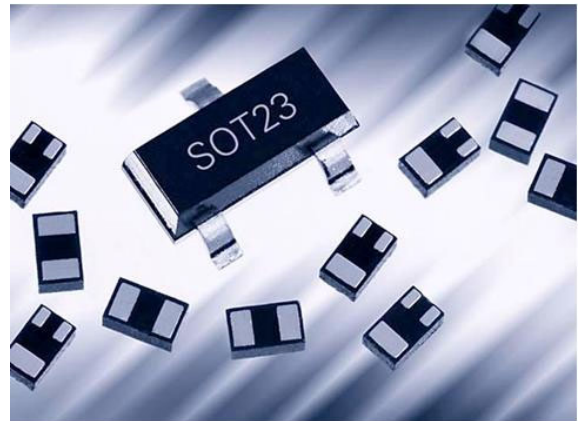
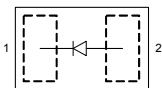


**Silicon Schottky Diode**

- RF Schottky diode for mixer applications up to 24 GHz
- Extremely low inductance combined with ultra low device capacitance
- Very stable performance for all major parameters
- Package size: 0.62 x 0.32 x 0.31 mm<sup>3</sup> only
- Pb-free (RoHS compliant) package
- Qualified according AEC Q101


**BAT15-02LS**


Type	Package	Configuration	$L_S$ (nH)	Marking
BAT15-02LS	TSSLP-2-1	single, leadless	$0.2 \pm 0.05$	S

**Maximum Ratings** at  $T_A = 25\text{ }^\circ\text{C}$ , unless otherwise specified

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

**Thermal Resistance**

Parameter	Symbol	Value	Unit
Junction - soldering point <sup>1)</sup>	$R_{thJS}$	770	K/W

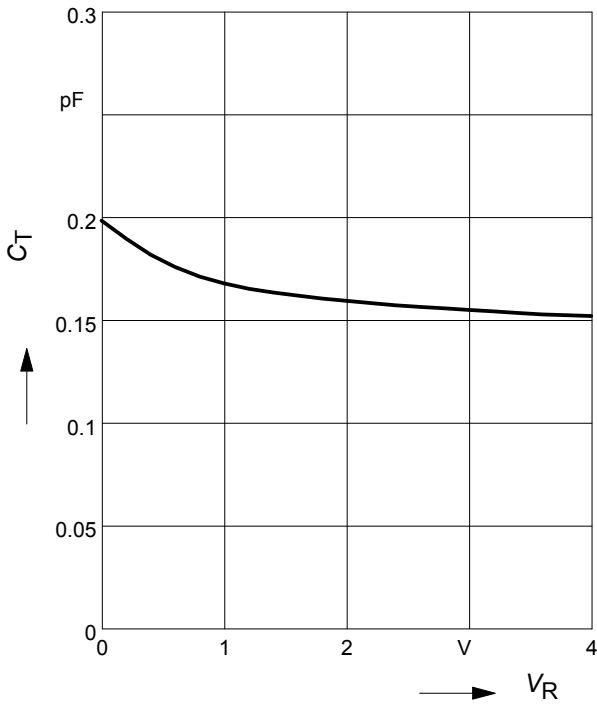
<sup>1)</sup>For calculation of  $R_{thJA}$  please refer to Application Note AN077 (Thermal Resistance Calculation)

**Electrical Characteristics at  $T_A = 25\text{ °C}$ , unless otherwise specified**

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

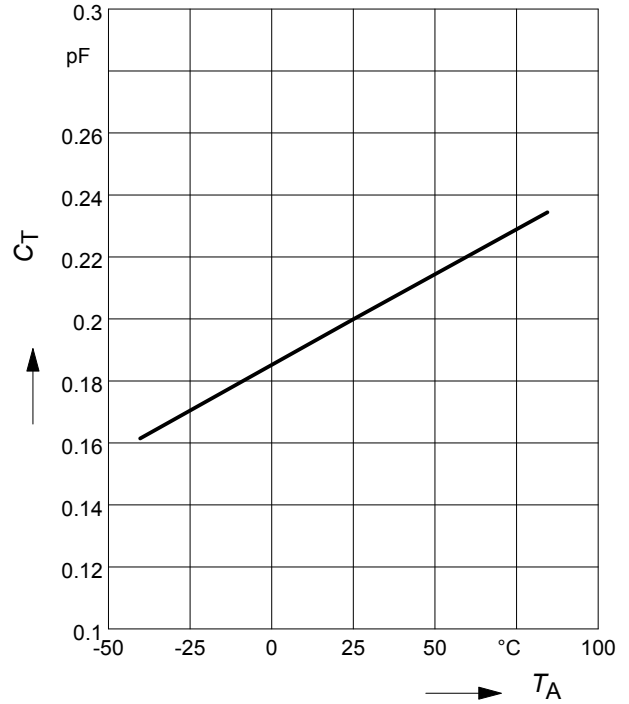
**Diode capacitance  $C_T = f(V_R)$**

$f = 1\text{MHz}$ ,  $T_A = 25\text{ }^\circ\text{C}$



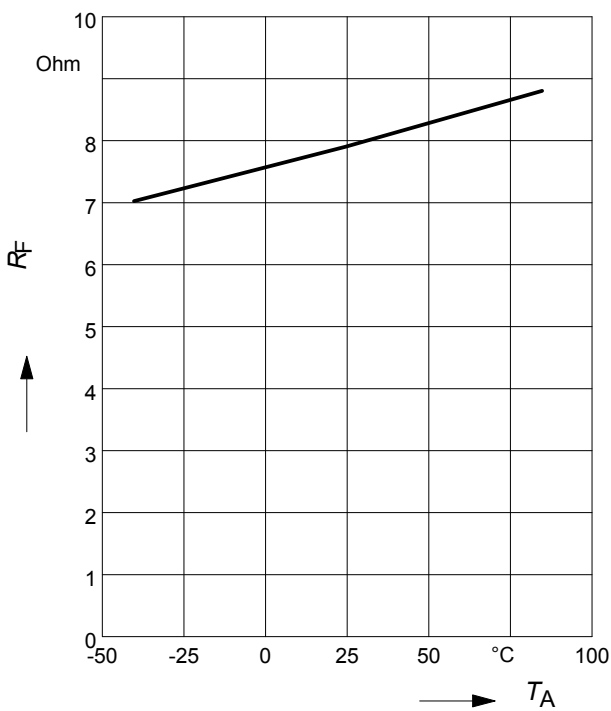
**Diode capacitance  $C_T = f(T_A)$**

$V_R = 0\text{ V}$ ,  $f = 1\text{MHz}$



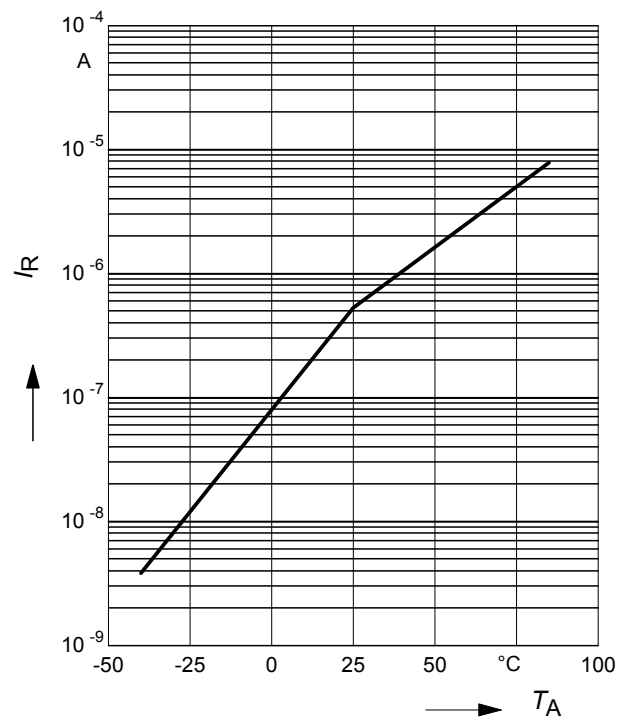
**Differential forward resistance  $R_F = f(T_A)$**

$I_F = 10\text{ mA} / 50\text{ mA}$



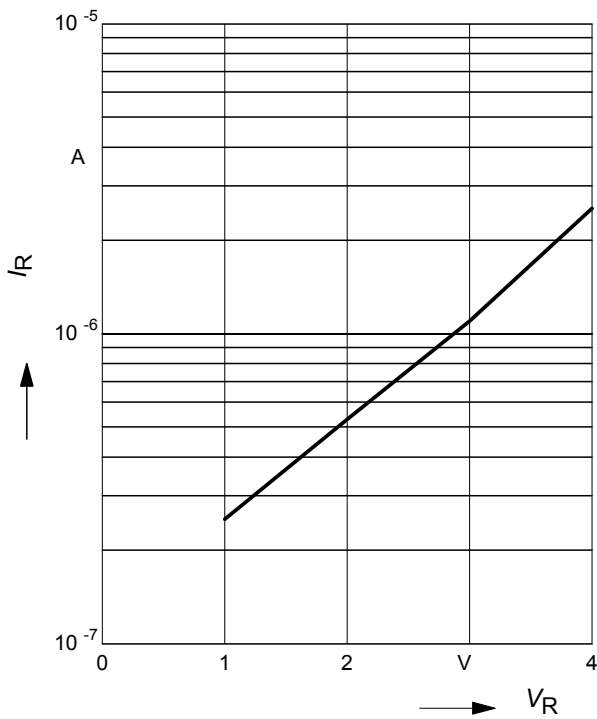
**Reverse current  $I_R = f(T_A)$**

$V_R = 1\text{ V}$



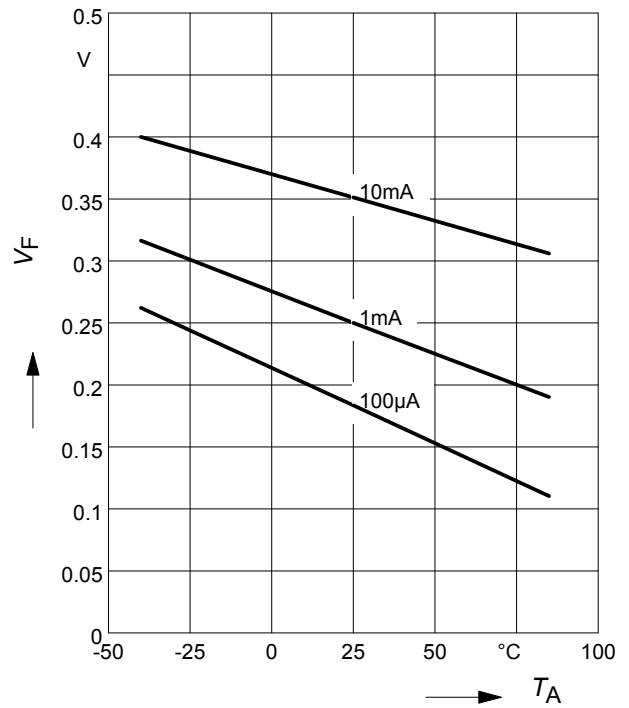
**Reverse current  $I_R = f(V_R)$**

$T_A = 25\text{ }^\circ\text{C}$



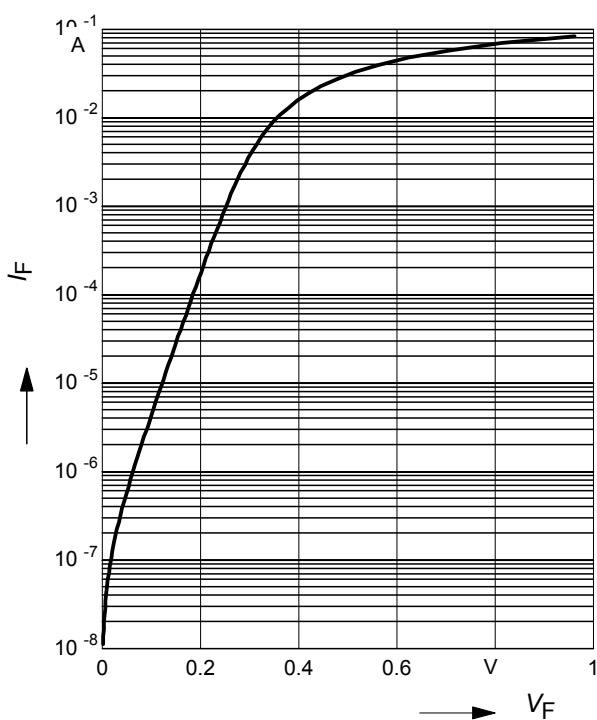
**Forward Voltage  $V_F = f(T_A)$**

$I_F = \text{Parameter}$



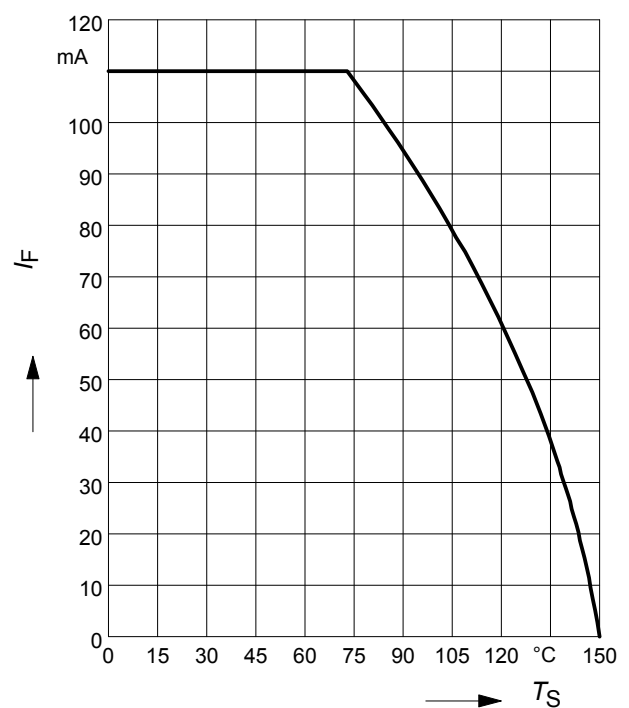
**Forward current  $I_F = f(V_F)$**

$T_A = 25\text{ }^\circ\text{C}$

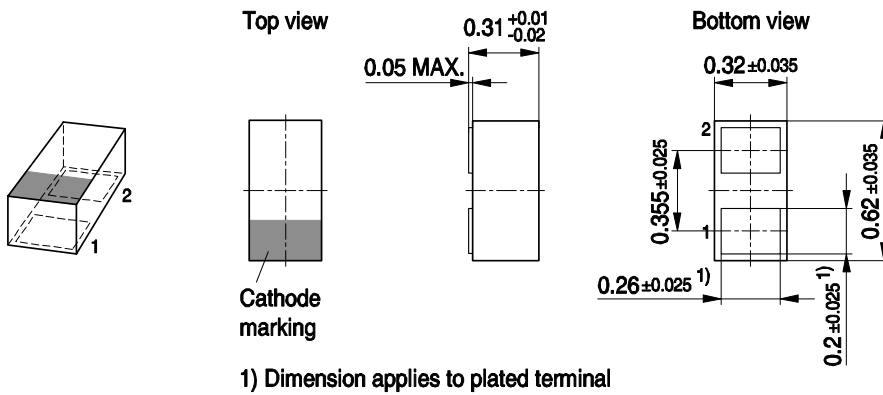


**Forward current  $I_F = f(T_S)$**

BAT15-02LS

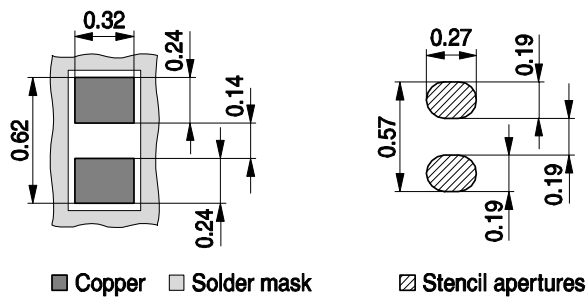


### Package Outline

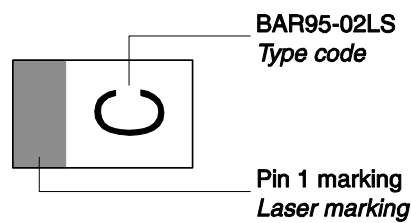


### Foot Print

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

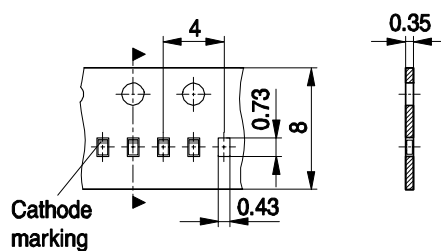


### Marking Layout (Example)



### Standard Packing

Reel ø180 mm = 15.000 Pieces/Reel



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