

## SMAJ Plastic-Encapsulate Diodes

### Schottky Rectifier

#### Features

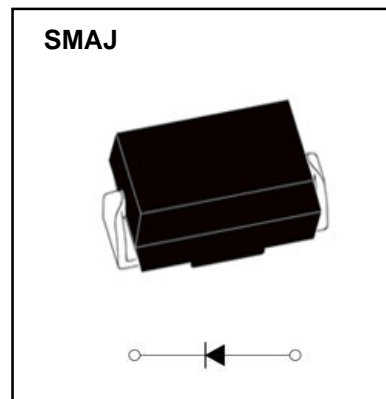
- $I_o$  1A
- $V_{RRM}$  20V-200V
- High surge current capability
- Polarity: Color band denotes cathode

#### Applications

- Rectifier

#### Marking

- SK1X
- X : From 2 To 20



#### Limiting Values (Absolute Maximum Rating)

Item	Symbol	Unit	Test Conditions	SK														
				12	13	14	15	16	18	110	115	120						
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 , $T_a = 25^\circ C$	30														
Junction Temperature	$T_J$	$^\circ C$		-55~+125					-55~+150									
Storage Temperature	$T_{STG}$	$^\circ C$		-55 ~ +150														

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

Item	Symbol	Unit	Test Condition	SK									
				12	13	14	15	16	18	110	115	120	
Peak Forward Voltage	$V_F$	V	$I_F = 1.0A$	0.55			0.70			0.85		0.95	
Peak Reverse Current	$I_{RRM1}$	mA	$V_{RM} = V_{RRM}$	$T_a = 25^\circ C$				0.5				0.2	
	$I_{RRM2}$			10			5.0						
Thermal Resistance(Typical)	$R_{\theta J-A}$	$^\circ C/W$	Between junction and ambient	88 <sup>1)</sup>									
	$R_{\theta J-L}$		Between junction and terminal	28 <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

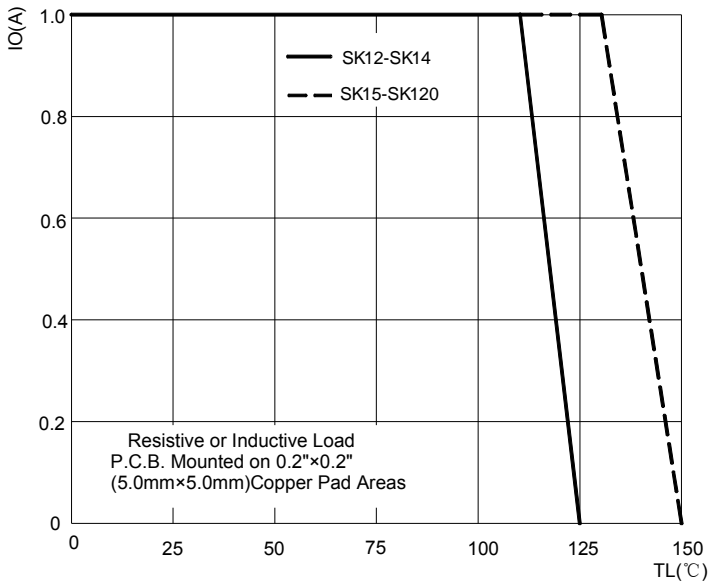


FIG2:Surge Forward Current Capadility

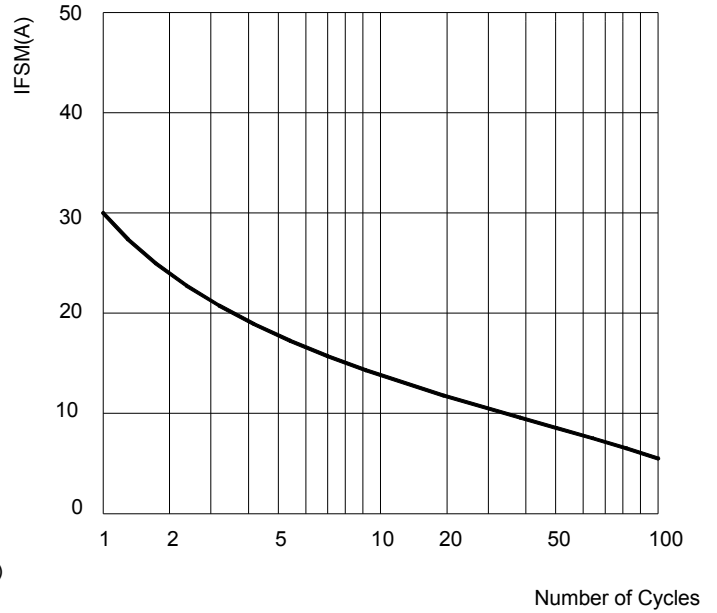


FIG.3: TYPICAL FORWARD CHARACTERISTICS

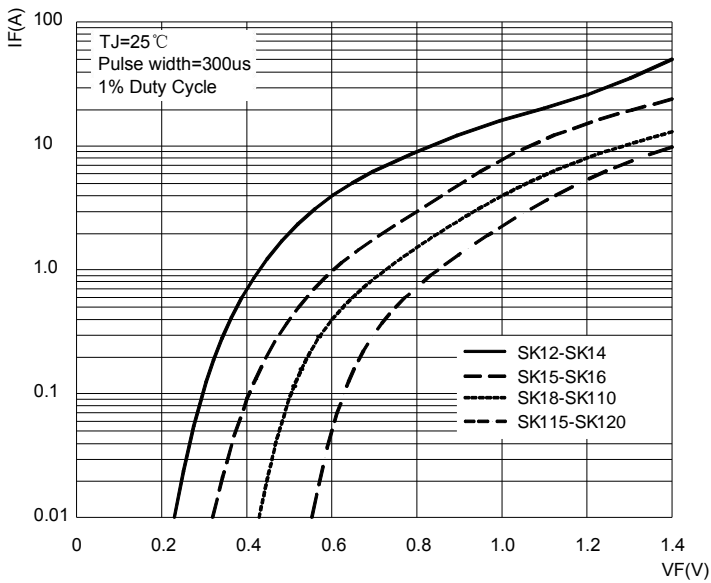
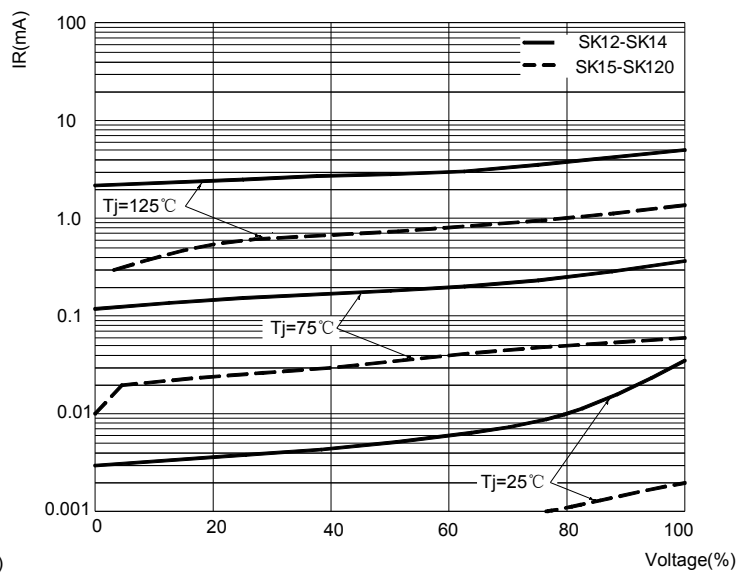
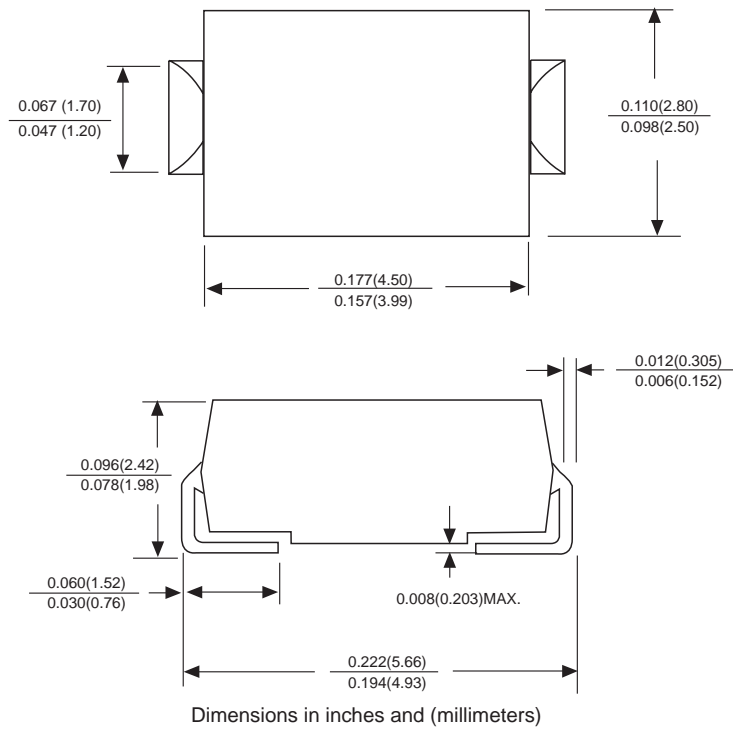


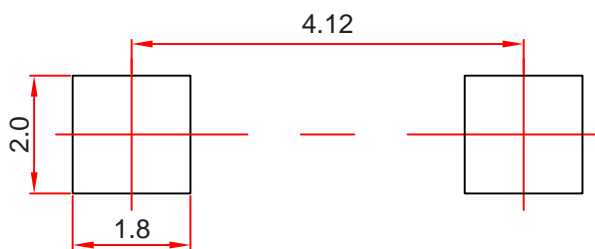
FIG.4: TYPICAL REVERSE CHARACTERISTICS



## SMAJ Package Outline Dimensions



## SMAJ Suggested Pad Layout



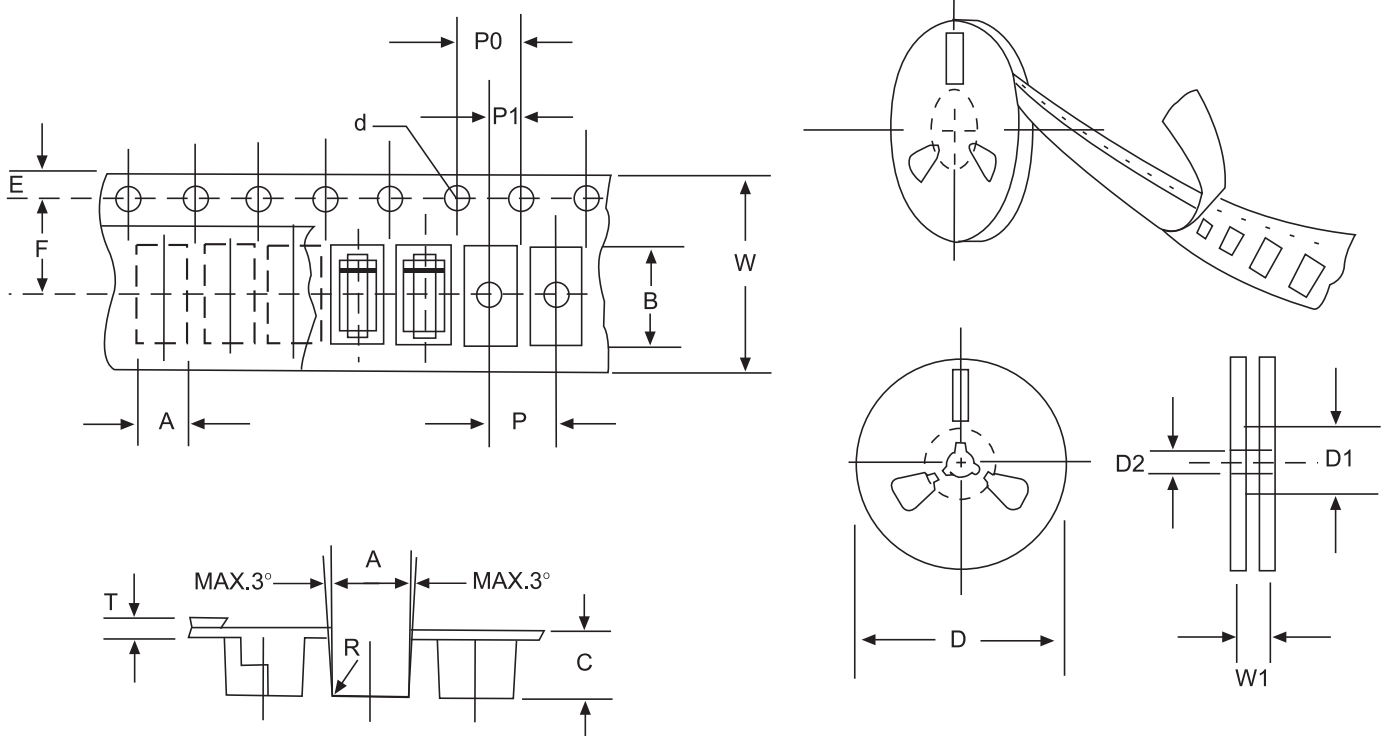
**Note:**

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

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## Reel Taping Specifications For Surface Mount Devices- SMA



**FIG:CONFIGURATION OF AXIAL TAPING**

ITEM	SYMBOL	SMA mm(inch)
Carrier width	A	2.79±0.1(0.110±0.004)
Carrier length	B	5.33±0.1(0.210±0.004)
Carrier depth	C	2.36±0.1(0.093±0.004)
Sprocket hole	d	1.5±0.05(0.059±0.0002)
Reel outside diameter	D	330/178±2.0(13/7.0±0.79)
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)
Total tape thickness	T	0.28±0.02(0.011±0.0008)
Tape width	W	12.0±0.2(0.472±0.008)
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.

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