



## Dielectric Resonator Oscillator, 30 GHz, +26 dBm

### Description:

Model **SOD-30303226-KF-S4** is a mechanically tuned, dielectric resonator oscillator with a center frequency of 30 GHz and a mechanical tuning range of  $\pm 150$  MHz. The oscillator delivers minimum output power of +26 dBm with a low phase noise and harmonic emissions. The oscillator takes a +9 V<sub>DC</sub>/900 mA DC bias. The RF output is equipped with a female 2.92 mm (K) connector.



### Features:

- Low AM/FM Noise and Harmonics
- Wide Mechanical Tuning Bandwidth

### Applications:

- Test Sources
- Signal Generation
- Lab Test Setups

### Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Center Frequency		30 GHz	
Power Output	+26 dBm		
Mechanical Tuning Range		$\pm 150$ MHz	
Frequency Stability			$\pm 5$ ppm/ $^{\circ}$ C
Phase Noise @ 100 KHz Offset		-95 dBc/Hz	
Spurious		-80 dBc	
Harmonics		-40 dBc	-30 dBc
Bias Voltage		+9 V <sub>DC</sub>	
Bias Current		900 mA	
Specification Temperature		+25 $^{\circ}$ C	
Operating Temperature	0 $^{\circ}$ C		+50 $^{\circ}$ C

### Mechanical Specifications:

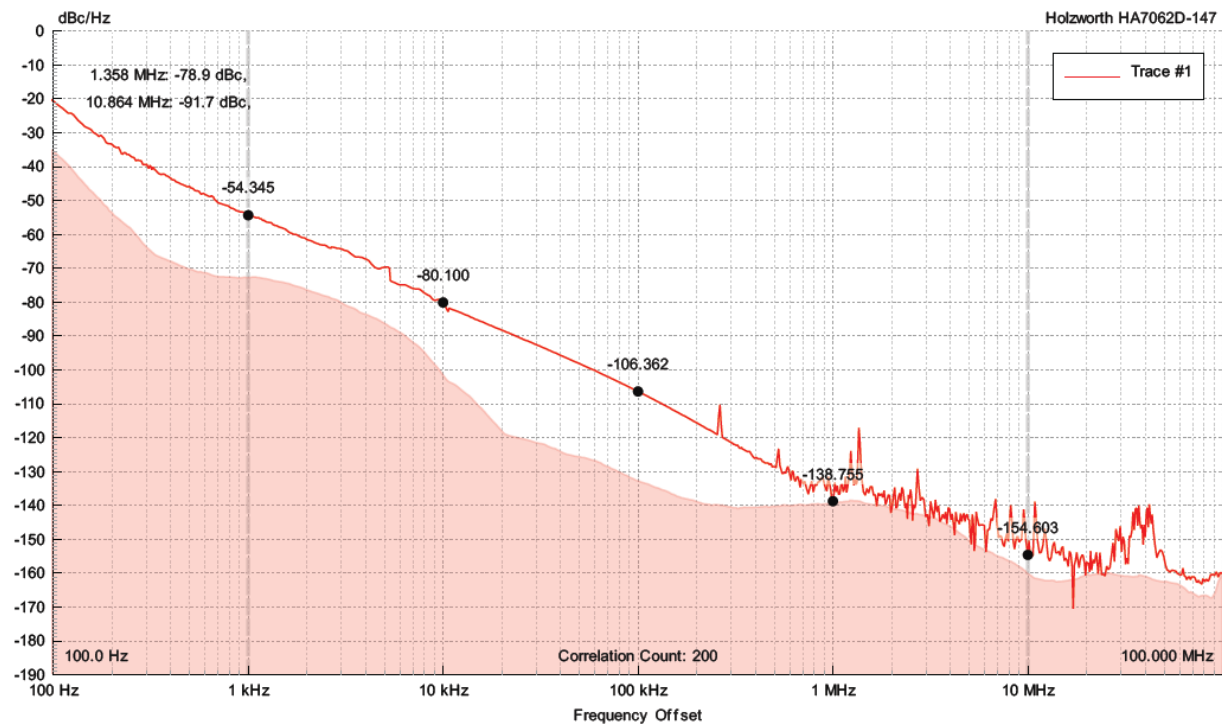
Item	Specification
RF Port	K (F)
DC Bias	Solder Pin
Case Material	Aluminum
Finish	Nickel Plated
Weight	2.8 Oz
Size	2.36" (L) x 1.10" (W) x 0.98" (H)
Outline	OD-FCA-NW2





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### Measured Phase Noise (25 °C operating temperature):



### Measured Data:

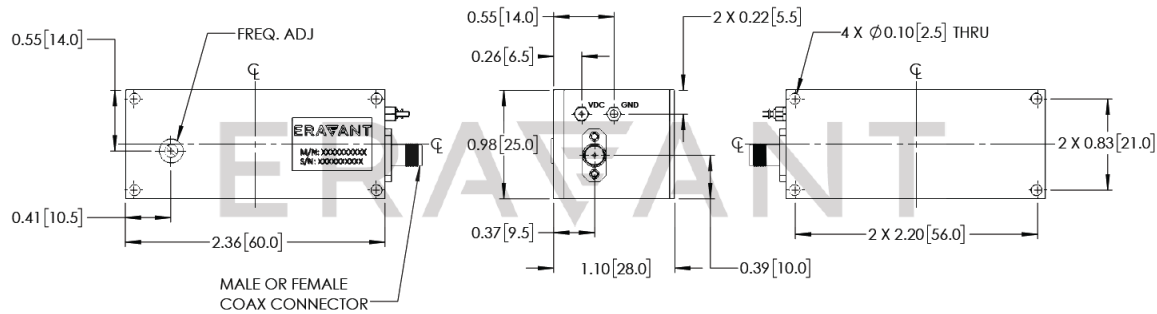
Parameter	Measurement		
	0 °C	+25 °C	+50 °C
Frequency	30.00031 GHz	29.99996 GHz	29.99825 GHz
Output Power	+27 dBm	+27 dBm	+26.8 dBm
Harmonics	-59 dBc	-55 dBc	-54 dBc
Spurious (within 30 ± 0.1 GHz)	-65 dBc	-70 dBc	-76 dBc
Spurious (outside 30 ± 0.1 GHz)	-80 dBc	-80 dBc	-80 dBc
Current Consumption at +9 VDC	860 mA	840 mA	810 mA
Frequency Stability	+0.47 ppm / °C	-	-2.28 ppm / °C





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



**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 case temperature unless specified.
- 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 ± 0.15 inch-pounds (0.90 ± 0.02 Nm), should be applied. **Eravant torque wrench, model SCH-08008-S1, is highly recommended.**

