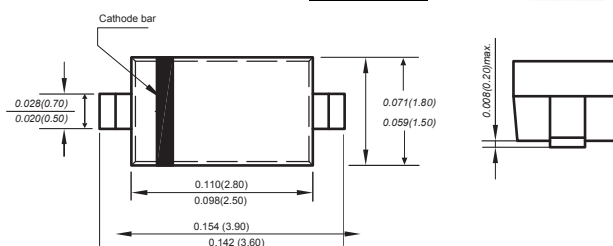


FAST SWITCHING DIODES

Features

- ◆ Fast switching speed
- ◆ Surface mount package ideally suited
- ◆ for automatic insertion
- ◆ For general purpose switching applications High
- ◆ conductance

SOD-123



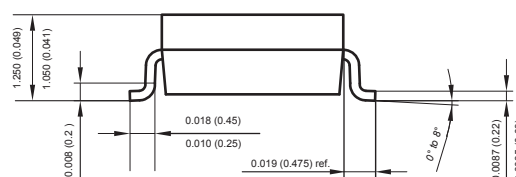
Mechanical Data

Case: JEDEC SOD-123 molded plastic body
 Terminals: Plated leads solderable per MIL-STD-750, Method 2026

Polarity: Polarity symbols marked on case

Weight : 0.00056 ounce, 0.016 grams

Marking: BAV19W:A8, BAV20W:T2, BAV21W:T3



Dimensions in inches and (millimeters)

Absolute Maximum Ratings at 25 °C

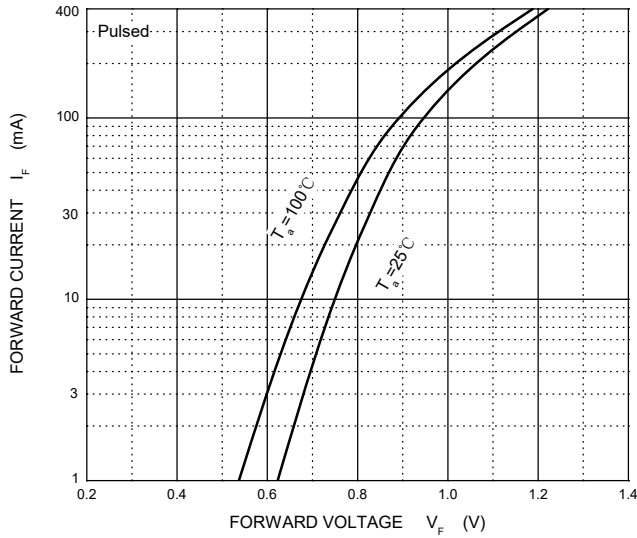
PARAMETER	SYMBOLS	BAV19W	BAV20W	BAV21W	UNITS
Peak repetitive peak reverse voltage	V_{RRM}				
Working peak reverse voltage	V_{RWM}	120	200	250	V
DC Blocking voltage	V_R				
RMS Reverse voltage	$V_{R(RMS)}$	71	106	141	V
Forward continuous current	I_{FM}		250		mA
Average rectified output current	I_o		200		mA
Peak forward surge current @=1s	I_{FSM}		1		A
@=1ms			3		
@=1us			9		
Repetitive peak forward current	I_{FRM}		625		mA
Power dissipation	P_d		500		mW
Thermal resistance junction to ambient	$R_{\theta JA}$		500		K/W
Storage temperature	T_{STG}		-55 to +150		°C
Non-Repetitive peak reverse voltage	V_{RM}	120	200	250	V

Characteristics at Ta= 25 °C

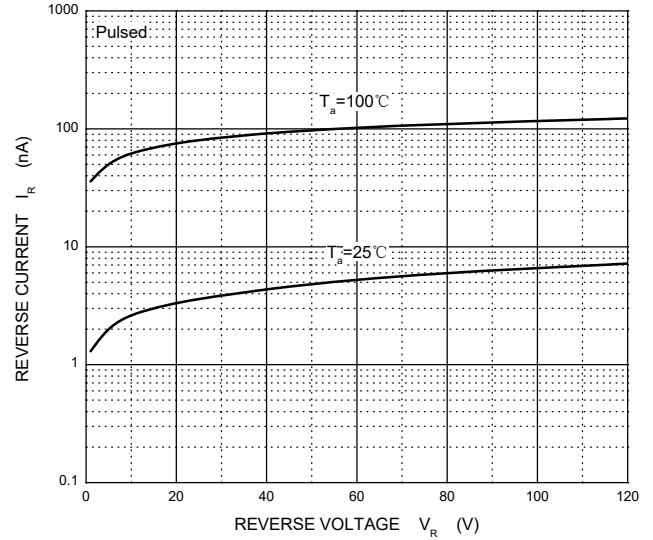
PARAMETER	SYMBOLS	Min.	Typ.	Max.	Unit	Conditions
Forward voltage	V_{F1}			1.0	V	$I_F=0.1A$
	V_{F2}			1.25	V	$I_F=0.2A$
Reverse current	I_R			0.1	uA	$V_R=120V$
				0.1	uA	$V_R=200V$
				0.1	uA	$V_R=250V$
Capacitance between terminals	C_T			5	pF	$V_R=4V, f=1.0MHz$
Reverse recovery time	t_{rr}			50	ns	$I_F=I_R=10mA$ $I_{rr}=0.1I_R, R_L=100 \Omega$

Typical Characteristics

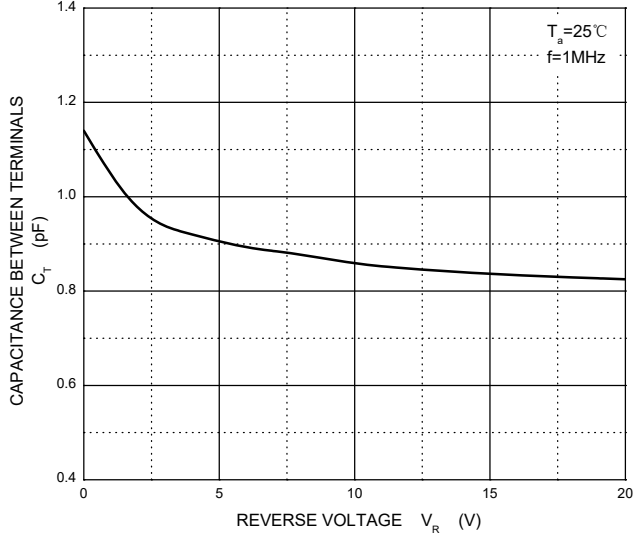
Forward Characteristics



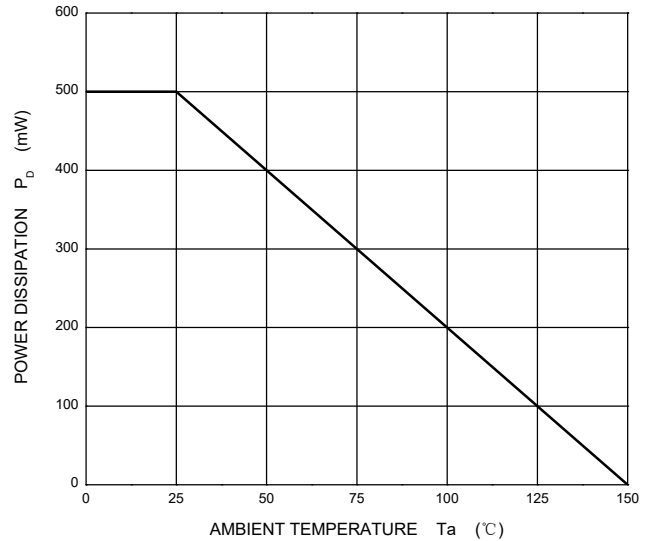
Reverse Characteristics



Capacitance Characteristics

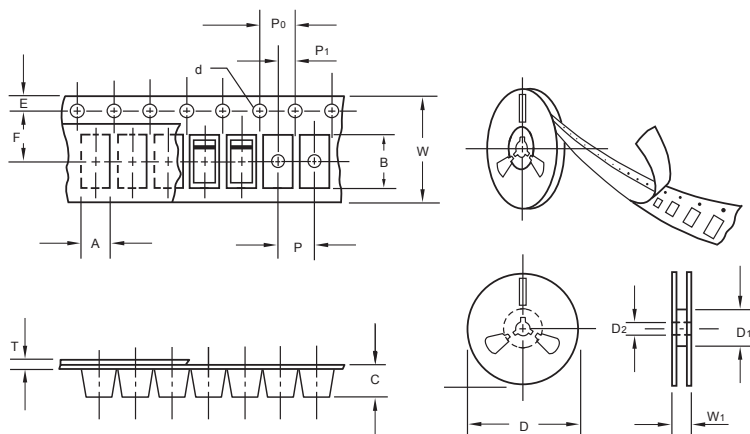


Power Derating Curve



The curve above is for reference only.

Packing information



unit:mm

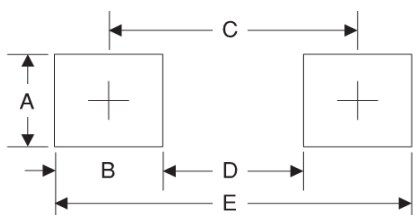
Item	Symbol	Tolerance	SOD-123
Carrier width	A	0.1	2.1
Carrier length	B	0.1	4.0
Carrier depth	C	0.1	1.60
Sprocket hole	d	0.05	1.55
7" Reel outside diameter	D	2.0	178.00
7" Reel inner diameter	D ₁	min	50.0
Feed hole diameter	D ₂	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	3.50
Punch hole pitch	P	0.1	4.00
Sprocket hole pitch	P ₀	0.1	4.00
Embossment center	P ₁	0.1	2.00
Overall tape thickness	T	0.1	0.25
Tape width	W	0.3	8.15
Reel width	W ₁	1.0	10.5

Note: Devices are packed in accordance with EIA standard RS-481-A and specifications listed above.

Reel packing

PACKAGE	REEL SIZE	REEL (pcs)	COMPONENT SPACING (m/m)	BOX (pcs)	INNER BOX (m/m)	REEL DIA, (m/m)	CARTON SIZE (m/m)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
SOD-123	7"	3,000	4.0	45,000	210*208*203	178	430*430*235	180,000	9.0

Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	1.2	0.047
B	1.2	0.047
C	3.2	0.126
D	2.0	0.079
E	4.4	0.173