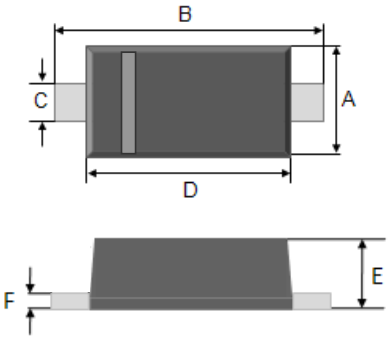
TAIWAN SEMICONDUCTOR

BAS316WS
200mW, High-speed switching SMD Diode

Small Signal Diode

SOD-323F



Dimensions	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	1.15	1.40	0.045	0.055
B	2.30	2.80	0.091	0.106
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	0.15	0.002	0.006

Features

- ✧Fast switching device(T_{rr}<4.0nS)
- ✧Surface device type mounting
- ✧Moisture sensitivity level 1
- ✧Matte Tin(Sn) lead finish
- ✧Pb free version, RoHS compliant
- ✧Green compound (Halogen free) with suffix "G" on packing code and prefix "G" on date code

Mechanical Data

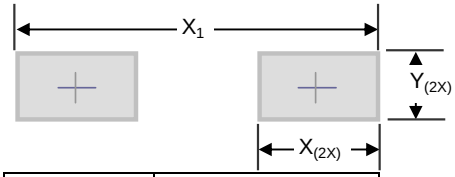
- ✧Case : Flat lead SOD-323F small outline plastic package
- ✧Terminal: Matte tin plated, lead free., solderable per MIL-STD-202, Method 208 guaranteed
- ✧High temperature soldering guaranteed: 260℃/10s
- ✧Polarity : Indicated by cathode band
- ✧Weight : 4.6±0.5 mg
- ✧Marking Code : W2

Ordering Information

Part No.	Package	Packing
BAS316WS RR	SOD-323F	3Kpcs / 7" Reel
BAS316WS RRG	SOD-323F	3Kpcs / 7" Reel

Pin Configuration

Suggested PAD Layout



Dimensions	Unit (mm)
X	0.710
X_1	2.900
Y	0.403

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Maximum Ratings

Type Number	Symbol	Value	Units
Power Dissipation	P_D	200	mW
Average Forward Current	I_O	250	mA
Non-Repetitive Peak Forward Surge Current Pulse Width= 1 usec Pulse Width= 1 msec	I_{FSM}	 4.0 1.0	A
Operating Junction Temperature	T_J	150	°C
Storage Temperature Range	T_{STG}	-65 to + 150	°C

Notes: 1. The suggested land pattern dimensions have been provided for reference only, as actual pad layouts may vary despending on application.

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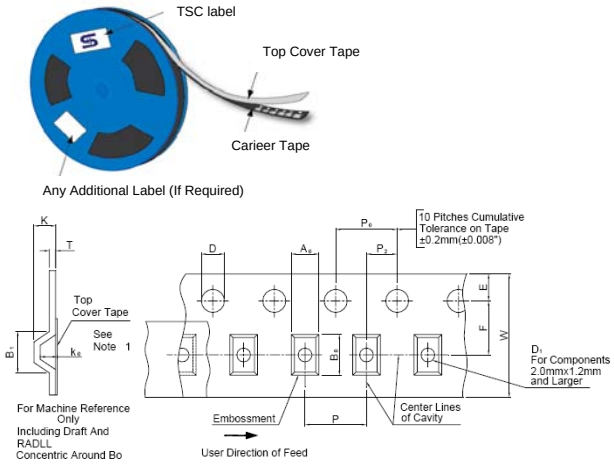
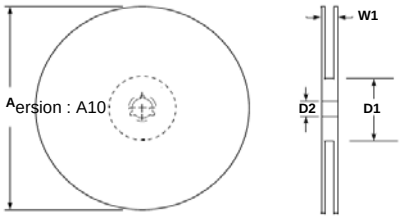
Electrical Characteristics

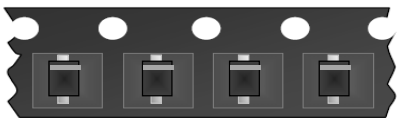
Type Number		Symbol	Min	Max	Units
Reverse Breakdown Voltage	I_R= 100 uA	$V_{(BR)}$	100	-	V
Forward Voltage	I_F= 1.0 mA	V_F	-	0.715	V
	I_F= 10 mA		-	0.855	
	I_F= 50 mA		-	1.000	
	I_F= 150 mA		-	1.250	
Reverse Leakage Current	V_R= 75 V	I_R	-	1.00	uA
	V_R= 25 V			0.03	
Junction Capacitance	V_R= 0, f=1.0MHz	C_J	-	1.5	pF
Reverse Recovery Time	I_F=I_R= 10mA, Irr=0.1 x I_R,	Trr	-	4.0	ns

Tape & Reel specification



Item	Symbol	Dimension(mm)
Carrier depth	K	2.40 Max.
Sprocket hole	D	1.50 +0.10
Reel outside diameter	A	178 ± 1
Reel inner diameter	D1	50 Min.
Feed hole width	D2	13.0 ± 0.5
Sprocke hole position	E	1.75 ±0.10
Punch hole position	F	3.50 ±0.05
Sprocke hole pitch	P0	4.00 ±0.10
Embossment center	P1	2.00 ±0.10
Overall tape thickness	T	0.6 Max.
Tape width	W	8.30 Max.
Reel width	W1	14.4 Max.





Note 1: A0, B0, and K0 are determined by component size. The clearance between the components and the cavity must be within 0.05 mm min. to 0.5 mm max. The component cannot rote more than 10o within the determined cavity.
Note 2: If B1 exceeds 4.2 mm(0.165") for 8 mm embossed tape, the tape may not feed through all tape feeders.

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Rating and Characteristic Curves

FIG 1 Typical Forward Characteristics

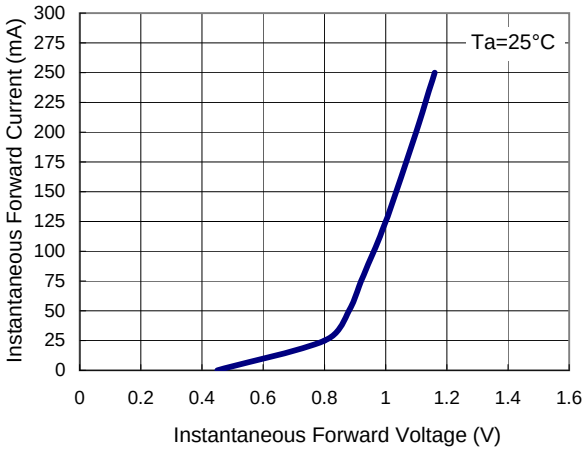

FIG 2 Reverse Current as a function of junction temperature.

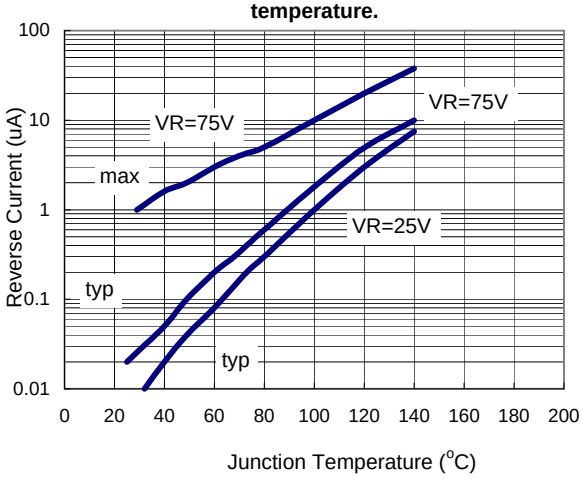

FIG 3 Admissible Power Dissipation Curve

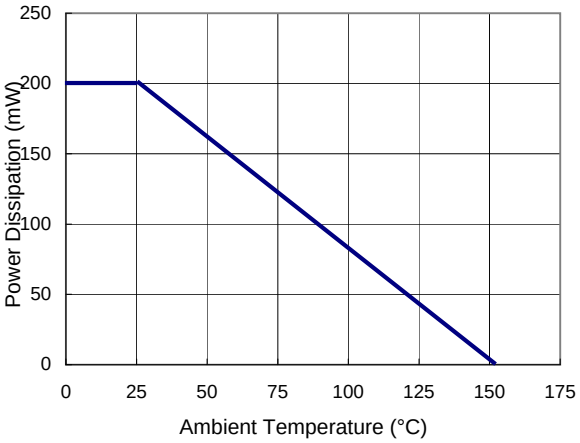

FIG 4 Typical Junction Capacitance