

## Electrical Specifications

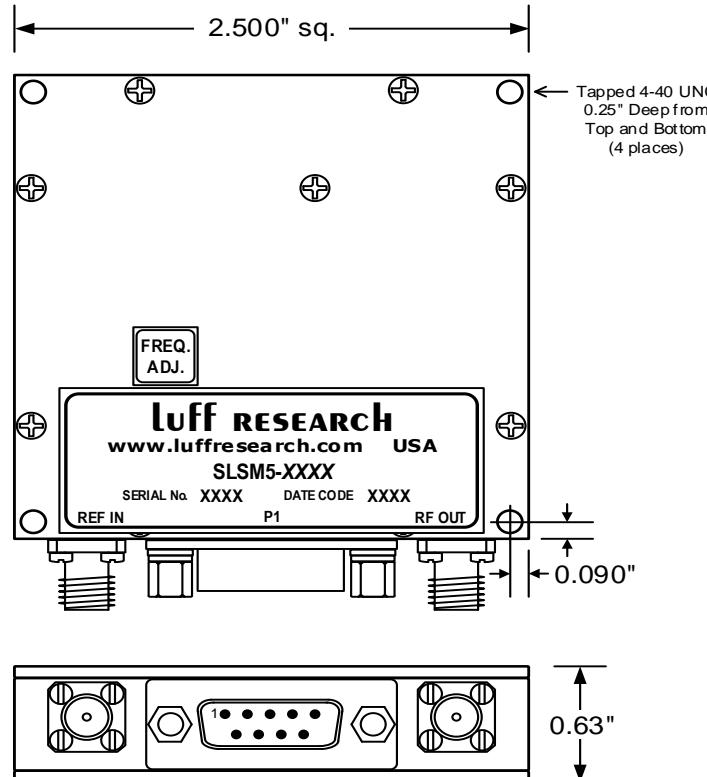
Frequency	1 - 4 GHz
Frequency Step Size	1 KHz
Frequency Stability and Accuracy	
External Ref.	Same as input
Internal Ref.	± 0.5 PPM (Over Temp Range)
Aging (after 2 months)	± 1.0 PPM max per year @ 25°C
Adjustability	10 years
Phase noise (dBc/Hz)	
L(100 Hz)	Typ. -79
L(1 kHz)	-93
L(10 kHz)	-98
L(100 kHz)	-99
L(1 MHz)	-125
L(10 MHz)	-145
Spurious (max)	-60 dBc
Harmonics (typ.)	-17 dBc
DC Power	
+5.5 VDC ± 0.5 VDC	600 mA
Power Out (nom. / min. @ 25°C)	+15 / +13 dBm
Power Variation (typ.)	± 2 dB
Load VSWR (max.)	2:1
Frequency Control	RS-485
Acquisition Time (typ.)	< 5ms
Phase-Lock Indicator (LD)	Open Collector (note 9)

## Reference Specifications

Input Reference Frequency	10 MHz
Input Level	0 dBm ± 3 dBm

## Environment Specifications

Operating Temp. Range (surface)	0°C to 60°C (note 8)
Storage Temp. Range	-40°C to 85°C
Relative Humidity (non-condensing)	90%RH @ 40°C
Shock	30G / 10 ms
Vibration	4G / 20 Hz - 20 kHz



### Notes:

1. This unit is available with an internal TCXO (±0.5 PPM) reference upon quote.
2. "Reference Input" is not available on units with an internal TCXO.
3. Frequency Adjust feature is only applicable to units with an internal TCXO.
4. These Synthesizers employ a fractional ÷N architecture.
5. With an external input, the output frequency has the same stability as the input and is typically accurate to within 2 Hz.
6. There is a very small set of frequencies in which a spectral anomaly occurs: the close-in spurious are > -60 dBc. These are often eliminated by shifting the Fo by 1 or 2 kHz.
7. This unit features a non-volatile memory and will return to the last frequency set.
8. Proper heatsinking may be required to keep surface temp. lower than +65°C.
9. TTL Compatible Lock Detect available upon quote.

**luff RESEARCH, inc.**

[luffresearch.com](http://luffresearch.com) | 20 N. Tyson Ave. Floral Park, NY 11001

Product Data Sheet

Frequency Synthesizer

SLSM5-14

April 17, 2018