Surface Mount Fast Recovery Rectifier

Features

- Low profile package
- Ideal for automated placement
- Glass passivated chip junction
- High forward surge capability
- Fast reverse recovery time
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

Typical Applications

For use in high frequency rectification of power supplies, inverters, converters, and freewheeling diodes for consumer, and telecommunication.

Mechanical Data

- **Package**: SMAF
  Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals**: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

■Maximum Ratings (T_a=25 Unless otherwise specified

PARAMETER	SYMBOL	UNIT	F1AFS	F1BFS	F1DFS	F1GFS	F1JFS	F1KFS	F1MFS
Device marking code			F1AFS	F1BFS	F1DFS	F1GFS	F1JFS	F1KFS	F1MFS
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	V	50	100	200	400	600	800	1000
Maximum RMS Voltage	V_{RMS}	V	35	70	140	280	420	560	700
Maximum DC blocking Voltage	V_{DC}	V	50	100	200	400	600	800	1000
Average rectified output current @60Hz sine wave, resistance load, TL (Fig.1)	I_O	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≤t≤8.3ms Tj=25	I^2t	A^2s	3.735						
Storage temperature	T_{stg}		-55 ~ +150						
Junction temperature	T_j		-55 ~ +150						

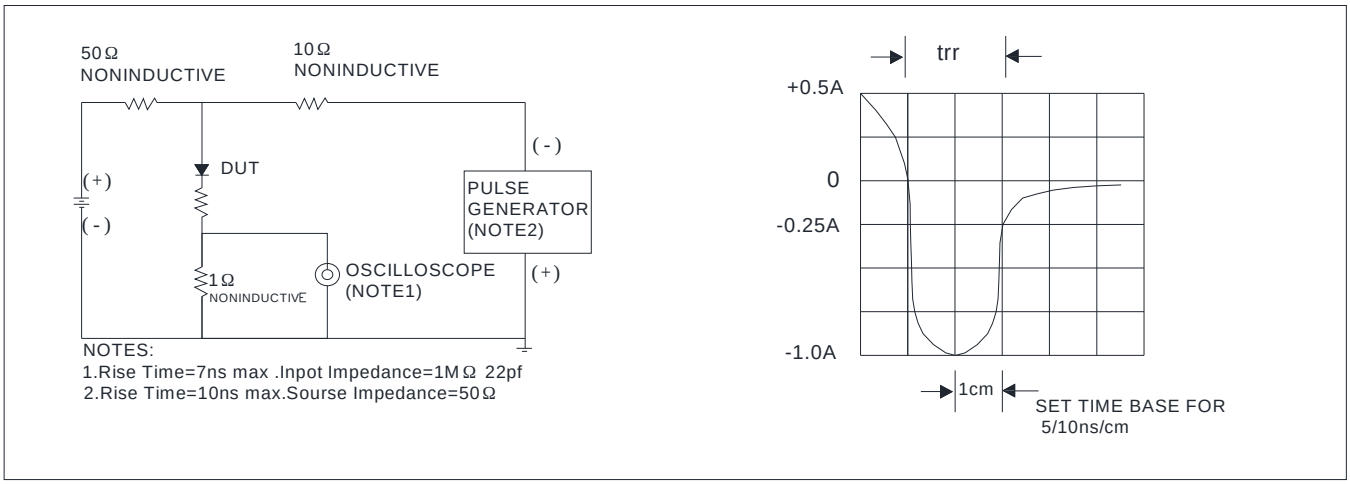
■Electrical Characteristics T_a=25 Unless otherwise specified

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	F1AFS	

■**Thermal Characteristics** T_a=25 Unless otherwise specified

PARAMETER	SYMBOL	UNIT	F1AFS	F1BFS	F1DFS	

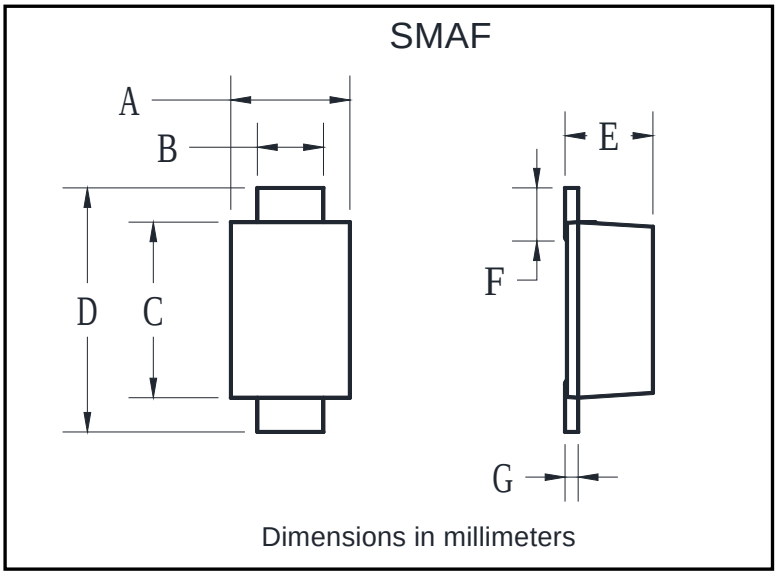
FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



■Ordering Information (Example)

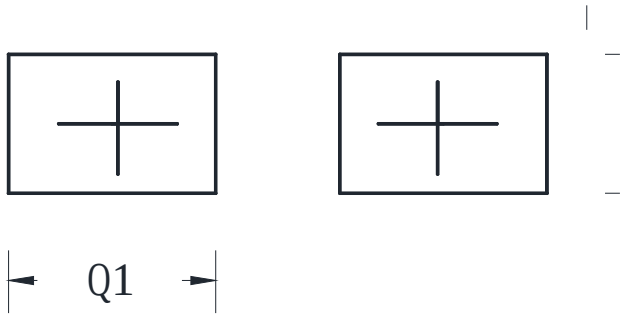
PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
F1AFS-F1MFS	F1	Approximate 0.034	3000	24000	96000	7” reel
F1AFS-F1MFS	F2	Approximate 0.034	10000	/	160000	13” reel
F1AFS-F1MFS	F3	Approximate 0.034	10000	/	120000	13” reel
F1AFS-F1MFS	F4	Approximate 0.034	7500	/	120000	13” reel

■ Outline Dimensions



SMAF		
Dim	Min	Max
A	2.40	2.80
B	1.35	1.45
C	3.40	3.60
D	4.40	4.80
E	1.05	1.25
F	0.50	1.00
G	0.15	0.22

■ **Suggested pad layout**



SMAF	
Dim	Millimeters
P1	6.50
P2	4.00
P3	1.50
Q1	2.50
Q2	1.70

Dimensions in millimeters

Disclaimer

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The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of with would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

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