

## NTE2337 Silicon NPN Transistor High Speed Switch

### **Features:**

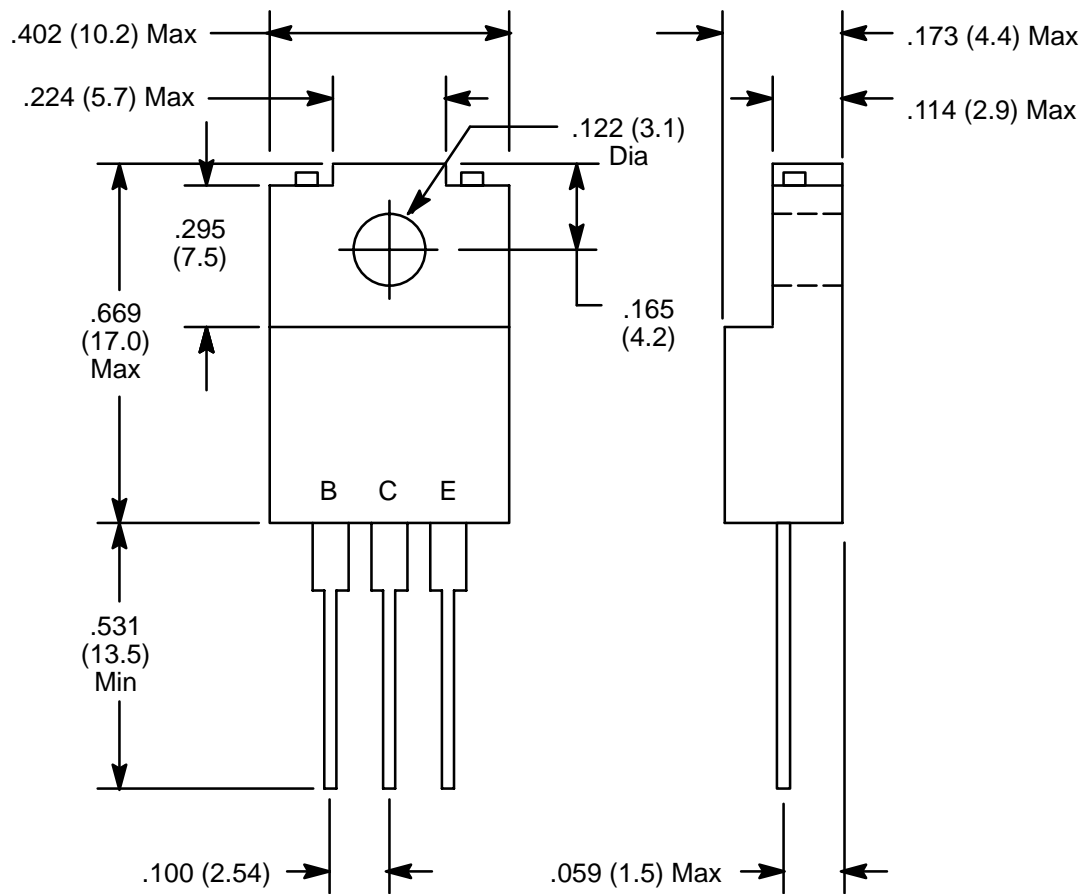
- High Collector–Base Voltage ( $V_{CBO}$ )
- Wide Area of Safety Operation (ASO)
- Good Linearity of DC Current Gain ( $h_{FE}$ )

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

Collector–Base Voltage, $V_{CBO}$	900V
Collector Emitter Voltage, $V_{CES}$	900V
Collector–Emitter Voltage, $V_{CEO}$	500V
Emitter Base Voltage, $V_{EBO}$	8V
Peak Collector Current, $I_{CP}$	15A
Collector Current, $I_C$	7A
Base Current, $I_B$	4A
Collector Power Dissipation, $P_C$	
$T_C = +25^\circ\text{C}$	45W
$T_A = +25^\circ\text{C}$	2W
Operating Junction Temperature, $T_J$	+150°C
Storage Temperature Range, $T_{stg}$	–55° to +150°C

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = 900\text{V}, I_E = 0$	–	–	100	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = 5\text{V}, I_C = 0$	–		100	$\mu\text{A}$
Collector Emitter Voltage	$V_{CEO}$	$I_C = 10\text{mA}, I_B = 0$	500	–	–	V
DC Current Gain	$h_{FE1}$	$V_{CE} = 5\text{V}, I_C = 0.1\text{A}$	15	–	–	
	$h_{FE2}$	$V_{CE} = 5\text{V}, I_C = 4\text{A}$	8	–	–	
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 4\text{A}, I_B = 0.8\text{A}$	–	–	1.0	V
Base–Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 4\text{A}, I_B = 0.8\text{A}$	–	–	1.5	V
Transition Frequency	$f_T$	$V_{CE} = 10\text{V}, I_C = 0.5\text{A}, f = 1\text{MHz}$	–	20	–	MHz
Turn–On Time	$t_{on}$	$I_C = 4\text{A},$ $I_{B1} = 0.8\text{A}, I_{B2} = -1.6\text{A},$ $V_{CC} = 200\text{V}$	–	–	1.0	$\mu\text{s}$
Storage Time	$t_{stg}$		–	–	3.0	$\mu\text{s}$
Collector Current Fall Time	$t_f$		–	–	0.3	$\mu\text{s}$



**NOTE:** Tab is isolated