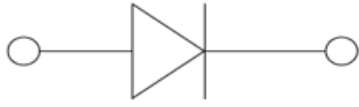


Small Signal Switching Diodes



SOD323

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:** SOD323
- **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		BAV19WSQ	100
				BAV20WSQ	150
				BAV21WSQ	200
Repetitive Peak Reverse Voltage	V_{RRM}	V		BAV19WSQ	120
				BAV20WSQ	200
				BAV21WSQ	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	$P_{tot}^{(1)}$	mW			250
Thermal Resistance Junction to Ambient	$R_{thJA}^{(1)}$	K/W			500
Maximum Junction Temperature	T_j	$^\circ\text{C}$			-55 to +150
Storage Temperature Range	T_{stg}	$^\circ\text{C}$			-55 to +150

(1) Device mounted on an FR4 PCB (1.0 x 1.0 x 0.06 inch), single-sided copper, tin-plated and standard footprint.



BAV19WSQ THRU BAV21WSQ

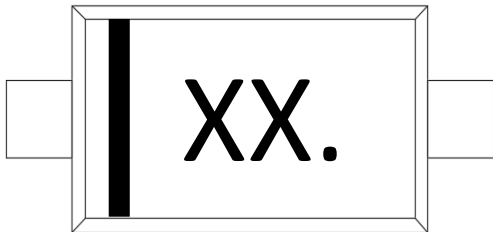
■ Electrical Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	CONDITIONS		MIN	MAX
Reverse Voltage	V _R	V	BAV19WSQ	I _R =100uA	100	
			BAV20WSQ	I _R =100uA	150	
			BAV21WSQ	I _R =100uA	200	
Forward Voltage	V _F	V	I _F =100mA			1.0
			I _F =200mA			1.25
Reverse Current	I _R	μA	BAV19WSQ	V _R =100V		0.1
			BAV20WSQ	V _R =150V		0.1
			BAV21WSQ	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)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
BAV19WSQ THRU BAV21WSQ	F2	Approximate 0.0045	3000	30000	120000	7" reel

■ Marking Information



PN	Marking Code
BAV19WSQ	A8
BAV20WSQ	T2
BAV21WSQ	T3

Note:

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



BAV19WSQ THRU BAV21WSQ

■ Characteristics (Typical)

Fig.1: P_D-T_A

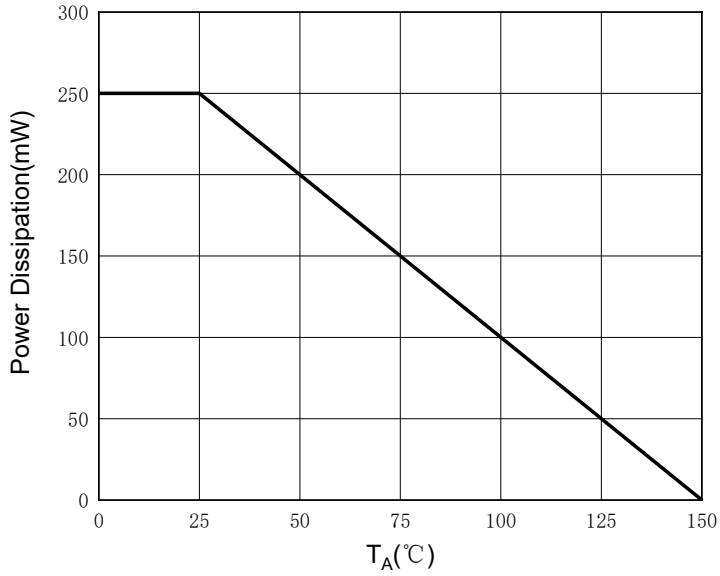


Fig.2: Forward Characteristics

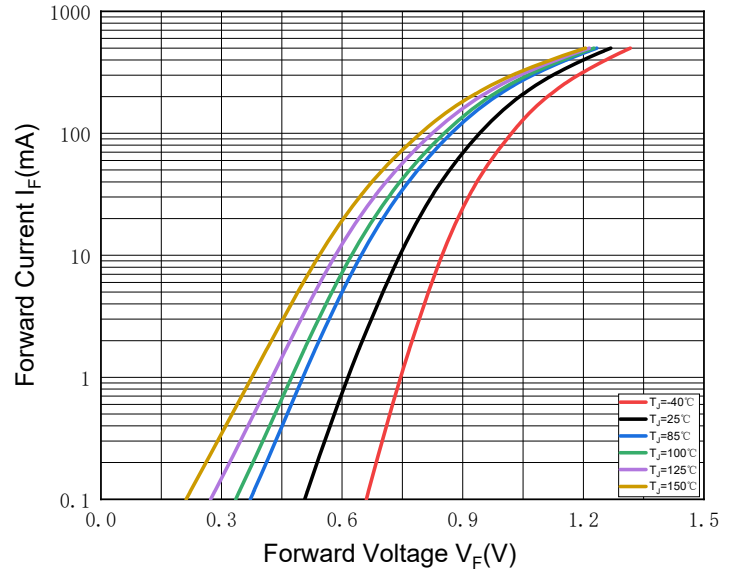


Fig.3: Reverse Characteristics

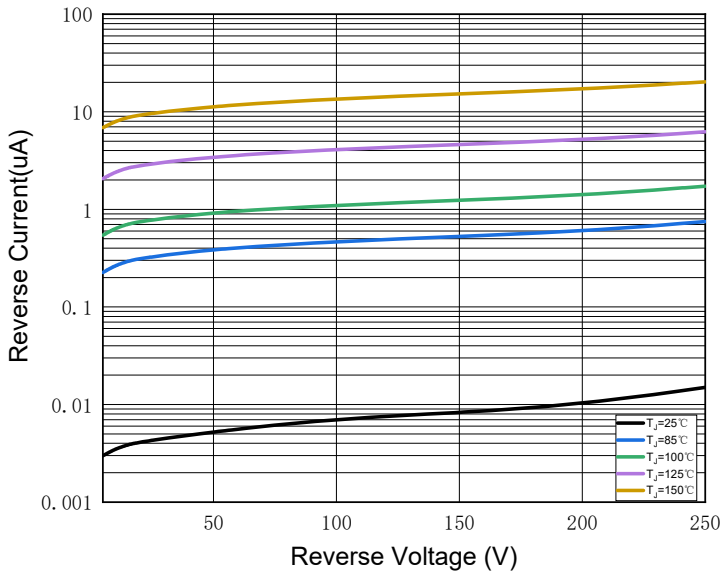
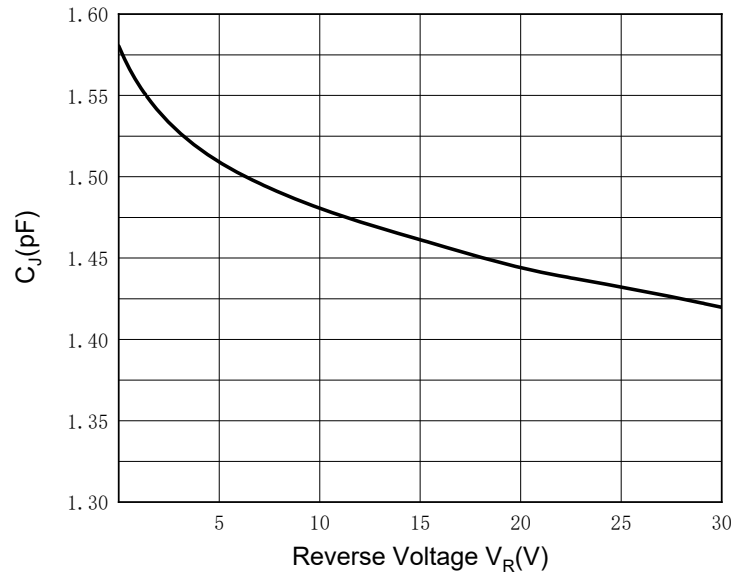


Fig.4: Capacitance Characteristics

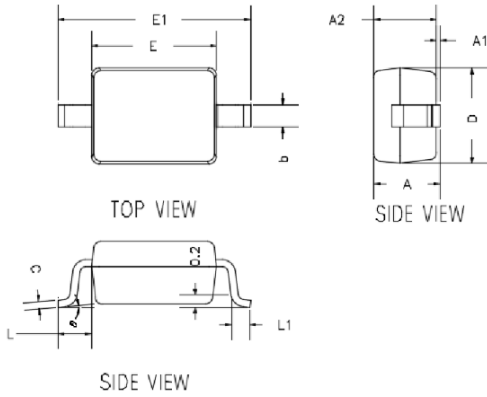




BAV19WSQ THRU BAV21WSQ

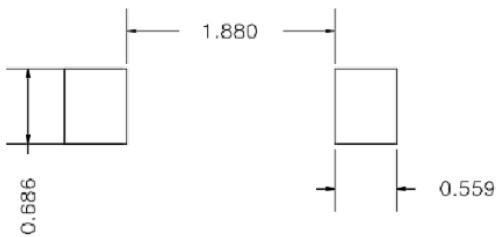
■ Outline Dimensions

SDD-323



DIMENSIONS				
DIM	INCHES		MM	
	MIN	MAX	MIN	MAX
A	---	0.0393	---	1.0000
A1	0.0000	0.0039	0.0000	0.1000
A2	0.0314	0.0354	0.8000	0.9000
b	0.0098	0.0157	0.2500	0.4000
c	0.0031	0.0059	0.0800	0.1500
D	0.0472	0.0551	1.2000	1.4000
E	0.0629	0.0709	1.6000	1.8000
E1	0.0984	0.1063	2.5000	2.7000
L	0.0187TYP		0.475TYP	
L1	0.0098	0.0157	0.250	0.400
θ	0°	8°	0°	8°

■ Soldering Footprint



UNIT : mm

SUGGESTED SOLDER PAD LAYOUT



BAV19WSQ THRU BAV21WSQ

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