

Rakon is one of the world's largest solutions providers of high reliability frequency control products. Rakon continuously develops state of the art frequency control products at the cutting edge of innovative technology. Rakon's high reliability solutions are found in space, defence and industrial applications which require the most stringent performance criteria. This is why many government and commercial programmes use Rakon oscillators across the globe, in systems where high performance is required under the most demanding conditions.

- Supplier to all major US based government contractors since the 1990s.
- Rakon offers a complete range of both ITAR and ITAR free frequency control products based on crystal, SAW and digital technologies.
- Rakon is involved in most of the scientific programmes managed by the European Space Agency (ESA).
- Rakon products can be found in a number of international programmes including Spacebus, ATV, Galileo, Goce, HTV, Herschel-Planck, Rosetta, Globalstar, Envisat, Venus Express and Mars Express.
- Rakon is closely involved in the design and development of products for major international defence programmes including those driven by the European Defence Agency.
- Development of high reliability solutions since World War II.
- Offering the world's largest manufacturing platform for high reliability applications.

Precise understanding and technical expertise

Critical to Rakon's success is our exceptional understanding of customers and their needs. Working closely with customers, Rakon gains in-depth knowledge not only of the products but how they interact with customers' systems and applications in the field. Rakon is engaged at the very early stages in customer programmes to ensure the best solution is delivered. Rakon has developed breakthrough innovations that have enabled our customers to be one step ahead in a highly competitive market.

- Rakon has a proven record of taking aerospace and military specifications and creating cost effective solutions.
- As your strategic frequency control partner, Rakon can enhance commercial products or provide customised solutions, ranging from high performance crystals, all the way through to complex sub-systems.
- Rakon has a long history of providing high reliability products with some customers having an association with Rakon of 30 years or more.

Innovation

Rakon is committed to enabling next generation technologies through a continual programme of innovation; through cost or size reductions, performance improvements or pioneering features.

UNITED KINGDOM

Lincoln
Defence qualified TCXOs



INDIA

Bangalore
Space and defence qualified OCXOs, TCXOs, VCXOs, XOs, modules



FRANCE

Argenteuil / Mougins / Pont Sainte Marie
Space and defence qualified OCXOs, TCXOs, VCXOs, XOs, crystals, crystal filters, SAW oscillators, digital pulse compression sub-systems



NEW ZEALAND

Auckland
Defence and automotive qualified TCXOs, crystals



RAKON HIGH RELIABILITY
MANUFACTURING LOCATIONS

EXTENSIVE PRODUCT OFFERING

Rakon has an extensive portfolio of products with extreme capabilities. We have frequency control solutions for space, defence and industrial applications including: navigation, observation, exploration, telecommunication, satellite and transportation programmes, avionics, airborne systems, communications, radars, satellites, submarine cable networks, oil exploration requirements and many other applications.

Crystal resonators

- A large range of packages and cuts including AT and SC
- Specific crystal designs for high temperatures: up to 180°C
- High reliability and stability in harsh environments
- Low phase noise and low g -sensitivity, excellent aging
- Further improved g -sensitivity (0.2 ppb/ g), with Rakon's dual crystal patented design
- RGX patented crystal designs enable shock survival up to 50,000 g
- ESA/SCC 3501 qualified, swept HQ crystal premium
- CNES qualified QAS crystals

Crystal filters

- A wide range of quartz, langasite and lithium tantalate filters
- Frequency range: 3 MHz to 250 MHz
- High selectivity

XOs

- SMD, flat pack or DIP packages, hybrid or discrete technology
- Compact size, low weight down to 2 g and low consumption: 0.1 W

VCXOs

- SMD and flat pack designs, discrete technology
- Excellent pulling range: ± 100 ppm absolute
- Manufactured in accordance with MIL-PRF-55310
- Compact sizes and low weight (2 g – 10 g)
- Low power consumption: 0.1 W
- Shock, vibration and radiation tolerant

TCXOs

- SMD, DIP and flat pack designs, discrete technology
- High stability over the full military temperature range: up to ± 0.5 ppm
- Charon patented technology featuring power saving modes with embedded timer and alarm functionality
- Advanced Pluto compensation down to 0.1 ppm over temperature

- Hybrid technology for improved phase noise
- Manufactured in accordance with MIL-PRF-55310
- Compact sizes and low weight (2 g – 10 g)
- Shock, vibration and radiation tolerant

OCXOs

- ULN 100 MHz OCXOs in a variety of packages: (plug-in, coaxial, ruggedised)
- Customised to many applications (ground, airborne)
- Ultra low phase noise: -163 dBc/Hz @1 kHz (typical)
- Flat pack designs with low power consumption: 0.5 W
- Excellent overall stability over temperature up to ± 0.5 ppb
- Miniature 9.7 mm x 7.5 mm OCXOs with 10 ppb stability
- High frequencies available (up to 125 MHz)
- Internal shock absorbers for airborne oscillators
- Shock and vibration in accordance with MIL-STD-810
- MIL-HDBK-217E qualified
- Excellent long term ageing of 100 ppb over 10 years
- Frequency stability over temperature: 0.01 ppb
- Long term stability: 10^{-13} per day

OCSOs

- ULN SAW oscillators available in a variety of packages (surface mount, coaxial, ruggedised)
- Frequency range of 300 to 600 MHz (additional multiplier option available)
- Market leading phase noise performance with noise floor as low as -182 dBc/Hz for earlier detection of stealth aircraft

DPCSSs

- Upgrading solution for operating SAW-based radars using digital technology
- High instantaneous dynamic range, high accuracy and flexibility
- High speed signal processing

Module assemblies

- SAW and crystal oscillators for ultra low phase noise and ultra stable frequency performances



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