

PRELIMINARY



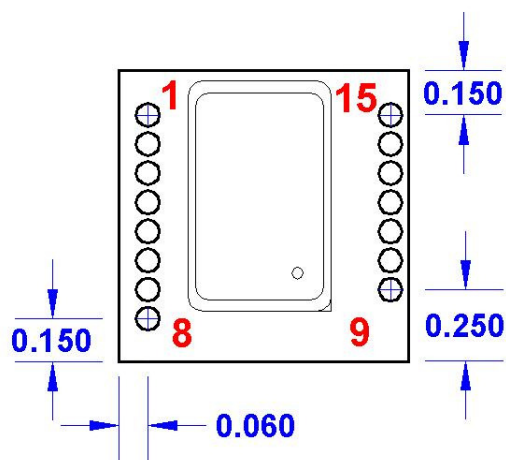
- The Pletronics GPS-TCXO Series is a high precision GPS-disciplined reference oscillator.
- The GPS-TCXO utilizes a high precision TCXO oscillator, synchronized to the GPS atomic clock.
- The GPS-TCXO offers unmatched price and performance over traditional GPS-OCXO reference solutions.
- Allan Deviation $< 2 \times 10^{-11}$ at 25°C.
- The GPS-TCXO has a standard LVCMOS output.
- Power is 3.3v.
- The GPS-TCXO has very low power consumption due to its high performance TCXO.
- An ideal solution for low power applications.
- Very low phase noise.
- Available in 10 MHz standard reference oscillator frequency. Contact Pletronics for additional frequencies.
- Evaluation modules are available.

TYP. ELECTRICAL SPECIFICATIONS:	
Module Specification:	
1 PPS Accuracy	±75ns to UTS RMS (1-Sigma) GPS Locked
1 PPS Output	3.3VDC CMOS
Serial Control	GPS NMEA Output
GPS Frequency	L1, C/A 1574MHz
GPS Antenna	Active or Passive
GPS Receiver	50 Channels, Mobile, SBAS WAAS, EGNOS, MSAS capable
Sensitivity	Acquisition -142 dBm, Tracking -158 dBm
GPS TTFF	Cold Start—<45 sec, Warm Start—1 sec, Hot Start—1 sec
ADEV	10Ks $< 5 \times 10^{-12}$ (TCXO, GPS Locked, 25°C, no motion)
TTL Alarm Output	GPS LOCK indicator, GPS Lock output
Warm Up Time / Stabilization Time	< 3 min at + 25°C to 1E-08 Accuracy
Supply Voltage (Vdd)	3.3V Single-Supply only (5V internally generated and filtered)
Power Consumption	< 0.6W with TCXO
Operating Temperature	0°C to +60°C
Storage Temperature	-45°C to +85°C
Additional Features	External 1PPS input, status LEDs, full NMEA
Oscillator Specification (TCXO):	
Frequency Output	10MHz CMOS 3.3Vpp (5.0Vpp optional)
10MHz Retrace	±2E-08 After 1 Hour @ +25°C
Frequency Stability Over Temperature (Unlock Condition)	±7.5E-08 (TCXO)
Output Amplitude	3.3Vpp CMOS, (5.0Vpp optional)
Connections:	
Connector Type:	
1PPS Output, 10MHz Output, power, system status, NMEA, 1PPS in, antenna input	100 mil spacing on pins, can be soldered, or plugged into a socket, gold-plated pins

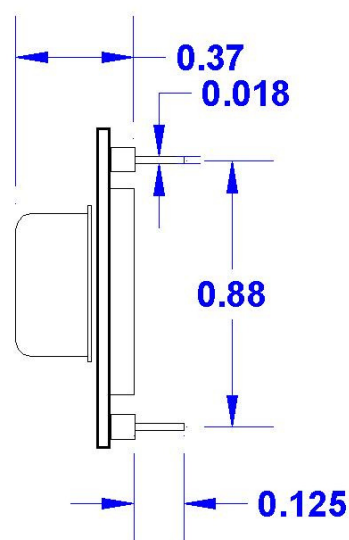
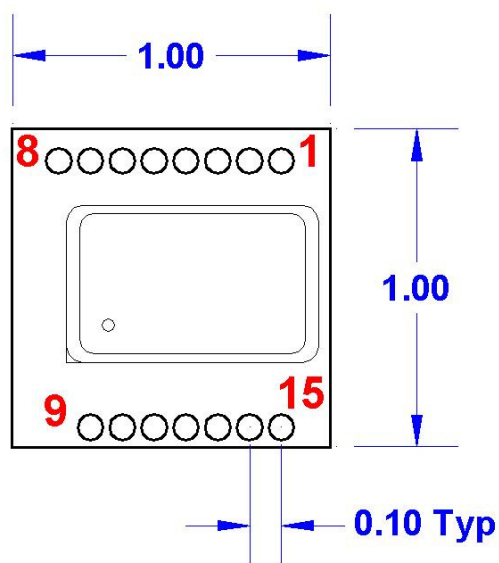
GPS-TCXO Series

GPS Synchronized TCXO Module

March 2014



Pad	Function	Note
1	Ground	
2	10 MHz Out	10 MHz CMOS Output
3	Lock OK	3.3V CMOS Output
4	1 PPS Output	3.3V CMOS Output
5	1 PPS Input	3.3V to 5.0V CMOS (Rising Edge)
6	+ 5V Output	< 100 ma
7	Ground	
8	+3.3V VDO In	
9	Ground	
10	Antenna Input	Module provides +5.0V Power Supply for Active Antenna
11	Ground	
12	NMEA Transmit	NEMA-0183 GGA format GPS data output
13	1PPS Input	High—External PPS, Low Internal PPS
14	N/C	No external Connection Allowed
15	N/C	No external Connection Allowed



Note: All dimensions are in inches

IMPORTANT NOTICE

Pletronics Incorporated (PLE) reserves the right to make corrections, improvements, modifications and other changes to this product at anytime. PLE reserves the right to discontinue any product or service without notice. Customers are responsible for obtaining the latest relevant information before placing orders and should verify that such information is current and complete. All products are sold subject to PLE's terms and conditions of sale supplied at the time of order acknowledgment.

PLE warrants performance of this product to the specifications applicable at the time of sale in accordance with PLE's limited warranty. Testing and other quality control techniques are used to the extent PLE deems necessary to support this warranty. Except where mandated by specific contractual documents, testing of all parameters of each product is not necessarily performed.

PLE assumes no liability for application assistance or customer product design. Customers are responsible for their products and applications using PLE components. To minimize the risks associated with the customer products and applications, customers should provide adequate design and operating safeguards.

PLE products are not designed, intended, authorized or warranted to be suitable for use in life support applications, devices or systems or other critical applications that may involve potential risks of death, personal injury or severe property or environmental damage. Inclusion of PLE products in such applications is understood to be fully at the risk of the customer. Use of PLE products in such applications requires the written approval of an appropriate PLE officer. Questions concerning potential risk applications should be directed to PLE.

PLE does not warrant or represent that any license, either express or implied, is granted under any PLE patent right, copyright, artwork or other intellectual property right relating to any combination, machine or process which PLE product or services are used. Information published by PLE regarding third-party products or services does not constitute a license from PLE to use such products or services or a warranty or endorsement thereof. Use of such information may require a license from a third party under the patents or other intellectual property of the third party, or a license from PLE under the patents or other intellectual property of PLE.

Reproduction of information in PLE data sheets or web site is permissible only if the reproduction is without alteration and is accompanied by associated warranties, conditions, limitations and notices. Reproduction of this information with alteration is an unfair and deceptive business practice. PLE is not responsible or liable for such altered documents.

Resale of PLE products or services with statements different from or beyond the parameters stated by PLE for that product or service voids all express and implied warranties for the associated PLE product or service and is an unfair or deceptive business practice. PLE is not responsible for any such statements.

Contacting Pletronics Inc.

Copyright © 2011, Pletronics Inc.