TEST REPORT
FCC ID: 2AAQOBMD705
IC ID:11232A-USBBT1EDR4

Product： Mini USB Bluetooth 4.0 Adapter

Trade Name： N/A

Model Name： BMD705, BMD704

Report No.： BZT- 2013DG0808270F

Prepared for

E-SENSE Technology Co., Ltd.

8F., No. 10, Lane 366, Sec. 2, Chung Shan Rd., ZhongHe Dist,
New Taipei City 235, Taiwan, ROC

Prepared by

BZT Testing Technology Co., Ltd.

1/F, Building E, Fenda Science Park, Sanwei Community,Xixiang Street
Bao'an District, Shenzhen P.R. China

TEST RESULT CERTIFICATION

Applicant's name	:	E-SENSE Technology Co., Ltd.
Address	:	8F., No. 10, Lane 366, Sec. 2, Chung Shan Rd., ZhongHe Dist, New Taipei City 235, Taiwan, ROC
Manufacture's Name	:	E-SENSE Technology Co., Ltd.
Address	:	8F., No. 10, Lane 366, Sec. 2, Chung Shan Rd., ZhongHe Dist, New Taipei City 235, Taiwan, ROC
Product description		
Product name	:	Mini USB Bluetooth 4.0 Adapter
Model and/or type reference	:	BMD705, BMD704
Standards	:	FCC Part15.247 RSS-210,Issue 8, December 2010
Test procedure		ANSI C63.4-2003 RSS-Gen Rules

This device described above has been tested by BZT, and the test results show that the equipment under test (EUT) is in compliance with the Industry Canada requirements. And it is applicable only to the tested sample identified in the report.

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Date of Test	:	
Date (s) of performance of tests	:	25 Jul. 2013 ~ 07 Aug. 2013
Date of Issue	:	08 Aug. 2013
Test Result	:	**Pass**

Testing Engineer **:** Apple Huang

(Apple Huang)

Technical Manager **:** Brown Lu

(Brown Lu)

Authorized Signatory **:** Bovey Yang

(Bovey Yang)

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1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15 (15.247) , Subpart C RSS-210 & RSS-Gen Rules			
Standard Section	Test Item	Judgment	Remark
15.207(RSS-Gen §7.2.4)	Conducted Emission	PASS	
15.247 (a)(2)(RSS-Gen§4.6.1 &RSS-210§A8.2 (a))	99% Occupied Bandwidth & 6dB Bandwidth	PASS	
15.247 (b)(RSS-210 §A8.4 (4))	Peak Output Power	PASS	
15.247 (c)(RSS-210 §2.2, §A8.5)	Radiated Spurious Emission	PASS	
15.247 (d)(RSS-210 §A8.2 (b))	Power Spectral Density	PASS	
15.205(RSS-210 §2.2, §A8.5)	Band Edge Emission	PASS	
15.203(RSS-Gen §7.1.2)	Antenna Requirement	PASS	
RSS-Gen §4.10	Receiver Spurious Emissions	PASS	

NOTE:

(1)” N/A” denotes test is not applicable in this Test Report

1.1 TEST FACILITY

BZT Testing Technology Co., Ltd.
Add. : 1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street, Bao'an District, Shenzhen P.R. China

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement **y** ± **U**，where expended uncertainty **U** is based on a standard uncertainty multiplied by a coverage factor of **k=2**，providing a level of confidence of approximately **95** %。

No.	Item	Uncertainty
1	Conducted Emission Test	±1.38dB
2	RF power,conducted	±0.16dB
3	Spurious emissions,conducted	±0.21dB
4	All emissions,radiated(<1G)	±4.68dB
5	All emissions,radiated(>1G)	±4.89dB
6	Temperature	±0.5°C
7	Humidity	±2%

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

<table>
<tr><td>Equipment</td><td>Mini USB Bluetooth 4.0 Adapter</td></tr>
<tr><td>Trade Name</td><td>N/A</td></tr>
<tr><td>Model Name</td><td>BMD705, BMD704</td></tr>
<tr><td>Product Description</td><td>The EUT is a Mini USB Bluetooth 4.0 Adapter

<table><tr><td>Operation Frequency:</td><td>2402~2480MHz</td></tr><tr><td>Antenna Designation:</td><td>FPCB Antenna</td></tr><tr><td>Antenna Gain(Peak)</td><td>1.0 dBi</td></tr><tr><td>EIRP Power:</td><td>-2.48 dBm</td></tr><tr><td>Modulation Type:</td><td>GFSK</td></tr></table>
Based on the application, features, or specification exhibited in User's Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification, please refer to the User's Manual.</td></tr>
<tr><td>Ratings</td><td>DC 5.0V, 100mA</td></tr>
<tr><td>Adapter</td><td>N/A</td></tr>
<tr><td>Battery</td><td>N/A</td></tr>
<tr><td>Connecting I/O Port(s)</td><td>Please refer to the User's Manual</td></tr>
</table>

Note:

1. For a more detailed features description, please refer to the manufacturer’s specifications or the User's Manual.
2. Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	NOTE
A	N/A	N/A	FPCB Antenna	N/A	1.0	BT Antenna

2.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description
Mode 1	Low channel / Middle Channel / High Channel
Mode 2	Link Mode

For Conducted Emission	
Final Test Mode	Description
Mode 2	Link Mode

For Radiated Emission	
Final Test Mode	Description
Mode 1	Low channel / Middle Channel / High Channel

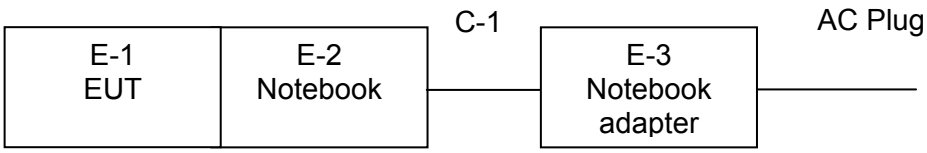
Note:

(1) The measurements are performed at the highest, middle, lowest available channels.

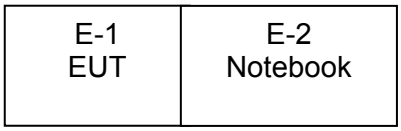
(2) The measurements are performed at all Bit Rate of Transmitter, the worst data was reported

2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Conducted Emission Test



Radiated Spurious Emission Test



2.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Brand	Model/Type No.	Series No.	Note
E-1	Mini USB Bluetooth 4.0 Adapter	N/A	BMD705	N/A	EUT
E-2	Notebook	DELL	PP10L	N/A	
E-3	Notebook adapter	DELL	HA65NS1-00	N/A	

Item	Shielded Type	Ferrite Core	Length	Note
C-1	NO	YES	120cm	

Note:

(1) The support equipment was authorized by Declaration of Confirmation.
(2) For detachable type I/O cable should be specified the length in cm in『Length』column.

2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS

Radiation Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Spectrum Analyzer	Agilent	E4407B	MY45108040	2013.07.06	2014.07.05	1 year
2	Test Receiver	R&S	ESPI	101318	2013.06.07	2014.06.06	1 year
3	Bilog Antenna	TESEQ	CBL6111D	31216	2013.07.06	2014.07.05	1 year
4	50Ω Coaxial Switch	Anritsu	MP59B	6200264416	2013.06.07	2014.06.06	1 year
5	Spectrum Analyzer	ADVANTEST	R3132	150900201	2013.06.07	2014.06.06	1 year
6	Horn Antenna	EM	EM-AH-10180	2011071402	2013.07.06	2014.07.05	1 year
7	Horn Ant	Schwarzbeck	BBHA 9170	9170-181	2013.07.06	2014.07.05	1 year
8	Amplifier	EM	EM-30180	060538	2012.12.22	2013.12.21	1 year
9	Loop Antenna	ARA	PLA-1030/B	1029	2013.06.08	2014.06.07	1 year
10	Power Meter	R&S	NRVS	100696	2013.07.06	2014.07.05	1 year
11	Power Sensor	R&S	URV5-Z4	0395.1619.05	2013.07.06	2014.07.05	1 year

Conduction Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Test Receiver	R&S	ESCI	101160	2013.06.06	2014.06.05	1 year
2	LISN	R&S	ENV216	101313	2012.08.24	2013.08.23	1 year
3	LISN	EMCO	3816/2	00042990	2012.08.24	2013.08.23	1 year
4	50Ω Coaxial Switch	Anritsu	MP59B	6200264417	2013.06.07	2014.06.06	1 year
5	Passive Voltage Probe	R&S	ESH2-Z3	100196	2013.06.07	2014.06.06	1 year
6	Absorbing clamp	R&S	MOS-21	100423	2013.06.08	2014.06.07	1 year

3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 POWER LINE CONDUCTED EMISSION Limits (Frequency Range 150KHz-30MHz)

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)		Standard
	Quasi-peak	Average	Quasi-peak	Average	
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *	CISPR
0.50 -5.0	73.00	60.00	56.00	46.00	CISPR
5.0 -30.0	73.00	60.00	60.00	50.00	CISPR

0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *	RSS-210
0.50 -5.0	73.00	60.00	56.00	46.00	RSS-210
5.0 -30.0	73.00	60.00	60.00	50.00	RSS-210

Note:

(1) The tighter limit applies at the band edges.

(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

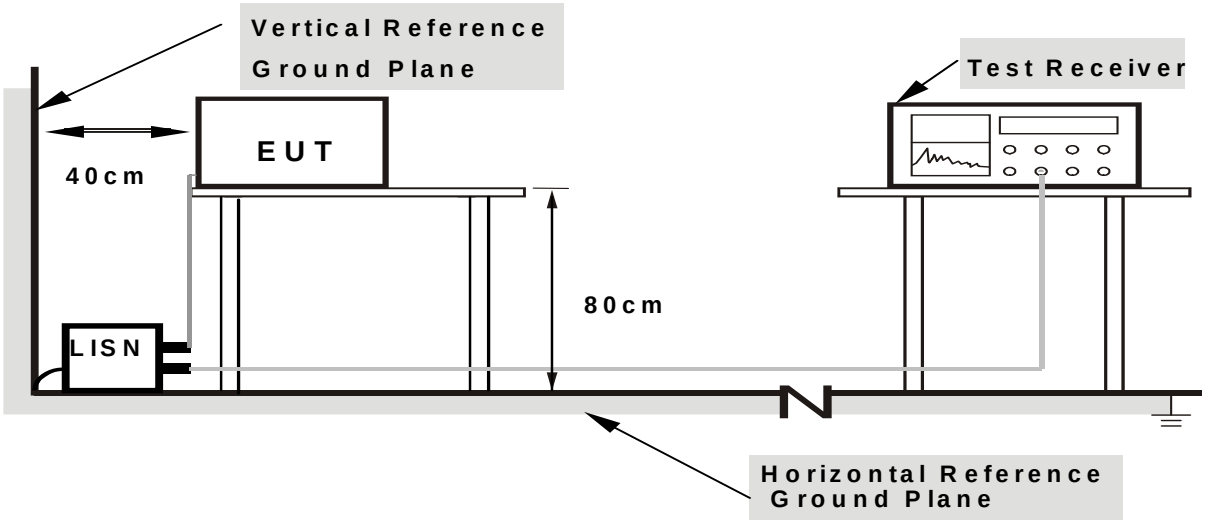
3.1.2 TEST PROCEDURE

a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
d. LISN at least 80 cm from nearest part of EUT chassis.
e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.1.3 DEVIATION FROM TEST STANDARD

No deviation

3.1.4 TEST SETUP



Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

3.1.5 EUT OPERATING CONDITIONS

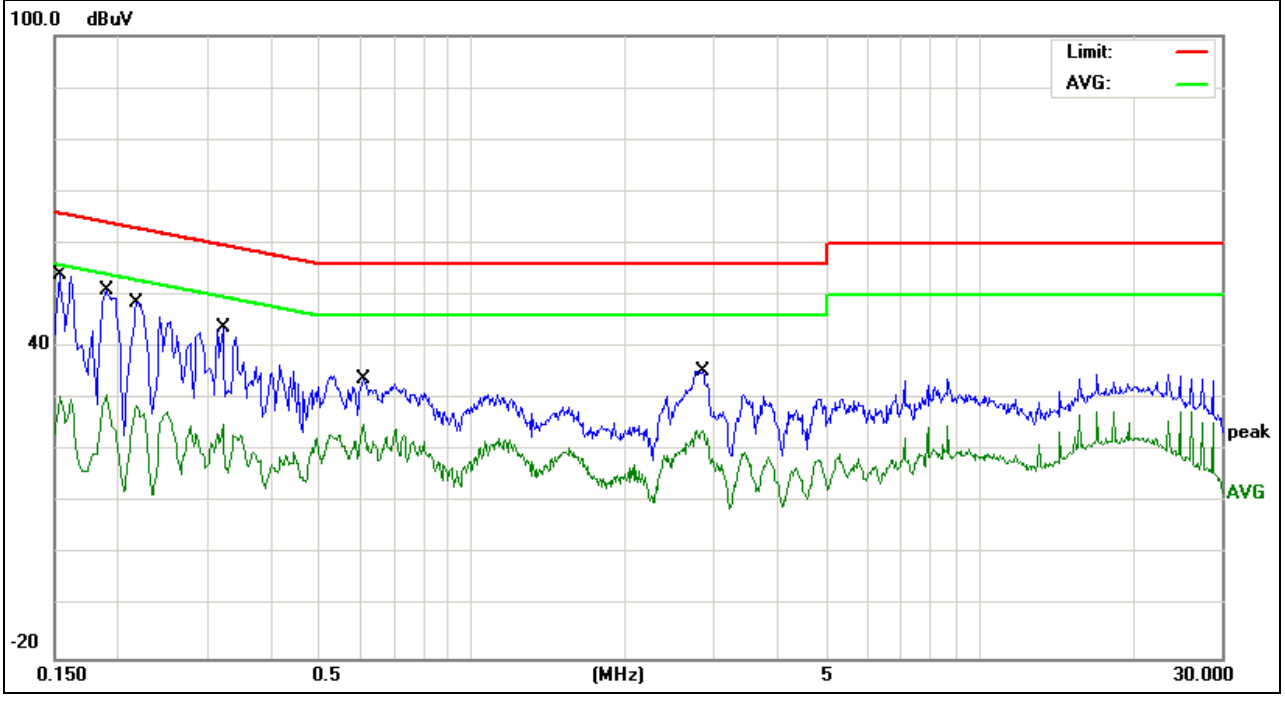
The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

3.1.6 TEST RESULTS

EUT：	Mini USB Bluetooth 4.0 Adapter	Model Name. ：	BMD705
Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	1010hPa	Phase：	L
Test Voltage ：	DC 5V From Notebook AC 120V/60Hz	Test Mode：	Mode 2

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV)	(dBμV)	(dB)	
0.1539	42.38	11.43	53.81	65.78	-11.97	QP
0.1539	18.98	11.43	30.41	55.78	-25.37	AVG
0.19	40.26	10.83	51.09	64.03	-12.94	QP
0.19	19.94	10.83	30.77	54.03	-23.26	AVG
0.2179	37.86	10.72	48.58	62.89	-14.31	QP
0.2179	18.08	10.72	28.8	52.89	-24.09	AVG
0.322	32.78	10.89	43.67	59.65	-15.98	QP
0.322	14.21	10.89	25.1	49.65	-24.55	AVG
0.6097	23.44	10.55	33.99	56	-22.01	QP
0.6097	14.52	10.55	25.07	46	-20.93	AVG
2.842	24.92	10.56	35.48	56	-20.52	QP
2.842	13.43	10.56	23.99	46	-22.01	AVG

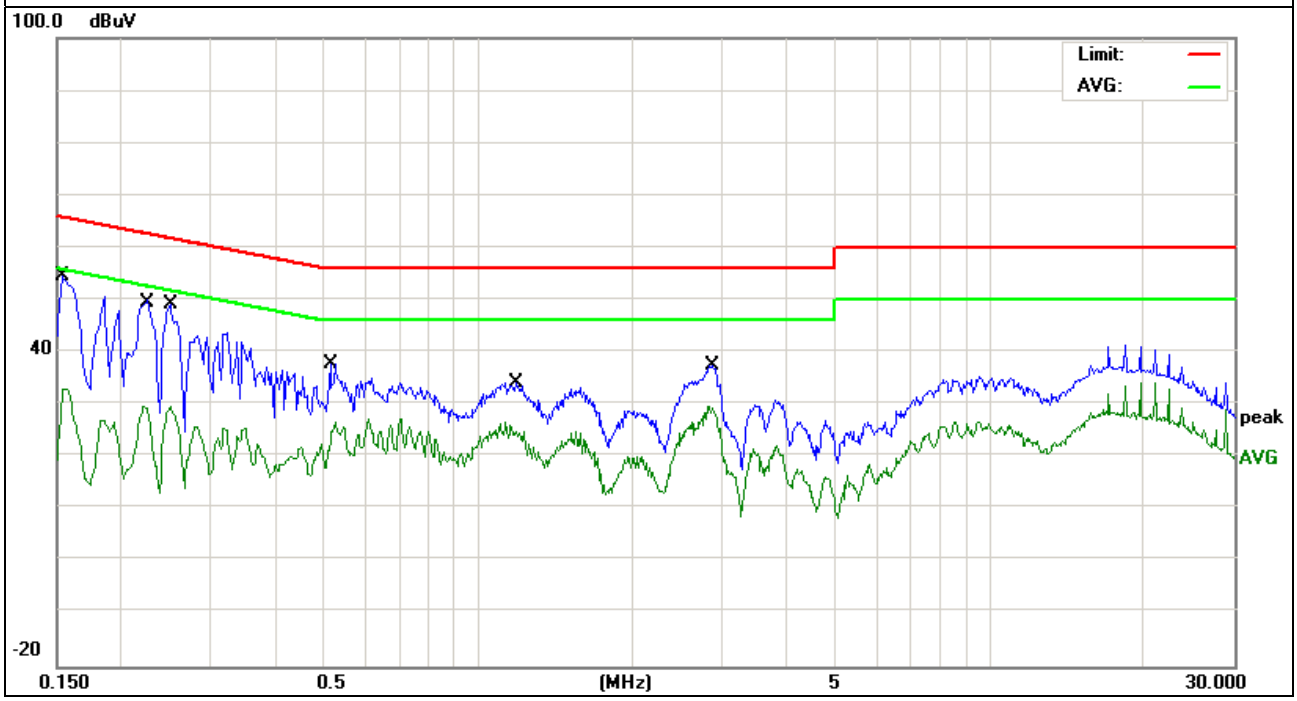
Remark:
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.



EUT：	Mini USB Bluetooth 4.0 Adapter	Model Name. ：	BMD705
Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	1010hPa	Phase：	N
Test Voltage ：	DC 5V From Notebook AC 120V/60Hz	Test Mode：	Mode 2

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV)	(dBμV)	(dB)	
0.1539	43.25	11.43	54.68	65.78	-11.1	QP
0.1539	21.61	11.43	33.04	55.78	-22.74	AVG
0.222	39.19	10.73	49.92	62.74	-12.82	QP
0.222	18.94	10.73	29.67	52.74	-23.07	AVG
0.25	38.35	10.81	49.16	61.75	-12.59	QP
0.25	18.88	10.81	29.69	51.75	-22.06	AVG
0.514	27.28	10.58	37.86	56	-18.14	QP
0.514	16.06	10.58	26.64	46	-19.36	AVG
1.1857	23.63	10.52	34.15	56	-21.85	QP
1.1857	15.49	10.52	26.01	46	-19.99	AVG
2.866	27.01	10.56	37.57	56	-18.43	QP
2.866	19.17	10.56	29.73	46	-16.27	AVG

Remark:
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.



3.2 RADIATED EMISSION MEASUREMENT

3.2.1 RADIATED EMISSION LIMITS (Frequency Range 9kHz-1000MHz)

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on RSS-210 §2.2& A8.5, then the RSS-210 & A8.5 limit in the table below has to be followed.

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	(dBuV/m) (at 3M)	
	PEAK	AVERAGE
Above 1000	74	54

Notes:

(1) The limit for radiated test was performed according to RSS-Gen.

(2) The tighter limit applies at the band edges.

(3) Emission level (dBuV/m)=20log Emission level (uV/m).

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (emission in restricted band)	1 MHz / 1 MHz for Peak, 1 MHz / *10Hz* for Average

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

3.2.2 TEST PROCEDURE

a. The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
c. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. The initial step in collecting conducted emission data is a Mini USB Bluetooth 4.0 Adapter analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

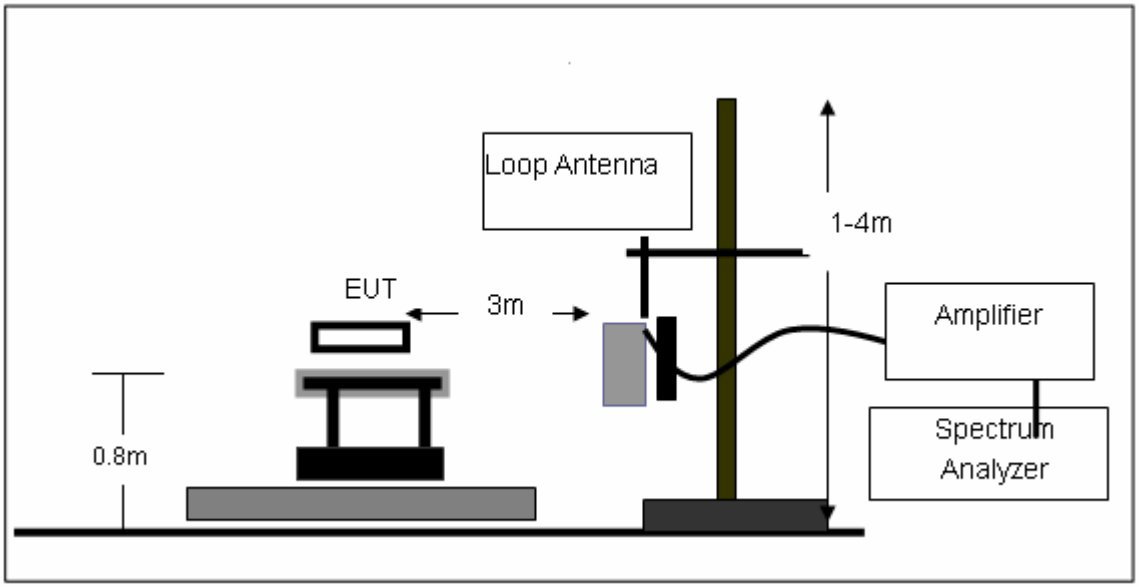
Both horizontal and vertical antenna polarities were tested
and performed pretest to three orthogonal axis. The worst case emissions were reported

3.2.3 DEVIATION FROM TEST STANDARD

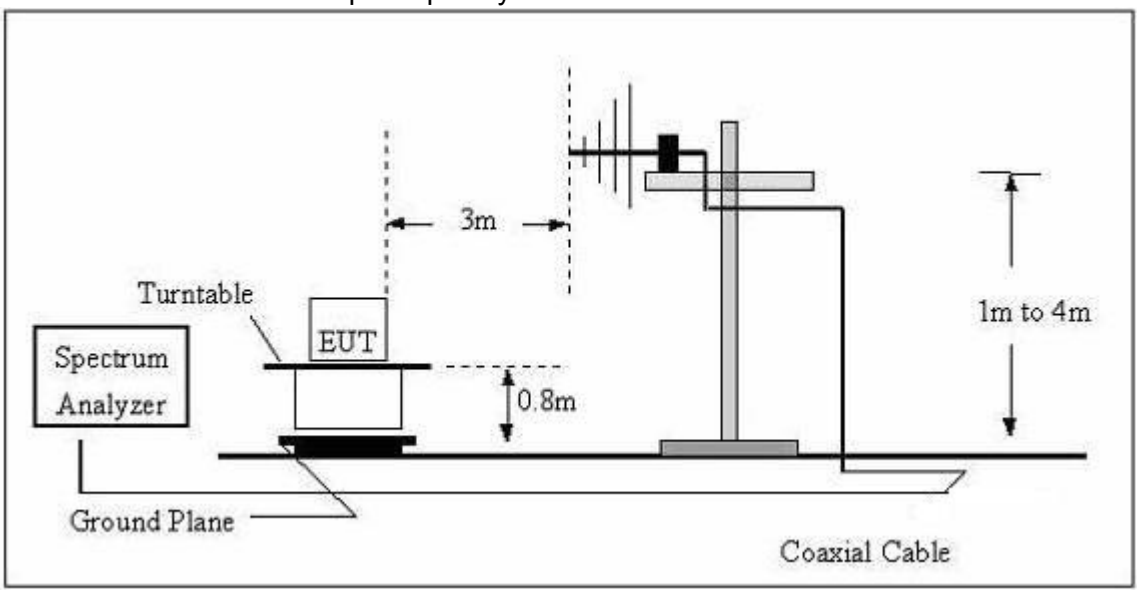
No deviation

3.2.4 TEST SETUP

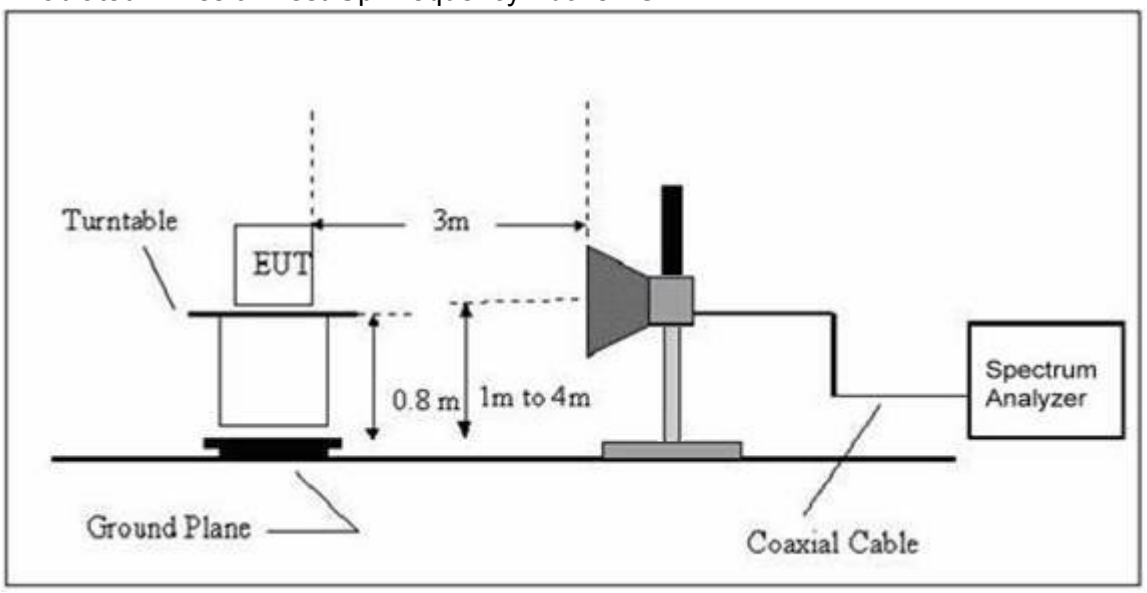
（A）Radiated Emission Test-Up Frequency Below 30MHz



（B）Radiated Emission Test-Up Frequency 30MHz~1GHz



（C）Radiated Emission Test-Up Frequency Above 1GHz



3.2.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

3.2.6 TEST RESULTS (Between 9KHz – 30 MHz)

EUT：	Mini USB Bluetooth 4.0 Adapter	Model Name. ：	BMD705
Temperature：	20 ℃	Relative Humidtity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V From Notebook
Test Mode ：	TX	Polarization :	--

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	PASS
--	--	--	--	PASS

NOTE:

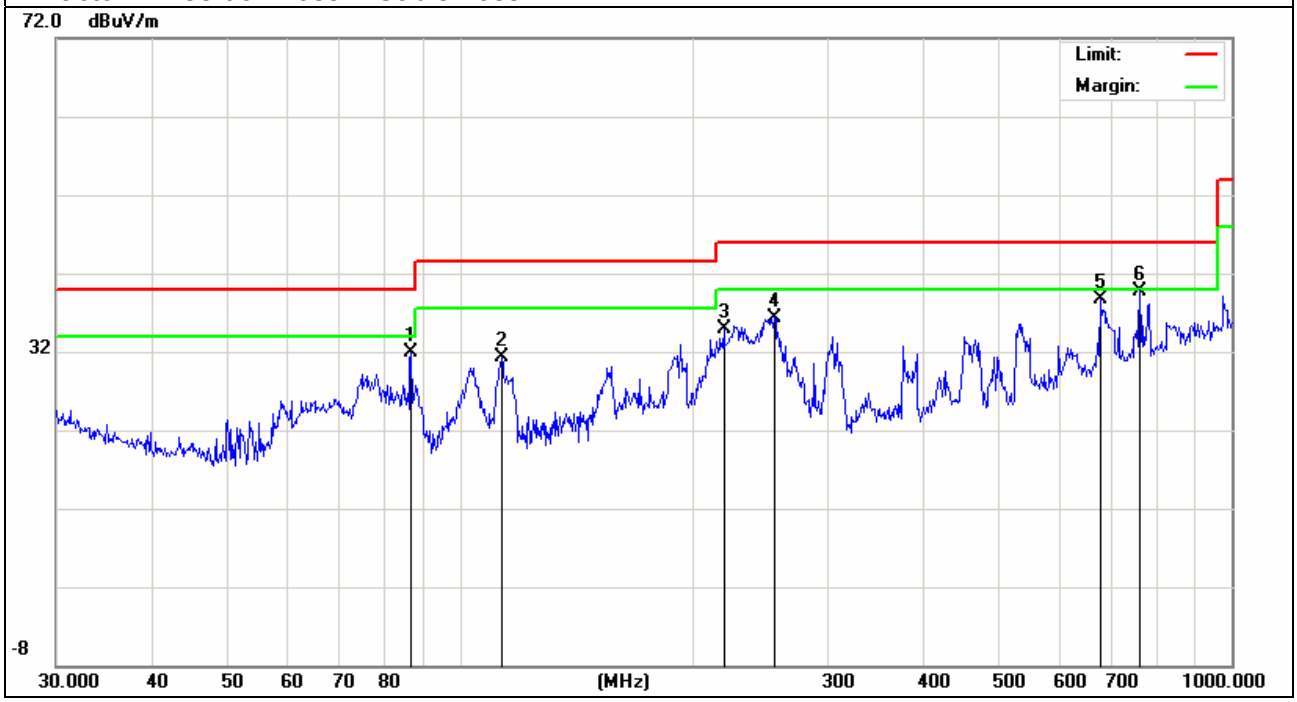
The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
Distance extrapolation factor =40 log (specific distance/test distance)(dB);
Limit line = specific limits(dBuv) + distance extrapolation factor.

3.2.7 TEST RESULTS (BETWEEN 30MHZ – 1GHZ)

EUT：	Mini USB Bluetooth 4.0 Adapter	Model Name. ：	BMD705
Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	1010hPa	Phase：	Horizontal
Test Voltage ：	DC 5V From Notebook	Test Mode：	TX

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV)	(dBμV)	(dB)	
86.5027	22.93	8.95	31.88	40	-8.12	QP
113.3161	19.61	11.6	31.21	43.5	-12.29	QP
219.8447	25.03	9.85	34.88	46	-11.12	QP
255.6228	22.53	13.81	36.34	46	-9.66	QP
675.2078	16.58	22.14	38.72	46	-7.28	QP
760.7036	15.44	24.36	39.8	46	-6.2	QP

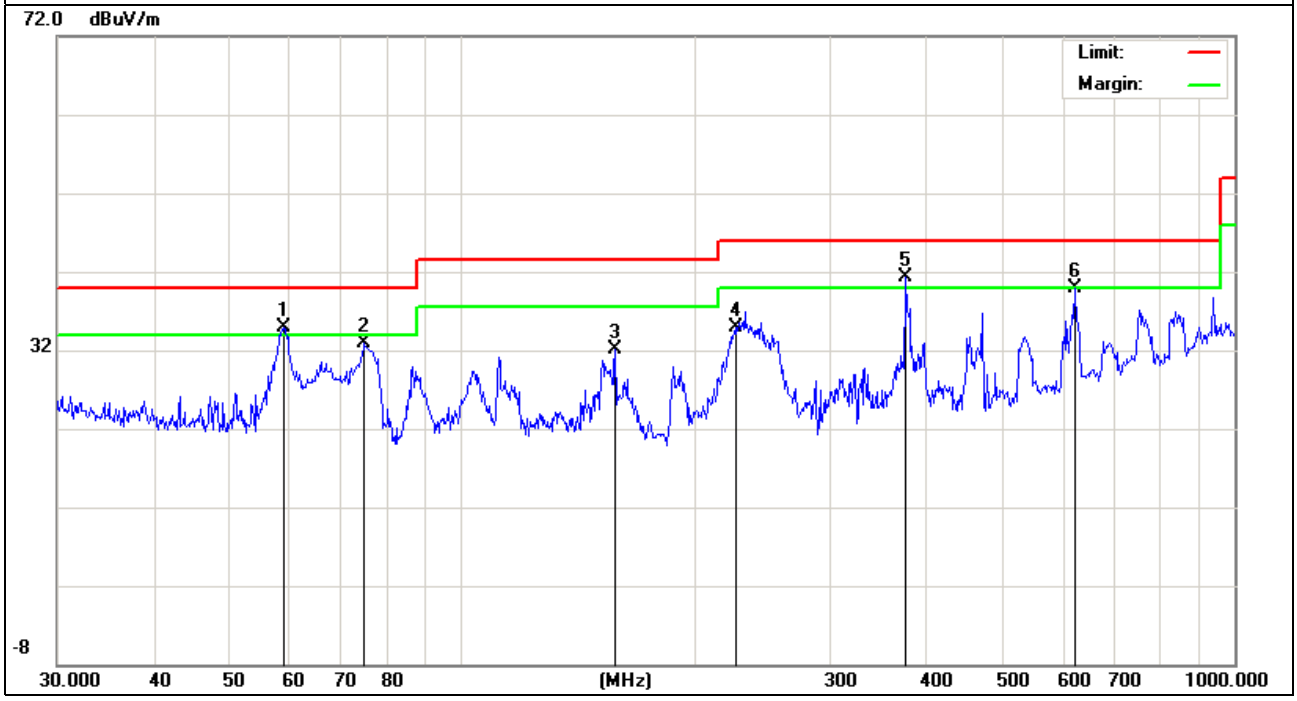
Remark:
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.



EUT：	Mini USB Bluetooth 4.0 Adapter	Model Name. ：	BMD705
Temperature：	26 ℃	Relative Humidity：	54%
Pressure：	1010hPa	Phase：	Vertical
Test Voltage ：	DC 5V From Notebook	Test Mode：	TX

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV)	(dBμV)	(dB)	
58.8185	29.63	5.34	34.97	40	-5.03	QP
74.9191	26.11	6.74	32.85	40	-7.15	QP
158.1123	21.2	10.9	32.1	43.5	-11.4	QP
226.0994	24.6	10.31	34.91	46	-11.09	QP
375.9385	25.07	16.21	41.28	46	-4.72	QP
620.7096	17.89	22.05	39.94	46	-6.06	QP

Remark:
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.



3.2.8 TEST RESULTS (ABOVE 1000 MHZ)

Normal Voltage

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
operation frequency:2402- Low Channel							
V	4803.743	61.04	-3.53	57.51	74	-16.49	Pk
V	4803.743	36.16	-3.53	32.63	54	-21.37	AV
H	4824.208	58.91	-3.53	55.38	74	-18.62	Pk
H	4824.208	34.46	-3.53	30.93	54	-23.07	AV
operation frequency:2440- Middle Channel							
V	4879.829	51.53	-3.58	47.95	74	-26.05	Pk
H	4879.829	52.67	-3.58	49.09	74	-24.91	Pk
operation frequency:2480-High Channel							
V	4961.316	61.28	-3.61	57.67	74	-16.33	pk
H	4961.316	60.34	-3.62	56.72	74	-17.28	pk

Remark:

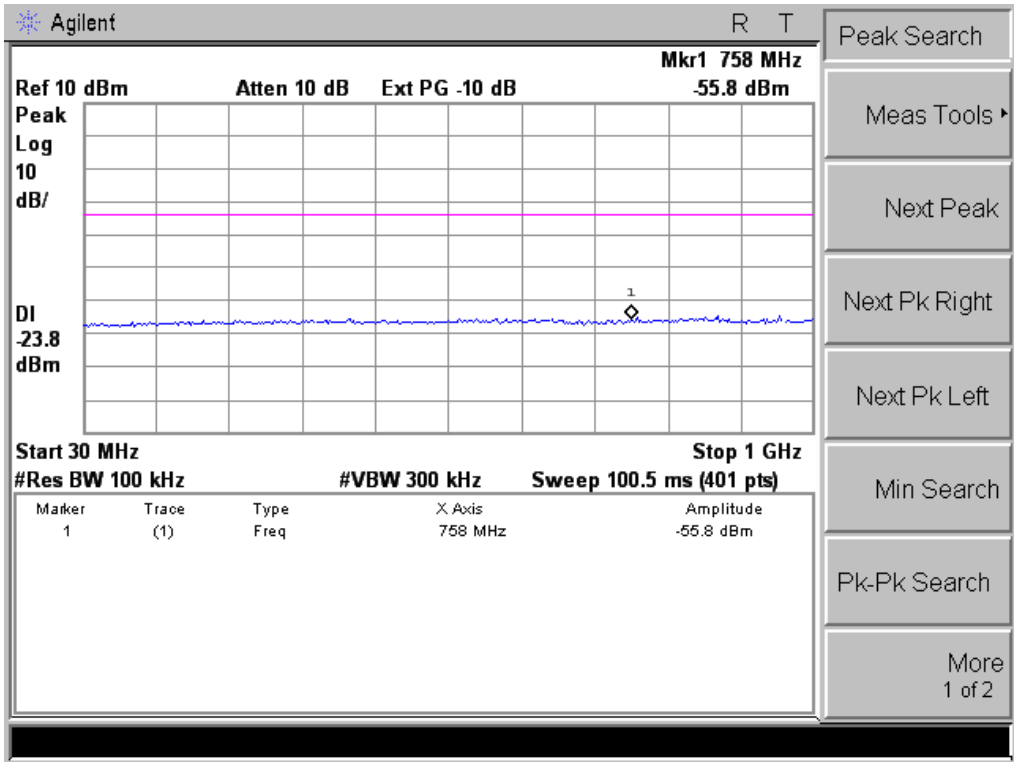
Absolute Level= Reading Level+ Factor, Margin= Absolute Level - Limit

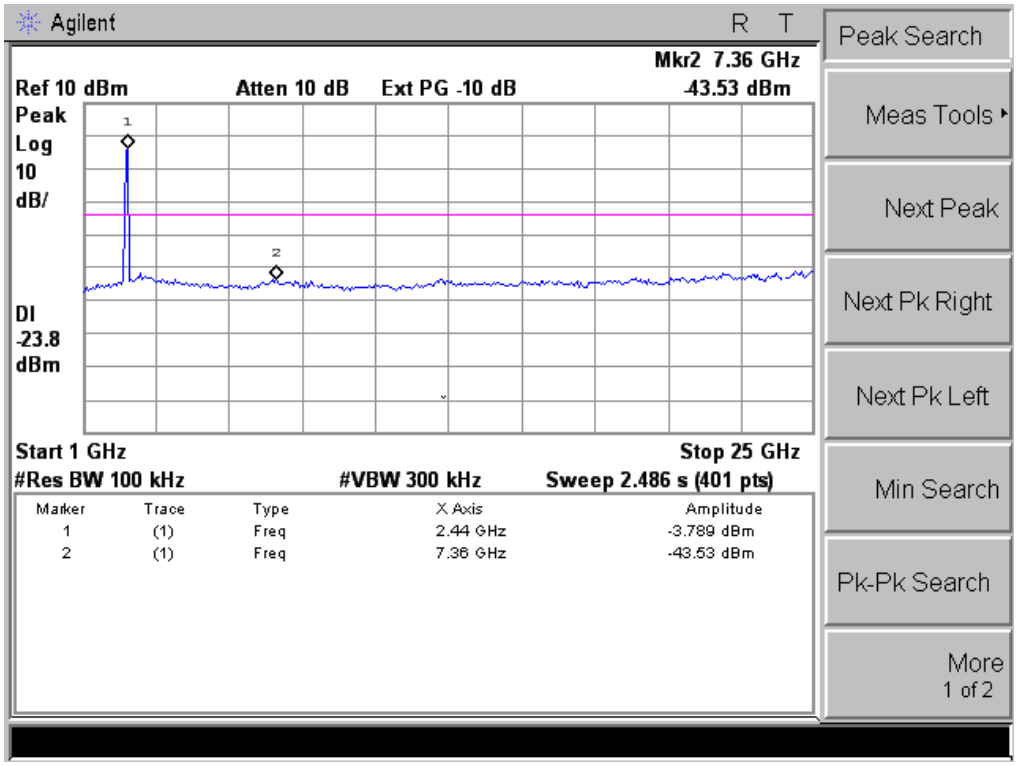
EUT：	Mini USB Bluetooth 4.0 Adapter	Model Name ：	BMD705
Temperature：	20 ℃	Relative Humidity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V From Notebook
Test Mode ：	RECEIVER		

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type	Comment
Below 1G							
75.7112	25.9	6.87	32.77	40	-7.23	QP	Vertical
237.4755	24.64	11.04	35.68	46	-10.32	QP	Vertical
308.9125	20.65	14.59	35.24	46	-10.76	QP	Vertical
387.992	20.86	16.78	37.64	46	-8.36	QP	Vertical
755.3872	13.27	24.33	37.6	46	-8.40	QP	Vertical
851.0353	13.38	25.47	38.85	46	-7.15	QP	Vertical
189.7384	24.75	8.78	33.53	43.5	-9.97	QP	Horizontal
226.8934	24.51	10.33	34.84	46	-11.16	QP	Horizontal
252.9482	22.06	13.45	35.51	46	-10.49	QP	Horizontal
533.8318	16.39	19.92	36.31	46	-9.69	QP	Horizontal
670.4891	16.59	22.08	38.67	46	-7.33	QP	Horizontal
890.7278	14.4	25.33	39.73	46	-6.27	QP	Horizontal
Above 1G							
1384.363	65.34	-18.26	47.08	74	-26.92	Pk	Vertical
2972.629	61.81	-13.64	48.17	74	-25.83	Pk	Vertical
3704.382	59.45	-11.53	47.92	74	-26.08	Pk	Vertical
1560.227	67.07	-18.24	48.83	74	-25.17	Pk	Horizontal
2187.293	58.82	-12.25	46.57	74	-27.43	Pk	Horizontal
2853.617	57.29	-6.81	50.48	74	-23.52	Pk	Horizontal

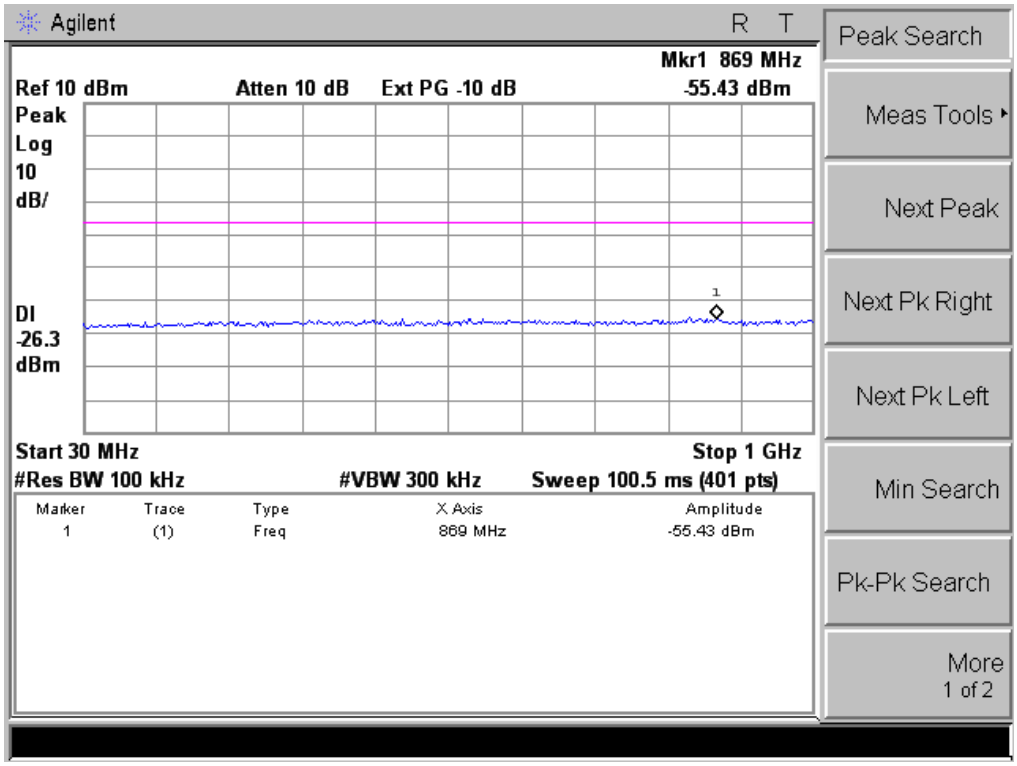
Conducted Spurious Emissions at Antenna Port:

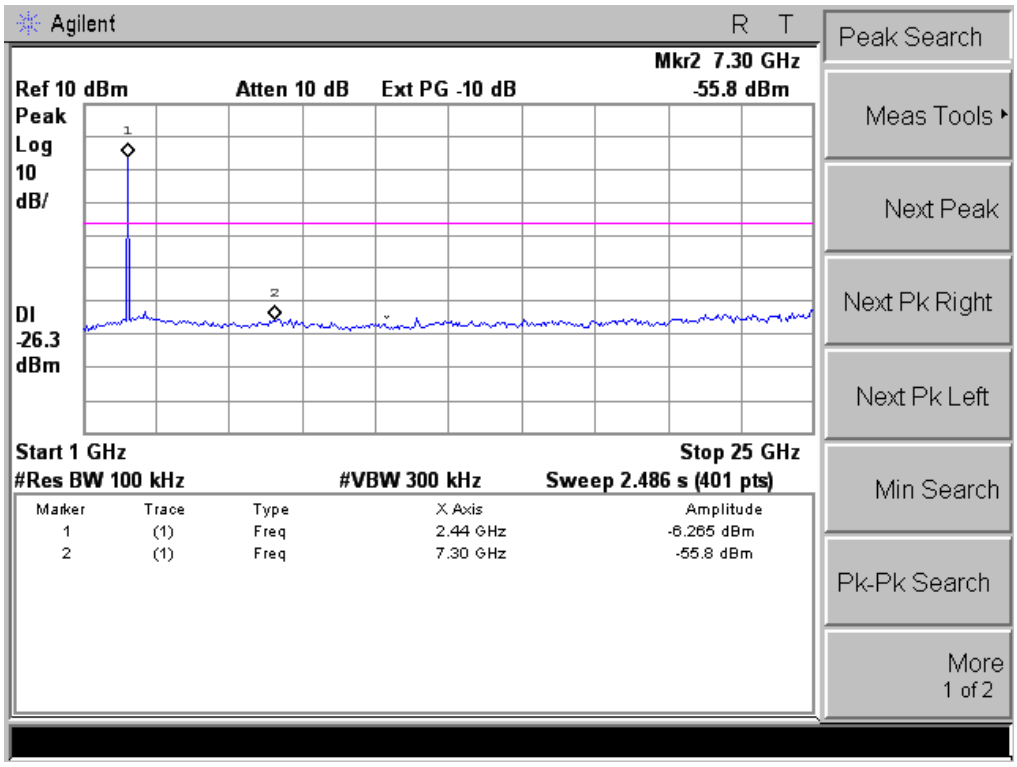
Low channel



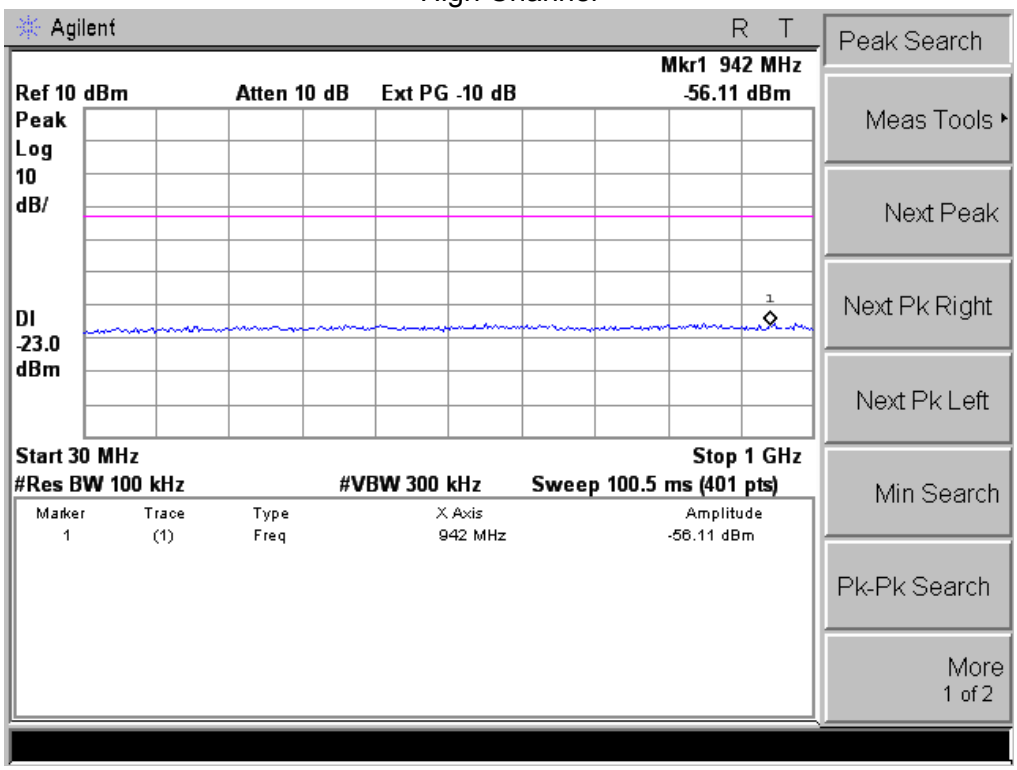


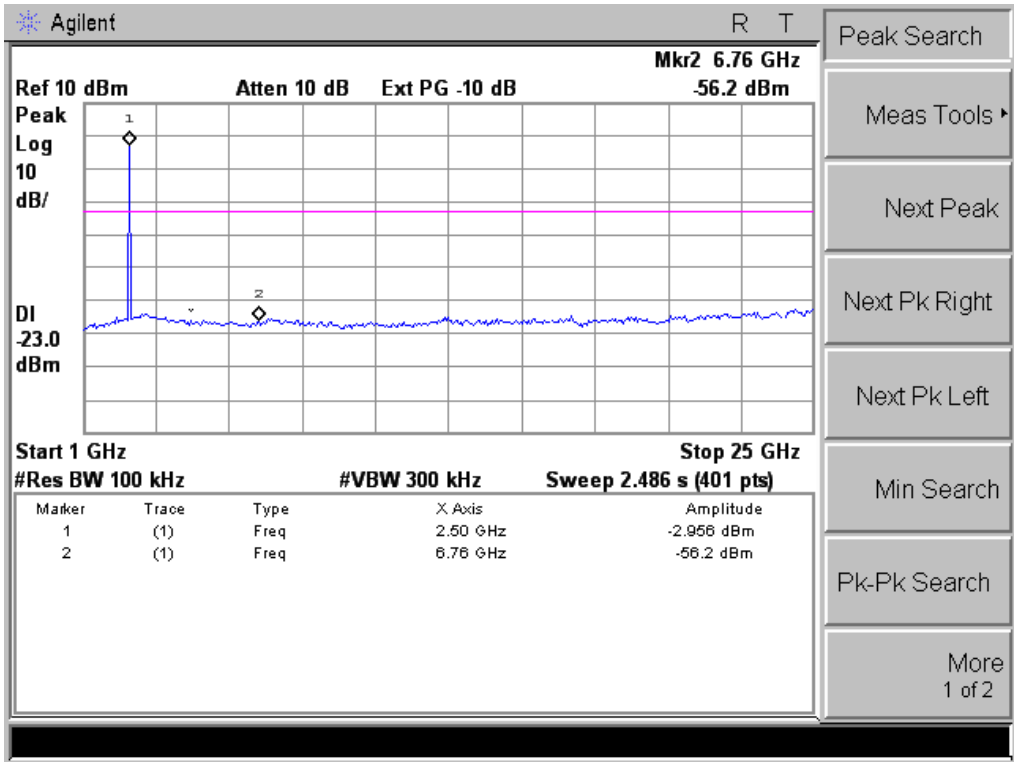
Middle Channel





High Channel





4. POWER SPECTRAL DENSITY TEST

4.1 APPLIED PROCEDURES / LIMIT

RSS-210 & RSS-Gen Rules				
Section	Test Item	Limit	Frequency Range (MHz)	Result
RSS-210§A8.2 (b)	Power Spectral Density	8 dBm (in any 3KHz)	2400-2483.5	PASS

4.1.1 TEST PROCEDURE

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS channel bandwidth.
3. Set the RBW ≥ 3 kHz.
4. Set the VBW ≥ 3 x 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.

4.1.2 DEVIATION FROM STANDARD

No deviation.

4.1.3 TEST SETUP

4.1.4 EUT OPERATION CONDITIONS

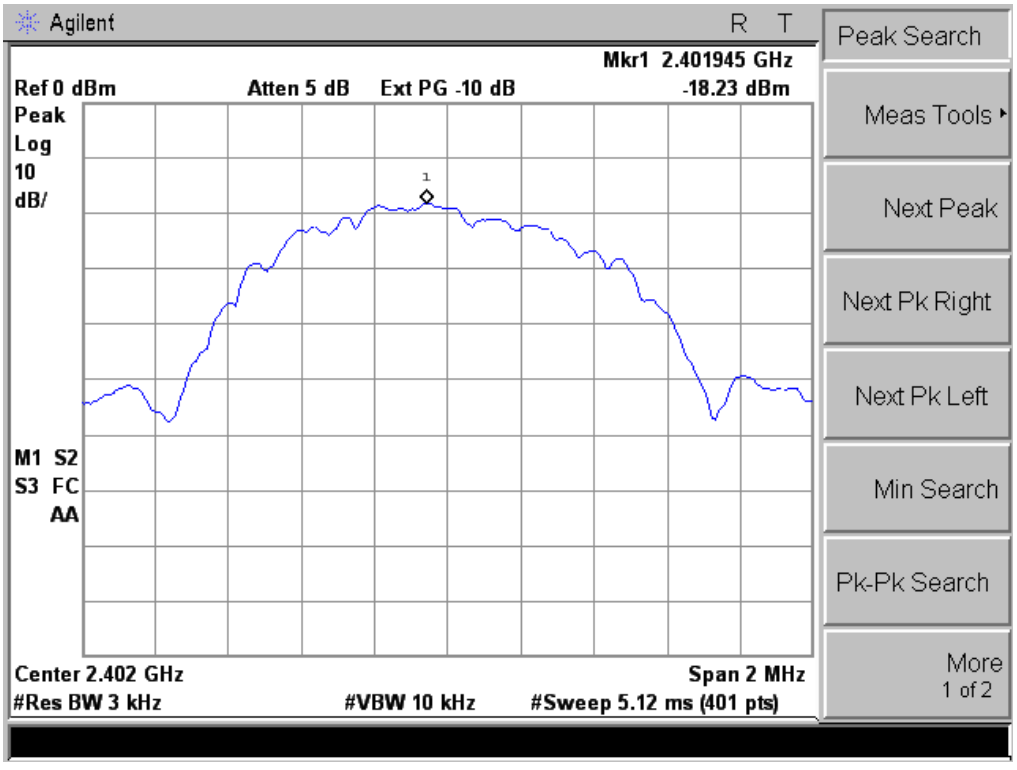
The EUT tested system was configured as the statements of 2.1 Unless otherwise a special operating condition is specified in the follows during the testing.

4.1.5 TEST RESULTS

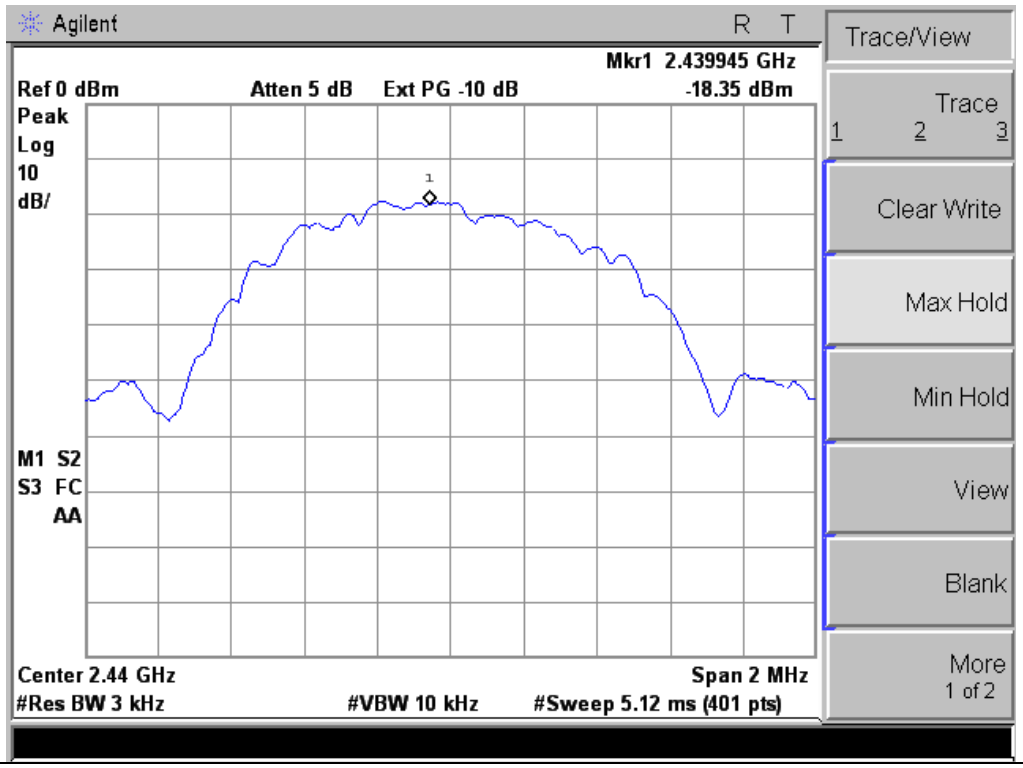
EUT：	Mini USB Bluetooth 4.0 Adapter	Model Name ：	BMD705
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1015 hPa	Test Voltage ：	DC 5V from noteboook
Test Mode ：	TX Low channel / Middle Channel / High Channel		

Frequency	Power Density (dBm)	Limit (dBm)	Result
2402 MHz	-18.23	8	PASS
2440 MHz	-18.35	8	PASS
2480 MHz	-15.46	8	PASS

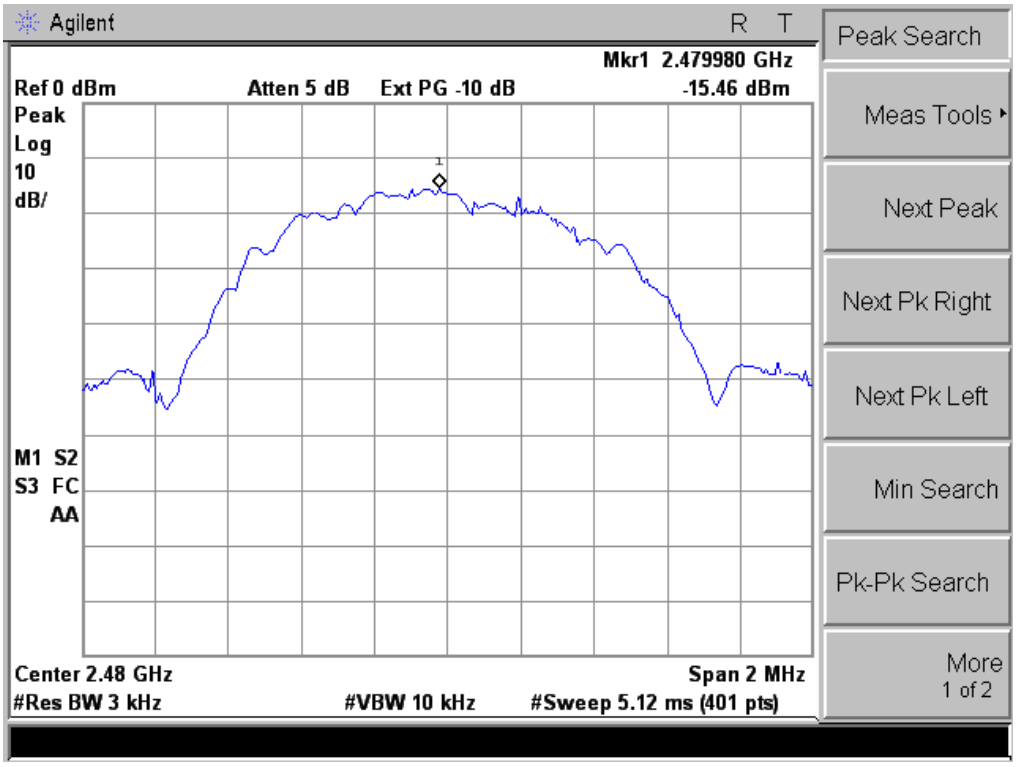
TX Low channel



TX Middle Channel



TX High Channel



5. BANDWIDTH TEST

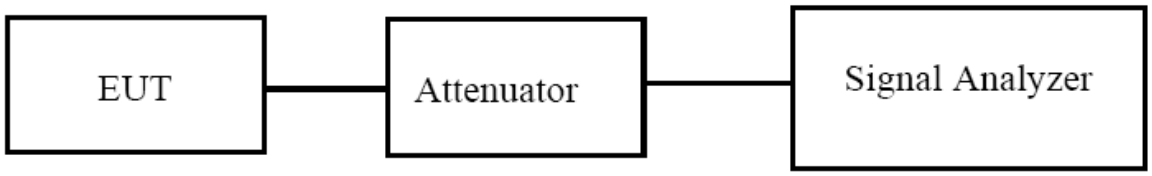
5.1 APPLIED PROCEDURES / LIMIT

RSS-210 & RSS-Gen Rules				
Section	Test Item	Limit	Frequency Range (MHz)	Result
RSS-Gen§4.6 .1&RSS-210§ A8.2 (a)	Bandwidth	>= 500KHz (6dB bandwidth)	2400-2483.5	PASS

5.1.1 TEST PROCEDURE

According to RSS-Gen Issue 3：December 2010

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.
3. Measure the frequency difference of two frequencies that were attenuated 6 dB from the reference level. Record the frequency difference as the emission bandwidth.
4. Repeat above procedures until all frequencies measured were complete.



5.1.2 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

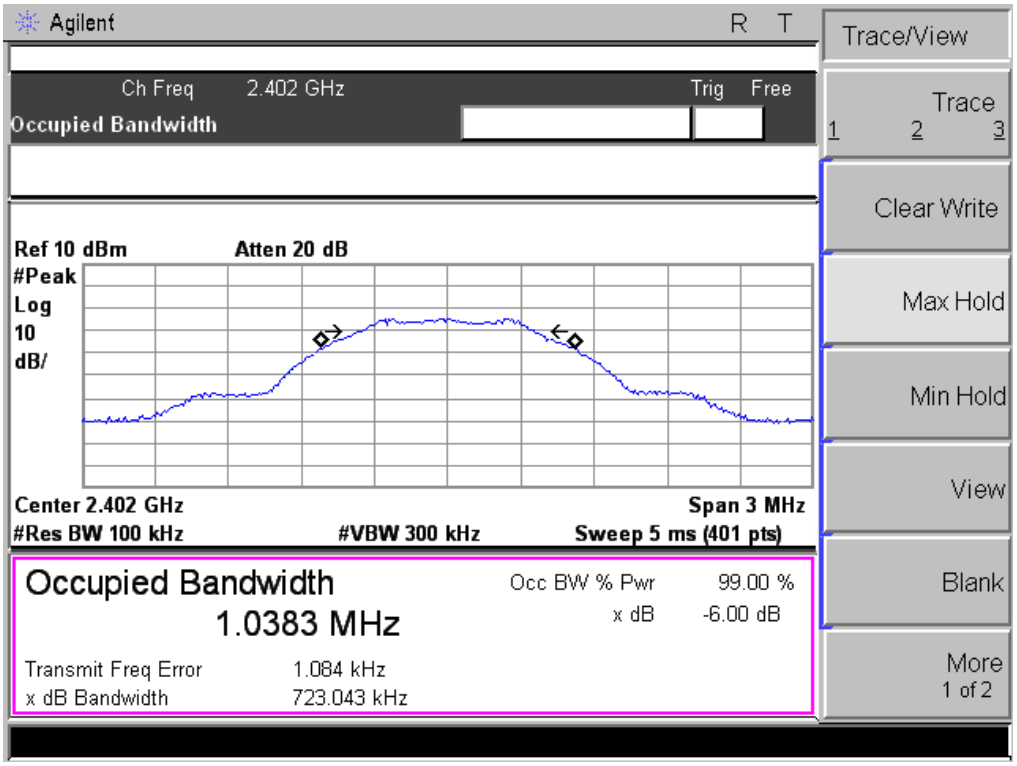
5.1.3 TEST RESULTS

EUT：	Mini USB Bluetooth 4.0 Adapter	Model Name ：	BMD705
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1012 hPa	Test Voltage ：	DC 5V from noteboook
Test Mode ：	TX Low channel / Middle Channel / High Channel		

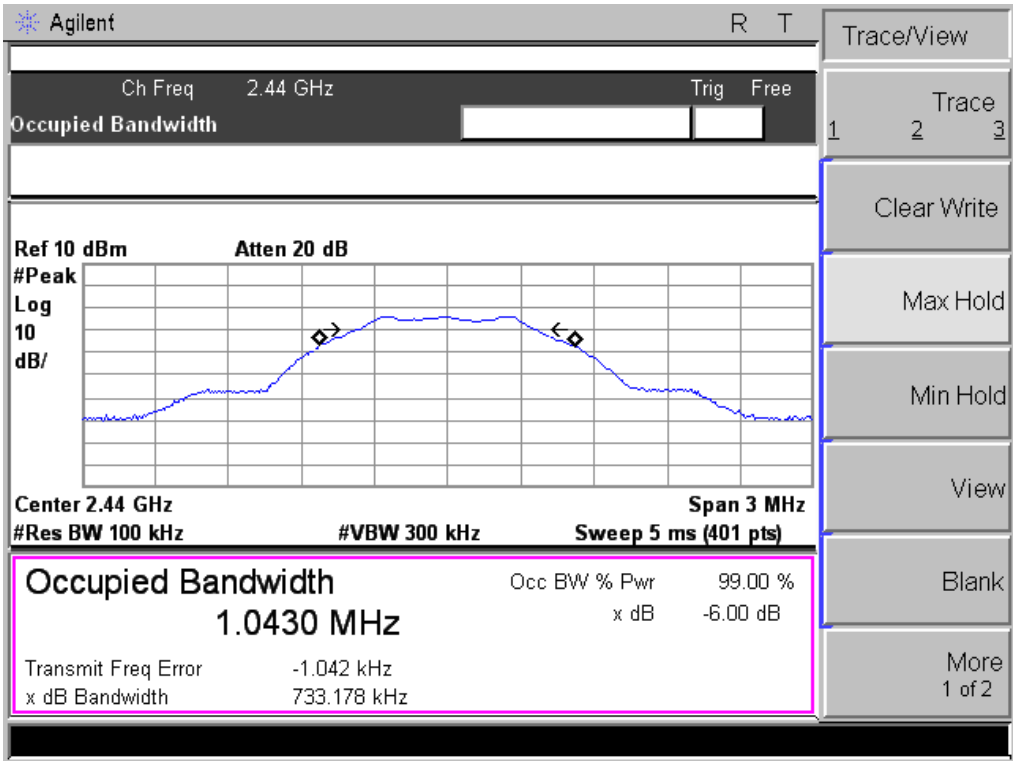
Channel	Frequency (MHz)	Data Rate (Mbps)	99% bandwidth (MHz)	6dB bandwidth (MHz)	Limit (kHz)	Result
TX						
Low	2402	1	1.351	0.723	500	Pass
Middle	2444	1	1.347	0.733	500	Pass
High	2480	1	1.351	0.728	500	Pass

6dB bandwidth

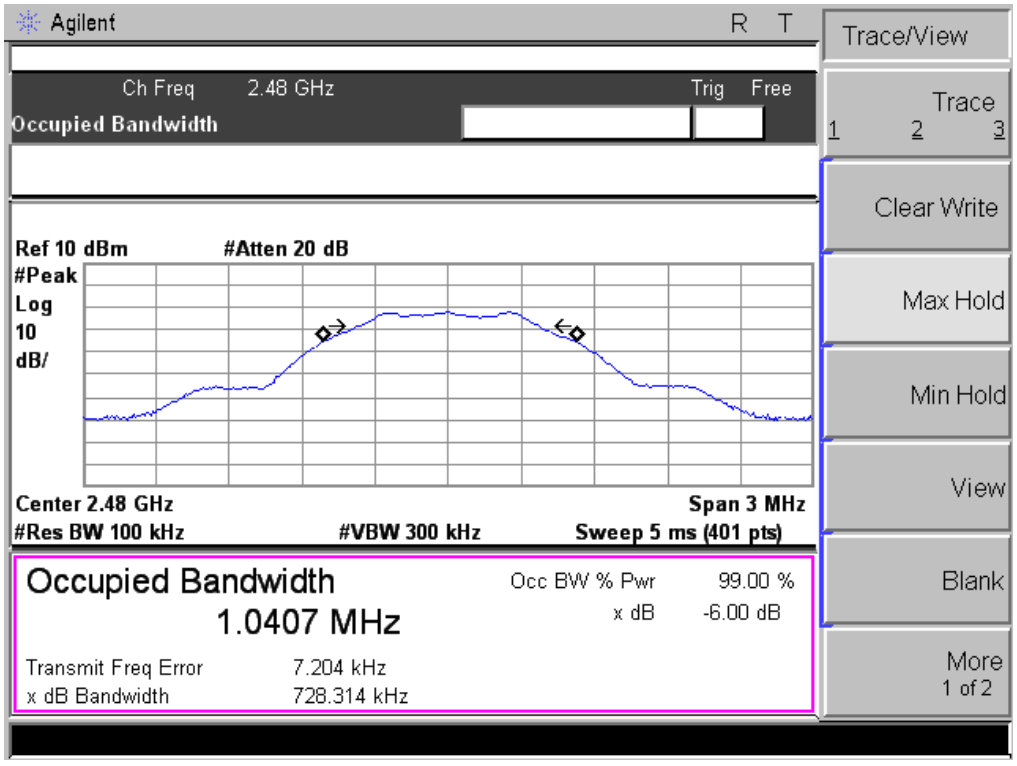
TX Low channel

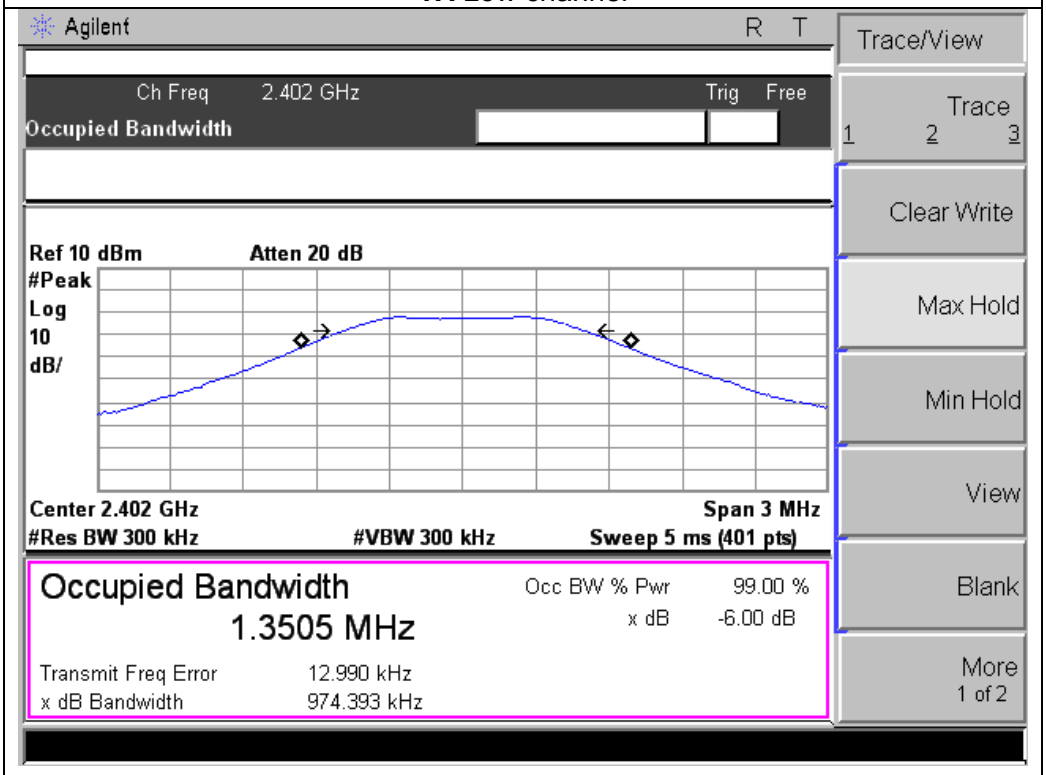
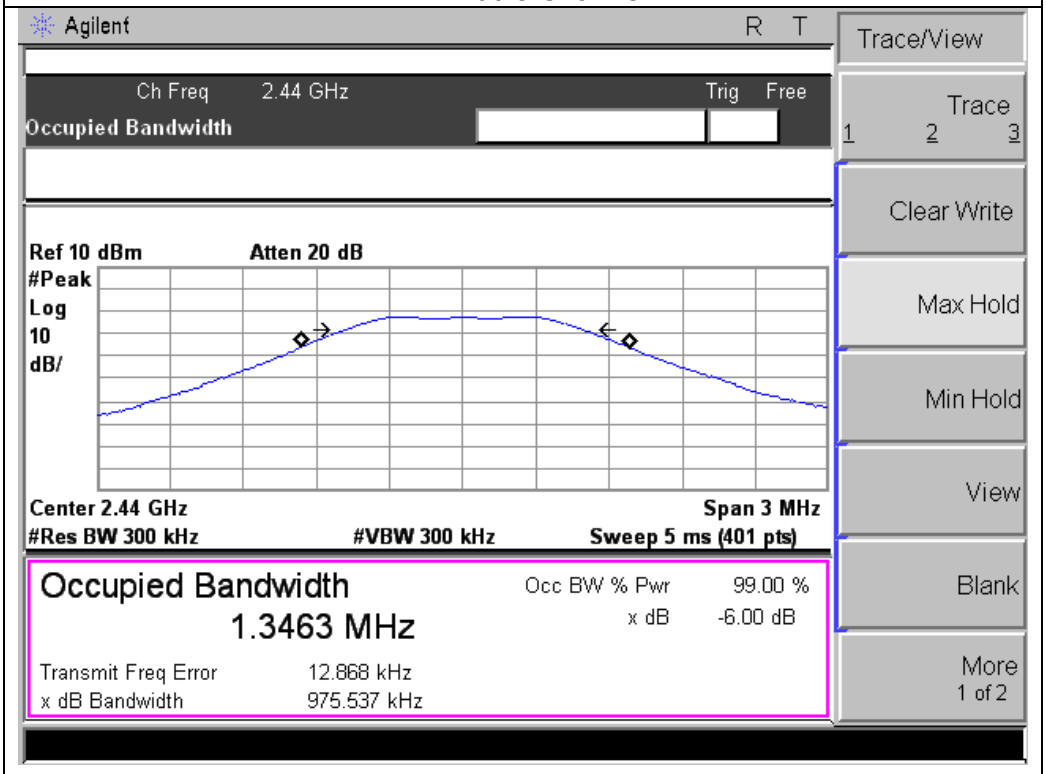


TX Middle Channel

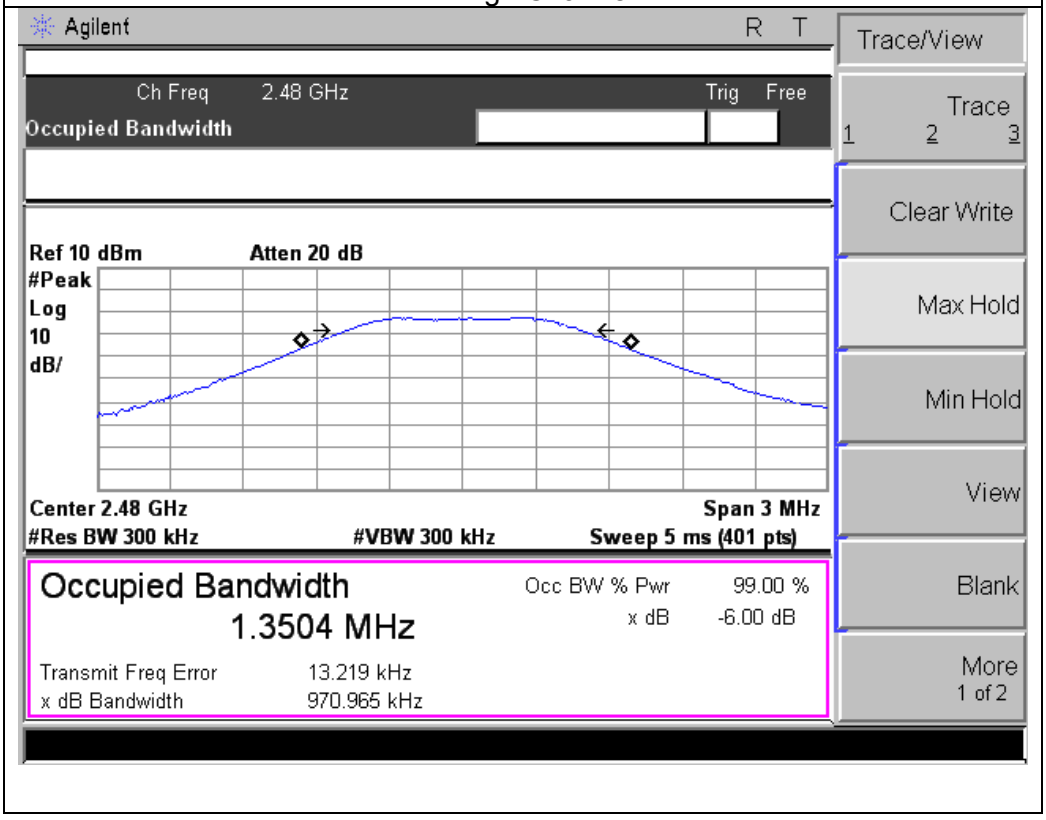


TX High Channel



99% **bandwidth**
TX Low channel

TX Middle Channel


TX High Channel



6. PEAK OUTPUT POWER TEST

6.1 APPLIED PROCEDURES / LIMIT

RSS-210 & RSS-Gen Rules				
Section	Test Item	Limit	Frequency Range (MHz)	Result
RSS-210 §A8.4 (4)	Peak Output Power	1 watt or 30dBm	2400-2483.5	PASS

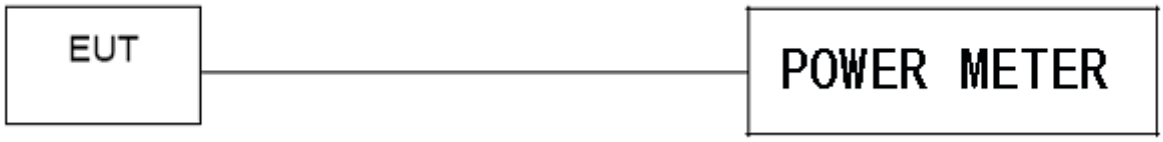
6.1.1 TEST PROCEDURE

a. The EUT was directly connected to the Power meter

6.1.2 DEVIATION FROM STANDARD

No deviation.

6.1.3 TEST SETUP



6.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

6.1.5 TEST RESULTS

EUT：	Mini USB Bluetooth 4.0 Adapter	Model Name ：	BMD705
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1012 hPa	Test Voltage ：	DC 5V from noteboook
Test Mode ：	TX Low channel / Middle Channel / High Channel		

TX			
Test Channe	Frequency	Maximum Conducted Output Power	LIMIT
	(MHz)	(dBm)	dBm
Low channel	2402	-4.93	30
Middle Channel	2440	-4.05	30
High Channel	2480	-2.48	30

7. 100 KHZ BANDWIDTH OF FREQUENCY BAND EDGE

APPLICABLE STANDARD

In any 100 kHz bandwidth outside the frequency band in which the spread Mini USB Bluetooth 4.0 Adapter 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, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

TEST PROCEDURE

a) Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
b) Position the EUT without connection to measurement instrument. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any one measured frequency within its operating range, and make sure the instrument is operated in its linear range.
c) Set RBW to 100 kHz and VBW of Mini USB Bluetooth 4.0 Adapter analyzer to 300 kHz with a convenient frequency span including 100 kHz bandwidth from band edge.
d) Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
e) Repeat above procedures until all measured frequencies were complete.

7.1 DEVIATION FROM STANDARD

No deviation.

7.2 TEST SETUP

7.3 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

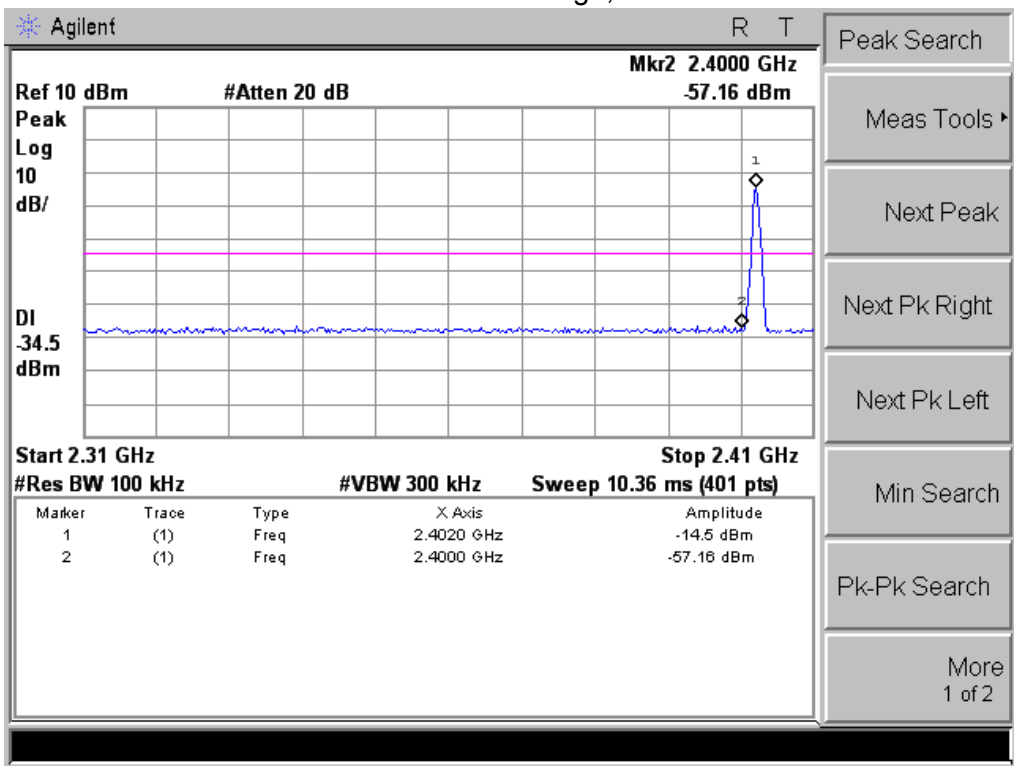
7.4 TEST RESULTS

EUT：	Mini USB Bluetooth 4.0 Adapter	Model Name ：	BMD705
Temperature：	25 ℃	Relative Humidity：	60%
Pressure：	1012 hPa	Test Voltage ：	DC 5V from noteboook

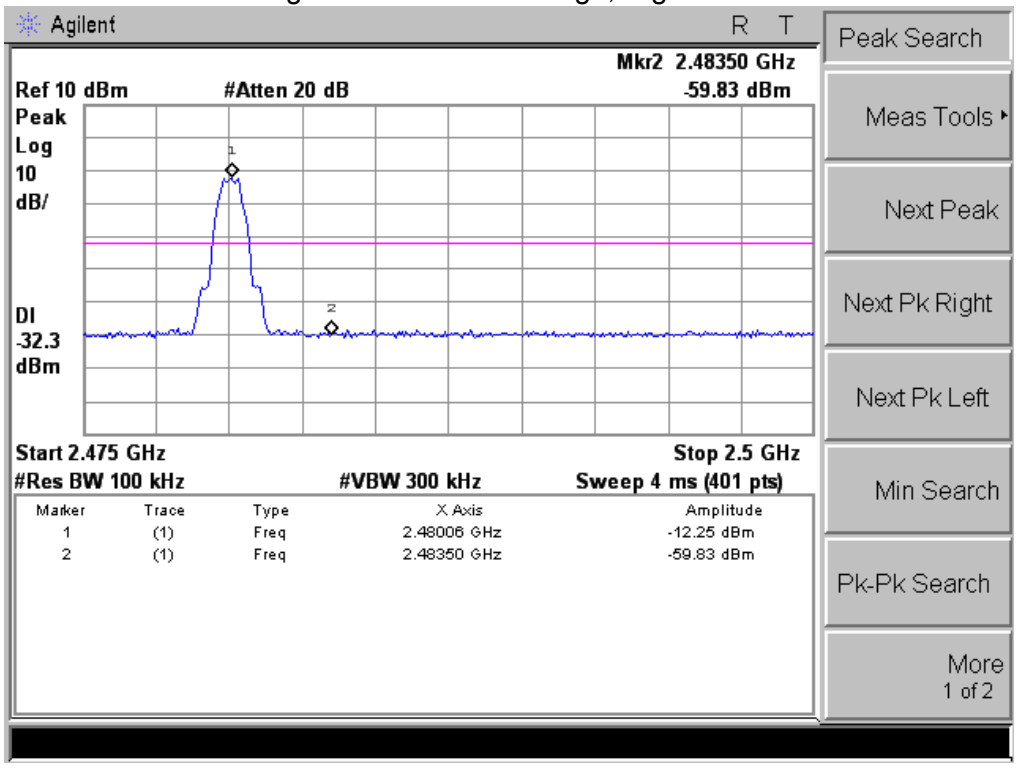
Frequency Band	Delta Peak to band emission (dBc)	＞Limit (dBc)	Result
Left-band	42.66	20	Pass
Right-band	46.58	20	Pass

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type	Comment
TX							
2390	65.91	-12.99	52.92	74	-21.08	peak	Vertical
2390	63.32	-12.99	50.33	74	-23.67	peak	Horizontal
2483.5	64.19	-12.78	51.41	74	-22.59	peak	Vertical
2483.5	60.96	-12.78	48.18	74	-25.82	peak	Horizontal

Low channel: Band Edge, Left Side



High channnel: Band Edge, Right Side



8. ANTENNA REQUIREMENT

8.1 STANDARD REQUIREMENT

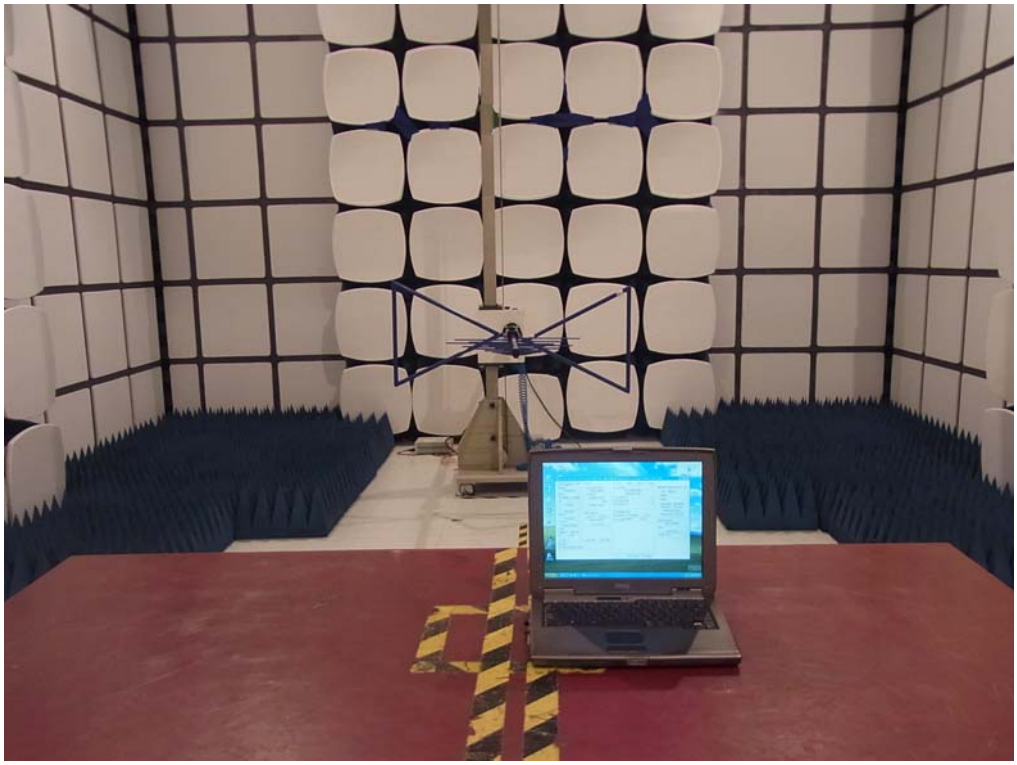
15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

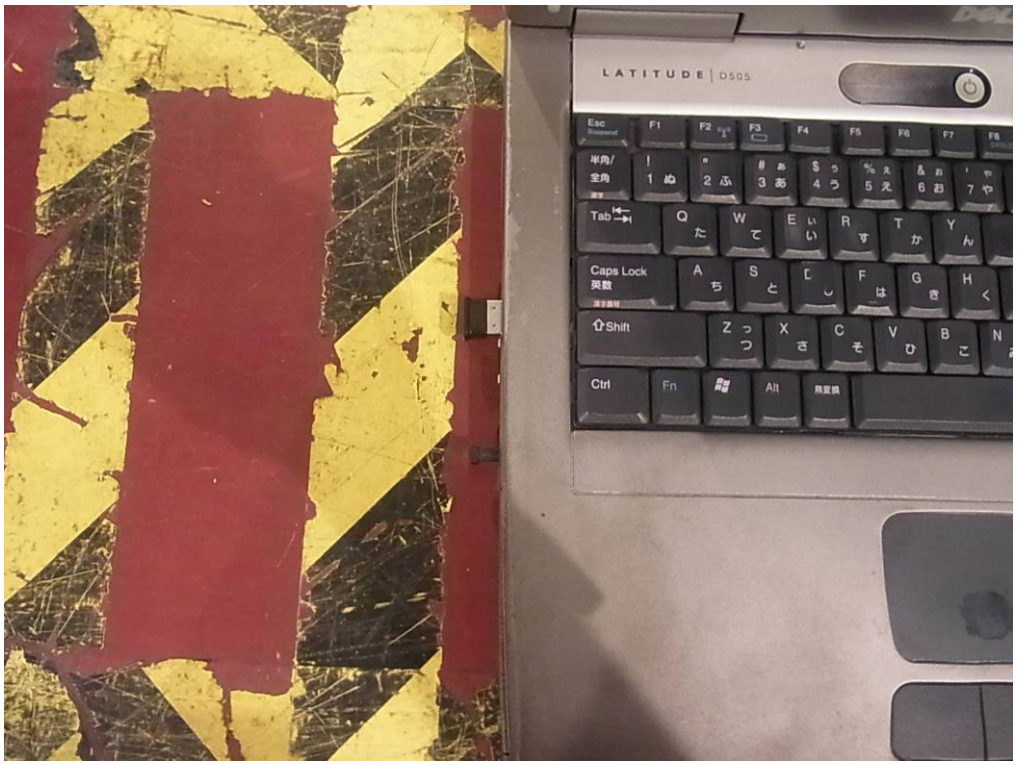
8.2 EUT ANTENNA

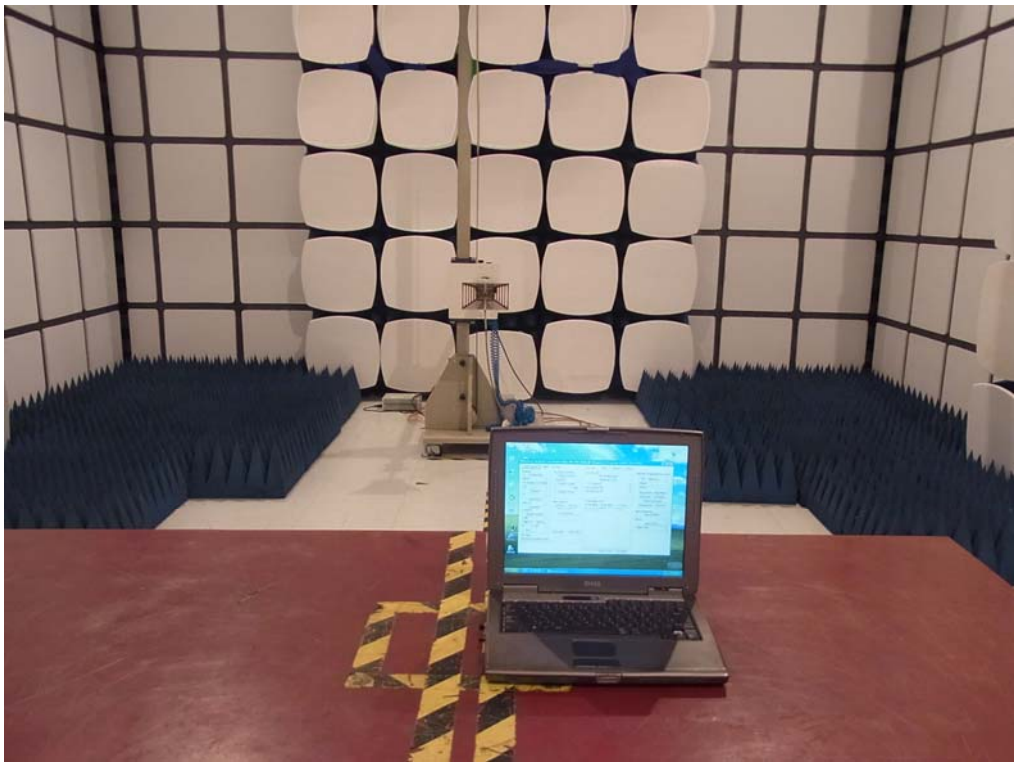
The EUT antenna is Integrated(FPCB) antenna. It comply with the standard requirement.

9. EUT TEST PHOTO

Radiated Measurement Photos







Conducted Measurement Photo