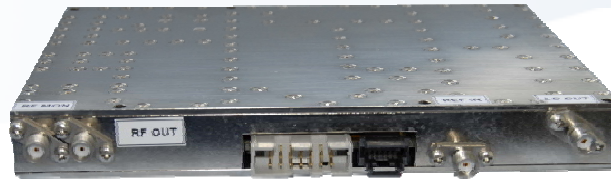


## **LNMFS Frequency Synthesizer**

### **LNMFS-1103**



**FREQUENCY RANGE:**  
**1.3-1.8 GHz**

#### **FEATURES**

- Very Low Phase Noise, 20 dB better than IESS-308
- Low Spurious:<-85 dBc
- 1 KHz and 125 KHz Standard Steps Size Options
- Includes Fixed Frequency L-Band Output
- Serial Control Simplifies Interfacing
- Compact Modular Construction: 7.7" X 5.5" X 0.73"
- Low DC Power Consumption, less than 8 watts
- Wide Operating Temperature Range
- Meets ESTI 300019-1-4 Shock and Vibration Requirements

#### **APPLICATIONS**

- LO for Fixed and Mobile SATCOM Converters
- LO for Digital Radio, up to 512 QAM
- Instrumentation
- OEM Products

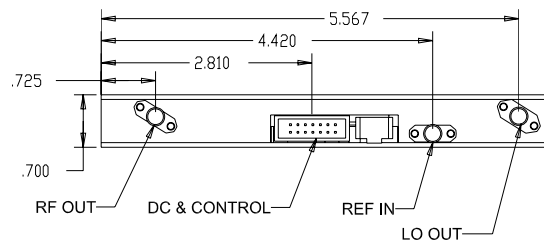
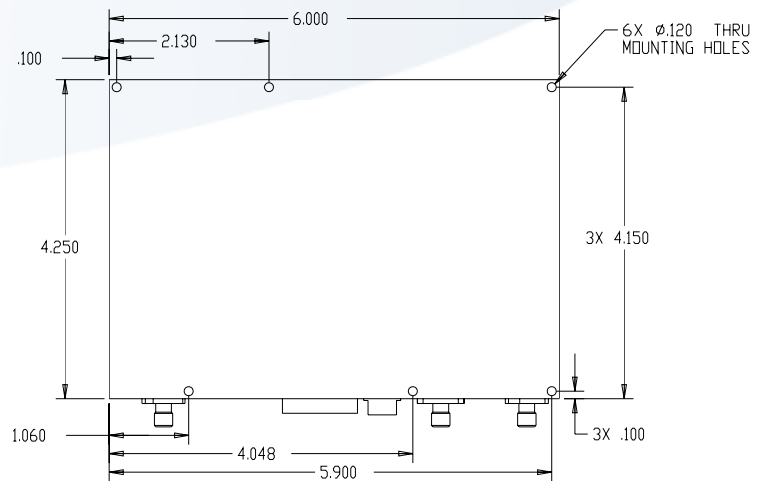
#### **GENERAL DESCRIPTION**

The LNMFS family of modular sub-octave coverage frequency synthesizers achieves exceptionally low phase noise in a rugged, compact package. Within the LNMFS, basic PLL indirect synthesizer architecture is enhanced using DDS and FPGA technology. This allows small step size and low spurious output levels to be achieved with moderate switching speed. The serial interface simplifies designing the synthesizer for any system application.

## SPECIFICATIONS

Output Frequency	1.3 – 1.8 GHz	
Frequency Bandwidth	0.50 GHz	
Step Size	1 KHz	
Switching Speed	< 50 mS	
Power Output	12 to 15 dBm	
In Band Spurious	< -70 dBc	
Out of Band Spurious	< -85 dBc	
Harmonics	N/A	
Phase Noise	1 KHz	< -100 dBc/Hz
	10 KHz	< -105 dBc/Hz
	100 KHz	< -108 dBc/Hz
	1 MHz	< -122 dBc/Hz
Fixed L-Band Output		
Frequency	N/A	
Power Output	N/A	
Spurious	N/A	
Harmonics	N/A	
External Reference Input		
Frequency	10 MHz	
Input Level	0 to +13 dBm	
Power Consumption		
DC Supply	+12 V	1.6 A
Operating Temp. Range	-25°C to +65°C	

## OUTLINE DRAWING



NOTES:  
 CONNECTORS:  
 RF OUT, LO OUT & REF IN: SMA  
 TYPE JACK (FEMALE).  
 DC & CONTROL: IDC TYPE, 14 PIN

PIN	FUNCTION
1	NC
2	GND
3	+5.25 to +5.50V
4	GND
5	+12 to +18V
6	GND
7	LOCK
8	GND
9	DATA
10	GND
11	CLOCK
12	GND
13	ENABLE
14	GND

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