US2ABF - US2MBF

Voltage Range - 50 to 1000 V
Forward Current - 2 Ampere

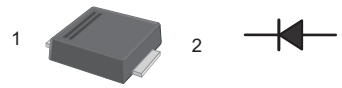
SURFACE MOUNT ULTRAFAST RECOVERY RECTIFIER

FEATURES

- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Superfast reverse recovery time
- Lead free in comply with EU RoHS 2011/65/EU directives

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



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

MECHANICAL DATA

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

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_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at Ta = 40 °C	$I_{F(AV)}$	2							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	55				50			A
Maximum Instantaneous Forward Voltage at 2 A	V_F	1.0			1.3	1.6			V
Maximum DC Reverse Current Ta = 25 °C at Rated DC Blocking Voltage Ta =125 °C	I_R	5 100							µA
Typical Junction Capacitance [1]	C_j	60							pF
Maximum Reverse Recovery Time [2]	t_{rr}	50				75			ns
Typical Thermal Resistance [3]	$R_{\theta JA}$ $R_{\theta JL}$	60 20							°C/W
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150							°C

NOTES:

1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

2) Measured with IF = 0.5 A, IR = 1 A, Irr = 0.25 A P.C.B. mounted with 0.5 X 0.5" (12.7 X 12.7 mm^2) copper pad areas.

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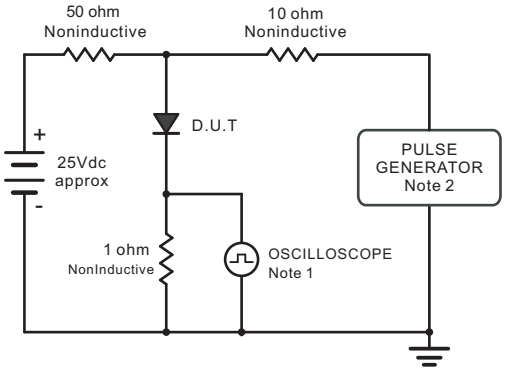
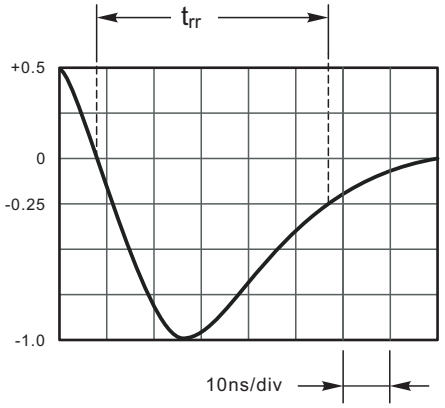
RATINGS AND CHARACTERISTICS OF US2ABF - US2MBF

Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram



Note: 1. Rise Time = 7ns, max.
Input Impedance = 1megohm,22pF.
2. Ries Time =10ns, max.
Source Impedance = 50 ohms.



Set time Base for 10ns/div

Fig.2 Maximum Average Forward Current Rating

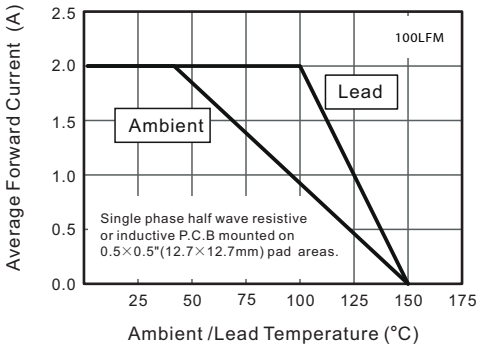


Fig.3 Typical Reverse Characteristics

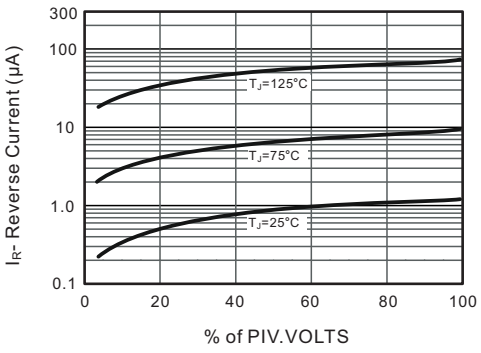


Fig.3 Typical Instaneous Forward Characteristics

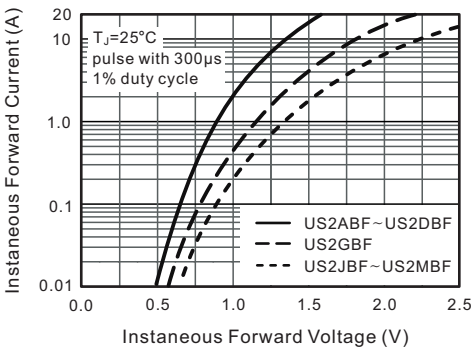
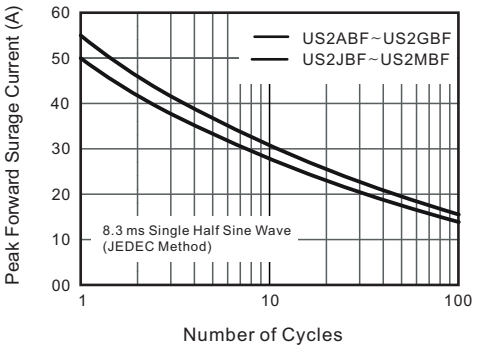


Fig.4 Maximum Non-Repetitive Peak Forward Surage Current



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US2ABF - US2MBF

Voltage Range - 50 to 1000 V
Forward Current - 2 Ampere

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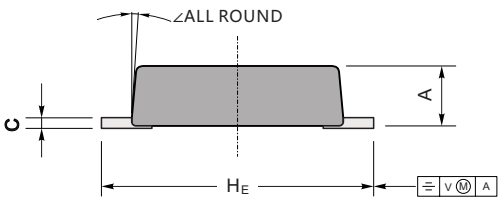
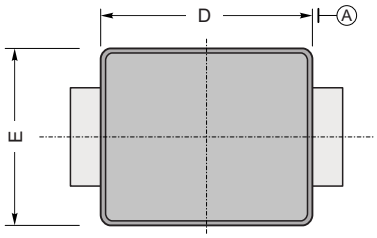
PACKAGE OUTLINE

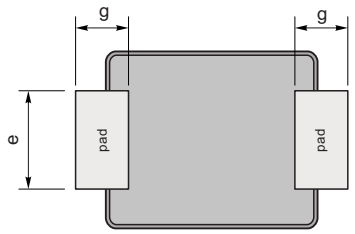
Plastic surface mounted package; 2 leads

SMBF





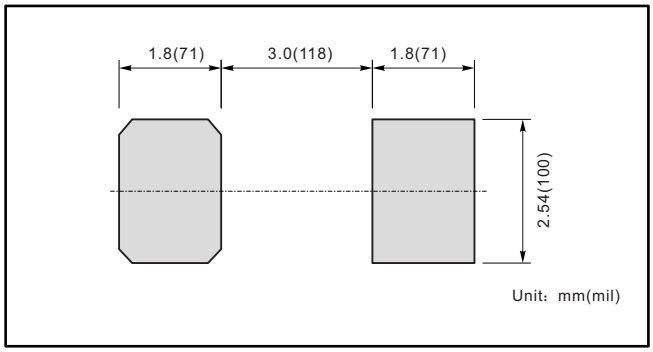
Top View



Bottom View

UNIT		A	C	D	E	H_E	e	g	∠
mm	max	1.3	0.26	4.4	3.7	5.5	2.2	1.0	9°
	min	1.1	0.18	4.2	3.5	5.1	1.9		
mil	max	51	10	173	146	216	86	40	
	min	43	7	165	138	200	75		

The recommended mounting pad size



Marking

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

Disclaimer

All product, product specifications and data are subject to change without notice to improve reliability, function or design or otherwise.

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