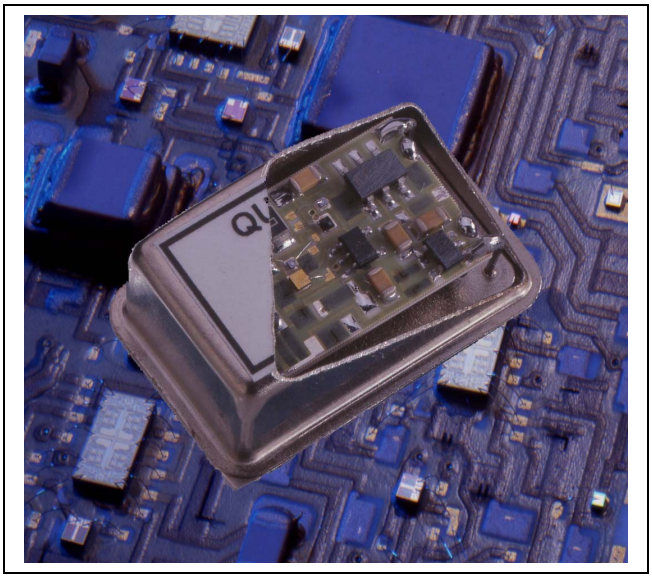
Parameters clearly improved



During the development of new hybrid OCXO´s, the engineers of Quintenz hybrid-technology turned our main attention to the following application-oriented requirements:
Low current consumption, low phasenoise, fast stabilization-behavior, small design and robust against rough environmental conditions as well as a wide temperature range. The improved qualities of our oscillators are a benefit in applications of the data-communication, military-, medicine- and measurement technology.

The highest frequency stability with quartz oscillators is usually achieved with a double oven design. In this case, X-tal and temperature sensitive devices are realizable with two serial temperature regulations on a extremely stable temperature only. Nevertheless, the inner temperature is much higher than the maximum ambient temperature. The heating power consumption depends on the outside temperature, the isolation and construction of the oven. At low supply voltages the current consumption rises accordingly. Nevertheless, these relatively high currents (mainly during warm up) considerably influence the reliability and stability qualities (line loss, current noise, component overload) of the whole unit.
The miniaturized, oven-stabilized precision crystaloscillators of QUINTENZ are of top quality for demanding applications. Adopting the Hybrid-technology and a thermal optimization of the oscillator-circuit, the warm up power consumtion could be reduced to approximately 50% compared with the most competitors. The hybrid miniaturization allows very good isolation-values so that highest frequency-stabilities can be achieved by single oven control only.
The different designs of our quartz-oscillators were developed for applications in rough environment-conditions as well. Simple clockoscillators (XO) in the TO-8 or DIL-14 as well as OCXO´s (oven-stabilized quartz-oscillators) are in the todays delivery-program. Flexibility and the possibility of small-series production are benefits of the manufacturer.
By the use of methods from the Micro-System-Technology, the outstanding stability-qualities are attainable also in the extended temperature range (-55 to +115°C, temperatures up to +200°C are in preparation) and under shock and vibrations.
To minimize effects induced by humidity variation, all oscillators are sealed hermetically under inertgas or vacuum. On wish, the modules can be subjected extensive Burn-In procedures and Screening tests.
The power consumption is approximately 250-500 mW (for OCXO at room-temperature and dependent on model-version) only. 3,3 V oscillators are available in all standard-designs, DIL, 20x20x10mm, 25,4x25,4x12,7, 27x36x15mm and their SMD-variants, and frequencies of 5 to 80 MHz. Frequency-stabilities from <± 1ppb are obtainable in small designs too.

The advantages of the hybrid oscillators in the short overview:

- Considerably reduced powerconsumption
- Smaller, and flatter package possible, 8 ...14 mm maximum height,
- High ambient-temperatures possible, until +115°C (+200°C in preparation),
- Warm-up times less than 1 minute
- A modular base construction enables different package-dimensions in short time

Detailed data sheets and additional informations are available at our web-site (www.quintenz.de) or from our distributors.

QUINTENZ HYBRIDTECHNIK GmbH · Eichenstr. 15 · D-82061 Neuried · Tel.+49(0)89/7592252 · Fax+49(0)89/7592545 · e-mail: info@quintenz.de