

## NTE1022

### Integrated Circuit

### 4-Channel Stereo Decoder

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

Supply Voltage, $V_{CC}$	25V
Power Dissipation, $P_D$	750mW
Derate Above $25^\circ\text{C}$	6mW/ $^\circ\text{C}$
Operating Temperature Range, $T_{opr}$	$-30^\circ$ to $+75^\circ\text{C}$
Storage Temperature Range, $T_{stg}$	$-55^\circ$ to $+150^\circ\text{C}$

**Electrical Characteristics:** ( $V_{CC} = 15\text{V}$ ,  $f = 1\text{kHz}$ ,  $R_a$  to  $R_d = \infty$ ,  $T_A = +25^\circ\text{C}$  unless otherwise specified)

Parameter	Symbol	Test Conditions			Typ	Max	Unit
Supply Current	$I_{CC}$	$V_{CC} = 15V$		—	16	20	mA
		$V_{CC} = 8V$		—	10	—	mA
Recommended Bias Resistance	$R_B$			47	—	680	k $\Omega$
Input Impedance	$Z_i$			—	3	—	M $\Omega$
Output Impedance	$Z_o$			—	7.2	9.0	k $\Omega$
Voltage Gain	$G_V$	$V_{CC} = 8V$ to $18V$		8.5	10.0	11.5	dB
Total Harmonic Distortion	THD	$V_{IN} = 100mV_{rms}$	$V_{CC} = 15V$	—	—	0.1	%
		$V_{IN} = 300mV_{rms}$		—	—	0.3	%
			$V_{CC} = 8V$	—	—	1.0	%
		$R_a = R_b = 18k\Omega$ , $R_c = R_d = 3k\Omega$ , $V_{IN} = 300mV$		—	—	0.5	%
Input Noise Voltage	$V_{IN(Max)}$	$V_{CC} = 15V$	THD = 1%	0.8	1.0	—	$V_{rms}$
		$V_{CC} = 8V$		—	0.5	—	$V_{rms}$
Output Noise Voltage	$V_{NO}$	$R_s = 220k\Omega$ , $R_B = 180k\Omega$ , BW = 30kHz		—	—	0.1	mV $_{rms}$

### Pin Connection Diagram

Bias	<b>1</b>	<b>16</b>	V <sub>CC</sub>
Control Resistance (To Pin10)	<b>2</b>	<b>15</b>	Control Resistance (To Pin7)
Left Input	<b>3</b>	<b>14</b>	Right Input
Control Resistance (To Pin10)	<b>4</b>	<b>13</b>	Control Resistance (To Pin7)
Right Back Output	<b>5</b>	<b>12</b>	Left Back Output
Left Front Output	<b>6</b>	<b>11</b>	Right Front Output
Control Resistance (Common)	<b>7</b>	<b>10</b>	Control Resistance (Common)
GND	<b>8</b>	<b>9</b>	N.C.

