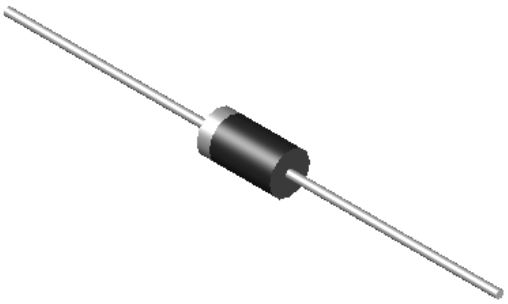
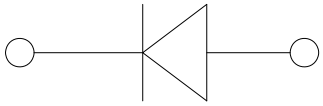
Super Fast Recovery Rectifier





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℃ Unless otherwise specified）

PARAMETER	SYMBOL	UNIT	SF51G	SF52G	SF53G	SF54G	SF55G	SF56G	SF57G	SF58G	SF59G
Device marking code			SF51G	SF52G	SF53G	SF54G	SF55G	SF56G	SF57G	SF58G	SF59G
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	V	50	100	150	200	300	400	500	600	800
Maximum RMS Voltage	V_{RMS}	V	35	70	105	140	210	280	350	420	560
Maximum DC blocking Voltage	V_{DC}	V	50	100	150	200	300	400	500	600	800
Average Forward Current @60Hz sine wave, Resistance load, T =60℃	$I_{F(AV)}$	A	5.0								
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave,1 cycle, Tj=25℃	I_{FSM}	A	150								100
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25℃			250								200
Current squared time @1ms≤t≤8.3ms Tj=25℃， Rating of per diod	I^2t	A^2s	94								41.5
Typical junction capacitance @Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	Cj	pF	80				46		30		36
Storage Temperature	T_{stg}	℃	-55 ~ +150								
Junction Temperature	Tj	℃	-55 ~ +150								

■Electrical Characteristics（Ta=25℃ Unless otherwise specified）

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	SF51G	SF52G	SF53G	SF54G	SF55G	SF56G	SF57G	SF58G	SF59G
Maximum instantaneous forward voltage drop per diode	VF	V	I_{FM}=5.0A	0.95				1.3		1.7		2.5
Maximum DC reverse current at rated DC blocking voltage per diode	I_R	μA	T_j=25℃	2.5								
			T_j=125℃	100								
Maximum reverse recovery time	t_{rr}	ns	I_F=0.5A,I_R=1.0A, I_{rr}=0.25A	35								

■Thermal Characteristics （T_a=25℃ Unless otherwise specified）

PARAMETER	SYMBOL	UNIT	SF51G	SF52G	SF53G	SF54G	SF55G	SF56G	SF57G	SF58G	SF59G
Typical Thermal Resistance	$R_{\theta J-A}$	℃/W	45								
	$R_{\theta J-C}$		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
SF51G~SF59G	D1	Approximate 1.05	1250	1250	12500	Tape
SF51G~SF59G	C1	Approximate 1.05	250	250	12500	Bulk
SF59G	G1	Approximate 1.05	500	500	12000	Bulk

■ Characteristics(Typical)

FIG.1: Io-Tc Curve

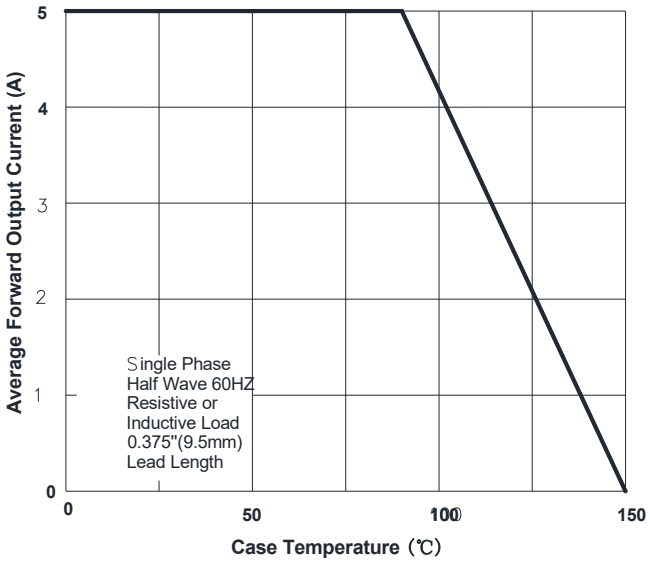


FIG.2: Forward Surge Current Capability

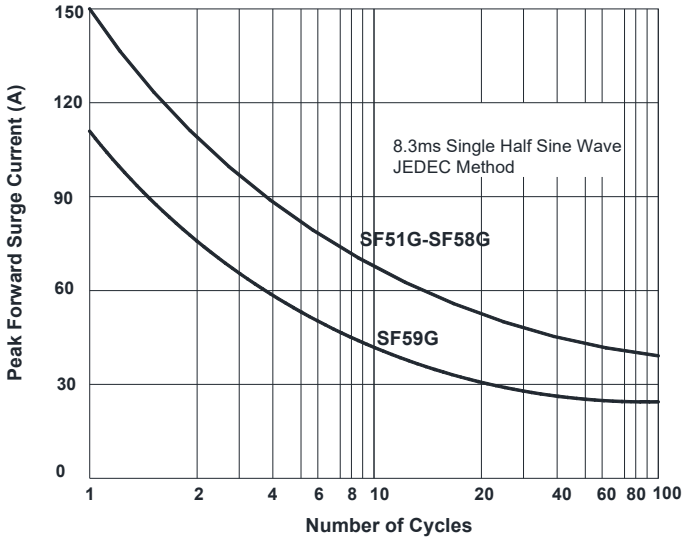


FIG.3: Forward Voltage

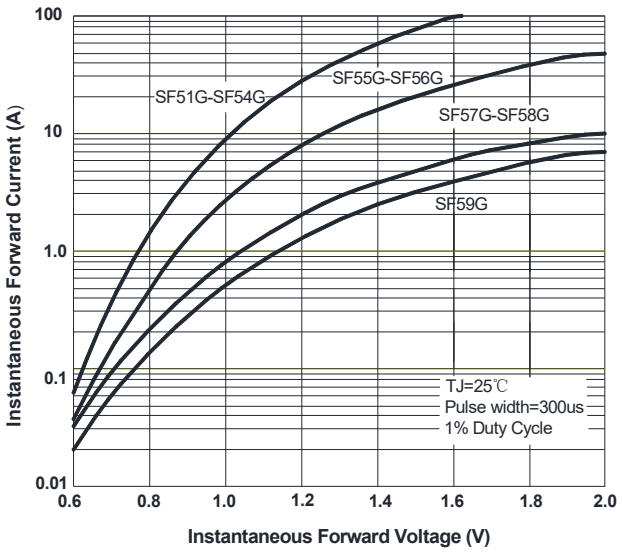


FIG.4: Typical Reverse Characteristics

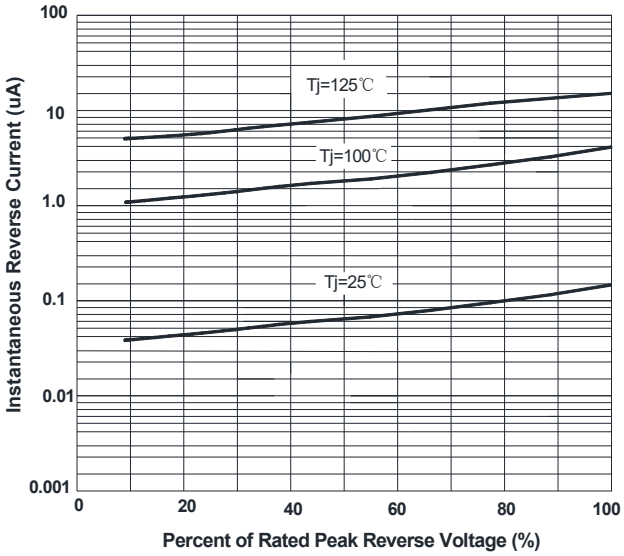
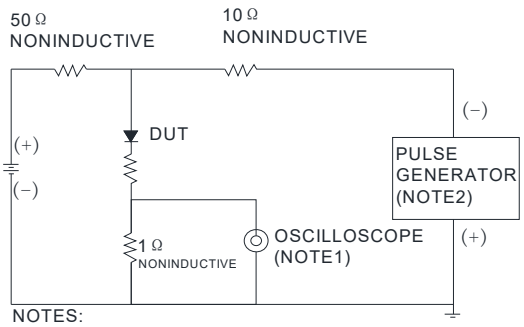
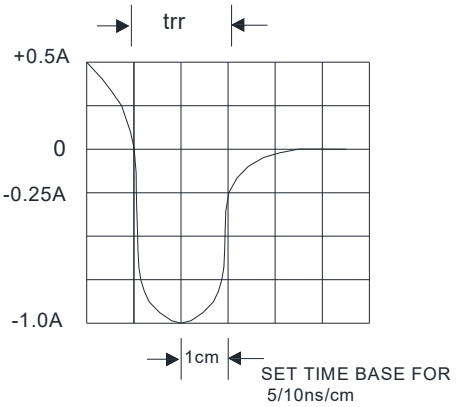
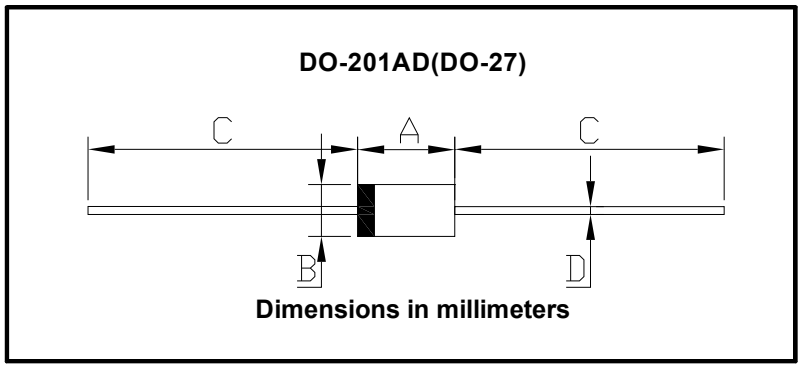


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time





■ 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

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