ELECTRONICS, INC.
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NTE2553
Silicon NPN Transistor
Darlington, Motor Driver, Switch
TO–220 Full Pack

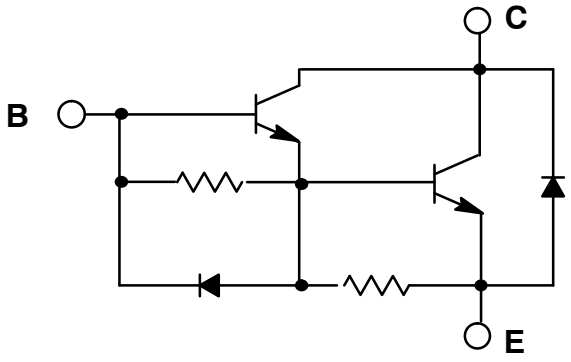
Features:
- High DC Current Gain
- High Breakdown Voltage

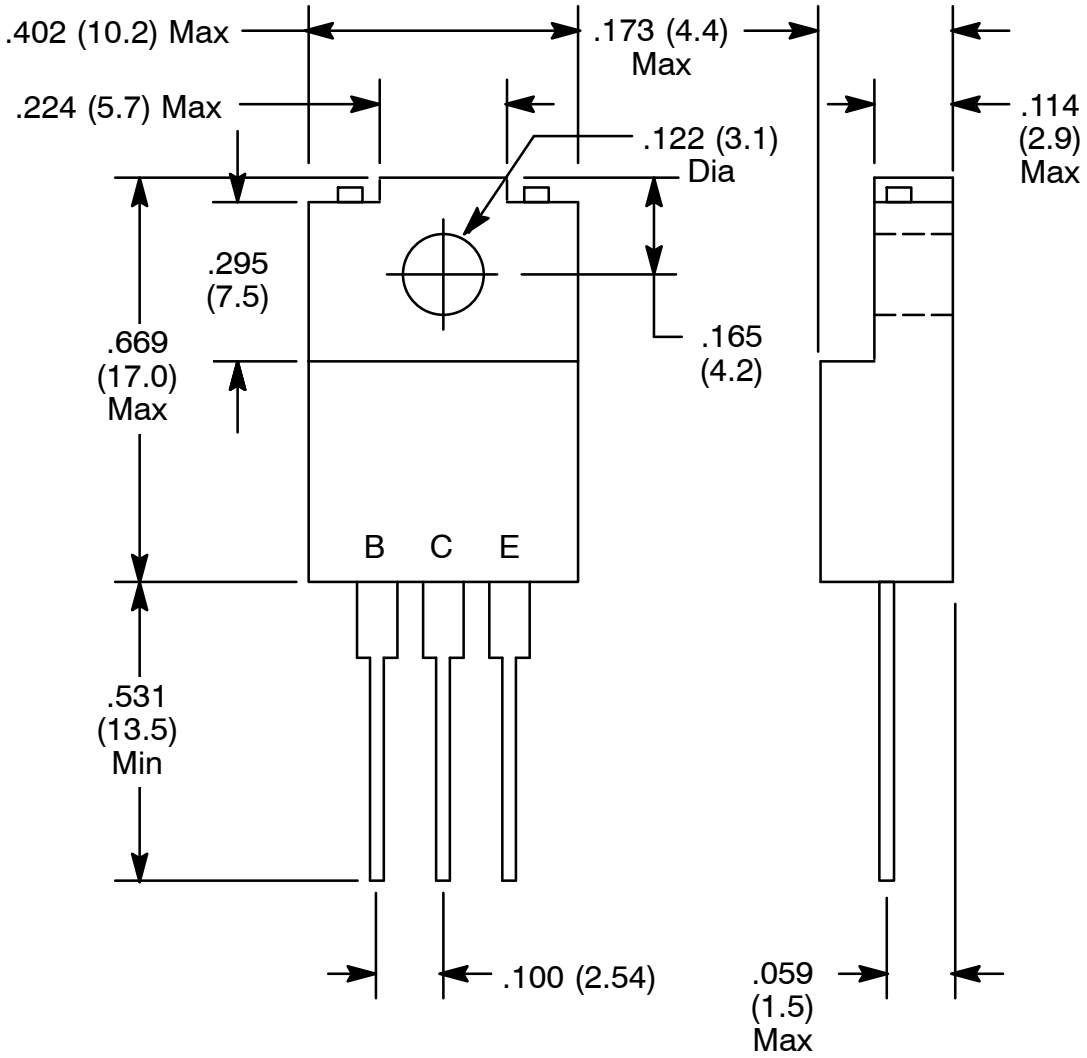
Absolute Maximum Ratings: (T_A = +25°C unless otherwise specified)

Collector–Base Voltage, V_{CBO} 300V
Collector–Emitter Voltage, V_{CEO} 200V
Emitter–Base Voltage, V_{EBO} 6V
Collector Current, I_C
  Continuous . . . . . ±12A
  Peak . . . . . ±18A
Base Current, I_B 1A
Collector Power Dissipation, P_C
  T_A = +25°C 2W
  T_C = +25°C 30W
Operating Junction Temperature, T_J . . . . . +150°C
Storage Temperature Range, T_{stg} . . . . . –55° to +150°C

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut–Off Current	I_{CBO}	V_{CB} = 300V, I_E = 0	–	–	100	μA
Emitter Cut–Off Current	I_{EBO}	V_{EB} = 6V, I_C = 0	50	–	150	mA
Collector–Base Breakdown Voltage	$V_{(BR)CBO}$	I_C = 1mA, I_E = 0	300	–	–	V
Collector–Emitter Sustaining Voltage	$V_{CEO(sus)}$	I_C = 250mA, L 40mH	200	–	–	V
DC Current Gain	h_{FE}	V_{CE} = 2V, I_C = 5A	500	–	5000	
		V_{CE} = 2V, I_C = 10A	100	–	–	
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	I_C = 10A, I_B = 100mA	–	–	2.0	V
Base–Emitter Saturation Voltage	$V_{BE(sat)}$	I_C = 10A, I_B = 100mA	–	–	2.3	V
Emitter–Collector Forward Voltage	V_{ECF}	I_E = 10A, I_B = 0	–	1.5	2.0	V
Transition Frequency	f_T	V_{CE} = 2V, I_C = 1A	–	40	–	MHz
Collector Output Capacitance	C_{ob}	V_{CB} = 10V, I_E = 0, f = 1MHz	–	200	–	pF
Turn–On Time	t_{on}	V_{CC} = 100V, I_{B1} = $-I_{B2}$ = 100mA	–	–	1.0	μs
Storage Time	t_{stg}		–	–	12	μs
Fall Time	t_f		–	–	2.0	μs





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