

VIAVI Fury

GPS Disciplined Oscillator

Typical Electrical Specifications

Module Specifications		
Dimensions		
OEM PCB	100 mm x 100 mm x 25 mm	
Desktop Enclosure	140 mm x 170 mm x 58 mm	
Applications	In-House Frequency Standard; Military and Industrial Applications; Battery operation	
1 PPS Output		
Connector	BNC (Desktop), Molex 100 mil type connector (OEM PCB)	
Output Voltage	3.3 V TTL/CMOS compatible with <2 ns RiseTime. 50 Ohm terminated or open ended	
10 MHz Sine Wave		
Connector	BNC (Desktop), Molex 100 mil type connector (OEM PCB)	
Output Power	+6 dBm ±3 dBm 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)	1 Hz	-90 dBc/Hz
	10 Hz	-122 dBc/Hz
	100 Hz	-140 dBc/Hz
	1 kHz	-155 dBc/Hz
	10 kHz	-155 dBc/Hz
	100 kHz	-157 dBc/Hz
	1 MHz	-160 dBc/Hz
Jitter	380 Femtoseconds RMS (measured with Agilent E5052B)	
Harmonics	<-50 dBc/Hz	
10 MHz CMOS/TTL		
Connector	BNC	
Output Voltage	3.3 Vpp or 5 Vpp Square Wave. Performance similar to 10 MHz Sine Wave Output	

Module Specifications continued

1 PPS GPS- FailSafe™ Input

Description	External 1 PPS 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	Molex 100 mil type
Input Voltage	TTL, CMOS 3.3 V/5 V
Timing Accuracy	
GPS Locked	Better than ± 20 ns 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, 1575.42 MHz, C/A 1.023 MHz 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	1 PPS cadence indicator LED. Lock Indicator LED
Alarm Output	3.3 V 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	11.0 V to 14.0 V DC less than 4.5 W 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 $<1^{\circ}\text{C}$ change with +12.0 V power supply unless otherwise specified.

Specifications subject to change without notice.



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