



ELECTRONICS, INC.
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NTE2572 Silicon NPN Transistor High Current Switch

Features:

- Low Collector Emitter Saturation Voltage
- High Current Capacity

Applications:

- Relay Drivers
- High Speed Inverters
- Converters

Absolute Maximum Ratings: ($T_A = +25^\circ\text{C}$ 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 | 7A |
| Peak | 12A |
| Collector Power Dissipation, P_C | |
| $T_A = +25^\circ\text{C}$ | 1.65W |
| $T_C = +25^\circ\text{C}$ | 40W |
| Operating Junction Temperature, T_J | +150°C |
| Storage Temperature Range, T_{stg} | -55° to +150°C |

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

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|--------------------------------------|---------------|-------------------------|-----|-----|-----|------|
| Collector Cutoff Current | I_{CBO} | $V_{CB} = 80V, I_E = 0$ | - | - | 0.1 | mA |
| Emitter Cutoff Current | I_{EBO} | $V_{EB} = 4V, I_C = 0$ | - | - | 0.1 | mA |
| DC Current Gain | h_{FE} | $V_{CE} = 2V, I_C = 1A$ | 100 | - | 280 | |
| | | $V_{CE} = 2V, I_C = 4A$ | 30 | - | - | |
| Gain-Bandwidth Product | f_T | $V_{CE} = 5V, I_C = 4A$ | - | 20 | - | MHz |
| Collector Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C = 4A, I_B = 400mA$ | - | - | 0.4 | 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 | $V_{(BR)CBO}$ | $I_C = 1\text{mA}, I_E = 0$ | 90 | – | – | V |
| Collector Emitter Breakdown Voltage | $V_{(BR)CEO}$ | $I_C = 1\text{mA}, R_{BE} = \infty$ | 80 | – | – | V |
| Emitter Base Breakdown Voltage | $V_{(BR)EBO}$ | $I_E = 1\text{mA}, I_C = 0$ | 6 | – | – | V |
| Turn-On Time | t_{on} | $V_{CC} = 30\text{V}, V_{BE} = -5\text{V},$ $10I_{B1} = -10I_{B2} = I_C = 2\text{A},$ Pulse Width = $20\mu\text{s},$ Duty Cycle $\leq 1\%$ | – | 0.1 | – | μs |
| Storage Time | t_{stg} | | – | 1.6 | – | μs |
| Fall Time | t_f | | – | 0.4 | – | μs |

