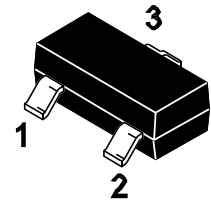


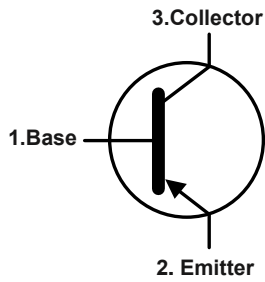
### Features

- For Switching and AF Amplifier Applications.

SOT-23



### Equivalent Circuit



1.Base 2.Emitter 3.Collector

#### Marking Code :

BCW68F : 8WF

BCW68G : 8WG

BCW68H : 8WH

### Absolute Maximum Ratings

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	60	V
Collector Emitter Voltage	$-V_{CEO}$	45	V
Emitter Base Voltage	$-V_{EBO}$	5	V
Collector Current	$-I_C$	800	mA
Peak Collector Current	$-I_{CM}$	1	A
Base Current	$-I_B$	100	mA
Peak Base Current	$-I_{BM}$	200	mA
Maximum Power Dissipation	$P_D$	200	mW
Junction Temperature	$T_J$	150	°C
Storage Temperature Range	$T_{STG}$	-55 to +150	°C



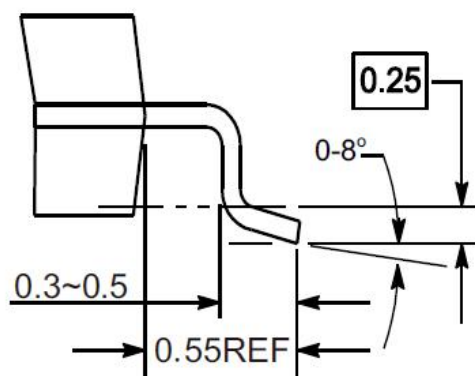
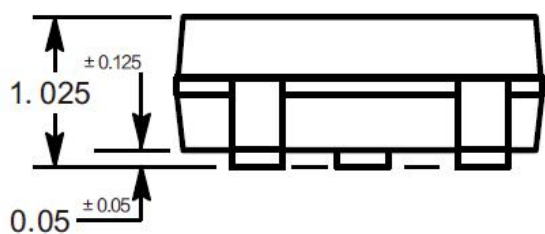
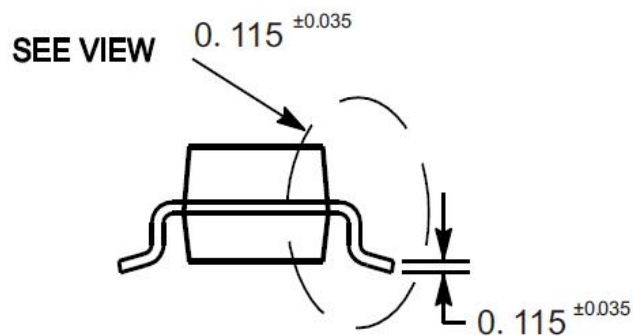
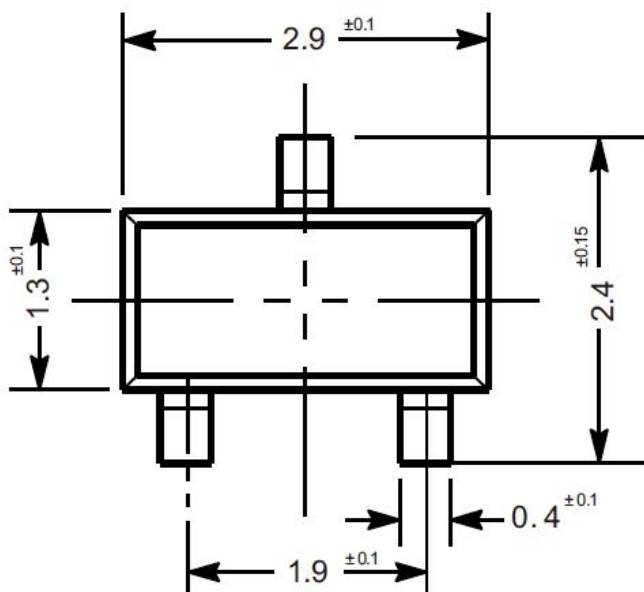
**Electrical Characteristics (T<sub>A</sub>=25°C)**

Parameter	Symbol	Min.	Max.	Unit
DC Current Gain				
at V <sub>CE</sub> = -10 V, I <sub>C</sub> = -100 mA	F	35	--	
	G	50	--	
	H	80	--	
at V <sub>CE</sub> = -1 V, I <sub>C</sub> = -10 mA	F	75	--	
	G	120	--	
	H	180	--	--
at V <sub>CE</sub> = -1 V, I <sub>C</sub> = -100 mA	F	100	250	
	G	160	400	
	H	250	630	
at V <sub>CE</sub> = -2 V, I <sub>C</sub> = -500 mA	F	35	--	
	G	60	--	
	H	100	--	
Collector Base Cutoff Current				
at V <sub>CB</sub> = -45V	-I <sub>CBO</sub>	--	20	nA
Emitter Base Cutoff Current				
at V <sub>EB</sub> = -4 V	-I <sub>EBO</sub>	--	20	nA
Collector Base Breakdown Voltage				
at I <sub>C</sub> = -10 μA	-V <sub>(BR)CBO</sub>	60	--	V
Collector Emitter Breakdown Voltage				
at I <sub>C</sub> = -10 mA	-V <sub>(BR)CEO</sub>	45	--	V
Emitter Base Breakdown Voltage				
at I <sub>E</sub> = -10 μA	-V <sub>(BR)EBO</sub>	5	--	V
Collector Emitter Saturation Voltage				
at I <sub>C</sub> = -100 mA, I <sub>B</sub> = -10 mA	-V <sub>CE(sat)</sub>	--	0.3	V
at I <sub>C</sub> = -500 mA, I <sub>B</sub> = -50 mA		--	0.7	
Base Emitter Saturation Voltage				
at I <sub>C</sub> = -100 mA, I <sub>B</sub> = -10 mA	-V <sub>BE(sat)</sub>	--	1.25	V
at I <sub>C</sub> = -500 mA, I <sub>B</sub> = -50 mA			2	
Transition Frequency				
at V <sub>CE</sub> = -10 V, I <sub>C</sub> = -20 mA, f = 100 MHz	F <sub>T</sub>	100	--	MHz
Output Capacitance				
at V <sub>CB</sub> = -10 V, f = 1 MHz	C <sub>ob</sub>	--	18	pF

### Package Outline

SOT-23

Dimensions in mm



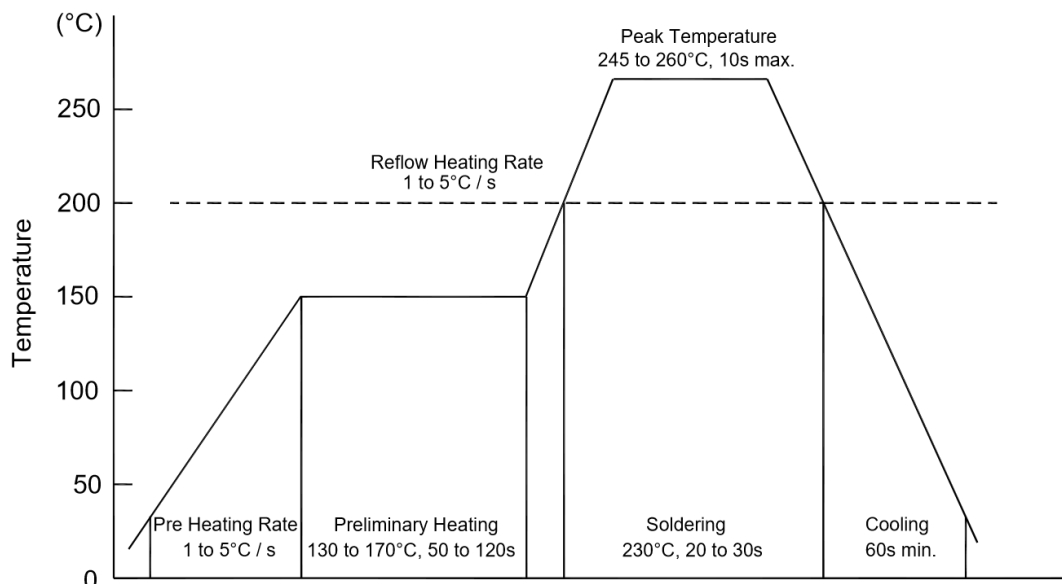
VIEW C

### Ordering Information

Device	Package	Shipping
BCW68	SOT-23	3,000PCS/Reel&7inches

### Conditions of Soldering and Storage

#### ◆ Recommended condition of reflow soldering



Recommended peak temperature is over 245 °C. If peak temperature is below 245 °C, you may adjust the following parameters:

- Time length of peak temperature (longer)
- Time length of soldering (longer)
- Thickness of solder paste (thicker)

#### ◆ Conditions of hand soldering

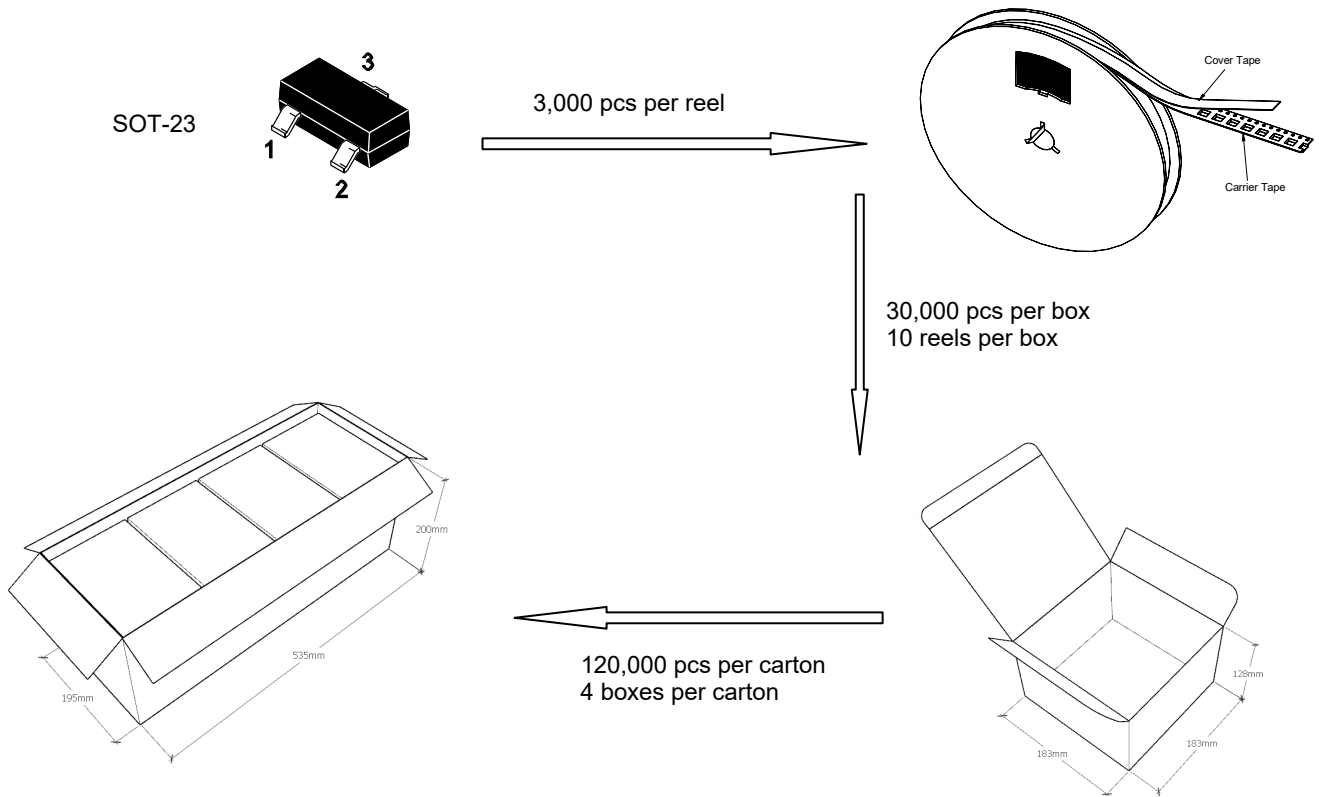
- Temperature: 370 °C
- Time: 3s max.
- Times: one time

#### ◆ Storage conditions

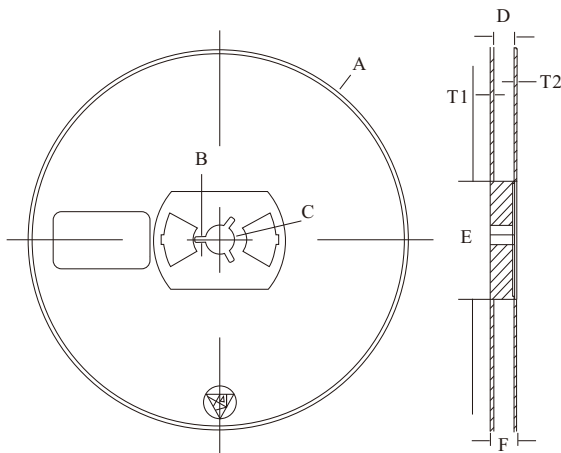
- **Temperature**  
5 to 40 °C
- **Humidity**  
30 to 80% RH
- **Recommended period**  
One year after manufacturing

### Package Specifications

- The method of packaging



### ◆ Embossed tape and reel data



Symbol	Value (unit: mm)
A	Ø 177.8±1
B	2.7±0.2
C	Ø 13.5±0.2
E	Ø 54.5±0.2
F	12.3±0.3
D	9.6+2/-0.3
T1	1.0±0.2
T2	1.2±0.2

Reel (7")

