

# SD103AX

Schottky Barrier Diode

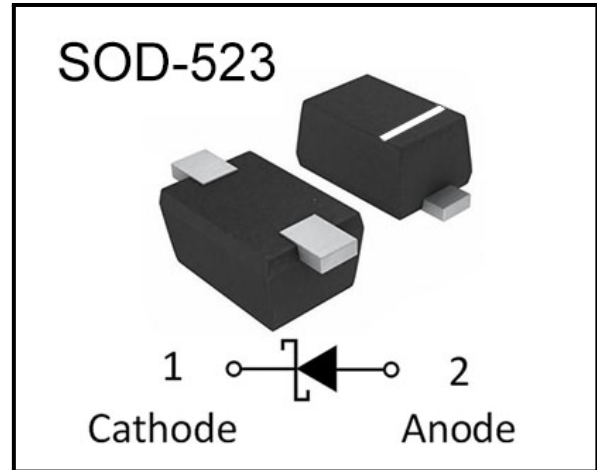
## Features

- Low forward voltage drop
- Guard Ring Construction for Transient Protection.
- Negligible Reverse Recovery Time.
- Low Reverse Capacitance.

## General Description

- Case: molded plastic
- Polarity: Color band denotes cathode
- Package: SOD-523 Plastic Package

## Package



## Marking



## Ordering information

Order code	Package	Marking	Base qty	Delivery mode
SD103AX	SOD-523	S4	3K	Tape and reel

## Maximum Ratings (@T<sub>A</sub>=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V <sub>RM</sub>	Non-repetitive Peak Reverse Voltage	40	V
V <sub>RPM</sub>	Peak Repetitive Peak Reverse Voltage		
V <sub>RWM</sub>	Working Peak Reverse Voltage		
V <sub>R</sub>	DC Blocking Voltage	28	V
V <sub>R(RMS)</sub>	RMS Reverse Voltage	350	mA
I <sub>FM</sub>	Forward Continuous Current	2.0	A
I <sub>FSM</sub>	Non-repetitive Peak Forward Surge Current @8.3mS	150	mW
P <sub>D</sub>	Power Dissipation	667	°C/ W
R <sub>θJA</sub>	Typical thermal resistance	-40 to +125	°C
T <sub>j</sub>	Operating junction Temperature Range	-50 to +150	°C
T <sub>STG</sub>	Storage temperature Range		



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Electrical Characteristics( @T<sub>A</sub>=25°C unless otherwise noted)

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Unit
V <sub>(BR)</sub>	Reverse breakdown voltage	I <sub>R</sub> =1mA	40	–	–	V
I <sub>R</sub>	Reverse voltage leakage current	V <sub>R</sub> =30V	–	–	5	μA
		V <sub>R</sub> =20V	–	–	2	
		V <sub>R</sub> =10V	–	–	1	
V <sub>F</sub>	Forward voltage	I <sub>F</sub> =1mA	–	0.27	–	V
		I <sub>F</sub> =5mA	–	0.32	–	
		I <sub>F</sub> =20mA	–	–	0.37	
		I <sub>F</sub> =200mA	–	–	0.6	
C <sub>j</sub>	Type junction capacitance	V <sub>R</sub> = 0V, f=1MHZ	–	50	–	pF
T <sub>rr</sub>	Reverse recovery time	I <sub>F</sub> =I <sub>R</sub> = 200mA, I <sub>rr</sub> =0.1X I <sub>R</sub> , R <sub>L</sub> =100Ω	–	10	–	nS



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Typical Performance Characteristics ( $T_J = 25^\circ\text{C}$ , unless otherwise noted)

Figure 1: Forward Characteristics

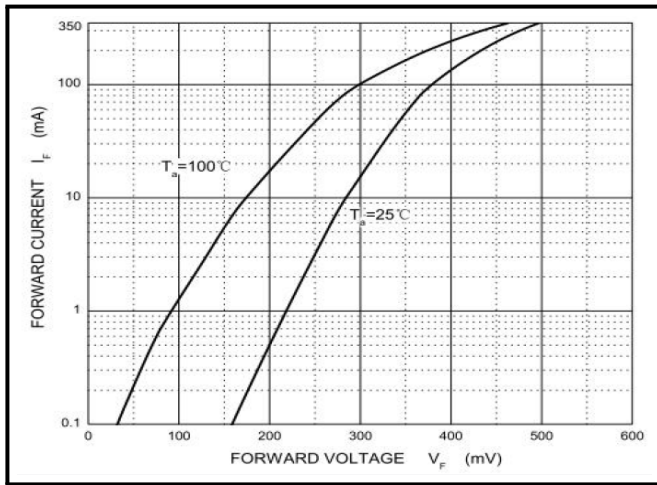


Figure 2: Reverse Characteristics

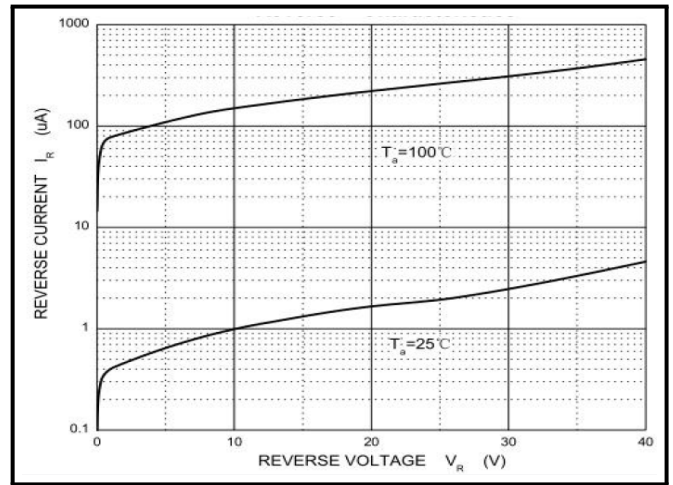


Figure 3: Capacitance Characteristics

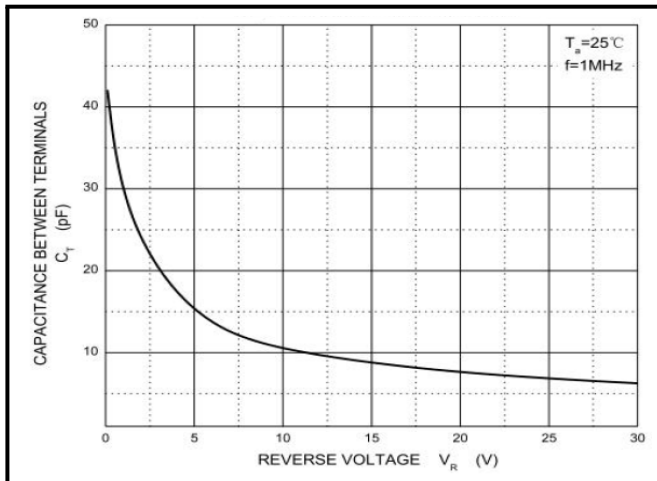
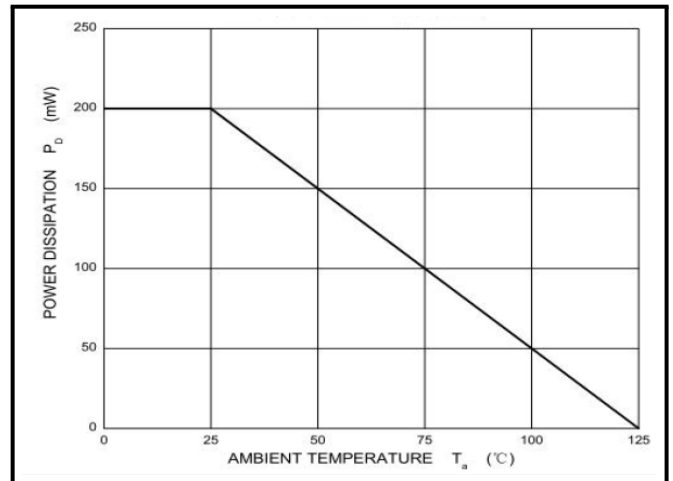


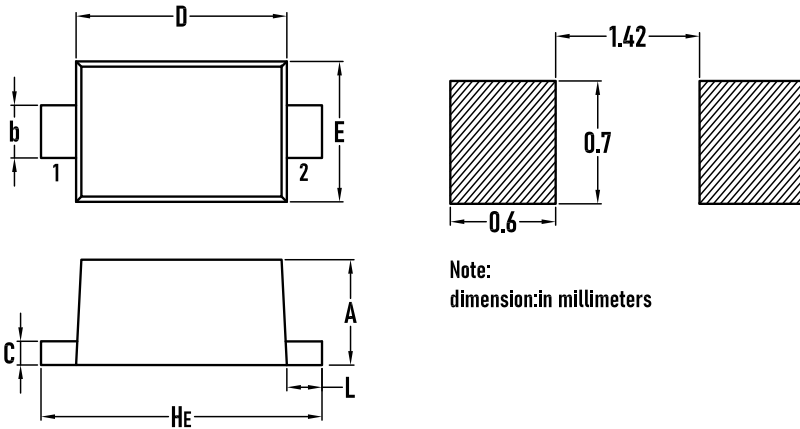
Figure 4: Power Derating Curve



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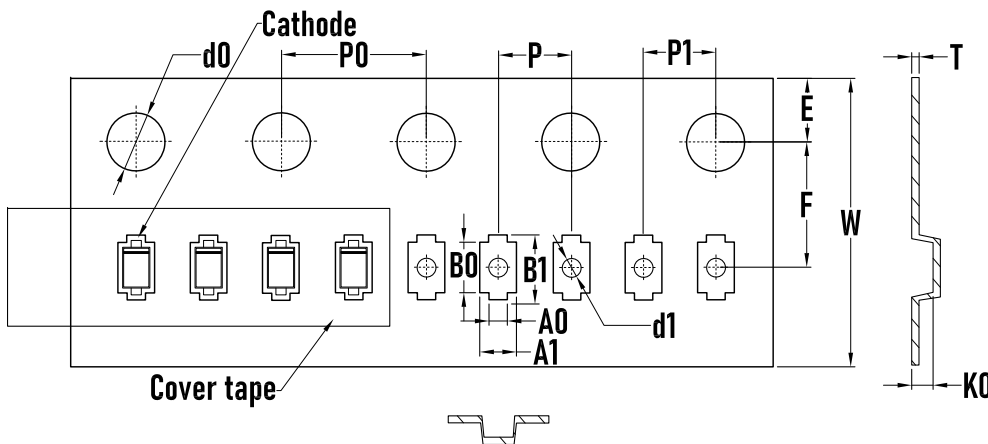
Schottky Barrier Diode

## Outline Drawing - SOD-523



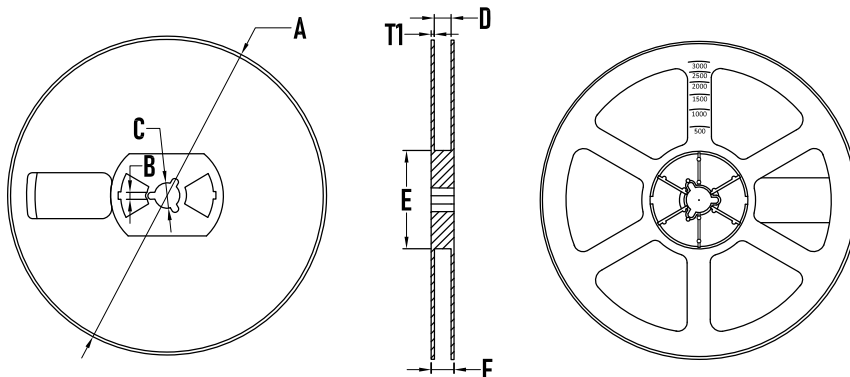
SYMBOL	MILLIMETER		INCHES	
	MIN.	MAX.	MIN.	MAX.
A	0.50	0.70	0.020	0.028
b	0.25	0.35	0.010	0.014
C	0.07	0.20	0.0028	0.0079
D	1.10	1.30	0.043	0.051
E	0.70	0.90	0.028	0.035
H <sub>E</sub>	1.50	1.70	0.059	0.067
L	0.15	0.25	0.006	0.010

## Packaging Tape - SOD-523



SYMBOL	MILLIMETER
A0	0.50±0.10
A1	1.00±0.10
B0	1.30±0.10
B1	1.80±0.10
d0	1.55±0.10
d1	0.50±0.05
E	1.75±0.10
F	3.50±0.10
K0	0.65±0.10
P	2.00±0.10
P0	4.00±0.10
P1	2.00±0.10
W	8.00±0.30
T	0.2 ±0.05

## Packaging Reel



SYMBOL	MILLIMETER
A	177.8±0.2
B	2.7±0.2
C	13.5±0.2
D	9.6±0.3
E	54.5±0.2
F	12.3±0.3
T1	1.0±0.2
Quantity	3000PCS

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