

TEST REPORT

Product : Bowtie
Trade mark : Wonderwoof
Model/Type reference : Bowtie
Serial Number : N/A
Report Number : EED32H000381-1
FCC ID : 2AEUE-1
Date of Issue: : May 29, 2015
Test Standards : 47 CFR FCC Part 15.247 (2014)
Test result : PASS

Prepared for:

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May 29, 2015

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Check No.: 1727872902



2 Version

Version No.	Date	Description
00	2015-04-01	Original

3 Test Summary

Test Item	Test Requirement	Test method	Result
Antenna Requirement	47 CFR Part 15, Subpart C Section 15.203/15.247 (c)	ANSI C63.10-2009	PASS
AC Power Line Conducted Emission	47 CFR Part 15, Subpart C Section 15.207	ANSI C63.10-2009	PASS
Conducted Peak Output Power	47 CFR Part 15, Subpart C Section 15.247 (b)(3)	ANSI C63.10-2009	PASS
6dB Occupied Bandwidth	47 CFR Part 15, Subpart C Section 15.247 (a)(2)	ANSI C63.10-2009	PASS
Power Spectral Density	47 CFR Part 15, Subpart C Section 15.247 (e)	ANSI C63.10-2009	PASS
Band-edge for RF Conducted Emissions	47 CFR Part 15, Subpart C Section 15.247(d)	ANSI C63.10-2009	PASS
RF Conducted Spurious Emissions	47 CFR Part 15, Subpart C Section 15.247(d)	ANSI C63.10-2009	PASS
Radiated Spurious Emissions	47 CFR Part 15, Subpart C Section 15.205/15.209	ANSI C63.10-2009	PASS
Restricted bands around fundamental frequency (Radiated Emission)	47 CFR Part 15, Subpart C Section 15.205/15.209	ANSI C63.10-2009	PASS

Test according to ANSI C63.4-2009 & ANSI C63.10-2009.

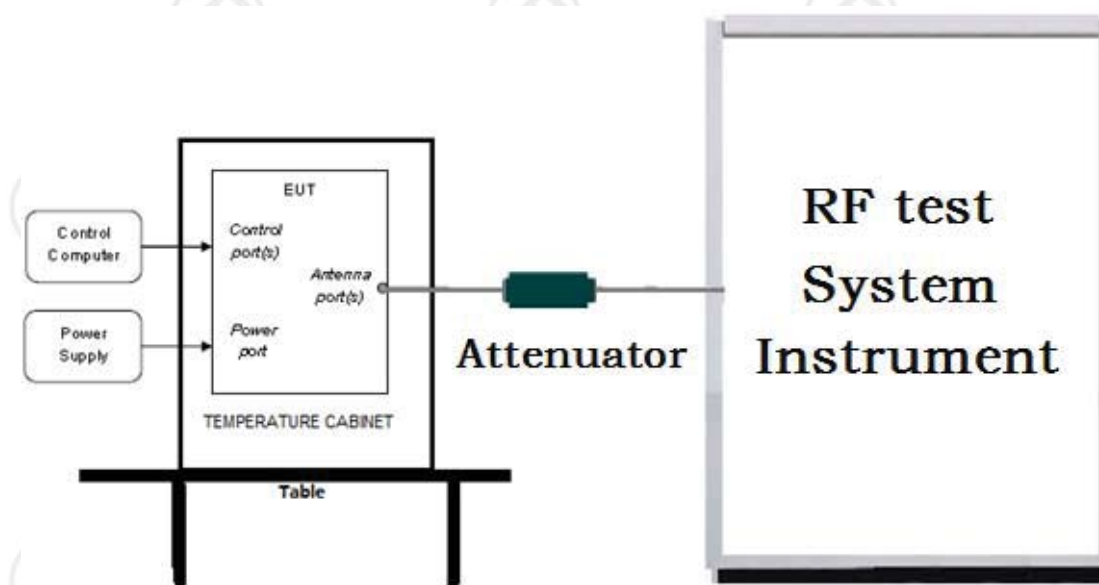
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5 Test Requirement

5.1 Test setup

5.1.1 For Conducted test setup



5.1.2 For Radiated Emissions test setup

Radiated Emissions setup:

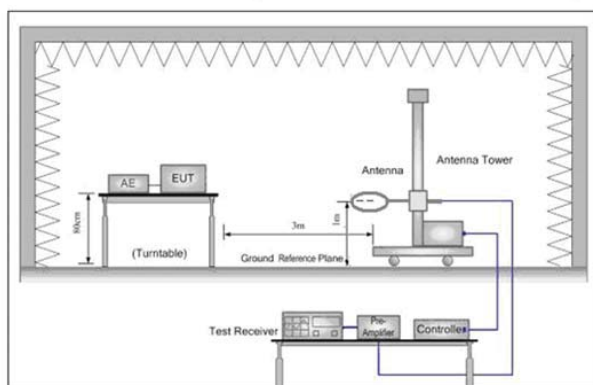


Figure 1. Below 30MHz

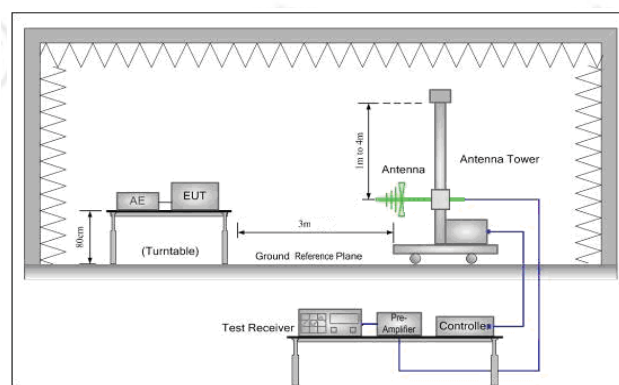


Figure 2. 30MHz to 1GHz

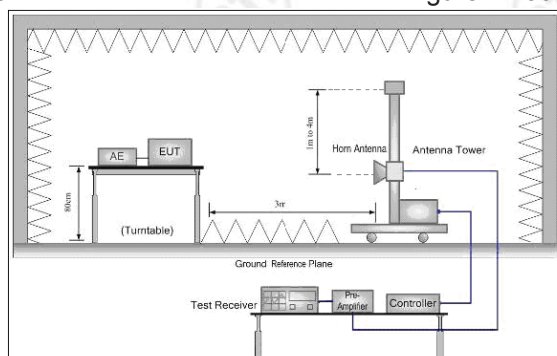
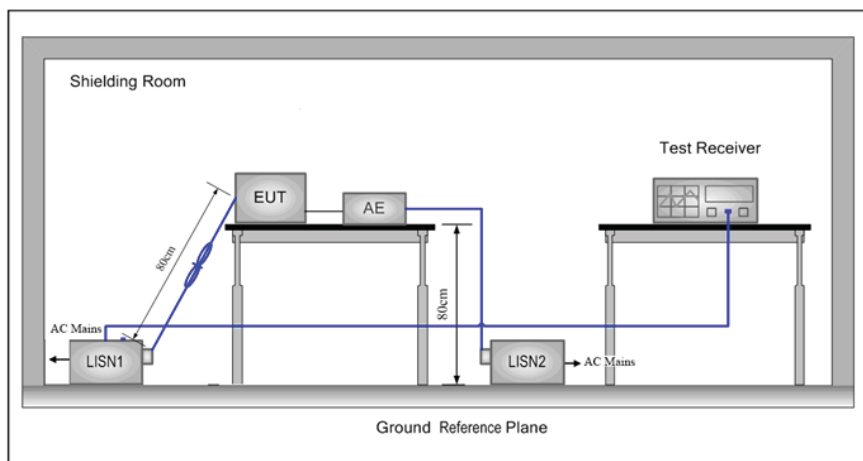


Figure 3. Above 1GHz

5.1.3 For Conducted Emissions test setup

Conducted Emissions setup



5.2 Test Environment

Operating Environment:	
Temperature:	25.0 °C
Humidity:	53 % RH
Atmospheric Pressure:	995mbar

5.3 Test Condition

Test channel:

Test Mode	Tx/Rx	RF Channel		
		Low(L)	Middle(M)	High(H)
GFSK	2402MHz ~2480 MHz	Channel 1	Channel 20	Channel 40
		2402MHz	2440MHz	2480MHz

6 General Information

6.1 Client Information

Applicant:	GTR INTERNATIONAL COMPANY LIMITED
Address of Applicant:	Management office, 2nd floor, LianTang Industrial Zone,48 KangZheng Road, DanZhuTou, LongGang District, ShenZhen, China
Manufacturer:	GTR INTERNATIONAL COMPANY LIMITED
Address of Manufacturer:	Management office, 2nd floor, LianTang Industrial Zone,48 KangZheng Road, DanZhuTou, LongGang District, ShenZhen, China

6.2 General Description of EUT

Product Name:	Bowtie
Model No.(EUT):	Bowtie
Tark mark:	Wonderwoof
<i>EUT Supports Radios application</i>	Bluetooth V4.0 BLE
Power Supply:	Charging input: 5V  , lithium Battery: 3.7V 
Sample Received Date:	Apr. 05,2015
Sample tested Date:	Apr. 05,2015 to May 29, 2015

6.3 Product Specification subjective to this standard

Operation Frequency:	2402MHz~2480MHz
Bluetooth Version:	4.0
Modulation Type:	GFSK
Number of Channel:	40
Sample Type:	Portable production
Antenna Type and Gain::	0dBi
Test Voltage:	DC 3.7V

Operation Frequency each of channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2402MHz	11	2422MHz	21	2442MHz	31	2462MHz
2	2404MHz	12	2424MHz	22	2444MHz	32	2464MHz
3	2406MHz	13	2426MHz	23	2446MHz	33	2466MHz
4	2408MHz	14	2428MHz	24	2448MHz	34	2468MHz
5	2410MHz	15	2430MHz	25	2450MHz	35	2470MHz
6	2412MHz	16	2432MHz	26	2452MHz	36	2472MHz
7	2414MHz	17	2434MHz	27	2454MHz	37	2474MHz
8	2416MHz	18	2436MHz	28	2456MHz	38	2476MHz
9	2418MHz	19	2438MHz	29	2458MHz	39	2478MHz
10	2420MHz	20	2440MHz	30	2460MHz	40	2480MHz

6.4 Description of Support Units

The EUT has been tested with associated equipment below.

1) support equipment

Device Type	Brand	Model	Data Cable	Remark
Notebook	HP	G3	N/A	FCC DOC
Mouse	L.Selectron	M004	Un-shielded 1.2M	FCC DOC

6.5 Test Location

All tests were performed at:

Centre Testing International (Shenzhen) Corporation Hongwei Industrial Zone, Bao'an 70 District, Shenzhen, Guangdong, China 518101

Telephone: +86 (0) 755 3368 3668 Fax: +86 (0) 755 3368 3385

No tests were sub-contracted.

6.6 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

CNAS-Lab Code: L1910

Centre Testing International (Shenzhen) Co., Ltd. has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC 17025: 2005 General Requirements) for the Competence of Testing and Calibration Laboratories. .

A2LA-Lab Cert. No. 3061.01

Centre Testing International (Shenzhen) Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

FCC-Registration No.: 756231

Centre Testing International (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Registration 756231.

IC-Registration No.: 7408A

The 3m Alternate Test Site of Centre Testing International (Shenzhen) Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 7408A .

IC-Registration No.: 7408B

The 10m Alternate Test Site of Centre Testing International (Shenzhen) Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 7408B.

NEMKO-Aut. No.: ELA503

Centre Testing International (Shenzhen) Co., Ltd. has been assessed the quality assurance system, the testing facilities, qualifications and testing practices of the relevant parts of the organization. The quality assurance system of the Laboratory has been validated against ISO/IEC 17025 or equivalent. The laboratory also fulfils the conditions described in Nemko Document NLA-10.

VCCI

The Radiation 3 &10 meters site of Centre Testing International (Shenzhen) Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-4096.

Main Ports Conducted Interference Measurement of Centre Testing International (Shenzhen) Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: C-4563.

Telecommunication Ports Conducted Disturbance Measurement of Centre Testing International (Shenzhen) Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: T-2146.

The Radiation 3 meters site of Centre Testing International (Shenzhen) Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-758

6.7 Deviation from Standards

None.

6.8 Abnormalities from Standard Conditions

None.

6.9 Other Information Requested by the Customer

None.

7 Equipment List

Equipment	Manufacturer	Model	Serial No.	Due Date
3M Chamber & Accessory Equipment	TDK	SAC-3	---	06/01/2016
Receiver	R&S	ESCI	100435	07/08/2015
Spectrum Analyzer	R&S	FSP40	100416	07/06/2015
Signal Generator	R&S	SMB 100A	3008A02145	01/15/2016
Vector Signal Generator	R&S	SMBV 100A	3636A01004	01/15/2016
Signal Analyzer	R&S	FSV	100263	01/15/2016
Communication test set test set	Agilent	N4010A	MY47230124	01/15/2016
Spectrum Analyzer	Keysight	N9010A	5522H-HY5KC-VL	01/15/2016
Signal Generator	Keysight	N5182B	MMAJ-I6AC3	01/15/2016
TRILOG Broadband Antenna	schwarzbeck	VULB 9163	618	06/17/2015
TRILOG Broadband Antenna	schwarzbeck	VULB 9163	617	07/13/2015
Multi device Controller	maturo	NCD/070/107 11112	---	N/A
Horn Antenna	ETS-LINGREN	3117	00057407	07/07/2015
Horn Antenna	ETS-LINGREN	3117	00057362	07/07/2015
Microwave Preamplifier	Agilent	8449B	3008A02425	03/19/2016
ESG Vector signal generators	Agilent	E4438C	MY45095744	01/15/2016
Temperature & Humidity Chamber	ESPEC	EL-04KA	N/A	08/03/2015
Receiver	R&S	ESCI	100009	07/19/2015
LISN	R&S	ENV216	100098	07/19/2015

8 Radio Technical Requirements Specification

Reference documents for testing:

No.	Identity	Document Title
1	FCC Part15C (2014)	Subpart C-Intentional Radiators
2	ANSI C63.10-2009	American National Standard for Testing Unlicensed Wireless Devices

Test Results List:

Test Requirement	Test method	Test item	Verdict	Note
Part15C Section 15.247 (a)(2)	ANSI C63.10	6dB Occupied Bandwidth	PASS	Appendix A)
Part15C Section 15.247 (b)(3)	ANSI C63.10	Conducted Peak Output Power	PASS	Appendix B)
Part15C Section 15.247(d)	ANSI C63.10	Band-edge for RF Conducted Emissions	PASS	Appendix C)
Part15C Section 15.247(d)	ANSI C63.10	RF Conducted Spurious Emissions	PASS	Appendix D)
Part15C Section 15.247 (e)	ANSI C63.10	Power Spectral Density	PASS	Appendix E)
Part15C Section 15.203/15.247 (c)	ANSI C63.10	Antenna Requirement	PASS	Appendix F)
Part15C Section 15.207	ANSI C63.10	AC Power Line Conducted Emission	PASS	Appendix G)
Part15C Section 15.205/15.209	ANSI C63.10	Restricted bands around fundamental frequency (Radiated Emission)	PASS	Appendix H)
Part15C Section 15.205/15.209	ANSI C63.10	Radiated Spurious Emissions	PASS	Appendix H)

Appendix A: DTS 6dB Emission Bandwidth

Test Result

Mode	Channel	6dB Bandwidth [MHz]	OBW[MHz]	Verdict
BLE	LCH	0.6893	1.0677	PASS
BLE	MCH	0.6872	1.0644	PASS
BLE	HCH	0.6902	1.0635	PASS

Test Graphs

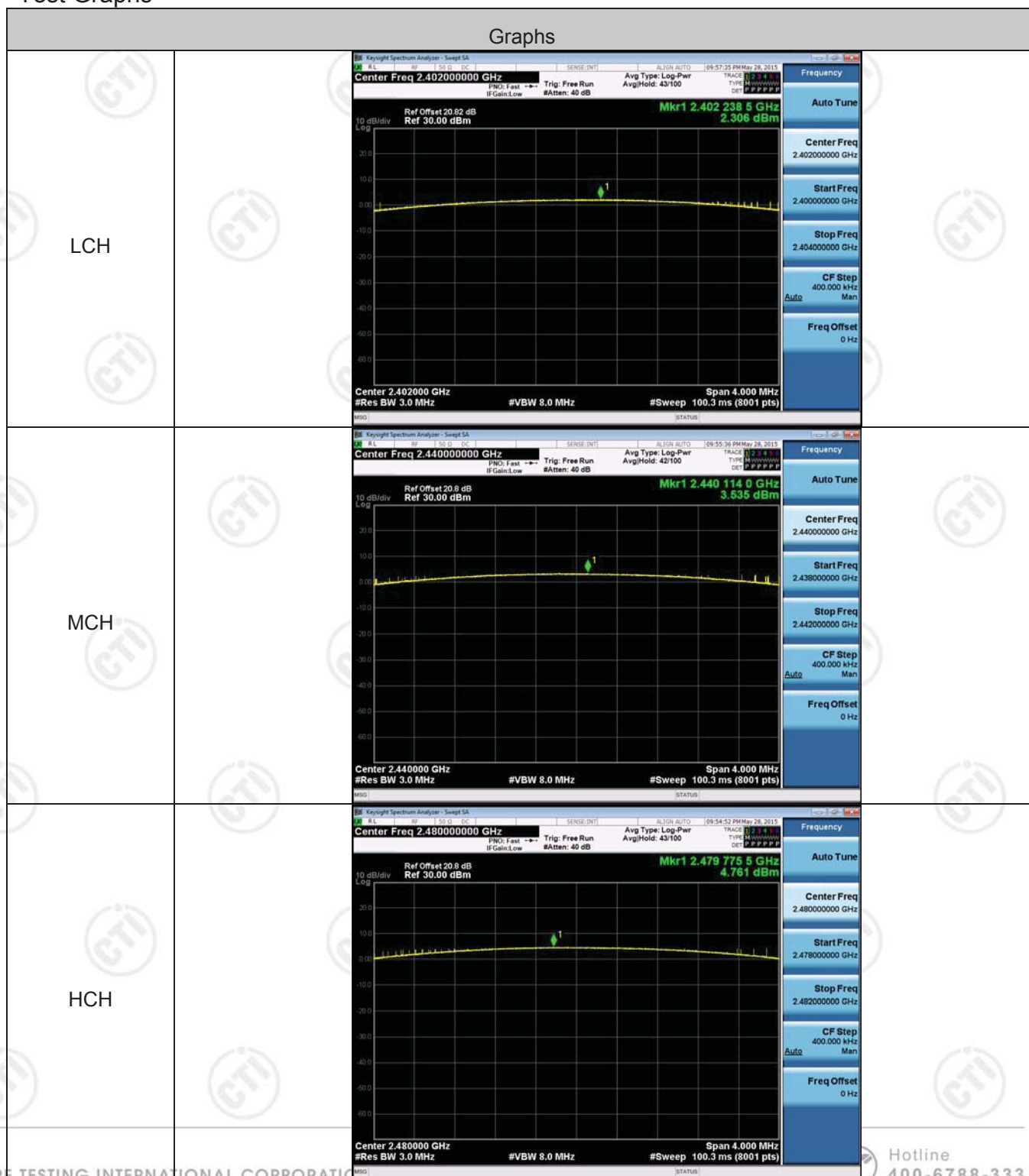


Appendix B: Conducted Peak Output Power

Test Result

Mode	Channel	Conduct Peak Power[dBm]	Verdict
BLE	LCH	2.306	PASS
BLE	MCH	3.535	PASS
BLE	HCH	4.761	PASS

Test Graphs

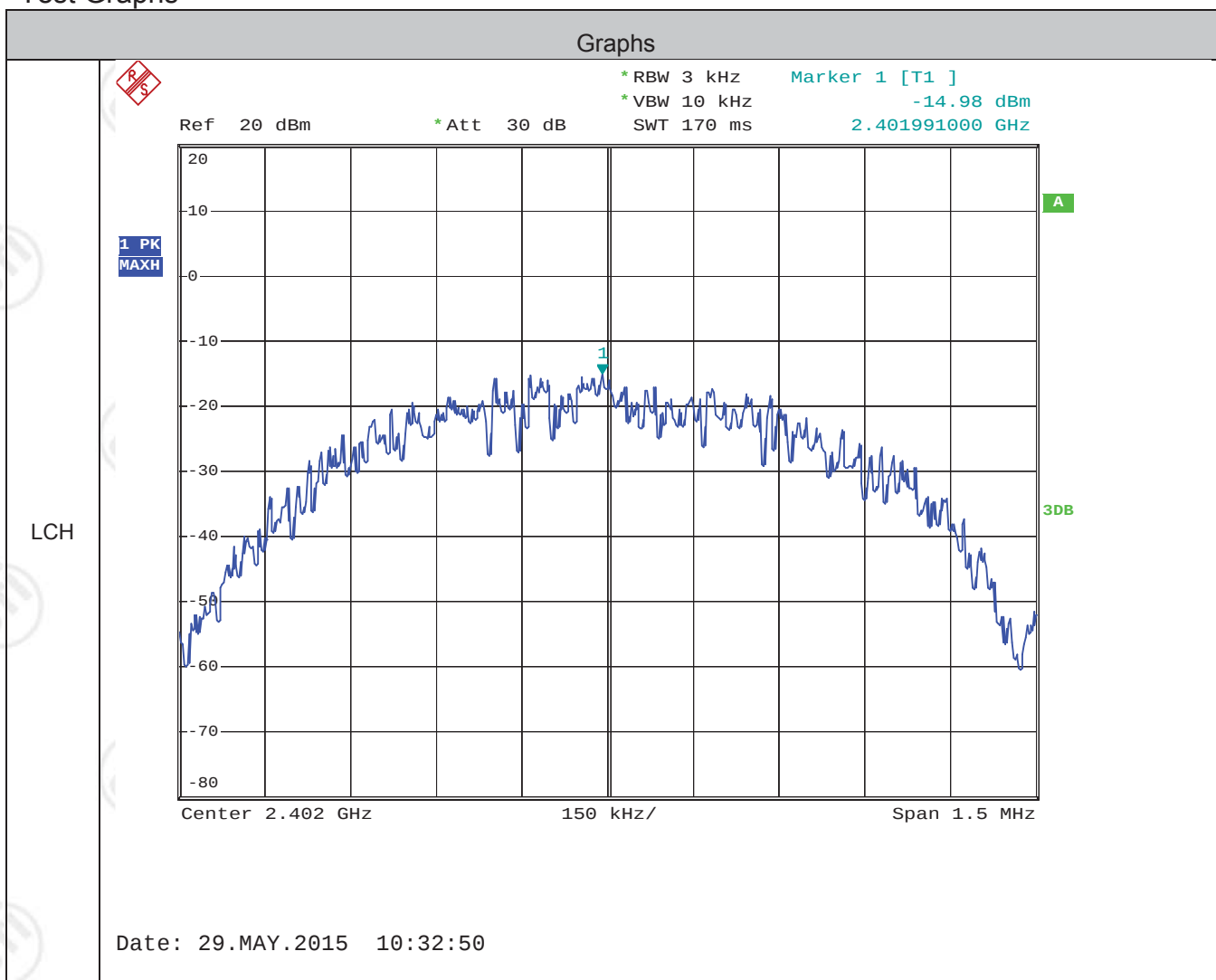


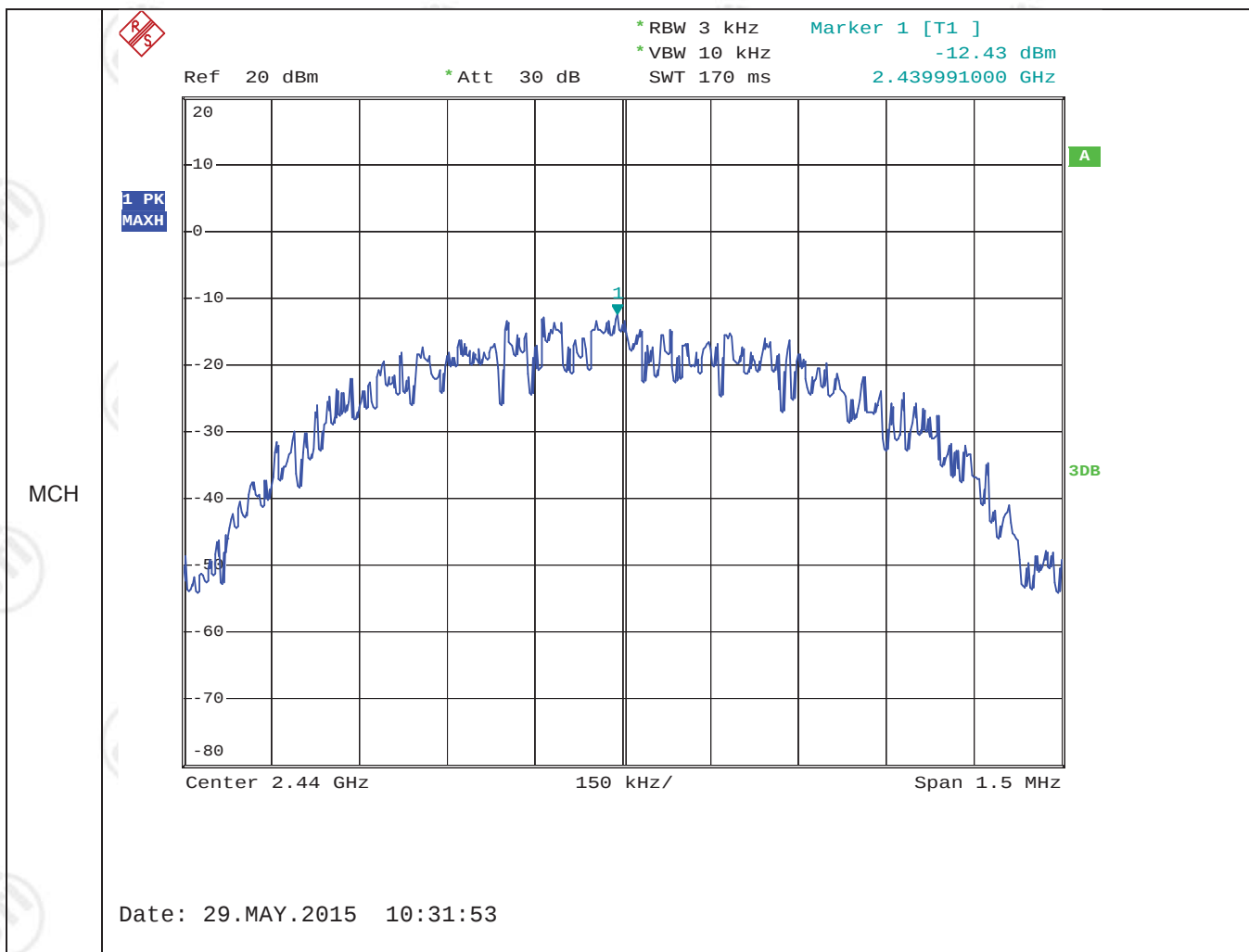
Appendix C: Maximum Power Spectral Density Level

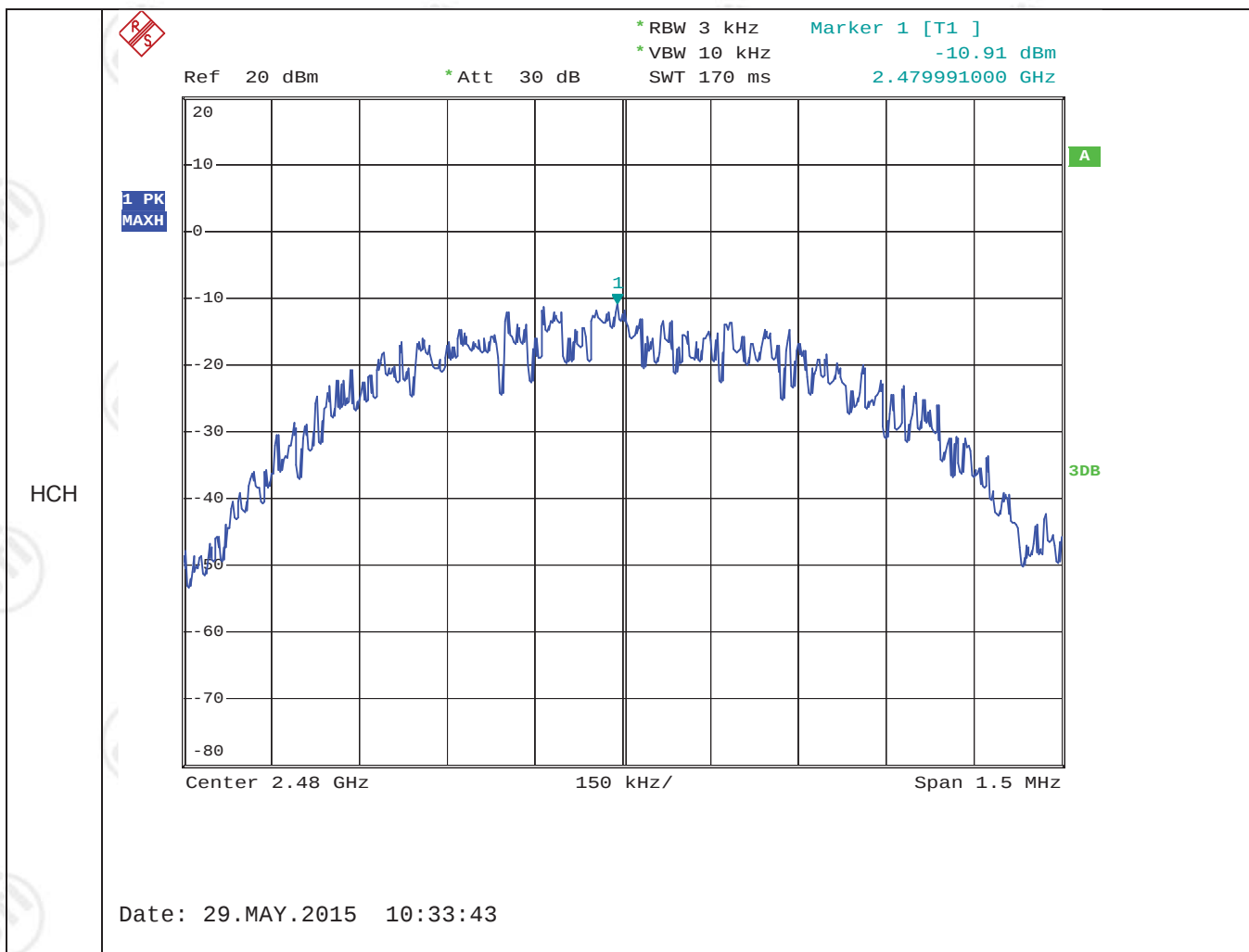
Result Table

Mode	Channel	PSD [dBm]	Verdict
BLE	LCH	-14.98	PASS
BLE	MCH	-12.43	PASS
BLE	HCH	-10.91	PASS

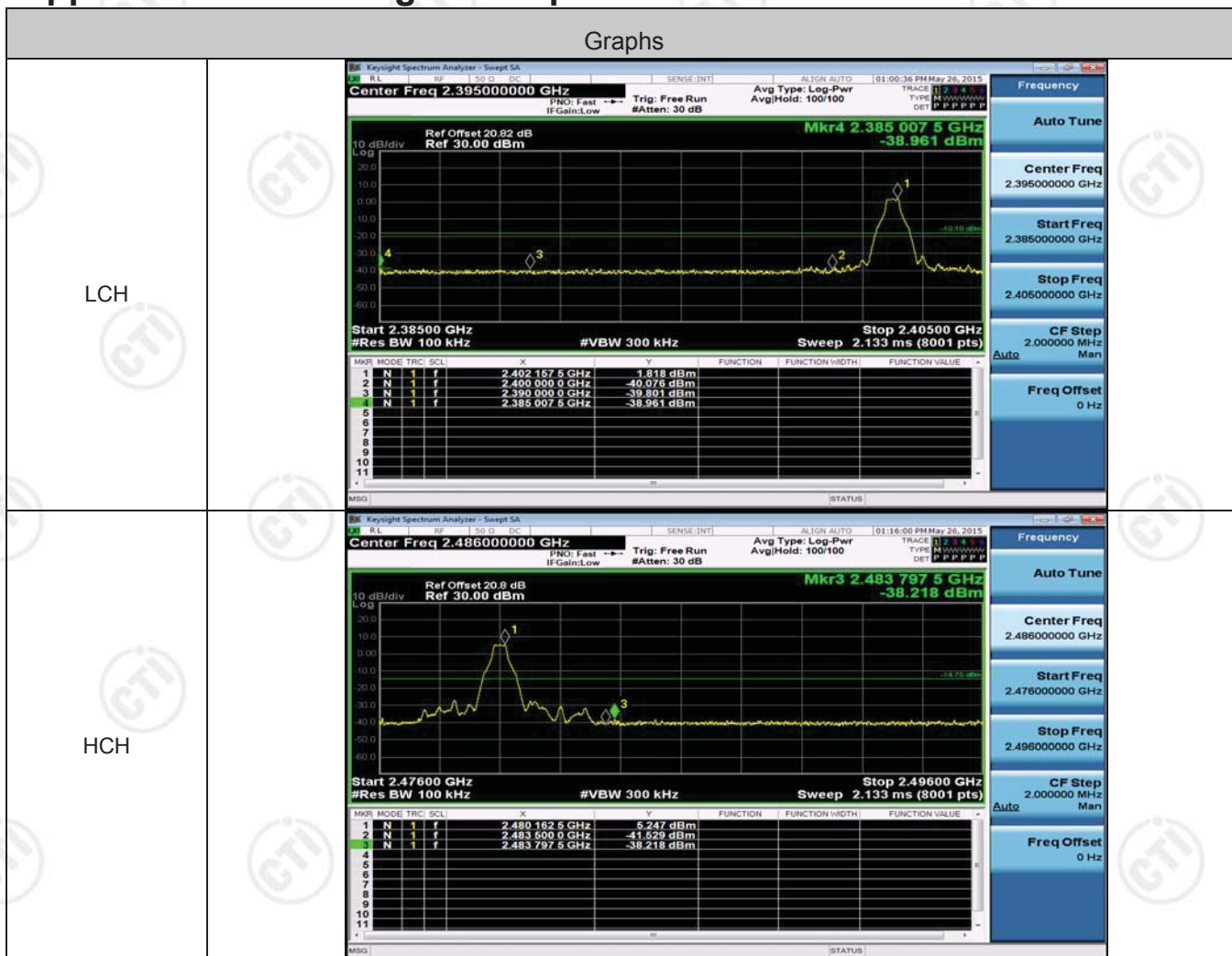
Test Graphs



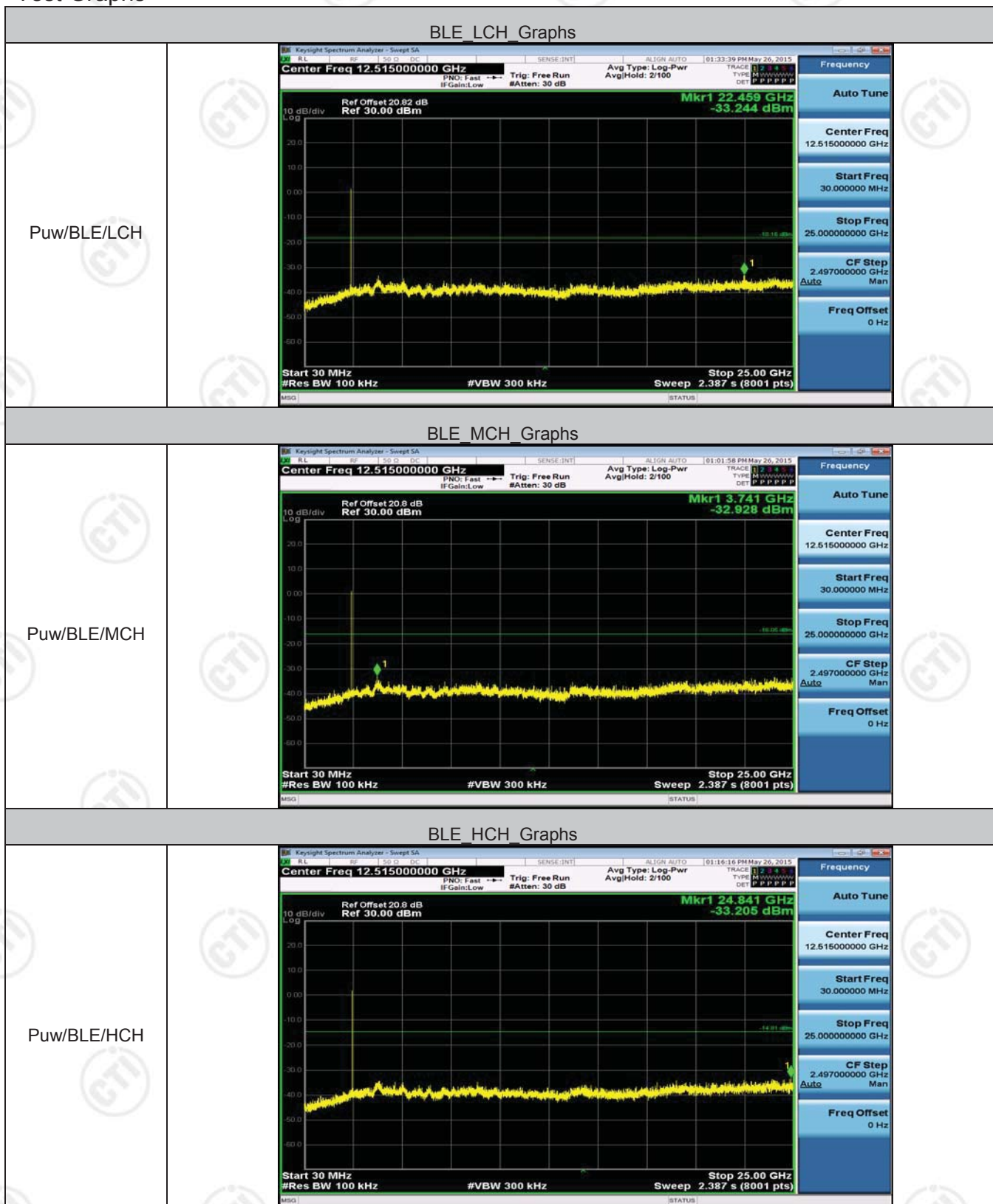




Appendix D: Band Edges Compliance



Appendix E: Conducted RF Spurious Emission Test Graphs



Appendix F) Antenna Requirement

15.203 requirement:

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 use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

15.247(b) (4) requirement:

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

EUT Antenna:

The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna is 0dBi.

Appendix G) AC Power Line Conducted Emission

Test Procedure:	Test frequency range :150KHz-30MHz 1) The mains terminal disturbance voltage test was conducted in a shielded room. 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a $50\Omega/50\mu\text{H} + 5\Omega$ linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded. 3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane, 4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2. 5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.		
Limit:	Frequency range (MHz)	Limit (dBuV)	
		Quasi-peak	Average
	0.15-0.5	66 to 56*	56 to 46*
	0.5-5	56	46
	5-30	60	50
* The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz. NOTE : The lower limit is applicable at the transition frequency			

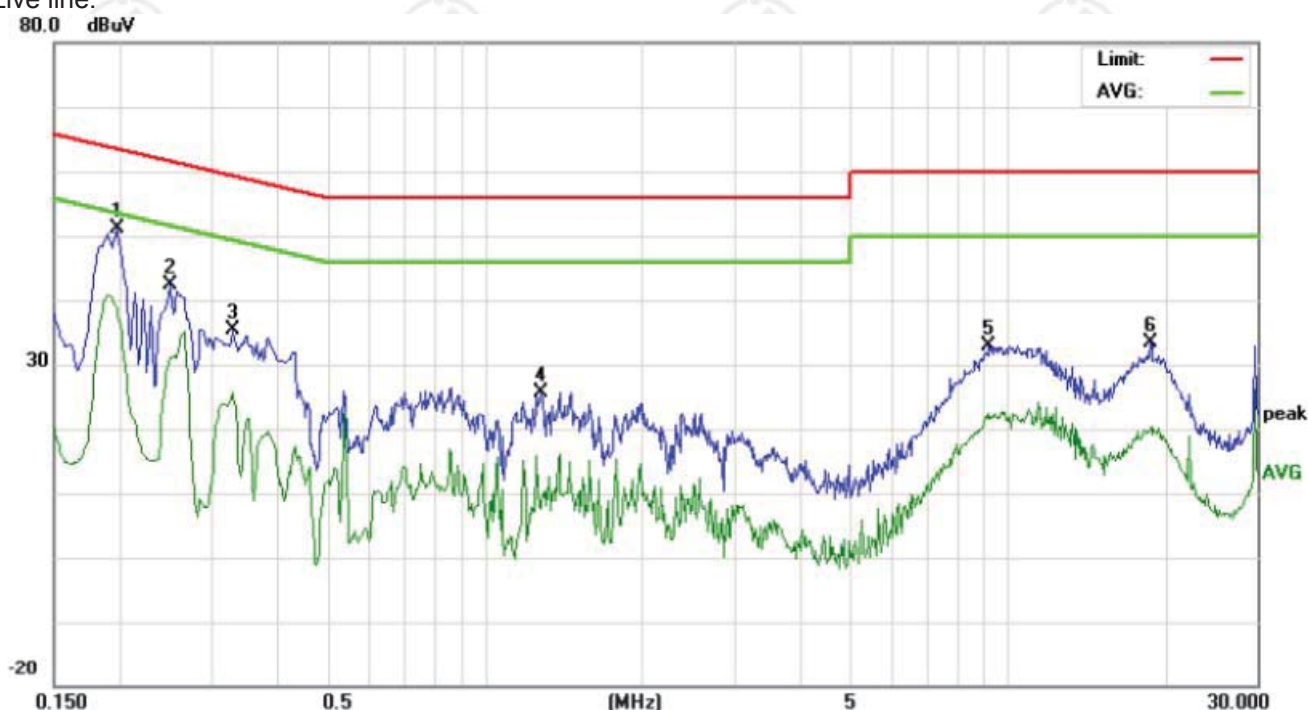
Measurement Data

An initial pre-scan was performed on the live and neutral lines with peak detector.

Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

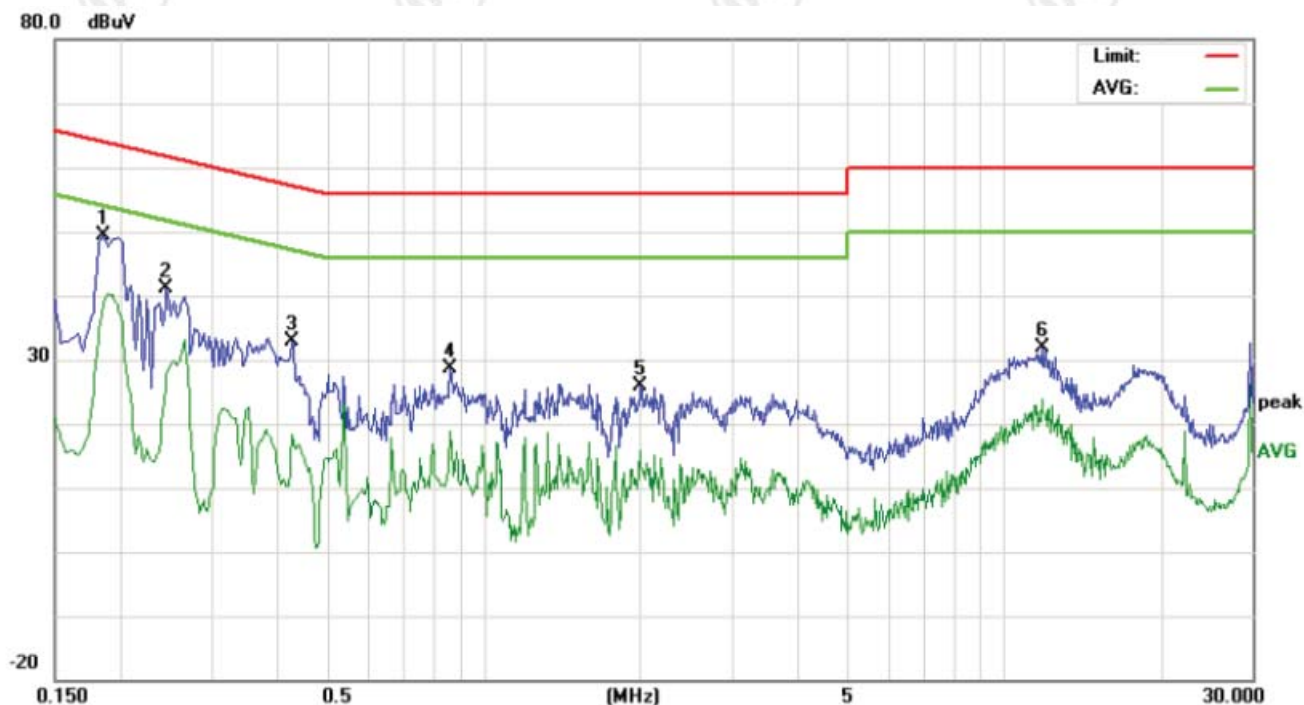
Product	: Bowtie	Model/Type reference	: Bowtie
Power	: AC 120V/60Hz	Temperature	: 22℃
Mode	: Keeping TX	Humidity	: 52%

Live line:



No.	Freq. MHz	Reading_Level (dBuV)			Correct Factor dB	Measurement (dBuV)			Limit (dBuV)		Margin (dB)		P/F	Comment
		Peak	QP	AVG		peak	QP	AVG	QP	AVG	QP	AVG		
1	0.1980	41.31		28.88	9.90	51.21		38.78	63.69	53.69	-12.48	-14.91	P	
2	0.2500	32.56		21.13	9.90	42.46		31.03	61.75	51.75	-19.29	-20.72	P	
3	0.3300	25.36		15.61	9.90	35.26		25.51	59.45	49.45	-24.19	-23.94	P	
4	1.2860	15.81		-0.71	9.90	25.71		9.19	56.00	46.00	-30.29	-36.81	P	
5	9.2180	22.84		12.49	9.97	32.81		22.46	60.00	50.00	-27.19	-27.54	P	
6	18.8020	23.05		9.63	10.28	33.33		19.91	60.00	50.00	-26.67	-30.09	P	

Neutral line:



No.	Freq. MHz	Reading_Level (dBuV)			Correct Factor dB	Measurement (dBuV)			Limit (dBuV)		Margin (dB)		P/F	Comment
		Peak	QP	AVG		peak	QP	AVG	QP	AVG	QP	AVG		
1	0.1860	39.57		28.68	9.90	49.47		38.58	64.21	54.21	-14.74	-15.63	P	
2	0.2460	31.15		17.73	9.90	41.05		27.63	61.89	51.89	-20.84	-24.26	P	
3	0.4300	22.89		8.43	9.90	32.79		18.33	57.25	47.25	-24.46	-28.92	P	
4	0.8660	18.63		8.97	9.90	28.53		18.87	56.00	46.00	-27.47	-27.13	P	
5	2.0020	15.93		3.88	9.90	25.83		13.78	56.00	46.00	-30.17	-32.22	P	
6	11.8180	21.96		13.96	9.96	31.92		23.92	60.00	50.00	-28.08	-26.08	P	

Appendix H) Restricted bands around fundamental frequency (Radiated)/Radiated Spurious Emissions

Receiver Setup:	Frequency	Detector	RBW	VBW	Remark
	0.009MHz-0.090MHz	Peak	10kHz	30kHz	Peak
	0.009MHz-0.090MHz	Average	10kHz	30kHz	Average
	0.090MHz-0.110MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
	0.110MHz-0.490MHz	Peak	10kHz	30kHz	Peak
	0.110MHz-0.490MHz	Average	10kHz	30kHz	Average
	0.490MHz -30MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
	30MHz-1GHz	Quasi-peak	120 kHz	300kHz	Quasi-peak
	Above 1GHz	Peak	1MHz	3MHz	Peak
		Peak	1MHz	10Hz	Average
Test Procedure:					
Below 1GHz test procedure as below: - The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. - The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. - The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. - For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. - The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. - If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet. Above 1GHz test procedure as below: - Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber. - Test the EUT in the lowest channel ,the middle channel ,the Highest channel - The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is worse case. - Repeat above procedures until all frequencies measured was complete.					

Limit:	Frequency	Field strength (microvolt/meter)	Limit (dB μ V/m)	Remark	Measurement distance (m)
	0.009MHz-0.490MHz	2400/F(kHz)	-	-	300
	0.490MHz-1.705MHz	24000/F(kHz)	-	-	30
	1.705MHz-30MHz	30	-	-	30
	30MHz-88MHz	100	40.0	Quasi-peak	3
	88MHz-216MHz	150	43.5	Quasi-peak	3
	216MHz-960MHz	200	46.0	Quasi-peak	3
	960MHz-1GHz	500	54.0	Quasi-peak	3
	Above 1GHz	500	54.0	Average	3
Note: 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.					

Radiated Spurious Emissions test Data:

All the modes of operation (X, Y, Z) were investigated and the worst-case emissions are reported.

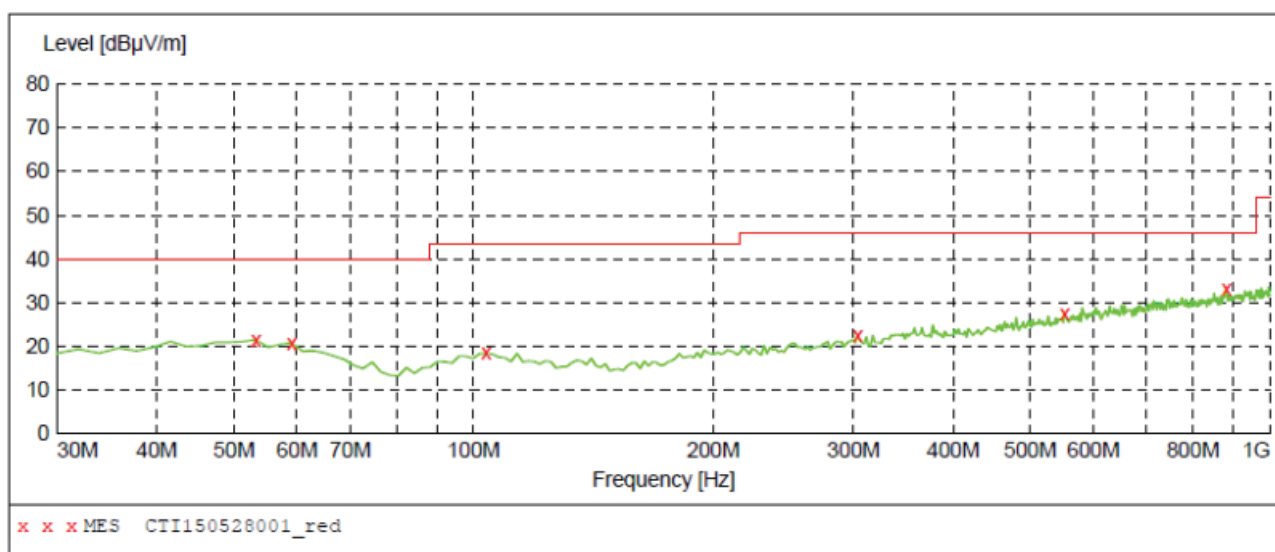
A. Below 30MHz:

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 ~ 1GHz:

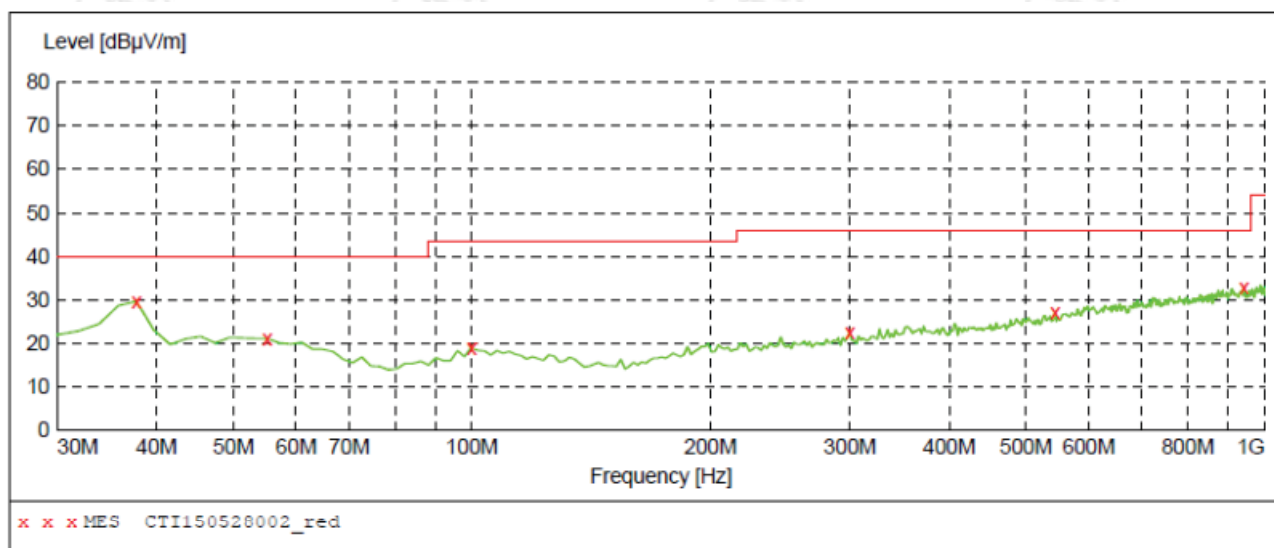
The test data of low channel, middle channel and high channel are almost same in frequency bands 30MHz to 1GHz, and the data of middle channel (GFSK mode) are chosen as representative in below:

H:



Frequency MHz	Level dBμV/m	Transd dB	Limit dBμV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
53.280000	21.50	15.7	40.0	18.5	---	100.0	100.00	HORIZONTAL
59.100000	20.80	14.9	40.0	19.2	---	100.0	325.00	HORIZONTAL
103.720000	18.40	13.2	43.5	25.1	---	100.0	20.00	HORIZONTAL
303.540000	22.40	16.5	46.0	23.6	---	100.0	216.00	HORIZONTAL
551.860000	27.50	21.8	46.0	18.5	---	100.0	164.00	HORIZONTAL
881.660000	33.10	26.7	46.0	12.9	---	100.0	245.00	HORIZONTAL

V:



Frequency MHz	Level dBμV/m	Transd dB	Limit dBμV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
37.760000	29.70	14.4	40.0	10.3	---	100.0	37.00	VERTICAL
55.220000	21.10	15.4	40.0	18.9	---	100.0	220.00	VERTICAL
99.840000	19.00	13.4	43.5	24.5	---	100.0	232.00	VERTICAL
299.660000	22.30	16.3	46.0	23.7	---	100.0	245.00	VERTICAL
544.100000	27.00	21.6	46.0	19.0	---	100.0	179.00	VERTICAL
941.800000	32.70	27.2	46.0	13.3	---	100.0	179.00	VERTICAL

C. Above 1GHz:
Test Results-(Measurement Distance: 3m)_Channel low_2402MHz_GFSK mode:

Frequency (MHz)	Measurement (dBμV/m)	Limit (dBμV/m)	Detector Type	Antenna (H/V)	Result (P/F)
2390.0	32.89	74	PK	H	P
2400.0	45.98	74	PK	H	P
2402.0*	88.99	---	PK	H	P
4804.0	40.19	74	PK	H	P
2390.0	33.90	74	PK	V	P
2400.0	46.17	74	PK	V	P
2402.0*	87.09	---	PK	V	P
4804.0	41.29	74	PK	V	P

*: fundamental frequency

Test Results-(Measurement Distance: 3m)_Channel middle_2440MHz_GFSK mode:

Frequency (MHz)	Measurement (dBμV/m)	Limit (dBμV/m)	Detector Type	Antenna (H/V)	Result (P/F)
2440.0*	88.98	---	PK	H	P
4880.0	40.12	74	PK	H	P
2440.0*	89.12	---	PK	V	P
4880.0	41.22	74	PK	V	P

*: fundamental frequency

Test Results-(Measurement Distance: 3m)_Channel high_2480MHz_GFSK mode:

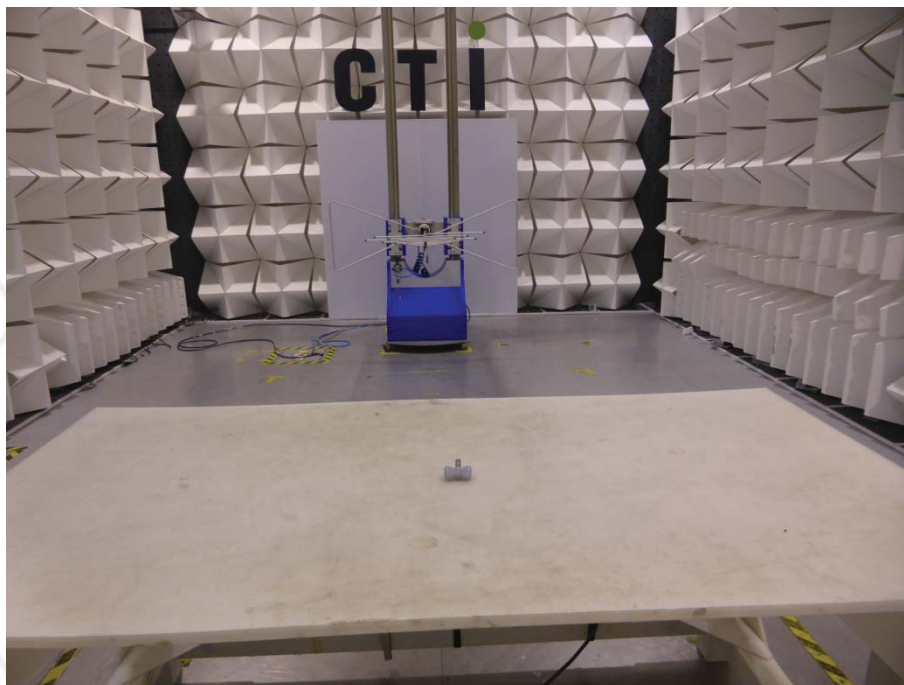
Frequency (MHz)	Measurement (dBμV/m)	Limit (dBμV/m)	Detector Type	Antenna (H/V)	Result (P/F)
2480.0*	89.78	---	PK	H	P
2483.5	42.19	74	PK	H	P
4960.0	40.01	74	PK	H	P
2480.0*	88.99	---	PK	V	P
2483.5	41.20	74	PK	V	P
4960.0	42.09	74	PK	V	P

*: fundamental frequency

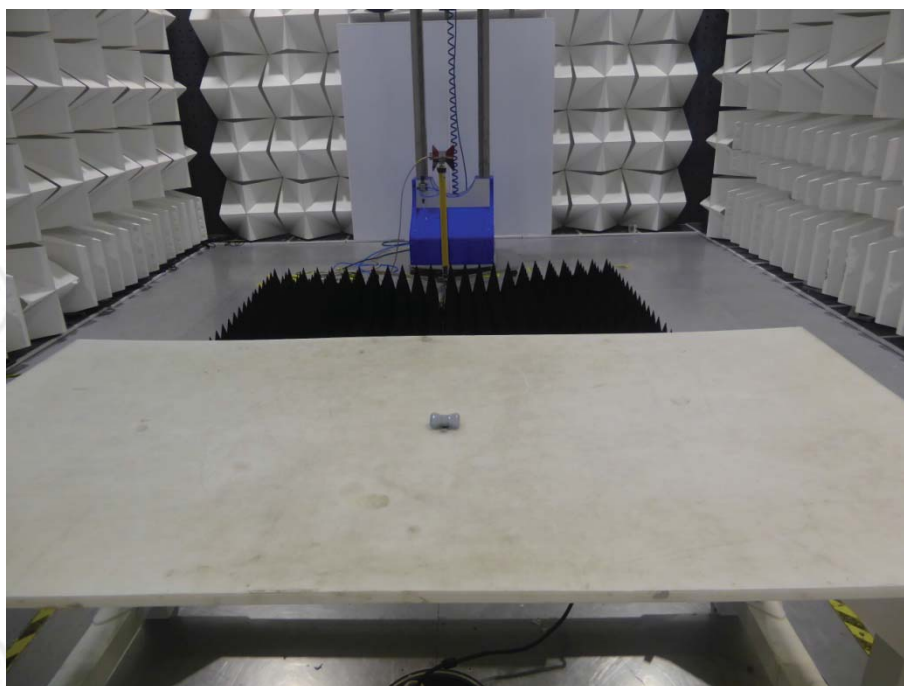
Remark:

1. The above tables show that the frequencies peak data are all below the average limit, so the average data of these frequencies are deemed to fulfill the average limits and not reported.
2. No emission found from 18GHz to 25GHz.
3. All outside of operating frequency band and restricted band specified are below 15.209.

PHOTOGRAPHS OF TEST SETUP



Radiated spurious emission Test Setup-1 (Below 1GHz)



Radiated spurious emission Test Setup-2(Above 1GHz)



Conducted emission Test Setup

PHOTOGRAPHS OF EUT Constructional Details



View of external EUT-1



View of external EUT-2



View of external EUT-3



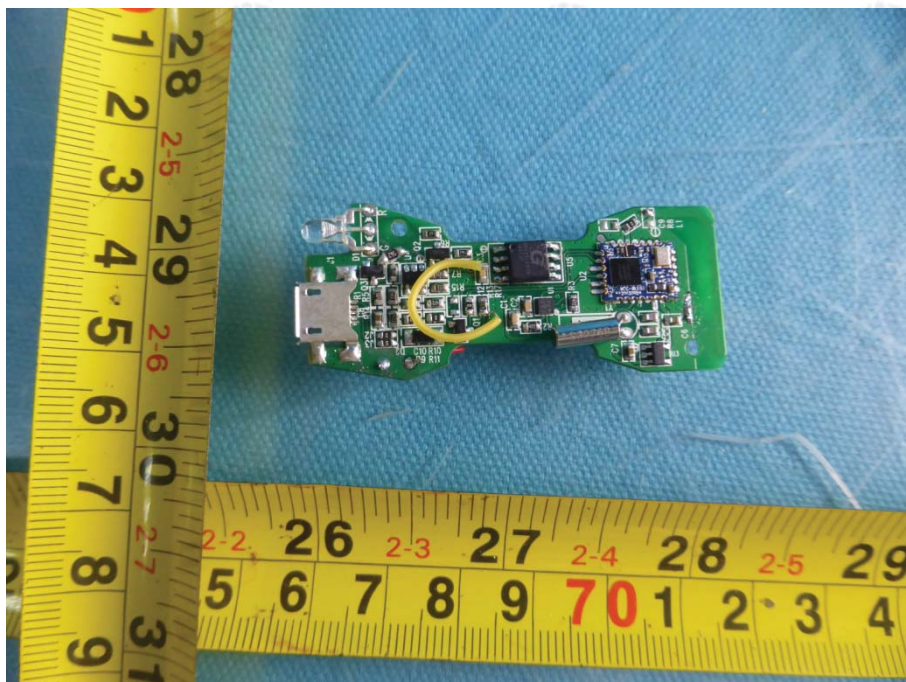
View of external EUT-4



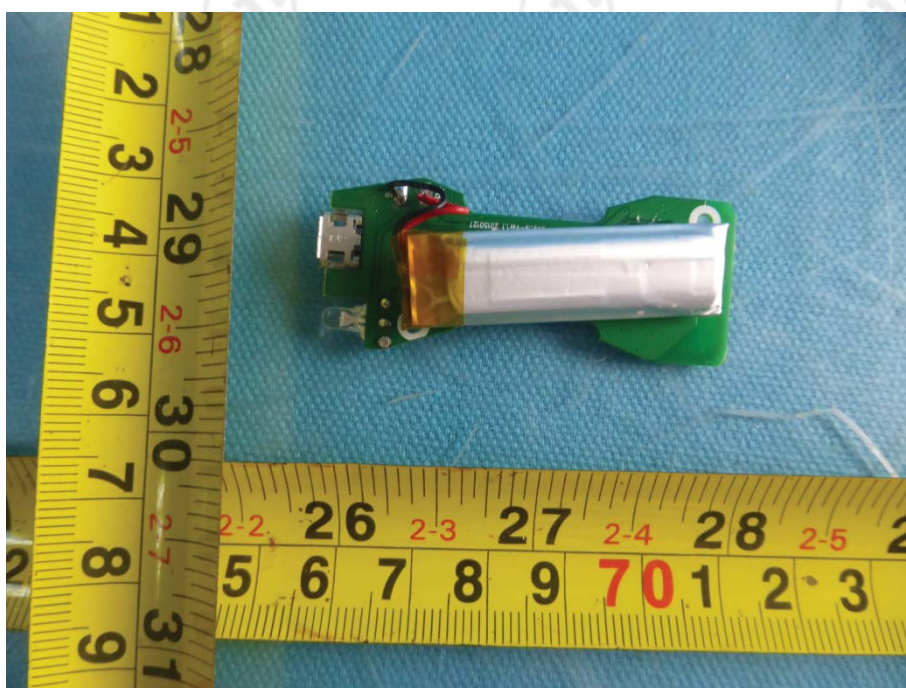
View of external EUT-5



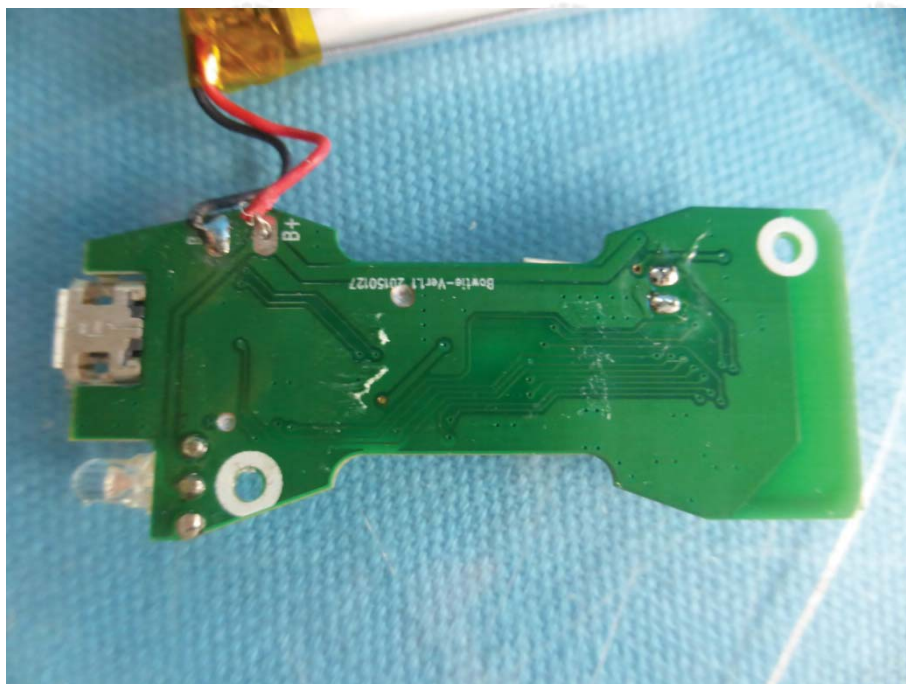
View of internal EUT-1



View of internal EUT-2



View of internal EUT-3



View of internal EUT-4



View of internal EUT-5

*** End of Report ***

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