



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

**NTE1104**  
**Integrated Circuit**  
**Wide and Narrow Band Amp,**  
**FM/IF Limiter**

**Applications:**

- For FM IF Amplifier
- For TV SIF Amplifier

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

Supply Voltage, $V_{CC}$ .....	15V
Output Voltage, $V_{OUT}$ .....	24V
Input Voltage (Between Pin1 and Pin2), $V_{IN}$ .....	$\pm 15V$
Power Dissipation, $P_D$ .....	400mW
Derate Above $25^\circ\text{C}$ .....	3mW/ $^\circ\text{C}$
Operating Temperature Range ( $V_{CC} = 12V$ ), $T_{opr}$ .....	-30 to $+75^\circ\text{C}$
Storage Temperature Range, $T_{stg}$ .....	-55 to $+125^\circ\text{C}$

**Electrical Characteristics:** ( $T_A = +25^\circ\text{C}$  unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Supply Current	$I_{CC}$	$V_{CC} = 12V$	5.3	9.5	14.0	mA
		$V_{CC} = 9V$	—	6.5	—	mA
Power Dissipation	$P_D$	$V_{CC} = 12V$	—	114	—	mW
		$V_{CC} = 9V$	—	59	—	mW
Voltage Gain	$G_V$	$V_{CC} = 12V, R_g = 50\Omega, R_L = 1k\Omega$	—	26.5	—	dB
Input Impedance Parallel Input Resistance	$r_{ip}$	$V_{CC} = 12V, f = 10.7\text{MHz}$	—	35	—	k $\Omega$
			—	8.0	—	pF
Output Impedance Parallel Input Resistance	$r_{op}$		—	80	—	k $\Omega$
			—	3.0	—	pF
Forward Transfer Admittance	$y_f$		—	30	—	mmhos
Reverse Transfer Admittance	$y_r$		—	2.0	—	$\mu\text{mhos}$

**Pin Connection Diagram**  
(Front View)

