

## Output Frequency

Output Frequency Range:	1 - 4 GHz	
Frequency step size:	1 kHz	
Frequency stability and accuracy (note 4)		
External reference unit	Same as input	
Internal reference unit (note 1)	±0.5 PPM (over temp range)	
Aging (After 2 months):	±1 PPM max per year @ 25°C	
Adjustability (typ.):	10 years	
Phase noise in dBc/Hz:	Typ.	Max.
	L(100 Hz)	-79
	L(1 kHz)	-95
	L(10 kHz)	-100
	L(100 kHz)	-105
	L(1 MHz)	-128
	L(10 MHz)	-142
Spurious (typ.): (note 5)	-60 dBc	
Harmonics (typ.):	-17 dBc	
Power out (nom. / min.) @ 25°C:	+15 / +13 dBm	
Power variation (freq. & temp.) (max.):	±2 dB	
Load VSWR (max.):	2:1	

## Reference Frequency

Input reference frequency:	10 MHz
Input level:	0 dBm ±3 dB

## Frequency Tuning / Alarm

Frequency control:	RS-485
Acquisition time (typ):	< 5 msec
Phase-lock indicator (LD), High = lock:	Open collector (note 8)

## DC Power

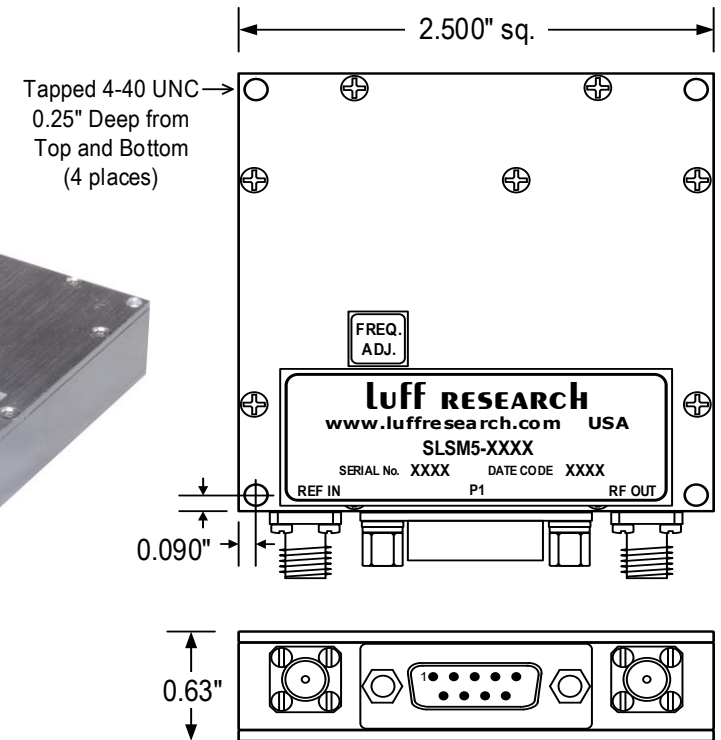
+5.5 Vdc ±0.5 V	600 mA
-----------------	--------

## Mechanical

RF connectors:	SMA (F)
DC connections / Freq. Control:	DB9 (M)

## Environment

Operating temperature range (surface):	-5°C to +65°C (note 7)
Storage temperature range:	-40°C to 85°C
Relative humidity (non-condensing):	90%RH @ 40°
Shock:	30 G / 10msec
Vibration:	4 G / 20 Hz - 20 kHz
Specifications @:	+25°C



## NOTES:

1. This unit is available with an internal TCXO (±0.5 PPM) - Model No. SLSM5-14-INT
2. The frequency adjustment is only applicable on units with internal reference.
3. The 'REF IN' connector is not provided on units with internal reference.
4. This synthesizer employs a fractional ÷N architecture. With an external input the output frequency has the same stability as the input and is typically accurate to within 2 Hz.
5. There is a very small set of frequencies at which a spectral anomaly occurs where the close in spurious are <-60 dBc. These can often be eliminated by shifting Fo by 1 or 2 kHz.
6. These units have a non-volatile memory feature and at power on the unit will return to the last set frequency.
7. Proper heatsinking is required to keep surface temperature less than +65°C.
8. For TTL compatible lock detector output, add -T at the end of the model number.

**Luff Research, Inc.**

FLORAL PARK, NY USA

[www.luffresearch.com](http://www.luffresearch.com)

PRODUCT DATA SHEET

SLSM5 FREQUENCY SYNTHESIZER

Model: SLSM5-14

Rev. E

04/01/20