

**SOD-123 Plastic-Encapsulate Switching Diode**

**SOD-123**



**FEATURES**

- For surface mounted applications
- Glass Passivated Chip Junction
- Fast reverse recovery time
- Ideal for automated placement
- Lead free in comply with EU RoHS 2011/65/EU directives

**MECHANICAL DATA**

- Case: SOD-123
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 16mg/0. 00056oz

**Absolute Maximum Ratings at 25 °C**

Parameter	Symbols	BAV19W	BAV20W	BAV21W	Units
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	120	200	250	V
Maximum RMS voltage	$V_{RMS}$	100	150	200	V
Continuous Forward Current	$I_F$	250			mA
Repetitive Peak Forward Current	$I_{FRM}$	625			mA
Non-repetitive Peak Forward Surge Current at 1s at 1ms at 1 us	$I_{FSM}$	1 3 9			A
Total Power Dissipation	$P_{tot}$	500			mW
Operating and Storage Temperature Range	$T_j, T_{stg}$	-55 ~ +150			°C

**Characteristics at  $T_a = 25\text{ °C}$**

Parameter	Symbols	BAV19W	BAV20W	BAV21W	Units
Reverse Breakdown Voltage at $I_R = 100\mu A$	$V_{(BR)R}$	120	200	250	V
Maximum Forward Voltage at 100 mA at 200 mA	$V_F$	1.00 1.25			V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_a = 25\text{ °C}$ $T_a = 150\text{ °C}$	$I_R$	0.1 100			$\mu A$
Typical Junction Capacitance at $V_R = 4V, f = 1MHz$	$C_j$	5			pF
Maximum Reverse Recovery Time <sup>(1)</sup>	$t_{rr}$	50			ns

( 1 ) Measured with  $I_F = 0.5 A, I_R = 1 A, I_{rr} = 0.25 A$

## Typical Characteristics

Fig.1 Forward Current Derating Curve

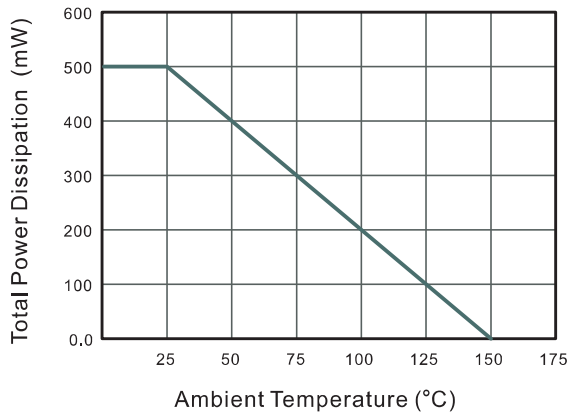


Fig.2 Typical Reverse Characteristics

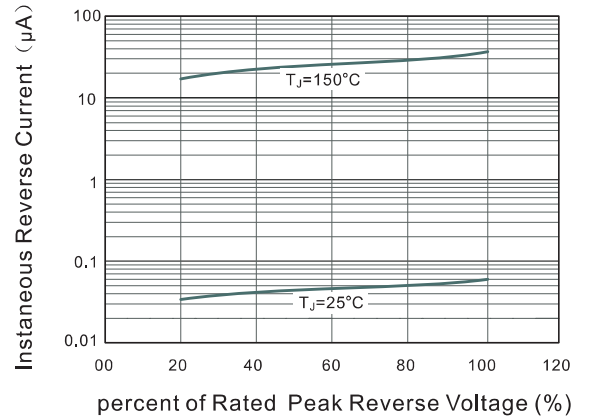


Fig.3 Typical Instantaneous Forward Characteristics

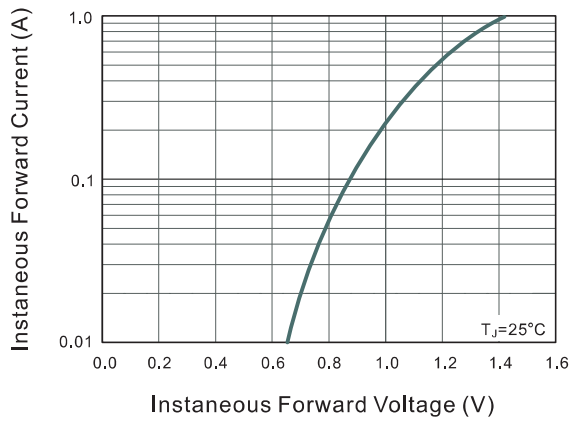
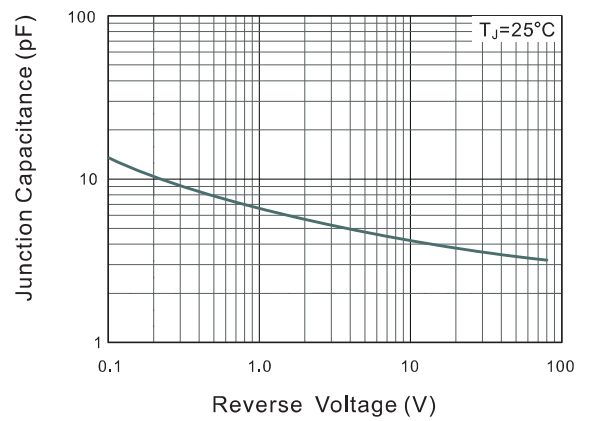
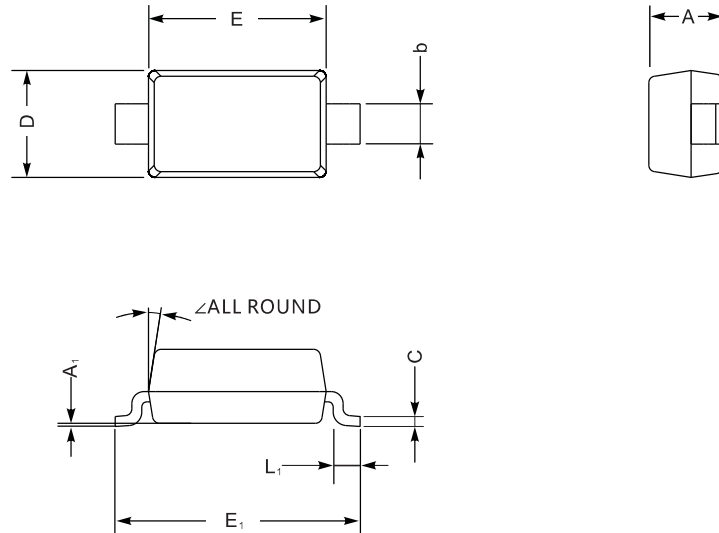


Fig.4 Typical Junction Capacitance



**PACKAGE OUTLINE**

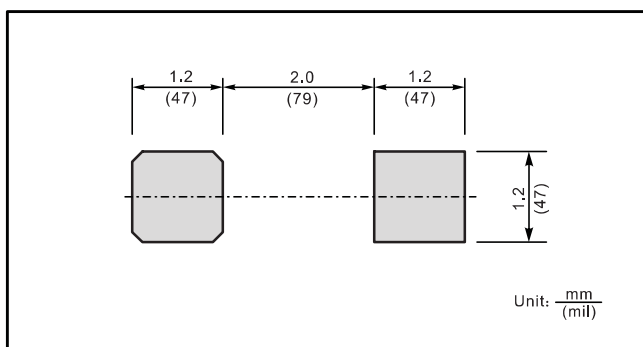
Plastic surface mounted package; 2 leads



SOD-123 mechanical data

UNIT		A	C	D	E	E <sub>1</sub>	L <sub>1</sub>	b	A <sub>1</sub>	∠
mm	max	1.3	0.22	1.8	2.8	3.9	0.45	0.7	0.2	9°
	min	0.9	0.09	1.5	2.5	3.6	0.25	0.5	—	
mil	max	51	8.7	71	110	154	18	28	8	
	min	35	3.5	59	98	142	10	20	—	

**The recommended mounting pad size**



**Marking**

Type number	Marking code
BAV19W	A8
BAV20W	T2
BAV21W	T3