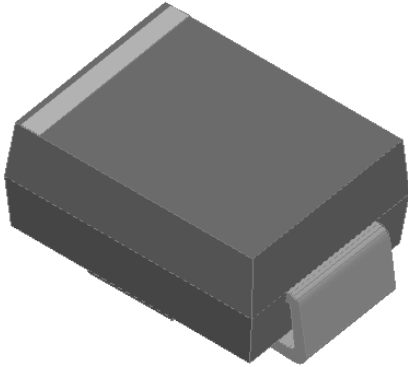


Surface Mount General Purpose Rectifier

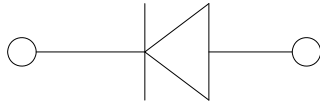


Features

- Low profile package
- Ideal for automated placement
- Glass passivated chip junction
- 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 rectification of power supplies, inverters, converters, and freewheeling diodes for consumer and telecommunication.



Mechanical Data

- **Package:** DO-214AA (SMB)
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 (T_a=25°C Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | GS25A | GS25B | GS25D | GS25G | GS25J | GS25K | GS25M |
|---|------------------|------------------|------------|-------|-------|-------|-------|-------|-------|
| Device marking code | | | GS25A | GS25B | GS25D | GS25G | GS25J | GS25K | GS25M |
| Maximum Repetitive peak reverse voltage | V _{RRM} | V | 50 | 100 | 200 | 400 | 600 | 800 | 1000 |
| Maximum RMS Voltage | V _{RMS} | V | 35 | 70 | 140 | 280 | 420 | 560 | 700 |
| Maximum DC Blocking Voltage | V _{DC} | V | 50 | 100 | 200 | 400 | 600 | 800 | 1000 |
| Average rectified output current @60Hz sine wave, resistance load, TL (Fig.1) | I _O | A | 2.5 | | | | | | |
| Forward Surge Current (Non-repetitive) @60Hz Half-sine wave, 1 cycle, T _j =25°C | I _{FSM} | A | 80 | | | | | | |
| Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, T _j =25°C | | | 150 | | | | | | |
| Current squared time @1ms≤t≤8.3ms T _j =25°C | I ² t | A ² s | 26.56 | | | | | | |
| Storage temperature | T _{stg} | °C | -55 ~ +150 | | | | | | |
| Junction temperature | T _j | °C | -55 ~ +150 | | | | | | |

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

| PARAMETER | SYMBOL | UNIT | TEST CONDITIONS | GS25A | GS25B | GS25D | GS25G | GS25J | GS25K | GS25M |
|---|----------------|------|---|-------|-------|-------|-------|-------|-------|-------|
| Maximum instantaneous forward voltage | V _F | V | I _{FM} =2.5A | 1.1 | | | | | | |
| Maximum DC reverse current at rated DC blocking voltage | I _R | μA | T _j =25°C | 5.0 | | | | | | |
| | | | T _j =125°C | 100 | | | | | | |
| Typical junction capacitance | C _j | pF | Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C | 17 | | | | | | |



GS25A THRU GS25M

■ Thermal Characteristics (T_a=25°C Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | GS25A | GS25B | GS25D | GS25G | GS25J | GS25K | GS25M |
|----------------------------|-------------------|------|-------------------|-------|-------|-------|-------|-------|-------|
| Typical Thermal resistance | R _{θJ-A} | °C/W | 55 ⁽¹⁾ | | | | | | |
| | R _{θJ-L} | | 15 ⁽¹⁾ | | | | | | |
| | R _{θJ-C} | | 10 ⁽¹⁾ | | | | | | |

Note:
 (1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.3" x 0.3" (8.0 mm x 8.0 mm) copper pad areas

■ Characteristics (Typical)

FIG1: Io-TL Curve

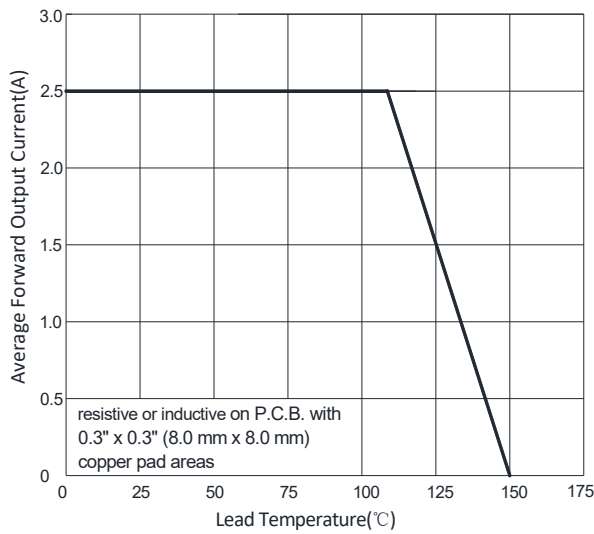


FIG2: Surge Forward Current Capability

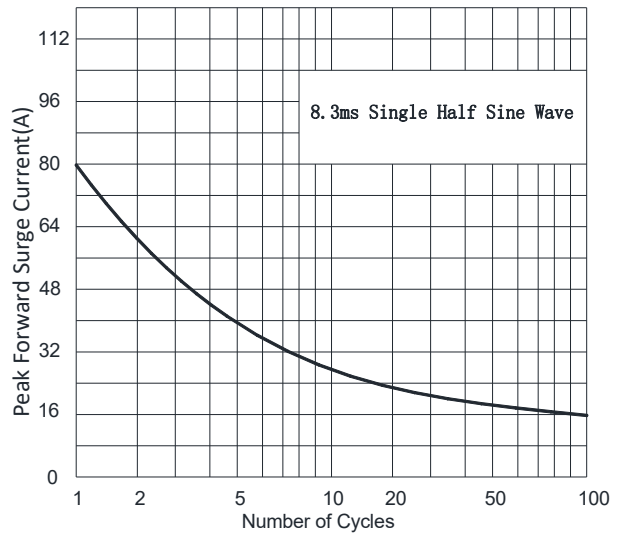


FIG3: Typical Forward characteristics

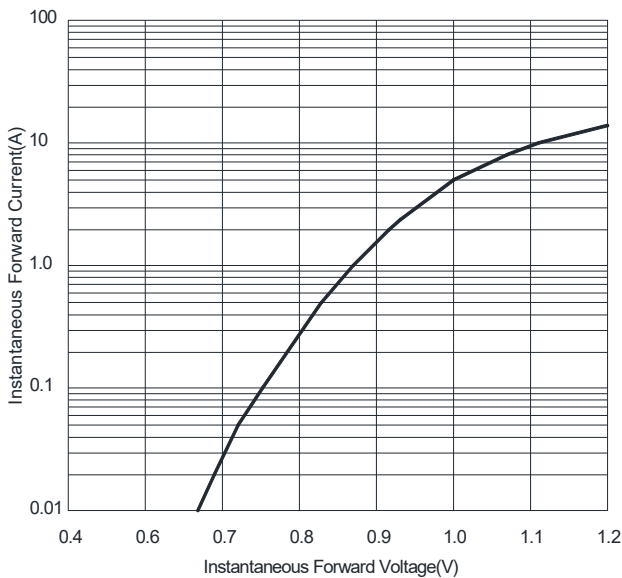
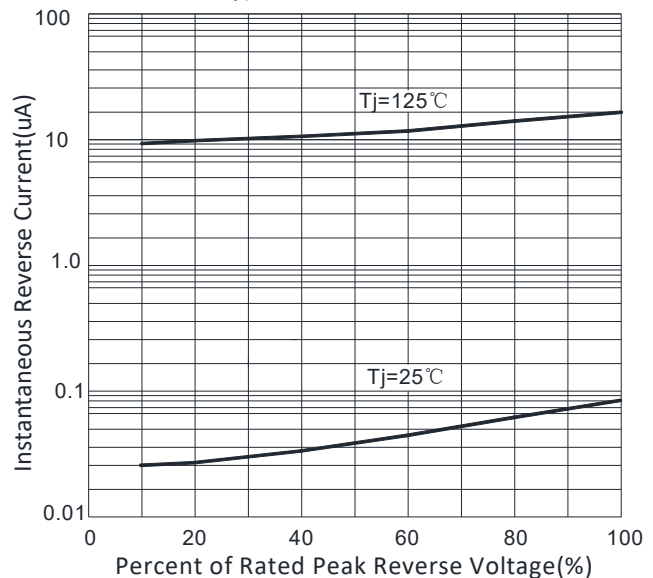


FIG4: Typical Reverse Characteristics



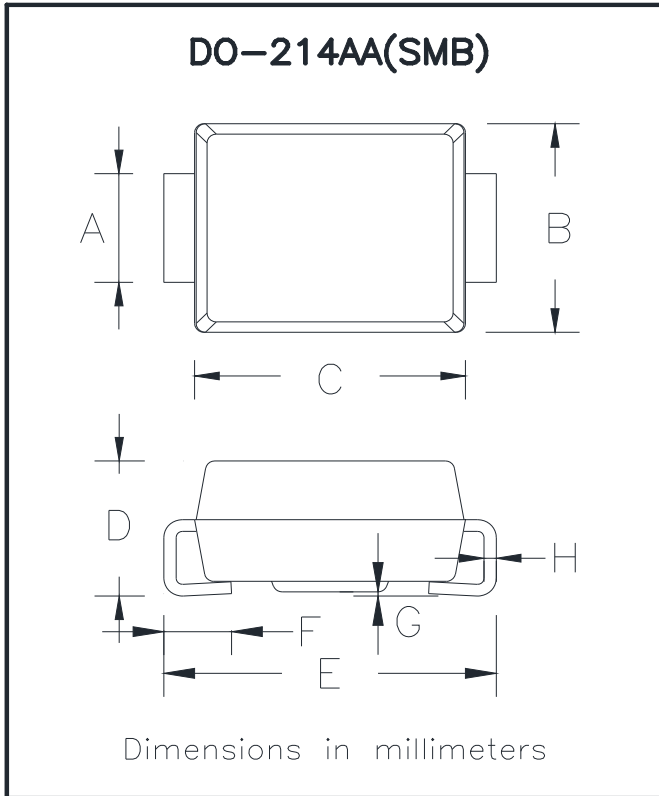


GS25A THRU GS25M

Ordering Information (Example)

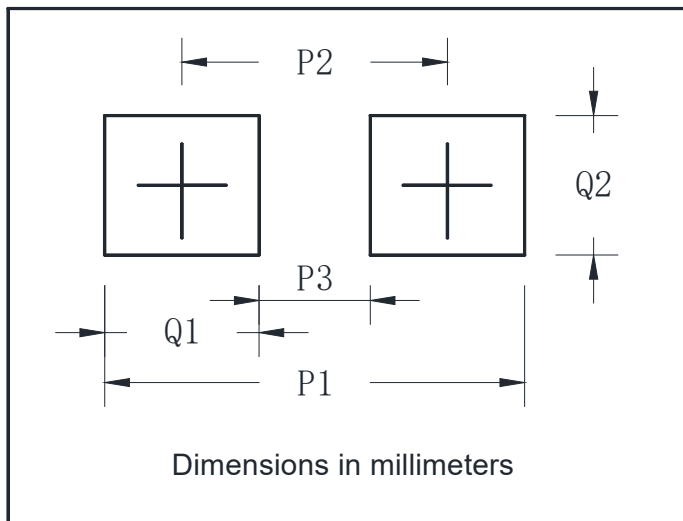
| PREFERRED P/N | PACKING CODE | UNIT WEIGHT(g) | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---------------|--------------|-------------------|----------------------|-------------------------|----------------------------|---------------|
| GS25A-GS25M | F1 | Approximate 0.096 | 3000 | / | 48000 | 13" reel |
| GS25A-GS25M | F2 | Approximate 0.096 | 750 | 6000 | 24000 | 7" reel |
| GS25A-GS25M | F3 | Approximate 0.096 | 500 | 4000 | 16000 | 7" reel |

Outline Dimensions



| DO-214AA(SMB) | | |
|---------------|------|------|
| Dim | Min | Max |
| A | 1.85 | 2.15 |
| B | 3.30 | 3.94 |
| C | 4.05 | 4.75 |
| D | 1.99 | 2.61 |
| E | 5.21 | 5.59 |
| F | 0.90 | 1.41 |
| G | 0.05 | 0.20 |
| H | 0.15 | 0.31 |

Suggested pad layout



| DO-214AA(SMB) | |
|---------------|-------------|
| Dim | Millimeters |
| P1 | 6.8 |
| P2 | 4.3 |
| P3 | 1.8 |
| Q1 | 2.5 |
| Q2 | 2.3 |



GS25A THRU GS25M

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