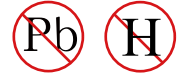




YEA SHIN TECHNOLOGY CO., LTD

## FR101G THRU FR107G

**FAST RECOVERY GLASS PASSIVATED RECTIFIER**  
**VOLTAGE RANGE 50 to 1000 Volts CURRENT 1.0 Ampere**



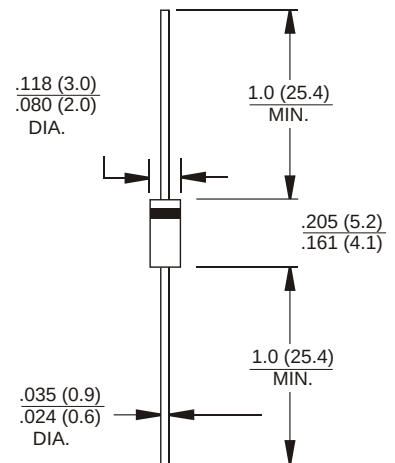
### FEATURES

- High reliability
- Low leakage
- Low forward voltage drop
- High current capability
- Glass passivated junction
- High switching capability
- High temperature soldering : 260 °C /10 seconds at terminals
- Pb free product at available : 99% Sn above meet RoHS environment substance directive request.

### MECHANICAL DATA

- Case: Molded plastic
- Epoxy : UL 94V-0 rate flame retardant
- Lead: MIL-STD-202E method 208C guaranteed
- Mounting position: Any
- Weight: 0.33 gram

DO-41 Unit:inch (mm)



### 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%

#### MAXIMUM RATINGS (At TA = 25°C unless otherwise noted)

| RATINGS                                                                                            | SYMBOL                            | FR101G      | FR102G | FR103G | FR104G | FR105G | FR106G | FR107G | UNITS |
|----------------------------------------------------------------------------------------------------|-----------------------------------|-------------|--------|--------|--------|--------|--------|--------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                             | V <sub>RRM</sub>                  | 50          | 100    | 200    | 400    | 600    | 800    | 1000   | Volts |
| Maximum RMS Voltage                                                                                | V <sub>RMS</sub>                  | 30          | 70     | 140    | 280    | 420    | 560    | 700    | Volts |
| Maximum DC Blocking Voltage                                                                        | V <sub>DC</sub>                   | 50          | 100    | 200    | 400    | 600    | 800    | 1000   | Volts |
| Maximum Average Forward Rectified Current at TA = 55 °C                                            | I <sub>O</sub>                    | 1.0         |        |        |        |        |        |        | Amps  |
| Peak Forward Surge Current 8.3 ms single half sine- wave superimposed on rated load (JEDEC method) | I <sub>FSM</sub>                  | 30          |        |        |        |        |        |        | Amps  |
| Typical Junction Capacitance (Note 2)                                                              | C <sub>J</sub>                    | 15          |        |        |        |        |        |        | pF    |
| Operating and Storage Temperature Range                                                            | T <sub>J</sub> , T <sub>STG</sub> | -55 to +150 |        |        |        |        |        |        | °C    |

#### ELECTRICAL CHARACTERISTICS (At TA = 25°C unless otherwise noted)

| CHARACTERISTICS                                                                               | SYMBOL          | FR101G | FR102G | FR103G | FR104G | FR105G | FR106G | FR107G | UNITS |
|-----------------------------------------------------------------------------------------------|-----------------|--------|--------|--------|--------|--------|--------|--------|-------|
| Maximum Instantaneous Forward Voltage at 1.0A DC                                              | V <sub>F</sub>  | 1.3    |        |        |        |        |        |        | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage TA = 25 °C                            | I <sub>R</sub>  | 5.0    |        |        |        |        |        |        | uAmps |
| Maximum Full Load Reverse Current Average, Full Cycle .375" (9.5mm) lead length at TL = 55 °C |                 | 100    |        |        |        |        |        |        | uAmps |
| Maximum Reverse Recovery Time (Note 1)                                                        | t <sub>rr</sub> | 150    |        |        |        | 250    | 500    |        | nSec  |

NOTES : 1. Test Conditions: IF = 0.5A, IR = 1.0A, IRR = 0.25A

2. Measured at 1 MHz and applied reverse voltage of 4.0 volts

# DEVICE CHARACTERISTICS

## FR101G THRU FR107G

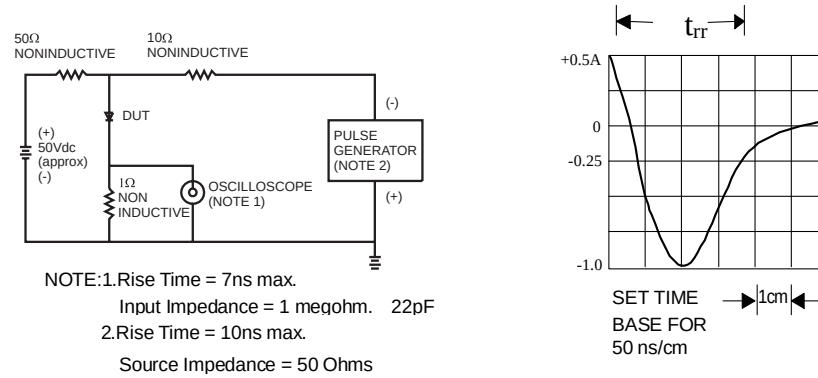


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

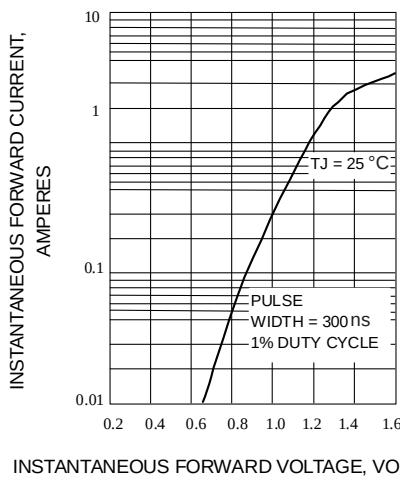


Fig. 2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

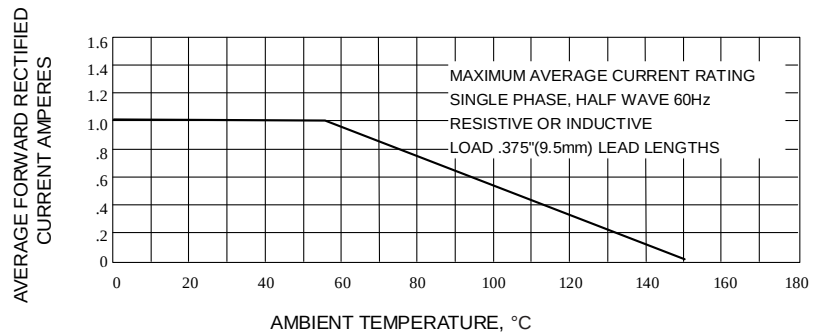


Fig. 3-FORWARD CURRENT DERATING CURVE

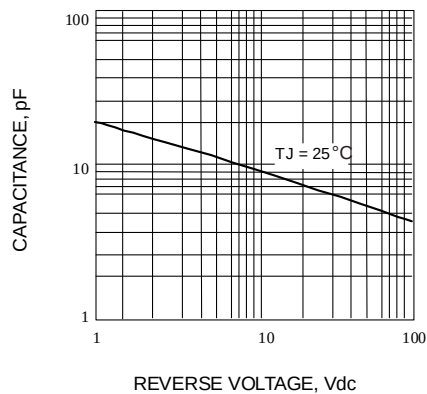


Fig. 4-TYPICAL JUNCTION CAPACITANCE

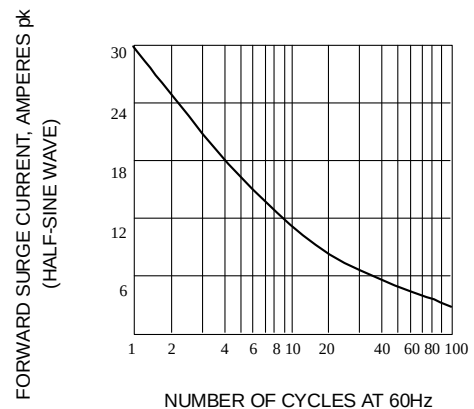


Fig. 5-PEAK FORWARD SURGE CURRENT