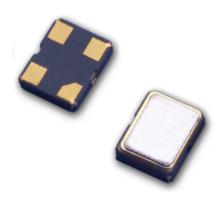


# Miniature Clock Oscillators

The series 616, 620 and 625 small size clock oscillators represent the latest development in CTS' efforts to provide miniaturized frequency control solutions without any performance tradeoffs. These quartz crystal oscillators come in packages all the way down to  $1.6 \times 1.2$  mm, but still offer impeccable performance and reliability. The series 616, 620 and 625 will enable designers and manufacturers to develop even smaller and more cost-effective systems without having to compromise on performance.





### **Miniaturized Designs**

To meet the industry demands for smaller and lighter components, CTS has developed a line of ultra small clock oscillators, that retain the high performance quality that is emblematic of CTS' frequency control products. With packaging sizes down to  $1.6 \times 1.2 \text{ mm}$ , these oscillators can be implemented in intricate electronic circuits without compromising functionality or end performance.



## Well-Proven Technology

For the better part of a century, CTS has been developing quartz crystal solutions for industrial and consumer electronics. Clock oscillators from CTS are built on long heritage of product expertise and know-how. Hence, they set the industry benchmarks for operational reliability, frequency stability, phase noise/jitter performance and power efficiency. To boot, product specifications can be customized upon request in order to meet unique system requirements.



### **Cost-Effective Frequency Control**

Thanks to the small design scale and low power consumption, the miniaturized clock oscillators from CTS are highly cost-effective frequency control solutions, both in terms of price point and operational costs. Combined with short lead and delivery times, the series 616, 620 and 625 clock oscillators are ideal choices of standard frequency control that can be implemented in a wide range of end applications.



#### Miniature Clock Oscillators - Technical Specifications

<u>Parameter</u>	<u>Series 616</u>	Series 620	<u>Series 625</u>
Size L x W (mm)	1.6 x 1.2	2.0 x 1.6	2.5 x 2.0
Output	HCMOS	HCMOS	HCMOS
Frequency Range (MHz)	1.0 - 60	1.0 - 110	1.0 - 160
Frequency Stability (ppm)	±20, ±25, ±30, ±50	±20, ±25, ±30, ±50	±20, ±25, ±30, ±50
Phase Jitter (fs typ)	500	500	500
Voltage (V)	1.8, 2.5, 3.3	1.8, 2.5, 3.3	1.8, 2.5, 3.3
Temperature Range (°C)	-20 to 70, -40 to 85, -40 to 105	-20 to 70, -35 to 85, -40 to 85, -40 to 105	-20 to 70, -35 to 85, -40 to 85, -40 to 105

#### **CTS Frequency Control Expertise**

As one of the first companies to commercialize quartz crystals for electronics (1942), CTS has a long history of providing reliability, quality, exceptional stability, low jitter, and low phase noise performance in frequency control products. We have innovations in high-performance jitter attenuators, frequency translators, tight-stability and low-power OCXOs, and high-frequency reference clocks. We offer a wide-ranging, diverse product portfolio of standard industry form factors down to the smallest sizes and custom solutions from our engineered product platforms to meet your specific needs.

Clock Oscillators are the heart of frequency control products, and CTS offers the widest array of crystal oscillators (XOs) in the industry. Whether you need a simple reference clock, or you are developing a mission critical system, we have the right crystal oscillators to help. Our team will help you select the right clock oscillators in packages as small as  $1.6 \, \text{mm} \times 1.2 \, \text{mm}$ .



#### **Contact Information**

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