



Company Introduction

KVG Quartz Crystal Technology GmbH

KVG 石英晶体技术有限公司

Location / Headquarter: Waibstadter Str. 2-4, 74924 Neckarbischofsheim / Germany

We provide

- **state-of-the-art frequency control products for Science & Industry**
(quartz oscillators, quartz filters, frequency synthesizer etc.)
- **Customized products and excellent service** (e.g. DeRTM-LOG)

DeRTM-LOG project managers:

DESY: Mavrič, Uroš

KVG: Bai, Jiaoni

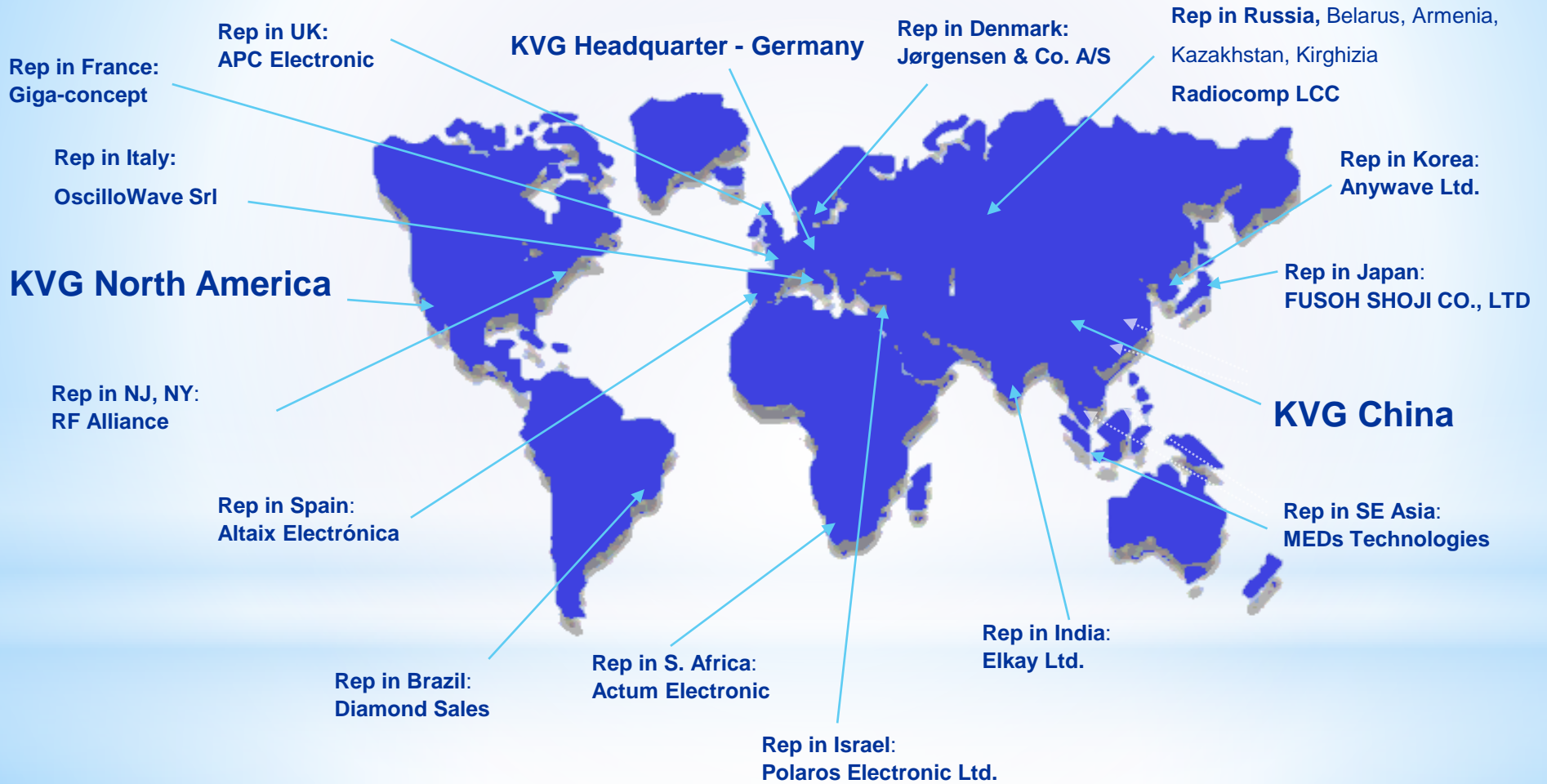







KVG - certified according to EN9100 and ISO14001





KVG Sales Offices



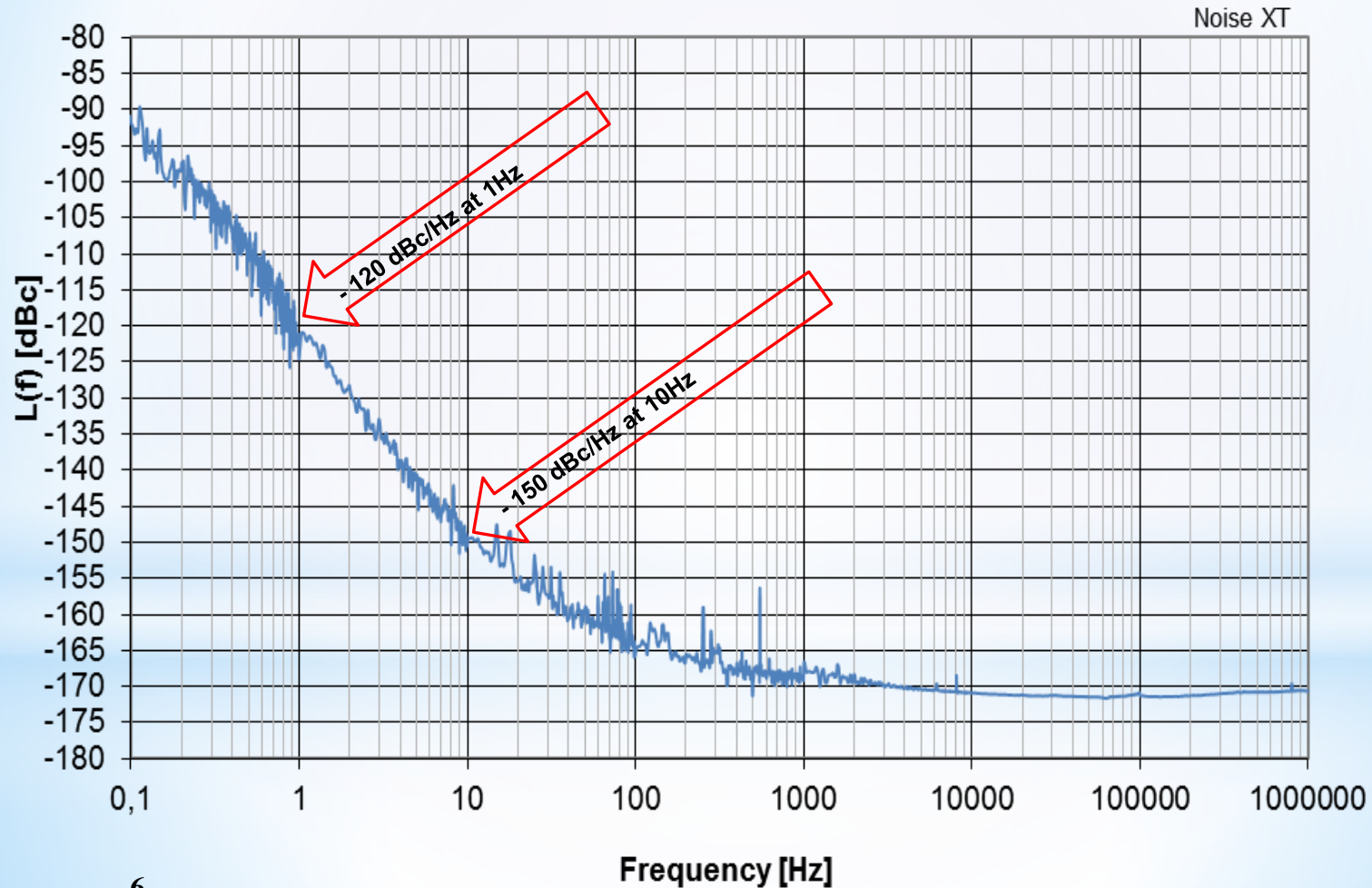
Filters		Bandpass and Notch crystal filters From narrow passband IF-filters 5 MHz up to front-end filters 200 MHz
XO		Crystal Oscillators For a variety of consumer, industrial and IOT applications Wide temp. range -55°C to +125°C, Frequencies up to 1.5GHz Extreme environmental applications, oil drilling, Aerospace
VCXO		Voltage Controlled Crystal Oscillator High frequency up to 2.1 GHz, low jitter performance Avionics, defence, test equipment and other industrial applications
TCXO		Temperature Compensated Crystal Oscillator Stabilities of < +/- 0.14 ppm over wide temperature range and frequencies up to 1.5 GHz
OCXO		Oven Controlled Crystal Oscillator Broad product range, up to 1GHz. Synchronisation, avionics, defence, test equipment and broad cast applications

Ultra Low Phase Noise OCXO 10 MHz Series

- **25.8 x 25.8 x 14 mm Hermetic Sealed OCXO**
- **Supply Voltage :** 12.0V
- **Current Consumption :**
 - Turn On : 400 mA (4.8 W max.)
 - Steady State : 150 mA (1.8W max.)
- **Frequency Stability :**
 - ± 10ppb, -20°C ~ 70°C
- **Output power:** > +8 dBm, sine wave, 50 Ohm
- **Phase noise :**
 - < - 120 dBc/Hz at 1 Hz
 - < - 148 dBc/Hz at 10 Hz
 - < - 162 dBc/Hz at 100 Hz
 - < - 168 dBc/Hz at 1 kHz
 - < - 168 dBc/Hz at 10 kHz
 - < - 168 dBc/Hz at 100 kHz
- **Applications:**
 - Radar systems, Audio equipment, CT, Signal source Generator, Reference oscillator



Ultra Low Phase Noise OCXO 10 MHz Series



Ultra Low Phase Noise OCXO 100 MHz Series

- **Case:** 25.8 x 25.8 x 14 mm or 22 x 25 x 13.2 mm - SMD
- **Supply Voltage :** 12.0V
- **Fast Warm-up Time**
- **Low Power Consumption**
- **Frequency Stability :**
 - ± 10ppb -20°C ~ 70°C
 - ± 50 ppb -40 to +85 °C
- **Output power:** ≥ +10 dBm, sine wave, 50 Ohm
- **Phase noise :**
 - < - 110 dBc/Hz at 10 Hz
 - < - 140 dBc/Hz at 100 Hz
 - < - 170 dBc/Hz at 1 kHz
 - < - 176 dBc/Hz at 10 kHz
 - < - 177 dBc/Hz at 100 kHz
 - < - 178 dBc/Hz at 1 MHz
- **Good Long-Term Stability (Low Aging)**
15 years ±2 ppm max.
- **Applications:**
Phase noise tester, Frequency sources, Radar systems, Mobile phone Tester, Microwave systems, Signal source generator





High-End Product – ULPN 1 GHz OCXO

Ultra Low Phase Noise Frequency Synthesizer

- 162.5 MHz, 325 MHz, 499.8 MHz, 1 GHz, 1.3 GHz, 2.6 GHz, 2.856 GHz etc. with ultra low phase noise/jitter and high reliability

Example 1: ULNS-OCXO Module 1 GHz

- External 10 MHz reference clock
- Over all stability is in the range of +/-2.5 ppm including 10 years aging
- Phase noise
 - 90dBc/Hz@10 Hz
 - 120dBc/Hz@100 Hz
 - 150dBc/Hz@1 kHz
 - 160dBc/Hz@10 kHz @100 kHz @1 MHz
 - 170dBc/Hz@10 MHz
- Jitter RMS (1 kHz to 10 MHz) ≤ 3 fs

Example 2: ULNS-OCXO Module 1.3 GHz

Application master oscillator of 1.3 GHz superconducting cavity

- External 10 MHz reference clock
- Phase noise
 - 90dBc/Hz @ 10 Hz
 - 115dBc/Hz @ 100 Hz
 - 142dBc/Hz @ 1 kHz
 - 154dBc/Hz @ 10 kHz
 - 159dBc/Hz @ 100 kHz
 - 170dBc/Hz @ 1 MHz
 - 170dBc/Hz @ 10 MHz
- Jitter RMS (1 kHz to 10 MHz) ≤ 3 fs

Thank you for your attention!

Further questions about DeRTM-LOG module and KVG products,
please contact us.

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