STM-Rb-S Series Ultra-Thin Rubidium Clock

同相科技 Synchronization Technology Ltd

Product Introduction

The STM-Rb-S series rubidium atomic clock is a thin and lightweight rubidium atomic frequency standard product that can be conveniently installed in a card-style chassis. The device is characterized by good short-term stability, small size, light weight, short lock time, low power consumption, and strong shock resistance.

Product Features

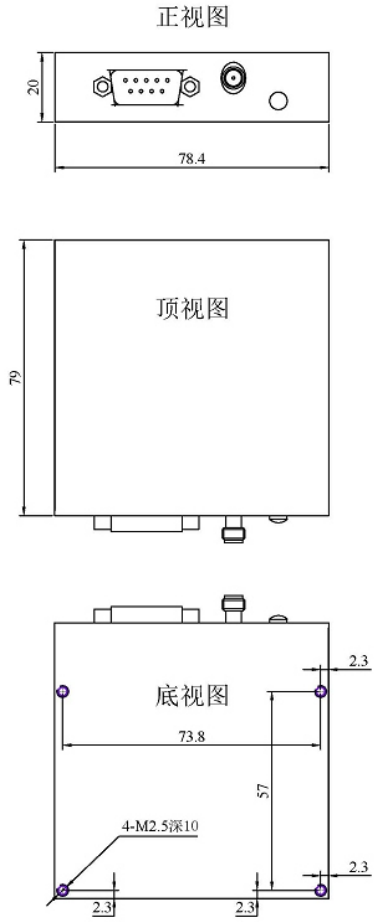
- 1PPS Taming Function
- Aging rate: <5E-12/day
- Fast lock and tame, frequency accuracy better than 5E-11 within 300 seconds after power on
- Ultra-thin card structure design, height 20mm
- Wide temperature operation

Technical Specifications

Product Features	Specification Name	Indicator Parameters	Remarks
RF Output	Frequency	10MHz	1 Channel Sine Wave Output, SMA Interface
	Output Power	11±2dBm	Load Impedance 50Ω at 10MHz
	Factory Accuracy	<5E-11	+25℃
	Short-term Stability	Regular Model:<5.0E-12/1s;<8.0E-12/10s;<4.0E-12/100s Professional Model:<5.0E-12/1s;<3.0E-12/10s;<1.0E-12/100s	
	Phase Noise	Regular Model / Professional Model 1Hz ≤-95dBc/Hz / 1Hz ≤-100dBc/Hz 10Hz ≤-130 dBc/Hz / 10Hz ≤-135 dBc/Hz 100Hz ≤-145 dBc/Hz / 100Hz ≤-150 dBc/Hz ≥1kHz ≤-155dBc/Hz / ≥1kHz ≤-158dBc/Hz	
	Timing Accuracy	<0.8μs/24h	
	Frequency Repeatability	<±5E-11	
	Aging	<±5.0E-12/d	
	Harmonic	<-40dBc	
	Spurious	<-80dBc	
	Frequency Temperature Characteristics	<5.0E-10（0℃ to 50℃）;	

1PPS Output	Rise Time	<2ns	
	Pulse Width	500us~500ms(默认100ms)	
	Level	>4.5V (1MΩ/15pF Load)	
PPS Taming	PPS Input	3.3V ~5V(TTL/LVTTL)	
	Taming Accuracy	<1E-12	Power-up within 2 hours, taming time greater than 1 day
Surveillance and Control	Frequency Modulation Accuracy	<5.0E-13	Adjustment Range: ±1.0E-6
	Lock Time	<3分钟	+25℃
	State Monitoring	Rubidium Clock Lock and Taming Indicator	High Level Lock Low Level Unlock
	Communication Monitoring	RS-232	
Power Supply Voltage	Input Voltage	+12~16 VDC	
	Maximum Current	1.8A（+25℃）	
	Steady-State Current	≤0.6 A（+25℃）	
	Power Supply Interface	DB9Male	
Environment	Operating Temperature	-40℃~+60℃	
	Storage Temperature	-55℃~+85℃	
	Relative Humidity	≤85% non-condensing (operating state)	
Appearance	Weight	<150g	
	Dimensions	78.4mm×77.9mm×20mm	

External Dimensions



Selection Guide

STM-Rb-S C ↵
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①Performance Options: C(Regular Model), P(Professional Model)