FCC RF Test Report

APPLICANT : FUJITSU LIMITED

EQUIPMENT: STYLISTIC Q series Tablet PC

BRAND NAME : FUJITSU

MODEL NAME : Q738

FCC ID : EJE-WB0104

STANDARD : FCC Part 15 Subpart C §15.247

CLASSIFICATION : (DTS) Digital Transmission System

This is a partial report. The product was received on Nov. 18, 2017 and testing was completed on Nov. 29, 2017. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

Reviewed by: Joseph Lin / Supervisor

Approved by: Jones Tsai / Manager

SPORTON INTERNATIONAL INC.

No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C.

SPORTON INTERNATIONAL INC.

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1190

: Rev. 01

Report No.: FR7N1801B

Report Template No.: BU5-FR15CBT4.0 Version 2.0

Report Version

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR7N1801B	Rev. 01	Initial issue of report	Jan. 11, 2018

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SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	15.247(b)(3)	Peak Output Power	≤ 30dBm	Pass	-
3.2	15.247(d)	Radiated Band Edges and Spurious Emission	15.209(a) & 15.247(d)	Pass	Under limit 3.95 dB at 197.130 MHz
3.3	15.203 & 15.247(b)	Antenna Requirement	N/A	Pass	-

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1 General Description

1.1 Applicant

FUJITSU LIMITED

1-1, Kamikonadaka 4-chome, Nakahara-ku, Kawasaki, 211-8588 Japan

1.2 Manufacturer

FUJITSU LIMITED

1-1, Kamikodanaka 4-chome, Nakahara-ku, Kawasaki, 211-8588 Japan

1.3 Product Feature of Equipment Under Test

Bluetooth, Wi-Fi 2.4GHz 802.11b/g/n, Wi-Fi 5GHz 802.11a/n/ac, and 60GHz

Product Specification subjective to this standard					
Integrated WLAN Module	Brand Name: Intel Model Name: 8265NGW				
Antenna Type	WLAN: <ant. 1="">: PIFA Antenna <ant. 2="">: PIFA Antenna Bluetooth: PIFA Antenna 60GHz: Integral Antenna</ant.></ant.>				

1.4 Modification of EUT

No modifications are made to the EUT during all test items.

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1.5 Testing Location

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code: 1190) and the FCC designation No. TW1190 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC Test.

Test Site	SPORTON INTERNATIONAL INC.				
	No. 52, Hwa Ya 1 st Rd., Hwa Ya Technology Park,				
Test Site Location	Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C.				
rest Site Location	TEL: +886-3-327-3456				
	FAX: +886-3-328-4978				
Took Site No	Sporton S	Site No.			
Test Site No.	TH05-HY	03CH07-HY			

Note: The test site complies with ANSI C63.4 2014 requirement.

1.6 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- FCC Part 15 Subpart C §15.247
- FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v04
- ANSI C63.10-2013

Remark: All test items were verified and recorded according to the standards and without any deviation during the test.

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2 Test Configuration of Equipment Under Test

2.1 Carrier Frequency Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
	0	2402	21	2444
	1	2404	22	2446
	2	2406	23	2448
	3	2408	24	2450
	4	2410	25	2452
	5	2412	26	2454
	6	2414	27	2456
	7 8 9	2416	28	2458
		2418	29	2460
		2420	30	2462
2400-2483.5 MHz	10	2422	31	2464
	11	2424	32	2466
	12	2426	33	2468
	13	2428	34	2470
	14	2430	35	2472
	15	2432	36	2474
	16	2434	37	2476
	17	2436	38	2478
	18	2438	39	2480
	19	2440	-	-
	20	2442	-	-

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2.2 Test Mode

The RF output power was recorded in the following table:

		Bluetooth – LE RF Output Peak Power
Channal	Frequency	Data Rate / Modulation
Channel	rrequericy	GFSK
		1Mbps
Ch00	2402MHz	6.10 dBm
Ch19	2440MHz	<mark>6.17</mark> dBm
Ch39	2480MHz	5.89 dBm

		Bluetooth – LE RF Output Average Power
Channal	Eroguenev	Data Rate / Modulation
Channel	Frequency	GFSK
		1Mbps
Ch00	2402MHz	5.32 dBm
Ch19	2440MHz	<mark>5.37</mark> dBm
Ch39	2480MHz	5.05 dBm

a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated: radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (X plane) were recorded in this report.

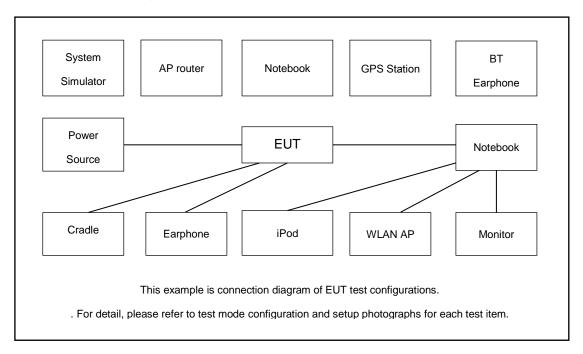
The following summary table is showing all test modes to demonstrate in compliance with the standard.

Summary table of Test Cases								
Radiated	Mode 1: Bluetooth Tx CH00_2402 MHz_1Mbps							
TCs	Mode 2: Bluetooth Tx CH19_2440 MHz_1Mbps							
ics	Mode 3: Bluetooth Tx CH39_2480 MHz_1Mbps							

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2.3 Connection Diagram of Test System



2.4 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	iPod Earphone	Apple	N/A	Verification	N/A	N/A

2.5 EUT Operation Test Setup

The RF test items, an engineering test program "Tool" was provided and enabled to make EUT continuous transmit/receive.

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3 Test Result

3.1 Output Power Measurement

3.1.1 Limit of Output Power

For systems using digital modulation in the 2400-2483.5MHz, the limit for peak output power is 30dBm. If transmitting antenna of directional gain greater than 6dBi is used, the peak output power from the intentional radiator shall be reduced below the above stated value by the amount in dB that the directional gain of the antenna exceeds 6 dBi. In case of point-to-point operation, the limit has to be reduced by 1dB for every 3dB that the directional gain of the antenna exceeds 6dBi.

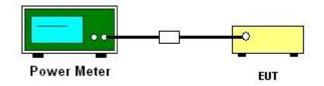
3.1.2 Measuring Instruments

The section 4.0 of List of Measuring Equipment of this test report is used for test.

3.1.3 Test Procedures

- The testing follows the Measurement Procedure of FCC KDB No. 558074 DTS D01 Meas.
 Guidance v04 section 9.1.3 PKPM1 Peak power meter method.
- 2. The RF output of EUT was connected to the power meter by RF cable and attenuator. The path loss was compensated to the results for each measurement.
- 3. Set to the maximum power setting and enable the EUT transmit continuously.
- 4. Measure the conducted output power and record the results in the test report.

3.1.4 Test Setup



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3.2 Radiated Band Edges and Spurious Emission Measurement

3.2.1 Limit of Radiated Band Edges and Spurious Emission

In any 100 kHz bandwidth outside the intentional radiator frequency band, all harmonics/spurious must be at least 20 dB below the highest emission level within the authorized band. If the output power of this device was measured by spectrum analyzer, the attenuation under this paragraph shall be 30 dB instead of 20 dB. In addition, radiated emissions which fall in the restricted bands must also comply with the limits as below.

Frequency	Field Strength	Measurement Distance		
(MHz)	(microvolts/meter)	(meters)		
0.009 - 0.490	2400/F(kHz)	300		
0.490 – 1.705	24000/F(kHz)	30		
1.705 – 30.0	30	30		
30 – 88	100	3		
88 – 216	150	3		
216 - 960	200	3		
Above 960	500	3		

3.2.2 Measuring Instruments

The section 4.0 of List of Measuring Equipment of this test report is used for test.

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3.2.3 Test Procedures

- 1. The testing follows FCC KDB Publication No. 558074 D01 DTS Meas. Guidance v04.
- 2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level.
- 3. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
- 4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
- 5. Corrected Reading: Antenna Factor + Cable Loss + Read Level Preamp Factor = Level
- 6. For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
- 7. Use the following spectrum analyzer settings:
 - (1) Span shall wide enough to fully capture the emission being measured;
 - (2) Set RBW=100 kHz for f < 1 GHz; VBW ≥ RBW; Sweep = auto; Detector function = peak; Trace = max hold;
 - (3) Set RBW = 1 MHz, VBW= 3MHz for $f \ge 1$ GHz for peak measurement. For average measurement:
 - VBW = 10 Hz, when duty cycle is no less than 98 percent.
 - VBW ≥ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.

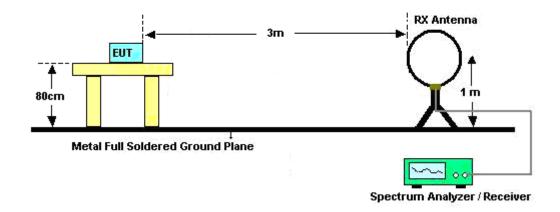
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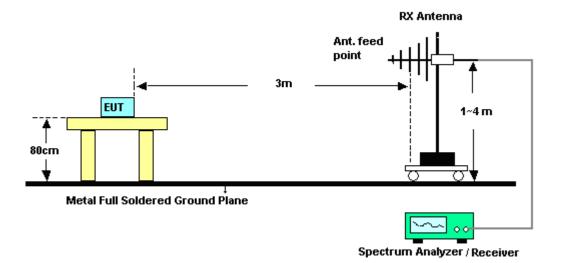
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3.2.4 Test Setup

For radiated emissions below 30MHz



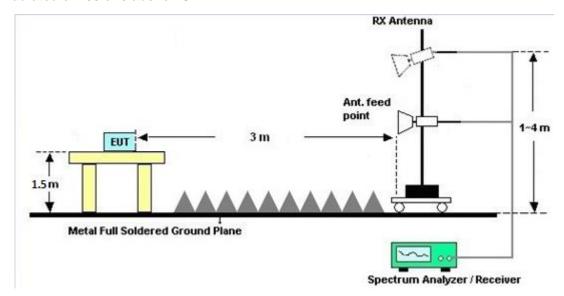
For radiated emissions from 30MHz to 1GHz



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For radiated emissions above 1GHz



3.2.5 Test Results of Radiated Spurious Emissions (9 kHz ~ 30 MHz)

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

3.2.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix A and B.

3.2.7 Duty Cycle

Please refer to Appendix C.

3.2.8 Test Result of Radiated Spurious Emission (30MHz ~ 10th Harmonic)

Please refer to Appendix A and B.

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3.3 Antenna Requirements

3.3.1 Standard Applicable

If directional gain of transmitting antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the rule.

3.3.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.3.3 Antenna Gain

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.

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4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Power Meter	Anritsu	ML2495A	0932001	N/A	Sep. 26, 2017	Nov.21.2017	Sep. 25, 2018	Conducted (TH05-HY)
Power Sensor	Anritsu	MA2411B	0846202	300MHz~40GH z	Sep. 26, 2017	Nov.21.2017	Sep. 25, 2018	Conducted (TH05-HY)
Spectrum Analyzer	Rohde & Schwarz	FSP40	100057	9kHz-40GHz	Nov. 25, 2016	Nov.21.2017	Nov. 24, 2017	Conducted (TH05-HY)
Bilog Antenna	TESEQ	CBL 6111D&00800 N1D01N-06	35419&03	30MHz to 1GHz	Jan. 07, 2017	Nov. 22, 2017~ Nov. 29, 2017	Jan. 06, 2018	Radiation (03CH07-HY)
Double Ridge Horn Antenna	ESCO	3117	00075962	1GHz ~ 18GHz	Aug. 23, 2017	Nov. 22, 2017~ Nov. 29, 2017	Aug. 22, 2018	Radiation (03CH07-HY)
Preamplifier	MITEQ	AMF-7D-0010 1800-30-10P	1590075	1GHz ~ 18GHz	Apr. 25, 2017	Nov. 22, 2017~ Nov. 29, 2017	Apr. 24, 2018	Radiation (03CH07-HY)
Preamplifier	COM-POWER	PA-103A	161241	10MHz-1GHz	Mar. 14, 2017	Nov. 22, 2017~ Nov. 29, 2017	Mar. 13, 2018	Radiation (03CH07-HY)
Spectrum Analyzer	Agilent	N9010A	MY534701 18	10Hz~44GHz	Apr. 17, 2017	Nov. 22, 2017~ Nov. 29, 2017	Apr. 16, 2018	Radiation (03CH07-HY)
Antenna Mast	Max-Full	MFA520BS	N/A	1m~4m	N/A	Nov. 22, 2017~ Nov. 29, 2017	N/A	Radiation (03CH07-HY)
Turn Table	ChainTek	Chaintek 3000	N/A	0~360 Degree	N/A	Nov. 22, 2017~ Nov. 29, 2017	N/A	Radiation (03CH07-HY)
Amplifier	MITEQ	TTA1840-35- HG	1871923	18GHz~40GHz, VSWR : 2.5:1 max	Jul. 18, 2017	Nov. 22, 2017 Nov. 29, 2017	Jul. 17, 2018	Radiation (03CH07-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Oct. 20, 2016	Nov. 22, 2017~ Nov. 29, 2017	Oct. 19, 2018	Radiation (03CH07-HY)
SHF-EHF Horn Antenna	SCHWARZBE CK	BBHA 9170	BBHA9170 251	18GHz- 40GHz	Nov. 10, 2017	Nov. 22, 2017~ Nov. 29, 2017	Nov. 09, 2018	Radiation (03CH07-HY)
EMI Test Receiver	Agilent	N9038A(MXE)	MY532900 53	20Hz to 26.5GHz	Jan. 12, 2017	Nov. 22, 2017~ Nov. 29, 2017	Jan. 11, 2018	Radiation (03CH07-HY)
Preamplifier	Agilent	8449B	3008A023 62	1GHz~26.5GHz	Oct. 30, 2017	Nov. 22, 2017~ Nov. 29, 2017	Oct. 29, 2018	Radiation (03CH07-HY)

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5 Uncertainty of Evaluation

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence	5.70
of 95% (U = 2Uc(y))	3.70

Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence	5.50
of 95% (U = 2Uc(y))	3.30

Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence	5.20
of 95% (U = 2Uc(y))	3.20

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Appendix A. Radiated Spurious Emission

Toot Engineer	Joseph Wang, Stan Heigh and James Chiu	Temperature :	21~23°C
Test Engineer :	Jesse Wang, Stan Hsieh and James Chiu	Relative Humidity :	51~53%

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2.4GHz 2400~2483.5MHz

BLE (Band Edge @ 3m)

(MHz)		Limit									1
(MHz)			Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
2338.98	55.07	-18.93	74	49.99	31.83	8.28	35.03	100	298	Р	Н
2321.86	5 47.07	-6.93	54	42.02	31.79	8.28	35.02	100	298	Α	Н
2402	99.44	-	-	94.3	31.95	8.24	35.05	100	298	Р	Н
2402	98.96	-	-	93.82	31.95	8.24	35.05	100	298	Α	Н
											Н
											Н
2322.28	5 55.6	-18.4	74	50.55	31.79	8.28	35.02	289	353	Р	>
2322.8	45.89	-8.11	54	40.84	31.79	8.28	35.02	289	353	Α	٧
2402	92.91	-	-	87.77	31.95	8.24	35.05	289	353	Р	>
2402	92.23	-	-	87.09	31.95	8.24	35.05	289	353	Α	٧
											V
											V
	2402 2402 2322.28 2322.81 2402 2402	2402 99.44 2402 98.96 2322.285 55.6 2322.81 45.89 2402 92.91	2402 99.44 - 2402 98.96 - 2322.285 55.6 -18.4 2322.81 45.89 -8.11 2402 92.91 - 2402 92.23 -	2402 99.44 - - 2402 98.96 - - 2322.285 55.6 -18.4 74 2322.81 45.89 -8.11 54 2402 92.91 - - 2402 92.23 - -	2402 99.44 - - 94.3 2402 98.96 - - 93.82 2322.285 55.6 -18.4 74 50.55 2322.81 45.89 -8.11 54 40.84 2402 92.91 - - 87.77 2402 92.23 - - 87.09	2402 99.44 - - 94.3 31.95 2402 98.96 - - 93.82 31.95 2322.285 55.6 -18.4 74 50.55 31.79 2322.81 45.89 -8.11 54 40.84 31.79 2402 92.91 - - 87.77 31.95 2402 92.23 - - 87.09 31.95	2402 99.44 - - 94.3 31.95 8.24 2402 98.96 - - 93.82 31.95 8.24 2322.285 55.6 -18.4 74 50.55 31.79 8.28 2322.81 45.89 -8.11 54 40.84 31.79 8.28 2402 92.91 - - 87.77 31.95 8.24 2402 92.23 - - 87.09 31.95 8.24	2402 99.44 - - 94.3 31.95 8.24 35.05 2402 98.96 - - 93.82 31.95 8.24 35.05 2322.285 55.6 -18.4 74 50.55 31.79 8.28 35.02 2322.81 45.89 -8.11 54 40.84 31.79 8.28 35.02 2402 92.91 - - 87.77 31.95 8.24 35.05 2402 92.23 - - 87.09 31.95 8.24 35.05	2402 99.44 - - 94.3 31.95 8.24 35.05 100 2402 98.96 - - 93.82 31.95 8.24 35.05 100 2322.285 55.6 -18.4 74 50.55 31.79 8.28 35.02 289 2322.81 45.89 -8.11 54 40.84 31.79 8.28 35.02 289 2402 92.91 - - 87.77 31.95 8.24 35.05 289 2402 92.23 - - 87.09 31.95 8.24 35.05 289	2402 99.44 - - 94.3 31.95 8.24 35.05 100 298 2402 98.96 - - 93.82 31.95 8.24 35.05 100 298 2322.285 55.6 -18.4 74 50.55 31.79 8.28 35.02 289 353 2322.81 45.89 -8.11 54 40.84 31.79 8.28 35.02 289 353 2402 92.91 - - 87.77 31.95 8.24 35.05 289 353 2402 92.23 - - 87.09 31.95 8.24 35.05 289 353	2402 99.44 - - 94.3 31.95 8.24 35.05 100 298 P 2402 98.96 - - 93.82 31.95 8.24 35.05 100 298 A 2322.285 55.6 -18.4 74 50.55 31.79 8.28 35.02 289 353 P 2322.81 45.89 -8.11 54 40.84 31.79 8.28 35.02 289 353 A 2402 92.91 - - 87.77 31.95 8.24 35.05 289 353 P 2402 92.23 - - 87.09 31.95 8.24 35.05 289 353 A

Remark

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^{2.} All results are PASS against Peak and Average limit line.

2.4GHz 2400~2483.5MHz

BLE (Harmonic @ 3m)

BLE	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	
		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	i .	
		4804	41.05	-32.95	74	54.25	34.24	11.96	59.4	100	0	Р	Н
													Н
													Н
BLE													Н
CH 00 2402MHz		4804	42.37	-31.63	74	55.57	34.24	11.96	59.4	100	0	Р	V
2402WITI2													V
													V
													V
Remark	1. No	o other spurious	s found.							•	•		
	2. All	l results are PA	SS against F	Peak and	Average lim	it line.							

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Emission below 1GHz 2.4GHz BLE (LF)

BLE	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
		158.79	37.25	-6.25	43.5	49.61	16.52	2.62	31.5	-	-	Р	Н
		197.13	39.55	-3.95	43.5	53.45	14.83	2.72	31.45	100	66	Р	Н
		224.94	38.33	-7.67	46	51.01	15.7	3.03	31.41	-	-	Р	Н
		360.2	38.65	-7.35	46	45.62	20.66	3.57	31.2	-	-	Р	Н
		456.1	32.02	-13.98	46	36.08	23.11	3.88	31.05	-	-	Р	Н
		981.1	34.61	-19.39	54	28.82	30.76	5.54	30.51		-	Р	Н
													Н
													Н
													Н
													Н
2.4GHz													Н
BLE													Н
LF		97.5	29.4	-14.1	43.5	43.2	15.65	2.11	31.56	-	-	Р	V
		157.17	35.96	-7.54	43.5	48.22	16.62	2.62	31.5	100	217	Р	V
		224.4	34.18	-11.82	46	46.95	15.61	3.03	31.41	-	-	Р	V
		350.4	30.79	-15.21	46	38.1	20.33	3.57	31.21	-	-	Р	V
		456.1	30.26	-15.74	46	34.32	23.11	3.88	31.05	-	-	Р	V
		981.1	35.25	-18.75	54	29.46	30.76	5.54	30.51	-	-	Р	V
													V
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													V
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													V

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Note symbol

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*	Fundamental Frequency which can be ignored. However, the level of any
	unwanted emissions shall not exceed the level of the fundamental frequency.
!	Test result is over limit line.
P/A	Peak or Average
H/V	Horizontal or Vertical

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A calculation example for radiated spurious emission is shown as below:

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WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	Р	Н
CH 01												-	
2412MHz		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	Α	Н

1. Level($dB\mu V/m$) =

Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBµV) - Preamp Factor(dB)

2. Over Limit(dB) = Level(dB μ V/m) – Limit Line(dB μ V/m)

For Peak Limit @ 2390MHz:

- 1. Level(dBµV/m)
- = Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBµV) Preamp Factor(dB)
- $= 32.22(dB/m) + 4.58(dB) + 54.51(dB\mu V) 35.86 (dB)$
- $= 55.45 (dB\mu V/m)$
- 2. Over Limit(dB)
- = Level(dBµV/m) Limit Line(dBµV/m)
- $= 55.45(dB\mu V/m) 74(dB\mu V/m)$
- = -18.55(dB)

For Average Limit @ 2390MHz:

- 1. Level(dBµV/m)
- = Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBµV) Preamp Factor(dB)
- $= 32.22(dB/m) + 4.58(dB) + 42.6(dB\mu V) 35.86 (dB)$
- $= 43.54 (dB\mu V/m)$
- 2. Over Limit(dB)
- = Level($dB\mu V/m$) Limit Line($dB\mu V/m$)
- $= 43.54(dB\mu V/m) 54(dB\mu V/m)$
- = -10.46(dB)

Both peak and average measured complies with the limit line, so test result is "PASS".

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Appendix B. Radiated Spurious Emission Plots

Toot Engineer		Temperature :	21~23°C
Test Engineer :	Jesse Wang, Stan Hsieh and James Chiu	Relative Humidity :	51~53%

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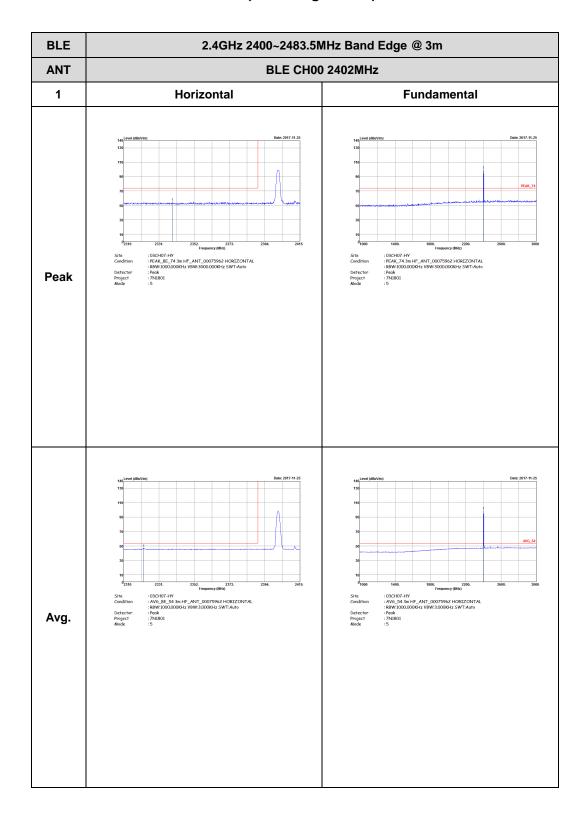
Note symbol

-L	Low channel location
-R	High channel location

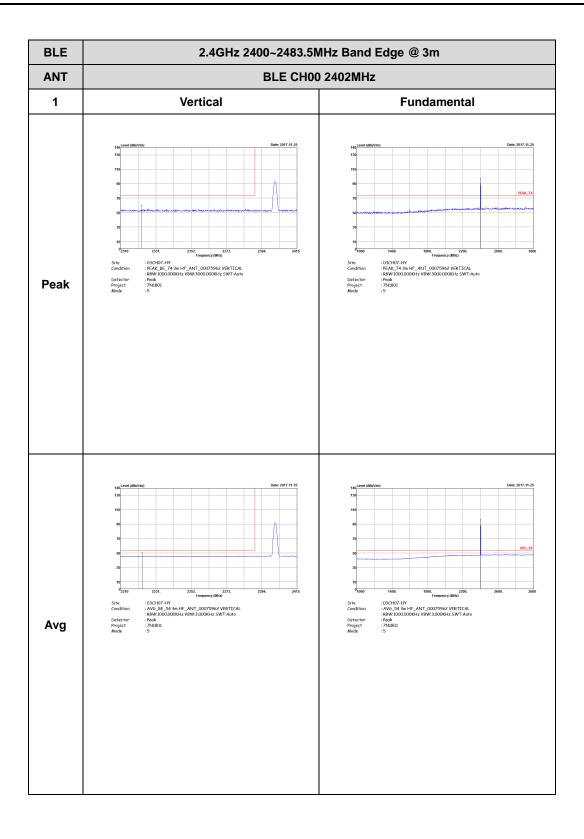
SPORTON INTERNATIONAL INC. Page Number : B1 of B5

2.4GHz 2400~2483.5MHz

BLE (Band Edge @ 3m)



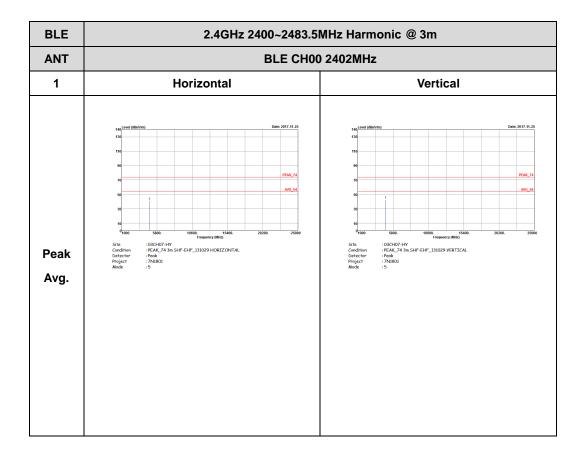
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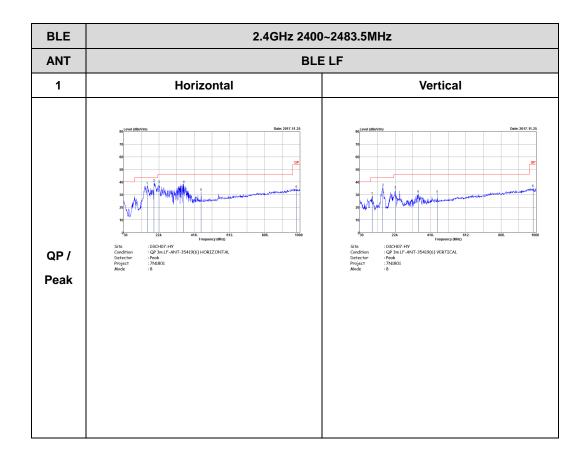
2.4GHz 2400~2483.5MHz

BLE (Harmonic @ 3m)



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Emission below 1GHz 2.4GHz BLE (LF)



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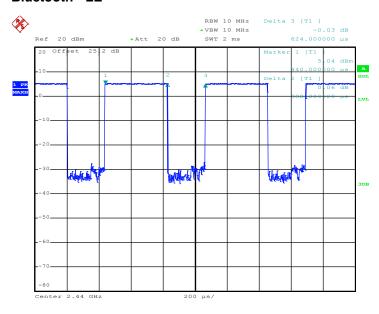


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Appendix C. Duty Cycle Plots

Band	Duty Cycle(%) T(us)		1/T(kHz)	VBW Setting
Bluetooth -LE	62.18	388	2.58	3kHz

Bluetooth - LE



Date: 21.NOV.2017 15:02:37