ELECTRONICS, INC.
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NTE2550
Silicon NPN Transistor
Darlington Driver, Switch
TO–220 Full Pack

Absolute Maximum Ratings:

Collector–Base Voltage, V_{CBO} 500V
Collector–Emitter Voltage, V_{CEO} 400V
Emitter–Base Voltage, V_{EBO} 12V
Collector Current, I_C
  Continuous 10A
  Peak 15A
Base Current, I_C
  Continuous 0.5A
  Peak 1.0A
Collector Power Dissipation (T_C = +25°C), P_C 50W
Dielectric Strength (Terminal to Case, AC1 minute), Vdis 2kV
Operating Junction Temperature, T_J . . . . . +150°C
Storage Temperature Range, T_{stg} . . . . . –55° to +150°C
Maximum Thermal Resistance, Junction–to–Case, R_{thJC} . . . . . 2.5°C/W
Mounting Torque (Note 1), TOR . . . . . 5kg •¢m

Note 1. Recommended torque: 3kg • cm.

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector–Emitter Sustaining Voltage	V_{CEO}	V_{CE} (Clamp)	400	–	–	V
Collector Cut–Off Current	I_{CBO}	V_{CB} = 500V	–	–	0.1	mA
	I_{CEO}	V_{CE} = 400V	–	–	0.1	mA
Emitter Cut–Off Current	I_{EBO}	V_{EB} = 12V	–	–	100	mA
DC Current Gain	h_{FE}	V_{CE} = 2V, I_C = 7A	150	–	–	
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	I_C = 7A, I_B = 70mA	–	–	1.5	V
Base–Emitter Saturation Voltage	$V_{BE(sat)}$	I_C = 7A, I_B = 70mA	–	–	2.0	V
Gain–Bandwidth Product	f_T	V_{CE} = 10V, I_C = 1A	–	10	–	MHz
Turn–On Time	t_{on}	I_{B1} = I_{B2} = 70mA, I_C = 7A, R_L = 10Ω, V_{BB2} = 4V	–	–	2.0	μs
Storage Time	t_s		–	–	15	μs
Fall Time	t_f		–	–	15	μs

Rev. 9–17

RoHS

Schematic Diagram