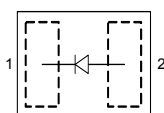


Silicon Schottky Diode

- 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



BAT24-02LS



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

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

Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	4	V
Forward current	I_F	110	mA
Total power dissipation $T_S \leq 73^\circ\text{C}$	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 ¹⁾	R_{thJS}	≤ 770	K/W

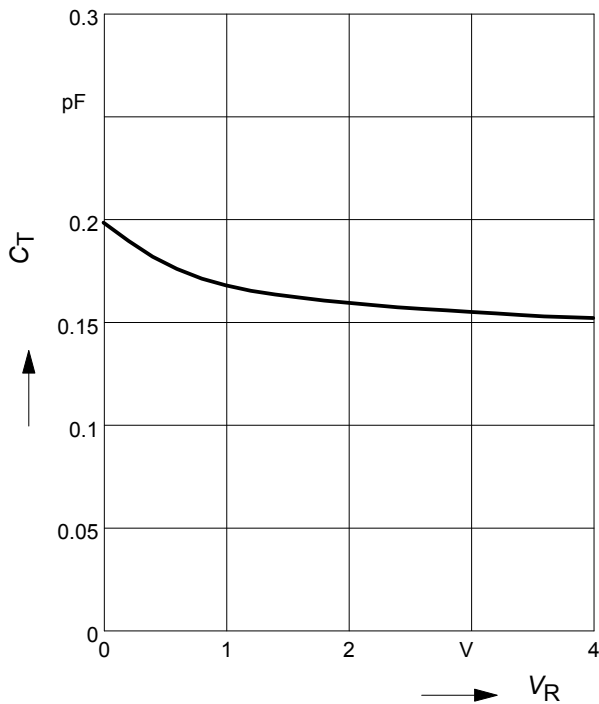
¹⁾For calculation of R_{thJA} please refer to Application Note Thermal Resistance

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

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC Characteristics					
Breakdown voltage $I_{(BR)} = 10\ \mu\text{A}$	$V_{(BR)}$	4	-	-	V
Reverse current $V_R = 1\ \text{V}$	I_R	-	-	5	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	0.23	pF
Differential forward resistance $I_F = 10\ \text{mA} / 50\ \text{mA}$	R_F	-	8	10	Ω

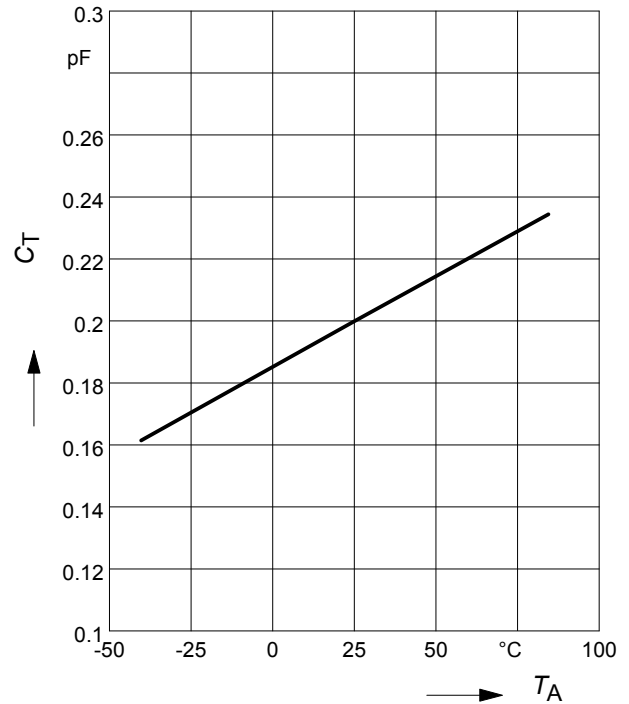
Diode capacitance $C_T = f(V_R)$

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



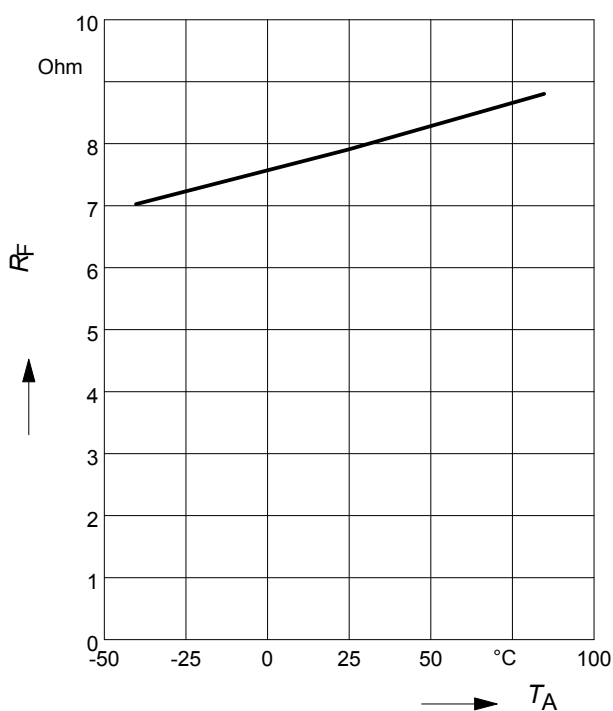
Diode capacitance $C_T = f(T_A)$

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



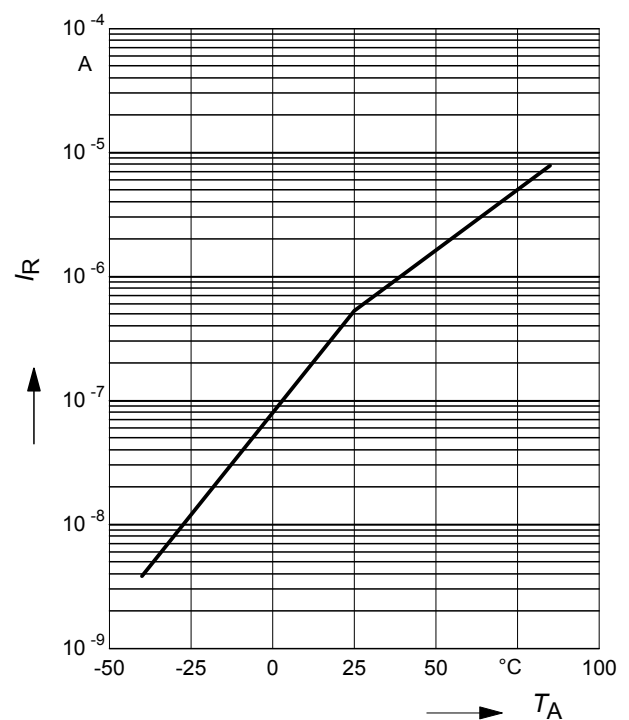
Differential forward resistance $R_F = f(T_A)$

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



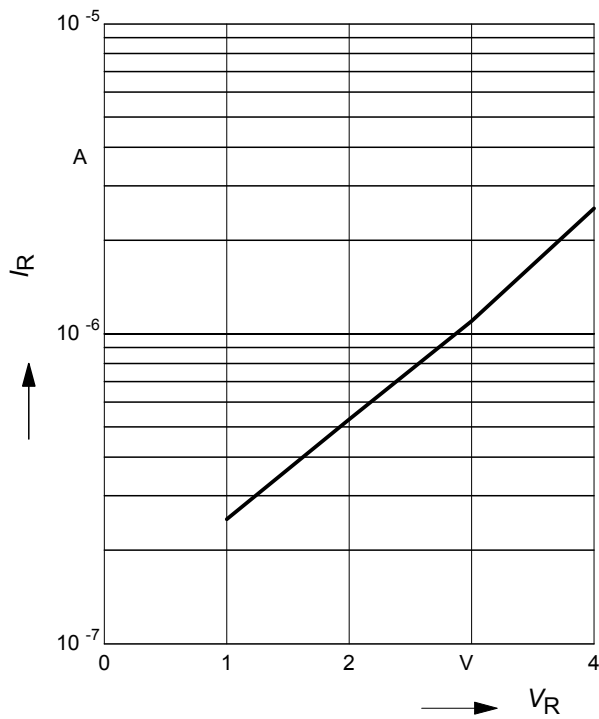
Reverse current $I_R = f(T_A)$

$V_R = 1\text{ V}$



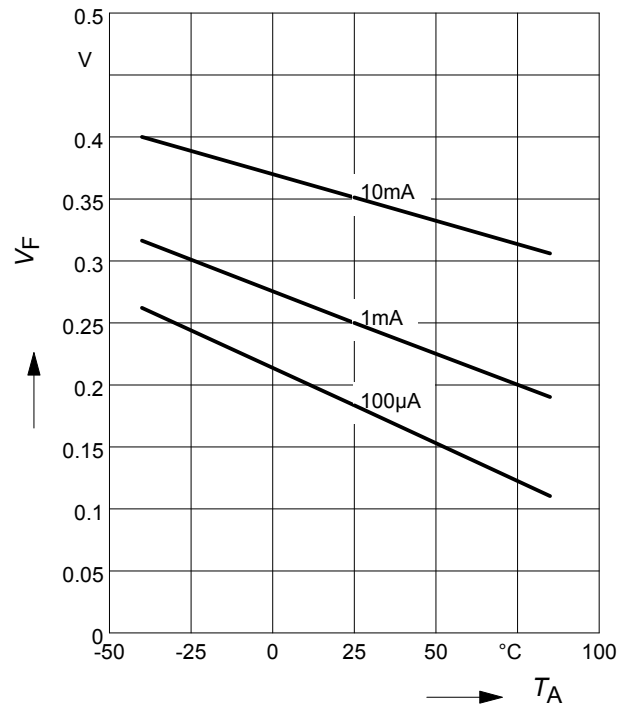
Reverse current $I_R = f(V_R)$

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



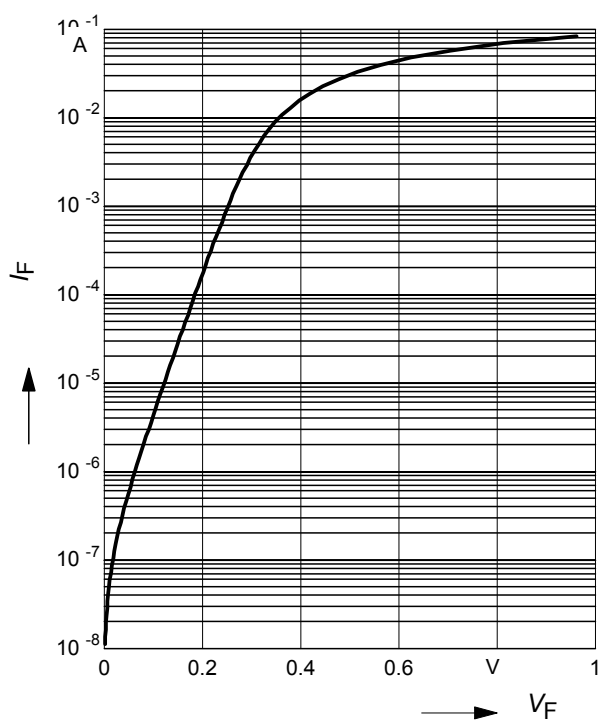
Forward Voltage $V_F = f(T_A)$

$I_F = \text{Parameter}$

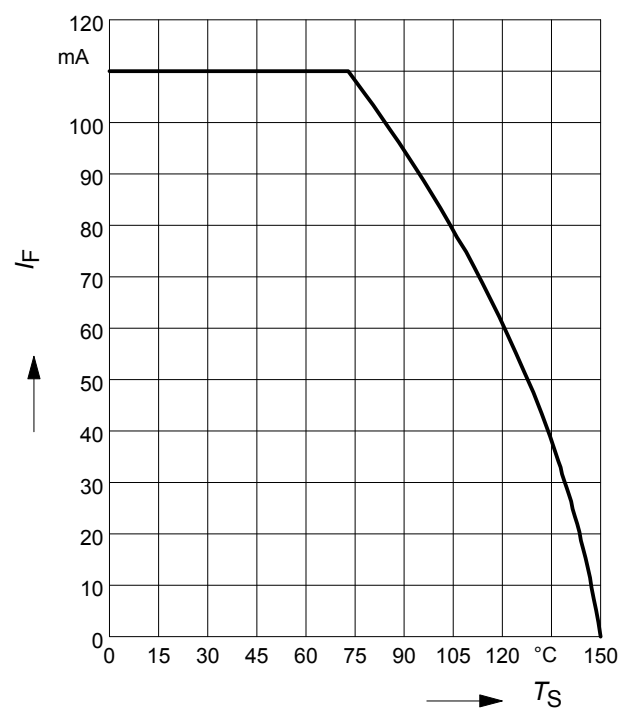


Forward current $I_F = f(V_F)$

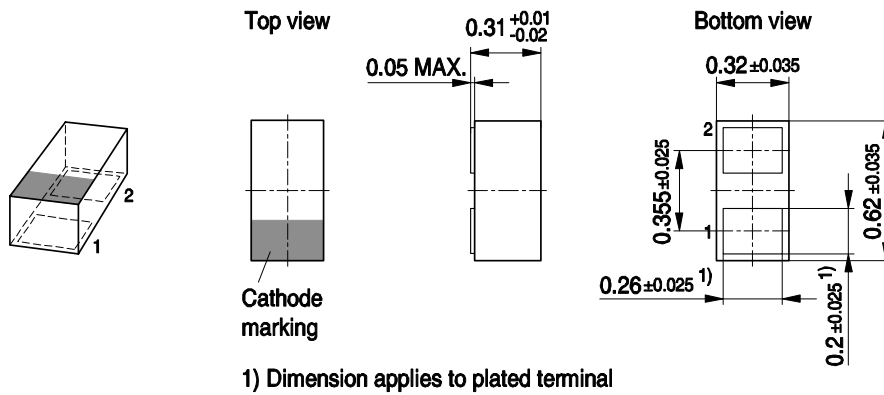
$T_A = 25\text{ }^{\circ}\text{C}$



Forward current $I_F = f(T_S)$

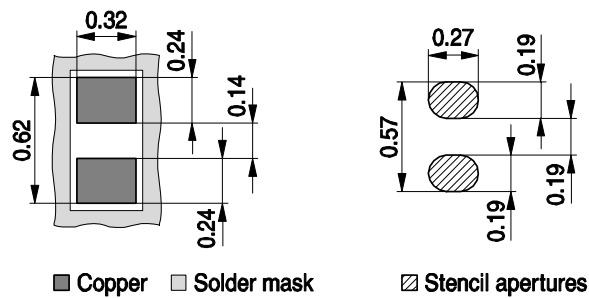


Package Outline

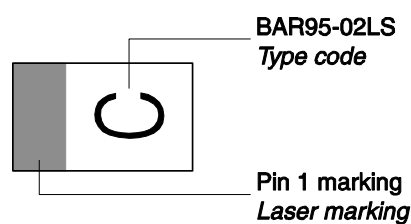


Foot Print

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

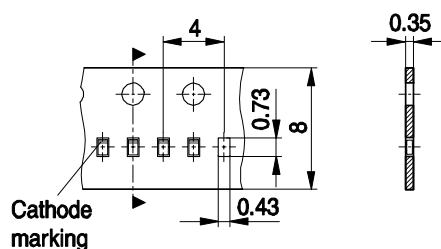


Marking Layout (Example)



Standard Packing

Reel ø180 mm = 15.000 Pieces/Reel



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