



OHA4 series OCXO

The World's Smallest Oscillator with Superior Performance



Introduction

In the world of precision timing, crystal oscillators are the heartbeat of modern technology. They provide highly accurate and stable clock signals for a wide range of applications, including telecommunications, wireless communication, and base station equipment. In recent years, the development of oven-controlled crystal oscillators (OCXOs) has revolutionized the industry by providing even greater levels of precision and stability. Among the most notable advancements in the field is the world's smallest OCXO with superior performance.

1. Smallest package size for OCXO in the market (7.5 x 5.5 x 3.3 mm)

Pletronics OHA4 series OCXO is the world's smallest OCXO, a remarkable achievement in the field of crystal oscillators. Dimension just 7.5 x 5.5 x 3.3 mm, this oscillator is significantly smaller than the average OCXO on the market. The development of OHA4 series OCXO represents a significant step forward in the industry, as it demonstrates the increasing demand for smaller, more compact solutions that do not compromise on performance or quality.

2. Excellent stability over temperature (± 10 ppb @ -20 to 70°C)

The stability of an oscillator's frequency over temperature is critical in applications that require precise and accurate timing. Pletronics OHA4 series OCXO boasts an excellent temperature stability performance, with just ± 10 ppb frequency deviation over a temperature range of -20 to 70°C. This level of stability is remarkable and ensures that the oscillator's output frequency remains highly accurate and stable, even in harsh temperature environments. For even wider operating temperature ranges, OHA4 can deliver a stability of ± 20 ppb over a temperature range of -40 to 95°C. In either case, the exceptional stability versus temperature performance of the Pletronics OHA4 series OCXO makes it an excellent choice for applications where precise timing is essential.

3. Superior phase noise performance

Pletronics OHA4 series OCXO delivers superior phase noise performance, with a rating of -156 dBc/Hz at 1 kHz, -161 dBc/Hz at 10kHz. This low phase noise level is critical for high-speed communication systems, as it helps to reduce the effects of noise and interference, resulting in improved signal quality.

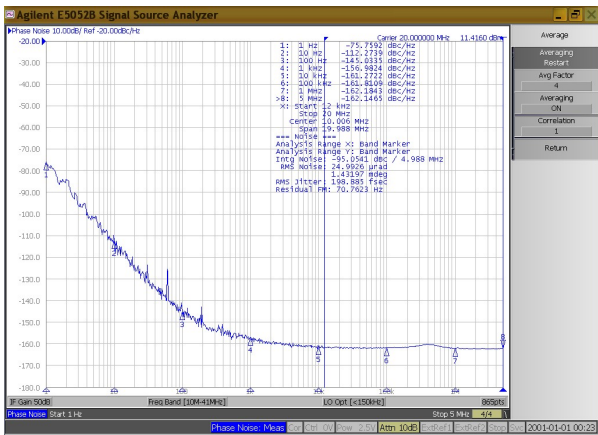
4. Stratum 3/3E compliant

Another notable feature of OHA4 series OCXO is its Stratum 3/3E compliance clock, which the performance is outstanding in the industry for similar-size products. This level of performance is essential for applications that require high levels of precision and stability, such as IEEE1588 packet timing protocol applications.

Conclusion

Pletronics OHA4 series OCXO offers a unique combination of features that make it an ideal solution for a wide range of applications. Its small size, excellent frequency stability over temperature, wide operating temperature range and superior phase noise performance, make it an ideal choice for base station/picocell, wireless communication equipment, telecom transmission and switching equipment, and other applications where precise timing is essential. With its Stratum 3/3E compliance and compatibility with the IEEE1588 packet timing protocol, this oscillator is a must-have for anyone looking to achieve the highest levels of precision and stability in their systems.

Phase Noise Plot (TYP)



Product table

Product Series	Output Logic	Frequency Range	Standard Frequency	VDD (V)	Stability vs Temperature	Phase Noise (Typ) @ 20MHz	Aging	Package Size (mm)
OHA4	CMOS	10 to 40MHz	10, 19.2, 20, 30.72, 38.88, 40MHz	3.3V	±10ppb @ -20 to 70°C ±20ppb @ -40 to 95°C	-75 dBc/Hz @ 1Hz -112 dBc/Hz @ 10Hz -145 dBc/Hz @ 100Hz -156 dBc/Hz @ 1KHz -161 dBc/Hz @ 10KHz -161 dBc/Hz @ 100KHz -162 dBc/Hz @ 1MHz	±3ppb daily ±0.3ppm yearly	7.5 x 5.5 x 3.3

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