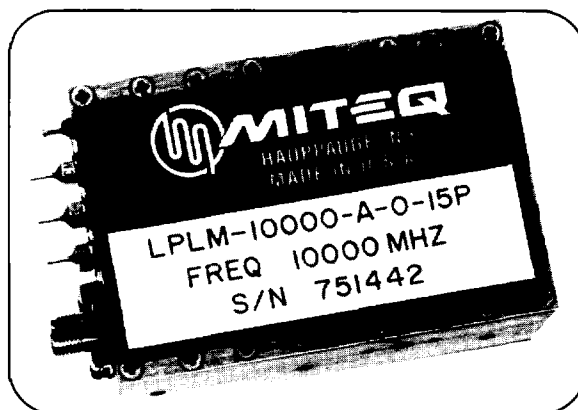


4 TO 15 GHz PHASE-LOCKED COAXIAL RESONATOR OSCILLATOR
LPLM Series

- Superior Phase Noise
- Ideal for Digital Radio Links
- Three-Year Warranty
- 100% Environmental Screening
- Options: Internal Crystal Reference
(Mechanically Adjustable)

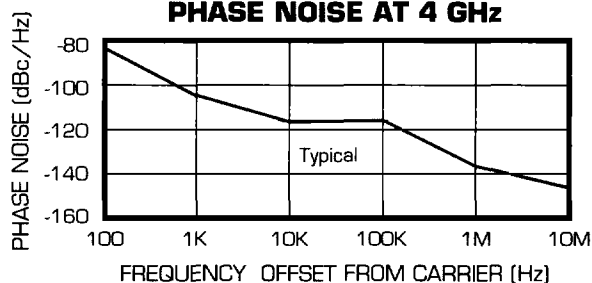
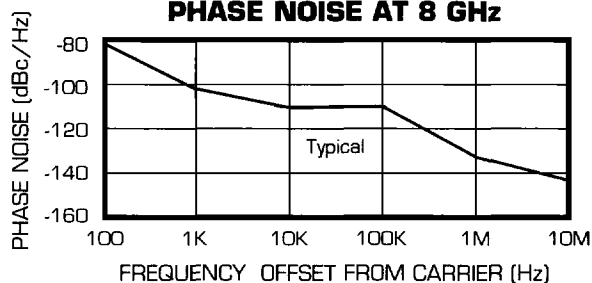
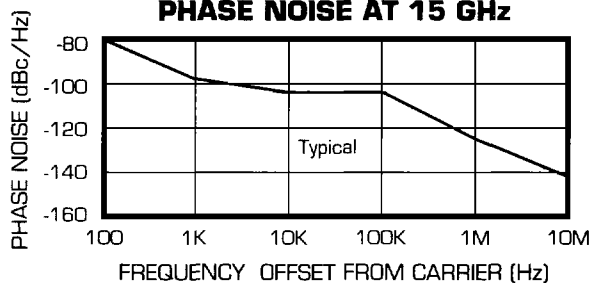

ELECTRICAL SPECIFICATIONS

Output frequency	4 to 15 GHz
Output frequency tuning range	2.0% (nom.) (1)
Output power	+10 dBm (min.)
Output power variation	±1.0 dB (max.)
Input reference range	50 to 150 MHz
Input reference power range	-3 to +3 dBm
Phase noise	See graph
Output spurious signals	-65 dBc (min.)
Output harmonics	-50 dBc (min.)
Output impedance	50 Ω (nom.)
Load VSWR	1.5:1 (nom.)
DC voltage	15, 20 or 24 volts
DC current	400 mA (typ.)

Note 1: Up to 5% available on custom models

GUARANTEED PHASE NOISE

Offset from Carrier	Phase Noise at 4 GHz Carrier	Phase Noise at 8 GHz Carrier	Phase Noise at 15 GHz Carrier
100 Hz	-85 dBc/Hz	-80 dBc/Hz	-75 dBc/Hz
1 kHz	-105 dBc/Hz	-100 dBc/Hz	-95 dBc/Hz
10 kHz	-113 dBc/Hz	-107 dBc/Hz	-103 dBc/Hz
100 kHz	-113 dBc/Hz	-107 dBc/Hz	-103 dBc/Hz
1 MHz	-133 dBc/Hz	-127 dBc/Hz	-123 dBc/Hz
10 MHz	-145 dBc/Hz	-145 dBc/Hz	-140 dBc/Hz

PHASE NOISE AT 4 GHz

PHASE NOISE AT 8 GHz

PHASE NOISE AT 15 GHz


4 TO 15 GHz LPLM SERIES OSCILLATOR

MECHANICAL SPECIFICATIONS

Size	Refer to outline drawing
Weight.....	300 grams (nom.)
RF connectors.....	SMA female
DC connectors	Filtercons

ENVIRONMENTAL SPECIFICATIONS

Operating temperature	-30 to +75°C
Storage temperature.....	-55 to +95°C
Humidity.....	Up to 95% at +40°C noncondensing
Shock (nonoperating).....	30 Gs, 10 ms
Vibration (nonoperating).....	20 to 2000 Hz random to .04 G ² /Hz

ORDERING INFORMATION

LPLM- _____ - _____ - _____ - _____ P
 Output Frequency (MHz) Ref. Alarm Voltage
 Option Option Option

Reference Options:

- A. External reference
 - B. ±20 PPM (-25 to +75°C)
 - C. ±5 PPM (-20 to +70°C)
 - D. ±1 PPM (0 to +50°C)
- (Note: for Options B, C, and D specify output frequency to 6 decimal places)

Alarm Options:

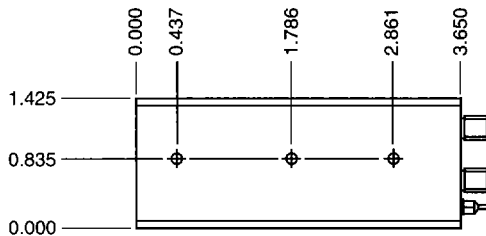
- O. 0 V in lock, +V out of lock
- 1. Relay open in lock, closed out of lock (contact closure to ground)
- 2. Relay closed in lock, open out of lock (contact closure to ground)

Voltage Options:

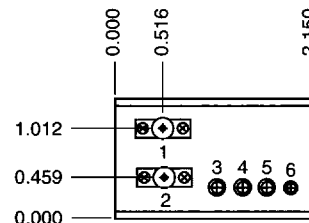
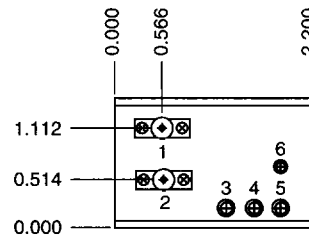
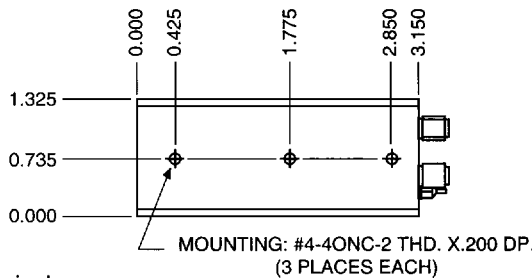
- 15. +15 VDC Supply Voltage
- 20. +20 VDC Supply Voltage
- 24. +24 VDC Supply Voltage

OUTLINE DRAWING

LPLM 4-8



LPLM 8-15



- LEGEND**
- 1 RF IN
 - 2 RF OUT
 - 3 ALARM
 - 4 TEST PT.
 - 5 +V. DC
 - 6 GND.

All dimensions are in inches.
 Optional mounting plates available, contact MITEQ.

ADDITIONAL PRODUCTS

- Phase-Locked Cavity Oscillators
 - PLC Series – fundamental to 4.4 GHz
 - PLM Series – multiplied to 40 GHz
- Phase-Locked Crystal Oscillators
 - PLD Series – up to 1 GHz
- Phase-Locked Fundamental Coaxial Resonators
 - LP Series – 0.5 to 3 GHz, analog locked
 - DLP Series – 0.5 to 3 GHz, digitally locked
- Multiplied Crystal Oscillators (ultra-low spurs)
 - XTM Series – 0.13 to 2 GHz
- Free-Running Cavity Oscillators (20% tuning range)
 - OTC Series – 1 to 6 GHz (fundamental)
 - OTC-CM Series – to 30 GHz (multiplied)
- Free-Running VCOs (octave tuning) – .025 to 2 GHz
- DROs – up to 20 GHz
- Frequency Synthesizers – to 26 GHz

For additional information, please contact Al Annarumma at extension 172.



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