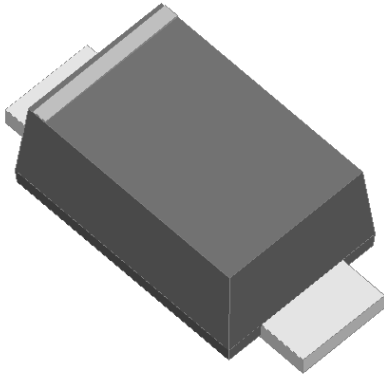


## Surface Mount General Purpose Rectifier

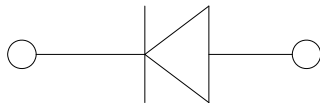


### Features

- Low profile package
- Ideal for automated placement
- Glass passivated chip junction
- Switching for general purpose
- High forward surge capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

### Typical Applications

For use in general purpose switching rectification of power supply, inverters, converters, and freewheeling diodes for consumer and telecommunication.



### Mechanical Data

- **Package:** SOD-123FL  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

### ■Maximum Ratings (Ta=25°C Unless otherwise specified)

| PARAMETER                                                                        | SYMBOL | UNIT | G1A       | G1B | G1D | G1G | G1J | G1K | G1M  |
|----------------------------------------------------------------------------------|--------|------|-----------|-----|-----|-----|-----|-----|------|
| Device marking code                                                              |        |      | G1A       | G1B | G1D | G1G | G1J | G1K | G1M  |
| Repetitive peak reverse voltage                                                  | VRRM   | V    | 50        | 100 | 200 | 400 | 600 | 800 | 1000 |
| Average rectified output current<br>@60Hz sine wave, Resistance load, Ta (FIG.1) | IO     | A    | 1.0       |     |     |     |     |     |      |
| Surge(non-repetitive)forward current<br>@ 60Hz half-sine wave,1 cycle, Tj=25°C   | IFSM   | A    | 30        |     |     |     |     |     |      |
| Storage temperature                                                              | Tstg   | °C   | -55 ~+150 |     |     |     |     |     |      |
| Junction temperature                                                             | Tj     | °C   | -55 ~+150 |     |     |     |     |     |      |

### ■Electrical Characteristics (Ta=25°C Unless otherwise specified)

| PARAMETER                                                         | SYMBOL | UNIT | TEST CONDITIONS | G1A      | G1B | G1D | G1G | G1J | G1K | G1M |
|-------------------------------------------------------------------|--------|------|-----------------|----------|-----|-----|-----|-----|-----|-----|
| Maximum instantaneous forward voltage drop per diode              | VF     | V    | IFM=1.0A        | 1.1      |     |     |     |     |     |     |
| Maximum DC reverse current at rated DC blocking voltage per diode | IRRM   | μA   | VRM=VRRM        | Ta=25°C  |     |     |     | 5   |     |     |
|                                                                   |        |      |                 | Ta=125°C |     |     |     | 100 |     |     |



# G1A THRU G1M

## ■ Thermal Characteristics ( $T_a=25^{\circ}\text{C}$ Unless otherwise specified)

| PARAMETER                                       | SYMBOL           | UNIT                 | G1A | G1B | G1D | G1G | G1J | G1K | G1M |
|-------------------------------------------------|------------------|----------------------|-----|-----|-----|-----|-----|-----|-----|
| Thermal resistance<br>Between junction and lead | $R_{\theta J-L}$ | $^{\circ}\text{C/W}$ | 20  |     |     |     |     |     |     |

Note: Thermal resistance between junction and ambient and between junction and lead mounted on P.C.B with 3mm\*3mm.

## ■ Ordering Information (Example)

| PREFERRED P/N | PACKING CODE | UNIT WEIGHT(g)      | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---------------|--------------|---------------------|----------------------|-------------------------|----------------------------|---------------|
| G1A THRU G1M  | F1           | Approximate 0.01367 | 3000                 | 15000                   | 120000                     | 7" reel       |
| G1A THRU G1M  | F2           | Approximate 0.01367 | 10000                | 20000                   | 160000                     | 13" reel      |

## ■ Characteristics(Typical)

FIG1:  $I_o$ - $T_a$  Curve

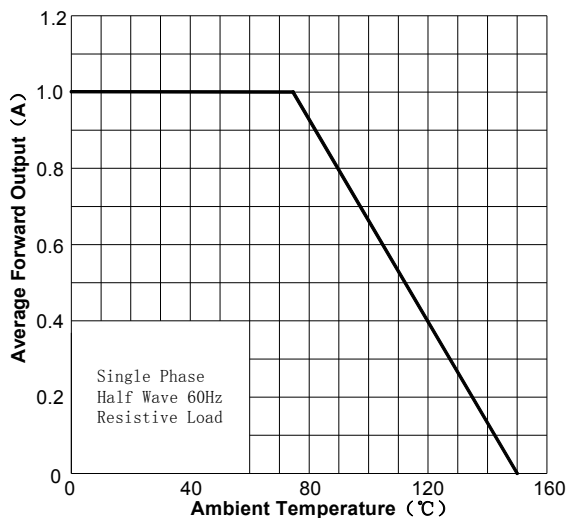


FIG2: Surge Forward Current Capability

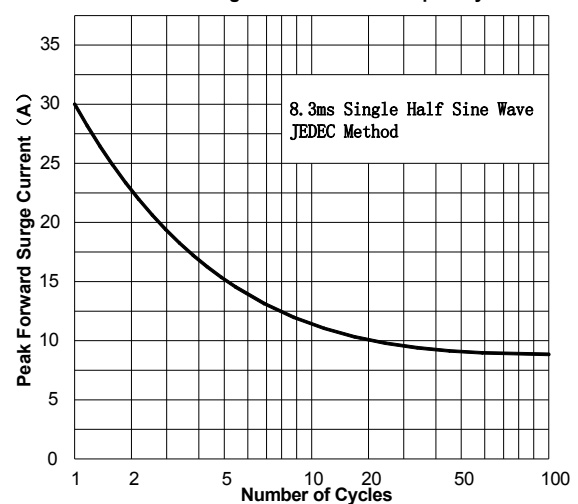


FIG3: Forward Voltage

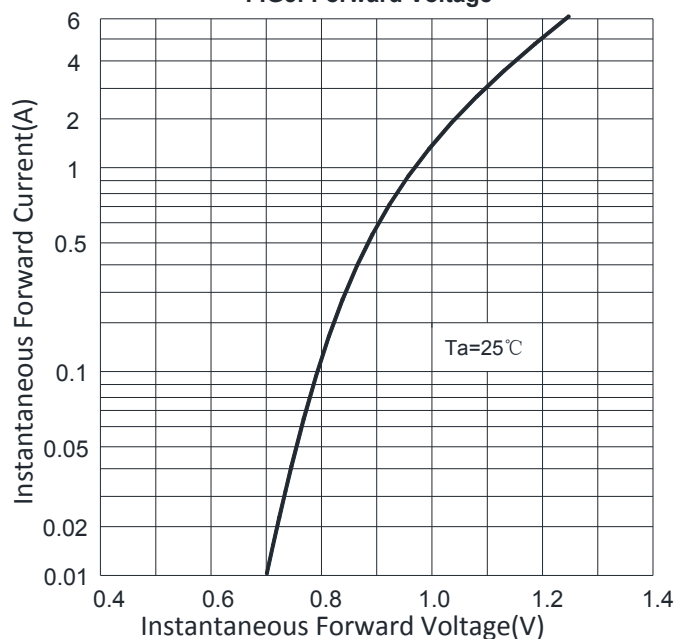
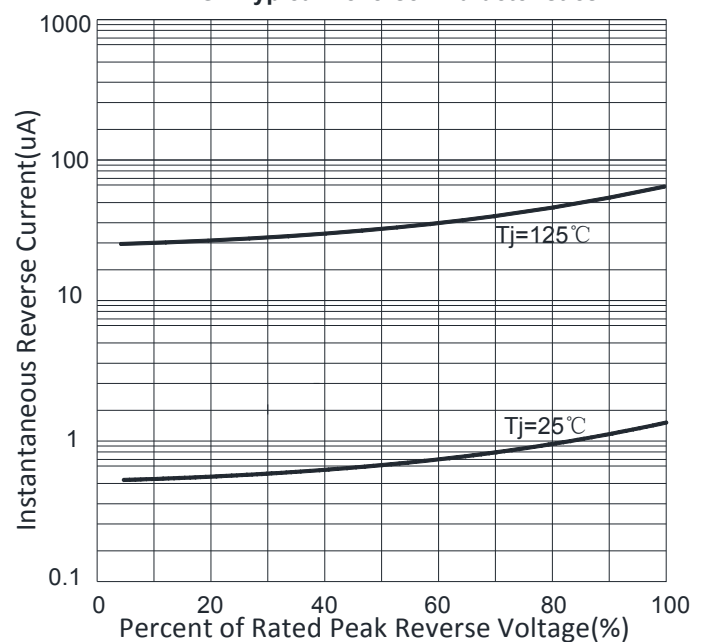
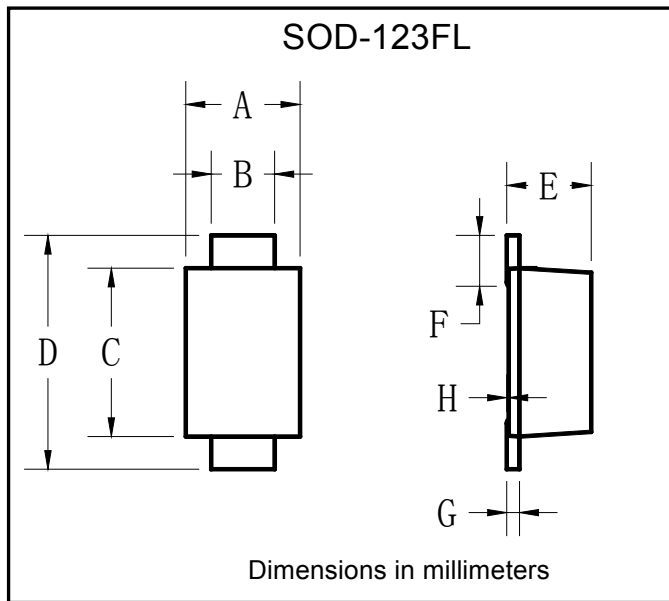


FIG4: Typical Reverse Characteristics

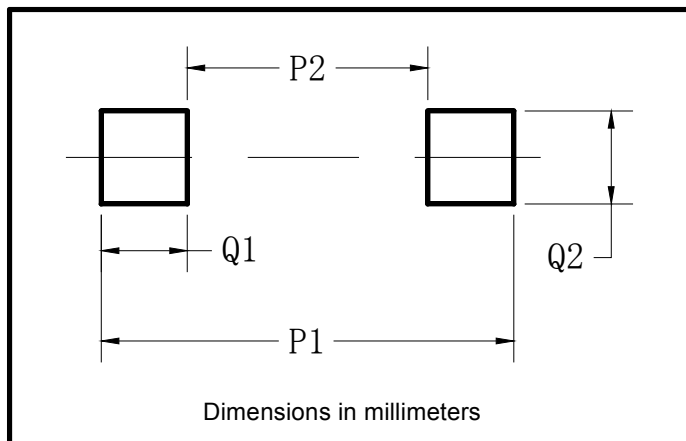


## ■ Outline Dimensions



| SOD-123FL |      |      |
|-----------|------|------|
| Dim       | Min  | Max  |
| A         | 1.60 | 1.90 |
| B         | 0.90 | 1.10 |
| C         | 2.55 | 2.85 |
| D         | 3.60 | 3.90 |
| E         | 1.00 | 1.20 |
| F         | 0.40 | 0.90 |
| G         | 0.10 | 0.25 |
| H         | 0.02 | 0.05 |

## ■ Suggested pad layout



| Dim | Min  |
|-----|------|
| P1  | 3.90 |
| P2  | 2.70 |
| Q1  | 1.10 |
| Q2  | 0.78 |



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