ELECTRONICS, INC.
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NTE2558
Silicon NPN Transistor
Darlington, High Voltage, High Speed Switch
w/ Damper Diode

Features:
- High Reliability
- High Collector–Base Breakdown Voltage
- On–Chip Damper Diode

Applications:
- High–Voltage, High–Power Switching
- Induction Cookers

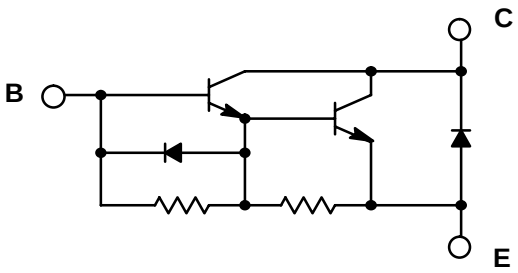
Absolute Maximum Ratings: (T_A = +25°C unless otherwise specified)

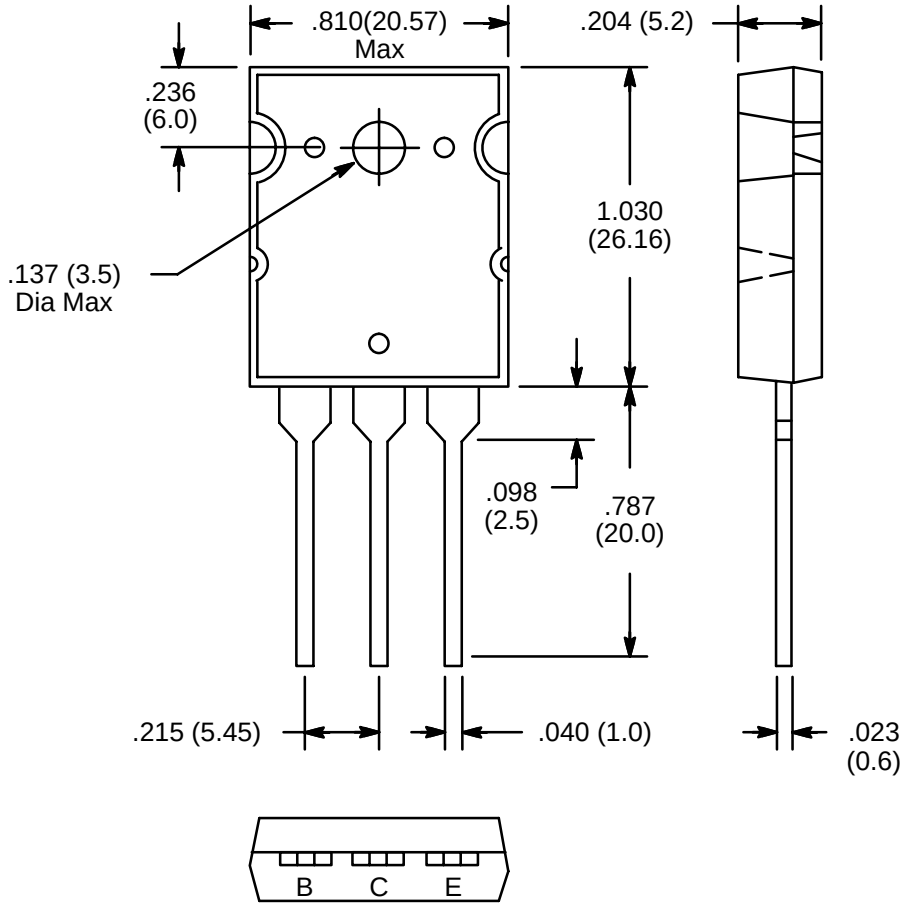
Collector Base Voltage, V_{CBO} 1500V
Collector Emitter Voltage, V_{CEO} 800V
Emitter Base Voltage, V_{EBO} 5V
Collector Current, I_C
  Continuous 15A
  Peak 30A
Base Current. I_B 3A
Collector Power Dissipation (T_C = +25°C), P_C 250W
Operating Junction Temperature, T_J . . . . . +150°C
Storage Temperature Range, T_{stg} . . . . . –55° to +150°C

Electrical Characteristics: (T_A = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cutoff Current	I_{CBO}	V_{CB} = 800V, I_E = 0	–	–	0.1	mA
Emitter Cutoff Current	I_{EBO}	V_{EB} = 5V, I_C = 0	–	–	600	mA
DC Current Gain	h_{FE}	V_{CE} = 5V, I_C = 15A	25	–	–	
Collector–Emitter Sustaining Voltage	$V_{CEO(sus)}$	I_C = 100mA	800	–	–	V
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	I_C = 15A, I_B = 0.75A	–	–	3.0	V
Base–Emitter Saturation Voltage	$V_{BE(sat)}$	I_C = 15A, I_B = 0.75A	–	–	2.5	V
Collector–Base Breakdown Voltage	$V_{(BR)CBO}$	I_C = 5mA, I_E = 0	1500	–	–	V
Diode Forward Voltage	V_F	I_{EC} = 15A	–	–	2.0	V
Fall Time	t_f	I_C = 15A, I_{B1} = 1A, I_{B2} = –5A, V_{CC} = 200V, R_L = 13.3Ω	–	–	2.0	µs

Schematic Diagram





Note: Collector connected to heat sink.