



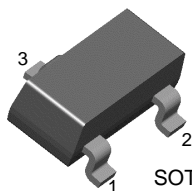
THE DATASHEET OF BCX20



BCX20

NPN Epitaxial Silicon Transistor

Switching and Amplifier Applications



SOT-23
Marking: U2
1. Base 2. Emitter 3. Collector

Absolute Maximum Ratings $T_a = 25^\circ\text{C}$ unless otherwise noted

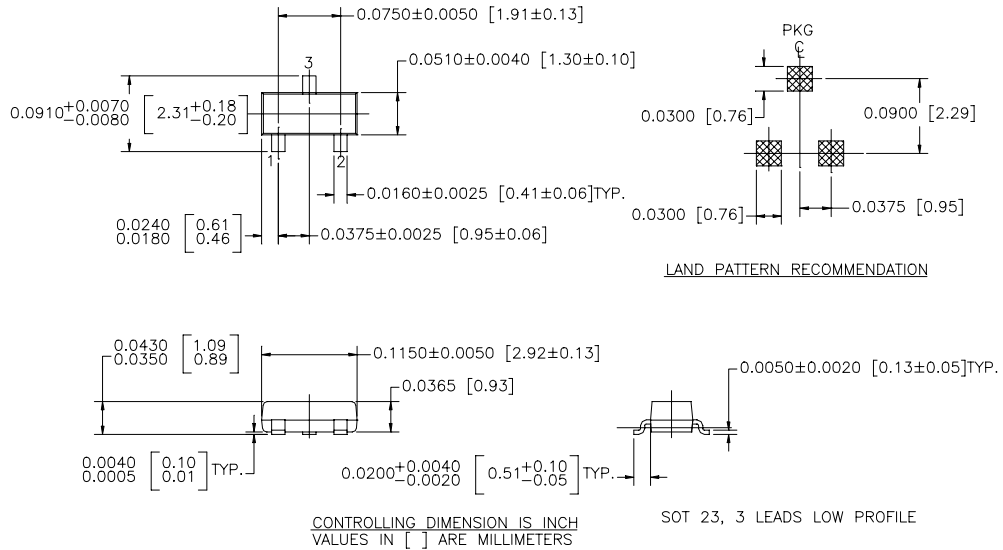
| Symbol | Parameter | Value | Units |
|-----------|---------------------------|-----------|------------------|
| V_{CES} | Collector-Emitter Voltage | 30 | V |
| V_{CEO} | Collector-Emitter Voltage | 25 | V |
| V_{EBO} | Emitter-Base Voltage | 5 | V |
| I_C | Collector Current (DC) | 800 | A |
| P_C | Collector Dissipation | 310 | W |
| T_J | Junction Temperature | 150 | $^\circ\text{C}$ |
| T_{STG} | Storage Temperature | -65 ~ 150 | $^\circ\text{C}$ |

Electrical Characteristics $T_C = 25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Conditions | Min. | Max | Units |
|---------------|--------------------------------------|--|------|------|-------|
| BV_{CEO} | Collector-Emitter Breakdown Voltage | $I_C = 10\text{mA}, I_B = 0$ | 25 | | V |
| BV_{CES} | Collector-Emitter Breakdown Voltage | $I_C = 100\mu\text{A}, V_{BE} = 0$ | 30 | | V |
| BV_{EBO} | Emitter-Base Breakdown Voltage | $I_E = 10\mu\text{A}, I_C = 0$ | 5 | | V |
| I_{CBO} | Collector Cut-off Current | $V_{CE} = 20\text{V}, V_{BE} = 0$ | | 100 | nA |
| I_{EBO} | Emitter-Base Cut-off Current | $V_{BE} = 5\text{V}, I_C = 0$ | | 10 | nA |
| h_{FE1} | DC Current Gain | $V_{CE} = 1\text{V}, I_C = 100\text{mA}$ | 100 | 600 | |
| h_{FE2} | | $V_{CE} = 1\text{V}, I_C = 300\text{mA}$ | 70 | | |
| h_{FE3} | | $V_{CE} = 1\text{V}, I_C = 500\text{mA}$ | 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 Saturation Voltage | $V_{CE} = 1\text{A}, I_B = 500\text{mA}$ | | 1.2 | V |

Mechanical Dimensions

SOT-23



NOTE : UNLESS OTHERWISE SPECIFIED

- STANDARD LEAD FINISH 150 MICROINCHES / 3.81 MICROMETERS
MINIMUM TIN / LEAD (SOLDER) ON ALLOY 42
- REFERENCE JEDEC REGISTRATION TO-236, VARIATION AB, ISSUE G, DATED JUL 1993

Dimensions in Millimeters

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| DOMET™ | GTO™ | MicroPak™ | QFET® | SuperSOT™-8 |
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| FACT Quiet Series™ | | OCXPro™ | RapidConnect™ | UHC™ |
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|--------------------------|------------------------|---|
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