0.05 - 15GHz USB Microwave Synthesizer

MAIN FEATURES

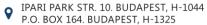
- * Very wide frequency tuning range
- * Low phase noise
- Low spurious level
- ❖ Built in high stability frequency reference
- ❖ USB powered and USB programmable
- Small size

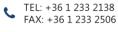
DESCRIPTION

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	50-1	50-15000MHz				
Frequency step	1Hz	1Hz				
Output RF power	+10d	+10dBm±2dB over temperature and frequency at maximum setting				
RF power variation	typ. ±	typ. ±1dB, max. ±2dB over frequency				
Attenuation control	20dB	20dB in 0.1dB steps				
Level control accuracy	±0.50	±0.5dB				
RF on/off	min.	min. 60dB isolation				
Spurious	typ	typ60dBc, max55dBc (carrier +/-10MHz)				
Subharmonics	typ	typ60dBc, max55dBc				
Harmonics	typ	typ15dBc				
Frequency stability (internal reference)	aging	better than ± 1 ppm over temperature aging: better than ± 1.5 ppm in first year and ± 5 ppm for 10 years (includes the first year)				
Phase noise (typical)		Output frequency				
			1GHz	10GHz		
		100Hz	-88dBc/Hz	-68dBc/Hz		
	et	1kHz	-112dBc/Hz	-92dBc/Hz		
	@offset	10kHz	-125dBc/Hz	-105dBc/Hz		
	e e	100kHz	-126dBc/Hz	-106dBc/Hz		
		1MHz	-141dBc/Hz	-121dBc/Hz		
Frequency switching time	typic	typical 150usec, max. 200usec				
Output return loss	min.	min. 10dB				







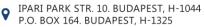


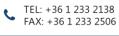
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Control	via USB-3.0
Alarm	via USB-3.0
Power supply	via USB-3.0, 5V±0.5V
Current consumption	650mA typ. @ 5V
Control&power connector	USB-3.0, Type A connector
RF connector	SMA (F)
Operating Temperature range	-20°C to +70°C (base-plate temperature)
Storage 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 @ Fout=10GHz

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