



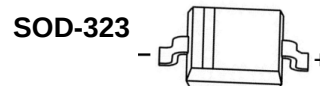
BAV16WS/1N4148WS

Plastic-encapsulate diodes

Product data sheet

1. General description

Fast switching diode encapsulated in a small SOD-323 Surface-Mounted Device (SMD) plastic package.



2. Features

- Fast Switching Speed
- High Conductance

3. Applications

- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Applications

4. Quick reference data

Table 1. Quick reference data

Parameter	Symbol	Limit	Unit
Non-Repetitive Peak Reverse Voltage	V_{RM}	100	V
RMS Reverse Voltage	$V_{R(RMS)}$	71	V
Forward Continuous Current	I_{FM}	300	mA
Average Rectified Output Current	I_O	150	mA
Non-Repetitive Peak Forward Surge Current @ $t=8.3ms$	I_{FSM}	2.0	A
Power Dissipation	P_d	200	mW

5. Pinning information

Table 2. Pinning information

Pin	Name	Description	Simplified outline	Graphic symbol
1	Cathode	connect to IO		
2	Anode	connect to IO		

6. Ordering information

Table 3. Ordering information

Part number	Package	Material	Packing	Quantity per reel	Flammability rating	Reel size
BAV16WS / 1N4148WS	SOD-323	halogen free	tape & reel	3,000pcs	UL 94V-0	7 inches

7. Marking

Table 4. Marking codes

Part number	Marking code
BAV16WS	T6
1N4148WS	T4

The marking bar indicates the cathode

Solid dot = Green molding compound device, if none, the normal device.

8. Limiting values and electrical Characteristics

Table 5. Limiting values

 $T_a=25^{\circ}\text{C}$

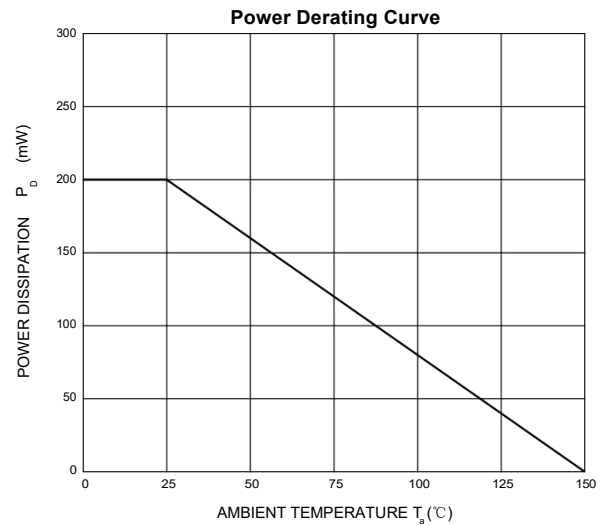
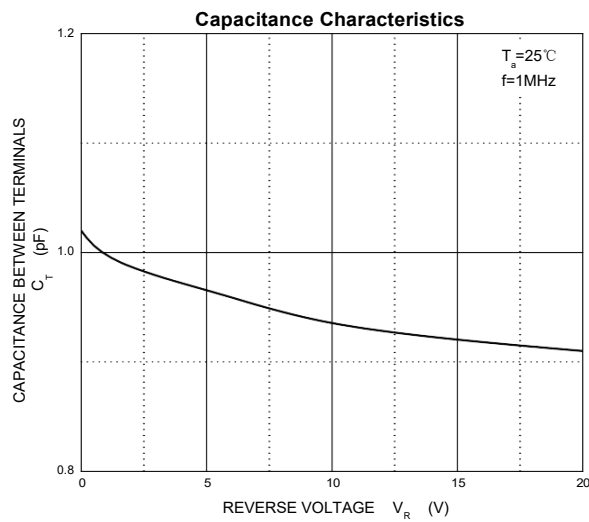
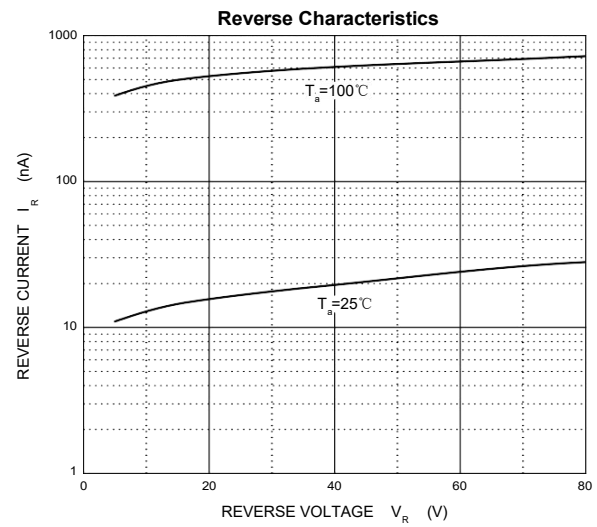
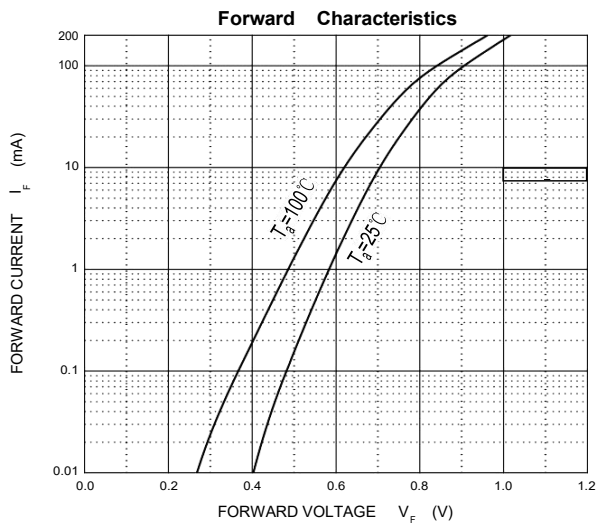
Parameter	Symbol	Limit	Unit
Non-Repetitive Peak Reverse Voltage	V_{RM}	100	V
Peak Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
RMS Reverse Voltage	$V_{R(RMS)}$	71	V
Forward Continuous Current	I_{FM}	300	mA
Average Rectified Output Current	I_O	150	mA
Non-Repetitive Peak Forward Surge Current @ $t=8.3\text{ms}$	I_{FSM}	2.0	A
Power Dissipation	P_d	200	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	625	$^{\circ}\text{C/W}$
Operation Junction and Storage Temperature Range	T_J, T_{STG}	-55~+150	$^{\circ}\text{C}$

Table 6. Electrical characteristics

 $T_a=25^{\circ}\text{C}$

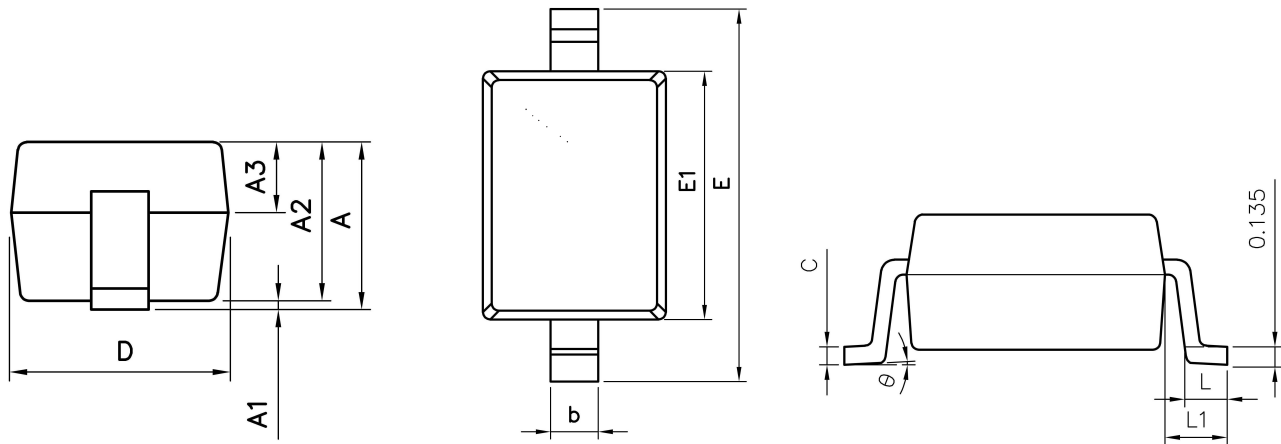
Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Forward voltage	V_{F1}			0.715	V	$I_F=1\text{mA}$
	V_{F2}			0.855	V	$I_F=10\text{mA}$
	V_{F3}			1.0	V	$I_F=50\text{mA}$
	V_{F4}			1.25	V	$I_F=150\text{mA}$
Reverse current	I_{R1}			1	μA	$V_R=75\text{V}$
	I_{R2}			25	nA	$V_R=20\text{V}$
Capacitance between terminals	C_T			2	pF	$V_R=0\text{V}, f=1\text{MHz}$
Reverse recovery time	t_{rr}			4	ns	$I_F=I_R=10\text{mA}$ $I_{rr}=0.1I_R, R_L=100\Omega$

9. Typical characteristics



10.Package outline

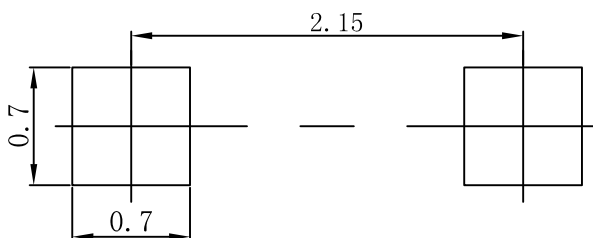
Table 7. SOD-323 Package outline



Symbol	Dimension in millimeter		
	Min	Nom	Max
A	0.95	1.0	1.05
A1	0.0	0.05	0.1
A2	0.85	0.90	0.95
A3	0.35	0.40	0.45
b	0.30	0.35	0.40
c	0.127	0.131	0.135
D	1.20	1.25	1.30
E	2.50	2.65	2.80
E1	1.65	1.70	1.75
L	0.20	0.30	0.40
L1	0.45		0.65
θ	0°	3°	8°

11.Suggested pad layout

Table 8. Suggested pad layout



Note:

1. Controlling dimension: in millimeters
2. General tolerance: $\pm 0.05\text{mm}$
3. The pad layout is for reference purposes only

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