



**ELECTRONICS, INC.**  
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## NTE1170 Integrated Circuit Dual Preamp for Car Radio

**Features:**

- Fewer Peripheral Parts
- Low Noise
- 8-Lead SIP Type Package

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

Maximum Supply Voltage, $V_{CCmax}$ .....	18V
Allowable Power Dissipation, $P_{Dmax}$ .....	200mW
Operating Temperature Range, $T_{opg}$ .....	$-20^\circ$ to $+75^\circ\text{C}$
Storage Temperature Range, $T_{stg}$ .....	$-40^\circ$ to $+125^\circ\text{C}$

**Recommended Operation Condition:** ( $T_A = +25^\circ\text{C}$  unless otherwise specified)

Recommended Supply Voltage, $V_{CC}$ .....	9V
Load Resistance, $R_L$ .....	10k $\Omega$

**Electrical Charactersitics:** ( $T_A = +25^\circ\text{C}$ ,  $V_{CC} = 9\text{V}$ ,  $R_L = 10\text{k}\Omega$ ,  $R_g = 600\Omega$ ,  $f = 1\text{kHz}$ , NAB)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Current Dissipation	$I_{CC}$		–	4	6	mA
Voltage Gain	VG	closed looped	–	35	–	dB
		open looped, $V_O = 0.77\text{V}$	76	80	–	
Output Voltage	$V_O$	THD = 1%	1.1	1.8	–	V
Total Harmonic Distortion	THD	$V_O = 0.5\text{V}$	–	0.1	0.3	%
Input Resistance	$r_i$		70K	100K	–	$\Omega$
Noise Voltage Converted to Input	$V_{NI}$	$R_g = 2.2\text{k}\Omega$	–	1.25	2.0	$\mu\text{V}$
Cross Talk	CT		–50	–65	–	dB



**Pin Connection Diagram**  
(Front View)

