

Surface Mount Fast Recovery Rectifier

RS1AF—RS1MF

Features

- ◆ Low profile package
- ◆ deal for automated placement
- ◆ Glass passivated chip junction
- ◆ High forward surge capability
- ◆ Fast reverse recovery time

Mechanical Data

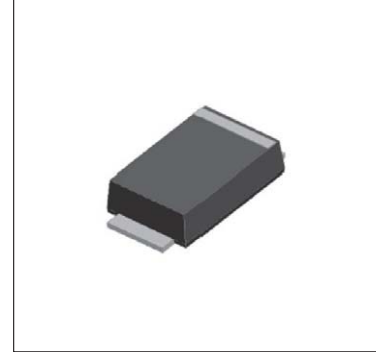
Case: SMAF Molded plastic body

Terminals: Plated leads solderable per MIL-STD-750,
Method 2026

High temperature soldering guaranteed: 260°C/10 seconds

Polarity: Cathode line denotes the cathode end

Mounting Position: Any



Maximum Ratings & Electrical Characteristics

Ratings at TA = 25°C unless otherwise specified

Characteristic	Symbol	RS1AF	RS1BF	RS1DF	RS1GF	RS1JF	RS1KF	RS1MF	Units
Peak repetitive reverse voltage	VRRM	50	100	200	400	600	800	1000	V
RMS reverse voltage	VRMS	35	70	140	280	420	560	700	V
DC blocking voltage	VDC	50	100	200	400	600	800	1000	V
Maximum average forward output current	IF(AV)	1							A
Peak forward surge current,8.3ms single half-sine-wave, @TJ = 25°C	IFSM	30							A
Rating for fusing(t<8.3ms)	I2t	3.74							A2sec
Maximum instantaneous forward voltage @ 1A	VF	1.3							V
Maximum Reverse current Rated VR	IR	@TA =25°C							μ A
		@TA =125°C							
Maximum Reverse Recovery Time IF = 0.5 A, IR = 1 A, Irr = 0.25 A.	Trr	150				250	500		nS

Thermal Characteristics

Characteristic	Symbol	RS1AF	RS1BF	RS1DF	RS1GF	RS1JF	RS1KF	RS1MF	Units
Typical thermal resistance (Note 1)	R θJA	80							°C /W
	R θJC	20							
	R θJL	25							
Operating junction temperature range	TJ	- 55 ---- + 150							°C
Storage temperature range	TSTG	- 55 ---- + 150							°C

Note

(1) Device mounted on PCB with 5 mm x 5mm copper pad areas

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Ratings and Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

Fig.1-Forward Current Derating Curve

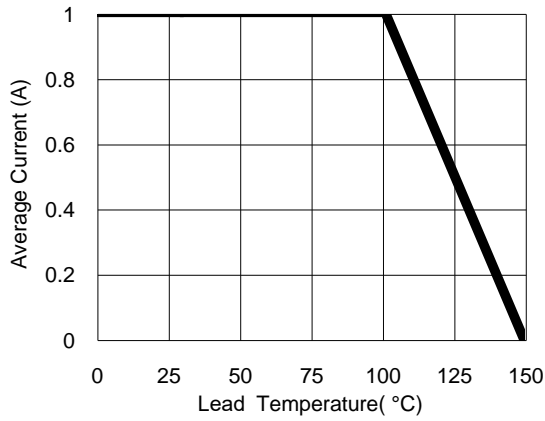


Fig.2- Surge Current Derating Curve

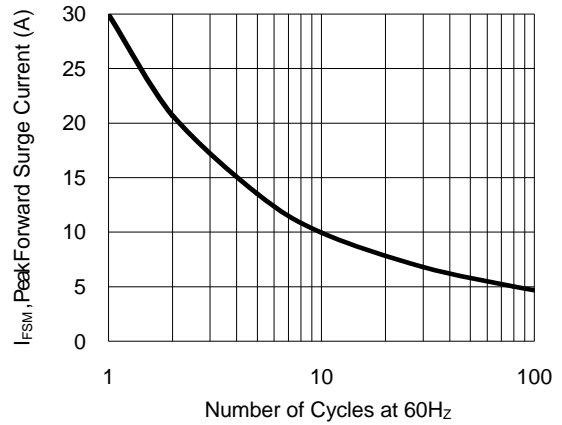


Fig.3- Typical Forward Voltage Characteristic

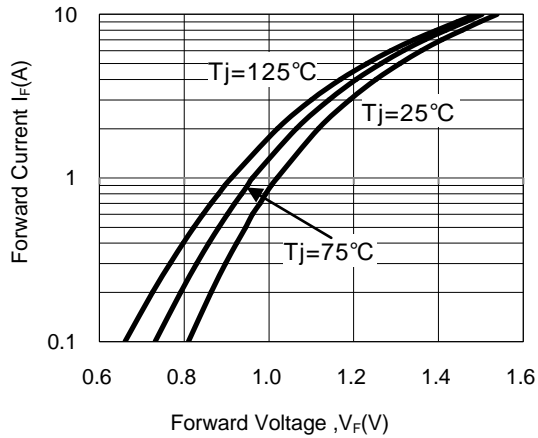
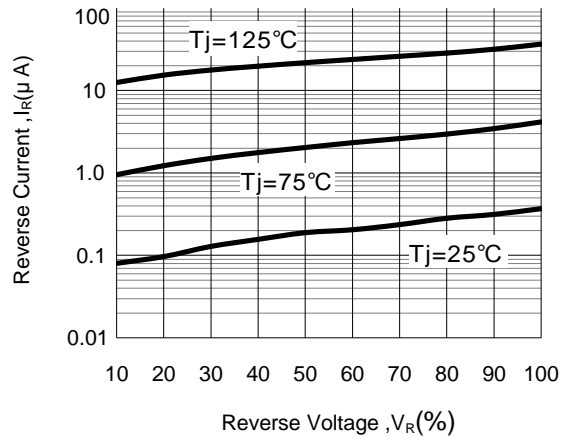


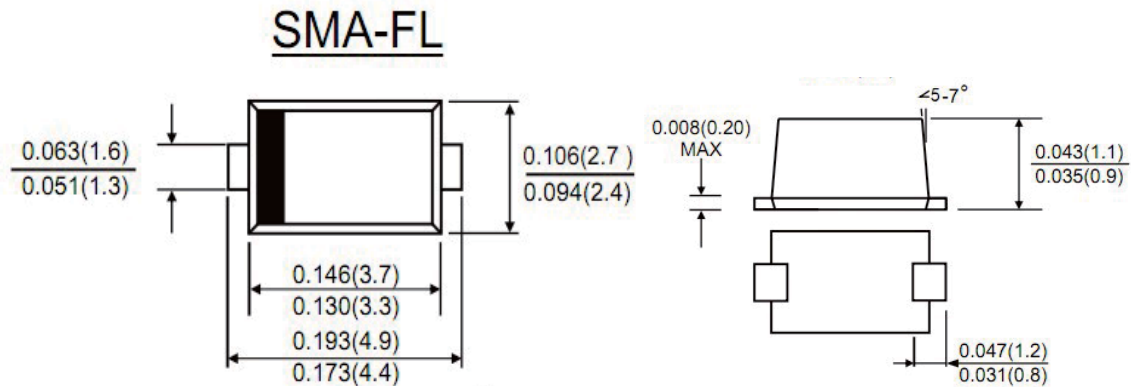
Fig.4- Typical Reverse Characteristic



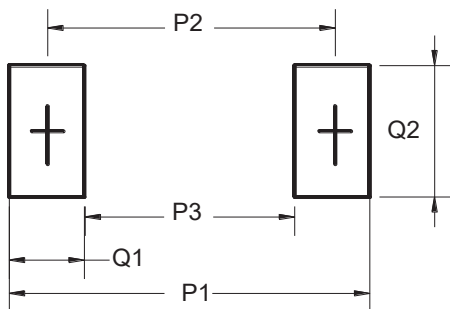
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Package Outline Dimensions(unit:mm)



Mounting Pad Layout(unit:mm)



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

Ordering Information

Part No.	Marking	Package	Shipping
RS1AF	RS1AF	SMAF	10000PCS /Tape&Reel
RS1BF	RS1BF	SMAF	10000PCS /Tape&Reel
RS1DF	RS1DF	SMAF	10000PCS /Tape&Reel
RS1GF	RS1GF	SMAF	10000PCS /Tape&Reel
RS1JF	RS1JF	SMAF	10000PCS /Tape&Reel
RS1KF	RS1KF	SMAF	10000PCS /Tape&Reel
RS1MF	RS1MF	SMAF	10000PCS /Tape&Reel

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