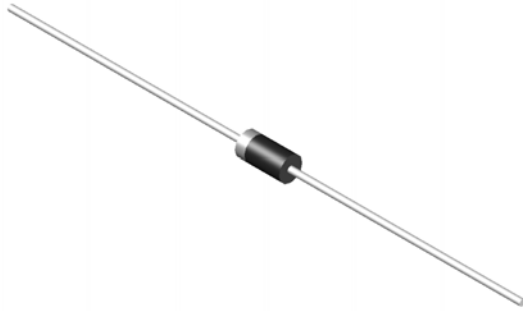


## Super Fast Recovery Rectifier

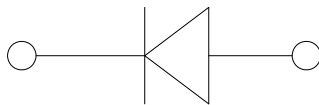


### Features

- 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-204AL(DO-41)  
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	SF19G
Device marking code			SF19G
Maximum Repetitive Peak Reverse Voltage	VRRM	V	800
Maximum RMS Voltage	VRMS	V	560
Maximum DC blocking Voltage	VDC	V	800
Average Forward Current @60Hz sine wave, Resistance load, Ta =60°C	$I_{F(AV)}$	A	1.0
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, Tj=25°C	$I_{FSM}$	A	30
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25°C			60
Current squared time @1ms≤t≤8.3ms Tj=25°C, Rating of per diode	$I^2t$	A <sup>2</sup> s	3.735
Typical junction capacitance @Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	Cj	pF	11
Storage Temperature	Tstg	°C	-55 ~ +150
Junction Temperature	Tj	°C	-55 ~ +150

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	SF19G
Maximum instantaneous forward voltage drop per diode	V <sub>F</sub>	V	I <sub>FM</sub> =1.0A	1.85
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> =100°C	50
			T <sub>j</sub> =125°C	100
Maximum reverse recovery time	t <sub>r</sub>	ns	I <sub>F</sub> =0.5A, I <sub>R</sub> =1.0A, I <sub>r</sub> =0.25A	35



# SF19G

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

PARAMETER	SYMBOL	UNIT	SF19G
Typical Thermal Resistance	R <sub>θJ-A</sub>	°C/W	60

## ■ Ordering Information (Example)

PREFERED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
SF19G	D1	Approximate 0.30	5000	5000	50000	Tape
SF19G	C1	Approximate 0.30	1000	1000	50000	Bulk

## ■ Characteristics(Typical)

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

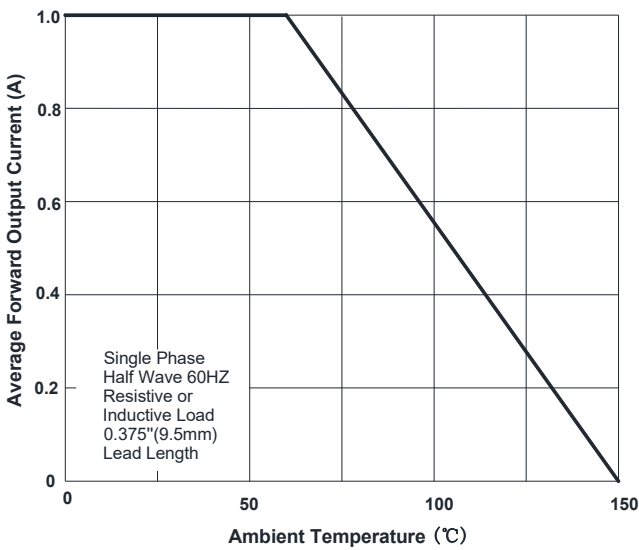


FIG.2: Forward Surge Current Capability

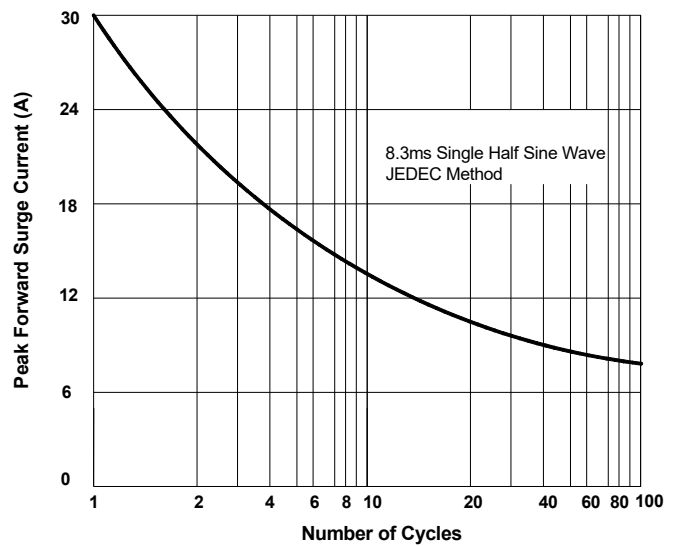


FIG.3: Typical Forward Voltage

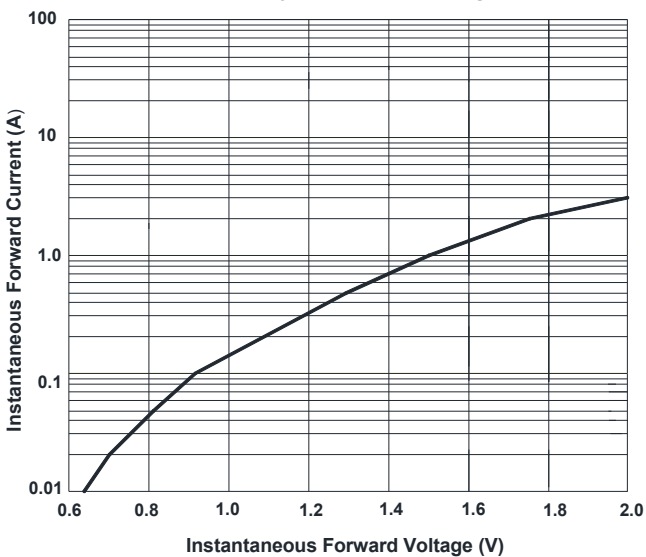
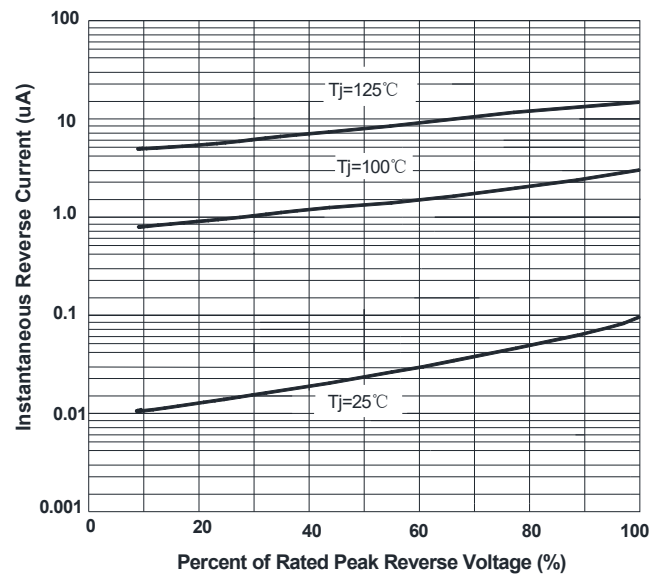
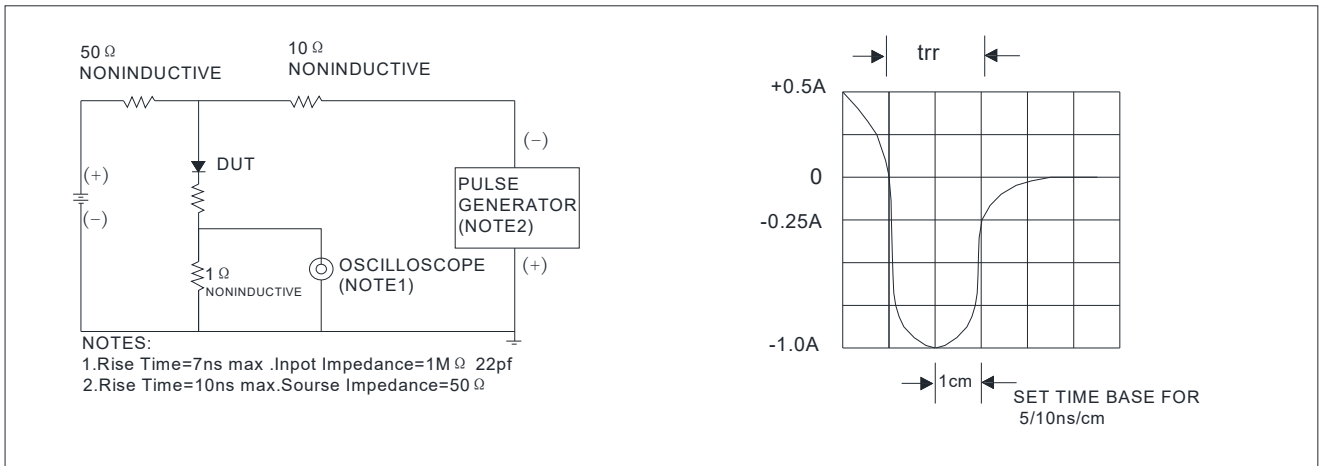


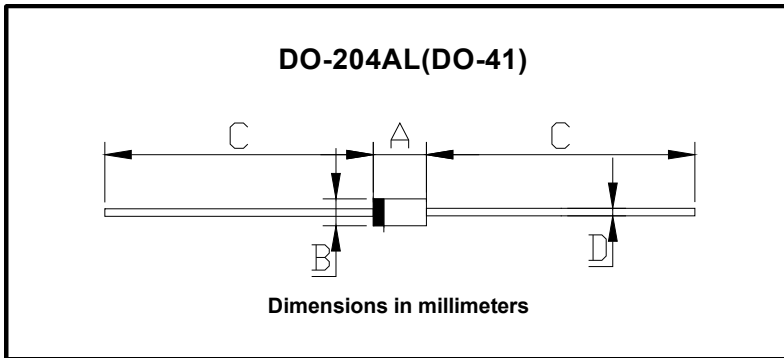
FIG.4: Typical Reverse Characteristics



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



## ■ Outline Dimensions



DO-204AL(DO-41)		
Dim	Min	Max
A	4.22	5.21
B	2.03	2.72
C	25.4	/
D	0.69	0.86



## SF19G

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