ELECTRONICS, INC.
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NTE256
Silicon NPN Transistor
Darlington w/Damper Diode
TO–3P Type Package

Features:
- Very High DC Current Gain
- Monolithic Darlington Transistor with Integrated Antiparallel Collector–Emitter Diode
- Robust Device Performance and Reliable Operation

Applications:
- High–Power Fast Switching Applications

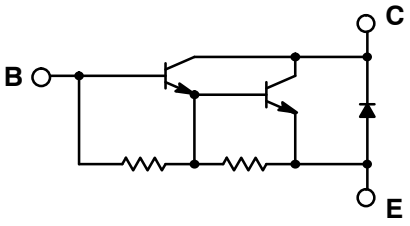
Absolute Maximum Ratings: (T_A = +25°C unless otherwise specified)

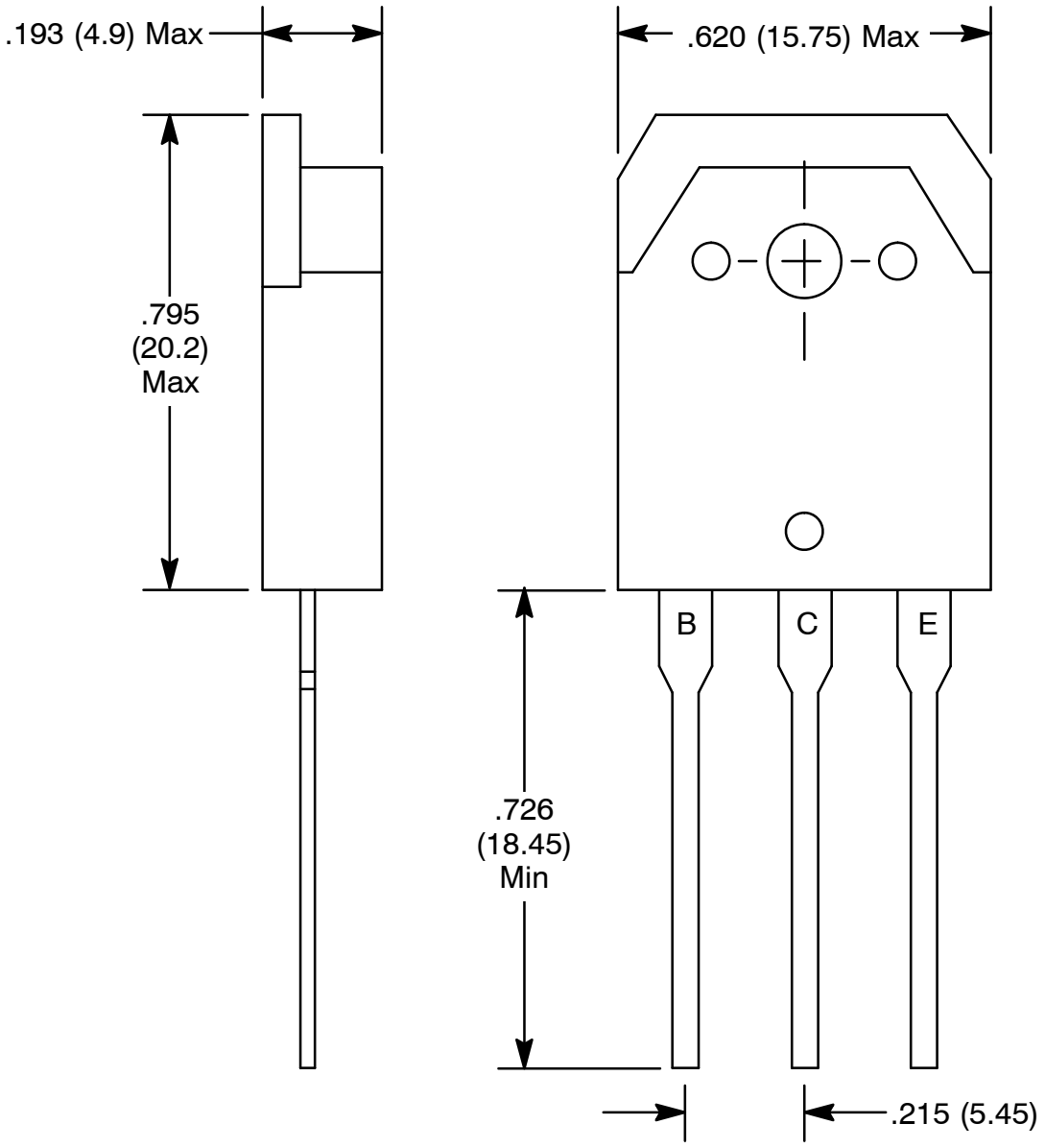
Collector–Base Voltage, V_{CBO} 500V
Collector–Emitter Voltage, V_{CEO} 400V
Emitter–Base Voltage, V_{EBO} 8V
Collector Current, I_C
  Continuous 20A
  Peak 30A
Continuous Base Current, I_B 2.5A
Collector Power Dissipation, P_C 125W
Operating Junction Temperature, T_J . . . . . +150°C
Storage Temperature Range, T_{stg} . . . . . –65° to + 175°C
Thermal Resistance, Junction–to–Case, R_{thJC} . . . . . 1.0°C/W

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

Parameter	Symbol	Test Conditions		Min	Typ	Max	Unit
Collector–Emitter Sustaining Voltage	$V_{CEO(sus)}$	I_C = 250mA, I_B = 0		400	–	–	V
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	I_C = 10A, I_B = 400mA		–	–	1.9	V
		I_C = 20A, I_B = 2A		–	–	3.0	V
Base–Emitter Saturation Voltage	$V_{BE(sat)}$	I_C = 10A, I_B = 400mA		–	–	2.5	V
Collector Cutoff Current	I_{CER}	V_{CB} = 400V, I_E = 0, R_{BE} = 50Ω, T_J = +100°C		–	–	5	mA
	I_{CEV}	V_{CE} = 450V, I_B = 0, V_{BE} = 1.5V		–	–	0.25	mA
			T_J = +100°C	–	–	5.0	mA
Emitter Cutoff Current	I_{EBO}	V_{EB} = 2V, I_C = 0		–	–	175	mA
DC Current Gain	h_{FE}	I_C = 5A, V_{CE} = 5V		300	–	1800	

Rev. 8–20


C
B
E


.193 (4.9) Max
.620 (15.75) Max
.795
(20.2)
Max
B
C
E
.726
(18.45)
Min
.215 (5.45)