ELECTRONICS, INC.
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NTE2534 (NPN) & NTE2535 (PNP)
Silicon Complementary Transistors
High Current Switch

Features:
- Low Collector Emitter Saturation Voltage

Applications:
- Relay Drivers
- High Speed Inverters
- Converters

Absolute Maximum Ratings: (T_A = +25°C unless otherwise specified)

Collector Base Voltage, V_{CBO} 90V
Collector Emitter Voltage, V_{CEO} 80V
Emitter Base Voltage, V_{EBO} 6V
Collector Current, I_C
  Continuous 12A
  Pulse 20A
Collector Power Dissipation (T_C = +25°C), P_C 1W
Operating Junction Temperature, T_J . . . . . +150°C
Storage Temperature Range, T_{stg} . . . . . –55° to +150°C

Electrical Characteristics: (T_A = +25°C 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} = 4V, I_C = 0	–	–	0.1	mA
DC Current Gain	h_{FE1}	V_{CE} = 2V, I_C = 1A	100	–	280	
	h_{FE2}	V_{CE} = 2V, I_C = 6A	30	–	–	
Gain–Bandwidth Product	f_T	V_{CE} = 5V, I_C = 1A	–	20	–	MHz
Collector–Emitter Saturation Voltage NTE2534	$V_{CE(sat)}$	I_C = 6A, I_B = 600mA	–	–	0.5	V
NTE2535			–	–	0.4	V

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector–Base Breakdown Voltage	$V_{(BR)CBO}$	I_C = 1mA, I_E = 0	90	–	–	V
Collector–Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C = 1mA, R_{BE} = ∞	80	–	–	V
Emitter–Base Breakdown Voltage	$V_{(BR)EBO}$	I_E = 1mA, I_C = 0	6	–	–	V
Turn–On Time	t_{on}	V_{CC} = 50V, $10I_{B1} = -10I_{B2} = I_C$ = 5A, Pulse Width = 20µs, Duty Cycle ≤ 1%, Note 1	–	0.2	–	µs
Storage Time NTE2534	t_{stg}		–	0.7	–	µs
NTE2535			–	1.7	–	µs
Fall Time NTE2534	t_f		–	0.1	–	µs
NTE2535			–	0.2	–	µs

Note 1. For NTE2535, the polarity is reversed.