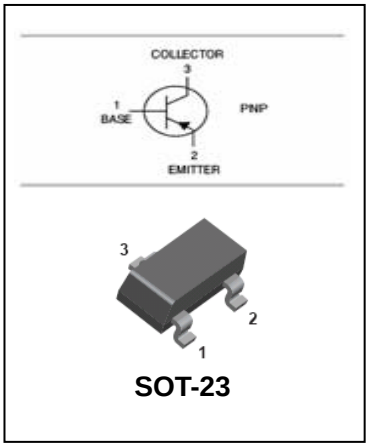
PNP General Purpose Amplifier BCW69/BCW70

FEATURES

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

Lead-free



SOT-23

APPLICATIONS

- General purpose switching and amplification.

ORDERING INFORMATION

Type No.	Marking	Package Code
BCW69	H1	SOT-23
BCW70	H2	SOT-23

MAXIMUM RATING @ Ta=25℃ unless otherwise specified

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-50	V
V_{CEO}	Collector-Emitter Voltage	-45	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_{CM}	Peak collector current	-200	mA
I_C	Collector Current -Continuous	-100	mA
I_{BM}	peak base current	-200	mA
P_D	Total Device Dissipation	250	mW
$R_{th\ j\text{-}a}$	thermal resistance from junction to ambient	500	K/W
$T_{j,}$	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-65 to +150	℃
T_{amb}	operating ambient temperature	-65 to +150	℃

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ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=-10μA I_E=0	-50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=-2mA I_B=0	-45			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=-10μA I_C=0	-5			V
Collector cut-off current	I_{CBO}	V_{CB}=-20V, I_E=0 V_{CB}=-20V I_E=0,T_a=100℃			-100 -10	nA uA
Emitter cut-off current	I_{EBO}	V_{EB}=-5V ,I_C=0			-100	nA
DC current gain BCW69 BCW70	h_{FE}	V_{CE}=-5V I_C=-10uA		90 150		
DC current gain BCW69 BCW70	h_{FE}	V_{CE}=-5V I_C=-2mA	120 215		260 500	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-10mA I_B=-0.5mA I_C=-50mA I_B=-2.5mA; note 1		-0.08 -0.15	-0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=-10mA I_B=-0.5mA I_C=-50mA I_B=-2.5mA; note 1		-0.72 -0.81		V V
Base-emitter voltage	V_{BE}	I_C=-2mA V_{CE}=-5V	-0.6		-0.75	V
Collector output capacitance	C_{ob}	I_E=I_e=0,V_{CB}=-10V,f=1MHz		4.5		pF
Transition frequency	f_T	V_{CE}=-5V I_C=-10mA f=100MHz	100			MHz
Noise figure	NF	V_{CE}=-5V I_C=-200μA R_S=2kΩ f=1kHz B=200Hz			10	dB

Note

1. Pulse test: tp ≤ 300 us; δ ≤0.02.

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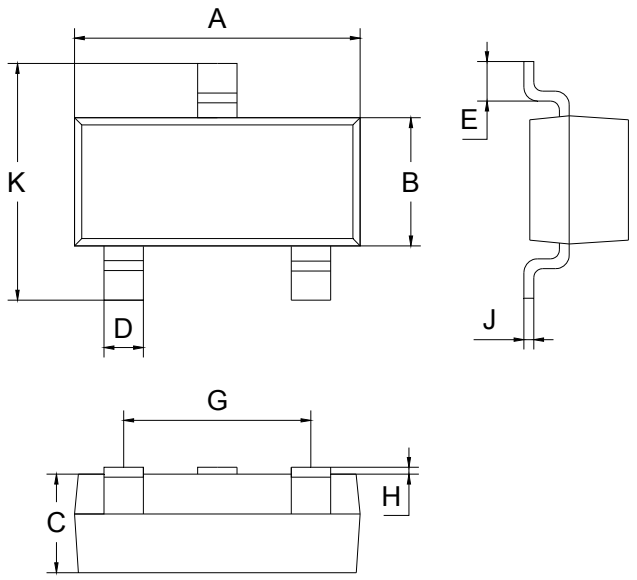
PACKAGE OUTLINE

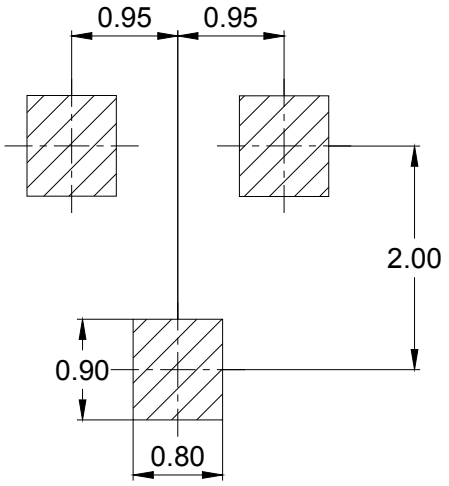
Plastic surface mounted package

SOT-23



SOT-23		
Dim	Min	Max
A	2.70	3.10
B	1.10	1.50
C	1.0 Typical	
D	0.4 Typical	
E	0.35	0.48
G	1.80	2.00
H	0.02	0.1
J	0.1 Typical	
K	2.20	2.60
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit : mm

PACKAGE INFORMATION

Device	Package	Shipping
BCW69/70	SOT-23	3000/Tape&Reel