

## 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: DO-214AC/SMA
- ◆Terminals: Solderable per MIL-STD-750, Method 2026
- ◆Approx. Weight: 0.07g / 0.002oz

### 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

1.Cathode	2.Anode
	
DO-214AC/SMA	

### Marking Code

RS3A	YFW RS3A
RS3B	YFW RS3B
RS3D	YFW RS3D
RS3G	YFW RS3G
RS3J	YFW RS3J
RS3K	YFW RS3K
RS3M	YFW RS3M

Parameter	Symbols	RS3A	RS3B	RS3D	RS3G	RS3J	RS3K	RS3M	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>	80							<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.

## Ratings And Characteristic Curves

Fig.1 Maximum Average Forward Current Rating

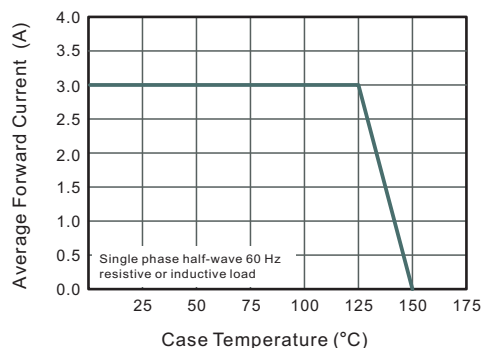


Fig.2 Typical Reverse Characteristics

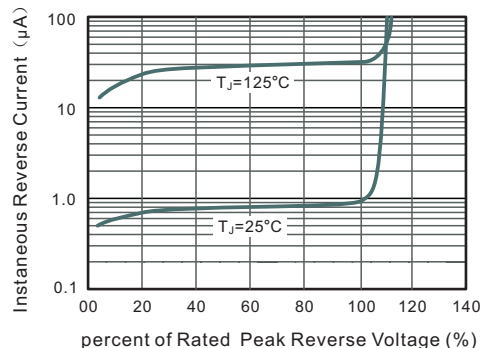


Fig.3 Typical Instantaneous Forward Characteristics

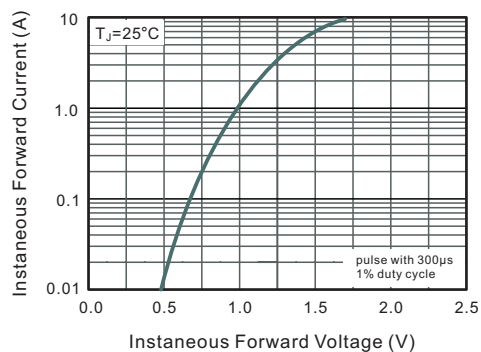


Fig.4 Typical Junction Capacitance

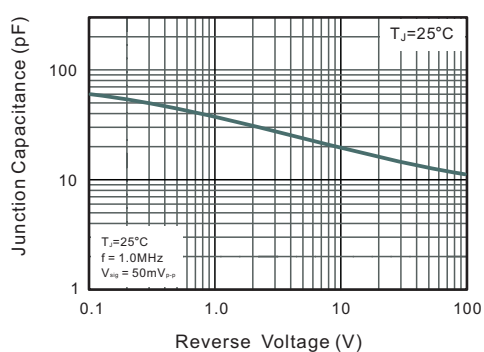
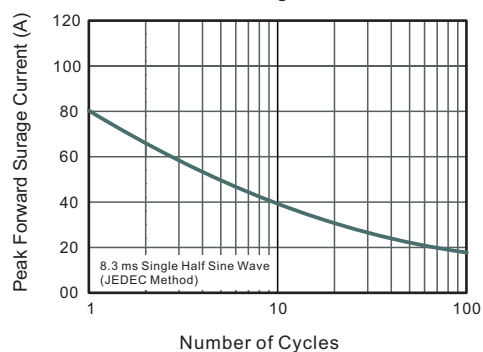


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



## Marking Diagram



## Ordering information

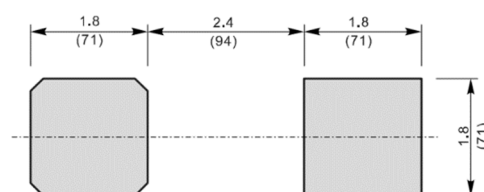
Package	Packing Description	Packing Quantity
DO-214AC SMA	Tape/Reel, 13" reel	5000PCS/Reel 50000PCS/Carton
	Tape/Reel, 7" reel	2000PCS/Reel 50000PCS/Carton

## Package Dimensions

### DO-214AC SMA

Dim.	Millimeter(mm)		mil	
	Min.	Max.	Min.	Max.
A	1.9	2.45	75	96
D	4.0	4.5	157	181
E	2.5	2.8	100	110
H <sub>E</sub>	4.7	5.2	185	205
c	0.15	0.31	6	12
e	1.3	1.8	51	71
g	0.9	1.5	35	59
b	0.05	0.2	2	7.9
a	0.3		12	

## The recommended mounting pad size



Unit :  $\frac{\text{mm}}{(\text{mil})}$

## Disclaimer

The information presented in this document is for reference only. Guangdong Youfeng Microelectronics Co.,Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise. The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), YFW or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale. This publication supersedes & replaces all information previously supplied. For additional information, please visit our website <https://www.yfwdiode.com>, or consult YFW sales office for further assistance.