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NTE1057 Integrated Circuit FM IF Amplifier, AF Pre-Amplifier

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

Supply Voltage	
$V_{10-14}, V_{11-14}, V_{9-8}$	15V
V_{2-1}	$3V_{p-p}$
V_{9-7}	30V
Supply Current	
I_{10}, I_{11}	30mA
I_g	10mA
Power Dissipation, P_T	375mW
Operating Ambient Temperature, T_{opr}	-20° to $+60^\circ\text{C}$
Storage Temperature, T_{stg}	-40° to $+150^\circ\text{C}$

Recommended Operating Characteristics:

Supply Voltage, V_{CC}	12V
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Electrical Characteristics: ($T_A = 25^\circ\text{C}$, unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Total Current Consumption	I_{tot}	$V_{CC} = 11V, f = 4.5MHz$	15	19	25	mA
IF Limiting Voltage	$V_{i(lim)}$		30	43	51	dB μ
AF Voltage Output	$V_{O(AF)}$		250	300	430	mV $_{rms}$
Voltage Gain	G_V		-	73	-	dB
AM Rejection	AMR		-	45	-	dB
Total Harmonic Distortion	THD		-	0.5	-	%
Input Resistance	R_i		-	2.5	-	k Ω
Input Capacitance	C_i		-	12	-	pF
Output Resistance	R_o		-	100	-	k Ω
Output Capacitance	C_o		-	4	-	pF
Collector Cutoff Current	I_{CBO}		$V_{CB} = 30V$	-	-	10
	I_{CEO}	$V_{CE} = 15V$	-	-	10	μA

Electrical Characteristics (Cont'd): ($T_A = 25^\circ\text{C}$, unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
DC Current Gain	h_{FE}	$V_{CE} = 5\text{V}, I_E = -1\text{mA}$	30	50	120	
Small-Signal Short Circuit Input Impedance	h_{ie}	$V_{CE} = 5\text{V}, I_E = -1\text{mA}, f = 270\text{Hz}$	-	2	-	$\text{k}\Omega$
Small-Signal Output Impedance	h_{oe}		-	6	-	μhos
Small-Signal Open Circuit Reverse Voltage Transfer Ratio	h_{re}		-	1	-	$\times 10^{-4}$
Noise Figure	NF		-	8	-	dB

Pin Connection Diagram
(Front View)

