

**Description**

The A4558 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**

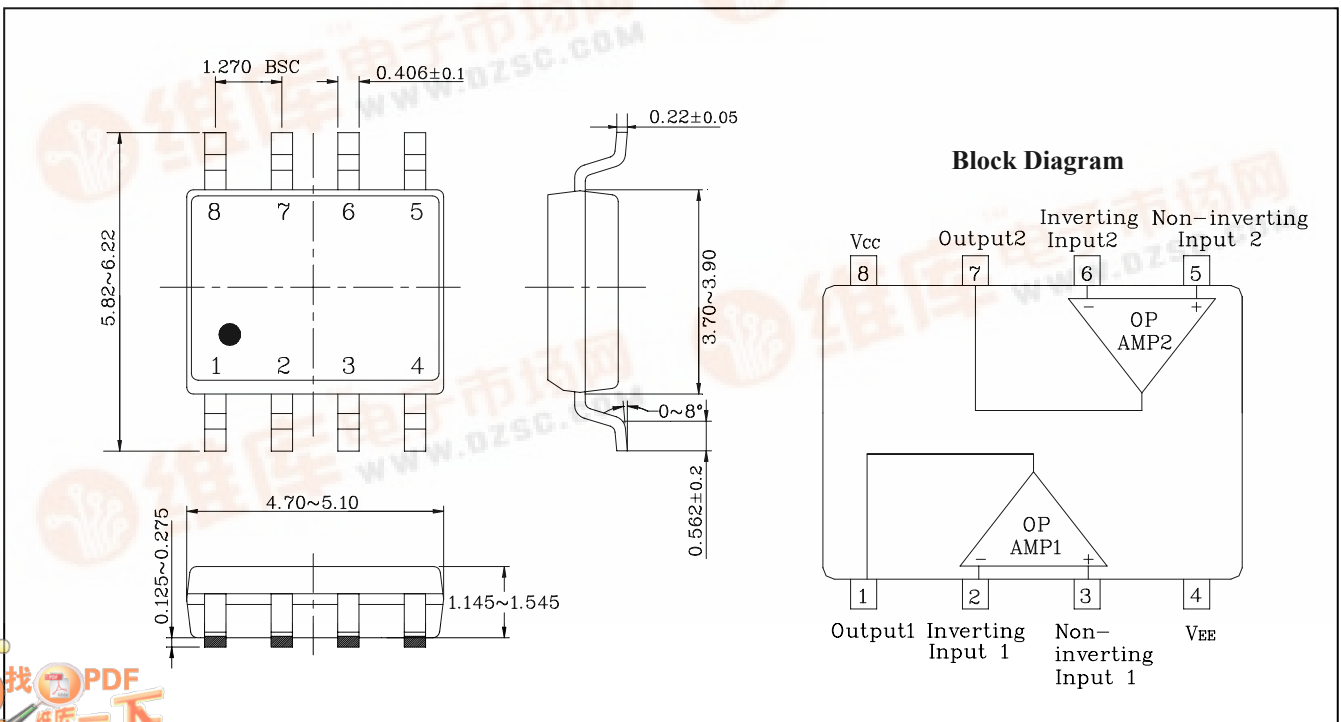
- Active filters
- Audio amplifiers
- VCOs
- Other electronic circuits

**Ordering Information**

Type NO.	Marking	Package Code
A4558	A4558	SOP-8

**Outline Dimensions**

unit : mm



**Absolute maximum ratings**

Characteristic	Symbol	Ratings	Unit
Supply voltage	$V_{CC}$	20 or $\pm 10$	V
Differential input voltage	$V_{IND}$	20	V
Input voltage	$V_{IN}$	$\pm 10$	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.  $V_{CC} = +5V$ ,  $V_{EE} = -5V$  and  $T_a = 25^{\circ}C$ )

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Input Offset Voltage	$V_{IOS}$	$R_g \leq 10\text{ k}\Omega$	0	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	$V_{ICR}$	-	$\pm 5$	$\pm 7$	-	V
Maximum Output Voltage	$V_{OM}$	$R_L = 10\text{ k}\Omega$	$\pm 2.9$	$\pm 3.4$	-	V
		$R_L = 2\text{ k}\Omega$	$\pm 2.7$	$\pm 3.2$	-	V
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	$\mu V/V$
Supply Current	$I_{CC}$	-	-	3	6	mA
Slew Rate	SR	$R_L \geq 2\text{ k}\Omega$	-	2	-	V/ $\mu s$
Unity Gain Cross Frequency	$f_T$	Open Loop	-	3	-	MHz
Large Signal Voltage Gain	$G_V$	$V_{CC} = 8V$ , $V_{EE} = -8V$ , $R_L = 2K$	86	100	-	dB
Output Sink Current	$I_{SINK}$	-	15	25	-	mA
Output Source Current	$I_{SOURCE}$	-	15	25	-	mA

## Electrical Characteristic Curves

Fig. 1  $G_V$ -f

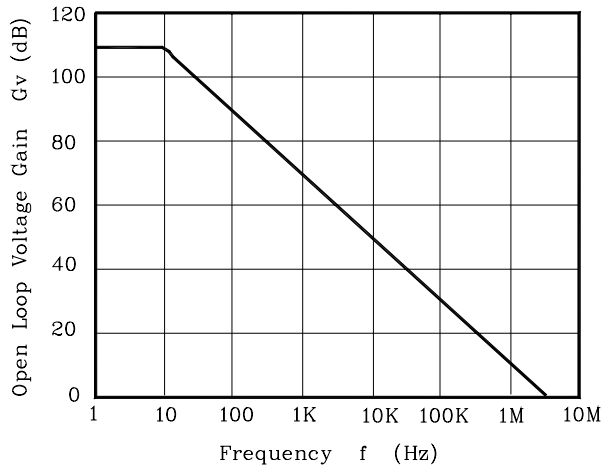


Fig. 2  $V_{OPP}$ -f

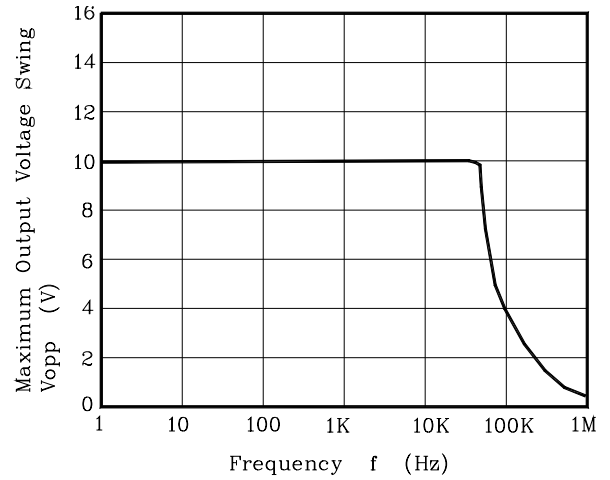


Fig. 3  $I_{IB}$ - $T_a$

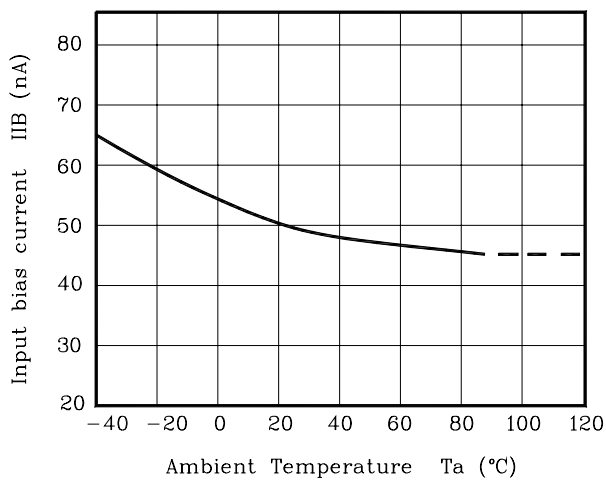
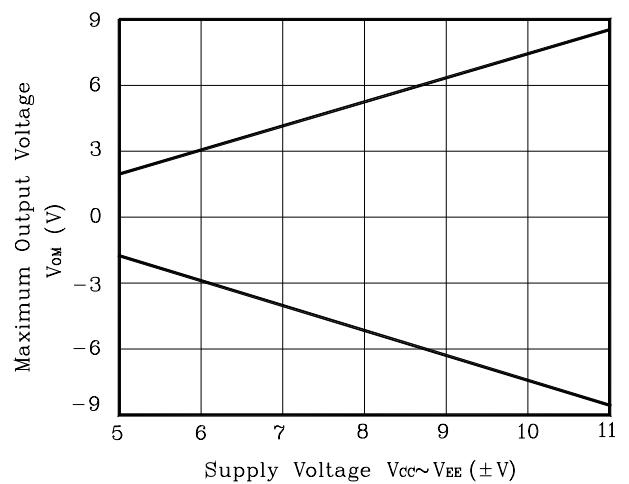


Fig. 4  $V_{OM}$ - $V_{cc}$ ,  $V_{EE}$



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