



# **TEST REPORT**

**Product** : Clean Wipe Keyboard Bluetooth

Trade mark :

SEAL (SHIELD)

Model/Type reference : SSKSV099BT

Serial number : N/A

Ratings : DC 5V

FCC ID : X7LSSKSV099BT

Report number : EESZF12050020

**Date** : Dec. 30, 2013

**Regulations** : See below

Test Standards	Results
	PASS

### Prepared for:

Seal Shield Corporation 3105 Riverside Avenue Jacksonville, FL 32205

### Prepared by:

Centre Testing International (Shenzhen) Co., Ltd. Hongwei Industrial Zone, Bao'an 70 District, Shenzhen, Guangdong, China

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Tested

by:

Reviewed by:

( ouisa lu

Approved by:

Lab manager

Date:

Dec. 30, 2013

Check No.: 1702082273





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N/A means not applicable.	

















#### 1. GENERAL INFORMATION

Applicant: Seal Shield Corporation

3105 Riverside Avenue Jacksonville, FL 32205

Manufacturer: CAN Technology Co., Ltd.

No. 827 Sec. 1St, Chung Hua Rd. Chung Li city Taoyuan Hsien

Taiwan

SQT shenzhen SQT Electronics Co., Ltd. Factory:

Bldg B4, Hengji Industry Zone, He Yi Village, Sha Jing Town,

Bao An Area, Shenzhen, Guangdong Province, China

FCC ID: X7LSSKSV099BT

**Product:** Clean Wipe Keyboard Bluetooth

Trade mark:

Model/Type reference: SSKSV099BT

N/A Serial number:

EESZF12050020 Report number:

Sample Received Date: Nov. 15, 2013

Nov. 15, 2013 to Dec. 29, 2013 Sample tested Date:

The above equipment was tested by Centre Testing International for compliance with the requirements set forth in the FCC and IC Rules and the measurement procedure according to ANSI C63.4:2003.

#### 2. PRODUCT INFORMATION

CENTRE TESTING INTERNATIONAL CORPORATION

Items	Description		
Rating	Charging Input: 5V=== Lithium Battery: 3.7V===		
Intentional Transceiver	Intentional Transceiver		
Frequency Range	2402 ~ 2480 MHz		
Channel Number	79 (at intervals of 1MHz)		
Modulation Type	GFSK		
Antenna Type	PCB Antenna		
Antenna Type	0dBi		





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#### 3. TEST SUMMARY

No.	Test Item	Rule	Test Result
1	Conducted Emission (CE)	FCC 15.207	PASS
2	20dB Bandwidth	FCC 15.247(a)(1)	PASS
3	Carrier Frequency Separation	FCC15.247(a)(1)	PASS
4	Number of Hopping Frequency	FCC 15.247(a)(iii)	PASS
5	Time of Occupancy (Dwell Time)	FCC 15.247(a)(iii)	PASS
6	Maximum Peak Conducted Output Power	FCC 15.247(b)(1)	PASS
7	Band edge Emission	FCC 15.247(d)	PASS
8	Spurious RF Conducted Emission	FCC 15.247(d)	PASS
9	Radiated Emission	FCC 15.247(d)	PASS
10	Antenna Requirements *	FCC 15.203	PASS

<sup>\*:</sup> According to Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The EUT has a built in antenna which is a short wire solder on the PCB, this is permanently attached antenna and meets the requirements of this section.

#### 4. MEASUREMENT UNCERTAINTY

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Measurement items			Uncertainty
Conducted Emission Test			3.2 dB
Radiated Emissions / Bandedge Emission			4.5 dB

## 5. SYSTEM TEST CONFIGURATION

### **5.1 JUSTIFICATION**

For emissions testing, the equipment under test (Product) setup to transmit continuously to simplify the measurement methodology. Care was taken to ensure proper power supply voltages during testing. During testing, all cables were manipulated to produce worst case emissions. It was powered by 3.7VDC. Only the worst case data were recorded in this test report.

The signal is maximized through rotation and placement in the three orthogonal axes. The antenna height and polarization are varied during the search for maximum signal level. The antenna height is varied from 1 to 4 meters. Radiated emissions are taken at three meters unless the signal level is too low for measurement at that distance. If necessary, a pre-amplifier is used and/or the test is conducted at a closer distance.

All readings are extrapolated back to the equivalent three meter reading using inverse scaling with distance. Analyzer resolution is 100 kHz or greater for frequencies below 1000 MHz. The resolution is 1 MHz or greater for frequencies above 1000 MHz. The spurious emissions more than 20 dB below the permissible value are not reported.

Radiated emission measurement were performed the lowest radio frequency signal



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generated in the device which is greater than 9 kHz to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.

#### **5.2 PRODUCT EXERCISING SOFTWARE**

The Product exercise program ISRT, (provided by client) used during testing was designed to exercise the various system components in a manner similar to a typical use.

The parameters of test software setting:

During the test, Channel and power controlling software provided by the applicant was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the application and is going to be fixed on the firmware of the end product.

Channel No.	Data rate	Modulation Type
1 to 79	1 Mbps	GFSK

#### 6. TABLE OF TEST MODE

Preliminary tests were performed the entire possible configuration in different modulation type and different data rate according to the following table to find the worst cases. And only one group of the worst - case data for each test item is shown in the report.

Test Items	Mode	Data Rate	Channel
20dB Bandwidth	GFSK	1 Mbps	1 / 40 / 79
Carrier Frequency Separation	GFSK	1 Mbps	1 and 2 /40 and 41 / 78 and 79
Number of Hopping Frequency	GFSK	1 Mbps	1 to 79
Time of Occupancy (Dwell Time)	GFSK	1 Mbps	1 / 40 / 79
Maximum Peak Conducted Output Power	GFSK	1 Mbps	1 / 40 / 79
Band edge Emission	GFSK	1 Mbps	1 / 79
Spurious RF Conducted Emission	GFSK	1 Mbps	1 / 40 / 79
Radiated Emission	GFSK	1 Mbps	1 / 40 / 79

#### 7. TEST EQUIPMENT LIST

Equipment	Manufacturer	Model Number	Serial Number	Due Date
Receiver	Receiver R&S ESCI		100009	07/19/2014
LISN	R&S	ENV216	100098	07/19/2014
3M Chamber & Accessory Equipment	ETS-LINDGREN FACT-3		3510	07/12/2016
Spectrum Analyzer	Agilent	E4443A	MY45300910	01/18/2014
Receiver	R&S	ESCI	100435	07/19/2014
TRILOG Broadband Antenna	schwarzbeck	VULB 9163	618	06/25/2014
Multi device Controller	ETS-LINGREN	2090	00057230	N/A





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Horn Antenna	ETS-LINGREN	3117	00057407	07/19/2014
Microwave Preamplifier	Agilent	8449B	3008A02425	04/16/2014
Spectrum Analyzer	R&S	FSP40	100416	07/06/2014

## 8. SUPPORT EQUIPMENT LIST

No.	Device Type	Brand	Model	Series No.	Data Cable	Remark
1.	Notebook	DELL	Vostro 3400	GYQTVP1	N/A	FCC DOC
2.	Mouse	L.Selectron	M004	02284699	Un-shielded 1.2M	FCC DOC

#### Notes:

- 1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
- 2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.





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#### 9. CONDUCTED EMISSION TEST

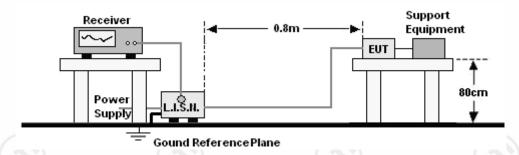
#### 9.1. LIMITS

Frequency range	Limits dE	β(μV)
(MHz)	Quasi-peak	Average
0,15 to 0,50	66 to 56	56 to 46
0,50 to 5	56	46
5 to 30	60	50

**NOTE:** 1. The lower limit shall apply at the transition frequencies.

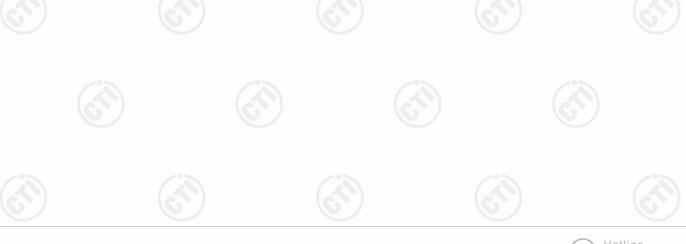
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 to 0.50 MHz.

#### 9.2. BLOCK DIAGRAM OF TEST SETUP



#### 9.3. PROCEDURE OF CONDUCTED EMISSION TEST

- a. The Product was placed on a nonconductive table above the horizontal ground reference plane, and 0.4 m from the vertical ground reference plane, and connected to the main through Line Impedance Stability Network (L.I.S.N).
- b. The RBW of the receiver was set at 9 kHz in 150 kHz ~ 30MHz with Peak and AVG detector in Max Hold mode. Run the receiver's pre-scan to record the maximum disturbance generated from Product in all power lines in the full band.
- c. For each frequency whose maximum record was higher or close to limit, measure its QP and AVG values and record.





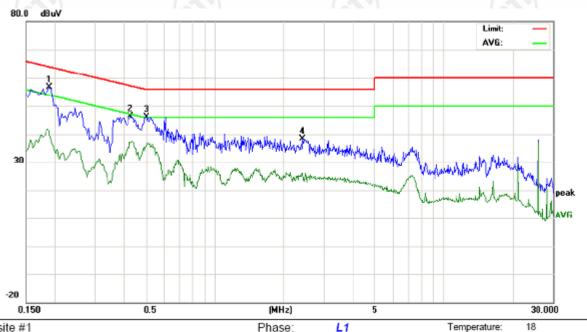






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### 9.4. GRAPHS AND DATA



Site site #1

Limit: FCC Class B CE (QP)

EUT: Clean Wipe Keyboard Bluetooth

M/N: SSKSV099BT

Mode: hopping off Keeping TX

Note:

No.	Freq.		ding_Le dBuV)	vel	Correct Factor	ctor (dBuV)			Limit (dBuV)		Margin (dB)			
	MHz	Peak	QP	AVG	dB	peak	QP	AVG	QP	AVG	QP	AVG	P/F	Comment
1	0.1900	46.73	43.68	30.14	9.79	56.52	53.47	39.93	64.03	54.03	-10.56	-14.10	Р	
2	0.4300	36.58	33.52	27.45	9.80	46.38	43.32	37.25	57.25	47.25	-13.93	-10.00	Ρ	
3	0.5020	36.41	33.42	26.39	9.80	46.21	43.22	36.19	56.00	46.00	-12.78	-9.81	Ρ	
4	2.4340	28.36	20.96	14.57	9.91	38.27	30.87	24.48	56.00	46.00	-25.13	-21.52	Р	

Power:









Humidity:

45 %









AC 120V/60Hz



















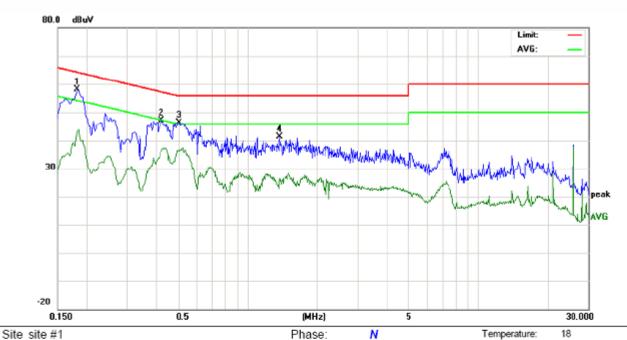
Humidity:

45 %



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AC 120V/60Hz

Limit: FCC Class B CE (QP)

EUT: Clean Wipe Keyboard Bluetooth

M/N: SSKSV099BT

Mode: hopping off Keeping TX

Note:

No.	Reading_Level Freq. (dBuV)		Correct Factor	Measurement (dBuV)			Limit (dBuV)		Margin (dB)					
	MHz	Peak	QP	AVG	dB	peak	QP	AVG	QP	AVG	QP	AVG	P/F	Comment
1	0.1819	48.45	43.77	30.58	9.78	58.23	53.55	40.36	64.39	54.39	-10.84	-14.03	Ρ	
2	0.4220	37.26	32.87	26.07	9.80	47.06	42.67	35.87	57.41	47.41	-14.74	-11.54	Р	
3	0.5020	36.66	33.43	26.51	9.80	46.46	43.23	36.31	56.00	46.00	-12.77	-9.69	Ρ	
4	1.3779	31.59	26.15	14.61	9.84	41.43	35.99	24.45	56.00	46.00	-20.01	-21.55	Р	

Power:



















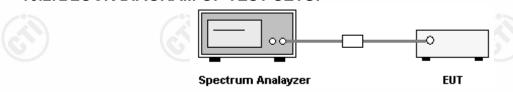




# 10. 20DB BANDWIDTH OCCUPIED BANDWIDTH MEASUREMENT 10.1. LIMITS

None

#### 10.2. BLOCK DIAGRAM OF TEST SETUP

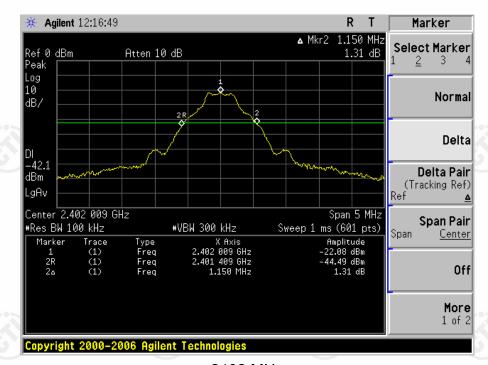


### 10.3. TEST PROCEDURE

- 1. The transmitter output (antenna port) was connected to the spectrum analyzer.
- 2. Set spectrum analyzer's RBW and VBW to applicable value with Peak in Max Hold.
- 3. A PEAK output reading and 20dB OBW function in spectrum analyzer were taken.

#### 10.4. TEST RESULT

Frequency (MHz)	20 dB BW (MHz)
2402	1.150
2441	1.108
2480	1.150



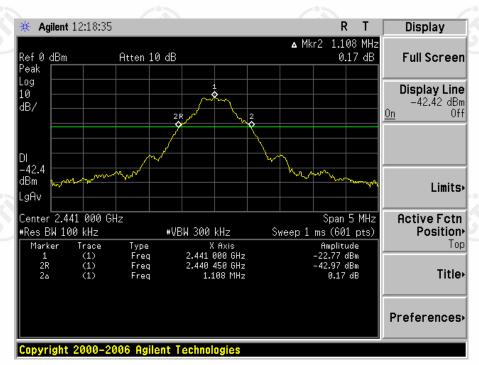
2402 MHz



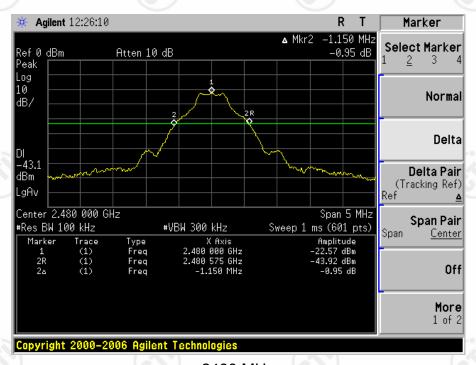








2441 MHz



2480 MHz



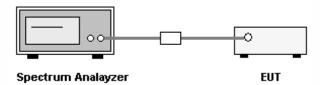


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# 11. CARRIER FREQUENCY SEPARATION 11.1. LIMITS

Frequency hopping systems operating in the 2400-2483.5MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125mW.

#### 11.2. BLOCK DIAGRAM OF TEST SETUP

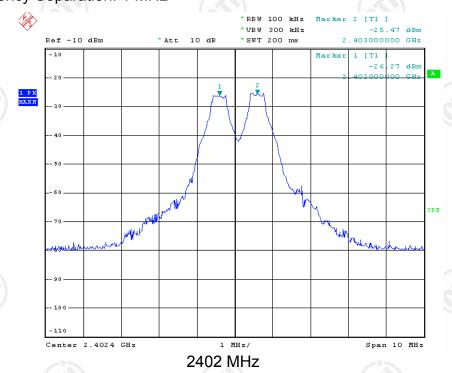


#### 11.3. TEST PROCEDURE

- 1. The transmitter output (antenna port) was connected to the spectrum analyzer.
- 2. Set spectrum analyzer's RBW and VBW to applicable value with Peak in Max Hold. The original channel's carrier frequency was taken.
- 3. Make Product transmit in adjacent channel.
- 4. Use the delta maker button on spectrum analyzer to read the channel separation from the adjacent channel to original channel.

#### 11.4. TEST RESULT

Carrier Frequency Separation: 1 MHz



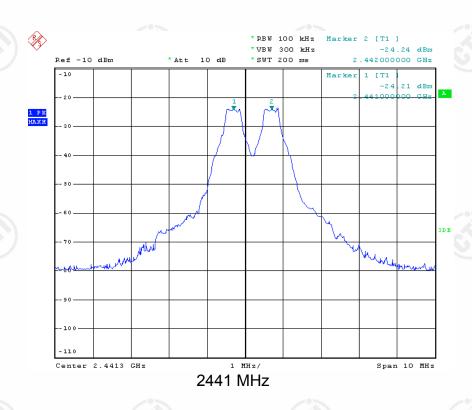


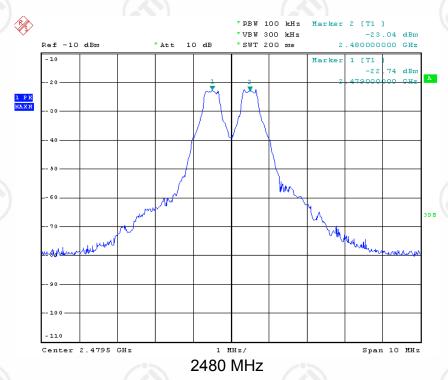














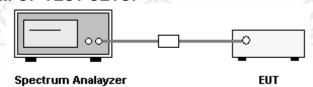




# 12. NUMBER OF HOPPING FREQUENCY 12.1. LIMITS

Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels.

#### 12.2. BLOCK DIAGRAM OF TEST SETUP

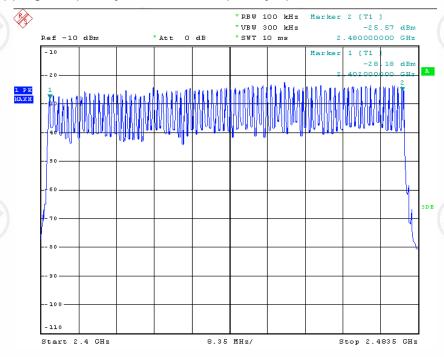


#### 12.3. TEST PROCEDURE

- 1. The transmitter output (antenna port) was connected to the spectrum analyzer.
- 2. Set spectrum analyzer to Peak in Max Hold.
- 3. Make Product work continually, till all operation channels were recorded.

#### 12.4. TEST RESULT

Number of Hopping Frequency is 79, with frequency space = 1MHz.





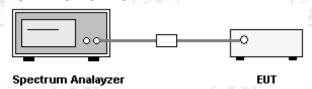


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# 13. TIME OF OCCUPANCY (DWELL TIME) 13.1. LIMITS

The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

#### 13.2. BLOCK DIAGRAM OF TEST SETUP



#### 13.3. TEST PROCEDURE

- 1. The transmitter output (antenna port) was connected to the spectrum analyzer.
- 2. Set spectrum analyzer's RBW and VBW to applicable value with Peak in Max Hold.
- 3. Measured pulse time and Time separation.

#### 13.4. TEST RESULT

Frequency (MHz)	Pulse	Wide(ms)	Dwell Time (ms)	Limit (s)	Result (Pass / Fail)
	DH1	0.39	124.8		
2402	DH3	DH3 1.66 265.6		0.4	Pass
	DH5	2.90	309.3		Ch
	DH1	0.40	128.0	6.	0
2441	DH3	1.66	265.6	0.4	Pass
0.5	DH5	2.90	309.3		0
(61)	DH1	0.39	124.8		$C_{(i,j)}$
2480	DH3	1.66	265.6	0.4	Pass
	DH5	2.90	309.3		

#### Remark:

DH1 Packet permit maximum 1600 / 79 / 2 = 10.12 hops per second in each channel (1 time slot RX, 1 time slot TX). So, total hops is  $10.12 \times 31.6 = 320$ 

DH3 Packet permit maximum 1600 / 79 / 4 = 5.06 hops per second in each channel (3 time slots RX, 1 time slot TX). So, total hops is  $5.06 \times 31.6 = 160$ 

DH5 Packet permit maximum 1600/79/6 = 3.37 hops per second in each channel (5 time slots RX, 1 time slot TX). So, total hops is  $3.37 \times 31.6 = 106.67$ 



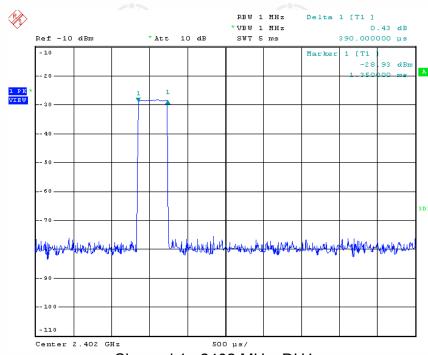




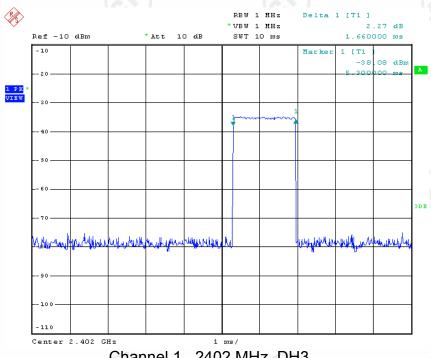








Channel 1 2402 MHz DH1



Channel 1\_ 2402 MHz\_DH3



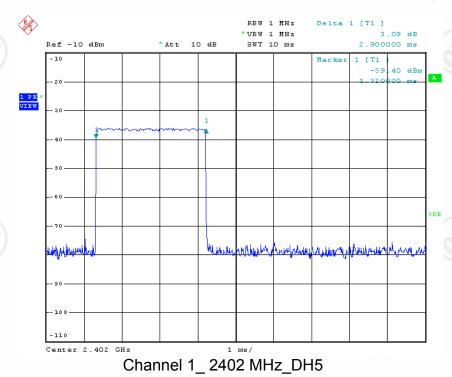


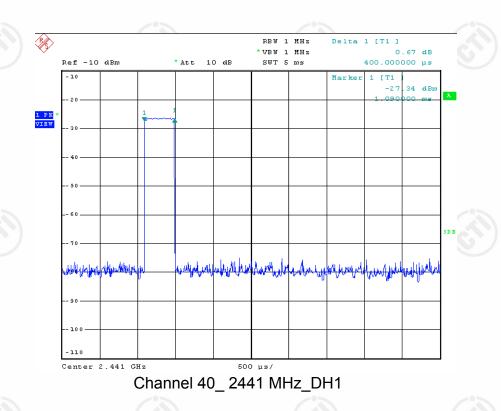






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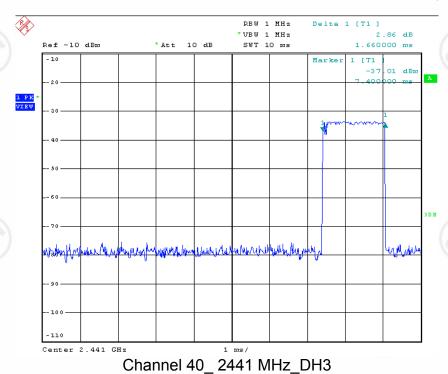


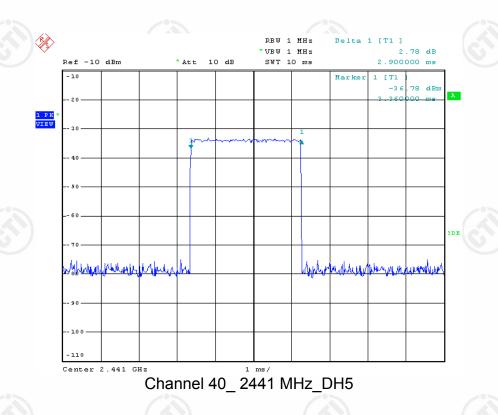






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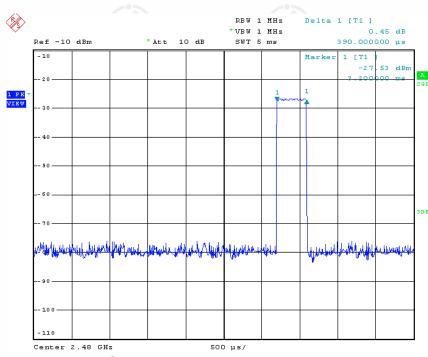




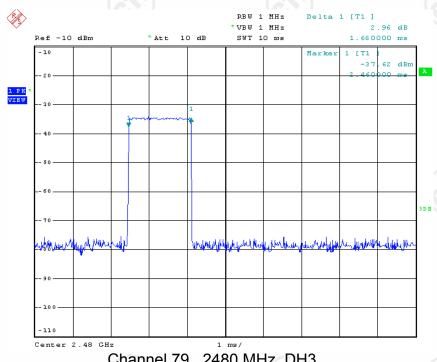








Channel 79\_ 2480 MHz\_DH1



Channel 79\_ 2480 MHz\_DH3









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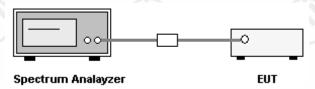


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# 14. MAXIMUM PEAK CONDUCTED OUTPUT POWER MEASUREMENT 14.1. LIMITS

The limit for peak output power is 0.125Watt (21dBm).

### 14.2. BLOCK DIAGRAM OF TEST SETUP



#### 14.3. TEST PROCEDURE

- 1. The transmitter output (antenna port) was connected to the spectrum analyzer.
- 2. Set spectrum analyzer's RBW and VBW to applicable value with Peak in Max Hold.
- 3. Record the channel power directly from the spectrum analyzer.

#### 14.4. TEST RESULT

_				
	Frequency (MHz)	Peak Power (dBm)	Limit (dBm)	Result (Pass / Fail)
	2402	-4.82	21	Pass
	2441	-4.95	21	Pass
	2480	-5.07	21	Pass



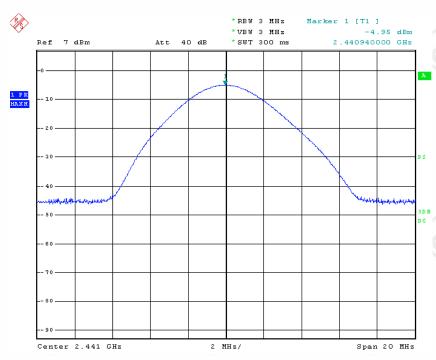








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2441MHz











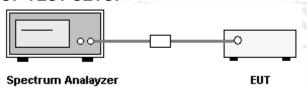


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# 15. BAND EDGE EMISSION MEASUREMENT 15.1. LIMITS

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a).

#### 15.2. BLOCK DIAGRAM OF TEST SETUP



#### 15.3. TEST PROCEDURE

- 1. Set spectrum analyzer's RBW and VBW to applicable value with Peak in Max Hold.
- 2. Record the emission drops at the band-edge relative to the highest fundamental emission level.
- 3. Use the marker-delta method to determine band-edge compliance as required.

#### 15.4. TEST RESULT

Pass.



400-6788-333

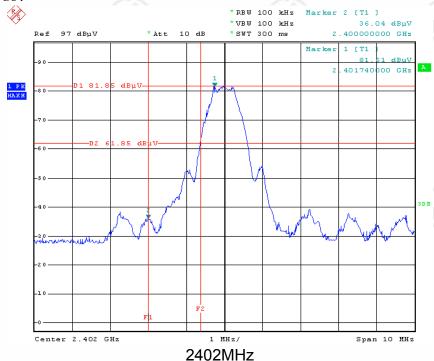


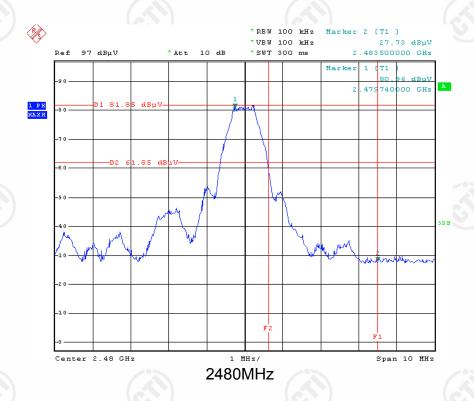






Hopping off mode:











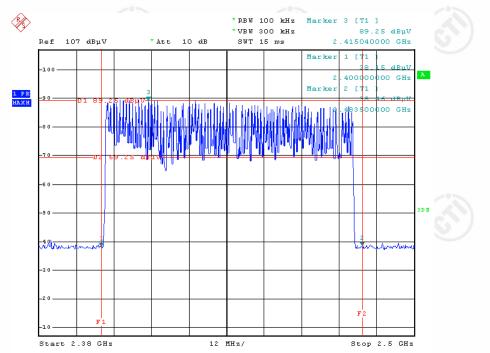


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Hopping mode:























































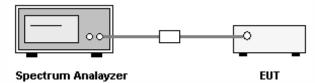


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# 16. SPURIOUS RF CONDUCTED EMISSIONS MEASUREMENT 16.1. LIMITS

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.

#### 16.2. BLOCK DIAGRAM OF TEST SETUP

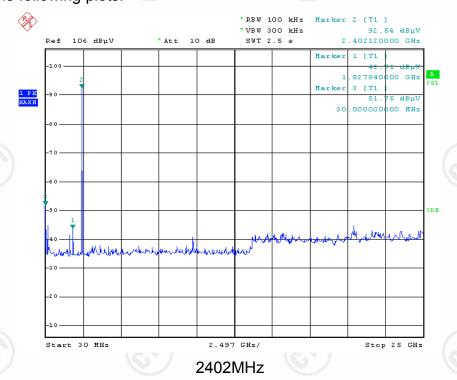


#### **16.3. TEST PROCEDURE**

- 1. The transmitter output (antenna port) was connected to the spectrum analyzer.
- 2. Set spectrum analyzer's RBW and VBW to applicable value with Peak in Max Hold.
- 3. Record the peak level of the in-band emission and all spurious emissions from the lowest frequency generated in the Product up through the 10th harmonic.

#### 16.4. TEST RESULT

Please see the following plots.





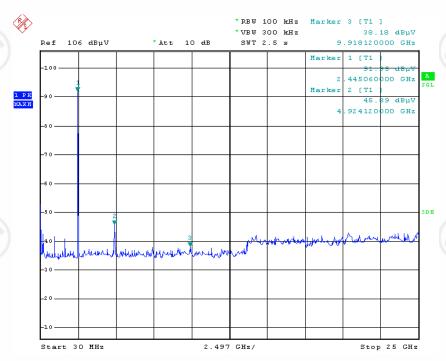




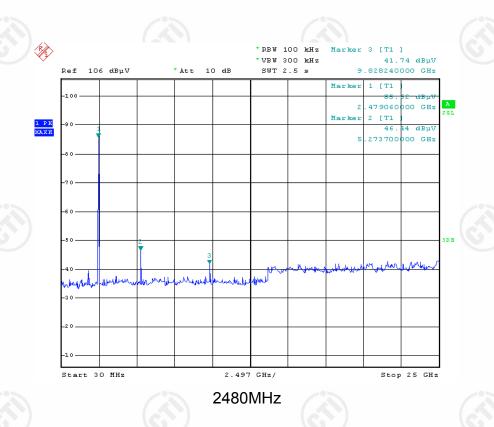




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2441MHz







# 17. RADIATED EMISSIONS MEASUREMENT 17.1. LIMITS

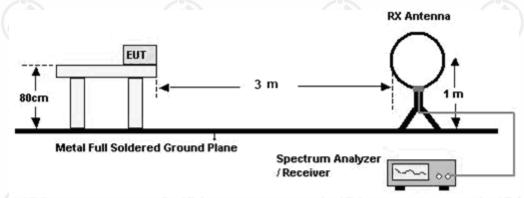
The field strength of any emissions, which appear outside of operating frequency band and restricted band specified on FCC 15.205(a), shall not exceed the general radiated emission limits as below.

Frequency (MHz)	Field strength (μV/m)	Distance (m)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

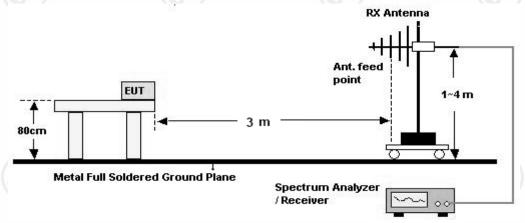
Note: the tighter limit applies at the band edges.

#### 17.2. BLOCK DIAGRAM OF TEST SETUP

For radiated emissions from 9kHz to 30MHz



For radiated emissions from 30 - 1000MHz



For radiated emissions from 1GHz to 25GHz

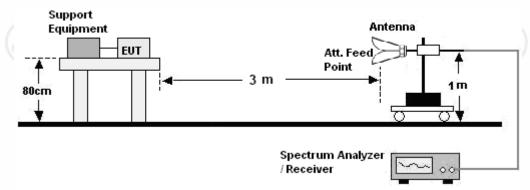








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### 17.3. TEST PROCEDURE

#### 30MHz ~ 1GHz:

- a. The Product was placed on the non-conductive turntable 0.8m above the ground at a chamber
- b. Set the spectrum analyzer/receiver in Peak detector, Max Hold mode, and 100 kHz RBW. Record the maximum field strength of all the pre-scan process in the full band when the antenna is varied between 1~4 m in both horizontal and vertical, and the turntable is rotated from 0 to 360 degrees.
- c. For each frequency whose maximum record was higher or close to limit, measure its QP value (120 kHz RBW): vary the antenna's height and rotate the turntable from 0 to 360 degrees to find the height and degree where Product radiated the maximum emission, then set the test frequency analyzer/receiver to QP Detector and specified bandwidth with Maximum Hold Mode, and record the maximum value.

#### **Below 30MHz**

- a. The Product is placed on a turntable 0.8 meters above the ground in the chamber, 3 meter away from the antenna (loop antenna). The maximum values of the field strength are recorded by adjusting the polarizations of the test antenna and rotating the turntable.
- b. For each suspected emission, the Product was arranged to its worst case and then turn table was turned from 0 degrees to 360 degrees to find the maximum reading.
- c. The test frequency analyzer system was set to Peak Detect (300Hz RBW in 9kHz to 150kHz and 10kHz RBW in 150kHz to 30MHz) Function and Specified Bandwidth with Maximum Hold Mode.

#### Above 1GHz:

- a. The EUT was placed on the non-conductive turntable 0.8 m above the ground at a chamber.
- b. Set the spectrum analyzer/receiver in Peak detector, Max Hold mode, and 1MHz RBW. Record the maximum field strength of all the pre-scan process in the full band when the antenna is varied in both horizontal and vertical, and the turntable is rotated from 0 to 360 degrees.



















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#### 17.4. TEST RESULT

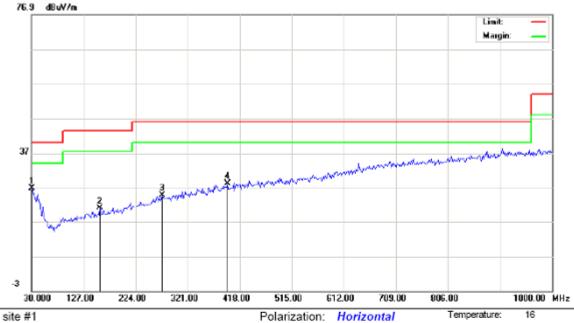
#### A. Below 30MHz:

No emissions were found higher than the background below 30MHz and background is lower than the limit, so it deems to compliance with the limit without recorded.

#### B. 30MHz $\sim$ 1GHz:

The test data of low channel, middle channel and high channel are almost same in frequency bands 30MHz to 1GHz, and the data of middle channel are chosen as representative in below:

#### H:



Site site #1

Limit: FCC PART15.207

EUT: Clean Wipe Keyboard Bluetooth

M/N: SSKSV099BT

Mode: hopping off Keeping TX

Note:

	No	1 30.0000 7.29		evel	Correct Factor	Measurement (dBuV/m)		Limit (dBuV/m)		Margin (dB)					
_		MHz	Peak	QP	AVG	dB	peak	QP	AVG	QP	AVG	QP	AVG	P/F	Comment
Ī	1	30.0000	7.29			19.55	26.84			40.00		-13.16		Р	
	2	157.7167	9.13			11.81	20.94			43.50		-22.56		Р	
	3	274.1167	8.95			15.86	24.81			46.00		-21.19		Р	
	4	395.3667	9.11			19.11	28.22			46.00		-17.78		Р	

Power:









Humidity:





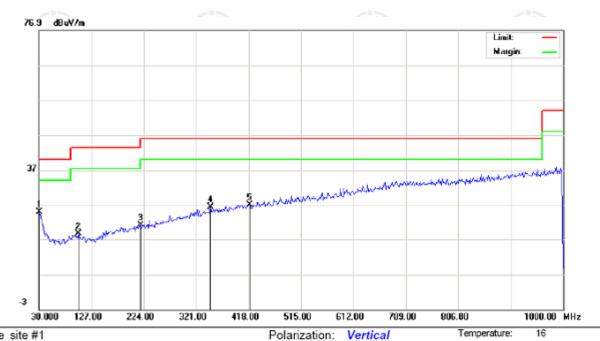






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V:



DC 5V

Site site #1 Limit: FCC PART15.207

EUT: Clean Wipe Keyboard Bluetooth

M/N: SSKSV099BT

Mode: hopping off Keeping TX

Note:

	No.	Freq.		ling_L∈ BuV)	evel	Correct Factor		easurem dBuV/m		Lin (dBu'		Mai (d	rgin IB)		
-		MHz	Peak	QP	AVG	dB	peak	QP	AVG	QP	AVG	QP	AVG	P/F	Comment
	1	30.0000	7.34			17.63	24.97			40.00		-15.03		Р	
_	2	102.7500	8.30			10.24	18.54			43.50		-24.96		Р	
_	3	217.5333	8.71			12.54	21.25			46.00		-24.75		Р	
_	4	346.8667	9.41			17.03	26.44			46.00		-19.56		Р	
	5	419.6167	8.27			18.69	26.96			46.00		-19.04		Р	

Power:









Humidity:

52 %























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### C. Above 1GHz:

	Test	Results-(Me	easurement	Distance: 31	m)_Channel	low	
_	Mea	asurement v	alue	Li	mit	Antenna	Result
Frequency (MHz)	PK (dBµV/m)	AV factor (dB)	ΑV (dBμV/m)	PK (dBµV/m)	ΑV (dBμV/m)	(H/V)	(P/F)
2390.000	30.36	)	(6	74	54	Н	Р
2402.000*	93.21					Н	Р
2483.500	31.02			74	54	Н	Р
4804.000	42.21	(	<u> </u>	74	54	Н	Р
(6				10	5	16	
2390.000	30.66			74	54	V	Р
2402.000*	89.23					V	Р
2483.500	31.25		/	74	54	V	Р
4804.000	39.26	N)	(6	74	54	V	Р

<sup>\*:</sup> fundamental frequency

	Test R	esults-(Mea	surement D	istance: 3m)	_Channel n	niddle	
_	Mea	asurement v	value .	Li	mit	Antenna	Result
Frequency (MHz)	PK (dBµV/m)	AV factor (dB)	AV (dBμV/m)	PK (dBµV/m)	AV (dBμV/m)	(H/V)	(P/F)
2390.000	31.23			74	54	Н	Р
2441.000*	92.63	<u> </u>	(	<u> </u>	(	H	Р (
2483.500	30.66	)	(6	74	54	Н	Р
4882.000	39.35			74	54	Н	Р
2390.000	31.25	/		74	54	V	Р
2441.000*	89.96	(6	N)	(6	N)	V	Р
2483.500	30.25			74	54	V	Р
4882.000	36.63			74	54	V	Р

<sup>\*:</sup> fundamental frequency











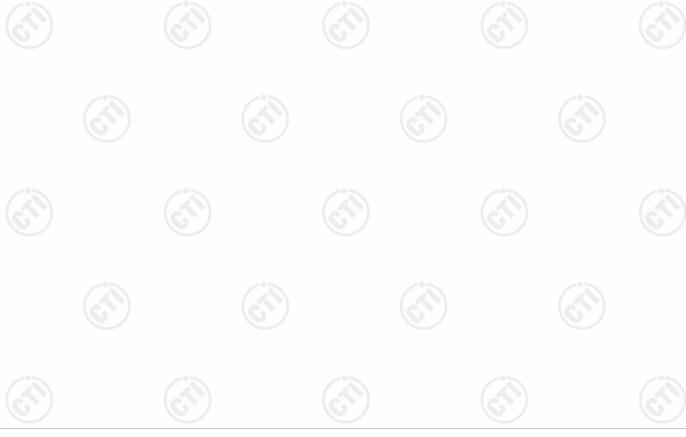
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	Test	Results-(Me	asurement l	Distance: 3n	n)_Channel	high		
_	Mea	asurement v	value	Li	mit	Antenna	Result (P/F)	
Frequency (MHz)	PK (dBµV/m)	AV factor (dB)	AV (dBμV/m)	PK (dBµV/m)	ΑV (dBμV/m)	(H/V)		
2390.000	31.25		(	74	54	Н	Р	
2480.000*	91.36	)		)	(	Н	Р	
2483.500	30.66			74	54	Н		
4960.000	38.23			74	54	Н	Р	
2390.000	31.63	(6	<u> </u>	74	54	V	Р	
2480.000*	87.63					V	Р	
2483.500	31.02			74	54	V	Р	
4960.000	35.66	(E)	(	74	54	V	Р	

<sup>\*:</sup> fundamental frequency

#### Remark:

- 1. The above tables show that the frequencies peak data are all below the average limit, so the average data of these frequencies are deems to fulfill the average limits and not reported.
- 2. According to the emissions below 18GHz, the data curve is lower than the limit, and the data between 18GHz to 25GHz will be lower than the limit, so they are not recorded in the report.
- 3. All outside of operating frequency band and restricted band specified are below 15.209.





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# **APPENDIX 1 PHOTOGRAPHS OF TEST SETUP**



**CONDUCTED EMISSION TEST SETUP** 



TEST SETUP OF RADIATED EMISSION (30MHz-1GHz)



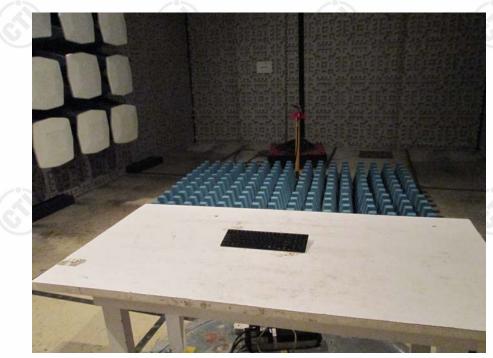








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**TEST SETUP OF RADIATED EMISSION (above 1GHz)** 





















































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## **APPENDIX 2 EXTERNAL PHOTOGRAPHS OF PRODUCT**



View of Product-1



View of Product-2



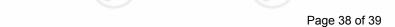




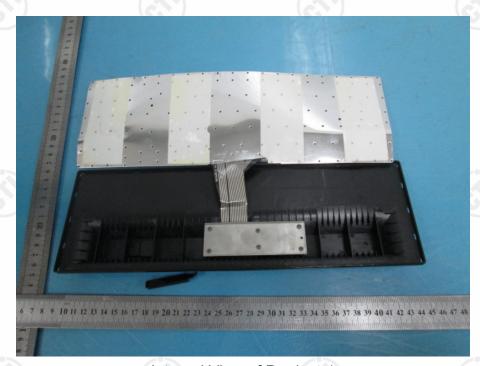




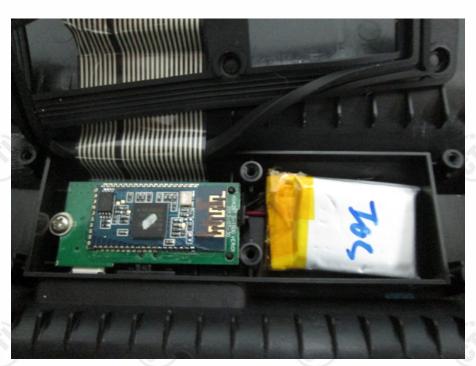




## **APPENDIX 3 INTERNAL PHOTOGRAPHS OF PRODUCT**



Internal View of Product-1

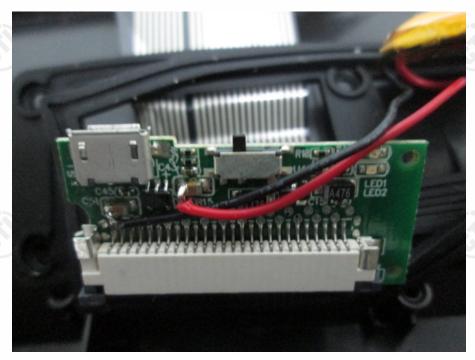


Internal View of Product-2





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Internal View of Product-3



Internal View of Product-4

## \*\*\* End of report \*\*\*

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