

**Fast Switching Diode**

**FEATURES**

- \* Fast Switching Device(TRR<50nS)
- \* Power Dissipation of 250mW
- \* High Stability and High Reliability
- \* Low Reverse Leakage

**MECHANICAL DATA**

- \* SOD-323 Small Outline Plastic Package
- \* Polarity: Color band denotes cathode end
- \* Mounting Position: Any

**SOD-323**



Marking: BAV19WS ----A8  
BAV20WS ----T2  
BAV21WS ----T3

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25 °C ambient temperature unless otherwise specified.  
Single phase, half wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

**MAXIMUM RATINGS (@ TA=25 °C unless otherwise noted)**

RATINGS	SYMBOL	BAV19WS	BAV20WS	BAV21WS	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	120	200	250	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	84	140	175	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	120	200	250	Volts
Maximum Average Forward Rectified Current at T <sub>A</sub> = 55°C	I <sub>O</sub>	0.2		0.25	Amps
Peak Forward Surge Current 10ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	1.7			Amps
Current Squarad Time	I <sup>2</sup> t	0.014			A <sup>2</sup> Sec
Typical Thermal Resistance (Note 2)	R <sub>θJA</sub>	100			°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to + 150			°C

**ELECTRICAL CHARACTERISTICS(@TA=25 °C unless otherwise noted)**

CHARACTERISTICS	SYMBOL	BAV19WS	BAV20WS	BAV21WS	UNITS
Maximum Instantaneous Forward Voltage	I <sub>F</sub> =0.1A	1.0			Volts
	I <sub>F</sub> =0.2A	1.25			
Maximum DC Reverse Current at Rated DC Blocking Voltage	@T <sub>A</sub> = 25°C	0.1			uAmps
	@T <sub>A</sub> = 150°C	500			
Maximum Reverse Recovery Time (Note 1)	trr	50			nSec

NOTES : 1. Reverse Recovery Test Conditions: I<sub>F</sub> = 0.03A, R = 30mA, I<sub>RR</sub> = 3mA  
2. Thermal Resistance : Mounted on PCB.

2020-11  
REV:F

## RATING AND CHARACTERISTICS CURVES (BAV19WS THRU BAV21WS)

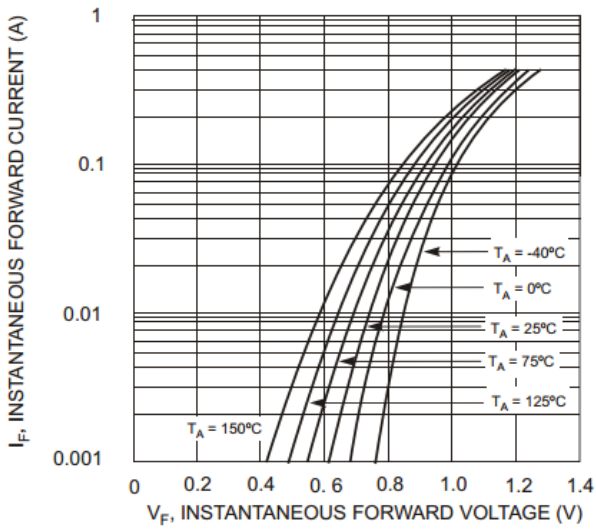


Fig. 1 Typical Forward Characteristics

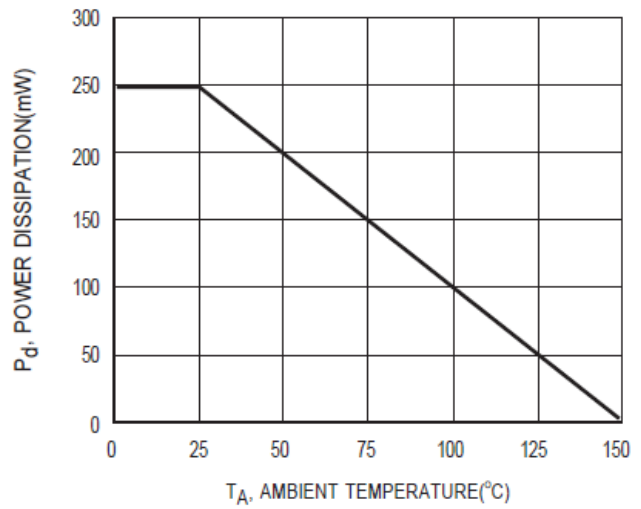


Fig. 2 Power Derating Curve

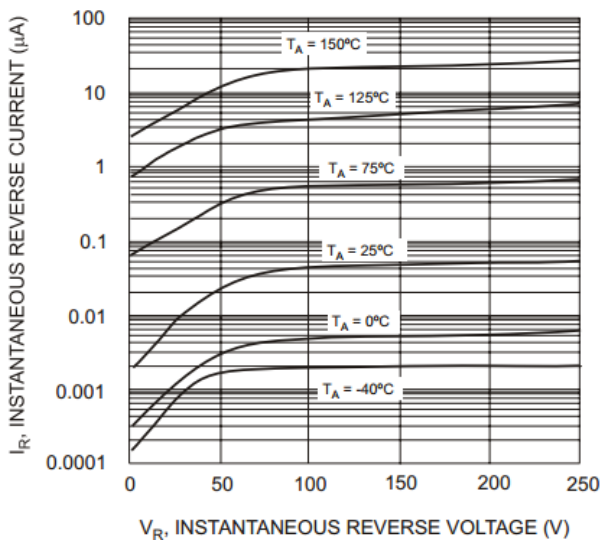


Fig. 3 Typical Reverse Characteristics

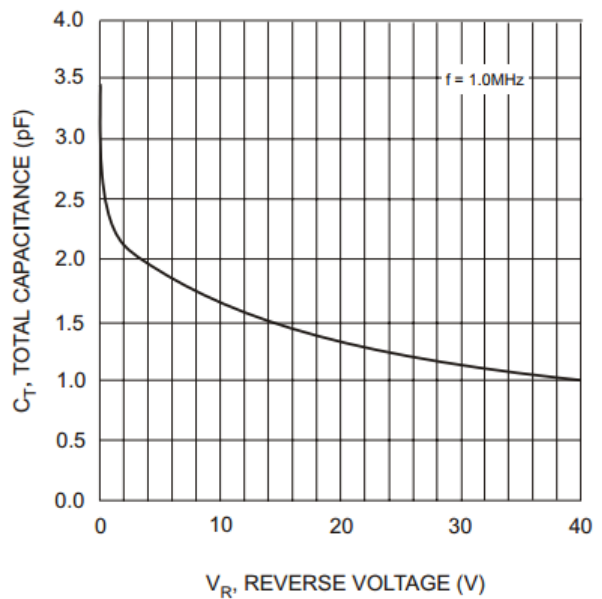
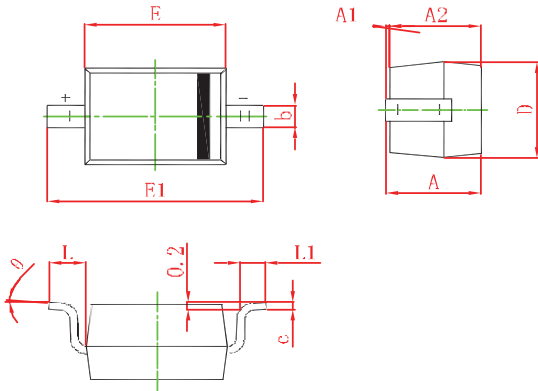


Fig. 4 Typical Capacitance vs. Reverse Voltage

Plastic surface mounted package

SOD-323



Symbol	Min.(mm)	Max.(mm)
A		1.000
A1	0.000	0.100
A2	0.800	0.900
b	0.250	0.350
c	0.080	0.150
D	1.200	1.400
E	1.600	1.800
E1	2.500	2.700
L	0.475REF	
L1	0.250	0.400
θ	0°	8°

## PACKAGING OF DIODE AND BRIDGE RECTIFIERS

### REEL PACK

PACKAGE	PACKING CODE	EA PER REEL	EA PER INNER BOX	COMPONENT SPACE (mm)	TAPE SPACE (mm)	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
SOD-323	-T	3,000	15,000	---	---	178	390*205*31	120,000	5.17

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