# isc Silicon NPN RF Transistor 2SC4537

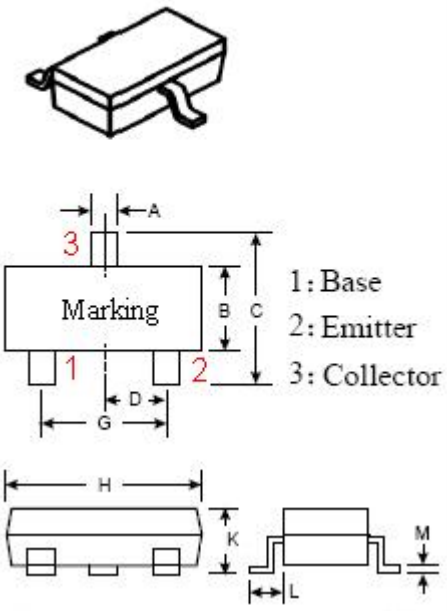
## DESCRIPTION

- Low Noise
  NF = 1.6 dB TYP., @$V_{CE}$ = 5 V, $I_C$ = 5 mA, f = 900 MHz
- High Power Gain
  PG = 10 dB TYP. @$V_{CE}$ = 5 V, $I_C$ = 20 mA, f = 900 MHz
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## APPLICATIONS

- Designed for VHF, UHF low noise amplifier.

SOT-323 package




| DIM | mm | |
|---|---|---|
| | MIN | MAX |
| A | 0.30 | 0.40 |
| B | 1.15 | 1.35 |
| C | 2.00 | 2.40 |
| D | 0.65 | |
| H | 1.80 | 2.20 |
| K | 0.80 | 1.00 |
| M | 0.10 | 0.25 |

## ABSOLUTE MAXIMUM RATINGS($T_a$=25℃)

| SYMBOL | PARAMETER | VALUE | UNIT |
|---|---|---|---|
| $V_{CBO}$ | Collector-Base Voltage | 15 | V |
| $V_{CEO}$ | Collector-Emitter Voltage | 11 | V |
| $V_{EBO}$ | Emitter-Base Voltage | 2 | V |
| $I_C$ | Collector Current-Continuous | 50 | mA |
| $P_C$ | Collector Power Dissipation @$T_C$=25℃ | 0.1 | W |
| $T_J$ | Junction Temperature | 150 | ℃ |
| $T_{stg}$ | Storage Temperature Range | -55~150 | ℃ |

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## ELECTRICAL CHARACTERISTICS

**$T_C$=25℃ unless otherwise specified**

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|---|---|---|---|---|---|---|
| $V_{(BR)CBO}$ | Collector-Base Breakdown Voltage | $I_C$= 10μA ; $I_E$= 0 | 15 | | | V |
| $I_{CBO}$ | Collector Cutoff Current | $V_{CB}$= 12V; $I_E$= 0 | | | 1.0 | μA |
| $I_{CEO}$ | Collector Cutoff Current | $V_{CE}$= 10V; $I_E$= ∞ | | | 1.0 | μA |
| $I_{EBO}$ | Emitter Cutoff Current | $V_{EB}$= 1V; $I_C$= 0 | | | 1.0 | μA |
| $h_{FE}$ | DC Current Gain | $I_C$= 20mA ; $V_{CE}$= 5V | 50 | | 250 | |
| $f_T$ | Current-Gain—Bandwidth Product | $I_C$= 20mA ; $V_{CE}$= 5V | 4.5 | 6.0 | | GHz |
| $C_{OB}$ | Output Capacitance | $I_E$= 0 ; $V_{CB}$= 5V;f= 1.0MHz | | 1.0 | 1.5 | pF |
| PG | Power Gain | $I_C$= 20mA ; $V_{CE}$= 5V; f= 900MHz | | 10 | | dB |
| NF | Noise Figure | $I_C$= 5mA ; $V_{CE}$= 5V;f= 900MHz | | 1.6 | | dB |