

## SMAF Plastic-Encapsulate Diodes

### SS32F THRU SS320F Schottky Rectifier Diodes

#### Features

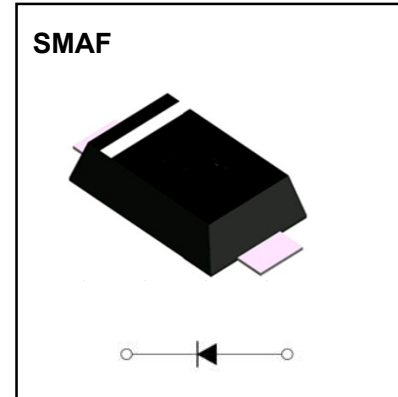
- $I_{F(AV)}$  3A
- $V_{RRM}$  20V-200V
- High surge current capability
- Polarity: Color band denotes cathode

#### Applications

- Rectifier

#### Marking

- SS3X  
X : From 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, TL(Fig.1) | 3.0        |    |    |          |    |    |     |     |     |
| Surge(Non-repetitive)Forward Current | I <sub>FSM</sub>   | A    | 60Hz Half-sine wave,<br>1 cycle, Ta=25℃            | 70         |    |    |          |    |    |     |     |     |
| Junction Temperature                 | T <sub>J</sub>     | ℃    |                                                    | -55~+125   |    |    | -55~+150 |    |    |     |     |     |
| Storage Temperature                  | T <sub>STG</sub>   | ℃    |                                                    | -55 ~ +150 |    |    |          |    |    |     |     |     |

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

| Item                        | Symbol               | Unit | Test Condition                    |                     | SS3  |     |      |    |      |    |      |     |
|-----------------------------|----------------------|------|-----------------------------------|---------------------|------|-----|------|----|------|----|------|-----|
|                             |                      |      |                                   |                     | 2F   | 3F  | 4F   | 5F | 6F   | 8F | 10F  | 15F |
| 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> | T <sub>a</sub> =25℃ | 0.5  |     |      |    | 0.1  |    |      |     |
|                             | T <sub>a</sub> =100℃ |      |                                   | 10                  |      | 5.0 |      |    |      |    |      |     |
| Thermal Resistance(Typical) | R <sub>θJ-A</sub>    | ℃/W  | Between junction and ambient      |                     | 55   |     |      |    |      |    |      |     |
|                             | R <sub>θJ-L</sub>    |      | Between junction and terminal     |                     | 17   |     |      |    |      |    |      |     |

#### Notes:

Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas

## Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

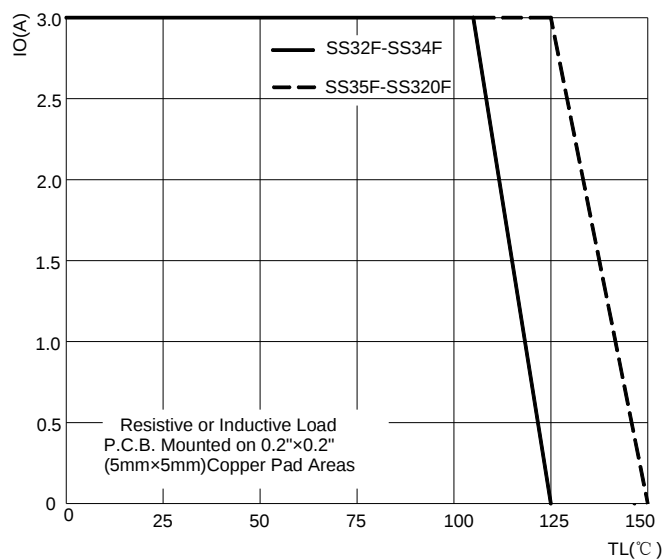


FIG.2: MAXIMUM NON-REPETITIVE FORWARD URGE CURRENT

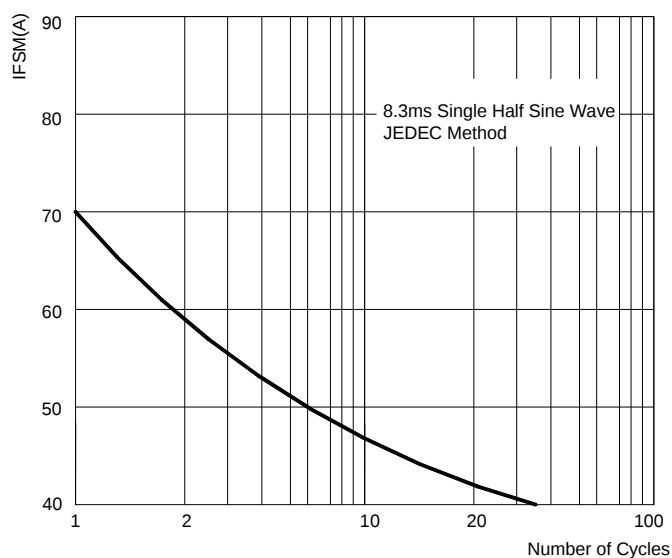


FIG.3: TYPICAL FORWARD CHARACTERISTICS

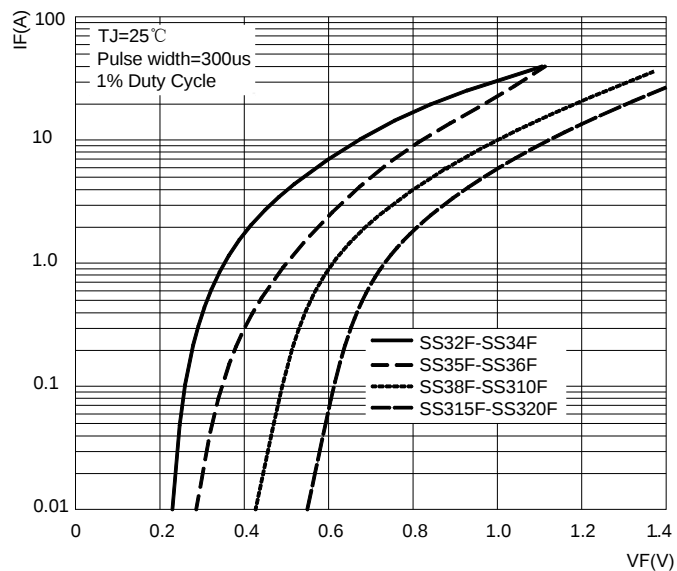
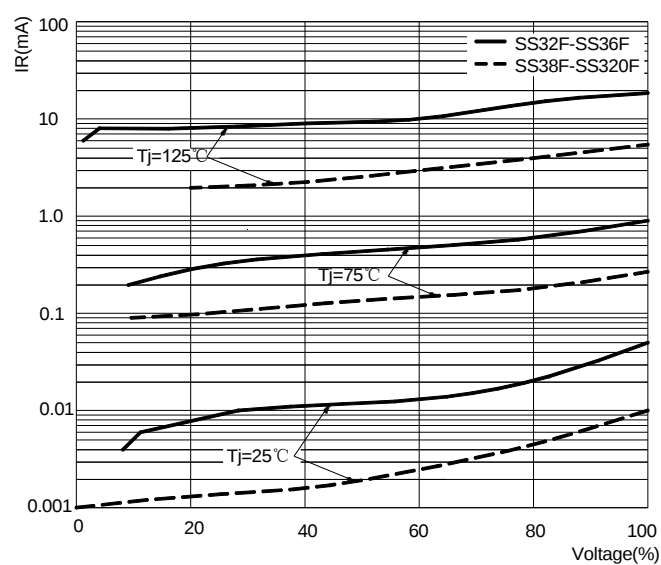
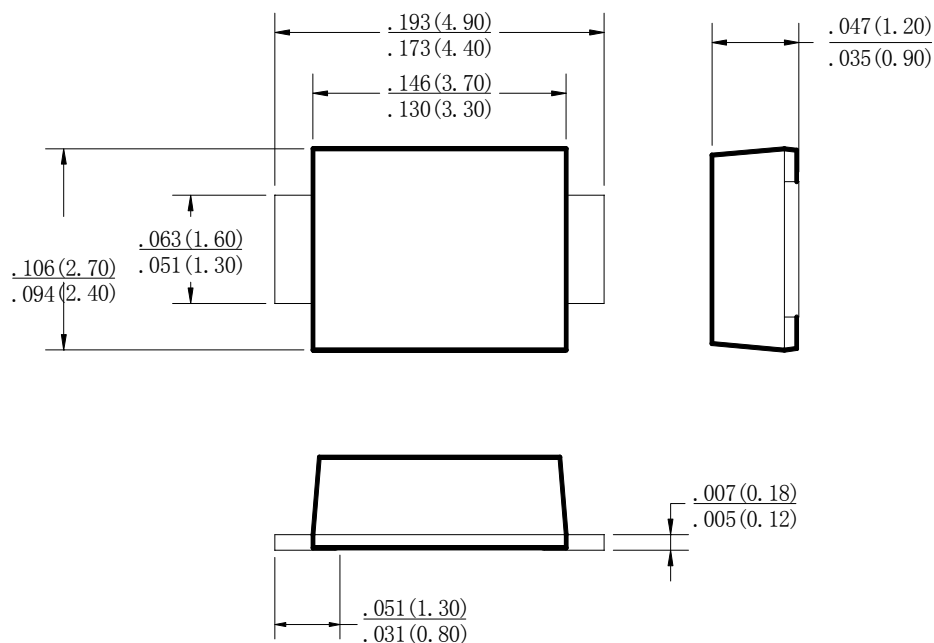


FIG.4: TYPICAL REVERSE CHARACTERISTICS

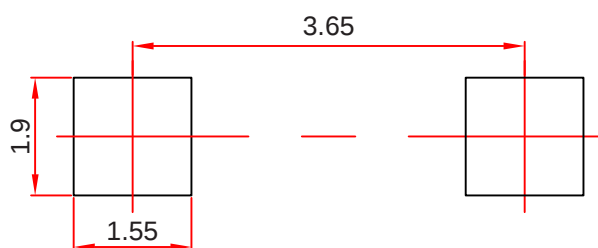


## SMAF Package Outline Dimensions



Dimensions in inches and (millimeters)

## SMAF Suggested Pad Layout

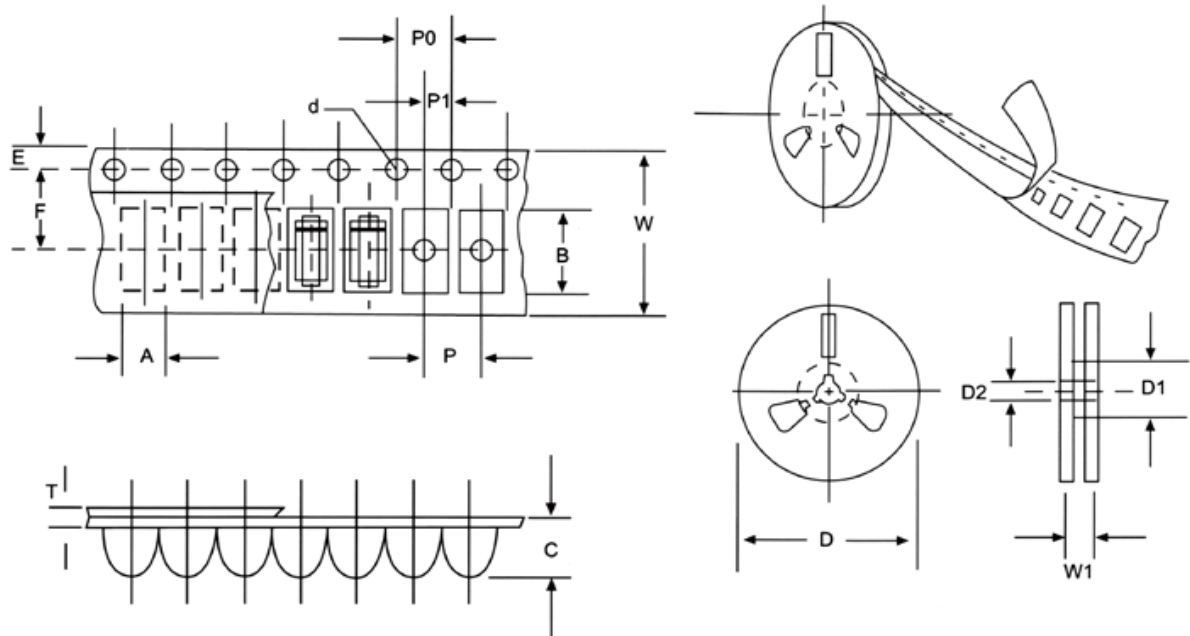


### Note:

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

### NOTICE

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**FIG:CONFIGURATION OF SURFACE MOUNTED DEVICES TAPING**

| ITEM                   | SYMBOL | SMAF mm(inch)          |
|------------------------|--------|------------------------|
| Carrier width          | A      | 2.83+0.1(0.112+0.004)  |
| Carrier length         | B      | 4.90+0.1(0.193+0.004)  |
| Carrier depth          | C      | 1.45+0.1(0.057+0.004)  |
| Sprocket hole          | d      | 1.55+0.05(0.061+0.002) |
| Reel outside diameter  | D      | 178+2.0( 7.0+0.079)    |
| Reel inner diameter    | D1     | 54±1.0( 2.13±0.039)    |
| Feed hole diameter     | D2     | 13+0.5(0.512+0.020)    |
| Strocket hole position | E      | 1.75+0.1(0.069+0.004)  |
| Punch hole position    | F      | 5.5+0.05(0.217+0.002)  |
| Punch hole pitch       | P      | 4.0+0.1(0.157+0.004)   |
| Sprocket hole pitch    | P0     | 4.0+0.1(0.157+0.004)   |
| Embossment center      | P1     | 2.0+0.1(0.079+0.004)   |
| Totall tape thickness  | T      | 0.23-0.29(0.009-0.011) |
| Tape width             | W      | 12.0+0.1(0.472+0.004)  |
| Reel width             | W1     | 16.8+2.0(0.661+0.079)  |

NOTE:Devices are packde in accordance with EIA standard RS-481-A and specification given above.