New!

- 40 or 80 MHz analysis bandwidth
- WLAN modulation analysis
Performance Exceeding Expectations

The brainpower and the will are already yours; the next step is selecting precisely the right tools to reach the market first.

The Agilent PSA Series offers high-performance spectrum analysis up to 50 GHz and beyond with powerful one-button measurements, a versatile feature set, and a leading-edge combination of flexibility, speed, accuracy, and dynamic range. From millimeter wave and phase noise measurements to spur searches and modulation analysis, the PSA Series offers unique and comprehensive high-performance solutions to R&D and manufacturing engineers in cellular and emerging wireless communications, aerospace, and defense.

- **Dynamic range**
  Fine-tune measurements with the industry’s most usable dynamic range.

- **Accuracy**
  Design with confidence using industry’s highest accuracy.

- **Flexibility**
  Take control of measurement setups through advanced flexibility.

- **Speed**
  Increase throughput and design efficiently with fast measurements.

### PSA Series frequency range summary

<table>
<thead>
<tr>
<th>Model</th>
<th>Frequency</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>E4443A</td>
<td>3 Hz 6.7 GHz</td>
<td></td>
</tr>
<tr>
<td>E4445A</td>
<td>3 Hz 13.2 GHz</td>
<td></td>
</tr>
<tr>
<td>E4440A</td>
<td>3 Hz 26.5 GHz</td>
<td>External mixing to 325 GHz</td>
</tr>
<tr>
<td>E4447A</td>
<td>3 Hz 42.98 GHz</td>
<td></td>
</tr>
<tr>
<td>E4446A</td>
<td>3 Hz 44 GHz</td>
<td>External mixing to 325 GHz</td>
</tr>
<tr>
<td>E4448A</td>
<td>3 Hz 50 GHz</td>
<td>External mixing to 325 GHz</td>
</tr>
</tbody>
</table>
Design efficiently and with confidence

To promote productivity in research and development, test and measurement tools must be flexible, thorough, and easy to use. Troubleshooting and design verification can be expedited and simplified with the PSA Series spectrum analyzers. With this one tool, it is easy to optimize setups for unique spectrum measurements, to customize advanced power measurements for modulated signals, and to dive down to the bit level using the digital demodulation personalities.

Having confidence in measurement results is essential to design verification. Understanding the importance of this, Agilent makes measurement integrity its highest priority. We provide guaranteed technical specifications to a set performance level on which you can depend.

Increase and maintain manufacturing throughput

From high-volume automated testing of cellular base stations to manually tuning oscillators, the PSA Series optimizes manufacturing throughput on many levels.

*Increased throughput* – Fast 1 ms sweeps, 30 ms ACP measurements, and 45/s update rates reduce automated test times. Manual tests are accelerated by one-button setups and fewer required button presses per measurement. The PSA Series shifts easily between measurement personalities, minimizing changeover time and accelerating troubleshooting.

Improved yields – Excellent specifications reduce measurement uncertainty to allow for narrower test margins and improved yields. Sophisticated algorithms constantly monitor analyzer conditions and determine when internal background alignment is required.

One analyzer, many solutions – Using only 177 mm (7 in) of rack space, the PSA Series is packed with features. Superior accuracy (±0.17 dB typical) and linearity may eliminate the need for a power meter. Cellular communications measurement personalities give it digital demodulation capability. The phase noise personality transforms it to a phase noise tester. The external source control personality enables scalar stimulus-response measurements. The feature list is long and will continue to grow.

The PSA Series offers a wide variety of features for making more than just traditional spectrum analyzer measurements.

- **Power Suite**
- **Measurement personalities**
- **Modulation analysis**
- **Modern connectivity**
Great specifications are the starting point for great measurements. The PSA Series has the technology to offer unprecedented control over dynamic range, resolution, and speed.

**Dynamic range**

- 2 dB step attenuator
- 160 RBW settings (10% steps)
- Optional built-in preamplifier
- Noise correction for ACP measurements

- –153 dBm typical DANL
- –166 dBm typical DANL with built-in preamplifier
- +19 dBm typical TOI
- +7 dBm nominal 1-dB gain compression
- –118 dBc/Hz typical phase noise at 10 kHz offset
- 81 dB typical W-CDMA ACPR dynamic range with noise correction

The PSA Series achieves superior linearity and unsurpassed accuracy due to its advanced design and modern technology.

**Accuracy**

- ±0.17 dB typical amplitude accuracy
- 0 dB reference level uncertainty
- 0 dB display switching uncertainty
- ±0.05 dB RBW switching uncertainty
- ±0.07 dB display linearity

To learn more, read...

Optimizing Dynamic Range for Distortion Measurements, product note, literature number 5980-3079EN

This figure illustrates 0.1 dB/division display resolution, 0.01 dB reference level resolution, and 0.001 marker resolution with averaging.
From the novice to the most knowledgeable expert, the PSA makes it easy for anyone to obtain accurate, reliable results from their measurements.

**Swept versus FFT**
Perform swept-tuned measurements with digital RBW filters or fast Fourier transform (FFT) measurements with digital FFT filters. Use this flexibility to optimize for speed and sensitivity.

**Phase noise optimization**
The PSA Series’ local oscillator (LO) phase lock loop configuration can be set to optimize phase noise close to a carrier within a 50 kHz offset, close to a carrier outside of a 50 kHz offset, or for tuning speed.

**Digital detectors**
Detector modes become important for accurately measuring different types of continuous wave, noise, and noise-like signals. The PSA Series offers this complete suite of detectors to assure correct measurement results.

- normal
- average (log, rms, voltage)
- peak
- sample
- negative peak
- EMI detectors
  (quasi-peak, peak, average)

Choose between swept or FFT measurements and optimize input attenuation and resolution bandwidths to make fast measurements.

- 1 µs sweep times in zero-span
- 1 ms frequency sweep times
- > 50 measurements/second locally
- > 45 measurements/second remotely
- 30 ms fast ACP measurements
- Fast low-level spur search

---

**To learn more, read...**
**PSA Series Swept and FFT Analysis**, product note, literature number 5980-3081EN
Power Suite: The Power to Realize

Making broadband signal measurements simple and intuitive requires unique spectrum analyzer measurement capability. The PSA Series offers a comprehensive suite of flexible, one-button RF and microwave power measurements, with wireless format-based setups for 2G/3G, W-LAN, Bluetooth™, UWB, and S-DMB standards. Power Suite is a standard tool set included in every PSA Series spectrum analyzer.

Power Suite measurements
- channel power
- occupied bandwidth
- adjacent channel power (with multiple offsets)
- multicarrier power/12-carrier ACP
- power statistics (CCDF)
- harmonic distortion
- burst power
- third order intercept (TOI)
- spurious emissions
- spectrum emission mask

EMI Measurements

Perform EMI precompliance measurements using the PSA’s built-in CISPR and MIL standards compliant EMI detectors and bandwidths. Avoid costly redesign by measuring the radiated and conducted emissions of your design early in the development process.

Limit Lines

Customizable limit lines for pass/fail testing are standard with every PSA Series spectrum analyzer.

Gated Sweep

Use the standard, built-in gated sweep capability to analyze time varying signals, such as burst RF or TDMA, without interference from switching the carrier on and off.

40/80 MHz Bandwidth Digitizer (Option 140/122)

Capture and measure complex vector time/frequency domain signals with up to 40 or 80 MHz of analysis bandwidth, 78 dB (typical) dynamic range, and excellent phase and amplitude flatness using Agilent’s advanced interleave technology. Now available on 6.7 GHz, 13.2 GHz, and 26.5 GHz PSA Series, Option 140 or 122 helps you optimize the PSA configuration to best fit your signal analysis needs within your budget.

Digital Demodulation hardware (Option B7J)

This option, required for format-based modulation analysis, includes a 1-dB electronic step attenuator and provides spectrum and waveform analysis and I/Q pairs over GPIB or LAN.
Measurement Personalities

There are 15 measurement personalities available for the PSA Series. Conveniently built into the analyzer, these optional application-specific measurement personalities provide advanced capability with one-button measurement simplicity.

External source control (Option 215)

This option enables the PSA to control Agilent PSG or ESG signal generators for scalar stimulus-response measurements up to 50 GHz.

WLAN (Option 217)

This measurement personality analyzes the RF and modulation characteristics of IEEE-standard Wireless Local Area Network (WLAN) signals, including 802.11b/a/g. Additionally, signals with slightly different modulation parameters, such as 802.11j and 802.11a-turbo mode, can be analyzed.

Flexible digital modulation analysis (Option 241)

Analyze and measure digital modulation quality and troubleshoot a wide variety of digitally modulated signals with this built-in flexible tool. Provide not only the EVM results, but also numerous traces with the EQ filter function.

Phase noise (Option 226)

This flexible tool quickly and easily generates plots of phase noise in dBc/Hz versus log offset frequency, measures jitter, or makes continuous spot frequency phase noise measurements.

Noise figure (Option 219)

Make noise figure and gain measurements from 100 kHz to 26.5 GHz with this personality that offers guides for measurement setups and a built-in uncertainty calculator to qualify the measurement system.

Cellular communications

The PSA Series offers powerful, format-based power measurements and modulation analysis for several popular cellular formats.

- W-CDMA (Option BAF) for uplink and downlink
- HSDPA (Option 210) enhancement to the W-CDMA option
- 1xEV-DO (Option 214) for forward and reverse links including 3GPP2 Rev-A support
- GSM with EDGE (Option 202) including EDGE EVM, PVT, PFER, and ORFS
- cdma2000 (Option B78) for forward and reverse links
- 1xEV-DV (Option 214) enhancement to the cdma2000 option
- cdmaOne (Option BAC)
- TD-SCDMA (Option 211) power measurements only
- NADC/PDC (Option BAE)

To learn more, read... Measurement Personality technical overviews, a complete list is available on page 16.
The PSA Series has a simple and intuitive user interface. The display is large and bright with effective use of colors. Front panel hard keys perform frequently used functions and provide access to menus. Soft keys on the display are organized for quick and easy navigation. One-button set-ups are provided for many measurements.

Built-in on screen help makes it very easy to look up information for front panel soft keys and hard keys, including their equivalent remote SCPI commands. Help is available for the base instrument and Power Suite operations, as well as phase noise, noise figure, and TD-SCDMA measurement personalities.

Trace operations allow users for the post-measurement processing among displayed traces, including trace exchange, copying, addition, subtraction, mean, and trace normalization.
Frequency reference input (1 to 30 MHz)
321.4 MHz IF output
30 MHz IF output (Option H70)
Y-axis video output (Option 124)
Frequency reference input (1 to 30 MHz)
Mode – shift easily between measurement personalities
Auto couple – access flexibility features under one menu
Comprehensive marker functions
Measure – easy access to and control of one-button measurements and setups
External mixing (Option AYZ)
Precision type-N with selectable DC coupling for measurements from 3 Hz (2.4 mm connector on E4447A, E4446A, and E4448A)
Floppy disk drive (screen capture in .wmf or .gif)
(frequency and amplitude pairs in .csv)
VGA output to connect to a video monitor or projector
10 baseT LAN for control and upgrades
Parallel printer port for connection to standard PC printers and quick printouts of measurement results
GPIB to communicate with SCPI
A Spectrum Analyzer with a Digital Brain

**Agilent PSA Series block diagram**

All-digital auto-ranging IF

The PSA Series has an all-digital IF section with auto-ranging capability. After the input signal is downconverted, it is immediately digitized, and all processing is performed digitally. This architecture offers:

- Variable RBW filters in 10% steps
- Exact and predictable resolution bandwidths
- Zero uncertainty in reference level and display scale switching
- Improved filter shape factor
- Faster sweep speeds
- Increased display resolution
- FFT capability
- Multiple detector modes

With auto-ranging, the analyzer adjusts the input signal in real time during the sweep so that the full range of the digitizer is utilized. Thus, at every point in the sweep the signal is being measured with the full resolution and dynamic range of the ADC.

- Signals are measured accurately everywhere on the display.
- Accuracy and linearity do not degrade when measuring small signals in the presence of large signals.
- The dynamic range of the instrument is not limited by the dynamic range of the digitizer.

To learn more, read...

*Measurement Innovations and Benefits, product note, literature number 5980-3082EN*
Modern Connectivity

Connect

The PSA Series has built-in capability to network with PCs, printers, and software programs. Standard connectivity features include

- **IVI-COM** drivers for Agilent VEE
- **IntuiLink** software for easy transfer of measurement results into Microsoft® Excel and Word
- **Floppy disk drive**
- **GPIB** and **10 baseT LAN** for automated control and remote operation
- **82357A USB/GPIB interface** for direct connection from the USB port on your PC to the PSA
- **SCPI** programmability

- **Code compatibility measurement personality suite** (Option 266) for easily upgrading your 8566A/B, 8568A/B, or 8560 and 8590 Series spectrum analyzers to the PSA Series
- **Y-axis video output** (Option 124) provides performance similar to the 8566A/B, 8568A/B spectrum analyzer
- **Parallel port** for printing

**BenchLink Web Remote** (Option 230) used to control analyzer functions, record and evaluate data, and view signals in real time, remotely anywhere in the world over the Web

**Agilent’s Connectivity Suites** and products will enable you to make fast, easy instrument connections and create test programs based on the power of Microsoft Visual Studio/.NET

---

Advanced modulation analysis with Agilent 89601A vector signal analysis software

For engineers working with today’s emerging broadband communication systems, the PC based Agilent 89601A vector signal analysis (VSA) software and the PSA together provide an indispensable tool for basic research and product development.

Evaluate modulated signals, digital and analog, with 40 or 80 MHz of analysis bandwidth and 78 dB (typical) of dynamic range (with Option 140 or 122). The 89601A vector signal analysis software teams advanced demodulation algorithms with highly flexible scalar and vector analysis tools to help you develop, troubleshoot and verify the physical layer performance of your radio system.
Confidence Brings Reward

**PSA series specifications**

Every PSA Series spectrum analyzer is thoroughly tested and guaranteed to meet the specifications given in the PSA Spectrum Analyzers Specifications Guide and other product literature. With reliable performance, error budgets for measurement uncertainty can be reduced resulting in increased yields, improved device specification settings, and reduction in test setup costs.

**Typical performance**

Because 80% of PSA Series analyzers typically perform significantly better than the guaranteed specifications, we supply a “typical” value for the more commonly used specifications. Use this typical data when comparing products, or when the application pushes the limit on a given specification.

**Performance verification and instrument calibration**

All functions and specifications of each PSA are fully calibrated and certified in the Agilent factory. The recommended calibration cycle for the PSA is one year, and Agilent calibration services are available worldwide to support this product. Furthermore, Agilent can provide ANSI Z540 or ISO 17025 conformant and accredited calibrations upon request, which provide detailed data reports and certifications.

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**To learn more, read...**

*ISO 17025 Calibration – essential information that will help you win, brochure, literature number 5988-7953EN*
### Key Specifications

<table>
<thead>
<tr>
<th>E4443A/E4445A/E4440A/E4447A/E4446A/E4448A</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Frequency range</strong></td>
</tr>
<tr>
<td><strong>Speed</strong></td>
</tr>
<tr>
<td>Sweep time, span ≥ 10 Hz</td>
</tr>
<tr>
<td>Sweep time span = 0 Hz</td>
</tr>
<tr>
<td>Fast ACP measurement time</td>
</tr>
<tr>
<td>Local measurement update rate</td>
</tr>
<tr>
<td>Remote measurement update rate</td>
</tr>
<tr>
<td><strong>Resolution</strong></td>
</tr>
<tr>
<td>Resolution bandwidth range, swept and FFT</td>
</tr>
<tr>
<td>Variable sweep (trace) point range</td>
</tr>
<tr>
<td>Phase noise at 1 GHz</td>
</tr>
<tr>
<td>10 kHz offset</td>
</tr>
<tr>
<td>1 MHz offset</td>
</tr>
<tr>
<td>10 MHz offset</td>
</tr>
<tr>
<td><strong>Dynamic range</strong></td>
</tr>
<tr>
<td>Displayed average noise level (DANL)</td>
</tr>
<tr>
<td>10 MHz to 3 GHz</td>
</tr>
<tr>
<td>3 GHz to 20 GHz</td>
</tr>
<tr>
<td>20 GHz to 26.5 GHz</td>
</tr>
<tr>
<td>26.5 GHz to 44 GHz</td>
</tr>
<tr>
<td>44 GHz to 50 GHz</td>
</tr>
<tr>
<td>Preamplifier (DANL), 10 MHz to 3 GHz</td>
</tr>
<tr>
<td>1 dB gain compression, 200 MHz to 3 GHz</td>
</tr>
<tr>
<td>Input attenuator range</td>
</tr>
<tr>
<td>TOI, 1.7 GHz to 3.0 GHz</td>
</tr>
<tr>
<td><strong>ACPR, W-CDMA (5 MHz offset)</strong></td>
</tr>
<tr>
<td>Dynamic range</td>
</tr>
<tr>
<td>With noise correction</td>
</tr>
<tr>
<td><strong>Accuracy</strong></td>
</tr>
<tr>
<td>Absolute amplitude accuracy</td>
</tr>
<tr>
<td>Frequency response, 3 Hz to 3 GHz</td>
</tr>
<tr>
<td>Frequency accuracy (1 GHz)</td>
</tr>
<tr>
<td>ACPR, W-CDMA accuracy (5 MHz offset)</td>
</tr>
<tr>
<td>Mobile station</td>
</tr>
<tr>
<td>Base station</td>
</tr>
<tr>
<td><strong>Analysis bandwidth</strong></td>
</tr>
<tr>
<td>Maximum bandwidth</td>
</tr>
<tr>
<td>With Option 140</td>
</tr>
<tr>
<td>(E4443A/45A/40A only)</td>
</tr>
<tr>
<td>With Option 122</td>
</tr>
<tr>
<td>(E4443A/45A/40A only)</td>
</tr>
<tr>
<td>I/Q waveform digital output bandwidth</td>
</tr>
<tr>
<td>(Option E444xA-B7J)</td>
</tr>
<tr>
<td>321.4 MHz IF output²</td>
</tr>
<tr>
<td>−1 dB bandwidth</td>
</tr>
<tr>
<td>With Option 123:</td>
</tr>
<tr>
<td>−3 dB bandwidth</td>
</tr>
</tbody>
</table>

---

1. See PSA Series spectrum analyzers data sheet for more specification details (literature number 5980-1284E).
2. Analysis bandwidth is the instantaneous bandwidth available around a center frequency over which the input signal can be digitized for further analysis or processing in the time, frequency, or modulation domain.
3. IF output is not available for E4447A.

---

**To learn more, read...**

**PSA Series**, data sheet, literature number 5980-1284E
The performance and flexibility of the PSA Series spectrum analyzer is only a small part of what is available from Agilent. In a constantly changing environment, Agilent’s ability to understand your business needs and quickly provide the latest end-to-end service and support solutions gives the certainty and confidence necessary to accelerate the development and deployment of winning technologies.

Support solutions

Use Agilent’s support solutions to get more from the PSA, as well as other test equipment, by increasing productivity and maximizing up-time. Our programs are designed with flexibility and can be tailored to meet your needs, including costs and response times.

Repair services ensure that the instrument is up and running as quickly as possible. The PSA comes with a one-year return-to-Agilent warranty. Extended warranty and technical support options are available at the time of purchase.

Agilent Calibration services are available worldwide to insure PSA measurement confidence to its original factory shipped condition. Choose return-to-Agilent or on-site calibration services. Upfront calibration plans available at the time of purchase provide the best value.

Volume On-site Calibration (VOSCAL) service minimizes instrument downtime and associated costs by delivering quality calibration on-site without interfering with output schedules. VOSCAL is a fully operational, high-quality mobile calibration laboratory complete with high-specification systems and automation.

System up-time services provide Agilent’s global resources and expertise to help prevent system failures and develop solutions to problems fast. Our system up-time teams are comprised of our best service specialists to keep systems up and running.

Equipment management services assist in managing test and measurement assets. Agilent’s global equipment management solution helps maximize the utilization and reduce the ownership cost of test equipment.

For more information on Agilent support solutions visit:

www.agilent.com/find/tm_services

Knowledge services

Our goal at Agilent is to provide the key resources that will help you build the comprehensive solutions to stay competitive. Agilent’s knowledge services are the best in the business and encompass a wide range of solutions designed with your goals in mind.

Technical consulting provides the required technical expertise to complete and implement specific test strategies.

Process consulting helps to integrate new R&D or manufacturing test processes and technology into your current environment.

Enterprise business consulting provides business-planning services focused on enterprise-wide test issues.

Training and education gives access to our depth of product expertise and helps keep you abreast of emerging technologies. Encompassing technology training, product training, measurement fundamentals and applications training, our classes can be delivered on-site or at an Agilent Training Center.

For more information on Agilent education and training visit:

www.agilent.com/find/education
### PSA Series Ordering Information

#### PSA Series spectrum analyzer
- E4443A 3 Hz to 6.7 GHz
- E4445A 3 Hz to 13.2 GHz
- E4440A 3 Hz to 26.5 GHz
- E4447A 3 Hz to 42.98 GHz
- E4446A 3 Hz to 44 GHz
- E4448A 3 Hz to 50 GHz

#### Measurement Personalities

<table>
<thead>
<tr>
<th>Code</th>
<th>Personality</th>
<th>Example Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>E444xA-226</td>
<td>Phase noise</td>
<td>E4440A-B7J, E4448A-1DS</td>
</tr>
<tr>
<td>E444xA-219</td>
<td>Noise figure</td>
<td></td>
</tr>
<tr>
<td>E444xA-241</td>
<td>Flexible digital modulation analysis</td>
<td></td>
</tr>
<tr>
<td>E444xA-BAF</td>
<td>W-CDMA</td>
<td></td>
</tr>
<tr>
<td>E444xA-210</td>
<td>HSDPA</td>
<td></td>
</tr>
<tr>
<td>E444xA-202</td>
<td>GSM w/ EDGE</td>
<td></td>
</tr>
<tr>
<td>E444xA-B78</td>
<td>cdma2000</td>
<td></td>
</tr>
<tr>
<td>E444xA-214</td>
<td>1xEV-DV</td>
<td></td>
</tr>
<tr>
<td>E444xA-204</td>
<td>1xEV-DO</td>
<td></td>
</tr>
<tr>
<td>E444xA-BAE</td>
<td>cdmaOne</td>
<td></td>
</tr>
<tr>
<td>E444xA-BAF</td>
<td>NADC, PCD</td>
<td></td>
</tr>
<tr>
<td>E444xA-217</td>
<td>WLAN</td>
<td></td>
</tr>
<tr>
<td>E444xA-211</td>
<td>TD-SCDMA</td>
<td></td>
</tr>
<tr>
<td>E444xA-215</td>
<td>External source control</td>
<td></td>
</tr>
<tr>
<td>E444xA-266</td>
<td>Programming code compatibility suite</td>
<td></td>
</tr>
</tbody>
</table>

#### Options

To add options to a product, use the following ordering scheme:
- Model E444xA (x = 0, 3, 5, 6, 7 or 8)
- Example options E4440A-B7J, E4448A-1DS

#### Warranty & Service

Standard warranty is one year.
- R-51B-001-3C 1-year return-to-Agilent warranty extended to 3 years

#### Calibration

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>R-50C-011-3</td>
<td>Inclusive calibration plan, 3 year coverage</td>
</tr>
<tr>
<td>R-50C-013-3</td>
<td>Inclusive calibration plan and cal data, 3 year coverage</td>
</tr>
<tr>
<td>E444xA-0BW</td>
<td>Service manual</td>
</tr>
<tr>
<td>E444xA-UK5</td>
<td>Commercial calibration certificate with test data</td>
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<tr>
<td>R-52A</td>
<td>Calibration software and licensing (ordered with PSA)</td>
</tr>
<tr>
<td>N7810A</td>
<td>PSA Series calibration application software (stand-alone order)</td>
</tr>
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</table>

#### Hardware

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>E444xA-1DS</td>
<td>100 kHz to 3 GHz built-in preamplifier</td>
</tr>
<tr>
<td>E444xA-122</td>
<td>80 MHz bandwidth digitizer</td>
</tr>
<tr>
<td>E444xA-140</td>
<td>40 MHz bandwidth digitizer</td>
</tr>
<tr>
<td>E444xA-123</td>
<td>Switchable MW preselector bypass</td>
</tr>
<tr>
<td>E444xA-124</td>
<td>Y-axis video output</td>
</tr>
<tr>
<td>E444xA-AYZ</td>
<td>External mixing</td>
</tr>
<tr>
<td>E4440A-BAB</td>
<td>Replaces type-N input connector with APC 3.5 connector</td>
</tr>
<tr>
<td>E444xA-H70</td>
<td>70 MHz IF output</td>
</tr>
</tbody>
</table>

#### PC Software

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>E444xA-230</td>
<td>BenchLink Web Remote Control Software</td>
</tr>
<tr>
<td>E444xA-233</td>
<td>N5530S measuring receiver software &amp; license</td>
</tr>
<tr>
<td>E444xA-235</td>
<td>Wide BW digitizer external calibration wizard</td>
</tr>
</tbody>
</table>

#### Accessories

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>E444xA-1CM</td>
<td>Rack mount kit</td>
</tr>
<tr>
<td>E444xA-1CN</td>
<td>Front handle kit</td>
</tr>
<tr>
<td>E444xA-1CP</td>
<td>Rack mount with handles</td>
</tr>
<tr>
<td>E444xA-1CR</td>
<td>Rack slide kit</td>
</tr>
<tr>
<td>E444xA-015</td>
<td>6 GHz return loss measurement accessory kit</td>
</tr>
<tr>
<td>E444xA-045</td>
<td>Millimeter wave accessory kit</td>
</tr>
<tr>
<td>E444xA-0B1</td>
<td>Extra manual set including CD ROM</td>
</tr>
</tbody>
</table>

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1. Options not available in all countries
Product Literature

PSA in general
• Selecting the Right Signal Analyzer for Your Needs, Selection Guide, literature number 5968-3413E
• PSA Series, Data Sheet, literature number 5980-1284E
• PSA Series, Configuration Guide, literature number 5989-2773EN
• Self-Guided Demonstration for Spectrum Analysis, Product Note, literature number 5989-0735EN

Wide bandwidth and vector signal analysis
• 40/90 MHz Bandwidth Digitizer, Technical Overview, 5989-1115EN
• Using Extended Calibration Software for Wide Bandwidth Measurements, PSA Option 122 & 89600 VSA, Application Note 1443, 5988-7814EN
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