

SMD Fast Recovery Rectifiers

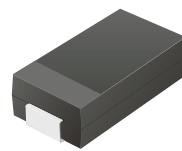
Comchip
SMD Diode Specialist

CFRA101-G Thru. CFRA107-G

Reverse Voltage: 50 to 1000 Volts

Forward Current: 1.0 Amp

RoHS Device

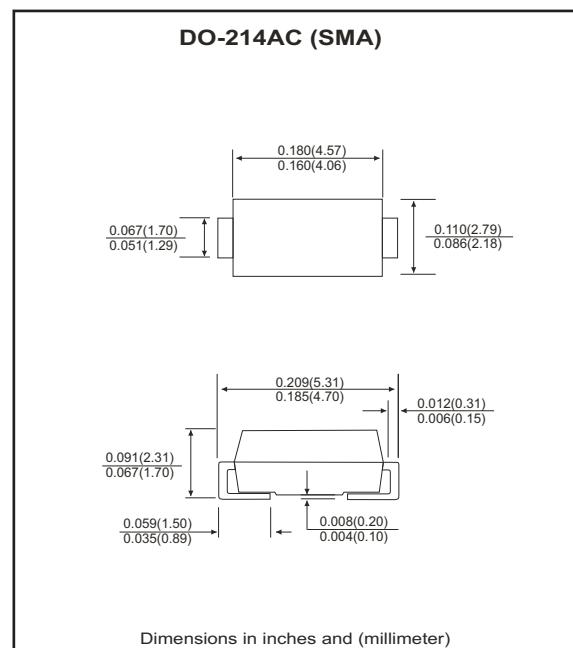


Features

- Ideal for surface mount applications.
- Easy pick and place.
- Plastic package has Underwriters Lab. flammability classification 94V-0.
- Fast recovery time: 150~500nS.
- Low leakage current.

Mechanical data

- Case: JEDEC DO-214AC, molded plastic.
- Terminals: solderable per MIL-STD-750, method 2026.
- Polarity: Color band denotes cathode end.
- Approx. weight: 0.063 grams



Maximum Ratings and Electrical Characteristics

| Parameter | Symbol | CFRA 101-G | CFRA 102-G | CFRA 103-G | CFRA 104-G | CFRA 105-G | CFRA 106-G | CFRA 107-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} | | | | | 30 | | | A |
| Max. average forward current | I _o | | | | | 1.0 | | | A |
| Max. instantaneous forward voltage at 1.0A | V _F | | | | | 1.3 | | | V |
| Reverse recovery time | T _{rr} | | | 150 | | 250 | | 500 | nS |
| Max. DC reverse current at T _A =25 °C rated DC blocking voltage T _A =125 °C | I _R | | | | 5.0 | 200 | | | µA |
| Max. thermal resistance (Note 1) | R _{θJA} | | | | 42 | | | | °C/W |
| Max. operating junction temperature | T _J | | | 150 | | | | | °C |
| Storage temperature | T _{STG} | | | | -55 to +150 | | | | °C |

Notes: 1. Thermal resistance from junction to ambient and junction to lead mounted on P.C.B. with 0.2×0.2 inch(5.0×5.0 mm²)copper pad area.

REV:A

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RATING AND CHARACTERISTIC CURVES (CFRA101-G thru CFRA107-G)

Fig.1 Reverse Characteristics

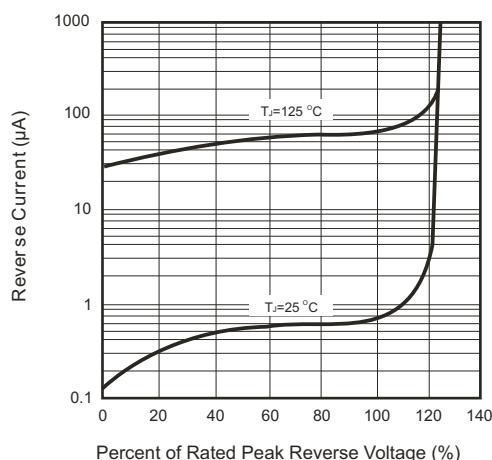


Fig.2 Forward Characteristics

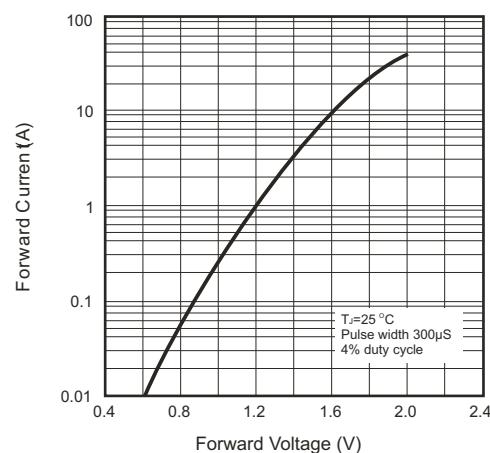


Fig.3 Junction Capacitance

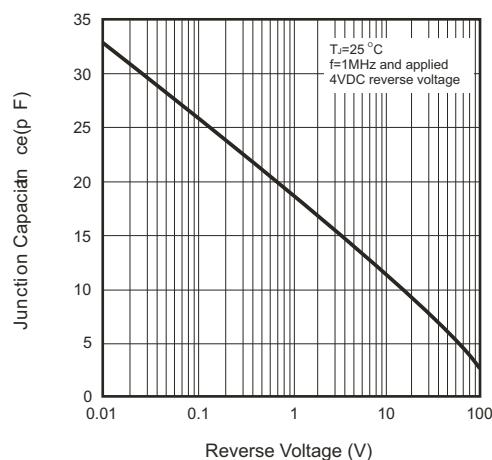


Fig.4 Non-repetitive Forward Surge Current

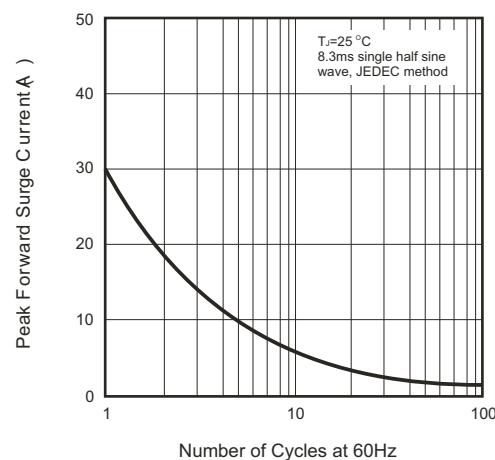


Fig.5 Test Circuit Diagram and Reverse Recovery Time Characteristics

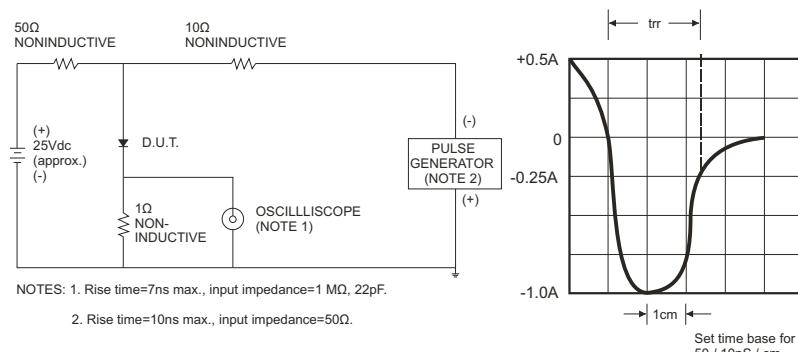


Fig.6 Current Derating Curve

