

SMB Plastic-Encapsulate Diodes

Low VF Schottky Rectifier Diodes

Features:

- $I_{F(AV)}$ 3A
- V_{RRM} 20V-200V
- High surge current capability
- Polarity: Color band denotes cathode

Applications:

- Rectifier

Marking

- KS3XL-B

X : From 2 To 20

SMB



Limiting Values (Absolute Maximum Rating)

Item	Symbol	Unit	Test Conditions	KS3									
				2L-B	3L-B	4L-B	5L-B	6L-B	8L-B	10L-B	15L-B	20L-B	
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, TL(Fig.1)	3.0									
Surge(Non-repetitive)Forward Current	I_{FSM}	A	60Hz Half-sine wave , 1 cycle , $T_a = 25^{\circ}C$	100									
Junction Temperature	T_J	$^{\circ}C$		-50~+150									
Storage Temperature	T_{STG}	$^{\circ}C$		-50 ~ +150									

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

Item	Symbol	Unit	Test Condition	KS3									
				2L-B	3L-B	4L-B	5L-B	6L-B	8L-B	10L-B	15L-B	20L-B	
Peak Forward Voltage	V_F	V	$I_F = 3.0A$	0.45		0.58		0.72		0.82			
Peak Reverse Current	I_{RRM1}	mA	$V_{RM} = V_{RRM}$	$T_a = 25^{\circ}C$		0.2		0.1					
	I_{RRM2}			$T_a = 100^{\circ}C$		5		2					
Thermal Resistance(Typical)	$R_{\theta J-A}$	$^{\circ}C/W$	Between junction and ambient	55 ¹⁾									
	$R_{\theta J-L}$		Between junction and terminal	20 ¹⁾									

Notes:

- ¹⁾ Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.6" x 0.6" (16 mm x 16 mm) copper pad areas

Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

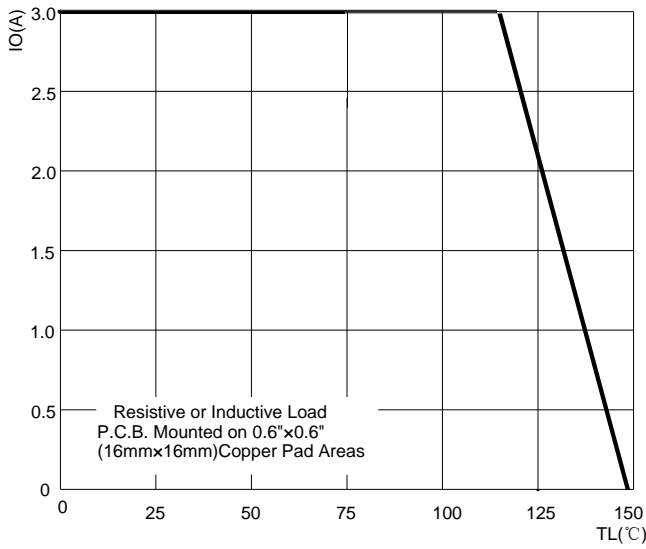


FIG.2: MAXIMUM NON-REPETITIVE FORWARD URGE CURRENT

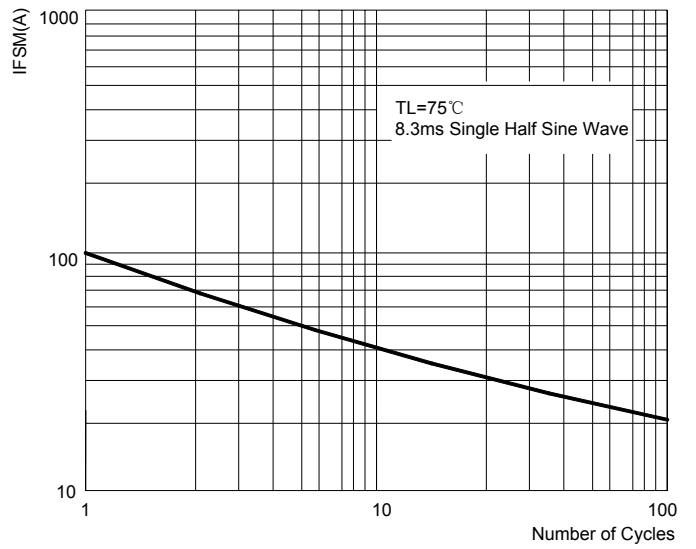


FIG.3: TYPICAL FORWARD CHARACTERISTICS

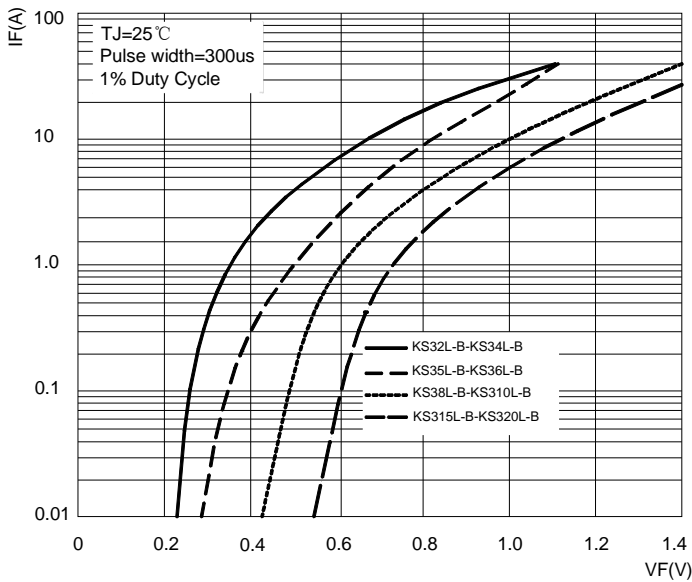
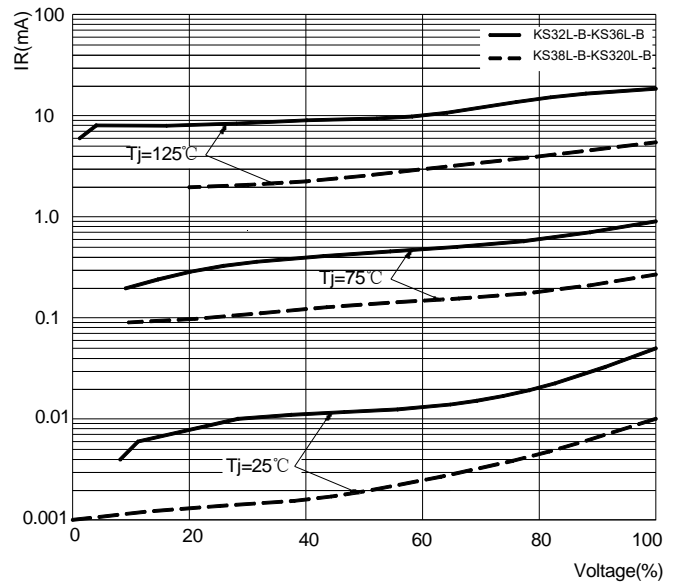
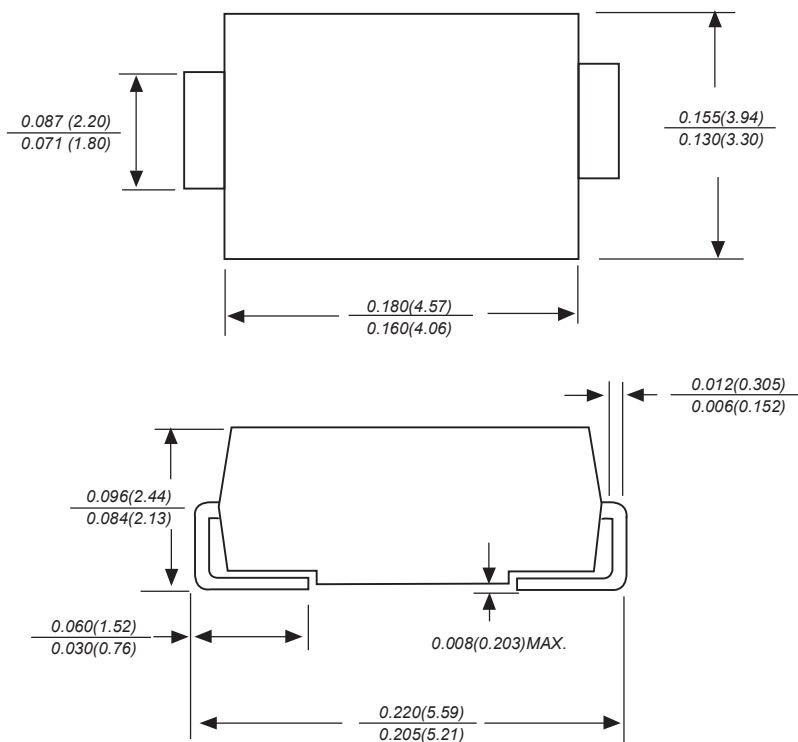


FIG.4: TYPICAL REVERSE CHARACTERISTICS

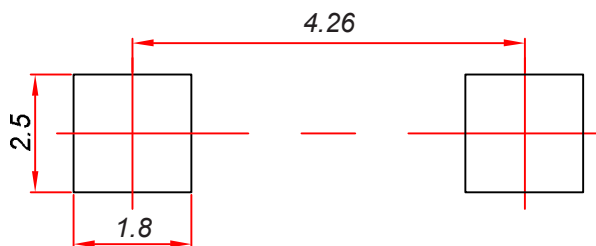


SMB Package Outline Dimensions



Dimensions in inches and (millimeters)

SMB Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05 mm.
3. The pad layout is for reference purposes only.

Reel Taping Specifications For Surface Mount Devices–SMB

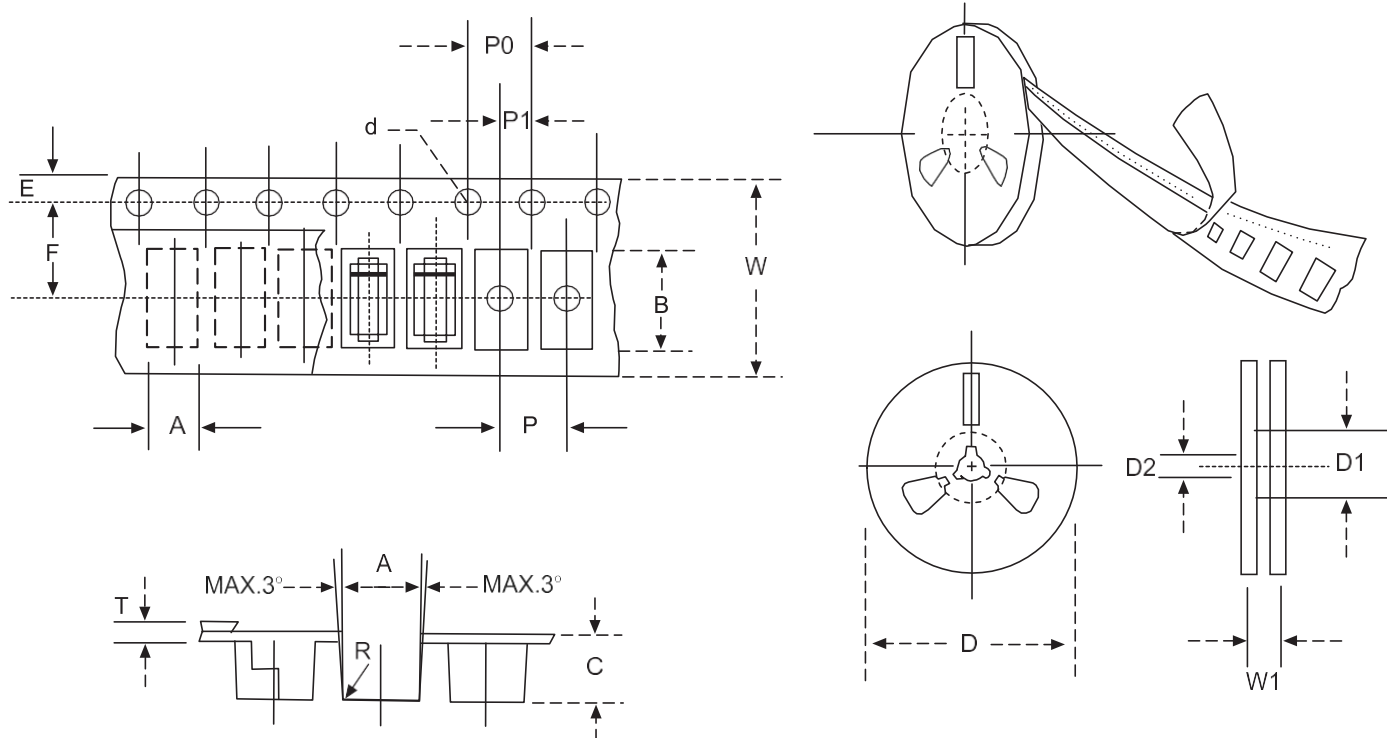


FIG: CONFIGURATION OF SURFACE MOUNTED DEVICES TAPING

ITEM	SYMBOL	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)
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)
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.