

# BAV19W~BAV21W

## Plastic-Encapsulate Switching Diodes

ROHS



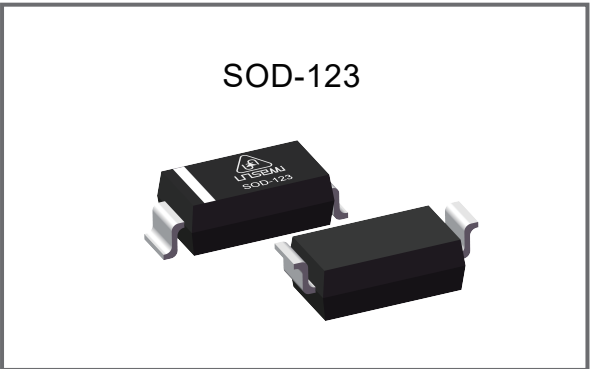
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### Features

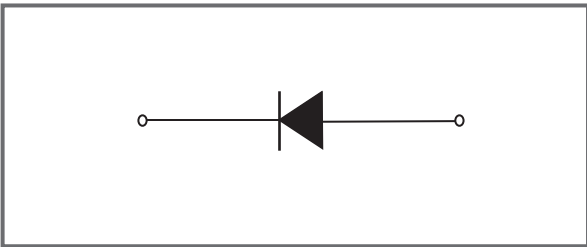
- ◆ Fast Switching Speed
- ◆ Low Reverse Current
- ◆ For General Purpose Switching Applications
- ◆ Surface Mount Package Ideally Suited for Automatic Insertion

### Mechanical Data

- ◆ Case: SOD-123
- ◆ Molding Compound Flammability Rating : UL 94V-O
- ◆ Quantity Per Reel : 3,000pcs
- ◆ Lead Finish : Lead Free
- ◆ Device Marking: BAV19W : A8  
BAV20W : T2  
BAV21W : T3



### Functional Diagram



### Mechanical Characteristics

Parameter	Symbol	BAV19W	BAV20W	BAV21W	Units
Repetitive Peak Reverse Voltage	VRRM	100	150	200	V
Reverse Voltage	VR	100	150	200	V
Average Rectified Output Current	Io	0.2			A
Non-Repetitive Peak Forward Surge Current @t=8.3ms	IFSM	2.0			A
Power Dissipation	PD	0.5			W
Thermal Resistance Junction to Ambient	R <sub>θJA</sub>	250			°C/W
Junction Temperature	TJ	150			°C
Storage Temperature Range	Tstg	-55~+150			°C

### Electrical Characteristics (Ratings at 25°C ambient temperature unless otherwise specified)

Parameter	Symbol	Test Conditions		Value		Units
				Min.	Max.	
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =100V	BAV19W	-	0.1	μA
		V <sub>R</sub> =150V	BAV20W	-	0.1	
		V <sub>R</sub> =200V	BAV21W	-	0.1	
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =100mA		-	1.0	V
		I <sub>F</sub> =200mA		-	1.25	
Total Capacitance	C <sub>tot</sub>	V <sub>R</sub> =0V, f=1MHz			5.0	pF
Reverse Recovery Time	t <sub>rr</sub>	I <sub>F</sub> =I <sub>R</sub> =30mA, I <sub>rr</sub> =0.1X I <sub>R</sub> , R <sub>L</sub> =100Ω			50	nS

## Electrical Characteristics Curves

Fig.1 Forward Characteristics

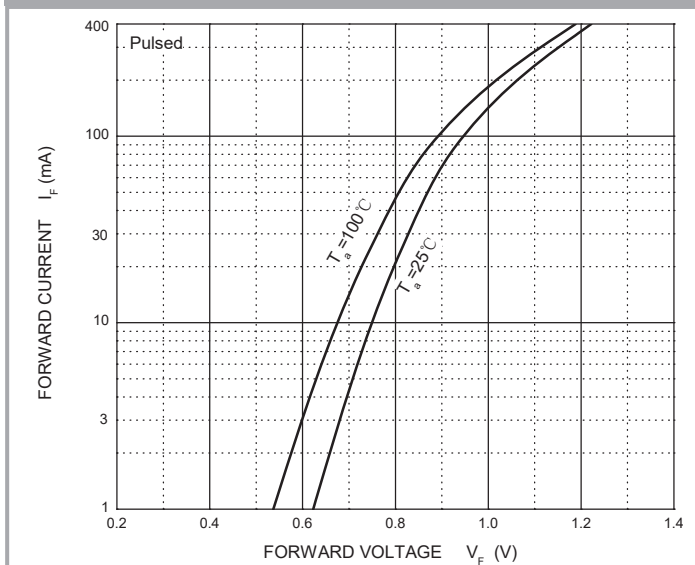


Fig. 2 Reverse Characteristics

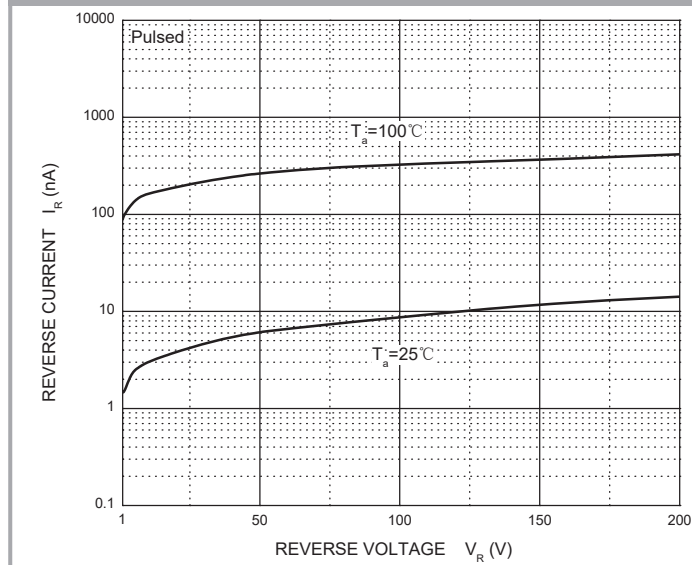


Fig.3 Capacitance Characteristics

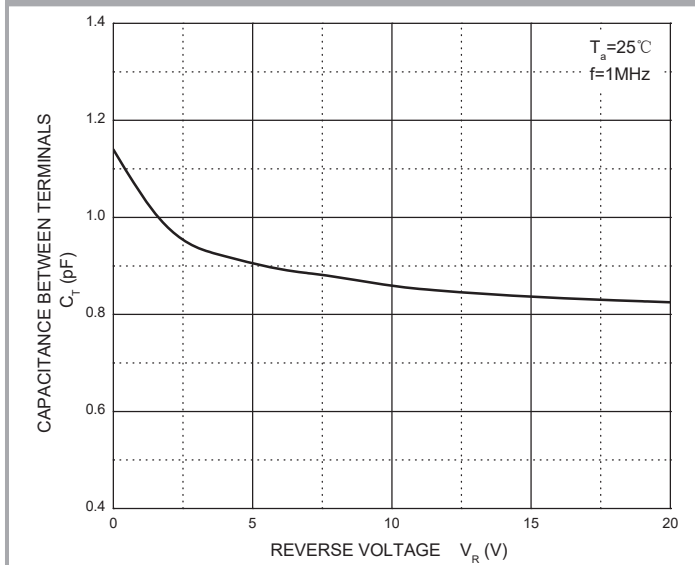
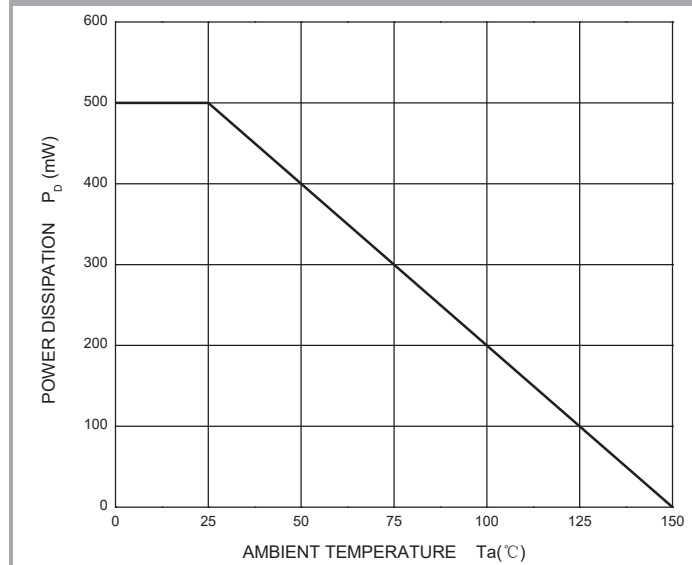
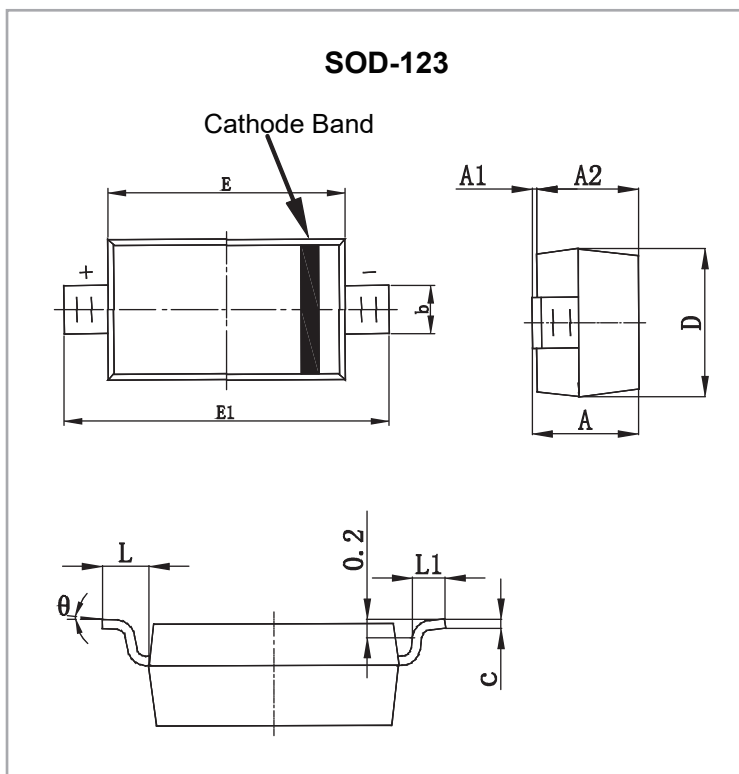


Fig. 4 Power Derating Curve



## Package Outline & Dimensions



Dimensions	Inches		Millimeters	
	Min.	Max.	Min.	Max.
A	0.041	0.049	1.050	1.250
A1	0	0.004	0	0.100
A2	0.041	0.045	1.050	1.150
b	0.018	0.026	0.450	0.650
c	0.003	0.006	0.080	0.150
D	0.059	0.067	1.500	1.700
E	0.102	0.110	2.600	2.800
E1	0.140	0.152	3.550	3.850
L	0.020REF		0.500 REF	
L1	0.010	0.018	0.250	0.450
$\theta$	0°	8°	0°	8°

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