

## SMB Plastic-Encapsulate Diodes

Schottky Power Rectifier

### Features:

- Small Compact Surface Mountable Package with J-Bend Leads
- Rectangular Package for Automated Handling
- Highly Stable Oxide Passivated Junction
- High Blocking Voltage – 100 Volts
- 175°C Operating Junction Temperature
- All Packages are Pb-Free

### Applications:

- Case: Epoxy, Molded
- Weight: 95 mg (approximately)
- Finish: All External Surfaces Corrosion Resistant and Terminal Leads are Readily Solderable
- Lead and Mounting Surface Temperature for Soldering Purposes: 260°C Max. for 10 Seconds

### Marking

- S210

### Limiting Values(Absolute Maximum Rating)

Item	Symbol	Unit	Test Conditions	KMBRS210
Repetitive Peak Reverse Voltage	$V_{RRM}$	V		100
Maximum RMS Voltage	$V_{RMS}$	V		70
Maximum DC Blocking Voltage	$V_{DC}$	V		100
Average Rectified Forward Current	$I_{F(AV)}$	A	$T_L = 163^\circ\text{C}$ $T_L = 148^\circ\text{C}$	1.0 2.0
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 ~ +175
Storage Temperature	$T_{STG}$	$^\circ\text{C}$		-55 ~ +175
Voltage Rate of Change	dv/dt	V/ns		10

SMB



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

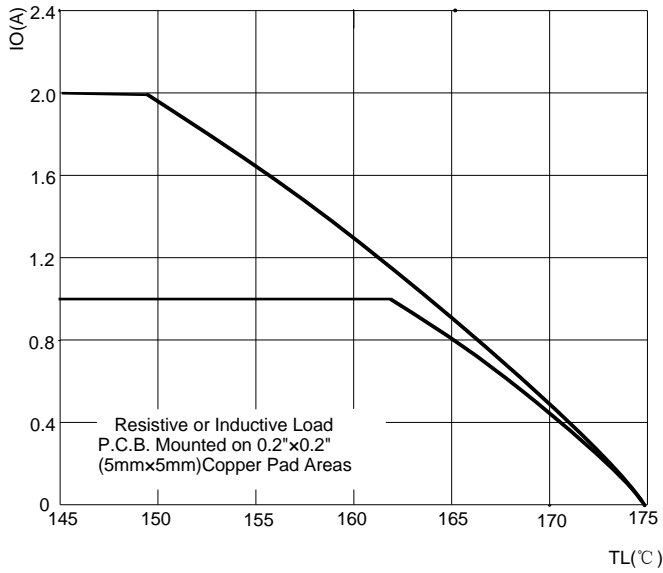
Item	Symbol	Unit	Test Condition	KMBRS210	
Peak Forward Voltage	$V_F$	V	$I_F=1.0\text{A}$	0.75(MAX)	
Peak Reverse Current	$I_{RRM1}$	mA	$V_{RM}=V_{RRM}$	$T_a = 25^\circ\text{C}$	0.02
	$I_{RRM2}$			$T_a = 100^\circ\text{C}$	5
Thermal Resistance(Typical)	$R_{\theta J-A}$	$^\circ\text{C}/\text{W}$	Between junction and ambient	45	
	$R_{\theta J-L}$		Between junction and terminal	22	

### Notes:

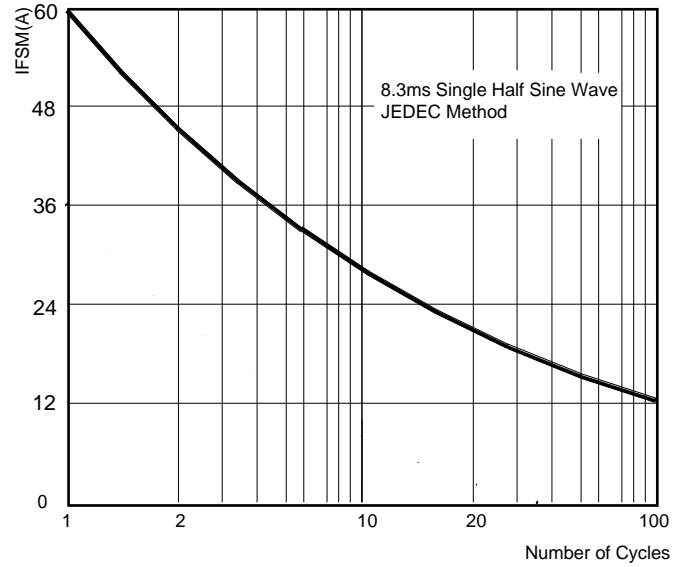
Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas

**Typical Characteristics**

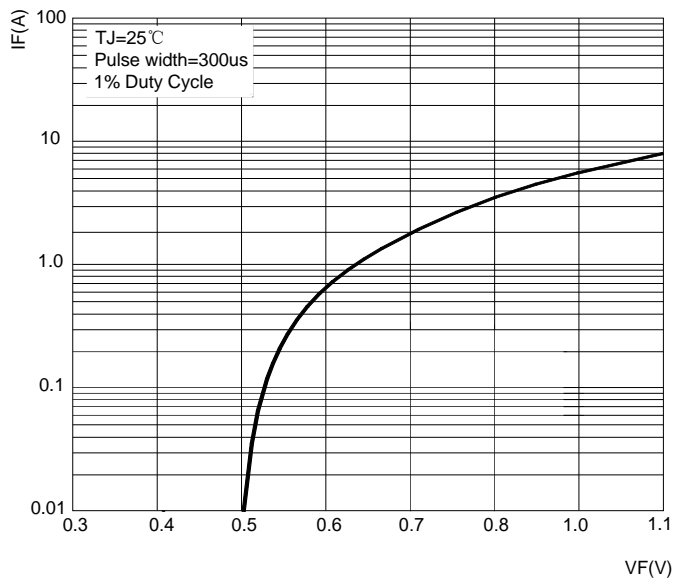
**FIG.1: FORWARD CURRENT DERATING CURVE**



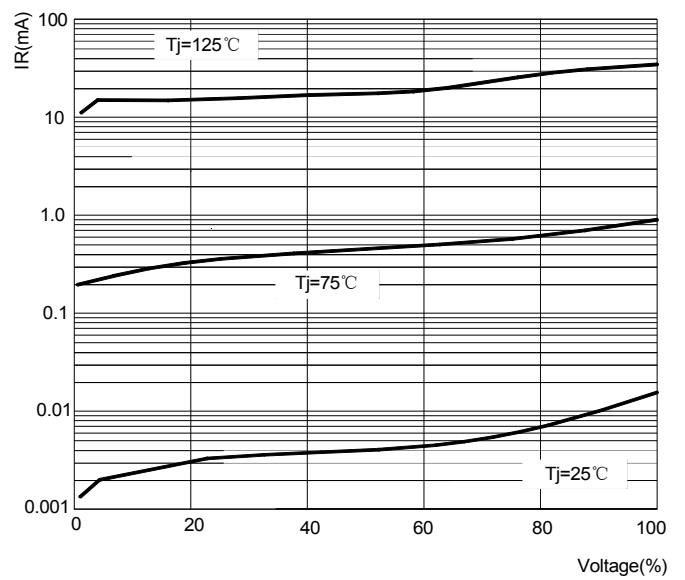
**FIG.2: MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



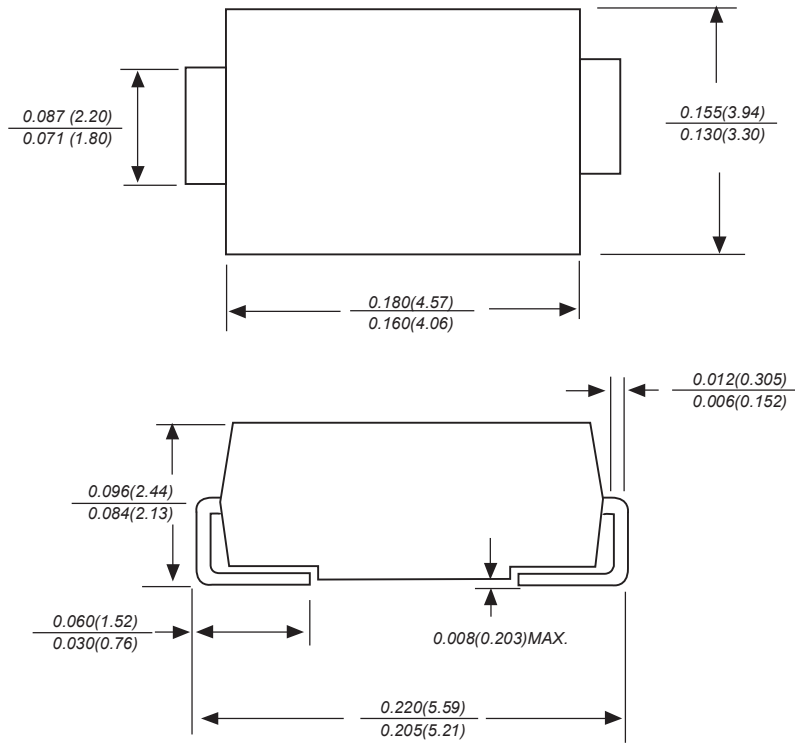
**FIG.3: TYPICAL FORWARD CHARACTERISTICS**



**FIG.4: TYPICAL REVERSE CHARACTERISTICS**

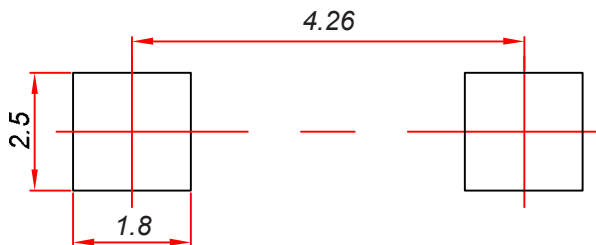


**SMB Package Outline Dimensions**



*Dimensions in inches and (millimeters)*

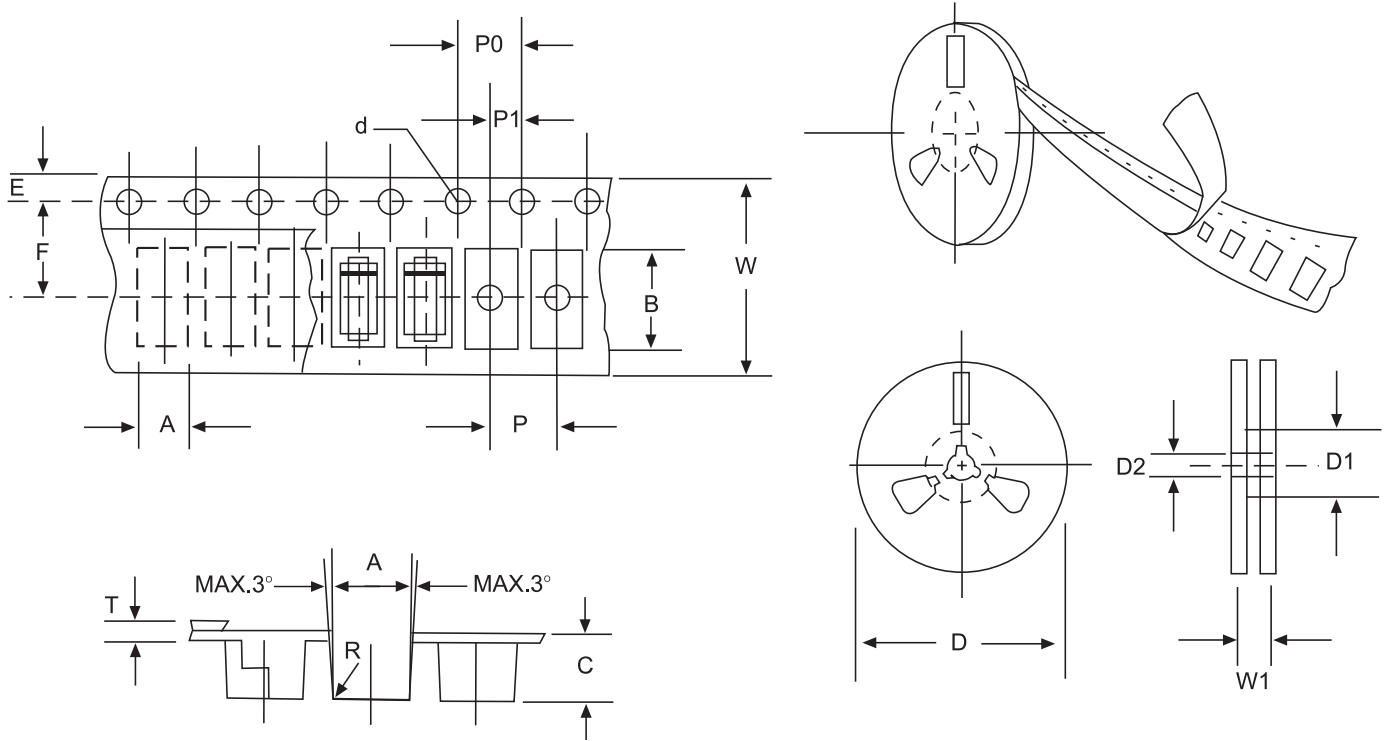
**SMB Suggested Pad Layout**



**Note:**

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

**Reel Taping Specifications For Surface Mount Devices-SMB**



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

ITEM	SYMBOL	SMB 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)
Totall 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.