

# SD103AX

## Plastic-Encapsulate Schottky Barrier Diode

ROHS



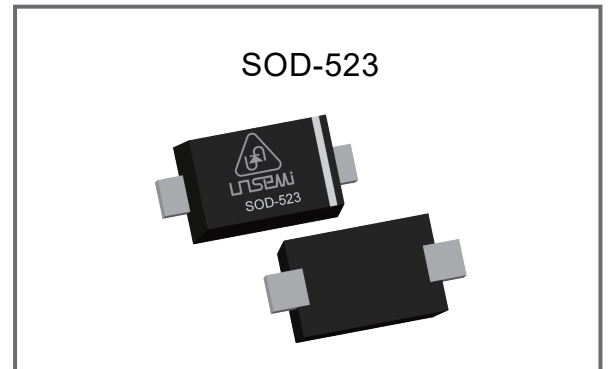
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### Features

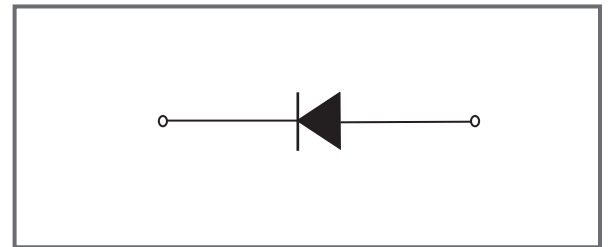
- ◆ Low Forward Voltage Drop
- ◆ Low Reverse Capacitance
- ◆ Low Reverse Recovery Time
- ◆ Guard Ring Construction for Transient Protection

### Mechanical Data

- ◆ Case: SOD-523
- ◆ Molding Compound Flammability Rating : UL 94V-0
- ◆ Polarity: Color Band Denotes Cathode End
- ◆ Quantity Per Reel : 3,000pcs/8,000pcs
- ◆ Device Marking: S4



### Functional Diagram



### Mechanical Characteristics

Parameter	Symbol	Value	Units
Repetitive Peak Reverse Voltage	VRRM	40	V
Reverse Voltage	VR	40	V
Forward Continuous Current	IFM	0.35	A
Non-Repetitive Peak Forward Surge Current @t=8.3ms	IFSM	2.0	A
Power Dissipation	PD	0.15	W
Thermal Resistance Junction to Ambient	R <sub>θJA</sub>	667	°C/W
Junction Temperature Range	TJ	-40~+125	°C
Storage Temperature Range	Tstg	-55~+150	°C

**Electrical Characteristics (Ratings at 25°C ambient temperature unless otherwise specified)**

Parameter	Symbol	Test Conditions	Value			Units
			Min.	Typ.	Max.	
Reverse Current	IR	VR=10V	-	-	1.0	μA
		VR=20V	-	-	2.0	
		VR=30V	-	-	5.0	
Forward Voltage	VF	IF=1mA	-	0.27	-	V
		IF=5mA	-	0.32	-	
		IF=20mA	-	-	0.37	
		IF=200mA	-	-	0.6	
Total Capacitance	Ctot	VR=0V, f=1MHz	-	50	-	pF
Reverse Recovery Time	trr	IF=IR=200mA, Irr=0.1×IR, RL=100Ω	-	10	-	nS

Electrical Characteristics Curves

Fig.1 Forward Characteristics

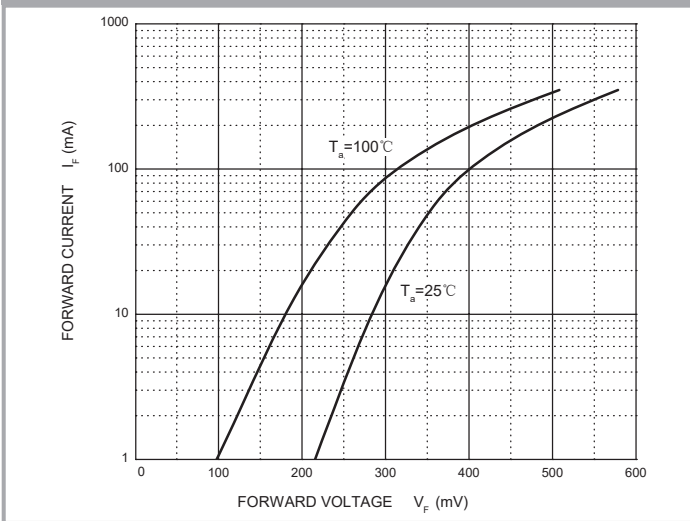


Fig. 2 Reverse Characteristics

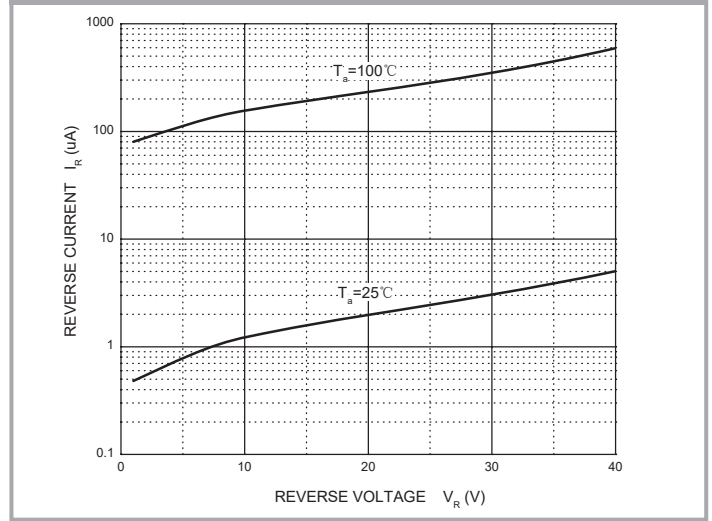


Fig.3 Capacitance Characteristics

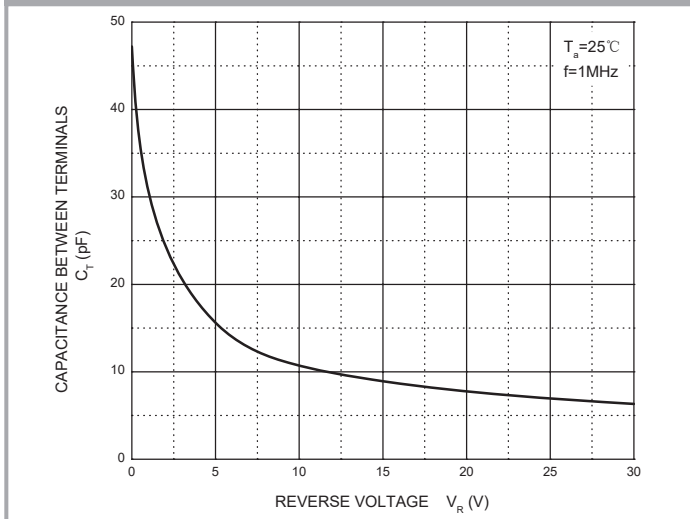
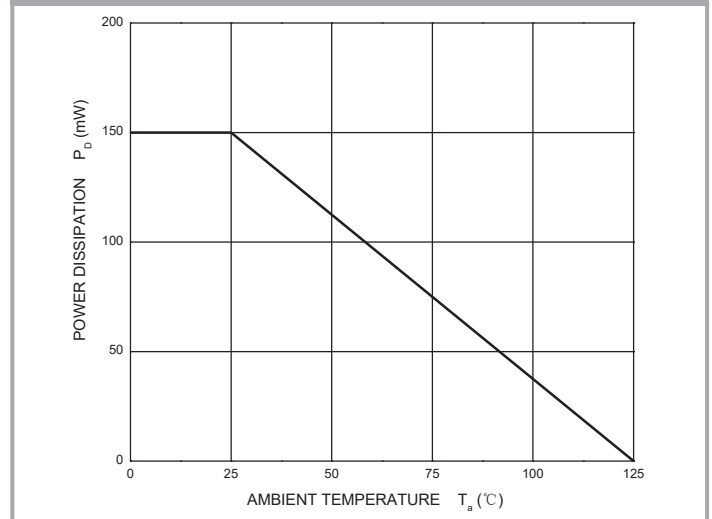
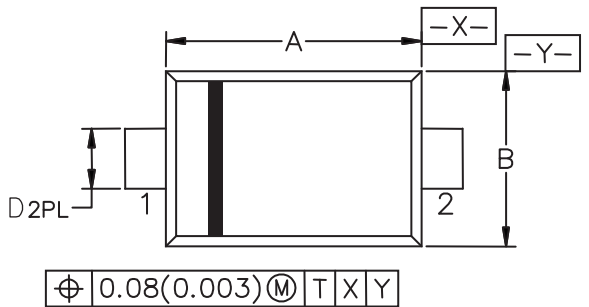


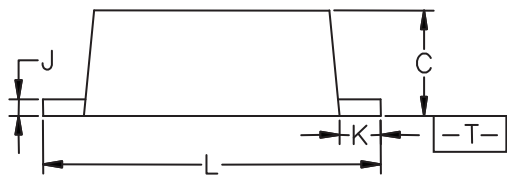
Fig. 4 Power Derating Curve



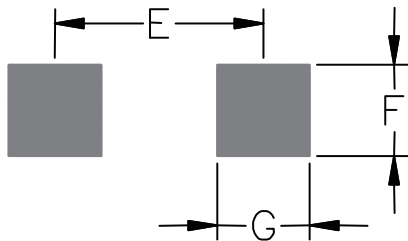
**SOD-523 Package Outline & Dimensions**



Symbol	Millimeters			Inches		
	Min.	Nom.	Max.	Min.	Nom.	Max.
A	1.10	1.20	1.30	0.043	0.047	0.051
B	0.70	0.80	0.90	0.028	0.032	0.035
C	0.50	0.60	0.70	0.020	0.024	0.028
D	0.25	0.30	0.35	0.010	0.012	0.014
J	0.07	0.14	0.20	0.0028	0.0055	0.0079
K	0.15	0.20	0.25	0.006	0.008	0.010
L	1.50	1.60	1.70	0.059	0.063	0.067



**Soldering Footprint**



Symbol	Millimeters	Inches
E	1.40	0.0547
F	0.40	0.0157
G	0.40	0.0157

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