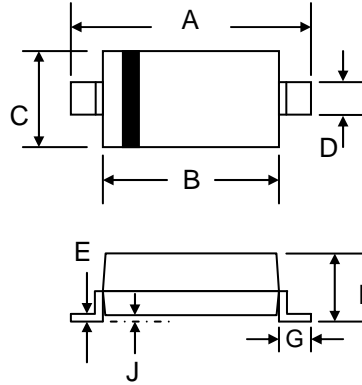


### Features

- **Very Low Forward Voltage**
- Fast Switching Speed
- PN Junction Guard Ring for Transient and ESD Protection
- For General Purpose Switching Applications
- Plastic Material – UL Recognition Flammability Classification 94V-0



SOD-323		
Dim	Min	Max
A	2.30	2.75
B	1.60	1.80
C	1.20	1.40
D	0.25	0.40
E	0.05	0.15
G	0.20	0.40
H	—	1.10
J	—	0.10
All Dimensions in mm		

### Mechanical Data

- Case: SOD-323, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.004 grams (approx.)
- Marking: Device Code, See Page 3
- **Lead Free: For RoHS / Lead Free Version, Add “-LF” Suffix to Part Number, See Page 4**

### Maximum Ratings @ $T_A=25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	SS0520WS	SS0530WS	SS0540WS	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	20	30	40	V
Working Peak Reverse Voltage	$V_{RWM}$				
DC Blocking Voltage	$V_R$				
Forward Continuous Current (Note 1) @ $T_L = 90^\circ\text{C}$	$I_F$	0.5			A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	5.5			A
Thermal Resistance, Junction to Lead (Note 2)	$R_{JL}$	150		118	$^\circ\text{C}/\text{W}$
Thermal Resistance, Junction to Ambient (Note 1)	$R_{JA}$	206		206	
Operating Temperature Range	$T_J$	-65 to +125			$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-65 to +150			$^\circ\text{C}$

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

Characteristic	Symbol	SS0520WS	SS0530WS	SS0540WS	Unit
Maximum Forward Voltage Drop @ $I_F = 0.1\text{A}$	$V_{FM}$	0.300	0.375	—	V
@ $I_F = 0.5\text{A}$		0.385	0.430	0.510	
@ $I_F = 1.0\text{A}$		—	—	0.620	
Peak Reverse Current @ $T_J = 25^\circ\text{C}$	$I_{RM}$	250	130	20	$\mu\text{A}$
At Rated DC Blocking Voltage @ $T_J = 100^\circ\text{C}$		8.0	5.0	13	mA

Note: 1. Mounted on FR-4 PCB with 645mm<sup>2</sup> pad size.  
2. Mounted on FR-4 PCB with minimum recommended pad size.

# SS0520WS – SS0540WS

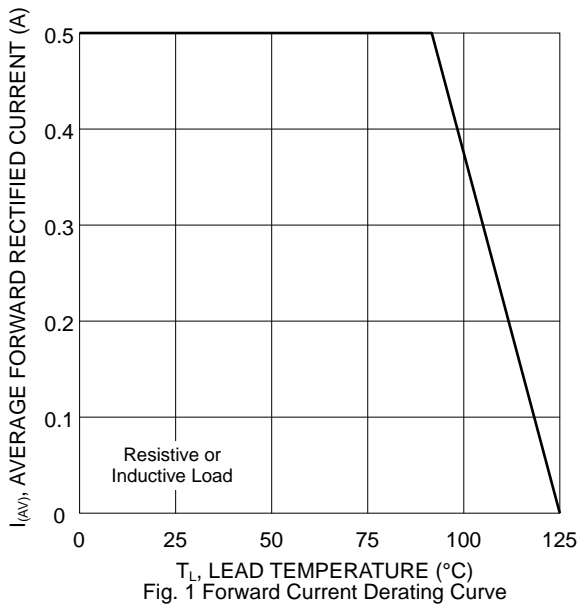


Fig. 1 Forward Current Derating Curve

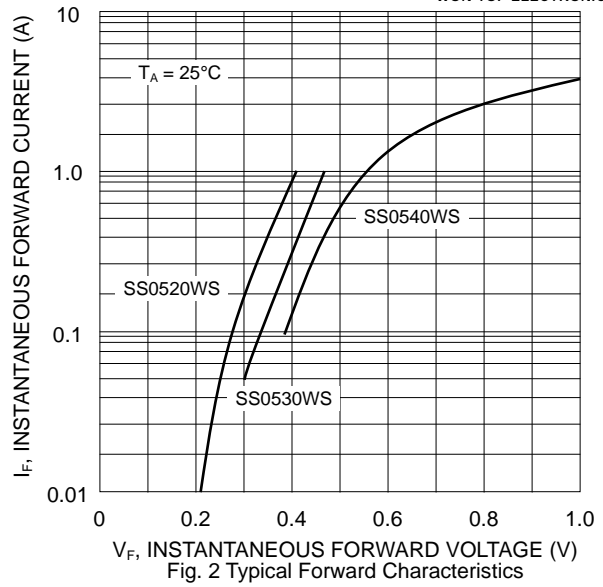


Fig. 2 Typical Forward Characteristics

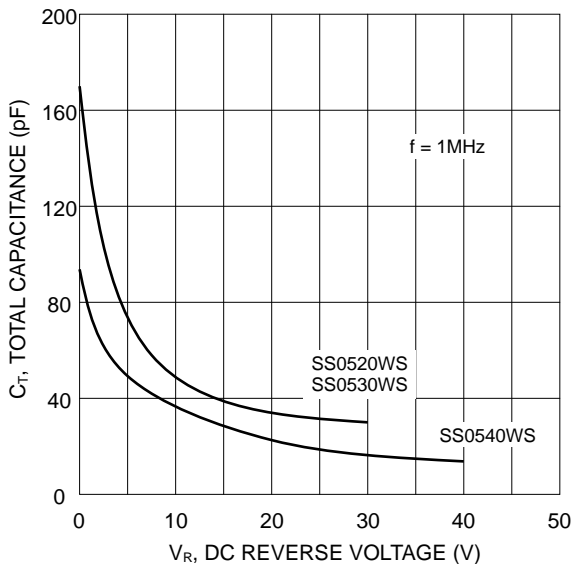


Fig. 3 Total Capacitance vs. Reverse Voltage

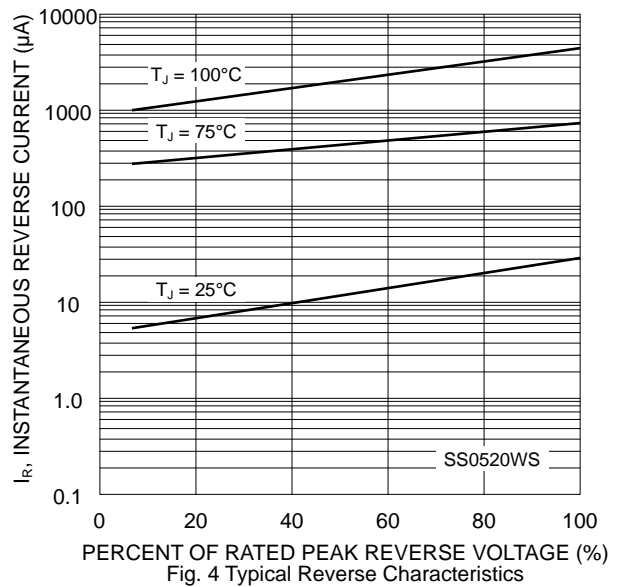


Fig. 4 Typical Reverse Characteristics

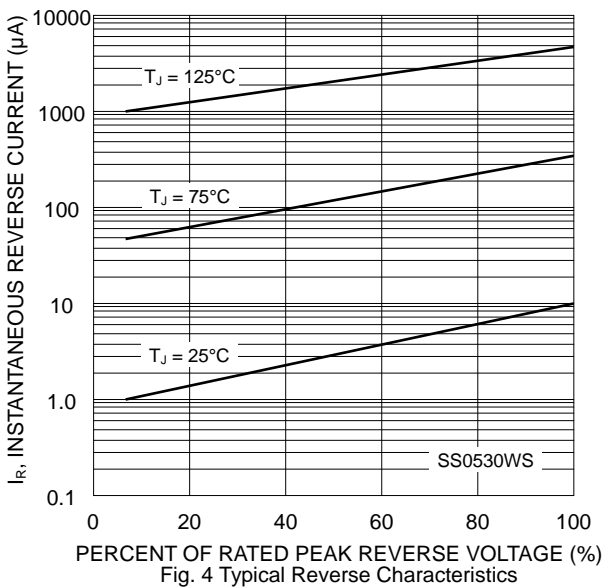


Fig. 4 Typical Reverse Characteristics

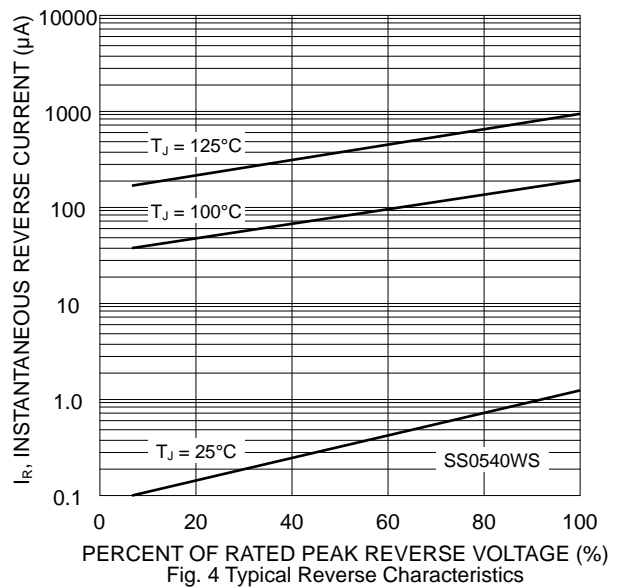


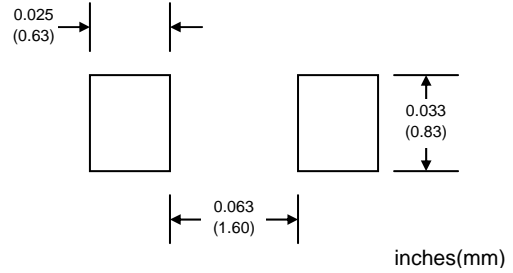
Fig. 4 Typical Reverse Characteristics

## MARKING INFORMATION



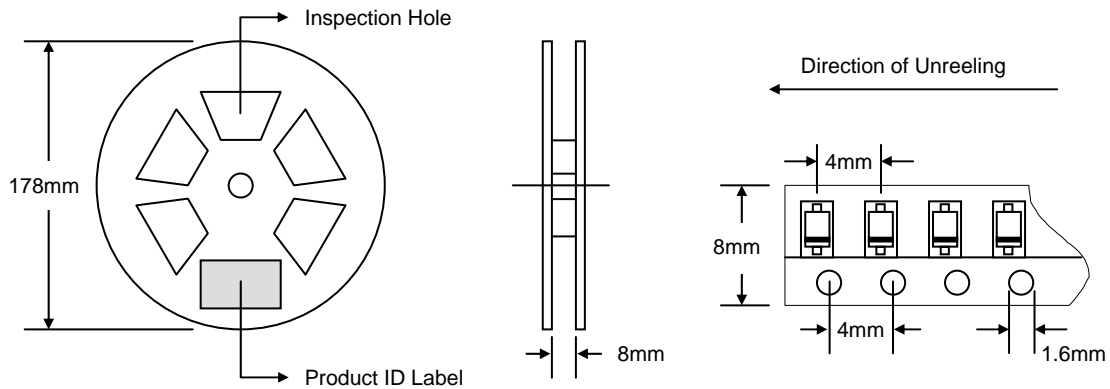
Cathode = Polarity Band  
 Sx = Device Code  
 x = D (SS0520WS)  
   E (SS0530WS)  
   F (SS0540WS)

## RECOMMENDED FOOTPRINT



## PACKAGING INFORMATION

### TAPE & REEL



Reel Diameter (mm)	Quantity (PCS)	Inner Box Size L x W x H (mm)	Quantity (PCS)	Carton Size L x W x H (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
178	3,000	187 x 187 x 65	15,000	390 x 240 x 420	150,000	7.0

**Note:** 1. Anti-static plastic reel, white, water clear or blue color. Inspection hole might be varied in different alignment.  
 2. Components are packed in accordance with EIA standard 481-1 and 481-2.

## ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
SS0520WS-T1	SOD-323	3000/Tape & Reel
SS0530WS-T1	SOD-323	3000/Tape & Reel
SS0540WS-T1	SOD-323	3000/Tape & Reel

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order RoHS / Lead Free version (with Lead Free finish), add “-LF” suffix to part number above. For example, SS0520WS-T1-LF.**

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