



# LTCC Type VC-TCXO & TCXO Introduction



## Unique Operating Characteristics

Having identified a need for a miniature high performance low power oscillator, **AEL Crystals Limited** have developed a unique product to meet this requirement at a surprisingly affordable price. Utilizing discrete components on a ceramic base substrate it allows us to offer a level of performance unobtainable using a conventional ASIC design.

## Performance Applications

This product is particularly suited to high performance applications, where size and power may be a critical consideration. eg.

- **GPS receivers**
- **Private Mobile Radio**
- **3G Base Stations**
- **Portable reference frequency source**

## Comparison between AEL LTCC Oscillator and ASIC design

	AEL LTCC	ASIC Design
<b>Signal to Noise</b>	-142dBc/1kHz (at 26MHz)	-132dBc/1kHz (at 26MHz)
<b>Frequency Range</b>	Available up to 50MHz, with consistent performance across all frequencies	Available up to 26MHz decreasing performance at higher frequencies
<b>Power Consumption</b>	0.8mA Max. (at 13MHz)	1.1mA Max (at 13MHz)
<b>Flexible Design</b>	Freedom to chose parameters to suit application, not limited by LSI Chip. ie VDD 2V available	All design parameters are dictated by LSI chip

## Making Your Products Better!

By utilizing the AEL LTCC type VC-TCXO & TCXO you will be able to offer a faster data transmission (Higher Frequencies translate to higher data rates). A much smaller form factor without losing performance (choice of 5.0mm x 3.2mm or 7.00mm x 5.00mm footprint). Much better phase noise characteristics, and much lower power consumption, ideal for battery operated applications