

# OM SENI

## SMB Surface Mount High Efficient Rectifier

### US2AB THRU US2MB

#### Features

- Low profile package
- Ideal for automated placement
- Glass passivated pallet chip junction
- Super fast reverse recovery time
- Low switching losses, high efficiency
- High forward surge capability

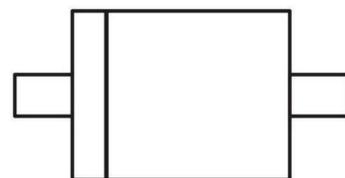
#### Applications

For use in high frequency rectification and freewheeling application in switching mode converters and inverters for consumer, computer, automotive, and telecommunication

#### Mechanical Data

- Case: DO-214AA(SMB)  
Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Cathode line denotes the cathode end

#### Function Diagram



**Reverse Voltage**

50-1000 V

**Forward Current**

2 Ampere



**SMB**

#### Maximum Ratings (Ta=25°C Unless otherwise specified)

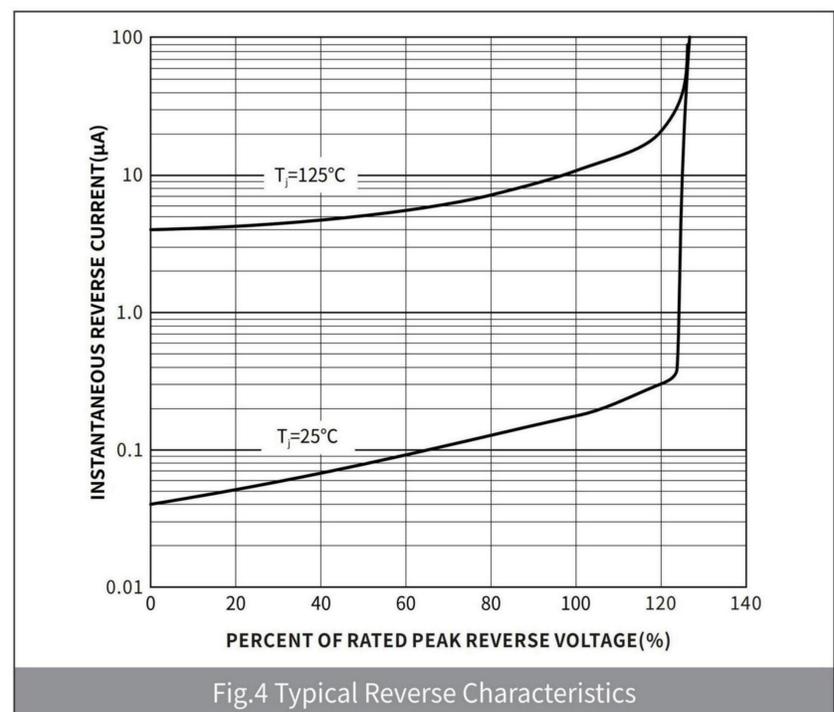
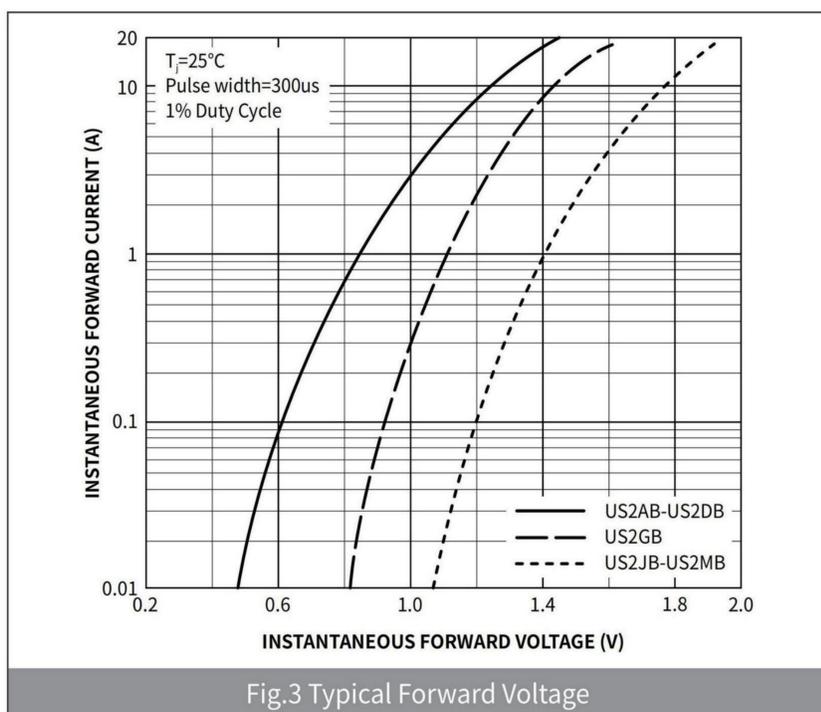
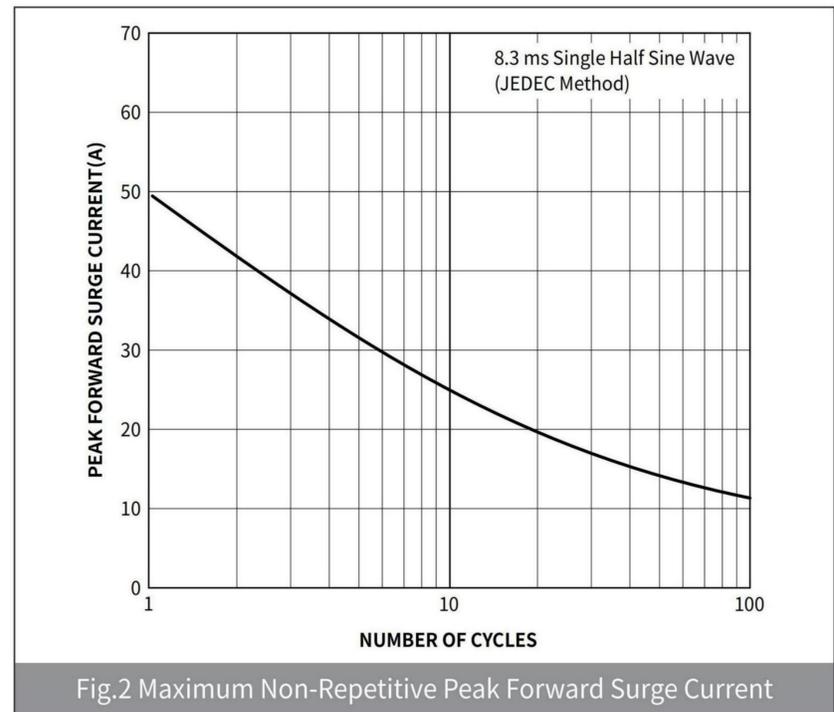
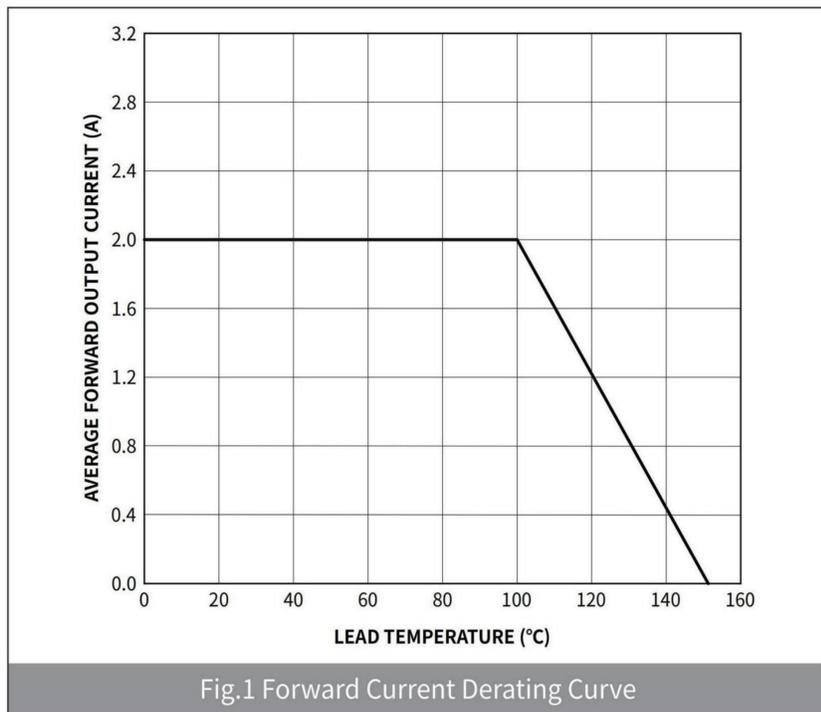
PARAMETER	SYMBOL	UNIT	US2AB	US2BB	US2DB	US2GB	US2JB	US2KB	US2MB
Device marking code			US2AB	US2BB	US2DB	US2GB	US2JB	US2KB	US2MB
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	V	50	100	200	400	600	800	1000
Maximum RMS Voltage	$V_{RMS}$	V	35	70	140	280	420	560	700
Maximum DC blocking Voltage	$V_{DC}$	V	50	100	200	400	600	800	1000
Maximum Average Forward Rectified Current @ 60Hz sinewave, Resistance load, TL (Fig.1)	$I_{F(AV)}$	A	2.0						
Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave	$I_{FSM}$	A	50.0						
Storage temperature	$T_{stg}$	°C	-55 ~+150						
Junction temperature	$T_j$	°C	-55 ~+150						
Typical Thermal Resistance	$R_{\theta J-A}$	°C /W	60						
	$R_{\theta J-L}$	°C /W	15						

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## Electrical Characteristics (Ta=25°C Unless otherwise noted)

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	US2AB	US2BB	US2DB	US2GB	US2JB	US2KB	US2MB
Maximum instantaneous forward voltage	$I_F=2.0A$	$V_F$	V	1.0			1.4	1.7		
Maximum reverse recovery time	$I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$	$T_{rr}$	ns	50					75	
Maximum DC reverse current at rated DC blocking voltage	$V_R=V_{DC}, T_A=25^\circ C$	$I_{R1}$	$\mu A$	2.0						
	$V_R=V_{DC}, T_A=100^\circ C$	$I_{R2}$		200						
Typical junction capacitance	4.0V DC, 1MHz	$C_J$	pF	50						

## Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)



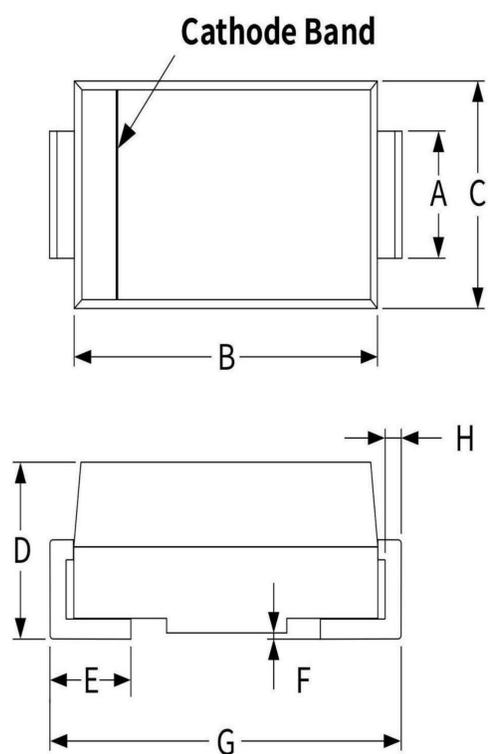
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## Ordering Information

PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SMB	R3	0.098	3000	6000	30000	13"

## Package Outline Dimensions (SMB/D0-214AA)

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.85	2.21	0.073	0.087
B	4.25	4.85	0.167	0.191
C	3.30	3.94	0.130	0.155
D	2.15	2.65	0.085	0.104
E	0.75	1.52	0.030	0.060
F	-	0.203	-	0.008
G	5.08	5.59	0.200	0.220
H	0.15	0.31	0.006	0.012



## Suggested Pad Layout

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
M	2.26	-	0.089	-
J	2.10	-	0.085	-
K	-	2.74	-	0.107

