

## NTE186A (NPN) & NTE187A (PNP) Silicon Complementary Transistors Medium Power Audio Amplifier

**Features:**

- 5W Output in Complementary Pair

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

Collector–Base Voltage, $V_{CBO}$	50V
Collector–Emitter Voltage, $V_{CEO}$	40V
Emitter–Base Voltage, $V_{EBO}$	5V
Peak Collector Current, $I_{CP}$	3A
Base Current, $I_B$	600mA
Collector Power Dissipation ( $T_C = +25^\circ\text{C}$ ), $P_C$	10W
Operating Junction Temperature, $T_J$	+150°C
Storage Temperature Range, $T_{stg}$	-55° to +150°C

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector–Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 1\text{mA}, I_E = 0$	50	–	–	V
Collector–Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 10\text{mA}, I_B = 0$	40	–	–	V
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = 20\text{V}, I_E = 0$	–	–	1	$\mu\text{A}$
	$I_{CEO}$	$V_{CE} = 12\text{V}, I_B = 0$	–	–	100	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = 5\text{V}, I_C = 0$	–	–	100	$\mu\text{A}$
DC Current Gain	$h_{FE}$	$V_{CE} = 5\text{V}, I_C = 1\text{A}$	50	120	220	
Transition Frequency	$f_T$	$V_{CE} = 5\text{V}, I_C = 500\text{mA}$	–	150	–	MHz
Base–Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 2\text{A}, I_B = 200\text{mA}$	–	–	1.5	V
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 2\text{A}, I_B = 200\text{mA}$	–	0.4	1.0	V
Collector Output Capacitance	$C_{ob}$	$V_{CB} = 5\text{V}, I_E = 0, f = 1\text{MHz}$	–	50	–	pF

