

## SMAF Plastic-Encapsulate Diodes

### SS12F THRU SS120F Schottky Rectifier Diodes

#### Features

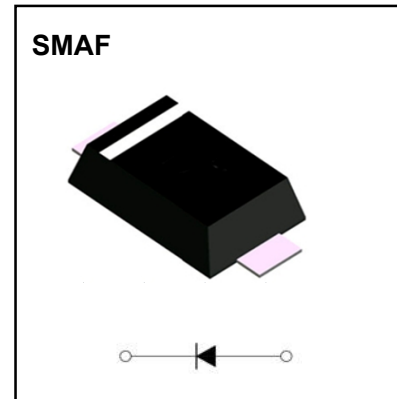
- $I_{F(AV)}$  1A
- $V_{RRM}$  20V-200V
- High surge current capability
- Polarity: Color band denotes cathode

#### Applications

- Rectifier

#### Marking

- SS1X  
X : From 2 To 20



#### Limiting Values(Absolute Maximum Rating)

Item	Symbol	Unit	Test Conditions	SS1														
				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)	1.0														
Surge(Non-repetitive)Forward Current	$I_{FSM}$	A	60Hz Half-sine wave, 1 cycle, $T_a=25^\circ\text{C}$	30														
Junction Temperature	$T_J$	$^\circ\text{C}$		-55~+125					-55~+150									
Storage Temperature	$T_{STG}$	$^\circ\text{C}$		-55 ~ +150														

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

Item	Symbol	Unit	Test Condition	SS1													
				2F	3F	4F	5F	6F	8F	10F	15F	20F					
Peak Forward Voltage	$V_F$	V	$I_F=1.0\text{A}$	0.55		0.70		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		88												
	$R_{\theta J-L}$		Between junction and terminal		28												

#### 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

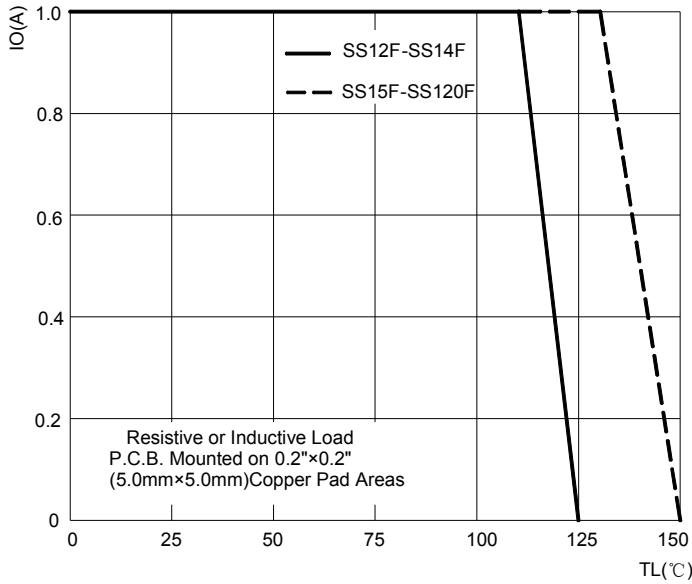


FIG2:Surge Forward Current Capadity

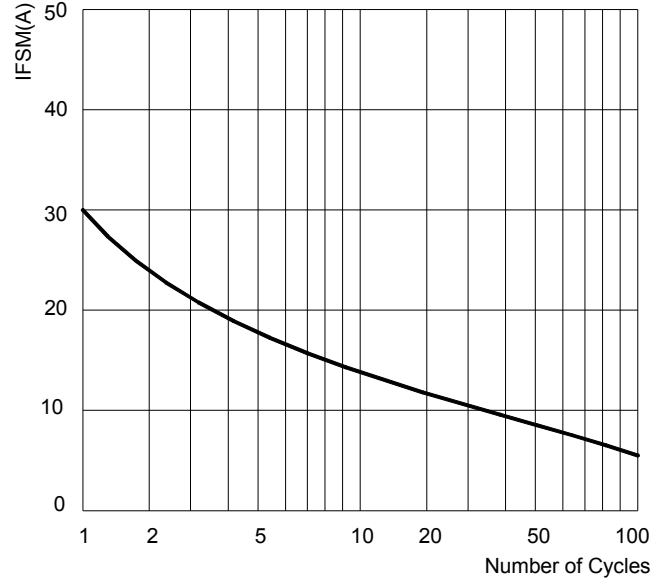


FIG.3: TYPICAL FORWARD CHARACTERISTICS

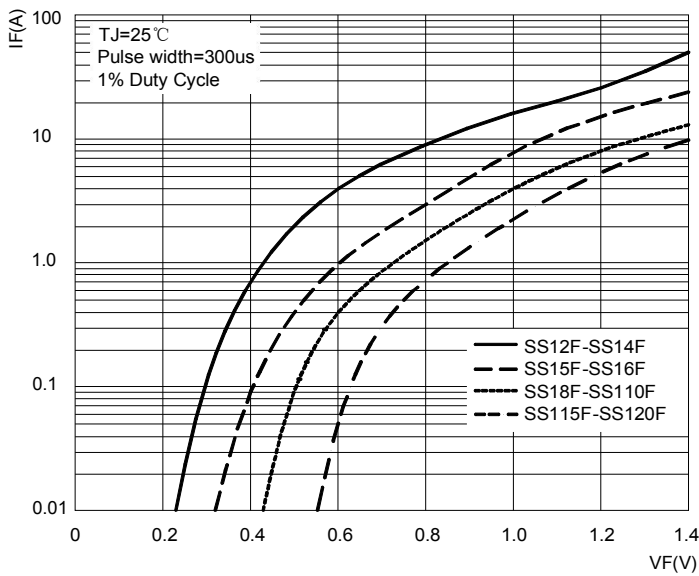
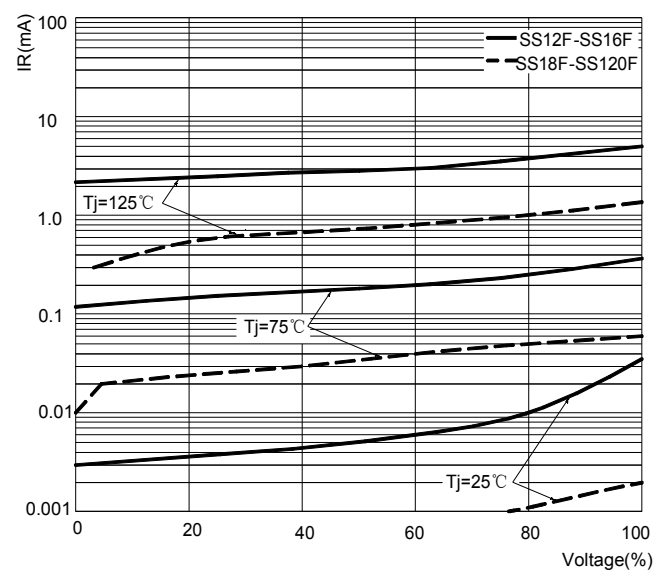
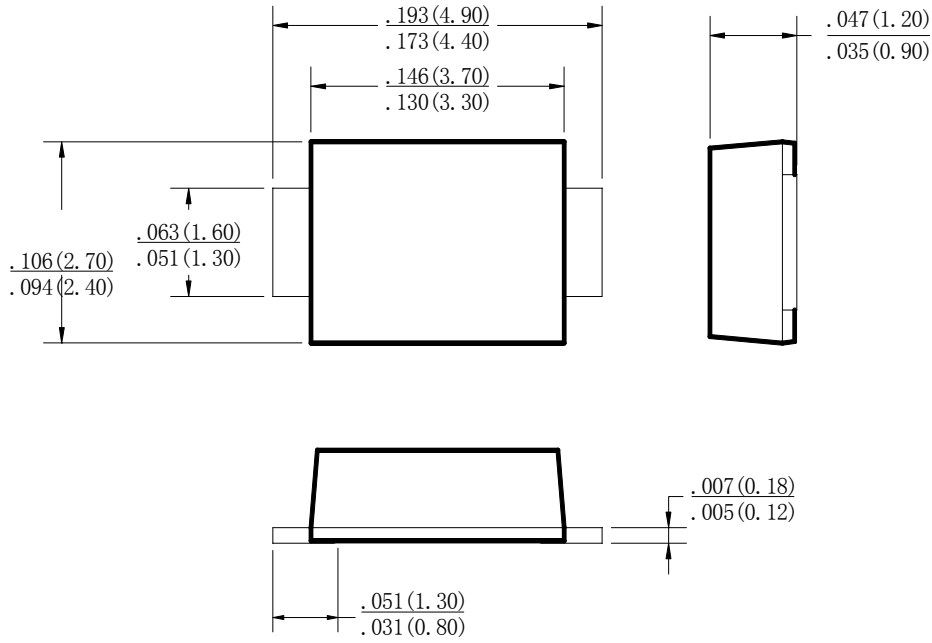


FIG.4: TYPICAL REVERSE CHARACTERISTICS

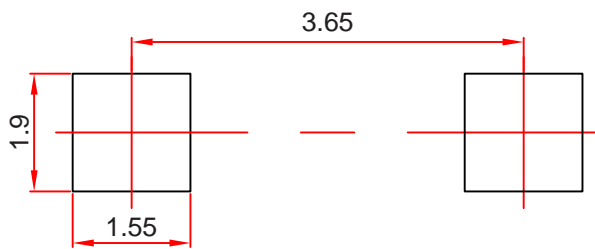


## SMAF Package Outline Dimensions



Dimensions in inches and (millimeters)

## SMAF Suggested Pad Layout



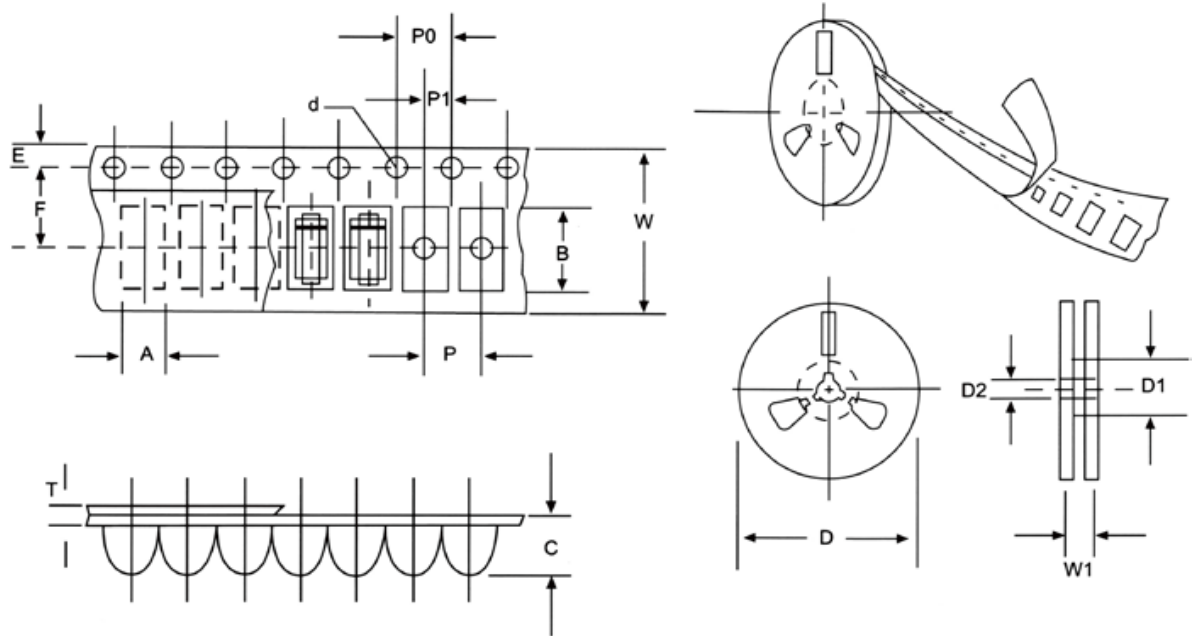
**Note:**

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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**Reel Taping Specifications For Surface Mount Devices- SMAF**



**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)
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)
Total 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 packed in accordance with EIA standard RS-481-A and specification given above.