

SD103AW THRU SD103CW

Small Signal Schottky Diode



Features

- Moisture sensitivity level 1
- Reverse voltage: 40V/30V/20V
- Average forward current : 350mA

Application

- High frequency and low voltage rectifier

Mechanical data

- **Package:** SOD-123
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102

■ Maximum Ratings ($T_a=25^{\circ}\text{C}$ Unless otherwise specified)

Parameter	Symbol	Unit	Value	
Device marking code			SD103AW	S4
			SD103BW	S5
			SD103CW	S6
Repetitive peak reverse voltage	V_{RRM}	V	SD103AW	40
			SD103BW	30
			SD103CW	20
Forward current	I_F	A	0.35	
Non-repetitive surge peak forward current @ t=8.3ms half-sine wave	I_{FSM}	A	1.5	
Non-repetitive surge peak forward current @ t=1ms square wave			5	

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Parameter	Symbol	Unit	Value
Power dissipation	P_D	mW	400
Junction temperature	T_J	°C	-55 to +125
Storage temperature	T_{STG}	°C	-55 to +150

■ Electrical Characteristics ($T_A=25^{\circ}\text{C}$ Unless otherwise specified)

Parameter	Symbol	Unit	Conditions	Min	Typ	Max
Breakdown voltage	V_R	V	SD103AW	40		
			SD103BW	30		
			SD103CW	20		
Forward voltage	V_F	V	$I_F=20\text{mA}$			0.37
			$I_F=200\text{mA}$			0.60
Reverse leakage current	I_R	μA	SD103AW			5.0
			SD103BW			5.0
			SD103CW			5.0
Junction capacitance	C_j	pF	$V_R=0\text{V}, f=1\text{MHz}$			50

■ Thermal Characteristics

Parameter	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	$R_{\theta J-A}^{(1)}$	°C/W	315
Thermal resistance, junction-to-case	$R_{\theta J-C}^{(1)}$	°C/W	252

Note:

(1) Thermal resistance from junction to ambient and from junction to case mounted on P.C.B. with 8mm*9mm copper pad areas

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■ Characteristics

Fig 1: PD-TA Curve

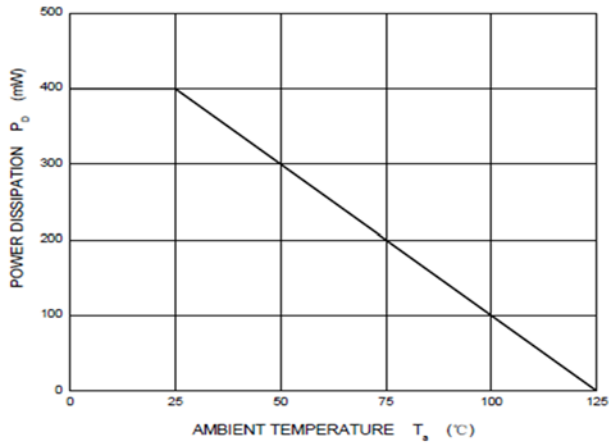


Fig 2: Capacitance Capability

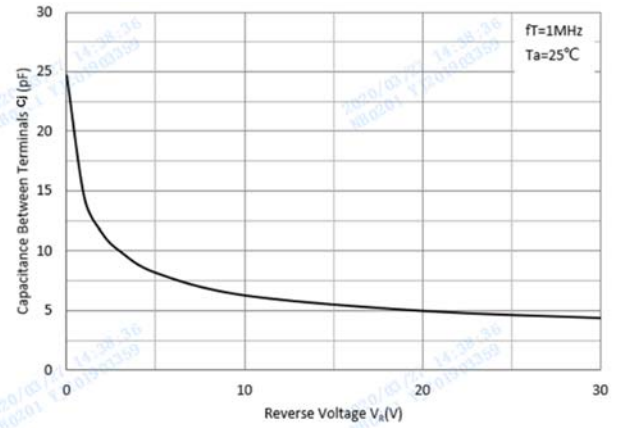


Fig 3: Typical Forward Characteristics

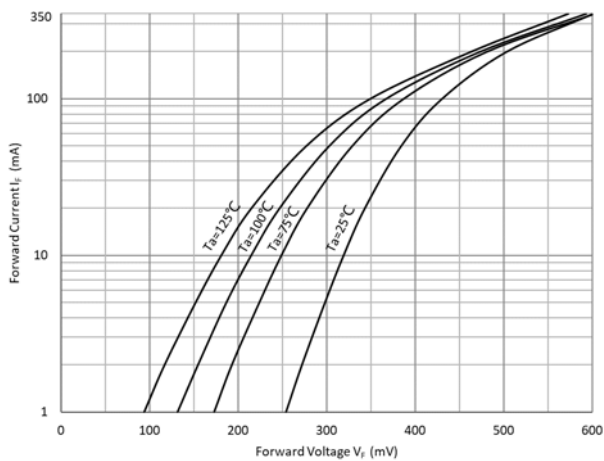
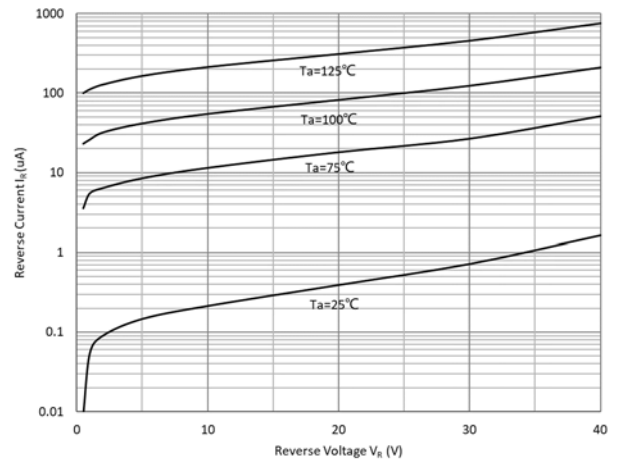


Fig 4: Typical Reverse Characteristic

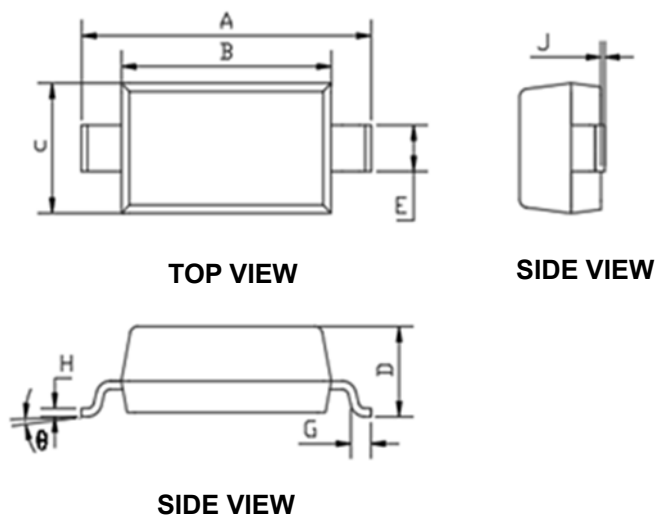


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■ Ordering Information

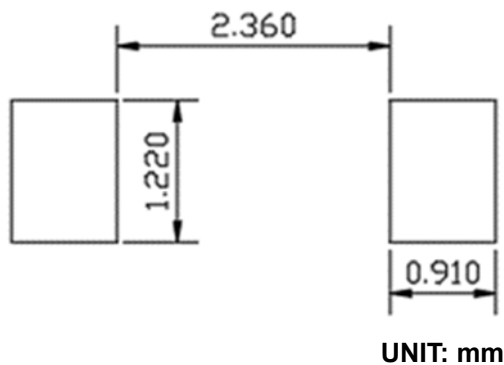
Preferred P/N	Packing code	Unit weight(g)	Minimum package(pcs)	Inner box quantity(pcs)	Outer carton quantity(pcs)	Delivery mode
SD103AW THRU SD103CW	F2	Approximate 0.011	3000	30000	120000	7" reel
SD103AW THRU SD103CW	F3	Approximate 0.011	10000	/	210000	13" reel

■ Outline Dimensions



DIMENSIONS				
DIM	INCHES		MM	
	MIN	MAX	MIN	MAX
A	0.140	0.152	3.550	3.850
B	0.100	0.112	2.550	2.850
C	0.055	0.071	1.400	1.800
D	0.037	0.053	0.950	1.350
E	0.020	0.028	0.510	0.710
G	0.006	0.018	0.150	0.450
H	0.003	0.010	0.080	0.250
J	0.000	0.006	0.000	0.150
θ	0	8°	0	8°

■ Suggested Pad Layout



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