



### Surface Mount Ultrafast Recovery Rectifier

Reverse Voltage – 50V~1000 V

Forward Current – 2.0 A

#### FEATURES

- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Easy to pick and place
- High efficiency
- Lead free in comply with EU RoHS 2011/65/EU directives

#### MECHANICAL DATA

- Case: SMBF
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 57mg / 0.002oz

#### PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Top View  
Marking Code: U2AB~U2MB  
Simplified outline SMBF symbol

#### Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

Parameter	Symbols	US2ABF	US2BBF	US2DBF	US2GBF	US2JBF	US2KBF	US2MBF	Units				
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V				
Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V				
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V				
Maximum Average Forward Rectified Current at T <sub>c</sub> = 125 °C	I <sub>F(AV)</sub>	2							A				
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I <sub>FSM</sub>	50							A				
Maximum Instantaneous Forward Voltage at 2 A	V <sub>F</sub>	1.0		1.3	1.65				V				
Maximum DC Reverse Current T <sub>a</sub> = 25 °C at Rated DC Blocking Voltage T <sub>a</sub> = 125 °C	I <sub>R</sub>	5 100							µA				
Maximum Reverse Recovery Time <sup>(1)</sup>	t <sub>rr</sub>	50			75				ns				
Typical Thermal Resistance <sup>(2)</sup>	R <sub>θJA</sub> R <sub>θJC</sub>	60 18							°C/W				
Operating and Storage Temperature Range	T <sub>j</sub> , T <sub>stg</sub>	-55 ~ +150							°C				

( 1 ) Measured with I<sub>F</sub> = 0.5 A, I<sub>R</sub> = 1 A, I<sub>rr</sub> = 0.25 A.

( 2 ) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.



Fig.1 Forward Current Derating Curve

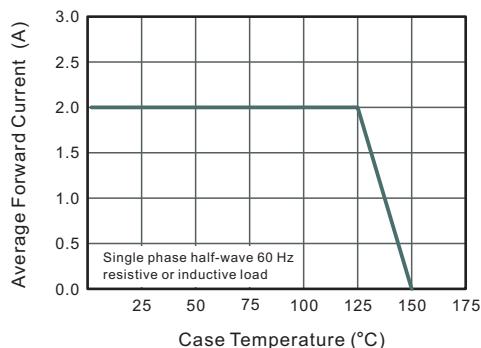


Fig.2 Typical Reverse Characteristics

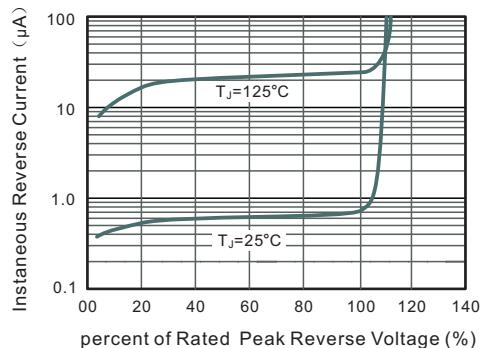


Fig.3 Typical Forward Characteristics

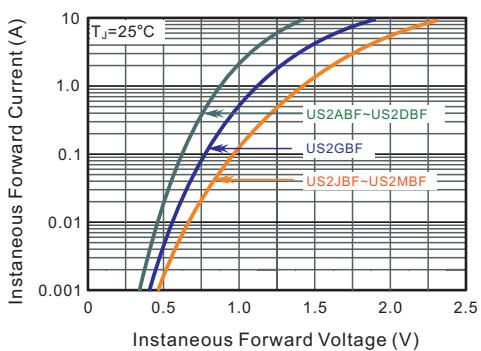
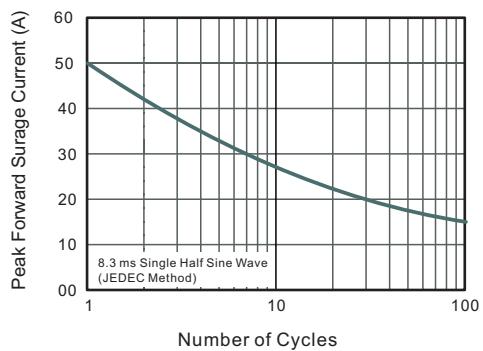


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current

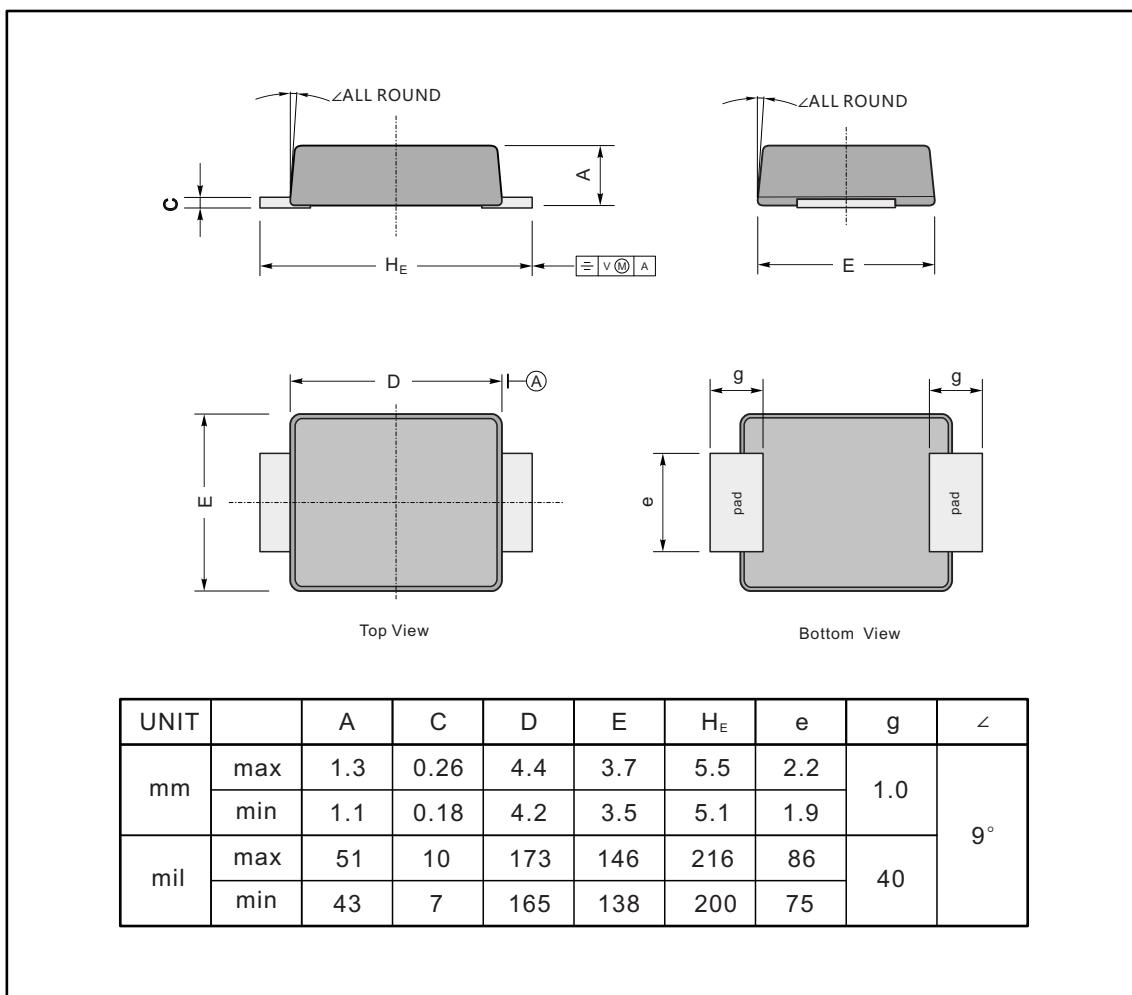




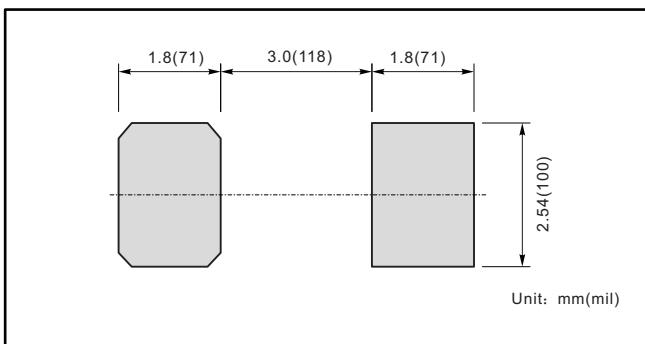
## PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SMBF



### The recommended mounting pad size



### Marking

Type number	Marking code
US2ABF	U2AB
US2BBF	U2BB
US2DBF	U2DB
US2GBF	U2GB
US2JBF	U2JB
US2KBF	U2KB
US2MBF	U2MB