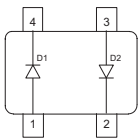
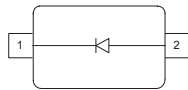
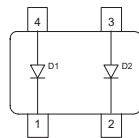
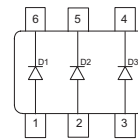
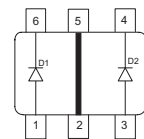


Silicon Schottky Diode

- Low barrier diode for detectors up to GHz frequencies


BAT62

**BAT62-02L
BAT62-02W
BAT62-03W**

**BAT62-07W
BAT62-07L4**

BAT62-08S

BAT62-09S


ESD: Electrostatic discharge sensitive device, observe handling precaution!

Type	Package	Configuration	L_S (nH)	Marking
BAT62	SOT143	anti-parallel pair	2	62s
BAT62-02L *	TSLP-2-1	single, leadless	0.4	L
BAT62-02W	SCD80	single	0.6	62
BAT62-03W	SOD323	single	1.8	L
BAT62-07L4	TSLP-4-4	parallel pair, leadless	0.4	62
BAT62-07W	SOT343	parallel pair	1.8	62s
BAT62-08S	SOT363	parallel triple	1.6	62s
BAT62-09S*	SOT363	parallel pair, high isolation	1.6	69s

*Preliminary Data

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

Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	40	V
Forward current	I_F	20	mA
Total power dissipation	P_{tot}		mW
BAT62, $T_S \leq 85^\circ\text{C}$		100	
BAT62-02L, -07L4, -03W, $T_S \leq 108^\circ\text{C}$		100	
BAT62-02W, $T_S \leq 109^\circ\text{C}$		100	
BAT62-07W, $T_S \leq 103^\circ\text{C}$		100	
BAT62-08S, -09S, $T_S \leq 105^\circ\text{C}$		100	
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
BAT62		≤ 650	
BAT62-02L, -07L4, -03W		≤ 420	
BAT62-02W		≤ 410	
BAT62-07W		≤ 470	
BAT62-08S		≤ 450	
BAT62-09S		$\leq \text{tdb}$	

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

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
Reverse current	I_R	-	-	10	μA
$V_R = 40\text{ V}$					
Forward voltage	V_F	-	0.58	1	V
$I_F = 2\text{ mA}$					
Forward voltage matching ²⁾	ΔV_F	-	-	20	mV
$I_F = 2\text{ mA}$					

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

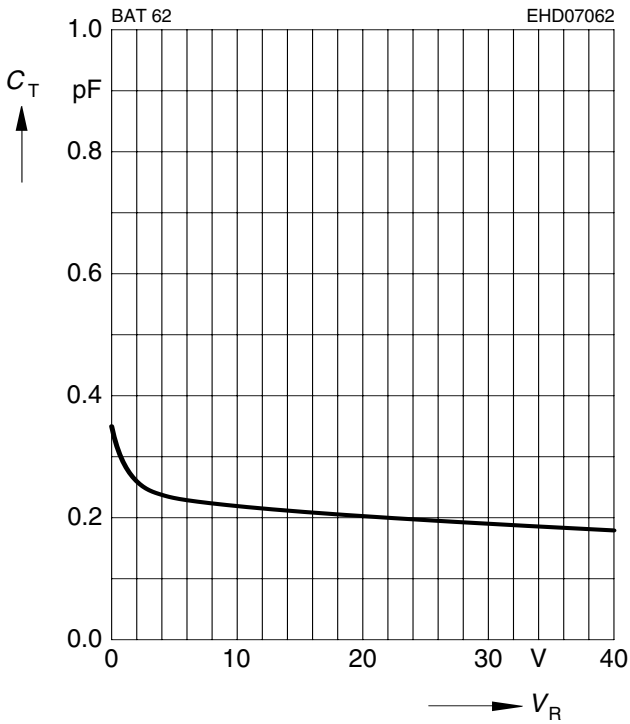
²⁾ ΔV_F is the difference between lowest and highest V_F in a multiple diode component.

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

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
AC Characteristics					
Diode capacitance $V_R = 0\text{ V}, f = 1\text{ MHz}$	C_T	-	0.35	0.6	pF
Differential resistance $V_R = 0\text{ V}, f = 10\text{ kHz}$	R_0	-	225	-	k Ω

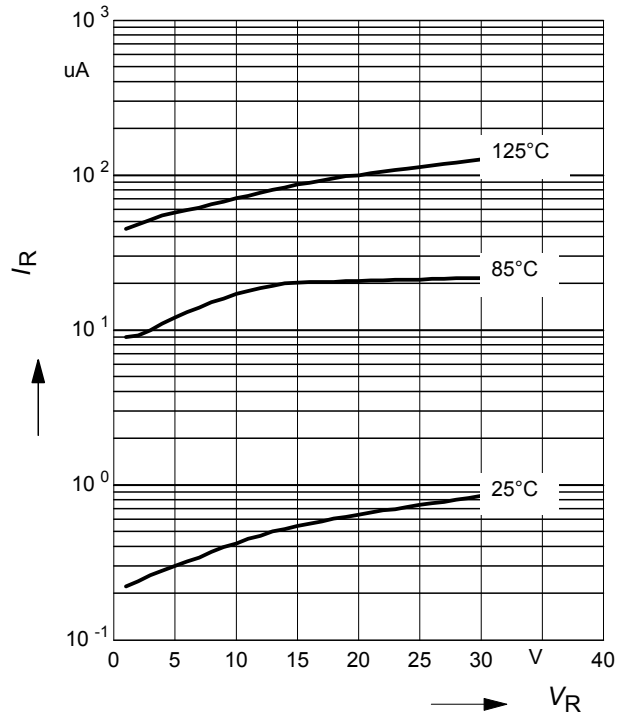
Diode capacitance $C_T = f(V_R)$

$f = 1\text{MHz}$



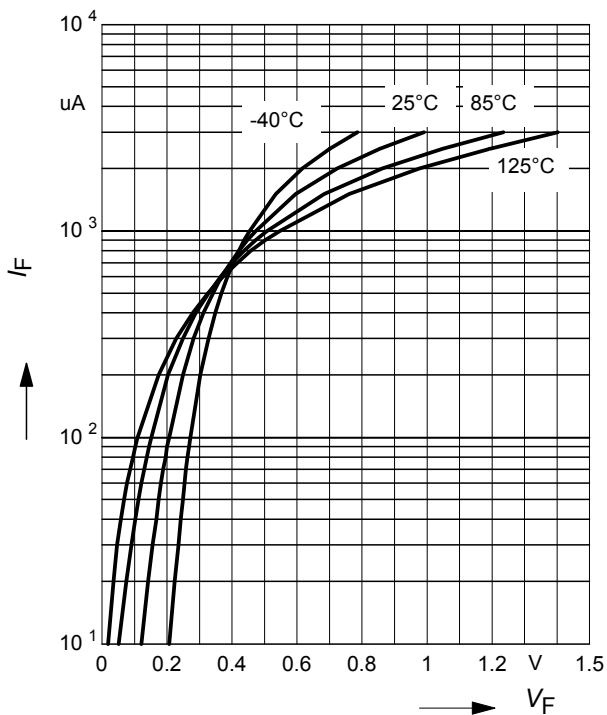
Reverse current $I_R = f(V_R)$

$T_A = \text{Parameter}$



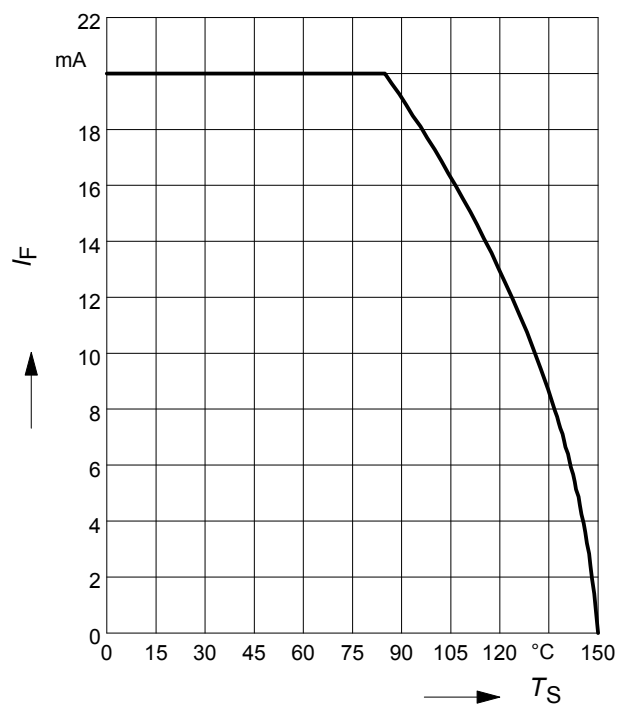
Forward current $I_F = f(V_F)$

$T_A = \text{Parameter}$



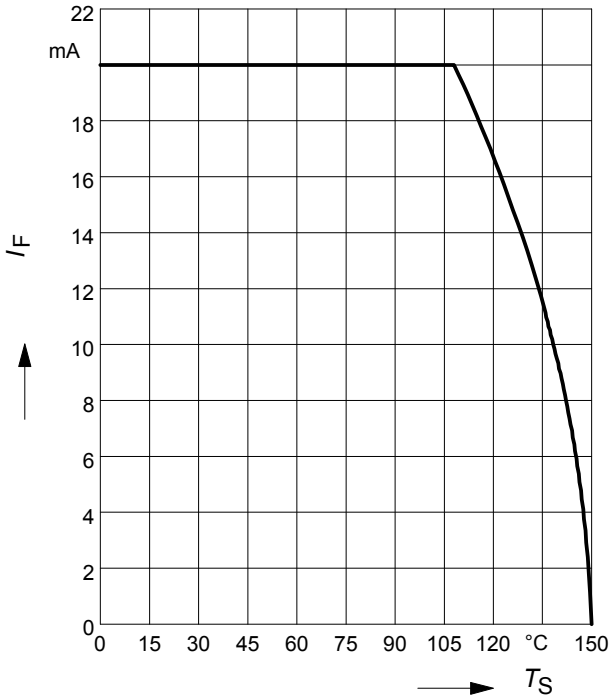
Forward current $I_F = f(T_S)$

BAT62



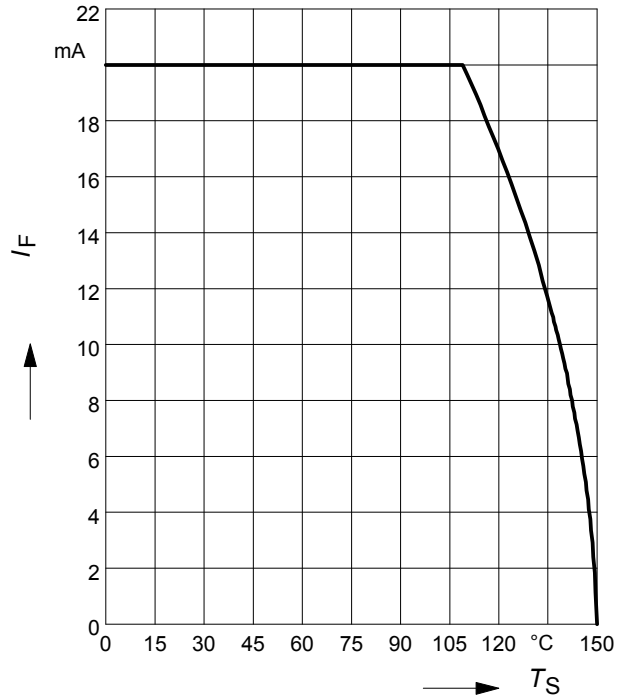
Forward current $I_F = f(T_S)$

BAT62-02L, -07L4



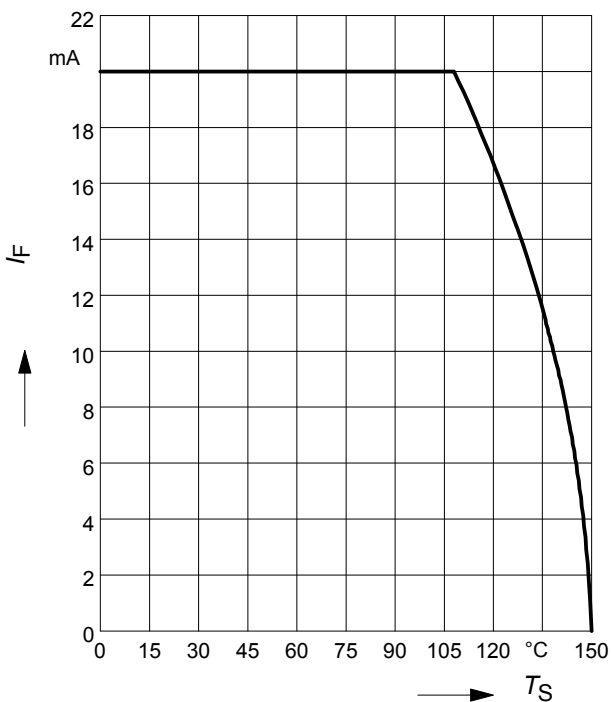
Forward current $I_F = f(T_S)$

BAT62-02W



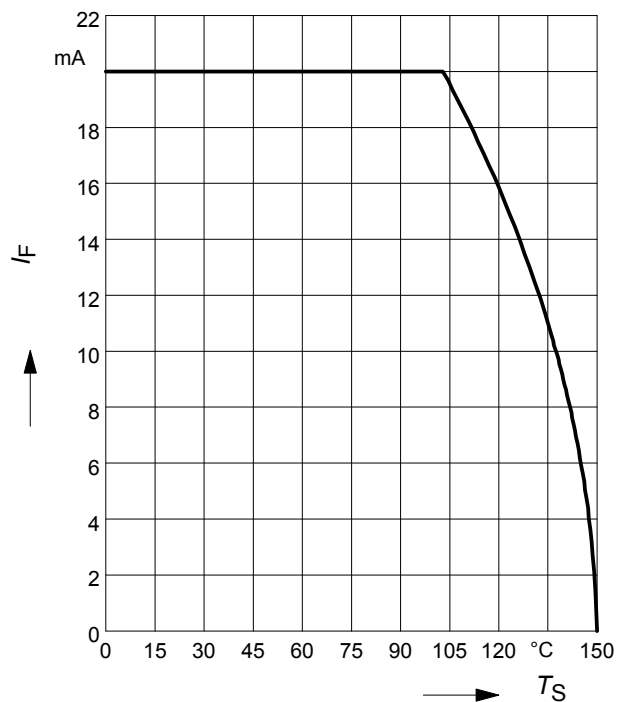
Forward current $I_F = f(T_S)$

BAT62-03W



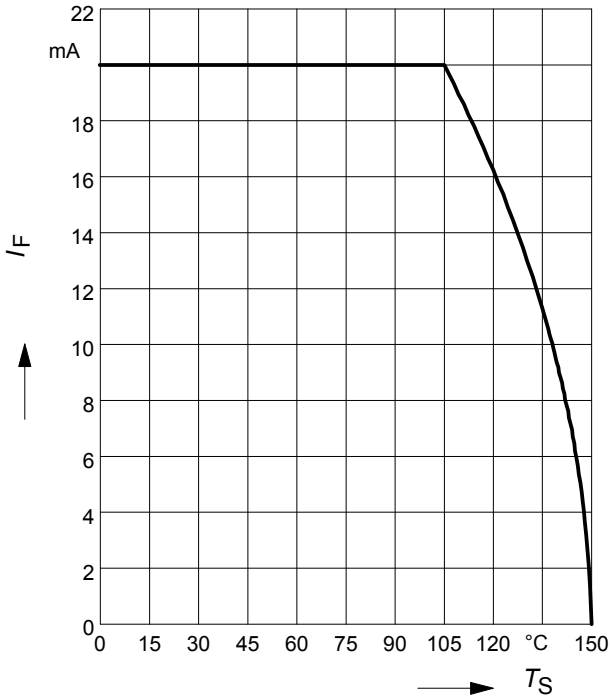
Forward current $I_F = f(T_S)$

BAT62-07W



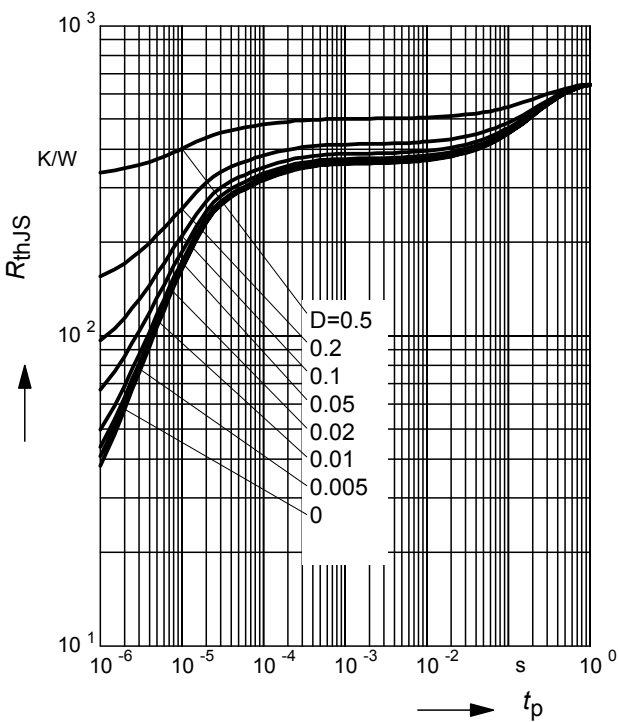
Forward current $I_F = f(T_S)$

BAT62-08S



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

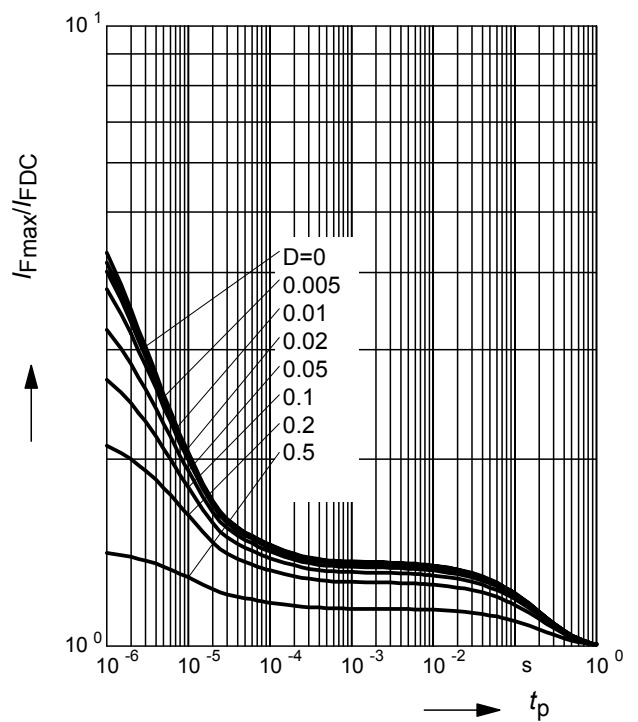
BAT62



Permissible Pulse Load

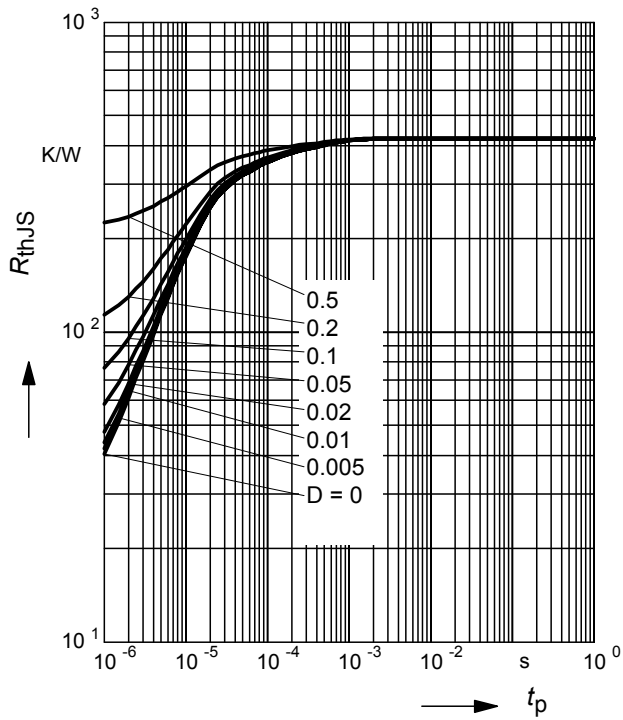
$I_{Fmax} / I_{FDC} = f(t_p)$

BAT62



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

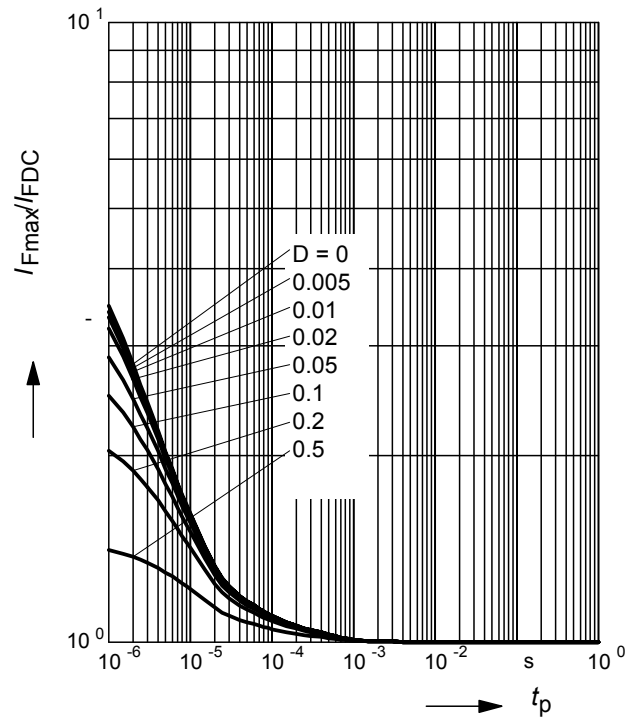
BAT62-02L, -07L4



Permissible Pulse Load

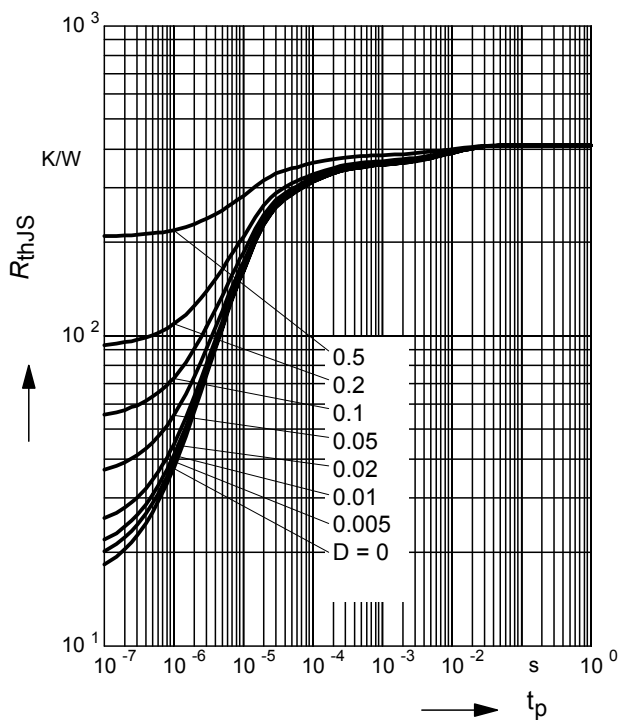
$I_{Fmax} / I_{FDC} = f(t_p)$

BAT62-02L, -07L4



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

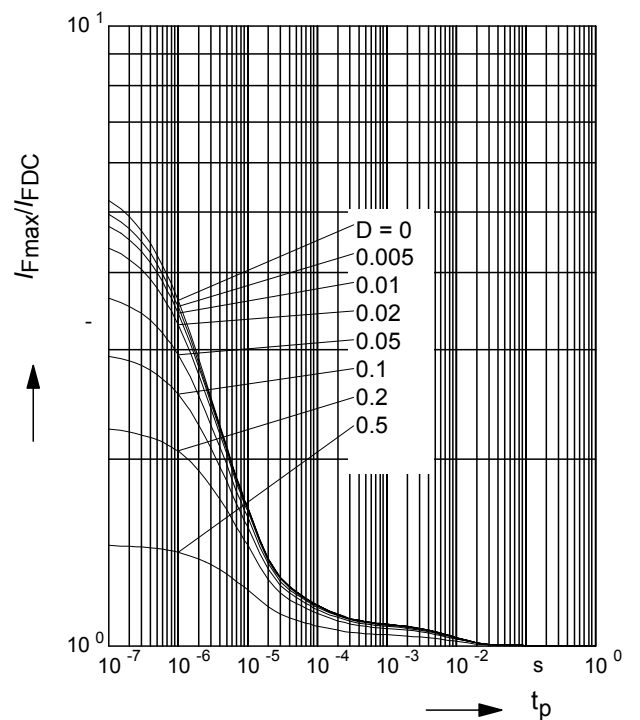
BAT62-02W



Permissible Pulse Load

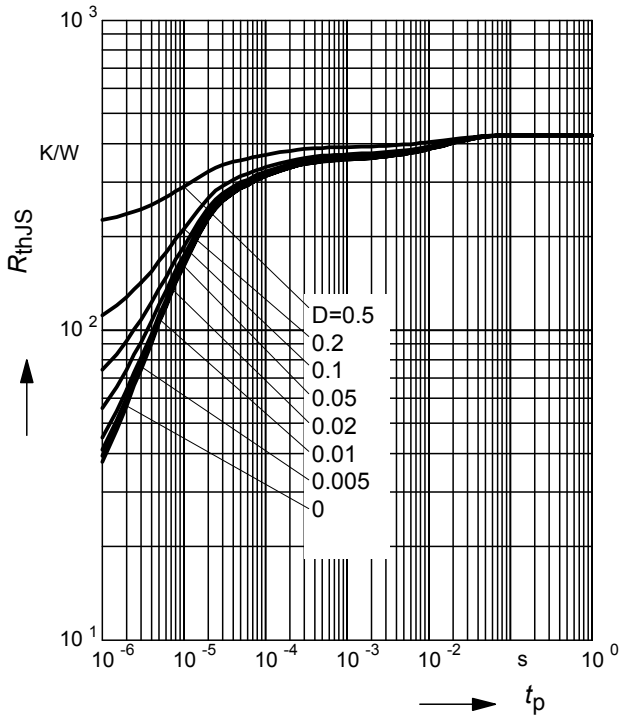
$I_{Fmax} / I_{FDC} = f(t_p)$

BAT62-02W



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

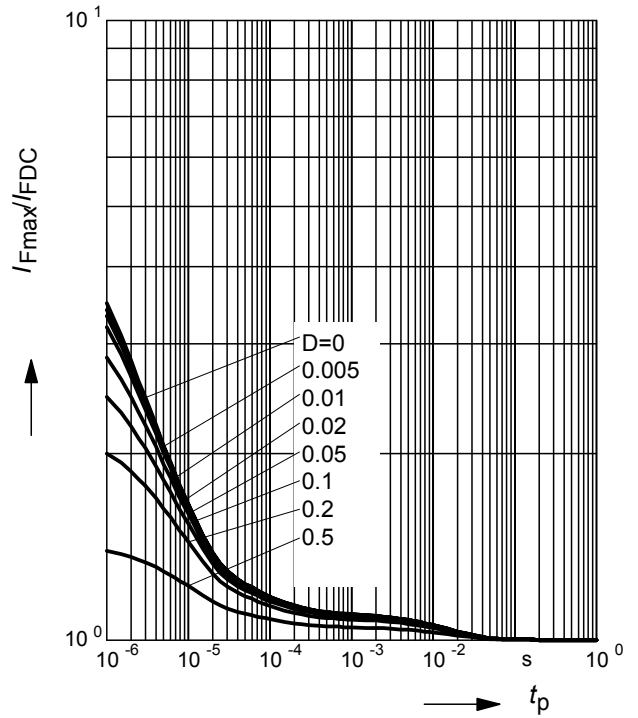
BAT62-03W



Permissible Pulse Load

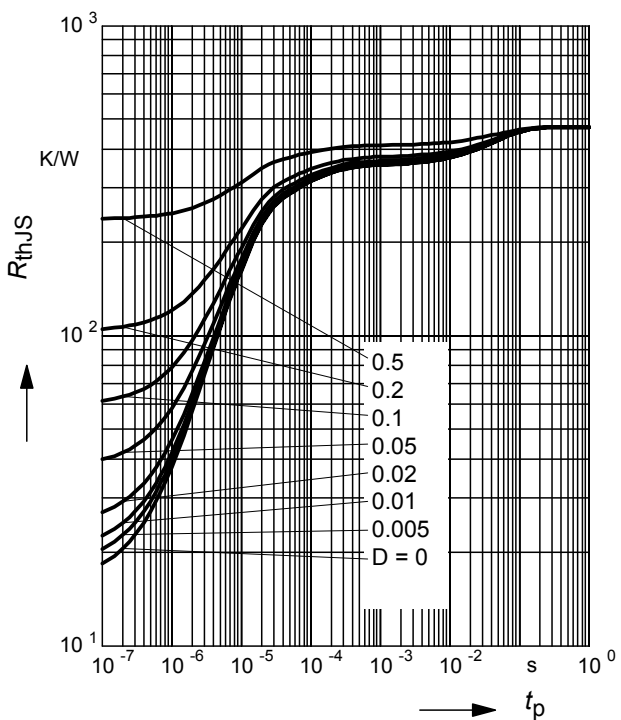
$I_{Fmax} / I_{FDC} = f(t_p)$

BAT62-03W



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

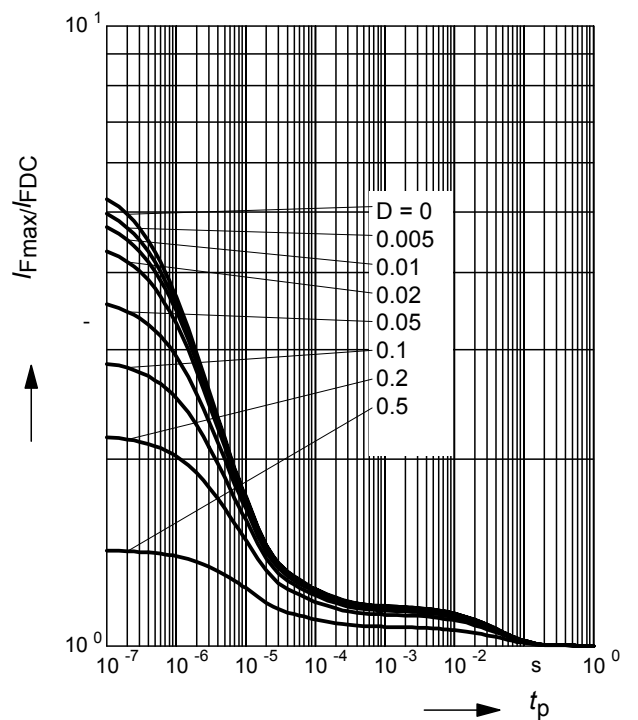
BAT62-07W



Permissible Pulse Load

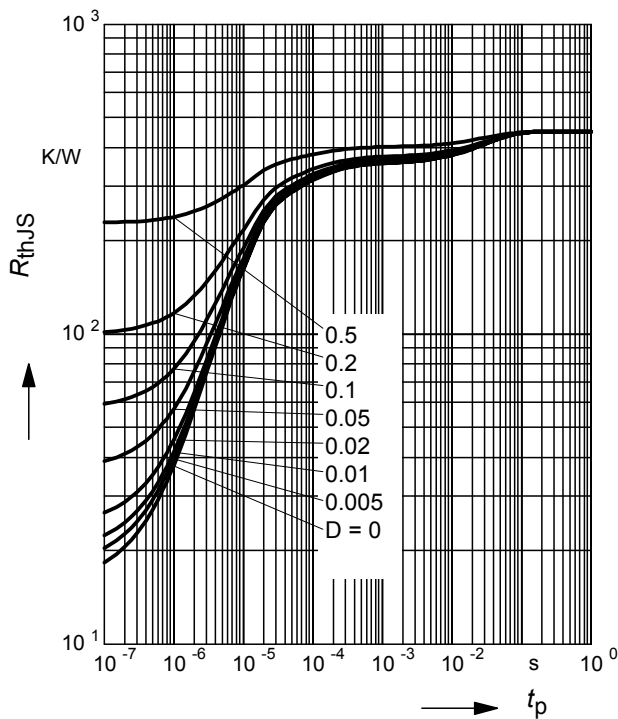
$I_{Fmax} / I_{FDC} = f(t_p)$

BAT62-07W



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

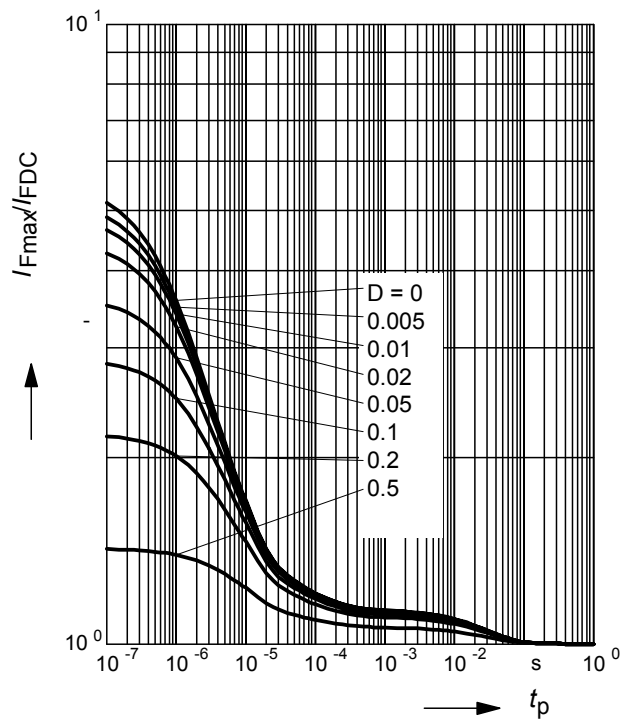
BAT62-08S



Permissible Pulse Load

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

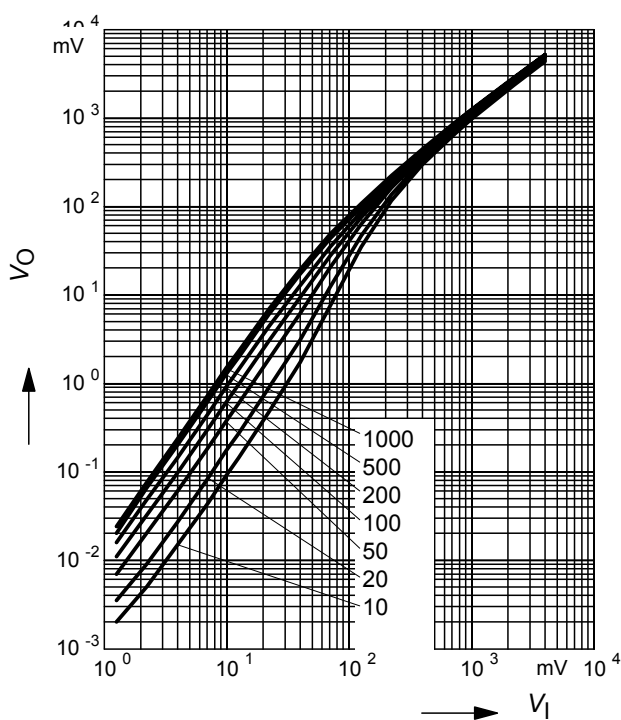
BAT62-08S



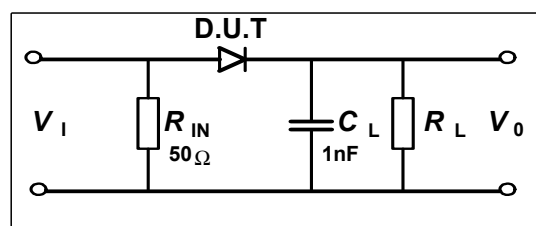
Rectifier voltage $V_{out} = f(V_{in})$

$f = 900\text{MHz}$

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



Testcircuit



**Published by Infineon Technologies AG,
St.-Martin-Strasse 53,
81669 München**

**© Infineon Technologies AG 2004.
All Rights Reserved.**

Attention please!

The information herein is given to describe certain components and shall not be considered as a guarantee of characteristics.

Terms of delivery and rights to technical change reserved.

We hereby disclaim any and all warranties, including but not limited to warranties of non-infringement, regarding circuits, descriptions and charts stated herein.

Information

For further information on technology, delivery terms and conditions and prices please contact your nearest Infineon Technologies Office (www.infineon.com).

Warnings

Due to technical requirements components may contain dangerous substances. For information on the types in question please contact your nearest Infineon Technologies Office.

Infineon Technologies Components may only be used in life-support devices or systems with the express written approval of Infineon Technologies, if a failure of such components can reasonably be expected to cause the failure of that life-support device or system, or to affect the safety or effectiveness of that device or system. Life support devices or systems are intended to be implanted in the human body, or to support and/or maintain and sustain and/or protect human life. If they fail, it is reasonable to assume that the health of the user or other persons may be endangered.