

**SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER**

**VOLTAGE 150 to 200 Volts CURRENT 1.0 Ampere**

**FEATURES**

- \* Low power loss, high efficiency
- \* Low leakage
- \* Low forward voltage drop
- \* High current capability
- \* High speed switching
- \* High surge capability
- \* High reliability
- \* Guard ring construction on dic
- \* Anti-ESD
- \* P/N suffix V means AEC-Q101 qualified, e.g:SS150V
- \* P/N suffix V means Halogen-free

**MECHANICAL DATA**

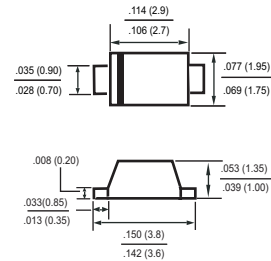
- \* Epoxy: Device has UL flammability classification 94V-0
- \* Mounting position: Any
- \* Weight: 0.01 gram (Approx.)
- \* Flat lead frame

**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, derate current by 20%.



**SOD-123F**



**MAXIMUM RATINGS (@ TA=25 °C unless otherwise noted)**

| RATINGS                                                                                           | SYMBOL           | SS150V       | SS200V | UNITS              |
|---------------------------------------------------------------------------------------------------|------------------|--------------|--------|--------------------|
| Maximum Recurrent Peak Reverse Voltage                                                            | V <sub>RRM</sub> | 150          | 200    | Volts              |
| Maximum RMS Voltage                                                                               | V <sub>RMS</sub> | 105          | 140    | Volts              |
| Maximum DC Blocking Voltage                                                                       | V <sub>DC</sub>  | 150          | 200    | Volts              |
| Maximum Average Forward Rectified Current @ T <sub>A</sub> =75 °C                                 | I <sub>O</sub>   | 1.0          |        | Amps               |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | I <sub>FSM</sub> | 25           |        | Amps               |
| Current Squared Time                                                                              | I <sup>2</sup> t | 2.6          |        | A <sup>2</sup> Sec |
| Typical Thermal Resistance (Note 3)                                                               | R <sub>θJA</sub> | 110          |        | °C/W               |
|                                                                                                   | R <sub>θJL</sub> | 30           |        |                    |
| Operating Temperature Range                                                                       | T <sub>J</sub>   | -55 to + 150 |        | °C                 |
| Storage Temperature Range                                                                         | T <sub>STG</sub> | -55 to + 150 |        | °C                 |
| Typical Junction Capacitance (Note 1)                                                             | C <sub>J</sub>   | 110          |        | pF                 |

**ELECTRICAL CHARACTERISTICS (@TA=25 °C unless otherwise noted)**

| CHARACTERISTICS                                  | SYMBOL         | SS150V                   | SS200V | UNITS |
|--------------------------------------------------|----------------|--------------------------|--------|-------|
| Maximum Instantaneous Forward Voltage at 1.0A DC | V <sub>F</sub> | 0.85                     |        | Volts |
| Maximum Average Reverse Current                  | I <sub>R</sub> | @T <sub>A</sub> = 25°C   |        | uAmps |
| at Rated DC Blocking Voltage                     |                | @T <sub>A</sub> = 150 °C |        | mAmps |

NOTES : 1. Measured at 1 MHz and applied reverse voltage of 4 Volts.  
2. "RoHS compliant"  
3. Mounted on PCB.

2022-04  
REV:O

## RATING AND CHARACTERISTICS CURVES ( SS150V, SS200V )

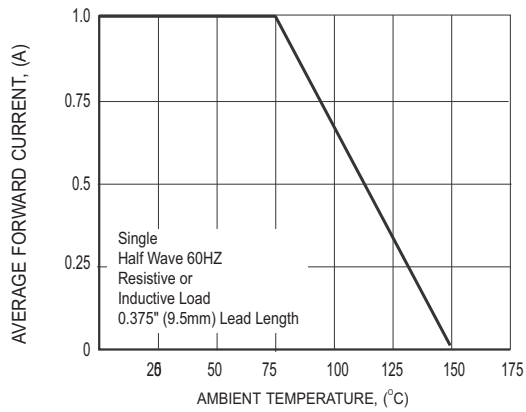


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

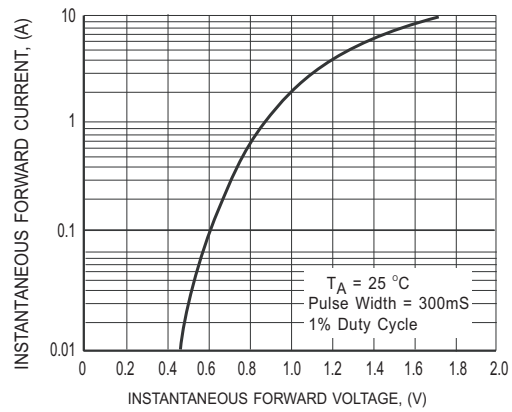


FIG.2 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS

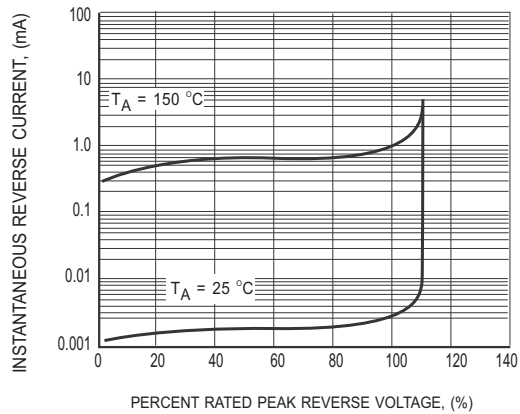


FIG.3 MAXIMUM REVERSE CHARACTERISTICS

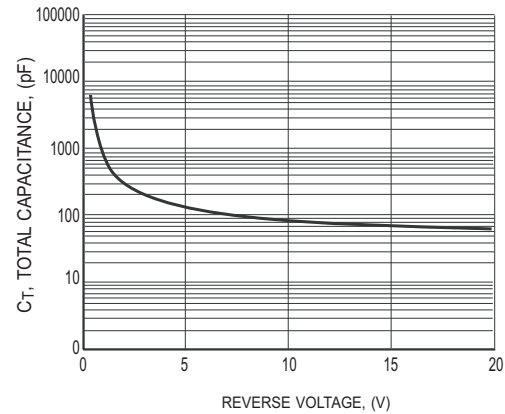


FIG.4 TYPICAL TOTAL CAPACITANCE

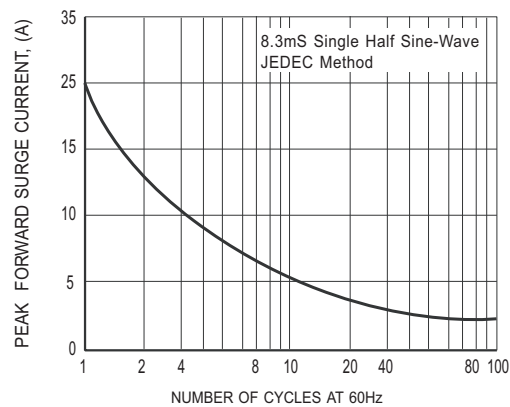
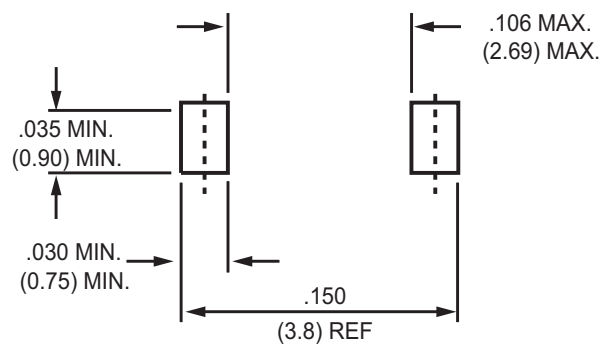


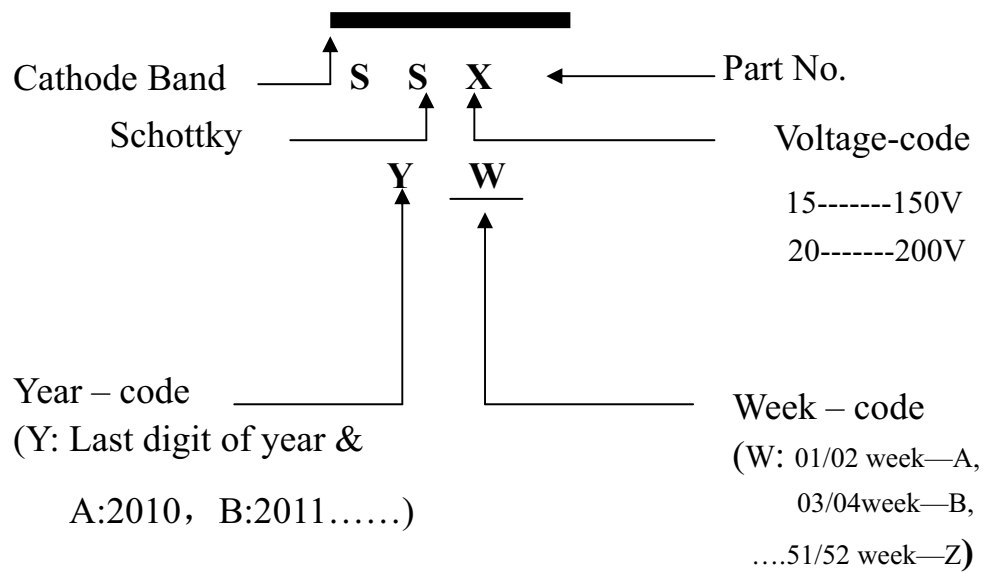
FIG.5 TYPICAL REVERSE CHARACTERISTICS

## Mounting Pad Layout



Dimensions in inches and (millimeters)

## Marking Description



## PACKAGING OF DIODE AND BRIDGE RECTIFIERS

### REEL PACK

| PACKAGE                | PACKING CODE | EA PER REEL | EA PER INNER BOX | COMPONENT SPACE (mm) | TAPE SPACE (mm) | REEL DIA (mm) | CARTON SIZE (mm) | EA PER CARTON | GROSS WEIGHT(Kg) |
|------------------------|--------------|-------------|------------------|----------------------|-----------------|---------------|------------------|---------------|------------------|
| SOD-123F/<br>SOD-123FL | -W           | 3,000       | 15,000           | ---                  | ---             | 178           | 390*205*31       | 120,000       | 6.964            |

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