



# SS12~S100

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

**VOLTAGE** 20 to 100 Volts **CURRENT** 1.0 Ampere

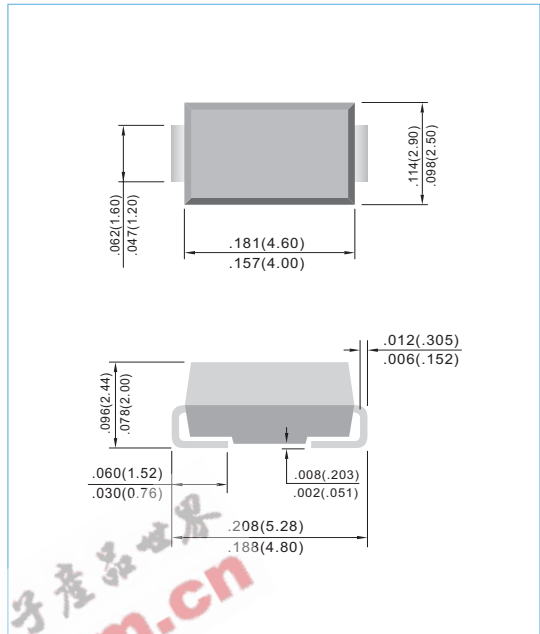
**SMA/DO-214AC** Unit: inch (mm)

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- For surface mounted applications
- Low profile package
- Built-in strain relief
- Metal to silicon rectifier. majority carrier conduction
- Low power loss,high efficiency
- High surge capacity
- High current capacity ,low  $V_F$
- For use in low voltage high frequency inverters, free wheeling, and polarity protection applications.
- In compliance with EU RoHS 2002/95/EC directives

### MECHANICAL DATA

- Case: JEDEC DO-214AC molded plastic
- Terminals:Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes positive end (cathode)
- Standard packaging: 12mm tape (EIA-481)
- Weight: 0.002 ounce, 0.064 gram



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.  
Resistive or inductive load.

| PARAMETER   | SYMBOL                             | SS12        | SS13 | SS14 | SS15 | SS16 | SS18        | S100 | UNITS                       |                  |
|---|------------------------------------|-------------|------|------|------|------|-------------|------|-----------------------------|------------------|
| Maximum Recurrent Peak Reverse Voltage  | $V_{RRM}$                          | 20          | 30   | 40   | 50   | 60   | 80          | 100  | V                           |                  |
| Maximum RMS Voltage   | $V_{RMS}$                          | 14          | 21   | 28   | 35   | 42   | 56          | 70   | V                           |                  |
| Maximum DC Blocking Voltage   | $V_{DC}$                           | 20          | 30   | 40   | 50   | 60   | 80          | 100  | V                           |                  |
| Maximum Average Forward Current .375" (9.5mm) lead length at $T_L=75^\circ\text{C}$                       | $I_{F(AV)}$                        | 1.0         |      |      |      |      |             |      | A                           |                  |
| Peak Forward Surge Current :8.3ms single half sine-wave superimposed on rated load(JEDEC method)          | $I_{FSM}$                          | 30          |      |      |      |      |             |      | A                           |                  |
| Maximum Forward Voltage at 1.0A ( Note 1)   | $V_F$                              | 0.5         |      |      | 0.7  |      | 0.85        |      | V                           |                  |
| Maximum DC Reverse Current at $T_J=25^\circ\text{C}$<br>Rated DC Blocking Voltage $T_J=100^\circ\text{C}$ | $I_R$                              | 0.5         |      |      |      |      | 0.5         |      | mA                          |                  |
|   |                                    | 50          |      |      |      |      | 20          |      |                             |                  |
| Maximum Thermal Resistance ( Note 2)  | $R_{\theta JL}$<br>$R_{\theta JA}$ | 28<br>88    |      |      |      |      |             |      | $^\circ\text{C} / \text{W}$ |                  |
| Operating Junction Temperature Range  | $T_J$                              | -55 to +125 |      |      |      |      | -55 to +150 |      |                             | $^\circ\text{C}$ |
| Storage Temperature Range   | $T_{STG}$                          | -55 to +150 |      |      |      |      |             |      |                             | $^\circ\text{C}$ |

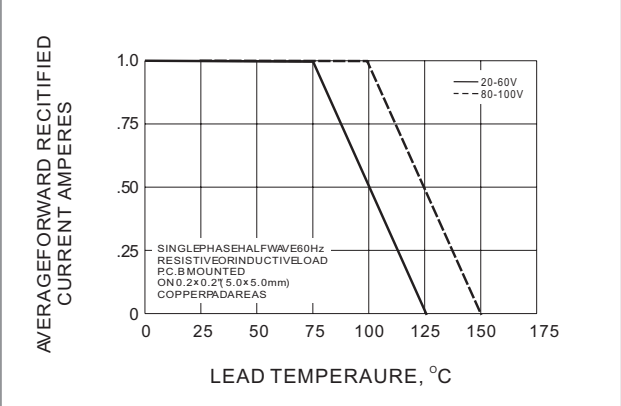
**NOTES:**

- A.Pulse Test with PW =300μsec, 1% Duty Cycle.
- B.Mounted on P.C. Board with 5.0mm<sup>2</sup> (.013mm thick) copper pad areas.

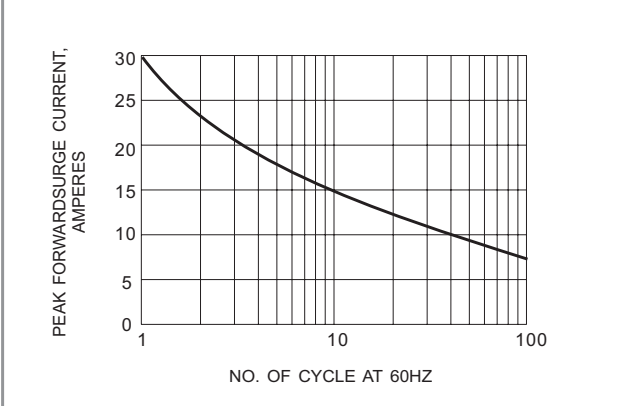


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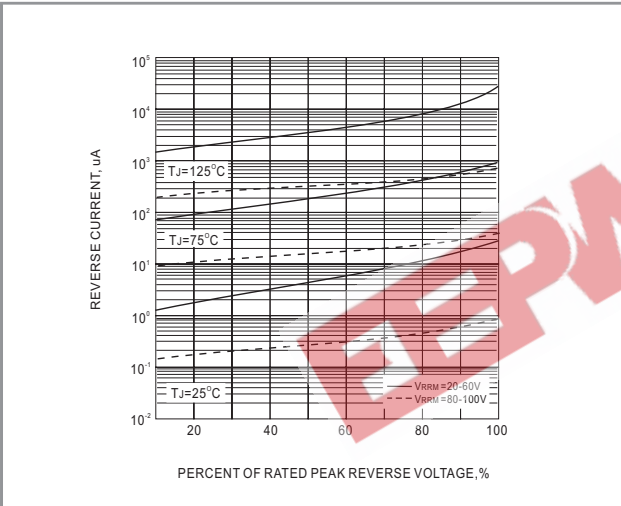
## RATING AND CHARACTERISTIC CURVES



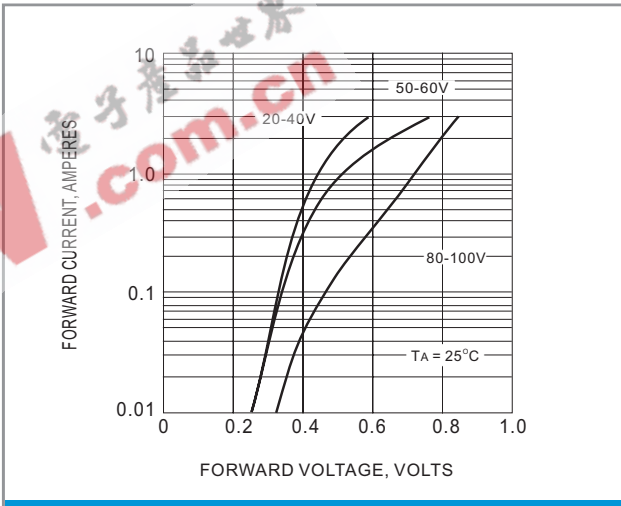
**Fig.1- FORWARD CURRENT DERATING CURVE**



**Fig.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**Fig.3- TYPICAL REVERSE CHARACTERISTIC**



**Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC**

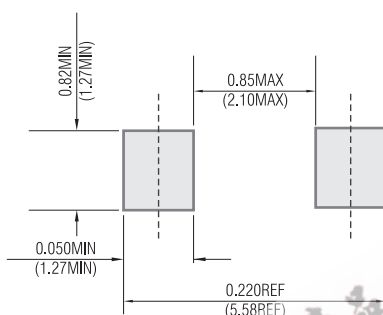


## SS12~S100

### MOUNTING PAD LAYOUT

SMA/DO-214AC

Unit: inch ( mm )



### ORDER INFORMATION

- Packing information

T/R - 7.5K per 13" plastic Reel

T/R - 1.8Kper 7" plastic Reel

### LEGAL STATEMENT

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