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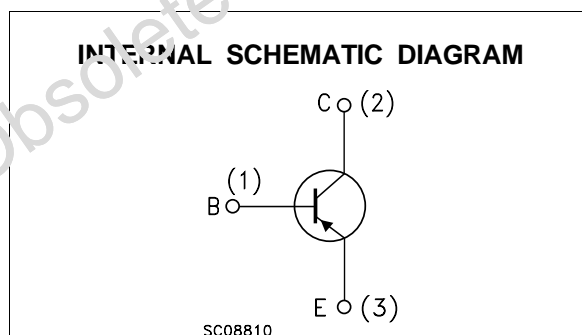
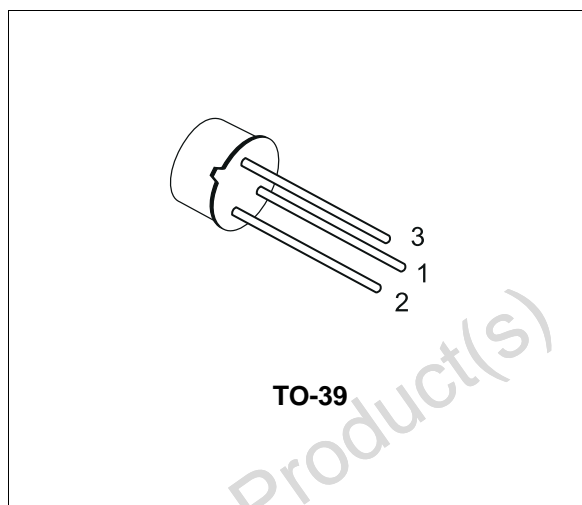
BSS44

SILICON PNP TRANSISTOR

- STMicroelectronics PREFERRED SALESTYPE
- PNP TRANSISTOR

DESCRIPTION

The BSS44 is a silicon epitaxial planar PNP transistor in Jedec TO-39 metal case. It is used for high-current switching and power applications up to 5 A.



ABSOLUTE MAXIMUM RATINGS

| Symbol | Parameter | Value | Unit |
|-----------|---|------------|------------------|
| V_{CBO} | Collector-Base Voltage ($I_E = 0$) | - 65 | V |
| V_{CEO} | Collector-Emitter Voltage ($I_B = 0$) | - 60 | V |
| V_{EBO} | Emitter-Base Voltage ($I_C = 0$) | - 6 | V |
| I_C | Collector Current | - 5 | A |
| P_{tot} | Total Dissipation at $T_{case} \leq 25\text{ }^\circ\text{C}$ | 5 | W |
| | $T_{amb} \leq 25\text{ }^\circ\text{C}$ | 0.87 | W |
| T_{stg} | Storage Temperature | -65 to 200 | $^\circ\text{C}$ |
| T_j | Max. Operating Junction Temperature | 200 | $^\circ\text{C}$ |

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THERMAL DATA

| | | | | |
|-----------------------|----------------------------------|-----|-----|------|
| R _{thj-case} | Thermal Resistance Junction-case | Max | 35 | °C/W |
| R _{thj-amb} | Thermal Resistance Junction-amb | Max | 200 | °C/W |

ELECTRICAL CHARACTERISTICS (T_{case} = 25 °C unless otherwise specified)

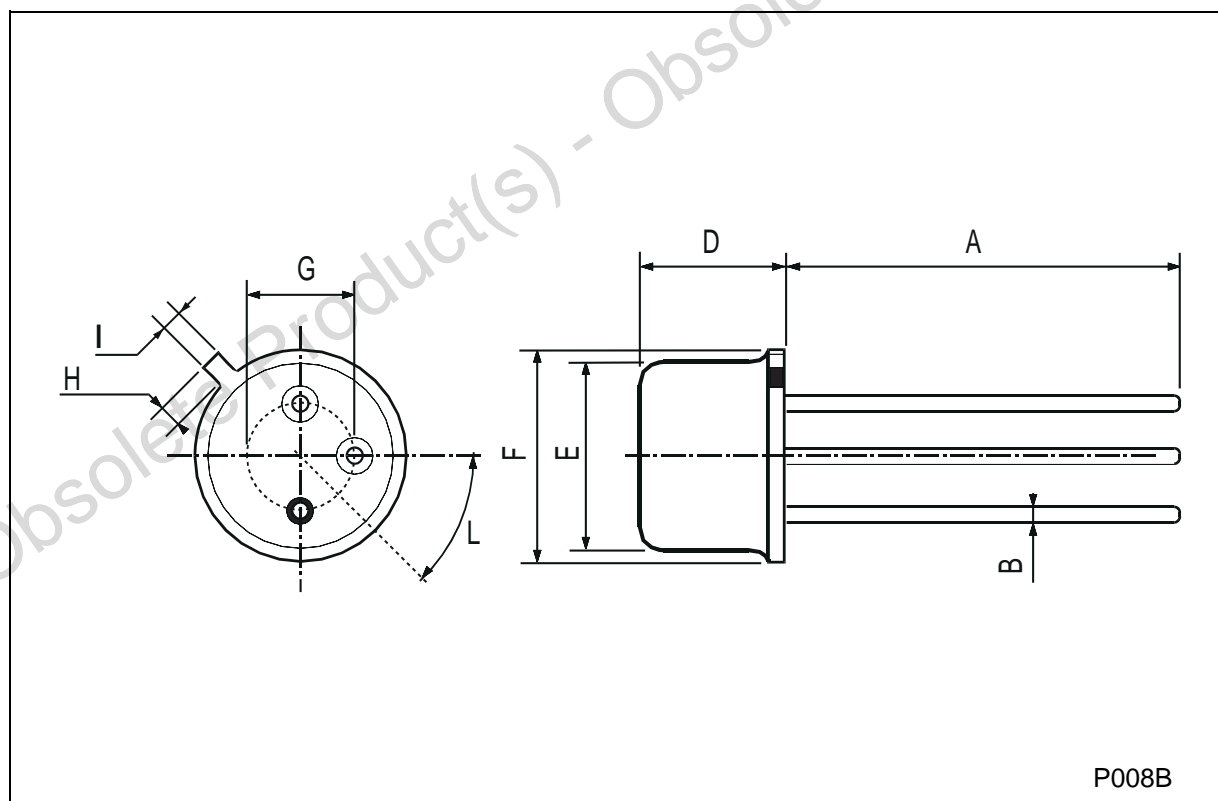
| Symbol | Parameter | Test Conditions | | Min. | Typ. | Max. | Unit |
|-------------------------|---|---|-------------------------|------|-------|------|------|
| I _{CES} | Collector Cut-off Current (V _{BE} =0) | V _{CE} = -60 V | | | | -0.5 | μA |
| V _{(BR)CBO} * | Collector-base Breakdown Voltage (I _E = 0) | I _C = -1 mA | | -65 | | | V |
| V _{CEO(sus)} * | Collector-Emitter Sustaining Voltage (I _B = 0) | I _C = -50 mA | | -60 | | | V |
| V _{EBO} * | Emitter-base Voltage (I _C = 0) | I _E = -1 mA | | -6 | | | V |
| V _{CE(sat)} * | Collector-Emitter Saturation Voltage | I _C = -0.5 A | I _B = -50 mA | -0.1 | | | V |
| | | I _C = -5 A | I _B = -0.5 A | -0.4 | | -1 | V |
| V _{BE(sat)} * | Base-Emitter Saturation Voltage | I _C = -0.5 A | I _B = -50 mA | -0.8 | | | V |
| | | I _C = -5 A | I _B = -0.5 A | -1.1 | | -1.6 | V |
| h _{FE} * | DC Current Gain | I _C = -0.5 A | V _{CE} = -2 V | 30 | | | |
| | | I _C = -2 A | V _{CE} = -2 V | 40 | 70 | | |
| | | I _C = -5 A | V _{CE} = -2 V | | 45 | | |
| f _T * | Transition Frequency | I _C = -0.5 A | V _{CE} = -5 V | | 80 | | MHz |
| C _{CBO} | Collector-base Capacitance | I _E = 0 f = 1 MHz | V _{CB} = 10 V | | | 100 | pF |
| t _{on} | Turn-on Time | I _C = -0.5 A | V _{CC} = -20 V | | 0.065 | | μs |
| t _{off} | Turn-off Time | I _{B1} = -I _{B2} = -50 mA | | | 0.45 | | μs |

* Pulsed: Pulse duration = 300 μs, duty cycle 1.5 %

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TO-39 MECHANICAL DATA

| DIM. | mm | | | inch | | |
|------|------------|------|------|-------|------|-------|
| | MIN. | TYP. | MAX. | MIN. | TYP. | MAX. |
| A | 12.7 | | | 0.500 | | |
| B | | | 0.49 | | | 0.019 |
| D | | | 6.6 | | | 0.260 |
| E | | | 8.5 | | | 0.334 |
| F | | | 9.4 | | | 0.370 |
| G | 5.08 | | | 0.200 | | |
| H | | | 1.2 | | | 0.047 |
| I | | | 0.9 | | | 0.035 |
| L | 45° (typ.) | | | | | |



BSS44

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