Test Report of FCC Part 15 C for FCC Certificate

On Behalf of

Shenzhen Full-Join Technology Co.,Ltd.

Product Description:	**Internet Radio**
Brand Name:	**Full-Join**
Model No.:	**DTS**
FCC ID:	**W27-DTS**

Prepared for:	**Shenzhen Full-Join Technology Co.,Ltd.** 9/F, No.1, Xinrui Road, Hourui, Xixiang Town, Baoan District, Shenzhen, Guangdong, China
Prepared by:	**Bontek Compliance Testing Laboratory Ltd** 1/F, Block East H-3, OCT Eastern Ind. Zone, Qiaocheng East Road, Nanshan, Shenzhen, China Tel: 86-755-86337020 Fax: 86-755-86337028
Report No.:	BCT09AR-005E
Issue Date:	February 15, 2009
Test Date:	January 15~ February 12, 2009

Test by: **Reviewed By:**

Kendy Wang

Tony Wu

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1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Applicant:	**Shenzhen Full-Join Technology Co., Ltd.**
Address of applicant:	9/F, No.1, Xinrui Road, Hourui, Xixiang Town, Baoan District, Shenzhen, Guangdong, China
Manufacturer:	**Shenzhen Full-Join Technology Co., Ltd.**
Address of manufacturer:	9/F, No.1, Xinrui Road, Hourui, Xixiang Town, Baoan District, Shenzhen, Guangdong, China

Equipment Under Test:	Internet Radio
Brand Name:	Full-Join
Model No.:	DTS
Type of Modulation:	OFDM (802.11g)
	Note: This product only has one type of Modulation of OFDM (802.11g).
Frequency Band:	2412 MHz ~ 2472 MHz
Number of Channels:	13
Antenna Type:	Dipole Antenna
Output Power :	13.6dBm(22.9mW)
Power Supply:	12 V DC from AC/DC Adaptor is attached.

Remark: * *The test data gathered are from the production sample provided by the manufacturer.*

1.2 Related Submittal(s) / Grant (s)

This submittal(s) is a test report based on the Electromagnetic Interference (EMI) tests performed on the EUT. The EMI measurements were performed according to the measurement procedure described in ANSI C63.4 - 2003.

The tests were performed in order to determine compliance with FCC Part 15, Subpart C, and section 15.203, 15.207, and 15.247 rules.

1.3 Test Methodology

Both conducted and radiated testing were performed according to the procedures in ANSI C63.4 - 2003, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz. Radiated testing was performed at an antenna to EUT distance 3 meters.

1.4 Test Facility

All measurement required was performed at laboratory of Bontek Compliance Testing Laboratory Ltd at 1/F, Block East H-3, OCT Eastern Ind. Zone, Qiaocheng East Road, Nanshan, Shenzhen, China and SGS-CSTC Standards Technical Services Co., Ltd ShenZhen Branch EMC Lab at No.1 Workshop, M-10, Middle Section, Science&Technology Park, Shenzhen 518057, China

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

FCC – Registration No.: 338263

Bontek Compliance Testing Laboratory Ltd EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 338263, March 24, 2008.

IC Registration No.: 126111

The 3m alternate test site of Bontek Compliance Testing Laboratory Ltd EMC Laboratory has been registered by Certification and Engineer Bureau of Industry Canada for the performance of with Registration NO.: 126111 on March, 2008.

FCC – Registration No.: 556682

SGS-CSTC Standards Technical Services Co., Ltd ShenZhen Branch EMC Lab, EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 556682.

2. SYSTEM TEST CONFIGURATION

The tests documented in this report were performed in accordance with ANSI C63.4-2003 and FCC CFR 47 Part 15 Subpart C.

2.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner that intends to maximize its emission characteristics in a continuous normal application.

2.2 EUT Exercise

The calibrated antennas used to sample the radiated field strength are mounted on a non-conductive, motorized antenna mast 3 or 10 meters from the leading edge of the turntable.

2.3 General Test Procedures

Conducted Emissions The EUT is placed on the turntable, which is 0.8 m above ground plane. According to the requirements in Section 7.1 of ANSI C63.4-2003.Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-Peak detector mode.

Radiated Emissions The EUT is a placed on as turntable, which is 0.8 m above ground plane. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna, which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the maximum emissions, exploratory radiated emission measurements were made according to the requirements in Section 13.1.4.1 of ANSI C63.4-2003.

2.4 List of Measuring Equipments Used

For Radiated Spurious Emission (30~25GHz) test: SGS-CSTC Shenzhen Branch:

Items	Equipment	Manufacturer	Model No.	Last Cal	Calibration Period
1	EMI Test Receiver	R&S	ESI 26	2008/6	1 year
2	Horn Antenna	R/S	CH14-H052	2008/6	1 year
3	3m Semi- Anechoic Chamber	ETS	N/A	2008/6	1 year
4	Horn Antenna	R/S	HF906	2008/6	1 year
5	Spectrum Analyzer	HP	8594EM	2008/6	1 year

For other test: Bontek Compliance Testing Laboratory Ltd

Items	Equipment	Manufacturer	Model No.	Last Cal	Calibration Period
1	EMI Test Receiver	R&S	ESCI	2008/02/22	1 Year
2	EMI Test Receiver	R&S	ESPI	2008/02/22	1 Year
3	Amplifier	HP	8447D	2008/02/22	1 Year
4	3 phase Artificial Mains（L.I.S.N）	SCHWARZBECK	NSLK 8128	2008/02/22	1 Year
5	TRILOG Broadband Test-Antenna	SCHWARZBECK	VULB9163	2008/02/22	1 Year
6	Horn Antenna	SCHWARZBECK	BBHA9120A	2008/02/22	1 Year
7	High Field Biconical Antenna	ELECTRO-METRICS	EM-6913	2008/09/04	1 Year
8	Log Periodic Antenna	ELECTRO-METRICS	EM-6950	2008/09/04	1 Year
9	Remote Active Vertical Antenna	ELECTRO-METRICS	EM-6892	2008/09/04	1 Year
10	Power Clamp	SCHWARZBECK	MDS-21	2008/02/22	1 Year

3. SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
15.203/15.247(b)/(c)	Antenna Requirement	Pass
15.207	AC Power Line Conducted Emission	Pass
15.247(a)(2)	Spectrum Bandwidth of a Direct Sequence Spread Spectrum System	Pass
15.247(b)	Maximum Peak Output Power	Pass
15.247(d)	Radiated Emissions	Pass
15.247(e)	Power Spectral Density	Pass
15.247(c)	Band Edge Measurement	Pass

4. ANTENNA REQUIREMENT

4.1 Standard Applicable

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

Section 15.247(b)/(c):

If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

If the intentional radiator is used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6 dBi provided the maximum peak output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

4.2 Antenna Connected Construction

The antenna used in this product is Dipole antenna with R-SMA connector. The maximum Gain of the antenna is 2dBi.

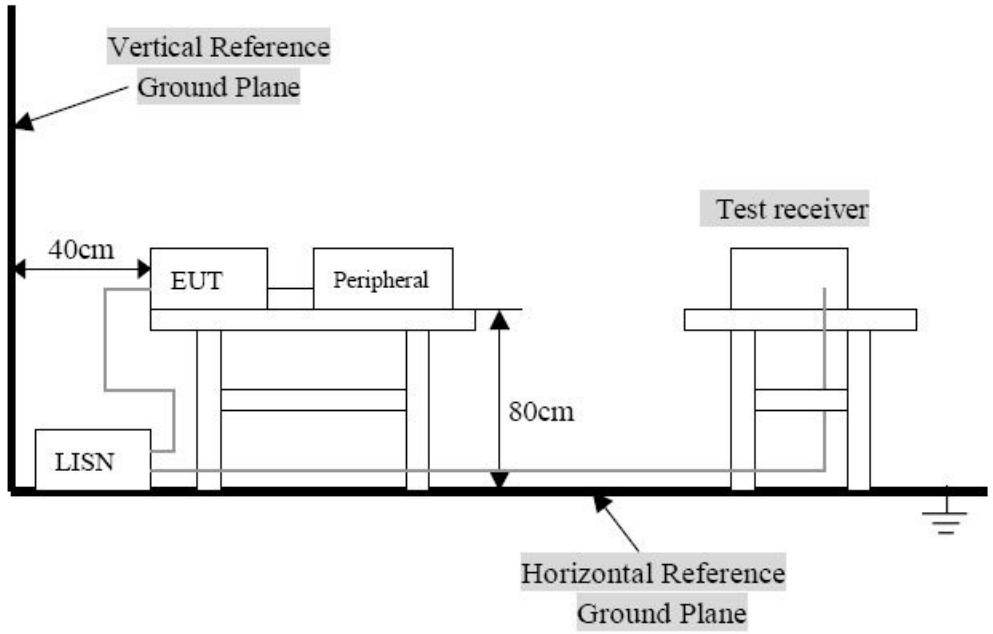
5. TEST OF CONDUCTED EMISSION

5.1 Applicable Standard

Section 15.207: For a Low-power Radio-frequency Device is designed to be connected to the AC power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed below limits table.

Frequency Range (MHz)	Limits (dBuV)	
	Quasi-Peak	Average
0.150～0.500	66～56	56～46
0.500～5.000	56	46
5.000～30.00	60	50

5.2 Test Setup Diagram



Remark: 1. The setup of EUT is according with per ANSI C63.4-2003 measurement procedure. The specification used was with the FCC 15.207 limits.

2. The EUT was connected to a 120 VAC/ 60Hz power source.

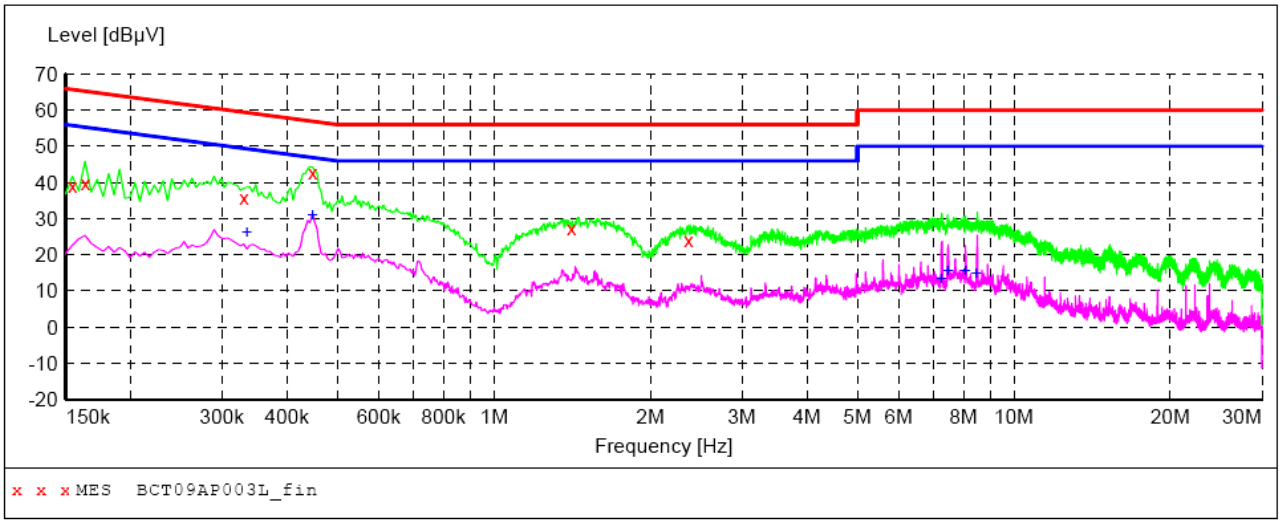
5.3 Test Result

Temperature (℃) : 22~23	EUT: Internet Radio
Humidity (%RH): 50~54	M/N: DTS
Barometric Pressure (mbar): 950~1000	Operation Condition: Charging Mode

Conducted Emission from AC/DC Adaptor:

EUT: Internet Radio
Operating Condition: Charging Mode
Test Site: Shielded Room
Operator: Andy
Test Specification: DC 12V from AC/DC adapter (AC 120V/60Hz)
Comment: Live Line

SCAN TABLE: "Voltage(150K-30M)FIN"
Short Description: 150K-30M Voltage



MEASUREMENT RESULT: "BCT09AP003L_fin"

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Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.154500	38.90	11.4	66	26.9	QP	L1	GND
0.163500	39.70	11.2	65	25.6	QP	L1	GND
0.330000	35.70	10.5	60	23.8	QP	L1	GND
0.447000	42.80	10.3	57	14.1	QP	L1	GND
1.405500	27.20	10.2	56	28.8	QP	L1	GND
2.364000	24.00	10.2	56	32.0	QP	L1	GND

MEASUREMENT RESULT: "BCT09AP003L_fin2"

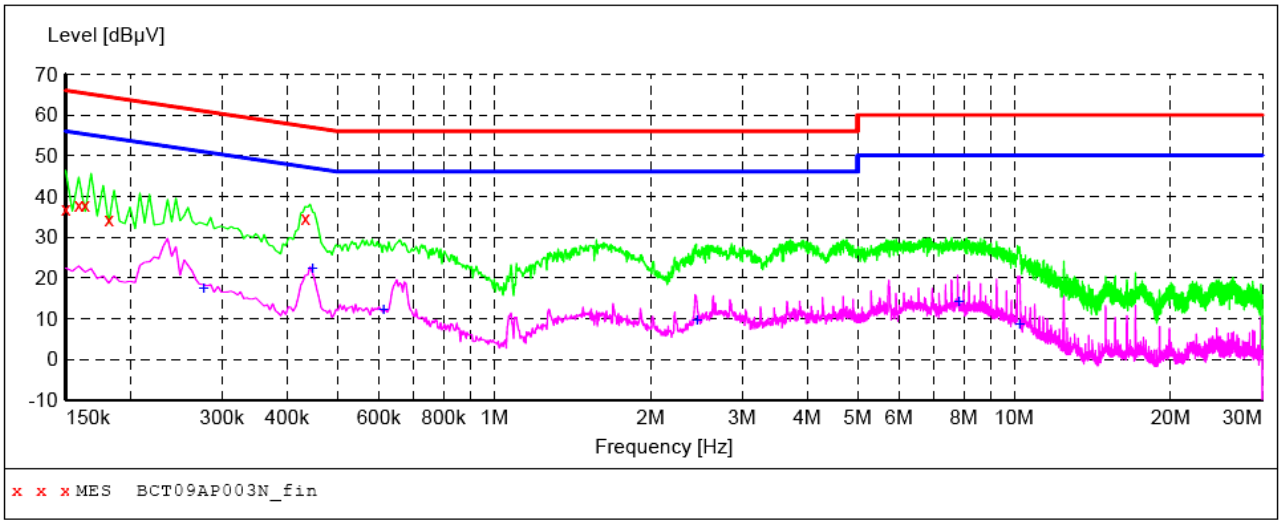
1/6/2009 14:19

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.334500	26.20	10.5	50	24.1	AV	L1	GND
0.447000	30.90	10.3	47	16.3	AV	L1	GND
7.242000	13.40	10.4	50	36.6	AV	L1	GND
7.458000	15.40	10.4	50	34.6	AV	L1	GND
8.065500	15.60	10.5	50	34.4	AV	L1	GND
8.470500	14.70	10.5	50	35.3	AV	L1	GND

Conducted Emission from AC/DC Adaptor:

EUT: Internet Radio
Operating Condition: Charging Mode
Test Site: Shielded Room
Operator: Andy
Test Specification: DC 12V from AC/DC adapter (AC 120V/60Hz)
Comment: Neutral Line

SCAN TABLE: "Voltage(150K-30M)FIN"
Short Description: 150K-30M Voltage



MEASUREMENT RESULT: "BCT09AP003N_fin"

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Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.150000	36.90	11.4	66	29.1	QP	N	GND
0.159000	37.80	11.3	66	27.7	QP	N	GND
0.163500	37.80	11.2	65	27.5	QP	N	GND
0.181500	34.30	11.0	64	30.1	QP	N	GND
0.433500	34.60	10.3	57	22.6	QP	N	GND

MEASUREMENT RESULT: "BCT09AP003N_fin2"

1/6/2009 14:16

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.276000	17.50	10.6	52	34.9	AV	N	GND
0.447000	22.40	10.3	47	24.8	AV	N	GND
0.613500	12.00	10.2	46	34.0	AV	N	GND
2.454000	9.50	10.2	46	36.5	AV	N	GND
7.831500	14.00	10.5	50	36.0	AV	N	GND
10.243500	8.50	10.5	50	41.5	AV	N	GND

6. Test of 6dB Bandwidth

6.1 Applicable Standard

Section 15.247(a)(2): For direct sequence systems, the minimum 6 dB bandwidth shall be at least 500 kHz.

6.2 EUT Setup

Spectrum Analyzer

6.3 Test Equipment List and Details

See section 2.4.

6.4 Test Procedure

1. The transmitter output was connected to the spectrum analyzer through an attenuator.

2. Set RBW of spectrum analyzer to 100KHz and VBW to 300KHz.

3. Set Detector to Peak, Trace to Max Hold and Sweep Time is Auto.

4. The spectrum width with level higher than 6dB below the peak level.

5. Repeat above 1~3 points for the middle and highest channel of the EUT.

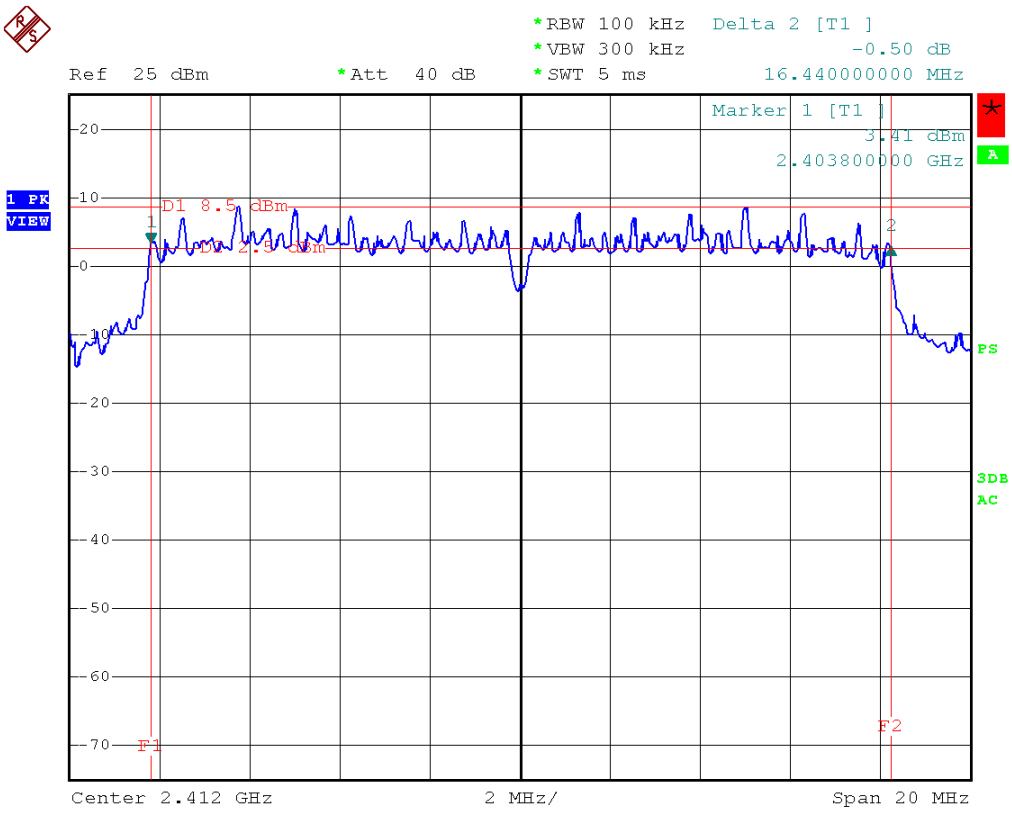
6.5 Test Result

Temperature (℃) : 22~23	EUT: Internet Radio
Humidity (%RH): 50~54	M/N: DTS
Barometric Pressure (mbar): 950~1000	Operation Condition: Tx Mode

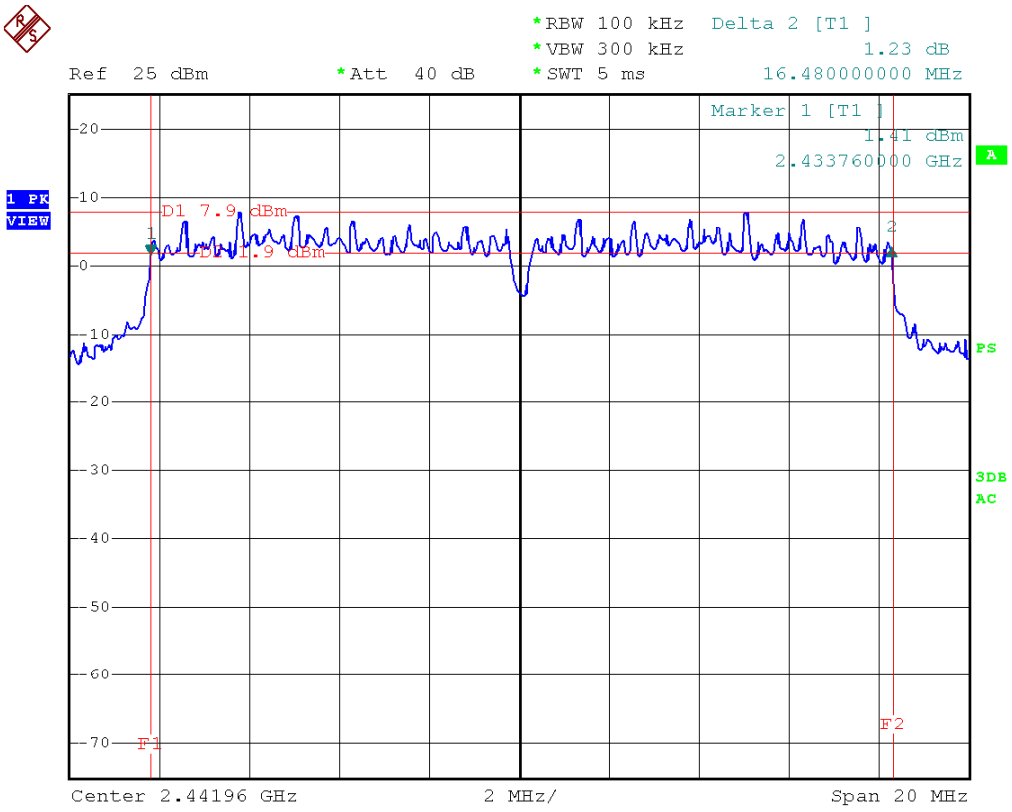
Modulation Type	Channel No.	Frequency (MHz)	6dB Bandwidth (kHz)	Min. Limit (kHz)
OFDM	Low	2412.00	16440	>500
OFDM	Middle	2442.00	16480	>500
OFDM	High	2472.00	16520	>500

Test plot see following pages:

Channel Low：


*RBW 100 kHz
*VBW 300 kHz
*SWT 5 ms
Delta 2 [T1]
-0.50 dB
16.440000000 MHz
Ref 25 dBm
*Att 40 dB
Marker 1 [T1]
3.41 dBm
2.403800000 GHz
1 PK
VIEW
D1 8.5 dBm
D2 -1.5 dBm
PS
3DB
AC
F1
F2
Center 2.412 GHz
2 MHz/
Span 20 MHz
Date: 16.JAN.2009 09:22:52

Channel Middle：



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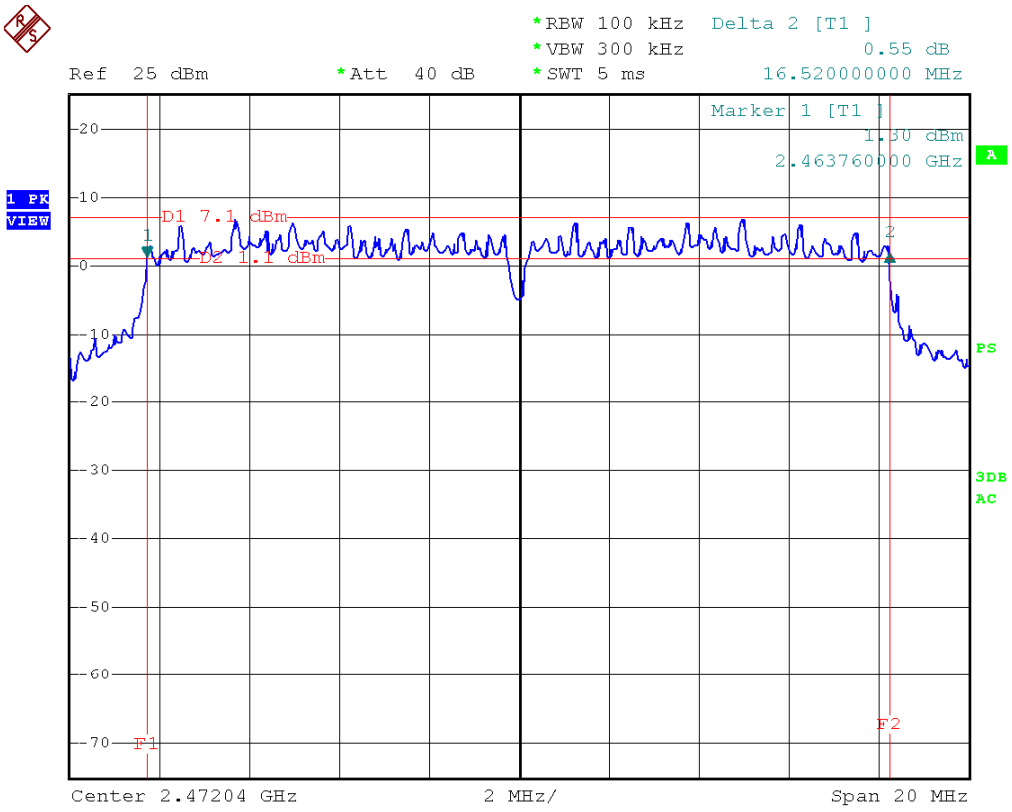
Channel High：



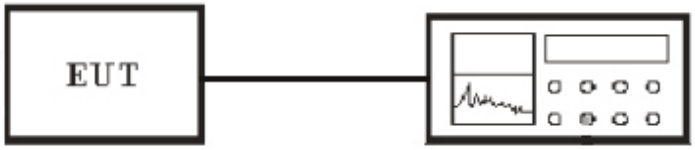
Date: 16.JAN.2009 09:28:21

7. Test of Maximum Peak Output Power

7.1 Applicable Standard

Section 15.247(b)(1): For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels and The maximum peak output power shall not exceed 1 watt. For all other frequency hopping systems in this frequency band, The maximum peak output power shall not exceed 0.125 watt.

7.2 EUT Setup



Spectrum Analyzer

7.3 Test Equipment List and Details

See section 2.4.

7.4 Test Procedure

1. The transmitter output was connected to the peak power meter and recorded the peak value.

2. Peak power meter parameter set to auto attenuator and filter is the same as.

3. Repeated the 1 for the middle and highest channel of the EUT.

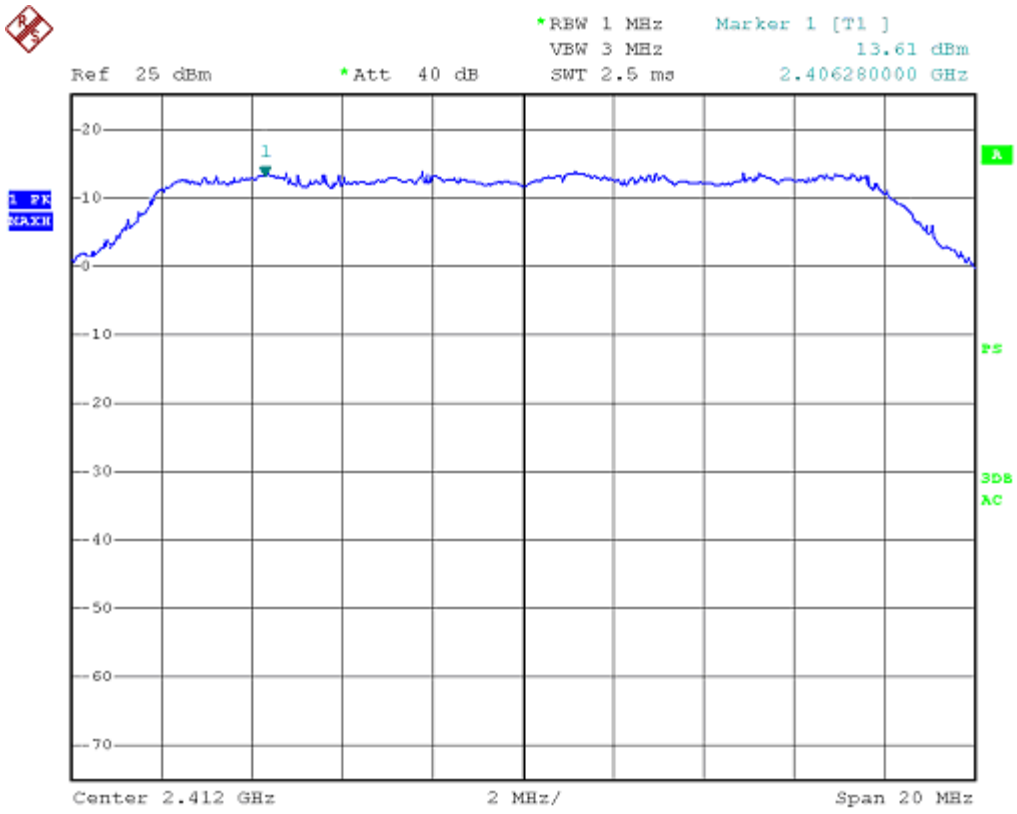
7.5 Test Result

Temperature (℃) : 22~23	EUT: Internet Radio
Humidity (%RH): 50~54	M/N: DTS
Barometric Pressure (mbar): 950~1000	Operation Condition: Tx Mode

Modulation Type	Channel No.	Frequency (MHz)	Output Power (dBm)	Limits (dBm)	Margin (dB)
OFDM	Low	2412.00	13.61	30	16.39
OFDM	Middle	2442.00	13.37	30	16.63
OFDM	High	2472.00	13.36	30	16.64

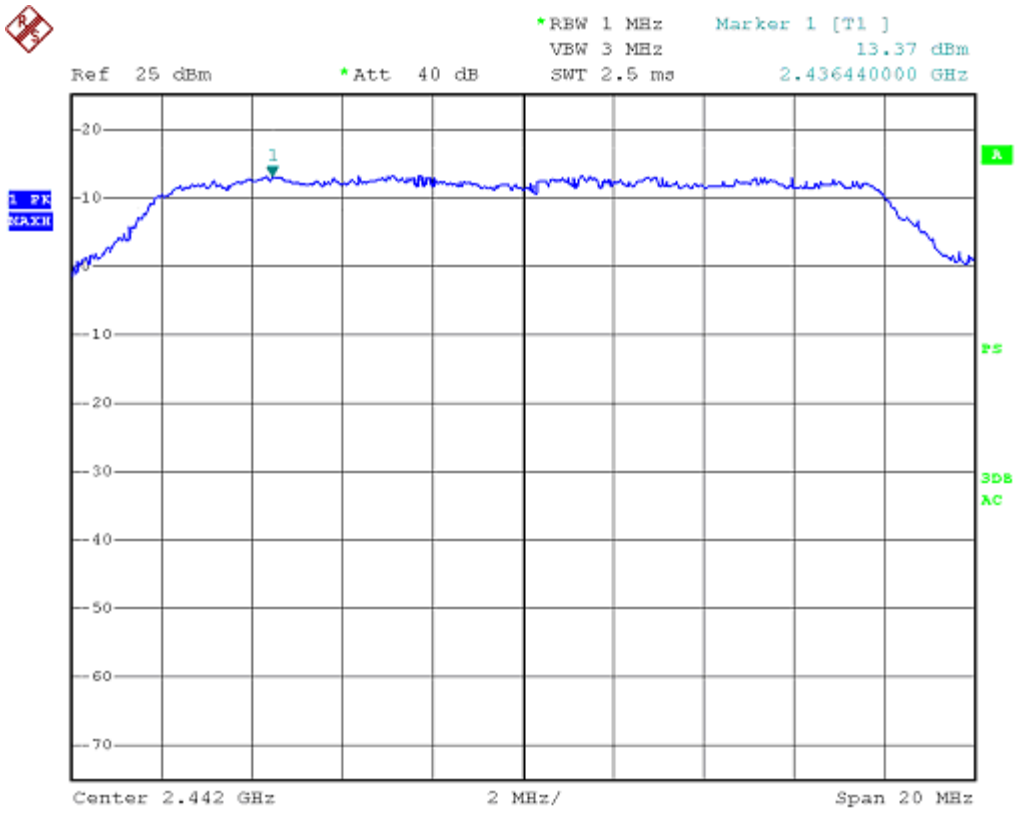
Test plot see following pages:

Channel Low：



Date: 10.FEB.2009 09:25:25

Channel Middle：



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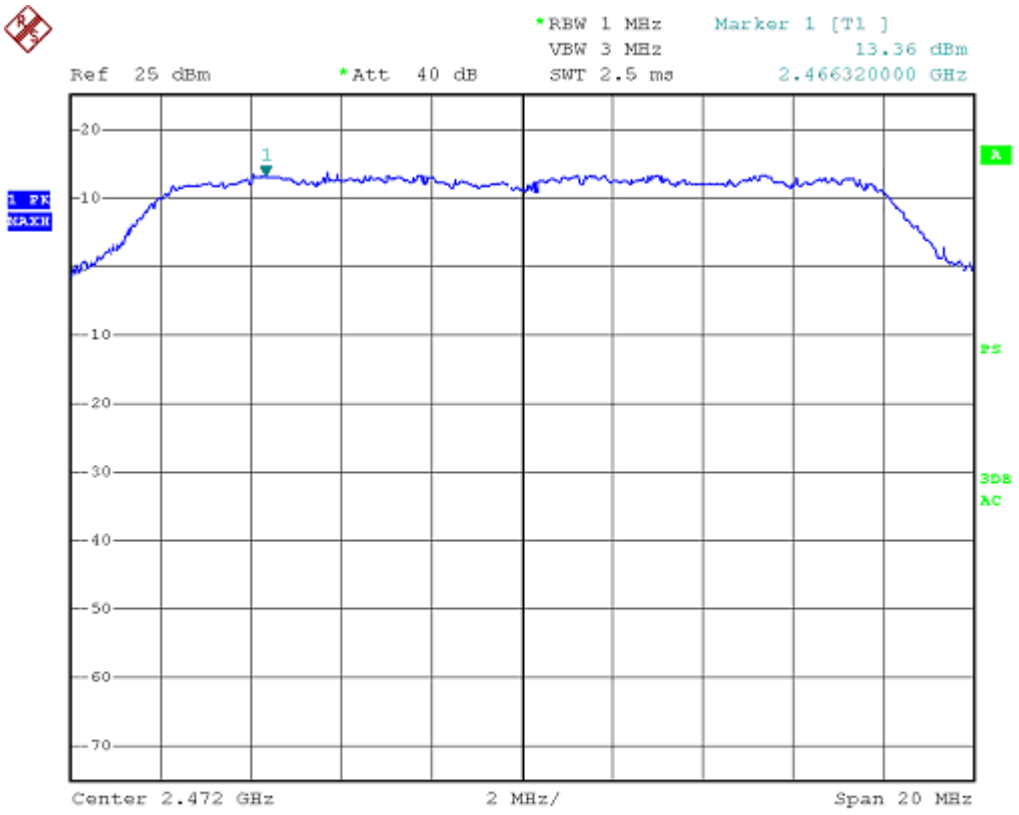
Channel High：



Date: 10.FEB.2009 09:29:44

8. Test of Power Spectral Density

8.1 Applicable Standard

Section 15.247(e): The Maximum of Power Spectral Density Measurement is 8dBm.

8.2 EUT Setup

Spectrum Analyzer

8.3 Test Equipment List and Details

See section 2.4.

8.4 Test Procedure

1. The transmitter output was connected to the spectrum analyzer through an attenuator.

2. Set RBW of spectrum analyzer to 3KHz and VBW to 30KHz.

3. Set Detector to Peak, Trace to Max Hold and set sweep time = span/3kHz. The sweep time is allowed to be longer than span/3kHz for a full response of the mixer in the spectrum analyzer.

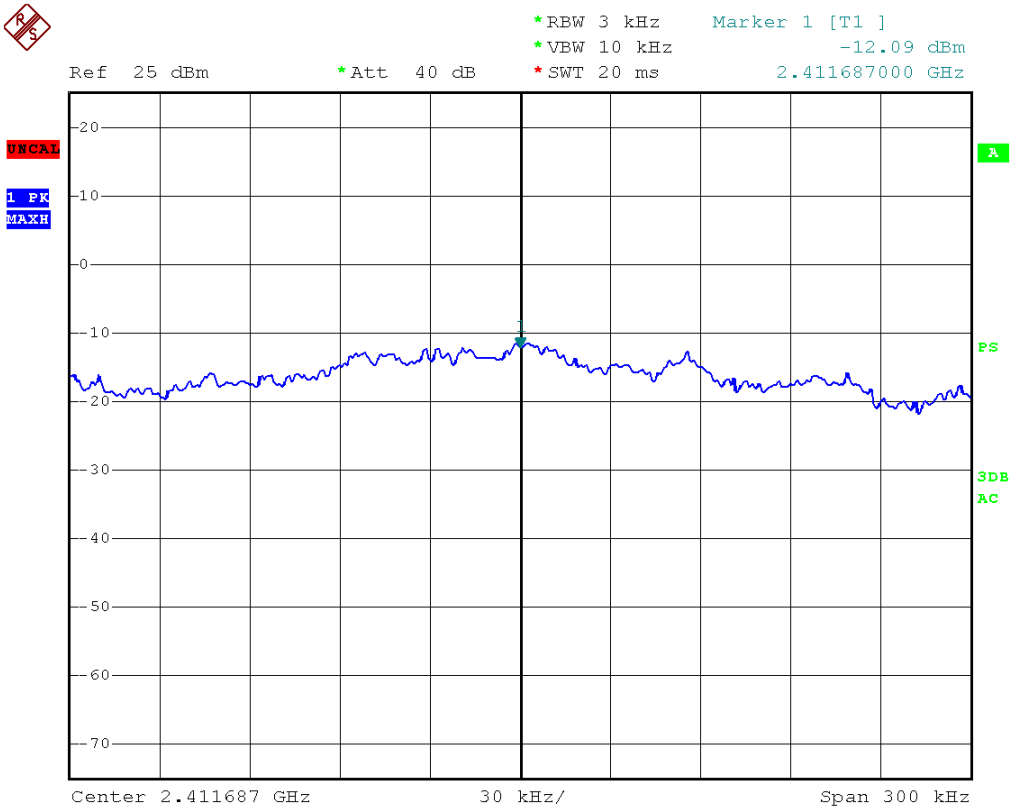
4. Repeat above 1~3 points for the middle and highest channel of the EUT.

8.5 Test Result

Temperature (℃) : 22~23	EUT: Internet Radio
Humidity (%RH): 50~54	M/N: DTS
Barometric Pressure (mbar): 950~1000	Operation Condition: Tx Mode

Test plot see following pages:

Channel Low：



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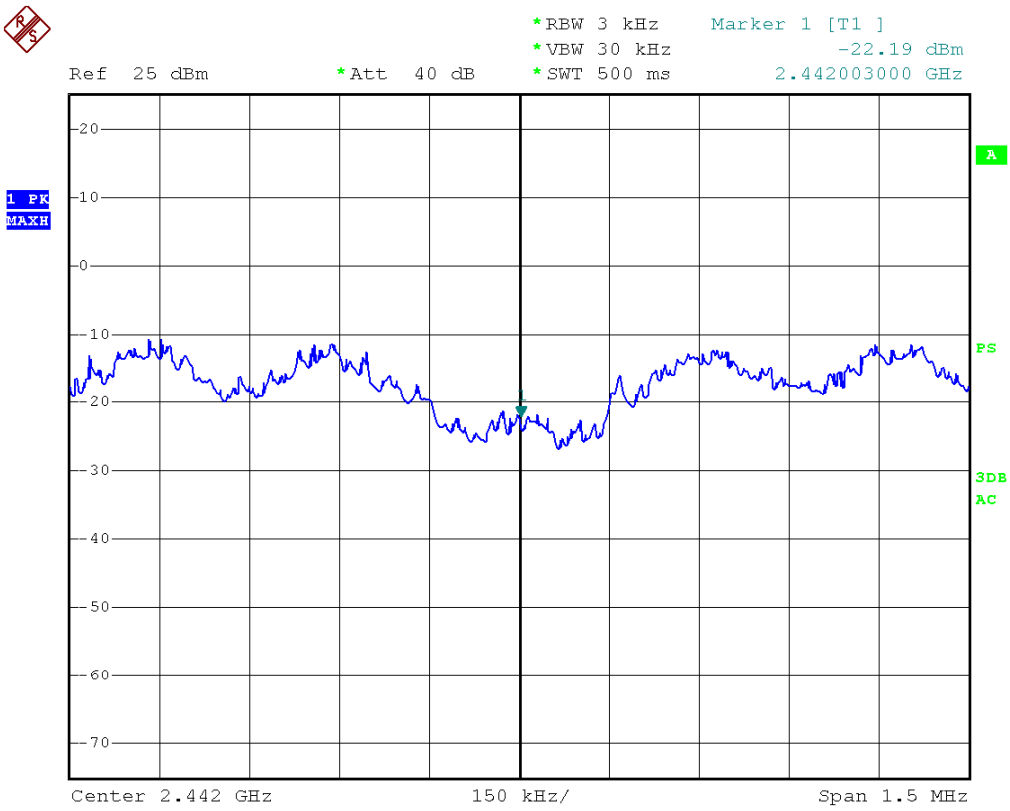
Channel Middle：



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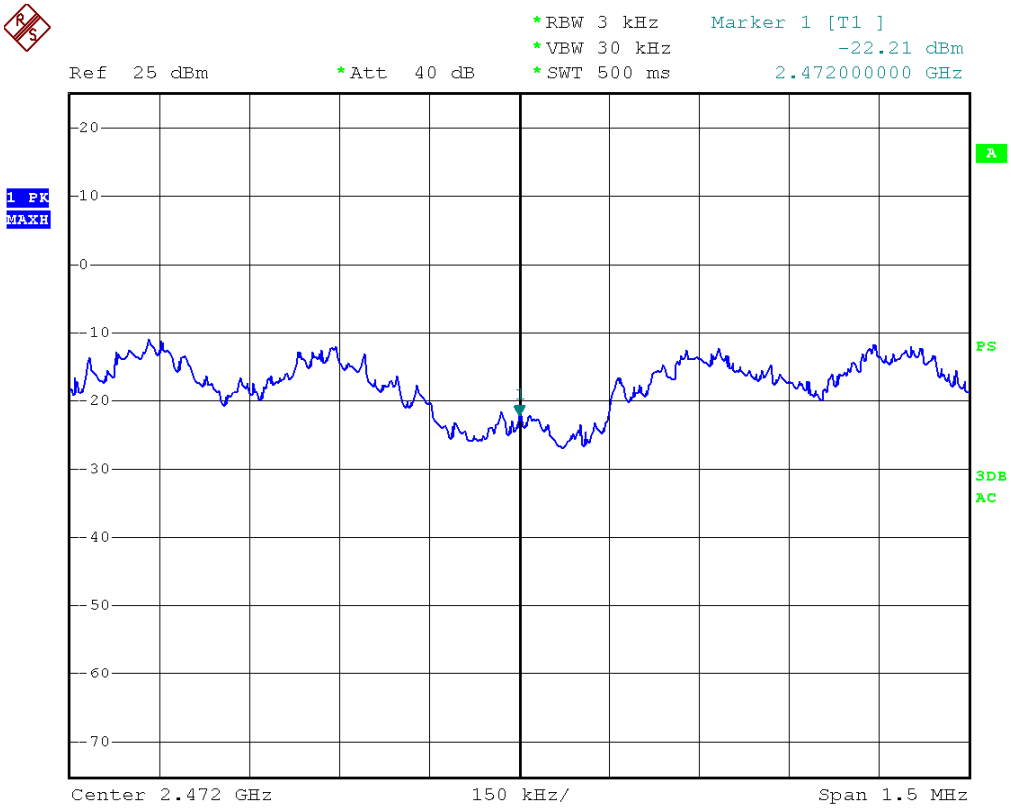
Channel High：



Date: 16.JAN.2009 09:31:32

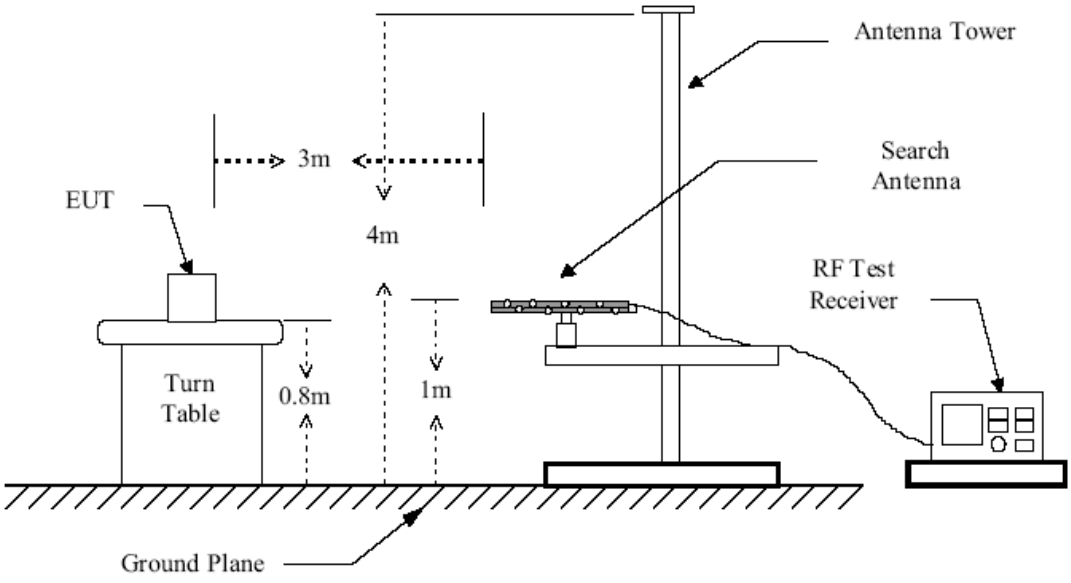
9. Test of Band Edges Emission

9.1 Applicable Standard

Section 15.247(c): In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. In addition, radiated emissions that fall in the restricted bands, as defined in Section 15.205, must also comply with the radiated emission limits specified in Section 15.209.

9.2 EUT Setup

Radiated Measurement Setup



Conducted Measurement Setup

Spectrum Analyzer

9.3 Test Equipment List and Details

See section 2.4.

9.4 Test Procedure

Conducted Measurement

1. The transmitter is set to the lowest channel.

2. The transmitter output was connected to the spectrum analyzer via a cable and cable loss is used as the offset of the spectrum analyzer.

3. Set both RBW and VBW of spectrum analyzer to 100KHz with convenient frequency span including 100MHz bandwidth from lower band edge. Then detector set to peak and max hold this trace.

4. The lowest band edges emission was measured and recorded.

5. The transmitter set to the highest channel and repeated 2~4.

Radiated Measurement

1. Configure the EUT according to ANSI C63.4.

2. The turntable was rotated by 360 degrees to determine the position of the highest radiation.

3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emission field strength of both horizontal and vertical polarization.

4. For band edge emission, the antenna tower was scan (from 1 M to 4 M) and then the turn table was rotated (from 0 degree to 360 degrees) to find the maximum reading.

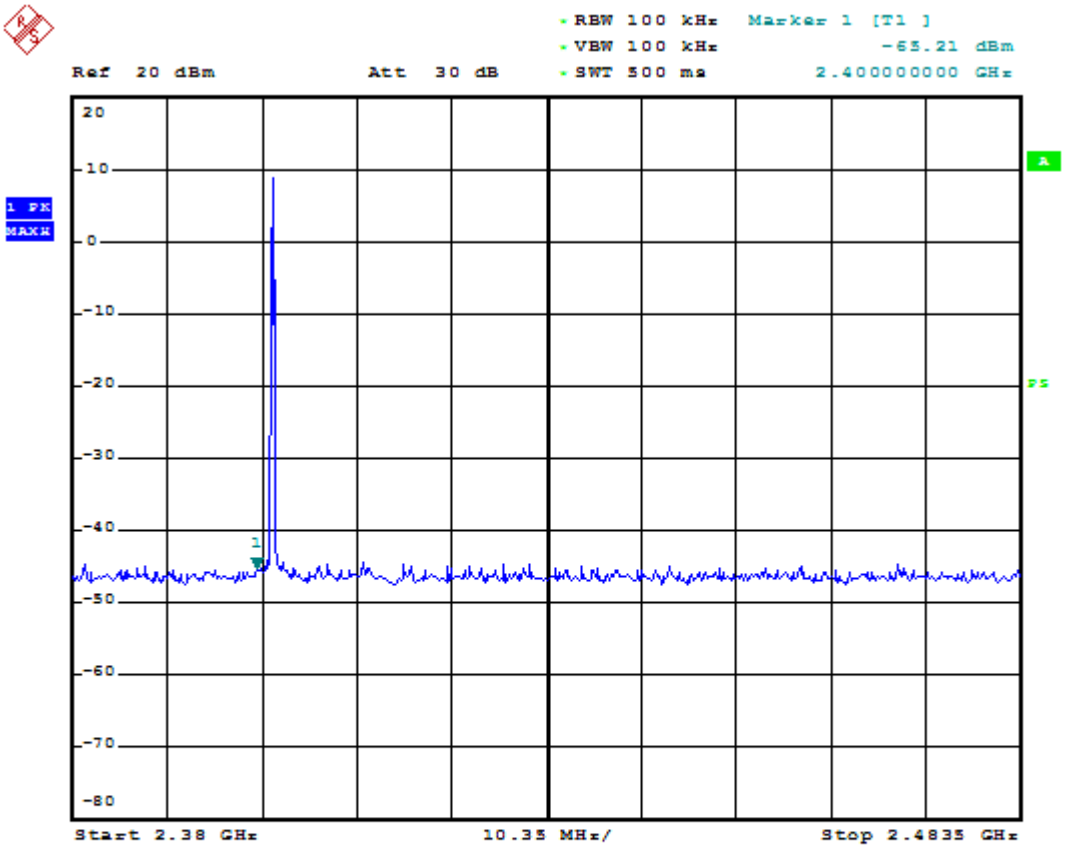
5. For band edge emission, use 10Hz VBW and 1MHz RBW for reading under AV and use 1MHz VBW and 1MHz RBW for reading under PK.

9.5 Test Result

Temperature (℃) : 22~23	EUT: Internet Radio
Humidity (%RH): 50~54	M/N: DTS
Barometric Pressure (mbar): 950~1000	Operation Condition: Tx Mode

Test plot see following pages:

Radiated Test Result



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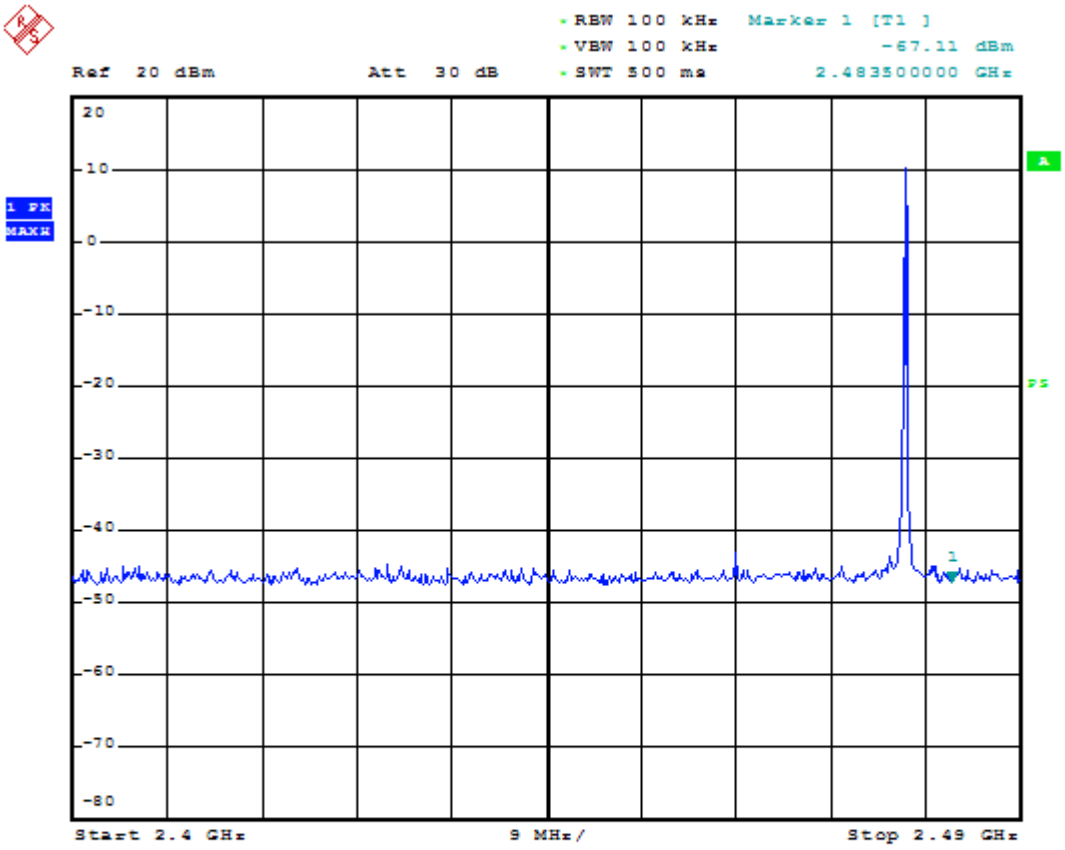

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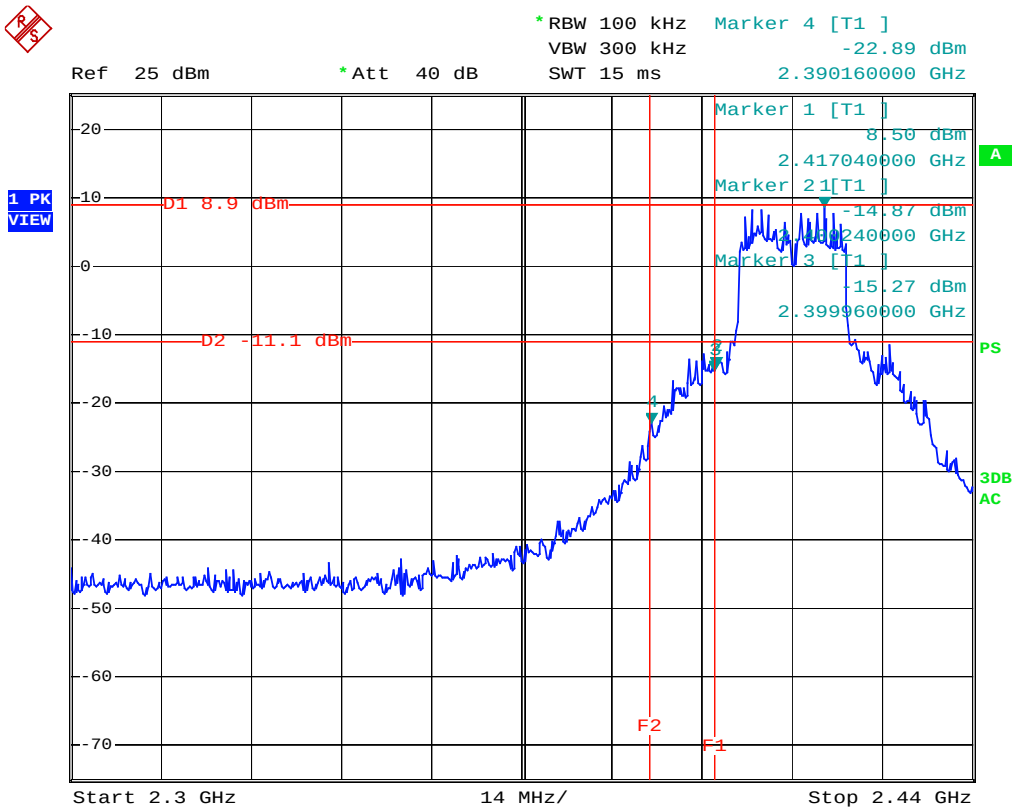
Conducted Test Result



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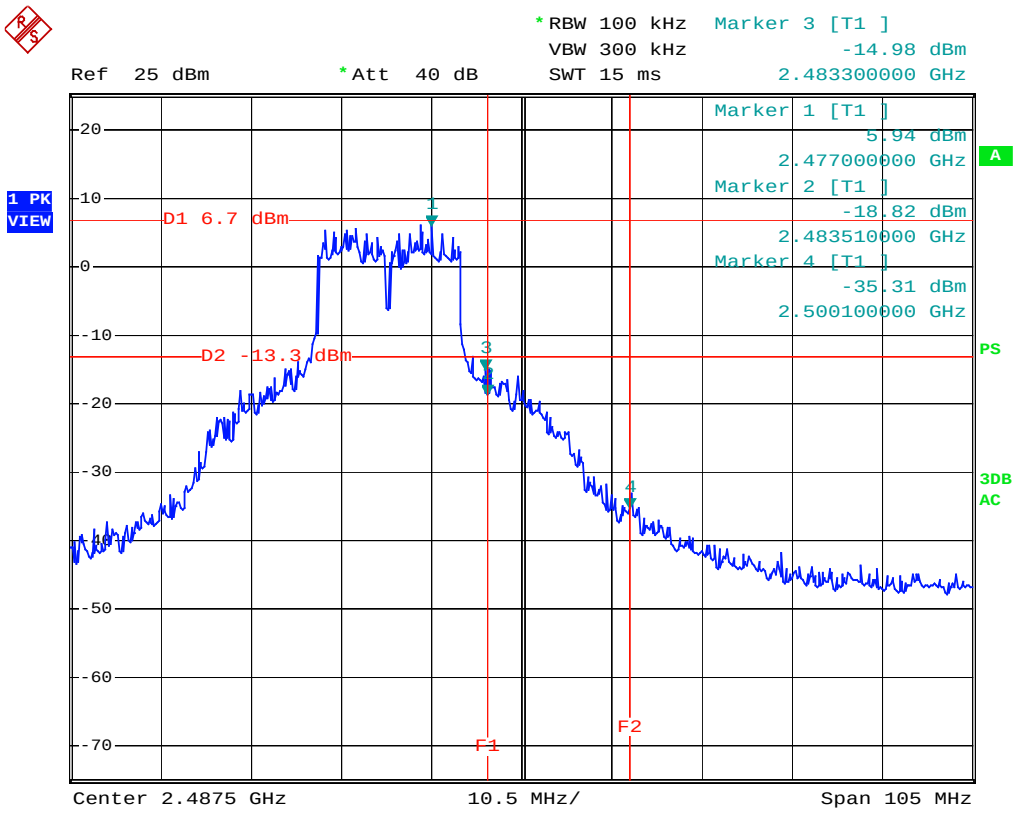


Date: 4.FEB.2009 14:08:11

10. Test of Spurious Radiated Emission

10.1 Applicable Standard

Section 15.247(d): In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. In addition, radiated emissions that fall in the restricted bands, as defined in Section 15.205, must also comply with the radiated emission limits specified in Section 15.209.

10.2 EUT Setup

Radiated Measurement Setup

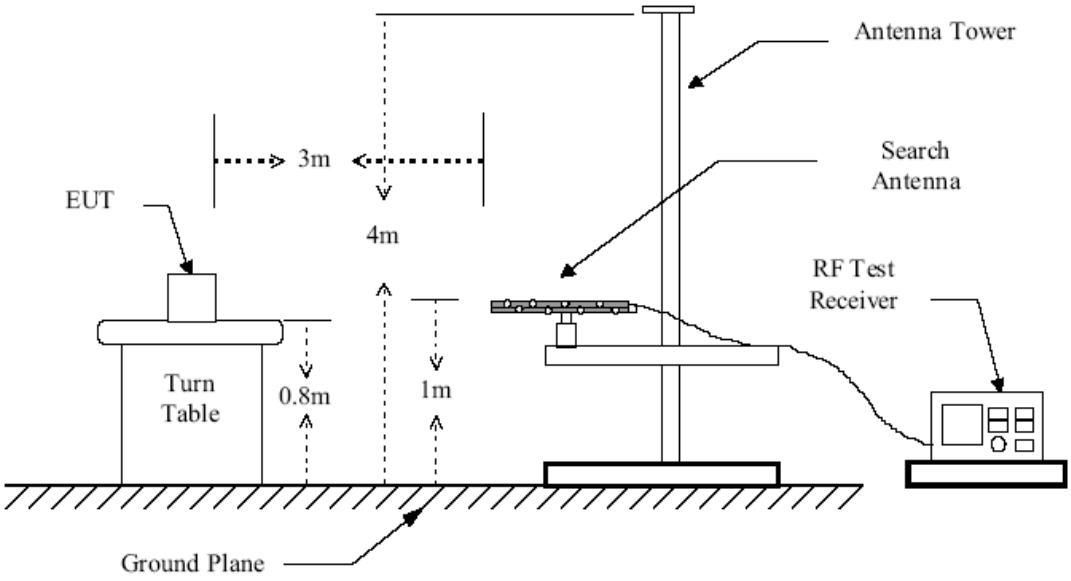


Figure 1 : Frequencies measured below 1 GHz configuration

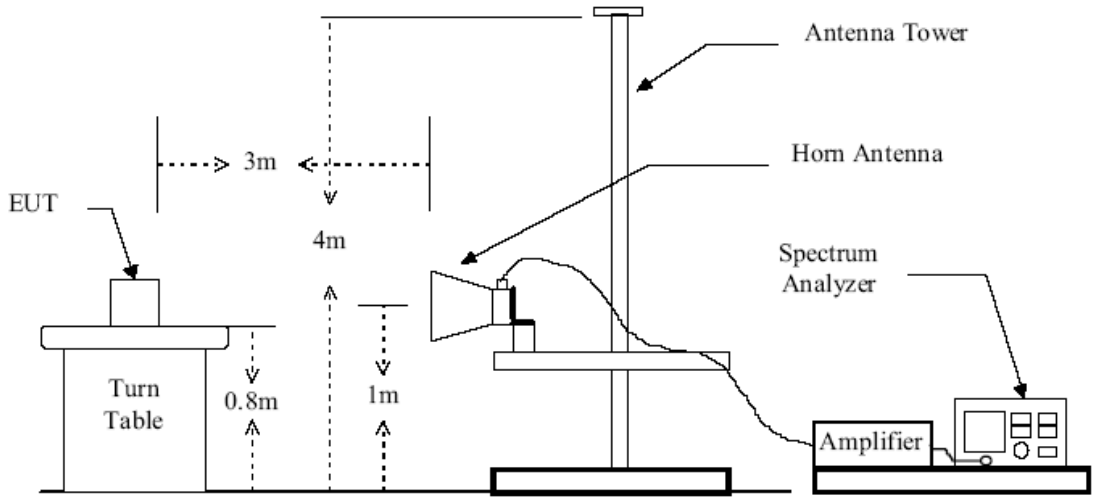


Figure 2 : Frequencies measured above 1 GHz configuration

Conducted Measurement Setup

Spectrum Analyzer

10.3 Test Equipment List and Details

See section 2.4.

10.4 Test Procedure

Radiated Measurement

1. Configure the EUT according to ANSI C63.4.

2. The EUT was placed on the top of the turntable 0.8 meter above ground.

3. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.

4. Power on the EUT and all the supporting units.

5. The turntable was rotated by 360 degrees to determine the position of the highest radiation.

6. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emission field strength of both horizontal and vertical polarization.

7. For each suspected emission, the antenna tower was scanned (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.

8. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.

Conducted Measurement

1. For emission above 1GHz,conducted measurement method is used.

2. The transmitter is set to the lowest channel.

3. The transmitter output was connected to the spectrum analyzer via a cable and cable loss is used as the offset of the spectrum analyzer.

4. Set RBW to 1 MHz and VBW to 3 MHz, Then detector set to peak and max hold this trace.

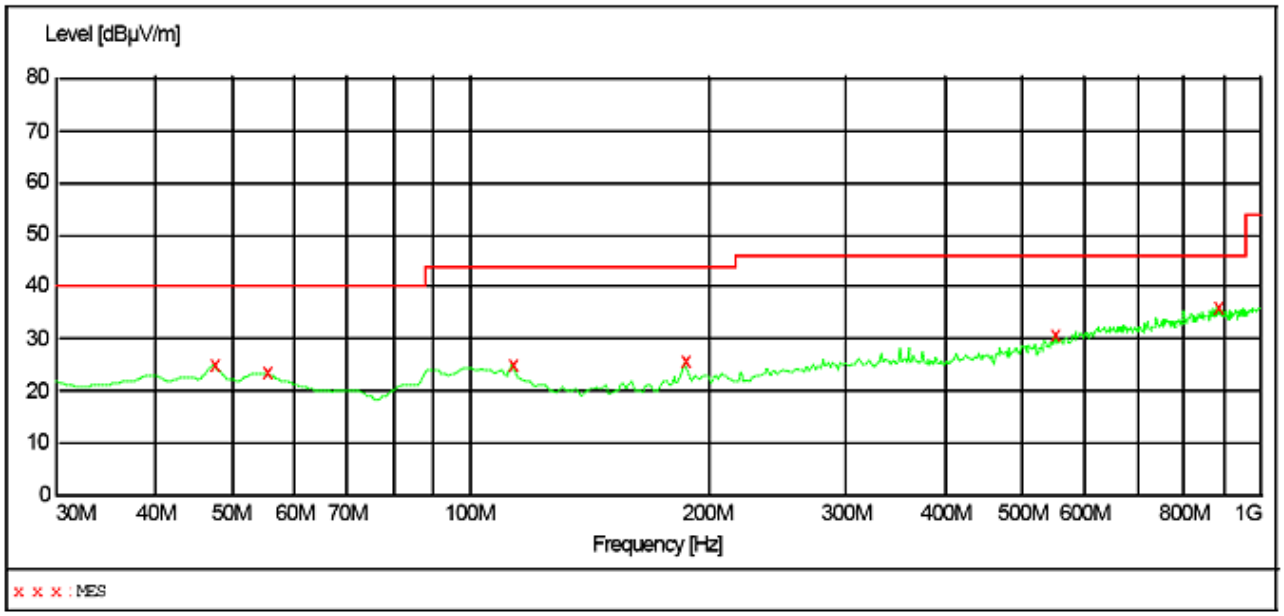
5. The lowest band edges emission was measured and recorded.

6. The transmitter set to the highest channel and repeated 2~4.

10.5 Test Result

Temperature (℃) : 22~23	EUT: Internet Radio
Humidity (%RH): 50~54	M/N: DTS
Barometric Pressure (mbar): 950~1000	Operation Condition: Tx / Rx & Charging Mode

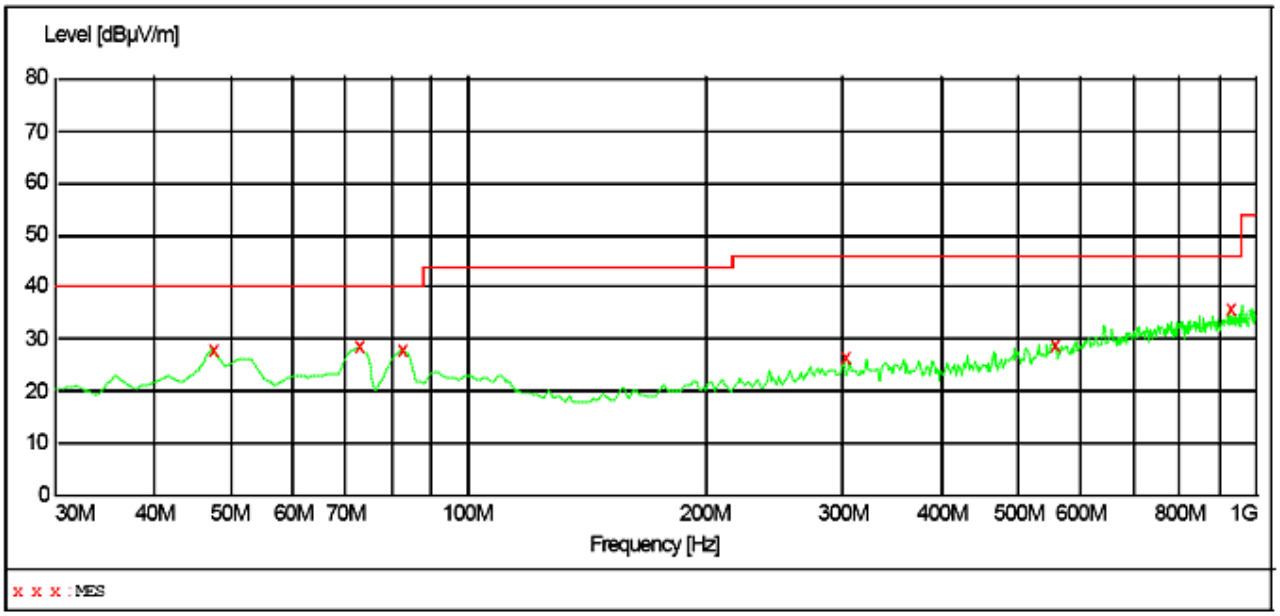
Spurious Emission (30~1000MHz)



MEASUREMENT RESULT: "BCT09AP003H_red"

1/23/2009 16:00

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
47.460000	25.00	16.7	40.0	15.0	QP	100.0	0.00	HORIZONTAL
55.220000	23.30	16.5	40.0	16.7	QP	100.0	0.00	HORIZONTAL
113.420000	24.90	17.0	43.5	18.6	QP	100.0	0.00	HORIZONTAL
187.140000	25.40	16.5	43.5	18.1	QP	100.0	0.00	HORIZONTAL
547.980000	30.50	24.0	46.0	15.5	QP	100.0	0.00	HORIZONTAL
883.600000	36.10	29.1	46.0	9.9	QP	100.0	0.00	HORIZONTAL



MEASUREMENT RESULT: "BCT09AP003V_red"

1/23/2009 16:06

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
47.460000	28.00	16.7	40.0	12.0	QP	100.0	0.00	VERTICAL
72.680000	28.40	13.0	40.0	11.6	QP	100.0	0.00	VERTICAL
82.380000	27.90	14.4	40.0	12.1	QP	100.0	0.00	VERTICAL
301.600000	26.30	20.2	46.0	19.7	QP	100.0	0.00	VERTICAL
553.800000	29.10	24.1	46.0	16.9	QP	100.0	0.00	VERTICAL
924.340000	35.50	29.5	46.0	10.5	QP	100.0	0.00	VERTICAL

Harmonics

Channel Low								
Maximum Frequency (MHz)	Polarity and Level					Limit (dBμV/m)	Margin (dBμV/m)	Mark (P/Q/A)
	Polarity	Height (m)	Reading dBμV	Transd	Result dBμV/m			
1125.00	H	1.23	56.11	22.6	33.51	74.0	17.89	P
			46.28	22.6	23.68	54.0	7.72	A
1125.00	V	1.00	59.91	22.6	37.31	74.0	14.09	P
			50.44	22.6	27.84	54.0	3.56	A
2390.00	H	1.28	58.72	23.8	34.92	74.0	15.28	P
			47.05	23.8	23.25	54.0	6.95	A
2390.00	V	1.14	66.56	23.8	42.76	74.0	7.44	P
			50.56	23.8	26.76	54.0	3.44	A
*2412.00	H	1.25	102.26	24.3	77.96			P
			91.72	24.3	67.42			A
*2412.00	V	1.25	110.36	24.3	86.06			P
			100.24	24.3	75.94			A
4824.00	H	1.05	44.59	25.7	18.89	74.0	29.41	P
			31.53	25.7	5.83	54.0	22.47	A
4824.00	V	1.00	45.30	25.7	19.6	74.0	28.70	P
			31.89	25.7	6.19	54.0	22.11	A
7236.00	---		---	---	---	---	---	
9648.00	---		---	---	---	---	---	
12060.00	---		---	---	---	---	---	
14472.00	---		---	---	---	---	---	
16884.00	---		---	---	---	---	---	
19296.00	---		---	---	---	---	---	
21708.00	---		---	---	---	---	---	
24120.00	---		---	---	---	---	---	

Remark: 1. Transd.=Antenna Factor+Cable Loss-Pre-amplifier
Margin = Level-Limit
Mark: P means Peak Value, Q means Quasi Peak Value, A means Average Value
2. Data of measurement within this frequency range shown " -" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
3. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz.
4. The test limit distance is 3m limit
5. " * ": Fundamental frequency.

Channel Mid								
Maximum Frequency (MHz)	Polarity and Level					Limit (dBμV/m)	Margin (dBμV/m)	Mark (P/Q/A)
	Polarity	Height (m)	Reading dBμV	Transd	Result dBμV/m			
1125.00	H	1.19	55.69	22.6	33.09	74.0	18.31	P
			45.81	22.6	23.21	54.0	8.19	A
1125.00	V	1.03	60.04	22.6	37.44	74.0	13.96	P
			50.67	22.6	28.07	54.0	3.33	A
2390.00	H	1.28	47.04	23.8	23.24	74.0	26.96	P
			41.11	23.8	17.31	54.0	12.89	A
2390.00	V	1.14	50.60	23.8	26.8	74.0	23.4	P
			45.62	23.8	21.82	54.0	8.38	A
*2442.00	H	1.25	101.97	24.6	77.37			P
			91.34	24.6	66.74			A
*2442.00	V	1.25	110.47	24.6	85.87			P
			100.03	24.6	75.43			A
4884.00	H	1.08	44.54	25.9	18.64	74.0	29.64	P
			31.98	25.9	6.08	54.0	22.02	A
4884.00	V	1.00	45.58	25.9	19.68	74.0	28.42	P
			32.06	25.9	6.16	54.0	21.94	A
7326.00	---		---	---	---	---	---	
9768.00	---		---	---	---	---	---	
12210.00	---		---	---	---	---	---	
14652.00	---		---	---	---	---	---	
17094.00	---		---	---	---	---	---	
19536.00	---		---	---	---	---	---	
21978.00	---		---	---	---	---	---	
24420.00	---		---	---	---	---	---	

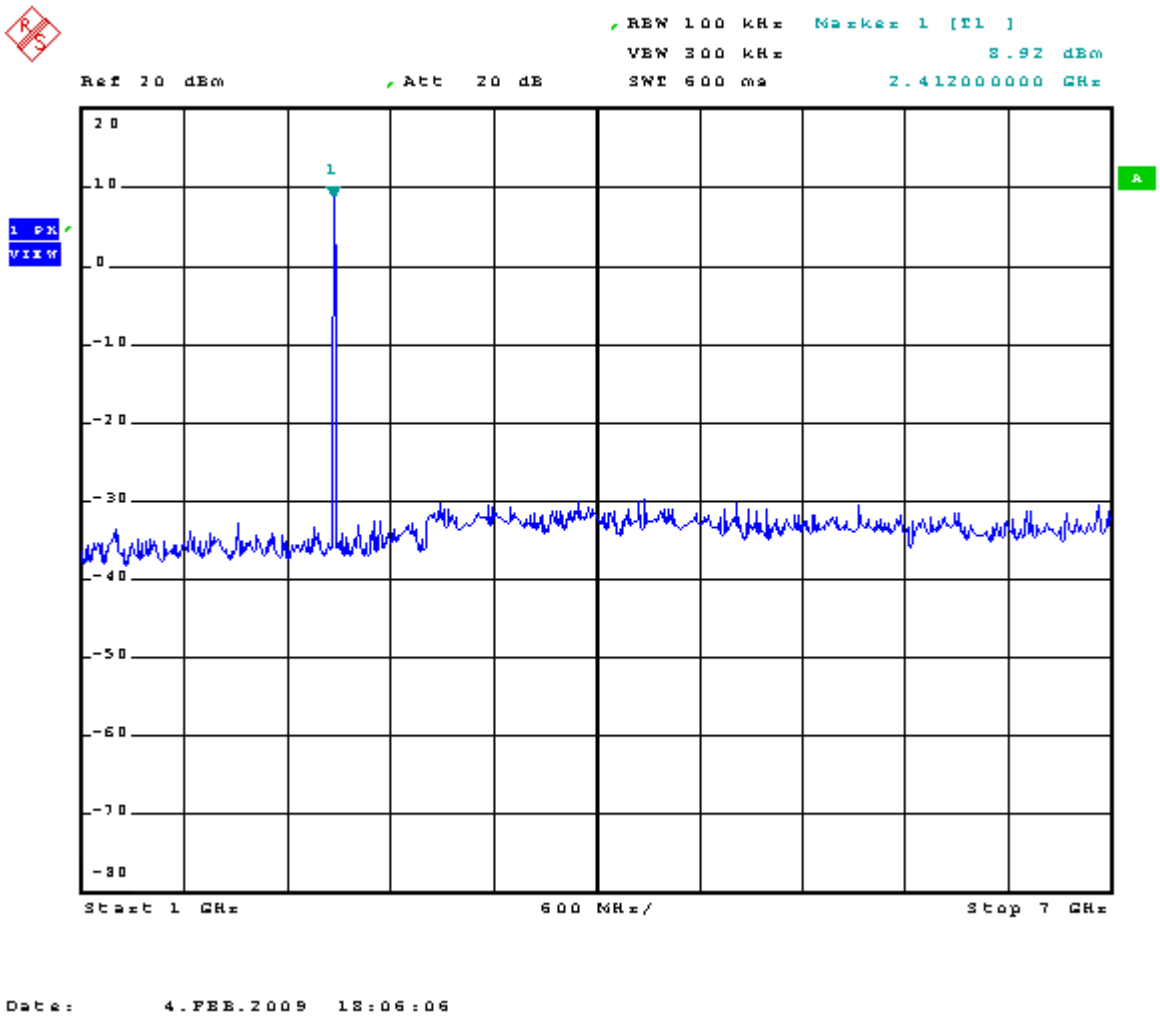
Remark: 1. Transd.=Antenna Factor+Cable Loss-Pre-amplifier
Margin = Level-Limit
Mark: P means Peak Value, Q means Quasi Peak Value, A means Average Value
2. Data of measurement within this frequency range shown " -" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
3. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz.
4. The test limit distance is 3m limit
5. " * ": Fundamental frequency.

Channel High								
Maximum Frequency (MHz)	Polarity and Level					Limit (dBμV/m)	Margin (dBμV/m)	Mark (P/Q/A)
	Polarity	Height (m)	Reading dBμV	Transd	Result dBμV/m			
1125.00	H	1.23	56.74	22.6	34.14	74.0	17.26	P
			47.06	22.6	24.46	54.0	6.94	A
1125.00	V	1.00	59.17	22.6	36.57	74.0	14.83	P
			49.94	22.6	27.34	54.0	4.06	A
*2472.00	H	1.25	102.33	24.6	77.73			P
			91.87	24.6	67.27			A
*2472.00	V	1.25	110.47	24.6	85.87			P
			100.29	24.6	75.69			A
2483.00	H	1.33	58.14	24.8	33.34	74.0	15.86	P
			47.21	24.8	22.41	54.0	6.79	A
2483.00	V	1.25	67.04	24.8	42.24	74.0	6.96	P
			50.17	24.8	25.37	54.0	3.83	A
4944.00	H	1.00	44.69	26.0	18.69	74.0	29.31	P
			31.62	26.0	5.62	54.0	22.38	A
4944.00	V	1.00	45.62	26.0	19.62	74.0	28.38	P
			32.01	26.0	6.01	54.0	21.99	A
7416.00	---		---	---	---	---	---	
9888.00	---		---	---	---	---	---	
12360.00	---		---	---	---	---	---	
14832.00	---		---	---	---	---	---	
17304.00	---		---	---	---	---	---	
19776.00	---		---	---	---	---	---	
22248.00	---		---	---	---	---	---	
24720.00	---		---	---	---	---	---	

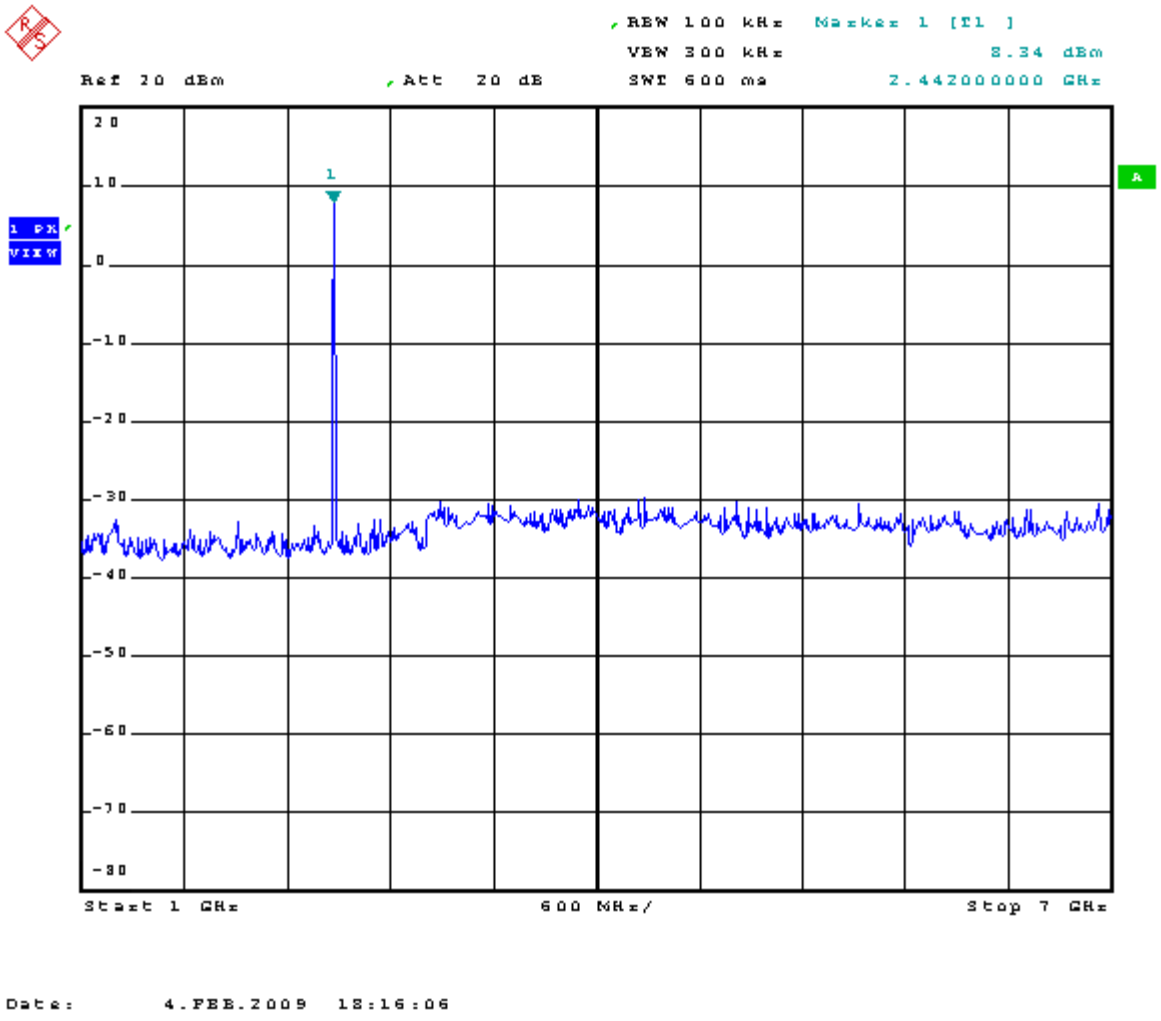
Remark: 1. Transd.=Antenna Factor+Cable Loss-Pre-amplifier
Margin = Level-Limit
Mark: P means Peak Value, Q means Quasi Peak Value, A means Average Value
2. Data of measurement within this frequency range shown " -" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
3. Spectrum analyzer setting P(Peak): RBW=1MHz, VBW=1MHz, A(Average): RBW=1MHz, VBW=10Hz.
4. The test limit distance is 3m limit
5. " * ": Fundamental frequency.

Conducted Test Result (1~7GHz)

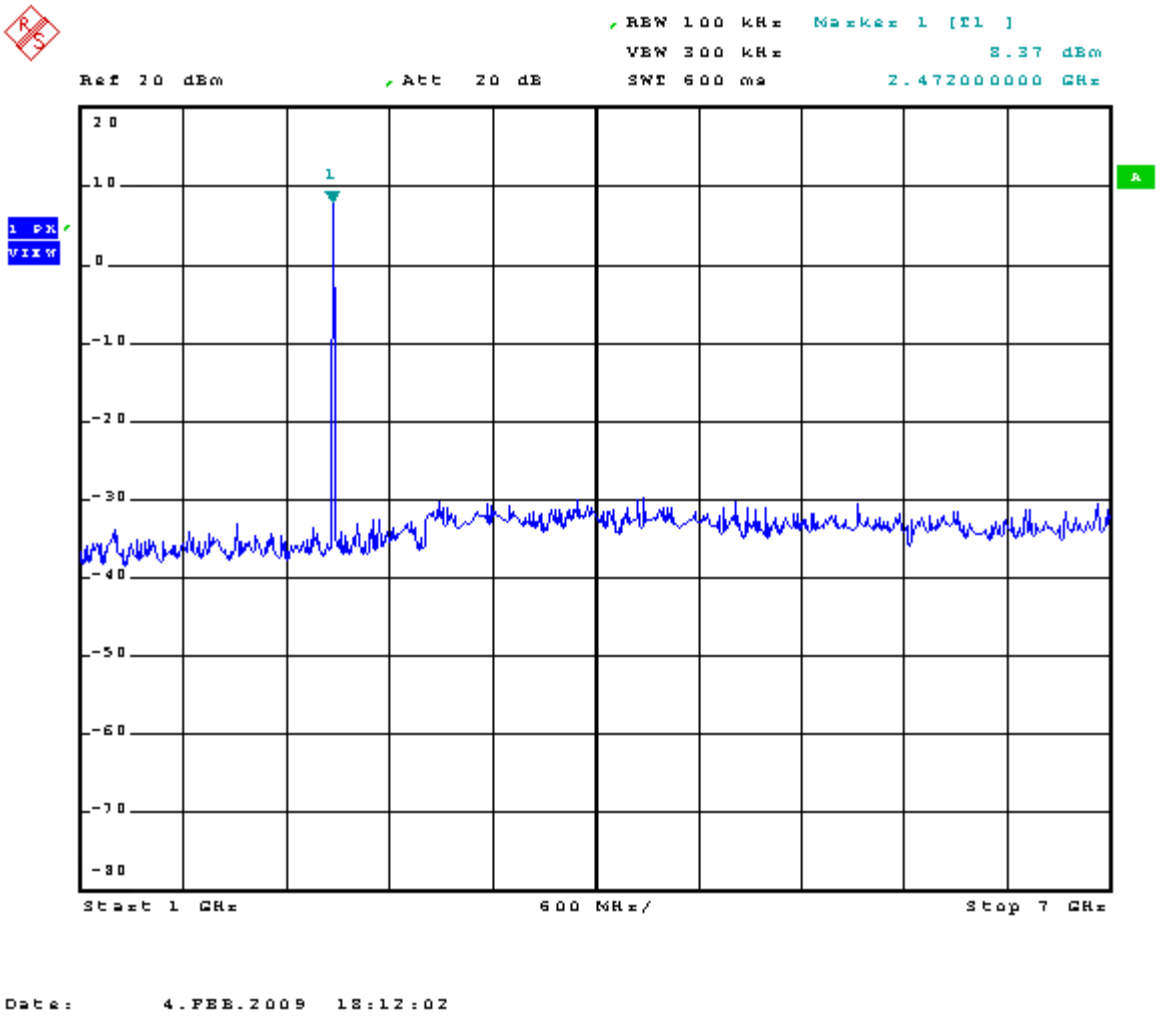
Channel Low：



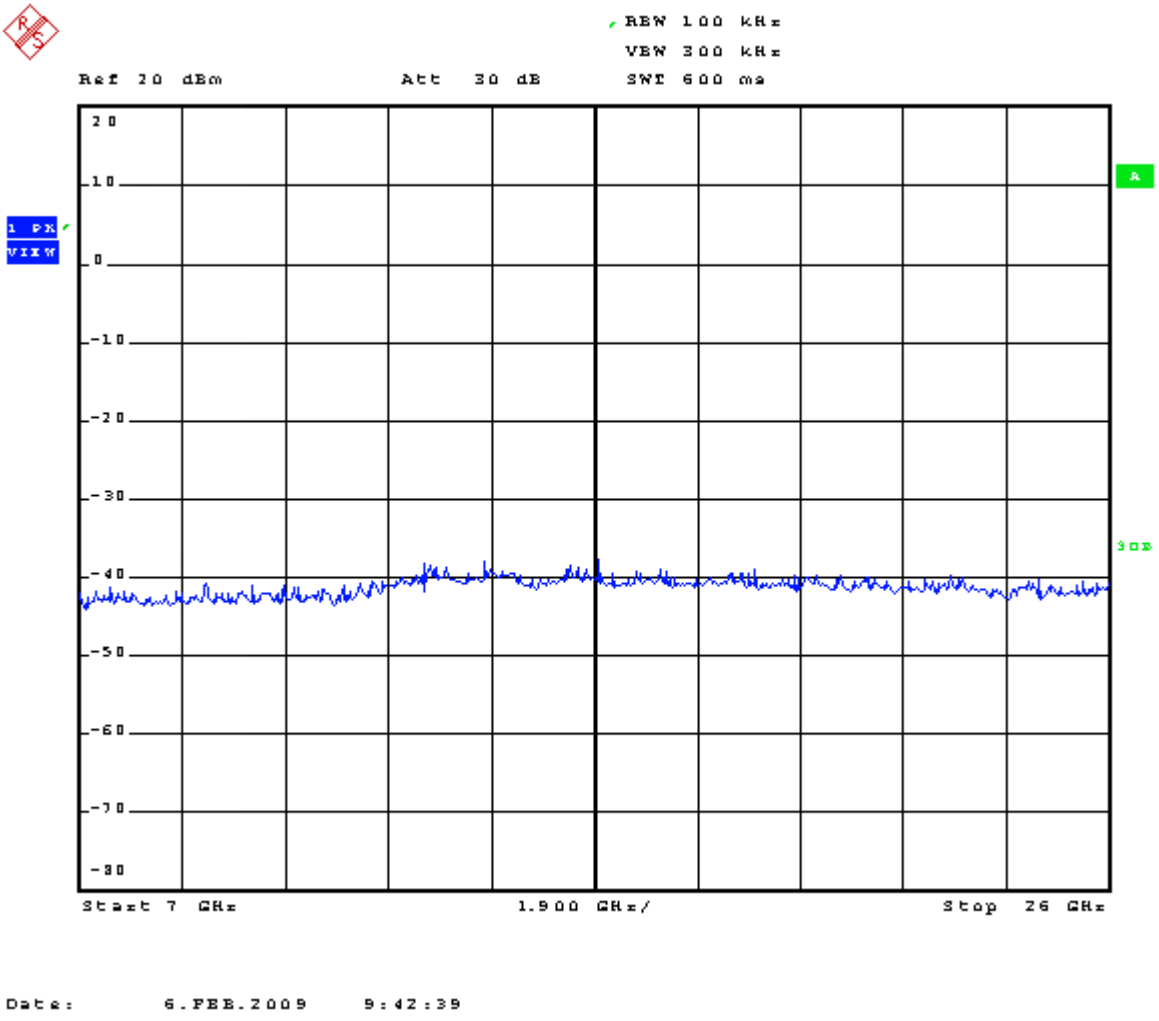
Channel Middle：



Channel High：



Conducted Test Result (7~25GHz)



11. RF EXPOSURE

11.1 Applicable Standard

According to § 15.247(b)(4) and § 1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

11.2 Test Result

This is a portable device and the Max peak output power is 13.6dBm (22.9mW) lower than low threshold 60/fGHz mW (24.896mW), d<20cm in general population category.
So the SAR measurement is not necessary.