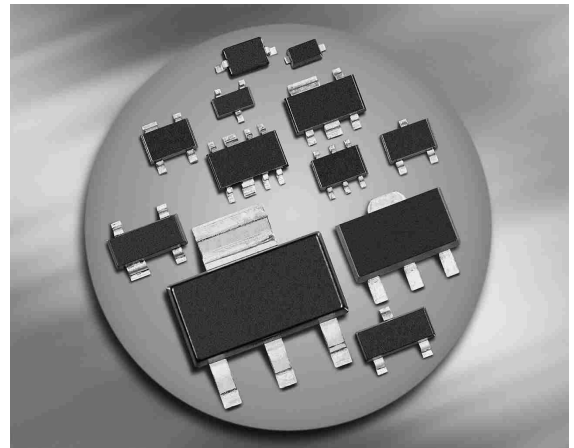
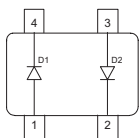


Silicon Schottky Diode

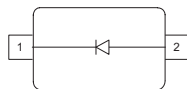
- Low barrier diode for detectors up to GHz frequencies



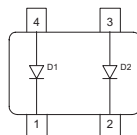
BAT62



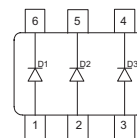
BAT62-02L BAT62-02W BAT62-03W



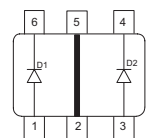
BAT62-07W BAT62-07L4



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.	
DC Characteristics					
Reverse current $V_R = 40\text{ V}$	I_R	-	-	10	μA
Forward voltage $I_F = 2\text{ mA}$	V_F	-	0.58	1	V
Forward voltage matching ²⁾ $I_F = 2\text{ mA}$	ΔV_F	-	-	20	mV

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

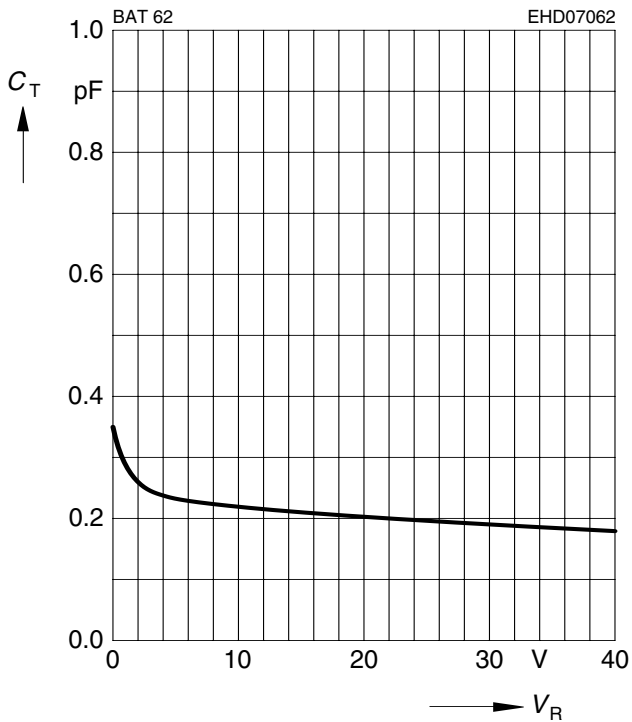
²⁾ ΔV_F is the difference between lowest and highest V_F in a multiple diode component.

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	-	kΩ

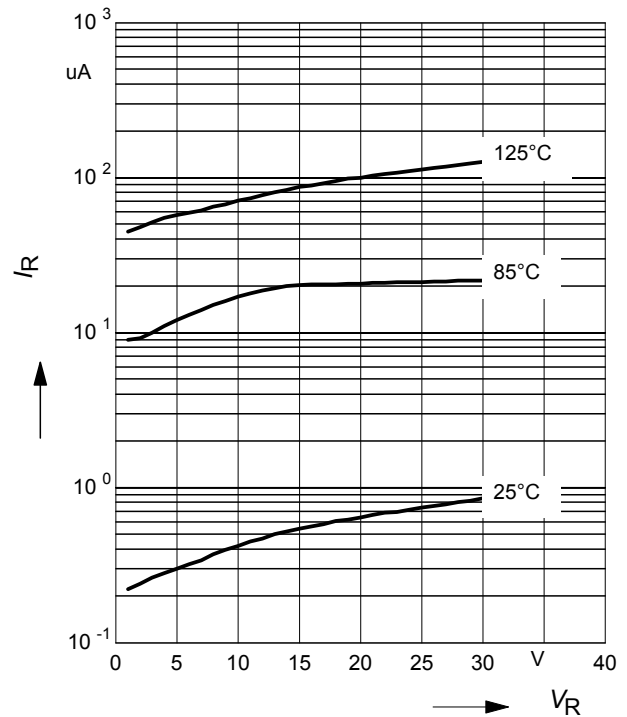
Diode capacitance $C_T = f(V_R)$

$f = 1\text{MHz}$



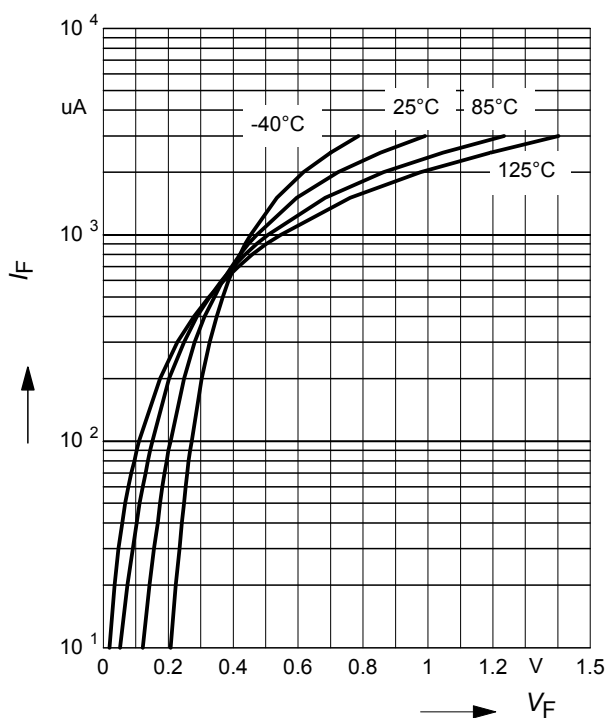
Reverse current $I_R = f(V_R)$

$T_A = \text{Parameter}$



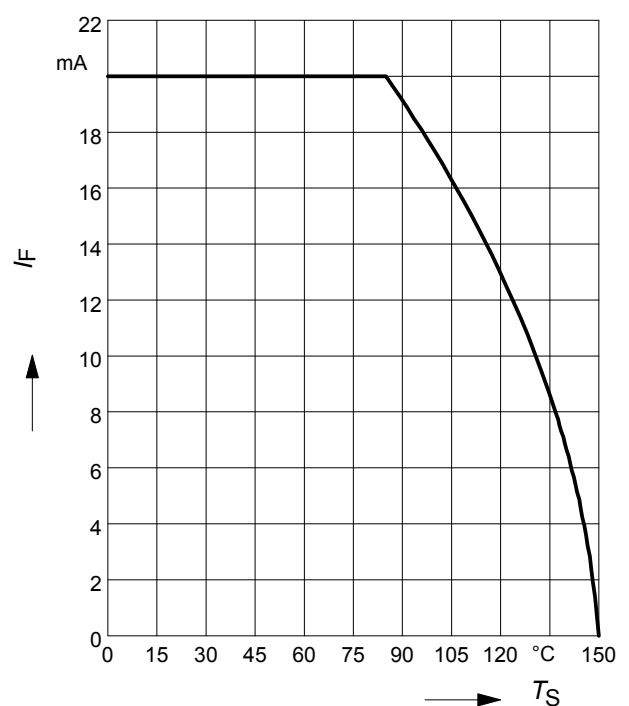
Forward current $I_F = f(V_F)$

$T_A = \text{Parameter}$



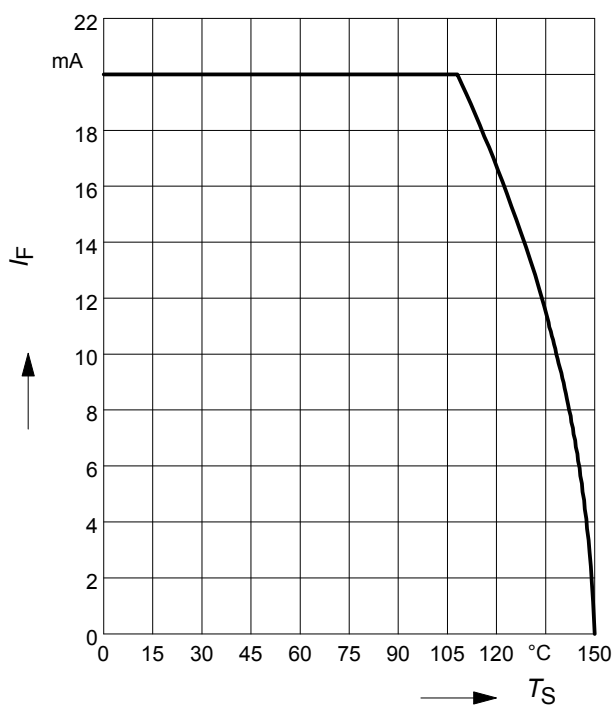
Forward current $I_F = f(T_S)$

BAT62



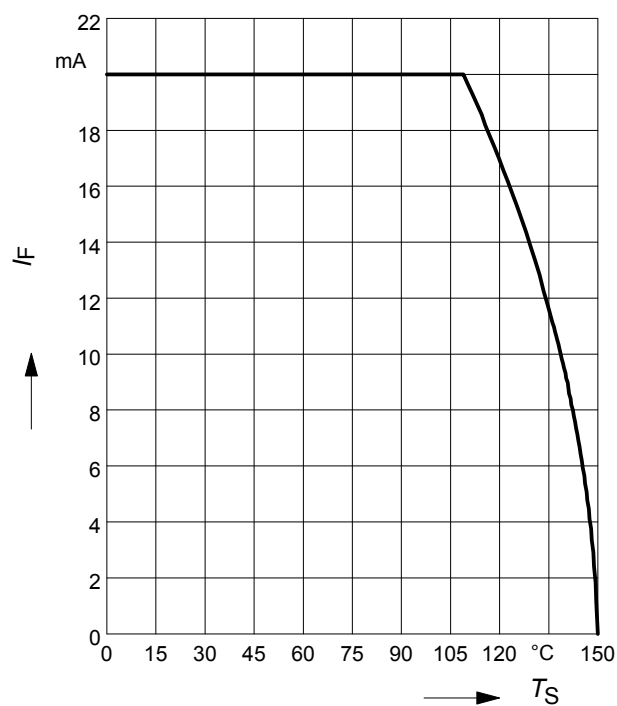
Forward current $I_F = f(T_S)$

BAT62-02L, -07L4



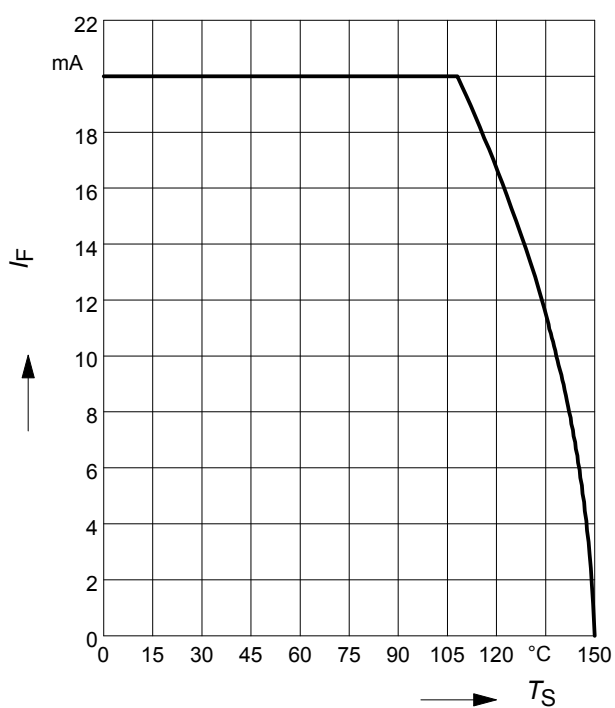
Forward current $I_F = f(T_S)$

BAT62-02W



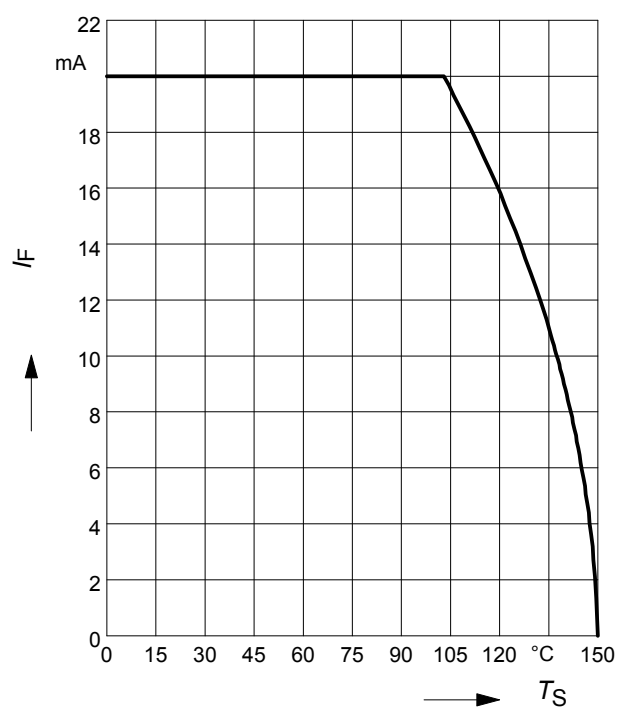
Forward current $I_F = f(T_S)$

BAT62-03W



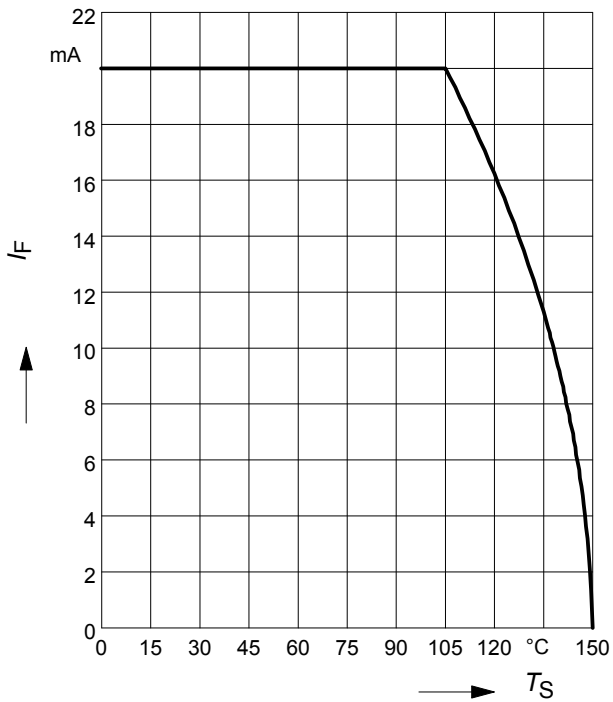
Forward current $I_F = f(T_S)$

BAT62-07W



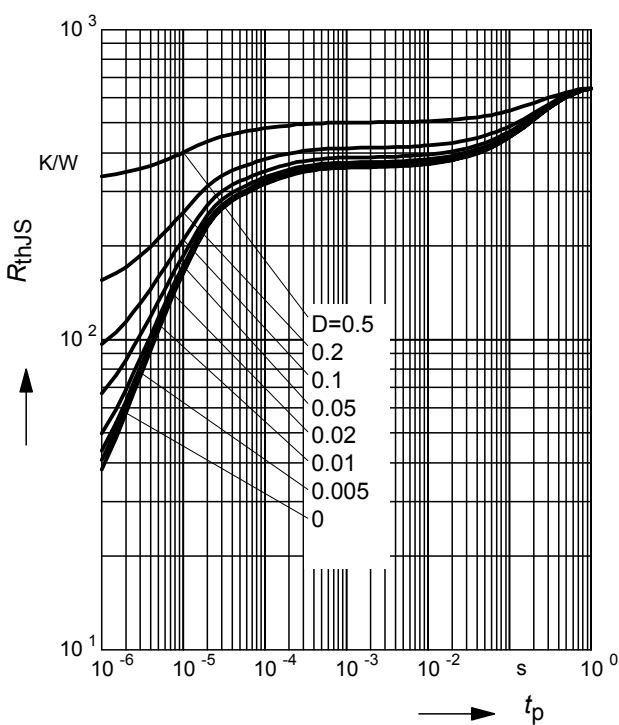
Forward current $I_F = f(T_S)$

BAT62-08S



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

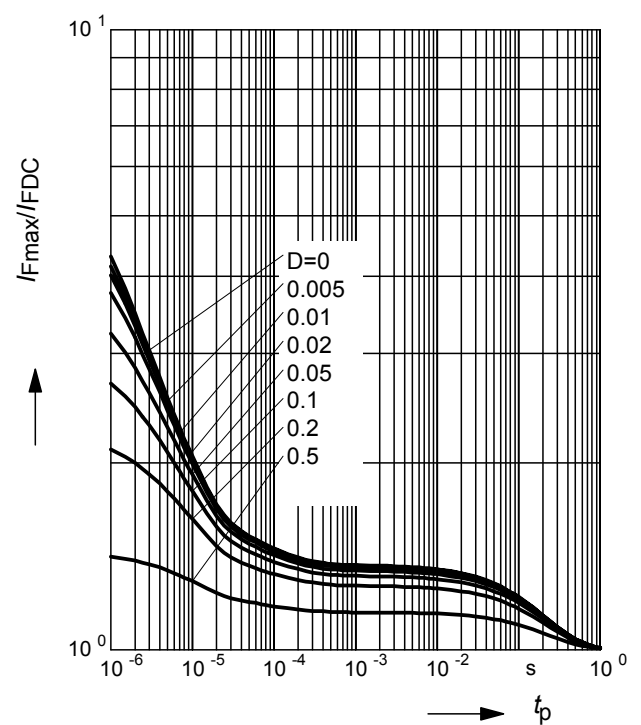
BAT62

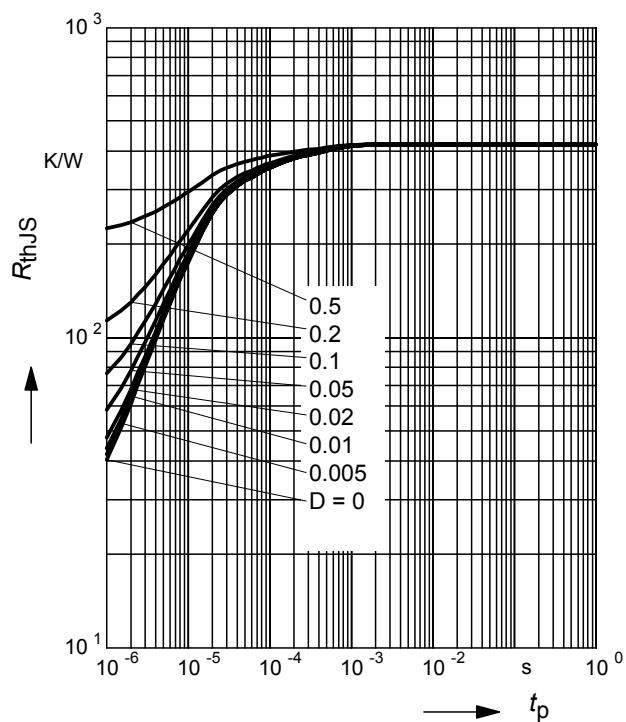


Permissible Pulse Load

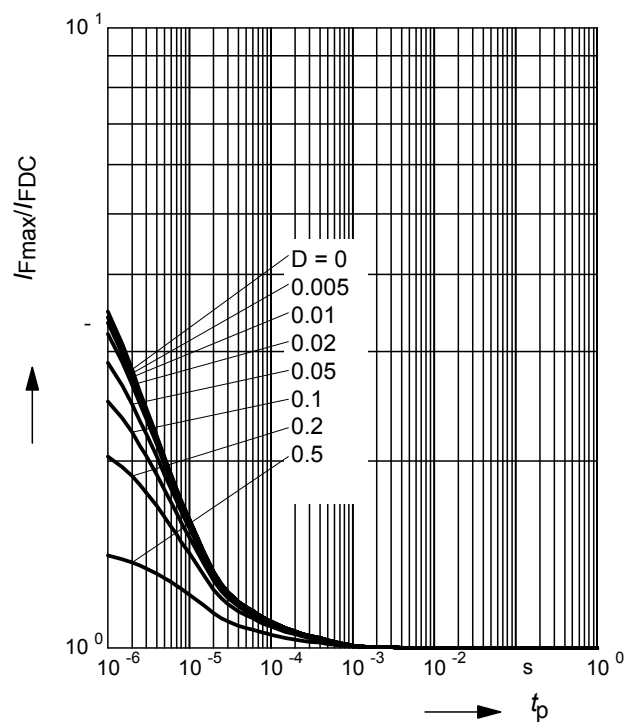
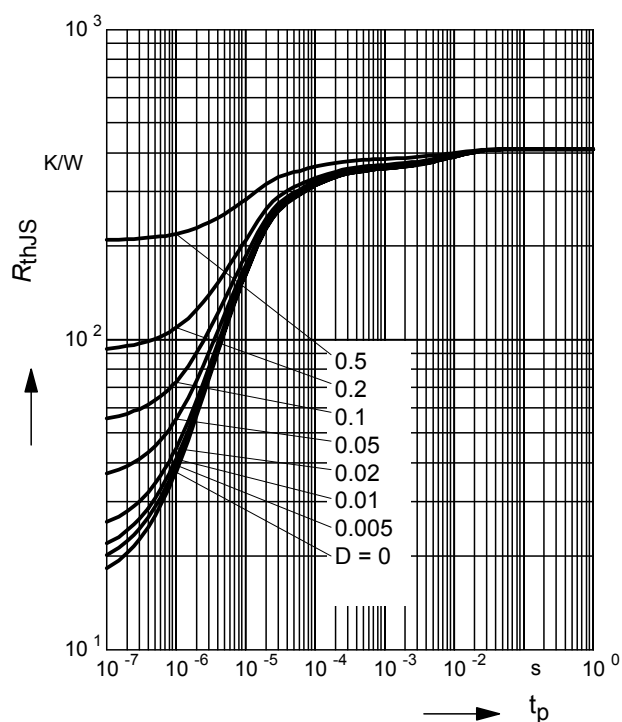
$$I_{Fmax}/I_{FDC} = f(t_p)$$

BAT62

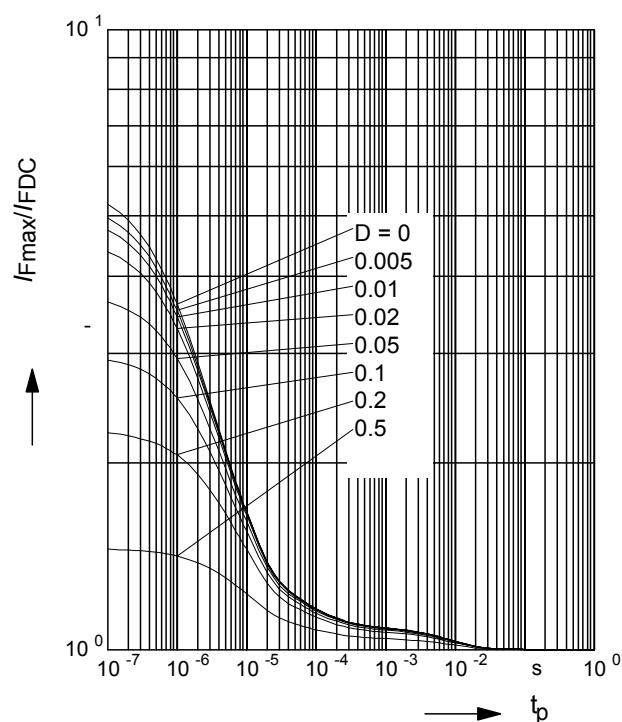


Permissible Puls Load $R_{thJS} = f(t_p)$
BAT62-02L, -07L4

Permissible Pulse Load

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

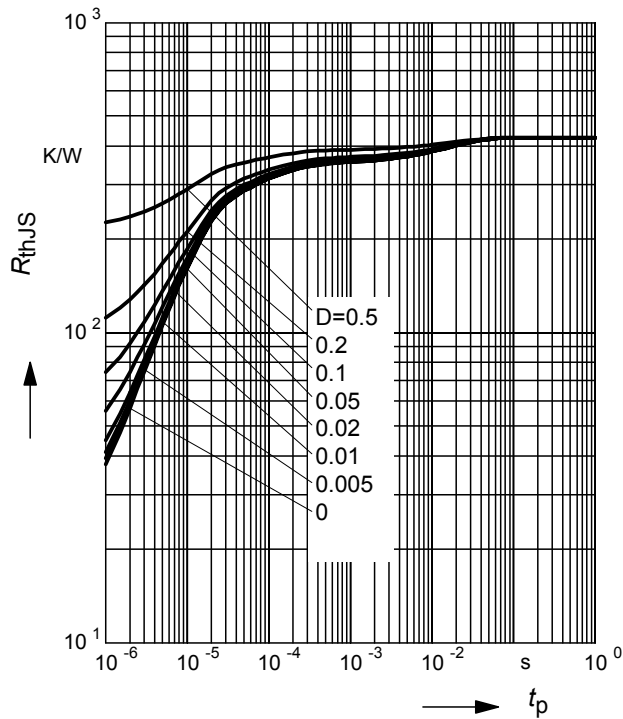
BAT62-02L, -07L4

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 $R_{thJS} = f(t_p)$

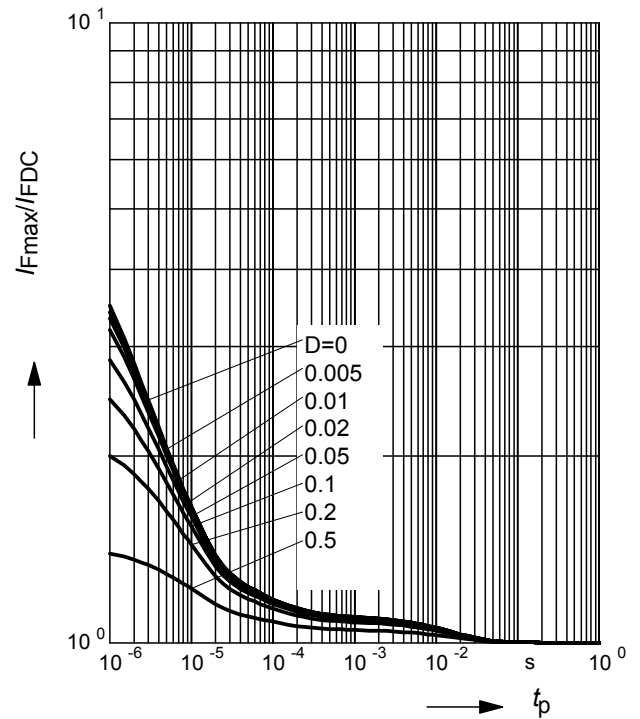
BAT62-03W



Permissible Pulse Load

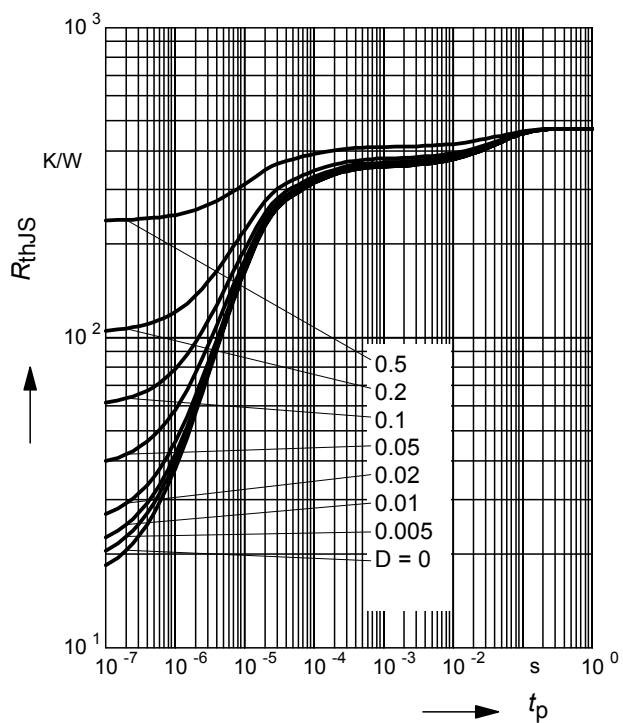
$$I_{Fmax}/I_{FDC} = f(t_p)$$

BAT62-03W



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

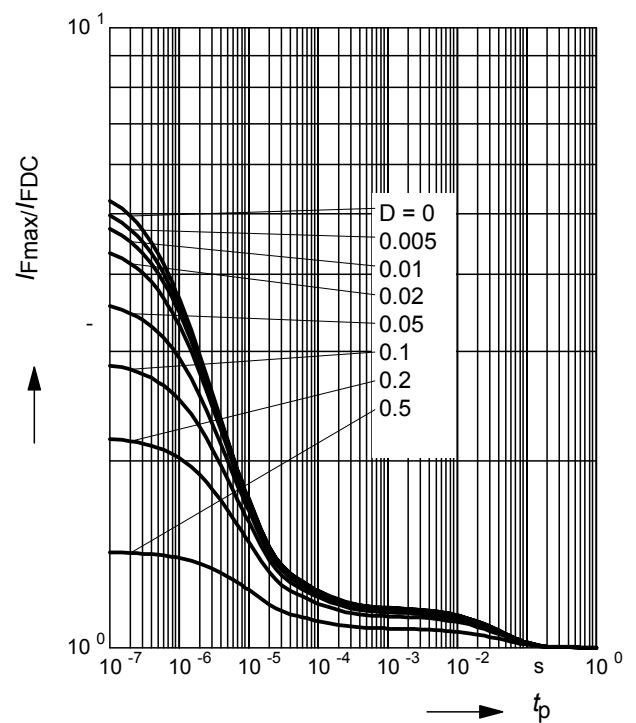
BAT62-07W



Permissible Pulse Load

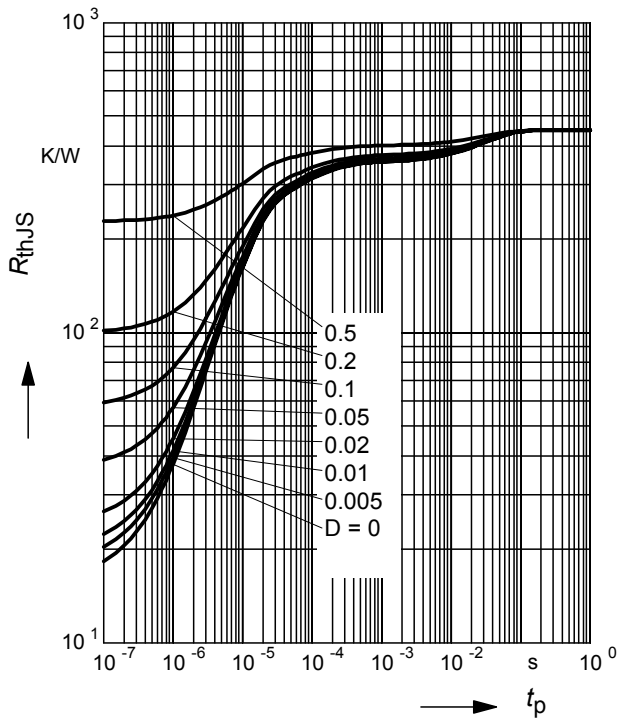
$$I_{Fmax}/I_{FDC} = f(t_p)$$

BAT62-07W



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

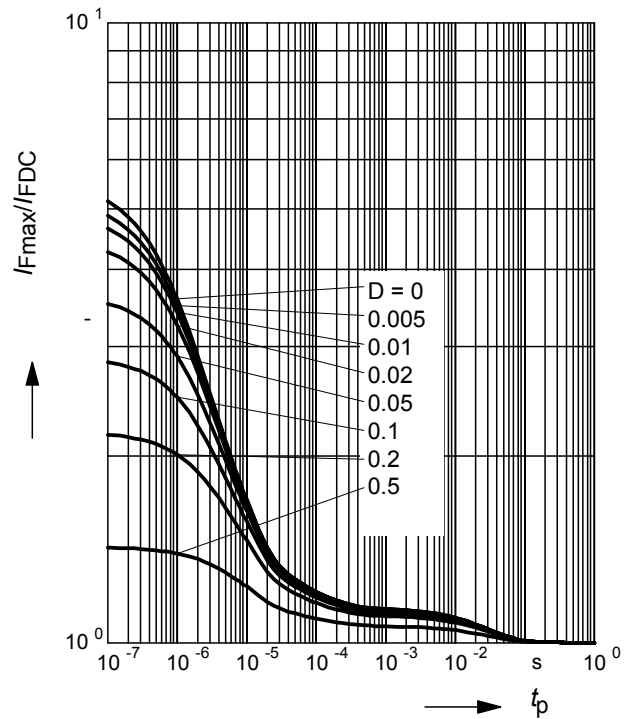
BAT62-08S



Permissible Pulse Load

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

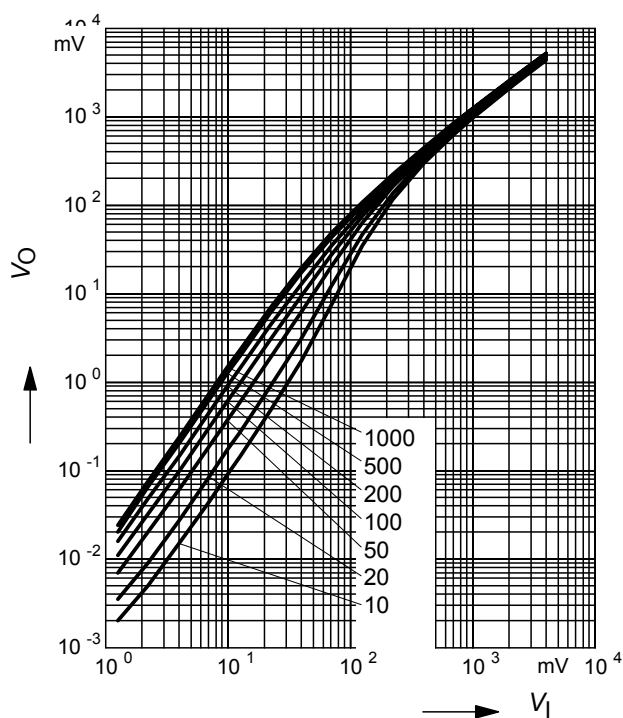
BAT62-08S



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

$f = 900\text{MHz}$

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



Testcircuit

