

**SPECIFICATION SHEET**

DWG NO.:	SP-TBD	REVISION:	01
SHEET:	1 OF 1	DATE:	10/1/2014

REVISION HISTORY			
REV	ECO/ DESCRIPTION	DATE	APPD
01	Initial release	10/1/14	EG

MODEL NO.:	MMCPLDRO-4000-10I
DESCRIPTION:	PHASE-LOCKED DIELECTRIC RESONATOR OSCILLATOR (Internal Reference)

Output Frequency	4.0 GHz
Output Power	+10 dBm min.
Reference	Internal
Frequency Stability	± 2.5 ppm
Spurious	
In-Band	-70 dBc max.
Harmonics	-25 dBc max.
Sub-Harmonic	-40 dBc max.
Phase Lock Alarm	TTL: "H" = In Lock / "L" = Out of Lock
Load VSWR	1.5:1 max.
Phase Noise	
Offset (Hz)	SSB Phase Noise (dBc/Hz)
100 Hz	-75 dBc/Hz max.
1 KHz	-105 dBc/Hz max.
10 KHz	-115 dBc/Hz max.
100 KHz	-120 dBc/Hz max.
1 MHz	-135 dBc/Hz, max.
Supply Voltage	+12 VDC ± 0.5 V Stabilized: 500 mA, Surge: 650 mA
Current	Surge: 700 mA max. Stabilized: 580 mA max.
Temperature range: Operating	-40°C to +85°C
Storage	-54°C to +85°C
Warm up time	Three seconds max.
Connector	
RF Output	SMA Female (field removable)
Supply Voltage	Hermetic Feedthru
Hermetic Sealing	Fine and Gross Leak Rate as per MIL-STD-883, Method 1014

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DWG NO.:	SP-TBD	REVISION:	01
SHEET:	1 OF 1	DATE:	10/1/2014

REVISION HISTORY				MODEL NO.:	MMCPLDRO-1160-101
REV	ECO/ DESCRIPTION	DATE	APPD	DESCRIPTION:	PHASE-LOCKED DIELECTRIC RESONATOR OSCILLATOR (Internal Reference)
01	Initial release	10/1/14	EG		

Output Frequency	1160 MHz
Output Power	+10 dBm min.
Reference	Internal
Frequency Stability	± 2.5 ppm
Spurious	
In-Band	-70 dBc max.
Harmonics	-25 dBc max.
Phase Lock Alarm	TTL: "H" = In Lock / "L" = Out of Lock
Load VSWR	1.5:1 max.
Phase Noise	
Offset (Hz)	SSB Phase Noise (dBc/Hz)
100 Hz	-85 dBc/Hz max.
1 KHz	-110 dBc/Hz max.
10 KHz	-120 dBc/Hz max.
100 KHz	-135 dBc/Hz max.
1 MHz	-140 dBc/Hz, max.
Supply Voltage	+12 VDC ± 0.5 V Stabilized: 500 mA, Surge: 650 mA
Current	Surge: 700 mA max. Stabilized: 580 mA max.
Temperature range: Operating	-40°C to +85°C
Storage	-54°C to +85°C
Warm up time	Three seconds max.
Connector	
RF Output	SMA Female (field removable)
Supply Voltage	Hermetic Feedthru
Hermetic Sealing	Fine and Gross Leak Rate as per MIL-STD-883, Method 1014



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## SPECIFICATION SHEET

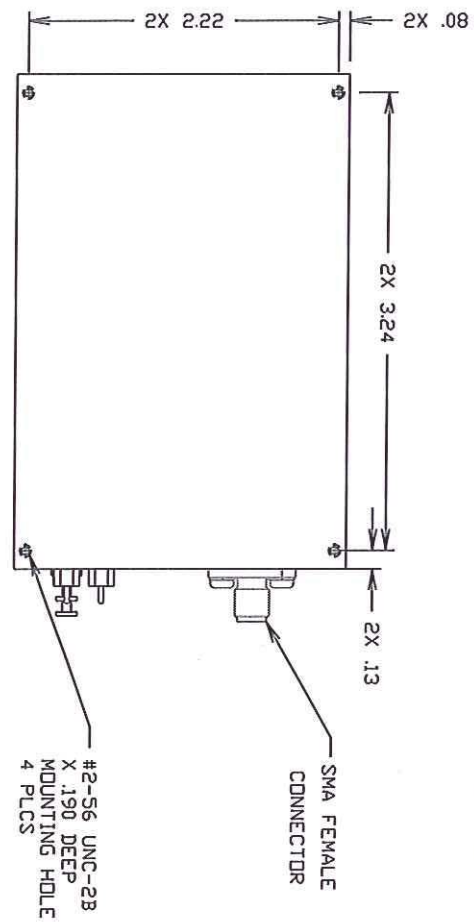
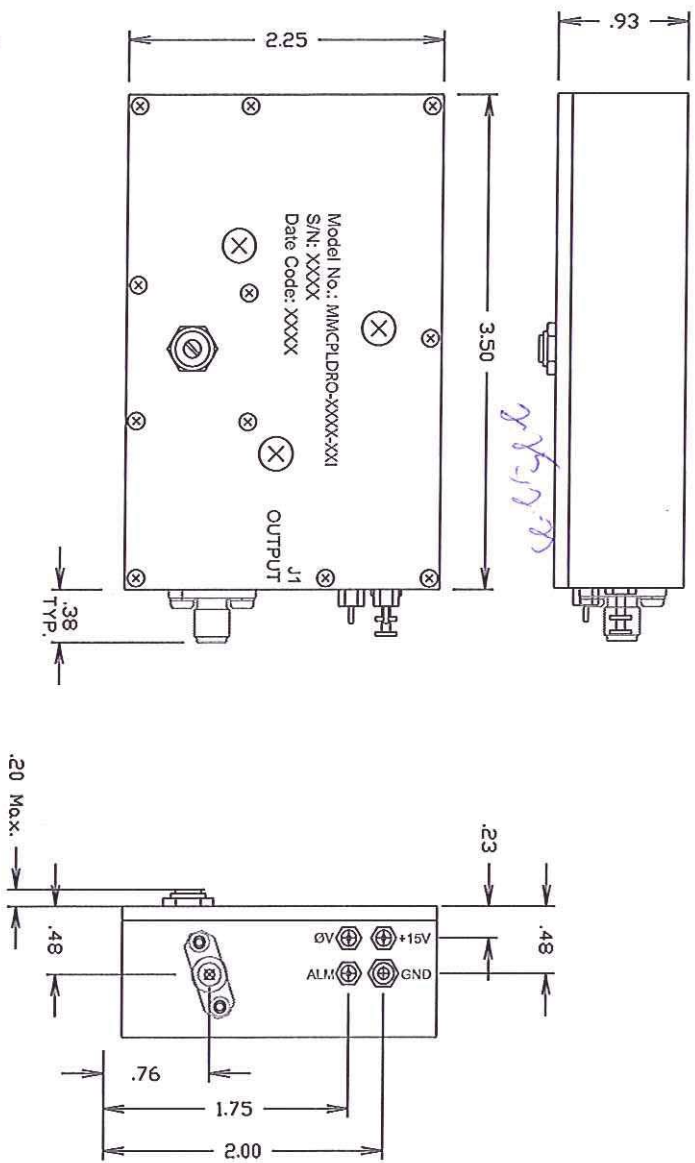
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REVISION HISTORY			
REV	ECO/ DESCRIPTION	DATE	APPD
01	Initial release	10/1/14	EG

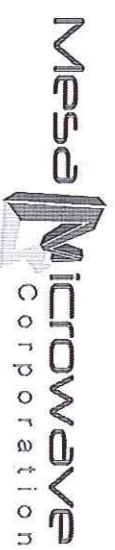
MODEL NO.:	<b>MMCPLDRO-18500-13I</b>
DESCRIPTION:	<b>PHASE-LOCKED DIELECTRIC RESONATOR OSCILLATOR (Internal Reference)</b>

Output Frequency	18.5 GHz
Output Power	+13 dBm min.
Reference	Internal
Frequency Stability	± 2.5 ppm
Spurious	
In-Band	-70 dBc max.
Harmonics	-25 dBc max.
Sub-Harmonics	-40 dBc max.
Phase Lock Alarm	TTL: "H" = In Lock / "L" = Out of Lock
Load VSWR	1.5:1 max.
Phase Noise	
Offset (Hz)	SSB Phase Noise (dBc/Hz)
100 Hz	-70 dBc/Hz max.
1 KHz	-92 dBc/Hz max.
10 KHz	-102 dBc/Hz max.
100 KHz	-110 dBc/Hz max.
1 MHz	-130 dBc/Hz, max.
Supply Voltage	+12 VDC ± 0.5 V Stabilized: 500 mA, Surge: 650 mA
Current	Surge: 700 mA max. Stabilized: 580 mA max.
Temperature range: Operating	-40°C to +85°C
Storage	-54°C to +85°C
Warm up time	Three seconds max.
Connector	
RF Output	SMA Female (field removable)
Supply Voltage	Hermetic Feedthru





- NOTES:**
- 1) MAT'L: ALUMINUM 6061-T6S1 PER QQ-A-250/11 OR ALUMINUM 2024-T4S1 PER QQ-A-250/4.
  - 2) FINISH: ELECTROLESS NICKEL PER MIL-C-26074 CLASS 4 (.00025 MINIMUM THICK).
  - 3) MARKING: LABEL



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UNLESS NOTED  
DIMENSIONS ARE IN INCHES  
AND APPLY AFTER PLATING  
TOLERANCES:

FRACTION	XX ± 1/64	XX ± .01
DECIMAL	.XXX ± .005	.XXX ± .001
ANGLES	° ± .1°	.XXX ± .001
DRN	CHRIS	09/12/13
CHK	TNG	09/12/13
APP		

TITLE:		OUTLINE	
SIZE:		DWG NO.	
A		OUTLINE	
SCALE:		SHEET:	
1 : 1		1 OF 1	
PLDRO WITH INTERNAL REF REV 01			