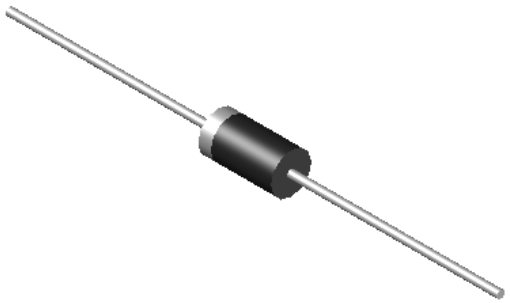
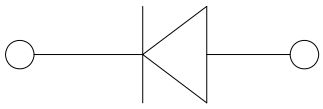
Super Fast Recovery Rectifier





Features

- Ultrafast reverse recovery time
- Low leakage current
- Low switching losses, high efficiency
- High forward surge capability
- 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	SF51	SF52	SF53	SF54	SF55	SF56	SF57	SF58
Device marking code			SF51	SF52	SF53	SF54	SF55	SF56	SF57	SF58
Repetitive Peak Reverse Voltage	V_{RRM}	V	50	100	150	200	300	400	500	600
Average Forward Current @60Hz sine wave, Resistance load, Ta =50℃	$I_{F(AV)}$	A	5.0							
Surge(Non-repetitive)Forward Current @ 60Hz Half-sine wave,1 cycle, Ta=25℃	IFSM	A	150							
Storage Temperature	Tstg	℃	-55 ~+150							
Junction Temperature	Tj	℃	-55~+125							

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	SF51	SF52	SF53	SF54	SF55	SF56	SF57	SF58
Maximum instantaneous forward voltage drop per diode	VF	V	IFM=5.0A	0.95				1.3		1.7	
Maximum DC reverse current at rated DC blocking voltage per diode	IR	μA	Ta=25℃	5							
			Ta=100℃	150							
Reverse Recovery time	t_{rr}	ns	I_F=0.5A I_R=1A I_{RR}=0.25A	35							
Typical junction capacitance	Cj	pF	Measured at 1MHZ and Applied Reverse Voltage of 4.0 V.D.C.	100				80			

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

PARAMETER	SYMBOL	UNIT	SF51	SF52	SF53	SF54	SF55	SF56	SF57	SF58
Thermal Resistance	RθJ-A	℃/W	12							

■Ordering Information (Example)

PREFERED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
SF51~SF58	D1	Approximate 1.05	1250	1250	12500	Tape
SF51~SF58	C1	Approximate 1.05	250	250	12500	Bulk

■ Characteristics(Typical)

FIG.1: Io-Ta Curve

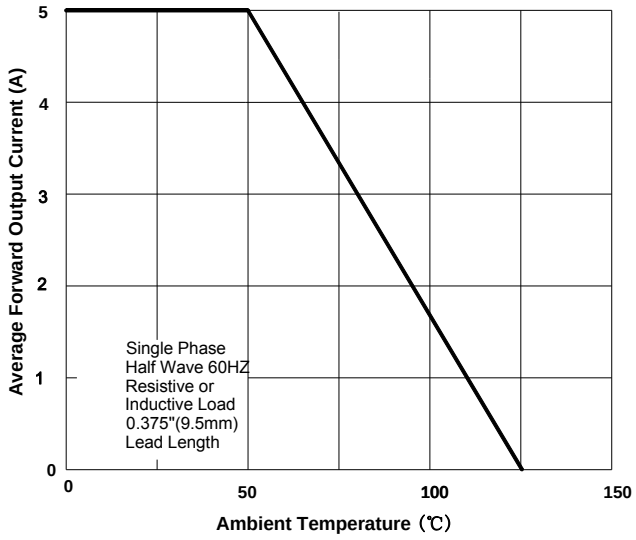


FIG.2: Surge Forward Currrent Capability

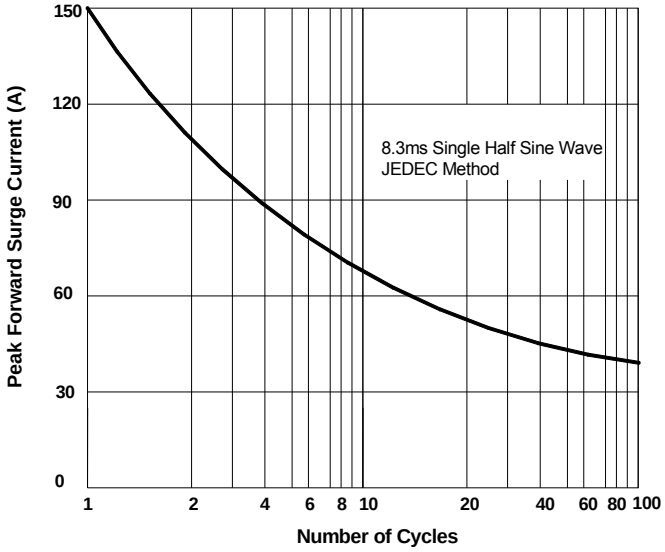


FIG.3: Forward Voltage

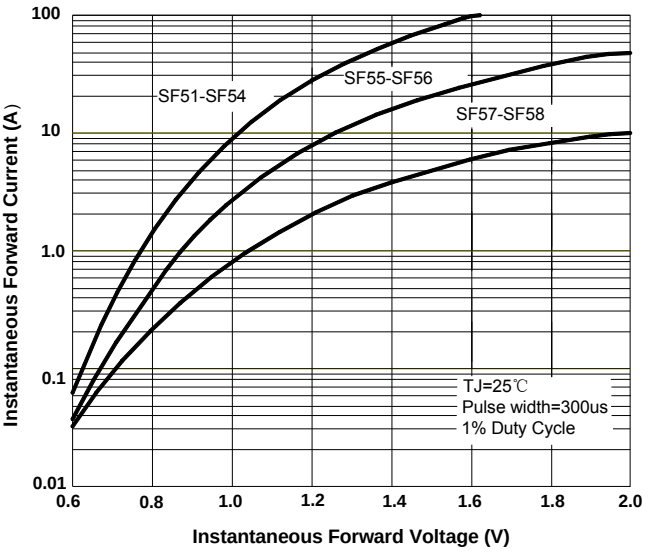


FIG.4: Typical Reverse Characteristics

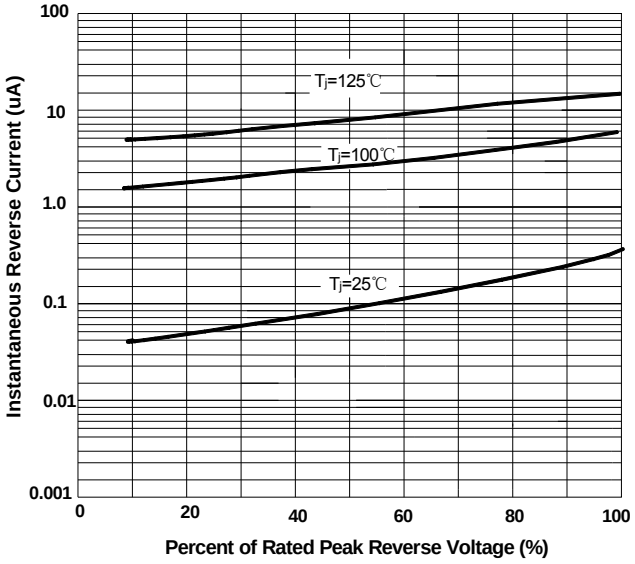
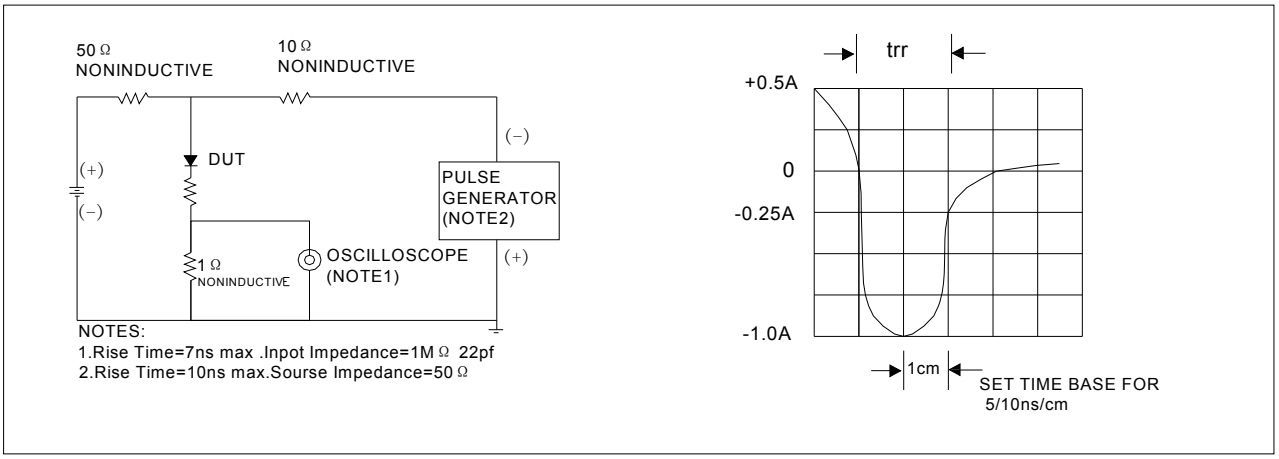
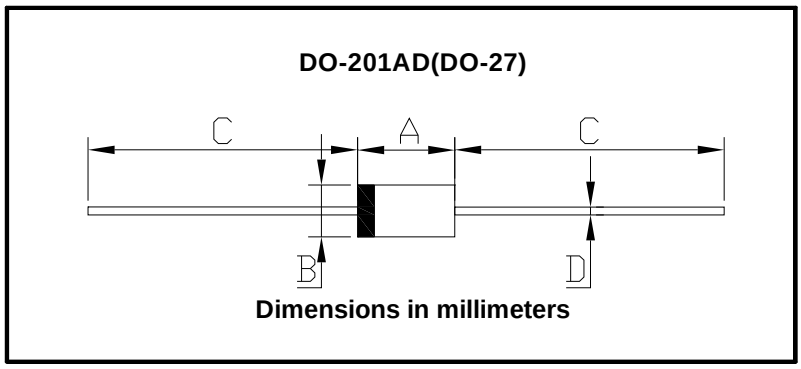


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



■ 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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