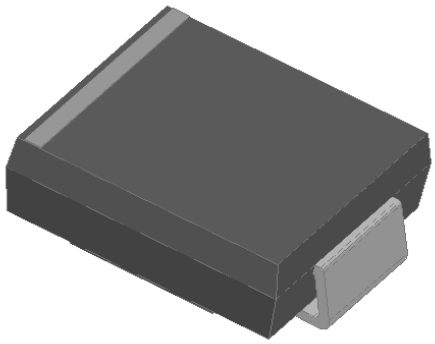
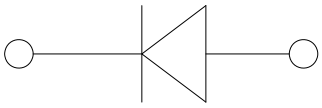
# Surface Mount General Purpose Rectifier





## 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

- **P**ackage: DO-214AB (SMC)

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: Color band denotes the cathode end

## ■Maximum Ratings (Ta=25℃ Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | GS5A | GS5B | GS5D | GS5G | GS5J | GS5K | GS5M |
|---|---|---|---|---|---|---|---|---|---|
| Device marking code | | | GS5A | GS5B | GS5D | GS5G | GS5J | GS5K | GS5M |
| 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 | 5.0 | | | | | | |
| Forward Surge Current (Non-repetitive) @60Hz Half-sine wave,1 cycle, Tj=25℃ | $I_{FSM}$ | A | 150 | | | | | | |
| Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25℃ | | | 300 | | | | | | |
| Current squared time @1ms≤t≤8.3ms Tj=25℃ | $I^2t$ | $A^2s$ | 94 | | | | | | |
| Storage Temperature | $T_{stg}$ | ℃ | -55 ~ +150 | | | | | | |
| Junction Temperature | $T_j$ | ℃ | -55 ~ +150 | | | | | | |

## ■Electrical Characteristics（$T_a$=25℃ Unless otherwise specified）

| PARAMETER | SYMBOL | UNIT | TEST CONDITIONS | GS5A | GS5B | GS5D | GS5G | GS5J | GS5K | GS5M |
|---|---|---|---|---|---|---|---|---|---|---|
| Maximum instantaneous forward voltage | $V_F$ | V | $I_{FM}$=5.0A | 1.1 | | | | | | |
| Maximum DC reverse current at rated DC blocking voltage | $I_R$ | μA | $T_j$=25℃ | 5 | | | | | | |
| | | | $T_j$=125℃ | 100 | | | | | | |
| Typical junction capacitance | Cj | pF | Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C | 33 | | | | | | |

## ■Thermal Characteristics （$T_a$=25℃ Unless otherwise specified）

| PARAMETER | SYMBOL | UNIT | GS5A | GS5B | GS5D | GS5G | GS5J | GS5K | GS5M |
|---|---|---|---|---|---|---|---|---|---|
| Typical Thermal resistance | $R_{\theta J-A}$ | ℃/W | 48 | | | | | | |
| | $R_{\theta J-L}$ | | 15 | | | | | | |
| | $R_{\theta J-C}$ | | 12 | | | | | | |

Note(1)
Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.6" x 0.6" (16 mm x 16 mm) copper pad areas

## ■Ordering Information (Example)

| PREFERED P/N | PACKAGE CODE | UNIT WEIGHT(g) | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---|---|---|---|---|---|---|
| **GS5A~GS5M** | F1 | Approximate 0.254 | 3000 | / | 42000 | 13” reel |

## ■ Characteristics(Typical)

FIG.1: Io-TL Curve

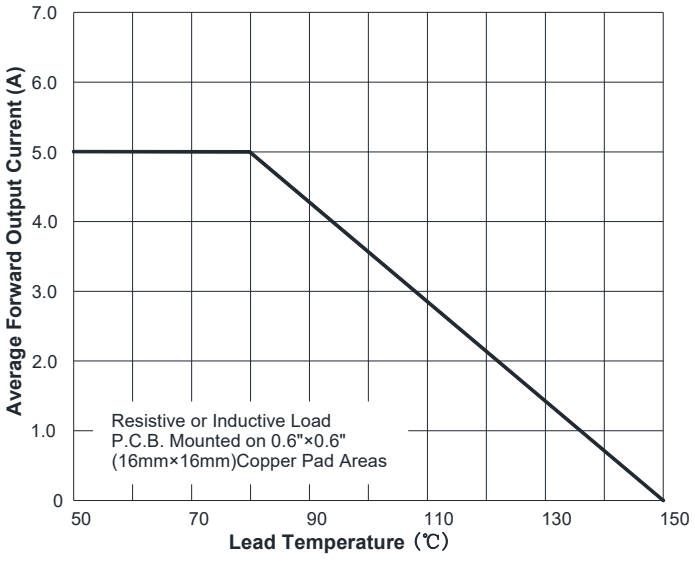



FIG.2: Forward Surge Currrent Capability

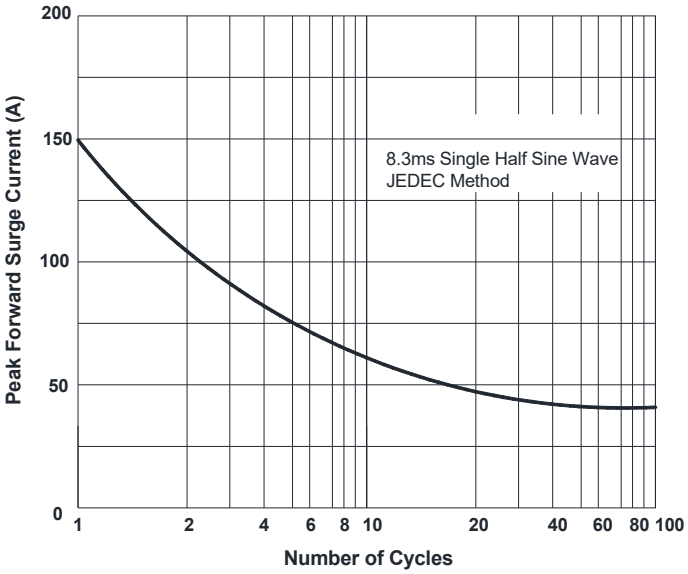


FIG.3: Typical Forward Voltage

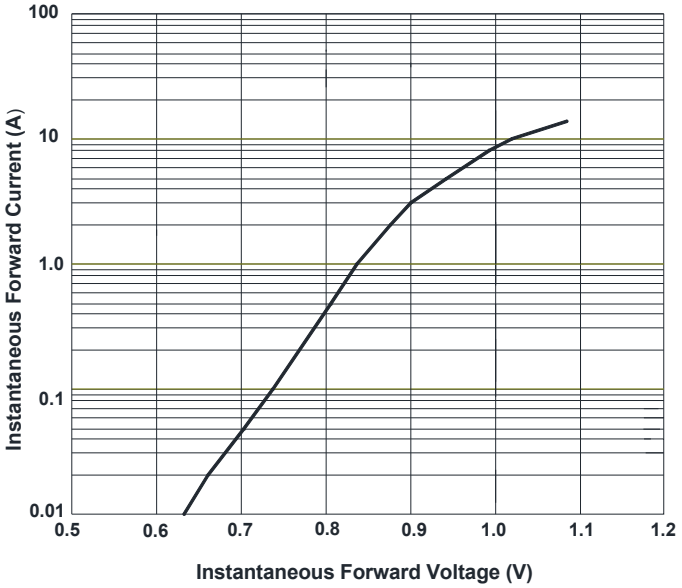
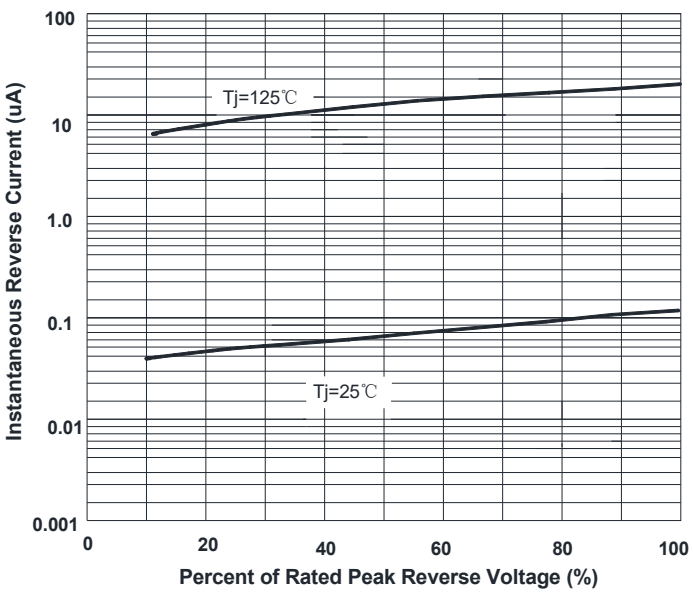
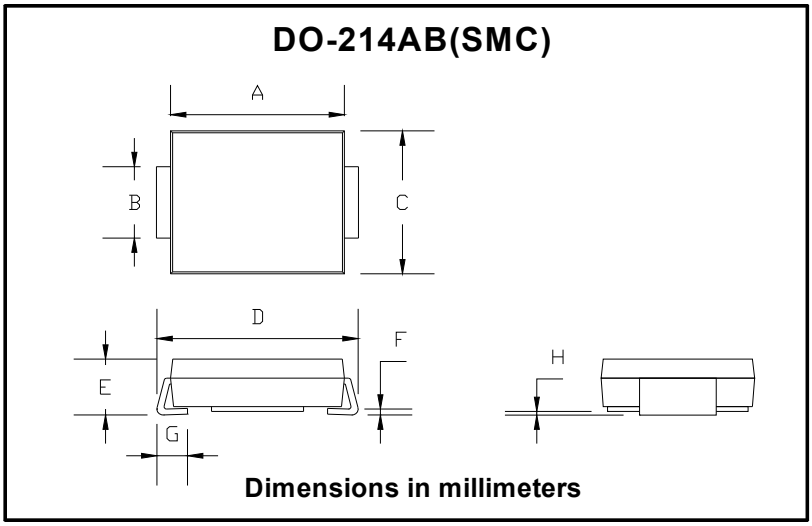



FIG.4: Typical Reverse Characteristics

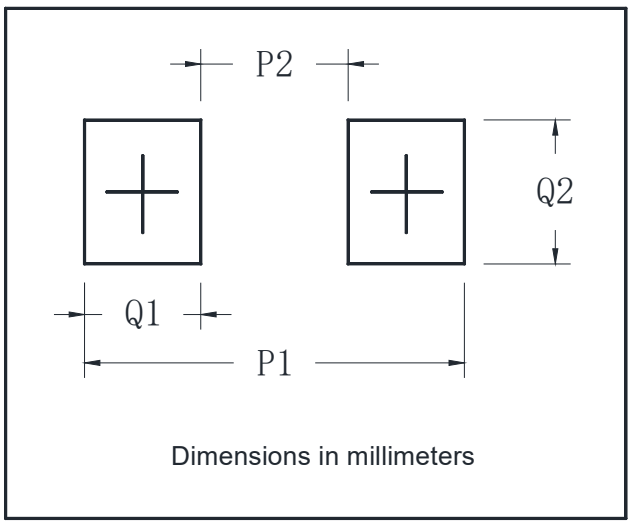



## ■ Outline Dimensions




| DO-214AB (SMC) | | |
|---|---|---|
| Dim | Min | Max |
| A | 6.60 | 7.11 |
| B | 2.85 | 3.27 |
| C | 5.59 | 6.22 |
| D | 7.75 | 8.13 |
| E | 1.99 | 2.61 |
| F | 0.15 | 0.31 |
| G | 0.76 | 1.52 |
| H | 0.05 | 0.20 |

## ■ Suggested pad layout




| DO-214AB (SMC) | |
|---|---|
| Dim | Min |
| P1 | 9.9 |
| P2 | 3.84 |
| Q1 | 3.03 |
| Q2 | 3.82 |

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