

Data Sheet

VIAVI

ULN 2550

25 or 50 MHz GPSDO DOCXO Module with LVDS and CMOS Outputs

Typical Electrical Specifications

Module Specifications	
1 PPS Accuracy	± 30 ns to UTC RMS (1-Sigma) GPS Locked
Frequency Accuracy	Better than $\pm 3E-10$ after 1 hour operation with GPS locked
Holdover Stability	$< \pm 7$ μ s over 24-Hour Period @+25°C (No Motion, after 5 days with GPS)
ADEV	1 s to 1000 s: $< 5 E-11$ with GPS lock typical
1 PPS Outputs (OCXO Flywheel Generated)	Two outputs: 5 V CMOS and LVDS
10/25/100 MHz Outputs (6x total, 4x @25/50 MHz, 10 MHz, 100 MHz)	4x LVDS 25/50 MHz, 1x CMOS 100 MHz, 1x CMOS 10 MHz
RS-232 Control (TTL Level, RS-232 levels optional)	TTL Level, Full control via SCPI-99 Control Commands, NMEA 0183
GPS Frequency	L1, C/A 1574 MHz
GPS Antenna	Passive or Active, 5 V
GPS Receiver	50 Channels, Mobile, GPS, WAAS, EGNOS, MSAS supported, Galileo ready
Sensitivity	
Acquisition	-144 dBm
Tracking	-160 dBm
GPS TTFF	
Cold Start	<45 sec
Warm Start	1 sec
Hot Start	1 sec
TTL Alarm Output	GPS Unlock and Hardware Failure indicator



ULN 2550

Module Specifications continued			
Warm Up Time/Stabilization Time	<10 min at +25°C to 1E-09 Accuracy Typical		
Supply Voltage (Vdd)	11.0 V to 16.0 V DC Nominal		
Power Consumption	<4 W at +25°C with DOCXO		
Environmental Conformance	MIL-STD-202, Method 204, Condition I-A		
Temperature			
Operating Temperature	(Extended temp range) -25°C to +75°C		
Storage Temperature	-45°C to +85°C		
Oscillator Specifications			
Frequency Output	10 MHz, 25/50 MHz, and 100 MHz outputs		
10/100 MHz Retrace without GPS	±2E-08 After 1 Hour		
Frequency Stability	±2.5E-010 over temperature, low-g option: ±3E-010 per g per axis		
Output Amplitude			
10 MHz	CMOS 5V		
25/50 MHz	LVDS		
100 MHz	CMOS 3.3V		
Warm Up Time	<12 min		
Phase Noise		25 MHz Out	10 MHz Out
	1 Hz	-88 dBc/Hz	-100 dBc/Hz
	10 Hz	-109 dBc/Hz	-125 dBc/Hz
	100 Hz	-125 dBc/Hz	-142 dBc/Hz
	1 kHz	-145 dBc/Hz	-152 dBc/Hz
	10 kHz	-155 dBc/Hz	-155 dBc/Hz
	100 kHz	-160 dBz/Hz	-155 dBc/Hz
Designed Lifetime	>10 years		

NOTE: Specifications subject to change without notice.



Contact Us +1 800 835 2352
avcomm.sales@viavisolutions.com

To reach the VIAVI office nearest you, visit
viavisolutions.com/contact.

© 2024 VIAVI Solutions Inc.
Product specifications and descriptions in this document are subject to change without notice.
Patented as described at
viavisolutions.com/patents
uln2500-ds-avi-nse-ae
30194033 900 0124