



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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250mA, 100V High-Speed Switching SMD Diode

FEATURES

- Low power loss, high efficiency
- Ideal for automated placement
- High surge current capability
- 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-323F
- Molding compound meets UL 94 V-0 flammability rating
- Moisture sensitivity level: level 1, per J-STD-020
- Packing code with suffix "G" means green compound (halogen-free)
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 1A whisker test
- Polarity: Indicated by cathode band
- Weight: $4.6 \pm 0.5\text{mg}$ (approximately)

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
$I_{F(AV)}$	250	mA
V_{RRM}	100	V
V_F at $I_F=150\text{mA}$	1.25	V
T_J Max.	150	°C
Package	SOD-323F	
Configuration	Single dice	



ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise noted)			
PARAMETER	SYMBOL	BAS316WS	UNIT
Marking code on the device		W2	
Repetitive peak reverse voltage	V_{RRM}	100	V
Forward current	$I_{F(AV)}$	250	mA
Non-repetitive peak forward surge current	Pulse Width = 1 μs Pulse Width = 1 ms	4.0	A
		1.0	
Junction temperature range	T_J	-65 to +150	°C
Storage temperature range	T_{STG}	-65 to +150	°C

ELECTRICAL SPECIFICATIONS ($T_A = 25^\circ\text{C}$ unless otherwise noted)					
PARAMETER	CONDITIONS	SYMBOL	MIN	MAX	UNIT
Forward voltage per diode ⁽¹⁾	$I_F = 1.0\text{mA}, T_J = 25^\circ\text{C}$	V_F	-	0.715	V
	$I_F = 10\text{mA}, T_J = 25^\circ\text{C}$		-	0.855	
	$I_F = 50\text{mA}, T_J = 25^\circ\text{C}$		-	1.000	
	$I_F = 150\text{mA}, T_J = 25^\circ\text{C}$		-	1.250	
Reverse voltage	$I_R = 100\mu\text{A}, T_J = 25^\circ\text{C}$	V_R	100	-	V
Reverse current @ rated V_R per diode ⁽²⁾	$V_R = 20\text{V}, T_J = 25^\circ\text{C}$	I_R	-	0.03	μA
	$V_R = 75\text{V}, T_J = 25^\circ\text{C}$		-	1.00	
Junction capacitance	1 MHz, $V_R = 0\text{V}$	C_J	-	1.5	pF
Reverse recovery time	$I_F = 10\text{mA}, I_R = 10\text{mA}, I_{rr} = 0.1 \times I_R$	t_{rr}	-	4.0	ns

Notes:

1. Pulse test with $PW = 0.3\text{ ms}$
2. Pulse test with $PW = 30\text{ ms}$

ORDERING INFORMATION				
PART NO.	PACKING CODE	PACKING CODE SUFFIX(*)	PACKAGE	PACKING
BAS316WS	RR	G	SOD-323F	3K / 7" Reel
	R9			10K / 13" Reel

Notes:

*: optional available

EXAMPLE				
EXAMPLE P/N	PART NO.	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
BAS316WS RRG	BAS316WS	RR	G	Green compound

CHARACTERISTICS CURVES

($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig.1 Typical Forward Characteristics

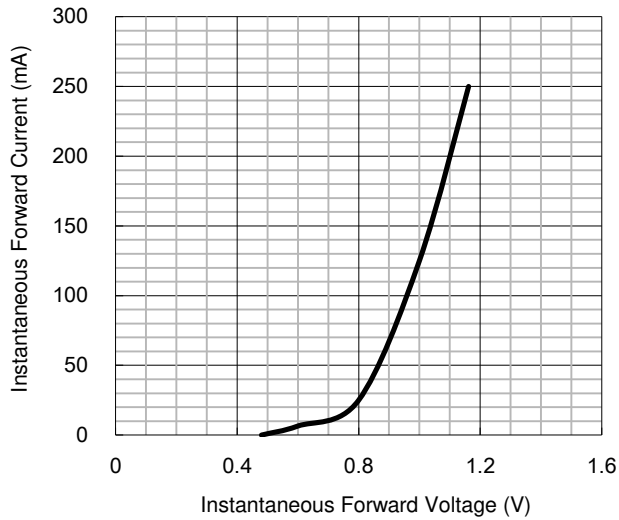


Fig.2 Reverse Current As A Function of Junction Temperature

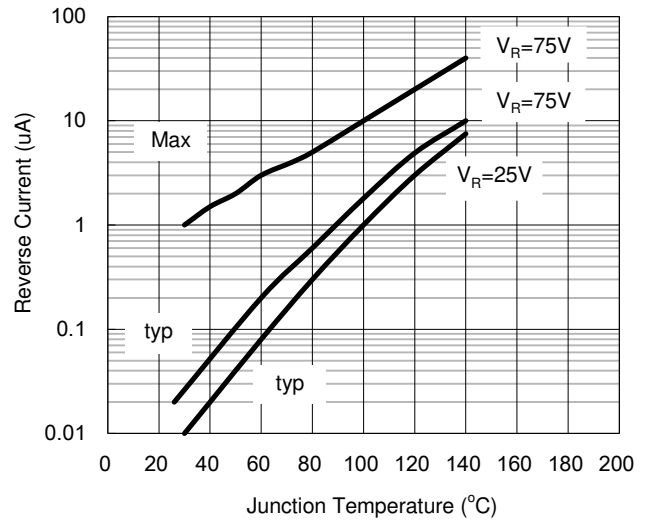


Fig.3 Admissible Power Dissipation Curve

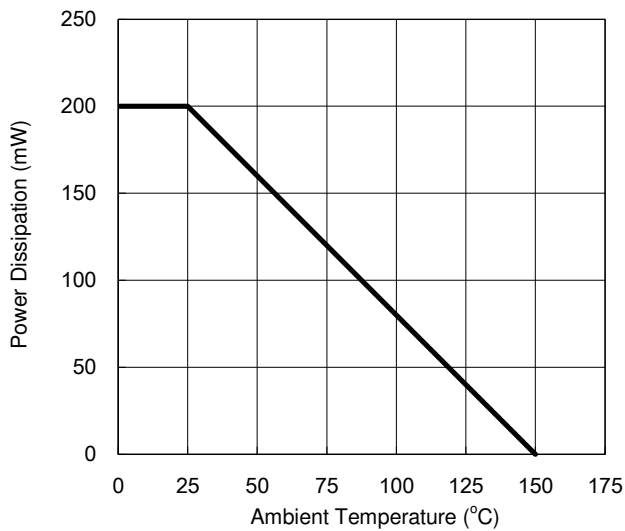
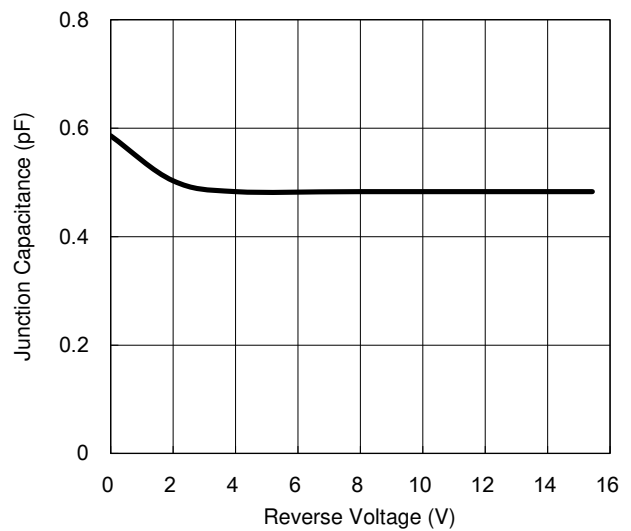
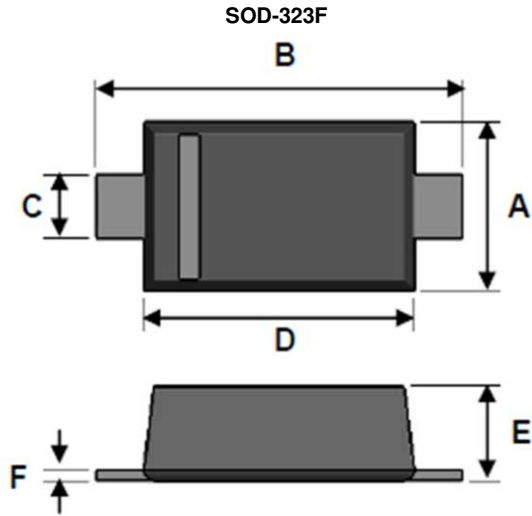


Fig.4 Typical Junction Capacitance

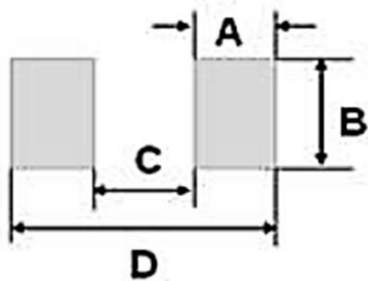


PACKAGE OUTLINE DIMENSION



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	1.15	1.35	0.045	0.053
B	2.30	2.80	0.091	0.110
C	0.25	0.40	0.010	0.016
D	1.60	1.80	0.063	0.071
E	0.80	1.10	0.031	0.043
F	0.05	0.25	0.002	0.010

SUGGEST PAD LAYOUT



DIM.	Unit (mm)	Unit (inch)
	Typ.	Typ.
A	0.63	0.025
B	0.83	0.033
C	1.60	0.063
D	2.86	0.113

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