SOP-35301113-KF-EB

Phase Locked Oscillator, 35 GHz, +13 dBm, 10 MHz Externally Referenced

SOP-35301113-KF-EB is a phase locked oscillator with high performance DRVCO (Dielectric Resonator Voltage Controller Oscillator) technology to generate a clean and high-quality microwave signal. The oscillator is designed and fabricated to be phase locked to the high quality 10 MHz externally reference oscillator so that the superior phase noise performance can be achieved. The oscillator delivers a typical output power of +13 dBm and has nominal harmonic of -25 dBc and spurious of -75 dBc, respectively. The oscillator has a built-in voltage regulator to further improve the signal quality and prevent possible damage due to the over voltage operation. The oscillator is hermetically sealed to offer the maximum environmental performance.

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
Frequency		35 GHz	
Output Power		+13 dBm	
Phase Noise*	Reference Source + 20 Log (N) + 3 dB		
External Reference Frequency		10 MHz	
External Reference Input Power	-3 dBm	0 dBm	+3 dBm
Sub-Harmonics			-60 dBc
Harmonic		-25 dBc	
Spurious		-75 dBc	
Phase Locked Indicator (Lock)	TLL “High”		
Phase Error Voltage (V_T)	0 to +10 V_{DC}		
DC Voltage		+12 V_{DC}	+15 V_{DC}
DC Supply Current		650 mA	
Frequency Stability (Externally Referenced)*	Same as reference		
Specification Temperature		+25°C	
Operating Temperature	-40°C		+70°C

*For externally referenced phase locked oscillators, phase noise is reference source dependent, in General. Phase Noise = Reference Source + 20 Log (N) + 3 dB. The phase noise data shown here Is tested with Wenzel model 501-27501-32

ECCN

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FEATURES

- High Output Power
- Low Phase Noise
- Low Harmonic Components

APPLICATIONS

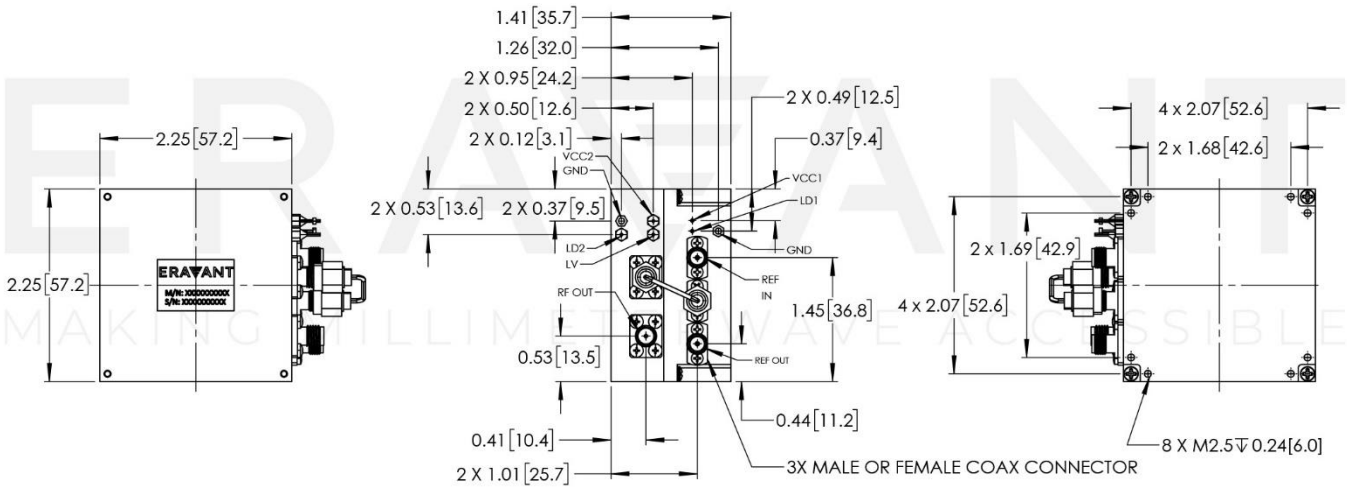
- Radar Systems
- Communication Links
- Transmitters/Receivers

SUPPLEMENTAL DETAILS

Mechanical Specifications:

Item	Specification
RF Output	2.92 mm (F) Connector
REF Output	SMA (F) Connector
DC Bias Port (Vcc)	Feedthru Pin
Phase Lock Indicator Port (LD)	Feedthru Pin
Phase Error Voltage (VT)	Feedthru Pin
Ground Terminal	Ground Lug
Case Material	Aluminum
Finish	Nickel Plated and Bare Aluminum
Package	Hermetically Sealed
Weight	4.0 Oz
Size	2.25” (L) x 2.25” (W) x 1.41” (H)
Outline	OP-EC-SM1

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:

- 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 should never exceed **+70 °C**. Use proper heatsink or fan if necessary.
- 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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