



Dielectric Resonator Oscillator, 20 GHz, +15 dBm

Description:

Model **SOD-20301215-SF-S1** is a mechanically tuned, dielectric resonator oscillator with a center frequency of 20 GHz and a mechanical tuning range of ± 50 MHz. The oscillator delivers a nominal output power of +15 dBm with a low phase noise and harmonic emissions. The oscillator takes a +12 V_{DC}/125 mA DC bias. The RF output is equipped with a female SMA connector.



Features:

- Low AM/FM Noise and Harmonics
- Mechanically Tunable

Applications:

- Test Sources
- Signal Generation
- Lab Test Setups

Electrical Specifications:

| Parameter | Minimum | Typical | Maximum |
|-----------------------------|----------------|---------------------|---------------------------|
| Center Frequency | | 20 GHz | |
| Power Output | | +15 dBm | |
| Mechanical Tuning Range | | ± 50 MHz | |
| Frequency Stability | | | ± 3 ppm/ $^{\circ}$ C |
| Phase Noise @ 10 KHz Offset | | -85 dBc/Hz | |
| Spurious | | | -75 dBc |
| Harmonics | | | -20 dBc |
| Bias Voltage | | +12 V _{DC} | |
| Bias Current | | 125 mA | |
| Specification Temperature | | +25 $^{\circ}$ C | |
| Operating Temperature | 0 $^{\circ}$ C | | +50 $^{\circ}$ C |

Mechanical Specifications:

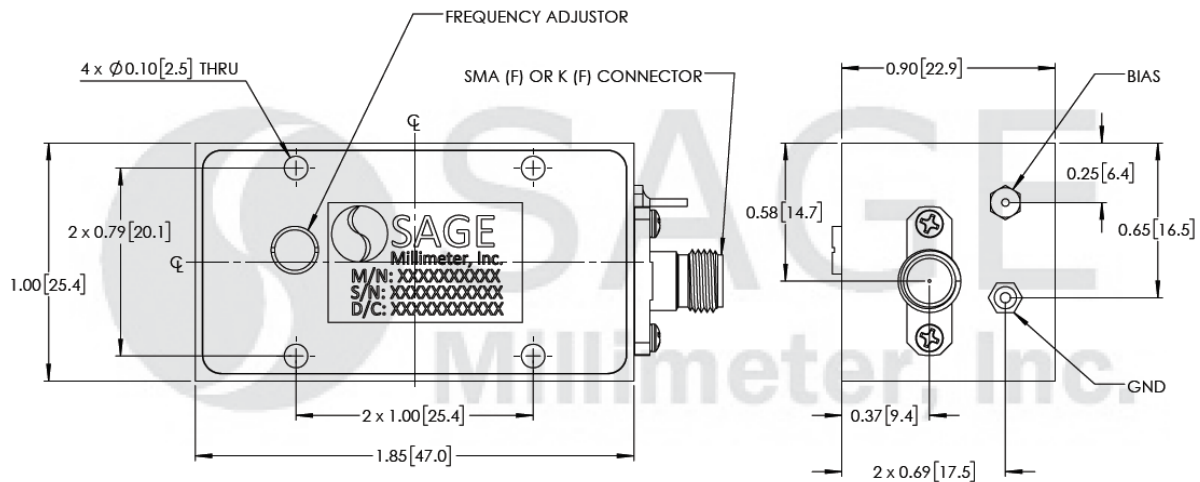
| Item | Specification |
|---------------|-----------------------------------|
| RF Port | SMA (F) |
| DC Bias | Solder Pin |
| Case Material | Aluminum |
| Finish | Chem Film |
| Weight | 4 Oz |
| Size | 1.85" (L) x 1.00" (W) x 0.90" (H) |
| Outline | OD-FCK-P1 |





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



Note:

- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.
- Other mechanical configurations are available under different model numbers.

Caution:

- Reversing polarity bias will destroy the device.
- Exceeding absolute maximum ratings shown will damage the device.
- The device is static sensitive. Always follow ESD rules when working with the device.
- The case temperature of the device shall never exceed **+50°C**. Use additional heatsink or fan if necessary.
- Proper torque, 8.0 ± 0.15 inch-pounds (0.90 ± 0.02 Nm), should be applied. **SAGE Millimeter torque wrench, model SCH-08008-S1, is highly recommended.**

