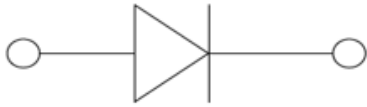


Small Signal Switching Diodes



SOD123

Features

- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 1
- V_{RRM} 120V to 250V
- I_{FAV} 200mA
- Part no. with suffix "Q" means AEC-Q101 qualified

Applications

- General Purpose Switches Diodes
- Automotive

Mechanical Data

- **Case:** SOD123
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

■ Maximum Ratings ($T_a=25^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	CONDITIONS	PART	VALUE
Reverse Voltage	V_R	V		BAV19WQ	100
				BAV20WQ	150
				BAV21WQ	200
Repetitive Peak Reverse Voltage	V_{RRM}	V		BAV19WQ	120
				BAV20WQ	200
				BAV21WQ	250
Average Forward Current	I_{FAV}	mA			200
Non-Repetitive Peak Forward Surge Current	I_{FSM}	A	$t_p < 10\text{ms}$		1.7
Power Dissipation	P_{tot}	mW			410
Thermal Resistance Junction to Ambient	R_{thJA}	K/W			305
Maximum Junction Temperature	T_j	$^\circ\text{C}$			150
Storage Temperature Range	T_{stg}	$^\circ\text{C}$			-55 to +150

BAV19WQ THRU BAV21WQ

■ Electrical Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	CONDITIONS		MIN	MAX
Reverse Voltage	V _R	V	BAV19WQ	I _R =100uA	100	
			BAV20WQ	I _R =100uA	150	
			BAV21WQ	I _R =100uA	200	
Forward Voltage	V _F	V	I _F =100mA			1.0
			I _F =200mA			1.25
Reverse Current	I _R	μA	BAV19WQ	V _R =100V		0.1
			BAV20WQ	V _R =150V		0.1
			BAV21WQ	V _R =200V		0.1
Diode Capacitance	C _D	pF	V _R =V _F =0V, f =1MHz			5
Reverse Recovery Time	t _{rr}	ns	I _F =30mA, I _{rr} =0.1I _R , R _L =100Ω			50

■ Ordering Information (Example)

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
BAV19WQ THRU BAV21WQ	F2	Approximate 0.010	3000	30000	120000	7" reel

BAV19WQ THRU BAV21WQ

■ Characteristics (Typical)

Fig.1: P_D - T_A

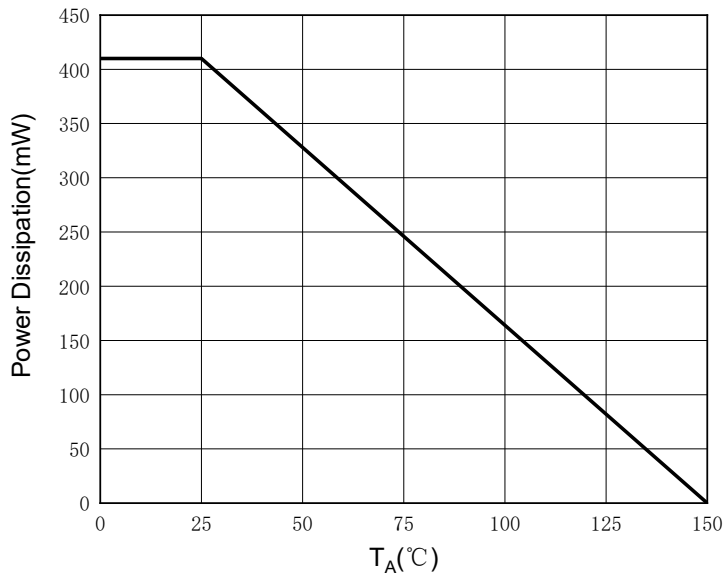


Fig.2: Forward Characteristics

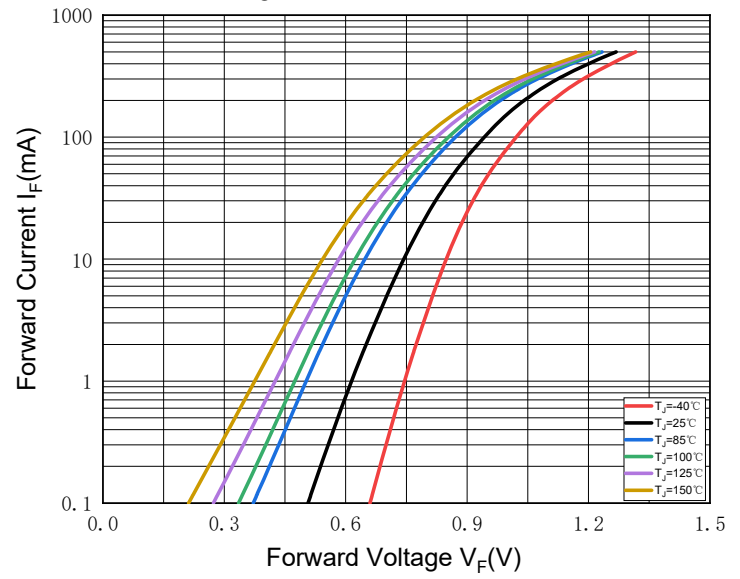


Fig.3: Reverse Characteristics

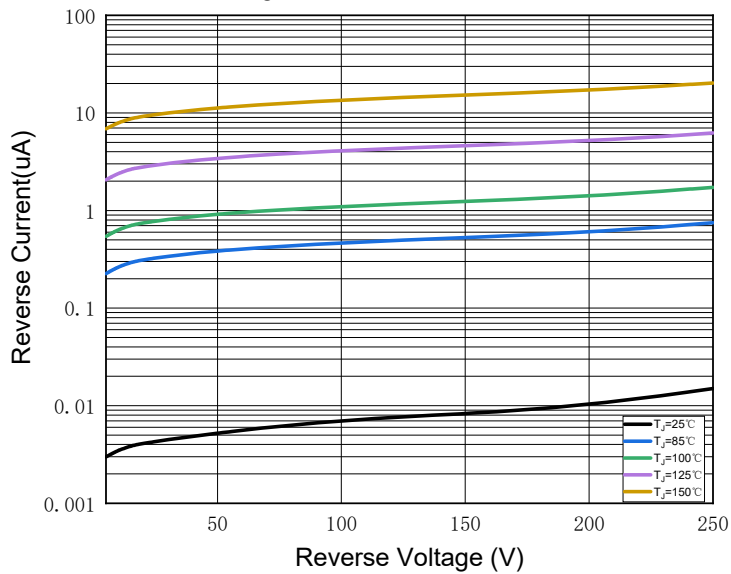
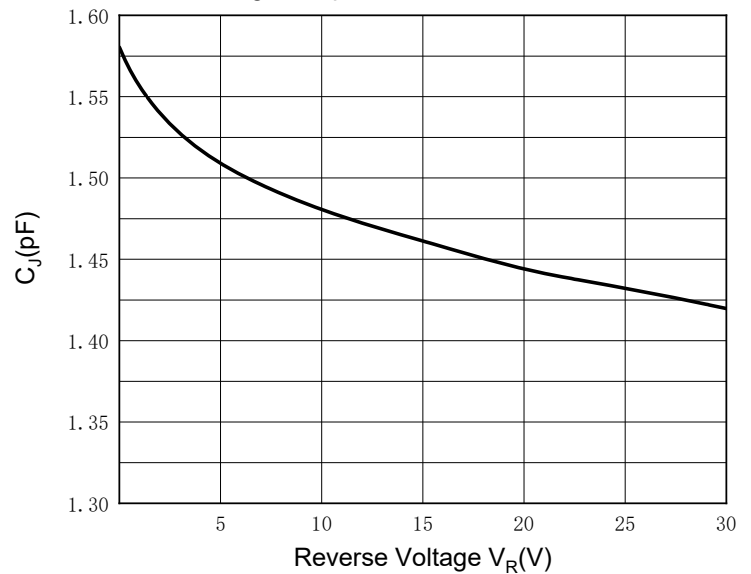


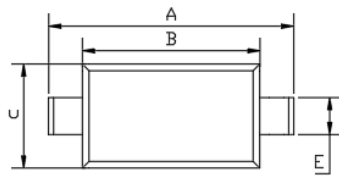
Fig.4: Capacitance Characteristics



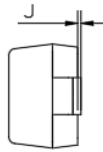
BAV19WQ THRU BAV21WQ

■ Outline Dimensions

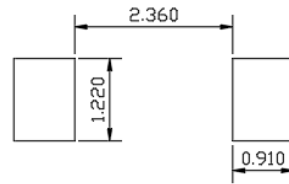
SOD-123



TOP VIEW

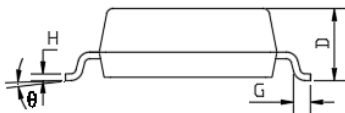


SIDE VIEW



UNIT: mm

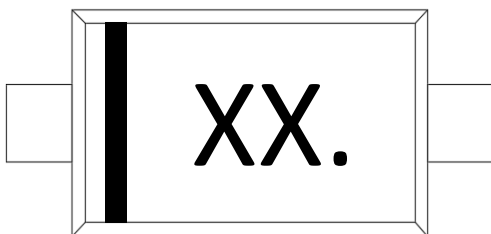
SUGGESTED SOLDER PAD LAYOUT



SIDE VIEW

DIMENSIONS				
DIM	INCHES		MM	
	MIN	MAX	MIN	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°

■ Marking Information



PN	Marking
BAV19WQ	A8
BAV20WQ	T2
BAV21WQ	T3

Note:

1. All marking is at middle of the product body
2. All marking is in laser marking
3. Body color: Black

BAV19WQ THRU BAV21WQ

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