

## Surface Mount General Purpose Silicon Rectifiers

Reverse Voltage - 50 to 1000 V

Forward Current - 3 A

### FEATURES

- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Ideal for automated placement
- Lead free in comply with EU RoHS 2011/65/EU directives

### MECHANICAL DATA

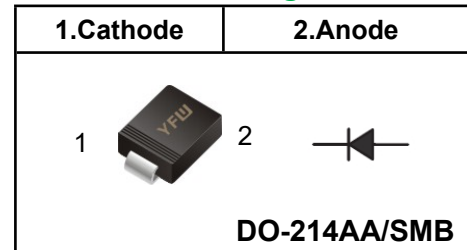
- Case: DO-214AA/SMB
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.093g / 0.003oz

### Maximum Ratings and Electrical 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

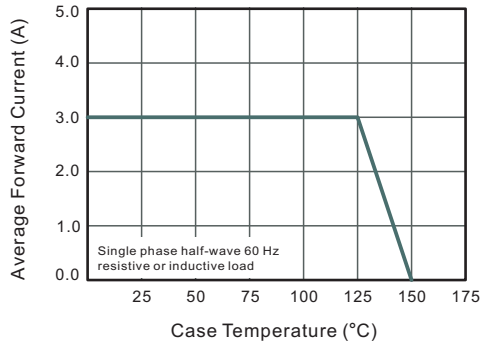
<b>S3AB</b>	<b>YFE S3A</b>
<b>S3BB</b>	<b>YFW S3B</b>
<b>S3DB</b>	<b>YFW S3D</b>
<b>S3GB</b>	<b>YFW S3G</b>
<b>S3JB</b>	<b>YFW S3J</b>
<b>S3KB</b>	<b>YFW S3K</b>
<b>S3MB</b>	<b>YFW S3M</b>

Parameter	Symbols	S3AB	S3BB	S3DB	S3GB	S3JB	S3KB	S3MB	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 $T_c = 125\text{ }^\circ\text{C}$	$I_{F(AV)}$	3							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	$I_{FSM}$	90							A
Maximum Instantaneous Forward Voltage at 3 A	$V_F$	1.1							V
Maximum DC Reverse Current $T_a = 25\text{ }^\circ\text{C}$ at Rated DC Blocking Voltage $T_a = 125\text{ }^\circ\text{C}$	$I_R$	5 50							$\mu\text{A}$
Typical Junction Capacitance <sup>(1)</sup>	$C_j$	35							pF
Typical Thermal Resistance <sup>(2)</sup>	$R_{\theta JA}, R_{\theta JC}$	48/16							$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_j, T_{stg}$	-55 ~ +150							$^\circ\text{C}$

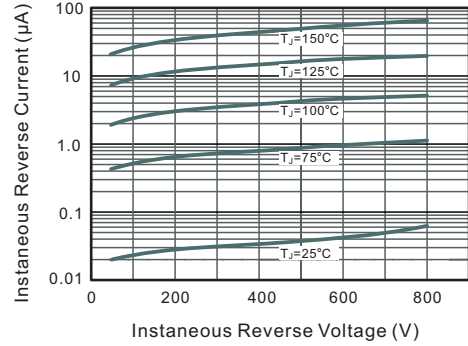
(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

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

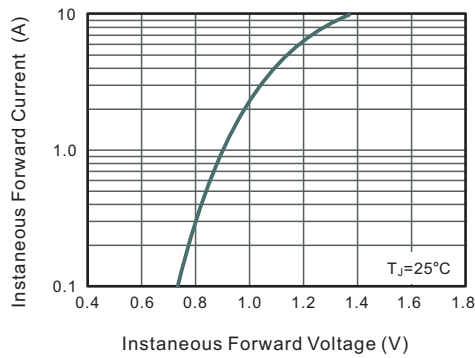
**Fig.1 Forward Current Derating Curve**



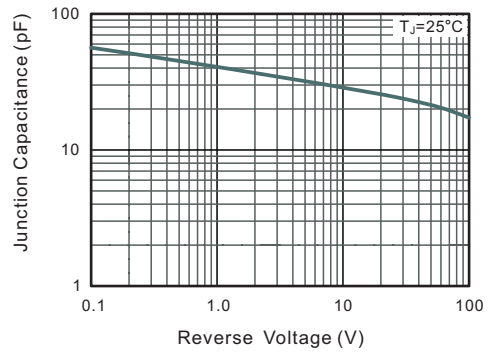
**Fig.2 Typical Instaneous Reverse Characteristics**



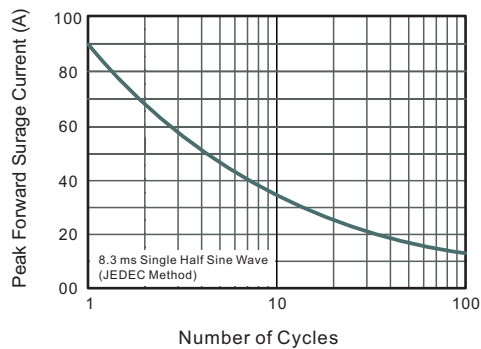
**Fig.3 Typical Forward Characteristic**



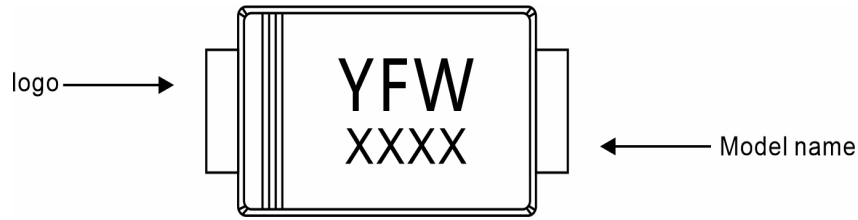
**Fig.4 Typical Junction Capacitance**



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



**Marking Diagram**



**Ordering information**

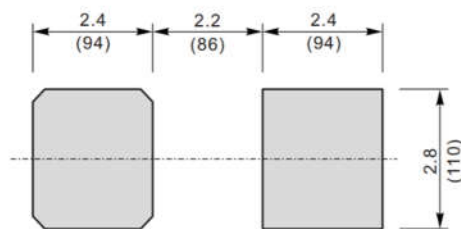
Package	Packing Description	Packing Quantity
DO-214AA SMB	Tape/Reel, 13" reel	3000PCS/Reel 30000PCS/Carton

**Package Dimensions**

**DO-214AA SMB**

Dim.	Millimeter(mm)		mil	
	Min.	Max.	Min.	Max.
A	2.13	2.44	84	96
E	4.06	4.70	160	185
D	3.3	3.94	130	155
E <sub>1</sub>	5.08	5.59	200	220
A <sub>1</sub>	0.05	0.20	2.0	7.9
L	0.8	1.5	32	59
C	0.152	0.305	6	12
b	1.9	2.2	75	87

**The recommended mounting pad size**



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

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