

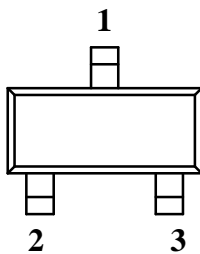
Silicon PNP HF Transistor

Applications

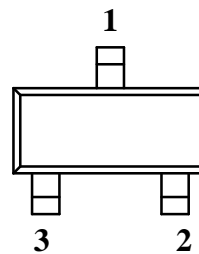
RF-IF amplifier specially for thick and thin film circuits.

Features

- High power gain
- Low noise figure



94 9280



95 10527

BF550 Marking: G2
 Plastic case (SOT 23)
 1= Collector; 2= Base; 3= Emitter

BF550R Marking: G5
 Plastic case (SOT 23R)
 1= Collector; 2= Base; 3= Emitter

Absolute Maximum Ratings

| Parameters | Symbol | Value | Unit |
|--|------------|-------|------|
| Collector-base voltage | $-V_{CBO}$ | 40 | V |
| Collector-emitter voltage | $-V_{CEO}$ | 40 | V |
| Emitter-base voltage | $-V_{EBO}$ | 4 | V |
| Collector current | $-I_C$ | 25 | mA |
| Total power dissipation on ceramic substrat (7 x 5 x 0.6) mm ³ $T_{amb} \leq 60^\circ\text{C}$ | P_{tot} | 200 | mW |
| Junction temperature | T_j | 125 | °C |

Maximum Thermal Resistance

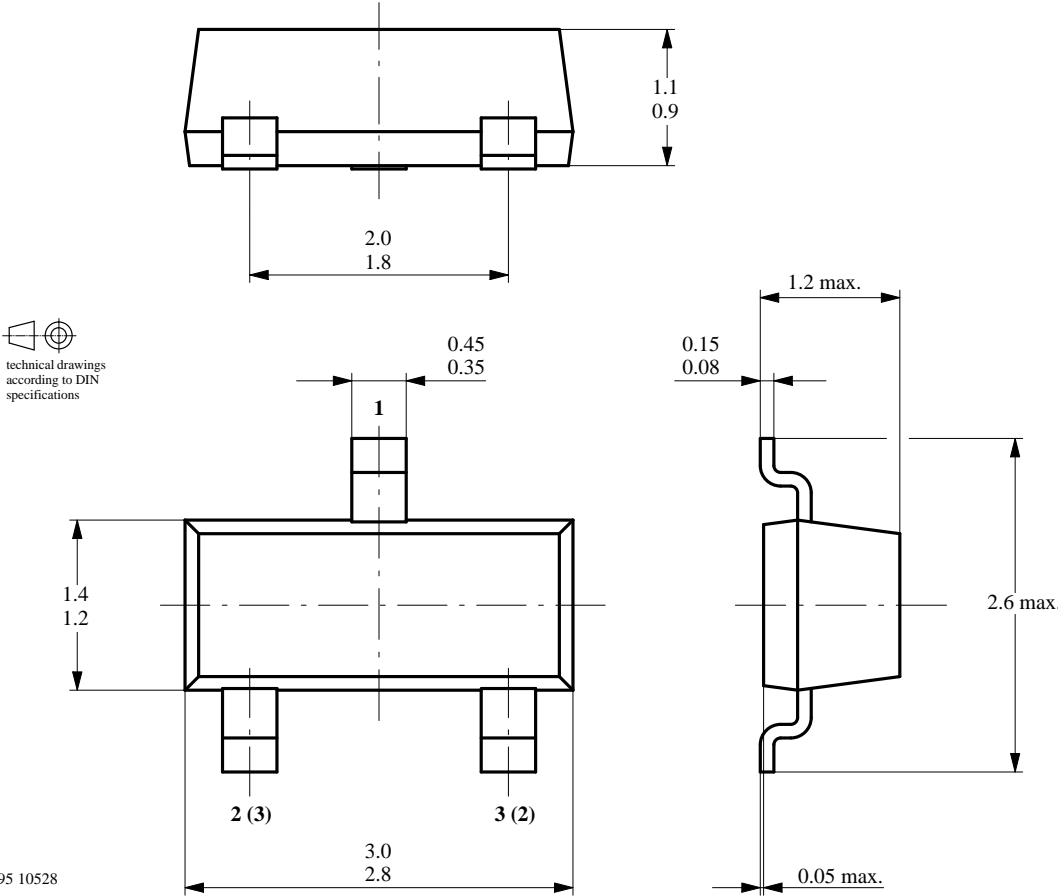
| Parameters | Symbol | Value | Unit |
|--|------------|-------|------|
| Junction ambient on ceramic substrat (7 x 5 x 0.6) mm ³ | R_{thJA} | 530 | K/W |

Electrical Characteristics

$T_{amb} = 25^{\circ}\text{C}$, unless otherwise specified

| Parameters / Test Conditions | Symbol | Min. | Typ. | Max. | Unit |
|--|------------|------|------|------|------|
| Collector cut-off current $-V_{CB} = 30\text{ V}, I_E = 0\text{ A}$ | $-I_{CBO}$ | | | 50 | nA |
| Base-emitter voltage $-V_{CE} = 10\text{ V}, -I_C = 1\text{ mA}$ | $-V_{BE}$ | | 750 | | mV |
| DC forward current transfer ratio $-V_{CE} = 10\text{ V}, -I_C = 1\text{ mA}$ | h_{FE} | 50 | | | |
| Gain bandwidth product $-V_{CB} = 10\text{ V}, -I_C = 1\text{ mA}, f = 100\text{ MHz}$ | f_T | | 350 | | MHz |
| Feedback capacitance $-V_{CB} = 10\text{ V}, -I_C = 1\text{ mA}, f = 100\text{ MHz}$ | C_{re} | | 0.5 | | pF |
| Noise figure $-V_{CE} = 10\text{ V}, -I_C = 1\text{ mA}, R_G = 300\ \Omega, f = 200\text{ MHz}$ | F_b | | 2 | | dB |

Dimensions in mm



Ozone Depleting Substances Policy Statement

It is the policy of **TEMIC TELEFUNKEN microelectronic GmbH** to

1. Meet all present and future national and international statutory requirements.
2. Regularly and continuously improve the performance of our products, processes, distribution and operating systems with respect to their impact on the health and safety of our employees and the public, as well as their impact on the environment.

It is particular concern to control or eliminate releases of those substances into the atmosphere which are known as ozone depleting substances (ODSs).

The Montreal Protocol (1987) and its London Amendments (1990) intend to severely restrict the use of ODSs and forbid their use within the next ten years. Various national and international initiatives are pressing for an earlier ban on these substances.

TEMIC TELEFUNKEN microelectronic GmbH semiconductor division has been able to use its policy of continuous improvements to eliminate the use of ODSs listed in the following documents.

1. Annex A, B and list of transitional substances of the Montreal Protocol and the London Amendments respectively
2. Class I and II ozone depleting substances in the Clean Air Act Amendments of 1990 by the Environmental Protection Agency (EPA) in the USA
3. Council Decision 88/540/EEC and 91/690/EEC Annex A, B and C (transitional substances) respectively.

TEMIC can certify that our semiconductors are not manufactured with ozone depleting substances and do not contain such substances.

We reserve the right to make changes without further notice to improve technical design.

Parameters can vary in different applications. All operating parameters must be validated for each customer application by customer. Should Buyer use TEMIC products for any unintended or unauthorized application, Buyer shall indemnify TEMIC against all claims, costs, damages, and expenses, arising out of, directly or indirectly, any claim of personal damage, injury or death associated with such unintended or unauthorized use.

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