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## 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 ( $R = 50\text{k}\Omega$ , $T_1, T_2, T_3$ ), $V_{\text{CER}}$ .....	13.5V
Collector–Emitter Voltage ( $T_4, T_6$ ), $V_{\text{CEX}}$ .....	13.5V
Emitter–Base Voltage ( $T_1, T_2, T_3, T_5$ ), $V_{\text{EBO}}$	
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, $T_{\text{opr}}$ .....	$-20^\circ$ to $+75^\circ\text{C}$
Storage Temperature Range, $T_{\text{stg}}$ .....	$-65^\circ$ 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	$I_{\text{CBO}}$	$V_{\text{CB}} = 10\text{V}$ ( $T_1, T_2, T_3, T_4, T_6$ )	–	–	1	$\mu\text{A}$	
Collector Current NTE1054	$I_{\text{C1}}$	$V_{5-4} = 4\text{V}$ ( $T_1, T_2$ )	0.62	–	1.24	mA	
NTE1055			0.62	–	1.26	mA	
Collector Current NTE1054	$I_{\text{C2}}$	$V_{5-4} = 4\text{V}$ ( $T_3, T_4, T_6$ )	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
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	–	–

### Pin Connection Diagram

