

A0020A Laser Linewidth Measurement System

Keysight Technologies and SYCATUS

Laser linewidth measurement down to 40 kHz
Wide wavelength range of both C and L band
Interferometer and optical receiver in one box
Essential measurement for lasers for digital
coherent systems

SYCATUS provides A0020A laser linewidth measurement system. A0020A achieves minimum linewidth measurement down to 40 kHz. A0020A operates in wide wavelength range of both C and L band.

Laser linewidth characteristics is the most critical item for laser diodes used in digital coherent transmission systems because of the narrow linewidth requirements for multilevel optical transmission.

Highly integrated optical source like ITLA also needs linewidth measurement to investigate the effect of the noise caused by electronics for laser conditioning.

A0020A enables the accurate characterization of laser diodes, which improves the performance and the quality of laser diodes. A0020A also reduces the measurement time and accelerate the development and the manufacturing of products.

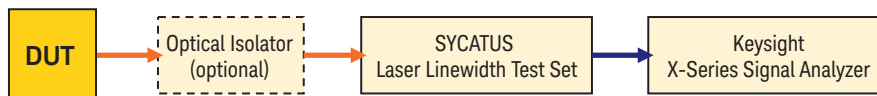
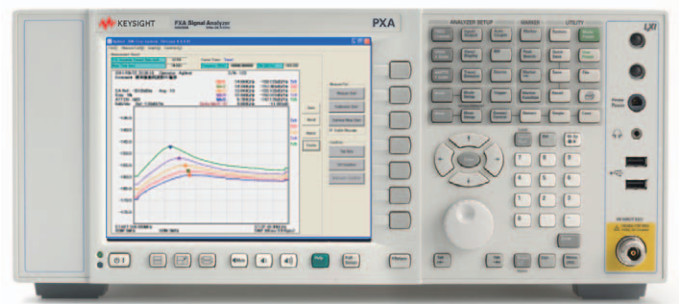


Fig. 1 A0020A System Configuration



SYCATUS A0020A Laser Linewidth Measurement System

SYCATUS A0020A laser linewidth measurement system consists of SYCATUS laser linewidth test set and Keysight X-series signal analyzer.

The laser linewidth test set contains a delayed self-heterodyne interferometer followed by a high-gain linear optical receiver. The interferometer includes a polarization controller to adjust the interference condition.

By the combination of Keysight X-series signal analyzer, linewidth measured at 3 dB, 10 dB and 20 dB bandwidth can be obtained easily and immediately.

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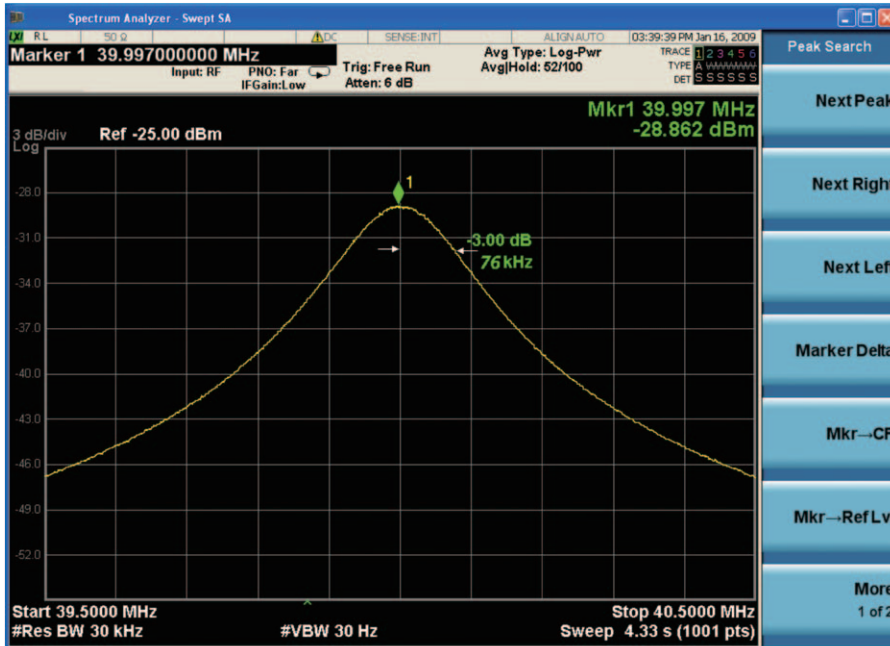


Fig. 2 Linewidth Measurement Example

SYCATUS

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Table 1 Linewidth Measurement System Specifications

Items	Specification
Optical Wavelength Range	1520 nm to 1620 nm
Minimum Linewidth Frequency	40 kHz
Input Optical Power Range	-20 dBm to +7 dBm
Frequency Shift of Interferometer	100 MHz

Ordering Information

Keysight Technologies	
X-Series Signal Analyzer	N9000A CXA
	N9010A EXA
	N9020A MXA
	N9030A PXA
SYCATUS	
Delayed Self-Heterodyne Interferometer	A0020A-DHI
Optical Receiver Built-In	A0020A-ORX

Other options are available; contact SYCATUS Sales for more details

www.keysight.com

For more information on Keysight Technologies' products, applications or services, please contact your local Keysight office. The complete list is available at:

www.keysight.com/find/contactus

