

## NPN General Purpose Amplifier

## BCW71/BCW72

### FEATURES

- Low current(max.100mA).
- Low voltage(max.45V).
- Low noise.

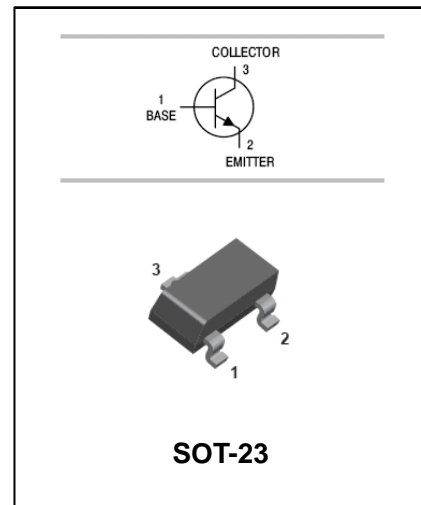


Lead-free

### APPLICATIONS

- General purpose switching and amplification.

### ORDERING INFORMATION



Type No.	Marking	Package Code
BCW71	K1	SOT-23
BCW72	K2	SOT-23

### MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	Unit
$V_{CB0}$	Collector-Base Voltage	50	V
$V_{CEO}$	Collector-Emitter Voltage	45	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current -Continuous	100	mA
$I_{CM}$	Collector Current -Peak	200	mA
$P_C$	Collector Dissipation	250	mW
$R_{th\ j-a}$	Thermal resistance from junction to ambient	500	°C/W
$T_j, T_{stg}$	Junction and Storage Temperature	-65 to+150	°C

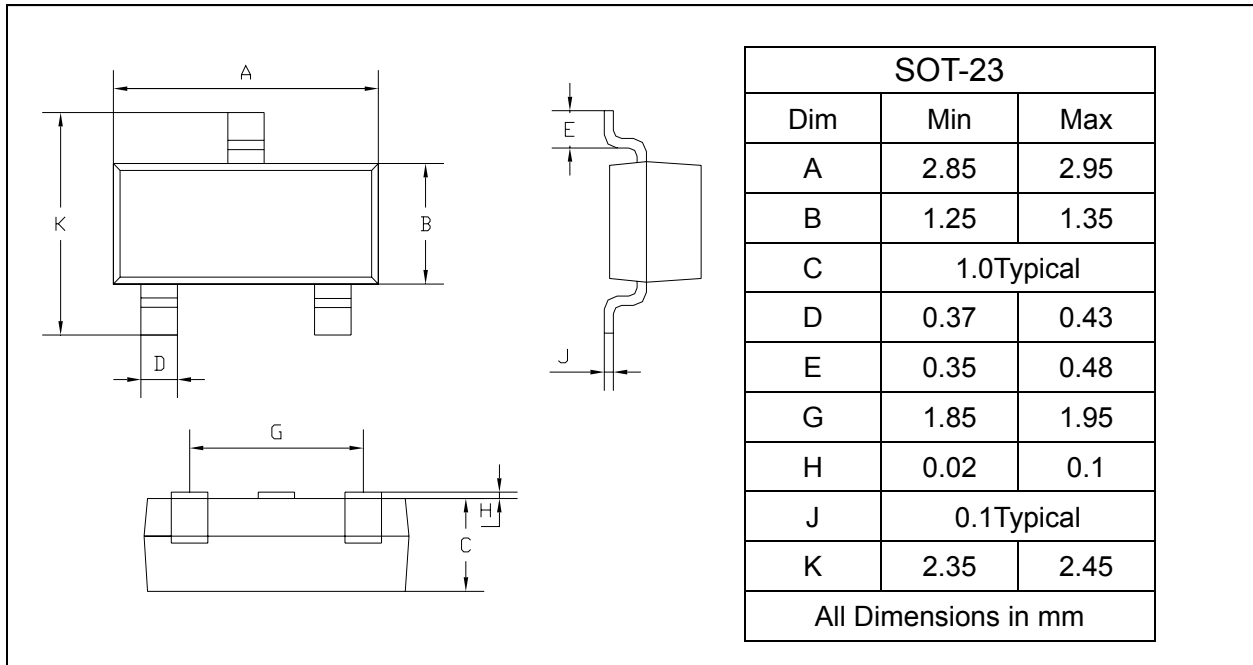
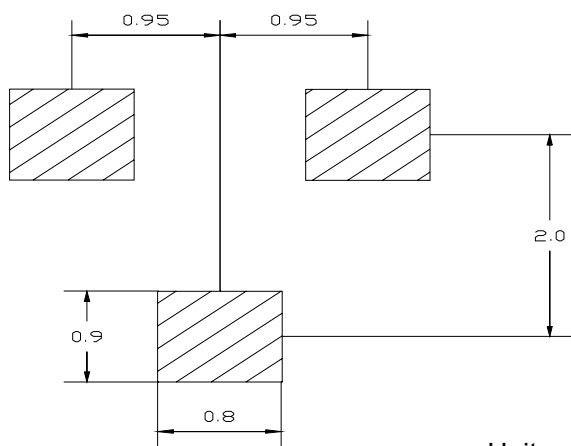
**NPN General Purpose Amplifier****BCW71/BCW72****ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified**

Parameter	Symbol	Test conditions	MIN	Typ	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A$ $I_E=0$	50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1.0mA$ $I_B=0$	45			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu A$ $I_C=0$	5			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=20V$ $I_E=0$			100	nA
Emitter cut-off current	$I_{EBO}$	$V_{EB}=5V$ $I_C=0$			100	nA
DC current gain	BCW71 BCW72 BCW71 BCW72	$V_{CE}=5V$ $I_C=10\mu A$ $V_{CE}=5V$ $I_C=2mA$		90 150	220 450	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=10mA$ $I_B=0.5mA$ $I_C=50mA$ $I_B=2.5mA$		0.12 0.21	0.25	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=10mA$ $I_B=0.5mA$ $I_C=50mA$ $I_B=2.5mA$		0.75 0.85		V
Base-emitter voltage	$V_{BE}$	$I_C=2mA$ $V_{CE}=5V$	0.55		0.7	V
Collector capacitance	$C_C$	$I_E=I_e=0$ , $V_{CB}=10V$ , $f=1MHz$		2.5		
Transition frequency	$f_T$	$V_{CE}=5V$ $I_C=10mA$ $f=100MHz$	100			MHz
Noise figure	NF	$V_{CE}=5V$ $I_C=200\mu A$ $R_S=2k\Omega$ $f=1kHz$ $B=200Hz$			10	dB

**NPN General Purpose Amplifier****BCW71/BCW72****PACKAGE OUTLINE**

Plastic surface mounted package

SOT-23

**SOLDERING FOOTPRINT****PACKAGE INFORMATION**

Device	Package	Shipping
BCW71/72	SOT-23	3000/Tape&Reel