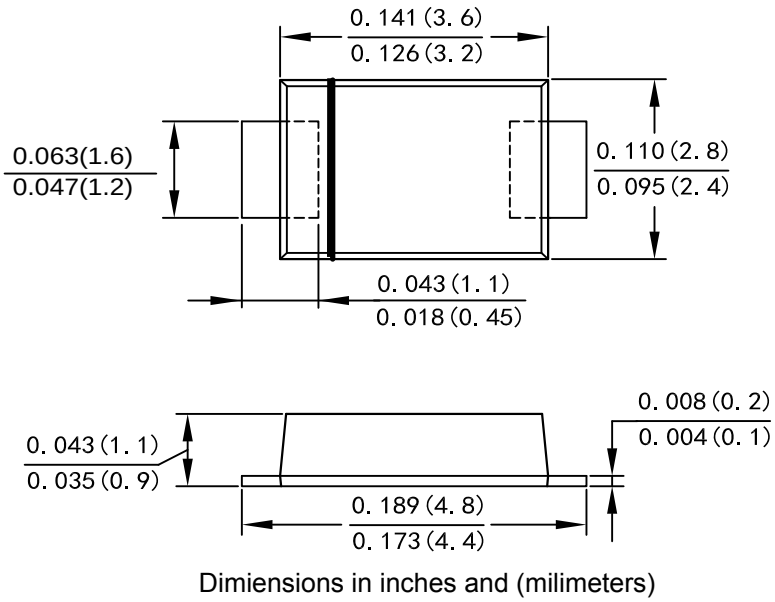
# U2A THRU U2M

2.0AMP Surface Mount Glass Ultra Fast Rectifier

## Features

- Low cost
- Ultra fast switching for high efficiency
- High current capability
- Plastic Case Material has UL Flammability Classification Rating 94V- 0

Case: SMAF




Dimiensions in inches and (milimeters)

## Mechanical Data

- Case: Molded plastic SMAF
- Terminals: Plated leads solderable per MIL-STD-750,Method 2026 guaranteed
- Polarity: Color band dentes cathode end
- Mounting Position: Any
- Making: Type Number

## Maximum Ratings and Electrical Characteristics

Rating at 25℃ ambient temperature unless otherwise specified
Single phase,half wave,60Hz,resistive or inductive load
For capacitive load derate current by 20%

| Type Number | SYMBOL | U2A | U2B | U2D | U2G | U2J | U2K | U2M | Unit |
|---|---|---|---|---|---|---|---|---|---|
| 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 | 700 | V |
| Maximum DC Blocking Voltage | $V_{DC}$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Average Rectified Output Current @$T_L$ =90℃ | $I_{F(AV)}$ | 2.0 | | | | | | | A |
| Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$ | 60 | | | | | | | A |
| $I^2t$ Rating for Fusing (t < 8.3ms) | $I^2t$ | 14.940 | | | | | | | $A^2s$ |
| Forward Voltage @IF=2.0A | $V_{FM}$ | 1.0 | | | 1.3 | | 1.7 | | V |
| Peak Reverse Current @$T_A$ =25℃ | $I_R$ | 5.0 | | | | | | | uA |
| At Rated DC Blocking Voltage @$T_A$ =125℃ | | 100 | | | | | | | |
| Maximum Reverse Recovery Time (Note 1) | Trr | 50 | | | | | 75 | | ns |
| Typical Junction Capacitance (Note 2) | $C_J$ | 15 | | | | | | | pF |
| Typical Thermal Resistance Junction to Ambient(Note 3) | $R_{\theta JA}$<br>$R_{\theta JL}$<br>$R_{\theta JC}$ | 105<br>15<br>23 | | | | | | | ℃/W |
| Operating Temperature Range | $T_J$ | -55 to+150 | | | | | | | ℃ |
| Storage Temperature Range | $T_{STG}$ | -55 to +150 | | | | | | | ℃ |

Note:

1.Reverse Recovery Test Conditions:IF=0.5A,IR=1.0A,IRR=0.25A.

2. Measured at 1.0 MHz and Applied reverse Voltage of 4.0V D.C

3.Device mounted on FR-4 substrate, 1"*1", 2oz, single-sided, PC boards with 0.06"*0.09" copper pad. For reference only

FIG.1MAXIMUM AVERAGE FORWARD CURRENT DERATING

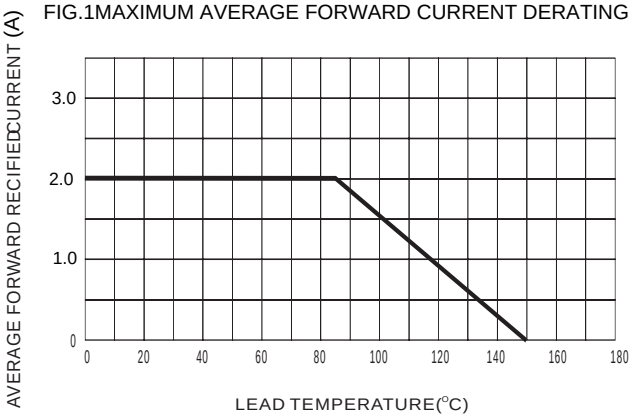



FIG.2TYPICAL FORWARD CHARACTERISTICS

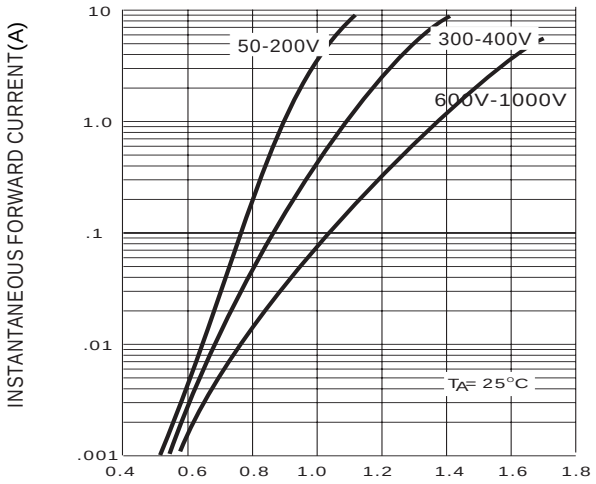



FIG.3MAXIMUM NON-REPEITIVE SURGE CURRENT

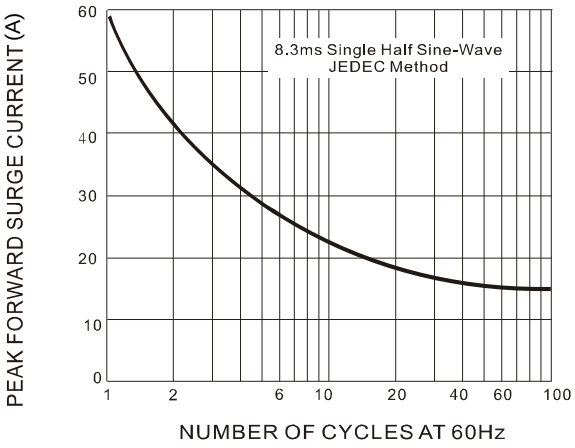



FIG.4TYPICAL JUNCTION CAPACITANCE

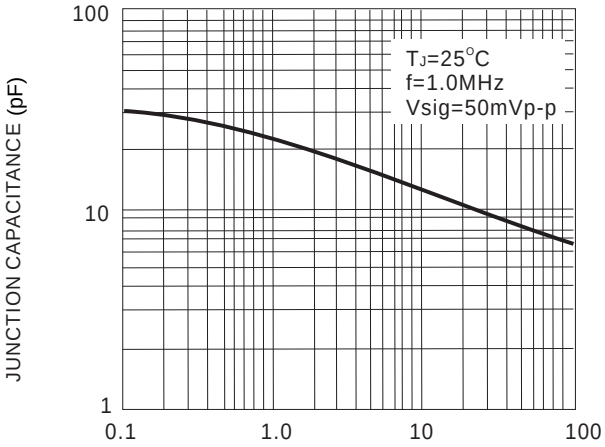



FIG.5TYPICAL REVERSE CHRACTERISTICS

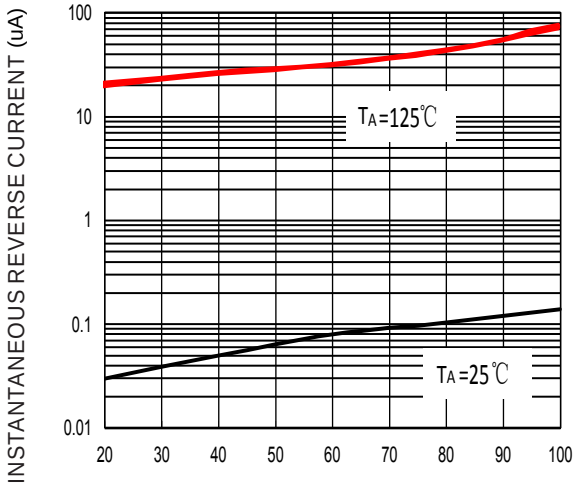
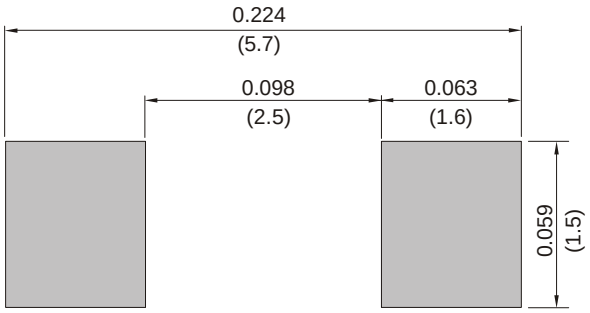



Fig.6 TYPICAL CAPACITANCE



# Important Notice and Disclaimer

- Reproducing and modifying information of the document is prohibited without permission from XINNUO
- XINNUO reserves the right to make changes to this document and its products and specifications
- XINNUO disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- XINNUO does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the here in document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications.

  XINNUO makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown here in are not designed and authorized for equipments requiring high level of reliability or relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, transportation equipment, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own ris k andagree to fully indemnify XINNUO for any damages resulting from such improper use or sale.
- Since XINNUO uses lot number as the tracking base, please provide the lot number for tracking when complaining.