

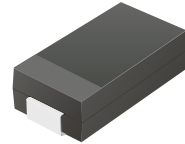
# CGRC301-G Thru. CGRC307-G

Glass Passivated Type

Reverse Voltage: 50 to 1000 Volts

Forward Current: 3.0 Amp

RoHS Device

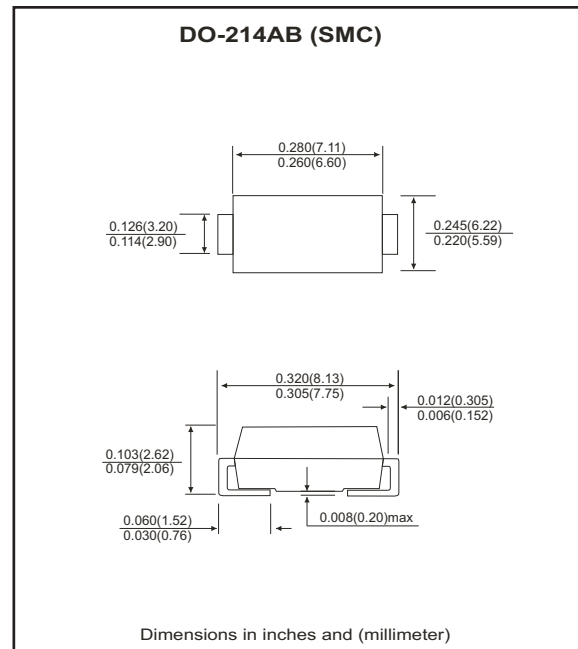


## Features

- Ideal for surface mount applications.
- Easy pick and place.
- Plastic package has Underwriters Lab. flammability classification 94V-0.
- Built in strain relief.
- High surge current capability.

## Mechanical data

- Case: JEDEC DO-214AB, molded plastic.
- Terminals: solderable per MIL-STD-750, method 2026.
- Polarity: Color band denotes cathode end.
- Approx. weight: 0.23 grams



## Maximum Ratings and Electrical Characteristics

| Parameter                                                                                        | Symbol          | CGRC 301-G  | CGRC 302-G | CGRC 303-G | CGRC 304-G | CGRC 305-G | CGRC 306-G | CGRC 307-G | Units         |
|--------------------------------------------------------------------------------------------------|-----------------|-------------|------------|------------|------------|------------|------------|------------|---------------|
| Max. repetitive peak reverse voltage                                                             | $V_{RRM}$       | 50          | 100        | 200        | 400        | 600        | 800        | 1000       | V             |
| Max. DC blocking voltage                                                                         | $V_{DC}$        | 50          | 100        | 200        | 400        | 600        | 800        | 1000       | V             |
| Max. RMS voltage                                                                                 | $V_{RMS}$       | 35          | 70         | 140        | 280        | 420        | 560        | 700        | V             |
| Peak surge forward current, 8.3ms single half sine-wave superimposed on rate load (JEDEC method) | $I_{FSM}$       | 100         |            |            |            |            |            |            | A             |
| Max. average forward current                                                                     | $I_O$           | 3.0         |            |            |            |            |            |            | A             |
| Max. instantaneous forward voltage at 3.0A                                                       | $V_F$           | 1.1         |            |            |            |            |            |            | V             |
| Max. DC reverse current at $T_A=25^{\circ}C$<br>rated DC blocking voltage $T_A=125^{\circ}C$     | $I_R$           | 5.0<br>250  |            |            |            |            |            |            | $\mu A$       |
| Max. thermal resistance (Note 1)                                                                 | $R_{\theta JA}$ | 50          |            |            |            |            |            |            | $^{\circ}C/W$ |
| Max. operating junction temperature                                                              | $T_J$           | 150         |            |            |            |            |            |            | $^{\circ}C$   |
| Storage temperature                                                                              | $T_{STG}$       | -55 to +150 |            |            |            |            |            |            | $^{\circ}C$   |

Notes: 1. Thermal resistance from junction to terminal mounted on P.C.B. with 5.0×5.0 mm square (0.13mm thick) land area.

## RATING AND CHARACTERISTIC CURVES (CGRC301-G thru CGRC307-G)

Fig.1 Reverse Characteristics

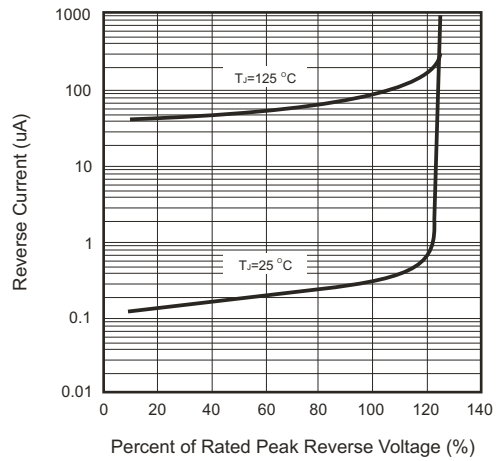


Fig.2 Forward Characteristics

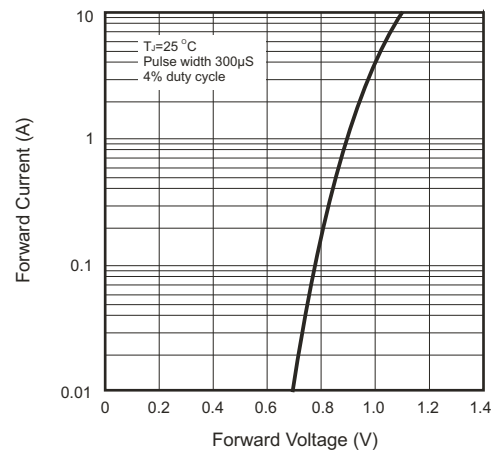


Fig.3 Junction Capacitance

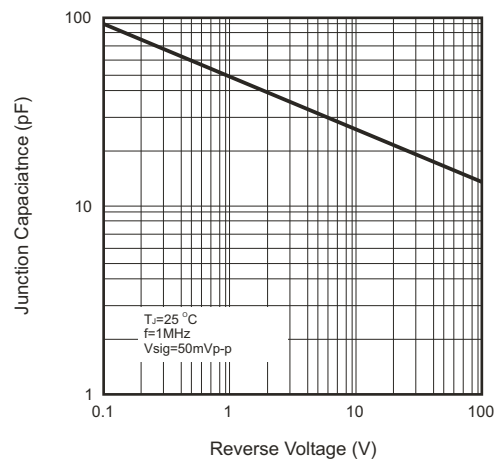


Fig.4 Current Derating Curve

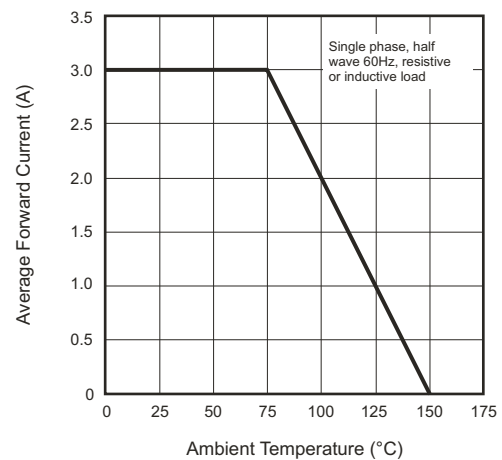
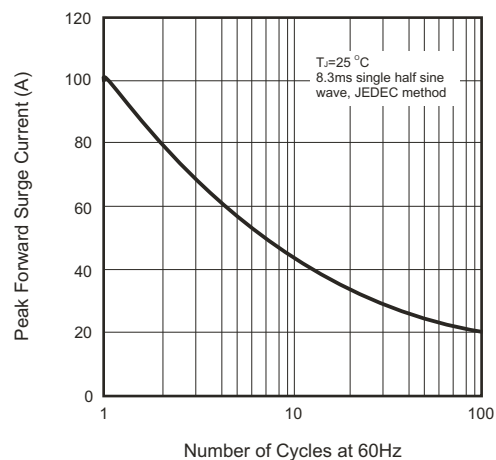
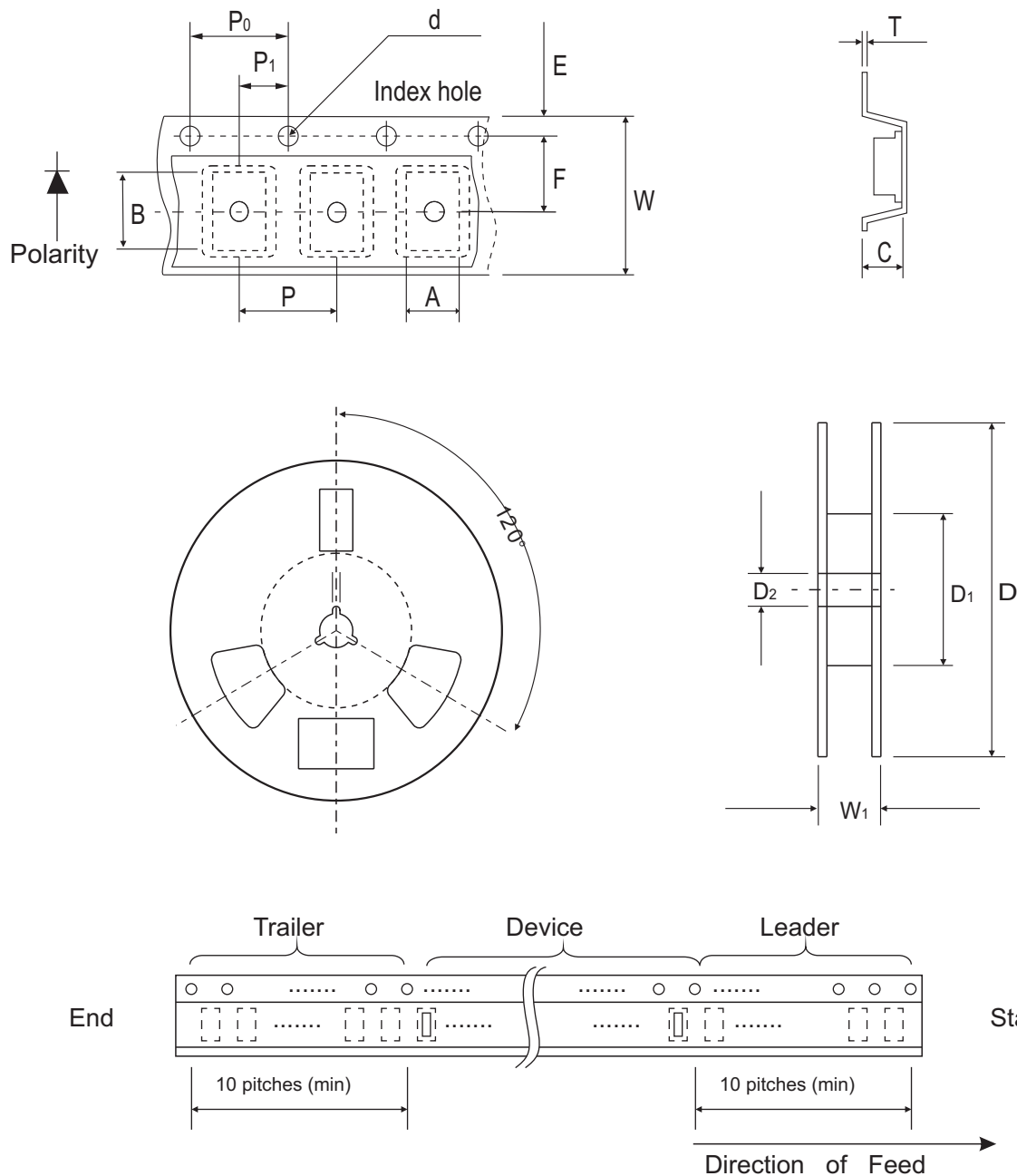


Fig.5 Non-repetitive Forward Surge Current



## Reel Taping Specification



| DO-214AB (SMC) | SYMBOL | A          | B           | C           | d             | D             | D1         | D2            |
|----------------|--------|------------|-------------|-------------|---------------|---------------|------------|---------------|
|                | (mm)   | 6.3 (max)  | 8.6 (max)   | 2.9 (max)   | 1.50 ± 0.10   | 330 ± 1.00    | 50.0 MIN.  | 13.5 ± 1.00   |
|                | (inch) | 0.248(max) | 0.338 (max) | 0.114 (max) | 0.059 ± 0.004 | 13.00 ± 0.039 | 1.969 MIN. | 0.531 ± 0.039 |

| DO-214AB (SMC) | SYMBOL | E             | F             | P             | P0            | P1            | W             | W1        |
|----------------|--------|---------------|---------------|---------------|---------------|---------------|---------------|-----------|
|                | (mm)   | 1.75 ± 0.10   | 7.50 ± 0.05   | 8.00 ± 0.10   | 4.00 ± 0.10   | 2.00 ± 0.05   | 16.0 ± 0.20   | 22.4 MAX. |
|                | (inch) | 0.689 ± 0.004 | 0.295 ± 0.002 | 0.314 ± 0.004 | 0.157 ± 0.004 | 0.079 ± 0.002 | 0.629 ± 0.008 | 0.882 MAX |

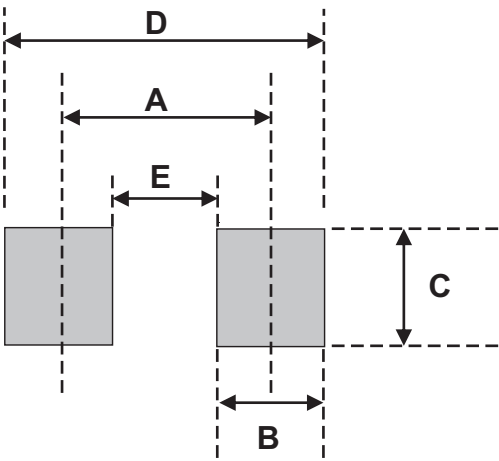
## Marking Code

| Park Number              | Marking Code |
|--------------------------|--------------|
| CGRC301-G thru CGRC307-G | 301 thru 307 |



## Suggested PAD Layout

| SIZE | DO-214AB (SMC) |        |
|------|----------------|--------|
|      | (mm)           | (inch) |
| A    | 6.20           | 0.244  |
| B    | 1.60           | 0.063  |
| C    | 4.80           | 0.189  |
| D    | 7.80           | 1.441  |
| E    | 4.6            | 0.181  |



## Standard Packaging

| Case Type      | Qty per Reel | Reel Size |
|----------------|--------------|-----------|
|                | (Pcs)        | (inch)    |
| DO-214AB (SMC) | 3,000        | 13        |