



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

## NTE1103 Integrated Circuit General Purpose, Low Noise Preamplifier

**Features:**

- Low Noise
- Wide Operating Supply Voltage Range:  $V_{CC} = 3V$  to  $12V$

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

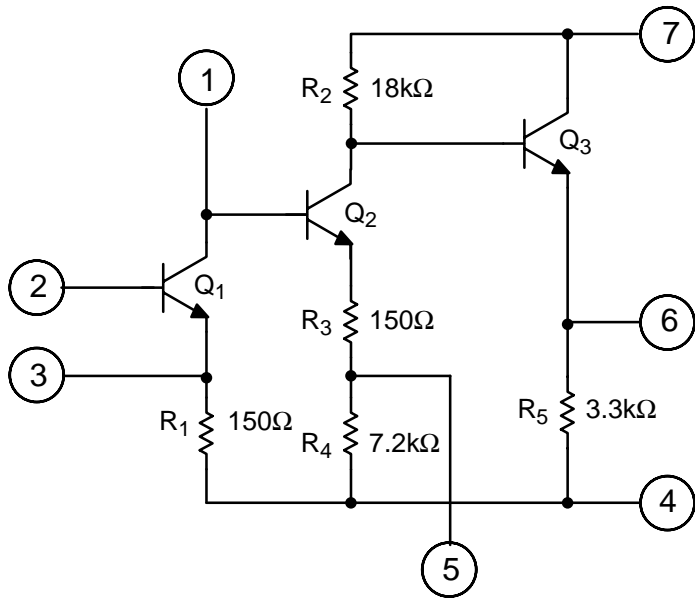
Supply Voltage, $V_{CC}$ .....	15V
Power Dissipation, $P_D$ .....	200mW
Derate Above $25^\circ C$ .....	2mW/ $^\circ C$
Operating Temperature Range, $T_{opr}$ .....	$-30^\circ$ to $+75^\circ C$
Storage Temperature Range, $T_{stg}$ .....	$-55^\circ$ to $+125^\circ C$

**Electrical Characteristics:** ( $T_A = +25^\circ C$ ,  $V_{CC} = 8V$ ,  $R_L = 22k\Omega$  unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Supply Current	$I_{CC}$	$V_{IN} = 0$	1.6	2.0	2.6	mA
Voltage Gain (Open Loop)	$G_{VO}$	$f = 1kHz$ , $V_{IN} = -80dBm$	62	–	–	dB
Voltage Gain (Closed Loop)	$G_V$	$f = 1kHz$ , $R_{NF} = 22k\Omega$ , $V_{IN} = -45dBm$ , Note 1	40.5	–	46.5	dB
Maximum Output Voltage	$V_{OM}$	$f = 1kHz$ , THD = 1%	1.0	–	–	$V_{rms}$
Equivalent Input Noise Voltage	$V_{NI}$	NAB equalizer, $R_g = 2.2k\Omega$ , $f = 1kHz$	–	2.0	–	$\mu V_{rms}$

Note 1. In regard to the value of voltage gain (closed loop voltage), it is possible to be classified.

### Equivalent Circuit



### Pin Connection Diagram (Front View)

