

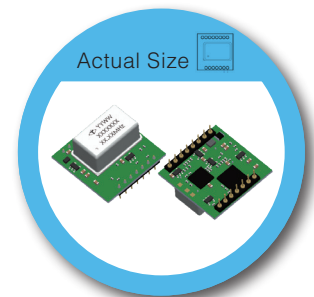
GPS Disciplined Oscillator (GPSDO) GT-11 series

FEATURES

- Build-in GPS receiver module and provides +5.0V for Active Antenna
- Very low power consumption due to its high performance TCXO
- Unmatched price and performance over traditional GPS-OCXO reference solutions
- 10MHz CMOS output and 1pps CMOS output
- Enable external 1pps input for discipline
- Discipline to 75ns RMS in phase
- GPS NMEA output

TYPICAL APPLICATION

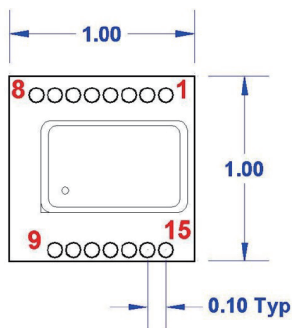
- Low Cost, Affordable Reference Clock
- Test and measurement equipment



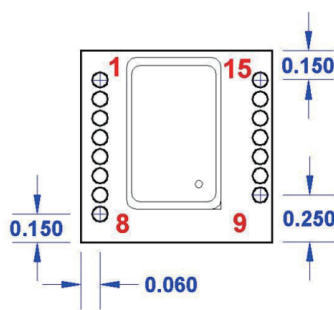
RoHS Compliant

DIMENSION (mm)

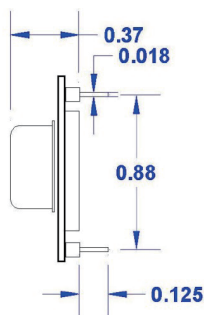
[TOP VIEW]



[BOTTOM VIEW]



[SIDE VIEW]



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 Enable	High: Internal PPS, Low: External PPS
14	N/C	No external Connection Allowed
15	N/C	No external Connection Allowed

ELECTRICAL SPECIFICATION

10 MHz OUTPUT (via PIN 2)

Parameter	Min.	Typ.	Max.	Unit	Test Condition
Frequency Output		10.000000		MHz	
Output Amplitude		LVC MOS			
"1" level	+2.6			V	
"0" level			+0.4	V	
ADEV			0.005	ppb	5E-12 (Tau = 10Ks, GPS Locked, 25°C, no motion)

1PPS Output (via PIN 4)

Parameter	Min.	Typ.	Max.	Unit	Test Condition
Output Amplitude		LVC MOS			
1PPS Accuracy		75		ns	To UTC RMS (1-Sigma) GPS Locked
Load Impedance		10		MΩ//10pF	

Supply Voltage (via PIN 8)

Parameter	Min.	Typ.	Max.	Unit	Test Condition
Supply Voltage	+3.135	+3.3	+3.465	Vdc	
Power Consumption			600	mW	

External 1PPS Reference Input (via PIN 5)

Parameter	Reference Std.	Test Condition
Input Amplitude	LVC MOS	Rising Edge
Input Impedance	10MΩ//10pF	

GPS (via PIN 10)

Parameter	Reference Std.	Test Condition
GPS Frequency	GPS : L1, C/A 1574MHz; GLONASS : L1, 1602MHz + K*0.5625MHz	Factory default GPS & GLONASS, SBAS, OZSS
Receiver Sensitivity	Acquisition -148 dBm; Tracking -164dBm	
Antenna	Active	Active antenna – GPS, GLONASS, BeiDou bands. Module provides +5.0V Power Supply for Active antenna

Interface (via PIN 12)

Parameter	Reference Std.	Test Condition
Serial Control	GPS NMEA Output	NMEA-0183 GGA Format GPS Data Output Baud rate 38400

Environmental

Parameter	Reference Std.	Test Condition
Operating Temperature	0°C to +60°C	
Storage Temperature	-45°C to +85°C	
Mechanical Shock	JESD22-B104	
Vibration	JESD22-B103	
Solderability	IPC J-STD-002	
Thermal Shock	MIL-STD-883 Methode 1011, Condition A	