

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

FEATURES

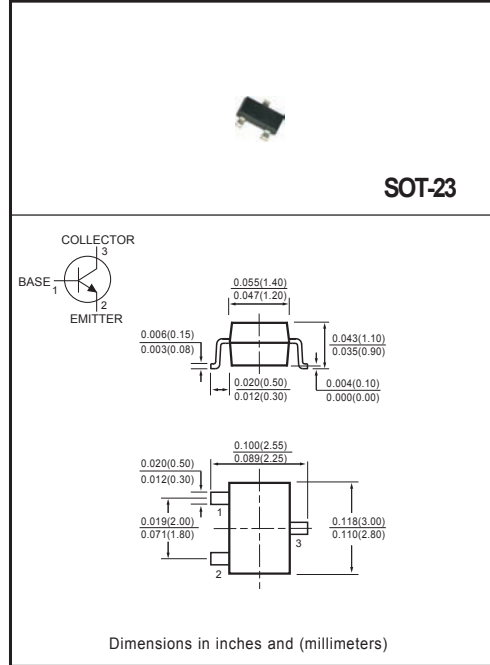
- * Power dissipation
 $P_{CM} : \square \quad 0.225 \square \quad W$ ($T_{amb}=25^{\circ}C$) Note1
- * Collector current
 $I_{CM} : \square \quad 0.1 \square \quad A$
- * Collector-base voltage
 $V_{CBO} : \square \quad 50 \square \quad V$
- * Operating and storage junction temperature range
 $T_{J}, T_{stg} : -55^{\circ}C$ to $+150^{\circ}C$

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 $25^{\circ}C$ ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.



Dimensions in inches and (millimeters)

ELECTRICAL CHARACTERISTICS (@ $T_A = 25^{\circ}C$ unless otherwise noted)

| CHARACTERISTICS | SYMBOL | MIN | MAX | UNITS |
|---|---------------|-----|-----|---------|
| Collector - base breakdown voltage ($I_C = 10\mu A, I_E = 0$) | V_{CBO} | 50 | - | V |
| Collector - emitter breakdown voltage ($I_C = 10mA, I_B = 0$) | V_{CEO} | 45 | - | V |
| Emitter - base breakdown voltage ($I_E = 10\mu A, I_C = 0$) | V_{EBO} | 6 | - | V |
| Collector cut - off current ($V_{CB} = 50V, I_E = 0$) | I_{CBO} | - | 0.1 | μA |
| Collector cut - off current ($V_{CE} = 45V, I_B = 0$) | I_{CEO} | - | 0.1 | μA |
| Emitter cut - off current ($V_{EB} = 5V, I_C = 0$) | I_{EBO} | - | 0.1 | μA |
| DC current gain ($V_{CE} = 5V, I_C = 2mA$) | $h_{FE(1)}$ | 420 | 800 | - |
| 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

| | |
|--------|----|
| BC847C | 1G |
|--------|----|

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

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