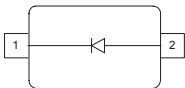


**Silicon Schottky Diode**

- DBS mixer applications up to 12 GHz
- Low noise figure
- Low barrier type


**BAT14-03W**


**ESD: Electrostatic discharge sensitive device, observe handling precaution!**

Type	Package	Configuration	$L_S$ (nH)	Marking
BAT14-03W	SOD323	single	1.8	O/white

**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	$I_F$	90	mA
Total power dissipation $T_S \leq 85^\circ\text{C}$	$P_{\text{tot}}$	100	mW
Junction temperature	$T_j$	150	°C
Operating temperature range	$T_{\text{op}}$	-55 ... 125	
Storage temperature	$T_{\text{stg}}$	-55 ... 150	

**Thermal Resistance**

Parameter	Symbol	Value	Unit
Junction - soldering point <sup>1)</sup>	$R_{\text{thJS}}$	$\leq 690$	K/W

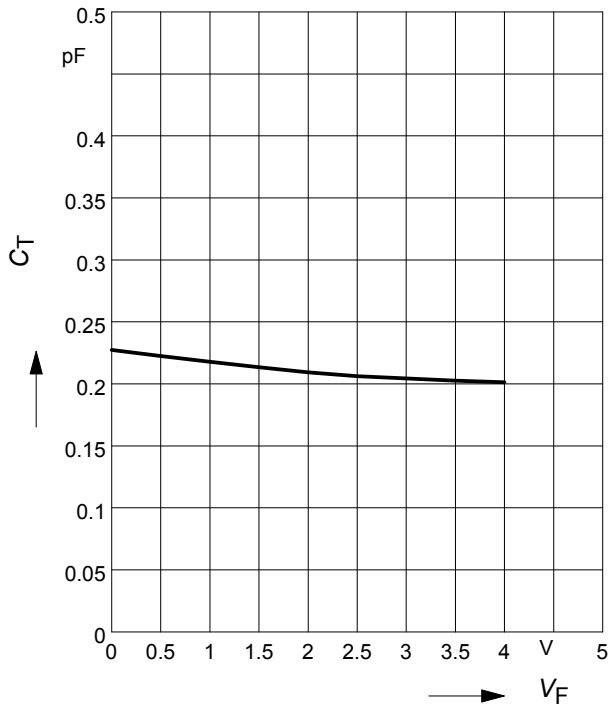
<sup>1)</sup>For calculation of  $R_{\text{thJA}}$  please refer to Application Note Thermal Resistance

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

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
<b>DC Characteristics</b>					
Breakdown voltage $I_{(BR)} = 10 \mu\text{A}$	$V_{(BR)}$	4	-	-	V
Forward voltage $I_F = 1 \text{ mA}$ $I_F = 10 \text{ mA}$	$V_F$	0.36 0.48	0.43 0.55	0.52 0.66	
<b>AC Characteristics</b>					
Diode capacitance $V_R = 0, f = 1 \text{ MHz}$	$C_T$	-	0.22	0.35	pF
Differential forward resistance $I_F = 10\text{mA} / 50\text{mA}$	$R_F$	-	5.5	-	$\Omega$

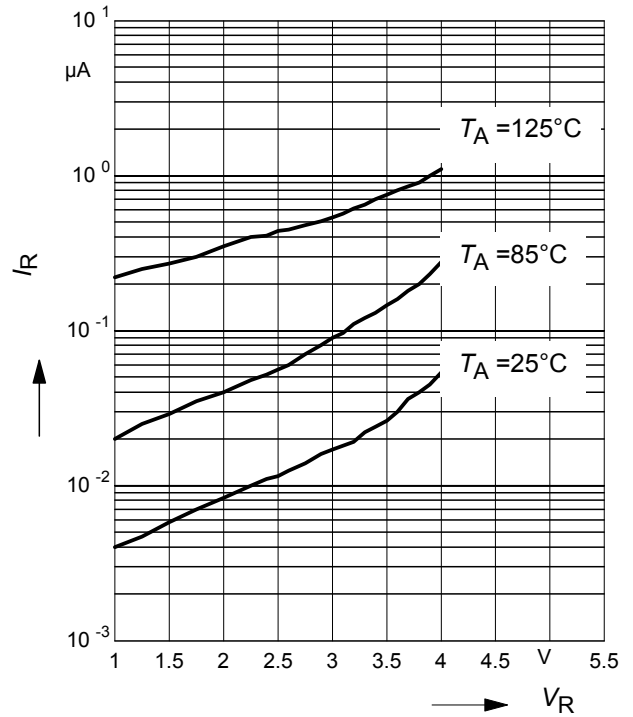
**Diode capacitance  $C_T = f(V_R)$**

$f = 1\text{MHz}$



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

$T_A = \text{Parameter}$



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

