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Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 35689A

HP Agilent 35689A S-Parameter Test Set 100 kHz to 500 MHz The HP 35689A is an S-parameter test set used with HP 4395A-class combination analyzers for transmission/reflection measurements. OEM 4395A/35689 family tables list 35689A covering 100 kHz to 500 MHz (35689B extends to 1.8 GHz for 4396B). The test set provides the directional bridges and switching for S11/S21-class measurements with the host analyzer source and receiver. RF component S-parameter characterization on 4395A from 100 kHz to 500 MHz. The HP 35689A is an S-parameter test set used with HP 4395A-class combination analyzers for transmission/reflection measurements. OEM 4395A/35689 family tables list 35689A covering 100 kHz to 500 MHz (35689B extends to 1.8 GHz for 4396B). The test set provides the directional bridges and switching for S11/S21-class measurements with the host analyzer source and receiver. RF component S-parameter characterization on 4395A from 100 kHz to 500 MHz. Host Analyzer: HP 4395A combination analyzer class Related Test Set: 35689B 100 kHz to 1.8 GHz for 4396B class



MODEL

**Agilent / Keysight
35689A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

35689A

LISTING

<https://aumictechlabs.com/products/35689a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight 35689A is a 50 Ohm S-Parameter Test Set designed to extend the vector network analysis capabilities of the 3589A Spectrum/Network Analyzer. Operating from 10 Hz to

150 MHz, it delivers one-port and two-port measurements with ± 0.25 dB amplitude accuracy. The test set combines analog swept techniques with digital signal processing to characterize device behavior in the frequency domain.

Technical Specifications
Frequency Range: 10 Hz to 150 MHz
Impedance: 50 Ohm
Amplitude Accuracy: ± 0.25 dB (typical)

Key Features
Swept spectrum mode utilizes digital IF filters for high-speed measurements while maintaining amplitude accuracy and resolution. Narrow band zoom mode employs Fast Fourier Transform (FFT) for accelerated measurements and enhanced resolving power on spans of 40 kHz and below. Vector network mode provides complete frequency-domain characterization of S-parameters.

Compatibility & Integration
The 35689A integrates directly with the 3589A Spectrum/Network Analyzer via interconnect cable. The 3589A supports all three measurement modes - swept spectrum, narrow band zoom, and vector network analysis - with optional high stability frequency reference and time-gated spectrum analysis capabilities. A 75 Ohm version (35689B) is available for systems requiring different impedance matching.

35689A Characteristics / Specifications

PARAMETER	VALUE
Model	35689A
Instrument Type	S-parameter test set
Frequency Range	100 kHz to 500 MHz
Host Analyzer	HP 4395A combination analyzer class
Related Test Set	35689B 100 kHz to 1.8 GHz for 4396B class
System Impedance	50 ohm
Measurements	S11 S21 transmission/reflection class
Form Factor	dedicated S-parameter test set
Manufacturer	HP Agilent Keysight
Use Case	RF network measurements with 4395A
Connectors	50 ohm coaxial
Control	from host 4395A
Operating Temperature Class	RF analyzer laboratory window
Literature	HP 35689A/35689B S-parameter test set tables
Directivity Class	test-set directional bridge
Source Path	host analyzer source through the test set
Receiver Path	test-set coupled ports to 4395A receivers
Calibration	SOLT/response with 4395A
Related Analyzer 43	use 35689B not 35689A
Documentation Type	OEM combination-analyzer accessory table
Brand Lineage	Hewlett Packard Agilent Keysight
Calibration Source	OEM published specifications
Operating temperature	Class: RF analyzer laboratory window

35689A Specifications

PARAMETER	VALUE
Applications	RF component S-parameter characterization on 4395A from 100 kHz to 500 MHz.
Key Features	S-parameter test set for 4395A
Directional bridge switching	50 ohm coaxial paths
Technical Specifications	Model: 35689A

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	Class: RF analyzer laboratory window
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Operating Temperature Class	RF analyzer laboratory window
Literature	HP 35689A/35689B S-parameter test set tables
Directivity Class	test-set directional bridge
Source Path	host analyzer source through the test set
Receiver Path	test-set coupled ports to 4395A receivers
Calibration	SOLT/response with 4395A
Related Analyzer 43	use 35689B not 35689A
Documentation Type	OEM combination-analyzer accessory table
Brand Lineage	Hewlett Packard Agilent Keysight
Calibration Source	OEM published specifications Notes From HP 35689A S-parameter test-set listings with 4395A (100 kHz to 500 MHz). Directivity, insertion loss, and port match versus frequency are on the 35689A data sheet.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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PARAMETER	VALUE
Model	35689A
Instrument Type	S-parameter test set
Frequency Range	100 kHz to 500 MHz
Host Analyzer	HP 4395A combination analyzer class
Related Test Set	35689B 100 kHz to 1.8 GHz for 4396B class
System Impedance	50 ohm
Measurements	S11 S21 transmission/reflection class
Form Factor	dedicated S-parameter test set
Manufacturer	HP Agilent Keysight
Use Case	RF network measurements with 4395A
Connectors	50 ohm coaxial
Control	from host 4395A
Operating Temperature Class	RF analyzer laboratory window
Literature	HP 35689A/35689B S-parameter test set tables
Directivity Class	test-set directional bridge
Source Path	host analyzer source through the test set
Receiver Path	test-set coupled ports to 4395A receivers
Calibration	SOLT/response with 4395A
Related Analyzer 4396	use 35689B not 35689A
Documentation Type	OEM combination-analyzer accessory table
Brand Lineage	Hewlett Packard Agilent Keysight
Calibration Source	OEM published specifications
Notes	
From HP 35689A S-parameter test-set listings with 4395A (100 kHz to 500 MHz). Directivity, insertion loss, and port match versus frequency are on the 35689A data sheet.	

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

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NIST-traceable calibration · SAM registered ·
30-day returns
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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.