

Compact rubidium frequency standard CH1-1022/3



A compact CH1-1022/3 rubidium frequency standard is intended for use as an embedded signal source for frequency and time measuring systems, telecommunication systems and navigation. Rubidium clock with user-programmable output signal frequency as well as digital control and monitoring via RS-232 port. The device is designed for applications with high demands on the size, weight and power consumption. Available options: B - improved short-term stability. 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.....	0.6 to 1.2
3. 1 pps output polarity.....	Positive level.....
LVTTTL33 and LVCMOS33 of JEDEC JESD8C.01 standard	
pulse width, μs.....	10 to 20
rise time, ns.....	< 5
4. Accuracy at shipment, at range.....	± 2·10 ⁻¹¹
5. Aging (after 72 hrs), at range.....	± 4·10 ⁻¹¹ /month
at range.....	± 4.8·10 ⁻¹⁰ /year
6. Frequency retrace (after 24 hrs on).....	< 2·10 ⁻¹¹
7. Short-term stability (Allan variance) 1 s.....	< 3·10 ⁻¹¹ (option B 1·10 ⁻¹¹)
10 s.....	< 1·10 ⁻¹¹ (option B 3·10 ⁻¹²)
100 s.....	< 3·10 ⁻¹² (option B 1·10 ⁻¹²)
8. Temperature shift (-35 to +67 °C *), at range.....	± 5·10 ⁻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 4·10 ⁻⁶ Hz).....	100 Hz to 100 MHz
10. Harmonics, dBc.....	< - 30
11. Phase noise, dBc/Hz offset 1 Hz.....	< - 80
10 Hz.....	< - 90
85 Hz.....	< - 120
1 kHz.....	< - 125
10 kHz.....	< - 125
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, 18V).....	5
(@ -35 °C, 18V).....	20
14. Supply voltage, V.....	16.5 to 24
15. Input voltage sensitivity (16.5 to 24V).....	< 1·10 ⁻¹¹ /V
16. Input power (steady state @ 25 °C), W.....	< 16
17. Dimensions (depth×width×height), mm.....	100×85×43
18. Weight, Kg.....	< 0.6

made in RUSSIA