

NTE284 (NPN) & NTE285 (PNP) Silicon Complementary Transistors Audio Amplifier Output

Description:

The NTE284 (NPN) and NTE285 (PNP) are silicon complementary power transistors in a TO3 type package designed for use in power amplifier applications.

Applications:

- Recommended for 100W High-Fidelity Audio Frequency Amplifier Output Stage

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

Collector to Base Voltage, V_{CBO}	180V
Collector to Emitter Voltage, V_{CEO}	180V
Emitter to Base Voltage, V_{EBO}	5V
Collector Current, I_C	16A
Emitter Current, I_E	16A
Power Dissipation, P_C	150W
Junction Temperature, T_j	+150°C
Storage Temperature, T_{stg}	-65°C to +150°C

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

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = 90V, I_E = 0$	-	-	100	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 5V, I_C = 0$	-	-	100	μA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 0.1A, I_B = 0$	180	-	-	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 10mA, I_C = 0$	5	-	-	V
DC Current Gain	h_{FE}	$V_{CE} = 5V, I_C = 2A$	70	-	140	V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 10A, I_B = 1A$	-	-	3.0	V
Base to Emitter Voltage	V_{BE}	$V_{CE} = 5V, I_C = 10A$	-	-	2.5	V
Current Gain Bandwidth Product	f_T	$V_{CE} = 5V, I_C = 2A$	-	6	-	MHz
Output Capacitance NTE284	C_{ob}	$V_{CB} = 10V, I_E = 0, f = 1MHz$	-	300	-	pF
NTE285			-	450	-	pF

Note 1. NTE284MP is a matched pair of NTE284 with their DC Current Gain (h_{FE}) matched to within 10% of each other.

Note 2. NTE285MP is a matched pair of NTE285 with their DC Current Gain (h_{FE}) matched to within 10% of each other.

Note 3. NTE285MCP is a matched complementary pair containing 1 each of NTE284 (NPN) and NTE285 (PNP).

