AUK Semiconductor

S45S58

Low Noise Single OP AMP

Description

The S45S58 is a monolithic Integrated Circuit designed for Single 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

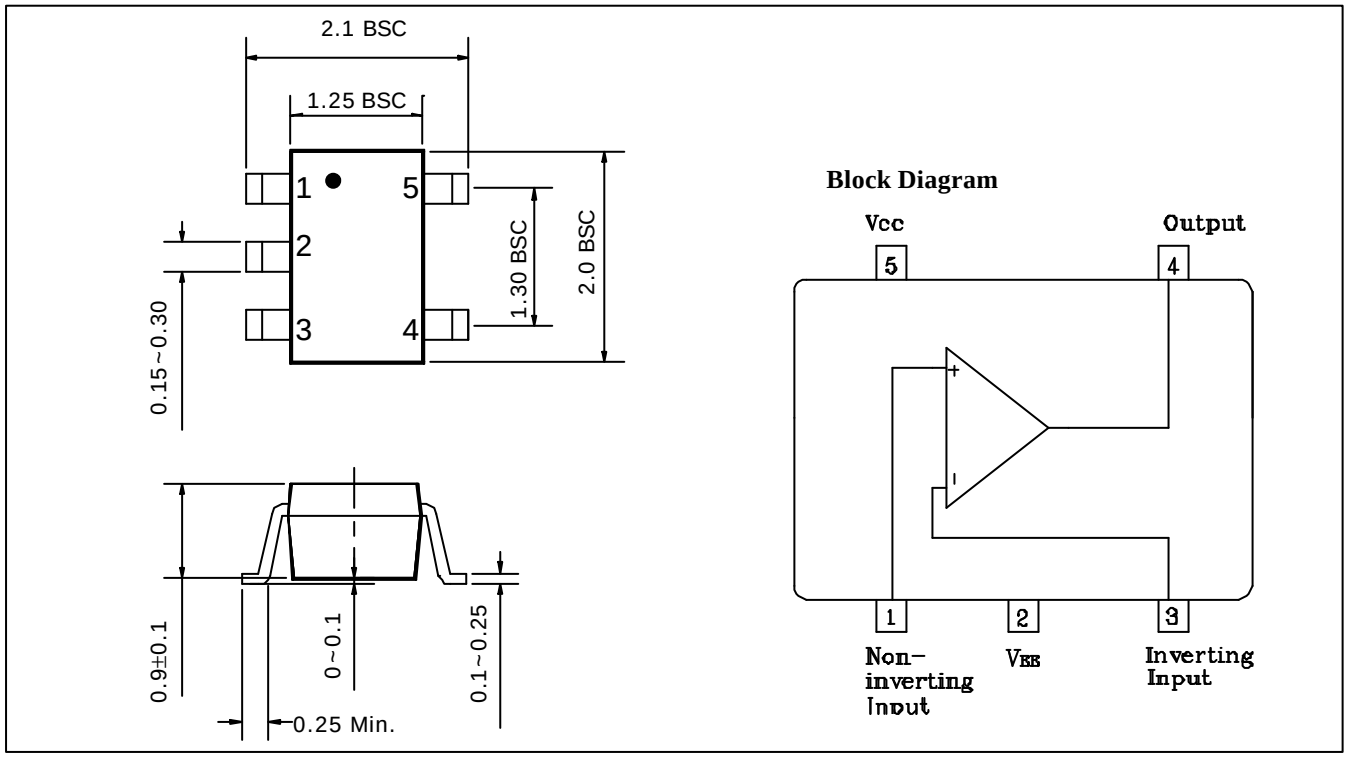
• Active filters
· Audio amplifiers
· VCOs
· Other electronic circuits

Ordering Information

Type NO.	Marking	Package Code
S45S58	458	SOT-25

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

Electrical Characteristics

(Unless otherwise specified. V_{CC} = +15V, V_{EE}=-15V and Ta = 25°C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Input offset voltage	V_{IOS}	Rg ≤10 kΩ	-	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≥10 kΩ	±12	±14	-	V
		R_L≥2 kΩ	±10	±13	-	V
Large signal Voltage Gain	G_V	Vout=±10V, RL≥2 kΩ	86	100	-	dB
Common mode rejection ratio	CMRR	Rg ≤10 kΩ	70	90	-	dB
Power supply rejection ratio	PSRR	Rg ≤10 kΩ	-	30	150	uV/V
Slew Rate	SR	G_V=1, R_L≥2 kΩ	-	1.0	-	V/us
Supply Current	I_{CC}	-	-	4.0	6.0	mA
Equivalent input noise voltage	V_{NI}	RIAA, R_S=1 kΩ, f=30 Hz~30 kHz	-	2.5	-	uVrms
Source Current	I_{SOURCE}	-	27	-	-	mA
Sink Current	I_{SINK}	-	27	-	-	mA

Electrical Characteristic Curves

Fig. 1 G_V - f

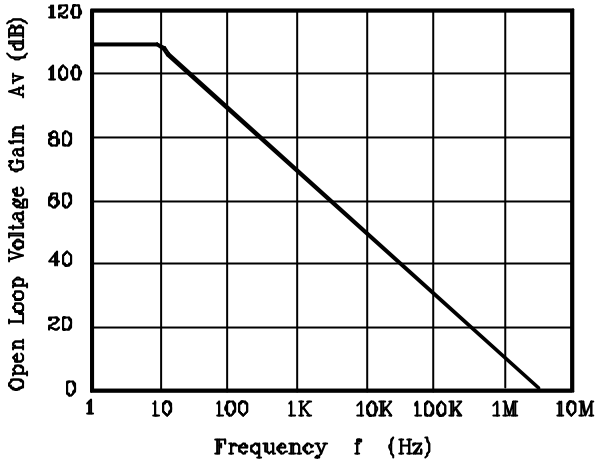


Fig. 2 V_{OP-P} - f

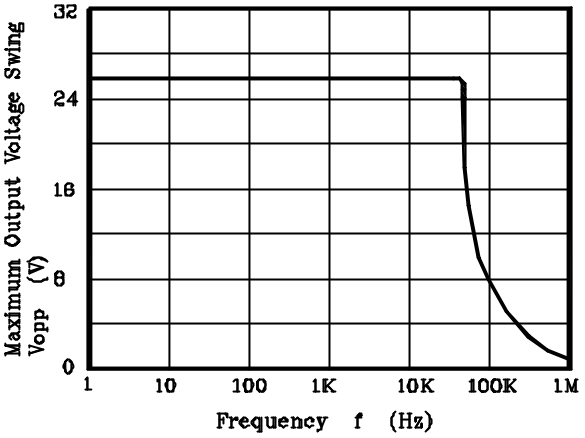


Fig. 3 I_{IB} - T_a

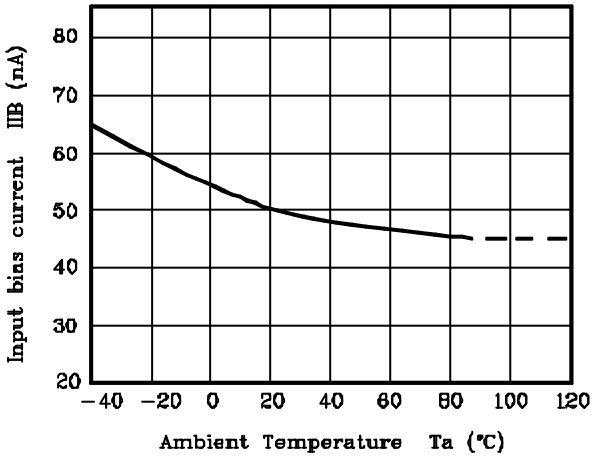


Fig. 4 V_{OM} - V_{CC}, V_{EE}

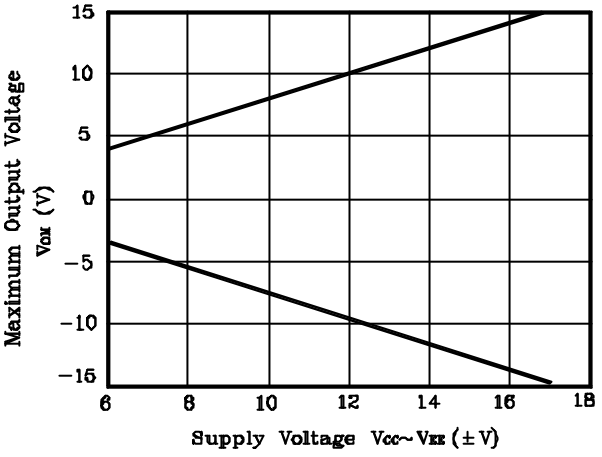


Fig. 5 V_{OP-P} - R_L

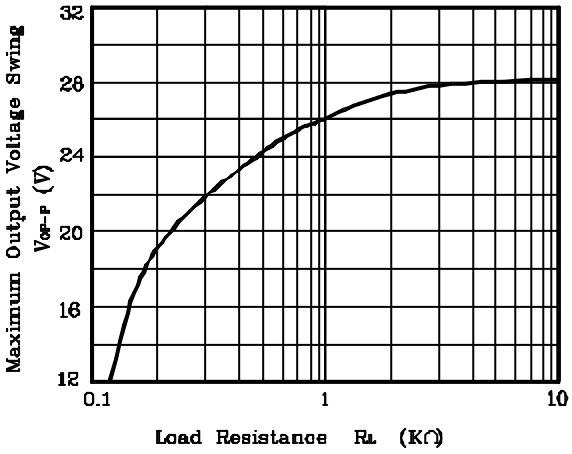


Fig. 6 V_{NI} - f