



PROJECT

Innovative technology, coupled with durability is required of the frequency control components that help to make the wearable mobile medical monitoring systems (WMMMSs) so powerful. Typically, in applications such as these, two types of FCP are required: a watch crystal, to keep track of time for the microprocessor, as well as a crystal, to support the input frequency for the Bluetooth/ BLE.

APPLICATION CHALLENGES

Limited PCB Space- These devices are typically a fraction of the size of their predecessors.

Temperature- Body temperature, ambient temperature and restricted air flow dictate the need for the product to withstand extreme temperature ranges.

Durability-Shock and vibration.

Power management- Because a coin cell battery (along with a charging coil) powers the sensor, the display, the MCU, the BLE, the antenna, etc., a low drive level in the frequency components is critical to help prolong battery life.

PRODUCT SOLUTIONS

ILSI has worked closely with WMMMSs designers to address several critical issues with our family of frequency control products. In addition, ILSI's products are ultra-competitively priced and offer some of the industry's best lead times.

Watch Crystals

- [IL3W Series](#)
2-Pad Ceramic SMD, 1.6x1.0mm, 32.768kHz
- [IL3T Series](#)
2-Pad Ceramic SMD, 2.0x1.2mm, 32.768kHz
- [IL3R Series](#)
4-Pad Plastic Package, 1.4x7.0mm, 32.768kHz

Crystals

- [ILCX21 Series](#)
4-Pad Ceramic SMD, 1.2x1.0mm, 36MHz – 80MHz
- [ILCX20 Series](#)
4-Pad Ceramic SMD, 1.6x1.2mm, 24MHz – 60MHz
- [IXA10 Series](#)
4-Pad Ceramic SMD, 1.6x1.2mm, 24MHz – 50MHz

SUMMARY

The global medical wearable market is one that is expected to continue to explode with new products and applications well into the next decade. WMMMSs are currently being developed to address hosts of problems, such as chronic pulmonary disease, asthma, heart arrhythmia, pain management, breast cancer- just to name a few- all the while being comfortable to wear and easy to use. It's not a surprise that many industry experts expect the market to grow to \$12.1 billion by 2021.

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