

### SUPER FAST DIODE MODULE TYPE 60A

## Features

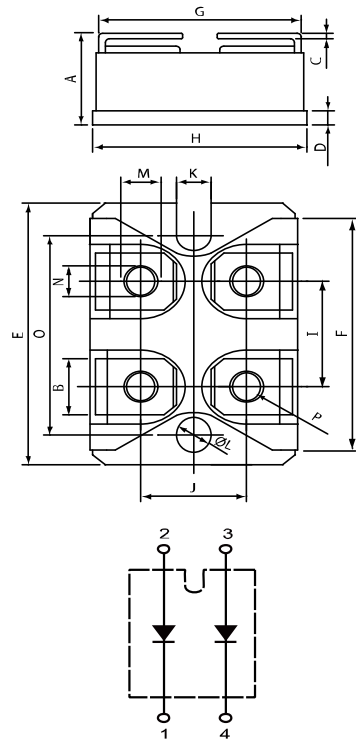
- High Surge Capability
- Type 1000V  $V_{RRM}$
- Isolation Type Package
- Electrically Isolation base plate



## Maximum Ratings

Operating Temperature : -55 °C to +175 °C  
 Storage Temperature : -55 °C to +175 °C

| Part Number      | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|------------------|--|---------------------|-----------------------------|
| GSXF030A100S1-D3 | 1000V                                  | 700V                | 1000V                       |



## Electrical Characteristics @ 25 °C Unless Otherwise Specified.

|  |                 |                          |   |
|--|-----------------|--------------------------|---|
| Average Forward Current (Per pkg)  | $I_{F(AV)}$     | 60 A                     | $T_c = 125\text{ }^\circ\text{C}$                                     |
| Peak Forward Surge Current (Per leg)   | $I_{FSM}$       | 400 A                    | 8.3ms, half sine  |
| Maximum Instantaneous Forward Voltage* (Per leg)                             | $V_F$           | 2.35 V                   | $I_{FM} = 30\text{A}; T_J = 25\text{ }^\circ\text{C}$                 |
| Maximum Instantaneous Reverse Current At Rated DC Blocking Voltage (Per leg) | $I_R$           | 25 $\mu\text{A}$<br>3 mA | $T_J = 25\text{ }^\circ\text{C}$<br>$T_J = 150\text{ }^\circ\text{C}$ |
| Maximum Reverse Recovery Time (Per leg)                                      | $T_{rr}$        | 85 ns                    | $I_F = 0.5\text{A}, I_R = 1.0\text{A}$<br>$I_{RR} = 0.25\text{A}$     |
| Isolation Voltage  | $V_{iso}$       | 2500 V                   | A.C. 1 minute   |
| Maximum Thermal Resistance Junction To Case (Per leg)                        | $R_{\theta jc}$ | 1.2 $^\circ\text{C/W}$   |   |

\* Pulse Test: Pulse Width 300  $\mu\text{sec}$ , Duty < 2%

| DIM | DIMENSIONS |       |       |       |
|-----|------------|-------|-------|-------|
|     | INCHES     |       | MM    |       |
|     | MIN        | MXA   | MIN   | MXA   |
| A   | .500       | .519  | 12.70 | 13.20 |
| B   | .307       | .322  | 7.80  | 8.20  |
| C   | .029       | .033  | .75   | .84   |
| D   | .077       | .082  | 1.95  | 2.10  |
| E   | 1.487      | 1.502 | 37.80 | 38.20 |
| F   | 1.250      | 1.258 | 31.75 | 32.00 |
| G   | .931       | .956  | 23.65 | 24.30 |
| H   | .996       | 1.007 | 25.30 | 25.60 |
| I   | .586       | .594  | 14.90 | 15.10 |
| J   | .492       | .516  | 12.50 | 13.10 |
| K   | .161       | .169  | 4.10  | 4.30  |
| L   | .161       | .169  | 4.10  | 4.30  |
| M   | .181       | .191  | 4.60  | 4.95  |
| N   | .165       | .177  | 4.20  | 4.50  |
| O   | 1.184      | 1.192 | 30.10 | 30.30 |
| P   | M4*8       |       |       |       |

Figure .1- Typical Forward Characteristics

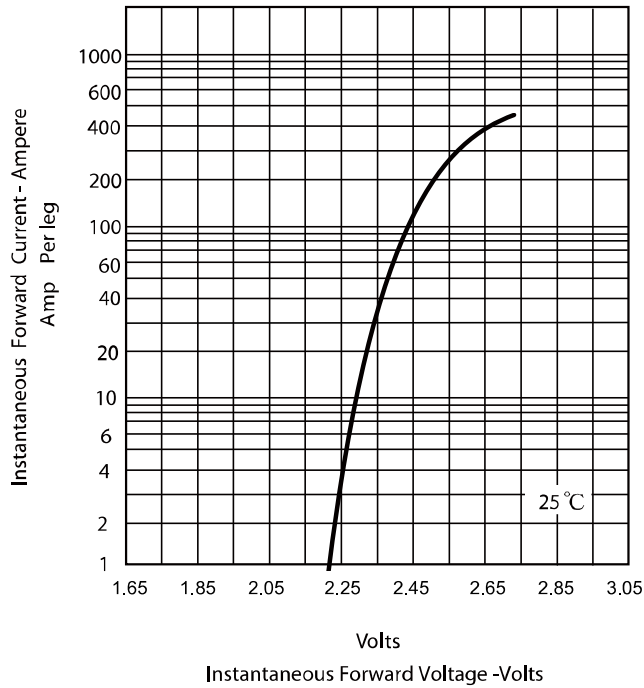


Figure.2 - Forward Derating Curve

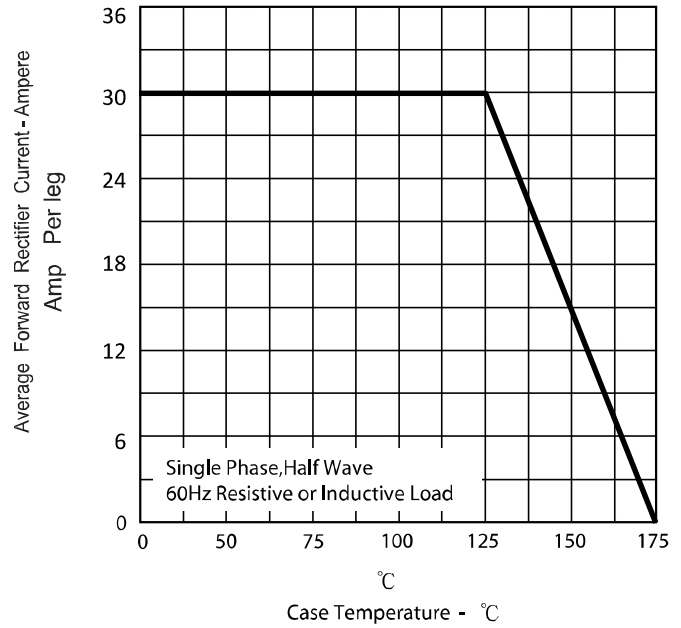


Figure.3 - Peak Forward Surge Current

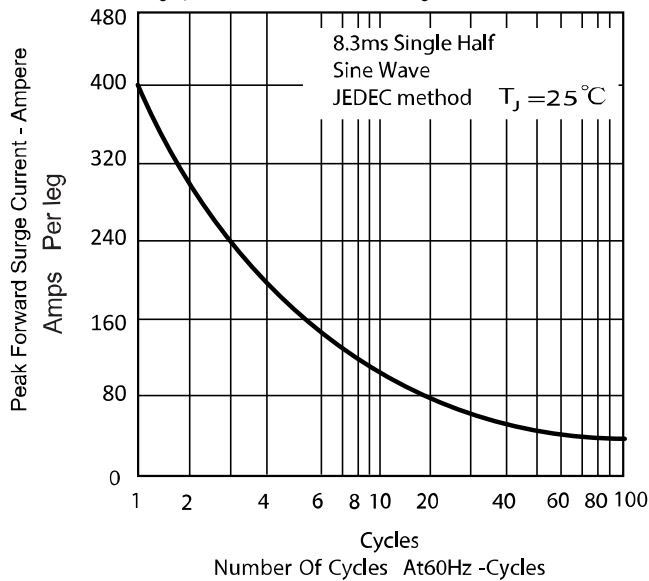
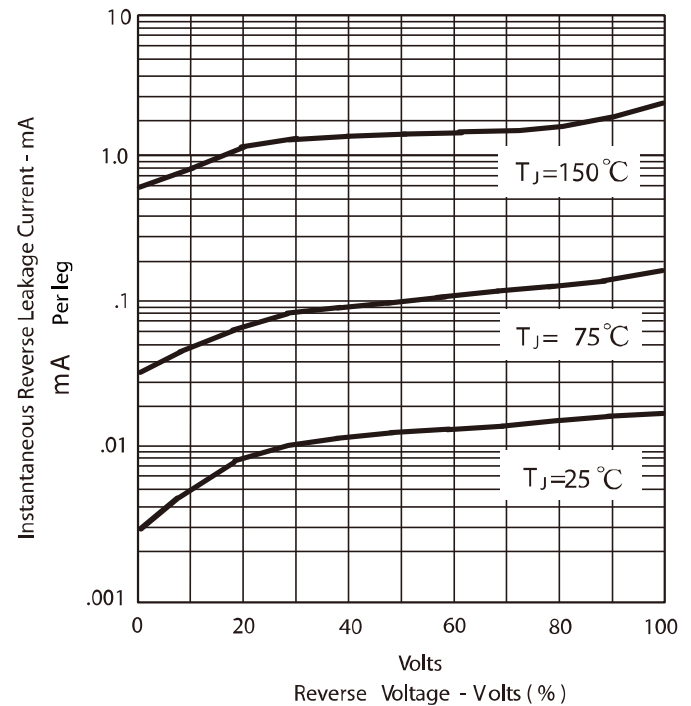


Figure .4 -Typical Reverse Characteristics



### Revision History

| Date       | Revision | Notes                       |
|------------|----------|-----------------------------|
| 8/10/2014  | 1.0      | Initial release             |
| 01/03/2020 | 1.1      | Applied company name change |
|            |          |                             |

#### Notes

##### **RoHS Compliance**

The levels of RoHS restricted materials in this product are below the maximum concentration values (also referred to as the threshold limits) permitted for such substances, or are used in an exempted application, in accordance with EU Directive 2011/65/EC (RoHS2), as implemented March, 2013. RoHS Declarations for this product can be obtained from the Product Documentation sections of [www.SemiQ.com](http://www.SemiQ.com).

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