



## SMBG Plastic-Encapsulate Diodes

### SK52 THRU SK520 Schottky Rectifier Diodes

#### Features

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

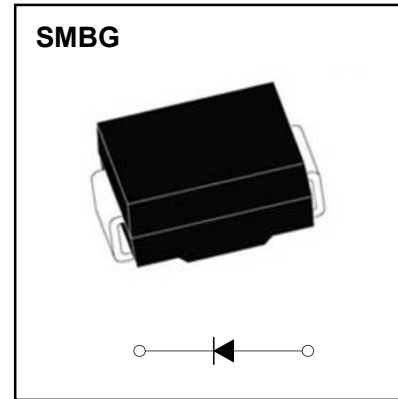
#### Applications

- Rectifier

#### Marking

- SK5X

X : From 2 To 20



#### Limiting Values(Absolute Maximum Rating)

Item	Symbol	Unit	Test Conditions	SK5														
				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						
Maximum DC Blocking Voltage	$V_{DC}$	V		20	30	40	50	60	80	100	150	200						
Average Forward Current	$I_{F(AV)}$	A	60Hz Half-sine wave, Resistance load, FIG.1	5.0														
Surge(Non-repetitive)Forward Current	$I_{FSM}$	A	60Hz Half-sine wave, 1 cycle, $T_a=25^\circ\text{C}$	150														
Junction Temperature	$T_J$	$^\circ\text{C}$		-55~+125					-55~+150									
Storage Temperature	$T_{STG}$	$^\circ\text{C}$		-55 ~ +150														

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

Item	Symbol	Unit	Test Condition	SK5													
				2	3	4	5	6	8	10	15	20					
Peak Forward Voltage	$V_F$	V	$I_F=5.0\text{A}$	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									
	$I_{RRM2}$			$T_a=100^\circ\text{C}$		20		10									
Thermal Resistance(Typical)	$R_{\theta J-A}$	$^\circ\text{C}/\text{W}$	Between junction and ambient	60													
	$R_{\theta J-L}$		Between junction and terminal	20													

#### Notes:

Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.27" x 0.27" (7.0 mm x 7.0 mm) copper pad areas

# Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

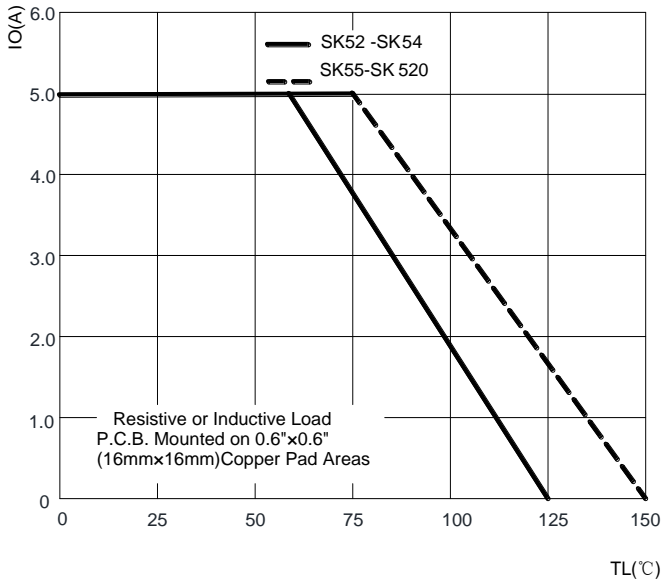


FIG.2: MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

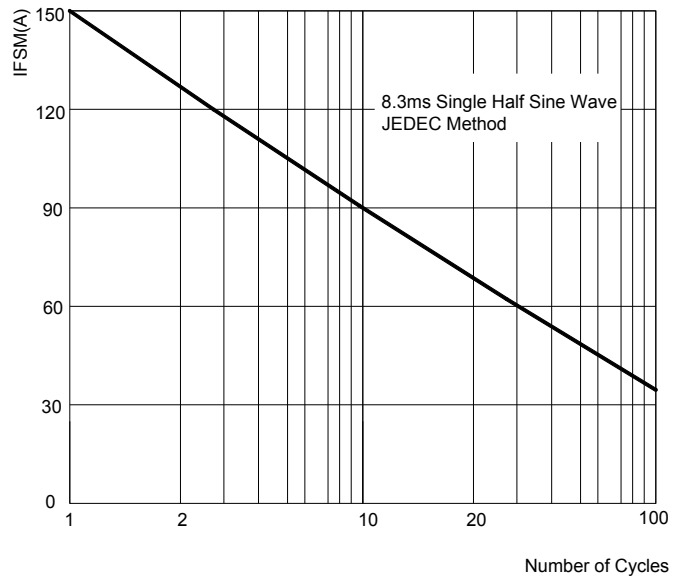


FIG.3: TYPICAL FORWARD CHARACTERISTICS

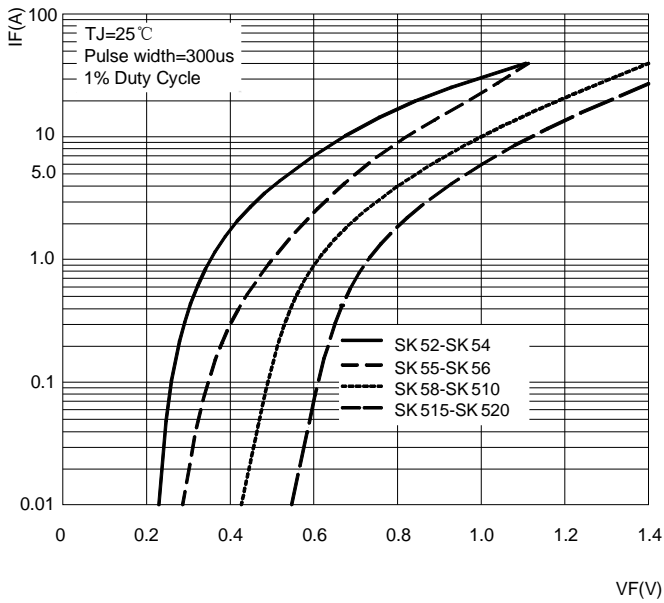
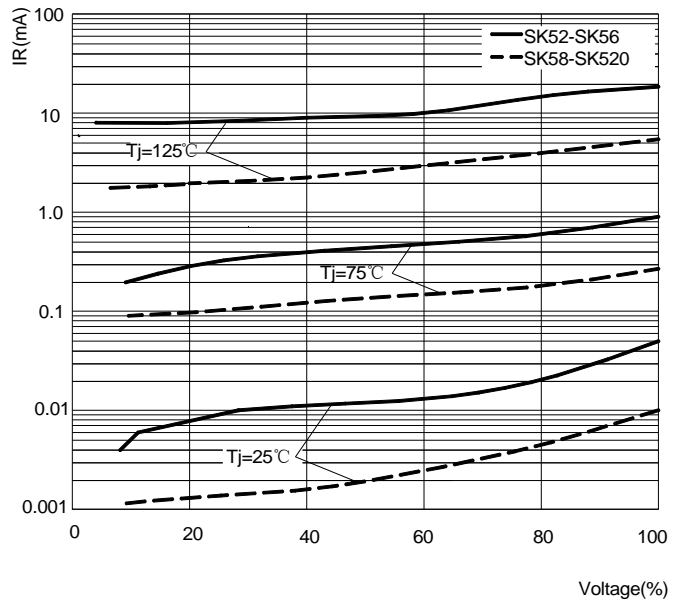
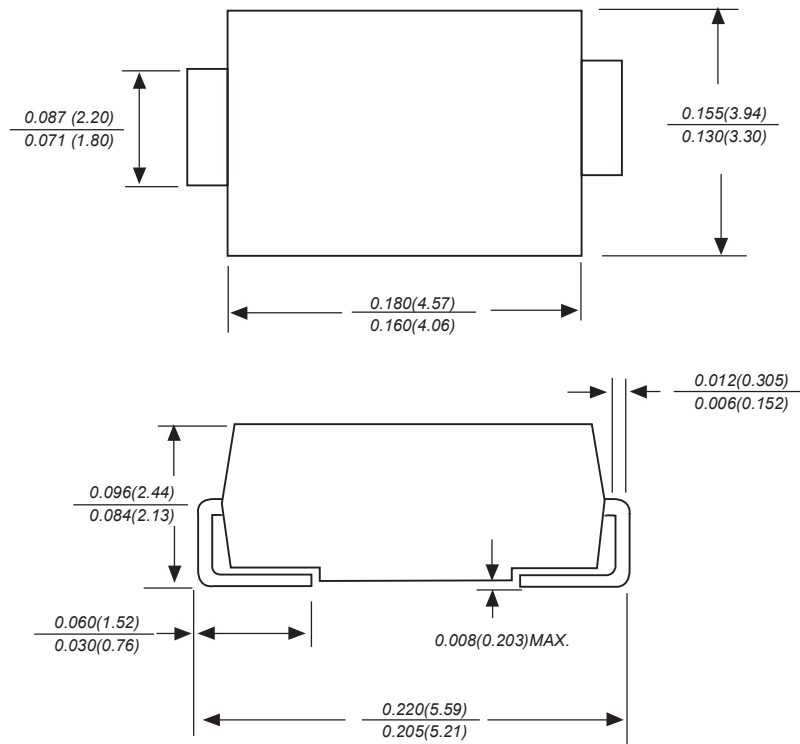


FIG.4: TYPICAL REVERSE CHARACTERISTICS

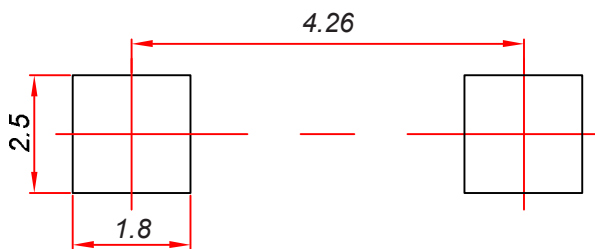


## SMBG Package Outline Dimensions



Dimensions in inches and (millimeters)

## SMBG Suggested Pad Layout



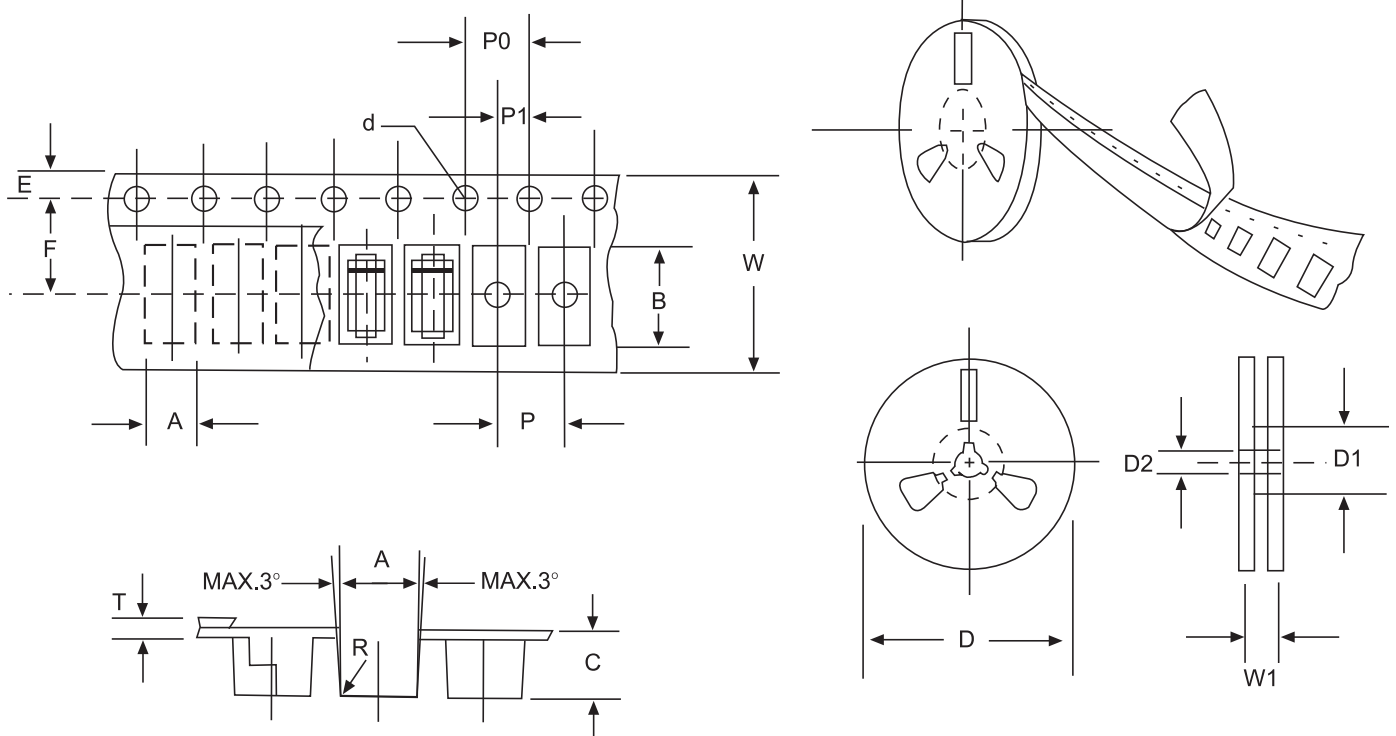
### Note:

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-SMBG



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

ITEM	SYMBOL	SMBG mm(inch)
Carrier width	A	4.09±0.1(0.161±0.004)
Carrier length	B	5.82±0.1(0.229±0.004)
Carrier depth	C	2.50±0.1(0.100±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)
Stroket hole position	E	1.75±0.1(0.069±0.004)
Punch hole position	F	5.65±0.05(0.222±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	0.32±0.1(0.013±0.004)
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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