

# MSKSEMI

SEMICONDUCTOR



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Product data sheet

**VOLTAGE RANGE**

20 to 100 Volts

**CURRENT**

5.0 Ampere



**FEATURES**

- \* Ideal for surface mount applications
- \* Easy pick and place
- \* Built-in strain relief
- \* Low forward voltage drop

**MECHANICAL DATA**

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Metallurgically bonded construction
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Rating 25°C ambient temperature unless otherwise specified.  
Single phase half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

| P/N(MARK)                                                                                             | SS52F      | SS53F | SS54F | SS55F | SS56F | SS58F | SS59F | SS510F | UNITS |
|-------------------------------------------------------------------------------------------------------|------------|-------|-------|-------|-------|-------|-------|--------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                                | 20         | 30    | 40    | 50    | 60    | 80    | 90    | 100    | V     |
| Maximum RMS Voltage                                                                                   | 14         | 21    | 28    | 35    | 42    | 56    | 63    | 70     | V     |
| Maximum DC Blocking Voltage                                                                           | 20         | 30    | 40    | 50    | 60    | 80    | 90    | 100    | V     |
| Maximum Average Forward Rectified Current<br>At T <sub>L</sub> =100°C                                 | 5.0        |       |       |       |       |       |       |        | A     |
| Peak Forward Surge Current, 8.3 ms single half sine-wave<br>superimposed on rated load (JEDEC method) | 120        |       |       |       |       |       |       |        | A     |
| Maximum Instantaneous Forward Voltage at 5.0A                                                         | 0.55       |       | 0.70  |       | 0.85  |       |       |        | V     |
| Maximum DC Reverse Current<br>Ta=25°C                                                                 | 0.1        |       |       |       | 0.02  |       |       |        | mA    |
| at Rated DC Blocking Voltage<br>Ta=100°C                                                              | 5          |       |       |       | 2     |       |       |        | mA    |
| Typical Junction Capacitance (Note1)                                                                  | 380        |       |       |       |       |       |       |        | pF    |
| Typical Thermal Resistance R <sub>JL</sub> (Note 2)                                                   | 10         |       |       |       |       |       |       |        | °C/W  |
| Operating Temperature Range T <sub>J</sub>                                                            | -65 — +150 |       |       |       |       |       |       |        | °C    |
| Storage Temperature Range T <sub>stg</sub>                                                            | -65 — +150 |       |       |       |       |       |       |        | °C    |

**NOTES:**

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal Resistance Junction to Lead.

RATING AND CHARACTERISTIC CURVES (SS52F THRU SS510F)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

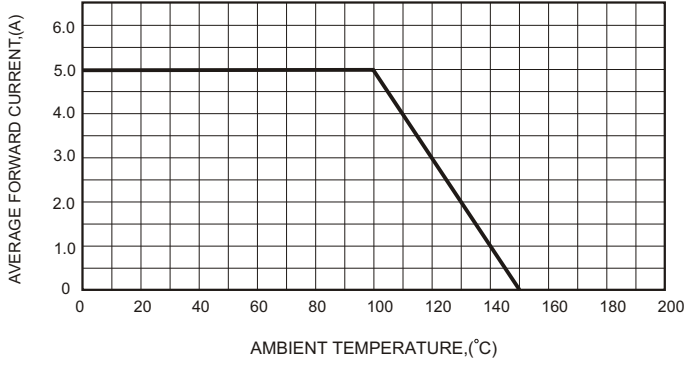


FIG.2-TYPICAL FORWARD CHARACTERISTICS

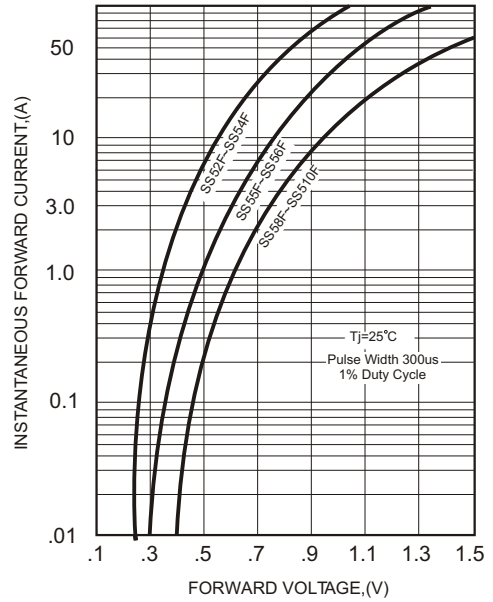


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

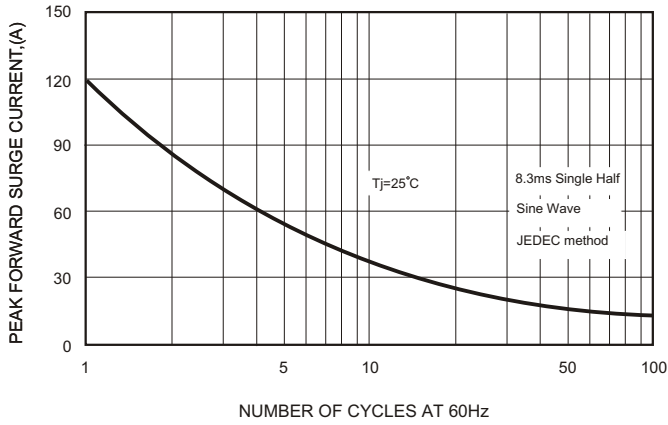


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

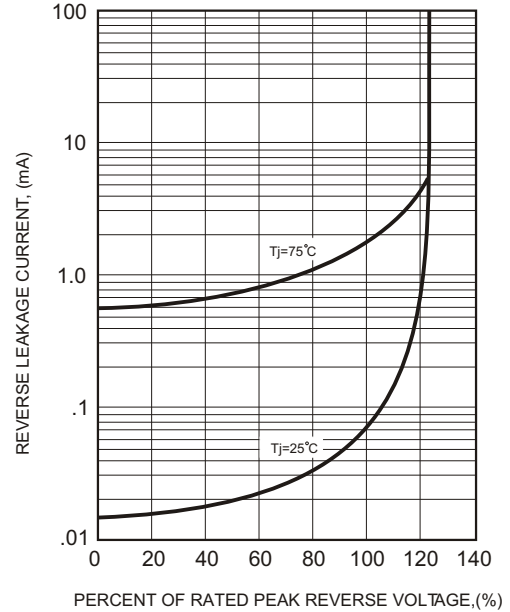
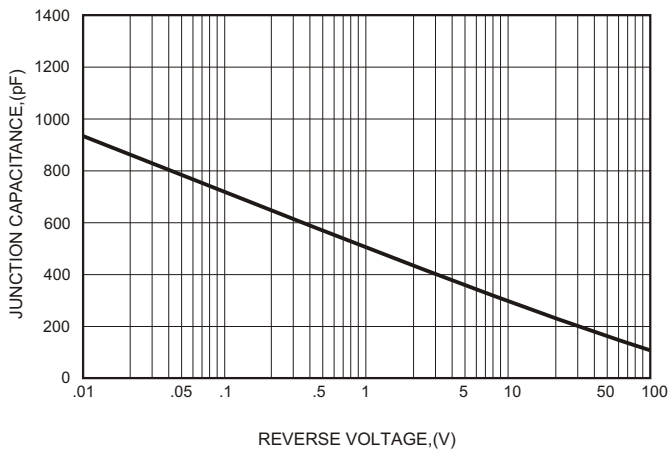
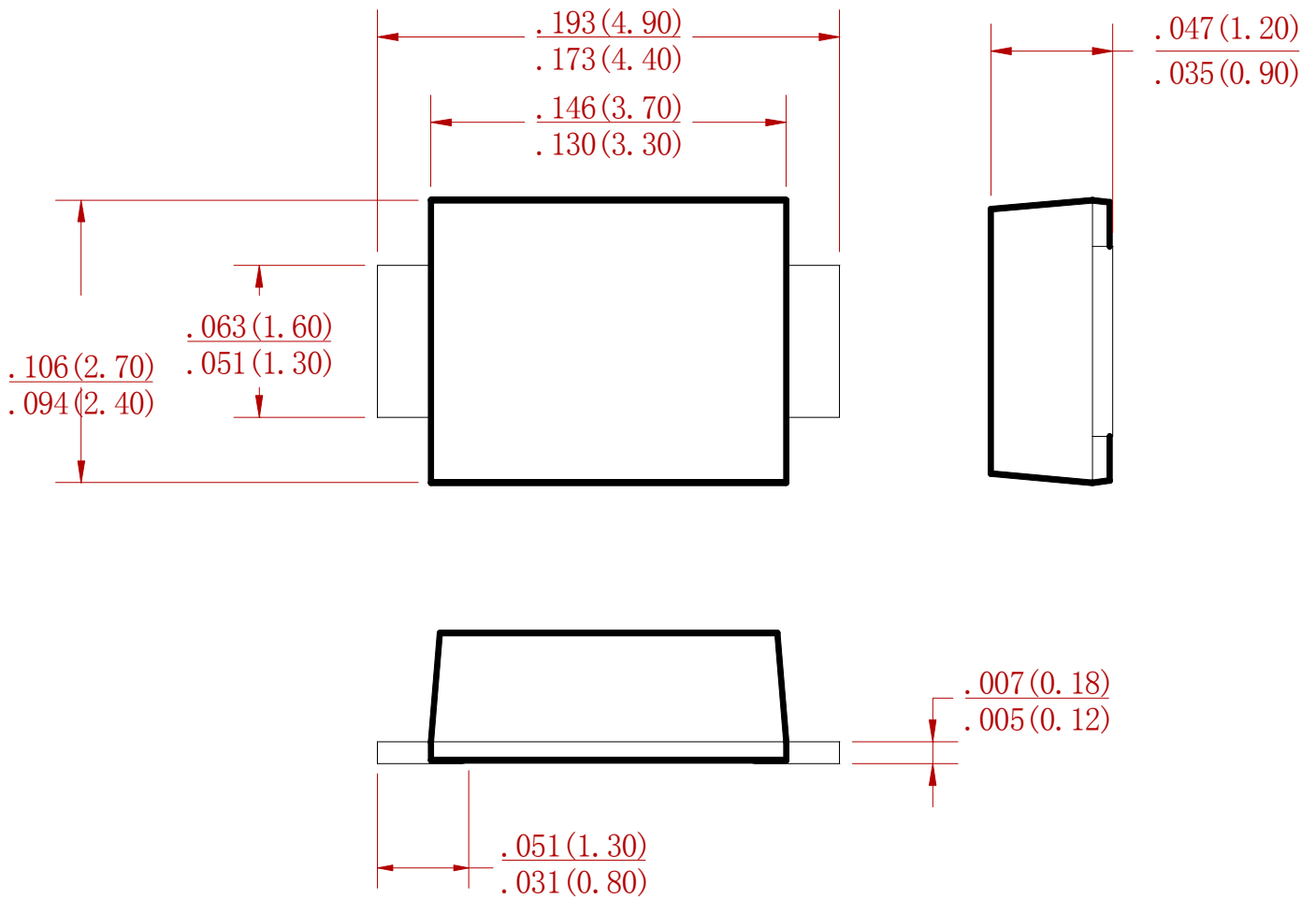


FIG.4-TYPICAL JUNCTION CAPACITANCE



**PACKAGE MECHANICAL DATA**



Dimensions in inches and (millimeters)

**REEL SPECIFICATION**

| P/N               | PKG  | QTY  |
|-------------------|------|------|
| SS52F THRU SS510F | SMAF | 3000 |

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