Surface Mount Ultrafast Recovery Rectifier

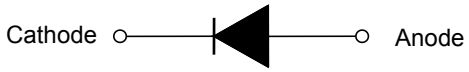
FEATURES:

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

Marking

Type number	Marking code
US1ABF	U1AB
US1BBF	U1BB
US1DBF	U1DB
US1GBF	U1GB
US1JBF	U1JB
US1KBF	U1KB
US1MBF	U1MB

Circuit Diagram & Pin Configuration:



SMBF

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	US1ABF	US1BBF	US1DBF	US1GBF	US1JBF	US1KBF	US1MBF	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 °C	$I_{F(AV)}$	1							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	35							A
Maximum Instantaneous Forward Voltage at 1 A	V_F	1.0			1.3	1.65			V
Maximum DC Reverse Current T_a = 25 °C at Rated DC Blocking Voltage T_a =125 °C	I_R	5 100							μA
Maximum Reverse Recovery Time (1)	t_{rr}	50				75			ns
Typical Thermal Resistance (2)	$R_{\theta JA}$	75							°C/W
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150							°C

(1) Measured with I_F = 0.5 A, I_R = 1 A, I_{rr} = 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

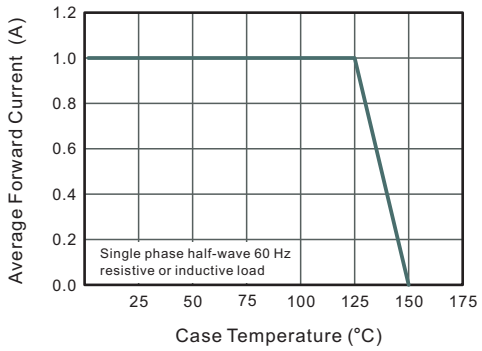


Fig.2 Typical Reverse Characteristics

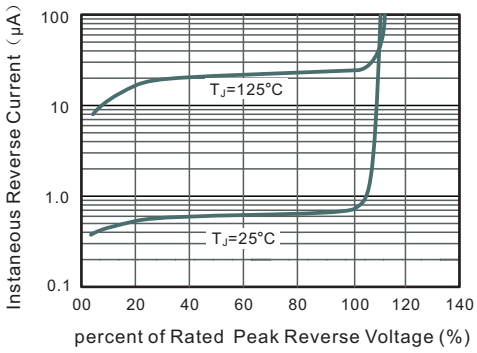


Fig.3 Typical Forward Characteristics

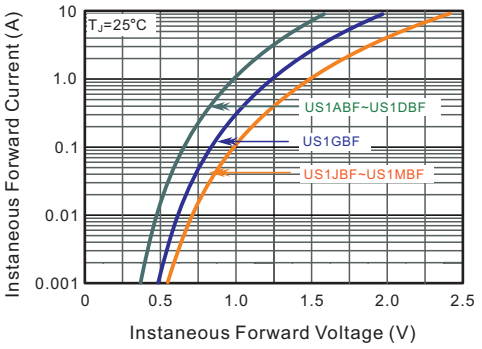
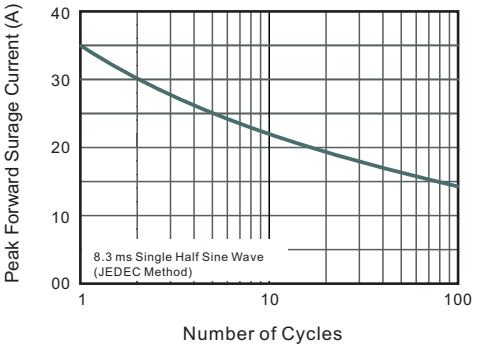
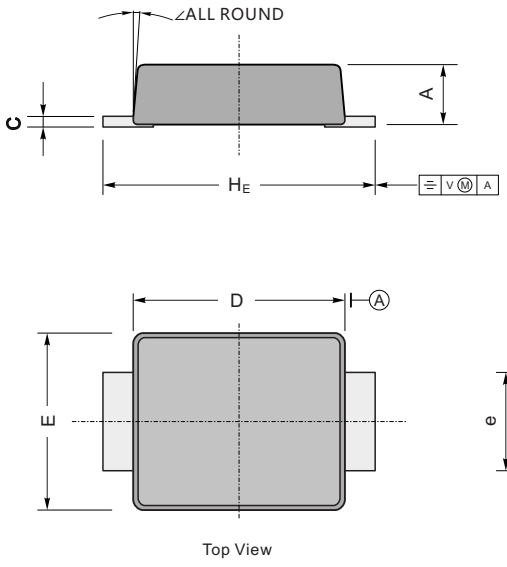


Fig.4 Maximum Non-Repetitive Peak Forward Surage Current



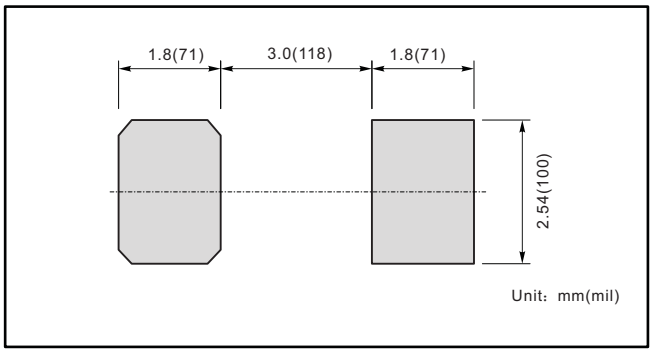
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads **SMBF**



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



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