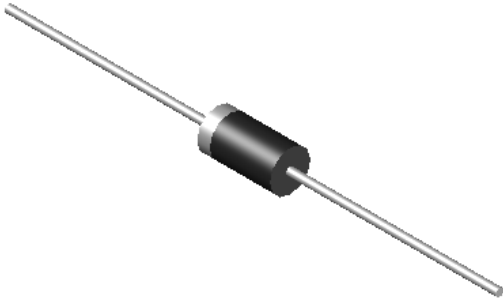


## Super Fast Recovery Rectifier

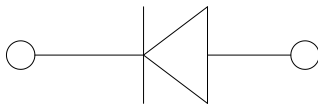


### Features

- 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	SF31G	SF32G	SF33G	SF34G	SF35G	SF36G	SF37G	SF38G
Device marking code			SF31G	SF32G	SF33G	SF34G	SF35G	SF36G	SF37G	SF38G
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 =50°C	I <sub>F(AV)</sub>	A	3.0							
Forward Surge Current(Non-repetitive) @60Hz Half-sine wave, 1 cycle, Ta=25°C	I <sub>FSM</sub>	A	125							
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	SF31G	SF32G	SF33G	SF34G	SF35G	SF36G	SF37G	SF38G
Maximum instantaneous forward voltage drop per diode	V <sub>F</sub>	V	I <sub>FM</sub> =3.0A	0.95			1.3		1.7		
Maximum DC reverse current at rated DC blocking voltage per diode	I <sub>R</sub>	μA	T <sub>a</sub> =25°C	5							
			T <sub>a</sub> =100°C	150							
Reverse Recovery time	t <sub>r</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			



# SF31G THRU SF38G

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

PARAMETER	SYMBOL	UNIT	SF31G	SF32G	SF33G	SF34G	SF35G	SF36G	SF37G	SF38G
Thermal Resistance	R <sub>θJ-A</sub>	°C/W	30							

## ■ Ordering Information (Example)

PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
SF31G~SF38G	D1	Approximate 1.05	1250	1250	12500	Tape
SF31G~SF38G	C1	Approximate 1.05	250	250	12500	Bulk

## ■ Characteristics(Typical)

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

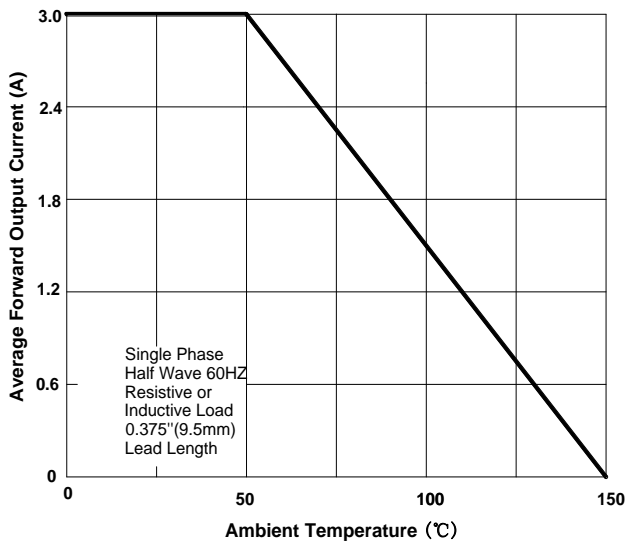


FIG.2: Forward Surge Current Capability

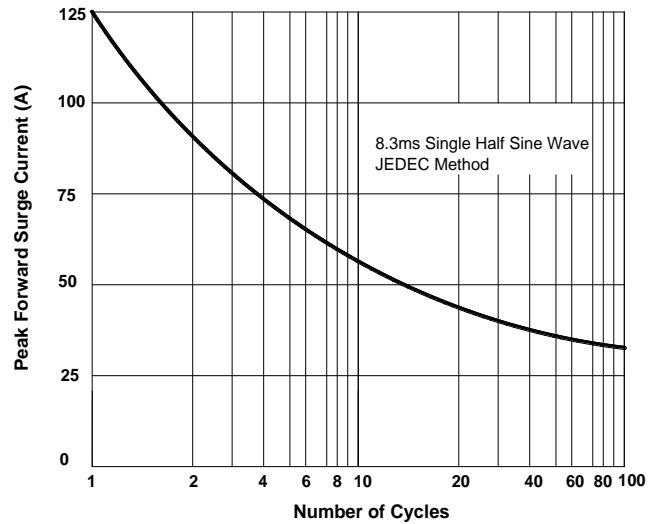


FIG.3: Forward Voltage

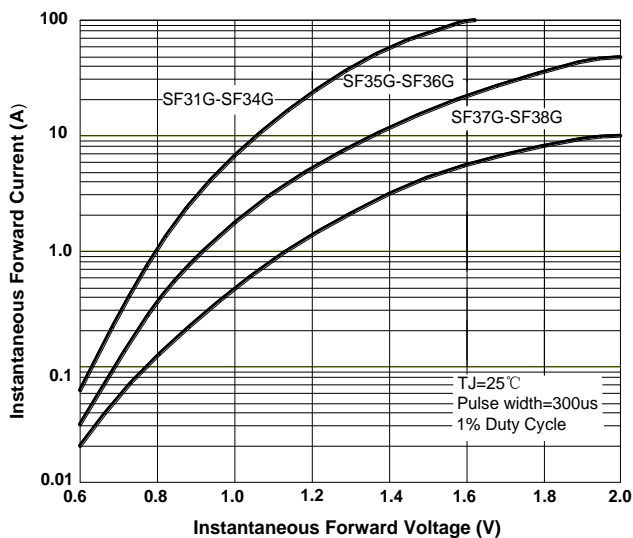


FIG.4: Typical Reverse Characteristics

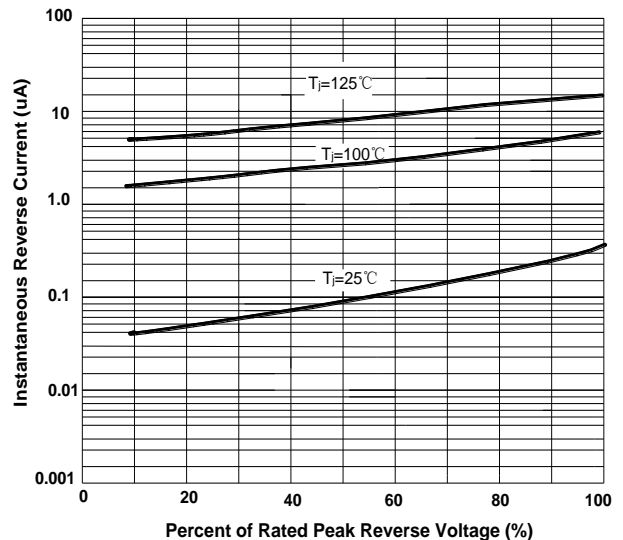
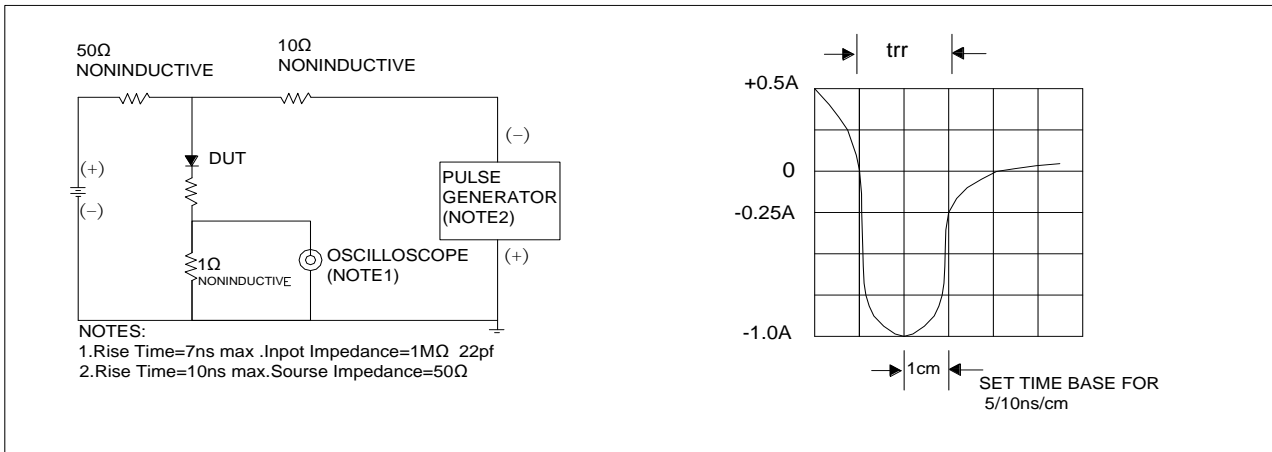
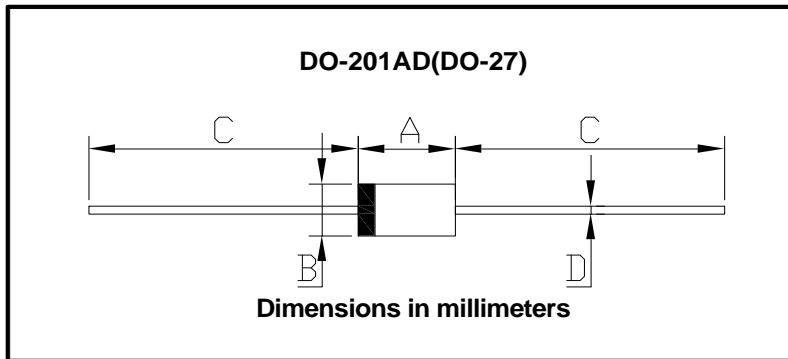


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



## ■ 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



## SF31G THRU SF38G

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