

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	BAV19WSV	BAV20WSV	BAV21WSV	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	BAV19WSV	BAV20WSV	BAV21WSV	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.

2020-11
REV:O

RATING AND CHARACTERISTICS CURVES (BAV19WSV THRU BAV21WSV)

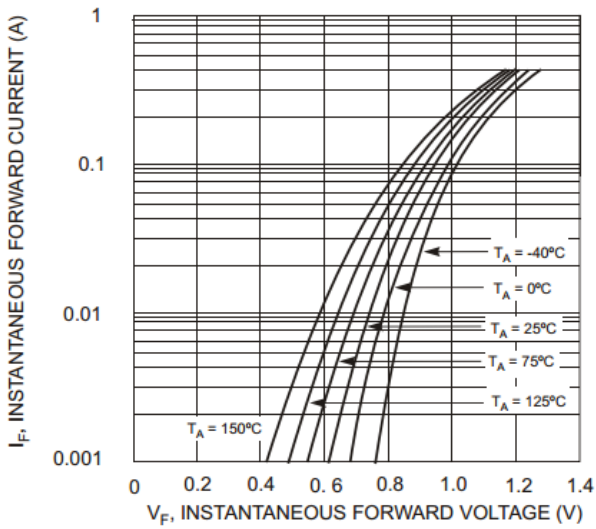


Fig. 1 Typical Forward Characteristics

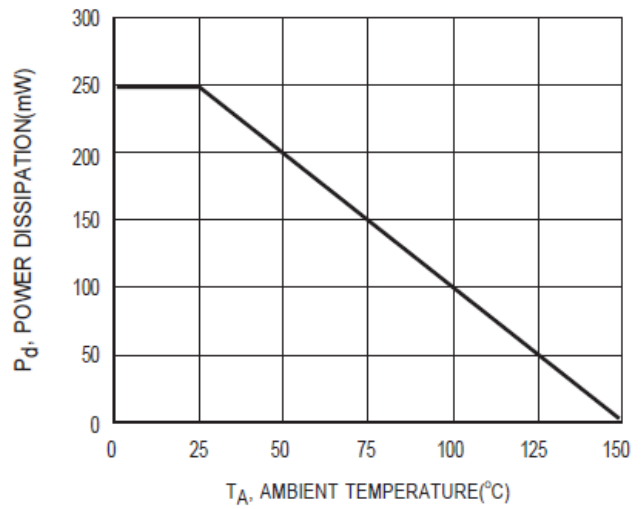


Fig. 2 Power Derating Curve

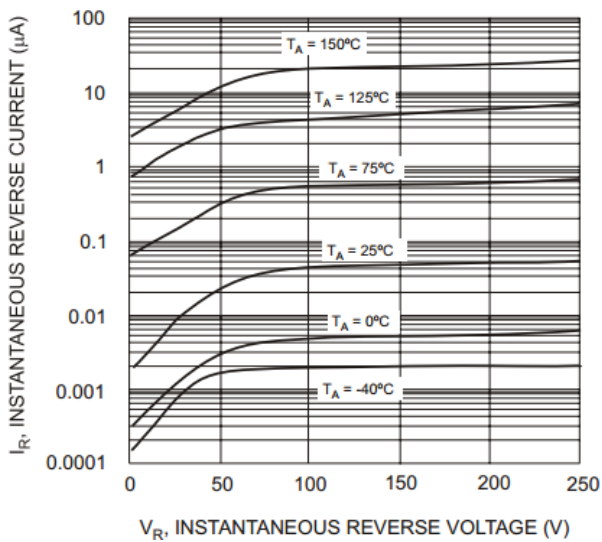


Fig. 3 Typical Reverse Characteristics

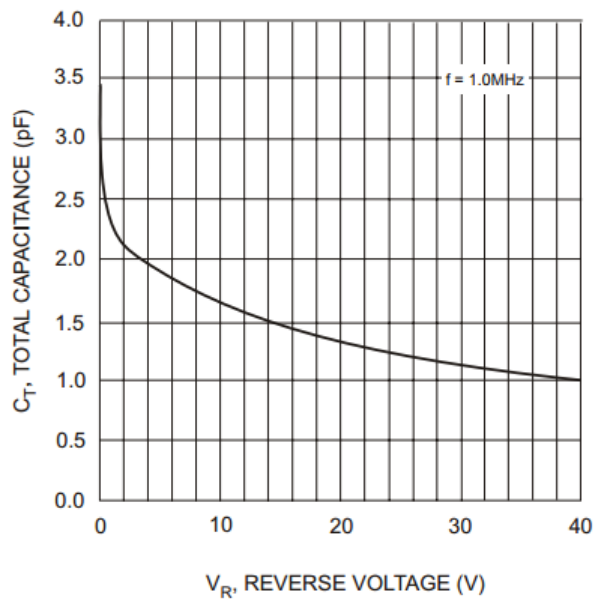
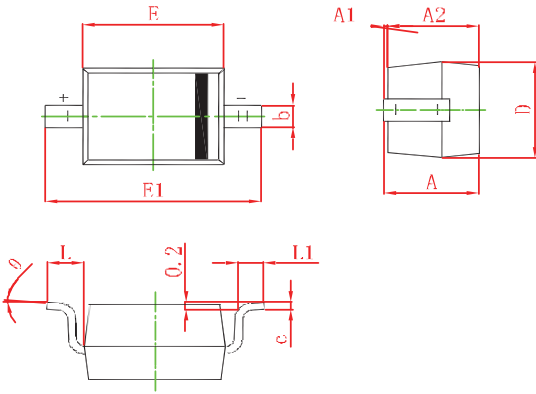


Fig. 4 Typical Capacitance vs. Reverse Voltage

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

DISCLAIMER NOTICE

Rectron Inc reserves the right to make changes without notice to any product specification herein, to make corrections, modifications, enhancements or other changes. Rectron Inc or anyone on its behalf assumes no responsibility or liability for any errors or inaccuracies. Data sheet specifications and its information contained are intended to provide a product description only. "Typical" parameters which may be included on RECTRON data sheets and/ or specifications can and do vary in different applications and actual performance may vary over time. Rectron Inc does not assume any liability arising out of the application or use of any product or circuit.

Rectron products are not designed, intended or authorized for use in medical, life-saving implant or other applications intended for life-sustaining or other related applications where a failure or malfunction of component or circuitry may directly or indirectly cause injury or threaten a life without expressed written approval of Rectron Inc. Customers using or selling Rectron components for use in such applications do so at their own risk and shall agree to fully indemnify Rectron Inc and its subsidiaries harmless against all claims, damages and expenditures.