

**SINLOON®**  
POWER SEMICONDUCTOR

**SF21 - SF27**



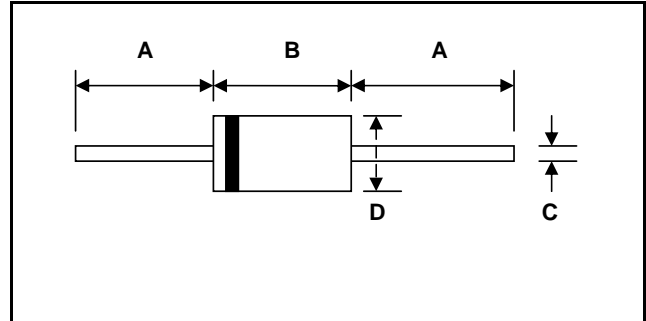
2.0A Superfast Diode

**FEATURE**

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

**MECHANICAL DATA**

- ◆ Case: DO-15, Molded Plastic.
- ◆ Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- ◆ Polarity: Cathode Band.
- ◆ Marking: Type Number
- ◆ Weight: 0.40 grams (approx.)
- ◆ Mounting Position: Any
- ◆ Lead Free: For RoHS / Lead free Version, Add "LF" suffix to part Number, See page 3.



DO-15		
Dim.	Min.	Max.
A	25.40	—
B	5.50	7.62
C	0.71	0.864
D	2.60	3.60
All Dimensions in mm		

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**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS @TA = 25°C unless otherwise specified**

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

Characteristic	Symbol	SF21	SF22	SF23	SF24	SF25	SF26	SF27	Unit
Peak Repetitive Reverse Voltage	VRRM								
Working Peak Reverse Voltage	VRWM	50	100	150	200	300	400	600	V
DC Blocking Voltage	VR								
RMS Reverse Voltage	VR(RMS)	35	70	105	140	210	280	420	V
Average Rectified Output Current @TA=55°C (Note 1)	IO	2.0							A
Non-Repetitive Peak Forward Surtge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	50							A
Forward Voltage @IF=2.0A	VFM	0.95			1.30		1.70		V
Peak Reverse Current @TA=25°C	IRM	5.0							mA
At Rated DC Blocking Voltage @TA=100°C		100							
Reverse Recovery Time ( Note 2)	trr	35							°C/W
Typical Junction Capacitance ( Note 3)	Cj	50			30				pF
Operating Temperature Range	TJ	-65 to +125							°C
Storage Temperature Range	TSTG	-65 to +150							°C

- Note:**
- 1). Leads maintained at ambient temperature at a distance of 9.5mm from the case.
  - 2). Measured with IF=0.5A, IR=1.0A, IRR=0.25A. See figure 5.
  - 3). Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

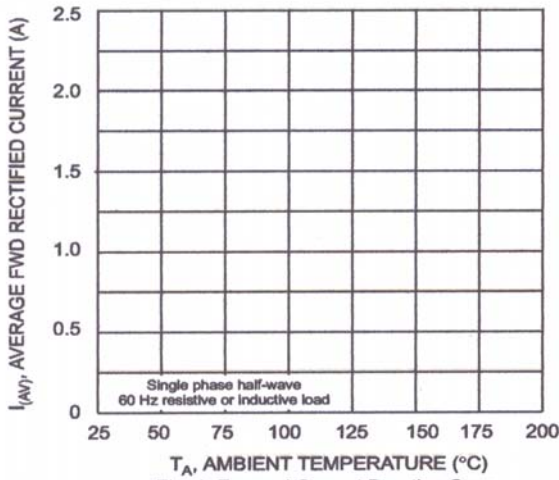
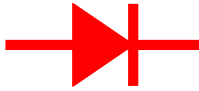


Fig. 1 Forward Current Derating Curve

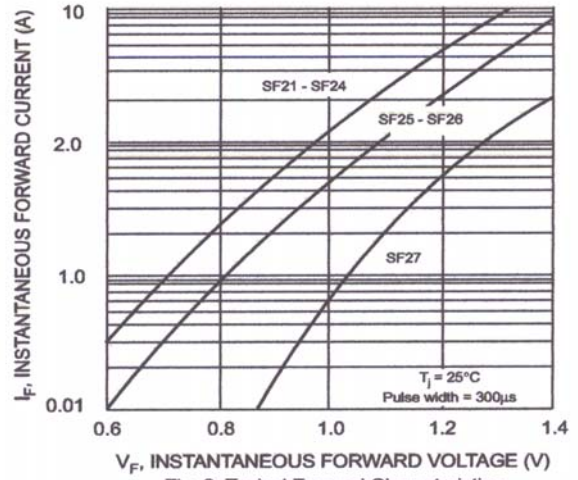


Fig. 2 Typical Forward Characteristics

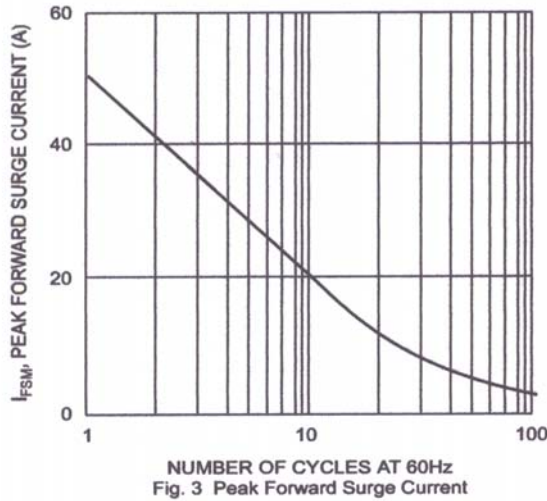


Fig. 3 Peak Forward Surge Current

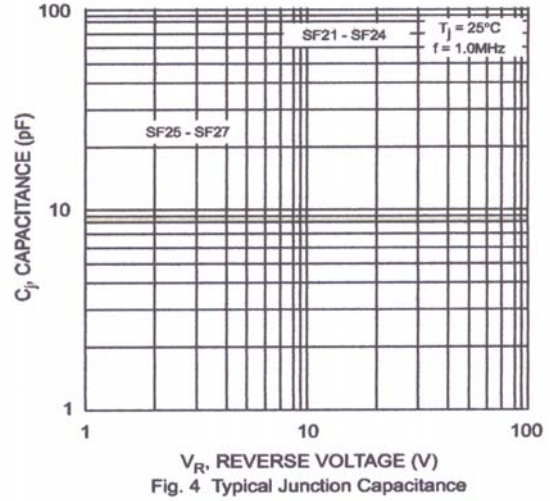
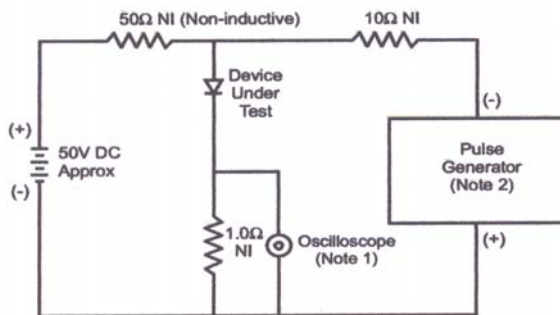
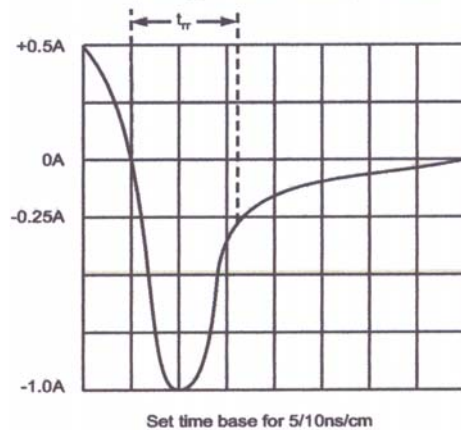


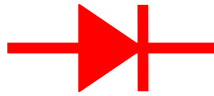
Fig. 4 Typical Junction Capacitance



- 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





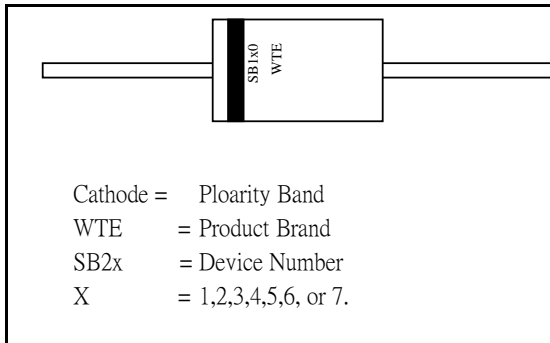
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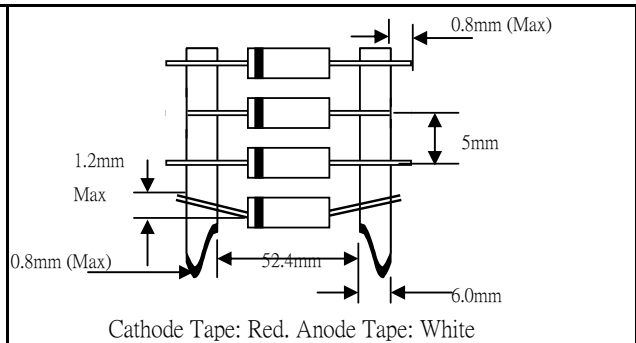


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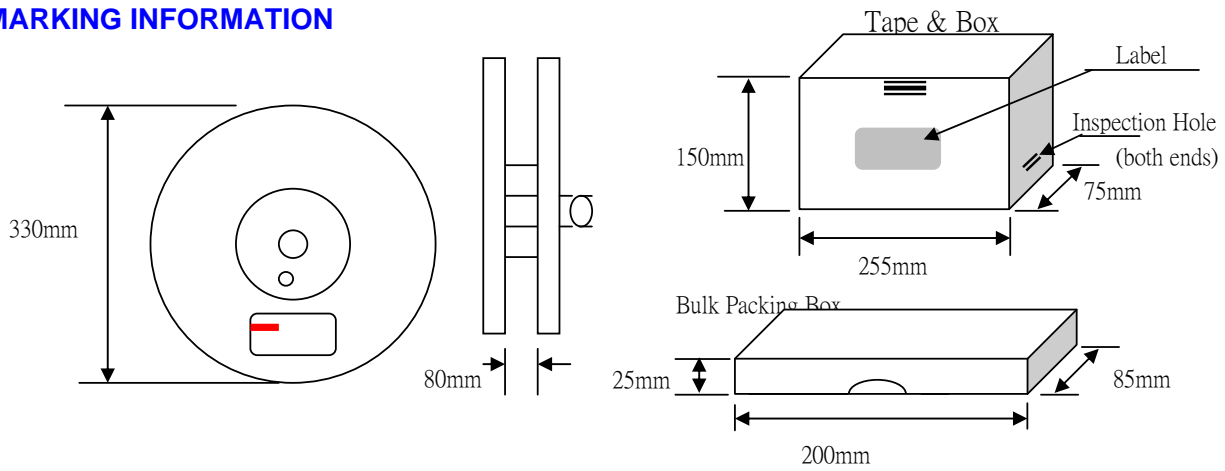
**MARKING INFORMATION**



**TAPING SPECIFICATION**



**MARKING INFORMATION**



Packaging (mm)	Quantity (PCS)	Reel Diameter Box Size (mm)	Carton Size LxWxH (mm)	Quantity (PCS)	Approx Gross Weight (KG)
Tape & Reel	4000	330	370x370x420	20000	12.0
Tape & Box	3000	255x75x150	400x273x415	30000	15.0
Bulk Box	1000	200x85x25	459x214x256	40000	17.5

- 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	Product No.	Package Type	Shipping Quantity
SF21-T3	DO-15	4000/Tape & Reel	SF25-T3	DO-15	4000/Tape & Reel
SF21-TB	DO-15	3000/Tape & Box	SF25-TB	DO-15	3000/Tape & Box
SF21	DO-15	1000 Unit/Box	SF25	DO-15	1000 Unit/Box
SF22-T3	DO-15	4000/Tape & Reel	SF26-T3	DO-15	4000/Tape & Reel
SF22-TB	DO-15	3000/Tape & Box	SF26-TB	DO-15	3000/Tape & Box
SF22	DO-15	1000 Unit/Box	SF26	DO-15	1000 Unit/Box
SF23-T3	DO-15	4000/Tape & Reel	SF27-T3	DO-15	4000/Tape & Reel
SF23-TB	DO-15	3000/Tape & Box	SF27-TB	DO-15	3000/Tape & Box
SF23	DO-15	1000 Unit/Box	SF27	DO-15	1000 Unit/Box
SF24-T3	DO-15	4000/Tape & Reel			
SF24-TB	DO-15	3000/Tape & Box			
SF24	DO-15	1000 Unit/Box			

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- 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, SF21-TB-LF.

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