

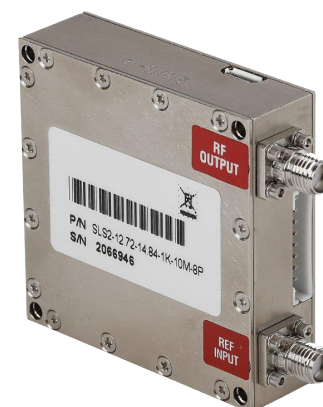


# SLS2 SERIES FREQUENCY SYNTHESIZER

0.010 GHz to 15 GHz (IN BANDS)  
 Extended Bands to 20.0 GHz

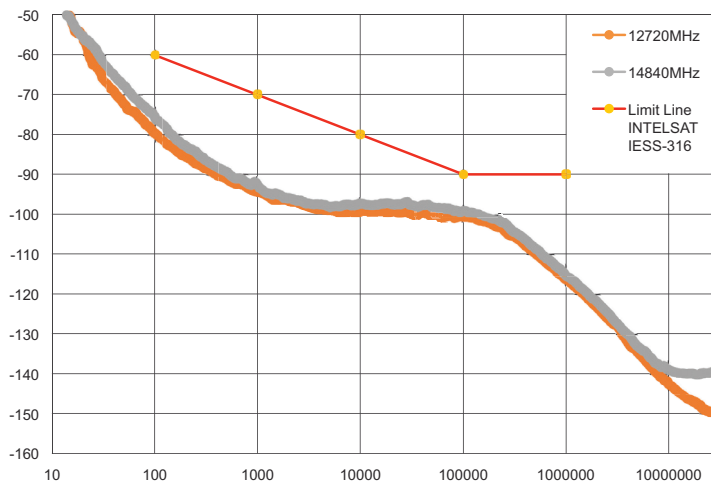
SPECIFICATION	
Output frequency range capabilities	0.010 GHz to 15 GHz (In Bands)
Examples of standard frequency bands	1 GHz to 2 GHz 2 GHz to 4 GHz 3 GHz to 6 GHz 4 GHz to 8 GHz 9 GHz to 11 GHz 10.405 GHz to 11.450 GHz 11.450 GHz to 12.570 GHz 12.720 GHz to 14.840 GHz Multioctaves also available
(Contact factory for custom frequency bands)	
Step size	1 kHz (custom step sizes available)
Output power	+13 dBm minimum
Output power variation	± 2 dBm
Output harmonic in narrow band	-20 dBc maximum
Output harmonic in octave bandwidths	-15 dBc maximum
Subharmonics for 15 GHz to 19 GHz bands	-10 dBc maximum
Output spurious	-60 dBc maximum
Phase noise	See graph
Input reference frequency Standard 10 MHz custom	10 MHz (Custom reference frequencies available from 1 MHz to 200 MHz). Also available is programmable varying reference.
Input reference power level	0±3 dBm
Input impedance	50 ohms
Load VSWR	1.5:1 nominal
DC power requirements	+7 volts to +24 volts at 3.5 W typical, 4 W maximum Single rail supply
Phase lock alarm	TTL High in lock, low out of lock
Frequency control	Serial RS-422 (4 wire) or USB

PHASE NOISE SPECIFICATIONS (dBc/Hz), typical	OFFSET (Hz)						
	10	100	1K	10K	100K	300K	1M
12700 MHz	-42	-77	-94	-99	-100	-105	-116
14840 MHz	-42	-75	-92	-97	-98	-104	-115

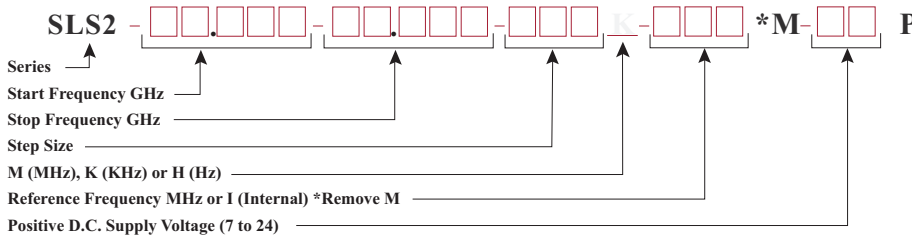


L3Harris's SLS2 series of high spectral purity synthesizers offer a low price alternative for L, S, C and Ku-bands with the lowest phase noise. With standard 1 kHz step size output at all bands the SLS2 series synthesizers are ideal for dual conversion up and down converters. With +13 dBm output power and 60 dBc spurious suppression, the SLS2 series support the most stringent system applications. Consuming less than 4 Watt maximum from (+7 to 28 V) DC supply.

## PHASE NOISE SPECIFICATIONS PHASE NOISE CHARACTERISTICS



### ORDERING INFORMATION

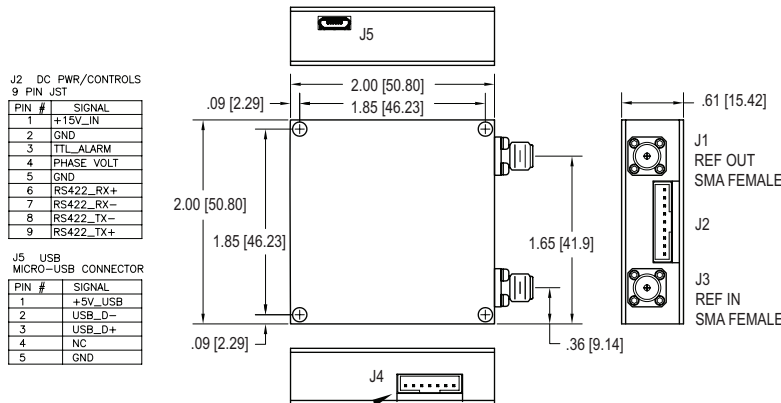


\* Internal Reference Ex: Part Number SLS2-2.00-4.00-1k-I-8P. Covers 2.0 to 4.0 GHz with a step size of 1kHz, has an internal reference and +8Volt supply.

EXAMPLE: Part Number SLS2-12.70-14.48-1K-10M-8P part number for frequency synthesizer covering 12.72 GHz to 14.48 GHz with a step size of 1 kHz and a reference frequency of 10 MHz with +8 volts D.C. supply voltage.

NOTE: Use only character length necessary

### OUTLINE DRAWING 218213



J4 For L3Harris Narda-MITEQ use only.

NOTE: Dimensions shown are in inches and these shown in brackets [ ] are in millimeters.

### KEY FEATURES

- > Low cost
- > 10 dB below INTELSAT phase noise mask
- > Ideal for use in dual conversion up and down converters
- > 1 kHz standard step size
- > Available in octave wide bands
- > Built in reference cleanup or internal reference
- > Low G sensitivity

### OPTIONS

- > Custom frequency bands
- > Custom step sizes
- > High output power options

### GENERAL SPECIFICATIONS

MECHANICAL SPECIFICATIONS	
Outline drawing	218213
Size	2.0" x 2.0" x 0.61"
Weight	≤ 100 grams
RF connectors	SMA female
DC connectors	9-pin JST™ (mating connector PHR-9 or equivalent)

### ENVIRONMENTAL SPECIFICATIONS

TEMPERATURE	
Operating	-40 °C to +80 °C
Storage	-50 °C to +100 °C
Humidity	95% at 40 °C non-condensing
Shock (survival)	30 g's, 10 ms pulse
Vibration (survival)	20 Hz to 2000 Hz random to 4 g's rms
G-sensitivity	1.5 PPb/g (worst axis)



### SLS2 Series Frequency Synthesizer

© 2019 L3Harris Technologies, Inc. | 08/2019

This material consists of L3Harris Technologies general capabilities information and does not contain controlled technical data as defined within the International Traffic in Arms (ITAR) Part 120.10 or Export Administration Regulations (EAR) Part 734.7-11. D-417B/03.22.19

L3Harris Technologies is an agile global aerospace and defense technology innovator, delivering end-to-end solutions that meet customers' mission-critical needs. The company provides advanced defense and commercial technologies across air, land, sea, space and cyber domains.



1025 W. NASA Boulevard  
Melbourne, FL 32919  
t 631.231.1700 | f 631.231.1711  
componentsnm@L3Harris.com