

## MAIN FEATURES

- ❖ From 1025MHz to 1150MHz adjustable frequency
- ❖ 1MHz frequency step
- ❖ Very low phase noise
- ❖ Very low spurious level
- ❖ Internal reference

## DESCRIPTION

The BSVL10 is a high performance L-band synthesizer with very low phase noise and spurious level, making them ideal for use as a stable frequency source in communications, navigation, surveillance, or test and measurement system. The BSVL10 has adjustable output frequency from 1025MHz to 1150MHz. The BSVL10 contains a low phase noise reference, that provides low phase noise as well and fine frequency stability even under vibration. The output frequency can be switched with fine 1MHz step in short 250us time. The BSVL10 has one RF output and one 15-pin Micro D-Sub connector for power and communication.

## SPECIFICATIONS

Operating frequency	1025MHz-1150MHz
Frequency spacing	1MHz
Output power	+14dBm+/-1dB
Switching time	250us
Harmonics	≤-30dBc
Subharmonics	≤-50dBc
Spurious	≤-60dBc
Static Phase Noise	≤-80dBc/Hz @100Hz ≤-100dBc/Hz @1kHz
AM Noise	≤-136dBc/Hz @1kHz-1MHz
FM Noise under random vibration @0.04g <sup>2</sup> /Hz	≤-38dBc/Hz @100Hz ≤-70dBc/Hz @1kHz
Frequency Stability under random vibration @0.04g <sup>2</sup> /Hz	+/-1ppm
Frequency Accuracy	+/-50kHz
Warm-up time	15 seconds
Input commands	3 Wire serial (Data, Clock, Enable) TTL
Output answers	3 Wire serial (Data, Clock, Enable) TTL, R <sub>out</sub> =200Ω
Lock signal	TTL level, R <sub>out</sub> =330Ω (Low level), R <sub>out</sub> =10kΩ (High level)
RF Connector type	SMA female
Data and power connector type	Micro-D15, Female

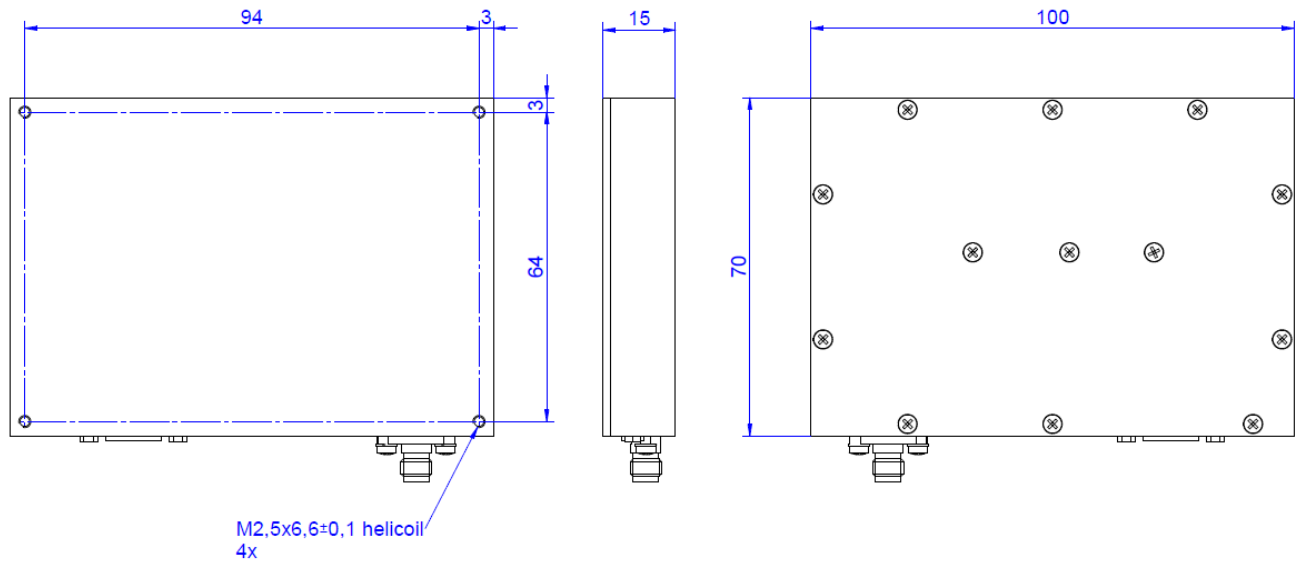


## BSVL10 Low Phase Noise L-band Synthesizer With Internal Reference

	Number	Direction	Name
Data connector pin assignment	1	-	GND
	2	Out, $R_{out}=300\Omega$	-15V_RET
	3	Out, $R_{out}=300\Omega$	+15V_RET
	4	-	NC
	5	Out	LOCKDET
	6	Out	DATA_OUT
	7	In	LE_IN
	8	In	CP_IN
	9	-	GND
	10	-Power In	-15V_IN
	11	+Power In	+15V_IN
	12	-	NC
	13	Out	LE_OUT
	14	Out	CP_OUT
	15	In	DATA_IN
DC Power	+15V/200mA max. -15V/15mA max.		
Size	100x70x15mm (LxWxH)		
Weight	170g		
Operation temperature range	-40°C to +71°C		
High temperature transient	+90°C for 30 minutes		
Storage temperature range	-55°C to +95°C		
Altitude	As per Standard MIL-STD-810F (70,000 feet)		
Relative humidity	As per Standard MIL-STD-810F (93% at +71°C)		
Sinusoidal vibration	As per Standard MIL-STD-810F for fighter installation		
Shocks	As per Standard MIL-STD-810F (18 shock impacts of 15g)		
Gunfire vibration	As per Standard MIL-STD-810F		
EMI/EMC	As per Standard MIL-STD-461E Measurement Procedure is according to MIL-STD-461E		

Specifications are subject to change without notice.

### OUTLINE DRAWING (mm)



### ORDERING INFORMATION

MODEL NUMBER	DESCRIPTION
BSVL10K00296	BSVL10 L band, 1025-1150 MHz, step 1 MHz, int ref, fast switching

### DOCUMENT REVISION

DOCUMENT NAME	REVISION	DATE
BSVL10-LM-K00296	V02	29/03/2023