

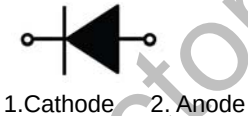


RS1AF-RS1MF

Features:

- ☐ For surface mounted applications
- ☐ Low profile package
- ☐ Glass Passivated Chip Junction
- ☐ Easy to pick and place
- ☐ Fast reverse recovery time
- ☐ Lead free in comply with EU RoHS 2011/65/EU directives

SMAF



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, derate current by 20%.

Parameter	Symbols	RS1AF	RS1BF	RS1DF	RS1GF	RS1JF	RS1KF	RS1MF	Units
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V _{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at T _c = 125 °C	I _{F(AV)}	1							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I _{FSM}	30							A
Maximum Forward Voltage at 1 A	V _F	1.3							V
Maximum DC Reverse Current T _a = 25 °C at Rated DC Blocking Voltage T _a =125 °C	I _R	5 50							μA
Typical Junction Capacitance at V _R =4V, f=1MHz	C _j	15							pF
Maximum Reverse Recovery Time ⁽¹⁾	t _{rr}	150				250	500		ns
Typical Thermal Resistance ⁽²⁾	R _{θJA}	80							°C/W
Operating and Storage Temperature Range	T _j , T _{stg}	-55 ~ +150							°C

(1) Measured with $I_F = 0.5\text{A}$, $I_R = 1\text{A}$, $I_{rr} = 0.25\text{A}$.

(2) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

Typical Characteristics

Fig.1 Forward Current Derating Curve

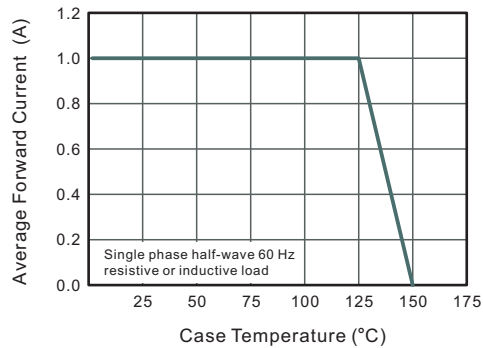


Fig.2 Typical Reverse Characteristics

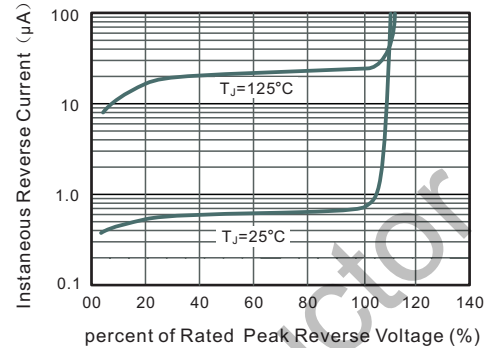


Fig.3 Typical Instantaneous Forward Characteristics

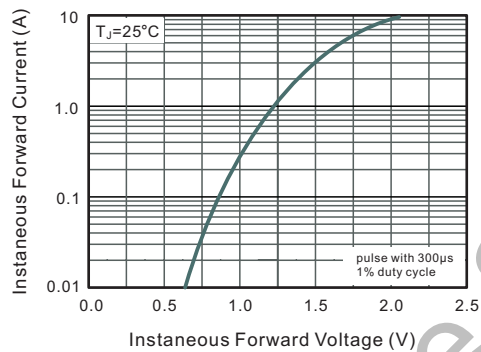


Fig.4 Typical Junction Capacitance

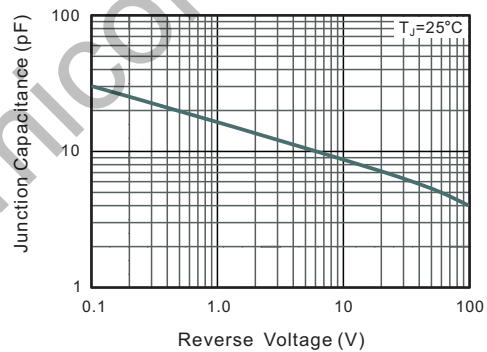
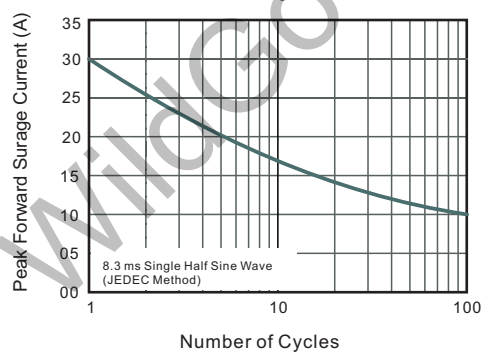
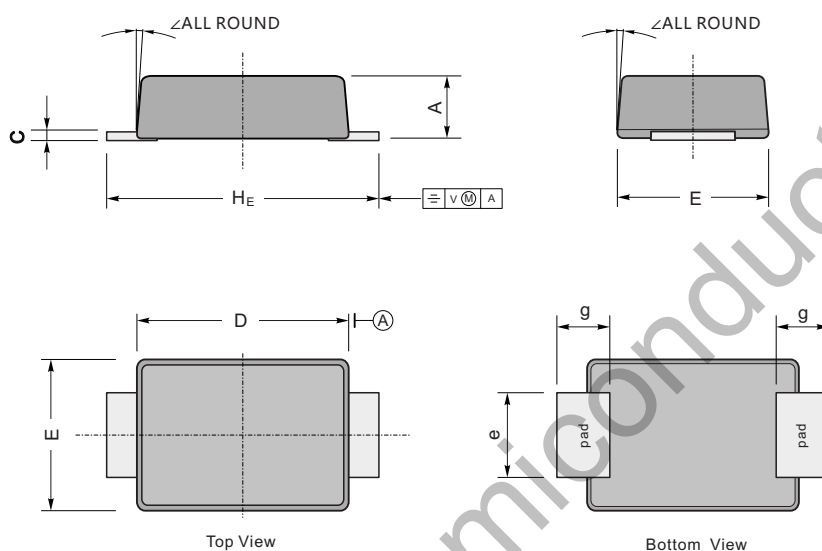


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

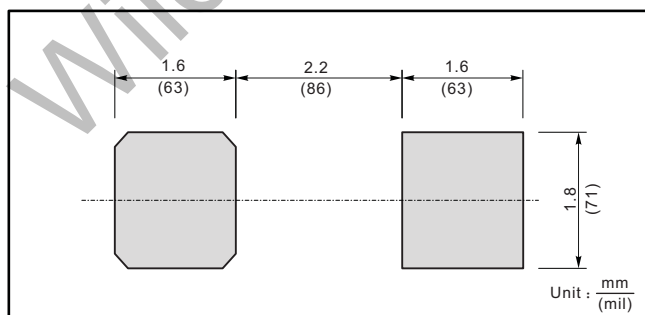


Package Dimension**SMAF**

Unit: mm



UNIT		A	C	D	E	e	g	H _E	$\angle$
mm	max	1.2	0.20	3.7	2.7	1.6	1.2	4.9	7°
	min	0.9	0.12	3.3	2.4	1.3	0.8	4.4	
mil	max	47	7.9	146	106	63	47	193	
	min	35	4.7	130	94	51	31	173	

The recommended mounting pad size**Marking**

Type number	Marking code
RS1AF	RS1A
RS1BF	RS1B
RS1DF	RS1D
RS1GF	RS1G
RS1JF	RS1J
RS1KF	RS1K
RS1MF	RS1M