

Prüfbericht-Nr.: Test Report No.:	17051483 002	Auftrags-Nr.: Order No.:	164040100	Seite 1 von 71 Page 1 of 71
Kunden-Referenz-Nr.: Client Reference No.:	440253	Auftragsdatum: Order date.:	02.07.2015	
Auftraggeber: Client:	Dongguan Alllike Electronics Co., Ltd. Chuanca Development Zone, Machong Town, Dongguan, Guangdong, China			
Prüfgegenstand: Test item:	Bluetooth/CD Compact Shelf System			
Bezeichnung / Typ-Nr.: Identification / Type No.:	NS-SH513			
Auftrags-Inhalt: Order content:	FCC and IC			
Prüfgrundlage: Test specification:	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 FCC KDB Publication 447498 v05r02 CFR47 FCC Part 15: Subpart B Section 15.107 CFR47 FCC Part 15: Subpart B Section 15.109 RSS-247 Issue 1 May 2015 RSS-Gen Issue 4 November 2014 ICES-003 Issue 5 August 2012 RSS-102 Issue 5 March 2015			
Wareneingangsdatum: Date of receipt:	07.07.2015			
Prüfmuster-Nr.: Test sample No.:	A000217399-001			
Prüfzeitraum: Testing period:	10.07.2015 - 06.08.2015			
Ort der Prüfung: Place of testing:	Accurate Technology Co., Ltd.			
Prüflaboratorium: Testing laboratory:	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüfergebnis*: Test result*:	Pass			
geprüft von / tested by:		kontrolliert von / reviewed by:		
08.09.2015 Ryan Yang / Senior Project Engineer 		08.09.2015 Sam Lin / Technical Certifier 		
Datum Date	Name/Stellung Name/Position	Unterschrift Signature	Datum Date	Name/Stellung Name/Position
Sonstiges / Other:				
FCC ID: BUQF106BT4 IC: 11059A-F106BT4				
Zustand des Prüfgegenstandes bei Anlieferung: Condition of the test item at delivery:		Prüfmuster vollständig und unbeschädigt Test item complete and undamaged:		
* Legende: 1 = sehr gut 2 = gut 3 = befriedigend P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) Legend: 1 = very good 2 = good 3 = satisfactory P(ass) = passed a.m. test specifications(s) F(ail) = failed a.m. test specifications(s)		4 = ausreichend 5 = mangelhaft N/A = nicht anwendbar N/T = nicht getestet 4 = sufficient 5 = poor N/A = not applicable N/T = not tested		
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines <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>				

V04

Test Summary

5.1.1 ANTENNA REQUIREMENT*RESULT: Pass***5.1.2 PEAK CONDUCTED OUTPUT POWER***RESULT: Pass***5.1.3 CONDUCTED POWER SPECTRAL DENSITY***RESULT: Pass***5.1.4 6dB BANDWIDTH***RESULT: Pass***5.1.5 99% BANDWIDTH***RESULT: Pass***5.1.6 CONDUCTED SPURIOUS EMISSIONS MEASURED IN 100 KHz BANDWIDTH***RESULT: Pass***5.1.7 RADIATED SPURIOUS EMISSION***RESULT: Pass***5.1.8 20dB BANDWIDTH***RESULT: Pass***5.1.9 CARRIER FREQUENCY SEPARATION***RESULT: Pass***5.1.10 NUMBER OF HOPPING FREQUENCY***RESULT: Pass***5.1.11 TIME OF OCCUPANCY***RESULT: Pass***5.1.12 CONDUCTED EMISSIONS***RESULT: Pass***5.1.13 RADIATED EMISSION***RESULT: Pass***6.1.1 ELECTROMAGNETIC FIELDS***RESULT: Pass*

Contents

1	GENERAL REMARKS	5
1.1	COMPLEMENTARY MATERIALS	5
2	TEST SITES	5
2.1	TEST FACILITIES	5
2.2	LIST OF TEST AND MEASUREMENT INSTRUMENTS	6
2.3	TRACEABILITY.....	7
2.4	CALIBRATION.....	7
2.5	MEASUREMENT UNCERTAINTY.....	7
2.6	LOCATION OF ORIGINAL DATA.....	7
2.7	STATUS OF FACILITY USED FOR TESTING.....	7
3	GENERAL PRODUCT INFORMATION.....	8
3.1	PRODUCT FUNCTION AND INTENDED USE.....	8
3.2	RATINGS AND SYSTEM DETAILS	8
3.3	INDEPENDENT OPERATION MODES	10
3.4	NOISE GENERATING AND NOISE SUPPRESSING PARTS	10
3.5	SUBMITTED DOCUMENTS	10
4	TEST SET-UP AND OPERATION MODES.....	11
4.1	PRINCIPLE OF CONFIGURATION SELECTION.....	11
4.2	TEST OPERATION AND TEST SOFTWARE	11
4.3	SPECIAL ACCESSORIES AND AUXILIARY EQUIPMENT	11
4.4	COUNTERMEASURES TO ACHIEVE EMC COMPLIANCE	11
4.5	TEST SETUP DIAGRAM.....	12
5	TEST RESULTS	14
5.1	TRANSMITTER REQUIREMENT & TEST SUITES	14
5.1.1	Antenna Requirement.....	14
5.1.2	Peak Conducted Output Power.....	15
5.1.3	Conducted Power Spectral Density.....	22
5.1.4	6dB Bandwidth.....	25
5.1.5	99% Bandwidth	28
5.1.6	Conducted Spurious Emissions Measured in 100 kHz Bandwidth	34
5.1.7	Radiated Spurious Emission.....	43
5.1.8	20dB Bandwidth.....	44
5.1.9	Carrier Frequency Separation	48
5.1.10	Number of Hopping Frequency	51
5.1.11	Time of Occupancy.....	53
5.1.12	Conducted Emissions	64

5.1.13	Radiated Emission.....	65
6	SAFETY HUMAN EXPOSURE.....	66
6.1	RADIO FREQUENCY EXPOSURE COMPLIANCE	66
6.1.1	Electromagnetic Fields	66
7	PHOTOGRAPHS OF THE TEST SET-UP	67
8	LIST OF TABLES.....	71
9	LIST OF PHOTOGRAPHS	71

1 General Remarks

1.1 Complementary Materials

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

Appendix 1: Test result

2 Test Sites

2.1 Test Facilities

Accurate Technology Co., Ltd.

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

FCC Registration No.: 752051

Test site Industry Canada No.: 5077A-2

The tests at the test sites 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
Accurate Technology Co., Ltd.

Radio Spectrum Test				
Equipment	Manufacturer	Model No.	Serial No.	Cal. Until
Spectrum Analyzer	R&S	ESPI3	100396/003	09.01.2016
Spectrum Analyzer	Agilent	E7405A	MY45115511	09.01.2016
Temp. & Humid. Chamber	Gongwen	HSD-500	0109	09.01.2016
Conducted Emissions				
Equipment	Manufacturer	Model No.	Serial No.	Cal. Until
Test Receiver	R&S	ESCS30	100307	09.01.2016
L.I.S.N.	Schwarzbeck	NLSK8126	8126431	09.01.2016
Pulse Limiter	R&S	ESH3-Z2	100815	09.01.2016
50_ Coaxial Switch	Anritsu Corp	MP59B	6200283933	09.01.2016
Radiated Emission & Spurious Emission				
Equipment	Manufacturer	Model No.	Serial No.	Cal. Until
Spectrum Analyzer	R&S	FSV40	101495	01.01.2016
Test Receiver	R&S	ESCS30	100307	01.01.2016
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	01.01.2016
Loop Antenna	Schwarzbeck	FMZB1516	1516131	01.01.2016
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	01.01.2016
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	01.01.2016
RF Switching Unit+PreAMP	Compliance Direction	RSU-M2	38322	01.01.2016
Pre-Amplifier	R&S	CBLU11835 40-01	3791	01.01.2016
50 Coaxial Switch	Anritsu Corp	MP59B	6200506474	01.01.2016
RF Coaxial Cable	SUHNER	N-3m	No.8	01.01.2016
RF Coaxial Cable	RESENBERGER	N-3.5m	No.9	01.01.2016
RF Coaxial Cable	SUHNER	N-6m	No.10	01.01.2016
RF Coaxial Cable	RESENBERGER	N-12m	No.11	01.01.2016
50_ Coaxial Switch	Anritsu Corp	MP59B	6200283933	09.01.2016

2.3 Traceability

All measurement equipment calibrations are traceable to NIM (National Institute of Metrology) or where calibration is performed in other countries, 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

Parameter	Uncertainty
Radio Spectrum	± 0.60 dB
All Emission, Radiated	± 4.42 dB
Conducted Emission	± 2.23 dB
Radiated Emission	± 4.42 dB

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. Test 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 CD compact shelf system with Bluetooth function.

Refer to User Manual and Circuit Diagram for further details.

3.2 Ratings and System Details

Table 2: Technical Specification of EUT

Technical Specification	Value	
Product Name	Bluetooth/CD Compact Shelf System	
Model Number	NS-SH513	
Operating Frequency	2402-2480MHz	
Extreme Temperature Range	-20°C ~ +55°C	
Operation Voltage	AC 120V 60Hz	
Modulation	BDR mode	GFSK
	EDR mode	$\pi/4$ DQPSK, 8DPSK
	Low Energy mode	GFSK
Number of Channel	BDR & EDR mode:79 channels; Low Energy mode:40 channels	
Channel Spacing	BDR & EDR mode: 1MHz; Low Energy mode: 2MHz;	
Bluetooth Version	Bluetooth 4.0 (dual mode)	
Antenna Type and Gain	PCB Antenna, 0 dBi	

Table 3: RF Channel and Frequency of Bluetooth

RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
00	2402.00	20	2422.00	40	2442.00	60	2462.00
01	2403.00	21	2423.00	41	2443.00	61	2463.00
02	2404.00	22	2424.00	42	2444.00	62	2464.00
03	2405.00	23	2425.00	43	2445.00	63	2465.00
04	2406.00	24	2426.00	44	2446.00	64	2466.00
05	2407.00	25	2427.00	45	2447.00	65	2467.00
06	2408.00	26	2428.00	46	2448.00	66	2468.00
07	2409.00	27	2429.00	47	2449.00	67	2469.00
08	2410.00	28	2430.00	48	2450.00	68	2470.00
09	2411.00	29	2431.00	49	2451.00	69	2471.00
10	2412.00	30	2432.00	50	2452.00	70	2472.00
11	2413.00	31	2433.00	51	2453.00	71	2473.00
12	2414.00	32	2434.00	52	2454.00	72	2474.00
13	2415.00	33	2435.00	53	2455.00	73	2475.00
14	2416.00	34	2436.00	54	2456.00	74	2476.00
15	2417.00	35	2437.00	55	2457.00	75	2477.00
16	2418.00	36	2438.00	56	2458.00	76	2478.00
17	2419.00	37	2439.00	57	2459.00	77	2479.00
18	2420.00	38	2440.00	58	2460.00	78	2480.00
19	2421.00	39	2441.00	59	2461.00	/	/

Table 4: RF Channel and Frequency of Bluetooth Low Energy

RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
00	2402.00	10	2422.00	20	2442.00	30	2462.00
01	2404.00	11	2424.00	21	2444.00	31	2464.00
02	2406.00	12	2426.00	22	2446.00	32	2466.00
03	2408.00	13	2428.00	23	2448.00	33	2468.00
04	2410.00	14	2430.00	24	2450.00	34	2470.00
05	2412.00	15	2432.00	25	2452.00	35	2472.00
06	2414.00	16	2434.00	26	2454.00	36	2474.00
07	2416.00	17	2436.00	27	2456.00	37	2476.00
08	2418.00	18	2438.00	28	2458.00	38	2478.00
09	2420.00	19	2440.00	29	2460.00	39	2480.00

3.3 Independent Operation Modes

The basic operation modes are:

- A. On,
 - 1. Bluetooth mode (BDR & EDR mode)
 - a. Transmitting
 - 1) Low Channel
 - 2) Middle Channel
 - 3) High Channel
 - b. Receiving
 - 2. Bluetooth mode (Low Energy mode)
 - a. Transmitting
 - 1) Low Channel
 - 2) Middle Channel
 - 3) High Channel
 - b. Receiving
- B. On, Transmitting on Hopping channel
- C. On, Bluetooth connecting mode
- D. Playing form CD
- E. Playing form AUX input
- F. Playing form USB
- G. FM
 - 1. Low channel
 - 2. Middle channel
 - 3. High channel
- H. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to Circuit Diagram for further details.

3.5 Submitted Documents

- | | |
|-----------------------------|-------------------------|
| - Application Form | - Bill of Material |
| - Block Diagram | - Circuit Diagram |
| - FCC/IC Label and Location | - Operation Description |
| - Photo Document | - User Manual |

4 Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

The equipment under test (EUT) was configured to measure its maximum power 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. All testing were performed according to the procedures in ANSI C63.10: 2013 & ANSI C63.4: 2014

4.3 Special Accessories and Auxiliary Equipment

The EUT was tested together with the following accessories:

Description	Manufacturer	Part No.	S/N
Mobile phone	HUAWEI	P7-L00	7NZMYN151S027984

4.4 Countermeasures to Achieve EMC Compliance

Additional countermeasures to the submitted test sample(s) for Radiated Emission were employed to achieve compliance.

4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test (Below 1GHz)

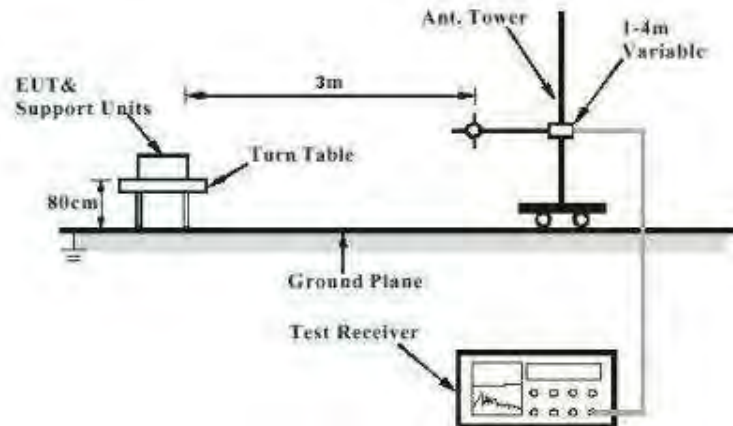


Diagram of Measurement Configuration for Radiation Test (Above 1GHz)

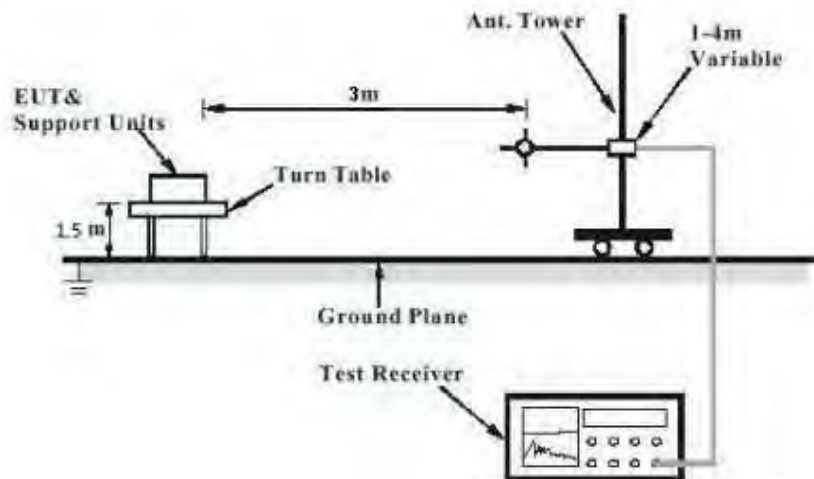


Diagram of Measurement Configuration for Mains Conduction Measurement

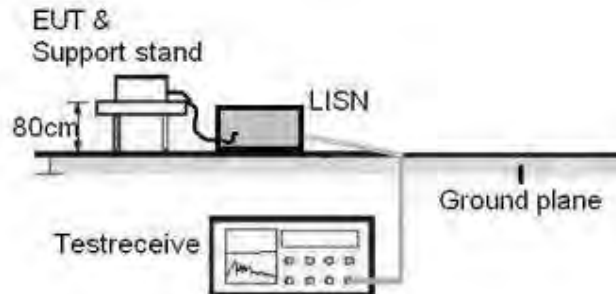


Diagram of Measurement Configuration for Conducted Transmitter Measurement



5 Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT: **Pass**

Test Specification

Test standard	: FCC Part 15.247(b)(4) and Part 15.203 RSS-Gen Clause 6.7
Limits	: the use of antennas with directional gains that do not exceed 6dBi

According to the manufacturer declared, the EUT has an internal antenna, the directional gain of antenna is 0 dBi, and the antenna connector is designed with permanent attachment and no consideration of replacement. Therefore the EUT is considered sufficient to comply with the provision.

Therefore the EUT is considered sufficient to comply with the provision.

5.1.2 Peak Conducted Output Power**RESULT:****Pass****Test Specification**

Test standard	: FCC Part 15.247(b)(1)&(3)	
	RSS-247 Clause 5.4(2)&(4)	
Basic standard	: ANSI C63.10: 2013	
Limits	: BDR & EDR: 0.125 Watts	Low Energy: 1.0 Watts
Kind of test site	: Shielded Room	

Test Setup

Date of testing	: 10.07.2015
Input voltage	: AC 120V, 60Hz
Operation mode	: A.1.a, A.2.a
Test channel	: Low / Middle/ High
Ambient temperature	: 25°C
Relative humidity	: 56%
Atmospheric pressure	: 101 kPa

Table 5: Test Result of Peak Conducted Output Power, BDR

Channel	Channel Frequency (MHz)	Peak Output Power		Limit
		(dBm)	(W)	(W)
Low Channel	2402	-2.31	0.00059	0.125
Middle Channel	2441	1.43	0.00139	0.125
High Channel	2480	3.32	0.00215	0.125

Table 6: Test Result of Peak Conducted Output Power, EDR

Channel	Channel Frequency (MHz)	Peak Output Power		Limit
		(dBm)	(W)	(W)
Low Channel	2402	-3.77	0.00042	0.125
Middle Channel	2441	0.25	0.00106	0.125
High Channel	2480	2.58	0.00181	0.125

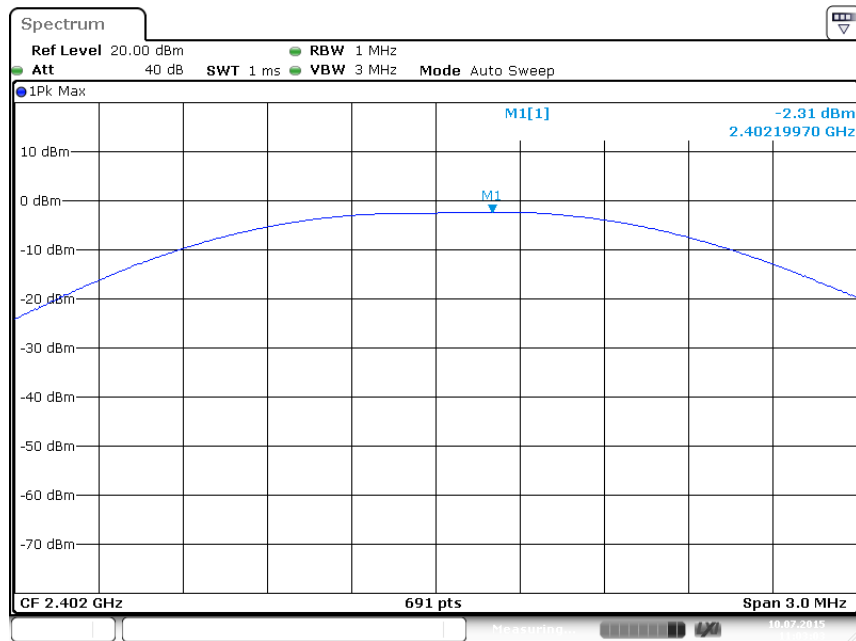
Table 7: Test Result of Peak Conducted Output Power, Low Energy

Channel	Channel Frequency (MHz)	Peak Output Power		Limit
		(dBm)	(W)	(W)
Low Channel	2402	-0.18	0.00096	1.0
Middle Channel	2440	2.15	0.00164	1.0
High Channel	2480	3.92	0.00247	1.0

For the measurement records, refer to following test plot:

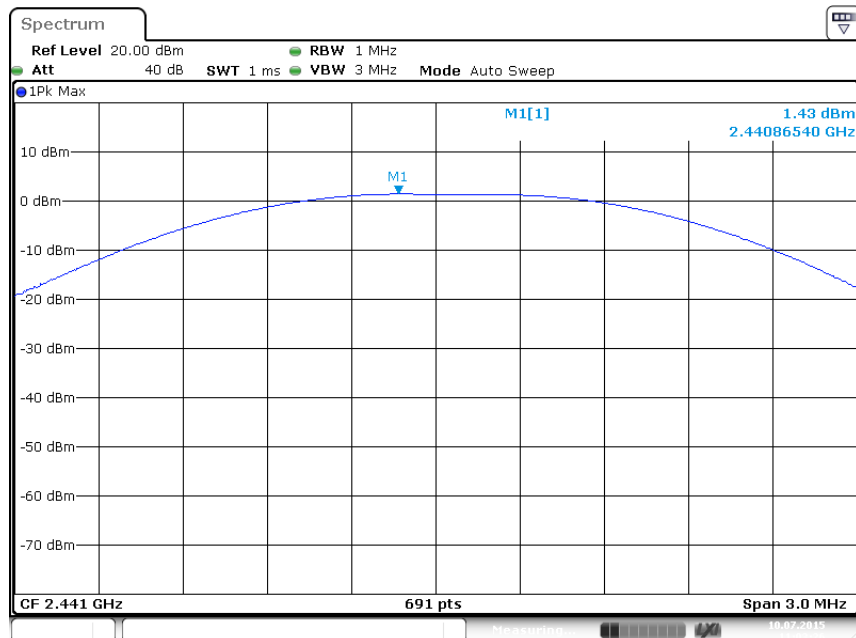
Test Plot of Peak Conducted Output Power, BDR

Low channel:



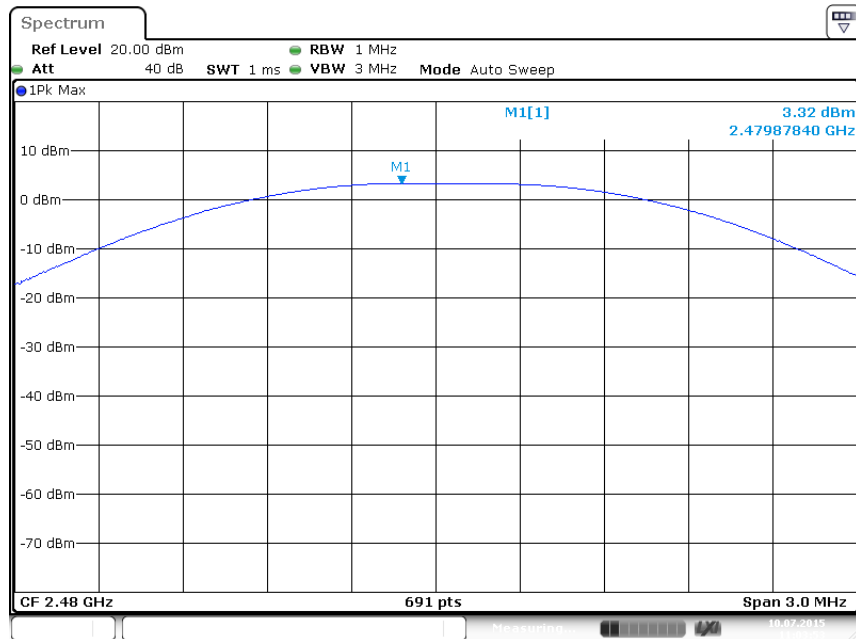
Date: 10.JUL.2015 11:03:03

Middle channel:



Date: 10.JUL.2015 11:03:26

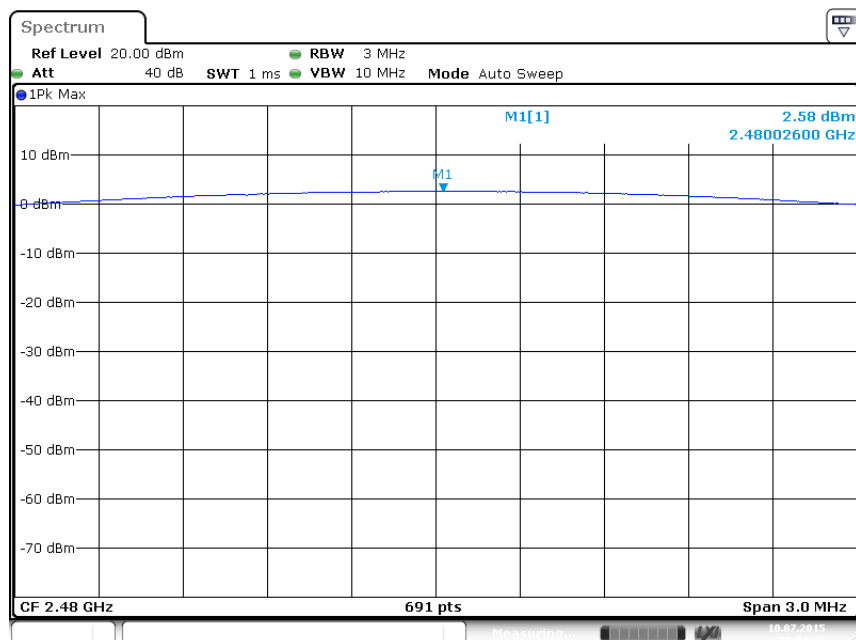
High channel:



Date: 10.JUL.2015 11:03:54

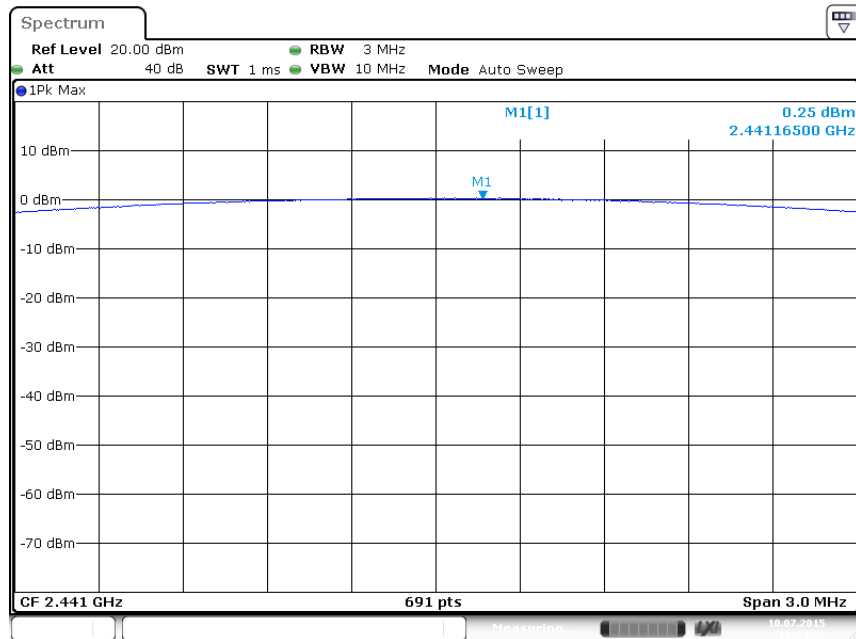
Test Plot of Peak Conducted Output Power, EDR

Low channel:



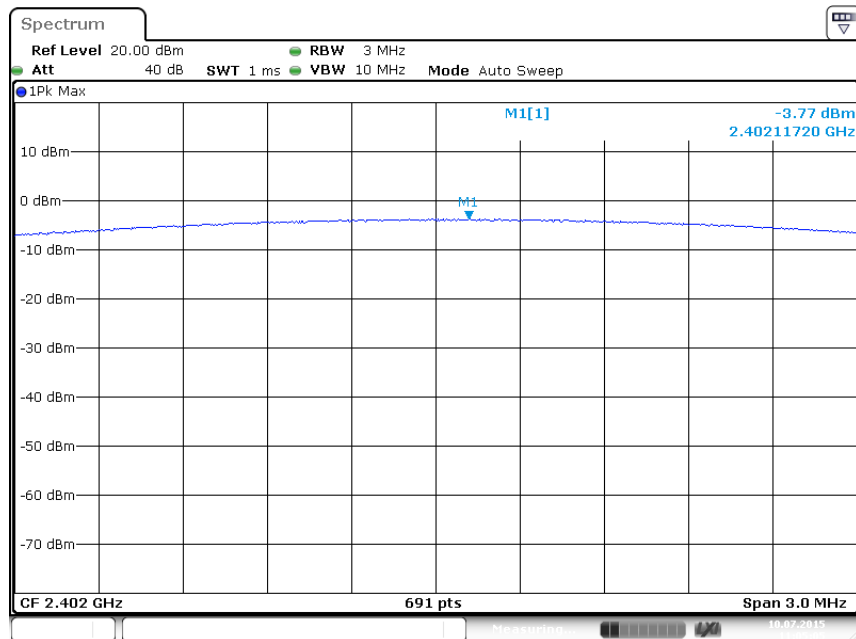
Date: 10.JUL.2015 11:04:27

Middle channel:



Date: 10.JUL.2015 11:04:51

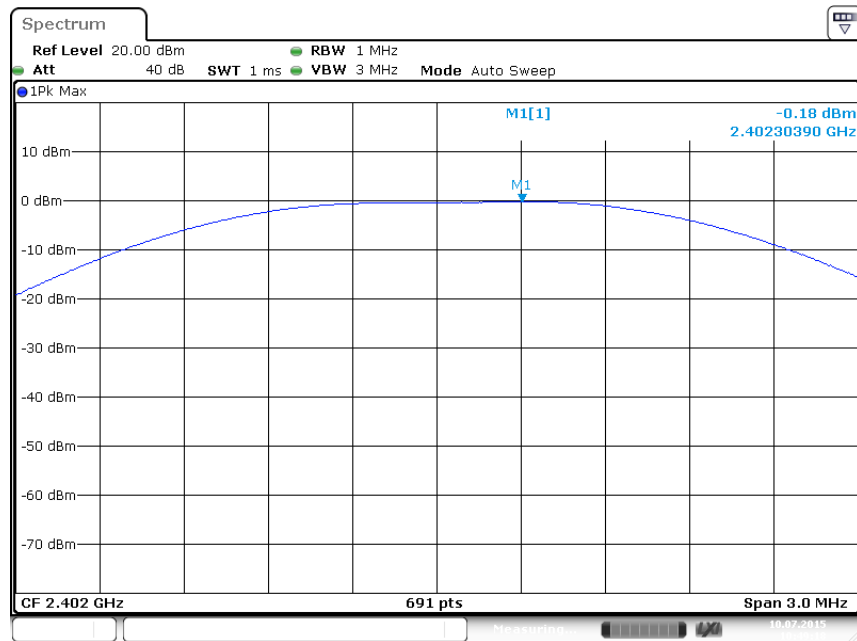
High channel:



Date: 10.JUL.2015 11:05:05

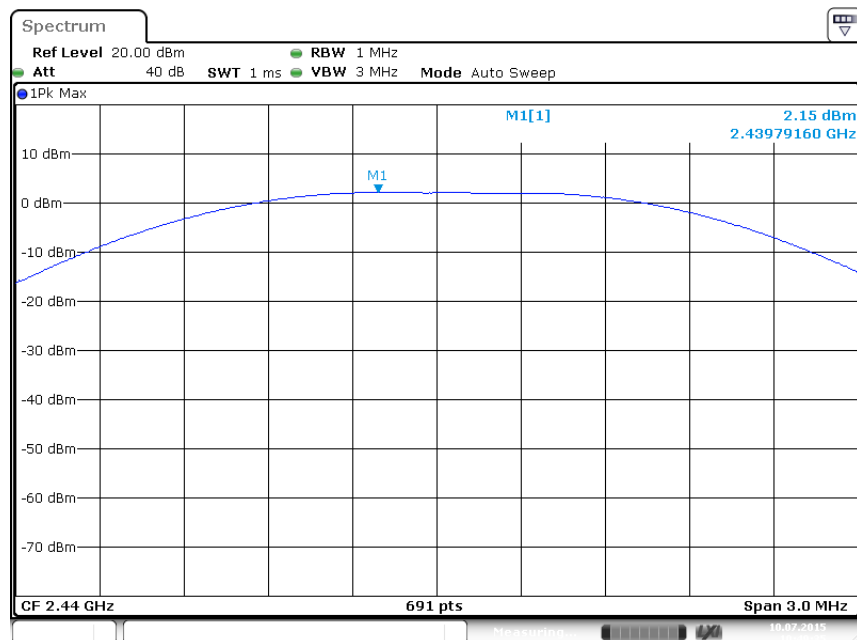
Test Plot of Peak Conducted Output Power, Low Energy

Low channel:



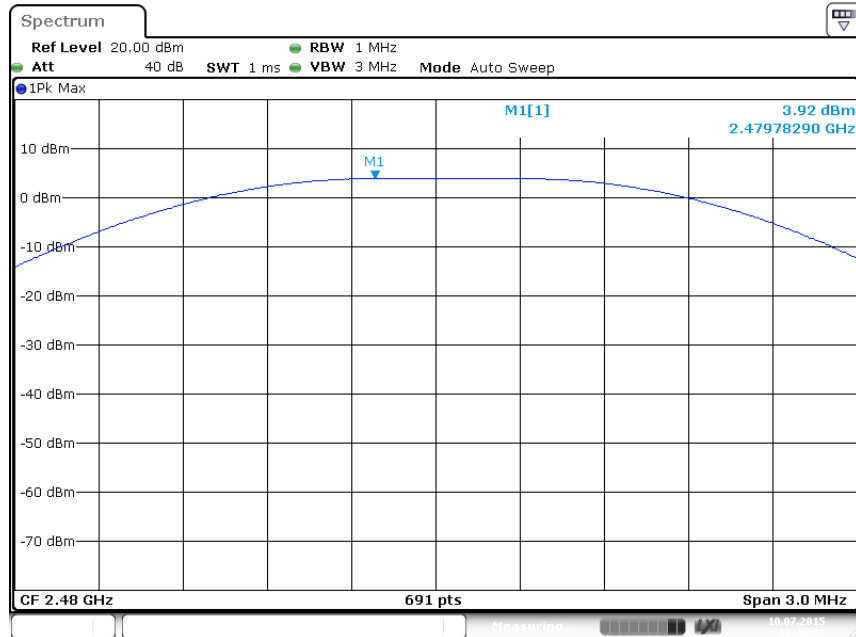
Date: 10.JUL.2015 10:49:18

Middle channel:



Date: 10.JUL.2015 10:49:35

High channel:



Date: 10.JUL.2015 10:49:47

5.1.3 Conducted Power Spectral Density

RESULT:**Pass****Test Specification**

Test standard : FCC Part 15.247(e)
RSS-247 Clause 5.2(2)

Basic standard : ANSI C63.10: 2013

Limits : 8 dBm / 3kHz

Kind of test site : Shielded Room

Test Setup

Date of testing : 10.07.2015

Input voltage : AC 120V, 60Hz

Operation mode : A.2.a

Test channel : Low / Middle/ High

Ambient temperature : 25°C

Relative humidity : 56%

Atmospheric pressure : 101 kPa

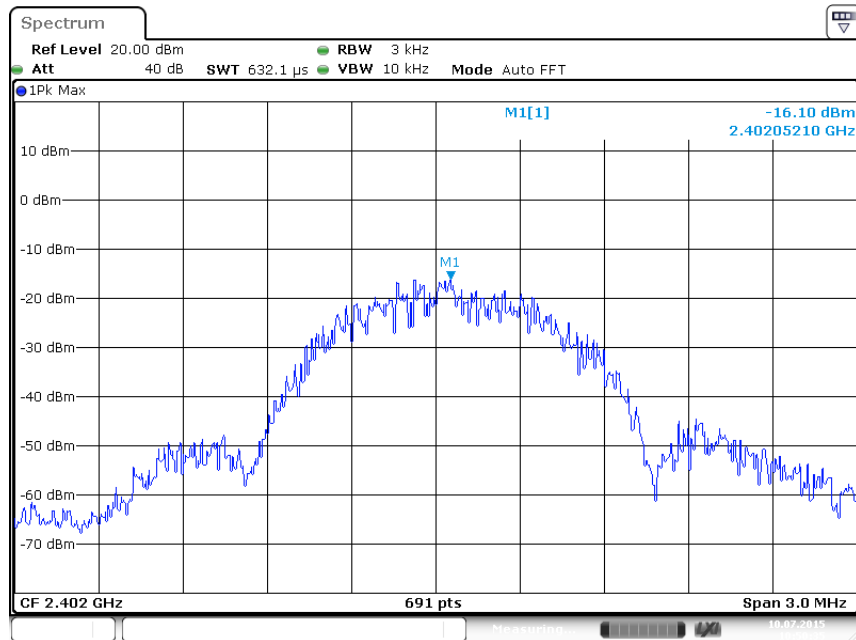
Table 8: Test Result of Power Spectral Density, Low Energy

Channel	Channel Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Limit (dBm/3kHz)
Low Channel	2402	-16.10	8.0
Middle Channel	2440	-13.46	8.0
High Channel	2480	-11.47	8.0

For the measurement records, refer to following test plot:

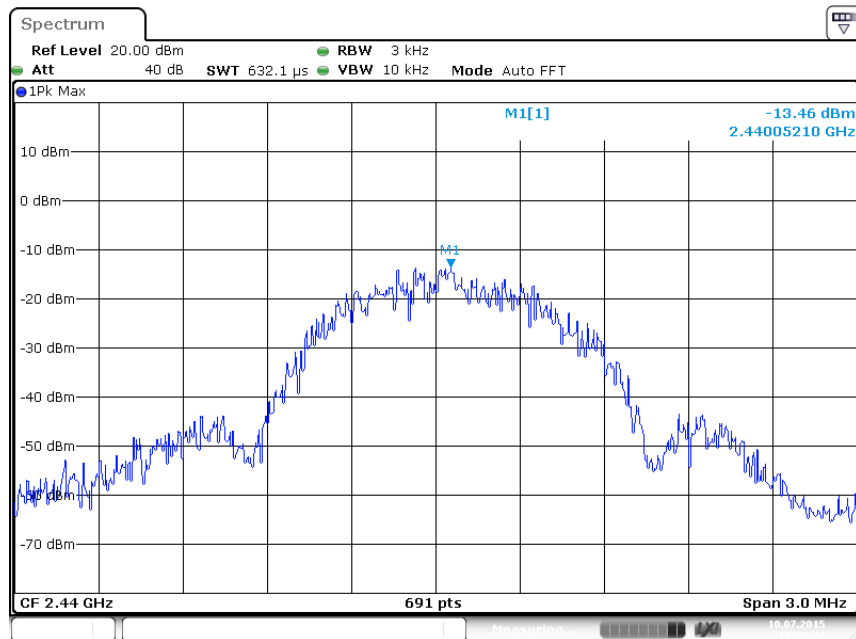
Test Plot of Power Spectral Density, Low Energy

Low channel:



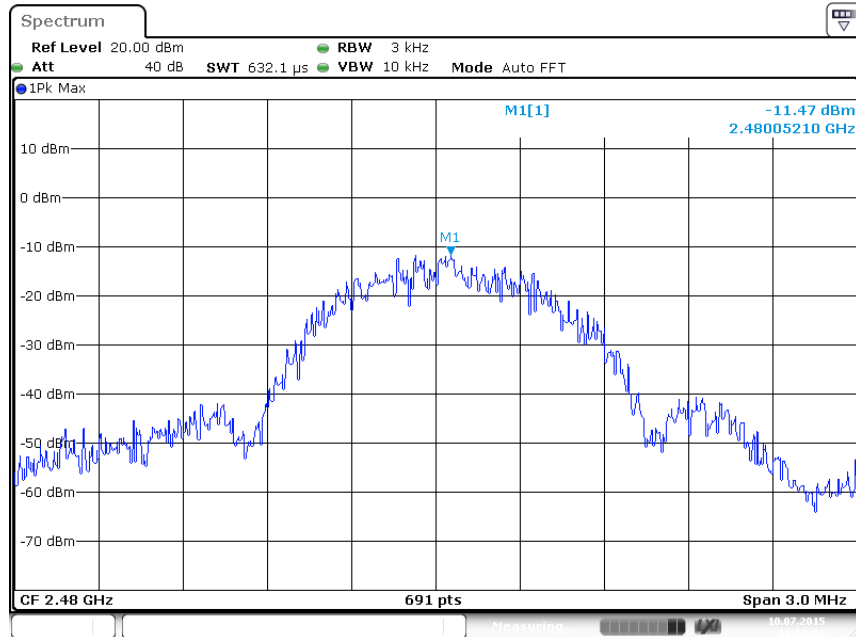
Date: 10. JUL. 2015 10:50:36

Middle channel:



Date: 10. JUL. 2015 10:50:23

High channel:



Date: 10.JUL.2015 10:50:09

5.1.4 6dB Bandwidth

RESULT:**Pass****Test Specification**

Test standard : FCC Part 15.247(a)(2)
RSS-247 Clause 5.2(1)

Basic standard : ANSI C63.10: 2013

Limits : More than 500 KHz

Kind of test site : Shielded Room

Test Setup

Date of testing : 10.07.2015

Input voltage : AC 120V, 60Hz

Operation mode : A.2.a

Test channel : Low / Middle/ High

Ambient temperature : 25°C

Relative humidity : 56%

Atmospheric pressure : 101 kPa

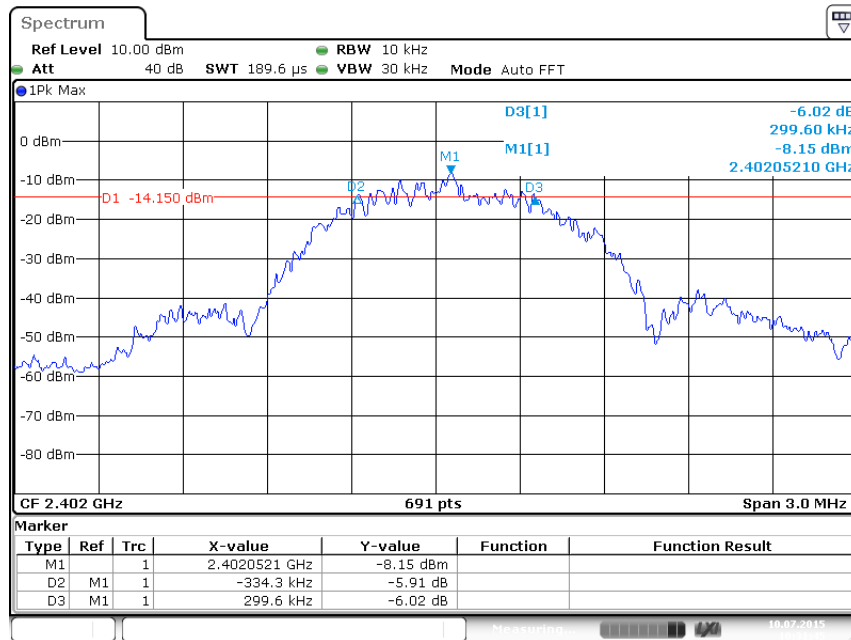
Table 9: Test Result of 6dB Bandwidth, Low Energy

Channel	Channel Frequency (MHz)	-6dB Bandwidth (kHz)	Limit (kHz)	Result
Low Channel	2402	633.9	> 500	Pass
Middle Channel	2440	633.9	> 500	Pass
High Channel	2480	633.9	> 500	Pass

For the measurement records, refer to following test plot:

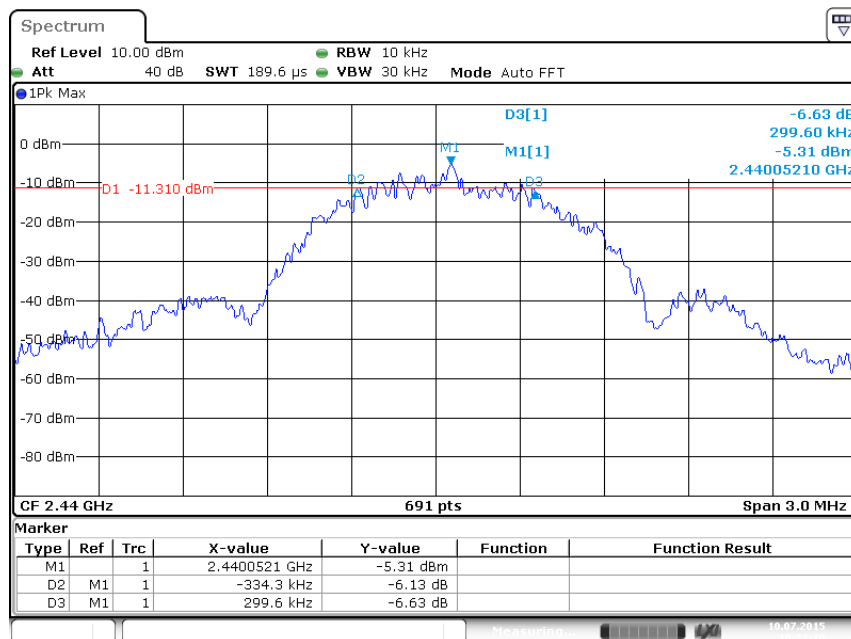
Test Plot of 6dB Bandwidth, Low Energy

Low channel:



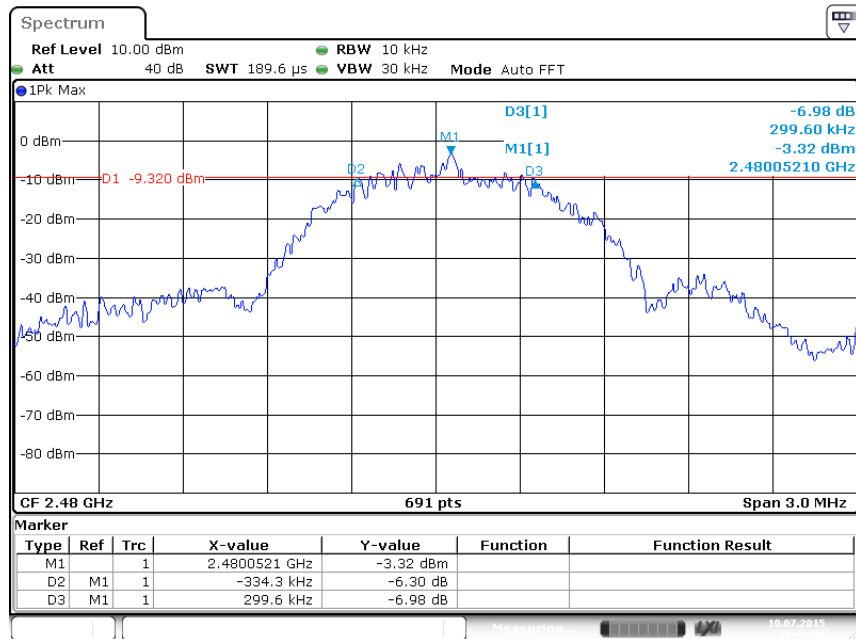
Date: 10. JUL. 2015 10:31:46

Middle channel:



Date: 10. JUL. 2015 10:33:10

High channel:



Date: 10.JUL.2015 10:33:56

5.1.5 99% Bandwidth

RESULT:
Pass
Test Specification

Test standard : RSS-Gen Clause 6.6
 Basic standard : ANSI C63.10: 2013
 Kind of test site : Shielded Room

Test Setup

Date of testing : 10.07.2015
 Input voltage : AC 120V, 60Hz
 Operation mode : A.1.a , A.2.a
 Test channel : Low / Middle/ High
 Ambient temperature : 25°C
 Relative humidity : 56%
 Atmospheric pressure : 101 kPa

Table 10: Test Result of 99% Bandwidth, BDR mode

Channel	Channel Frequency (MHz)	99% Bandwidth (kHz)	Limit (kHz)	Result
Low Channel	2402	933.43	/	Pass
Middle Channel	2441	933.43	/	Pass
High Channel	2480	933.43	/	Pass

Table 11: Test Result of 99% Bandwidth, EDR mode

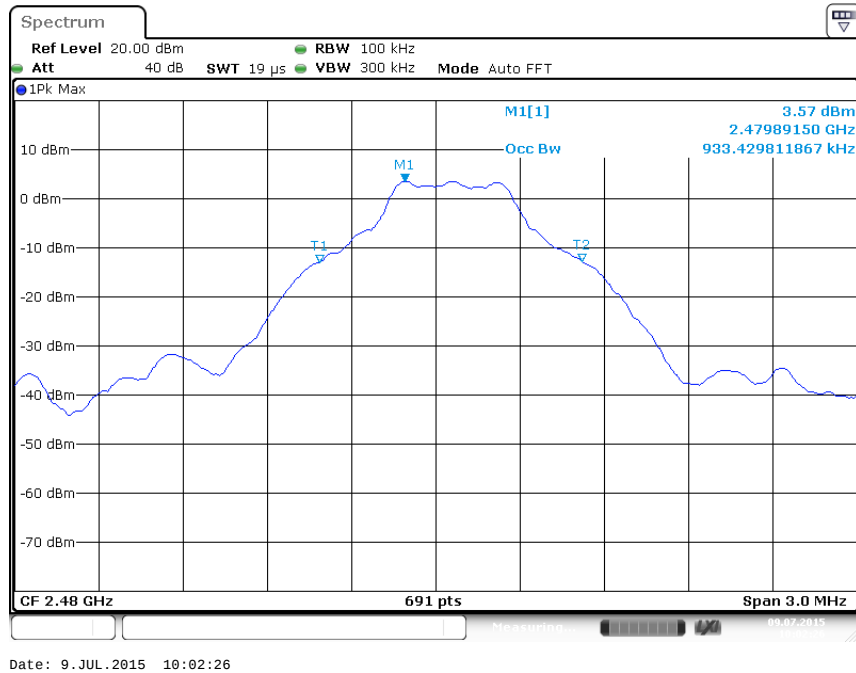
Channel	Channel Frequency (MHz)	99% Bandwidth (kHz)	Limit (kHz)	Result
Low Channel	2402	1193.92	/	Pass
Middle Channel	2441	1193.92	/	Pass
High Channel	2480	1193.92	/	Pass

Table 12: Test Result of 99% Bandwidth, Low Energy

Channel	Channel Frequency (MHz)	99% Bandwidth (kHz)	Limit (kHz)	Result
Low Channel	2402	1046.31	/	Pass
Middle Channel	2440	1041.97	/	Pass
High Channel	2480	1046.31	/	Pass

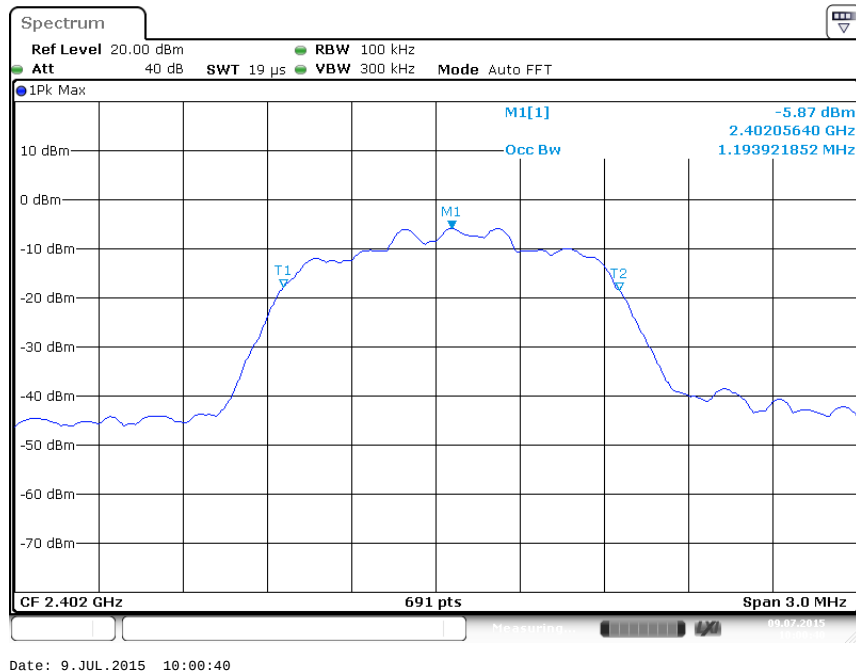
For the measurement records, refer to following test plot:

High channel:

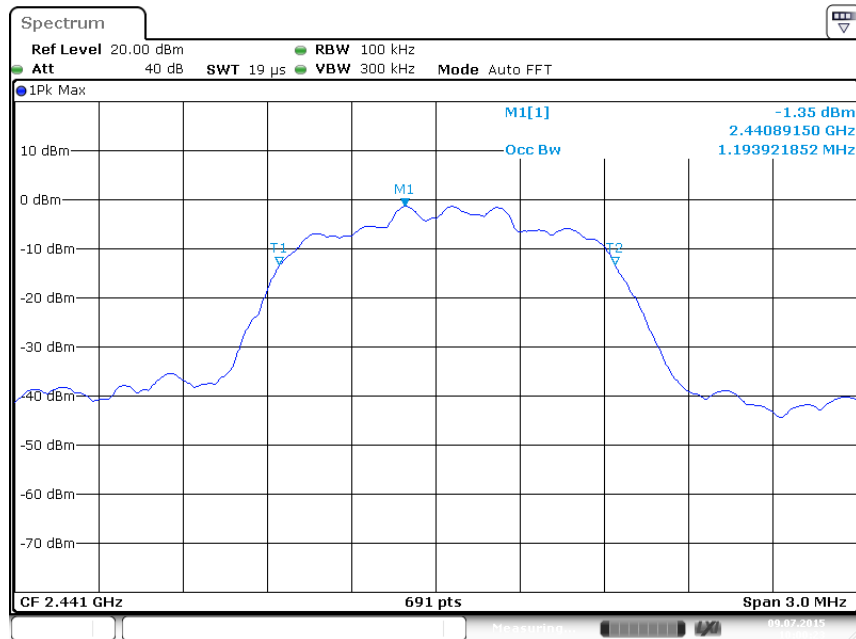


Test Plot of 99% Bandwidth, EDR

Low channel:

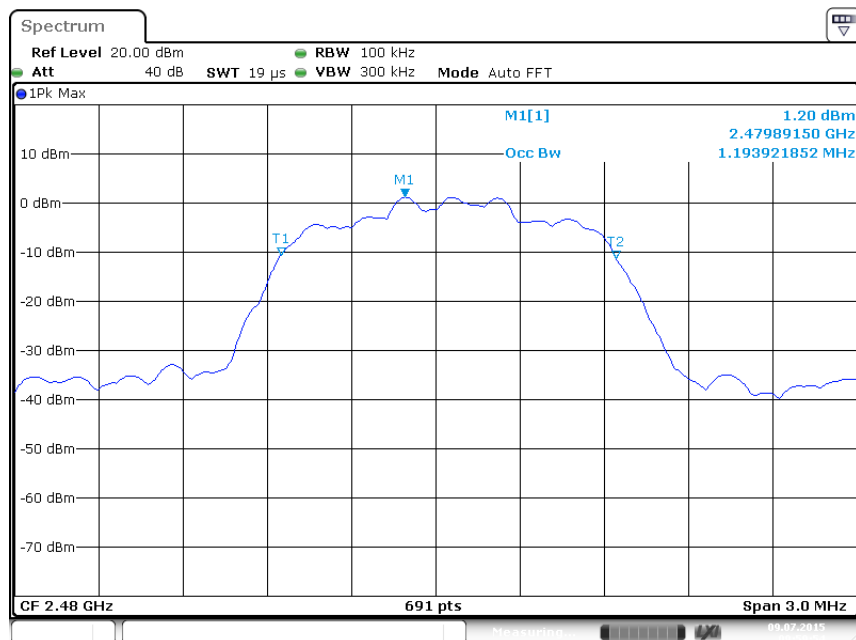


Middle channel:



Date: 9.JUL.2015 10:00:22

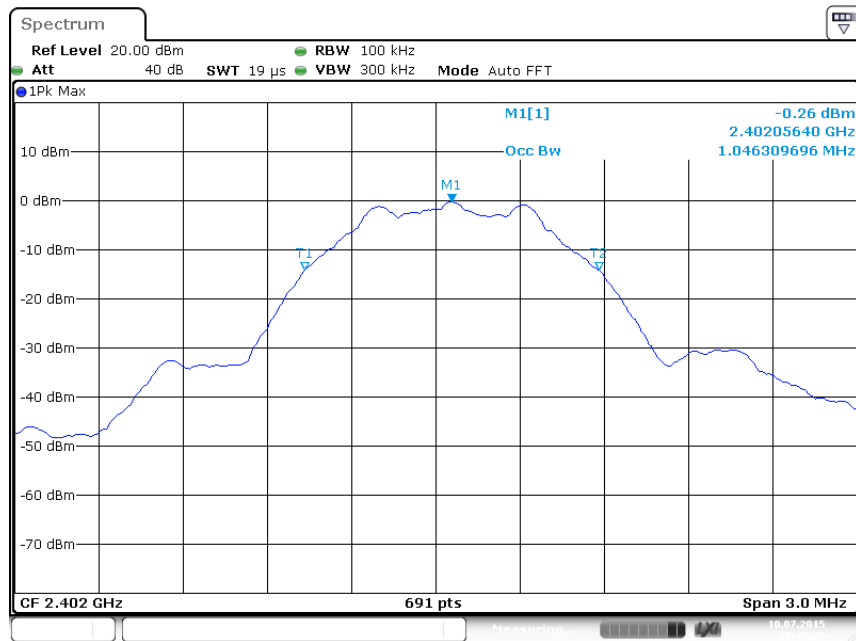
High channel:



Date: 9.JUL.2015 09:59:54

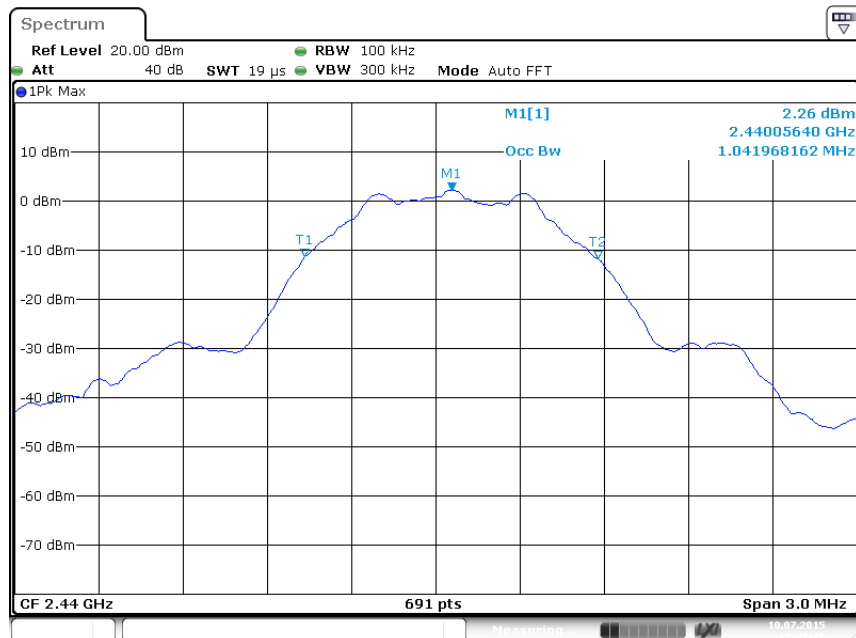
Test Plot of 99% Bandwidth, Low Energy

Low channel:



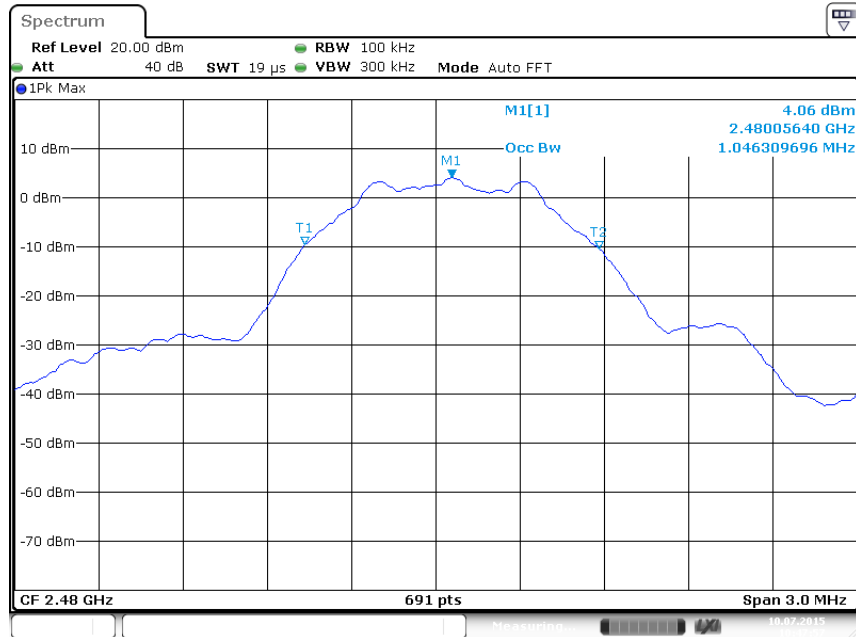
Date: 10.JUL.2015 10:48:29

Middle channel:



Date: 10.JUL.2015 10:48:16

High channel:



Date: 10.JUL.2015 10:47:57

5.1.6 Conducted Spurious Emissions Measured in 100 kHz Bandwidth**RESULT:****Pass****Test Specification**

Test standard	: FCC Part 15.247(d) RSS-247 Clause 5.5
Basic standard	: ANSI C63.10: 2013
Limits	: 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	: Shielded Room

Test Setup

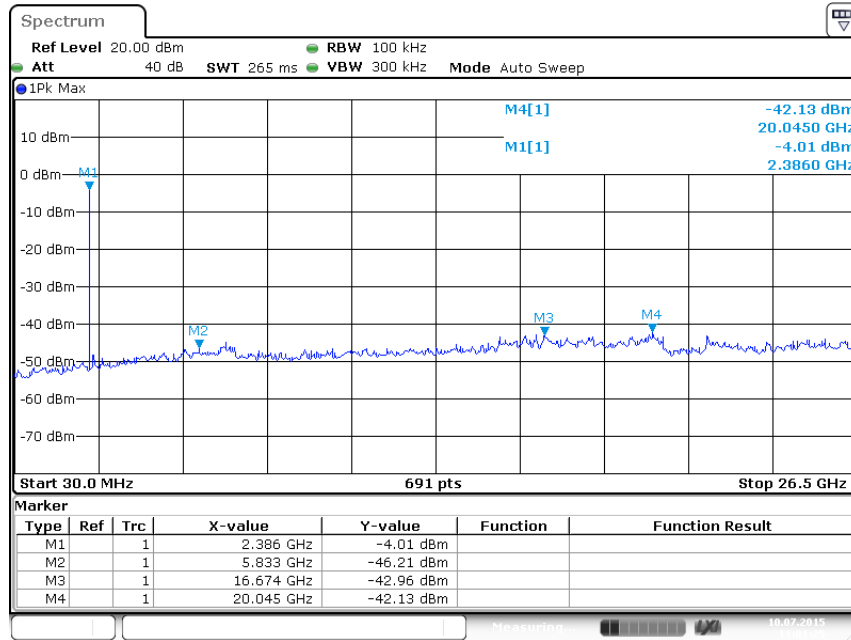
Date of testing	: 10.07.2015
Input voltage	: AC 120V, 60Hz
Operation mode	: A.1.a, A.2.a
Test channel	: Low / Middle/ High
Ambient temperature	: 25°C
Relative humidity	: 56%
Atmospheric pressure	: 101 kPa

All emissions are more than 20dB below fundamental, compliance is achieved as well.

For the measurement records, refer to following test plot:

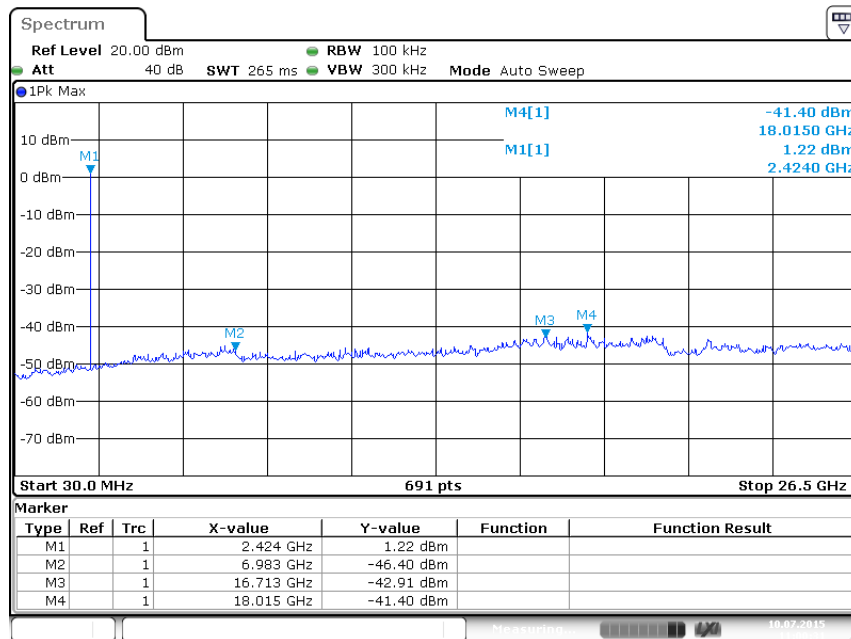
Test Plot of Conducted spurious emissions measured in 100kHz Bandwidth of BDR mode

Low channel:



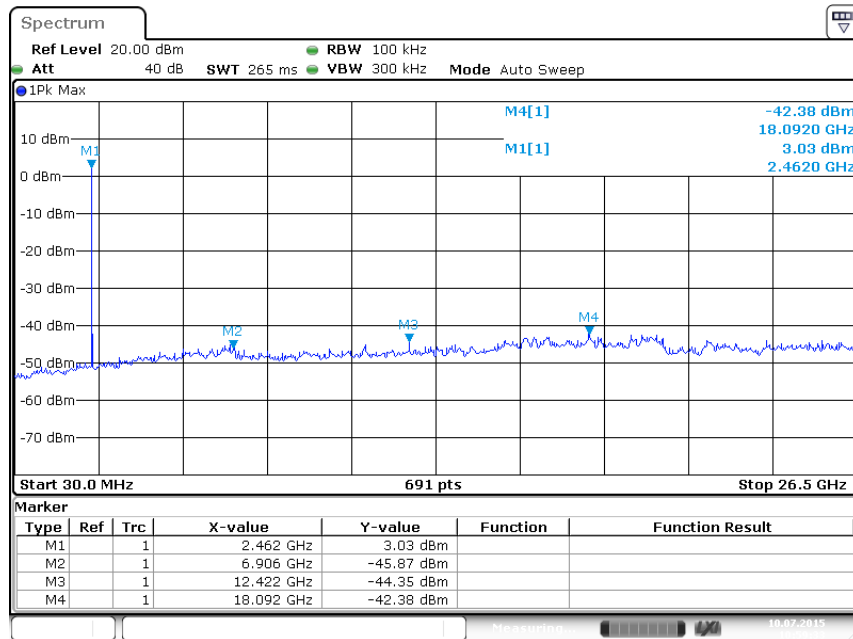
Date: 10.JUL.2015 11:01:25

Middle channel:



Date: 10.JUL.2015 11:00:31

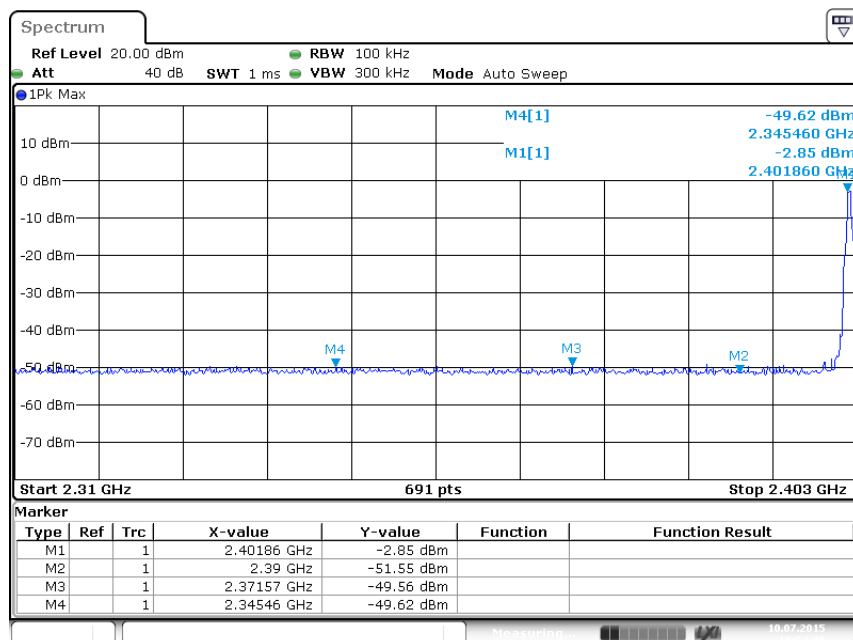
High channel:



Date: 10.JUL.2015 10:59:34

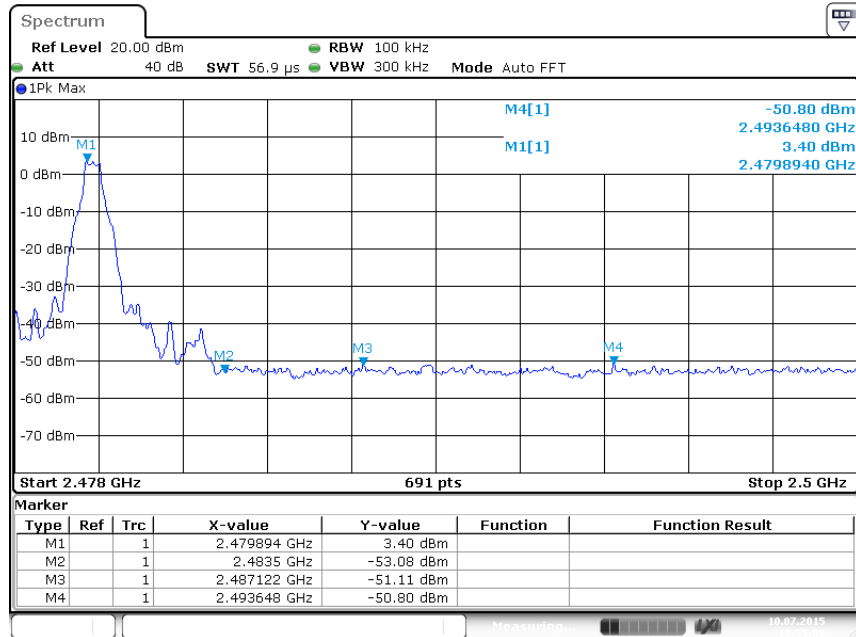
Test Plot of 100 kHz Bandwidth of Frequency Band Edge

Low channel:



Date: 10.JUL.2015 10:54:08

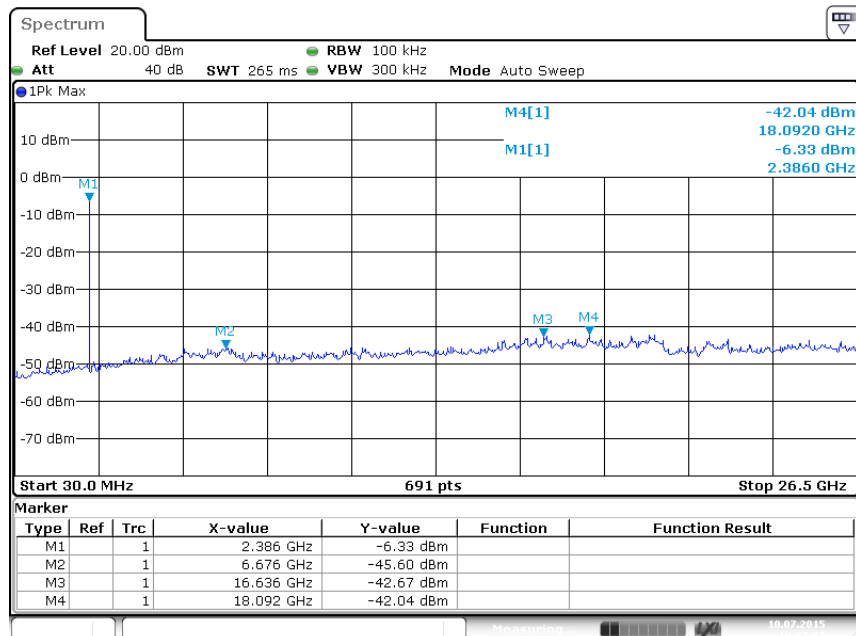
High channel:



Date: 10. JUL. 2015 10:55:09

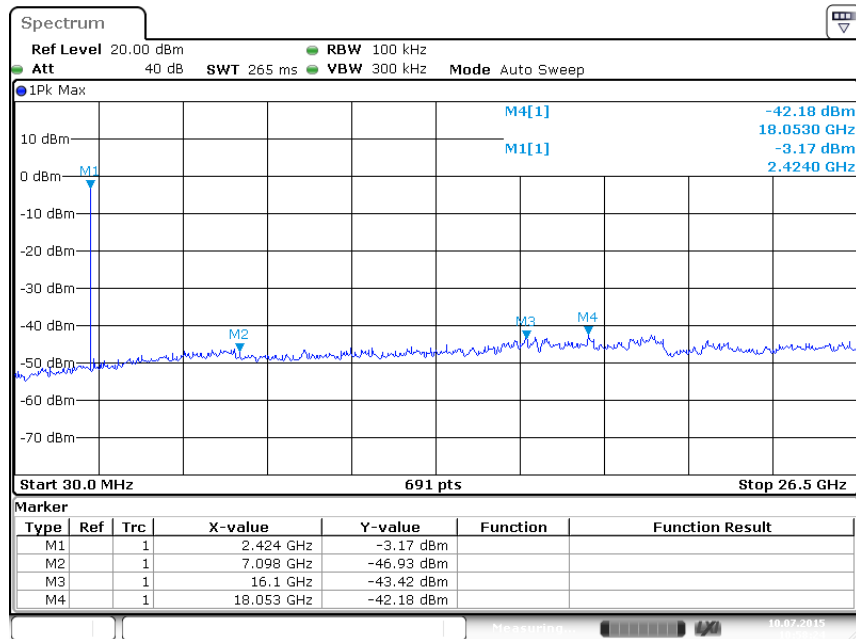
Test Plot of Conducted spurious emissions measured in 100kHz Bandwidth of EDR mode

Low channel:



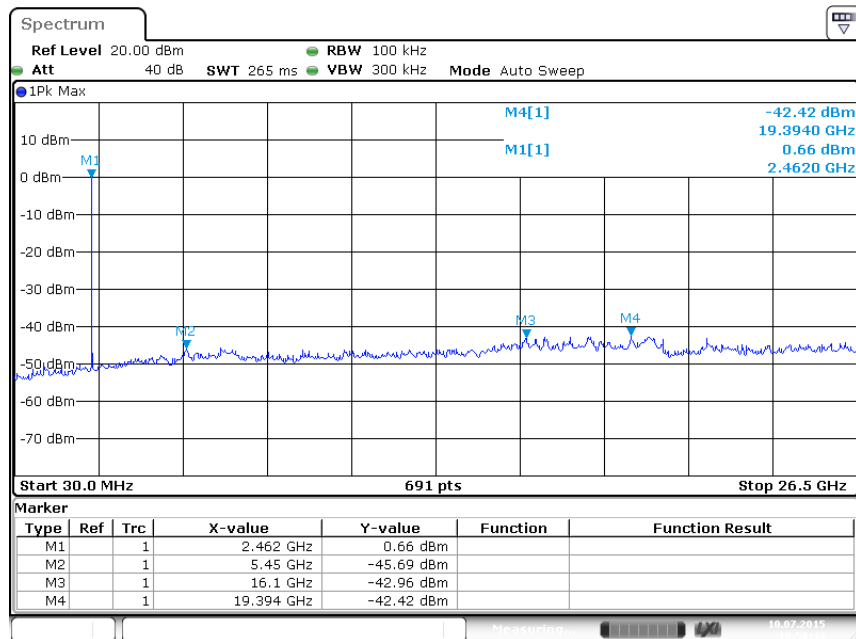
Date: 10. JUL. 2015 10:57:51

Middle channel:



Date: 10.JUL.2015 10:58:24

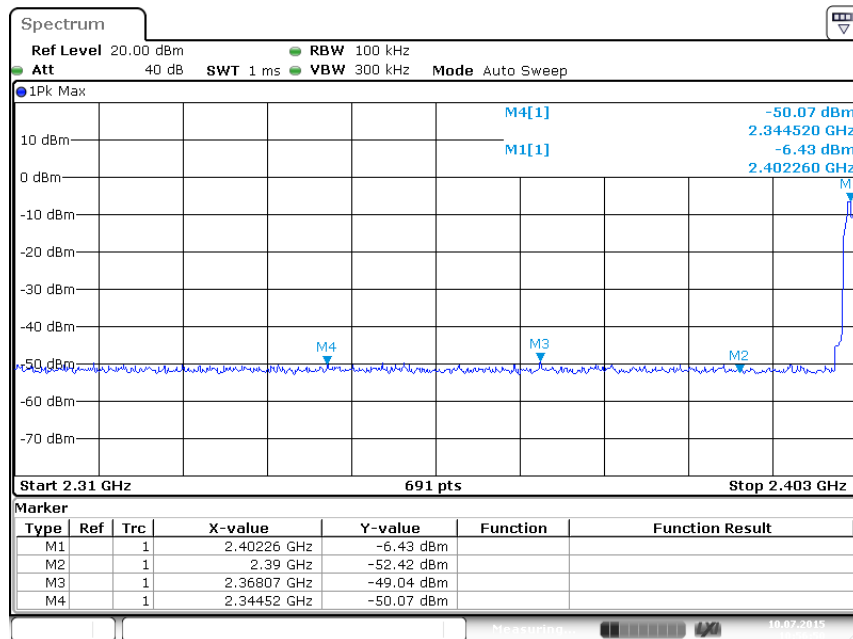
High channel:



Date: 10.JUL.2015 10:58:49

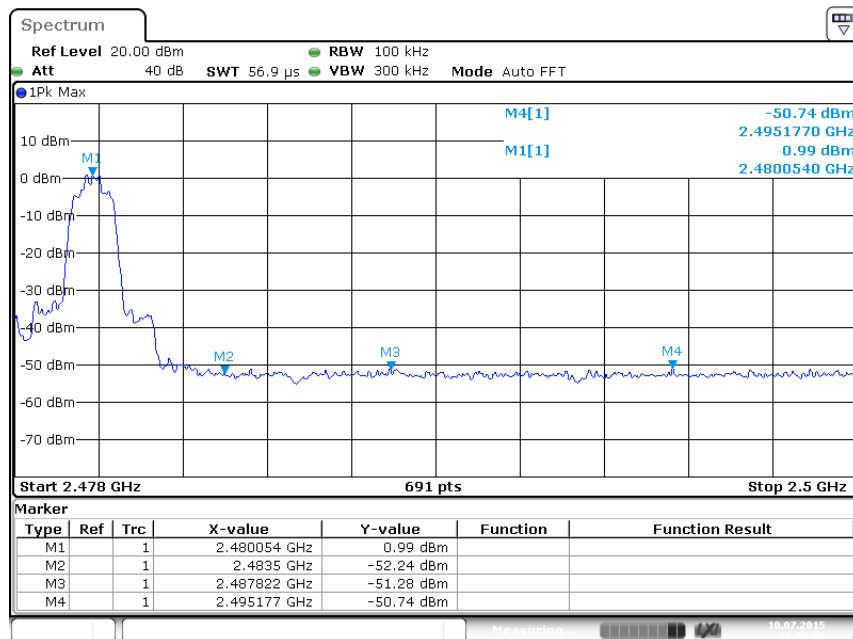
Test Plot of 100 kHz Bandwidth of Frequency Band Edge

Low channel:



Date: 10.JUL.2015 10:56:51

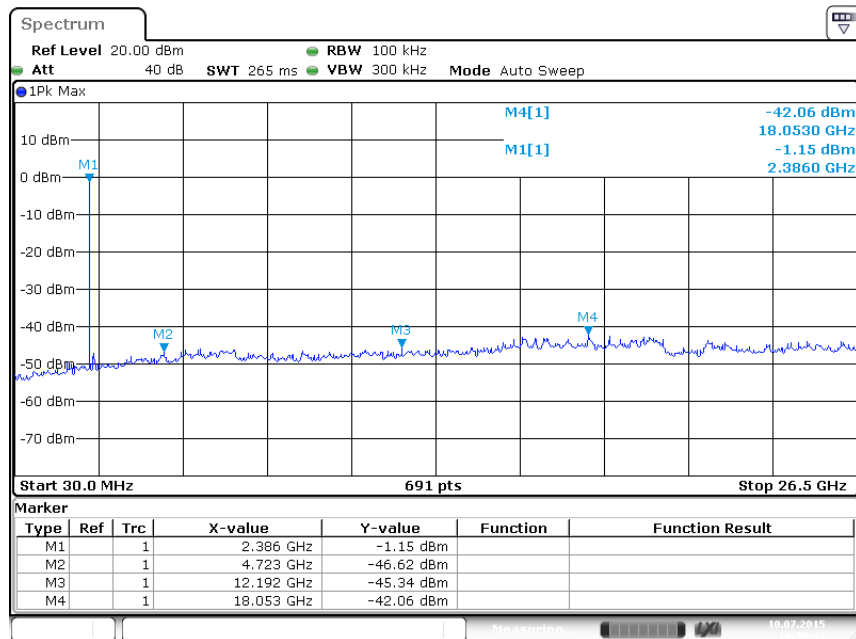
High channel:



Date: 10.JUL.2015 10:56:01

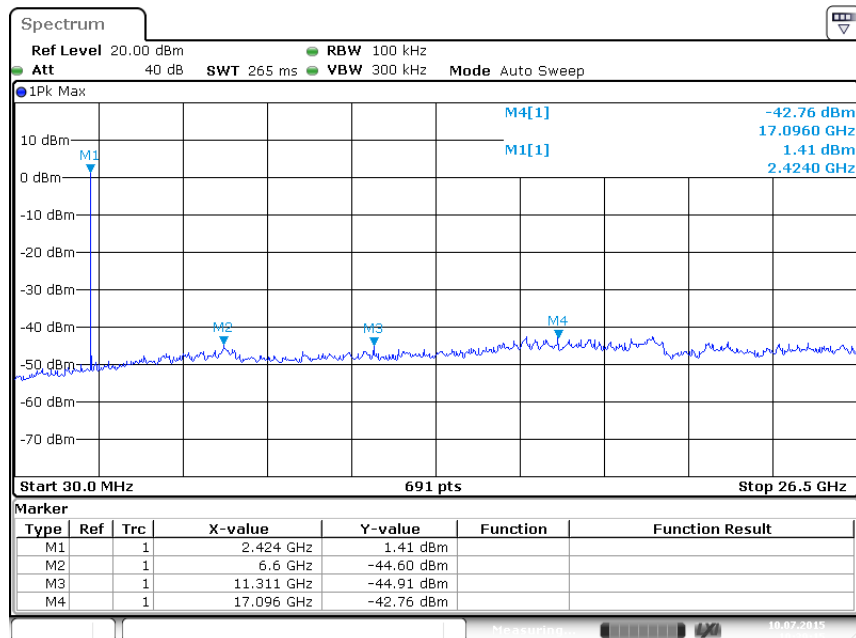
Test Plot of Conducted spurious emissions measured in 100kHz Bandwidth of Low Energy

Low channel:



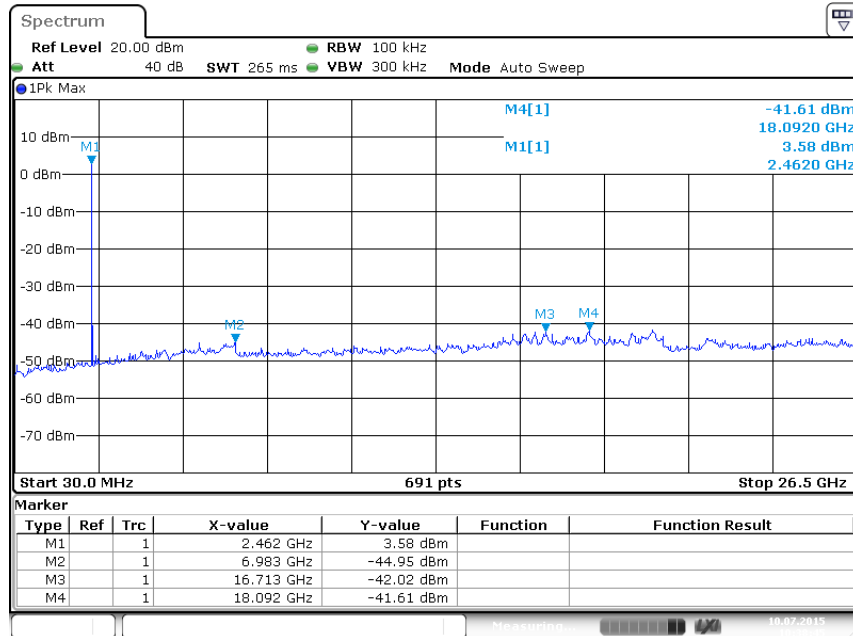
Date: 10.JUL.2015 10:39:49

Middle channel:



Date: 10.JUL.2015 10:39:16

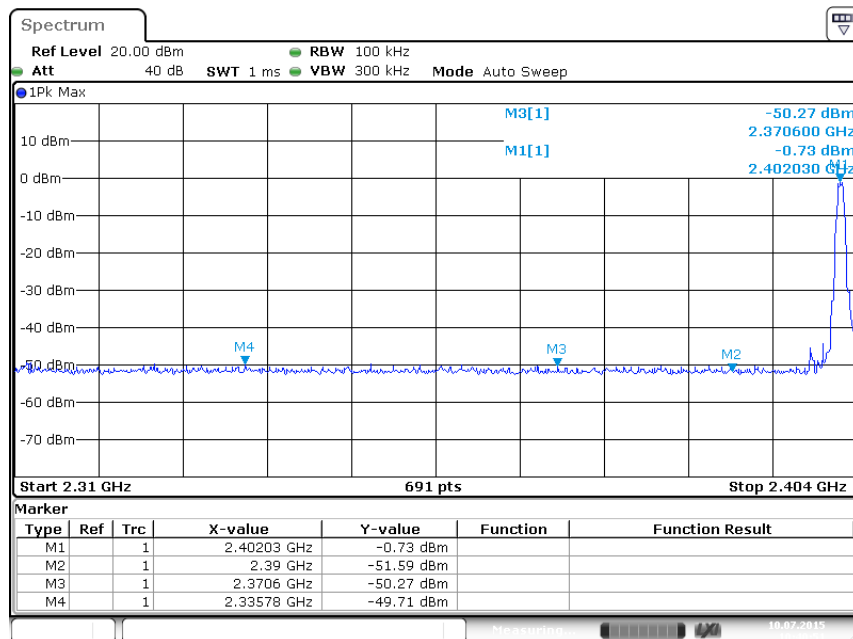
High channel:



Date: 10.JUL.2015 10:38:45

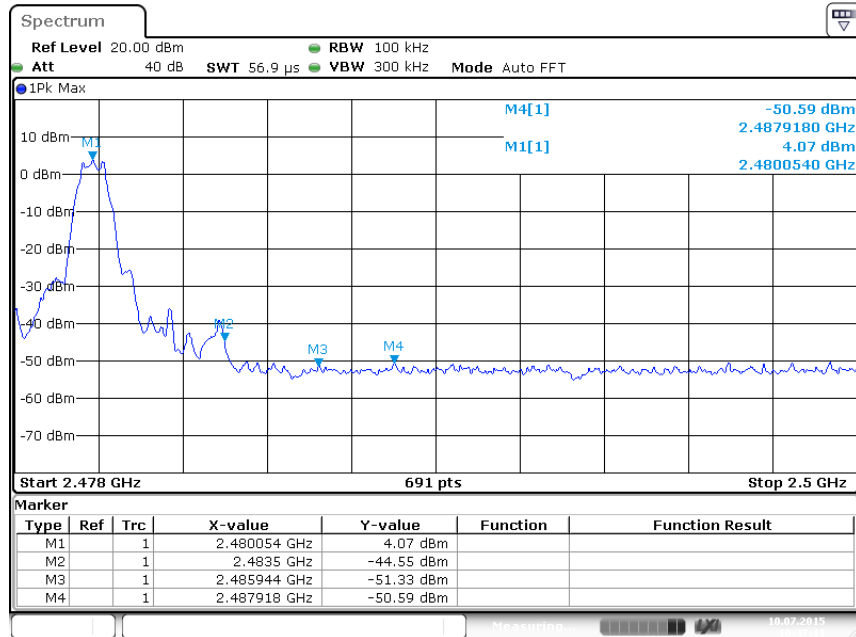
Test Plot of 100 kHz Bandwidth of Frequency Band Edge

Low channel:



Date: 10.JUL.2015 10:40:52

High channel:



Date: 10. JUL. 2015 10:47:11

5.1.7 Radiated Spurious Emission

RESULT:**Pass****Test Specification**

Test standard	: FCC Part 15.247(d), FCC Part 15.205 RSS-247 Clause 3.3
Basic standard	: ANSI C63.10: 2013
Limits	: Refer to 15.209(a) of FCC part 15.247(d) RSS-Gen Table 4
Kind of test site	: 3m Semi-anechoic chamber

Test Setup

Date of testing	: 11.07.2015
Input voltage	: AC 120V, 60Hz
Operation mode	: A.1.a, A.2.a
Test channel	: Low / Middle/ High
Ambient temperature	: 25°C
Relative humidity	: 56%
Atmospheric pressure	: 101 kPa

Remark:

During the pretest the EUT was rotated through three orthogonal axes to determine the attitude that maximizes the emissions. After that the EUT was manually handled to find the orientation that has the maximum emission, which is the orientation shown in the test set-up photos.

Pre-test the EUT in continuous transmitting mode at the low (2402 MHz), middle (2441 MHz) and high (2480 MHz) channel with different data packet. Compliance test in continuous transmitting mode with BDR mode (DH5) as the worst case was found.

Testing was carried out within frequency range 9kHz to the tenth harmonics.

For the measurement records, refer to the appendix 1.

5.1.8 20dB Bandwidth

RESULT:

Pass

Test Specification

Test standard : FCC Part 15.247(a)(1)
RSS-247 Clause 5.1(1)
Basic standard : ANSI C63.10: 2013
Kind of test site : Shielded Room

Test Setup

Date of testing : 09.07.2015
Input voltage : AC 120V, 60Hz
Operation mode : A.1.a
Test channel : Low / Middle/ High
Ambient temperature : 25°C
Relative humidity : 56%
Atmospheric pressure : 101 kPa

Table 13: Test Result of 20dB Bandwidth, BDR mode

Channel	Channel Frequency (MHz)	20dB Bandwidth (kHz)	2/3 of 20dB Bandwidth (kHz)	Limit (MHz)	Result
Low Channel	2402	920.50	613.667	/	Pass
Middle Channel	2441	920.50	613.667	/	Pass
High Channel	2480	920.50	613.667	/	Pass

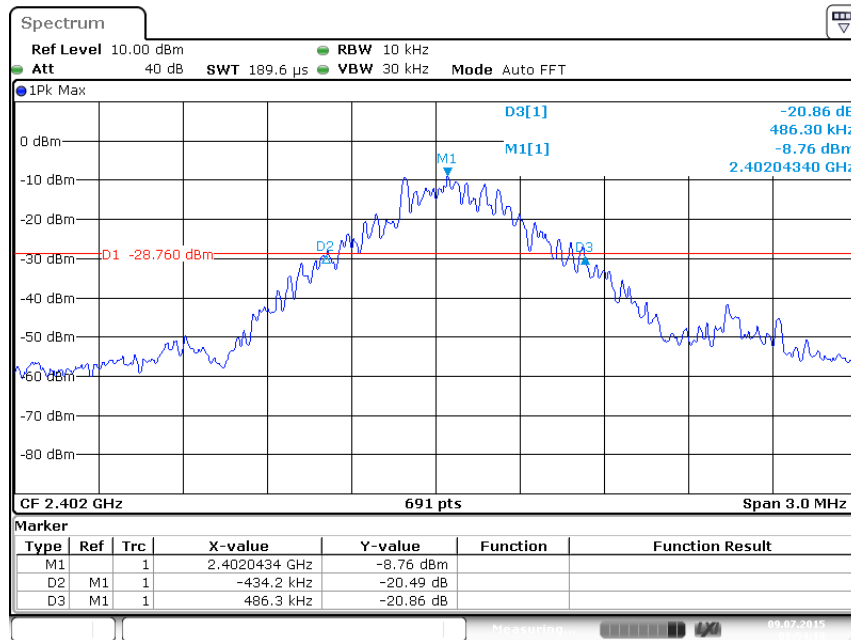
Table 14: Test Result of 20dB Bandwidth, EDR mode

Channel	Channel Frequency (MHz)	20dB Bandwidth (kHz)	2/3 of 20dB Bandwidth (kHz)	Limit (MHz)	Result
Low Channel	2402	1207.00	804.667	/	Pass
Middle Channel	2441	1202.60	801.733	/	Pass
High Channel	2480	1207.00	804.667	/	Pass

For the measurement records, refer to following test plot:

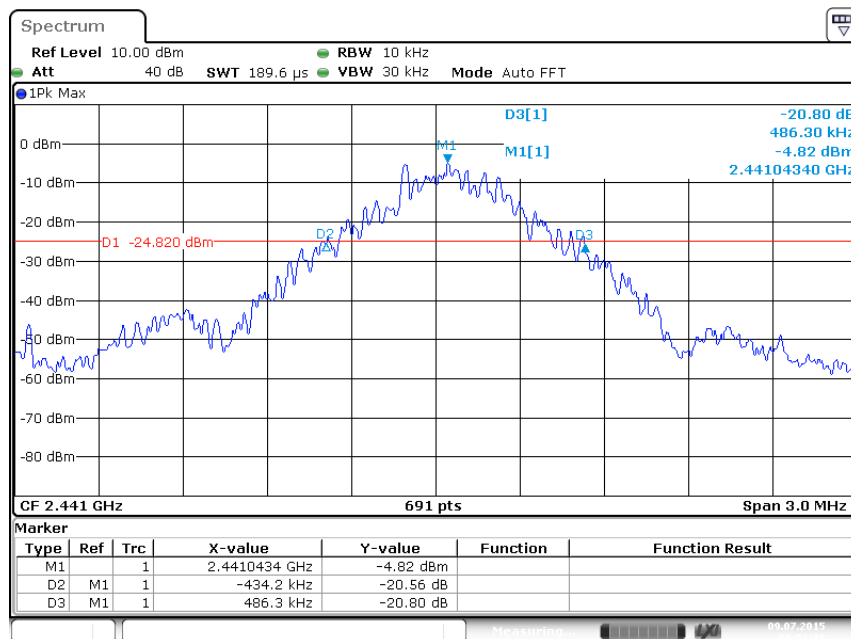
Test Plot of 20dB Bandwidth, BDR

Low channel:



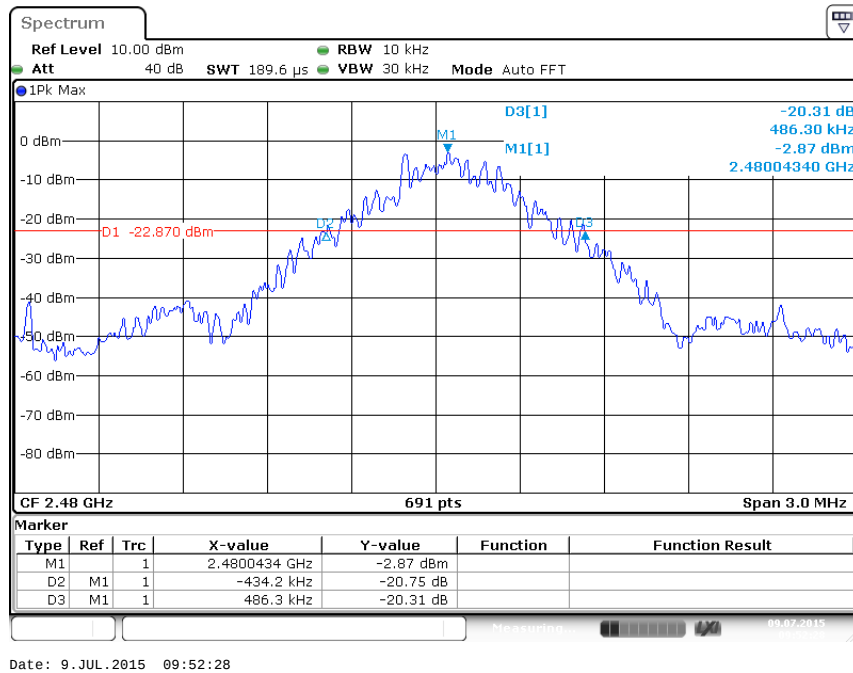
Date: 9.JUL.2015 09:54:18

Middle channel:



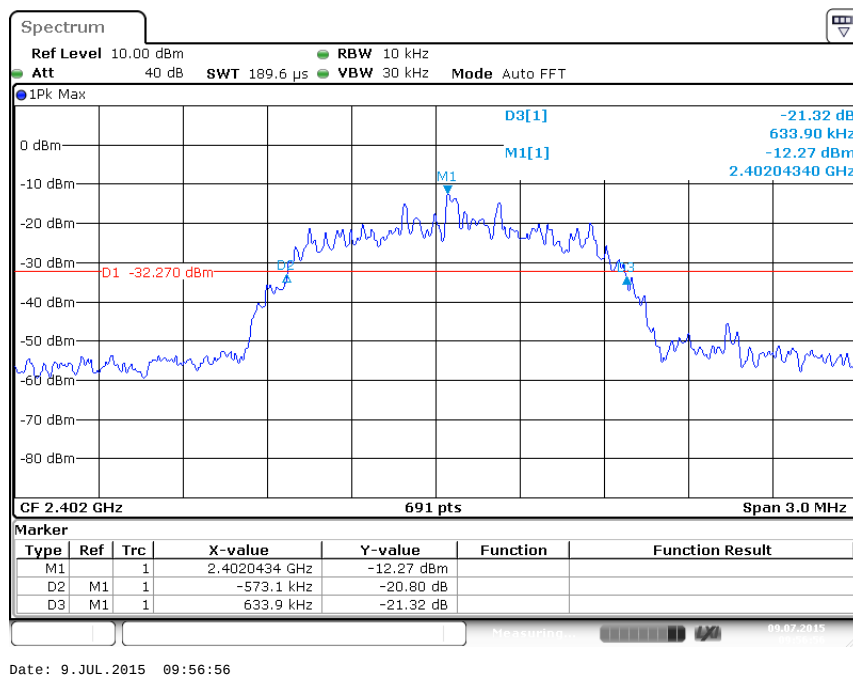
Date: 9.JUL.2015 09:53:18

High channel:

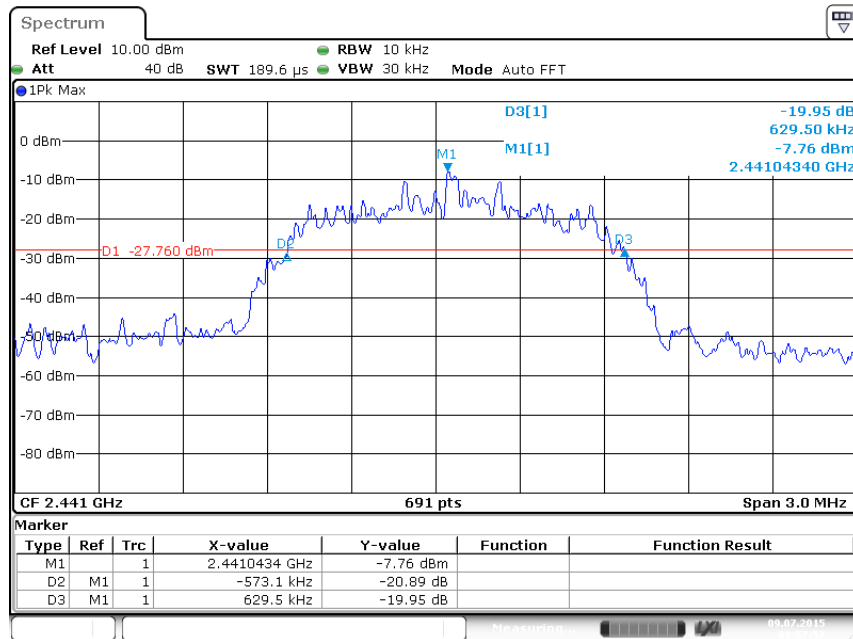


Test Plot of 20dB Bandwidth, EDR

Low channel:

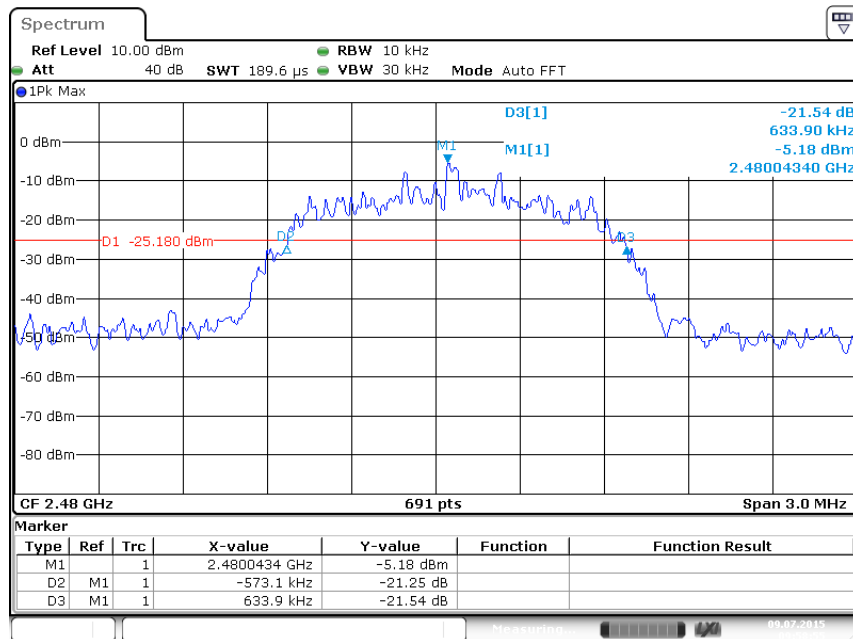


Middle channel:



Date: 9.JUL.2015 09:57:57

High channel:



Date: 9.JUL.2015 09:58:55

5.1.9 Carrier Frequency Separation

RESULT:

Pass

Test Specification

Test standard : FCC Part 15.247(a)(1)
RSS-247 Clause 5.1(2)
Basic standard : ANSI C63.10: 2013
Limits : $\geq 25\text{kHz}$ or $2/3$ of 20dB bandwidth, whichever is greater
Kind of test site : Shielded Room

Test Setup

Date of testing : 10.07.2015
Input voltage : AC 120V, 60Hz
Operation mode : A.1.a
Test channel : Low / Middle/ High
Ambient temperature : 25°C
Relative humidity : 56%
Atmospheric pressure : 101 kPa

Table 15: Test Result of Carrier Frequency Separation

Channel	Channel Frequency (MHz)	Measured Channel Separation (KHz)	Limit (kHz)	Result
Low Channel	2402	1002.9	≥ 25kHz or 2/3 of 20dB bandwidth	Pass
Adjacency Channel	2403			
Middle Channel	2441	1002.9		Pass
Adjacency Channel	2442			
High Channel	2480	1002.9		Pass
Adjacency Channel	2479			

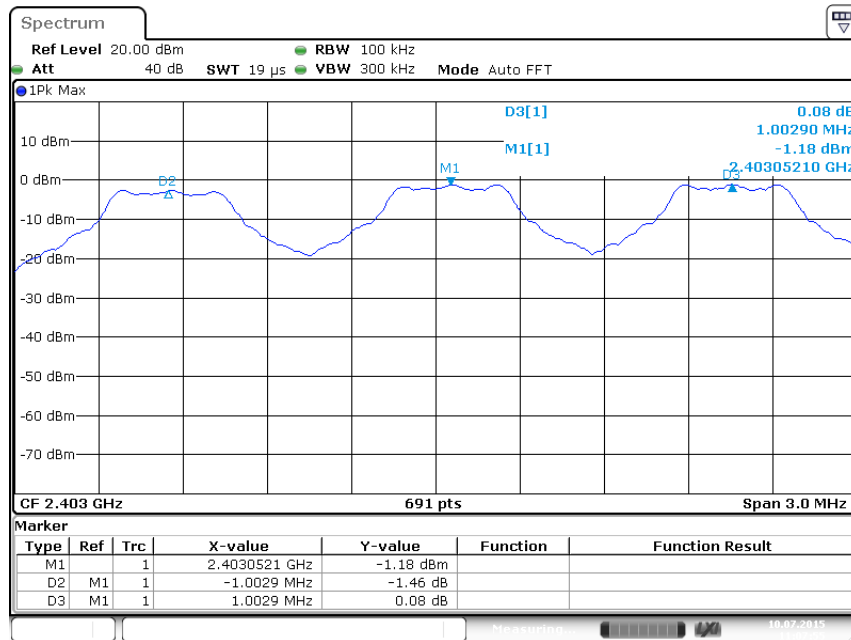
Note:

The limit is maximum $2/3$ of the 20 dB bandwidth: 804.667 KHz .

For the measurement records, refer to following test plot:

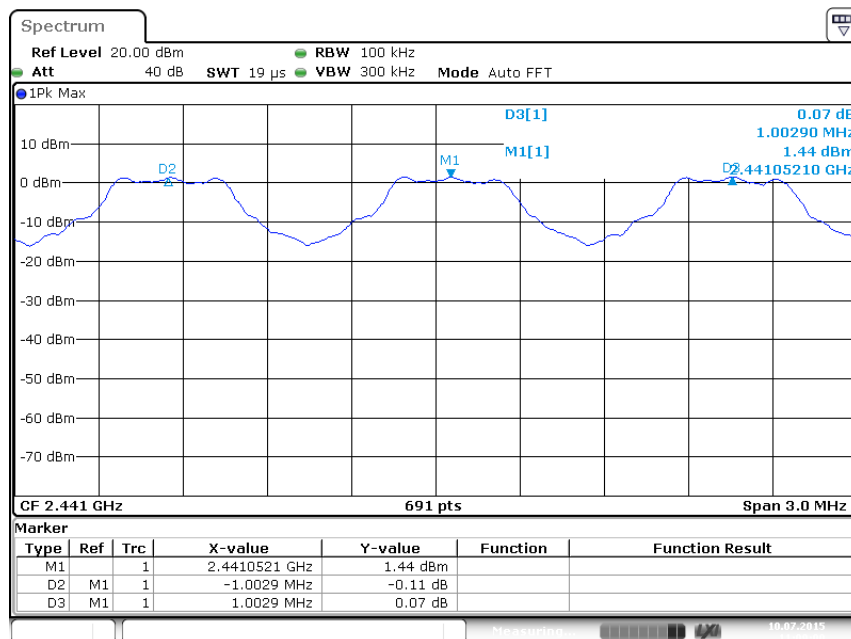
Test Plot of Carrier Frequency Separation

Low channel:



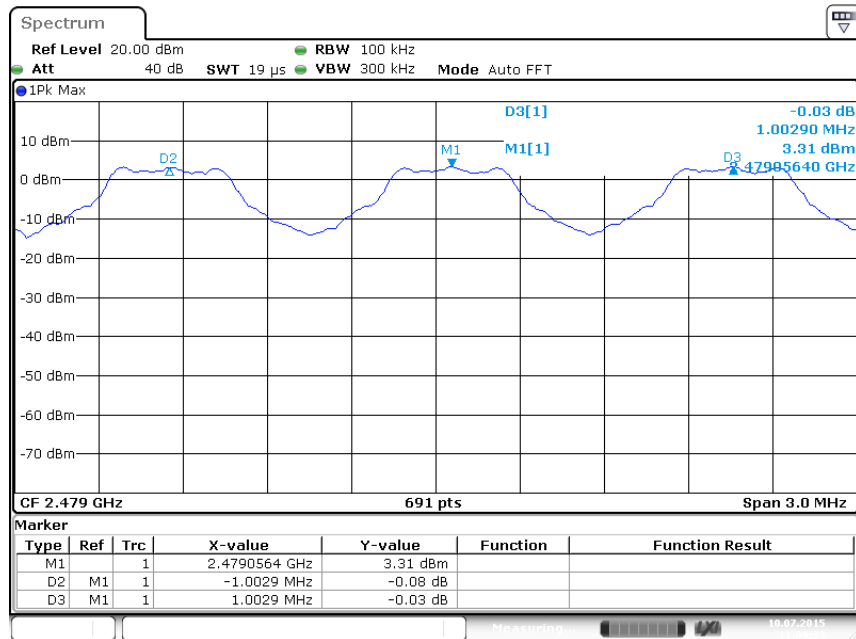
Date: 10.JUL.2015 11:07:56

Middle channel:



Date: 10.JUL.2015 11:09:01

High channel:



Date: 10.JUL.2015 11:09:33

5.1.10 Number of Hopping Frequency

RESULT:

Pass

Test Specification

Test standard : FCC part 15.247(a)(1)(iii)
RSS-247 Clause 5.1(4)
Basic standard : ANSI C63.10: 2013
Limits : ≥ 15 non-overlapping channels
Kind of test site : Shielded Room

Test Setup

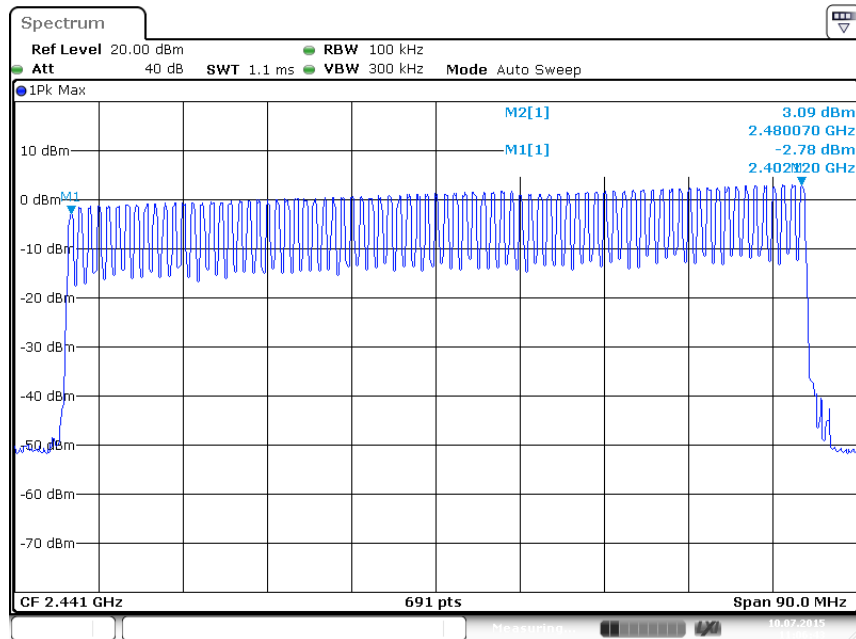
Date of testing : 10.07.2015
Input voltage : AC 120V, 60Hz
Operation mode : B
Ambient temperature : 25°C
Relative humidity : 56%
Atmospheric pressure : 101 kPa

Table 16: Test Result of Number of Hopping Frequency

Frequency Range	Measured Quantity of Hopping Channel	Limit	Result
2402 to 2480 MHz	79	≥ 15	Pass

For the measurement records, refer to following test plot:

Test Plot of Number of hopping frequency



Date: 10.JUL.2015 11:06:43

5.1.11 Time of Occupancy**RESULT:****Pass****Test Specification**

Test standard : FCC part 15.247(a)(1)(iii)
RSS-247 Clause 5.1(4)
Basic standard : ANSI C63.10: 2013
Limits : 0.4s
Kind of test site : Shielded Room

Test Setup

Date of testing : 10.07.2015
Input voltage : AC 120V, 60Hz
Test channel : Low / Middle/ High
Operation mode : A.1.a
Ambient temperature : 25°C
Relative humidity : 56%
Atmospheric pressure : 101 kPa

Table 17: Test Result of Time of Occupancy, BDR mode

Channel	Data Mode	Pulse width (ms)	Measured Dwell time(s)	Limit (s)	Result
Low Channel	1DH1	0.449	0.144	0.4	Pass
	1DH3	1.710	0.274	0.4	Pass
	1DH5	2.978	0.318	0.4	Pass
Middle Channel	1DH1	0.435	0.139	0.4	Pass
	1DH3	1.710	0.274	0.4	Pass
	1DH5	2.978	0.318	0.4	Pass
High Channel	1DH1	0.449	0.144	0.4	Pass
	1DH3	1.710	0.274	0.4	Pass
	1DH5	3.000	0.320	0.4	Pass

Table 18: Test Result of Time of Occupancy, EDR mode

Channel	Data Mode	Pulse width (ms)	Measured Dwell time (s)	Limit (s)	Result
Low Channel	3DH1	0.449	0.144	0.4	Pass
	3DH3	1.725	0.276	0.4	Pass
	3DH5	2.993	0.319	0.4	Pass
Middle Channel	3DH1	0.449	0.144	0.4	Pass
	3DH3	1.701	0.272	0.4	Pass
	3DH5	2.993	0.319	0.4	Pass
High Channel	3DH1	0.449	0.144	0.4	Pass
	3DH3	1.710	0.274	0.4	Pass
	3DH5	2.971	0.317	0.4	Pass

Note:

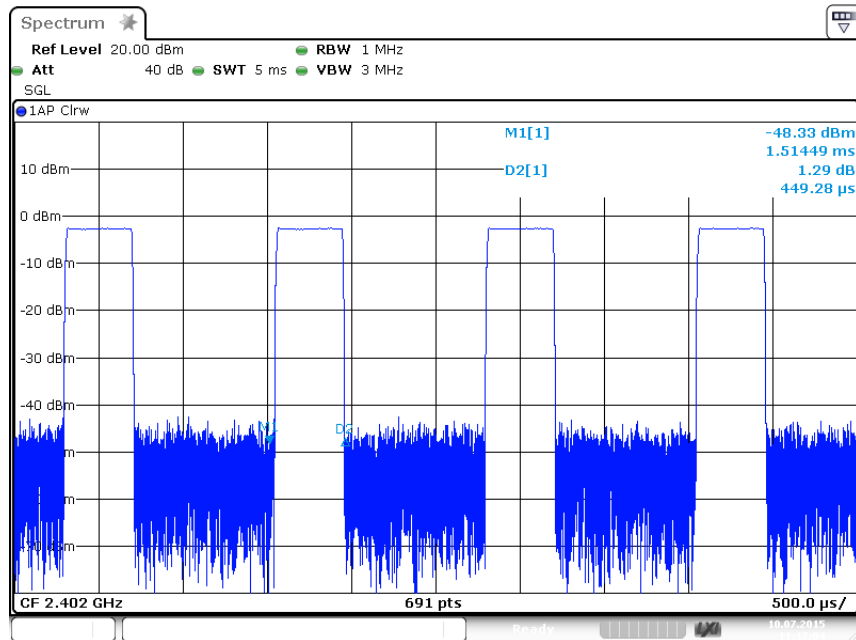
Dwell time = Pulse width x (Hopping rate / Number of channels) x Period

Period = 0.4 (seconds/ channel) x 79 (channel) = 31.6 seconds

For the measurement records, refer to following test plot:

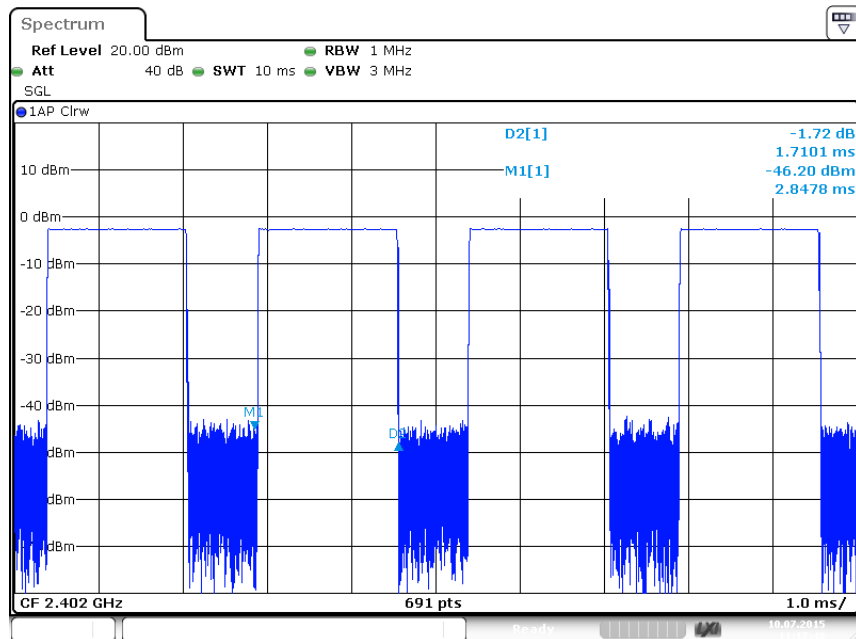
Test Plot of Time of Occupancy, BDR

Low channel: DH1



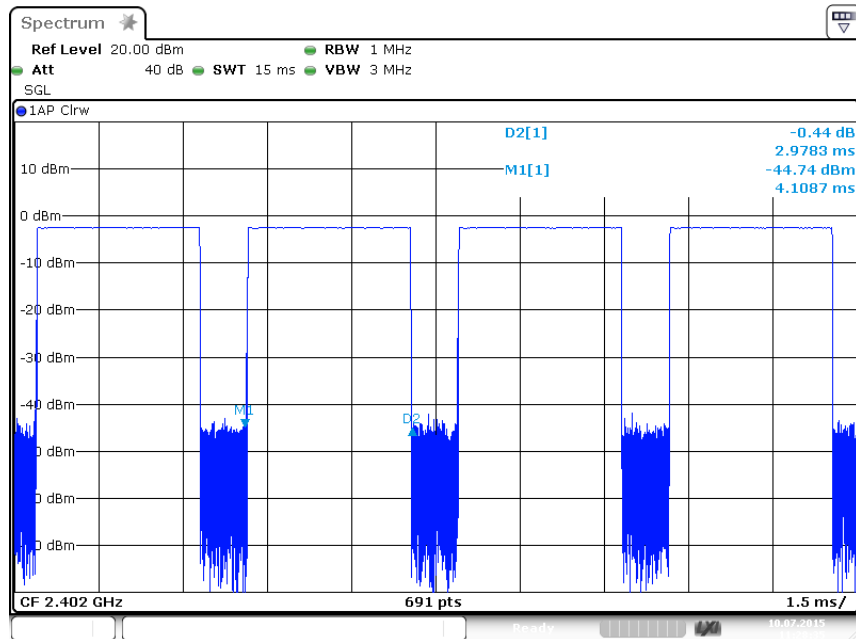
Date: 10.JUL.2015 11:17:04

Low channel: DH3



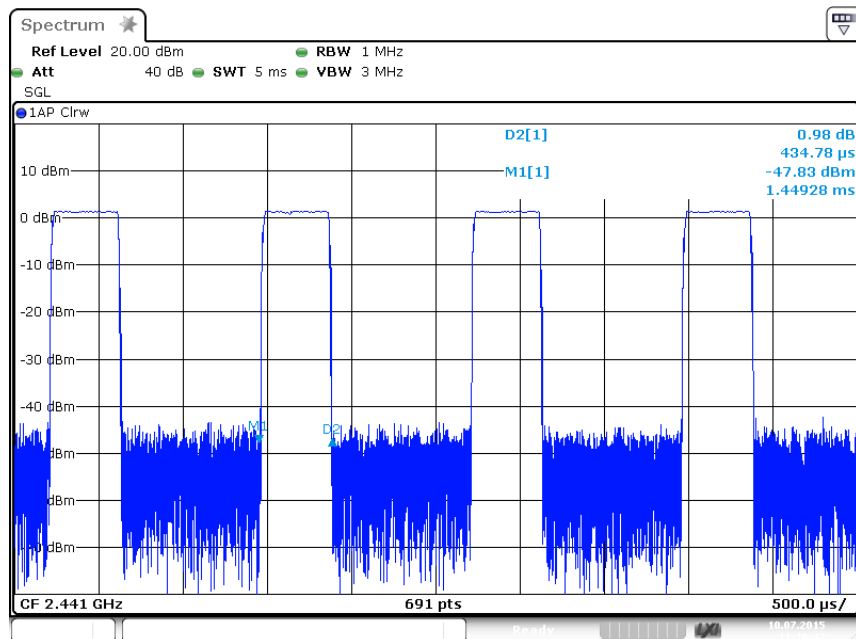
Date: 10.JUL.2015 11:17:48

Low channel: DH5



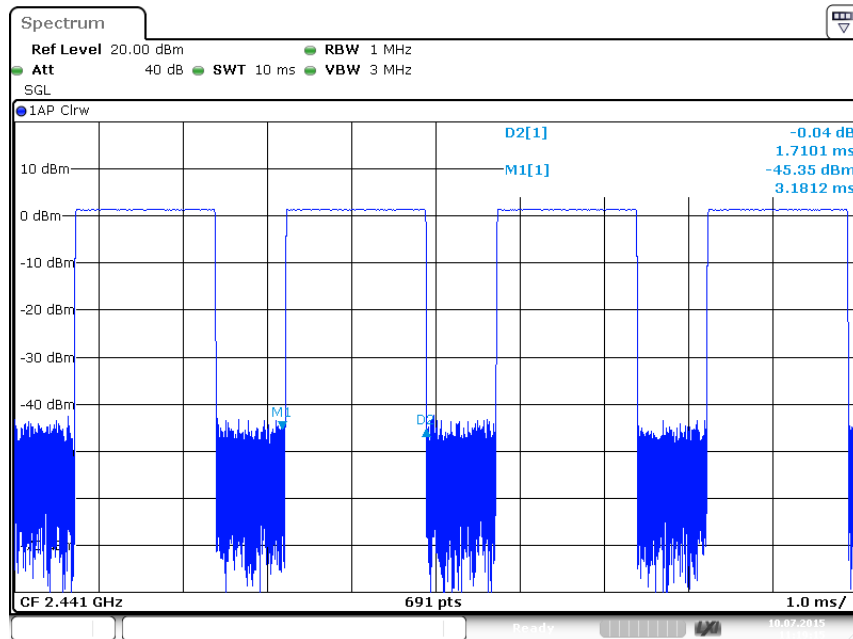
Date: 10.JUL.2015 11:28:35

Middle channel: DH1



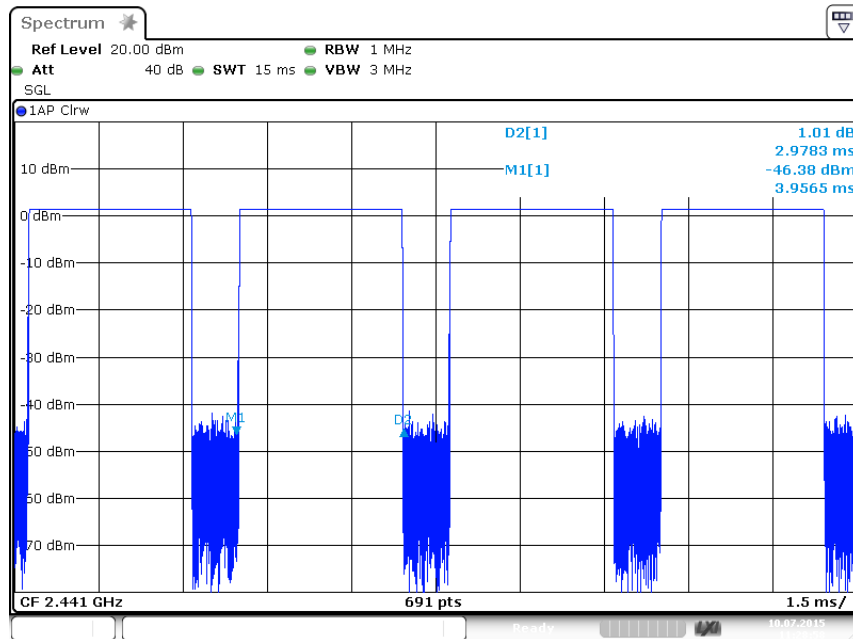
Date: 10.JUL.2015 11:16:42

Middle channel: DH3



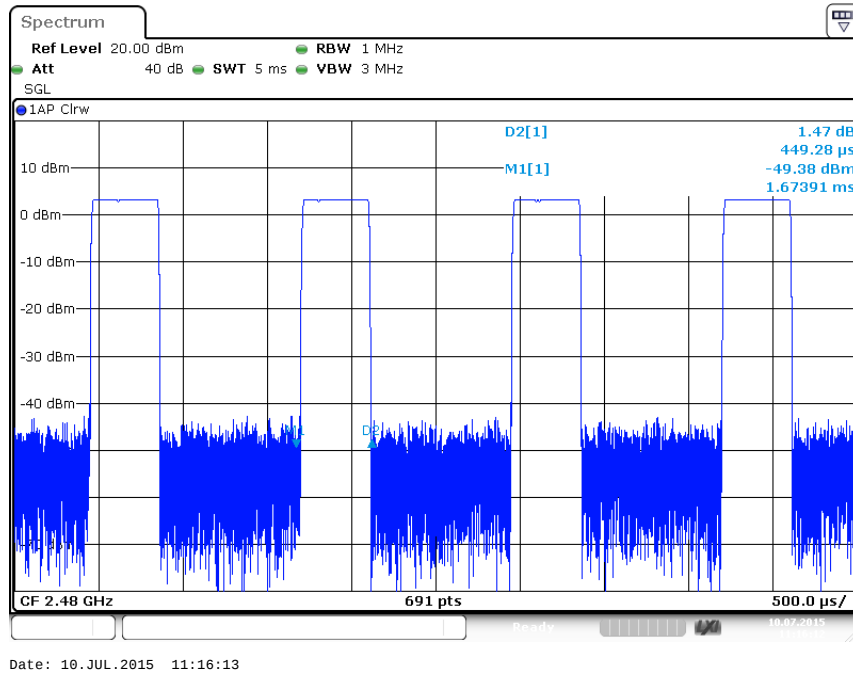
Date: 10.JUL.2015 11:19:16

Middle channel: DH5

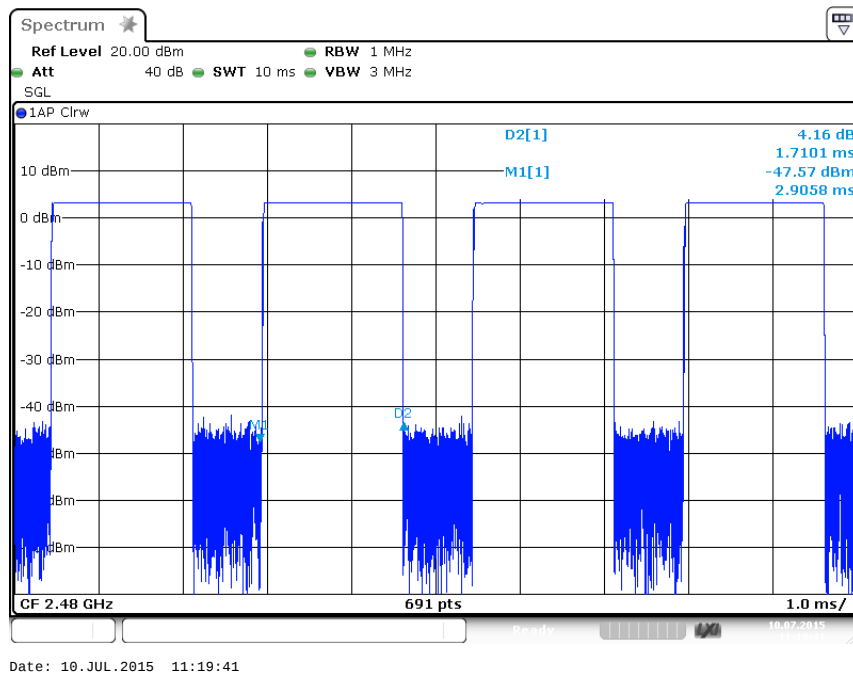


Date: 10.JUL.2015 11:28:58

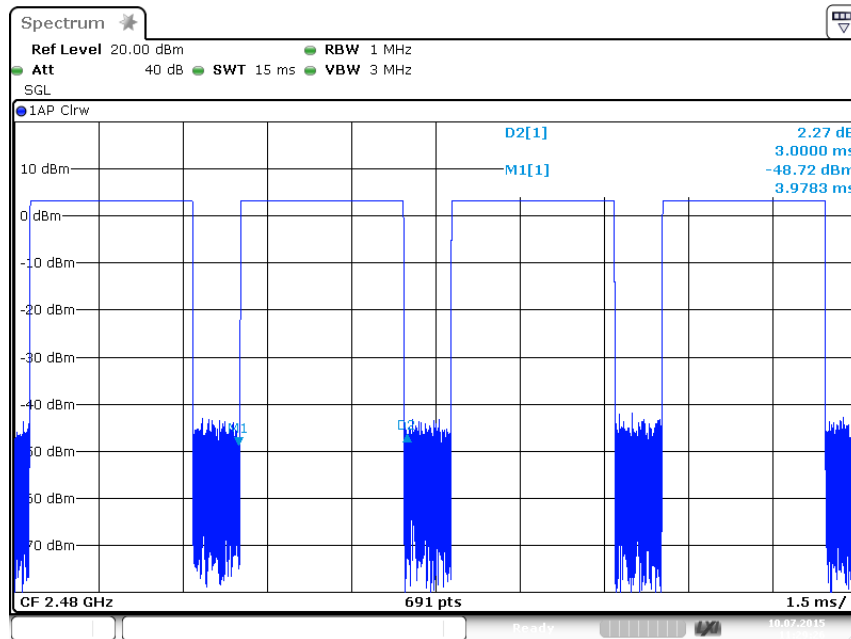
High channel: DH1



High channel: DH3



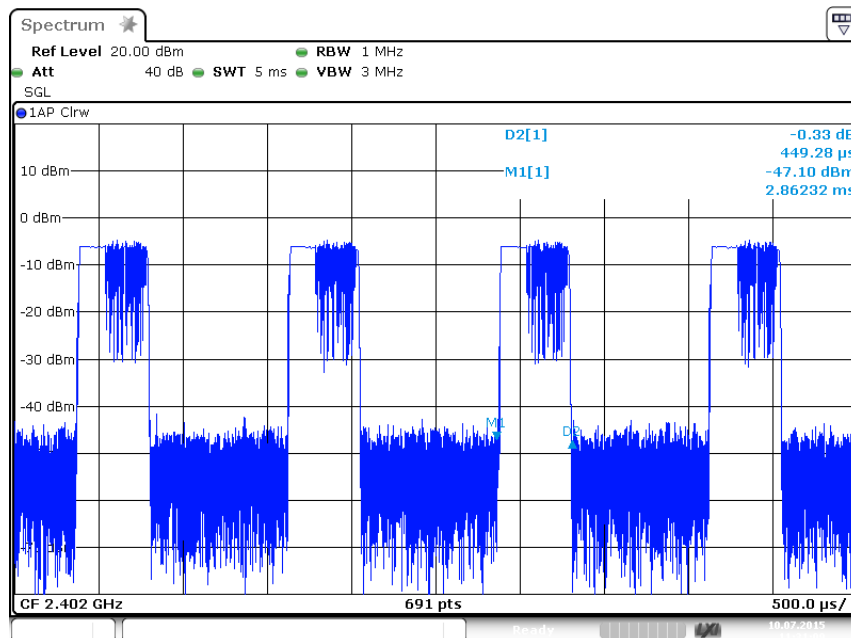
High channel: DH5



Date: 10.JUL.2015 11:29:26

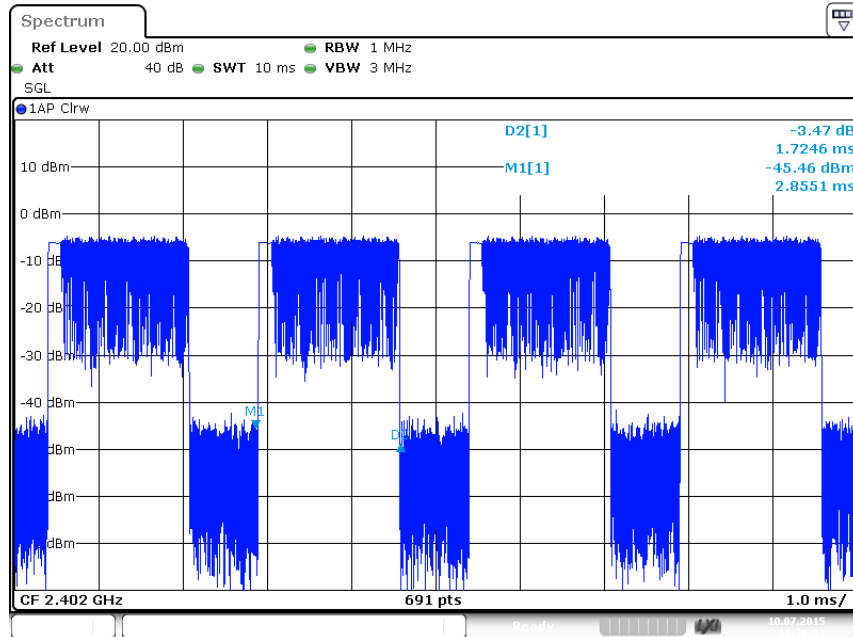
Test Plot of Time of Occupancy, EDR

Low channel: 3DH1



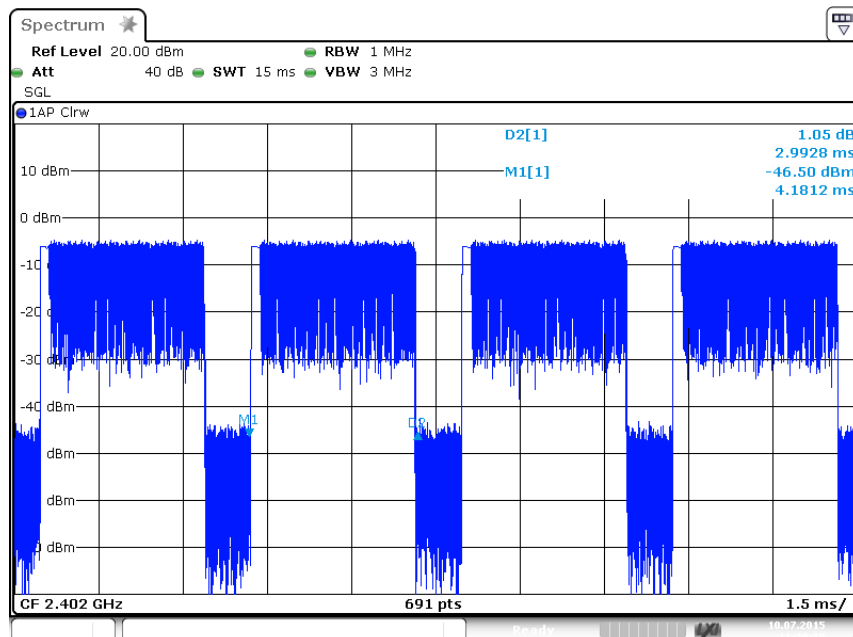
Date: 10.JUL.2015 11:31:09

Low channel: 3DH3



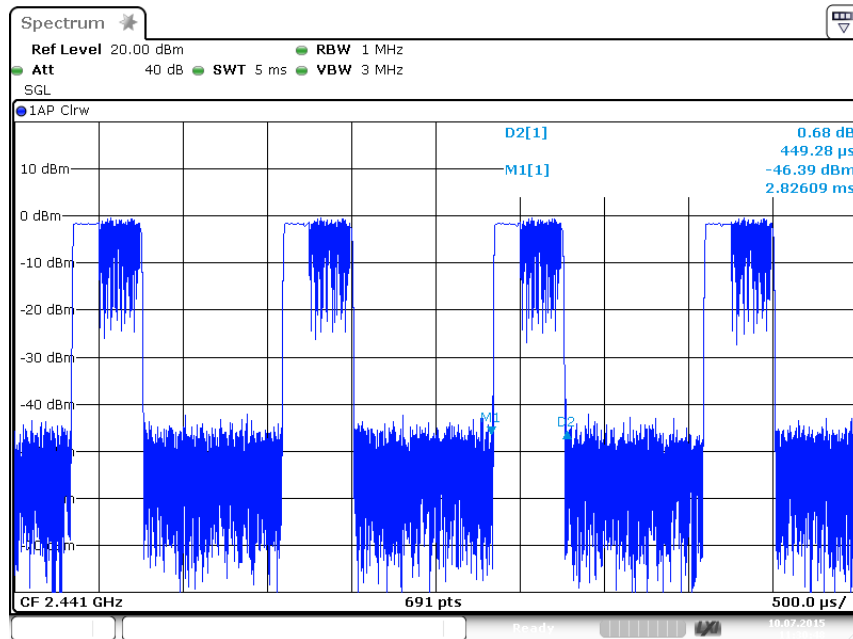
Date: 10. JUL. 2015 11:36:24

Low channel: 3DH5



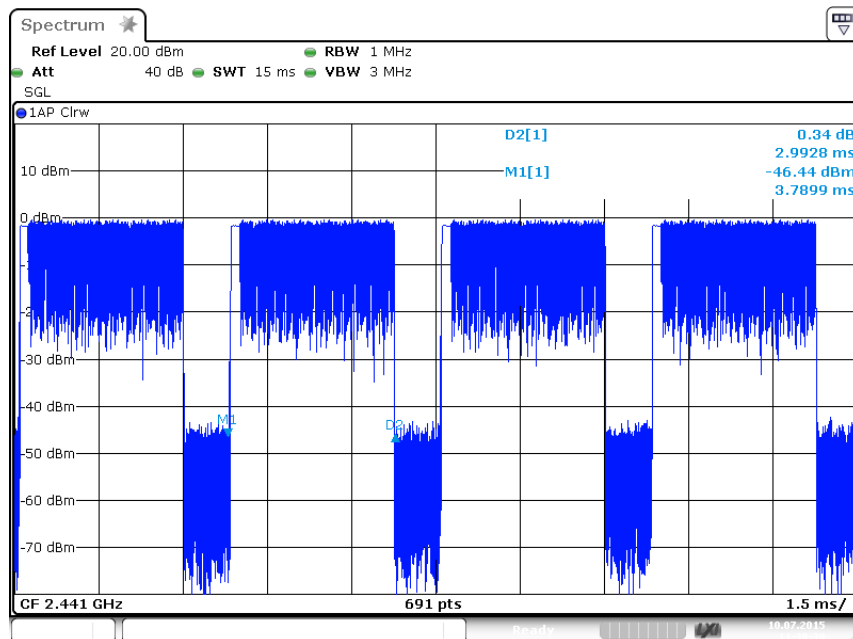
Date: 10. JUL. 2015 11:39:19

Middle channel: 3DH1



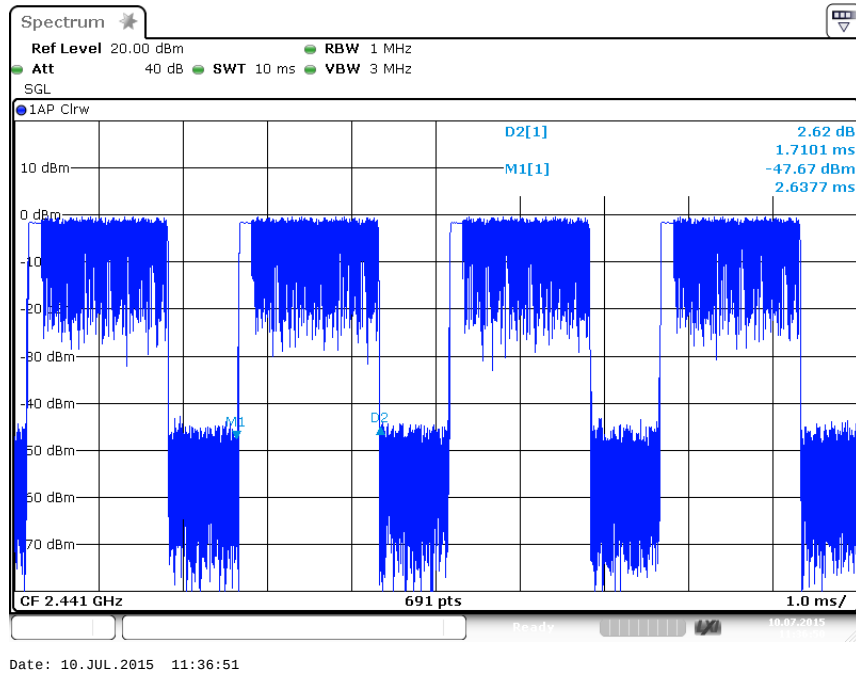
Date: 10.JUL.2015 11:30:49

Middle channel: 3DH3

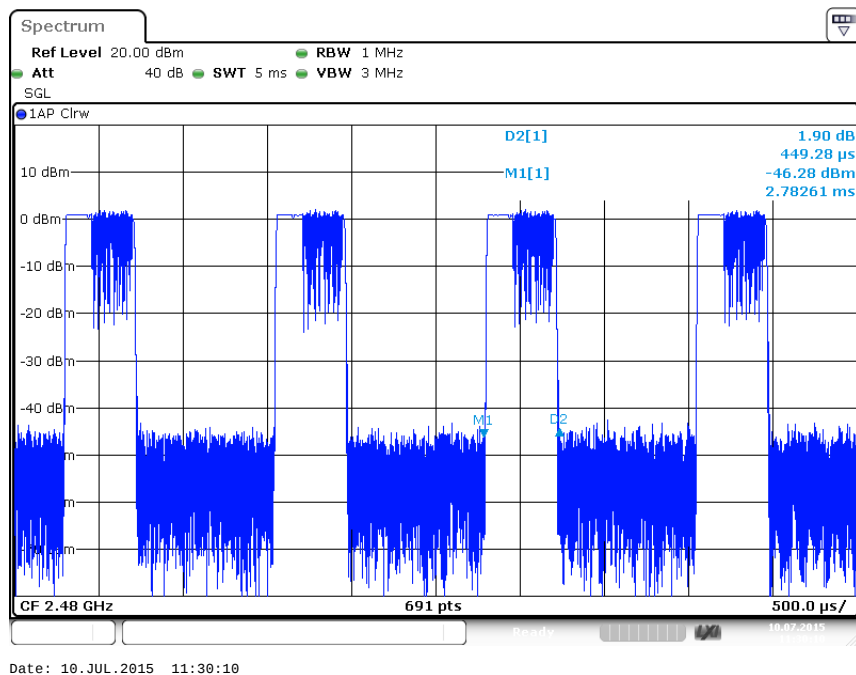


Date: 10.JUL.2015 11:38:39

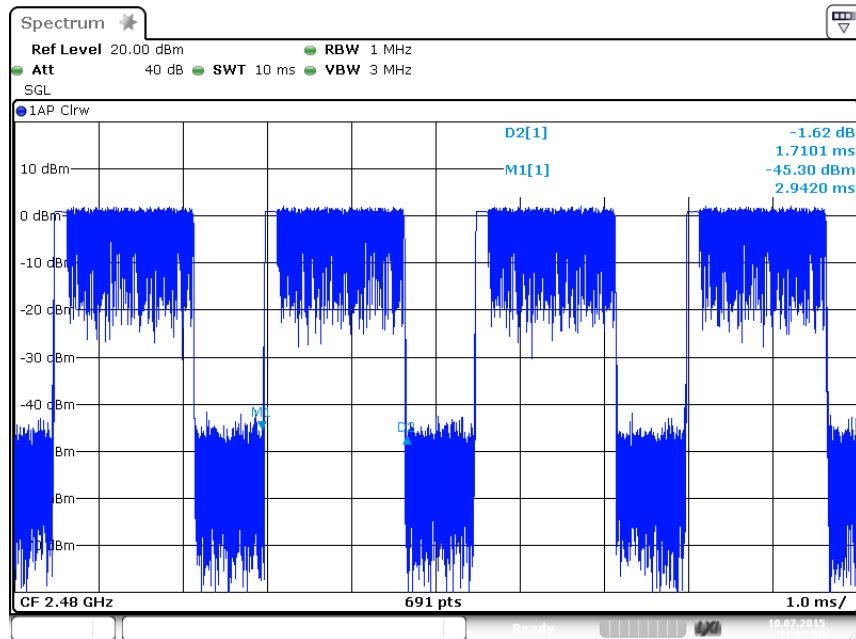
Middle channel: 3DH5



High channel: 3DH1

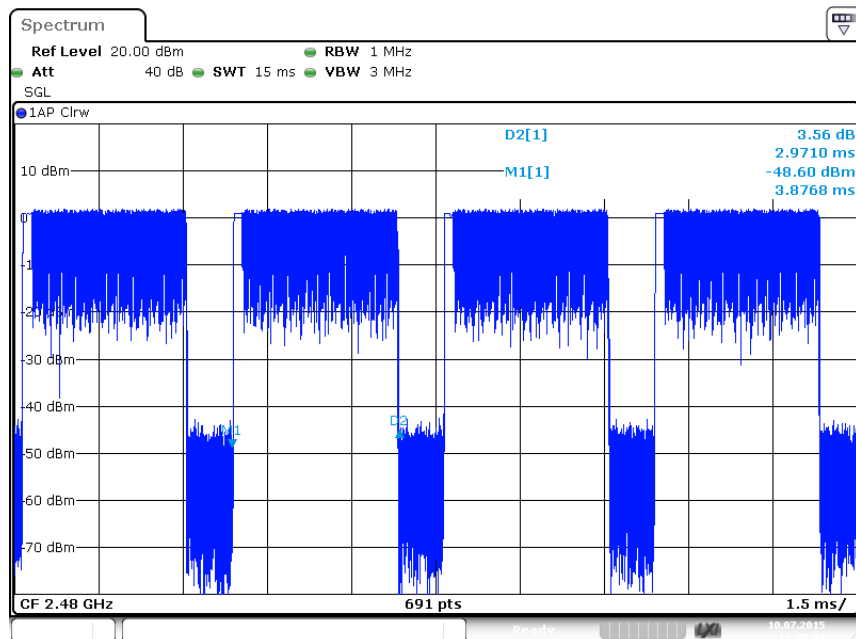


High channel: 3DH3



Date: 10.JUL.2015 11:37:15

High channel: 3DH5



Date: 10.JUL.2015 11:38:04

5.1.12 Conducted Emissions**RESULT:****Pass****Test Specification**

Test standard	: FCC Part 15.207(a) & FCC Part 15.107(a) RSS-Gen Clause 8.8 & ICES-003
Basic standard	: ANSI C63.10: 2013 & ANSI C63.4: 2014
Frequency range	: 0.15 – 30MHz
Limits	: FCC Part 15.207(a) & FCC Part 15.107(a) RSS-Gen Table 3 & ICES-003 Table 2
Kind of test site	: Shielded Room

Test Setup

Date of testing	: 03.07.2015
Input voltage	: AC 120V, 60Hz
Operation mode	: C, D, E, F, G
Earthing	: Not connected
Ambient temperature	: 25°C
Relative humidity	: 56%
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the appendix 1.

5.1.13 Radiated Emission**RESULT:****Pass****Test Specification**

Test standard	: FCC Part 15.109(a) ICES-003
Basic standard	: ANSI C63.4: 2014
Frequency range	: 30 - 6000MHz
Classification	: Class B
Limits	: FCC Part 15.109(a) ICES-003 Table 5 & Table 7
Kind of test site	: 3m Semi-anechoic chamber

Test Setup

Date of testing	: 31.07.2015
Input voltage	: AC 120V, 60Hz
Operation mode	: D, E, F, G
Earthing	: Not connected
Ambient temperature	: 23°C
Relative humidity	: 48%
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the appendix 1.

6 Safety Human Exposure

6.1 Radio Frequency Exposure Compliance

6.1.1 Electromagnetic Fields

RESULT:**Pass****Test Specification**

Test standard : FCC KDB Publication 447498 v05r02
RSS-102 Issue 5 March 2015

Measurement Record:

The minimum distance for the EUT is less than 5mm.

Since maximum peak output power of the transmitter is 2.47 mW <10 mW.

Hence the EUT is excluded from SAR evaluation according to FCC KDB Publication 447498 D01 General RF Exposure Guidance v05r02.

The maximum peak output power of the transmitter is 2.47 mW (3.92 dBm), which is far below the SAR exclusion threshold level 4 mW≈6.02 dBm.

Hence the EUT is exempted from routine evaluation limits (SAR Evaluation) according to clause 2.5.1 of RSS-102 Issue 5.

7 Photographs of the Test Set-Up

Photograph 1: Set-up for Radiated Spurious Emissions (9kHz - 30MHz)



Photograph 2: Set-up for Radiated Spurious Emissions (30MHz-1GHz)



Photograph 3: Set-up for Radiated Spurious Emissions (1GHz ~ 18GHz)



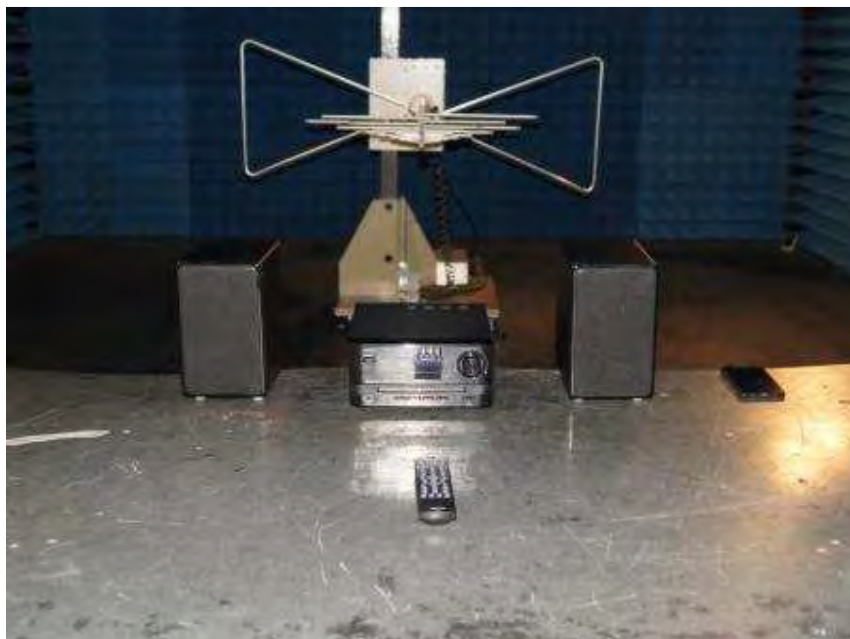
Photograph 4: Set-up for Radiated Spurious Emissions (18GHz ~ 26GHz)



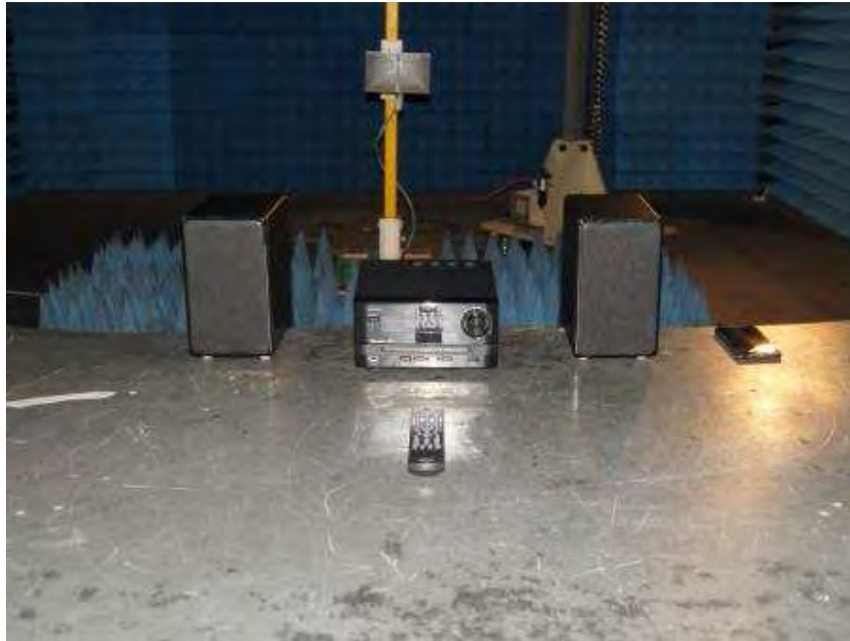
Photograph 5: Set-up for Conducted Emissions



Photograph 6: Set-up for Radiated Emission (Below 1GHz)



Photograph 7: Set-up for Radiated Emission (Above 1GHz)



8 List of Tables

Table 1: List of Test and Measurement Equipment.....	6
Table 2: Technical Specification of EUT	8
Table 3: RF Channel and Frequency of Bluetooth	9
Table 4: RF Channel and Frequency of Bluetooth Low Energy	9
Table 5: Test Result of Peak Conducted Output Power, BDR	16
Table 6: Test Result of Peak Conducted Output Power, EDR	16
Table 7: Test Result of Peak Conducted Output Power, Low Energy	16
Table 8: Test Result of Power Spectral Density, Low Energy	22
Table 9: Test Result of 6dB Bandwidth, Low Energy	25
Table 10: Test Result of 99% Bandwidth, BDR mode.....	28
Table 11: Test Result of 99% Bandwidth, EDR mode.....	28
Table 12: Test Result of 99% Bandwidth, Low Energy	28
Table 13: Test Result of 20dB Bandwidth, BDR mode.....	44
Table 14: Test Result of 20dB Bandwidth, EDR mode.....	44
Table 15: Test Result of Carrier Frequency Separation	48
Table 16: Test Result of Number of Hopping Frequency	51
Table 17: Test Result of Time of Occupancy, BDR mode.....	54
Table 18: Test Result of Time of Occupancy, EDR mode.....	54

9 List of Photographs

Photograph 1: Set-up for Radiated Spurious Emissions (9kHz - 30MHz).....	67
Photograph 2: Set-up for Radiated Spurious Emissions (30MHz-1GHz).....	67
Photograph 3: Set-up for Radiated Spurious Emissions (1GHz ~ 18GHz)	68
Photograph 4: Set-up for Radiated Spurious Emissions (18GHz ~ 26GHz)	68
Photograph 5: Set-up for Conducted Emissions	69
Photograph 6: Set-up for Radiated Emission (Below 1GHz)	69
Photograph 7: Set-up for Radiated Emission (Above 1GHz).....	70

List of Figures

Figure 1: Test figure of Radiated Spurious Emissions (9kHz – 30MHz), BDR (Low).....	2
Figure 2: Test figure of Radiated Spurious Emissions (30MHz – 1GHz), BDR (Low).....	3
Figure 3: Test figure of Radiated Spurious Emissions (1GHz –25GHz), BDR (Low)	5
Figure 4: Test figure of Radiated Spurious Emissions (9kHz – 30MHz), BDR (Mid).....	9
Figure 5: Test figure of Radiated Spurious Emissions (30MHz – 1GHz), BDR (Mid).....	10
Figure 6: Test figure of Radiated Spurious Emissions (1GHz –25GHz), BDR (Mid)	12
Figure 7: Test figure of Radiated Spurious Emissions (9kHz – 30MHz), BDR (High).....	16
Figure 8: Test figure of Radiated Spurious Emissions (30MHz – 1GHz), BDR (High).....	17
Figure 9: Test figure of Radiated Spurious Emissions (1GHz –25GHz), BDR (High)	19
Figure 10: Test figure of Radiated Spurious Emissions (9kHz – 30MHz), Low Energy (Low)	23
Figure 11: Test figure of Radiated Spurious Emissions (30MHz – 1GHz), Low Energy (Low)	24
Figure 12: Test figure of Radiated Spurious Emissions (1GHz –25GHz), Low Energy (Low)	26
Figure 13: Test figure of Radiated Spurious Emissions (9kHz – 30MHz), Low Energy (Mid)	30
Figure 14: Test figure of Radiated Spurious Emissions (30MHz – 1GHz), Low Energy (Mid)	31
Figure 15: Test figure of Radiated Spurious Emissions (1GHz –25GHz), Low Energy (Mid)	33
Figure 16: Test figure of Radiated Spurious Emissions (9kHz – 30MHz), Low Energy (High)	37
Figure 17: Test figure of Radiated Spurious Emissions (30MHz – 1GHz), Low Energy (High)	38
Figure 18: Test figure of Radiated Spurious Emissions (1GHz –25GHz), Low Energy (High)	40
Figure 19: Test figure of Radiated Emissions in Restricted Bands, BDR (Low).....	44
Figure 20: Test figure of Radiated Emissions in Restricted Bands, BDR (High)	46
Figure 21: Test figure of Radiated Emissions in Restricted Bands, Low Energy (Low),	48
Figure 22: Test figure of Radiated Emissions in Restricted Bands, Low Energy (High)	50
Figure 23: Test figure of Conducted Emissions.....	52
Figure 24: Test figure of Radiated Emissions	62

Figure 1: Test figure of Radiated Spurious Emissions (9kHz – 30MHz), BDR (Low)

ACCURATE TECHNOLOGY CO., LTD

FCC Class B 3m Radiated

EVT: CD Shelf System with Bluetooth M/H:NB-SH511
 Manufacturer: DONGGUAN ALLLINK ELECTRONICS CO., LTD
 Operating Condition: TX 2402MHz
 Test Site: 2# Chamber
 Operator: LAN
 Test Specification: AC 120V/60Hz
 Comment: X
 Start of Test: 2015-7-11 /

SCAN TABLE: "LFRE Fin"

Short Description:			BWE STD VTERM 1.70			
Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M

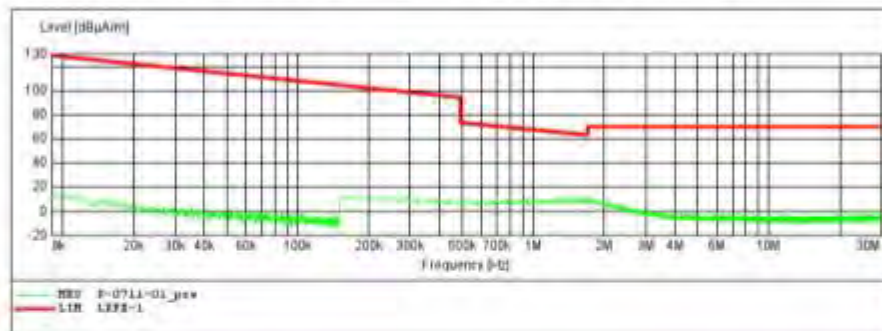
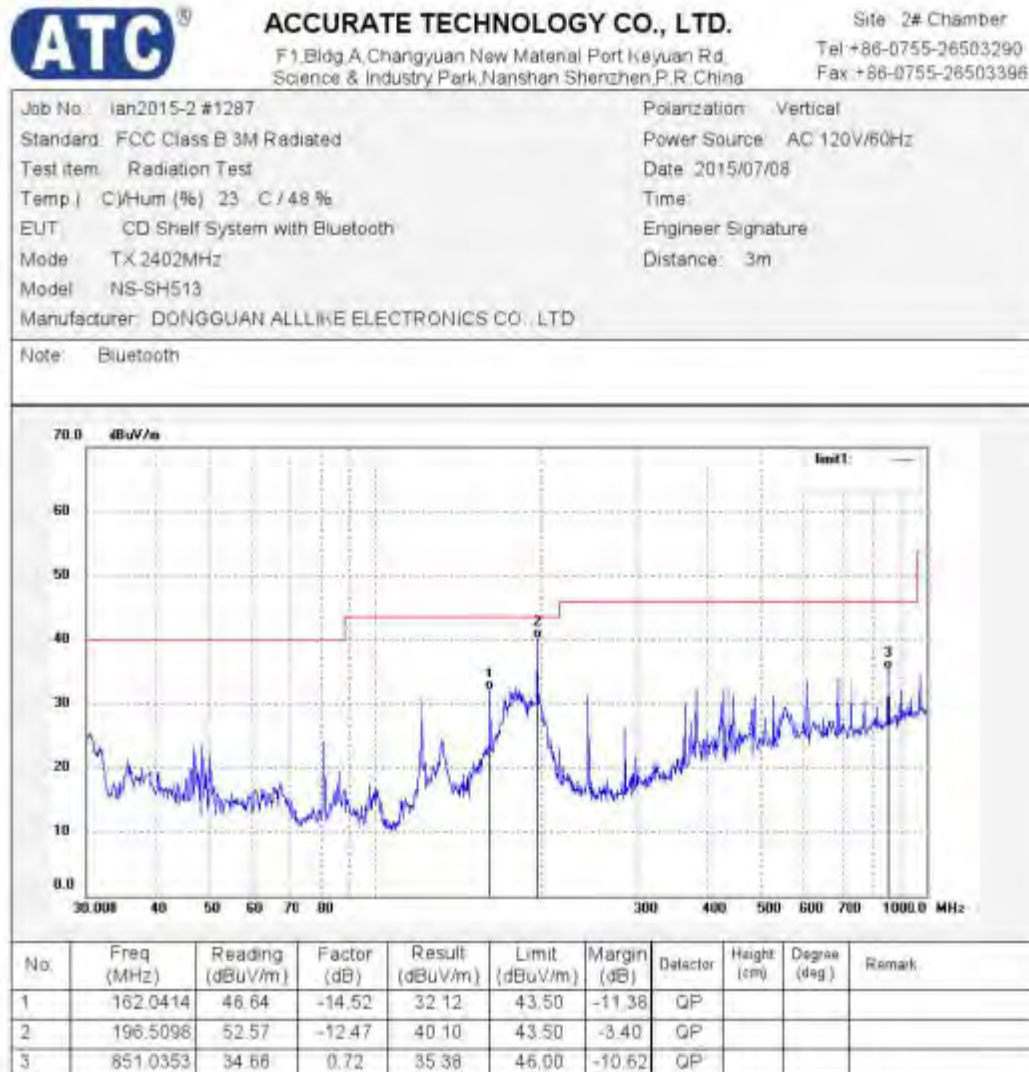


Figure 2: Test figure of Radiated Spurious Emissions (30MHz – 1GHz), BDR (Low)





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Science & Industry Park, Nanshan Shenzhen P.R. China

Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1288

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp: C/Hum (%) 23 °C / 48 %

EUT: CD Shelf System with Bluetooth

Mode: TX 2402MHz

Model: NS-SH513

Manufacturer: DONGGUAN ALLIKE ELECTRONICS CO., LTD

Polarization: Horizontal

Power Source: AC 120V/60Hz

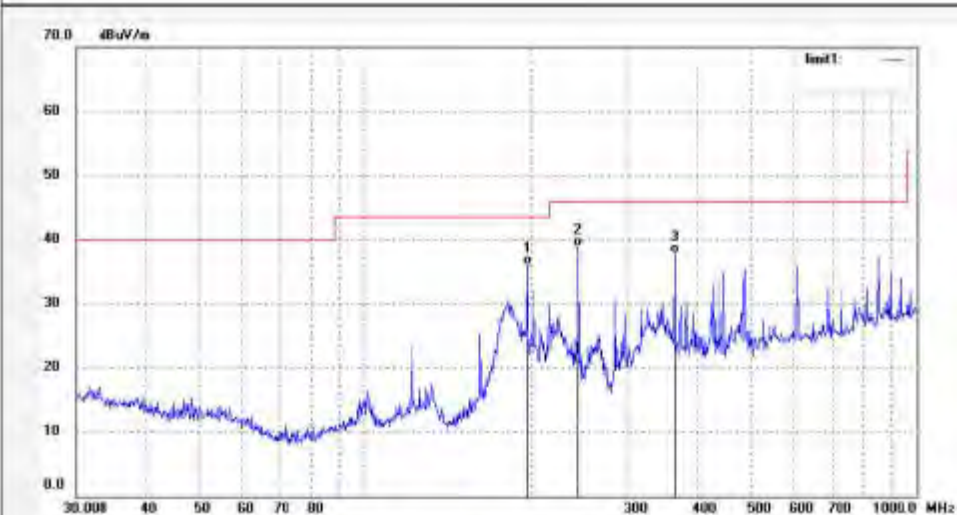
Date: 2015/07/08

Time:

Engineer Signature:

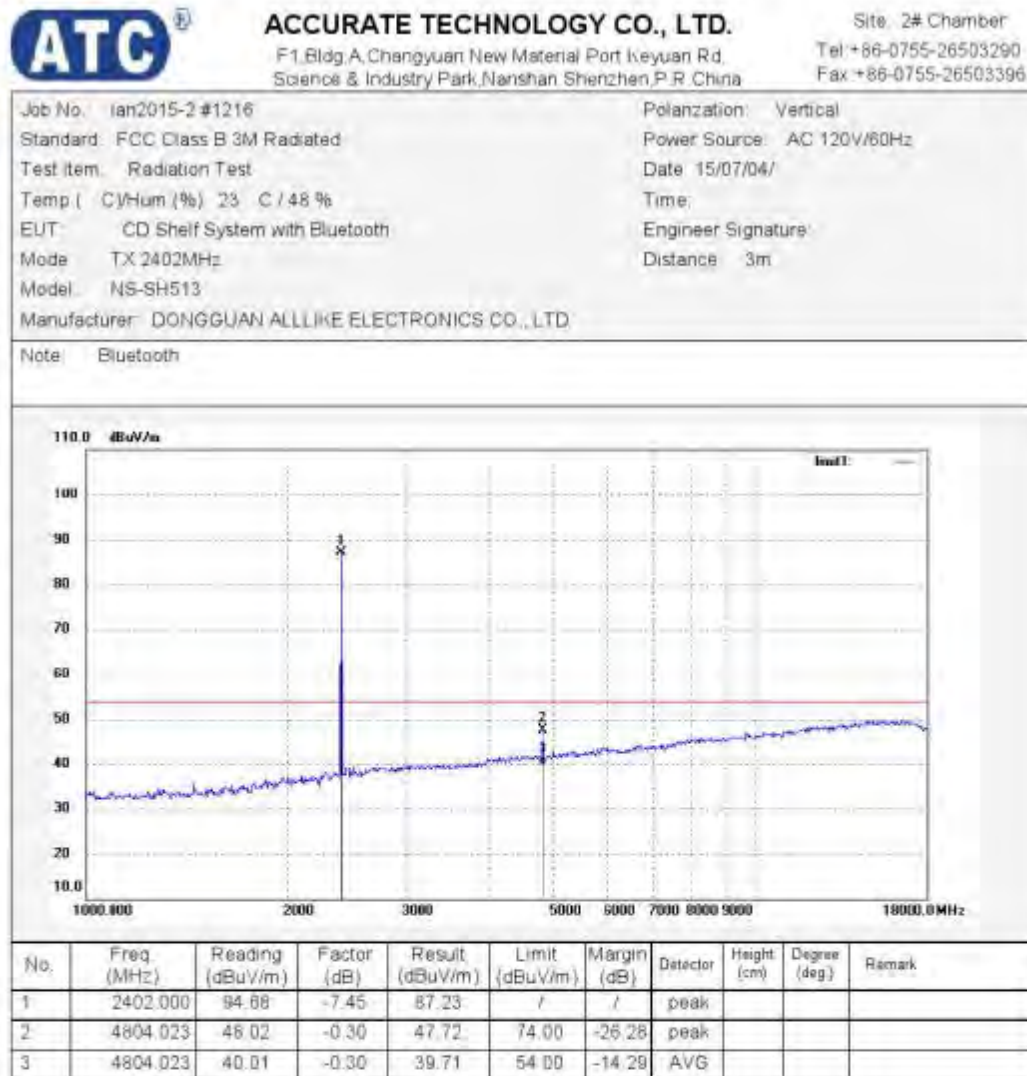
Distance: 3m

Note: Bluetooth



No.	Freq (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Hight (cm)	Degree (deg)	Remark
1	196.5098	48.69	-12.47	36.22	43.50	-7.28	QP			
2	243.3771	49.80	-10.82	38.98	46.00	-7.02	QP			
3	364.2595	45.39	-7.57	37.82	46.00	-8.18	QP			

Figure 3: Test figure of Radiated Spurious Emissions (1GHz –25GHz), BDR (Low)





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Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Ian2015-2 #1217

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp (C)/Hum (%) 23 C / 48 %

EUT: CD Shelf System with Bluetooth

Mode: TX 2402MHz

Model: NS-SH513

Manufacturer: DONGGUAN ALLLIKE ELECTRONICS CO., LTD

Polarization: Horizontal

Power Source: AC 120V/60Hz

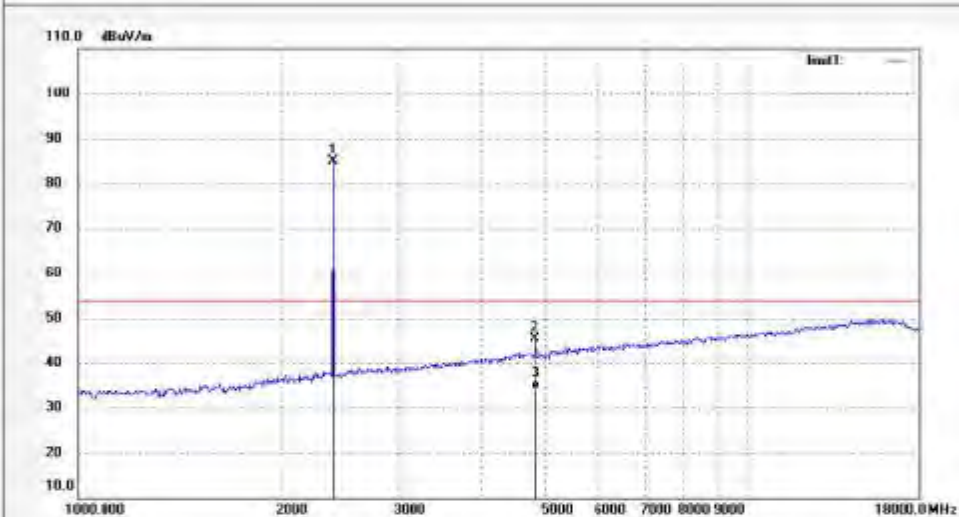
Date: 15/07/04/

Time:

Engineer Signature:

Distance: 3m

Note: Bluetooth



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	2402.000	92.37	-7.45	84.92	/	/	peak			
2	4804.022	45.74	-0.30	45.44	74.00	-28.56	peak			
3	4804.022	34.52	-0.30	34.22	54.00	-19.78	AVG			



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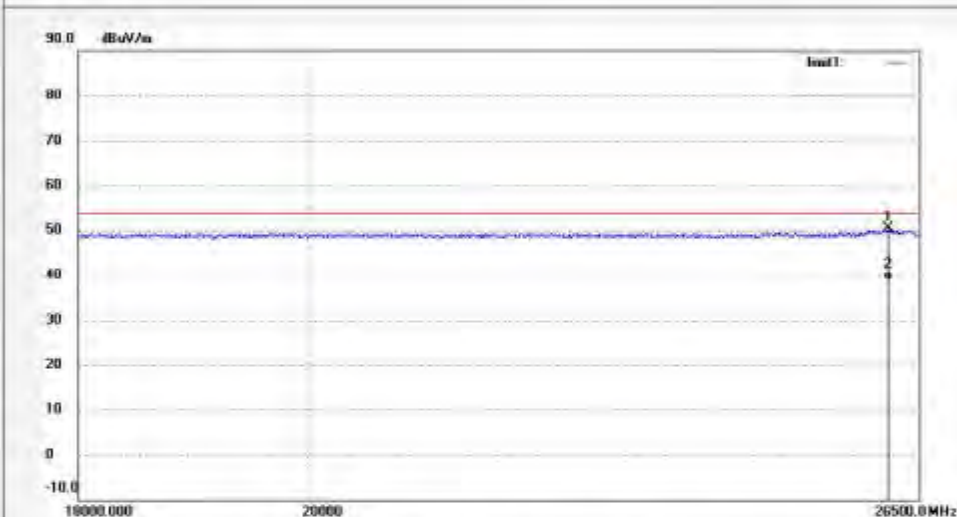
F1 Bldg. A, Changyuan New Material Port Keyuan Rd.
Science & Industry Park, Nanshan Shenzhen, P.R. China

Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.:	lan2015-2 #1268	Polanzation:	Horizontal
Standard:	FCC Class B 3M Radiated	Power Source:	AC 120V/60Hz
Test item:	Radiation Test	Date:	15/07/04/
Temp (C)/Hum (%):	23 C / 48 %	Time:	
EUT:	CD Shelf System with Bluetooth	Engineer Signature:	
Mode:	TX 2402MHz	Distance:	3m
Model:	NS-SH513		
Manufacturer:	DONGGUAN ALLLIKE ELECTRONICS CO., LTD.		
Note:	Bluetooth		



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	26123.470	33.98	16.50	50.48	74.00	-23.52	peak			
2	26123.470	22.28	16.50	38.78	54.00	-15.22	AVG			



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Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1269

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp (C)/Hum (%) 23 C / 48 %

EUT: CD Shelf System with Bluetooth

Mode: TX 2402MHz

Model: NS-SH513

Manufacturer: DONGGUAN ALLLIKE ELECTRONICS CO., LTD

Polarization: Vertical

Power Source: AC 120V/60Hz

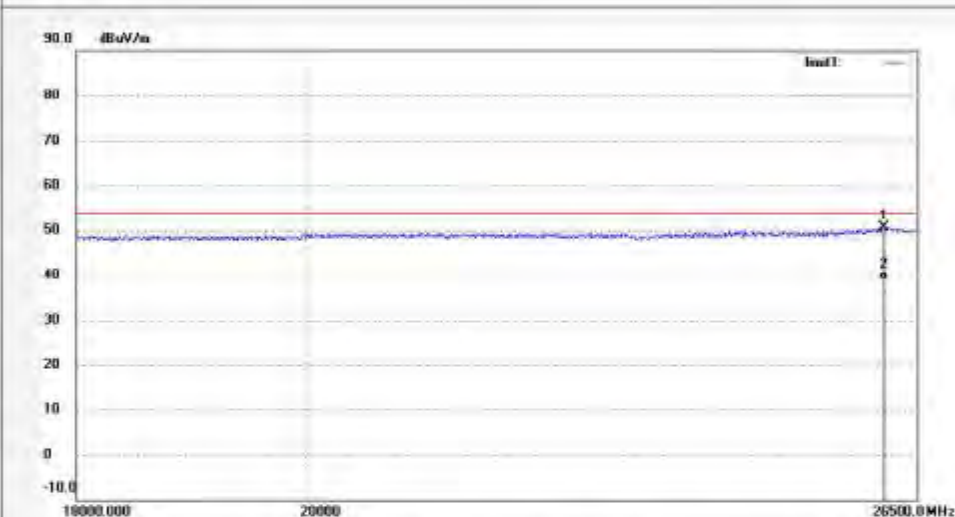
Date: 15/07/04/

Time:

Engineer Signature:

Distance: 3m

Note: Bluetooth



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	26103.270	34.14	16.50	50.64	74.00	-23.36	peak			
2	26103.270	22.45	16.50	38.95	54.00	-15.05	AVG			

Figure 4: Test figure of Radiated Spurious Emissions (9kHz – 30MHz), BDR (Mid)

ACCURATE TECHNOLOGY CO., LTD

FCC Class B 3m Radiated

EUT: CD Shelf System with Bluetooth M/N: NS-SH513
 Manufacturer: DONGGUAN ALLLIKE ELECTRONICS CO., LTD
 Operating Condition: TX 2441MHz
 Test Site: 2# Chamber
 Operator: LAN
 Test Specification: AC 120V/50Hz
 Comment: X
 Start of Test: 2015-7-11 /

SCAN TABLE: "LFRE Fin"

Short Description:			_SUB_STD_VTERM2 1.70			
Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak 1.0 s	200 Hz	151dB	
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak 1.0 s	9 kHz	151dB	

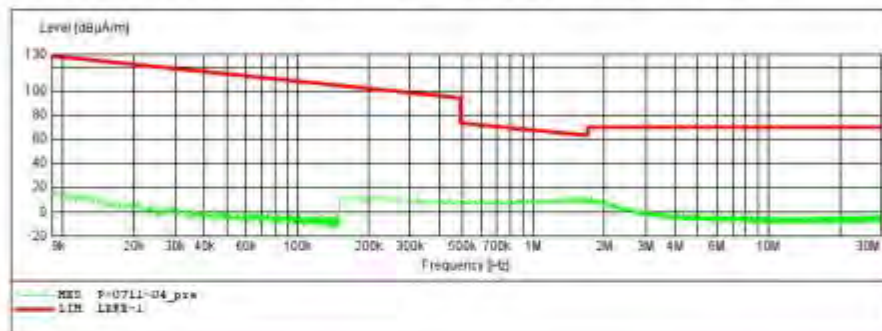


Figure 5: Test figure of Radiated Spurious Emissions (30MHz – 1GHz), BDR (Mid)





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Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1290

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp: C/Hum (%) 23 C / 48 %

EUT: CD Shelf System with Bluetooth

Mode: TX 2441MHz

Model: NS-SH513

Manufacturer: DONGGUAN ALLIKE ELECTRONICS CO., LTD

Polarization: Vertical

Power Source: AC 120V/60Hz

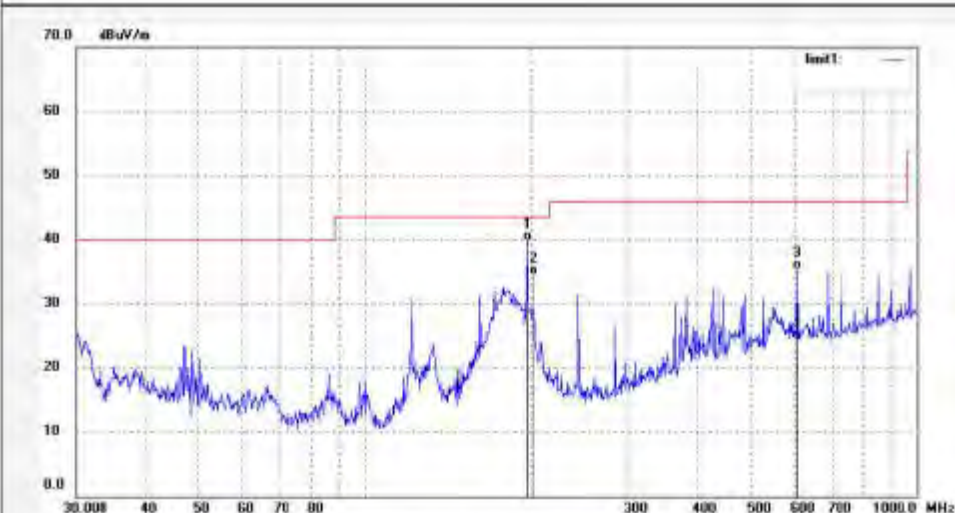
Date: 2015/07/08

Time:

Engineer Signature:

Distance: 3m

Note: Bluetooth



No.	Freq (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Hight (cm)	Degree (deg)	Remark
1	196.5098	52.21	-12.47	39.74	43.50	-3.76	QP			
2	202.8103	46.91	-12.35	34.56	43.50	-8.94	QP			
3	607.7666	38.32	-2.84	35.48	46.00	-10.52	QP			

Figure 6: Test figure of Radiated Spurious Emissions (1GHz –25GHz), BDR (Mid)





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Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Jan2015-2 #1220

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp (C)/Hum (%) 23 C / 48 %

EUT: CD Shelf System with Bluetooth

Mode: TX 2441MHz

Model: NS-SH513

Manufacturer: DONGGUAN ALLLIKE ELECTRONICS CO.,LTD

Polarization: Vertical

Power Source: AC 120V/60Hz

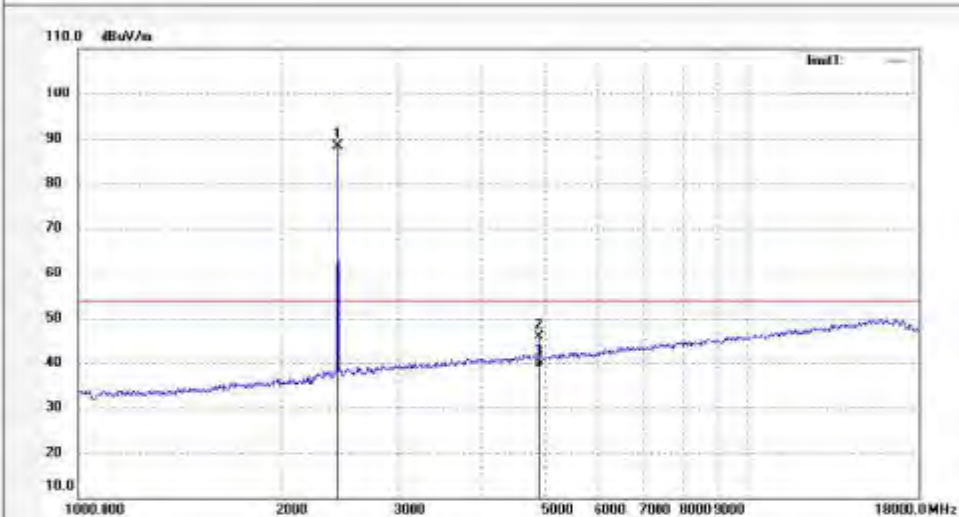
Date: 15/07/04/

Time:

Engineer Signature:

Distance: 3m

Note: Bluetooth



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	2441.000	95.71	-7.35	88.36	/	/	peak			
2	4882.025	45.67	0.14	45.81	74.00	-28.19	peak			
3	4882.025	38.63	0.14	38.77	54.00	-15.23	AVG			



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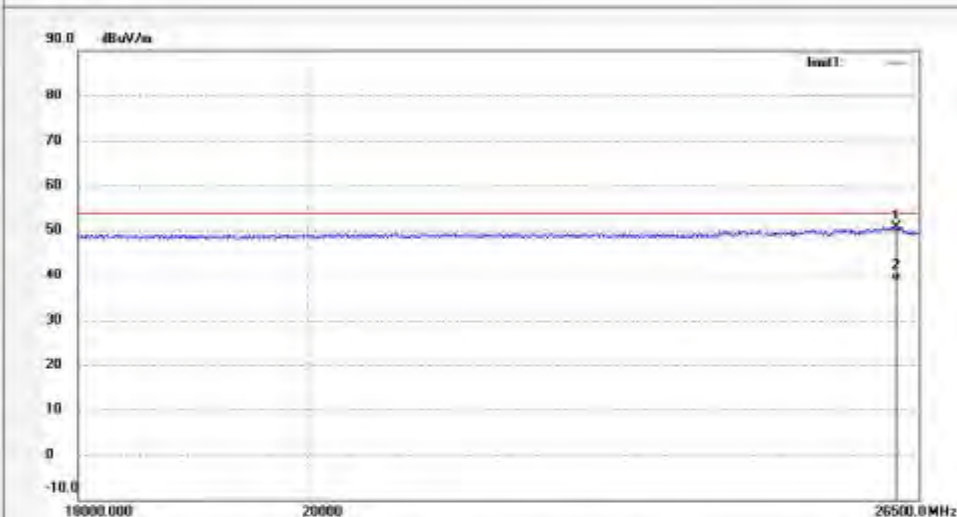
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Science & Industry Park, Nanshan Shenzhen, P.R. China

Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.:	lan2015-2 #1270	Polarization:	Vertical
Standard:	FCC Class B 3M Radiated	Power Source:	AC 120V/60Hz
Test item:	Radiation Test	Date:	15/07/04/
Temp (C)/Hum (%):	23 C / 48 %	Time:	
EUT:	CD Shelf System with Bluetooth	Engineer Signature:	
Mode:	TX 2441MHz	Distance:	3m
Model:	NS-SH513		
Manufacturer:	DONGGUAN ALLLIKE ELECTRONICS CO., LTD		
Note:	Bluetooth		



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	26224.704	34.24	16.50	50.74	74.00	-23.26	peak			
2	26224.704	22.17	16.50	38.67	54.00	-15.33	AVG			



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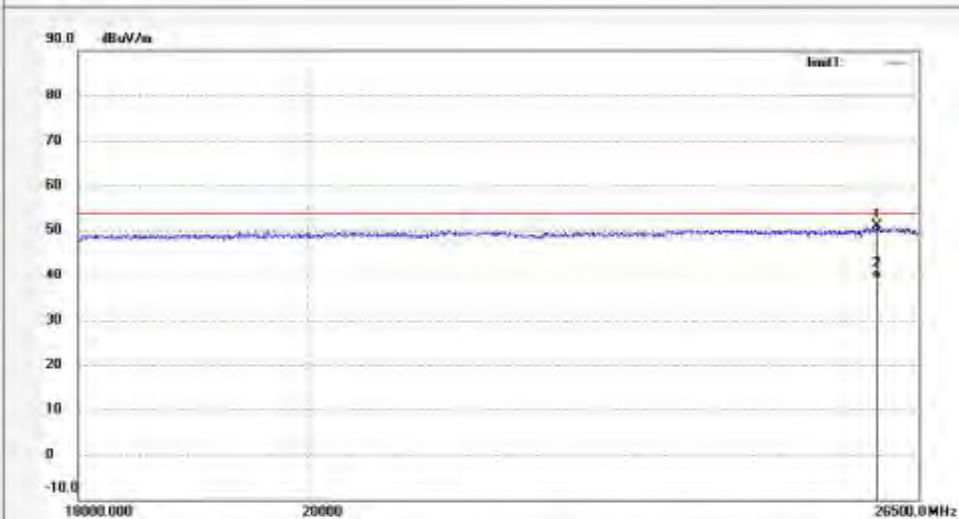
F1 Bldg. A, Changyuan New Material Port Keyuan Rd.
Science & Industry Park, Nanshan Shenzhen, P.R. China

Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.:	lan2015-2 #1271	Polarization:	Horizontal
Standard:	FCC Class B 3M Radiated	Power Source:	AC 120V/60Hz
Test item:	Radiation Test	Date:	15/07/04/
Temp (C)/Hum (%)	23 C / 48 %	Time:	
EUT:	CD Shelf System with Bluetooth	Engineer Signature:	
Mode:	TX 2441MHz	Distance:	3m
Model:	NS-SH513		
Manufacturer:	DONGGUAN ALLLIKE ELECTRONICS CO., LTD.		
Note:	Bluetooth		



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	25992.449	34.46	16.50	50.96	74.00	-23.04	peak			
2	25992.449	22.63	16.50	39.13	54.00	-14.87	AVG			

Figure 7: Test figure of Radiated Spurious Emissions (9kHz – 30MHz), BDR (High)

ACCURATE TECHNOLOGY CO., LTD

FCC Class B 3m Radiated

EUT: CD Shelf System with Bluetooth M/N: NS-SH513
 Manufacturer: DONGGUAN ALLLIKE ELECTRONICS CO., LTD
 Operating Condition: TX T480MHz
 Test Site: 2# Chamber
 Operator: LAN
 Test Specification: AC 120V/50Hz
 Comment: X
 Start of Test: 2015-7-11 /

SCAN TABLE: "LFRE Fin"

Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M

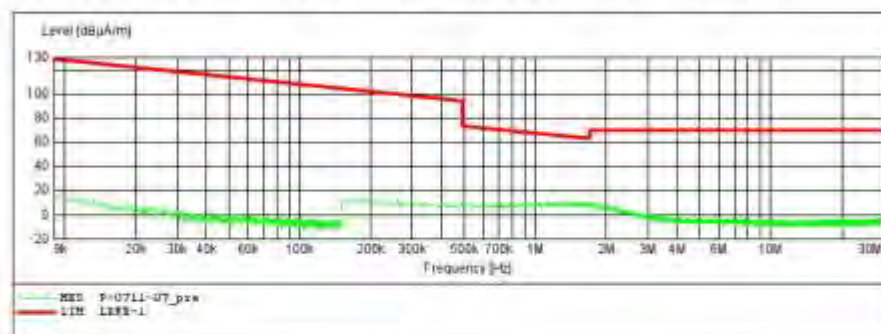


Figure 8: Test figure of Radiated Spurious Emissions (30MHz – 1GHz), BDR (High)





ACCURATE TECHNOLOGY CO., LTD.

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

Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1292

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.: C/Hum. (%) 23 °C / 48 %

EUT: CD Shelf System with Bluetooth

Mode: TX 2480MHz

Model: NS-SH513

Manufacturer: DONGGUAN ALLLIKE ELECTRONICS CO., LTD

Polarization: Horizontal

Power Source: AC 120V/60Hz

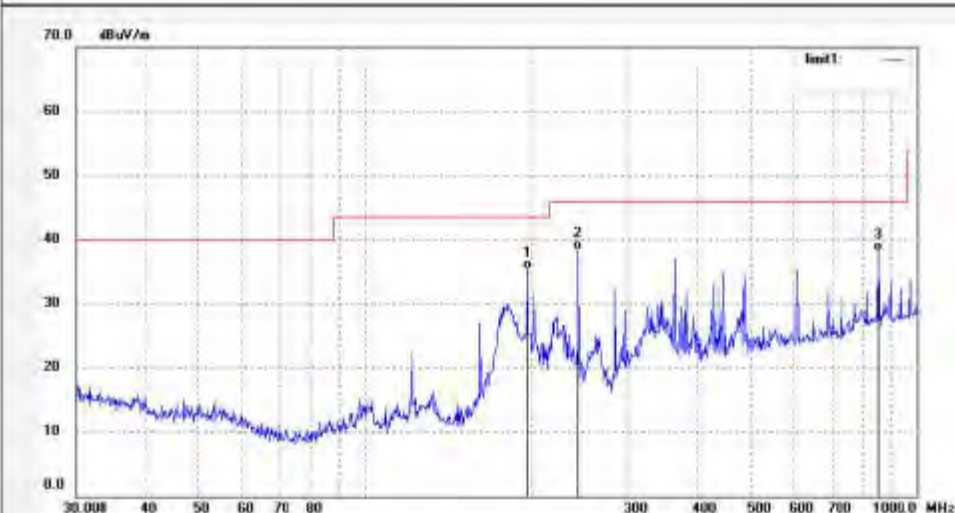
Date: 2015/07/08

Time:

Engineer Signature:

Distance: 3m

Note: Bluetooth



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Haight (cm)	Degree (deg)	Remark
1	196.5098	47.83	-12.47	35.36	43.50	-8.14	QP			
2	243.3771	49.19	-10.82	38.37	46.00	-7.63	QP			
3	851.0353	37.52	0.72	38.24	46.00	-7.76	QP			

Figure 9: Test figure of Radiated Spurious Emissions (1GHz –25GHz), BDR (High)





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Science & Industry Park, Nanshan, Shenzhen, P.R. China

Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: lan2015-2 #1223

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp (C)/Hum (%) 23 C / 48 %

EUT: CD Shelf System with Bluetooth

Mode: TX 2480MHz

Model: NS-SH513

Manufacturer: DONGGUAN ALLLIKE ELECTRONICS CO., LTD

Polarization: Vertical

Power Source: AC 120V/60Hz

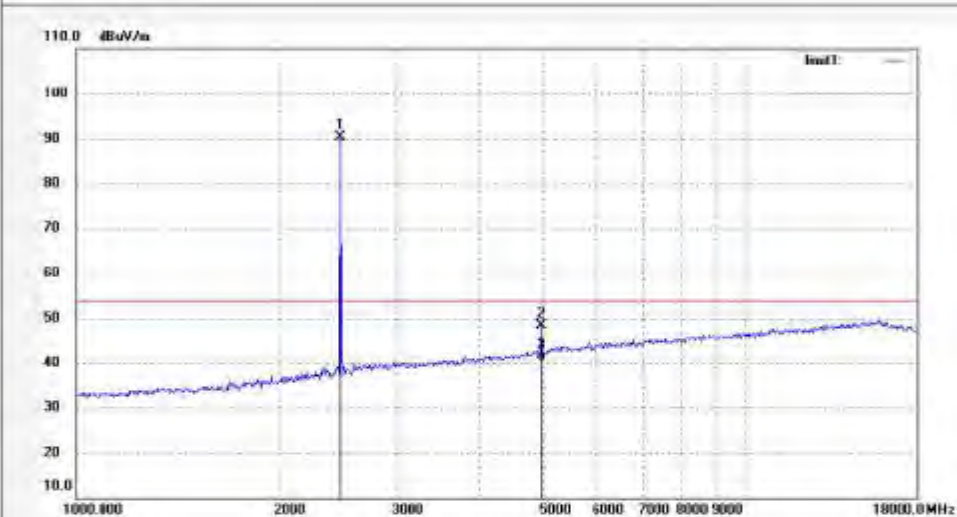
Date: 15/07/04/

Time:

Engineer Signature:

Distance: 3m

Note: Bluetooth



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	2480.000	97.71	-7.37	90.34	/	/	peak			
2	4960.025	47.84	0.52	46.36	74.00	-25.64	peak			
3	4960.025	39.90	0.52	40.42	54.00	-13.58	AVG			



ACCURATE TECHNOLOGY CO., LTD.

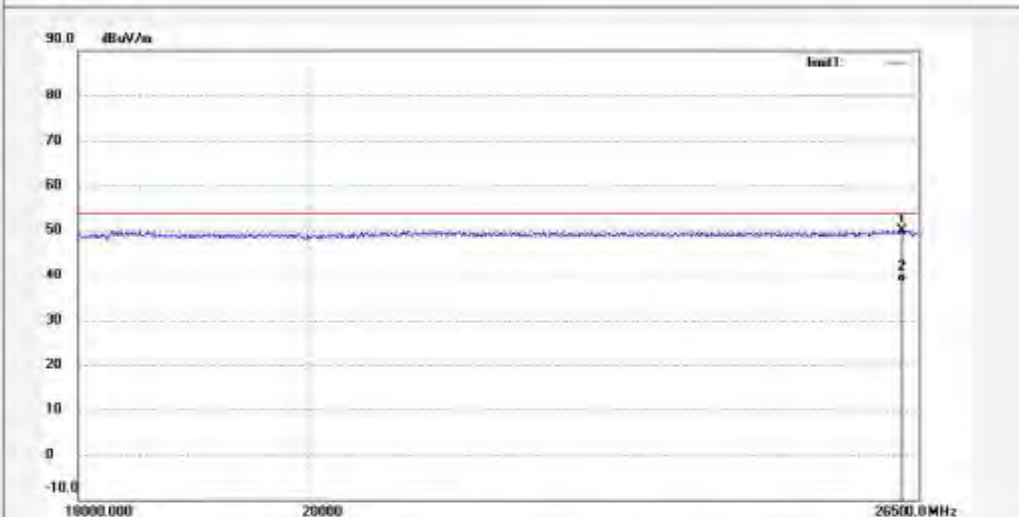
F1 Bldg. A, Changyuan New Material Port Keyuan Rd.
Science & Industry Park, Nanshan Shenzhen, P.R. China

Site: 2# Chamber

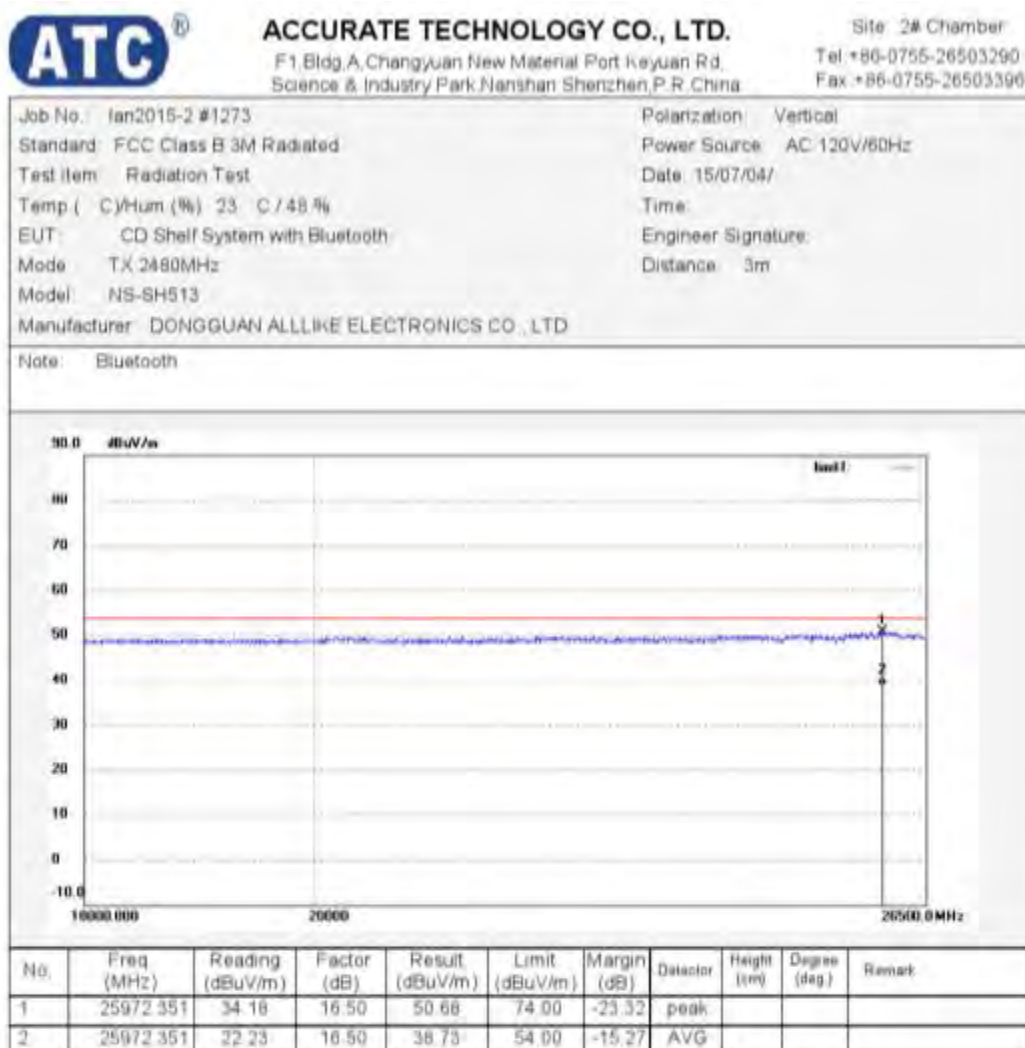
Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.:	lan2015-2 #1272	Polarization:	Horizontal
Standard:	FCC Class B 3M Radiated	Power Source:	AC 120V/60Hz
Test item:	Radiation Test	Date:	15/07/04/
Temp (C)/Hum (%)	23 C / 48 %	Time:	
EUT:	CD Shelf System with Bluetooth	Engineer Signature:	
Mode:	TX 2480MHz	Distance:	3m
Model:	NS-SH513		
Manufacturer:	DONGGUAN ALLLIKE ELECTRONICS CO., LTD.		
Note:	Bluetooth		



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	26285.633	33.47	16.50	49.97	74.00	-24.03	peak			
2	26285.633	21.79	16.50	38.29	54.00	-15.71	AVG			



Note: Pre-test the EUT in continuous transmitting mode at the low (2402 MHz), middle (2441 MHz) and high (2480 MHz) channel with different data packets. Compliance test in continuous transmitting mode with BDR mode (DH5) was found as the worst case.

Figure 10: Test figure of Radiated Spurious Emissions (9kHz – 30MHz), Low Energy (Low)

ACCURATE TECHNOLOGY CO., LTD

FCC Class B 3m Radiated

EUT: CD Shelf System with Bluetooth M/N:N8-SH513
 Manufacturer: DONGGUAN ALLLIKE ELECTRONICS CO., LTD
 Operating Condition: TX 2400MHz
 Test Site: 2# Chamber
 Operator: LAN
 Test Specification: AC 120V/50Hz
 Comment: X
 Start of Test: 2015-7-11 /

SCAN TABLE: "LFRE Fin"

Short Description:				_SUB_STD_VTERM2 1.70		
Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M

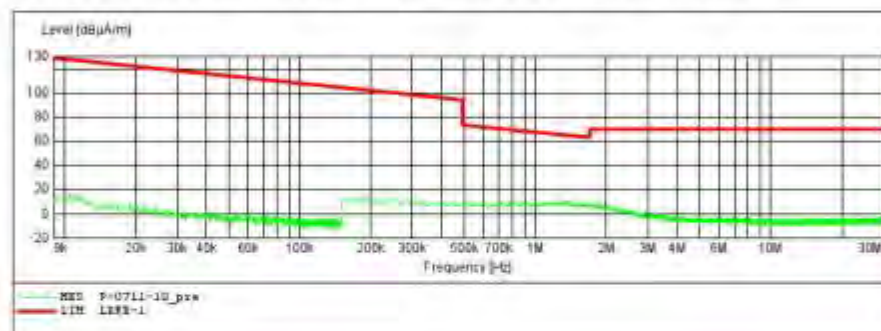


Figure 11: Test figure of Radiated Spurious Emissions (30MHz – 1GHz), Low Energy (Low)





ACCURATE TECHNOLOGY CO., LTD.

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

Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1294

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp: C/Hum (%) 23 °C / 48 %

EUT: CD Shelf System with Bluetooth

Mode: TX 2402MHz

Model: NS-SH513

Manufacturer: DONGGUAN ALLLIKE ELECTRONICS CO., LTD

Polarization: Vertical

Power Source: AC 120V/60Hz

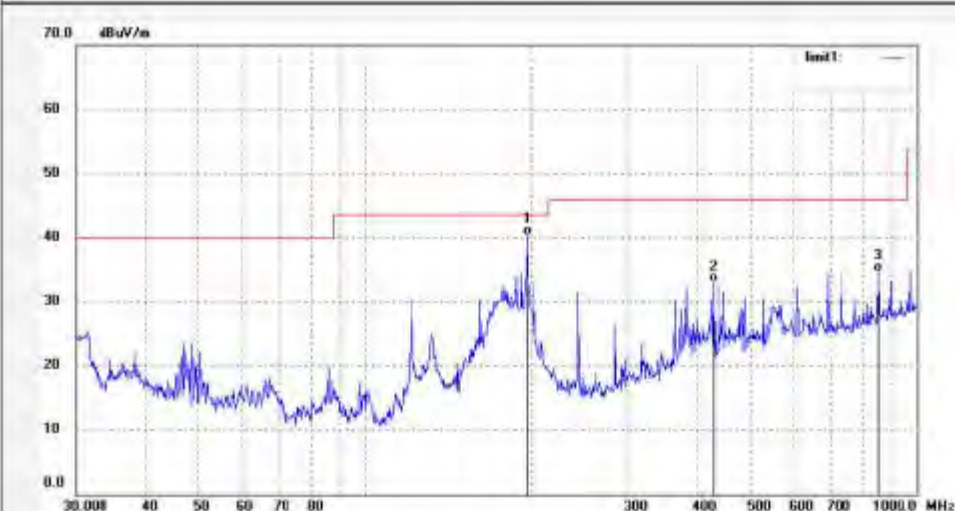
Date: 2015/07/08

Time:

Engineer Signature:

Distance: 3m

Note: Bluetooth 4.0



No.	Freq (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Hight (cm)	Degree (deg)	Remark
1	196.5098	52.81	-12.47	40.34	43.50	-3.16	QP			
2	428.0192	39.01	-6.09	32.92	46.00	-13.08	QP			
3	851.0353	33.98	0.72	34.70	46.00	-11.30	QP			

Figure 12: Test figure of Radiated Spurious Emissions (1GHz –25GHz), Low Energy (Low)





ACCURATE TECHNOLOGY CO., LTD.

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

Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1227

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp (C)/Hum (%) 23 C / 48 %

EUT: CD Shelf System with Bluetooth

Mode: TX 2402MHz

Model: NS-SH513

Manufacturer: DONGGUAN ALLLIKE ELECTRONICS CO., LTD

Polarization: Vertical

Power Source: AC 120V/60Hz

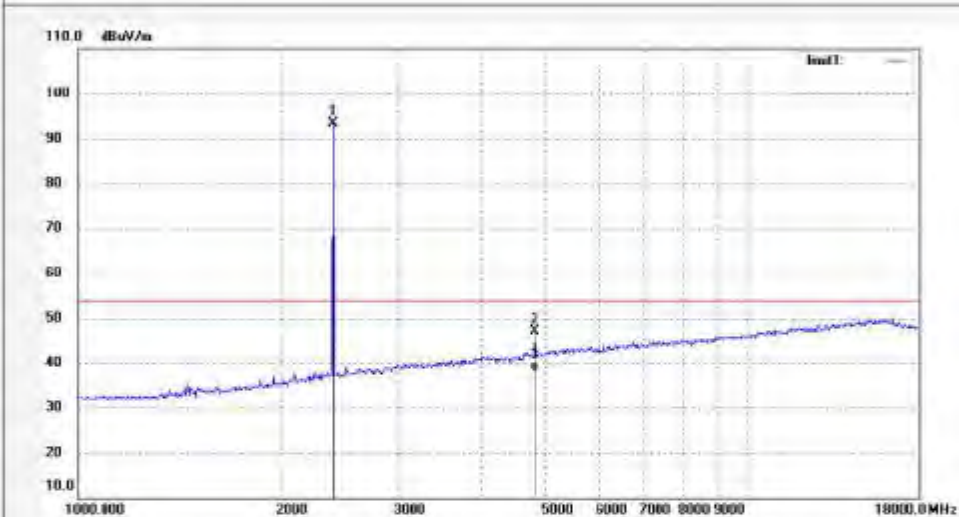
Date: 15/07/04/

Time:

Engineer Signature:

Distance: 3m

Note: Bluetooth 4.0



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	2402.000	100.64	-7.45	93.39	/	/	peak			
2	4804.024	47.50	-0.30	47.20	74.00	-26.80	peak			
3	4804.024	38.48	-0.30	38.18	54.00	-15.82	AVG			



ACCURATE TECHNOLOGY CO., LTD.

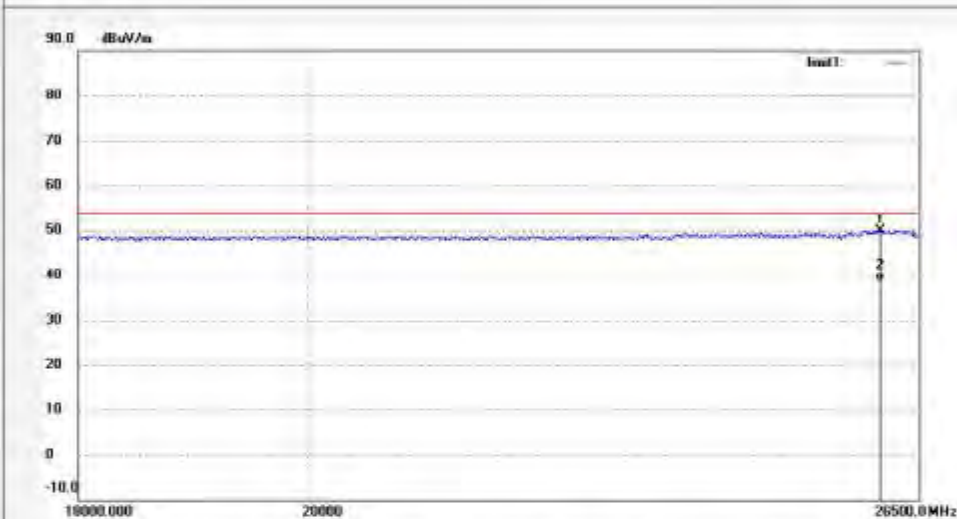
F1 Bldg. A, Changyuan New Material Port Keyuan Rd.
Science & Industry Park, Nanshan Shenzhen, P.R. China

Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.:	ian2015-2 #1274	Polarization:	Vertical
Standard:	FCC Class B 3M Radiated	Power Source:	AC 120V/60Hz
Test item:	Radiation Test	Date:	15/07/04/
Temp (C)/Hum (%)	23 C / 48 %	Time:	
EUT:	CD Shelf System with Bluetooth	Engineer Signature:	
Mode:	TX 2402MHz	Distance:	3m
Model:	NS-SH513		
Manufacturer:	DONGGUAN ALLLIKE ELECTRONICS CO., LTD		
Note:	Bluetooth 4.0		



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	26032.693	33.46	16.50	49.96	74.00	-24.04	peak			
2	26032.693	22.08	16.50	38.58	54.00	-15.42	AVG			



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Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1275

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp (C)/Hum (%) 23 C / 48 %

EUT: CD Shelf System with Bluetooth

Mode: TX 2402MHz

Model: NS-SH513

Manufacturer: DONGGUAN ALLLIKE ELECTRONICS CO., LTD

Polarization: Horizontal

Power Source: AC 120V/60Hz

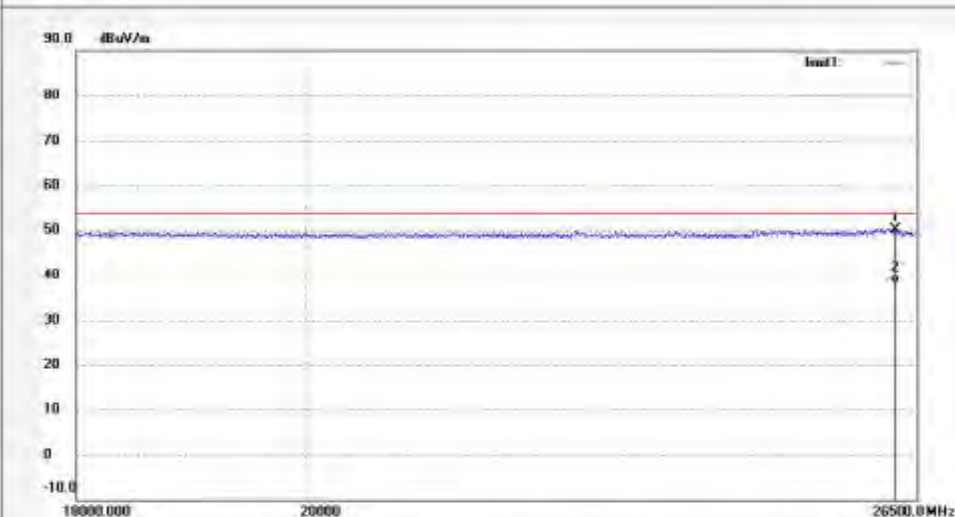
Date: 15/07/04/

Time:

Engineer Signature:

Distance: 3m

Note: Bluetooth 4.0



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	26234.849	33.73	16.50	50.23	74.00	-23.77	peak			
2	26234.849	21.75	16.50	38.25	54.00	-15.75	AVG			

Figure 13: Test figure of Radiated Spurious Emissions (9kHz – 30MHz), Low Energy (Mid)

ACCURATE TECHNOLOGY CO., LTD

FCC Class B 3m Radiated

EUT: CD Shelf System with Bluetooth M/N: NS-SH513
 Manufacturer: DONGGUAN ALLLIKE ELECTRONICS CO., LTD
 Operating Condition: TX T440MHz
 Test Site: 2# Chamber
 Operator: LAN
 Test Specification: AC 120V/50Hz
 Comment: X
 Start of Test: 2015-7-11 /

SCAN TABLE: "LFRE Fin"

Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M

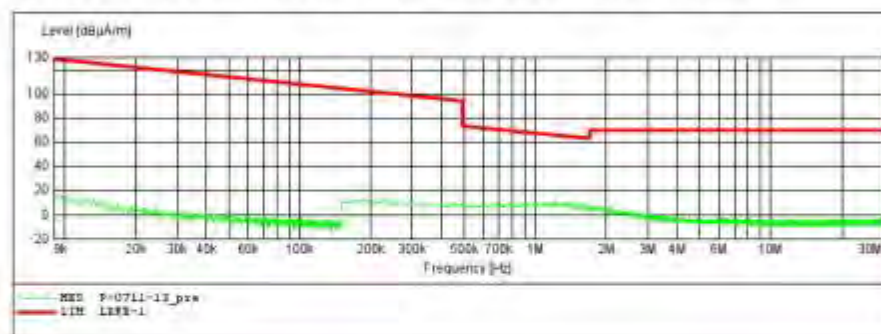


Figure 14: Test figure of Radiated Spurious Emissions (30MHz – 1GHz), Low Energy (Mid)





ACCURATE TECHNOLOGY CO., LTD.

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

Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1296

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp: C/Hum (%) 23 °C / 48 %

EUT: CD Shelf System with Bluetooth

Mode: TX 2440MHz

Model: NS-SH513

Manufacturer: DONGGUAN ALLIKE ELECTRONICS CO., LTD

Polarization: Horizontal

Power Source: AC 120V/60Hz

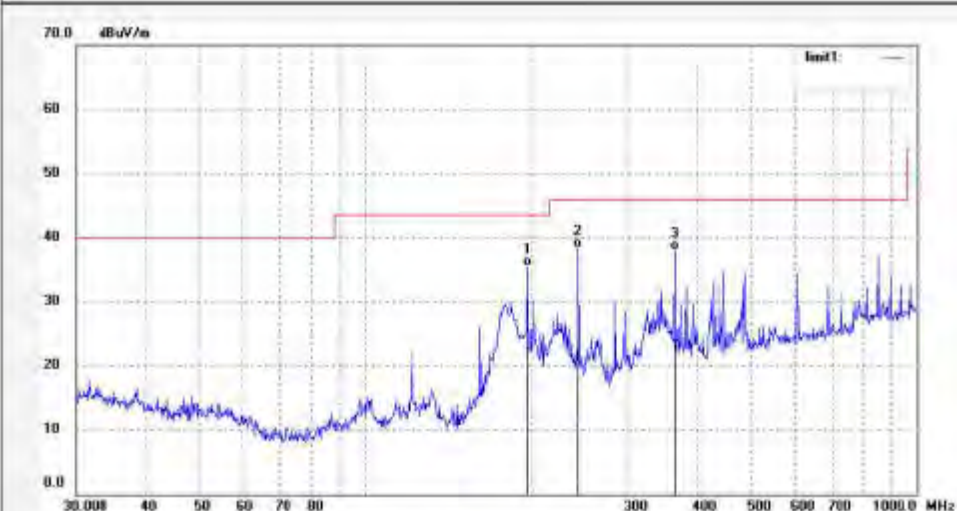
Date: 2015/07/08

Time:

Engineer Signature:

Distance: 3m

Note: Bluetooth 4.0



No.	Freq (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Hight (cm)	Degree (deg)	Remark
1	196.5098	48.13	-12.47	35.66	43.50	-7.84	QP			
2	243.3771	49.20	-10.82	38.38	46.00	-7.62	QP			
3	364.2595	45.65	-7.57	38.08	46.00	-7.92	QP			

Figure 15: Test figure of Radiated Spurious Emissions (1GHz –25GHz), Low Energy (Mid)





ACCURATE TECHNOLOGY CO., LTD.

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Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: ian2015-2 #1231

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp (C)/Hum (%) 23 C / 48 %

EUT: CD Shelf System with Bluetooth

Mode: TX 2440MHz

Model: NS-SH513

Manufacturer: DONGGUAN ALLLIKE ELECTRONICS CO., LTD

Polarization: Vertical

Power Source: AC 120V/60Hz

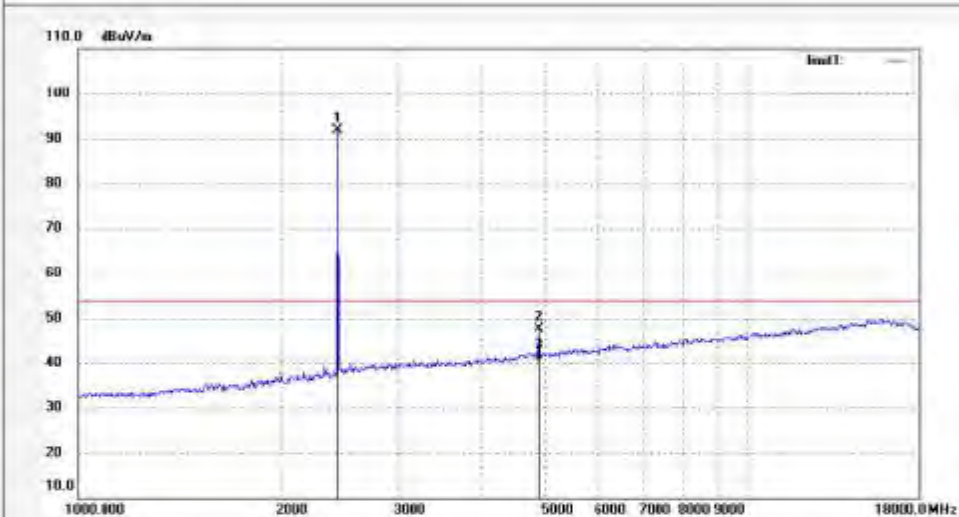
Date: 15/07/04/

Time:

Engineer Signature:

Distance: 3m

Note: Bluetooth 4.0



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	2440.000	99.22	-7.36	91.86	/	/	peak			
2	4880.022	47.46	0.13	47.59	74.00	-26.41	peak			
3	4880.022	40.21	0.13	40.34	54.00	-13.66	AVG			



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

Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1276

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp (C)/Hum (%) 23 C / 48 %

EUT: CD Shelf System with Bluetooth

Mode: TX 2440MHz

Model: NS-SH513

Manufacturer: DONGGUAN ALLIKE ELECTRONICS CO., LTD

Polarization: Horizontal

Power Source: AC 120V/60Hz

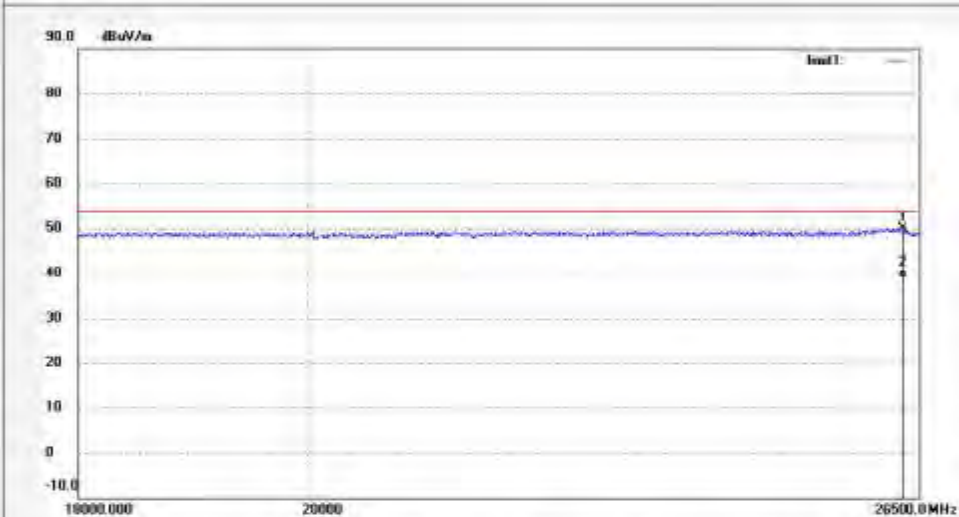
Date: 15/07/04/

Time:

Engineer Signature:

Distance: 3m

Note: Bluetooth 4.0



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	26305.974	33.44	16.50	49.94	74.00	-24.06	peak			
2	26305.974	22.35	16.50	38.85	54.00	-15.15	AVG			



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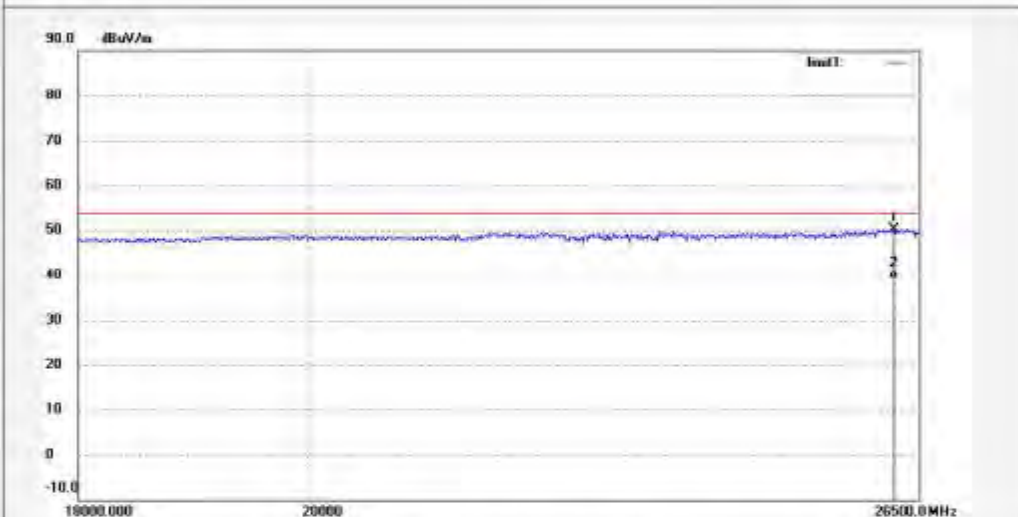
F1 Bldg. A, Changyuan New Material Port Keyuan Rd.
Science & Industry Park, Nanshan, Shenzhen, P.R. China

Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.:	lan2015-2 #1277	Polanzation:	Vertical
Standard:	FCC Class B 3M Radiated	Power Source:	AC 120V/60Hz
Test item:	Radiation Test	Date:	15/07/04/
Temp (C)/Hum (%)	23 C / 48 %	Time:	
EUT:	CD Shelf System with Bluetooth	Engineer Signature:	
Mode:	TX 2440MHz	Distance:	3m
Model:	NS-SH513		
Manufacturer:	DONGGUAN ALLLIKE ELECTRONICS CO., LTD		
Note:	Bluetooth 4.0		



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	26194.292	33.71	16.50	50.21	74.00	-23.79	peak			
2	26194.292	22.57	16.50	39.07	54.00	-14.93	AVG			

Figure 16: Test figure of Radiated Spurious Emissions (9kHz – 30MHz), Low Energy (High)

ACCURATE TECHNOLOGY CO., LTD

FCC Class B 3m Radiated

EUT: CD Shelf System with Bluetooth M/N: NS-BH512
 Manufacturer: DONGGUAN ALLLIKE ELECTRONICS CO., LTD
 Operating Condition: TX 2480MHz
 Test Site: 2# Chamber
 Operator: LAN
 Test Specification: AC 120V/60Hz
 Comment: X
 Start of Test: 2015-7-11 /

SCAN TABLE: "LFRE Fin"

Short Description:			SUB STD VTERMC 1.70			
Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak 1.0 s	200 Hz	1516M	
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak 1.0 s	9 kHz	1516M	

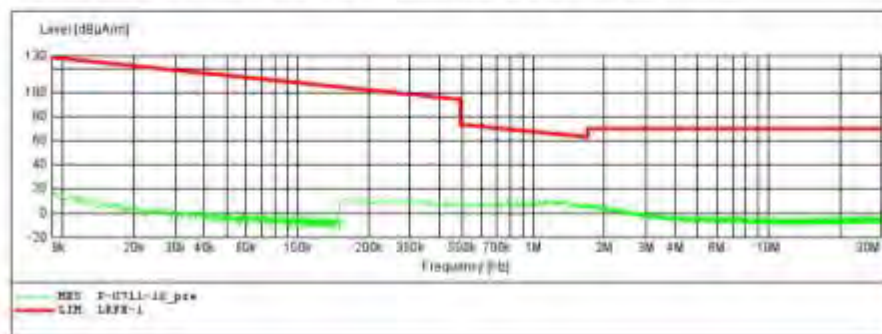
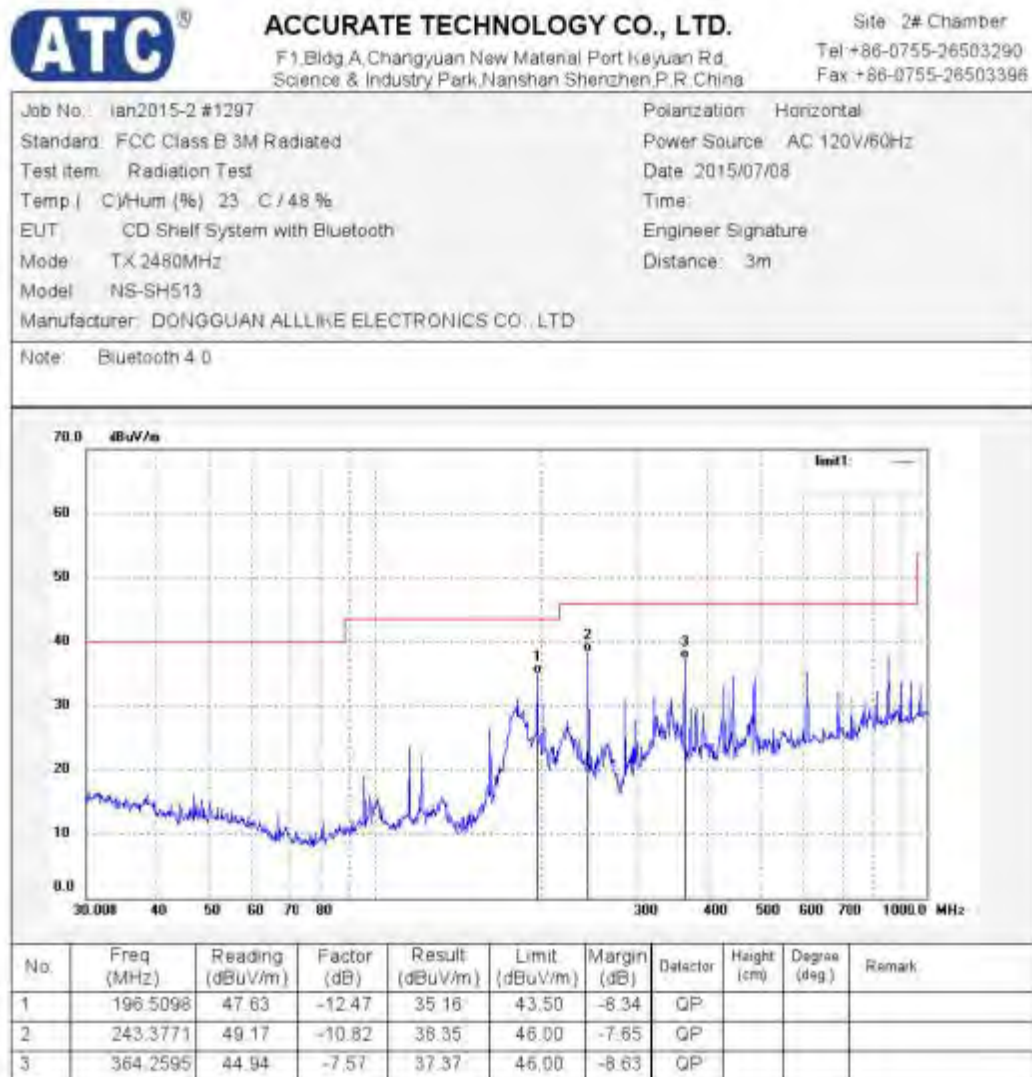


Figure 17: Test figure of Radiated Spurious Emissions (30MHz – 1GHz), Low Energy (High)





ACCURATE TECHNOLOGY CO., LTD.

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

Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1298

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp: C/Hum (%) 23 °C / 48 %

EUT: CD Shelf System with Bluetooth

Mode: TX 2480MHz

Model: NS-SH513

Manufacturer: DONGGUAN ALLIKE ELECTRONICS CO., LTD

Polarization: Vertical

Power Source: AC 120V/60Hz

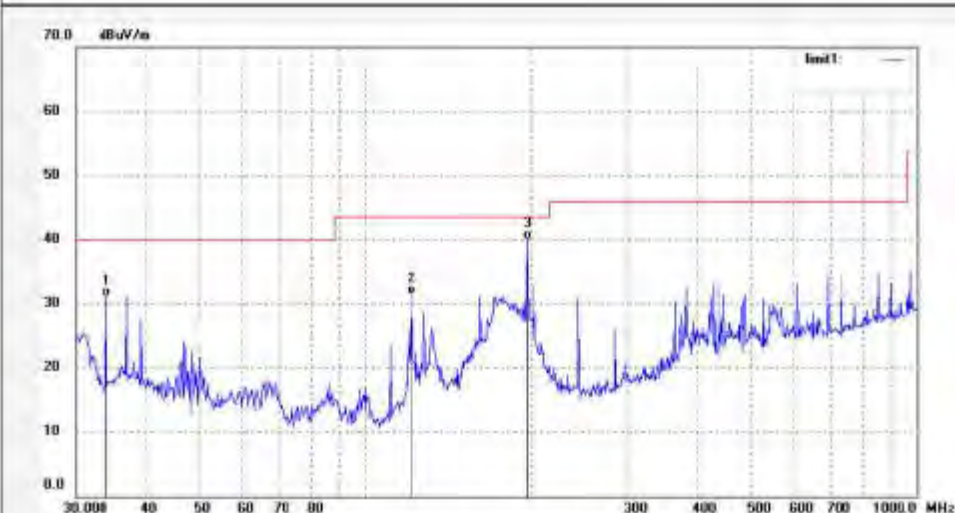
Date: 2015/07/08

Time:

Engineer Signature:

Distance: 3m

Note: Bluetooth 4.0



No.	Freq (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Hight (cm)	Degree (deg)	Remark
1	34.0363	41.34	-10.32	31.02	40.00	-8.98	QP			
2	121.5485	44.65	-13.32	31.33	43.50	-12.17	QP			
3	196.5098	52.54	-12.47	40.07	43.50	-3.43	QP			

Figure 18: Test figure of Radiated Spurious Emissions (1GHz –25GHz), Low Energy (High)





ACCURATE TECHNOLOGY CO., LTD.

F1 Bldg. A, Changyuan New Material Port Keyuan Rd,
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Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: ian2015-2 #1233

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp (C)/Hum (%) 23 C / 48 %

EUT: CD Shelf System with Bluetooth

Mode: TX 2480MHz

Model: NS-SH513

Manufacturer: DONGGUAN ALLLIKE ELECTRONICS CO., LTD

Polarization: Horizontal

Power Source: AC 120V/60Hz

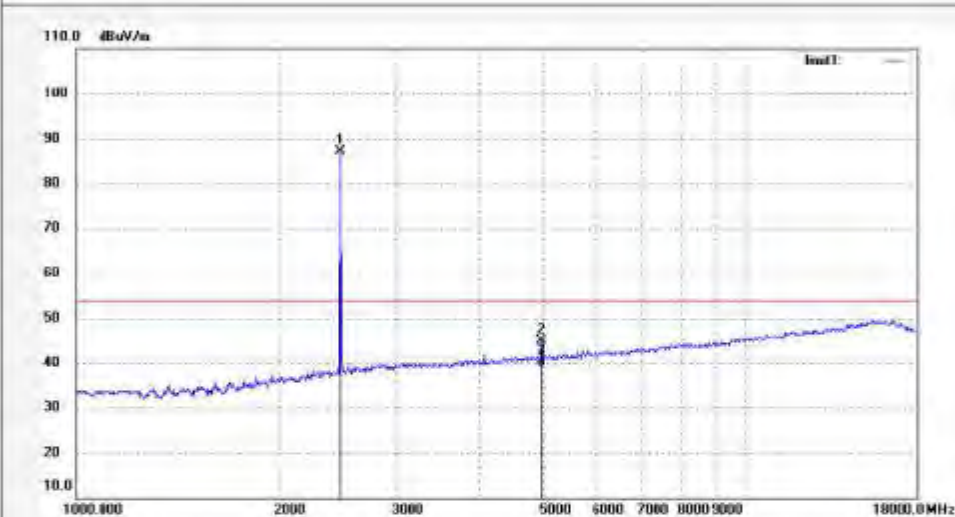
Date: 15/07/04/

Time:

Engineer Signature:

Distance: 3m

Note: Bluetooth 4.0



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	2480.000	94.53	-7.37	87.16	/	/	peak			
2	4960.026	44.45	0.52	44.97	74.00	-29.03	peak			
3	4960.026	38.51	0.52	39.03	54.00	-14.97	AVG			



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

Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1278

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp (C)/Hum (%) 23 C / 48 %

EUT: CD Shelf System with Bluetooth

Mode: TX 2480MHz

Model: NS-SH513

Manufacturer: DONGGUAN ALLLIKE ELECTRONICS CO., LTD

Polarization: Vertical

Power Source: AC 120V/60Hz

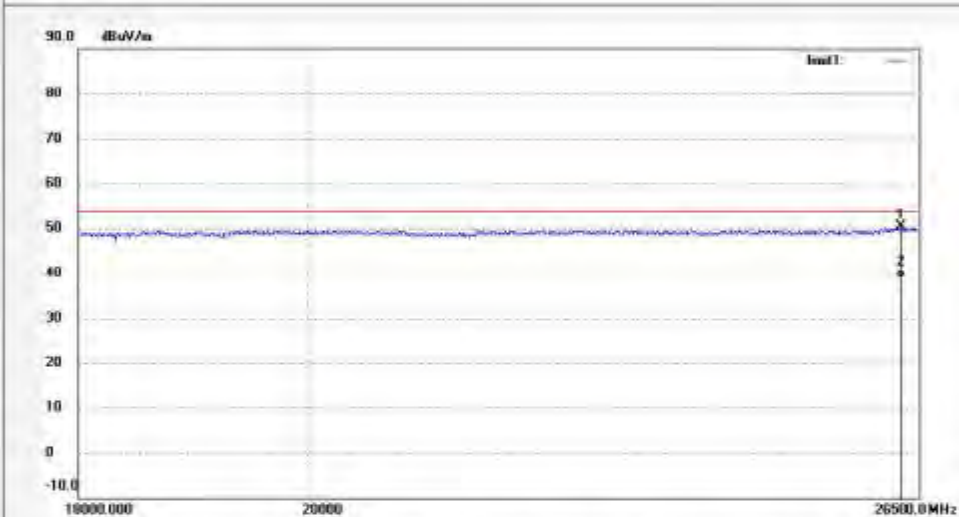
Date: 15/07/04/

Time:

Engineer Signature:

Distance: 3m

Note: Bluetooth 4.0



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	26275.468	33.84	16.50	50.34	74.00	-23.66	peak			
2	26275.468	22.35	16.50	38.85	54.00	-15.15	AVG			



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

Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: Jan2015-2 #1279

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp (C)/Hum (%) 23 C / 48 %

EUT: CD Shelf System with Bluetooth

Mode: TX 2480MHz

Model: NS-SH513

Manufacturer: DONGGUAN ALLLIKE ELECTRONICS CO., LTD

Polarization: Horizontal

Power Source: AC 120V/60Hz

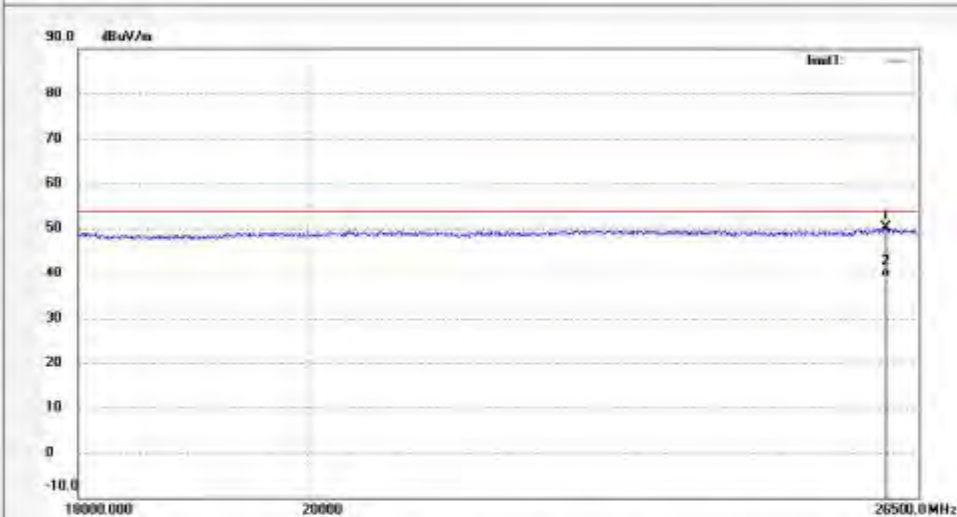
Date: 15/07/04/

Time:

Engineer Signature:

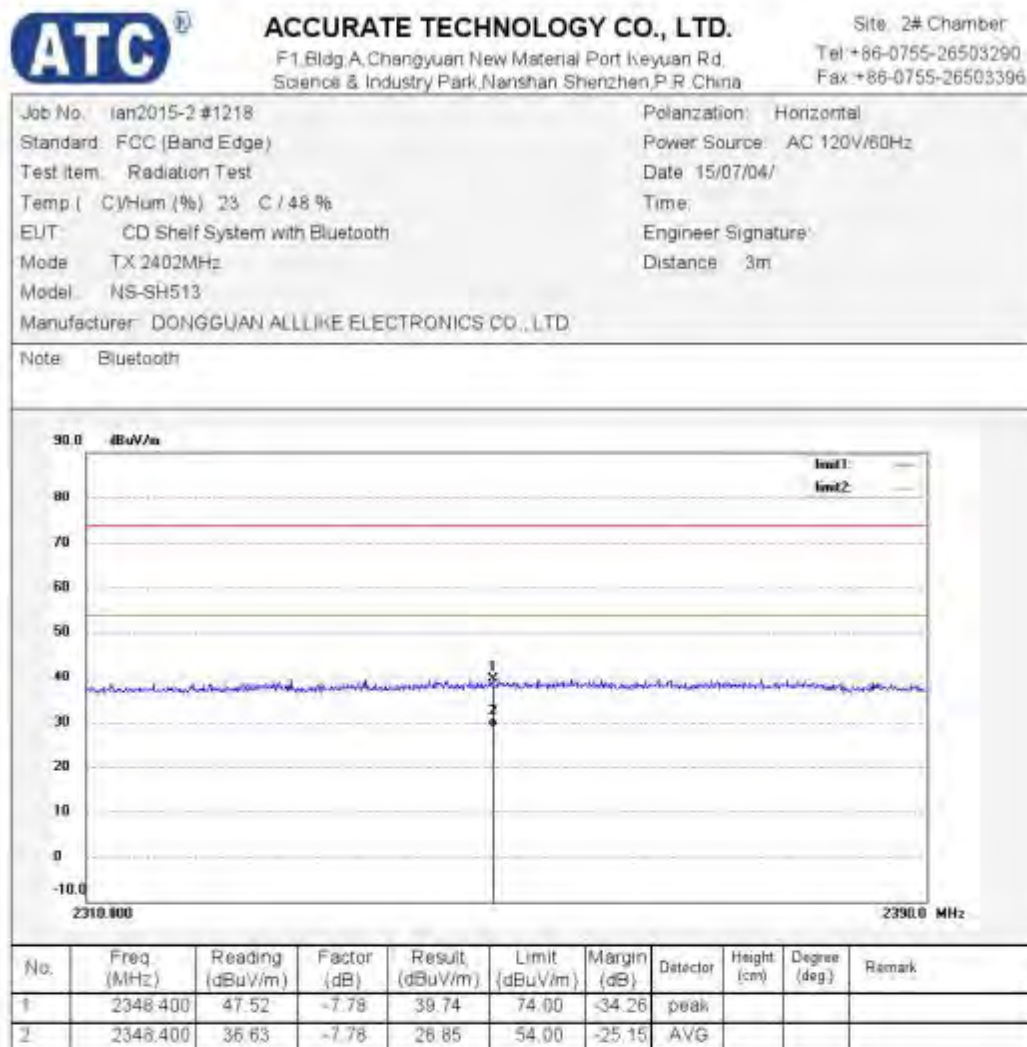
Distance: 3m

Note: Bluetooth 4.0



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	26103.270	33.61	16.50	50.11	74.00	-23.89	peak			
2	26103.270	22.52	16.50	39.02	54.00	-14.98	AVG			

Figure 19: Test figure of Radiated Emissions in Restricted Bands, BDR (Low)





ACCURATE TECHNOLOGY CO., LTD.

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

Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: ian2015-2 #1219

Standard: FCC (Band Edge)

Test item: Radiation Test

Temp (C)/Hum (%) 23 C / 48 %

EUT: CD Shelf System with Bluetooth

Mode: TX 2402MHz

Model: NS-SH513

Manufacturer: DONGGUAN ALLLIKE ELECTRONICS CO., LTD

Polarization: Vertical

Power Source: AC 120V/60Hz

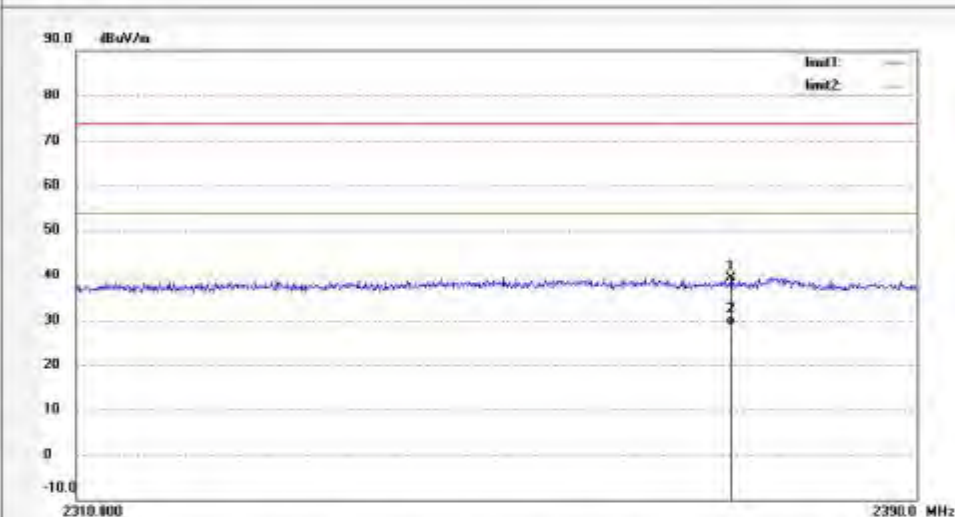
Date: 15/07/04/

Time:

Engineer Signature:

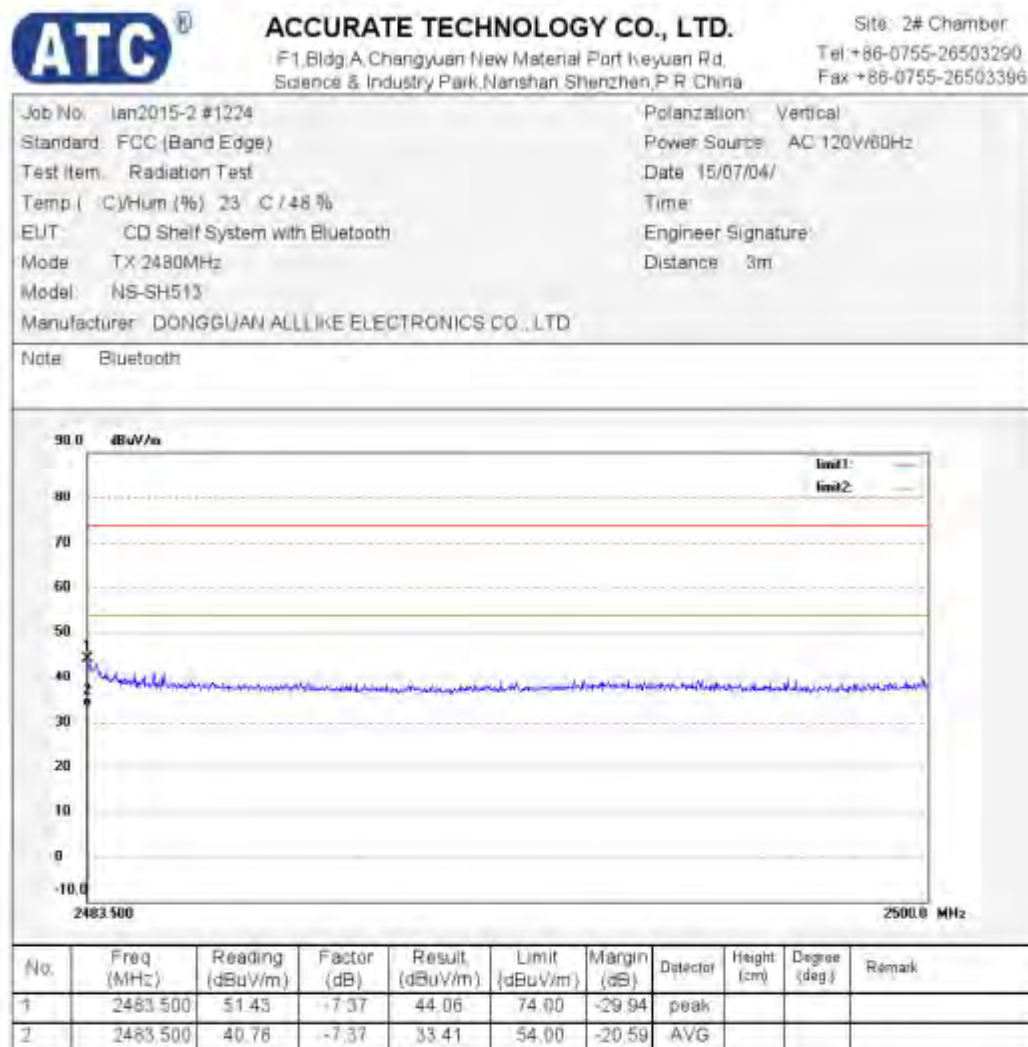
Distance: 3m

Note: Bluetooth



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	2372.160	47.14	-7.64	39.50	74.00	-34.50	peak			
2	2372.160	36.45	-7.64	28.81	54.00	-25.19	AVG			

Figure 20: Test figure of Radiated Emissions in Restricted Bands, BDR (High)



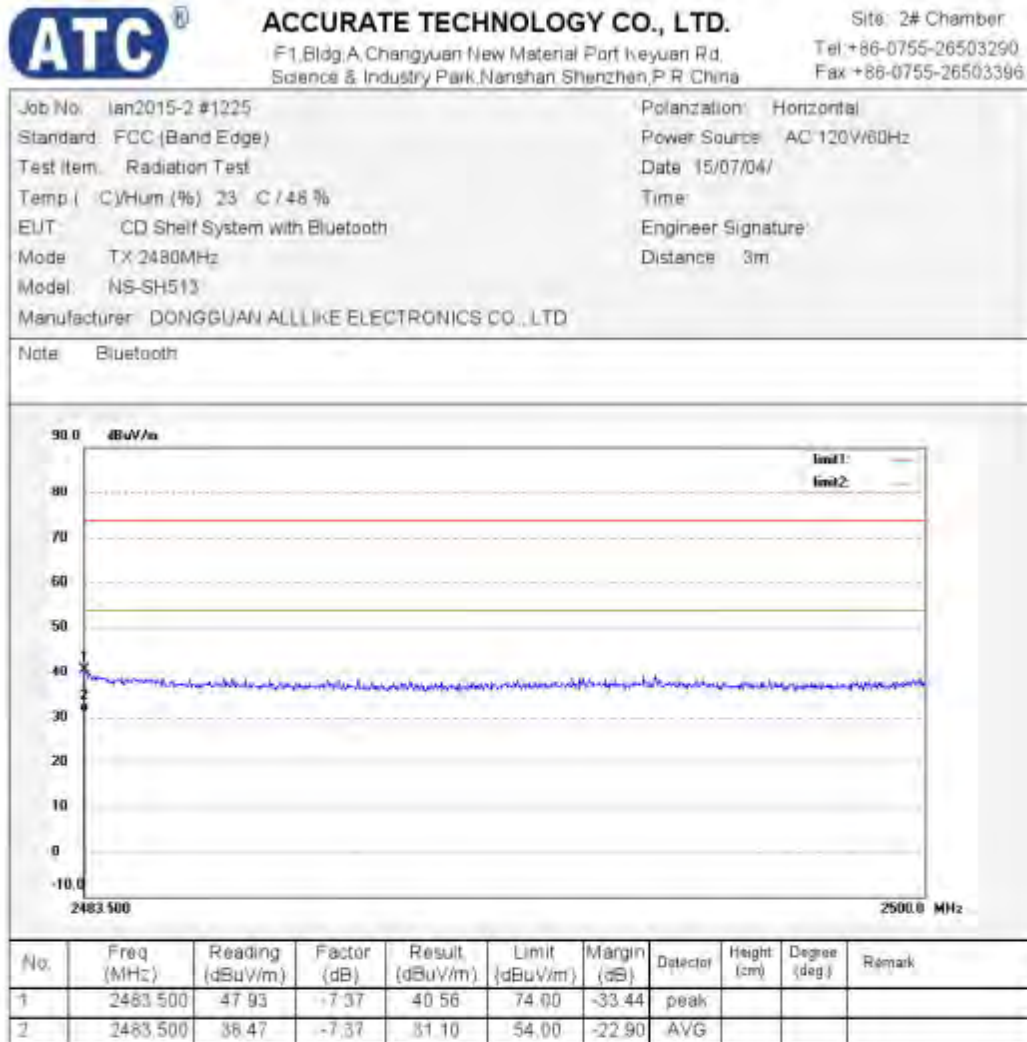
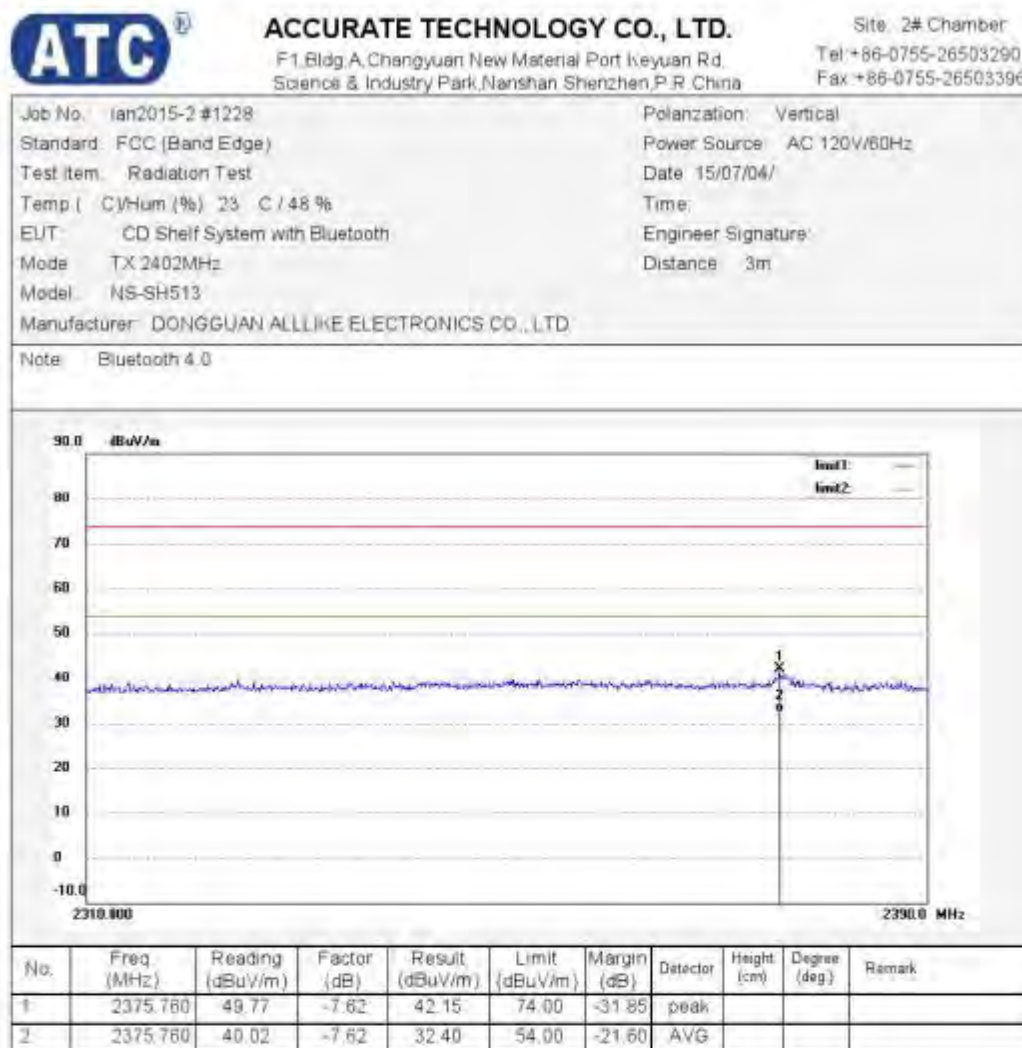


Figure 21: Test figure of Radiated Emissions in Restricted Bands, Low Energy (Low),





ACCURATE TECHNOLOGY CO., LTD.

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

Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: ian2015-2 #1229

Standard: FCC (Band Edge)

Test item: Radiation Test

Temp (C)/Hum (%) 23 C / 48 %

EUT: CD Shelf System with Bluetooth

Mode: TX 2402MHz

Model: NS-SH513

Manufacturer: DONGGUAN ALLLIKE ELECTRONICS CO., LTD

Polarization: Horizontal

Power Source: AC 120V/60Hz

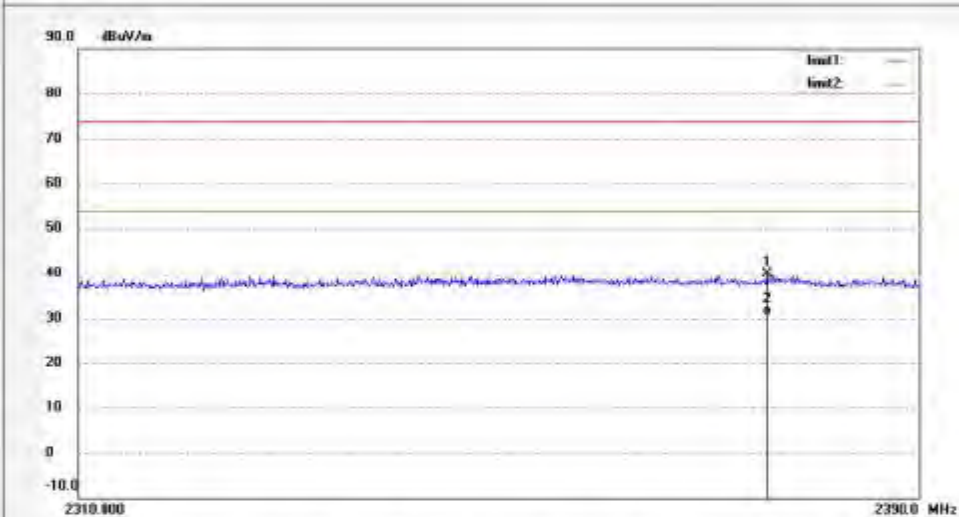
Date: 15/07/04/

Time:

Engineer Signature:

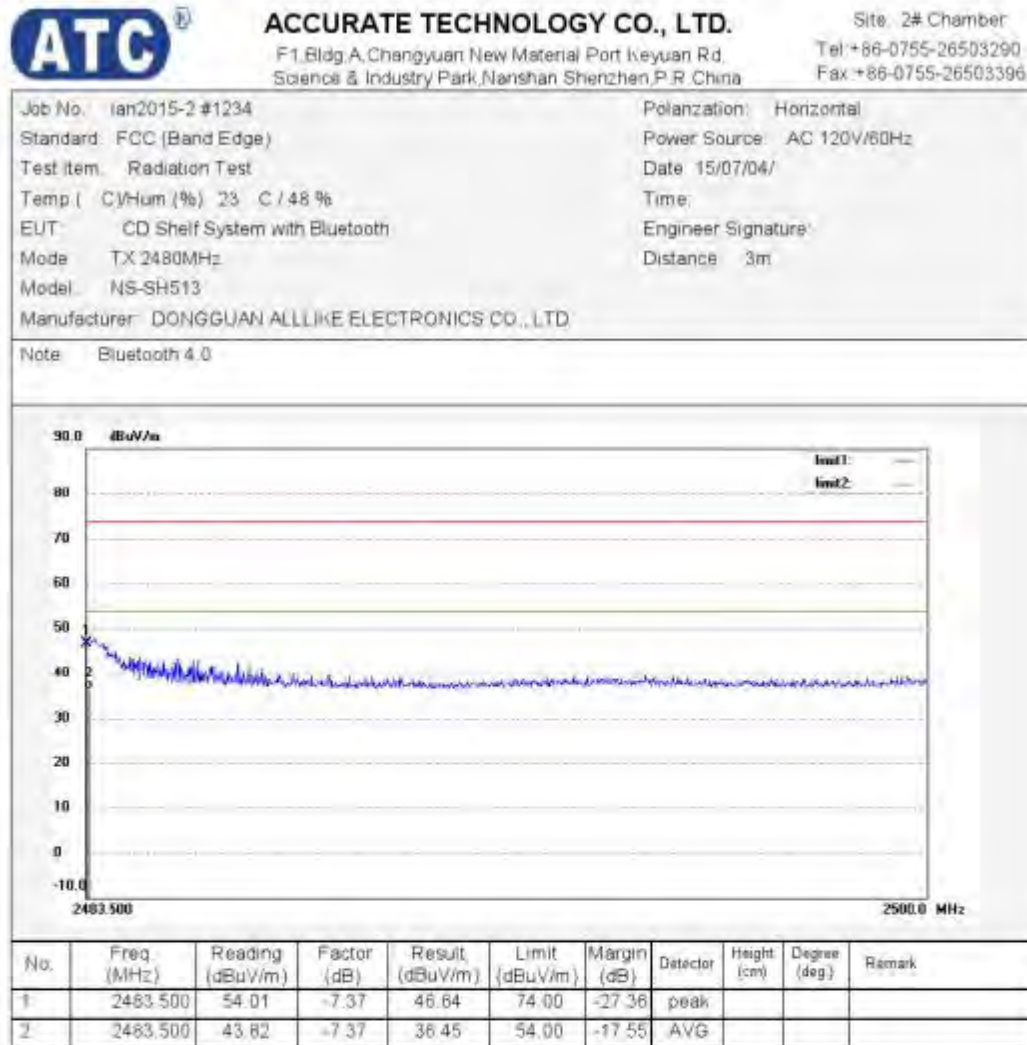
Distance: 3m

Note: Bluetooth 4.0



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	2375.360	47.42	-7.62	39.80	74.00	-34.20	peak			
2	2375.360	38.28	-7.62	30.66	54.00	-23.34	AVG			

Figure 22: Test figure of Radiated Emissions in Restricted Bands, Low Energy (High)





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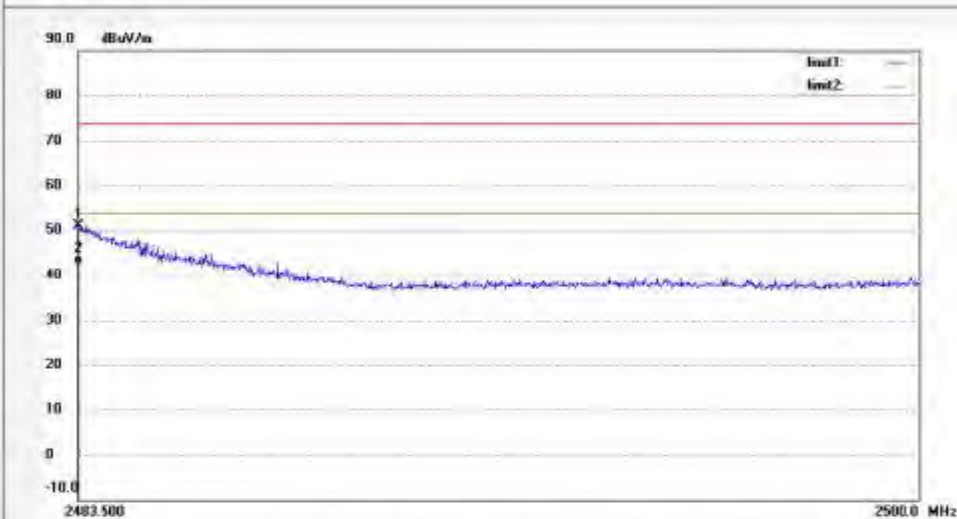
F1 Bldg. A, Changyuan New Material Port Keyuan Rd.
Science & Industry Park, Nanshan Shenzhen, P.R. China

Site: 2# Chamber

Tel: +86-0755-26503290

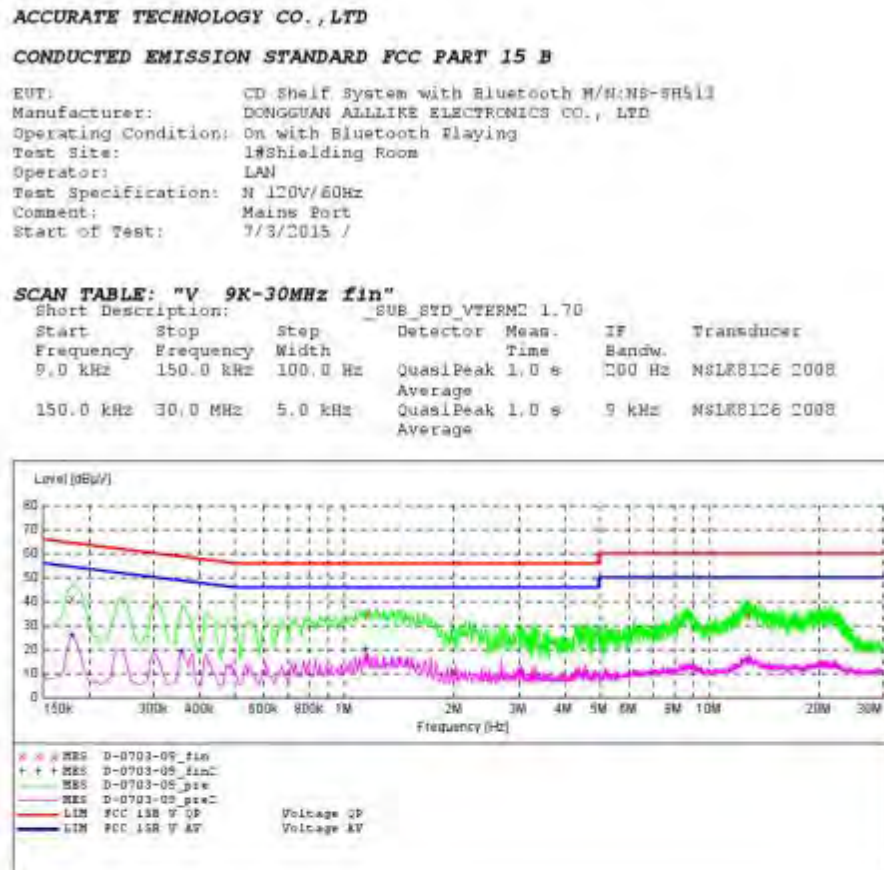
Fax: +86-0755-26503396

Job No.:	ian2015-2 #1235	Polarization:	Vertical
Standard:	FCC (Band Edge)	Power Source:	AC 120V/60Hz
Test item:	Radiation Test	Date:	15/07/04/
Temp (C)/Hum (%):	23 C / 48 %	Time:	
EUT:	CD Shelf System with Bluetooth	Engineer Signature:	
Mode:	TX 2480MHz	Distance:	3m
Model:	NS-SH513		
Manufacturer:	DONGGUAN ALLLIKE ELECTRONICS CO., LTD		
Note:	Bluetooth 4.0		



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	2483.500	56.18	-7.37	50.81	74.00	-23.19	peak			
2	2483.500	49.73	-7.37	42.36	54.00	-11.64	AVG			

Figure 23: Test figure of Conducted Emissions



MEASUREMENT RESULT: "D-0703-09_fin"

7/3/2015

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.180000	40.70	10.5	65	23.8	QP	N	GND
1.165000	33.90	10.9	58	22.1	QE	N	GND
17.850000	33.70	11.3	60	26.3	QE	N	GND

MEASUREMENT RESULT: "D-0703-09_fin2"

7/3/2015

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.180000	25.70	10.5	55	28.8	AV	N	GND
0.360000	19.00	10.6	49	29.7	AV	N	GND
1.150000	20.00	10.9	46	26.0	AV	N	GND

ACCURATE TECHNOLOGY CO., LTD

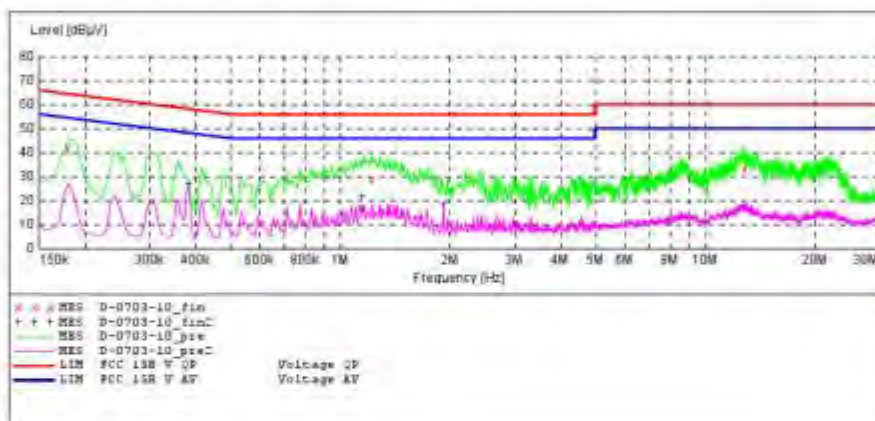
CONDUCTED EMISSION STANDARD FCC PART 15 B

EUT: CD Shelf System with Bluetooth M/M:MS-SH512
 Manufacturer: DONGGUAN ALLLIKE ELECTRONICS CO., LTD
 Operating Condition: On with Bluetooth
 Test Site: 1#Shielding Room
 Operator: LAN
 Test Specification: 1 170V/60Hz
 Comment: Mains Port
 Start of Test: 7/3/2015 /

SCAN TABLE: "V 9K-30MHz fin"

Short Description: _SUB_STD_VTERM2 1.70

Start Frequency	Stop Frequency	Step Width	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	100 Hz	NSLRB126 2008
150.0 kHz	30.0 MHz	5.0 kHz	Average	1.0 s	9 kHz	NSLRB126 2008
			Average			



MEASUREMENT RESULT: "D-0703-10_fin"

7/3/2015

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.180000	41.50	10.5	65	23.0	QP	L1	GND
1.025000	28.50	10.9	56	27.5	QP	L1	GND
12.865000	32.70	11.3	60	27.3	QP	L1	GND

MEASUREMENT RESULT: "D-0703-10_fin2"

7/3/2015

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.395000	26.30	10.7	48	21.9	AV	L1	GND
1.150000	21.40	10.5	46	24.6	AV	L1	GND
1.920000	28.10	11.0	46	27.9	AV	L1	GND
12.670000	17.30	11.3	50	32.7	AV	L1	GND

ACCURATE TECHNOLOGY CO., LTD

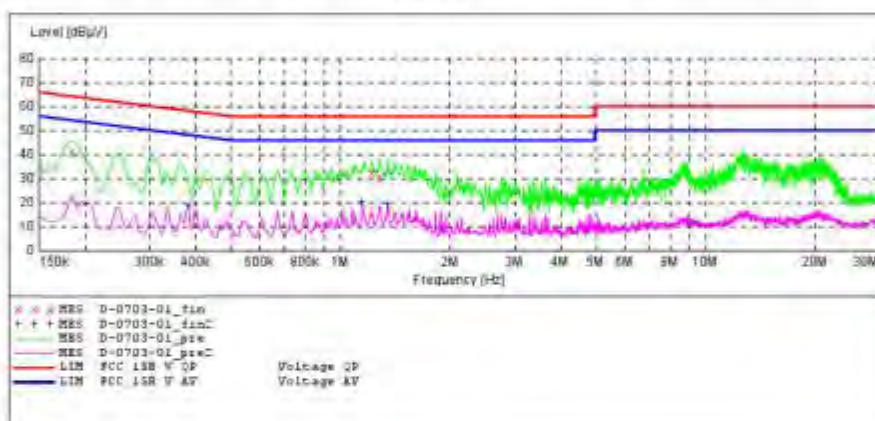
CONDUCTED EMISSION STANDARD FCC PART 15 B

EUT: CD Shelf System with Bluetooth M/M:MS-SH512
 Manufacturer: DONGGUAN ALLLIKE ELECTRONICS CO., LTD
 Operating Condition: CD Playing
 Test Site: 1#Shielding Room
 Operator: LAN
 Test Specification: N 170V/60Hz
 Comment: Mains Port
 Start of Test: 7/3/2015 /

SCAN TABLE: "V 9K-30MHz fin"

Short Description: _SUB STD_VTERM2 1.70

Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
9.0 KHz	150.0 KHz	100.0 Hz	QuasiPeak 1.0 s	100 Hz	MSLRB126 2008	
150.0 KHz	30.0 MHz	5.0 KHz	Average			
			QuasiPeak 1.0 s	9 kHz	MSLRB126 2008	
			Average			



MEASUREMENT RESULT: "D-0703-01_fin"

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.185000	41.00	10.5	64	23.3	QP	N	GND
1.225000	32.50	10.9	56	23.5	QP	N	GND
1.280000	30.00	10.9	56	26.0	QP	N	GND

MEASUREMENT RESULT: "D-0703-01_fin2"

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.395000	18.50	10.7	48	29.7	AV	N	GND
1.150000	19.80	10.9	46	26.2	AV	N	GND
1.350000	18.70	10.9	46	27.3	AV	N	GND

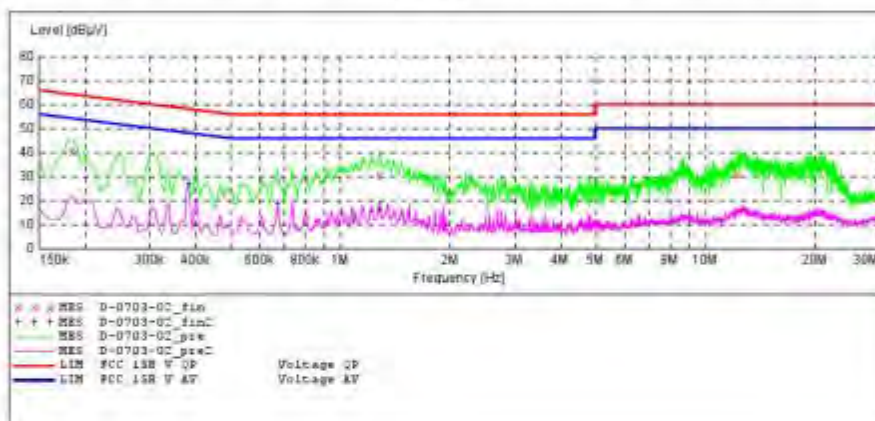
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15 B

EUT: CD Shelf System with Bluetooth M/M:MS-SH511
 Manufacturer: DONGGUAN ALLLIKE ELECTRONICS CO., LTD
 Operating Condition: CD Playing
 Test Site: 1#Shielding Room
 Operator: LAN
 Test Specification: 1 170V/60Hz
 Comment: Mains Port
 Start of Test: 7/3/2015 /

SCAN TABLE: "V 9K-30MHz fin"

Short Description:			SUB STD_VTERM2 1.70					
Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer		
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	100 Hz	MSLRB126 2008		
			Average					
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	MSLRB126 2008		
			Average					



MEASUREMENT RESULT: "D-0703-02_fin"

7/3/2015								
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE	
0.185000	40.30	10.5	64	24.0	QP	L1	GND	
1.280000	30.00	10.9	56	26.0	QP	L1	GND	
12.340000	30.60	11.3	60	29.4	QP	L1	GND	

MEASUREMENT RESULT: "D-0703-02_fin2"

7/3/2015								
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE	
0.385000	26.30	10.7	48	21.9	AV	L1	GND	
0.675000	18.30	10.8	46	27.7	AV	L1	GND	
1.280000	15.70	10.9	46	30.3	AV	L1	GND	

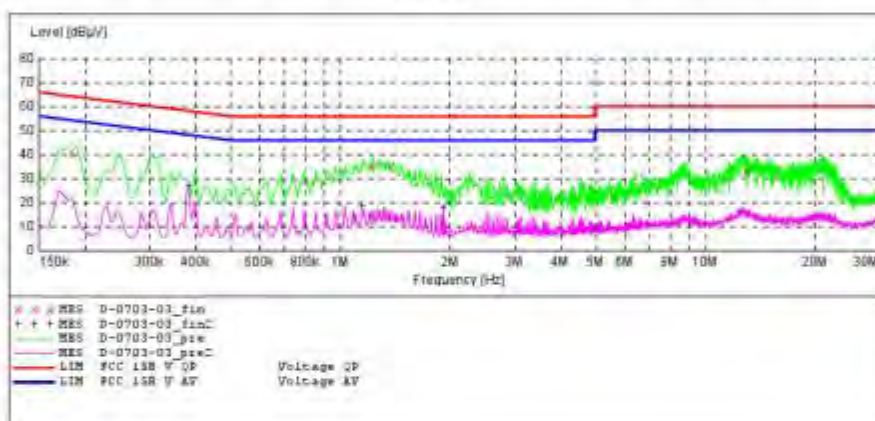
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15 B

EUT: CD Shelf System with Bluetooth M/M:MS-SH511
 Manufacturer: DONGGUAN ALLLIKE ELECTRONICS CO., LTD
 Operating Condition: USB Playing
 Test Site: 1#Shielding Room
 Operator: LAN
 Test Specification: 1 170V/60Hz
 Comment: Mains Port
 Start of Test: 7/3/2015 /

SCAN TABLE: "V 9K-30MHz fin"

CAN TABLE: "V 9K-30MHZ IIR"				SUB STD_VTERM2 1.70			
Short Description:							
Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer	
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	100 Hz	MSLRB126 2008	
				Average			
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	MSLRB126 2008	
				Average			



MEASUREMENT RESULT: "D-0703-03_fin"

7/3/2015								
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE	
0.185000	40.40	10.5	64	23.9	QP	L1	GND	
1.025000	34.50	10.9	56	21.5	QP	L1	GND	
13.030000	32.70	11.3	60	27.3	QP	L1	GND	

MEASUREMENT RESULT: "D-0703-03_fin2"

7/3/2015								
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE	
0.395000	26.30	10.7	48	21.9	AV	L1	GND	
1.150000	18.30	10.9	46	27.7	AV	L1	GND	
1.920000	17.30	11.0	46	28.7	AV	L1	GND	

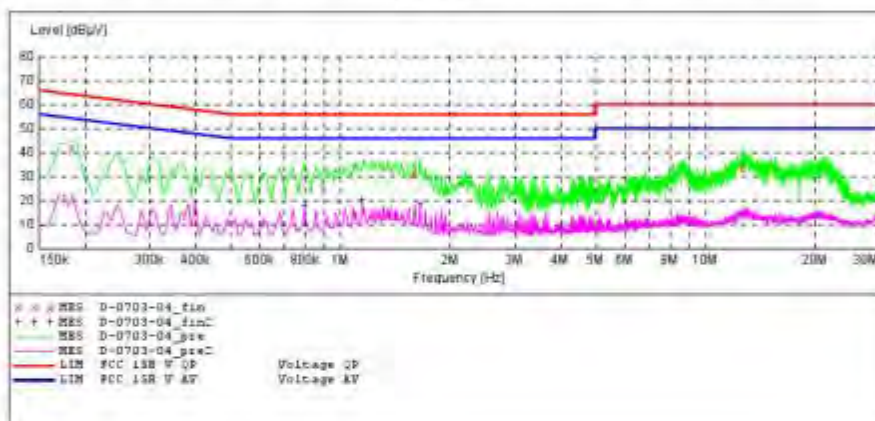
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15 B

EUT: CD Shelf System with Bluetooth M/M:MS-SH511
 Manufacturer: DONGGUAN ALLLIKE ELECTRONICS CO., LTD
 Operating Condition: USB Playing
 Test Site: 1#Shielding Room
 Operator: LAN
 Test Specification: N 170V/60Hz
 Comment: Mains Port
 Start of Test: 7/3/2015 /

SCAN TABLE: "V 9K-30MHz fin"

Short Description:		SUB STD_VTERM2 1.70							
Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer			
9.0 KHz	150.0 KHz	100.0 Hz	QuasiPeak 1.0 s		100 Hz	NSLR5126 2008			
150.0 KHz	30.0 MHz	5.0 KHz	Average						
			QuasiPeak 1.0 s		9 kHz	NSLR5126 2008			
			Average						



MEASUREMENT RESULT: "D-0703-04_fin"

7/3/2015								
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE	
0.185000	41.40	10.5	64	22.9	QP	N	GND	
1.600000	30.70	10.9	56	25.3	QP	N	GND	
12.670000	33.40	11.3	60	26.6	QP	N	GND	

MEASUREMENT RESULT: "D-0703-04_fin2"

7/3/2015								
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE	
0.800000	17.50	10.8	46	28.5	AV	N	GND	
1.150000	19.80	10.9	48	28.2	AV	N	GND	
1.660000	17.80	10.9	46	28.2	AV	N	GND	

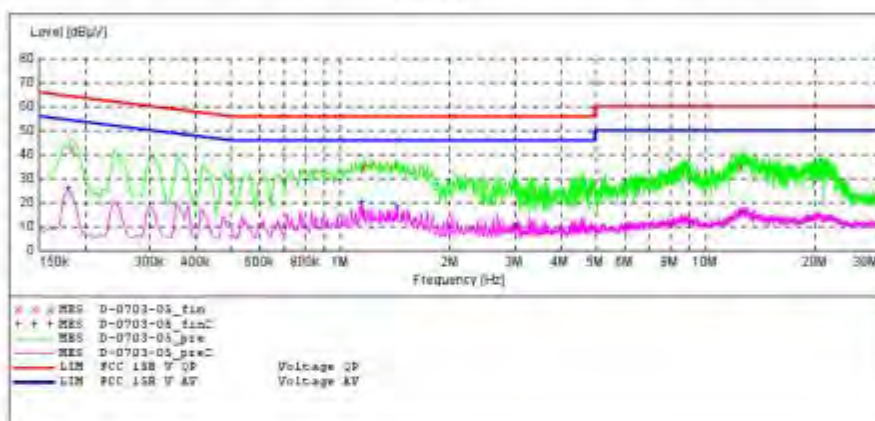
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15 B

EUT: CD Shelf System with Bluetooth M/M:MS-SH512
 Manufacturer: DONGGUAN ALLLIKE ELECTRONICS CO., LTD
 Operating Condition: Aux in
 Test Site: 1#Shielding Room
 Operator: LAN
 Test Specification: N 170V/60Hz
 Comment: Mains Port
 Start of Test: 7/3/2015 /

SCAN TABLE: "V 9K-30MHz fin"

CAN TABLE: "V 9K-30MHZ IIR"							_SUB_STD_VTERM2 1.70	
Short Description:								
Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer		
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	100 Hz	MSLRB126	2008	
			Average					
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	MSLRB126	2008	
			Average					



MEASUREMENT RESULT: "D-0703-05_fin"

7/3/2015								
Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE	
0.185000	41.70	10.5	64	22.6	QP	N	GND	
1.165000	34.00	10.9	56	22.0	QP	N	GND	
12.565000	34.30	11.3	60	25.7	QP	N	GND	

MEASUREMENT RESULT: "D-0703-05_fin2"

7/3/2015								
Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE	
0.180000	25.70	10.5	55	28.8	AV	N	GND	
1.150000	20.10	10.9	46	25.9	AV	N	GND	
1.435000	18.00	10.9	46	28.0	AV	N	GND	

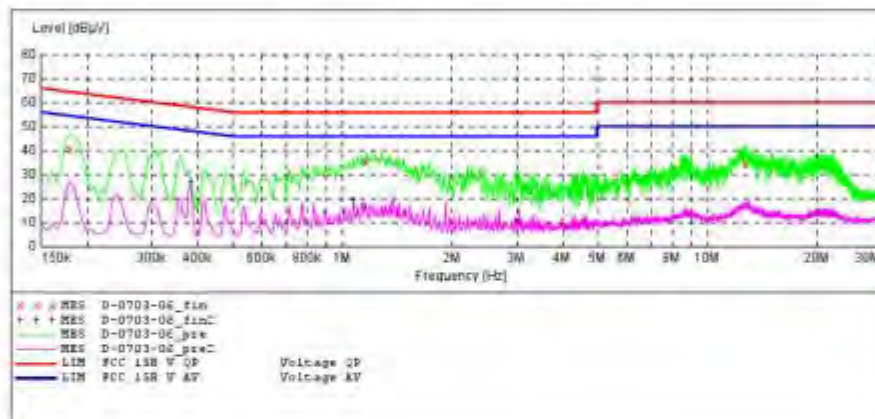
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15 B

EUT: CD Shelf System with Bluetooth M/H/MS-SH511
 Manufacturer: DONGGUAN ALLLIKE ELECTRONICS CO., LTD
 Operating Condition: Aux in
 Test Site: 1#Shielding Room
 Operator: LAN
 Test Specification: 1 170V/60Hz
 Comment: Mains Port
 Start of Test: 7/3/2015 /

SCAN TABLE: "V 9K-30MHz fin"

Short Description:			SUB STD_VTERM2 1.70					
Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer		
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	100 Hz	NSLRB126 2008		
			Average					
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	NSLRB126 2008		
			Average					



MEASUREMENT RESULT: "D-0703-06_fin"

7/3/2015								
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE	
0.180000	40.50	10.5	65	24.0	QP	L1	GND	
1.165000	34.90	10.9	56	21.1	QP	L1	GND	
12.745000	34.40	11.3	60	25.6	QP	L1	GND	

MEASUREMENT RESULT: "D-0703-06_fin2"

7/3/2015								
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE	
0.385000	26.30	10.7	48	21.9	AV	L1	GND	
1.075000	18.70	10.9	46	27.3	AV	L1	GND	
1.375000	17.90	10.9	46	28.1	AV	L1	GND	

ACCURATE TECHNOLOGY CO., LTD

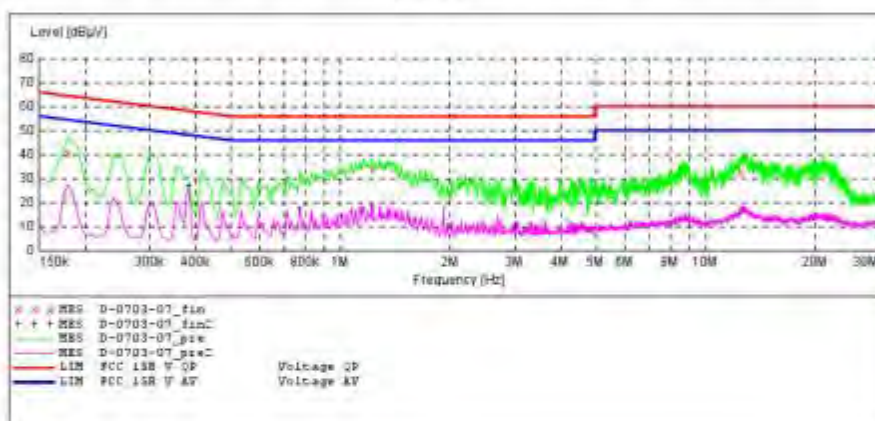
CONDUCTED EMISSION STANDARD FCC PART 15 B

EUT: CD Shelf System with Bluetooth M/M:MS-SH511
 Manufacturer: DONGGUAN ALLLIKE ELECTRONICS CO., LTD
 Operating Condition: Radio FM
 Test Site: 1#Shielding Room
 Operator: LAN
 Test Specification: 1 170V/60Hz
 Comment: Mains Port
 Start of Test: 7/3/2015 /

SCAN TABLE: "V 9K-30MHz fin"

Short Description: _SUB STD_VTERM2 1.70

Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak 1.0 s	100 Hz	MSLRB126 2008	
150.0 kHz	30.0 MHz	5.0 kHz	Average			
			QuasiPeak 1.0 s	9 kHz	MSLRB126 2008	
			Average			



MEASUREMENT RESULT: "D-0703-07_fin"

7/3/2015

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.180000	40.50	10.5	65	24.0	QP	L1	GND
1.230000	33.70	10.9	56	22.3	QP	L1	GND
12.610000	32.30	11.3	60	27.7	QP	L1	GND

MEASUREMENT RESULT: "D-0703-07_fin2"

7/3/2015

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.385000	26.30	10.7	48	21.9	AV	L1	GND
0.775000	17.30	10.8	46	28.8	AV	L1	GND
1.225000	17.80	10.9	46	28.2	AV	L1	GND

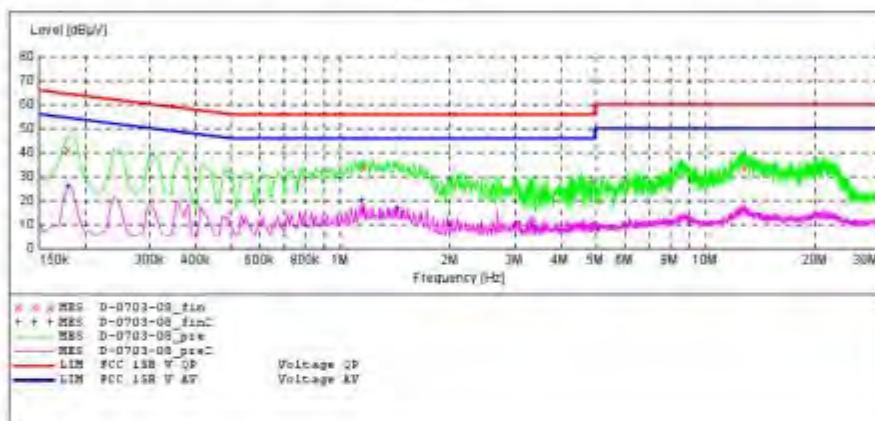
ACCURATE TECHNOLOGY CO., LTD

CONDUCTED EMISSION STANDARD FCC PART 15 B

EUT: CD Shelf System with Bluetooth M/M:MS-SR511
 Manufacturer: DONGGUAN ALLLIKE ELECTRONICS CO., LTD
 Operating Condition: Radio FM
 Test Site: 1#Shielding Room
 Operator: LAN
 Test Specification: N 170V/60Hz
 Comment: Mains Port
 Start of Test: 7/3/2015 /

SCAN TABLE: "V 9K-30MHz fin"

Short Description:			SUB STD_VTERM2 1.70					
Start	Stop	Step	Detector	Meas. Time	IF Bandw.	Transducer		
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	100 Hz	MSLRB126 2008		
			Average					
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	MSLRB126 2008		
			Average					



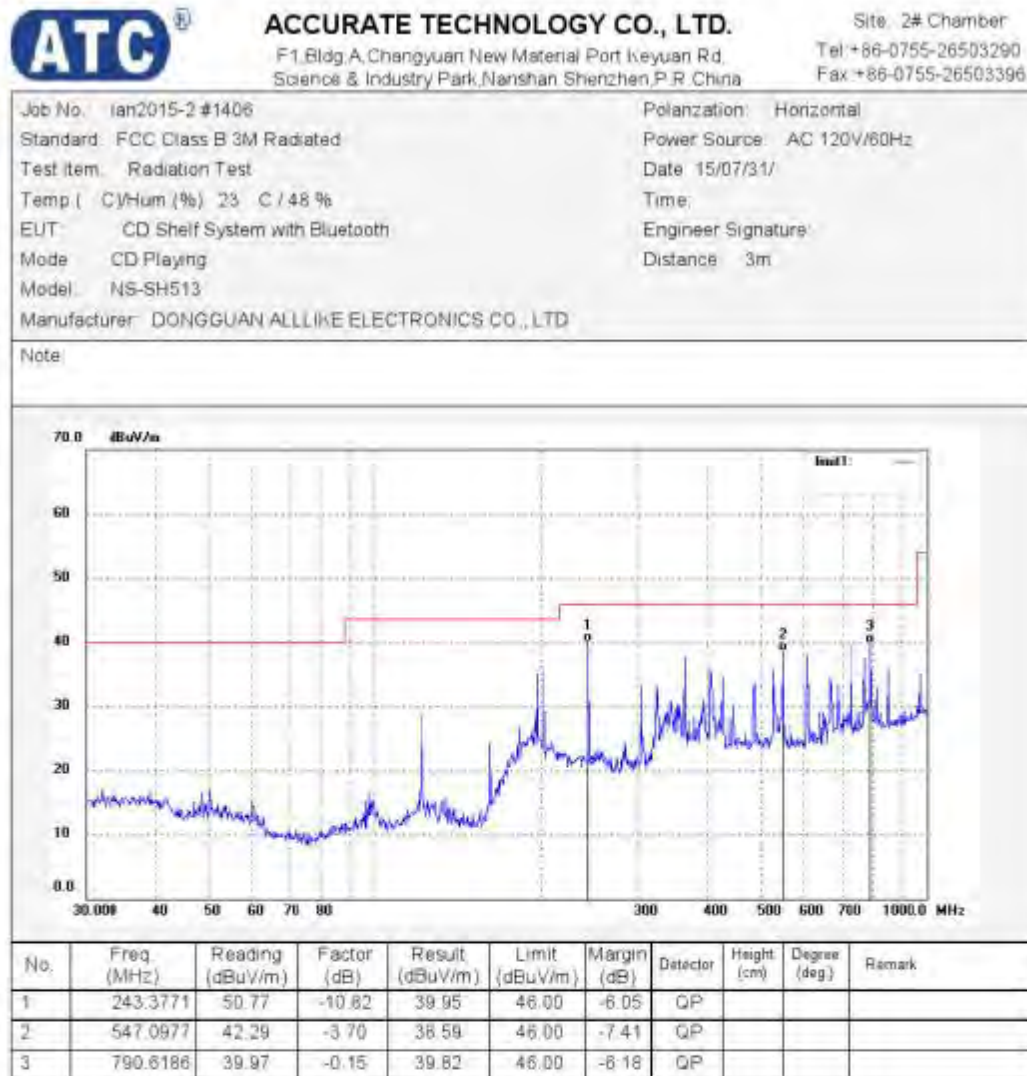
MEASUREMENT RESULT: "D-0703-08_fin"

7/3/2015								
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE	
0.180000	40.80	10.5	65	23.9	QP	N	GND	
1.165000	33.70	10.9	56	22.3	QP	N	GND	
12.865000	33.30	11.3	60	26.7	QP	N	GND	

MEASUREMENT RESULT: "D-0703-08_fin2"

7/3/2015								
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE	
0.180000	25.80	10.5	55	28.5	AV	N	GND	
1.150000	20.00	10.9	46	26.0	AV	N	GND	
1.435000	16.50	10.9	46	29.5	AV	N	GND	

Figure 24: Test figure of Radiated Emissions





ACCURATE TECHNOLOGY CO., LTD.

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

Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: ian2015-2 #1407

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp (C)/Hum (%) 23 C / 48 %

EUT: CD Shelf System with Bluetooth

Mode: CD Playing

Model: NS-SH513

Manufacturer: DONGGUAN ALLLIKE ELECTRONICS CO., LTD

Polarization: Vertical

Power Source: AC 120V/60Hz

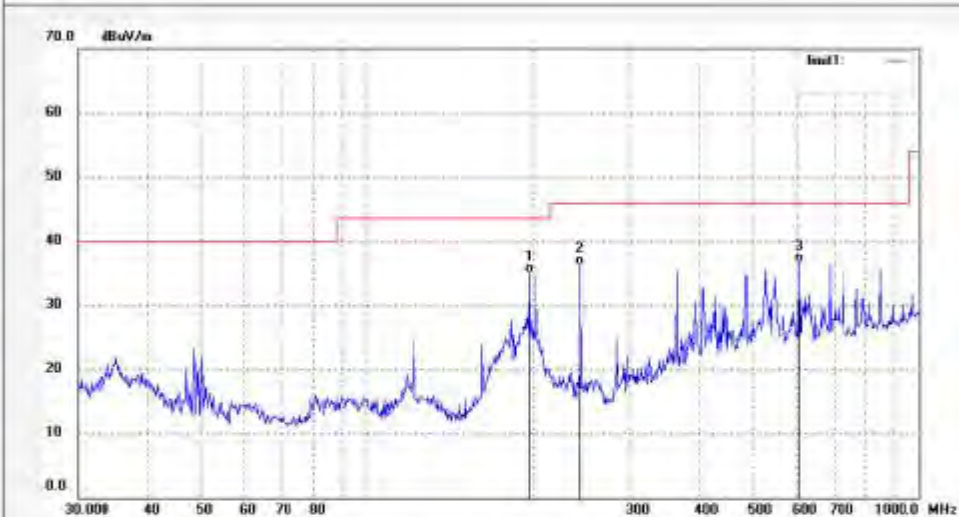
Date: 15/07/31/

Time:

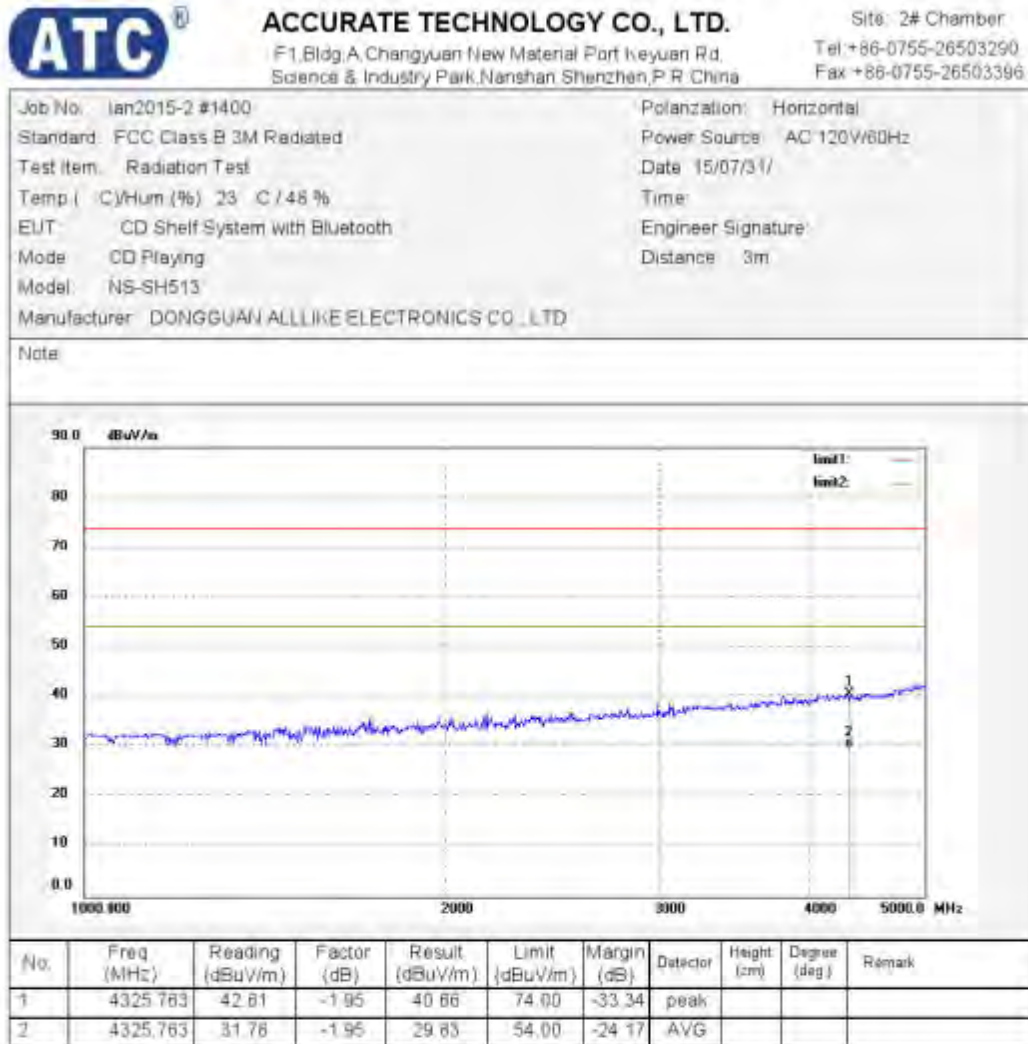
Engineer Signature:

Distance: 3m

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	196.5098	47.59	-12.47	35.12	43.50	-8.38	QP			
2	243.3771	47.22	-10.82	36.40	46.00	-9.60	QP			
3	607.7886	39.45	-2.84	36.61	46.00	-9.39	QP			





ACCURATE TECHNOLOGY CO., LTD.

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

Site: 2# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: Jan2015-2 #1401

Standard: FCC Class B 3M Radiated

Test Item: Radiation Test

Temp.: C/Hum.(%) 23 C /45 %

EUT: CD Shelf System with Bluetooth

Mode: CD Playing

Model: NS-SH513

Manufacturer: DONGGUAN ALLLIKE ELECTRONICS CO.,LTD

Polarization: Vertical

Power Source: AC 120V/60Hz

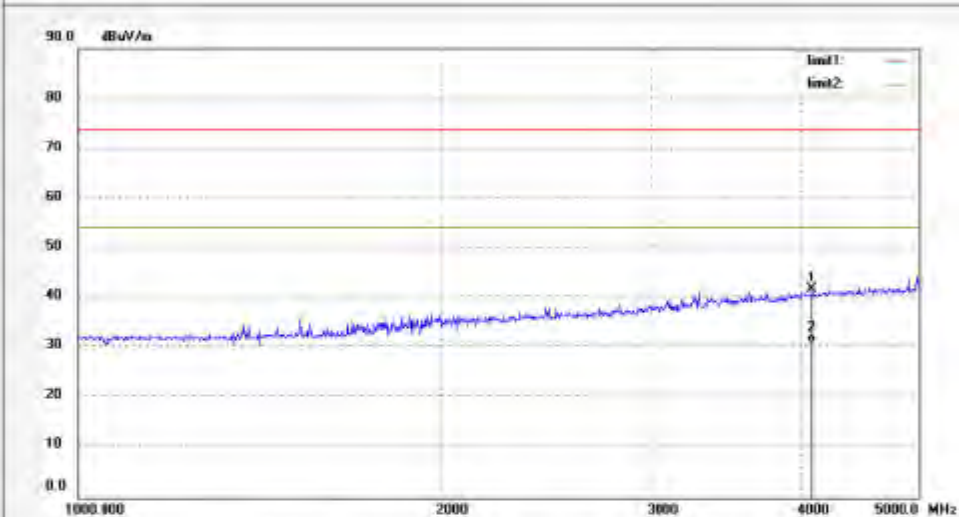
Date: 15/07/31/

Time:

Engineer Signature:

Distance: 3m

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	4075.687	43.16	-1.51	41.85	74.00	-32.35	peak			
2	4075.687	32.47	-1.51	30.96	54.00	-23.04	AVG			



ACCURATE TECHNOLOGY CO., LTD.

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

Site: 2# Chamber

Tel: +86-0755-26503290

Fax: +86-0755-26503396

Job No.: ian2015-2 #1408

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp (C)/Hum (%) 23 C / 48 %

EUT: CD Shelf System with Bluetooth

Mode: Aux in

Model: NS-SH513

Manufacturer: DONGGUAN ALLIKE ELECTRONICS CO., LTD

Polarization: Vertical

Power Source: AC 120V/60Hz

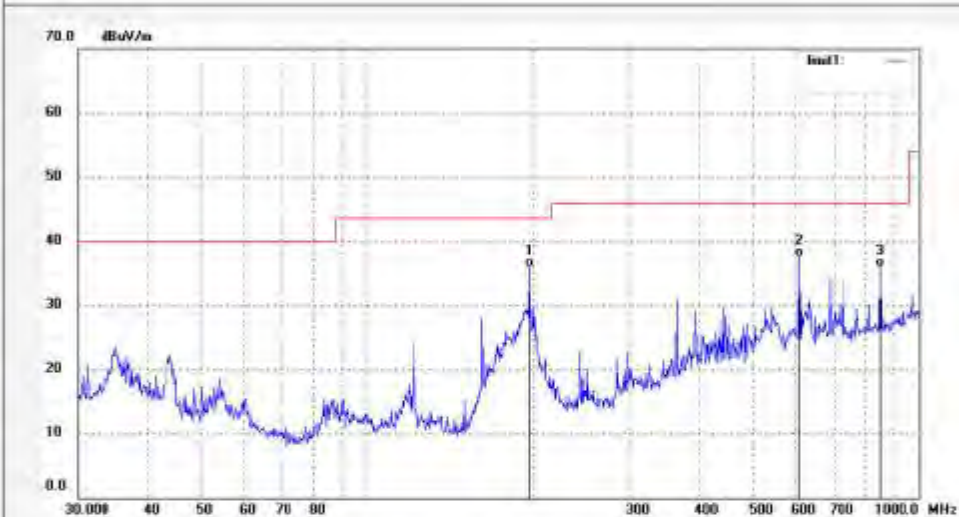
Date: 15/07/31/

Time:

Engineer Signature:

Distance: 3m

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	196.5098	48.38	-12.47	35.91	43.50	-7.59	QP			
2	607.7866	40.38	-2.84	37.54	46.00	-8.46	QP			
3	851.0353	35.29	0.72	36.01	46.00	-9.99	QP			



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Job No.: ian2015-2 #1409

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp (C)/Hum (%) 23 C / 48 %

EUT: CD Shelf System with Bluetooth

Mode: Aux in

Model: NS-SH513

Manufacturer: DONGGUAN ALLIKE ELECTRONICS CO., LTD

Polarization: Horizontal

Power Source: AC 120V/60Hz

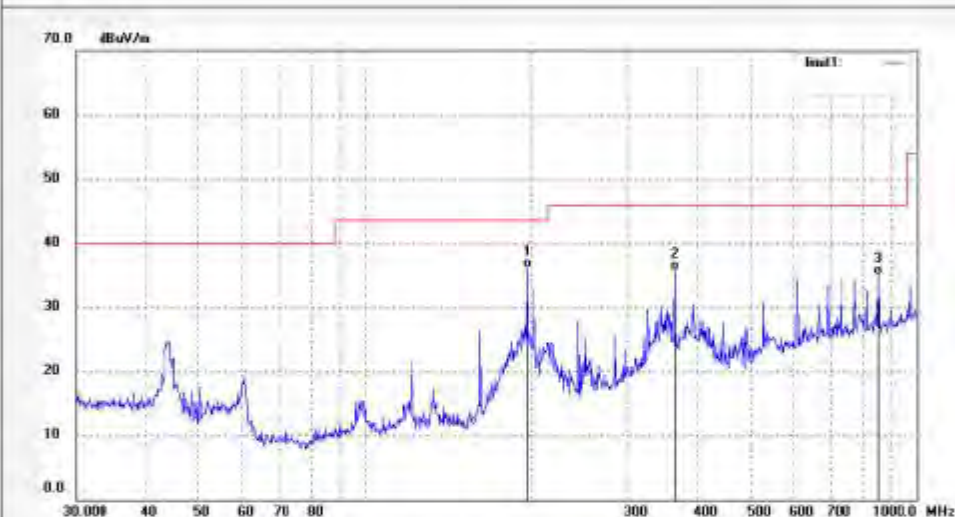
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Time:

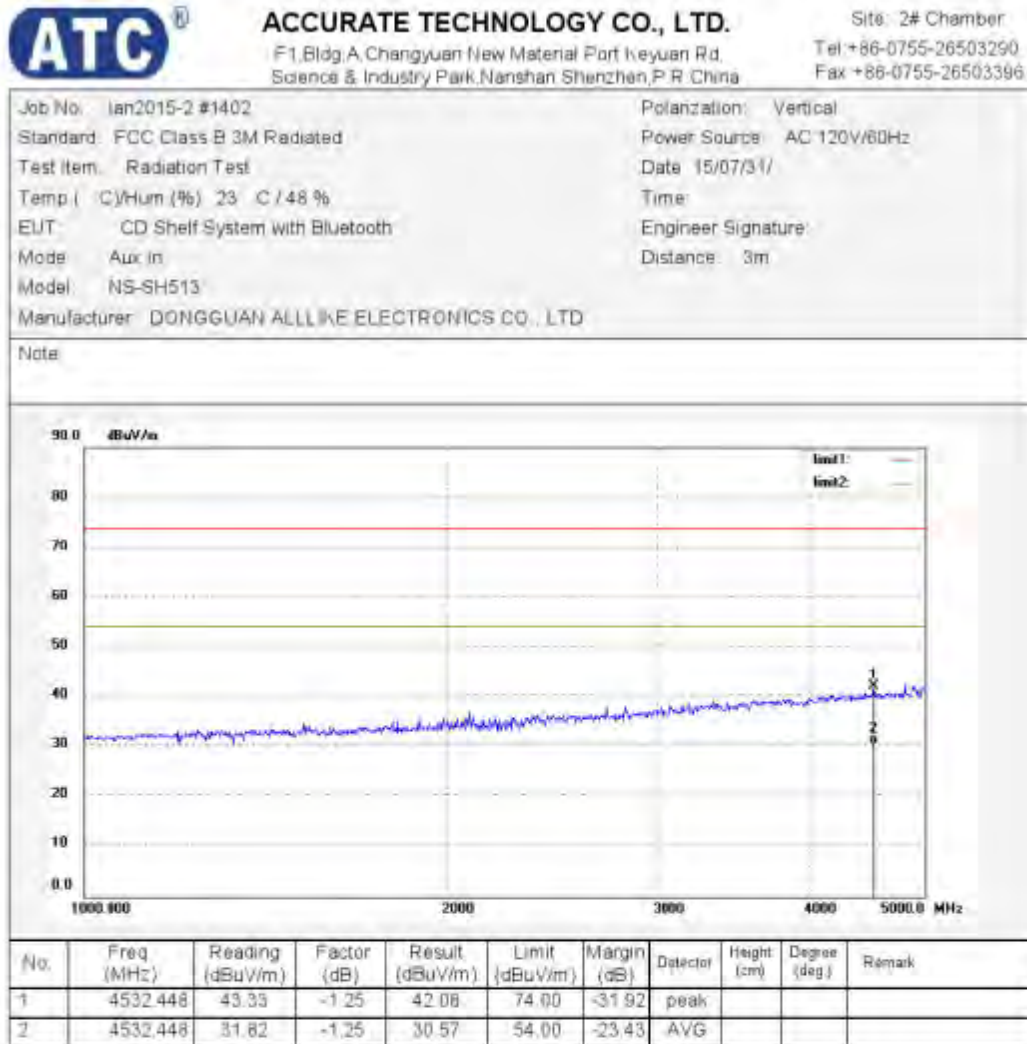
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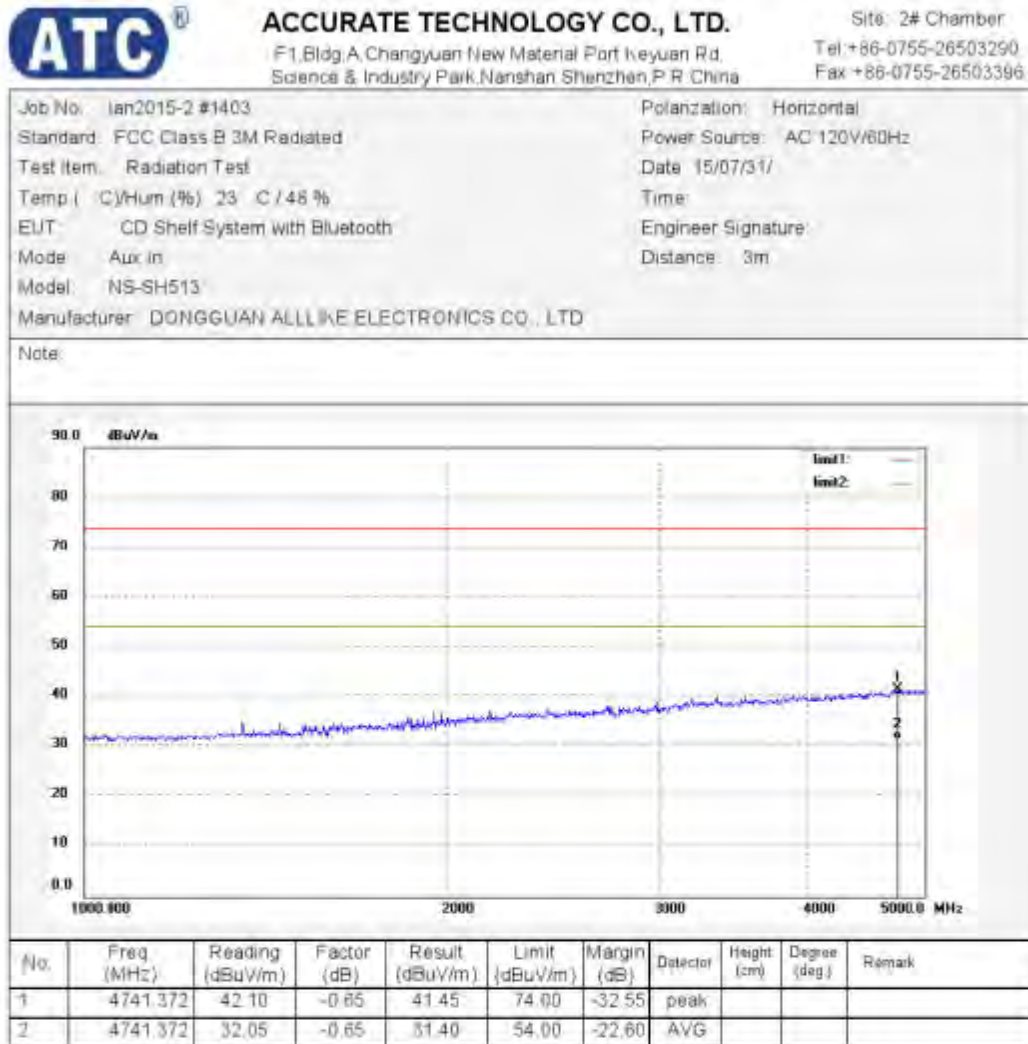
Distance: 3m

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	196.5098	46.54	-12.47	36.07	43.50	-7.43	QP			
2	364.2595	43.28	-7.57	35.71	46.00	-10.29	QP			
3	851.0353	34.41	0.72	35.13	46.00	-10.87	QP			







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Job No.: ian2015-2 #1410

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp (C)/Hum (%) 23 C / 48 %

EUT: CD Shelf System with Bluetooth

Mode: USB Playing

Model: NS-SH513

Manufacturer: DONGGUAN ALLLIKE ELECTRONICS CO., LTD

Polarization: Horizontal

Power Source: AC 120V/60Hz

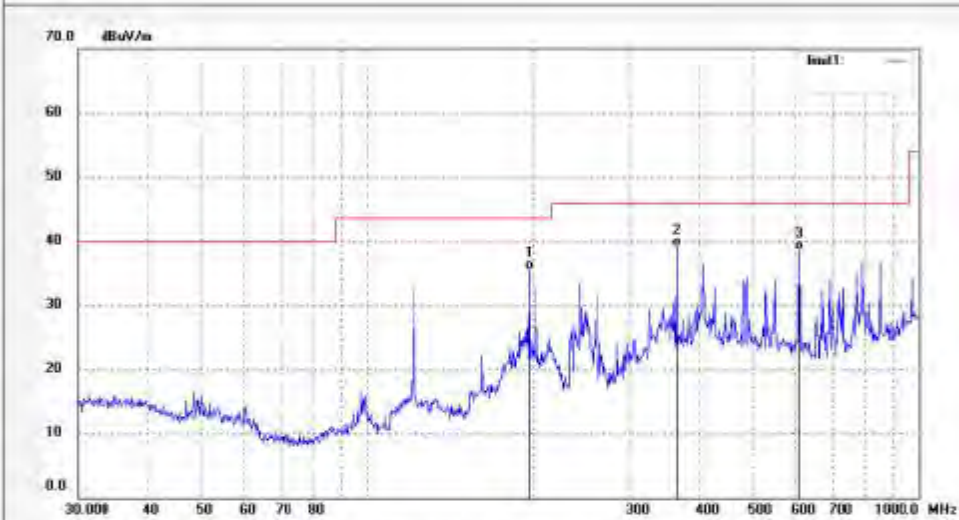
Date: 15/07/31/

Time:

Engineer Signature:

Distance: 3m

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	196.5098	48.04	-12.47	35.57	43.50	-7.93	QP			
2	364.2595	46.83	-7.57	39.06	46.00	-6.94	QP			
3	607.7886	41.36	-2.84	38.52	46.00	-7.48	QP			



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Job No.: ian2015-2 #1411

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp (C)/Hum (%) 23 C / 48 %

EUT: CD Shelf System with Bluetooth

Mode: USB Playing

Model: NS-SH513

Manufacturer: DONGGUAN ALLLIKE ELECTRONICS CO., LTD

Polarization: Vertical

Power Source: AC 120V/60Hz

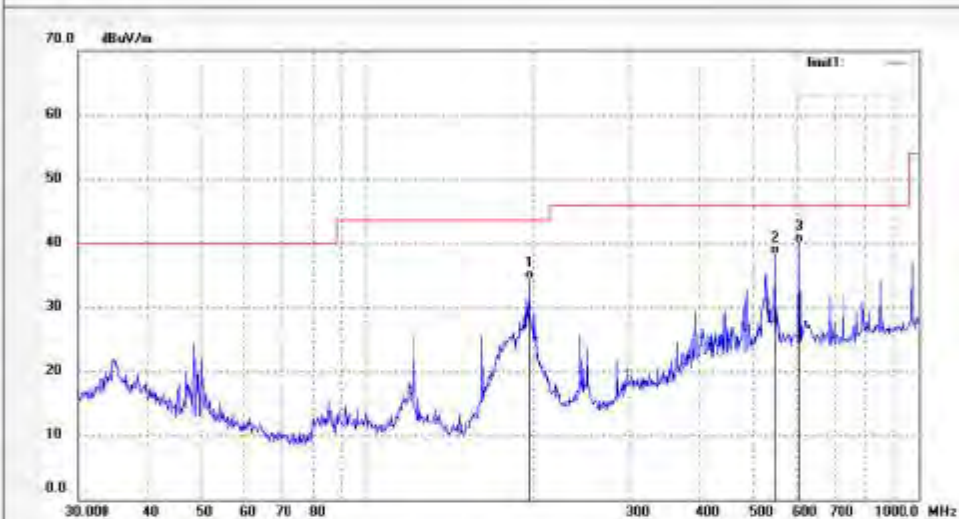
Date: 15/07/31/

Time:

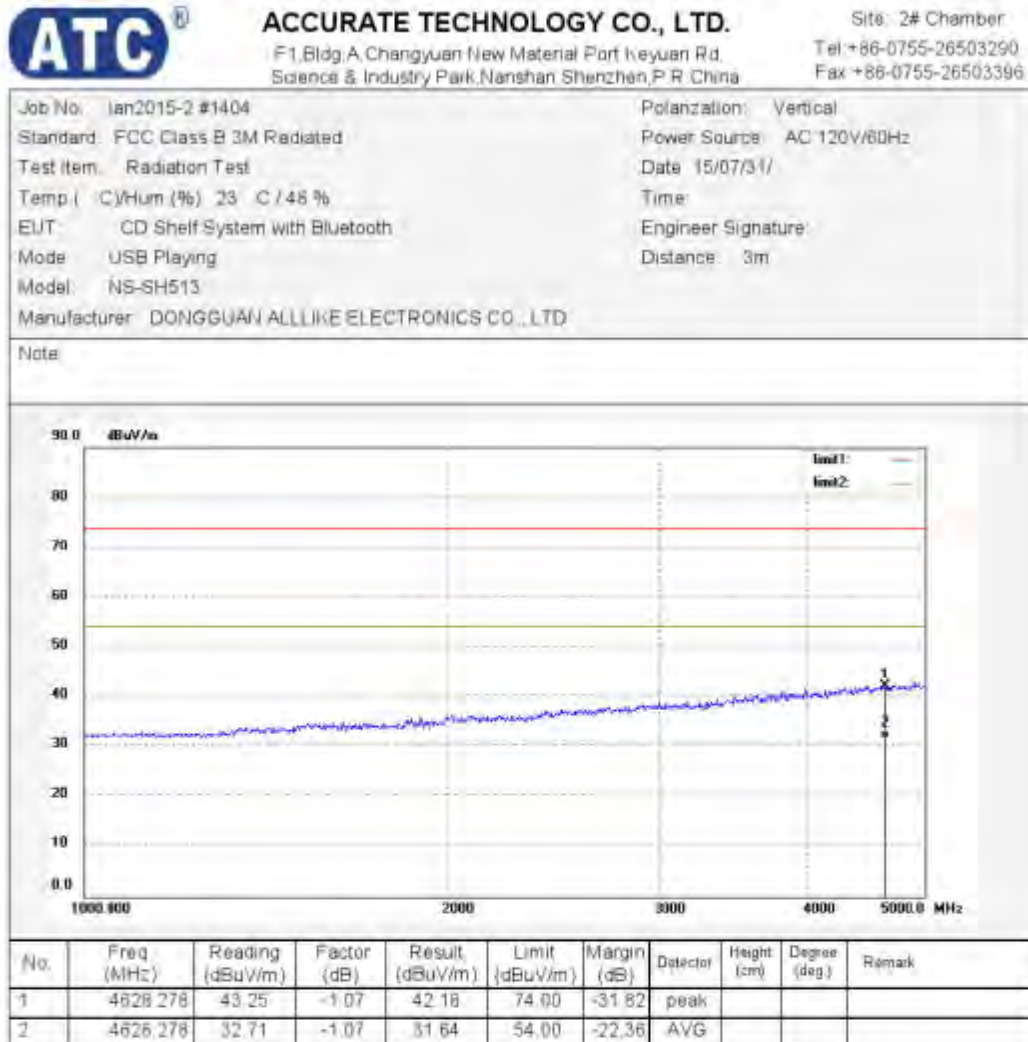
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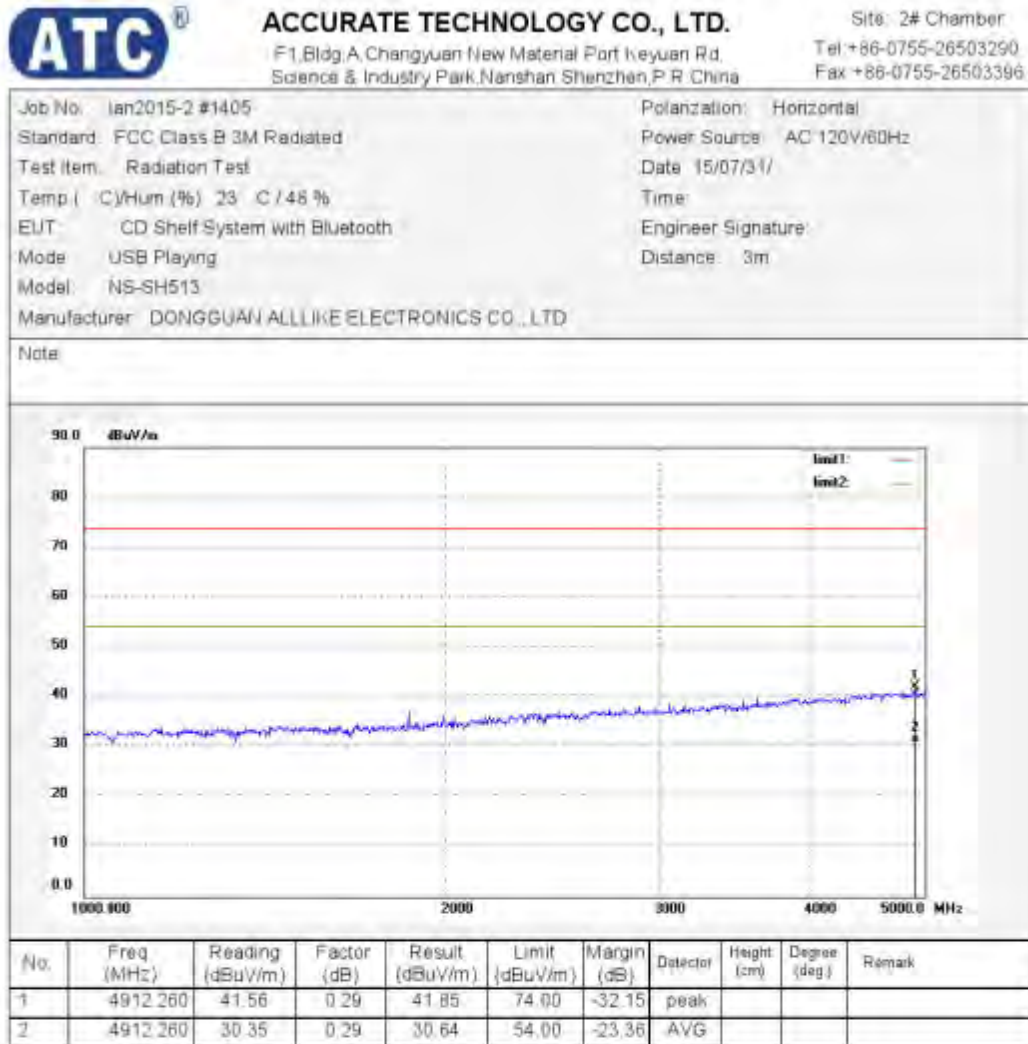
Distance: 3m

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	196.5098	46.85	-12.47	34.38	43.50	-9.12	QP			
2	547.0977	41.89	-3.70	38.19	46.00	-7.81	QP			
3	607.7886	42.85	-2.84	40.01	46.00	-5.99	QP			







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Job No.: ian2015-2 #1388

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp (C)/Hum (%) 23 C / 48 %

EUT: CD Shelf System with Bluetooth

Mode: FM 88.1MHz

Model: NS-SH513

Manufacturer: DONGGUAN ALLLIKE ELECTRONICS CO., LTD

Polarization: Horizontal

Power Source: AC 120V/60Hz

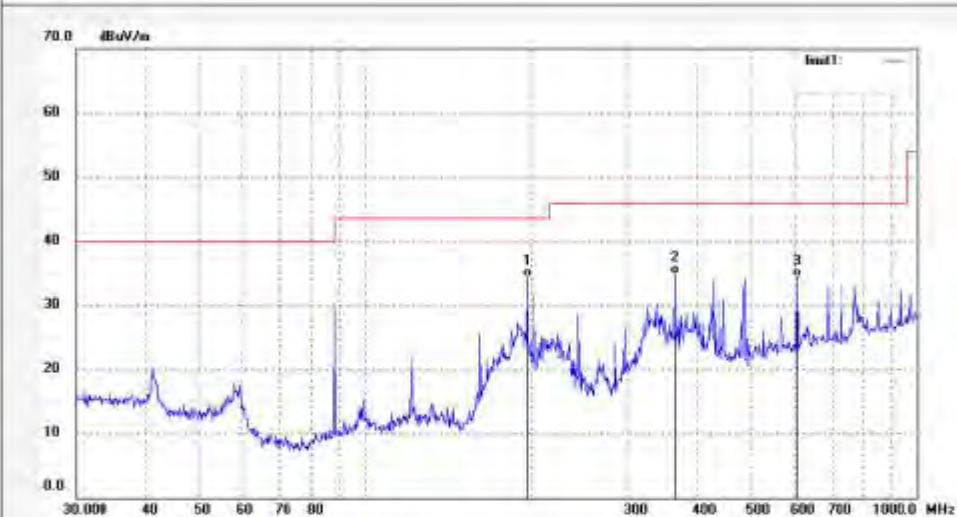
Date: 15/07/31/

Time:

Engineer Signature:

Distance: 3m

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	196.5098	47.87	-13.47	34.40	43.50	-9.10	QP			
2	364.2595	43.55	-8.67	34.88	46.00	-11.02	QP			
3	607.7886	38.28	-3.84	34.44	46.00	-11.56	QP			



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Job No.: Jan2015-2 #1389

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp (C)/Hum (%) 23 C / 48 %

EUT: CD Shelf System with Bluetooth

Mode: FM 88.1MHz

Model: NS-SH513

Manufacturer: DONGGUAN ALLLIKE ELECTRONICS CO., LTD

Polarization: Vertical

Power Source: AC 120V/60Hz

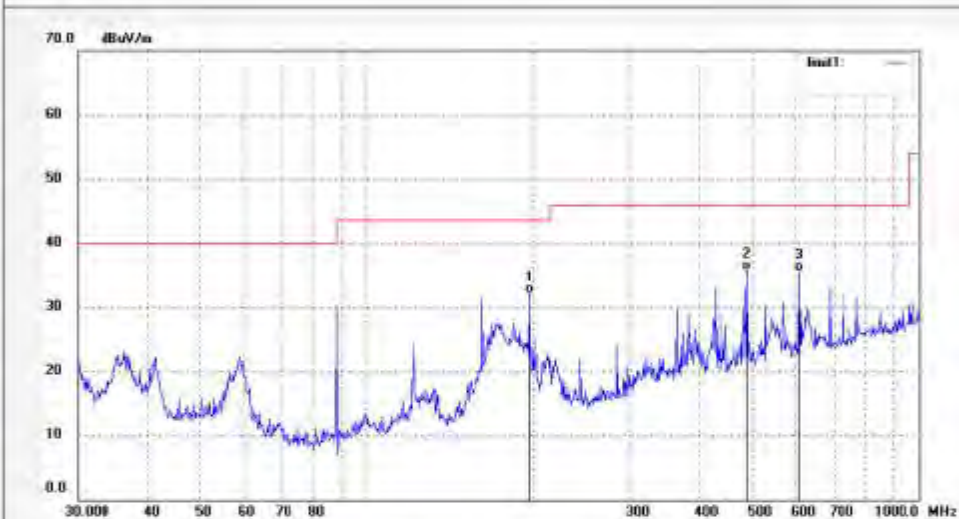
Date: 15/07/31/

Time:

Engineer Signature:

Distance: 3m

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	196.5098	45.54	-13.47	32.07	43.50	-11.43	QP			
2	487.3150	42.07	-6.23	35.84	46.00	-10.16	QP			
3	607.7886	39.47	-3.84	35.63	46.00	-10.37	QP			



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Job No.: ian2015-2 #1390

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp (C)/Hum (%) 23 C / 48 %

EUT: CD Shelf System with Bluetooth

Mode: FM 98.1MHz

Model: NS-SH513

Manufacturer: DONGGUAN ALLLIKE ELECTRONICS CO., LTD

Polarization: Vertical

Power Source: AC 120V/60Hz

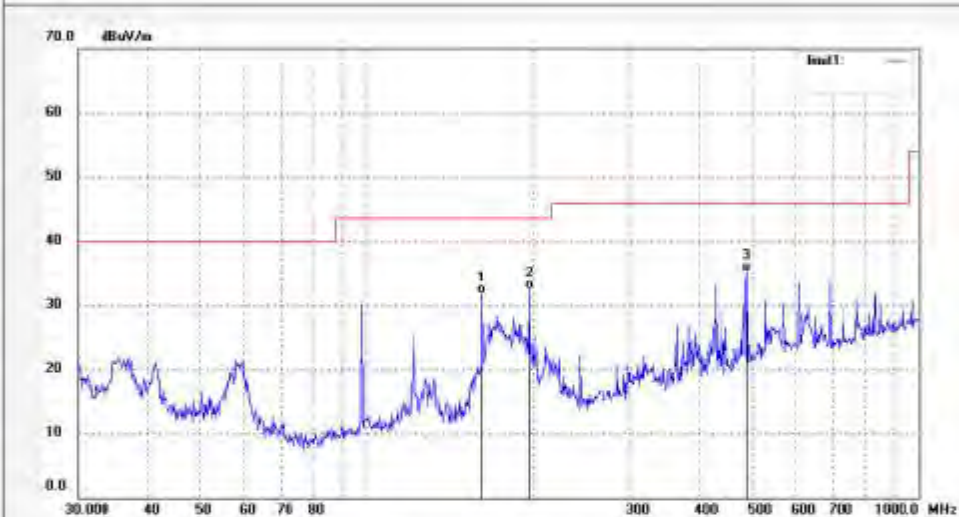
Date: 15/07/31/

Time:

Engineer Signature:

Distance: 3m

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	162.0414	47.25	-15.52	31.73	43.50	-11.77	QP			
2	196.5098	45.95	-13.47	32.48	43.50	-11.02	QP			
3	487.3150	41.50	-8.23	33.27	46.00	-12.73	QP			



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Job No.: Jan2015-2 #1391

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp (C)/Hum (%) 23 C / 48 %

EUT: CD Shelf System with Bluetooth

Mode: FM 98.1MHz

Model: NS-SH513

Manufacturer: DONGGUAN ALLLIKE ELECTRONICS CO., LTD

Polarization: Horizontal

Power Source: AC 120V/60Hz

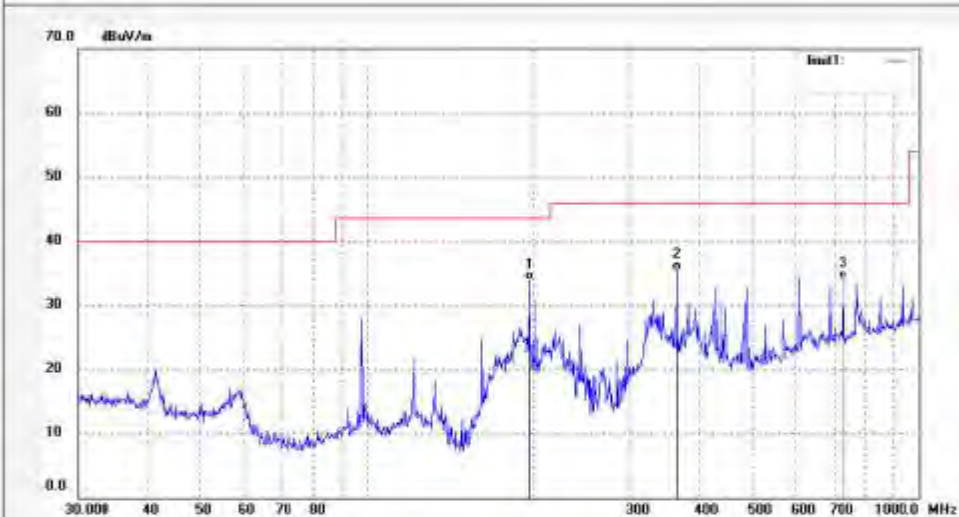
Date: 15/07/31/

Time:

Engineer Signature:

Distance: 3m

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	196.5098	47.28	-13.47	33.81	43.50	-9.69	QP			
2	364.2595	44.02	-8.67	35.35	46.00	-10.65	QP			
3	729.3582	36.46	-2.36	34.10	46.00	-11.90	QP			



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Job No.: Jan2015-2 #1392

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp (C)/Hum (%) 23 C / 48 %

EUT: CD Shelf System with Bluetooth

Mode: FM 107.9MHz

Model: NS-SH513

Manufacturer: DONGGUAN ALLLIKE ELECTRONICS CO., LTD

Polarization: Horizontal

Power Source: AC 120V/60Hz

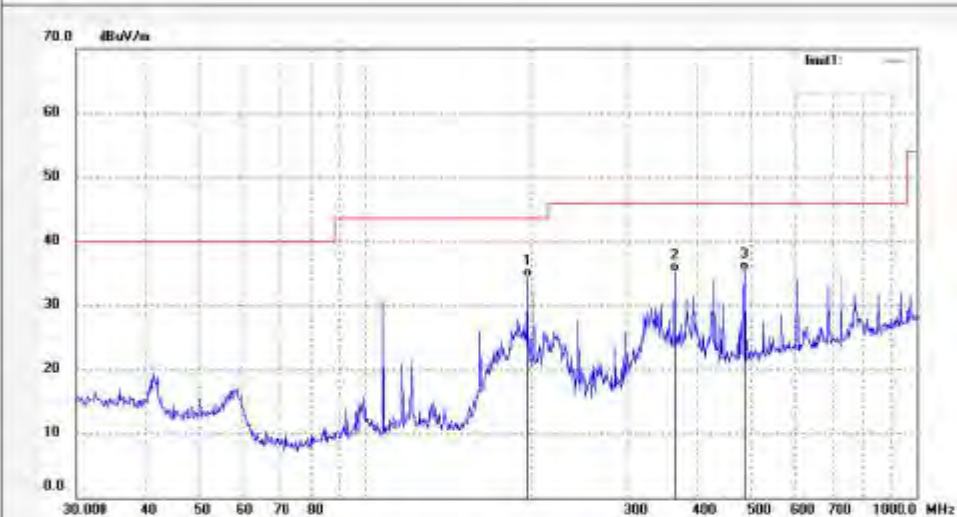
Date: 15/07/31/

Time:

Engineer Signature:

Distance: 3m

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	196.5098	47.88	-13.47	34.41	43.50	-9.09	QP			
2	364.2595	43.78	-8.67	35.21	46.00	-10.79	QP			
3	487.3150	41.64	-8.23	33.41	46.00	-10.59	QP			



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Job No.: Jan2015-2 #1393

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp (C)/Hum (%) 23 C / 48 %

EUT: CD Shelf System with Bluetooth

Mode: FM 107.9MHz

Model: NS-SH513

Manufacturer: DONGGUAN ALLLIKE ELECTRONICS CO., LTD

Polarization: Vertical

Power Source: AC 120V/60Hz

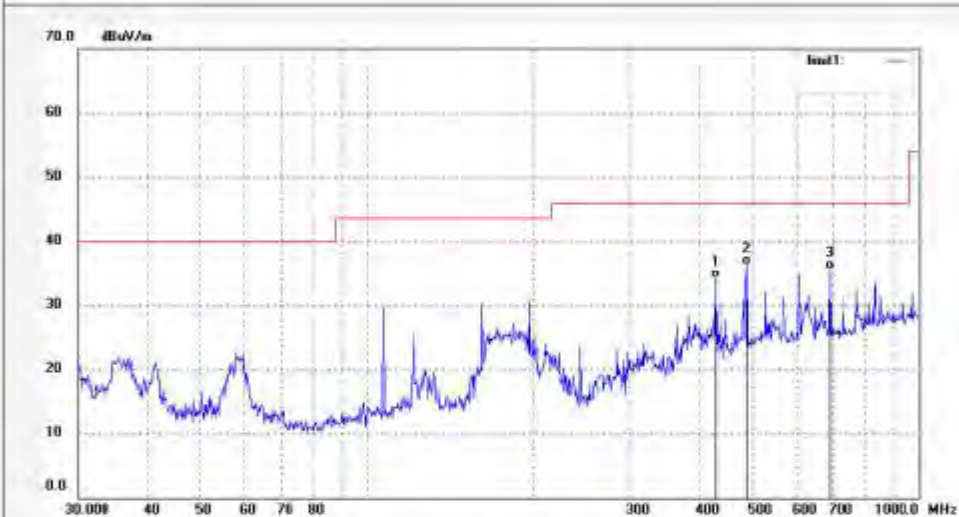
Date: 15/07/31/

Time:

Engineer Signature:

Distance: 3m

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	426.0192	41.28	-7.09	34.19	46.00	-11.81	QP			
2	487.3149	42.50	-6.23	36.27	46.00	-9.73	QP			
3	689.5643	38.54	-2.92	35.62	46.00	-10.38	QP			



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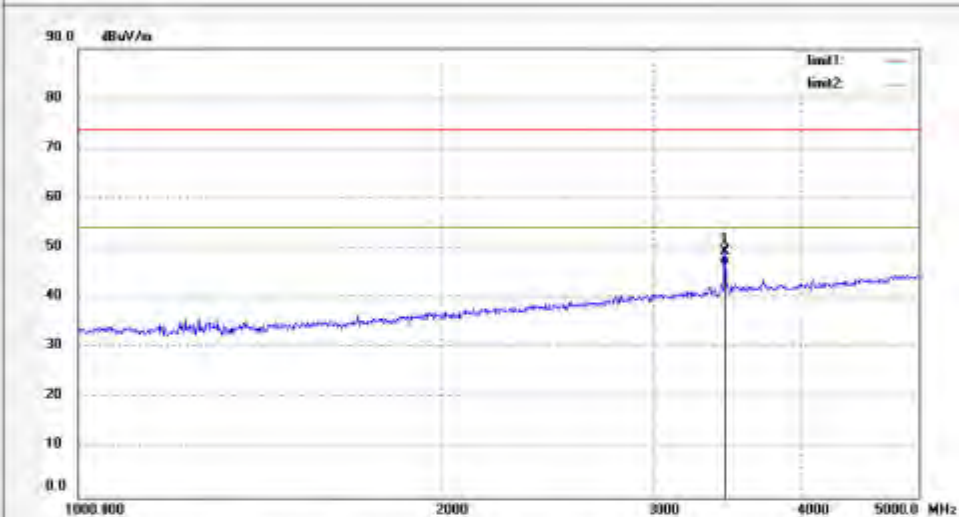
Site: 2# Chamber

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Job No.: Jan2015-2 #1394	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test Item: Radiation Test	Date: 15/07/31/
Temp.: C/Hum. (%) 23 °C / 45 %	Time:
EUT: CD Shelf System with Bluetooth	Engineer Signature:
Mode: FM 107.9MHz	Distance: 3m
Model: NS-SH513	
Manufacturer: DONGGUAN ALLLIKE ELECTRONICS CO.,LTD	

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	3453.077	52.60	-3.43	49.17	74.00	-24.83	peak			
2	3453.077	50.21	-3.43	46.78	54.00	-7.22	AVG			



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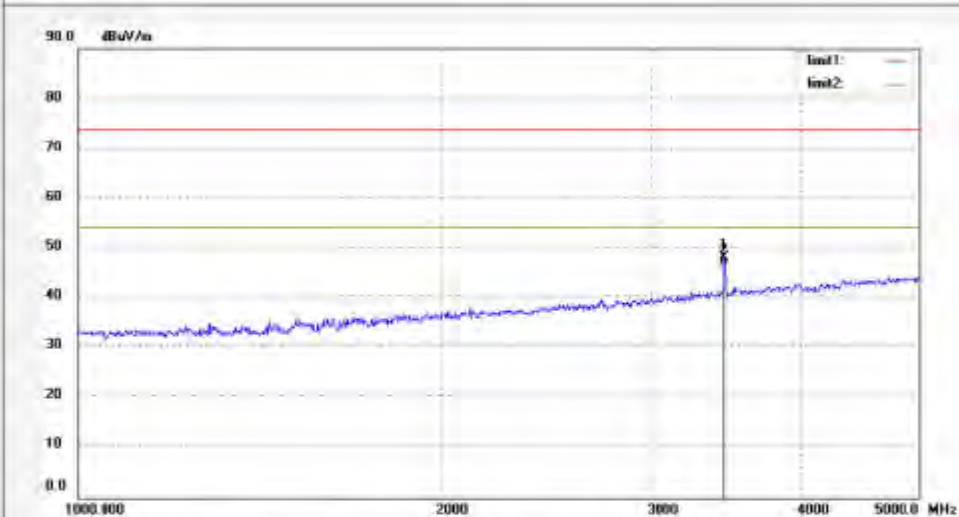
Site: 2# Chamber

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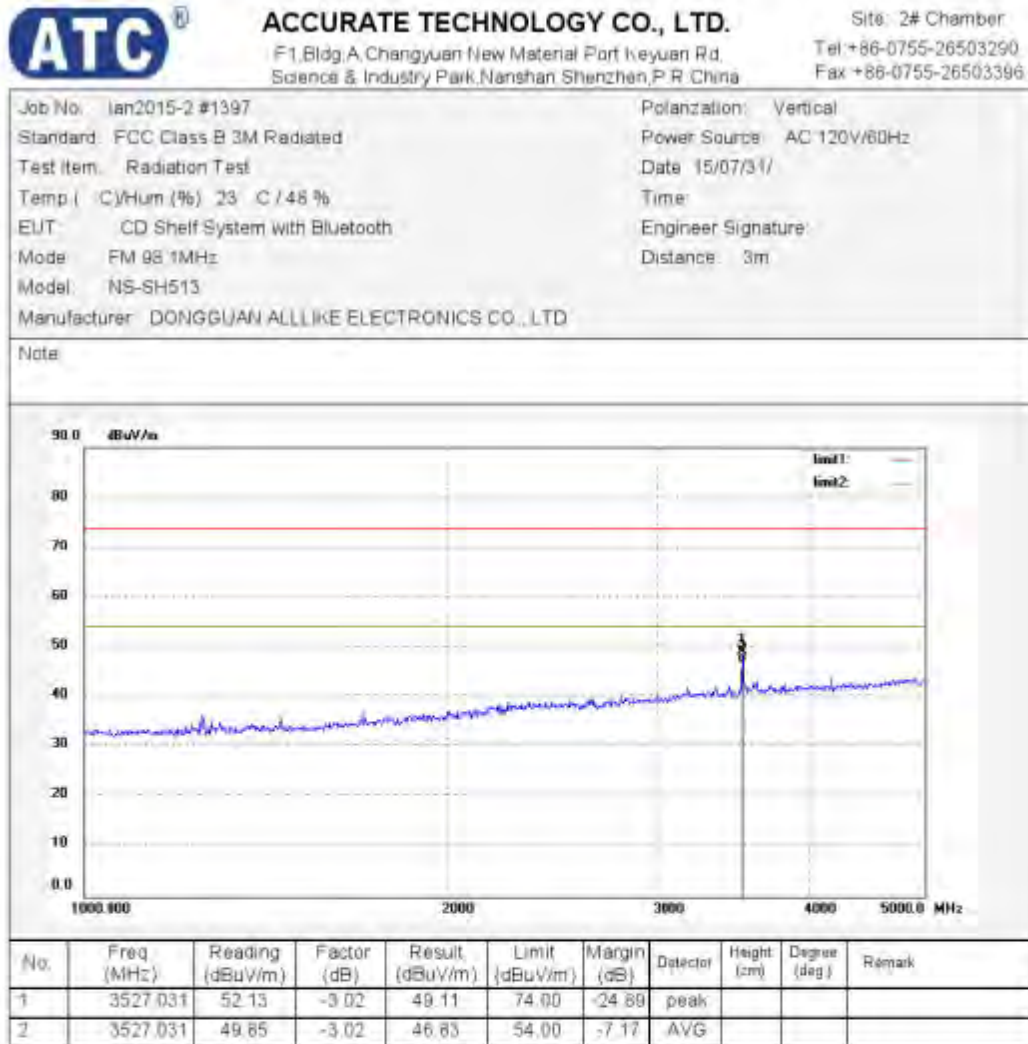
Job No: Jan2015-2 #1395	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz
Test Item: Radiation Test	Date: 15/07/31/
Temp: (C)/Hum: (%) 23 C / 45 %	Time:
EUT: CD Shelf System with Bluetooth	Engineer Signature:
Mode: FM 107.9MHz	Distance: 3m
Model: NS-SH513	
Manufacturer: DONGGUAN ALLLIKE ELECTRONICS CO.,LTD	

Note:



No.	Freq (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	3453.082	51.84	-3.47	48.37	74.00	-25.63	peak			
2	3453.082	49.85	-3.47	46.38	54.00	-7.62	AVG			







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Job No: Jan2015-2 #1398

Standard: FCC Class B 3M Radiated

Test Item: Radiation Test

Temp (C)/Hum (%) 23 C /45 %

EUT: CD Shelf System with Bluetooth

Mode: FM 88.1MHz

Model: NS-SH513

Manufacturer: DONGGUAN ALLLIKE ELECTRONICS CO.,LTD

Polarization: Vertical

Power Source: AC 120V/60Hz

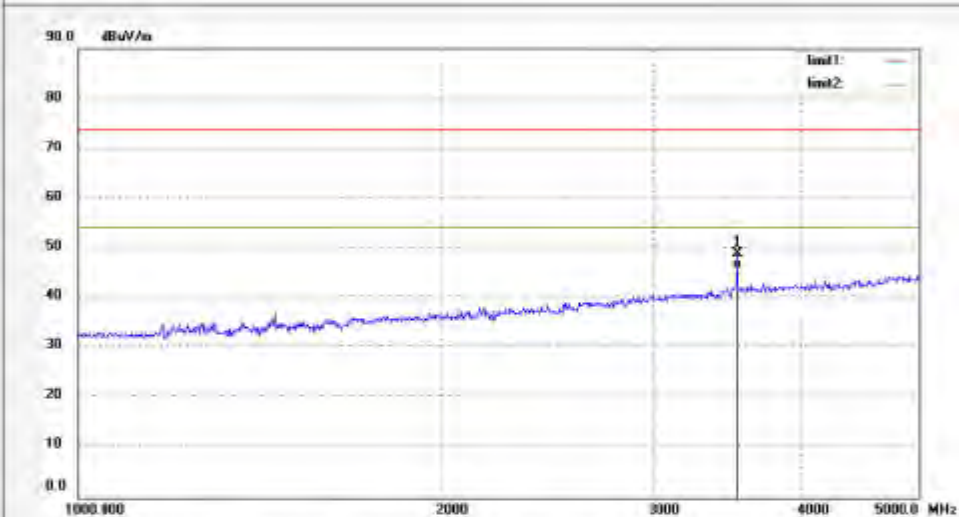
Date: 15/07/31/

Time:

Engineer Signature:

Distance: 3m

Note:



No.	Freq (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	3529.210	51.87	-3.01	48.86	74.00	-25.14	peak			
2	3529.210	46.96	-3.01	43.95	54.00	-10.05	AVG			



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Job No: Jan2015-2 #1399

Standard: FCC Class B 3M Radiated

Test Item: Radiation Test

Temp: (C)/Hum: (%) 23 C /45 %

EUT: CD Shelf System with Bluetooth

Mode: FM 88.1MHz

Model: NS-SH513

Manufacturer: DONGGUAN ALLLIKE ELECTRONICS CO.,LTD

Polarization: Horizontal

Power Source: AC 120V/60Hz

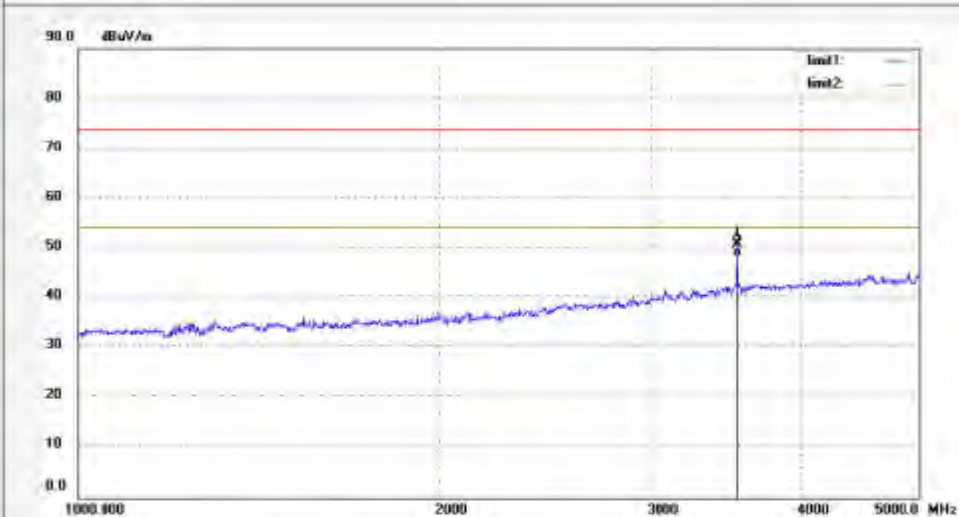
Date: 15/07/31/

Time:

Engineer Signature:

Distance: 3m

Note:



No.	Freq (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg)	Remark
1	3529.244	53.80	-3.01	50.79	74.00	-23.21	peak			
2	3529.244	51.23	-3.01	48.22	54.00	-5.78	AVG			