

FAST SWITCHING DIODES

Features

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

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:T3

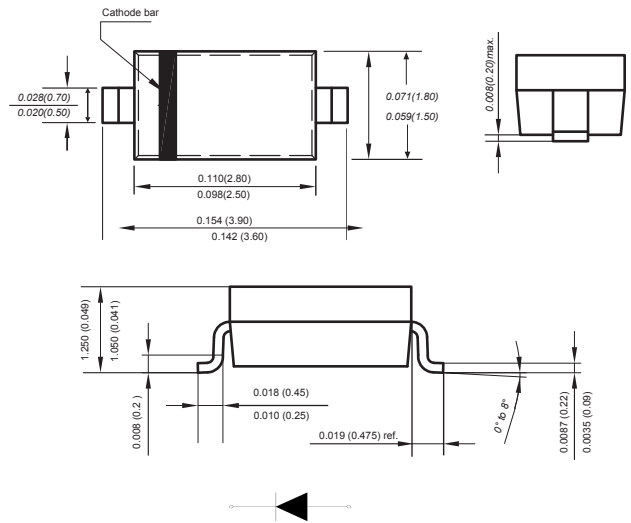
Absolute Maximum Ratings at 25 °C

PARAMETER	SYMBOLS	BAV21WD	UNITS
Peak repetitive peak reverse voltage	V_{RRM}	250	V
Working peak reverse voltage	V_{RWM}		
DC Blocking voltage	V_{DC}		
RMS Reverse voltage	$V_{R(RMS)}$	141	V
Average rectified output current	I_o	200	mA
Peak forward surge current @ $t < 8.3ms$	I_{FSM}	2	A
Repetitive peak forward current	I_{FRM}	625	mA
Power dissipation(1)	P_d	500	mW
Operating and Storage Temperature Range	T_j, T_{STG}	-55 to +150	°C

Characteristics at $T_a = 25\text{ °C}$

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	$V_R = 250V$
Capacitance between terminals	C_T			5	pF	$V_R = 0V, f = 1.0MHz$
Reverse recovery time	t_{rr}			50	ns	$I_F = 0.5A, I_R = 1A, I_{rr} = 0.25A$

note1 : Device mounted on an FR4 Printed-Circuit Board (PCB), single-sided copper, tin-plated mounting pad for cathode 1cm²

SOD-123


Dimensions in inches and (millimeters)

Typical Characterisitics

Fig.1 Power Derating Curve

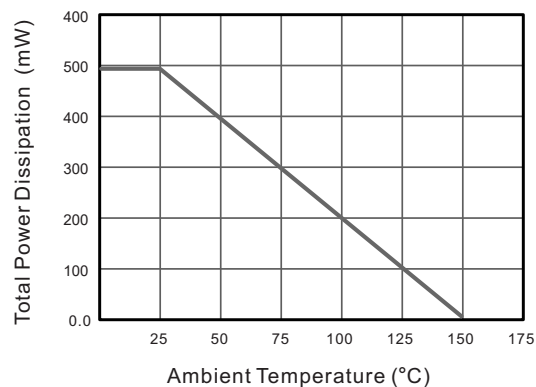


Fig.2 Typical Reverse Characteristics

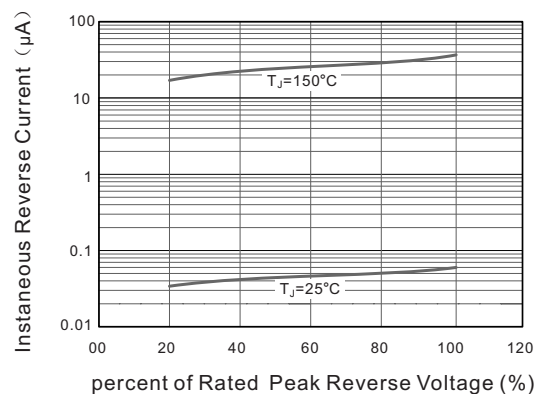


Fig.3 Typical Instaneous Forward Characteristics

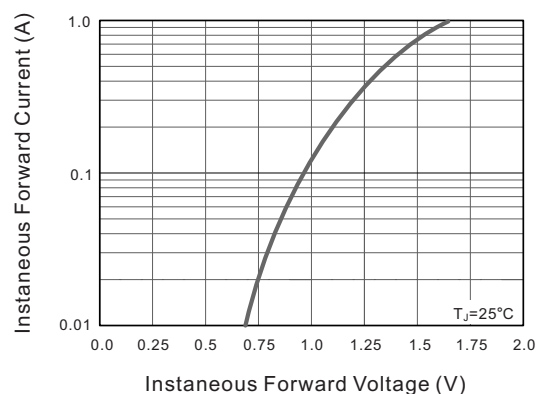
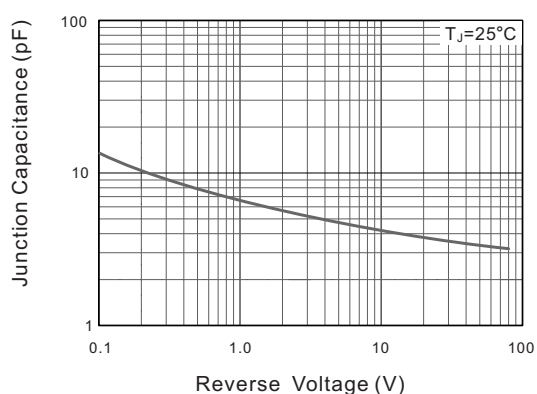
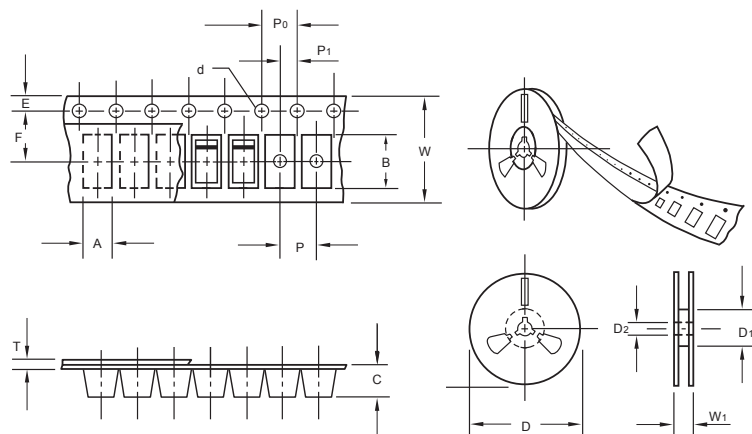


Fig.4 Typical Junction Capacitance



The curve above is for reference only.

Packing information



unit:mm

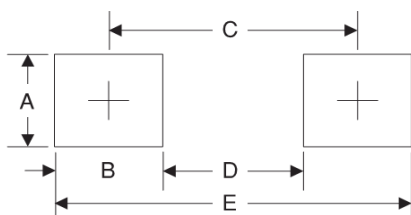
Item	Symbol	Tolerance	SOD-123
Carrier width	A	0.1	2.1
Carrier length	B	0.1	4.0
Carrier depth	C	0.1	1.60
Sprocket hole	d	0.05	1.55
7" Reel outside diameter	D	2.0	178.00
7" Reel inner diameter	D ₁	min	50.0
Feed hole diameter	D ₂	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	3.50
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