



# SMBG Plastic-Encapsulate Diodes

## SS510L Schottky Rectifier Diode

### Features

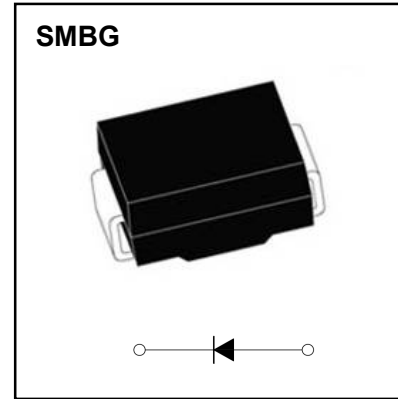
- $I_{F(AV)}$  5A
- $V_{RRM}$  100V
- High surge current capability
- Polarity: Color band denotes cathode
- Low peak forward voltage

### Applications

- Rectifier

### Marking

- SS510L:SS510L



### Limiting Values(Absolute Maximum Rating)

Item	Symbol	Unit	Test Conditions	SS510L
Repetitive Peak Reverse Voltage	$V_{RRM}$	V		100
Maximum RMS Voltage	$V_{RMS}$	V		70
Average Forward Current	$I_{F(AV)}$	A	60Hz Half-sine wave, Resistance load	5.0
Surge(Non-repetitive)Forward Current	$I_{FSM}$	A	60Hz Half-sine wave, 1 cycle, $T_a=25\text{ C}$	120
Junction Temperature	$T_J$	$^{\circ}\text{C}$		-55 ~ +150
Storage Temperature	$T_{STG}$	$^{\circ}\text{C}$		-55 ~ +150

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

Item	Symbol	Unit	Test Condition		SS510L
Peak Forward Voltage	$V_F$	V	$I_F=5.0\text{A}$	$T_a=25^{\circ}\text{C}$	0.70
Peak Reverse Current	$I_{RRM1}$	mA	$V_{RM}=V_{RRM}$	$T_a=25^{\circ}\text{C}$	0.03
	$I_{RRM2}$			$T_a=100^{\circ}\text{C}$	20
Thermal Resistance(Typical)	$R_{\theta J-A}$	$^{\circ}\text{C}/\text{W}$	Between junction and ambient		55
	$R_{\theta J-L}$		Between junction and lead		13
Juction Capacitance (Typical)	$C_j$	pF	Measured at 1MHZ and Applied Reverse Voltage of 4.0 V.D.C		280

### Notes:

Thermal resistance from junction to ambient and from junction to lead mounted on FR4 PCB double sided copper mini pad

# Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

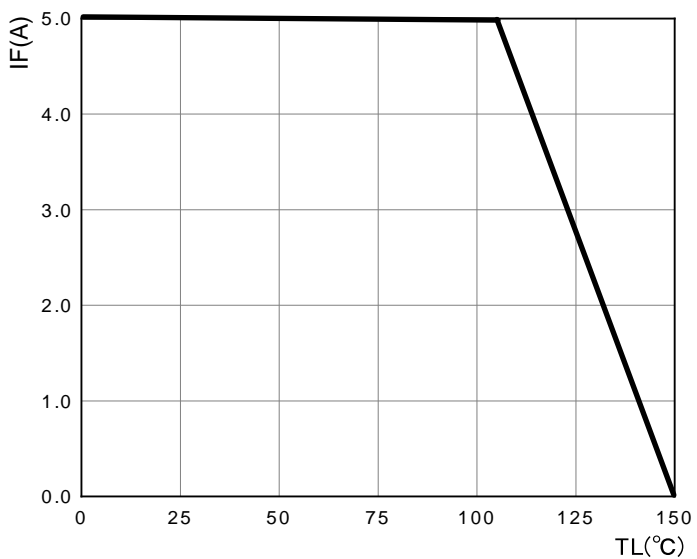


FIG.2: MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

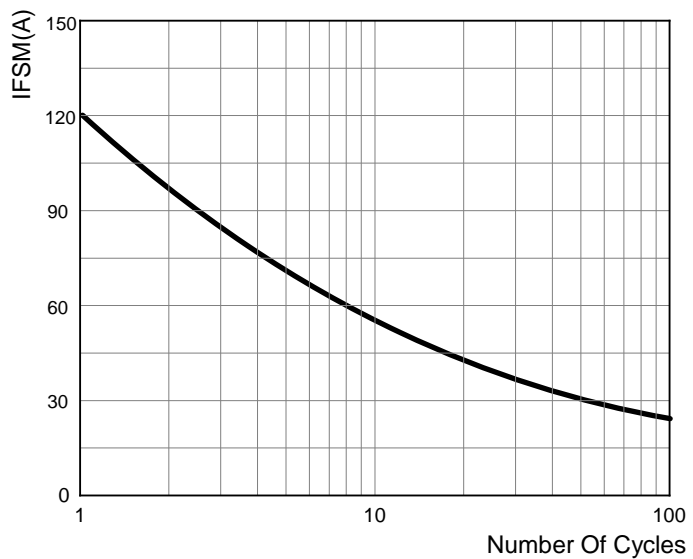


FIG.3: TYPICAL FORWARD CHARACTERISTICS

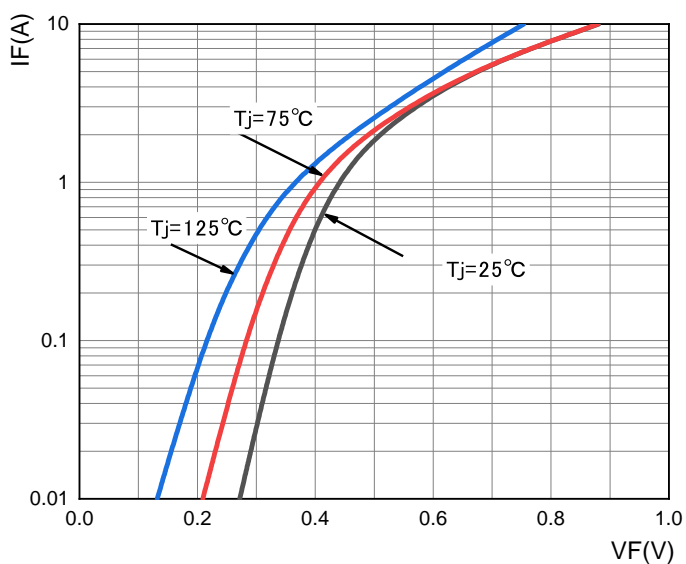
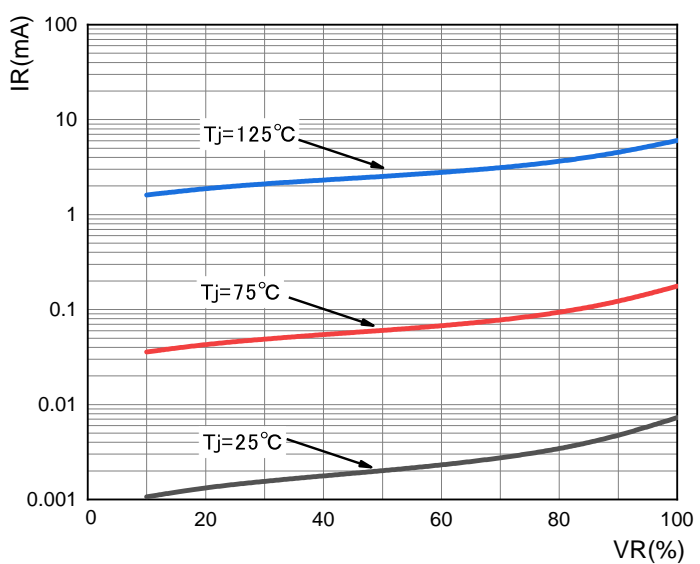
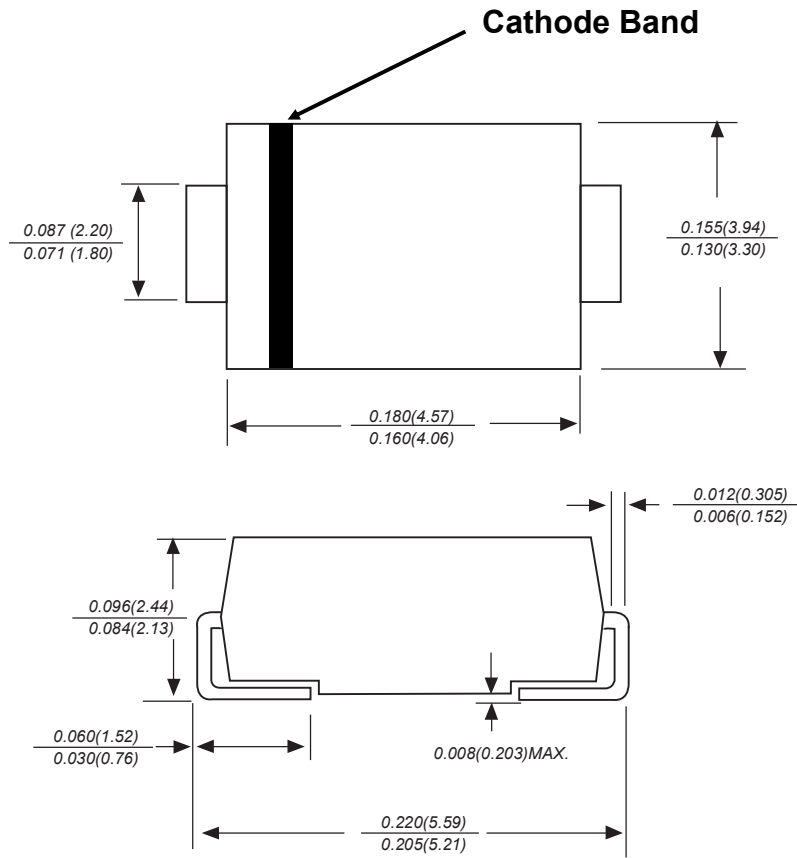


FIG.4: TYPICAL REVERSE CHARACTERISTICS

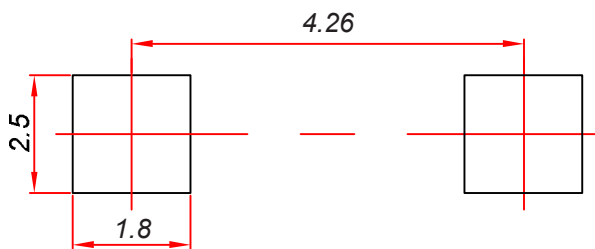


## SMBG Package Outline Dimensions



Dimensions in inches and (millimeters)

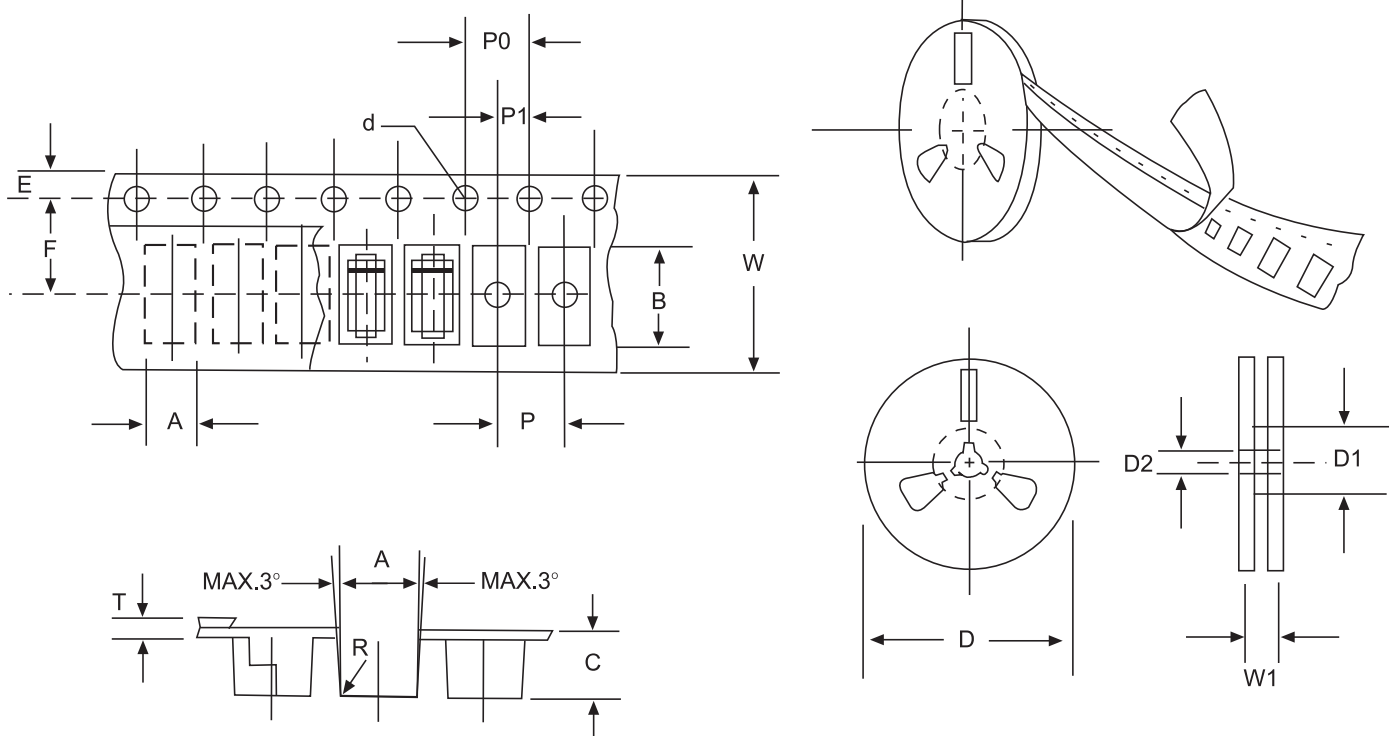
## SMBG Suggested Pad Layout



**Note:**

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05mm$ .
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)
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.