

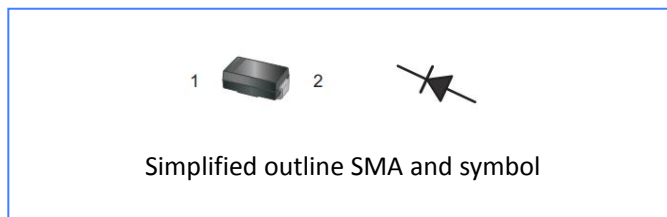
US1A THRU US1M

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 directive

Mechanical Data

- Case:SMA
- Terminals: Solderable per MIL-STD-750, Method 20
- Approx. Weight: 0.055g / 0.002oz



Pinning

PIN	DESCRIPTION
1	Cathode
2	Anode

Absolute Maximum Ratings And Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Symbols	US1A	US1B	US1D	US1G	US1J	US1K	US1M	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 Tc = 125 °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 Ta = 25 °C at Rated DC Blocking Voltage Ta =125 °C	I _R	5 100							μ A
Maximum Reverse Recovery Time ⁽¹⁾	trr	50			75			ns	
Typical Thermal Resistance ⁽³⁾	RθJA	75							°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) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas

Rating And Characteristic Curves

Fig.1 Forward Current Derating Curve

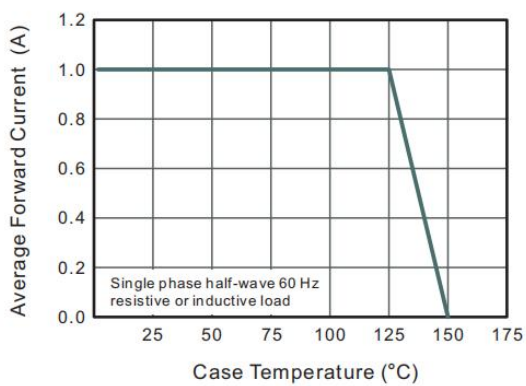


Fig.2 Typical Reverse Characteristics

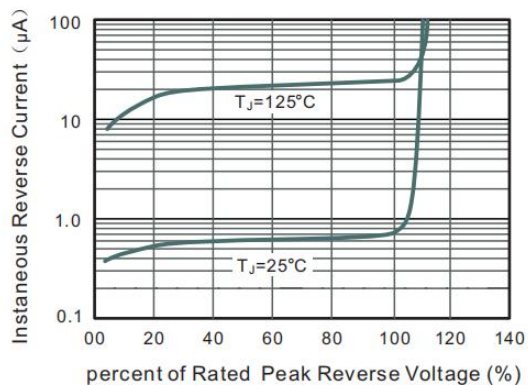


Fig.3 Typical Forward Characteristics

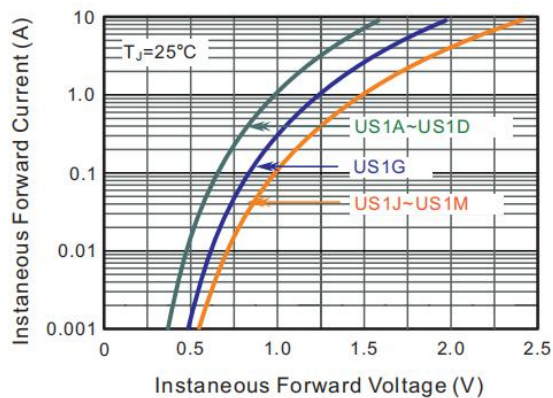
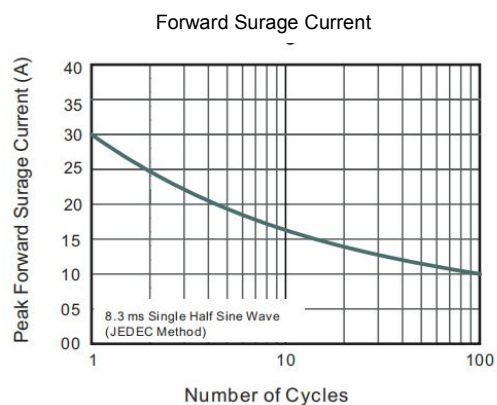


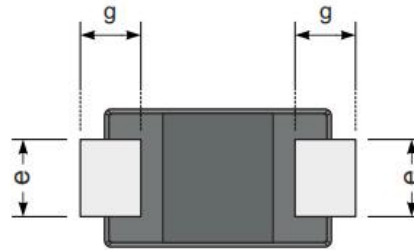
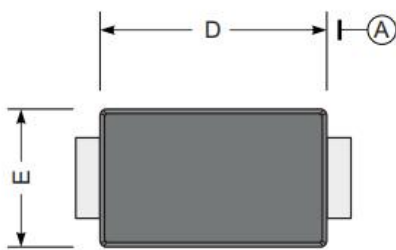
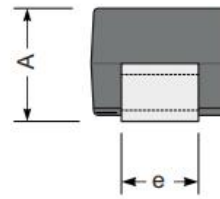
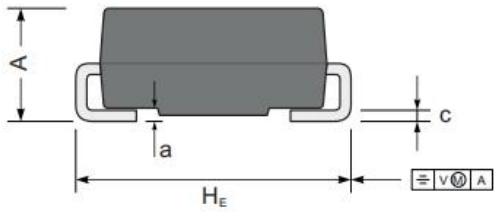
Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



Package Outline

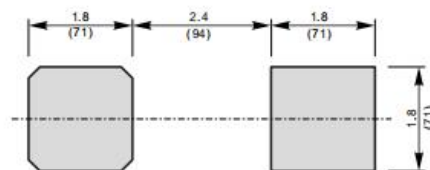
Plastic surface mounted package; 2 leads

SMA



UNIT		A	C	D	E	e	g	H _E	a
mm	max	2.2	0.31	4.5	2.7	1.6	1.5	5.2	0.3
	min	1.9	0.15	4.0	2.3	1.3	0.9	4.7	
mil	max	87	12	181	106	63	59	205	12
	min	75	6	157	91	51	35	185	

The recommended mounting pad size



Unit : $\frac{\text{mm}}{(\text{mil})}$