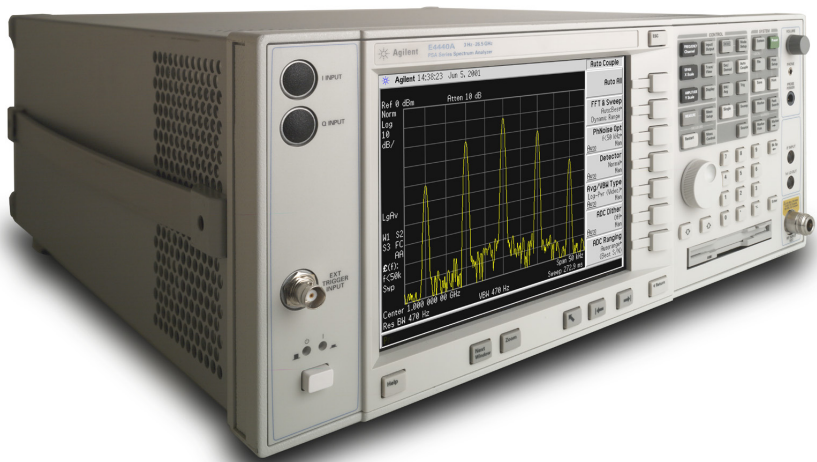


Agilent PSA Series Spectrum Analyzers Video Output

Option 124 Technical Overview

The PSA Series, Agilent Technologies' highest performing spectrum analyzer, now offers an optional video output on the rear panel. The video output emulates what is displayed on screen. The voltage range is 0 volts for the bottom of the display and 1 volt for the top. The video output on the rear panel is a reconstruction of the detected IF signal. Option 124 was developed in response to customers who have 8566B spectrum analyzers and utilize the video output. The PSA video output performance is very similar to the 8566B spectrum analyzer.



PSA Video Out vs. 8566B Video Out Operating Conditions

- The delay between the signal input and the video out is greater on the PSA.
- Later vintages of 8566Bs had an output impedance of 190 ohms and the PSA video is 140 ohms.
- During calibration the video output holds instead of tracking the video envelope. The 8566B did not have auto alignments. If the quick calibration process interferes with your measurements, it is recommended that the PSA be placed in the external trigger mode without a trigger present. There will not be any on-screen data.
- Trace averaging affects the display but not the video out.
- All display scale types (log and linear)
- All log scales (0.1 to 20 dB/div)
- Spectrum analyzer mode only
- Swept operation only (not FFT)
- Gating must be off
- Narrow IF path only when 80 MHz bandwidth digitizer (Option 122) is present
- Operates in spectrum analyzer mode, will not operate correctly with functions such as FFT or gated sweep



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Specification Summary

Amplitude range

Minimum	Bottom on screen
Maximum	Top of screen plus over range (smaller of 2 dB or 1 division)
Output scaling	0 to 1.0 V open circuit
Offset	±1% of full scale (nominal)
Gain accuracy	±1% of output voltage (nominal)
Signal delay from RF input to video output	1.67 μ s +2.56/RBW + 0.159/VBW (nominal)

Product Literature

Literature Number

• <i>PSA Series</i> , brochure	5980-1283E
• <i>PSA Series</i> , data sheet	5980-1284E
• <i>Self-Guided Demonstration for Spectrum Analysis</i> , product note	5988-0735EN
• <i>Phase Noise Measurement Personality</i> , technical overview	5988-3698EN
• <i>Noise Figure Measurement Personality</i> , technical overview	5988-7884EN
• <i>Flexible Modulation Analysis Measurement Personality</i> , technical overview	5989-1119EN
• <i>W-CDMA and HSDPA 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>NADC/PDC Measurement Personality</i> , technical overview	5988-3697EN
• <i>TD-SDCMA Measurement Personality</i> , technical overview	5989-0056EN
• <i>80 MHz Bandwidth Digitizer</i> , technical overview	5989-1115EN
• <i>Programming Code Compatibility Suite</i> , technical overview	5989-1111EN
• <i>PSA Series Spectrum Analyzers, Option H70, 70 MHz IF Output</i> product overview	5988-5261EN
• <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>Signal Analysis Basics</i> , application note 150	5952-0292
• <i>8 Hints for Millimeter Wave Spectrum Measurements</i> , application note	5988-5680EN
• <i>Spectrum Analyzer Measurements to 325 GHz with the Use of External Mixers</i> , application note 1453	5988-9414EN
• <i>EMI</i> , application note 150-10	5968-3661E
• <i>Vector Signal Analysis Basics</i> , application note 150-15	5989-1121EN
• <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</i> , technical overview	5980-0723E
• <i>N5530S</i> , technical overview	5989-1113EN
• <i>Selecting the Right Signal Analyzer for Your Needs</i> , selection guide	5968-3413E
• <i>BenchLink Web Remote Control Software</i> , product overview	5988-2610EN
• <i>IntuiLink Software</i> , data sheet	5980-3115EN

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
 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 or 8)
 Example options E4440A-B7J, E4448A-1DS

Warranty & service

Standard warranty is three years.
 R-51B-001-5C Warranty Assurance Plan,
 Return to Agilent, 5 years

Measurement personalities

E444xA-226	Phase noise	
E444xA-219	Noise figure	Requires 1DS
E444xA-241	Flexible modulation analysis	
E444xA-BAF	W-CDMA	Requires B7J
E444xA-210	HSDPA	Requires B7J and BAF
E444xA-202	GSM w/ EDGE	Requires B7J
E444xA-B78	cdma2000	Requires B7J
E444xA-214	1xEV-DV	Requires B7J and B78
E444xA-204	1xEV-DO	Requires B7J
E444xA-BAC	cdmaOne	Requires B7J
E444xA-BAE	NADC, PCD	Requires B7J
E444xA-211	TD-SCDMA	
E444xA-266	Programming code compatibility suite	

Hardware

E444xA-1DS	100 kHz to 3 GHz built-in preamplifier	
E444xA-B7J	Digital demodulation hardware	
E4440A-122	80 MHz bandwidth digitizer	E4440A only, excludes H70
E444xA-123	Switchable MW preselector bypass	E4440A/43A/45A only, excludes AYZ
E444xA-124	Y-axis video output	
E444xA-AYZ	External mixing	E4440A/46A/48A only, excludes 123
E4440A-BAB	Replaces type-N input connector with APC 3.5 connector	E4440A only
E444xA-H70	70 MHz IF output	Excludes 122

Connectivity software

E444xA-230	BenchLink Web Remote Control Software	
E4440A-235	Wide BW digitizer external calibration wizard	Requires 122

Accessories

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

Calibration ¹

R-50C-011-3	Calibration Assurance Plan, Return to Agilent, 3 years	
R-50C-011-5	Calibration Assurance Plan, Return to Agilent, 5 years	
R-50C-016-3	Agilent Calibration + Uncertainties + Guardbanding, 3 years	
R-50C-016-5	Agilent Calibration + Uncertainties + Guardbanding, 5 years	
AMG	Agilent Calibration + Uncertainties + Guardbanding	Accredited calibration
A6J	ANSI Z540-1-1994 Calibration	
R-50C-021-3	ANSI Z540-1-1994 Calibration, 3 years	
R-50C-021-5	ANSI Z540-1-1994 Calibration, 5 years	
UK6	Commercial calibration certificate with data	To be ordered with PSA
E444xA-0BW	Service manual and calibration software	

1. Options not available in all countries

For the latest product and support information including brochures, datasheets, manuals, application notes, and frequently asked questions, please visit our product web pages at: www.agilent.com/find/spectrumanalyzers



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For other unlisted countries:

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