
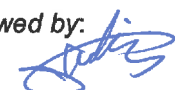


Prüfbericht-Nr.: <i>Test Report No.:</i>	17045688 001	Auftrags-Nr.: <i>Order No.:</i>	164027250	Seite 1 von 48 Page 1 of 48	
Kunden-Referenz-Nr.: <i>Client Reference No.:</i>	N/A	Auftragsdatum: <i>Order date:</i>	12.12.2014		
Auftraggeber: <i>Client:</i>	Lenovo (Beijing) Limited, No.6 Chuang Ye Road, Shangdi Information Industry, Haidian District, Beijing, China				
Prüfgegenstand: <i>Test item:</i>	ThinkPad Stack Bluetooth Speaker				
Bezeichnung / Typ-Nr.: <i>Identification / Type No.:</i>	S123				
Auftrags-Inhalt: <i>Order content:</i>	FCC approval				
Prüfgrundlage: <i>Test specification:</i>	CFR47 FCC Part 15: Subpart C Section 15.247 CFR47 FCC Part 15: Subpart C Section 15.207 CFR47 FCC Part 15: Subpart C Section 15.209 CFR47 FCC Part 15: Subpart B Section 15.107 CFR47 FCC Part 15: Subpart B Section 15.109 FCC KDB publication 447498 D01 v05r02				
Wareneingangsdatum: <i>Date of receipt:</i>	26.03.2015	N/A			
Prüfmuster-Nr.: <i>Test sample No.:</i>	A000178199-001, A000178199-002, A000178199-003				
Prüfzeitraum: <i>Testing period:</i>	01.04.2015 - 22.04.2015				
Ort der Prüfung: <i>Place of testing:</i>	Accurate Technology Co., Ltd.				
Prüflaboratorium: <i>Testing laboratory:</i>	TÜV Rheinland (Shenzhen) Co., Ltd.				
Prüfergebnis*: <i>Test result*:</i>	Pass				
geprüft von / tested by:		kontrolliert von / reviewed by:			
					
30.04.2015	Tom Wang / Project Manager	13.05.2015	Sam Lin / Technical Certifier		
Datum <i>Date</i>	Name / Stellung <i>Name / Position</i>	Unterschrift <i>Signature</i>	Datum <i>Date</i>	Name / Stellung <i>Name / Position</i>	Unterschrift <i>Signature</i>
Sonstiges / Other: This report is for DSS equipment class.					
Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of the test item at delivery:</i>			Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged</i>		
* Legende: 1 = sehr gut 2 = gut 3 = befriedigend 4 = ausreichend 5 = mangelhaft P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet Legend: 1 = very good 2 = good 3 = satisfactory 4 = sufficient 5 = poor P(ass) = passed a.m. test specification(s) F(ail) = failed a.m. test specification(s) N/A = not applicable N/T = not tested					
<p>Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i></p>					

v04

TEST SUMMARY

5.1.1 ANTENNA REQUIREMENT*RESULT: Passed***5.1.2 PEAK OUTPUT POWER***RESULT: Passed***5.1.3 20dB BANDWIDTH AND 99% BANDWIDTH***RESULT: Passed***5.1.4 CONDUCTED SPURIOUS EMISSIONS MEASURED IN 100 KHZ BANDWIDTH***RESULT: Passed***5.1.5 SPURIOUS EMISSIONS***RESULT: Passed***5.1.6 FREQUENCY SEPARATION***RESULT: Passed***5.1.7 NUMBER OF HOPPING FREQUENCY***RESULT: Passed***5.1.8 TIME OF OCCUPANCY***RESULT: Passed***5.1.9 RADIATED EMISSIONS***RESULT: Passed***5.1.10 CONDUCTED EMISSIONS***RESULT: Passed*

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1. General Remarks

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix A: Test Results of Bluetooth 4.0 mode

Appendix B: Test Results of RF Exposure

2. Test Sites

2.1 Test Facilities

Accurate Technology Co., Ltd.

(FCC Registration No.: 752051 & IC Registration Number: 5077A-2)

F1, Bldg A, Changyuan New Material Port, Keyuan Rd., Science & Industry Park,
Nanshan District, Shenzhen, 518057, P.R. China

The tests at the test site have been conducted under the supervision of a TÜV engineer.

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Kind of Equipment	Manufacturer	Type	S/N	Calibrated until
Radio Spectrum Test				
Spectrum Analyzer	Rohde&Schwarz	FSV40	101495	Jan.11, 2016
Test Receiver	Rohde& Schwarz	ESR	101817	Jul. 30, 2016
Spectrum Analyzer	Rohde&Schwarz	FSP30	100220	Jan.21, 2016
Power Meter	Rohde&Schwarz	NRP	100970	Jan. 21.2016
Power Sensor	Rohde&Schwarz	NRP-Z11	103642	Jan. 21.2016
Conducted emissions				
Test Receiver	Rohde & Schwarz	ESCS30	100307	Jan.11, 2016
L.I.S.N.	Schwarzbeck	NLSK8126	8126431	Jan.11, 2016
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100305	Jan.11, 2016
Radiated emissions				
Spectrum Analyzer	Rohde&Schwarz	FSV40	101495	Jan.11, 2016
Test Receiver	Rohde& Schwarz	ESR	101817	Jul. 30, 2016
Bilog Antenna	Schwarzbeck	VULB9163	9163-194	Jan.15, 2016
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	Jan.15, 2016
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	Jan.11, 2016
RF Switching Unit+PreAMP	Compliance Direction	RSU-M2	38322	Jan.11, 2016
Pre-Amplifier	Agilent	8447D	294A10619	Jan.11, 2016
Pre-Amplifier	Rohde&Schwarz	CBLU1183540-01	3791	Jan.11, 2016

2.3 Traceability

All measurement equipment calibrations are traceable to NIST or where calibration is performed outside the United States, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

2.5 Measurement Uncertainty

The estimated combined standard uncertainty for radiated emissions and conducted emissions measurements as below table,

Items		Extended Uncertainty
CE	Disturbance Voltage (dBuV)	U=1.94dB, k=2, σ =95%
RE (9kHz-30MHz)	Field strength (dBuV/m)	U=3.08dB, k=2, σ =95%
RE (30-1000MHz)	Field strength (dBuV/m)	U=4.42dB, k=2, σ =95%
RE (above 1000MHz)	Field strength (dBuV/m)	U=4.06dB, k=2, σ =95%

2.6 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix1 of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) file for certification follow-up purposes.

2.7 Status of Facility Used for Testing

The Accurate Technology Co., Ltd. facility located at F1, Bldg A, Changyuan New Material Port, Keyuan Rd., Science & Industry Park, Nanshan District, Shenzhen, 518057, P.R. China is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

3. General Product Information

3.1 Product Function and Intended Use

The EUT is ThinkPad Stack Bluetooth Speaker. It supports Bluetooth 4.0 dual mode wireless technology.

For details refer to the User Manual, Technical Description and Circuit Diagram.

3.2 Ratings and System Details

Table 2: Technical Specification of EUT

Technical Specification	Value
Kind of Equipment:	ThinkPad Stack Bluetooth Speaker
Type Designation:	S123
FCC ID:	A5MS123
IC:	5903G-S123
Type of Equipment:	Class B digital equipment
Equipment Class:	DSS
Wireless Technology:	Bluetooth 4.0
Operating Frequency Range:	2402-2480MHz for Bluetooth
Channel Number:	79 channels for Bluetooth 4.0
Channel Separation:	1MHz for Bluetooth 4.0
Type of Modulation:	GFSK, 8DPSK, $\pi/4$ QDPSK for Bluetooth 4.0
Operating Voltage:	DC 5.2V via marketed AC/DC adapter DC 3.7V via Lithium-ion battery
Operating Temperature Range:	5°C to 35°C
Antenna Type:	FPCB Antenna for Bluetooth
Smart Antenna Systems:	Not Applicable
Number of Antenna:	1 for Bluetooth
Antenna Gain:	Max. -0.13dBi for Bluetooth

Table 3: Marketed AC/DC adapter

Description	Manufacturer	Model	S/N	Rating
AC/DC adapter	Lite-On Technology Corporation	PA-110-17IN	45N0530	Input: AC 100-240V, 50/60Hz, 0.3A MAX. Output: DC 5.2V, 2A

Table 4: List of Radio Frequency Channel, Bluetooth 4.0

RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
0	2402.00	21	2423.00	42	2444.00	63	2465.00
1	2403.00	22	2424.00	43	2445.00	64	2466.00
2	2404.00	23	2425.00	44	2446.00	65	2467.00
3	2405.00	24	2426.00	45	2447.00	66	2468.00
4	2406.00	25	2427.00	46	2448.00	67	2469.00
5	2407.00	26	2428.00	47	2449.00	68	2470.00
6	2408.00	27	2429.00	48	2450.00	69	2471.00
7	2409.00	28	2430.00	49	2451.00	70	2472.00
8	2410.00	29	2431.00	50	2452.00	71	2473.00
9	2411.00	30	2432.00	51	2453.00	72	2474.00
10	2412.00	31	2433.00	52	2454.00	73	2475.00
11	2413.00	32	2434.00	53	2455.00	74	2476.00
12	2414.00	33	2435.00	54	2456.00	75	2477.00
13	2415.00	34	2436.00	55	2457.00	76	2478.00
14	2416.00	35	2437.00	56	2458.00	77	2479.00
15	2417.00	36	2438.00	57	2459.00	78	2480.00
16	2418.00	37	2439.00	58	2460.00	--	--
17	2419.00	38	2440.00	59	2461.00	--	--
18	2420.00	39	2441.00	60	2462.00	--	--
19	2421.00	40	2442.00	61	2463.00	--	--
20	2422.00	41	2443.00	62	2464.00	--	--

Table 5: Frequency hopping information

Technical Specification	Description
Hopping Range	<p>Hereby we declare that the maximum frequency of this device is: 2402-2480MHz. This is according the Bluetooth Core Specification for devices which will be operated in the USA. This was checked during the Bluetooth Qualification tests (Test Case: TRM/CA/04-E).</p>
Hopping Sequence	<p>Example of a 79 hopping sequence in data mode:</p> <p>33,04,21,44,23,42,53,46,55,48,40,59,72,29,76,31,08,73, 07,75,09,45,60,39,58,13,47,11,77,52,35,50,65,54,67,56, 69,62,71,64, 7,25,27,66,57,70,74,61,78,63,10,41,05,43, 15,44,64,68,02,70,06,01,51,03,55,05,03,66,53,49,36,47,</p>
Receiver input bandwidth	<p>The input bandwidth of the receiver is 1MHz. In every connection one Bluetooth device is the master and the other one is the slave. The master determines the hopping sequence. The slave follows this sequence. Both devices shift between RX and TX time slot according to the clock of the master.</p> <p>Additionally the type of connection is set up at the beginning of the connection. The master adapts its hopping frequency and its TX/RX timing according to the packet type of the connection. Also the slave of the connection will use these settings.</p> <p>Repeating of a packer has no influence on the hopping sequence. The hopping sequence generated by the master of the connection will be followed in any case.</p> <p>That means a repeated packet will not be send on the same frequency, it is send on the next frequency of the hopping sequence.</p>

3.3 Independent Operation Modes

The basic operation modes are:

- A. Transmitting
 - 1. Bluetooth function
 - a. Low Channel
 - b. Mid Channel
 - c. High Channel
- B. Receiving
- C. Standby
- D. Battery Charging
- E. Aux-in playing
- F. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to the Circuit Diagram.

3.5 Submitted Documents

- Bill of Material	- Circuit Diagram
- PCB Layout	- Instruction Manual
- Photo Document	- Rating Label

4. Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

Radio Spectrum: The equipment under test (EUT) was configured at its highest power output in order to measure its highest possible radiation and conducted level. The test modes were adapted accordingly in reference to the instructions for use.

Emission: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5.

During testing, test software BlueSuite provided by the applicant was used to control the operating channel as well as output power for Bluetooth operation.

Table 6: List of Frequencies under Test, Bluetooth operation

RF Channel of Bluetooth 4.0			
Channel	Channel number	Frequency (MHz)	Power Level setting in software
Low	0	2402.00	50
Middle	39	2441.00	50
High	78	2480.00	50

4.3 Special Accessories and Auxiliary Equipment

Table 7: List of Accessories and Auxiliary Equipment

Description	Manufacturer	Model	S/N	Rating
Laptop PC	Lenovo	X200	L3-ANW2G	--
Mobile Phone	HUAWEI	P7-L00	7NZMYN151S027 984	--

4.4 Countermeasures to achieve EMC Compliance

The test sample which has been tested contained the noise suppression parts as described in the Constructional Data Form or the Technical Construction File. No additional measures were employed to achieve compliance.

4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test

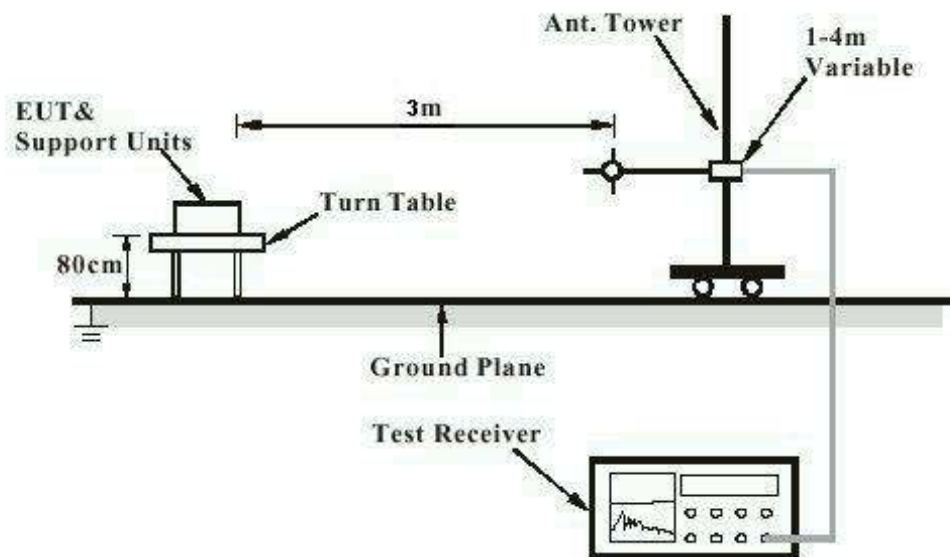


Diagram of Measurement Equipment Configuration for Conduction Measurement

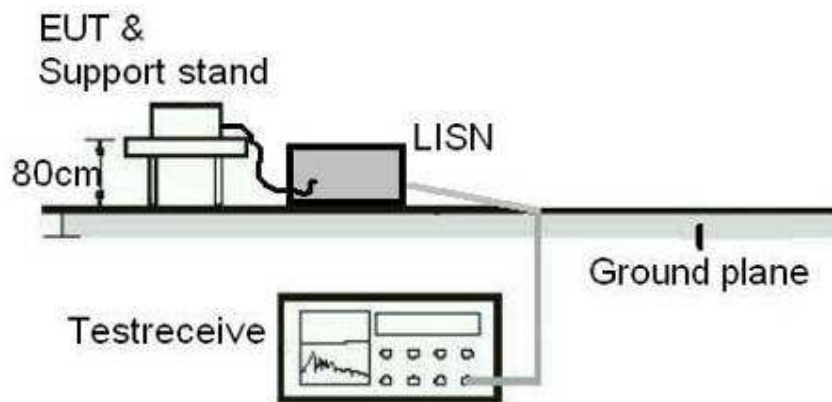
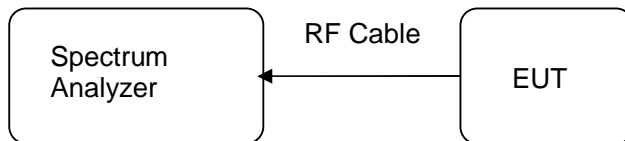


Diagram of Measurement Equipment Configuration for Transmitter Measurement



5. Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT:**Passed**

Test date	:	2015-04-01 to 2015-04-22
Test standard	:	FCC Part 15.247(b)(4) and Part 15.203
Limit	:	the use of antennas with directional gains that do not exceed 6 dBi

According to the manufacturer declared, the EUT has an internal antenna, the directional gain of antenna is -0.13dBi, and the antenna connector is designed with permanent attachment and no consideration of replacement. Therefore the EUT is considered sufficient to compliance the provision.

Refer to EUT photo for details.

5.1.2 Peak Output Power

RESULT:
Passed

Test date : 2015-04-01 to 2015-04-22
 Test standard : FCC Part 15.247(b)(1)
 Basic standard : ANSI C63.4: 2009
 Limit : 0.125Watt
 Kind of test site : Shielded room

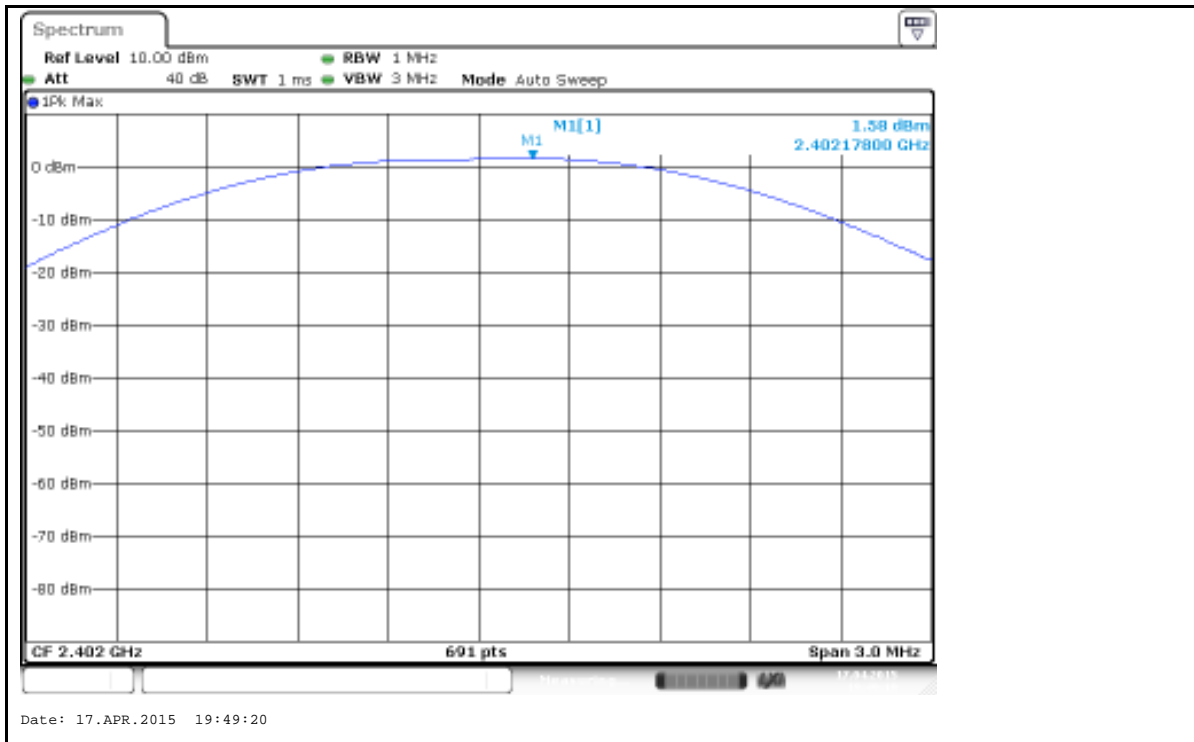
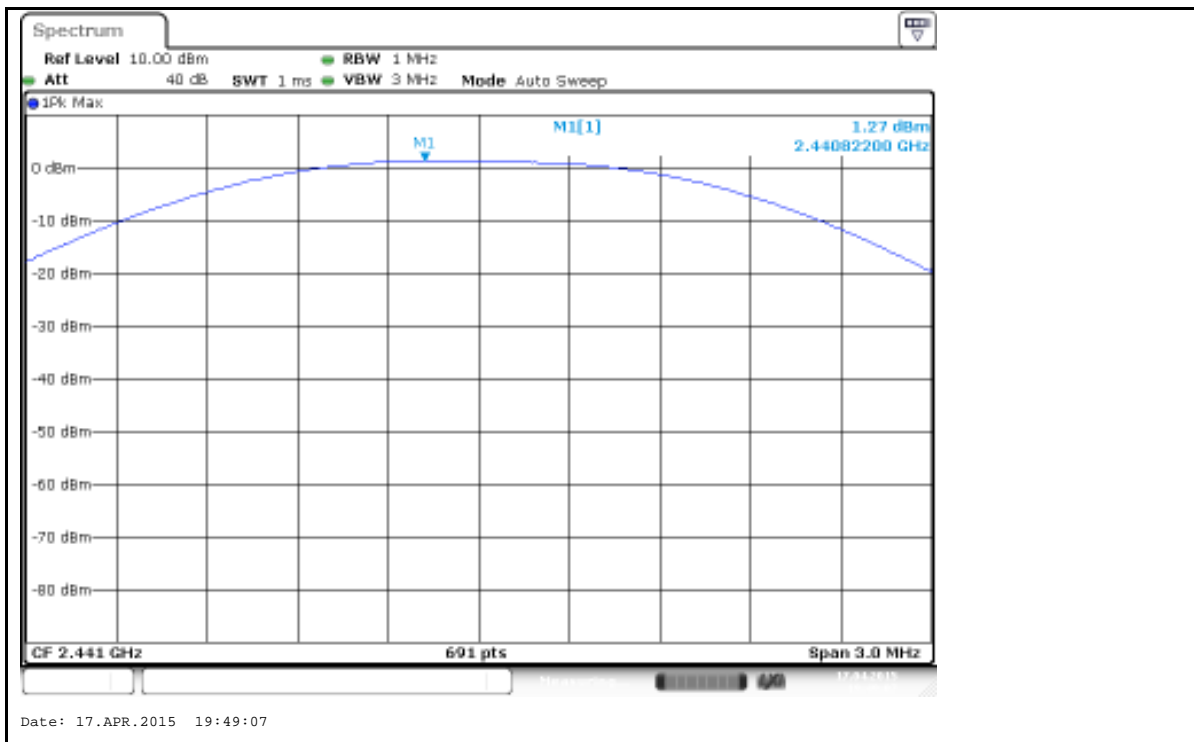
Test setup

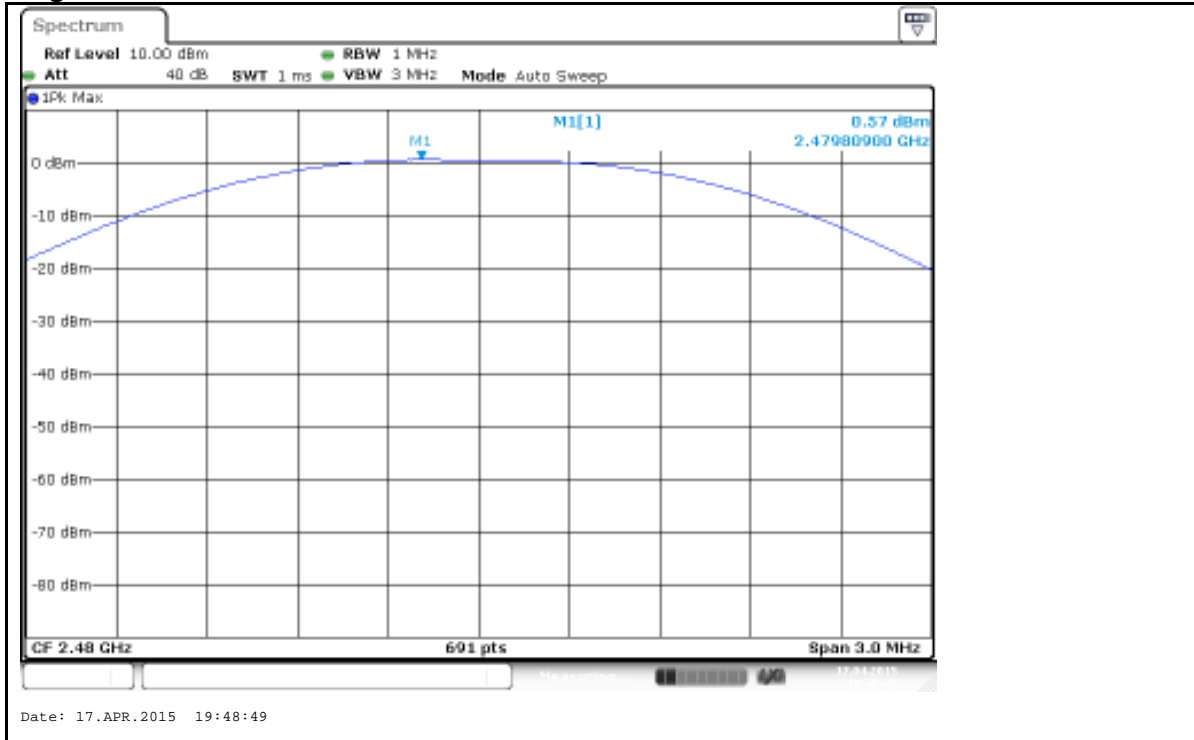
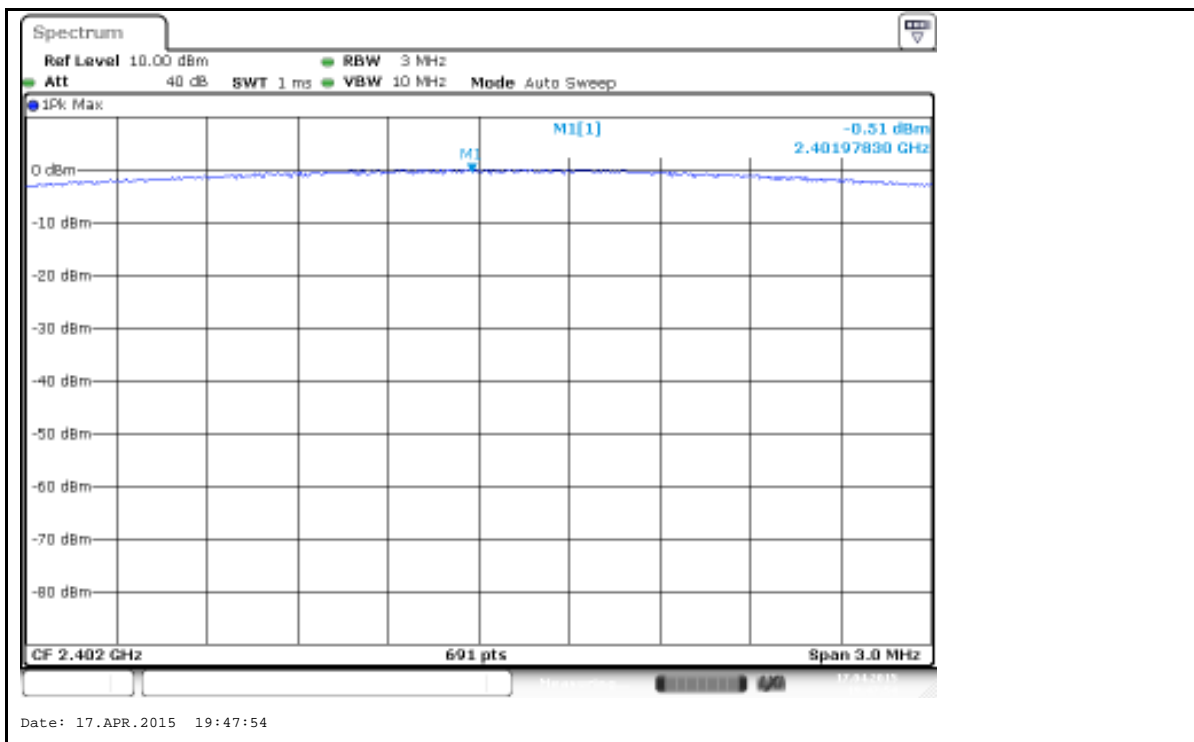
Test Channel : Low/ Middle/ High
 Operation Mode : A.1
 Ambient temperature : 23°C
 Relative humidity : 50%
 Atmospheric pressure : 101.0 kPa

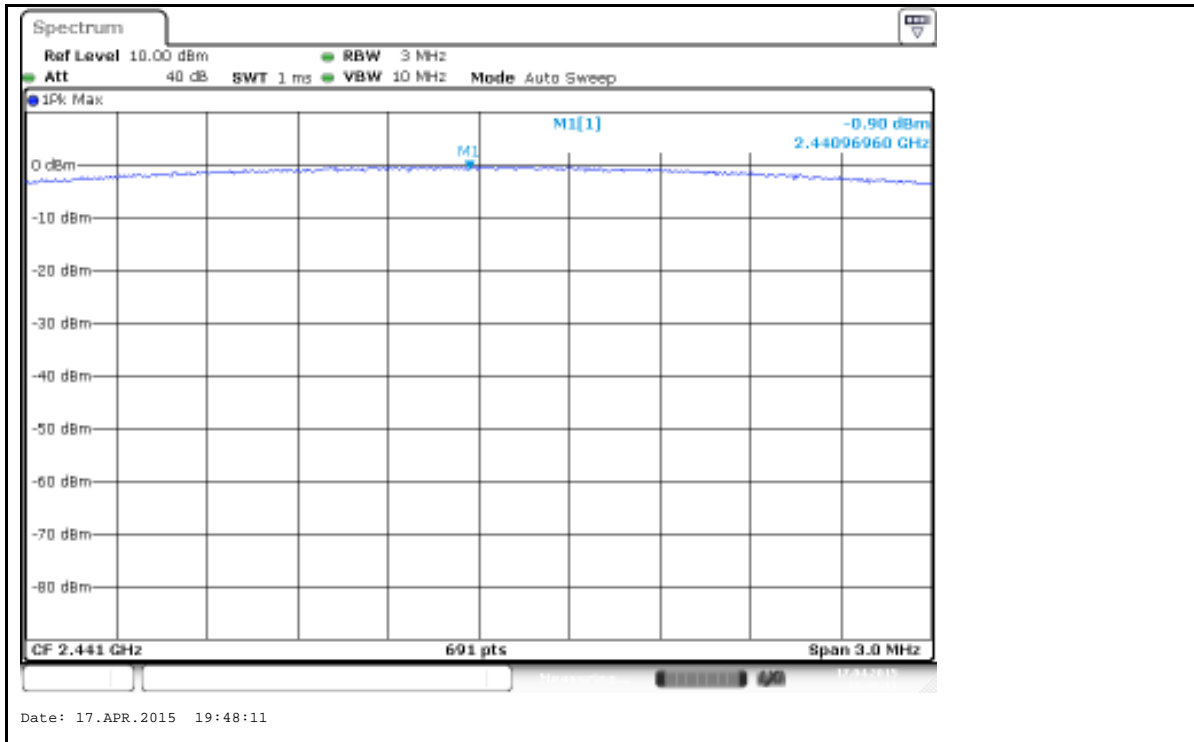
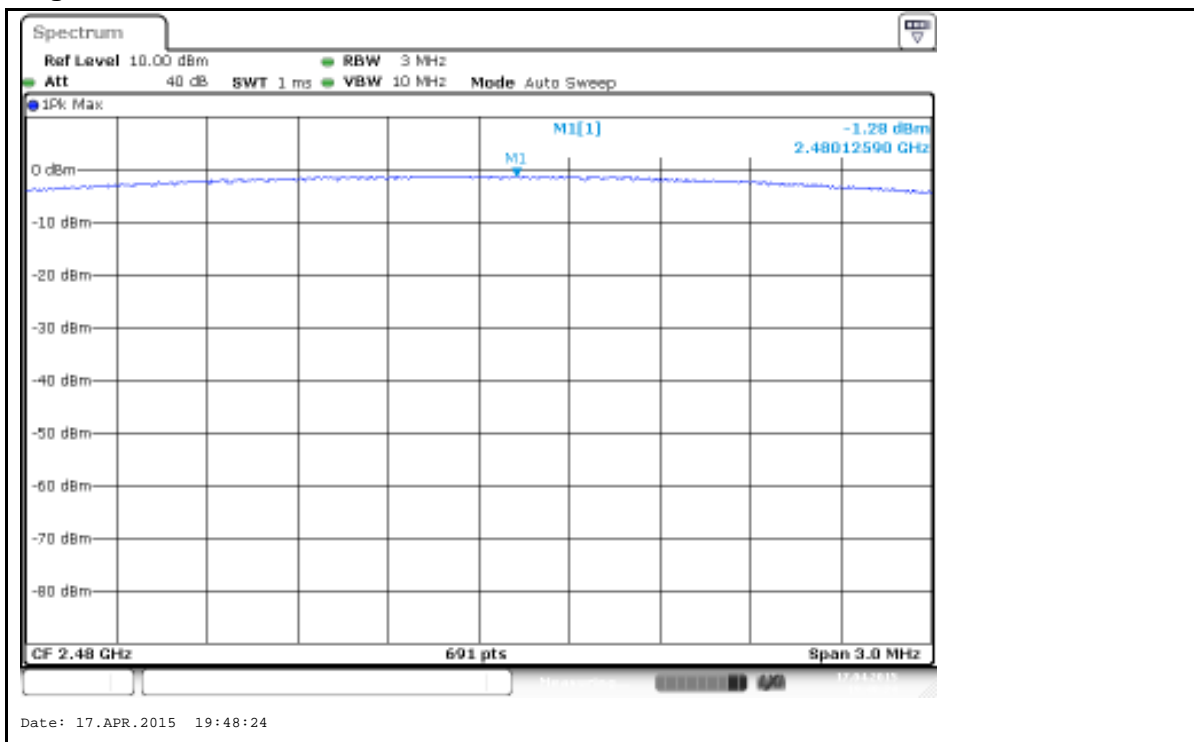
Table 8: Test result of Peak Output Power

Channel	Channel Frequency (MHz)	BDR mode		
		Peak Output Power		Limit
		(dBm)	(W)	(W)
Low Channel	2402	3.58	0.00228	0.125
Middle Channel	2441	3.27	0.00212	0.125
High Channel	2480	2.57	0.00181	0.125
Channel	Channel Frequency (MHz)	EDR mode		
		Peak Output Power		Limit
		(dBm)	(W)	(W)
Low Channel	2402	1.49	0.00141	0.125
Middle Channel	2441	1.10	0.00129	0.125
High Channel	2480	0.72	0.00118	0.125

Note:
 1. Peak Output power = measure value + cable loss, cable loss is 2dB.

Test Graph of Peak Output Power, BDR mode
Low Channel

Middle Channel


High Channel

Test Graph of Peak Output Power, EDR mode
Low Channel


Middle Channel

High Channel


5.1.3 20dB Bandwidth and 99% Bandwidth

RESULT:
Passed

Date of testing : 2015-04-01 to 2015-04-22
 Test standard : FCC Part 15.247(a)(1)
 Basic standard : ANSI C63.4: 2009
 Kind of test site : Shielded room

Test setup

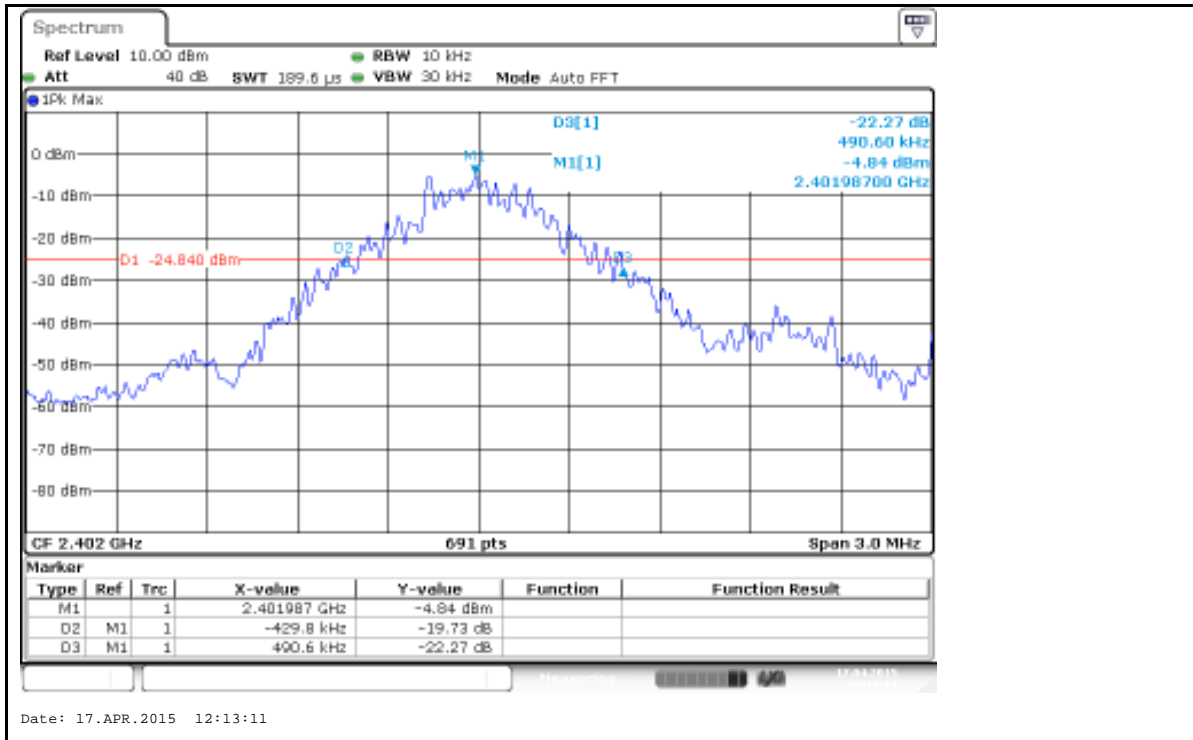
Test Channel : Low/ Middle/ High
 Operation Mode : A.1
 Ambient temperature : 23°C
 Relative humidity : 50%
 Atmospheric pressure : 101.0 kPa

Table 9: Test result of 20dB Bandwidth and 99% Bandwidth

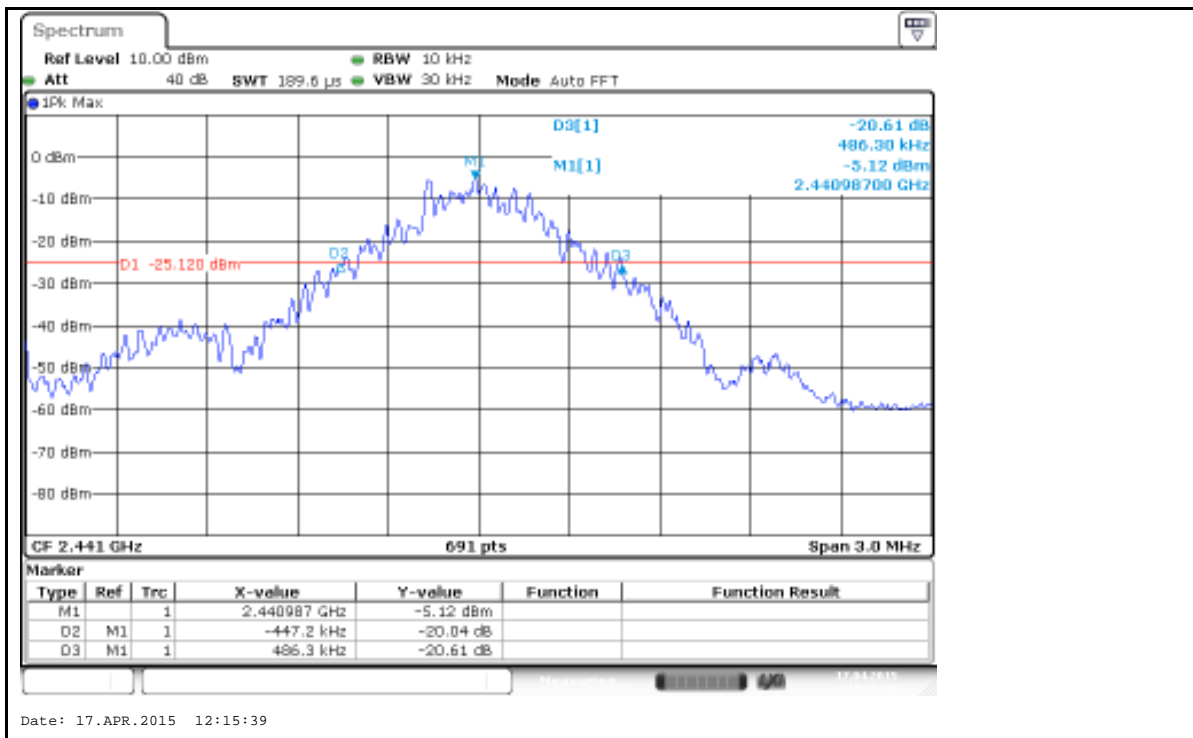
BDR mode				
Channel	Channel Frequency (MHz)	20dB Bandwidth (kHz)	99% Bandwidth (kHz)	Result
Low Channel	2402	920.4	937.77	Pass
Mid Channel	2441	933.5	929.09	Pass
High Channel	2480	937.8	933.43	Pass
EDR mode				
Channel	Channel Frequency (MHz)	20dB Bandwidth (kHz)	99% Bandwidth (kHz)	Result
Low Channel	2402	1207.0	1193.92	Pass
Mid Channel	2441	1202.6	1189.58	Pass
High Channel	2480	1207.0	1189.58	Pass

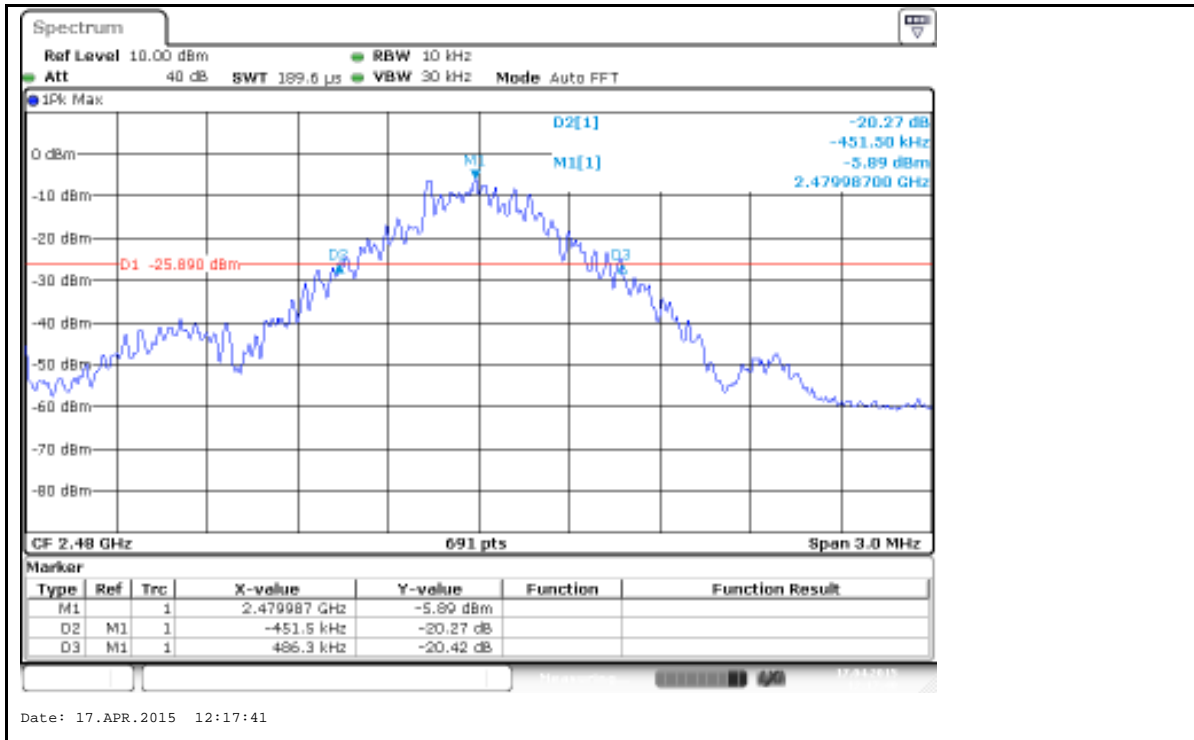
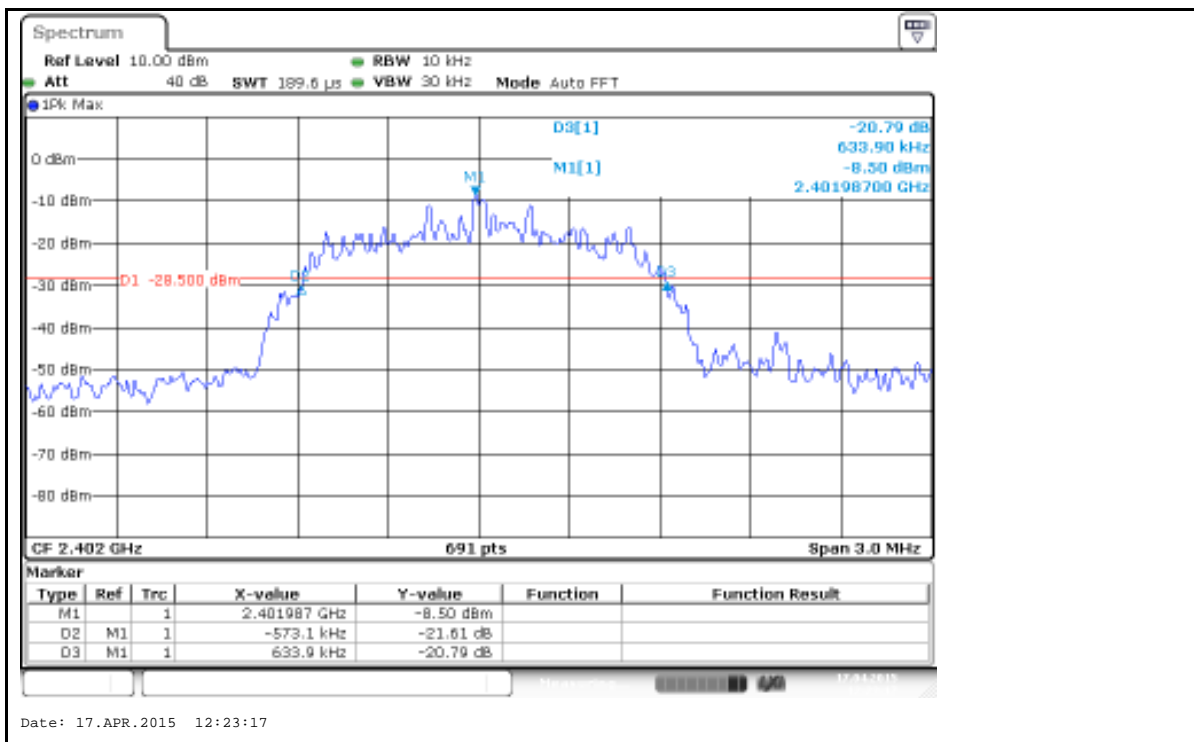
Test Graph of 20dB Bandwidth, BDR mode

Low Channel



Middle Channel



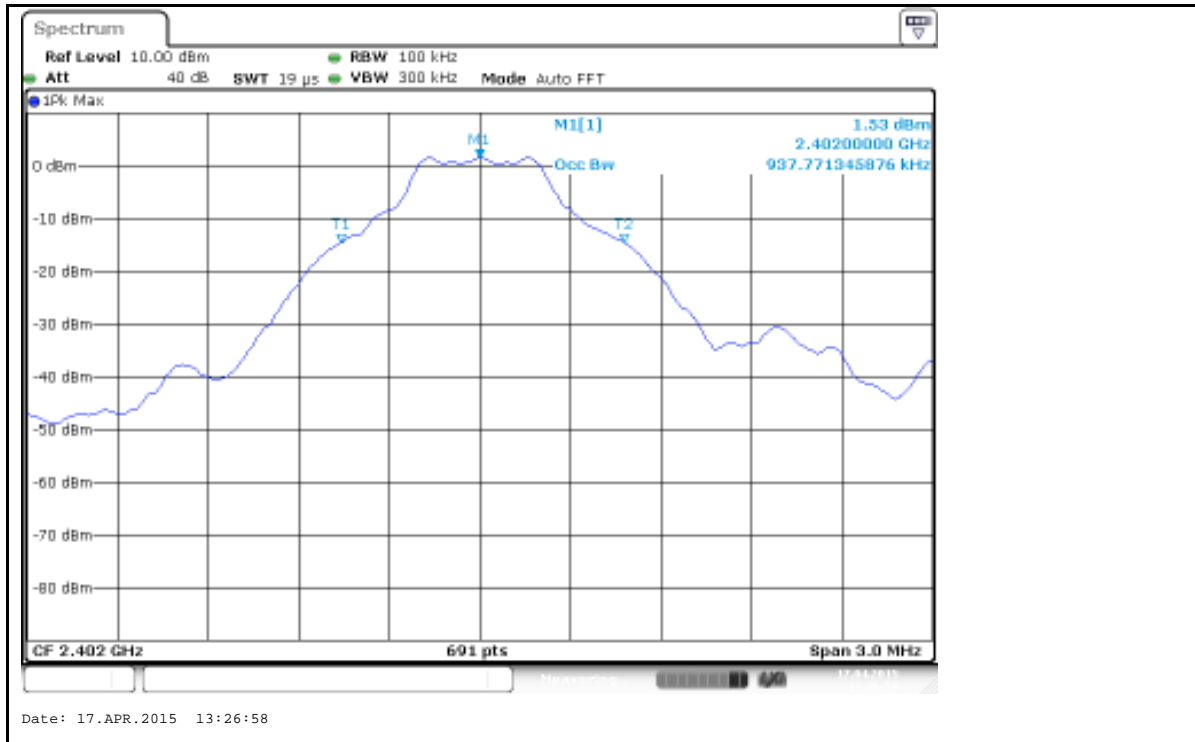
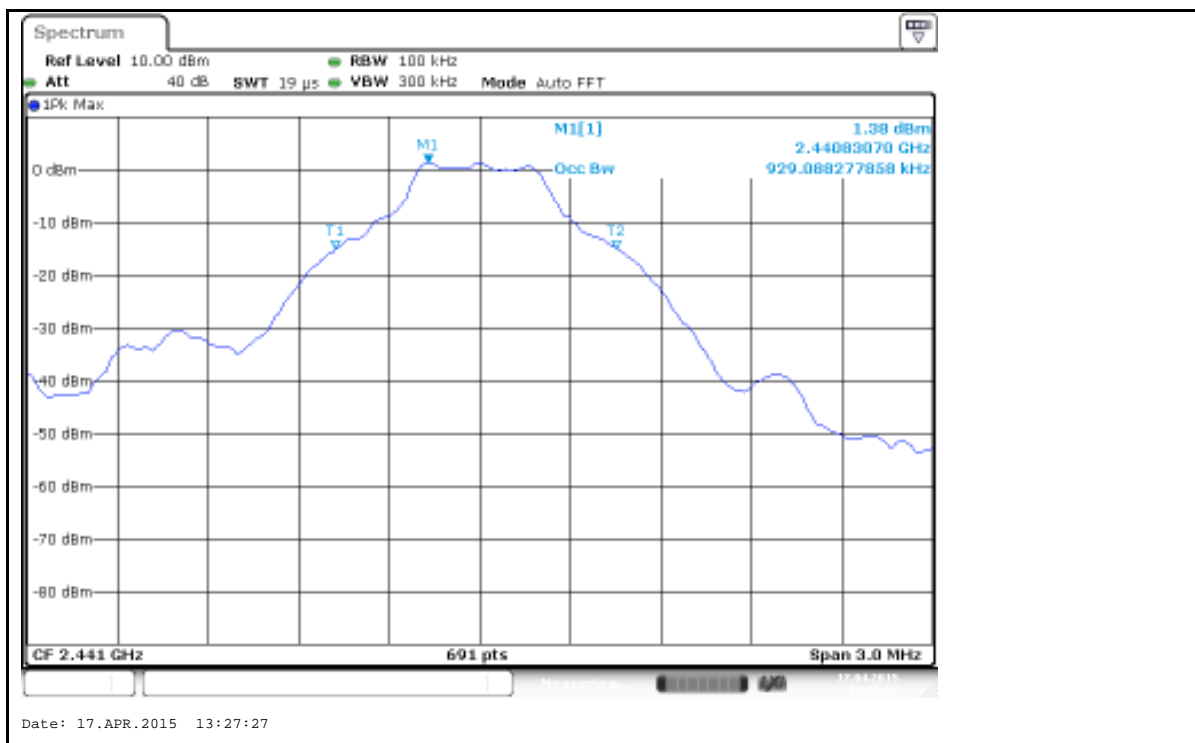
High Channel

Test Graph of 20dB Bandwidth, EDR mode
Low Channel


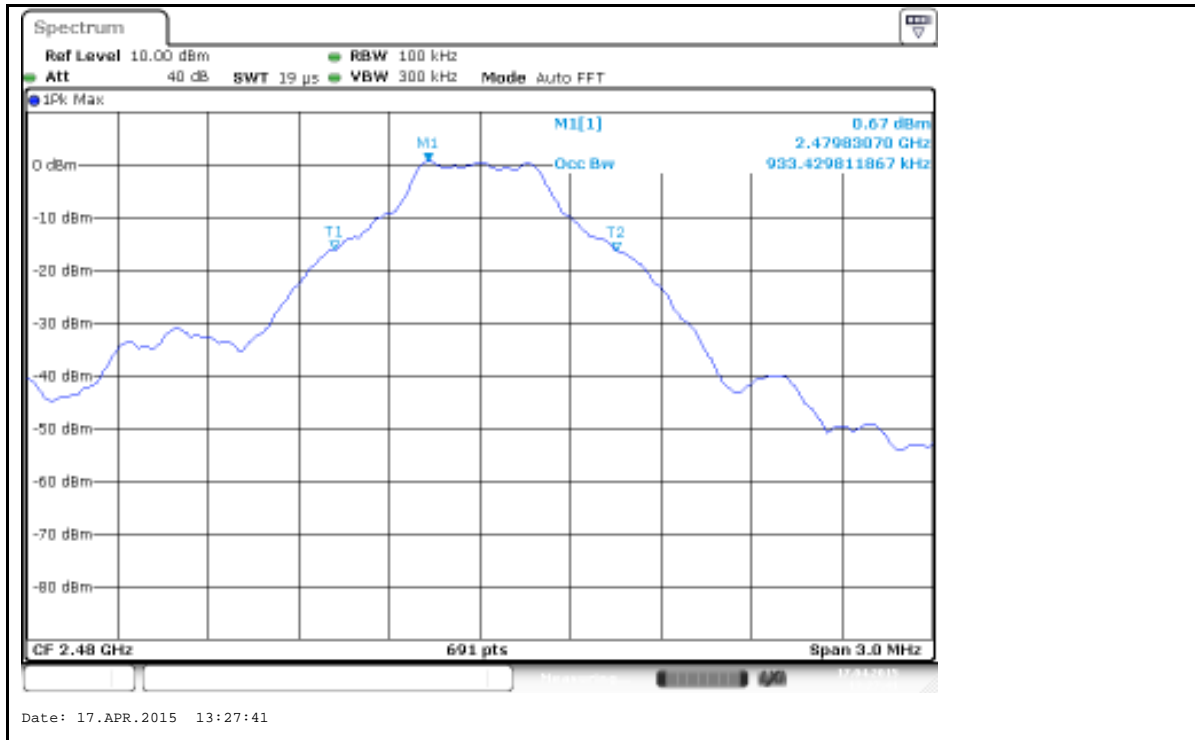
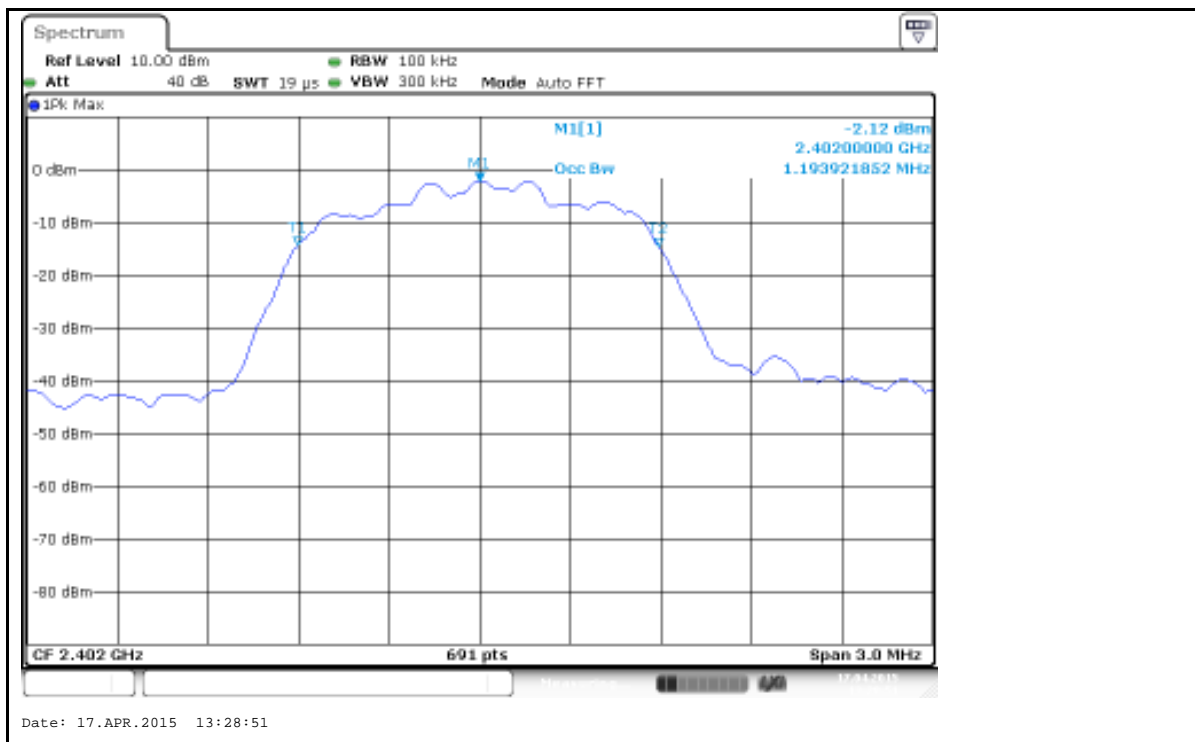
Middle Channel

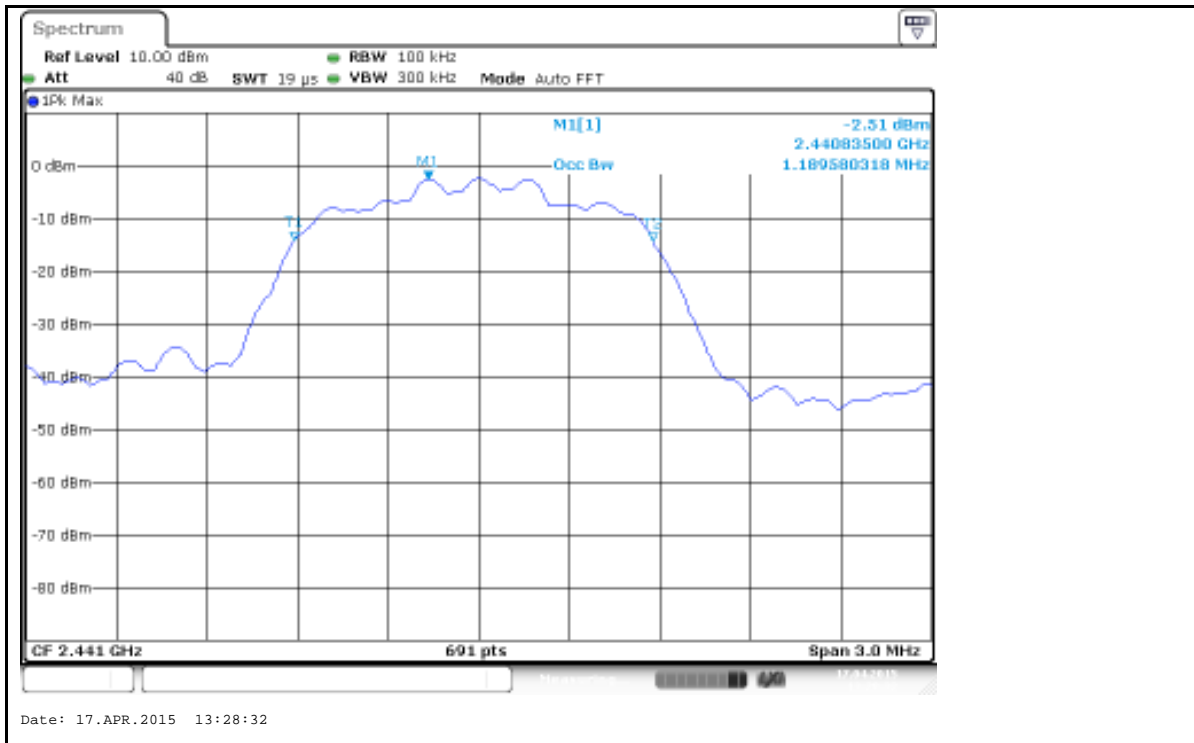
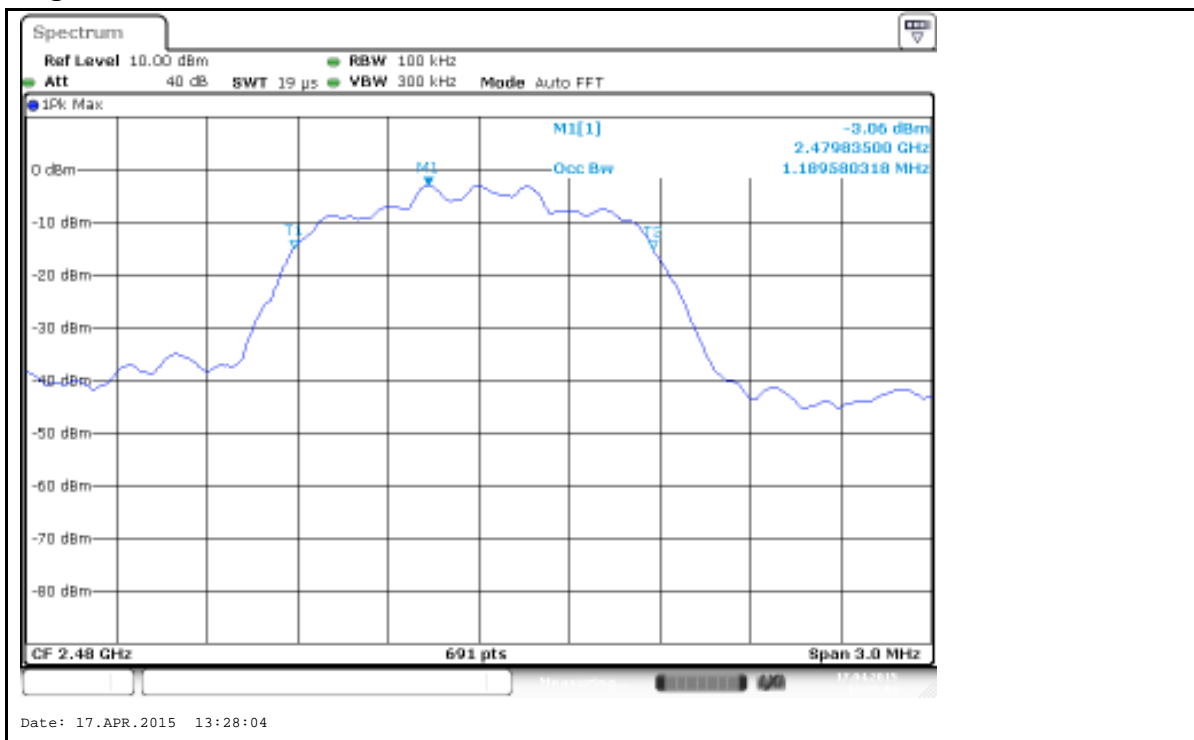

Date: 17.APR.2015 12:22:22

High Channel


Date: 17.APR.2015 12:21:23

Test Graph of 99% Bandwidth, BDR mode
Low Channel

Middle Channel


High Channel

Test Graph of 99% Bandwidth, EDR mode
Low Channel


Middle Channel

High Channel


5.1.4 Conducted Spurious Emissions measured in 100 kHz Bandwidth

RESULT: **Passed**

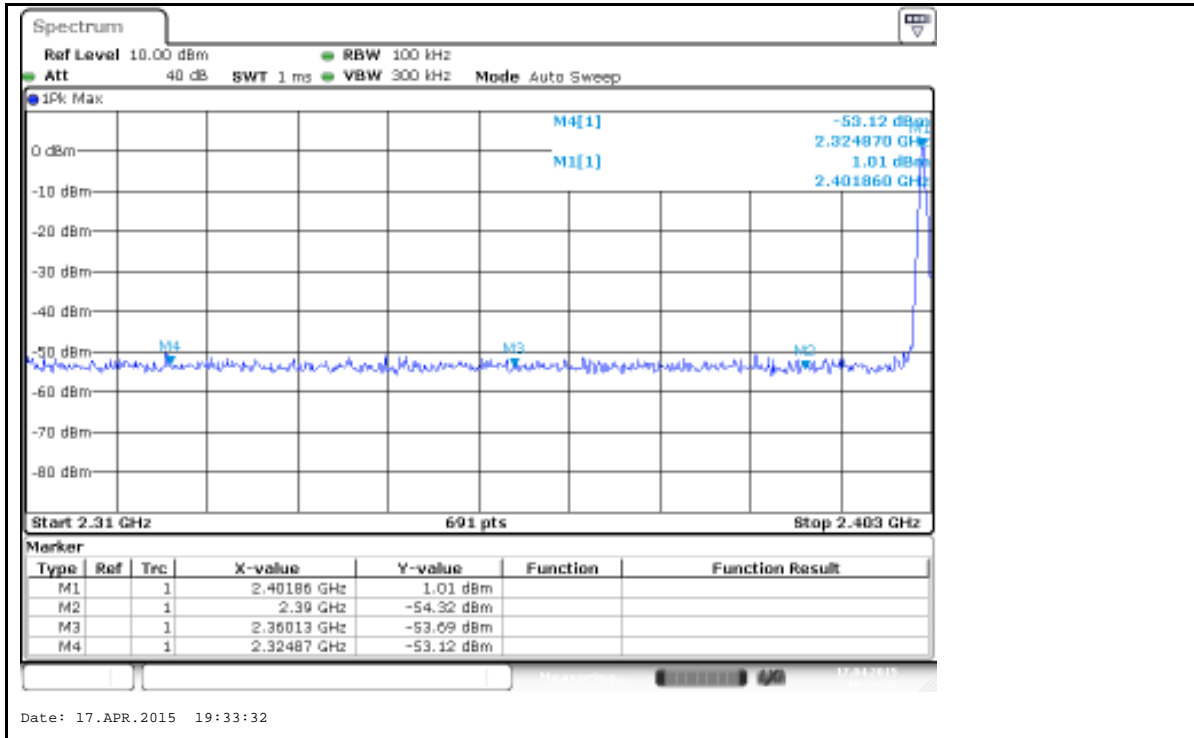
Date of testing : 2015-04-01 to 2015-04-22
Test standard : FCC part 15.247(d)
Basic standard : ANSI C63.4: 2009
Limit : 20dB (below that in the 100kHz bandwidth within the band that contains the highest level of the desired power);
In addition, radiated emissions which fall in the restricted bands, must also comply with the radiated emission limits specified in 15.209(a)
Kind of test site : Shield room

Test setup

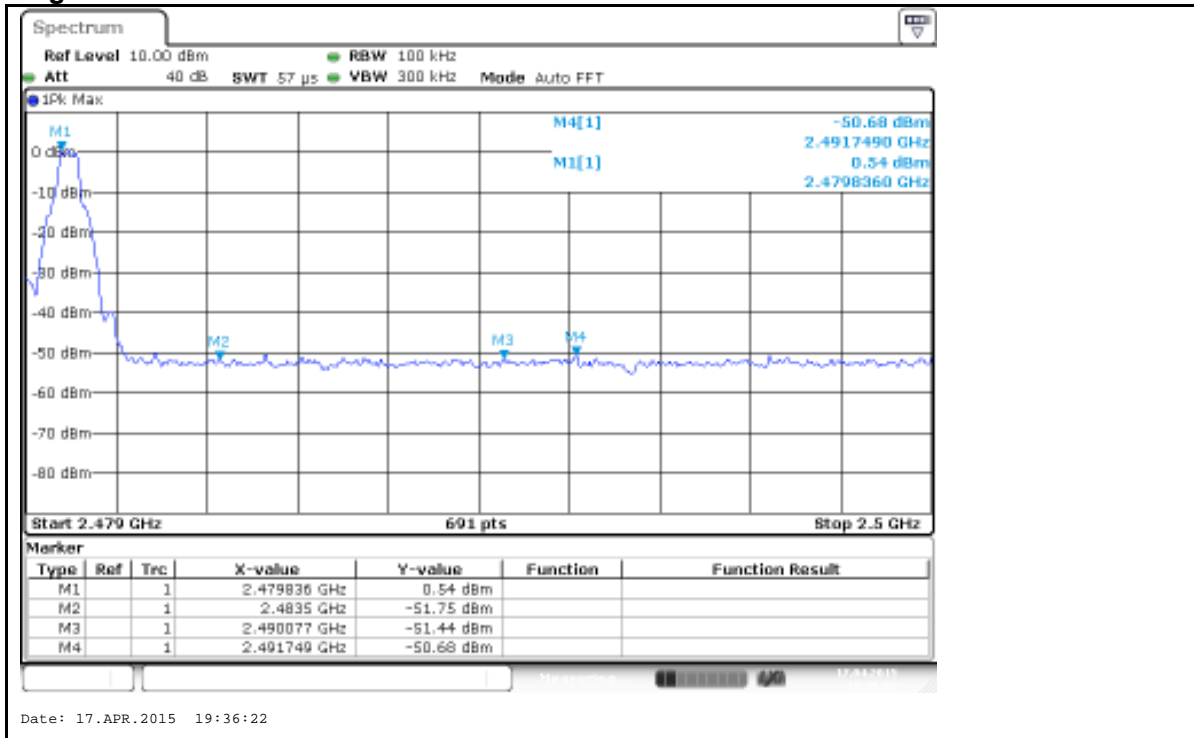
Test Channel : Low/ Middle/ High
Operation mode : A.1
Ambient temperature : 23°C
Relative humidity : 50%
Atmospheric pressure : 101.0 kPa

Test results of 100kHz Bandwidth of Frequency Band Edge by Conducted method refer to following test graph, and compliance is achieved as well.

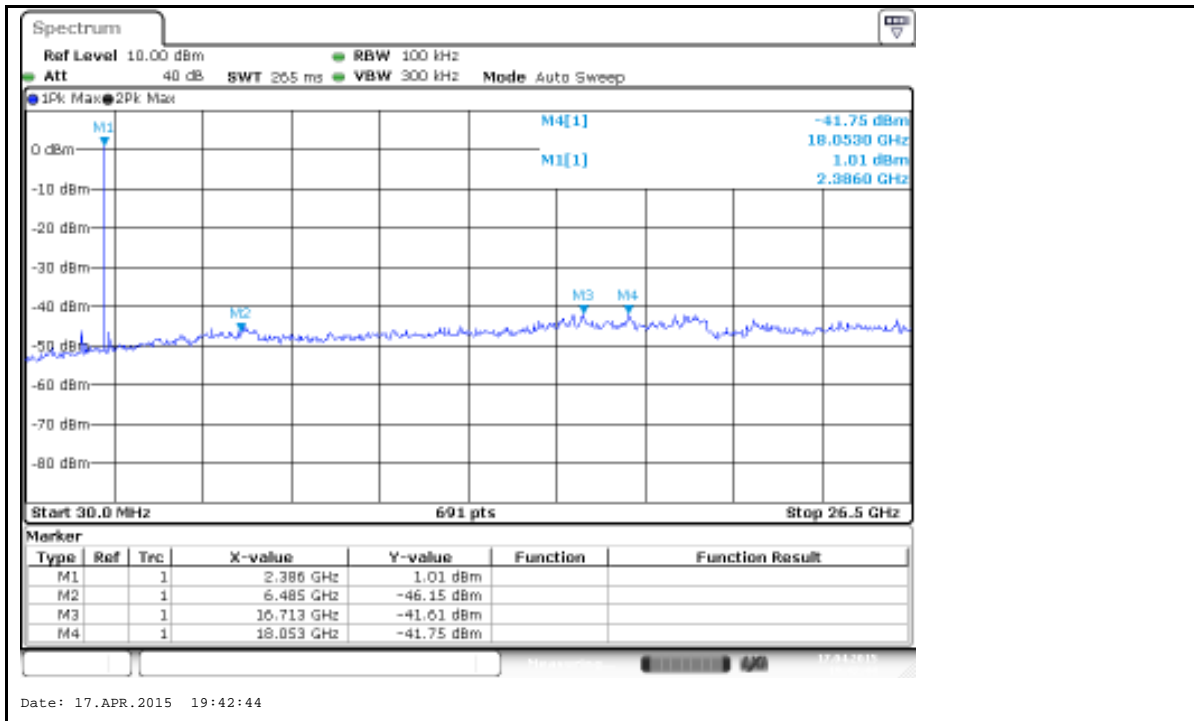
Test Graph of 100 kHz Bandwidth of Frequency Band Edge, BDR mode Low Channel



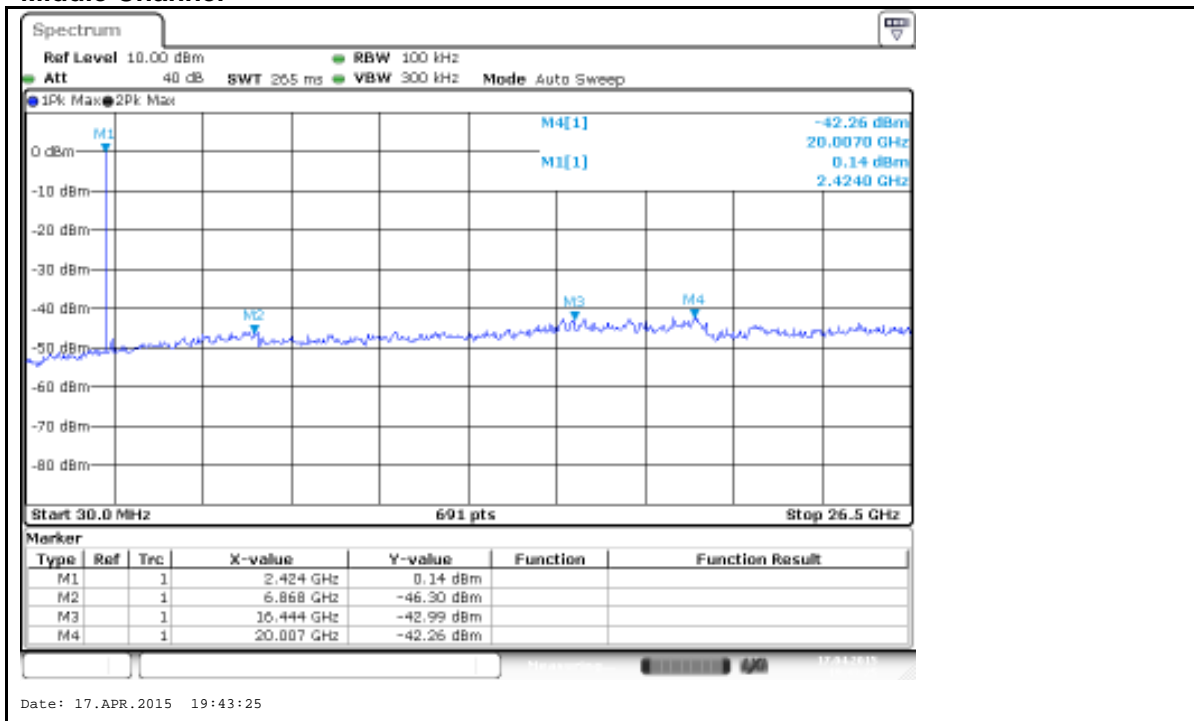
High Channel

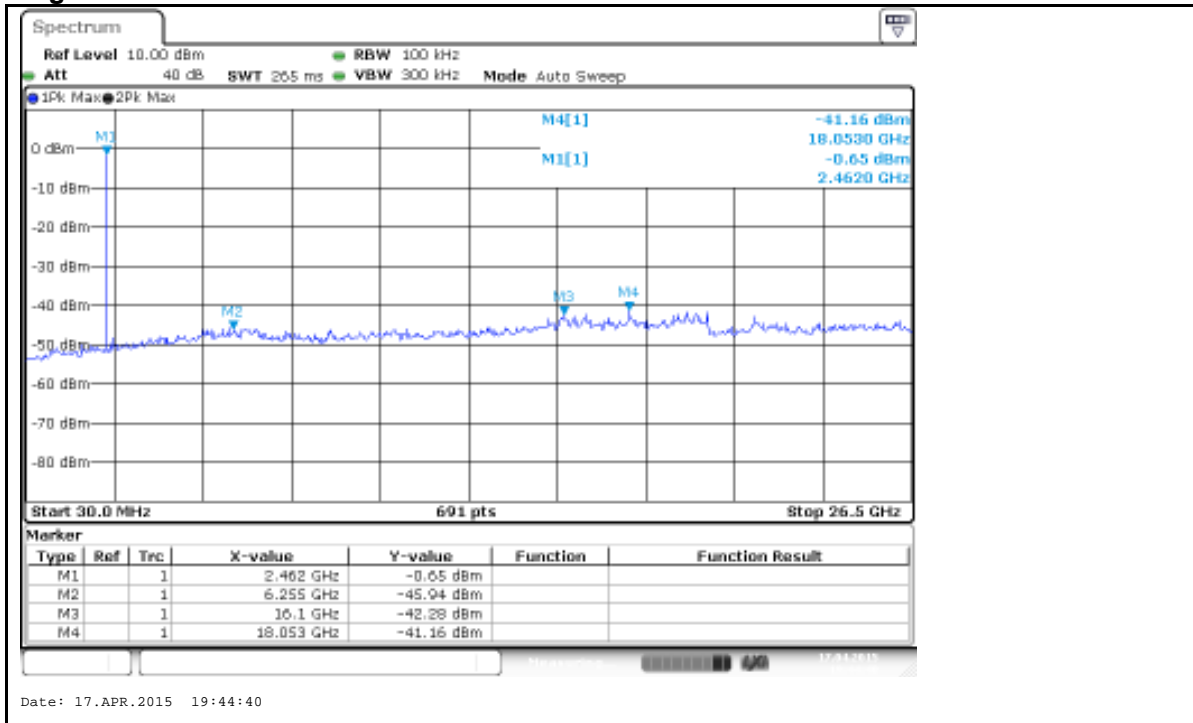
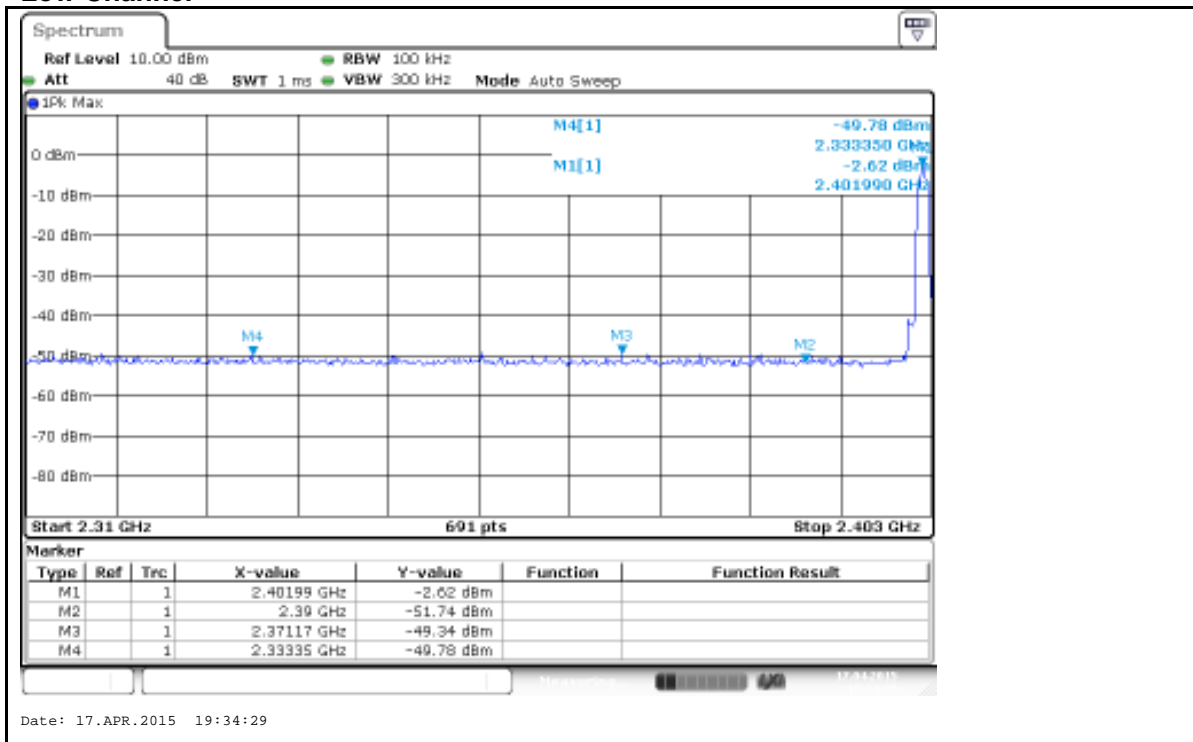


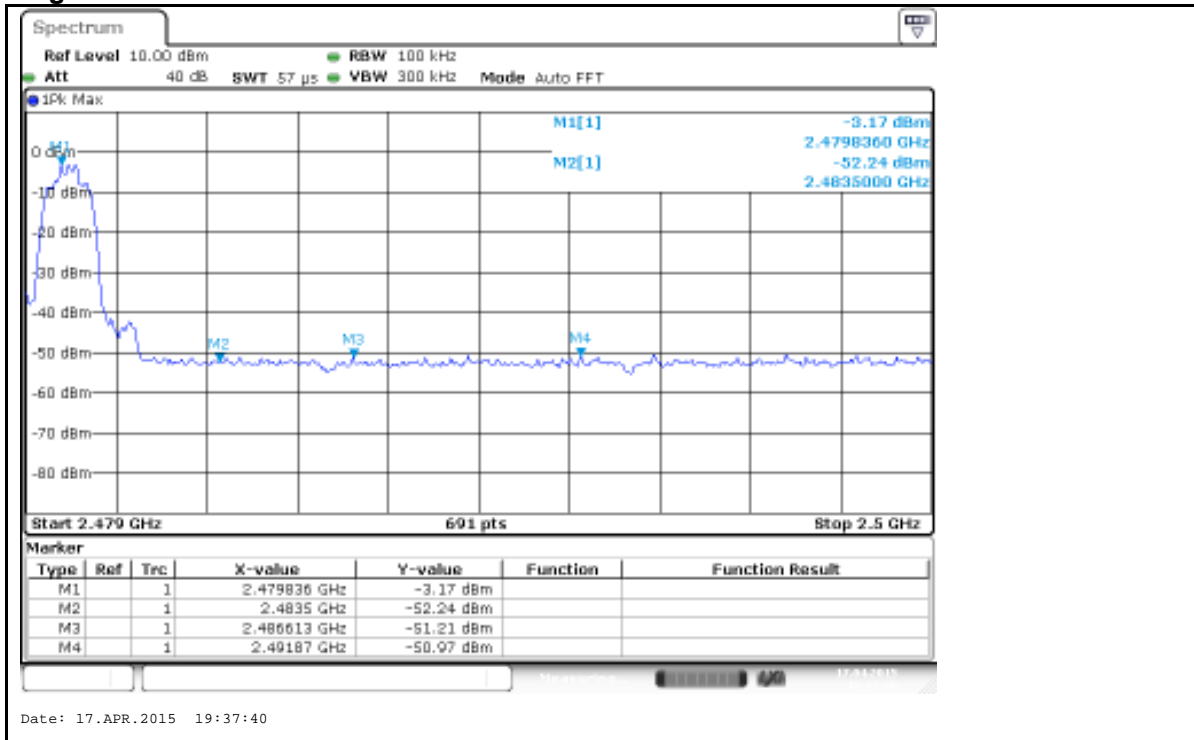
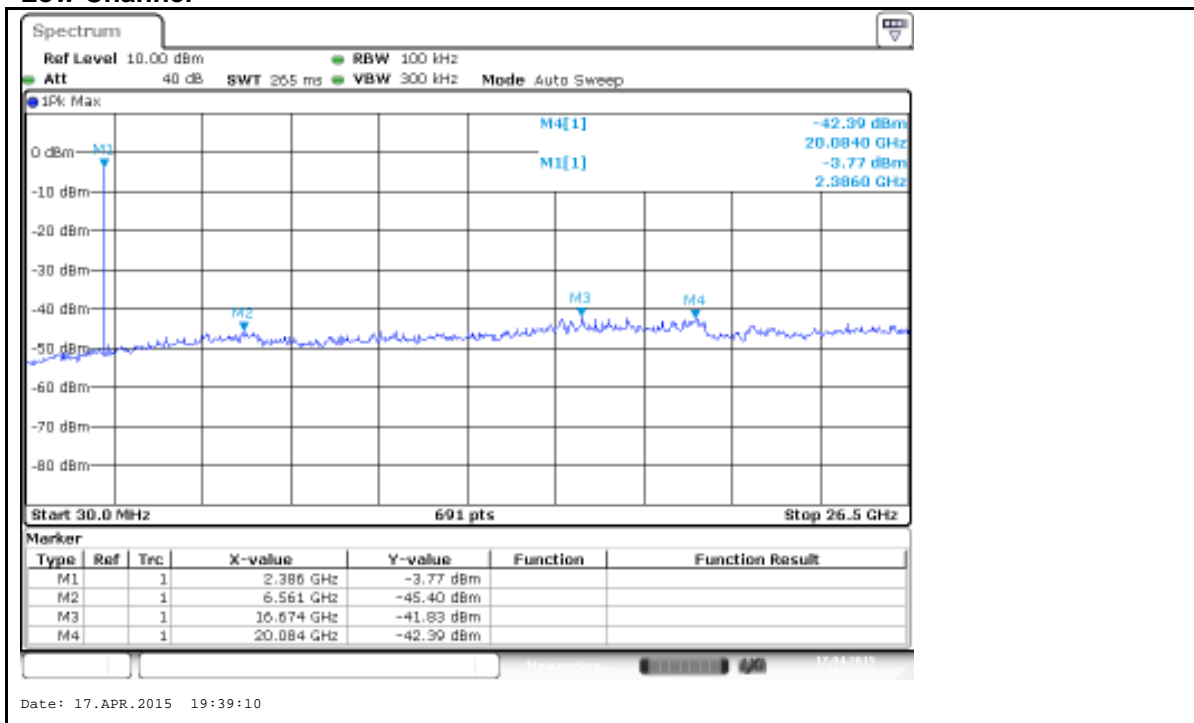
Test Graph of Conducted spurious emissions measured in 100 kHz Bandwidth, BDR mode Low Channel

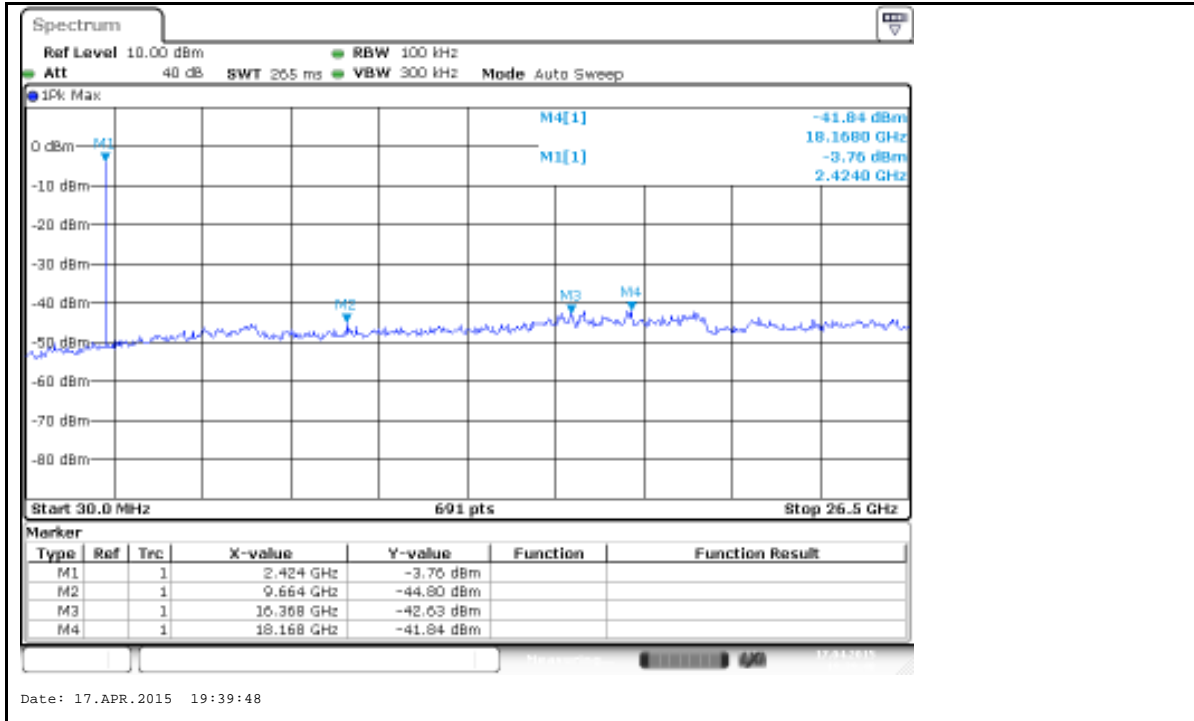
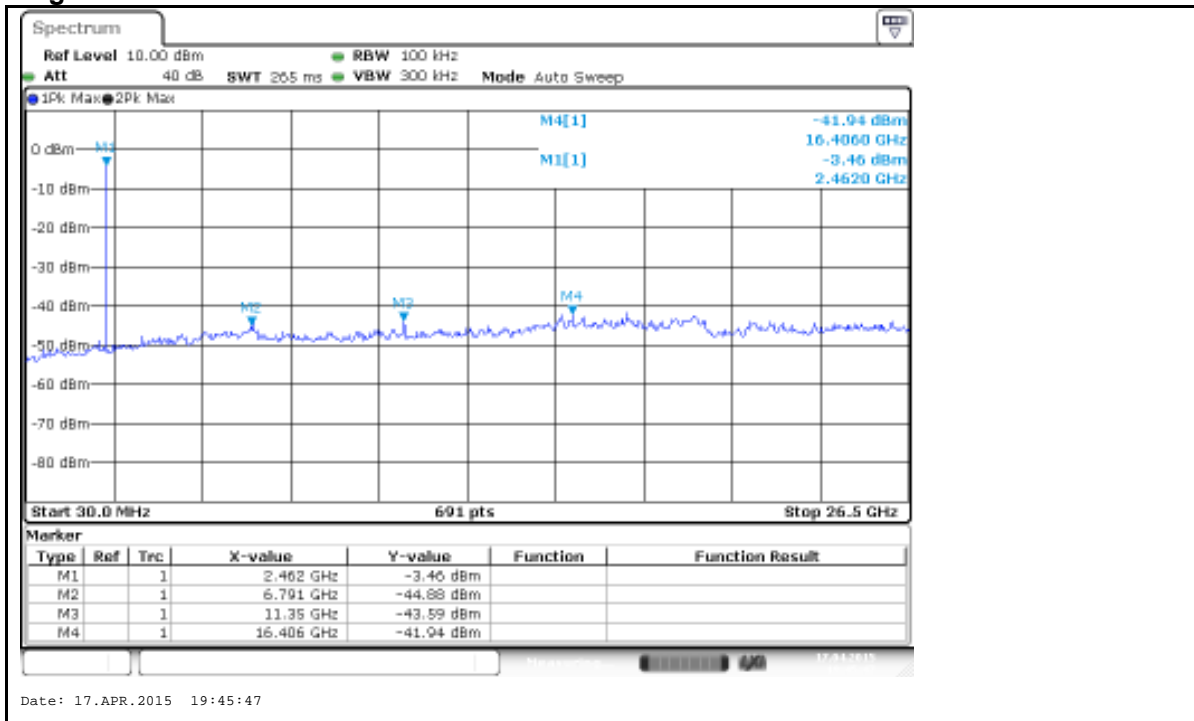


Middle Channel



High Channel

**Test Graph of 100 kHz Bandwidth of Frequency Band Edge,
 EDR mode
 Low Channel**


High Channel

Test Graph of Conducted spurious emissions measured in 100 kHz Bandwidth, EDR mode
Low Channel


Middle Channel

High Channel


5.1.5 Spurious Emissions

RESULT:**Passed**

Date of testing : 2015-04-01 to 2015-04-22
Test standard : FCC part 15.247(d)
FCC part 15.209
Basic standard : ANSI C63.4: 2009
Limits : Refer to 15.209(a)
Kind of test site : 3m Semi-Anechoic Chamber

Test setup

Test Channel : Low/ Middle/ High
Operation mode : A.1+D
Ambient temperature : 23°C
Relative humidity : 48%
Atmospheric pressure : 101.0 kPa

Refer to attached Appendix A for details.

5.1.6 Frequency Separation

RESULT:
Passed

Date of testing : 2015-04-01 to 2015-04-22
 Test standard : FCC part 15.247(a)(1)
 Basic standard : ANSI C63.4: 2009
 Limit : $\geq 25\text{kHz}$ or two-thirds of 20dB bandwidth, whichever is greater
 Kind of test site : Shield room

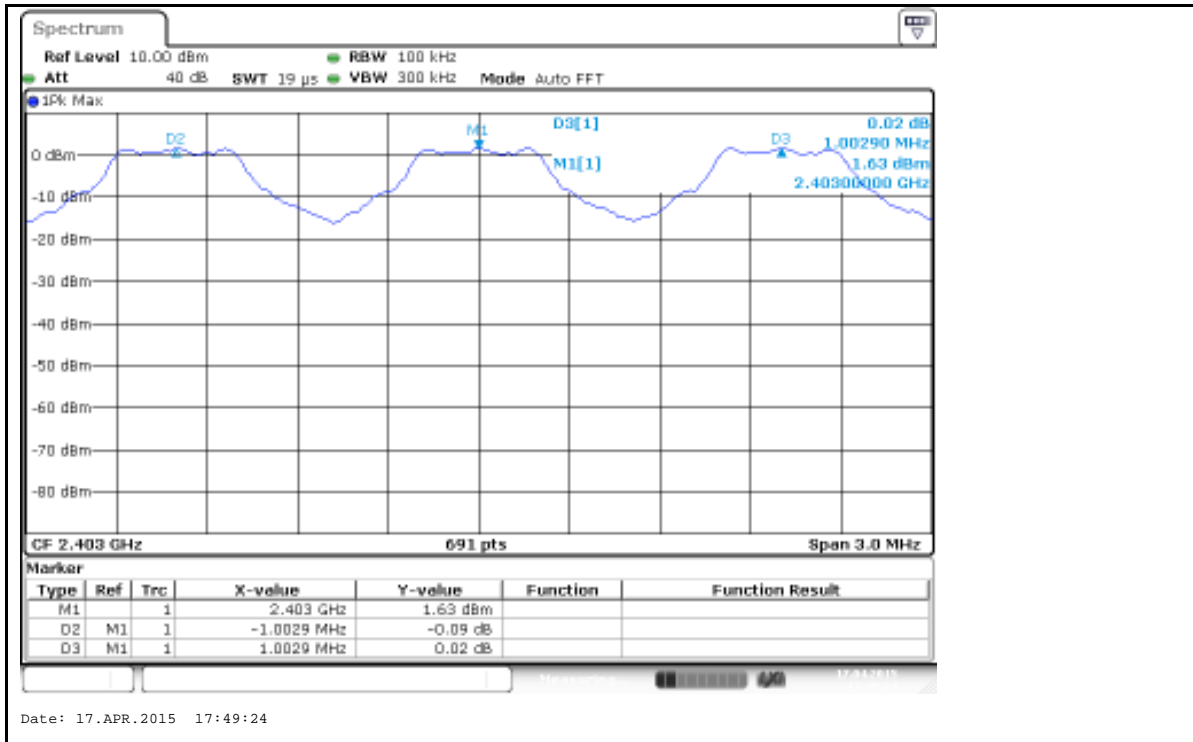
Test setup

Test Channel : Low/ Middle/ High
 Operation Mode : A.1
 Ambient temperature : 23°C
 Relative humidity : 50%
 Atmospheric pressure : 101.0 kPa

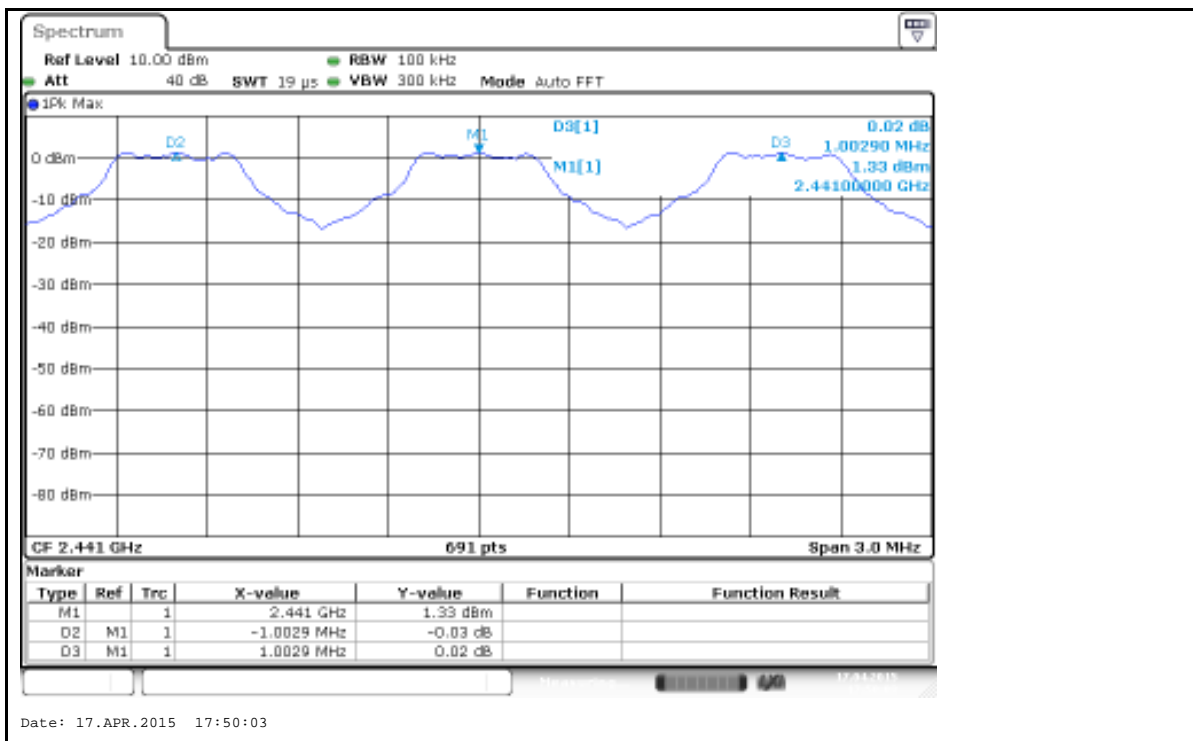
Table 10: Test result of Frequency Separation

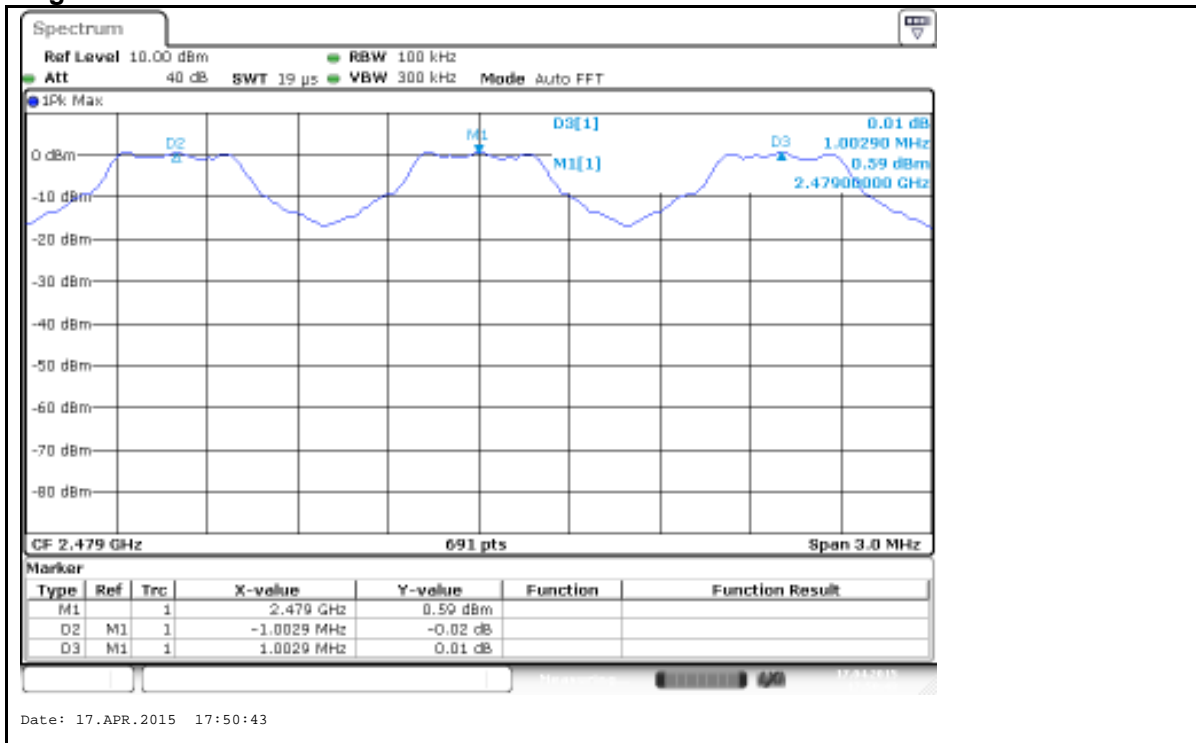
Channel	Channel Frequency (MHz)	Measured Channel Separation (MHz)	Limit (kHz)	Result
Low Channel	2402	1	$\geq 25\text{kHz}$ or two-thirds of 20dB bandwidth	Pass
Adjacency Channel	2403			
Mid Channel	2441	1	$\geq 25\text{kHz}$ or two-thirds of 20dB bandwidth	Pass
Adjacency Channel	2442			
High Channel	2480	1	$\geq 25\text{kHz}$ or two-thirds of 20dB bandwidth	Pass
Adjacency Channel	2479			

Test Graph of Frequency Separation Low Channel



Middle Channel



High Channel


5.1.7 Number of hopping frequency

RESULT:
Passed

Date of testing : 2015-04-01 to 2015-04-22
 Test standard : FCC part 15.247(a)(1)(iii)
 Basic standard : ANSI C63.4: 2009
 Limits : ≥ 15 non-overlapping channels
 Kind of test site : Shield room

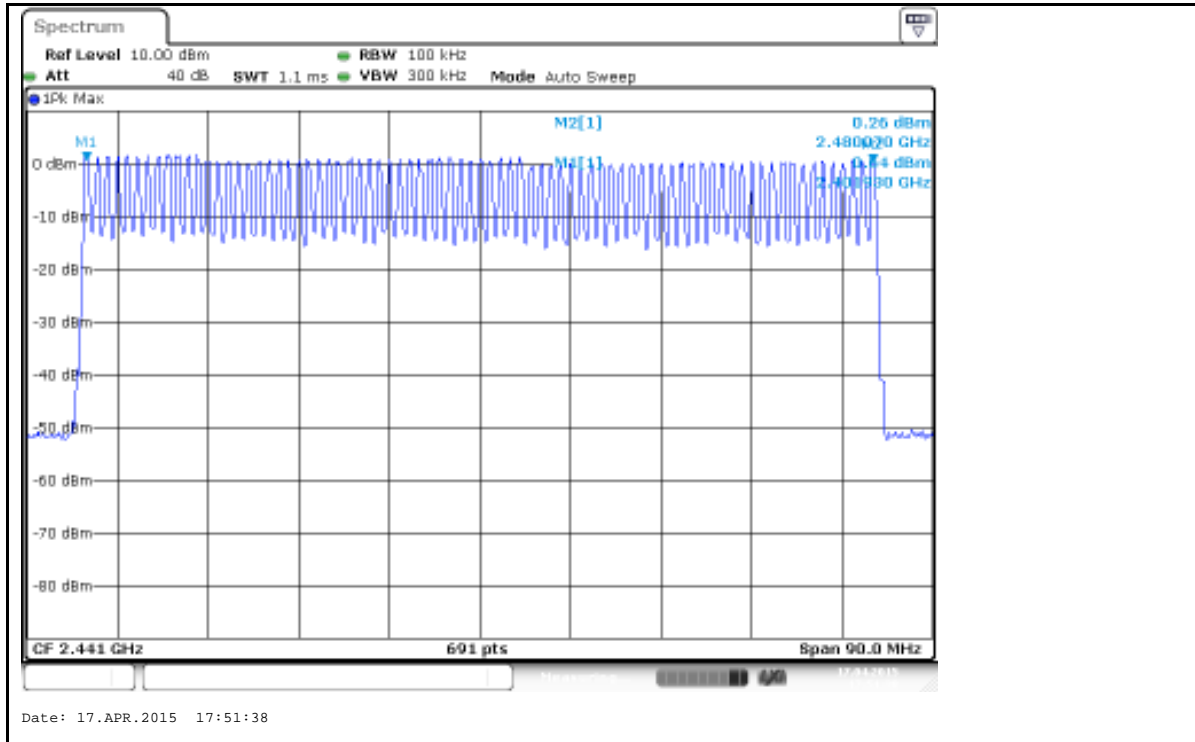
Test setup

Test Channel : Low/ Middle/ High
 Operation Mode : A.1
 Ambient temperature : 23°C
 Relative humidity : 50%
 Atmospheric pressure : 101.0 kPa

Table 11: Test result of Number of hopping frequency

Frequency Range	Measured Quantity of Hopping Channel	Limit	Result
<u>2400</u> to <u>2483.5</u> MHz	79	≥ 15	Pass

Test Graph of Number of hopping frequency



5.1.8 Time of Occupancy

RESULT:
Passed

Date of testing : 2015-04-01 to 2015-04-22
 Test standard : FCC part 15.247(a)(1)(iii)
 Basic standard : ANSI C63.4: 2009
 Limits : 0.4s
 Kind of test site : Shield room

Test setup

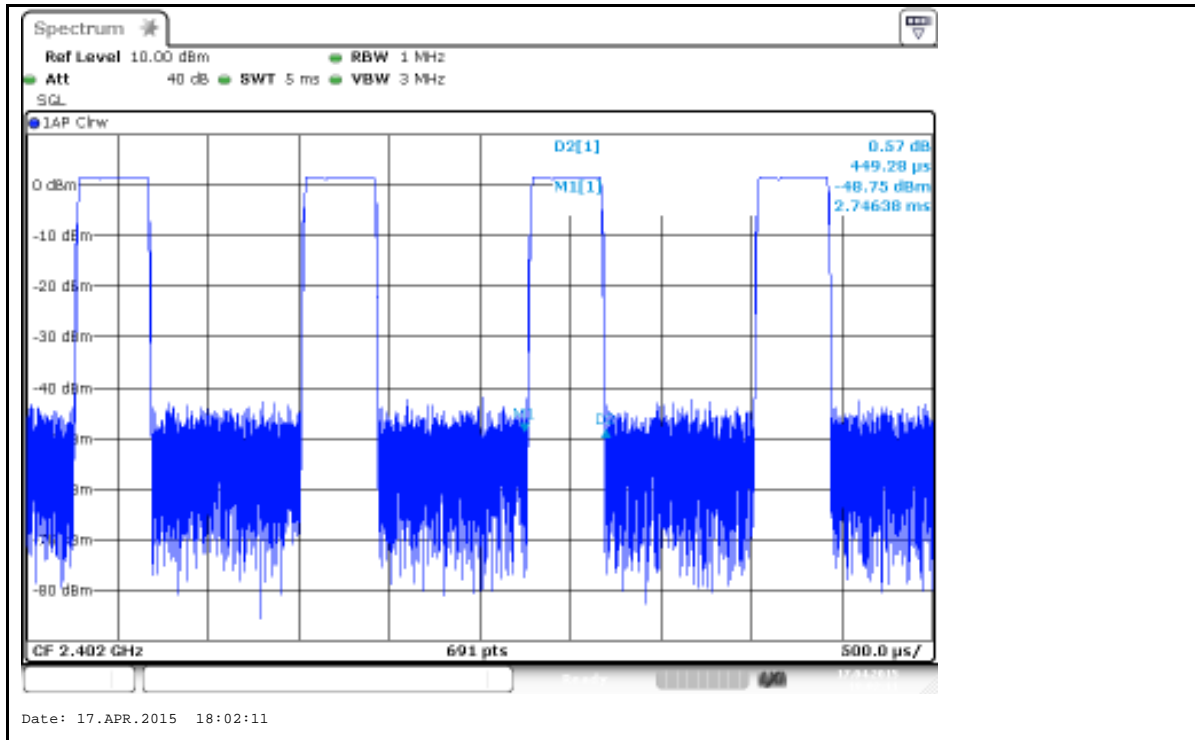
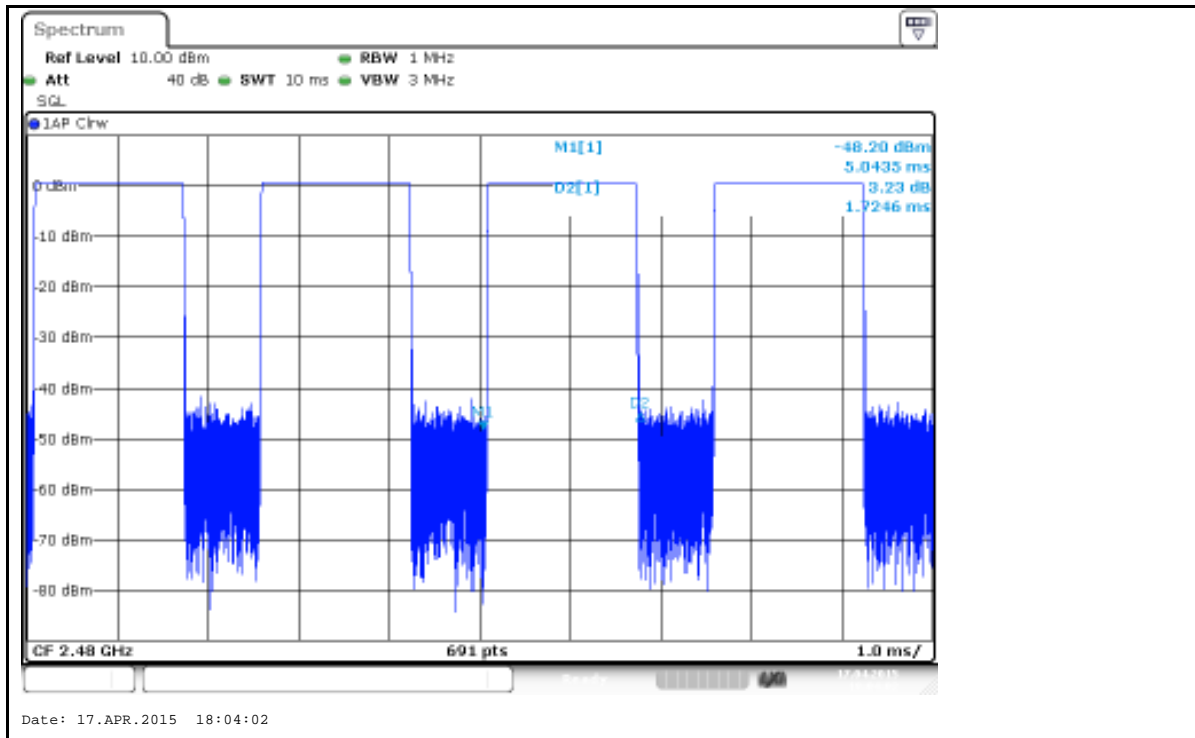
Test Channel : Low/ Middle/ High
 Operation Mode : A.1
 Ambient temperature : 23°C
 Relative humidity : 50%
 Atmospheric pressure : 101.0 kPa

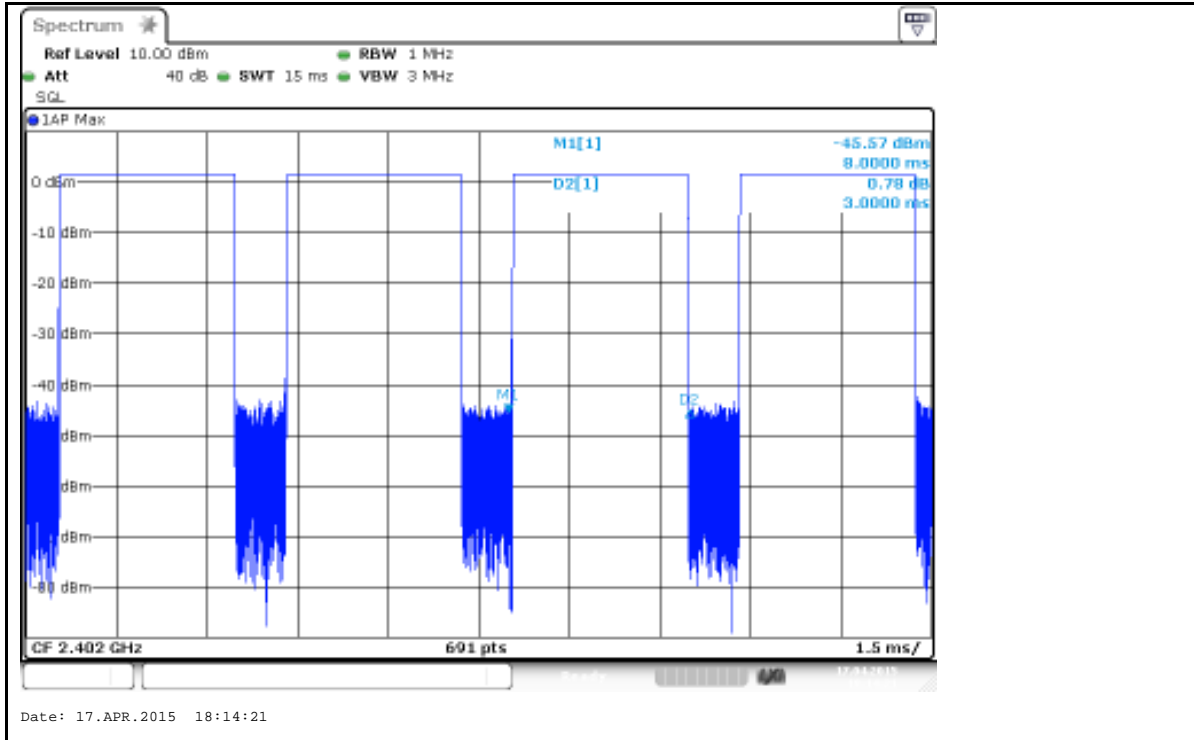
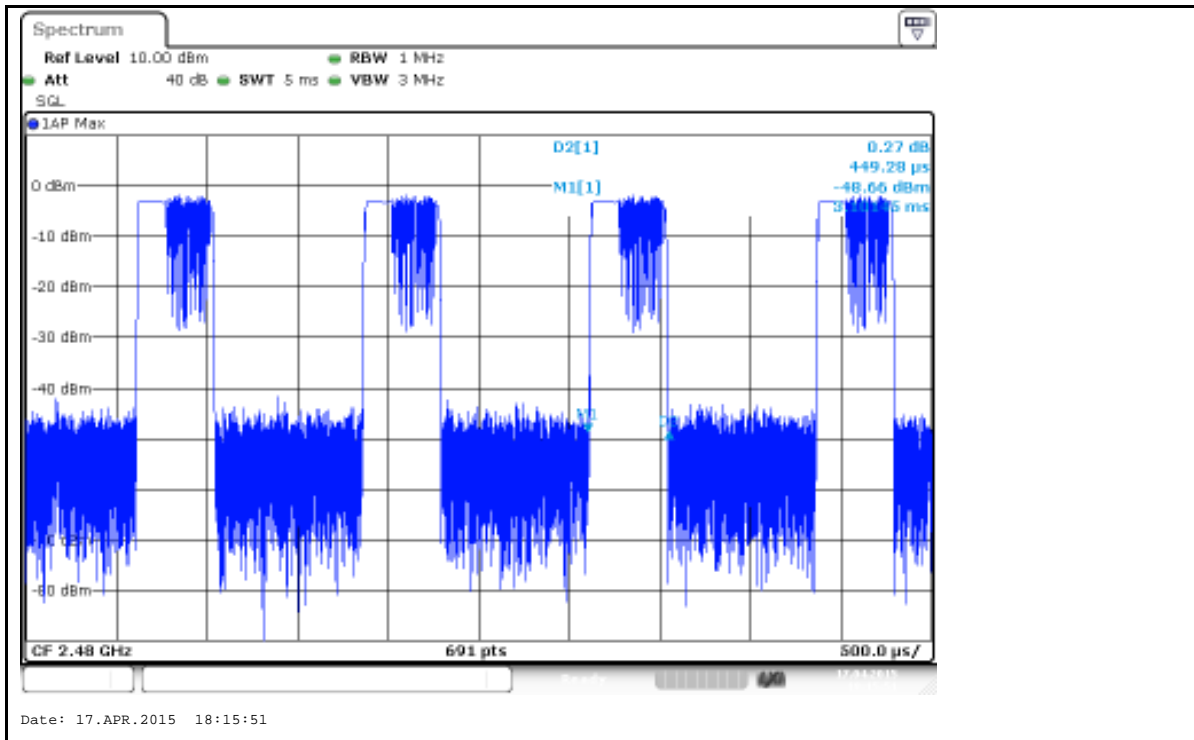
Table 12: Test result of Time of Occupancy, BDR mode

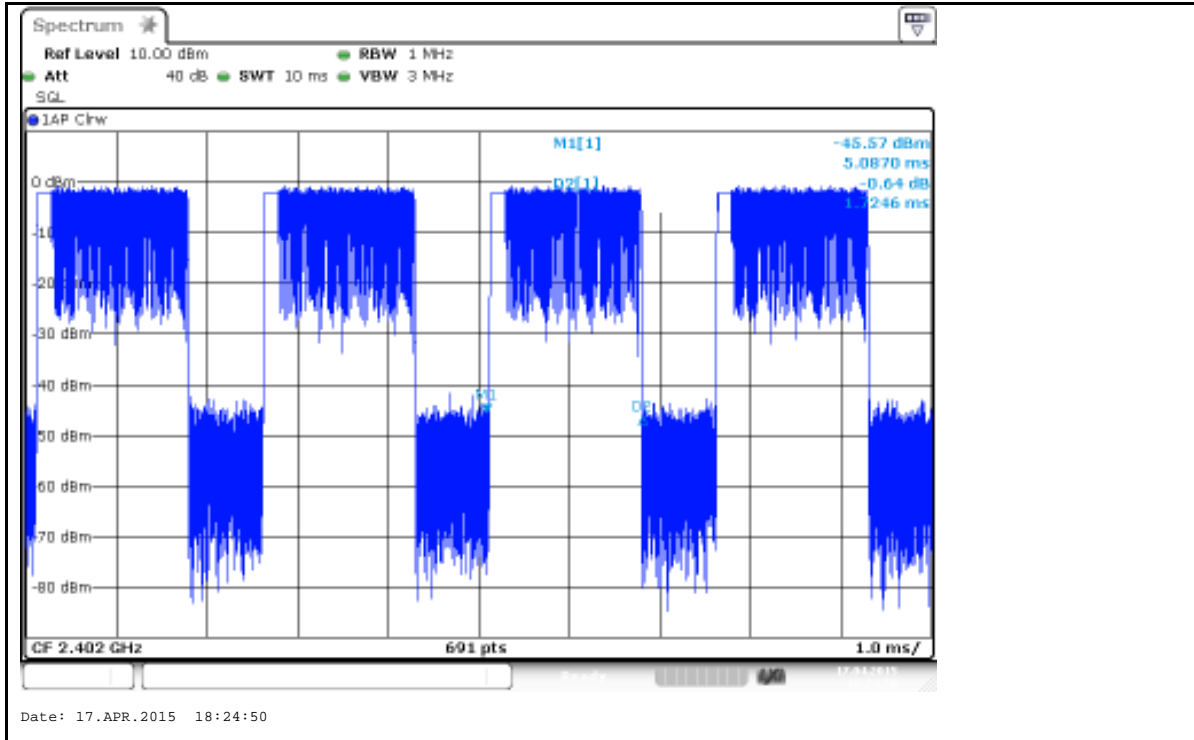
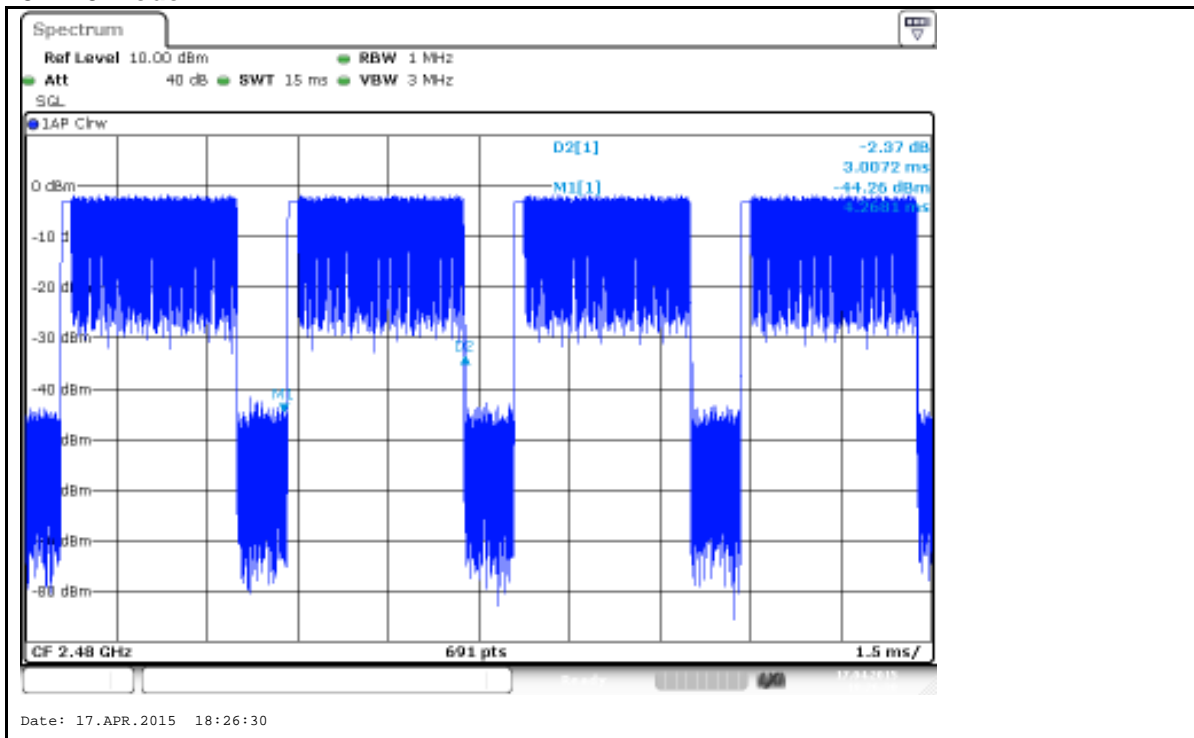
Channel	Frequency (MHz)	Pulse Width (ms)	Dwell Time (s)	Limit	Result	Remark
Low Channel	2402	0.449	0.144	0.4	Pass	DH1
		1.725	0.276	0.4	Pass	DH3
		3.000	0.320	0.4	Pass	DH5
Middle Channel	2441	0.449	0.144	0.4	Pass	DH1
		1.725	0.276	0.4	Pass	DH3
		3.000	0.320	0.4	Pass	DH5
High Channel	2480	0.449	0.144	0.4	Pass	DH1
		1.725	0.276	0.4	Pass	DH3
		3.000	0.320	0.4	Pass	DH5

Table 13: Test result of Time of Occupancy, EDR mode

Channel	Frequency (MHz)	Pulse Width (ms)	Dwell Time (s)	Limit	Result	Remark
Low Channel	2402	0.449	0.144	0.4	Pass	3-DH1
		1.725	0.276	0.4	Pass	3-DH3
		3.007	0.321	0.4	Pass	3-DH5
Middle Channel	2441	0.449	0.144	0.4	Pass	3-DH1
		1.725	0.276	0.4	Pass	3-DH3
		3.007	0.321	0.4	Pass	3-DH5
High Channel	2480	0.449	0.144	0.4	Pass	3-DH1
		1.725	0.276	0.4	Pass	3-DH3
		3.007	0.321	0.4	Pass	3-DH5

Test Graph of Time of Occupancy, BDR mode
DH1 mode

DH3 mode


DH5 mode

Test Graph of Time of Occupancy, EDR mode
3-DH1 mode


3-DH3 mode

3-DH5 mode


5.1.9 Radiated emissions

RESULT:**Passed**

Date of testing	:	2015-04-01 to 2015-04-22
Test standard	:	FCC Part 15.109
Basic standard	:	ANSI C63.4: 2009
Frequency range	:	30 – 6000MHz
Limits	:	FCC Part 15.109(a)
Kind of test site	:	3m Semi-Anechoic Chamber

Test Setup

Input Voltage	:	DC 5.2V (via AC/DC adapter)
Operation Mode	:	E, E+D
Ambient temperature	:	23°C
Relative humidity	:	48%
Atmospheric pressure	:	101.0 kPa

Refer to attached Appendix A for details.

5.1.10 Conducted emissions

RESULT:**Passed**

Date of testing	:	2015-04-01 to 2015-04-22
Test standard	:	FCC Part 15.207 FCC Part 15.107
Basic standard	:	ANSI C63.4: 2009
Frequency range	:	0.15MHz – 30MHz
Limits	:	FCC Part 15.207(a) FCC Part 15.107(a)
Kind of test site	:	Shield Room

Test Setup

Input Voltage	:	DC 5.2V (via AC/DC adapter)
Operation Mode	:	A+B+D, E+D
Ambient temperature	:	23°C
Relative humidity	:	50%
Atmospheric pressure	:	101.0 kPa

Refer to attached Appendix A for details.

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Appendix A

Test Results of Bluetooth 4.0 mode

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