

# RS1AF THRU RS1MF-HAF

## Surface Mount Fast Recovery Rectifier

Reverse Voltage - 50 to 1000 V

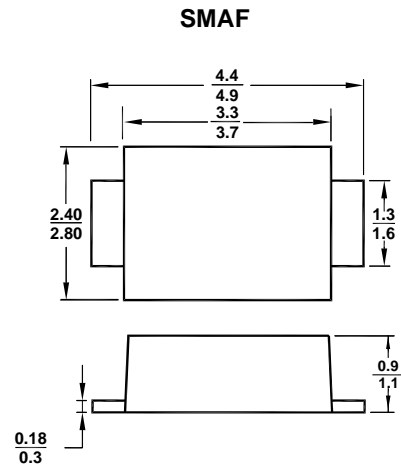
Forward Current - 1 A

### Features

- Glass Passivated Chip Junction
- For surface mounted applications
- Low profile package
- Fast reverse recovery time
- Halogen and Antimony Free(HAF),RoHS compliant

### Mechanical Data

- **Case:** SMAF
- **Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026



All Dimensions in mm

### Absolute Maximum Ratings and Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20%.

Parameter	Symbols	RS1AF	RS1BF	RS1DF	RS1GF	RS1JF	RS1KF	RS1MF	Units
	Marking	RS1A	RS1B	RS1D	RS1G	RS1J	RS1K	RS1M	-
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at T <sub>a</sub> = 65°C	I <sub>F(AV)</sub>	1							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I <sub>FSM</sub>	30							A
Maximum Forward Voltage at 1 A	V <sub>F</sub>	1.3							V
Maximum Reverse Current at Rated DC Blocking Voltage	T <sub>a</sub> = 25°C I <sub>R</sub> T <sub>a</sub> = 125°C	5 50							µA
Typical Junction Capacitance at V <sub>R</sub> = 4 V, f = 1 MHZ	C <sub>j</sub>	15							pF
Typical Thermal Resistance <sup>1)</sup>	R <sub>θJA</sub>	115							°C/W
Maximum Reverse Recovery Time at I <sub>F</sub> = 0.5 A, I <sub>R</sub> = 1 A, I <sub>rr</sub> = 0.25 A	t <sub>rr</sub>	150				250	500		ns
Operating Junction and Storage Temperature Range	T <sub>j</sub> , T <sub>stg</sub>	- 55 to + 150							°C

1) P.C.B. mounted with 0.2 X 0.2" (5 X 5 mm) copper pad areas.

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Dated: 14/04/2015 JD Rev: 02

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Fig.1 Forward Current Derating Curve

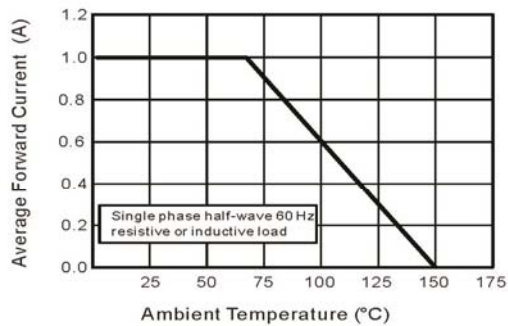


Fig.2 Typical Reverse Characteristics

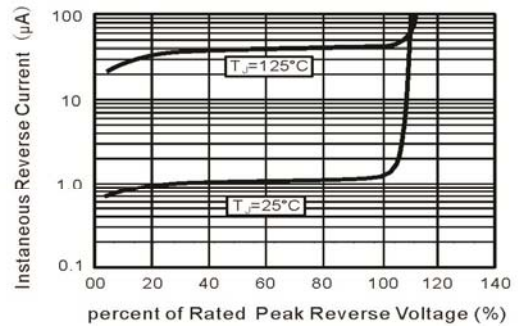


Fig.3 Typical Instantaneous Forward Characteristics

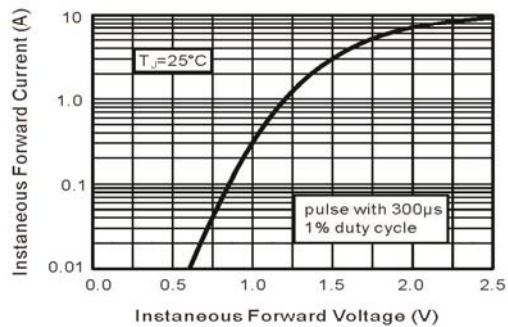


Fig.4 Typical Junction Capacitance

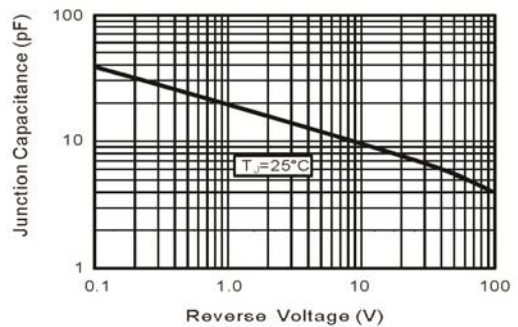
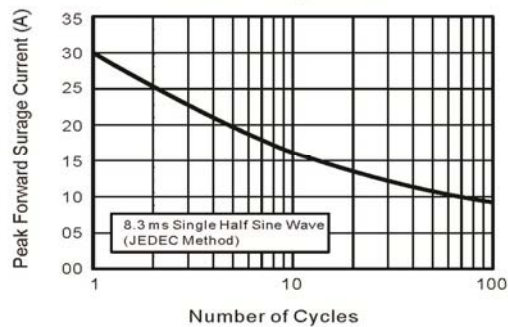


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



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