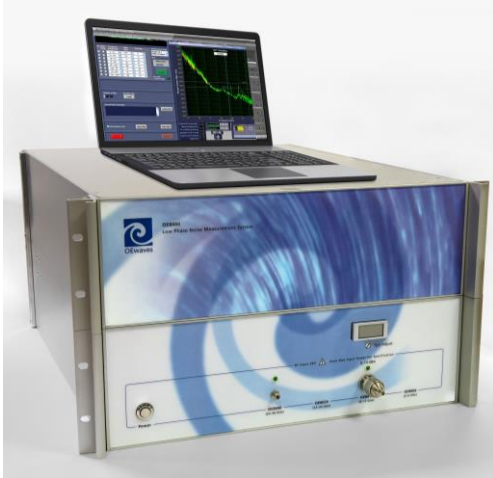
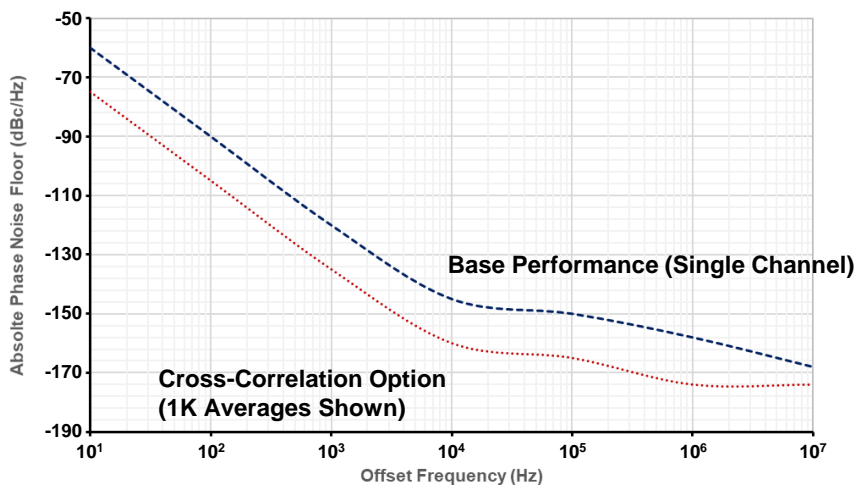


HI-Q™ RF Test Measurement System (TMS) utilizes microwave photonics techniques for automated measurement of ultra-low phase noise oscillators.



HI-Q™ RF TMS is fast and fully automated and yields the spectral density of the phase noise of an RF or microwave signal source at any operating frequency in the specified bands.

This homodyne-based system is unique in wide frequency band measurement without requiring another low noise reference source or down-converter, as required in conventional heterodyne approaches. The system operates with ease, speed, and precision using a simple graphic user interface via a notebook PC. The cross-correlation performance of the system shown in the figure below has been calibrated through a comparison with the measurement system at NIST.



FEATURES

- Ultra-Low Phase/Frequency Noise Measurement
- Fast Real-Time Measurement
- Fully Automated
- Cross-Correlation Homodyne Capability
- No Low Noise Reference Source Required
- User Friendly Interface
- Simple PC-based Operation
- 6U x 19" Rack System
- Customizable Configurations, Upgrades, and Options

OPTIONAL CONFIGURATION

- Dual Channel Cross-Correlation Measurements
- Extended Input and Offset Frequency Range Measurements
- Two Port Residual Phase Noise Measurement
- AM Noise Measurements
- Extended Input Power Range
- Optical Input
- Performance Level and Frequency Range Options and Upgrades

HI-Q™ RF TEST MEASUREMENT SYSTEM

OE8000



SPECIFICATIONS

Phase Noise Offset	10 Hz	1 kHz	100 kHz	10 MHz
▪ Absolute Phase Noise Floor @ 1.5 – 3 GHz	-72 dBc / Hz	-132 dBc / Hz	-162 dBc / Hz	-174 dBc / Hz
▪ Absolute Phase Noise Floor @ 3 – 6 GHz	-66 dBc / Hz	-126 dBc / Hz	-156 dBc / Hz	-172 dBc / Hz
▪ Absolute Phase Noise Floor @ 6 – 12 GHz	-60 dBc / Hz	-120 dBc / Hz	-150 dBc / Hz	-168 dBc / Hz
* Consult for other frequency ranges				
RMS Timing Jitter Sensitivity – Single Channel	5 fs (100 Hz – 10 MHz)			
Input Power Range	+5 to +15 dBm			
Spurious (Max)	-50 dBc (<1 kHz offset) -80 dBc (>1 kHz offset)			
Measurement Types	Raw Data Homodyne Spurious RMS Jitter		Cross-correlation Option AM Noise Option 2-Port Residual Phase Noise Option (External Signal Source Required)	
Averaging (Max)	99,999 (Cross-correlation Option)			
Display Functions	Spectrum / Spectral Density / Markers / Spurious Contents			
Data Storage and I/O	HDD / USB Port / 100 Ethernet Port			
Resolution Bandwidth	0.1 Hz – 200 kHz			
Operating Temperature Range	15°C to 35°C			
Power	110 / 120 V _{ac} or 220 / 240 V _{ac}			
Size	19" Rack Mount (Height depends on performance and feature options)			

OPTIONS

Extended Frequency Offset Measurement	0.1 Hz < f _{offset} < 320 MHz (Customer to specify range)
Extended Input Power	-10 to +15 dBm / +10 to +20 dBm
Extended Temperature Range	10°C to 40°C
Custom Input Frequency Range	RF – Millimeter Wave
AM Noise Measurements	Customer to specify requirements
Phase Noise Performance Level	Customer to specify requirements
2-Port Residual Phase Noise Measurement	Customer to specify requirements / External signal source is required

NOTE: These specifications are subject to change without notice due to OEwaves ongoing development cycle. This product line is covered by one or more of the following U.S. patents: 8,155,913; 8,155,914. Other patents pending.

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