

## 2LPL SERIES PHASE-LOCKED OSCILLATOR

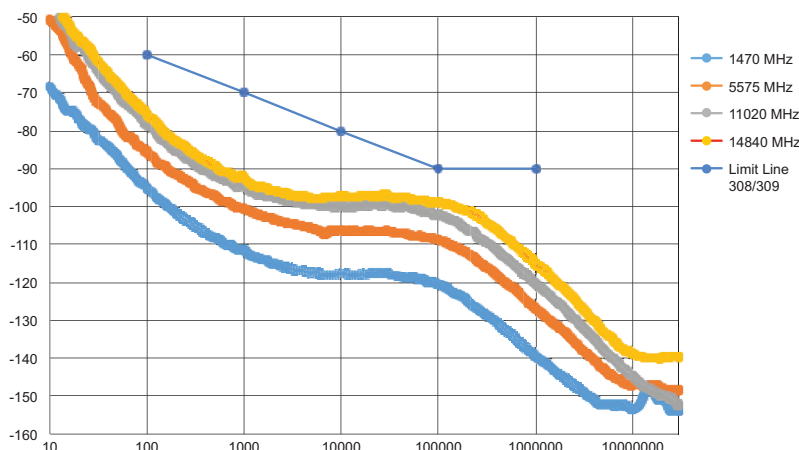
0.010 GHz to 15 GHz (FIXED OUTPUT)  
EXTENDED BANDS to 20.0 GHz

### SPECIFICATION

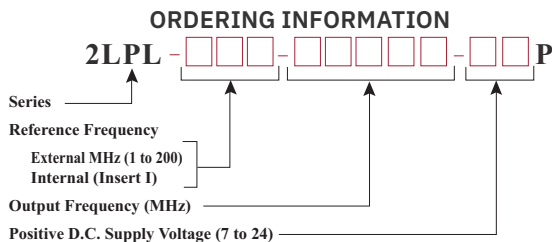
Output frequency range	0.010 GHz to 15 GHz
Output power	+13 dBm minimum
Output harmonic	-25 dBc maximum
Subharmonics for 15 GHz to 19 GHz bands	-10 dBc maximum
Output spurious	-60 dBc maximum
Phase noise	See graph and table
Input reference frequency	1 MHz to 200 MHz (or 10 MHz optional reference output available)
*Input reference power level	0±3 dBm*
Input impedance	50 ohms
Load VSWR	1.5:1 nominal
DC power requirements	+7 volts to +24 volts at 3.5 W typical to 4 W maximum
Phase lock alarm	TTL High in lock, low out of lock
*Internal/reference	0.5 ppm at 0° C to 60° C Output can be made available

PHASE NOISE SPECIFICATIONS (dBc/Hz), typical	OFFSET (Hz)						
	10	100	1K	10K	100K	300K	1M
1470 MHz	-68	-95	-111	-117	-120	-127	-139
5575 MHz	-50	-85	-100	-106	-108	-112	-126
11020 MHz	-45	-78	-94	-99	-102	-107	-120
14840 MHz	-45	-75	-92	-97	-98	-101	-115

### PHASE NOISE CHARACTERISTICS



The Narda-MITEQ 2LPL Series phase-locked source offers excellent phase noise and spurious performance in a miniature 2.0" width x 2.0" length x 0.61" height housing and is available in fixed frequencies from 10 MHz to 15 GHz. Units can operate from either external reference, or internal TCXO with stability as low as 500 PPB. Flexible internal DC regulators allow operating DC from +7 VDC to +28 VDC.

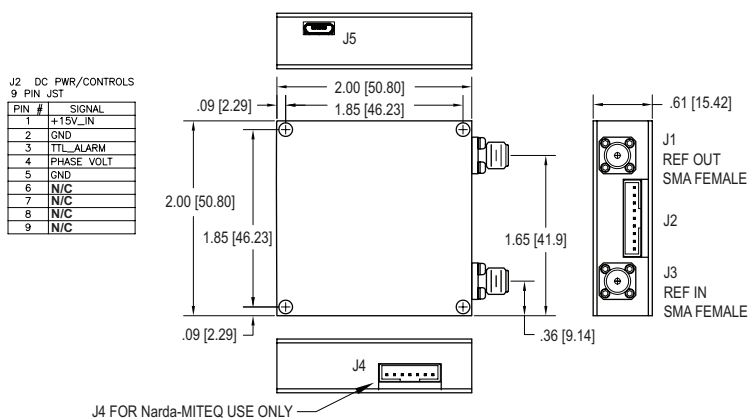


EXAMPLE: Part Number 2LPL-10-13050-15P 2LPL Series phase-locked oscillator with 13.05 GHz output locked to 10 MHz reference and +15 volts D.C. supply voltage.

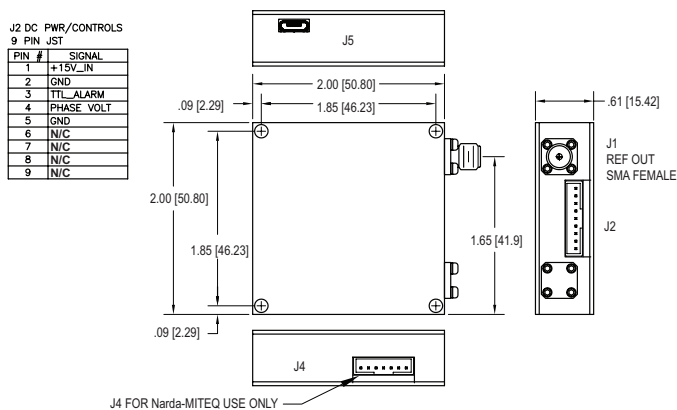
NOTE: Only use character length necessary

EXAMPLE: 2LPL-5-2100-8P 2.10 GHz locked to 5MHz and +8 volts D.C.

### OUTLINE DRAWING 218213



### 219069 (WITH INTERNAL REFERENCE)



### KEY FEATURES

- > Low cost
- > Phase locked to external standard or internal crystal reference
- > Built-in reference Cleanup
- > Low phase noise
- > Low G sensitivity
- > Small package
- > 100% burn-in and temperature testing
- > Three-year warranty
- > +17 Output power option

### GENERAL SPECIFICATIONS

#### MECHANICAL SPECIFICATIONS

Outline drawing	218213 and 219069
Size	2.0" x 2.0" x 0.61"
Weight	≤ 100 grams
RF connectors	SMA female
DC connectors	9-pin JST™ (mating connector PHR-9 or equivalent)

### ENVIRONMENTAL SPECIFICATIONS

#### TEMPERATURE

Operating	-40 °C to +80 °C
Storage	-50 °C to +100 °C
Humidity	95% at 40 °C non-condensing
Shock (survival)	30 g's, 10 ms pulse
Vibration (survival)	20 Hz to 2000 Hz random to 4 g's rms
G-sensitivity	1.5 PPb/g (worst axis)

NOTE: Dimensions shown are in inches and these shown in brackets [ ] are in millimeters.



### 2LPL Series Phase-Locked Oscillator

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Narda-MITEQ is an agile global aerospace and defense technology innovator, delivering end-to-end solutions that meet customers' mission-critical needs. The company provides advanced defense and commercial technologies across air, land, sea, space and cyber domains.

**narda MITEQ**

435 Moreland Road  
Hauppauge, NY 11788  
t 631.231.1700 | f 631.231.1711  
componentsnm@nardamiteq.com