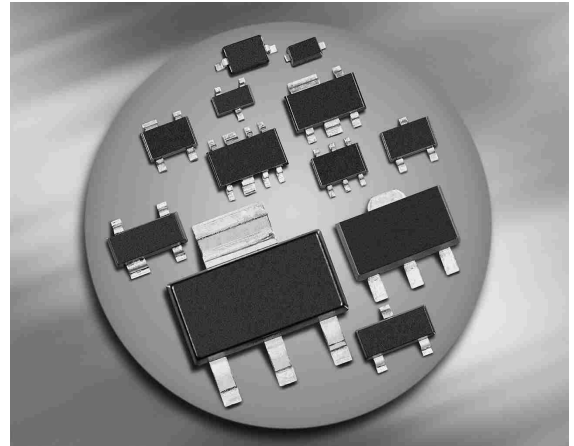
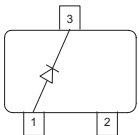
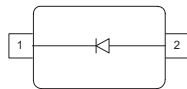
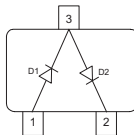
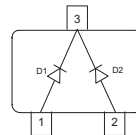
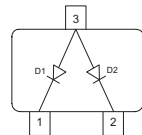
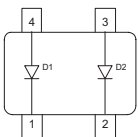
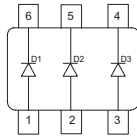
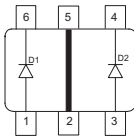


Silicon Schottky Diodes

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


BAT68

BAT68-02L

**BAT68-04
BAT68-04W**

**BAT68-05
BAT68-05W**

**BAT68-06
BAT68-06W**

**BAT68-07
BAT68-07W**

BAT68-08S

BAT68-09S


ESD: Electrostatic discharge sensitive device, observe handling precaution!

Type	Package	Configuration	L_S (nH)	Marking
BAT68	SOT23	single	1.8	83s
BAT68-02L*	TSLP-2-1	single, leadless	0.4	83
BAT68-04	SOT23	series	1.8	84s
BAT68-04W	SOT323	series	1.4	84s
BAT68-05	SOT23	common cathode	1.8	85s
BAT68-05W	SOT323	common cathode	1.4	85s
BAT68-06	SOT23	common anode	1.8	86s
BAT68-06W	SOT323	common anode	1.4	86s
BAT68-07	SOT143	parallel pair	2	87s
BAT68-07W	SOT343	parallel pair	1.6	87s
BAT68-08S	SOT363	parallel triple	1.4	83s
BAT68-09S*	SOT363	parallel pair, high isolation	1.6	89s

* Preliminary Data

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	
BAT68-02L, $T_S \leq 114^\circ\text{C}$		150	
BAT68-04, BAT68-06, BAT68-07, $T_S \leq 61^\circ\text{C}$		150	
BAT68-04W/-06W/-08S/-09S, $T_S \leq 92^\circ\text{C}$		150	
BAT68-05, $T_S \leq 46^\circ\text{C}$		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	
BAT68-02L		≤ 240	
BAT68-04, BAT68-06, BAT68-07		≤ 590	
BAT68-04W-BAT68-06W, BAT68-08S		≤ 390	
BAT68-05		≤ 690	
BAT68-07W		≤ 410	
BAT68-09S		$\leq \text{tdb}$	

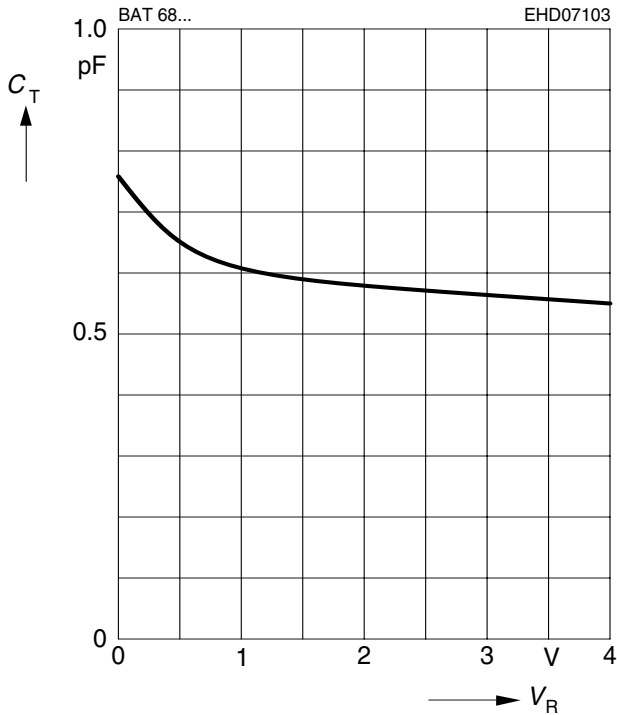
¹⁾For calculation of R_{thJA} please refer to Application Note Thermal Resistance

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

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
DC Characteristics					
Breakdown voltage $I_{(BR)} = 10\ \mu\text{A}$	$V_{(BR)}$	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
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

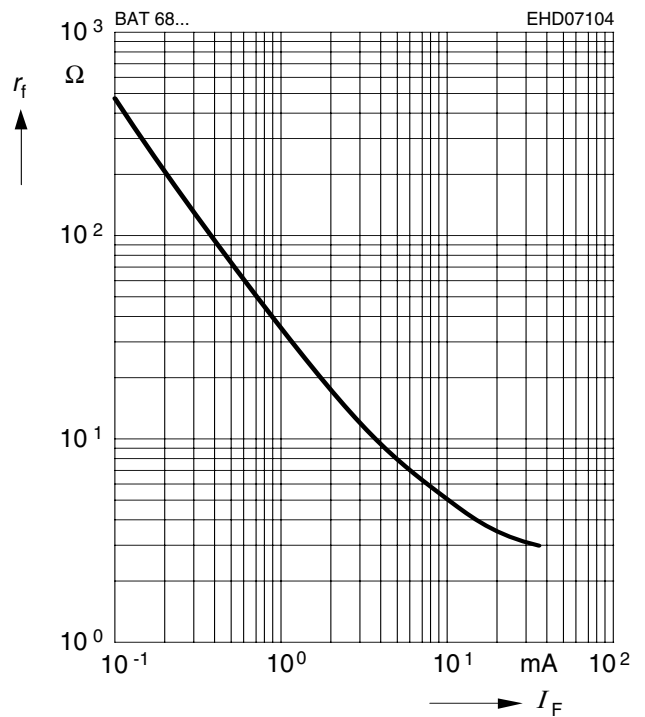
Diode capacitance $C_T = f(V_R)$

$f = 1\text{MHz}$



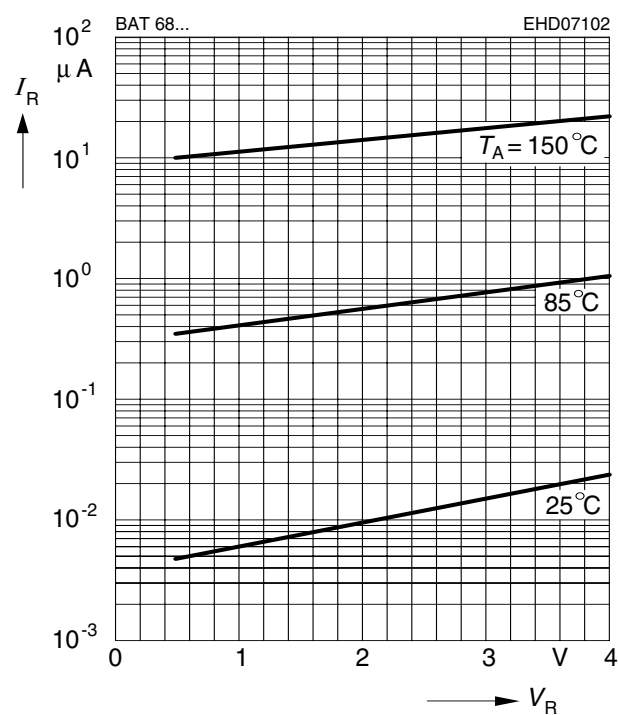
Differential forward resistance $r_f = f(I_F)$

$f = 10\text{kHz}$



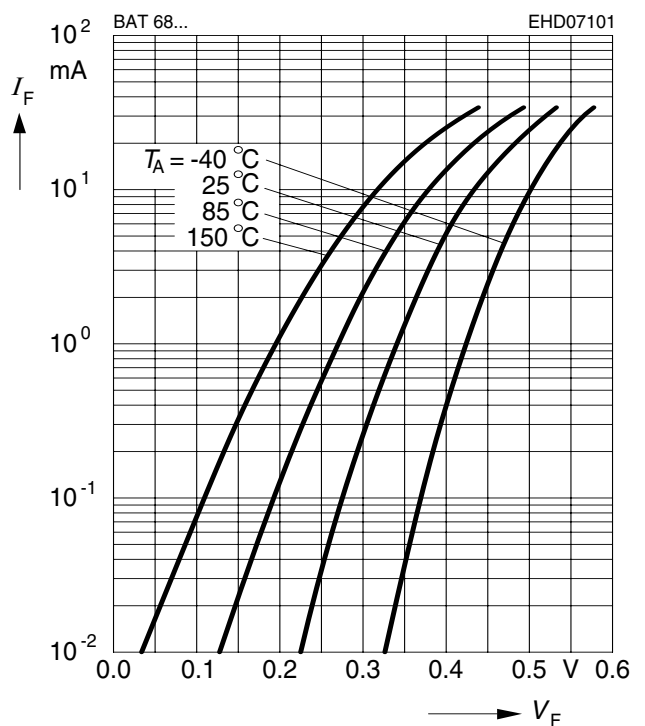
Reverse current $I_R = f(V_R)$

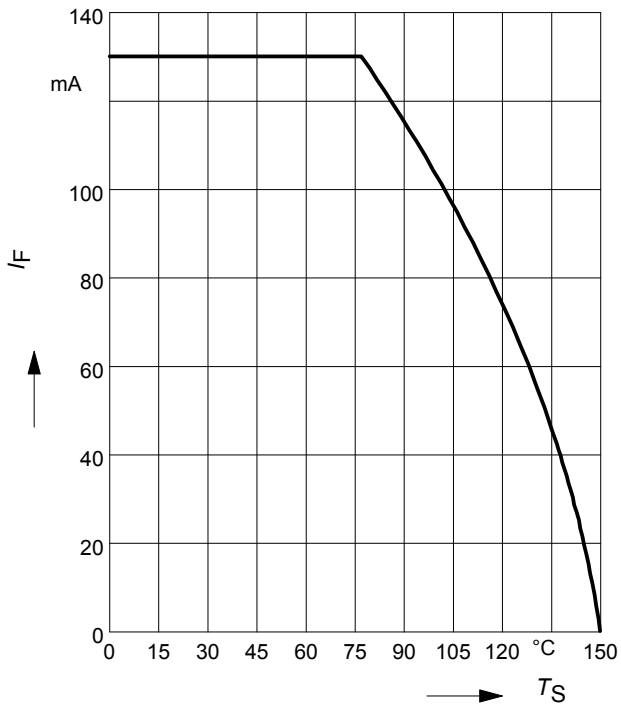
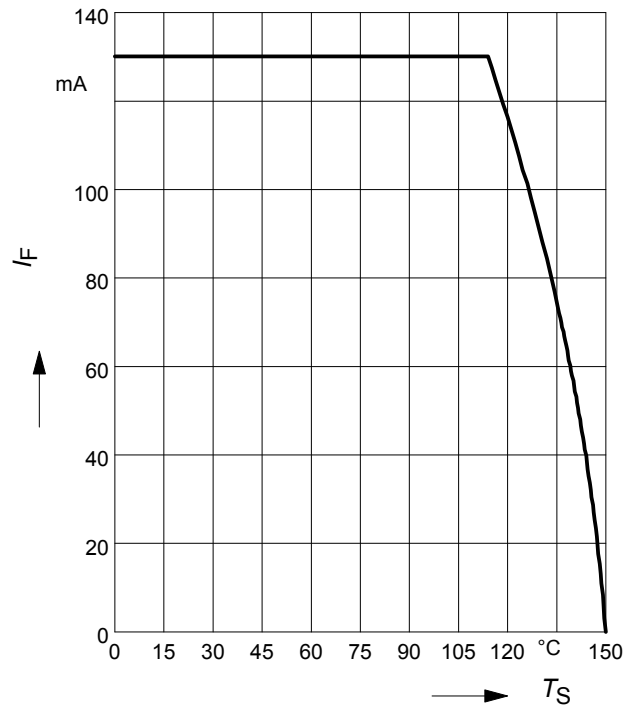
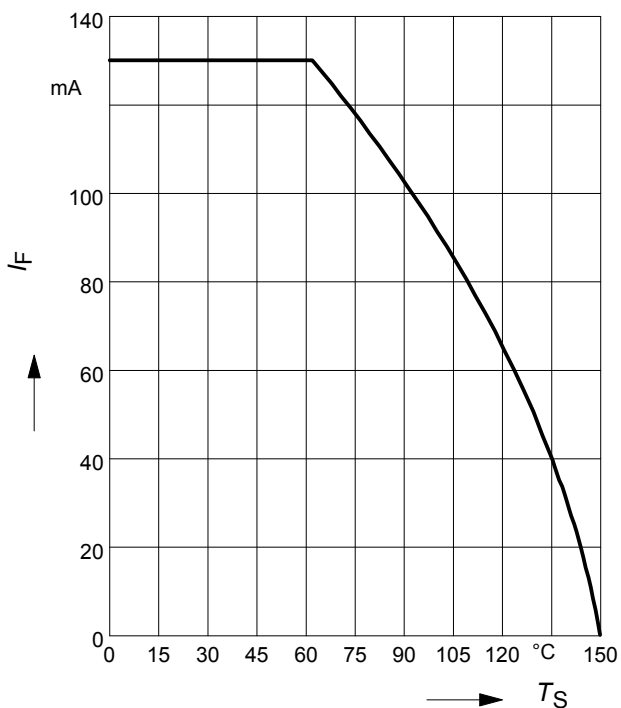
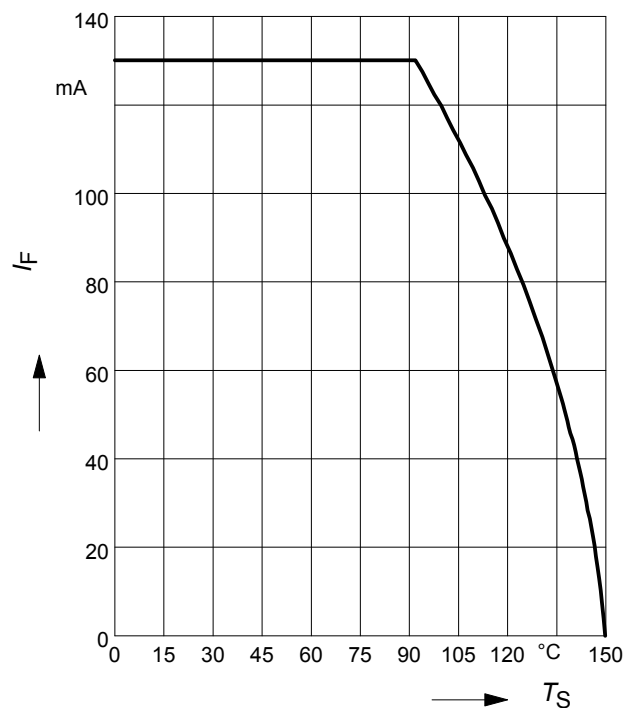
$T_A = \text{Parameter}$



Forward current $I_F = f(V_F)$

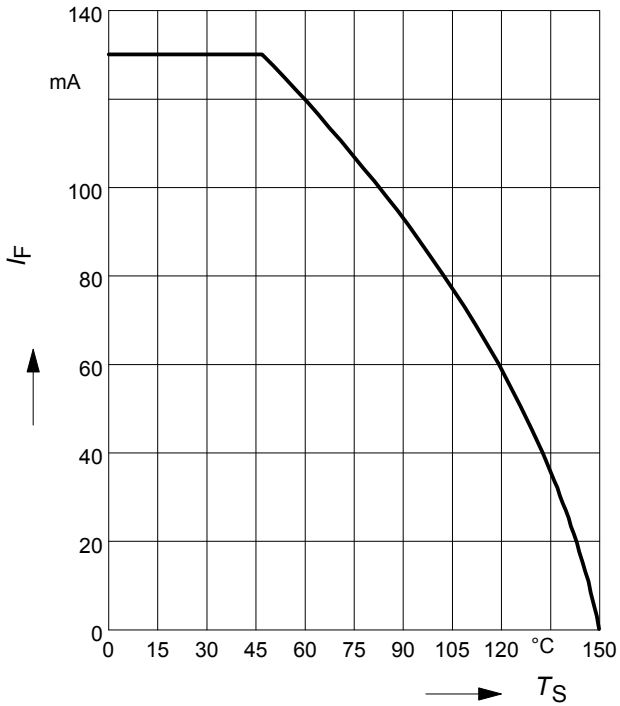
$T_A = \text{Parameter}$



Forward current $I_F = f(T_S)$
BAT68

Forward current $I_F = f(T_S)$
BAT68-02L

Forward current $I_F = f(T_S)$
BAT68-04, BAT68-06, BAT68-07

Forward current $I_F = f(T_S)$
BAT68-04W-BAT68-06W, BAT68-08S
BAT68-09S


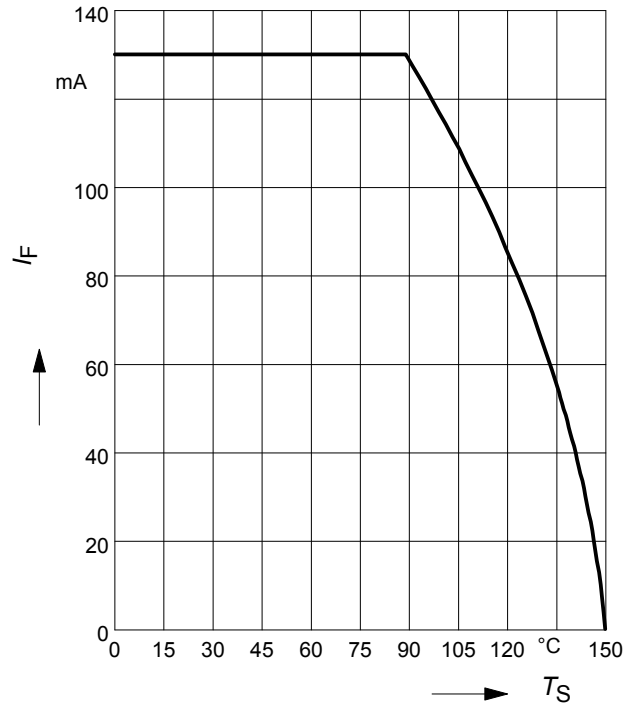
Forward current $I_F = f(T_S)$

BAT68-05



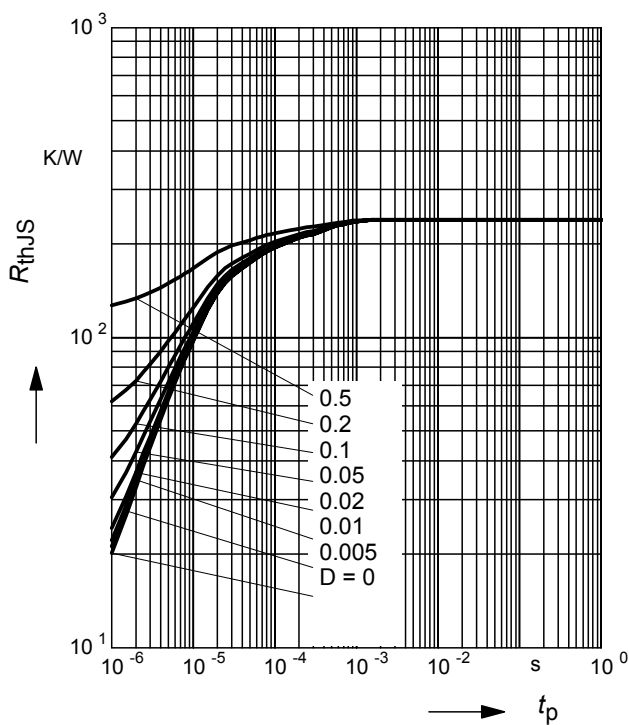
Forward current $I_F = f(T_S)$

BAT68-07W



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

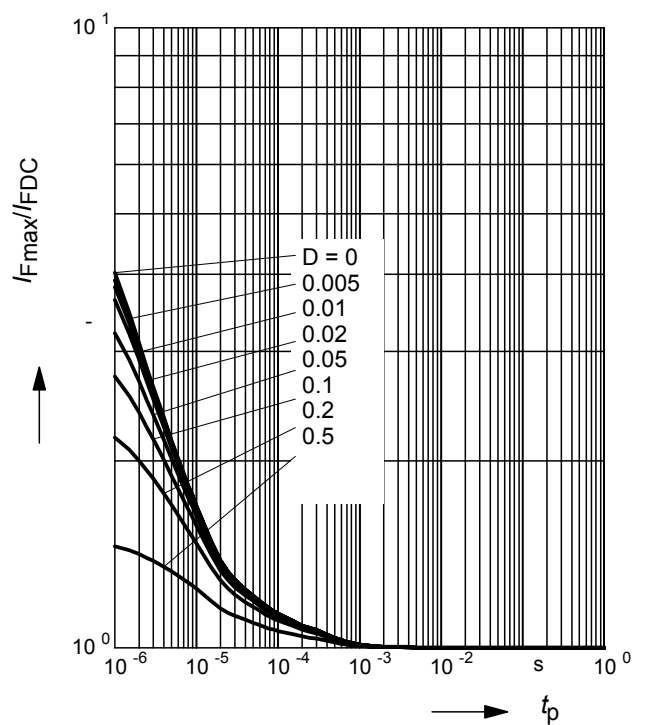
BAT68-02L



Permissible Pulse Load

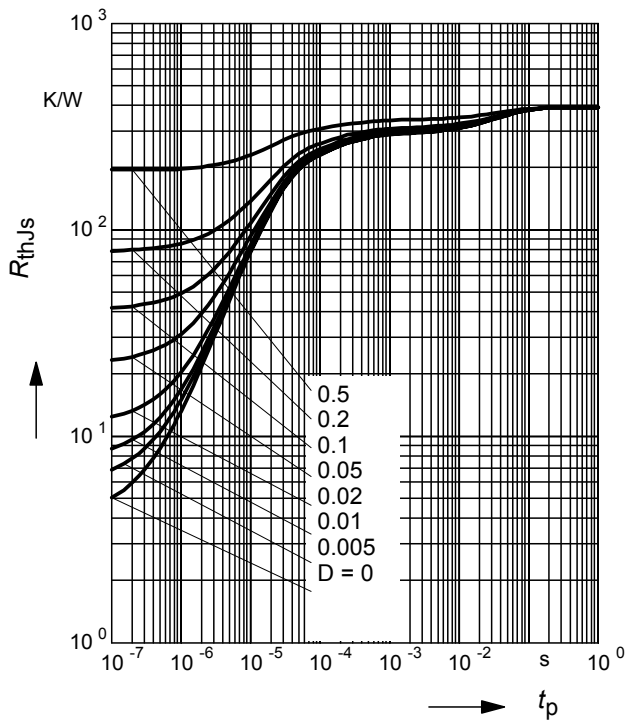
$I_{Fmax}/I_{FDC} = f(t_p)$

BAT68-02L



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

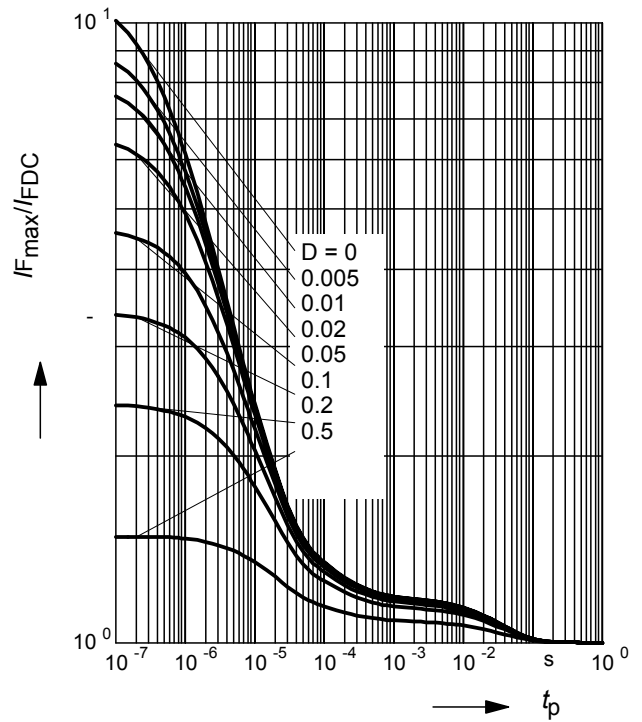
BAT68-04W-BAT68-06W



Permissible Pulse Load

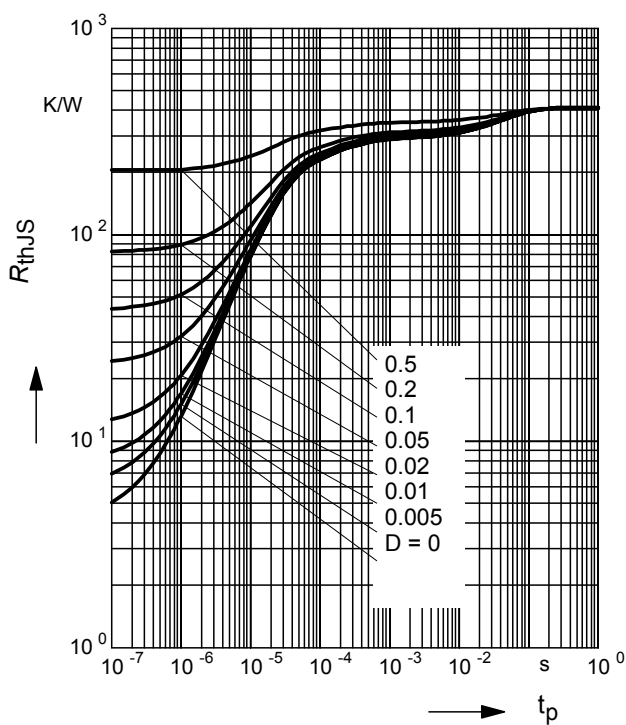
$$I_{Fmax}/I_{FDC} = f(t_p)$$

BAT68-04W-BAT68-06W



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

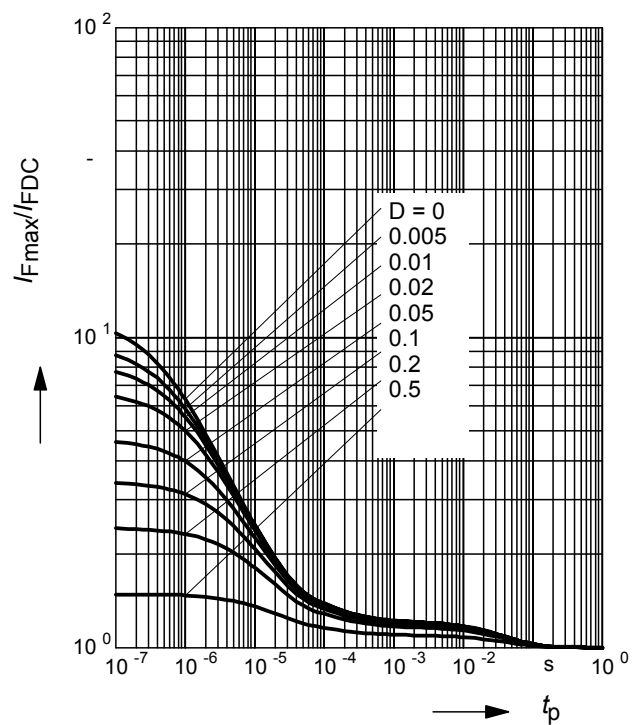
BAT68-07W



Permissible Pulse Load

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

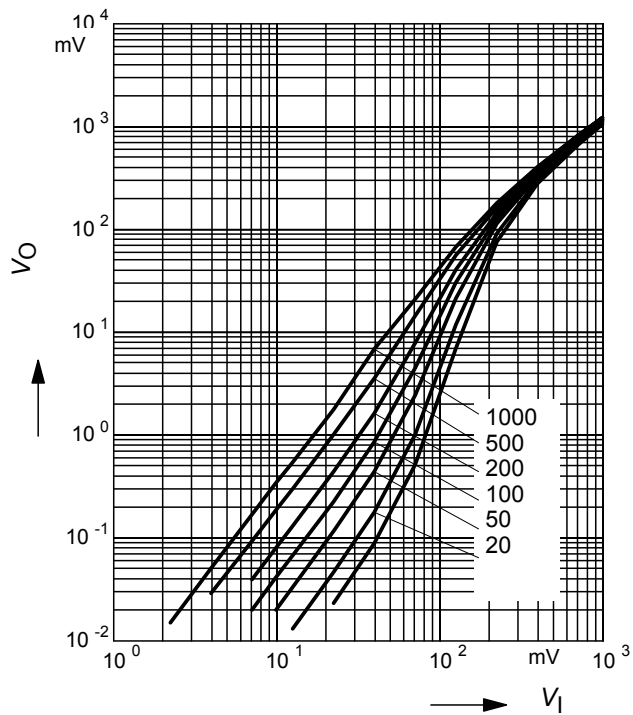
BAT68-07W



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

$f = 900\text{MHz}$

R_L = Parameter in $\text{k}\Omega$



Testcircuit

