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# NTE2641
# Silicon NPN Transistor
# Horizontal Deflection Output for High Resolution Displays & Color TVs

**Features:**

- High Voltage: $V_{CBO}$ = 1500V
- Low Saturation Voltage: $V_{CE(sat)}$ = 3V Max
- High Speed: $t_f$ = 0.1μs Typ

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

Collector–Base Voltage, $V_{CBO}$ . . . . . 1500V
Collector–Emitter Voltage, $V_{CEO}$ . . . . . 750V
Emitter–Base Voltage, $V_{EBO}$ . . . . . 5V
Collector Current, $I_C$
  Continuous DC . . . . . 17A
  Pulse . . . . . 34A
Base Current, $I_B$ . . . . . 8.5A
Collector Power Dissipation ($T_C$ = +25°C), $P_C$ . . . . . 75W
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 | $I_{CBO}$ | $V_{CB}$ = 1500V, $I_E$ = 0 | – | – | 1 | mA |
| Emitter Cutoff Current | $I_{EBO}$ | $V_{EB}$ = 5V, $I_C$ = 0 | – | – | 100 | μA |
| Collector–Emitter Breakdown Voltage | $V_{(BR)CEO}$ | $I_C$ = 10mA, $I_B$ = 0 | 750 | – | – | V |
| DC Current Gain | $h_{FE}$ | $V_{CE}$ = 5V, $I_C$ = 2A | 22 | – | 48 | |
| | | $V_{CE}$ = 5V, $I_C$ = 7A | 9 | – | 18 | |
| | | $V_{CE}$ = 5V, $I_C$ = 14A | 5 | – | 8 | |
| Collector–Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C$ = 14A, $I_B$ = 3.5A | – | – | 3 | V |
| Base–Emitter Saturation Voltage | $V_{BE(sat)}$ | $I_C$ = 14A, $I_B$ = 3.5A | – | 1.0 | 1.5 | V |
| Transition Frequency | $f_T$ | $V_{CE}$ = 10V, $I_C$ = 0.1A | – | 2 | – | MHz |
| Collector Output Capacitance | $C_{ob}$ | $V_{CB}$ = 10V, $I_E$ = 0, f = 1MHz | – | 240 | – | pF |

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

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| **Switching Time** | | | | | | |
| Storage Time | $t_{stg}$ | $I_{CP}$ = 9A, $I_{B1}$(end) = 1.3A, $f_H$ = 64kHz | – | 2.7 | 3.0 | µs |
| Fall Time | $t_f$ | | – | 0.2 | 0.3 | µs |
| Storage Time | $t_{stg}$ | $I_{CP}$ = 7.5A, $I_{B1}$(end) = 1.1A, $f_H$ = 100kHz | – | 1.8 | 2.0 | µs |
| Fall Time | $t_f$ | | – | 0.10 | 0.15 | µs |

