



Frequency Calibrator VCH-313



Frequency calibrator VCH-313 is intended for calibration and verification of different frequency signal sources, using precision time scale signal, transmitted by satellite navigation systems GPS/GLONASS. The instrument can provide periodical frequency correction of the calibrating frequency standard in automatic mode.

Key applications

- ◆ Verification of metrological parameters of precision frequency signals sources;
- ◆ time keeping metrology systems;
- ◆ scientific research measurements.



VCH-313 Specifications

Inputs (The frequency of input signal is recognized automatically.)

Waveform	Qty	Amplitude	Termination
5MHz (sine)	1	1 ±0.2 V _{RMS}	50 Ohms
10 MHz (sine)		1 ±0.2 V _{RMS}	50 Ohms
2048 kbps (pulse)		ITU-T G.703	

Frequency calibration error depends on input signal frequency "F" and measurement time "T" and is determined by formula $\Delta F/F=1/FT$. Values of calibration errors are given in the table below.

Input frequency "F"	Calibration error depends from measurement time "T"		
	1 Hour	6 Hours	24 Hours
2,048 MHz	$\leq 6.0 \times 10^{-10}$	$\leq 1.0 \times 10^{-10}$	$\leq 3.0 \times 10^{-11}$
5 MHz	$\leq 1.5 \times 10^{-10}$	$\leq 2.5 \times 10^{-11}$	$\leq 6.0 \times 10^{-12}$
10 MHz	$\leq 3.0 \times 10^{-11}$	$\leq 5.0 \times 10^{-12}$	$\leq 1.0 \times 10^{-12}$

General

Best Frequency Calibration accuracy (T=10days)	$\leq 1 \times 10^{-13}$
Interface:	RS-232C; USB;
Digital control and results of Calibration	Front panel display and remotely
Power AC:	100–240 V, 50-60 Hz
Power DC: (Option 1 - Dual Power supplies)	38.4–57.6 V
Power consumption:	$\leq 25W$
Warm up period	≤ 30 mins
Operating temperature range ($\pm 1^\circ$ C/Hour)	+10 ~ +35°C
Dimensions (WxHxD)	240 x 140 x 330 mm
Antenna:	JCA225S (or similar)
Antenna cable's length:	60m
Weight	~4.5 kg



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