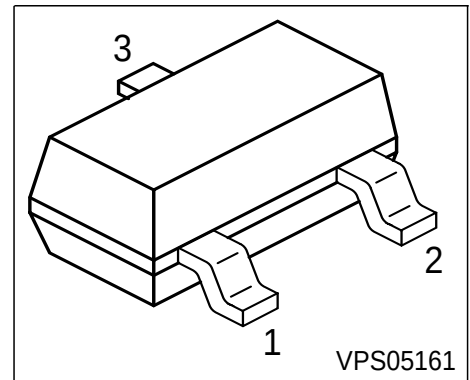
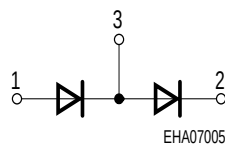
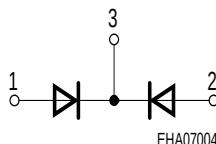
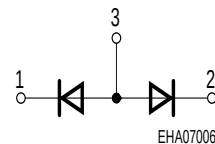


Silicon PIN Diodes

- PIN diode for high speed switching of RF signals
- Low forward resistance
- Very low capacitance
- For frequencies up to 3 GHz


BAR63-04

BAR63-05

BAR63-06


Type	Marking	Pin Configuration			Package
BAR63-04	G4s	1 = A1	2 = C2	3=C1/A2	SOT23
BAR63-05	G5s	1 = A1	2 = A2	3=C1/C2	SOT23
BAR63-06	G6s	1 = C1	2 = C2	3=A1/A2	SOT23

Maximum Ratings

Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	50	V
Forward current	I_F	100	mA
Total power dissipation, $T_S \leq 55^\circ\text{C}$	P_{tot}	250	mW
Operating temperature range	T_{op}	-55 ... 150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 ... 150	

Thermal Resistance

Parameter	Symbol	Value	Unit
Junction - soldering point ¹⁾	R_{thJS}	380	K/W

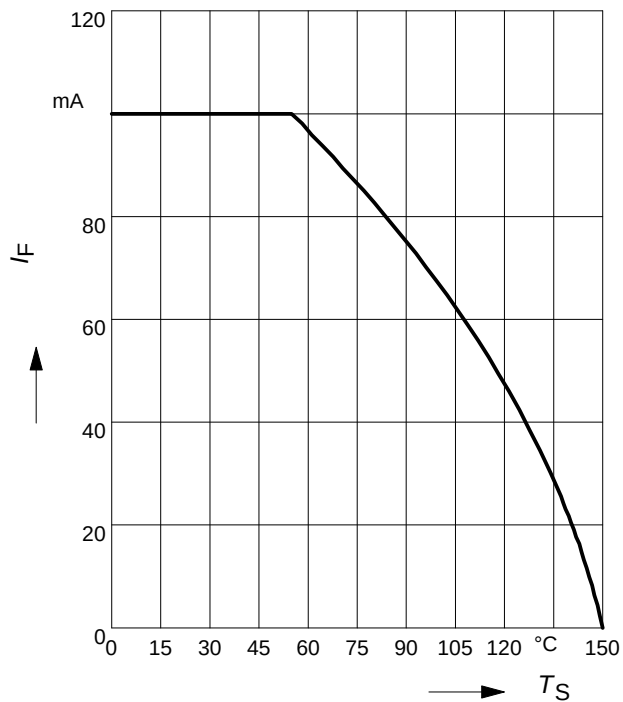
¹⁾For calculation of R_{thJA} please refer to Application Note Thermal Resistance

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

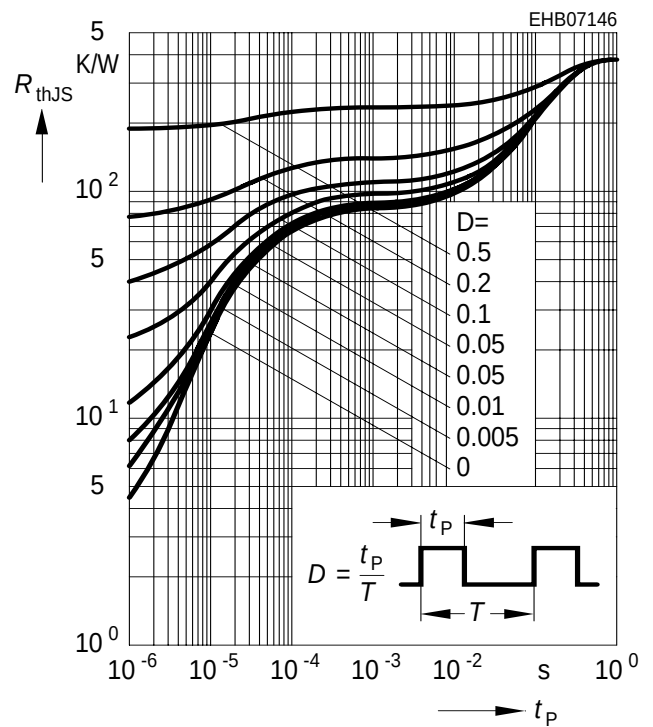
Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC characteristics					
Breakdown voltage $I_{(BR)} = 5 \mu A$	$V_{(BR)}$	50	-	-	V
Reverse current $V_R = 20 V$	I_R	-	-	50	nA
Forward voltage $I_F = 100 mA$	V_F	-	0.95	1.2	V
AC characteristics					
Diode capacitance $V_R = 0 V, f = 100 MHz$ $V_R = 5 V, f = 1 MHz$	C_T	- -	0.3 0.21	- 0.3	pF
Forward resistance $I_F = 5 mA, f = 100 MHz$ $I_F = 10 mA, f = 100 MHz$	r_f	- -	1.2 1	2 -	Ω
Charge carrier life time $I_F = 10 mA, I_R = 6 mA, I_R = 3 mA$	τ_{rr}	-	75	-	ns
Series inductance	L_S	-	1.8	-	nH

Forward current $I_F = f(T_S)$

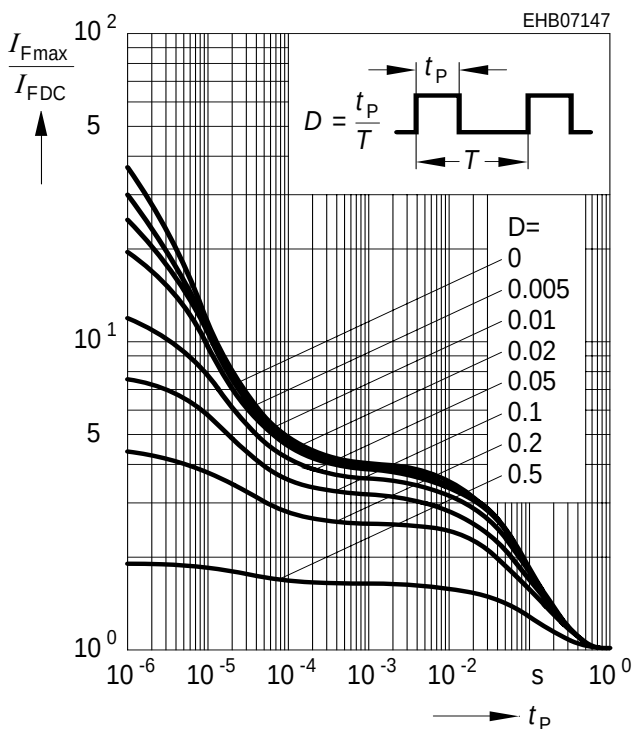
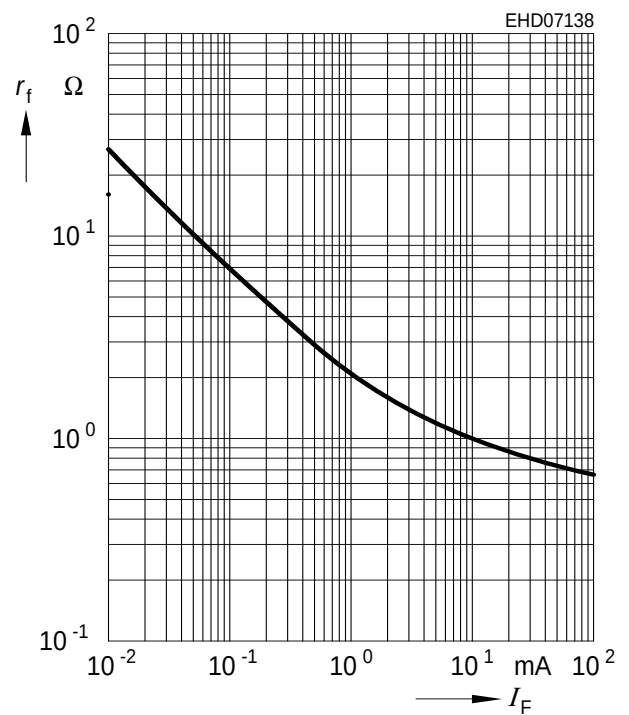
BAR63-04...06


Permissible pulse load $R_{thJS} = f(t_p)$

BAR63-04...06

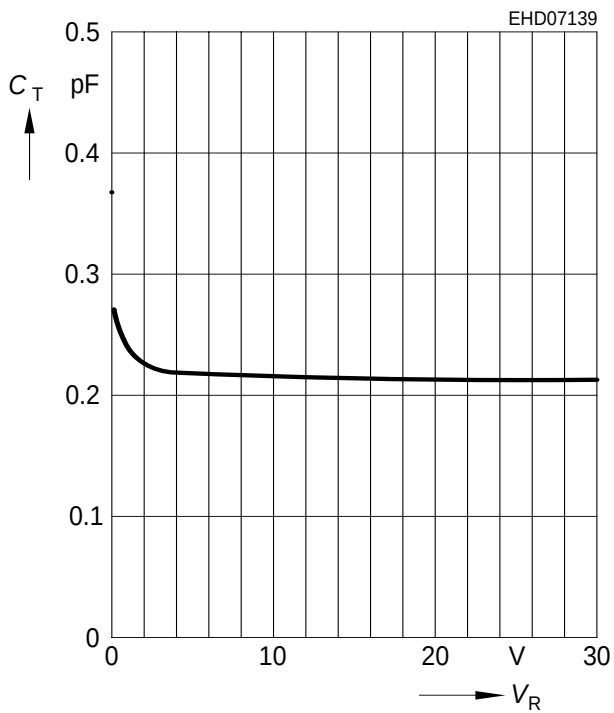

Permissible pulse load $I_{Fmax} / I_{FDC} = f(t_p)$

BAR63-04...06


Forward resistance $r_f = f(I_F)$
 $f = 100\text{MHz}$


Diode capacitance $C_T = f(V_R)$

$f = 1\text{MHz}$



Forward current $I_F = f(V_F)$

$T_A = \text{Parameter}$

