

CPT Atomic Clock(CT55)

Description

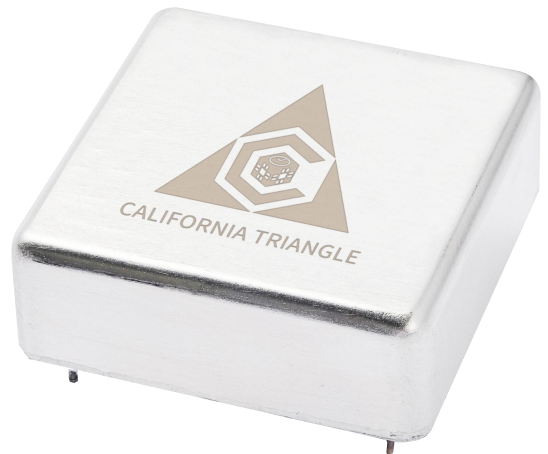
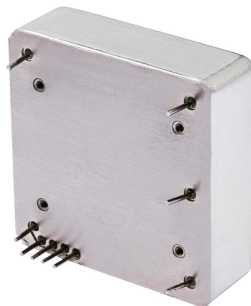
CT55 is a chip scale atomic clock(CSAC) based on Coherent Polarization Trapping (CPT) principle, integrating 1PPS taming and 1PPS output functions. It has the advantages of high precision, low power consumption, small size, and fast startup.

Feature

- Compact Design
- Compatible with SA.55
- Wide Range Power Supply
- Wide Range Working Temperature
- Ultra-low temperature Coefficient
- Anti-Vibration

Application Filed

- Timing Board and Module
- Telecommunication System
- Power Grid
- Positioning System

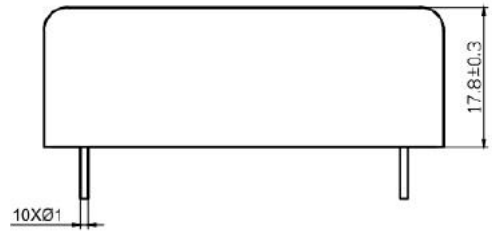
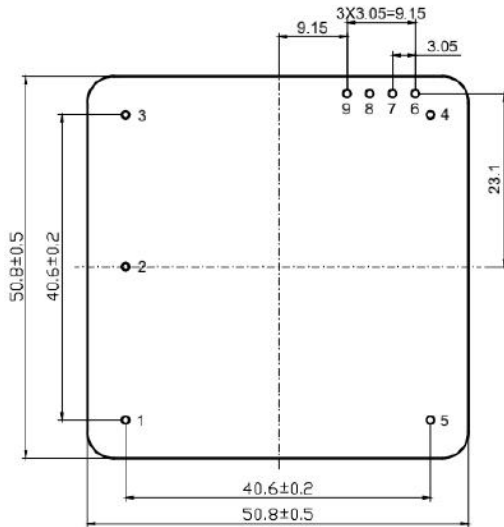


Technical Parameter

Item		Parameter
Output Frequency		10MHz
Output Type		HCMOS
Frequency Accuracy		$\pm 5E-11$
Short-term Stability		5.0E-11/1s
		3.0E-11/10s
		1.0E-11/100s
Phase Noise(SSB)	10Hz	$\leq -90\text{dBc/Hz}$
	100Hz	$\leq -120\text{dBc/Hz}$
	1kHz	$\leq -140\text{dBc/Hz}$
	10kHz	$\leq -145\text{dBc/Hz}$
Frequency Drift		$< 2E-11/D$
Power Supply		+5~12V DC
Steady Consumption(25°C)		$\leq 3W@12V$
Max Consumption		$\leq 14W@12V$
Power-on Feature(25°C)		$\leq 10\text{min (Lock)}$
Frequency Adjust Range		$\pm 2E-8$
Adjust Resolution (Digital)		Better than $1E-12$
1PPS Sync Accuracy		$\pm 50\text{ns}$
Tame Accuracy		$1E-12$
Time Keeping Ability		$\leq 5\mu\text{s}(24\text{h})$
Working Temperature		-40~80°C
Temperature Feature		$\leq 5E-11$
Storage Temperature		-55~100°C
Dimension		50.8x50.8x17.8mm
Weight		$\leq 100\text{g}$

Dimension

(50.8 ± 0.5) mm \times (50.8 ± 0.5) mm \times (17.8 ± 0.3) mm.



Pin Definition

Serial	Function	Description
1	1PPS_IN	Reference 1PPS input
2	CASE	Out Case
3	10MHz	Output
4	GND	Signal and Power
5	+5V	Power+
6	TXD	UART TX
7	RXD	UART RX
8	LOCK	Lock Indicator, 3.4V, Low=Lock
9	1PPS_OUT	Output