

## Dielectric Resonator Oscillator, 17.65 GHz, +15 dBm

### Description:

Model SOD-18301215-SF-S4-2 is a mechanically tuned, dielectric resonator oscillator with a center frequency of 17.65 GHz and a mechanical tuning range of  $\pm 50$  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<sub>DC</sub>/380 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		17.65 GHz	
Power Output		+15 dBm	
Mechanical Tuning Range		$\pm 50$ MHz	
Frequency Stability			$\pm 5$ ppm/ $^{\circ}$ C
Phase Noise @ 100 KHz Offset		-85 dBc/Hz	
Spurious			-70 dBc
Harmonics			-20 dBc
Bias Voltage		+12 V <sub>DC</sub>	
Bias Current		380 mA	
Specification Temperature		+25 $^{\circ}$ C	
Operating Temperature	0 $^{\circ}$ C		+50 $^{\circ}$ C

### Mechanical Specifications:

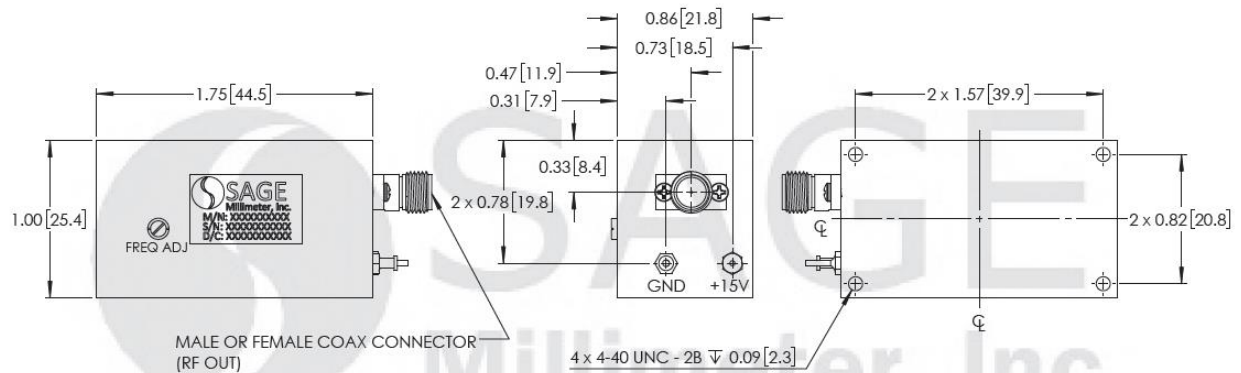
Item	Specification
RF Port	SMA (F)
DC Bias	Solder Pin
Case Material	Aluminum
Finish	Chem Film
Weight	4 Oz
Size	1.75" (L) x 1.00" (W) x 0.86" (H)
Outline	OD-FCD-P1



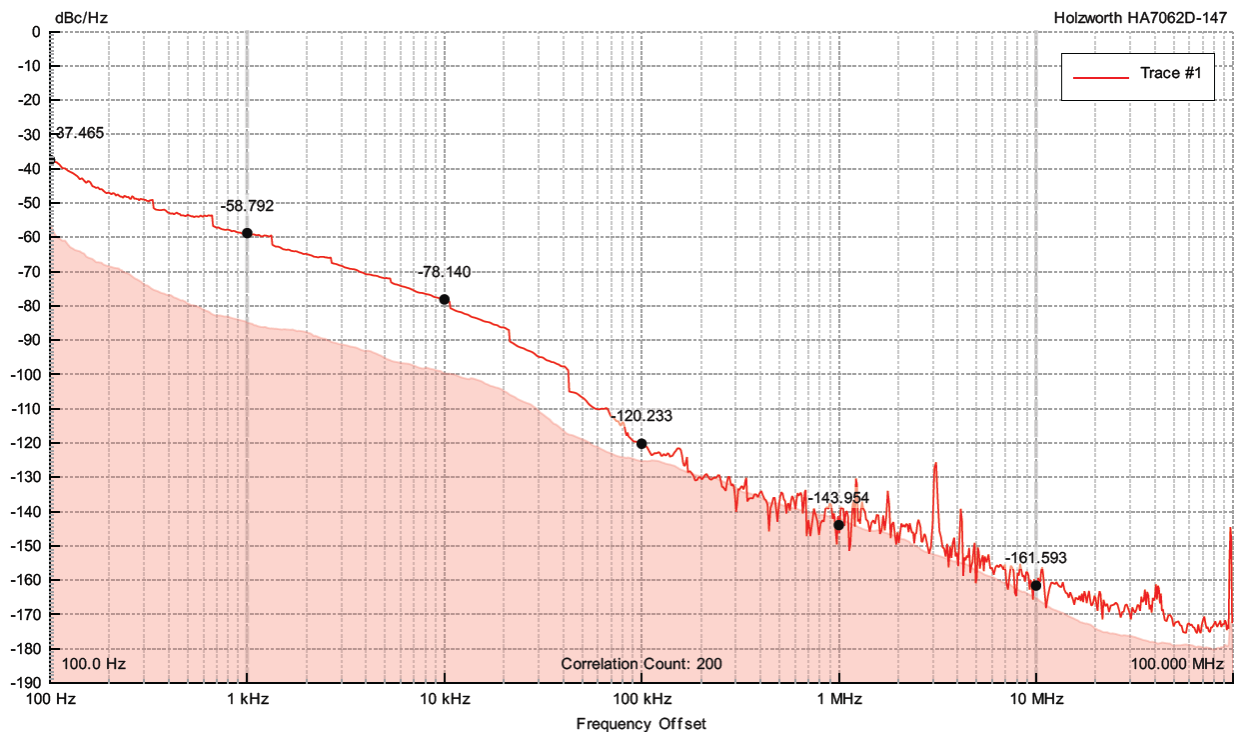


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**Mechanical Outline:** (Unless otherwise specified, all dimensions are in inches [millimeters])



## Measured Phase Noise Response:





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### Note:

- All data presented is collected from a sample lot. Actual data may vary unit to unit, slightly.
- All testing was performed under +25 °C room temperature.
- 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 additional heatsink or fan if necessary.
- Proper torque,  $8.0 \pm 0.15$  inch-pounds ( $0.90 \pm 0.02$  Nm), should be applied. **Eravant torque wrench, model SCH-08008-S1, is highly recommended.**

