

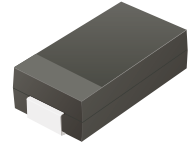
# CGRB301-HF Thru. CGRB307-HF

Reverse Voltage: 50 to 1000 Volts

Forward Current: 3.0 Amp

RoHS Device

Halogen Free

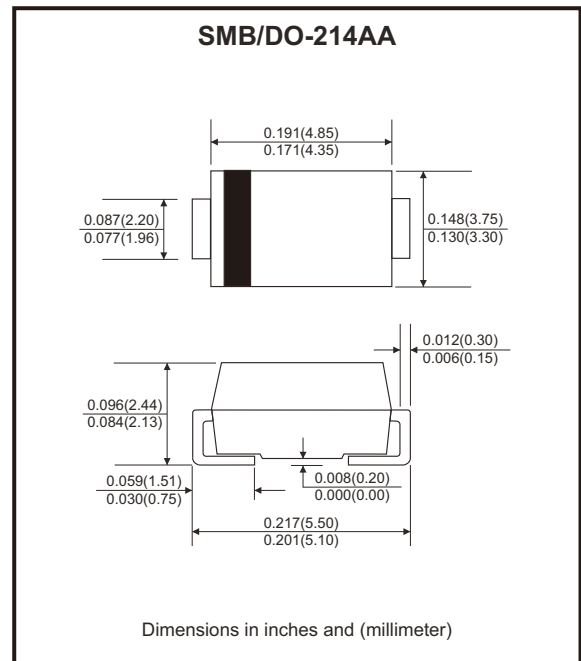


## Features

- Glass passivated chip.
- Low forward voltage.
- High current capability.
- High reliability.
- High surge current capability.

## Mechanical data

- Case: JEDEC DO-214AA, molded plastic.
- Epoxy: UL 94V-0 rate flame retardant.
- Lead: Solderable per MIL-STD-750, method 2026.
- Polarity: Color band denotes cathode end.
- Mounting position: Any.



## Circuit Diagram



## Maximum Ratings and Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise noted)

| Parameter                                             | Symbol                            | CGRB 301-HF | CGRB 302-HF | CGRB 303-HF | CGRB 304-HF | CGRB 305-HF | CGRB 306-HF | CGRB 307-HF | Unit |
|-------------------------------------------------------|-----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------|
| Repetitive peak reverse voltage                       | V <sub>RRM</sub>                  | 50          | 100         | 200         | 400         | 600         | 800         | 1000        | V    |
| DC blocking voltage                                   | V <sub>DC</sub>                   | 50          | 100         | 200         | 400         | 600         | 800         | 1000        | V    |
| RMS voltage                                           | V <sub>R</sub>                    | 35          | 70          | 140         | 280         | 420         | 560         | 700         | V    |
| Average forward rectified current                     | I <sub>F</sub>                    | 3           |             |             |             |             |             |             | A    |
| Maximum instantaneous forward voltage @I <sub>F</sub> | V <sub>F</sub>                    | 1.15        |             |             |             |             |             |             | V    |
| Maximum DC reverse current                            | I <sub>R</sub>                    | 10          |             |             |             |             |             |             | μA   |
| Operating and storage temperature range               | T <sub>J</sub> , T <sub>STG</sub> | -55 to +150 |             |             |             |             |             |             | °C   |

Rating and Characteristic Curves (CGRB301-HF Thru. CGRB307-HF)

Fig.1 - Forward Current Derating Curve

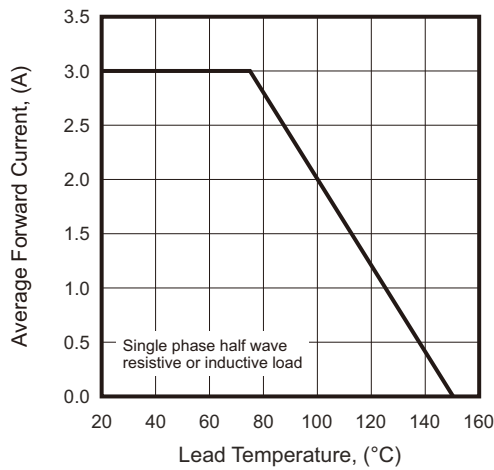


Fig.2 - Peak Forward Surge Current

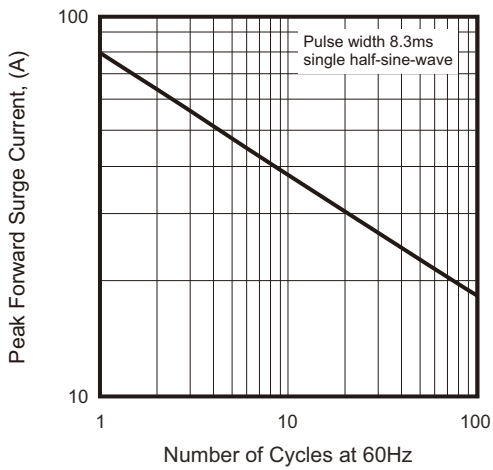


Fig.3 - Typical Forward Characteristics

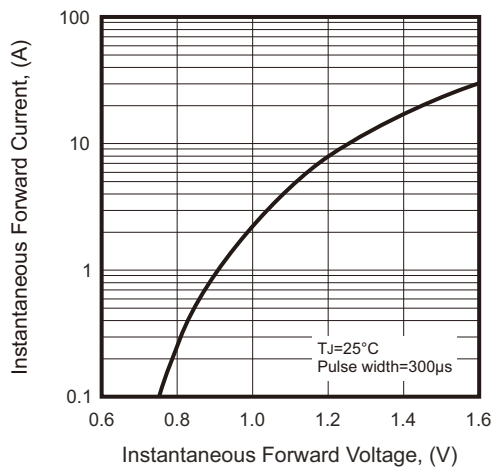
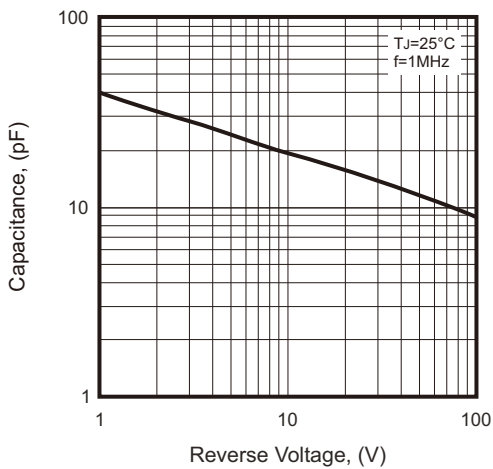
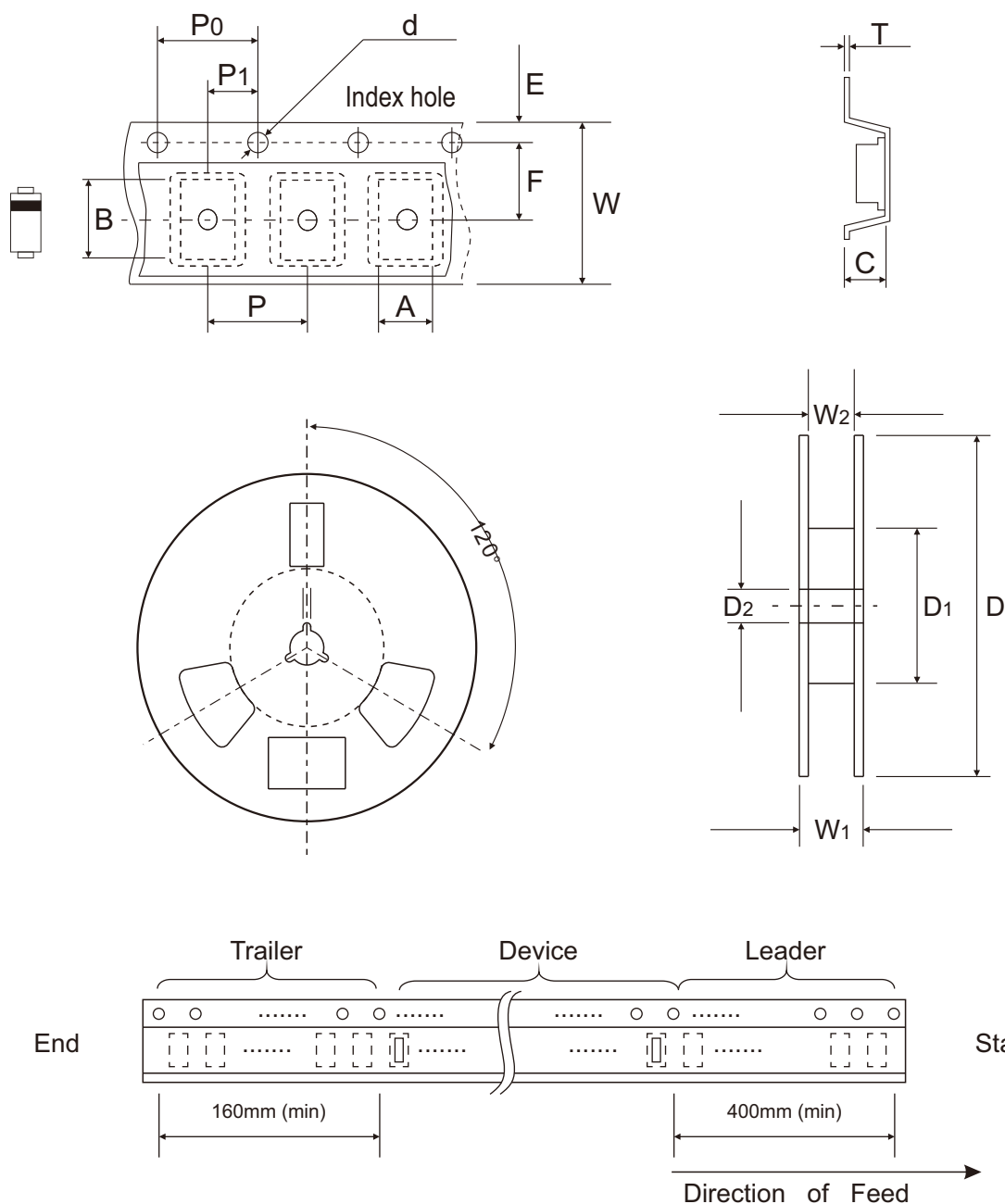


Fig.4 - Typical Junction Capacitance



## Reel Taping Specification



| DO-214AA<br>(SMB) | SYMBOL | A          | B | C | d             | D      | D1           | D2                       | E             |
|-------------------|--------|------------|---|---|---------------|--------|--------------|--------------------------|---------------|
|                   | (mm)   | See Note 1 |   |   | 1.55 ± 0.05   | 330.00 | 50.00 (Min.) | 13.00 + 0.50<br>- 0.20   | 1.75 ± 0.10   |
|                   | (inch) |            |   |   | 0.061 ± 0.002 | 12.992 | 1.969 (Min.) | 0.512 + 0.020<br>- 0.008 | 0.069 ± 0.004 |

| DO-214AA<br>(SMB) | SYMBOL | F             | P             | P0            | P1            | T            | W             | W1           | W2                       |
|-------------------|--------|---------------|---------------|---------------|---------------|--------------|---------------|--------------|--------------------------|
|                   | (mm)   | 5.50 ± 0.05   | 8.00 ± 0.10   | 4.00 ± 0.10   | 2.00 ± 0.05   | 0.40 (Max.)  | 12.00 ± 0.10  | 18.40 (Max.) | 12.40 + 2.00<br>- 0.00   |
|                   | (inch) | 0.217 ± 0.002 | 0.315 ± 0.004 | 0.157 ± 0.004 | 0.079 ± 0.002 | 0.016 (Max.) | 0.472 ± 0.004 | 0.724 (Max.) | 0.488 + 0.079<br>- 0.000 |

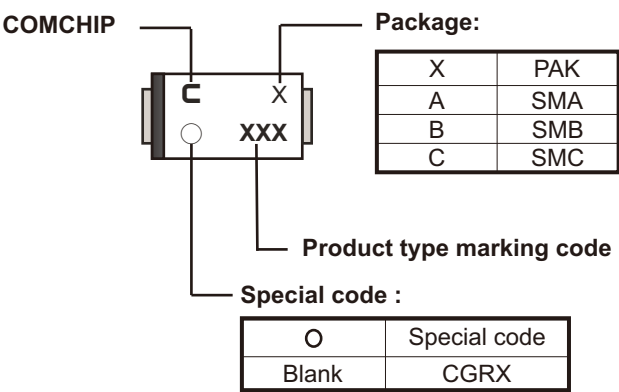
Notes: 1. A, B, and C the clearance between the component and the cavity must be within 0.5mm max.  
for 8mm tape and 12mm tape, 1.0mm max. for 16mm tape and 24mm tape.

Company reserves the right to improve product design , functions and reliability without notice.

REV:A

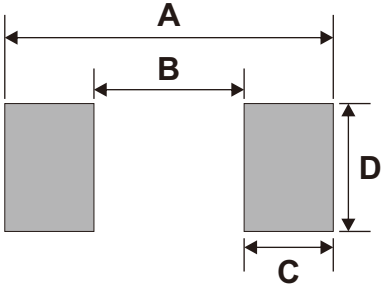
## Marking Code

| Part Number | Marking Code |
|-------------|--------------|
| CGRB301-HF  | 301          |
| CGRB302-HF  | 302          |
| CGRB303-HF  | 303          |
| CGRB304-HF  | 304          |
| CGRB305-HF  | 305          |
| CGRB306-HF  | 306          |
| CGRB307-HF  | 307          |



## Suggested PAD Layout

| SIZE | DO-214AA(SMB) |           |
|------|---------------|-----------|
|      | (mm)          | (inch)    |
| A    | 5.60 REF      | 0.220 REF |
| B    | 2.16 MAX      | 0.085 MAX |
| C    | 1.52 MIN      | 0.060 MIN |
| D    | 2.18 MIN      | 0.086 MIN |



## Standard Packaging

| Case Type         | REEL PACK       |                     |
|-------------------|-----------------|---------------------|
|                   | REEL<br>( pcs ) | Reel Size<br>(inch) |
| DO-214AA<br>(SMB) | 3,000           | 13                  |

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