

Reverse Voltage - 50 to 1000 V

Forward Current - 3A

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

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 @ Fig.1	I _{F(AV)}	3							A
Peak Forward Surge Current,8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	80							A
Peak Forward Surge Current,1.0ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	160							A
I ² t Rating for fusing (3ms≤t≤8.3ms)	I ² t	26.5							A ² S
Max Instantaneous Forward Voltage at 3 A	V _F	1.0			1.3	1.68			V
Maximum DC Reverse Current at Rated DC Reverse Voltage T _a = 25°C T _a =125°C	I _R	5 100							μA
Typical Junction Capacitance ⁽¹⁾	C _j	76			46	38	32		pF
Maximum Reverse Recovery Time ⁽²⁾	t _{rr}	50				75			ns
Typical Thermal Resistance ⁽³⁾	R _{θJA} R _{θJC} R _{θJL}	42 10 15							°C/W
Operating and Storage Temperature Range	T _j , T _{stg}	-55 ~ +150							°C

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

(2) Measured with $I_F = 0.5 A$, $I_R = 1 A$, $t_{rr} = 0.25 A$.

(3) P.C.B. mounted with 1.5" X 1.5" (3.81 X 3.81 cm) copper pad areas.

Typical Characteristics

Fig.1 Forward Current Derating Curve

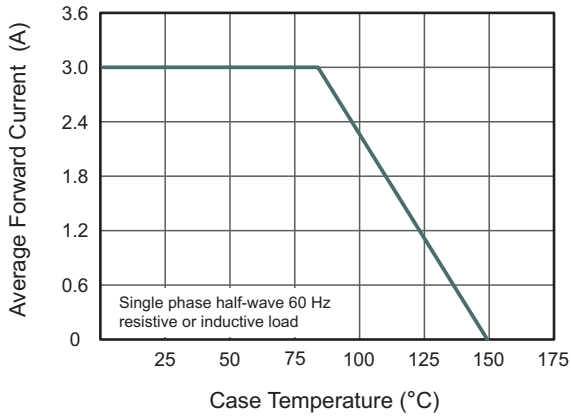


Fig.2 Typical Reverse Characteristics

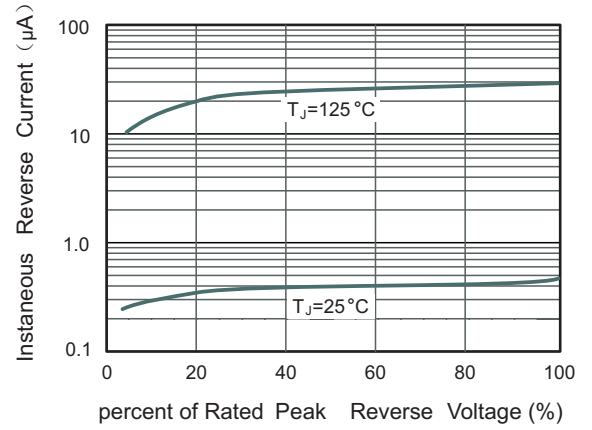


Fig.3 Typical Forward Characteristics

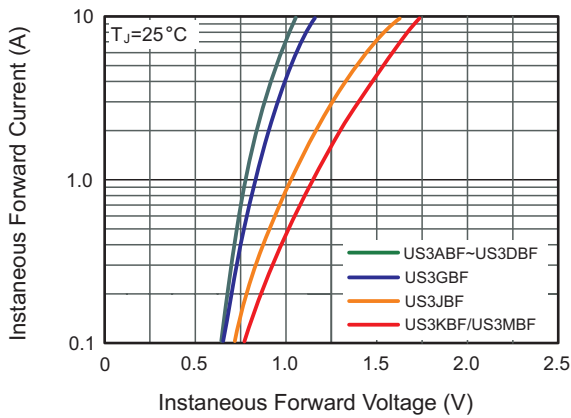


Fig.4 Typical Junction Capacitance

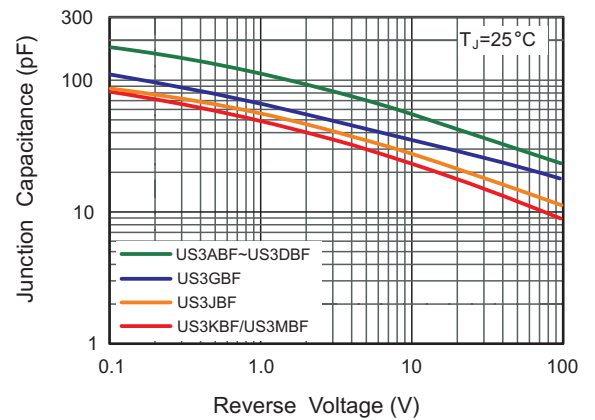
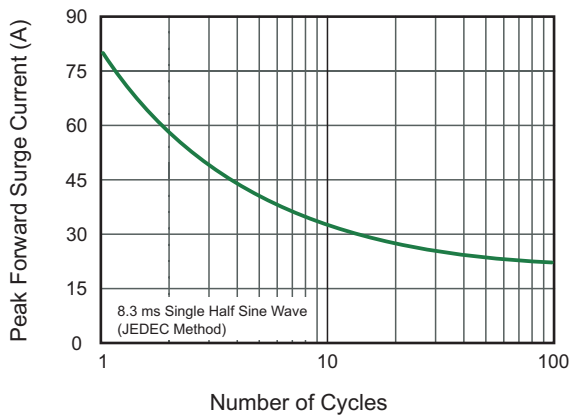


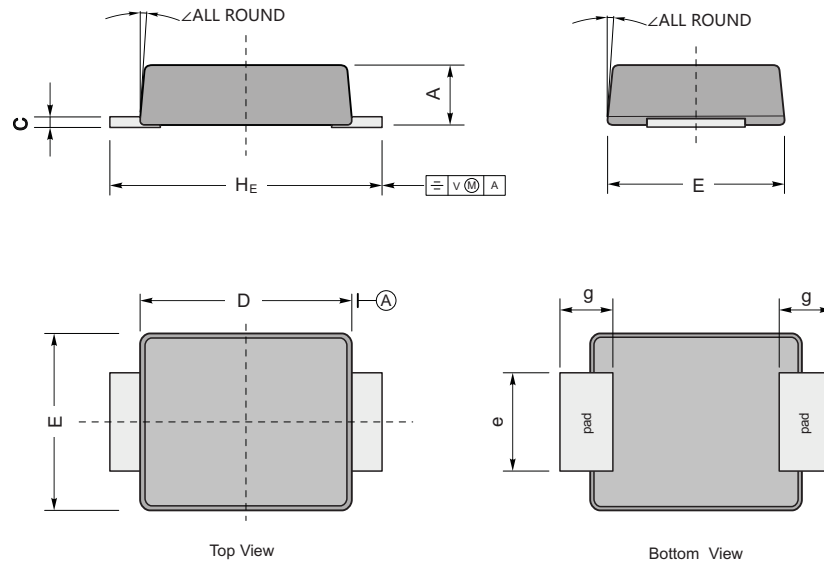
Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



PACKAGE OUTLINE

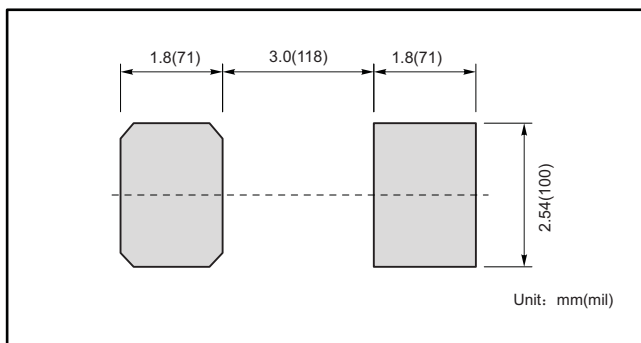
Plastic surface mounted package; 2 leads

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



Marking

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



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