

**SINLOON®**  
POWER SEMICONDUCTOR

**SF31 - SF37**



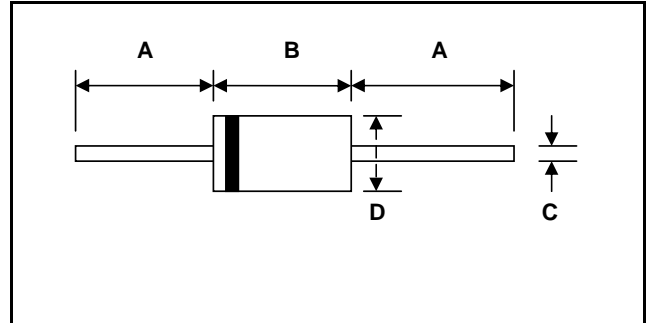
**3.0A Superfast Diode**

**FEATURE**

- ◆ 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.
- ◆ Marking: Type Number
- ◆ Weight: 1.2 grams (approx.)
- ◆ Mounting Position: Any
- ◆ Lead Free: For RoHS / Lead free Version, Add "LF" suffix to part Number, See page 3.



DO-201AD		
Dim.	Min.	Max.
A	25.40	—
B	7.20	9.50
C	1.20	1.300
D	4.80	5.30
All Dimensions in mm		

<http://www.mayloon.com>

**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	SF31	SF32	SF33	SF34	SF35	SF36	SF37	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	3.0							A
Non-Repetitive Peak Forward Surtge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	125							A
Forward Voltage @IF=3.0A	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	100			80				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.

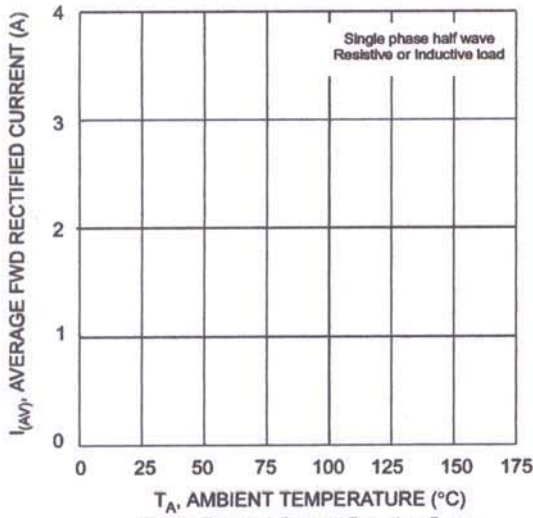
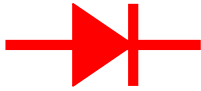


Fig. 1 Forward Current Derating Curve

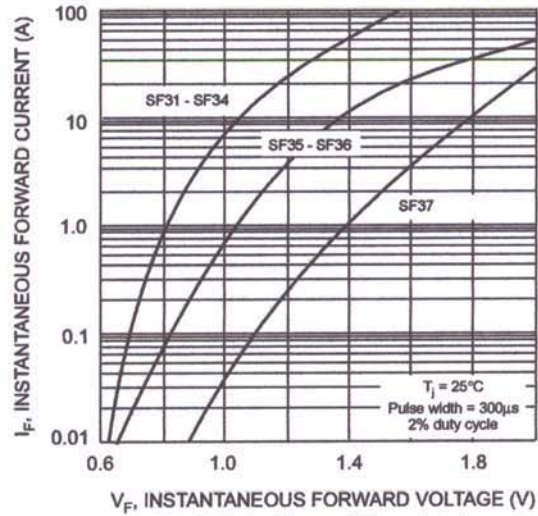


Fig. 2 Typical Forward Characteristics

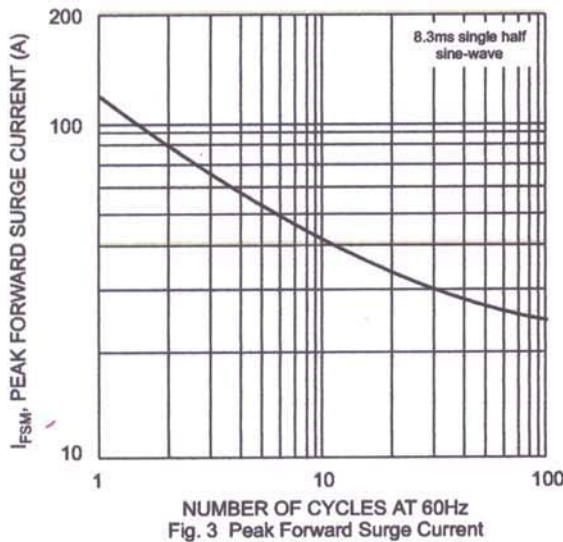


Fig. 3 Peak Forward Surge Current

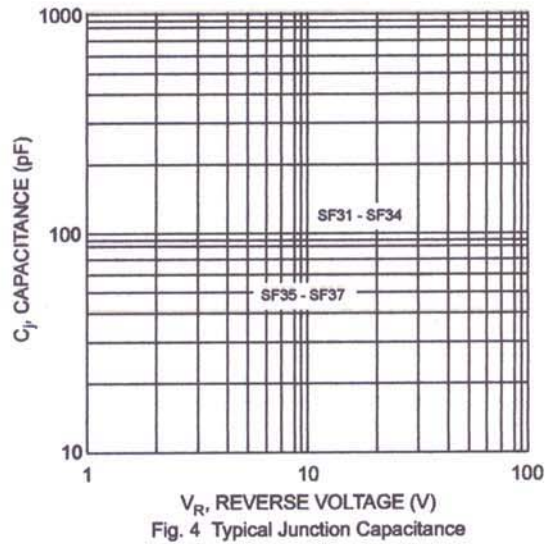
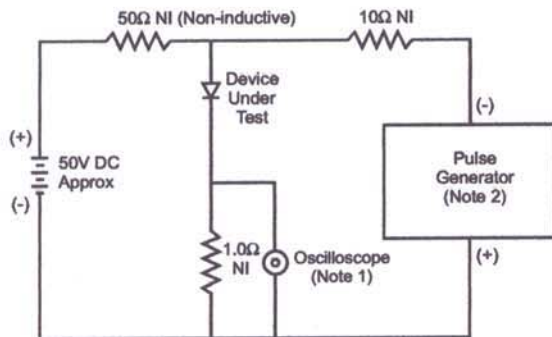
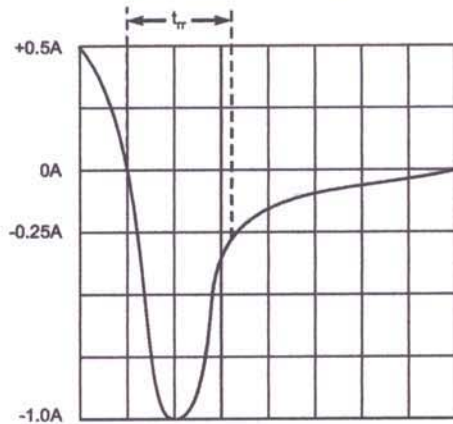


Fig. 4 Typical Junction Capacitance

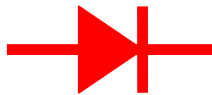


- Notes:  
1. Rise Time = 7.0ns max. Input Impedance = 1.0MΩ, 22pF.  
2. Rise Time = 10ns max. Input Impedance = 50Ω.



Set time base for 5/10ns/cm

Fig. 5 Reverse Recovery Time Characteristic and Test Circuit



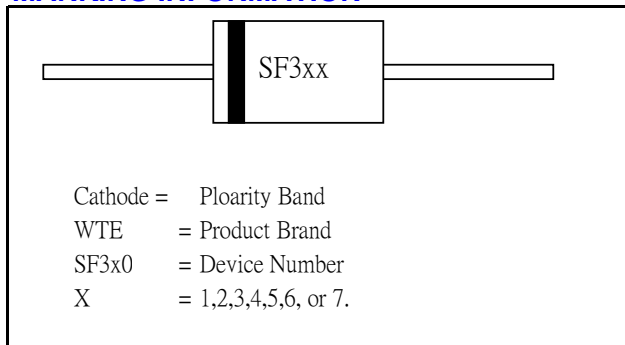
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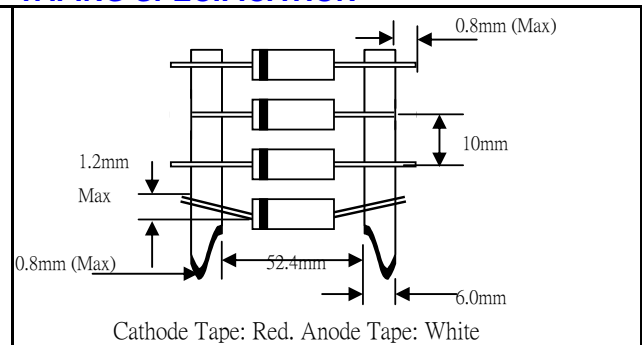


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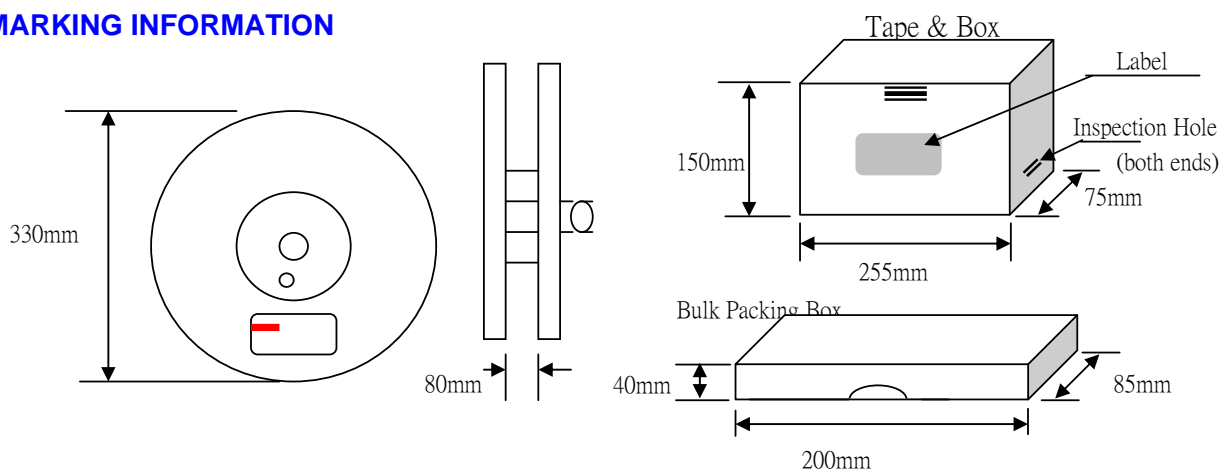
**MARKING INFORMATION**



**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	1200	330	370x370x420	6000	10.0
Tape & Box	1200	255x75x150	400x273x415	12000	17.0
Bulk Box	500	200x85x25	459x214x256	12500	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	Product No.	Package Type	Shipping Quantity
SF31-T3	DO-201AD	1200/Tape & Reel	SF35-T3	DO-201AD	1200/Tape & Reel
SF31-TB	DO-201AD	1200/Tape & Box	SF35-TB	DO-201AD	1200/Tape & Box
SF31	DO-201AD	500 Unit/Box	SF35	DO-201AD	500 Unit/Box
SF32-T3	DO-201AD	1200/Tape & Reel	SF36-T3	DO-201AD	1200/Tape & Reel
SF32-TB	DO-201AD	1200/Tape & Box	SF36-TB	DO-201AD	1200/Tape & Box
SF32	DO-201AD	500 Unit/Box	SF36	DO-201AD	500 Unit/Box
SF33-T3	DO-201AD	1200/Tape & Reel	SF37-T3	DO-201AD	1200/Tape & Reel
SF33-TB	DO-201AD	1200/Tape & Box	SF37-TB	DO-201AD	1200/Tape & Box
SF33	DO-201AD	500 Unit/Box	SF37	DO-201AD	500 Unit/Box
SF34-T3	DO-201AD	1200/Tape & Reel			
SF34-TB	DO-201AD	1200/Tape & Box			
SF34	DO-201AD	500 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, SF31-TB-LF.