

GLASS PASSIVATED RECTIFIERS

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

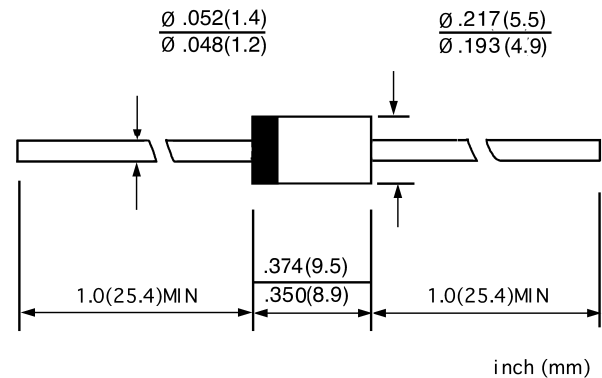
FEATURES

- ◇ 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°C 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°C	I _{F(AV)}	3.0							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load @T _J =125°C	I _{FSM}	200.0							A
Maximum instantaneous forward voltage @3.0A	V _F	1.3							V
Maximum reverse current @T _A =25°C at rated DC blocking voltage @T _A =100°C	I _R	10.0 200.0							μ A
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 _{θJA}	22.0							°C/W
Operating junction temperature range	T _J	- 55 ---- +175							°C
Storage temperature range	T _{STG}	- 55 ---- +175							°C

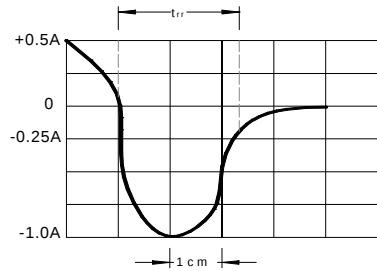
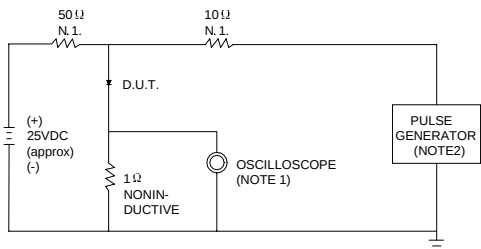
NOTE: 1. Measured with $I_F = 0.5\text{A}$, $I_R = 1\text{A}$, $t_{rr} = 0.25\text{A}$.

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

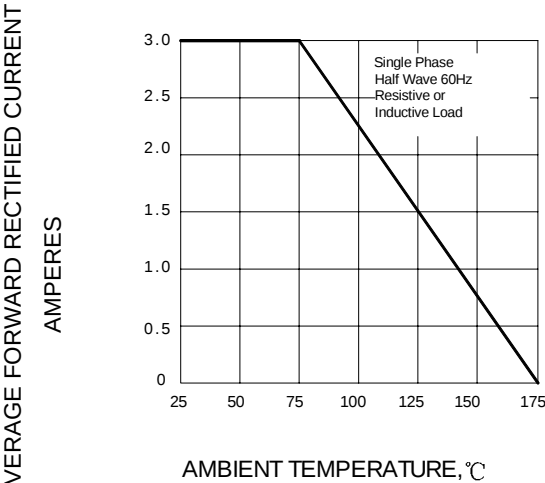


FIG.3 -- TYPICAL FORWARD CHARACTERISTICS

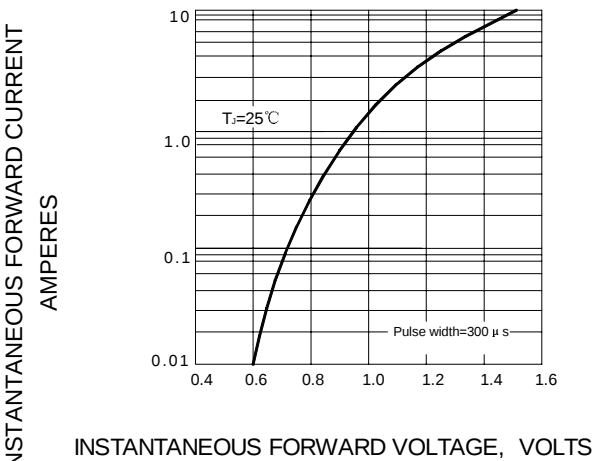


FIG.4 --PEAK FORWARD SURGE CURRENT

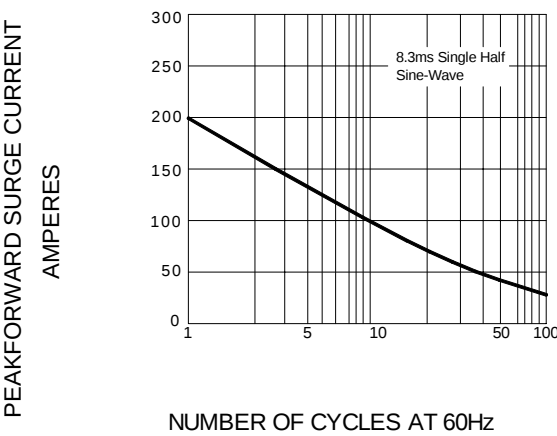


FIG.5 -- TYPICAL JUNCTION CAPACITANCE

