

SMBF Plastic-Encapsulate Diodes

High Efficient Rectifier Diodes

Features

- $I_{F(AV)}$ 2A
- V_{RRM} 50V-1000V
- High surge current capability
- Polarity: Color band denotes cathode

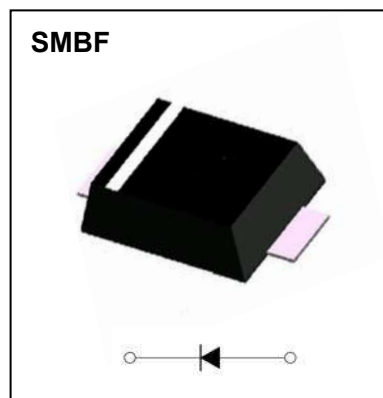
Applications

- Rectifier

Marking

- US2X

X : From ABF To MBF



Limiting Values(Absolute Maximum Rating)

Item	Symbol	Unit	Test Conditions	US2						
				ABF	BBF	DBF	GBF	JBF	KBF	MBF
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
Average Forward Current	$I_{F(AV)}$	A	60Hz Half-sine wave, Resistance load	2.0						
Surge(Non-repetitive)Forward Current	I_{FSM}	A	60Hz Half-sine wave, 1 cycle, $T_a=25^{\circ}\text{C}$	50						
Operation Junction and Storage Temperature Range	T_J, T_{STG}	$^{\circ}\text{C}$		-55 ~ +150						

Electrical Characteristics (T=25°C Unless otherwise specified)

Item	Symbol	Unit	Test Condition		US2						
					ABF	BBF	DBF	GBF	JBF	KBF	MBF
Peak Forward Voltage	V _F	V	I _F =2.0A		1.0			1.3	1.7		
Maximum reverse recovery time	t _{rr}	ns	I _F =0.5A,I _R =1.0A,I _{rr} =0.25A		50			75			
Peak Reverse Current	I _{RRM1}	μA	V _{RM} =V _{RRM}	T _a =25℃	5						
	T _a =125℃			50							
Thermal Resistance(Typical)	R _{θJ-A}	℃/W	Between junction and ambient		75						
	R _{θJ-L}		Between junction and terminal		27						
Juction Capacitance (Typical)	Cj	pF	Measured at 1MHZ and Applied Reverse Voltage of 4.0 V.D.C		26			20	10		

Notes:

Thermal resistance from junction to ambient and from junction to lead mounted on FR4 PCB double sided copper mini pad

Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

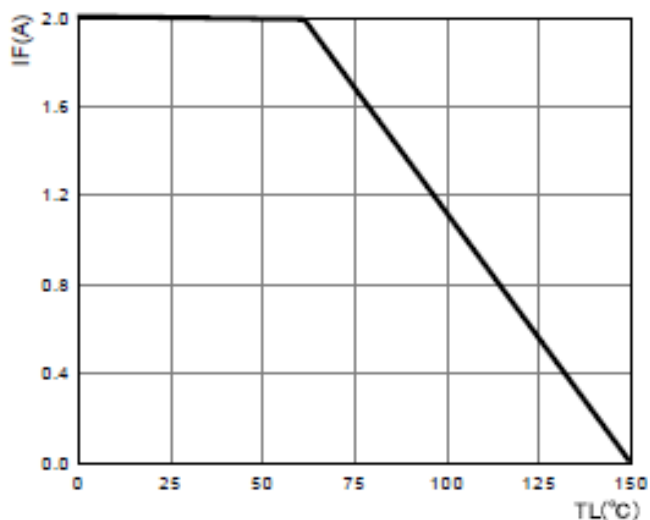
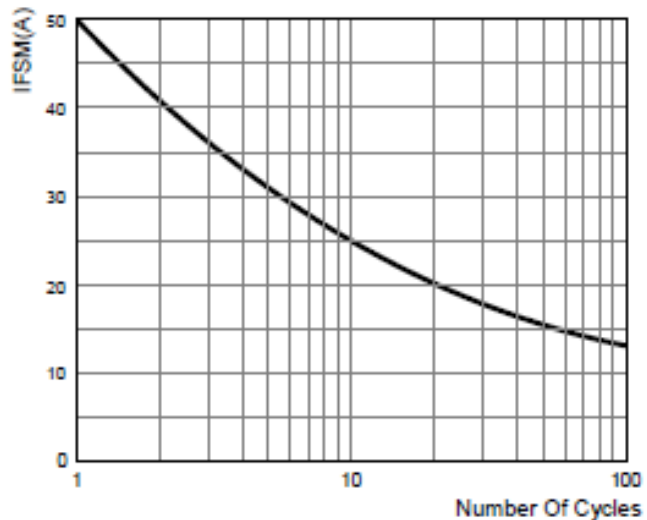
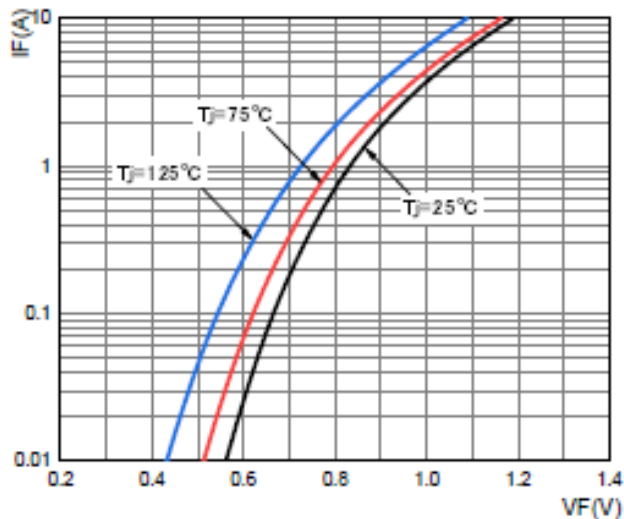


FIG.2: MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



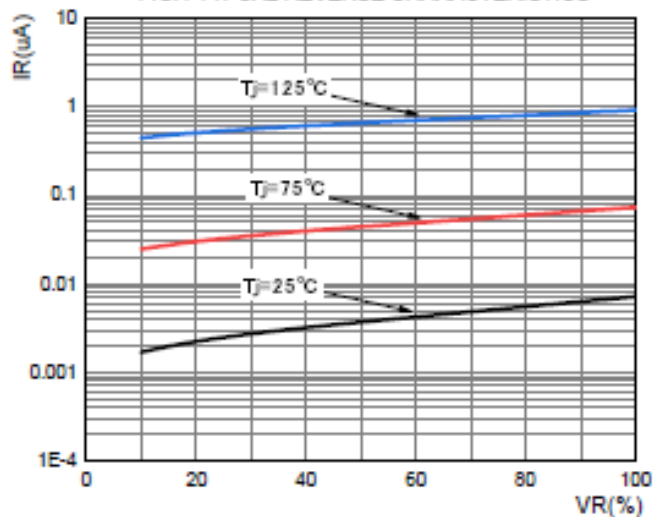
US2ABF-US2DBF

FIG.3 : TYPICAL FORWARD CHARACTERISTICS



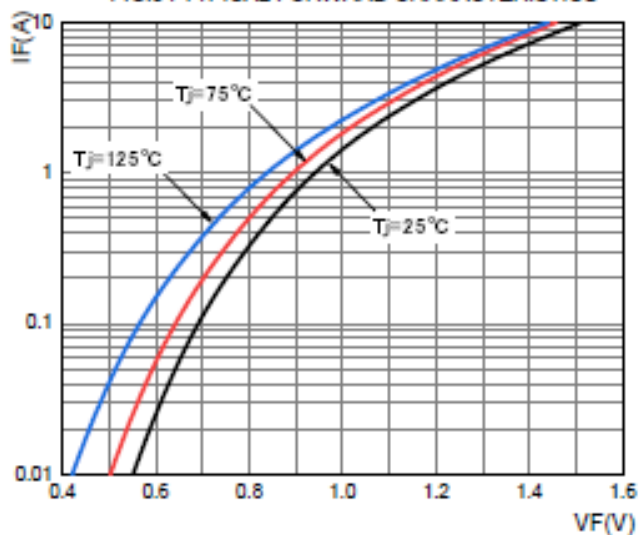
US2ABF-US2DBF

FIG.4 TYPICAL REVERSE CHARACTERISTICS



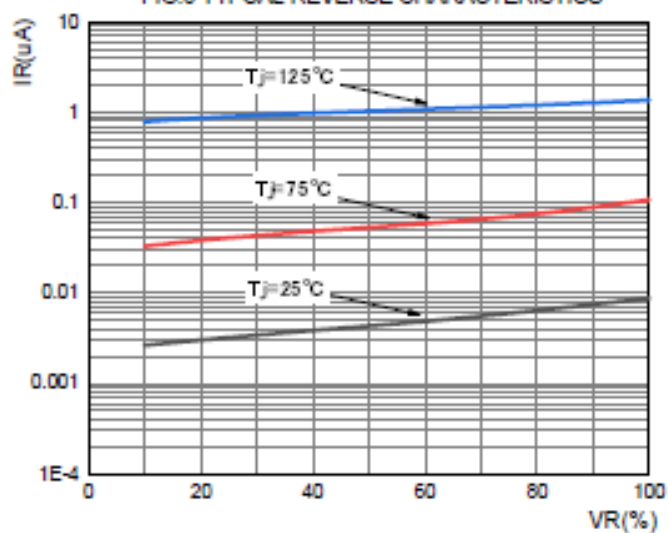
US2GBF

FIG.5 : TYPICAL FORWARD CHARACTERISTICS



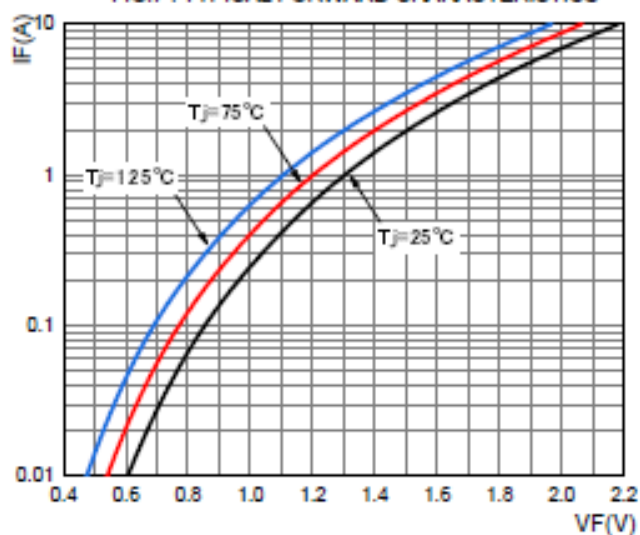
US2GBF

FIG.6 TYPICAL REVERSE CHARACTERISTICS



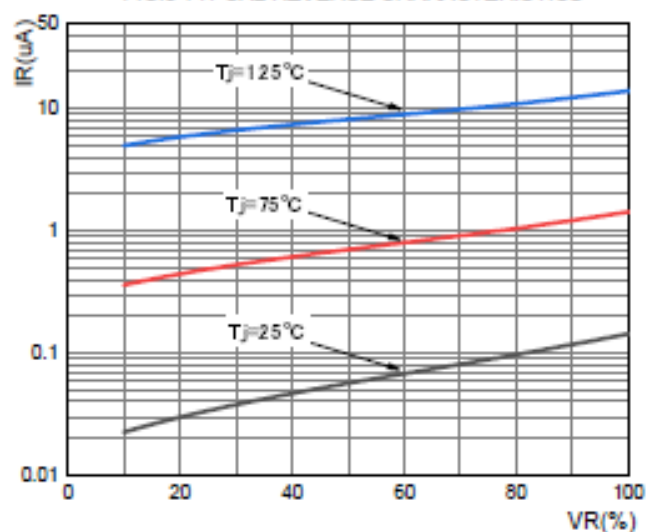
US2JBF-US2MBF

FIG.7 : TYPICAL FORWARD CHARACTERISTICS

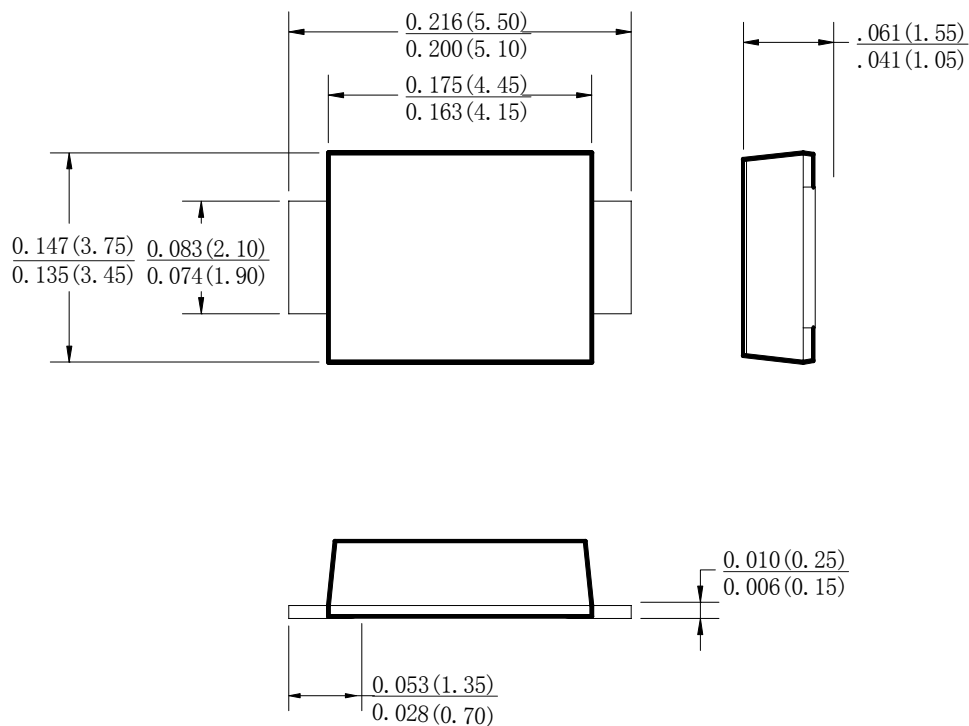


US2JBF-US2MBF

FIG.8 TYPICAL REVERSE CHARACTERISTICS

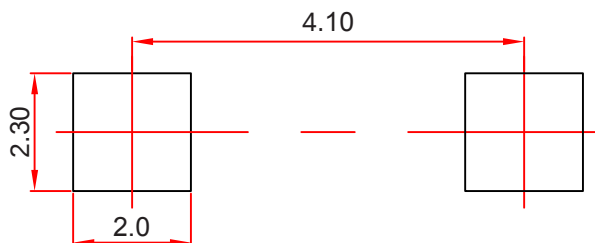


SMBF Package Outline Dimensions



Dimensions in inches and (millimeters)

SMBF Suggested Pad Layout



Note:

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