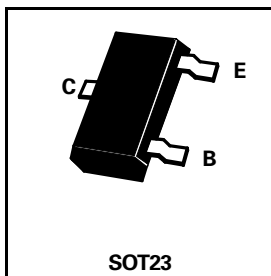


# SOT23 PNP SILICON PLANAR SWITCHING TRANSISTORS

ISSUE 2 – SEPTEMBER 95

## BSS80B BSS80C

PARTMARKING DETAIL — BSS80B - CH  
BSS80C - CJ



### ABSOLUTE MAXIMUM RATINGS.

| PARAMETER                                  | SYMBOL         | VALUE       | UNIT        |
|--|----------------|-------------|-------------|
| Collector-Base Voltage                     | $V_{CBO}$      | -60         | V           |
| Collector-Emitter Voltage                  | $V_{CEO}$      | -40         | V           |
| Emitter-Base Voltage                       | $V_{EBO}$      | -5          | V           |
| Peak Pulse Current                         | $I_{CM}$       | -800        | mA          |
| 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 $T_{amb} = 25^{\circ}C$ ).

| PARAMETER                             |                  | SYMBOL        | MIN.      | MAX.         | UNIT          | CONDITIONS.  |
|---------------------------------------|------------------|---------------|-----------|--------------|---------------|--|
| Collector-Base Breakdown Voltage      |                  | $V_{(BR)CBO}$ | -60       |              | V             | $I_C = -10\mu A$   |
| Collector-Emitter Breakdown Voltage   |                  | $V_{(BR)CEO}$ | -40       |              | V             | $I_C = -10mA$  |
| Emitter-Base Breakdown Voltage        |                  | $V_{(BR)EBO}$ | -5        |              |               | $I_E = -10mA$  |
| Collector Cut-Off Current             |                  | $I_{CBO}$     |           | -10<br>-10   | nA<br>$\mu A$ | $V_{CB} = -50V, V_{CE} = -50V, T_a = 150^{\circ}C$             |
| Emitter Cut-Off Current               |                  | $I_{EBO}$     |           | -10          | nA            | $V_{BE} = -3V$   |
| Collector-Emitter Saturation Voltage  |                  | $V_{CE(sat)}$ |           | -0.4<br>-1.6 | mV<br>V       | $I_C = -150mA, V_{CE} = -10V$<br>$I_C = -150mA, V_{CE} = -10V$ |
| Static Forward Current Transfer Ratio | BSS80B<br>BSS80C | $h_{FE}$      | 40<br>100 | 120<br>300   |               | $I_C = 150mA, V_{CE} = 10V$<br>$I_C = 150mA, V_{CE} = 10V$     |
| Transition Frequency                  |                  | $f_T$         | 200       |              | MHz           | $V_{CE} = -20V, I_C = -50mA$<br>$f = 100MHz$                   |
| Output Capacitance                    |                  | $C_{obo}$     |           | 8            | pF            | $V_{CB} = -10V, f = 1MHz$                                      |
| Delay Time                            |                  | $t_d$         |           | 10           | ns            | $V_{CC} = -30V, I_C = -150mA$<br>$I_{B1} = -I_{B2} = -15mA$    |
| Rise Time                             |                  | $t_r$         |           | 40           | ns            |  |
| Storage Time                          |                  | $t_s$         |           | 80           | ns            |  |
| Fall Time                             |                  | $t_f$         |           | 30           | ns            |  |