

Travelling Merchant: _____

DATASHEET

Standard: **R32-E422-10.00MHz**

P/N: _____

Plot			The Label
Drew	Audited	Approved	Stamp, please! Thanks!
Date: 2022.03.11			

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1. Electrical Parameters

Table 1:

Item	Description	Min.	Typ.	Max.	Unit	Test Condition
1 PPS Output	Level	3.1	3.3	3.5	V	
	Pulse Width	1			μs	
	Rise/Fall Time			10	ns	
RF Output	Nominal Frequency	10.00			MHz	
	Format	Sinewave				
	Load	50			Ω	
	Level	7			dBm	
	Frequency Accuracy	-0.1		+0.1	×10 ⁻⁹	At Shipment
	Frequency vs. Temperature	-0.5		+0.5	×10 ⁻⁹	TA varies from -20°C to 60°C
	Short-term Stability (Allan Deviation)			0.05	×10 ⁻⁹	1s
				0.02	×10 ⁻⁹	10s
				5	×10 ⁻¹²	100s
	Daily Aging	-5		+5	×10 ⁻¹²	After 1 day of continuous operation.
	Monthly Aging	-0.05		+0.05	×10 ⁻⁹	Design assurance
	Yearly Aging	-3		+3	×10 ⁻⁹	Design assurance
	Warm-Up Time			8	minutes	@25°C within ±0.2×10 ⁻⁹ of final frequency with reference after 30minutes on.
	Frequency Adjustment Range	-20		+20	×10 ⁻⁹	Adjusted through UART interface, resolution ≤1E-12
	Frequency reproducibility			1	×10 ⁻¹²	
Magnetic sensitivity			0.05	×10 ⁻⁹		
Phase Noise			-85	dBc/Hz	10Hz	
			-115		100Hz	
			-135		1KHz	
			-140		10KHz	
Supply Voltage	Supply Voltage	4.85	5	5.15	V	
	Warm Up			20	W	TA varies from -20°C to 60°C
	Steady			6	W	@25°C



2. . Communication Protocol

The rubidium atomic clock has a communication function with the user's computer, using LVCOMS level communication. Users can use the software communication interface to view the working status of the rubidium clock and adjust the output frequency

Using UART communication, UART data specifications:

- a) Output interface: UART;
- b) Communication protocol: UART serial communication asynchronous protocol;
- c) Baud rate: 115200;
- d) Data bits: 8 bits, arranged in low order before high order after;
- e) Starting position: 1 position;
- f) Stop position: 1 position;
- g) Odd checksum: None

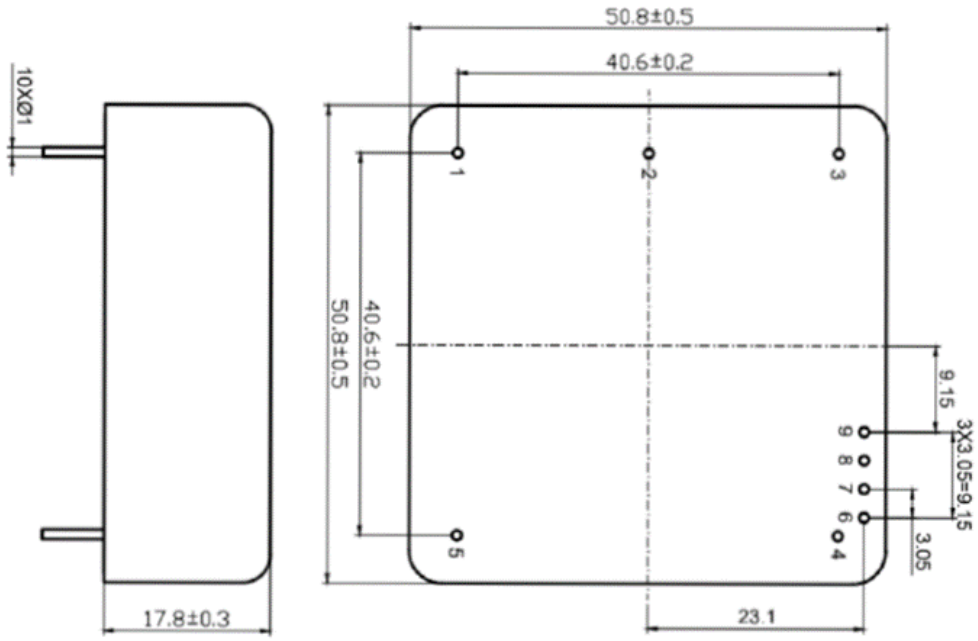
3. Environmental Conditions

Table 2:

	Description	Test Condition
Environmental Conditions	Operable Temperature	-20°C 到 60°C
	Storage Temperature	-55°C~85°C
	Storage Humidity	30%~80%
	MTBF	≥100000 Hours
	Magnetic Field	≤2 Gauss
Full Package Storage	Relative humidity (%)	20%~70%
	Temperature (°C)	-10°C~35°C



4. Mechanical Structure (mm)



Pin Function

1	1PPS_IN
2	CASE
3	10MHz
4	GND
5	+5V
6	LOCK
7	TXD
8	RXD
9	1PPS_OUT

Note1: Tolerance ± 0.30mm without mark

Note2: Referential weight 100g

5. Wave soldering curve (RoHS)

