FireFly-IIA GPSDO DOCXO with Distribution Amplifier Module Spec

Jackson Labs

"the next generation in frequency and timing"

- **1.5 X 3 X 0.8 Inch Package**
- **Built-In 10MHz Distribution Amp with 3 isolated outputs (>80dB)**
- **Excellent Holdover Stability**
- **Double Oven SC-Cut Crystal**
- **PRELIMINARY SPECIFICATION**

ELECTRICAL SPECIFICATIONS:

Module Specification:	
1 PPS Accuracy	±50ns to UTC RMS (1-Sigma) GPS Locked
Frequency Accuracy	Better than ±3E-010 after 3 hours operation with GPS locked
Holdover Stability	<±7us over 24 Hour Period @+25°C (No Motion)
ADEV	0.1s to 1000s: <1E-11 with GPS lock
1 PPS Output (OCXO Flywheel Generated)	LVDS output, RS-232 level output
10MHz Output	Two LVDS and three Isolated Sine Wave at +13dBm ±3dBm
Distribution Amplifier Port Isolation	2MHz: > 98dB, 10MHz: > 92dB, 1GHz: > 92dB
RS-232 Control	Full control via SCPI-99 Control Commands
GPS Frequency	L1, C/A 1574MHz
GPS Antenna	Passive or Active, 5V
GPS Receiver	50 Channels, Mobile, **GPS, WAAS, EGNOS, MSAS supported, Galileo ready**
Sensitivity	Acquisition -144 dBm Tracking -160 dBm
TTFF	Cold Start - <45 sec, Warm Start - 1 sec, Hot Start - 1 sec
TTL Alarm Output	GPS Unlock and Hardware Failure indicator
Warm Up Time / Stabilization Time	<10 min at +25°C to 1E-09 Accuracy Typ.
Supply Voltage (Vdd)	12 VDC Nominal ±5%
Power Consumption	<4W at +25°C
Operating Temperature	0°C to +75°C (-25C to +75C extended temp range available)
Storage Temperature	-45°C to +85°C
Oscillator Specification:	
Frequency Output	10MHz
10MHz Retrace	±2E-08 After 1 Hour
Frequency Stability Over Temperature	±2.5E-010
Output Amplitude	Output Isolation: >80dB, +13dBm ±3dBm, LVDS +/-300mV
Warm Up Time	< 12 min
Phase Noise	1Hz -90dBc/Hz 10Hz -120dBc/Hz 100Hz -140dBc/Hz 1kHz -150dBc/Hz 10kHz -155dBc/Hz
Designed Lifetime	>10 years

FireFly-IIA GPSDO:

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Revision 01/06/2012 C