TEMIC
Semiconductors

BF569/BF569R
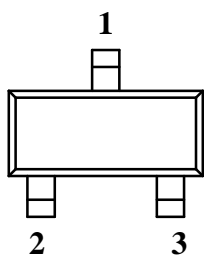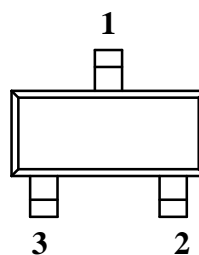
Silicon PNP Planar RF Transistor

Applications

For selfoscillating RF mixter stages

94 9280

BF569 Marking: LH
Plastic case (SOT 23)
1= Collector; 2= Base; 3= Emitter

95 10527

BF569R Marking: LM
Plastic case (SOT 23)
1= Collector; 2= Base; 3= Emitter

Absolute Maximum Ratings

Parameters	Symbol	Value	Unit
Collector-base voltage	$-V_{CBO}$	40	V
Collector-emitter voltage	$-V_{CEO}$	35	V
Emitter-base voltage	$-V_{EBO}$	3	V
Collector current	$-I_C$	30	mA
Total power dissipation $T_{amb} \leq 60°C$	P_{tot}	200	mW
Junction temperature	T_j	150	°C
Storage temperature range	T_{stg}	$-65...+150$	°C

Maximum Thermal Resistance

Parameters	Symbol	Value	Unit
Junction ambient on glass fibre printed board (25 x 20 x 1.5) mm^3 plated with 35 μm Cu	R_{thJA}	450	K/W

Electrical DC Characteristics

$T_{amb} = 25°C$, unless otherwise specified

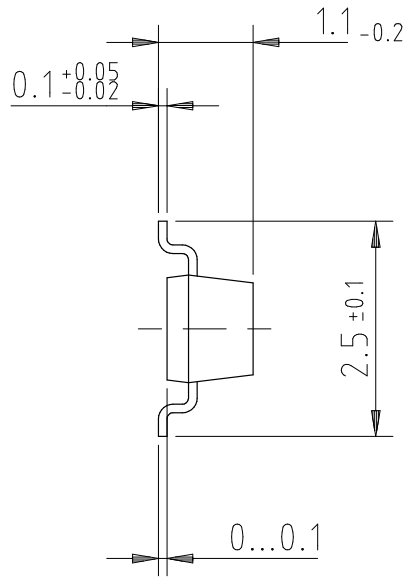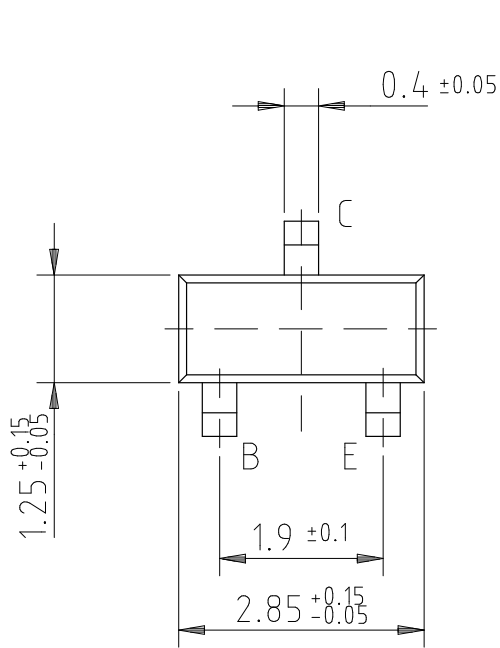| Parameters / Test Conditions	Symbol	Min.	Typ.	Max.	Unit
Collector-emitter cut-off current $-V_{CE} = 40$ V, $V_{BE} = 0$	$-I_{CES}$			100	µA
Collector-base cut-off current $-V_{CB} = 20$ V, $I_E = 0$	$-I_{CBO}$			100	nA
Emitter-base cut-off current $-V_{EB} = 2$ V, $I_C = 0$	$-I_{EBO}$			10	µA
Collector-emitter breakdown voltage $-I_C = 1$ mA, $I_B = 0$	$-V_{(BR)CEO}$	35			V
DC forward current transfer ratio $-V_{CE} = 10$ V, $-I_C = 3$ mA	h_{FE}	25	50	90	

Electrical AC Characteristics

$T_{amb} = 25°C$

Parameters / Test Conditions	Symbol	Min.	Typ.	Max.	Unit
Transition frequency $-V_{CE} = 10$ V, $-I_C = 3$ mA, f = 300 MHz	f_T		1000		MHz
Collector-base capacitance $-V_{CB} = 10$ V, f = 1 MHz	C_{cb}		0.35		pF
Noise figure $-V_{CE} = 10$ V, $-I_C = 3$ mA, $Z_S = 50$ Ω $Z_L = 500$ Ω, f = 800 MHz	F		4.2	5.0	dB
Power gain $-V_{CE} = 10$ V, $-I_C = 3$ mA $Z_S = 50$ Ω, $Z_L = 500$ Ω, f = 800 MHz	G_{pb}	13	14.5		dB

Dimensions of BF569 in mm

0.4 ±0.05

C

1.25 $^{+0.15}_{-0.05}$

1.9 ±0.1

2.85 $^{+0.15}_{-0.05}$

B   E

0.1 $^{+0.05}_{-0.02}$

1.1 $_{-0.2}$

95 11346

2.5 ±0.1

0...0.1
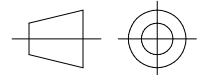
technical drawings
according to DIN
specifications

Dimensions of BF569R in mm

0.4 ±0.05

C

1.25 $^{+0.15}_{-0.05}$

1.9 ±0.1

2.85 $^{+0.15}_{-0.05}$

E   B

0.1 $^{+0.05}_{-0.02}$

1.1 $_{-0.2}$

95 11347

2.5 ±0.1

0...0.1
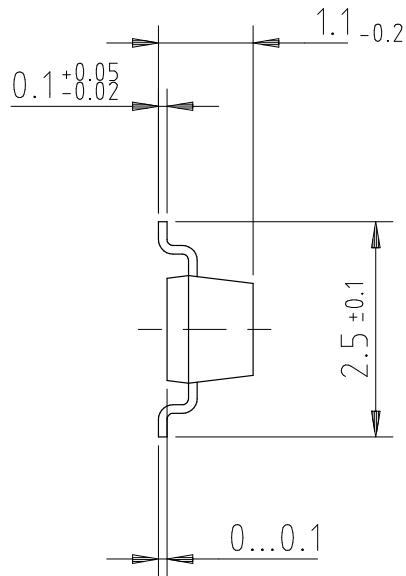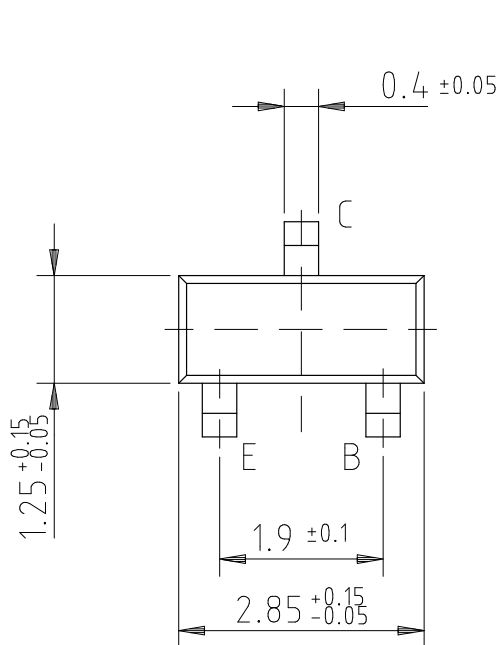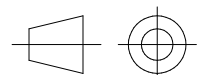
technical drawings
according to DIN
specifications

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.