Output Frequency

Output Frequency Range:	4 - 8 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)	-75	
	L(1 kHz)	-87	
	L(10 kHz)	-90	
	L(100 kHz)	-92	
	L(1 MHz)	-121	
	L(10 MHz)	-140	

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

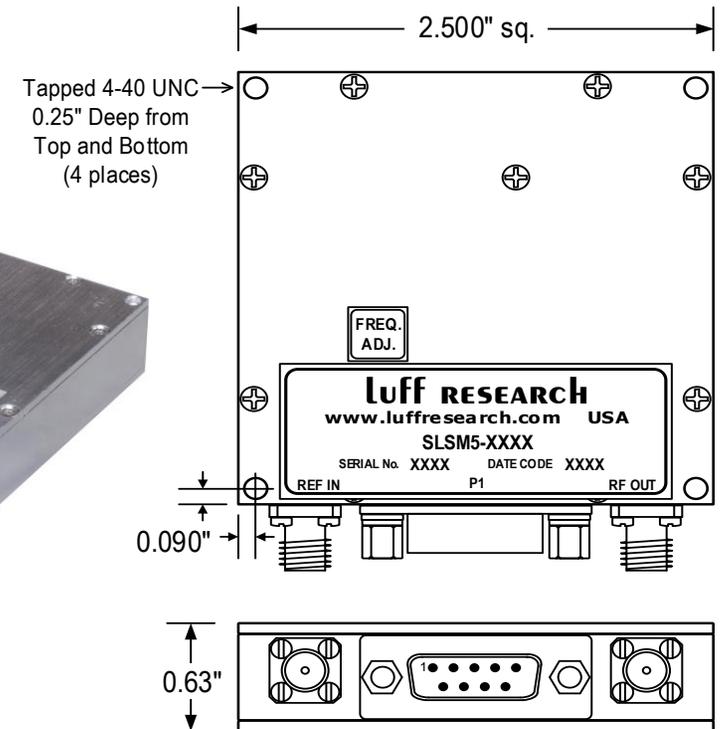|	
Frequency control:	RS-485
Acquisition time (typ):	< 5 msec
Phase-lock indicator (LD), High = lock:	Open collector (note 8)

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

2.500" sq.

Tapped 4-40 UNC 0.25" Deep from Top and Bottom (4 places)

FREQ. ADJ.

luff RESEARCH
www.luffresearch.com USA
SLSM5-XXXX
SERIAL No. XXXX   DATE CODE XXXX
REF IN   P1   RF OUT

0.090"

0.63"

NOTES:

1. This unit is available with an internal TCXO (±0.5 PPM) - Model No. SLSM5-48-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.

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FLORAL PARK, NY USA

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PRODUCT DATA SHEET

SLSM5 FREQUENCY SYNTHESIZER

Model: SLSM5-48	Rev. F	04/01/20