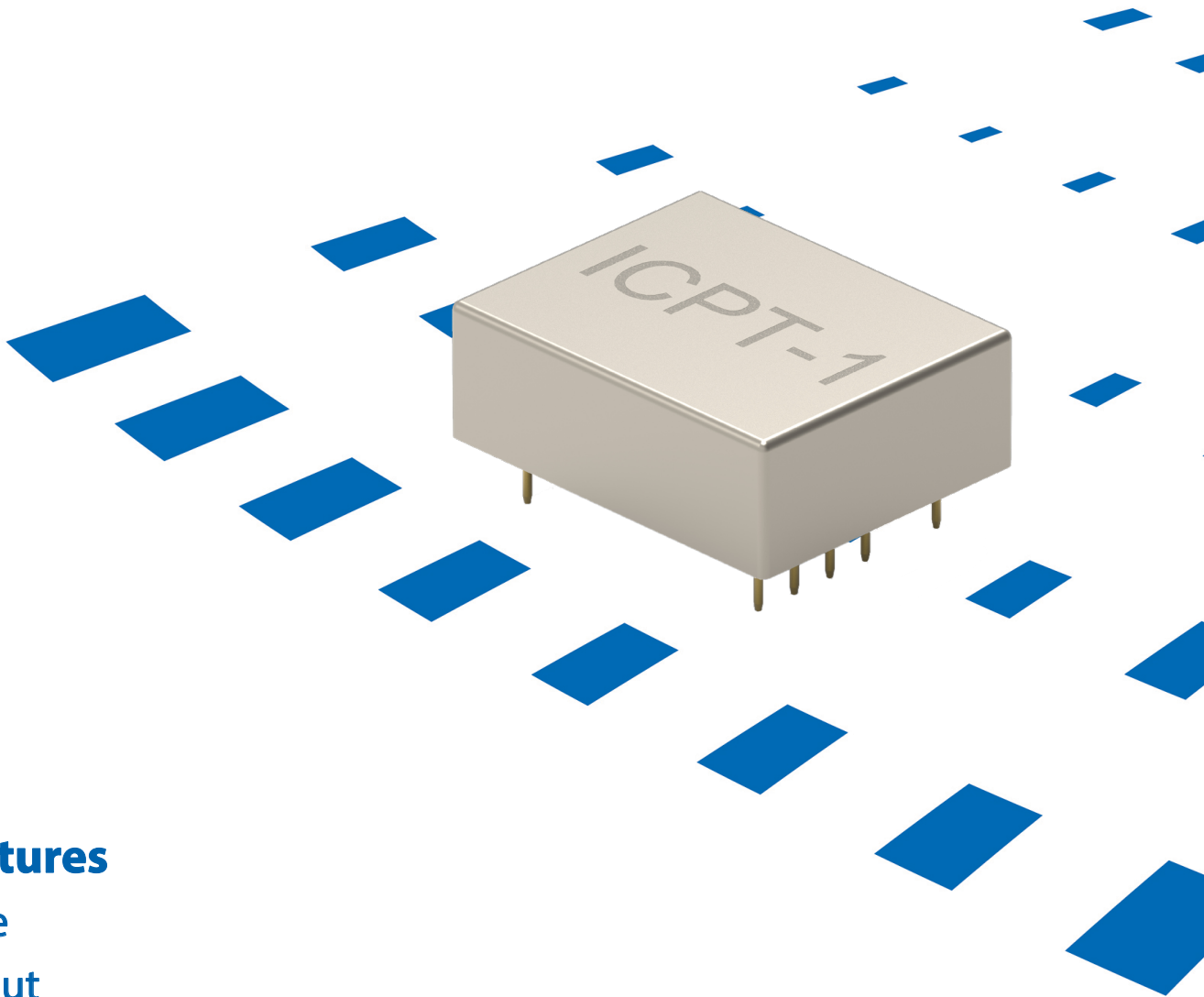




# Rubidium Oscillator

## ■ ICPT-1



### **Key Features**

Small size

1 PPS input

Low current consumption

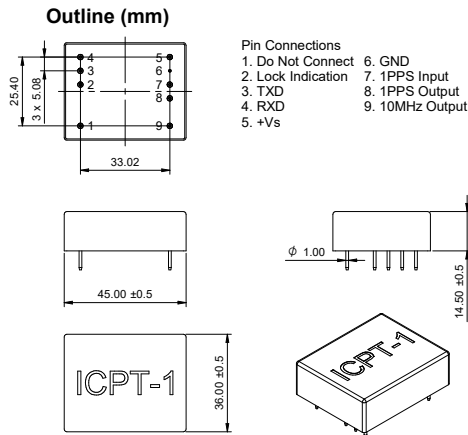
Digital frequency adjustment

# ICPT-1 Rubidium Oscillator

The ICPT-1 is a rubidium clock designed using the Coherent Population Trap method. The advantage of this type over a traditional rubidium frequency source is the small size of only 36.0 x 45.0 x 14.5 mm and a low current consumption of only 0.5 A. Instead of working with a Rubidium lamp the ICPT-1 uses a laser to initiate oscillation – this increases the lifetime of the atomic clock. With the possibility of a 1 PPS linkage it is perfectly suited to support synchronisation applications and can be used as timing reference.

## Specification

- 36.0 x 45.0 x 14.5 mm
- 10 MHz
- 1 PPS input and output
- $\pm 0.5$  ppb over -45 to 70 °C
- Typical short term stability of 0.09 ppb @ 1 s
- Digital frequency adjustment
- 3.3 V supply voltage
- HCMOS output



## Applications

Ideal for synchronisation or as reference clock for:

- Satellite & secure communications
- Navigation systems
- Financial
- Utility
- Security
- Communications timing applications

## Stock parts available:

Part Number	Supply Voltage	Package (mm)	Output Compatibility	Frequency	Short Term Stability @ 1 s	Operating Temperature Range
LFRBXO084033	3.3 V	36.0 x 45.0 x 14.5	HCMOS	10 MHz	0.09 ppb	-40 to 70 °C

For other specifications please contact IQD.

## Additional material available:

### Handbook

IQD has done extensive testing and gathered the results into a comprehensive handbook. These include among others short term stability, power consumption, retrace and frequency over temperature measurements.

### Programming Manual

The ICPT-1 offers multiple programming options. The manual includes all information needed to digitally adjust the frequency, to use the 1 second time of day (TOD) counter as well as the 1 PPS lock and holdover mode.

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