

### GLASS PASSIVATED RECTIFIERS

VOLTAGE RANGE: 50 --- 1000 V

CURRENT: 3.0 A

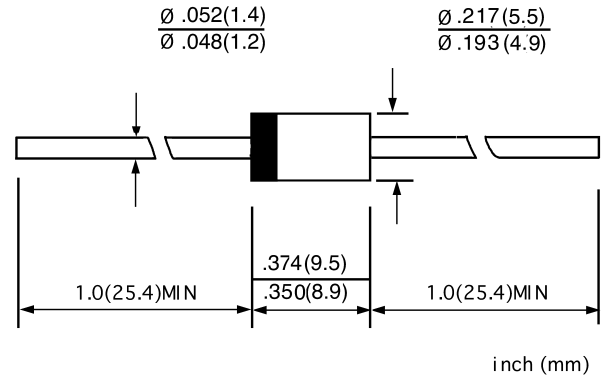
#### FEATURES

- ◇ Glass passivated junction
- ◇ 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-27, molded plastic
- ◇ Terminals: Axial lead, solderable per MIL-STD-202, Method 208
- ◇ Polarity: Color band denotes cathode
- ◇ Weight: 0.041 ounces, 1.15 grams
- ◇ Mounting position: 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%.

|                                                                                                                  |                    | UF<br>5400G     | UF<br>5401G | UF<br>5402G | UF<br>5403G | UF<br>5404G | UF<br>5405G | UF<br>5406G | UF<br>5407G | UF<br>5408G | UNITS |
|------------------------------------------------------------------------------------------------------------------|--------------------|-----------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------|
| Maximum recurrent peak reverse voltage                                                                           | V <sub>RRM</sub>   | 50              | 100         | 200         | 300         | 400         | 500         | 600         | 800         | 1000        | V     |
| Maximum RMS voltage                                                                                              | V <sub>RMS</sub>   | 35              | 70          | 140         | 210         | 280         | 350         | 420         | 560         | 700         | V     |
| Maximum DC blocking voltage                                                                                      | V <sub>DC</sub>    | 50              | 100         | 200         | 300         | 400         | 500         | 600         | 800         | 1000        | V     |
| Maximum average forw ard rectified current<br>9.5mm lead length, @T <sub>A</sub> =75°C                           | I <sub>F(AV)</sub> | 3.0             |             |             |             |             |             |             |             |             | A     |
| Peak forw ard surge current<br>8.3ms single half-sine-w ave<br>superimposed on rated load @T <sub>J</sub> =125°C | I <sub>FSM</sub>   | 150.0           |             |             |             |             |             |             |             |             | A     |
| Maximum instantaneous forw ard voltage<br>at 3.0 A                                                               | V <sub>F</sub>     | 1.0             |             |             |             |             | 1.7         |             |             |             | V     |
| Maximum reverse current @T <sub>A</sub> =25°C<br>at rated DC blocking voltage @T <sub>A</sub> =100°C             | I <sub>R</sub>     | 10.0<br>100.0   |             |             |             |             |             |             |             |             | μ A   |
| Maximum reverse recovery time (Note1)                                                                            | t <sub>tr</sub>    | 50              |             |             |             |             | 75          |             |             |             | ns    |
| Typical junction capacitance (Note2)                                                                             | C <sub>J</sub>     | 45              |             |             |             |             |             |             |             |             | pF    |
| Typical thermal resistance (Note3)                                                                               | R <sub>θJA</sub>   | 20              |             |             |             |             |             |             |             |             | °C/W  |
| Operating junction temperature range                                                                             | T <sub>J</sub>     | - 55 ---- + 175 |             |             |             |             |             |             |             |             | °C    |
| Storage temperature range                                                                                        | T <sub>STG</sub>   | - 55 ---- + 175 |             |             |             |             |             |             |             |             | °C    |

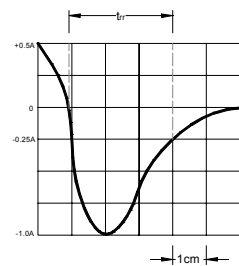
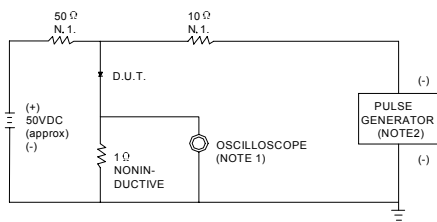
NOTE: 1. Measured with  $I_F=0.5\text{A}$ ,  $I_R=1\text{A}$ ,  $t_{rr}=0.25\text{A}$ .

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

SET TIME BASE FOR 10/20 ns/cm

FIG.2 -- TYPICAL FORWARD CHARACTERISTIC

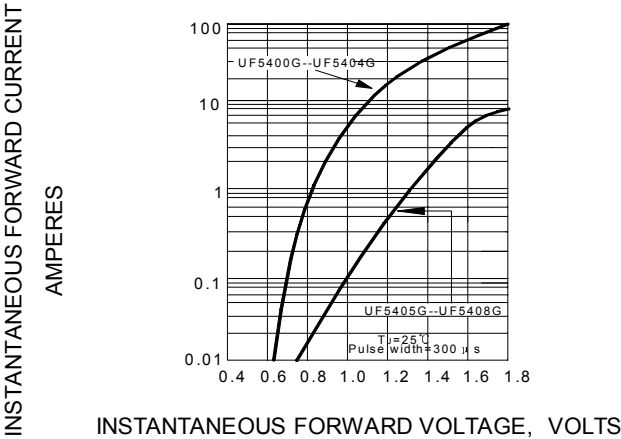


FIG.3 -- FORWARD DERATING CURVE

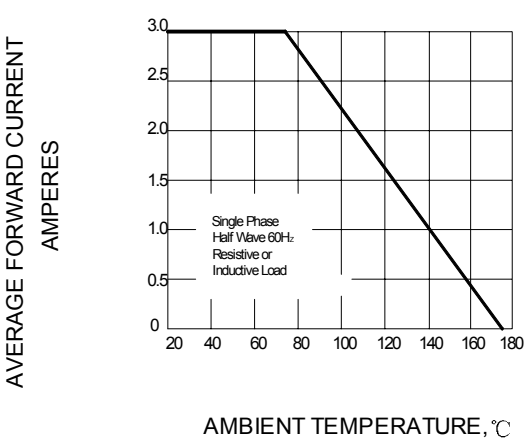


FIG.4 -- TYPICAL JUNCTION CAPACITANCE

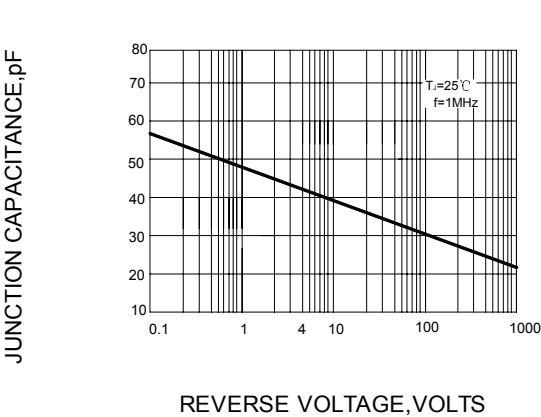


FIG.5 -- PEAK FORWARD SURGE CURRENT

