

## GP30DL THRU GP30ML

### Low VF Rectifier Diode

#### FEATURES

- \* GPRC (Glass passivated rectifier chip) inside
- \* Glass passivated cavity-free junction
- \* Compliance to RoHS product
- \* Low forward voltage drop
- \* 3.0 Ampere operation at TA=55°C with no thermal runaway
- \* Plastic package has Underwriters Laboratory Flammability Classification 94V-0

#### APPLICATION

- \* General purpose rectification
- \* Surge absorption

#### MECHANICAL DATA

**Case :** DO-201AD molded plastic

**Terminals :** Tin Plated, solderable per MIL-STD-750, Method 2026.

**Polarity :** Color band denotes cathode end

**Weight :** 1.12 grams

#### PACKING

**Bulk :**

- \* 500 pieces box
- \* 24 boxes per (330x320x265mm) carton

**Reel :**

- \* 1,250 pieces per reel
- \* 4 reels per (340x340x330mm) carton

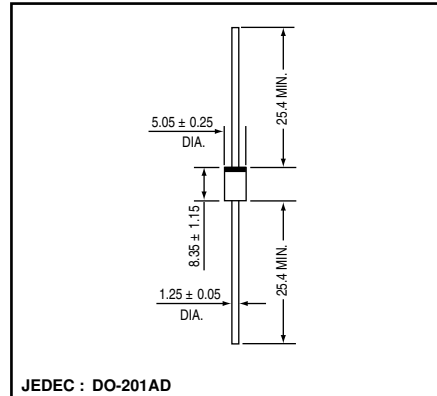
$$VF < 0.90V @ IF = 3A$$

$$IFSM = 140Amp$$

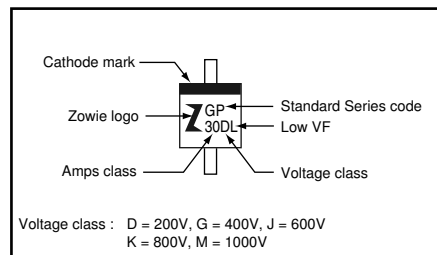
#### OUTLINE DIMENSIONS

**Case : DO-201AD**

Unit : mm



#### MARKING



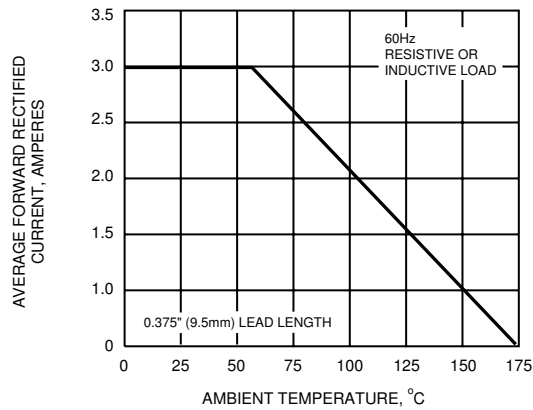
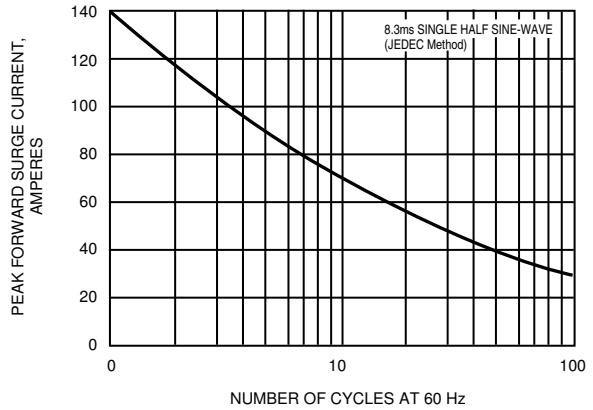
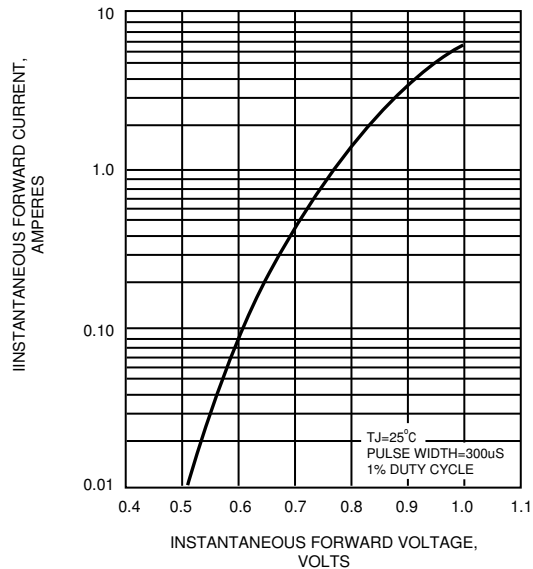
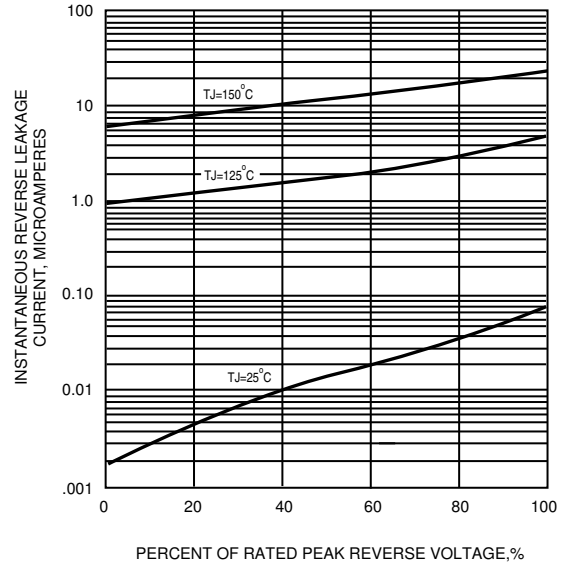
#### Absolute Maximum Ratings (Ta = 25 °C)

| ITEM                                                     | Symbol | Rating      |        |        |        |        | Unit |
|----------------------------------------------------------|--------|-------------|--------|--------|--------|--------|------|
|                                                          |        | GP30DL      | GP30GL | GP30JL | GP30KL | GP30ML |      |
| Repetitive peak reverse voltage                          | VRRM   | 200         | 400    | 600    | 800    | 1000   | V    |
| Average forward current                                  | IF(AV) | 3.0         |        |        |        |        | A    |
| Peak forward surge current (8.3ms single half sine-wave) | IFSM   | 140         |        |        |        |        |      |
| Operating junction temperature Range                     | Tj     | -65 to +175 |        |        |        |        | °C   |
| Storage temperature Range                                | TSTG   | -65 to +175 |        |        |        |        |      |

#### Electrical characteristics (Ta = 25 °C)

| ITEM                            | Symbol  | Conditions                 | Type                       | Min. | Typ. | Max. | Unit |
|---------------------------------|---------|----------------------------|----------------------------|------|------|------|------|
| Forward voltage                 | VF      | IF = 3.0A                  | GP30DL<br>GP30GL<br>GP30JL | -    | 0.87 | 0.90 | V    |
|                                 |         |                            | GP30KL<br>GP30ML           | -    | 0.90 | 0.92 |      |
| Repetitive peak reverse current | IRRM    | VR = Max. VRRM, Ta = 25 °C |                            | -    | 0.08 | 5    | uA   |
| Junction capacitance            | Cj      | VR = 4V, f = 1.0 MHz       |                            | -    | 40   | -    | pF   |
| Thermal resistance              | Rth(JA) | Junction to ambient *      |                            | -    | 20   | -    | °C/W |
|                                 | Rth(JL) | Junction to lead *         |                            | -    | 10   | -    |      |

\* Thermal resistance from junction to ambient and from junction to lead at 0.375" (9.5 mm) lead lengths, P.C.B. mounted.

**FIG.1 - FORWARD CURRENT DERATING CURVE**

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

**FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**

**FIG.4 - TYPICAL REVERSE CHARACTERISTICS**

**FIG.5 - TYPICAL JUNCTION CAPACITANCE**
