



# 1SS400

## SURFACE MOUNT SWITCHING DIODE

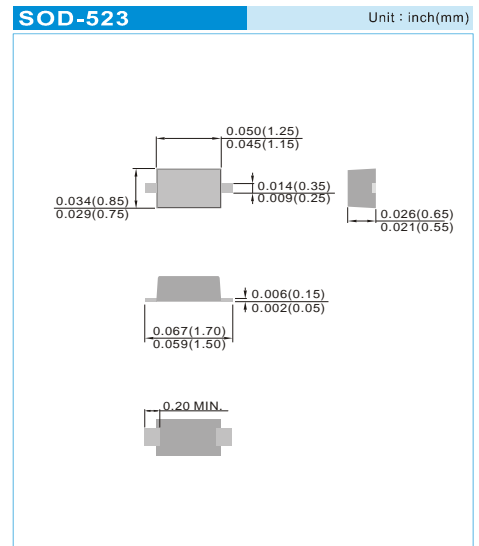
This device is an extremely fast switching diode housed in the ultra-small SOD-523 package. Ideal for applications

### FEATURES

- Extremely fast reverse recovery time to reduce switching losses
- Very low capacitance for reduced insertion losses
- Reverse voltage rating of 80V
- Also available in lead-free plating (100% matte tin finish)
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std..(Halogen Free)

### MECHANICAL DATA

- Case: SOD-523, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity : Color band denotes cathode end
- Approx.Weight : 0.0014 ounces, 0.0001 grams
- Marking : 14



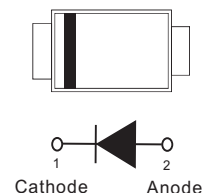
### MAXIMUM RATINGS $T_J = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED

PARAMETER	SYMBOL	LIMITS	UNITS
Peak Reverse Voltage	$V_{RM}$	90	V
Continuous Reverse Voltage	$V_R$	80	V
Continuous Forward Current	$I_F$	225	mA
Non-repetitive Peak Forward Current , $t = 0.001\text{ms}$ , Square Wave	$I_{FSM}$	4	A
Total Power Dissipation (Note1)	$P_{tot}$	200	mW
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	-55 to 150	$^\circ\text{C}$

Note 1. FR-5 Board 1.0 x 0.75 x 0.062 in

### THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	LIMITS	UNITS
Thermal Resistance, Junction to Ambient	$R_{\theta_{JA}}$	625	$^\circ\text{C} / \text{W}$





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## ELECTRICAL CHARACTERISTICS $T_J = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Forward Voltage (Note 2)	$V_F$	$I_F = 100\text{mA}$	-	-	1.2	V
Reverse Leakage Current	$I_R$	$V_R = 80\text{V}$	-	-	0.1	$\mu\text{A}$
Junction Capacitance	$C_D$	0Vdc Bias, $f = 1\text{MHz}$	-	3	-	pF
Reverse Recovery Time (See Figure 1)	$t_{rr}$	$I_F = 10\text{mA}$ , $I_R = 10\text{mA}$ $R_L = 100\ \text{Ohms}$ ; measured at $I_{Rrec} = 1\text{mA}$	-	-	4.0	ns

Note 2. Short duration pulse test to avoid self-heating effect

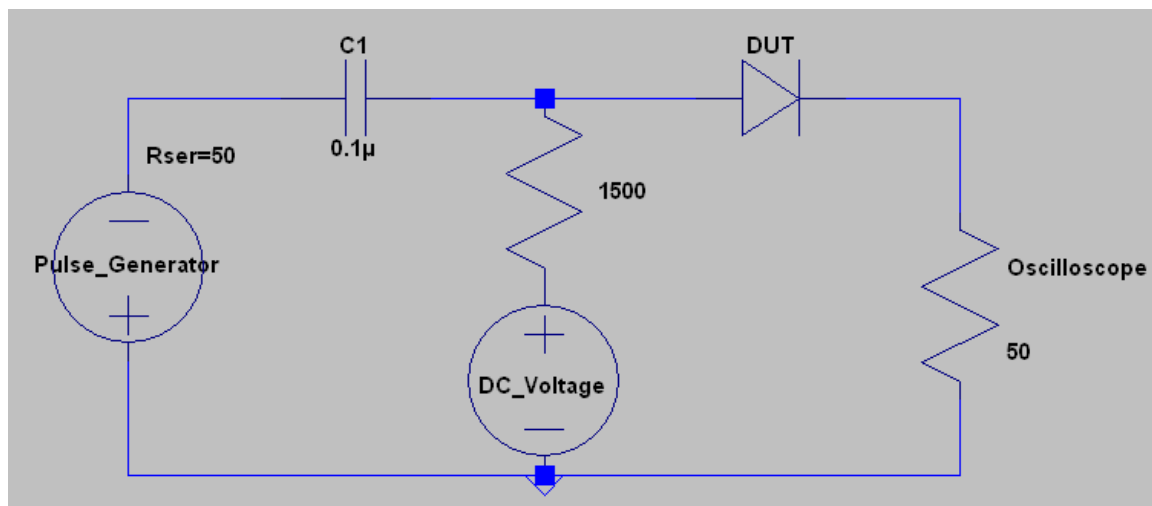
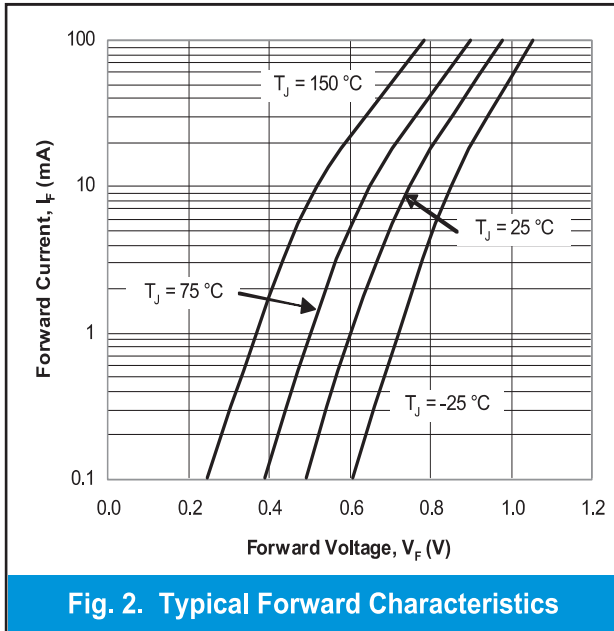


Figure 1. Reverse Recovery Time Equivalent Test Circuit

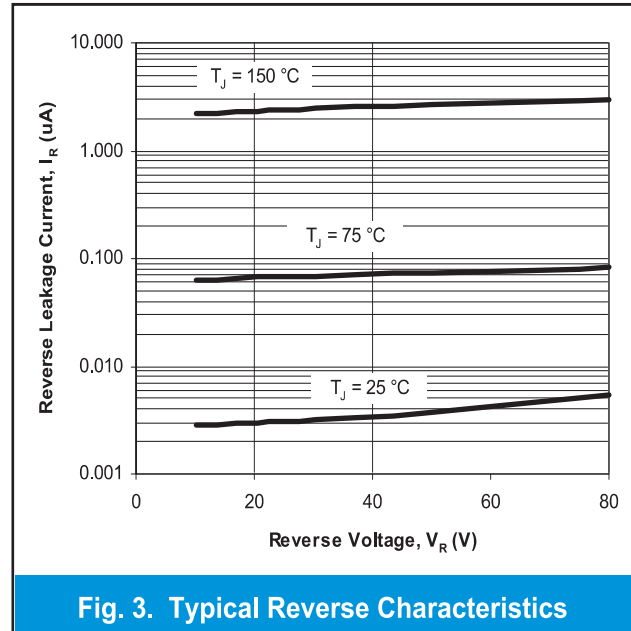


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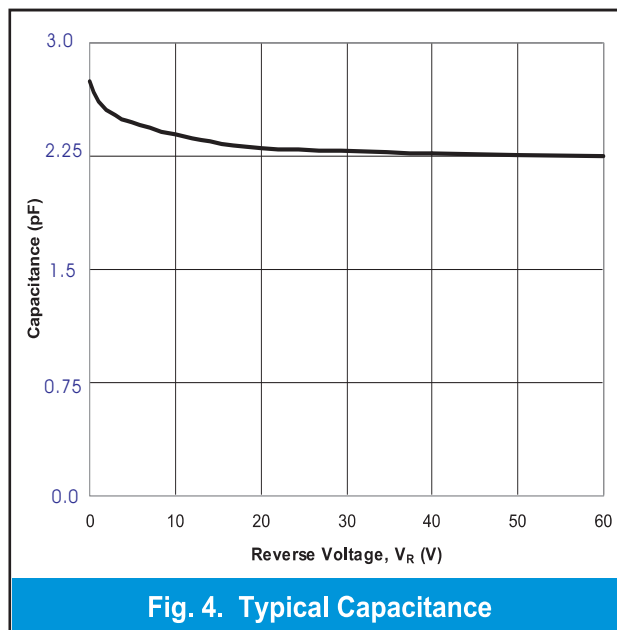
## TYPICAL CHARACTERISTIC CURVES



**Fig. 2. Typical Forward Characteristics**



**Fig. 3. Typical Reverse Characteristics**



**Fig. 4. Typical Capacitance**

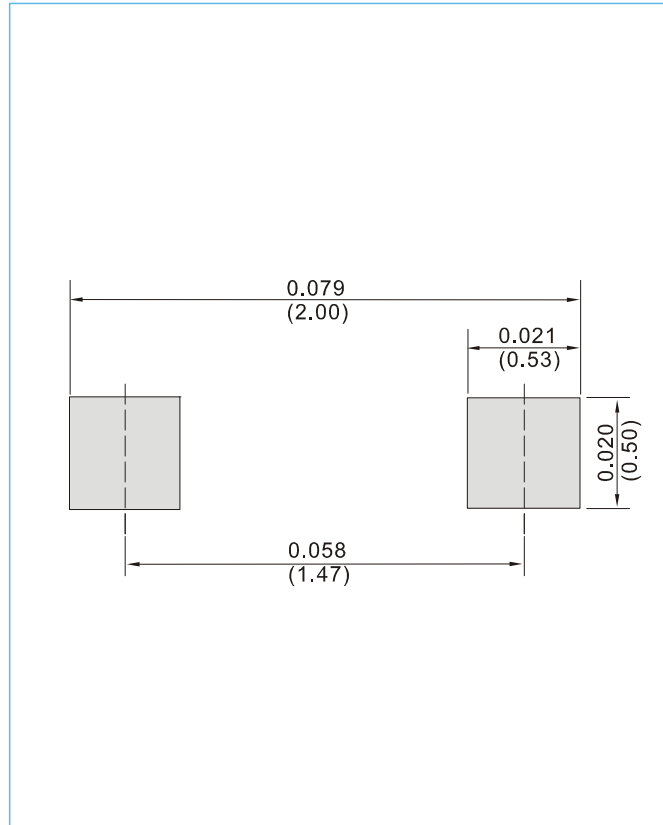


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## MOUNTING PAD LAYOUT

SOD-523

Unit : inch(mm)



## ORDER INFORMATION

- Packing information
  - T/R - 12K per 13" plastic Reel
  - T/R - 5K per 7" plastic Reel



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## Part No\_packing code\_Version

1SS400\_R1\_00001

1SS400\_R2\_00001

For example :

**RB500V-40** **R2** **00001**



Packing Code <b>XX</b>				Version Code <b>XXXXX</b>		
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HF or RoHS	1 <sup>st</sup> Code	2 <sup>nd</sup> ~5 <sup>th</sup> Code
Tape and Ammunition Box (T/B)	<b>A</b>	N/A	<b>0</b>	<b>HF</b>	<b>0</b>	serial number
Tape and Reel (T/R)	<b>R</b>	7"	<b>1</b>	<b>RoHS</b>	<b>1</b>	serial number
Bulk Packing (B/P)	<b>B</b>	13"	<b>2</b>			
Tube Packing (T/P)	<b>T</b>	26mm	<b>X</b>			
Tape and Reel (Right Oriented) (TRR)	<b>S</b>	52mm	<b>Y</b>			
Tape and Reel (Left Oriented) (TRL)	<b>L</b>	PANASERT T/B CATHODE UP (PBCU)	<b>U</b>			
FORMING	<b>F</b>	PANASERT T/B CATHODE DOWN (PBCD)	<b>D</b>			



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