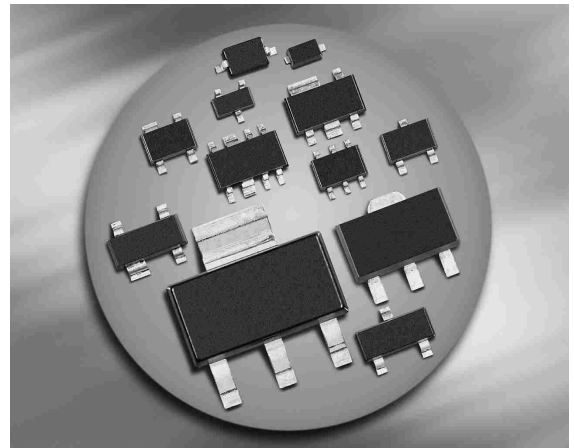
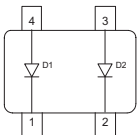


## Silicon Switching Diode

- For high-speed switching applications
- Electrical insulated diodes



### BAS28/W



Type	Package	Configuration	Marking
BAS28	SOT143	parallel pair	JTs
BAS28W	SOT343	parallel pair	JTs

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

Parameter	Symbol	Value	Unit
Diode reverse voltage	$V_R$	80	V
Peak reverse voltage	$V_{RM}$	85	
Forward current	$I_F$	200	mA
Surge forward current, $t = 1 \mu\text{s}$	$I_{FS}$	4.5	A
Total power dissipation	$P_{tot}$		mW
BAS28, $T_S \leq 31^\circ\text{C}$		330	
BAS28W, $T_S \leq 103^\circ\text{C}$		250	
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 ... 150	

### Thermal Resistance

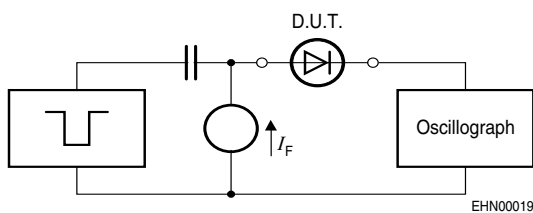
Parameter	Symbol	Value	Unit
Junction - soldering point <sup>1)</sup>	$R_{thJS}$		K/W
BAS28		$\leq 360$	
BAS28W		$\leq 190$	

<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.	
DC Characteristics					
Breakdown voltage $I_{(BR)} = 100 \mu A$	$V_{(BR)}$	85	-	-	V
Reverse current $V_R = 75 V$ $V_R = 25 V, T_A = 150 ^\circ C$ $V_R = 75 V, T_A = 150 ^\circ C$	$I_R$	- - -	- - -	0.1 30 50	$\mu A$
Forward voltage $I_F = 1 mA$ $I_F = 10 mA$ $I_F = 50 mA$ $I_F = 100 mA$ $I_F = 150 mA$	$V_F$	- - - - -	- - - - -	715 855 1000 1200 1250	mV
AC Characteristics					
Diode capacitance $V_R = 0 V, f = 1 MHz$	$C_T$	-	-	2	pF
Reverse recovery time $I_F = 10 mA, I_R = 10 mA$ , measured at $I_R = 1mA$ , $R_L = 100 \Omega$	$t_{rr}$	-	-	4	ns

Test circuit for reverse recovery time

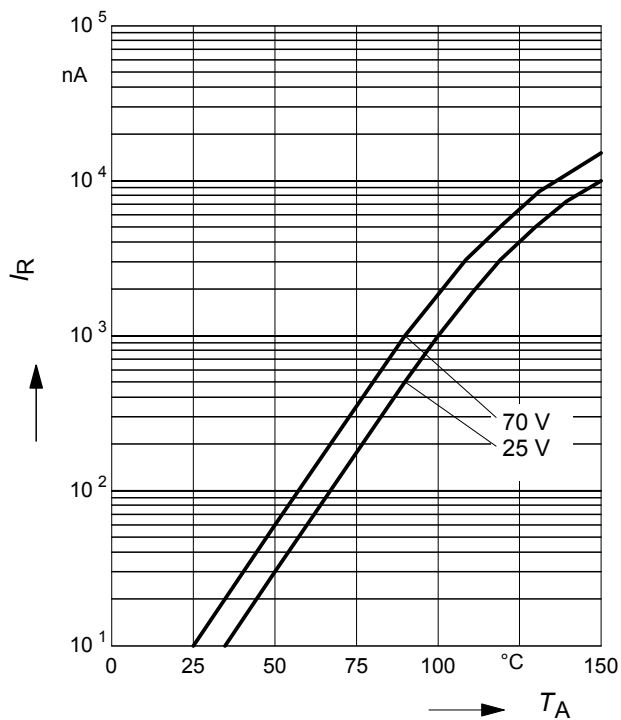


Pulse generator:  $t_p = 100\text{ns}$ ,  $D = 0.05$ ,  
 $t_r = 0.6\text{ns}$ ,  $R_i = 50\Omega$

Oscilloscope:  $R = 50\Omega$ ,  $t_r = 0.35\text{ns}$ ,  
 $C \leq 1\text{pF}$

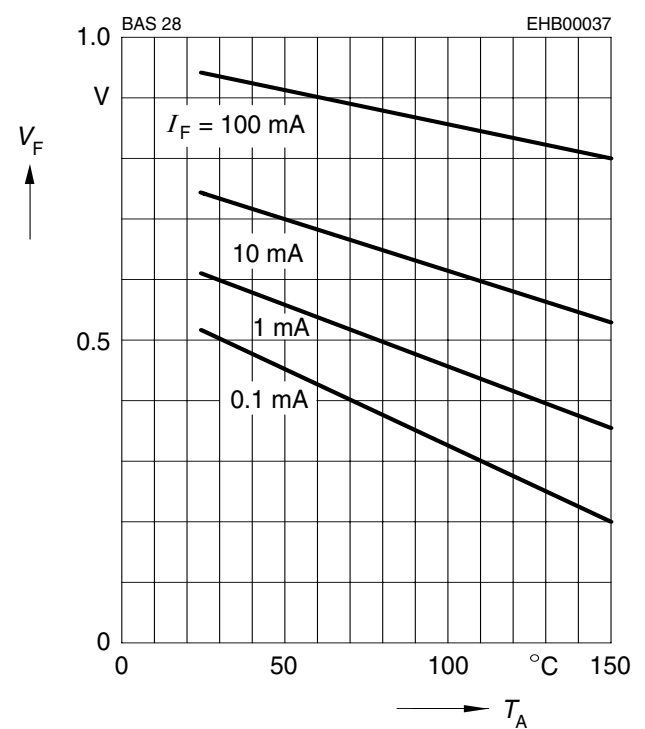
**Reverse current  $I_R = f(T_A)$**

$V_R = \text{Parameter}$



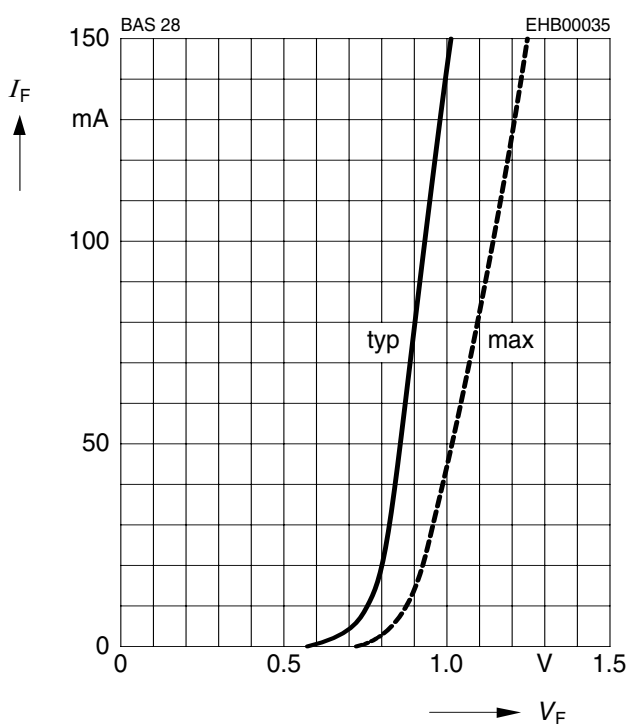
**Forward Voltage  $V_F = f(T_A)$**

$I_F = \text{Parameter}$



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

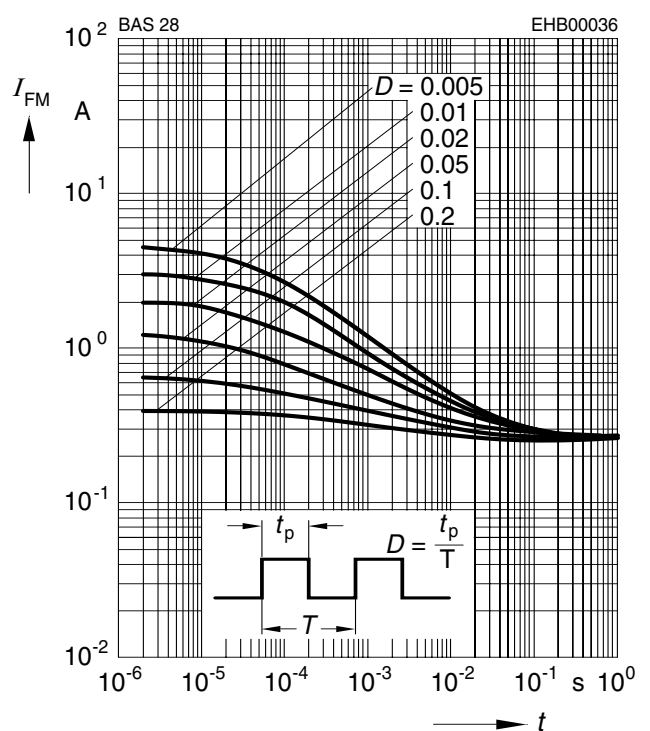
$T_A = 25\text{ °C}$



**Peak forward current  $I_{FM} = f(t_p)$**

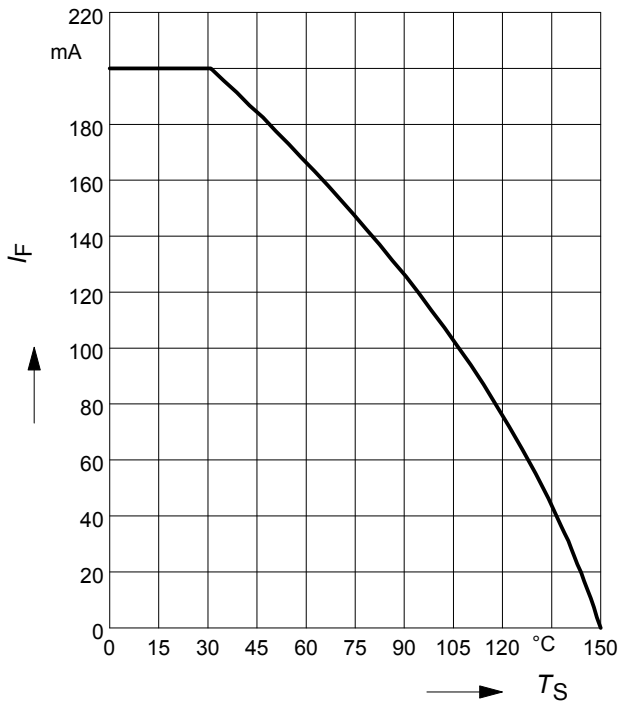
$T_A = 25\text{ °C}$

BAS28



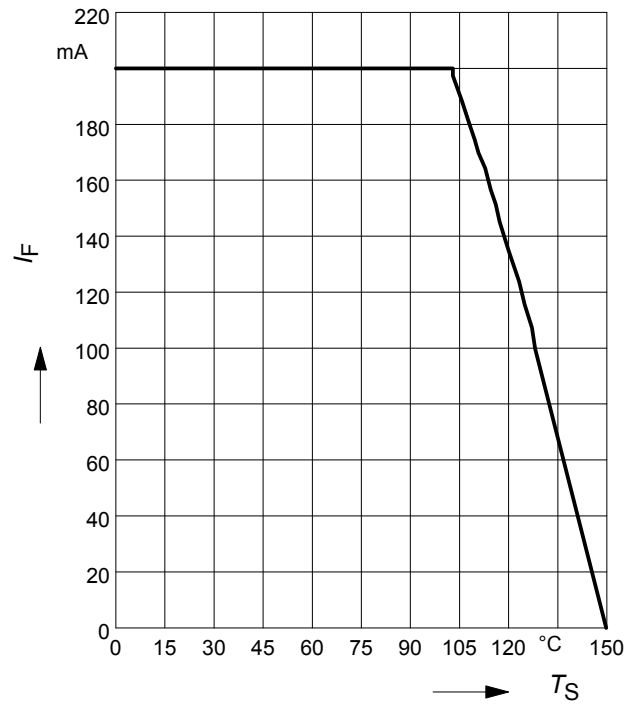
**Forward current  $I_F = f(T_S)$**

**BAS28**



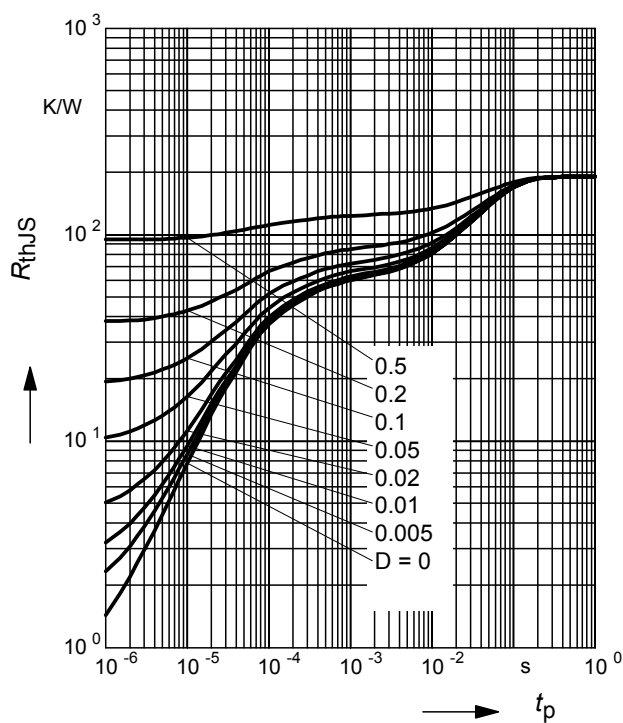
**Forward current  $I_F = f(T_S)$**

**BAS28W**



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

**BAS28W**



**Permissible Pulse Load**

$I_{Fmax}/I_{FDC} = f(t_p)$  **BAS28W**

