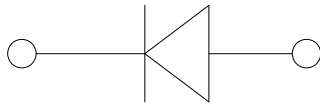
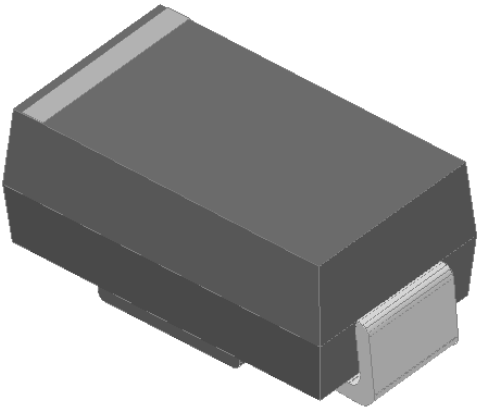


Surface Mount General Purpose Rectifier



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
- Part no. with suffix "Q" means AEC-Q101 qualified

Typical Applications

For use in general purpose rectification of power supplies, inverters, converters, and freewheeling diodes for consumer, automotive and telecommunication.

Mechanical Data

- **Package:** DO-214AC (SMA)
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 ($T_a=25^\circ\text{C}$ Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | GS2AAQ | GS2BAQ | GS2DAQ | GS2GAQ | GS2JAQ | GS2KAQ | GS2MAQ |
|----------------------------------------------------------------------------------------------|-----------|------------------|------------|--------|--------|--------|--------|--------|--------|
| Device marking code | | | GS2AA | GS2BA | GS2DA | GS2GA | GS2JA | GS2KA | GS2MA |
| 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 |
| Average rectified output current @60Hz sine wave, Resistance load, TL (Fig.1) | I_O | A | 2 | | | | | | |
| Surge(non-repetitive)forward current @60Hz Half-sine wave,1 cycle, $T_a=25^\circ\text{C}$ | I_{FSM} | A | 50 | | | | | | |
| Storage temperature | T_{stg} | $^\circ\text{C}$ | -55~+150 | | | | | | |
| Junction temperature | T_J | $^\circ\text{C}$ | -55 ~ +150 | | | | | | |

■ Electrical Characteristics ($T_a=25^\circ\text{C}$ Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | TEST CONDITIONS | GS2AAQ | GS2BAQ | GS2DAQ | GS2GAQ | GS2JAQ | GS2KAQ | GS2MAQ |
|-----------------------------------------------------------------------------------------|-----------|---------------|-------------------------|--------|--------|--------|--------|--------|--------|--------|
| Maximum instantaneous forward voltage drop per diode | V_F | V | $I_{FM}=2.0A$ | 1.15 | | | | | | |
| Typical junction capacitance | C_J | pF | $V_R=4V, 1\text{ MHz}$ | 18 | | | | | | |
| Maximum DC reverse current at rated DC blocking voltage per diode @ $V_{RM}=V_{RRM}$ | I_{RRM} | μA | $T_a=25^\circ\text{C}$ | 5 | | | | | | |
| | | | $T_a=125^\circ\text{C}$ | 100 | | | | | | |



GS2AAQ THRU GS2MAQ

■ Thermal Characteristics ($T_a=25^\circ\text{C}$ Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | GS2AAQ | GS2BAQ | GS2DAQ | GS2GAQ | GS2JAQ | GS2KAQ | GS2MAQ |
|--------------------|------------------|--------------------|------------------|--------|--------|--------|--------|--------|--------|
| Thermal Resistance | $R_{\theta J-A}$ | $^\circ\text{C/W}$ | 55 ¹⁾ | | | | | | |
| | $R_{\theta J-L}$ | $^\circ\text{C/W}$ | 20 ¹⁾ | | | | | | |

Note

(1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas

■ Characteristics (Typical)

Fig1: I_o-T_L Curve

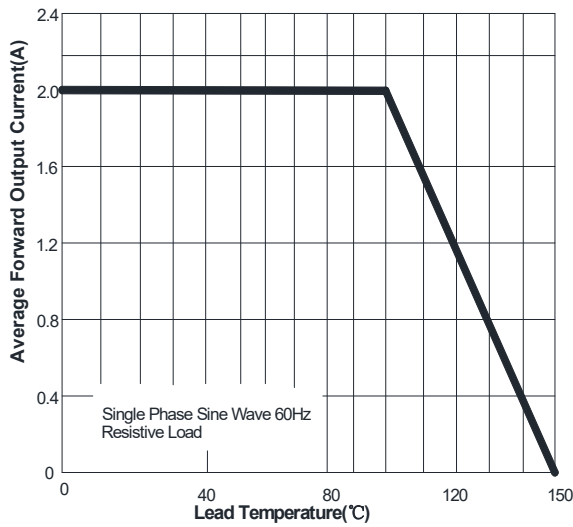


Fig2: Surge Forward Current Capability

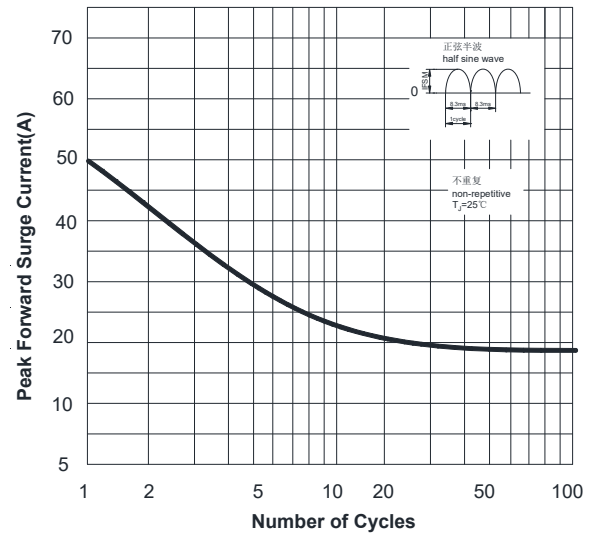


Fig3: Typical Forward Characteristics

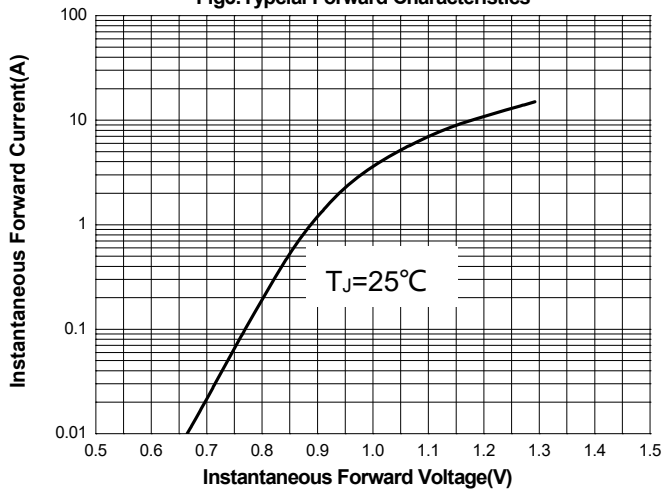
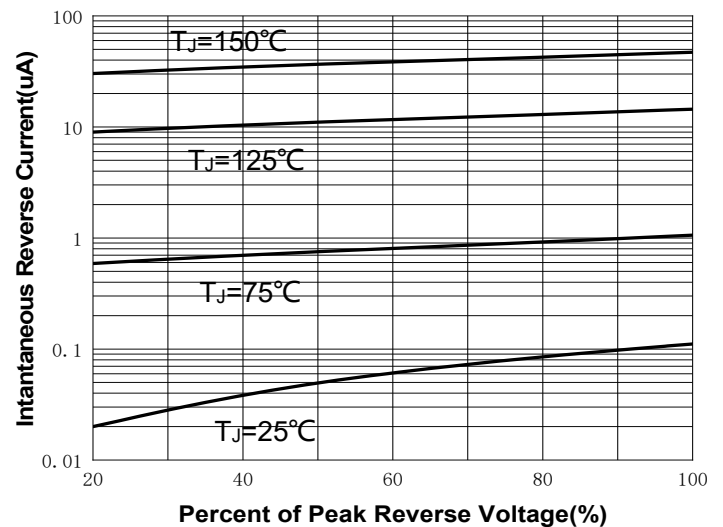


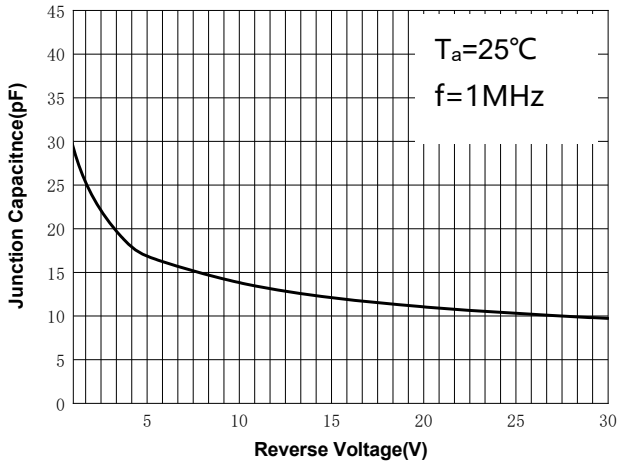
Fig4: Typical Reverse Characteristics





GS2AAQ THRU GS2MAQ

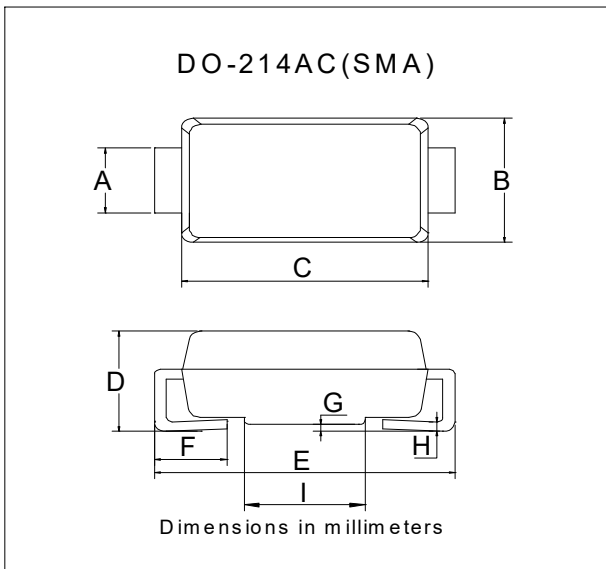
Fig5: Typical Junction Capacitance



Ordering Information (Example)

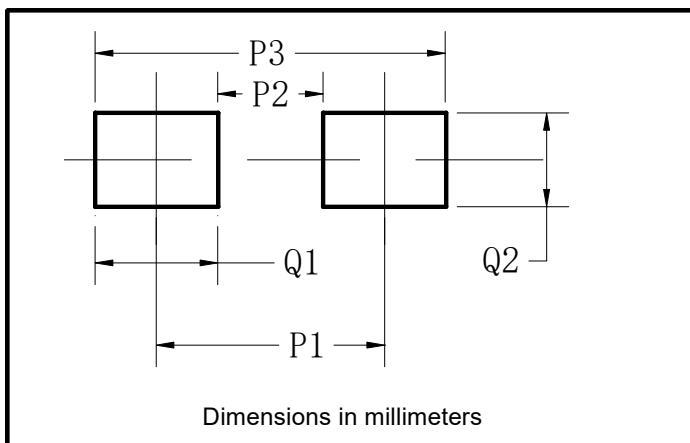
| PREFERRED P/N | PACKAGE CODE | UNIT WEIGHT(g) | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---------------|--------------|-------------------|----------------------|-------------------------|----------------------------|---------------|
| GS2AAQ-GS2MAQ | F2 | Approximate 0.067 | 7500 | / | 120000 | 13" reel |

Outline Dimensions



| DO-214AC(SMA) | | |
|---------------|------|------|
| Dim | Min | Max |
| A | 1.25 | 1.58 |
| B | 2.40 | 2.83 |
| C | 4.00 | 4.75 |
| D | 1.90 | 2.30 |
| E | 4.93 | 5.28 |
| F | 0.76 | 1.41 |
| G | 0.05 | 0.20 |
| H | 0.15 | 0.31 |
| I | 1.7 | 2.1 |

Suggested Pad Layout



| DO-214AC(SMA) | |
|---------------|-------------|
| Dim | Millimeters |
| P1 | 4.00 |
| P2 | 1.50 |
| P3 | 6.50 |
| Q1 | 2.50 |
| Q2 | 1.70 |



GS2AAQ THRU GS2MAQ

Disclaimer

The information presented in this document is for reference only. Yangzhou Yangjie Electronic Technology Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with automotive electronics, are not designed for use in medical, lifesaving, lifesustaining, or military, Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website [http:// www.21yangjie.com](http://www.21yangjie.com) , or consult your nearest Yangjie's sales office for further assistance.