

## Surface Mount General Purpose Silicon Rectifiers

Reverse Voltage - 50 to 1000 V

Forward Current - 5 A

### FEATURES

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



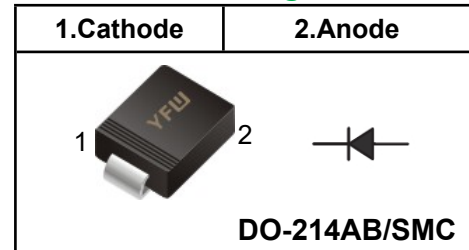
### MECHANICAL DATA

- Case: DO-214AB/SMC
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.22g / 0.0077oz

### 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

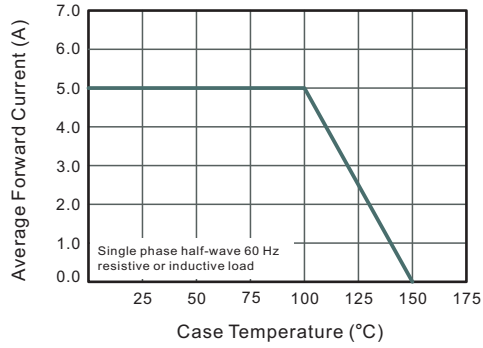
<b>S5A</b>	<b>S5A</b>
<b>S5B</b>	<b>S5B</b>
<b>S5D</b>	<b>S5D</b>
<b>S5G</b>	<b>S5G</b>
<b>S5J</b>	<b>S5J</b>
<b>S5K</b>	<b>S5K</b>
<b>S5M</b>	<b>S5M</b>

Parameter	Symbols	S5A	S5B	S5D	S5G	S5J	S5K	S5M	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 $T_c = 115\text{ }^\circ\text{C}$	$I_{F(AV)}$	5							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	$I_{FSM}$	120							A
Maximum Instantaneous Forward Voltage at 5 A	$V_F$	1.0							V
Maximum DC Reverse Current $T_a = 25\text{ }^\circ\text{C}$ at Rated DC Blocking Voltage $T_a = 125\text{ }^\circ\text{C}$	$I_R$	5 100							$\mu\text{A}$
Typical Junction Capacitance <sup>(1)</sup>	$C_j$	50							pF
Typical Thermal Resistance <sup>(2)</sup>	$R_{\theta JA} / R_{\theta JC}$	35/13							$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_j, T_{stg}$	-55 ~ +150							$^\circ\text{C}$

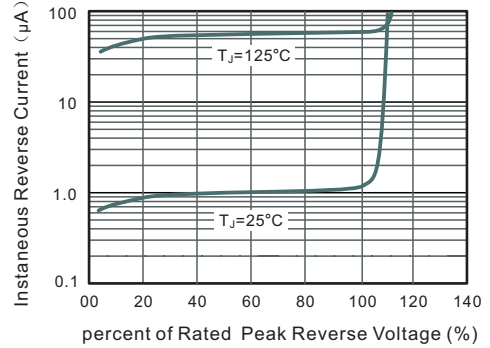
(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

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

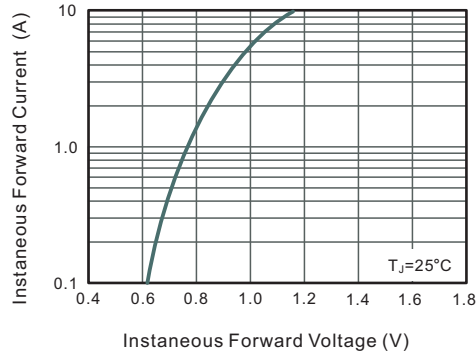
**Fig.1 Forward Current Derating Curve**



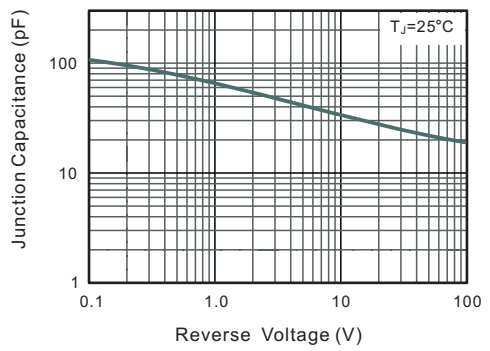
**Fig.2 Typical Reverse Characteristics**



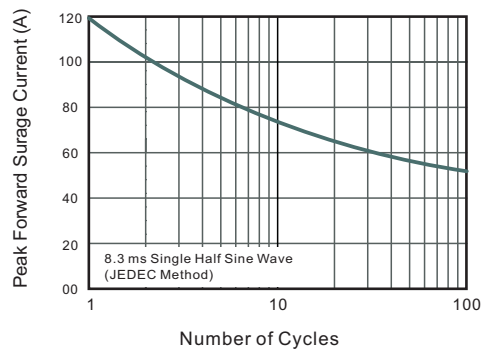
**Fig.3 Typical Forward Characteristic**



**Fig.4 Typical Junction Capacitance**

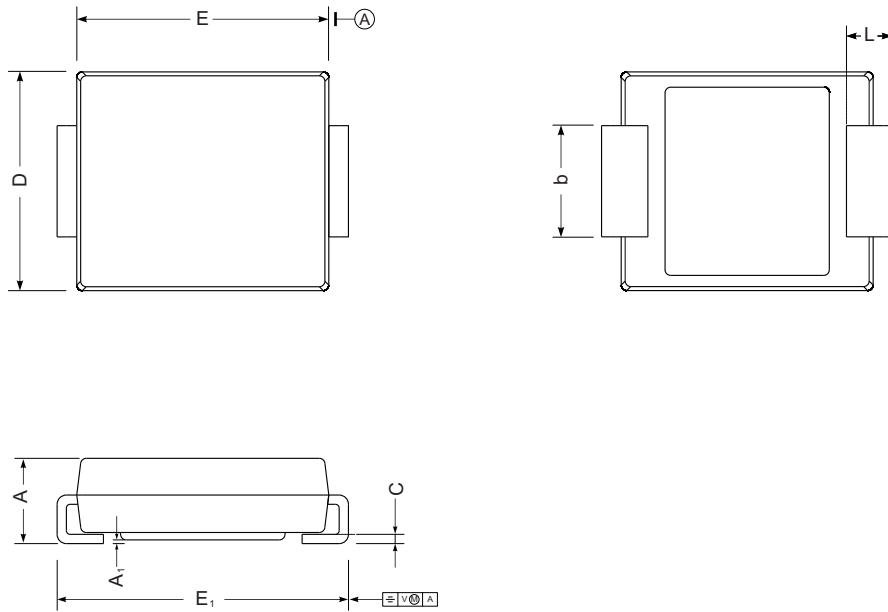


**Fig.6 Maximum Non-Repetitive Peak Forward Surge Current**



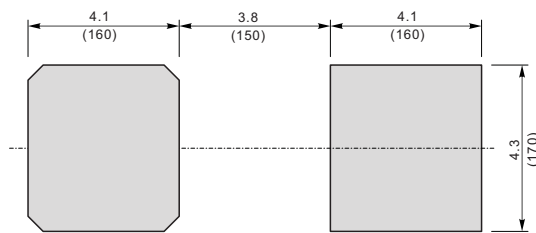
**Package Outline DO-214AB SMC**

Plastic surface mounted package; 2 leads



UNIT		A	E	D	E <sub>1</sub>	A <sub>1</sub>	C	L	b
mm	max	2.62	7.0	6.2	8.0	0.21	0.31	1.6	3.25
	min	2.00	6.5	5.6	7.6	0.05	0.15	0.9	2.75
mil	max	103	276	244	315	8.3	12	63	128
	min	79	256	220	299	2.0	5.9	35	108

**The recommended mounting pad size**



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

**Summary of Packing Options**

Package	Packing Description	Packing Quantity	Industry Standard
DO-214AB SMC	Tape/Reel, 13" reel	3000	EIA-481-1