

FCC PART 15C TEST REPORT FOR CERTIFICATION
On Behalf of

INMUSIC BRANDS INC

Multimedia Player/Amplifier

Model Number: DN-350MP

Additional Model: DP27

FCC ID: Y4O-DP27

Prepared for:	INMUSIC BRANDS INC
200	SCENIC VIEW DRIVE, SUITE 201, CUMBERLAND, RI
02864, U.S.A.	
Prepared By:	EST Technology Co., Ltd.
	San Tun Management Zone, Houjie District, Dongguan, China
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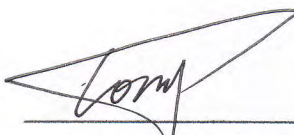
Report Number:	ESTE-R1706158
Date of Test:	May 11 ~ June 16, 2017
Date of Report:	June 30, 2017

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Test Report Verification

Applicant:	INMUSIC BRANDS INC		
Address:	200 SCENIC VIEW DRIVE, SUITE 201, CUMBERLAND, RI 02864, U.S.A.		
Manufacturer:	INMUSIC BRANDS INC		
Address:	200 SCENIC VIEW DRIVE, SUITE 201, CUMBERLAND, RI 02864, U.S.A.		
E.U.T:	Multimedia Player/Amplifier		
Model Number:	DN-350MP		
Additional Model:	DP27 Note: The two models have the same technical construction including circuit diagram, PCB Layout, components and component layout, all electrical construction and mechanical construction, except the different model number.		
Power Supply:	AC 100-240V ~ 50/60Hz		
Test Voltage:	AC 120V/60Hz AC 240V/60Hz		
Trade Name:	DENON PROFESSIONAL	Serial No.:	-----
Date of Receipt:	May 11, 2017	Date of Test:	May 11 ~ June 16, 2017
Test Specification:	FCC Rules and Regulations Part 15 Subpart C:2016 ANSI C63.10:2013		
Test Result:	The device described above is tested by EST Technology Co., Ltd. The measurement results were contained in this test report and EST Technology Co., Ltd. was assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT to be technically compliance with the FCC Rules and Regulations Part 15 Subpart C requirements. This report applies to above tested sample only and shall not be reproduced in part without written approval of EST Technology Co., Ltd. Date: June 30, 2017		
Prepared by:	Reviewed by:	Approved by:	
 _____ Amy / Assistant	 _____ Tony Tang / Engineer	 _____ Iceman Hu / Manager	
Other Aspects:	None.		
Abbreviations: OK/P=passed fail/F=failed n.a/N=not applicable E.U.T=equipment under tested			
This test report is based on a single evaluation of one sample of above mentioned products, It is not permitted to be duplicated in extracts without written approval of EST Technology Co., Ltd.			

1. GENERAL INFORMATION

1.1. Description of Device (EUT)

Product Name	:	Multimedia Player/Amplifier	
FCC ID	:	Y4O-DP27	
Model Number	:	DN-350MP	
Operation frequency	:	2402MHz~2480MHz	
Number of channel	:	79	40
Antenna	:	Antenna 1:External antenna , 3 dBi gain Antenna 2:External antenna , 3 dBi gain Note: The device has one BNC jack, and include two antennas for customers to choose one to use.	
Modulation	:	Dual-mode Bluetooth 4.0 BT BDR: GFSK BT EDR: $\pi/4$ -DQPSK BT EDR: 8-DPSK	Dual-mode Bluetooth 4.0 BLE: GFSK
Sample Type	:	Prototype production	

2. SUMMARY OF TEST

2.1. Summary of test result

Description of Test Item	Standard	Results
Power Line Conducted Emission	FCC Part 15: 15.207 ANSI C63.10:2013	PASS
Radiated Emission	FCC Part 15: 15.209 ANSI C63.10:2013 KDB 558074	PASS
Band Edge Compliance	FCC Part 15: 15.247 ANSI C63.10:2013 KDB 558074	PASS
6dB Bandwidth	FCC Part 15: 15.247 ANSI C63.10:2013 KDB 558074	PASS
Peak Output Power	FCC Part 15: 15.247 ANSI C63.10:2013 KDB 558074	PASS
Power Spectral Density	FCC Part 15: 15.247 ANSI C63.10:2013 KDB 558074	PASS
Antenna requirement	FCC Part 15: 15.203	PASS
Note: KDB 558074 D01 DTS Meas Guidance v04		

2.2. Test Facilities

EMC Lab : Certificated by CNAL, CHINA
 Registration No.: L5288
 Date of registration: December 07, 2015

 Certificated by FCC, USA
 Registration No.: 989591
 Date of registration: November 15, 2016

 Certificated by Industry Canada
 Registration No.: 9405A-1
 Date of registration: December 30, 2015

 Certificated by VCCI, Japan
 Registration No.: R-3663 & C-4103
 Date of registration: July 25, 2011

 Certificated by TUV Rheinland, Germany
 Registration No.: UA 50195514 0001
 Date of registration: January 07, 2011

 Certificated by TUV/PS, Shenzhen
 Registration No.: SCN1017
 Date of registration: January 27, 2011

 Certificated by Intertek ETL SEMKO
 Registration No.: 2011-RTL-L1-18
 Date of registration: April 28, 2011

 Certificated by Siemic, Inc.
 Registration No.: SLCN021
 Date of registration: November 8, 2011

 Certificated by Nemko, Hong Kong
 Registration No.: 175193
 Date of registration: May 4, 2011

Name of Firm : EST Technology Co., Ltd.

Site Location : San Tun Management Zone, Houjie Town, Dongguan,
Guangdong, China

2.3. Measurement uncertainty

Test Item	Uncertainty
Uncertainty for Conduction emission test	2.54dB
Uncertainty for Radiation Emission test (30MHz-1GHz)	3.62
Uncertainty for Radiation Emission test (1GHz to 18GHz)	4.86
Uncertainty for radio frequency	7×10^{-8}
Uncertainty for conducted RF Power	0.20dB
Uncertainty for Power density test	0.26dB

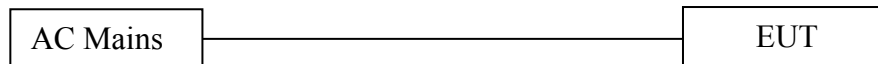
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

2.4. Assistant equipment used for test

2.4.1. N/A

2.5. Block Diagram

For radiated emissions test: EUT was placed on a turn table, which is 0.8 (or 1.5) meter high above ground. EUT was be set into Bluetooth test mode by software before test.



(EUT: Multimedia Player/Amplifier)

2.6. Test mode

A special test software was used to control EUT work in Continuous TX mode(100% duty cycle), and select test channel, wireless mode and data rate.

Mode Channel		Frequency
BT 4.0-BLE GFSK	Low 2402MHz	
	Middle 2440MHz	
	High 2480MHz	

2.7. Channel List for Bluetooth

Channel No.	Frequency (MHz)	Channel No.	Frequency (MHz)
1	2402	2	2404
3	2406	4	2408
5	2410	6	2412
7	2414	8	2416
9	2418	10	2420
11	2422	12	2424
13	2426	14	2428
15	2430	16	2432
17	2434	18	2436
19	2438	20	2440
21	2442	22	2444
23	2446	24	2448
25	2450	26	2452
27	2454	28	2456
29	2458	30	2460
31	2462	32	2464
33	2466	34	2468
35	2470	36	2472
37	2474	38	2476
39	2478	40	2480

2.8. Test Equipment

2.8.1. For conducted emission test

Equipment Manufacturer		Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde & Schwarz	ESHS30	832354	June 25,16	1 Year
Artificial Mains Networ	Rohde & Schwarz EN	V216	101260	June 25,16	1 Year
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	101100	June 25,16	1 Year

2.8.2. For radiated emission test(9 kHz-30MHz)

Equipment Manufacturer		Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde & Schwarz	ESCI	100435	June 25,16	1 Year
Loop Antenna	ETS-LINDGREN	6502 00071730		June 25,16	3 Year
RF Cable	MIYAZAKI	5D-2W 966	Chamber No.1	June 25,16	1 Year

2.8.3. For radiated emissions test (30-1000MHz)

Equipment Manufacturer		Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde & Schwarz	ESVS10	100004	June 25,16	1 Year
Spectrum Analyzer	Agilent	E4411B	MY50140697	June 25,16	1 Year
Bilog Antenna	Teseq	CBL 6111D	27090	June 28,15	3 Year
Signal Amplifier	Agilent	310N	187037	June 25,16	1 Year
RF Cable	MIYAZAKI	5D-2W 966	Chamber No.1	June 25,16	1 Year

2.8.4. For radiated emission test(above 1GHz)

Equipment Manufacturer		Model No.	Serial No.	Last Cal.	Next Cal.
Horn Antenna	SCHWARZB ECK	BBHA 9120 D	BBHA9120D1 002	June 28,15	3 Year
Board-Band Horn Antenna	SCHWARZB ECK	BBHA 9170	9170-497	June 28,15	3Year
Signal Amplifier	SCHWARZB ECK	BBV9718 9718	-212	June 25,16	1 Year
Spectrum Analyzer	Agilent	E4408B	MY44211139	June 25,16	1 Year
Spectrum Analyzer	Rohde &Schwarz	FSV 103173		June 25,16	1 Year
RF Cable	Hubersuhner	RG 214/U	513423	June 25,16	1 Year

3 POWER LINE CONDUCTED EMISSION TEST

3.1 Limit

Frequency	Maximum RF Line Voltage	
	Quasi-Peak Level dB(μ V)	Average Level dB(μ V)
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*
500kHz ~ 5MHz	56	46
5MHz ~ 30MHz	60	50

Notes: 1. * Decreasing linearly with logarithm of frequency.

2. The lower limit shall apply at the transition frequencies.

3.2 Test Procedure

The EUT was placed on a non-metallic table, 80cm above the ground plane. The EUT Power is connected to the power mains through a line impedance stabilization network (L.I.S.N. 1#). This provides a 50 ohm coupling impedance for the EUT (Please refer the block diagram of the test setup and photographs). The AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.10: 2013 on Conducted Emission Test.

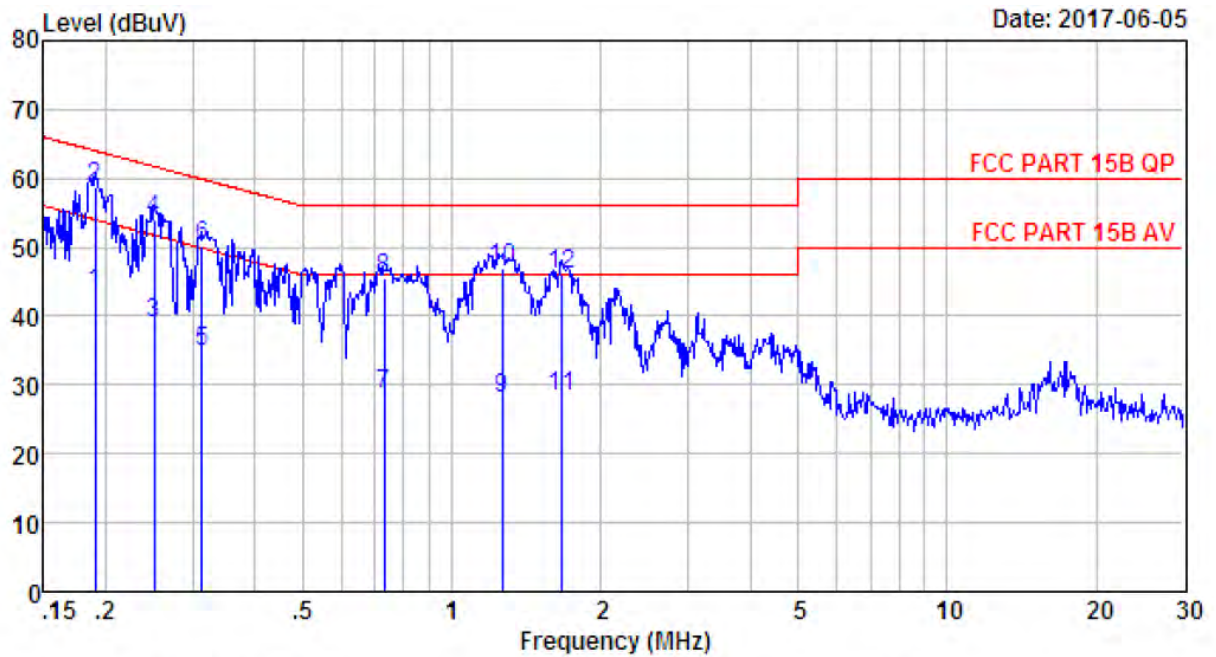
The bandwidth of test receiver (R & S ESHS30) is set at 10kHz.

The frequency range from 150kHz to 30MHz is checked.

3.3. Test Result

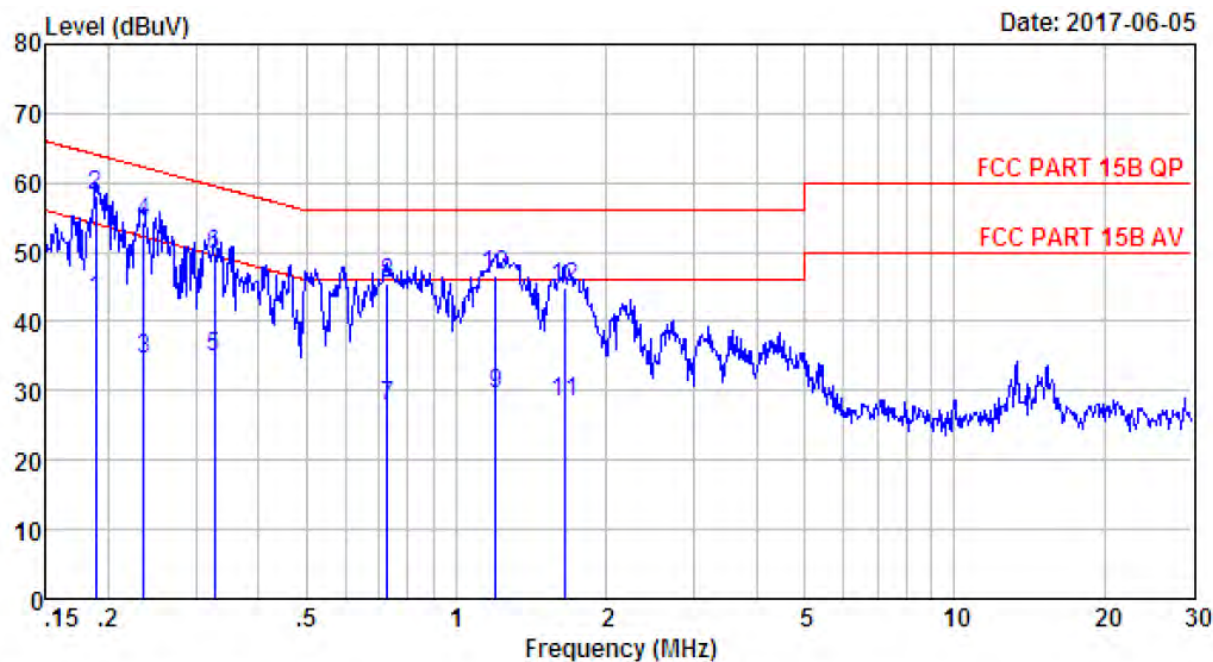
PASS. (All emissions not reported below are too low against the prescribed limits.)

3.4. Test data



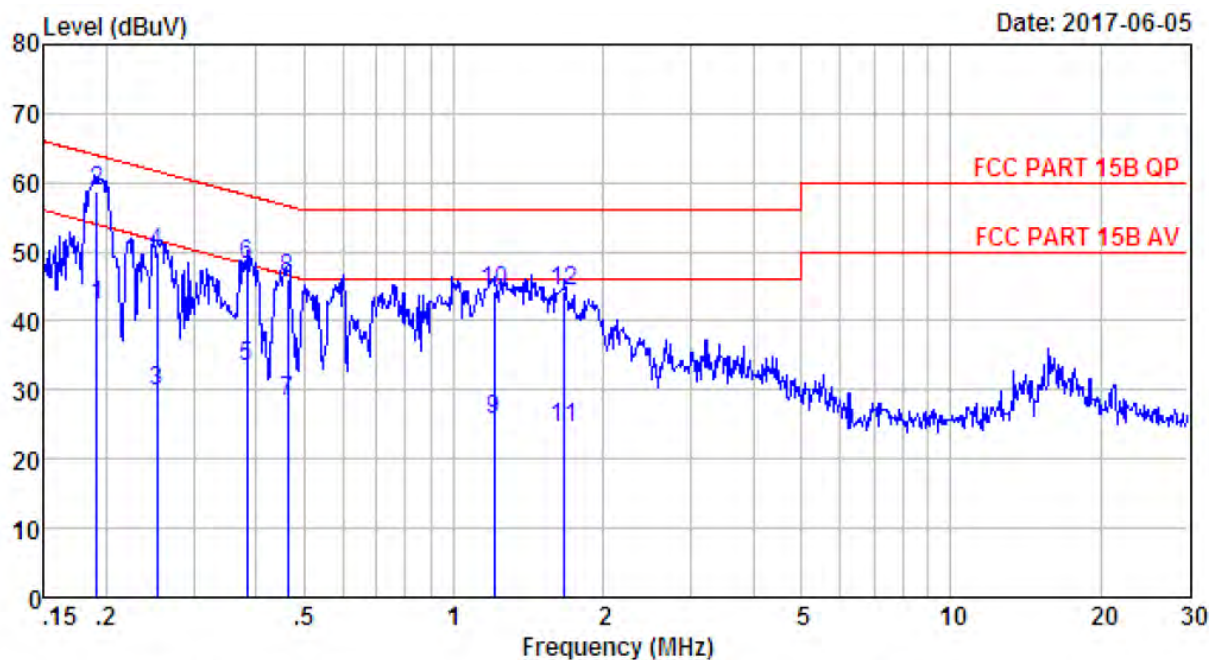
Site no : 844 Shield Room Data no. : 829
 Env. / Ins. : Temp:24.3'C Humi:58% Press:101.50kPa LINE Phase : NEUTRAL
 Limit : FCC PART 15B QP
 Engineer : Tony
 EUT : Multimedia Player/Amplifier
 Power : AC 240V/60Hz
 M/N : DN-350MP
 Test Mode : TX Mode

	Freq. (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.19	9.58	9.80	23.97	43.35	54.02	10.67	Average
2	0.19	9.58	9.80	39.51	58.89	64.02	5.13	QP
3	0.25	9.60	9.82	19.49	38.91	51.73	12.82	Average
4	0.25	9.60	9.82	34.63	54.05	61.73	7.68	QP
5	0.31	9.60	9.83	15.42	34.85	49.88	15.03	Average
6	0.31	9.60	9.83	30.74	50.17	59.88	9.71	QP
7	0.73	9.63	9.81	9.13	28.57	46.00	17.43	Average
8	0.73	9.63	9.81	26.13	45.57	56.00	10.43	QP
9	1.26	9.61	9.83	8.67	28.11	46.00	17.89	Average
10	1.26	9.61	9.83	27.64	47.08	56.00	8.92	QP
11	1.66	9.62	9.83	8.97	28.42	46.00	17.58	Average
12	1.66	9.62	9.83	26.72	46.17	56.00	9.83	QP



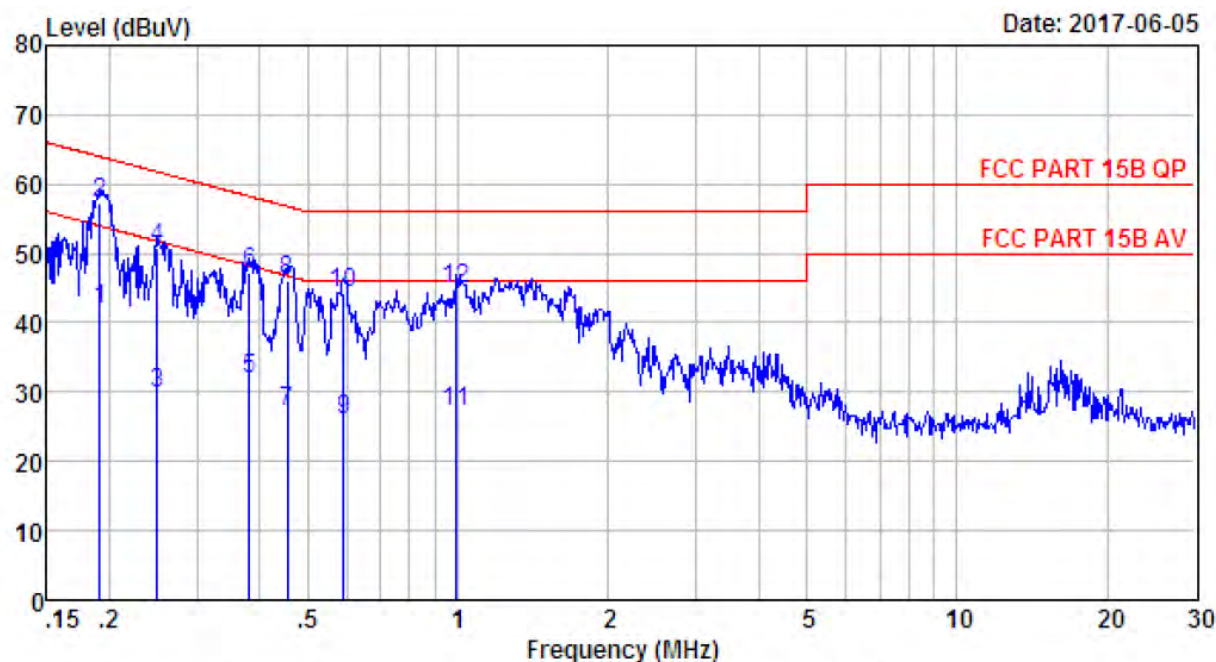
Site no : 844 Shield Room Data no. : 831
 Env. / Ins. : Temp:24.3'C Humi:58% Press:101.50kPa LINE Phase : LINE
 Limit : FCC PART 15B QP
 Engineer : Tony
 EUT : Multimedia Player/Amplifier
 Power : AC 240V/60Hz
 M/N : DN-350MP
 Test Mode : TX Mode

	Freq. (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.19	9.61	9.80	23.57	42.98	54.11	11.13	Average
2	0.19	9.61	9.80	38.66	58.07	64.11	6.04	QP
3	0.24	9.61	9.82	15.25	34.68	52.26	17.58	Average
4	0.24	9.61	9.82	34.98	54.41	62.26	7.85	QP
5	0.33	9.61	9.83	15.36	34.80	49.53	14.73	Average
6	0.33	9.61	9.83	30.20	49.64	59.53	9.89	QP
7	0.73	9.59	9.81	8.45	27.85	46.00	18.15	Average
8	0.73	9.59	9.81	26.11	45.51	56.00	10.49	QP
9	1.20	9.63	9.82	10.18	29.63	46.00	16.37	Average
10	1.20	9.63	9.82	27.17	46.62	56.00	9.38	QP
11	1.64	9.62	9.83	8.85	28.30	46.00	17.70	Average
12	1.64	9.62	9.83	25.54	44.99	56.00	11.01	QP



Site no : 844 Shield Room Data no. : 833
 Env. / Ins. : Temp:24.3'C Humi:58% Press:101.50kPa LINE Phase : LINE
 Limit : FCC PART 15B QP
 Engineer : Tony
 EUT : Multimedia Player/Amplifier
 Power : AC 120V/60Hz
 M/N : DN-350MP
 Test Mode : TX Mode

	Freq. (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.19	9.61	9.80	22.67	42.08	53.98	11.90	Average
2	0.19	9.61	9.80	39.46	58.87	63.98	5.11	QP
3	0.25	9.61	9.82	10.25	29.68	51.64	21.96	Average
4	0.25	9.61	9.82	30.36	49.79	61.64	11.85	QP
5	0.38	9.61	9.82	13.80	33.23	48.21	14.98	Average
6	0.38	9.61	9.82	28.77	48.20	58.21	10.01	QP
7	0.46	9.61	9.81	8.93	28.35	46.63	18.28	Average
8	0.46	9.61	9.81	26.64	46.06	56.63	10.57	QP
9	1.20	9.63	9.82	6.21	25.66	46.00	20.34	Average
10	1.20	9.63	9.82	24.91	44.36	56.00	11.64	QP
11	1.67	9.62	9.83	4.92	24.37	46.00	21.63	Average
12	1.67	9.62	9.83	24.74	44.19	56.00	11.81	QP



Site no : 844 Shield Room Data no. : 835
 Env. / Ins. : Temp:24.3'C Humi:58% Press:101.50kPa LINE Phase : NEUTRAL
 Limit : FCC PART 15B QP
 Engineer : Tony
 EUT : Multimedia Player/Amplifier
 Power : AC 120V/60Hz
 M/N : DN-350MP
 Test Mode : TX Mode

	Freq. (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBUV)	Emission Level (dBUV)	Limits (dBUV)	Margin (dB)	Remark
1	0.19	9.58	9.80	22.57	41.95	53.98	12.03	Average
2	0.19	9.58	9.80	37.93	57.31	63.98	6.67	QP
3	0.25	9.60	9.82	10.49	29.91	51.78	21.87	Average
4	0.25	9.60	9.82	31.21	50.63	61.78	11.15	QP
5	0.38	9.59	9.82	12.51	31.92	48.25	16.33	Average
6	0.38	9.59	9.82	27.87	47.28	58.25	10.97	QP
7	0.45	9.59	9.81	7.83	27.23	46.80	19.57	Average
8	0.45	9.59	9.81	26.68	46.08	56.80	10.72	QP
9	0.59	9.61	9.82	6.49	25.92	46.00	20.08	Average
10	0.59	9.61	9.82	24.98	44.41	56.00	11.59	QP
11	0.99	9.61	9.83	7.81	27.25	46.00	18.75	Average
12	0.99	9.61	9.83	25.49	44.93	56.00	11.07	QP

4 RADIATED EMISSION TEST

4.1 Limit

4.1.1 15.209 limits

Frequency (MHz)	Field strength ($\mu\text{V/m}$)	Distance (m)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

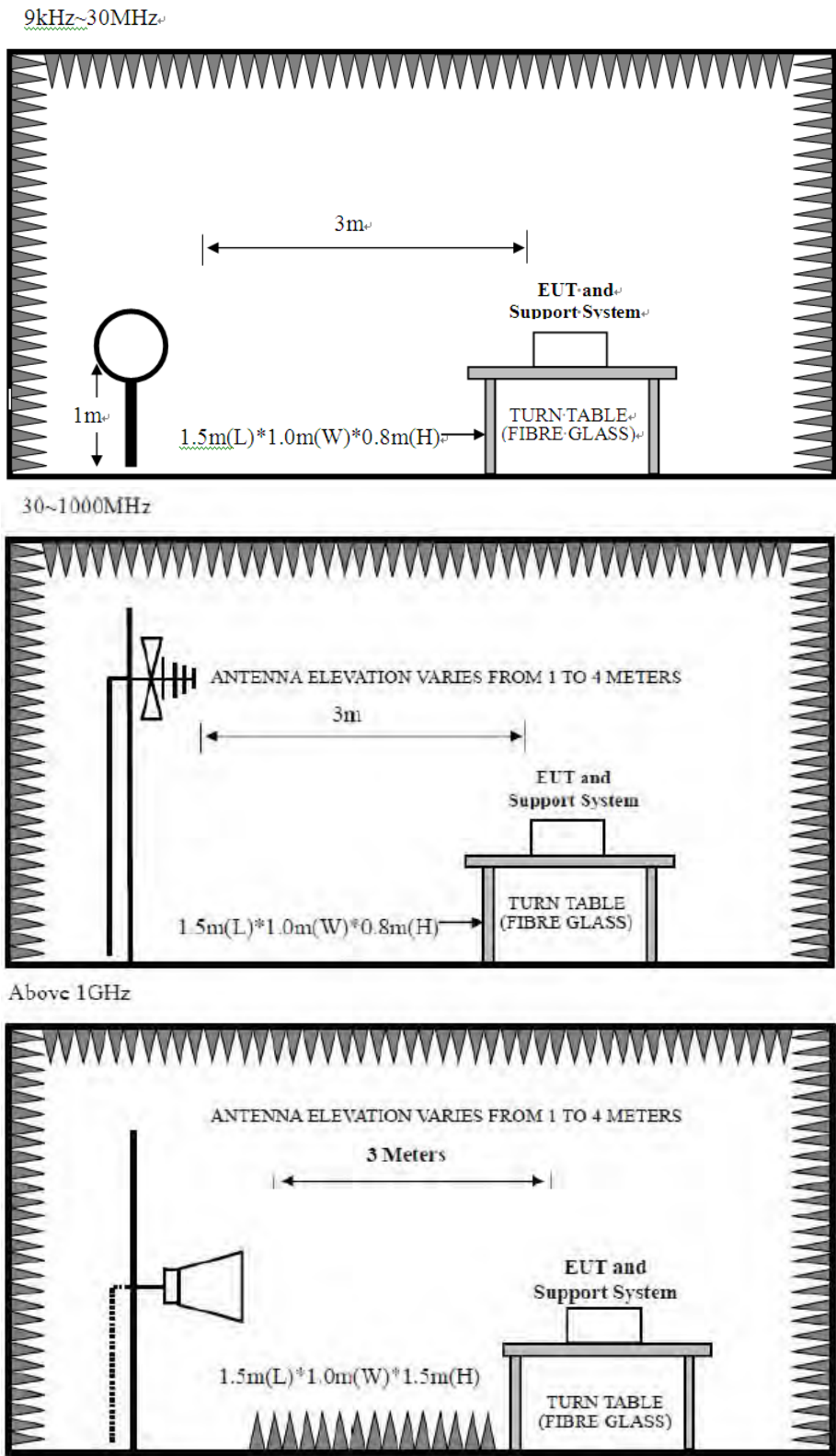
- Remark : (1) Emission level $\text{dB}\mu\text{V} = 20 \log \text{Emission level } \mu\text{V/m}$
 (2) The smaller limit shall apply at the cross point between two frequency bands.
 (3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

4.1.2 15.205 Restricted bands of operation

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(²)

All the emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

4.2. Block Diagram of Test setup



4.3. Test Procedure

EUT was placed on a turn table, which is 0.8 meter high above ground for 9kHz~1000MHz test, and which is 1.5 meter high above ground for above 1GHz test. The turn table can rotate 360 degrees to determine the position of the maximum emission level. Power on the EUT and let it working in test mode, then test it. EUT is set 3 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1 meter and 4 meters to find out the maximum emission level. Both horizontal and vertical polarization of the antenna are set on test.

The test frequency analyzer system was set to Peak Detect (300Hz RBW in 9kHz to 150kHz and 10kHz RBW in 150kHz to 30MHz) Function and Specified Bandwidth with Maximum Hold Mode.

The bandwidth of the EMI test receiver (R&S ESVS10) is set at 120kHz for frequency range from 30MHz to 1000 MHz.

The bandwidth of the Spectrum 's VBW is set at 1MHz and RBW is set at 1MHz for peak emissions measurement above 1GHz and 1MHz RBW, 10Hz VBW for average emissions measure above 1GHz

PEAK detector, 1MHz/1MHz for PAEK measurement,

PEAK detector, 1MHz/10Hz for Average measurement

The frequency range from 30MHz to 10th harmonic (25GHz) are checked.

4.4. Test Result

PASS.

All the emissions from 30MHz to 25 GHz were comply with 15.209 limits.

Note: 1、 For emissions above 1GHz, if peak level comply with average limit, then the average level is deemed to comply with average limit.

- 2、 The frequency 2402MHz 、 2440MHz and 2480 MHz is fundamental frequency which no limit, the limit on plots is automatically generated by the software, it's not fundamental limit, we can't remove it.

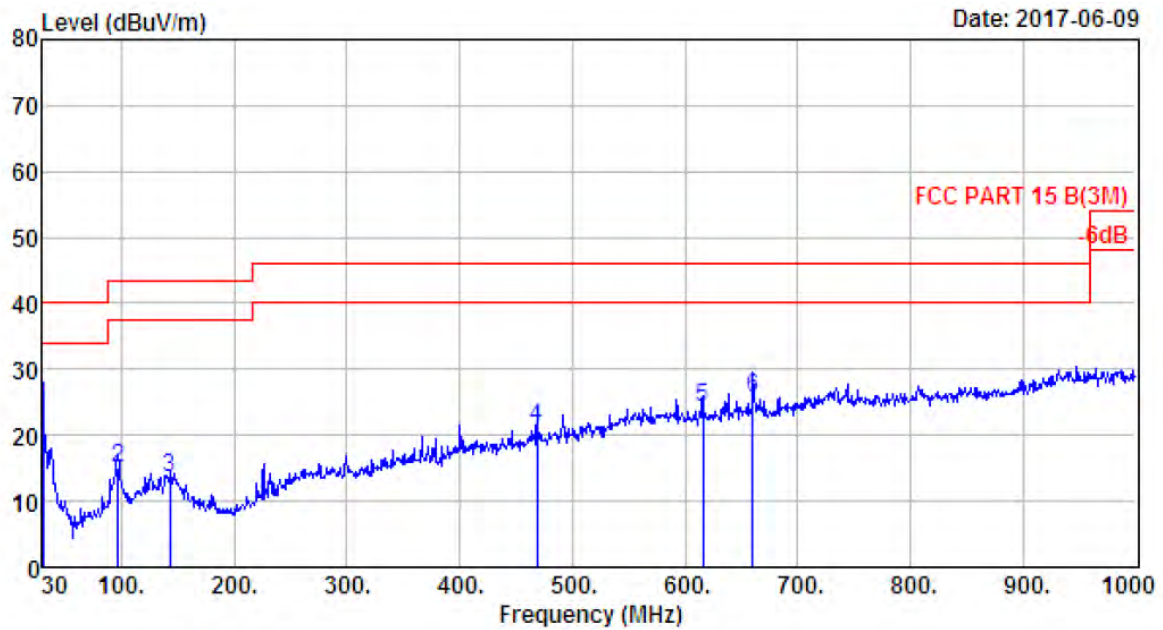
4.5. Test Data

9 kHz – 30 MHz

Pass

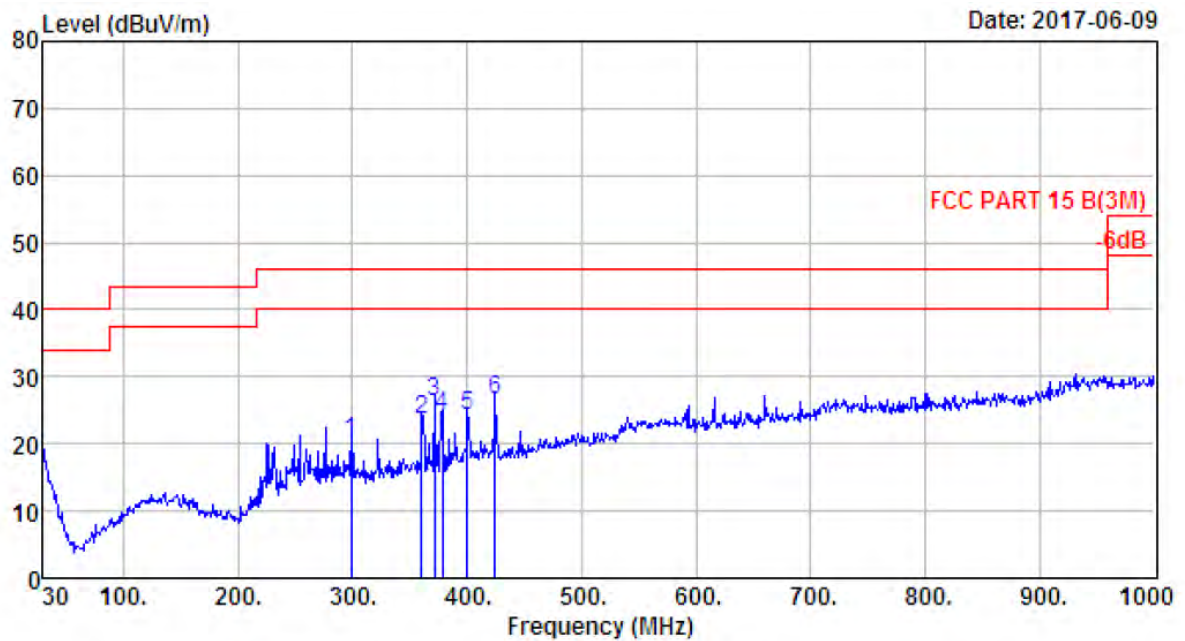
Note: The amplitude of spurious emission that is attenuated by more than 20dB below the permissible limit has no need to be reported.

30-1000 MHz



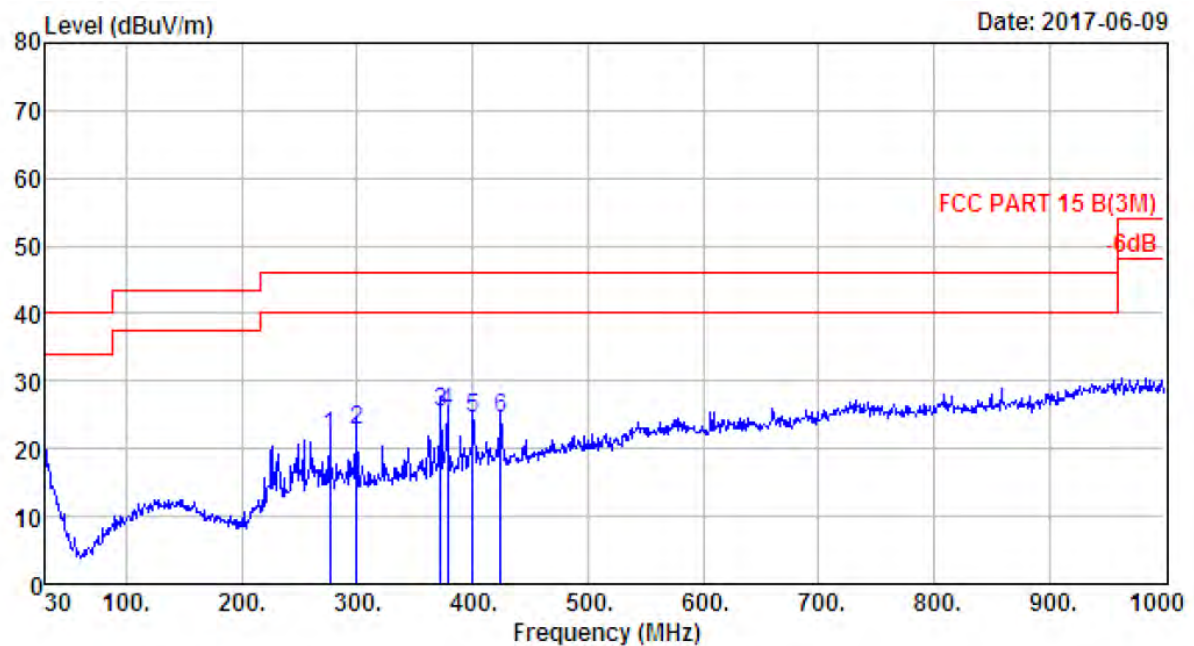
Site no. : 1# 966 Chamber Data no. : 375
 Dis. / Ant. : 3m 27137 Ant. pol. : VERTICAL
 Limit : FCC PART 15 B(3M)
 Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
 Engineer : Tony
 EUT : Multimedia Player/Amplifier
 Power : AC 120V/60Hz
 M/N : DN-350MP
 Test Mode : GFSK TX 2402MHz
 Antenna 1

	Freq. (MHz)	ANT Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	30.000	18.51	0.65	5.39	24.55	40.00	15.45	QP
2	96.930	8.92	1.33	4.83	15.08	43.50	28.42	QP
3	142.520	11.33	1.53	0.61	13.47	43.50	30.03	QP
4	468.440	17.14	3.09	1.00	21.23	46.00	24.77	QP
5	615.880	19.97	3.49	0.66	24.12	46.00	21.88	QP
6	660.500	20.07	3.57	1.95	25.59	46.00	20.41	QP



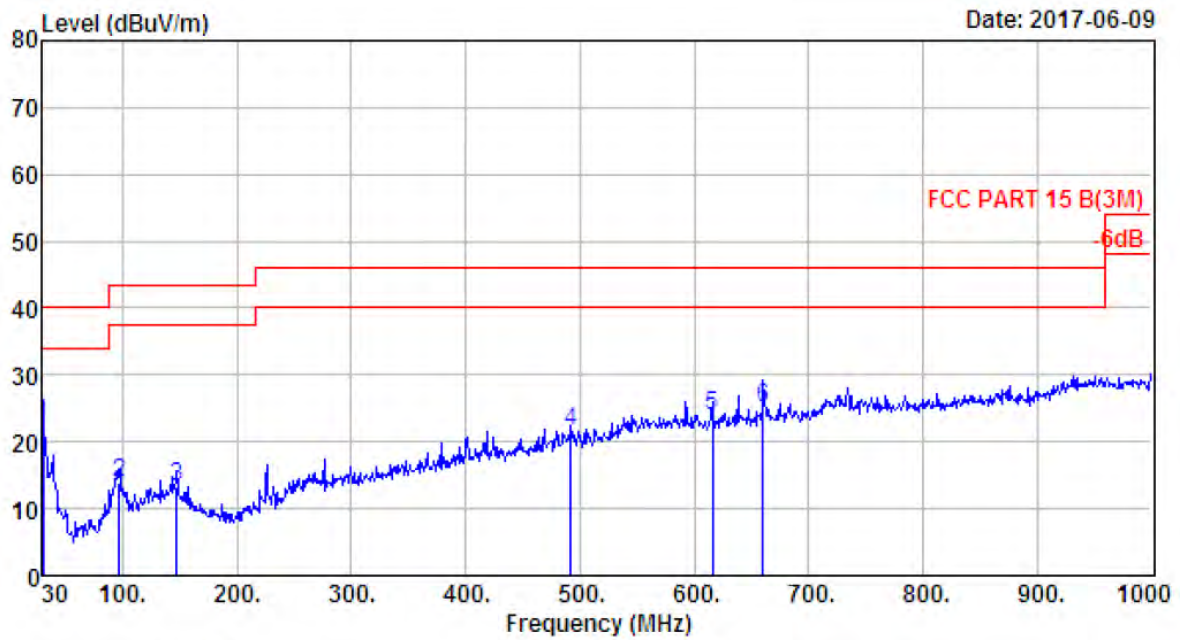
Site no. : 1# 966 Chamber Data no. : 376
 Dis. / Ant. : 3m 27137 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 B(3M)
 Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
 Engineer : Tony
 EUT : Multimedia Player/Amplifier
 Power : AC 120V/60Hz
 M/N : DN-350MP
 Test Mode : GFSK TX 2402MHz
 Antenna 1

	Freq. (MHz)	ANT Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	298.690	13.00	2.40	4.99	20.39	46.00	25.61	QP
2	360.770	14.49	2.61	6.46	23.56	46.00	22.44	QP
3	371.440	14.89	2.67	8.78	26.34	46.00	19.66	QP
4	378.230	14.98	2.62	6.56	24.16	46.00	21.84	QP
5	400.540	16.07	2.66	5.55	24.28	46.00	21.72	QP
6	424.790	16.18	2.79	7.73	26.70	46.00	19.30	QP



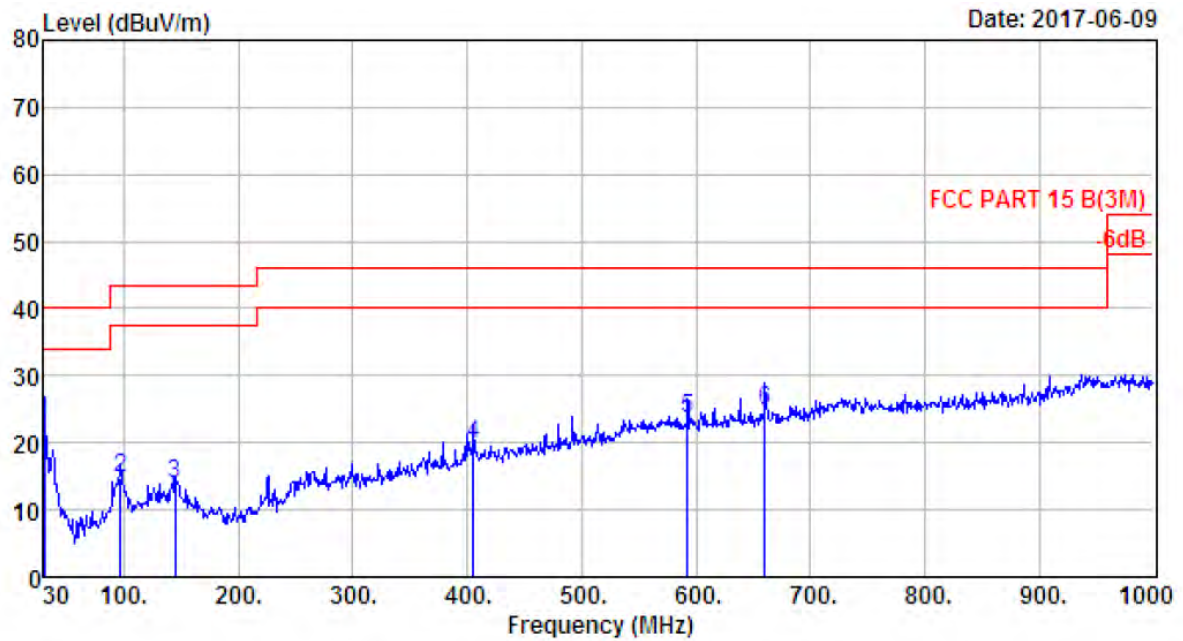
Site no. : 1# 966 Chamber Data no. : 377
 Dis. / Ant. : 3m 27137 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 B(3M)
 Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
 Engineer : Tony
 EUT : Multimedia Player/Amplifier
 Power : AC 120V/60Hz
 M/N : DN-350MP
 Test Mode : GFSK TX 2440MHz
 Antenna 1

	Freq. (MHz)	ANT Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	276.380	12.36	2.26	7.24	21.86	46.00	24.14	QP
2	299.660	13.01	2.38	7.30	22.69	46.00	23.31	QP
3	372.410	14.90	2.70	7.89	25.49	46.00	20.51	QP
4	378.230	14.98	2.62	7.72	25.32	46.00	20.68	QP
5	400.540	16.07	2.66	5.70	24.43	46.00	21.57	QP
6	424.790	16.18	2.79	5.66	24.63	46.00	21.37	QP



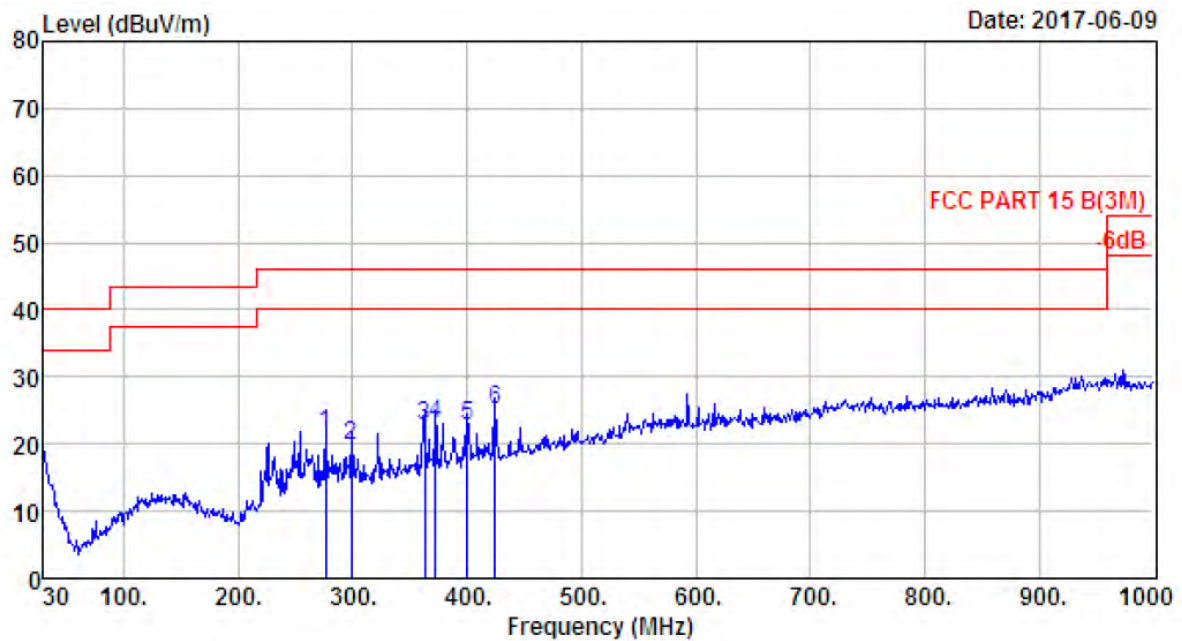
Site no. : 1# 966 Chamber Data no. : 378
 Dis. / Ant. : 3m 27137 Ant. pol. : VERTICAL
 Limit : FCC PART 15 B(3M)
 Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
 Engineer : Tony
 EUT : Multimedia Player/Amplifier
 Power : AC 120V/60Hz
 M/N : DN-350MP
 Test Mode : GFSK TX 2440MHz
 Antenna 1

	Freq. (MHz)	ANT Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	30.000	18.51	0.65	3.58	22.74	40.00	17.26	QP
2	96.930	8.92	1.33	3.76	14.01	43.50	29.49	QP
3	147.370	11.08	1.64	0.58	13.30	43.50	30.20	QP
4	491.720	17.82	3.12	0.50	21.44	46.00	24.56	QP
5	615.880	19.97	3.49	0.51	23.97	46.00	22.03	QP
6	660.500	20.07	3.57	1.51	25.15	46.00	20.85	QP



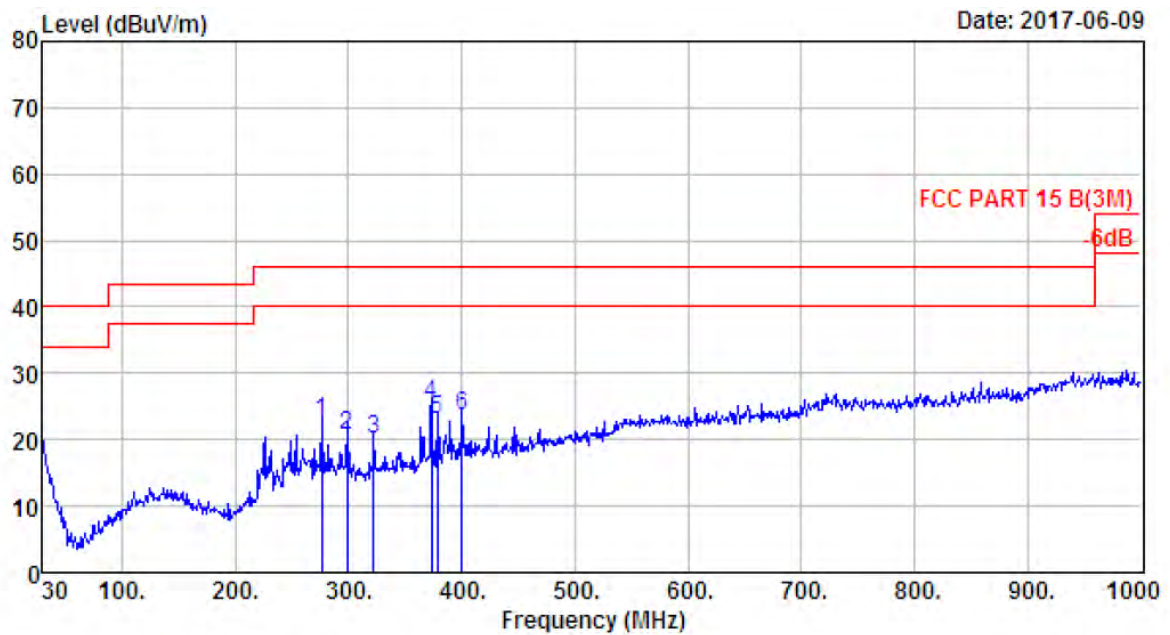
Site no. : site Data no. : 379
 Dis. / Ant. : 3m 27137 Ant. pol. : VERTICAL
 Limit : FCC PART 15 B(3M)
 Env. / Ins. : Temp:23.6°;Humi:56%;Press:101.52kPa
 Engineer : Tony
 EUT : Multimedia Player/Amplifier
 Power : AC 120V/60Hz
 M/N : DN-350MP
 Test Mode : GFSK TX 2480MHz
 Antenna 1

	Freq. (MHz)	ANT Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	30.000	18.51	0.65	4.04	23.20	40.00	16.80	QP
2	96.930	8.92	1.33	4.54	14.79	43.50	28.71	QP
3	144.460	11.26	1.54	1.06	13.86	43.50	29.64	QP
4	405.390	16.18	2.61	1.06	19.85	46.00	26.15	QP
5	592.600	19.48	3.36	0.81	23.65	46.00	22.35	QP
6	660.500	20.07	3.57	1.21	24.85	46.00	21.15	QP



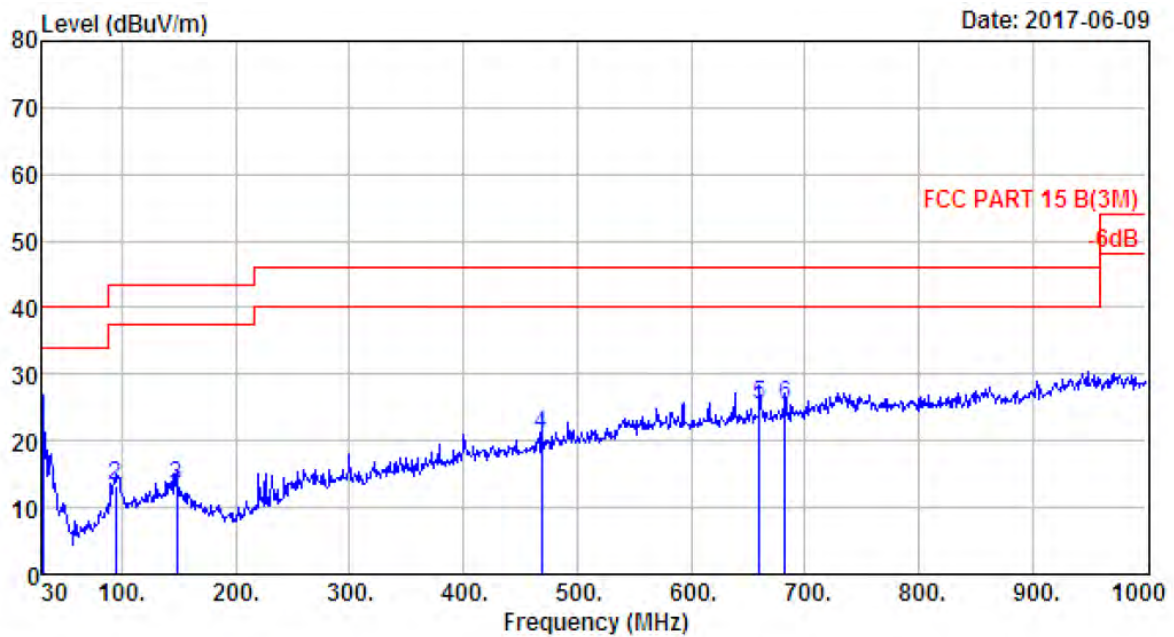
Site no. : 1# 966 Chamber Data no. : 380
 Dis. / Ant. : 3m 27137 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 B(3M)
 Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
 Engineer : Tony
 EUT : Multimedia Player/Amplifier
 Power : AC 120V/60Hz
 M/N : DN-350MP
 Test Mode : GFSK TX 2480MHz
 Antenna 1

	Freq. (MHz)	ANT Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	276.380	12.36	2.26	6.97	21.59	46.00	24.41	QP
2	298.690	13.00	2.40	4.50	19.90	46.00	26.10	QP
3	362.710	14.57	2.61	5.47	22.65	46.00	23.35	QP
4	372.410	14.90	2.70	5.43	23.03	46.00	22.97	QP
5	400.540	16.07	2.66	3.89	22.62	46.00	23.38	QP
6	424.790	16.18	2.79	6.04	25.01	46.00	20.99	QP



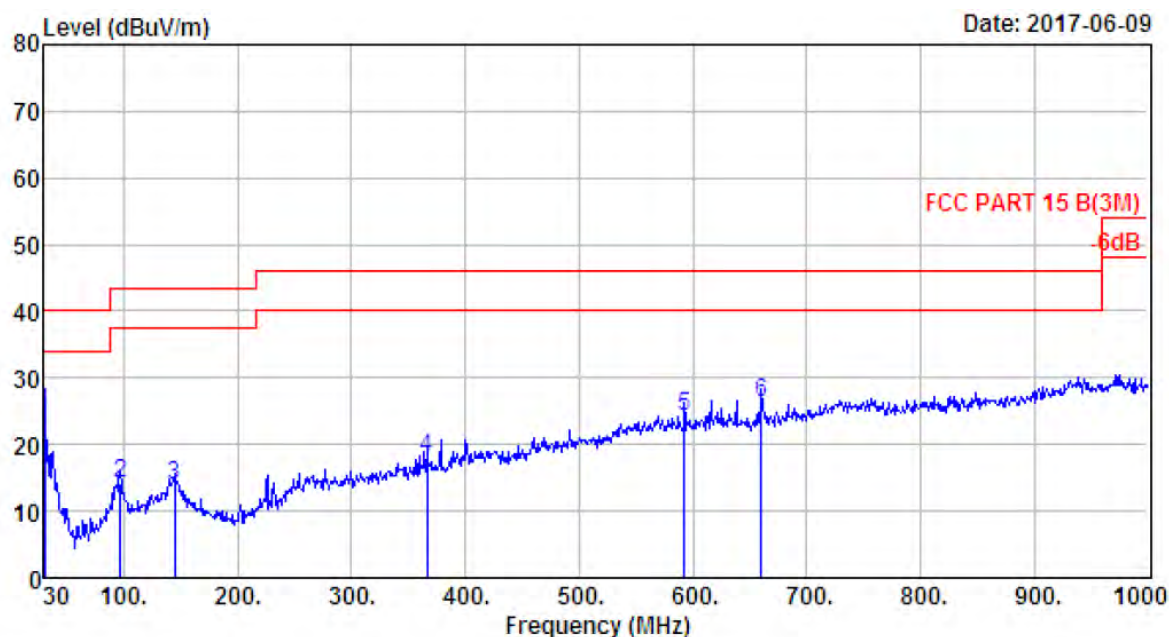
Site no. : 1# 966 Chamber Data no. : 393
 Dis. / Ant. : 3m 27137 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 B(3M)
 Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
 Engineer : Tony
 EUT : Multimedia Player/Amplifier
 Power : AC 120V/60Hz
 M/N : DN-350MP
 Test Mode : GFSK TX 2402MHz
 Antenna 2

	Freq. (MHz)	ANT Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	276.380	12.36	2.26	7.97	22.59	46.00	23.41	QP
2	298.690	13.00	2.40	5.36	20.76	46.00	25.24	QP
3	321.970	13.63	2.42	4.13	20.18	46.00	25.82	QP
4	373.380	14.92	2.74	7.65	25.31	46.00	20.69	QP
5	378.230	14.98	2.62	5.30	22.90	46.00	23.10	QP
6	400.540	16.07	2.66	4.90	23.63	46.00	22.37	QP



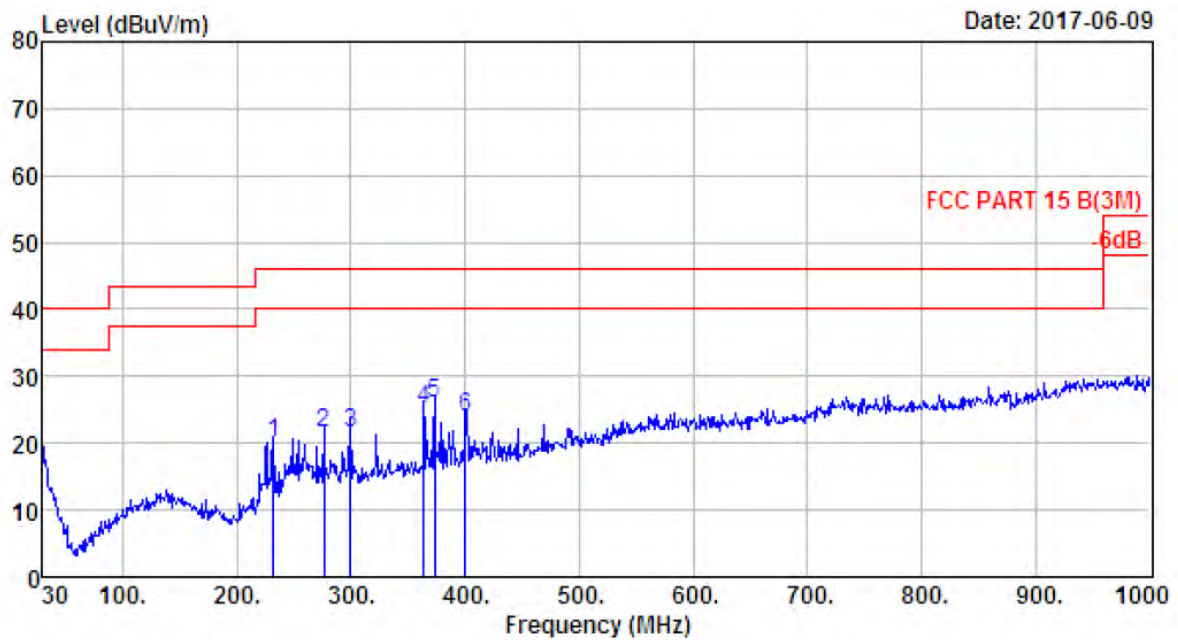
Site no. : 1# 966 Chamber Data no. : 394
 Dis. / Ant. : 3m 27137 Ant. pol. : VERTICAL
 Limit : FCC PART 15 B(3M)
 Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
 Engineer : Tony
 EUT : Multimedia Player/Amplifier
 Power : AC 120V/60Hz
 M/N : DN-350MP
 Test Mode : GFSK TX 2402MHz
 Antenna 2

	Freq. (MHz)	ANT Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	30.000	18.51	0.65	4.19	23.35	40.00	16.65	Peak
2	94.020	8.74	1.28	3.12	13.14	43.50	30.36	Peak
3	148.340	11.00	1.69	0.56	13.25	43.50	30.25	Peak
4	468.440	17.14	3.09	0.85	21.08	46.00	24.92	Peak
5	660.500	20.07	3.57	1.78	25.42	46.00	20.58	Peak
6	682.810	20.31	3.64	1.35	25.30	46.00	20.70	Peak



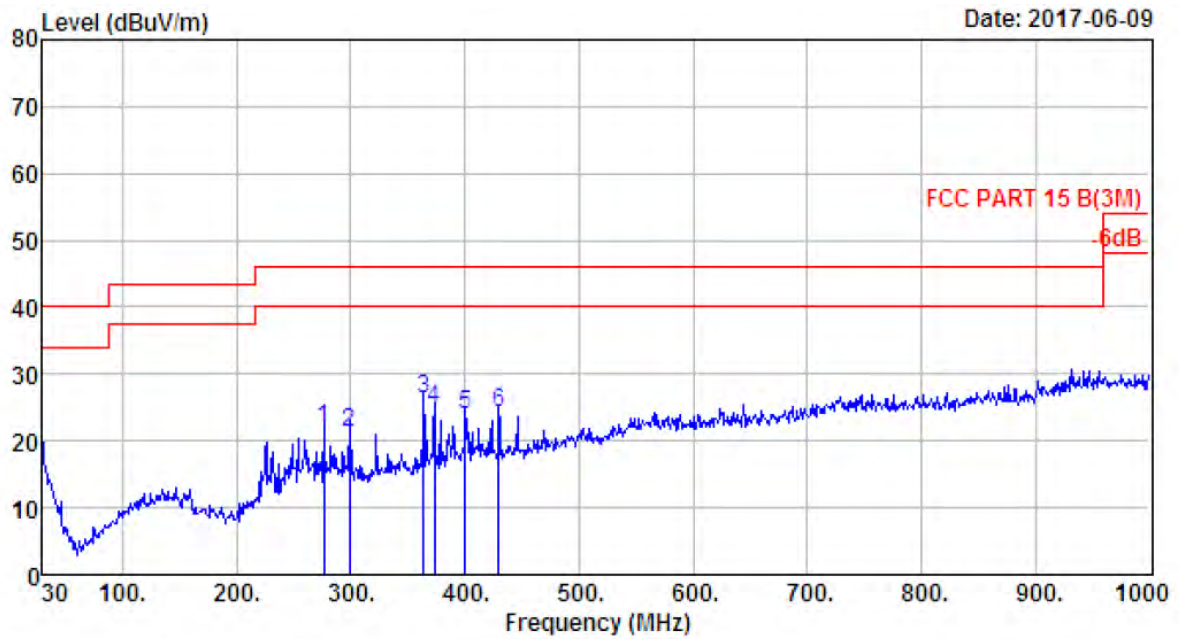
Site no. : site Data no. : 395
 Dis. / Ant. : 3m 27137 Ant. pol. : VERTICAL
 Limit : FCC PART 15 B(3M)
 Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
 Engineer : Tony
 EUT : Multimedia Player/Amplifier
 Power : AC 120V/60Hz
 M/N : DN-350MP
 Test Mode : GFSK TX 2440MHz
 Antenna 2

	Freq. (MHz)	ANT Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	30.000	18.51	0.65	5.75	24.91	40.00	15.09	QP
2	96.930	8.92	1.33	3.79	14.04	43.50	29.46	QP
3	144.460	11.26	1.54	0.95	13.75	43.50	29.75	QP
4	366.590	14.72	2.71	0.48	17.91	46.00	28.09	QP
5	592.600	19.48	3.36	1.34	24.18	46.00	21.82	QP
6	660.500	20.07	3.57	2.71	26.35	46.00	19.65	QP



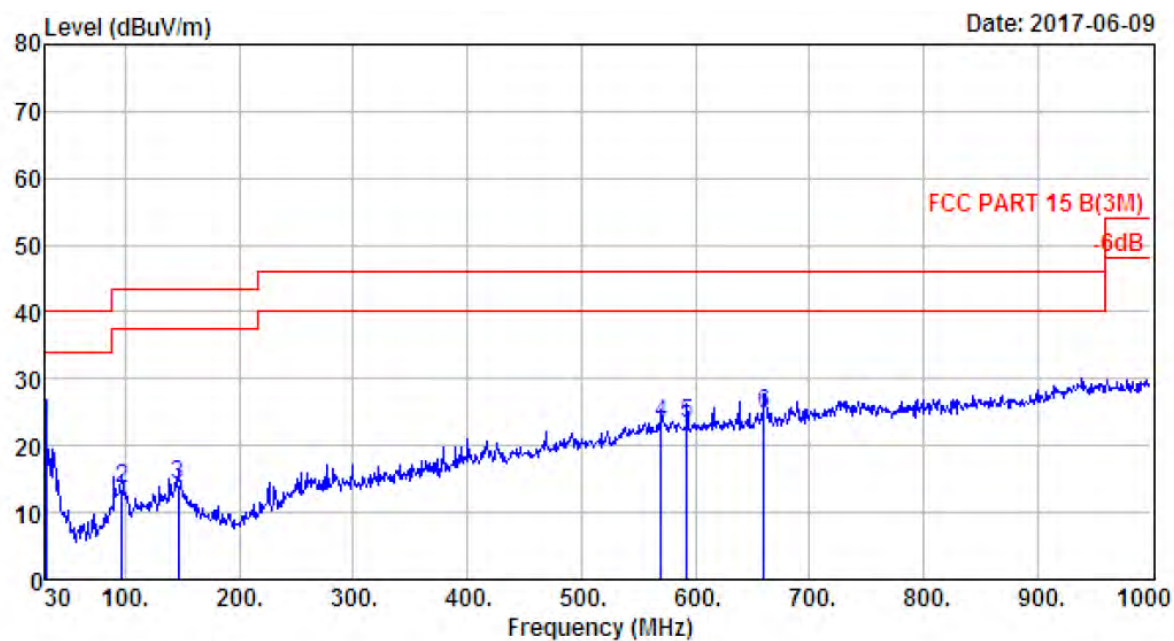
Site no. : site Data no. : 396
 Dis. / Ant. : 3m 27137 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 B(3M)
 Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
 Engineer : Tony
 EUT : Multimedia Player/Amplifier
 Power : AC 120V/60Hz
 M/N : DN-350MP
 Test Mode : GFSK TX 2440MHz
 Antenna 2

	Freq. (MHz)	ANT Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	231.760	9.54	2.07	8.33	19.94	46.00	26.06	QP
2	276.380	12.36	2.26	6.79	21.41	46.00	24.59	QP
3	299.660	13.01	2.38	6.08	21.47	46.00	24.53	QP
4	363.680	14.61	2.59	7.99	25.19	46.00	20.81	QP
5	373.380	14.92	2.74	8.42	26.08	46.00	19.92	QP
6	400.540	16.07	2.66	5.21	23.94	46.00	22.06	QP



Site no. : 1# 966 Chamber Data no. : 397
 Dis. / Ant. : 3m 27137 Ant. pol. : HORIZONTAL
 Limit : FCC PART 15 B(3M)
 Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
 Engineer : Tony
 EUT : Multimedia Player/Amplifier
 Power : AC 120V/60Hz
 M/N : DN-350MP
 Test Mode : GFSK TX 2480MHz
 Antenna 2

	Freq. (MHz)	ANT Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	276.380	12.36	2.26	7.34	21.96	46.00	24.04	Peak
2	298.690	13.00	2.40	5.76	21.16	46.00	24.84	Peak
3	363.680	14.61	2.59	8.95	26.15	46.00	19.85	Peak
4	373.380	14.92	2.74	7.02	24.68	46.00	21.32	Peak
5	400.540	16.07	2.66	5.13	23.86	46.00	22.14	Peak
6	429.640	16.06	2.86	5.40	24.32	46.00	21.68	Peak



Site no. : 1# 966 Chamber Data no. : 398
 Dis. / Ant. : 3m 27137 Ant. pol. : VERTICAL
 Limit : FCC PART 15 B(3M)
 Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
 Engineer : Tony
 EUT : Multimedia Player/Amplifier
 Power : AC 120V/60Hz
 M/N : DN-350MP
 Test Mode : GFSK TX 2480MHz
 Antenna 2

	Freq. (MHz)	ANT Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	30.000	18.51	0.65	4.09	23.25	40.00	16.75	QP
2	96.930	8.92	1.33	3.38	13.63	43.50	29.87	QP
3	146.400	11.15	1.58	1.55	14.28	43.50	29.22	QP
4	570.290	19.60	3.37	0.43	23.40	46.00	22.60	QP
5	592.600	19.48	3.36	0.56	23.40	46.00	22.60	QP
6	660.500	20.07	3.57	1.21	24.85	46.00	21.15	QP

Above 1000MHz

Site no. : 1# 966 Chamber Data no. : 315
 Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
 Engineer : Tony
 EUT : Multimedia Player/Amplifier
 Power : AC 120V/60Hz
 M/N : DN-350MP
 Test Mode : GFSK TX 2402MHz
 Antenna 1

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2402.00	27.61	6.62	34.64	95.05	94.64	74.00	-20.64	Peak
2	4804.00	31.25	11.77	35.64	30.98	38.36	74.00	35.64	Peak
3	7206.00	36.52	11.54	33.95	28.07	42.18	74.00	31.82	Peak
4	8684.00	37.32	11.45	33.66	28.19	43.30	74.00	30.70	Peak
5	11234.00	39.37	11.12	33.25	26.69	43.93	74.00	30.07	Peak
6	13495.00	40.07	11.50	32.65	25.81	44.73	74.00	29.27	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Site no. : 1# 966 Chamber Data no. : 316
 Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
 Engineer : Tony
 EUT : Multimedia Player/Amplifier
 Power : AC 120V/60Hz
 M/N : DN-350MP
 Test Mode : GFSK TX 2402MHz
 Antenna 1

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2402.00	27.61	6.62	34.64	92.06	91.65	74.00	-17.65	Peak
2	4804.00	31.25	11.77	35.64	30.22	37.60	74.00	36.40	Peak
3	7206.00	36.52	11.54	33.95	27.51	41.62	74.00	32.38	Peak
4	8684.00	37.32	11.45	33.66	27.50	42.61	74.00	31.39	Peak
5	11200.00	39.39	11.14	33.24	26.12	43.41	74.00	30.59	Peak
6	14005.00	41.46	10.90	33.01	25.27	44.62	74.00	29.38	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Site no. : 1# 966 Chamber Data no. : 319
 Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
 Engineer : Tony
 EUT : Multimedia Player/Amplifier
 Power : AC 120V/60Hz
 M/N : DN-350MP
 Test Mode : GFSK TX 2440MHz
 Antenna 1

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2440.00	27.60	6.67	34.85	95.85	95.27	74.00	-21.27	Peak
2	4880.00	31.37	12.07	35.76	30.87	38.55	74.00	35.45	Peak
3	7320.00	36.55	11.57	34.14	28.60	42.58	74.00	31.42	Peak
4	8684.00	37.32	11.45	33.66	28.05	43.16	74.00	30.84	Peak
5	11166.00	39.41	11.17	33.31	26.09	43.36	74.00	30.64	Peak
6	13784.00	40.88	11.16	33.05	25.38	44.37	74.00	29.63	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Site no. : 1# 966 Chamber Data no. : 320
 Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
 Engineer : Tony
 EUT : Multimedia Player/Amplifier
 Power : AC 120V/60Hz
 M/N : DN-350MP
 Test Mode : GFSK TX 2440MHz
 Antenna 1

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2440.00	27.60	6.67	34.85	92.79	92.21	74.00	-18.21	Peak
2	4880.00	31.37	12.07	35.76	29.63	37.31	74.00	36.69	Peak
3	7320.00	36.55	11.57	34.14	29.50	43.48	74.00	30.52	Peak
4	8735.00	37.40	11.45	33.76	27.92	43.01	74.00	30.99	Peak
5	11166.00	39.41	11.17	33.31	26.18	43.45	74.00	30.55	Peak
6	13580.00	40.31	11.40	32.64	24.36	43.43	74.00	30.57	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Site no. : site Data no. : 321
 Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
 Engineer : Tony
 EUT : Multimedia Player/Amplifier
 Power : AC 120V/60Hz
 M/N : DN-350MP
 Test Mode : GFSK TX 2480MHz
 Antenna 1

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2480.00	27.58	6.71	35.11	93.85	93.03	74.00	-19.03	Peak
2	4960.00	31.49	12.44	36.01	30.90	38.82	74.00	35.18	Peak
3	7440.00	36.54	11.61	34.22	28.13	42.06	74.00	31.94	Peak
4	8633.00	37.24	11.45	33.73	28.13	43.09	74.00	30.91	Peak
5	11455.00	39.23	10.96	33.53	26.82	43.48	74.00	30.52	Peak
6	14056.00	41.51	10.90	33.06	25.55	44.90	74.00	29.10	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Site no. : 1# 966 Chamber Data no. : 322
 Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
 Engineer : Tony
 EUT : Multimedia Player/Amplifier
 Power : AC 120V/60Hz
 M/N : DN-350MP
 Test Mode : GFSK TX 2480MHz
 Antenna 1

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2480.00	27.58	6.71	35.11	96.07	95.25	74.00	-21.25	Peak
2	4960.00	31.49	12.44	36.01	30.14	38.06	74.00	35.94	Peak
3	7440.00	36.54	11.61	34.22	28.35	42.28	74.00	31.72	Peak
4	8684.00	37.32	11.45	33.66	27.79	42.90	74.00	31.10	Peak
5	11115.00	39.44	11.20	33.55	26.48	43.57	74.00	30.43	Peak
6	13665.00	40.55	11.30	32.75	24.67	43.77	74.00	30.23	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Site no. : 1# 966 Chamber Data no. : 325
 Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
 Engineer : Tony
 EUT : Multimedia Player/Amplifier
 Power : AC 120V/60Hz
 M/N : DN-350MP
 Test Mode : GFSK TX 2402MHz
 Antenna 2

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2402.00	27.61	6.62	34.64	91.26	90.85	74.00	-16.85	Peak
2	4804.00	31.25	11.77	35.64	31.00	38.38	74.00	35.62	Peak
3	7206.00	36.52	11.54	33.95	27.96	42.07	74.00	31.93	Peak
4	8684.00	37.32	11.45	33.66	27.76	42.87	74.00	31.13	Peak
5	10826.00	39.33	11.30	34.00	27.46	44.09	74.00	29.91	Peak
6	13716.00	40.69	11.24	32.94	25.47	44.46	74.00	29.54	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Site no. : 1# 966 Chamber Data no. : 326
 Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
 Engineer : Tony
 EUT : Multimedia Player/Amplifier
 Power : AC 120V/60Hz
 M/N : DN-350MP
 Test Mode : GFSK TX 2402MHz
 Antenna 2

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2402.00	27.61	6.62	34.64	93.26	92.85	74.00	-18.85	Peak
2	4804.00	31.25	11.77	35.64	30.54	37.92	74.00	36.08	Peak
3	7206.00	36.52	11.54	33.95	27.46	41.57	74.00	32.43	Peak
4	8684.00	37.32	11.45	33.66	28.88	43.99	74.00	30.01	Peak
5	11064.00	39.48	11.24	33.83	26.22	43.11	74.00	30.89	Peak
6	13240.00	39.46	11.46	32.88	25.74	43.78	74.00	30.22	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Site no. : 1# 966 Chamber Data no. : 329
 Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
 Engineer : Tony
 EUT : Multimedia Player/Amplifier
 Power : AC 120V/60Hz
 M/N : DN-350MP
 Test Mode : GFSK TX 2440MHz
 Antenna 2

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2440.00	27.60	6.67	34.85	91.79	91.21	74.00	-17.21	Peak
2	4880.00	31.37	12.07	35.76	29.06	36.74	74.00	37.26	Peak
3	7320.00	36.55	11.57	34.14	29.64	43.62	74.00	30.38	Peak
4	8735.00	37.40	11.45	33.76	28.03	43.12	74.00	30.88	Peak
5	11166.00	39.41	11.17	33.31	25.86	43.13	74.00	30.87	Peak
6	13376.00	39.78	11.48	32.91	25.78	44.13	74.00	29.87	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Site no. : 1# 966 Chamber Data no. : 330
 Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
 Engineer : Tony
 EUT : Multimedia Player/Amplifier
 Power : AC 120V/60Hz
 M/N : DN-350MP
 Test Mode : GFSK TX 2440MHz
 Antenna 2

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2440.00	27.60	6.67	34.85	93.63	93.05	74.00	-19.05	Peak
2	4880.00	31.37	12.07	35.76	30.81	38.49	74.00	35.51	Peak
3	7320.00	36.55	11.57	34.14	27.85	41.83	74.00	32.17	Peak
4	9126.00	37.62	11.52	34.09	28.41	43.46	74.00	30.54	Peak
5	11404.00	39.25	10.99	33.57	26.76	43.43	74.00	30.57	Peak
6	14056.00	41.51	10.90	33.06	24.39	43.74	74.00	30.26	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Site no. : 1# 966 Chamber Data no. : 331
 Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
 Engineer : Tony
 EUT : Multimedia Player/Amplifier
 Power : AC 120V/60Hz
 M/N : DN-350MP
 Test Mode : GFSK TX 2480MHz
 Antenna 2

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2480.00	27.58	6.71	35.11	95.51	94.69	74.00	-20.69	Peak
2	4960.00	31.49	12.44	36.01	30.23	38.15	74.00	35.85	Peak
3	7440.00	36.54	11.61	34.22	28.25	42.18	74.00	31.82	Peak
4	9126.00	37.62	11.52	34.09	27.79	42.84	74.00	31.16	Peak
5	11200.00	39.39	11.14	33.24	25.97	43.26	74.00	30.74	Peak
6	13546.00	40.21	11.44	32.61	25.13	44.17	74.00	29.83	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

Site no. : 1# 966 Chamber Data no. : 332
 Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
 Engineer : Tony
 EUT : Multimedia Player/Amplifier
 Power : AC 120V/60Hz
 M/N : DN-350MP
 Test Mode : GFSK TX 2480MHz
 Antenna 2

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2480.00	27.58	6.71	35.11	91.96	91.14	74.00	-17.14	Peak
2	4960.00	31.49	12.44	36.01	31.31	39.23	74.00	34.77	Peak
3	7440.00	36.54	11.61	34.22	28.50	42.43	74.00	31.57	Peak
4	8684.00	37.32	11.45	33.66	28.10	43.21	74.00	30.79	Peak
5	11064.00	39.48	11.24	33.83	26.33	43.22	74.00	30.78	Peak
6	13580.00	40.31	11.40	32.64	24.83	43.90	74.00	30.10	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

18000MHz – 25000MHz

Pass

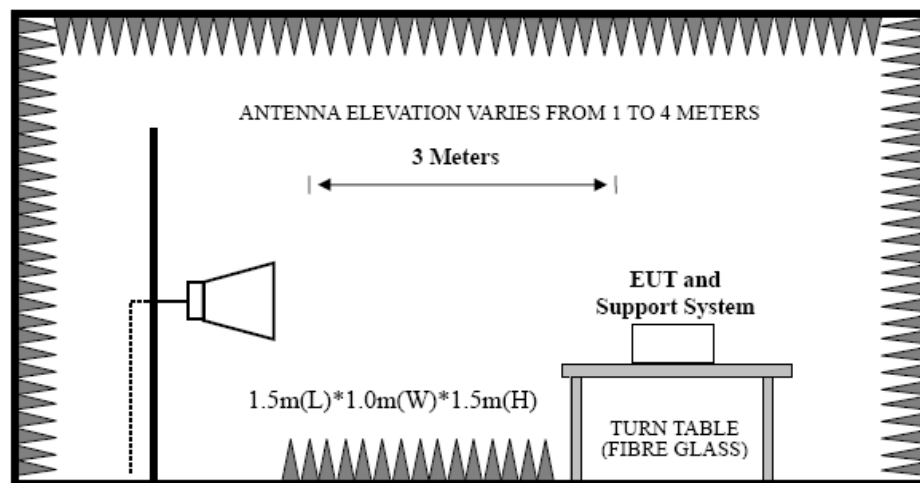
Note: The amplitude of spurious emission that is attenuated by more than 20dB below the permissible limit has no need to be reported.

5 BAND EDGE COMPLIANCE TEST

5.1 Limit

All the lower and upper band-edges emissions appearing within 2310MHz to 2390MHz and 2483.5MHz to 2500MHz restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions outside operation frequency band 2400MHz to 2483.5MHz shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits

5.2 Block Diagram of Test setup



5.3 Test Procedure

1. The EUT is placed on a turntable, which is 1.5m above the ground plane and worked at highest radiated power.
2. The turntable was rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.
4. Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission:

Peak : RBW = 1MHz, VBW = 1MHz, Detector=PEAK detector, Sweep time = auto.

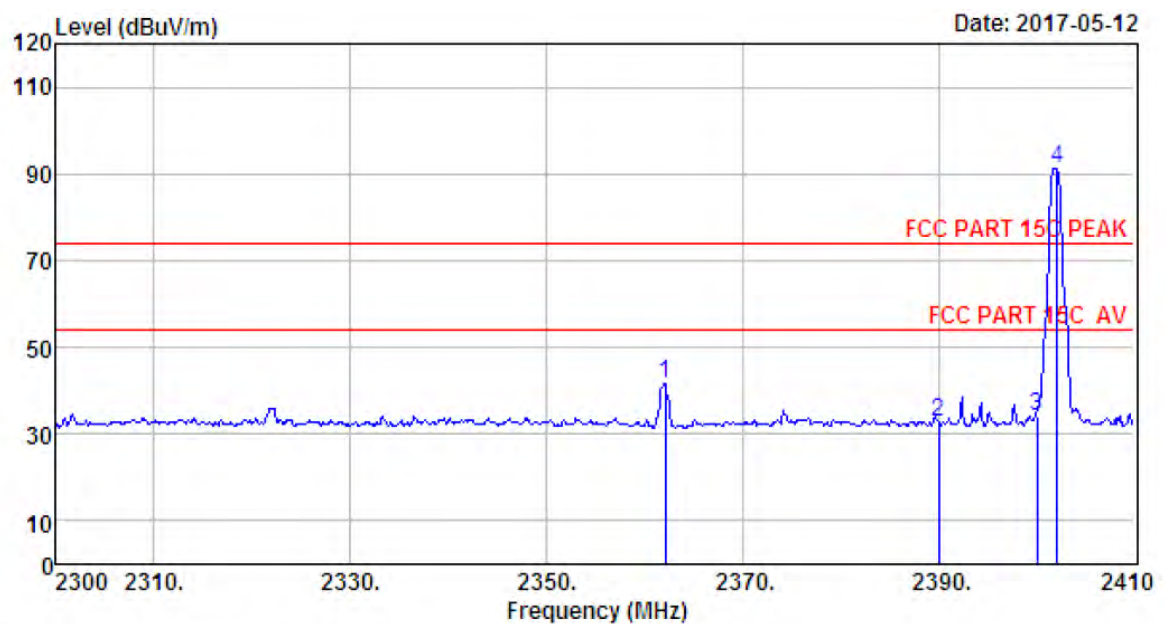
AV : RBW = 1MHz, VBW = 10Hz, Detector=PEAK detector, Sweep time = auto.

5.4 Test Result

Pass (The testing data was attached in the next pages.)

- Note: 1、For emissions above 1GHz, if peak level comply with average limit, then the average level is deemed to comply with average limit.
- 2、The frequency 2402MHz and 2480 MHz is fundamental frequency which no limit, the limit on plots is automatically generated by the software, it's not fundamental limit, we can't remove it.

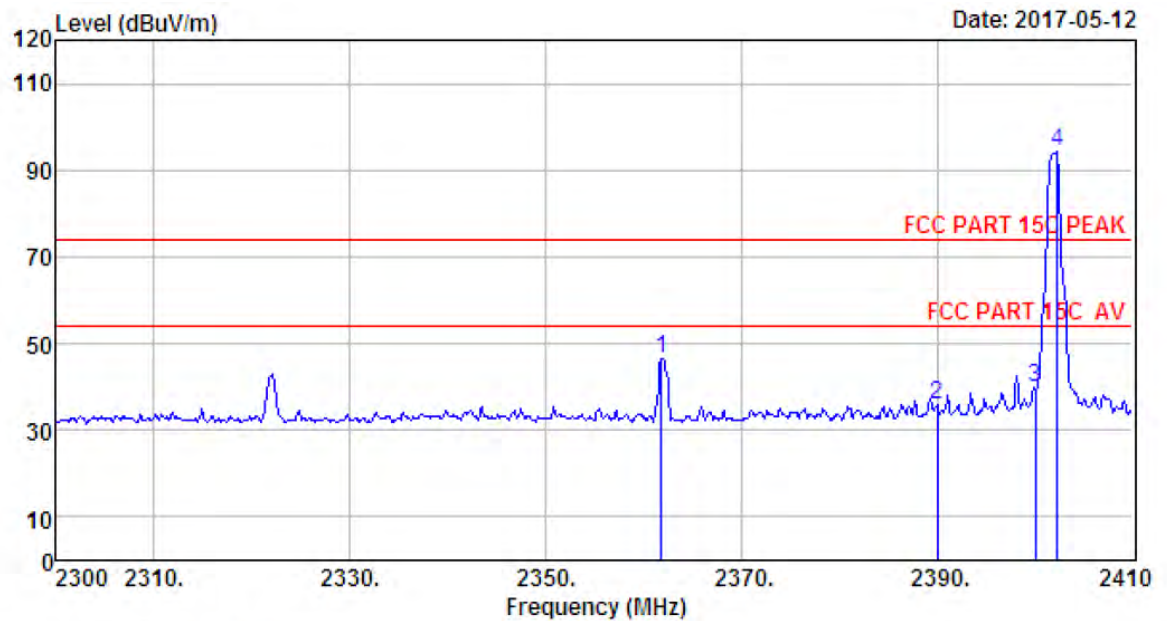
5.5 Test Data



Site no. : 1# 966 Chamber Data no. : 317
 Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
 Engineer : Tony
 EUT : Multimedia Player/Amplifier
 Power : AC 120V/60Hz
 M/N : DN-350MP
 Test Mode : GFSK TX 2402MHz
 Antenna 1

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2362.15	27.67	6.58	34.57	42.06	41.74	74.00	32.26	Peak
2	2390.00	27.64	6.62	34.62	33.25	32.89	74.00	41.11	Peak
3	2400.00	27.61	6.62	34.64	34.38	33.97	74.00	40.03	Peak
4	2402.08	27.61	6.62	34.64	91.84	91.43	74.00	-17.43	Peak

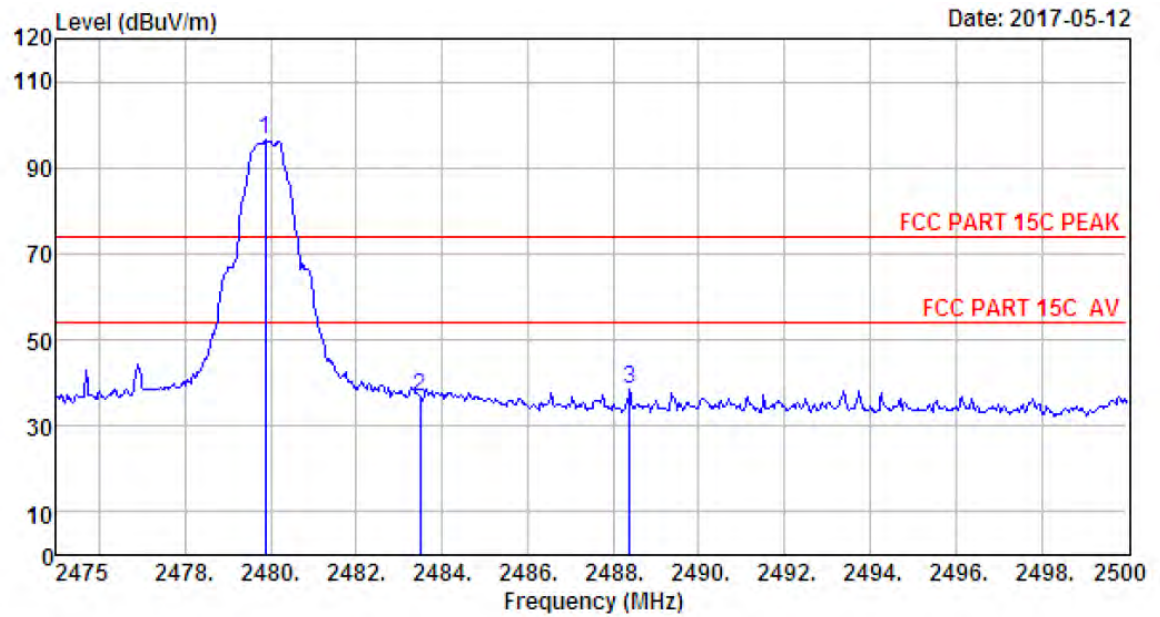
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 318
 Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
 Engineer : Tony
 EUT : Multimedia Player/Amplifier
 Power : AC 120V/60Hz
 M/N : DN-350MP
 Test Mode : GFSK TX 2402MHz
 Antenna 1

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2361.82	27.67	6.58	34.57	46.71	46.39	74.00	27.61	Peak
2	2390.00	27.64	6.62	34.62	36.05	35.69	74.00	38.31	Peak
3	2400.00	27.61	6.62	34.64	40.05	39.64	74.00	34.36	Peak
4	2402.30	27.61	6.62	34.64	94.55	94.14	74.00	-20.14	Peak

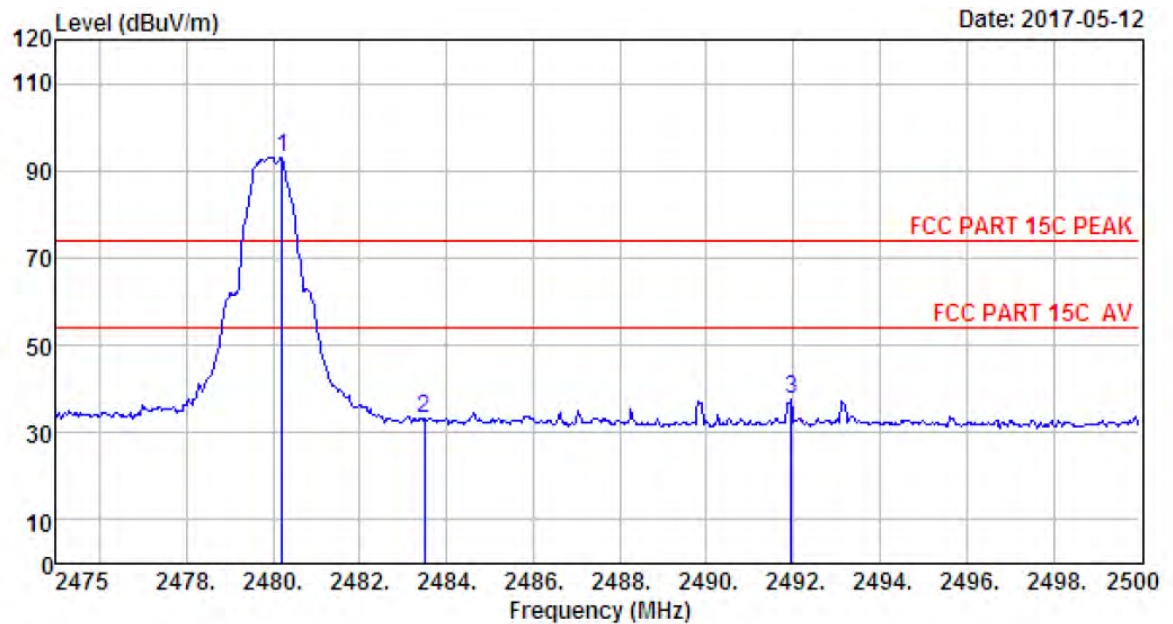
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 323
 Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
 Engineer : Tony
 EUT : Multimedia Player/Amplifier
 Power : AC 120V/60Hz
 M/N : DN-350MP
 Test Mode : GFSK TX 2480MHz
 Antenna 1

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBUV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Remark
1	2479.88	27.58	6.71	35.11	97.15	96.33	74.00	-22.33	Peak
2	2483.50	27.58	6.71	35.11	37.64	36.82	74.00	37.18	Peak
3	2488.38	27.58	6.73	35.11	39.27	38.47	74.00	35.53	Peak

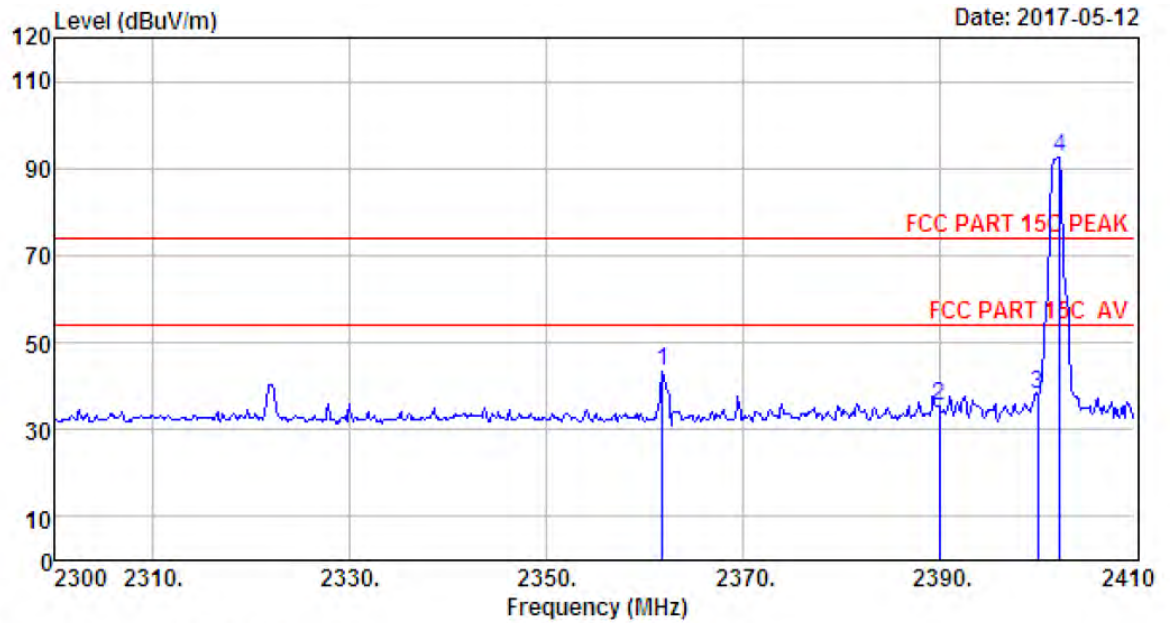
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 324
 Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
 Engineer : Tony
 EUT : Multimedia Player/Amplifier
 Power : AC 120V/60Hz
 M/N : DN-350MP
 Test Mode : GFSK TX 2480MHz
 Antenna 1

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2480.20	27.58	6.71	35.11	93.86	93.04	74.00	-19.04	Peak
2	2483.50	27.58	6.71	35.11	34.25	33.43	74.00	40.57	Peak
3	2491.95	27.58	6.73	35.24	38.42	37.49	74.00	36.51	Peak

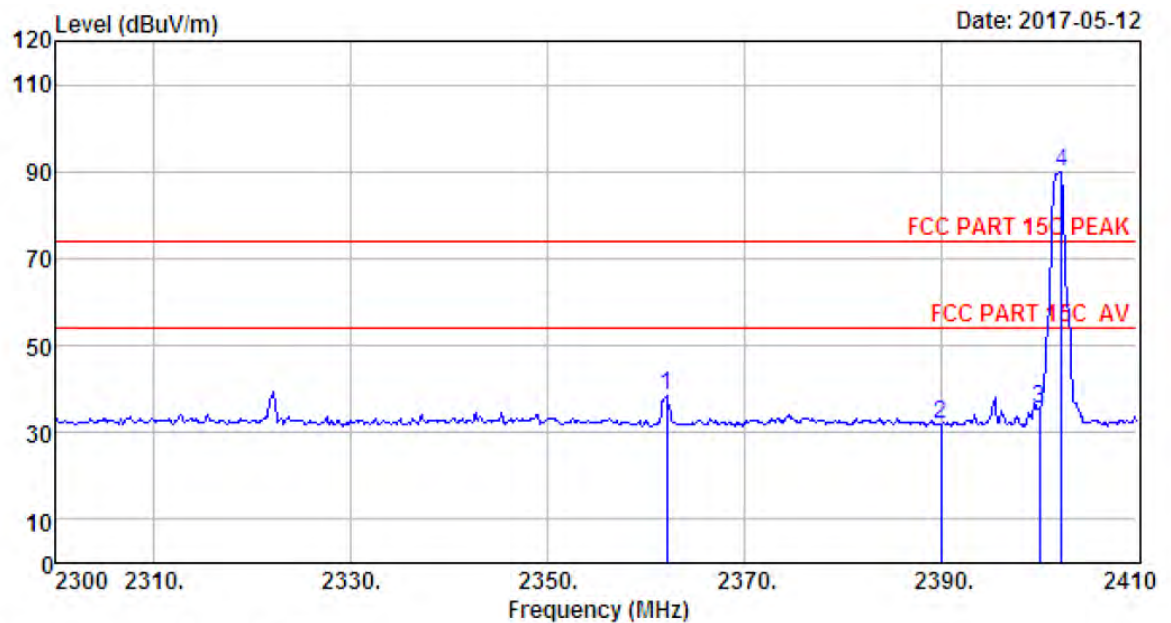
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 327
 Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
 Engineer : Tony
 EUT : Multimedia Player/Amplifier
 Power : AC 120V/60Hz
 M/N : DN-350MP
 Test Mode : GFSK TX 2402MHz
 Antenna 2

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2361.82	27.67	6.58	34.57	43.90	43.58	74.00	30.42	Peak
2	2390.00	27.64	6.62	34.62	35.68	35.32	74.00	38.68	Peak
3	2400.00	27.61	6.62	34.64	38.29	37.88	74.00	36.12	Peak
4	2402.30	27.61	6.62	34.64	93.13	92.72	74.00	-18.72	Peak

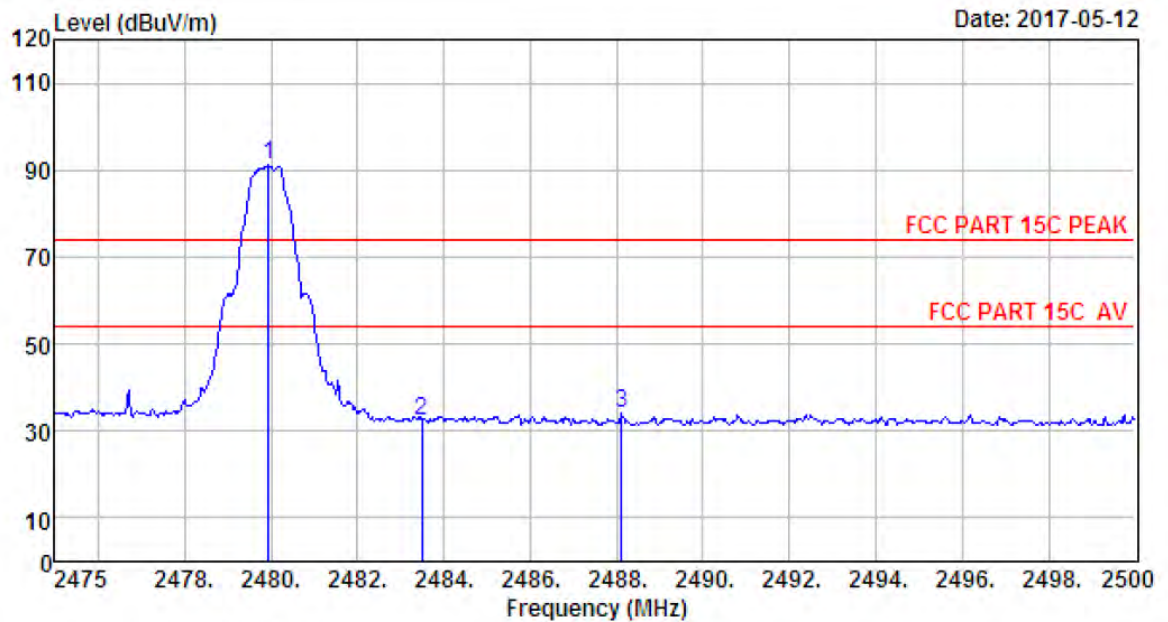
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 328
 Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
 Engineer : Tony
 EUT : Multimedia Player/Amplifier
 Power : AC 120V/60Hz
 M/N : DN-350MP
 Test Mode : GFSK TX 2402MHz
 Antenna 2

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2362.15	27.67	6.58	34.57	38.66	38.34	74.00	35.66	Peak
2	2390.00	27.64	6.62	34.62	32.26	31.90	74.00	42.10	Peak
3	2400.00	27.61	6.62	34.64	35.91	35.50	74.00	38.50	Peak
4	2402.30	27.61	6.62	34.64	90.35	89.94	74.00	-15.94	Peak

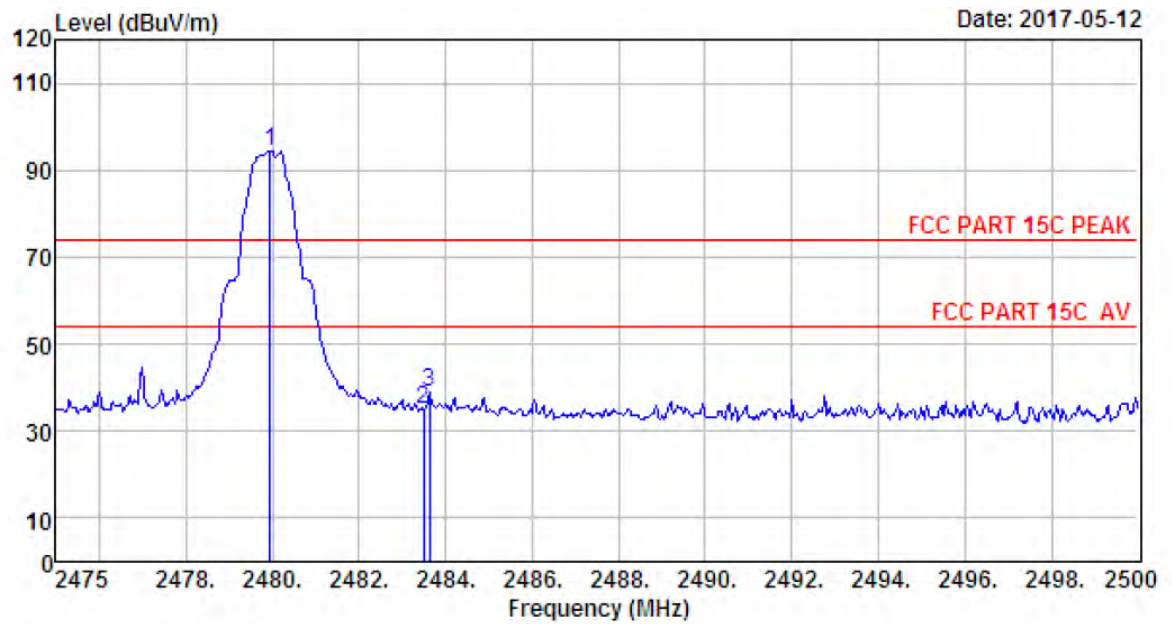
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 333
 Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
 Engineer : Tony
 EUT : Multimedia Player/Amplifier
 Power : AC 120V/60Hz
 M/N : DN-350MP
 Test Mode : GFSK TX 2480MHz
 Antenna 2

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2479.95	27.58	6.71	35.11	91.92	91.10	74.00	-17.10	Peak
2	2483.50	27.58	6.71	35.11	33.29	32.47	74.00	41.53	Peak
3	2488.13	27.58	6.73	35.11	34.80	34.00	74.00	40.00	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



Site no. : 1# 966 Chamber Data no. : 334
 Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL
 Limit : FCC PART 15C PEAK
 Env. / Ins. : Temp:23.6';Humi:56%;Press:101.52kPa
 Engineer : Tony
 EUT : Multimedia Player/Amplifier
 Power : AC 120V/60Hz
 M/N : DN-350MP
 Test Mode : GFSK TX 2480MHz
 Antenna 2

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2479.95	27.58	6.71	35.11	95.09	94.27	74.00	-20.27	Peak
2	2483.50	27.58	6.71	35.11	35.76	34.94	74.00	39.06	Peak
3	2483.63	27.58	6.71	35.11	39.77	38.95	74.00	35.05	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

6 6dB Bandwidth Test

6.1 Limit

For direct sequence systems, the minimum 6dB bandwidth shall be at least 500kHz

6.2 Test Procedure

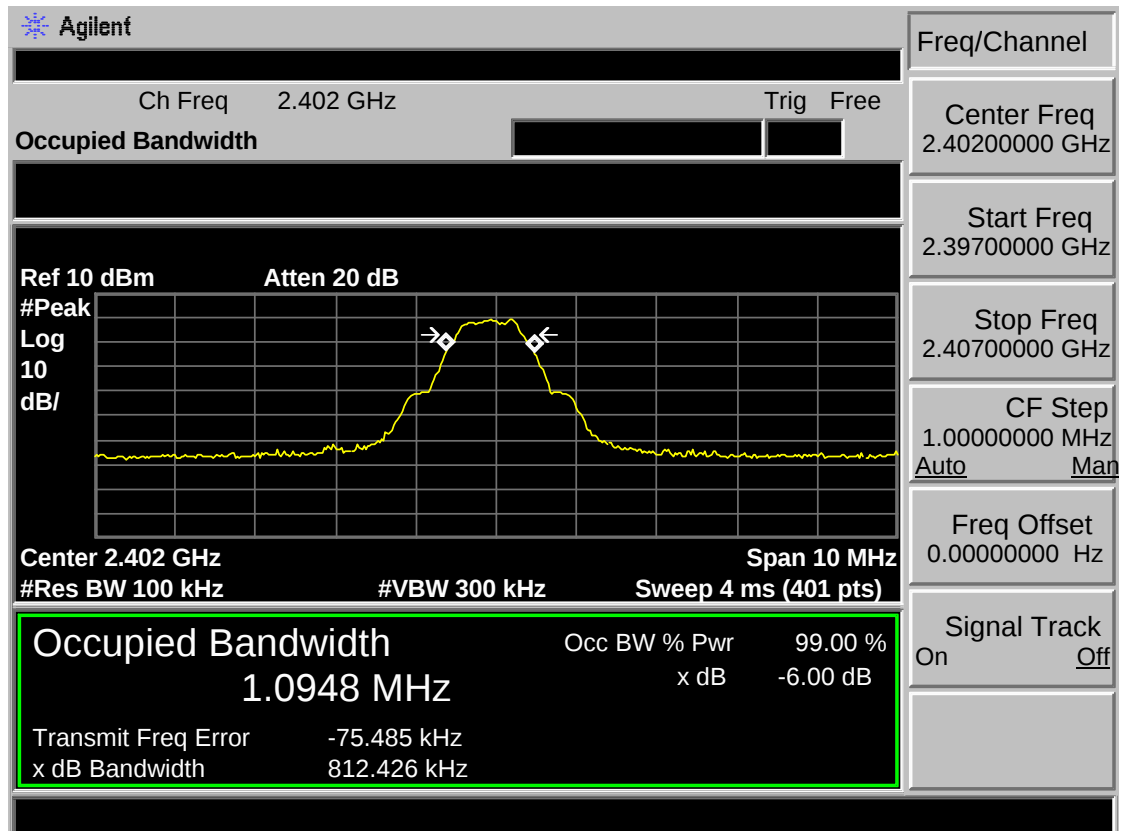
- 1, The transmitter output (antenna port) was connected to the spectrum analyzer. Connect EUT antenna terminal to the spectrum analyzer with a low loss SMA cable.
- 2, Follow the test procedure as described in KDB 558074
 - (1). Set resolution bandwidth (RBW) = 100 kHz.
 - (2). Set the video bandwidth (VBW) $\geq 3 \times$ RBW.
 - (3). Detector = Peak.
 - (4). Trace mode = max hold.
 - (5). Sweep = auto couple.
 - (6). Allow the trace to stabilize.
 - (7). Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

6.3 Test Result

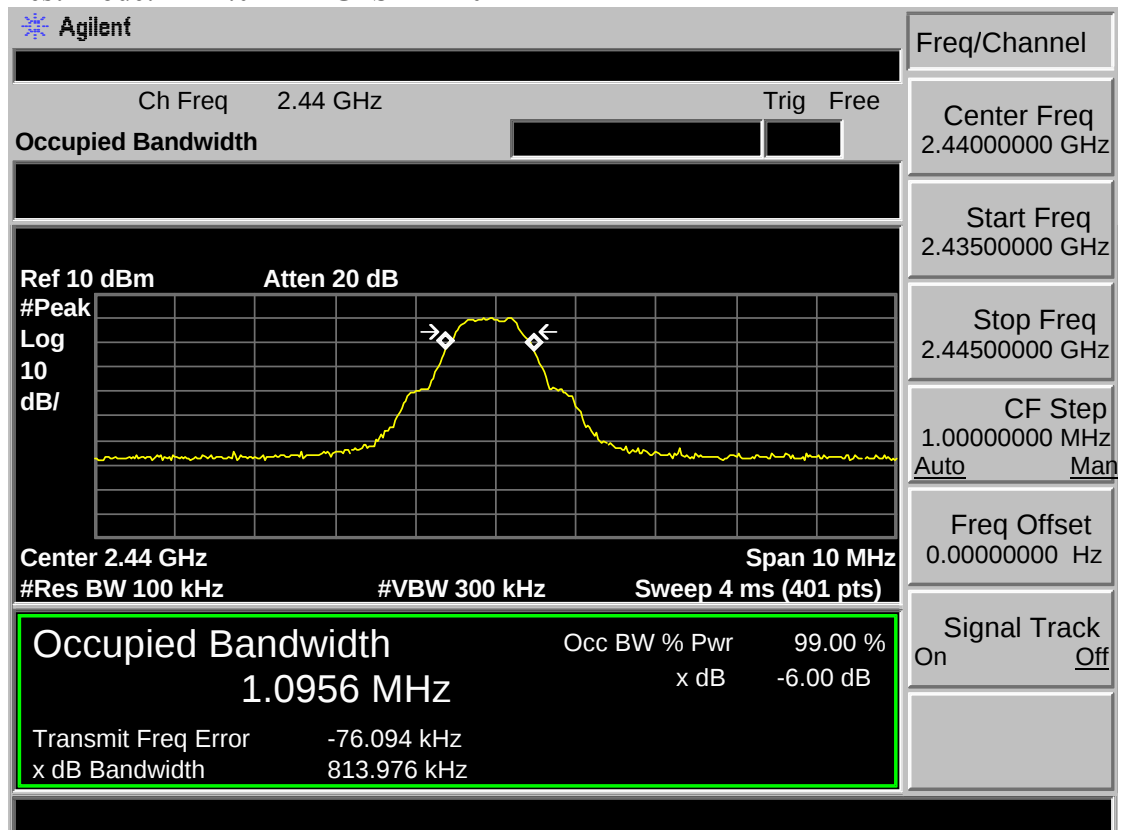
EUT: Multimedia Player/Amplifier			
M/N: DN-350MP			
Test date: 2017-05-15		Tested by: Tony.Tang	Test site: RF Site
Test Mode	CH	6dB bandwidth (MHz)	Limit (KHz)
BT 4.0-BLE GFSK	CH1 0.812		>500
	CH20 0.814		>500
	CH40 0.809		>500
Conclusion : PASS			

6.4 Test Data

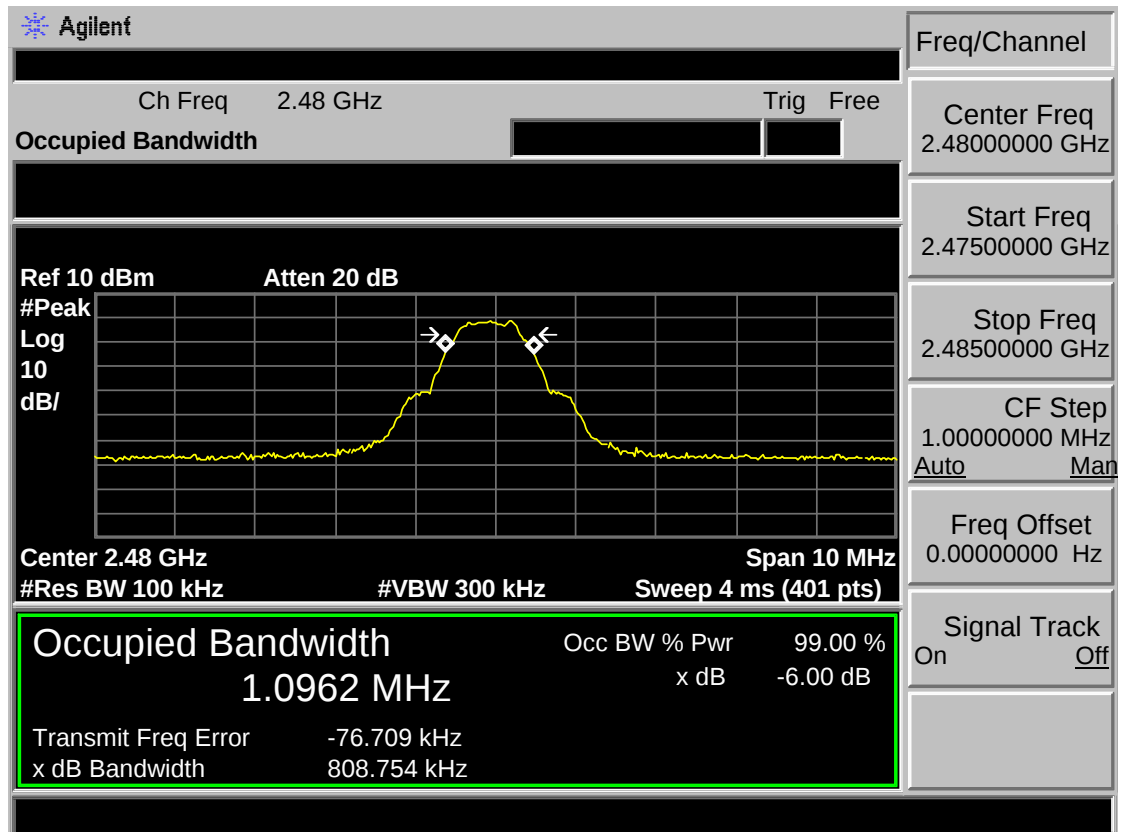
Test Mode: BT 4.0-BLE GFSK 2402MHz



Test Mode: BT 4.0-BLE GFSK 2440MHz



Test Mode: BT 4.0-BLE GFSK 2480MHz



7 OUTPUT POWER TEST

7.1 Limit

For systems using digital modulation in the 2400—2483.5MHz, The Peak out put Power shall not exceed 1W(30dBm)

7.2 Test Procedure

- 1, The trans mitter output t (antenna p ort) was co nnected to the spectrum analyzer . Connect EUT antenna terminal to the spectrum analyzer with a low loss SMA cable.
- 2, Follow the test procedure as described in KDB 558074
 - (1). Set the RBW $\geq$ DTS bandwidth.
 - (2). Set VBW $\geq$ 3 x RBW.
 - (3). Set span $\geq$ 3 x RBW.
 - (4). Sweep time = auto couple.
 - (5). Detector = peak.
 - (6). Trace mode = max hold.
 - (7). Allow trace to fully stabilize.
 - (8). Use peak marker function to determine the peak amplitude level.

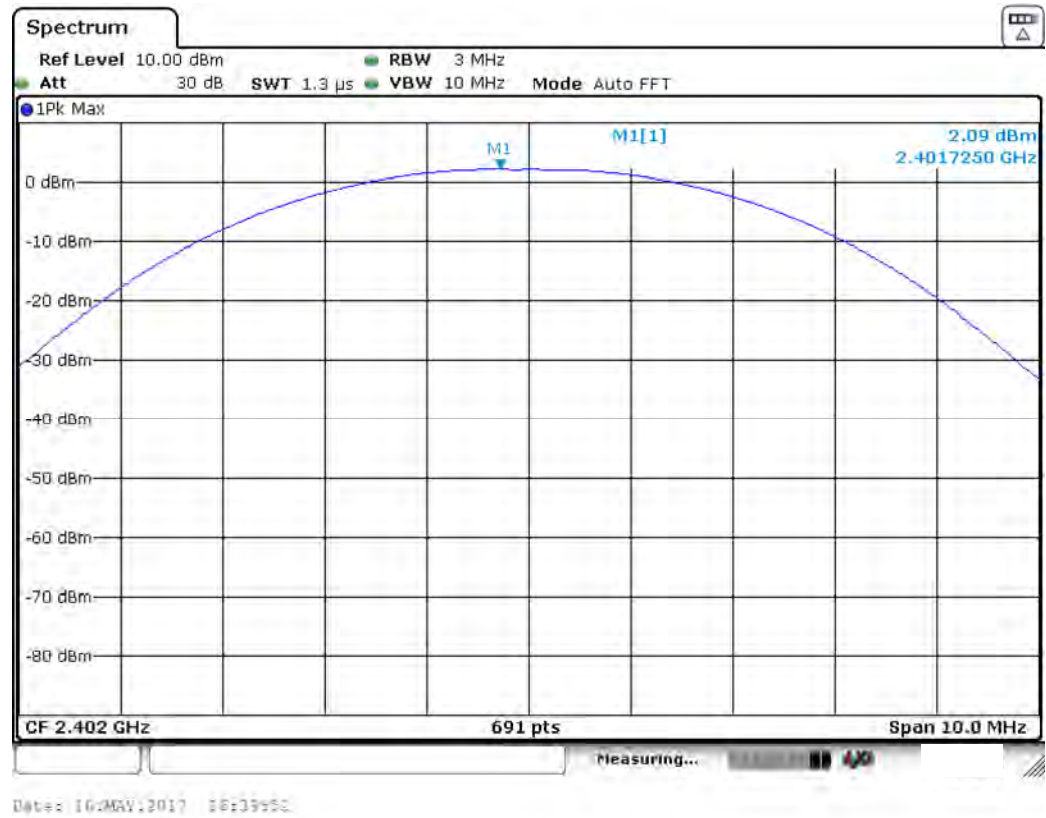
Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.

7.3 Test Result

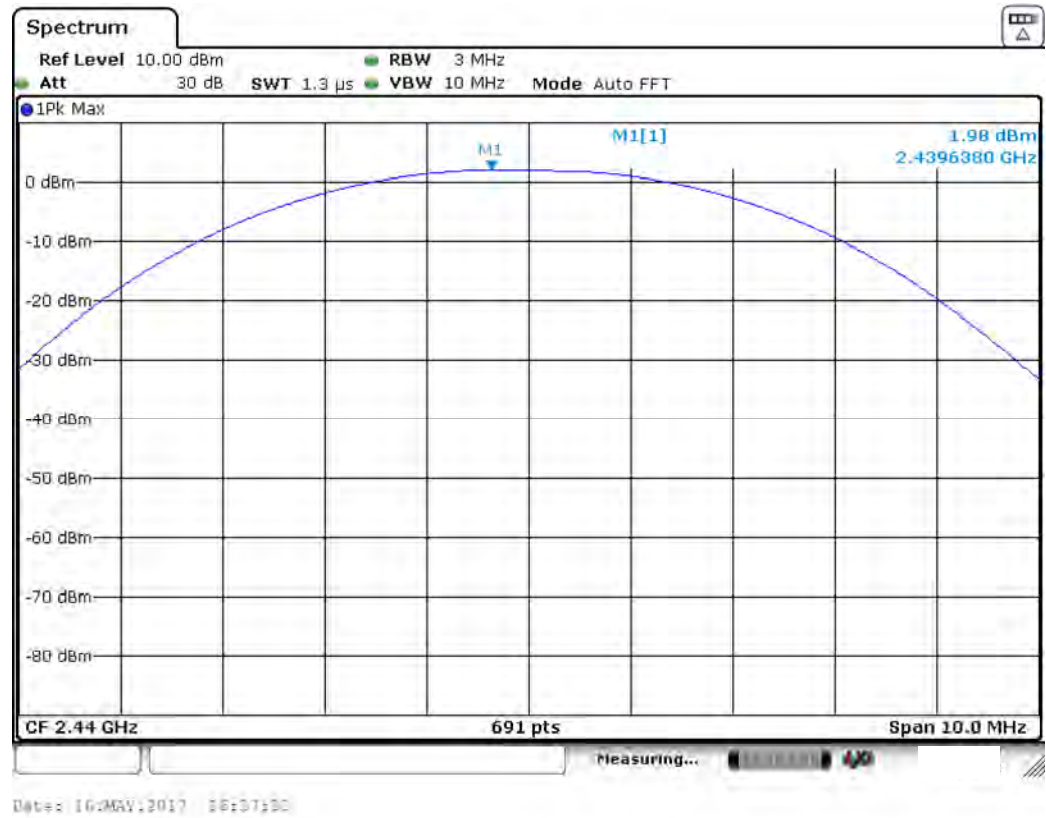
EUT:Multimedia Player/Amplifier			
M/N:DN-350MP			
Test date: 2017-05-16		Test site: 3m Chamber	Tested by: Tony Tang
Pass			
Test Mode	CH	Peak output Power (dBm)	Lim it (dBm)
BT 4.0-BLE GFSK	CH1 2.09		30
	CH20 1.98		30
	CH40 3.58		30
Conclusion : PASS			

7.4 Test Data

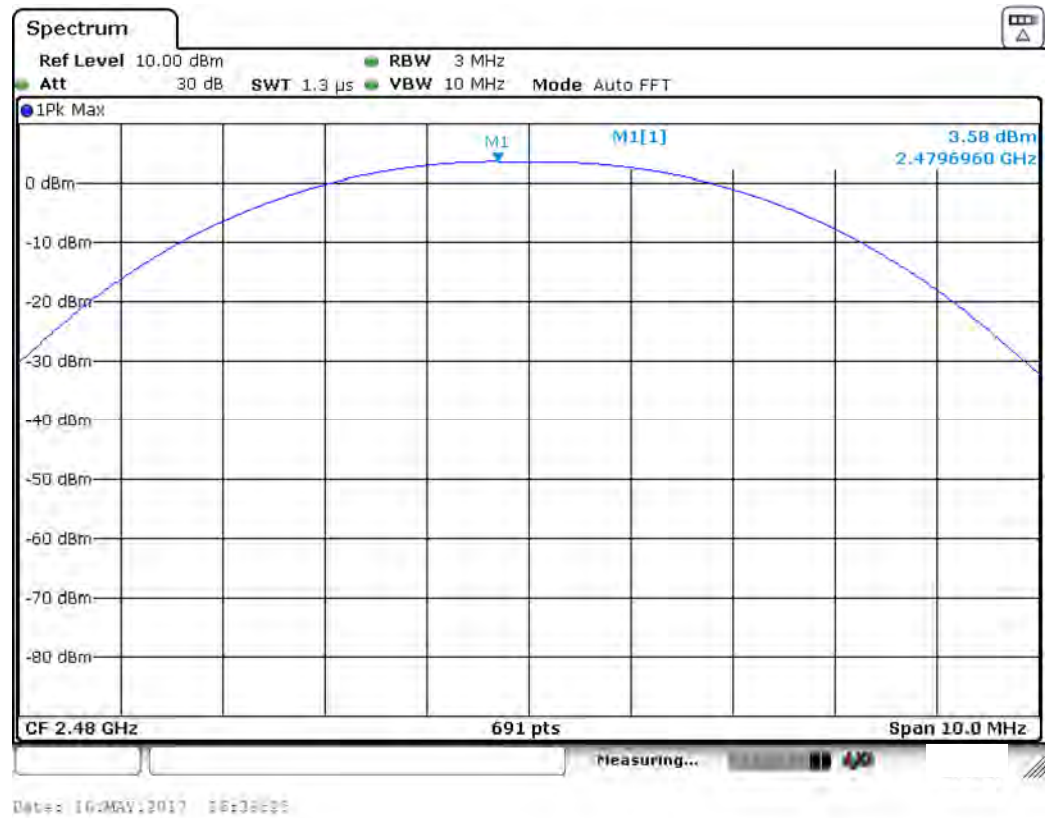
Test Mode: BT 4.0-BLE GFSK 2402MHz



Test Mode: BT 4.0-BLE GFSK 2440MHz



Test Mode: BT 4.0-BLE GFSK 2480MHz



8 POWER SPECTRAL DENSITY TEST

8.1 Limit

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3kHz band during any time interval of continuous transmission.

8.2 Test Procedure

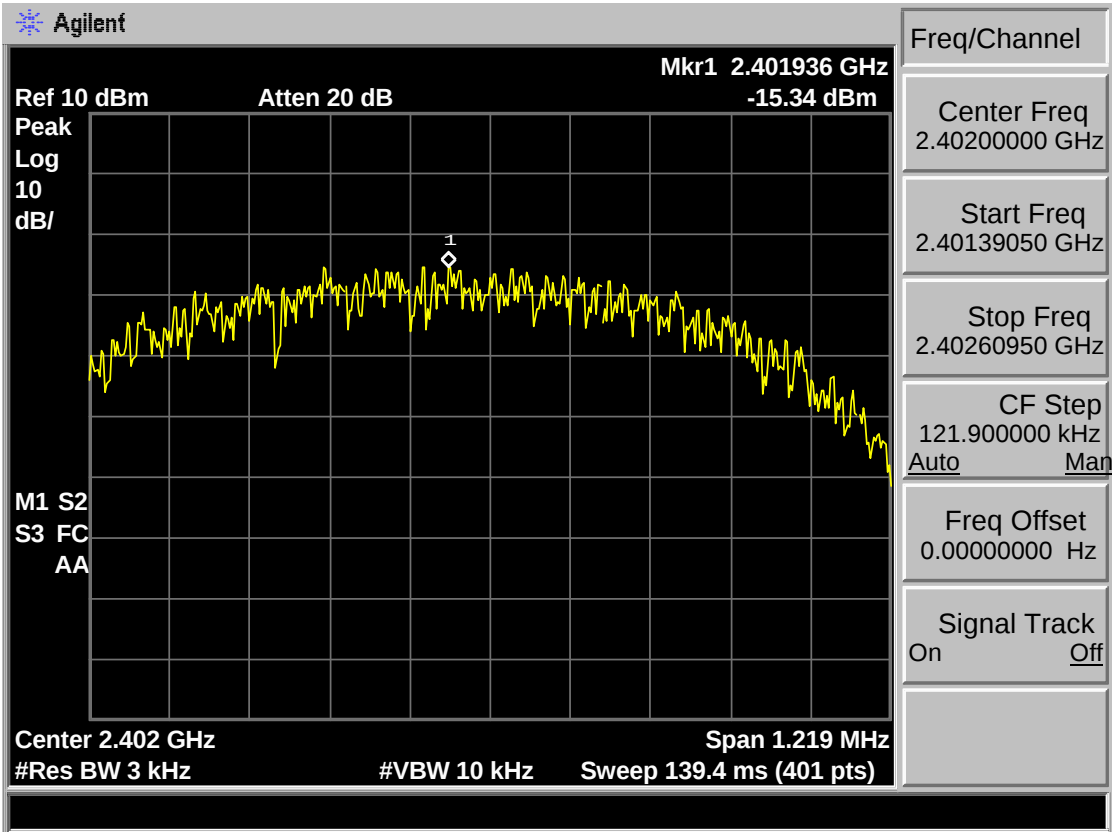
- 1, The transmitter output (antenna port) was connected to the spectrum analyzer. Connect EUT antenna terminal to the spectrum analyzer with a low loss SMA cable.
- 2, Follow the test procedure as described in KDB 558074
 - (1). Set analyzer center frequency to DTS channel center frequency.
 - (2). Set the span to 1.5 times the DTS bandwidth.
 - (3). Set the RBW to: $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
 - (4). Set the VBW $\geq 3 \text{ RBW}$.
 - (5). Detector = peak.
 - (6). Sweep time = auto couple.
 - (7). Trace mode = max hold.
 - (8). Allow trace to fully stabilize.
 - (9). Use the peak marker function to determine the maximum amplitude level.
 - (10). If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

8.3 Test Result

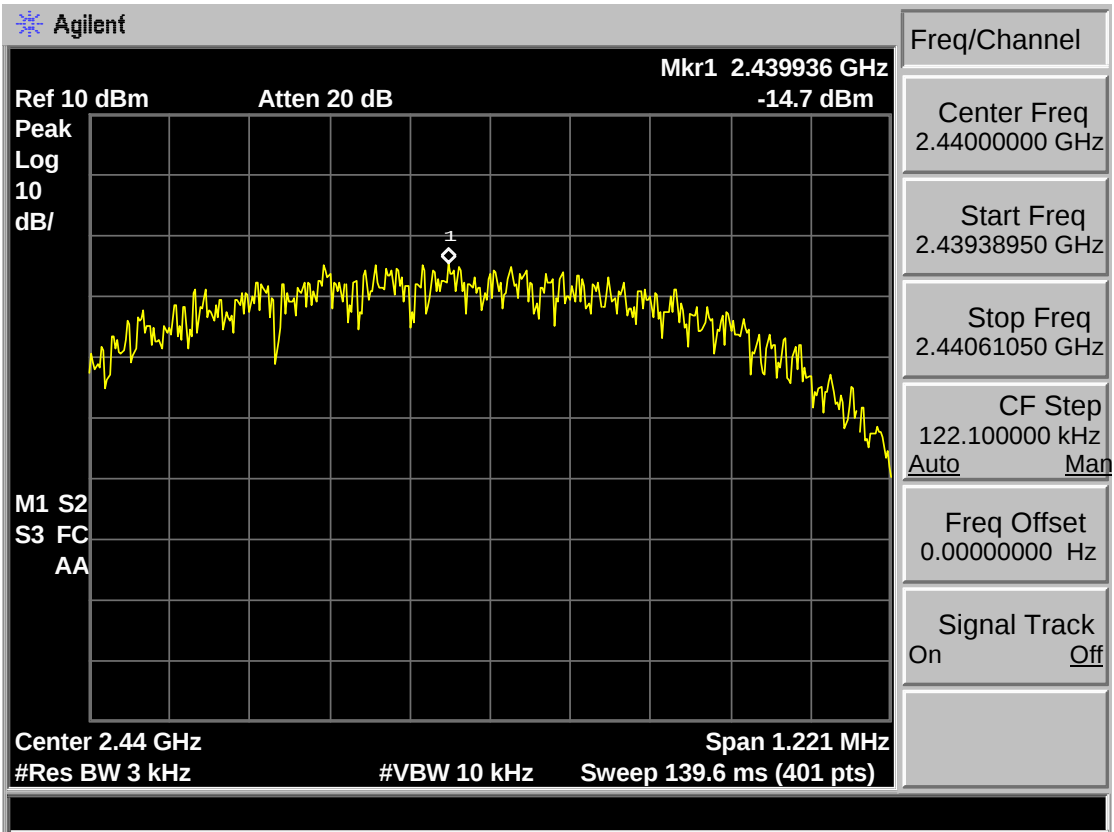
EUT: Multimedia Player/Amplifier			
M/N: DN-350MP			
Test date: 2017-05-15		Test site: 3m Chamber	Tested by: Tony Tang
Pass			
Test Mode	CH	Power density (dBm/3kHz)	Lim it (dBm /3kHz)
BT 4.0-BLE GFSK	CH1	-15.34	8
	CH20	-14.70	8
	CH40	-16.06	8
Conclusion : PASS			

8.4 Test Data

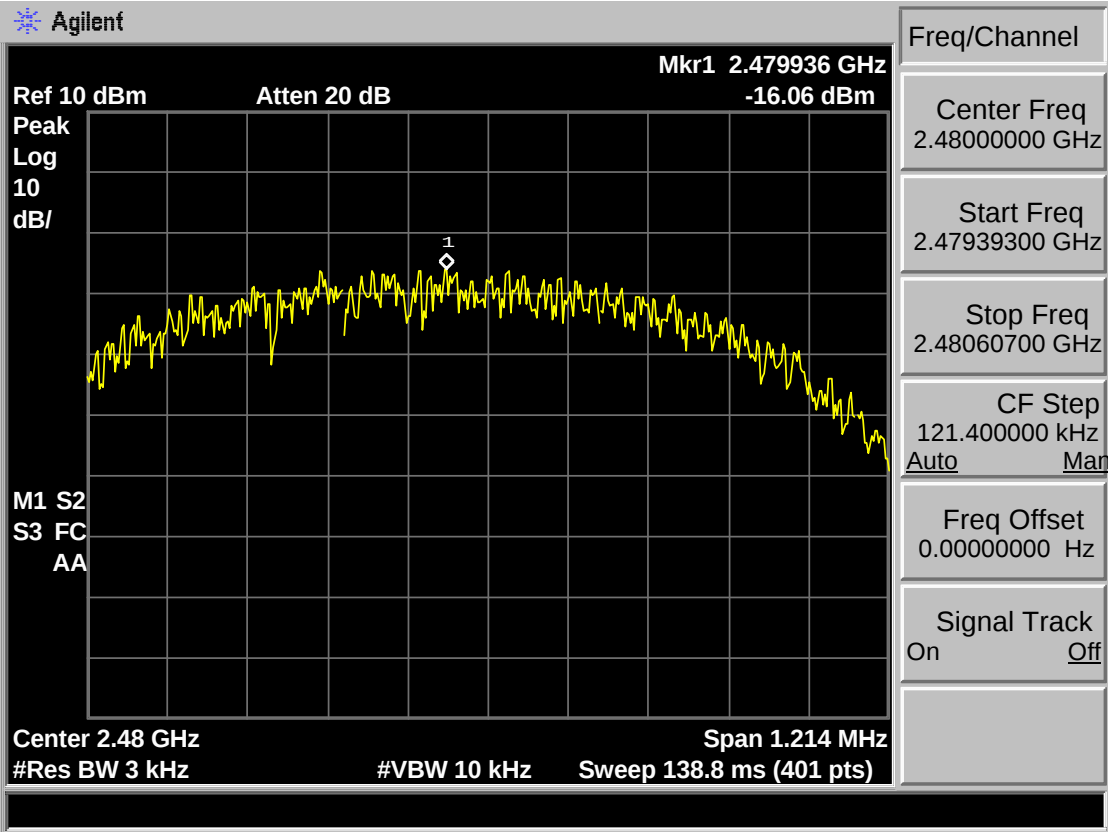
Test Mode: BT 4.0-BLE GFSK 2402MHz



Test Mode: BT 4.0-BLE GFSK 2440MHz



Test Mode: BT 4.0-BLE GFSK 2480MHz



9 ANTENNA REQUIREMENTS

9.1 Limit

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

9.2 Result

The antennas used for this product are External antenna and the antenna will uses a unique coupling to the EUT. No antenna other than that furnished by the responsible party shall be used with device, the maximum peak gain of the transmit antenna is only 3 dBi.