



ELECTRONICS, INC.
 44 FARRAND STREET
 BLOOMFIELD, NJ 07003
 (973) 748-5089

NTE1659 Integrated Circuit Dual AF Preamplifier

Description:

The NTE1659 is a monolithic 2-channel preamplifier integrated circuit in a 8-Lead SIP type package suitable for car stereo applications.

Features:

- Low Noise
- Wide Power Supply Voltage Range
- Built-In Bias Circuit Requires Fewer External Components
- High Open-Loop Voltage Gain
- Excellent Channel Balance

Applications:

- Car Stereo, Home Stereo, and other Preamplifier Applications

Absolute Maximum Ratings: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Supply Voltage, V_{CC}	18V
Power Dissipation ($T_A = +25^\circ$), P_d	500mW
Derate Above 25°C	5mW/ $^\circ\text{C}$
Operating Temperature Range, T_{opr}	-25° to $+75^\circ\text{C}$
Storage Temperature Range, T_{stg}	-55° to $+125^\circ\text{C}$

Recommended Operating Conditions: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Supply Voltage	V_{CC}		6	–	16	V

Electrical Characteristics: ($T_A = +25^\circ\text{C}$, $V_{CC} = 8\text{V}$, $f = 1\text{kHz}$, $R_L = 10\text{k}\Omega$, $R_N = 100\Omega$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Quiescent Current	I_Q	$V_{IN} = 0V_{rms}$	2	5	8	mA
Open-Loop Voltage Gain	G_{VO}	$V_{OUT} = 0.3V_{rms}$	65	80	–	dB
Maximum Output Voltage	V_{OM}	THD = 1%	1.0	1.5	–	V_{rms}
Input Impedance	Z_{IN}		50	–	–	$\text{k}\Omega$
Total Harmonic Distortion	THD	$V_{OUT} = 0.3V_{rms}$	–	0.1	0.3	%
Noise Voltage Referred to Input	V_{NIN}	$R_g = 2.2\text{k}\Omega$, BPF (30Hz to 20kHz)	–	1.2	2.0	μV_{rms}
Crosstalk	CT	$V_{OUT} = 0.3V_{rms}$, $R_g = 2.2\text{k}\Omega$	–	–65	–50	dB
Channel Balance	CB	$V_{OUT} = 0.3V_{rms}$	–	0	1.5	dB

Pin Connection Diagram
(Front View)

