

SOD-323 Plastic-Encapsulate Schottky Barrier Diode

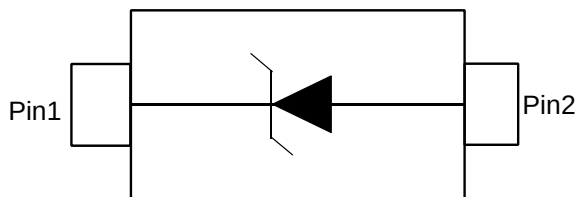
Description

General application schottky barrier diode, encapsulated in a SOD-323 leadless ultra small Surface-Mounted Device (SMD) plastic package.

Features

- Forward current: 2 A
- Reverse voltage: $V_R \geq 40\text{ V}$
- Low forward voltage: $V_F \leq 0.55\text{ V @ }2\text{A}$
- Low reverse current: $I_R \leq 100\text{ }\mu\text{A @ }40\text{ V}$
- High reliability

Schematic and Pin Configuration



Graphic symbol

Mechanical Characteristics

SOD-323 Small Outline Plastic Package

- Level 1 moisture sensitivity per J-STD-020
- Case Material: “Green” Molding Compound
- We declare that the material of product compliance with RoHS requirements and Halogen Free

Applications

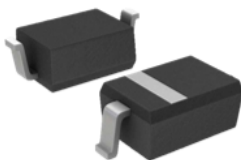
- Low voltage rectification
- High efficiency DC-to-DC conversion
- Switch Mode Power Supply (SMPS)
- Low power consumption applications
- Ultra high-speed switching
- LED backlight for mobile application

Marking Information



SH = Device Marking Code
Bar denotes Cathode

Package



SOD-323

Ordering Information

Part Number	Shipping	Reel Size
PSBD40V2D3	3000/Tape & Reel	7 inch

Maximum Ratings (T_A=25°C unless otherwise specified)

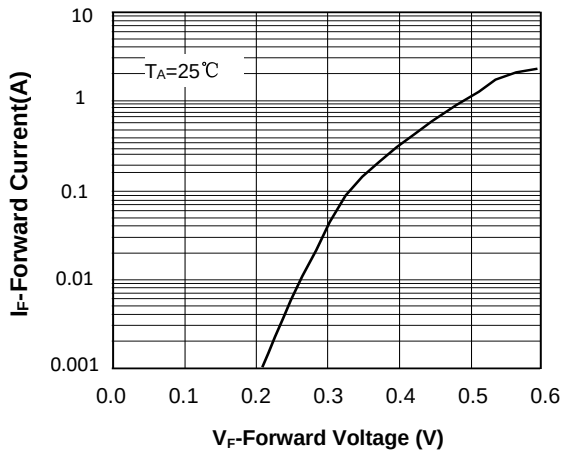
Parameter	Symbol	Value	Unit
DC Reverse Voltage	V _R	40	V
Mean Rectifying Current	I _O	2	A
Non-repetitive Peak Forward Surge Current @ t=8.3ms	I _{FSM}	9	A
Typical thermal resistance	R _{θJA}	400	°C/W
Power Dissipation	P _D	250	mW
Junction Temperature	T _J	-40 ~ +125	°C
Operating Temperature	T _{OP}	-40 ~ +125	°C
Storage Temperature	T _{STG}	-50 ~ +150	°C

Notes: (1), Device mounted on an FR4 PCB, single-sided copper, tin-plated and standard footprint.

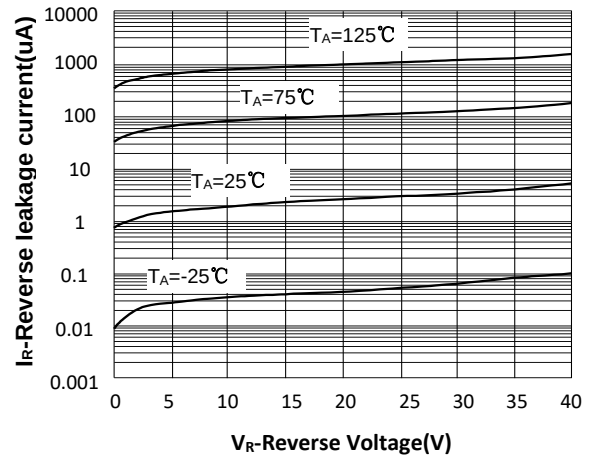
Electrical Characteristics (T_A=25°C unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Reverse voltage	V _{BR}	40	-	-	V	I _R =1mA
Forward Voltage	V _F		0.41	0.45	V	I _F =1A
		-	0.50	0.55	V	I _F =2A
Reverse Current	I _R	-	-	50	μA	V _R = 30V
		-	-	100	μA	V _R = 40V
Junction Capacitance	C _J			120	pF	V _R =0V, f=1MHz

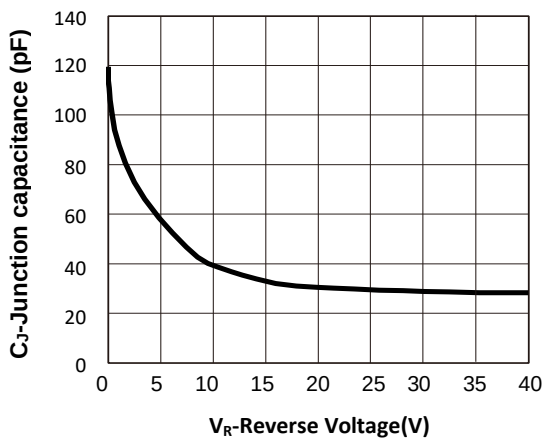
Typical Performance Characteristics($T_A=25^{\circ}\text{C}$ unless otherwise specified)



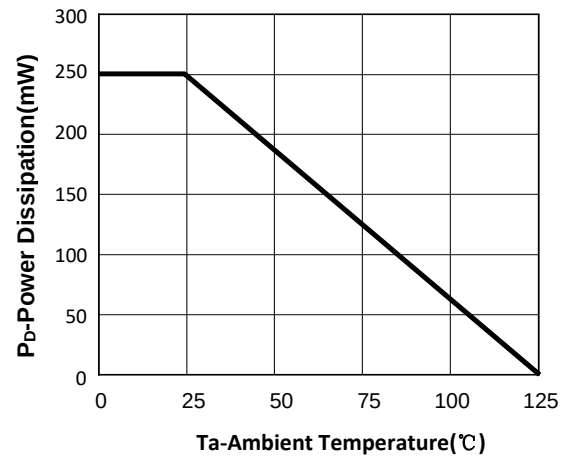
Forward voltage vs. Forward current



Reverse current vs.Reverse voltage

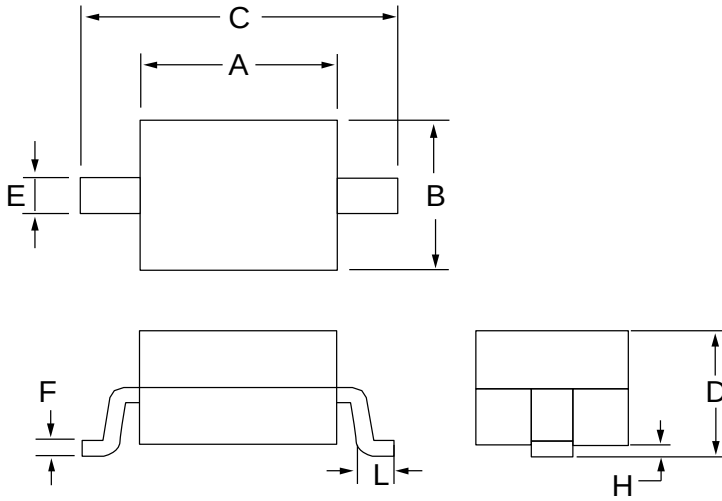


Juntion capacitance vs.Reverse voltage



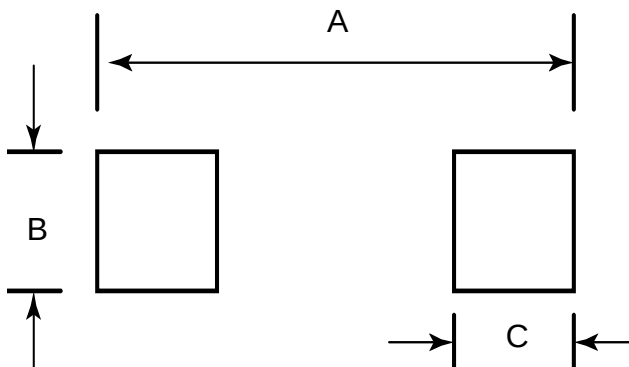
Ambient Temperature vs.Power Dissipation

SOD-323 Package Outline Drawing



SYM	DIMENSIONS				
	MILLIMETERS			INCHES	
	MIN	NOM	MAX	MIN	MAX
A	1.50	1.65	1.80	0.060	0.071
B	1.20	1.30	1.40	0.045	0.054
C	2.30	2.50	2.70	0.090	0.107
D	-		1.10	-	0.043
E	0.30		0.40	0.012	0.016
F	0.10		0.25	0.004	0.010
L	0.20		0.40	0.008	0.016
H	-		0.10	-	0.004

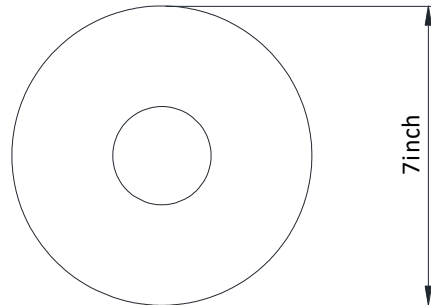
Suggested Land Pattern



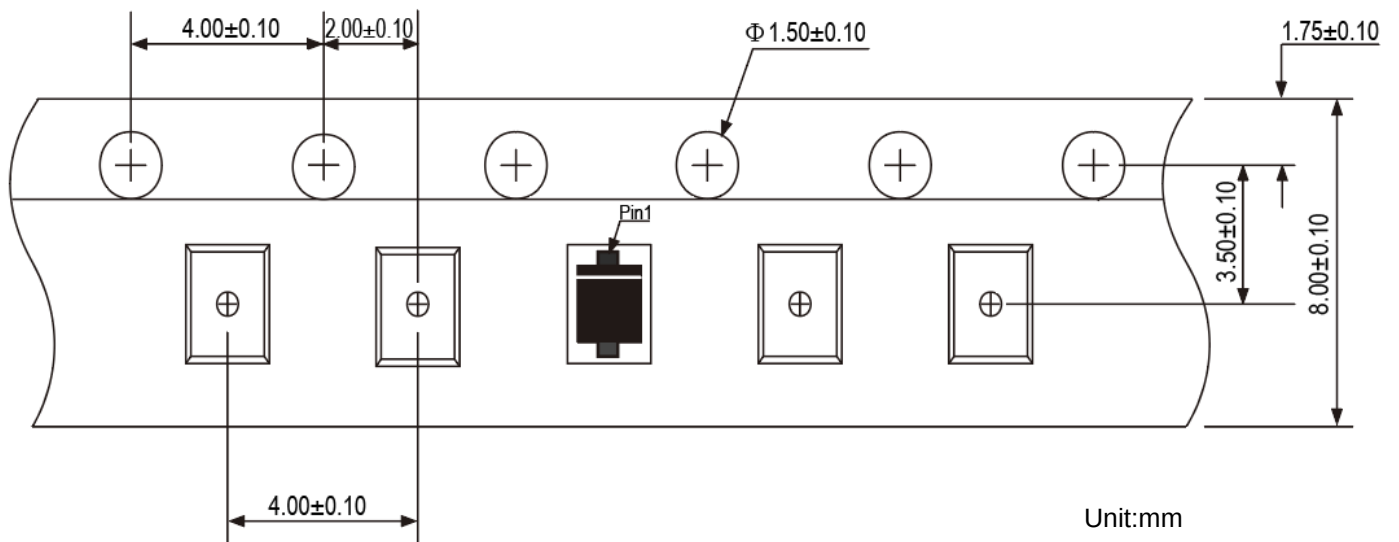
SYM	DIMENSIONS	
	MILLIMETERS	INCHES
A	3.15	0.120
B	0.80	0.031
C	0.80	0.031

TAPE AND REEL INFORMATION

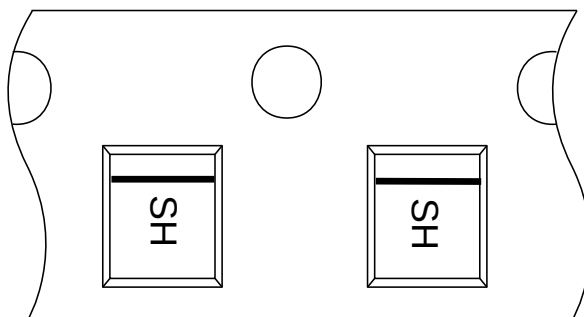
Reel Dimensions



Tape Dimensions



Unit:mm



→
User Direction of Feed

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