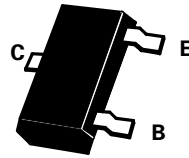


SOT23 NPN SILICON PLANAR RF TRANSISTORS

BFS17L BFS17H

ISSUE 4 – MARCH 2001

PARTMARKING DETAILS — BFS17L - E1L
BFS17H - E1H



ABSOLUTE MAXIMUM RATINGS.

| PARAMETER | SYMBOL | VALUE | UNIT |
|--|----------------|-------------|-------------|
| Collector-Base Voltage | V_{CBO} | 25 | V |
| Collector-Emitter Voltage | V_{CEO} | 15 | V |
| Emitter-Base Voltage | V_{EBO} | 2.5 | V |
| Peak Pulse Current | I_{CM} | 50 | mA |
| Continuous Collector Current | I_C | 25 | 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. | TYP. | MAX. | UNIT | CONDITIONS. |
|---------------------------------------|-----------|------|------------|----------|---------------|---|
| Collector Cut-Off Current | I_{CBO} | | | 10 10 | nA μA | $V_{CB}=10V, I_E=0$ $V_{CB}=10V, I_E=0,$ $T_{amb} = 100^{\circ}C$ |
| Static Forward Current Transfer Ratio | h_{FE} | | | | | |
| BFS17L | | 25 | | 100 | | $I_C=2.0mA, V_{CE}=1.0V$ |
| BFS17H | | 70 | | 200 | | $I_C=2.0mA, V_{CE}=1.0V$ |
| | | 20 | | 125 | | $I_C=25mA, V_{CE}=1.0V$ |
| Transition Frequency | f_T | | 1.0 1.3 | | GHz GHz | $I_C=2.0mA, V_{CE}=5.0V$ $f=500MHz$ $I_C=25mA, V_{CE}=5.0V$ $f=500MHz$ |
| Feedback Capacitance | $-C_{re}$ | | 0.85 | | pF | $I_C=2.0mA, V_{CE}=5V, f=1MHz$ |
| Output Capacitance | C_{obo} | | | 1.5 | pF | $V_{CB}=10V, f=1MHz$ |
| Input Capacitance | C_{ibo} | | | 2.0 | pF | $V_{EB}=0.5V, f=1MHz$ |
| Noise Figure | N | | 4.5 | | dB | $I_C=2.0mA, V_{CE}=5.0V$ $R_S=50\Omega, f=500MHz$ |
| Intermodulation Distortion | d_{im} | | -45 | | dB | $I_C=10mA, V_{CE}=6.0V$ $R_L=37.5\Omega, T_{amb}=25^{\circ}C$ $V_o=100mV$ at $f_p=183MHz$ $V_o=100mV$ at $f_q=200MHz$ measured at $f_{(2q-p)}=217MHz$ |

Spice parameter data is available upon request for this device

BFS17L BFS17H

TYPICAL CHARACTERISTICS

