

Ultra-low Power Fast Start OCXO

Clocking solutions need to meet the requirements of fast start-up and battery life of portable battery-powered devices such as portable wireless communications devices, mobile test equipment-level mobile precision positioning, etc. while ensuring the performance and stability. However, the power consumption of OCXO has been a problem in such application scenarios all along.
In this context, Dapu breaks through the bottleneck of OCXO's power consumption technology based on nearly two decades of accumulation of independent core technology in high-stability crystal oscillators. By adopting advanced vacuum holder structure and exclusive patented design solutions for precise temperature control of OCXO, Dapu fundamentally solves the issue of high-power consumption in ordinary OCXOs, while shortening the warm-up time to less than 60 seconds.

Ultra-Low Power OCXO vs. Ordinary OCXO (at ambient temperature)

	Ultra-Low Power OCXO	**Ordinary OCXO**
Power Consumption	100mW	1000mW
Start-up Time	60 seconds	150 ~300 seconds

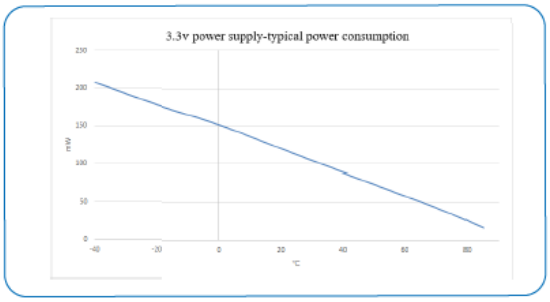
Typical Application Domains:

- Portable Wireless Communications
- Mobile Testing Equipment-Level Mobile Precision Positioning
- Beacons and Rescue Systems
- PTP Ethernet Switches and other devices

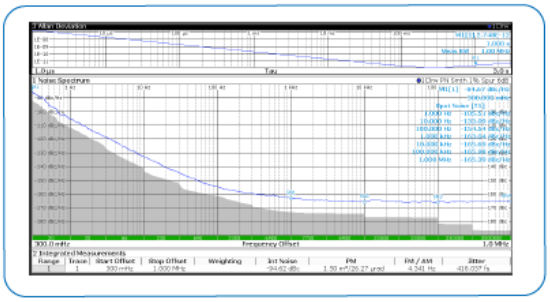
Ultra-Low Power Consumption Features:

- Frequency Range: 9.6MHz ~ 100MHz
- Power Supply Voltage: 3.3V / 5.0V
- Stable Power Consumption: 100mW (Typ.)
- Output Waveform: HCMOS / Sinewave
- Temperature Stability: ±5 ppb
- Phase Noise: -160 dBc/Hz@1KHz (Max.) @10MHz
- Warm-up Time: 60s (Typ.)
- Operating Temperature: -10°C ~ +60°C / -40°C ~ +85°C
- Moisture Sensitivity Level: MSL1 (Industry's First Airtight Design)
- Package Size: 19.0 x 19.0 x 10.5mm

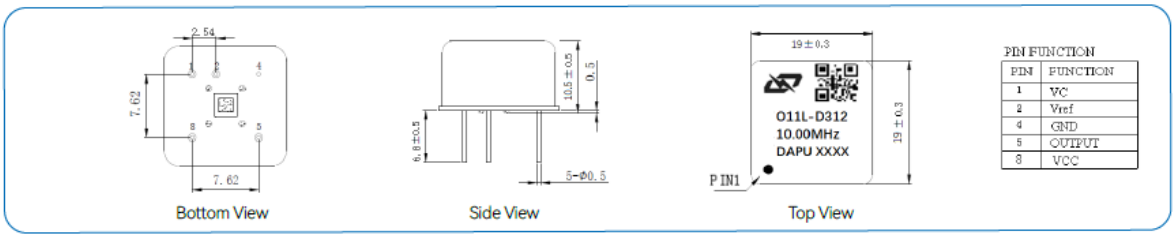
Power Consumption vs. Temperature Chart



Phase Noise Chart (10MHz)



Package Drawing (Unit:mm)



The frequency stability and low phase noise characteristics of the ultra-low power OCXO can greatly improve the performance of the device (reduce communication latency, improve synchronization accuracy and system stability). At the same time, its low power consumption and fast start-up minimize the power consumption of the device and prolong its battery life, meeting the needs of application scenarios such as fast start-up and portable endurance.

As 5G application scenarios continue to expand and new, mobile communications have higher and higher expectations for OCXO's low power consumption and miniaturization.