

## SMB Plastic-Encapsulate Diodes

### Super Fast Recovery Rectifier Diodes

#### Features:

- $I_{F(AV)}$  3A
- $V_{RRM}$  200V-600V
- High surge current capability
- Polarity: Color band denotes cathode

SMB



#### Applications:

- Rectifier

#### Marking

- MURS3X0

X : From 2 to 6

#### Limiting Values (Absolute Maximum Rating)

Item	Symbol	Unit	Test Conditions	KMURS3			
				20	30	40	60
Repetitive Peak Reverse Voltage	$V_{RRM}$	V		200	300	400	600
Maximum RMS Voltage	$V_{RMS}$	V		140	210	280	420
Average Forward Current	$I_{F(AV)}$	A	60Hz Half-sine wave , Resistance load , $T_a=120^{\circ}C$	3.0			
Surge(Non-repetitive)Forward Current	$I_{FSM}$	A	60Hz Half-sine wave , 1 cycle , $T_a=25^{\circ}C$	100			
Operation Junction and Storage Temperature Range	$T_J, T_{STG}$	$^{\circ}C$		-55 ~ +150			

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

Item	Symbol	Unit	Test Condition	KMURS3			
				20	30	40	60
Peak Forward Voltage	$V_F$	V	$I_{FM}=3.0A$	0.875	1.25		
Reverse recovery time	$t_{rr}$	ns	$I_F=0.5A, I_R=1.0A$ $I_{rr}=0.25A$	25	50		
Peak Reverse Current	$I_{RRM1}$	$\mu A$	$V_{RM}=V_{RRM}$	$T_a = 25^{\circ}C$			
	$I_{RRM2}$			$T_a = 100^{\circ}C$			
Thermal Resistance(Typical)	$R_{\theta J-A}$	$^{\circ}C/W$	Between junction and ambient	55			
	$R_{\theta J-L}$		Between junction and terminal	12			

#### Notes:

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

**Typical Characteristics**

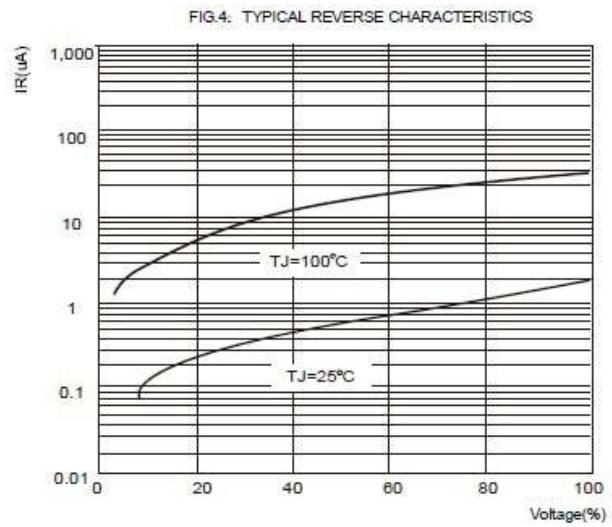
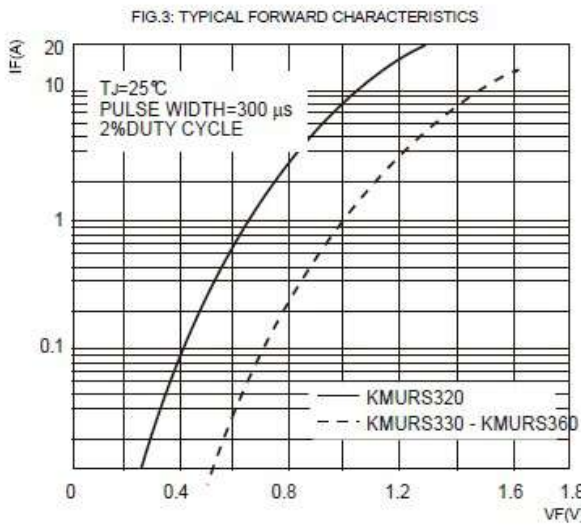
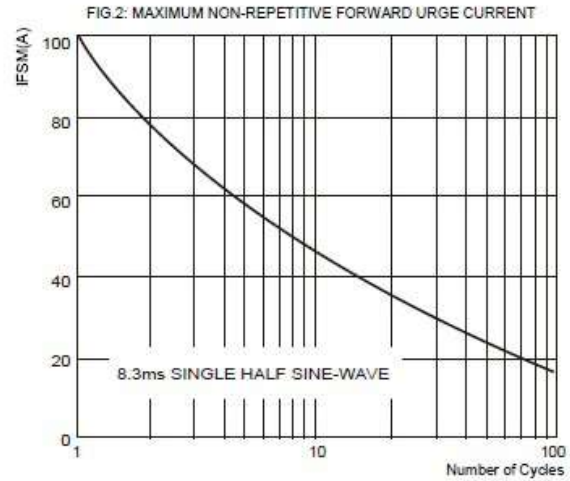
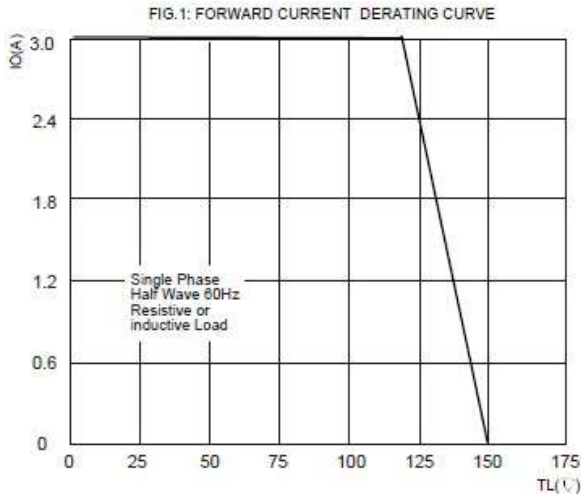
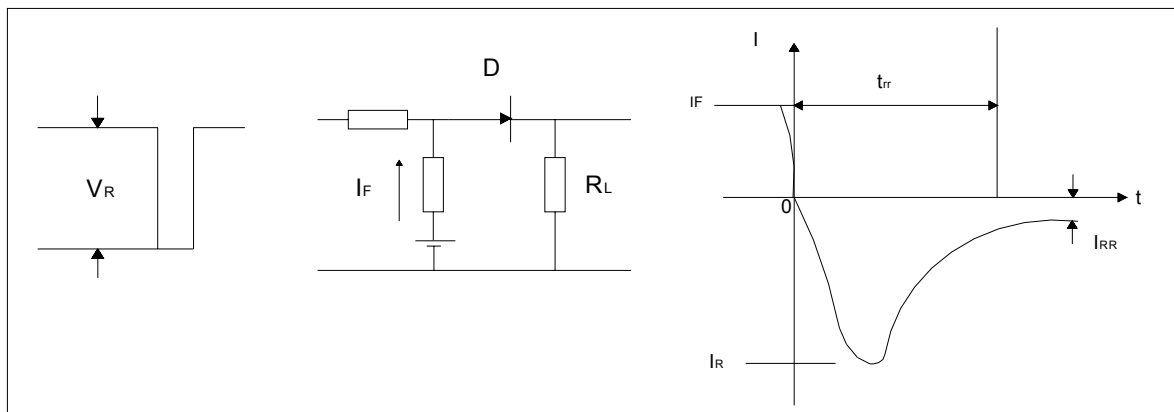
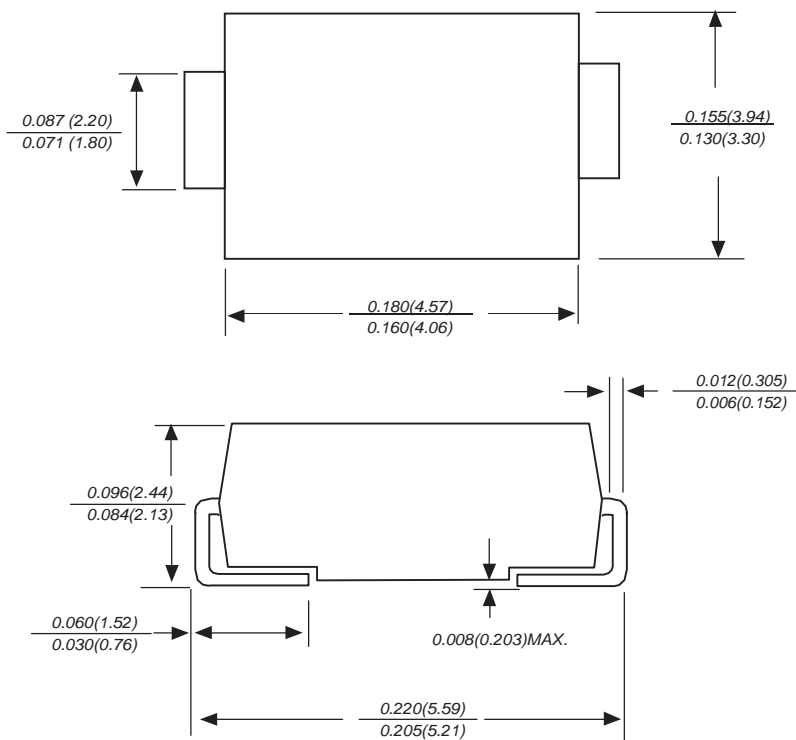


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time

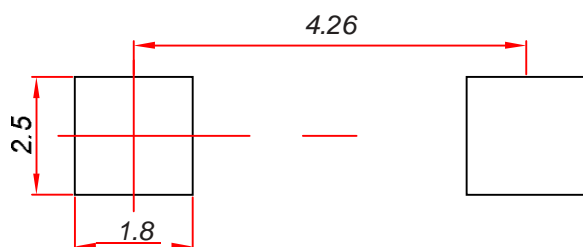


**SMB Package Outline Dimensions**



*Dimensions in inches and (millimeters)*

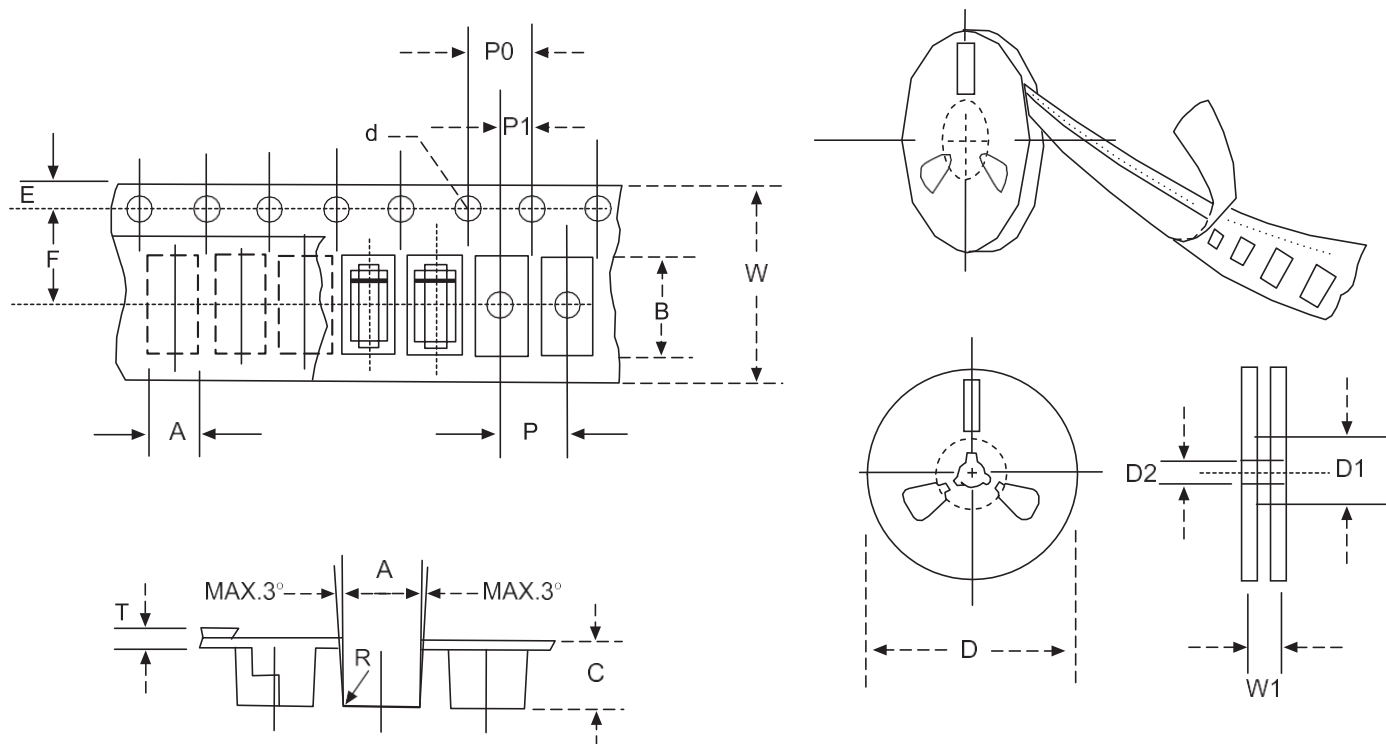
**SMB Suggested Pad Layout**



**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-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)
Strocket 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.