

# **FAST RECOVERY RECTIFIER**

**VOLTAGE RANGE 50 to 1000 Volts CURRENT 1.0 Ampere**

## **FEATURES**

- \* Fast switching
- \* Low leakage
- \* Low forward voltage drop
- \* High current capability
- \* High surge capability
- \* High reliability

## **MECHANICAL DATA**

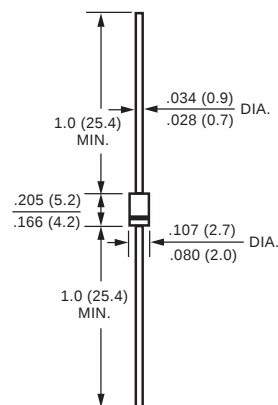
- \* Case: Molded plastic
- \* Epoxy: Device has UL flammability classification 94V-0
- \* Lead: MIL-STD-202E method 208C guaranteed
- \* Mounting position: Any
- \* Weight: 0.33 gram

## **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-41**



Dimensions in inches and (millimeters)

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

| RATINGS                                                                                           | SYMBOL   | FR101        | FR102 | FR103 | FR104 | FR105 | FR105P | FR106 | FR107 | FR107P | UNITS |
|---------------------------------------------------------------------------------------------------|----------|--------------|-------|-------|-------|-------|--------|-------|-------|--------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                            | VRRM     | 50           | 100   | 200   | 400   | 600   | 600    | 800   | 1000  | 1000   | Volts |
| Maximum RMS Voltage                                                                               | VRMS     | 35           | 70    | 140   | 280   | 420   | 400    | 560   | 700   | 700    | Volts |
| Maximum DC Blocking Voltage                                                                       | VDC      | 50           | 100   | 200   | 400   | 600   | 600    | 800   | 1000  | 1000   | Volts |
| Maximum Average Forward Rectified Current at TA = 75°C                                            | Io       | 1.0          |       |       |       |       |        |       |       |        | Amps  |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | IFSM     | 30           |       |       |       |       |        |       |       |        | Amps  |
| Typical Junction Capacitance (Note 2)                                                             | Cj       | 15           |       |       |       |       |        |       |       |        | pF    |
| Operating and Storage Temperature Range                                                           | TJ, TSTG | -55 to + 150 |       |       |       |       |        |       |       |        | °C    |

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

| CHARACTERISTICS                                                                              | SYMBOL | FR101 | FR102 | FR103 | FR104 | FR105 | FR105P | FR106 | FR107 | FR107P | UNITS |
|----------------------------------------------------------------------------------------------|--------|-------|-------|-------|-------|-------|--------|-------|-------|--------|-------|
| Maximum Instantaneous Forward Voltage at 1.0A DC                                             | VF     | 1.3   |       |       |       |       |        |       |       |        | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage TA = 25°C                            | IR     | 5.0   |       |       |       |       |        |       |       |        | uAmps |
| Maximum Full Load Reverse Current Full Cycle Average, .375" (9.5mm) lead length at TL = 55°C |        | 100   |       |       |       |       |        |       |       |        | uAmps |
| Maximum Reverse Recovery Time (Note 1)                                                       | trr    | 150   |       |       | 250   | 150   | 500    | 250   |       |        | 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

2002-11

## RATING AND CHARACTERISTIC CURVES ( FR101 THRU FR107 )

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

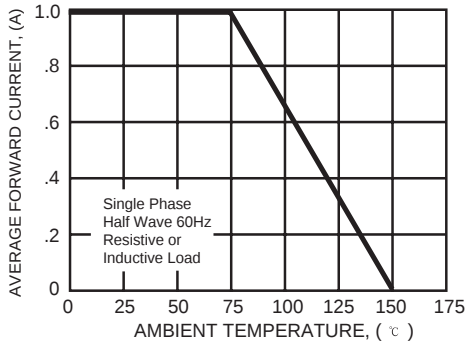


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

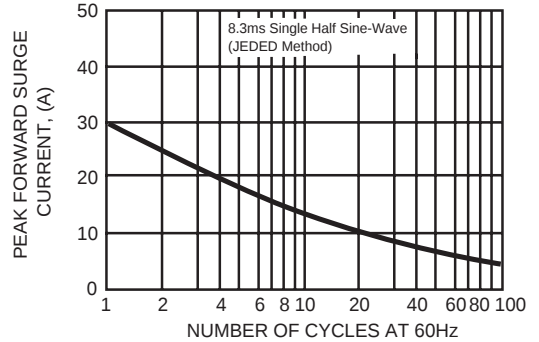


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

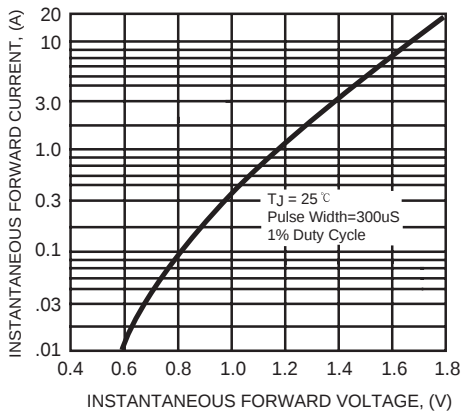


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

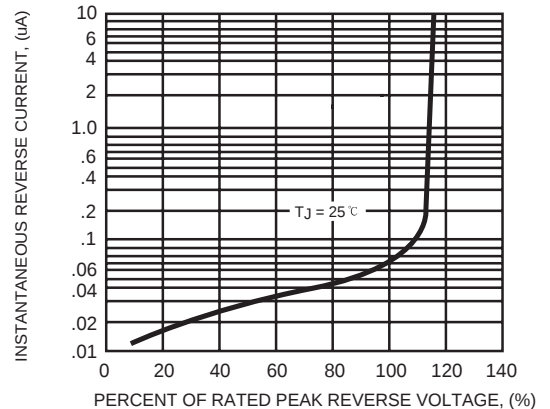


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

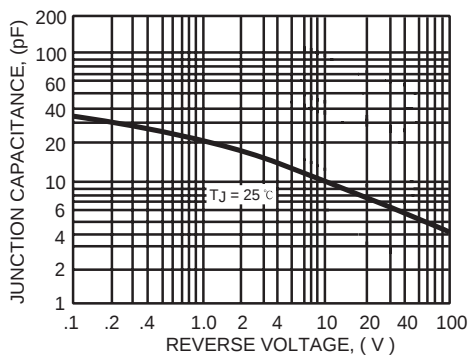
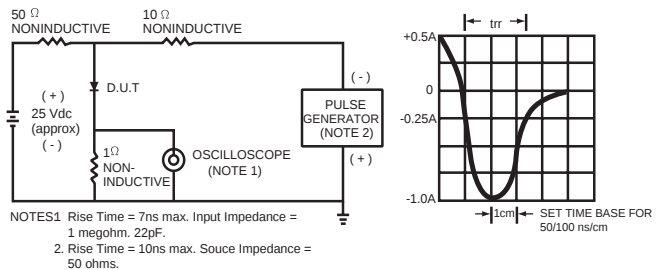


FIG. 6 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC





**ООО «НИОКРсистемс»** - это оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов. Реализуемая нашей компанией продукция насчитывает более полумиллиона наименований.

Благодаря этому наша компания предлагает к поставке практически не ограниченный ассортимент компонентов как оптовыми, мелкооптовыми партиями, так и в розницу.

Благодаря развитой сети поставщиков, помогаем в поиске и приобретении экзотичных или снятых с производства компонентов.

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