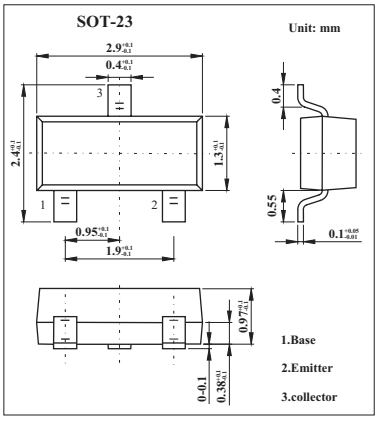
# Medium Power Transistor

# BCX41




## Features

- SOT23 NPN silicon planar

## Absolute Maximum Ratings Ta = 25℃

| Parameter | Symbol | Rating | Unit |
|---|---|---|---|
| Collector-emitter voltage | $V_{CES}$ | 125 | V |
| Collector-emitter voltage | $V_{CEO}$ | 125 | V |
| Emitter-base voltage | $V_{EBO}$ | 5 | V |
| Continuous collector current | $I_{CM}$ | 1 | A |
| Peak pulse current | $I_C$ | 800 | mA |
| Base current | $I_B$ | 100 | mA |
| Power dissipation | $P_{tot}$ | 330 | mW |
| Operating and storage temperature range | $T_j$,$T_{stg}$ | -55 to +150 | ℃ |

## Electrical Characteristics Ta = 25℃

| Parameter | Symbol | Testconditons | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Collector-emitter cut-off current | $I_{CES}$ | $V_{CE}$=100V<br>$V_{CE}$=100V,Tamb = 150℃ | | | 100<br>10 | nA<br>μA |
| | $I_{CEX}$ | $V_{CE}$=100V,$V_{BE}$=0.2V, Tamb = 85℃<br>$V_{CE}$=100V,$V_{BE}$=0.2V, Tamb = 125℃ | | | 10<br>75 | μA<br>μA |
| Emitter-base current | $I_{EBO}$ | $V_{EB}$=4V | | | 100 | nA |
| Collector-emitter saturation voltage * | $V_{CE(sat)}$ | $I_C$=300mA, $I_B$=30mA | | | 0.9 | V |
| Base-emitter saturation voltage * | $V_{BE(sat)}$ | $I_C$=300mA, $I_B$=30mA | | | 1.4 | V |
| DC current gain * | $h_{FE}$ | $I_C$=100μA,$V_{CE}$=1V<br>$I_C$=100mA,$V_{CE}$=1V<br>$I_C$=200mA,$V_{CE}$=1V | 25<br>63<br>40 | | | |
| Transitional frequency | $f_T$ | $I_C$=10mA, $V_{CE}$=5V, f=20MHz | | 100 | | MHz |
| Output capacitance | $C_{obo}$ | $V_{CB}$=10V, f=1MHz,$I_E$=Ie=0 | | 12 | | pF |

* Pulse test: tp = 300 μs; d ⩽ 0.02.

## Marking

| Marking | EK |
|---|---|