**Char support for DCDUSB team in Cypress**

**Instruments lists**

* Agilent DC power supply
* Kiethly2400 source meter
* Kiethly2600 source meter
* Kiethly2000 multi meter
* Tektronix scope
* Agilent multi meter
* Tektronix scope
* Tektronix signal generator AFG
* TDS
* Tempforce Advanced temperature source
* Keysight DC power supply
* Keysight Digital Signal Analyser
* Hand held multi meter

**Types of setup**

1. Bench: Manual, Automated (using python)
2. ATE (Automated Test Equipment): Agilent’s 93k, nexttest

**Bench setups**

Manual: In manual setup you need for device under test (DUT) you need to force particular temperature, adjust particular voltage in power supplies. Collect the readings through excel sheets that will be the data. Scope usage, signal generator usage required. Here device under test will be in the socket of the particular PCB. Before placing the device inside the socket you need to off the power supplies output.

**Automated setups**

In automated setups of dcdusb team is using python script to control almost all instruments which are in use. All instruments in order to automate interfaced with any of the National Instrument’s GPIB to USB, RS232, USB or LAN. Particular address recorded using NI Max Application and entered in python script’s address declaration. In these setups changing the device after completion of current one is the task of tech support. Here sometimes any instrument can fail to operate remotely due to physical disconnection with any of the interfaces or other. Then there will be VI error notification in the pycharm ( IDE using for python scripting). Go through the error there will be line number mentioned and there only you come to know which instrument giving problem.

**Important topics on python**

* Lists
* Tuples
* Numbers , Strings
* Functions

1)range() function

* Loops
* Comments in python
* Importing a module

1. auto\_instr
2. time -sleep() function
3. csv

* numpy module

1. arange function
2. linspace

List of ATE

1. next test
2. old 93k
3. new 93k

Parameters undergone for testing

|  |
| --- |
| 1. Active\_current |
| 1. block\_currents |
| 1. BOD |
| 1. boot\_time\_after\_fw\_write |
| 1. BTP |
| 1. check\_sum\_copy |
| 1. comparator |
| 1. comparator\_High\_detect |
| 1. comparator\_settling\_time |
| 1. data\_read\_write |
| 1. Duty\_cycle |
| 1. Eye\_diagram |
| 1. firmware\_writing |
| 1. flash\_time |
| 1. gate\_driver |
| 1. high\_low |
| 1. hysteresis |
| 1. IDDD on Gate |
| 1. IMO\_current |
| 1. IMO\_resolution |
| 1. ioh |
| 1. Itotal |
| 1. jitter |
| 1. LFPS |
| 1. ndaC |
| 1. NDAC\_PDAC |
| 1. OTP |
| 1. ovp\_OCP |
| 1. ovuv |
| 1. pdac\_ndac |
| 1. PGDO |
| 1. PGDO\_rpd |
| 1. POR |
| 1. positive\_negative\_widrth |
| 1. pulse width |
| 1. PWM |
| 1. PWM\_Frequency\_meas |
| 1. PWM\_RAMP\_TIME |
| 1. ramux |
| 1. REGISTER READING |
| 1. Resolution |
| 1. RISE TIME FALL TIME |
| 1. RISE TIME FALL TIME(2) |
| 1. Rise\_fall\_time |
| 1. Rtrip |
| 1. rx\_dc\_filter |
| 1. rx\_filter |
| 1. SCP |
| 1. SCP,OCP,RCP |
| 1. scp\_delay |
| 1. sleep\_deepsleep\_delay |
| 1. sso 50pF |
| 1. SSO\_1.8,1.2 |
| 1. sso\_data\_sorting |
| 1. sso\_Noise |
| 1. sso\_waveform\_capture |
| 1. stress |
| 1. temp\_on\_die |
| 1. ton |
| 1. Trx Filter |
| 1. tx |
| 1. TX RX |
| 1. v\_detect |
| 1. v\_native |
| 1. VBUS\_C\_control\_delay |
| 1. vih\_vil |
| 1. V-native |
| 1. Voltage\_doubler |
| 1. voltahe\_meas |
| 1. Vpeak |
| 1. zcd |