

**SOT-23 BIPOLAR TRANSISTORS
TRANSISTOR(NPN)**

FEATURES

- * Power dissipation
P_{CM} : □ 0.225 □ W (Tamb=25°C) Note1
- * Collector current
I_{CM} : □ 0.1 □ A
- * Collector-base voltage
V_{CBO} : □ 30 □ V
- * Operating and storage junction temperature range
T_J, T_{stg}: -55°C to +150°C

MECHANICAL DATA

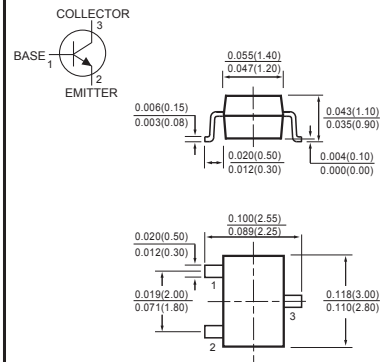
- * Case: Molded plastic
- * Epoxy: UL 94V-O rate flame retardant
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any
- * Weight: 0.008 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.



SOT-23



Dimensions in inches and (millimeters)

ELECTRICAL CHARACTERISTICS (@ TA = 25°C unless otherwise noted)

| CHARACTERISTICS | SYMBOL | MIN | MAX | UNITS |
|---|----------------------|-----|-----|-------|
| Collector-base breakdown voltage (I _C = 10μA, I _E =0) | V _{CBO} | 30 | - | V |
| Collector-emitter breakdown voltage (I _C = 10mA, I _B =0) | V _{CEO} | 30 | - | V |
| Emitter-base breakdown voltage (I _E = 10μA, I _C =0) | V _{EBO} | 6 | - | V |
| Collector cut-off current (V _{CB} = 30V, I _E =0) | I _{CBO} | - | 0.1 | μA |
| Collector cut-off current (V _{CE} = 30V, I _B =0) | I _{CEO} | - | 0.1 | μA |
| Emitter cut-off current (V _{EB} = 5V, I _C =0) | I _{EBO} | - | 0.1 | μA |
| DC current gain (V _{CE} = 5V, I _C = 2mA) | h _{FE(1)} | 200 | 450 | - |
| Collector-emitter saturation voltage (I _C = 100mA, I _B = 5mA) | V _{CE(sat)} | - | 0.5 | V |
| Base-emitter saturation voltage (I _C = 100mA, I _B = 5mA) | V _{BE(sat)} | - | 1.1 | V |
| Transition frequency (V _{CE} = 5V, I _C = 10mA, f= 100MHz) | f _T | 100 | - | MHz |

DEVICE MARKING

| | |
|--------|----|
| BC848B | 1K |
|--------|----|

Notes: 1. Transistor mounted on an FR4 Printed-circuit board.
2. "Fully ROHS compliant", "100% Sn plating (Pb-free)".

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