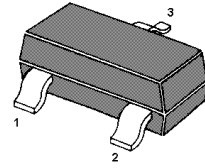


# BFS20

## NPN Silicon Epitaxial Planar Transistor

High frequency transistor for IF and VHF applications



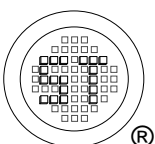
1.BASE 2.EMITTER 3.COLLECTOR  
TO-236 Plastic Package

### Absolute Maximum Ratings ( $T_a = 25\text{ }^\circ\text{C}$ )

| Parameter                 | Symbol    | Value         | Unit             |
|---------------------------|-----------|---------------|------------------|
| Collector-Base Voltage    | $V_{CBO}$ | 30            | V                |
| Collector-Emitter Voltage | $V_{CEO}$ | 20            | V                |
| Emitter-Base Voltage      | $V_{EBO}$ | 4             | V                |
| Collector Current         | $I_C$     | 25            | mA               |
| Power Dissipation         | $P_{tot}$ | 200           | mW               |
| Junction Temperature      | $T_j$     | 150           | $^\circ\text{C}$ |
| Storage Temperature Range | $T_{Stg}$ | - 65 to + 150 | $^\circ\text{C}$ |

### Characteristics at $T_a = 25\text{ }^\circ\text{C}$

| Parameter  | Symbol    | Min. | Typ. | Max. | Unit          |
|--|-----------|------|------|------|---------------|
| DC Current Gain<br>at $V_{CE} = 10\text{ V}$ , $I_C = 7\text{ mA}$                             | $h_{FE}$  | 40   | -    | 140  | -             |
| Collector Cutoff Current<br>at $V_{CB} = 20\text{ V}$  | $I_{CBO}$ | -    | -    | 100  | nA            |
| Emitter Cutoff Current<br>at $V_{EB} = 4\text{ V}$   | $I_{EBO}$ | -    | -    | 100  | $\mu\text{A}$ |
| Base Emitter Voltage<br>at $V_{CE} = 10\text{ V}$ , $I_C = 7\text{ mA}$                        | $V_{BE}$  | -    | -    | 0.9  | V             |
| Transition Frequency<br>at $V_{CE} = 10\text{ V}$ , $I_C = 5\text{ mA}$ , $f = 100\text{ MHz}$ | $f_T$     | 275  | 450  | -    | MHz           |
| Collector Base Capacitance<br>at $V_{CB} = 10\text{ V}$ , $f = 1\text{ MHz}$                   | $C_{ob}$  | -    | 1    | -    | pF            |



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