

## HIGH EFFICIENCY RECTIFIER

VOLTAGE RANGE: 100--- 1000 V  
CURRENT: 1.1 - 2.0 A

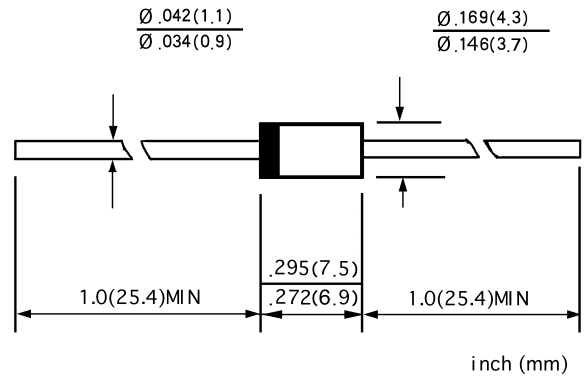
### FEATURES

- ◇ Low cost
- ◇ Diffused junction
- ◇ Low leakage
- ◇ Low forward voltage drop
- ◇ Easily cleaned with freon, alcohol, Isopropand and similar solvents
- ◇ The plastic material carries U/L recognition 94V-0

### MECHANICAL DATA

- ◇ Case: JEDEC DO-15B, molded plastic
- ◇ Terminals: Axial leads, solderable per MIL-STD-202, Method 208
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.024 ounces, 0.68 grams
- ◇ Mounting: Any

### DO - 15B



### 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%.

		RU3YX	RU3	RU3A	RU3B	RU3C	UNITS
Maximum peak repetitive reverse voltage	$V_{RRM}$	100	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	70	280	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	100	400	600	800	1000	V
Maximum average forward rectified current 9.5mm lead length, @ $T_A=75^\circ C$	$I_{F(AV)}$	2.0	1.5		1.1	1.5	A
Peak forward surge current 10ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ C$	$I_{FSM}$	50.0	20.0				A
Maximum instantaneous forward voltage @ $I_F=I_{F(AV)}$	$V_F$	0.95	1.5		2.5		V
Maximum reverse current @ $T_A=25^\circ C$ at rated DC blocking voltage @ $T_A=100^\circ C$	$I_R$	10.0				300.0	$\mu A$
		400.0					
Maximum reverse recovery time (Note1)	$t_{rr}$	50	100				ns
Typical junction capacitance (Note2)	$C_J$	50		30			pF
Typical thermal resistance (Note3)	$R_{\theta JL}$	12					$^\circ C/W$
Operating junction temperature range	$T_J$	- 55 ----- + 150					$^\circ C$
Storage temperature range	$T_{STG}$	- 55 ----- + 150					$^\circ C$

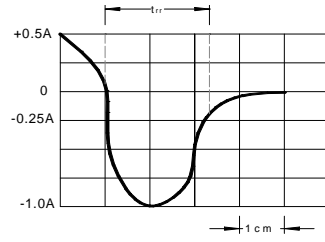
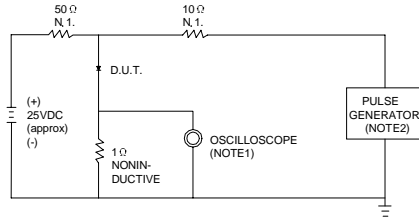
NOTE: 1. Measured with  $I_F=0.5A$ ,  $I_R=1A$ ,  $I_{rr}=0.25A$

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

3. Thermal resistance junction to ambient.

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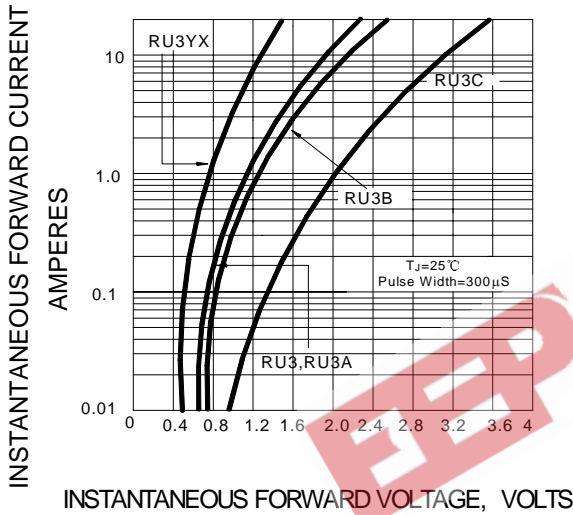
**FIG.1 – TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC**



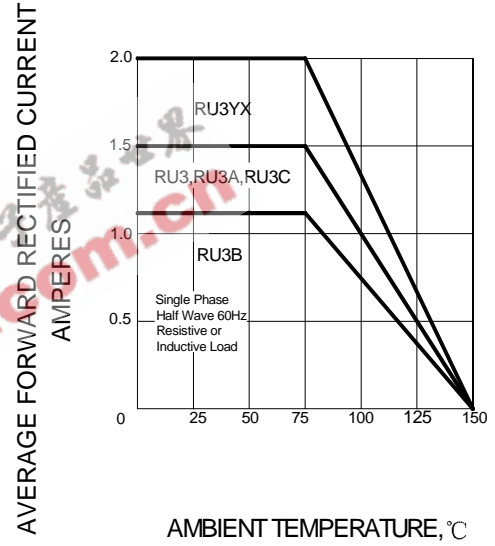
NOTES: 1. RISE TIME = 7ns MAX INPUT IMPEDANCE = 1MΩ, 22pF.  
 2. RISE TIME = 10ns MAX SOURCE IMPEDANCE = 50 Ω.

SET TIME BASE FOR 10/20 ns/cm

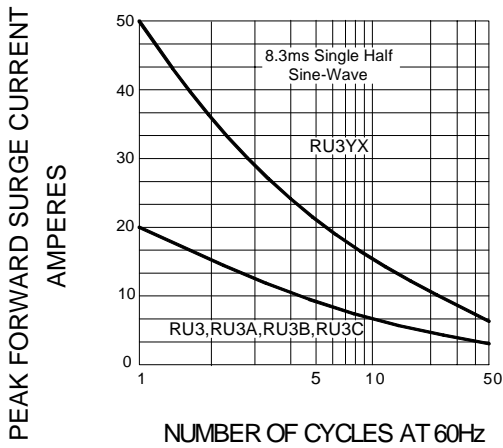
**FIG.2 – TYPICAL FORWARD CHARACTERISTIC**



**FIG.3 – FORWARD DERATING CURVE**



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



**FIG.5 – TYPICAL JUNCTION CAPACITANCE**

