

EMC - TEST REPORT

Report Number : 60.780.19.111.01 Date of Issue : December 18, 2019

Model : D650, D850

Product Type : Dictionary

Applicant : LEXIBOOK LIMITED

Address : Unit 8-9, 4th Floor, Kenning Industrial Building, 19 Wang Hoi Road,
Kwloon Bay, Kowloon, Hong Kong

Production Facility : NIL

Address : NIL

Test Result : ☒Positive ☐NegativeTotal pages
including
Appendices : 21

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1 Table of Contents

1 Table of Contents	2
2 Description of Equipment Under Test.....	3
3 Summary of Test Standards	4
4 Details about the Test Laboratory	5
4.1 Test Equipment Site List	6
4.2 Measurement System Uncertainty	7
5 Summary of Test Results	8
6 General Remarks	10
7 Emission Test Results	11
7.1 Radiated Emission Test	11
8 Performance Criteria	13
9 Immunity Test Results	14
9.1 Electrostatic Discharge Test	14
9.2 Radiated Immunity Test	16
10 Appendix A - General product information	17
11 Appendix B - Photographs of EUT	18

2 Description of Equipment Under Test

Description of the Equipment Under Test

Product: Dictionary

Model no.: D650, D850

Rating: 3.0VDC (1 x 3.0VDC "CR2032" button cell battery)

Description of the EUT: The EUT is considered as generic equipment.
More details of EUT technical specification please refer to the
User's Manual.

3 Summary of Test Standards

Directive(s)
Electromagnetic Compatibility Directive 2014/30/EU
Test Standards
EN 61000-6-3:2007+A1:2011 / AC: 2012 Electromagnetic compatibility (EMC) -- Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments
EN 61000-6-1:2007 Electromagnetic compatibility (EMC) -- Part 6-1: Generic standards - Immunity for residential, commercial and light-industrial environments

4 Details about the Test Laboratory

Site 1

Company name: TÜV SÜD Hong Kong Ltd.
3/F, West Wing, Lakeside 2,
10 Science Park West Avenue,
Science Park, Shatin, Hong Kong

Site 2

Company name: TÜV SÜD Certification and Testing (China) Co., Ltd. Shenzhen Branch
Building 12&13 Zhiheng Wisdomland Business Park,
Nantou Checkpoint Road 2,
Shenzhen 518052, P.R.China

Emission Tests	
Test Item	Test Site
EN 61000-6-3	
Radiated Emission Test	Site 2
Conducted Emission Test	NIL
Immunity Tests	
Test Item	Test Site
EN 61000-6-1	
Electrostatic Discharge Test (IEC 61000-4-2)	Site 2
Radiated Immunity Test (IEC 61000-4-3)	Site 2
Electrical Fast Transient Test (IEC 61000-4-4)	NIL
Surges Test (IEC 61000-4-5)	NIL
Conducted Immunity Test (IEC 61000-4-6)	NIL
Power Frequency Magnetic Field Test (IEC 61000-4-8)	NIL
Voltage Dips and Interruption Test (IEC 61000-4-11)	NIL

4.1 Test Equipment Site List

Radiated Emission Test – Site 2

DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	CAL. DUE DATE
EMI Test Receiver	Rohde & Schwarz	ESR 26	101269	2020-6-28
Trilog Super Broadband Test Antenna	Schwarzbeck	VULB 9163	707	2020-8-20
Horn Antenna	Rohde & Schwarz	HF907	102294	2020-6-22
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100398	2020-7-7
Pre-amplifier	Rohde & Schwarz	SCU 18	102230	2020-6-28
Signal Generator	Rohde & Schwarz	SMY01	839369/005	2020-6-28
Attenuator	Agilent	8491A	MY39264334	2020-6-28
3m Semi-anechoic chamber	TDK	9X6X6	----	2020-7-7
Test software	Rohde & Schwarz	EMC32	Version9.15.00	N/A

Electrostatic Discharge Test – Site 2

DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	CAL. DUE DATE
Electrostatic Discharge Simulator	Noiseken	ESS-2002	ESS0615075	2020-6-30

Radiated Immunity Test – Site 2

DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	CAL. DUE DATE
Signal Generator	Rohde & Schwarz	SMB100A	177600	2020-6-28
Power Amplifier	Rohde & Schwarz	BBA100	101238	2020-6-28
Power Amplifier	Rohde & Schwarz	BBA150	101671	2020-6-28
Power Amplifier	Rohde & Schwarz	BBA150-E100	102640	2020-6-28
Log-Periodic Antenna	Rohde & Schwarz	HL046E	100160	N/A
Microwave Log-Periodic Antenna	Rohde & Schwarz	STLP 9149	9149-453	N/A
Power Meter	Rohde & Schwarz	NRP2	103497	2020-6-28
Average Power Sensor	Rohde & Schwarz	NRP-Z91	102538	2020-6-17
Average Power Sensor	Rohde & Schwarz	NRP-Z91	102539	2020-6-17
Starprobe Laser-Powered Probe	AMPLIFIER RESEARCH	FL7006/KIT	0433720	2020-7-30
Audio Analyzer	Rohde & Schwarz	UPV	104348	2020-7-4
Fully Anechoic Chamber	TDK	8X4X4	--	2020-7-7
Test software	Rohde & Schwarz	EMC32	Version 9.15.03	N/A

4.2 Measurement System Uncertainty

Measurement System Uncertainty Emissions

System Measurement Uncertainty	
Items	Extended Uncertainty
Uncertainty for Radiated Emission in 3m chamber 30MHz-1000MHz	Horizontal: 5.12dB; Vertical: 5.10dB;

Measurement System Uncertainty Immunity

The measurement expanded uncertainties for defined systems are for a 95% confidence level, in accordance with the recommendations of ISO 17025.

5 Summary of Test Results

Emission Tests				
EN 61000-6-3				
Test Condition	Pages	Test Result		
		Pass	Fail	N/A
Radiated Emission	11-12	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Conducted Emission	NIL	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Summary of Test Results

Immunity Tests				
EN 61000-6-1				
Test Condition	Pages	Test Result		
		Pass	Fail	N/A
Electrostatic Discharge (IEC 61000-4-2)	14-15	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Radiated Immunity (IEC 61000-4-3)	16	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Electrical Fast Transient (IEC 61000-4-4)	NIL	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Surges (IEC 61000-4-5)	NIL	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Conducted Immunity (IEC 61000-4-6)	NIL	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Power Frequency Magnetic Field (IEC 61000-4-8)	NIL	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Voltage Dips and Interruption (IEC 61000-4-11)	NIL	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

6 General Remarks

REMARKS:

Client informs that the model D850 have the same technical construction including circuit diagram, PCB Layout, components and component layout, all electrical construction and mechanical construction, with Dictionary, D650. The difference lies only in outlook/ color of the different models. (Client's confirmation letter shown at appendix A)

EMC tests were performed on model: D650

SUMMARY:

- All tests according to the regulations cited on page 5 were

■ - Performed

□ - **Not** Performed

- The Equipment Under Test

■ - **Fulfills** the general approval requirements.

□ - **Does not** fulfill the general approval requirements.

Sample Received Date: December 2, 2019

Testing Start Date: December 3, 2019

Testing End Date: December 6, 2019

- TÜV SÜD HONG KONG LTD. -

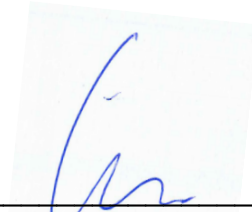
Reviewed by:



Hosea CHAN
EMC Project Engineer



Prepared by:



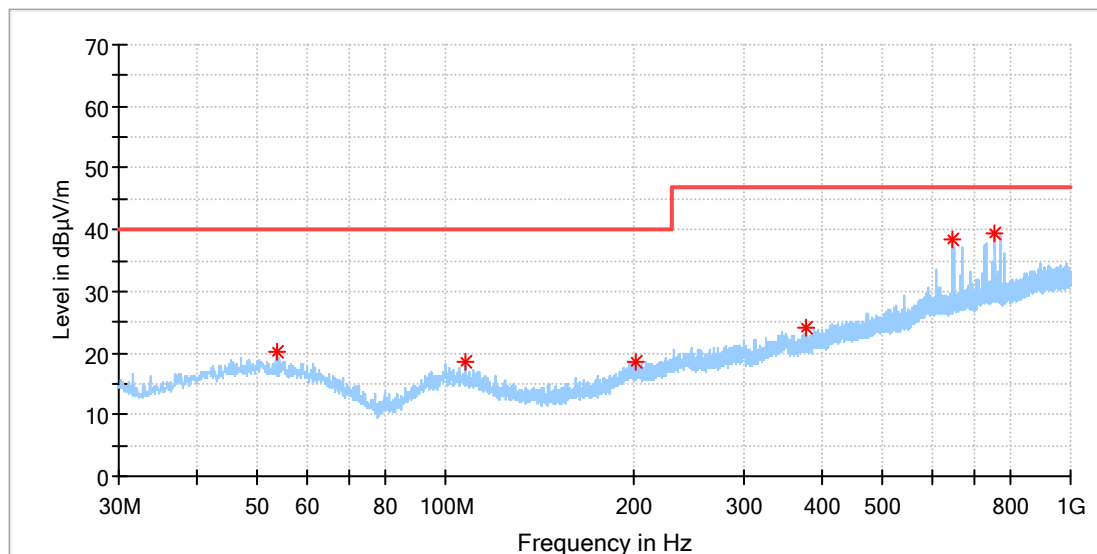
CHAN Kwong Ngai
EMC Test Engineer

7 Emission Test Results

7.1 Radiated Emission Test

EUT: D650
 Op Condition: Normal working
 Test Specification: Antenna: Horizontal
 Comment: 3.0VDC

Test Result
☒ Passed
☐ Not Passed

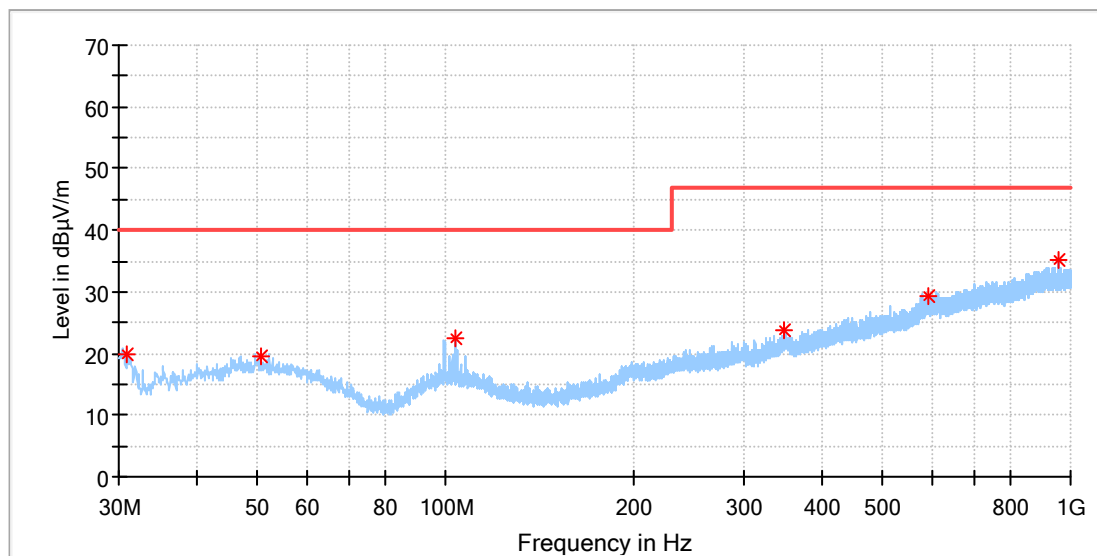


Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)
53.583125	20.20	40.00	19.80
107.296875	18.51	40.00	21.49
201.386875	18.47	40.00	21.53
378.715000	24.10	47.00	22.90
646.495625	38.49	47.00	8.51
758.106250	39.28	47.00	7.72

Radiated Emission Test

EUT: D650
 Op Condition: Normal working
 Test Specification: Antenna: Vertical
 Comment: 3.0VDC

Test Result
☒ Passed
☐ Not Passed



Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)
30.970000	19.93	40.00	20.07
50.491250	19.42	40.00	20.58
103.598750	22.54	40.00	17.46
348.766250	23.77	47.00	23.23
591.569375	29.22	47.00	17.78
959.017500	35.31	47.00	11.69

8 Performance Criteria

A	The apparatus shall continue to operate as intended during the test. No degradation of performance or loss of function is allowed below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus is used as intended. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and from what the user may reasonably expect from the apparatus if used as intended.
B	The apparatus shall continue to operate as intended after the test. No degradation of performance or loss of function is allowed below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus is used as intended. During the test, degradation of performance is allowed, however, no change of actual operating state or stored data is allowed. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and from what the user may reasonably expect from the apparatus if used as intended.
C	Temporary loss of function is allowed, provided the function is self-recoverable or can be restored by the operation of the controls, or by any operation specified in the instructions for use.

9 Immunity Test Results

9.1 Electrostatic Discharge Test

EUT: D650 Ambient Temperature (°C): 24.1
 Op Mode: Normal working Relative Humidity (%): 46.2
 Type of EUT: ☒ Table Top ☐ Floor Stand Atmospheric Pressure (mbar): 1014
 Comment: 3.0VDC

Test regulation: ☒ EN 61000-6-1 ☒ IEC 61000-4-2

Indirect Discharge: ☐ Draw points in the appendix

Point	Contact (kV)		Number and Polarity At each voltage level	
1: VCP-Front Side	<input type="checkbox"/> ..2	<input checked="" type="checkbox"/> ..4	<input type="checkbox"/> ..25 pos	<input type="checkbox"/> ..25 neg
	<input type="checkbox"/> ..6	<input type="checkbox"/> ..8	<input checked="" type="checkbox"/> ..10 pos	<input checked="" type="checkbox"/> ..10 neg
2: VCP-Right Side	<input type="checkbox"/> ..2	<input checked="" type="checkbox"/> ..4	<input type="checkbox"/> ..25 pos	<input type="checkbox"/> ..25 neg
	<input type="checkbox"/> ..6	<input type="checkbox"/> ..8	<input checked="" type="checkbox"/> ..10 pos	<input checked="" type="checkbox"/> ..10 neg
3: VCP-Rear Side	<input type="checkbox"/> ..2	<input checked="" type="checkbox"/> ..4	<input type="checkbox"/> ..25 pos	<input type="checkbox"/> ..25 neg
	<input type="checkbox"/> ..6	<input type="checkbox"/> ..8	<input checked="" type="checkbox"/> ..10 pos	<input checked="" type="checkbox"/> ..10 neg
4: VCP-Left Side	<input type="checkbox"/> ..2	<input checked="" type="checkbox"/> ..4	<input type="checkbox"/> ..25 pos	<input type="checkbox"/> ..25 neg
	<input type="checkbox"/> ..6	<input type="checkbox"/> ..8	<input checked="" type="checkbox"/> ..10 pos	<input checked="" type="checkbox"/> ..10 neg
5: HCP-Front Side	<input type="checkbox"/> ..2	<input checked="" type="checkbox"/> ..4	<input type="checkbox"/> ..25 pos	<input type="checkbox"/> ..25 neg
	<input type="checkbox"/> ..6	<input type="checkbox"/> ..8	<input checked="" type="checkbox"/> ..10 pos	<input checked="" type="checkbox"/> ..10 neg
6: HCP-Right Side	<input type="checkbox"/> ..2	<input checked="" type="checkbox"/> ..4	<input type="checkbox"/> ..25 pos	<input type="checkbox"/> ..25 neg
	<input type="checkbox"/> ..6	<input type="checkbox"/> ..8	<input checked="" type="checkbox"/> ..10 pos	<input checked="" type="checkbox"/> ..10 neg
7: HCP-Rear Side	<input type="checkbox"/> ..2	<input checked="" type="checkbox"/> ..4	<input type="checkbox"/> ..25 pos	<input type="checkbox"/> ..25 neg
	<input type="checkbox"/> ..6	<input type="checkbox"/> ..8	<input checked="" type="checkbox"/> ..10 pos	<input checked="" type="checkbox"/> ..10 neg
8: HCP-Left Side	<input type="checkbox"/> ..2	<input checked="" type="checkbox"/> ..4	<input type="checkbox"/> ..25 pos	<input type="checkbox"/> ..25 neg
	<input type="checkbox"/> ..6	<input type="checkbox"/> ..8	<input checked="" type="checkbox"/> ..10 pos	<input checked="" type="checkbox"/> ..10 neg

Remarks: VCP = Vertical Coupling Plane; HCP = Horizontal Coupling Plane
No Abnormality and malfunction was found during and after test.

Result: ☒ Complies ☐ Does not comply ☐ Photo Done

Criterion Required: B Criterion Met: A

Date: December 6, 2019 Test Engineer: Chan Kwong Ngai

Electrostatic Discharge Test

EUT: D650 Ambient Temperature (°C): 24.1
 Op Mode: Normal working Relative Humidity (%): 46.2
 Type of EUT: ☒ Table Top ☐ Floor Stand Atmospheric Pressure (mbar): 1014
 Comment: 3.0VDC

Test regulation: ☒ EN 61000-6-1 ☒ IEC 61000-4-2

Indirect Discharge: ☐ Draw points in the appendix

Point	Contact (kV)	Air (kV)	Number and Polarity at each voltage level	
1. Each non conductive Location touchable by hand	<input type="checkbox"/> ..2 <input type="checkbox"/> ..4	<input type="checkbox"/> ..2 <input type="checkbox"/> ..4	<input type="checkbox"/> ..25 pos	<input type="checkbox"/> ..25 neg
	<input type="checkbox"/> ..6 <input type="checkbox"/> ..8	<input checked="" type="checkbox"/> ..8 <input type="checkbox"/> ..	<input checked="" type="checkbox"/> ..10 pos	<input checked="" type="checkbox"/> ..10 neg
2. Each conductive Location touchable by hand	<input type="checkbox"/> ..2 <input checked="" type="checkbox"/> ..4	<input type="checkbox"/> ..2 <input type="checkbox"/> ..4	<input type="checkbox"/> ..25 pos	<input type="checkbox"/> ..25 neg
	<input type="checkbox"/> ..6 <input type="checkbox"/> ..8	<input type="checkbox"/> ..8 <input type="checkbox"/> ..	<input checked="" type="checkbox"/> ..10 pos	<input checked="" type="checkbox"/> ..10 neg
3.	<input type="checkbox"/> ..2 <input type="checkbox"/> ..4	<input type="checkbox"/> ..2 <input type="checkbox"/> ..4	<input type="checkbox"/> ..25 pos	<input type="checkbox"/> ..25 neg
	<input type="checkbox"/> ..6 <input type="checkbox"/> ..8	<input type="checkbox"/> ..8 <input type="checkbox"/> ..	<input type="checkbox"/> ..10 pos	<input type="checkbox"/> ..10 neg
4.	<input type="checkbox"/> ..2 <input type="checkbox"/> ..4	<input type="checkbox"/> ..2 <input type="checkbox"/> ..4	<input type="checkbox"/> ..25 pos	<input type="checkbox"/> ..25 neg
	<input type="checkbox"/> ..6 <input type="checkbox"/> ..8	<input type="checkbox"/> ..8 <input type="checkbox"/> ..	<input type="checkbox"/> ..10 pos	<input type="checkbox"/> ..10 neg
5.	<input type="checkbox"/> ..2 <input type="checkbox"/> ..4	<input type="checkbox"/> ..2 <input type="checkbox"/> ..4	<input type="checkbox"/> ..25 pos	<input type="checkbox"/> ..25 neg
	<input type="checkbox"/> ..6 <input type="checkbox"/> ..8	<input type="checkbox"/> ..8 <input type="checkbox"/> ..	<input type="checkbox"/> ..10 pos	<input type="checkbox"/> ..10 neg
6.	<input type="checkbox"/> ..2 <input type="checkbox"/> ..4	<input type="checkbox"/> ..2 <input type="checkbox"/> ..4	<input type="checkbox"/> ..25 pos	<input type="checkbox"/> ..25 neg
	<input type="checkbox"/> ..6 <input type="checkbox"/> ..8	<input type="checkbox"/> ..8 <input type="checkbox"/> ..	<input type="checkbox"/> ..10 pos	<input type="checkbox"/> ..10 neg

Remarks: No Abnormality and malfunction was found during and after test.

Result: ☒ Complies ☐ Does not comply ☐ Photo Done

Criterion Required: B Criterion Met: A

Date: December 6, 2019 Test Engineer: Chan Kwong Ngai

9.2 Radiated Immunity Test

EUT: D650 Ambient Temperature (°C): 23.7
 Op Mode: Normal working Relative Humidity (%): 56.4
 Type of EUT: ☒ Table Top ☐ Floor Stand Atmospheric Pressure (mbar): 1008
 Comment: 3.0VDC

Test regulation: ☒ EN 61000-6-1 ☒ IEC 61000-4-3

Frequency (MHz)	Side	Field Strength level	Criteria	Remarks
80-1000MHz 1400-2000MHz 2000-2700MHz	0	3V/m (rms) 3V/m (rms) 1V/m (rms)	A	NIL
80-1000MHz 1400-2000MHz 2000-2700MHz	90°	3V/m (rms) 3V/m (rms) 1V/m (rms)	A	NIL
80-1000MHz 1400-2000MHz 2000-2700MHz	180°	3V/m (rms) 3V/m (rms) 1V/m (rms)	A	NIL
80-1000MHz 1400-2000MHz 2000-2700MHz	270°	3V/m (rms) 3V/m (rms) 1V/m (rms)	A	NIL

Remarks: No Abnormality and malfunction was found during and after test.

Result: ☒ Complies ☐ Does not comply ☐ Photo Done

Criterion Required: A Criterion Met: A

Date: December 3, 2019 Test Engineer: Chan Kwong Ngai

10 Appendix A - General product information

To: TÜV SÜD HKG Ltd.

Attention: Edmond Fung
From: **TERRY TANG**
Fax No: **852-3636 7976**

Date: December 12, 2019
Total Page (Cover Included): 1

Declaration Letter

Subject: **DECLARATION of Identical**

We: **LEXIBOOK LIMITED**

Officially notify TÜV SÜD HKG Ltd. that the <<**D850**>> have the same technical construction including circuit diagram, PCB Layout, components and component layout, all electrical construction and mechanical construction, with <<**Dictionary**>>, <<**D650**>>. The difference lies only in outlook/ color of the different models.

<<**D850**>>:

<<**D650**>>:

<<**Dictionary**>>:

Applicant: **LEXIBOOK LIMITED**



12th December 2019

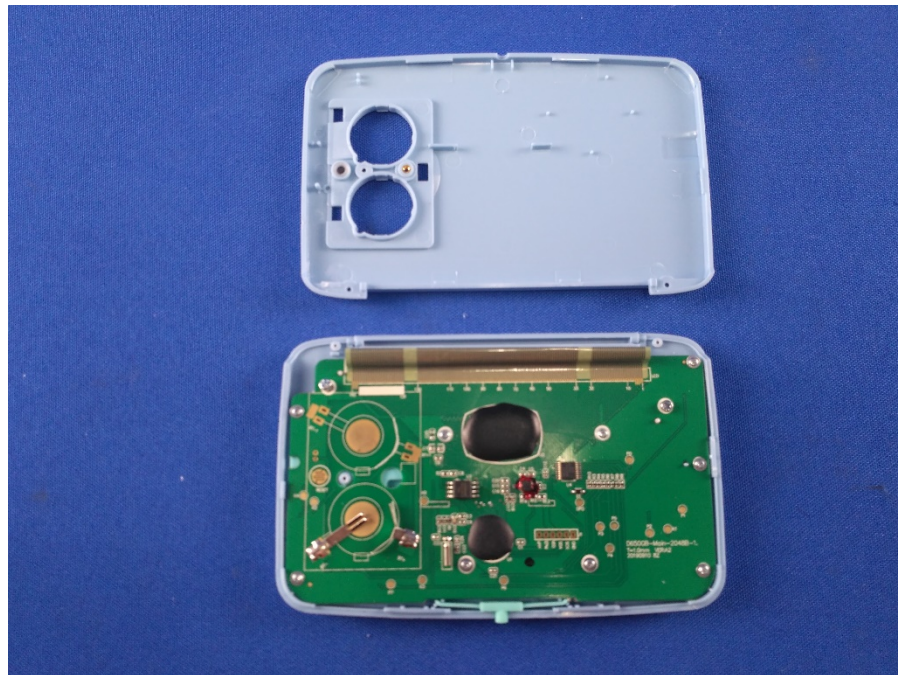
(Date)

(Applicant's authorized signature and company Chop)

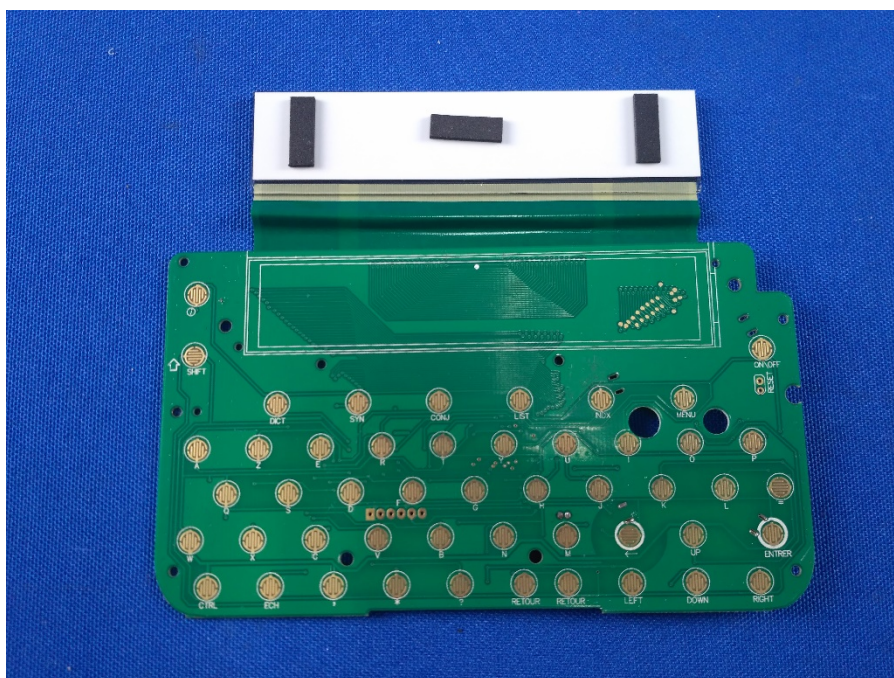
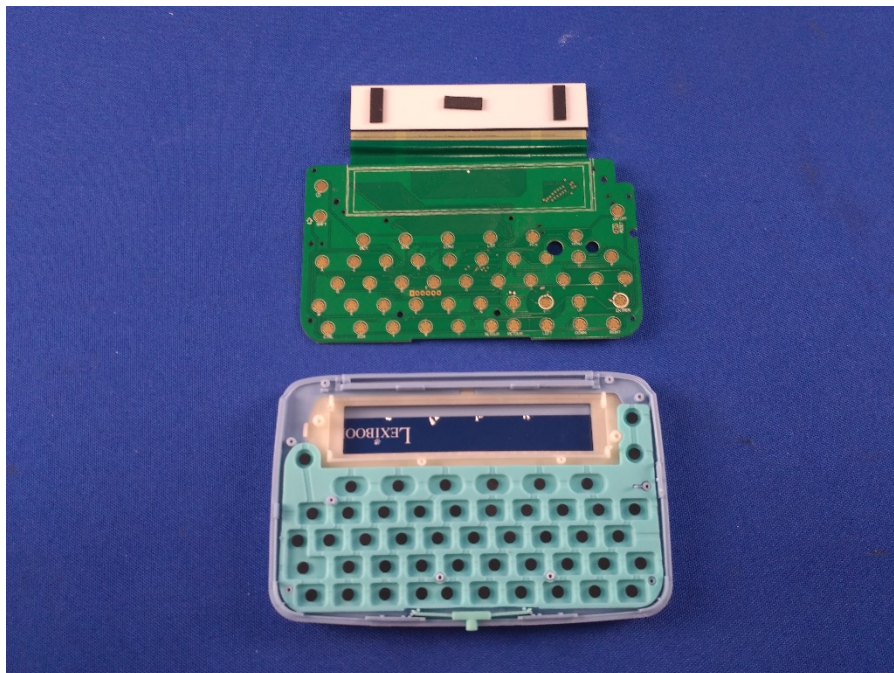
11 Appendix B - Photographs of EUT



Appendix B



Appendix B



Appendix B

