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2N3055 NPN SILICON POWER TRANSISTOR

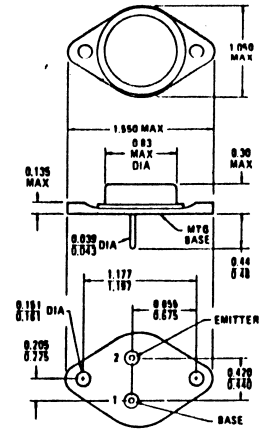
*MAXIMUM RATINGS

| Rating | Symbol | Value | Unit |
|---|-----------------------------------|--------------|---------------|
| Collector-Emitter Voltage | V _{CEO} | 60 | Vdc |
| Collector-Emitter Voltage | V _{CER} | 70 | Vdc |
| Collector-Base Voltage | V _{CB} | 100 | Vdc |
| Emitter-Base Voltage | V _{EB} | 7.0 | Vdc |
| Collector Current - Continuous | I _C | 15 | Adc |
| Base Current - Continuous | I _B | 7.0 | Adc |
| Total Device Dissipation @ T _C = 25°C Derate above 25°C | P _D | 115 0.657 | Watts W/°C |
| Operating and Storage Junction Temperature Range | T _J , T _{stg} | -65 to +200 | °C |

THERMAL CHARACTERISTICS

| Characteristic | Symbol | Max | Unit |
|--------------------------------------|-----------------|------|------|
| Thermal Resistance, Junction to Case | θ _{JC} | 1.52 | °C/W |

*Indicates JEDEC Registered Data.



TO-3

Collector Connected to Case

*ELECTRICAL CHARACTERISTICS (T_C = 25°C unless otherwise noted)

| Characteristic | Symbol | Min | Max | Unit |
|----------------|--------|-----|-----|------|
|----------------|--------|-----|-----|------|

OFF CHARACTERISTICS

| | | | | |
|--|-----------------------|----|-----------|-----|
| Collector-Emitter Sustaining Voltage (Note 1) (I _C = 200 mA, I _B = 0) | V _{CEO(sus)} | 60 | - | Vdc |
| Collector-Emitter Breakdown Voltage (Note 1) (I _C = 200 mA, R _{BE} = 100 Ohms) | BV _{CER} | 70 | - | Vdc |
| Collector-Emitter Current (V _{CE} = 30 Vdc, I _B = 0) | I _{CEO} | - | 0.7 | mA |
| Collector Cutoff Current (V _{CE} = 100 Vdc, V _{EB(off)} = 1.5 Vdc) (V _{CE} = 100 Vdc, V _{EB(off)} = 1.5 Vdc, T _C = 150°C) | I _{CEX} | - | 5.0 30 | mA |
| Emitter-Base Cutoff Current (V _{EB} = 7.0 Vdc, I _C = 0) | I _{EBO} | - | 5.0 | mA |

ON CHARACTERISTICS

| | | | | |
|--|----------------------|-----------|------------|-----|
| DC Current Gain (Note 1) (I _C = 4.0 Adc, V _{CE} = 4.0 Vdc) (I _C = 10 Adc, V _{CE} = 4.0 Vdc) | h _{FE} | 20 5.0 | 70 - | - |
| Collector-Emitter Saturation Voltage (Note 1) (I _C = 4.0 Adc, I _B = 0.4 Adc) (I _C = 10 Adc, I _B = 3.3 Adc) | V _{CE(sat)} | - | 1.1 8.0 | Vdc |
| Base-Emitter Voltage (Note 1) (I _C = 4.0 Adc, V _{CE} = 4.0 Vdc) | V _{BE} | - | 1.8 | Vdc |

DYNAMIC CHARACTERISTICS

| | | | | |
|--|-----------------|----|-----|-----|
| Small Signal Current Gain (Note 1) (V _{CE} = 4.0 Vdc, I _C = 1.0 Adc, f = 1.0 kHz) | h _{fe} | 15 | 120 | - |
| Small Signal Current Gain Cutoff Frequency (V _{CE} = 4.0 Vdc, I _C = 1.0 Adc, f = 1.0 kHz) | f _{αe} | 10 | - | kHz |

Note 1: Pulse Width ≈ 300 μs, Duty Cycle ≤ 2.0%.

*Indicates JEDEC Registered Data.

