

### PNP Silicon

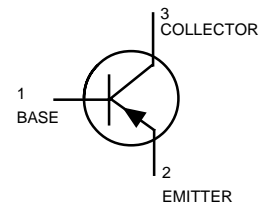
- RoHS product for packing code suffix "G",  
Halogen free product for packing code suffix "H"
- Weight : 0.008g

### ORDERING INFORMATION

Device	Marking	Shipping
BCW68GLT1	DG	3000/Tape&Reel

### MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector–Emitter Voltage	$V_{CEO}$	- 45	Vdc
Collector–Base Voltage	$V_{CBO}$	- 60	Vdc
Emitter–Base Voltage	$V_{EBO}$	- 5.0	Vdc
Collector Current — Continuous	$I_C$	- 800	mA



### THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR- 5 Board, (1) $T_A = 25^\circ\text{C}$	$P_D$	225	mW
Derate above 25°C		1.8	mW/°C
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	°C/W
Total Device Dissipation Alumina Substrate, (2) $T_A = 25^\circ\text{C}$	$P_D$	300	mW
Derate above 25°C		2.4	mW/°C
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	417	°C/W
Junction and Storage Temperature	$T_J, T_{stg}$	-55 to +150	°C

### ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise noted.)

Characteristic	Symbol	Min	Typ	Max	Unit
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### OFF CHARACTERISTICS

Collector–Emitter Breakdown Voltage ( $I_C = -10\text{ mA}$ , $I_B = 0$ )	$V_{(BR)CEO}$	- 45	—	—	Vdc
Collector–Emitter Breakdown Voltage ( $I_C = -10\text{ }\mu\text{A}$ , $V_{EB} = 0$ )	$V_{(BR)CES}$	- 60	—	—	Vdc
Emitter–Base Breakdown Voltage ( $I_E = -10\text{ }\mu\text{A}$ , $I_C = 0$ )	$V_{(BR)EBO}$	- 5.0	—	—	Vdc
Collector Cutoff Current ( $V_{CE} = -45\text{ Vdc}$ , $I_E = 0$ )	$I_{CES}$	—	—	- 20	nA
( $V_{CE} = -45\text{ Vdc}$ , $I_B = 0$ , $T_A = 150^\circ\text{C}$ )		—	—	- 10	$\mu\text{A}$
Emitter Cutoff Current ( $V_{EB} = -4.0\text{ Vdc}$ , $I_C = 0$ )	$I_{EBO}$	—	—	- 20	nA

1. FR- 5 = 1.0 x 0.75 x 0.062 in.

2. Alumina = 0.4 x 0.3 x 0.024 in. 99.5% alumina.

**ELECTRICAL CHARACTERISTICS** ( $T_A = 25^\circ\text{C}$  unless otherwise noted) (Continued)

Characteristic	Symbol	Min	Typ	Max	Unit
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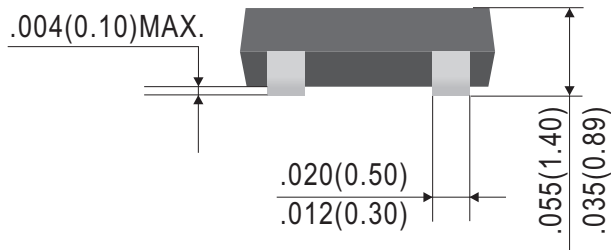
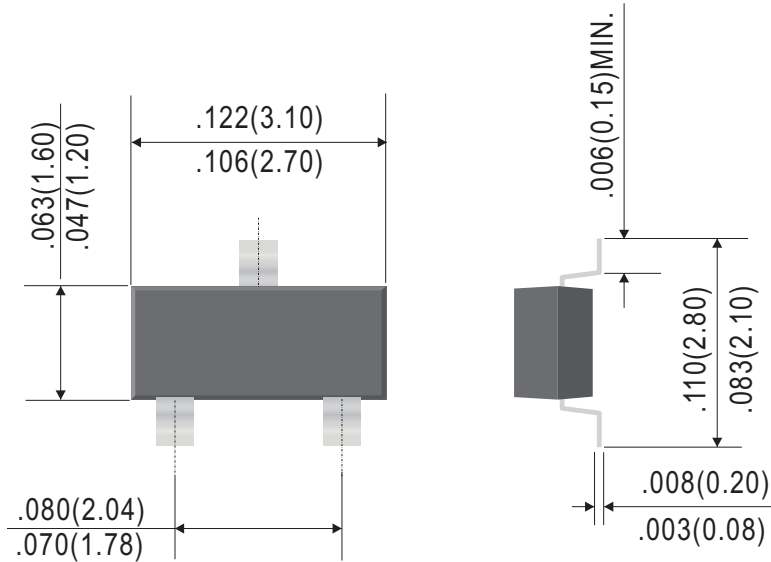
**DC CHARACTERISTICS**

DC Current Gain ( $I_C = -10 \text{ mA}$ , $V_{CE} = -1.0 \text{ Vdc}$ )	$h_{FE}$	120	—	400	—
( $I_C = -100 \text{ mA}$ , $V_{CE} = -1.0 \text{ Vdc}$ )		160	—	—	
( $I_C = -300 \text{ mA}$ , $V_{CE} = -1.0 \text{ Vdc}$ )		60	—	—	
Collector–Emitter Saturation Voltage ( $I_C = -300 \text{ mA}$ , $I_B = -30 \text{ mA}$ )	$V_{CE(sat)}$	—	—	-1.5	Vdc
Base–Emitter Saturation Voltage ( $I_C = -500 \text{ mA}$ , $I_B = -50 \text{ mA}$ )	$V_{BE(sat)}$	—	—	-2.0	Vdc

**SMSMALL–SIGNAL CHARACTERISTICS**

Current–Gain — Bandwidth Product ( $I_C = -20 \text{ mA}$ , $V_{CE} = -10 \text{ Vdc}$ , $f = 100 \text{ MHz}$ )	$f_T$	100	—	—	MHz
Output Capacitance ( $V_{CB} = -10 \text{ Vdc}$ , $I_E = 0$ , $f = 1.0 \text{ MHz}$ )	$C_{obo}$	—	—	18	pF
Input Capacitance ( $V_{EB} = -0.5 \text{ Vdc}$ , $I_C = 0$ , $f = 1.0 \text{ MHz}$ )	$C_{ibo}$	—	—	105	pF
Noise Figure ( $V_{CE} = -5.0 \text{ Vdc}$ , $I_C = -0.2 \text{ mA}$ , $R_s = 1.0 \text{ k}\Omega$ , $f = 1.0 \text{ kHz}$ , $BW = 200 \text{ Hz}$ )	NF	—	—	10	dB

**SOT-23**



Dimensions in inches and (millimeters)

