

NTE1054 & NTE1055 Integrated Circuit FM/AM IF Amp

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

Supply Voltage, V_{5-4}	10V
Collector-Emitter Voltage ($R = 50\text{k}\Omega$, T_1, T_2, T_3), V_{CER}	13.5V
Collector-Emitter Voltage (T_4, T_6), V_{CEX}	13.5V
Emitter-Base Voltage (T_1, T_2, T_3, T_5), V_{EBO}	
NTE1054	5V
NTE1055	6V
Collector Current ($T_1, T_2, T_3, T_4, T_5, T_6$), I_C	
NTE1054	3mA
NTE1055	5mA
Total Power Dissipation ($T_A \leq +75^\circ\text{C}$), P_T	
NTE1054	200mW
NTE1055	250mW
Operating Temperature Range, T_{opr}	-20° to $+75^\circ\text{C}$
Storage Temperature Range, T_{stg}	-65° to $+150^\circ\text{C}$

Electrical Characteristics: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions		Min	Typ	Max	Unit
Collector Cutoff Current	I_{CBO}	$V_{\text{CB}} = 10\text{V}$ (T_1, T_2, T_3, T_4, T_6)		–	–	1	μA
Collector Current NTE1054	I_{C1}	$V_{5-4} = 4\text{V}$ (T_1, T_2)		0.62	–	1.24	mA
NTE1055				0.62	–	1.26	mA
Collector Current NTE1054	I_{C2}	$V_{5-4} = 4\text{V}$ (T_3, T_4, T_6)		0.52	–	1.15	mA
NTE1055				1.14	–	2.52	mA
On Current NTE1054	$I_{7(\text{on})}$	$V_{5-4} = V_{7-4} = 4\text{V}$ (T_6)		1.00	–	–	mA
NTE1055				2.38	–	–	mA
Collector-Emitter Saturation Voltage	$V_{\text{CE(sat)}}$	$I_C = 100\mu\text{A}$, $I_B = 10\mu\text{A}$ (T_1, T_2)		–	–	0.15	V
Bias Voltage	V_{8-4}	$V_{5-4} = 4\text{V}$		1.2	–	1.6	V
FM Output Voltage NTE1054	$V_{\text{O(FM)}}$	$V_{5-4} = 4\text{V}$, $f = 10.7\text{MHz}$, MOD 400Hz 30%	$V_i = 40\text{dB}$	17.0	–	63.5	mV
NTE1055			$V_i = 30\text{dB}$	7.6	–	51.0	mV
AM Output Voltage NTE1054	$V_{\text{O(AM)}}$	$V_{5-4} = 4\text{V}$, $f = 455\text{kHz}$, MOD 400Hz 30%	$V_i = 20\text{dB}$	15	–	–	mV
NTE1055			$V_i = 40\text{dB}$	4	–	–	mV

Pin Connection Diagram

1 st IF Amp Output	1	14	2 nd IF Amp Input
1 st IF Amp Input	2	13	Bypass
Bypass	3	12	2 nd IF Amp Output
V _{CC}	4	11	3 rd IF Amp Input
GND	5	10	3 rd IF Amp Output
4 th IF Amp Input	6	9	3 rd IF Amp Output
4 th IF Amp Output	7	8	Output

