

Fury GPSDO Technical Specifications



| | | | |
|--------------------------------------|---|---|------------|
| General | Dimensions | 100mm x 100mm x 25mm OEM PCB. 140mm x 170mm x 58mm Desktop Enclosure | |
| | Applications | In-House Frequency Standard. Military and Industrial Applications. Battery operation | |
| 1PPS Output | Connector | BNC (Desktop), Molex 100mil type connector (OEM PCB) | |
| | Output Voltage | 3.3V TTL/CMOS compatible with <2ns RiseTime. 50Ohm terminated or open ended | |
| 10MHz Sine Wave | Connector | BNC (Desktop), Molex 100mil type connector (OEM PCB) | |
| | Output Power | +6dBm +/-3dBm into 50 Ohms | |
| | Stability | better than 5E-013/24 hours when locked to GPS (Double Oven OCXO) | |
| | Holdover | better than 7 microseconds/24 hours (better than 8.1E-011/24 hours average) DOCXO | |
| | Phase Noise (AT-cut OCXO) | 1Hz | -90dBc/Hz |
| | | 10Hz | -122dBc/Hz |
| | | 100Hz | -140dBc/Hz |
| | | 1KHz | -155dBc/Hz |
| | | 10KHz | -155dBc/Hz |
| | | 100KHz | -157dBc/Hz |
| | | 1MHz | -160dBc/Hz |
| | Jitter | 380 Femtoseconds RMS (measured with Agilent E5052B) | |
| Harmonics | < -50dBc/Hz | | |
| 10MHz CMOS/TTL | Connector | BNC | |
| | Output Voltage | 3.3Vpp or 5Vpp Square Wave. Performance similar to 10MHz Sine Wave Output | |
| 1PPS GPS-FailSafe™ Input | Description | External 1PPS input with auto-switching in case internal GPS fails, or goes into holdover. Allows fails-save GPS operation, or external (noisy) Atomic backup references etc. | |
| | Connector Input Voltage | Molex 100mil type TTL, CMOS 3.3V/5V | |
| Timing Accuracy | GPS Locked | Better than +/-20ns UTC offset 1-Sigma (RMS) | |
| | Holdover Mode | better than 7 microseconds/24 hours (better than 8.1E-011/24 hours average) DOCXO | |
| | Xtal Compensation | Automatic OCXO aging and temperature coefficient measurement and compensation | |
| GPS Specification | Sat Signal | 12-Channel GPS L1, 1575.42MHz, C/A 1.023MHz Timing-Optimized Receiver | |
| | Cold Start | Auto Survey mode, or 3D-Fix mode. 15 Minutes warmup to better than 1E-09 (DOCXO) | |
| Status LED's Alarm Output | LED Indicators | 1PPS cadence indicator LED. Lock Indicator LED | |
| | ALARM Output | 3.3V TTL, can drive LED. System Error, GPS error, and PLL unlock alarm. | |
| Serial Interface | Connector | RS-232. 9600 to 115200 Baud | |
| | Protocol | SCPI-99 Command Interface. Industry Standard Commands for drop-in replacement | |
| Environmental Characteristics | Temperature | 0-50°C (single OCXO), 0-70°C (double OCXO) | |
| | Power | 11.0V to 14.0V DC less than 4.5W at 25°C ambient | |
| NOTE | All specifications typical and quoted at 25.0°C after 3 days operation with GPS reception in still air with < 1°C change with +12.0V power supply unless otherwise specified. | | |

Jackson Labs

420 W. Sunnyoaks Ave.
Campbell, CA 95008 USA

(408) 596-0600 Fax: (408) 379-6451

info@jackson-labs.com

www.jackson-labs.com

Lowest Power GPSDO On Market

Technical specifications are typical at 25 +/-1Deg. C, and subject to