

Fast Switching Diode

FEATURES

- * Fast Switching Device(TRR<50nS)
- * Power Dissipation of 250mW
- * High Stability and High Reliability
- * Low Reverse Leakage
- * P/N suffix V means AEC-Q101 qualified, e.g:BAV19WSV
- * P/N suffix V means Halogen-free

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 _{RRM}	120	200	250	Volts
Maximum RMS Voltage	V _{RMS}	84	140	175	Volts
Maximum DC Blocking Voltage	V _{DC}	120	200	250	Volts
Maximum Average Forward Rectified Current at T _A = 55°C	I _O	0.2		0.25	Amps
Peak Forward Surge Current 10ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	1.7			Amps
Current Squarad Time	I ² t	0.014			A ² Sec
Typical Thermal Resistance (Note 2)	R _{θJA}	100			°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to + 150			°C

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

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

NOTES : 1. Reverse Recovery Test Conditions: I_F = 0.03A, R = 30mA, I_{RR} = 3mA
2. Thermal Resistance : Mounted on PCB.

2019-02
REV:E

RATING AND CHARACTERISTICS CURVES (BAV19WS THRU BAV21WS)

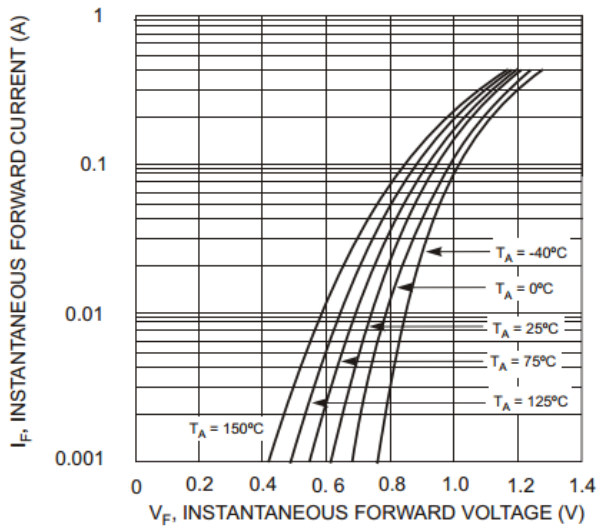


Fig. 1 Typical Forward Characteristics

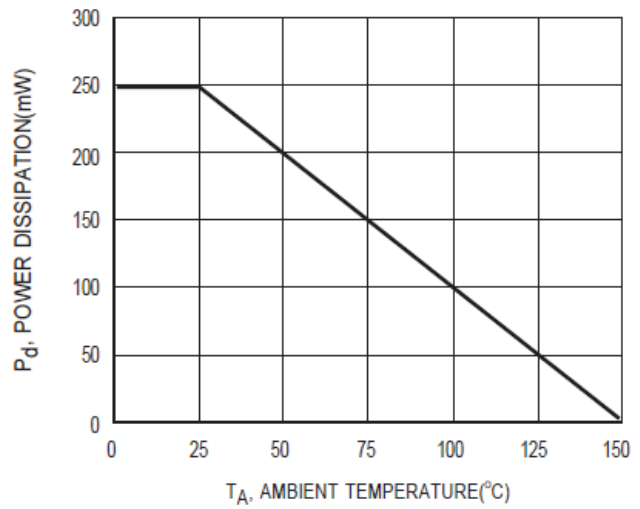


Fig. 2 Power Derating Curve

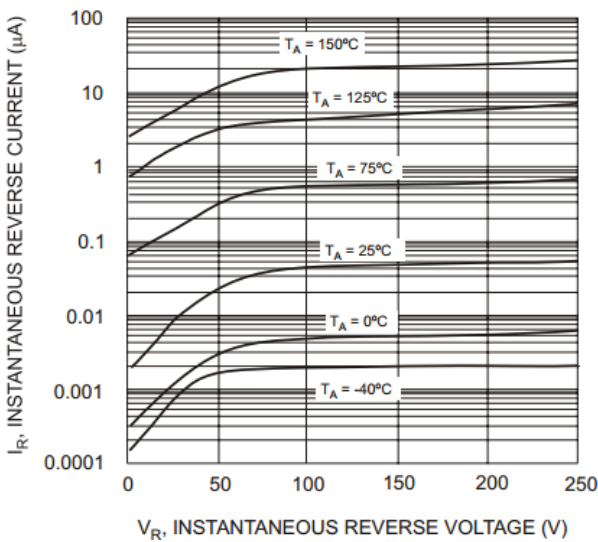


Fig. 3 Typical Reverse Characteristics

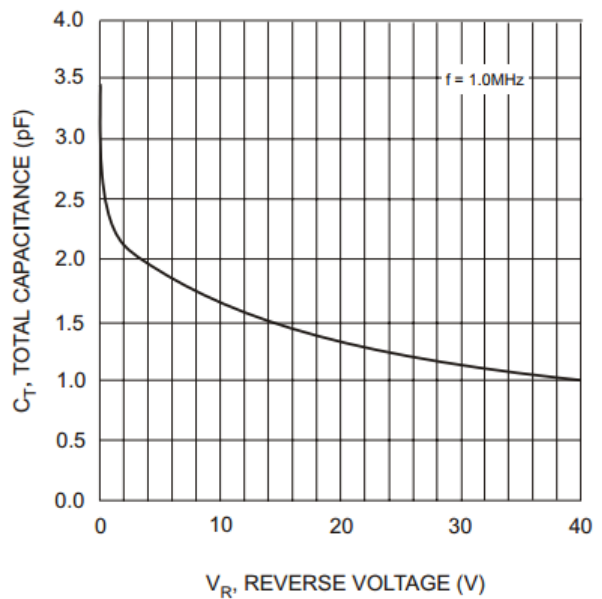
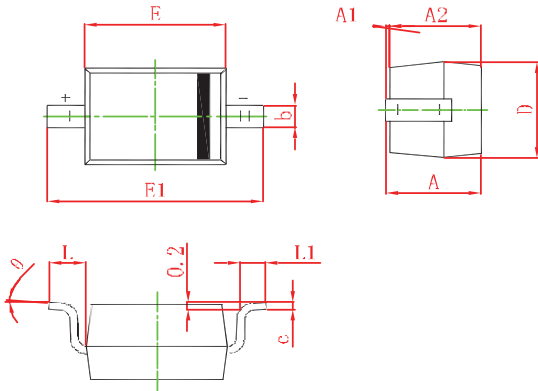


Fig. 4 Typical Capacitance vs. Reverse Voltage

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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