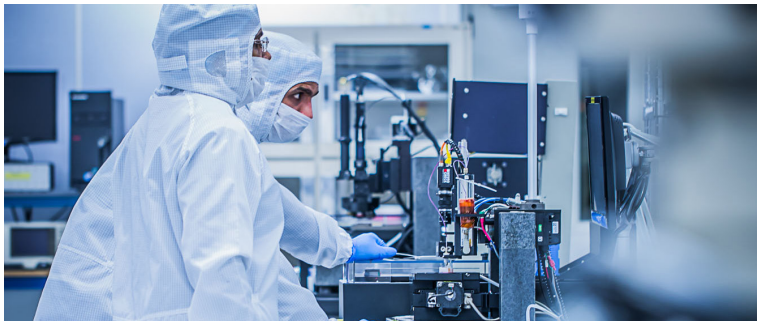
Hi-Reliability Products for Defence

Made in India

Rakon is one of the world's leading solution providers of high reliability frequency control products. Its business in India, Rakon India, offers a wide variety of high reliability solutions in the Indian defence market.

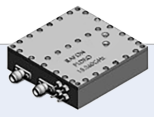
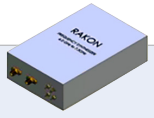
Defence Product Range, Heritage and Applications

- Rakon India has been supplying PLDROs, OCXOs, TCXOs, VCXOs, VCSOs, XOs, VCOs and VTFs into the Indian market and contributing to India's domestic defence programme for over 15+ years.
- Most of our defence products are manufactured in accordance with MIL standard and are deployed by Tier 1 and government agencies.
- Rakon can provide either standard products or modified solutions, ranging from high performance crystals and ovenised oscillators to complex system solutions.



Many government and commercial programmes in India use Rakon products in systems where high performance is required under the most complex and demanding conditions (such as airborne, sea and land defence applications). Specific applications include Stable Local Oscillators (STALOs), ground/air radar Tx/Rx modules, Coherent Oscillators (CO), master oscillators for radar Rx, Master Reference Oscillators (MRO), Identification of Friend or Foe (IFF) radars, military switching equipment, avionics (commercial and military), Air Route Surveillance Radar (ARSR), airborne Software-Defined Radio (SDR) and synthesizer references. Rakon India's defence products are MIL qualified and comply with the 'Make in India' Programmes.

Coming Soon

	PLDRO 	Frequency Synthesizer 	Hard Mount OCXO 
Frequency	Ku-band	6 – 7.5 GHz	60 – 120 MHz
Key features	• 57 x 57 x 15 mm • Dual output: 15.36 GHz, 80 MHz • Spurious level <-70 dBc • In-built internal reference • Phase lock alarm output	• 150 x 100 x 40 mm • Frequency step size: 1 kHz • Output power: +10 dBm • Reference: External/Internal	• 65 x 65 x 35 mm • Dynamic phase noise: 100 Hz offset:-115 dBc/Hz max. 500 Hz offset:-120 dBc/Hz max.

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Hi-Reliability solutions for defence – Made in India

PLDRO – Phase Locked Dielectric Resonator Oscillator

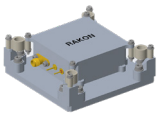
PLDRO: Ideal for radar systems, communication systems, guidance and navigation, where low phase noise is crucial.

- Frequency: 3 to 8 GHz
- Size: 51 x 51 x 17 mm
- Spurious level <-70 dBc
- In-built internal reference and Phase lock alarm output

OCXO – Vibration resilient solutions

ROX7878D: Vibration hardened OCXO is designed for radar and airborne applications. Certified by CEMILAC (Center for military airworthiness and Certification).

Single output



Dual output

- Frequency: 60 to 120 MHz
- Size: 78 x 78 x 27 mm
- Single or dual output options
  (For dual output, the Port isolation between 2 outputs > 30 dB)
- Dynamic phase noise:
  100 Hz offset:-115 dBc/Hz max.
  500 Hz offset:-120 dBc/Hz max.

ROX5151D: Vibration compensated OCXO is designed for commercial avionics equipment.

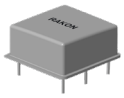
- Frequency: 10 to 120 MHz
- Size: 51 x 51 x 37 mm
- Withstands 20 *g* 10 – 2000 Hz vibration
  in 3 axes for 4 hours
- Compliant with altitude up to 50,000 ft

ROX4130D: High Frequency (HF) SMD OCXO is designed for applications where low phase noise and low *g*-sensitivity is crucial.

- Frequency: 500 MHz
- Size: 41 x 30 x 14.5 mm
- Frequency pulling: >±3 ppm
- Phase noise: -140 dBc @100 kHz

XO – MIL-STD-55310 Level B

RXO3434D: High RF power XO for Identification of Friend and Foe (IFF) radar systems and ground radar transceiver/receiver.



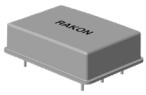
- Frequency: 0.1 to 1.15 GHz
- Size: 34 x 34 x 12.7 mm
- Power: 1 W in pulsed mode

RXO2520D: High shock resistance XO for launch vehicles.

- Frequency: 67 to 455 MHz
- Size: 25 x 20 x 10 mm
- Wide temperature range

TCXO – MIL-STD-55310 Level B, high performance

RCT3627D: Dual frequency output high stability gated TCXO for Identification of Friend, Foe (IFF) radar systems and military switching equipment.

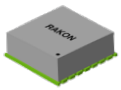


- Frequency: 1.03 and 1.09 GHz
- Size: 36 x 27 x 11 mm
- Stability: ±1 ppm over -40 to 85°C
- Digital frequency switching
- Fast switching time: <10 µs
- RF body radiation: -60 dBm

RTX2520D: High shock resistance TCXO for launch vehicles.

- Frequency: 67 to 455 MHz
- Size: 25 x 20 x 10 mm
- 16 pin, hermetically sealed
- Wide temperature range: -55 to 125°C

RHT2020D: High frequency TCXO for VHF band Software Defined Radio (SDR), Combat Net Radio (CNR) / man-pack radio.



- Frequency: 0.2 to 3.3 GHz
- Size: 20 x 20 x 11 mm
- PLL-based
- Surface mount package

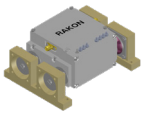
VCSO – High frequency solutions

RVS1490D: Voltage controlled SAW oscillator is designed for high speed converters where high frequency and low jitter is essential.

- Frequency: 0.84 to 1.09 GHz
- Size: 14.3 x 9.3 x 5.6 mm
- Frequency pulling: 200 ppm/V
- Phase noise: -125 dBc/Hz @ 10 kHz

VCO – High stability

RVC7670D: VCO for Stable Local Oscillators (STALO) and radar receiver modules.



- Frequency: 1.4 to 1.6 GHz
- Size: 76 x 70 x 45 mm
- High stability reference
- DDS/PLL-based, fast switching time

RVC1414D: VCO for high speed data communication, Identification of Friend and Foe (IFF) radar systems.

- Frequency: 0.97 to 1.45 GHz
- Size: 14 x 14 x 4.7 mm
- High stability reference
- Phase noise: -120 dBc/Hz

VTF - Voltage Tunable Filter

RVF2914D: The VTF is designed for tactical communications and support frequencies from 30 to 470 MHz.

- Frequency: 30 to 470 MHz
- Size: 29.7 x 14.5 x 6.0 mm
- Attenuation @ Fc ±42.8 MHz: 60 dB
- Bandwidth: 5% ±1%

For more details please visit: https://www.rakon.com/contact-us

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