

MAIN FEATURES

- ❖ Very wide frequency tuning range
- ❖ Low phase noise
- ❖ Low spurious level
- ❖ Built in high stability frequency reference
- ❖ USB powered and USB programmable
- ❖ Small size

DESCRIPTION

This synthesizer is intended for use in professional and commercial applications, where the extra wide frequency tuning range, PC programmability and compact size are important factors. This unit can be used in telecommunications, instrumentation and military applications. It is powered and controlled from USB 3.x interface.

SPECIFICATIONS

Frequency range	50-15000MHz			
Frequency step	1Hz			
Output RF power	+10dBm±2dB over temperature and frequency at maximum setting			
RF power variation	typ. ±1dB, max. ±2dB over frequency			
Attenuation control	20dB in 0.1dB steps			
Level control accuracy	±0.5dB			
RF on/off	min. 60dB isolation			
Spurious	typ. -60dBc, max. -55dBc (carrier +/-10MHz)			
Subharmonics	typ. -60dBc, max. -55dBc			
Harmonics	typ. -15dBc			
Frequency stability (internal reference)	better than ±1ppm over temperature aging: better than ±1.5ppm in first year and ±5ppm for 10 years (includes the first year)			
Phase noise (typical)	Output frequency			
		1GHz	10GHz	
	@offset	100Hz	-88dBc/Hz	-68dBc/Hz
		1kHz	-112dBc/Hz	-92dBc/Hz
		10kHz	-125dBc/Hz	-105dBc/Hz
		100kHz	-126dBc/Hz	-106dBc/Hz
1MHz		-141dBc/Hz	-121dBc/Hz	
Frequency switching time	typical 150usec, max. 200usec			
Output return loss	min. 10dB			

Control	via USB-3.0
Alarm	via USB-3.0
Power supply	via USB-3.0, 5V±0.5V
Current consumption	650mA typ. @ 5V
Control&power connector	USB-3.0, Type A connector
RF connector	SMA (F)
Operating Temperature range	-20°C to +70°C (base-plate temperature)
Storage Temperature range	-40°C to +85°C
Size	65x65x15mm

Specifications are subject to change without notice.

OUTLINE DRAWING (mm)

TYPICAL PERFORMANCE CHARACTERISTICS

Figure 2. Typical phase noise @ $F_{out}=10\text{GHz}$

ORDERING INFORMATION

MODEL NUMBER	DESCRIPTION
BSVW14K11169	BSVW14 0.05-15GHz wideband synthesizer; 1Hz step; -10...+10dBm output power; USB control

DOCUMENT REVISION

DOCUMENT NAME	REVISION	DATE
BSVW14-LM-K11169	V01	29/03/2023