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NTE2596 Silicon NPN Transistor High Voltage, High Current Switch TO3PBL Type Package

Features:

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

Absolute Maximum Ratings: ($T_A = +25^\circ\text{C}$ 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	
$T_A = +25^\circ\text{C}$	3.5W
$T_C = +25^\circ\text{C}$	300W
Junction Temperature, T_J	$+150^\circ\text{C}$
Storage Temperature Range, T_{stg}	-55° to $+150^\circ\text{C}$

Note 1. Pulse Test: Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 10\%$.

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

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

