




DESCRIPTION

The BFR92ALT1 is a low noise, high gain, discrete silicon bipolar transistors housed in low cost plastic packages.

IMPORTANT: For the most current data, consult MICROSEMI's website: <http://www.microsemi.com>

KEY FEATURES

-  High FTau-4.5GHz
-  Low noise-3.0dB@500MHz
-  Low cost SOT23 package

ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C)

| Symbol | Parameter | Value | Unit |
|-------------------|---------------------------|-------------|------|
| V _{CBO} | Collector-Base Voltage | 20 | V |
| V _{CEO} | Collector-Emitter Voltage | 15 | V |
| V _{EBO} | Emitter-Base Voltage | 2.0 | V |
| I _C | Device Current | 25 | mA |
| P _{DISS} | Power Dissipation | 273 | mW |
| T _J | Junction Temperature | 150 | C |
| T _{STG} | Storage Temperature | -55 to +150 | C |

APPLICATIONS/BENEFITS

-  LNA, Oscillator, Pre-Driver

THERMAL DATA

| | | | |
|----------------------|----------------------------------|-----|-----|
| R _{TH(j-c)} | Junction-Case Thermal Resistance | 275 | C/W |
|----------------------|----------------------------------|-----|-----|



SOT-23
BFR92ALT1

STATIC ELECTRICAL SPECIFICATIONS (T_{case} = 25°C)

| Symbol | Test Conditions | | | | Units |
|-------------------|---|------|------|------|-------|
| | | Min. | Typ. | Max. | |
| BV _{CBO} | I _C = .1mA I _E = 0 | 20 | | | V |
| BV _{CEO} | I _C = 10mA I _B = 0 | 15 | | | V |
| I _{CBO} | V _{CB} = 10V I _E = 0 | | | 50 | nA |
| h _{FE} | V _{CB} = 10V I _C = 14mA | 40 | | | |

DYNAMIC ELECTRICAL SPECIFICATIONS (T_{case} = 25°C)

| Symbol | Test Conditions | | | | Units |
|-----------------|--|------|------|------|-------|
| | | Min. | Typ. | Max. | |
| C _{CB} | V _{CB} = 10 V f = 1.0 MHz | | 0.7 | | pF |
| FTau | V _{CE} = 10 V I _C = 14 mA f = 500MHz | | 4.5 | | GHz |
| NF | V _{CE} = 1.5 V I _C = 3.0 mA f = 500MHz | | 3.0 | | dB |