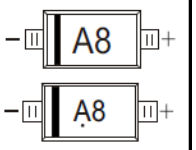
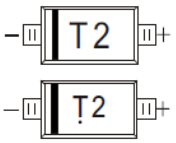
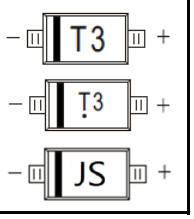
BAV19W thru BAV21W

Plastic-Encapsulate Diodes
Switching Diodes

SOD-123

Marking:		
BAV19W	BAV20W	BAV21W
A8	T2	T3,JS
		

The marking bar indicates the cathode

Solid dot = Green molding compound device,

if none, the normal device.

Features

- Low Reverse Current
- Surface Mount Package Ideally Suited for Automatic Insertion
- Fast Switching Speed
- For General Purpose Switching Applications

Ordering Information

Part No.	Remark	Package	Packing
BAVxxW	General	SOD-123	5000 / Tape & Reel
BAVxxW-H	Halogen Free		
BAVxxW-Q	AEC-Q101 qualified		

Maximum Ratings (T_A=25°C unless otherwise noted)

Parameter	Symbol	Limits			Unit
		BAV19W	BAV20W	BAV21W	
Non-Repetitive Peak Reverse Voltage	V_{RM}	120	200	250	V
Peak Repetitive Reverse Voltage	V_{RRM}	100	150	200	V
Working Peak Reverse Voltage	V_{RWM}				
RMS Reverse Voltage	$V_{R(RMS)}$	71	106	141	V
Average Rectified Output Current	I_O	200			mA
Non-repetitive Peak Forward Surge Current @ t=8.3ms	I_{FSM}	2			A
Repetitive Peak Forward Current	I_{FRM}	625			mA
Power Dissipation	P_D	500			mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	250			°C/W
Storage Temperature	T_{STG}	-55~+150			°C

Electrical Characteristics (T_A=25°C unless otherwise noted)

Parameter	Conditions	Symbol	Min.	Typ.	Max.	Unit
Reverse Current	V_R=100V BAV19W	I_R	—	—	0.10	μA
	V_R=150V BAV20W		—	—	0.10	
	V_R=200 BAV21W		—	—	0.10	
Forward Voltage	I_F=100mA	V_F	—	—	1	V
	I_F=200mA		—	—	1.25	
Total Capacitance	V_R=0, f=1MH$_Z$	C_T	—	—	5	pF
Reverse Recovery Time	I_F= I_R =30mA, I_{rr}=0.1*I_R , R_L=100Ω	t_{rr}	—	—	50	ns

Rating and Characteristics Curvers

Fig 1 Forward Characteristics

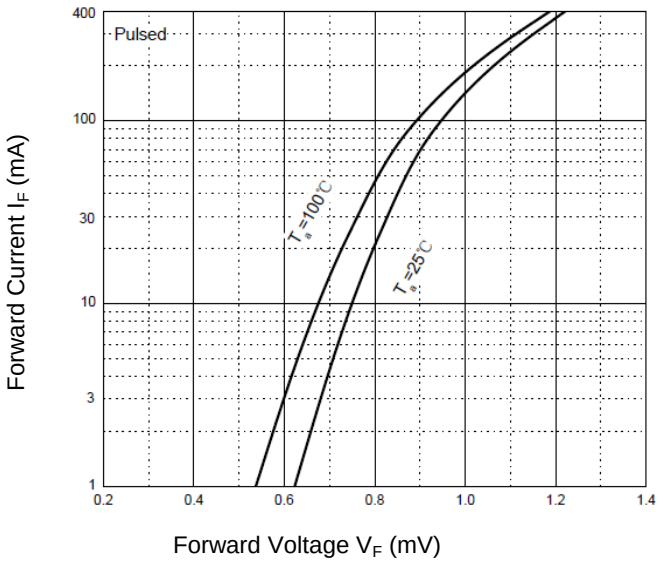


Fig 2 Reverse Characteristics

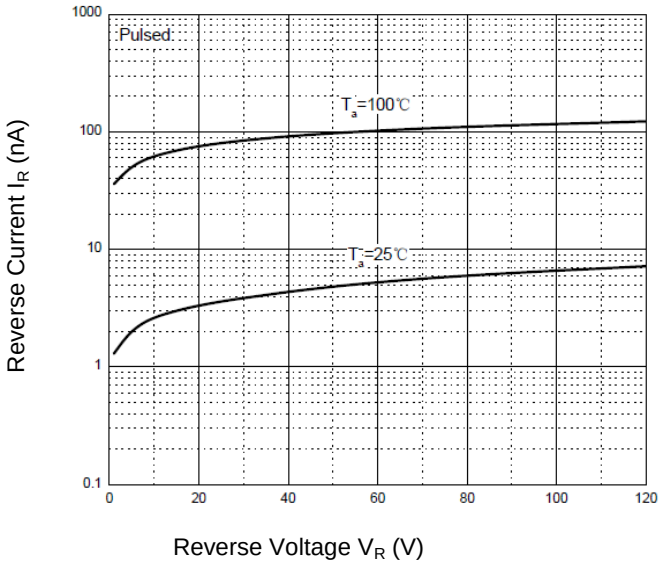


Fig 3 Capacitance Characteristics

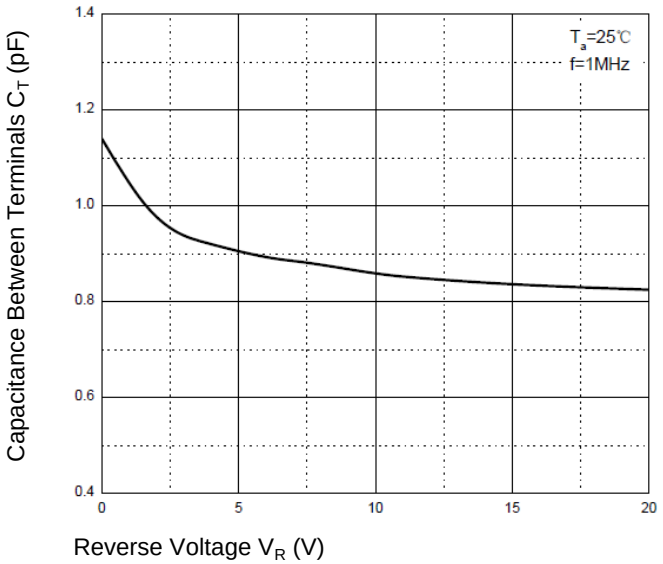
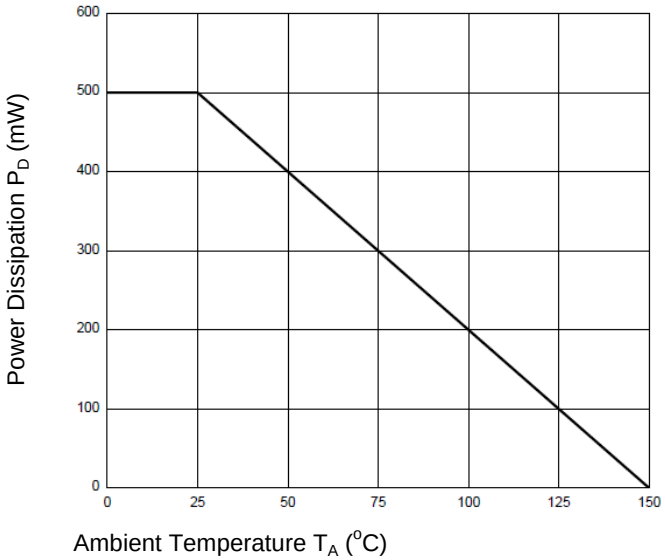
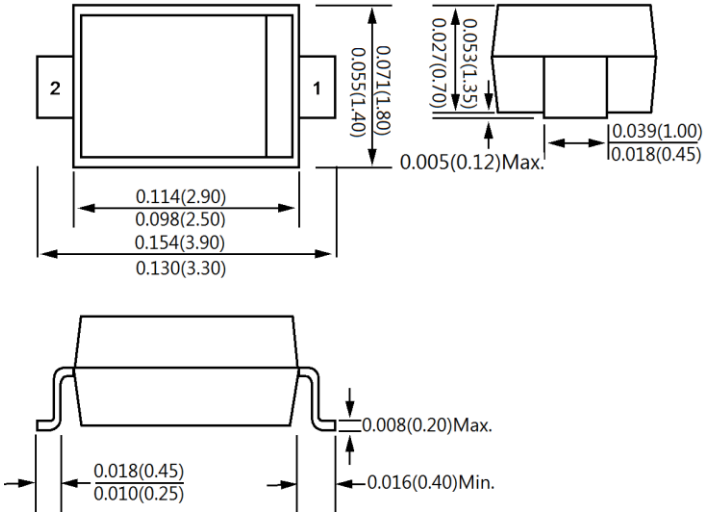


Fig 4 Power Derating Curve



Plastic-Encapsulate Diodes
Switching Diodes

Package Outline Dimensions

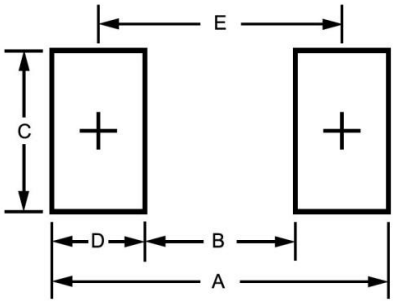


SOD-123

Dimensions in inches and (millimeters)

Suggested Pad Layout

Outline / Symbol	SOD-123 millimeters
A	4.15
B	2.55
C	1.00
D	0.80
E	3.35



Tape & Reel Specification

Item	Symbol	Dimension
		millimeters
Carrier width	A	1.85 ±0.05
Carrier length	B	3.95 ±0.05
Carrier depth	C	1.57 ±0.05
Sprocket hole	d	1.55 ±0.10
Reel outside diameter	D	178 ±2
Reel inner diameter	D1	54.4 ±1
Feed hole width	D2	13.0 ±1
Sprocke hole position	E	1.75 ±0.10
Punch hole position	F	3.50 ±0.10
Punch hole pitch	P	4.0 ±0.10
Sprocke hole pitch	P0	4.0 ±0.10
Embossment center	P1	2.0 ±0.10
Tape width	W	8.0 +0.3/-0.1
Reel width	W1	9.5 ±1