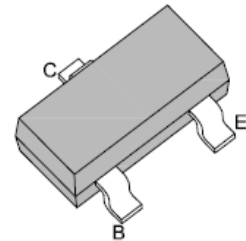


SMD General Purpose Transistors (NPN)

Features

- NPN Silicon Epitaxial Planar Transistor for Switching and Amplifier Applications
- RoHS compliance



SOT-23



Mechanical Data

Case:	SOT-23, Plastic Package
Terminals:	Solderable per MIL-STD-202G, Method 208
Weight:	0.008 gram

Maximum Ratings *(T_{Ambient}=25°C unless noted otherwise)*

Symbol	Description	BCV71	BCV72	Unit
	Marking Code	K7	K8	
V_{CB0}	Collector-Base Voltage	80		V
V_{CEO}	Collector-Emitter Voltage	60		V
V_{EB0}	Emitter-Base Voltage	5		V
I_C	Collector Current (D.C.)	100		mA
I_{CM}	Collector Current (Peak Value)	200		mA
P_{tot}	Power Dissipation above 25°C	250		mW
R_{θJA}	Thermal Resistance from Junction to Ambient	500		K/W
T_J	Junction Temperature	150		°C
T_{STG}	Storage Temperature Range	-55 to +150		°C

SMD General Purpose Transistors (NPN)

BCV71/BCV72

Electrical Characteristics ($T_{Ambient}=25^{\circ}C$ unless noted otherwise)

Symbol	Description	BCV71			BCV72			Unit	Conditions
		Min.	Typ.	Max.	Min.	Typ.	Max.		
hFE	D.C. Current Gain	-	90	-	-	150	-		$V_{CE}=5V, I_C=10\mu A$
		110	-	220	200	-	450		$V_{CE}=5V, I_C=2mA$
V(BR)CBO	Collector-Base Breakdown Voltage	80	-	-	80	-	-	V	$I_C=10\mu A, I_E=0$
V(BR)CEO	Collector-Emitter Breakdown Voltage	60	-	-	60	-	-	V	$I_C=2mA, I_B=0$
V(BR)EBO	Emitter-Base Breakdown Voltage	5	-	-	5	-	-	V	$I_E=10\mu A, I_C=0$
VCE(sat)	Collector-Emitter Saturation Voltage	-	120	250	-	120	250	mV	$I_C=10mA, I_B=0.5mA$
		-	210	-	-	210	-	mV	$I_C=50mA, I_B=2.5mA$
VBE(sat)	Base-Emitter Saturation Voltage	-	750	-	-	750	-	mV	$I_C=10mA, I_B=0.5mA$
		-	850	-	-	850	-	mV	$I_C=50mA, I_B=2.5mA$
VBE(ON)	Base-Emitter On Voltage	550	-	700	550	-	700	mV	$I_C=2mA, V_{CE}=5V$
ICBO	Collector-Base Cut-off Current	-	-	100	-	-	100	nA	$V_{CB}=20V, I_E=0$
		-	-	10	-	-	10	μA	$V_{CB}=20V, I_E=0, T_J=100^{\circ}C$
Cc	Collector Capacitance	-	2.5	-	-	2.5	-	pF	$V_{CB}=10V, f=1.0MHz, I_E=0$
fT	Current Gain-Bandwidth Product	-	300	-	-	300	-	MHz	$V_{CE}=5V, I_C=10mA, f=35MHz$
NF	Noise Figure	-	-	10	-	-	10	dB	$V_{CE}=5V, I_C=200mA, R_s=2k\Omega, f=1kHz, B=200Hz$

SMD General Purpose Transistors (NPN)

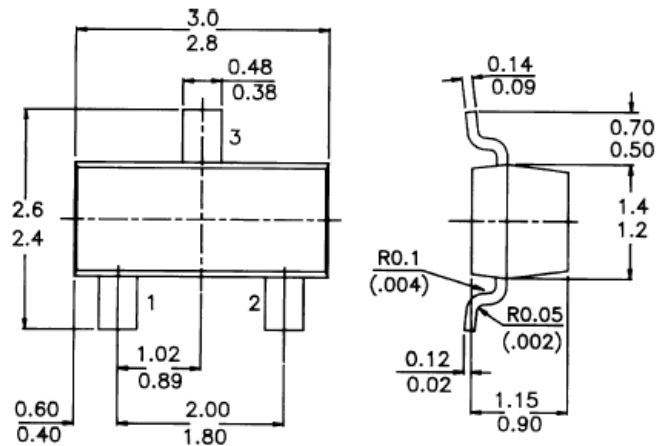
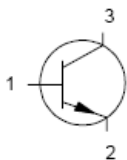
BCV71/BCV72

Dimensions in mm

SOT-23

Pin configuration

- 1 = BASE
- 2 = EMITTER
- 3 = COLLECTOR



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