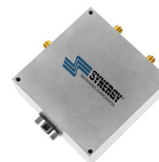


PHASE LOCKED CRYSTAL OSCILLATOR

CONNECTORIZED MODEL: LNFTD-10-120240-12

FEATURES:

- ▶ Excellent Performance
- ▶ Internal Ultra-Low Phase Noise 120 MHz Reference OCXO
- ▶ Phase locked to external 10 MHz Reference
- ▶ Internal Low-noise frequency doubler



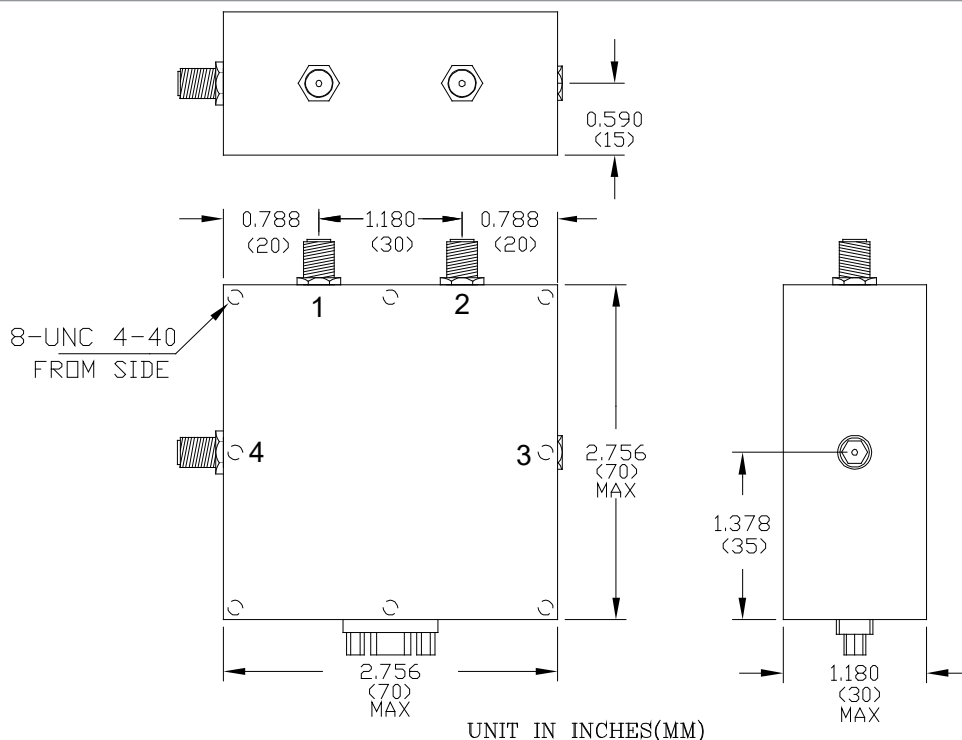
SPECIFICATIONS

Fundamental Frequency Output (RF1)	120 MHz	Maximum Phase Noise (free running)					
Multiplied Frequency Output (RF2)	240 MHz	Offset Frequency	RF1 (120 MHz) dBc/Hz RF2 (240 MHz) dBc/Hz				
External Reference Input	10 MHz (± 500 ppb)	@ 10 Hz	-100 dBc/Hz -90 dBc/Hz				
External Reference Level	+1 to +13 dBm	@ 100 Hz	-130 dBc/Hz -125 dBc/Hz				
Output Power (dBm)	RF1 (120 MHz)	@ 1 kHz	-160 dBc/Hz -150 dBc/Hz				
	RF2 (240 MHz)	@ 10 kHz	-170 dBc/Hz -165 dBc/Hz				
	+7 dBm (Min.)	@ ≥ 100 kHz	-175 dBc/Hz -167 dBc/Hz				
	+11 dBm (Min.)						
Harmonics	-80 dBc (Max.)	Lock Detect Output	<table border="1"> <tr> <th>Unlocked</th> <th>Locked</th> </tr> <tr> <td><math>< 1.5V</math></td> <td><math>< 3.5V</math></td> </tr> </table>	Unlocked	Locked	<math>< 1.5V</math>	<math>< 3.5V</math>
Unlocked	Locked						
<math>< 1.5V</math>	<math>< 3.5V</math>						
RF2 Sub-Harmonic (120 MHz)	-70 dBc (Max.)	Supply Voltage V_s	+12 Vdc (± 0.6 Vdc)				
Spurious	-80 dBc (Max.)	Supply Current I_s	<table border="1"> <tr> <th>During Warm-up</th> <th>Steady State</th> </tr> <tr> <td>600 mA (Max.)</td> <td>400 mA (Max.)</td> </tr> </table>	During Warm-up	Steady State	600 mA (Max.)	400 mA (Max.)
During Warm-up	Steady State						
600 mA (Max.)	400 mA (Max.)						
Impedance (All Ports)	50 Ohms	Operating Temperature	0°C to +50°C				
Loop Bandwidth	5 Hz (Typ.)	Weight	200 grams (Max.)				
Frequency Stability RF1 ~ RF2 (free-running)		Absolute Maximum Ratings					
Frequency Tolerance	± 100 ppb (Typ.), ± 500 ppb (Max.)	Supply Voltage V_s	+12 Vdc (+/-0.6 Vdc)				
Over operating Temperature	± 100 ppb (Typ.), ± 500 ppb (Max.)	RF Input Power P_{in}	+15 dBm (Max.)				
Frequency Pushing ($V_S \pm 5\%$)	± 10 ppb (Max.)	Storage Temperature	+105 °C (Max.)				
Load Pulling (RL $\pm 5\%$)	± 10 ppb (Max.)						
Long Term Aging (per day)	± 1 ppb (Typ.), ± 2 ppb (Max.)						
Long Term Aging (1 st year)	± 200 ppb (Typ.), ± 500 ppb (Max.)						
Long Term Aging (life)	± 100 ppb/yr (Typ.), ± 200 ppb/yr (Max.)						

PHASE LOCKED CRYSTAL OSCILLATOR

CONNECTORIZED MODEL: LNFTD-10-120240-12

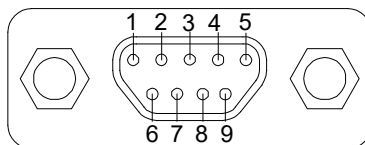
Package 435



UNIT IN INCHES(MM)

Pin connections:

Pin #	Symbol	Function
1	RF OUT	RF Output RF1(120MHz)
2	RF OUT	RF Output RF1(240MHz)
3	—	Blind Screw
4	REF. IN	REF(10MHz)



Front View Micro-D connector

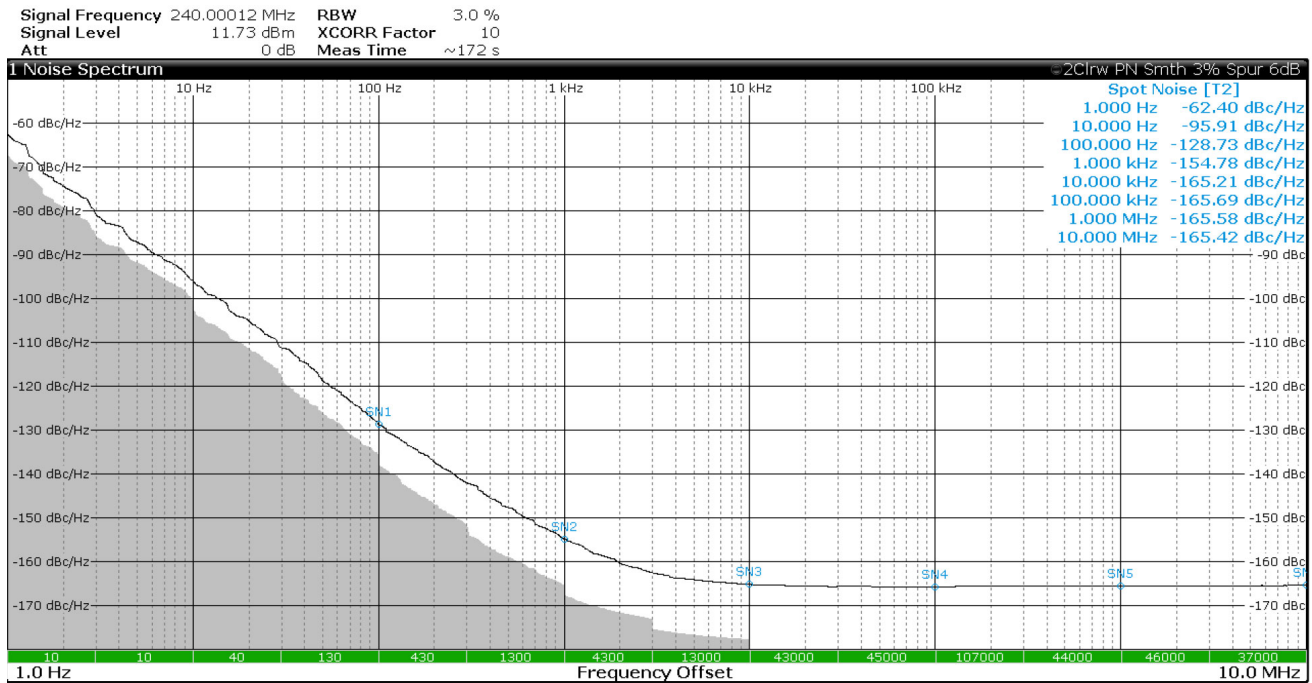
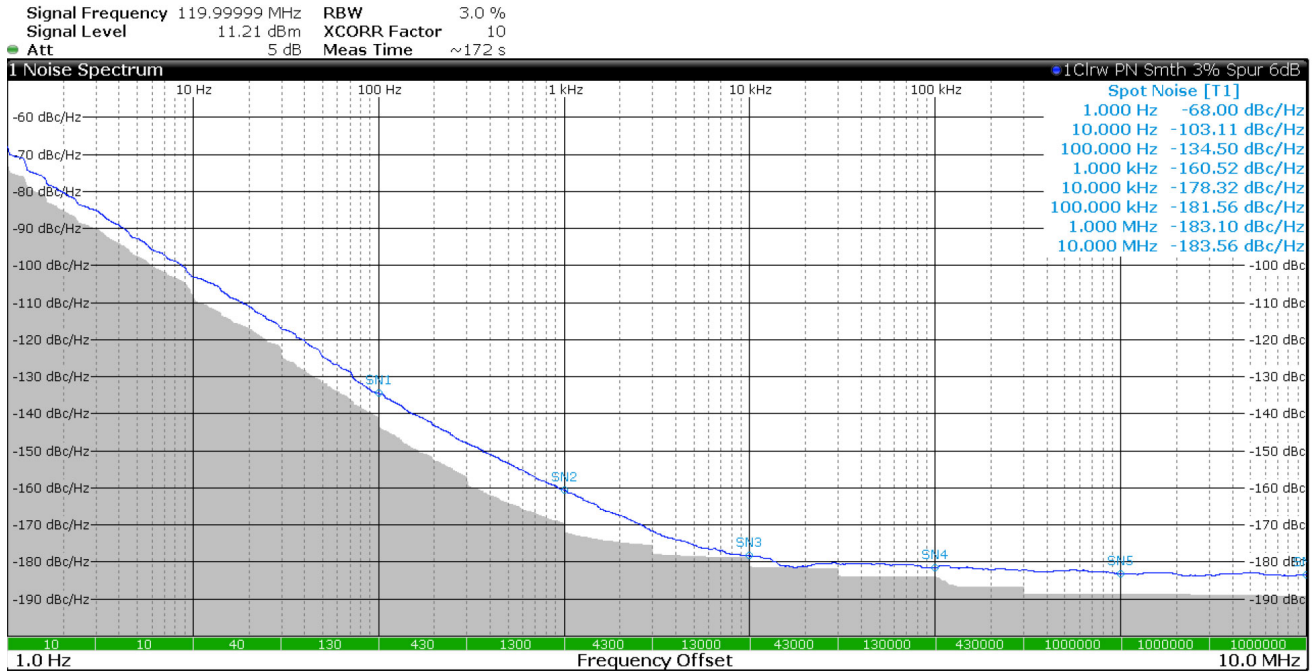
M83513/03 with jack posts M83513/05-07(2-56UNC)

Pin #	Symbol	Assignment Micro-D
1	Vs	Supply Voltage
2	Vs	Supply Voltage
3	GND	Ground
4	GND	Ground
5	N.C.	No Connection
6	LD	Lock Detect
7	N.C.	No Connection
8	N.C.	No Connection
9	N.C.	No Connection

PERFORMANCE PLOTS

PHASE LOCKED CRYSTAL OSCILLATOR CONNECTORIZED MODEL: LNFTD-10-120240-12

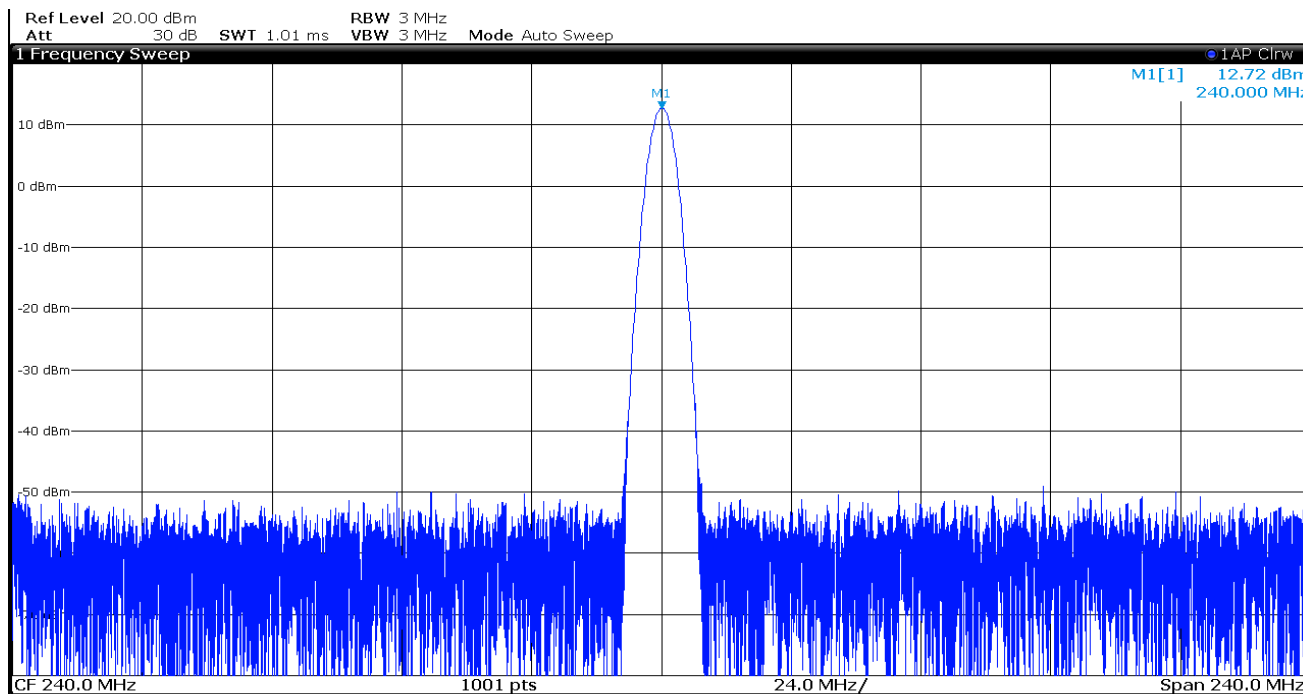
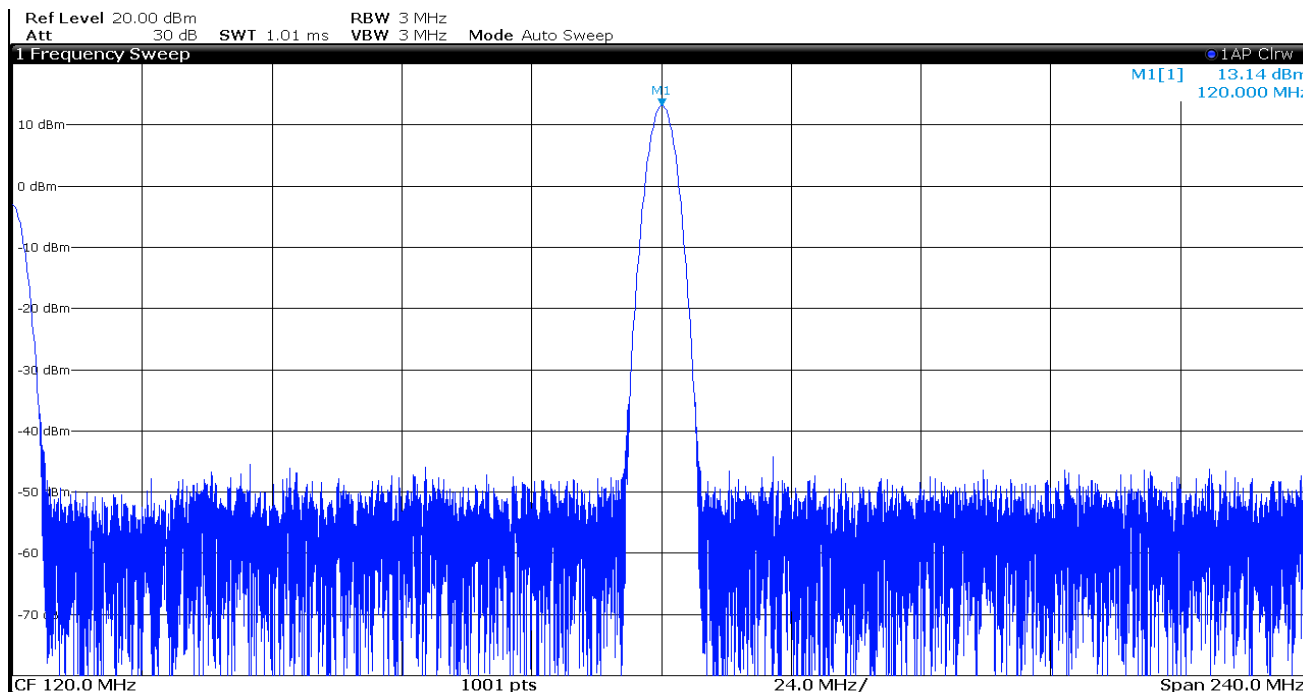
PERFORMANCE PLOTS



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201 McLean Boulevard • Paterson, New Jersey 07504 USA
Tel: (973) 881-8800 • Fax: (973) 881-8361
E-Mail: sales@synergymw.com • Website: <http://www.synergymw.com>
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PHASE LOCKED CRYSTAL OSCILLATOR CONNECTORIZED MODEL: LNFTD-10-120240-12



PERFORMANCE PLOTS