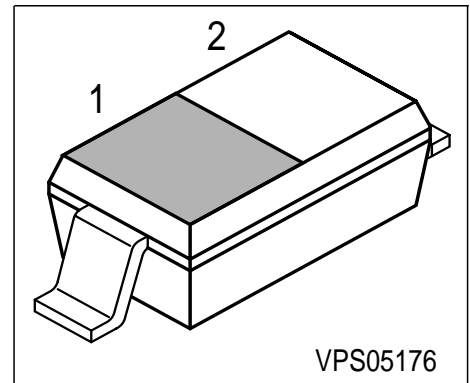


Silicon PIN Diode

- High voltage current controlled
RF resistor for RF attenuator and switches
- Frequency range above 1 MHz up to 3 GHz
- Low resistance and long carrier lifetime
- Very low capacitance at zero volts reverse bias at frequencies above 1 GHz
- Very low signal distortion



Type	Marking	Pin Configuration		Package
BAR64-03W	2 blue	1 = C	2 = A	SOD323

Maximum Ratings

Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	200	V
Forward current	I_F	100	mA
Total power dissipation, $T_S \leq 25^\circ\text{C}$	P_{tot}	250	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Operating temperature range	T_{op}	-55 ... 150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 ... 150	

Thermal Resistance

Junction - soldering point ¹⁾	R_{thJS}	≤ 370	K/W
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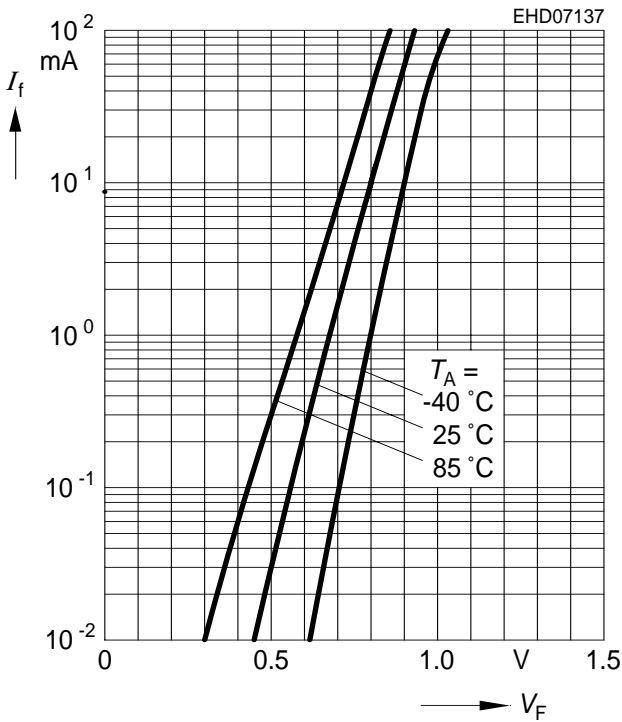
¹⁾For calculation of R_{thJA} please refer to Application Note Thermal Resistance

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

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC characteristics					
Breakdown voltage $I_{(BR)} = 5 \mu\text{A}$	$V_{(BR)}$	200	-	-	V
Forward voltage $I_F = 50 \text{ mA}$	V_F	-	-	1.1	
AC characteristics					
Diode capacitance $V_R = 20 \text{ V}, f = 1 \text{ MHz}$	C_T	-	0.23	0.35	pF
Forward resistance $I_F = 1 \text{ mA}, f = 100 \text{ MHz}$ $I_F = 10 \text{ mA}, f = 100 \text{ MHz}$ $I_F = 100 \text{ mA}, f = 100 \text{ MHz}$	r_f	-	12.5 2.1 0.85	20 3.8 1.35	Ω
Charge carrier life time $I_F = 10 \text{ mA}, I_R = 6 \text{ mA}, I_R = 3 \text{ mA}$	τ_{rr}	-	1.55	-	μs
Series inductance	L_S	-	1.8	-	nH

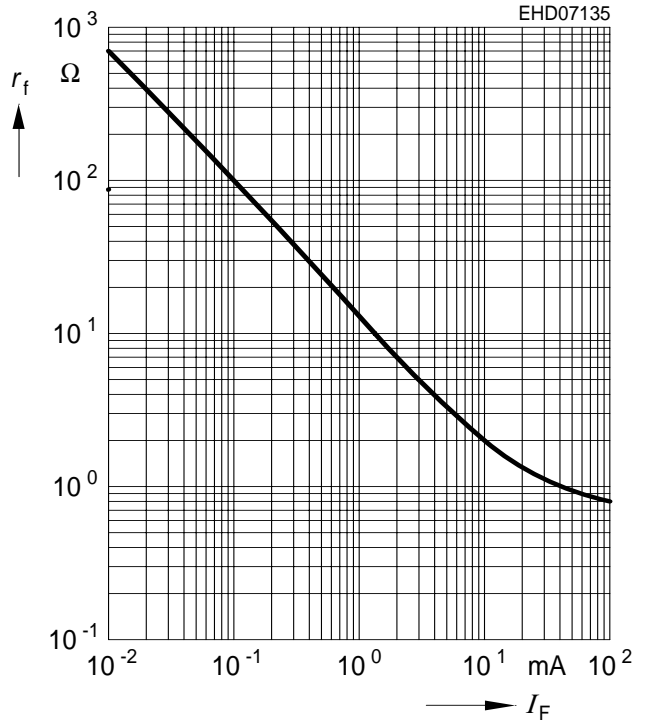
Forward current $I_F = f(V_F)$

$T_A =$ Parameter



Forward resistance $r_f = f(I_F)$

$f = 100\text{MHz}$



Diode capacitance $C_T = f(V_R)$

$f = 1\text{MHz}$

