

GPSDO

Contents

- 1 GPSDO Kit
 - ◆ 1.1 Product Compatibility
 - ◆ 1.2 Specifications
 - ◆ 1.3 Installation Guide
 - 2 GPSDO (OCXO)
 - ◆ 2.1 Product Compatibility
 - ◆ 2.2 Specifications
 - ◆ 2.3 Certificate of Volatility
 - 3 GPSDO (TCXO)
 - ◆ 3.1 Product Compatibility
 - ◆ 3.2 Specifications
 - ◆ 3.3 Certificate of Volatility
 - 4 Replacement Pin Headers for LC_XO GPSDO
-
- N200/N210
 - E100/E110

Module Specifications

1 PPS Accuracy	±50ns to UTC RMS (1-Sigma) GPS Locked
Holdover Stability	<±11?s over 3 hour period at +25C
1 PPS Output (OCXO Flywheel Generated)	3.3VDC CMOS
RS-232 Control	NMEA & SCPI-99 Control Commands, Integrated into UHD
GPS Frequency	L1, C/A 1574MHz
GPS Antenna	Active (3V compatible) or Passive
GPS Receiver	50 Channels, Mobile, WAAS, EGNOS, MSAS capable
Sensitivity	Acquisition -144dBm, Tracking -160dBm
TTFF	Cold Start: <45 sec, Warm Start: 1 sec, Hot Start: 1 sec
ADEV	1E-11 at 1s
Warm Up Time / Stabilization Time	<5 min at +25C to 1E-08 Accuracy
Supply Voltage (Vdd)	6VDC
Power Consumption	<1.8W Max, 1.35W Typical
Operating Temperature	0C to +60C
Storage Temperature	-45C to 85C

Oscillator Specifications

Frequency Output	10MHz
Stability	±1E-08 after 1 hour at 25°C
Frequency Stability Over Temperature (Unlock Condition)	±5E-08
Warm Up Time	±1 min at +25C
Phase Noise	-80dBc/Hz at 100Hz
	-110dBc/Hz at 1kHz
	-135dBc/Hz at 10MHz
	-145dBc/Hz at 1kHz
	<-145dBc/Hz at 10kHz

Media:gpsdo-kit 4.pdf

- X300/X310

Module Specifications

1 PPS Accuracy	±50ns to UTC RMS (1-Sigma) GPS Locked
Holdover Stability	<±20?s over 3 hour period at +25C
1 PPS Output (OCXO Flywheel Generated)	3.3VDC CMOS
RS-232 Control	NMEA & SCPI-99 Control Commands, Integrated into UHD
GPS Frequency	L1, C/A 1574MHz
GPS Antenna	Active (5V compatible) or Passive
GPS Receiver	50 Channels, Mobile, WAAS, EGNOS, MSAS capable

Sensitivity	Acquisition -142dBm, Tracking -168dBm
TTF	Cold Start: <45 sec, Warm Start: 1 sec, Hot Start: 1 sec
ADEV	1E-11 at 1s
Warm Up Time / Stabilization Time	<5 min at +25C to 1E-08 Accuracy
Supply Voltage (Vdd)	3.3/5VDC
Power Consumption	0.7W Max
Operating Temperature	0C to +60C
Storage Temperature	-45C to 85C

Oscillator Specifications

Frequency Output	10MHz
Reference	1E-08 after 1 hour at 25C
Frequency Stability	±5E-08
Over Temperature (Unlock Condition)	
Warm Up Time	1 min at +25C
Phase Noise at 10MHz	-75dBc/Hz
Phase Noise at 100kHz	-110dBc/Hz
Phase Noise at 1MHz	-132dBc/Hz
Phase Noise at 1kHz	-142dBc/Hz
Phase Noise at 10kHz	<-145dBc/Hz

• Media:GPSDO Jackson Labs LCXO and FireFly1A CoV.pdf

• B200/B210

Module Specifications

1 PPS Accuracy	±50ns to UTC RMS (1-Sigma) GPS Locked
1 PPS Output (OCXO Flywheel Generated)	3.3VDC CMOS
RS-232 Control	NMEA & SCPI-99 Control Commands, Integrated into UHD
GPS Frequency	L1, C/A 1574MHz
GPS Antenna	Active (5V compatible) or Passive
GPS Receiver	50 Channels, Mobile, WAAS, EGNOS, MSAS capable
Sensitivity	Acquisition -142dBm, Tracking -168dBm
TTF	Cold Start: <45 sec, Warm Start: 1 sec, Hot Start: 1 sec
ADEV	1E-11 at 1s
Warm Up Time / Stabilization Time	<5 min at +25C to 1E-08 Accuracy
Supply Voltage (Vdd)	3.3V
Power Consumption	0.5W Max
Operating Temperature	0C to +60C
Storage Temperature	-45C to 85C

Oscillator Specifications

Frequency Output	10MHz
Reference	1E-08 after 1 hour at 25C
Frequency Stability	±5E-08
Over Temperature (Unlock Condition)	
Warm Up Time	1 min at +25C
Phase Noise at 10MHz	-65dBc/Hz
Phase Noise at 100kHz	-102dBc/Hz
Phase Noise at 1MHz	-132dBc/Hz
Phase Noise at 10kHz	<-152dBc/Hz

• Media:GPSDO Jackson Labs LCXO and FireFly1A CoV.pdf

Manufacturer: Samtec

PN: BBL-115-G-E

- <https://www.samtec.com/products/bbl-115-g-e>
- **Datasheet:** File:JP6 JP7 pins.pdf