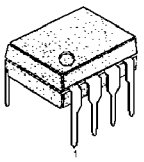
NE5532 DUAL OPERATIONAL AMPLIFIER

DUAL OPERATIONAL AMPLIFIERS

The NE5532 is a internally compensated dual low noise op AMP. The high small signal and power bandwidths provides superior performance in high quality AMP, all control circuits, and telephone applications.

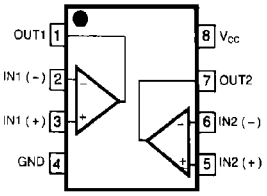
8 DIP



FEATURE

- Internal frequency compensation
- Slew Rate: 8V/μs
- Input noise voltage: 8nV/$\sqrt{Hz}$ (fo = 30Hz)
- Full power bandwidth: 140KHz

BLOCK DIAGRAM



ORDERING INFORMATION

Device	Package	Operating Temperature
NE5532	8 DIP	0 ~ + 70 °C

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C)

Characteristics	Symbol	NE5532	Unit
Power Supply Voltage	V_{CC}	±22	V
Differential Input Voltage	V_{IO}	13	V
Input Voltage	V_I	Supply Voltage	V
Power Dissipation	P_D	1000	mW
Operating Temperature Range	T_{OPR}	0 ~ + 70	°C

ELECTRICAL CHARACTERISTICS (V_{CC}= -5V, V_{EE}= - 15V, T_A = 25 °C)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Input Offset Voltage	V_{IO}			0.5	4.0	mV
Input Offset Current	I_{IO}			10	150	nA
Input Bias Current	I_{BIAS}			200	800	nA
Supply Current	I_{CC}			6.0	16	mA
Input Voltage Range	$V_{I(R)}$		±12	±13		V
Common Mode Rejection Range	CMRR	T_A = 25 °C	70	100		dB
Power Supply Rejection Ratio	PSRR	T_A = 25 °C	80	100		dB
Output Voltage Swing	$V_{O(P.P)}$	R_L≥600Ω	±12	±13		V
Input Resistance	R_I	T_A = 25 °C	30	300		KΩ
Short Circuit Current	I_{SC}			38		mA
Overshoot	O_S	R_L=600Ω, C_L=100pF		10	20	%
Gain	G_V	f = 10KHz	2	2.2		V/mV
Gain Bandwidth Product	GBW	C_L =100pF, R_L = 600Ω	8	10		MHz
Slew Rate	SR	R_L =1K, C_L =100pF,R_L =600Ω	6	8.0		V/us
Input Noise Voltage	V_{NI}	f_O = 30Hz f_O = 1KHz		8.0 5.0		nV/$\sqrt{Hz}$

FAIRCHILD SEMICONDUCTOR™

Rev. B

TYPICAL PERFORMANCE CHARACTERISTICS

Fig. 1 Open Loop Frequency Response

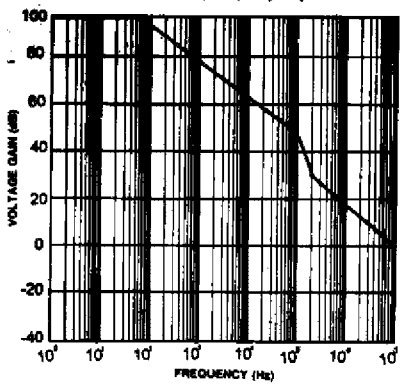


Fig. 2 Large Signal Frequency Response

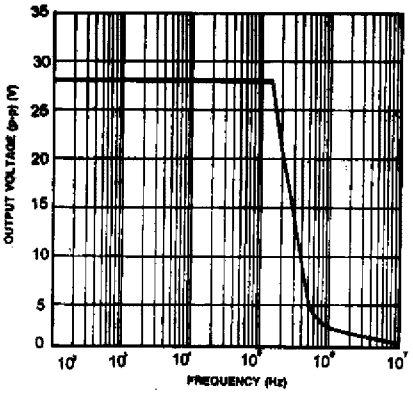


Fig. 3 Supply Current

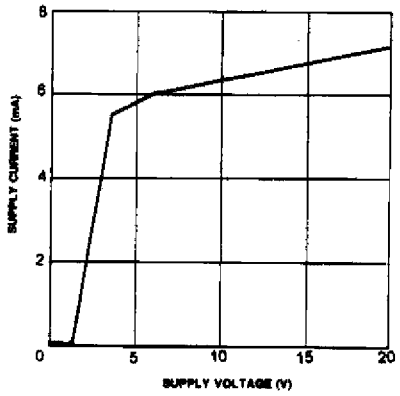


Fig. 4 Input Bias Current

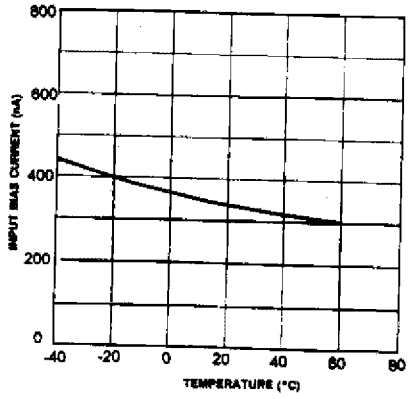


Fig. 5 Output Circuit Current

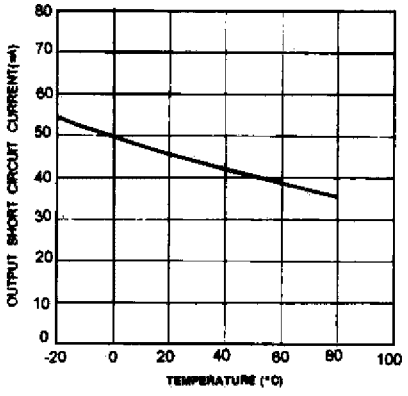
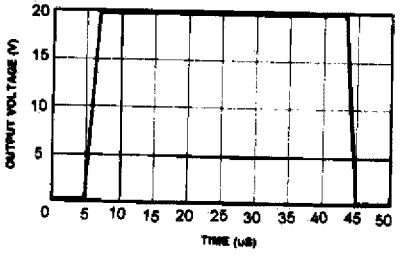


Fig. 6 Slew Rate



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Datasheet Identification	Product Status	Definition
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