

**Surface Mount Fast Recovery Rectifiers**

**Reverse Voltage - 50 to 1000 V**

**Forward Current - 3 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**

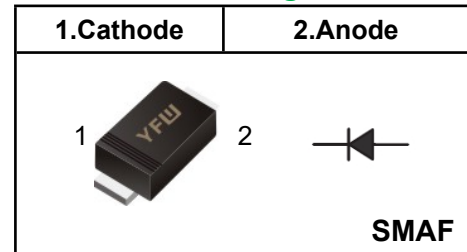
- ◆Case: SMAF
- ◆Terminals: Solderable per MIL-STD-750, Method 2026
- ◆Approx. Weight: 27mg /0.00095oz

**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**

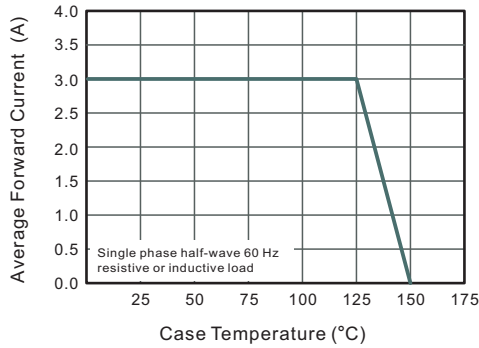
RS3AF	YFW RS3A
RS3BF	YFW RS3B
RS3DF	YFW RS3D
RS3GF	YFW RS3G
RS3JF	YFW RS3J
RS3KF	YFW RS3K
RS3MF	YFW RS3M

Parameter	Symbols	RS3AF	RS3BF	RS3DF	RS3GF	RS3JF	RS3KF	RS3MF	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>	3							<b>A</b>
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	<b>I<sub>FSM</sub></b>	100							<b>A</b>
Maximum Instantaneous Forward Voltage at 3 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>	32							<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>/ R<sub>θJC</sub></b>	50/16							<b>°C/W</b>
Operating and Storage Temperature Range	<b>T<sub>J</sub>, T<sub>stg</sub></b>	-55 ~ +150							<b>°C</b>

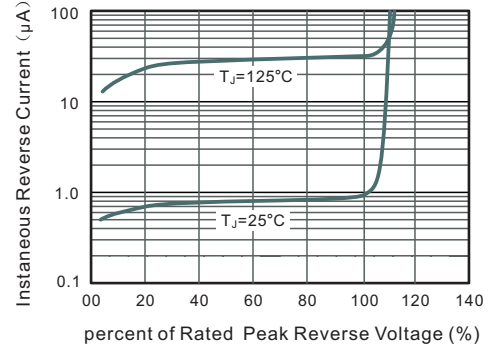
(1) Measured with  $I_F=0.5\text{A}, I_R=1\text{A}, I_n=0.25\text{A}$

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

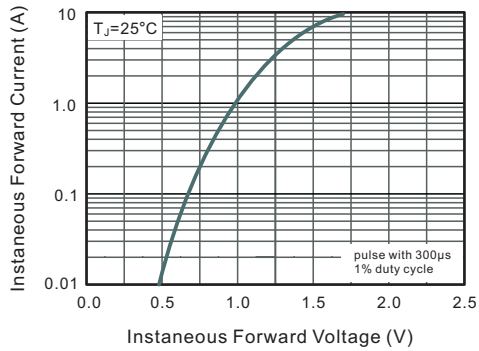
**Fig.1 Maximum Average Forward Current Rating**



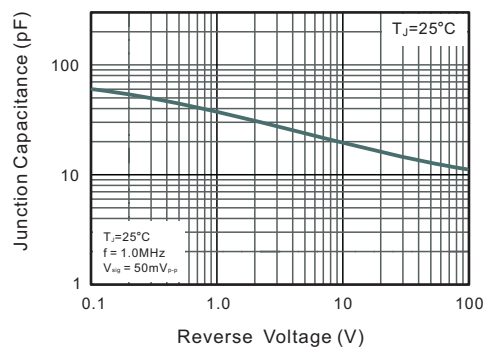
**Fig.2 Typical Reverse Characteristics**



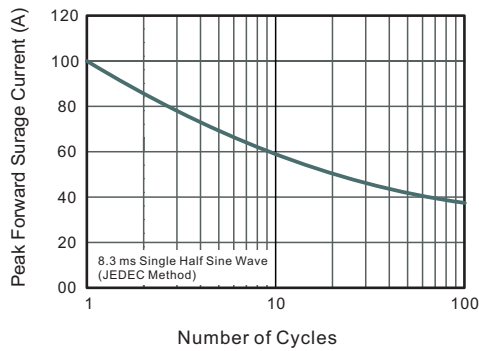
**Fig.3 Typical Instantaneous Forward Characteristics**



**Fig.4 Typical Junction Capacitance**



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



## Marking Diagram



## Ordering information

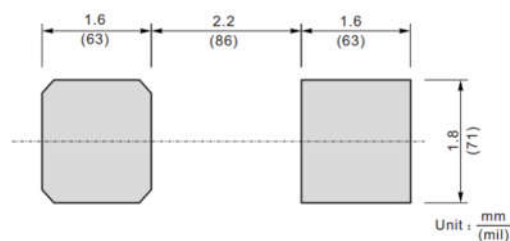
Package	Packing Description	Packing Quantity
SMAF	Tape/Reel, 13" reel	10000PCS/Reel 100000PCS/Carton
	Tape/Reel, 7" reel	3000PCS/Reel 120000PCS/Carton

## 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



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