



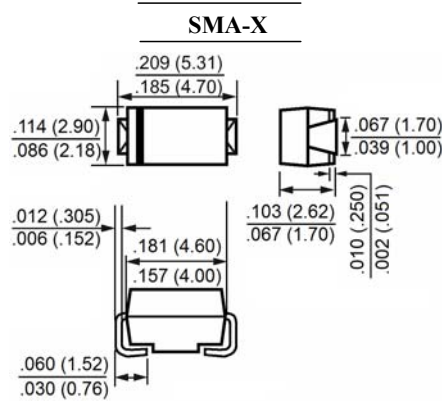
# SS12W THRU SS120W

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

**REVERSE VOLTAGE:** 20 to 200 VOLTS  
**FORWARD CURRENT:** 1.0 AMPERE

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- High current capacity
- Built-in strain relief
- Low profile package
- Metal to silicon rectifier. majority carrier conduction
- High surge capacity
- Low power loss, high efficiency
- For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- Suffix "H" indicates Halogen-free parts, ex. SS12WH



Dimensions in inches and (millimeters)

### MECHANICAL DATA

Case : Molded plastic, SMA-X

Terminals : Axial leads, solderable per MIL-STD-750, method 2026 guaranteed

Polarity : Color band denotes cathode end

### Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

| Parameter  | Symbols         | SS12W       | SS13W | SS14W | SS15W | SS16W       | SS18W | SS110W | SS115W | SS120W | Units |      |
|--|-----------------|-------------|-------|-------|-------|-------------|-------|--------|--------|--------|-------|------|
| Maximum Recerrent Peak Reverse Voltage   | $V_{RRM}$       | 20          | 30    | 40    | 50    | 60          | 80    | 100    | 150    | 200    | Volts |      |
| Maximum RMS Voltage  | $V_{RMS}$       | 14          | 21    | 28    | 35    | 42          | 56    | 71     | 105    | 140    | Volts |      |
| Maximum DC Blocking Voltage  | $V_{DC}$        | 20          | 30    | 40    | 50    | 60          | 80    | 100    | 150    | 200    | Volts |      |
| Maximum Average Forward Rectified Current at $T_L$ (See Fig. 1)  | $I_{(AV)}$      | 1.0         |       |       |       |             |       |        |        |        | Amp   |      |
| Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)      | $I_{FSM}$       | 30.0        |       |       |       |             |       |        |        |        | Amp   |      |
| Maximum Forward Voltage at 1.0A (Note 1)   | $V_F$           | 0.55        |       |       | 0.70  |             | 0.85  |        | 0.95   |        | Volts |      |
| Maximum Reverse Current at $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_A=100^\circ\text{C}$ | $I_R$           | 0.5         |       |       |       |             | 0.1   |        |        |        |       | mAmp |
| Typical Thermal Resistance (Note 2)  | $R_{\theta JA}$ | 88.0        |       |       |       |             |       |        |        |        | °C/W  |      |
|  | $R_{\theta JL}$ | 28.0        |       |       |       |             |       |        |        |        |       |      |
| Operating Junction Temperature Range   | $T_J$           | -65 to +125 |       |       |       | -65 to +150 |       |        |        |        |       | °C   |
| Storage Temperature Range  | $T_{stg}$       | -65 to +150 |       |       |       |             |       |        |        |        | °C    |      |

#### NOTES:

1- Pulse test: 300µs pulse width, 1% duty cycle

2- P.C.B. mounted with 0.2 x 0.2" (5.0 x 5.0mm) Copper Pad Areas



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### RATINGS AND CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

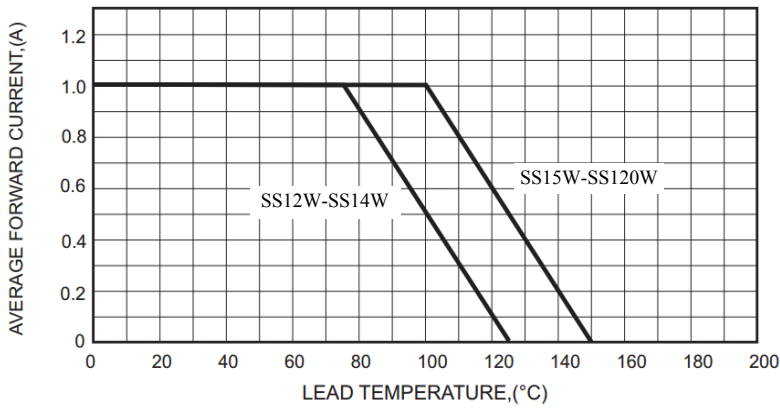


FIG.2-TYPICAL FORWARD CHARACTERISTICS

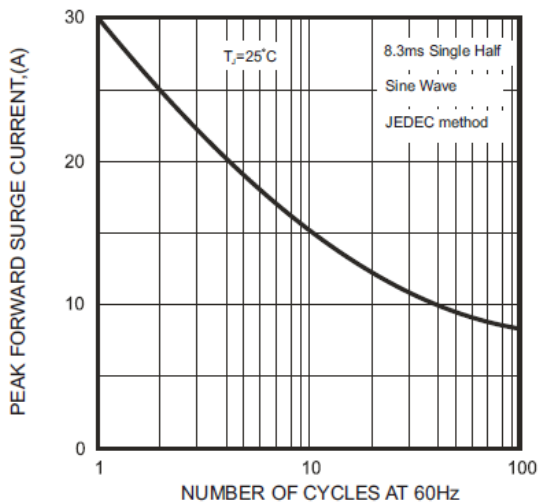
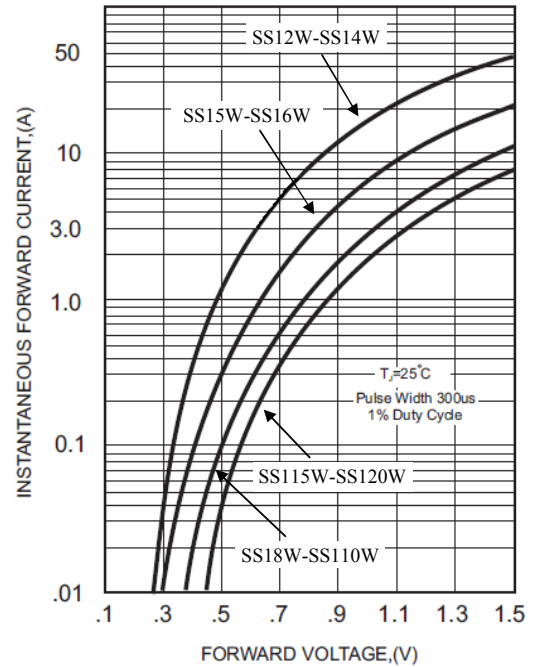


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

CHARACTERISTICS

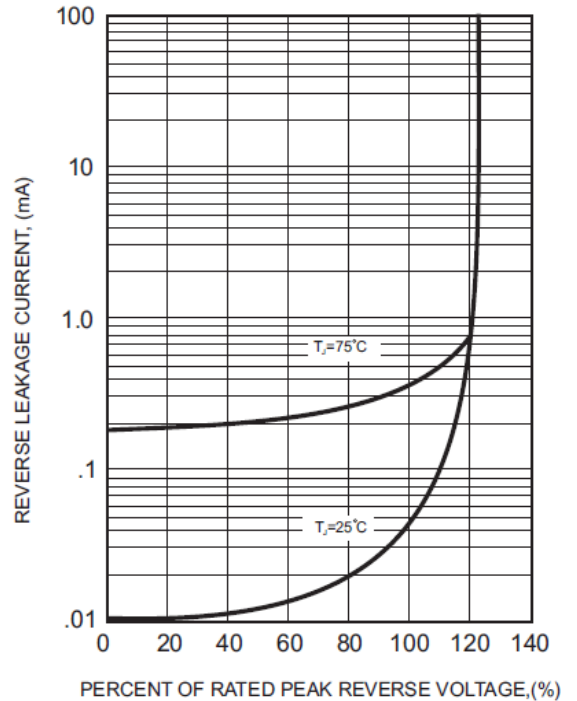


FIG.4- TYPICAL REVERSE