

SURFACE MOUNT ULTRAFAST RECOVERY RECTIFIER

Reverse Voltage - 50 to 1000 V

Forward Current - 2 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: SMB
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.095g / 0.003oz

PINNING

- 1 Cathode
2 Anode



Top View
Marking Code: US2A~US2M
Simplified outline SMB and 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	US2AB	US2BB	US2DB	US2GB	US2JB	US2KB	US2MB	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 $T_c = 125\text{ °C}$	$I_{F(AV)}$	2							A	
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	50							A	
Maximum Instantaneous Forward Voltage at 2 A	V_F	1.0		1.3		1.65			V	
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_a = 25\text{ °C}$ $T_a = 125\text{ °C}$	I_R	5 100							μA	
Maximum Reverse Recovery Time ⁽¹⁾	t_{rr}	50				75				ns
Typical Thermal Resistance ⁽²⁾	$R_{\theta JA}$	60							$^{\circ}\text{C}/\text{W}$	
Typical Junction Capacitance at $V_R=4\text{V}$, $f=1\text{MHz}$	C_j	20							pF	
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150							$^{\circ}\text{C}$	

(1) Measured with $I_F = 0.5\text{ A}$, $I_R = 1\text{ A}$, $I_{rr} = 0.25\text{ A}$.

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

Fig.1 Forward Current Derating Curve

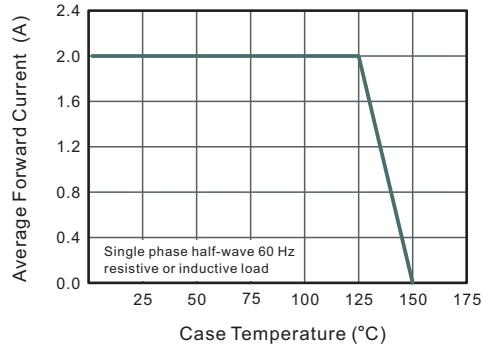


Fig.2 Typical Reverse Characteristics

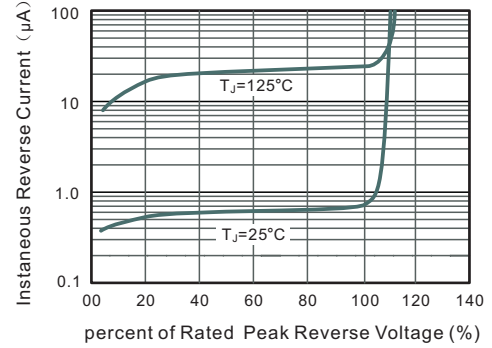


Fig.3 Typical Forward Characteristics

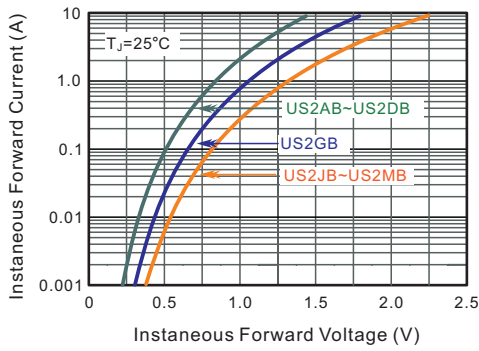
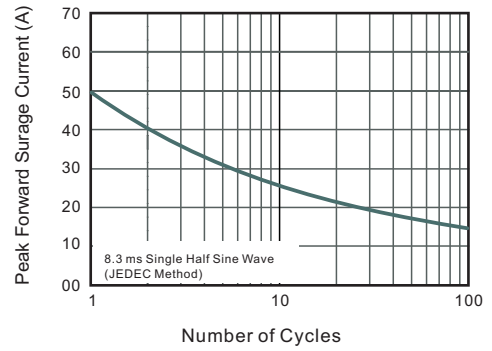


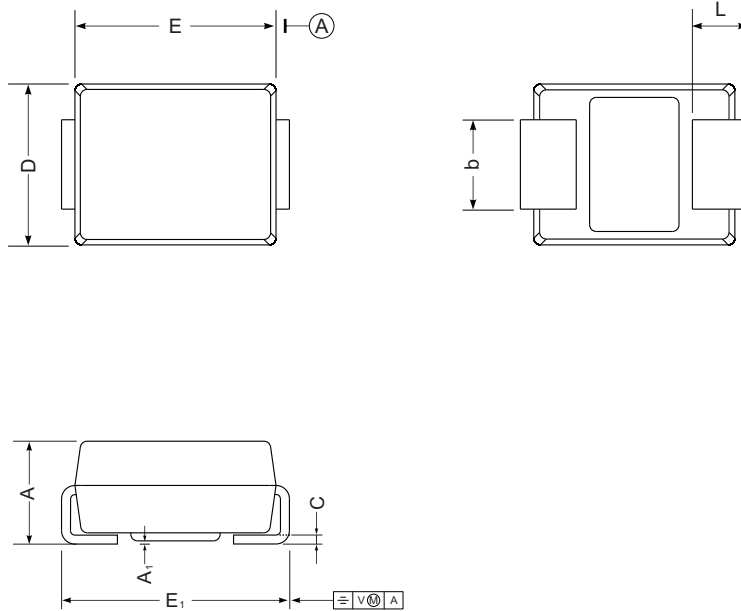
Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

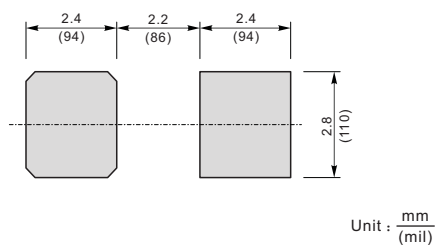
SMB



SMB mechanical data

UNIT		A	E	D	E ₁	A ₁	L	C	b
mm	max	2.44	4.70	3.94	5.59	0.20	1.5	0.305	2.2
	min	2.13	4.06	3.3	5.08	0.05	0.8	0.152	1.9
mil	max	96	185	155	220	7.9	59	12	87
	min	84	160	130	200	2.0	32	6	75

The recommended mounting pad size



Marking

Type number	Marking code
US2AB	US2A
US2BB	US2B
US2DB	US2D
US2GB	US2G
US2JB	US2J
US2KB	US2K
US2MB	US2M

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