

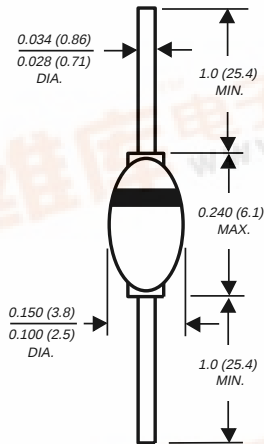
# CG1 AND DG1

## MINIATURE CLAMPER / DAMPER GLASS PASSIVATED JUNCTION RECTIFIER

**Reverse Voltage - 1400 to 1500 Volts    Forward Current - 1.5 Amperes**

**PATENTED \***

DO204AP



Dimensions in inches and (millimeters)

\* Brazed-lead assembly is covered by Patent No. 3,930,306

### FEATURES

- ◆ Specially designed for clamping circuits horizontal deflection systems and damper applications
- ◆ High temperature metallurgically bonded construction
- ◆ Glass passivated cavity-free junction
- ◆ 1.5 Ampere operation at  $T_A=50^{\circ}\text{C}$  with no thermal runaway
- ◆ Typical  $I_R$  less than  $0.1\mu\text{A}$
- ◆ Hermetically sealed package
- ◆ Capable of meeting environmental standards of MIL-S-19500
- ◆ High temperature soldering guaranteed:  $350^{\circ}\text{C}/10$  seconds  $0.375"$  (9.5mm) lead length, 5 lbs. (2.3kg) tension



### MECHANICAL DATA

**Case:** JEDEC DO-204AP Solid glass body

**Terminals:** Solder plated axial leads, solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

**Weight:** 0.02 ounce, 0.56 gram

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at  $25^{\circ}\text{C}$  ambient temperature unless otherwise specified.

|                                                                                                                     | SYMBOLS         | CG1         | DG1  | UNITS                       |
|---------------------------------------------------------------------------------------------------------------------|-----------------|-------------|------|-----------------------------|
| Maximum repetitive peak reverse voltage                                                                             | $V_{RRM}$       | 1400        | 1500 | Volts                       |
| Maximum RMS voltage                                                                                                 | $V_{RMS}$       | 980         | 1050 | Volts                       |
| Maximum DC blocking voltage                                                                                         | $V_{DC}$        | 1400        | 1500 | Volts                       |
| Maximum average forward rectified current<br>$0.375"$ (9.5mm) lead length at $T_A=50^{\circ}\text{C}$               | $I_{(AV)}$      | 1.5         |      | Amps                        |
| Peak forward surge current 8.3ms single half sine wave superimposed on rated load (JEDEC Method)                    | $I_{FSM}$       | 40.0        |      | Amps                        |
| Maximum instantaneous forward voltage at 1.0A                                                                       | $V_F$           | 1.1         |      | Volts                       |
| Maximum DC reverse current<br>at rated DC blocking voltage<br>$T_A=25^{\circ}\text{C}$<br>$T_A=100^{\circ}\text{C}$ | $I_R$           | 5.0<br>100  |      | $\mu\text{A}$               |
| Maximum full load reverse current full cycle average $0.375"$ (9.5mm) lead length at $T_A=100^{\circ}\text{C}$      | $I_{R(AV)}$     | 50.0        |      | $\mu\text{A}$               |
| Maximum reverse recovery time (NOTE 1)                                                                              | $t_{rr}$        | 15.0        | 20.0 | $\mu\text{s}$               |
| Typical junction capacitance (NOTE 2)                                                                               | $C_J$           | 15.0        |      | pF                          |
| Typical thermal resistance (NOTE 3)                                                                                 | $R_{\theta JA}$ | 55.0        |      | $^{\circ}\text{C}/\text{W}$ |
| Operating junction and storage temperature range                                                                    | $T_J, T_{STG}$  | -65 to +175 |      | $^{\circ}\text{C}$          |

#### NOTES:

- (1) Reverse recovery test conditions:  $I_F=0.5\text{A}$ ,  $I_R=50\text{mA}$
- (2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
- (3) Thermal resistance from junction to ambient at  $0.375"$  (9.5mm) lead length, P.C.B. mounted

## RATINGS AND CHARACTERISTIC CURVES CG1 AND DG1

FIG. 1 - FORWARD CURRENT DERATING CURVE

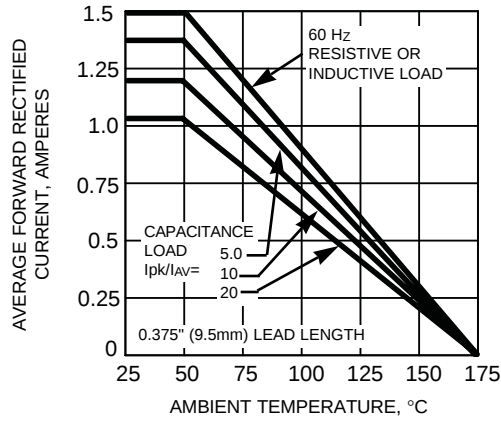


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

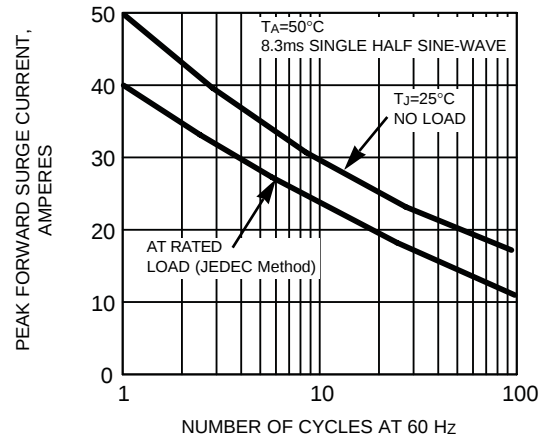


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

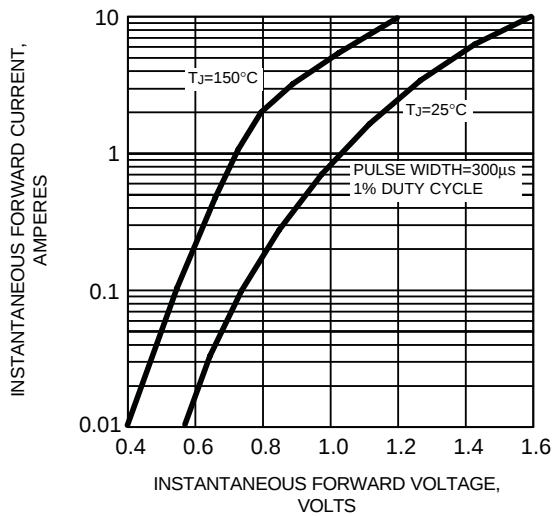


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

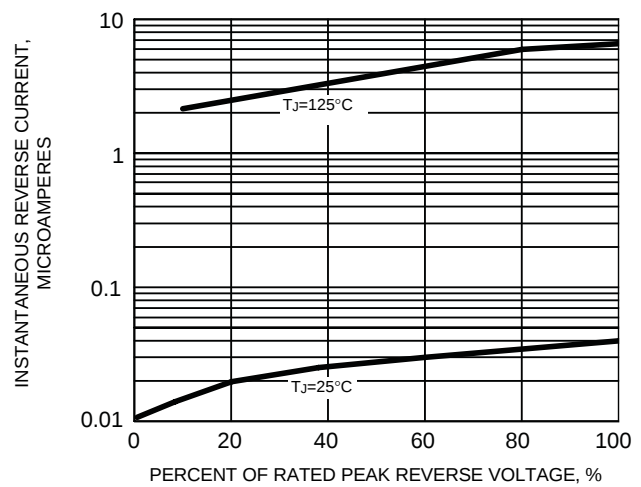


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

