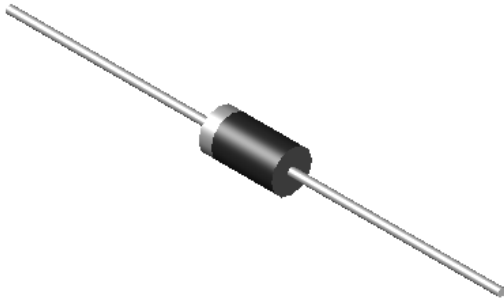


## Super Fast Recovery Rectifier

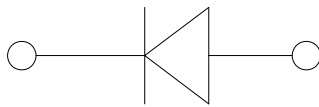


### Features

- Ultrafast reverse recovery time
- Low leakage current
- Low switching losses, high efficiency
- High forward surge capability
- Glass passivated chip junction
- Solder dip 275 °C max. 7 s, per JESD 22-B106

### Typical Applications

For use in high frequency rectification and freewheeling application in switching mode converters and inverters for consumer, computer and telecommunication.



### Mechanical Data

- **Package:** DO-201AD(DO-27)  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Color band denotes the cathode end

### ■Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	SF51	SF52	SF53	SF54	SF55	SF56	SF57	SF58
Device marking code			SF51	SF52	SF53	SF54	SF55	SF56	SF57	SF58
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	V	50	100	150	200	300	400	500	600
Average Forward Current @60Hz sine wave, Resistance load, Ta =60°C	I <sub>F(AV)</sub>	A	5.0							
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, Ta=25°C	I <sub>FSM</sub>	A	150							
Storage Temperature	T <sub>stg</sub>	°C	-55 ~+150							
Junction Temperature	T <sub>j</sub>	°C	-55~+150							

### ■Electrical Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	SF51	SF52	SF53	SF54	SF55	SF56	SF57	SF58
Maximum instantaneous forward voltage drop per diode	V <sub>F</sub>	V	I <sub>FM</sub> =5.0A	0.95			1.3		1.7		
Maximum DC reverse current at rated DC blocking voltage per diode	I <sub>R</sub>	μA	Ta=25°C	5							
			Ta=100°C	150							
Reverse Recovery time	T <sub>RR</sub>	ns	I <sub>F</sub> =0.5A I <sub>R</sub> =1A I <sub>RR</sub> =0.25A	35							
Typical junction capacitance	C <sub>j</sub>	pF	Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C.	60				40			



# SF51 THRU SF58

## ■ Thermal Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	SF51	SF52	SF53	SF54	SF55	SF56	SF57	SF58
Typical Thermal Resistance	R <sub>θJ-A</sub>	°C/W	15							

## ■ Ordering Information (Example)

PREFERED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
SF51~SF58	D1	Approximate 1.05	1250	1250	12500	Tape
SF51~SF58	C1	Approximate 1.05	250	250	12500	Bulk

## ■ Characteristics(Typical)

FIG.1: I<sub>o</sub>-T<sub>a</sub> Curve

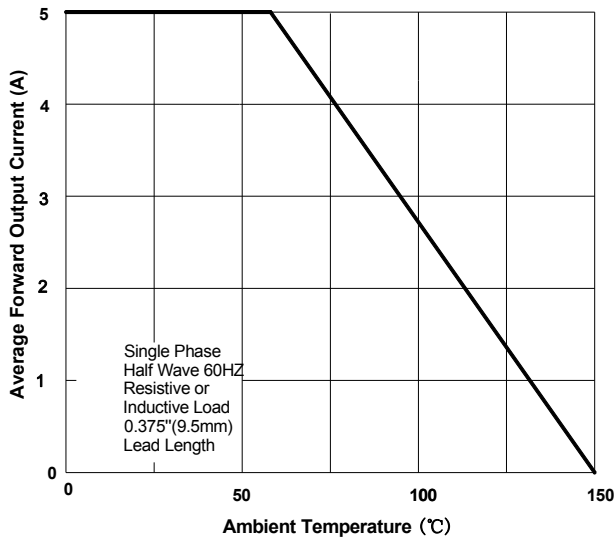


FIG.2: Forward Surge Current Capability

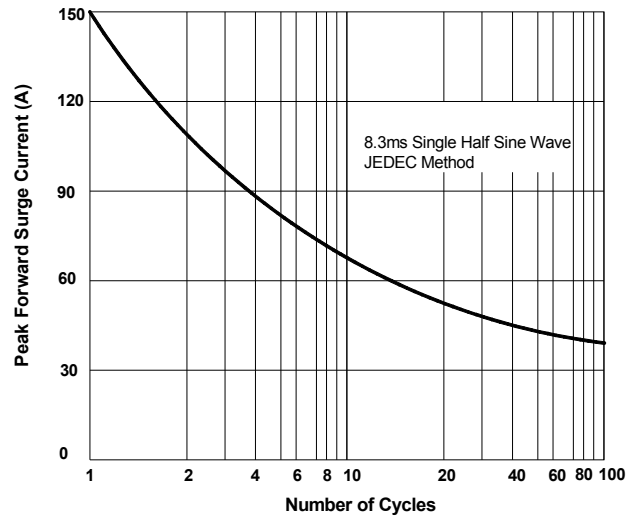


FIG.3: Forward Voltage

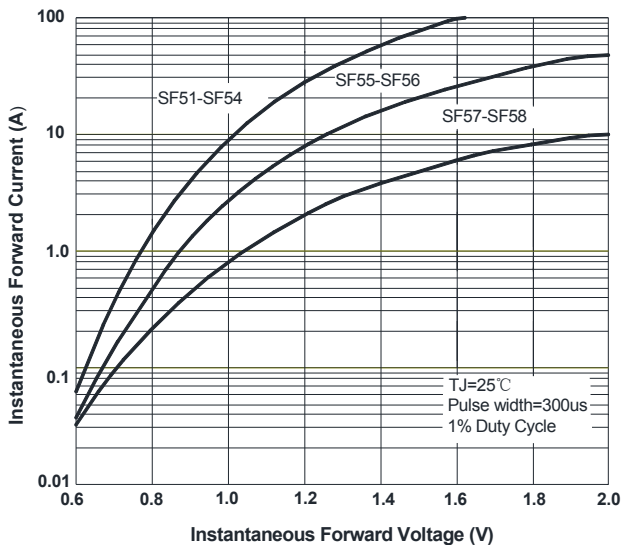


FIG.4: Typical Reverse Characteristics

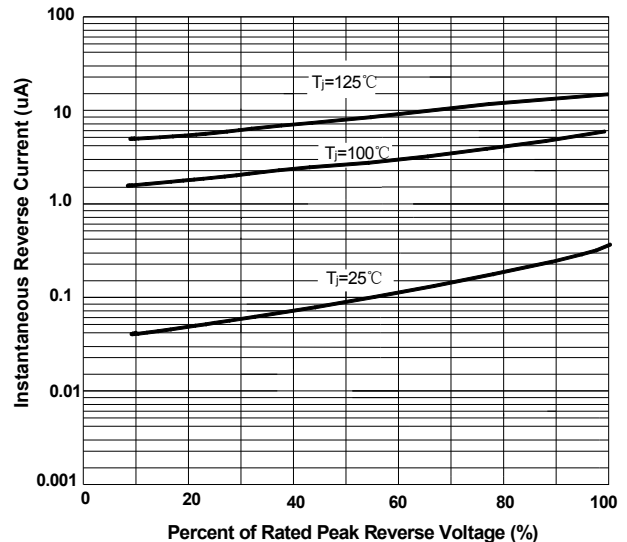
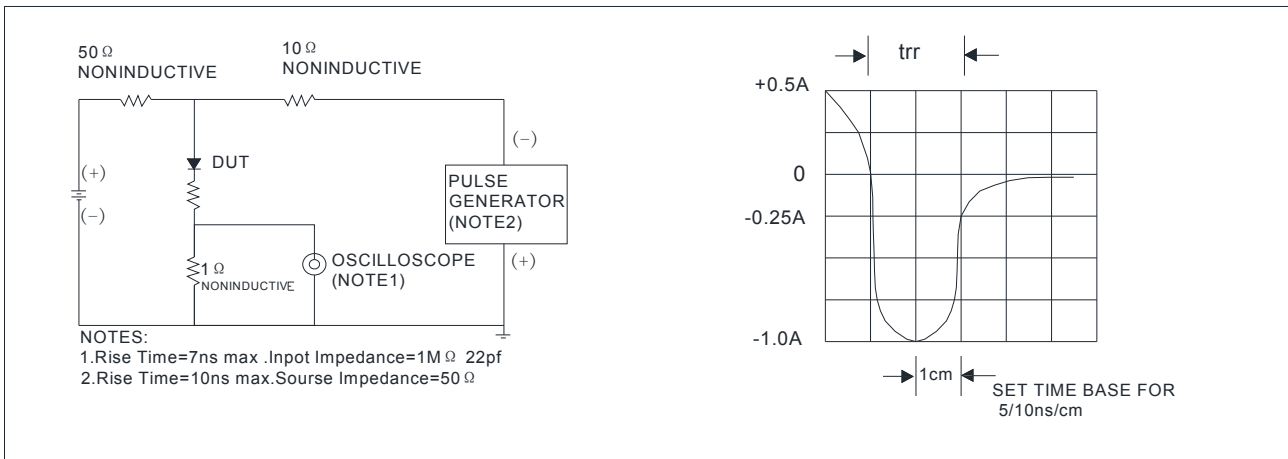
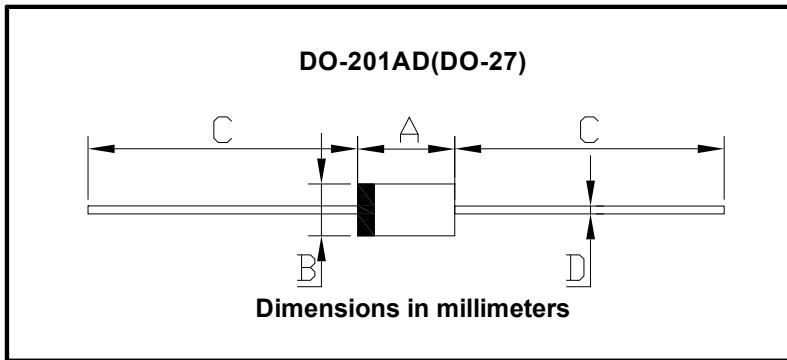


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



## ■ Outline Dimensions



DO-201AD(DO-27)		
Dim	Min	Max
A	8.50	9.50
B	5.00	5.60
C	25.4	/
D	1.20	1.30



## SF51 THRU SF58

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