

Introduction

RAKONは、高信頼性周波数制御製品の世界最大級のソリューションプロバイダーです。その高信頼性ソリューションは、最も厳しい性能基準が要求される防衛や計測の用途で見られます。このため、多くの政府および防衛プログラムが、最も厳しい条件下で高性能が要求されるシステムで、世界中のRAKONオシレータとサブシステムを使用しています。RAKONは、常に革新的な技術の最先端を行く周波数制御製品を開発しています。

Test Capabilities

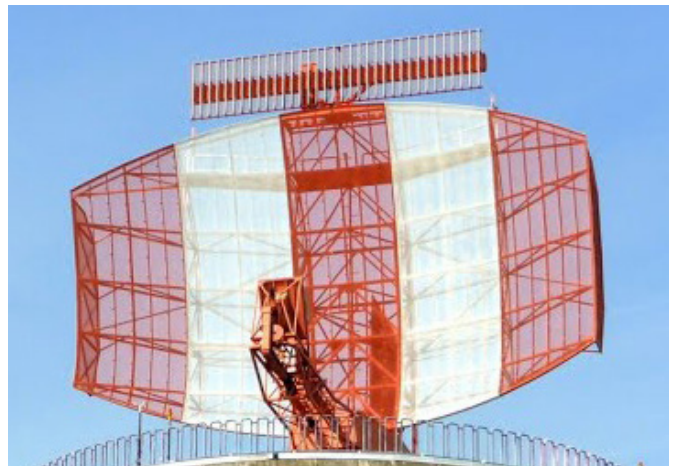
Rakon develops and manufactures custom test equipment that is tailored to the specific needs of our oscillator products, including:

- ◆ Proprietary Test Equipment for Surviving Shock Test up to >30,000 g to test our high shock resistant and highly stable TCXOs.
- ◆ High performance phase noise analyzers using cross-correlation technique to measure our ultra low phase noise OCXOs (SAW oscillators) and OCXOs.
- ◆ Rakon has a unique capability for high resolution testing in production. 100% parameter test guarantees oscillator performance.
- ◆ Very high resolution Frequency Stability vs. Temperature measurement, microjump screening, acceleration sensitivity, crystal assembly and tuning test.



Rakon is Qualified in Many MIL Programmes

RAKONの高信頼性周波数制御製品ソリューションは、防衛市場の最も厳しい性能の期待に応えています。RAKONは高度な技術要件を満たす幅広い発振器とサブシステムを開発し、計測器、地上、船舶、航空機のアプリケーションに最適な製品を提供しています。RAKONは、フリーの周波数制御製品を幅広く提供しており、30年にわたる防衛用途での実績があります。





Hi-Reliability Products for Defense & Instrumentation

Defense and Instrumentation Solutions



RAKONは、極めて優れた能力を持つ製品を幅広く取り揃えています。私たちは、あらゆる種類の防衛および計測アプリケーションのための周波数制御ソリューションを用意しています。

Crystal Resonators MIL-PRF-3098 crystals*

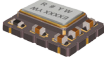

- RHX3500**  Crystals for ultra stable TCXOs and OCXOs in harsh environments.
- Frequency up to 140 MHz
- RHX3700**  Crystals for ultra stable TCXOs and OCXOs in harsh environments.
- High stability and low ageing
 - Low phase noise and low *g*-sensitivity
 - Swept HQ crystal premium

* Crystals fully manufactured and tested following the guidelines of MIL-PRF-3098.



XO Low noise and low jitter

- RXO5032AD**  XO meets the demanding environmental requirements for Aeronautics and Defense.
- Size: 5.0 x 3.2 mm
 - Frequency: 8 to 1500 MHz
- QEN55, 49**  QEN series for Avionics, rugged radios.
- Package: 20.7 x 13.1 x 5, 14 x 9 x 3 mm
 - Frequency: 1.5 to 100 MHz


TCXO High performance

- RPT7050A**  Pluto+™ ultra stable TCXO.
- Frequency: 10 to 52 MHz
 - Size: 7.0 x 5.0 mm
 - FvsT: ±0.2 ppm (-55 to +105°C)
- RPT7050D**  Pluto+™ low *g*-sensitivity TCXO.
- Frequency: 16 to 40 MHz (10 MHz available CMOS only)
 - Low *g*-sensitivity: 0.2 ppb/*g*
 - FvsT: ±0.5 ppm (-40 to +85°C)
±1.0 ppm (-55 to +105°C)

OCXO Commercial off-the-shelf (COTS)

- RFPO40**  Mercury™ IC-OCXO.
- Frequency: 5 to 50 MHz
 - Size: 9 x 7 mm
 - FvsT: ±10 to 100 ppb (-40 to +85°C)
- ROX - T1, T2, S3, S4**  Discrete OCXO.
- Frequency: 5 to 65 MHz
 - Size: 52 x 42, 38 x 27, 25 x 22 mm
 - FvsT: ±0.1 to 10 ppb (-40 to +85°C)

Low Noise OCXO Low *g*-sensitivity option

- LNO100**  Low noise OCXO series for Test equipment, Airborne RADAR and Synthesizers.
- Frequency: 80 to 125 MHz
 - Size: 25 x 22 x 13 mm (SMD package), 38 x 38 x 25 mm (ruggedized package with SMA connector)
 - FvsT: ±0.5 ppm (-40 to +85°C)
 - Noise floor: <-180 dBc/Hz typ, at 100 MHz


OCXO & Multipliers Ultra low phase noise

- LNO320 - 5000**  Low noise OCXO series for Test equipment, RADAR and Electronic Warfare systems.
- Frequency: 320 MHz to 5 GHz
 - Size: 25 x 22 x 13 mm (SMD package), 70 x 70 x 35 mm (ruggedized package with shock absorbers)
 - Noise floor: <-180 dBc/Hz typ, from 320 to 500 MHz
 - g*-sensitivity: as low as 0.5 ppb/*g*
 - Supply voltage: 5 to 12 V

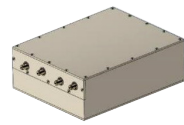
Sub-Systems and Frequency Synthesizer

RAKONは、サブシステムと低位相ノイズのソリューションで強い伝承が有ります。当社のソリューションは、既存のSAWベースのRADARシステムをアップグレードする際に理想的です。デジタルパルス圧縮サブシステムと高速デジタル処理により、システムの性能を大幅に向上させることができます。

Sub-Systems Fully programmable

- CIF 04, 05, 06, 07**  The series of Sub-Systems are provided with FPGA firmware loaded, including waveforms generation and pulse compression.
- Size: 175 x 152 x 27.1, 175 x 75 x 10 mm
 - IF analog input and output
 - BITE function
 - High BxT compression gain
 - One or two expander channels; one or two independent compressor channels

Frequency Synthesizer I/Q Outputs or 1x RF Output

- DS-H01**  These are USB/SPI programming Frequency Synthesizer with several mode options: CW, chirp, list, pulse and burst.
- Output frequency range
 - > I/Q: 10 to 500 MHz
 - > RF with Internal Reference: 3 to 4 GHz
 - > RF with External Reference: 1 GHz bandwidth inside 2 to 4 GHz range
 - SFDR: ≥60 dBc for I/Q; ≥50 dBc for RF
 - Noise floor: ≤-155 dBc/Hz typ, at 500 MHz

