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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.

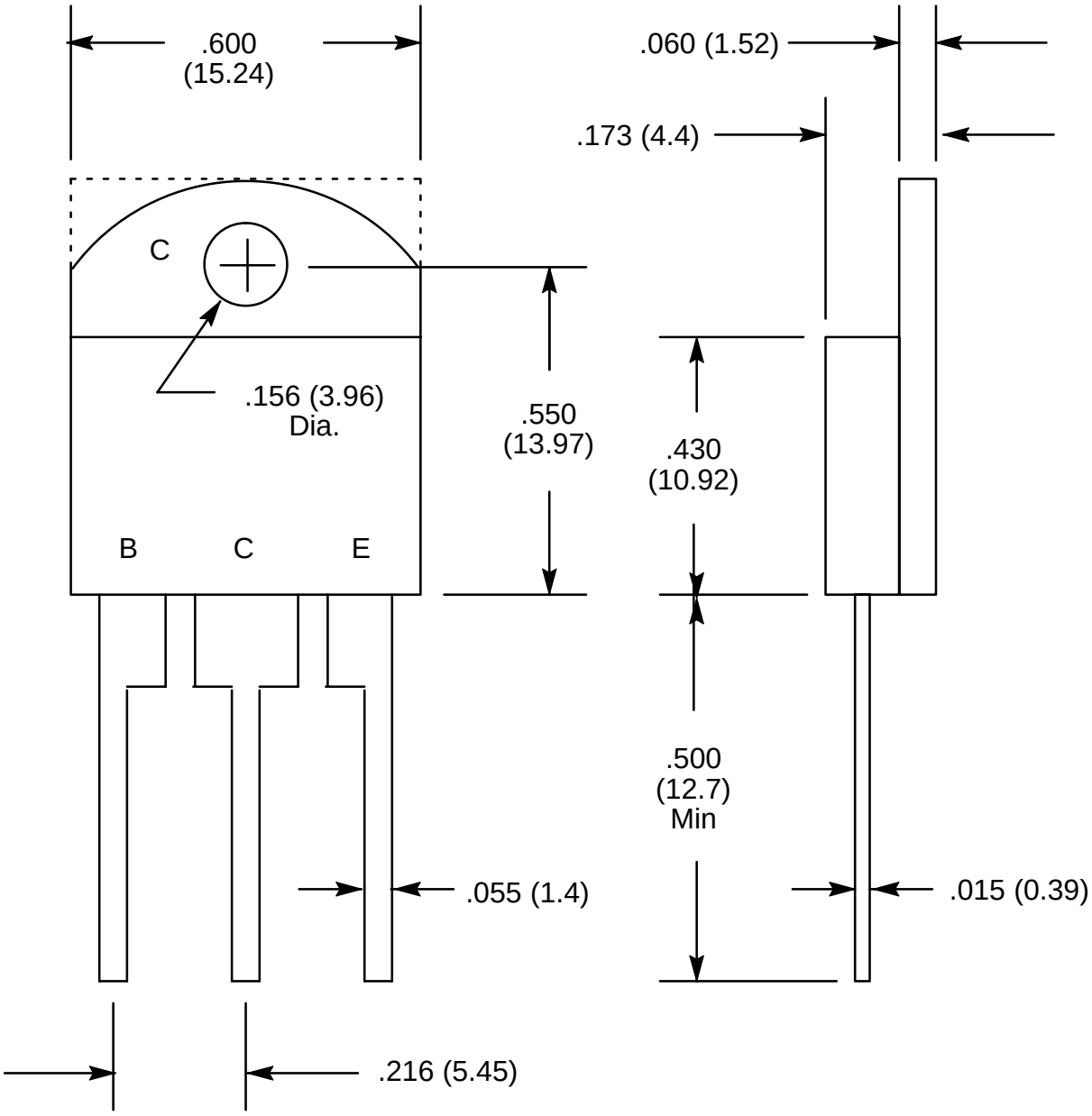
**Absolute Maximum Ratings:**

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 ($t_p \le 2$ms) . . . . . 20A
Base Current, $I_B$
  Continuous . . . . . 4A
  Peak ($t_p \le 2$ms) . . . . . 6A
Power Dissipation ($T_C$ = +25°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 Charactertistics:** ($T_C$ = +25°C unless otherwise specified)

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Collector–Emitter Sustaining Voltage | $V_{CEO(sus)}$ | $I_C$ = 100mA, L = 25mH, 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°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, Note 1 | – | – | 1.5 | V |
| Base–Emitter Saturation Voltage | $V_{BE(sat)}$ | $I_C$ = 6A, $I_B$ = 1.2A, 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 = 300µs, Duty Cycle = 1.5%.




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