

NTE2322

Silicon PNP Transistor Quad, General Purpose

Absolute Maximum Ratings:

| | |
|--|-------------------------------------|
| Collector–Emitter Voltage, V_{CEO} | 40V |
| Collector–Base Voltage, V_{CBO} | 60V |
| Emitter–Base Voltage, V_{EBO} | 5V |
| Continuous Collector Current, I_C | 600mA |
| Total Device Dissipation ($T_A = +25^\circ\text{C}$, Each Transistor), P_D | 0.65W |
| Derate Above 25°C | 6.5mW/ $^\circ\text{C}$ |
| Total Device Dissipation ($T_A = +25^\circ\text{C}$, Total Device), P_D | 1.9W |
| Derate Above 25°C | 19mW/ $^\circ\text{C}$ |
| Operating Junction Temperature Range, T_J | -55° to $+125^\circ\text{C}$ |
| Storage Temperature Range, T_{stg} | -55° to $+125^\circ\text{C}$ |
| Thermal Resistance, Junction–to–Ambient, R_{thJA} | 66 $^\circ\text{C}/\text{W}$ |

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

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|--------------------------------------|---------------|--|-----|-----|-----|------|
| OFF Characteristics | | | | | | |
| Collector–Emitter Breakdown Voltage | $V_{(BR)CEO}$ | $I_C = 10\text{mA}$, $I_B = 0$, Note 1 | 40 | – | – | V |
| Collector–Base Breakdown Voltage | $V_{(BR)CBO}$ | $I_C = 10\mu\text{A}$, $I_E = 0$ | 60 | – | – | V |
| Emitter–Base Breakdown Voltage | $V_{(BR)EBO}$ | $I_E = 10\mu\text{A}$, $I_C = 0$ | 5 | – | – | V |
| Collector Cutoff Current | I_{CBO} | $V_{CB} = 30\text{V}$, $I_E = 0$ | – | – | 50 | nA |
| Emitter Cutoff Current | I_{EBO} | $V_{EB} = 3\text{V}$, $I_E = 0$ | – | – | 50 | nA |
| ON Characteristics (Note 1) | | | | | | |
| DC Current Gain | h_{FE} | $V_{CE} = 10\text{V}$, $I_C = 10\text{mA}$ | 75 | – | – | |
| | | $V_{CE} = 10\text{V}$, $I_C = 150\text{mA}$ | 100 | – | – | |
| | | $V_{CE} = 10\text{V}$, $I_C = 300\text{mA}$ | 30 | – | – | |
| Collector–Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C = 150\text{mA}$, $I_B = 15\text{mA}$ | – | – | 0.4 | V |
| | | $I_C = 300\text{mA}$, $I_B = 30\text{mA}$ | – | – | 1.6 | V |
| Base–Emitter Saturation Voltage | $V_{BE(sat)}$ | $I_C = 150\text{mA}$, $I_B = 15\text{mA}$ | – | – | 1.5 | V |
| | | $I_C = 300\text{mA}$, $I_B = 30\text{mA}$ | – | – | 2.6 | V |

Note 1. Pulse test: Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$.

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

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|-------------------------------------|-----------|---|-----|-----|-----|------|
| Small-Signal Characteristics | | | | | | |
| Current Gain-Bandwidth Product | f_T | $V_{CE} = 20\text{V}, I_C = 50\text{mA}, f = 100\text{MHz}$ | 200 | – | – | MHz |
| Output Capacitance | C_{obo} | $V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$ | – | – | 8 | pF |
| Input Capacitance | C_{ibo} | $V_{EB} = 2\text{V}, I_C = 0, f = 1\text{MHz}$ | – | – | 30 | pF |

Pin Connection Diagram

