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NTE2327
Silicon NPN Transistor
High Voltage, High Speed Switch

Description:

The NTE2327 is a silicon NPN transistor in a TO126 type package designed for use in converters, inverters, switching regulators, motor control systems and switching applications.

Absolute Maximum Ratings:

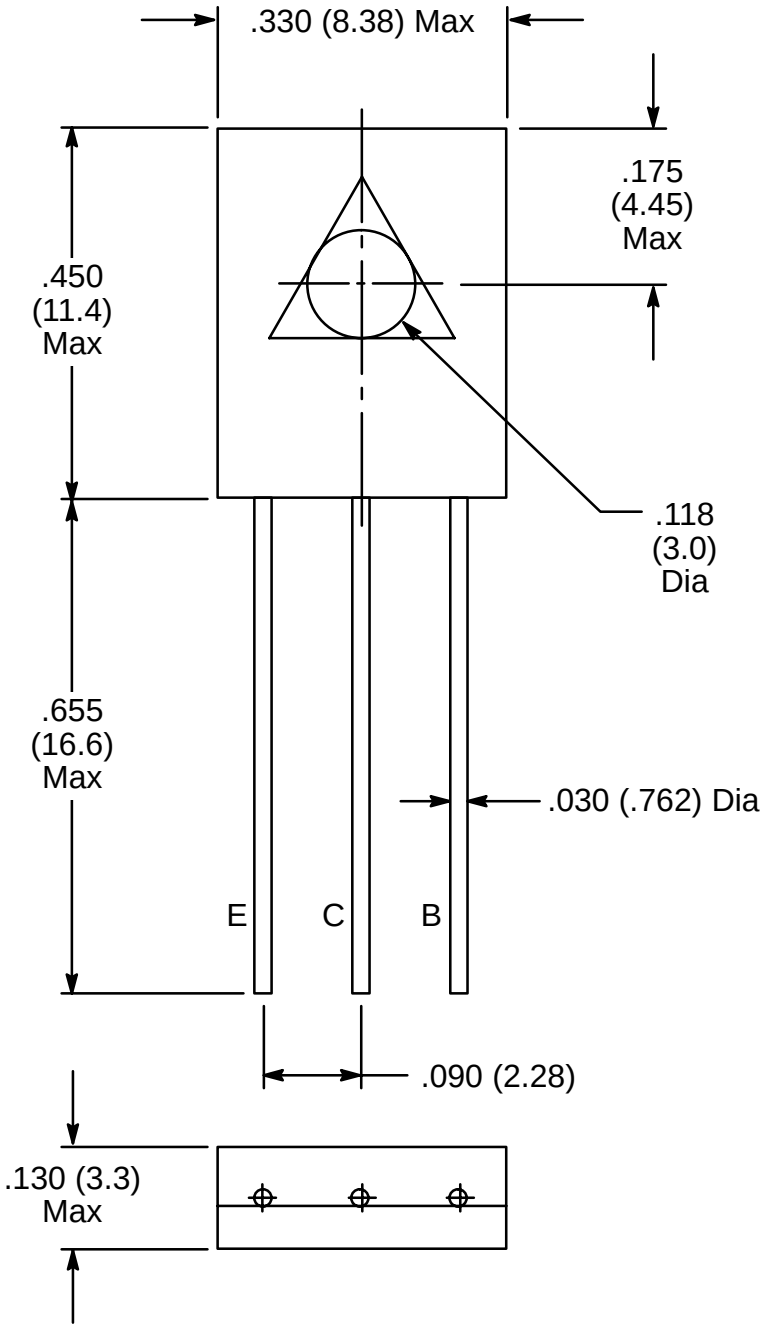
Collector–Emitter Voltage (V_{BE} = 0, Peak value), V_{CESM} 1000V
Collector–Emitter Voltage (Open base), V_{CEO} 450V
Emitter–Base Voltage (Open Collector), V_{EBO} 5V
Collector Current, I_C
  Continuous 0.5A
  Peak (t_p = 2ms) 1A
Base Current, I_B
  Continuous 0.2A
  Peak 0.3A
Reverse Base Current (Peak Value, Note 1), $–I_{BM}$ 0.3A
Total Power Dissipation ($T_{MB} \le +60°C$), P_{tot} 20W
Operating Junction Temperature, T_J . . . . . +150°C
Storage Temperature Range, T_{stg} . . . . . –65° to +150°C
Thermal Resistance, Junction–to–Mounting Base, R_{thJMB} 4.5K/W
Thermal Resistance, Junction–to–Ambient, R_{thJA} 100K/W

Note 1. Turn–Off current.

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cutoff Current (Note 2)	I_{CES}	V_{CEM} = 1000V, V_{BE} = 0	–	–	100	µA
		V_{CEM} = 1000V, V_{BE} = 0, T_J = +125°C	–	–	1	mA
Emitter Cutoff Current	I_{EBO}	I_C = 0, V_{EB} = 5V	–	–	1	mA
DC Current Gain	h_{FE}	I_C –= 50mA, V_{CE} = 5V	–	50	–	
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	I_C = 0.1A, I_B = 10mA	–	–	0.8	V
		I_C = 0.2A, I_B = 20mA	–	–	1.0	V
Base–Emitter Saturation Voltage	$V_{BE(sat)}$	I_C = 0.2A, I_B = 20mA	–	–	1.0	V
Collector–Emitter Sustaining Voltage	$V_{CEO(sus)}$	I_C = 100mA, I_{Boff} = 0, L = 25mH	450	–	–	V
Transition Frequency	f_T	I_C = 50mA, V_{CE} = 10V, f = 1MHz	–	20	–	MHz
Turn–On Time	t_{on}	I_{Con} = 0.2A, V_{CC} = 250V, I_{Bon} = 20mA, $–I_{Boff}$ = 40mA	–	0.25	0.50	µs
Storage Time	t_s		–	2.0	3.5	µs
Fall Time	t_f		–	0.4	1.3	µs

Note 2. Measured with a half sine–wave voltage.


.330 (8.38) Max
.175
(4.45)
Max
.450
(11.4)
Max
.118
(3.0)
Dia
.655
(16.6)
Max
.030 (.762) Dia
E
C
B
.090 (2.28)
.130 (3.3)
Max