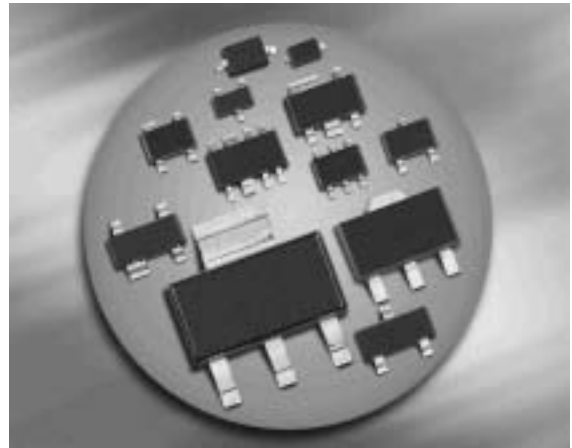
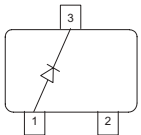
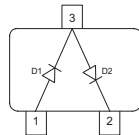
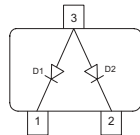
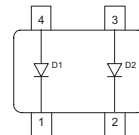
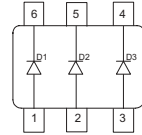


Silicon Schottky Diodes

- For mixer applications in the VHF / UHF range
- For high-speed switching applications


BAT68

BAT68-04
BAT68-04W

BAT68-06
BAT68-06W

BAT68-07W

BAT68-08S

ESD: Electrostatic discharge sensitive device, observe handling precaution!

Type	Package	Configuration	L_S (nH)	Marking
BAT68	SOT23	single	1.8	83s
BAT68-04	SOT23	series	1.8	84s
BAT68-04W	SOT323	series	1.4	84s
BAT68-06	SOT23	common anode	1.8	86s
BAT68-06W	SOT323	common anode	1.4	86s
BAT68-07W	SOT343	parallel pair	1.6	87s
BAT68-08S	SOT363	parallel triple	1.4	83s

Maximum Ratings at $T_A = 25^\circ\text{C}$, unless otherwise specified

Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	8	V
Forward current	I_F	130	mA
Total power dissipation	P_{tot}		mW
BAT68, $T_S \leq 77^\circ\text{C}$		150	
BAT68-04, BAT68-06, $T_S \leq 61^\circ\text{C}$		150	
BAT68-04W/-06W/-08S, $T_S \leq 92^\circ\text{C}$		150	
BAT68-07W, $T_S \leq 89^\circ\text{C}$		150	
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 ... 150	

Thermal Resistance

Parameter	Symbol	Value	Unit
Junction - soldering point ¹⁾	R_{thJS}		K/W
BAT68		≤ 490	
BAT68-04, BAT68-06		≤ 590	
BAT68-04W-BAT68-06W, BAT68-08S		≤ 390	
BAT68-07W		≤ 410	

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

Parameter	Symbol	Values			Unit
		min.	typ.	max.	

DC Characteristics

Breakdown voltage $I_{(BR)} = 10 \mu\text{A}$	$V_{(BR)}$	8	-	-	V
Reverse current $V_R = 1 \text{ V}$ $V_R = 1 \text{ V}, T_A = 60^\circ\text{C}$	I_R	-	-	0.1 1.2	μA
Forward voltage $I_F = 1 \text{ mA}$ $I_F = 10 \text{ mA}$	V_F	- 340	318 390	340 500	mV

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

Parameter	Symbol	Values			Unit
		min.	typ.	max.	

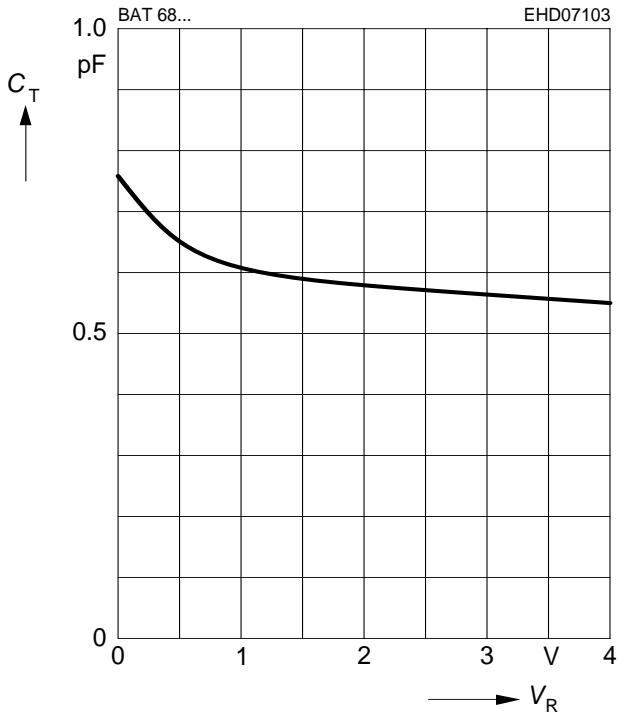
AC Characteristics

Diode capacitance $V_R = 0, f = 1 \text{ MHz}$	C_T	-	-	1	pF
Differential forward resistance $I_F = 5 \text{ mA}, f = 10 \text{ kHz}$	R_F	-	-	10	Ω

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

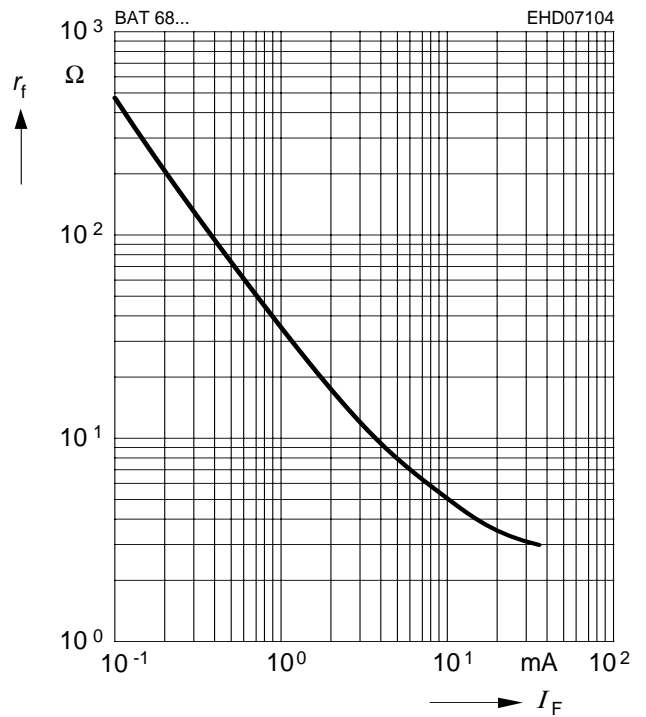
Diode capacitance $C_T = f(V_R)$

$f = 1\text{MHz}$



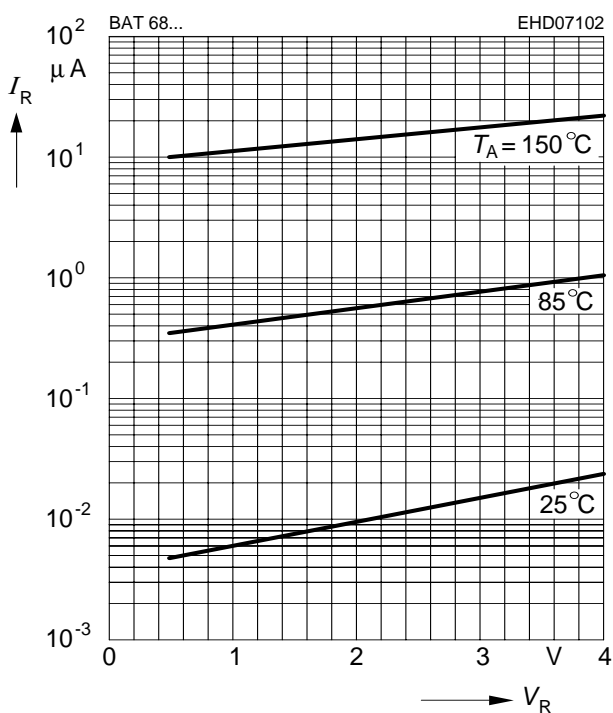
Differential forward resistance $r_f = f(I_F)$

$f = 10\text{kHz}$



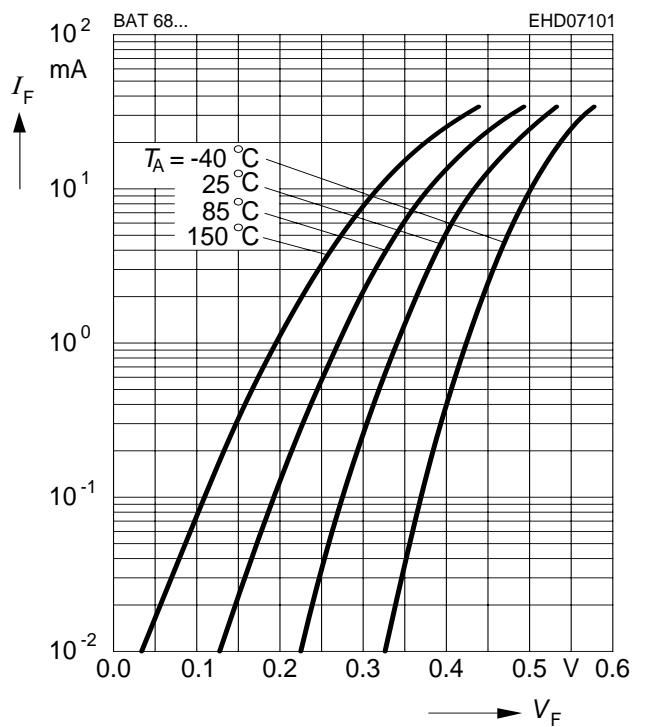
Reverse current $I_R = f(V_R)$

$T_A = \text{Parameter}$



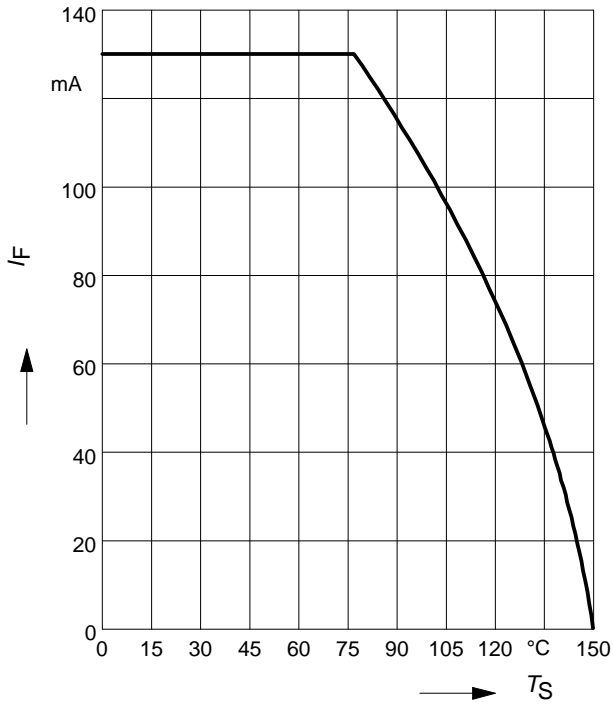
Forward current $I_F = f(V_F)$

$T_A = \text{Parameter}$



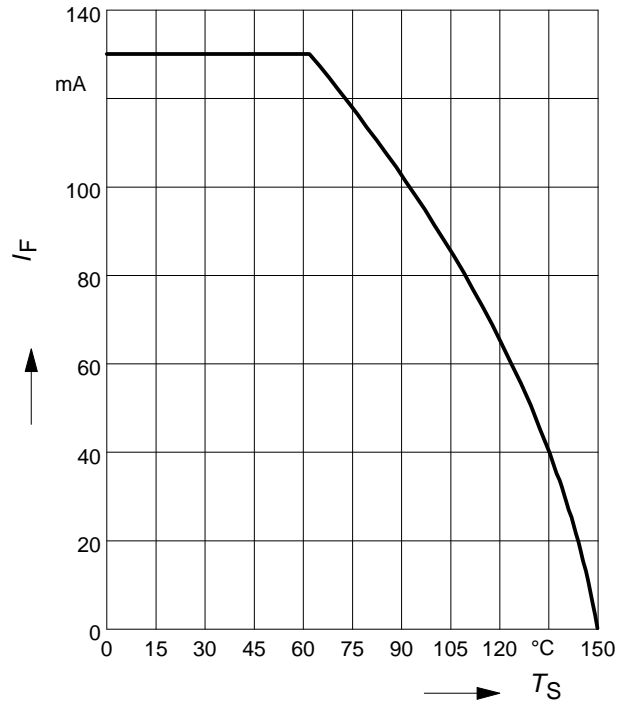
Forward current $I_F = f(T_S)$

BAT68



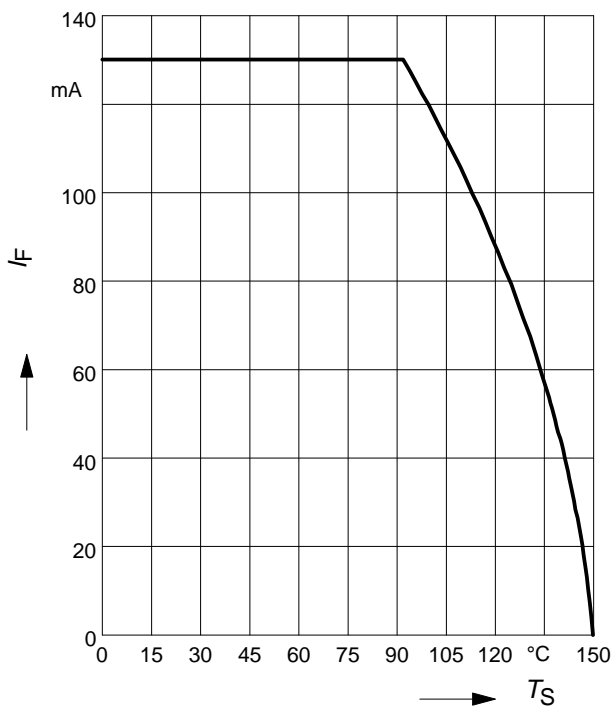
Forward current $I_F = f(T_S)$

BAT68-04, BAT68-06



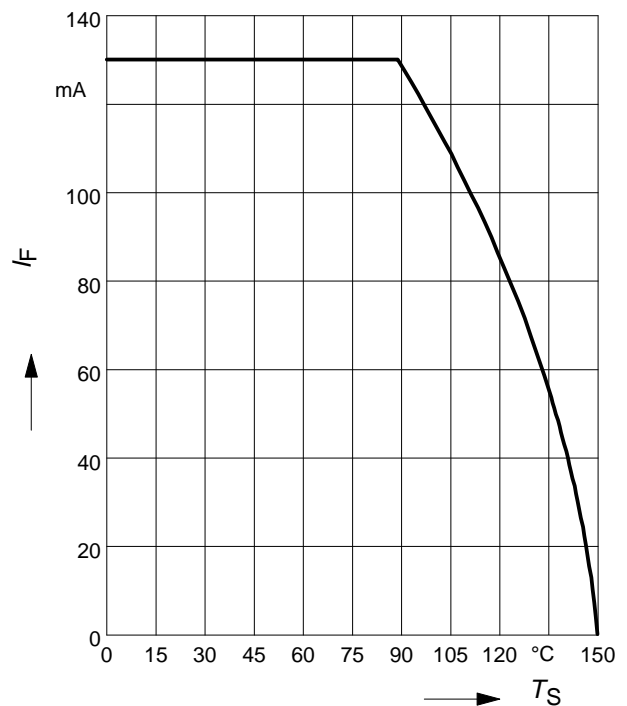
Forward current $I_F = f(T_S)$

BAT68-04W-BAT68-06W, BAT68-08S



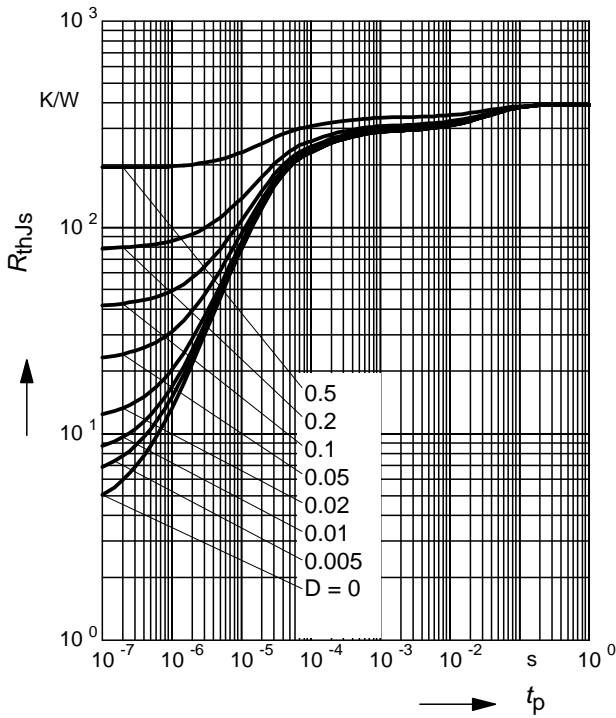
Forward current $I_F = f(T_S)$

BAT68-07W



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

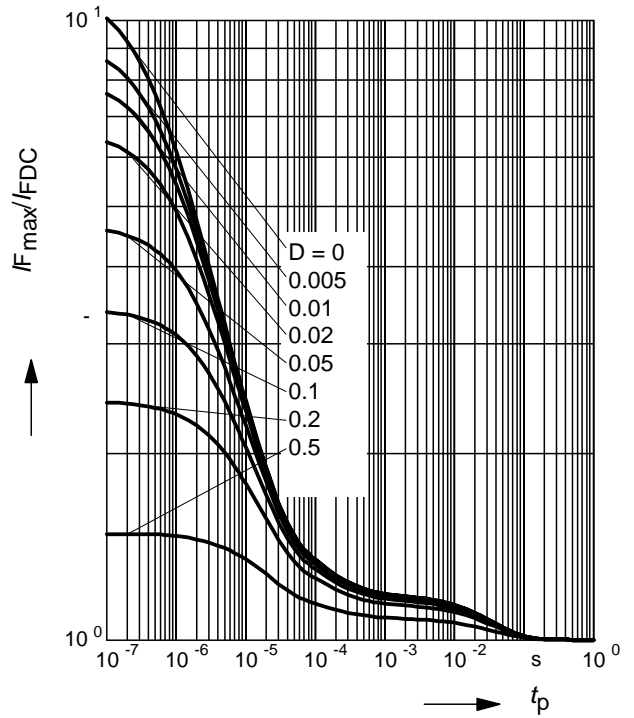
BAT68-04W-BAT68-06W



Permissible Pulse Load

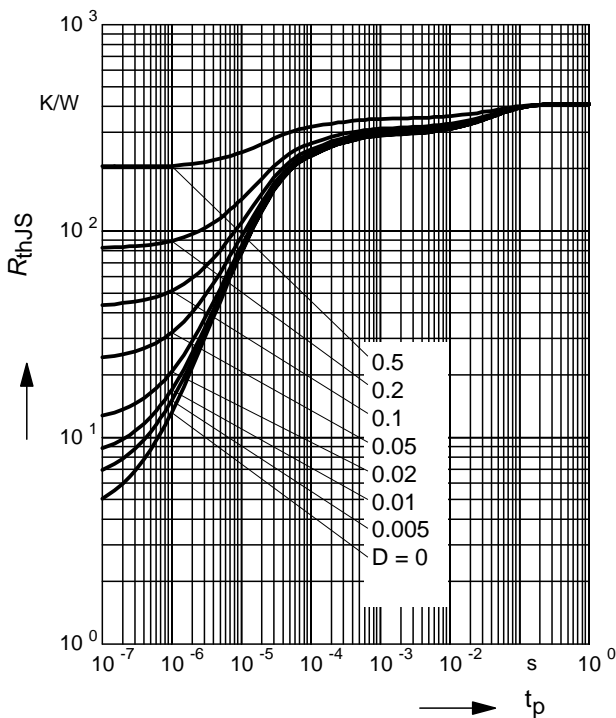
$I_{Fmax} / I_{FDC} = f(t_p)$

BAT68-04W-BAT68-06W



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

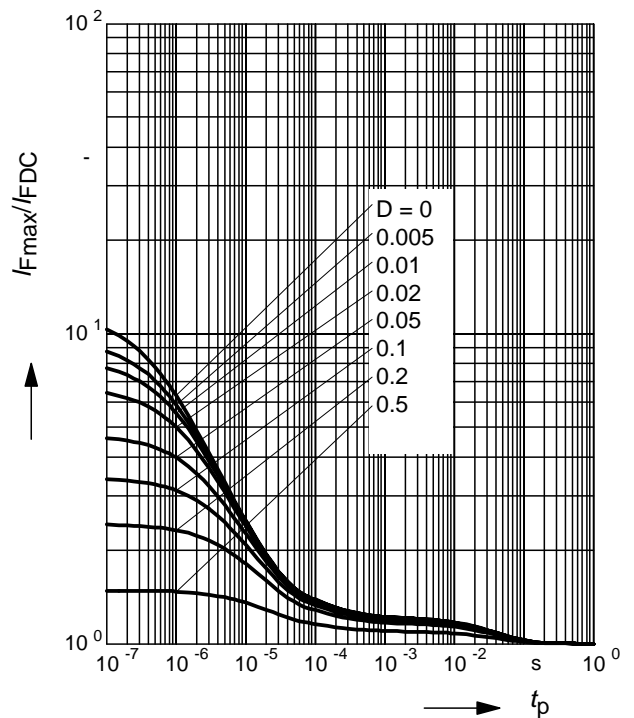
BAT68-07W



Permissible Pulse Load

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

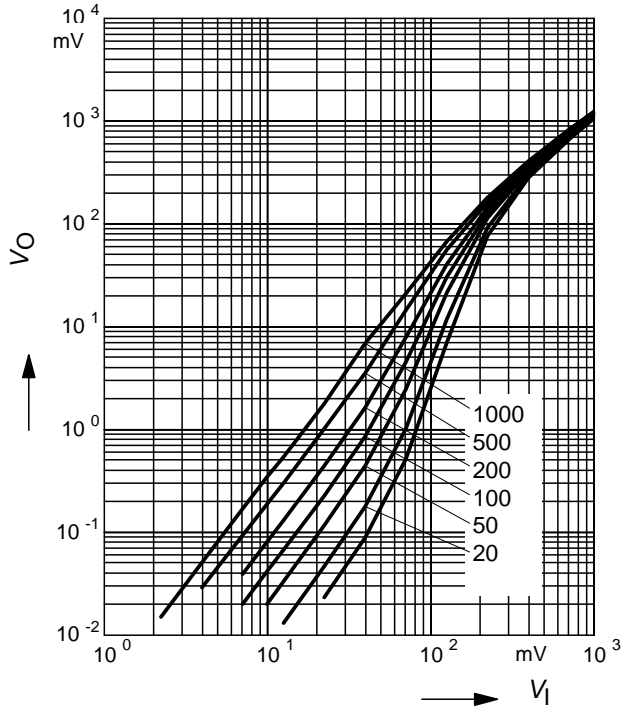
BAT68-07W



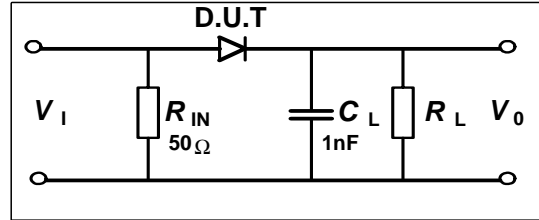
Rectifier voltage $V_{out} = f(V_{in})$

$f = 900\text{MHz}$

$R_L =$ Parameter in $k\Omega$



Testcircuit



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St.-Martin-Strasse 53,
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