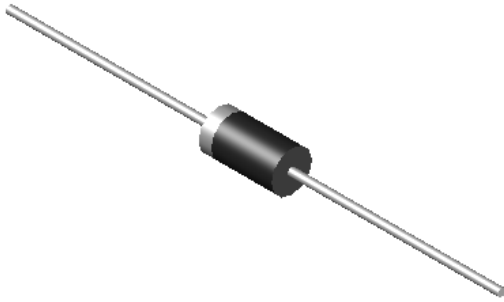


Super Fast Recovery Rectifier

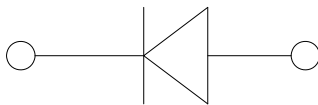


Features

- 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 (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	SF59G
Device marking code			SF59G
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	V	800
Maximum RMS Voltage	V _{RMS}	V	560
Maximum DC blocking Voltage	V _{DC}	V	800
Average Forward Current @60Hz sine wave, Resistance load, T _a =60°C	I _{F(AV)}	A	5.0
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, T _j =25°C	I _{FSM}	A	100
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, T _j =25°C			200
Current squared time @1ms≤t≤8.3ms T _j =25°C, Rating of per diode	I ² t	A ² s	41.5
Typical junction capacitance @Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	C _j	pF	36
Storage Temperature	T _{stg}	°C	-55 ~ +150
Junction Temperature	T _j	°C	-55 ~ +150

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	SF59G
Maximum instantaneous forward voltage drop per diode	V _F	V	I _{FM} =5.0A	2.0
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



SF59G

■ Thermal Characteristics ($T_a=25^{\circ}\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	SF59G
Typical Thermal Resistance	$R_{\theta J-A}$	$^{\circ}\text{C}/\text{W}$	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
SF59G	D1	Approximate 1.05	1250	1250	12500	Tape
SF59G	C1	Approximate 1.05	250	250	12500	Bulk

■ Characteristics (Typical)

FIG.1: I_o - T_a Curve

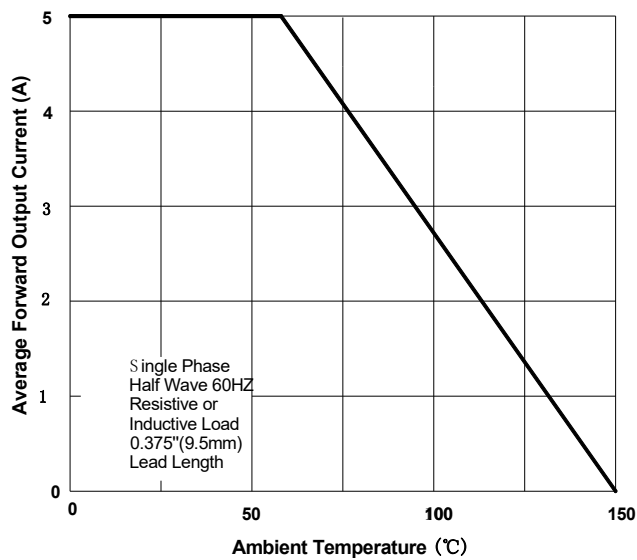


FIG.2: Forward Surge Current Capability

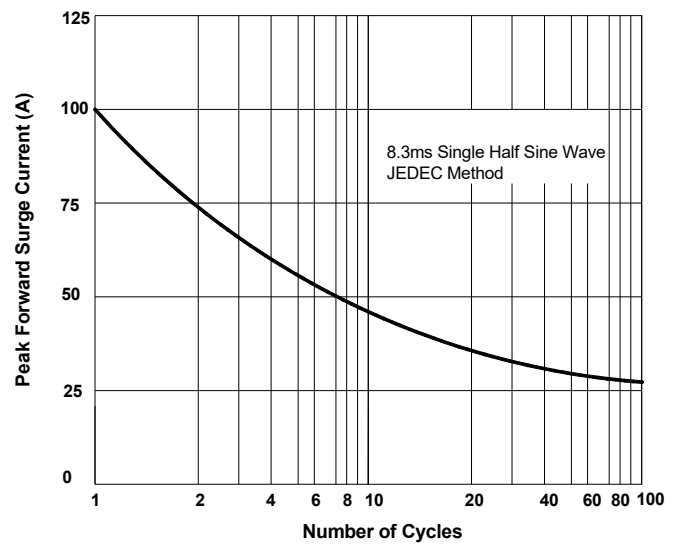


FIG.3: Forward Voltage

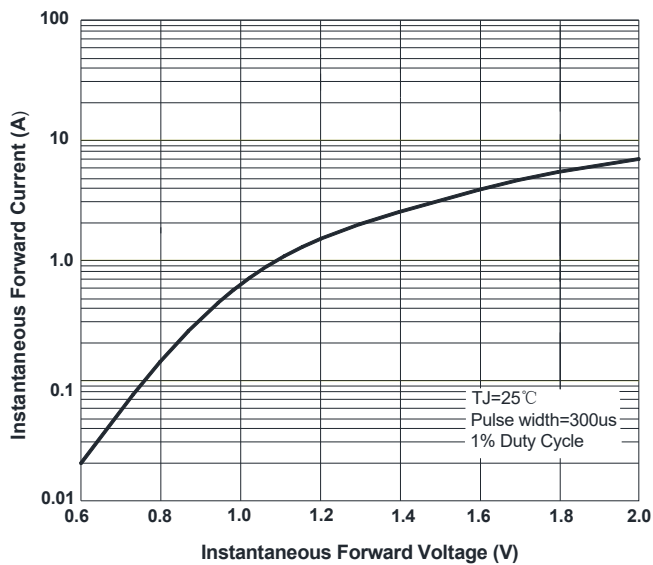


FIG.4: Typical Reverse Characteristics

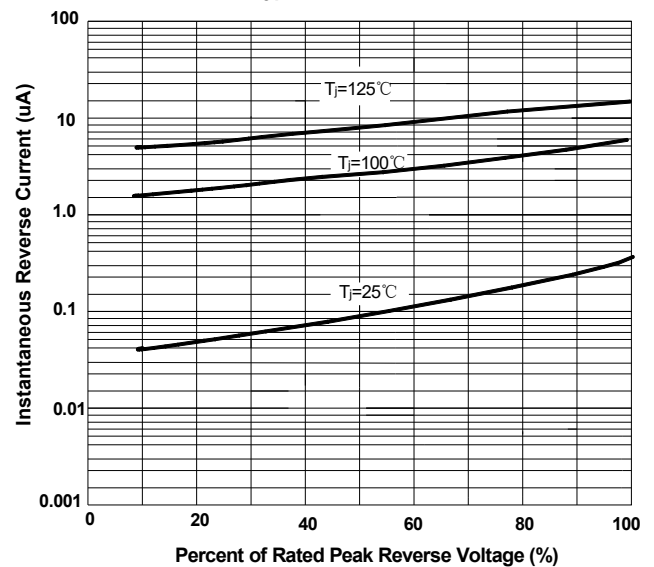
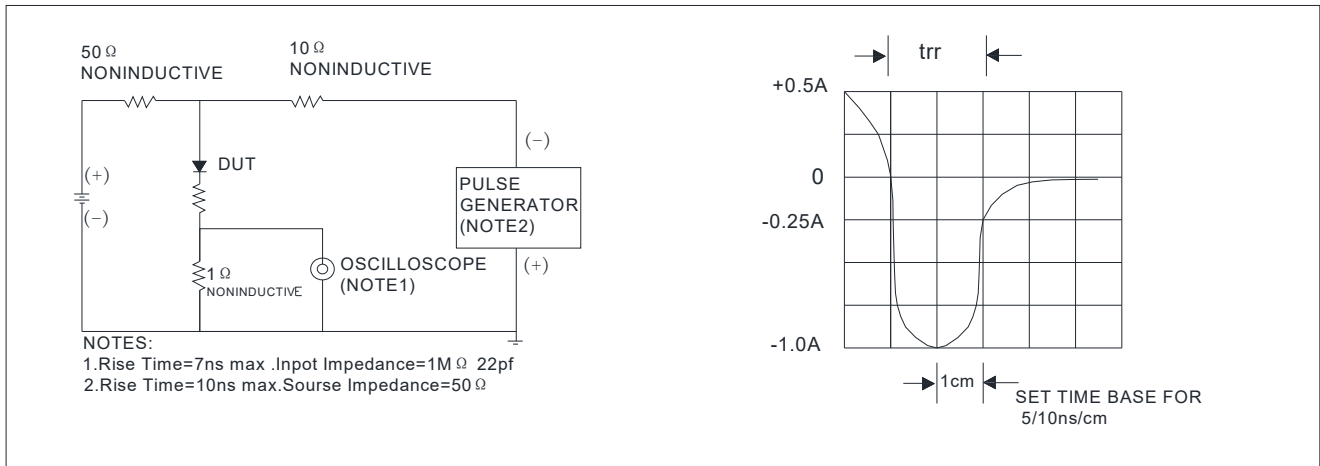
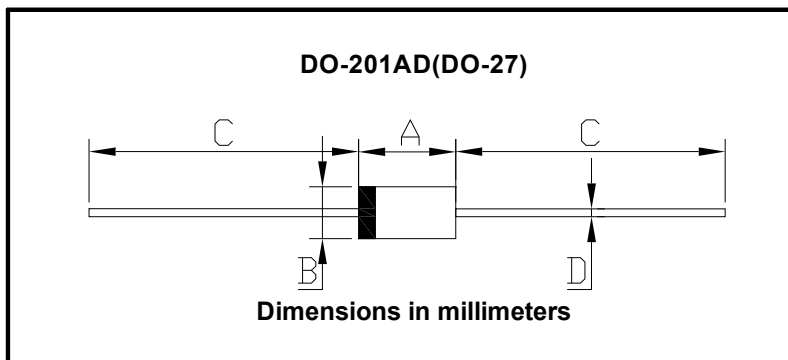


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



■ 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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