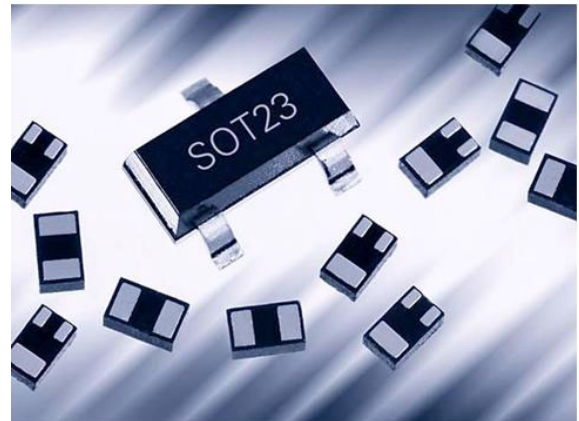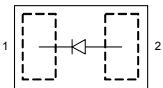## Silicon Schottky Diode

- RF Schottky diode for mixer applications up to 26 GHz

- Extremely low inductance combined with ultra low device capacitance

- Very stable performance for all major parameters

- Package size: 0.62 x 0.31 x 0.31 mm³ only

- Pb-free (RoHS compliant) package

- Qualified according AEC Q101

AEC Qualified   **RoHS**

BAT24-02LS

Type	Package	Configuration	L_S(nH)	Marking
BAT24-02LS	TSSLP-2-1	single, leadless	0.2 ±0.05	S

Maximum Ratings at T_A = 25°C, unless otherwise specified

Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	4	V
Forward current	I_F	110	mA
Total power dissipation $T_S \leq 73\ °C$	P_{tot}	100	mW
Junction temperature	T_j	150	°C
Operating temperature range	T_{op}	-55 ... 150	
Storage temperature	T_{stg}	-55 ... 150	

Thermal Resistance

| Parameter	Symbol	Value	Unit
Junction - soldering point[1]	R_{thJS}	≤ 770	K/W

[1]For calculation of R_{thJA} please refer to Application Note Thermal Resistance

Electrical Characteristics at T_A = 25°C, unless otherwise specified

| Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC Characteristics					
Breakdown voltage $I_{(BR)}$ = 10 µA	$V_{(BR)}$	4	-	-	V
Reverse current V_R = 1 V	I_R	-	-	5	µA
Forward voltage I_F = 1 mA I_F = 10 mA	V_F	0.16 0.25	0.23 0.32	0.32 0.41	V
AC Characteristics					
Diode capacitance V_R = 0 V, f = 1 MHz	C_T	-	0.2	0.23	pF
Differential forward resistance I_F = 10 mA / 50 mA	R_F	-	8	10	Ω

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Diode capacitance $C_T = f(V_R)$
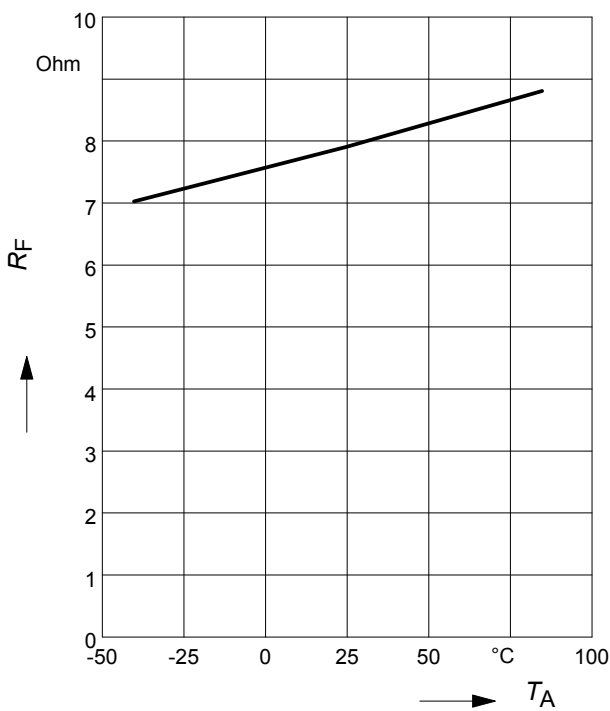
$f = 1\text{MHz}, \ T_A = 25\ °C$
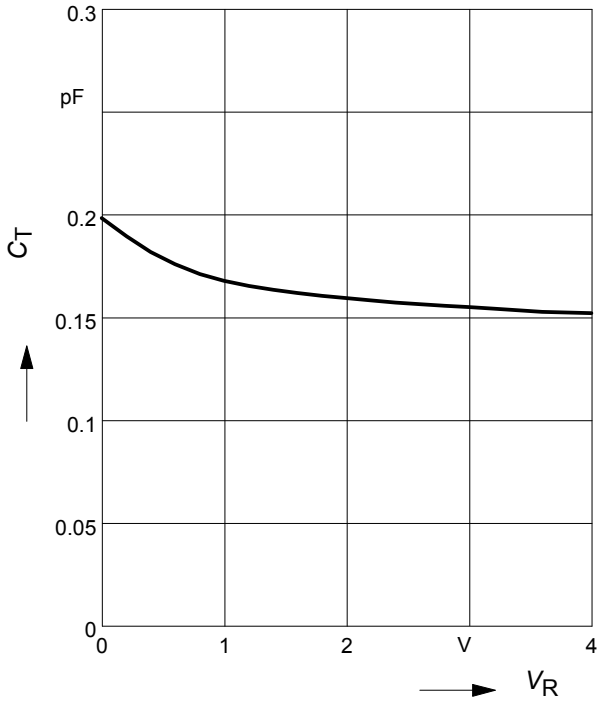
Diode capacitance $C_T = f(T_A)$

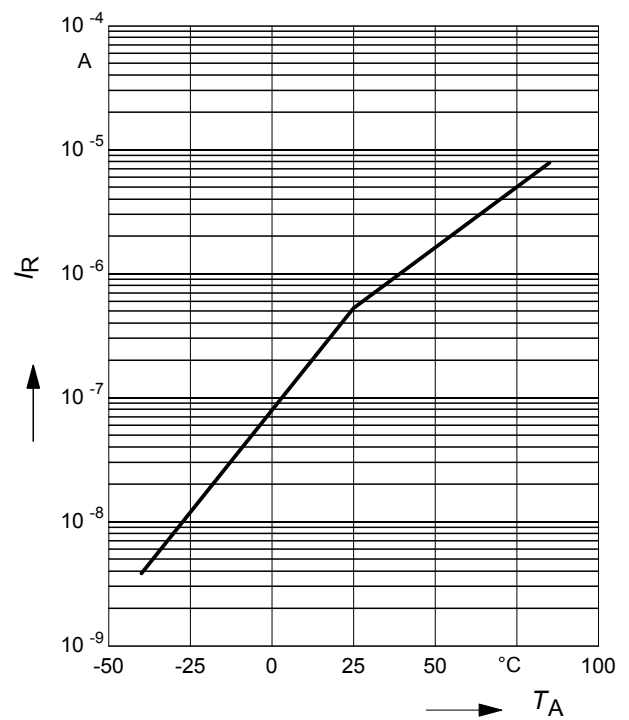$V_R = 0\ \text{V}, \ f = 1\text{MHz}$
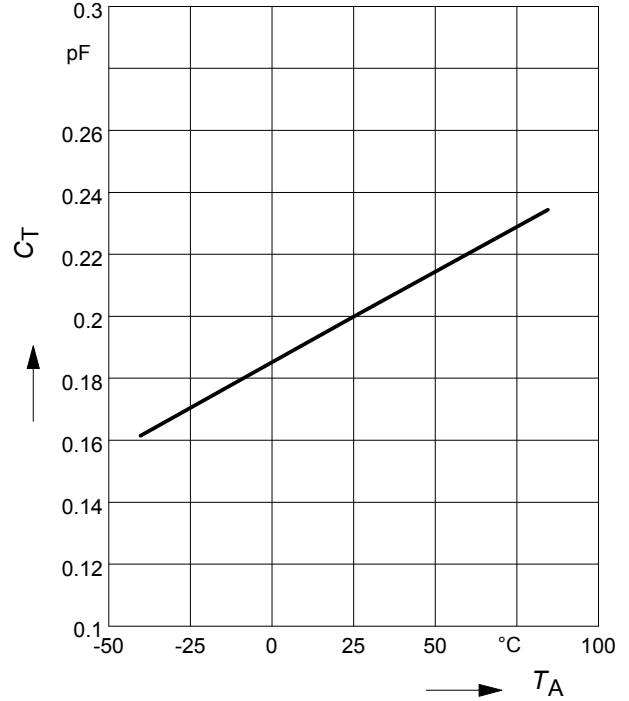
Differential forward resistance $R_F = f(T_A)$

$I_F = 10\ \text{mA} / 50\ \text{mA}$
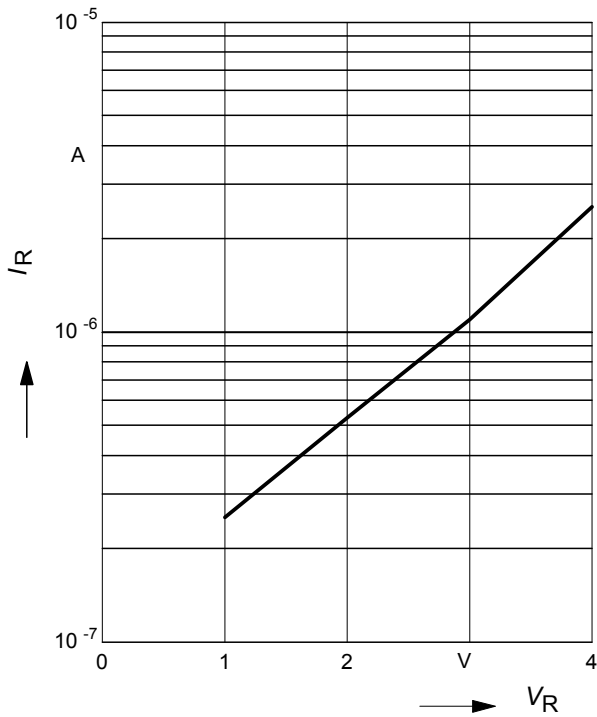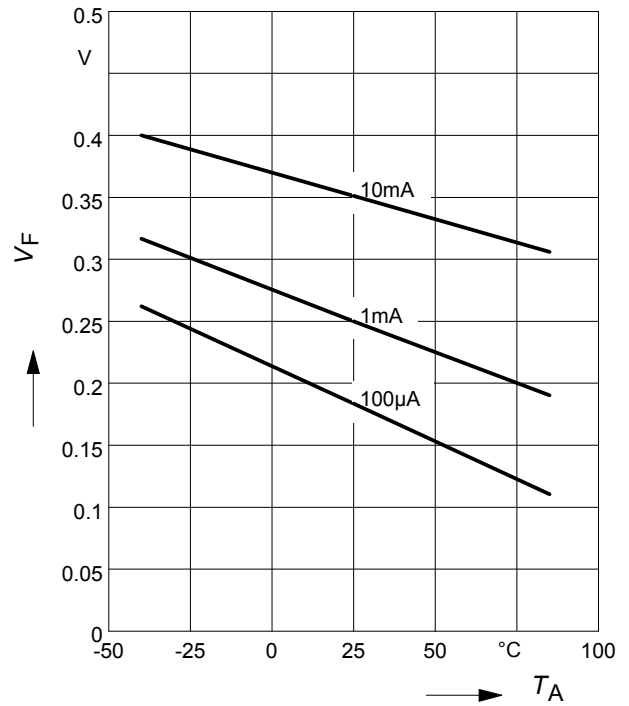
Reverse current $I_R = f(T_A)$

$V_R = 1\ \text{V}$
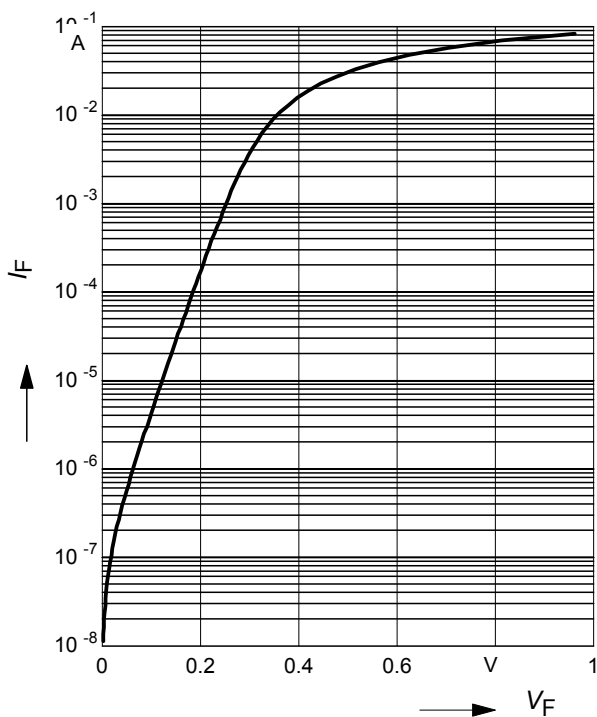
3

Reverse current $I_R = f(V_R)$

T_A = 25 °C

Forward Voltage $V_F = f(T_A)$
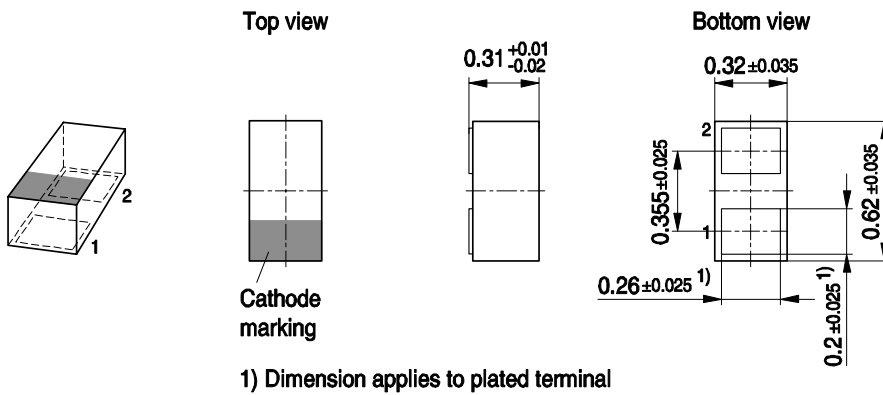
I_F = Parameter

Forward current $I_F = f(V_F)$
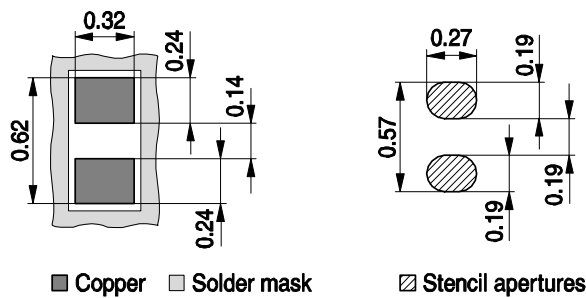
T_A = 25 °C

Forward current $I_F = f(T_S)$

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Package Outline

Top view

Bottom view

$0.31^{+0.01}_{-0.02}$

0.32 ± 0.035

0.355 ± 0.025

0.62 ± 0.035

0.26 ± 0.025 [1])

0.2 ± 0.025 [1])

Cathode marking

1) Dimension applies to plated terminal
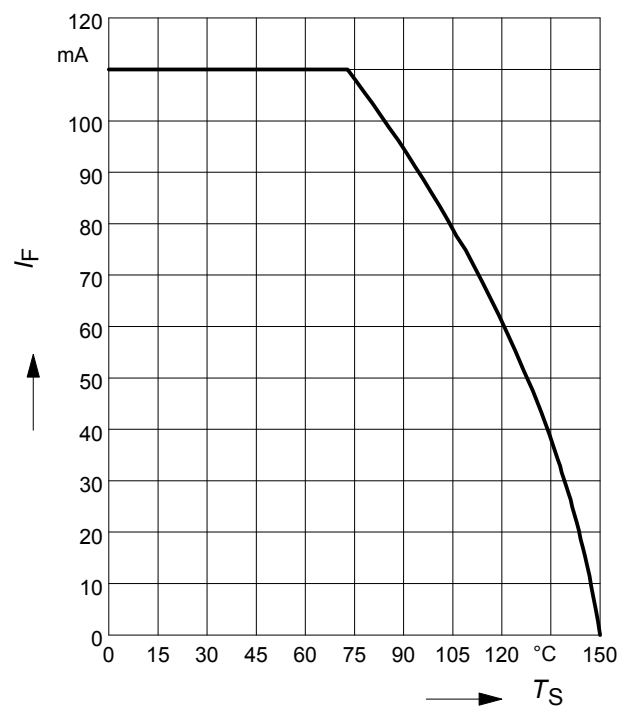
Foot Print

For board assembly information please refer to Infineon website "Packages"

0.32

0.24

0.14

0.62

0.24

0.27

0.19

0.57

0.19

0.19

■ Copper ☐ Solder mask ▨ Stencil apertures

Marking Layout (Example)

BAR95-02LS
Type code

C

Pin 1 marking
Laser marking
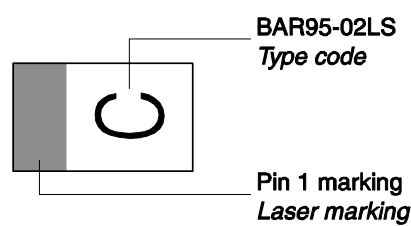
Standard Packing

Reel ø180 mm = 15.000 Pieces/Reel
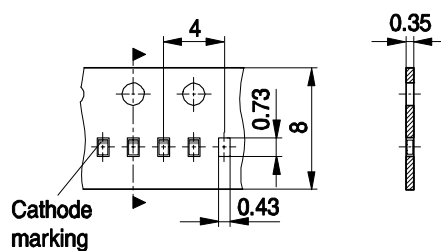
4

0.35

0.73

8

Cathode marking

0.43

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Attention please!

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