

PNP Silicon

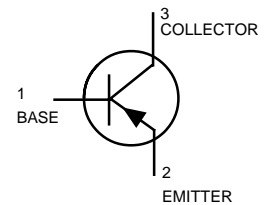
- RoHS product for packing code suffix "G",
Halogen free product for packing code suffix "H"
- Weight : 0.008g
- **Moisture Sensitivity Level 1**

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 | mAdc |



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 |
|----------------|--------|-----|-----|-----|------|
|----------------|--------|-----|-----|-----|------|

OFF CHARACTERISTICS

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

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 |
|----------------|--------|-----|-----|-----|------|
|----------------|--------|-----|-----|-----|------|

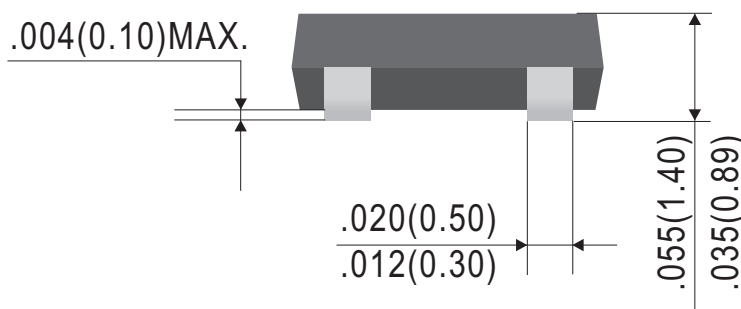
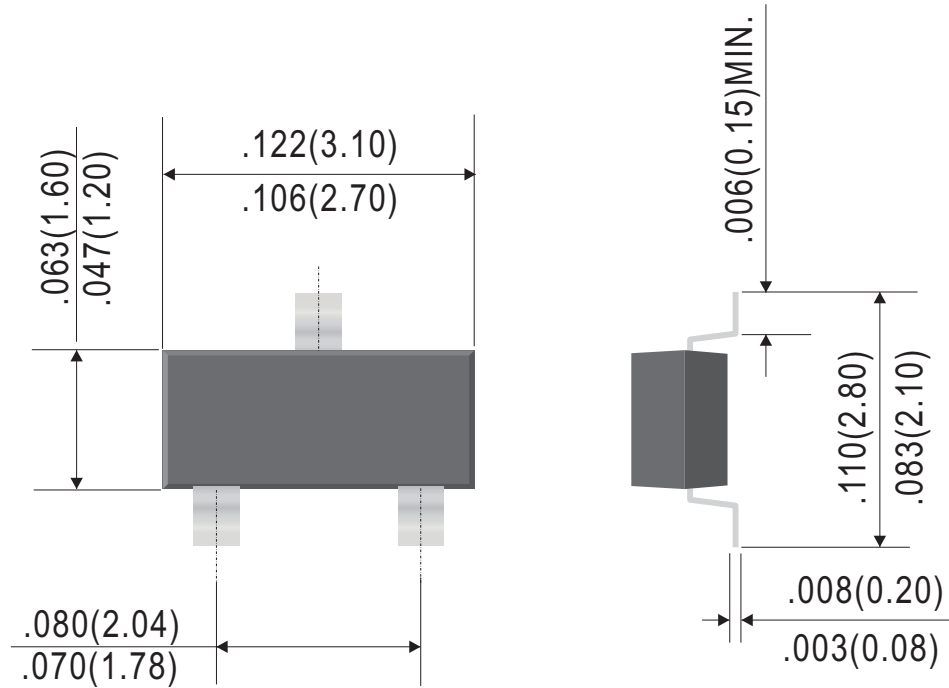
DC CHARACTERISTICS

| | | | | | |
|--|---------------|-----|---|------|-----|
| 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)

Ordering Information:

| Device PN | Packing |
|--------------------------------|------------------------|
| BCW68GLT1 G ⁽¹⁾ -WS | Tape&Reel: 3 Kpcs/Reel |

Note: (1) RoHS product for packing code suffix "G" ; Halogen free product for packing code suffix "H"

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