

## HIGH EFFICIENCY RECTIFIER

VOLTAGE RANGE: 400 --- 600 V  
CURRENT: 1.5 A

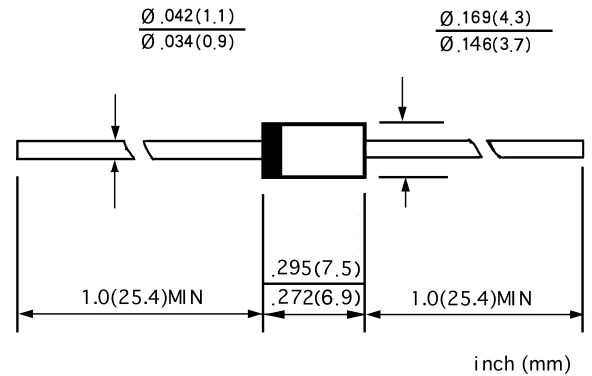
### FEATURES

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

### 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, 50 Hz, resistive or inductive load. For capacitive load, derate by 20%.

		RU3M	RU3AM	UNITS
Maximum peak repetitive reverse voltage	$V_{RRM}$	400	600	V
Maximum RMS voltage	$V_{RMS}$	280	420	V
Maximum DC blocking voltage	$V_{DC}$	400	600	V
Maximum average forward rectified current 9.5mm lead length, @ $T_A=75^\circ\text{C}$	$I_{F(AV)}$	1.5		A
Peak forward surge current 10ms single half-sine-wave superimposed on rated load @ $T_J=125^\circ\text{C}$	$I_{FSM}$	50.0		A
Maximum instantaneous forward voltage @ 1.5A	$V_F$	1.1		V
Maximum reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=100^\circ\text{C}$	$I_R$	10.0	350.0	$\mu\text{A}$
Maximum reverse recovery time (Note1)	$t_{rr}$	100		ns
Typical junction capacitance (Note2)	$C_J$	50	30	pF
Typical thermal resistance (Note3)	$R_{\theta JL}$	12		$^\circ\text{C}/\text{W}$
Operating junction temperature range	$T_J$	- 55 ----- + 150		$^\circ\text{C}$
Storage temperature range	$T_{STG}$	- 55 ----- + 150		$^\circ\text{C}$

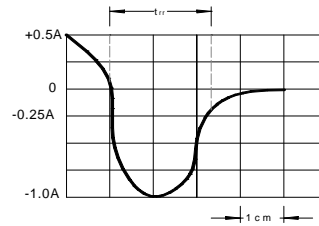
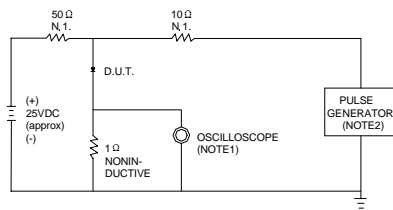
NOTE: 1. Measured with  $I_F=0.5\text{A}$ ,  $I_R=1\text{A}$ ,  $I_{rr}=0.25\text{A}$ .

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

3. Thermal resistance junction to ambient.

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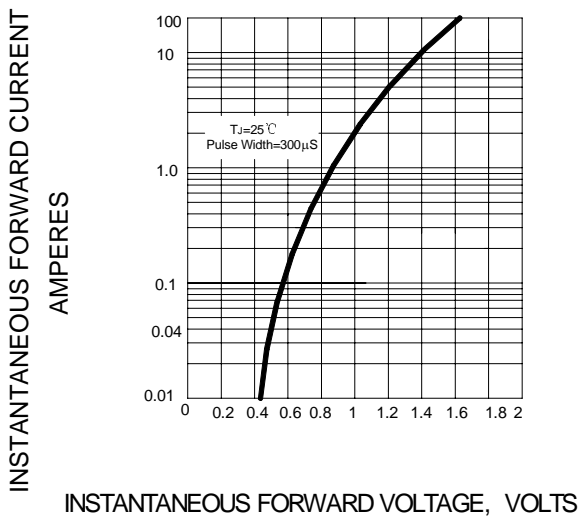
**FIG.1 – TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC**



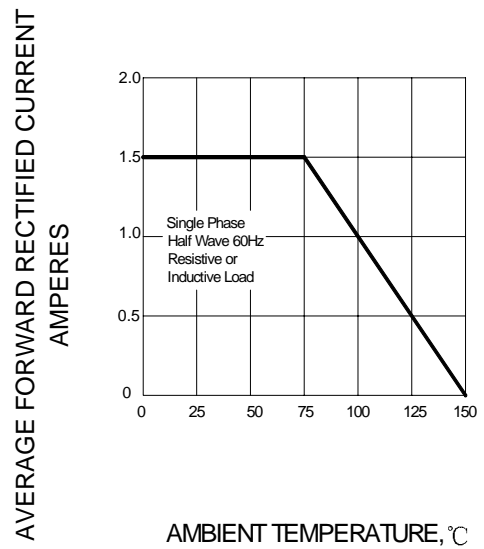
NOTES:1.RISE TIME = 7ns MAX.INPUT IMPEDANCE =1M $\Omega$ . 22pF.  
2.RISE TIME =10ns MAX.SOURCE IMPEDANCE=50  $\Omega$ .

SET TIME BASE FOR 10/20 ns/cm

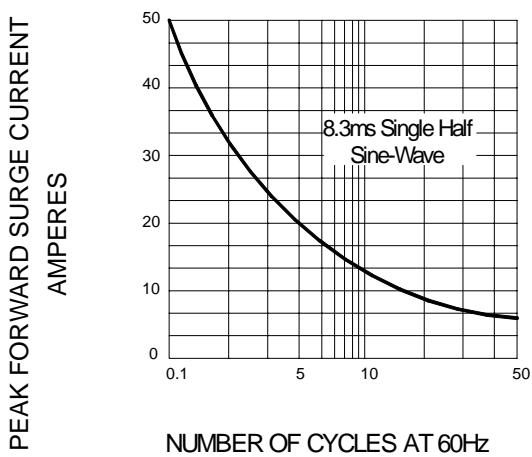
**FIG.2 – TYPICAL FORWARD CHARACTERISTIC**



**FIG.3 – FORWARD DERATING CURVE**



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



**FIG.5-TYPICAL JUNCTION CAPACITANCE**

