ELECTRONICS, INC.
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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°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°C 2.0W
  T_C = +25°C 20W
Operating Junction Temperature, T_J . . . . . +150°C
Storage Temperature Range, T_{stg} . . . . . –55° to +150°C

Electrical Characteristics: (T_A = +25°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.

Rev. 6–15

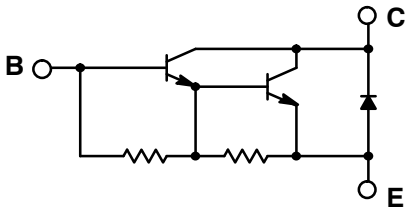
RoHS 2002/95/EC

Electrical Characteristics (Cont'd): (T_A = +25°C, Note 1 unless otherwise specified)

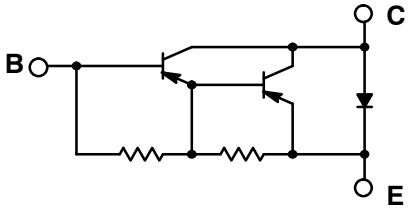
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector–to–Emitter Saturation Voltage NTE2547	$V_{CE(sat)}$	I_C = 4A, I_B = 8mA	–	0.9	1.5	V
NTE2548			–	1.0	1.5	V
Base–to–Emitter Saturation Voltage	$V_{BE(sat)}$	I_C = 4A, I_B = 8mA	–	–	2.0	V
Collector–Base Breakdown Voltage	$V_{(BR)CBO}$	I_C = 5mA, I_E = 0	110	–	–	V
Collector–Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C = 50mA, R_{BE} = ∞	100	–	–	V
Turn–On Time NTE2547	t_{on}	I_C = 500I_{B1} = –500I_{B2} = 4A, V_{CC} = 50V, R_L = 12.5Ω	–	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

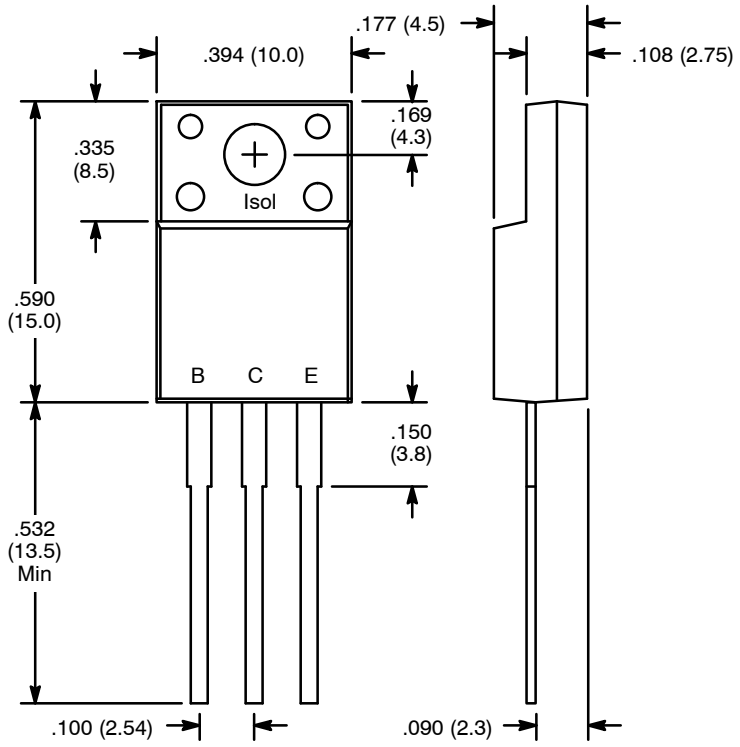
Note 1. For NTE2548 (PNP), the polarity is reversed.

NTE2547
(NPN)



NTE2548
(PNP)





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