

# 1N5615GP - 1N5623GP

## GLASS PASSIVATED JUNCTION FAST RECOVERY RECTIFIERS

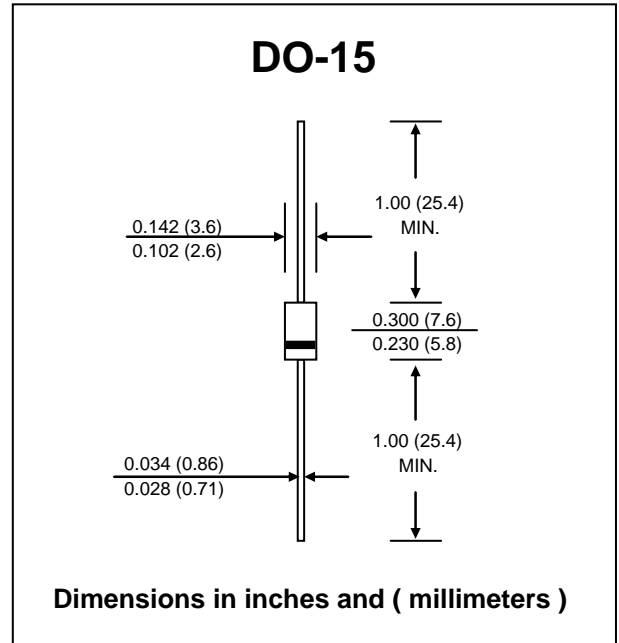
**PRV : 200 - 1000 Volts**  
**Io : 1.0 Ampere**

### FEATURES :

- \* Glass passivated chip
- \* High forward surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* **Pb / RoHS Free**

### MECHANICAL DATA :

- \* Case : DO-15 Molded plastic
- \* Epoxy : UL94V-0 rate flame retardant
- \* Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 0.4 gram



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

| RATING  | SYMBOL          | 1N5615GP      | 1N5617GP | 1N5619GP | 1N5621GP | 1N5623GP | UNIT               |
|---|-----------------|---------------|----------|----------|----------|----------|--------------------|
| Maximum Recurrent Peak Reverse Voltage  | $V_{RRM}$       | 200           | 400      | 600      | 800      | 1000     | V                  |
| Maximum RMS Voltage   | $V_{RMS}$       | 140           | 280      | 420      | 560      | 700      | V                  |
| Maximum DC Blocking Voltage   | $V_{DC}$        | 200           | 400      | 600      | 800      | 1000     | V                  |
| Maximum Average Forward Current<br>0.375"(9.5mm) Lead Length $T_a = 55\text{ }^\circ\text{C}$                                 | $I_{F(AV)}$     | 1.0           |          |          |          |          | A                  |
| Peak Forward Surge Current,<br>8.3ms Single half sine wave superimposed<br>on rated load (JEDEC Method)                       | $I_{FSM}$       | 50            |          |          |          |          | A                  |
| Maximum Peak Forward Voltage at $I_F = 1.0\text{ A}$  | $V_F$           | 1.2           |          |          |          |          | V                  |
| Maximum DC Reverse Current $T_a = 25\text{ }^\circ\text{C}$<br>at Rated DC Blocking Voltage $T_a = 100\text{ }^\circ\text{C}$ | $I_R$           | 0.5           |          |          |          |          | $\mu\text{A}$      |
|   | $I_{R(H)}$      | 25            |          |          |          |          | $\mu\text{A}$      |
| Maximum Reverse Recovery Time ( Note 1 )  | $T_{rr}$        | 150           | 250      | 300      | 500      |          | ns                 |
| Typical Junction Capacitance ( Note 2 )   | $C_J$           | 25            |          |          |          |          | pf                 |
| Typical Thermal Resistance (Note3)  | $R_{\theta JA}$ | 45            |          |          |          |          | $^\circ\text{C/W}$ |
| Junction Temperature Range  | $T_J$           | - 65 to + 175 |          |          |          |          | $^\circ\text{C}$   |
| Storage Temperature Range   | $T_{STG}$       | - 65 to + 175 |          |          |          |          | $^\circ\text{C}$   |

#### Notes :

- (1) Reverse Recovery Test Conditions :  $I_F = 0.5\text{ A}$ ,  $I_{RM} = 1.0\text{ A}$ ,  $I_{R(REC)} = 0.25\text{ A}$ .
- (2) Measured at 1.0 MHz and applied reverse voltage of 4.0VDC
- (3) Thermal resistance from Junction to Ambient at 0.375" (9.5mm) Lead Lengths, P.C. Board Mounted.



RATING AND CHARACTERISTIC CURVES ( 1N5615GP - 1N5623GP )

FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

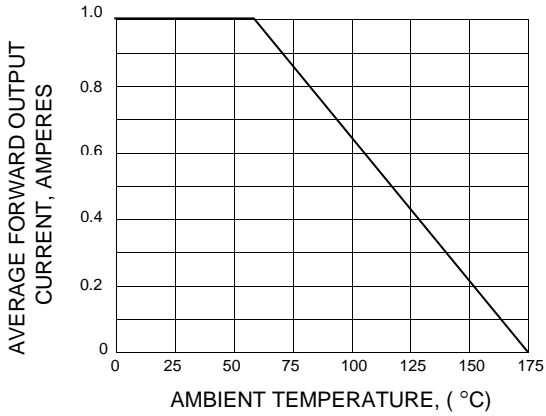


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

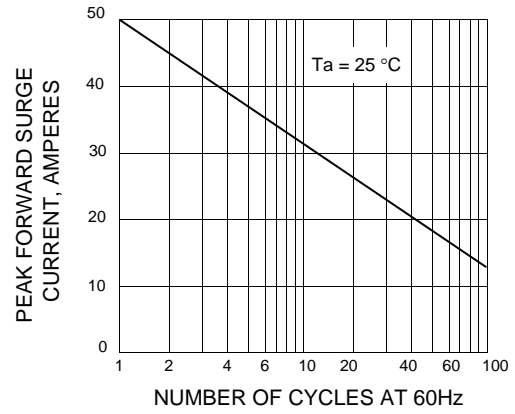


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

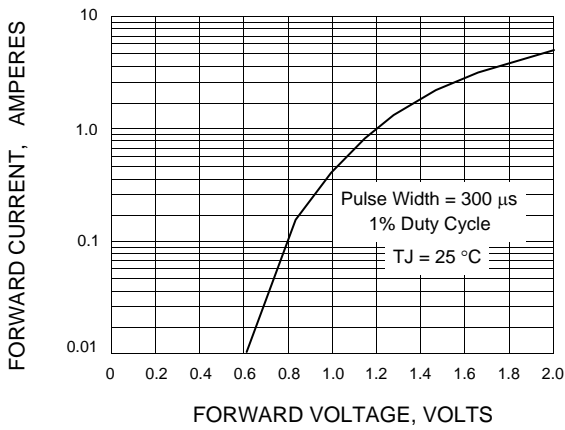


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

