NTE ELECTRONICS, INC.

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°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°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	–	MH_Z
Output Capacitance NTE284	C_{ob}	V_{CB} = 10V, I_E = 0, f = $1MH_Z$	–	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).