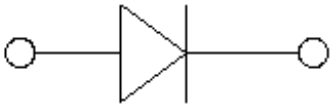
Small Signal Schottky Diode





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℃ 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	
Repetitive Peak Forward Current@ tp=1ms, δ=0.25	I_{FRM}	A	1	
Power dissipation	P_D	mW	400	
Junction temperature	T_J	℃	-55 to +125	
Storage temperature	T_{STG}	℃	-55 to +150	

■ Electrical Characteristics (Ta=25℃ Unless otherwise specified)

Parameter	Symbol	Unit	Conditions		Min	Typ	Max
Breakdown voltage	V_R	V	SD103AW	I_R=100uA	40		
			SD103BW		30		
			SD103CW		20		
Forward voltage	V_F	V	I_F=20mA				0.37
			I_F=200mA				0.60
Reverse leakage current	I_R	uA	SD103AW	V_R=30V			5.0
			SD103BW	V_R=20V			5.0
			SD103CW	V_R=10V			5.0
Junction capacitance	Cj	pF	V_R=0V, f =1MHZ				50
Reverse recovery time	Trr	ns	IF=IR=10mA, Irr=0.1*IR,				5

■ Thermal Characteristics

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

■Characteristics

Fig 1：PD-TA Curve

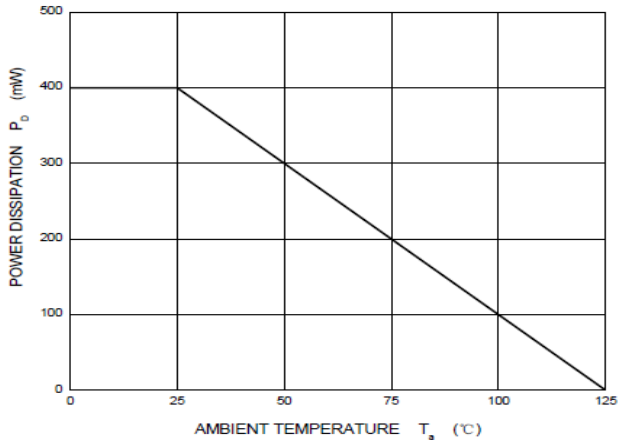


Fig 2：Capacitance Capability

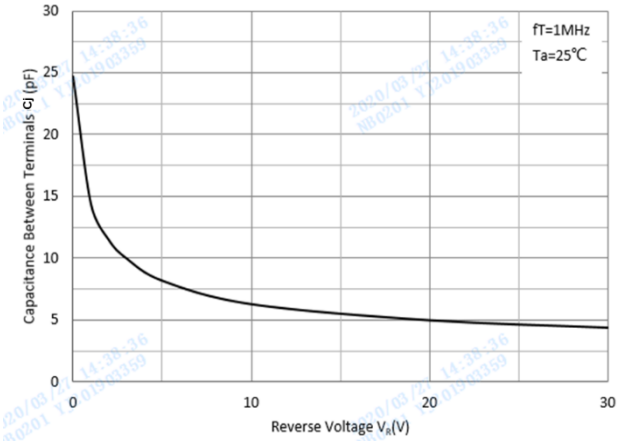


Fig 3：Typical Forward Characteristics

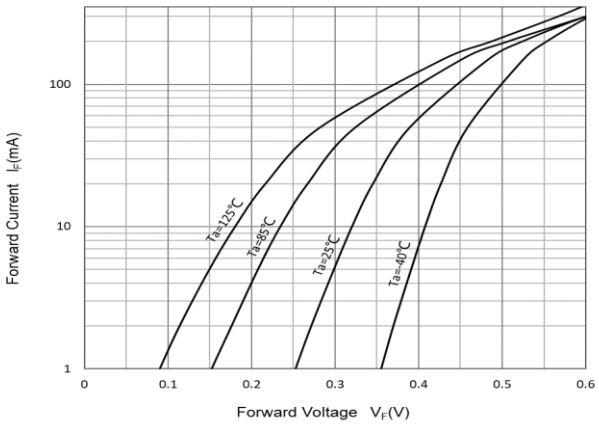
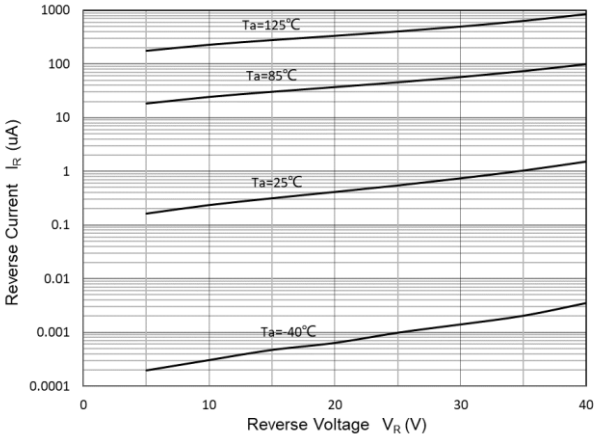


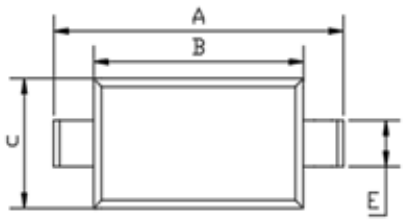
Fig 4：Typical Reverse Characteristic



■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

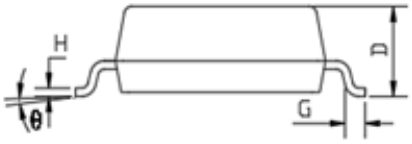
■ Outline Dimensions



TOP VIEW



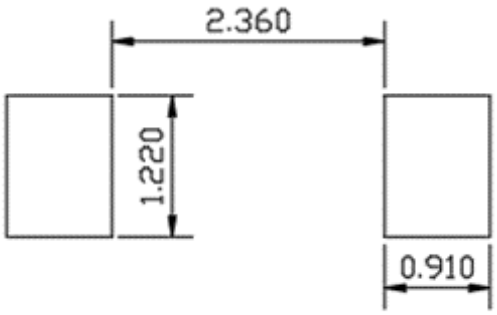
SIDE VIEW



SIDE VIEW

DIMENSIONS				
DIM	INCHES		MM	
	MIN	MAX	MN	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



UNIT: mm

Note:
1. All dimensions are in millimeters (mm) unless otherwise specified.
[所有尺寸均以毫米为单位，除非另有说明]
2. General tolerances: ±0.10mm unless otherwise specified.
[通用公差为±0.10mm，除非另有说明]
3. Dimensions and tolerances per ASME Y14.5M-2018.
[尺寸和公差遵循 ASME Y14.5M-2018 标准]
4.All dimensions shown are exclusive of burrs and gate residues.
Burrs and gate vestiges shall not exceed 0.15 mm in maximum.
[所有尺寸均不包括毛刺和浇口残留，毛刺与浇口残留的尺寸最大不得超过 0.15mm]
5.Dimension b does not include dambar protrusion of max 0.100 mm per side.
[尺寸b不包括单边最大0.100 MM的中筋凸出部分]
6.Dimensions B and C are the overall extreme outer dimensions of the mold compound. These dimensions exclude mold flash, lead flash, protrusions and burrs but include the maximum allowable mold mismatch.
[B和C是塑封体的外部极限尺寸，不包括包封溢料、内引线溢料、凸出部分以及胶体毛刺，但是包含了包封错位的最大尺寸]
7.Formed leads shall be planar with respect to one another within a maximum of 0.076 mm relative to the seating plane.
[成型的管脚应为同一平面，共面性最大为0.1mm]

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