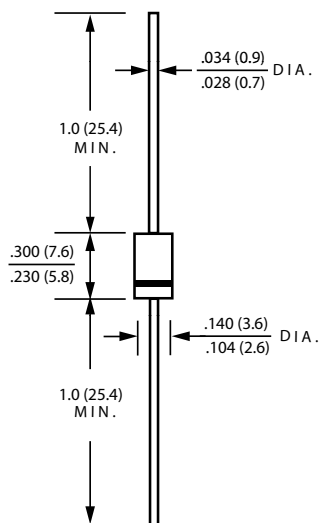


## Super Fast Recovery Rectifiers Glass Passivation Junction



DO-15

Dimensions in inches and (millimeters)

### Ordering Information

| Part Number | Remark       |
|-------------|--------------|
| SF2xG       | General      |
| SF2xG-H     | Halogen Free |

### PRIMARY CHARACTERISTICS

|                   |                     |
|-------------------|---------------------|
| $I_F$             | 2A                  |
| $V_{RRM}$         | 50~600V             |
| $I_{FSM}$         | 50A                 |
| $V_F$             | 0.98V, 1.30V, 1.75V |
| $T_J \text{ max}$ | 125°C               |

### Features

- Guardring for overvoltage protection
- Very small conduction losses
- Low forward voltage drop
- Component in accordance to RoHS 2002/95/EC

### Mechanical Data

- Cases: DO-15
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Terminals: Lead free Plating (Tin Finish)  
Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.366 grams (approximate)

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

| PARAMETER                                                                          | SYMBOL           | SF21G       | SF22G | SF23G | SF24G | SF25G | SF26G | SF28G | UNIT |
|------------------------------------------------------------------------------------|------------------|-------------|-------|-------|-------|-------|-------|-------|------|
| Maximum repetitive peak reverse voltage                                            | V <sub>RRM</sub> | 50          | 100   | 150   | 200   | 300   | 400   | 600   | V    |
| Maximum RMS voltage                                                                | V <sub>RMS</sub> | 35          | 70    | 105   | 140   | 210   | 280   | 420   | V    |
| Maximum DC blocking voltage                                                        | V <sub>DC</sub>  | 50          | 100   | 150   | 200   | 300   | 400   | 600   | V    |
| Maximum average forward rectified current                                          | I <sub>F</sub>   | 2.0         |       |       |       |       |       |       | A    |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load | I <sub>FSM</sub> | 50.0        |       |       |       |       |       |       | A    |
| Maximum Instantaneous Forward Voltage<br>IF=2A @ 25°C                              | V <sub>F</sub>   | 0.98        |       |       |       | 1.30  |       | 1.75  | V    |
| Maximum DC Reverse Current @ Tc=25°C<br>at Rated DC Blocking Voltage @ Tc=100°C    | I <sub>R</sub>   | 5<br>100    |       |       |       |       |       |       | uA   |
| Typical Junction Capacitance(NOTE1)                                                | C <sub>j</sub>   | 100         |       |       |       |       |       |       | pF   |
| Maximum Reverse Recovery Time (NOTE2)                                              | T <sub>rr</sub>  | 35          |       |       |       |       |       |       | nS   |
| Typical thermal resistance                                                         | R <sub>θJA</sub> | 30          |       |       |       |       |       |       | °C/W |
| Operating Temperature Range                                                        | T <sub>J</sub>   | -55 to +150 |       |       |       |       |       |       | °C   |
| Storage Temperature Range                                                          | T <sub>STG</sub> | -55 to +150 |       |       |       |       |       |       | °C   |

NOTES:1.Measured at 1.0MHZ and applied reverse voltage of 4.0V DC

2.Measured with IF=0.5A,IR=1A,IRR=0.25A

## Super Fast Recovery Rectifiers Glass Passivation Junction

FIG. 1-TYPICAL FORWARD CURRENT DERATING CURVE

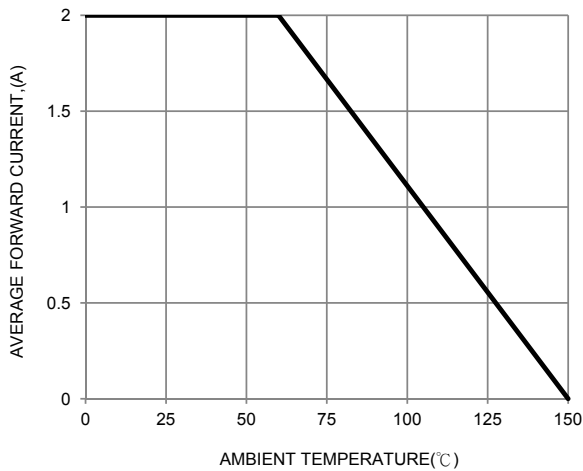


FIG. 2-TYPICAL FORWARD CHARACTERISTICS

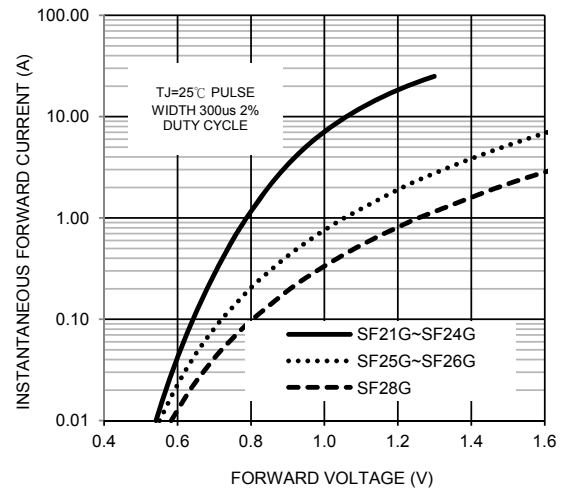


FIG. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

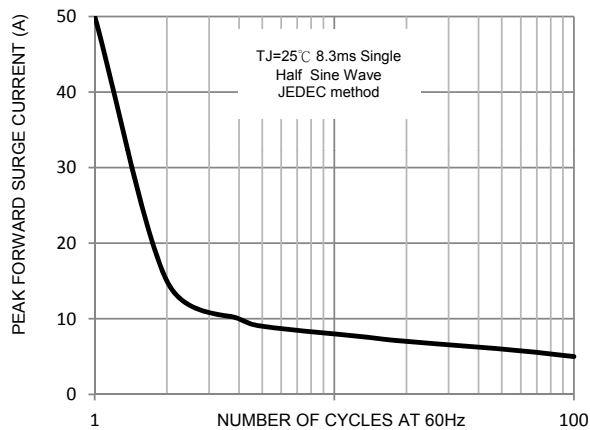


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

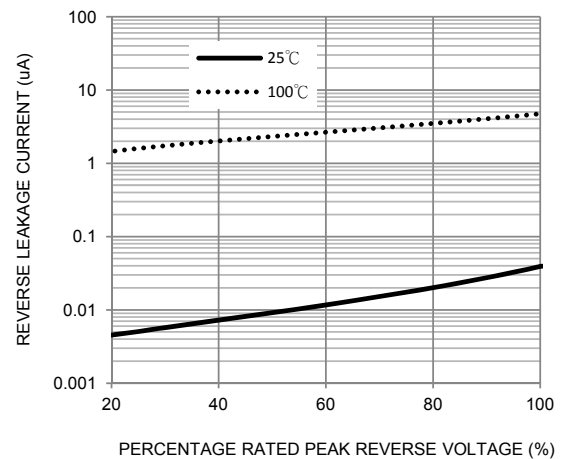


FIG. 5-TYPICAL JUNCTION CAPACITANCE

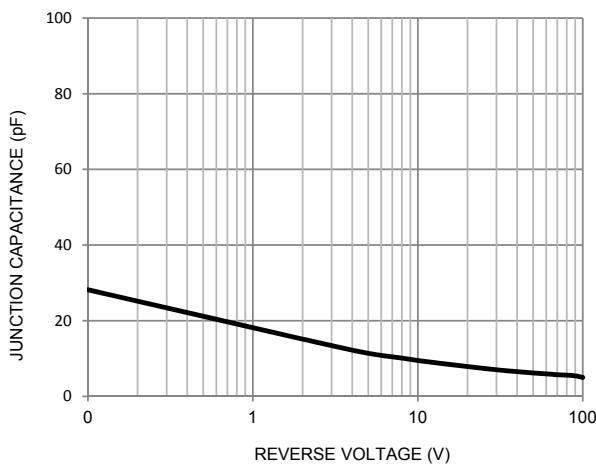


FIG. 6-Reverse Recovery Time Characteristic and Test Circuit

