

**GLASS PASSIVATED RECTIFIERS**

**VOLTAGE RANGE: 50 --- 1000 V**  
**CURRENT: 1.0 A**

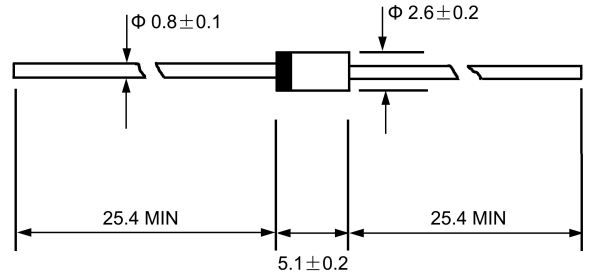
**FEATURES**

- ◇ Low cost
- ◇ Glass passivated junction
- ◇ Low leakage
- ◇ Low forward voltage drop
- ◇ High current capability
- ◇ Easily cleaned with alcohol, Isopropanol and similar solvents
- ◇ The plastic material carries U/L recognition 94V-0

**MECHANICAL DATA**

- ◇ Case: JEDEC DO-41, molded plastic
- ◇ Terminals: Axial lead, solderable per MIL-STD-202, Method 208
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.012 ounces, 0.34 grams
- ◇ Mounting position: Any

**DO - 41**



Dimensions in millimeters

**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 by 20%.

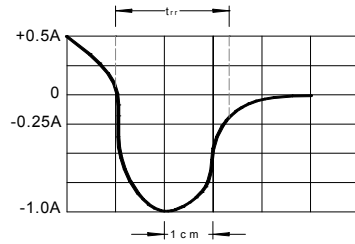
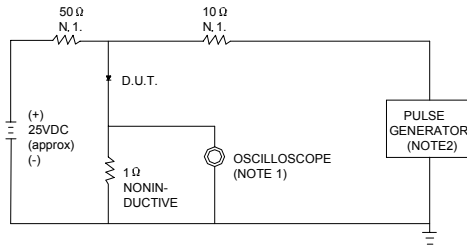
		FR101G	FR102G	FR103G	FR104G	FR105G	FR106G	FR107G	UNITS
Maximum recurrent peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum average forward rectified current 9.5mm lead length, @ $T_A=75^\circ C$	$I_{F(AV)}$	1.0							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ C$	$I_{FSM}$	30.0							A
Maximum instantaneous forward voltage at 1.0A	$V_F$	1.3							V
Maximum reverse current @ $T_A=25^\circ C$ at rated DC blocking voltage @ $T_A=100^\circ C$	$I_R$	5.0 100.0							$\mu A$
Maximum reverse recovery time (Note1)	$t_{rr}$	150			250		500		ns
Typical junction capacitance (Note2)	$C_J$	12.0							pF
Typical thermal resistance (Note3)	$R_{\theta JA}$	55.0							$^\circ C/W$
Operating junction temperature range	$T_J$	- 55 ---- + 175							$^\circ C$
Storage temperature range	$T_{STG}$	- 55 ---- +175							$^\circ C$

NOTE: 1. Measured with  $I_F=0.5A$ ,  $I_R=1A$ ,  $I_n=0.25A$ .

2. Measured at 1.0MHZ and applied reverse voltage of 4.0V DC.

3. Thermal resistance junction to ambient

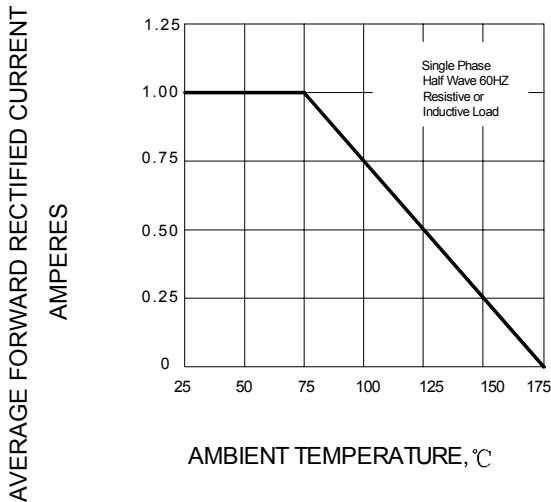
**FIG.1 – TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC**



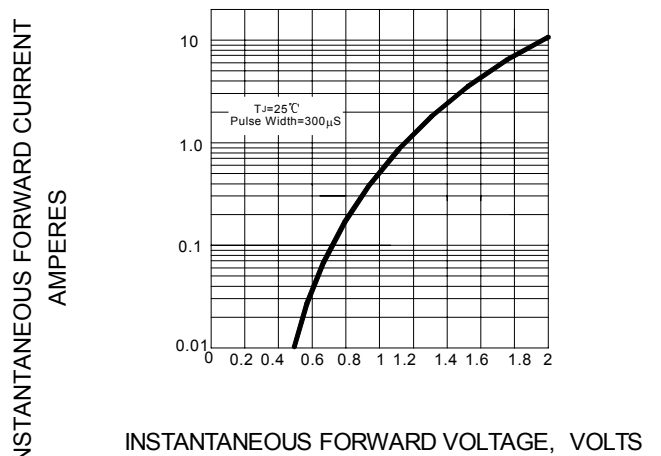
NOTES:1.RISE TIME = 7ns MAX.INPUT IMPEDANCE =1MΩ . 22pF.  
2.RISE TIME =10ns MAX.SOURCE IMPEDANCE=50 Ω .

SET TIME BASE FOR 50/100 ns/cm

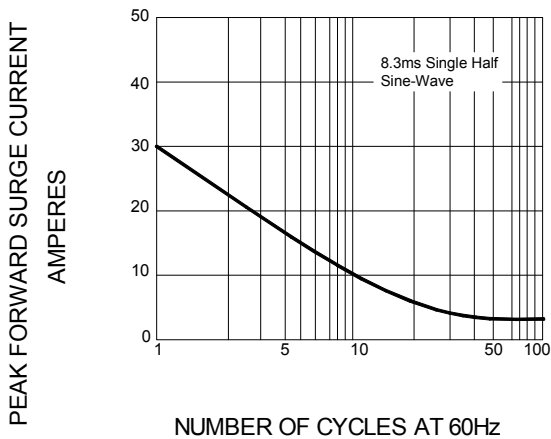
**FIG.2 – TYPICAL FORWARD CURRENT DERATING CURVE**



**FIG.3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG.4 –PEAK FORWARD SURGE CURRENT**



**FIG.5 – TYPICAL JUNCTION CAPACITANCE**

