

SOD-96202217-SF-S1

Dielectric Resonator Oscillator, 9.6 GHz, +17 dBm

SOD-96202217-SF-S1 is a mechanically tuned, dielectric resonator oscillator with a center frequency of 9.6 GHz and a mechanical tuning range of ± 100 MHz. The oscillator delivers a nominal output power of +17 dBm with a low phase noise and harmonic emissions. The oscillator takes a +12 V_{DC}/90 mA DC bias. The RF output is equipped with a female SMA connector.



Electrical Specifications:

| Parameter | Minimum | Typical | Maximum |
|------------------------------|----------------|---------------------|---------------------------|
| Center Frequency | | 9.6 GHz | |
| Power Output | | +17 dBm | |
| Mechanical Tuning Range | | ± 100 MHz | |
| Frequency Stability | | | ± 4 ppm/ $^{\circ}$ C |
| Phase Noise @ 100 KHz Offset | | -100 dBc/Hz | |
| Spurious | | | -75 dBc |
| Harmonics | | | -25 dBc |
| Bias Voltage | | +12 V _{DC} | |
| Bias Current | | 90 mA | |
| Specification Temperature | | +25 $^{\circ}$ C | |
| Operating Temperature | 0 $^{\circ}$ C | | +50 $^{\circ}$ C |

Mechanical Specifications:

| Item | Specification |
|---------------|-----------------------------------|
| RF Ports | SMA (F) |
| DC Bias | Solder Pin |
| Case Material | Aluminum |
| Finish | Chem Film |
| Weight | 3.8 Oz |
| Size | 1.80" (L) x 1.00" (W) x 0.76" (H) |
| Outline | OD-FSX-NW1 |

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FEATURES

- Low AM/FM Noise and Harmonics
- Mechanically Tunable

APPLICATIONS

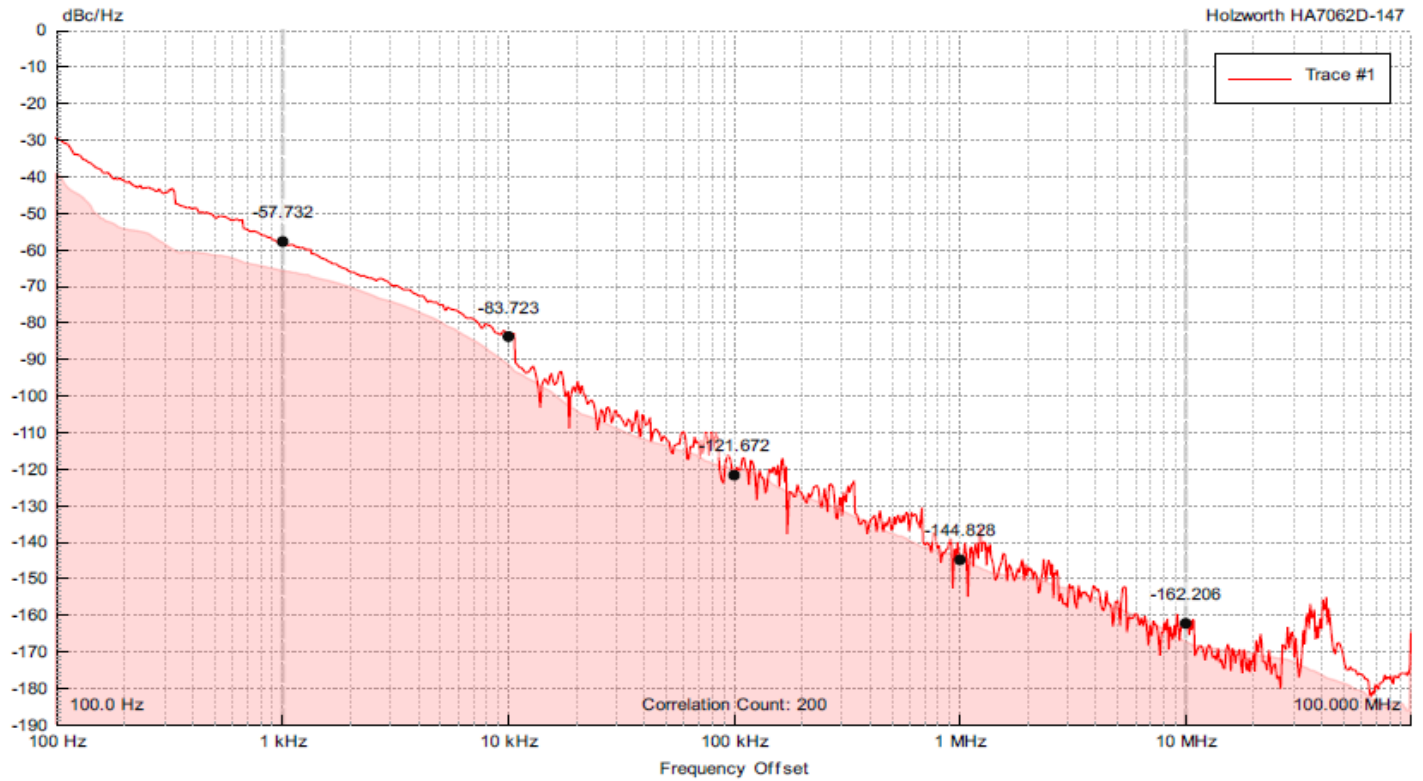
- Test Sources
- Signal Generation
- Lab Test Setups

SUPPLEMENTAL DETAILS

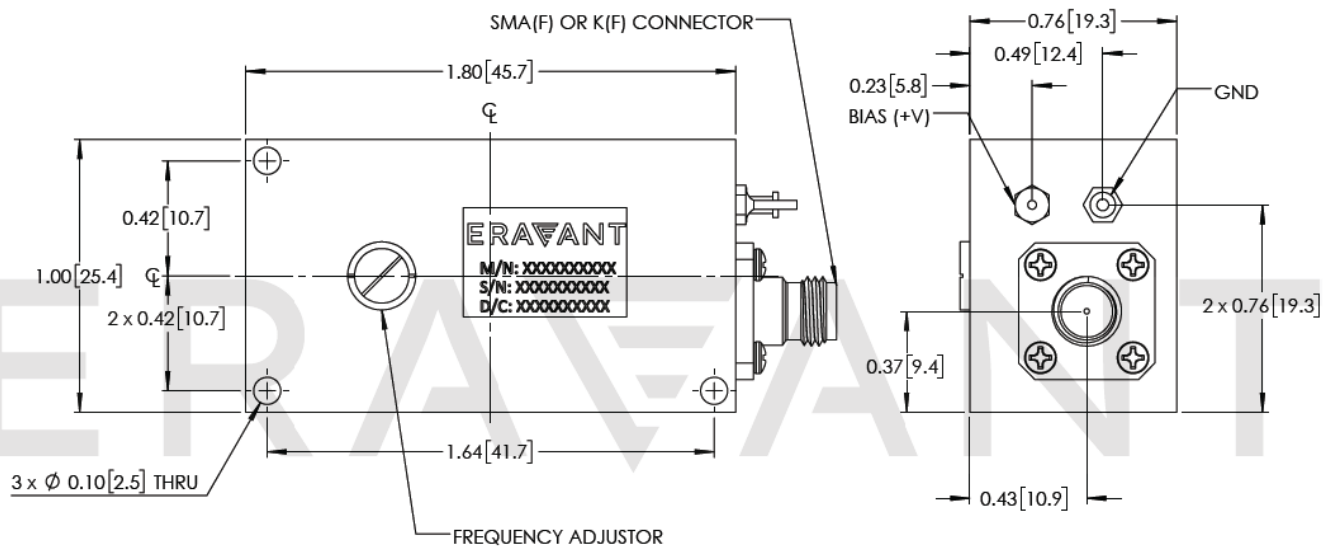


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Typical Phase Noise vs. Frequency Offset



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



NOTE:

- Eravant 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 an additional heatsink or fan if necessary.
- For 1.35 mm, 1.85 mm, 2.4 mm, 2.92 mm, and SMA connectors proper torque should be applied: 8.0 ± 0.15 inch-pounds (0.90 ± 0.02 Nm). Torque wrench model SCH-08008-S1 is highly recommended.

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