



ELECTRONICS, INC.
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NTE2302

Silicon NPN Transistor

Color TV Horizontal Deflection Output ^w/Damper Diode

Features:

- High Breakdown Voltage and High Reliability
- High Switching Speed
- Capable of Being Mounted in a Variety of Methods

Absolute Maximum Ratings: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

| | |
|--|----------------|
| Collector–Base Voltage, V_{CBO} | 1500V |
| Collector–Emitter Voltage, V_{CEO} | 800V |
| Emitter–Base Voltage, V_{EBO} | 7V |
| Collector Current, I_C | |
| Continuous | 5A |
| Peak | 16A |
| Collector Dissipation ($T_C = +25^\circ\text{C}$), P_C | 120W |
| 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} | $V_{CB} = 800V, I_E = 0$ | – | – | 10 | μA |
| Emitter Cutoff Current | I_{EBO} | $V_{EB} = 4V, I_C = 0$ | 40 | – | 130 | mA |
| DC Current Gain | h_{FE} | $V_{CE} = 5V, I_C = 1A$ | 8 | – | – | |
| Current Gain–Bandwidth Product | f_T | $V_{CE} = 10V, I_C = 1A$ | – | 3 | – | MHz |
| Collector–Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C = 4A, I_B = 0.8A$ | – | – | 5.0 | V |
| Base–Emitter Saturation Voltage | $V_{BE(sat)}$ | $I_C = 4A, I_B = 0.8A$ | – | – | 1.5 | V |
| Collector–Base Breakdown Voltage | $V_{(BR)CBO}$ | $I_C = 5mA, I_E = 0$ | 1500 | – | – | V |
| Collector–Emitter Breakdown Voltage | $V_{(BR)CEO}$ | $I_C = 100mA, R_{BE} = \infty$ | 800 | – | – | V |
| Emitter–Base Breakdown Voltage | $V_{(BR)EBO}$ | $I_E = 200mA, I_C = 0$ | 7 | – | – | V |
| Diode Forward Voltage | V_F | $I_{EC} = 5A$ | – | – | 2 | V |
| Fall Time | t_f | $V_{CC} = 200V, I_C = 4A, I_{B1} = 0.8A, I_{B2} = -1.6A, R_L = 50\Omega$ | – | – | 0.7 | μs |

