

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 / 0.00095oz



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 T _c = 100 °C	I _{F(AV)}	1							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I _{FSM}	30							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 Junction Capacitance ⁽²⁾	C _j	15							pF
Typical Thermal Resistance ⁽³⁾	R _{θJA}	80							°C/W
Operating and Storage Temperature Range	T _j , T _{stg}	-55 ~ +150							°C

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

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

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

Fig.1 Forward Current Derating Curve

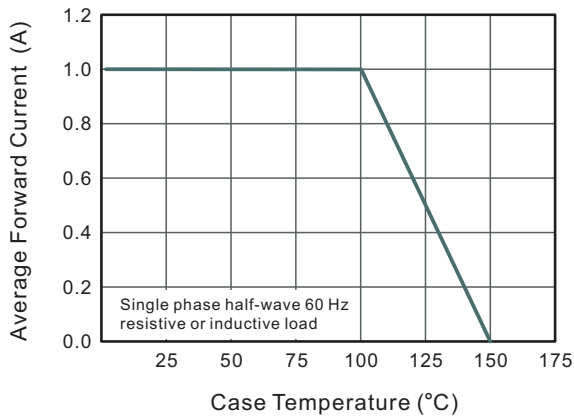


Fig.2 Typical Reverse Characteristics

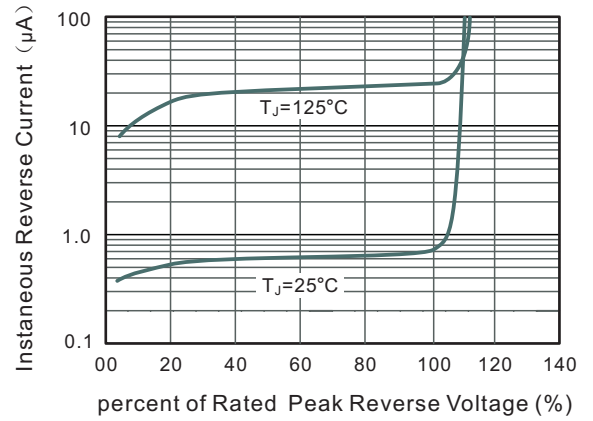


Fig.3 Typical Forward Characteristics

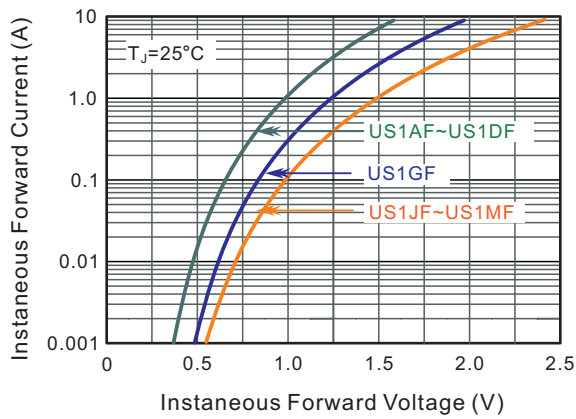


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current

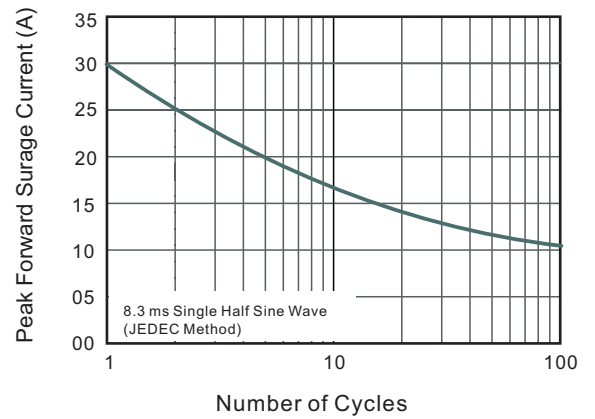
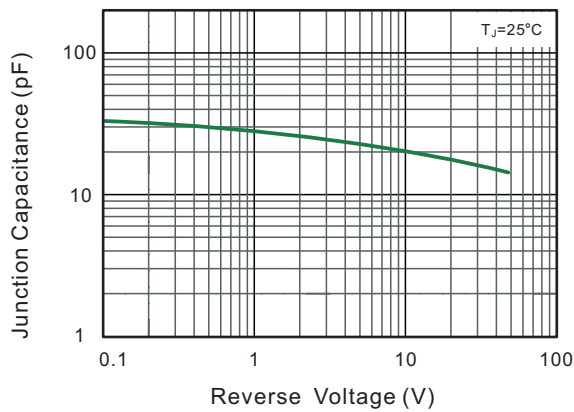
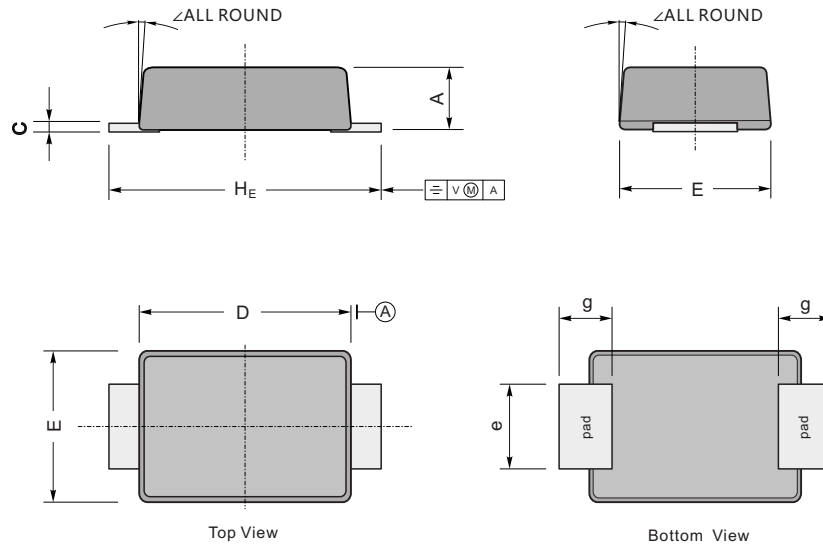


Fig.5 Typical Junction Capacitance



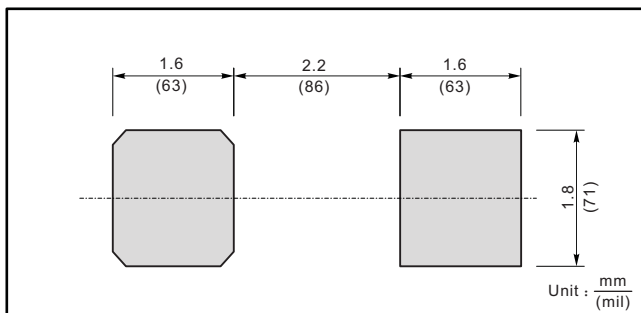
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads



UNIT		A	C	D	E	e	g	H _E	∠
mm	max	1.2	0.20	3.7	2.7	1.6	1.2	4.9	7°
	min	0.9	0.12	3.3	2.4	1.3	0.8	4.4	
mil	max	47	7.9	146	106	63	47	193	
	min	35	4.7	130	94	51	31	173	

The recommended mounting pad size



Marking

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