

## SMAF Plastic-Encapsulate Diodes

### Schottky Rectifier

#### Features

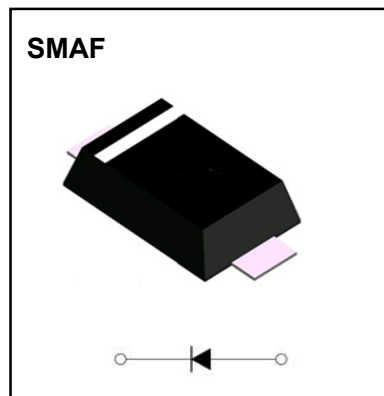
- $I_o$  2A
- $V_{RRM}$  20V-200V
- High surge current capability
- Polarity: Color band denotes cathode

#### Applications

- Rectifier

#### Marking

- SS22F-SS220F : SS22-SS220



#### Limiting Values (Absolute Maximum Rating)

| Item                                 | Symbol      | Unit             | Test Conditions                                      | SS2        |    |    |    |          |    |     |     |     |  |
|--------------------------------------|-------------|------------------|--|------------|----|----|----|----------|----|-----|-----|-----|--|
|                                      |             |                  |  | 2F         | 3F | 4F | 5F | 6F       | 8F | 10F | 15F | 20F |  |
| Repetitive Peak Reverse Voltage      | $V_{RRM}$   | V                |  | 20         | 30 | 40 | 50 | 60       | 80 | 100 | 150 | 200 |  |
| Maximum RMS Voltage                  | $V_{RMS}$   | V                |  | 14         | 21 | 28 | 35 | 42       | 56 | 70  | 105 | 140 |  |
| Average Forward Current              | $I_{F(AV)}$ | A                | 60HZ Half-sine wave, Resistance load, TL(Fig.1)      | 2.0        |    |    |    |          |    |     |     |     |  |
| Surge(Non-repetitive)Forward Current | $I_{FSM}$   | A                | 60Hz Half-sine wave, 1 cycle, $T_a=25^\circ\text{C}$ | 50         |    |    |    |          |    |     |     |     |  |
| Junction Temperature                 | $T_J$       | $^\circ\text{C}$ |  | -55~+125   |    |    |    | -55~+150 |    |     |     |     |  |
| Storage Temperature                  | $T_{STG}$   | $^\circ\text{C}$ |  | -55 ~ +150 |    |    |    |          |    |     |     |     |  |

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

| Item                        | Symbol           | Unit                      | Test Condition                | SS2                     |                  |    |     |     |      |     |      |     |  |
|-----------------------------|------------------|---------------------------|-------------------------------|-------------------------|------------------|----|-----|-----|------|-----|------|-----|--|
|                             |                  |                           |                               | 2F                      | 3F               | 4F | 5F  | 6F  | 8F   | 10F | 15F  | 20F |  |
| Peak Forward Voltage        | $V_F$            | V                         | $I_F=2.0\text{A}$             | 0.55                    |                  |    | 0.7 |     | 0.85 |     | 0.95 |     |  |
| Peak Reverse Current        | $I_{RRM1}$       | mA                        | $V_{RM}=V_{RRM}$              | $T_a=25^\circ\text{C}$  |                  |    |     | 0.5 |      | 0.1 |      |     |  |
|                             | $I_{RRM2}$       |                           |                               | $T_a=100^\circ\text{C}$ |                  |    |     | 10  |      | 5.0 |      |     |  |
| Thermal Resistance(Typical) | $R_{\theta J-A}$ | $^\circ\text{C}/\text{W}$ | Between junction and ambient  |                         | 75 <sup>1)</sup> |    |     |     |      |     |      |     |  |
|                             | $R_{\theta J-L}$ |                           | Between junction and terminal |                         | 17 <sup>1)</sup> |    |     |     |      |     |      |     |  |

#### 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

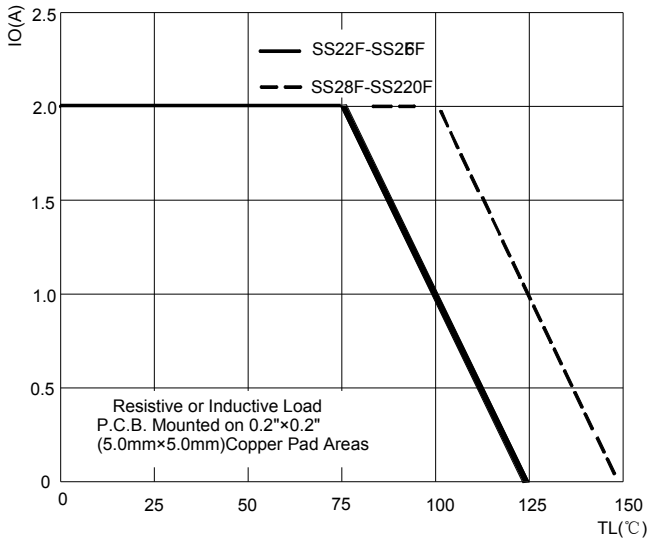


FIG.2: MAXIMUM NON-REPETITIVE FORWARD URGE CURRENT

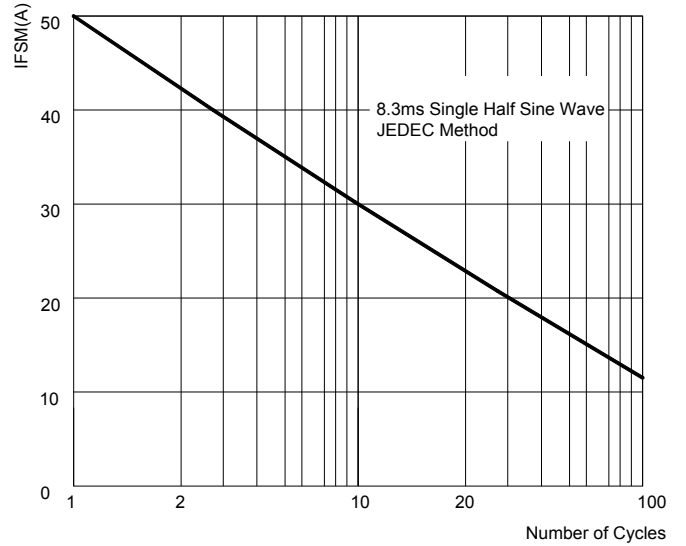


FIG.3: TYPICAL FORWARD CHARACTERISTICS

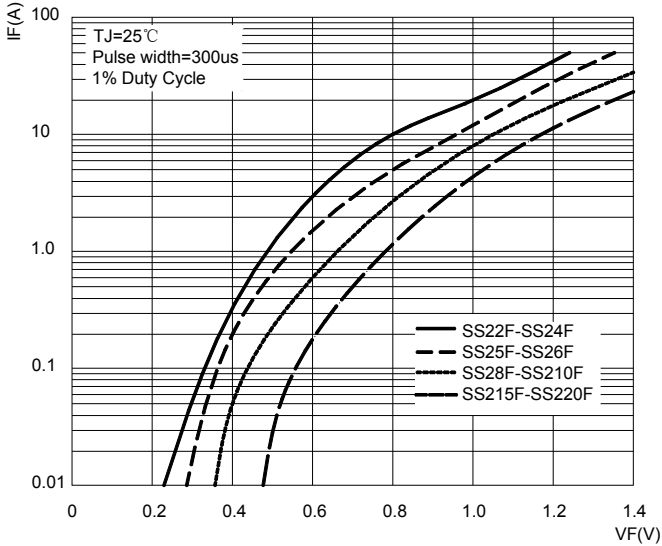
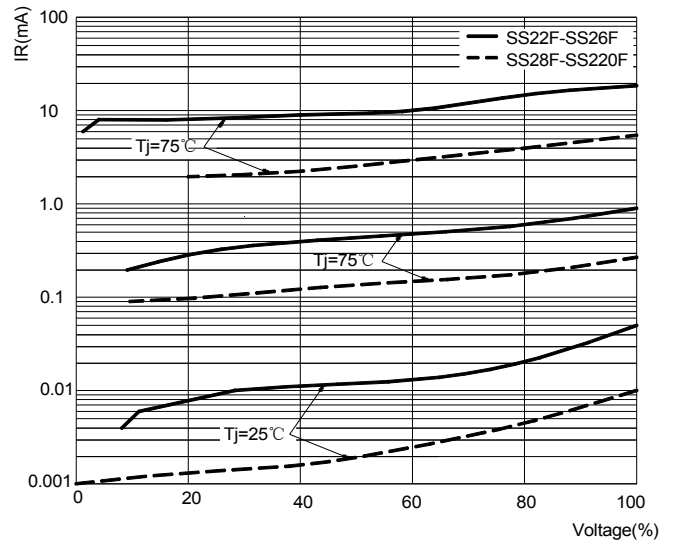
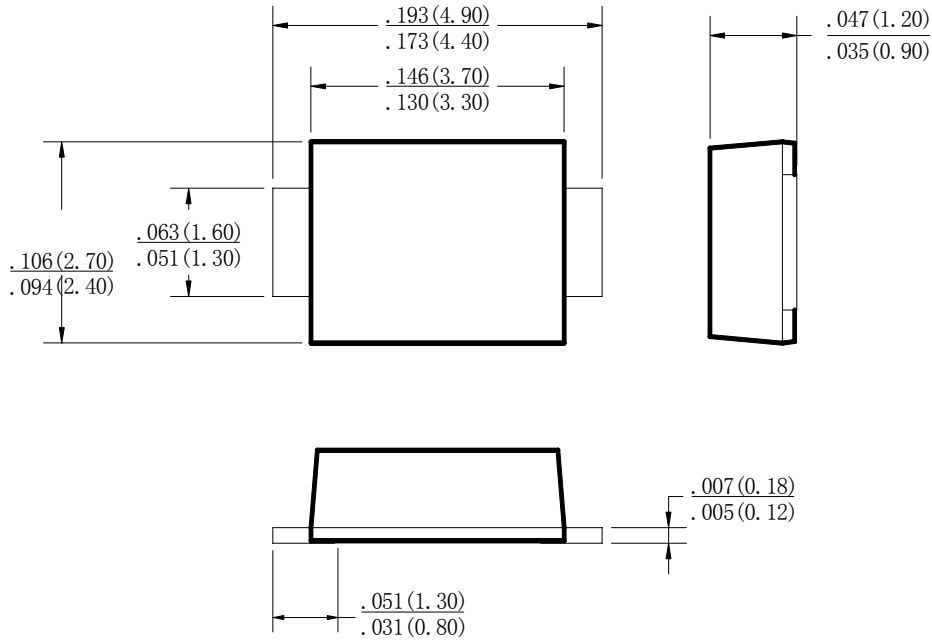


FIG.4: TYPICAL REVERSE CHARACTERISTICS

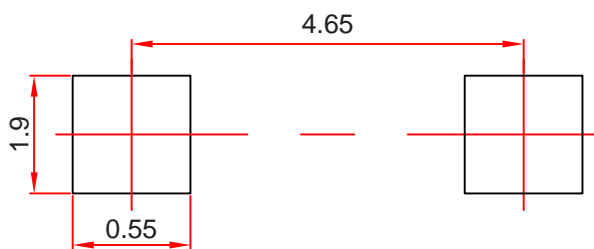


## SMAF Package Outline Dimensions



Dimensions in inches and (millimeters)

## SMAF Suggested Pad Layout

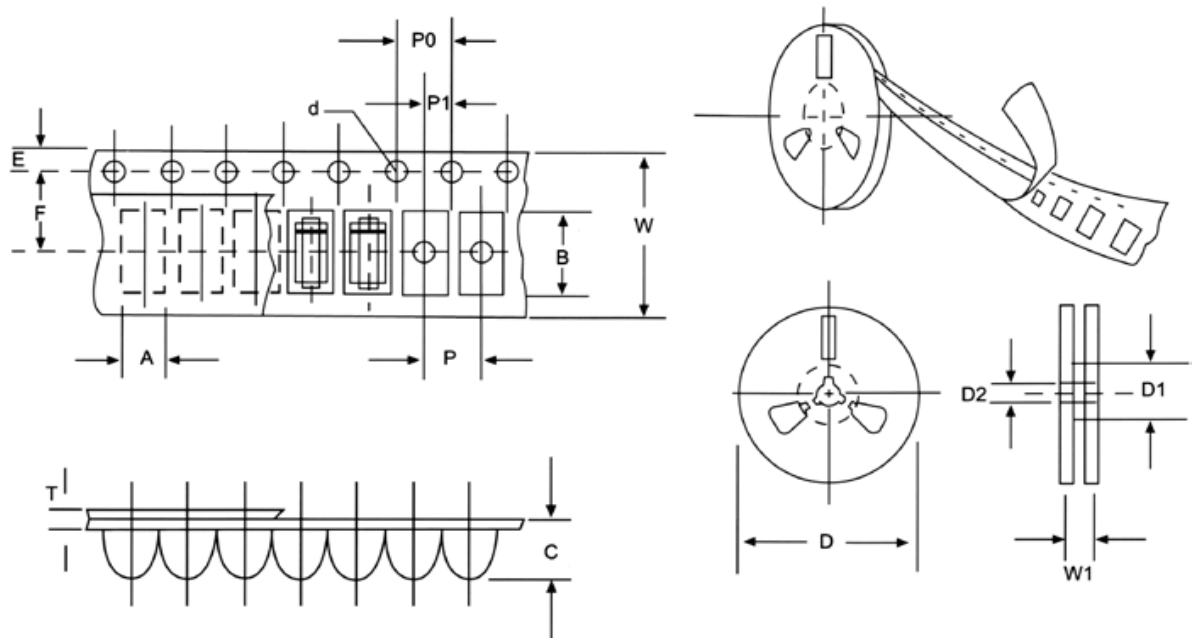


### Note:

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

### NOTICE

JSHD reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. JSHD does not assume any liability arising out of the application or use of any product described herein.



**FIG:CONFIGURATION OF AXIAL 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      | 280/178+2.0(11/7.0+0.079) |
| Reel inner diameter    | D1     | 8.0+0.2(0.315+0.008)      |
| Feed hole diameter     | D2     | 13+0.5(0.512+0.020)       |
| Sprocket 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.