 10\text{ k}\Omega$	70	90	-	dB
Power supply rejection ratio	PSRR	$R_g \leq 10\text{ k}\Omega$	-	30	150	$\mu V/V$
Slew Rate	SR	$G_V = 1$, $R_L \geq 2\text{ k}\Omega$	-	1.0	-	V/ μs
Supply Current	I_{CC}	-	-	4.0	6.0	mA
Equivalent input noise voltage	V_{NI}	RIAA, $R_S = 1\text{ k}\Omega$, $f = 30\text{ Hz} \sim 30\text{ kHz}$	-	2.5	-	μV_{rms}
Source Current	I_{SOURCE}	-	27	-	-	mA
Sink Current	I_{SINK}	-	27	-	-	mA

Electrical Characteristic Curves

Fig. 1 $G_V - f$

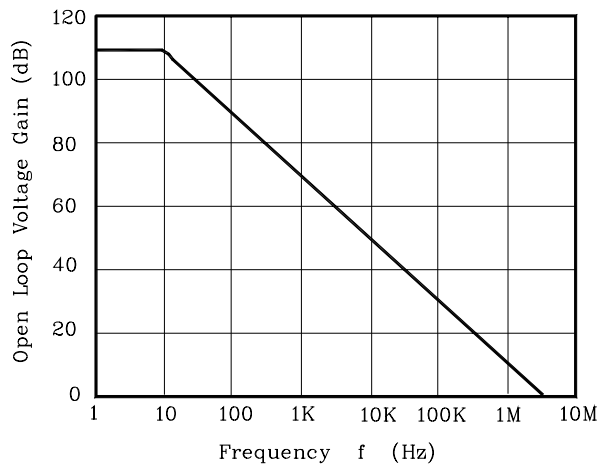


Fig. 2 $V_{OP-P} - f$

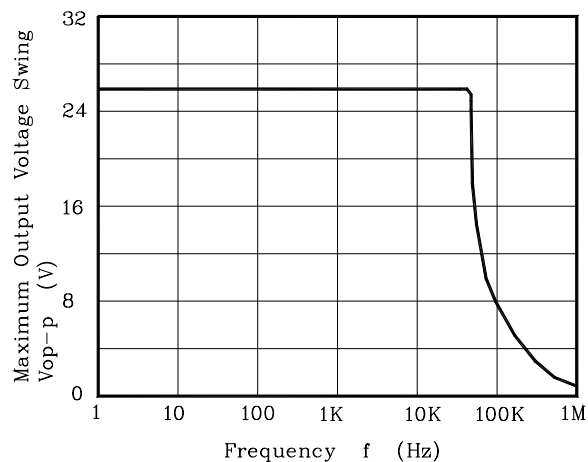


Fig. 3 $I_{IB} - T_a$

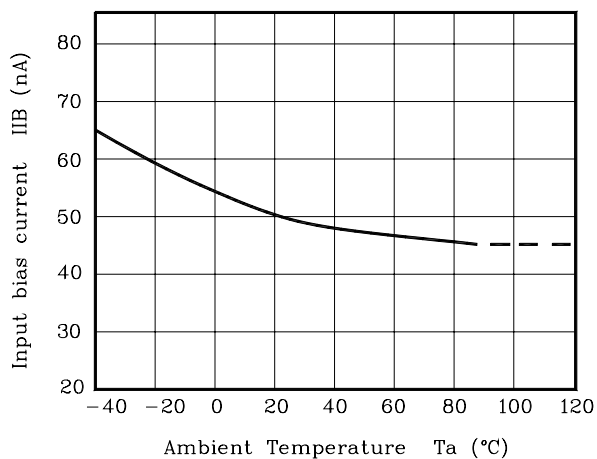


Fig. 4 $V_{OM} - V_{CC}, V_{EE}$

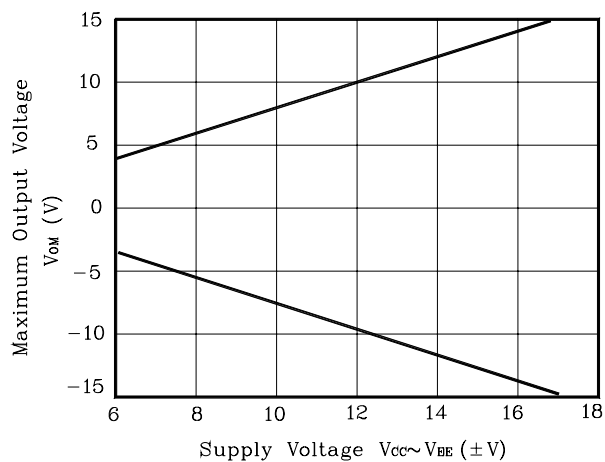


Fig. 5 $V_{OP-P} - R_L$

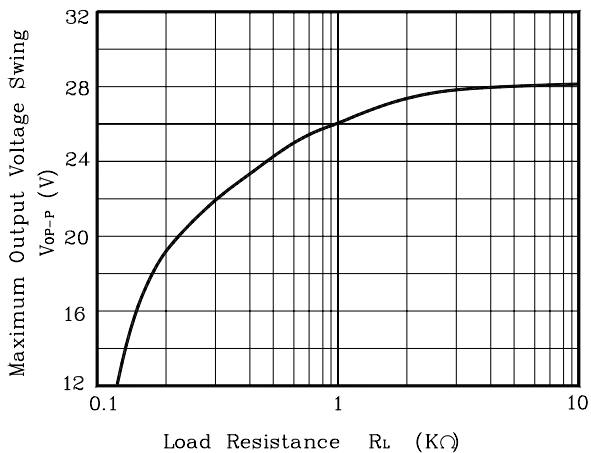
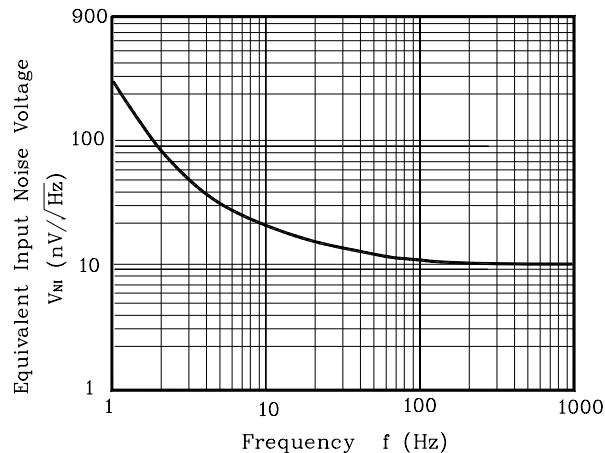


Fig. 6 $V_{NI} - f$



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