

Compact rubidium frequency standard CH1-1022/2



A compact CH1-1022/2 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. Available options: B - improved short-term stability; C - improved

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.....	LVTTL33 and LVCMOS33 of JEDEC JESD8C.01 standard
pulse width, μs.....	10 to 20
rise time, ns.....	< 5
4. Accuracy at shipment, at range.....	$\pm 2 \cdot 10^{-11}$
5. Aging (after 72 hrs), at range.....	$\pm 4 \cdot 10^{-11}$ /month
at range.....	$\pm 4.8 \cdot 10^{-10}$ /year
6. Relative error of frequency for 1 day in a sync mode by external 1pps signal, at range.....	$\pm 1 \cdot 10^{-11}$
7. Frequency retrace (after 24 hrs on).....	< $2 \cdot 10^{-11}$
8. Short-term stability (Allan variance) 1 s.....	< $3 \cdot 10^{-11}$ (option B $1 \cdot 10^{-11}$)
10 s.....	< $1 \cdot 10^{-11}$ (option B $3 \cdot 10^{-12}$)
100 s.....	< $3 \cdot 10^{-12}$ (option B $1 \cdot 10^{-12}$)
9. Temperature shift (-35 to +67 °C *), at range.....	$\pm 5 \cdot 10^{-10}$
(*) - the upper limit of temperature range is measured on the base plate of device and should not exceed specified values.	
10. The tuning range of the output frequency (digital with the step $1 \cdot 10^{-12}$).....	$\pm 1 \cdot 10^{-8}$
11. Harmonics, dBc.....	< - 30
12. Phase noise, dBc/Hz offset 1 Hz.....	< - 80
10 Hz.....	< - 90
85 Hz.....	< - 130
1 kHz.....	< - 140 (option C - 145)
10 kHz.....	< - 145 (option C - 150)
13. 1pps output signal synchronization accuracy by external 1pps signal, μs, at range.....	± 0.1
14. Warm-up time to $< 1 \cdot 10^{-9}$, min (@ 25 °C, 18V).....	5
(@ -35 °C, 18V).....	20
15. Supply voltage, V.....	16.5 to 24
16. Input voltage sensitivity (16.5 to 24V).....	< $1 \cdot 10^{-11}$ /V
17. Input power (steady state @ 25 °C), W.....	< 16
18. Dimensions (depth×width×height), mm.....	100×85×43
19. Weight, Kg.....	< 0.6

made in RUSSIA