

### HIGH EFFICIENCY RECTIFIER

VOLTAGE RANGE: 70--- 1000 V

CURRENT: 2.0--- 3.5 A

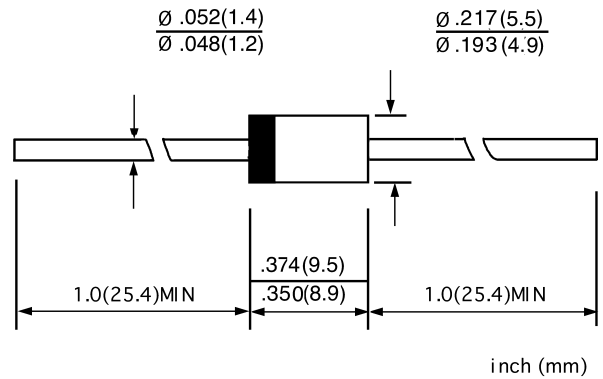
#### FEATURES

- ◇ Low cost
- ◇ Diffused junction
- ◇ Low leakage
- ◇ Low forward voltage drop
- ◇ High current capability
- ◇ Easily cleaned with freon, alcohol, Isopropand and similar solvents

#### MECHANICAL DATA

- ◇ Case: JEDEC DO-27, molded plastic
- ◇ Terminals: Axial leads, solderable per MIL-STD-202, Method 208
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.041 ounces, 1.15grams
- ◇ Mounting: 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%.

		RG4Y	RG4Z	RG4	RG4A	RG4C	UNITS
Maximum peak repetitive reverse voltage	$V_{RRM}$	70	200	400	600	1000	V
Maximum RMS voltage	$V_{RMS}$	49	140	280	420	700	V
Maximum DC blocking voltage	$V_{DC}$	70	200	400	600	1000	V
Maximum average forward rectified current 9.5mm lead length, @ $T_A=75^\circ C$	$I_{F(AV)}$	3.5	3.0		2.0		A
Peak forward surge current 10ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ C$	$I_{FSM}$	100.0	80.0		50.0	60.0	A
Maximum instantaneous forward voltage @ $I_F=I_{F(AV)}$	$V_F$	1.3	1.7	1.8	2.0	3.0	V
Maximum reverse current @ $T_A=25^\circ C$ at rated DC blocking voltage @ $T_A=100^\circ C$	$I_R$	1000.0 5000.0		500.0 2500.0			$\mu A$
Maximum reverse recovery time (Note1)	$t_{rr}$	50					ns
Typical junction capacitance (Note2)	$C_J$	70			50		pF
Typical thermal resistance (Note3)	$R_{\theta JL}$	8					$^\circ C/W$
Operating junction temperature range	$T_J$	- 55 ----- + 150					$^\circ C$
Storage temperature range	$T_{STG}$	- 55 ----- + 150					$^\circ C$

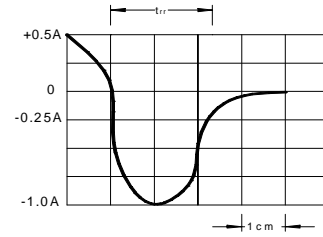
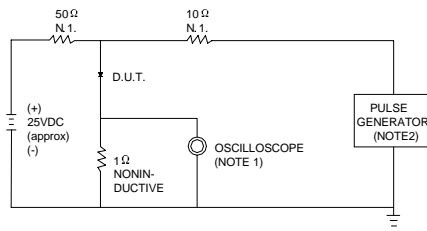
NOTE:1. Measured with  $I_F=0.5A$ ,  $I_R=1A$ ,  $I_{rr}=0.25A$ .

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

3. Thermal resistance junction to ambient.

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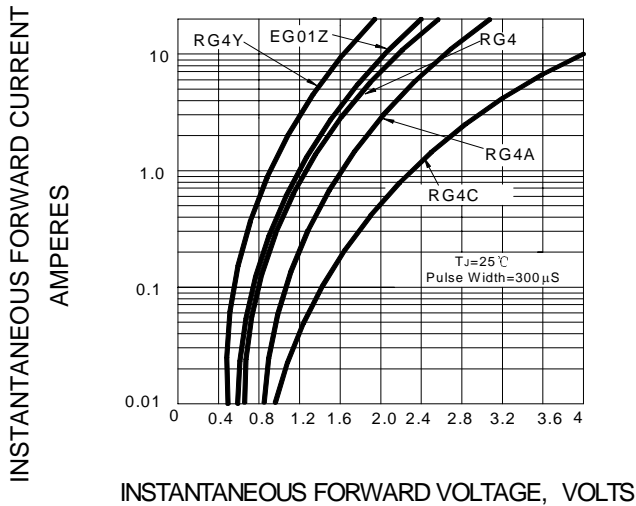
**FIG.1 – TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC**



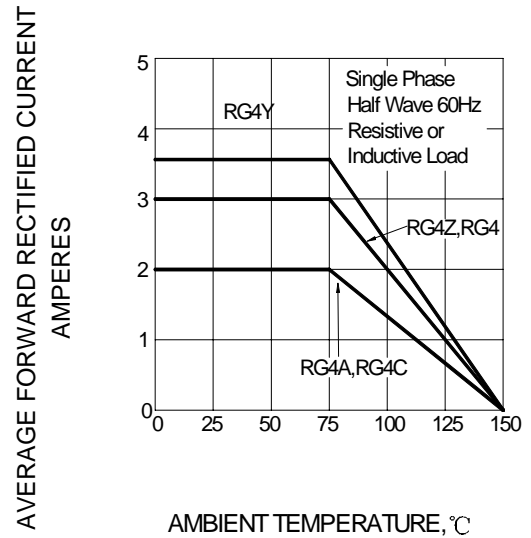
NOTES:1. RISE TIME = 7ns MAX.INPUT IMPEDANCE =1MΩ. 22pF.  
2. RISE TIME =10ns MAX.SOURCE IMPEDANCE=50 Ω.

SET TIME BASE FOR 10/20 ns/cm

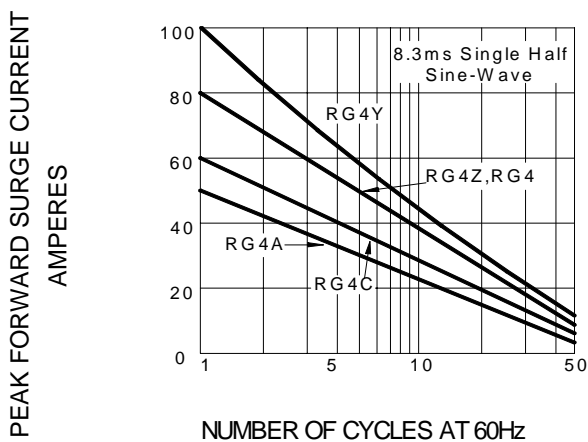
**FIG.2 – TYPICAL FORWARD CHARACTERISTIC**



**FIG.3 – FORWARD DERATING CURVE**



**FIG.4 – PEAK FORWARD SURGE CURRENT**



**FIG.5 – TYPICAL JUNCTION CAPACITANCE**

