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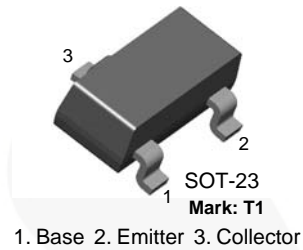
March 2014

BCX17

PNP General-Purpose Amplifier

Description

This device is designed for general-purpose amplifiers and switching applications at currents to 0.5 A. Sourced from process 78.



Ordering Information

| Part Number | Marking | Package | Packing Method |
|-------------|---------|-----------|----------------|
| BCX17 | T1 | SOT-23 3L | Tape and Reel |

Absolute Maximum Ratings

Stresses exceeding the absolute maximum ratings may damage the device. The device may not function or be operable above the recommended operating conditions and stressing the parts to these levels is not recommended. In addition, extended exposure to stresses above the recommended operating conditions may affect device reliability. The absolute maximum ratings are stress ratings only. Values are at $T_C = 25^\circ\text{C}$ unless otherwise noted.

| Symbol | Parameter | Value | Unit |
|----------------|--|-------------|------------------|
| V_{CEO} | Collector-Emitter Voltage | -45 | V |
| V_{CBO} | Collector-Base Voltage | -50 | V |
| V_{EBO} | Emitter-Base Voltage | -5 | V |
| I_C | Collector Current - Continuous | -500 | mA |
| T_J, T_{STG} | Junction and Storage Temperature Range | -55 to +150 | $^\circ\text{C}$ |

Thermal Characteristics

Values are at $T_A = 25^\circ\text{C}$ unless otherwise noted.

| Symbol | Parameter | Max. | Unit |
|-----------------|---|------|---------------------------|
| P_D | Total Device Dissipation: Alumina Substrate, $T_A = 25^\circ\text{C}^{(1)}$ | 300 | mW |
| | Derate Above $T_A = 25^\circ\text{C}$ | 2.4 | mW/ $^\circ\text{C}$ |
| $R_{\theta JA}$ | Thermal Resistance, Junction to Ambient | 417 | $^\circ\text{C}/\text{W}$ |

Note:

- Alumina = 0.4 inch x 0.3 inch x 0.024 inch 9.5% alumina.

Electrical Characteristics

Values are at $T_C = 25^\circ\text{C}$ unless otherwise noted.

| Symbol | Parameter | Conditions | Min. | Max. | Unit |
|---------------|--------------------------------------|--|------|-------|---------------|
| $V_{(BR)CEO}$ | Collector-Emitter Breakdown Voltage | $I_C = -10\text{ mA}, I_B = 0$ | -45 | | V |
| $V_{(BR)CES}$ | Collector-Emitter Breakdown Voltage | $I_C = -10\ \mu\text{A}, I_E = 0$ | -50 | | V |
| I_{CBO} | Collector Cut-Off Current | $V_{CB} = -20\text{ V}, I_E = 0$ | | -100 | nA |
| | | $V_{CB} = -20\text{ V}, I_E = 0,$ $T_A = 150^\circ\text{C}$ | | -5 | μA |
| I_{EBO} | Emitter Cut-Off Current | $V_{EB} = -5.0\text{ V}, I_C = 0$ | | -10 | μA |
| h_{FE} | DC Current Gain | $I_C = -100\text{ mA}, V_{CE} = -1.0\text{ V}$ | 100 | 600 | |
| | | $I_C = -300\text{ mA}, V_{CE} = -1.0\text{ V}$ | 70 | | |
| | | $I_C = -500\text{ mA}, V_{CE} = -1.0\text{ V}$ | 40 | | |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C = -500\text{ mA}, I_B = -50\text{ mA}$ | | -0.62 | V |
| $V_{BE(on)}$ | Base-Emitter On Voltage | $I_C = -500\text{ mA}, V_{CE} = -1.0\text{ V}$ | | -1.2 | V |

Physical Dimensions

SOT-23

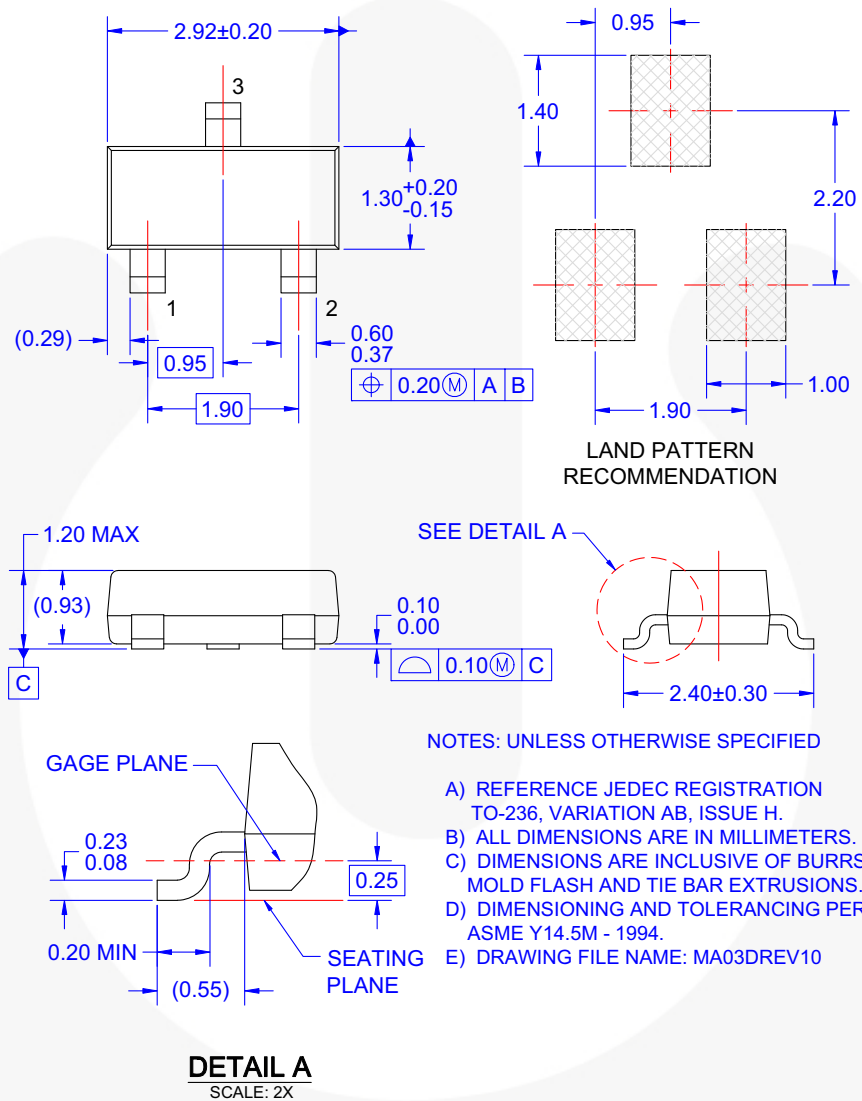


Figure 1. 3-LEAD, SOT23, JEDEC TO-236, LOW PROFILE (ACTIVE)

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|--------------------------|-----------------------|---|
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