ELECTRONICS, INC.
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NTE1541
Integrated Circuit
FM IF Amp & Detector for Car Radio

Features:

- FM IF amplifier and limiter
- Demodulated output: $600_m V_{rms}$ (Max.)
- Total harmonic distortio: 0.3% (Max.)

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

Maximum Supply Voltage, V_{CCmax} 16V
Maximum Input Voltage, V_{IN} . . . . . $0.7V_{rms}$
Allowable Power Dissipation (Note 1), P_D 400mW
Operating Temperature Range, T_{opr} . . . . . –20° to +80°C
Storage Temperature Range, T_{stg} . . . . . –40° to +125°C

Note 1. Derate by 4mW per 1°C when used at temperatures above +25°C.

Recommended Operating Conditions: (T_A = +25°C unless otherwise specified)

Supply Voltage, V_{CC} 12V

Electrical Characteristics: (T_A = +25°C, V_{CC} = 12V, f = 10.7MHz, f_m = 400Hz 100% Modulation)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Current Drain	I_{CC}		8	12	15	V
Output Pin (Pin 7) DC Voltage	V_7		3.7	–	5.2	V
Demodulated Output	V_O	V_{IN} = 80dBμ	400	–	600	$_mV_{rms}$
Input Limiting Voltage	$V_{IN(lim)}$	–3dB limiting	–	50	55	dBμ
Total Harmonic Distortion	THD	V_{IN} = 80dBμ	–	0.2	0.3	%
Signal–to–Noise Ratio	S/N		70	80	–	dB
AM Rejection Ratio	AMR		47	53	–	dB
Output Resistance	R_O	f = 400Hz	6.2	7.7	9.5	kΩ

Pin Connection Diagram