



Agilent PSA Series High-Performance Spectrum Analyzers

Configuration Guide



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The Agilent PSA Series spectrum analyzer offers high-performance spectrum analysis up to 50 GHz with powerful one-button measurements, a versatile feature set, and a leading-edge combination of flexibility, speed, accuracy, bandwidth, and dynamic range.

This configuration guide will help you select the right options to optimize the PSA analyzer for your specific applications. In addition, it includes information for upgrading your existing PSA. For further product and application information, please see the information listed at the end of this guide.

Option Availability and Compatibility

PSA Series Available models and frequency ranges

E4443A (3 Hz to 6.7 GHz)	E4446A (3 Hz to 44 GHz)	E4447A (3 Hz to 42.98 GHz)
E4440A (3 Hz to 26.5 GHz)	E4445A (3 Hz to 13.2 GHz)	E4448A (3 Hz to 50 GHz)

Option description	Option available for:						Compatibility/comments
	E4443A	E4445A	E4440A	E4447A	E4446A	E4448A	
Analysis bandwidths							
40 MHz bandwidth digitizer (includes Basic Mode) (Option 140)	•	•	•				Excludes Options 122, 107, H70, H20, H25, HN9, HB2, H7L, HY7, HA5, and HBA; Option 123 required for full analysis bandwidth above 3 GHz
80 MHz bandwidth digitizer (includes Basic Mode) (Option 122)	•	•	•				Excludes Options 140, 107, H70, H20, H25, HN9, HB2, H7L, HY7, HA5, and HBA; Option 123 required for full analysis bandwidth above 3 GHz
Switchable microwave (μ W) preselector bypass (Option 123)	•	•	•	•	•	•	Excludes Options AYZ and HN8
Wide bandwidth (BW) digitizer external calibration wizard for Option 122 (Option 235)	•	•	•				PC software for use with Option 122 only
Measurement personalities digital wireless communication							
Flexible digital modulation analysis measurement personality (Option 241)	•	•	•	•	•	•	Can work with Options 122 or 140 with Option 123 for wider bandwidth
WLAN measurement personality (Option 217)	•	•	•				Requires Options 122 or 140; Option 123 recommended for measurements above 3 GHz
GSM w/ EDGE measurement personality (Option 202)	•	•	•	•	•	•	Requires Option B7J
W-CDMA measurement (Option BAF)	•	•	•	•	•	•	Requires Option B7J; Option 1DS recommended; Option 110 compatible
HSDPA/HSUPA measurement personality (Option 210)	•	•	•	•	•	•	Requires Option B7J and BAF; Option 1DS recommended; Option 110 compatible
cdmaOne measurement personality (Option BAC)	•	•	•	•	•	•	Requires Option B7J
cdma2000 measurement personality (Option B78)	•	•	•	•	•	•	Requires Option B7J; Option 1DS recommended; Option 110 compatible
1xEV-DO measurement personality (Option 204)	•	•	•	•	•	•	Requires Option B7J; Option 1DS recommended; Option 110 compatible
1xEV-DV measurement personality (Option 214)	•	•	•	•	•	•	Requires Options B7J and B78; Option 1DS recommended; Option 110 compatible
NADC, PDC measurement personality (Option BAE)	•	•	•	•	•	•	Requires Option B7J
TD-SCDMA power measurement personality (Option 211)	•	•	•	•	•	•	
TD-SCDMA modulation analysis measurement personality (Option 212)	•	•	•	•	•	•	Requires Option B7J
HSDPA/8PSK for TD-SCDMA modulation analysis measurement personality (Option 213)	•	•	•	•	•	•	Requires Options B7J and 212

Option Availability and Compatibility (continued)

Option description	Option available for:						Compatibility/ comments
	E4443A	E4445A	E4440A	E4447A	E4446A	E4448A	
Measurement personalities – general purpose applications							
External source control measurement personality (Option 215)	•	•	•	•	•	•	
Noise figure measurement personality (Option 219)	•	•	•	•	•	•	Requires Option 1DS, to meet specifications; Option 110 provides nominal performance
Phase noise measurement personality (Option 226)	•	•	•	•	•	•	
Built-in measuring receiver personality and PC software (Option 233)	•	•	•	•	•	•	Option 123 required for measurements above 3 GHz; Option IDS or 110 may be required for certain specifications
AM/FM/PM triggering for measuring receiver (Option 23A)	•	•	•	•	•	•	Requires Option 233
CCITT filter for audio measurements (Option 23B)	•	•	•	•	•	•	Requires Options 233 and 107
Programming code compatibility suite measurement personality (Option 266)	•	•	•	•	•	•	Supports HP/Agilent 8566A/B, 8568A/B, 856xE/EC, and 859xE
Hardware and miscellaneous							
Audio input 100 kOhm (Option 107)	•	•	•	•	•	•	Requires Option 233 to operate; excludes Options 122, 140, and HA5
RF/μW internal preamplifier 10 MHz to the upper limit of PSA (Option 110)	•	•	•	•	•	•	Excludes Option IDS
USB device side I/O interface (Option 111)	•	•	•	•	•	•	USB 2.0 standard, device side only
512 MB user memory	•	•	•	•	•	•	Excludes Option 117, HS1, and HS7; shipped standard in all PSA instruments with SN prefix ≥ US/MY 4615 unless Option 117 is installed
Secure memory erase (Option 117)	•	•	•	•	•	•	Excludes Options 115, HS1, and HS7
Y-axis video output (Option 124)	•	•	•	•	•	•	Excludes Option H7L
RF internal preamplifier 100 kHz to 3 GHz (Option 1DS)	•	•	•	•	•	•	Excludes Option 110
BenchLink Web remote control software (Option 230)	•	•	•	•	•	•	PC software enabling remote control of the PSA through the Web
External mixing (Option AYZ)			•	•	•	•	Excludes Options 123 and HN8
Digital demodulation hardware (includes Basic Mode) (Option B7J)	•	•	•	•	•	•	
Replace type-N input connector with APC 3.5 connector (Option BAB)			•				Excludes Option HBA; required by Option E4440A-233
Commercial calibration certificate with test data (Option UK6)	•	•	•	•	•	•	

Option Availability and Compatibility (continued)

Option description	Option available for:						Compatibility/ comments
	E4443A	E4445A	E4440A	E4447A	E4446A	E4448A	
Special handling options¹							
25 MHz IF output (Option H25)			●				Excludes Options 122, 140, H70, HY7, HB2, and H20
21.4 MHz IF output (Option HB2)	●	●	●		●	●	Excludes Options 122, 140, H20, H25, HY7, and H70
70 MHz IF output (Option H70)	●	●	●		●	●	Excludes Options 122, 140, HB2, H20, HY7, and H25
Improved gain 70 MHz IF output (Option HY7)	●	●	●		●	●	Excludes Options 122, 140, HB2, H20, H70, and H25
Rear panel RF input (Option HBA)	●	●	●				Excludes Options 122, 140, BAB, and H26
80 MHz wide baseband IF output at 321.4 MHz for RF input frequencies less than 3.05 GHz (Option HN9)	●	●	●		●	●	Excludes Options 122 and 140

Note: "●" indicates "available for the model;" blank indicates "not available"

1. Item descriptions for those special handling options that are not listed in this section but in the "Compatibility/ comments" column are as follows:

- H20: 20 MHz IF output on the rear panel (available for E4440A/43A only)
- H7L: Auxiliary log video out (available for all PSA Series except for E4447A)
- HN8: Wide band preselector bypass
- HA5: Modified performance, only available for E4445A

PSA Accessories

Options	Description	Comment
PSA specific accessories		
015	6 GHz return loss measurement accessory kit	Recommended for Option 215 (external source control) users for return loss measurements
045	Millimeter wave accessory kit	Available for E4447A/46A/48A
1CM	Rack mount kit	
1CN	Front handle kit	
1CP	Rack mount kit with handles	
1CR	Rack slide kit	
Software		
230	BenchLink Web remote control software	
	IntuiLink connectivity software (PC software that enables easy transfer of screen and data from analyzer to the Microsoft® Office applications)	Shipped with all PSA Series spectrum analyzers as a standard item; available on the Web for download, visit http://www.agilent.com/find/psa , and find the download site under "Software & Firmware Downloads"
Documentation		
0B1	Extra manual set including CD ROM	
0B0	Manual not included (retains CD-ROM version)	
0BW	Service manual, assembly level	For PSA Series calibration application software, select R-52A, or order N7810A standalone
ABA	Manual set: US- English localization	
AB1	Manual set: Korea-Korean localization	
AB2	Manual set: China-Chinese localization	
ABD	Manual set: Germany-German localization	
ABF	Manual set: France-French localization	
ABJ	Manual set: Japan-Japanese localization	
ABZ	Manual set: Italy-Italian localization	
Warranty and calibration		
R-50C-001	Standard calibration	
R-50C-002	Standards compliant calibration	
R-51B-001-C	1-year return-to-Agilent warranty	Standard
R-51B-001-3C	1-year return-to-Agilent warranty extended to 3 years	
R-51B-001-5C	1-year return-to-Agilent warranty extended to 5 years	
R-52A	Calibration software and licensing	To be ordered with PSA
N7810A	PSA calibration software and licensing	To be ordered standalone

PSA Accessories (continued)

Options	Description	Comment
General spectrum analyzer accessories		
11970K	Waveguide harmonic mixer (18 to 26.5 GHz)	Non-preselected
11970A	Waveguide harmonic mixer (26.5 to 40 GHz)	Non-preselected
11970Q	Waveguide harmonic mixer (33 to 50 GHz)	Non-preselected
11970U	Waveguide harmonic mixer (40 to 60 GHz)	Non-preselected
11970V	Waveguide harmonic mixer (50 to 75 GHz)	Non-preselected
11970W	Waveguide harmonic mixer (75 to 110 GHz)	Non-preselected
11974A	Preselected millimeter mixer (26.5 to 40 GHz)	
11974Q	Preselected millimeter mixer (33 to 50 GHz)	
11974U	Preselected millimeter mixer (40 to 60 GHz)	
11974V	Preselected millimeter mixer (50 to 75 GHz)	
11909A	Low noise amplifier, 9 kHz to 1 GHz	
8447A/D	Amplifiers 100 kHz to 400 MHz/1.3 GHz	
8449B	Microwave preamplifier 1 GHz to 26.5 GHz	
11975A	Amplifier (2 to 8 GHz)	
82357A	USB/GPIB interface	
E5810A	LAN/GPIB gateway	
85024A	High frequency active probe (300 kHz to 3 GHz)	
11867A	RF limiter (dc to 1.8 GHz)	
N9355/6B	Power limiter, 0.01 to 18 GHz	
N9355/6C	Power limiter, 0.01 to 26 GHz	
N9355F	Power limiter, 0.01 to 50 GHz	
11713A	Attenuator/switch driver	
11945A	Close field probe set, 9 kHz to 1 GHz Used for:	EMC measurements
11947A	Transient limiter, 9 kHz to 200 MHz Used for:	EMC measurements

PSA Series – Upgrades

Ordering instructions

To upgrade an existing PSA Series spectrum analyzer, order the corresponding model number followed by a 'U' and the desired option number.

For example: E444xAU-YYY (where x = 3, 5, 0, 7, 6, 8 and YYY = the option number)

For further information, such as number of slots required and time required by the service center, visit: http://www.agilent.com/find/psa_upgrades

Option description	Comments	Incompatible options	Customer upgradeable	Self maintainers with Options OBW and N7810A	Return to Agilent Service Center
Hardware capabilities and performance					
80 MHz bandwidth digitizer (Option 122)	Available for E4443A/45A/40A with SN prefix \geq US/MY4430; Option 123 required for full analysis bandwidth above 3 GHz	107, H70, HY7, H20, HBA, HB2, H7L, H25, HNQ, HN9, and HA5			•
40 MHz bandwidth digitizer (Option 140)	Available for E4443A/45A/40A with SN prefix \geq US/MY4430; Option 123 required for full analysis bandwidth above 3 GHz	107, H70, HY7, H20, HBA, HB2, H7L, H25, HNQ, HN9, and HA5			•
Option 140 (40 MHz BW) to Option 122 (80 MHz BW) upgrade kit (Option 422)	Requires Option 140; available for E4443A/45A/40A with SN prefix \geq US/MY4430, Option 123 recommended for measurements above 3 GHz	107, H70, HY7, H20, HBA, HB2, H7L, H25, HNQ, HN9, and HA5			•
Y-axis video output (Option 124)	Available for all PSA models with SN prefix \geq US/MY4430	HA5, H7L			•
Switchable microwave preselector bypass (Option 123)	Available for E4443A/45A/40A with SN prefix \geq US/MY4430 and E4447A/46A/48A; for earlier models, see Option 423	AYZ, HA5, HN8, HNQ, and H26			•
Switchable microwave preselector bypass (Option 423)	Available for earlier E4443A/45A/40A models with SN prefix \leq US/MY4402	HA5, AYZ, HNQ, H26, and HN8			•
Gated sweep hardware (Option 426)	Available for all PSA models with SN prefix $<$ US/MY4336, shipped standard for later PSA models (SN prefix \geq US/MY4336)	None		•	•
Digital demodulation hardware (Option B7J)	Available for all PSA models with SN prefix \geq US4142/MY4100	None		•	•
Digital demodulation hardware (for earlier PSA models) (Option 071)	Available for all earlier PSA models with SN prefix \leq US4142/MY4100	None		•	•
RF Internal preamplifier (Option 1DS)	Frequency coverage: 100 KHz to 3 GHz; available for all PSA models	HA5 and 110		•	•
64 MB flash memory (Option ANE)	Shipped standard in all PSA models with SN prefix \geq US/MY4222; shipped standard in all E4447A/46A/48A	None		•	•
Noise figure hardware kit for early PSA instruments (Option 119)	Required by Option 219 for all PSA models with SN prefix \leq US4222/MY4100; standard for all PSA models with SN prefix \geq US/MY4336	HA5		•	•
APC 3.5 mm connector (Option BAB)	Available for E4440A only	HBA		•	•
External mixing (Option AYZ)	Available for E4440A/47A/46A/48A	123 and HN8		•	•
Audio input 100 kOhm (Option 107)	Requires Option 233 to operate; available for PSA models with SN prefix \geq US/MY4430	122, 140, and HA5		•	•
RF/ μ W internal preamplifier (Option 110)	Frequency coverage: 10 MHz to the upper limit of a PSA; available for all PSA models; for PSA models with Option 1DS installed, Option 1DS must be removed before installing Option 110	IDS, H26, HT1, and HA5		•	•

PSA Series – Upgrades (continued)

Option description	Comments	Incompatible options	Customer upgradeable	Self maintainers with Options OBW and N7810A	Return to Agilent Service Center
Hardware capabilities and performance (continued)					
USB device side I/O interface (Option 111)	USB 2.0 standard device side only; available for PSA models with SN prefix \geq US/MY4430	HA5		•	•
512 MB user memory (Option 115)	Available for all PSA models and serial numbers	117, HT1, HA5, H26, HN8, HS1, HS7		•	•
Secures memory erase (Option 117)	Available for all PSA models and serial numbers	115, HT1, HA5, H26, HN8, HS1, HS7		•	•
Measurement personalities					
Flexible modulation analysis (Option 241)	Available for all PSA models; Option 1DS recommended for wide bandwidth, requires Option 122 or 140 with Option 123 up to 50 GHz	HA5	•		
WLAN measurement personality (Option 217)	Requires Option 122 or 140; available for E4443A/45A/40A; requires Option 123 for measurements above 3 GHz	HA5	•		
GSM w/ EDGE measurement personality (Option 202)	Requires Option B7J; available for all PSA models	None	•		
W-CDMA measurement personality (Option BAF)	Requires Option B7J; available for all PSA models; Option 1DS recommended	None	•		
HSDPA/HSUPA measurement personality (Option 210)	Requires Options B7J and BAF; available for all PSA models; Option 1DS recommended	None	•		
cdmaOne measurement personality (Option BAC)	Requires Option B7J; available for all PSA models	None	•		
cdma2000 measurement personality (Option B78)	Requires Option B7J; available for all PSA models; Option 1DS recommended	None	•		
1xEV-DO measurement personality (Option 204)	Requires Option B7J; available for all PSA models; Option 1DS recommended	None	•		
1xEV-DV measurement personality (Option 214)	Requires Options B7J and B78; available for all PSA models; Option 1DS recommended	None	•		
TD-SCDMA power measurement personality (Option 211)	Available for all PSA models; for PSA models with SN prefix < US/MY4336, Option 426 is required	None	•		
TD-SCDMA modulation analysis measurement personality (Option 212)	Requires Option B7J; available for all PSA models	None	•		
HSDPA/8PSK for TD-SCDMA modulation analysis measurement personality (Option 213)	Requires Options B7J and 212; available for all PSA models	None	•		

PSA Series – Upgrades (continued)

Option description	Comments	Incompatible options	Customer upgradeable	Self maintainers with Options OBW and N7810A	Return to Agilent Service Center
Measurement personalities (continued)					
NADC, PDC measurement personality (Option BAE)	Requires Option B7J; available for all PSA models	None	•		
External source control measurement personality (Option 215)	Available for all PSA models; for PSA models with SN prefix < US/MY4336, the gated sweep Option 426 is required	HA5	•		
Noise figure measurement personality (Option 219)	Available for all PSA models; for PSA models with SN prefix ≤ US4222/MY4100, Option 119 is required; Option 1DS is required to meet specifications	HA5	•		
Phase noise measurement personality (Option 226)	Available for all PSA models	HA5	•		
BenchLink web remote control software (Opt 230)	PC software to run Web server	None	•		
Built-in measuring receiver personality and PC software (Option 233)	Available for all PSA models; Option 123 required for measurements above 3 GHz, Option 1DS or 110 may be required for certain specifications	HA5	•		
AM/FM/PM triggering for measuring receiver (Option 23A)	Requires Option 233; available for all PSA models	HA5	•		
CCITT filter for audio measurements (Option 23B)	Requires Options 233 and 107; available for all PSA models	HA5	•		
Wide BW digitizer external calibration wizard (Option 235)	PC software for use with Option 122 only; available for E4443A/45A/40A only	None	•		
Programming code compatibility suite (Option 266)	Available for all PSA models	None	•		
Firmware upgrade (Option UE2)	Includes install note and PSA firmware CD-ROM; available for all PSA models	None	•		
Special options					
70 MHz IF output (Option H70)	Available for all PSA models except E4447A	122, 140, HB2, H20, H25, and HY7			•
Auxiliary log video output (Option H7L)	Available for all PSA models except E4447A	122, 140, and 124			•

With restriction of the PSA's internal memory space, not all the measurement personalities will fit into the instrument simultaneously. Visit the "Memory Calculator" at <http://sa.tm.agilent.com/PSA/memory/> to ensure your PSA has sufficient memory space to accommodate the measurement personalities you want to install.

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

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

Calibration¹

R-50C-011-3 Inclusive calibration plan, 3 year coverage
 R-50C-013-3 Inclusive calibration plan and cal data, 3 year coverage
 E444xA-0BW Service manual
 E444xA-UK6 Commercial calibration certificate with test data
 R-52A Calibration software and licensing (ordered with PSA)
 N7810A PSA Series calibration application software (stand-alone order)

Measurement Personalities

E444xA-226	Phase noise	
E444xA-219	Noise figure	Requires Option IDS or 110 to meet specifications
E444xA-241	Flexible digital modulation analysis	
E444xA-BAF	W-CDMA	Requires Option B7J
E444xA-210	HSDPA/HSUPA	Requires Options B7J and BAF
E444xA-202	GSM w/ EDGE	Requires Option B7J
E444xA-B78	cdma2000	Requires Option B7J
E444xA-214	1xEV-DV	Requires Options B7J and B78
E444xA-204	1xEV-DO	Requires Option B7J
E444xA-BAC	cdmaOne	Requires Option B7J
E444xA-BAE	NADC, PCD	Requires Option B7J
E444xA-217	WLAN	Requires Option 122 or 140
E444xA-211	TD-SCDMA power	
E444xA-212	TD-SCDMA modulation	Requires Option B7J
E444xA-213	HSDPA/8PSK for TD-SCDMA	Requires Options B7J and 212
E444xA-215	External source control	
E444xA-266	Programming code compatibility suite	
E444xA-233	Built-in measuring receiver personality	
E444xA-23A	AM/FM/PM triggering	Requires Option 233
E444xA-23B	CCITT filter	Requires Options 233 and 107

Hardware

E444xA-1DS	RF internal preamplifier (100 kHz to 3 GHz)	Excludes Option 110
E444xA-110	RF/μW internal preamplifier (10 MHz to upper frequency limit of the PSA)	Excludes Option 1DS
E444xA-B7J	Digital demodulation hardware	
E444xA-122	80 MHz bandwidth digitizer	E4440A/43A/45A only, excludes Options 140, 107, and H70
E444xA-140	40 MHz bandwidth digitizer	E4440A/43A/45A only, excludes Options 122, 107, and H70
E444xA-123	Switchable MW preselector bypass	Excludes Option AYZ
E444xA-124	Y-axis video output	
E444xA-AYZ	External mixing	E4440A/47A/46A/48A only, excludes Option 123
E444xA-107	Audio input 100 kΩ	Requires Option 233 to operate; excludes Options 122 and 140
E444xA-111	USB device side I/O interface	
E444xA-115	512 MB user memory	Excludes Option 117; shipped standard in all PSA instruments with serial number prefix ≥ MY4615 unless Option 117 is installed
E4440A-BAB	Replaces type-N input connector with APC 3.5 connector	E4440A
E444xA-H70	70 MHz IF output	Excludes Options 122 and 140; not available for E4447A

PC Software

E444xA-230	BenchLink Web Remote Control Software	
E444xA-235	Wide BW digitizer external calibration wizard	Requires Option 122 E4443A/45A/40A only

Accessories

E444xA-1CM	Rack mount kit
E444xA-1CN	Front handle kit
E444xA-1CP	Rack mount with handles
E444xA-1CR	Rack slide kit
E444xA-015	6 GHz return loss measurement accessory kit
E444xA-045	Millimeter wave accessory kit
E444xA-0B1	Extra manual set including CD ROM

1. Options not available in all countries

Related Literature

Publication Title	Publication Type	Publication Number
PSA in general		
<i>Selecting the Right Signal Analyzer for Your Needs</i>	Selection Guide	5968-3413E
<i>PSA Series</i>	Brochure	5980-1283E
<i>PSA Series</i>	Data Sheet	5980-1284E
<i>PSA Series</i>	Configuration Guide	5989-2773EN
<i>Self-Guided Demonstration for Spectrum Analysis</i>	Product Note	5988-0735EN
Wide bandwidth and vector signal analysis		
<i>40/80 MHz Bandwidth Digitizer</i>	Technical Overview	5989-1115EN
<i>Using Extended Calibration Software for Wide Bandwidth Measurements, PSA Option 122 & 89600 VSA</i>	Application Note 1443	5988-7814EN
<i>PSA Series Spectrum Analyzer Performance Guide Using 89601A Vector Signal Analysis Software</i>	Product Note	5988-5015EN
<i>89650S Wideband VSA System with High Performance Spectrum Analysis</i>	Technical Overview	5989-0871EN
Measurement personalities and applications		
<i>Phase Noise Measurement Personality</i>	Technical Overview	5988-3698EN
<i>Noise Figure Measurement Personality</i>	Technical Overview	5988-7884EN
<i>External Source Measurement Personality</i>	Technical Overview	5989-2240EN
<i>Flexible Modulation Analysis Measurement Personality</i>	Technical Overview	5989-1119EN
<i>W-CDMA and HSDPA/HSUPA Measurement Personalities</i>	Technical Overview	5988-2388EN
<i>GSM with EDGE Measurement Personality</i>	Technical Overview	5988-2389EN
<i>cdma2000 and 1xEV-DV Measurement Personalities</i>	Technical Overview	5988-3694EN
<i>1xEV-DO Measurement Personality</i>	Technical Overview	5988-4828EN
<i>cdmaOne Measurement Personality</i>	Technical Overview	5988-3695EN
<i>WLAN Measurement Personality</i>	Technical Overview	5989-2781EN
<i>NADC/PDC Measurement Personality</i>	Technical Overview	5988-3697EN
<i>TD-SCDMA Measurement Personality</i>	Technical Overview	5989-0056EN
<i>Built-in Measuring Receiver Personality / Agilent N5531S Measuring Receiver</i>	Technical Overview	5989-4795EN
<i>BenchLink Web Remote Control Software</i>	Product Overview	5988-2610EN
<i>IntuiLink Software</i>	Data Sheet	5980-3115EN
<i>Programming Code Compatibility Suite</i>	Technical Overview	5989-1111EN
Hardware options		
<i>PSA Series Spectrum Analyzers Video Output (Option 124)</i>	Technical Overview	5989-1118EN
<i>PSA Series Spectrum Analyzers, Option H70, 70 MHz IF Output</i>	Product Overview	5988-5261EN
Spectrum analyzer fundamentals		
<i>Optimizing Dynamic Range for Distortion Measurements</i>	Product Note	5980-3079EN
<i>PSA Series Amplitude Accuracy</i>	Product Note	5980-3080EN
<i>PSA Series Swept and FFT Analysis</i>	Product Note	5980-3081EN
<i>PSA Series Measurement Innovations and Benefits</i>	Product Note	5980-3082EN
<i>Spectrum Analysis Basics</i>	Application Note 150	5952-0292
<i>Vector Signal Analysis Basics</i>	Application Note 150-15	5989-1121EN
<i>8 Hints for Millimeter Wave Spectrum Measurements</i>	Application Note	5988-5680EN
<i>External Waveguide Mixing and Millimeter Wave Measurement with PSA Spectrum Analyzers</i>	Application Note 1485	5988-9414EN
<i>EMI</i>	Application Note 150-10	5968-3661E



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Remove all doubt

Our repair and calibration services will get your equipment back to you, performing like new, when promised. You will get full value out of your Agilent equipment throughout its lifetime. Your equipment will be serviced by Agilent-trained technicians using the latest factory calibration procedures, automated repair diagnostics and genuine parts. You will always have the utmost confidence in your measurements.

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Revised: 11/08/06

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Printed in USA, December 6, 2006
5989-2773EN

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