

Description

The A358 consists of two independent high gain Internally frequency compensated operational amplifiers designed to operate from a single power supply over a wide range of voltage.

Features

- Input common mode voltage range includes ground
- Internally frequency compensated for unity gain
- Large DC voltage gain : 100dB
- Wide bandwidth for unity gain : 1 MHz
- Very low power consumption
- Wide supply voltage range : Single : 3V ~ 20V, Dual : $\pm 1.5 \sim \pm 10V$

Applications

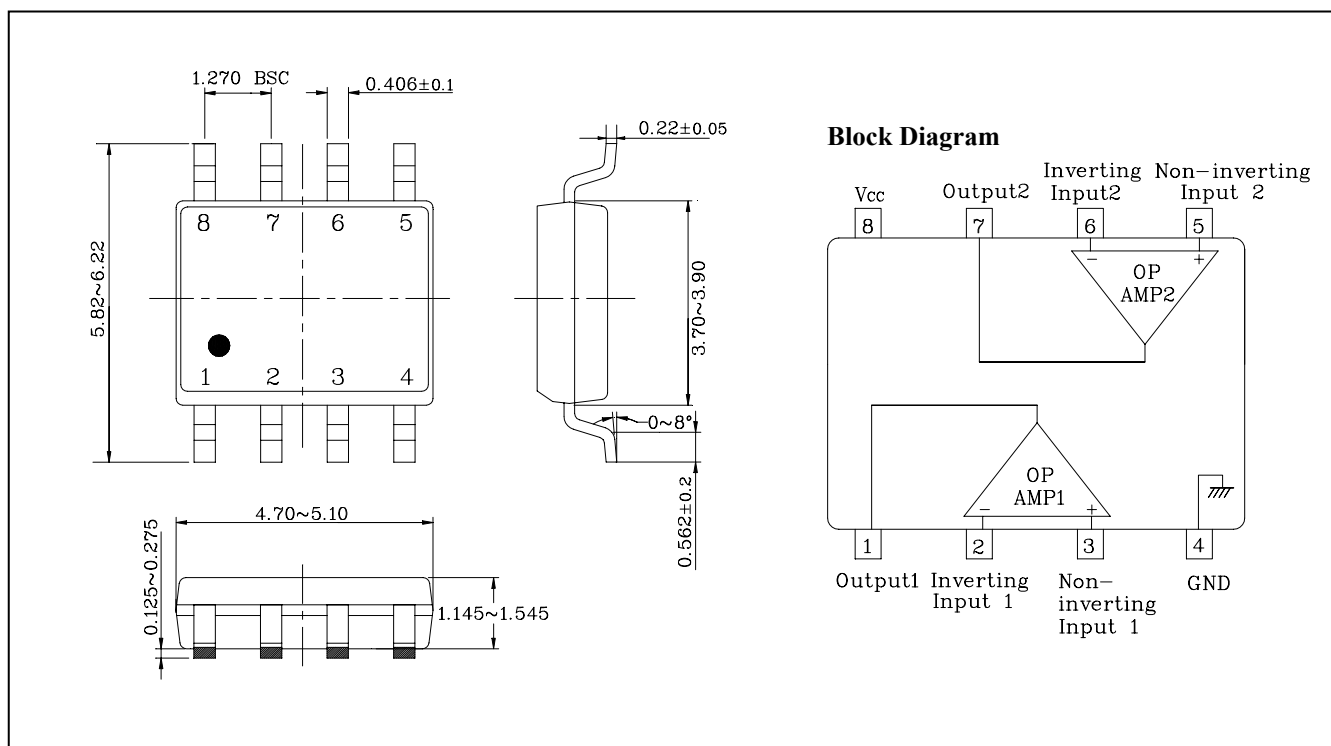
- Transducer amplifier
- DC gain blocks
- Conventional operational amplifiers

Ordering Information

Type NO.	Marking	Package Code
A358	A358	SOP-8

Outline Dimensions

unit : mm



Absolute maximum ratings

Characteristic	Symbol	Ratings	Unit
Supply voltage	V_{CC}	20 or ± 10	V
Differential input voltage	V_{IND}	20	V
Input voltage	V_{IN}	± 10	V
Power Dissipation	P_D	300	mW
Operating temperature	T_{opr}	$-45 \sim +85$	$^{\circ}\text{C}$
Storage temperature	T_{stg}	$-55 \sim 150$	$^{\circ}\text{C}$

Electrical Characteristics

(Unless otherwise specified. $V_{CC} = 5\text{V}$, $V_{EE} = \text{GND}$, $T_a = 25^{\circ}\text{C}$)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Input offset voltage	V_{IOS}	$R_g \leq 10 \text{ K}\Omega$	-	2	7	mV
Input offset current	I_{IOS}		-	5	50	nA
Input bias current	I_{IB}		-	45	250	nA
common mode voltage range	V_{ICR}	$V_{CC} = 15\text{V}$, $V_{EE} = \text{GND}$	0	-	$V_{CC} - 1.5$	V
Supply current	I_{CC}	$V_{CC} = 15\text{V}$, $R_L = \infty$	-	0.7	1.4	mA
		$V_{CC} = 5\text{V}$, $R_L = \infty$	-	0.5	1.2	
Output voltage swing	V_{OH}	$V_{IN+} = 1\text{V}$, $V_{IN-} = 0\text{V}$, $R_L = 2 \text{ K}\Omega$	2.5	3.5	4.2	V
	V_{OL}	$V_{IN+} = 0\text{V}$, $V_{IN-} = 1\text{V}$, $R_L = 2 \text{ K}\Omega$	-	2	20	mV
Common mode rejection ratio	CMRR	$V_{CC} = 15\text{V}$	65	90	-	dB
Power supply rejection ratio	PSRR	$V_{CC} = 15\text{V}$	65	100	-	dB
Output source current	I_{O+}	$V_{IN+} = 1\text{V}$, $V_{IN-} = 0\text{V}$, $V_{OUT} = 0\text{V}$	20	40	-	mA
Output sink current	I_{O-}	$V_{IN+} = 0\text{V}$, $V_{IN-} = 1\text{V}$, $V_{OUT} = 5\text{V}$	10	20	-	mA
Slew Rate	S_R	-	-	0.5	-	V/ μS

Electrical Characteristic Curves

Fig. 1 $V_{IOS}-T_a$

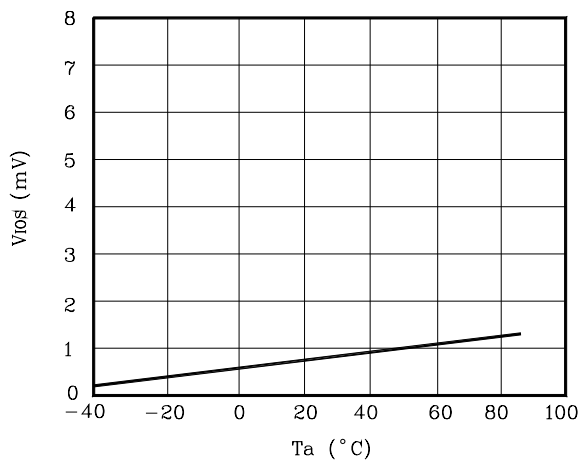


Fig. 2 I_O-T_a

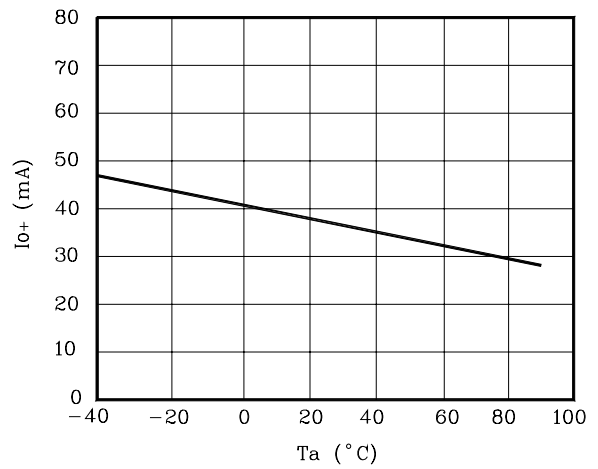


Fig. 3 CMRR-f

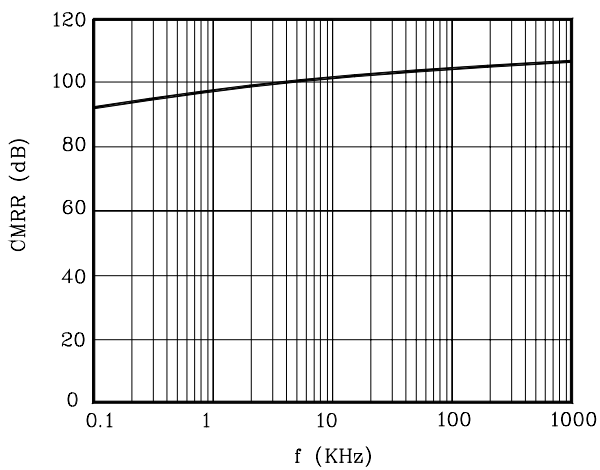
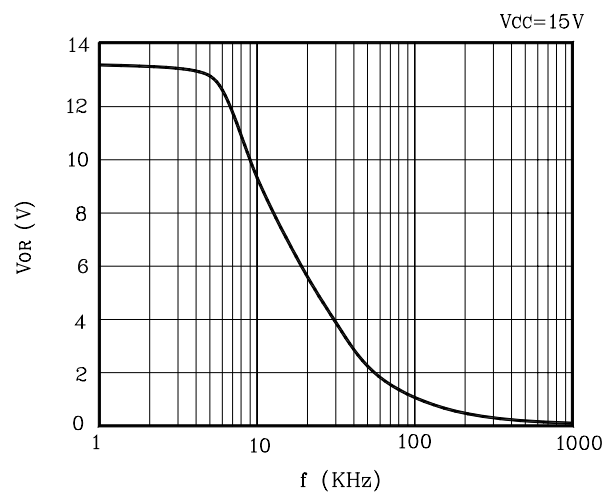


Fig. 4 $V_{OR}-f$



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