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NTE2310 Silicon NPN Transistor High Voltage, High Speed Switch

Description:

The NTE2310 is a silicon multiepitaxial mesa NPN transistor in a TO218 type package designed for use in high voltage, fast switching industrial applications.

Absolute Maximum Ratings:

Collector–Emitter Voltage ($V_{BE} = 0$), V_{CES}	1000V
Collector–Emitter Voltage ($I_B = 0$), V_{CEO}	450V
Collector Current, I_C	
Continuous	8A
Peak ($t_p \leq 2ms$)	20A
Base Current, I_B	
Continuous	4A
Peak ($t_p \leq 2ms$)	6A
Power Dissipation ($T_C = +25^\circ C$), P_D	125W
Operating Junction Temperature, T_J	+175°C
Storage Temperature Range, T_{stg}	–65° to +175°C
Thermal Resistance, Junction–to–Case, R_{thJC}	1.2°C/W

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector–Emitter Sustaining Voltage	$V_{CEO(sus)}$	$I_C = 100mA, L = 25mH, \text{Note 1}$	400	–	–	V
Collector Cutoff Current	I_{CES}	$V_{CE} = 1000V, V_{BE} = 0$	–	–	1	mA
		$V_{CE} = 1000V, V_{BE} = 0, T_C = +125^\circ C$	–	–	3	mA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 9V, I_C = 0$	–	–	10	mA
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 6A, I_B = 1.2A, \text{Note 1}$	–	–	1.5	V
Base–Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 6A, I_B = 1.2A, \text{Note 1}$	–	–	1.5	V
Turn–On Time	t_{on}	$I_C = 6A, I_{B1} = 1.2A, I_{B2} = 1.2A$	–	–	1	μs
Storage Time	t_s		–	–	4	μs
Fall Time	t_f		–	–	0.8	μs

Note 1. Pulse Test: Pulse Width = 300 μs , Duty Cycle = 1.5%.

