

NCTP9511

I-V CURVE TRACER PROBE

Instruction Manual

Please read the instruction manual carefully to avoid injury and prevent from damage to this product and device under test

Ver. 1.2 2014-4-19

Preface

Thank you for choosing NCTP9511 IV Curve Tracer Probe. This instruction manual includes safety summary, brief introduction, main specifications and operating basics etc. Please read the manual carefully prior to using this product.

Warranty

Our company warrants that this product will be free from defects in materials and workmanship for a period of one (1) year from the date of shipment. If any such product proves defective during this warranty period, our company, at its option, either will repair the defective product without charge for parts and labor, or will provide a replacement in exchange for the defective product. Parts, modules and replacement products used by our company for warranty work may be new or reconditioned to like new performance. All replaced parts, modules and products become the property of our company.

This warranty shall not apply to any defect, failure or damage caused by improper use or improper or inadequate maintenance and care.

THIS WARRANTY IS GIVEN BY OUR COMPANY WITH RESPECT TO THE PRODUCT IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED. OUR COMPANY AND ITS VENDORS DISCLAIM ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. OUR COMPANY AND ITS VENDORS WILL NOT BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES IRRESPECTIVE OF WHETHER OUR COMPANY OR THE VENDOR HAS ADVANCE NOTICE OF THE POSSIBILITY OF SUCH DAMAGES.

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1. Safety Summary

Please Review the following safety precautions to avoid injury and prevent damage to this product or any products connected to it.

Use proper AC adapter. Use only the AC adapter specified for this product.

Connect and disconnect properly. Connect the BNC terminals output to the oscilloscope before connecting the probes to the circuit under test. Disconnect the probes input from the circuit under test firstly before disconnecting the BNC connection from the oscilloscope.

Do not connect or disconnect probes while the measured object is connected to a voltage source.

Do not use it to measure electriferous object. This product should be used to measure uncharged object to avoid damage to the probe or the measured objects.

Do not operate without covers. Do not operate this product with covers or panels removed. Do not try to open this product, no any part or component inside could be repaired or replaced by yourself.

Grounding: This product connects to oscilloscope GND through the BNC terminal, and please make sure of reliable grounding during test.

Do not operate in an explosive atmosphere.

Do not operate in wet/damp conditions.

2. Brief introduction

NCTP9511 I-V Curve Tracer Probe is usually used with an oscilloscope. Display the I-V curve trace of measured object on the screen of oscilloscope to measure or analysis the resistance, inductor, capacitor, transistor, transformer etc. as well as analysis the various parameters of test circuit.

If you want to verify or repair a PCBA or a malfunction instrument, comparison to a typical board could be a very smart approach in daily practice. If you can use this product expertly, the efficiency will be much higher than multi-meter and routine probes.

The most advantage is that the NCTP9511 can be used while the object PCBA or instrument could not be allowed to energized or power on. Often, if a malfunction instrument is powered on, the faults will be augmented and the loss will be increased.

It may be used at the following location usually:

- Check general component & components combination
- Check transformer or motor coils
- Check and repair PCBA
- Check and repair electronic instrument
- Measure and Analysis the circuit parameters
- Basic electronic experiment

3. Main Specifications

| Electrical Specification | |
|----------------------------------|---------------------|
| AC adapter output | AC9V, 100mA |
| AC adapter input | AC230V, 50~60Hz |
| Typical mechanical specification | |
| Input cable length | Approximately 100cm |
| Output cable length | Approximately 50cm |
| Probe body | 120×55×24 (mm) |
| Weight | 300g |
| Environment Specification | |
| Operating temperature | 0~40°C |
| Storing temperature | -10~45°C |
| Operating humidity | 85%RH |
| Storing humidity | 90%RH |
| Operating altitude | 3000m |
| Storing altitude | 12000m |

4. Unpacking and Preparation for Use

4-1 Unpacking

This product has been checked and tested for the quality before it comes out of the factory. Please check if there is damage during the transportation when unpacking. If there is, please inform the carrier and the distributor immediately.

Packing list:

| | |
|--------------------|-------|
| NCTP9511 probe | 1pcs |
| Alligator Clips | 1pair |
| Test Probes | 1pair |
| Instruction manual | 1pcs |
| AC adapter | 1pcs |

4-2 Preparation for use

Please check the line voltage prior to connect the AC adapter to the electric outlet. The line voltage should be coincident the following list. If the incorrect line voltage is used, it will damage the product and the AC adapter.

| AC adapter input voltage | Frequency |
|--------------------------|-----------|
| AC230V | 50~60Hz |

Warning: Use only the AC adapter specified for this product to avoid injury and prevent damage to this product.

5. General View of Product & Accessories



NCTP9511 I-V Curve Tracer probe



AC adapter

7. Operating Basics

NCTP9511 I-V Curve Tracer Probe is very convenient to operate. But we suggest every new user should read the manual perfectly prior to begin operating.

7-1 Operation steps

- a. Make sure the input voltage for AC Adaptor is correct prior to use.
- b. Set the oscilloscope to X-Y mode.
- c. Set both the vertical sensitivity of X and Y channel to 5V/div.
- d. Connect the X output BNC (with red ring) to the X channel of oscilloscope. Connect the Y output BNC (with blue ring) to the Y channel of oscilloscope.
- e. Connect the AC adapter to the probe firstly and then plug the adapter to the electrical outlet. The red POWER indicator lights.
- f. Fix the two input Test Probes to the Input Connectors, connect the the Test Probes to the measured object to start measuring. The curve trace of object will be displayed on the screen of oscilloscope.
- g. In case that the measured object is components with feet, it will be more convenient to use the Alligator Clips instead.
- h. Readjust the oscilloscope vertical sensitivity according to displayed trace to get a satisfied display.
- i. When the test is finished, disconnect input from measured object at first, then disconnect the power, disconnect the output BNC terminal from the oscilloscope at last.

7-2 Attention to use

- a. If you want to measure or repair a complicated PCBA or instrument, it's best that you prepare a typical sample to compare.
- b. The probe and measuring instrument should warm up for 20 minutes

if you want to get high accuracy measuring result.

- c. When the probe works, there will be about 9Vrms voltage between the two input probes/clips in open circuit status, and about 2mArms current through the two input probes/clips in short-circuit status.

7-3 Example I-V curve trace for some components:

