250mA, 100V SMD Switching Diode

FEATURES

- Fast switching device (trr<4ns)
- Ideal for automated placement
- Moisture sensitivity level: level 1, per J-STD-020
- Compliance to RoHS directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21

APPLICATIONS

- Switching mode power supply (SMPS)
- Adapters
- Lighting application
- On-board DC/DC converter

MECHANICAL DATA

- Case: SOD-323
- Molding compound meets UL 94 V-0 flammability rating
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 1A whisker test
- Polarity: Indicated by cathode band
- Weight: 4.85 ± 0.5mg (approximately)

KEY PARAMETERS		
PARAMETER	**VALUE**	**UNIT**
I_F	250	mA
V_R	100	V
V_F at I_F=150mA	1.25	V
T_J Max.	150	°C
Package	SOD-323	
Configuration	Single die	

Pb-Free RoHS COMPLIANT HALOGEN FREE





ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted)				
PARAMETER		**SYMBOL**	**BAS316**	**UNIT**
Marking code on the device			A6	
Power dissipation		P_D	200	mW
Forward current		I_F	250	mA
Non-repetitive peak forward surge current	Pulse Width = 1 μs	I_{FRM}	4.0	A
	Pulse Width = 1 ms		1.0	
Junction temperature range		T_J	-65 to +150	°C
Storage temperature range		T_{STG}	-65 to +150	°C

ELECTRICAL SPECIFICATIONS (T_A = 25°C unless otherwise noted)					
PARAMETER	**CONDITIONS**	**SYMBOL**	**MIN**	**MAX**	**UNIT**
Forward voltage per diode (1)	I_F = 1.0mA, T_J = 25°C	V_F	-	0.715	V
	I_F = 10mA, T_J = 25°C		-	0.855	
	I_F = 50mA, T_J = 25°C		-	1.000	
	I_F = 150mA, T_J = 25°C		-	1.250	
Reverse voltage	I_R = 100μA, T_J = 25°C	V_R	100	-	V
Reverse current @ rated V_R (2)	V_R = 25V T_J = 25°C	I_R	-	0.03	μA
	V_R = 75V T_J = 25°C		-	1.00	
Junction capacitance	f = 1 MHz, V_R = 0V	C_J	-	1.5	pF
Reverse recovery time	I_F = 10mA, I_R = 10mA, R_L = 100Ω	t_{rr}	-	4.0	ns

Notes:

1. Pulse test with PW=0.3 ms
2. Pulse test with PW=30 ms

ORDERING INFORMATION		
ORDERING CODE	**PACKAGE**	**PACKING**
BAS316 RRG	SOD-323	3K / 7" Reel

CHARACTERISTICS CURVES

(T_A = 25°C unless otherwise noted)

Fig.1 Typical Forward Characteristics

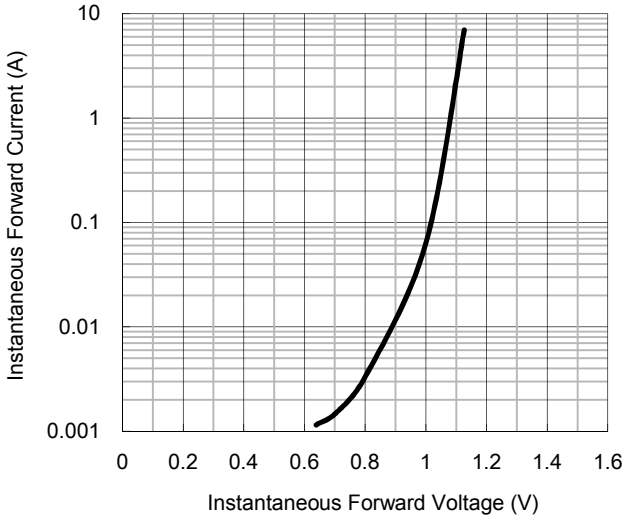


Fig.2 Reverse Current

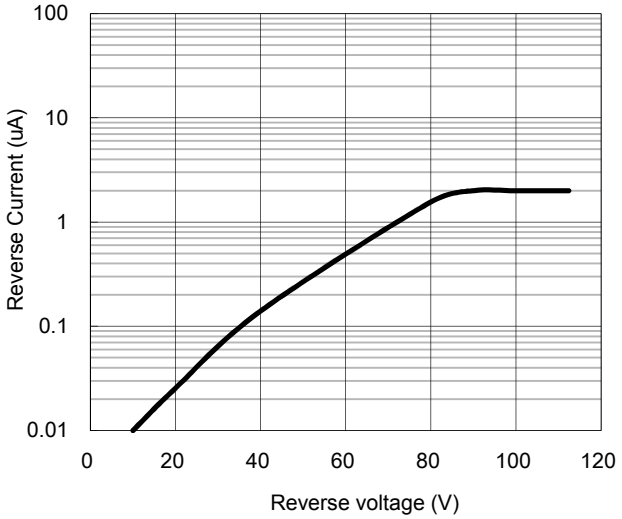


Fig.3 Admissible Power Dissipation Curve

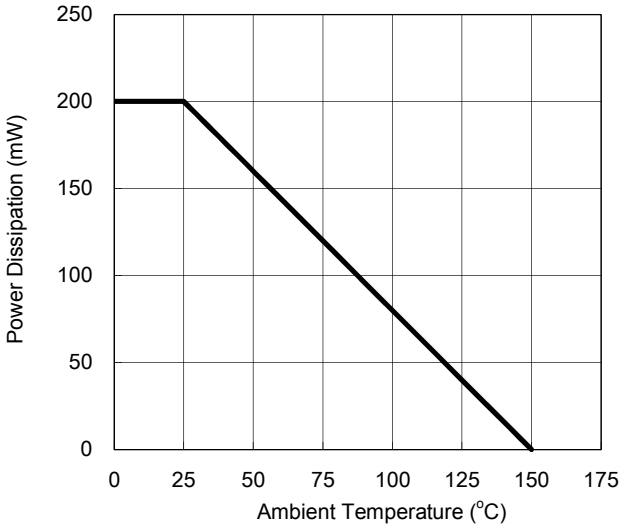
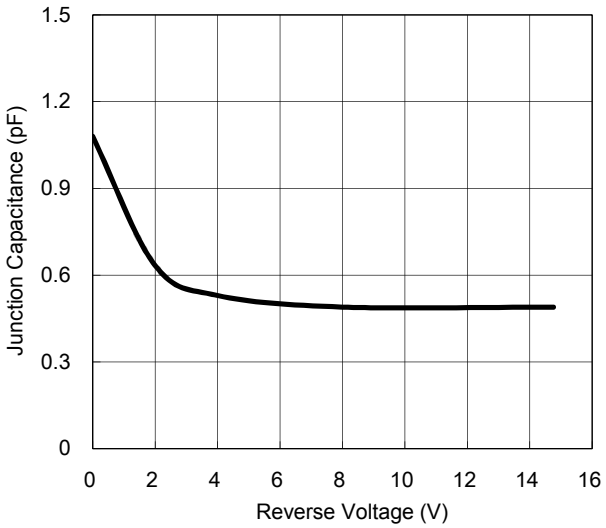
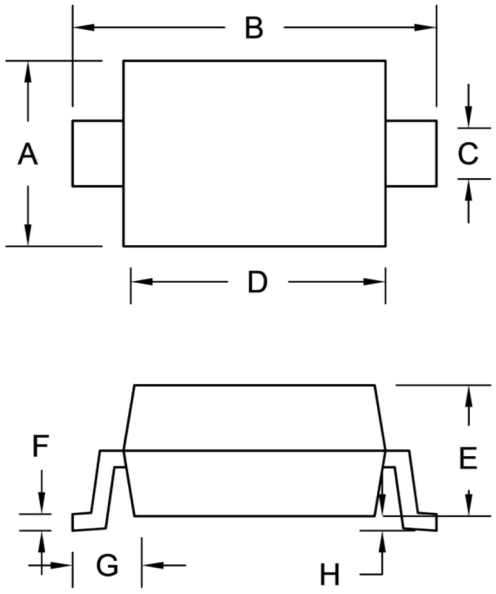


Fig.4 Typical Junction Capacitance



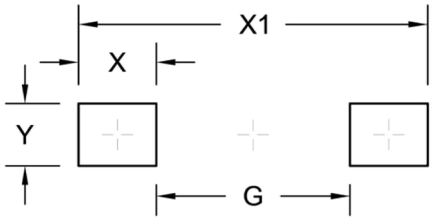
PACKAGE OUTLINE DIMENSION

SOD-323



DIM.	Unit (mm)		Unit (inch)	
	Min.	Max.	Min.	Max.
A	1.150	1.400	0.045	0.055
B	2.300	2.700	0.091	0.106
C	0.250	0.450	0.010	0.018
D	1.600	1.800	0.063	0.071
E	0.800	1.000	0.031	0.039
F	0.050	0.177	0.002	0.007
G	0.475 (Ref.)		0.019 (Ref.)	
H	-	0.100	-	0.004

SUGGEST PAD LAYOUT



Symbol	Unit (mm)	Unit (inch)
G	1.52	0.060
X	0.61	0.024
X1	2.74	0.108
Y	0.49	0.019

Notice

Specifications of the products displayed herein are subject to change without notice. TSC or anyone on its behalf, assumes no responsibility or liability for any errors or inaccuracies.

Purchasers are solely responsible for the choice, selection, and use of TSC products and TSC assumes no liability for application assistance or the design of Purchasers' products.

Information contained herein is intended to provide a product description only. No license, express or implied, to any intellectual property rights is granted by this document. Except as provided in TSC's terms and conditions of sale for such products, TSC assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of TSC products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify TSC for any damages resulting from such improper use or sale.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Taiwan Semiconductor:

BAS316 RRG