

## SMB Plastic-Encapsulate Diodes

### Schottky Rectifier Diodes

#### Features:

- $I_{F(AV)}$  1A
- $V_{RRM}$  20V-200V
- High surge current capability
- Polarity: Color band denotes cathode

#### Applications:

- Rectifier

#### Marking

- SS1X / SK1X  
 X : From 2L To 20L

SMB



#### Limiting Values(Absolute Maximum Rating)

Item	Symbol	Unit	Test Conditions	SK1															
				2L	3L	4L	5L	6L	8L	10L	15L	20L							
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, $T_a=100^\circ\text{C}$	1.0															
Surge(Non-repetitive)Forward Current	$I_{FSM}$	A	60Hz Half-sine wave, 1 cycle, $T_a=25^\circ\text{C}$	60															
Junction Temperature	$T_J$	$^\circ\text{C}$		-55~+150															
Storage Temperature	$T_{STG}$	$^\circ\text{C}$		-55 ~ +150															

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

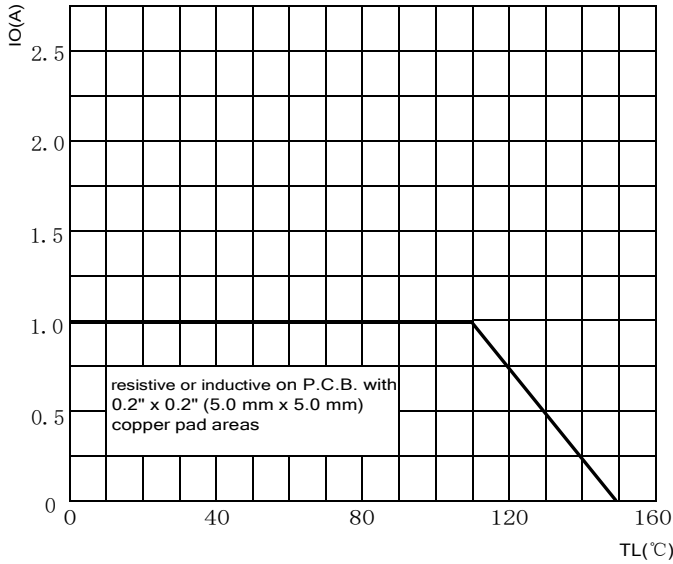
Item	Symbol	Unit	Test Condition	SS1															
				2L	3L	4L	5L	6L	8L	10L	15L	20L							
Peak Forward Voltage	$V_F$	V	$I_F=1.0A$	0.45		0.55		0.75		0.85									
Peak Reverse Current	$I_{RRM1}$	mA	$V_{RM}=V_{RRM}$	$T_a=25^\circ\text{C}$		0.2		0.1											
	$I_{RRM2}$			$T_a=100^\circ\text{C}$		10		5.0											
Thermal Resistance(Typical)	$R_{\theta J-A}$	$^\circ\text{C}/\text{W}$	Between junction and ambient	75															
	$R_{\theta J-L}$		Between junction and terminal	17															

#### Notes:

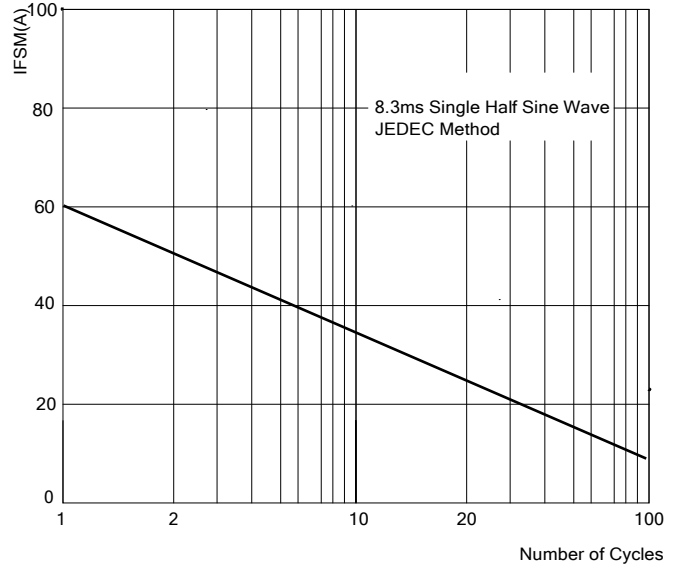
Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas

**Typical Characteristics**

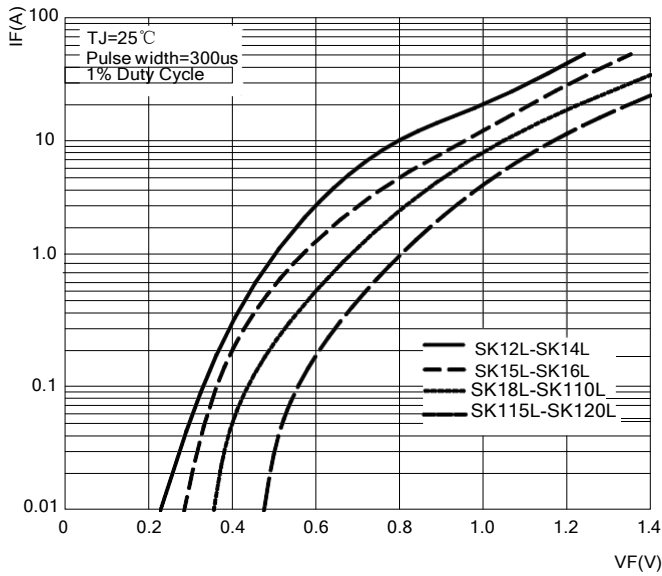
**FIG.1: FORWARD CURRENT DERATING CURVE**



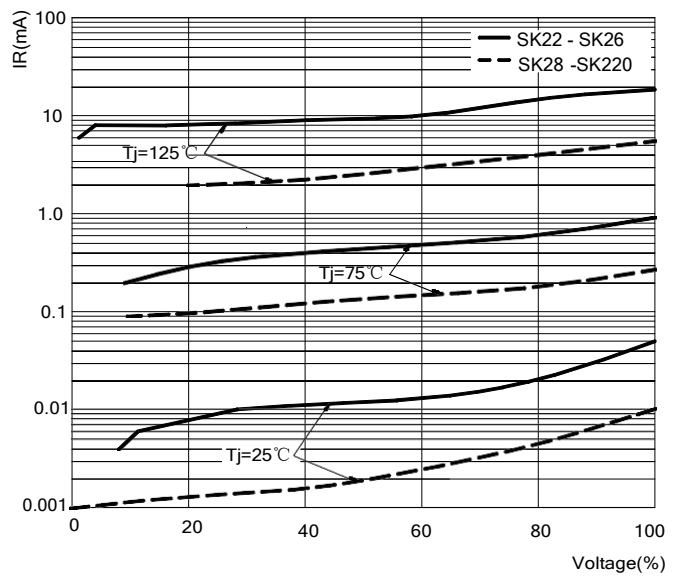
**FIG.2: MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



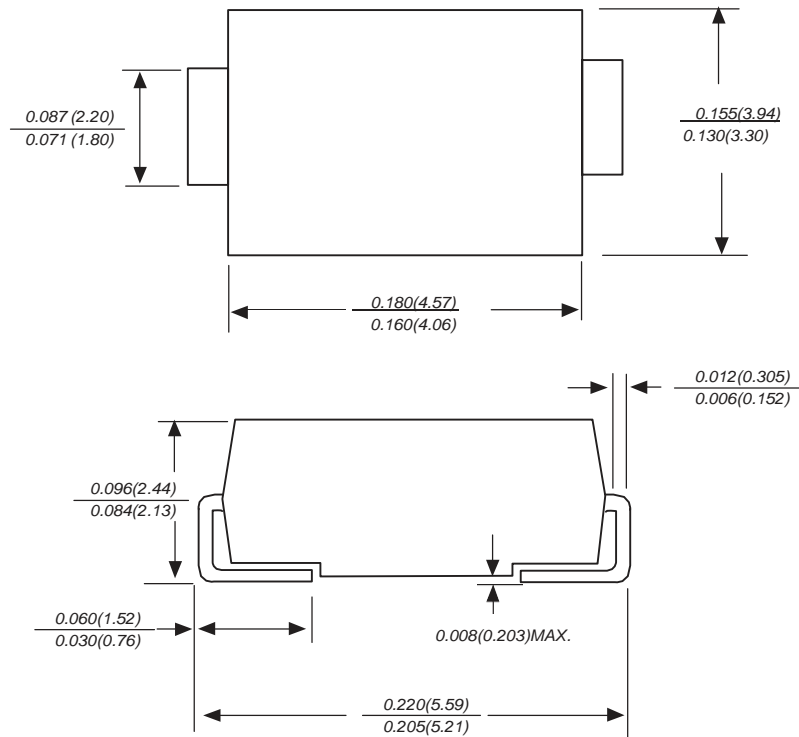
**FIG.3: TYPICAL FORWARD CHARACTERISTICS**



**FIG.4: TYPICAL REVERSE CHARACTERISTICS**

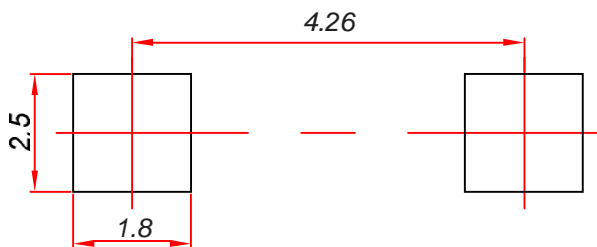


### SMB Package Outline Dimensions



Dimensions in inches and (millimeters)

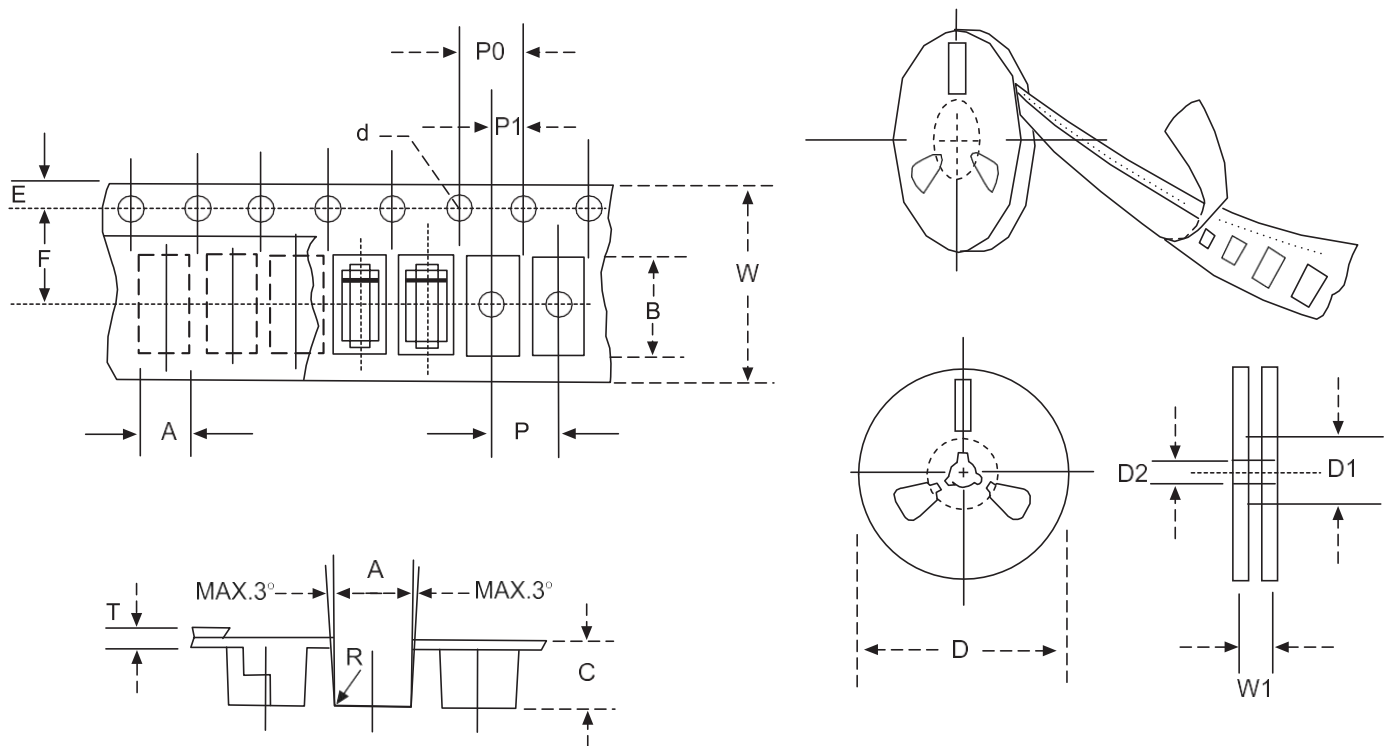
### SMB Suggested Pad Layout



**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-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)
Sprocket 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.