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NTE2547 (NPN) & NTE2548 (PNP) Silicon Complementary Transistors Darlington Driver TO-220 Full Pack

Features:

- High DC Current Gain
- High Current Capacity and Wide ASO
- Low Saturation Voltage

Applications:

- Motor Drivers
- Printer Hammer Drivers
- Relay Drivers
- Voltage Regulator Control

Absolute Maximum Ratings: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Collector to Base Voltage, V_{CBO}	110V
Collector to Emitter Voltage, V_{CEO}	100V
Emitter to Base Voltage, V_{EBO}	6V
Collector Current, I_C	
Continuous	8A
Peak	12A
Collector Dissipation, P_C	
$T_A = +25^\circ\text{C}$	2.0W
$T_C = +25^\circ\text{C}$	20W
Operating Junction Temperature, T_J	$+150^\circ\text{C}$
Storage Temperature Range, T_{stg}	-55° to $+150^\circ\text{C}$

Electrical Characteristics: ($T_A = +25^\circ\text{C}$, Note 1 unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = 80\text{V}, I_E = 0$	–	–	0.1	mA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = 5\text{V}, I_C = 0$	–	–	3.0	mA
DC Current Gain	h_{FE}	$V_{CE} = 3\text{V}, I_C = 4\text{A}$	1500	4000		
Transition Frequency	f_T	$V_{CE} = 5\text{V}, I_C = 4\text{A}$	–	20	–	MHz

Note 1. For NTE2548 (PNP), the polarity is reversed.



Electrical Characteristics (Cont'd): ($T_A = +25^\circ\text{C}$, Note 1 unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-to-Emitter Saturation Voltage NTE2547	$V_{CE(sat)}$	$I_C = 4\text{A}, I_B = 8\text{mA}$	-	0.9	1.5	V
NTE2548			-	1.0	1.5	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 4\text{A}, I_B = 8\text{mA}$	-	-	2.0	V
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = 5\text{mA}, I_E = 0$	110	-	-	V
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 50\text{mA}, R_{BE} = \infty$	100	-	-	V
Turn-On Time NTE2547	t_{on}	$I_C = 500\text{mA}, I_{B1} = -500\text{mA}, I_{B2} = 4\text{A}, V_{CC} = 50\text{V}, R_L = 12.5\Omega$	-	0.6	-	μs
NTE2548			-	0.7	-	μs
Storage Time NTE2547	t_{stg}		-	4.8	-	μs
NTE2548			-	1.4	-	μs
Fall Time NTE2547	t_f		-	1.6	-	μs
NTE2548			-	1.5	-	μs

Note 1. For NTE2548 (PNP), the polarity is reversed.

