

ASOPD4558 双运算放大器

概述:

ASOPD4558 内部包括有两个独立的、高增益、内部频率补偿的双运算放大器，适合于电源电压范围很宽的

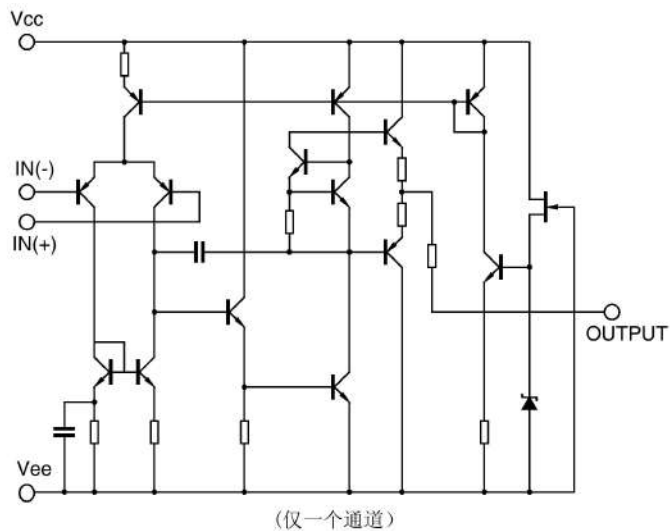
单电源使用，也适用于双电源工作模式，在推荐的工作条件下，电源电流与电源电压无关。它的使用范围包括传感放大器、直流增益模块和其他所有可用单电源供电的使用运算放大器的场合。

ASOPD4558 采用 SOP8 封装形式。

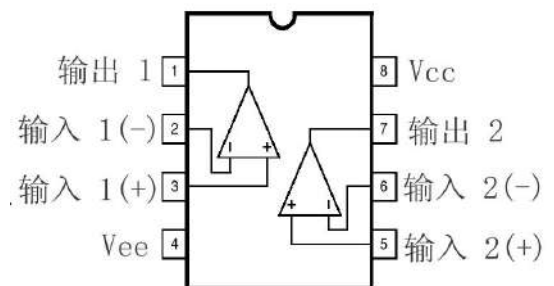
特点:

- 内部频率补偿
- 直流电压增益高（约 100dB）
- 单位增益频带宽（约 5MHz）
- 低输入偏流
- 低输入失调电压和失调电流
- 共模输入电压范围宽，包括接地
- 差模输入电压范围宽，等于电源电压范围
- 输出电压摆幅大（0 至 $V_{CC}-1.5V$ ）

内部电路图:



管脚排列图





引出端功能符号:

引出端序号	功 能	符 号	引出端序号	功 能	符 号
1	输出 1	OUT 1	5	输入 2 (+)	IN 2(+)
2	输入 1 (-)	IN 1(-)	6	输入 2 (-)	IN 2(-)
3	输入 1 (+)	IN 1(+)	7	输出 2	OUT 2
4	V _{ee}	V _{ee}	8	电源电压	V _{cc}

极限值 (绝对最大额定值, 若无其它规定, T_{amb}=25℃)

参 数 名 称	符 号	数 值	单 位
电源电压	V _{cc}	±22	V
差动输入电压	V _{I(DIFF)}	±18	V
输入电压	V _I	±15	V
工作环境温度范围	T _{amb}	0~+70	℃
贮存温度范围	T _{stg}	-65~+150	℃

电特性 (若无其它规定, T_{amb}=25℃, V_{cc}=15, V_{ee}=-15V)

特 性	测 试 条 件	符 号	规 范 值			单 位
			最 小	典 型	最 大	
电源电流		I _{cc}		4.0	6.0	mA
输入失调电压	R _s <10kΩ	V _{IO}	-	2	6.0	mV
输入失调电流		I _{IO}		5	200	nA
输入偏置电流		I _{BIAS}	-	30	500	nA
输入共模电压范围		V _{I(R)}	-	±12	±13	V
大信号电压增益	V _O (p-p)=±10V, R _L <2kΩ	G _v	-	20	200	V/mV
输出电压摆幅	R _L >10kΩ	V _O (p-p)	±12	±14	-	V
	R _L >2kΩ		±10	±13	-	
共模抑制比	R _s <10kΩ	CMRR	-	70	90	dB
电源电压抑制比	R _s <10kΩ	PSRR	-	76	90	dB



典型工作参数曲线

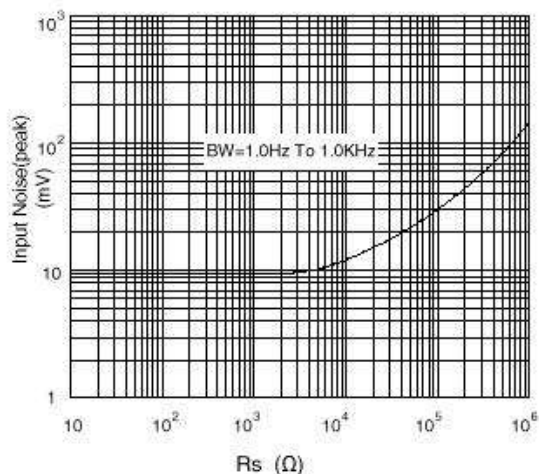
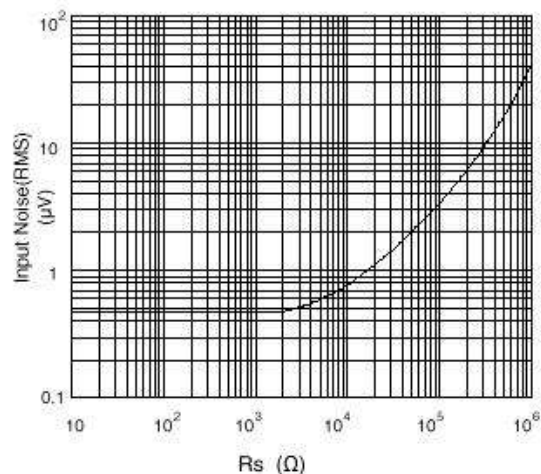
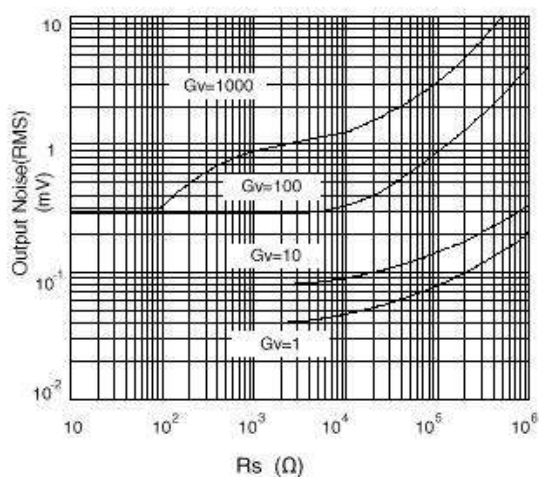
图 1 Burst Noise vs R_s 图 2 RMS Noise vs R_s 图 3 Output Noise vs R_s 

图 4 Spectral Noise Density

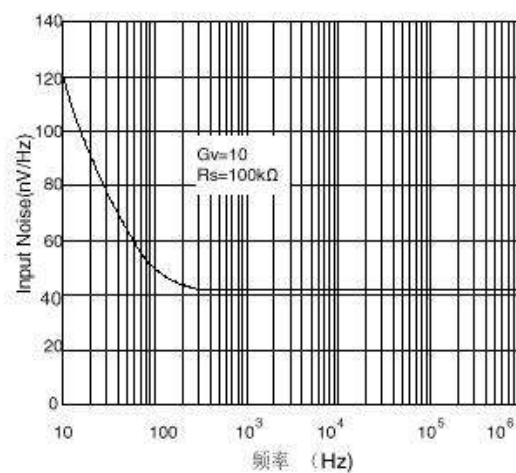


图 5 开环频率响应

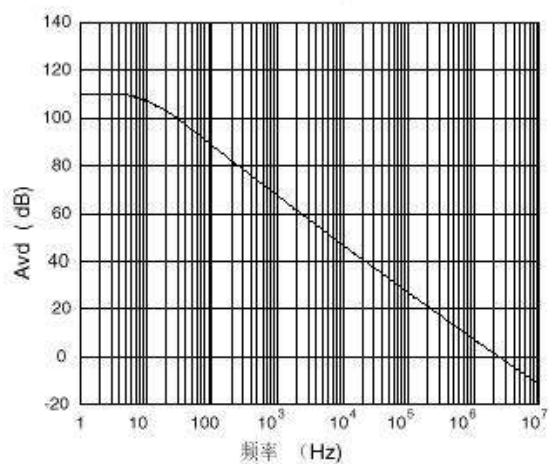


图 6 PHASE MARGIN vs FREQUENCY

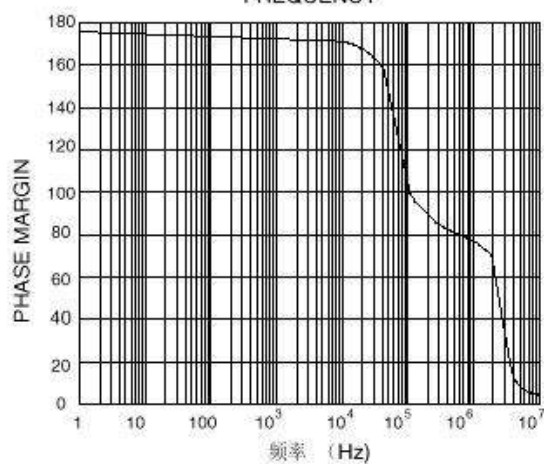




图 7 正输出逻辑摆幅与负载电阻的关系

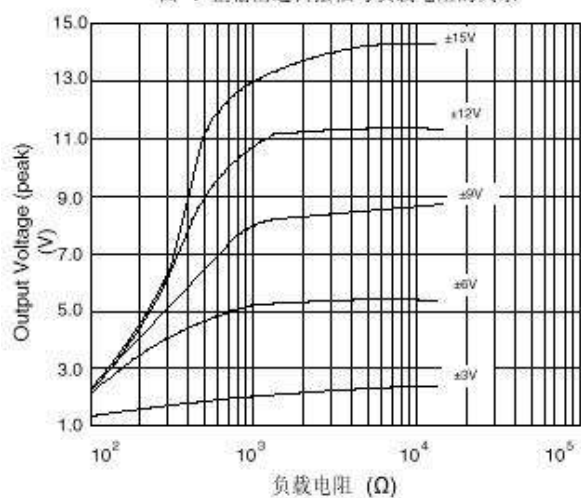


图 8 负输出逻辑摆幅与负载电阻的关系

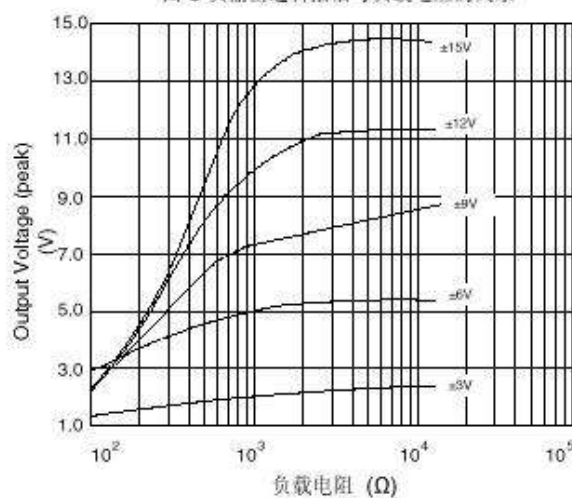
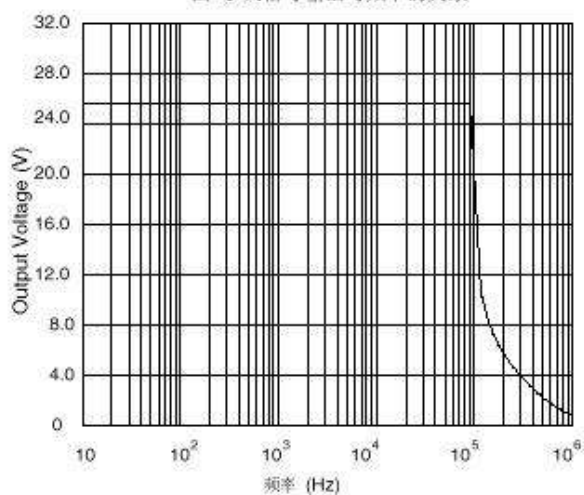
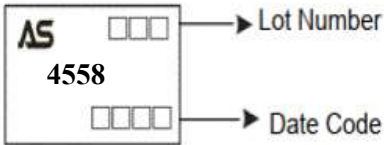


图 9 大信号输出与频率的关系

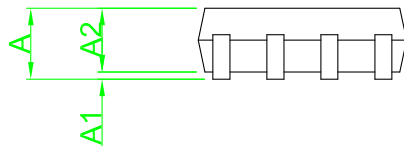
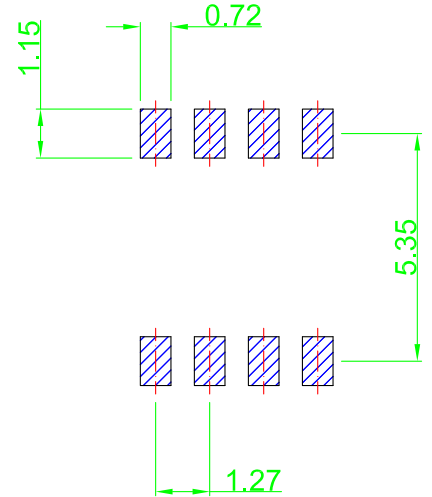
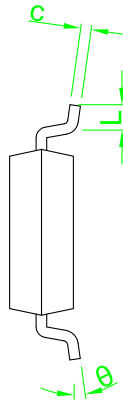
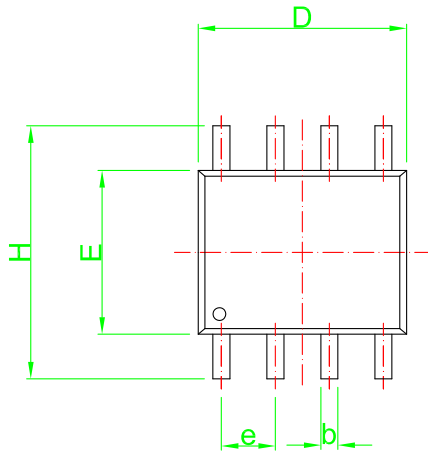


Ordering and Marking Information

Device	Marking	Package	Packaging	Quantity
ASOPD4558S-R	4558	SOP8	Tape&Reel	4000/Reel

PACKAGE	MARKING
SOP8	

■ Package Dimension



SOP8

Recommended Land Pattern

Symbol	Dimensions in Millimeters		Dimensions in Inches	
	Min	Max	Min	Max
A	---	1.75	---	0.069
A1	0.00	0.26	0.000	0.010
A2	1.30	1.70	0.051	0.067
b	0.30	0.55	0.012	0.022
C	0.15	0.35	0.006	0.014
D	4.80	5.00	0.189	0.197
E	3.80	4.00	0.150	0.157
e	1.27 TYP		0.050 TYP	
H	5.70	6.30	0.224	0.248
L	0.45	0.85	0.018	0.033
θ	0°	8°	0°	8°

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