

# FR201 - FR207-STR

**PRV : 50 - 1000 Volts**  
**Io : 2.0 Amperes**

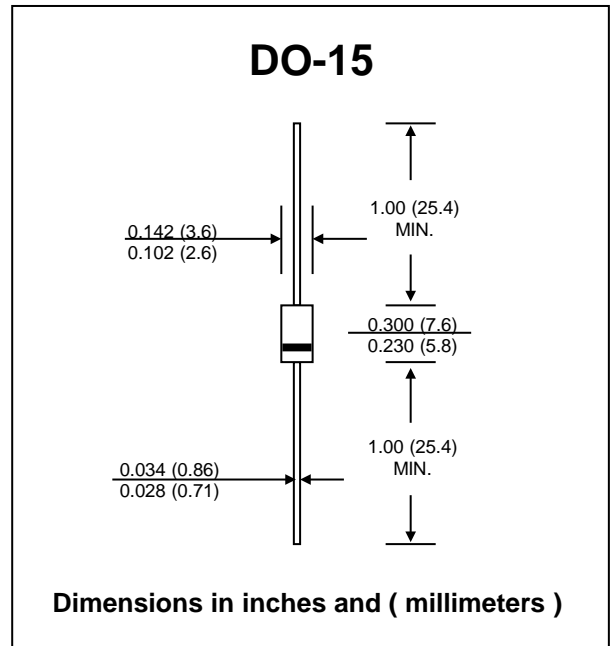
### FEATURES :

- \* High current capability
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* Fast switching for high efficiency
- \* **Pb / RoHS Free**

### MECHANICAL DATA :

- \* Case : DO-15 Molded plastic
- \* Epoxy : UL94V-0 rate flame retardant
- \* Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 0.4 gram

## FAST RECOVERY RECTIFIER DIODES



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 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%.

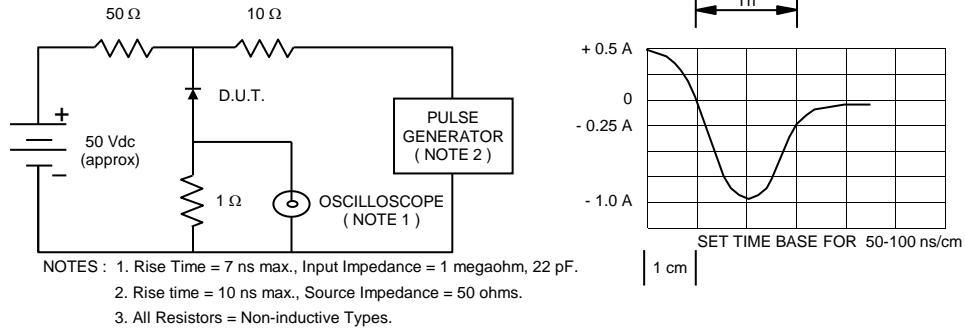
| RATING  | SYMBOL | FR201         | FR202 | FR203 | FR204 | FR205 | FR206 | FR207 | FR207-STR | UNIT |
|---|--------|---------------|-------|-------|-------|-------|-------|-------|-----------|------|
| Maximum Recurrent Peak Reverse Voltage  | VRRM   | 50            | 100   | 200   | 400   | 600   | 800   | 1000  | 1000      | V    |
| Maximum RMS Voltage   | VRMS   | 35            | 70    | 140   | 280   | 420   | 560   | 700   | 700       | V    |
| Maximum DC Blocking Voltage   | VDC    | 50            | 100   | 200   | 400   | 600   | 800   | 1000  | 1000      | V    |
| Maximum Average Forward Current<br>0.375"(9.5mm) Lead Length Ta = 55 °C                                 | IF(AV) | 2.0           |       |       |       |       |       |       |           | A    |
| Peak Forward Surge Current,<br>8.3ms Single half sine wave Superimposed<br>on rated load (JEDEC Method) | IFSM   | 75            |       |       |       |       |       |       |           | A    |
| Maximum Peak Forward Voltage at IF = 2.0 Amps.  | VF     | 1.3           |       |       |       |       |       |       |           | V    |
| Maximum DC Reverse Current Ta = 25 °C<br>at Rated DC Blocking Voltage Ta = 100 °C                       | IR     | 10            |       |       |       |       |       |       |           | µA   |
|   | IR(H)  | 500           |       |       |       |       |       |       |           | µA   |
| Maximum Reverse Recovery Time ( Note 1 )  | Trr    | 150           |       |       | 250   |       | 500   |       | 250       | ns   |
| Typical Junction Capacitance ( Note 2 )   | CJ     | 15            |       |       |       |       |       |       |           | pf   |
| Junction Temperature Range  | TJ     | - 65 to + 150 |       |       |       |       |       |       |           | °C   |
| Storage Temperature Range   | TSTG   | - 65 to + 150 |       |       |       |       |       |       |           | °C   |

**Notes :**

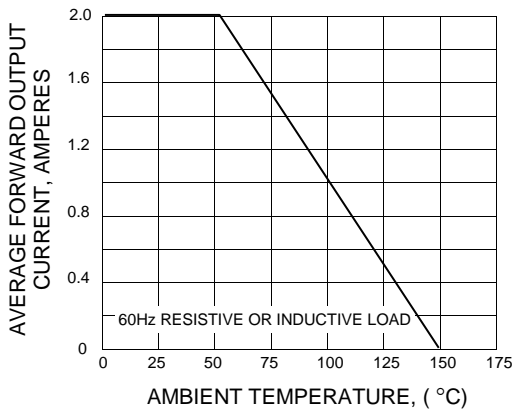
- ( 1 ) Reverse Recovery Test Conditions : IF = 0.5 A, IR = 1.0 A, Irr = 0.25 A.
- ( 2 ) Measured at 1.0 MHz and applied reverse voltage of 4.0 Vdc

**RATING AND CHARACTERISTIC CURVES ( FR201 - FR207-STR )**

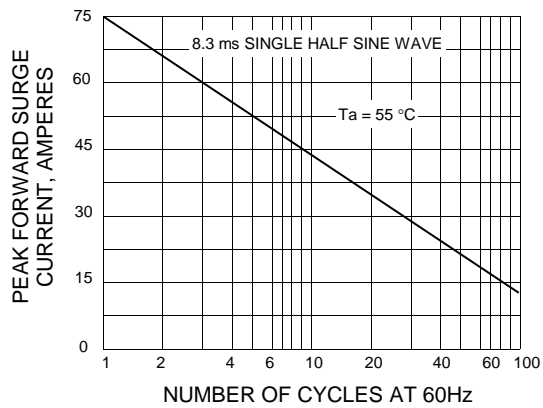
**FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**



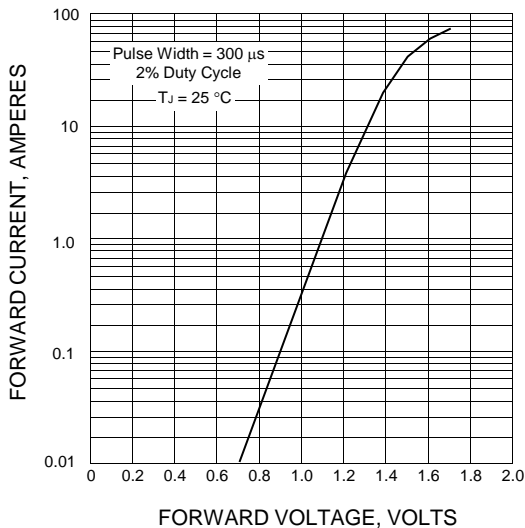
**FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



**FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG.4 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.5 - TYPICAL REVERSE CHARACTERISTICS**

