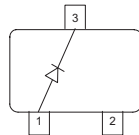
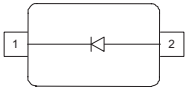


**Silicon PIN Diode**

- Current-controlled RF resistor  
for switching and attenuating applications
- Frequency range 1 MHz ... 2 GHz
- Especially useful as antenna switch  
in TV-sat tuners
- Very low harmonics


**BA595**  
**BA895**
**BA885**


Type	Package	Configuration	$L_S$ (nH)	Marking
BA595	SOD323	single	1.8	white R
BA885	SOT23	single	1.8	PA
BA895	SCD80	single	0.8	RA

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

Parameter	Symbol	Value	Unit
Diode reverse voltage	$V_R$	50	V
Forward current	$I_F$	50	mA
Junction temperature	$T_j$	150	°C
Operating temperature range	$T_{op}$	-55 ... 125	
Storage temperature	$T_{stg}$	-55 ... 150	

**Thermal Resistance**

Parameter	Symbol	Value	Unit
Junction - soldering point <sup>1)</sup>	$R_{thJS}$		K/W
BA595, BA885		$\leq 370$	
BA895		$\leq 95$	

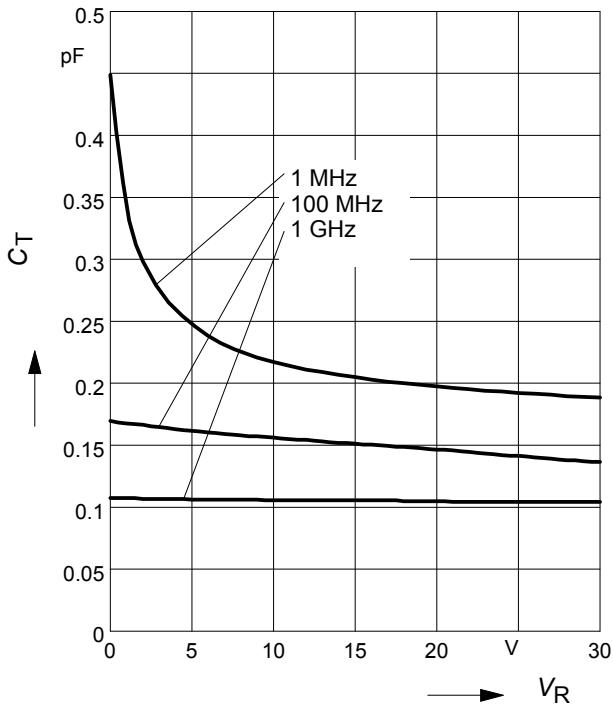
<sup>1)</sup>For calculation of  $R_{thJA}$  please refer to Application Note Thermal Resistance

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

Parameter	Symbol	Values			Unit
		min.	typ.	max.	
<b>DC Characteristics</b>					
Reverse current $V_R = 30\text{ V}$	$I_R$	-	-	20	nA
Forward voltage $I_F = 50\text{ mA}$	$V_F$	-	-	1.1	V
<b>AC Characteristics</b>					
Diode capacitance $V_R = 0\text{ V}, f = 100\text{ MHz}$ $V_R = 10\text{ V}, f = 1\text{ MHz}$	$C_T$	-	0.26 0.22	0.4 0.6	pF
Reverse parallel resistance $V_R = 1\text{ V}, f = 100\text{ MHz}$ $V_R = 0\text{ V}, f = 1\text{ GHz}$	$R_P$	-	50 10	- -	k $\Omega$
Forward resistance $I_F = 1.5\text{ mA}, f = 100\text{ MHz}$ $I_F = 10\text{ mA}, f = 100\text{ MHz}$	$r_f$	-	22 4.5	40 7	$\Omega$
Charge carrier life time $I_F = 10\text{ mA}, I_R = 6\text{ mA}$ , measured at $I_R = 3\text{ mA}$ , $R_L = 100\ \Omega$	$\tau_{rr}$	-	1600	-	ns
I-region width	$W_I$	-	130	-	$\mu\text{m}$

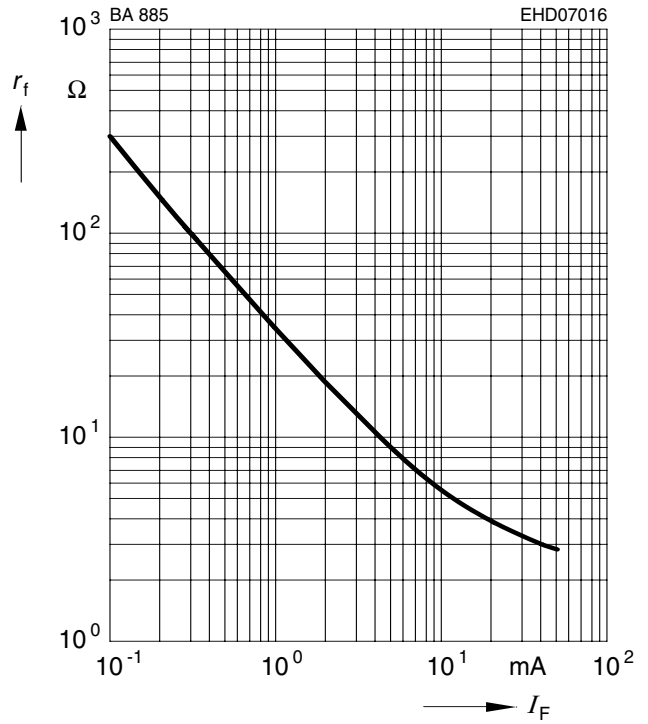
**Diode capacitance  $C_T = f(V_R)$**

$f =$  Parameter



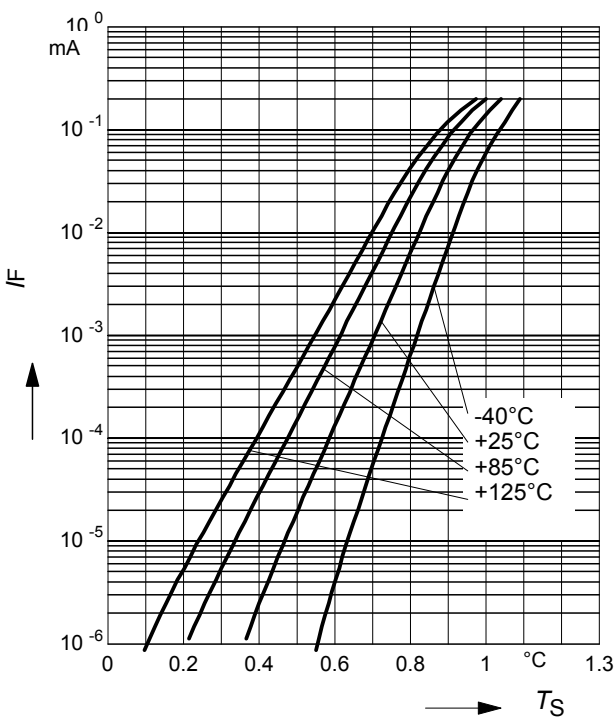
**Forward resistance  $r_f = f(I_F)$**

$f =$  Parameter



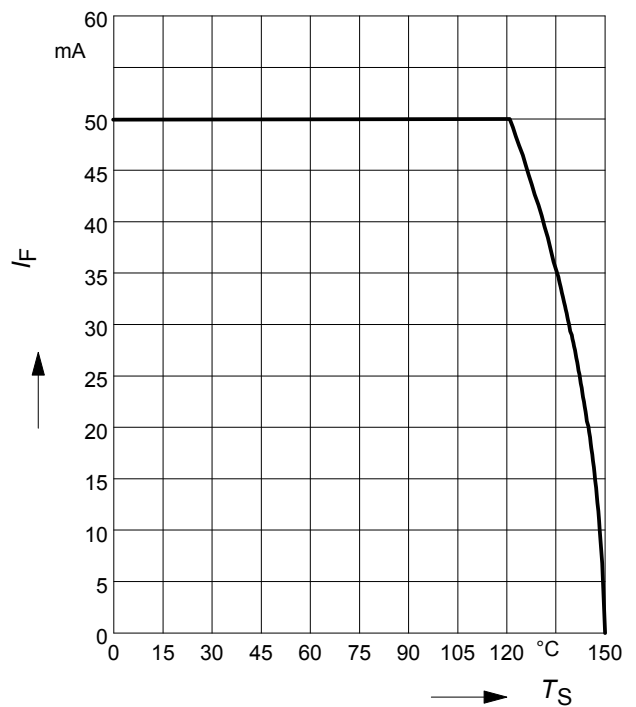
**Forward current  $I_F = f(V_F)$**

$T_A =$  Parameter



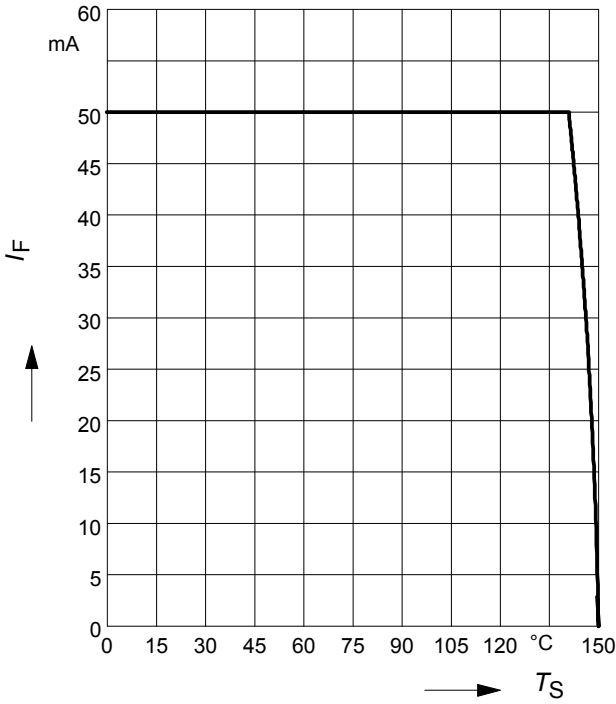
**Forward current  $I_F = f(T_S)$**

BA595



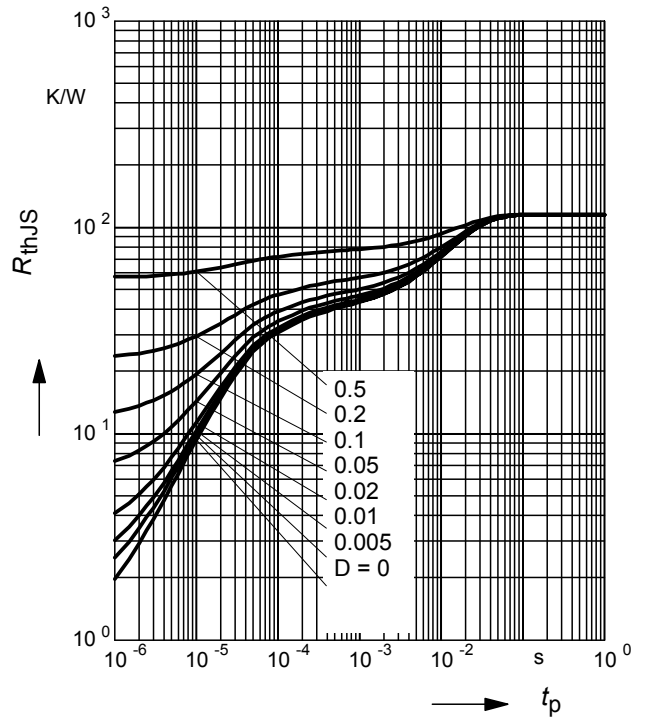
**Forward current  $I_F = f(T_S)$**

BA895



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

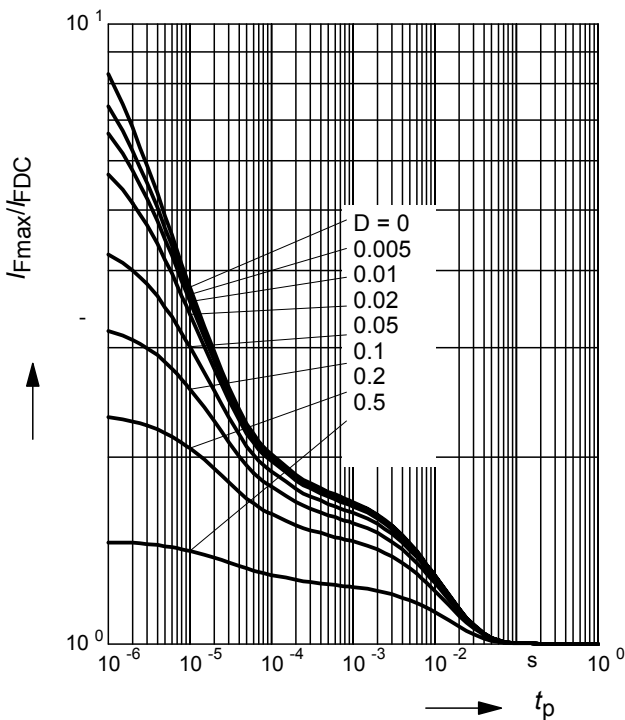
BA595



**Permissible Pulse Load**

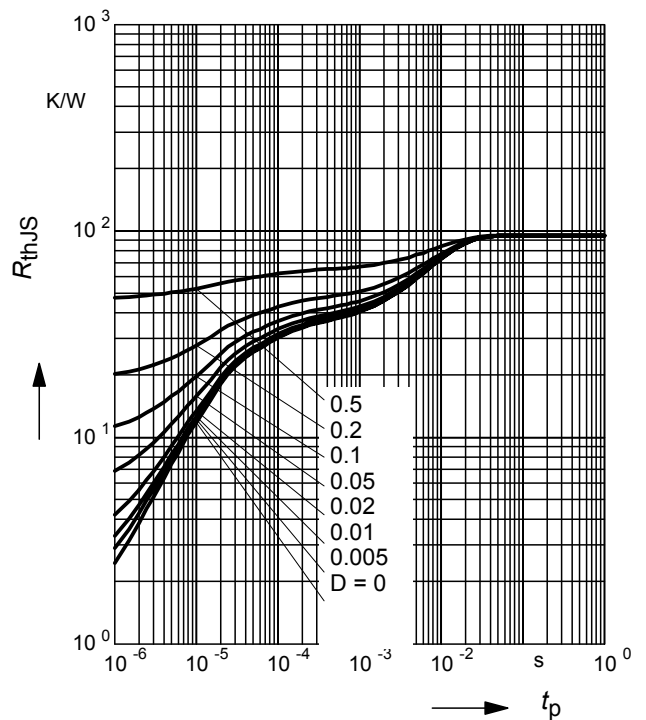
$I_{Fmax} / I_{FDC} = f(t_p)$

BA595



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

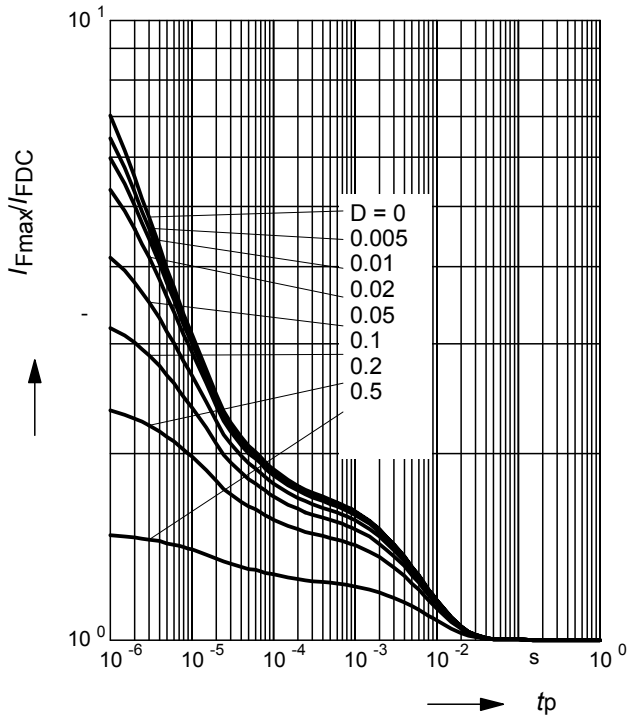
BA595



**Permissible Pulse Load**

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

BA895



This datasheet has been download from:

[www.datasheetcatalog.com](http://www.datasheetcatalog.com)

Datasheets for electronics components.