



## SMC Plastic-Encapsulate Diodes

### SS52 THRU SS520 Schottky Rectifier Diodes

#### Features

- $I_{F(AV)}$  5A
- $V_{RRM}$  20V-200V
- High surge current capability
- Polarity: Color band denotes cathode

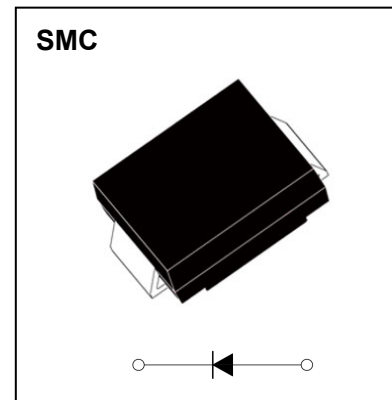
#### Applications

- Rectifier

#### Marking

- SS5X

X : From 2 To 20



#### Limiting Values (Absolute Maximum Rating)

Item	Symbol	Unit	Test Conditions	SS5								
				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)	5.0								
Surge(Non-repetitive)Forward Current	$I_{FSM}$	A	60Hz Half-sine wave , 1 cycle , $T_a = 25^\circ\text{C}$	200								
Junction Temperature	$T_J$	$^\circ\text{C}$		-50~+150								
Storage Temperature	$T_{STG}$	$^\circ\text{C}$		-50 ~ +150								

#### Electrical Characteristics (T=25°C Unless otherwise specified)

Item	Symbol	Unit	Test Condition	SS5								
				2	3	4	5	6	8	10	15	20
Peak Forward Voltage	$V_F$	V	$I_F = 5.0\text{A}$	0.50		0.65		0.85		0.95		
Peak Reverse Current	$I_{RRM1}$	mA	$V_{RM} = V_{RRM}$	$T_a = 25^\circ\text{C}$		0.1						
	$I_{RRM2}$			$T_a = 105^\circ\text{C}$		1.0						
Voltage rate of change	$dV/dt$	V/ $\mu\text{s}$	Rated $V_R$	10000								
Thermal Resistance(Typical)	$R_{\theta J-A}$	$^\circ\text{C}/\text{W}$	Between junction and ambient	112 <sup>1)</sup>								
	$R_{\theta J-L}$		Between junction and terminal	12 <sup>1)</sup>								

#### Notes:

- <sup>1)</sup> Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.6" x 0.6" (16 mm x 16 mm) copper pad areas

# Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

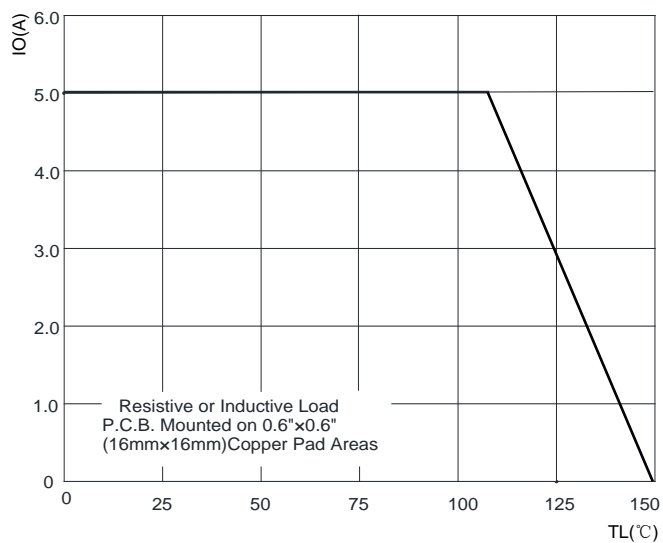


FIG.2: MAXIMUM NON-REPETITIVE FORWARD URGE CURRENT

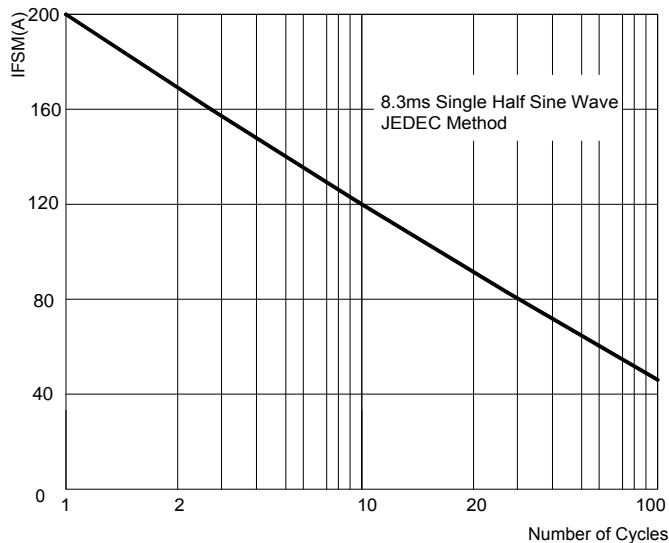


FIG.3: TYPICAL FORWARD CHARACTERISTICS

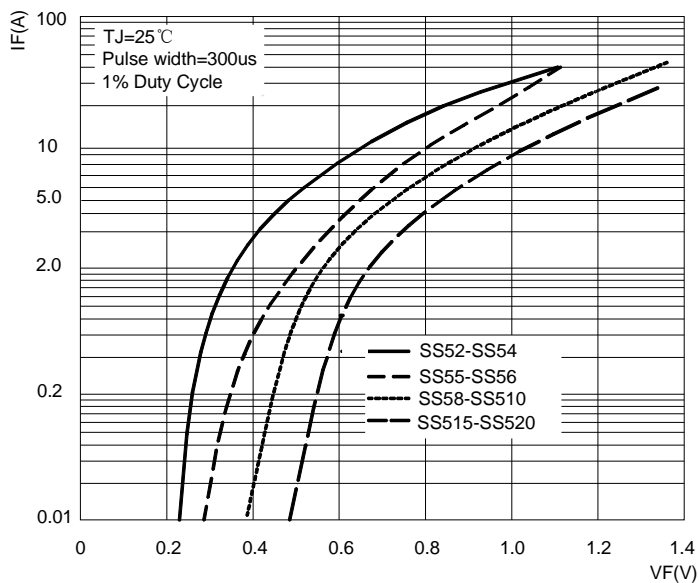
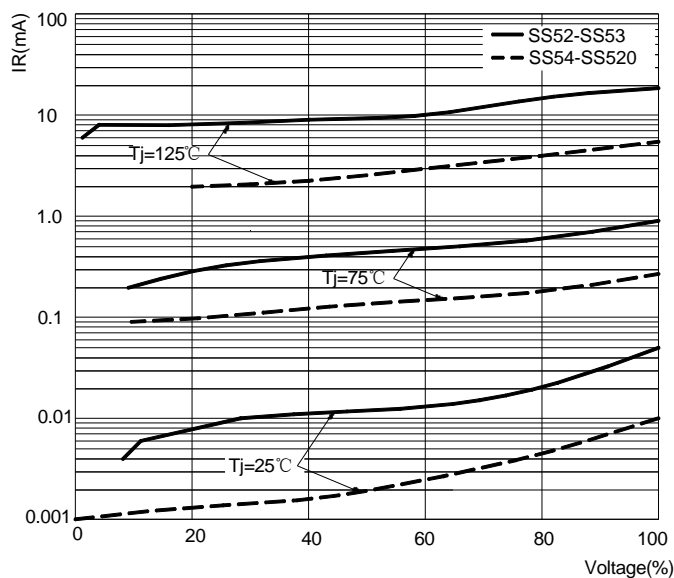
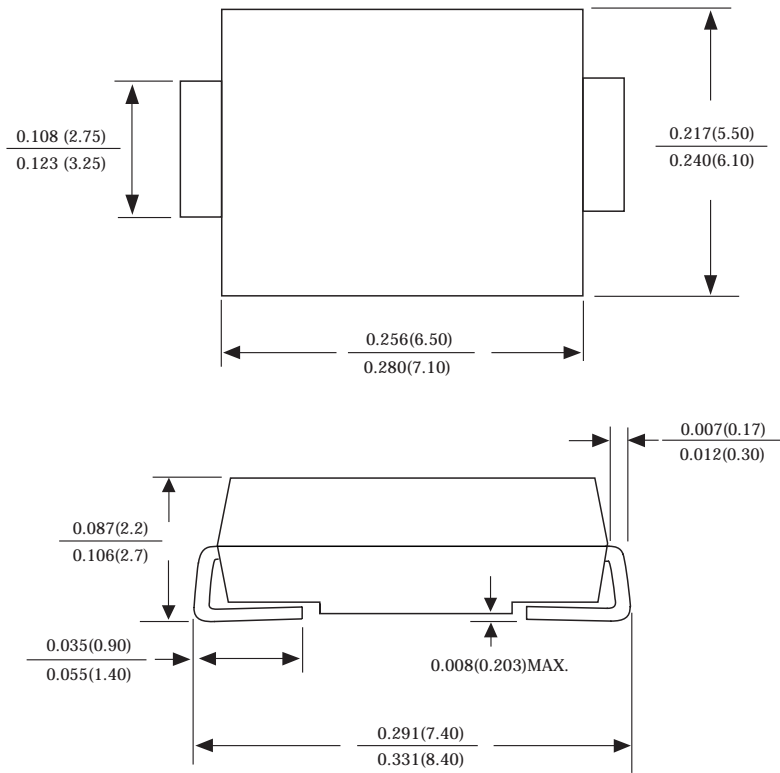


FIG.4: TYPICAL REVERSE CHARACTERISTICS

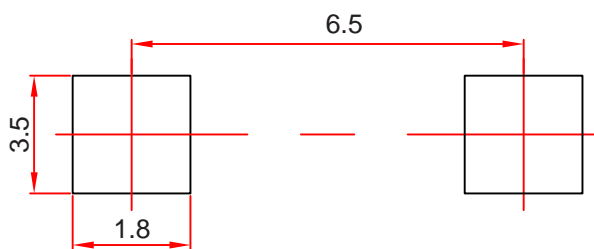


## SMC Package Outline Dimensions



Dimensions in inches and (millimeters)

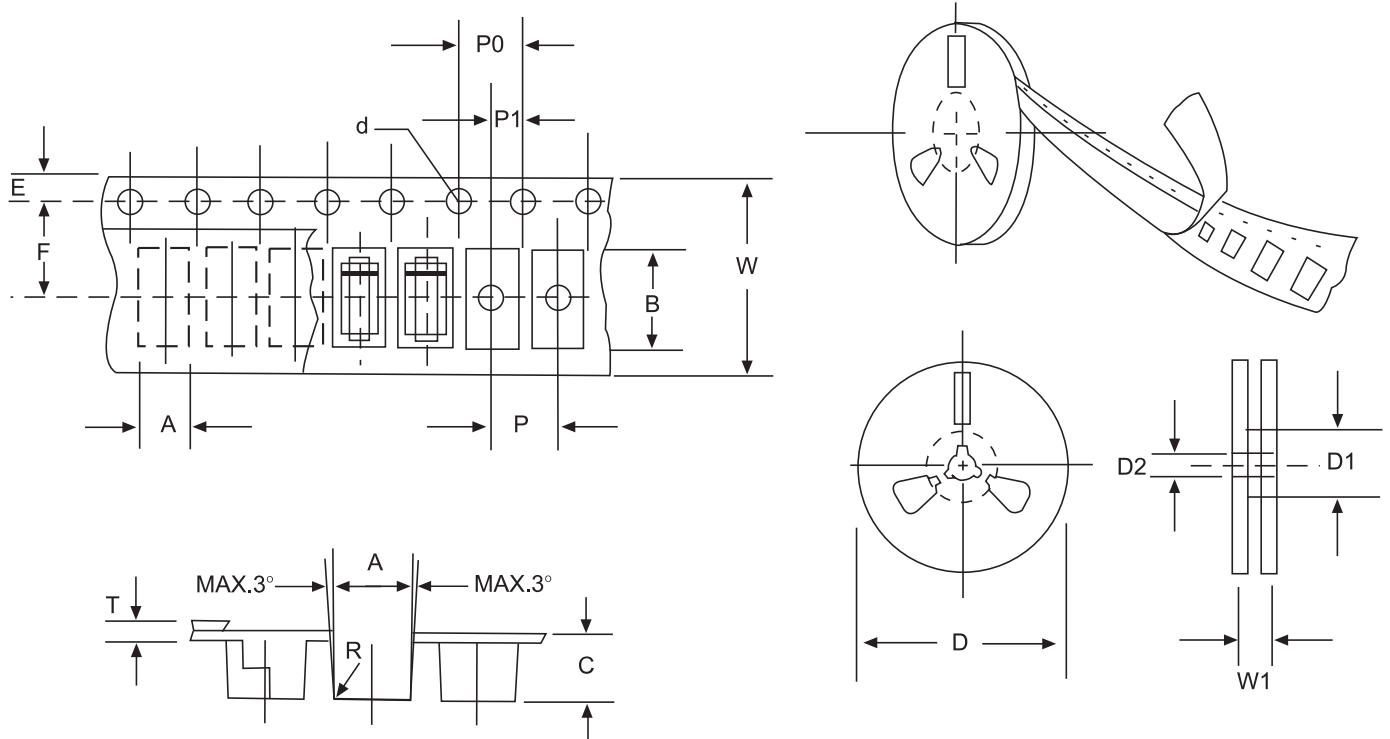
## SMC Suggested Pad Layout



### Note:

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05\text{mm}$ .
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.