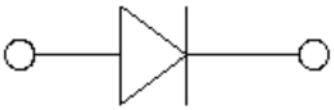
Small-Signal Switching Diodes



Features

- Moisture sensitivity level 1
- Reverse voltage: 100V/150V/200V
- Average forward current : 0.2A

Application

- High frequency rectifier
- Signal switching

Mechanical data

- **Package**: SOD-123
- **Terminals**: Tin plated leads, solderable per J-STD-002 and JESD22-B102

■ **Maximum Ratings** (T_a=25℃ Unless otherwise specified)

Parameter	Symbol	Unit	Value	
Device marking code			BAV19W	A8
			BAV20W	T2
			BAV21W	T3
Repetitive peak reverse voltage	V_{RRM}	V	BAV19W	120
			BAV20W	200
			BAV21W	250
Forward current	I_F	A	0.2	
Non-repetitive surge peak forward current @ t=8.3ms half-sine wave	I_{FSM}	A	2	
Non-repetitive surge peak forward current @ t=1ms square wave			2.5	
Non-repetitive surge peak forward current @ t=1s square wave			1	
Power dissipation	P_D	mW	400	

Parameter	Symbol	Unit	Value
Junction temperature	T_J	℃	-65 to +150
Storage temperature	T_{STG}	℃	-65 to +150

■ Electrical Characteristics (Ta=25℃ Unless otherwise specified)

Parameter	Symbol	Unit	Conditions		Min	Typ	Max
Breakdown voltage	V_R	V	BAV19W	I_R=10uA	100		
			BAV20W	I_R=10uA	150		
			BAV21W	I_R=10uA	200		
Forward voltage	V_F	V	I_F=100mA				1.0
			I_F=200mA				1.25
Reverse leakage current	I_R	nA	BAV19W	V_R=100V			100
			BAV20W	V_R=150V			100
			BAV21W	V_R=200V			100
Junction capacitance	Cj	pF	V_R=0V, f =1MHZ				5
Reverse recovery time	Trr	ns	I_F=I_R=30mA,R_L=100Ω,I_{RR}=3mA				50

■ Thermal Characteristics

Parameter	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	$R_{\theta J-A}$(1)	℃/W	315
Thermal resistance, junction-to-case	$R_{\theta J-C}$(1)	℃/W	250

Note:

（1）Thermal resistance from junction to ambient and from junction to case mounted on P.C.B. with 8mm*9mm copper pad areas

■Characteristics

Fig 1：P_D-Ta Curve

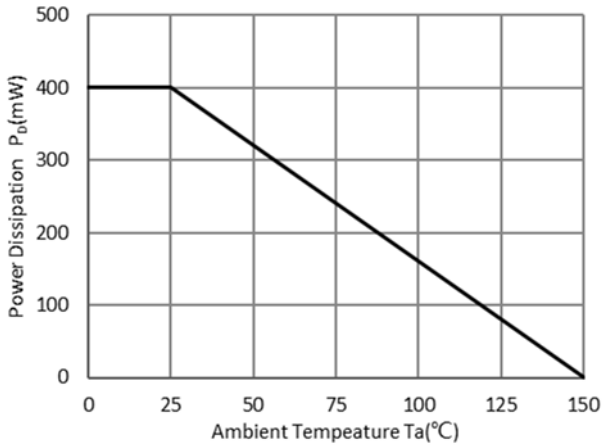


Fig 2：Capacitance Capability

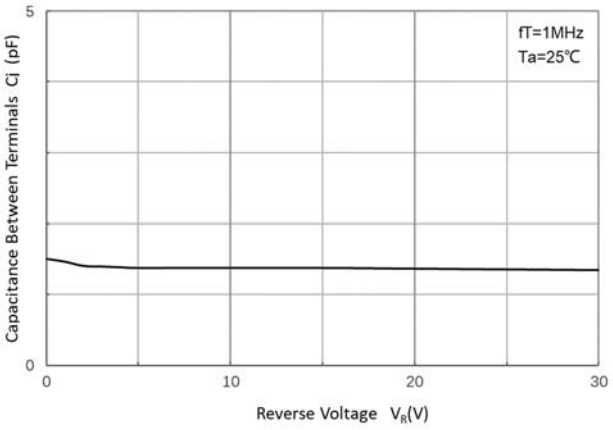


Fig 3：Typical Forward Characteristics

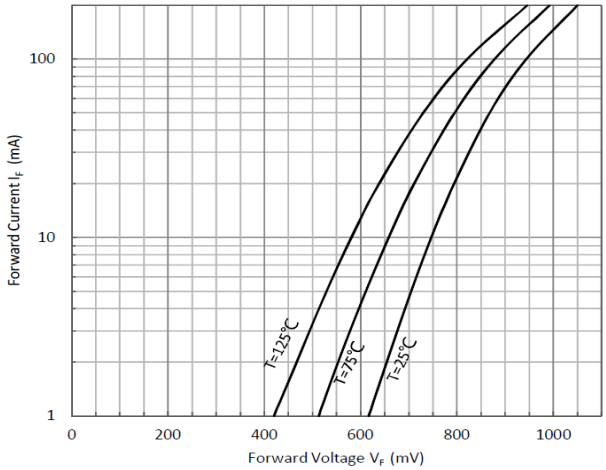
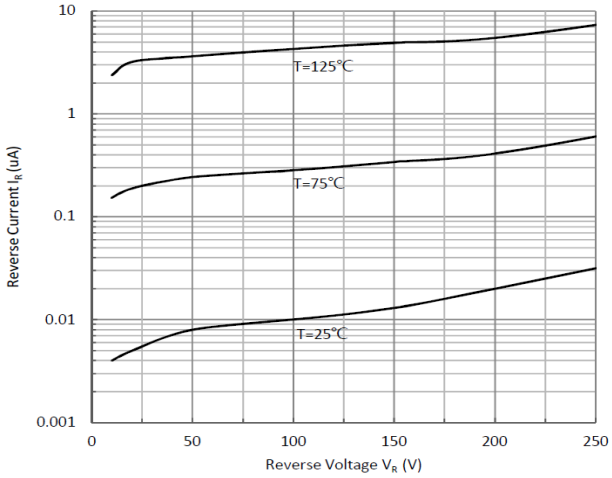


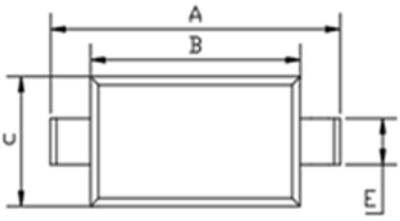
Fig 4：Typical Reverse Characteristics



■Ordering Information

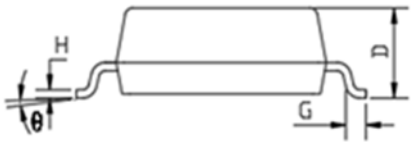
Preferred P/N	Packing code	Unit weight(g)	Minimum package(pcs)	Inner box quantity(pcs)	Outer carton quantity(pcs)	Delivery mode
BAV19W THRU BAV21W	F2	Approximate 0.011	3000	30000	120000	7” reel
BAV19W THRU BAV21W	F3	Approximate 0.011	10000	/	210000	13” reel

■ Outline Dimensions



TOP VIEW

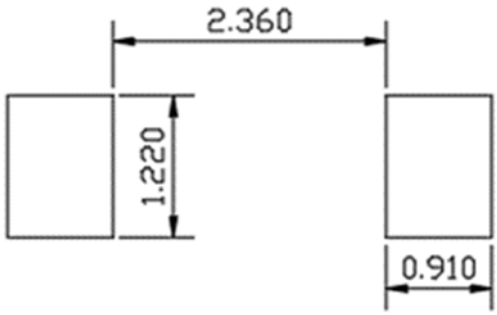
SIDE VIEW



SIDE VIEW

DIMENSIONS				
DIM	INCHES		MM	
	MIN	MAX	MN	MAX
A	0.140	0.152	3.550	3.850
B	0.100	0.112	2.550	2.850
C	0.055	0.071	1.400	1.800
D	0.037	0.053	0.950	1.350
E	0.020	0.028	0.510	0.710
G	0.006	0.018	0.150	0.450
H	0.003	0.010	0.080	0.250
J	0.000	0.006	0.000	0.150
θ	0	8°	0	8°

■ Suggested Pad Layout



UNIT: mm

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