

About New Space

The traditional space sector has been dominated by governments. Only the space communications sector has developed a dominant private component. The other traditional space sectors (e.g. launchers, human spaceflight, earth observation, global navigation systems and scientific missions) have remained subject to government control.

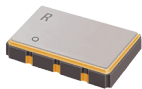
New Space refers to the recent democratisation of the space sector, which implies that more private companies, including startups, participate in this industry. This transformation is driven by innovations in launch and satellite manufacturing technology. In 60 years, the satellite launch mass has evolved from 20,000 kg to less than 4 kg.

A major trend in the New Space sector is the availability of high performance, Commercial-off-the-Shelf (COTS) approach, where satellite manufacturers are able to use standard commercial products, radiation tolerant or not, which are part of the equipment flown directly into space, or where products can be upscaled for spaceflight. This new approach speeds up development times and reduces production costs significantly. One area where COTS products are in use, is the small Low Earth Orbit (LEO) satellite market, where the satellites have a short mission lifetime and do not require the higher reliability standards of large Geostationary Earth Orbit satellites (GEO). Never-the-less it's important to note that COTS products do not fit the suitability of all New Space programmes, and cost-effectiveness is balanced by the need for high-reliability solutions that perform under demanding environmental conditions.

◆ New Space Products

Radiation Tolerant COTS XO RK105

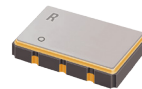
New Space grade radiation tolerant COTS XO for LEO satellites/mega-constellations.



- Frequency: 8 to 1500 MHz
- Hermetically sealed package: 5.0 x 3.2 mm SMD
- TID limit: 72/100 kRad
- Latch-up free till 32.4/62 MeV
- Quick time to market

Radiation Tolerant COTS VCXO RK205

New Space grade radiation tolerant COTS VCXO for LEO satellites/mega-constellations.

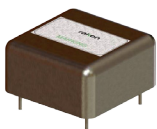


- Frequency: 8 to 1500 MHz
- Hermetically sealed package: 5.0 x 3.2 mm SMD
- Absolute Pull Range (APR): ± 50 ppm
- TID limit: 72/100 kRad
- Latch-up free till 32.4/62 MeV
- Quick time to market

◆ Sub-System Solutions

New Space OCXO RK406 NS

The RK406 NS is a low cost and low power consumption Space OCXO uniquely designed for the New Space market.



- Frequency: 10 to 125 MHz
- Package: 25.4 x 25.4 x 12.7 mm
- Overall freq. stability: ± 0.5 ppm (5y)
- ADEV (1s): $< 2E-11$
- Supply voltage: 5V
- Power consumption: 400 mW
- Output waveform: Sine 50 Ω
- TID limit: 30 kRad
- Latch-up free up to LET 60 MeV/mg/cm²

Master Reference Oscillator (MRO)

This MRO is an ideal solution for LEO satellite constellations, where ultra-low noise and very-low power consumption features are essential.

The test and screening flows can be tailored according to customer requirements to reduce cost and lead time.



Coming Soon!

- Frequency: 10 to 125 MHz
- Overall freq. stability: ± 0.5 ppm (5y)
- Freq. distr. unit with up to 48 outputs
- Integrated DC/DC converter
- Synchro to the 1PPS/1kHz
- TM/TC
- Output power up to 23 dBm

