

## SD103AWS THRU SD103CWS

### 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-323
- **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			SD103AWS	S4
			SD103BWS	S5
			SD103CWS	S6
Forward current	$I_F$	mA	350	
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	
Power dissipation	$P_D$	mW	200	
Junction temperature	$T_J$	$^{\circ}\text{C}$	-55 to +125	
Storage temperature	$T_{STG}$	$^{\circ}\text{C}$	-55 to +150	

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### ■ Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

Parameter	Symbol	Unit	Conditions		Min	Typ	Max
Reverse voltage	V <sub>R</sub>	V	SD103AWS	I <sub>R</sub> =100uA	40		
			SD103BWS		30		
			SD103CWS		20		
Forward voltage	V <sub>F1</sub>	V	I <sub>F</sub> =20mA				0.37
	V <sub>F2</sub>	V	I <sub>F</sub> =200mA				0.60
Reverse leakage current	I <sub>R</sub>	uA	SD103AWS	V <sub>R</sub> =30V			5
			SD103BWS	V <sub>R</sub> =20V			5
			SD103CWS	V <sub>R</sub> =10V			5
Junction capacitance	C <sub>j</sub>	pF	V <sub>R</sub> =0V, f =1MHZ				50

### ■ Thermal Characteristics

Parameter	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	R <sub>θJ-A</sub> <sup>(1)</sup>	°C/W	500
Thermal resistance, junction-to-case	R <sub>θJ-C</sub> <sup>(1)</sup>	°C/W	400

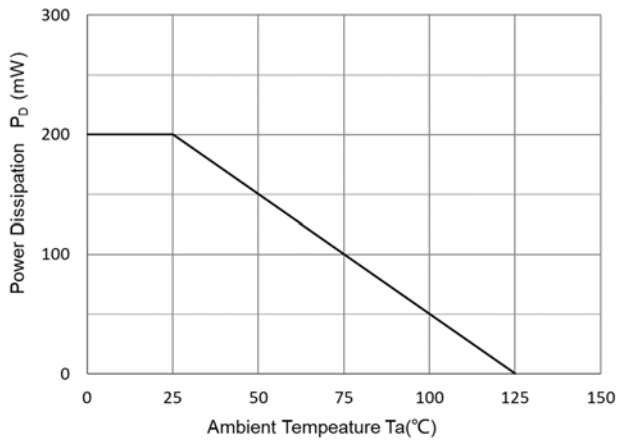
#### Note:

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

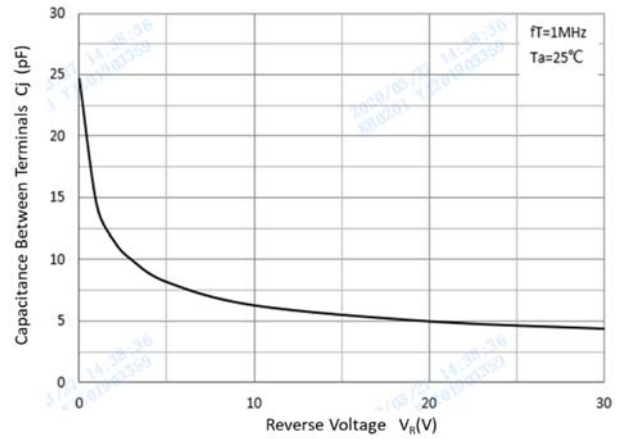
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### ■ Characteristics

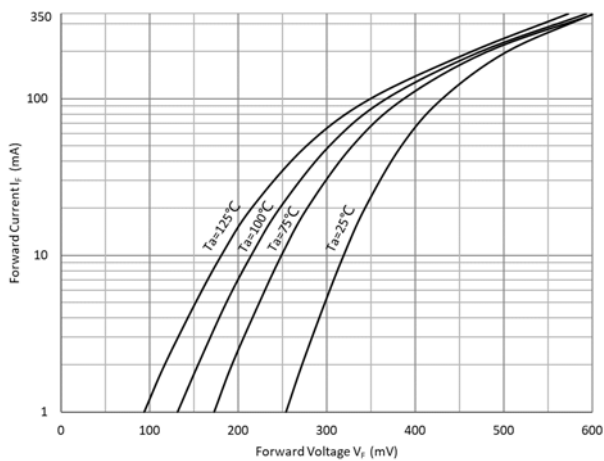
**Fig 1:  $P_D$ - $T_a$  Curve**



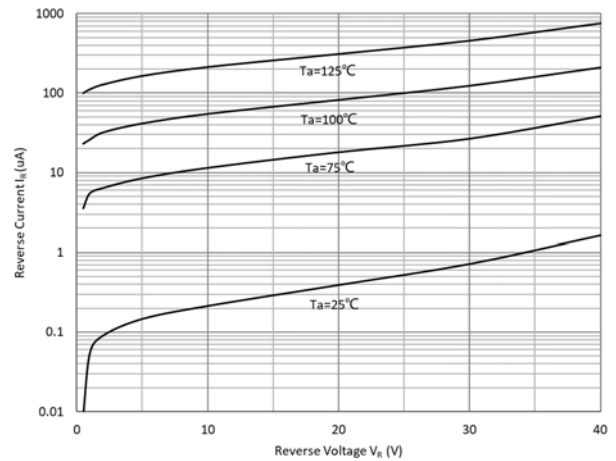
**Fig 2: Capacitance Capability**



**Fig 3: Typical Forward Characteristics**



**Fig 4: Typical Reverse Characteristics**

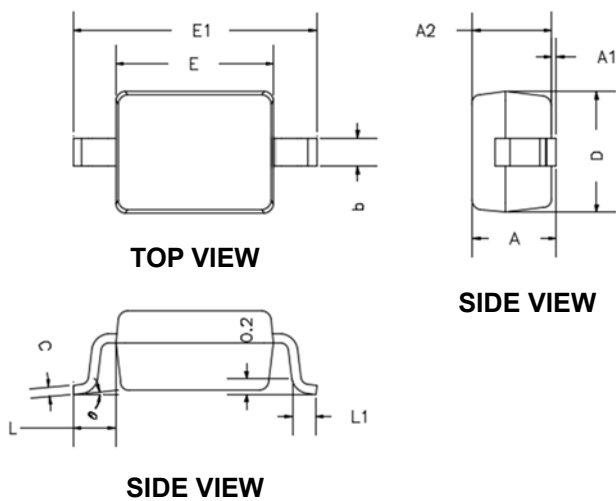


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### ■ Ordering Information

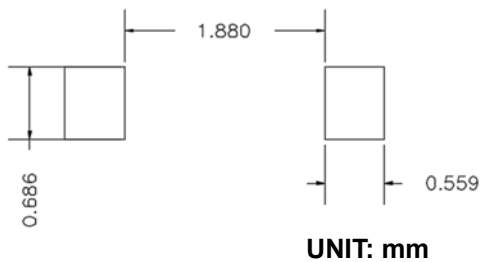
Preferred P/N	Packing code	Unit weight(g)	Minimum package(pcs)	Inner box quantity(pcs)	Outer carton quantity(pcs)	Delivery mode
SD103AWS THRU SD103CWS	F2	Approximate 0.0048	3000	30000	120000	7" reel
SD103AWS THRU SD103CWS	F3	Approximate 0.0048	10000	/	210000	13" reel

### ■ Outline Dimensions



DIMENSIONS				
DIM	INCHES		MM	
	MIN	MAX	MIN	MAX
A	---	0.0393	---	1.0000
A1	0.0000	0.0039	0.0000	0.1000
A2	0.0314	0.0354	0.8000	0.9000
b	0.0098	0.0157	0.2500	0.4000
c	0.0031	0.0059	0.0800	0.1500
D	0.0472	0.0551	1.2000	1.4000
E	0.0629	0.0709	1.6000	1.8000
E1	0.0984	0.1063	2.5000	2.7000
L	0.0187TYP		0.475TYP	
L1	0.0098	0.0157	0.250	0.400
e	0°	8°	0°	8°

### ■ Suggested Pad Layout



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