

# RU4M - RU4AM HIGH EFFICIENCY RECTIFIER DIODES

VOLTAGE RANGE: 400 - 600V CURRENT: 3.5 A

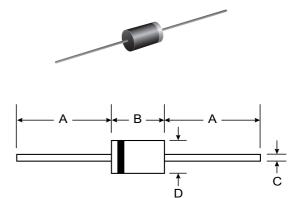
#### **Features**

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

### **Mechanical Data**

- Case: DO-201AD, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 1.2 grams (approx.)
- Mounting Position: Any
- Marking: Type Number





DO-201AD				
Dim	Min	Max		
Α	25.40	_		
В	7.20	9.50		
С	1.20	1.30		
D	4.80	5.30		
All Dimensions in mm				

## Maximum Ratings and Electrical Characteristics T<sub>A</sub> = 25°C unless otherwise specified

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

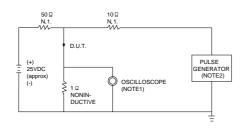
Characteristic	Symbol	RU4M	RU4AM	Units
Maximum peak repetitive reverse voltage	V <sub>RRM</sub>	400	600	V
Maximum RMS voltage	V <sub>RMS</sub>	280	420	V
Maximum DC blocking voltage	V <sub>DC</sub>	400	600	V
Maximum average forw ard rectified current 9.5mm lead length, $@T_A = 75^{\circ}C$	I <sub>F(AV)</sub>	3.5		А
Peak forw ard surge current 10ms single half-sine-w ave superimplsed on rated load @T <sub>J</sub> =125℃	I <sub>FSM</sub>	70.0		А
Maximum instantaneous forw ard voltage  @ 3.5A	V <sub>F</sub>	1.3	<b>!</b>	V
Maximum reverse current $@T_A=25^{\circ}C$ at rated DC blocking voltage $@T_A=100^{\circ}C$	I <sub>R</sub>	10.0 300.0		μА
Maximum reverse recovery time (Note1)	t <sub>rr</sub>	100		ns
Typical junction capacitance (Note2)	CJ	70	50	pF
Typical thermal resistance (Note3)	$R_{\theta JL}$	8		°C/W
Operating junction temperature range	TJ	- 55 + 150		°C
Storage temperature range	T <sub>STG</sub>	- 55 + 150		°C

NOTE: 1. Measured with  $I_F$ =0.5A,  $I_R$ =1A,  $I_r$ =0.25A.

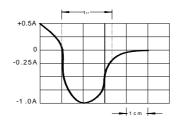
- 2. Measured at  $1.0 \mathrm{MH}_{\mathrm{Z}}$  and applied reverse voltage of  $4.0 \mathrm{V}$  DC.
- 3. Thermal resistance junction to ambient.



### FIG.1 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



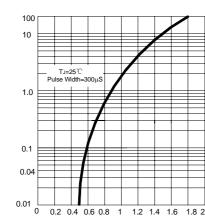
NOTES:1.RISE TIME = 7ns MAX.INPUT IMPEDANCE =1M $\Omega$ . 22pF. 2.RISE TIME =10ns MAX.SOURCE IMPEDANCE=50  $\Omega$ .



SET TIME BASE FOR 10/20 ns/cm

#### FIG.2 - TYPICAL FORWARD CHARACTERISTIC

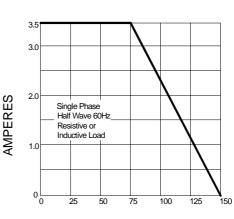
INSTANTANEOUS FORWARD CURRENT AMPERES



INSTANTANEOUS FORWARD VOLTAGE, VOLTS

## FIG.3 - FORWARD DERATING CURVE

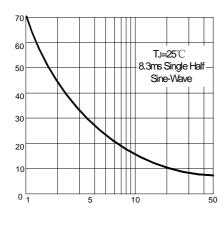




AMBIENT TEMPERATURE, ℃

### FIG.4 - PEAK FORWARD SURGE CURRENT

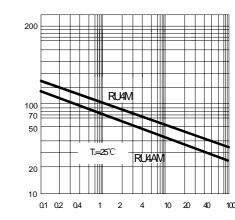
PEAK FORWARD SURGE CURRENT AMPERES



NUMBER OF CYCLES AT 60Hz

#### FIG.5- TYPICAL JUNCTION CAPACITANCE





REVERSE VOLTAGE, VOLTS