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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:**

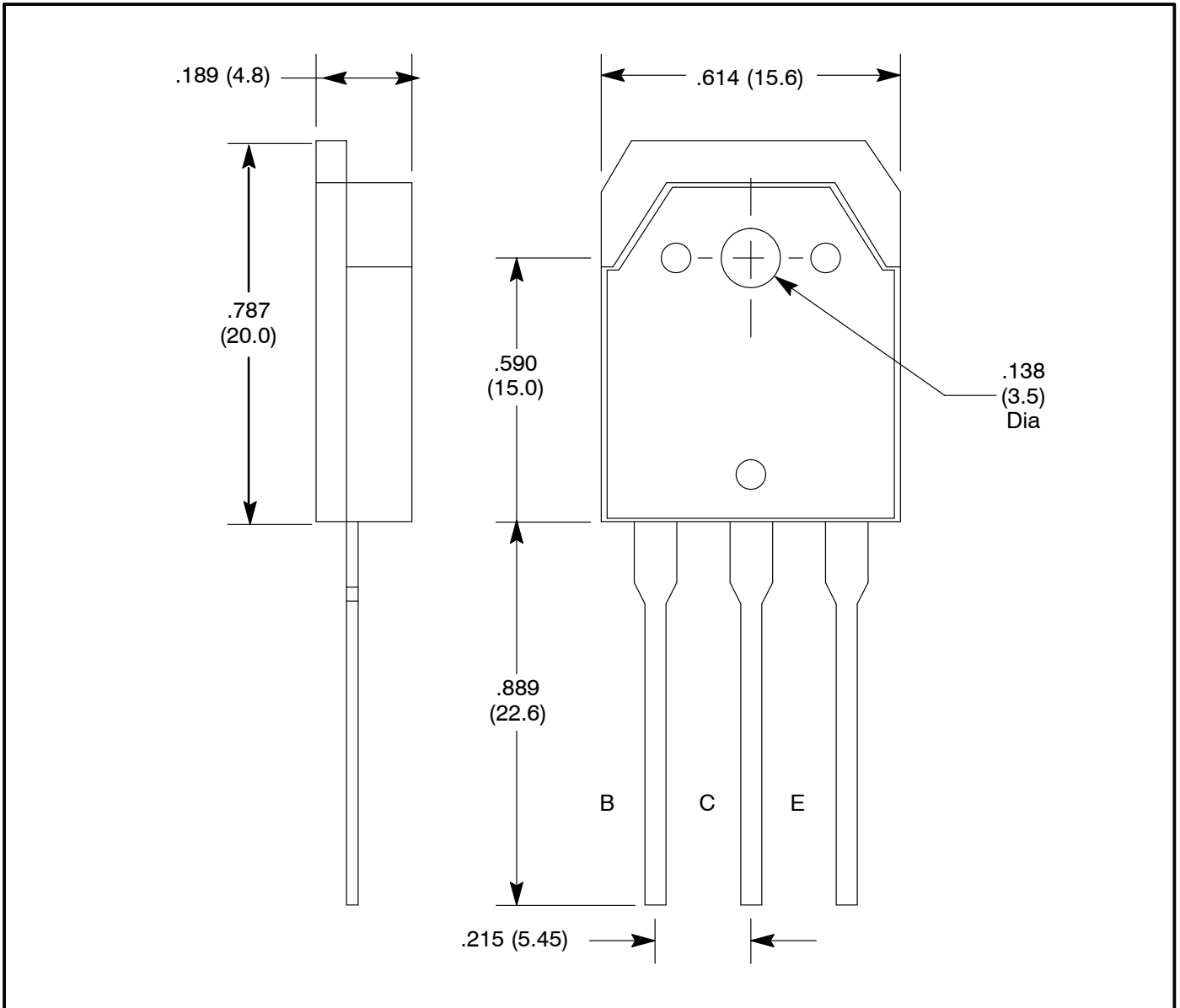
- Automotive Market

**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
<b>OFF Characteristics</b>						
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
		$T_J = +125^\circ\text{C}$				
	$I_{CEO}$	$V_{CE} = 450\text{V}, I_B = 0$	–	–	1	mA
Emitter Cutoff Current	$I_{EBO}$	$I_C = 0, V_{EB} = 5\text{V}$	–	–	50	mA
<b>ON Characteristics</b>						
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



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