

SURFACE MOUNT ULTRAFAST RECOVERY RECTIFIER
Reverse Voltage - 50 to 1000 V
Forward Current - 1 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: SMAF
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 27mg 0.00086oz

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Top View
 Marking Code: US1A~US1M
 Simplified outline SMAF and symbol

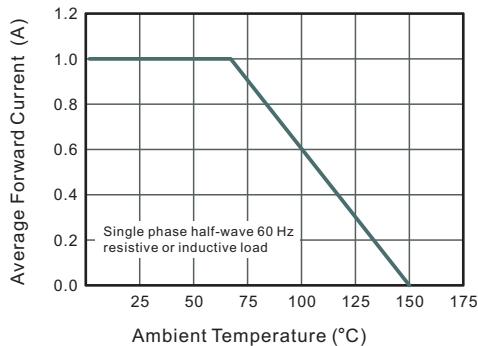
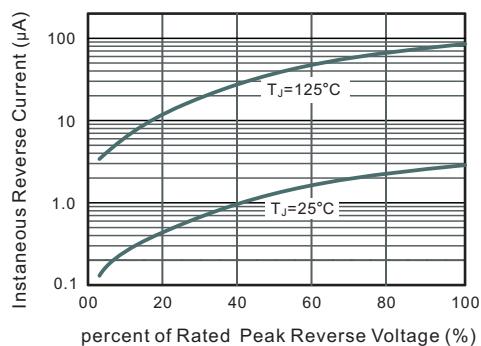
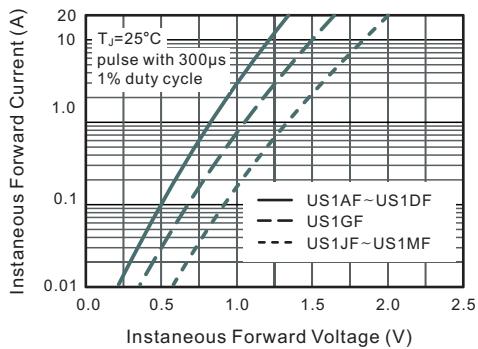
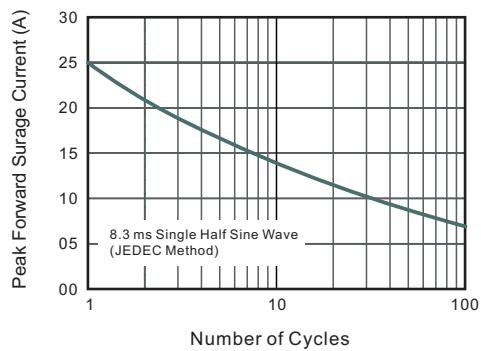
Maximum Ratings and Electrical characteristics

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	US1AF	US1BF	US1DF	US1GF	US1JF	US1KF	US1MF	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 = 65 °C	I _{F(AV)}	1						A						
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I _{FSM}	25						A						
Maximum Instantaneous Forward Voltage at 1 A	V _F	1.0		1.4		1.7		V						
Maximum DC Reverse Current Ta = 25 °C at Rated DC Blocking Voltage Ta = 125 °C	I _R	5 100						μA						
Maximum Reverse Recovery Time ¹⁾	t _{rr}	50			75			ns						
Typical Thermal Resistance	R _{θJA}	180						°C/W						
Operating and Storage Temperature Range	T _j , T _{stg}	-55 ~ +150						°C						

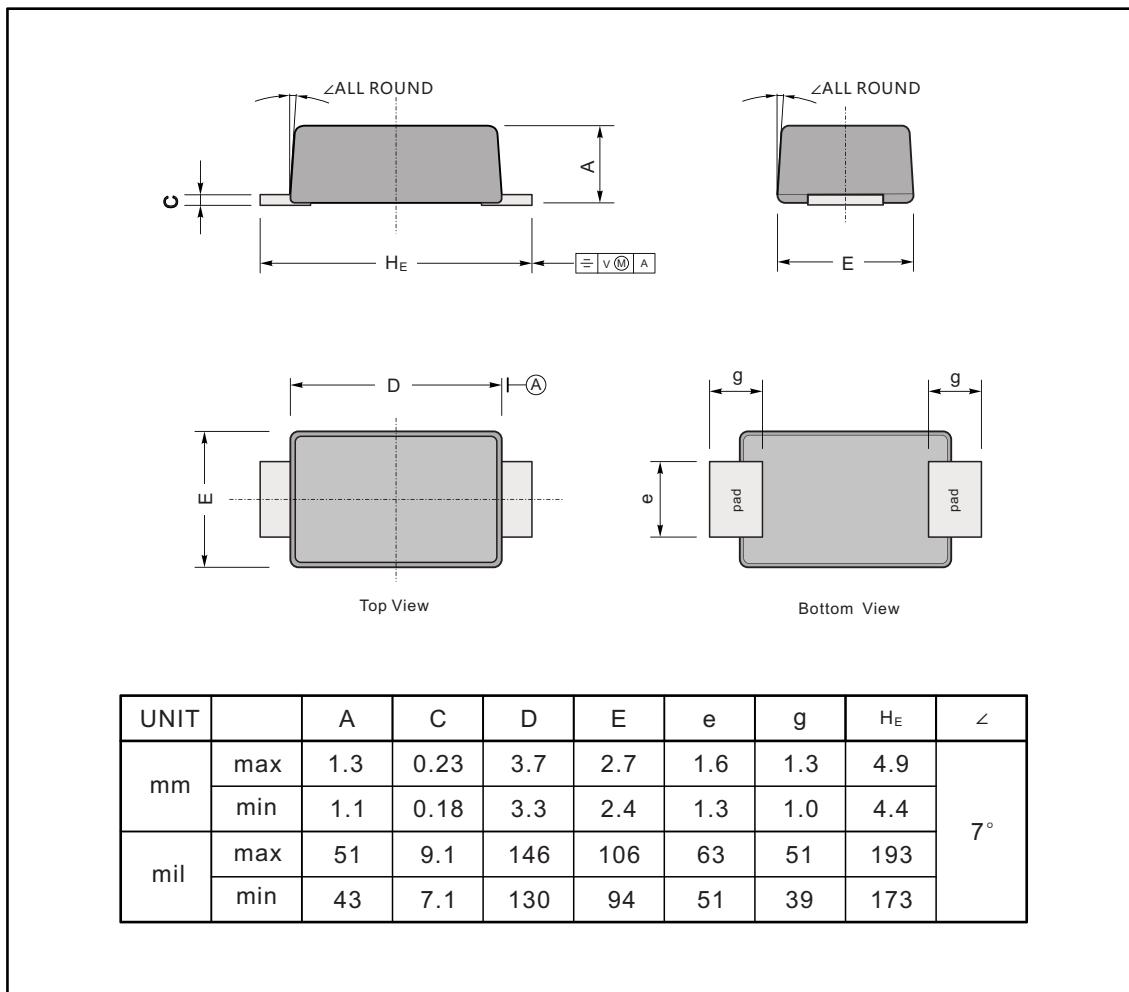
 1) Measured with I_F = 0.5 A, I_R = 1 A, I_{rr} = 0.25 A

Fig.1 Forward Current Derating Curve

Fig.2 Typical Reverse Characteristics

Fig.3 Typical Instantaneous Forward Characteristics

Fig.4 Maximum Non-Repetitive Peak Forward Surge Current


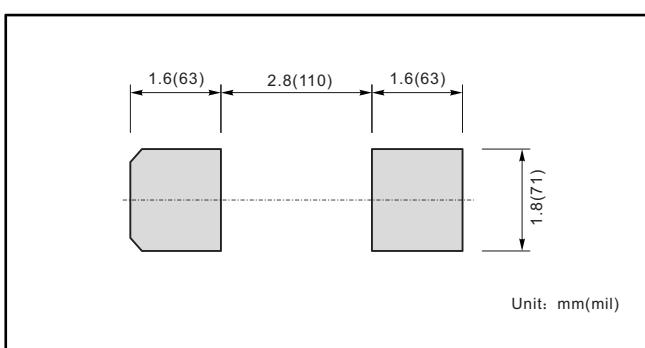
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SMAF



The recommended mounting pad size



Marking

Type number	Marking code
US1AF	US1A
US1BF	US1B
US1DF	US1D
US1GF	US1G
US1JF	US1J
US1KF	US1K
US1MF	US1M