

Rubidium frequency standard CH1-1014



A compact CH1-1014 rubidium frequency standard is intended for use as an embedded signal source for frequency and time measuring systems, telecommunication systems and navigation. Disciplined by external 1pps signal rubidium clock with digital control and monitoring via RS-232 port. The device is designed for applications with high demands on the size, weight and power consumption. PC software included.

Specification

1. Output signal frequency..... 10 MHz sine + 1pps pulse
2. Output signal amplitude at a load of 50 Ω, Vrms, sine, at range.....0.8 to 1.2
3. Accuracy at shipment, at range..... ± 2·10⁻¹¹
4. Aging (after 72 hrs), at range..... ± 2·10⁻¹¹/month
at range..... ± 2.4·10⁻¹⁰/year
5. Relative error of frequency for 1 day in a sync mode by external 1pps signal, at range.....± 5·10⁻¹²
6. Frequency retrace (after 24 hrs on)..... < 2·10⁻¹¹
7. Short-term stability (Allan variance) 1 s..... < 1.4·10⁻¹¹
10 s..... < 5·10⁻¹²
100 s..... < 2·10⁻¹²
1 day < 5·10⁻¹²
8. Temperature shift (0 to +50 °C *), at range..... ± 2·10⁻¹⁰
(*) - the upper limit of temperature range is measured on the base plate of device and should not exceed specified values.
9. The tuning range of the output frequency (digital with the step 1·10⁻¹²)..... ± 1·10⁻⁹
10. Harmonics, dBc..... < - 30
11. Phase noise, dBc/Hz offset 85 Hz..... < - 130
1 kHz..... < - 140
10 kHz..... < - 145
12. 1pps output signal synchronization accuracy by external 1pps signal, μs, at range..... ± 0.1
13. Warm-up time to < 1·10⁻⁹, min (@ 25 °C, 24V)..... 15
14. Supply voltage, V..... 22 to 28
15. Input power (steady state @ 25 °C), W..... < 18
16. Dimensions (depth×width×height), mm..... 158×78×87
17. Weight, Kg..... < 1.2

