

## FREQUENCY SYNTHESIZER SPECIFICATIONS

### Output Frequency

|   |                            |      |      |
|---|----------------------------|------|------|
| Output Frequency Range:                                     | 8 - 12.5 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:                                      |                            | Typ. | Max. |
|   | L(100 Hz)                  | -69  |      |
|   | L(1 kHz)                   | -83  |      |
|   | L(10 kHz)                  | -88  |      |
|   | L(100 kHz)                 | -91  |      |
|   | L(1 MHz)                   | -119 |      |
| 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

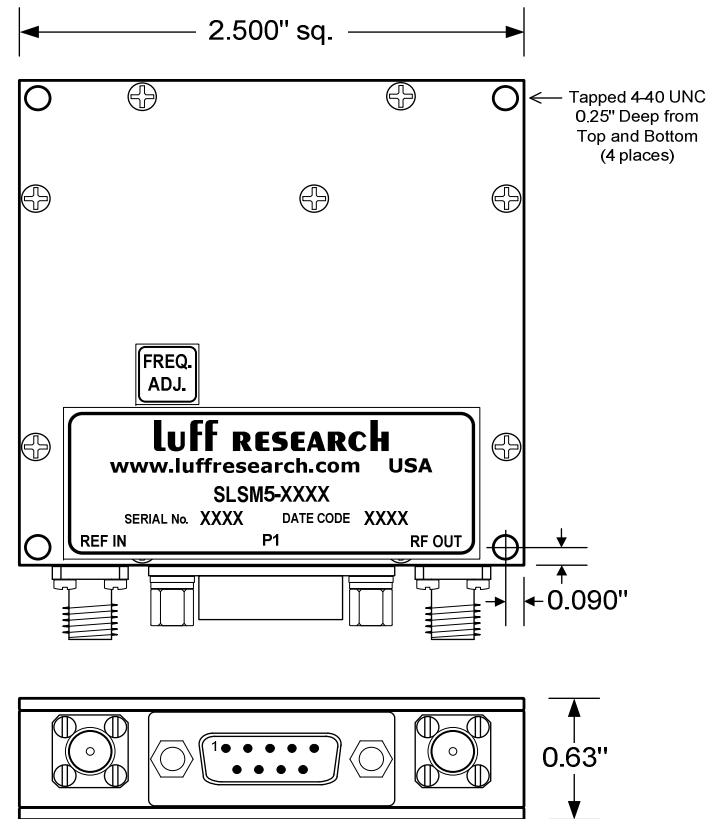
|   |   |
|---|---|
| Frequency control:                      | RS-485  |
| Acquisition time (typ):                 | < 5 msec  |
| Phase-lock indicator (LD), High = lock: | <input type="checkbox"/> Open collector <input checked="" type="checkbox"/> TTL |

### DC Power

|                 |        |
|-----------------|--------|
| +5.5 Vdc ±0.5 V | 650 mA |
|-----------------|--------|

### 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. These unit are available with an internal TCXO. (Model No. SLSM5-812-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**

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PRODUCT DATA SHEET

FREQUENCY SYNTHESIZER

Model: SLSM5-812

Rev. F

09/28/15