



# SM220B thru SM2200B



## Schottky Barrier Rectifiers



DO-214AA(SMB)

### Primary Characteristics

$I_F$	2	A
$V_{RRM}$	20~200	V
$I_{FSM}$	50	A
$V_F$	0.50, 0.70, 0.85, 0.87, 0.90	V
$T_J$ max	125,150	°C

### Features

- Low profile package
- Ideal for automated placement
- Guard Ring for over voltage protection
- Low forward voltage drop

### Mechanical Data

- Case : DO-214AA(SMB)
- Case Material : Molded Plastic. UL Flammability Classification Rating 94V-0
- Terminals : Lead free Plating (Tin Finish)  
Solderable per MIL-STD-202, Method 208
- Polarity : Cathode Band
- Weight : 0.092 grams (approximate)

### Ordering Information

Part No.	Remark	Package	Packing
SM2x0B	General	SMB	3000 / Tape & Reel
SM2x0B-H	Halogen Free		
SM2x0B-Q	AEC-Q101 qualified		

### Maximum Ratings (TA=25°C unless otherwise noted)

PARAMETER	SYMBOL	SM 220B	SM 230B	SM 240B	SM 250B	SM 260B	SM 280B	SM 2100B	SM 2150B	SM 2200B	UNIT	
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	30	40	50	60	80	100	150	200	V	
Maximum RMS voltage	$V_{RMS}$	14	21	28	35	42	56	70	105	140	V	
Maximum DC blocking voltage	$V_{DC}$	20	30	40	50	60	80	100	150	200	V	
Maximum average forward rectified current	$I_F$	2.0									A	
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	50.0									A	
Maximum Instantaneous Forward Voltage IF=2A @ 25°C	$V_F$	0.50			0.70		0.85		0.87	0.90	V	
Maximum DC Reverse Current @ TA=25°C at Rated DC Blocking Voltage @ TA=100°C	$I_R$	0.5 15					0.2 5.0				mA	
Typical Junction Capacitance(NOTE1)	$C_j$	125			70			55	40		pF	
Typical Thermal Resistance	$R_{\theta JC}$	40									°C/W	
Operating Temperature Range	$T_J$	-55 to +125					-55 to +150					°C
Storage Temperature Range	$T_{STG}$	-55 to +150									°C	
Marking Code		SM 220B	SM 230B	SM 240B	SM 250B	SM 260B	SM 280B	SM 2100B	SM 2150B	SM 2200B		

### NOTES :

1.Measured at 1.0MHz and applied reverse voltage of 4.0V DC



## Schottky Barrier Rectifiers

### Rating and Characteristics Curves

FIG. 1-Typical Forward Current Derating Curve

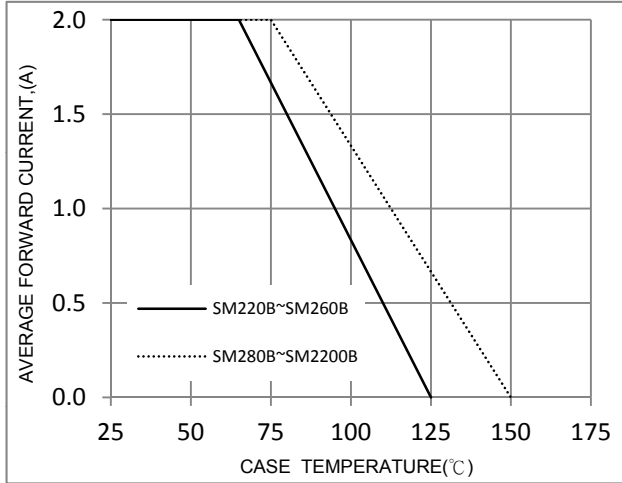


FIG. 2-Typical Forward Characteristics

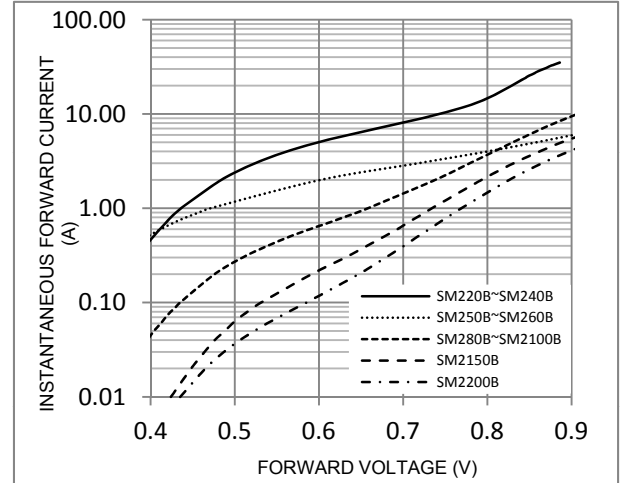


FIG. 3-Maximum Non-Repetitive Forward Surge Current

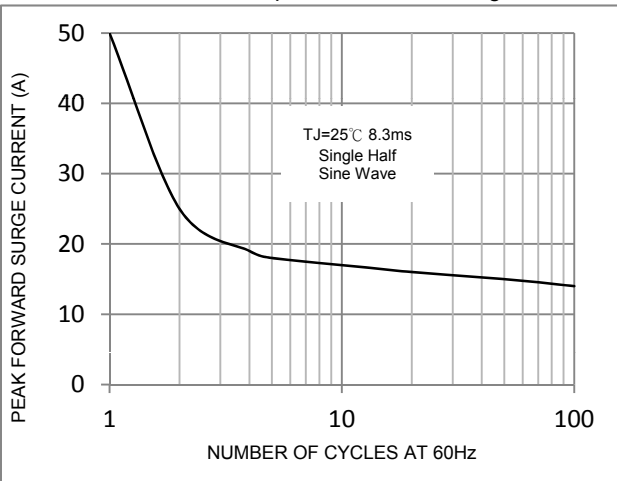


FIG. 4-Typical Reverse Characteristics

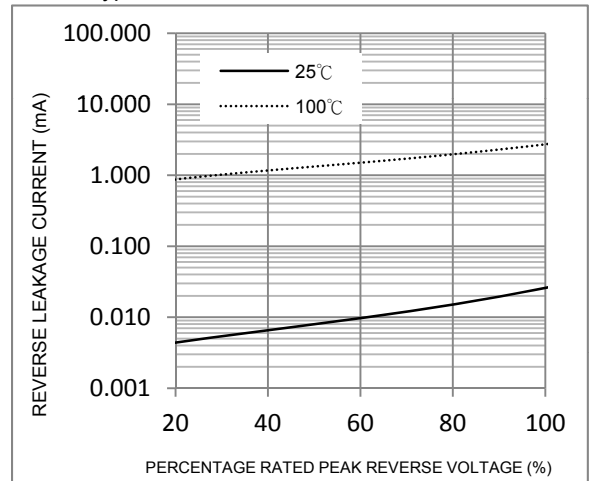
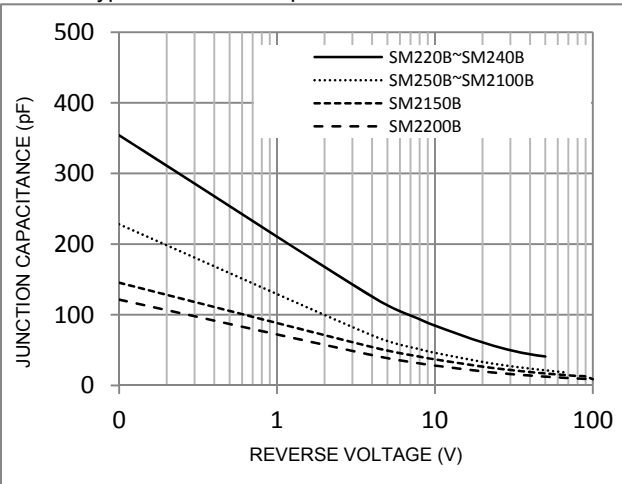
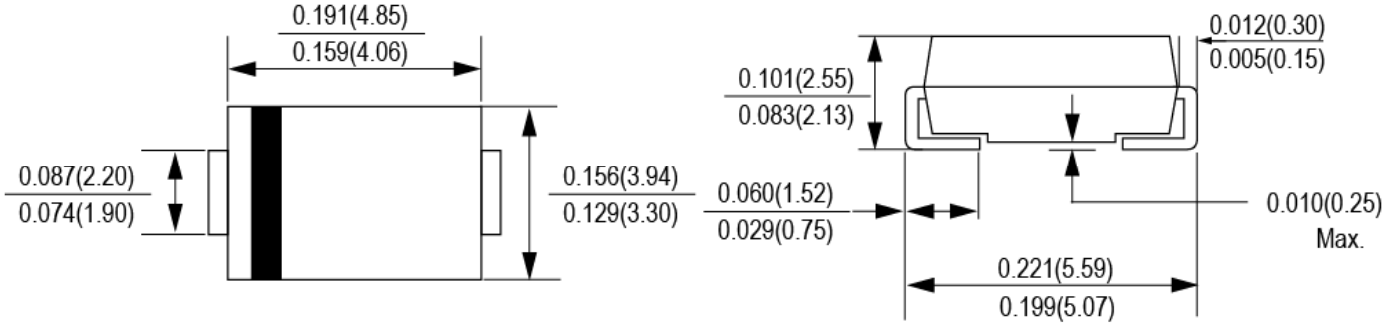


FIG. 5-Typical Junction Capacitance





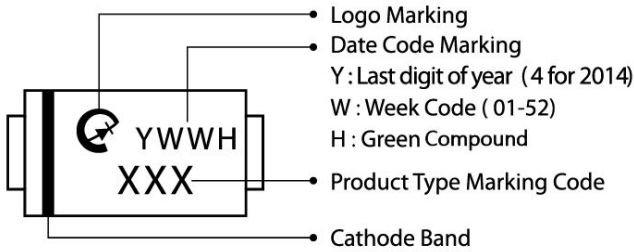
Package Outline Dimensions



DO-214AA(SMB)

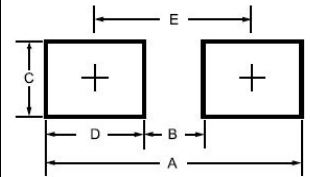
Dimensions in inches and (millimeters)

Marking Information



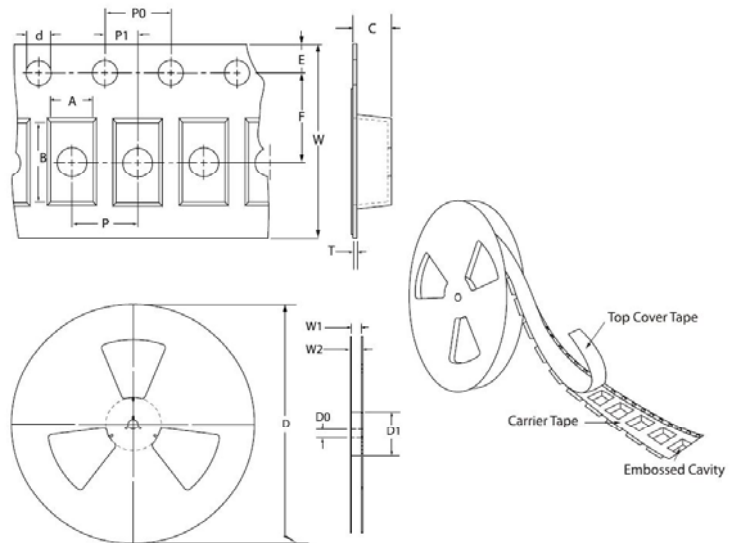
Suggested Pad Layout

Dimension	Outline	SMB (DO-214AA)
A		6.80
B		1.80
C		2.30
D		2.50
E		4.30



Tape & Reel Specification

ITEM	SYMBOL	SMB(mm) DO-214AA
Carrier width	A	4.0(max)
Carrier length	B	5.9(max)
Carrier depth	C	3.0(max)
Sprocket hole	d	1.50±0.1
Reel outside diameter	D	330±2.0
Feed hole diameter	D0	13.5±1
Reel inner diameter	D1	50 (min.)
Sprocket hole position	E	1.75±0.1
Punch hole position	F	5.5±0.05
Sprocket hole pitch	P	8.0±0.1
Sprocket hole pitch	Po	4.0±0.1
Embossment center	P1	2.0±0.05
Overall tape thickness	T	0.6 (max)
Tape width	W	12.0±0.3
Reel width	W2	18.4 (max)
Reel width	W1	14.4 (max)





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