

**SINGLE-PHASE GLASS PASSIVATED  
SILICON BRIDGE RECTIFIER**

**VOLTAGE RANGE 50 to 1000 Volts CURRENT 25 Amperes**

**FEATURES**

- \* Superior thermal desing
- \* 300 amperes surge rating
- \* 1/4" universal faston terminal
- \* Hole thru for # 10 screw

**MECHANICAL DATA**

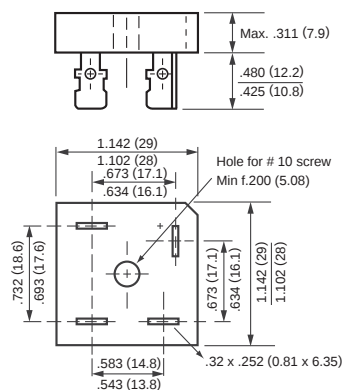
- \* UL listed the recognized component directory, file #E94233
- \* Epoxy: Device has UL flammability classification 94V-O

**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%.



**MP-25**



Dimensions in inches and (millimeters)

**MAXIMUM RATINGS** (At TA = 25°C unless otherwise noted)

| RATINGS                                                                                           | SYMBOL                           | MP2505       | MP251 | MP252 | MP254 | MP256 | MP258 | MP2510 | UNITS               |
|---------------------------------------------------------------------------------------------------|----------------------------------|--------------|-------|-------|-------|-------|-------|--------|---------------------|
| Maximum Recurrent Peak Reverse Voltage                                                            | V <sub>RRM</sub>                 | 50           | 100   | 200   | 400   | 600   | 800   | 1000   | Volts               |
| Maximum RMS Bridge Input Voltage                                                                  | V <sub>RMS</sub>                 | 35           | 70    | 140   | 280   | 420   | 560   | 700    | Volts               |
| Maximum DC Blocking Voltage                                                                       | V <sub>DC</sub>                  | 50           | 100   | 200   | 400   | 600   | 800   | 1000   | Volts               |
| Maximum Average Forward Rectified Output Current at Tc = 55°C                                     | I <sub>O</sub>                   | 25.0         |       |       |       |       |       |        | Amps                |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | I <sub>FSM</sub>                 | 300          |       |       |       |       |       |        | Amps                |
| Typical Current Squared Time                                                                      | I <sup>2</sup> t                 | 374          |       |       |       |       |       |        | A <sup>2</sup> /Sec |
| RMS isolation voltage from case to lead                                                           | V <sub>ISO</sub>                 | 2500         |       |       |       |       |       |        | Volts               |
| Typical Thermal Resistance (from junction to case)                                                | R <sub>θJC</sub>                 | 1.9          |       |       |       |       |       |        | °C/W                |
| Typical Thermal Resistance (from junction to ambient)                                             | R <sub>θJA</sub>                 | 19           |       |       |       |       |       |        |                     |
| Operating and Storage Temperature Range                                                           | T <sub>J</sub> ,T <sub>STG</sub> | -55 to + 150 |       |       |       |       |       |        | °C                  |

**ELECTRICAL CHARACTERISTICS** (At TA = 25°C unless otherwise noted)

| CHARACTERISTICS                                      | SYMBOL         | MP2505 | MP251 | MP252 | MP254 | MP256 | MP258 | MP2510 | UNITS |
|------------------------------------------------------|----------------|--------|-------|-------|-------|-------|-------|--------|-------|
| Maximum Forward Voltage Drop per element at 12.5A DC | V <sub>F</sub> | 1.05   |       |       |       |       |       |        | Volts |
| Maximum Reverse Current at Rated                     | I <sub>R</sub> | 0.5    |       |       |       |       |       |        | uAmps |
| DC Blocking Voltage per element                      |                | 500    |       |       |       |       |       |        | uAmps |

NOTE: 1. Suffix "W" for wire type  
2. "RoHS compliant"

2023-06  
REV:F

## RATING AND CHARACTERISTIC CURVES( MP2505 THRU MP2510 )

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

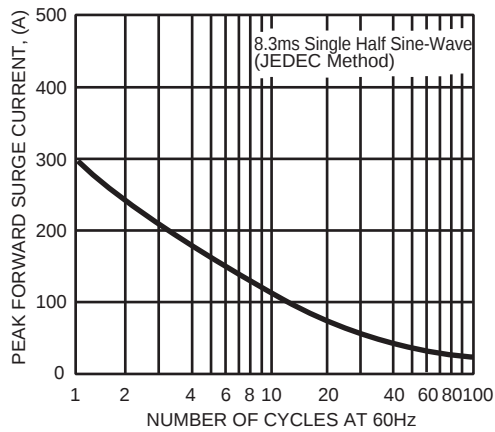


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

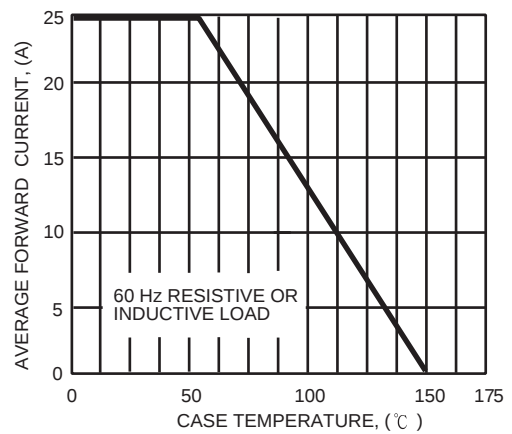


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

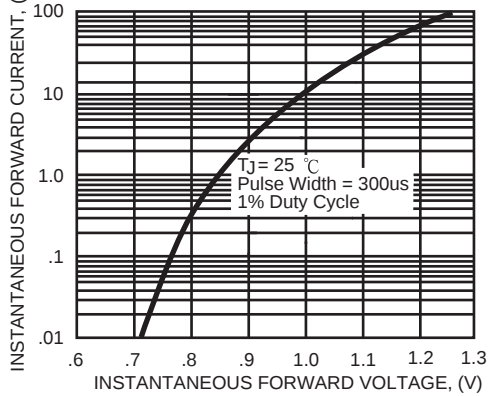
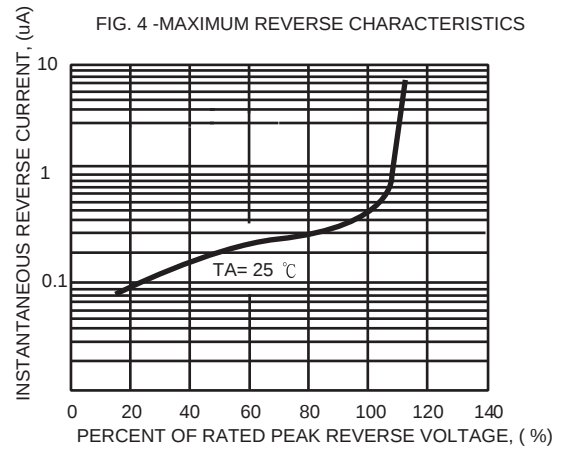


FIG. 4 - MAXIMUM REVERSE CHARACTERISTICS

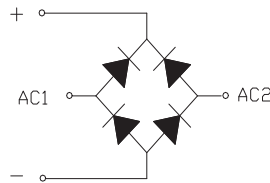




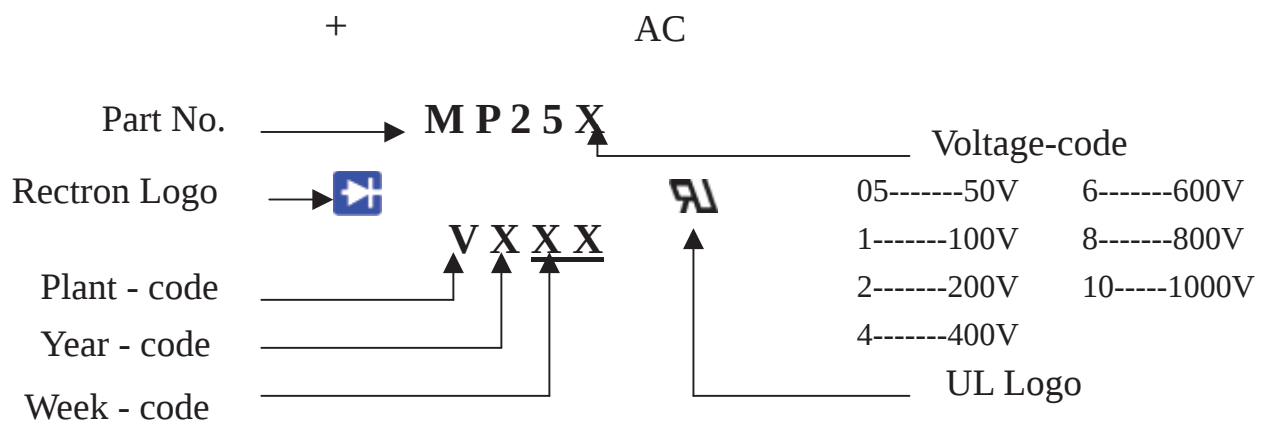
# RECTRON

## Attachment information about MP25X

### 1. Internal Circuit



### 2. Marking on the body



### 3. Items marked on the inner box and carton

#### 3.1 On the box (for -B)

CUSTOMER  
TYPE  
LOT NO.  
QUANTITY  
Q.A.  
DATE

#### 3.2 On the carton

CUSTOMER  
TYPE  
QUANTITY  
LOT NO.  
REMARK

## PACKAGING OF DIODE AND BRIDGE RECTIFIERS

### BULK PACK

| PACKAGE       | PACKING CODE | EA PER BOX | INNER BOX SIZE<br>(mm) | CARTON SIZE<br>(mm) | EA PER CARTON | GROSS<br>WEIGHT(Kg) |
|---------------|--------------|------------|------------------------|---------------------|---------------|---------------------|
| MP-15/-25/-35 | -B           | 50         | 206*208*45.5           | 450*220*255         | 500           | 9.6                 |

## DISCLAIMER NOTICE

Rectron Inc reserves the right to make changes without notice to any product specification herein, to make corrections, modifications, enhancements or other changes. Rectron Inc or anyone on its behalf assumes no responsibility or liability for any errors or inaccuracies. Data sheet specifications and its information contained are intended to provide a product description only. "Typical" parameters which may be included on RECTRON data sheets and/ or specifications can and do vary in different applications and actual performance may vary over time. Rectron Inc does not assume any liability arising out of the application or use of any product or circuit.

Rectron products are not designed, intended or authorized for use in medical, life-saving implant or other applications intended for life-sustaining or other related applications where a failure or malfunction of component or circuitry may directly or indirectly cause injury or threaten a life without expressed written approval of Rectron Inc. Customers using or selling Rectron components for use in such applications do so at their own risk and shall agree to fully indemnify Rectron Inc and its subsidiaries harmless against all claims, damages and expenditures.