ELECTRONICS, INC.
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NTE1162
Integrated Circuit
TV Sound IF Amp & FM Detector

Absolute Maximum Ratings: (T_A = +25°C unless otherwise specified)

Supply Voltage, V_{CC} . . . . . Note 1
Supply Current (I_5), I_{CC} 50mA
Total Power Dissipation ($T_A \le$ +70°C), P_T 445mW
Operating Temperature Range, T_{opr} . . . . . –20° to +70°C
Storage Temperature Range, T_{stg} . . . . . –40° to +150°C

Note 1. Pin5 can be connected to any positive voltage by using a resistor (R_S):
Ex. V_{CC} = 24V, R_S = 390Ω, I_S = 30mA
V_{CC} = 140V, R_S = 3.9kΩ, I_S = 30mA

Electrical Characteristics: (T_A = +25°C, V_{CC} = 24V, R_S = 390Ω unless otherwise specified)

Parameter	Symbol	Test Conditions		Min	Typ	Max	Unit
Total Circuit Current	I_{tot}	V_{CC} = 9V, Pin1 – Pin2, Pin9 – Pin10 Shorted		10	16	24	mA
Zener Voltage	$V_{5–3}$	Pin1 – Pin2, Pin9 – Pin10 Shorted		10.3	11.2	12.2	V
Input Limiting Voltage (–3dB)	$V_{i(lim)}$	f_o = 4.5MHz, f_m = 400Hz, Δf = ±25kHz, V_i = 100mV_{rms}		–	250	400	μV_{rms}
AM Rejection Ratio	AMR		AM = 400Hz, 30%	40	50	–	dB
Output Impedance	$R_{O(IF)}$	f_o = 4.5MHz, Pin9 – Pin3 Shorted		–	3.25	–	kΩ
Output Capacitance	$C_{O(IF)}$			–	10	–	pF
Demodulation Output	$V_{O(AF)}$	f_o = 4.5MHz, f_m = 400Hz, Δf = ±25kHz, V_i = 100mV_{rms}	R_6 = 0	0.5	0.75	1.1	V_{rms}
Demodulation Signal Distortion	THD			–	0.9	2.0	%
Output Resistance	$R_{O(7)}$	f = 400Hz, V_i = 100mV_{rms}		–	7.5	–	kΩ
	$R_{O(8)}$			–	300	–	Ω
Attenuation Circuit Max. Attenuation	ATT	R_6 = ∞		60	80	–	dB
Sound Amp Distortion	THD	f = 400Hz	V_O = 2V_{rms}	–	1.5	–	%
Non–Distortional Max. Output	$V_{O(max)}$		THD = 5%	2.0	2.5	–	V_{rms}
Voltage Gain	$G_{V(AF)}$		V_i = 100mV_{rms}	17.5	20.0	23.0	dB

Pin Connection Diagram