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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°C
Storage Temperature Range, $T_{stg}$ .....	-55° to +150°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	$I_{CBO}$	$V_{CB} = 80V, I_E = 0$	-	-	0.1	mA
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = 5V, I_C = 0$	-	-	3.0	mA
DC Current Gain	$h_{FE}$	$V_{CE} = 3V, I_C = 4A$	1500	4000		
Transition Frequency	$f_T$	$V_{CE} = 5V, I_C = 4A$	-	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	-	$\mu\text{s}$
NTE2548			-	0.7	-	$\mu\text{s}$
Storage Time NTE2547	$t_{stg}$		-	4.8	-	$\mu\text{s}$
NTE2548			-	1.4	-	$\mu\text{s}$
Fall Time NTE2547	$t_f$		-	1.6	-	$\mu\text{s}$
NTE2548			-	1.5	-	$\mu\text{s}$

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

