

## NTE2541 (NPN) & NTE2542 (PNP) Silicon Complementary Transistors Darlington, Motor/Relay Driver

**Absolute Maximum Ratings:**

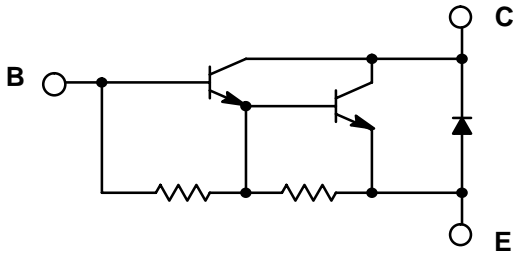
|  |                |
|--|----------------|
| Collector Base Voltage, $V_{CBO}$ .....                              | 120V           |
| Collector Emitter Voltage, $V_{CEO}$ .....                           | 120V           |
| Emitter Base Voltage, $V_{EBO}$ .....                                | 6V             |
| Collector Current, $I_C$   |                |
| Continuous .....   | 25A            |
| Pulse .....  | 40A            |
| Continuous Base Current, $I_B$ .....                                 | 2A             |
| Collector Power Dissipation ( $T_{FL} = +25^{\circ}C$ ), $P_C$ ..... | 120W           |
| Operating Junction Temperature, $T_J$ .....                          | +150°C         |
| Storage Temperature Range, $T_{stg}$ .....                           | -55° to +150°C |

**Electrical Characteristics:** (Note 1)

| Parameter                            | Symbol        | Test Conditions               | Min  | Typ | Max | Unit    |
|--------------------------------------|---------------|-------------------------------|------|-----|-----|---------|
| Collector Cutoff Current             | $I_{CBO}$     | $V_{CB} = 120V, I_E = 0$      | -    | -   | 10  | $\mu A$ |
| Emitter Cutoff Current               | $I_{EBO}$     | $V_{EB} = 6V, I_C = 0$        | 10   | -   | -   | mA      |
| Collector–Emitter Breakdown Voltage  | $V_{(BR)CEO}$ | $I_C = 25mA, R_{BE} = \infty$ | 120  | -   | -   | V       |
| DC Current Gain                      | $h_{FE}$      | $V_{CE} = 4V, I_C = 12A$      | 2000 | -   | -   |         |
| Collector–Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C = 12A, I_B = 24mA$       | -    | -   | 1.8 | V       |
| Base–Emitter Saturation Voltage      | $V_{BE(sat)}$ | $I_C = 12A, I_B = 24mA$       | -    | -   | 2.5 | V       |

Note 1. For NTE2542, the polarity is reversed.

**NTE2541**  
(NPN)



**NTE2542**  
(PNP)

