

# FR101G - FR107G-STR GLASS PASSIVATED JUNCTION FAST RECOVERY RECTIFIERS

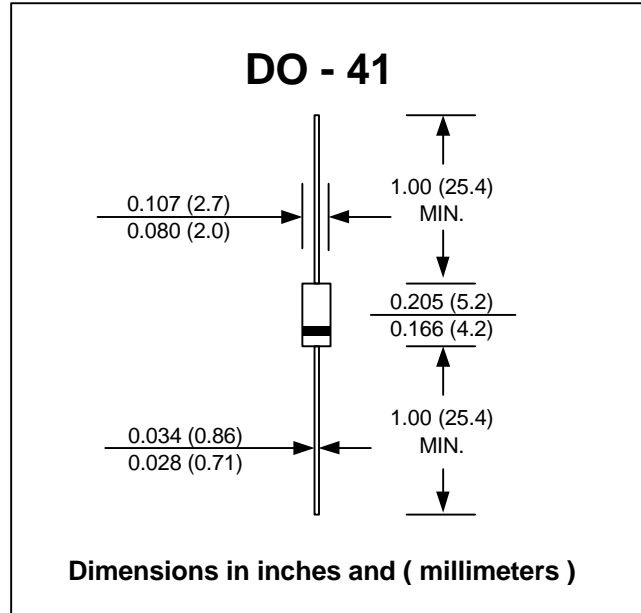
**PRV : 50 - 1000 Volts**  
**Io : 1.0 Ampere**

**FEATURES :**

- \* Glass passivated chip
- \* High current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* Fast switching for high efficiency

**MECHANICAL DATA :**

- \* Case : DO-41 Molded plastic
- \* Epoxy : UL94V-O rate flame retardant
- \* Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 0.339 gram



**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%.

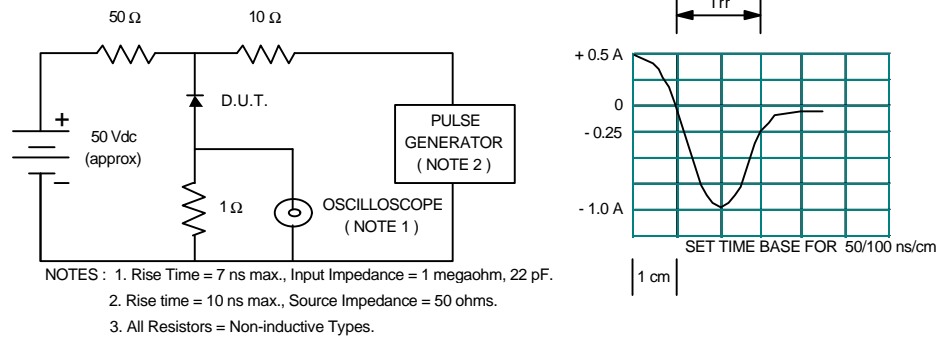
RATING	SYMBOL	FR 101G	FR 102G	FR 103G	FR 104G	FR 105G	FR 106G	FR 107G	FR107G -STR	UNIT
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	200	400	600	800	1000	1000	Volts
Maximum RMS Voltage	VRMS	35	70	140	280	420	560	700	700	Volts
Maximum DC Blocking Voltage	VDC	50	100	200	400	600	800	1000	1000	Volts
Maximum Average Forward Current 0.375"(9.5mm) Lead Length Ta = 55 °C	IF(AV)	1.0								Amps.
Peak Forward Surge Current, 8.3ms Single half sine wave superimposed on rated load (JEDEC Method)	IFSM	35								Amps.
Maximum Peak Forward Voltage at IF = 1.0 Amp.	VF	1.3								Volts
Maximum DC Reverse Current Ta = 25 °C	IR	5								µA
at Rated DC Blocking Voltage Ta = 125 °C	IR(H)	150								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 :**

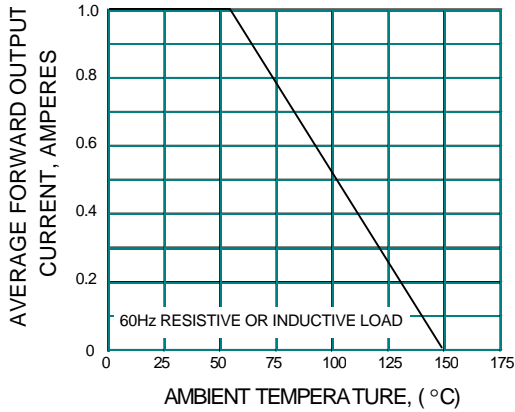
- ( 1 ) Reverse Recovery Test Conditions : IF = 0.5 A, IR = 1.0 A, Irr = 0.25 A.
- ( 2 ) Measured at 1.0 MHz and applied reverse voltage of 4.0 Vdc

## RATING AND CHARACTERISTIC CURVES ( FR101G - FR107G )

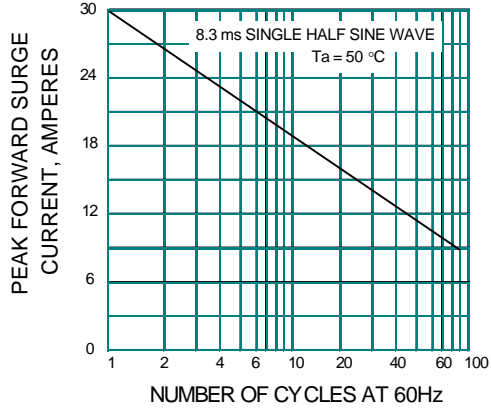
**FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**



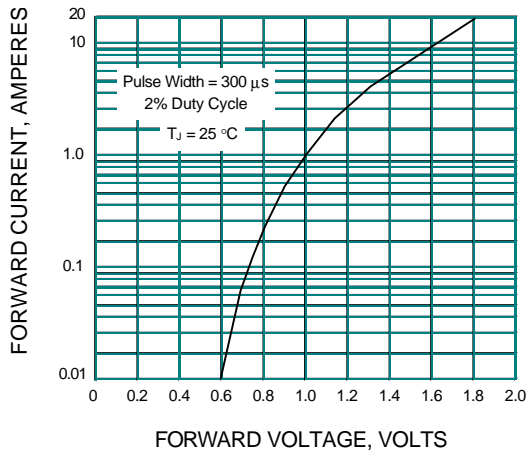
**FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



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



**FIG.4 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.5 - TYPICAL REVERSE CHARACTERISTICS**

