

Test Fixture

LCR-05A

QUICK START GUIDE

GW INSTEK PART NO. 82CR-05A00MA1



ISO-9001 CERTIFIED MANUFACTURER

GW INSTEK

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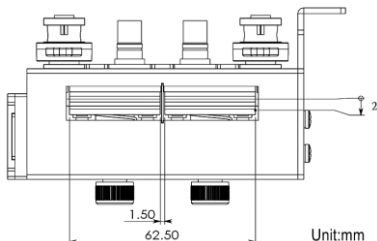
OVERVIEW

The LCR-05A Test Fixture for axial & radial leaded components.

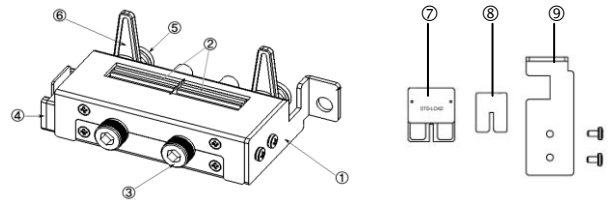
Specifications

Model	LCR-05A
DUT Connector	4-Terminal
Measurement Frequency	DC to 30MHz
Maximum Voltage	±45V Peak max. (AC+DC)
Application size	See figure below with electrode size
Dimensions:	98W x 25H x 65D mm
Weight	246g
Operating Environment	0~50°C, <70%RH

Additional error (with OPEN/SHORT/LOAD ($\geq 3\text{MHz}$) correction)		
$Z_e = \pm \{A + (Z_s/Z_x + Y_o \times Z_x) \times 100\} \%$		Z_x : Measured Value [Ω]
A	Proportional error $f \leq 20\text{MHz}$	$0.275 \times (f/10)^2$ [%]
	Proportional error $f > 20\text{MHz}$	$5.5 \times (f/100)$ [%]
Y_o	Open repeatability	$0.002 + 10 \times (f/100)$ [μS]
Z_s	Short repeatability	$2 + 600 \times (f/100)$ [$\text{m}\Omega$]



Fixture Overview



Index	Item	Description	Quantity
1	Test Fixture Main Body	The main body of test fixture	1
2	Electrode	Test terminals that connect with DUT (Device Under Test)	4
3	Adjusting Screw	To adjust the scale of Electrode openings at both sides	2
4	Short-Circuit Jumper Box	To place the short-circuit jumper	1
5	BNC	Measuring terminals that connect with instruments	4
6	Fixing Handles	It fastens or loosens terminals between BNC and instrument. Turn right to fix, whilst turn left to loosen	2
7	STD LOAD	Standard resistor (100 Ω)	1
8	Short-Circuit Jumper	The short-circuit Jumper	1
9	L-Shape Bracket	It can be fixed to test fixture main body to raise stability when test fixture is under test, further reducing BNC improper force (The screws are fixed on the test fixture main body by default)	1

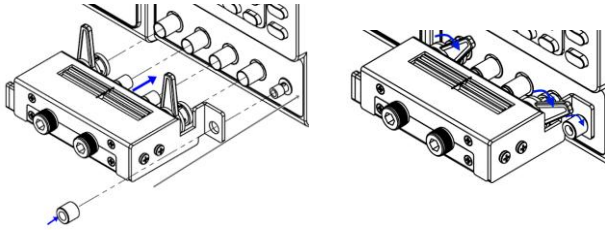
INSTALLATION

1. Turn the both fixing handles of BNC terminals from LCR-05A test fixture toward left side until the gap of BCN external sleeve faces upward.
2. Align the gap with the salient point of BNC terminal from LCR test instrument and insert it firmly into place. Turn the both fixing handles of BNC terminals from LCR-05A test fixture toward right side until the external sleeve of BCN is fixed stably into place.

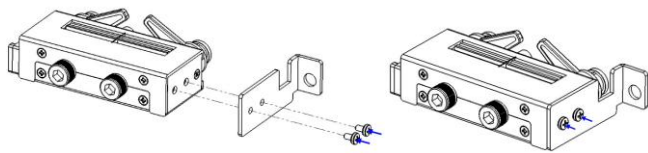
Note: When the L-shape bracket is employed, take off the nut from the ground terminal prior to test fixture installation. Follow the steps above for proper installation followed by fastening the nut so that the test fixture can be held tightly when DUT is inserted.

Note: Refer to the pictures below for details of L-shape bracket installation.

Test Fixture Installation

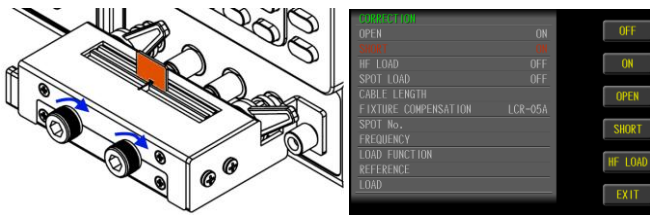


L-shape Installation

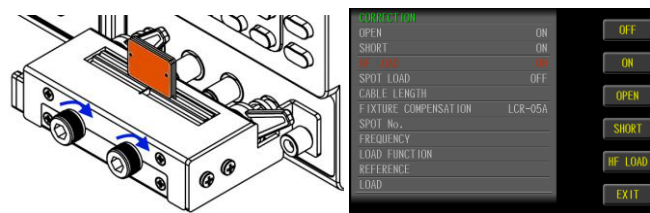


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4. Loosen the adjusting screws counter-clockwise to make the Electrodes open. Insert the short-circuit jumper into the Electrodes followed by fastening the screws. Subtly adjust the Electrodes to clamp the short-circuit jumper tightly. Execute the SHORT CORRECTION and the SHORT item will change from OFF to ON.



5. It is suggested to execute HF LOAD calibration when test frequency is greater than 3MHz. Loosen the adjusting screws counter-clockwise to make the Electrodes open. Insert the STD-LOAD into the Electrodes followed by fastening the screws. Subtly adjust the Electrodes to clamp the STD-LOAD tightly. Execute the HF LOAD CORRECTION and the HF LOAD item will change from OFF to ON.



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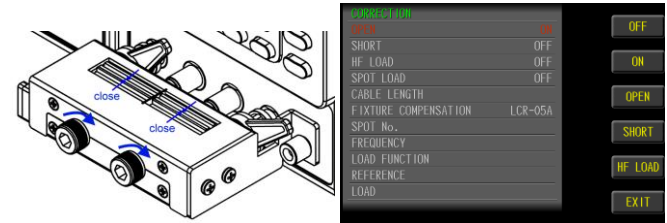
MEASUREMENT

WARNING Before measurement, be sure to read the operating instructions to avoid danger.

1. Set measuring conditions with parameters, and install LCR-05A test fixture.
2. Execute the CORRECTION mode. Set LCR-05A for the FIXTURE COMPENSATION item in order to execute LCR-05A parameter compensation, by which the CABLE LENGTH item will be unavailable. On the other hand, when extension cable is wired with LCR-05A for measurement, it is required to disable the FIXTURE COMPENSATION item (OFF) and instead select an appropriate option for CABLE LENGTH corresponding to the employed cable.

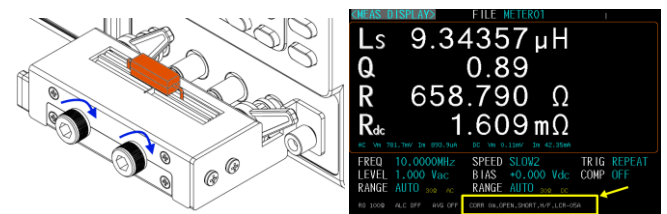


3. Fasten the adjusting screws clockwise to make the Electrodes tightly close. Execute the OPEN CORRECTION and the OPEN item will change from OFF to ON.



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6. Loosen the adjusting screws counter-clockwise to make the Electrodes open. Insert the DUT into the Electrodes followed by fastening the screws. Subtly adjust the Electrodes to clamp the DUT tightly and it is now ready for measurement. The latest calibration status will be shown in the bottom of the LCD display (item and measuring cable length or test fixture model).



7. Remove the component from the test fixture.

Note: It is required to place DUT into the test fixture in exactly vertical way without any tilt, skew or wobble. Do not fasten the adjusting screws overly in case of thread stripped and over compression on DUT. Also, do not overly loosen the screws in case of accidental drop out of screws.

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