

SURFACE MOUNT ULTRA FAST RECOVERY RECTIFIER

FEATURES

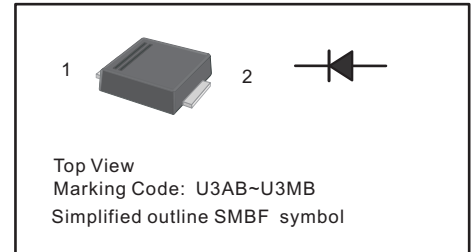
- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Superfast reverse recovery time
- Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA

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

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



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 %.

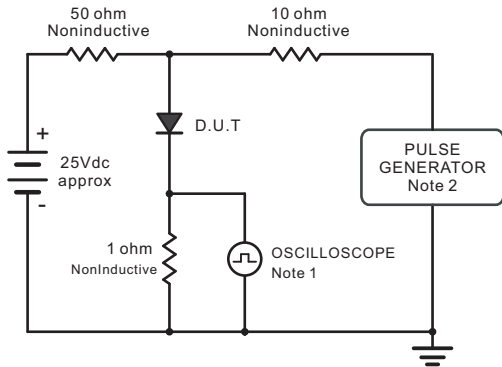
Parameter	Symbols	US3ABF	US3BBF	US3DBF	US3GBF	US3JBF	US3KBF	US3MBF	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at Ta = 40 °C	$I_{F(AV)}$	3							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	100							A
Maximum Instantaneous Forward Voltage at 3 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	75							pF
Maximum Reverse Recovery Time ²⁾	t_{rr}	50				75			ns
Typical Thermal Resistance ³⁾	$R_{\theta JA}$ $R_{\theta JL}$	55 16							°C/W
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150							°C

Notes:

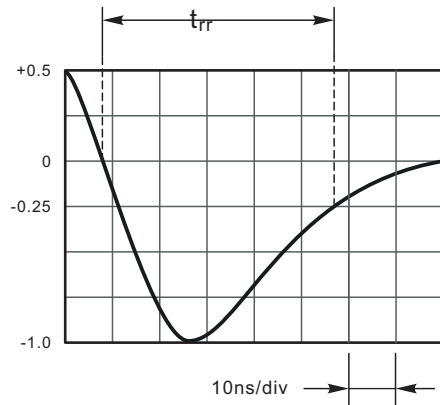
1. Measured at 1 MHz and applied reverse voltage of 4 V D.C
2. Measured with $I_F = 0.5$ A, $I_R = 1$ A, $I_{rr} = 0.25$ A
3. P.C.B. mounted with 0.5 X 0.5" (12.7 X 12.7 mm²) copper pad areas.

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RATING AND CHARACTERISTIC CURVES US3ABF - US3MBF

Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram



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



Set time Base for 10ns/div

Fig.2 Maximum Average Forward Current Rating

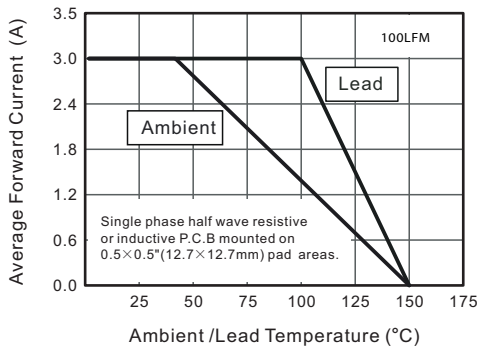


Fig.3 Typical Reverse Characteristics

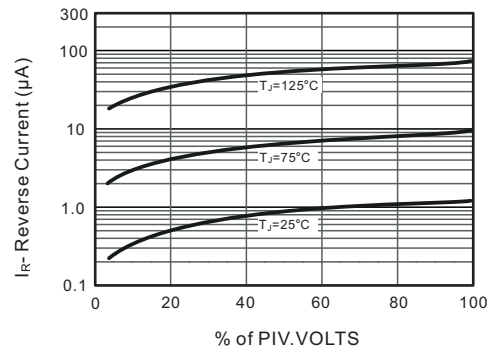


Fig.3 Typical Instantaneous Forward Characteristics

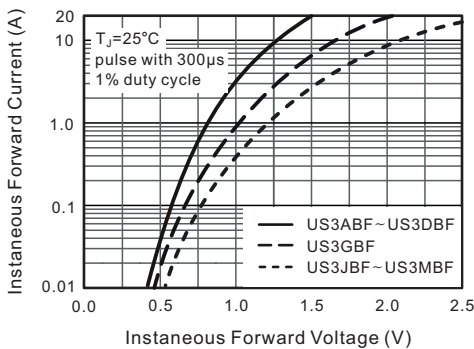
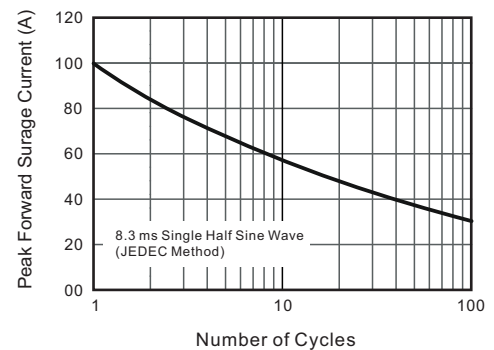
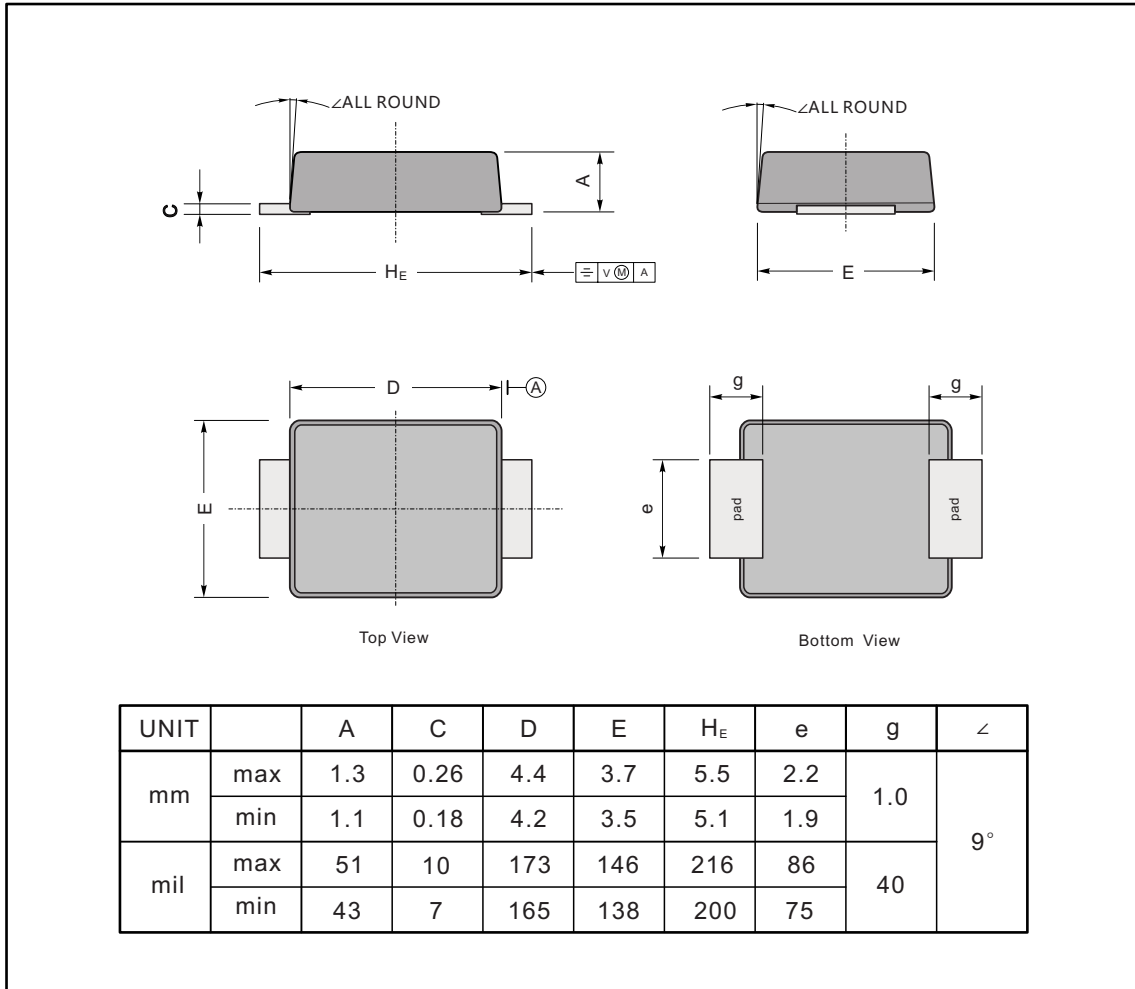
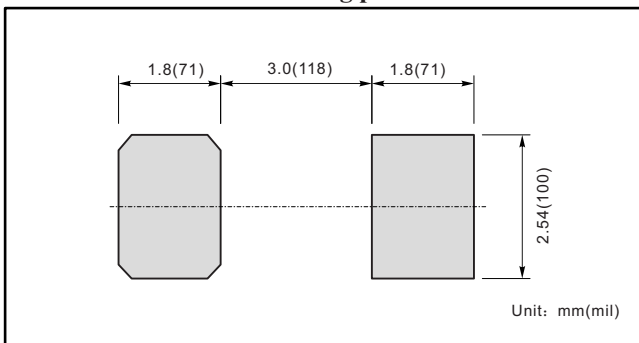


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



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PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SMBF

The recommended mounting pad size

Marking

Type number	Marking code
US3ABF	U3AB
US3BBF	U3BB
US3DBF	U3DB
US3GBF	U3GB
US3JBF	U3JB
US3KBF	U3KB
US3MBF	U3MB

Disclaimer

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