

## Super Fast Recovery Rectifier

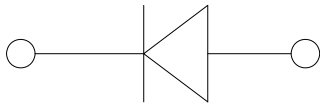


### Features

- 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-204AC(DO-15)  
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	SF21G	SF22G	SF23G	SF24G	SF25G	SF26G	SF27G	SF28G
Device marking code			SF21G	SF22G	SF23G	SF24G	SF25G	SF26G	SF27G	SF28G
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	V	50	100	150	200	300	400	500	600
Maximum RMS Voltage	V <sub>RMS</sub>	V	35	70	105	140	210	280	350	420
Maximum DC blocking Voltage	V <sub>DC</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	2.0							
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, Tj=25°C	I <sub>FSM</sub>	A	50							
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25°C			100							
Current squared time @1ms≤t8.3≤ms Tj=25°C, Rating of per diode	I <sup>2</sup> t	A <sup>2</sup> s	10.375							
Typical junction capacitance @Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	C <sub>j</sub>	pF	32				18		13	
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	SF21G	SF22G	SF23G	SF24G	SF25G	SF26G	SF27G	SF28G
Maximum instantaneous forward voltage drop per diode	V <sub>F</sub>	V	I <sub>FM</sub> =2.0A	0.95				1.3		1.7	
Maximum DC reverse current at rated DC blocking voltage per diode	I <sub>R</sub>	μA	T <sub>j</sub> =25°C	2.5							
			T <sub>j</sub> =125°C	100							
Maximum reverse recovery time	t <sub>rr</sub>	ns	I <sub>F</sub> =0.5A, I <sub>R</sub> =1.0A, I <sub>r</sub> =0.25A	35							



# SF21G THRU SF28G

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

PARAMETER	SYMBOL	UNIT	SF21G	SF22G	SF23G	SF24G	SF25G	SF26G	SF27G	SF28G
Typical Thermal Resistance	R <sub>θJA</sub>	°C/W	50							

## ■ Ordering Information (Example)

PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
SF21G~SF28G	D1	Approximate 0.38	3000	3000	30000	Tape
SF21G~SF28G	C1	Approximate 0.38	500	500	25000	Bulk

## ■ Characteristics(Typical)

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

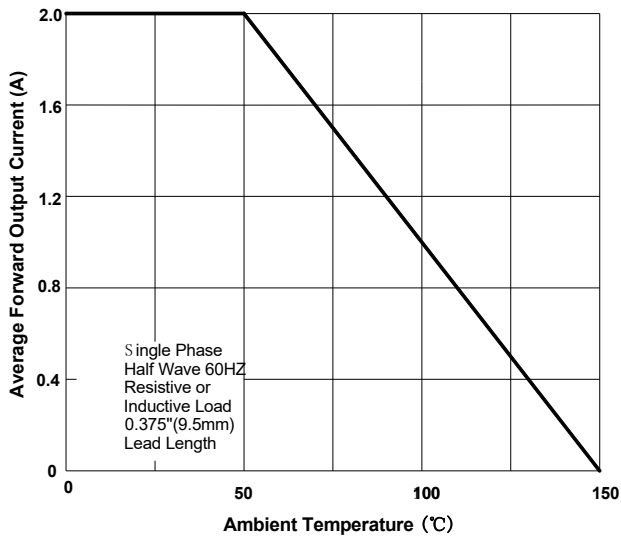


FIG.2: Forward Surge Current Capability

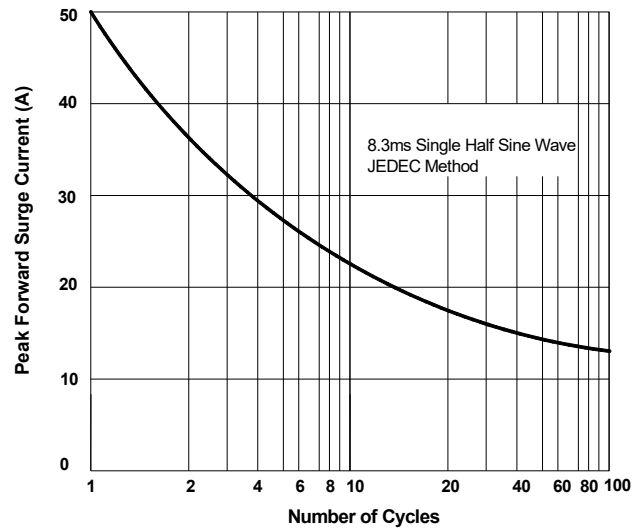


FIG.3: Forward Voltage

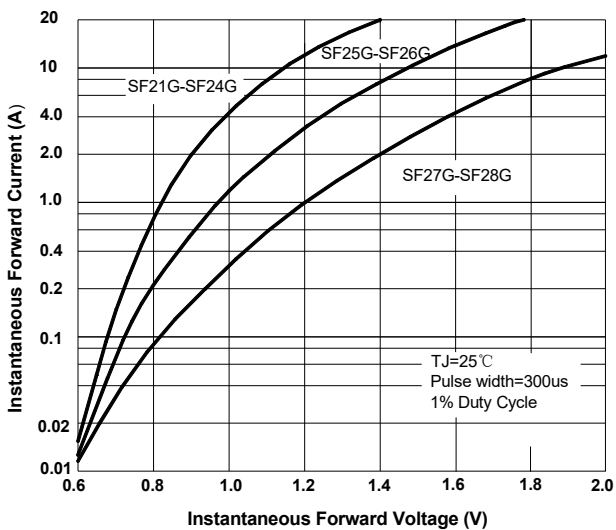


FIG.4: Typical Reverse Characteristics

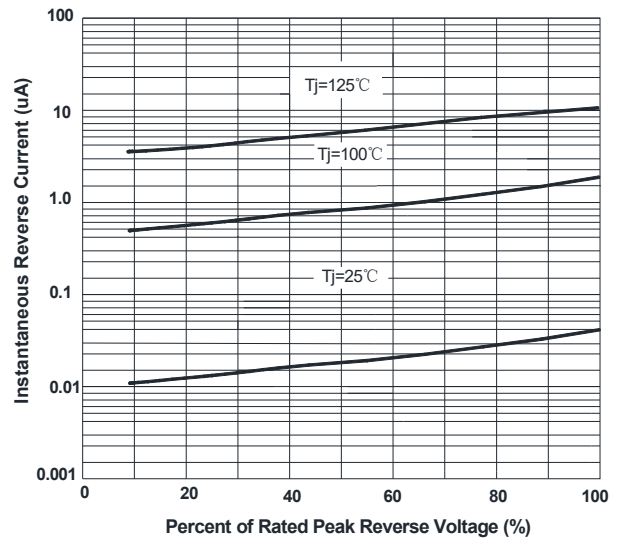
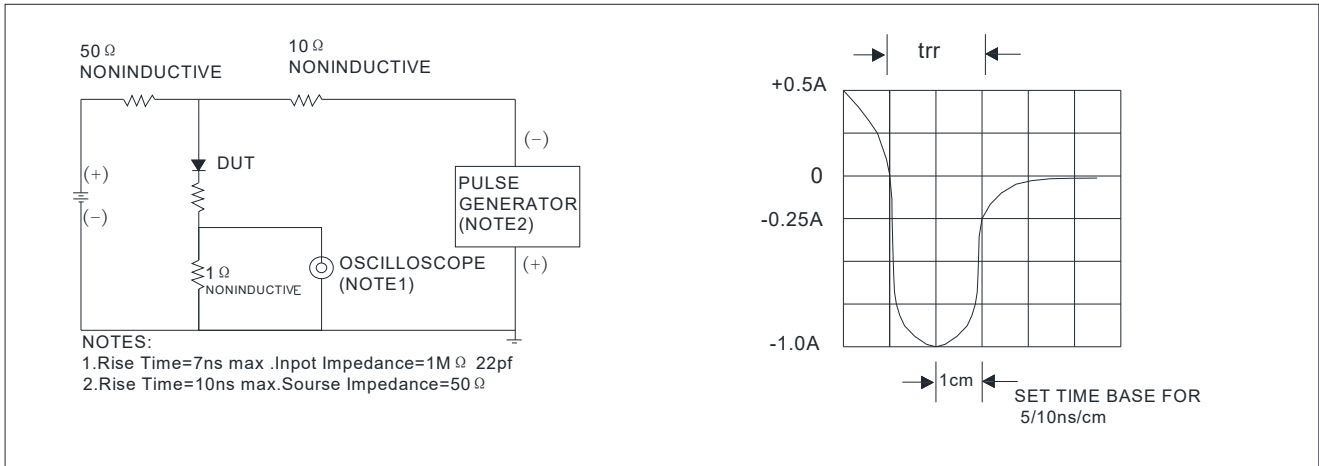
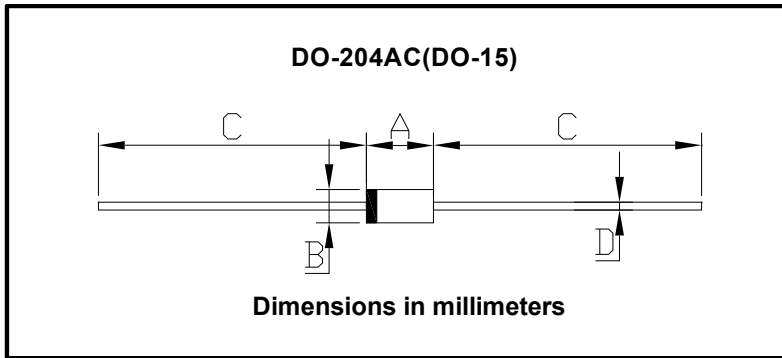


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



## ■ Outline Dimensions



DO-204AC(DO-15)		
Dim	Min	Max
A	5.80	7.60
B	2.60	3.60
C	25.4	/
D	0.70	0.90



## SF21G THRU SF28G

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