

## SMC Plastic-Encapsulate Diodes

### 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

SMC



#### Limiting Values(Absolute Maximum Rating)

Item	Symbol	Unit	Test Conditions	SK3									
				2	3	4	5	6	8	10	15	20	
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)	3.0									
Surge(Non-repetitive)Forward Current	$I_{FSM}$	A	60Hz Half-sine wave, 1 cycle, $T_a=25^{\circ}C$	100									
Junction Temperature	$T_J$	$^{\circ}C$		-55~+150									
Storage Temperature	$T_{STG}$	$^{\circ}C$		-55 ~ +150									

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

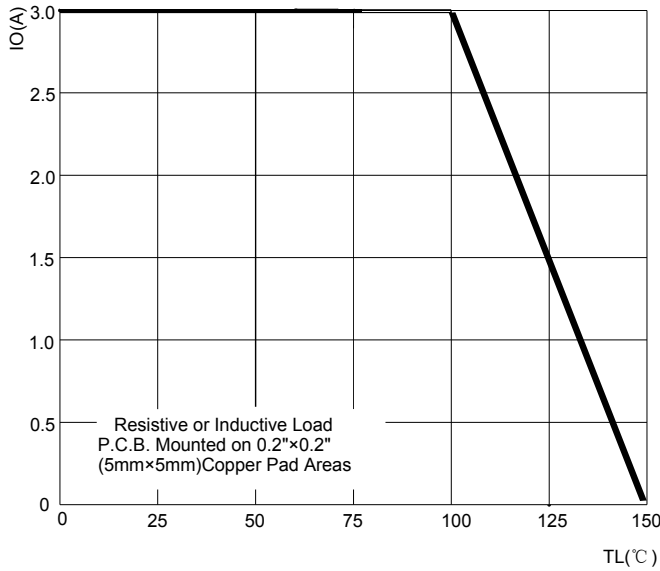
Item	Symbol	Unit	Test Condition	SK3									
				2	3	4	5	6	8	10	15	20	
Peak Forward Voltage	$V_F$	V	$I_F=3.0A$	0.55		0.7		0.82		0.90			
Peak Reverse Current	$I_{RRM1}$	mA	$V_{RM}=V_{RRM}$	$T_a=25^{\circ}C$				0.2		0.1			
	$I_{RRM2}$			5.0									
Thermal Resistance(Typical)	$R_{\theta J-A}$	$^{\circ}C/W$	Between junction and ambient		47 <sup>1)</sup>								
	$R_{\theta J-L}$		Between junction and terminal		13 <sup>1)</sup>								

#### Notes:

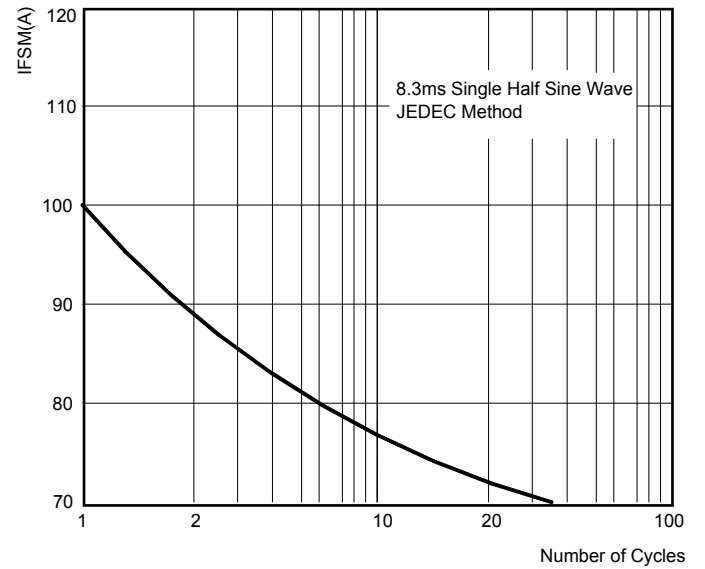
Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas

**Typical Characteristics**

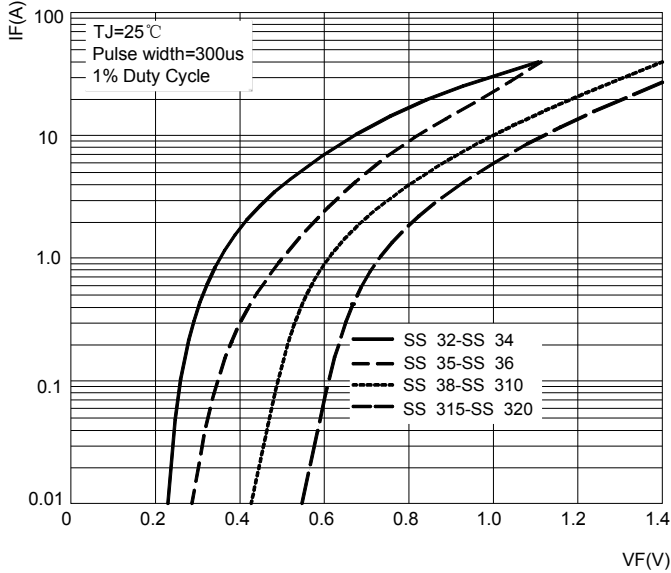
**FIG.1: FORWARD CURRENT DERATING CURVE**



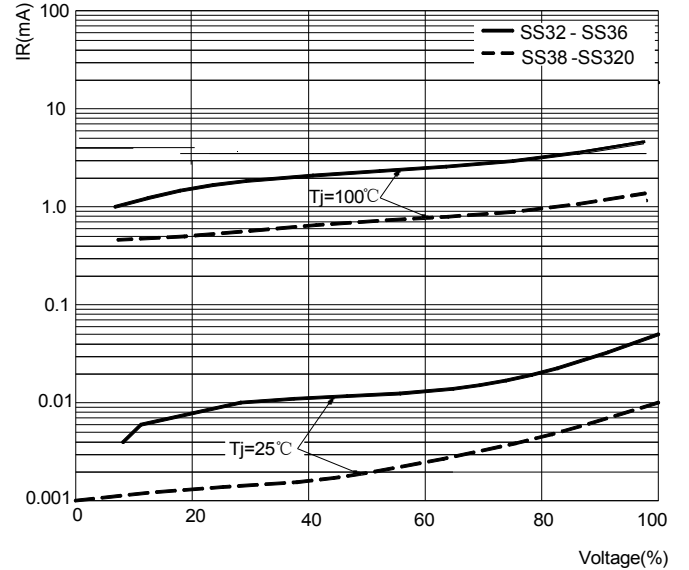
**FIG.2: MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



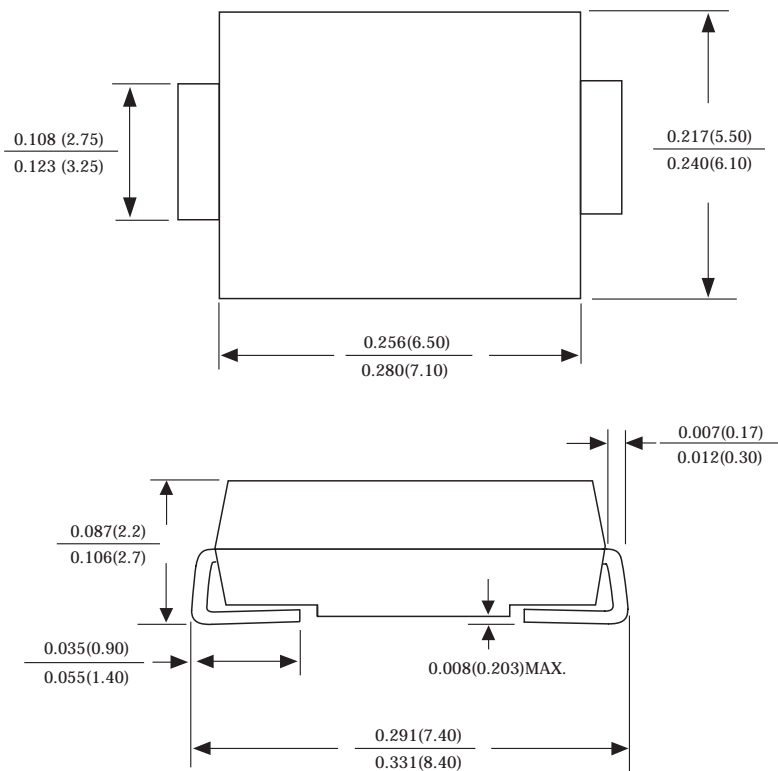
**FIG.3: TYPICAL FORWARD CHARACTERISTICS**



**FIG.4: TYPICAL REVERSE CHARACTERISTICS**

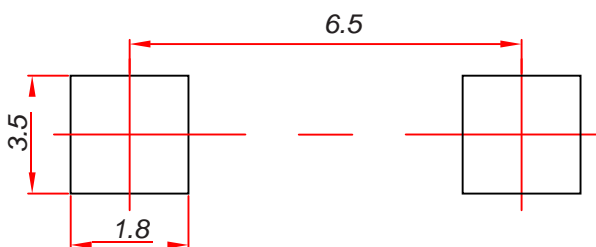


### SMC Package Outline Dimensions



Dimensions in inches and (millimeters)

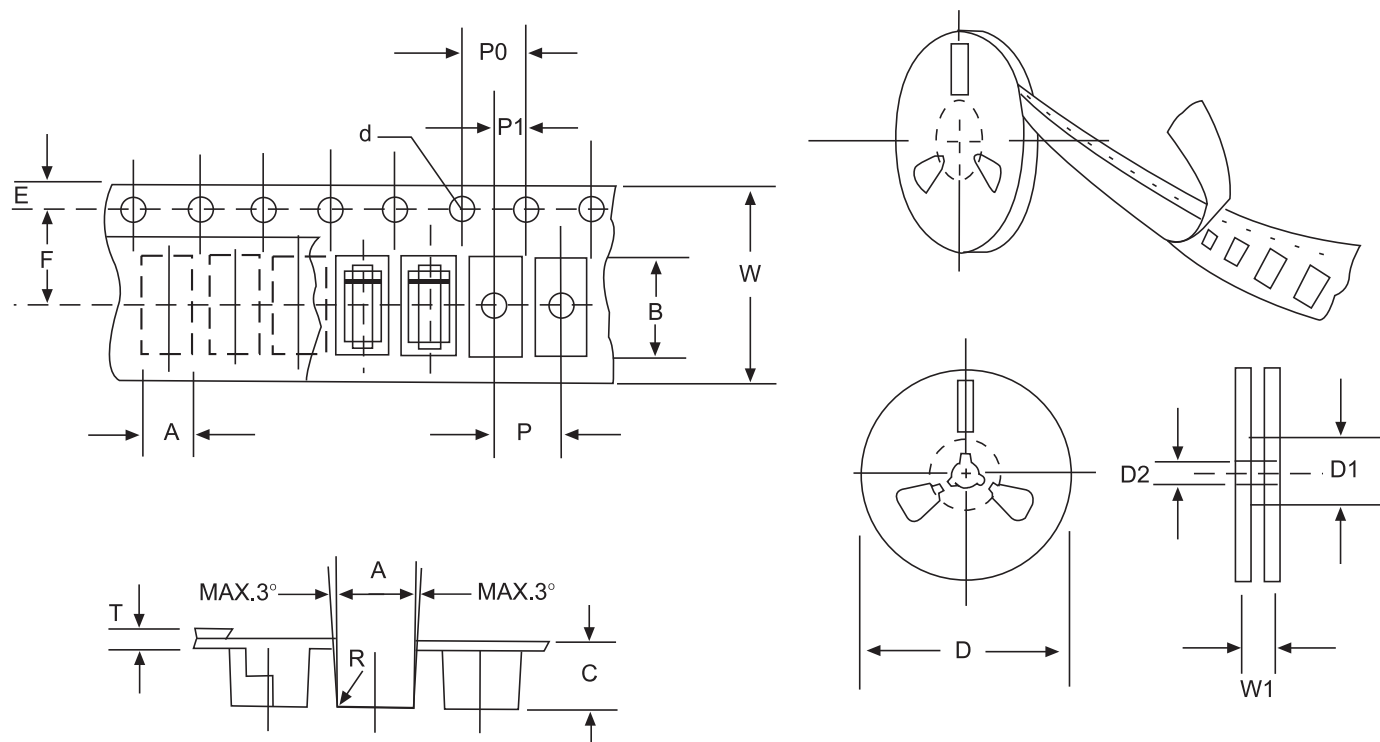
### SMC Suggested Pad Layout



**Note:**

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

## Reel Taping Specifications For Surface Mount Devices-SMC



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

ITEM	SYMBOL	SMC mm(inch)
Carrier width	A	6.05±0.1(0.238±0.004)
Carrier length	B	8.31±0.1(0.327±0.004)
Carrier depth	C	2.70±0.1(0.106±0.004)
Sprocket hole	d	1.55±0.05(0.061±0.002)
Reel outside diameter	D	330±2.0(13±0.079)
Reel inner diameter	D1	75±1.0 ( 2.95 ±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	7.65±0.05(0.301±0.002)
Punch hole pitch	P	8.0±0.1(0.315±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	0.3±0.1(0.012±0.004)
Tape width	W	16.0±0.2(0.630±0.008)
Reel width	W1	24.0±2.0(0.945±0.079)

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