

YG4558/EL

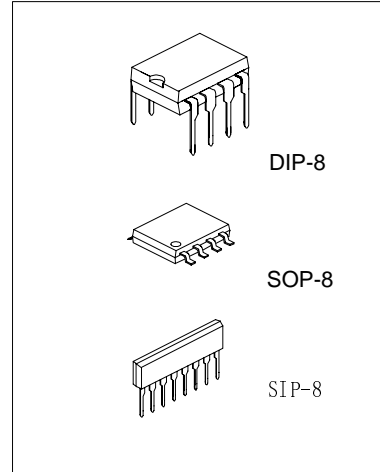
DUAL OPERATIONAL AMPLIFIER

DESCRIPTION

YG4558 is a monolithic integrated circuit designed for dual operational amplifier.

FEATURES

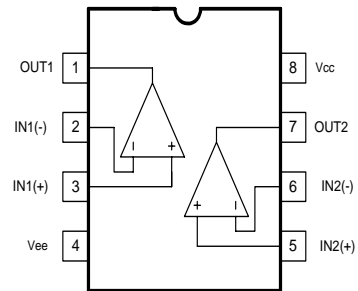
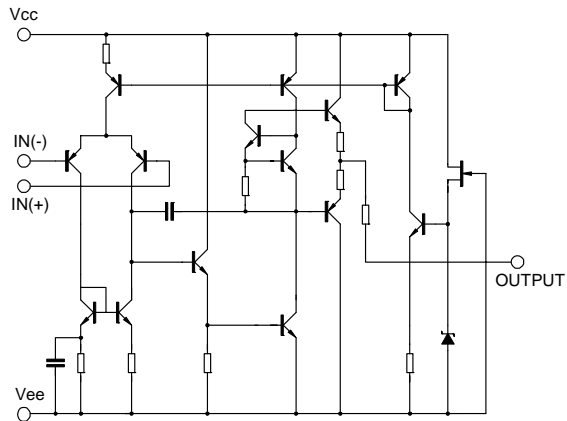
- *No frequency compensation required.
- *No latch-up
- *Large common mode and differential voltage range
- *Parameter tracking over temperature range
- *Gain and phase match between amplifiers
- *Internally frequency compensated
- *Low noise input transistors



ORDERING INFORMATION

Device	Package
YG4558	DIP-8-300-2.54
YG4558E	SOP-8-225-27
YG4558L	SIP-8-2.54

BLOCK DIAGRAM



ABSOLUTE MAXIMUM RATINGS

Characteristic	Symbol	Value	Unit
Supply Voltage	V _{CC}	±22	V
Differential input voltage	V _{I(DIFF)}	±18	V
Power Dissipation	P _D	400	mW
Input Voltage	V _I	±15	V
Operating Temperature	T _{OPR}	0~+70	°C
Storage Temperature	T _{STG}	-65~+150	°C

ELECTRICAL CHARACTERISTICS(T_a=25°C ,V_{CC}=15V,V_{EE}=-15V)

Characteristic	Symbol	Test Condition	Min	Typ.	Max	Unit
Supply Current	I _{CC}			3.5	5.6	mA
Input offset voltage	V _{IO}	R _S <10kΩ		2	6	mV
Input offset current	I _{IO}			5	200	nA
Input bias current	I _{BIAS}			30	500	nA
Large signal voltage gain	G _V	V _{O(p-p)} =10V,R _L <2kΩ	20	200		V/mV
Common Mode Input Voltage Range	V _{I(R)}		±12	±13		V
Common Mode Rejection Ratio	CMRR	R _S <10kΩ	70	90		dB
Supply Voltage Rejection Ratio	PSRR	R _S <10kΩ	76	90		dB
Output Voltage swing	V _{O(p-p)}	R _L >10kΩ		±12	±14	V
Power Consumption	P _C			70	170	mV
Slew Rate	SR	V _i =10V,R _L >2kΩ,C _L <100pF	1.2			V/μs
Rise Time	T _{RIS}	V _i =20mV,R _L >2kΩ,C _L <100pF		0.3		μs
Overshoot	OS	V _i =20mV,R _L >2kΩ,C _L <100pF		15		%

TYPICAL PERFORMANCE CHARACTERISTICS

Fig.1 Positive output voltage swing vs Load resistance

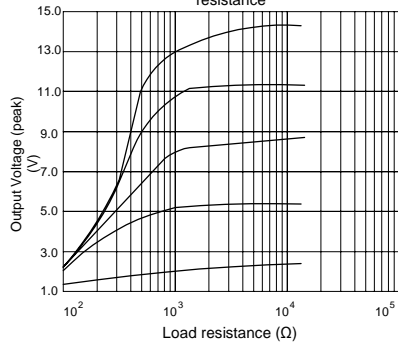


Fig.2 Positive output voltage swing vs Load resistance

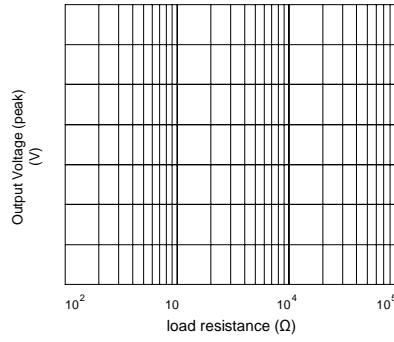


Fig.3 Power bandwidth (large signal swing vs frequency)

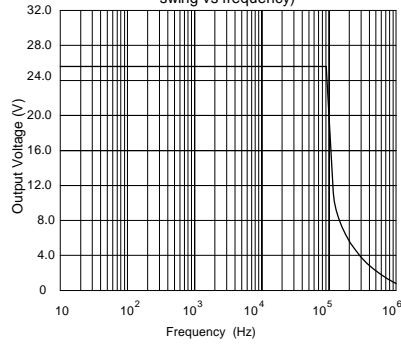


Fig. 4 Burst Noise vs Rs

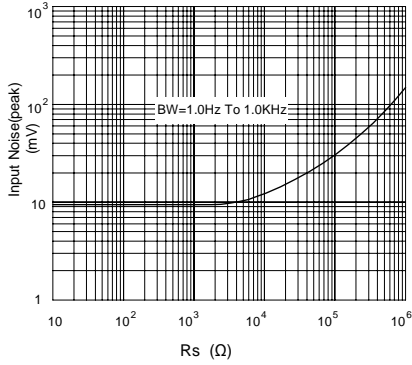


Fig. 5 RMS Noise vs Rs

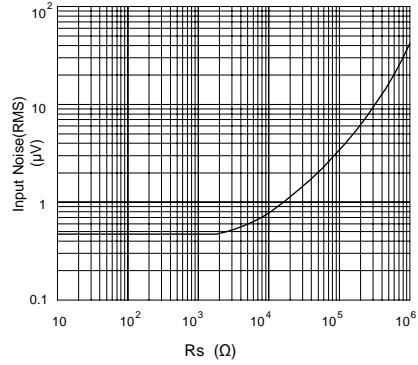


Fig. 6 Output Noise vs Rs

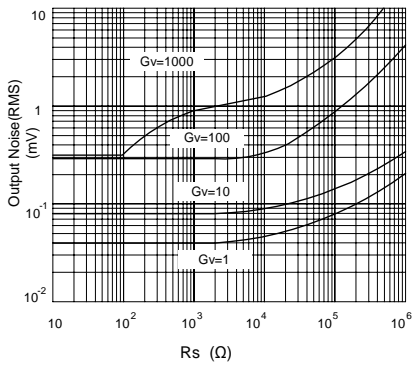


Fig. 7 Spectral Noise Density

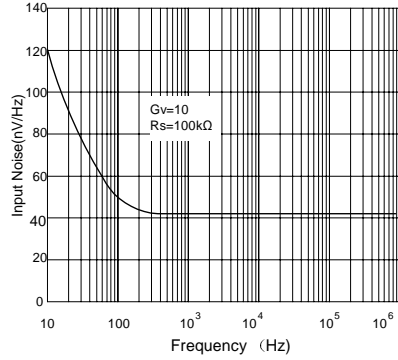


Fig. 8 Open loop frequency response

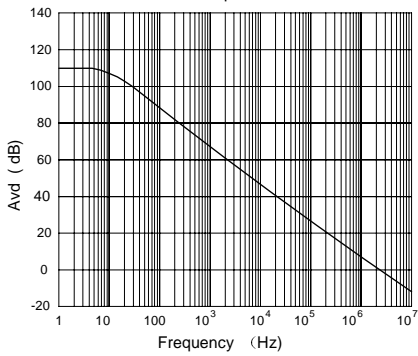
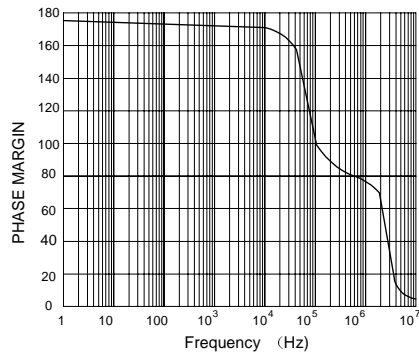
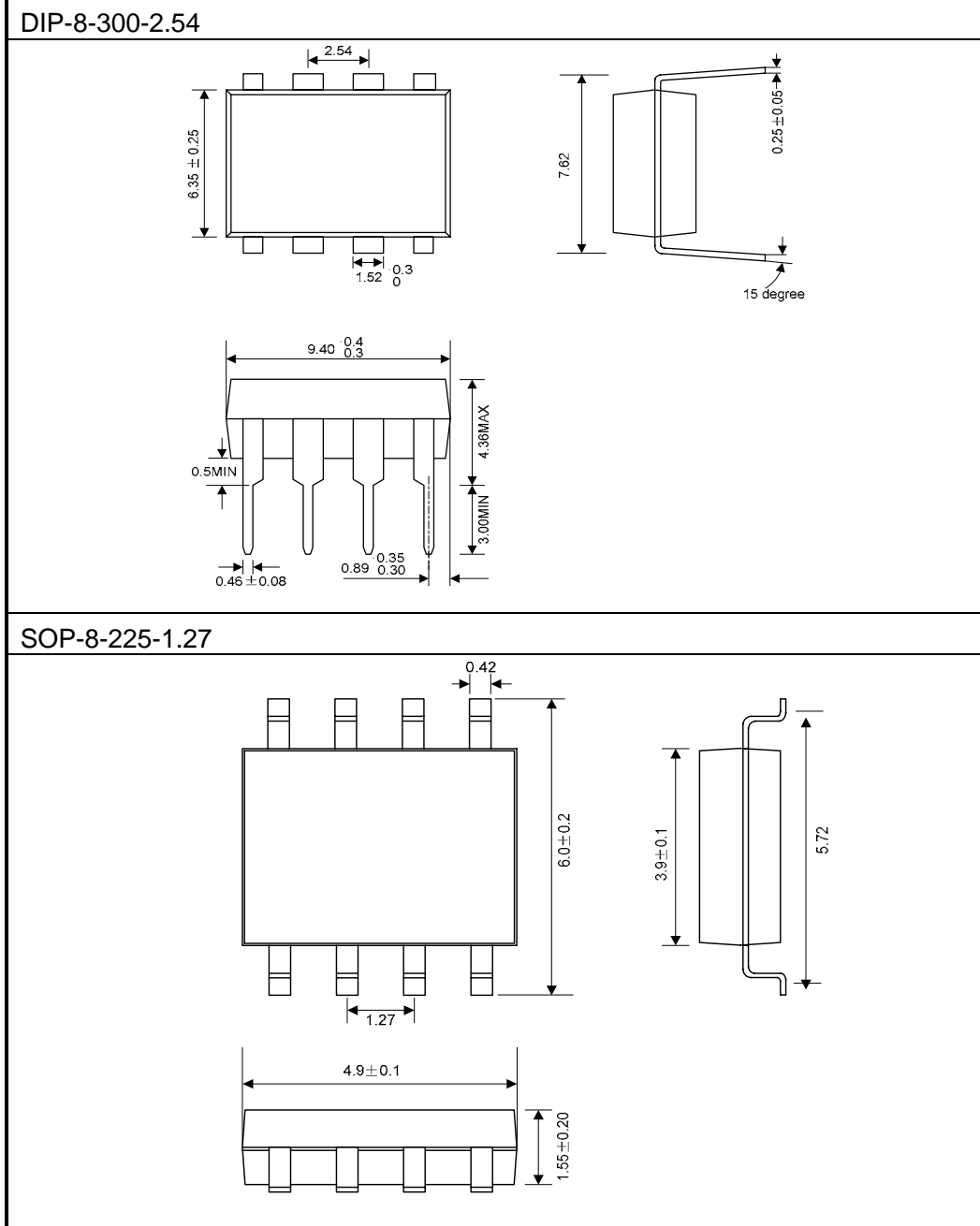


Fig. 9 PHASE MARGIN vs FREQUENCY

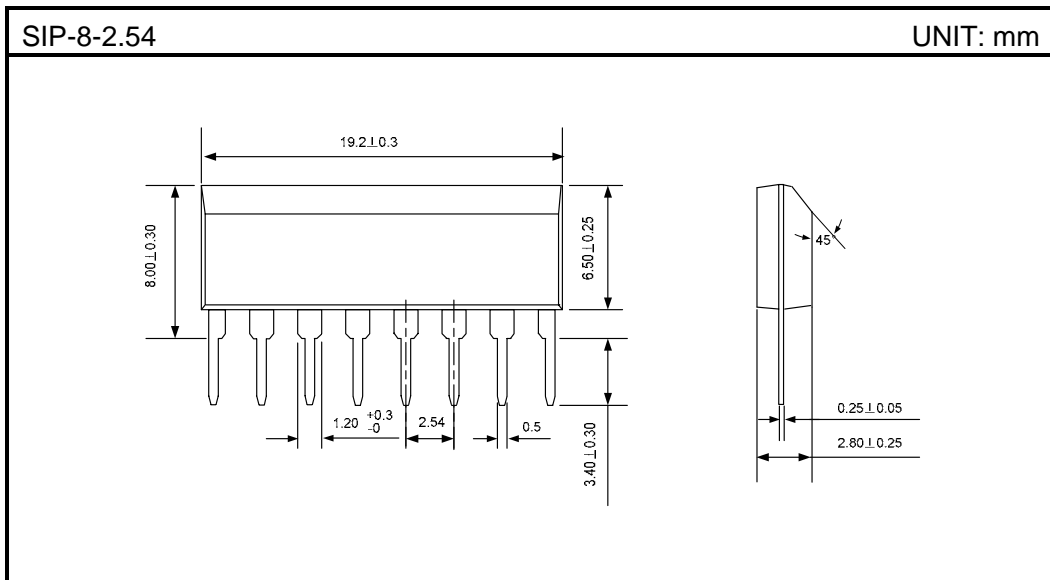


PACKAGE DIMENSIONS



YG4558/EL

LINEAR INTEGRATED CIRCUIT



Attach

Revision History

Data	REV	Description	Page
	1.0	Original	
2003.10.23	1.1	Add "OREDRING INFORMATION"	1
2005.3.17	1.2	Change "UTC4558 To UTC4558/E"	1
		Revise "Package Dimensions"	5
2009.11.10	1.3	Add"SIP-8-2.54" 1,6	