AN6592, AN6592S

Dual Low Power Consumption Operational Amplifiers

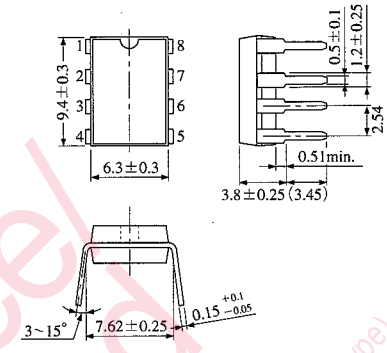
■ Overview

The AN6592 and the AN6592S are dual operational amplifiers allowing very low power consumption operation, with phase compensation circuits built-in and wide supply voltage range, so that they are very easy to use. They are suitable for application to various electronic circuits such as portable equipments operated by the battery.

■ Features

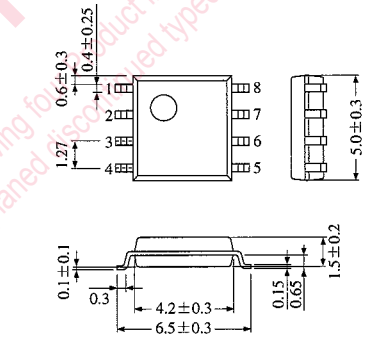
- Phase compensation circuit built-in
- Wide supply voltage range : ±1 to ±18V
- Output short-circuit protection built-in
- Low power consumption : I_{CC}=250 μA max.
- High voltage gain : G_V=100dB typ.

AN6592 Unit : mm



8-pin DIL Plastic Package (DIP008-P-0300B)

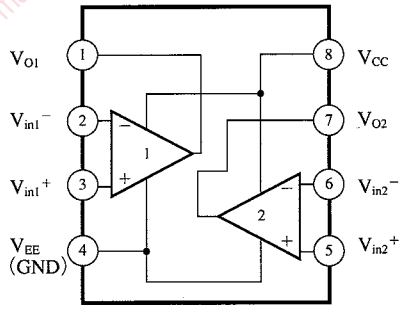
AN6592S Unit : mm



8-pin PANAFLAT Plastic Package (SOP008-P-0225A)

■ Block Diagram

AN6592
AN6592S



■ Pin Descriptions

Pin No.	Pin name
1	Ch.1 output
2	Ch.1 inverting input
3	Ch.1 non inverting input
4	V_{EE} (GND)
5	Ch.2 non inverting input
6	Ch.2 inverting input
7	Ch.2 output
8	V_{CC}

■ Absolute Maximum Ratings (Ta=25℃)

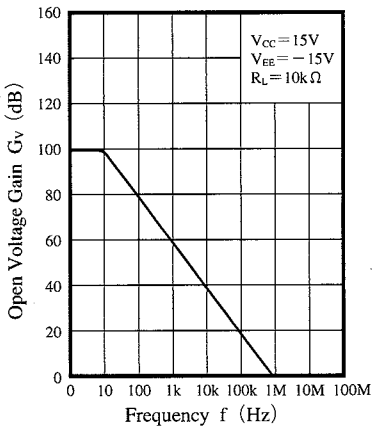
Parameter		Symbol	Rating	Unit
Voltage	Supply voltage	V_{CC}	±18	V
	Differential input voltage	V_{ID}	±30	V
	Common-mode input voltage	V_{ICM}	±15	V
Power dissipation	AN6592	P_D	500	mW
	AN6592S		360	
Operating ambient temperature		T_{opr}	−20 to +75	℃
Storage temperature	AN6592	T_{stg}	−55 to +150	℃
	AN6592S		−55 to +125	

■ Electrical Characteristics (V_{CC}=15V, V_{EE}=−15V, Ta=25℃)

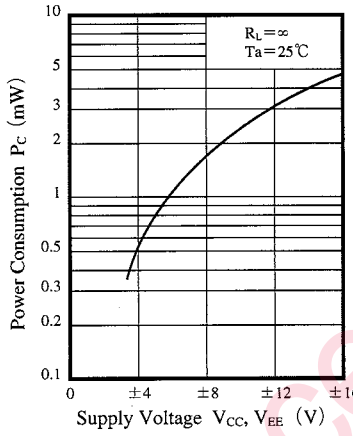
Parameter	Symbol	Condition	min	typ	max	Unit
Input offset voltage	$V_{I(offset)}$	$R_S \leqq 10k\Omega$	—	1	5	mV
Input offset current	I_{IO}		—	5	80	nA
Input bias current	I_{Bias}		—	50	250	nA
Voltage gain	G_V	$R_L \geqq 10k\Omega$, $V_O = \pm 10V$	70	100	—	dB
Maximum output voltage	$V_{O(max.)}$	$R_L \geqq 10k\Omega$	±12	±13	—	V
Common-mode input voltage width	V_{CM}		±12	±13	—	V
Common-mode rejection ratio	CMR		60	80	—	dB
Supply voltage rejection ratio	SVR		—	30	200	μV/V
Supply current	I_{CC}	$R_L = \infty$	—	130	250	μA
Slew rate	SR	$R_L \geqq 10k\Omega$	—	0.5	—	V/μs
Equivalent input noise voltage	V_{ni}	$R_S = 1k\Omega$, DIN/AUDIO	—	4	—	μVrms

■ Characteristics Curve

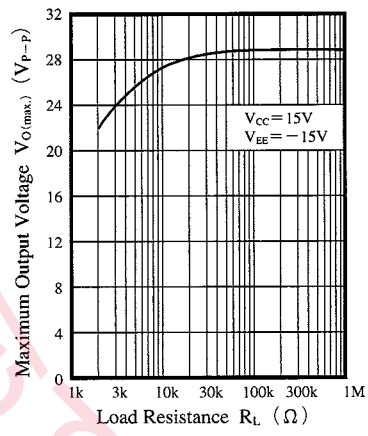
$G_V - f$



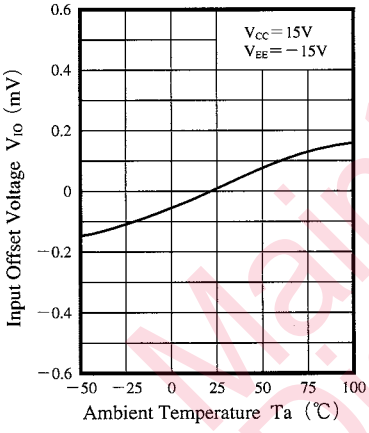
$P_C - V_{CC}, V_{EE}$



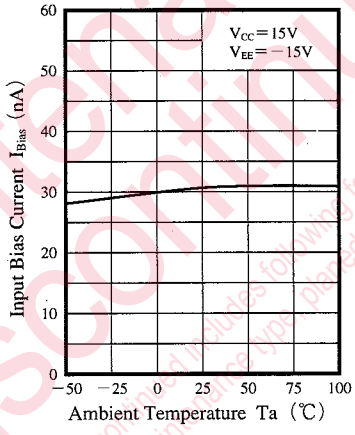
$V_{O(max.)} - R_L$



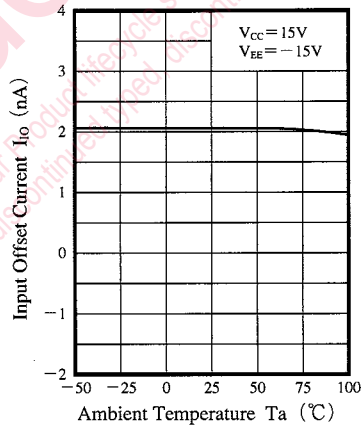
$V_{IO} - Ta$



$I_{Bias} - Ta$



$I_{IO} - Ta$



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