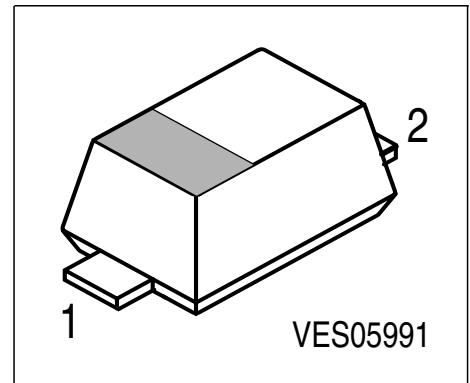


**Silicon PIN Diode**

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



Type	Marking	Pin Configuration		Package
BAR 67-02W	T	1=C	2=A	SCD-80

**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**

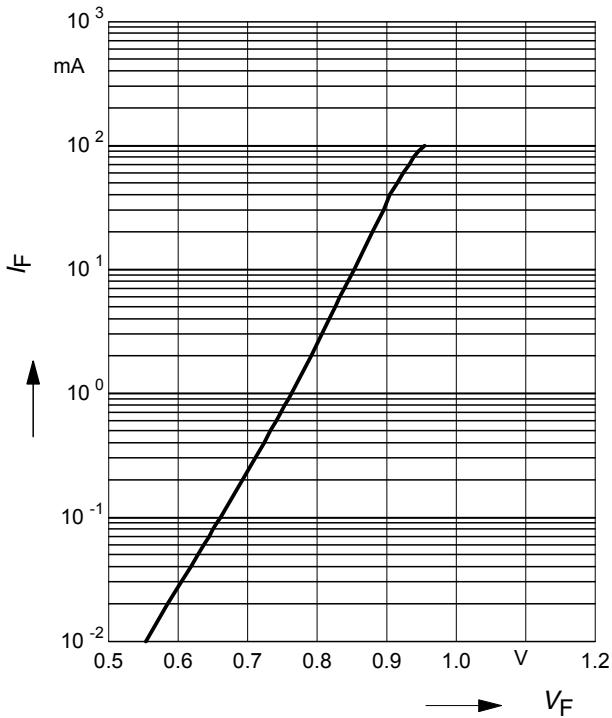
Parameter	Symbol	Value	Unit
Junction - soldering point	$R_{thJS}$	115	K/W

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

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
<b>DC Characteristics</b>					
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
<b>AC Characteristics</b>					
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	$\Omega$
Zero bias conductance $V_R = 0\text{ V}, f = 100\text{ MHz}$	$g_p$	-	220	-	$\mu\text{S}$
Charge carrier life time $I_F = 10\text{ mA}, I_R = 6\text{ mA}, I_R = 3\text{ mA}$	$\tau_{rr}$	-	0.7	-	$\mu\text{s}$
Series inductance	$L_S$	-	0.8	-	nH

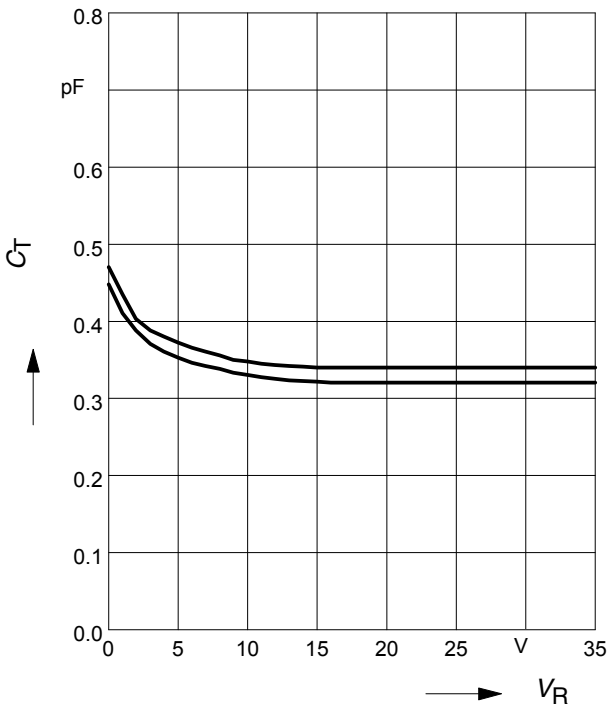
**Forward current  $I_F = f(V_F)$**

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



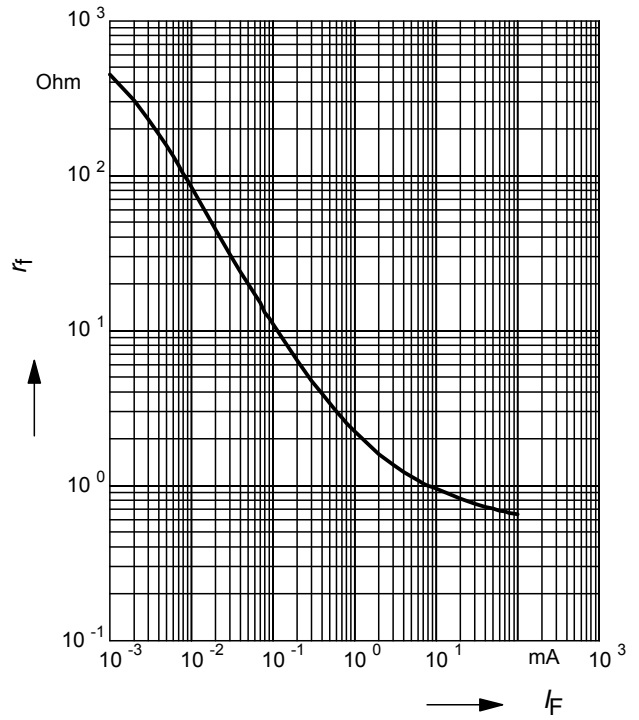
**Diode capacitance  $C_T = f(V_R)$**

$f = 1\text{MHz}$



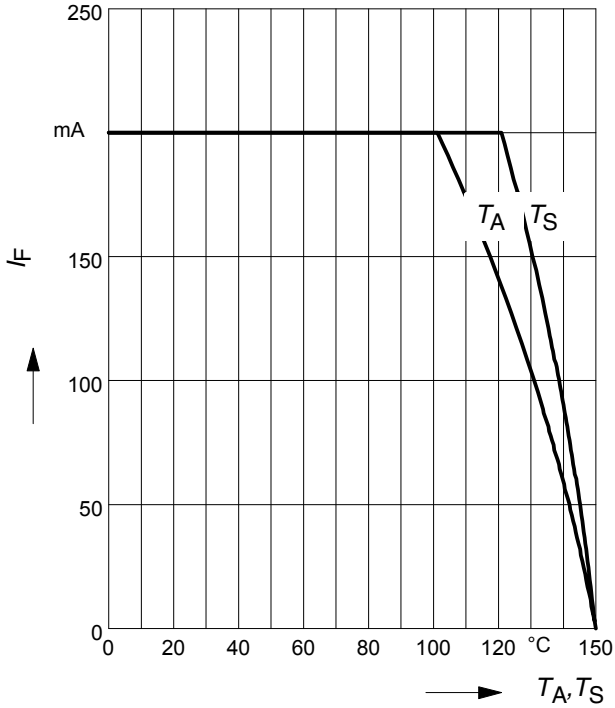
**Forward resistance  $r_f = f(I_F)$**

$f = 100\text{MHz}$

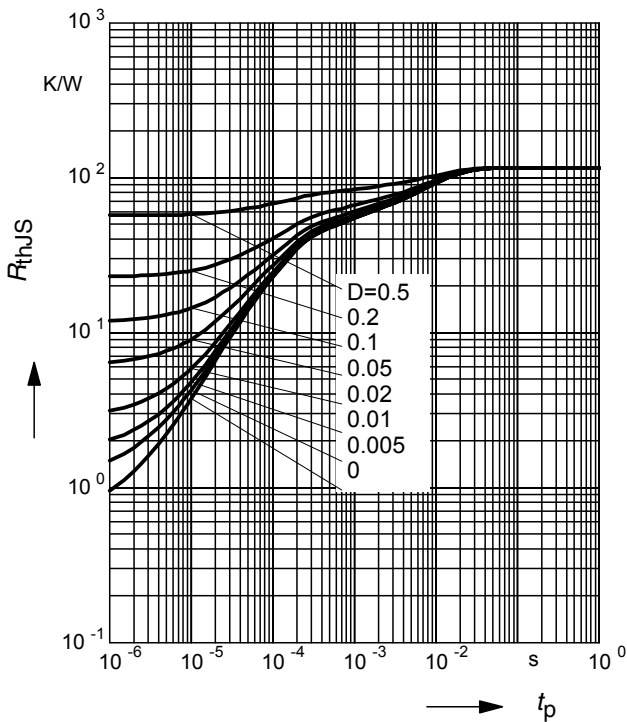


**Forward current  $I_F = f(T_A^*; T_S)$**

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



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



**Permissible Pulse Load**

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

