



Super Fast Recovery Rectifier

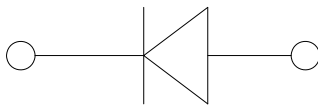


Features

- 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°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	SF21G-E	SF22G-E	SF23G-E	SF24G-E	SF25G-E	SF26G-E	SF27G-E	SF28G-E
Device marking code			SF21G-E	SF22G-E	SF23G-E	SF24G-E	SF25G-E	SF26G-E	SF27G-E	SF28G-E
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	V	50	100	150	200	300	400	500	600
Maximum RMS Voltage	V _{RMS}	V	35	70	105	140	210	280	350	420
Maximum DC blocking Voltage	V _{DC}	V	50	100	150	200	300	400	500	600
Average Forward Current @60Hz sine wave, Resistance load, Ta =50℃	I _{F(AV)}	A	2.0							
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave,1 cycle, Tj=25℃	I _{FSM}	A	50							
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25℃			100							
Current squared time @1ms≤t≤8.3ms Tj=25℃, Rating of per diode	I ² t	A ² s	10.375							
Typical junction capacitance @Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	Cj	pF	28				26		25	
Storage Temperature	T _{stg}	℃	-55 ~ +150							
Junction Temperature	T _j	℃	-55 ~ +150							

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	SF21G-E	SF22G-E	SF23G-E	SF24G-E	SF25G-E	SF26G-E	SF27G-E	SF28G-E
Maximum instantaneous forward voltage drop per diode	V _F	V	I _{FM} =2.0A	0.92				1.3		1.7	
Maximum DC reverse current at rated DC blocking voltage per diode	I _R	μA	T _j =25°C	2.5							
			T _j =125°C	50							
Maximum Reverse Recovery time	TRR	ns	I _F =0.5A I _R =1A I _{RR} =0.25A	25						35	



SF21G-E THRU SF28G-E

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

PARAMETER	SYMBOL	UNIT	SF21G-E	SF22G-E	SF23G-E	SF24G-E	SF25G-E	SF26G-E	SF27G-E	SF28G-E
Typical Thermal Resistance	$R_{\theta J-A}$	$^{\circ}\text{C/W}$	50							
	$R_{\theta J-L}$	$^{\circ}\text{C/W}$	25							
	$R_{\theta J-C}$	$^{\circ}\text{C/W}$	20							

■ Ordering Information (Example)

PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
SF21G-E ~ SF28G-E	D1	Approximate 0.38	3000	3000	30000	Tape
SF21G-E ~ SF28G-E	C1	Approximate 0.38	500	500	25000	Bulk

■ Characteristics(Typical)

FIG.1: I_o - T_a Curve

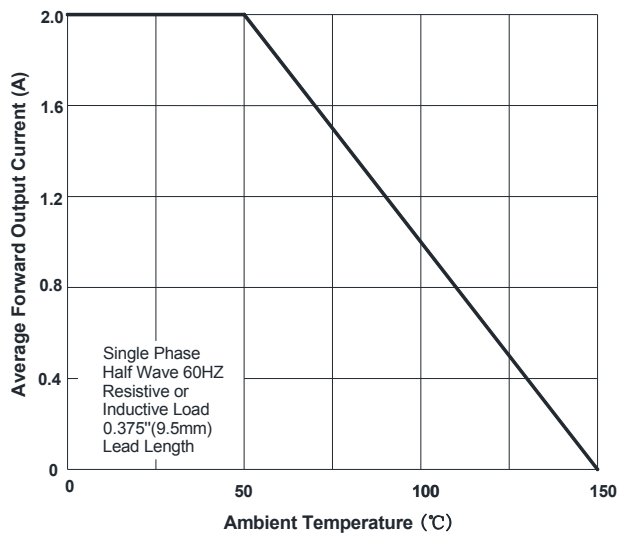


FIG.2: Forward Surge Current Capability

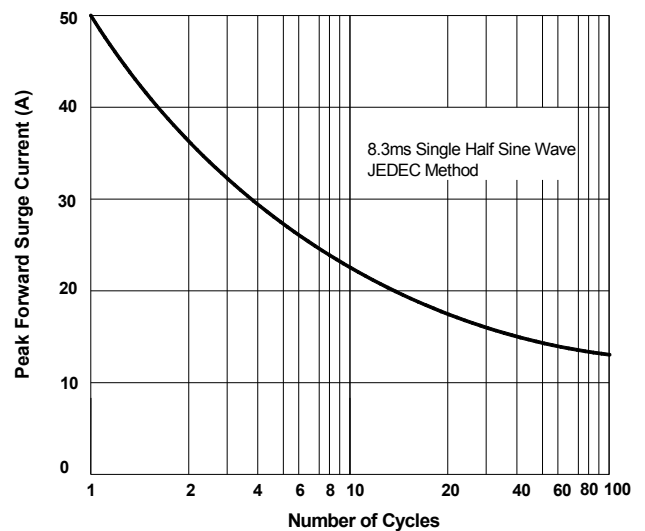


FIG.3: Typical Forward Voltage

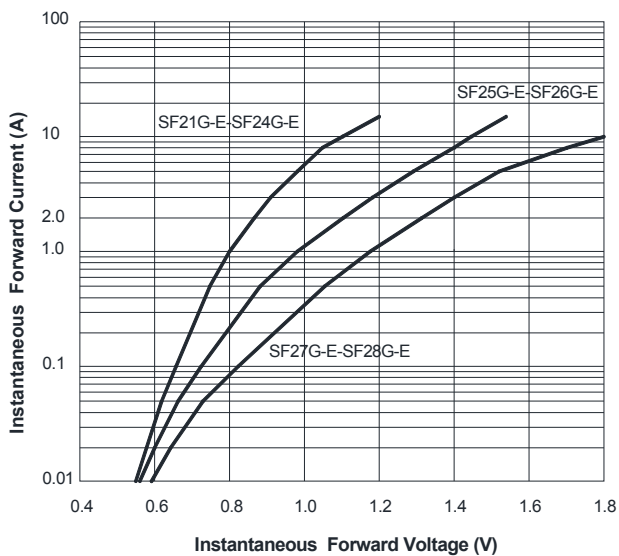
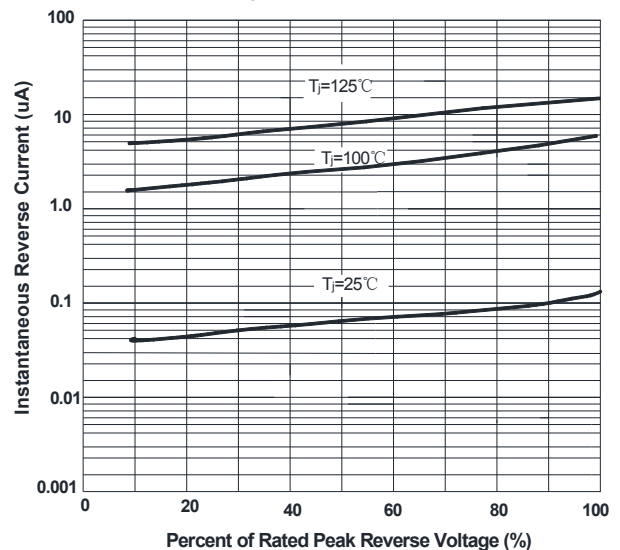


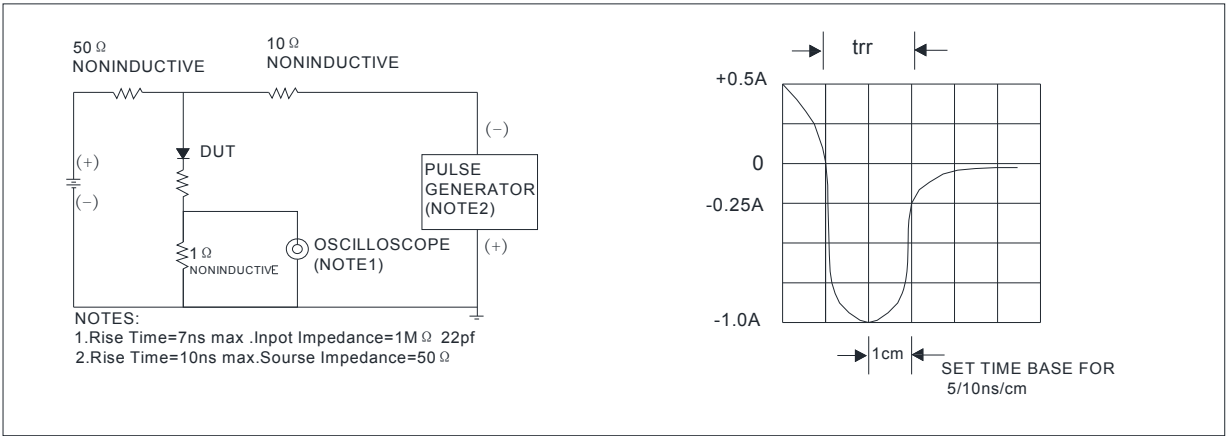
FIG.4: Typical Reverse Characteristics



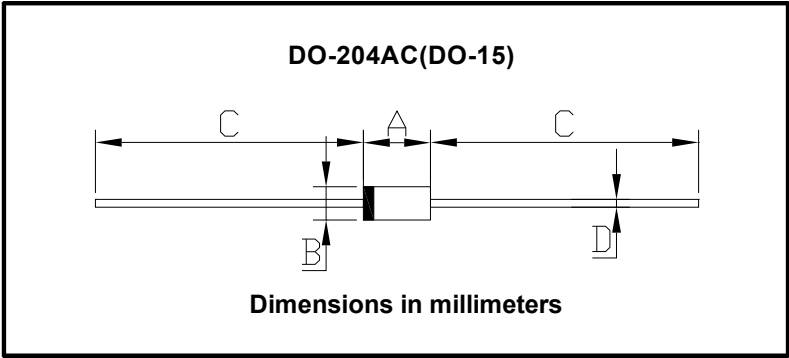


SF21G-E THRU SF28G-E

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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