Agilent 4287A RF LCR Meter,
1 MHz to 3 GHz

Configuration Guide

Agilent Technologies

Ordering Guide

The following steps will guide you through configuring your 4287A.

Standard Furnished Item

Description	Additional Information
CD-ROM Manual	Includes Operation and Programming manuals in PDF. See documentation option for printed manuals.
Test head with 1m test cable	See Accessory Option for cable extension.
Power Cable	
Certificate of Calibration	

Note: The following are not furnished: Operation and Service Manual, Calibration kit, Test Fixture Stand, 3.5 mm-to-7 mm Adapter, Keyboard and Mouse. Refer to Accessory Option, Documentation Option and Available Accessories for the selection of these items.

Step 1. Choose Accessory Option for Integrating into Component Handler System (If not required, go to Step 2)

Description	Option No.	Requires	Not Compatible	Additional Information
Working Standard Set	4287A-004	None	None	Required when performing calibration at DUT contacts of component handler or test fixture. Includes Shorting Bars and 51.0 ohm Chip Resistors (SMD size: 1.0 x 0.5 mm, 1.6 x 0.8 mm, 2.0 x 1.2 mm, 3.2 x 1.6 mm)
Test Head Extension Cable Set	4287A-020	None	None	Coaxial cable set for extending the test head cable to 2 m from standard 1 m. Required when 2 m test head cables are needed for installation.
16195B Calibration Kit	4287A-700	4287A-710,-720	None	Recommended for system calibration and tests. Usable for multiple 4287As. Needed to perform calibration at 7 mm connector plane of 3.5 mm-to-7 mm adapter attached to 3.5 mm test port connector on test head. Includes OPEN, SHORT, 50 Ω LOAD, LOW-LOSS CAPACITOR standards and carrying case.

Note: Refer to Upgrade for retrofit information on the above options.

Step 2. Choose Accessory Option for Using Test Fixture (If not required, go to Step 3)

Description	Option No.	Requires	Not Compatible	Additional Information
Working Standard Set	4287A-004	None	None	Needed when performing calibration at DUT contacts of custom test fixture or component handler. (Not required when using Agilent's RF component test fixtures.) Includes Shorting Bars and 51.0 ohm Chip Resistors (SMD size: 1.0 x 0.5 mm, 1.6 x 0.8 mm, 2.0 x 1.2 mm, 3.2 x 1.6 mm)
Test Fixture Extension Cable Set	4287A-020	None	None	Coaxial cable set for extending the test head cable to 2 m from standard 1 m. Required when 2 m test head cables are needed for installation.
16195B Calibration Kit	4287A-700	4287A-710,-720	None	Required for performing calibration at 7 mm connector plane of 3.5 mm-to-7 mm adapter attached to 3.5 mm test port connector on test head. Includes OPEN, SHORT, 50 Ω LOAD, LOW-LOSS CAPACITOR standards and carrying case. Usable for multiple 4287As.
Test Fixture Stand	4287A-710	4287A-700,-720	None	Required for using Agilent's RF component test fixtures and the 16195B Calibration kit. See Available Accessories in this guide.
3.5 mm-to-7 mm Adapter	4287A-720	4287A-700,-710	None	Required for using Agilent's RF component test fixtures and the 16195B Calibration Kit. See Available Accessories in this guide.

Note: Refer to Upgrade for retrofit information on the above options.

Step 3. Choose General/Miscellaneous Accessory Option (If not required, go to Step 4)

Description	Option No.	Requires	Not Compatible	Additional Information
Keyboard	4287A-810	None	None	PS/2 Keyboard for simplifying measurement setup and programming.
Mouse	4287A-820	None	None	PS/2 Mouse for simplifying measurement setup and programming.
Rackmount Kit	4287A-1CM	None	None	Not installable simultaneously with 4287A-1CP.
Front Handle Kit	4287A-1CN	None	None	Not installable simultaneously with 4287A-1CP.
Handle/Rack Mount Kit	4287A-1CP	None	None	Not installable simultaneously with 4287A-1CM or 1CN.

Note: Refer to Upgrade for retrofit information on the above options.

Step 4. Choose Documentation Option (If not required, go to Step 5)

Description	Option No.	Additional Information
U.S. - English Localization	4287A-ABA	Printed manuals are not furnished. Order documentation option if required.
Japan - Japanese Localization	4287A-ABJ	
Service Manual	4287A-0BW	

Step 5. Choose Calibration Certificate Option (If not required, go to Step 6)

Description	Option No.	Additional Information
ISO 17025 compliant calibration	4287A-1A7	ISO 17025 compliant calibration
ANSI Z540 compliant calibration	4287A-A6J	ANSI Z540 compliant calibration

Step 6. Choose Warranty Plan

1 year return-to-Agilent warranty and service plan are standard. For extended warranty options and additional information, contact your local Agilent sales office or visit the Agilent home website.

Hardware Upgrade

Option No.	Description	Upgrade Model No. or Equivalent Part Number	Customer Installable	Requires (Instrument must already include the following)	Not Compatible	Additional Information
4287A-004	Working Standard Set	4287U-004	Yes	None	None	
4287A-020	Test Fixture Extension Cable Set	4287U-020	No	None	None	Installable at service center only
4287A-700	16195B Calibration Kit	16195B	Yes	4287A-710, -720	None	
4287A-710	Test Fixture Stand	04287-60121	Yes	4287A-720	None	
4287A-720	3.5 mm-to-7 mm Adapter	1250-1746	Yes	None	None	
4287A-810	Keyboard	1150-7970	Yes	None	None	
4287A-820	Mouse	1150-7799	Yes	None	None	
4287A-1CM	Rackmount Kit	5063-9216	Yes	None	None	
4287A-1CN	Front Handle Kit	5063-9229	Yes	None	None	
4287A-1CP	Handle/Rack Mount Kit	5188-4430	Yes	None	None	

Note: For firmware update and upgrade information, refer to product homepage on the Agilent home website.

Available Accessories - Measurement Accessories

Description	Model Number	Requires (Instrument must already include the following)	Additional Information
Parallel Electrode SMD Test Fixture	16196A	4287A-700, -710, -720	For 1608 (mm) / 0603 (inch) SMD up to 3 GHz
	16196A-710	—	Add Magnifying lens and tweezers
	16196A-ABA	—	U.S. - English localization
	16196A-ABJ	—	Japan – Japanese localization
Parallel Electrode SMD Test Fixture	16196B	4287A-700, -710, -720	For 1005 (mm) / 0402 (inch) SMD up to 3 GHz
	16196B-710	—	Add Magnifying lens and tweezers
	16196B-ABA	—	U.S. - English localization
	16196B-ABJ	—	Japan – Japanese localization
Parallel Electrode SMD Test Fixture	16196C	4287A-700, -710, -720	For 0603 (mm) / 0201 (inch) SMD up to 3 GHz
	16196C-710	—	Add Magnifying lens and tweezers
	16196C-ABA	—	U.S. - English localization
	16196C-ABJ	—	Japan – Japanese localization
Parallel Electrode SMD Test Fixture	16196D	4287A-700, -710, -720	For 0402 (mm) / 01005 (inch) SMD up to 3 GHz
	16196D-710	—	Add Magnifying lens and tweezers
	16196D-ABA	—	U.S. - English localization
	16196D-ABJ	—	Japan – Japanese localization
High Temperature Test Fixture	16194A	4287A-700, -710, -720	For SMD and leaded device up to 2 GHz, Temperature range: –55 °C to +200 °C. 50 Ω working standard resistors, wrench, tweezers and, Operation and Service Manual are furnished.
	16194A-010	—	Add EIA/EIAJ size shorting bar set
	16194A-701	—	Add Shorting bar set; (1 x 1 x 2.4, 1.6 x 2.4 x 2, 3.2 x 2.4 x 2.4, 4.5 x 2.4 x 2.4) mm
Bottom Electrode SMD Test Fixture	16197A	4287A-700, -710, -720	For SMD from 1005 (mm) / 0402 (inch) to 3225 (mm) / 1210 (inch); up to 3 GHz. Device guides, EIA/EIAJ size shorting bar set, tweezers, wrench, magnifying lens, carrying case and, Operation and Service Manual are furnished.
	16197A-001	—	Add 0603 (mm) / 0201 (inch) device guide
	16197A-ABA	—	U.S. - English localization
	16197A-ABJ	—	Japan – Japanese localization

Available Accessories - Measurement Accessories (continued)

Description	Model Number	Requires (Instrument must already include the following)	Additional Information
SMD Test Fixture	16092A	4287A-700, -710, -720	For SMD and leaded device up to 500 MHz. Operation Note is furnished.
Parallel Electrode SMD Test Fixture	16192A	4287A-700, -710, -720	For SMD up to 2 GHz. Operation and Service Manual is furnished.
	16192A-010	—	Add EIA/EIAJ size shorting bar set
	16192A-701	—	Add Shorting bar set; (1 x 1 x 2.4, 1.6 x 2.4 x 2, 3.2 x 2.4 x 2.4, 4.5 x 2.4 x 2.4) mm
	16192A-710	—	Add Magnifying lens and tweezers
DC Bias Adapter	16200B	4287A-700, -710, -720	External DC bias adapter; 5 A max. or 40 V max., 1 MHz to 1 GHz. Operation and Service Manual is furnished.
	16200B-001	—	Add Shorting bars and 51 Ω working standard resistors set; from 0603 (mm)/0201 (inch) to 3216 (mm)/1206 (inch)
Test Fixture	16093-65003	4287A-700, -710, -720	Equivalent to previous 16093A; For leaded device up to 250 MHz
Test Fixture	16093-65004	4287A-700, -710, -720	Equivalent to previous 16093B; For leaded device up to 125 MHz
Probe Test Fixture	16094-65000	4287A-700 (4287A-710,-720 for use with 8120-4779)	Equivalent to previous 16094A; For in-circuit measurement up to 125 MHz. Recommended test cable is 8120-4779.
Test Cable	8120-4779	4287A-700, -710, -720	7 mm connector cable recommended for using 16094-65000; Cable length 60 cm.

Note: For more detailed information, refer to Accessories Selection Guide for Impedance Measurements.

Available Accessories – for Performance Test and Maintenance

Description	Model Number	Requires (Instrument must already include the following)	Additional Information
Performance Test Kit	16190B	—	7 mm performance test kit; includes Open, Short, 50 Ω Load, Air-line, calibration data, wrench and carrying case.

Note: For details of the performance test kit, refer to product homepage on the Agilent home website.

Literature Resource

Title	Publication Number
4287A Data Sheet	5968-5758E
4287A Technical Overview	5968-5443E
LCR Meters, Impedance Analyzers and Test Fixtures Selection Guide	5952-1430E
Accessories Selection Guide For Impedance Measurements	5965-4792E
Impedance Measurement Handbook	5950-3000

Note: More literature is available on the Agilent home website.

Web Resource

Have access to the following website to acquire the latest news, product and support information, application literature and more.
www.agilent.com/find/lcrmeters

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