

# GS1010FL

## Product profile

Surface Mount High Current Density Diode

## General description

Rectifiers 1.0 Amp 1000V

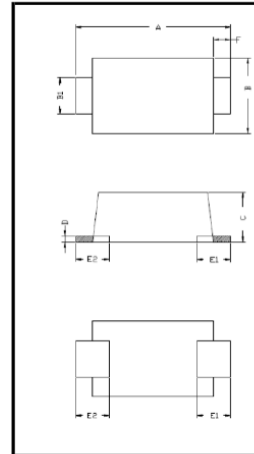
## Features

- Low forward voltage
- Reverse energy tested
- High current capability
- Extremely low thermal resistance

## Mechanical data

- Case: SOD-123S Molded plastic
- Epoxy: UL94V-O rate flame retardant
- Lead: Lead Formed for Surface Mount
- Polarity: Color band denotes cathode end
- Mounting position: Any

SOD123S



| Dimension | Millimeters |      | Inches |       |
|-----------|-------------|------|--------|-------|
|           | Min         | Max  | Min    | Max   |
| A         | 3.50        | 3.90 | 0.138  | 0.154 |
| B         | 1.60        | 2.00 | 0.063  | 0.079 |
| B1        | 0.80        | 1.00 | 0.031  | 0.039 |
| C         | 1.00        | 1.40 | 0.039  | 0.055 |
| D         | 0.12        | 0.20 | 0.005  | 0.008 |
| E1        | 0.60        | 1.00 | 0.024  | 0.039 |
| E2        | 0.60        | 1.00 | 0.024  | 0.039 |
| F         | 0.20        | 0.60 | 0.008  | 0.024 |

## Maximum Ratings (Tc=25°C unless otherwise noted)

| Parameter  | Symbol | GS1010FL    | Unit |
|--|--------|-------------|------|
| Maximum repetitive peak reverse voltage  | VRRM   | 1000        | V    |
| RMS Voltage (Max.)   | VRMS   | 700         | V    |
| Working peak reverse voltage   | VRWM   | 1000        | V    |
| Maximum average forward rectified current  | IF(AV) | 1.0         | A    |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed<br>on rated load (JEDEC Method) | IFSM   | 30          | A    |
| Operating junction temperature range   | TJ     | -55 to +150 | °C   |
| Storage temperature range  | TSTG   | -55 to +150 | °C   |

## THERMAL CHARACTERISTICS

| Parameter                  | Symbol | Value | Unit |
|----------------------------|--------|-------|------|
| Typical thermal resistance | RθJA   | 42    | °C/W |

Notes:

- (1) Pulse test: 300 μs pulse width, 1 % duty cycle
- (2) Pulse test: Pulse width ≤ 40 ms

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### Electrical characteristics (Tc=25°C unless otherwise noted)

#### OFF CHARACTERISTICS

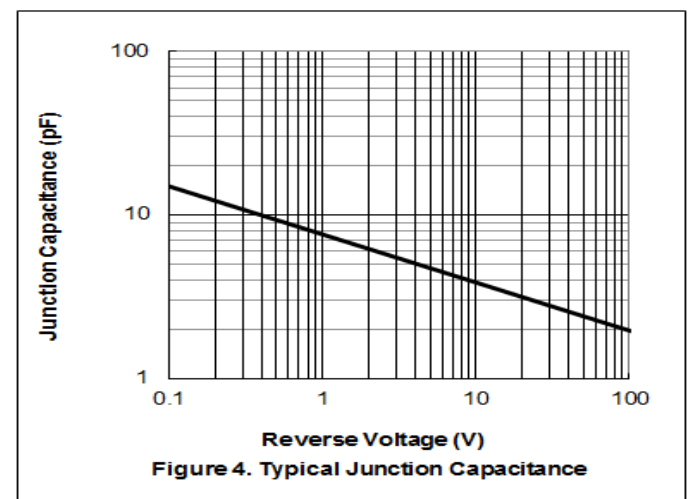
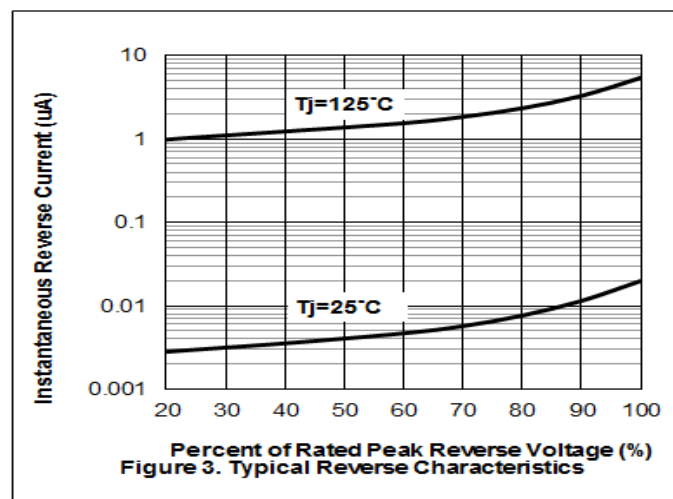
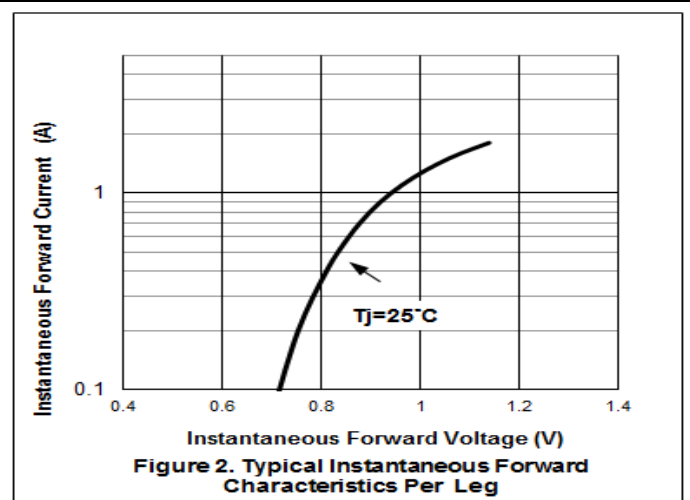
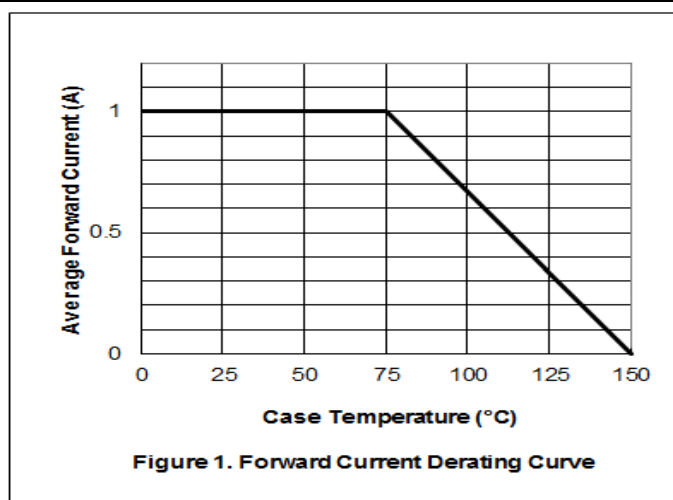
| Parameter  | Symbol | Value   |     | Unit |
|--|--------|---------|-----|------|
|  |        | Typical | Max |      |
| Instantaneous forward voltage<br>at IF=1A, Tj=25°C | VF     | 0.94    | 1.0 | V    |
| Maximum reverse current<br>Tj=25°C                 | IR     | 2       |     | u'A  |
| at working peak reverse voltage Tj=125°C           |        | 2       |     | m'A  |
| Junction Capacitance @ DC 5V                       | CJ     | 4       |     | pF   |

#### DEVICE MARK

GS1010FL

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### ■ Characteristic Curves



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