AUK Semiconductor

A358

Low Power Dual OP AMP

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 : ±1.5 ~ ±10V

Applications

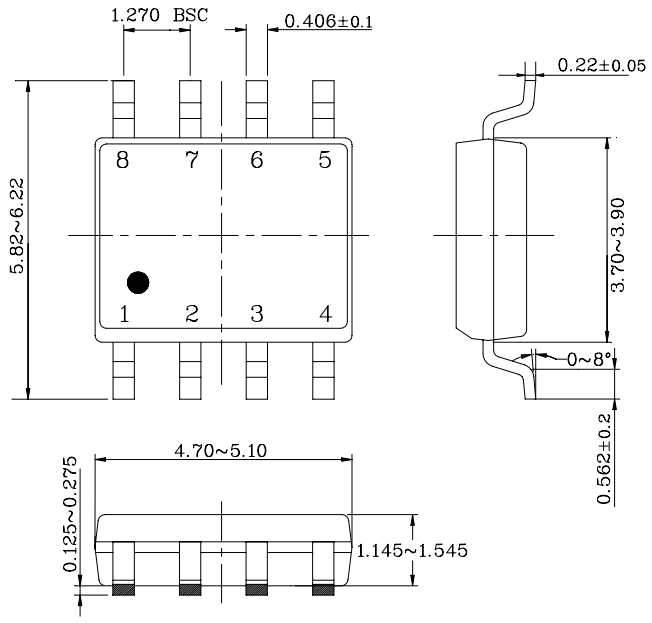
- Transducer amplifier
- DC gain blocks
- Conventional operational amplifiers

Ordering Information

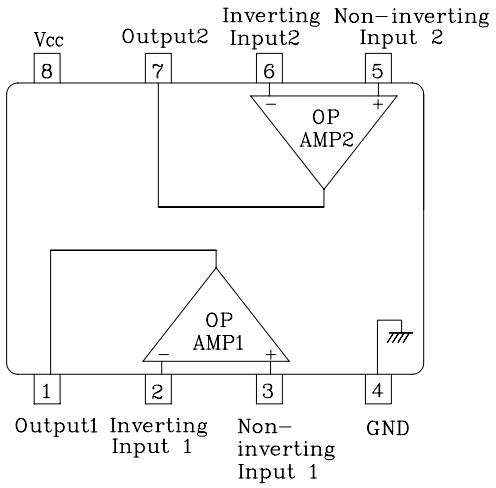
Type NO.	Marking	Package Code
A358	A358	SOP-8

Outline Dimensions

unit : mm



Block Diagram



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 ~ +85	°C
Storage temperature	T_{stg}	-55 ~ 150	°C

Electrical Characteristics

(Unless otherwise specified. V_{CC} = 5V, V_{EE} = GND, Ta=25°C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Input offset voltage	V_{IOS}	Rg ≤ 10 KΩ	-	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} = 15V, V_{EE} = GND	0	-	V_{CC} –1.5	V
Supply current	I_{CC}	V_{CC} = 15V, R_L = ∞	-	0.7	1.4	mA
		V_{CC} = 5V, R_L = ∞	-	0.5	1.2	
Output voltage swing	V_{OH}	V_{IN+} = 1V, V_{IN-} = 0V, R_L=2 KΩ	2.5	3.5	4.2	V
	V_{OL}	V_{IN+} = 0V, V_{IN-} = 1V, R_L=2 KΩ	-	2	20	mV
Common mode rejection ratio	CMRR	V_{CC} = 15V	65	90	-	dB
Power supply rejection ratio	PSRR	V_{CC} = 15V	65	100	-	dB
Output source current	I_{O+}	V_{IN+} = 1V, V_{IN-} = 0V, V_{OUT} = 0V	20	40	-	mA
Output sink current	I_{O-}	V_{IN+} = 0V, V_{IN-} = 1V, V_{OUT} = 5V	10	20	-	mA
Slew Rate	S_R	-	-	0.5	-	V/uS

Electrical Characteristic Curves

Fig. 1 V_{IOS}-T_a

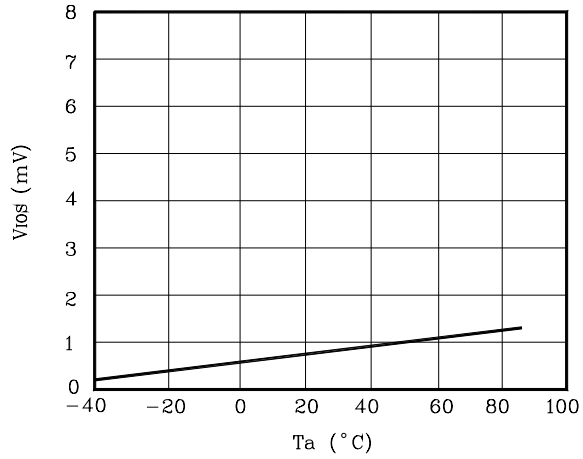


Fig. 2 I_O-T_a

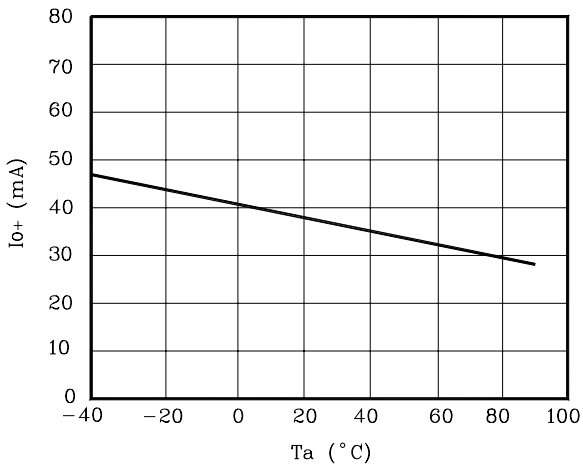


Fig. 3 CMRR-f

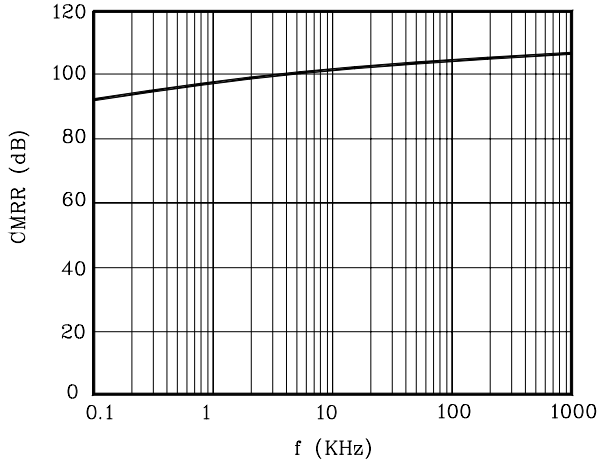
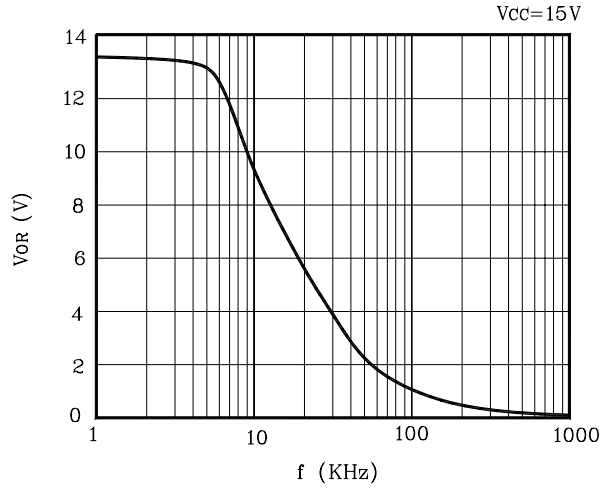


Fig. 4 V_{OR}-f



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