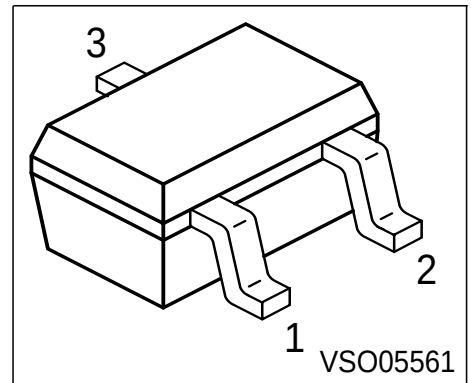
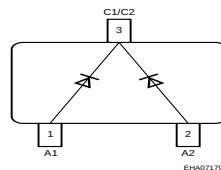


Silicon Schottky Diode

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



BAT 15-05W



ESD: Electrostatic discharge sensitive device, observe handling precaution!

Type	Marking	Pin Configuration			Package
BAT15-05W	S5s	1=A1	2=A2	3=C1/C1	SOT323

Maximum Ratings

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

Thermal Resistance

Junction - soldering point ¹⁾	R_{thJS}	≤930	K/W
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¹⁾For calculation of R_{thJA} please refer to Application Note Thermal Resistance

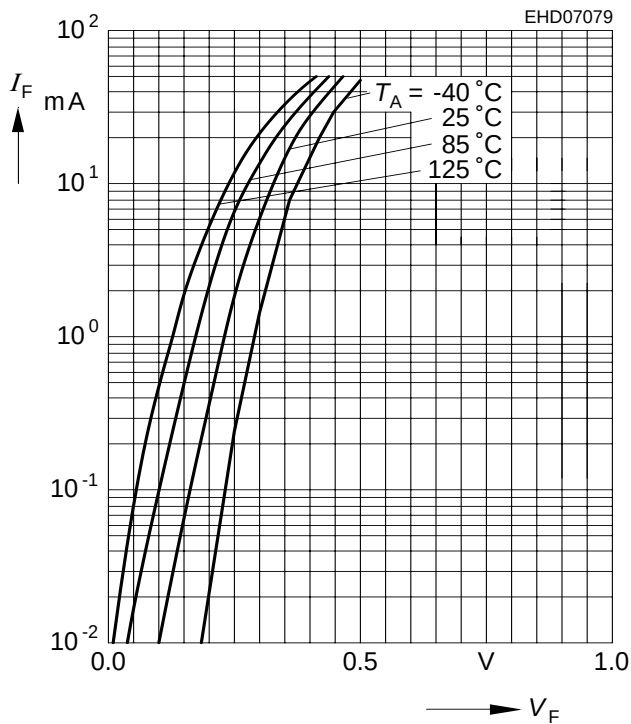
Electrical Characteristics at $T_A = 25\text{ °C}$, unless otherwise specified.

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC characteristics					
Breakdown voltage $I_{(BR)} = 5\text{ }\mu\text{A}$	$V_{(BR)}$	4	-	-	V
Forward voltage $I_F = 1\text{ mA}$	V_F	-	0.23	0.32	
$I_F = 10\text{ mA}$		-	-	0.4	
Forward voltage matching ¹⁾ $I_F = 10\text{ mA}$	ΔV_F	-	-	20	mV
AC characteristics					
Diode capacitance $V_R = 0\text{ V}, f = 1\text{ MHz}$	C_T	-	-	0.35	pF
Forward resistance $I_F = 10\text{mA} / 50\text{mA}$	R_F	-	5.5	-	Ω

1) ΔV_F is difference between lowest and highest V_F in component

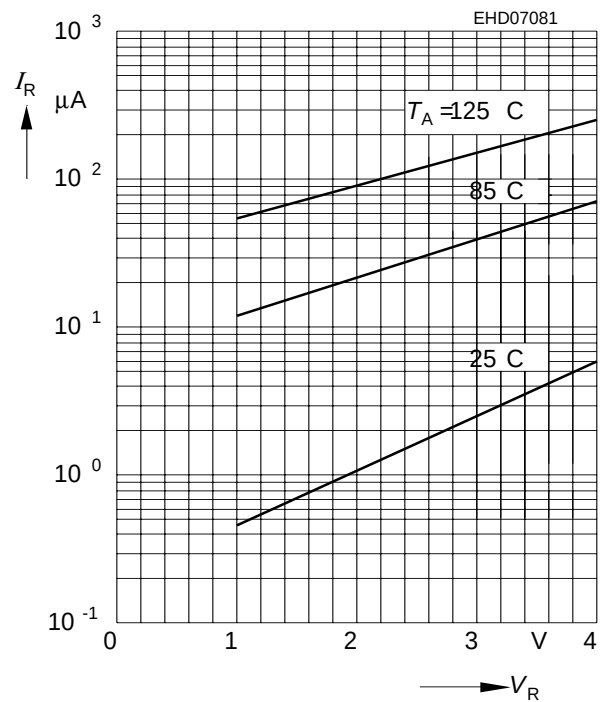
Forward current $I_F = f(V_F)$

$T_A = \text{Parameter}$



Reverse current $I_R = f(V_R)$

$T_A = \text{Parameter}$



Diode capacitance $C_T = f(V_R)$

$f = 1\text{MHz}$

