ELECTRONICS, INC.
44 FARRAND STREET
BLOOMFIELD, NJ 07003
(973) 748–5089

NTE2340
Silicon NPN Transistor
Darlington Power Amp, Switch

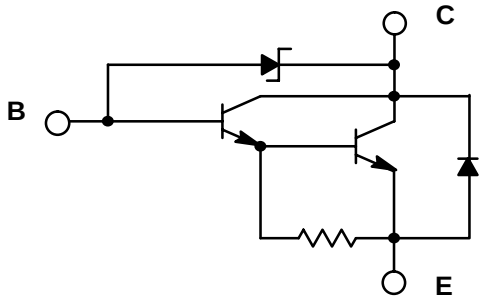
Features:
- 60V Zener Diode Built–In Between Collector and Base
- Very Small Fluctuation in Breakdown Voltages
- Large Energy Handling Capability
- High Speed Switching

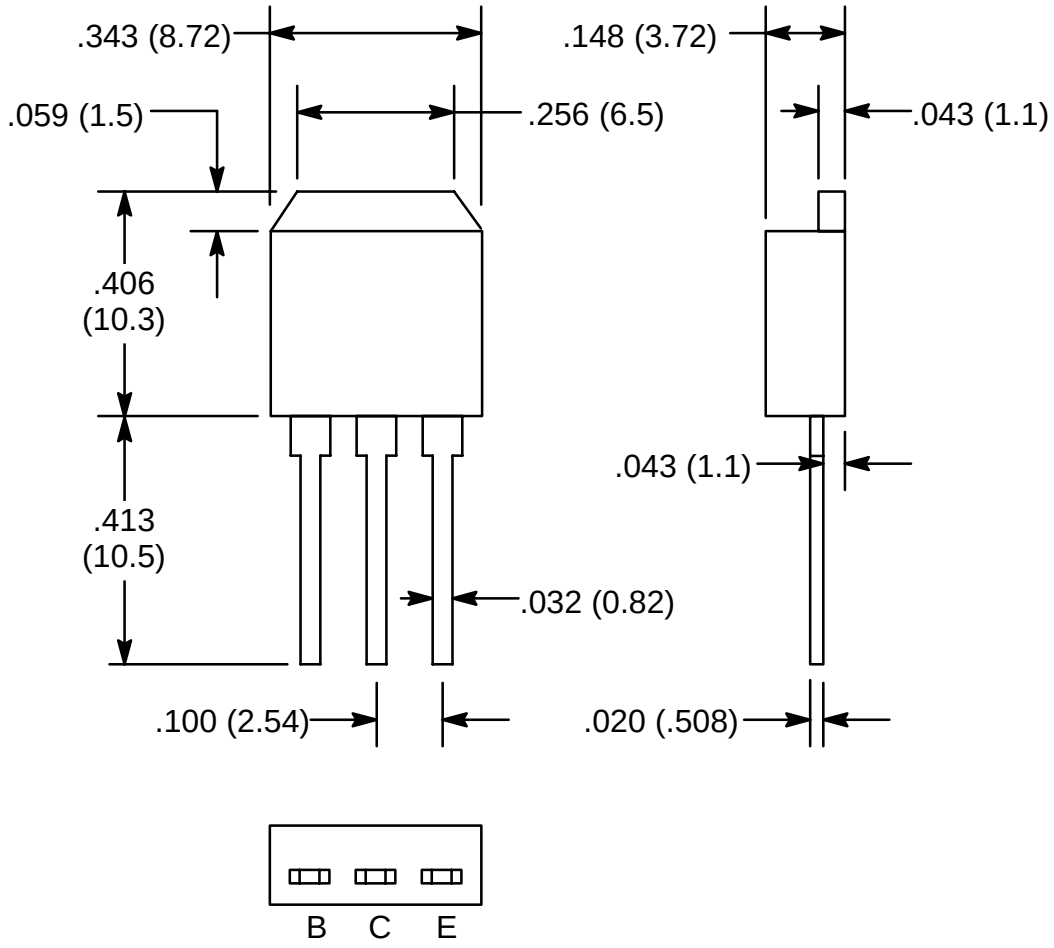
Absolute Maximum Ratings: (T_C = +25°C unless otherwise specified)

Collector–Base Voltage, V_{CBO} . . . . . 60 ±10V
Collector–Emitter Voltage, V_{CEO} . . . . . 60 ±10V
Emitter–Base Voltage, V_{EBO} 7V
Collector Current, I_C
  Continuous 8A
  Peak 12A
Collector Power Dissipation, P_C
  T_A = +25°C 1.3W
  T_C = +25°C 45W
Operating Junction Temperature, T_J . . . . . +150°C
Storage Temperature Range, T_{stg} . . . . . –55° to +150°C

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut–Off Current	I_{CBO}	V_{CB} = 50V, I_E = 0	–	–	100	µA
Emitter Cut–Off Current	I_{EBO}	V_{EB} = 7V, I_C = 0	–	–	2	mA
Collector–Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C = 5mA, I_B = 0	50	–	70	V
DC Current Gain	$h_{FE\ (1)}$	V_{CE} = 3V, I_C = 4A	2000	–	5000	
	$h_{FE\ (2)}$	V_{CE} = 3V, I_C = 8A	500	–	–	
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	I_C = 4A, I_B = 8mA	–	–	1.5	V
Base–Emitter Saturation Voltage	$V_{BE(sat)}$	I_C = 4A, I_B = 8mA	–	–	2.0	V
Transition Frequency	f_T	V_{CE} = 10V, I_C = 0.5A, f = 1MHz	–	20	–	MHz
Turn–On Time	t_{on}	V_{CC} = 50V, I_{B1} = –I_{B2} = 8mA, I_C = 4A	–	0.5	–	µs
Storage Time	t_{stg}		–	4.0	–	µs
Fall Time	t_f		–	1.0	–	µs
Energy Handling Capability	$E_{s/b}$	I_C = 1A, L = 100mH, R_{BE} = 100Ω	50	–	–	mJ


C
B
E


.343 (8.72)
.148 (3.72)
.059 (1.5)
.256 (6.5)
.043 (1.1)
.406
(10.3)
.043 (1.1)
.413
(10.5)
.032 (0.82)
.100 (2.54)
.020 (.508)
B C E