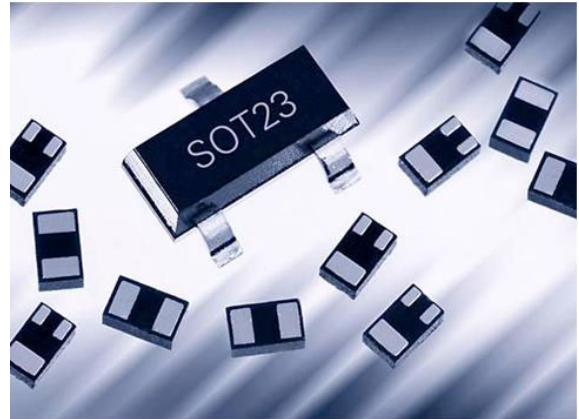
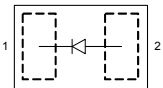


Silicon Schottky Diode

- 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
- Pb-free (RoHS compliant) package
- Qualified according AEC Q101


BAT15-02LRH


Type	Package	Configuration	L_S (nH)	Marking
BAT15-02LRH	TSLP-2-7	single, leadless	0.4	NP

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

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

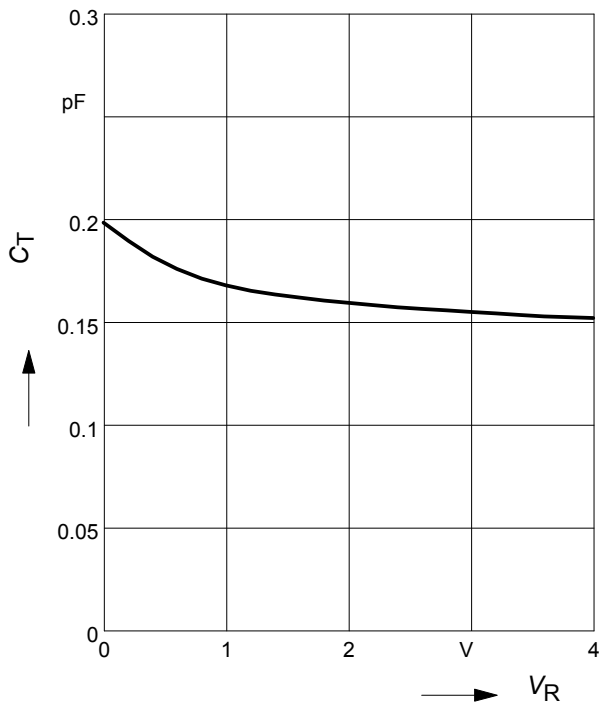
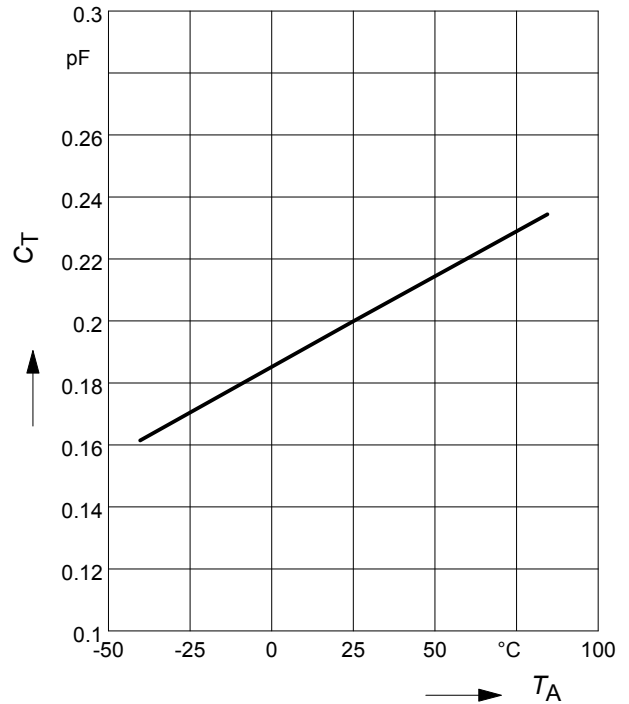
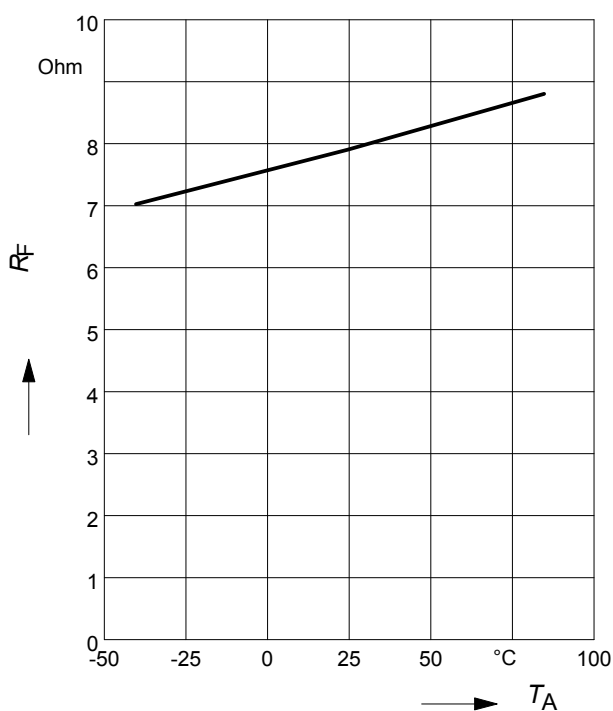
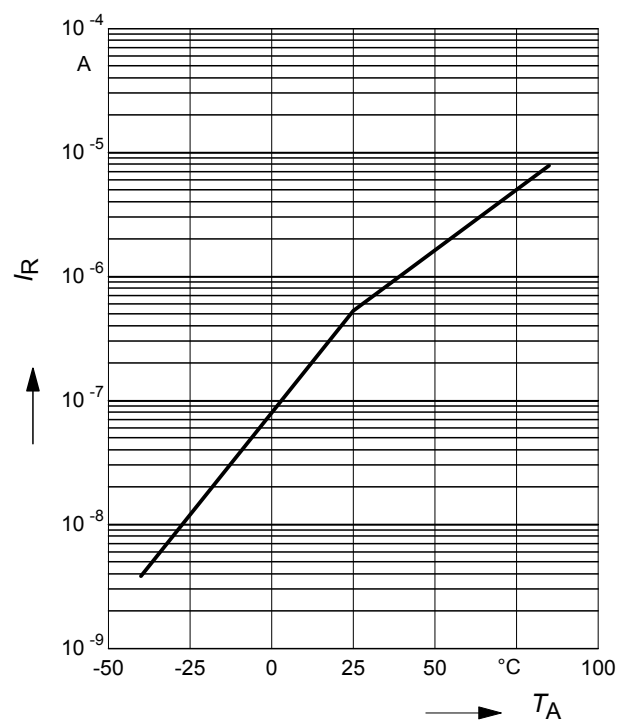
Thermal Resistance

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

¹⁾For calculation of R_{thJA} please refer to Application Note AN077 (Thermal Resistance Calculation)

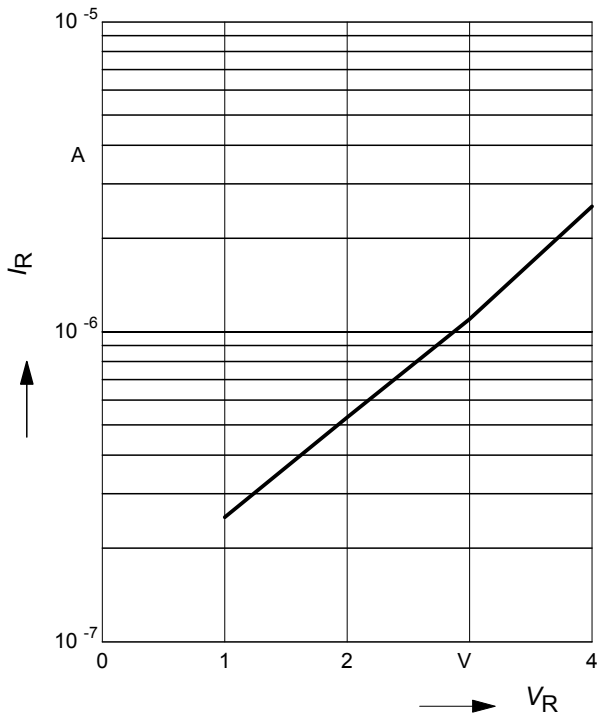
Electrical Characteristics at $T_A = 25\text{ °C}$, unless otherwise specified

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC Characteristics					
Breakdown voltage $I_{(BR)} = 100\ \mu\text{A}$	$V_{(BR)}$	4	-	-	V
Reverse current $V_R = 1.5\ \text{V}$ $V_R = 1.5\ \text{V}, T_A = 85\text{ °C}$	I_R	- -	- -	5 125	μA
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
AC Characteristics					
Diode capacitance $V_R = 0\ \text{V}, f = 1\ \text{MHz}$	C_T	-	0.2	0.26	pF
Differential forward resistance $I_F = 10\ \text{mA} / 50\ \text{mA}$	R_F	-	8	10	Ω
Series inductance	L_S	-	0.4	0.6	nH

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 $I_R = f(T_A)$
 $V_R = 1\text{ V}$


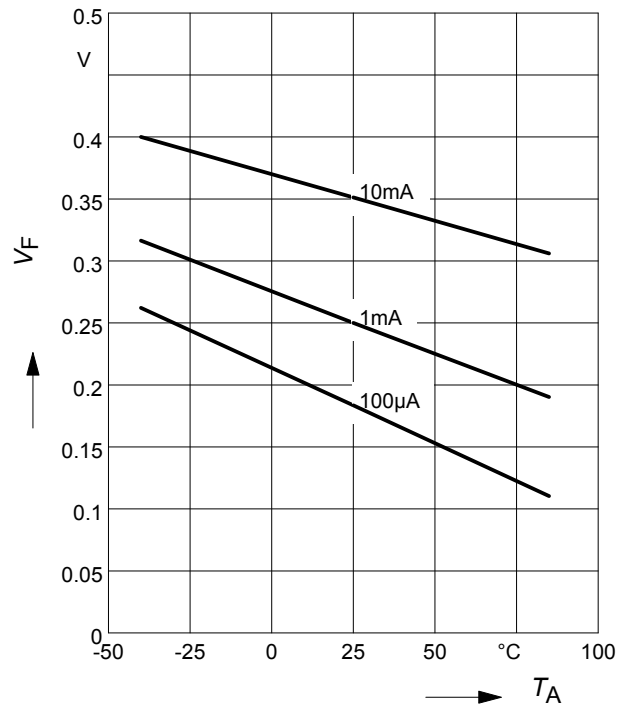
Reverse current $I_R = f(V_R)$

$T_A = 25\text{ °C}$



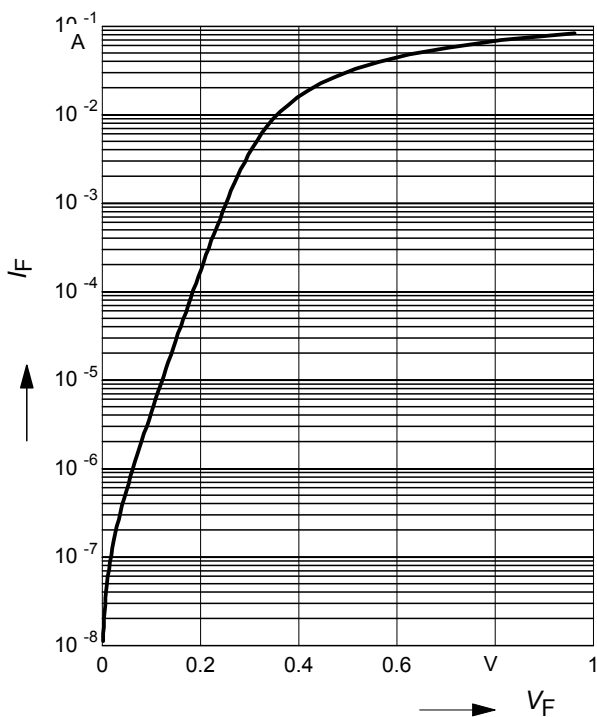
Forward Voltage $V_F = f(T_A)$

$I_F = \text{Parameter}$



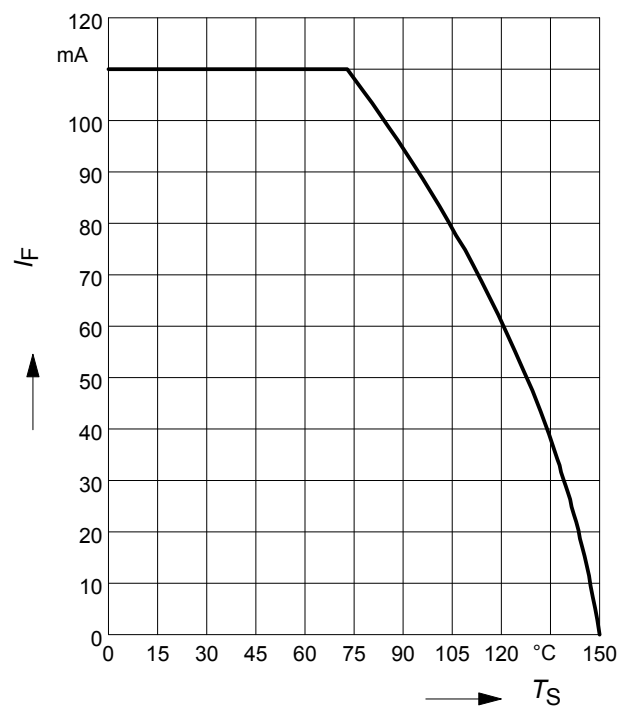
Forward current $I_F = f(V_F)$

$T_A = 25\text{ °C}$

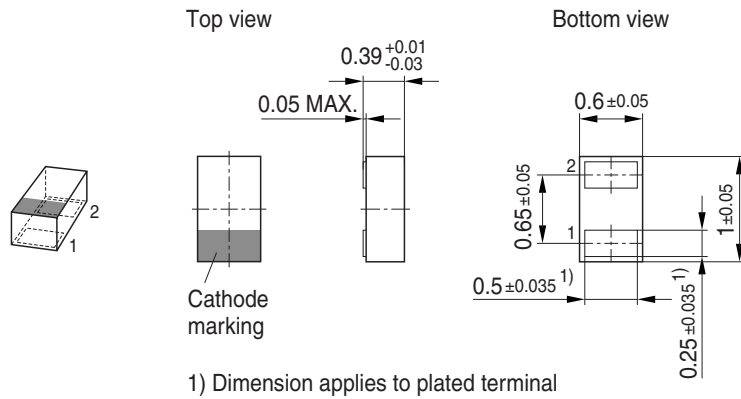


Forward current $I_F = f(T_S)$

BAT15-02LS

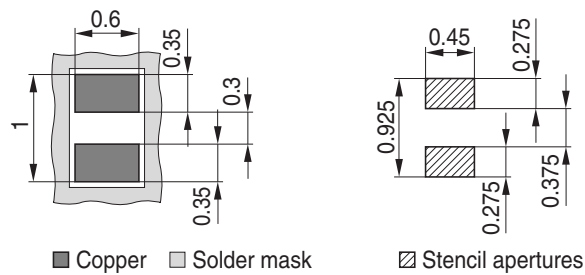


Package Outline

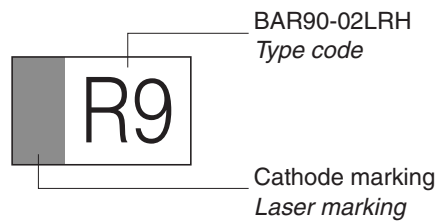


Foot Print

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

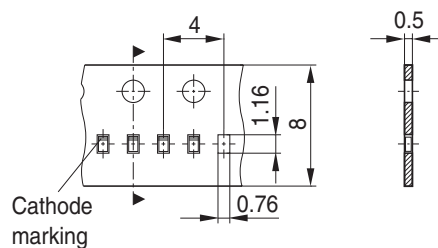


Marking Layout (Example)



Standard Packing

Reel \varnothing 180 mm = 15.000 Pieces/Reel
 Reel \varnothing 330 mm = 50.000 Pieces/Reel (optional)



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