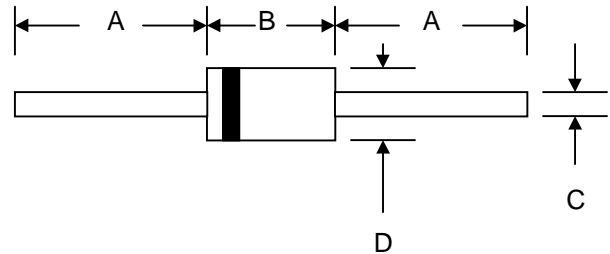


### Features

- Diffused Junction
- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability



### Mechanical Data

- Case: DO-201AD, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 1.2 grams (approx.)
- Mounting Position: Any
- Marking: Type Number
- **Lead Free: For RoHS / Lead Free Version, Add "-LF" Suffix to Part Number, See Page 4**

DO-201AD		
Dim	Min	Max
A	25.4	—
B	7.20	9.50
C	1.20	1.30
D	4.80	5.30
All Dimensions in mm		

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

Single Phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

Characteristic	Symbol	SF51	SF52	SF53	SF54	SF55	SF56	SF57	Unit	
Peak Repetitive Reverse Voltage	$V_{RRM}$									
Working Peak Reverse Voltage	$V_{RWM}$	50	100	150	200	300	400	600	V	
DC Blocking Voltage	$V_R$									
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	105	140	210	280	420	V	
Average Rectified Output Current (Note 1) @ $T_A = 50^\circ\text{C}$	$I_O$	5.0							A	
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	150							A	
Forward Voltage @ $I_F = 5.0\text{A}$	$V_{FM}$	0.95			1.3		1.7		V	
Peak Reverse Current At Rated DC Blocking Voltage @ $T_A = 25^\circ\text{C}$ @ $T_A = 100^\circ\text{C}$	$I_{RM}$	5.0				100				$\mu\text{A}$
Reverse Recovery Time (Note 2)	$t_{rr}$	35							nS	
Typical Junction Capacitance (Note 3)	$C_j$	110				50				pF
Operating Temperature Range	$T_j$	-65 to +125							$^\circ\text{C}$	
Storage Temperature Range	$T_{STG}$	-65 to +150							$^\circ\text{C}$	

Note: 1. Leads maintained at ambient temperature at a distance of 9.5mm from the case  
2. Measured with  $I_F = 0.5\text{A}$ ,  $I_R = 1.0\text{A}$ ,  $IRR = 0.25\text{A}$ . See figure 5.  
3. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

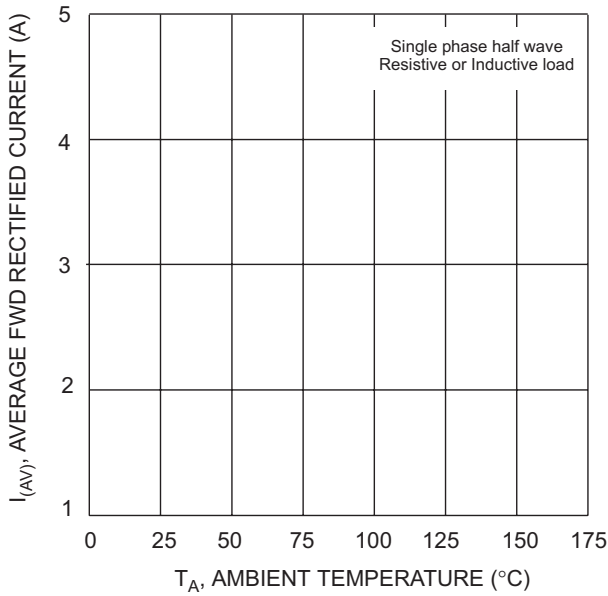


Fig. 1 Forward Current Derating Curve

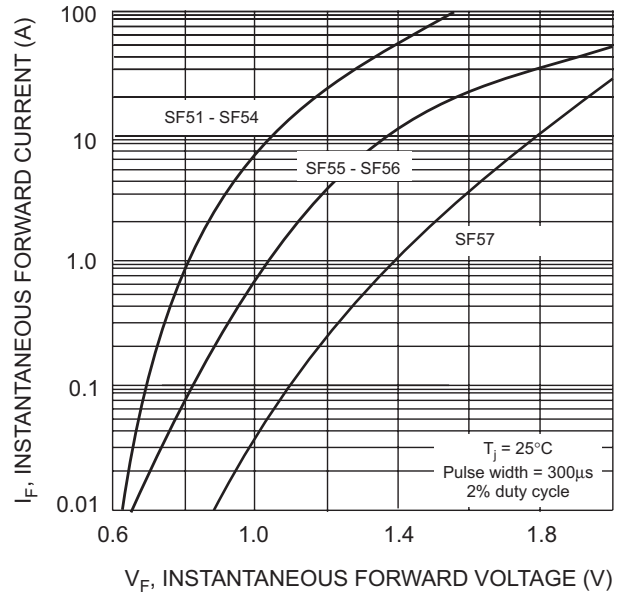


Fig. 2 Typical Forward Characteristics

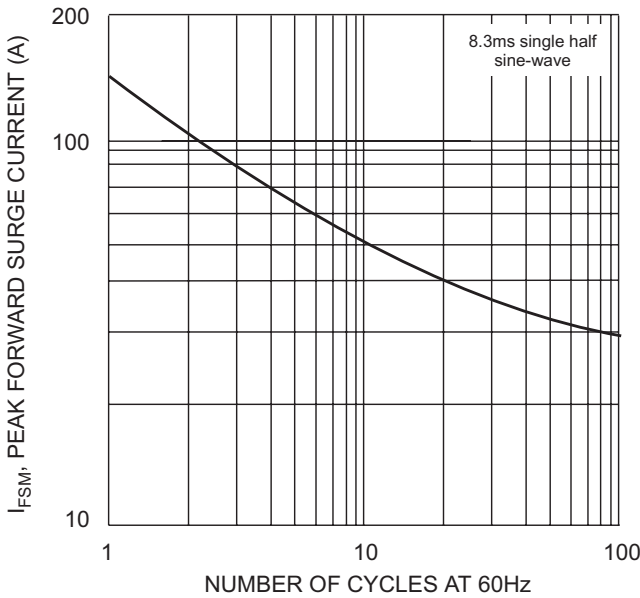


Fig. 3 Peak Forward Surge Current

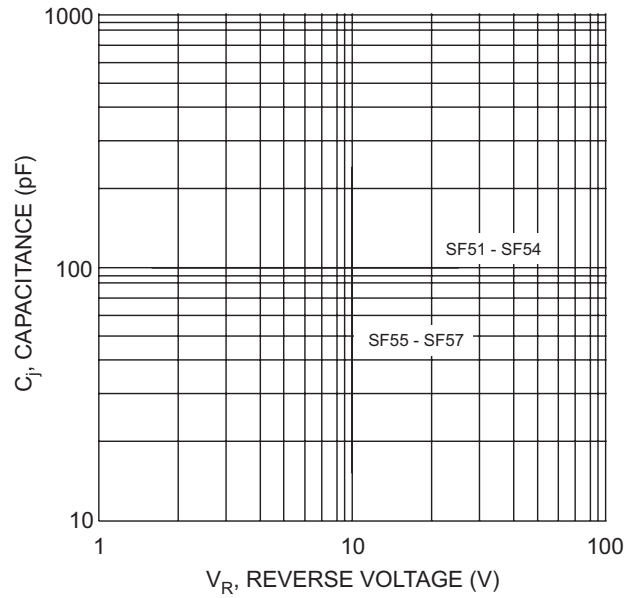
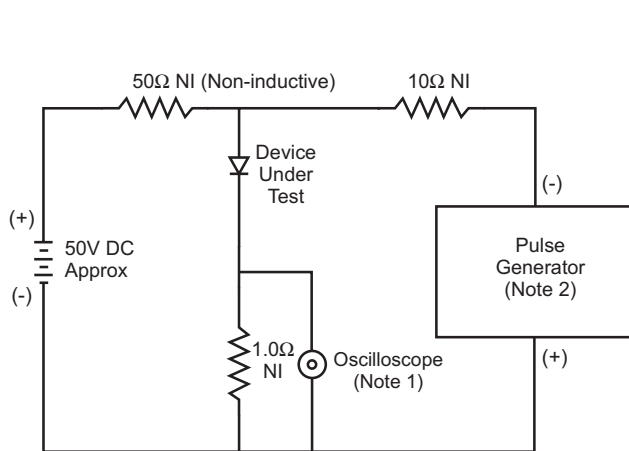


Fig. 4 Typical Junction Capacitance



- Notes:
1. Rise Time = 7.0ns max. Input Impedance = 1.0MΩ, 22pF.
  2. Rise Time = 10ns max. Input Impedance = 50Ω.

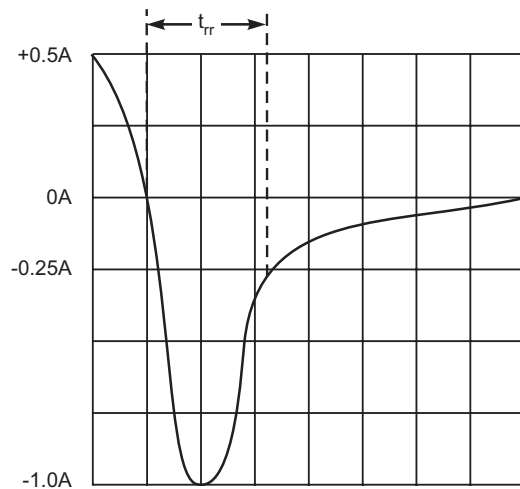
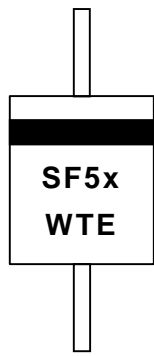


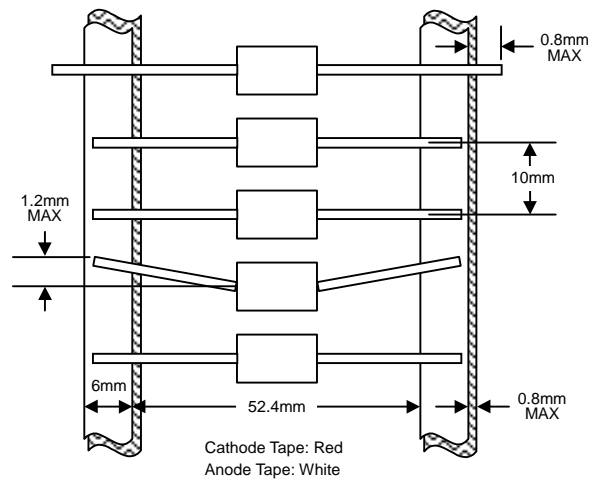
Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

## MARKING INFORMATION

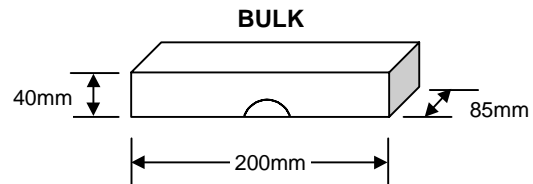
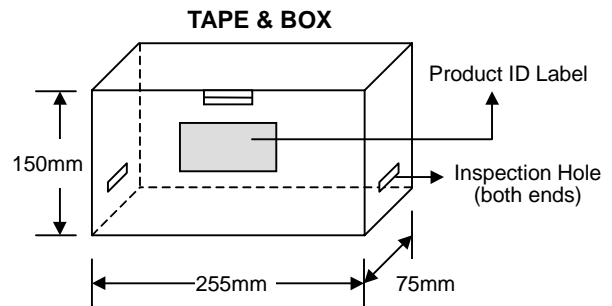
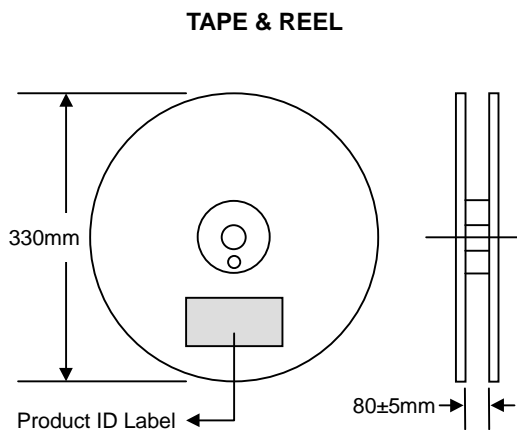


Cathode = Polarity Band  
 SF5x = Device Number  
 x = 1, 2, 3, 4, 5, 6 or 7  
 WTE = Manufacturer's Logo

## TAPING SPECIFICATIONS



## PACKAGING INFORMATION



Packaging	Reel Diameter / Box Size (mm)	Quantity (PCS)	Carton Size (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
<b>TAPE &amp; REEL</b>	330	1,200	370 x 370 x 420	6,000	10.0
<b>TAPE &amp; BOX</b>	255 x 75 x 150	1,200	400 x 273 x 415	12,000	17.0
<b>BULK</b>	200 x 85 x 40	500	459 x 214 x 256	12,500	16.0

**Note:** 1. Paper reel, white or gray color. Core material: plastic or metal.  
 2. Components are packed in accordance with EIA standard RS-296-E.

## ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
SF51-T3	DO-201AD	1200/Tape & Reel
<b>SF51-TB</b>	DO-201AD	1200/Tape & Box
SF51	DO-201AD	500 Units/Box
SF52-T3	DO-201AD	1200/Tape & Reel
<b>SF52-TB</b>	DO-201AD	1200/Tape & Box
SF52	DO-201AD	500 Units/Box
SF53-T3	DO-201AD	1200/Tape & Reel
<b>SF53-TB</b>	DO-201AD	1200/Tape & Box
SF53	DO-201AD	500 Units/Box
SF54-T3	DO-201AD	1200/Tape & Reel
<b>SF54-TB</b>	DO-201AD	1200/Tape & Box
SF54	DO-201AD	500 Units/Box
SF55-T3	DO-201AD	1200/Tape & Reel
<b>SF55-TB</b>	DO-201AD	1200/Tape & Box
SF55	DO-201AD	500 Units/Box
SF56-T3	DO-201AD	1200/Tape & Reel
<b>SF56-TB</b>	DO-201AD	1200/Tape & Box
SF56	DO-201AD	500 Units/Box
SF57-T3	DO-201AD	1200/Tape & Reel
<b>SF57-TB</b>	DO-201AD	1200/Tape & Box
SF57	DO-201AD	500 Units/Box

1. Products listed in **bold** are WTE **Preferred** devices.
2. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
3. **To order RoHS / Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, SF51-TB-LF.**

Won-Top Electronics Co., Ltd (WTE) has checked all information carefully and believes it to be correct and accurate. However, WTE cannot assume any responsibility for inaccuracies. Furthermore, this information does not give the purchaser of semiconductor devices any license under patent rights to manufacturer. WTE reserves the right to change any or all information herein without further notice.

**WARNING: DO NOT USE IN LIFE SUPPORT EQUIPMENT.** WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

**Won-Top Electronics Co., Ltd.**

No. 44 Yu Kang North 3rd Road, Chine Chen Dist., Kaohsiung, Taiwan

**Phone:** 886-7-822-5408 or 886-7-822-5410

**Fax:** 886-7-822-5417

**Email:** sales@wontop.com

**Internet:** http://www.wontop.com

*We power your everyday.*