

## FEATURES

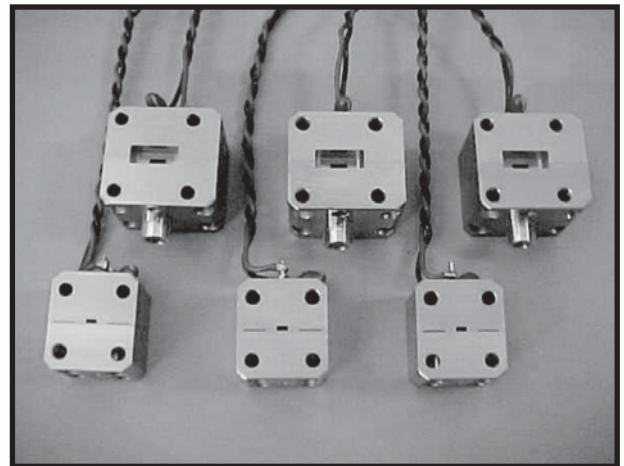
- ❖ Fix or mechanically tuned
- ❖ Excellent frequency and power stability
- ❖ Extremely high external Q
- ❖ Very low phase noise
- ❖ Self locking tuning mechanism

## APPLICATIONS

- ❖ Police speed radar guns
- ❖ Doppler sensors
- ❖ Transceivers

## DESCRIPTION

**OGL** series K and Ka band Gunn diode oscillators are especially designed for low cost commercial applications. Unlike most manufacturers' products, these oscillators are made of high performance devices and machined aluminum cavities. Due to extremely high external Q and temperature compensation mechanism, these oscillators exhibit higher frequency and power stability, lower phase noise and higher anti-load-pulling abilities. The oscillators are ideal candidates for the applications such as Police Speed Radar Gun and Doppler Sensors, where low close-in phase noise and high frequency stability are required.

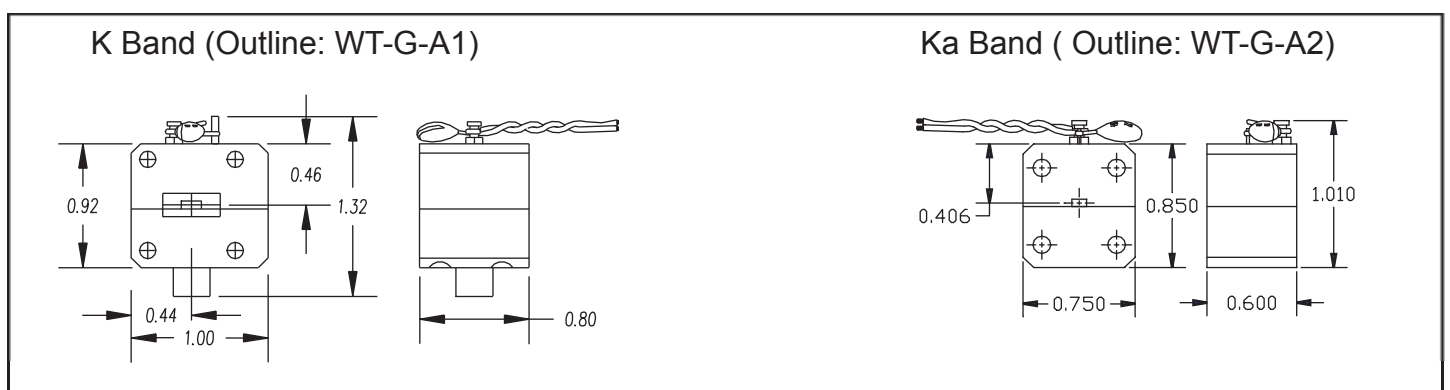


**OGL Series**

## SPECIFICATIONS

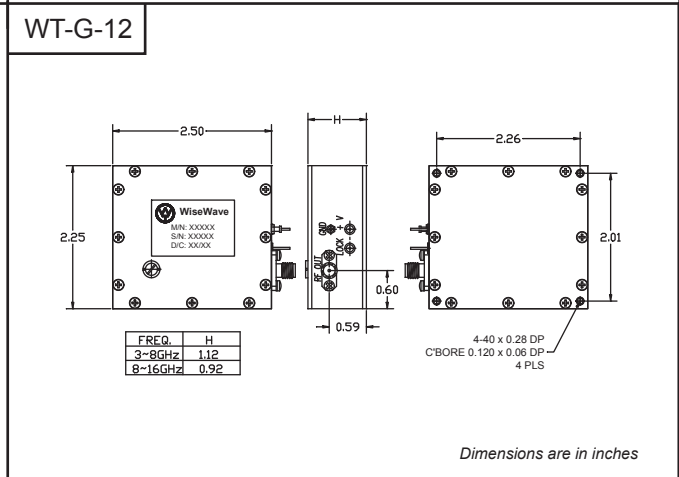
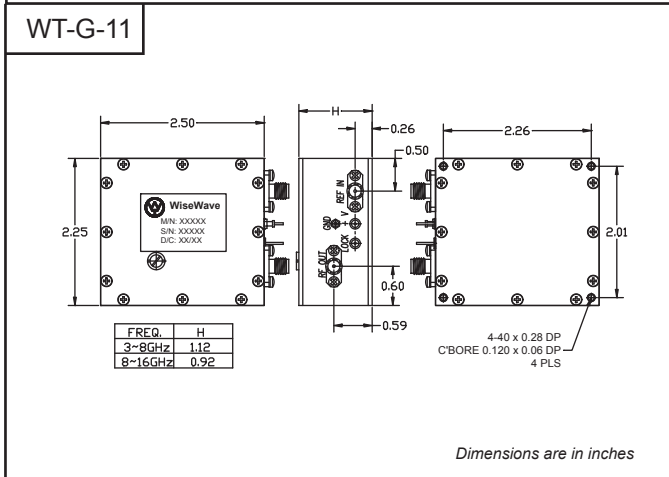
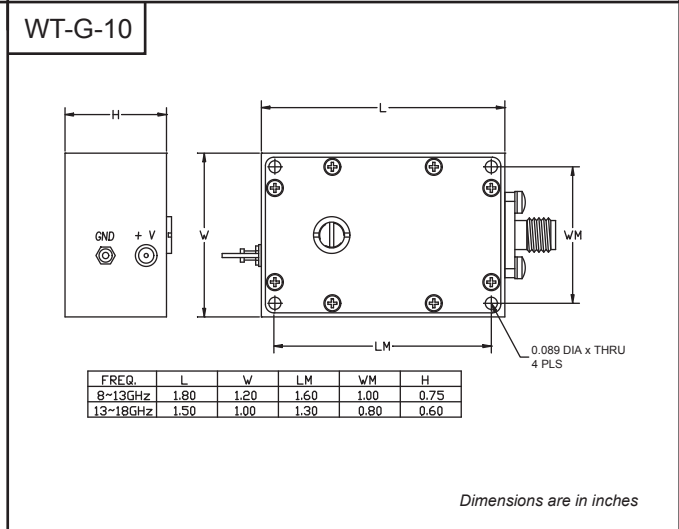
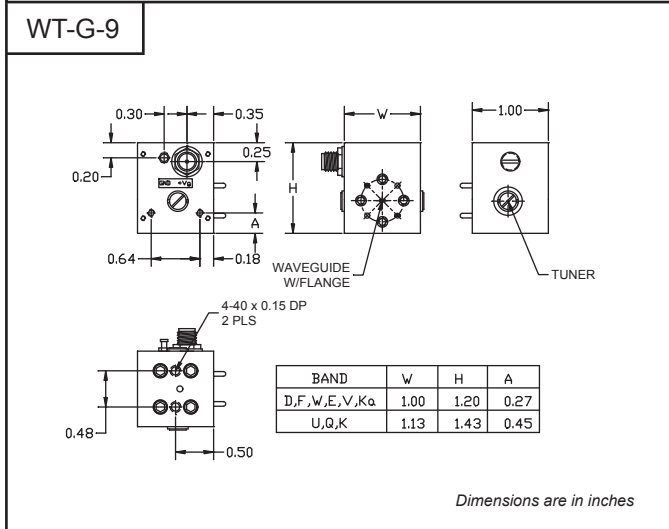
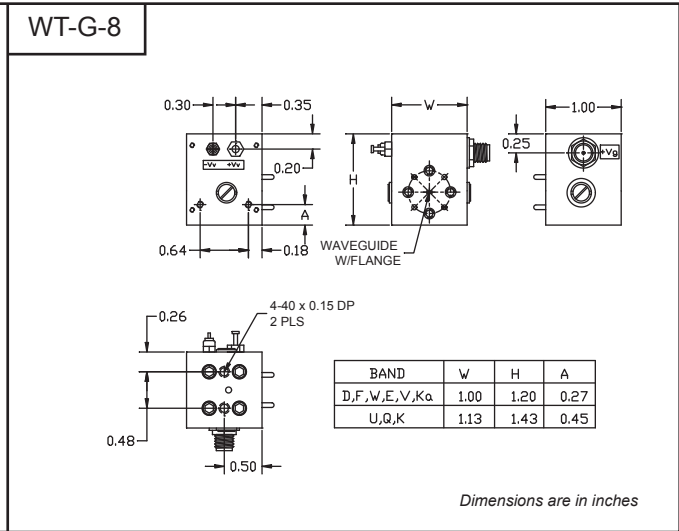
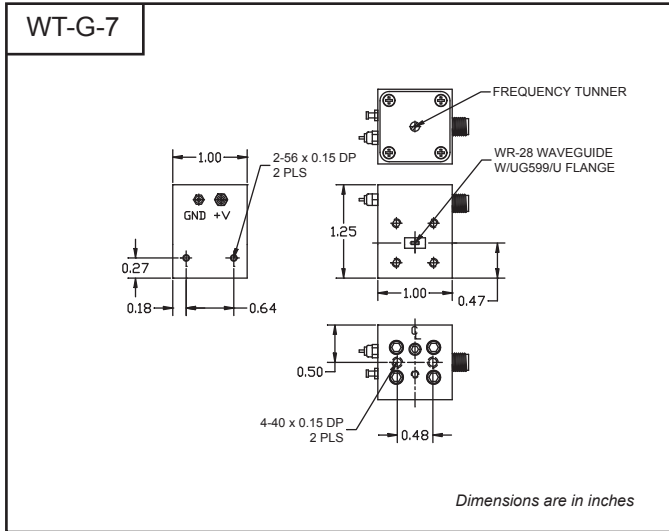
| Typical Specifications   |  |
|--|--|
| K Band (Model No.: OGL-42240110-31)  | Ka Band (Model No.: OGL-28350110-32)   |
| Center frequency: 24.125 GHz<br>Power Output: +10 dBm (minimum)<br>Mechanical tuning range: $\pm 500$ MHz (minimum)<br>$\Delta F/\Delta T$ : -0.20 MHz/ $^{\circ}$ C (maximum, -40 to +85 $^{\circ}$ C)<br>$\Delta P/\Delta T$ : -0.03 dB/ $^{\circ}$ C (maximum, -40 to +85 $^{\circ}$ C)<br>Phase noise: -98 dBc/Hz @ 100 KHz offset<br>Bias: 5.5V/250 mA (Typical)<br>Flange: UG595/U (through holes, 4-40)<br>Temperature Range: -40 to +85 $^{\circ}$ C | Center frequency: 35.000 GHz<br>Power Output: +10 dBm (minimum)<br>Mechanical tuning range: $\pm 500$ MHz (minimum)<br>$\Delta F/\Delta T$ : -0.40 MHz/ $^{\circ}$ C (maximum, -40 to +85 $^{\circ}$ C)<br>$\Delta P/\Delta T$ : -0.04 dB/ $^{\circ}$ C (maximum, -40 to +85 $^{\circ}$ C)<br>Phase noise: -95 dBc/Hz @ 100 KHz offset<br>Bias: 5.5V/350 mA (Typical)<br>Flange: UG599/U (through holes, 4-40)<br>Temperature Range: -40 to +85 $^{\circ}$ C |

## OUTLINE



| <p><b>WT-G-1</b></p> <p>Labels: 2-56 x 0.15 DP 2 PLS, WAVEGUIDE W/FLANGE, 1.00, 0.30, 0.35, 0.20, GND +V, 0.64, 0.18, 0.47, FREQUENCY TUNER, 0.50, 4-40 x 0.15 DP 2 PLS, 0.48</p> <table border="1"> <thead> <tr> <th>BAND</th> <th>W</th> <th>H</th> <th>A</th> </tr> </thead> <tbody> <tr> <td>D,F,W,E,V,Kα</td> <td>1.00</td> <td>1.20</td> <td>0.27</td> </tr> <tr> <td>U,Q,K</td> <td>1.13</td> <td>1.43</td> <td>0.45</td> </tr> </tbody> </table> <p><i>Dimensions are in inches</i></p> | BAND | W    | H    | A | D,F,W,E,V,Kα | 1.00 | 1.20 | 0.27 | U,Q,K | 1.13 | 1.43 | 0.45 | <p><b>WT-G-2</b></p> <p>Labels: 1.00, 0.30, 0.35, 0.20, GND +V, 2-56 x 0.15 DP 2 PLS, 0.64, 0.18, WAVEGUIDE W/FLANGE, 0.50, 4-40 x 0.15 DP 2 PLS, 0.48</p> <table border="1"> <thead> <tr> <th>BAND</th> <th>W</th> <th>H</th> <th>A</th> </tr> </thead> <tbody> <tr> <td>D,F,W,E,V,Kα</td> <td>1.00</td> <td>1.20</td> <td>0.27</td> </tr> <tr> <td>U,Q,K</td> <td>1.13</td> <td>1.43</td> <td>0.45</td> </tr> </tbody> </table> <p><i>Dimensions are in inches</i></p> | BAND | W | H | A | D,F,W,E,V,Kα | 1.00 | 1.20 | 0.27 | U,Q,K | 1.13 | 1.43 | 0.45 |
|---|------|------|------|---|--------------|------|------|------|-------|------|------|------|--|------|---|---|---|--------------|------|------|------|-------|------|------|------|
| BAND  | W    | H    | A    |   |              |      |      |      |       |      |      |      |  |      |   |   |   |              |      |      |      |       |      |      |      |
| D,F,W,E,V,Kα  | 1.00 | 1.20 | 0.27 |   |              |      |      |      |       |      |      |      |  |      |   |   |   |              |      |      |      |       |      |      |      |
| U,Q,K   | 1.13 | 1.43 | 0.45 |   |              |      |      |      |       |      |      |      |  |      |   |   |   |              |      |      |      |       |      |      |      |
| BAND  | W    | H    | A    |   |              |      |      |      |       |      |      |      |  |      |   |   |   |              |      |      |      |       |      |      |      |
| D,F,W,E,V,Kα  | 1.00 | 1.20 | 0.27 |   |              |      |      |      |       |      |      |      |  |      |   |   |   |              |      |      |      |       |      |      |      |
| U,Q,K   | 1.13 | 1.43 | 0.45 |   |              |      |      |      |       |      |      |      |  |      |   |   |   |              |      |      |      |       |      |      |      |
| <p><b>WT-G-3</b></p> <p>Labels: 0.30, 0.35, 0.20, GND +V, 2-56 x 0.15 DP 2 PLS, WAVEGUIDE W/FLANGE, 0.64, 0.18, 0.50, 0.48, 4-40 x 0.15 DP 2 PLS</p> <table border="1"> <thead> <tr> <th>BAND</th> <th>W</th> <th>H</th> <th>A</th> </tr> </thead> <tbody> <tr> <td>D,F,W,E,V,Kα</td> <td>1.00</td> <td>1.20</td> <td>0.27</td> </tr> <tr> <td>U,Q,K</td> <td>1.13</td> <td>1.43</td> <td>0.45</td> </tr> </tbody> </table> <p><i>Dimensions are in inches</i></p>                              | BAND | W    | H    | A | D,F,W,E,V,Kα | 1.00 | 1.20 | 0.27 | U,Q,K | 1.13 | 1.43 | 0.45 | <p><b>WT-G-4</b></p> <p>Labels: 0.30, 0.35, 0.20, GND +V, 2-56 x 0.15 DP 2 PLS, WR-28 WAVEGUIDE W/UG599/U FLANGE, 0.25, 1.25, 0.27, 0.64, 1.00, 0.18, 0.47, 0.50, 4-40 x 0.15 DP 2 PLS, 0.48</p> <p><i>Dimensions are in inches</i></p>  |      |   |   |   |              |      |      |      |       |      |      |      |
| BAND  | W    | H    | A    |   |              |      |      |      |       |      |      |      |  |      |   |   |   |              |      |      |      |       |      |      |      |
| D,F,W,E,V,Kα  | 1.00 | 1.20 | 0.27 |   |              |      |      |      |       |      |      |      |  |      |   |   |   |              |      |      |      |       |      |      |      |
| U,Q,K   | 1.13 | 1.43 | 0.45 |   |              |      |      |      |       |      |      |      |  |      |   |   |   |              |      |      |      |       |      |      |      |
| <p><b>WT-G-5</b></p> <p>Labels: 0.30, 0.35, 0.20, GND +V, 2-56 x 0.15 DP 2 PLS, WAVEGUIDE W/FLANGE, 0.64, 1.00, 0.18, 0.25, +V, 0.50, 4-40 x 0.15 DP 2 PLS, 0.48</p> <table border="1"> <thead> <tr> <th>BAND</th> <th>W</th> <th>H</th> <th>A</th> </tr> </thead> <tbody> <tr> <td>D,F,W,E,V,Kα</td> <td>1.00</td> <td>1.20</td> <td>0.27</td> </tr> <tr> <td>U,Q,K</td> <td>1.13</td> <td>1.43</td> <td>0.45</td> </tr> </tbody> </table> <p><i>Dimensions are in inches</i></p>              | BAND | W    | H    | A | D,F,W,E,V,Kα | 1.00 | 1.20 | 0.27 | U,Q,K | 1.13 | 1.43 | 0.45 | <p><b>WT-G-6</b></p> <p>Labels: FREQUENCY TUNER, BIAS PORT, 0.14 DIA X 0.38 DP, 2.50, 2.20, WR-10/WR-12/WR-15 W/UG387/U FLANGE, 0.43, 0.15, 0.55, 1.00, 0.50, 4-40 x 0.15 DP 2 PLS, 0.40</p> <p><i>Dimensions are in inches</i></p>  |      |   |   |   |              |      |      |      |       |      |      |      |
| BAND  | W    | H    | A    |   |              |      |      |      |       |      |      |      |  |      |   |   |   |              |      |      |      |       |      |      |      |
| D,F,W,E,V,Kα  | 1.00 | 1.20 | 0.27 |   |              |      |      |      |       |      |      |      |  |      |   |   |   |              |      |      |      |       |      |      |      |
| U,Q,K   | 1.13 | 1.43 | 0.45 |   |              |      |      |      |       |      |      |      |  |      |   |   |   |              |      |      |      |       |      |      |      |

The flange pattern shown is for illustration purpose. Refer to Technical Reference Section for flange pattern details. The outline drawings shown are standard versions. Contact factory for your specific package requirements.



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