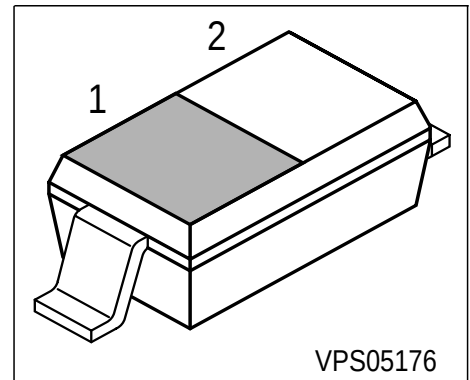


Silicon PIN Diode

- Low loss RF switch
- RF attenuator
- Low series capacitance and resistance



Type	Marking	Pin Configuration		Package
BAR67-03W	Blue T	1=C	2=A	SOD323

Maximum Ratings

Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	150	V
Forward current	I_F	200	mA
Operating temperature range	T_{op}	-55 ... 150	°C
Storage temperature	T_{stg}	-55 ... 150	

Thermal Resistance

Parameter	Symbol	Value	Unit
Junction - soldering point ¹⁾	R_{thJS}	130	K/W

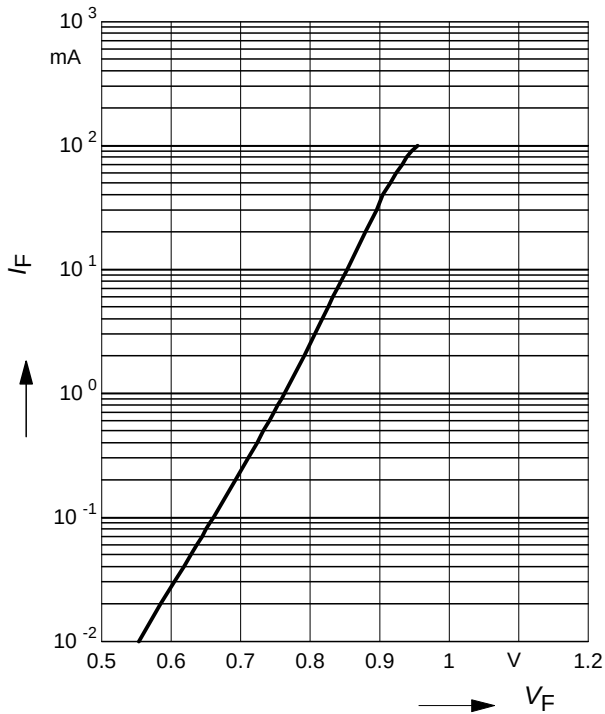
¹⁾For calculation of R_{thJA} please refer to Application Note Thermal Resistance

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

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC Characteristics					
Breakdown voltage $I_{(BR)} = 5\text{ }\mu\text{A}$	$V_{(BR)}$	150	-	-	V
Reverse current $V_R = 100\text{ V}$	I_R	-	-	20	nA
Forward voltage $I_F = 50\text{ mA}$	V_F	-	0.95	1.2	V
AC Characteristics					
Diode capacitance $V_R = 35\text{ V}, f = 1\text{ MHz}$ $V_R = 0\text{ V}, f = 100\text{ MHz}$	C_T	- -	0.4 0.35	0.6 0.9	pF
Forward resistance $I_F = 5\text{ mA}, f = 100\text{ MHz}$	r_f	-	1.5	1.8	Ω
Zero bias conductance $V_R = 0\text{ V}, f = 100\text{ MHz}$	g_p	-	220	-	μS
Charge carrier life time $I_F = 10\text{ mA}, I_R = 6\text{ mA}, I_R = 3\text{ mA}$	τ_{rr}	-	0.7	-	μs
Series inductance	L_S	-	1.8	-	nH

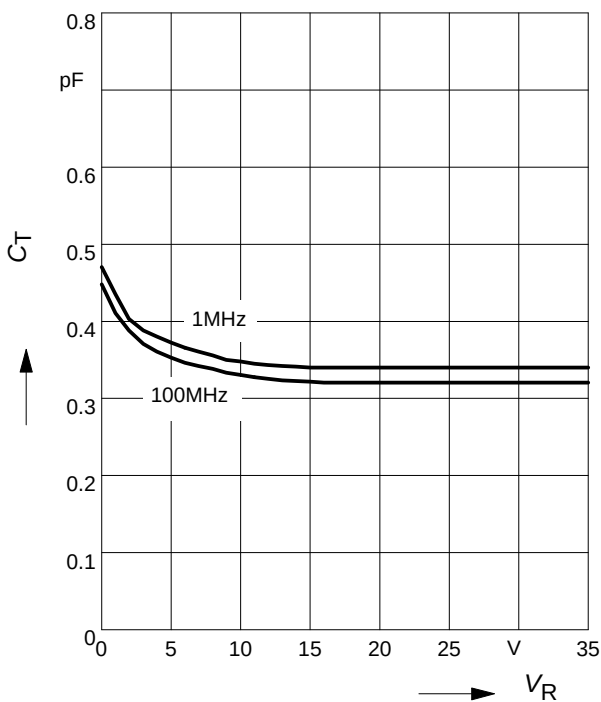
Forward current $I_F = f(V_F)$

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



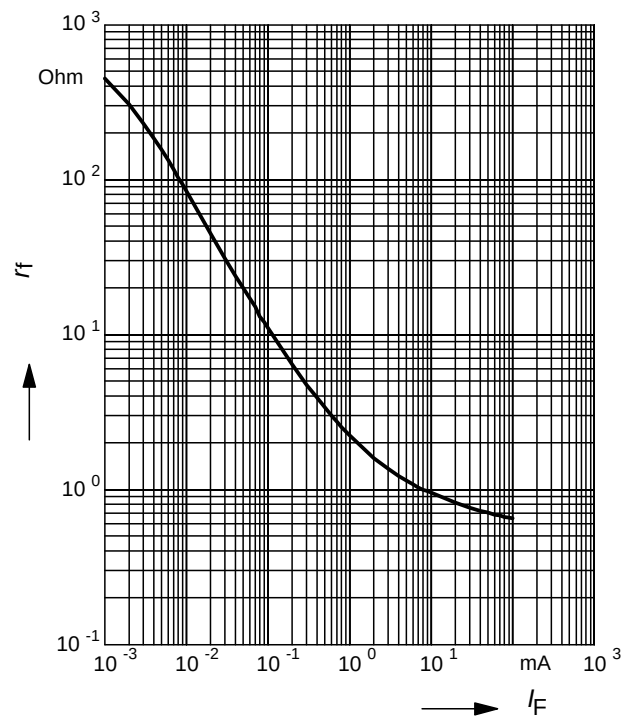
Diode capacitance $C_T = f(V_R)$

$f = 1\text{MHz}$

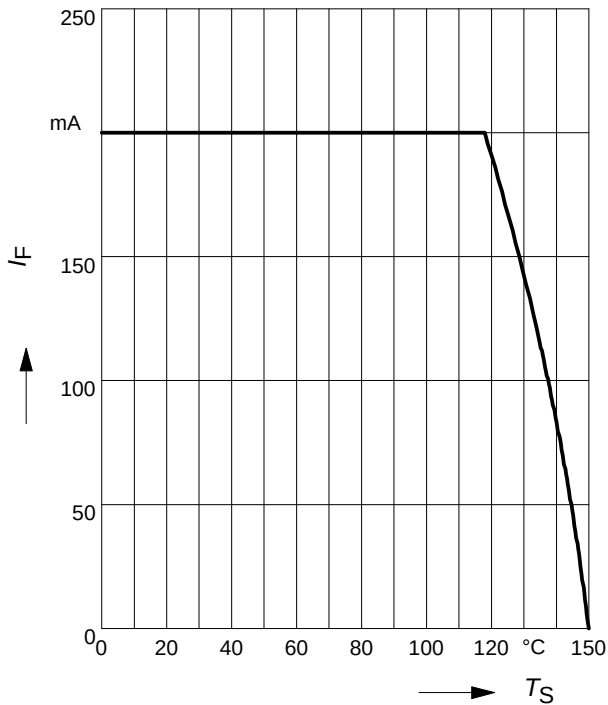


Forward resistance $r_f = f(I_F)$

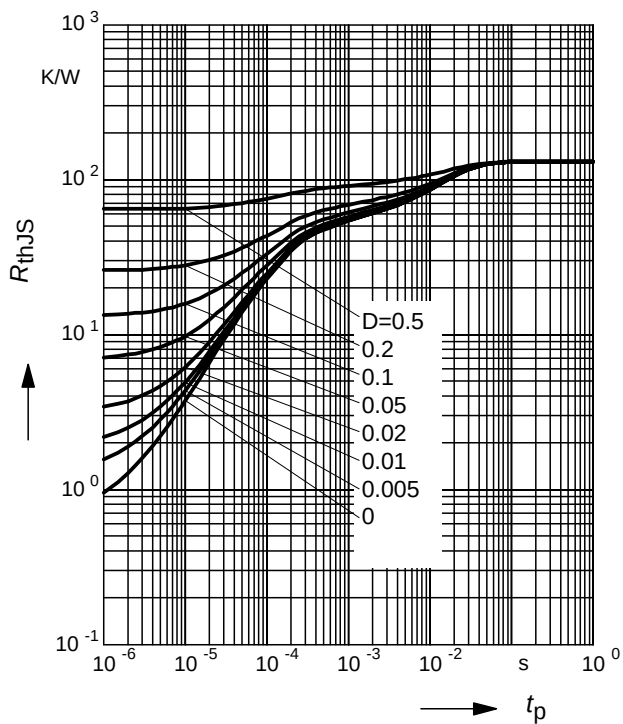
$f = 100\text{MHz}$



Forward current $I_F = f(T_S)$



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



Permissible Pulse Load

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

