

8560EC and 8561EC RF Spectrum Analyzers

The 8560EC and 8561EC offer excellent performance for RF design, manufacturing and service applications. The 8560EC has a frequency range of 30 Hz to 2.9 GHz, and the 8561EC extends this range up to 6.5 GHz. Both have synthesized tuning for drift-free accurate measurements.

8562EC RF Spectrum Analyzer

The 8562EC is a high-performance spectrum analyzer that provides the frequency and dynamic range needed for today's high-speed digital wireless communication applications. It allows manufacturing and R&D engineers to test network components with state-of-the-art performance. The 8562EC has a frequency range of 30 Hz to 13.2 GHz, which covers the spur-search ranges specified by leading standards organizations in Europe and in the United States.

8563EC Microwave Spectrum Analyzer

The 8563EC extends the outstanding features and capabilities of the 8560EC series RF spectrum analyzers into the microwave frequency range. The 8563EC has a standard frequency range of 9 kHz to 26.5 GHz (preselected from 2.75 GHz to 26.5 GHz), with optional low-end frequency coverage to 30 Hz. The image-enhanced, double-balanced harmonic mixer of the 8563EC achieves noise-figure performance similar to that of a fundamentally-mixed front end.

8564EC and 8565EC Millimeter Spectrum Analyzers

Whether you want to measure the third harmonic of a 15 GHz oscillator or the noise sidebands of a 38 GHz carrier, the 8564EC and 8565EC make spectrum analysis easier than ever before. A single coaxial connection is all you need to measure signals from 30 Hz to 50 GHz. Preselection minimizes images and multiple responses at higher frequencies.

The 8564EC has a frequency range of 9 kHz to 40 GHz, the 8565EC of 9 kHz to 50 GHz. Both have optional low-end coverage to 30 Hz and are preselected above 2.75 GHz.

8563EC E35 Adjacent Channel Power Ratio Test Set

Use the special option E35 with the 8561EC/62EC/63EC/64EC/65EC spectrum analyzers to increase the dynamic range of ACP measurements. Option E35 uses an alternate first converter mixer with custom filtering to increase the spectrum analyzer's ACPR measurement dynamic range. The dynamic range becomes at least 70 dB for systems with a guard band between channels of 900 kHz or greater. This meets the needs of emerging W-CDMA specifications. Control menus are integrated into the spectrum analyzer softkeys making the test set easy to use.

11970 Series and 11974 Series Millimeter Mixers

For millimeter-wave measurements¹, preselection can be extended to 75 GHz using the 11974 mixers. Unpreselected frequency range can be extended to 110 GHz using the 11970 series mixers, and to 325 GHz using mixers from other manufacturers.

85620A Mass Memory Module

This standard plug-in module adds measurement personality capability, enough memory to store 100 traces, memory-card capability and computer capability, without an external controller. Create complex measurement routines and save them as single-key measurements stored on memory cards or in the module's 128 KB of battery-backed RAM. A clock/calendar and automatic save and execute functions let you configure the spectrum analyzer for unattended, automatic measurements.

85629B Test and Adjustment Module

This accessory for the 8560EC/61EC/63EC (limited use on 8562EC/64EC) makes it easier to service your spectrum analyzer. The module plugs into the rear panel of the instrument and automates high-level diagnostics, self tests and adjustment procedures. It performs more than 1,000 troubleshooting adjustments. Readjustments are fast and accurate because the module controls internal analyzer settings as well as external test equipment.

85710A Digital Radio Measurement Personality

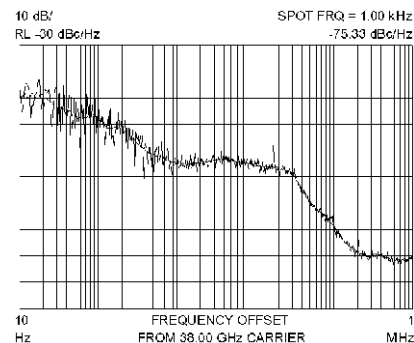
The 85710A Digital Radio Measurement Personality customizes the 8560EC series spectrum analyzers for digital radio measurements. It contains five agency masks for testing to U.S. FCC, U.K. and FRG speci-

¹ Millimeter-wave coverage is not available with Option 002 on the 8560EC.

fications. A compare-to-mask function allows you to characterize spectral emissions. Other functions include mean power level, transient analysis monitoring and frequency-response measurements. You can also create and store your own custom masks.

85671A Phase Noise Measurement Utility

This downloadable program transforms your 8560EC series spectrum analyzer into a phase noise tester. It eliminates the task of hand-drawing phase noise plots. To measure oscillator phase noise, you can generate graphs of phase noise (dBc/Hz) versus log offset frequency without having to manually tune to multiple frequency offsets. Other productivity features include direct phase noise readout, variable filtering (for controlling trade-offs between measurement repeatability and speed), calculation of RMS noise (displayed in radians and degrees), spot-frequency measurements (phase noise measurements at a single offset frequency) and digitized hardcopy and storage.



Use the 85671A phase noise utility to easily characterize noise sidebands of an oscillator.

85672A Spurious Response Measurements Utility

The 85672A is a downloadable program on a card that inserts directly into any 8560EC series spectrum analyzer. This new test utility provides fast and easy spurious response test capability for all of Agilent's high-performance spectrum analyzers. Test setup time can be drastically reduced for manufacturing and R & D engineers with this one-button solution. 85672A offers five preprogrammed tests: third-order intermodulation product/third order intercept (TOI), harmonics and total-harmonic distortion (THD), discrete sideband spurs, general-spur search and mixing products.

Scalar Network Analysis Capability

The 85640A tracking generator and the optional built-in tracking generator for the 8560EC both cover 300 kHz to 2.9 GHz. See page 250 for details.

Specifications

Frequency

Frequency Range (internal mixing)

8560EC:	30 Hz to 2.9 GHz
8561EC:	30 Hz to 6.5 GHz
8562EC:	30 Hz to 13.2 GHz
8563EC:	9 kHz to 26.5 GHz; 30 Hz to 26.5 GHz (Option 006)
8564EC:	9 kHz to 40 GHz; 30 Hz to 40 GHz (Option 006)
8565EC:	9 kHz to 50 GHz; 30 Hz to 50 GHz (Option 006)

Frequency Range (external mixing): 18 GHz to 325 GHz in 12 waveguide bands (not available with 8560EC Option 002)

Frequency Reference Accuracy

		Option 103
Temperature Stability	$\pm 1 \times 10^{-6}$	$\pm 1 \times 10^{-6}$
Aging (per year)	$\pm 1 \times 10^{-7}$	$\pm 2 \times 10^{-6}$
Stability	$\pm 1 \times 10^{-8}$	$\pm 1 \times 10^{-6}$

Warmup (nominal), 5 minute $\pm 1 \times 10^{-7}$; 15 minute $\pm 1 \times 10^{-8}$

Frequency Readout Accuracy (N = LO Harmonic)

Span > 2 MHz x N:	$\pm (\text{freq. readout} \times \text{freq. ref. accuracy} + 5\% \times \text{span} + 15\% \times \text{RBW} + 10 \text{ Hz})$
Span \leq 2 MHz x N:	$\pm (\text{freq. readout} \times \text{freq. ref. accuracy} + 1\% \times \text{span} + 15\% \times \text{RBW} + 10 \text{ Hz})$

For more information, visit our web site:

<http://www.agilent.com/find/8560>