

## SMCG Plastic-Encapsulate Diodes

### SK102 THRU SK1020 Schottky Rectifier Diodes

#### Features

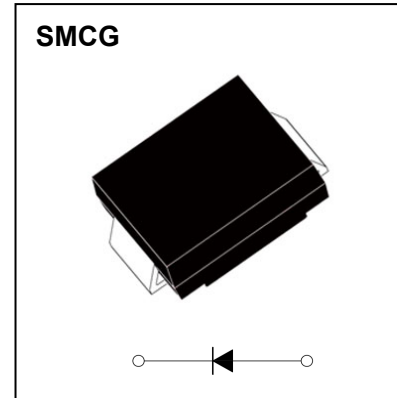
- $I_{F(AV)}$  10A
- $V_{RRM}$  20V-200V
- High surge current capability
- Polarity: Color band denotes cathode

#### Applications

- Rectifier

#### Marking

- SK10X  
X : From 2 To 20



#### Limiting Values(Absolute Maximum Rating)

Item	Symbol	Unit	Test Conditions	SK10															
				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)	10.0															
Surge(Non-repetitive)Forward Current	$I_{FSM}$	A	60Hz Half-sine wave, 1 cycle, $T_a = 25^\circ C$	250															
Junction Temperature	$T_J$	$^\circ C$		-55~+125					-55~+150										
Storage Temperature	$T_{STG}$	$^\circ C$		-55 ~ +150															

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

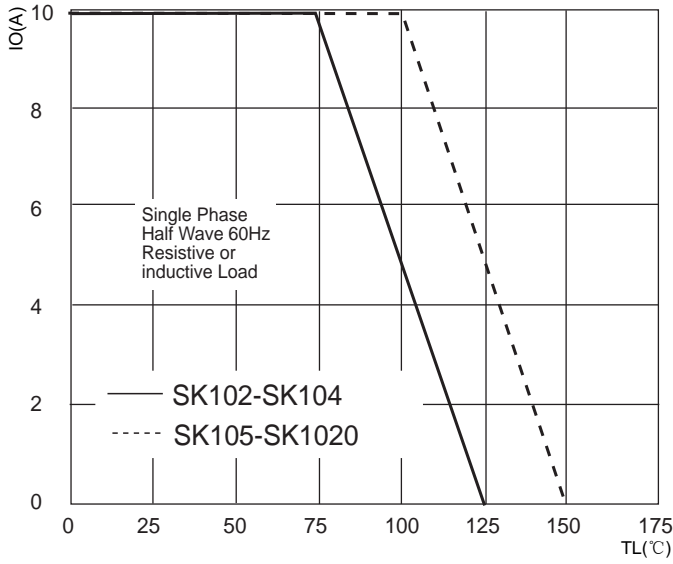
Item	Symbol	Unit	Test Condition	SK10											
				2	3	4	5	6	8	10	15	20			
Peak Forward Voltage	$V_{FM}$	V	$I_{FM} = 10.0A$	0.65		0.75		0.85		0.95					
Peak Reverse Current	$I_{RRM1}$	mA	$V_{RM} = V_{RRM}$	$T_a = 25^\circ C$				0.5		0.1					
	$I_{RRM2}$			$T_a = 100^\circ C$				20		10					
Thermal Resistance(Typical)	$R_{\theta J-A}$	$^\circ C/W$	Between junction and ambient		50										
	$R_{\theta J-L}$		Between junction and lead		15										
Typical junction capacitance	CJ	pF	Measured at 1.0MHz and applied reverse voltage of 4.0 volts.		400										

#### Notes:

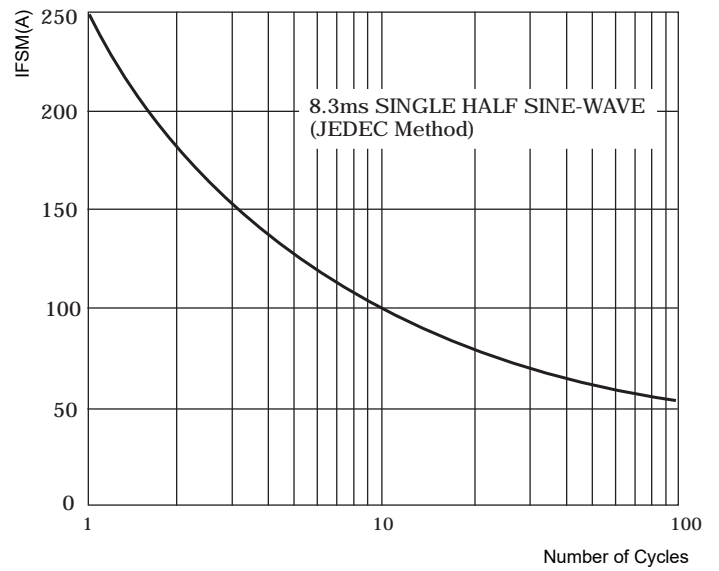
Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas

# Typical Characteristics

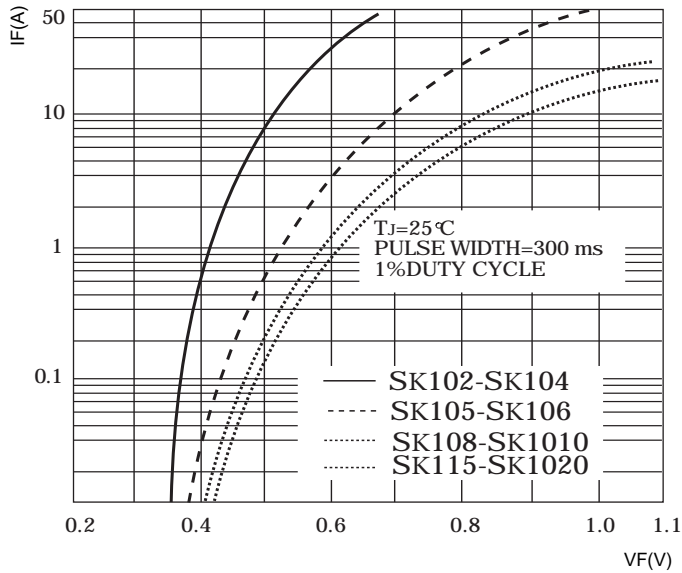
**FIG.1: FORWARD CURRENT DERATING CURVE**



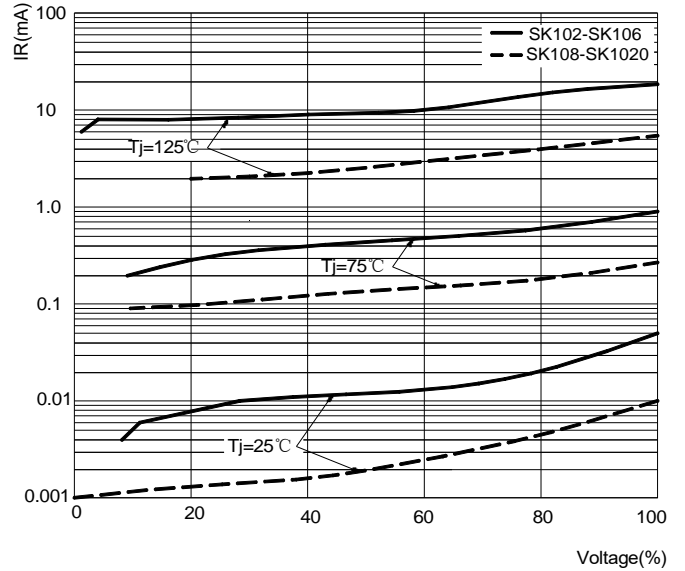
**FIG.2: MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



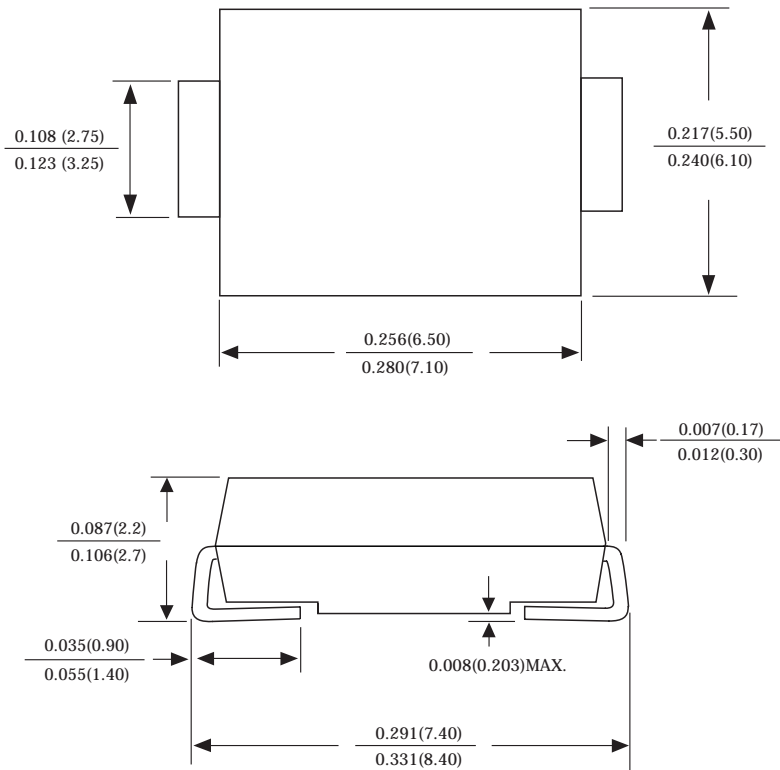
**FIG.3: TYPICAL FORWARD CHARACTERISTICS**



**FIG.4: TYPICAL REVERSE CHARACTERISTICS**

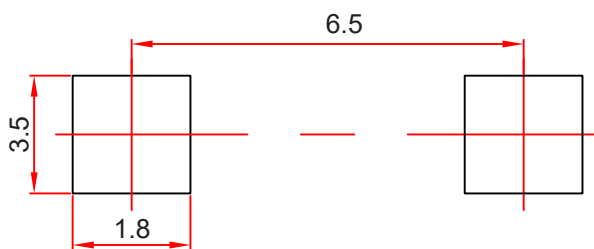


## SMCG Package Outline Dimensions



Dimensions in inches and (millimeters)

## SMCG Suggested Pad Layout



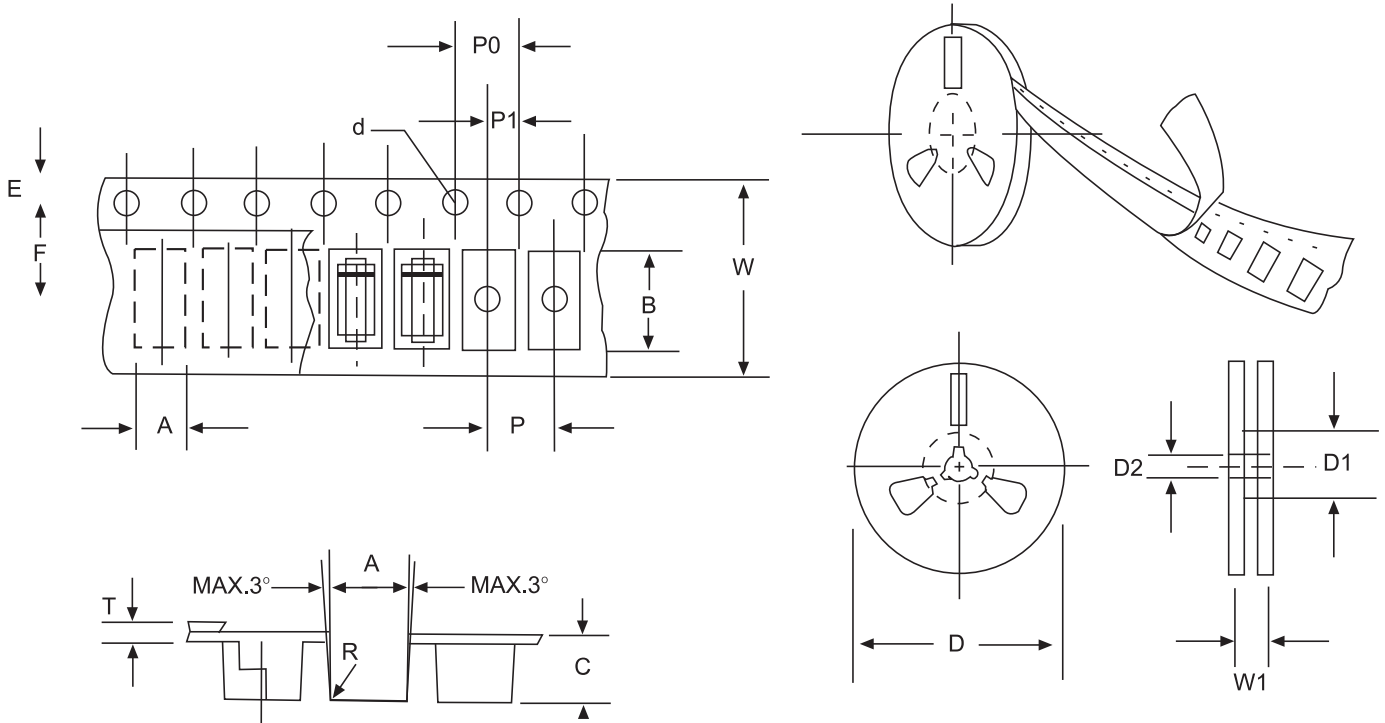
### Note:

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

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# Reel Taping Specifications For Surface Mount Devices-SMCG



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

ITEM	SYMBOL	SMCG 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.

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