

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

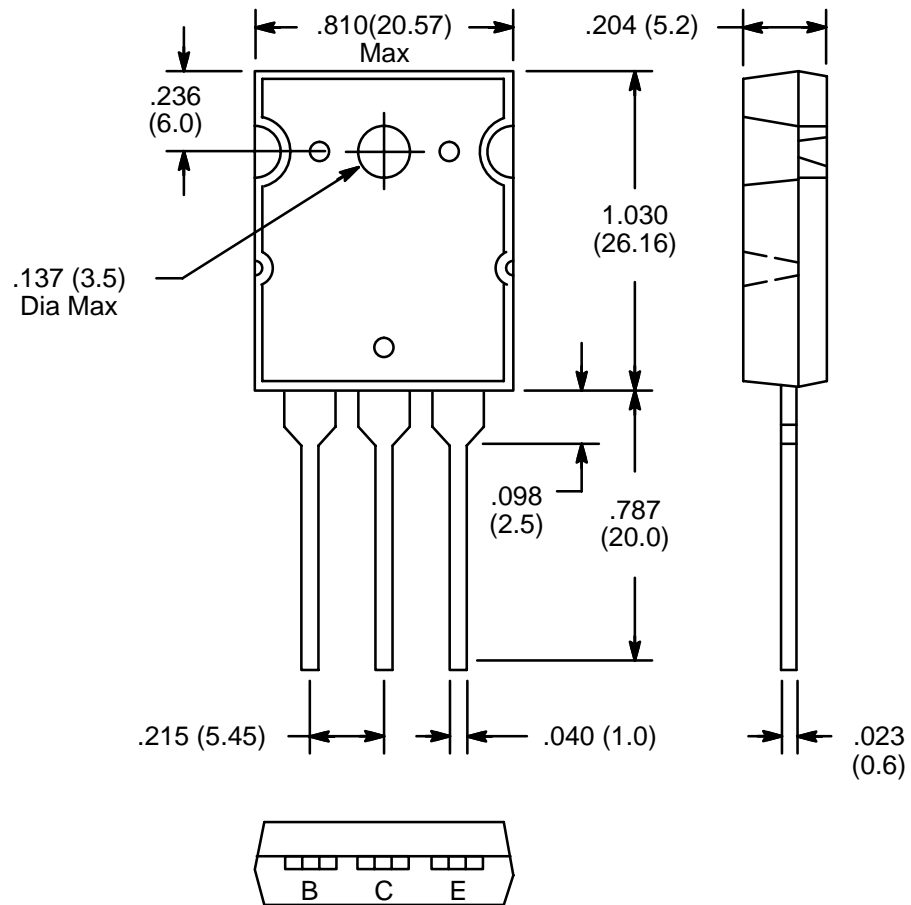
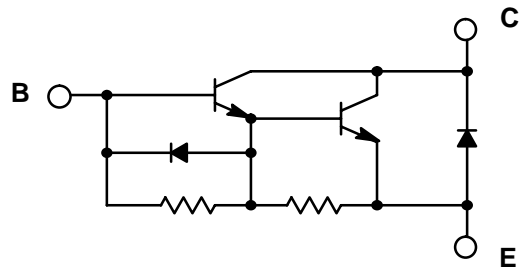
Absolute Maximum Ratings: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

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 ($T_C = +25^\circ\text{C}$), P_C	250W
Operating Junction Temperature, T_J	$+150^\circ\text{C}$
Storage Temperature Range, T_{stg}	-55° to $+150^\circ\text{C}$

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = 800\text{V}, I_E = 0$	–	–	0.1	mA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 5\text{V}, I_C = 0$	–	–	600	mA
DC Current Gain	h_{FE}	$V_{CE} = 5\text{V}, I_C = 15\text{A}$	25	–	–	
Collector–Emitter Sustaining Voltage	$V_{CEO(sus)}$	$I_C = 100\text{mA}$	800	–	–	V
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 15\text{A}, I_B = 0.75\text{A}$	–	–	3.0	V
Base–Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 15\text{A}, I_B = 0.75\text{A}$	–	–	2.5	V
Collector–Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 5\text{mA}, I_E = 0$	150 0	–	–	V
Diode Forward Voltage	V_F	$I_{EC} = 15\text{A}$	–	–	2.0	V
Fall Time	t_f	$I_C = 15\text{A}, I_{B1} = 1\text{A},$ $I_{B2} = -5\text{A}, V_{CC} = 200\text{V},$ $R_L = 13.3\Omega$	–	–	2.0	μs

Schematic Diagram



Note: Collector connected to heat sink.