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## NTE1541 Integrated Circuit FM IF Amp & Detector for Car Radio

**Features:**

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

**Absolute Maximum Ratings:** ( $T_A = +25^\circ C$  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, $T_{opr}$ .....	$-20^\circ$ to $+80^\circ C$
Storage Temperature Range, $T_{stg}$ .....	$-40^\circ$ to $+125^\circ C$

Note 1. Derate by 4mW per  $1^\circ C$  when used at temperatures above  $+25^\circ C$ .

**Recommended Operating Conditions:** ( $T_A = +25^\circ C$  unless otherwise specified)

Supply Voltage, $V_{CC}$ .....	12V
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**Electrical Characteristics:** ( $T_A = +25^\circ C$ ,  $V_{CC} = 12V$ ,  $f = 10.7MHz$ ,  $f_m = 400Hz$  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	$V_O$	$V_{IN} = 80dB\mu$	400	-	600	$mV_{rms}$
Input Limiting Voltage	$V_{IN(lim)}$	-3dB limiting	-	50	55	$dB\mu$
Total Harmonic Distortion	THD	$V_{IN} = 80dB\mu$	-	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	$k\Omega$

### Pin Connection Diagram

