SAMYANG ELECTRONICS

FR301G --- FR307G

GLASS PASSIVATED RECTIFIERS

VOLTAGE RANGE: 50 --- 1000 V
CURRENT: 3.0 A

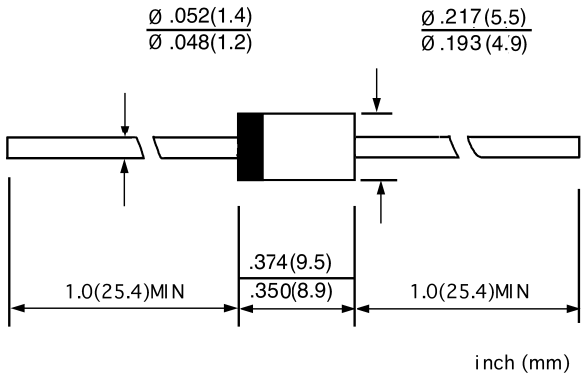
FEATURES

- ◇ 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-27,molded plastic
- ◇ Terminals: Axial lead ,solderable per MIL- STD-202,Method 208
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.041 ounces,1.15 grams
- ◇ Mounting position: Any

DO - 27



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.

Single phase,half wave,60 Hz,resistive or inductive load. For capacitive load,derate by 20%.

		FR301G	FR302G	FR303G	FR304G	FR305G	FR306G	FR307G	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℃	$I_{F(AV)}$	3.0							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @T_J=125℃	I_{FSM}	200.0							A
Maximum instantaneous forward voltage @3.0A	V_F	1.3							V
Maximum reverse current @T_A=25℃ at rated DC blocking voltage @T_A=100℃	I_R	10.0 200.0							μA
Maximum reverse recovery time (Note1)	t_{rr}	150				250	500		ns
Typical junction capacitance (Note2)	C_J	32.0							pF
Typical thermal resistance (Note3)	$R_{\theta JA}$	22.0							℃
Operating junction temperature range	T_J	- 55 ---- +175							℃
Storage temperature range	T_{STG}	- 55 ---- +175							℃

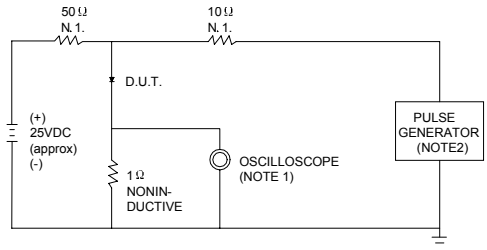
NOTE: 1. Measured with I_F=0.5A, I_R=1A, I_{rr}=0.25A.

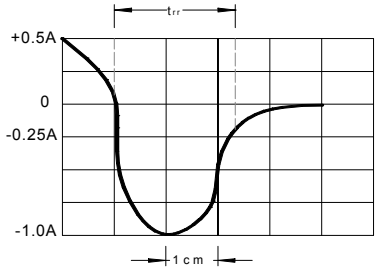
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

3.Thermal resistance junction to ambient

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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 --FORWARD DERATING CURVE

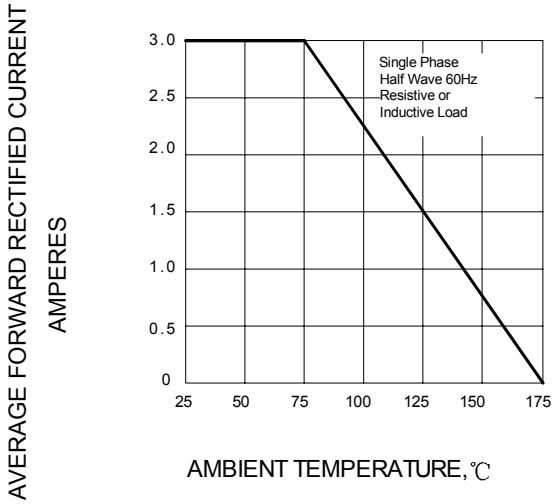


FIG.3 -- TYPICAL FORWARD CHARACTERISTICS

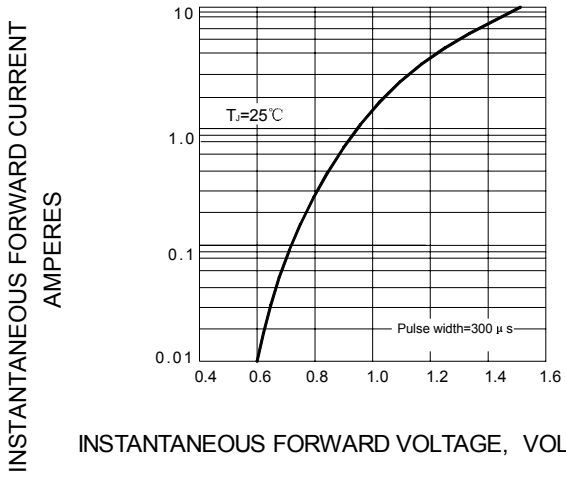


FIG.4 --PEAK FORWARD SURGE CURRENT

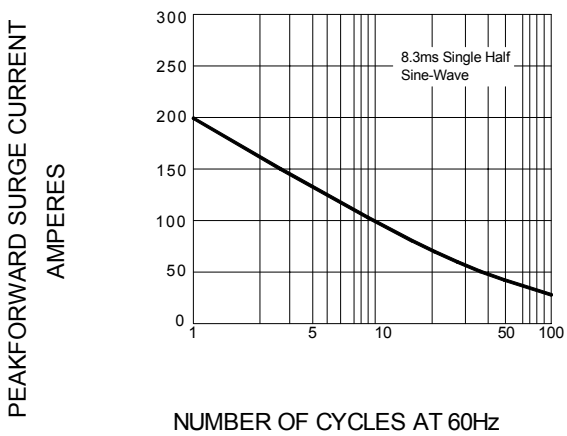


FIG.5 -- TYPICAL JUNCTION CAPACITANCE

