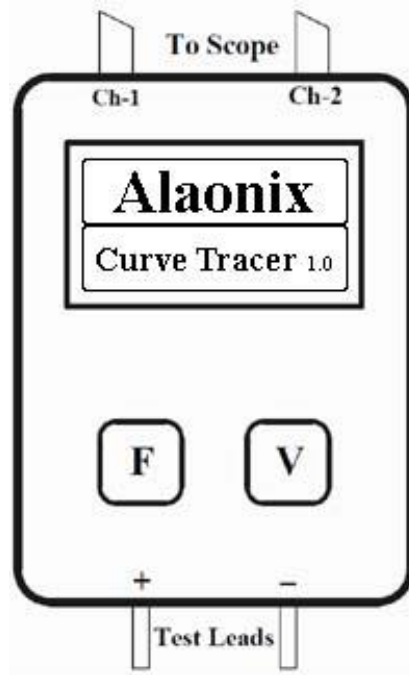
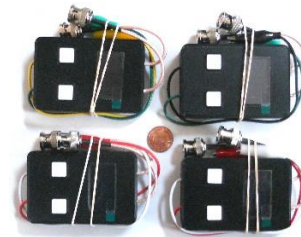
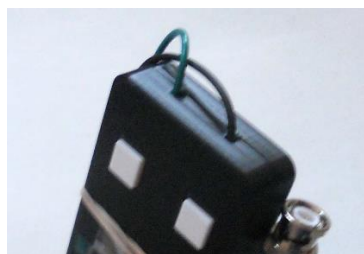
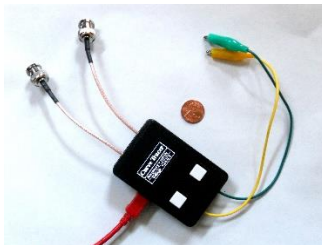


Alaonix Curve Tracer

User Manual



Alaonix Curve Tracer 1.0



A. Introduction

Alaonix Curve Tracer 1.0 is a small and light device. User can use it to check electronics semiconductor – transistors, diodes, zeners , capacitor and resistor..... Connect this device with an oscilloscope capable of being set in XY mode and you have a very great tester.

Please check your oscilloscope can handle a 24V peak to peak voltage on the input. Most scopes should not have this problem, may have the problem for use with a computer or some of the very low cost LCD/Arduino based scopes, please check your scope is capable before to use the device.

Specifications:

Device Display: 1.3" BW OLED display.
Serial Baud: 9600, 8, N, 1
Waveform: Sine wave
Test Frequencies: 100Hz, 200Hz, 500Hz, 1000Hz
Open circuit Voltage: 6V, 12V, 24V (Peak to Peak)
Output: Constant 6V (p-p)
Unit Power: 5V (Mini USB connector)
Current: < 100 mA
Dimensions: 78 x 52 x 17 mm
Weight: 70 g (2.5 Oz)

2. Before The Test

Connect the device to a scope.

When the PCB to be measured, the power supply **MUST** be Shut off.

Must make sure that the capacitors is discharged on the PCB. High voltage charged capacitors can damage the device.

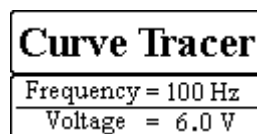
3. Turning on or turning off

To turn on the device, plug the USB cable into any USB socket whose output voltage is 5V, 2A. Energy sources such as computer, adapter and external power bank may be used as power source.

When the device is on, you will see:



Start screen

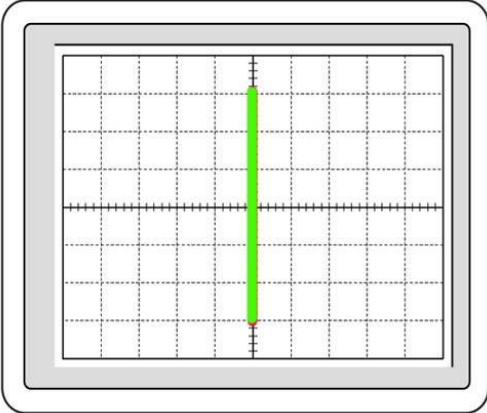


Main screen

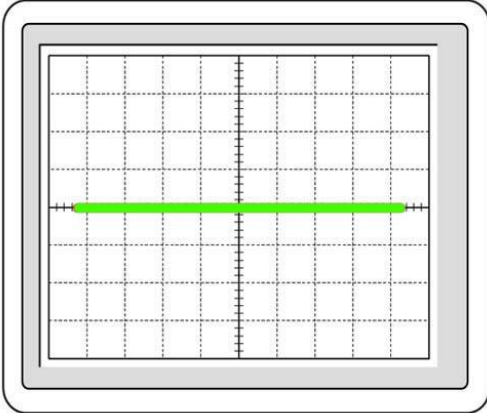
To turn off the device, disconnecting power supply will be sufficient.

4. Device Introduction

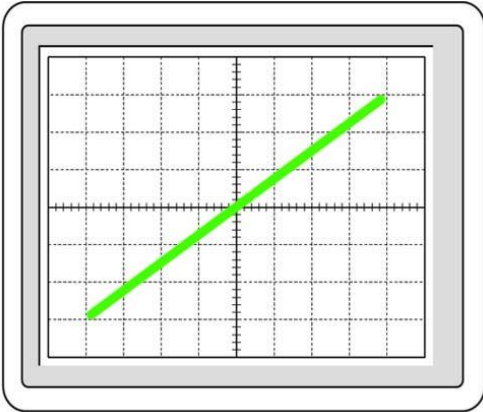
Curve tracing is essentially a means of making a graph of current (I) versus voltage (V) called an I-V curve, to display the basic characteristics of an electronic device. Below are some electronics semiconductors test images:



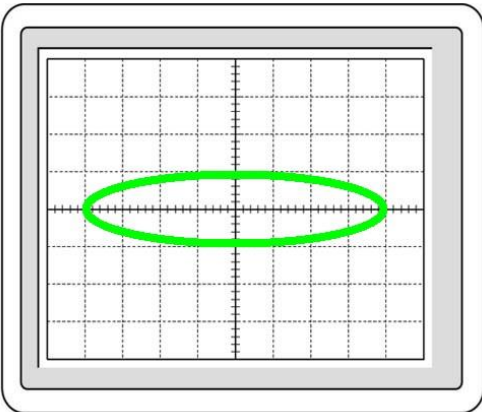
Open



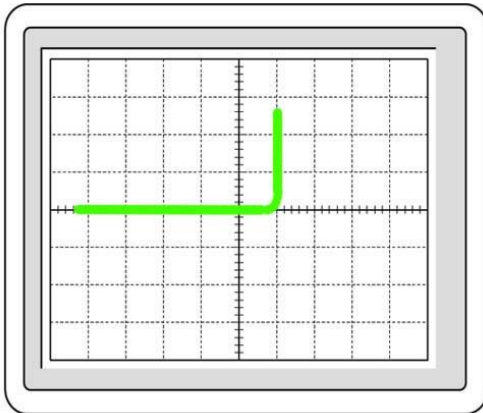
Short



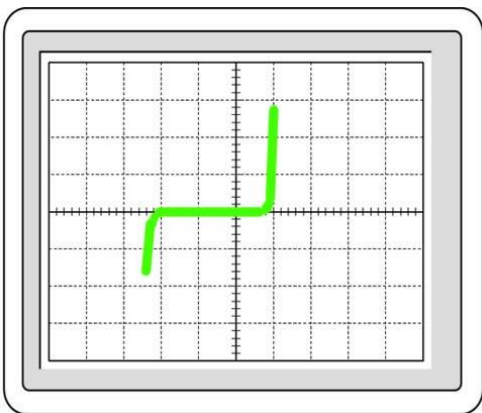
Resistor



Capacitor



Diode



Zener

The device has two buttons, one is for frequency changing, another one is for Voltage changing.

100Hz -6.0v, 100Hz-12v and 100Hz-24v screen:

Curve Tracer
Frequency = 100 Hz
Voltage = 6.0 V

Curve Tracer
Frequency = 100 Hz
Voltage = 12.0 V

Curve Tracer
Frequency = 100 Hz
Voltage = 24.0 V

200Hz -6.0v, 100Hz-12v and 100Hz-24v screen:

Curve Tracer
Frequency = 200 Hz
Voltage = 6.0 V

Curve Tracer
Frequency = 200 Hz
Voltage = 12.0 V

Curve Tracer
Frequency = 200 Hz
Voltage = 24.0 V

500Hz -6.0v, 500Hz-12v and 500Hz-24v screen:

Curve Tracer
Frequency = 500 Hz
Voltage = 6.0 V

Curve Tracer
Frequency = 500 Hz
Voltage = 12.0 V

Curve Tracer
Frequency = 500 Hz
Voltage = 24.0 V

1000Hz -6.0v, 1000Hz-12v and 1000Hz-24v screen:

Curve Tracer
Frequency = 1000 Hz
Voltage = 12.0 V

Curve Tracer
Frequency = 1000 Hz
Voltage = 6.0 V

Curve Tracer
Frequency = 1000 Hz
Voltage = 24.0 V

5. Device Calibration

The device has a calibration function; it can allow user to calibrate the device.

Hold the device two buttons, then plug the USB cable into any USB socket. You will see:

Alaonix
Curve Tracer 1.0

First screen

Calibration
Frequency = 100 Hz
Voltage = 6.0 V

Calibration Screen

Notice:

A terminal software and CH340 driver must be installed before you want to calibrated the device. (Those software and driver can be downloaded from many websites. You can google these key words "Serial communication terminal" and "CH340 Drive" to get them.)

Connect test leads to a scope, send **One Character Command** (No Line Feed and No Carriage Return) to select a calibration range and calibrate the device. Also user can use this function to operate the device too.

Send D or d key to set device Default.

Send F or f key to change device frequency.

Send A or a to changed device to 6V Range. (peak to peak)

Send B or b to changed device to 12V Range. (peak to peak)

Send C or c to changed device to 24V Range. (peak to peak)

Send M or m to calibrate (decrease) voltage.

Send P or p to calibrate (increase) voltage.

Send E or e to exit calibration.

Send H or h to show One Character Command list.

100Hz -6.0v, 100Hz-12v and 100Hz-24v calibration screen:

Calibration
Frequency = 100 Hz
Voltage = 6.0 V

Calibration
Frequency = 100 Hz
Voltage = 12.0 V

Calibration
Frequency = 100 Hz
Voltage = 24.0 V

200Hz -6.0v, 500Hz-12v and 500Hz-24v calibration screen:

Calibration
Frequency = 200 Hz
Voltage = 6.0 V

Calibration
Frequency = 200 Hz
Voltage = 12.0 V

Calibration
Frequency = 200 Hz
Voltage = 24.0 V

500Hz -6.0v, 500Hz-12v and 500Hz-24v calibration screen:

Calibration
Frequency = 500 Hz
Voltage = 12.0 V

Calibration
Frequency = 500 Hz
Voltage = 6.0 V

Calibration
Frequency = 500 Hz
Voltage = 24.0 V

1000Hz -6.0v, 1000Hz-12v and 1000Hz-24v calibration screen:

Calibration
Frequency = 1000 Hz
Voltage = 12.0 V

Calibration
Frequency = 1000 Hz
Voltage = 6.0 V

Calibration
Frequency = 1000 Hz
Voltage = 24.0 V

After calibrating device, User can send E or e command to exit calibration or turn off the device directly.

READ THE FOLLOWING TERMS AND CONDITIONS CAREFULLY

LIABILITY WARNING:

This device should be used only for experimental purposes. It has NOT gone through extensive testing and it could erase or corrupt some or all data on media cards that are inside the device. You assume to take your own risk when you purchase this device, and release the responsibility and liability from the manufacturer with no harm.

REGULATORY WARNING:

This device is intended solely for experimental purposes; it is not in finished product form and is NOT FCC approved. If you wish to install these modules into nonexperimental final finished products, you will be responsible to have the modules approved by the FCC at your own cost.

Support:

AlaTeam@alaonix.com