

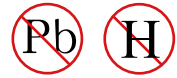


YEA SHIN TECHNOLOGY CO., LTD

US2A THRU US2M

## ULTRA FAST RECTIFIERS

VOLTAGE- 50 to 1000 Volts CURRENT - 2.0 Amperes



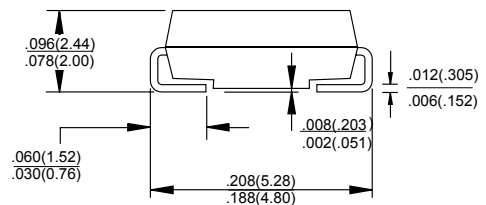
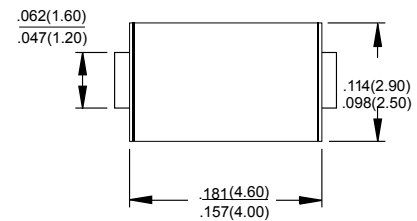
### FEATURES

- Glass passivated chip
- Ultra fast switching for high efficiency
- For surface mounted applications
- Low forward voltage drop and high current capability
- Low reverse leakage current
- Plastic material has UL flammability classification 94V-0
- High temperature soldering : 260°C / 10 seconds at terminals
- Pb free product at available : 99% Sn above meet RoHS environment substance directive request

### MECHANICAL DATA

- Case: DO-214AC full molded plastic package
- Case : Molded plastic
- Polarity : Indicated by cathode band

SMA/DO-214AC Unit:inch(mm)



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25 °C ambient temperature unless otherwise specified.
- Single phase, half wave, 60Hz, resistive or inductive load.
- For capacitive load, derate current by 20%

| CHARACTERISTICS   | SYMBOL | US2A        | US2B | US2D | US2G | US2J | US2K | US2M | UNITS |
|---|--------|-------------|------|------|------|------|------|------|-------|
| Maximum Recurrent Peak Reverse Voltage  | VRRM   | 50          | 100  | 200  | 400  | 600  | 800  | 1000 | V     |
| Maximum RMS Voltage   | VRMS   | 35          | 70   | 140  | 280  | 420  | 560  | 700  | V     |
| Maximum DC Blocking Voltage   | VDC    | 50          | 100  | 200  | 400  | 600  | 800  | 1000 | V     |
| Maximum Average Forward Rectified Current @TL =75°C   | IAV    | 2.0         |      |      |      |      |      |      | A     |
| Peak Forward Surge Current<br>8.3ms single half sine-wave<br>super imposed on rated load (JEDEC METHOD) | IFSM   | 60          |      |      |      |      |      |      | A     |
| Maximum forward Voltage at 2.0A DC  | VF     | 1.0         |      |      | 1.3  | 1.5  | 1.7  |      | V     |
| Maximum DC Reverse Current @TJ =25°C<br>at Rated DC Blocking Voltage @TJ =100°C                         | IR     | 5<br>100    |      |      |      |      |      |      | µA    |
| Maximum Reverse Recovery Time (Note 1)  | CJ     | 20          |      |      |      | 10   |      |      | pF    |
| Typical Junction Capacitance (Note 2)   | TRR    | 50          |      |      |      | 75   |      |      | ns    |
| Typical Thermal Resistance (Note 3)   | RθJC   | 30          |      |      |      |      |      |      | °C/W  |
| Operating Temperature Range   | TJ     | -55 to +150 |      |      |      |      |      |      | °C    |
| Storage Temperature Range   | TSTG   | -55 to +150 |      |      |      |      |      |      | °C    |

#### NOTES:

- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
- Reverse Recovery Test Conditions: IF=.5A, IR=1A, Irr=.25A.
- Thermal resistance from Junction to ambient and from junction to lead 0.375" (9.5mm) P.C.B mounted.

# DEVICE CHARACTERISTICS

## US2A THRU US2M

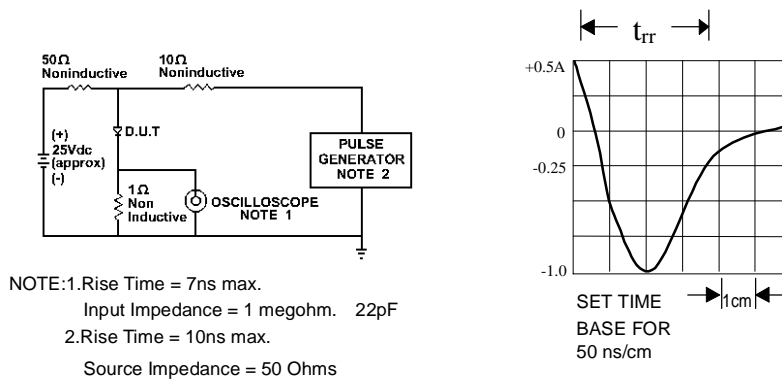


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

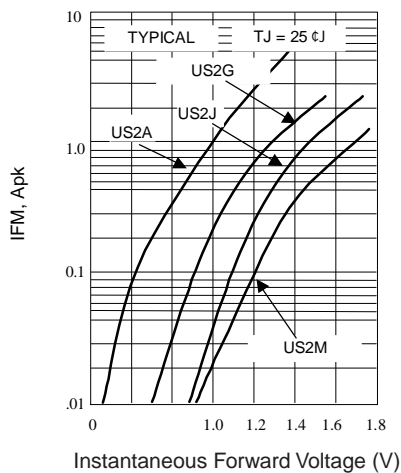


Fig. 2-FORWARD CHARACTERISTICS

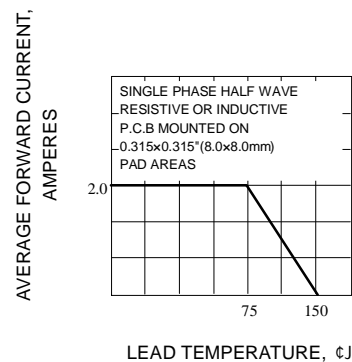


Fig. 3-FORWARD CURRENT DERATING CURVE

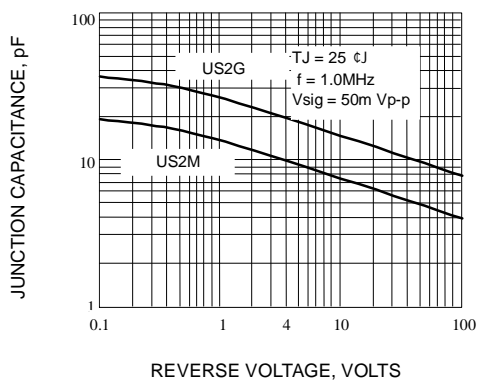


Fig. 4-TYPICAL JUNCTION CAPACITANCE

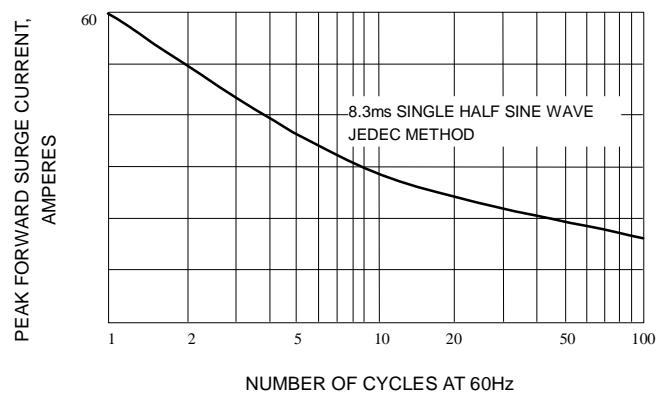


Fig. 5-PEAK FORWARD SURGE CURRENT