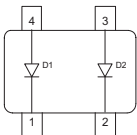


Silicon Switching Diode

- 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	

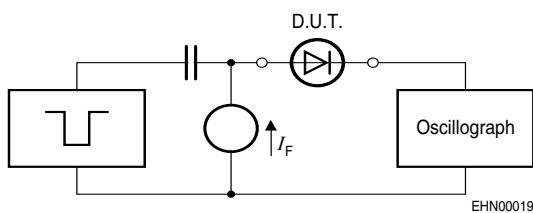
Thermal Resistance

Parameter	Symbol	Value	Unit
Junction - soldering point ¹⁾	R_{thJS}		K/W
BAS28		≤ 360	
BAS28W		≤ 190	

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

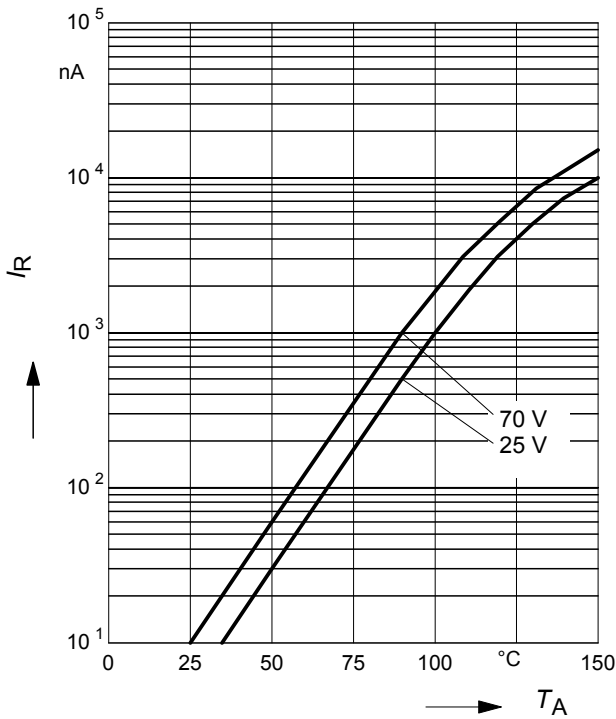
Test circuit for reverse recovery time


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

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

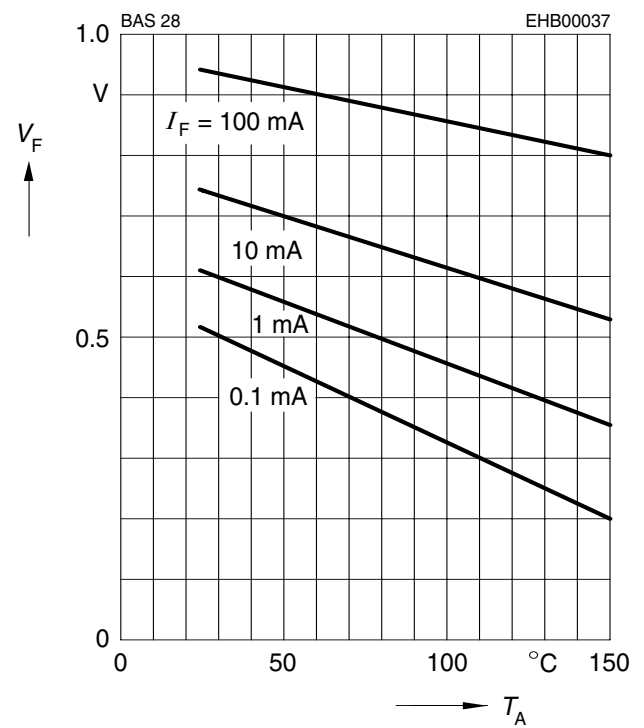
Reverse current $I_R = f(T_A)$

$V_R = \text{Parameter}$



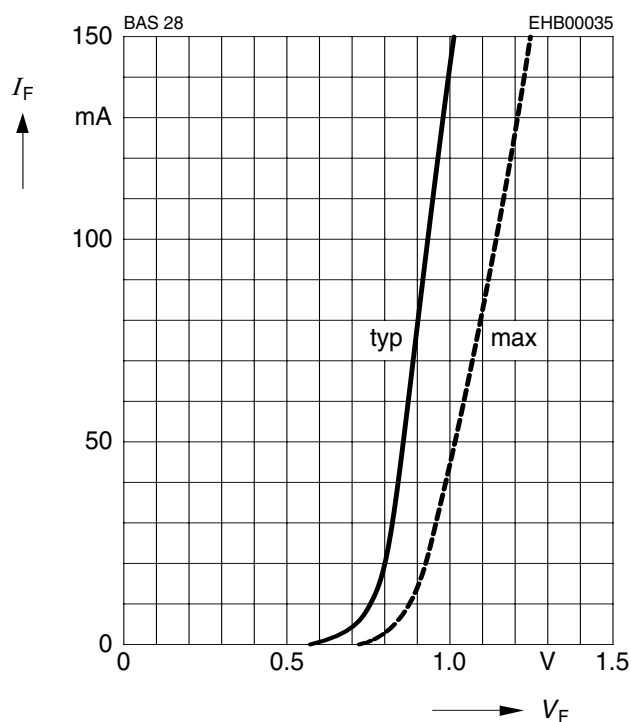
Forward Voltage $V_F = f(T_A)$

$I_F = \text{Parameter}$



Forward current $I_F = f(V_F)$

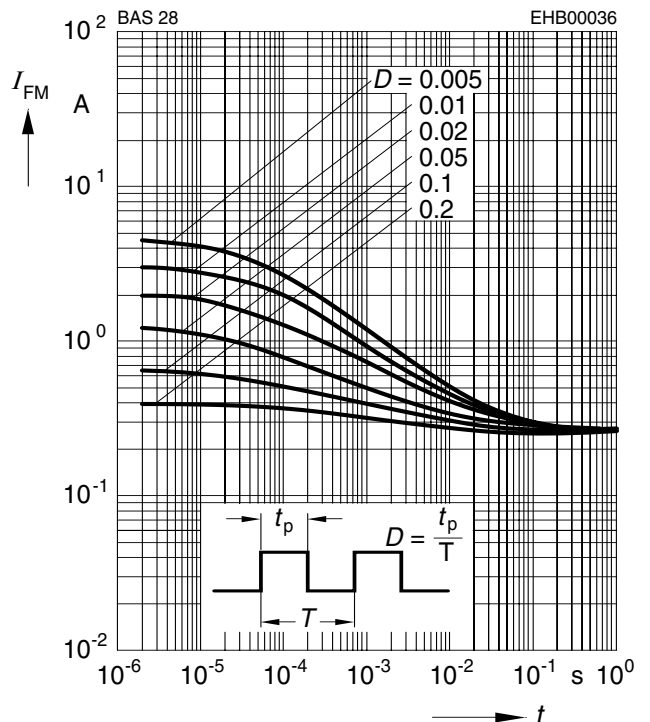
$T_A = 25\text{ °C}$



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

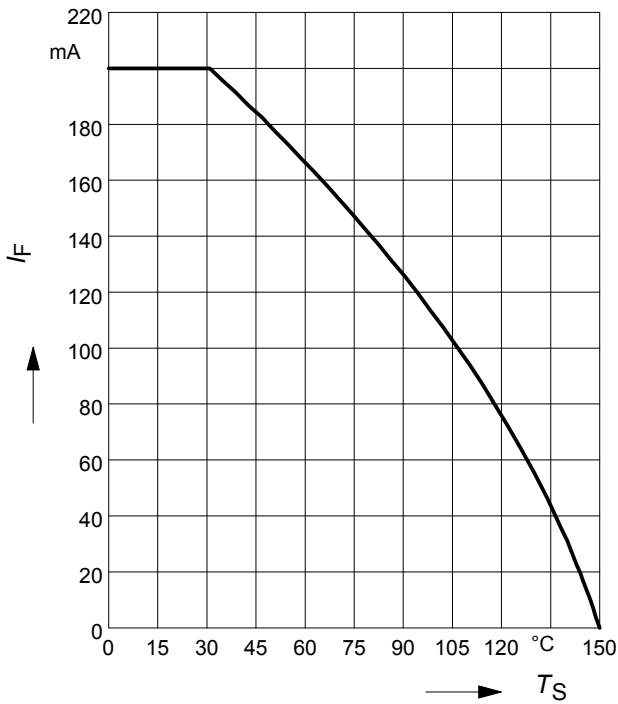
$T_A = 25\text{ °C}$

BAS28



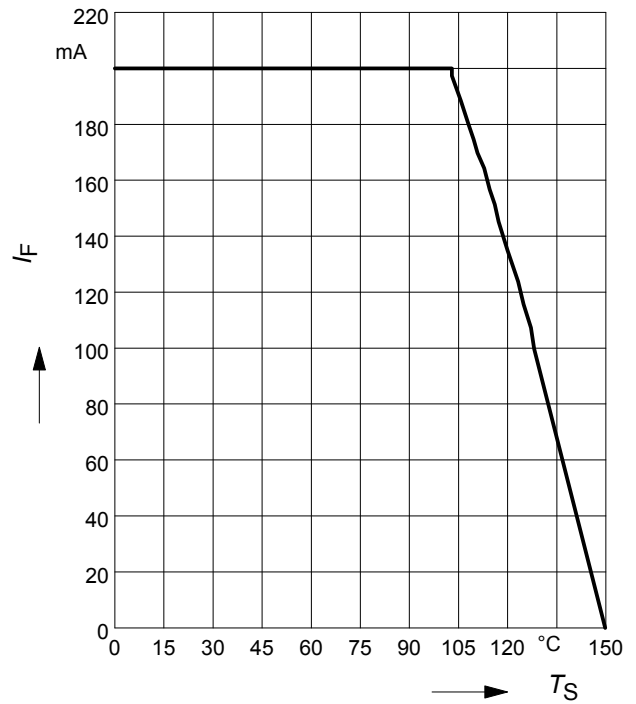
Forward current $I_F = f(T_S)$

BAS28



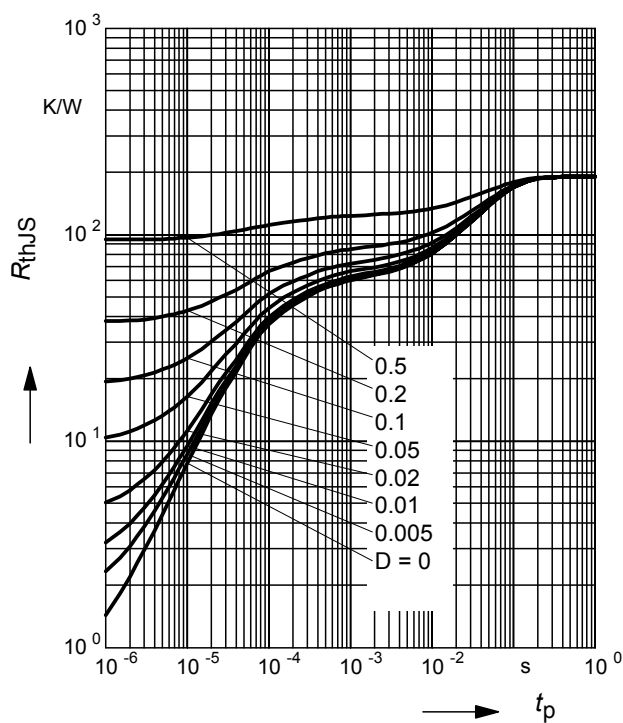
Forward current $I_F = f(T_S)$

BAS28W



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

BAS28W



Permissible Pulse Load

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

