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NTE2317 Silicon NPN Transistor High Voltage Fast Switching Power Darlington TO-3PN Type Package

Description:

The NTE2317 is a multi-epitaxial bipolar NPN transistor in a monolithic Darlington configuration mounted in a TO-3PN type package designed for use in automotive ignition applications and inverter circuits for motor controls. Controlled performances in the linear region make this device particularly suitable for car ignitions where current limiting is achieved desaturating the darlington.

Features:

- High Performance Electronic Ignition Darlington
- High Ruggedness

Applications:

- Automotive Market

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

Collector-Base Voltage (Open Emitter), V_{CBO}	500V
Collector-Emitter Voltage (Open Base), V_{CEO}	450V
Emitter-Base Voltage (Open Collector), V_{EBO}	5V
Collector Current, I_C	
Continuous	15A
Peak	30A
Base Current, I_B	
Continuous	1A
Peak	5A
Total Power Dissipation ($T_C = +25^\circ\text{C}$), P_T	105W
Maximum Operating Junction Temperature, T_J	+150°C
Storage Temperature Range, T_{stg}	-40° to +150°C
Thermal Resistance, Junction-to-Case, R_{thJC}	2.08°C/W

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
OFF Characteristics						
Collector–Emitter Sustaining Voltage	$V_{CE(sus)}$	$I_C = 100\text{mA}, I_B = 0$	450	–	–	V
Collector Cutoff Current	I_{CES}	$T_J = +25^\circ\text{C}$	–	–	1	mA
		$T_J = +125^\circ\text{C}$	–	–	5	mA
	I_{CEO}	$V_{CE} = 450\text{V}, I_B = 0$	–	–	1	mA
Emitter Cutoff Current	I_{EBO}	$I_C = 0, V_{EB} = 5\text{V}$	–	–	50	mA
ON Characteristics						
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 8\text{A}, I_B = 150\text{mA}$	–	–	1.8	V
Base–Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 8\text{A}, I_B = 150\text{mA}$	–	–	2.2	V
DC Current Gain	h_{FE}	$I_C = 5\text{A}, V_{CE} = 10\text{V}$	300	–	–	
Diode Forward Voltage	V_F	$I_F = 10\text{A}$	–	–	2.8	V

