

SOD-523 Plastic-Encapsulate Schottky Barrier Diode

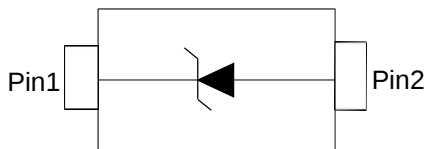
Description

General Application Schottky barrier rectifier, encapsulated in a SOD523 leadless ultra small Surface-Mounted Device (SMD) plastic package.

Features

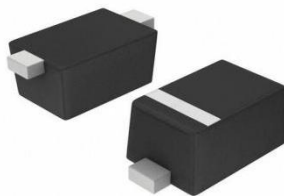
- Average forward current: $I_F(AV)$:1A
- Reverse voltage: $V_R \leq 40\text{ V}$
- Low forward voltage: $V_F \leq 0.6\text{ V @1A}$
- Low reverse current: $I_R \leq 40\mu\text{A@40V}$
- High reliability

Schematic and Pin Configuration



Graphic symbol

Package



SOD-523

Mechanical Characteristics

- SOD-523 Small Outline Plastic Package
- Level 1 moisture sensitivity per J-STD-020
- Case Material: "Green" Molding Compound
- We declare that the material of product complies with RoHS requirements and Halogen Free

Applications

- Low Voltage Rectification
- Switch Mode Power Supply(SMPS)
- Inverse Polarity Protection
- Low Power Consumption Applications

Marking Information



4A= Device Making Code

Ordering Information

Part Number	Shipping	Reel Size
B1040X	3000/Tape & Reel	7 inch

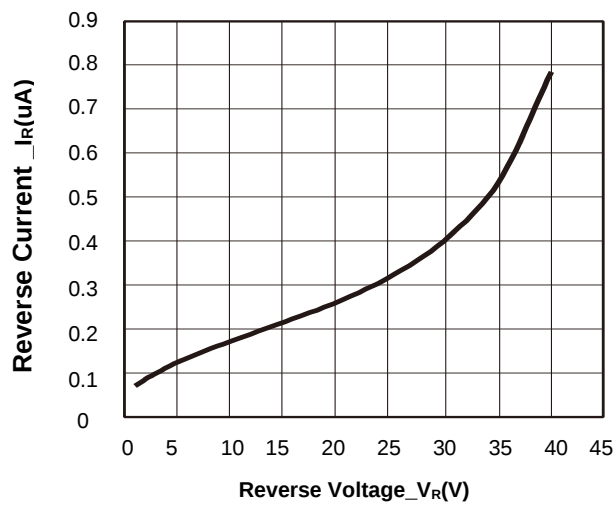
Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	500	mW
DC reverse voltage	V_R	40	V
Average rectified forward current	I_O	1	A
Non-repetitive Peak Forward Surge Current@ $t=8.3\text{ms}$	I_{FSM}	7	A
Junction temperature	T_J	125	$^{\circ}\text{C}$
Storage temperature	T_{STG}	-50 to + 150	$^{\circ}\text{C}$

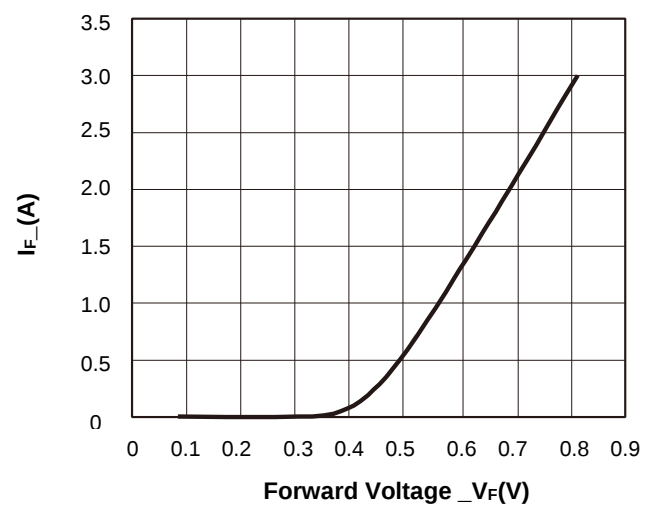
Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse voltage	V_{BR}	40	-	-	V	$I_R=1\text{mA}$
Forward voltage	V_F	-	-	0.42	V	$I_F = 0.1\text{A}$
		-	-	0.45	V	$I_F = 0.2\text{A}$
		-	-	0.60	V	$I_F = 1\text{A}$
Reverse current	I_R	-	-	15	μA	$V_R = 10\text{V}$
		-	-	40	μA	$V_R = 40\text{V}$
Capacitance between terminals	C_T	-	91	-	pF	$V_R=0\text{V}, f=1\text{MHz}$

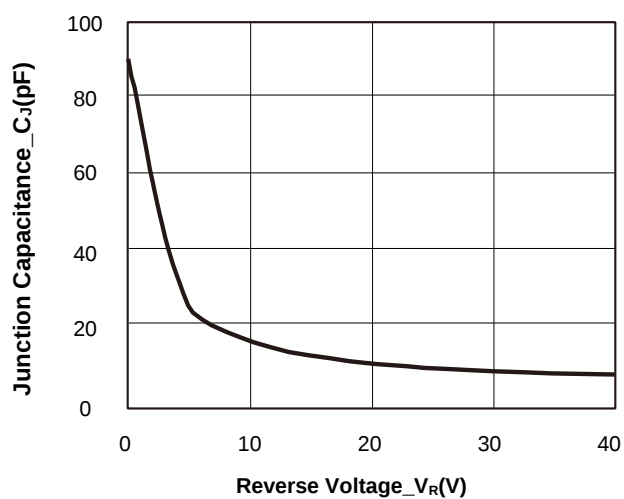
Typical Performance Characteristics ($T_A=25^\circ\text{C}$ unless otherwise Specified)



Reverse Current vs. Reverse Voltage

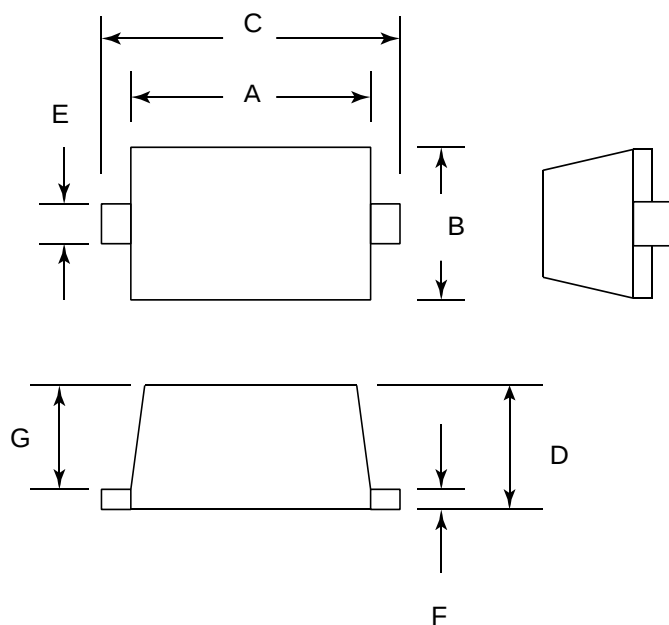


I_F vs. Forward Voltage



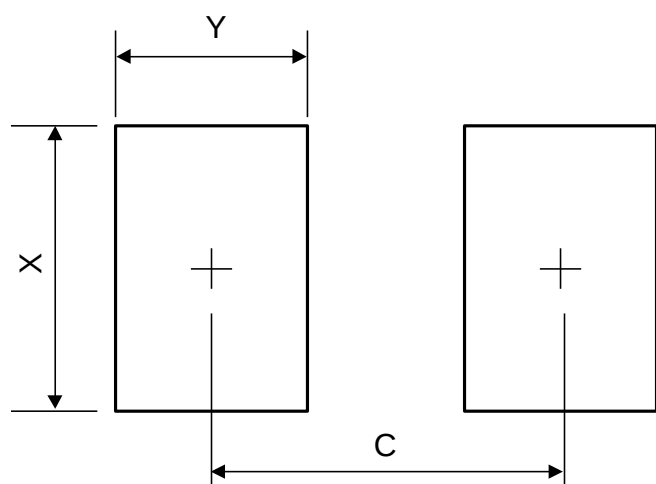
Junction Capacitance vs. Reverse Voltage

SOD523 Package Outline Drawing



SYM	DIMENSIONS			
	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.10	1.30	0.043	0.051
B	0.70	0.90	0.028	0.035
C	1.50	1.70	0.059	0.067
D	0.50	0.70	0.020	0.028
E	0.25	0.35	0.010	0.014
F	0.10	0.20	0.004	0.008
G	0.50	0.70	0.020	0.028

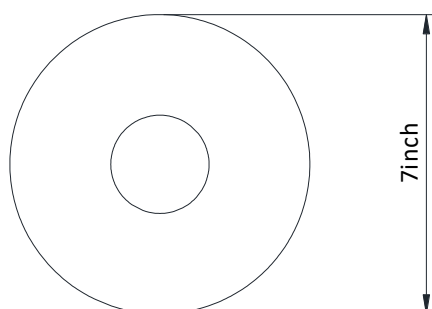
Suggested Land Pattern



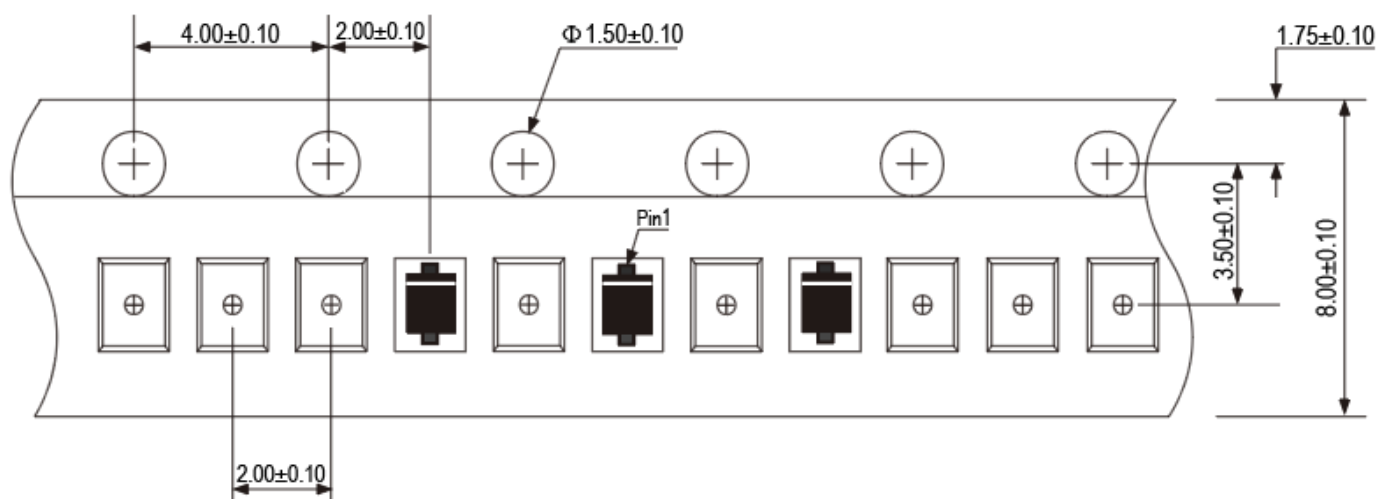
SYM	DIMENSIONS	
	MILLIMETERS	INCHES
C	1.42	0.056
X	0.70	0.028
Y	0.60	0.024

TAPE AND REEL INFORMATION

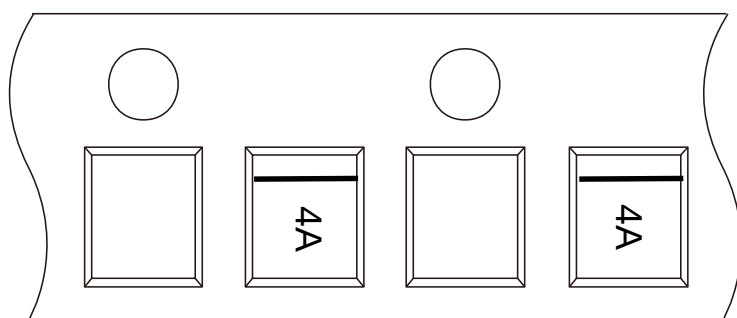
Reel Dimensions



Tape Dimensions



Unit:mm



User Direction of Feed

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