

## CGRC301-HF Thru. CGRC307-HF

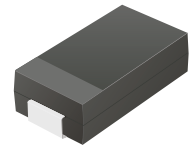
Glass Passivated Type

Reverse Voltage: 50 to 1000 Volts

Forward Current: 3.0 Amp

RoHS Device

Halogen Free

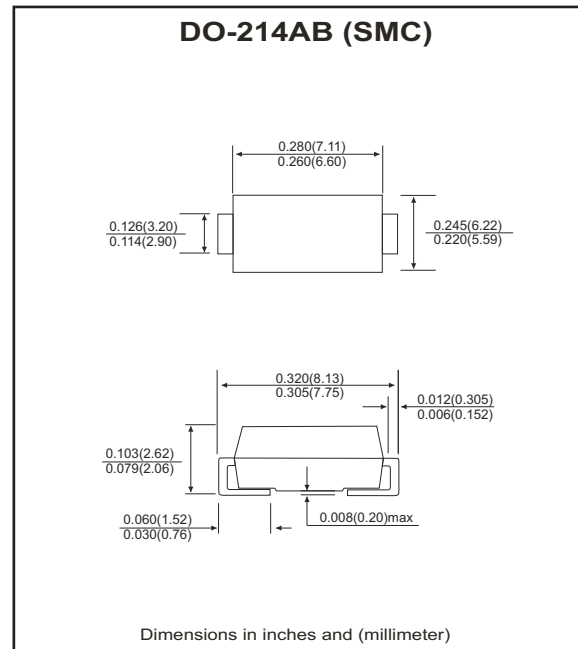


### Features

- 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-HF | CGRC 302-HF | CGRC 303-HF | CGRC 304-HF | CGRC 305-HF | CGRC 306-HF | CGRC 307-HF | 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-HF thru CGRC307-HF)

Fig.1 Reverse Characteristics

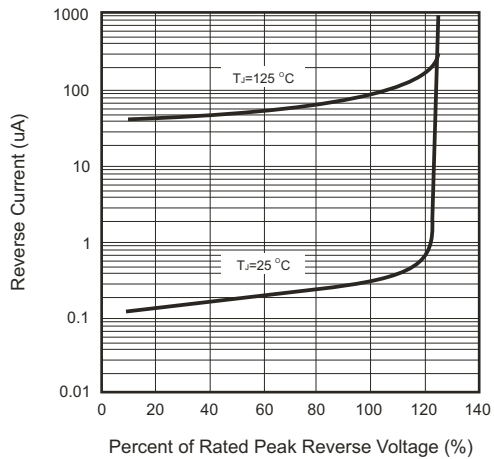


Fig.2 Forward Characteristics

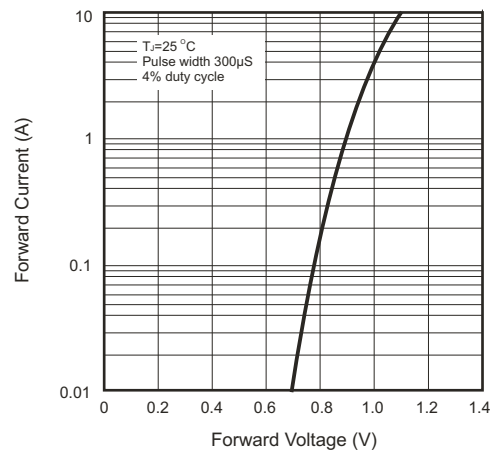


Fig.3 Junction Capacitance

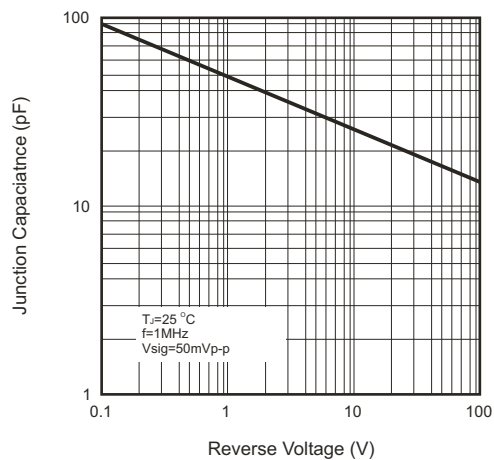


Fig.4 Current Derating Curve

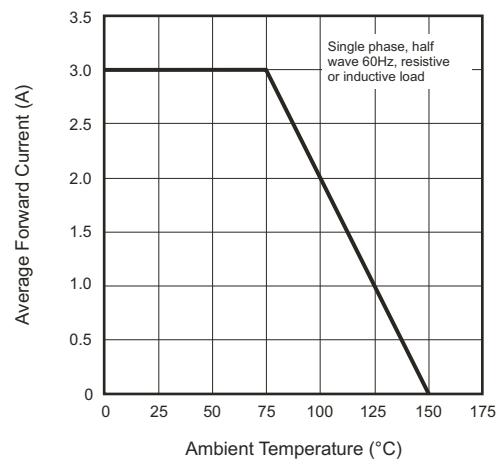
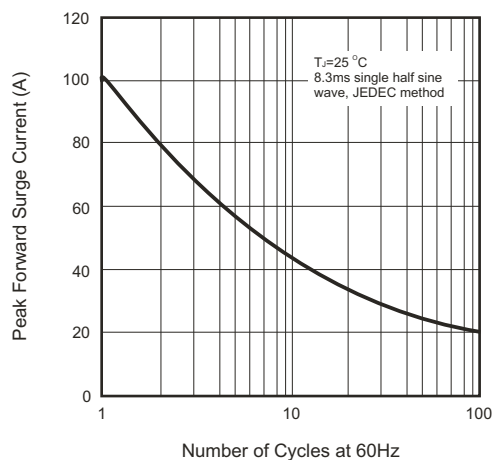
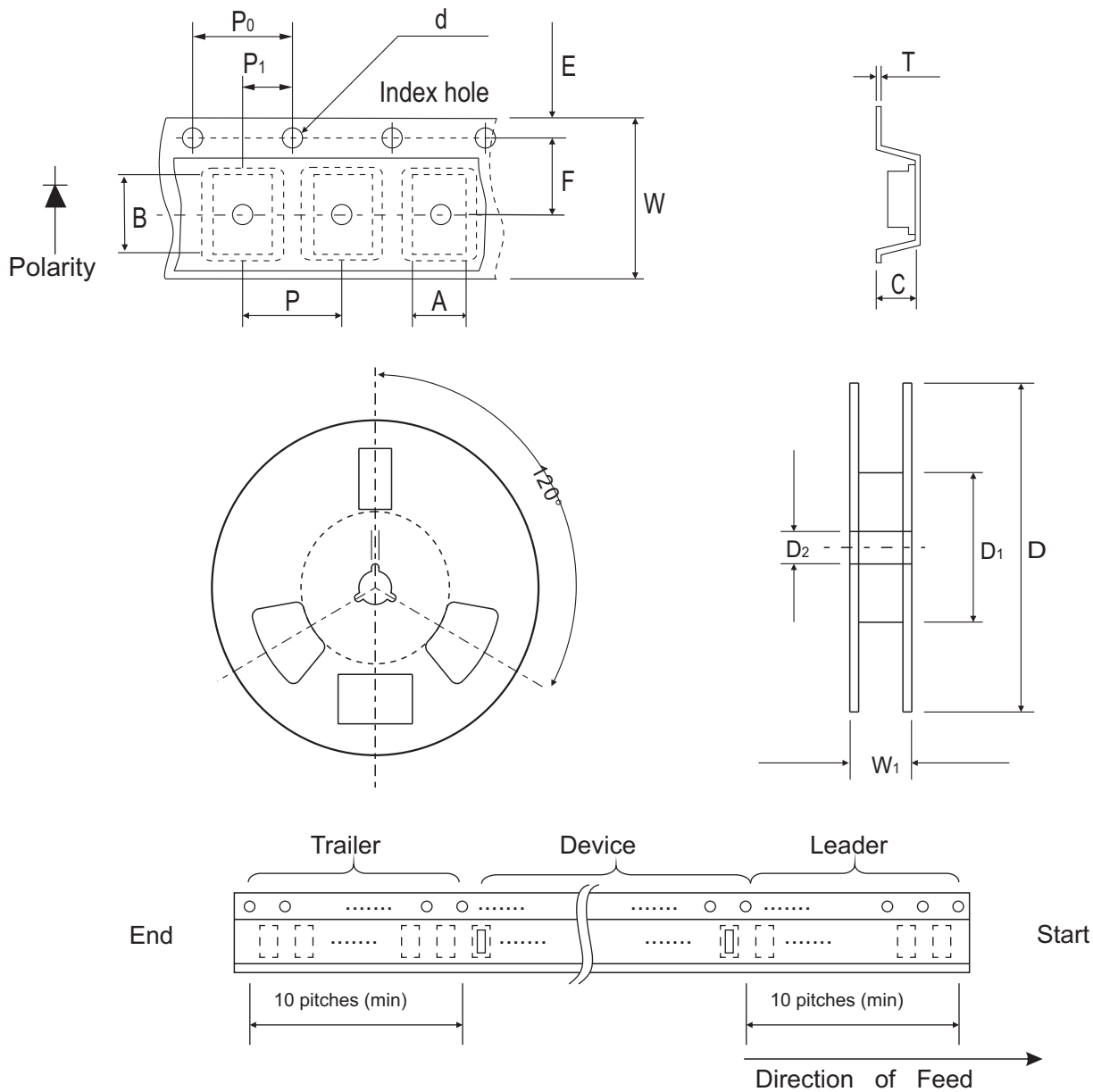


Fig.5 Non-repetitive Forward Surge Current



## Reel Taping Specification



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

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

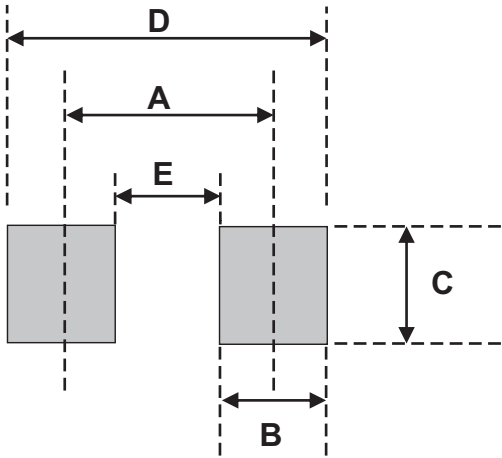
## Marking Code

| Park Number                | Marking Code |
|----------------------------|--------------|
| CGRC301-HF thru CGRC307-HF | 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) | 3000         | 13        |