

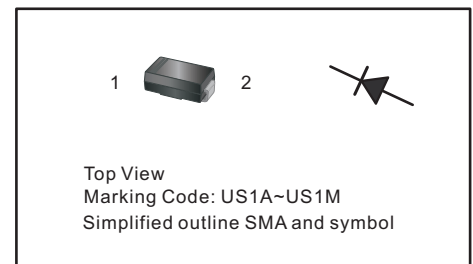
## SURFACE MOUNT ULTRAFAST RECOVERY RECTIFIER

### FEATURES

- Automotive Grade Diode
- 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

### PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



### MECHANICAL DATA

- Case: SMA
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.055g / 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	US1A	US1B	US1D	US1G	US1J	US1K	US1M	US1P	Units
Maximum Repetitive Peak Reverse Voltage	VRRM	50	100	200	400	600	800	1000	1150	V
Maximum RMS voltage	VRMS	35	70	140	280	420	560	700	810	V
Maximum DC Blocking Voltage	VDC	50	100	200	400	600	800	1000	1150	V
Maximum Average Forward Rectified Current at T <sub>c</sub> = 125 °C	IF(AV)	1								A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	IFSM	30								A
Maximum Instantaneous Forward Voltage at 1 A	VF	1.0			1.3		1.65			V
Maximum DC Reverse Current at Rated DC Blocking Voltage T <sub>a</sub> = 25 °C T <sub>a</sub> = 125 °C	IR	5							2	μA
		100								
Maximum Reverse Recovery Time ( 1 )	t <sub>rr</sub>	50				75				ns
Typical Thermal Resistance ( 2 )	R <sub>θJA</sub>	75								°C/W
Operating and Storage Temperature Range	T <sub>j</sub> , T <sub>stg</sub>	-55 ~ +150								°C

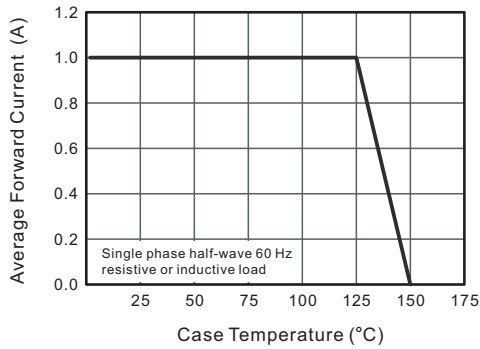
#### Notes:

- ( 1 ) Measured with IF = 0.5 A, IR = 1 A, I<sub>rr</sub> = 0.25 A  
 ( 2 ) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

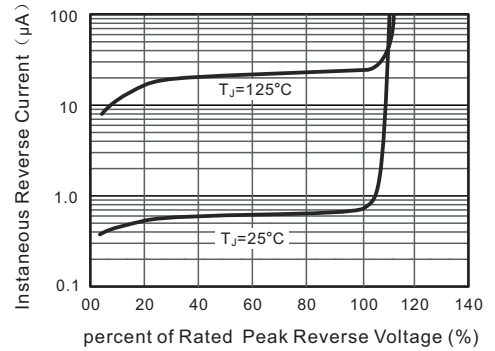
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### RATINGS AND CHARACTERISTIC CURVES US1A- US1P

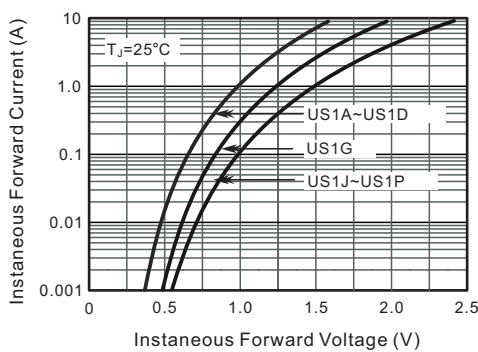
**Fig.1 Forward Current Derating Curve**



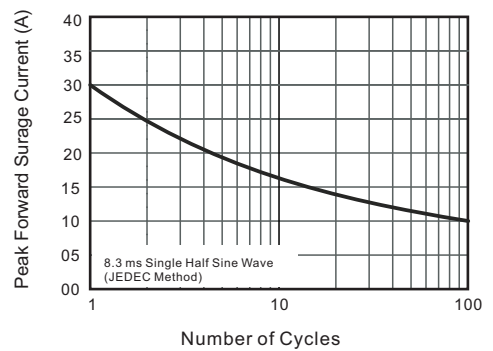
**Fig.2 Typical Reverse Characteristics**



**Fig.3 Typical Forward Characteristics**



**Fig.4 Maximum Non-Repetitive Peak Forward Surge Current**

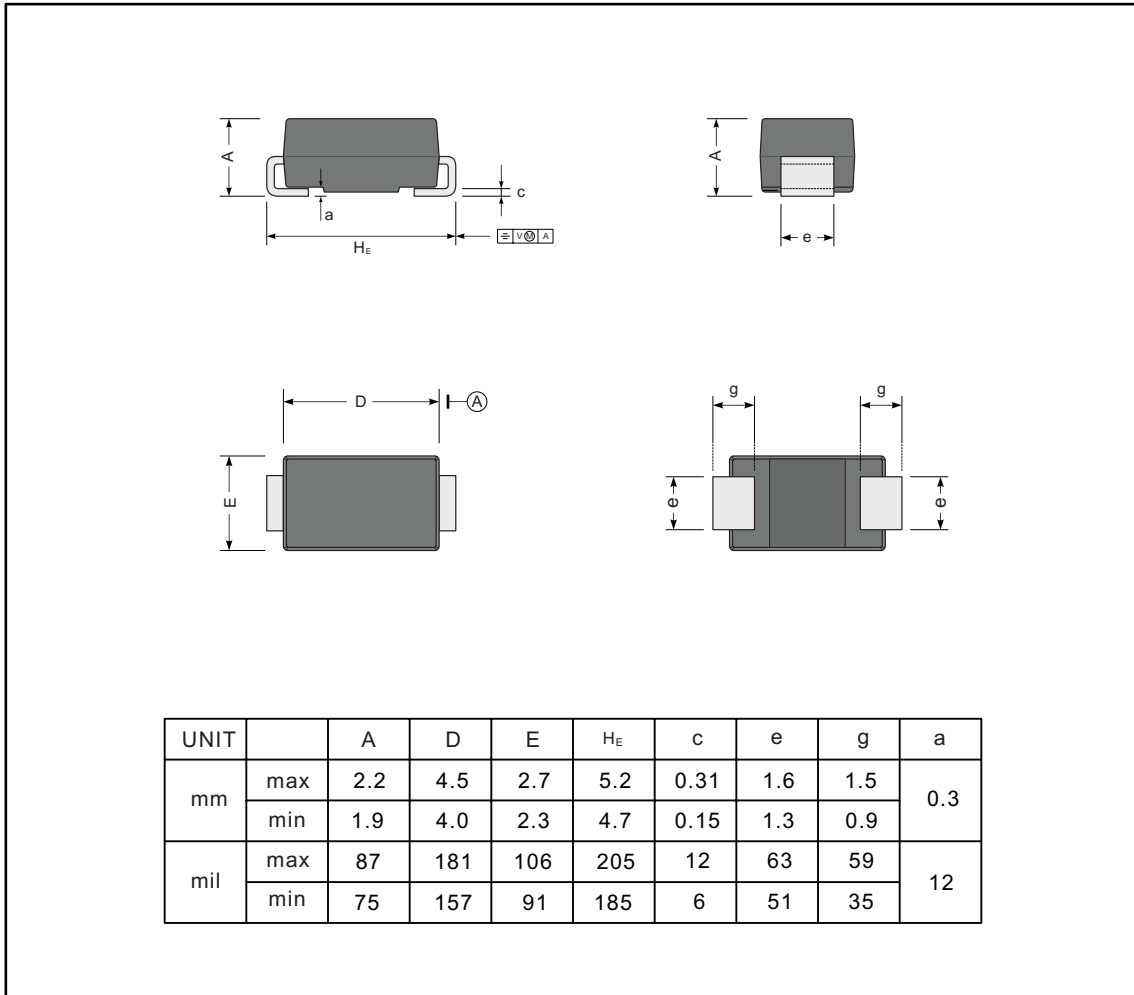


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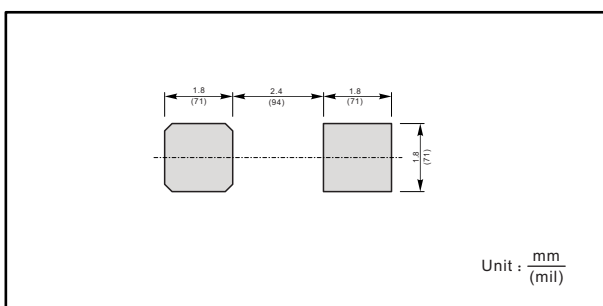
### PACKAGE OUTLINE

Plastic surface mounted package; 2 Leads

SMA



### The recommended mounting pad size



### Marking

Type number	Marking code
US1A	US1A
US1B	US1B
US1D	US1D
US1G	US1G
US1J	US1J
US1K	US1K
US1M	US1M

### Disclaimer

All product, product specifications and data are subject to change without notice to improve reliability, function or design or otherwise.