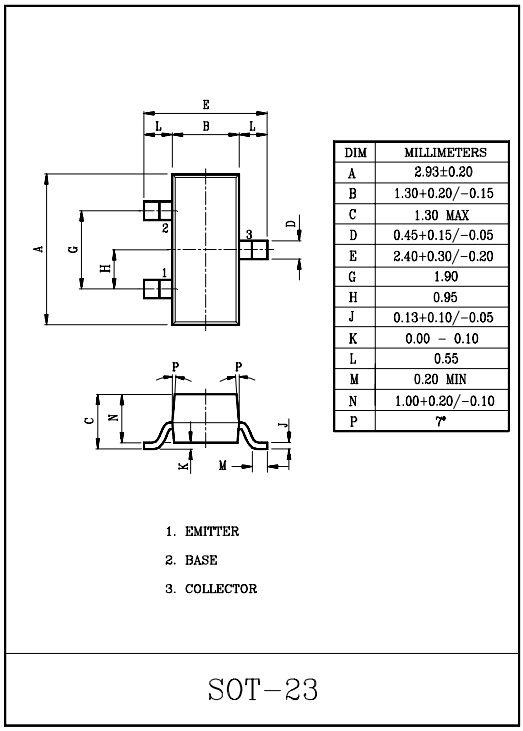
# BCW68

EPITAXIAL PLANAR PNP TRANSISTOR

HIGH CURRENT APPLICATION.




| DIM | MILLIMETERS |
|---|---|
| A | 2.93±0.20 |
| B | 1.30+0.20/−0.15 |
| C | 1.30 MAX |
| D | 0.45+0.15/−0.05 |
| E | 2.40+0.30/−0.20 |
| G | 1.90 |
| H | 0.95 |
| J | 0.13+0.10/−0.05 |
| K | 0.00 − 0.10 |
| L | 0.55 |
| M | 0.20 MIN |
| N | 1.00+0.20/−0.10 |
| P | 7° |

SOT-23

MAXIMUM RATINGS (Ta=25℃)

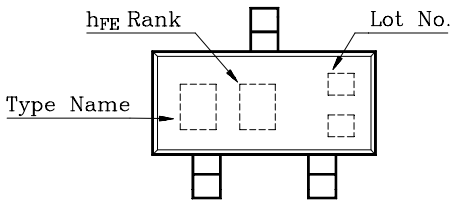
| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|---|---|---|---|
| Collector-Base Voltage | $V_{CBO}$ | -60 | V |
| Collector-Emitter Voltage | $V_{CEO}$ | -45 | V |
| Emitter-Base Voltage | $V_{EBO}$ | -5 | V |
| Collector Current | $I_C$ | -800 | mA |
| Emitter Current | $I_E$ | 800 | mA |
| Collector Power Dissipation | $P_C$ * | 350 | mW |
| Junction Temperature | $T_j$ | 150 | ℃ |
| Storage Temperature Range | $T_{stg}$ | -55~150 | ℃ |

$P_C$ * : Package mounted on 99.5% alumina 10×8×0.6mm.

MARK SPEC

| TYPE | MARK |
|---|---|
| BCW68F | DF |
| BCW68G | DG |

Marking



ELECTRICAL CHARACTERISTICS (Ta=25℃)

| CHARACTERISTIC | | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|---|---|---|---|---|---|---|---|
| Collector-Emitter Breakdown Voltage | | $V_{(BR)CEO}$ | $I_C$=-10mA, $I_B$=0 | -45 | - | - | V |
| Emitter-Base Breakdown Voltage | | $V_{(BR)EBO}$ | $I_E$=10μA, $I_C$=0 | -5.0 | - | - | V |
| Collector Cut-off Current | | $I_{CES}$ | $V_{EB}$=0V, $V_{CE}$=-45V | - | - | -20 | nA |
| | | | Ta=150℃, $V_{EB}$=0V, $V_{CE}$=-45V | - | - | -20 | μA |
| Emitter Cut-off Current | | $I_{EBO}$ | $I_C$=0, $V_{EB}$=-4V | - | - | -20 | nA |
| DC Current Gain | Group F | $h_{FE}$ | $V_{CE}$=-1V, $I_C$=-10mA | 75 | - | - | |
| | Group G | | | 120 | - | - | |
| | Group F | | $V_{CE}$=-1V, $I_C$=-100mA | 100 | - | 250 | |
| | Group G | | | 160 | - | 400 | |
| | Group F | | $V_{CE}$=-1V, $I_C$=-500mA | 35 | - | - | |
| | Group G | | | 60 | - | - | |
| Base-Emitter Saturation Voltage | | $V_{BE(sat)}$ | $I_C$=-100mA, $I_B$=-10mA | - | - | -1.25 | V |
| | | | $I_C$=-500mA, $I_B$=-50mA | - | - | -2.0 | |
| Collector-Emitter Saturation Voltage | | $V_{CE(sat)}$ | $I_C$=-100mA, $I_B$=-10mA | - | - | -0.3 | V |
| | | | $I_C$=-500mA, $I_B$=-50mA | - | - | -0.7 | |
| Transition Frequency | | $f_T$ | $I_C$=-80mA, $V_{CE}$=-10V, f=100MHz | 100 | - | - | MHz |
| Collector Output Capacitance | | $C_{ob}$ | $V_{CB}$=-10V, $I_E$=0, f=1MHz | - | - | 18 | pF |
| Collector Input Capacitance | | $C_{ib}$ | $V_{EB}$=-0.5V, f=1MHz | - | - | 80 | pF |
| Noise Figure | | NF | $I_C$=-0.2mA, $V_{CE}$=-5V, Rg=1kΩ, f=1kHz | - | 2.0 | 10 | dB |