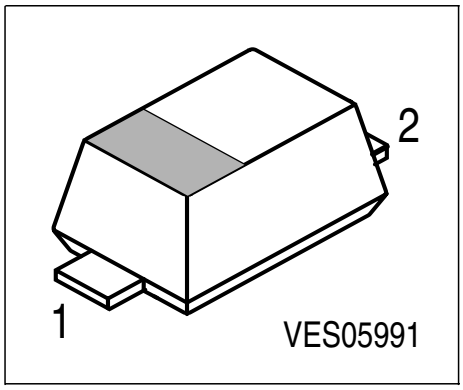
Silicon PIN Diode

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



Type	Marking	Pin Configuration		Package
BAR 67-02V	TT	1=C	2=A	SC-79

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

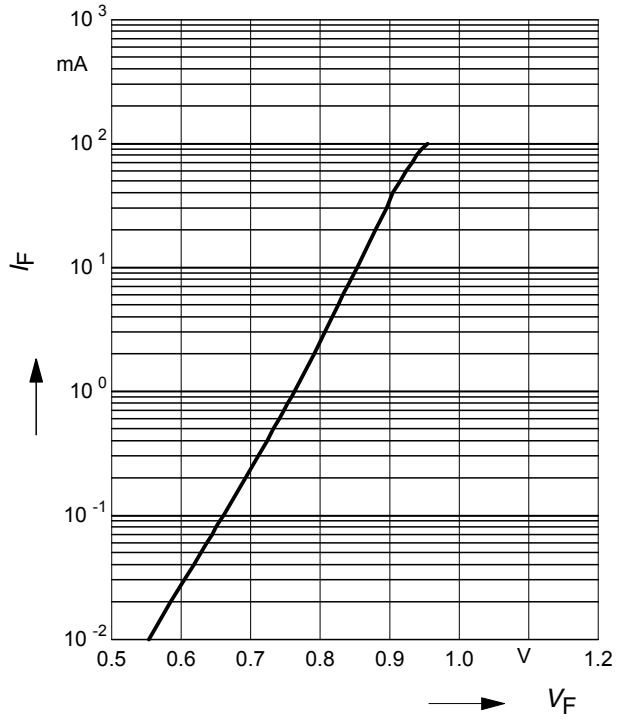
Parameter	Symbol	Value	Unit
Junction - soldering point	R_{thJS}	115	K/W

Electrical Characteristics at T_A = 25 °C, unless otherwise specified

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC Characteristics					
Breakdown voltage $I_{(BR)}$ = 5 µA	$V_{(BR)}$	150	-	-	V
Reverse current V_R = 100 V	I_R	-	-	20	nA
Forward voltage I_F = 50 mA	V_F	-	0.95	1.2	V
AC Characteristics					
Diode capacitance V_R = 5 V, f = 1 MHz V_R = 0 V, f = 100 MHz	C_T	 - -	 0.35 0.35	 0.55 0.9	pF
Forward resistance I_F = 5 mA, f = 100 MHz	r_f	-	1.5	1.8	Ω
Zero bias conductance V_R = 0 V, f = 100 MHz	g_p	-	220	-	µS
Charge carrier life time I_F = 10 mA, I_R = 6 mA, I_R = 3 mA	τ_{rr}	-	0.7	-	µs
Series inductance	L_s	-	0.8	-	nH

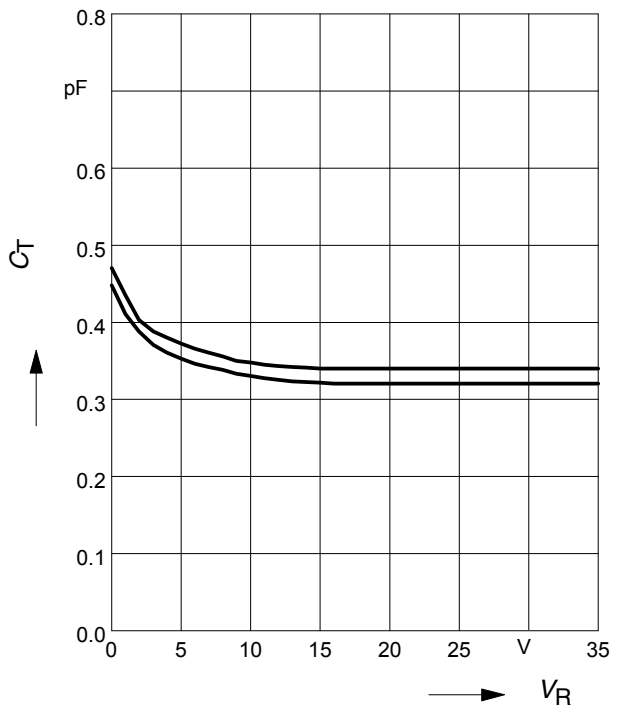
Forward current $I_F = f(V_F)$

T_A = 25°C



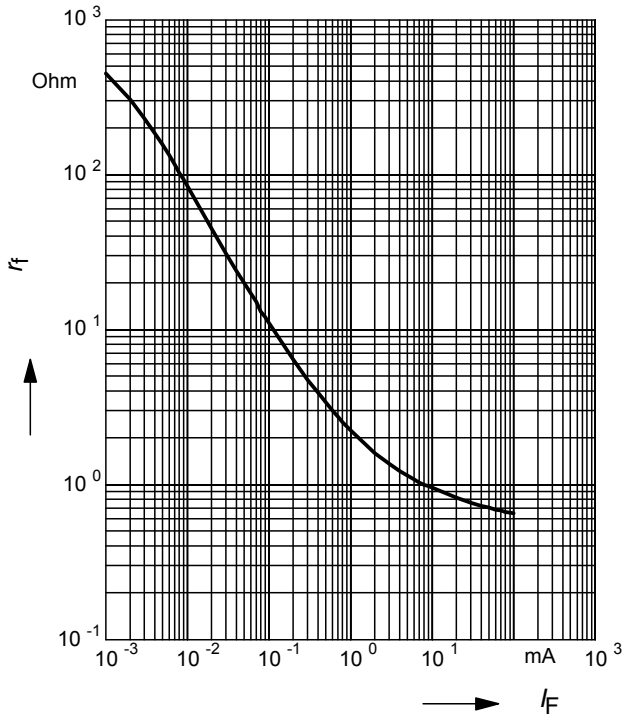
Diode capacitance $C_T = f(V_R)$

f = 1MHz



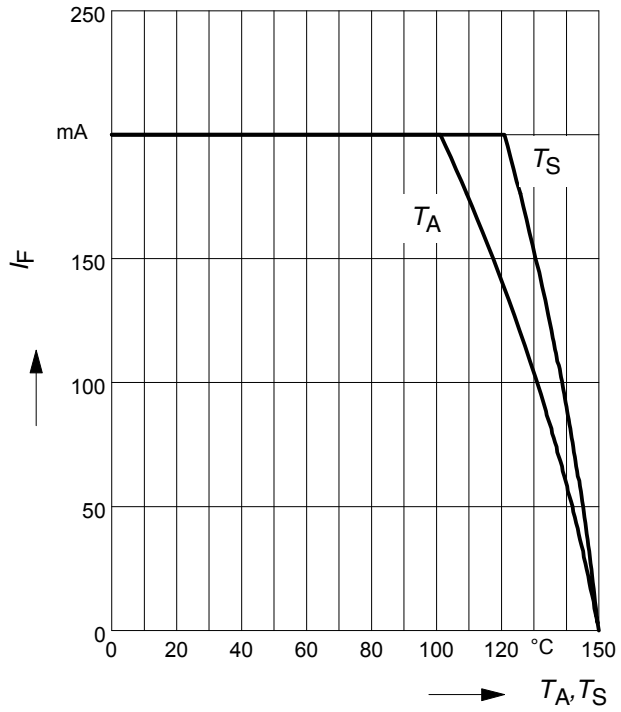
Forward resistance $r_f = f(I_F)$

f = 100MHz

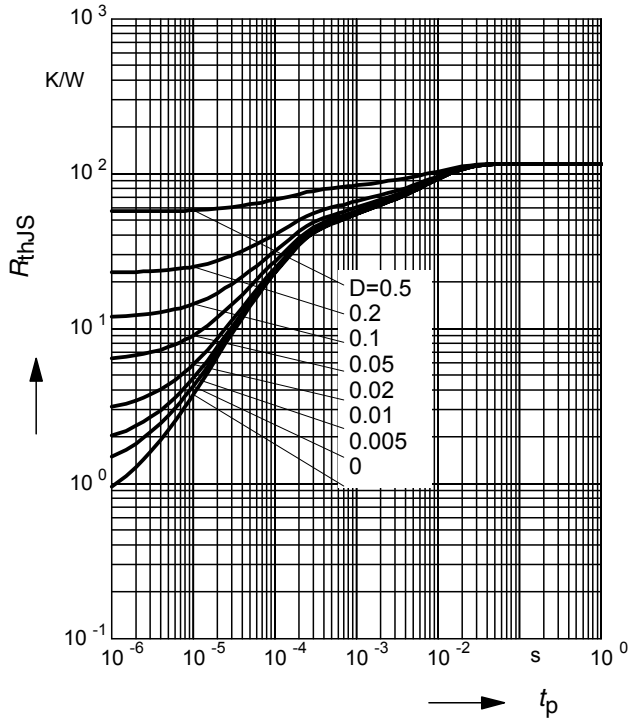


Forward current $I_F = f(T_A^*; T_S)$

*): mounted on alumina 15mm x 16.7mm x 0.7m



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



Permissible Pulse Load

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