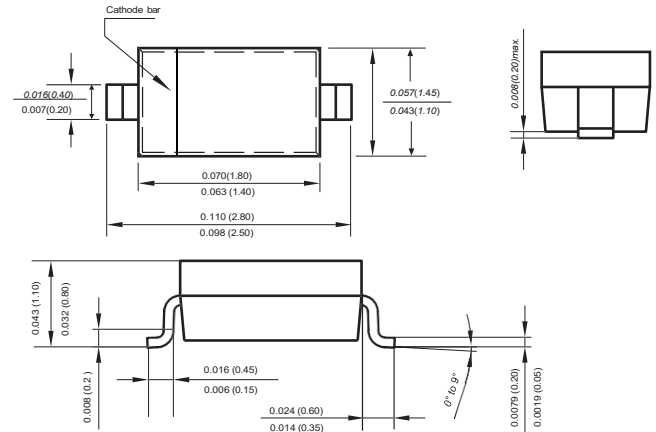


## SURFACE MOUNT GLASS PASSIVATED FAST RECOVERY RECTIFIER

### Features

### SOD-323

directives



Dimensions in inches and (millimeters)

## Maximum Ratings And Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

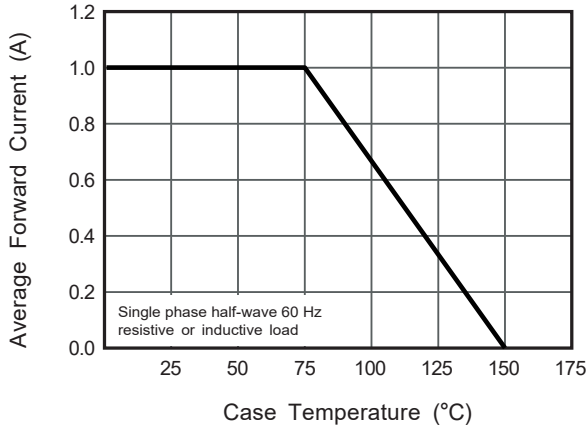
Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

| Parameter                                                                                                 | SYMBOLS            | FR101WS     | FR102WS | FR103WS | FR104WS | FR105WS | FR106WS | FR107WS | UNITS |
|-----------------------------------------------------------------------------------------------------------|--------------------|-------------|---------|---------|---------|---------|---------|---------|-------|
| Marking Code                                                                                              |                    | 1R          | 2R      | 3R      | 4R      | 5R      | 6R      | 7R      |       |
| Maximum repetitive peak reverse voltage                                                                   | V <sub>RMM</sub>   | 50          | 100     | 200     | 400     | 600     | 800     | 1000    | V     |
| Maximum RMS voltage                                                                                       | V <sub>RMS</sub>   | 35          | 70      | 140     | 280     | 420     | 560     | 700     | V     |
| Maximum DC blocking voltage                                                                               | V <sub>DC</sub>    | 50          | 100     | 200     | 400     | 600     | 800     | 1000    | V     |
| Maximum average forward rectified current                                                                 | I <sub>F(AV)</sub> | 1.0         |         |         |         |         |         |         | A     |
| Peak forward surge current<br>8.3ms single half sine-wave<br>superimposed on rated load (JEDEC Method)    | I <sub>FSM</sub>   | 15          |         |         |         |         |         |         | A     |
| Maximum instantaneous forward voltage at 1.0A                                                             | V <sub>F</sub>     | 1.3         |         |         |         |         |         |         | V     |
| Maximum DC reverse current    T <sub>A</sub> =25℃<br>at rated DC blocking voltage    T <sub>A</sub> =125℃ | I <sub>R</sub>     | 5<br>50     |         |         |         |         |         |         | uA    |
| Typical junction capacitance (NOTE 3)                                                                     | C <sub>J</sub>     | 5           |         |         |         |         |         |         | pF    |
| Typical reverse recovery time (NOTE 2)                                                                    | T <sub>rr</sub>    | 150         |         |         |         | 250     | 500     |         | ns    |
| Operating junction temperature range                                                                      | T <sub>J</sub>     | -55 to +125 |         |         |         |         |         |         | ℃     |
| Storage temperature range                                                                                 | T <sub>STG</sub>   | -55 to +150 |         |         |         |         |         |         | ℃     |

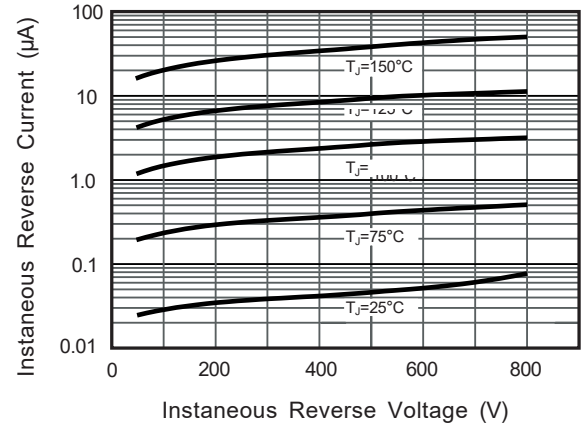
**Note:** 1. P.C.B. mounted with 0.2" X 0.2" (5 X 5 mm) copper pad areas.  
 2. Measured with  $I_F=0.5A$ ,  $I_R=1A$ ,  $I_{rr}=0.25A$   
 3. Measured at 1.0MHz and applied reverse voltage of 4.0V D.C.  
 4. The typical data above is for reference only.

## Typical Characteristics

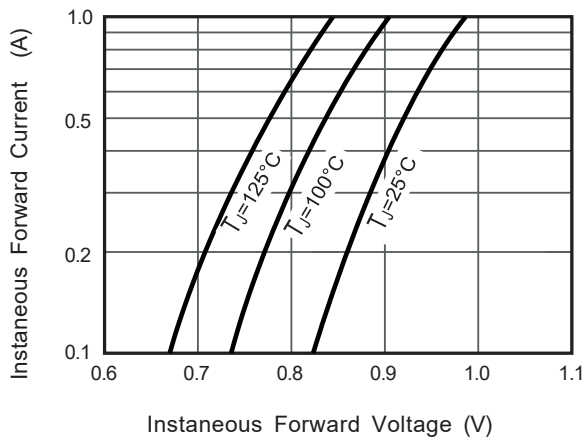
**Fig.1 Forward Current Derating Curve**



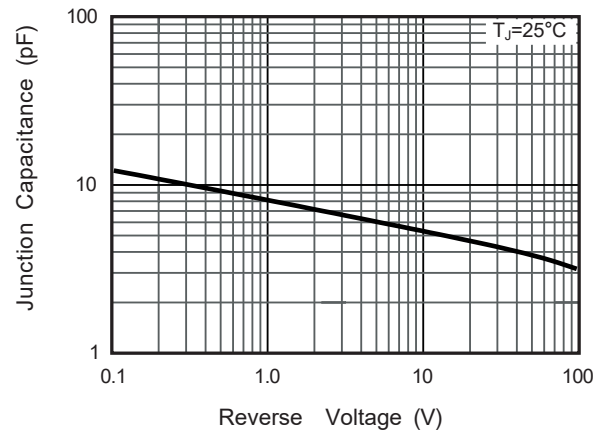
**Fig.2 Typical Instantaneous Reverse Characteristics**



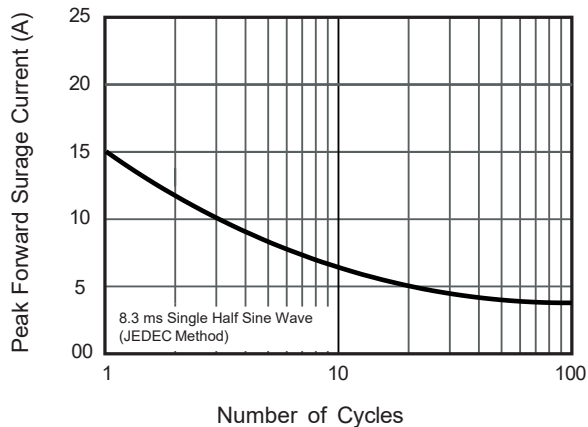
**Fig.3 Typical Forward Characteristic**



**Fig.4 Typical Junction Capacitance**



**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**



The curve above is for reference only.