SD103AW THRU SD103CW

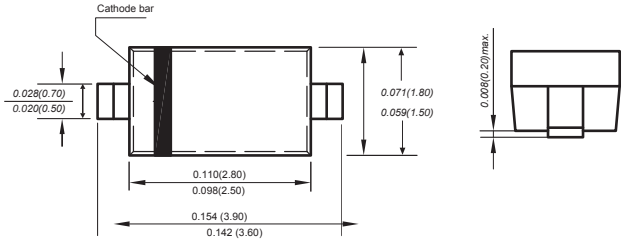
Reverse Voltage 20-40 Volts Forward Current - 0.35 Ampere

SCHOTTKY DIODES

Features

SOD-123

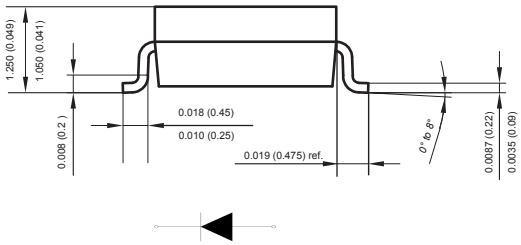
RoHS COMPLIANT



- Fast switching speed
- Guard ring construction for transient protection
- Negligible reverse recovery time
- low reverse capacitance

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 : 0.0007 ounce, 0.02 grams
Marking: SD103AW:S4, SD103BW:S5, SD103CW:S6



Dimensions in inches and (millimeters)

Absolute Maximum Ratings at 25 °C

PARAMETER	SYMBOLS	SD103AW	SD103BW	SD103CW	UNITS
Peak repetitive peak reverse voltage Working peak reverse voltage DC Blocking voltage	V_{RRM} V_{RWM} V_{DC}	40	30	20	VOLTS
RMS Reverse voltage	$V_{R(RMS)}$	28	21	14	V
Forward continuous current	I_{FM}	350			mA
Repetitive peak forward current at ≤1.0s	I_{FRM}	1.5			A
Power dissipation	Pd	400			mW
Thermal resistance junction to ambient	$R_{\Theta JA}$	300			℃/W
Storage temperature	T_{STG}	-55 to +150			℃

Characteristics at Ta= 25 °C

PARAMETER		SYMBOLS	Min.	Typ.	Max.	Unit	Conditions
Reverse breakdown voltageReverse	SD103AW SD103BW SD103CW	$V_{(BR)R}$	40 30 20			V	IR=100uA IR=100uA IR=100uA
Fowrard voltage		V_F			0.37 0.60	V	I_F=20mA I_F=200mA
Reverse current	SD103AW SD103BW SD103CW	I_{RM}			5.0	uA	V_R=30V V_R=20V V_R=10V
Capacitance between terminals		C_T		28		pF	V_R=0V,f=1.0MHz
Reverse recovery time		t_{rr}		10		ns	I_F=I_R=200mA Irr=0.1XI_R,R_L=100 Ω

Typical Characterisitics

Fig.1 Power Derating Curve

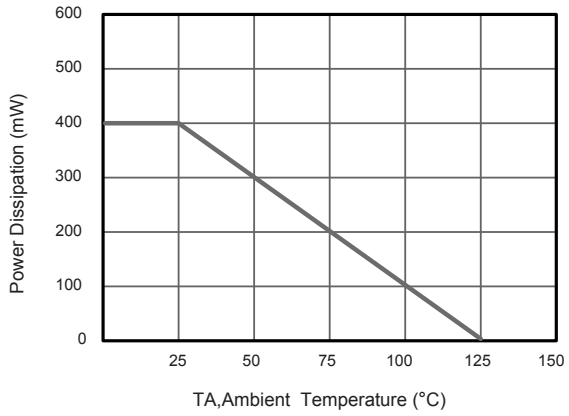


Fig.2 Typical Reverse Characteristics

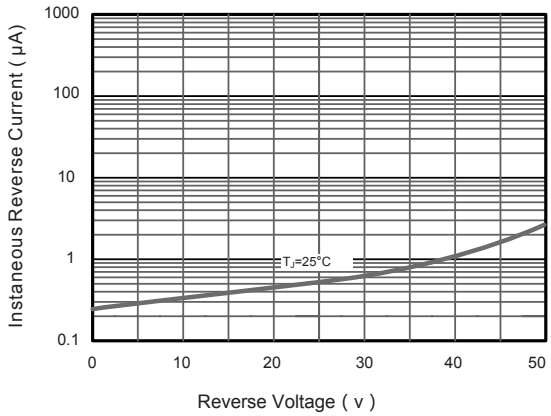


Fig.3 Forward Characteristics

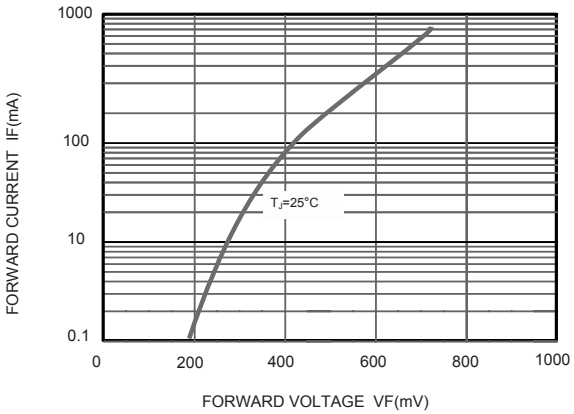


Fig.4 Typical Transient Thermal Impedance

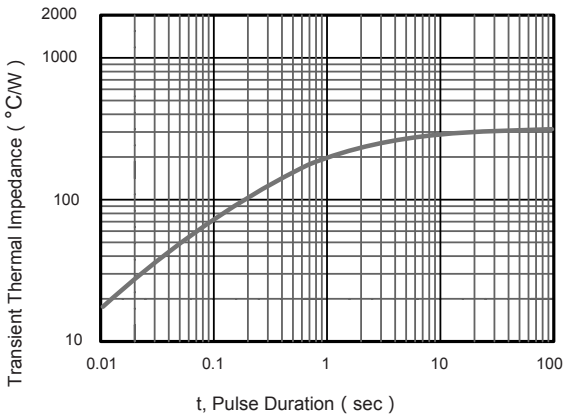
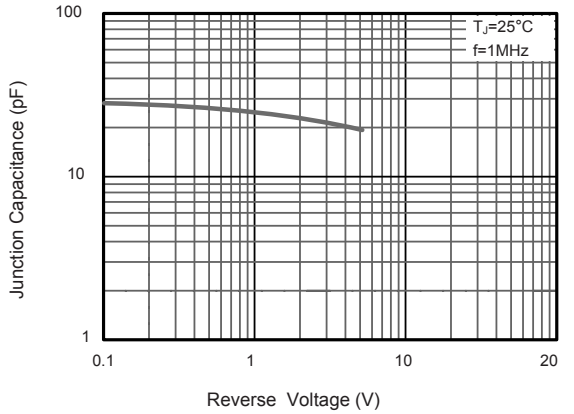
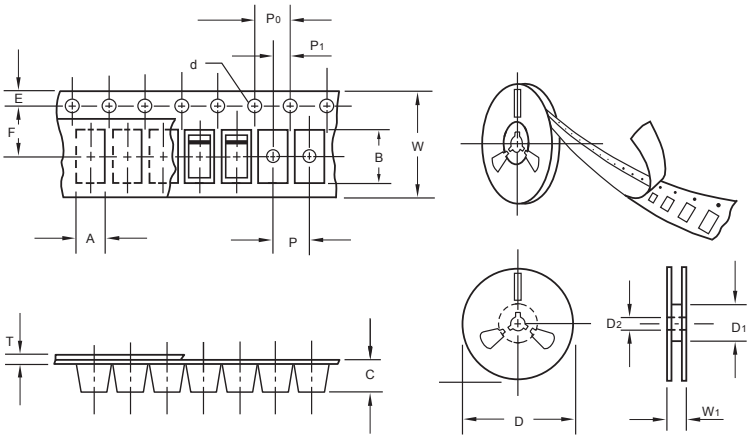


Fig.5 Typical Junction Capacitance



The curve above is for reference only.

Packing information



unit:mm

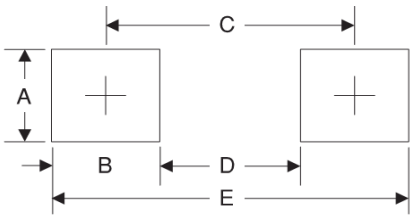
Item	Symbol	Tolerance	SOD-123
Carrier width	A	0.1	2.1
Carrier length	B	0.1	4.0
Carrier depth	C	0.1	1.60
Sprocket hole	d	0.05	1.55
7" Reel outside diameter	D	2.0	178.00
7" Reel inner diameter	D_1	min	50.0
Feed hole diameter	D_2	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	3.50
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 accor dance with EIA standar 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