

VIAVI

Mini-JLT

GNSS variant with GPS, Glonass, Galileo, BeiDou, QZSS

Typical Electrical Specifications

Module Specifications	
1 PPS Stability	< ±10 ns to UTC RMS (1-Sigma) GPS Locked (DOCXO)
Serial Control	GPS NMEA and Status Output, SCPI-99 control, USB and TTL Port
GPS Frequency, Antenna Power	C/A 1574 MHz, 3.3 V antenna-power built-in, 5 V external supply option
GPS Receiver	72 Channels, GPS, Glonass, Galileo, BeiDou, QZSS, SBAS capable
Sensitivity	
Acquisition	-148 dBm
Tracking	-167 dBm (GPS and Glonass)
GPS TTFF	
Cold Start	<30 sec
Warm Start	2 sec
Hot Start	2 sec
ADEV SOCXO	
1 s	<7E-012
1Ks	<7E-011
10K s	<8E-012 (25°C, no motion/airflow)
ADEV DOCXO option	
1 s	<5E-012
1Ks	<3E-011
10K s	<3E-012 (25°C, no motion/airflow)
Holdover at 25.0°C, no airflow, no motion/vibration, 5 days GPS locked	<5 µs in 5 hours (SOCXO), <4 µs in 24 hours (DOCXO)
Warmup and Stabilization Time	<12 min at +25°C to <1E-09 Accuracy to GPS



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Module Specifications continued

Supply Voltage (Vdd)	5 V $\pm$ 1.0 V
Power Consumption	<2.4 W (SOCXO), <3.2 W (DOCXO) @25°C, <8 W during warmup
Operating Temperature	-45°C to +80°C (SOCXO), 0°C to +75°C (DOCXO)
1 PPS External Reference Input	Supports an optional external 1 PPS input on pin 1 of power connector
10 MHz Outputs	1x 10 MHz at +5 dBm, 1x optional 10 MHz at +13 dBm, $\pm$ 3 dB
3-axis Accelerometer	Up to 20 readings/s, can be used for electronic g-compensation option

Oscillator Specification

Frequency Output	10 MHz at +5 dBm and +13 dBm
10 MHz Retrace	< $\pm$ 1E-09 After 1 hour @ +25°C (no GPS)
Frequency Stability over Temperature over 24 hours	$\pm$ 6E-09 (SOCXO), $\pm$ 0.5E-09 (DOCXO), <1E-012 over 24 hours (with GPS)
Output Harmonics, spurs	<-50 dBc/Hz, <-115 dBc/Hz
OCXO Aging (fully compensated by GPS)	< $\pm$ 0.1 ppm per year without GPS

		SOCXO	DOCXO
Phase Noise @ 10 MHz	1 Hz	-90 dBc/Hz	-94 dBc/Hz
	10 Hz	-128 dBc/Hz	-132 dBc/Hz
	100 Hz	-148 dBc/Hz	-142dBc/Hz
	1 kHz	-153 dBc/Hz	-150 dBc/Hz
	10 kHz	-155 dBc/Hz	-152 dBc/Hz
	100 kHz	<-155 dBc/Hz	-152 dBc/Hz

Connections	Connector Type
2x 10 MHz Sine Wave Out (second output not stuffed), GPS Antenna	SMA
+5 V Power, ext. 1 PPS input, TTL serial port, Ant. power (3.3 V to 5.5 V)	Molex PN 70543-0005
USB Communication	Mini USB, 2.0

NOTE: Specifications subject to change without notice.