

### Features

$I_{F(AV)}$  3A

$V_{RRM}$  20V-200V

High surge current capability

Polarity: Color band denotes cathode

### Applications

Rectifier

SMAF



Marking : SS3X

X : 2 To 20

### Limiting Values(Absolute Maximum Rating)

| Item                                 | Symbol             | Unit | Test Conditions                          | SS3        |    |    |    |    |    |     |     |     |
|--------------------------------------|--------------------|------|------------------------------------------|------------|----|----|----|----|----|-----|-----|-----|
|                                      |                    |      |                                          | 2F         | 3F | 4F | 5F | 6F | 8F | 10F | 15F | 20F |
| Repetitive Peak Reverse Voltage      | V <sub>RRM</sub>   | V    |                                          | 20         | 30 | 40 | 50 | 60 | 80 | 100 | 150 | 200 |
| Maximum RMS Voltage                  | V <sub>RMS</sub>   | V    |                                          | 14         | 21 | 28 | 35 | 42 | 56 | 70  | 105 | 140 |
| Average Forward Current              | I <sub>F(AV)</sub> | A    | 60Hz Half-sine wave ,<br>Resistance load | 3.0        |    |    |    |    |    |     |     |     |
| Surge(Non-repetitive)Forward Current | I <sub>FSM</sub>   | A    | 60Hz Half-sine wave ,<br>1 cycle, Ta=25℃ | 80         |    |    |    |    |    |     |     |     |
| Junction Temperature                 | T <sub>J</sub>     | ℃    |                                          | -55 ~ +150 |    |    |    |    |    |     |     |     |
| Storage Temperature                  | T <sub>STG</sub>   | ℃    |                                          | -55 ~ +150 |    |    |    |    |    |     |     |     |

### Electrical Characteristics ( $T = 25^{\circ}C$ Unless otherwise specified)

| Item                          | Symbol                        | Unit     | Test Condition                                            |         | SS3  |    |    |      |     |      |     |      |     |
|-------------------------------|-------------------------------|----------|-----------------------------------------------------------|---------|------|----|----|------|-----|------|-----|------|-----|
|                               |                               |          |                                                           |         | 2F   | 3F | 4F | 5F   | 6F  | 8F   | 10F | 15F  | 20F |
| Peak Forward Voltage          | V <sub>F</sub>                | V        | I <sub>F</sub> =3.0A                                      |         | 0.55 |    |    | 0.70 |     | 0.85 |     | 0.95 |     |
| Peak Reverse Current          | I <sub>RRM1</sub>             | mA       | V <sub>RM</sub> =V <sub>RRM</sub>                         | Ta=25°C | 0.5  |    |    |      | 0.1 |      |     |      |     |
|                               | Ta=100°C                      |          |                                                           | 10      |      |    |    | 5.0  |     |      |     |      |     |
| Thermal Resistance(Typical)   | R <sub>θJ-A</sub>             | °C/<br>W | Between junction and ambient                              |         | 101  |    |    |      |     |      |     |      |     |
|                               | Between junction and terminal |          | 9                                                         |         |      |    |    |      |     |      |     |      |     |
| Juction Capacitance (Typical) | Cj                            | pF       | Measured at 1MHZ and Applied Reverse Voltage of 4.0 V.D.C |         | 146  |    |    | 117  |     | 85   |     | 66   | 57  |

### Notes:

Thermal resistance from junction to ambient and from junction to lead mounted on FR4 PCB double sided copper mini pad

## Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

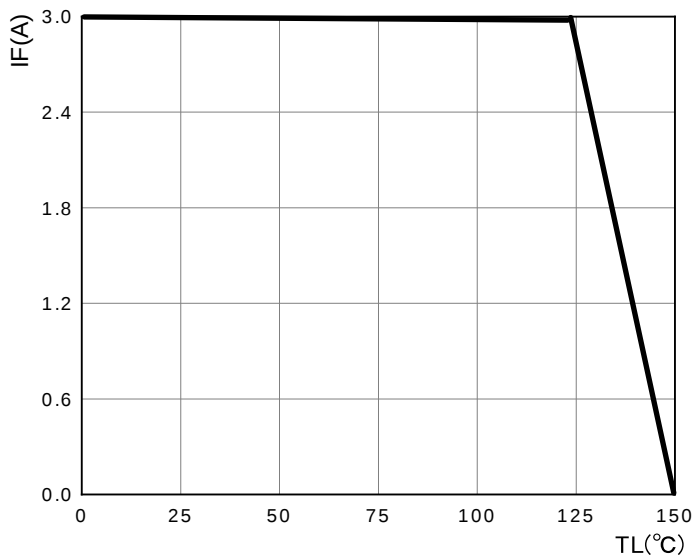
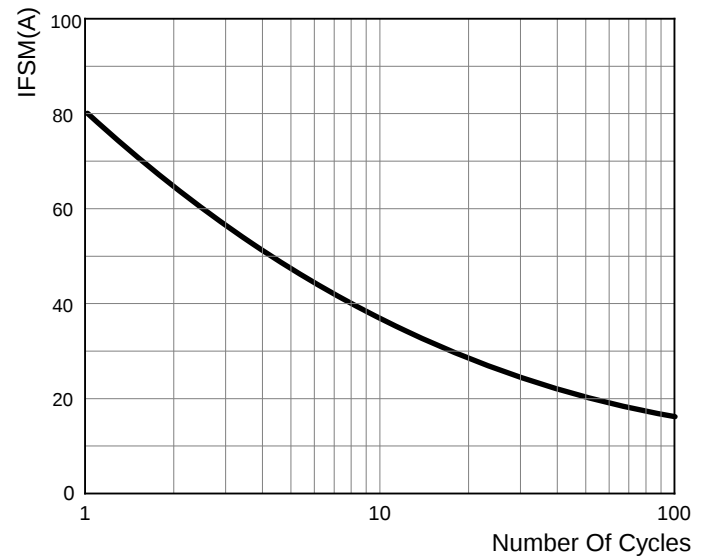
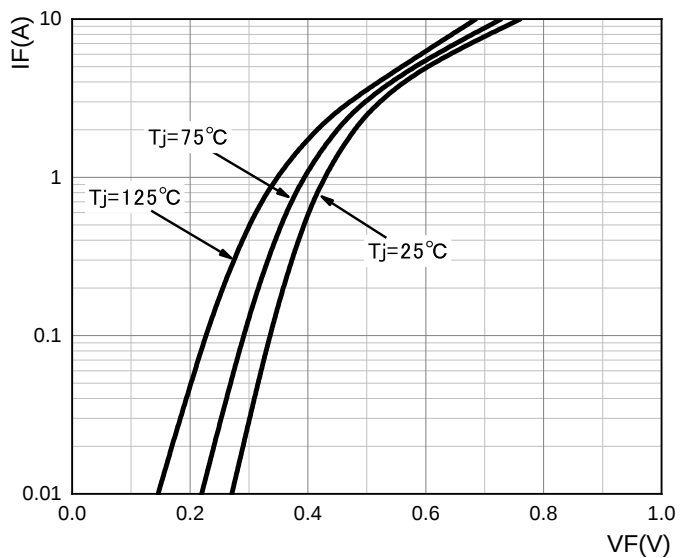


FIG 2: MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



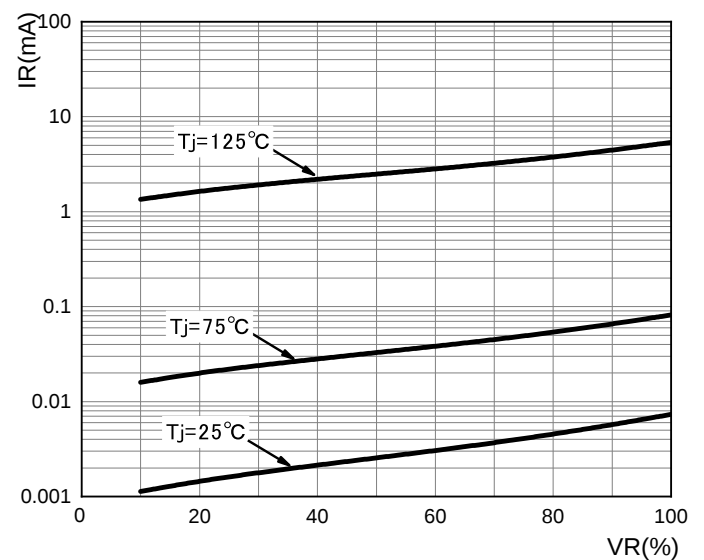
SS32F-SS34F

FIG.3: TYPICAL FORWARD CHARACTERISTICS



SS32F-SS34F

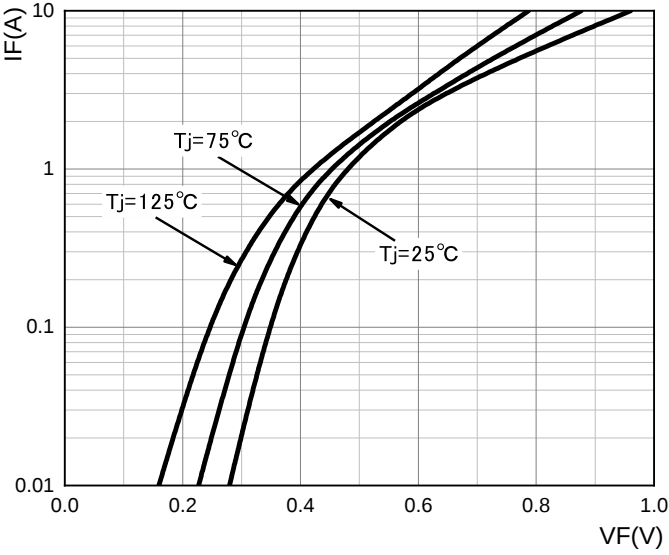
FIG.4: TYPICAL REVERSE CHARACTERISTICS



Typical Characteristics

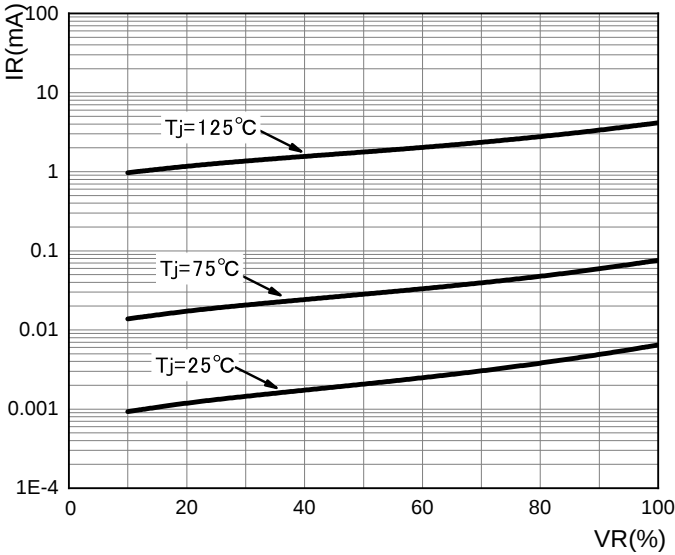
SS35F-SS36F

FIG.5: TYPICAL FORWARD CHARACTERISTICS



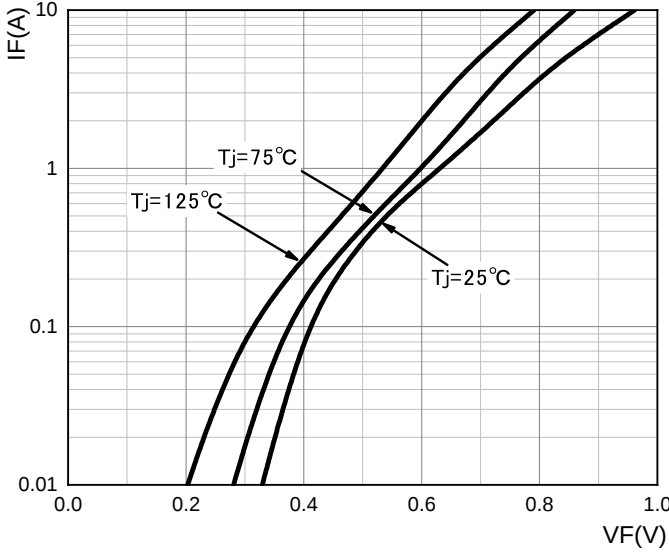
SS35F-SS36F

FIG.6: TYPICAL REVERSE CHARACTERISTICS



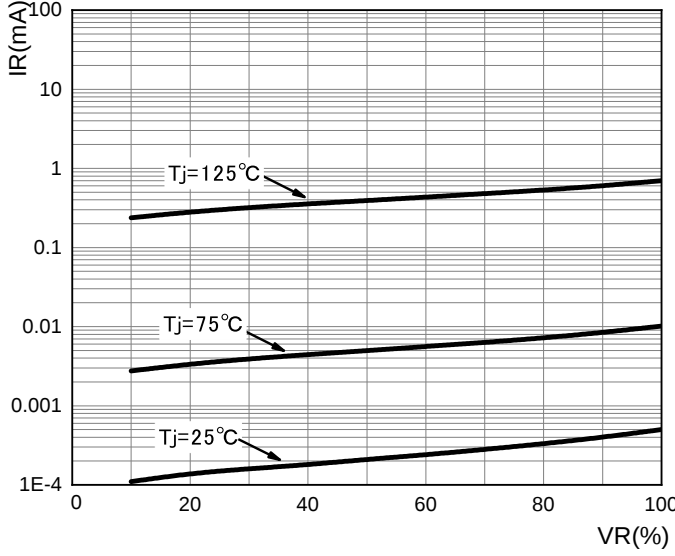
SS38F-SS310F

FIG.7: TYPICAL FORWARD CHARACTERISTICS



SS38F-SS310F

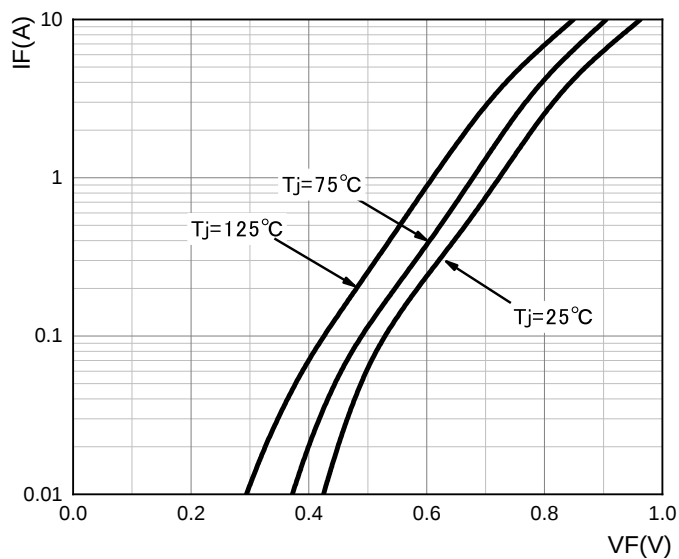
FIG.8: TYPICAL REVERSE CHARACTERISTICS



## Typical Characteristics

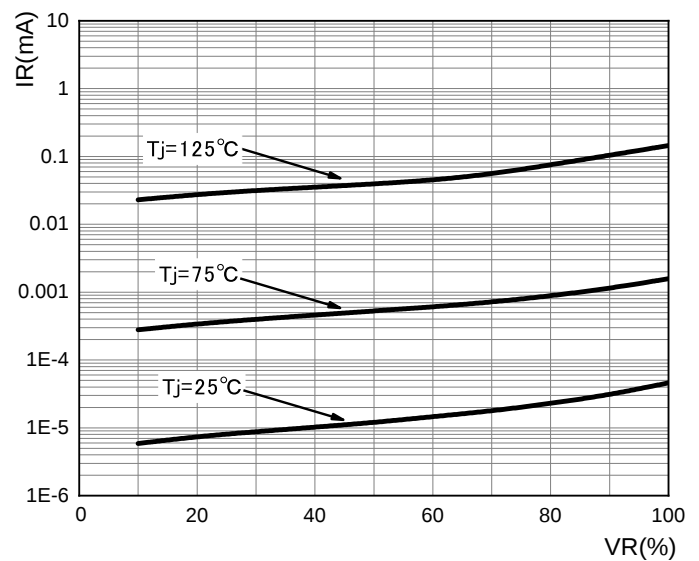
SS315F

FIG.9: TYPICAL FORWARD CHARACTERISTICS



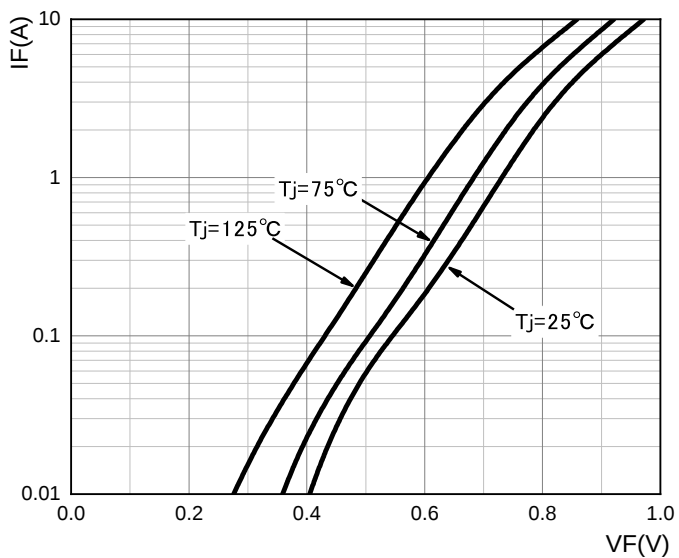
SS315F

FIG.10: TYPICAL REVERSE CHARACTERISTICS



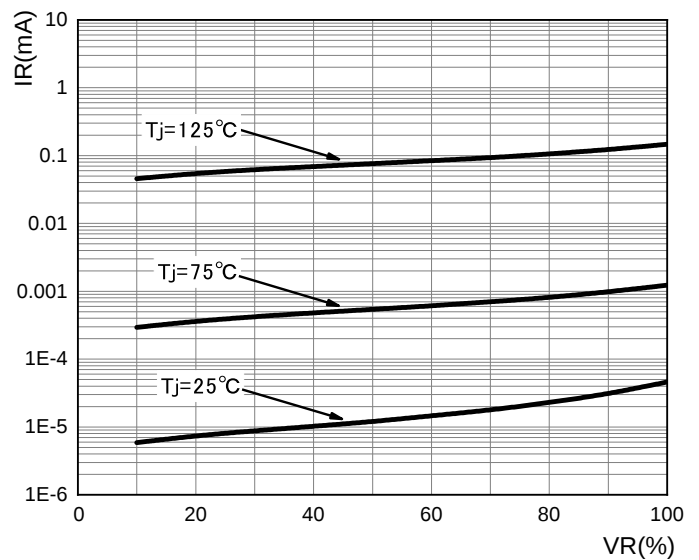
SS320F

FIG.11: TYPICAL FORWARD CHARACTERISTICS

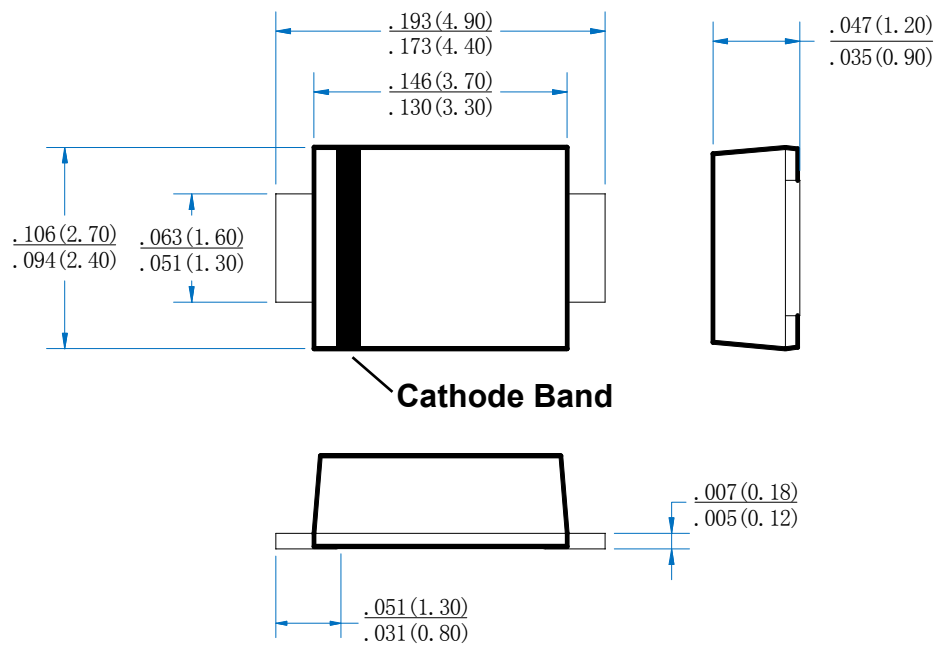


SS320F

FIG.12: TYPICAL REVERSE CHARACTERISTICS

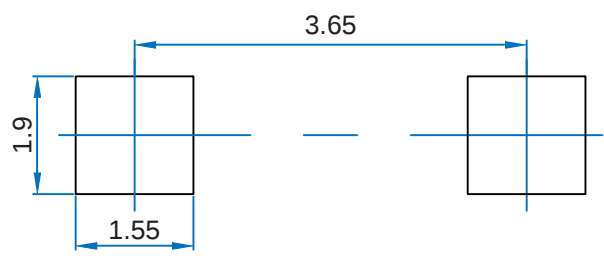


**SMAF** Package outline Dimensions



Dimensions in inches and (millimeters)

**SMAF** Suggested pad Layout



- Note:**
1. Controlling dimension: in millimeters.
  2. General tolerance:  $\pm 0.05$ mm.
  3. The pad layout is for reference purposes only.