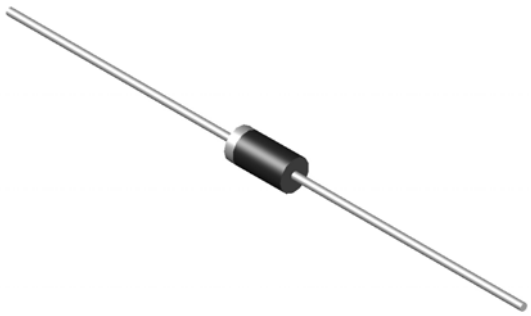
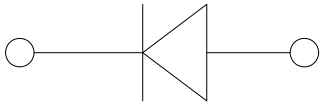
Super Fast Recovery Rectifier





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-204AC(DO-15)
  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	SF1600
Device marking code			SF1600
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	V	1600
Maximum RMS Voltage	V_{RMS}	V	1120
Maximum DC blocking Voltage	V_{DC}	V	1600
Average Forward Current @60Hz sine wave, Resistance load, Ta =25℃	$I_{F(AV)}$	A	1.0
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave,1 cycle, Tj=25℃	I_{FSM}	A	30
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25℃			60
Current squared time @1ms≤t8.3≤ms Tj=25℃, Rating of per diode	I^2t	A^2s	3.735
Typical junction capacitance @Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	Cj	pF	14
Storage Temperature	Tstg	℃	-55 ~ +150
Junction Temperature	T_j	℃	-55 ~ +150

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	SF1600
Maximum instantaneous forward voltage drop per diode	VF	V	IFM=1.0A	3.4
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	75

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

PARAMETER	SYMBOL	UNIT	SF1600
Typical Thermal Resistance	$R_{\theta J-A}$	℃/W	60

■Ordering Information (Example)

PREFERED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
SF1600	D1	Approximate 0.39	3000	3000	30000	Tape
SF1600	C1	Approximate 0.39	500	500	25000	Bulk

■ Characteristics(Typical)

FIG.1: Io-Ta Curve

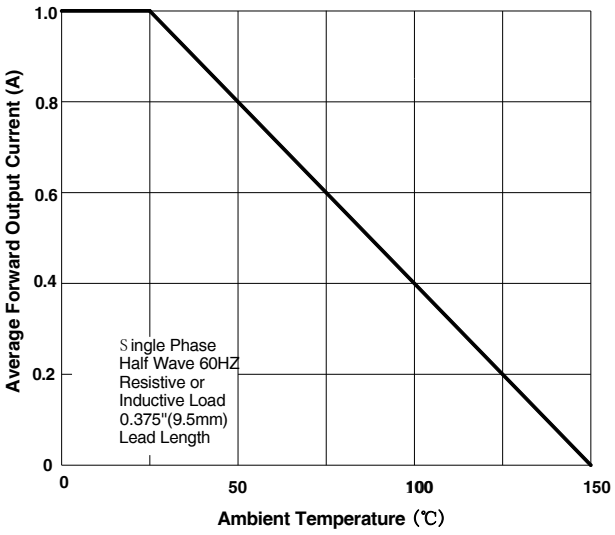


FIG.2: Forward Surge Current Capability

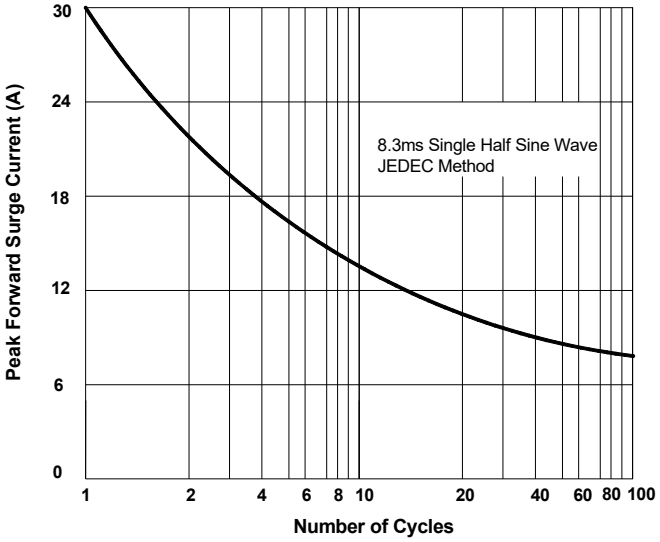


FIG.3: Forward Voltage

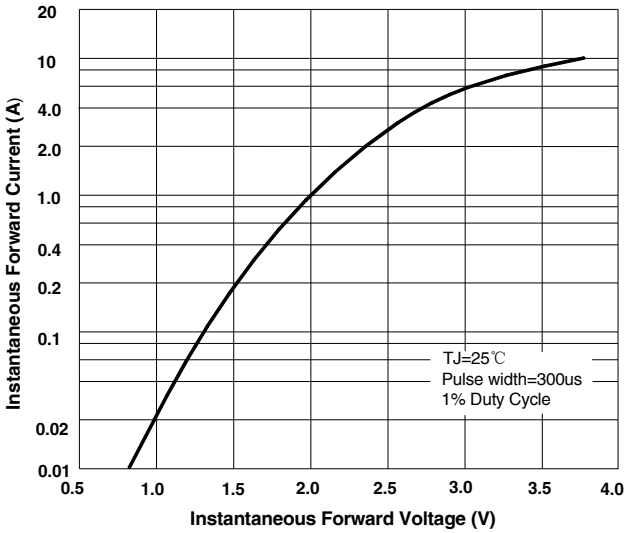


FIG.4: Typical Reverse Characteristics

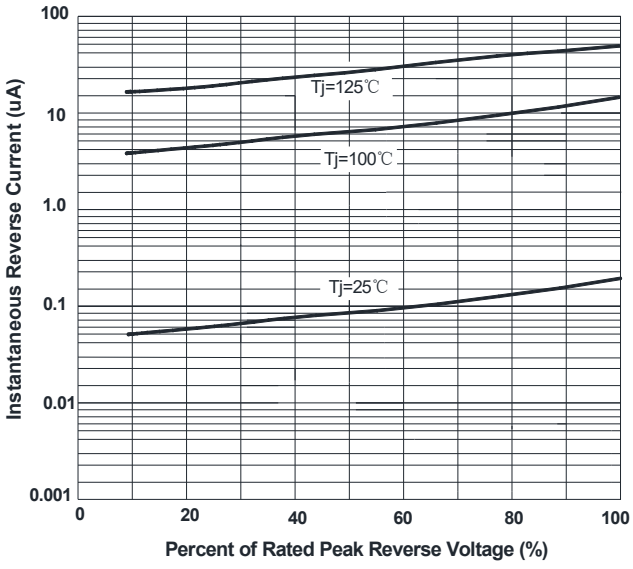
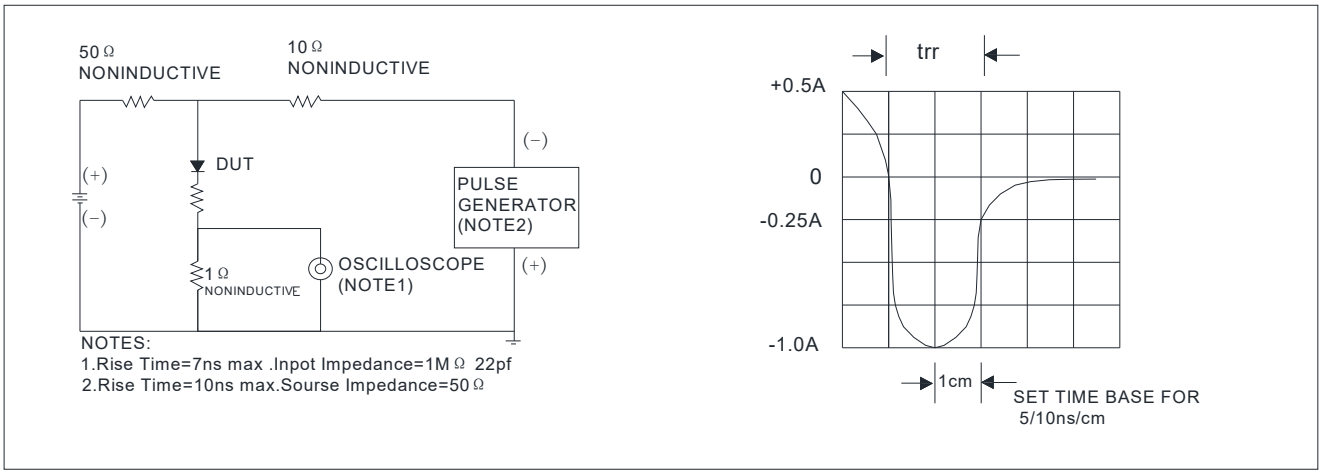
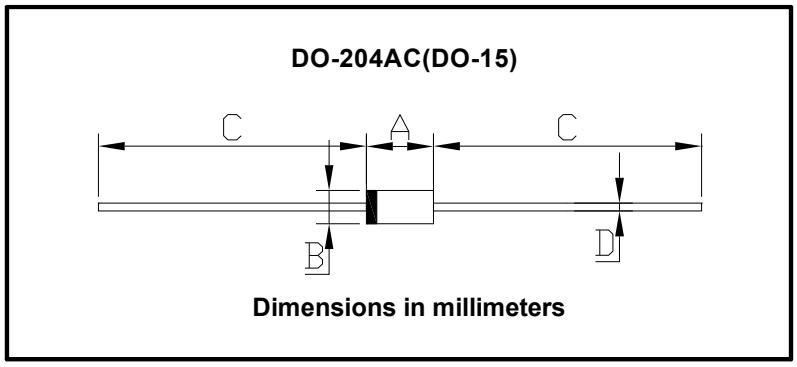


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



■ Outline Dimensions



DO-204AC(DO-15)		
Dim	Min	Max
A	5.80	7.60
B	2.60	3.60
C	25.4	/
D	0.70	0.90

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