

# 1U1 THRU 1U7

# GW

## 1.0 AMP SUPER FAST RECTIFIERS



### FEATURES

- \* Low forward voltage drop
- \* High current capability
- \* High reliability
- \* High surge current capability

### MECHANICAL DATA

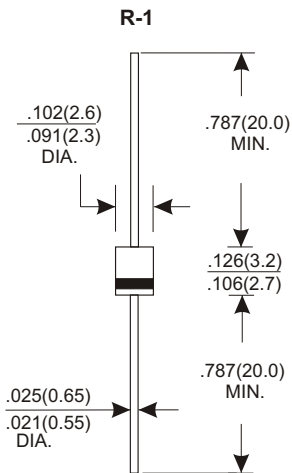
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any

### VOLTAGE RANGE

50 to 600 Volts

### CURRENT

1.0 Ampere



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unless otherwise specified.  
Single phase half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

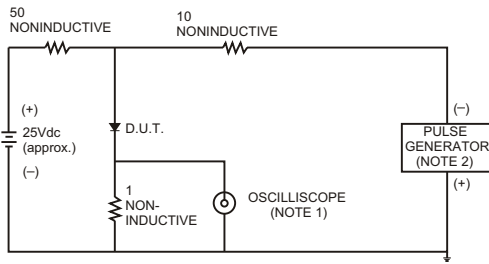
| TYPE NUMBER                                                                                           | 1U1        | 1U2 | 1U3 | 1U4 | 1U5 | 1U6 | 1U7 | UNITS |
|-------------------------------------------------------------------------------------------------------|------------|-----|-----|-----|-----|-----|-----|-------|
| Maximum Recurrent Peak Reverse Voltage                                                                | 50         | 100 | 150 | 200 | 300 | 400 | 600 | V     |
| Maximum RMS Voltage                                                                                   | 35         | 70  | 105 | 140 | 210 | 280 | 420 | V     |
| Maximum DC Blocking Voltage                                                                           | 50         | 100 | 150 | 200 | 300 | 400 | 600 | V     |
| Maximum Average Forward Rectified Current<br>.375"(9.5mm) Lead Length at Ta=55°C                      |            |     |     |     |     |     |     | A     |
| Peak Forward Surge Current, 8.3 ms single half sine-wave<br>superimposed on rated load (JEDEC method) |            |     |     |     |     |     |     | A     |
| Maximum Instantaneous Forward Voltage at 1.0A                                                         | 0.95       |     |     |     | 1.3 |     | 1.7 | V     |
| Maximum DC Reverse Current Ta=25°C                                                                    | 5.0        |     |     |     |     |     |     | μA    |
| at Rated DC Blocking Voltage Ta=100°C                                                                 | 100        |     |     |     |     |     |     | μA    |
| Maximum Reverse Recovery Time (Note 1)                                                                | 35         |     |     |     |     |     |     | nS    |
| Typical Junction Capacitance (Note 2)                                                                 | 30         |     |     |     |     |     |     | pF    |
| Operating and Storage Temperature Range Tj, Tstg                                                      | -65 — +150 |     |     |     |     |     |     | °C    |

#### NOTES:

1. Reverse Recovery Time test condition: IF=0.5A, IR=1.0A, IRR=0.25A
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

## RATING AND CHARACTERISTIC CURVES (1U1 THRU 1U7)

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



NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm, 22pF.  
2. Rise Time= 10ns max., Source Impedance= 50 ohms.

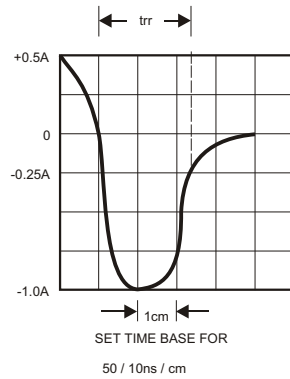


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

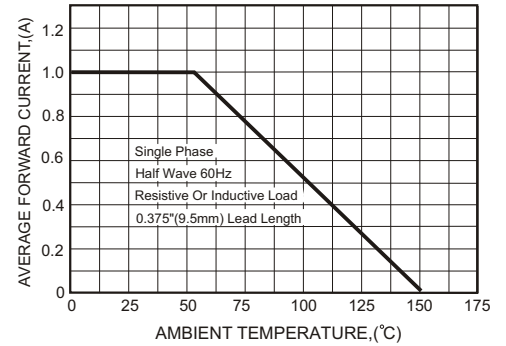


FIG.3-TYPICAL FORWARD CHARACTERISTICS

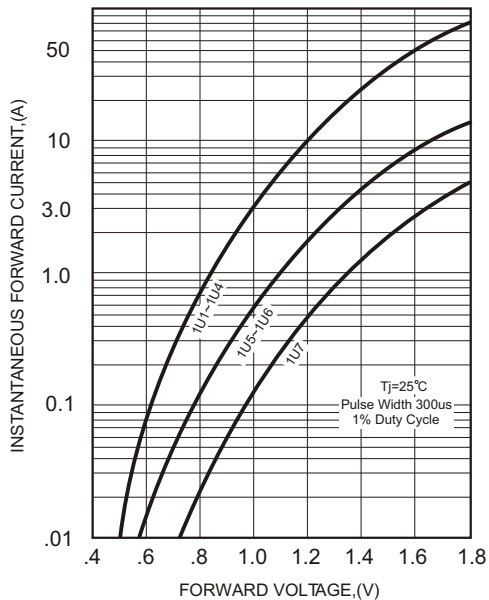


FIG.4-TYPICAL REVERSE CHARACTERISTICS

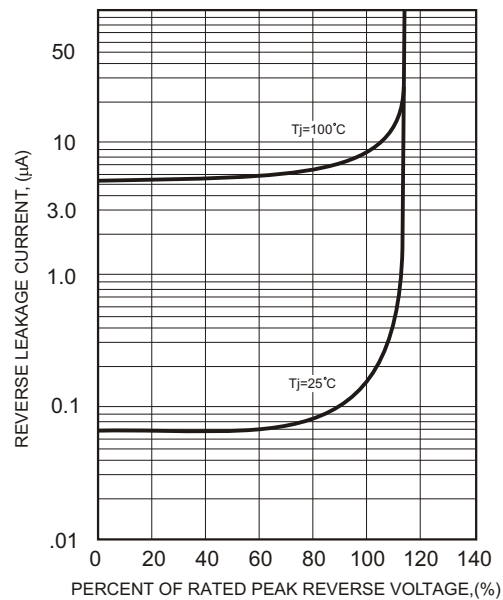


FIG.5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

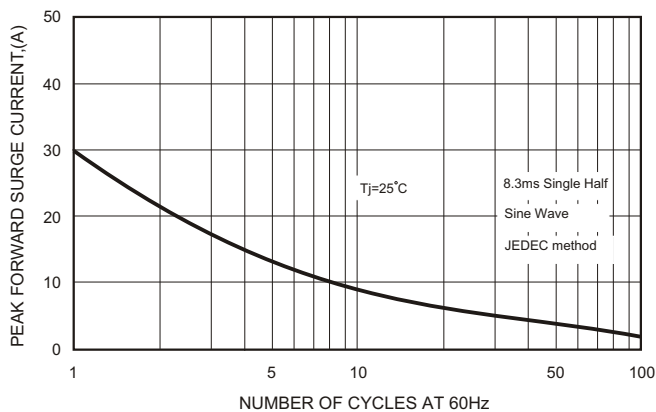


FIG.6-TYPICAL JUNCTION CAPACITANCE

