

## FREQUENCY SYNTHESIZER SPECIFICATIONS

### Output Frequency

Output Frequency Range:	4 - 8 GHz	
Frequency step size:	1 kHz	
Frequency stability and accuracy		
<input checked="" type="checkbox"/> External reference unit	Same as input	
<input type="checkbox"/> Internal reference unit	±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 @ 8 GHz:	Typ.	Max
L(100 Hz)	-70	
L(1 kHz)	-86	
L(10 kHz)	-93	
L(100 kHz)	-93	
L(1 MHz)	-118	
L(10 MHz)		
Spurious (typ.):	-60 dBc	
Harmonics (typ.):	-20 dBc	
Power out (min.):	+13 dBm	
Power variation (freq. & temp.) (max.):	±3 dB	
Load VSWR (max.):	2:1	

### Reference Frequency

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

### Frequency Tuning / Alarm

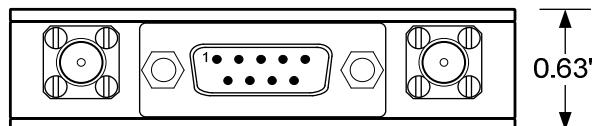
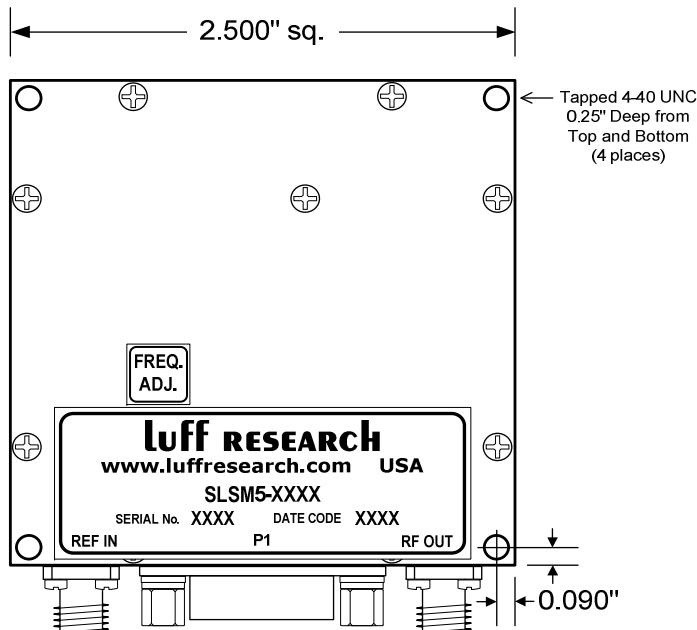
Frequency control:	RS-485
Acquisition time (typ.):	< 5 msec
Phase-lock indicator (LD), High = lock:	<input checked="" type="checkbox"/> Open collector <input type="checkbox"/> TTL

### DC Power

+5.5 Vdc ±0.5 V	650 mA (max)
-----------------	--------------

### Environment

Operating temperature range (surface):	-10°C to 70°C
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



### NOTES:

1. This unit is available with an internal TCXO. (Model No. SLSM5-48-INT)
2. The Frequency adjustment is only applicable on units with internal reference.
3. The '10 MHz 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 +70°C.

**luff RESEARCH, INC. USA**

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

PRODUCT DATA SHEET

FREQUENCY SYNTHESIZER

Model: SLSM5-48

Rev. B

04/09/15