

SMBF Surface Mount High Efficient Rectifier

Features

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

Applications

For use in fast switching rectification of power supplies,inverters, converters, and free wheeling diodes forconsumer, and telecommunication.

Mechanical Data

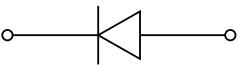
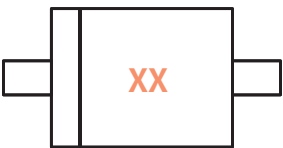
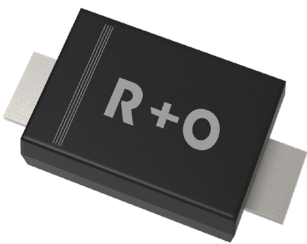
- Case: SMBF
Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750,Method 2026
- Polarity: Cathode line denotes the cathode end

Function Diagram

Reverse Voltage
50-1000 V

Forward Current
3 Ampere

SMBF



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

PARAMETER	SYMBOL	UNIT	US3ABF	US3BBF	US3DBF	US3GBF	US3JBF	US3KBF	US3MBF
Device marking code			US3ABF	US3BBF	US3DBF	US3GBF	US3JBF	US3KBF	US3MBF
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	3.0						
Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave	I _{FSM}	A	100						
Storage temperature	T _{stg}	°C	-55 ~ +150						
Junction temperature	T _j	°C	-55 ~ +150						
Typical Thermal Resistance	R _{θJ-A}	°C /W	75						
	R _{θJ-L}	°C /W	15						

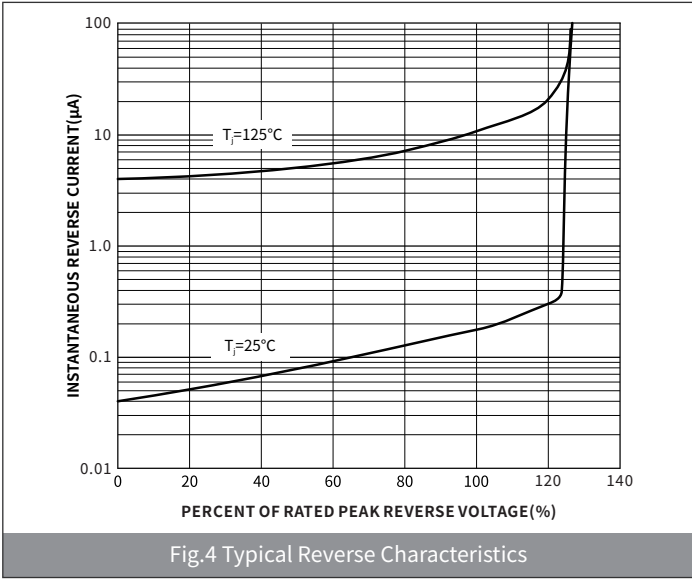
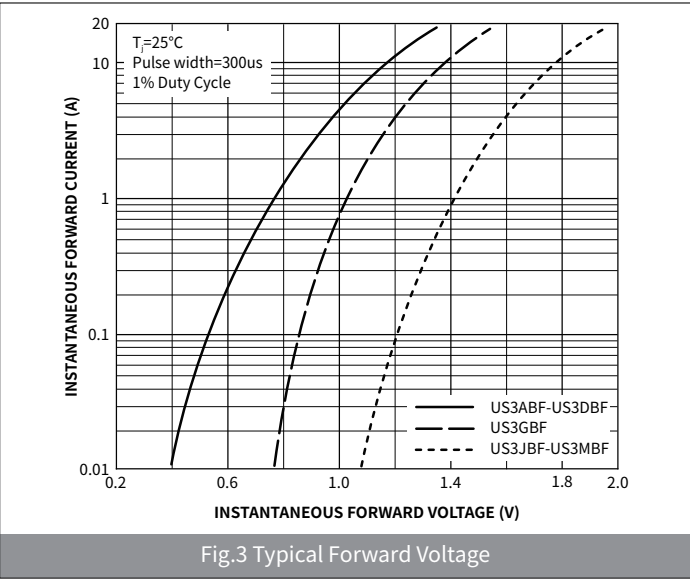
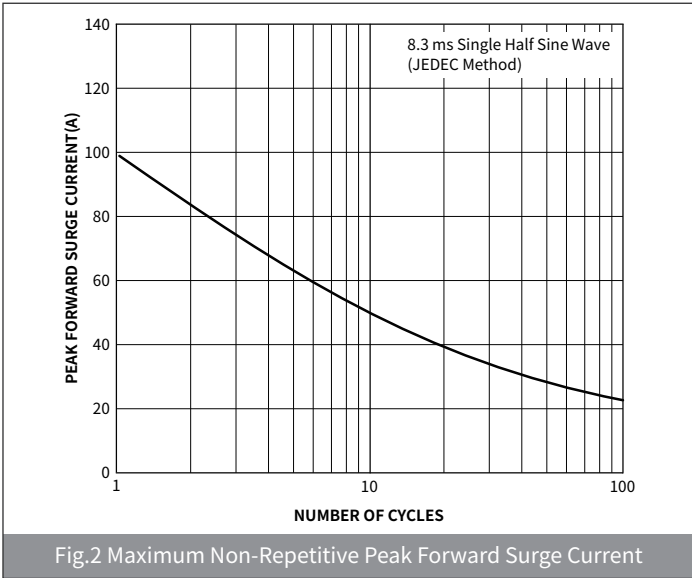
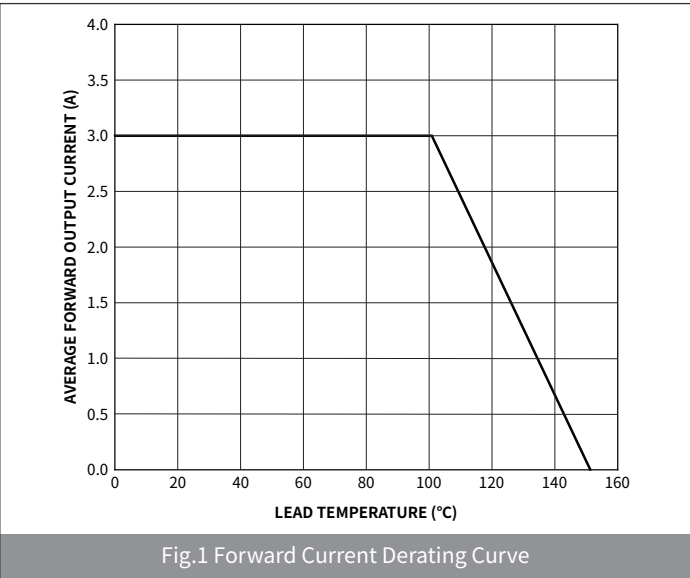
US3ABF THRU US3MBF

SURFACE MOUNT HIGH EFFICIENT RECTIFIER

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

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	US3ABF	US3BBF	US3DBF	US3GBF	US3JBF	US3KBF	US3MBF
Maximum instantaneous forward voltage	I _F =3.0A	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 currentat rated DC blocking voltage	V _R =V _{DC} , T _A =25°C	I _{R1}	μA	2.0						
	V _R =V _{DC} , T _A =125°C	I _{R2}		200						
Typical junction capacitance	4.0V DC,1MHz	C _J	pF	58						

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



US3ABF THRU US3MBF

SURFACE MOUNT HIGH EFFICIENT RECTIFIER

● Ordering Information

PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SMBF	R2	0.065	3000	6000	48000	11"
SMBF	R3	0.065	5000	10000	80000	13"

● Package Outline Dimensions (SMBF)

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.90	2.10	0.074	0.083
B	4.15	4.45	0.163	0.175
C	3.40	3.80	0.133	0.150
D	5.10	5.60	0.200	0.220
E	1.05	1.55	0.041	0.061
F	0.70	1.35	0.027	0.053
G	0.15	0.25	0.006	0.010

Cathode Band

Dimensions: A, B, C, D, E, F, G

● Suggested Pad Layout

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
M	2.20	-	0.086	-
J	1.90	-	0.075	-
K	-	2.40	-	0.094

Dimensions: J, K, M