

Super Fast Rectifier

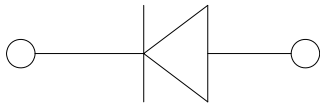


Features

- 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 (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	SF21	SF22	SF23	SF24	SF25	SF26	SF27	SF28
Device marking code			SF21	SF22	SF23	SF24	SF25	SF26	SF27	SF28
Repetitive Peak Reverse Voltage	VRRM	V	50	100	150	200	300	400	500	600
Average Forward Current @60Hz sine wave, Resistance load, T _a =60°C	I _{F(AV)}	A	2.0							
Surge(Non-repetitive)Forward Current @ 60Hz Half-sine wave,1 cycle, T _a =25°C	I _{FSM}	A	50							
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	SF21	SF22	SF23	SF24	SF25	SF26	SF27	SF28
Maximum instantaneous forward voltage drop per diode	V _F	V	I _{FM} =2.0A	0.95			1.3		1.7		
Maximum DC reverse current at rated DC blocking voltage per diode	I _R	μA	T _a =25°C	5							
			T _a =125°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.	50				30			



SF21 THRU SF28

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

PARAMETER	SYMBOL	UNIT	SF21	SF22	SF23	SF24	SF25	SF26	SF27	SF28
Thermal Resistance	R _{θJ-A}	°C/W	50							

■ Ordering Information (Example)

PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
SF21~SF28	D1	Approximate 0.38	3000	3000	30000	Tape
SF21~SF28	C1	Approximate 0.38	500	500	25000	Bulk

■ Characteristics(Typical)

FIG.1: Io-Ta Curve

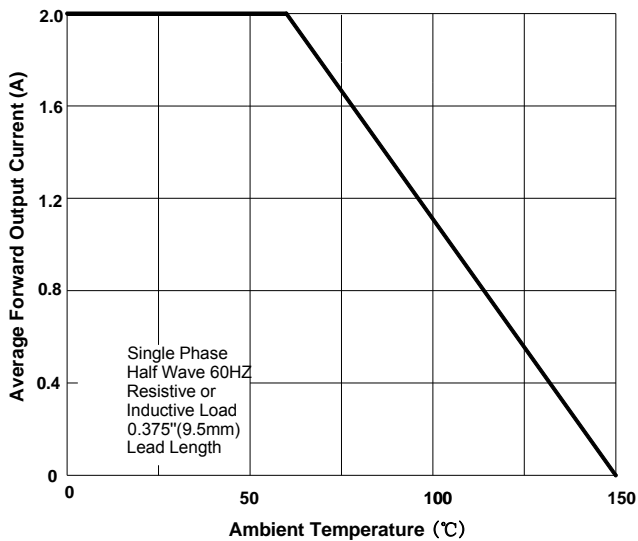


FIG.2: Surge Forward Current Capability

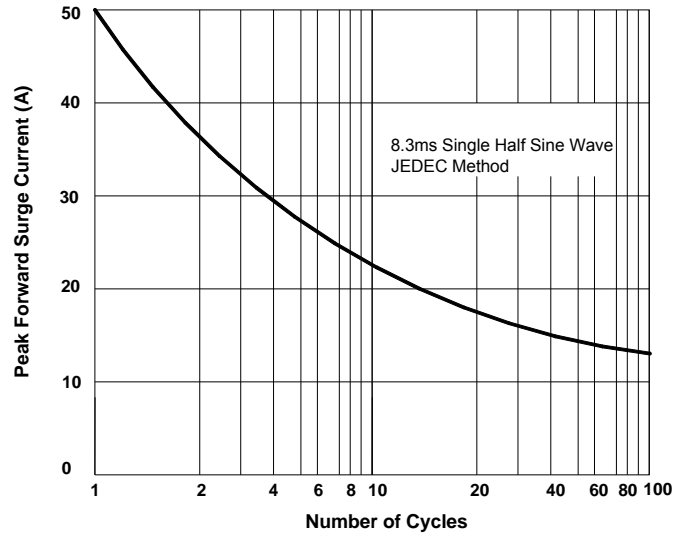


FIG.3: Forward Voltage

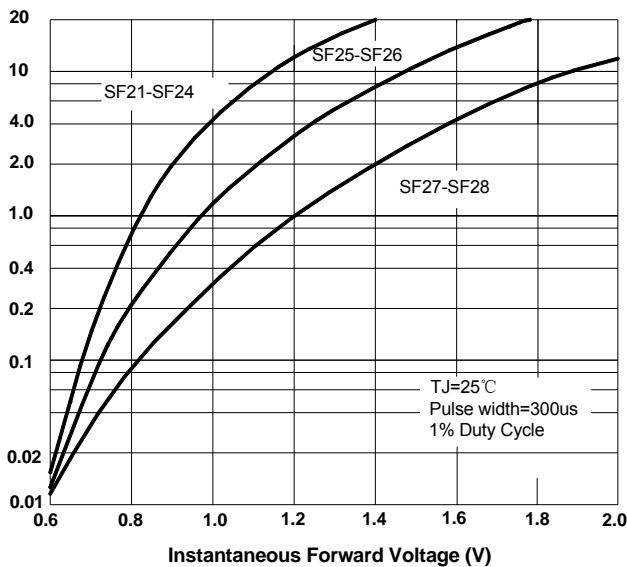
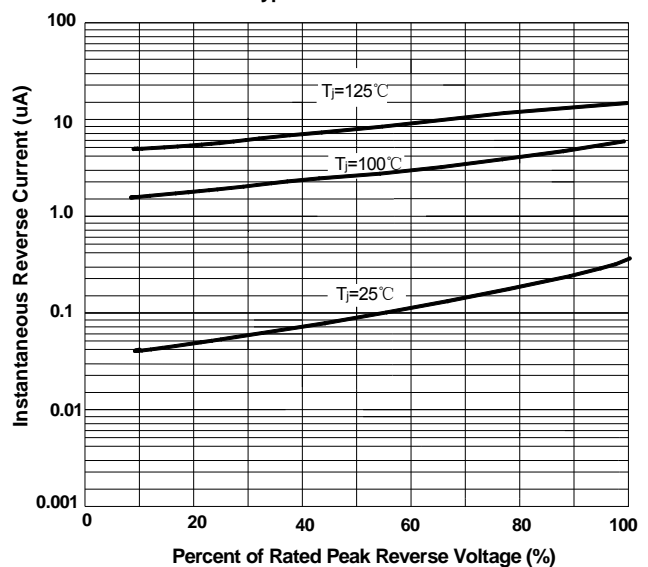


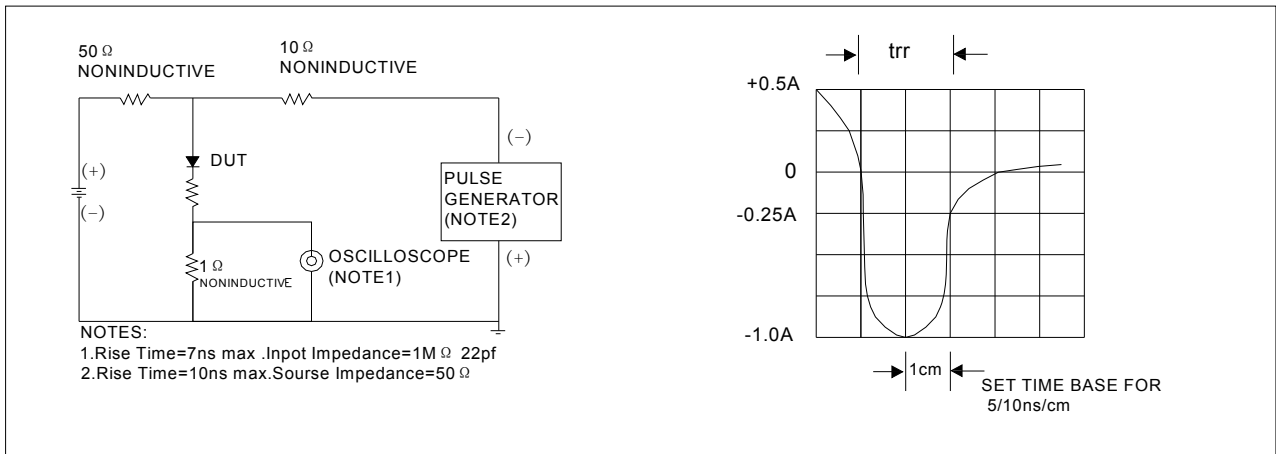
FIG.4: Typical Reverse Characteristics



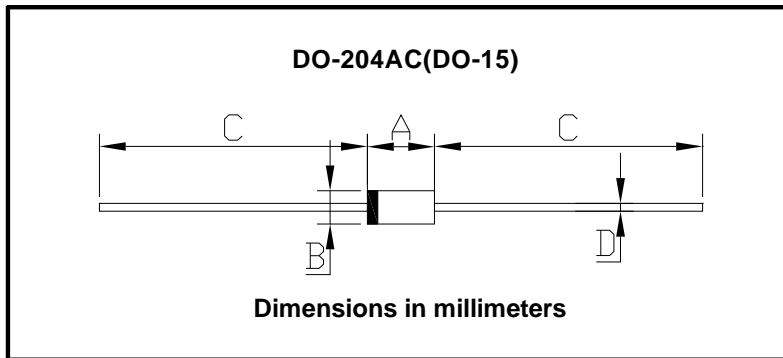


SF21 THRU SF28

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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