

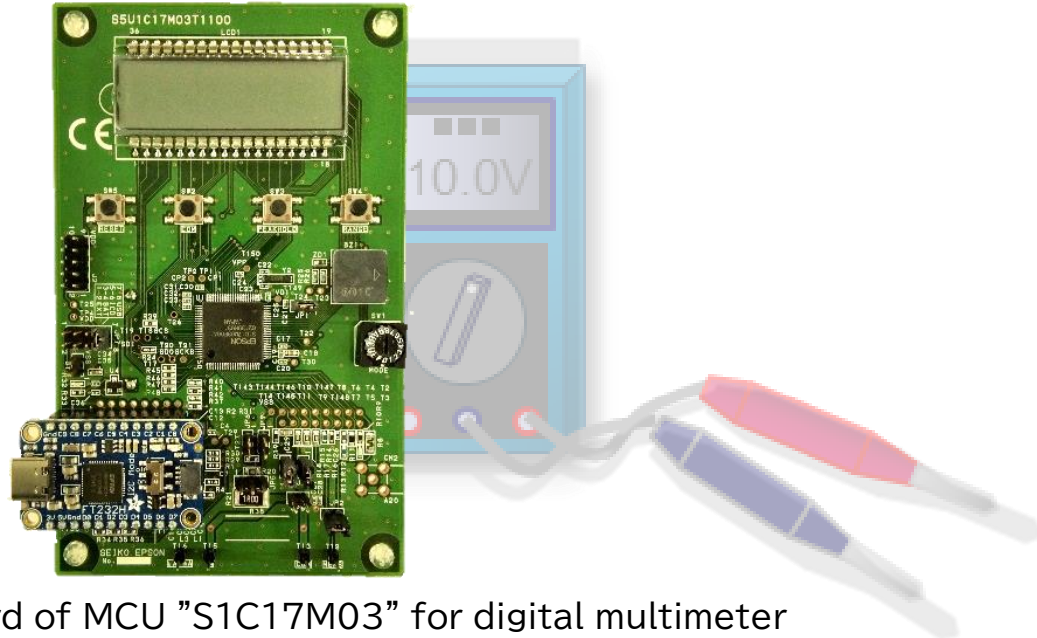
Only five minutes! How to use Epson DMM board

1. Introduction
2. DC voltage measurement
3. Characteristic value
 1. Recording characteristic values
 2. Checking characteristic values
4. Appendix
5. Manual

1. Introduction

The evaluation board "S5U1C17M03T" has a digital multimeter function loaded in the flash ROM, various measurements can be performed simply by turning on the power.

S5U1C17M03T

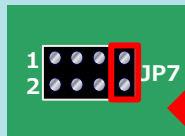


Evaluation board of MCU "S1C17M03" for digital multimeter

2. DC voltage measurement

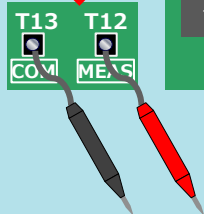
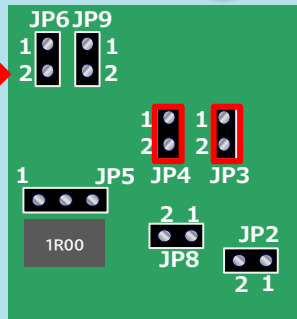
● Settings

1 Short the part of the red frame



3 Set "0" to the mark at the bottom center

2 Short the part of the red frame

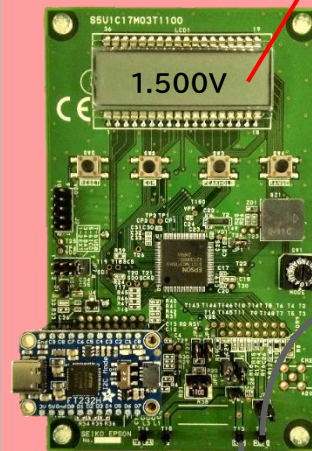


4 Connect the probe

5 Connect the PC and board with a USB cable (TypeC) to supply power

● Measurement

2 Check the display

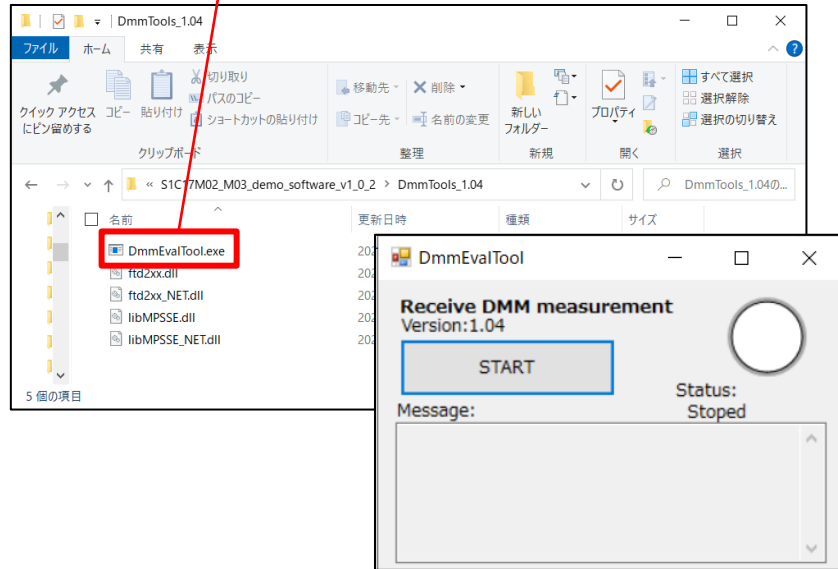


1 Connect the probe to the measurement target



3.1 Recording characteristic values

- 1 Start "DmmEvalTool.exe" from the [software package](#)



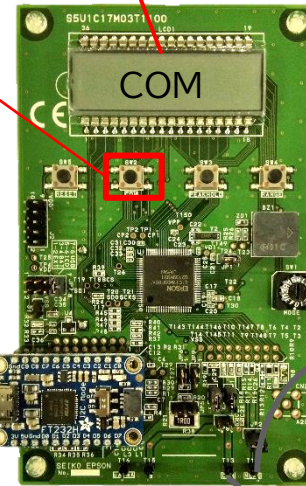
Operate the tool on the next page

- 2 Connect the PC and board with a USB cable (TypeC) to supply power



- 4 Push SW2
- 5 Check "COM" is displayed

- 5 Check "COM" is displayed



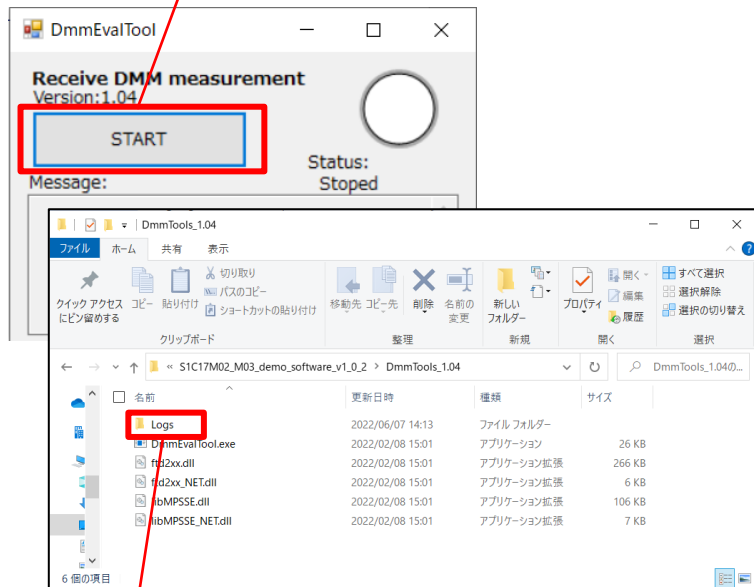
Example :
DC voltage
measurement

- 3 Connect the probe to the measurement target

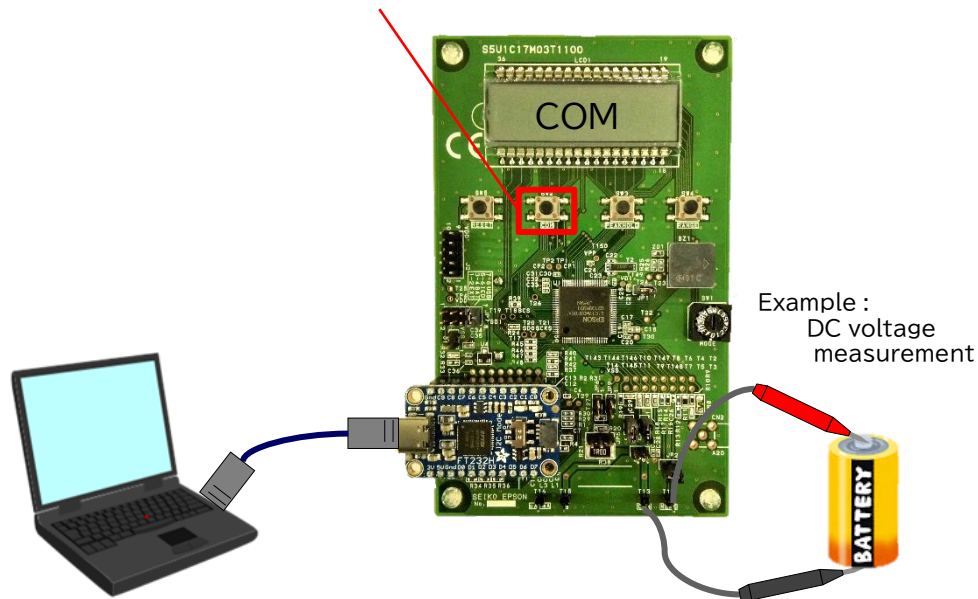


3.1 Recording characteristic values

1 Click "START" to start reading the data

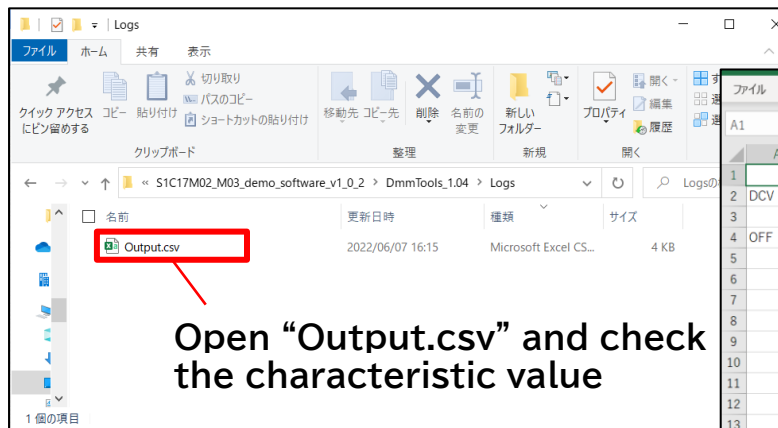


2 Press SW2 at any time to finish reading the data.



3 When reading is completed, a "Logs" folder will be created and the measurement data "Output.csv" will be saved in that folder.

3.2 Checking characteristic values



Open "Output.csv" and check the characteristic value

First measurement Second measurement

Data number of measurement

Mode of measurement

Range of measurement

Measurement data

Second data added
A column is added
each time you record

*The measurement data gets 16-bit digital values. (Excludes Capacity measurement and Frequency measurement)
*Please close the csv file when recording the characteristic value.

4. Appendix

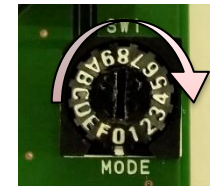
Switch measurement mode

You can switch to any measurement mode by setting the rotary switch. Check the correspondence between the set value, measurement mode and jumper setting from the table below.

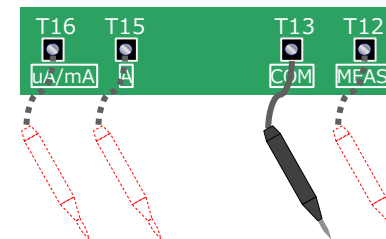
Except for default range, please refer to the “S5U1C17M03T Manual”.

# SW1	Measurement mode	Default range	Mode name	JP2	JP3	JP4	JP5	JP6	JP8	JP9
0	DC voltage	6V	DCV	open	short	short	open	open	open	open
1	AC voltage	6V	ACV	open	short	short	open	open	open	open
2	DC current	6mA	DCI	open	short	short	2-3short	short	short	open
3	AC current	6mA	ACI	open	short	short	2-3short	short	short	open
4	Resistance (CC-method)	600Ω	OHM CC	short	short	short	open	open	open	open
5	Resistance (CV-method)	600Ω	OHM CV	short	short	short	open	open	open	open
6	Continuity check	CV	CONT	short	short	short	open	open	open	open
7	Capacitance (CC-method)	1uF	CAP CC	short	short	short	open	open	open	open
8	Capacitance (CV-method)	10nF	CAP CV	short	short	short	open	open	open	open
9	Diode VF	-	DIODE	short	short	short	open	open	open	open
A	AC voltage and frequency	6V	FREQ ACV	open	short	short	open	open	open	open
B	AC current and frequency	6mA	FREQ ACI	open	short	short	2-3short	short	short	open
C	Internal temperature	-	TEMP	open	short	short	open	open	open	open

•Rotary switch



•Connection of the positive probe
 Current measurement(A range) : T15
 Current measurement(uA/mA range) : T16
 Others : T12



Cautions for measurement

1. If the evaluation board does not work as expected when performing “2. DC voltage measurement” and “3.1 Recording characteristic values”, push SW5 (reset switch) and start over from the beginning of the procedure.
2. No offset correction has been performed. Therefore, the actual input value and the value displayed on the LCD panel will differ.
3. It may be affected by power supply noise depending on the measurement environment.

Measurement mode affected by power supply noise

AC voltage and frequency

AC current and frequency

Capacitance (CC-method)

Capacitance (CV-method)

5. Reference manual

Information	Document
MCU「S1C17M02/03」	S1C17M02/03 Technical manual
Evaluation board 「S5U1C17M03T」	S5U1C17M03T Manual
Software	Application note

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