

NTE1100 Integrated Circuit TV Sound IF Amp, FM IF Amp

Features:

- High Power Gain: $G_P = 69\text{dB}$ (Typ)
- Good Limiter Characteristic: $V_{IN}(\text{lim}) = 600\mu\text{V}$ (Typ)
- High Output Voltage: $V_{OM} = 800\text{V}$ (Typ)
- Wide Frequency Range: $f = 1\text{kHz}$ to 20MHz
- Operating Supply Voltage Range: $V_{CC} = 6\text{V}$ to 15V

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

Supply Voltage, V_{CC}	15V
Input Voltage (Between Pin6 and Pin7), V_{IN}	$\pm 3\text{V}$
Power Dissipation, P_D	400mW
Derate Above 25°C	$4\text{mW}/^\circ\text{C}$
Operating Temperature, T_{opr}	-25° to $+75^\circ\text{C}$
Storage Temperature, 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}	$V_{CC} = 12\text{V}$	–	11	14	mA
		$V_{CC} = 6\text{V}$	7.0	8.5	–	mA
Output Current	I_{OUT}	$V_{CC} = 12\text{V}$	–	2.5	–	mA
Input Limiting Voltage	$V_{IN}(\text{lim})$	$V_{CC} = 12\text{V}$, $f = 10.7\text{MHz}$	–	600	–	μV
Maximum Output Voltage	V_{OM}	$V_{CC} = 12\text{V}$, $V_{IN} = 10\text{mV}$, $f = 10.7\text{MHz}$	–	800	–	mV
Power Gain	G_P	$V_{CC} = 12\text{V}$, $f = 10.7\text{MHz}$	66	69	72	dB
IF Voltage Gain	$G_{V(IF)}$	$V_{CC} = 12\text{V}$, $f = 10.7\text{MHz}$, $50\text{dB}\mu\text{V}$	–	56	–	dB
Input Impedance						
Parallel Input Resistance	r_{ip}	$V_{CC} = 12\text{V}$, $f = 10.7\text{MHz}$	–	5	–	$\text{k}\Omega$
Parallel Input Capacitance	C_{ip}		–	6	–	pF
Output Impedance						
Parallel Output Resistance	r_{op}	$V_{CC} = 12\text{V}$, $f = 10.7\text{MHz}$	–	10	–	$\text{k}\Omega$
Parallel Output Capacitance	C_{op}		–	5	–	pF

Pin Connection Diagram
(Front View)

