



# THE DATASHEET OF BAV21WS



## BAV19WS-BAV21WS SWITCHING DIODE



### Features

- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Applications
- High Conductance
- This is a Halogen Free Device
- “-A” is an AEC-Q101 qualified device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

### Schematic & Pin Configuration



### Mechanical Characteristics

- Case: SOD-323, Molded plastic
- Terminals: Plated leads solderable per MIL-STD-202, Method 208

### Maximum Ratings@T<sub>A</sub>=25°C unless otherwise specified

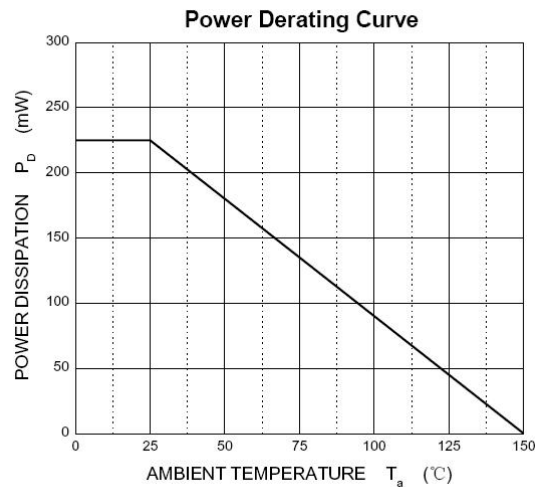
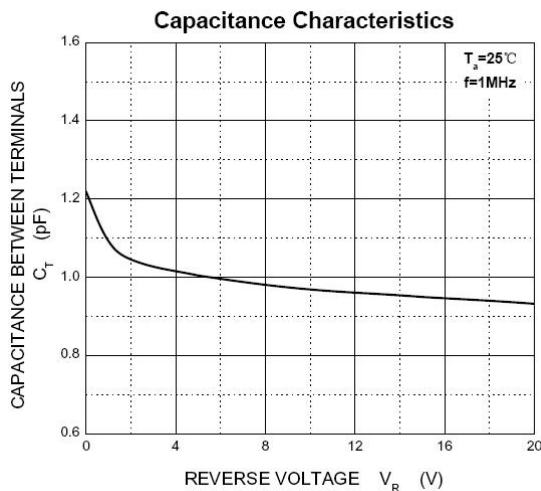
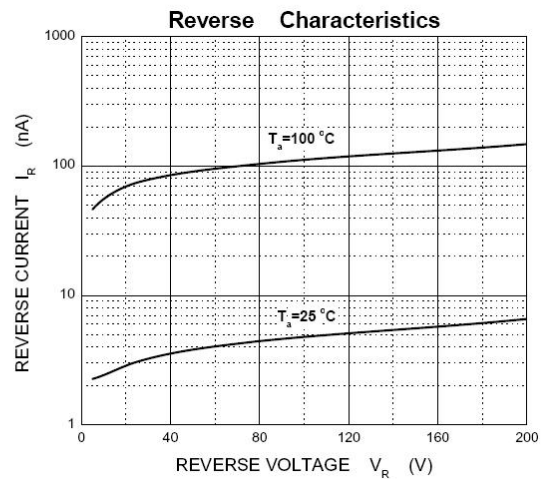
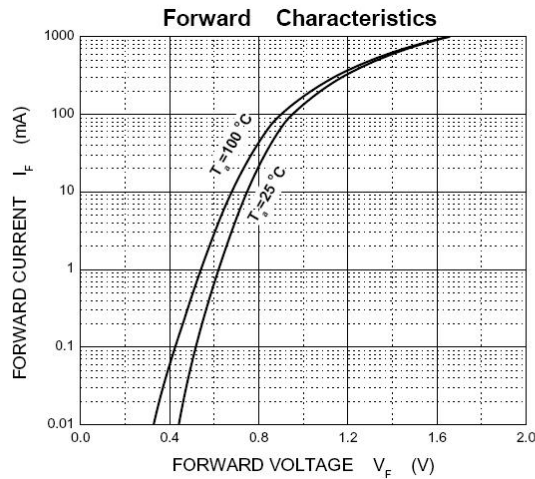
Characteristic	Symbol	BAV19WS	BAV20WS	BAV21WS	Unit
Marking Code		A8	T2	T3	
Non-Repetitive Peak Reverse Voltage	V <sub>RM</sub>	120	200	250	V
Peak Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	100	150	200	V
Working Peak Reverse Voltage	V <sub>RWM</sub>				
DC Blocking Voltage	V <sub>R</sub>				
RMS Reverse Voltage	V <sub>R(RMS)</sub>	71	106	141	
Average Rectified Output Current	I <sub>O</sub>	200			mA
Forward continuous current	I <sub>FM</sub>	400			mA
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	2.5 0.5			A
	@t=1.0ms @ t=1.0s				
Power Dissipation	P <sub>d</sub>	250			mW
Repetitive Peak Forward Current	I <sub>FRM</sub>	625			mA
Typical Thermal Resistance Junction to Ambient	R <sub>θJA</sub>	500			°C/W
Junction Temperature Range	T <sub>J</sub>	150			°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150			°C

**Electrical Characteristics@T<sub>A</sub>=25°C unless otherwise specified**

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Forward Voltage*	V <sub>F</sub>	I <sub>F</sub> =100mA I <sub>F</sub> =200mA	-	0.95 1.06	1.00 1.25	V
Reverse Leakage Current*	I <sub>R</sub>	V <sub>R</sub> =100V V <sub>R</sub> =150V V <sub>R</sub> =200V	-	0.007	0.1	μA
Diode capacitance	C <sub>T</sub>	V <sub>R</sub> =0V, f=1.0MHz	-	1.2	5	pF
Reverse recovery time	t <sub>rr</sub>	I <sub>F</sub> = I <sub>R</sub> =30mA, I <sub>rr</sub> =0.1×I <sub>R</sub> , R <sub>L</sub> =100 Ω	-	-	50	ns

\* Pulse width < 300 μs, duty cycle < 2%

**Ratings and Characteristics Curves**



Ordering Information

Device	Package	Shipping
BAV19WS-BAV21WS	SOD-323	3000pcs / reel
BAV19WSTR-BAV21WSTR	SOD-323	3000pcs / reel

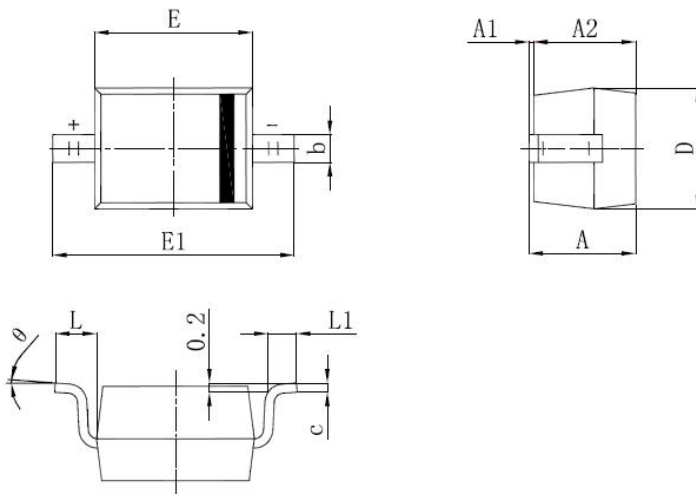
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram



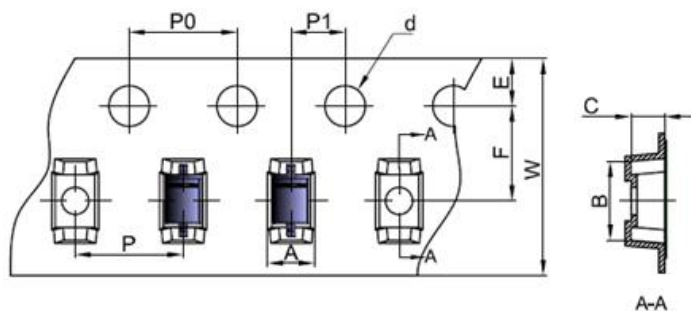
A8 = Marking Code

Mechanical Dimensions SOD-323



SYMBOL	Millimeters		Inches	
	MIN.	MAX.	MIN.	MAX.
A	-	1.000	-	0.039
A1	0.000	0.100	0.000	0.004
A2	0.800	0.900	0.031	0.035
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	1.200	1.400	0.047	0.055
E	1.600	1.800	0.063	0.071
E1	2.500	2.700	0.098	0.106
L	0.475 REF.		0.019 REF.	
L1	0.250	0.400	0.010	0.016
θ	0°	8°	0°	8°

Carrier Tape Specification SOD-323





SYMB OL	Millimeters	
	Min.	Max.
B	2.85	2.95
C	1.20	1.30
d	1.40	1.60
E	1.65	1.85
F	3.40	3.60
P	3.90	4.10
P0	3.90	4.10
P1	1.90	2.10
W	7.90	8.30

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