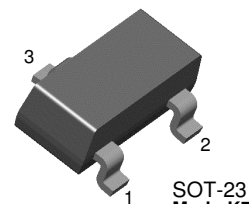


# BCV71

## NPN General Purpose Amplifier

- This device is designed for general purpose applications at collector currents to 300mA.
- Sourced from process 10.



1. Base 2. Emitter 3. Collector

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

Symbol	Parameter	Value	Units
$V_{CEO}$	Collector-Emitter Voltage	60	V
$V_{CBO}$	Collector-Base Voltage	80	V
$V_{EBO}$	Emitter-Base Voltage	5.0	V
$I_C$	Collector current (DC)	500	mA
$T_J, T_{stg}$	Operating and Storage Junction Temperature Range	-55 ~ +150	$^\circ\text{C}$

\* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

### NOTES:

- 1) These ratings are based on a maximum junction temperature of 150 degrees C.
- 2) These are state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

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

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
<b>Off Characteristics</b>						
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C = 10\mu\text{A}, I_E = 0$	80			V
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = 2\text{mA}, I_B = 0$	60			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E = 10\mu\text{A}, I_C = 0$	5.0			V
$I_{CBO}$	Collector Cutoff Current	$V_{CB} = 20\text{V}, I_E = 0$ $V_{CB} = 20\text{V}, I_E = 0, T_a = 100^\circ\text{C}$			100 10	nA $\mu\text{A}$
<b>On Characteristics</b>						
$h_{FE}$	DC Current Gain	$I_C = 2.0\text{mA}, V_{CE} = 5.0\text{V}$	110		220	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 10\text{mA}, I_B = 0.5\text{mA}$			0.25	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C = 2.0\text{mA}, V_{CE} = 5.0\text{V}$	0.55		0.7	V

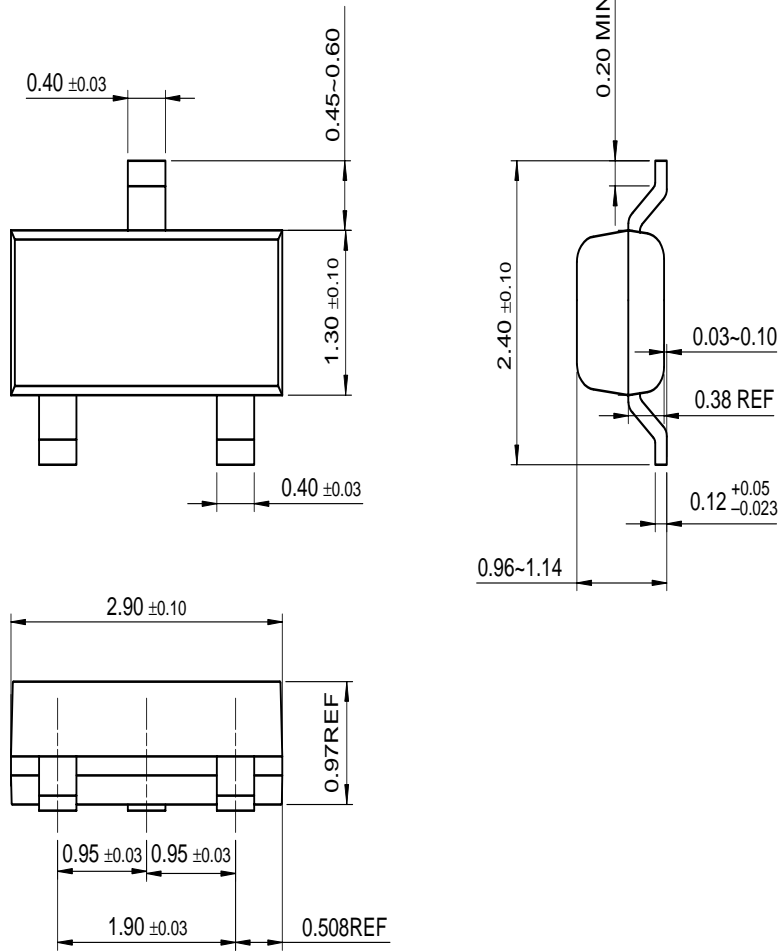
## Thermal Characteristics $T_a=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Max.	Units
$P_D$	Total Device Dissipation Derate above $25^\circ\text{C}$	350 2.8	mW mW/ $^\circ\text{C}$
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	357	$^\circ\text{C}/\text{W}$

Device mounted on FR-4PCB 40mm x 40mm x 1.5mm

# Package Dimensions

## SOT-23



Dimensions in Millimeters

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E <sup>2</sup> C MOS™	HiSeC™	MSX™	QT Optoelectronics™	TinyLogic®
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FACT™	i-Lo™	OCX™	RapidConfigure™	TruTranslation™
Across the board. Around the world.™	OCXPro™	RapidConnect™	UHC™	
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