

# UF2A-UF2M

Surface Mount Rectifiers

**VOLTAGE RANGE: 50 --- 1000 V**

**CURRENT: 2.0 A**



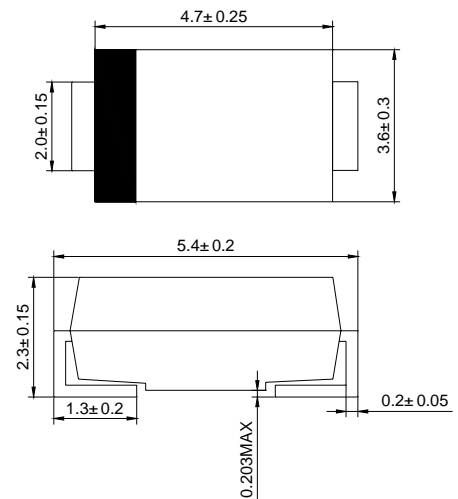
## DO-214AA(SMB)

### Features

- ◇ Low cost
- ◇ 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-214AA, molded plastic
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.003 ounces, 0.093 grams
- ◇ Mounting position: Any



Dimensions in millimeters

### 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%.

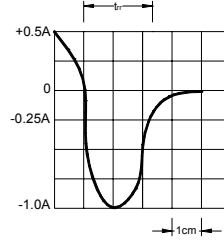
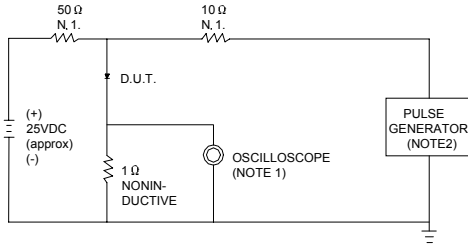
|                                                                                                                   |                 | UF2A            | UF2B | UF2D | UF2G | UF2J | UF2K | UF2M | UNITS                     |
|-------------------------------------------------------------------------------------------------------------------|-----------------|-----------------|------|------|------|------|------|------|---------------------------|
| 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<br>@ $T_L=90^\circ\text{C}$                                             | $I_{F(AV)}$     | 2.0             |      |      |      |      |      |      | A                         |
| Peak forward surge current<br>8.3ms single half-sine-wave<br>superimposed on rated load @ $T_J=125^\circ\text{C}$ | $I_{FSM}$       | 50              |      |      |      |      |      |      | A                         |
| Maximum instantaneous forward voltage at 2.0 A                                                                    | $V_F$           | 1.0             |      | 1.4  |      | 1.7  |      | V    |                           |
| Maximum reverse current @ $T_A=25^\circ\text{C}$<br>at rated DC blocking voltage @ $T_A=100^\circ\text{C}$        | $I_R$           | 5.0<br>100      |      |      |      |      |      |      | $\mu\text{A}$             |
| Maximum thermal resistance (NOTE1)                                                                                | $t_{rr}$        | 50              |      |      |      | 75   |      |      | ns                        |
| Typical junction capacitance (Note2)                                                                              | $C_J$           | 15              |      |      |      | 12   |      |      | pF                        |
| Typical thermal resistance (Note3)                                                                                | $R_{\theta JA}$ | 15              |      |      |      |      |      |      | $^\circ\text{C}/\text{W}$ |
| 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.

## Ratings AND Characteristic Curves

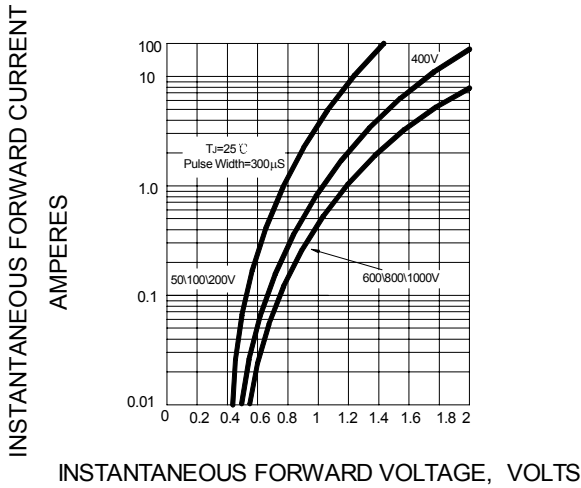
**FIG.1 – TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC**



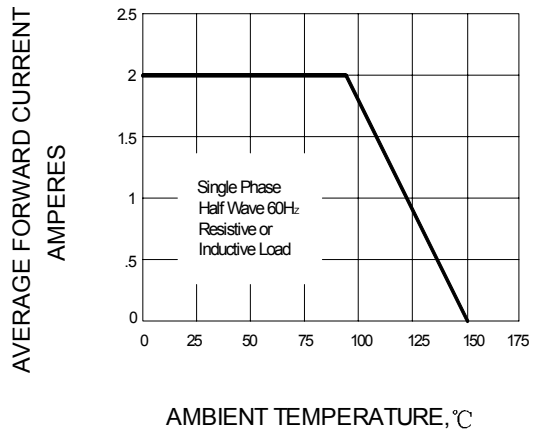
NOTES:1.RISE TIME = 7ns MAX.INPUT IMPEDANCE = 1MΩ .22pF.  
2.RISE TIME =10ns MAX.SOURCE IMPEDANCE=50 Ω.

SET TIME BASE FOR 20/30 ns/cm

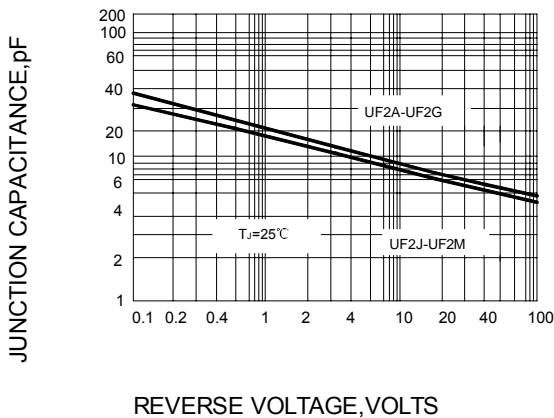
**FIG.2 – TYPICAL FORWARD CHARACTERISTIC**



**FIG.3 – FORWARD DERATING CURVE**



**FIG.4 – TYPICAL JUNCTION CAPACITANCE**



**FIG.5 – PEAK FORWARD SURGE CURRENT**

