

Crystal Oscillator Market by Type, Mounting Scheme (Surface Mount, Through-hole), Crystal Cut (AT, BT, SC), General Circuitry (TCXO, VCXO, OCXO), Application (Telecom & Networking, Consumer Electronics) and Region - Global Forecast to 2028

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Abstracts

The global crystal oscillator market was valued at USD 3.0 billion in 2023 and is projected to reach USD 3.4 billion by 2028; it is expected to register a CAGR of 2.5% during the forecast period. Rising use of CXOs in aerospace & defense applications is driving the growth of the crystal oscillator market. Whereas the availability of cost-effective and more reliable alternative technologies is restraining the growth of the crystal oscillator market.

“The AT cut segment is expected to grow at the highest CAGR during the forecast period.”

The crystal oscillator market for AT cut is expected to record the highest CAGR of 2.9% during the forecast period. Some of its other features include a combination of temperature stability, low frequency drift, high accuracy, miniaturization capabilities, low power consumption, wide frequency range, reliability, and cost-effectiveness. These factors collectively make AT cut crystal oscillators a preferred choice in various industries where precise and stable frequency sources are essential. AT cut crystal oscillators are mainly used in electric vehicles (EVs), smart meters, and other general electronic devices. AT cut crystal oscillators are used to provide a stable reference frequency for the powertrain control unit (PCU) in EVs. The PCU is responsible for controlling the electric motor and other components of the powertrain.

“Through-hole segment to register growth at the second-higher CAGR during the

forecast period.”

The through-hole segment is expected to grow at a second-higher CAGR of 1.5% during the forecast period. Crystal oscillators are used in industrial automation applications to provide precise timing signals for controllers, sensors, and actuators. Through-hole crystal oscillators are well-suited for these applications due to their reliability and performance. Through-hole crystal oscillators have preferable temperature and electrical characteristics and can be used in applications requiring a wide range of frequencies. Some crystal oscillators using through-hole mounting schemes are ECS-2100AX-049 and ECS-2100AX-283.2, offered by Seiko Epson Corporation (Japan).

“The North America segment is likely to grow at the second highest CAGR during the forecast period.”

The North American region is expected to witness the second highest CAGR of 2.0% during the forecast period. The presence of ecosystem players such as Microchip Technology Inc., SiTime Corp., Abracon, Greenray Industries, Inc., MTI-Milliren Technologies, Inc., QVS Tech, Inc., Bliley, Vishay Intertechnology, Inc. are contributing to the growth in North America.

Breakdown of primaries

The study contains insights from various industry experts, ranging from component suppliers to Tier 1 companies and OEMs. The break-up of the primaries is as follows:

By Company Type - Tier 1 – 35%, Tier 2 – 45%, Tier 3 – 20%

By Designation— C-level Executives - 40%, Directors - 30%, Others - 30%

By Region—North America - 30%, Europe - 25%, Asia Pacific - 40%, RoW - 5%

The crystal oscillator market is dominated by a few globally established players such as Seiko Epson Corporation (Japan), NIHON DEMPA KOGYO CO., LTD. (Japan), KYOCERA Corporation (Japan), Daishinku Corp. (Japan), SiTime Corporation (US). The study includes an in-depth competitive analysis of these key players in the crystal oscillator market, with their company profiles, recent developments, and key market strategies.

Research Coverage:

The report segments the crystal oscillator market and forecasts its size by type, mounting scheme, crystal cut, general circuitry, application, and region. The report also discusses the drivers, restraints, opportunities, and challenges pertaining to the market. It gives a detailed view of the market across four main regions—North America, Europe, Asia Pacific, and RoW. Supply chain analysis has been included in the report, along with the key players and their competitive analysis in the crystal oscillator ecosystem.

Key Benefits to Buy the Report:

Analysis of key drivers (Increasing adoption of crystal oscillators in aerospace and defense applications, Growing use of crystal oscillators in automotive sector, Higher demand for crystal oscillators with thriving consumer electronics industry, Rising deployment of crystal oscillators in 5G and 6G networks).

Restraint (Availability of cost-effective and more reliable alternative technologies), Opportunity (Growing demand for miniature electronic devices with improved performance, Increasing adoption of advanced automotive electronics), Challenges (Frequency drift issues in crystal oscillators after extended use)

Product Development/Innovation: Detailed insights on upcoming technologies, research and development activities, and new product launches in the crystal oscillator market.

Market Development: Comprehensive information about lucrative markets – the report analyses the crystal oscillator market across varied regions

Market Diversification: Exhaustive information about new products and services, untapped geographies, recent developments, and investments in the crystal oscillator market.

Competitive Assessment: In-depth assessment of market shares, growth strategies, and service offerings of leading players like Seiko Epson Corporation (Japan), NIHON DEMPA KOGYO CO., LTD. (Japan), KYOCERA Corporation (Japan), Daishinku Corp. (Japan), SiTime Corporation (US), SIWARD Crystal Technology Co., Ltd. (Taiwan), TXC Corporation (Taiwan), HOSONIC TECHNOLOGY (GROUP) CO., LTD. (Taiwan), Microchip Technology Inc. (US),

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Details on Business Overview, Products/Solutions/Services Offered, Recent Developments, MnM view (Key strengths/Right to win, Strategic choices made, Weakness/competitive threats) might not be captured in case of unlisted companies.

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