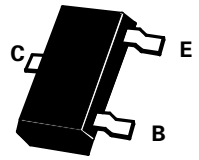
# SOT23 NPN SILICON PLANAR RF TRANSISTORS

**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°C | $P_{tot}$ | 330 | mW |
| Operating and Storage Temperature Range | $T_j$:$T_{stg}$ | -55 to +150 | °C |

## ELECTRICAL CHARACTERISTICS (at $T_{amb}$ = 25°C).

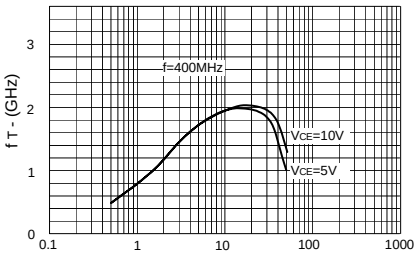
| PARAMETER | SYMBOL | MIN. | TYP. | MAX. | UNIT | CONDITIONS. |
|---|---|---|---|---|---|---|
| Collector Cut-Off Current | $I_{CBO}$ | | | 10<br>10 | nA<br>µA | $V_{CB}$=10V, $I_E$=0<br>$V_{CB}$=10V, $I_E$=0, $T_{amb}$ = 100°C |
| Static Forward Current Transfer Ratio | $h_{FE}$ | | | | | |
| BFS17L | | 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<br>1.3 | | GHz<br>GHz | $I_C$=2.0mA, $V_{CE}$=5.0V f=500MHz<br>$I_C$=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 $R_S$=50Ω, f=500MHz |
| Intermodulation Distortion | $d_{im}$ | | -45 | | dB | $I_C$=10mA, $V_{CE}$=6.0V $R_L$=37.5Ω,$T_{amb}$=25°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

ZETEX

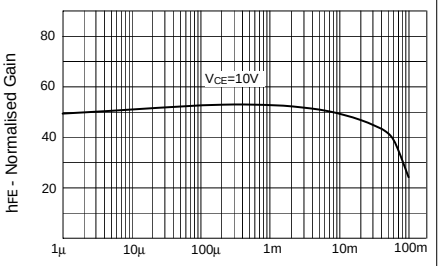
# BFS17L
# BFS17H

## TYPICAL CHARACTERISTICS



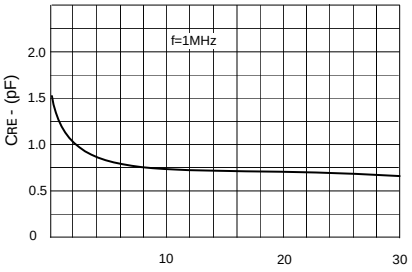

IC - Collector Current (mA)

**fT v IC**




IC - Collector Current (A)

**hFE v IC**




VCE - (V)

**CRE v VCE**