



US1AW SERIES

SURFACE MOUNT ULTRAFAST RECTIFIER

VOLTAGE 50 to 1000 Volts **CURRENT** 1.0 Ampere

SMA(W)

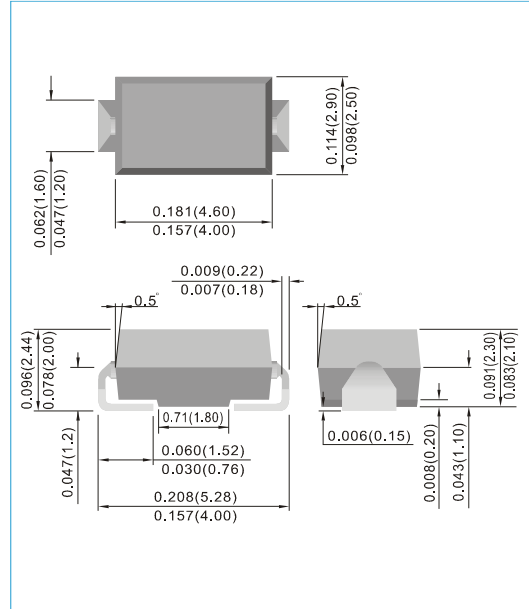
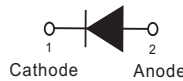
Unit : inch(mm)

FEATURES

- For surface mounted applications
- Low profile package
- Built-in strain relief
- Easy pick and place
- Ultrafast recovery times for high efficiency
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Lead free in comply with EU RoHS 2002/95/EC directives

MECHANICAL DATA

- Case: SMA(W) molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Standard packaging: 12mm tape (EIA-481)
- Weight: 0.002 ounce, 0.064 gram



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, derate current by 20%.

PARAMETER	SYMBOL	US1AW	US1BW	US1DW	US1GW	US1JW	US1KW	US1MW	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	800	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Current at $T_L=125^\circ\text{C}$	$I_{F(AV)}$	1.0							A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30							A
Maximum Forward Voltage at 1.0A	V_F	1.0		1.3		1.7		V	
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	10							μA
Typical Junction Capacitance (Notes 2)	C_J	17							pF
Typical Thermal Resistance (Notes 3)	$R_{\theta JL}$	30							$^\circ\text{C} / \text{W}$
Maximum Reverse Recovery Time (Notes 1)	t_{rr}	50				100			ns
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150							$^\circ\text{C}$

NOTES:

1. Reverse recovery test conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$.
2. Measured at 1 MHz and applied $V_r = 4.0$ volts.
3. Mounted on infinite heatsink.



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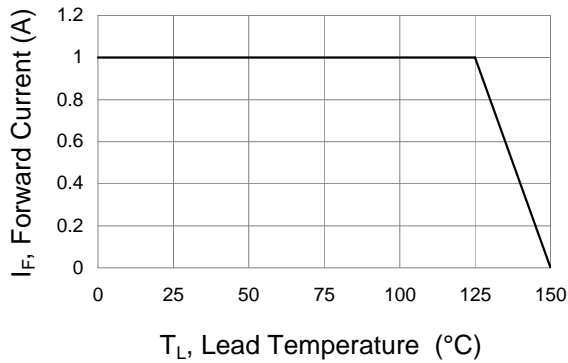


Fig.1 - Forward Current Derating Curve

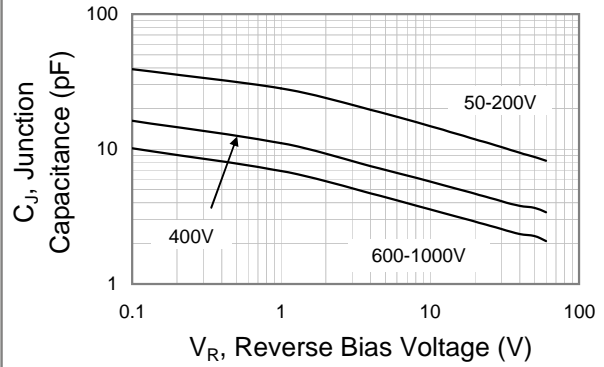


Fig.2 - Typical Junction Capacitance

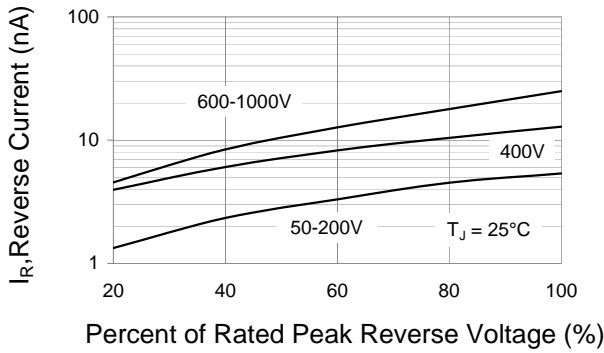


Fig.3 - Typical Reverse Characteristics

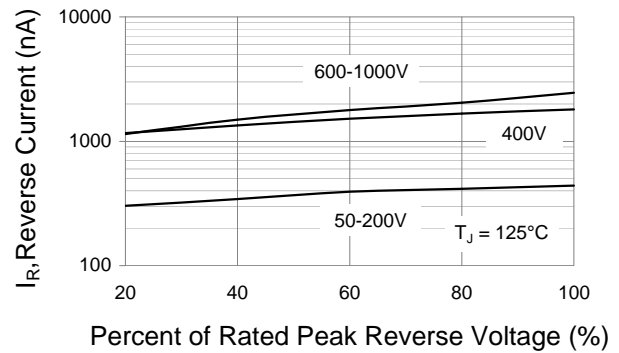


Fig.4 - Typical Reverse Characteristics

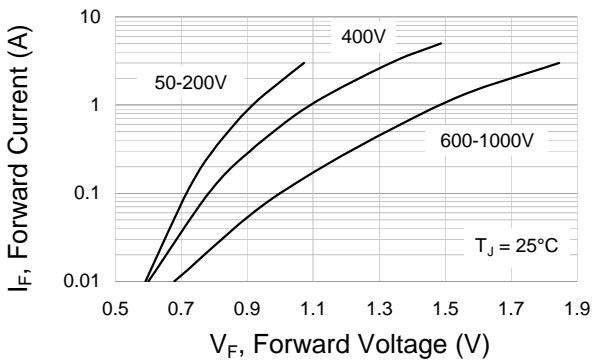


Fig.5 - Typical Forward Characteristics

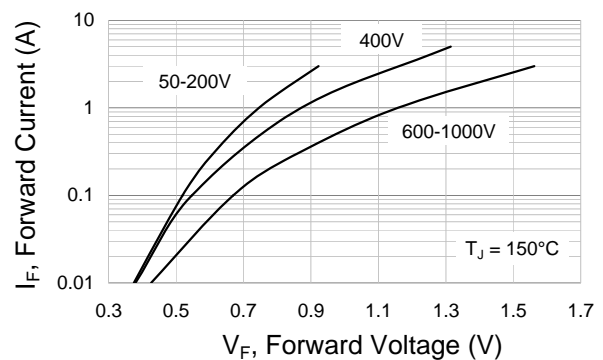
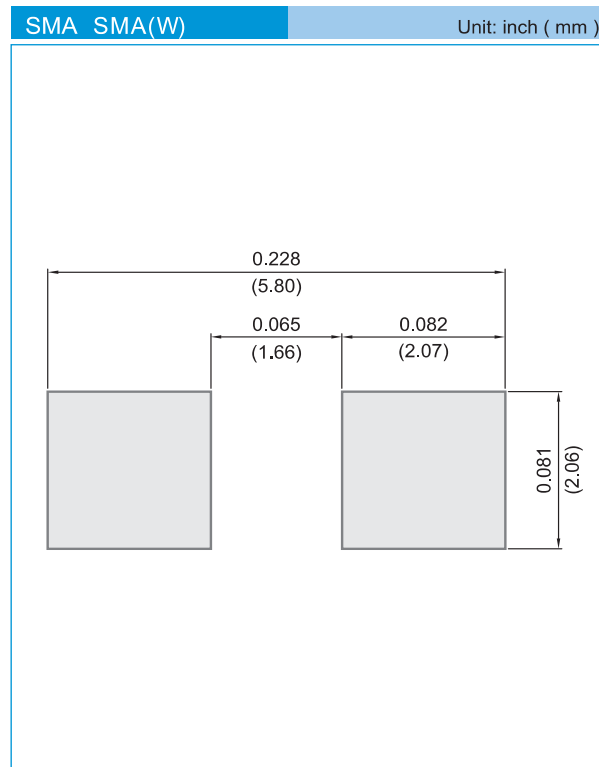


Fig.6 - Typical Forward Characteristics



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MOUNTING PAD LAYOUT



ORDER INFORMATION

- Packing information
 - T/R - 7.5K per 13" plastic Reel
 - T/R - 1.8Kper 7" plastic Reel

LEGAL STATEMENT

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