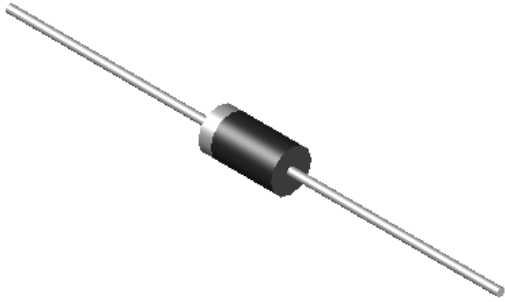


Super Fast Recovery Rectifier

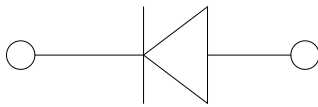


Features

- 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°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	SF51G	SF52G	SF53G	SF54G	SF55G	SF56G	SF57G	SF58G
Device marking code			SF51G	SF52G	SF53G	SF54G	SF55G	SF56G	SF57G	SF58G
Repetitive Peak Reverse Voltage	V_{RRM}	V	50	100	150	200	300	400	500	600
Average Forward Current @60Hz sine wave, Resistance load, Ta =60°C	$I_{F(AV)}$	A	5.0							
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, Ta=25°C	I_{FSM}	A	150							
Storage Temperature	T_{stg}	°C	-55 ~+150							
Junction Temperature	T_j	°C	-55~+150							

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	SF51G	SF52G	SF53G	SF54G	SF55G	SF56G	SF57G	SF58G
Maximum instantaneous forward voltage drop per diode	V_F	V	$I_{FM}=5.0A$	0.95			1.3		1.7		
Maximum DC reverse current at rated DC blocking voltage per diode	I_R	μA	$T_a=25^\circ C$	5							
			$T_a=100^\circ C$	150							
Reverse Recovery time	t_r	ns	$I_F=0.5A$ $I_R=1A$ $I_{RR}=0.25A$	35							
Typical junction capacitance	C_j	pF	Measured at 1MHZ and Applied Reverse Voltage of 4.0 V.D.C.	60				40			



SF51G THRU SF58G

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

PARAMETER	SYMBOL	UNIT	SF51G	SF52G	SF53G	SF54G	SF55G	SF56G	SF57G	SF58G
Thermal Resistance	$R_{\theta J-A}$	$^\circ\text{C}/\text{W}$	15							

■ Ordering Information (Example)

PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
SF51G~SF58G	D1	Approximate 1.05	1250	1250	12500	Tape
SF51G~SF58G	C1	Approximate 1.05	250	250	12500	Bulk

■ Characteristics(Typical)

FIG.1: I_o - T_a Curve

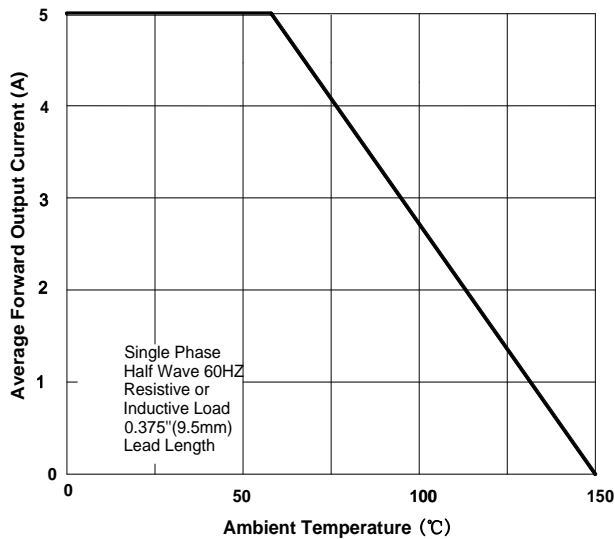


FIG.2: Forward Surge Current Capability

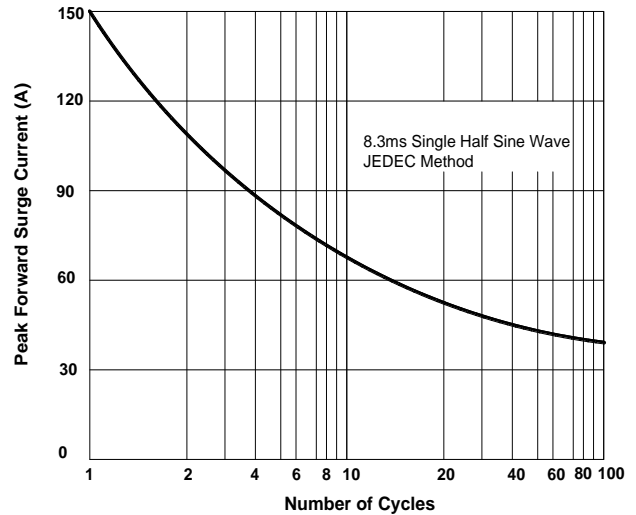


FIG.3: Forward Voltage

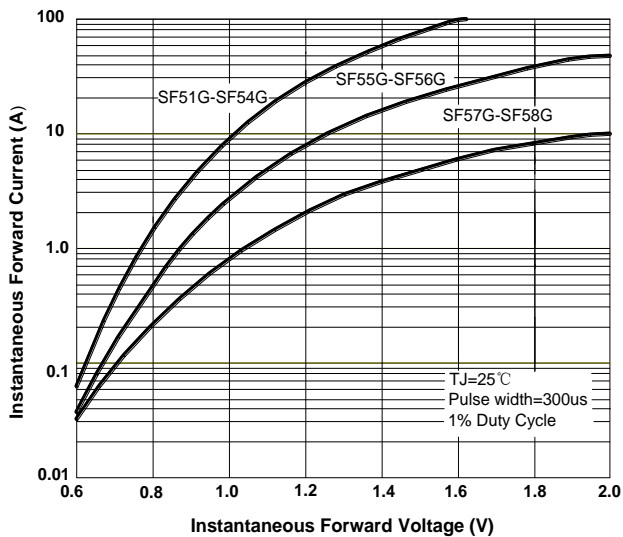
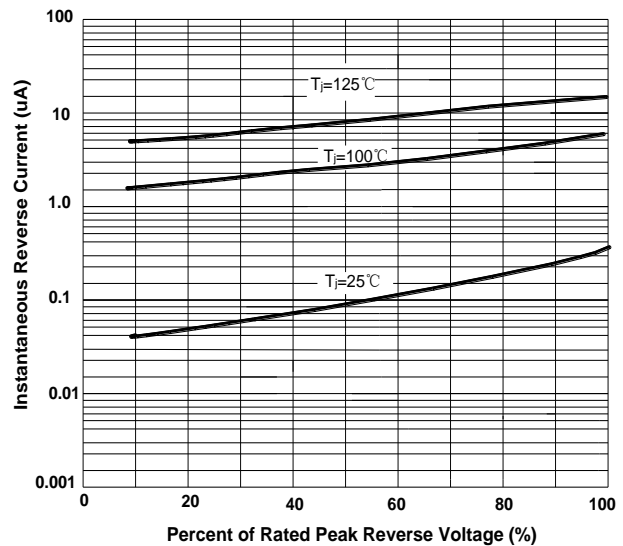


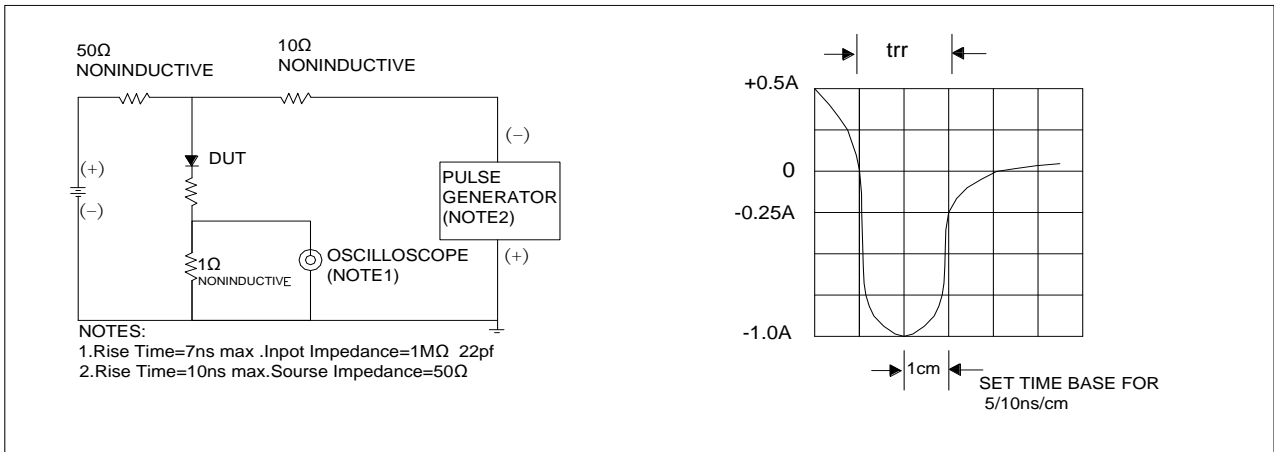
FIG.4: Typical Reverse Characteristics



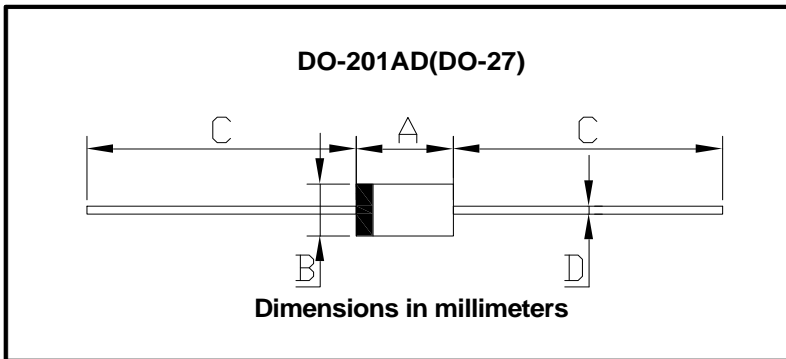


SF51G THRU SF58G

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



SF51G THRU SF58G

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