

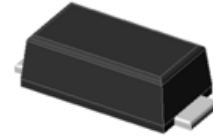
1.2A,50-1000V Fast Recovery Rectifiers

Features

- Low leakage current
- Low forward voltage drop
- Glass passivated chip junction
- Moisture sensitivity: level 1, per J-STD-020
- Halogen-free according to IEC 61249-2-21 definition
- High temperature soldering guaranteed: 260°C/10 seconds



RoHS
COMPLIANT



eSGA (SOD-123FL)

Applications

For use of fast switching rectification in lighting, cellular phone, portable device, power supplies and other consumer applications.

Maximum Ratings & Electrical Characteristics (T_A=25°C unless otherwise noted)

| Parameter | Symbol | RS12005FL | RS1201FL | RS1202FL | RS1204FL | RS1206FL | RS1208FL | RS1210FL | Unit |
|--|--------------------|-------------|----------|----------|----------|----------|----------|----------|------|
| Maximum repetitive peak reverse voltage | V _{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS voltage | V _{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC blocking voltage | V _{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum average forward rectified current | I _{F(AV)} | 1.2 | | | | | | | A |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load per diode | I _{FSM} | 35 | | | | | | | A |
| Operating junction temperature range | T _J | -55 to +150 | | | | | | | °C |
| Storage temperature range | T _{STG} | -55 to +150 | | | | | | | °C |

Thermal-Mechanical Specifications (T_A=25°C unless otherwise noted)

| Parameter | Symbol | Typ | Unit |
|---|------------------|-----|-------|
| Thermal Resistance, Junction to Ambient | R _{θJA} | 100 | °C /W |
| Thermal Resistance, Junction to Case | R _{θJC} | 20 | °C /W |
| Thermal Resistance, Junction to Lead | R _{θJL} | 20 | °C /W |



RS12005FL thru RS1210FL

GOOD-ARK Electronics

Electrical Specifications (T_A=25°C unless otherwise noted)

| Parameter | Symbol | Test Conditions | RS12005FL | RS1201FL | RS1202FL | RS1204FL | RS1206FL | RS1208FL | RS1210FL | Unit | |
|-------------------------------|-----------------|--|-----------|----------|----------|----------|----------|----------|----------|------|----|
| Forward Drop Voltage | V _F | I _F =1.2A | 1.3 | | | | | | | V | |
| Reverse leakage current @VR | I _R | T _J =25°C | 5 | | | | | | | uA | |
| | | T _J =125°C | 50 | | | | | | | | |
| Typical junction capacitance | C _J | 4.0 V 1 MHz | 7.5 | | | | | | | pF | |
| Maximum reverse recovery time | t _{rr} | I _F =0.5A, I _R =1.0A, I _{RR} =0.25A | 150 | | | | 250 | | 500 | | nS |

Note:

1. Mounted on copper pad area of 0.2x0.2" (5.0 x 5.0mm) to each terminal.

Ratings and Characteristics Curves

(TA = 25°C unless otherwise noted)

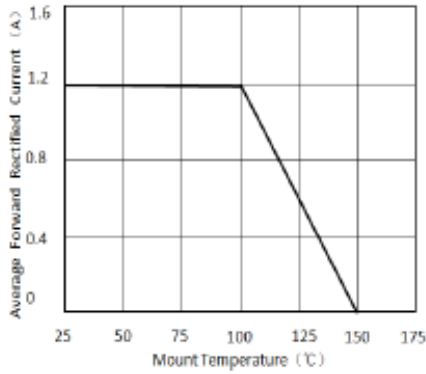


Figure 1. Forward Current Derating Curve

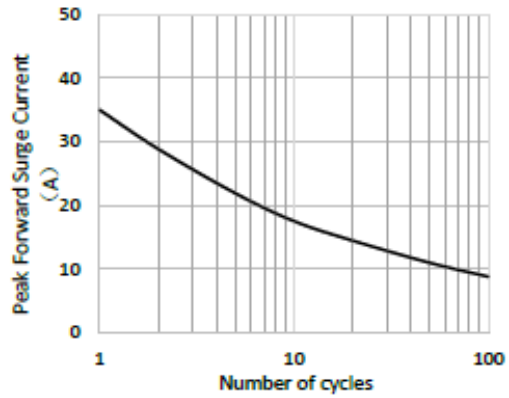


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

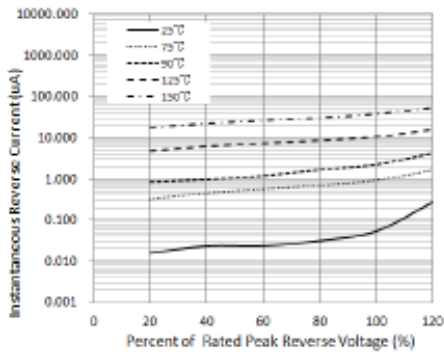


Figure 3. Typical Reverse Characteristics

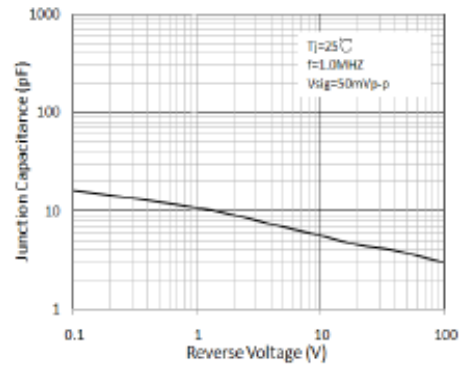


Figure 4. Typical Junction Capacitance

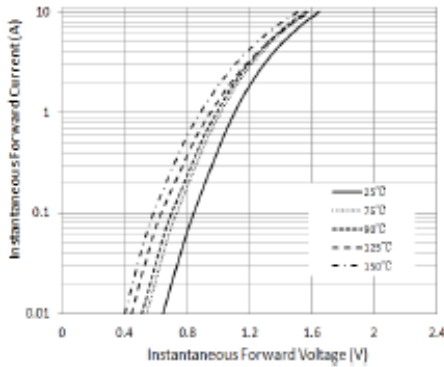
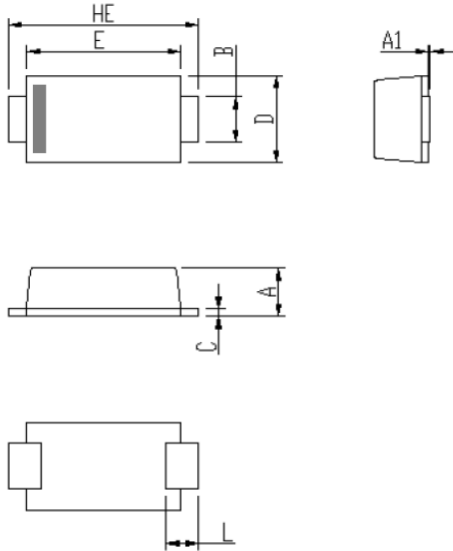


Figure 5. Typical Instantaneous Forward Characteristics

Package Outline Dimensions

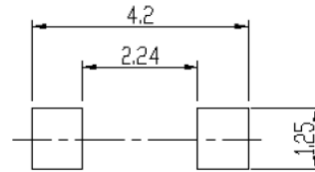
in inches (millimeters)

eSGA (SOD-123FL)



| DIM | Unit: mm | | Unit: inch | |
|-----|----------|------|------------|-------|
| | MIN | MAX | MIN | MAX |
| A | 0.9 | 1.08 | 0.035 | 0.043 |
| A1 | 0 | 0.1 | 0.000 | 0.004 |
| B | 0.85 | 1.05 | 0.033 | 0.041 |
| C | 0.1 | 0.25 | 0.004 | 0.010 |
| D | 1.7 | 2 | 0.067 | 0.079 |
| E | 2.9 | 3.1 | 0.114 | 0.122 |
| L | 0.43 | 0.83 | 0.017 | 0.033 |
| HE | 3.5 | 3.9 | 0.138 | 0.154 |

Soldering footprint



Revision History

| Document Version | Date of release | Description of changes |
|------------------|-----------------|------------------------|
| Rev.A | 2021.06.01 | Released Datasheet |
| Rev.B | 2023.10.11 | Modify document format |

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