ELECTRONICS, INC.
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NTE2596
Silicon NPN Transistor
High Voltage, High Current Switch

Features:
- High Breakdown Voltage, High Reliability
- Fast Switching Speed
- Wide ASO Range

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

Collector–to–Base Voltage, V_{CBO} 800V
Collector–to–Emitter Voltage, V_{CEO} 500V
Emitter–to–Base Voltage, V_{EBO} 7V
Collector Current, I_C
  Continuous 50A
  Peak (Note 1) 70A
Base Current, I_B 14A
Collector Dissipation, P_C
  T_A = +25°C 3.5W
  T_C = +25°C 300W
Junction Temperature, T_J . . . . . +150°C
Storage Temperature Range, T_{stg} . . . . . –55° to +150°C

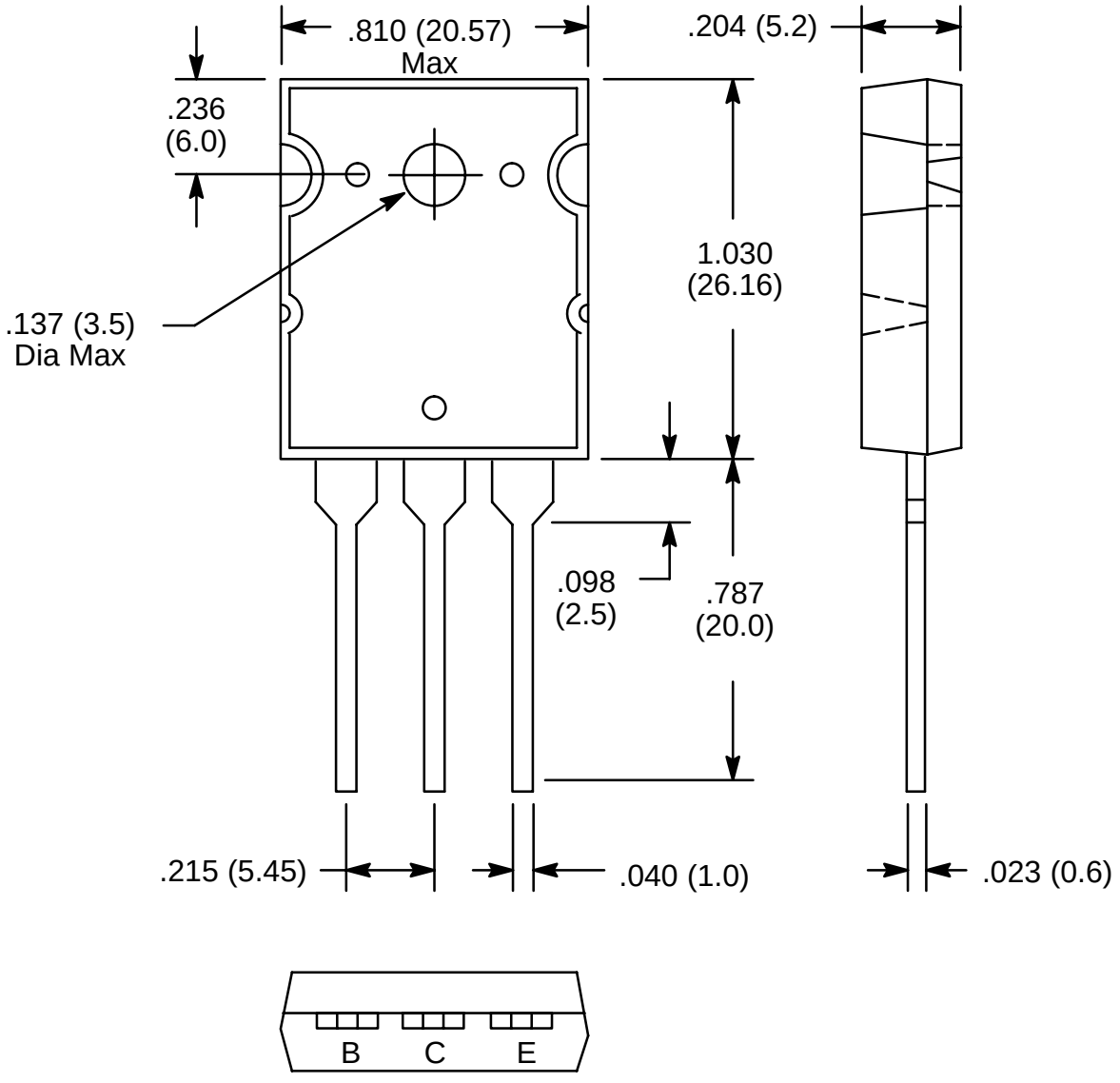
Note 1. Pulse Test: Pulse Width ≤ 300μs, Duty Cycle ≤ 10%.

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cutoff Current	I_{CBO}	V_{CB} = 500V, I_E = 0	–	–	10	μA
Emitter Cutoff Current	I_{EBO}	V_{EB} = 5V, I_C = 0	–	–	10	μA
DC Current Gain	$h_{FE(1)}$	V_{CE} = 5V, I_C = 4.8A	20	–	50	
	$h_{FE(2)}$	V_{CE} = 5V, I_C = 24A	8	–	–	
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	I_C = 24A, I_B = 4.8A	–	–	1.0	V
Base–Emitter Saturation Voltage	$V_{BE(sat)}$	I_C = 24A, I_B = 4.8A	–	–	1.5	V

Electrical Characteristics (Cont'd): (T_A = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector–Base Breakdown Voltage	$V_{(BR)CBO}$	I_C = 1mA, I_E = 0	800	–	–	V
Collector–Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C = 10mA, R_{BE} = ∞	500	–	–	V
Emitter–Base Breakdown Voltage	$V_{(BR)EBO}$	I_E = 1mA, I_C = 0	7	–	–	V
Collector–Emitter Sustaining Voltage	$V_{CEX(sus)}$	I_C = 15A, I_{B1} = $-I_{B2}$ = 2A, L = 100µH, Clamped	500	–	–	V
Turn–On Time	t_{on}	V_{CC} = 200V, $5I_{B1} = -2.5I_{B2} = I_C$ = 26A, R_L = 7.7Ω	–	–	0.5	µs
Storage Time	t_{stg}		–	–	3.0	µs
Fall Time	t_f		–	–	0.2	µs



Note: Collector connected to heat sink