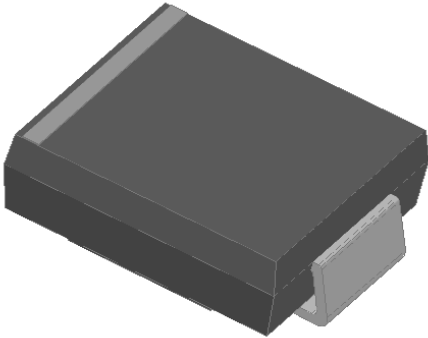


## Surface Mount General Purpose Rectifier

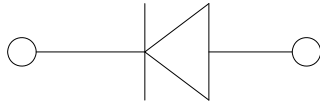


### Features

- 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-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 (T<sub>a</sub>=25°C Unless otherwise specified)

| PARAMETER   | SYMBOL           | UNIT             | GS10A      | GS10B | GS10D | GS10G | GS10J | GS10K | GS10M |
|---|------------------|------------------|------------|-------|-------|-------|-------|-------|-------|
| Device marking code   |                  |                  | GS10A      | GS10B | GS10D | GS10G | GS10J | GS10K | GS10M |
| Maximum Repetitive peak reverse voltage   | V <sub>RRM</sub> | V                | 50         | 100   | 200   | 400   | 600   | 800   | 1000  |
| Maximum RMS Voltage   | V <sub>RMS</sub> | V                | 35         | 70    | 140   | 280   | 420   | 560   | 700   |
| Maximum DC Blocking Voltage   | V <sub>DC</sub>  | V                | 50         | 100   | 200   | 400   | 600   | 800   | 1000  |
| Average Rectified Output Current<br>@60Hz sine wave, Resistance load, TL (FIG.1)              | I <sub>O</sub>   | A                | 10         |       |       |       |       |       |       |
| Forward Surge Current (Non-repetitive)<br>@60Hz Half-sine wave, 1 cycle, T <sub>j</sub> =25°C | I <sub>FSM</sub> | A                | 200        |       |       |       |       |       |       |
| Forward Surge Current (Non-repetitive)<br>@1ms, square wave, 1 cycle, T <sub>j</sub> =25°C    |                  |                  | 400        |       |       |       |       |       |       |
| Current squared time<br>@1ms t 8.3ms T <sub>j</sub> =25°C                                     | I <sup>2</sup> t | A <sup>2</sup> s | 166        |       |       |       |       |       |       |
| Storage Temperature   | T <sub>stg</sub> |                  | -55 ~ +150 |       |       |       |       |       |       |
| Junction Temperature  | T <sub>j</sub>   |                  | -55 ~ +150 |       |       |       |       |       |       |

### Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

| PARAMETER   | SYMBOL         | UNIT | TEST CONDITIONS   | GS10A | GS10B | GS10D | GS10G | GS10J | GS10K | GS10M |
|---|----------------|------|---|-------|-------|-------|-------|-------|-------|-------|
| Maximum instantaneous forward voltage                   | V <sub>F</sub> | V    | I <sub>FM</sub> =10A                                      | 1.1   |       |       |       |       |       |       |
| Maximum DC reverse current at rated DC blocking voltage | I <sub>R</sub> | μA   | T <sub>j</sub> =25  | 5     |       |       |       |       |       |       |
|   |                |      | T <sub>j</sub> =125                                       | 100   |       |       |       |       |       |       |
| Typical junction capacitance                            | C <sub>j</sub> | pF   | Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C | 55    |       |       |       |       |       |       |



# GS10A THRU GS10M

## Thermal Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

| PARAMETER                  | SYMBOL   | UNIT | GS10A | GS10B | GS10D | GS10G | GS10J | GS10K | GS10M |
|----------------------------|----------|------|-------|-------|-------|-------|-------|-------|-------|
| Typical Thermal resistance | R J-A(1) | /W   | 50    |       |       |       |       |       |       |
|                            | R J-L(1) |      | 10    |       |       |       |       |       |       |
|                            | R J-C(1) |      | 8     |       |       |       |       |       |       |

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)

| PREFERRED P/N | PACKAGE CODE | UNIT WEIGHT(g)    | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---------------|--------------|-------------------|----------------------|-------------------------|----------------------------|---------------|
| GS10A-GS10M   | F1           | Approximate 0.261 | 3000                 | /                       | 42000                      | 13" reel      |

## Characteristics(Typical)

FIG.1: I<sub>o</sub>-T<sub>L</sub> Curve

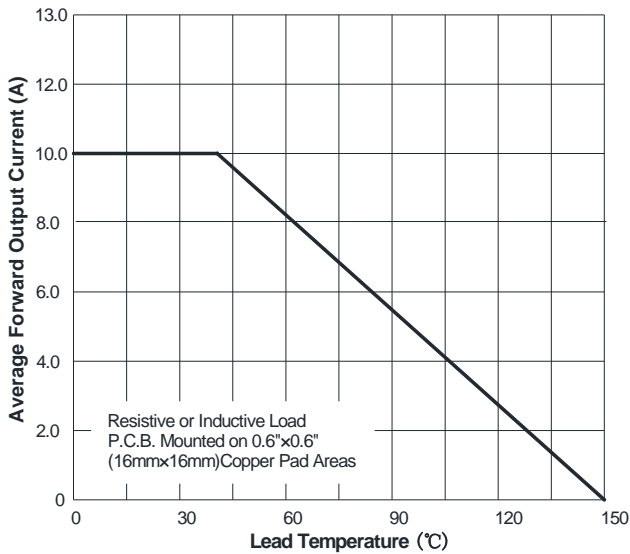


FIG.2: Forward Surge Current Capability

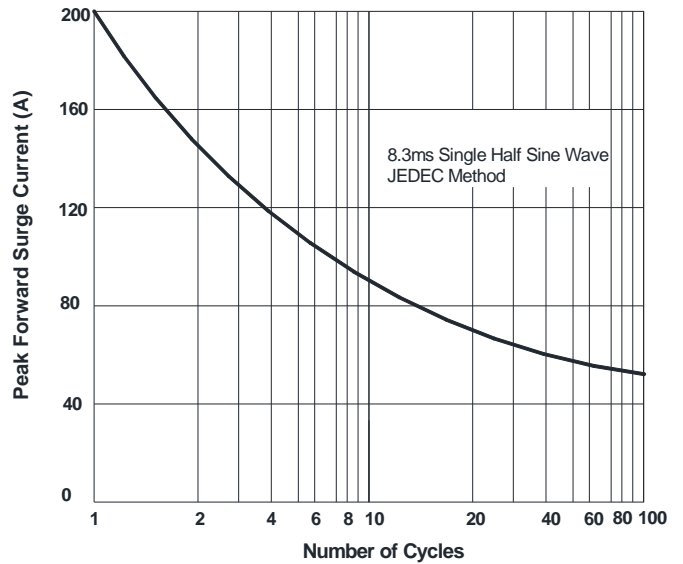


FIG.3: Typical Forward Voltage

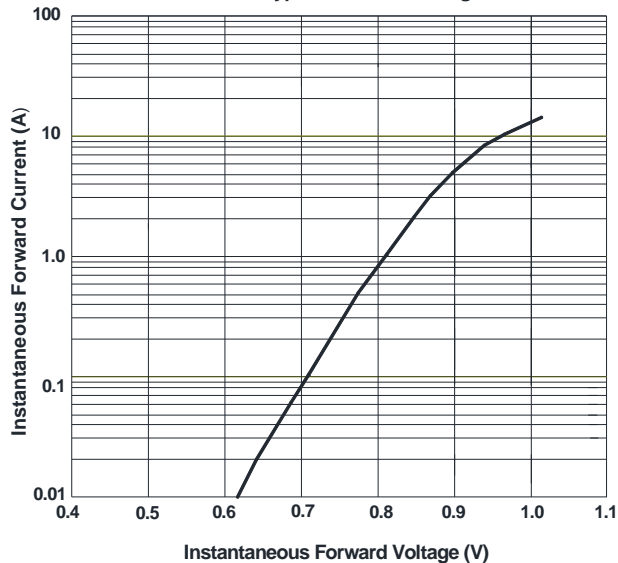
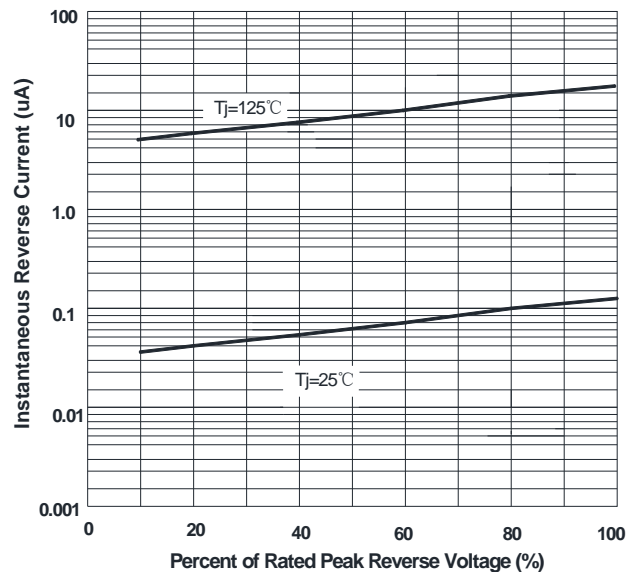


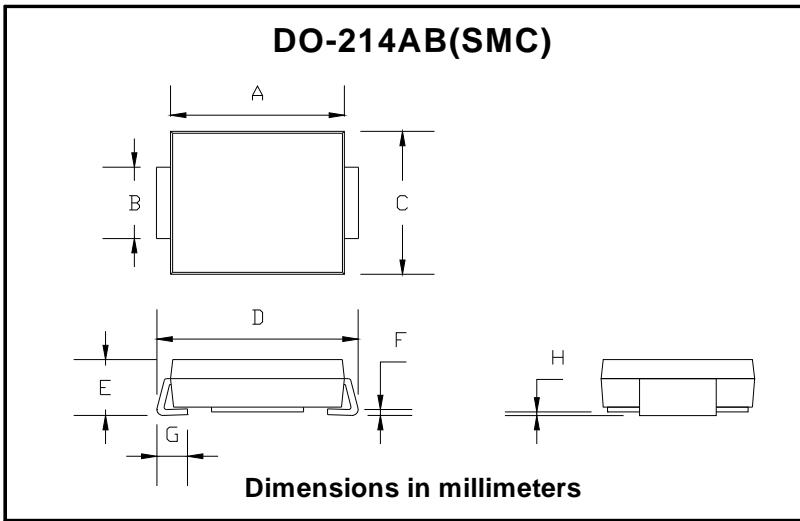
FIG.4: Typical Reverse Characteristics





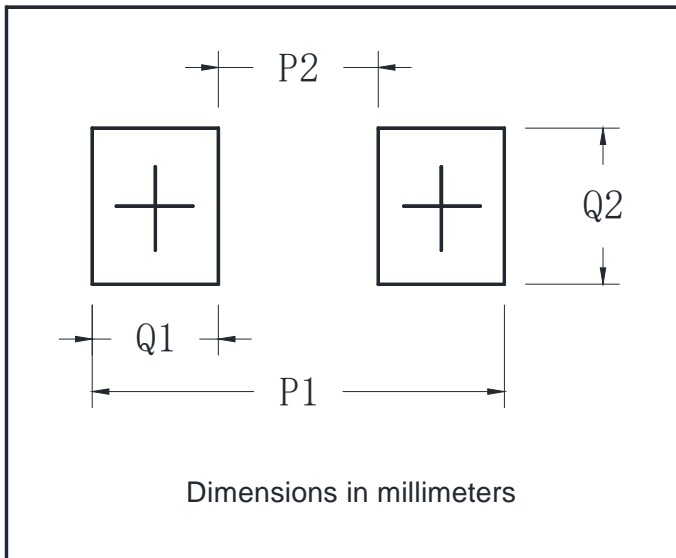
# GS10A THRU GS10M

## 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 |



## GS10A THRU GS10M

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