



SGPD520S thru SGPD560S

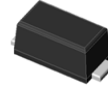
Surface Mount Schottky Rectifier
Reverse Voltage 20~60V Forward Current 0.5A

Features

- Low VF Schottky barrier diodes
- Very low profile - typical height of 1.0 mm
- Low forward voltage drop
- Low leakage current
- Moisture sensitivity: level 1, per J-STD-020
- High temperature soldering guaranteed: 260°C/10 seconds
- Halogen-free according to IEC 61249-2-21 definition



RoHS
COMPLIANT



eSGP(SOD-323F)

Typical Applications

For use of fast swiching in RF module, lighting, cellular phone, portable device, power supplies and other consumer applications.

| Maximum Ratings (TA = 25 °C unless otherwise noted) | | | | | |
|--|-------------|---------------|----------|----------|------|
| Parameter | Symbol | SGPD520S | SGPD540S | SGPD560S | Unit |
| Maximum repetitive peak reverse voltage | VRRM | 20 | 40 | 60 | V |
| Maximum RMS voltage | VRMS | 14 | 28 | 42 | V |
| Maximum DC blocking voltage | VDC | 20 | 40 | 60 | V |
| Maximum average forward rectified current | IF(AV) | 0.5 | | | A |
| Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load | IFSM | 15 | | | A |
| Operating junction and storage temperature range | TJ, TSTG | - 55 to + 150 | | | °C |

| Electrical Characteristics (TA = 25 °C unless otherwise noted) | | | | | | |
|--|-------------------|------------------|----------|----------|----------|-------|
| Parameter | Test Conditions | Symbol | SGPD520S | SGPD540S | SGPD560S | Unit |
| Maximum instantaneous forward voltage | 0.5A | V _F | 0.45 | 0.50 | 0.60 | Volts |
| Maximum DC reverse current at rated DC blocking voltage | TA=25°C | I _R | 80 | 80 | 50 | uA |
| | TA=125°C | | 30 | | | mA |
| Typical junction capacitance | 4.0 V, 1 MHz | C _J | 34 | 25 | 22 | pF |
| Typical thermal resistance | junction to mount | R _{θJM} | 55 | | | °C/W |

Note:1),The thermal resistance from junction to mount,mounted on P.C.B with 5x5mm copper pads,2 OZ,FR4 PCB



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Ratings and Characteristics Curves

(TA = 25°C unless otherwise noted)

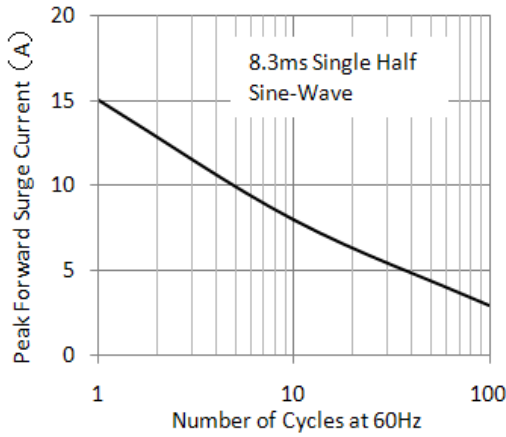


Figure 1. Maximum Non-Repetitive Peak Forward Surge Current

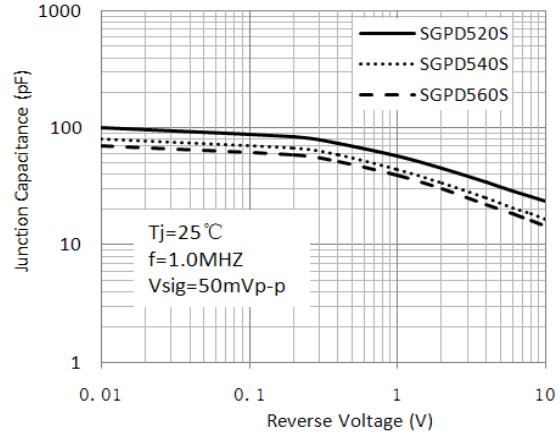


Figure 2. Typical Junction Capacitance

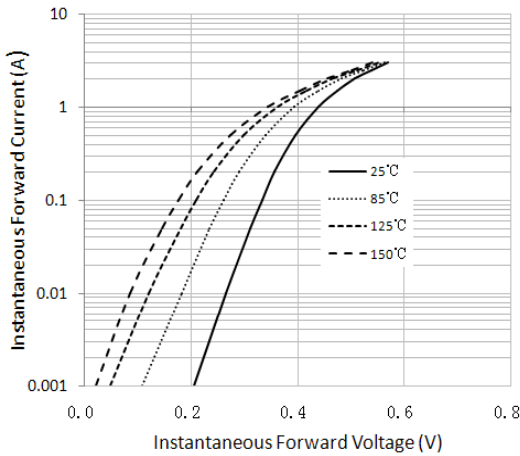


Figure 3. Typical Instantaneous Forward Characteristics (SGPD520S)

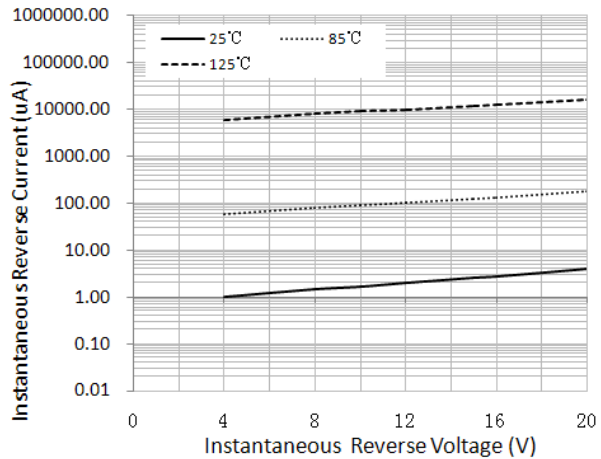


Figure 4. Typical Reverse Characteristics (SGPD520S)

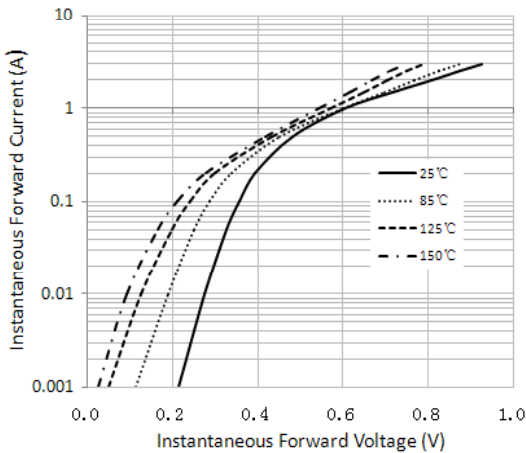


Figure 5. Typical Instantaneous Forward Characteristics (SGPD540S)

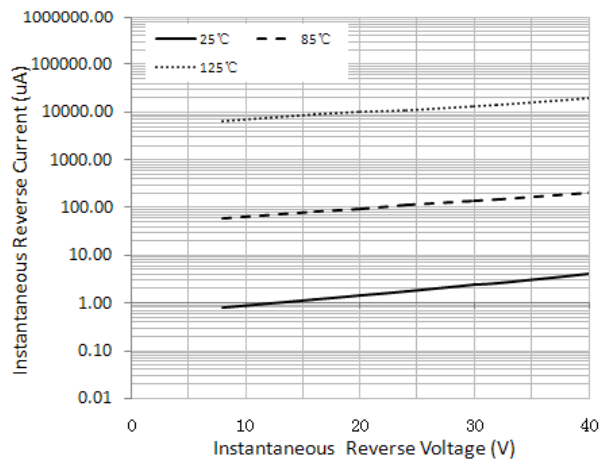


Figure 6. Typical Reverse Characteristics (SGPD540S)



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Ratings and Characteristics Curves

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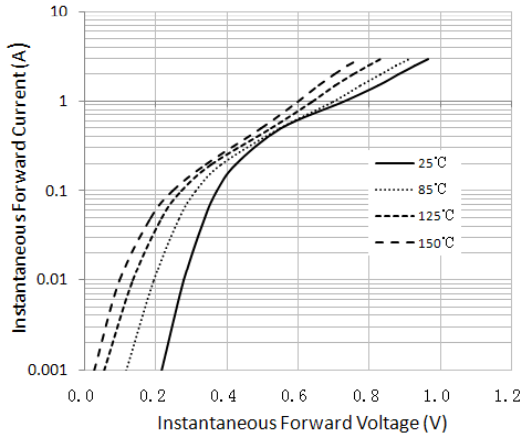


Figure 7. Typical Instantaneous Forward Characteristics (SGPD560S)

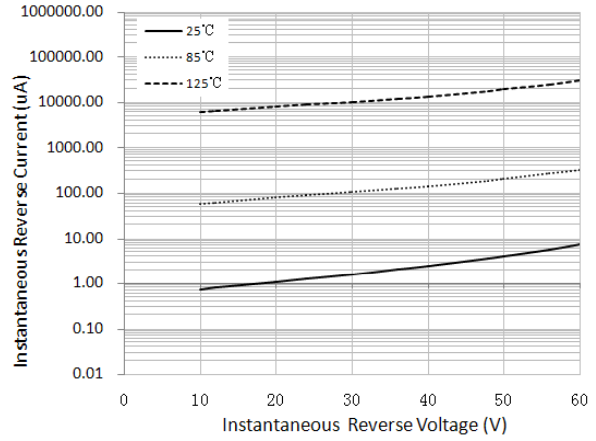
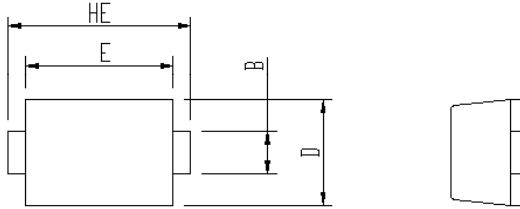


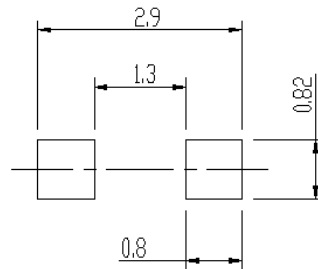
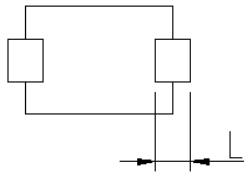
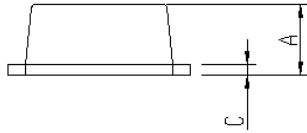
Figure 8. Typical Reverse Characteristics (SGPD560S)

Package Outline Dimensions



| Package | Unit:mm | | Unit:inch | |
|---------|---------|------|-----------|-------|
| | MIN | MAX | MIN | MAX |
| A | 0.9 | 1.08 | 0.035 | 0.043 |
| B | 0.5 | 0.7 | 0.020 | 0.028 |
| C | 0.1 | 0.25 | 0.004 | 0.010 |
| D | 1.4 | 1.6 | 0.055 | 0.063 |
| E | 2.0 | 2.2 | 0.079 | 0.087 |
| L | 0.35 | 0.65 | 0.014 | 0.026 |
| HE | 2.4 | 2.8 | 0.094 | 0.110 |

Soldering footprint

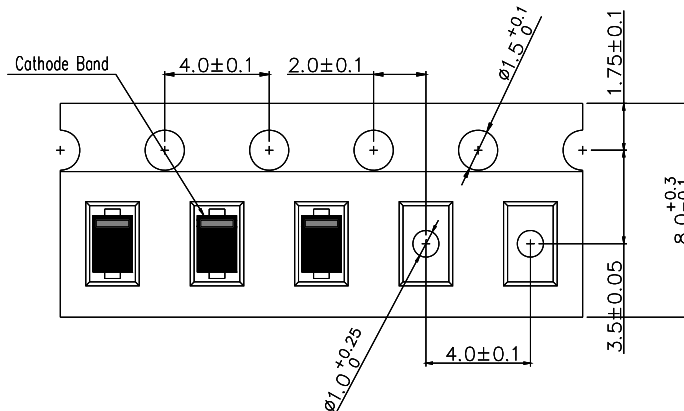


Packing Information

Packing quantities:

3000 pcs/Reel, 40 Reels/Box; 8mm Tape, 7" Reel

Tape & Reel Specification





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