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NTE1525
Integrated Circuit
FM IF Amplifier

Features:
- Three Stage Differential IF Amplifier
- Differential Peak Detector
- Muting Circuit
- Signal Meter Drive Circuit
- High Recovered Output Voltage: V_{OD} = 500mV_{rms} (Typ)
- Low Distortion: THD = 0.1% (Typ)
- Wide Operating Supply Voltage Range: V_{CC} = 8V to 15V (Typ)
- Signal Meter Drive Voltage: V_3 = 4V (Typ)
- Variable Muting Point
- Muting Off at Open Terminal
- Simplified Single Coil Tuning

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

Supply Voltage, V_{CC} 15V
Input Voltage, V_{IN} 0.7V
Power Dissipation, P_D 750mW
Derate above 25°C . . . . . 4mW/°C
Operating Temperature Range, T_{opr} . . . . . –25° to +75°C
Storage Temperature Range, T_{stg} . . . . . –55° to +150°C

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Supply Current	I_{CC}	V_{IN} = 0	10	14	18	mA
Input Limiting Voltage	$V_{IN\ (lim)}$	ΔF = ±75kHz dev. –3dB Limiting	–	50	55	dBμV
AM Rejection Ratio	AMR	FM: ΔF = ±75kHz dev. AM: 30% Mod. V_{IN} = 80dBμV	–	50	–	dB
Recovered Output Voltage	V_{OD}	ΔF = ±75kHz dev. V_{IN} = 80dBμV	300	500	700	mV_{rms}
Total Harmonic Distortion	THD	ΔF = ±22.5kHz dev. V_{IN} = 80dBμV	–	0.1	–	%
Signal–to–Noise Ratio	S/N	ΔF = ±75kHz dev. V_{IN} = 80dBμV	–	75	–	dB
Muting Attenuation	MA	ΔF = ±75kHz dev. V_{IN} = 80dBμV, V_4 = 0	–	70	–	dB

Electrical Characteristics (Cont'd): (V_{CC} = 12V, f = 10.7MHz, f_m = 400Hz, T_A = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Meter Drive Voltage	V_3 (Max)	V_{IN} = 110dBμV	–	4	–	V
Parallel Input Resistance	r_{ip}	f = 10.7MHz, Pin1 – GND	–	5	–	kΩ
Parallel Input Capacitance	c_{ip}		–	4.5	–	pF
Parallel Output Resistance	r_{op}	f = 10.7 MHz, Pin6 – GND	–	1.3	–	kΩ
Parallel Output Capacitence	c_{op}		–	4	–	pF
Output Resistance	R_O	f = 400Hz, Pin8 – GND	–	7.7	–	kΩ

Pin Connection Diagram
(Front View)