

August 16, 2018

FOR IMMEDIATE RELEASE

Low Jitter PLL VCXOs and Clock Oscillators

Lisle, IL - CTS Corporation (NYSE: CTS) announces three new models added to its family of high frequency low jitter voltage controlled crystal oscillators [VCXO]. Model 356, Model 358 and Model 334 employ advanced phased-locked loop [PLL] design techniques coupled with a low cost, low frequency fundamental mode quartz crystal that can synthesize a very high frequency output. Typical phase jitter performance of 600fs can be achieved throughout the entire frequency range. All three models are available with singled-ended HCMOS or differential LVPECL and LVDS outputs; stability options of ±25, ± 30 and ± 50 ppm and ± 2.5 V or ± 3.3 V operation.

The new VCXO line-up is complementary to a group of clock oscillators in the CTS product portfolio that incorporate the same advanced PLL design format. The clock series includes Model 656, Model 654 and newly added Model 634. All VCXO and clock models are factory programmable that are geared for engineering development activities, by offering a quick turn lead-time for developed frequencies and can simplify the process to generate uncommon frequencies.

The new models are suitable to support a wide array of market segments; covering telecommunication infrastructure, networking, server applications, test and measurement, medical diagnostic equipment and much more; by delivering good phase jitter performance and a high level of frequency stability.

Standard product features, common market applications and new series platforms are summarized below. Please refer to individual data sheets on our website to view more performance characteristics.

Product Features

- Advanced PLL Design w/ Low Fundamental Crystal
- Low Phase Jitter Performance
- External Voltage Control Pin
- **Small Ceramic Surface Mount Packages**
 - 7.0mmx5.0mm 5.0mmx3.2mm 3.2mmx2.5mm
- Common Frequencies Available [Output and Package Dependent]
 - 25.00MHz - 106.25MHz - 155.52MHz - 27.00MHz - 122.88MHz - 156.25MHz - 50.00MHz - 125.00MHz - 156.253906MHz - 74.25MHz - 148.351648MHz - 160.00MHz
 - 184.32MHz - 100.00MHz - 153.60MHz Contact factory for availability of frequencies not listed.

- 148.50MHz

- +2.5V or +3.3V Operation
- **Output Enable Standard**
- Tape and Reel Packaging
- **Output Types Available**
 - HCMOS LVPECL LVDS
 - 200.00MHz - 204.80MHz - 622.08MHz - 644.53125MHz - 250.00MHz - 312.50MHz - 669.3265MHz
 - 322.265625MHz - 693.4830MHz - 349.40MHz - 983.04MHz

Market Applications

- Broadcast Video Systems
- Storage Area Networking
- **Broadband Access**

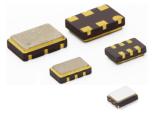
- 77.76MHz

Phase-Locked Loop

- **Networking Equipment**
- Ethernet/GbE/SyncE
- Fiber Channel

- 161.1328MHz

Test and Measurement



- 400.00MHz



Product Summary

VCXO Selector Guide

MODEL	PACKAGE SIZE [mm]	OUTPUT LOGIC	FREQUENCY [MHz]	PHASE JITTER [fs Typ]	TOTAL STABILITY	SUPPLY VOLTAGE	TEMPERATURE RANGE
334C 358C 356C	3.2 x 2.5 5.0 x 3.2 7.0 x 5.0	HCMOS	10 – 250	600	±25ppm ±30ppm ±50ppm	2.5V 3.3V	-20°C to 70°C -40°C to 85°C
334P/L 358P/L 356P/L	3.2 x 2.5 5.0 x 3.2 7.0 x 5.0	LVPECL LVDS	10 – 800	500	±25ppm ±30ppm ±50ppm	2.5V 3.3V	-20°C to 70°C -40°C to 85°C

https://www.ctscorp.com/connect_product_line/vcxo/

Clock Selector Guide

MODEL	PACKAGE SIZE [mm]	OUTPUT LOGIC	FREQUENCY [MHz]	PHASE JITTER [fs Typ]	TOTAL STABILITY	SUPPLY VOLTAGE	TEMPERATURE RANGE
634C 654C 656C	3.2 x 2.5 5.0 x 3.2 7.0 x 5.0	HCMOS	10 – 250	600	±20ppm ±25ppm ±30ppm ±50ppm	2.5V 3.3V	-20°C to 70°C -40°C to 85°C
634P/L 654P/L 656P/L	3.2 x 2.5 5.0 x 3.2 7.0 x 5.0	LVPECL LVDS	10 - 800 10 - 800 10 - 1000	500	±20ppm ±30ppm ±25ppm ±50ppm	2.5V 3.3V	-20°C to 70°C -40°C to 85°C

http://www.ctscorp.com/connect_product_line/clock-oscillators/

Sales Contact

Production volume and samples are available now. For more information call +1-800-982-5737 (North America), +65-6481-1466 (Asia) or +1-508-435-6831 (all other regions), E-mail:

<u>frequencysales@ctscorp.com</u>, see our website for more information as well as to contact a CTS Sales Representative or one of CTS's many distribution partners.

About CTS

CTS (NYSE: CTS) is a leading designer and manufacturer of products that Sense, Connect, and Move. The company manufactures sensors, actuators, and electronic components in North America, Europe, and Asia. CTS provides solutions to OEMs in the aerospace, communications, defense, industrial, information technology, medical, and transportation markets.

For more information on CTS Corporation, please visit <u>www.ctscorp.com.</u>

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