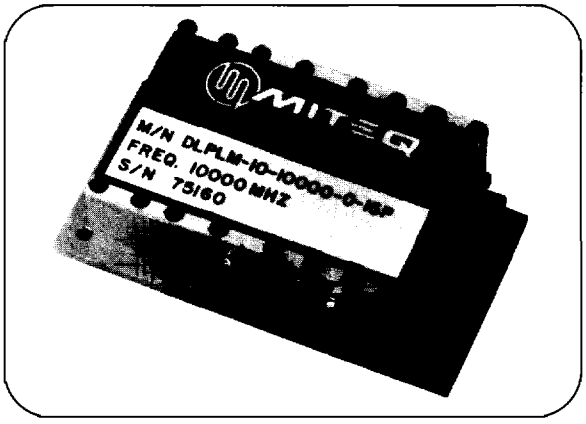
4 TO 15 GHz PHASE-LOCKED COAXIAL RESONATOR OSCILLATOR

DLPLM Series
DIGITALLY LOCKED TO LOW FREQUENCY REFERENCE

- **5–20 MHz Input Reference**
- **100% Environmental Screening**
- **Three-Year Warranty**



ELECTRICAL SPECIFICATIONS

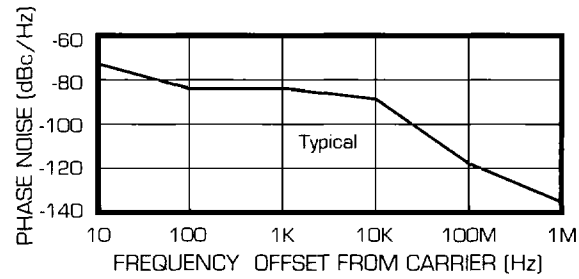
Output frequency	4 to 15 GHz
Output frequency tuning range	2.0% (nom.) *
Output power	+10 dBm (min.)
Output power variation	±1.0 dB (max.)
Input reference range	5 to 20 MHz
Input reference power range	-3 to +3 dBm
Phase noise	See graph
Output spurious signals	-70 dBc (min.)
Output harmonics	-55 dBc (min.)
Output impedance	50 Ω (nom.)
Load VSWR	1.5:1 (nom.)
DC voltage	15, 20, or 24 volts @ 400 mA (typ.)
	5 volts @ 300 mA (typ.)

GUARANTEED PHASE NOISE * *

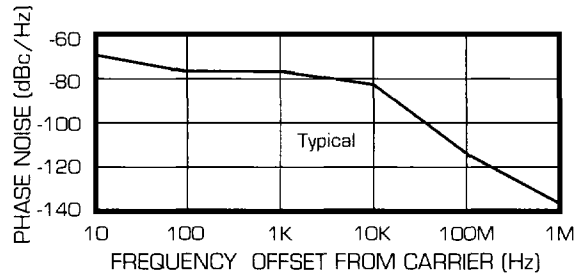
Offset from Carrier	Phase Noise at 4 GHz Carrier	Phase Noise at 8 GHz Carrier	Phase Noise at 15 GHz Carrier
10 Hz	-73 dBc/Hz	-68 dBc/Hz	-62 dBc/Hz
100 Hz	-73 dBc/Hz	-73 dBc/Hz	-68 dBc/Hz
1 KHz	-78 dBc/Hz	-73 dBc/Hz	-68 dBc/Hz
10 KHz	-85 dBc/Hz	-80 dBc/Hz	-75 dBc/Hz
100 KHz	-115 dBc/Hz	-110 dBc/Hz	-105 dBc/Hz
1 MHz	-130 dBc/Hz	-130 dBc/Hz	-125 dBc/Hz

* Up to 5% available on custom models.
** Guaranteed and typical phase noise is based on an input 10 MHz reference, alternative output frequencies are dependent upon the output/reference division ratio.

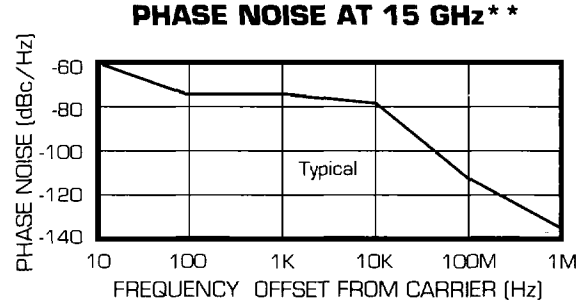
PHASE NOISE AT 4 GHz* *



PHASE NOISE AT 8 GHz* *



PHASE NOISE AT 15 GHz* *



4 TO 15 GHz DLPLM 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 G²/Hz

ORDERING INFORMATION

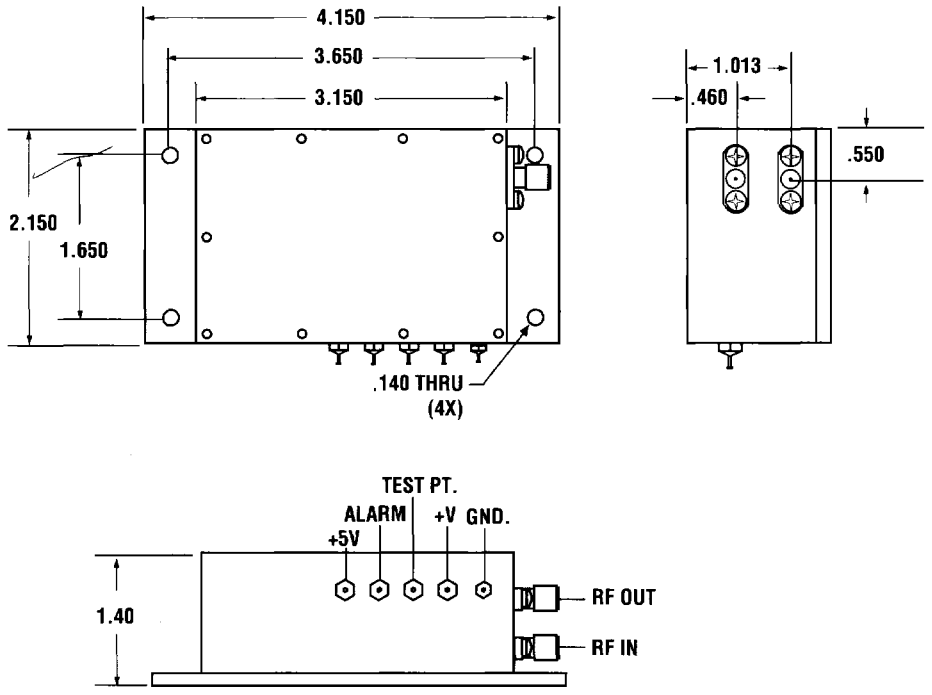
DLPLM- ___ - ___ ___ ___ ___ ___ - ___ - ___ P

Input Ref. (MHz)	Output Frequency (MHz)	Alarm Option	Voltage Option

Alarm Options:
- 0: 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 8 to 15 GHz



All dimensions are in inches.
Optional mounting plates available, contact MITEQ.
For outline drawing of 4 to 8 GHz DLPLM, please 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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