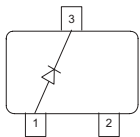


Silicon Low Leakage Diode

- Low-leakage applications
- Medium speed switching times
- Pb-free (RoHS compliant) package¹⁾
- Qualified according AEC Q101



BAS116



Type	Package	Configuration	Marking
BAS116	SOT23	single	JVs

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	250	mA
Non-repetitive peak surge forward current	I_{FSM}		A
$t = 1 \mu\text{s}$		4.5	
$t = 1 \text{ s}$		0.5	
Total power dissipation $T_S \leq 54^\circ\text{C}$	P_{tot}	370	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-65 ... 150	

Thermal Resistance

Parameter	Symbol	Value	Unit
Junction - soldering point ²⁾	R_{thJS}	≤ 260	K/W
BAS116			

¹Pb-containing package may be available upon special request

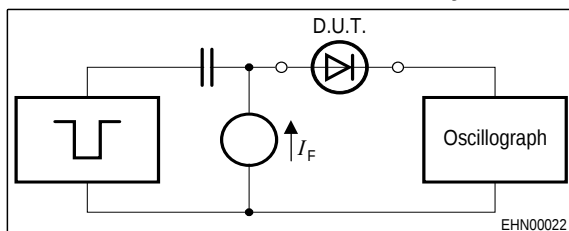
²For calculation of R_{thJA} please refer to Application Note Thermal Resistance

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 $V_R = 75\ \text{V}$ $V_R = 75\ \text{V}, T_A = 150\ ^\circ\text{C}$	I_R	- - -	- - -	5 80	nA
Forward voltage $I_F = 1\ \text{mA}$ $I_F = 10\ \text{mA}$ $I_F = 50\ \text{mA}$ $I_F = 150\ \text{mA}$	V_F	- - - -	- - - -	900 1000 1100 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}	-	0.6	1.5	μs

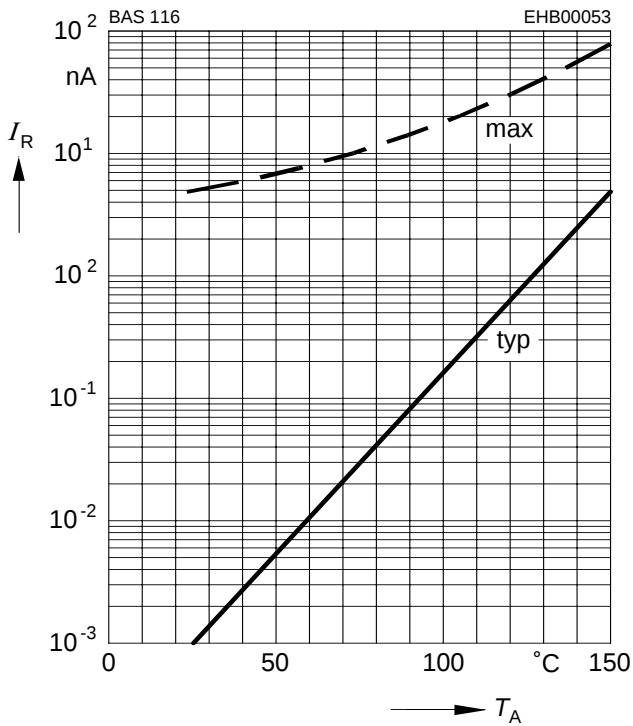
Test circuit for reverse recovery time


Puls generator: $t_p = 10\ \mu\text{s}$, $D = 0.05$,
 $t_r = 0.6\ \text{ns}$, $R_i = 50\ \Omega$

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

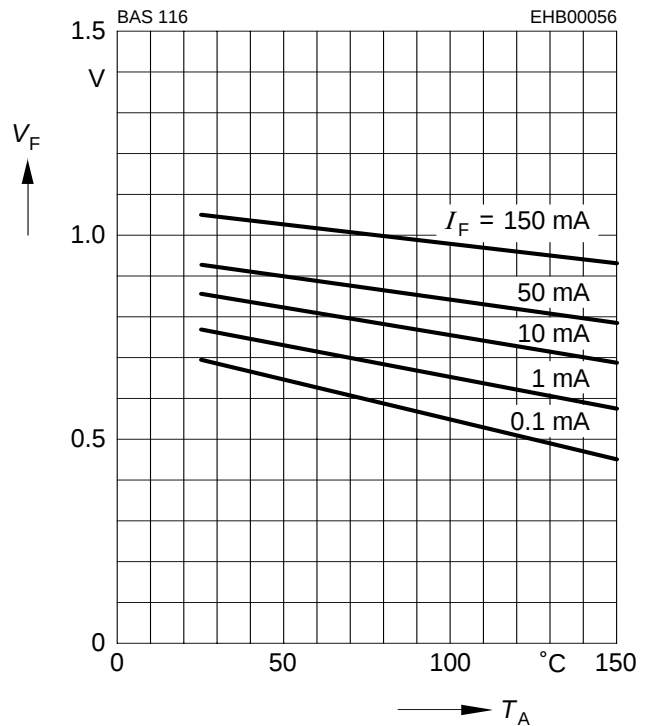
Reverse current $I_R = f(T_A)$

$V_R = \text{Parameter}$



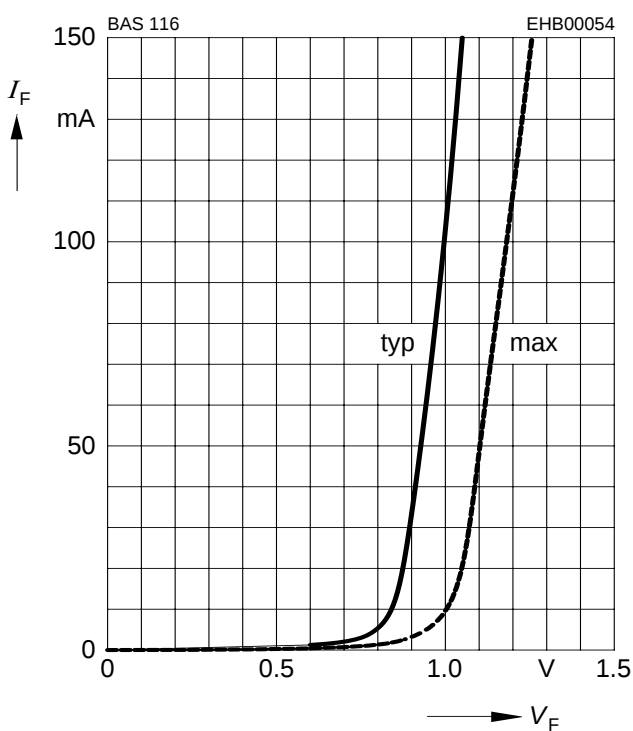
Forward Voltage $V_F = f(T_A)$

$I_F = \text{Parameter}$



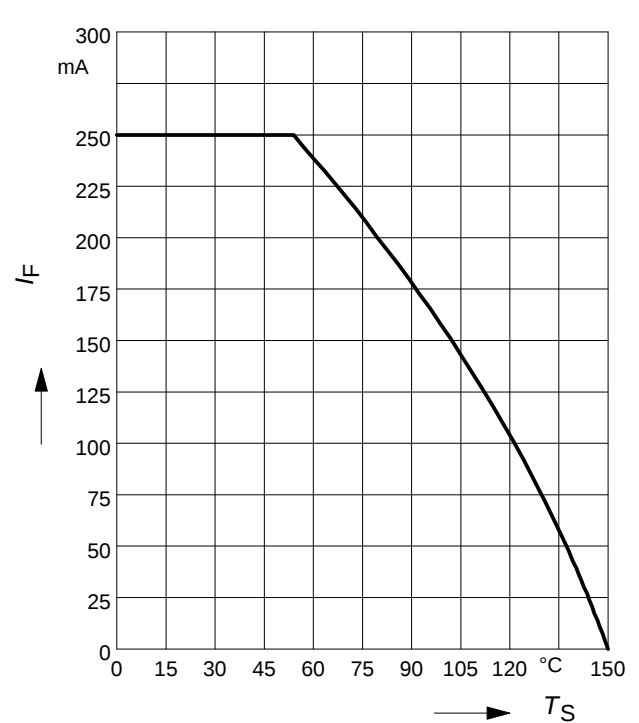
Forward current $I_F = f(V_F)$

$T_A = 25^\circ\text{C}$

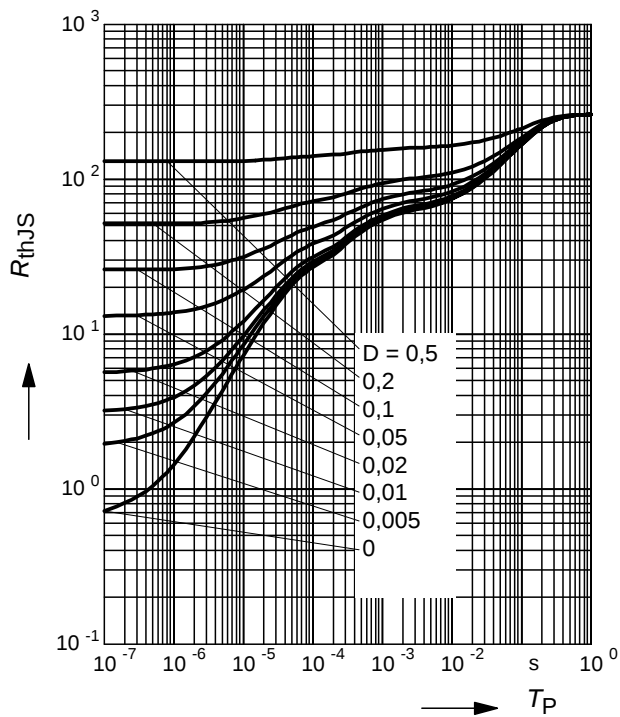


Forward current $I_F = f(T_S)$

BAS116

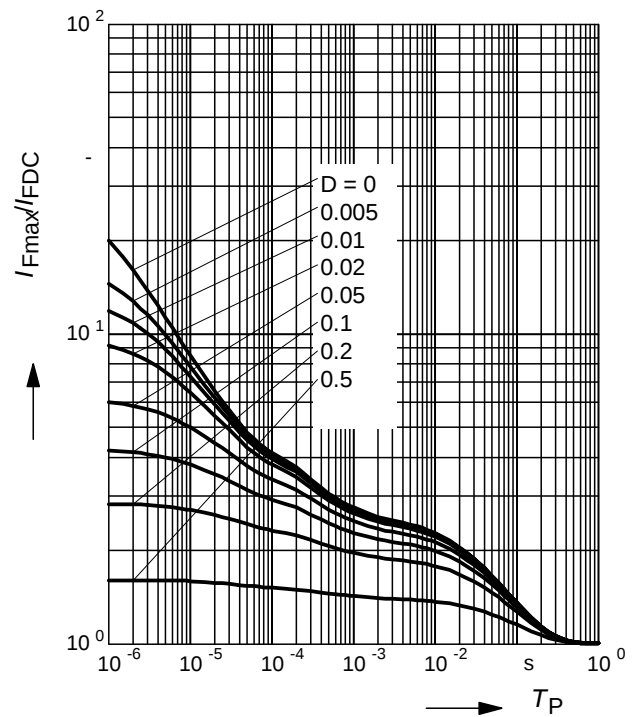


Permissible Puls Load $R_{thJS} = f(t_p)$

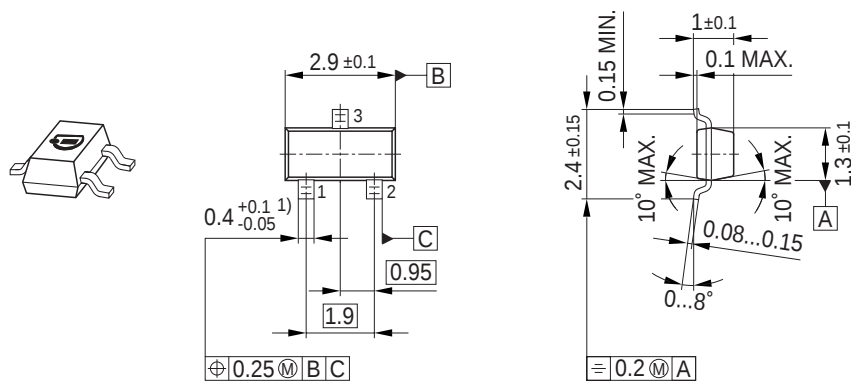


Permissible Pulse Load

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

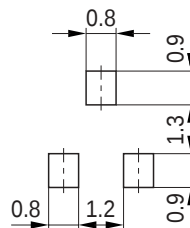


Package Outline

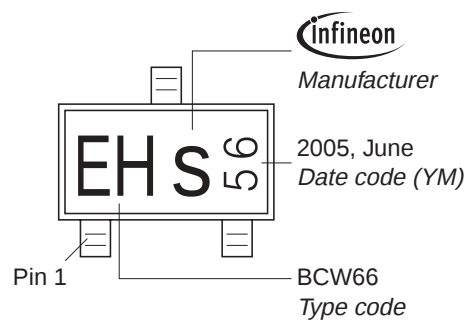


1) Lead width can be 0.6 max. in dambar area

Foot Print

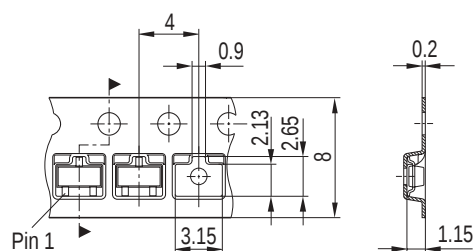


Marking Layout (Example)



Standard Packing

Reel $\varnothing 180$ mm = 3.000 Pieces/Reel
 Reel $\varnothing 330$ mm = 10.000 Pieces/Reel



Edition 2006-02-01

Published by

Infineon Technologies AG

81726 München, Germany

© Infineon Technologies AG 2007.

All Rights Reserved.

Attention please!

The information given in this dokument shall in no event be regarded as a guarantee of conditions or characteristics ("Beschaffenheitsgarantie"). With respect to any examples or hints given herein, any typical values stated herein and/or any information regarding the application of the device, Infineon Technologies hereby disclaims any and all warranties and liabilities of any kind, including without limitation warranties of non-infringement of intellectual property rights of any third party.

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.

AMEYA360

Components Supply Platform

Authorized Distribution Brand :



Website :

Welcome to visit www.ameya360.com

Contact Us :

➤ Address :

401 Building No.5, JiuGe Business Center, Lane 2301, Yishan Rd
Minhang District, Shanghai , China

➤ Sales :

Direct +86 (21) 6401-6692

Email amall@ameya360.com

QQ 800077892

Skype ameyasales1 ameyasales2

➤ Customer Service :

Email service@ameya360.com

➤ Partnership :

Tel +86 (21) 64016692-8333

Email mkt@ameya360.com