Test Fixture

LCR-15A

QUICK START GUIDE

GW INSTEK PART NO. 82CR-15A00M01

ISO-9001 CERTIFIED MANUFACTURER

GW INSTEK

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OVERVIEW

The LCR-15A Test Fixture for chip type components.

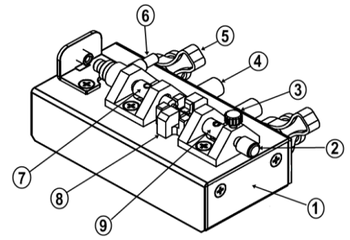
Specifications

Model	LCR-15A
DUT Connector	2-Terminal
Measurement Frequency	DC to 30MHz
Maximum Voltage	±45V Peak max.(AC+DC)
Application size	0201 – 1812, <5mm
Dimensions:	105W x 47H x 69D mm
Weight	185g
Operating Environment	0~50˚C, <70%RH

Additional error(with OPEN/SHORT/LOAD(≧3MHz) correction) Ze = ± {A + (Zs/Zx + Yo x Zx) x 100} % Zx:Measured Value[Ω]		
A	Proportional error	$0.375 \times (f/10)^2$ [%]
Yo	Open repeatability	0.005 + 10 × (f/100) [μS]
Zs	Short repeatability	20 + 30 × (f/10) [mΩ]

f:[MHz]

Fixture Overview



Index	Item	Description	Quantity
1	Test Fixture Main Body	The main body of test fixture	1
2	Knob	Pull or push it to move the test pin of HIGH side electrode	1
3	Locking Screw	Rotate it clockwise to fasten the HIGH electrode, whilst rotate it counterclockwise to loosen the electrode.	2
4	BNC	Measuring terminals that connect with instruments	4
5	Fixing Handles	It fastens or loosens terminals between BNC and instrument. Turn right to fix, whilst turn left to loosen	2
6	Lever	Put the lever to a proper place and rotate it clockwise to fix the LOW side test pin. Pull it leftward to adjust location of test pin for DUT placement. After test, rotate it counterclockwise to level it	1

		horizontally in case of damage.	
7	Low Electrode	LOW side test pin	1
8	Stage	Area for DUT placement	1
9	High Electrode	HIGH side test pin	1
10	STD LOAD	Standard resistor (100Ω)	10
11	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

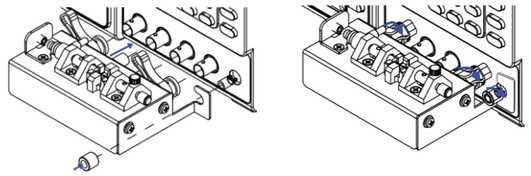
INSTALLATION

1. Turn the both fixing handles of BNC terminals from LCR-15A 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-15A test fixture toward right side until the external sleeve of BCN is fixed stably into place.

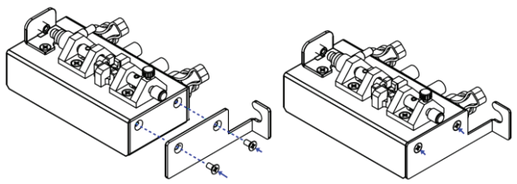
Note: When the L-shape bracket is employed, take off the nut from the ground terminal prior to test fixture installation. Follow the steps above for proper installation followed by fastening the nut so that the test fixture can be held tightly when DUT is inserted.

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

Test Fixture Installation



L-shape Installation

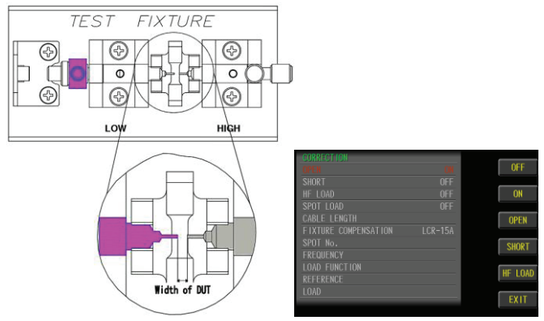


MEASUREMENT

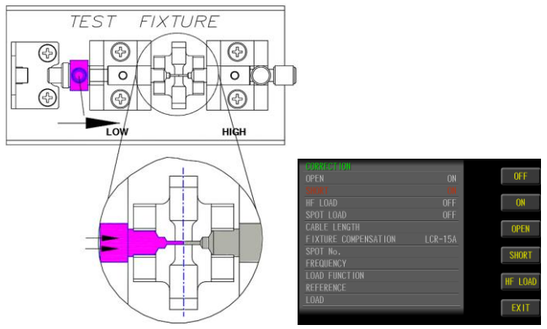
⚠ WARNING Before measurement, be sure to read the operating instructions to avoid danger.

1. Set measuring conditions with parameters, and install LCR-15A test fixture.
2. Execute the CORRECTION mode. Set LCR-15A for the FIXTURE COMPENSATION item in order to execute LCR-15A parameter compensation, by which the CABLE LENGTH item will be unavailable. On the other hand, when extension cable is wired with LCR-15A 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.

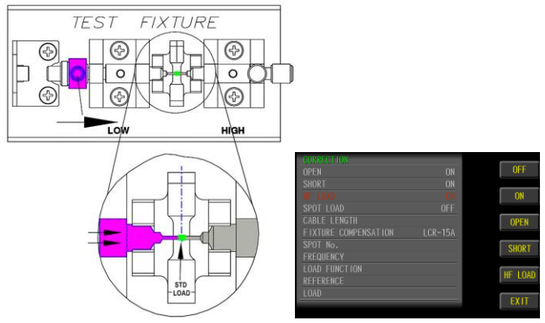
3. Pull the LOW side test pin leftward and loosen the High side locking screw followed by moving the HIGH side test pin rightward and loosening LOW side test pin. Adjust the interval between LOW and HIGH sides test pins to properly fit the width of DUT and fasten the locking screw. Implement open circuit test to make OPEN item displayed ON.



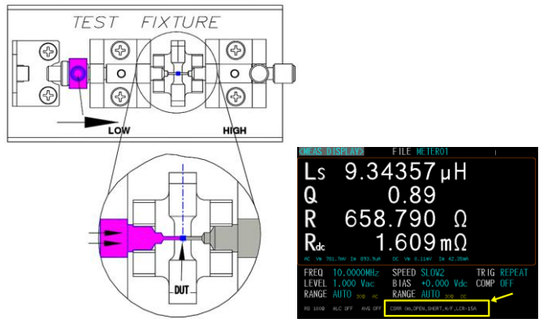
4. Pull the LOW side test pin leftward and loosen the High side locking screw followed by moving the HIGH side test pin leftward to the center of test stage and fastening the locking screw. Loosen the LOW side test pin to have the test pins of both LOW and HIGH sides contacted in short circuit. Implement short circuit test to make SHORT item displayed ON.



5. It is suggested to execute HF LOAD calibration when test frequency is greater than 3MHz. Pull the LOW side test pin leftward and loosen the High side locking screw followed by moving the HIGH side test pin rightward and placing the STD-LOAD to the center of test stage. Adjust the HIGH side test pin to make it contacted with right side of STD-LOAD followed by fastening the locking screw. Loosen the LOW side test pin to have the test pins of both LOW and HIGH sides contacted with STD-LOAD properly. Implement HF LOAD test to make HF LOAD item displayed ON.



6. Pull the LOW side test pin leftward and loosen the High side locking screw followed by moving the HIGH side test pin rightward and placing the DUT to the center of test stage. Adjust the HIGH side test pin to make it contacted with right side of DUT followed by fastening the locking screw. Loosen the LOW side test pin to have the test pins of both LOW and HIGH sides contacted with DUT 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. After completing the measurements, 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.