

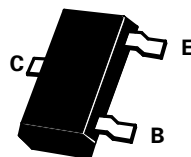
SOT23 PNP SILICON PLANAR SMALL SIGNAL TRANSISTORS

BCW29 BCW30

ISSUE 3 - JULY 1995

PARTMARKING DETAILS – BCW29 - C1
BCW30 - C2
BCW29R - C4
BCW30R - C5

COMPLEMENTARY TYPES – BCW29 - BCW31
BCW30 - BCW32



SOT23

ABSOLUTE MAXIMUM RATINGS.

| PARAMETER | SYMBOL | VALUE | UNIT |
|--|----------------|-------------|-------------|
| Collector-Base Voltage | V_{CBO} | -30 | V |
| Collector-Emitter Voltage | V_{CEO} | -30 | V |
| Emitter-Base Voltage | V_{EBO} | -20 | V |
| Peak Pulse Current | I_{CM} | -5 | A |
| Continuous Collector Current | I_C | -100 | A |
| Power Dissipation at $T_{amb}=25^{\circ}C$ | P_{tot} | 330 | mW |
| Operating and Storage Temperature Range | $T_j; T_{stg}$ | -55 to +150 | $^{\circ}C$ |

ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^{\circ}C$ unless otherwise stated).

| PARAMETER | SYMBOL | MIN. | TYP. | MAX. | UNIT | CONDITIONS. |
|---------------------------------------|---------------|----------|--------------|-------------|---------------|---|
| Base - Emitter Voltage | V_{BE} | -600 | | -750 | mV | $I_C = -2mA, V_{CE} = -5V$ |
| Collector-Emitter Saturation Voltage | $V_{CE(SAT)}$ | | -80 -150 | 250 | mV mV | $I_C = -10mA, I_B = -0.5mA$ $I_C = -50mA, I_B = -2.5mA$ |
| Base-Emitter Saturation Voltage | $V_{BE(SAT)}$ | | -720 -810 | | mV mV | $I_C = -10mA, I_B = -0.5mA$ $I_C = -50mA, I_B = -2.5mA$ |
| Collector- Base Cut-Off Current | I_{CBO} | | | -100 -10 | nA μA | $I_E = 0, V_{CB} = -20V$ $I_E = 0, V_{CB} = -20V,$ $T_j = 100^{\circ}C$ |
| Static Forward Current Transfer Ratio | BCW29 | h_{FE} | 120 | 90 | 260 | $I_C = -10\mu A, V_{CE} = -5V$ $I_C = -2mA, V_{CE} = -5V$ |
| | BCW30 | h_{FE} | 215 | 150 | 500 | $I_C = -10\mu A, V_{CE} = -5V$ $I_C = -2mA, V_{CE} = -5V$ |
| Transition Frequency | f_T | | 150 | | MHz | $I_C = -10mA, V_{CE} = -5V$ $f = 35MHz$ |
| Collector Capacitance | C_{TC} | | | 7 | pF | $I_E = I_B = 0, V_{CB} = -10V$ $f = 1MHz$ |
| Noise Figure | N | | | 10 | dB | $I_C = -200mA, V_{CE} = -5V$ $R_S = 2K\Omega, f = 1KHz$ $B = 200Hz$ |

*Measured under pulsed conditions. Pulse width=300 μs . Duty cycle $\leq 2\%$
Spice parameter data is available upon request for this device