

Ka-Band Volume Production Oscillator

SOL-35340215-28-G1 is a volume-production ready, Ka Band Gunn oscillator that utilizes a high performance GaAs Gunn diode and high Q cavity to achieve excellent phase noise and power stability. The oscillator is designed for fixed frequency applications; however, the frequency can be adjusted by  $\pm 4$  GHz using the self-locking set screw provided.



Electrical Specifications:

| Parameter                  | Minimum          | Typical              | Maximum                |
|----------------------------|------------------|----------------------|------------------------|
| Frequency Range            |                  | 35 GHz               |                        |
| Power Output               | +12 dBm          | +15 dBm              |                        |
| Mechanical Tuning Range    |                  | $\pm 4,000$ MHz      |                        |
| Harmonic Emissions         |                  | -20 dBc              |                        |
| Phase Noise@100 KHz offset |                  | -95 dBc/Hz           |                        |
| Frequency Stability        |                  |                      | -0.3 MHz/ $^{\circ}$ C |
| Power Output Stability     |                  |                      | -0.03 dB/ $^{\circ}$ C |
| Bias Voltage               |                  | +5.5 V <sub>DC</sub> | +6 V <sub>DC</sub>     |
| Bias Current               |                  | 300 mA               |                        |
| Specification Temperature  |                  | +25 $^{\circ}$ C     |                        |
| Operating Temperature      | -40 $^{\circ}$ C |                      | +85 $^{\circ}$ C       |

Mechanical Specifications:

| Item            | Specification                        |
|-----------------|--------------------------------------|
| RF Ports        | WR-28 Waveguide with UG-599/U Flange |
| Cavity Material | Aluminum                             |
| Finish          | Chem Film                            |
| Weight          | 0.6 Oz                               |
| Outline         | OL-A1                                |

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FEATURES

- Low Cost and Production Ready
- Mechanical Tuning Ability
- Low AM/FM Noise and Harmonics
- High Frequency and Power Stability

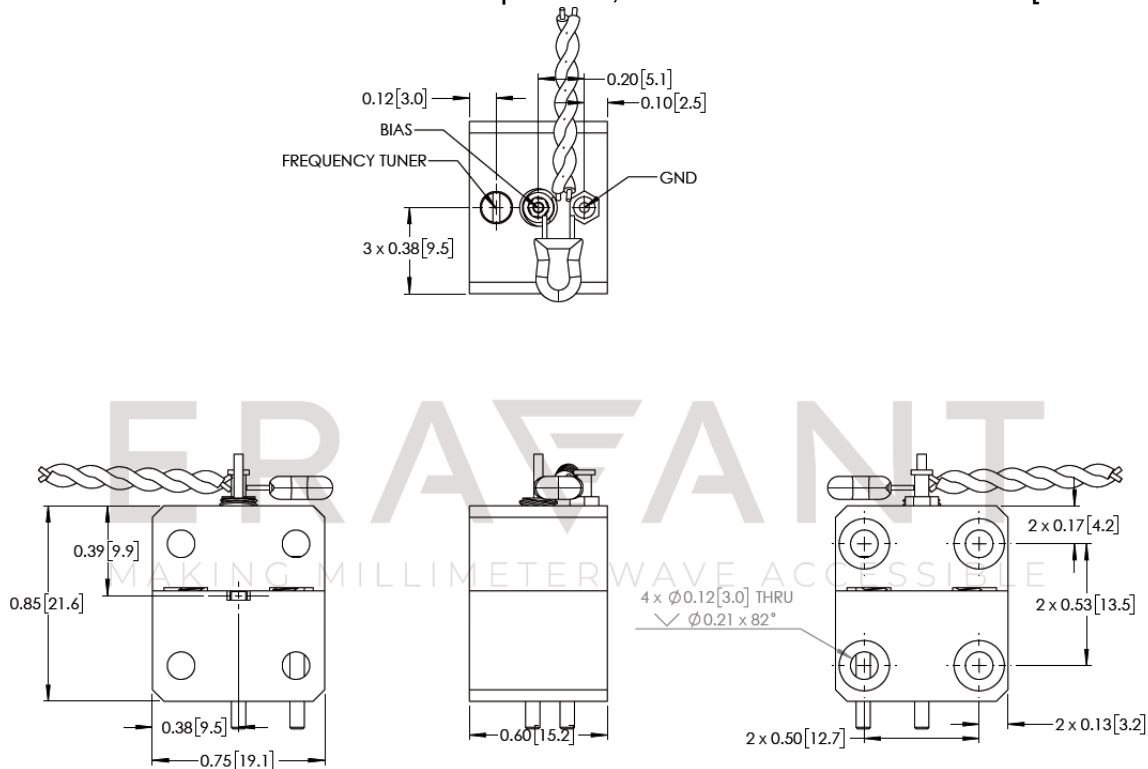
APPLICATIONS

- Traffic Control Systems
- Communication Systems
- Radar System

SUPPLEMENTAL DETAILS



**Mechanical Outline:** Unless otherwise specified, all dimensions are in inches [millimeters]



### NOTE:

- Eravant reserves the right to change the information presented without notice.

### CAUTION:

- Reversing polarity bias will destroy the device
- Exceeding absolute maximum rating shown will damage the device
- The device is static sensitive. Always follow ESD rules when working with the device
- Any foreign objects in the waveguide will cause performance degradation and possible device damage.
- The case temperature of the device shall never exceed +85 °C. Use an additional heatsink or fan if necessary.