



frequency control solutions

## Temperature Compensated Crystal Oscillators

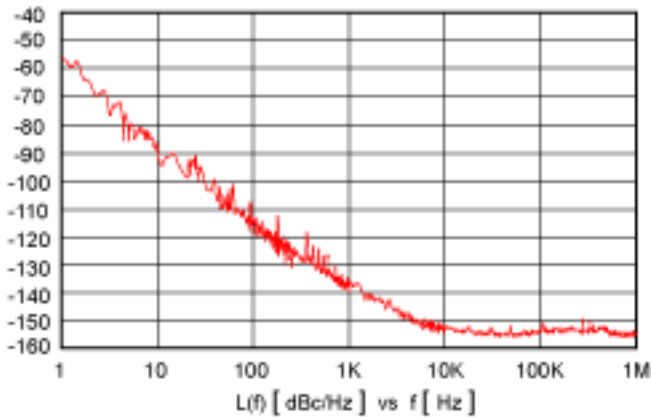
### Overview

Greenray TCXOs are designed for communications, instrumentation and military applications. Our TCXOs feature temperature stabilities of 1ppm or less and are available in a variety of packages, including SMT, and are available from 20KHz to 1GHz.

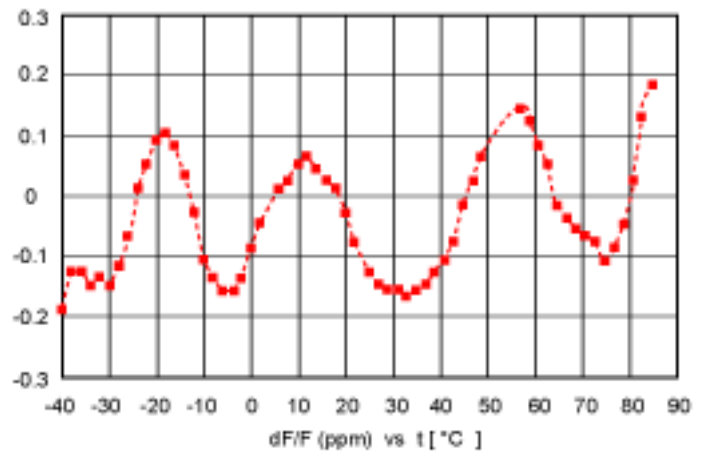
We incorporate leading-edge design and innovative manufacturing techniques to produce extremely rugged oscillators that are ideal for mobile and airborne applications, including smart munitions.

Key examples of our TCXO product line follow. For detailed information, product Data Sheets (pdf file format) are provided. You can also link to our Interactive Product Selector at the bottom of this page. To inquire about custom specifications, call 717-766-0223 and talk to a Greenray engineer.

PHASE NOISE  
20MHz TCXO T75 Series



FREQUENCY vs. TEMPERATURE  
20MHz TCXO T75 Series



### ZT620

Good Phase Noise over MIL temperature range  
Frequency Range: 10 - 100MHz  
Output Signal: HCMOS  
22.10 x 12.70 x 5.08 mm (0.87 x 0.50 x 0.20 in.)



### ZT5050

Ultra tight Stability ( $\pm 0.07$ ppm -40 to +85°C);  
Frequency Range: 10 - 50MHz  
Output Signal: HCMOS  
35.05 x 26.90 x 12.70 mm (1.38 x 1.06 x 0.50 in.)



Greenray Industries, Inc.

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### ZT560

Good Phase Noise over MIL temperature range  
Frequency Range: 20KHz - 30MHz  
Output Signal: HCMOS  
20.32 x 12.70 x 9.40 mm (0.80 x 0.50 x 0.37 in.)



### ZT5060

Low Phase Noise, hermetic DIP package  
Frequency Range: 10 - 50MHz  
Output Signal: HCMOS  
20.32 x 12.70 x 9.40 mm (0.80 x 0.50 x 0.37 in.)



### ZT600 & ZT601

Tight Stability; Low profile SMT package  
Frequency Range: 10 - 300MHz  
Output Signal: CMOS (ZT600) Sine (ZT601)  
25.40 x 29.21 x 5.08 mm (1.00 x 1.15 x 0.20 in.)



### T1177

High Frequency, tight Stability;  
Low Jitter & LVDS Output  
Frequency Range: 100 - 800MHz  
Output Signal: LVDS/PECL  
14.22 x 9.14 x 3.68 mm (0.56 x 0.36 x 0.145 in.)



### T75

Low g-sensitivity with tight Stability:  
( $\pm 0.5$ ppm over  $-40$  to  $+85^{\circ}\text{C}$ );  
Very small package, RoHS compliant  
Frequency Range: 10 - 50MHz  
Output Signal: HCMOS/Sine  
7.00 x 5.00 x 3.00 mm (0.275 x 0.197 x 0.118 in.)



### T1185

High Frequency, tight Stability;  
Low Jitter & PECL Output  
Frequency Range: 100 - 320MHz  
Output Signal: LVDS/CMOS/PECL  
14.22 x 9.14 x 3.68 mm (0.56 x 0.36 x 0.145 in.)



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### T96 & T98

Excellent long-term Stability; 9x14mm package  
Frequency Range: 10 - 100MHz  
Output Signal: CMOS (T96) Sine (T98)  
14.22 x 9.14 x 3.68 mm (0.56 x 0.36 x 0.145 in.)



### T1178

High Frequency, tight Stability & low Phase Noise  
Frequency Range: 100 - 500MHz  
Output Signal: Sine  
25.40 x 29.21 x 5.08 mm (1.00 x 1.150 x 0.200 in.)



### T1170

Tight Stability ( $\pm 0.5$ ppm over  $-40$  to  $+85^{\circ}\text{C}$ );  
Compact, hermetically sealed package  
Frequency Range: 10 - 125MHz  
Output Signal: LVDS  
14.22 x 9.14 x 3.68 mm (0.56 x 0.36 x 0.145 in.)



### T90 & T94

Tight Stability, low g-sensitivity & small package  
Frequency Range: 10 - 50MHz  
Output Signal: HCMOS (T90) Sine (T94)  
14.22 x 7.57 x 3.70 mm (0.56 x 0.30 x 0.145 in.)



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