



**DC COMPONENTS CO., LTD.**

RECTIFIER SPECIALISTS

**FR201G  
THRU  
FR207G**

**TECHNICAL SPECIFICATIONS OF FAST RECOVERY GLASS PASSIVATED RECTIFIER**  
**VOLTAGE RANGE - 50 to 1000 Volts** **CURRENT - 2.0 Amperes**

### FEATURES

- \* High reliability
- \* Low leakage
- \* Low forward voltage drop
- \* High current capability
- \* High switching capability
- \* Glass passivated junction

### MECHANICAL DATA

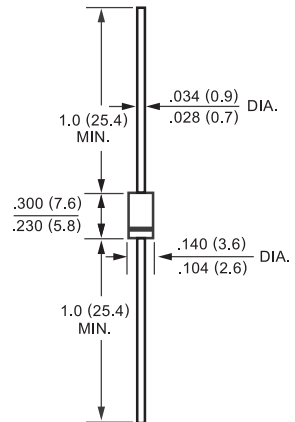
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: MIL-STD-202E, Method 208 guaranteed
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any
- \* Weight: 0.38 gram

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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



DO-15



Dimensions in inches and (millimeters)

|                                                                                                      | SYMBOL   | FR201G       | FR202G | FR203G | FR204G | FR205G | FR206G | FR207G | UNITS |
|------------------------------------------------------------------------------------------------------|----------|--------------|--------|--------|--------|--------|--------|--------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                               | VRRM     | 50           | 100    | 200    | 400    | 600    | 800    | 1000   | Volts |
| Maximum RMS Voltage                                                                                  | VRMS     | 35           | 70     | 140    | 280    | 420    | 560    | 700    | Volts |
| Maximum DC Blocking Voltage                                                                          | VDC      | 50           | 100    | 200    | 400    | 600    | 800    | 1000   | Volts |
| Maximum Average Forward Rectified Current<br>at TA = 55°C                                            | IO       | 2.0          |        |        |        |        |        |        | Amps  |
| Peak Forward Surge Current 8.3 ms single half sine-wave<br>superimposed on rated load (JEDEC Method) | IFSM     | 70           |        |        |        |        |        |        | Amps  |
| Maximum Instantaneous Forward Voltage at 2.0A DC                                                     | VF       | 1.3          |        |        |        |        |        |        | Volts |
| Maximum DC Reverse Current<br>at Rated DC Blocking Voltage TA = 25°C                                 | IR       | 5.0          |        |        |        |        |        |        | uAmps |
| Maximum Full Load Reverse Current Average,<br>Full Cycle .375*(9.5mm) lead length at TL = 55°C       |          | 100          |        |        |        |        |        |        | uAmps |
| Maximum Reverse Recovery Time (Note 1)                                                               | trr      | 150          |        |        |        | 250    | 500    |        | nSec  |
| Typical Junction Capacitance (Note 2)                                                                | CJ       | 25           |        |        |        |        |        |        | pF    |
| Operating and Storage Temperature Range                                                              | TJ, TSTG | -65 to + 150 |        |        |        |        |        |        | °C    |

NOTES : 1. Test Conditions: I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1.0A, I<sub>RR</sub> = 0.25A  
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts

RATING AND CHARACTERISTIC CURVES ( FR201G THRU FR207G )

FIG. 1 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

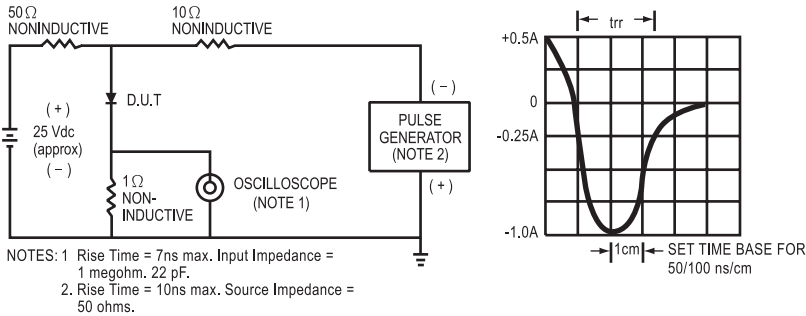


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

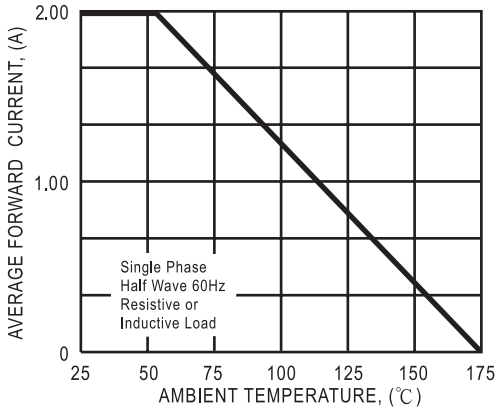


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

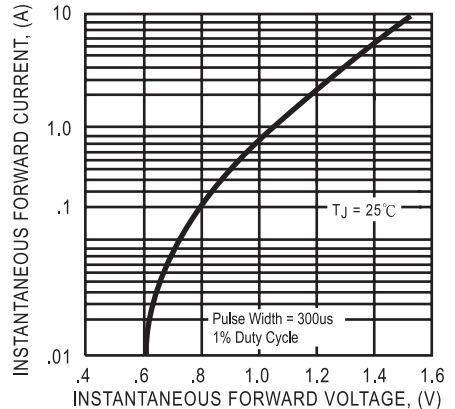


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

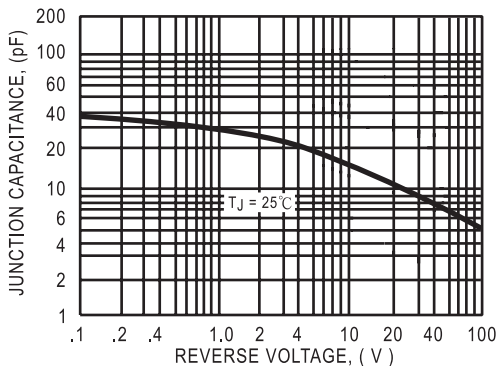
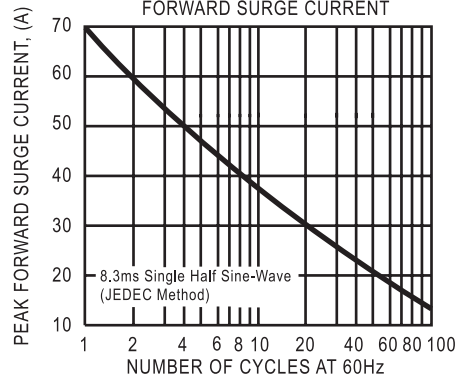


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



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