

**Surface Mount Fast Recovery Rectifiers**

**Reverse Voltage - 50 to 1000 V**

**Forward Current - 1 A**

**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

**MECHANICAL DATA**

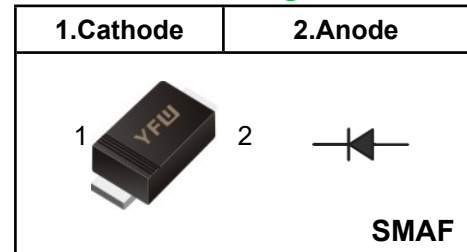
- ◆Case: SMAF
- ◆Terminals: Solderable per MIL-STD-750, Method 2026
- ◆Approx. Weight: 27mg /0.00095oz

**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 %.

**Pinning**



**Marking Code**

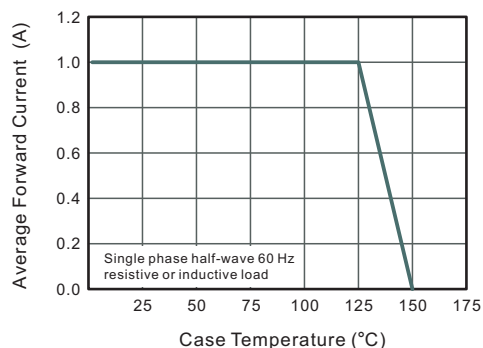
RS1AF	YFW RS1A
RS1BF	YFW RS1B
RS1DF	YFW RS1D
RS1GF	YFW RS1G
RS1JF	YFW RS1J
RS1KF	YFW RS1K
RS1MF	YFW RS1M

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

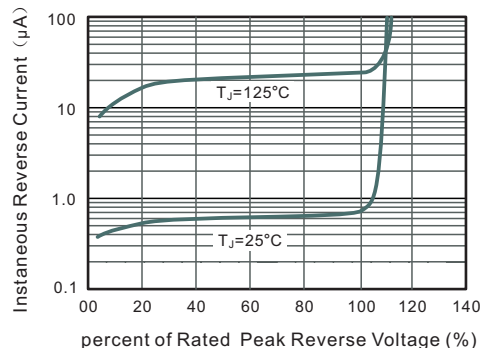
(1) Measured with  $I_F=0.5\text{A}, I_R=1\text{A}, I_n=0.25\text{A}$

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

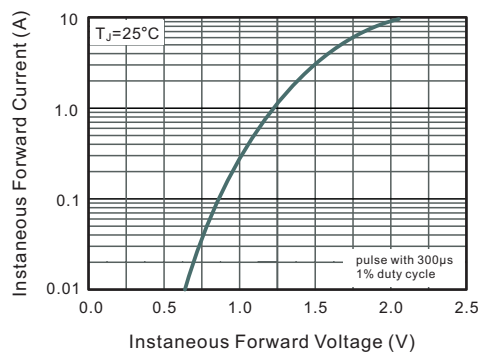
**Fig.1 Forward Current Derating Curve**



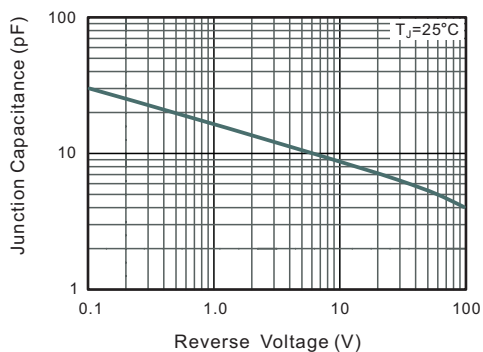
**Fig.2 Typical Reverse Characteristics**



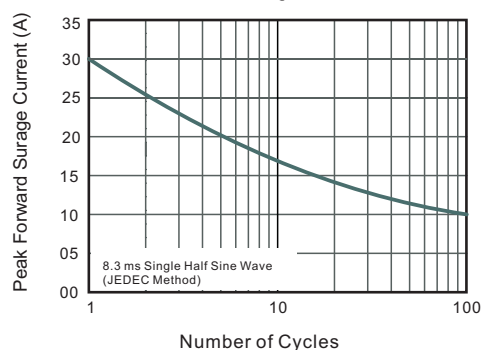
**Fig.3 Typical Instantaneous Forward Characteristics**



**Fig.4 Typical Junction Capacitance**



**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**



## Marking Diagram



## Ordering information

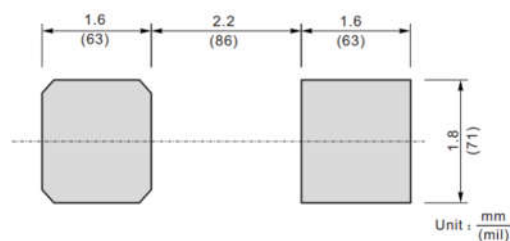
Package	Packing Description	Packing Quantity
SMAF	Tape/Reel, 13" reel	10000PCS/Reel 100000PCS/Carton
	Tape/Reel, 7" reel	3000PCS/Reel 120000PCS/Carton

## Package Dimensions

### SMAF

Dim.	Millimeter(mm)		mil	
	Min.	Max.	Min.	Max.
A	0.9	1.1	35	43
C	0.12	0.20	4.7	7.9
D	3.3	3.7	130	146
E	2.4	2.7	94	106
e	1.3	1.6	51	63
g	0.8	1.2	31	47
HE	4.4	4.9	173	193
∠	7°			

## The recommended mounting pad size



## Disclaimer

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