

SuperDiode – 250mW, 50nS SOD-323 Fast Switching Diode

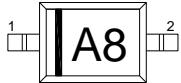

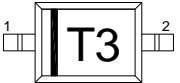
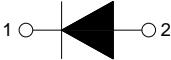
1. Features

- Fast switching device ( $T_{rr} < 50ns$ )
- Power dissipation of 250mW
- High stability and high reliability
- Low reverse leakage

2. Mechanical Data

- SOD-323 Small Outline Plastic Package
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Epoxy:94V-0

3. Marking and Circuit

BAV19WS	BAV20WS	BAV21WS	Circuit
			

4. Specification

Absolute Maximum Rating & Thermal Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

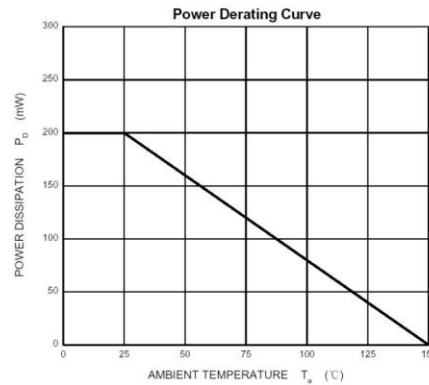
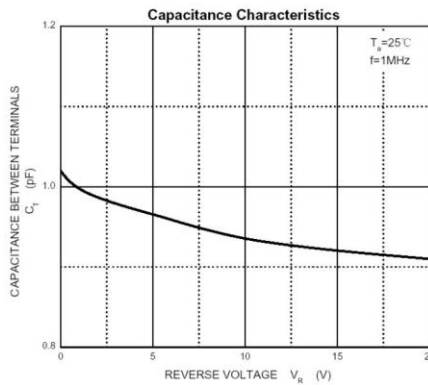
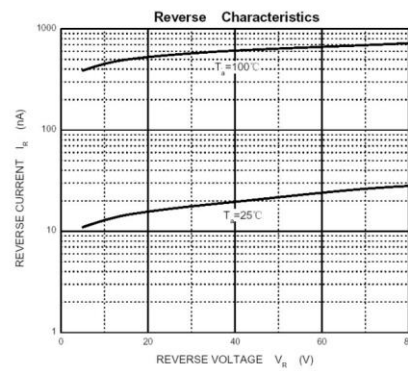
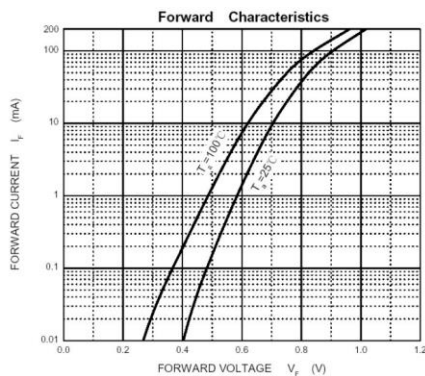
Parameters	Symbol	Value			Unit
		BAV19WS	BAV20WS	BAV21WS	
Reverse voltage	$V_R$	120	200	250	V
Peak reverse voltage	$V_{RM}$	100	150	250	V
Power dissipation	$P_D$	250			mW
Operating junction temperature	$T_J$	150			°C
Storage temperature range	$T_S$	-65~150			°C
Thermal resistance from junction to ambient	$R_{\theta JA}$	500			°C/W
Average rectified current	$I_o$	200			mA
Peak forward surge current @ $t_p=1ms$	$I_{FSM}$	1.7			A
Non-repetitive peak forward current	$I_{FM}$	400			mA

Valid provided that electrodes are kept at ambient temperature

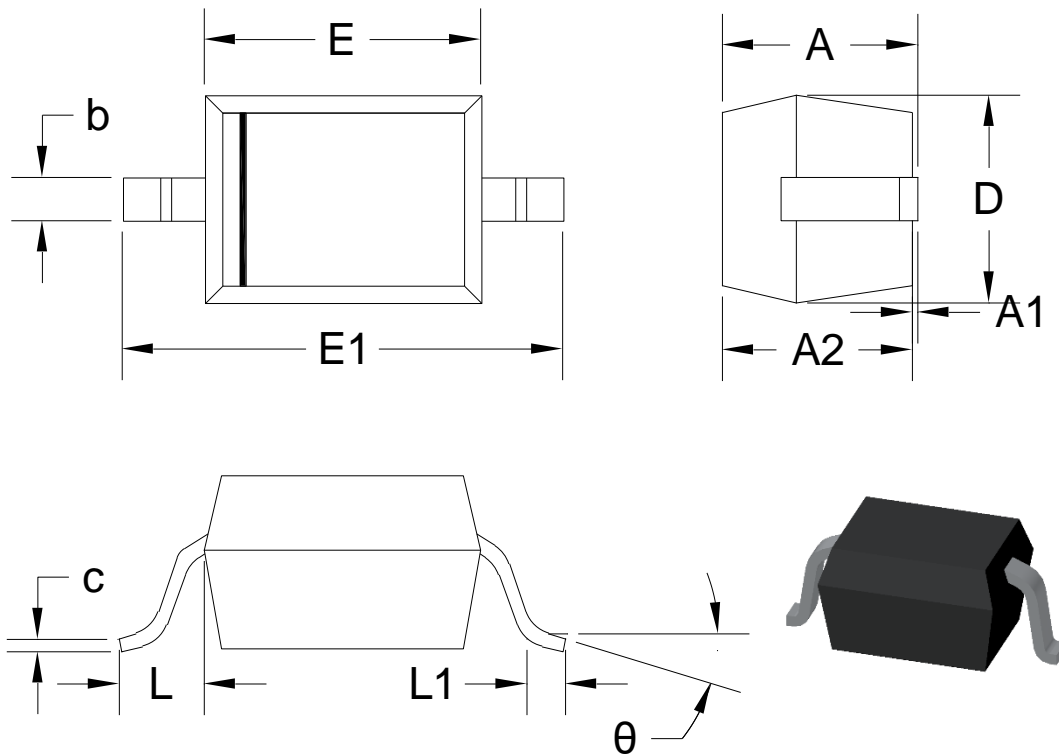
**Electrical Characteristics (At TA = 25°C unless otherwise specified)**

Symbols	Parameter	Test Condition	Limits		Unit
			Min	Max	
V <sub>RB</sub>	Reverse Breakdown Voltage	I <sub>R</sub> =100uA	BAV19WS	120	V
			BAV20WS	200	
			BAV21WS	250	
I <sub>R</sub>	Reverse Leakage Current	V <sub>R</sub> =100V	BAV19WS	0.1	uA
		V <sub>R</sub> =150V	BAV20WS		
		V <sub>R</sub> =200V	BAV21WS		
V <sub>F</sub>	Forward Voltage	I <sub>F</sub> =100mA		1.00	V
		I <sub>F</sub> =200mA		1.25	
T <sub>RR</sub>	Reverse Recovery Time	I <sub>F</sub> = I <sub>R</sub> =30mA		50	ns
		R <sub>L</sub> =100Ω			
		I <sub>RR</sub> =3mA			
C <sub>T</sub>	Junction Capacitance	V <sub>R</sub> =0V, f=1MHZ		5	pF

**5. Typical Characteristic**

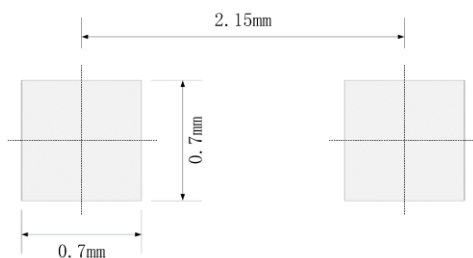


6. Dimension and Patterns (SOD-323)



Units: mm

Symbol	Min.	Max.	Symbol	Min.	Max.
A		1.000	E	1.600	1.800
A1	0.000	0.100	E1	2.550	2.750
A2	0.800	0.900	L	0.475REF	
b	0.250	0.350	L1	0.250	0.400
c	0.080	0.150	$\theta$	0°	8°
D	1.200	1.400			



Note:

1. Controlling dimension: in millimeters
2. General tolerance:  $\pm 0.05\text{mm}$
3. The pad layout is for reference only
4. Unit: mm

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