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NTE2549 Silicon NPN Transistor Darlington Driver, Switch

Absolute Maximum Ratings:

Collector–Base Voltage, V_{CBO}	200V
Collector–Emitter Voltage, V_{CEO}	200V
Emitter–Base Voltage, V_{EBO}	7V
Collector Current, I_C	
Continuous	10A
Peak	15A
Base Current, I_B	
Continuous	0.5A
Peak	1.0A
Collector Power Dissipation ($T_C = +25^\circ\text{C}$), P_C	50W
Dielectric Strength (Terminal to case, AC1 minute), V_{dis}	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 •cm

Note 1. Recommended torque: 3kg • cm.

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut–Off Current	I_{CBO}	$V_{CB} = 200V$	–	–	0.1	mA
	I_{CEO}	$V_{CE} = 200V$	–	–	0.1	mA
Emitter Cut–Off Current	I_{EBO}	$V_{EB} = 7V$	–	–	5.0	mA
DC Current Gain	h_{FE}	$V_{CE} = 3V, I_C = 5A$	1500	–	30000	
Collector–Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 5A, I_B = 10mA$	–	–	1.5	V
Base–Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 5A, I_B = 10mA$	–	–	2.0	V
Gain–Bandwidth Product	f_T	$V_{CE} = 10V, I_C = 1A$	–	20	–	MHz
Turn–On Time	t_{on}	$I_{B1} = I_{B2} = 10mA,$ $I_C = 5A, R_L = 6\Omega,$ $V_{BB2} = 4V$	–	–	2.0	μs
Storage Time	t_s		–	–	12	μs
Fall Time	t_f		–	–	5.0	μs

Schematic Diagram

