

AN6592, AN6592S

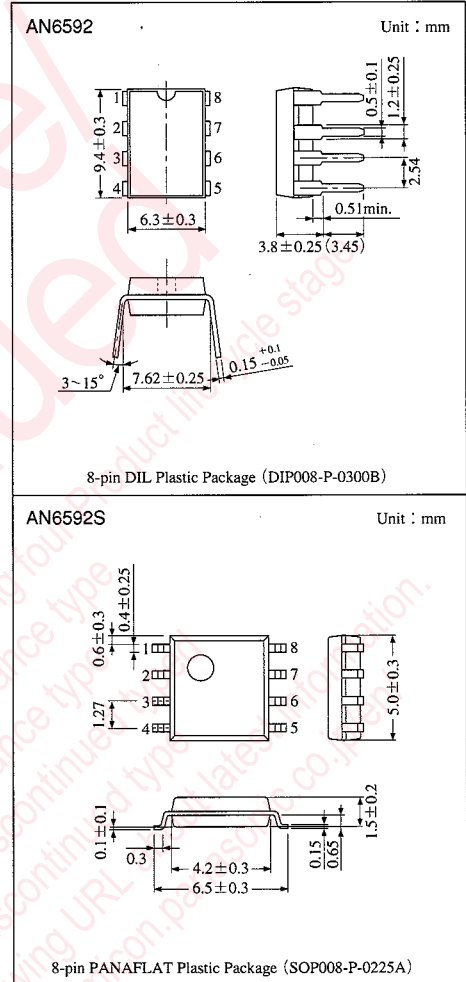
Dual Low Power Consumption Operational Amplifiers

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.

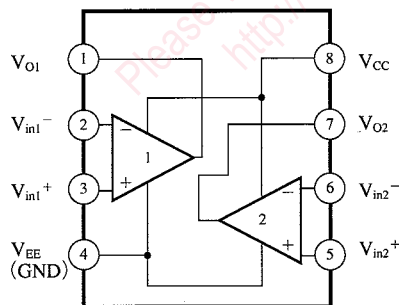
Features

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



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 (T_a = 25°C)

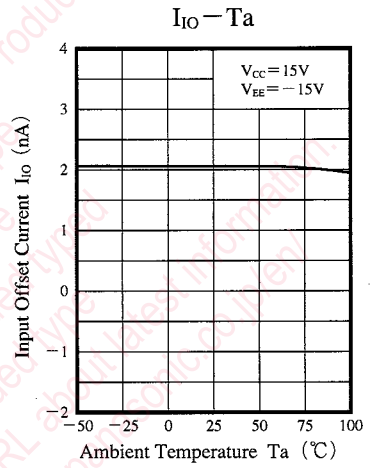
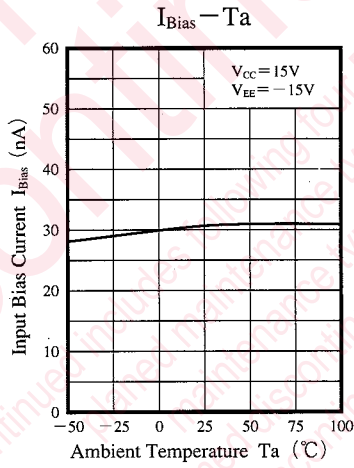
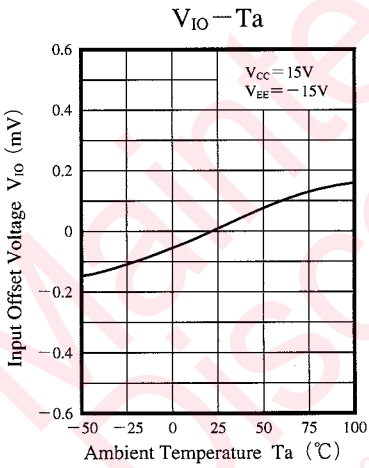
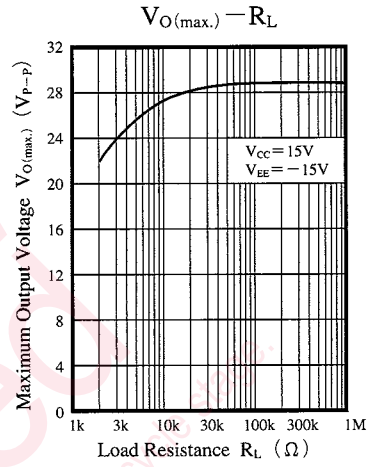
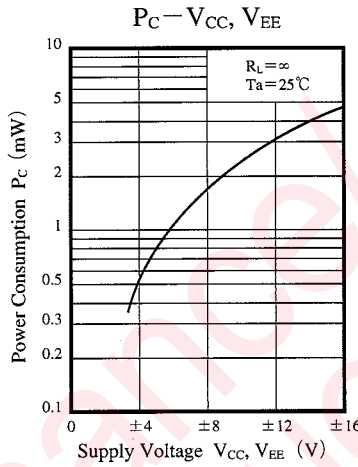
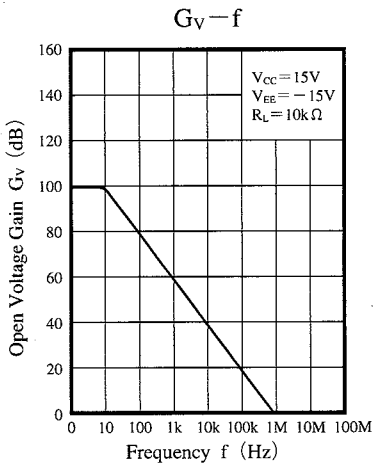
Parameter		Symbol	Rating	Unit
Voltage	Supply voltage	V _{CC}	±18	V
	Differential input voltage	V _{ID}	±30	V
	Common-mode input voltage	V _{ICM}	±15	V
Power dissipation	AN6592	P _D	500	mW
	AN6592S		360	
Operating ambient temperature		T _{opr}	-20 to +75	°C
Storage temperature	AN6592	T _{stg}	-55 to +150	°C
	AN6592S		-55 to +125	

Operational
Amplifiers

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

Parameter	Symbol	Condition	min	typ	max	Unit
Input offset voltage	V _{I(offset)}	R _S ≤ 10kΩ	—	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 ≥ 10kΩ, V _O = ±10V	70	100	—	dB
Maximum output voltage	V _{O(max.)}	R _L ≥ 10kΩ	±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 = ∞	—	130	250	μA
Slew rate	SR	R _L ≥ 10kΩ	—	0.5	—	V/μs
Equivalent input noise voltage	V _{ni}	R _S = 1kΩ, DIN/AUDIO	—	4	—	μV _{rms}

■ Characteristics Curve



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