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NTE330
Germanium PNP Transistor
High Power Switch

Description:

The NTE330 is a germanium PNP power transistor in a TO36 type package featuring low saturation voltage capability for high efficiency performance in motor drive controls and low loss regulators.

Absolute Maximum Ratings:

Collector–Emitter Voltage, V_{CEO} 40V
Collector–Base Voltage, V_{CB} 50V
Emitter–Base Voltage, V_{EB} 30V
Continuous Collector Current, I_C 25A
Continuous Base Current, I_B 4A
Total Device Dissipation (T_C = +25°C), P_D 87.5W
Derate Above 25°C . . . . . 1.17W/°C
Operating Junction Temperature Range, T_J . . . . . –65° to +95°C
Storage Temperature Range, T_{stg} . . . . . –65° to +95°C
Thermal Resistance, Junction–to–Case, R_{thJC} . . . . . 0.8°C/W

Electrical Characteristics: (T_C = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
OFF Characteristics						
Collector–Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C = 1A, I_B = 0	40	–	–	V
Floating Potential	V_{EBF}	V_{CB} = 50V, I_E = 0	–	–	1.0	V
Collector Cutoff Current	I_{CBO}	V_{CB} = 2V, I_E = 0	–	–	300	µA
		V_{CB} = 50V, I_E = 0	–	–	4.0	mA
		V_{CB} = 50V, I_E = 0, T_B = +85°C	–	–	15	mA
Emitter Cutoff Current	I_{EBO}	V_{BE} = 30V, I_C = 0	–	–	8.0	mA
ON Characteristics						
DC Current Gain	h_{FE}	V_{CE} = 4V, I_C = 15A	15	–	60	
		V_{CE} = 4V, I_C = 25A	12	–	–	
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	I_C = 25A, I_B = 4A	–	–	0.7	V
Base–Emitter Saturation Voltage	$V_{BE(sat)}$	I_C = 25A, I_B = 3A	–	–	1.5	V
Small–Signal Characteristics						
Common–Emitter Cutoff Frequency	h_{hfe}	V_{CE} = 6V, I_C = 5A	–	4.0	–	kHz