

# BAS316WS

## HIGH SPEED SWITCHING DIODE

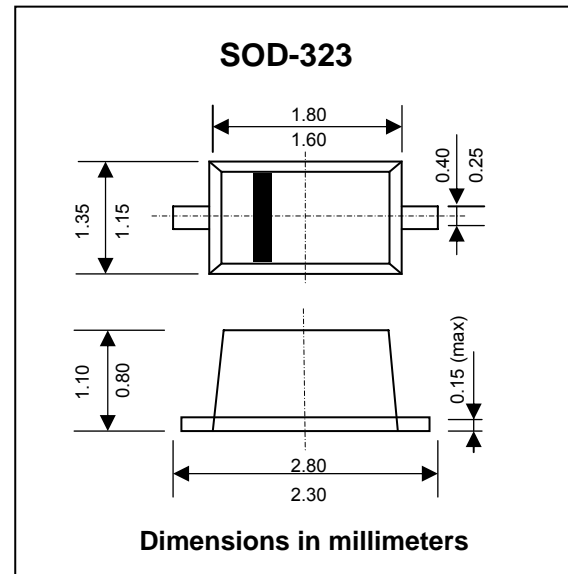
**PRV : 100 Volts**  
**Io : 250 mA**

### FEATURES :

- \* Very small plastic SMD package
- \* High switching speed: max. 4 ns
- \* Continuous reverse voltage: max. 100V
- \* Repetitive peak reverse voltage: max. 100V
- \* **Pb / RoHS Free**

### MECHANICAL DATA :

- \* Case : SOD-323 plastic Case
- \* Weight : approx. 0.004 g
- \* Marking Code : " WD"



### MAXIMUM RATINGS AND THERMAL CHARACTERISTICS ( T<sub>j</sub> = 25 °C unless otherwise specified)

Parameter	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	100	V
Maximum Continuous Reverse Voltage	V <sub>R</sub>	100	V
Maximum Continuous Forward Current T <sub>s</sub> = 90 °C (Note 1)	I <sub>F</sub>	250	mA
Maximum Non-repetitive Peak Forward Current (square wave; T <sub>j</sub> = 25 °C prior to surge)	I <sub>FSM</sub>	t = 1 μs	4
		t = 1 ms	1
		t = 1 s	0.5
Total Power Dissipation T <sub>s</sub> = 90 °C (Note 1)	P <sub>tot</sub>	400	mW
Thermal Resistance from Junction to soldering point	R <sub>th(j-s)</sub>	150	K/W
Junction Temperature Range	T <sub>J</sub>	150	°C
Storage Temperature Range	T <sub>STG</sub>	-65 to +150	°C

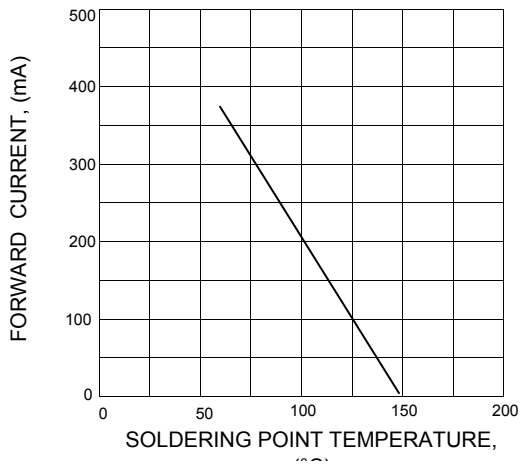
### ELECTRICAL CHARACTERISTICS ( T<sub>j</sub> = 25 °C unless otherwise specified)

Parameter	Test Condition	Symbol	Max.	Unit
Forward Voltage	I <sub>F</sub> = 1 mA	V <sub>F</sub>	715	mV
	I <sub>F</sub> = 10 mA		855	mV
	I <sub>F</sub> = 50 mA		1.00	V
	I <sub>F</sub> = 150 mA		1.25	V
Reverse Current	V <sub>R</sub> = 25 V	I <sub>R</sub>	30	nA
	V <sub>R</sub> = 75 V		1.0	μA
	V <sub>R</sub> = 25 V , T <sub>j</sub> = 150 °C		30	μA
	V <sub>R</sub> = 75 V , T <sub>j</sub> = 150 °C		50	μA
Capacitance	V <sub>R</sub> = 0 V, f = 1 MHz	C <sub>D</sub>	1.5	pF
Reverse Recovery Time	When switched from I <sub>F</sub> = 10 mA to I <sub>R</sub> = 10mA; R <sub>L</sub> = 100 Ω; measure at I <sub>R</sub> = 1 mA	T <sub>rr</sub>	4	ns

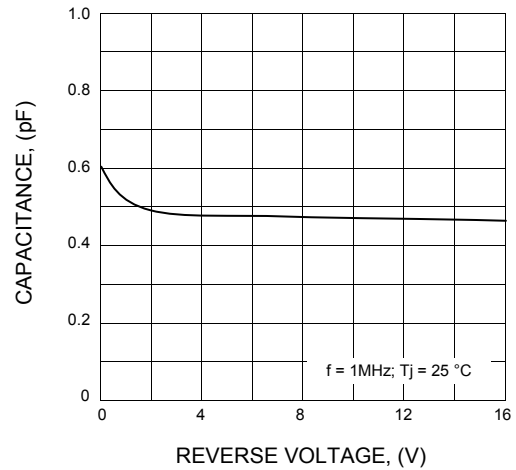
**Note :** (1) T<sub>s</sub> is the temperature at the soldering point of the cathode tap.

## RATINGS AND CHARACTERISTIC CURVES ( BAS316WS )

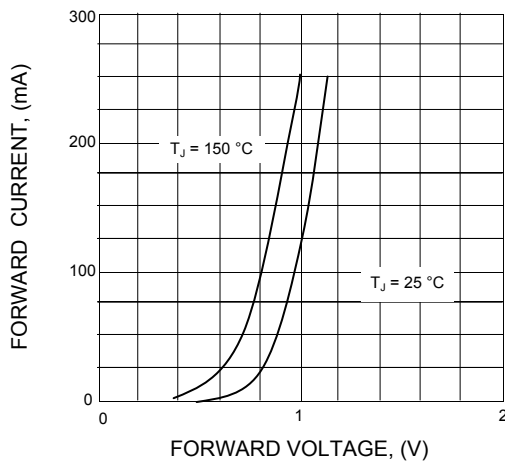
**FIG.1 - MAXIMUM CONTINUOUS FORWARD CURRENT VS. SOLDERING POINT TEMPERATURE**



**FIG.2 - DIODE CAPACITANCE VS. REVERSE VOLTAGE; TYPICAL VALUES**



**FIG.3 - FORWARD CURRENT VS. FORWARD VOLTAGE ; TYPICAL VALUES**



**FIG.4 - REVERSE CURRENT VS. JUNCTION TEMPERATURE**

