

NTE2566 (NPN) & NTE2567 (PNP) Silicon Complementary Transistors High Current, High Speed Switch

Features:

- Low Saturation Voltage
- Fast Switching Speed
- Isolated TO220 Type Package

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

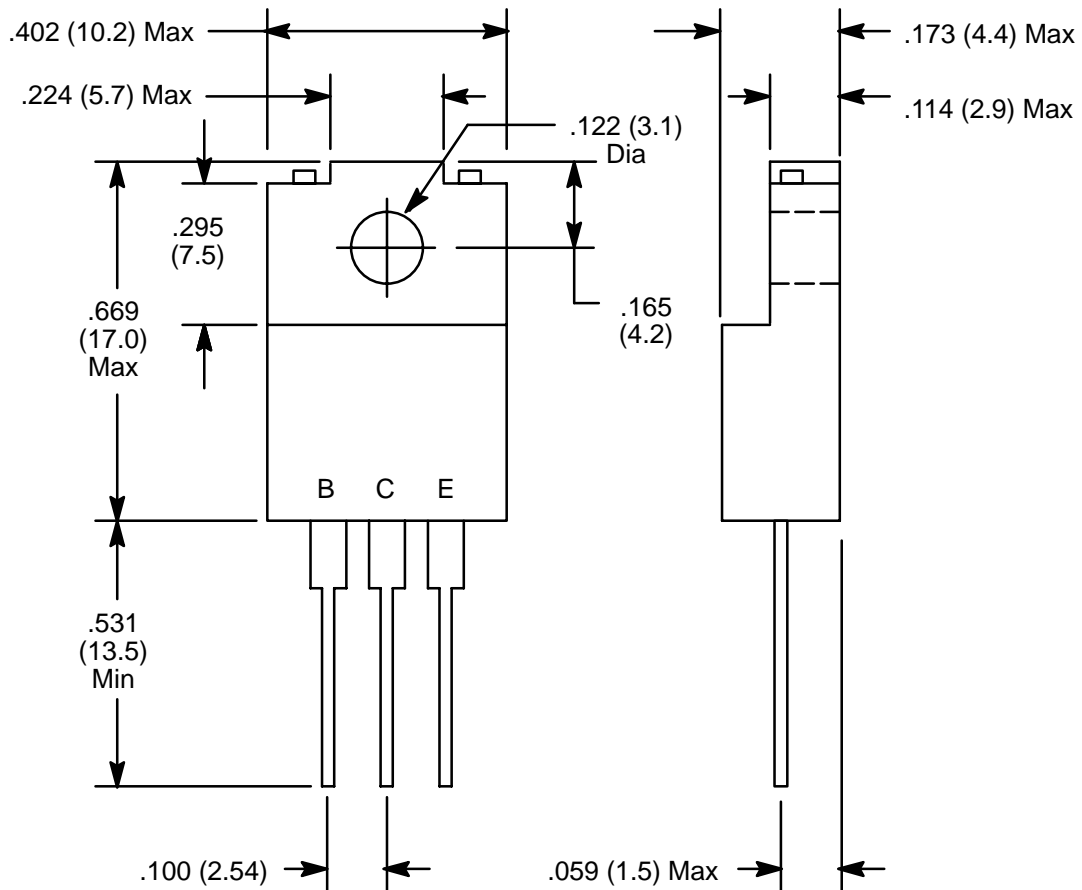
Collector–Base Voltage, V_{CBO}	60V
Collector–Emitter Voltage, V_{CEO}	50V
Emitter–Base Voltage, V_{EBO}	6V
Collector Current, I_C	
Continuous	12A
Peak	15A
Collector Power Dissipation, P_C	
$T_C = +25^\circ\text{C}$	30W
$T_A = +25^\circ\text{C}$	2W
Operating Junction Temperature, T_J	$+150^\circ\text{C}$
Storage Temperature Range, T_{stg}	-55° to $+150^\circ\text{C}$

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = 40\text{V}, I_E = 0$	–	–	0.1	mA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 4\text{V}, I_C = 0$	–		0.1	mA
DC Current Gain	h_{FE}	$V_{CE} = 2\text{V}, I_C = 1\text{A}$	100	–	200	
		$V_{CE} = 2\text{V}, I_C = 5\text{A}$	30	–	–	
Gain Bandwidth Product	f_T	$V_{CE} = 5\text{V}, I_C = 1\text{A}$	–	10	–	MHz
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 6\text{A}, I_B = 0.6\text{A}$	–	–	0.4	V
Collector–Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 1\text{mA}, I_E = 0$	60	–	–	V
Collector–Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 1\text{mA}, R_{BE} = \infty$	50	–	–	V
Emitter–Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 1\text{mA}, I_C = 0$	6	–	–	V

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Time NTE2566	t_{on}	$I_C = 5\text{A}, I_{B1} = 20\text{A},$ $I_{B2} = -20\text{A}, V_{CC} = 20\text{V},$ Pulse Width = $20\mu\text{s},$ Duty Cycle $\leq 1\%$	-	0.1	-	μs
NTE2567			-	0.2	-	μs
Storage Time NTE2566	t_{stg}		-	1.2	-	μs
NTE2567			-	0.4	-	μs
Collector Current Fall Time NTE2566	t_f		-	0.05	-	μs
NTE2567			-	0.1	-	μs



NOTE: Tab is isolated