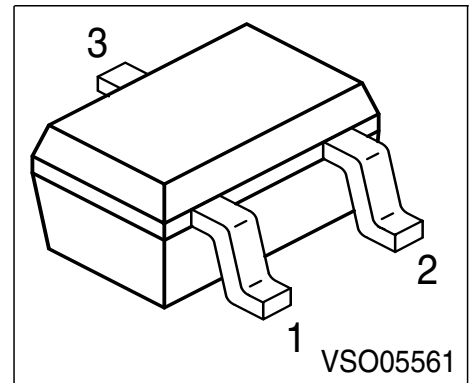
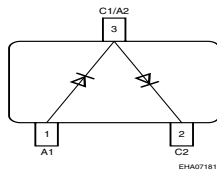


Silicon Schottky Diode

Preliminary data

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



ESD: Electrostatic discharge sensitive device, observe handling precaution!

Type	Marking	Pin Configuration			Package
BAT 15-04W	S8s	1 = A1	2=C2	3=C1/A2	SOT-323

Maximum Ratings

Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	4	V
Forward current	I_F	110	mA
Total power dissipation, $T_S \leq tbd$ °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 - ambient ¹⁾	R_{thJA}	$\leq tbd$	K/W
Junction - soldering point	R_{thJS}	$\leq tbd$	

1) Package mounted on alumina 15mm x 17.6mm x 0.7mm)

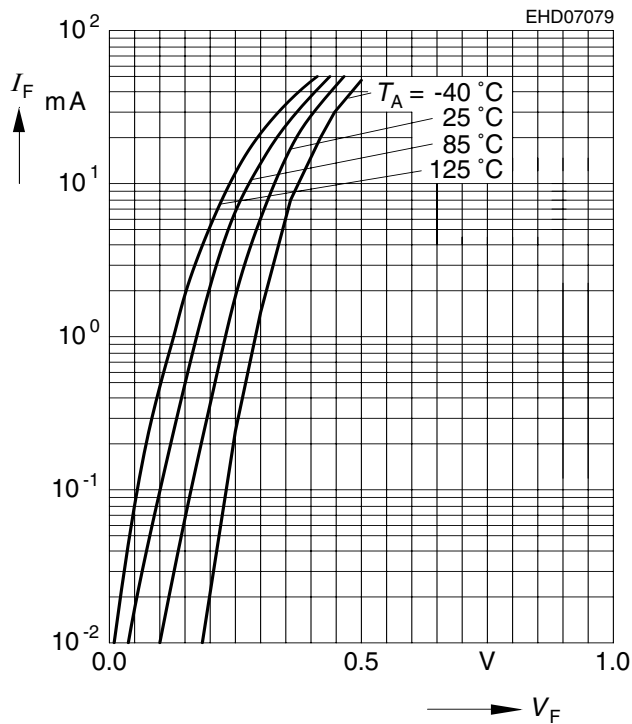
Electrical Characteristics at $T_A = 25\text{ °C}$, unless otherwise specified.

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

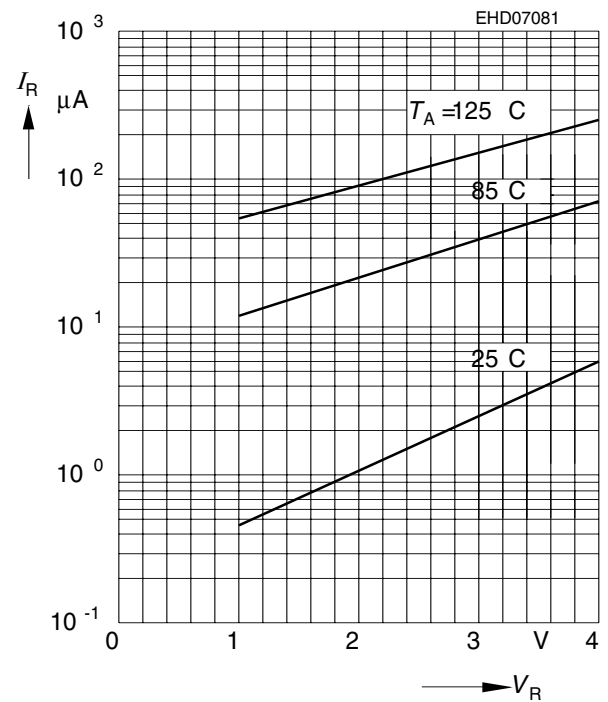
Forward current $I_F = f(V_F)$

$T_A = \text{Parameter}$



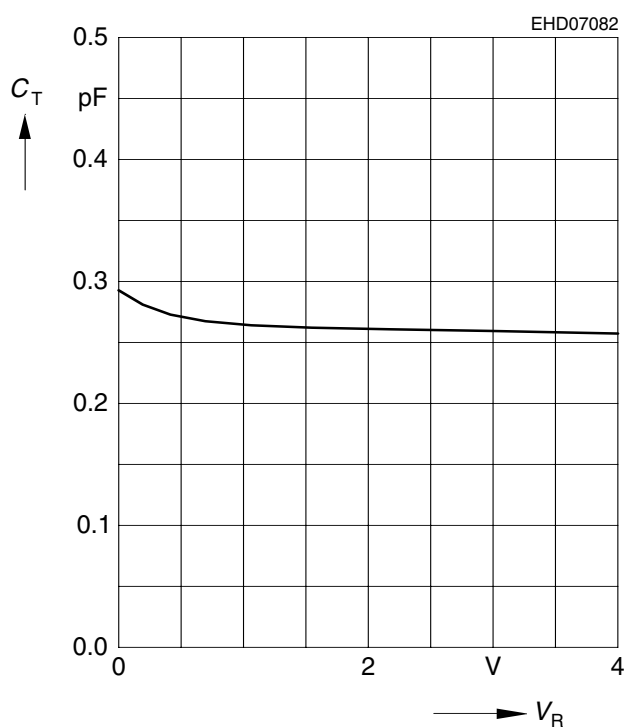
Reverse current $I_R = f(V_R)$

$T_A = \text{Parameter}$



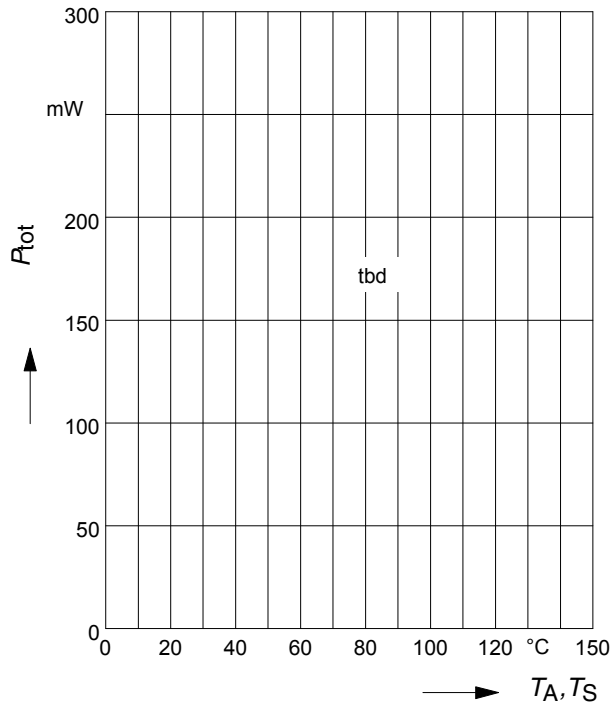
Diode capacitance $C_T = f(V_R)$

$f = 1\text{MHz}$

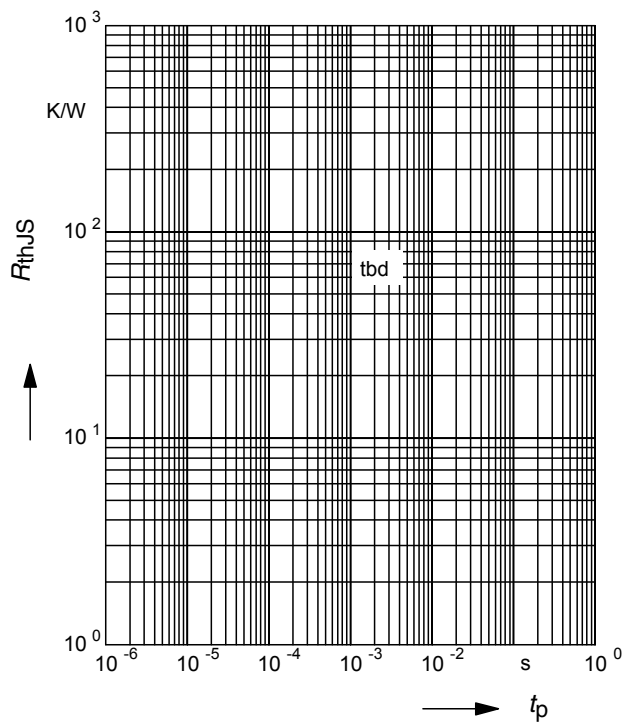


Forward current $I_F = f(T_A^*; T_S)$

* Package mounted on epoxy



Permissible Pulse Load $R_{thJS} = f(t_p)$



Permissible Pulse Load

$I_{Fmax} / I_{FDC} = f(t_p)$

