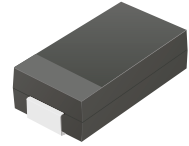


# CFRA201-G Thru. CFRA207-G

Reverse Voltage: 50 to 1000 Volts

Forward Current: 2.0 Amp

RoHS Device



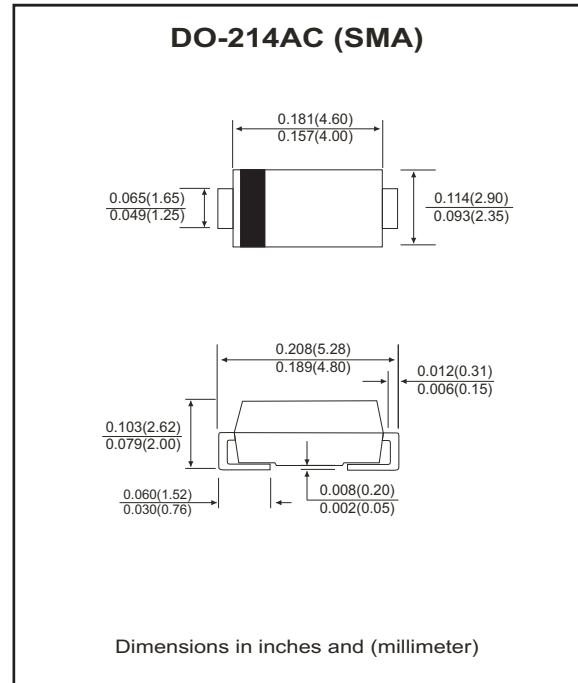
## Features

- Fast switching for high efficiency.
- Diffused Junction
- Low reverse leakage current.
- Low forward voltage drop.
- High current capability.
- The plastic material carries UL recognition 94V-0

## Mechanical data

- Case: Molded plastic.
- Terminals: Solderable per MIL-STD-750, method 2026.
- Polarity: Color band denotes cathode end.
- Weight: 0.053 grams(Approx).

## Circuit diagram



## Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.  
 Single phase, half wave, 60Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%

| Parameter                                                                                            | Symbol            | CFRA 201-G  | CFRA 202-G | CFRA 203-G | CFRA 204-G | CFRA 205-G | CFRA 206-G | CFRA 207-G | Unit |
|------------------------------------------------------------------------------------------------------|-------------------|-------------|------------|------------|------------|------------|------------|------------|------|
| Max. Repetitive peak reverse voltage                                                                 | V <sub>RRM</sub>  | 50          | 100        | 200        | 400        | 600        | 800        | 1000       | V    |
| Max. DC blocking voltage                                                                             | V <sub>DC</sub>   | 50          | 100        | 200        | 400        | 600        | 800        | 1000       | V    |
| Max. RMS voltage                                                                                     | V <sub>RMS</sub>  | 35          | 70         | 140        | 280        | 420        | 560        | 700        | V    |
| Max. Average forward rectified current @T <sub>A</sub> =75°C                                         | I <sub>(AV)</sub> | 2.0         |            |            |            |            |            |            | A    |
| Peak surge forward current, 8.3ms single half sine-wave superimposed on rate load (JEDEC method)     | I <sub>FSM</sub>  | 60          |            |            |            |            |            |            | A    |
| Max. Peak forward voltage at 2.0A DC                                                                 | V <sub>F</sub>    | 1.3         |            |            |            |            |            |            | V    |
| Max. DC reverse current at T <sub>J</sub> =25 °C<br>rated DC blocking voltage T <sub>J</sub> =100 °C | I <sub>R</sub>    | 5.0<br>100  |            |            |            |            |            |            | μA   |
| Max. Reverse recovery time (Note1)                                                                   | T <sub>rr</sub>   | 150         |            |            |            | 250        | 500        |            | nS   |
| Typical junction capacitance (Note2)                                                                 | C <sub>J</sub>    | 30          |            |            |            | 20         |            |            | pF   |
| Typical thermal resistance (Note 3)                                                                  | R <sub>θJA</sub>  | 25          |            |            |            |            |            |            | °C/W |
| Operating temperature range                                                                          | T <sub>J</sub>    | -55 to +150 |            |            |            |            |            |            | °C   |
| Storage temperature range                                                                            | T <sub>STG</sub>  | -55 to +150 |            |            |            |            |            |            | °C   |

Notes: 1. Measured with  $I_F=0.5\text{A}$ ,  $I_R=1\text{A}$ ,  $I_{RR}=0.25\text{A}$

2. Measured at 1.0 MHZ and applied reverse voltage of 4.0V DC

3. Thermal resistance junction to ambient.

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

REV:B

## RATING AND CHARACTERISTIC CURVES (CFRA201-G thru CFRA207-G)

Fig.1- Forward current derating curve

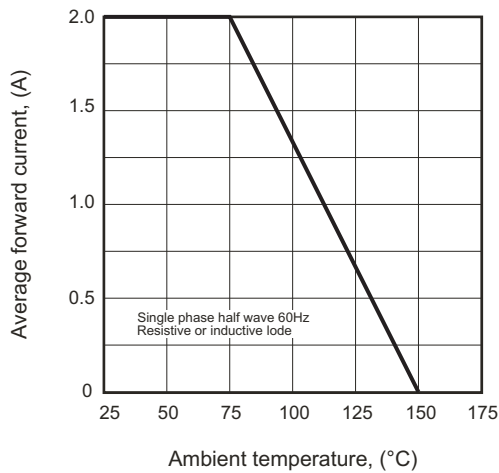


Fig.2- Maximum Non-repetitive Surge Current

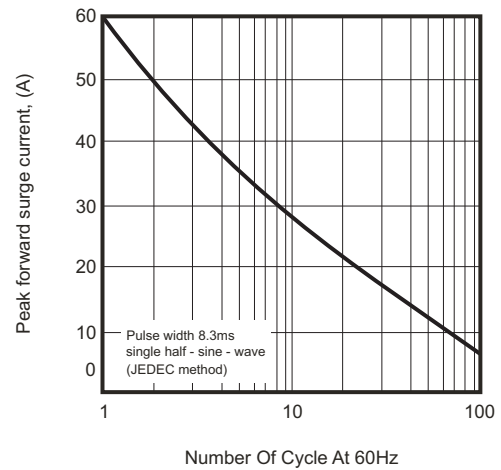


Fig.3- Typical junction capacitance

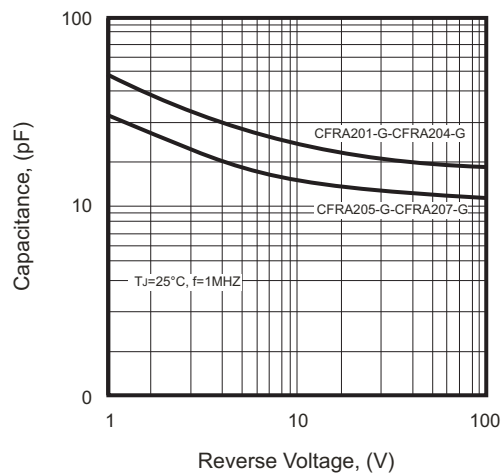
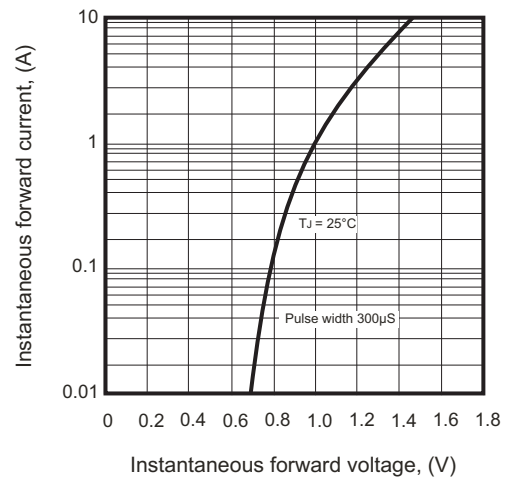
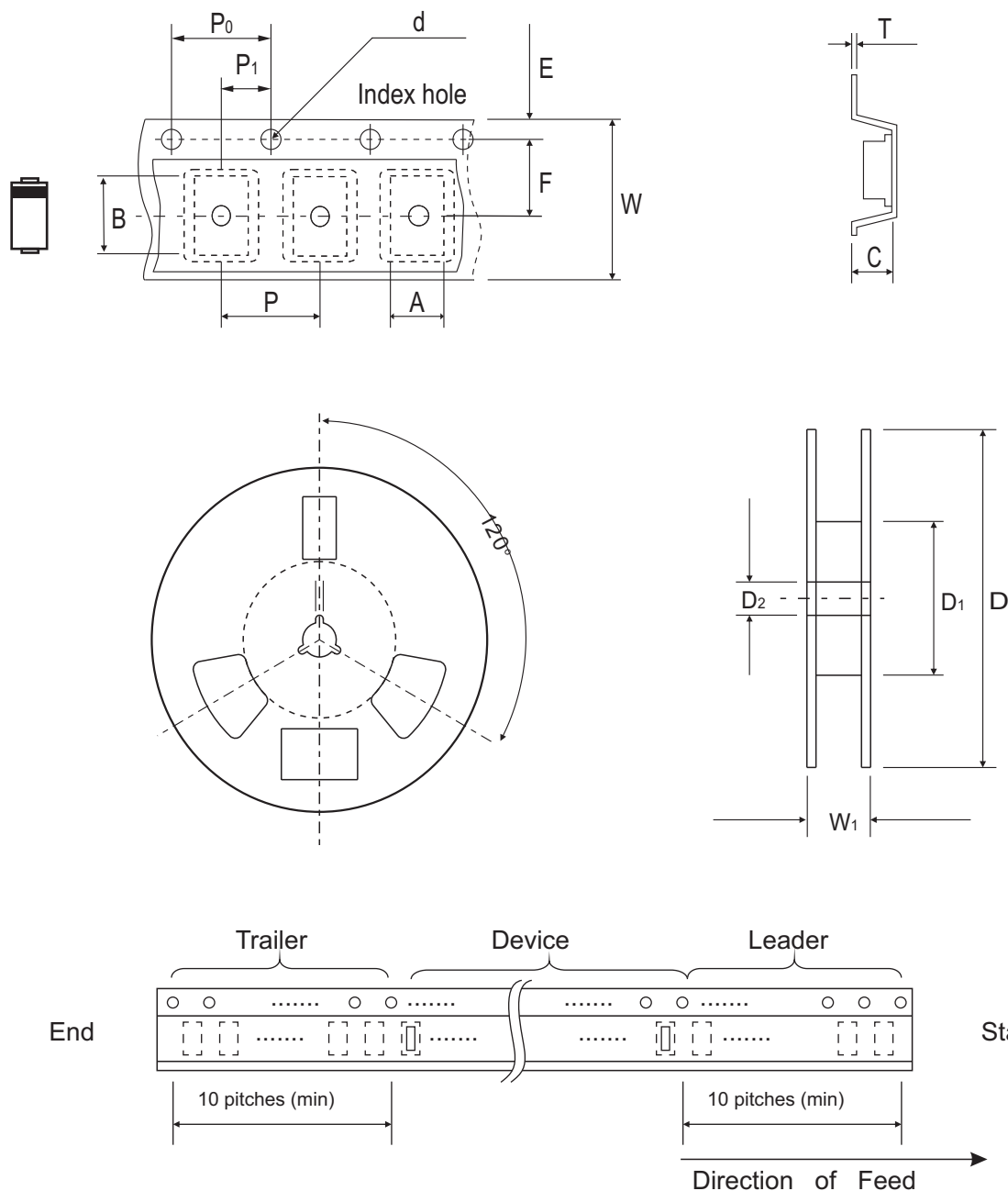


Fig.4- Typical forward characteristics



## Reel Taping Specification



| DO-214AC<br>(SMA) | SYMBOL | A                 | B                 | C                 | d                 | D                 | D1         | D2                |
|-------------------|--------|-------------------|-------------------|-------------------|-------------------|-------------------|------------|-------------------|
|                   | (mm)   | $2.72 \pm 0.10$   | $5.25 \pm 0.10$   | $2.36 \pm 0.10$   | $1.55 \pm 0.05$   | $330 \pm 2.00$    | 50.0 MIN.  | $13.00 \pm 0.20$  |
|                   | (inch) | $0.107 \pm 0.004$ | $0.207 \pm 0.004$ | $0.093 \pm 0.004$ | $0.061 \pm 0.002$ | $12.99 \pm 0.079$ | 1.969 MIN. | $0.512 \pm 0.008$ |

| DO-214AC<br>(SMA) | SYMBOL | E                 | F                 | P                 | P0                | P1                | T                 | W                 | W1                    |
|-------------------|--------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------------|
|                   | (mm)   | $1.75 \pm 0.10$   | $5.50 \pm 0.05$   | $4.00 \pm 0.10$   | $4.00 \pm 0.10$   | $2.00 \pm 0.05$   | $0.30 \pm 0.010$  | $12.0 \pm 0.30$   | $12.4 \pm 2.00/-0.00$ |
|                   | (inch) | $0.069 \pm 0.004$ | $0.217 \pm 0.002$ | $0.157 \pm 0.004$ | $0.157 \pm 0.004$ | $0.079 \pm 0.002$ | $0.012 \pm 0.004$ | $0.472 \pm 0.012$ | $0.488 \pm 0.079/-0$  |

## Marking Code

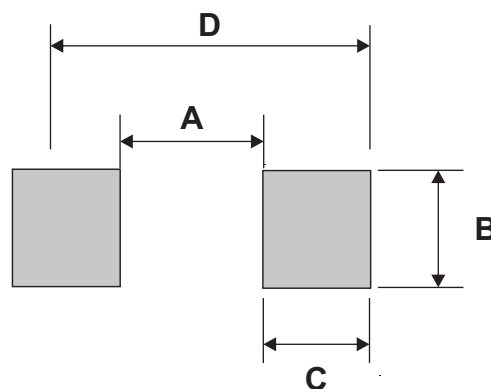
| Part Number | Marking Code |
|-------------|--------------|
| CFRA201-G   | RS2AA        |
| CFRA202-G   | RS2BA        |
| CFRA203-G   | RS2DA        |
| CFRA204-G   | RS2GA        |
| CFRA205-G   | RS2JA        |
| CFRA206-G   | RS2KA        |
| CFRA207-G   | RS2MA        |



xxxxxx= Product type marking code

## Suggested PAD Layout

| SIZE | DO-214AC (SMA) |           |
|------|----------------|-----------|
|      | (mm)           | (inch)    |
| A    | 2.10MAX        | 0.085 MAX |
| B    | 1.47 MIN       | 0.058MIN  |
| C    | 1.27 MIN       | 0.050 MIN |
| D    | 5.49REF        | 0.215REF  |



## Standard Packaging

| Case Type     | Qty Per Reel | Reel Size |
|---------------|--------------|-----------|
|               | (Pcs)        | (inch)    |
| DO-214AC(SMA) | 5,000        | 13        |