

**BCW67 SERIES
BCW68 SERIES**

**SURFACE MOUNT
PNP SILICON TRANSISTOR**



www.centrasemi.com



SOT-23 CASE

DESCRIPTION:

The CENTRAL SEMICONDUCTOR BCW67 and BCW68 Series types are PNP Silicon Transistors manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for general purpose switching and amplifier applications.

MARKING CODE: SEE MARKING CODE TABLE ON FOLLOWING PAGE

MAXIMUM RATINGS: ($T_A=25^\circ\text{C}$)

Collector-Base Voltage
Collector-Emitter Voltage
Emitter-Base Voltage
Continuous Collector Current
Peak Collector Current
Continuous Base Current
Peak Base Current
Power Dissipation
Operating and Storage Junction Temperature
Thermal Resistance

| SYMBOL | BCW67 | BCW68 | UNITS |
|----------------|-------|-------------|--------------------|
| V_{CB0} | 45 | 60 | V |
| V_{CEO} | 32 | 45 | V |
| V_{EBO} | | 5.0 | V |
| I_C | | 800 | mA |
| I_{CM} | | 1.0 | A |
| I_B | | 100 | mA |
| I_{BM} | | 200 | mA |
| P_D | | 350 | mW |
| T_J, T_{stg} | | -65 to +150 | $^\circ\text{C}$ |
| θ_{JA} | | 357 | $^\circ\text{C/W}$ |

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

| SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNITS |
|---------------|---|-----|-----|------|---------------|
| I_{CBO} | $V_{CB}=\text{Rated } V_{CEO}$ | | | 20 | nA |
| I_{CBO} | $V_{CB}=\text{Rated } V_{CEO}, T_A=150^\circ\text{C}$ | | | 20 | μA |
| I_{EBO} | $V_{EB}=4.0\text{V}$ | | | 20 | nA |
| BV_{CB0} | $I_C=10\mu\text{A}$ (BCW67) | 45 | | | V |
| BV_{CB0} | $I_C=10\mu\text{A}$ (BCW68) | 60 | | | V |
| BV_{CEO} | $I_C=10\text{mA}$ (BCW67) | 32 | | | V |
| BV_{CEO} | $I_C=10\text{mA}$ (BCW68) | 45 | | | V |
| BV_{EBO} | $I_E=10\mu\text{A}$ | 5.0 | | | V |
| $V_{CE(SAT)}$ | $I_C=100\text{mA}, I_B=10\text{mA}$ | | | 0.3 | V |
| $V_{CE(SAT)}$ | $I_C=500\text{mA}, I_B=50\text{mA}$ | | | 0.7 | V |
| $V_{BE(SAT)}$ | $I_C=100\text{mA}, I_B=10\text{mA}$ | | | 1.25 | V |
| $V_{BE(SAT)}$ | $I_C=500\text{mA}, I_B=50\text{mA}$ | | | 2.0 | V |
| f_T | $V_{CE}=5.0\text{V}, I_C=50\text{mA}, f=20\text{MHz}$ | | 200 | | MHz |
| C_c | $V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$ | | 6.0 | | pF |
| C_e | $V_{EB}=0.5\text{V}, I_C=0, f=1.0\text{MHz}$ | | 60 | | pF |

| | TEST CONDITIONS | BCW67A BCW68F | | BCW67B BCW68G | | BCW67C BCW68H | |
|----------|---|------------------|-----|------------------|-----|------------------|-----|
| | | MIN | MAX | MIN | MAX | MIN | MAX |
| h_{FE} | $V_{CE}=10\text{V}, I_C=100\mu\text{A}$ | 35 | | 50 | | 80 | |
| h_{FE} | $V_{CE}=1.0\text{V}, I_C=10\text{mA}$ | 75 | | 120 | | 180 | |
| h_{FE} | $V_{CE}=1.0\text{V}, I_C=100\text{mA}$ | 100 | 250 | 160 | 400 | 250 | 630 |
| h_{FE} | $V_{CE}=2.0\text{V}, I_C=500\text{mA}$ | 35 | | 60 | | 100 | |

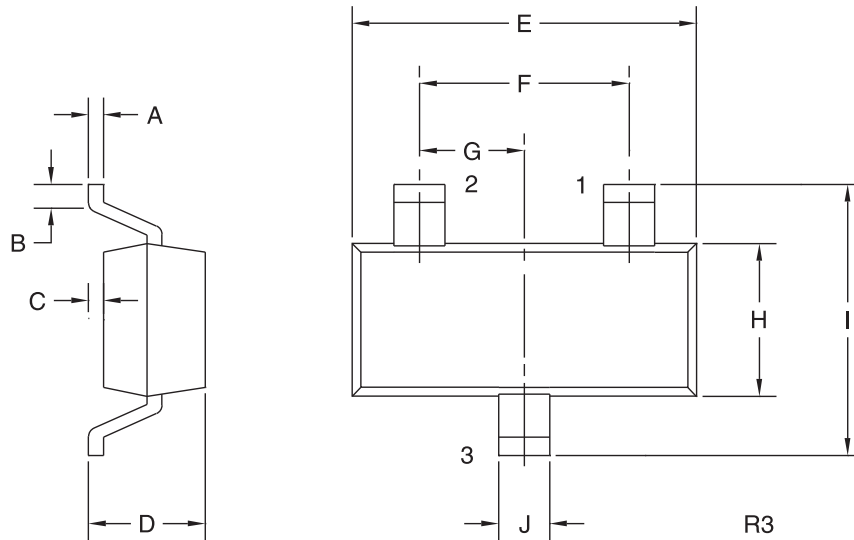
R2 (20-November 2009)

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SOT-23 CASE - MECHANICAL OUTLINE



LEAD CODE:

- 1) BASE
- 2) EMITTER
- 3) COLLECTOR

| DEVICE | MARKING CODE |
|--------|--------------|
| BCW67A | DA |
| BCW67B | DB |
| BCW67C | DC |
| BCW68F | DF |
| BCW68G | DG |
| BCW68H | DH |

| SYMBOL | INCHES | | MILLIMETERS | |
|--------|--------|-------|-------------|------|
| | MIN | MAX | MIN | MAX |
| A | 0.003 | 0.007 | 0.08 | 0.18 |
| B | 0.006 | - | 0.15 | - |
| C | - | 0.005 | - | 0.13 |
| D | 0.035 | 0.043 | 0.89 | 1.09 |
| E | 0.110 | 0.120 | 2.80 | 3.05 |
| F | 0.075 | | 1.90 | |
| G | 0.037 | | 0.95 | |
| H | 0.047 | 0.055 | 1.19 | 1.40 |
| I | 0.083 | 0.098 | 2.10 | 2.49 |
| J | 0.014 | 0.020 | 0.35 | 0.50 |

SOT-23 (REV: R3)

R2 (20-November 2009)

OUTSTANDING SUPPORT AND SUPERIOR SERVICES



PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix " TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix " PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

CONTACT US

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