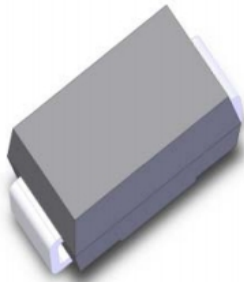


Surface Mount Glass Passivated Standard Rectifier
SMA(DO-214AC)

Features

- ROHS compliant
- Glass passivated chip
- High forward surge capability
- Meet MSL level 1, per J-STD-020 LF maximum peak of 250 °C
- Solder dip 260 °C / 40S
- Component in accordance to ROHS 2002/95/EC and WEEE 2002/96/WC
- UL recognition, file number E342874


Primary characteristics

| | |
|----------------------|--------------|
| $I_{F(AV)}$ | 1A |
| V_{RRM} | 50V to 1000V |
| I_{FSM} | 30A |
| I_{RM} | 5 μ A |
| V_{FM} at $I_F=1A$ | 1V |
| T_J max. | 150 °C |

Applications

Ideal for ac-to-dc bridge full wave rectification such as SMPS, home appliances, office equipment, industrial automation applications

Mechanical data

- SMA(DO-214AC)
- Epoxy meets UL 94 V-0 flammability rating
- Terminals: Tin plated leads.
- Polarity: As marked.
- Mounting Torque: 10cm \cdot kg(8.8 inches \cdot lbs)max.
- Recommended Torque: 5.7 cm \cdot kg(5 inches \cdot lbs)

Maximum rating (Ta=25°C unless otherwise noted)

| Parameter | Sym | SMA(DO-214AC) | | | | | | | Unit |
|--|-------------|---------------|-----|-----|-----|-----|-----|------|---------|
| | | M1 | M2 | M3 | M4 | M5 | M6 | M7 | |
| Max. repetitive peak reverse voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Max. RMS reverse voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Max. DC blocking voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Max. average forward current | $I_{F(AV)}$ | 1 | | | | | | | A |
| Non-repetitive peak forward surge current 8.3ms single half-sine-wave | I_{FSM} | 30 | | | | | | | A |
| Max. instantaneous forward voltage drop per diode | V_{FM} | 1 (1A) | | | | | | | V |
| Max. instantaneous reverse current at rated DC blocking voltage | I_{RM} | 5 | | | | | | | μ A |
| | | 50 | | | | | | | μ A |
| Operating junction temperature | T_J | -55 ~ +150 | | | | | | | °C |
| Storage temperature | T_{STG} | -55 ~ +150 | | | | | | | °C |
| Typical thermal resistance (Note 1) | R_{J-A} | 75 | | | | | | | °C/W |
| | R_{J-L} | 20 | | | | | | | °C/W |
| Typical junction capacitance (Note 2) | C_J | 10 | | | | | | | pF |

Notes:

1 Thermal resistance from junction to lead, 0.197x0.197"(5.0x5.0mm)copper pads to each terminal

2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C



Surface Mount Glass Passivated Standard Rectifier

Ordering information (Example)

| PREFERRED | UNIT WEIGHT (g) | PREFERRED PACKAGE CODE | BASE QUANTITY | DELIVERY MODE |
|-----------|-----------------|------------------------|---------------|---------------|
| M7 | | | | |

Typical characteristics

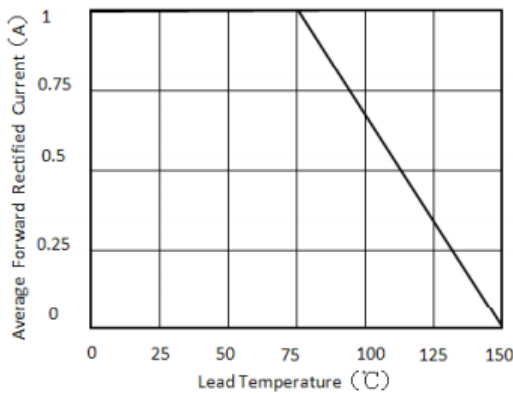


Figure 1. Forward Current Derating Curve

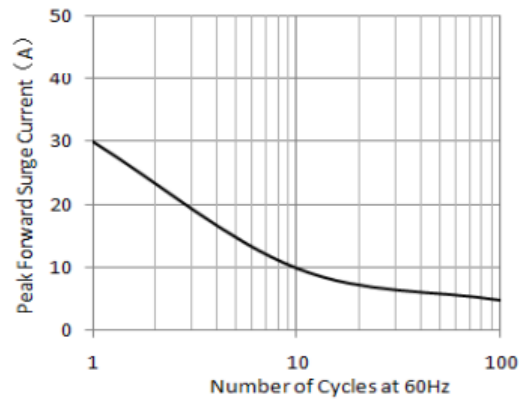


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

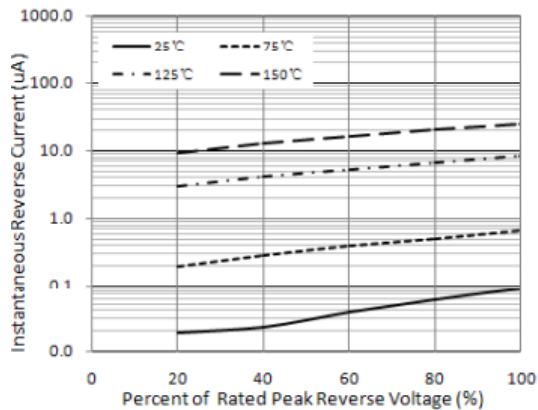


Figure 3. Typical Reverse Characteristics

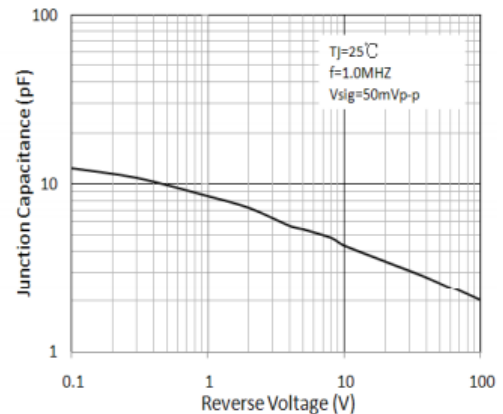
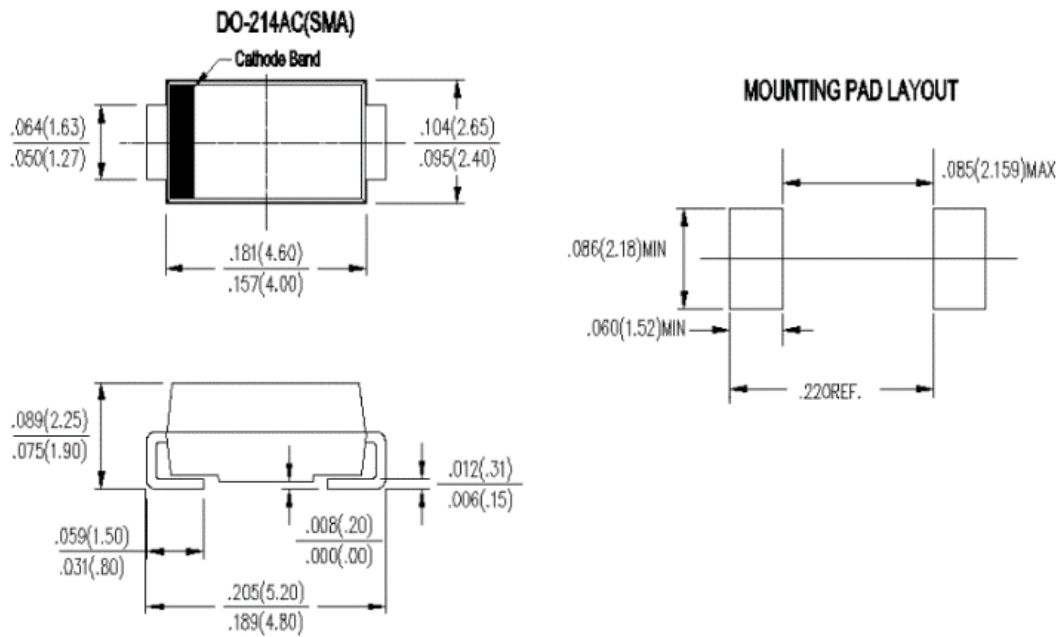


Figure 4. Typical Junction Capacitance

Surface Mount Glass Passivated Standard Rectifier

Package outline dimensions



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