
FCC Test Report

Report No.: STS1502008F04

FCC ID : BRCPC7088

APPLICATION PURPOSE : Original Equipment

PRODUCT DESIGNATION : tablet pc

BRAND NAME : Kinwei, Titan

MODEL NAME : PC7088, PC7088ME, PC7088B, PC70XX(XX represents00~99), PC70XXME(XX represents00~99),
PC70XXB(XX represents00~99), KW-PC7088J,
KW-PC7088, KW-PC70XXJ(XX represents00~99),
KW-PC70XX(XX represents00~99).

CLIENT : Kintech Co., Ltd.

DATE OF ISSUE : Jan.31, 2015

STANDARD(S) : FCC Part 15.247

TEST PROCEDURE(S) : KDB 558074 v03r02

REPORT VERSION : V1.0

Shenzhen STS Test Services Co., Ltd.

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Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Jan.31, 2015	Valid	Original Report



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1. VERIFICATION OF COMPLIANCE

Applicant	Kintech Co., Ltd.
Address	1F-5F, Bldg 22, Chen Tian Industrial Zone, Xi Xiang Bao An District, Shenzhen, Guang Dong, China
Manufacturer	Kintech Co., Ltd.
Address	1F-5F, Bldg 22, Chen Tian Industrial Zone, Xi Xiang Bao An District, Shenzhen, Guang Dong, China
Product Designation	tablet pc
Brand Name	Kinwei, Titan
Test Model	PC7088
Series Model	PC7088ME, PC7088B, PC70XX(XX represents00~99), PC70XXME(XX represents00~99), PC70XXB(XX represents00~99), KW-PC7088J, KW-PC7088, KW-PC70XXJ(XX represents00~99), KW-PC70XX(XX represents00~99).
Difference description	All the same except for the brand name and model name.
Date of test	Dec.11,2014 to Jan.31,2015
Deviation	None
Condition of Test Sample	Normal
Report Template	AGCRT-US-BLE/RF

WE HEREBY CERTIFY THAT:

The above equipment was tested by Shenzhen STS Test Services Co., Ltd. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4 (2003) and the energy emitted by the sample EUT tested as described in this report is in compliance with requirement of FCC Part 15 Rules requirement.

Prepared By



Tony Liu

Jan.31, 2015

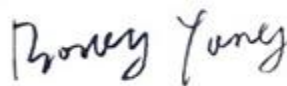
Checked By



Vita Li

Jan.31, 2015

Authorized By



Bovey Yang

Jan.31, 2015

2.GENERAL INFORMATION

2.1PRODUCT DESCRIPTION

The EUT is designed as “**tablet pc**”. It is designed by way of utilizing the FHSS technology to achieve the system operation.

A major technical description of EUT is described as following

Operation Frequency	2.402 GHz to 2.480GHz
Bluetooth Version	V4.0
Modulation	GFSK
Number of channels	40 Channel(37 Hopping Channel,3 advertising Channel)
Antenna Designation	Integrated Antenna
Antenna Gain	0.8dBi
Hardware Version	ELINK-MZ706-D3_V2
Software Version	MT83x2_MZ706_MZ7061H1C2W1.2015011317
Power Supply	DC3.7V by Built-in Li-ion Battery

2.2 RELATED SUBMITTAL(S)/GRANT(S)

This submittal(s) (test report) is intended for **FCC ID: BRCPC7088** filing to comply with Section 15.247of the FCC Part 15, Subpart C Rules.

2.3TEST METHODOLOGY

All measurements contained in this report were conducted with KDB 558074 D01 DTS Meas Guidance v03r02, 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.

The equipment under test (EUT) was configured to measure its highest possible emission level. The test modes were adapted accordingly in reference to the Operating Instructions. The EUT was tested in all three orthogonal planes and the worse case was showed.

2.4 TEST FACILITY

All measurement facilities used to collect the measurement data are located at
Shenzhen STS Test Services Co., Ltd.

1/F, Building 2, Zhuoke Science Park, Chongqing Road, Fuyong, Bao'an District, Shenzhen, China

FCC Registration No.: 842334

2.5 SPECIAL ACCESSORIES

Refer to section 2.2.

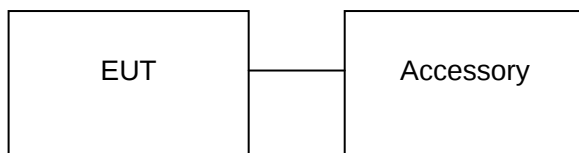
2.6 EQUIPMENT MODIFICATIONS

Not available for this EUT intended for grant.

3. SYSTEM TEST CONFIGURATION

3.1 CONFIGURATION OF TESTED SYSTEM

Configuration:



3.2 EQUIPMENT USED IN TESTED SYSTEM

Item	Equipment	Model No.	ID or Specification	Note
1	tablet pc	PC7088	FCCID:BRPC7088	EUT
2	Adapter	JKY0212-0502000UL	DC5.0V / 2A	Accessory
3	Battery	N/A	DC3.7V / 2500mAh	Accessory
4	Earphone	PC7088	N/A	Accessory
5	USB Cable	PC7088	N/A	Accessory

ALL TEST EQUIPMENT LIST

Name of Equipment	Manufacturer	Model	Calibration Date	Calibration Due.
SPECTRUM ANALYZER	AGILENT	E4407B	2014.10.25	2015.10.24
Power Probe	R&S	NRP-Z23	07/25/2014	07/24/2015
RF attenuator	N/A	RFA20db	N/A	N/A
TEST RECEIVER	R&S	ESCI	2014.10.25	2015.10.24
COMMUNICATION TESTER	AGILENT	8960	2014.10.25	2015.10.24
COMMUNICATION TESTER	R&S	CMU200	2014.10.25	2015.10.24
SPECTRUM ANALYZER	AGILENT	E4440A	2014.02.17	2015.02.16
TEST RECEIVER	R&S	ESCI	2014.10.25	2015.10.24
LISN	R&S	ENV216	2014.10.25	2015.10.24
LISN	EMCO	3810/2NM	2014.10.25	2015.10.24
Loop Antenna	Daze	ZN30900N	2014.10.27	2015.10.26
Bilog Antenna	TESEQ	CBL6111D	2014.10.27	2015.10.26
Horn Antenna	R&S	9120D	2014.10.27	2015.10.26
Test Cable	N/A	R-01	2014.10.25	2015.10.24
Test Cable	N/A	R-02	2014.10.25	2015.10.24
Conduction Cable	EM	N/A	2014.10.25	2015.10.24

4. SUMMARY OF TEST RESULTS

FCC RULES	DESCRIPTION OF TEST	RESULT
§ 15.203	Antenna Requirement	Compliant
§15.209 §15.247(d)	Radiated Emission	Compliant
§15.247(d)	Band Edges	Compliant
§15.247	6 dB Bandwidth	Compliant
§15.247(b)	Conducted Power	Compliant
§15.247(e)	Maximum Conducted Output Power SPECTRAL Density	Compliant
§15.207	Line Conduction Emission	Compliant

5. DESCRIPTION OF TEST MODES

The EUT has been operated in three modulations: GFSK independently.

NO.	TEST MODE DESCRIPTION
1	Low channel TX
2	Middle channel TX
3	High channel TX
4	Normal Operating (BT)

Note:

1. All the test modes can be supply by Built-in Li-ion battery, only the result of the worst case was recorded in the report if no any records.
2. For Radiated Emission, 3axis were chosen for testing for each applicable mode.
3. Eut is operating at its maximum duty cycle>or equal 98%

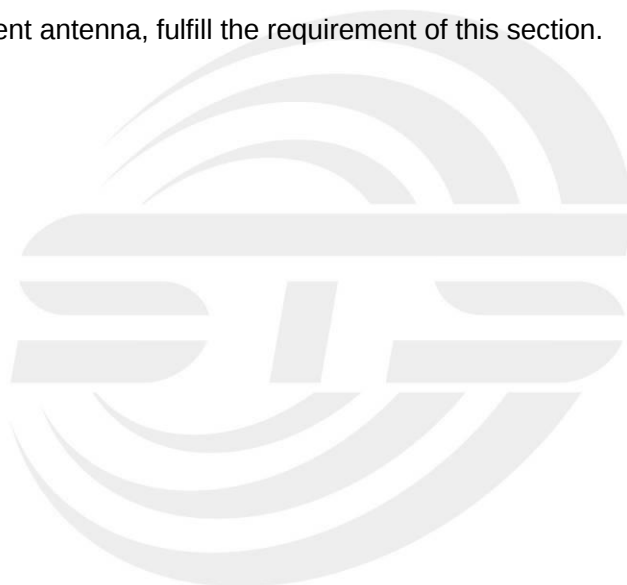
6. ANTENNA REQUIREMENT

6.1. STANDARD APPLICABLE

According to FCC 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. This requirement does not apply to carrier current devices or to devices operated under the provisions of Sections 15.211, 15.213, 15.217, 15.219, or 15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with Section 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this Part are not exceeded.

6.2. TEST RESULT

This product has a permanent antenna, fulfill the requirement of this section.



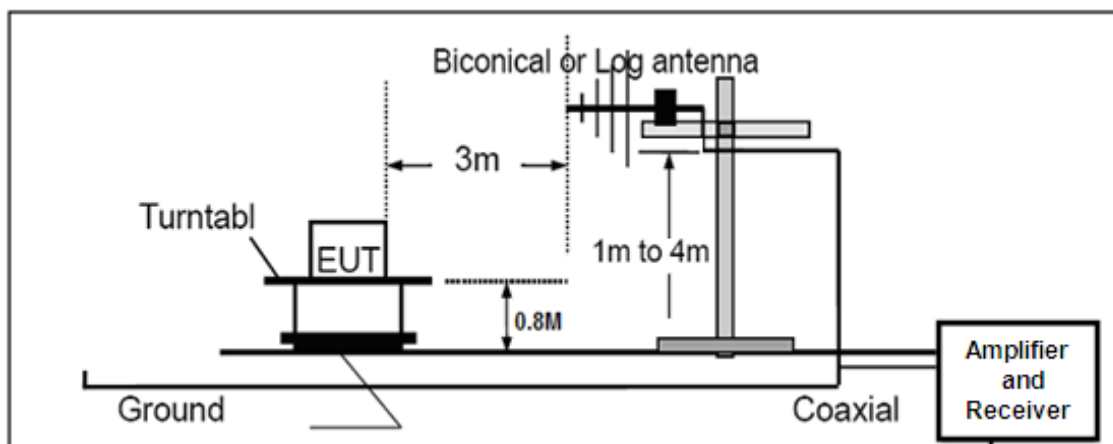
7. RADIATED EMISSION

7.1 MEASUREMENT PROCEDURE

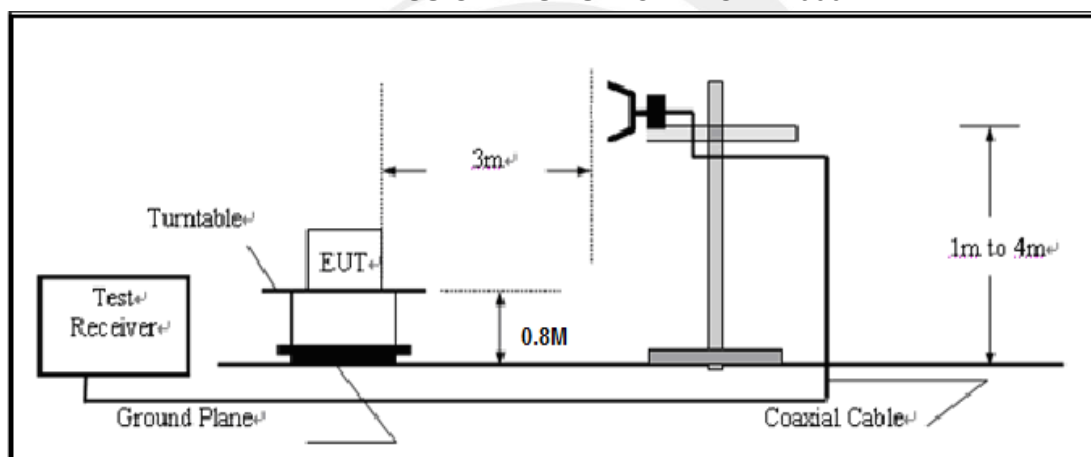
1. Configure the EUT according to ANSI C63.4. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting units. 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 emissions field strength of both horizontal and vertical polarization.
4. For each suspected emissions, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
6. For emissions above 1GHz, use 1MHz VBW and RBW for peak reading. Then 1MHz RBW and 10Hz VBW for average reading in spectrum analyzer.
7. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum values.
8. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
9. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High - Low scan is not required in this case.

7.2 TEST SETUP

RADIATED EMISSION TEST SETUP 30MHz-1000MHz



RADIATED EMISSION TEST SETUP ABOVE 1000MHz



7.3 LIMITS AND MEASUREMENT RESULT

15.209 Limit in the below table has to be followed

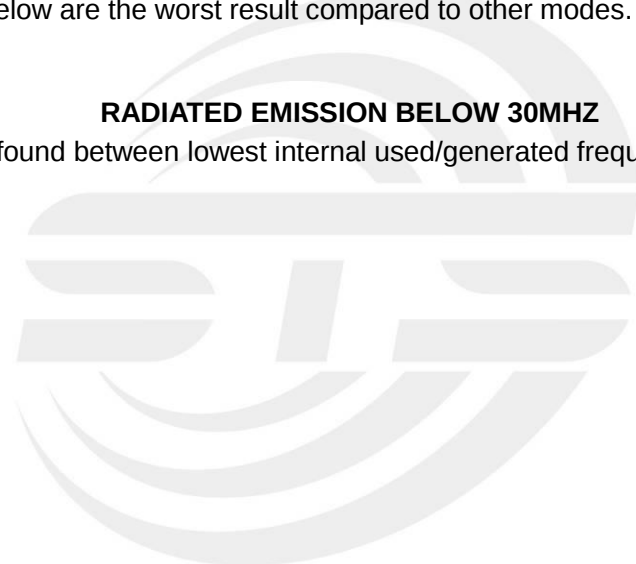
Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

Note: All modes were tested For restricted band radiated emission,
the test records reported below are the worst result compared to other modes.

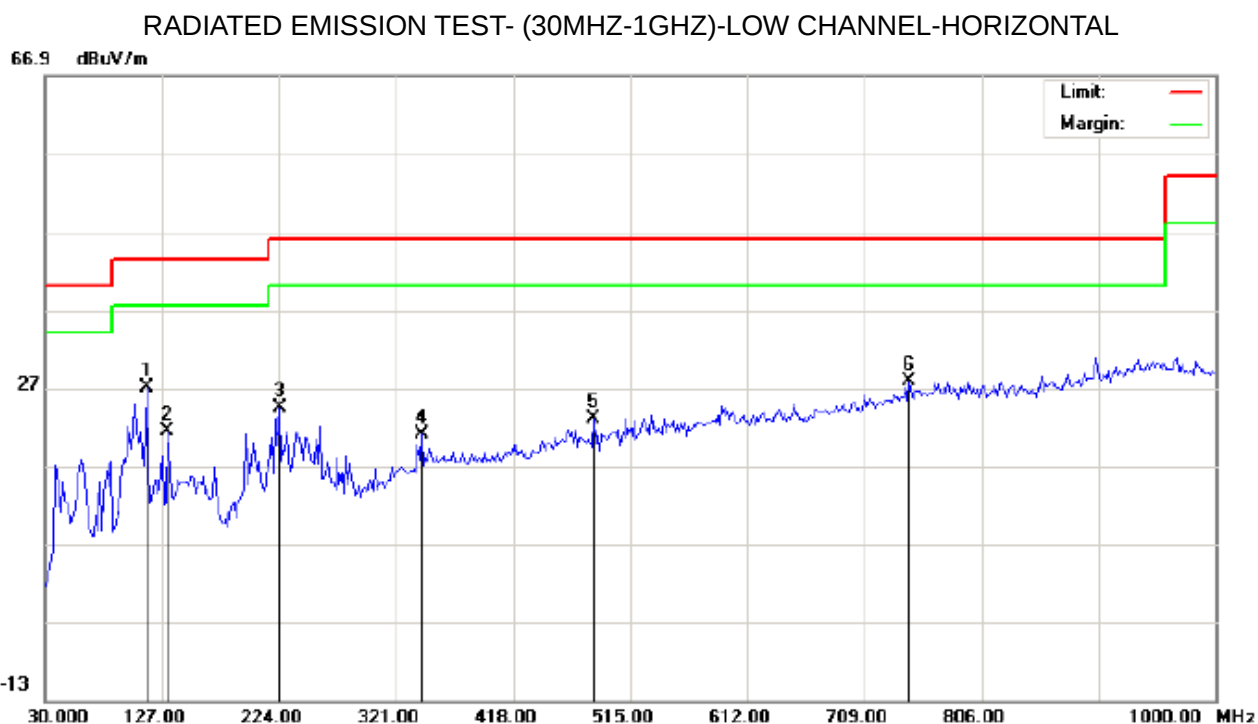
7.4 TEST RESULT

RADIATED EMISSION BELOW 30MHZ

No emission found between lowest internal used/generated frequencies to 30MHz.



RADIATED EMISSION BELOW 1GHZ



Site: site #1

Limit: FCC Class B 3M Radiation

EUT: tablet pc

M/N: PC7088

Mode: Low Channel TX

Note:

Polarization: **Horizontal**

Power: AC 120V/60Hz

Distance: 3m

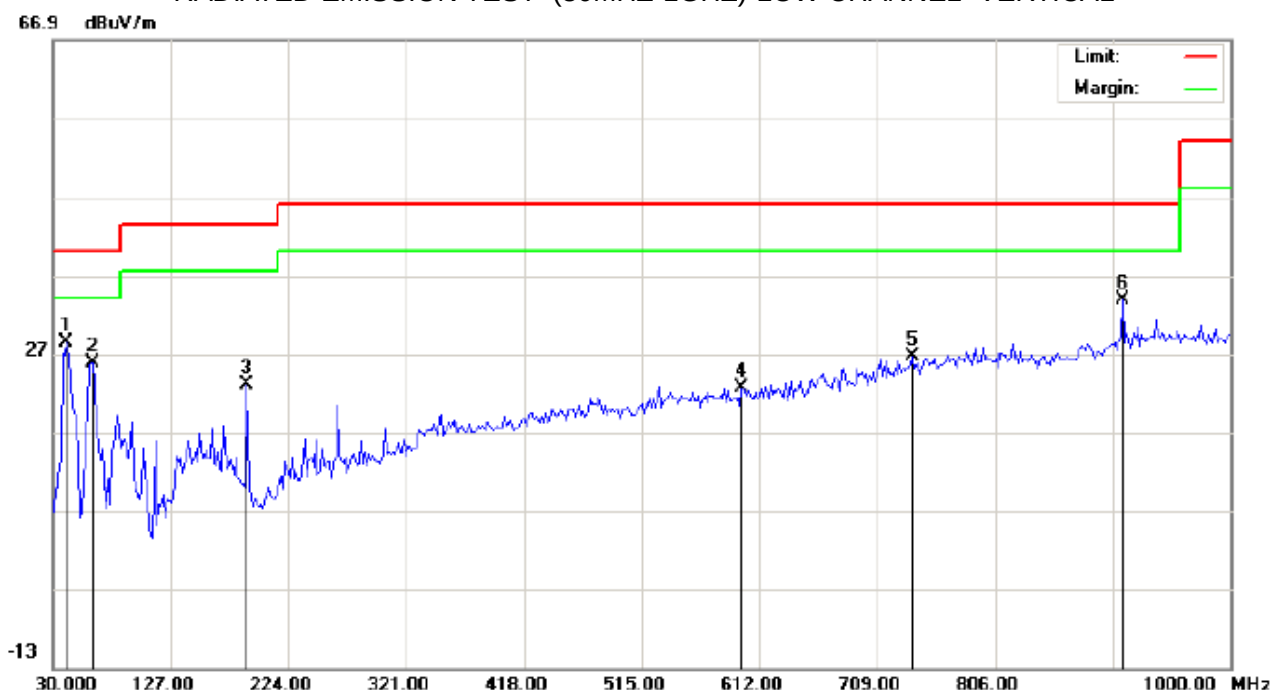
Temperature: 26

Humidity: 60 %

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1	*	114.0667	15.53	11.45	26.98	43.50	-16.52	peak			
2		131.8500	7.61	13.84	21.45	43.50	-22.05	peak			
3		224.0000	11.52	12.91	24.43	46.00	-21.57	peak			
4		342.0167	2.70	18.21	20.91	46.00	-25.09	peak			
5		484.2833	2.13	20.96	23.09	46.00	-22.91	peak			
6		746.1833	1.29	26.52	27.81	46.00	-18.19	peak			

RESULT: PASS

RADIATED EMISSION TEST- (30MHZ-1GHZ)-LOW CHANNEL -VERTICAL



Site: site #1

Limit: FCC Class B 3M Radiation

EUT: tablet pc

M/N: PC7088

Mode: Low Channel TX

Note:

Polarization: **Vertical**

Power: AC 120V/60Hz

Distance: 3m

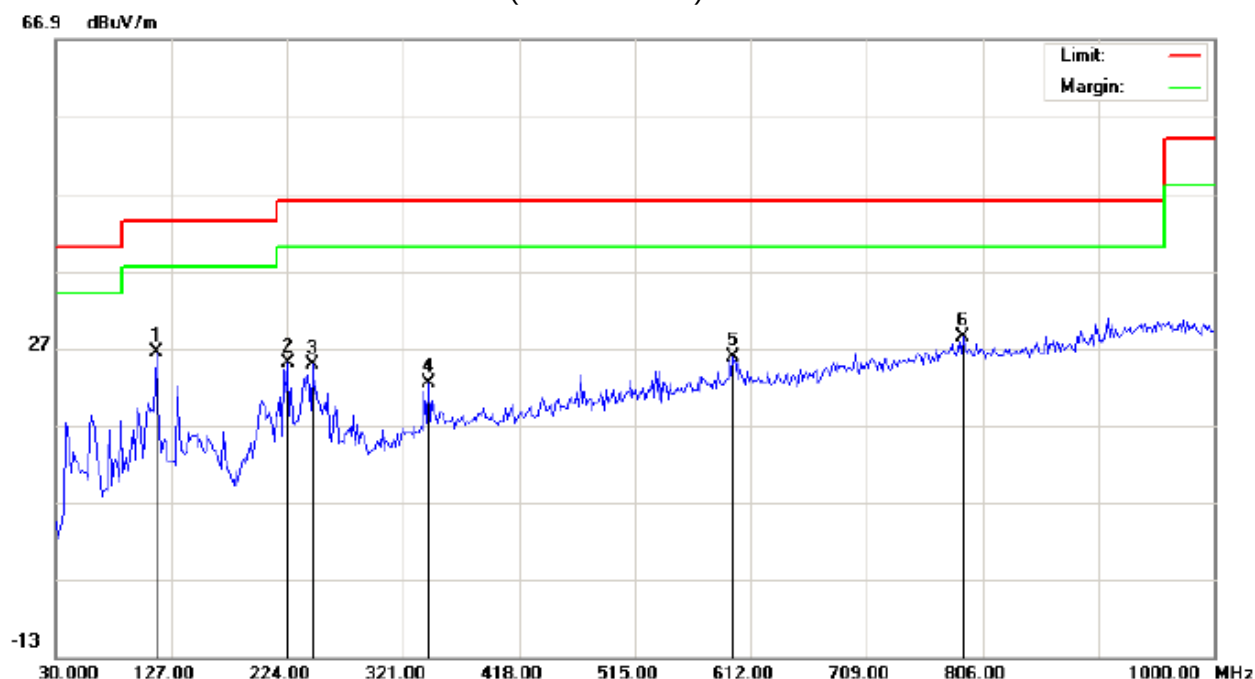
Temperature: 26

Humidity: 60 %

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1	*	41.3167	19.67	8.81	28.48	40.00	-11.52	peak			
2		62.3333	18.64	7.24	25.88	40.00	-14.12	peak			
3		190.0500	11.56	11.52	23.08	43.50	-20.42	peak			
4		597.4500	-0.04	22.72	22.68	46.00	-23.32	peak			
5		738.1000	0.31	26.29	26.60	46.00	-19.40	peak			
6		911.0833	4.79	28.92	33.71	46.00	-12.29	peak			

RESULT: PASS

RADIATED EMISSION TEST- (30MHZ-1GHZ)-MIDDLE CHANNEL-HORIZONTAL



Site: site #1
Limit: FCC Class B 3M Radiation
EUT: tablet pc
M/N: PC7088
Mode: Middle Channel TX
Note:

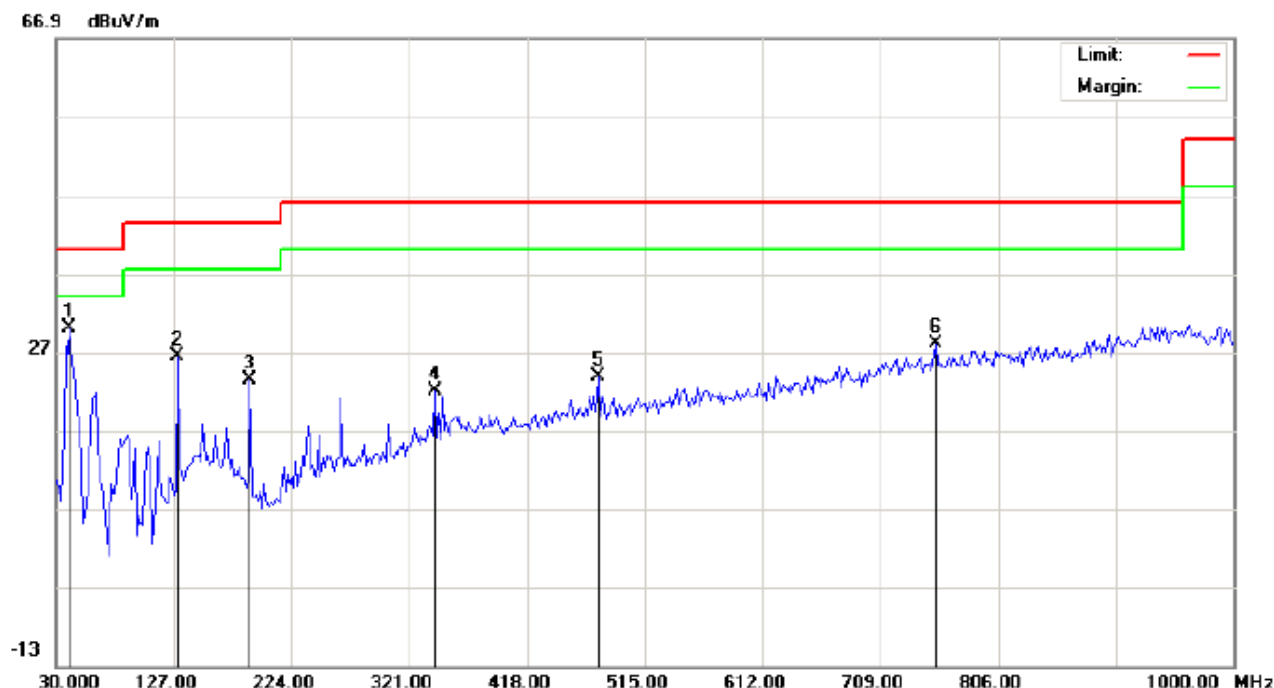
Polarization: **Horizontal**
Power: AC 120V/60Hz
Distance: 3m

Temperature: 26
Humidity: 60 %

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1	*	114.0667	15.04	11.45	26.49	43.50	-17.01	peak			
2		224.0000	12.12	12.91	25.03	46.00	-20.97	peak			
3		245.0167	11.10	13.71	24.81	46.00	-21.19	peak			
4		342.0167	4.29	18.21	22.50	46.00	-23.50	peak			
5		597.4500	2.05	23.67	25.72	46.00	-20.28	peak			
6		789.8333	1.13	27.18	28.31	46.00	-17.69	peak			

RESULT: PASS

RADIATED EMISSION TEST- (30MHZ-1GHZ)- MIDDLE CHANNEL -VERTICAL



Site: site #1
Limit: FCC Class B 3M Radiation
EUT: tablet pc
M/N: PC7088
Mode: Middle Channel TX
Note:

Polarization: **Vertical**
Power: AC 120V/60Hz
Distance: 3m

Temperature: 26
Humidity: 60 %

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1	*	41.3167	21.11	8.81	29.92	40.00	-10.08	peak			
2		130.2332	15.30	11.13	26.43	43.50	-17.07	peak			
3		190.0500	11.97	11.52	23.49	43.50	-20.01	peak			
4		342.0167	3.71	18.21	21.92	46.00	-24.08	peak			
5		476.2000	2.87	20.87	23.74	46.00	-22.26	peak			
6		754.2667	1.39	26.69	28.08	46.00	-17.92	peak			

RESULT: PASS

RADIATED EMISSION TEST- (30MHZ-1GHZ)-HIGH CHANNEL-HORIZONTAL

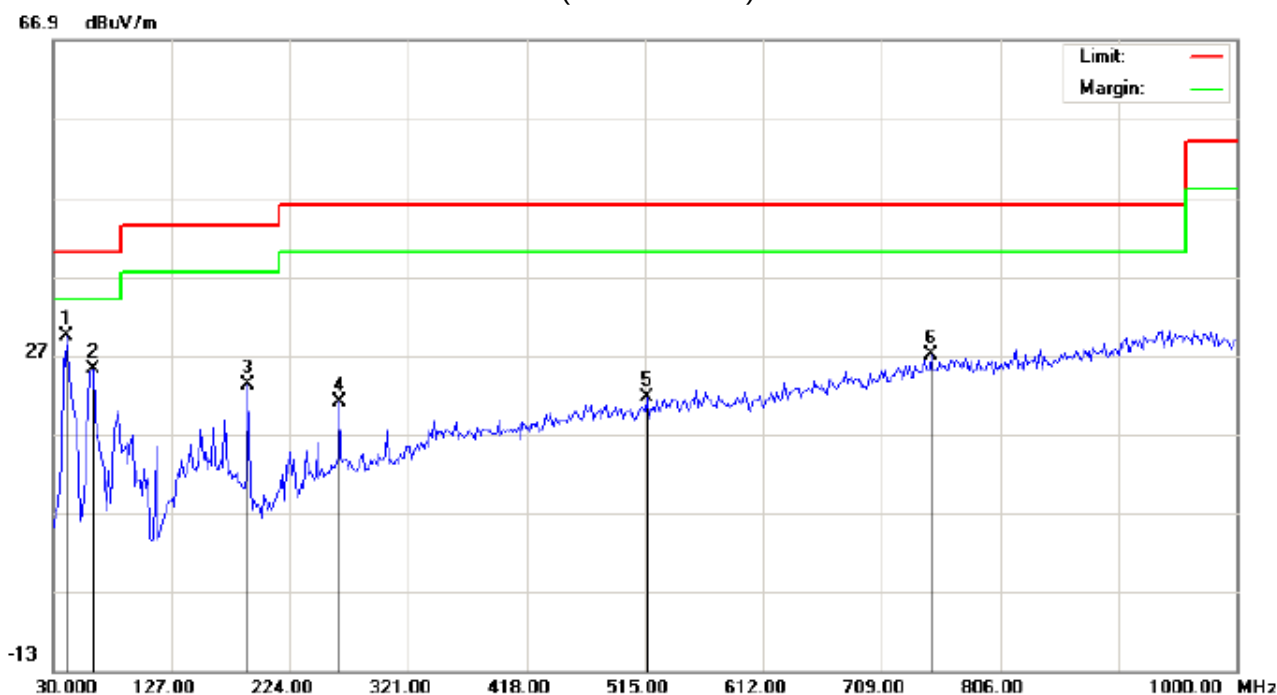


Site: site #1 Polarization: **Horizontal** Temperature: 26
Limit: FCC Class B 3M Radiation Power: AC 120V/60Hz Humidity: 60 %
EUT: tablet pc Distance: 3m
M/N: PC7088
Mode: High Channel TX
Note:

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		114.0667	15.12	11.45	26.57	43.50	-16.93	peak			
2		224.0000	11.56	12.91	24.47	46.00	-21.53	peak			
3		338.7833	4.46	17.99	22.45	46.00	-23.55	peak			
4		469.7333	2.25	20.80	23.05	46.00	-22.95	peak			
5		768.8167	-0.12	26.89	26.77	46.00	-19.23	peak			
6	*	909.4667	0.53	28.87	29.40	46.00	-16.60	peak			

RESULT: PASS

RADIATED EMISSION TEST- (30MHZ-1GHZ)-HIGH CHANNEL -VERTICAL



Site: site #1	Polarization: Vertical	Temperature: 26
Limit: FCC Class B 3M Radiation	Power: AC 120V/60Hz	Humidity: 60 %
EUT: tablet pc	Distance: 3m	
M/N: PC7088		
Mode: High Channel TX		
Note:		

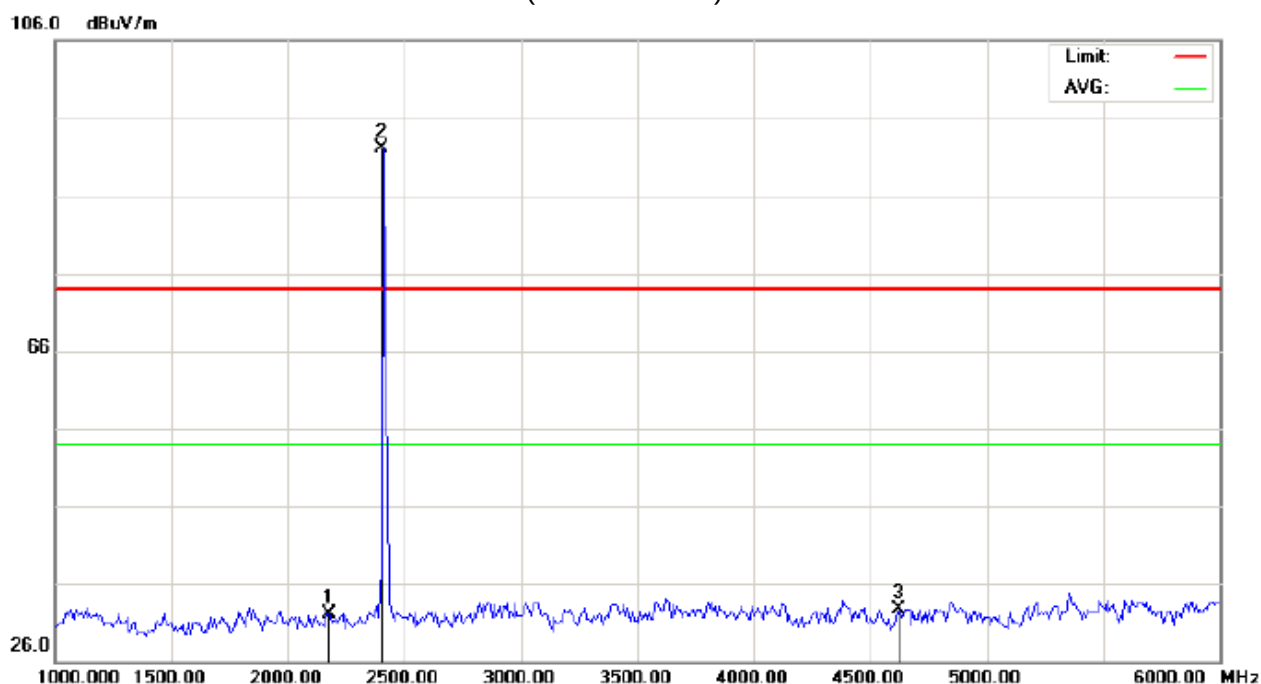
No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1	*	41.3167	20.69	8.81	29.50	40.00	-10.50	peak			
2		62.3333	17.93	7.24	25.17	40.00	-14.83	peak			
3		190.0500	11.67	11.52	23.19	43.50	-20.31	peak			
4		264.4166	6.71	14.34	21.05	46.00	-24.95	peak			
5		516.6167	0.00	21.58	21.58	46.00	-24.42	peak			
6		749.4167	0.33	26.61	26.94	46.00	-19.06	peak			

RESULT: PASS

Note: 1. Factor=Antenna Factor + Cable loss, Margin=Measurement-Limit.

2. The "Factor" value can be calculated automatically by software of measurement system.

RADIATED EMISSION ABOVE 1GHZ **RADIATED EMISSION TEST- (ABOVE 1GHZ)-LOW CHANNEL-HORIZONTAL**



Site: site #1	Polarization: Horizontal	Temperature: 26
Limit: FCC Class B 3M Radiation above 1GHZ(PK)	Power:	Humidity: 60 %
EUT: tablet pc	Distance:	
M/N: PC7088		
Mode: Low Channel TX		
Note:		

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		2175.000	42.11	-9.93	32.18	74.00	-41.82	peak			
2	*	2402.000	101.83	-9.68	92.15	74.00	18.15	peak			
3		4625.000	35.56	-2.78	32.78	74.00	-41.22	peak			

RESULT: PASS

RADIATED EMISSION TEST-(ABOVE 1GHZ)-LOW CHANNEL-VERTICAL

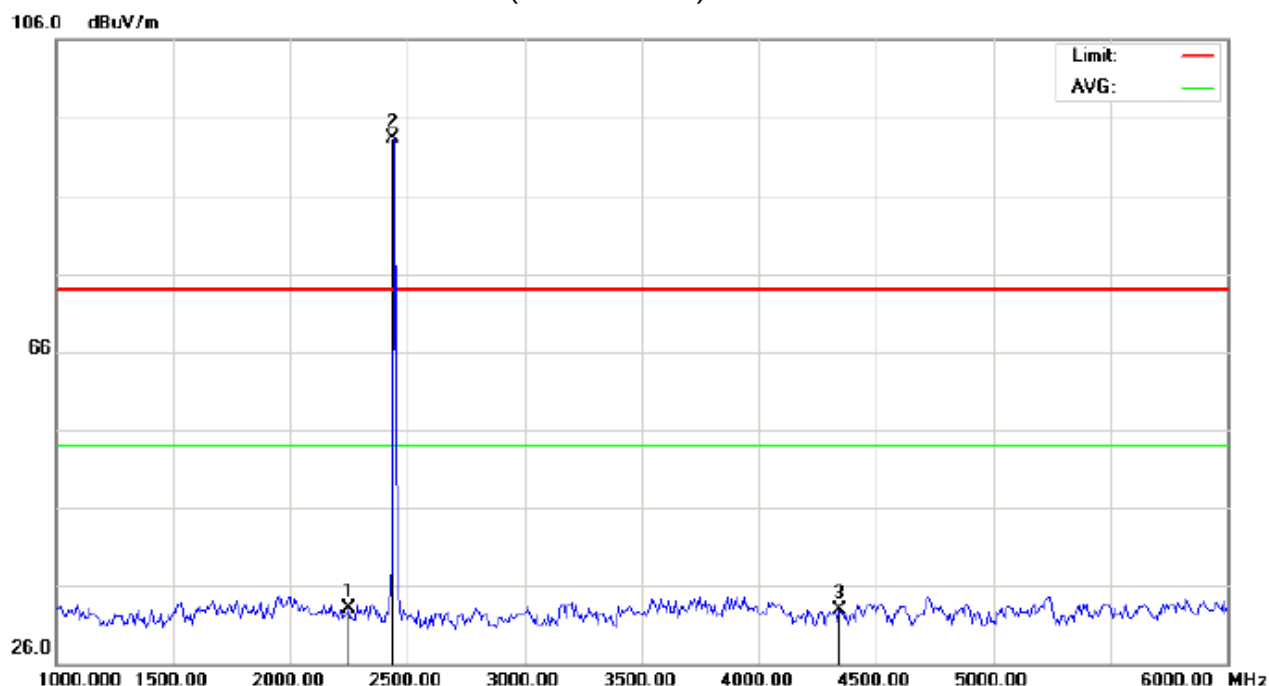


Site: site #1 Polarization: **Vertical** Temperature: 26
Limit: FCC Class B 3M Radiation above 1GHZ(PK) Power: Humidity: 60 %
EUT: tablet pc Distance:
M/N: PC7088
Mode: Low Channel TX
Note:

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		1608.333	46.97	-14.24	32.73	74.00	-41.27	peak			
2	*	2402.000	102.08	-9.68	92.40	74.00	18.40	peak			
3		4533.333	36.62	-3.02	33.60	74.00	-40.40	peak			

RESULT: PASS

RADIATED EMISSION TEST-(ABOVE 1GHZ)-MIDDLE CHANNEL-HORIZONTAL

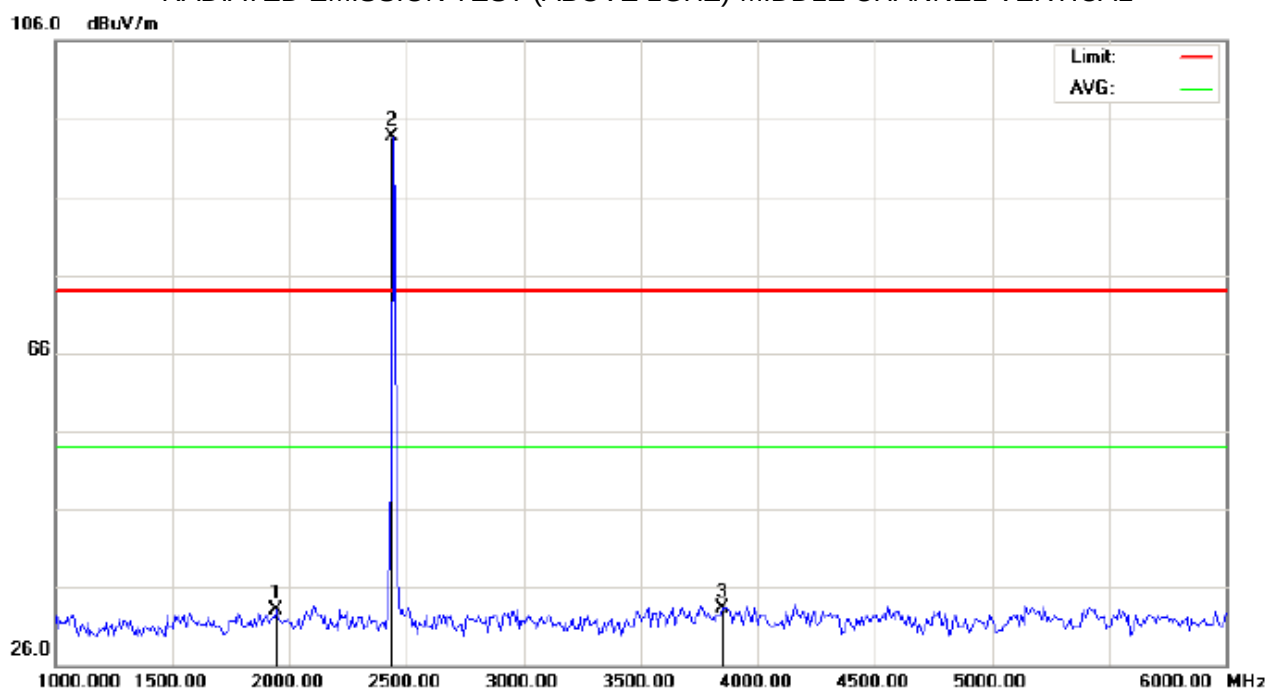


Site: site #1 Polarization: **Horizontal** Temperature: 26
Limit: FCC Class B 3M Radiation above 1GHZ(PK) Power: Humidity: 60 %
EUT: tablet pc Distance:
M/N: PC7088
Mode: Middle Channel TX
Note:

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		2250.000	42.95	-9.84	33.11	74.00	-40.89	peak			
2	*	2440.000	102.88	-9.64	93.24	74.00	19.24	peak			
3		4341.667	36.47	-3.65	32.82	74.00	-41.18	peak			

RESULT: PASS

RADIATED EMISSION TEST-(ABOVE 1GHZ)-MIDDLE CHANNEL-VERTICAL

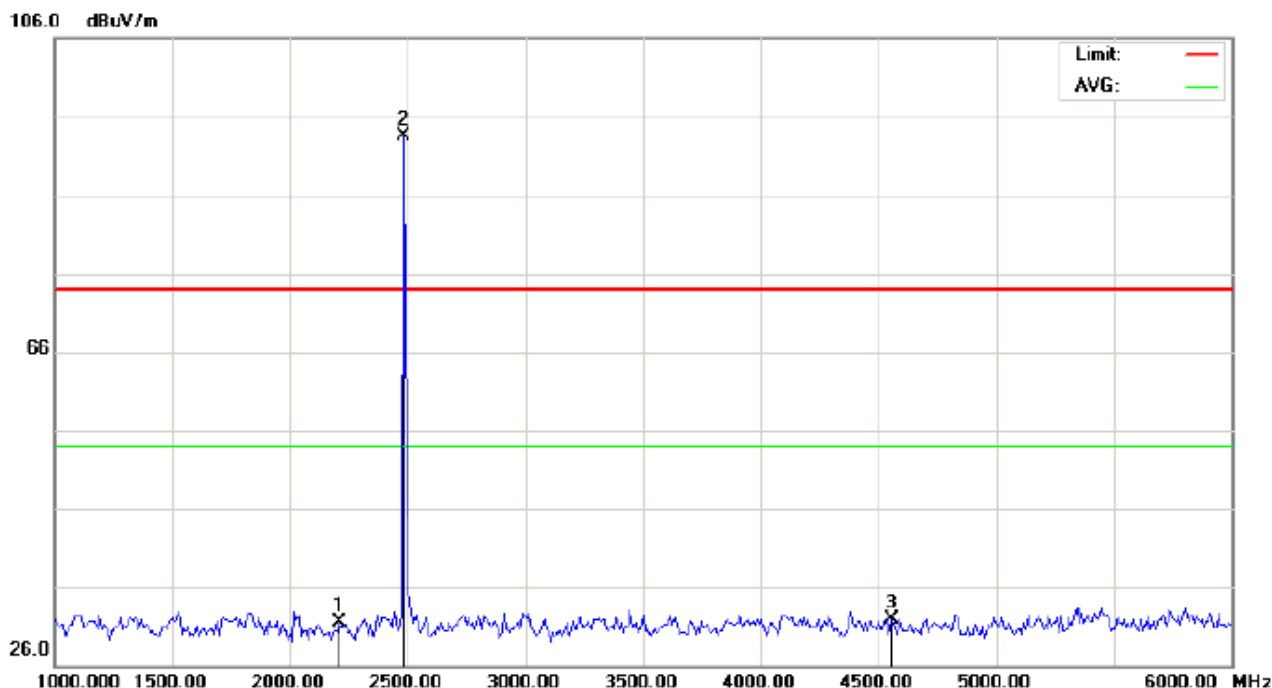


Site: site #1 Polarization: **Vertical** Temperature: 26
Limit: FCC Class B 3M Radiation above 1GHZ(PK) Power: Humidity: 60 %
EUT: tablet pc Distance:
M/N: PC7088
Mode: Middle Channel TX
Note:

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		1941.667	43.80	-10.73	33.07	74.00	-40.93	peak			
2	*	2440.000	103.31	-9.64	93.67	74.00	19.67	peak			
3		3850.000	39.08	-5.73	33.35	74.00	-40.65	peak			

RESULT: PASS

RADIATED EMISSION TEST-(ABOVE 1GHZ)-HIGH CHANNEL-HORIZONTAL

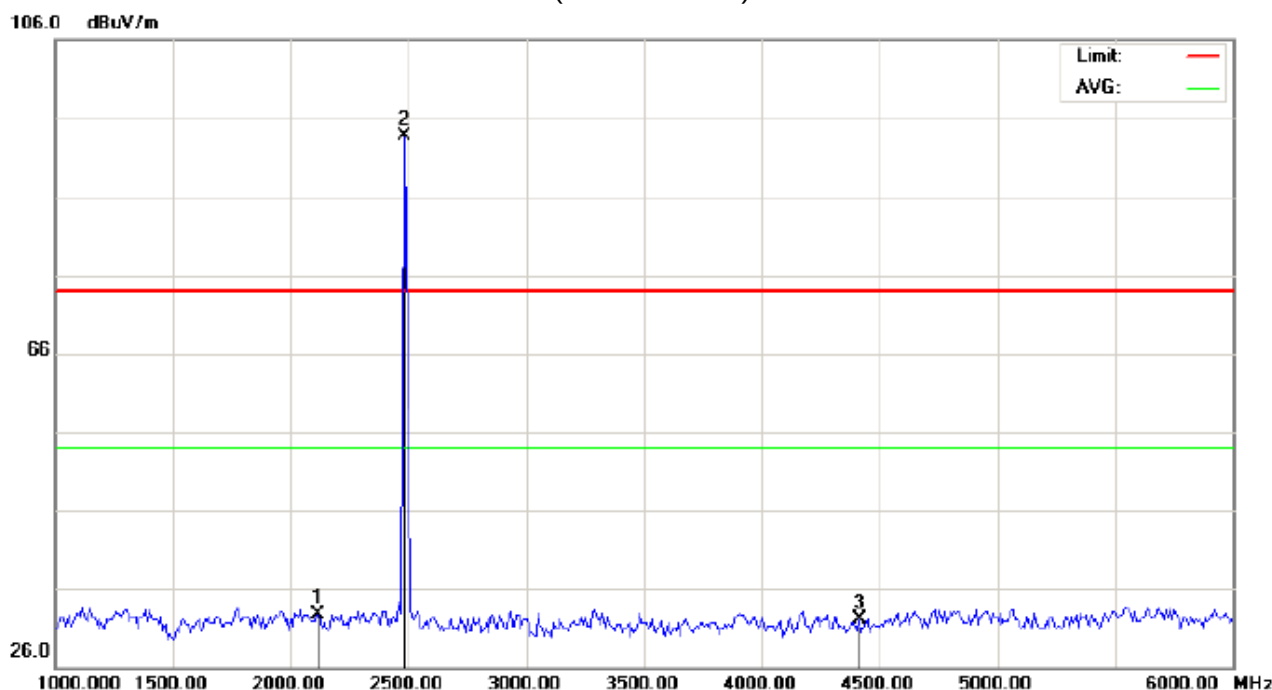


Site: site #1 Polarization: **Horizontal** Temperature: 26
Limit: FCC Class B 3M Radiation above 1GHZ(PK) Power: Humidity: 60 %
EUT: tablet pc Distance:
M/N: PC7088
Mode: High Channel TX
Note:

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		2208.333	41.44	-9.89	31.55	74.00	-42.45	peak			
2	*	2480.000	103.17	-9.59	93.58	74.00	19.58	peak			
3		4558.333	34.87	-2.96	31.91	74.00	-42.09	peak			

RESULT: PASS

RADIATED EMISSION TEST-(ABOVE 1GHZ)-HIGH CHANNEL-VERTICAL



Site: site #1 Polarization: **Vertical** Temperature: 26
Limit: FCC Class B 3M Radiation above 1GHZ(PK) Power: Humidity: 60 %
EUT: tablet pc Distance:
M/N: PC7088
Mode: High Channel TX
Note:

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		2116.667	42.75	-9.99	32.76	74.00	-41.24	peak			
2	*	2480.000	103.38	-9.59	93.79	74.00	19.79	peak			
3		4416.667	35.43	-3.39	32.04	74.00	-41.96	peak			

RESULT: PASS

Note: 6~25GHz at least have 20dB margin. No recording in the test report.

Factor=Antenna Factor+ Cable loss-Amplifier gain,

Margin=Measurement-Limit.

The "Factor" value can be calculated automatically by software of measurement system.

8. BAND EDGE EMISSION

8.1. MEASUREMENT PROCEDURE

1) Radiated restricted band edge measurements

The radiated restricted band edge measurements are measured with an EMI test receiver connected to the receive antenna while the EUT is transmitting

2) Conducted Emissions at the bang edge

a) The transmitter output was connected to the spectrum analyzer

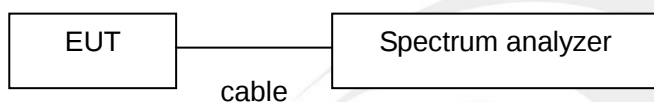
b) Set RBW=100kHz, VBW=300kHz

c) Suitable frequency span including 100kHz bandwidth from band edge

8.2. TEST SET-UP

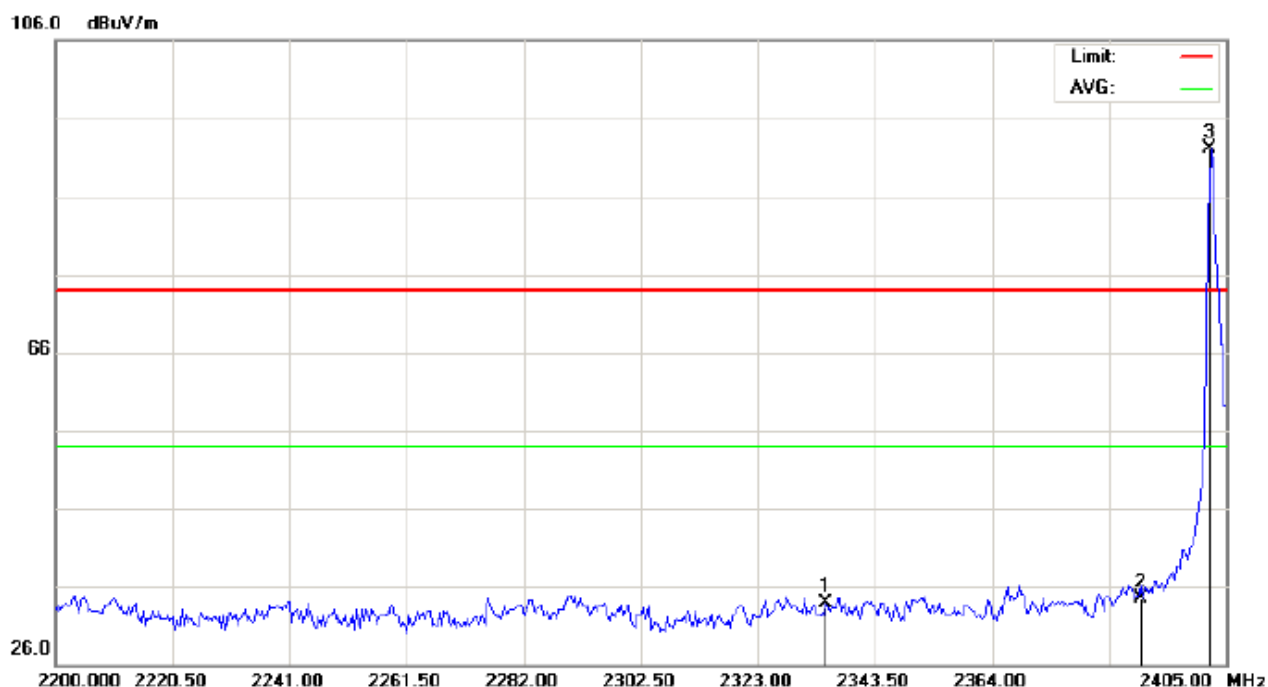
Radiated same as 6.2

Conducted set up



8.3. Radiated Test Result

TEST PLOT OF BAND EDGE FOR LOW CHANNEL -Horizontal



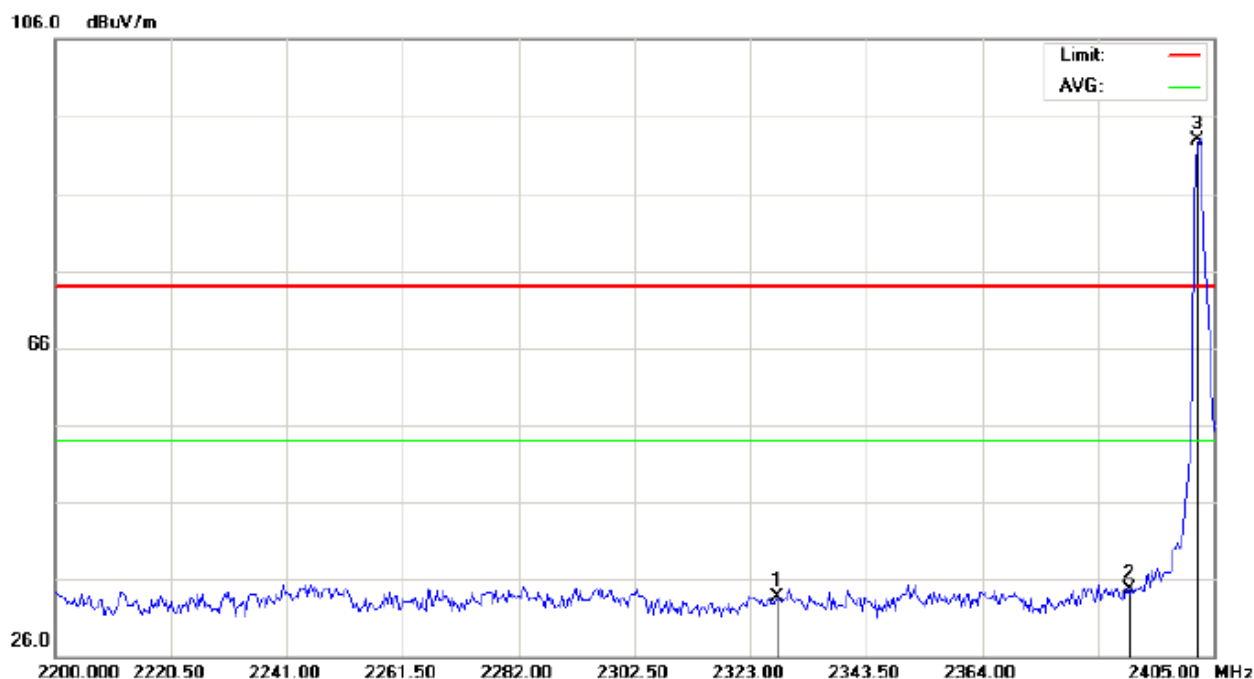
Site: site #1
Limit: FCC Class B 3M Radiation above 1GHZ(PK)
EUT: tablet pc
M/N: PC7088
Mode: Low Channel TX
Note:

Polarization: **Horizontal**
Power:
Distance:

Temperature: 26
Humidity: 60 %

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		2334.958	43.64	-9.75	33.89	74.00	-40.11	peak			
2		2390.000	44.21	-9.69	34.52	74.00	-39.48	peak			
3	*	2402.000	101.74	-9.68	92.06	74.00	18.06	peak			

TEST PLOT OF BAND EDGE FOR LOW CHANNEL - Vertical



Site: site #1 Polarization: **Vertical** Temperature: 26
Limit: FCC Class B 3M Radiation above 1GHZ(PK) Power: Humidity: 60 %
EUT: tablet pc Distance:
M/N: PC7088
Mode: Low Channel TX
Note:

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1		2327.783	43.38	-9.76	33.62	74.00	-40.38	peak			
2		2390.000	44.34	-9.69	34.65	74.00	-39.35	peak			
3	*	2402.000	102.49	-9.68	92.81	74.00	18.81	peak			

RESULT: PASS

TEST PLOT OF BAND EDGE FOR HIGH CHANNEL –Horizontal



Site: site #1 Polarization: **Horizontal** Temperature: 26
Limit: FCC Class B 3M Radiation above 1GHZ(PK) Power: Humidity: 60 %
EUT: tablet pc Distance:
M/N: PC7088
Mode: High Channel TX
Note:

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1	*	2480.000	102.46	-9.59	92.87	74.00	18.87	peak			
2		2483.500	45.56	-9.59	35.97	74.00	-38.03	peak			
3		2489.917	42.56	-9.58	32.98	74.00	-41.02	peak			

TEST PLOT OF BAND EDGE FOR HIGH CHANNEL -Vertical



Site: site #1 Polarization: **Vertical** Temperature: 26
Limit: FCC Class B 3M Radiation above 1GHZ(PK) Power: Humidity: 60 %
EUT: tablet pc Distance:
M/N: PC7088
Mode: High Channel TX
Note:

No.	Mk	Freq.	Reading	Factor	Measurement	Limit	Over	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		cm	degree	
1	*	2480.000	102.26	-9.59	92.67	74.00	18.67	peak			
2		2483.500	46.62	-9.59	37.03	74.00	-36.97	peak			
3		2489.623	45.17	-9.58	35.59	74.00	-38.41	peak			

RESULT: PASS

Note: The other modes radiation emission have enough 20dB margin.

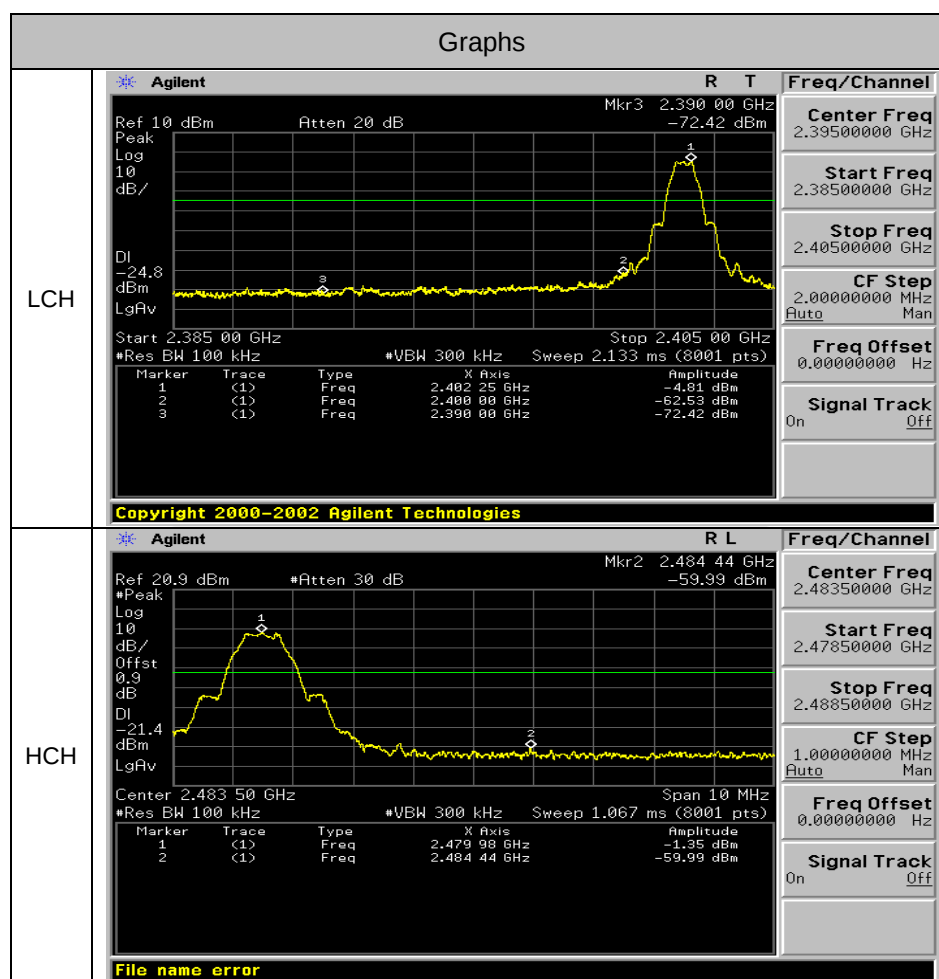
Factor=Antenna Factor + Cable loss - Amplifier gain, Over=Measure-Limit.

The "Factor" value can be calculated automatically by software of measurement system.

8.4. Conducted Test Result

Mode	Channel	Carrier Power[dBm]	Max.Spurious Level [dBm]	Limit [dBm]	Verdict
BLE	LCH	-4.81	-62.53	-24.8	PASS
BLE	HCH	-1.35	-59.988	-21.35	PASS

Test Graph



9. 6DB BANDWIDTH

9.1. TEST EQUIPMENT LIST AND DETAILS

Equipment	Manufacturer	Model	Cal. Date	Cal. Due
PSA SERIES SPECTRUM ANALYZER	AGILENT	E4440A	02/17/2014	02/16/2015
WIDEBAND REQUENCY ANTENNA	SCHWARZBECK	VULB9168	08/16/2014	08/15/2015

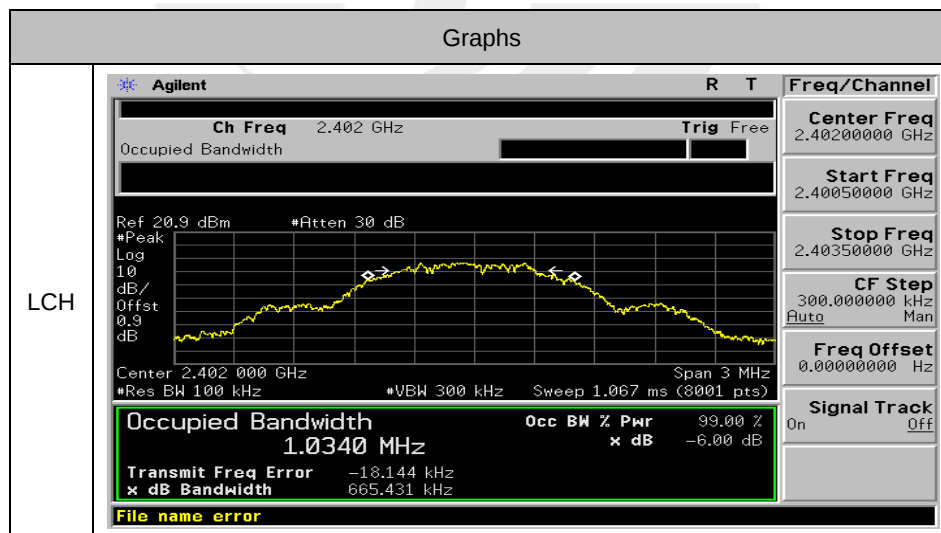
9.2. TEST PROCEDURE

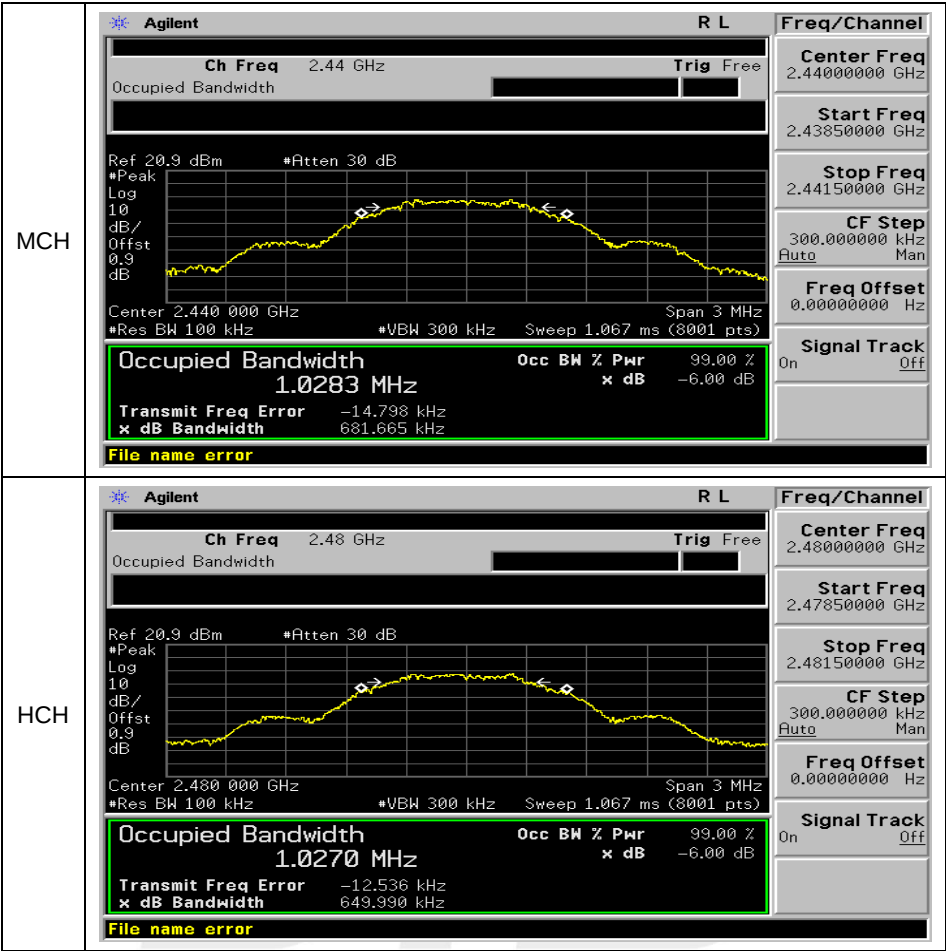
1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
3. Set SPA Centre Frequency = Operation Frequency, RBW= 100 KHz, VBW $\geq$ RBW.
4. Set SPA Trace 1 Max hold, then View.

9.3. SUMMARY OF TEST RESULTS/PLOTS

Mode	Channel	6dB Bandwidth [MHz]	OBW[MHz]	Minimum Limit (KHz)	Verdict
BLE	LCH	0.6654	1.0340	500	PASS
BLE	MCH	0.6817	1.0283		PASS
BLE	HCH	0.6500	1.0270		PASS

Test Graph





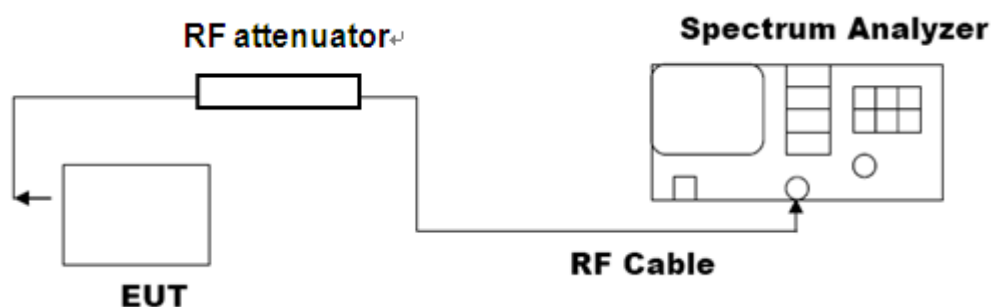
10. CONDUCTED OUTPUT POWER

10.1. MEASUREMENT PROCEDURE

1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2. Set the EUT Work on the top, middle and the bottom operation frequency individually.
3. Use the following spectrum analyzer settings:
Set the RBW $\geq$ DTS bandwidth
Set the VBW $\geq$ 3 x RBW
Set the span $\geq$ 3 x RBW
Detector = peak
Sweep time = auto couple
Trace mode = max hold
4. Allow the trace to stabilize. Use peak marker function to determine the peak amplitude level
5. Record the result form the Spectrum Analyzer.

Note: The EUT was tested according to KDB 558074 for compliance to FCC 47CFR 15.247 requirements.

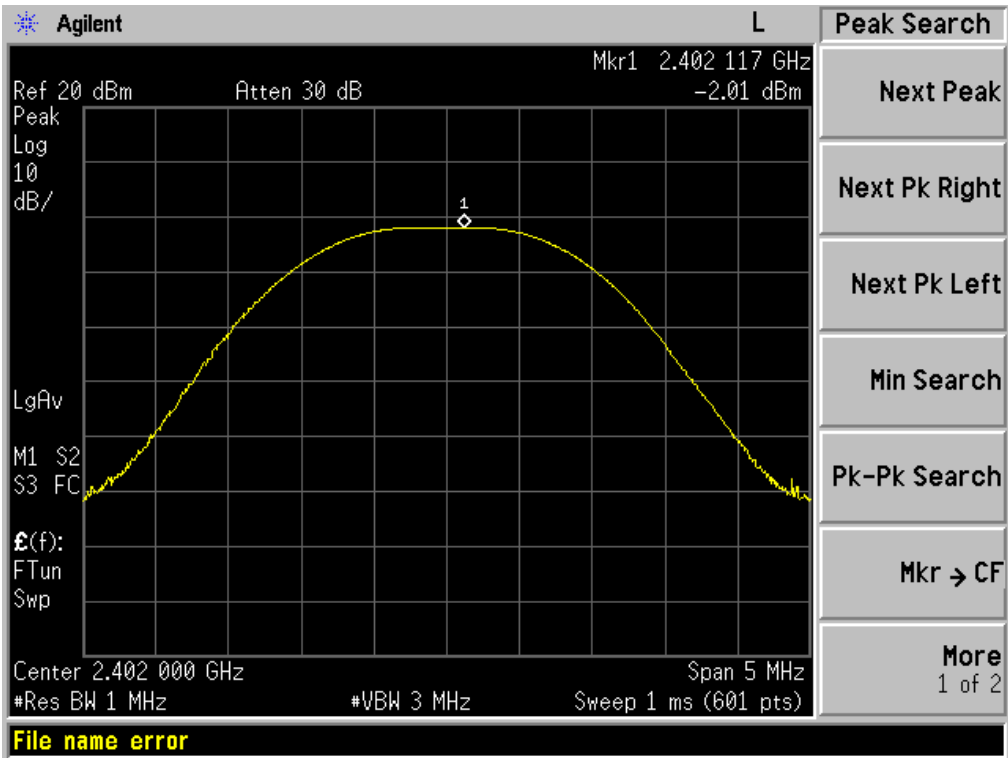
10.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)



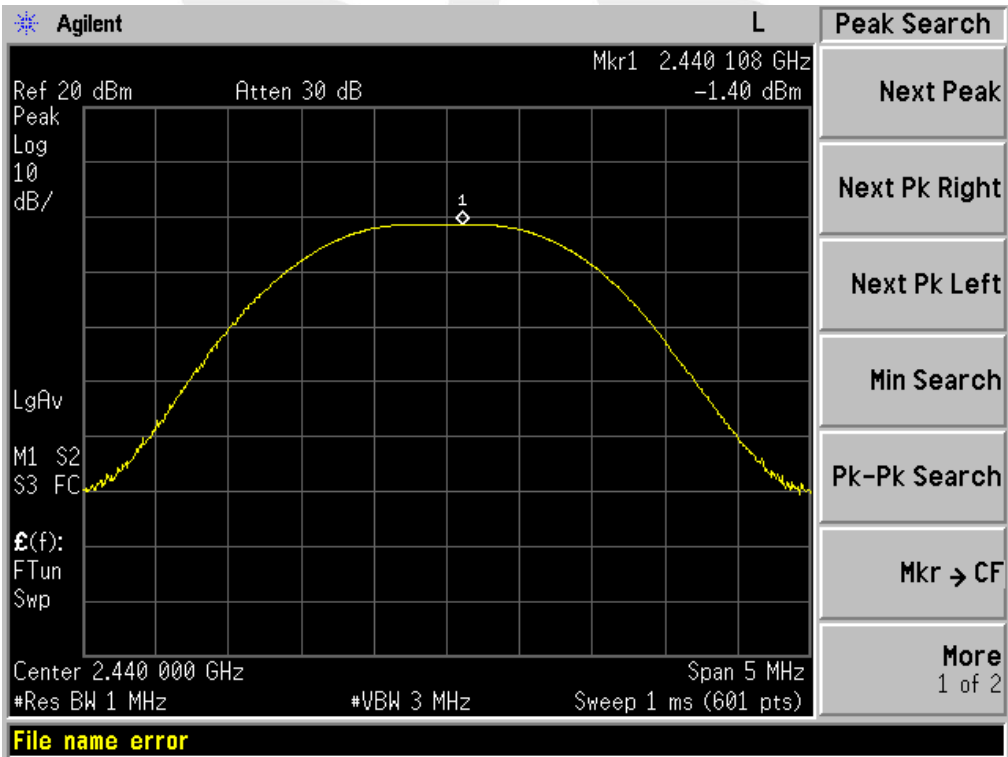
10.3. LIMITS AND MEASUREMENT RESULT

Channel	Peak Power (dBm)	Applicable Limits (dBm)	Pass/Fail
Low Channel	-2.01	30	Pass
Middle Channel	-1.40	30	Pass
High Channel	-1.39	30	Pass

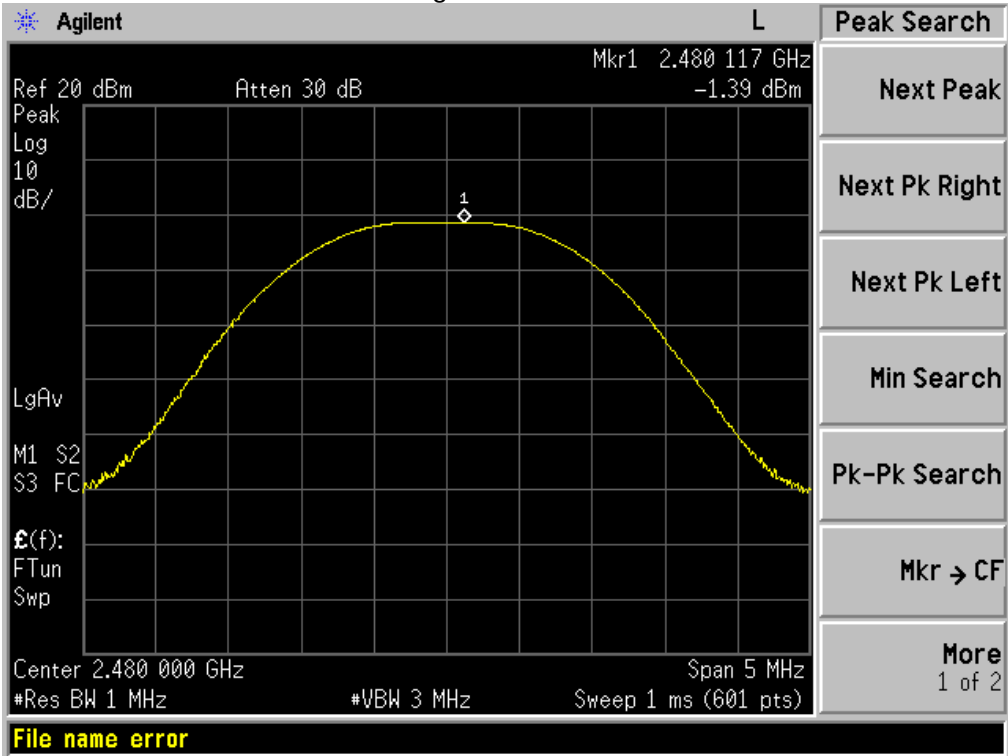
The Low Channel Result



The Middle Channel Result



The High Channel Result



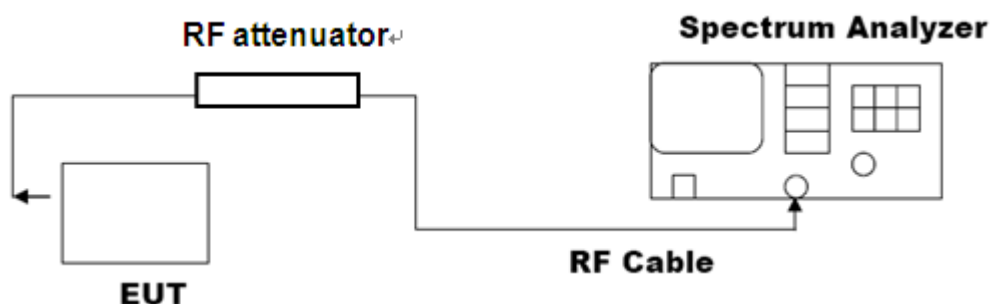
11. MAXIMUM CONDUCTED OUTPUT POWER SPECTRAL DENSITY

11.1 MEASUREMENT PROCEDURE

- (1). Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
- (2). Set the EUT Work on the top, the middle and the bottom operation frequency individually.
- (3). Set SPA Trace 1 Max hold, then View.

Note: The EUT was tested according to KDB 558074 for compliance to FCC 47CFR 15.247 requirements.

11.2 TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)



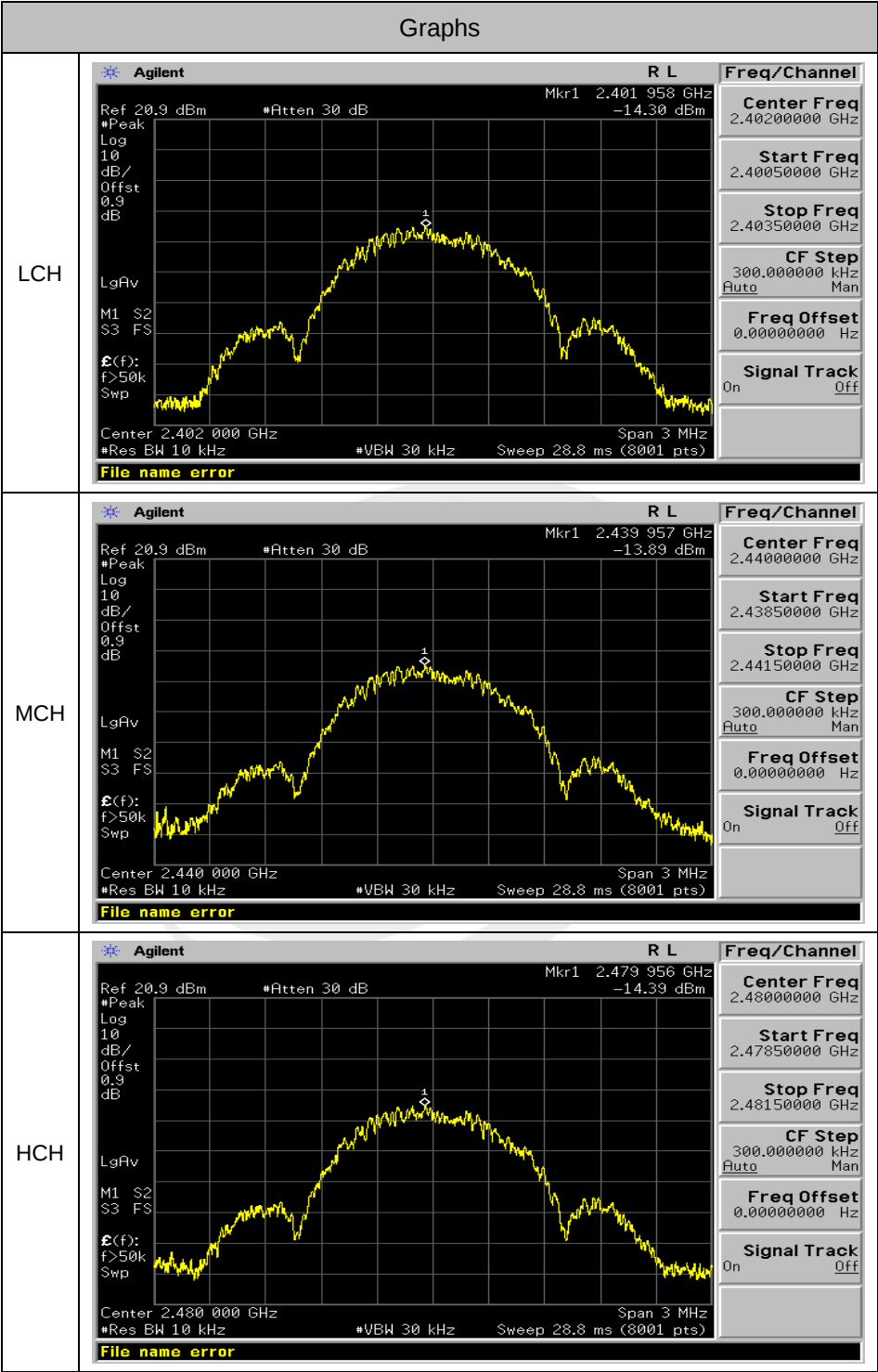
11.3 MEASUREMENT EQUIPMENT USED

Equipment	Manufacturer	Model	Cal. Date	Cal. Due
PSA SERIES SPECTRUM ANALYZER	AGILENT	E4440A	02/17/2014	02/16/2015
WIDEBAND REQUENCY ANTENNA	SCHWARZBECK	VULB9168	08/16/2014	08/15/2015

11.4 LIMITS AND MEASUREMENT RESULT

Mode	Channel	PSD [dBm/10kHz]	Limit[dBm/3kHz]	Verdict
BLE	LCH	-14.3	8	PASS
BLE	MCH	-13.89	8	PASS
BLE	HCH	-14.39	8	PASS

Test Graph



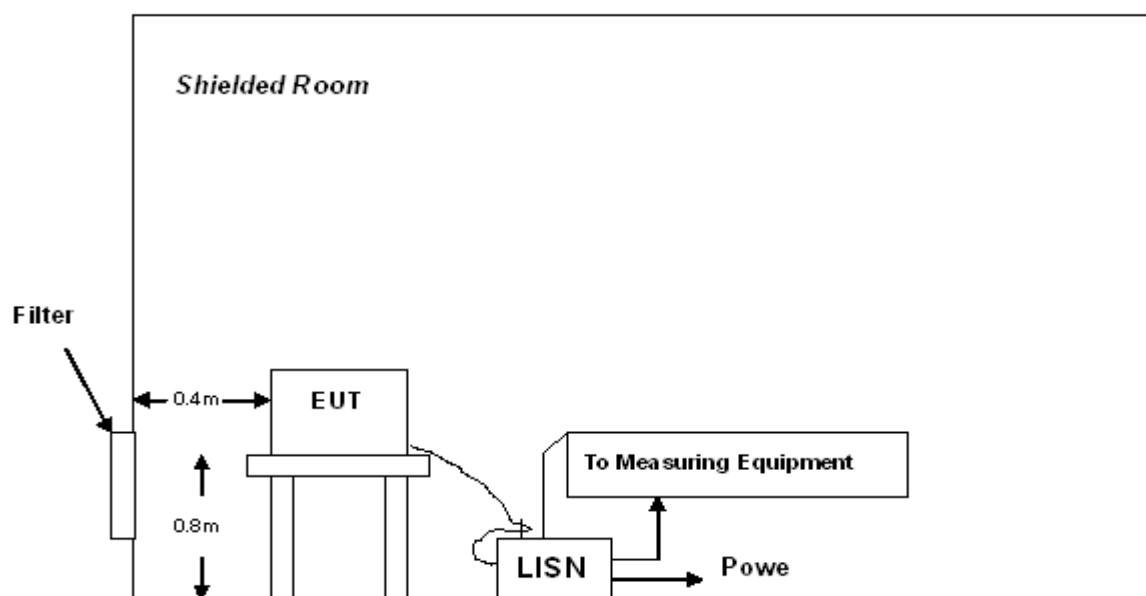
12. FCC LINE CONDUCTED EMISSION TEST

12.1 LIMITS

Frequency	Maximum RF Line Voltage	
	Q.P.(dBuV)	Average(dBuV)
150kHz~500kHz	66-56	56-46
500kHz~5MHz	56	46
5MHz~30MHz	60	50

****Note:** 1. The lower limit shall apply at the transition frequency.
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz

12.2 TEST SETUP



A: Powered through filter

12.3 PRELIMINARY PROCEDURE

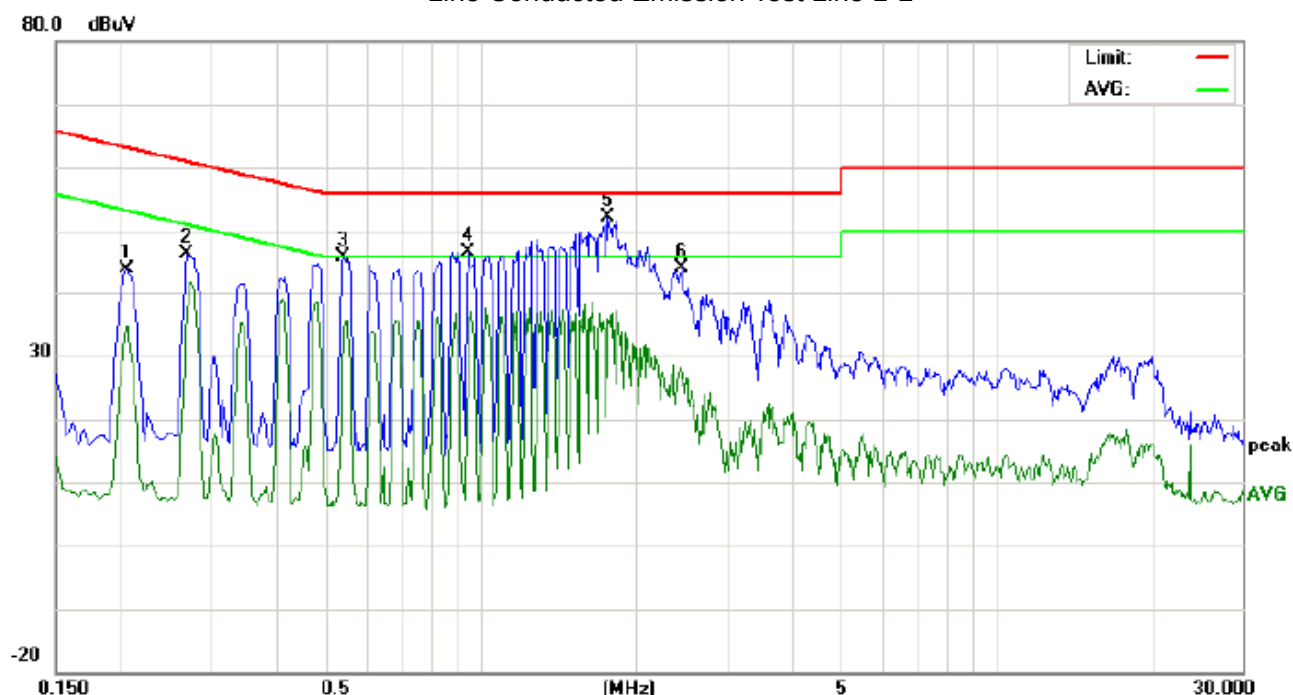
- 1) The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.4 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
- 2) Support equipment, if needed, was placed as per ANSI C63.4.
- 3) All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.
- 4) All support equipments received AC120V/60Hz power from a LISN, if any.
- 5) The EUT received power by adapter which received power by a LISN.
- 6) The test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
- 7) Analyzer / Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.
- 8) During the above scans, the emissions were maximized by cable manipulation.
- 9) The following test mode(s) were scanned during the preliminary test.
Then, the EUT configuration and cable configuration of the above highest emission level were recorded for reference of final testing.

12.4 FINAL TEST PROCEDURE

- 10) EUT and support equipment was set up on the test bench as per step 2 of the preliminary test.
- 11) 2) A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. If EUT emission level was less -2dB to the A.V. limit in Peak mode, then the emission signal was re-checked using Q.P and Average detector.
- 12) 3) The test data of the worst case condition(s) was reported on the Summary Data page.

12.5 TEST RESULT OF POWER LINE

Line Conducted Emission Test Line 1-L



Site: Conduction

Phase: **L1**

Temperature: 26

Limit: FCC Class B Conduction(QP)

Power: AC 120V/60Hz

Humidity: 60 %

EUT: tablet pc

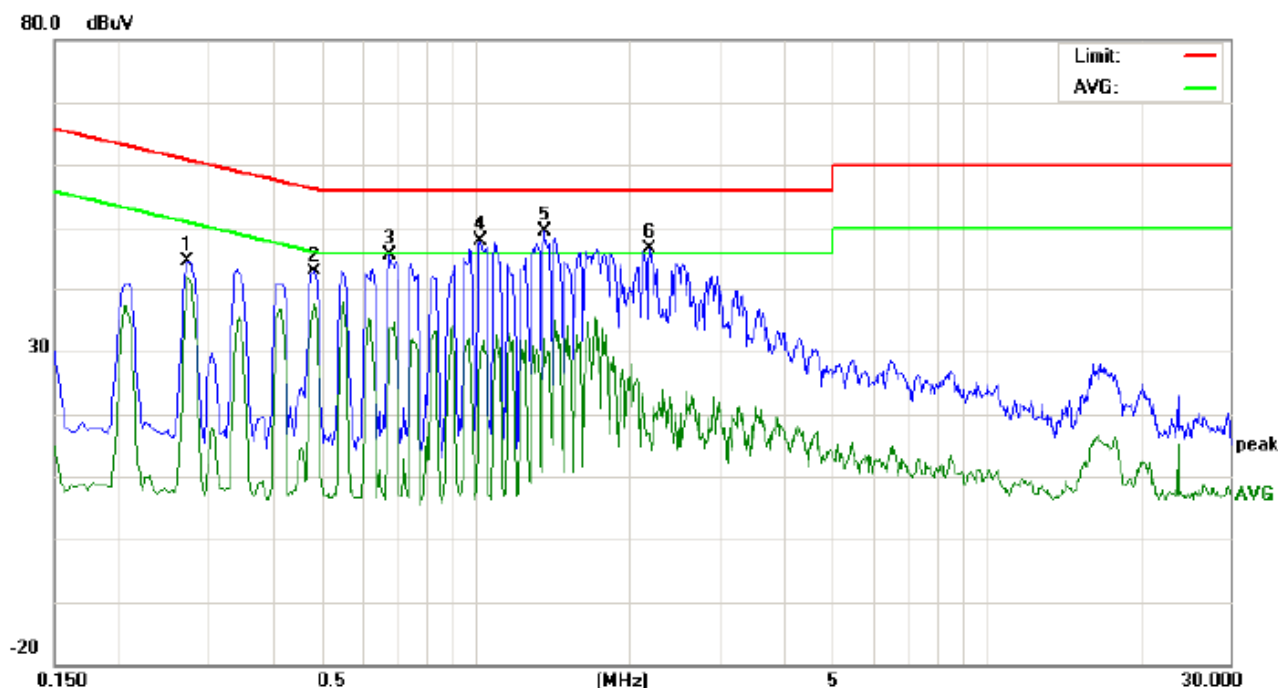
M/N: PC7088

Mode: Normal Operating(BT)

Note:

No.	Freq. (MHz)	Reading_Level (dBuV)			Correct Factor dB	Measurement (dBuV)			Limit (dBuV)		Margin (dB)		P/F	Comment
		Peak	QP	AVG		Peak	QP	AVG	QP	AVG	QP	AVG		
1	0.2060	33.70		24.44	10.22	43.92		34.66	63.36	53.36	-19.44	-18.70	P	
2	0.2700	35.98		27.66	10.28	46.26		37.94	61.12	51.12	-14.86	-13.18	P	
3	0.5420	35.44		23.44	10.36	45.80		33.80	56.00	46.00	-10.20	-12.20	P	
4	0.9460	36.35		16.62	10.39	46.74		27.01	56.00	46.00	-9.26	-18.99	P	
5	1.7700	41.93		25.66	10.29	52.22		35.95	56.00	46.00	-3.78	-10.05	P	
6	2.4539	33.62		16.69	10.41	44.03		27.10	56.00	46.00	-11.97	-18.90	P	

Line Conducted Emission Test Line 1-N



Site: Conduction

Phase: **N**

Temperature: 26

Limit: FCC Class B Conduction(QP)

Power: AC 120V/60Hz

Humidity: 60 %

EUT: tablet pc

M/N: PC7088

Mode: Normal Operating(BT)

Note:

No.	Freq. (MHz)	Reading_Level (dBuV)			Correct Factor	Measurement (dBuV)			Limit (dBuV)		Margin (dB)		P/F	Comment
		Peak	QP	AVG		Peak	QP	AVG	QP	AVG	QP	AVG		
1	0.2740	34.38		31.55	10.28	44.66		41.83	60.99	50.99	-16.33	-9.16	P	
2	0.4820	32.40		27.15	10.39	42.79		37.54	56.30	46.30	-13.51	-8.76	P	
3	0.6780	35.37		18.28	10.34	45.71		28.62	56.00	46.00	-10.29	-17.38	P	
4	1.0260	37.62		19.49	10.37	47.99		29.86	56.00	46.00	-8.01	-16.14	P	
5	1.3660	38.90		21.85	10.38	49.28		32.23	56.00	46.00	-6.72	-13.77	P	
6	2.1940	36.21		6.61	10.30	46.51		16.91	56.00	46.00	-9.49	-29.09	P	

APPENDIX A: PHOTOGRAPHS OF TEST SETUP

FCC LINE CONDUCTED EMISSION TEST SETUP



FCC RADIATED EMISSION TEST SETUP





APPENDIX B: PHOTOGRAPHS OF EUT

TOTAL VIEW OF EUT



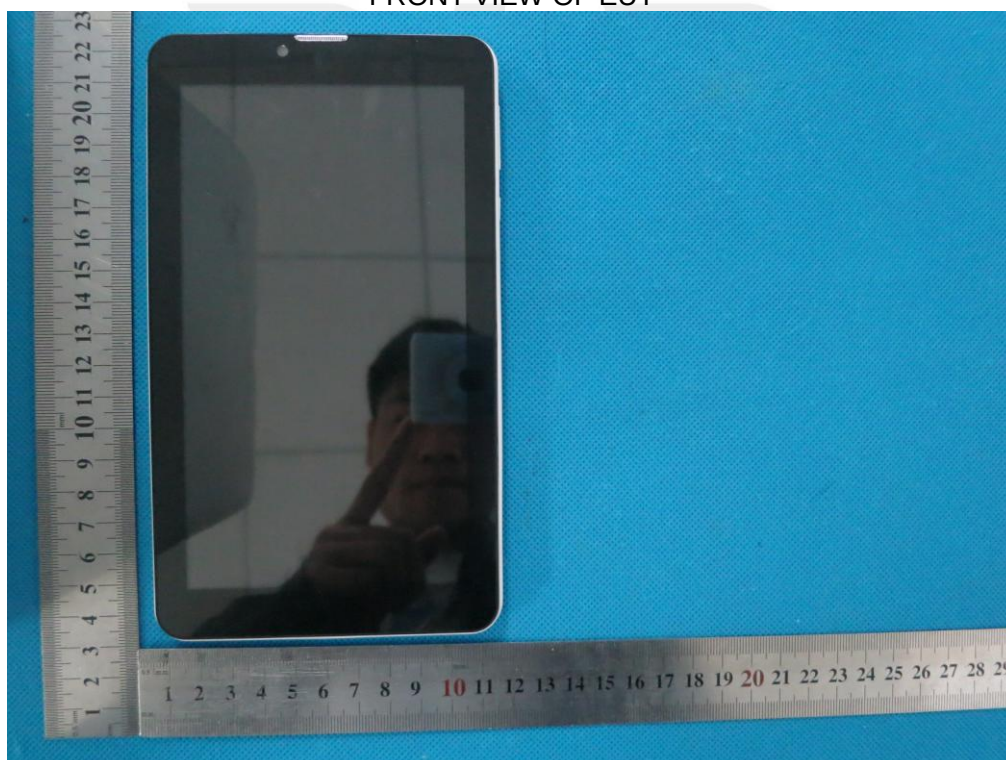
TOP VIEW OF EUT



BOTTOM VIEW OF EUT



FRONT VIEW OF EUT



BACK VIEW OF EUT



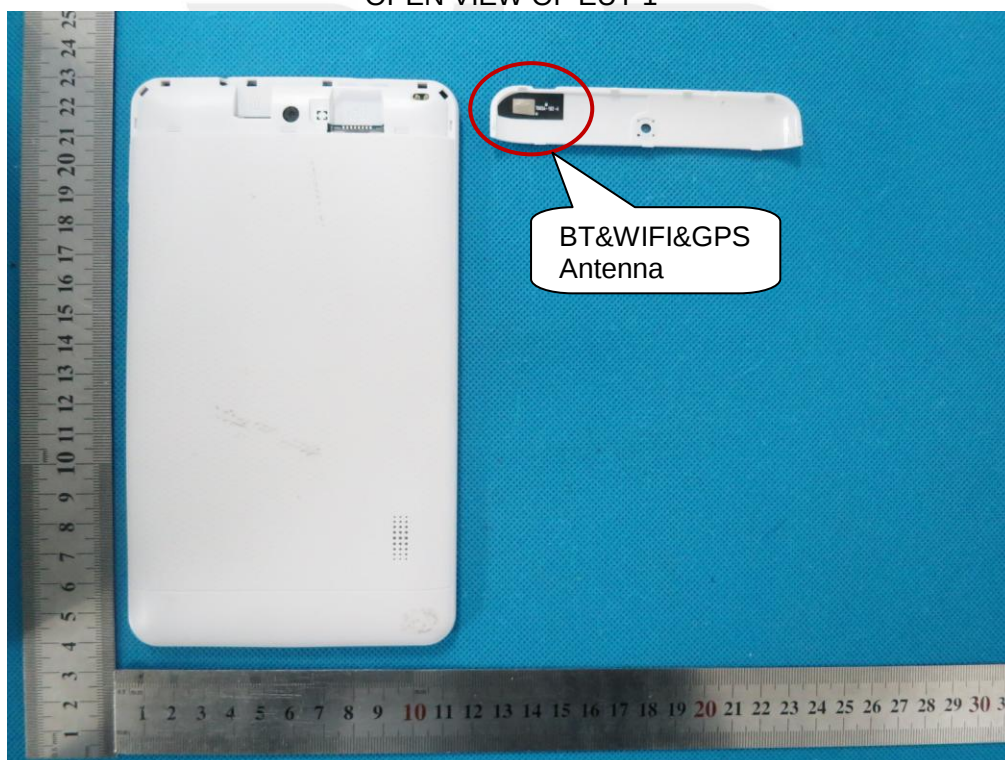
LEFT VIEW OF EUT



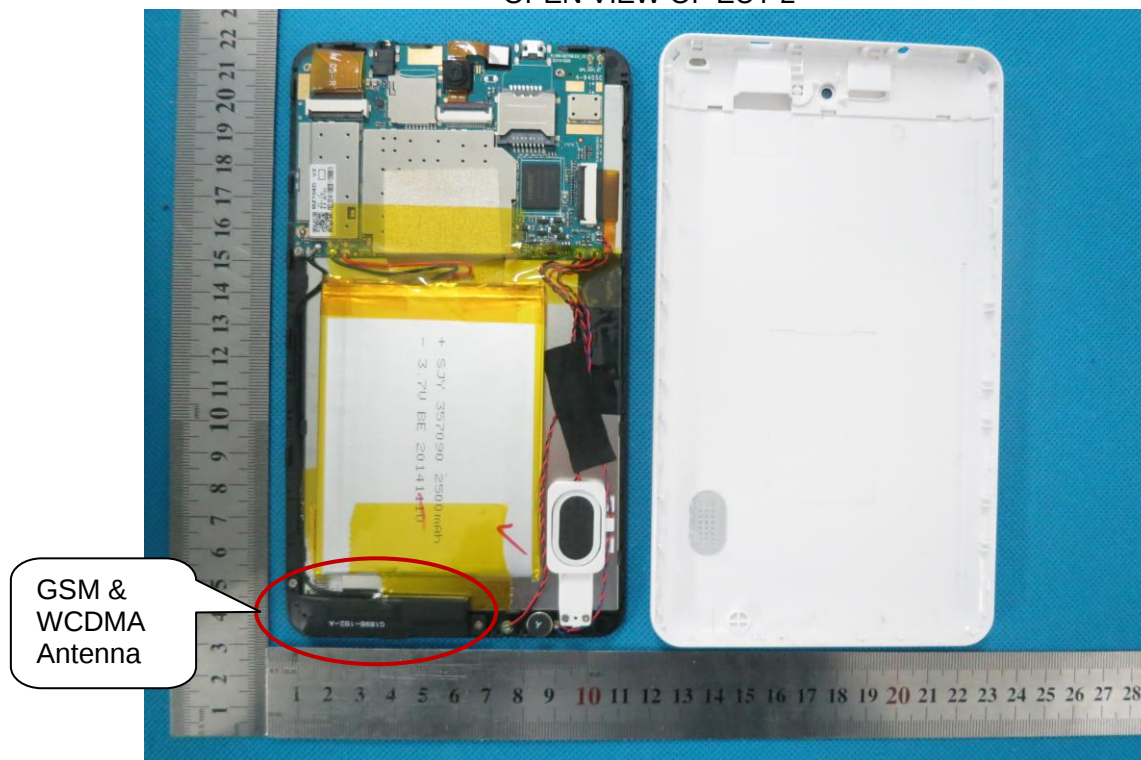
RIGHT VIEW OF EUT



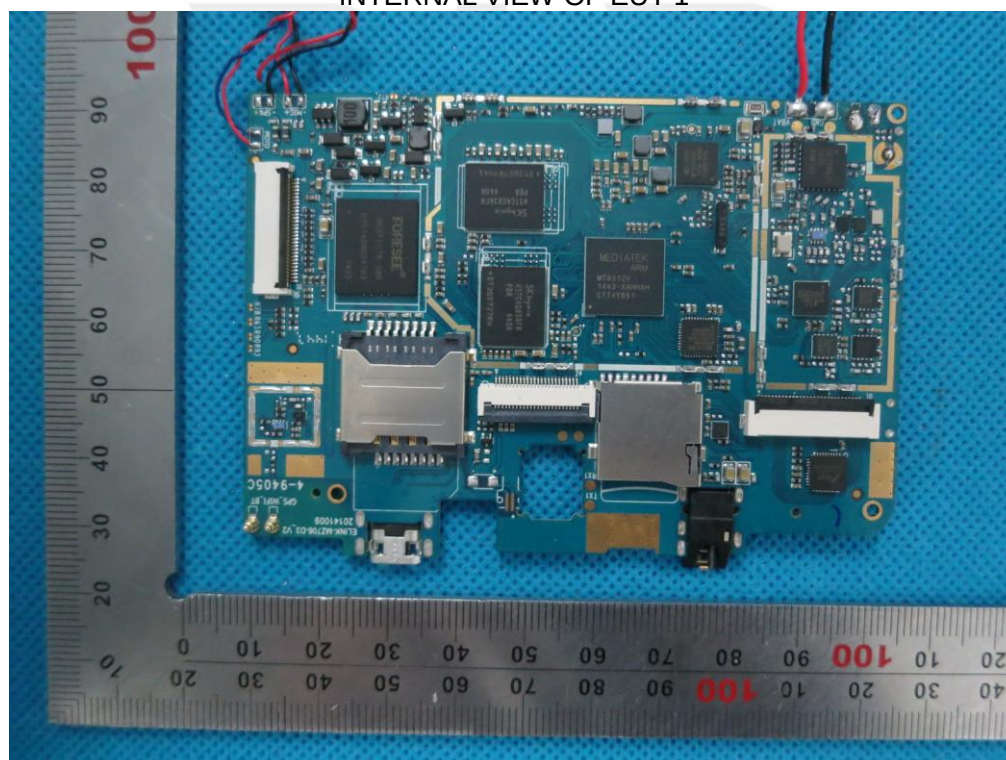
OPEN VIEW OF EUT-1



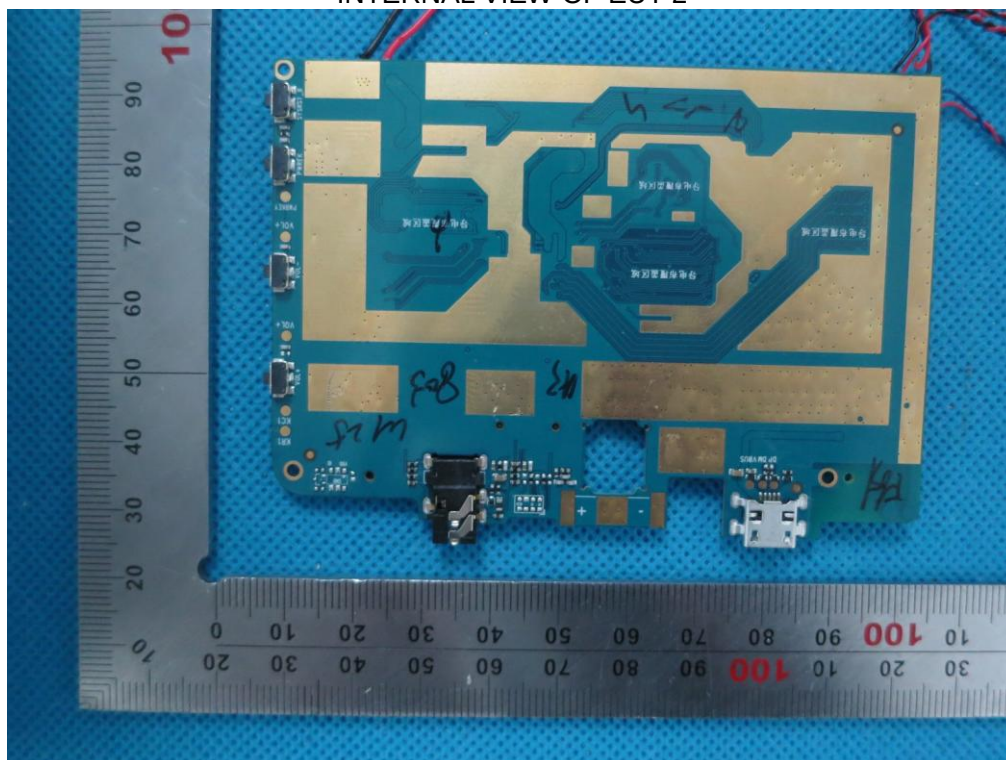
OPEN VIEW OF EUT-2



INTERNAL VIEW OF EUT-1



INTERNAL VIEW OF EUT-2



----END OF REPORT----