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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.

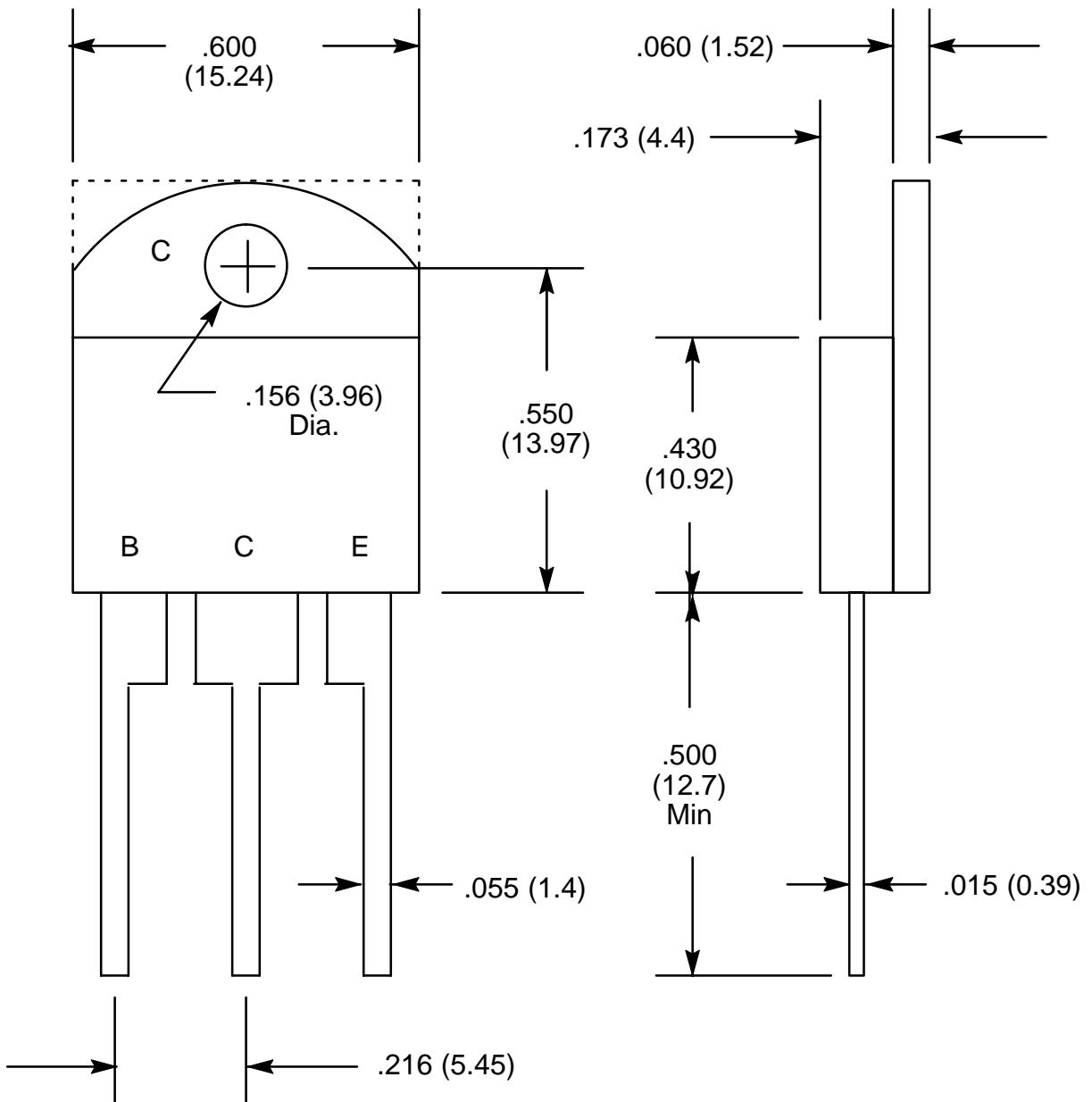
### Absolute Maximum Ratings:

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	$\mu s$
Storage Time	$t_s$		–	–	4	$\mu s$
Fall Time	$t_f$		–	–	0.8	$\mu s$

Note 1. Pulse Test: Pulse Width = 300 $\mu s$ , Duty Cycle = 1.5%.



**NOTE:** Dotted line indicates that case may have square corners