Super Fast Recovery Rectifier

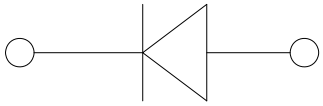


Features

- 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-204AL(DO-41)
  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	SF11G	SF12G	SF13G	SF14G	SF15G	SF16G	SF17G	SF18G
Device marking code			SF11G	SF12G	SF13G	SF14G	SF15G	SF16G	SF17G	SF18G
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 =60℃	$I_{F(AV)}$	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	18				12		9	
Storage Temperature	T_{stg}	℃	-55 ~ +150							
Junction Temperature	T_j	℃	-55 ~ +150							

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	SF11G	SF12G	SF13G	SF14G	SF15G	SF16G	SF17G	SF18G
Maximum instantaneous forward voltage drop per diode	VF	V	IFM=1.0A	0.95				1.3		1.7	
Maximum DC reverse current at rated DC blocking voltage per diode	IR	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	35							

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

PARAMETER	SYMBOL	UNIT	SF11G	SF12G	SF13G	SF14G	SF15G	SF16G	SF17G	SF18G
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
SF11G~SF18G	D1	Approximate 0.30	5000	5000	50000	Tape
SF11G~SF18G	C1	Approximate 0.30	1000	1000	50000	Bulk

■ Characteristics(Typical)

FIG.1: Io-Ta Curve

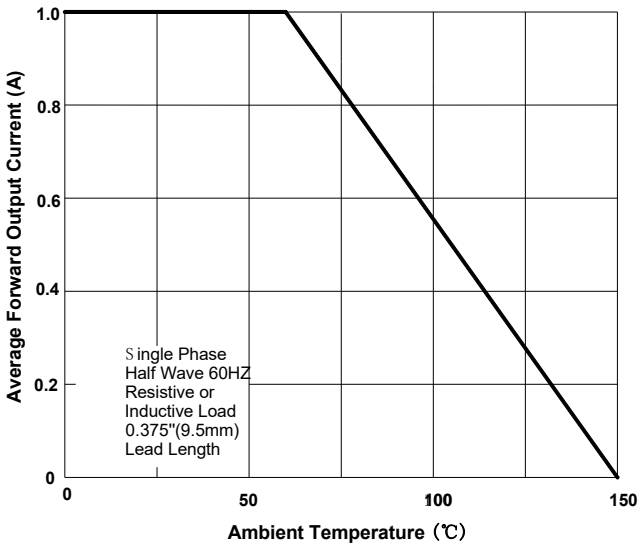


FIG.2: Forward Surge Current Capability

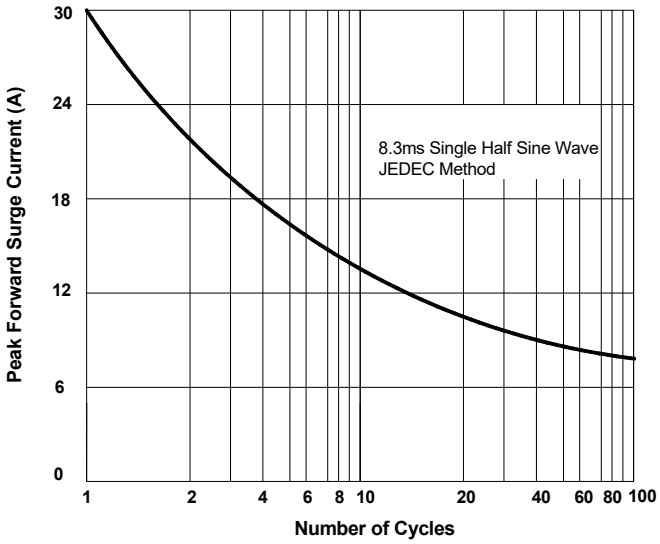


FIG.3: Forward Voltage

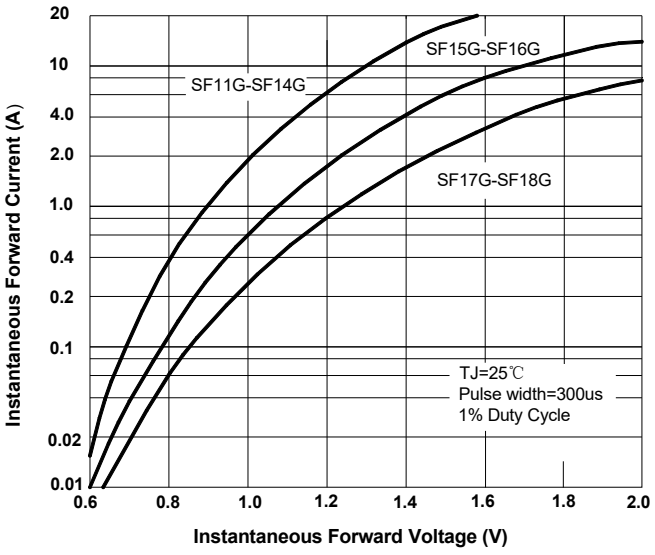


FIG.4: Typical Reverse Characteristics

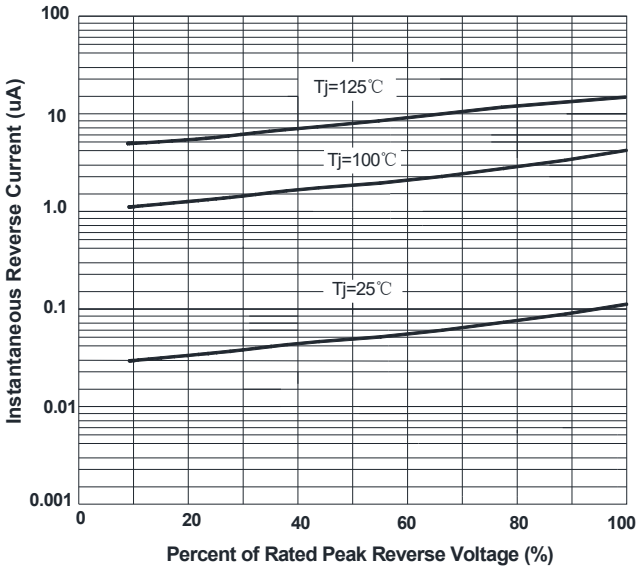
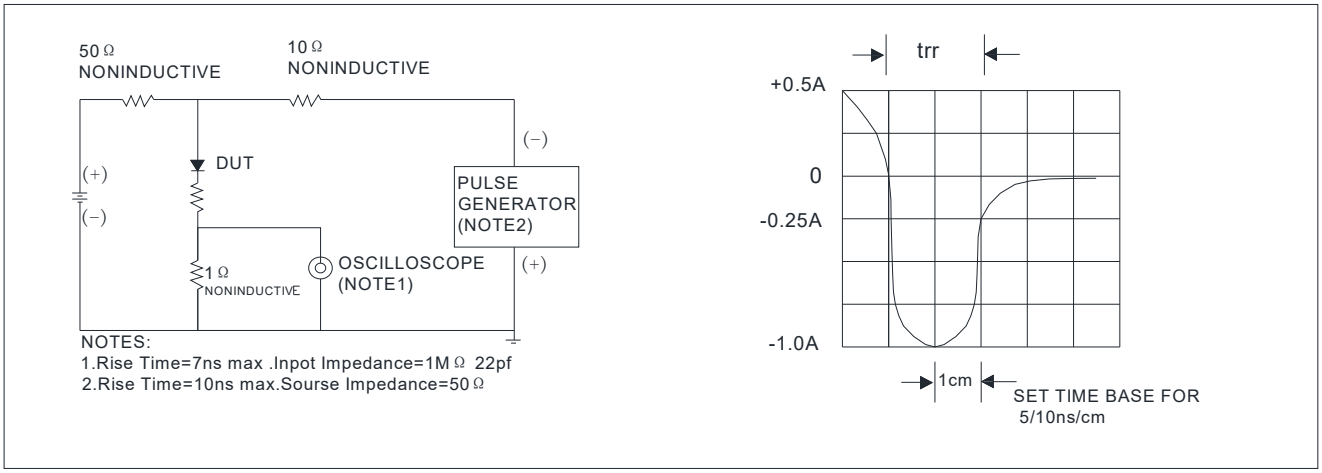
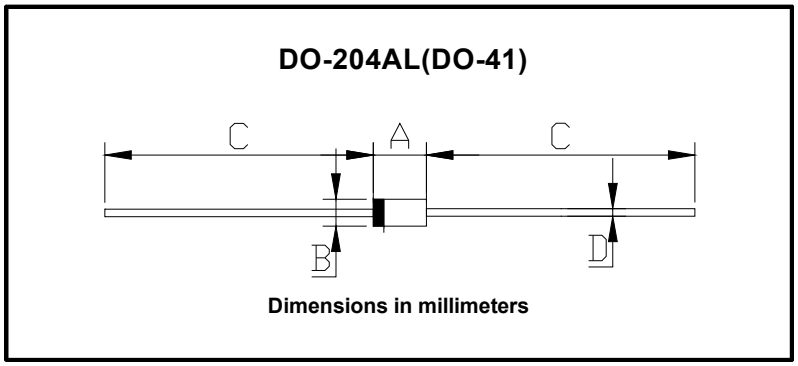


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



■ Outline Dimensions



DO-204AL(DO-41)		
Dim	Min	Max
A	4.22	5.21
B	2.03	2.72
C	25.4	/
D	0.69	0.86

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