

## 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

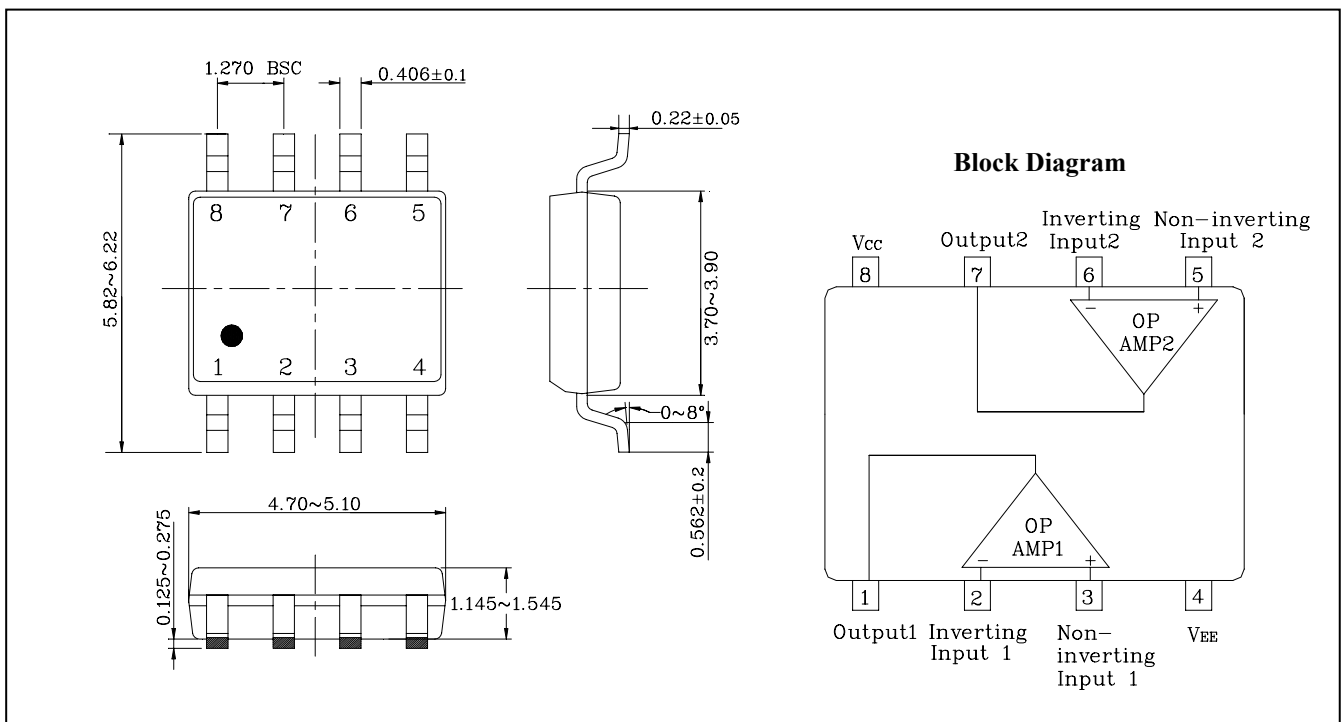
- Active filters
- Audio amplifiers
- VCOs
- Other electronic circuits

## 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	°C
Storage temperature	$T_{stg}$	-55 ~ +150	°C

**Electrical Characteristics**

(Unless otherwise specified.  $V_{CC} = +5V$ ,  $V_{EE} = -5V$  and  $T_a = 25\text{ °C}$ )

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	uV/V
Supply Current	$I_{CC}$	-	-	3	6	mA
Slew Rate	SR	$R_L \geq 2\text{ k}\Omega$	-	2	-	V/us
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

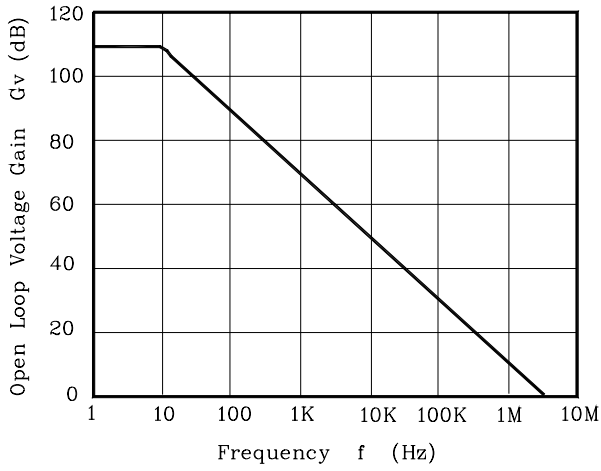


Fig. 2  $V_{OPP}$ -f

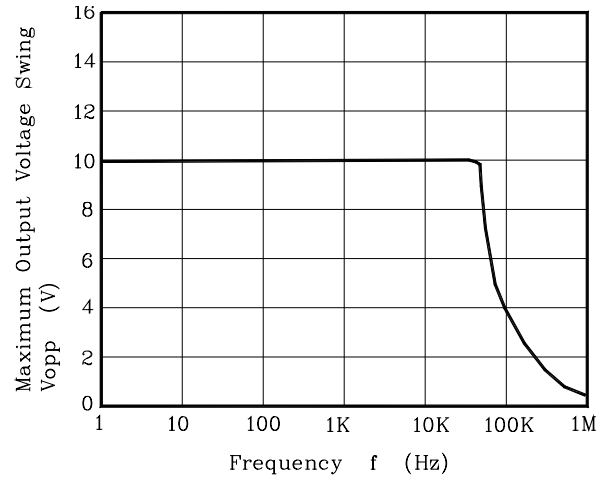


Fig. 3  $I_{IB}$ - $T_a$

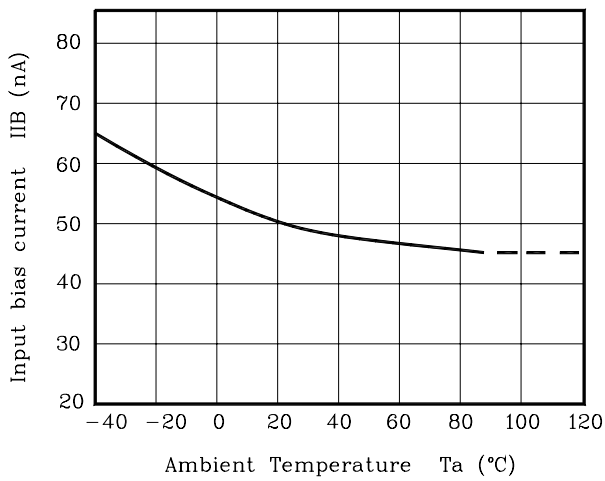
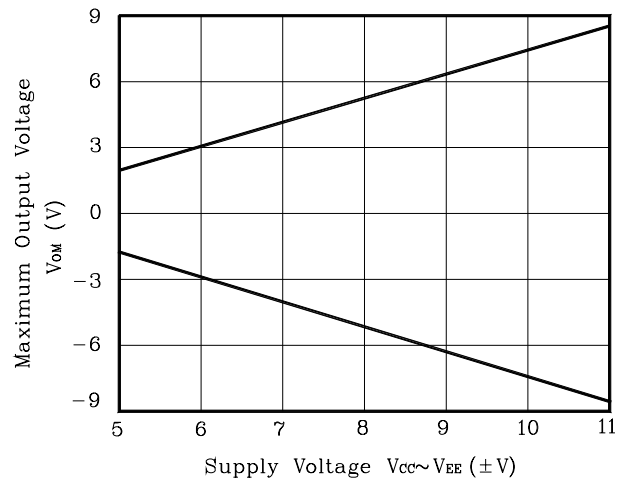


Fig. 4  $V_{OM}$ - $V_{CC}$ ,  $V_{EE}$



**These AUK products are intended for usage in general electronic equipments(Office and communication equipment, measuring equipment, domestic electrification, etc.).**

**Please make sure that you consult with us before you use these AUK products in equipments which require high quality and/or reliability, and in equipments which could have major impact to the welfare of human life(atomic energy control, airplane, spaceship, traffic signal, combustion central, all types of safety device, etc.).**

**AUK cannot accept liability to any damage which may occur in case these AUK products were used in the mentioned equipments without prior consultation with AUK.**