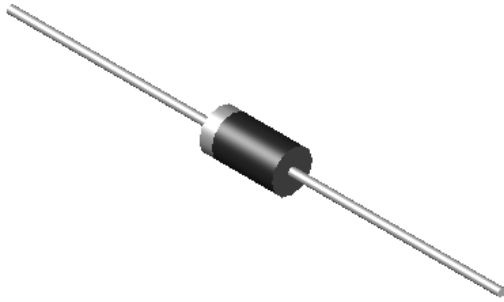


SF31G THRU SF38G

Super Fast Recovery Rectifier

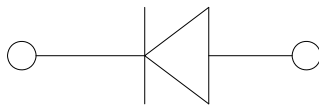


Features

- 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, -
- **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
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	V	50	100	150	200	300	400	500	600
Maximum RMS Voltage	V _{RMS}	V	35	70	105	140	210	280	350	420
Maximum DC blocking Voltage	V _{DC}	V	50	100	150	200	300	400	500	600
Average Forward Current @60Hz sine wave, Resistance load, Ta =50℃	I _{F(AV)}	A	3.0							
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave,1 cycle, Tj=25℃	I _{FSM}	A	125							
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25℃			250							
Current squared time @1ms≤t≤8.3ms Tj=25℃, Rating of per diode	I ² t	A ² s	65							
Typical junction capacitance @Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	Cj	pF	62				33		30	
Storage Temperature	T _{stg}	℃	-55 ~ +150							
Junction Temperature	T _j	℃	-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 _F	V	I _{FM} =3.0A	0.95				1.3		1.7	
Maximum DC reverse current at rated DC blocking voltage per diode	I _R	μA	T _j =25°C	2.5							
			T _j =125°C	100							
Maximum reverse recovery time	t _{rr}	ns	I _F =0.5A, I _R =1.0A, I _r =0.25A	35							

SF31G THRU SF38G

■ Thermal Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	SF31G	SF32G	SF33G	SF34G	SF35G	SF36G	SF37G	SF38G
Typical Thermal Resistance	R _{θJA}	°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_o-T_a Curve

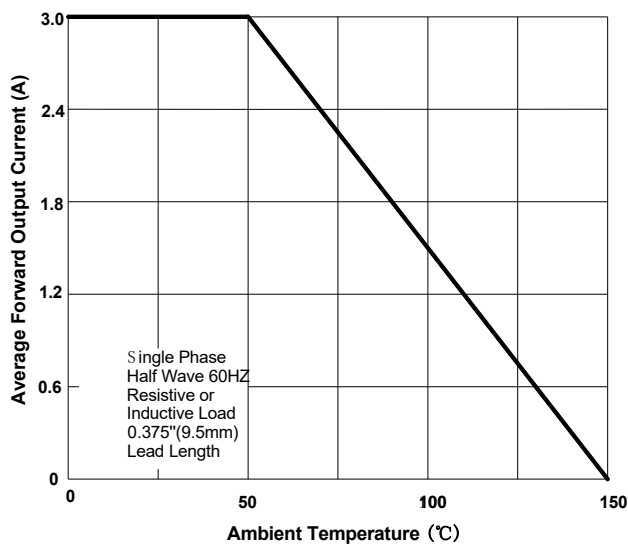


FIG.2: Forward Surge Current Capability

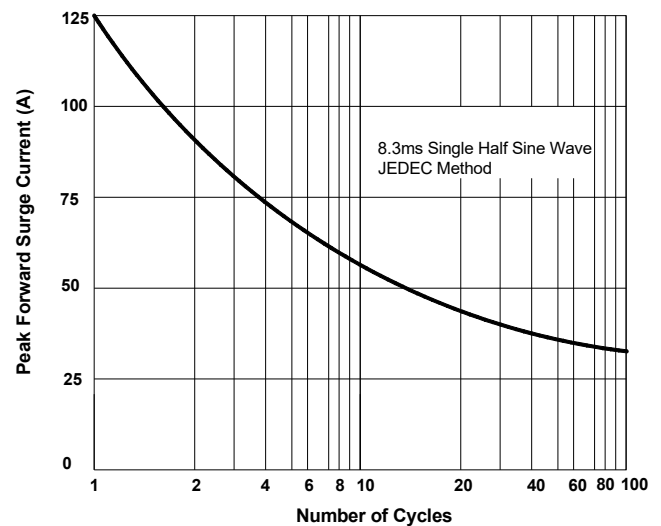


FIG.3: Forward Voltage

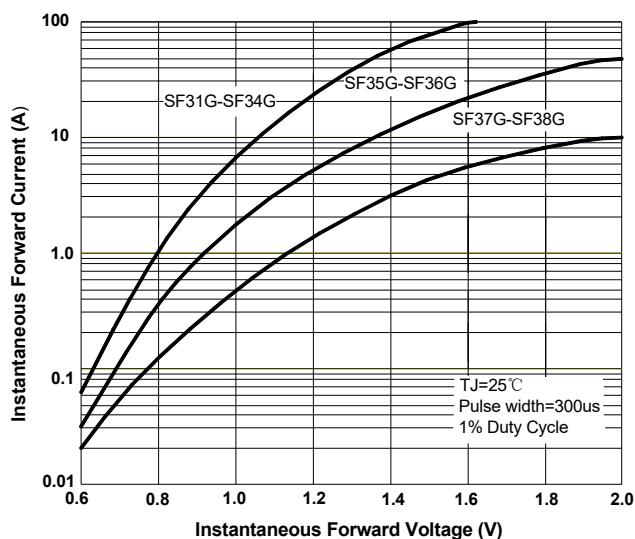
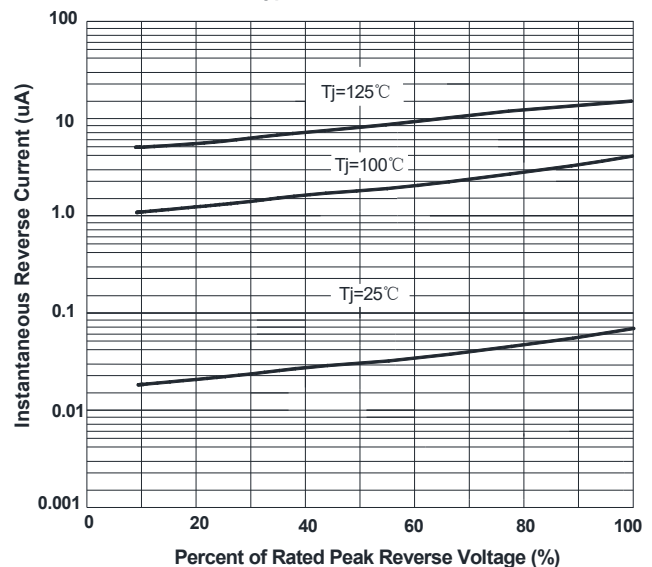
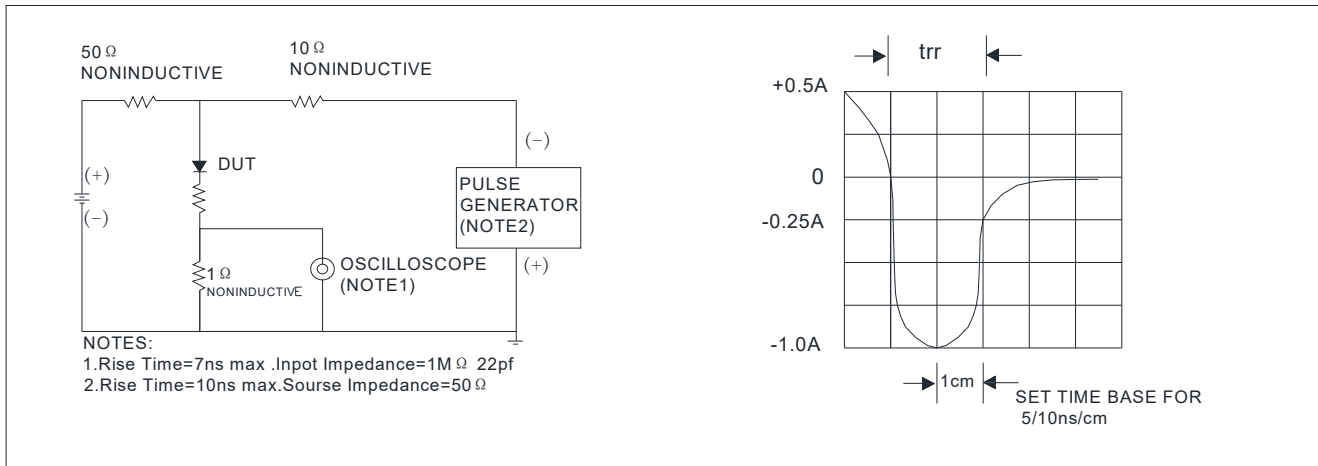


FIG.4: Typical Reverse Characteristics

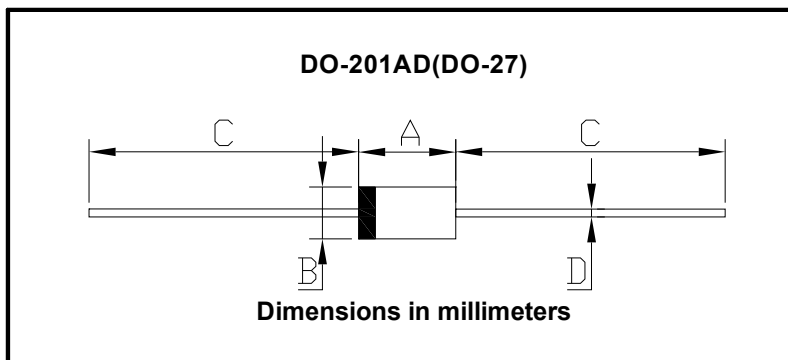


SF31G THRU SF38G

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

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