



ELECTRONICS, INC.  
 44 FARRAND STREET  
 BLOOMFIELD, NJ 07003  
 (973) 748-5089  
<http://www.nteinc.com>

## NTE1223

### Integrated Circuit

### Low Noise High Gain Pre-Amplifier Circuit

### For General Purpose Audio Pre-Amplifiers

**Features:**

- External initial stage emitter resistor which determines feedback voltage gain and assures better temperature characteristics.

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

Supply Voltage,  $V_{CC}$  ..... 20V  
 Supply Current,  $I_{CC}$  ..... 5mA  
 Power Dissipation ( $T_A \leq 75^\circ\text{C}$ ),  $P_D$  ..... 100mW  
 Operating Ambient Temperature Range,  $T_{opr}$  .....  $-20^\circ$  to  $+75^\circ\text{C}$   
 Storage Temperature Range,  $T_{stg}$  .....  $-55^\circ$  to  $+125^\circ\text{C}$

**Electrical Characteristics:** ( $V_{CC} = 9\text{V}$ ,  $f = 1\text{kHz}$ ,  $T_A = +25^\circ\text{C}$  unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Total Circuit Current	$I_{tot}$		-	1.3	2.3	mA
Closed Circuit Voltage Gain	$G_{vo}$	$V_i = 0.1\text{mV}$	75	80	-	dB
Output Voltage (AC)	$V_o$	THD = 1%	1.5	2	-	$V_{rms}$
Total Harmonic Distortion	THD	$V_o = 0.3\text{V}$	-	0.07	0.2	%
Input Resistance	$R_i$		-	130	-	k $\Omega$
Input Referred Noise Voltage	$V_{ni}$	$R_g = 2.2\text{k}\Omega$	-	0.8	1.5	$\mu\text{V}_{rms}$

### Pin Connection Diagram (Front View)

