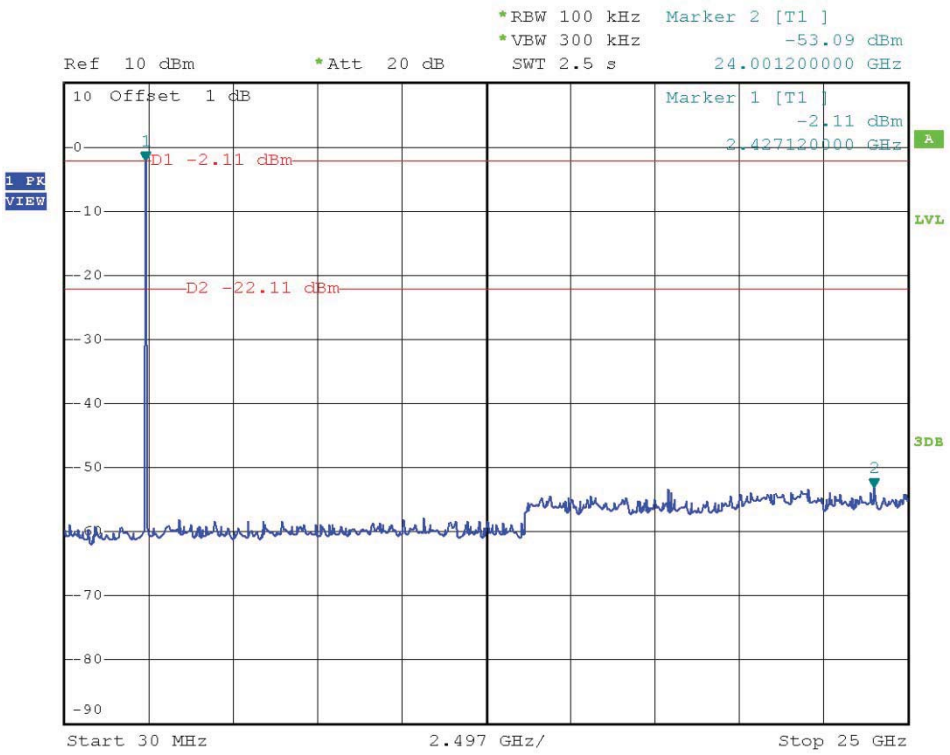
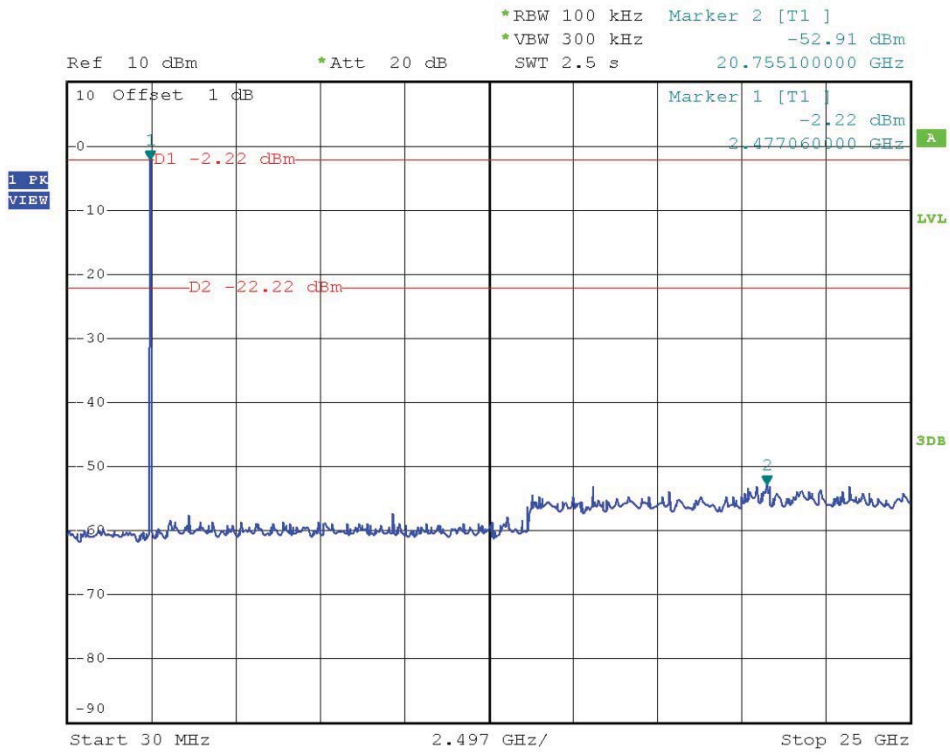


(Plot H.1: Channel = 39, 30MHz to 25GHz @ 8-DPSK)



(Plot I.1: Channel = 78, 30MHz to 25GHz @ 8-DPSK)

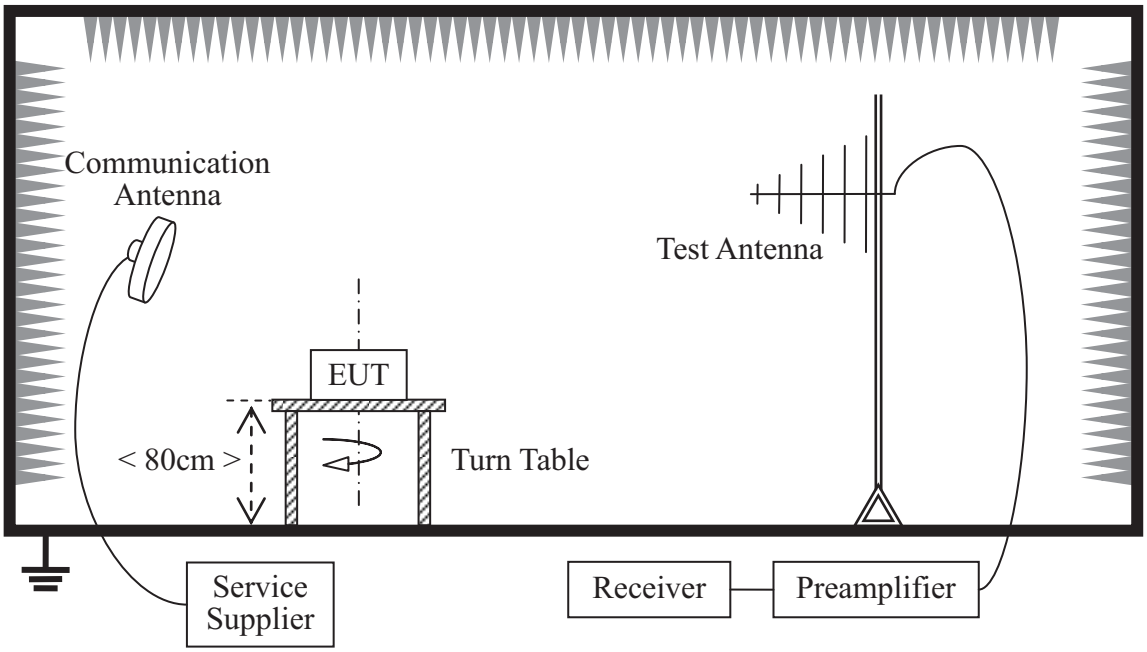
2.8. Band Edge

2.8.1. Requirement

According to FCC section 15.247(d), in any 100kHz 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 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

2.8.2. Test Description

A. Test Setup:



The Bluetooth Module of the EUT is powered by the Battery. The Module is located in a 3m Semi-Anechoic Chamber; the antenna factors, cable loss and so on of the site as factors are calculated to correct the reading. During the measurement, the Bluetooth Module is activated and controlled by the Bluetooth Service Supplier (SS) via a Common Antenna, and is set to operate under hopping-on test mode transmitting 339 bytes DH5 packages at maximum power.

For the Test Antenna:

Horn Test Antenna is 3m away from the EUT. Test Antenna height is varied from 1m to 4m above the ground to determine the maximum value of the field strength.

B. Equipments List:

Description	Manufacturer	Model	Serial No.	Calibration Due. Date
Receiver	R&S	ESIB26	A0304218	2014.06.07
Full-Anechoic Chamber	Albatross	12.8m*6.8m*6.4m	A0412372	2014.06.07
Double ridge horn antenna	R&S	HF906	A0304225	2014.06.10
Ultra-wideband antenna	R&S	HL562	A0304224	2014.06.10
Ampilier 1G~18GHz	R&S	MITEQ AFS42-00101800	25-S-42	2014.06.05

2.8.3. Test Procedure

For below 1G :QP detector RBW 120KHz ,VBW 300KHz.
For Above 1G: PK detector RBW 1MHz,VBW 3MHz for PK value ;PK detector RBW 1MHz, VBW 10Hz for AV value.

2.8.4. Test Result

The Bluetooth Module operates at hopping-off test mode. The lowest and highest channels are tested to verify the band edge emissions.

The measurement results are obtained as below:
$E\ [dB\mu V/m] = U_R + A_T + A_{Factor}\ [dB]$; $A_T = L_{Cable\ loss}\ [dB] - G_{preamp}\ [dB]$
A_T: Total correction Factor except Antenna
U_R: Receiver Reading
G_{preamp}: Preamplifier Gain
A_{Factor}: Antenna Factor at 3m

Note1: The red vertical lines “F1” in the following charts is to indicate the frequencies 2400MHz and 2483.5MHz respectively.
Note2: Both horizontal and vertical polarization direction of the antenna has been performed, only the worst case recorded in this report.

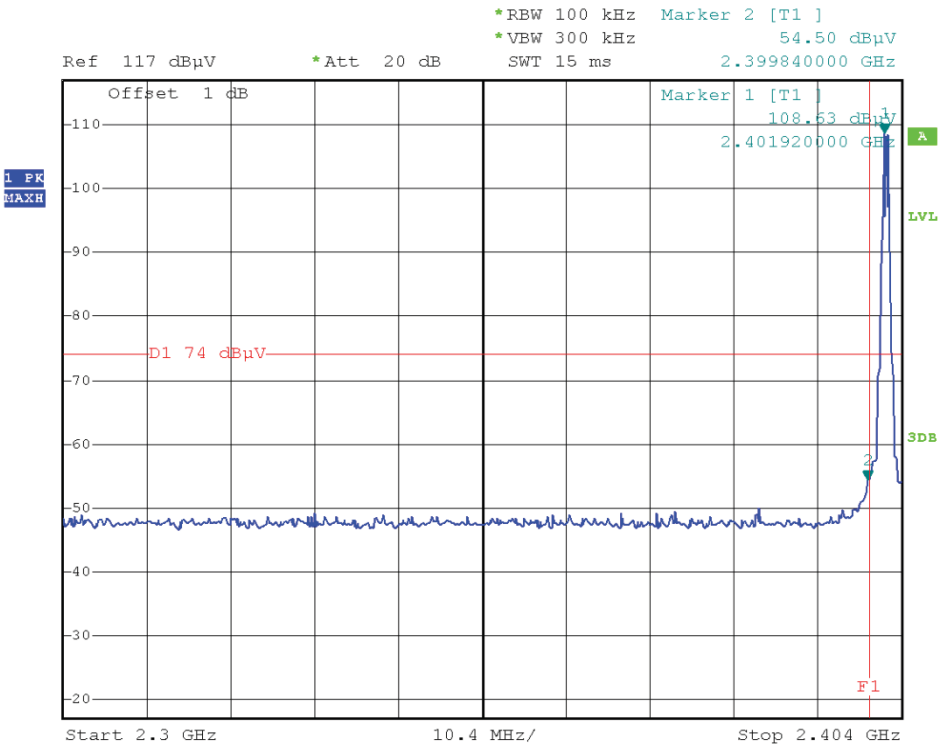
2.8.4.1. GFSK Mode

A. Test Verdict:

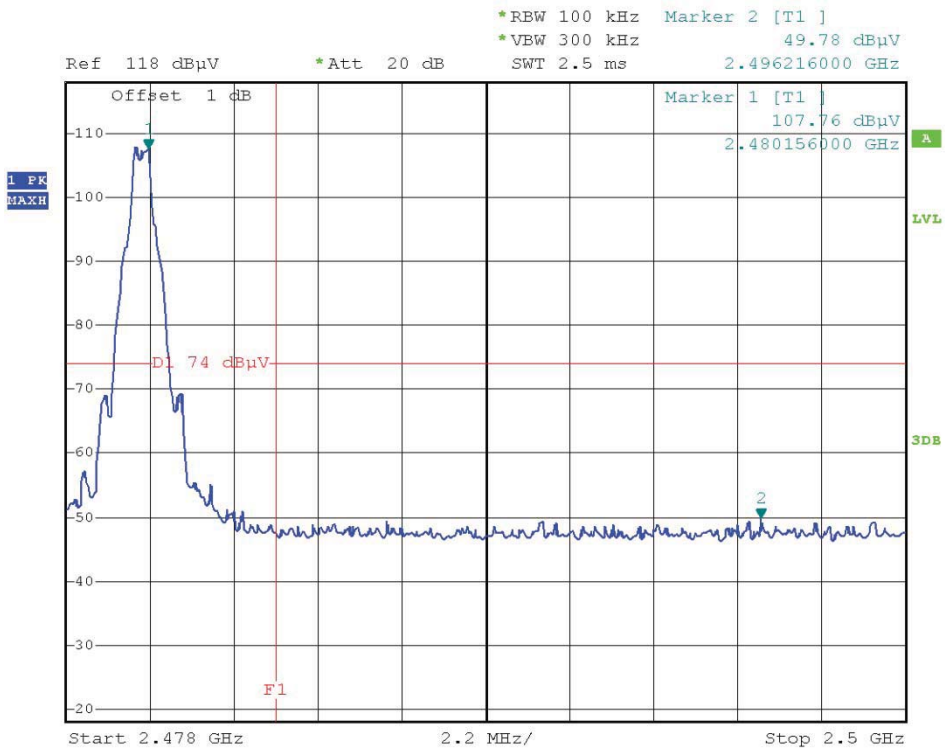
(Un-hopping)

Channel	Frequency (MHz)	Detector	Receiver Reading UR (dBuV)	AT (dB)	AFactor (dB@3m)	Max. Emission E (dBμV/m)	Limit (dBμV/m)	Verdict
		PK/ AV						
0	2385.904	PK	50.26	-31.7	28.3	46.86	74	Pass
0	2385.904	AV	41.96	-31.7	28.3	38.56	54	Pass
0	2399.840	PK	54.5	-31.7	28.3	51.10	74	Pass
0	2399.840	AV	41.55	-31.7	28.3	38.15	54	Pass
78	2485.964	PK	49.13	-29.45	29.2	48.88	74	Pass
78	2485.964	AV	47.94	-29.45	29.2	47.69	54	Pass
78	2496.216	PK	49.78	-29.45	29.2	49.53	74	Pass
78	2496.216	AV	47.39	-29.45	29.2	47.14	54	Pass

B. Test Plots:



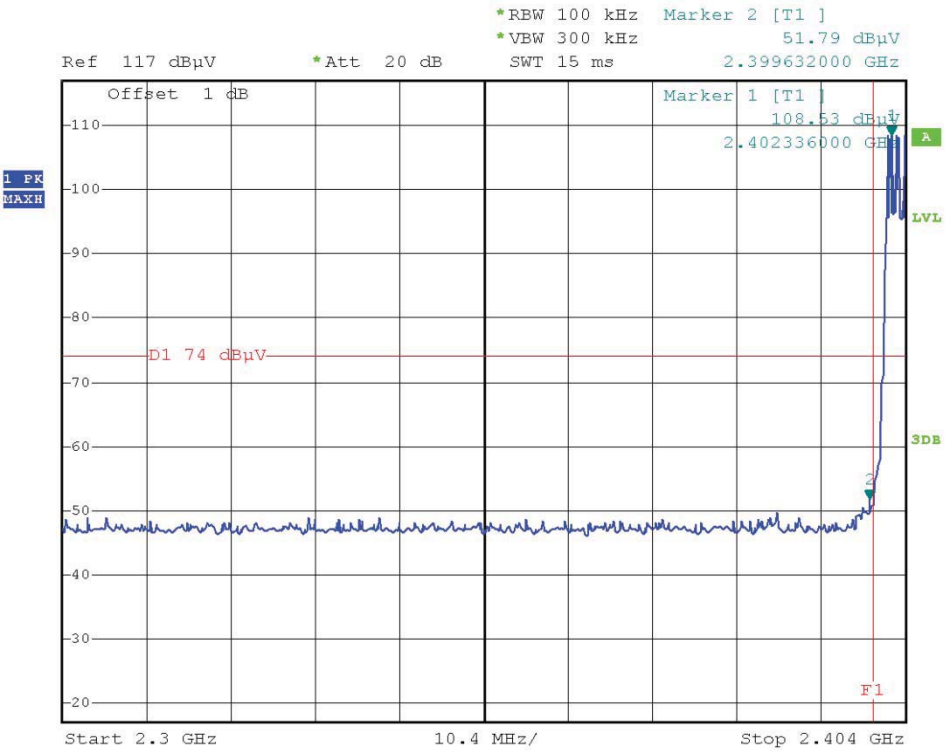
(Plot A1: Channel = 0 PEAK @ GFSK)



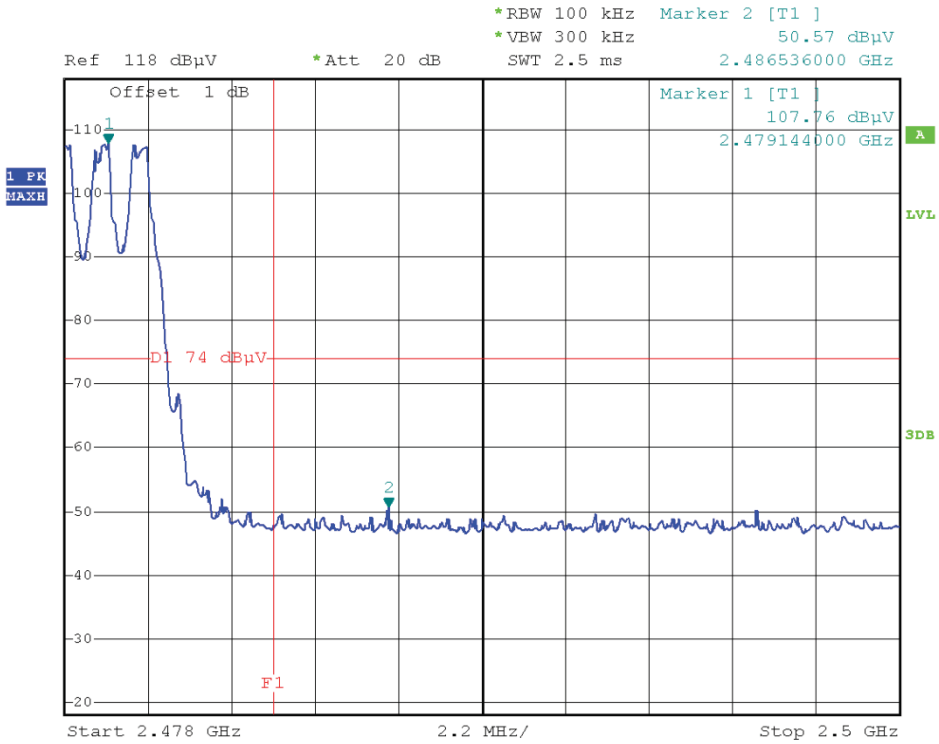
(Plot B1: Channel = 78 PEAK @ GFSK)

(hopping)

Channel	Frequency (MHz)	Detector PK/ AV	Receiver Reading UR (dBuV)	AT (dB)	AFactor (dB@3m)	Max. Emission E (dBμV/m)	Limit (dBμV/m)	Verdict
0	2385.904	PK	50.04	-31.78	28.2	46.46	74	Pass
0	2385.904	AV	42.96	-31.78	28.2	39.38	54	Pass
0	2399.632	PK	51.79	-31.78	28.2	48.21	74	Pass
0	2399.632	AV	39.98	-31.78	28.2	36.40	54	Pass
78	2486.536	PK	50.57	-29.45	29.2	50.32	74	Pass
78	2486.536	AV	47.93	-29.45	29.2	47.68	54	Pass
78	2487.328	PK	49.82	-29.24	29.3	49.88	74	Pass
78	2487.328	AV	48.87	-29.24	29.3	48.93	54	Pass



(Plot A1-1: Channel = 0 PEAK)



(Plot B1-1: Channel = 78 PEAK)

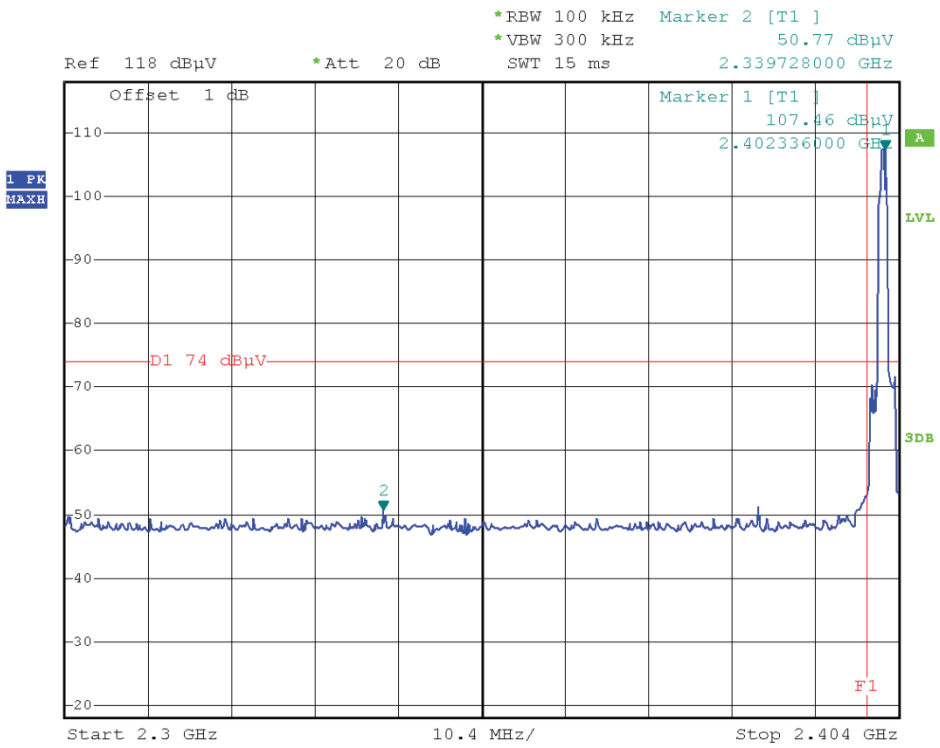
2.8.4.2. ∏/4-DQPSK Mode

A. Test Verdict:

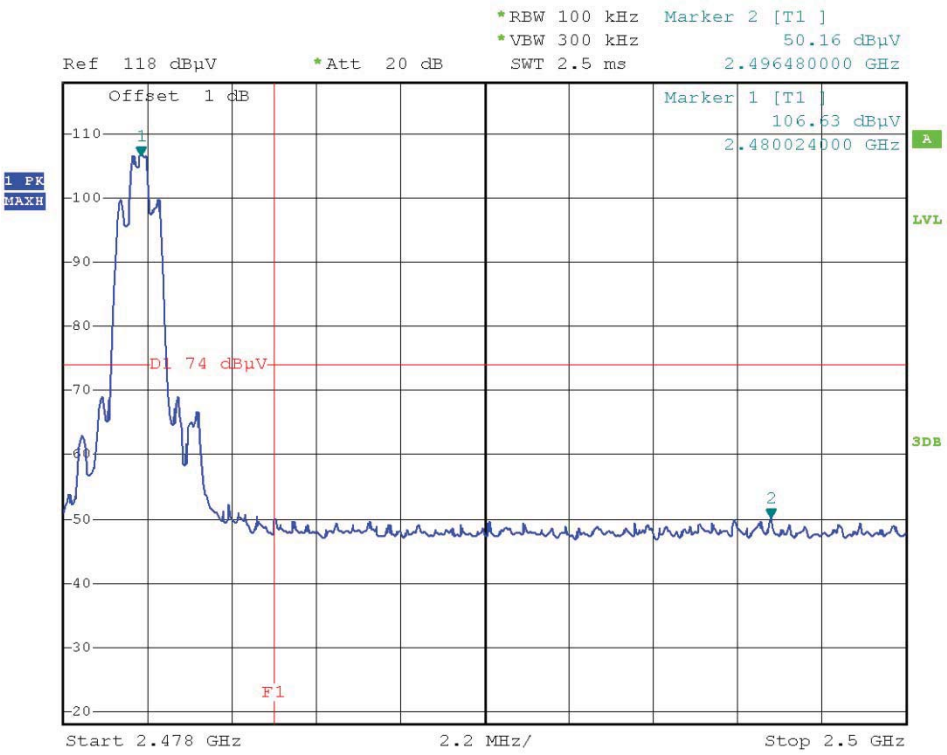
(Un-hopping)

Channel	Frequency (MHz)	Detector PK/ AV	Receiver Reading UR (dBuV)	AT (dB)	AFactor (dB@3m)	Max. Emission E (dBμV/m)	Limit (dBμV/m)	Verdict
0	2339.728	PK	50.77	-31.75	28.2	47.22	74	Pass
0	2339.728	AV	42.18	-31.74	28.2	38.64	54	Pass
0	2378.624	PK	49.66	-31.75	28.2	46.11	74	Pass
0	2378.624	AV	44.6	-31.74	28.2	41.06	54	Pass
78	2486.712	PK	50.03	-29.45	29.2	49.78	74	Pass
78	2486.712	AV	48.59	-29.45	29.2	48.34	54	Pass
78	2496.480	PK	50.16	-29.45	29.2	49.91	74	Pass
78	2496.480	AV	47.35	-29.45	29.2	47.1	54	Pass

B. Test Plots:



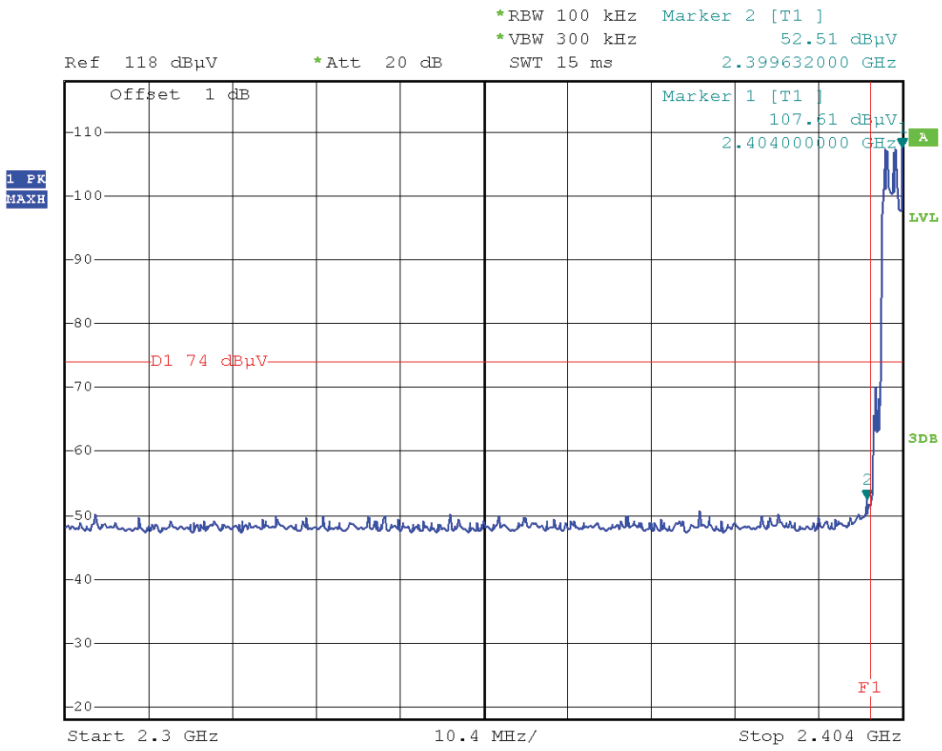
(Plot C1: Channel = 0 PEAK @ Π/4-DQPSK)



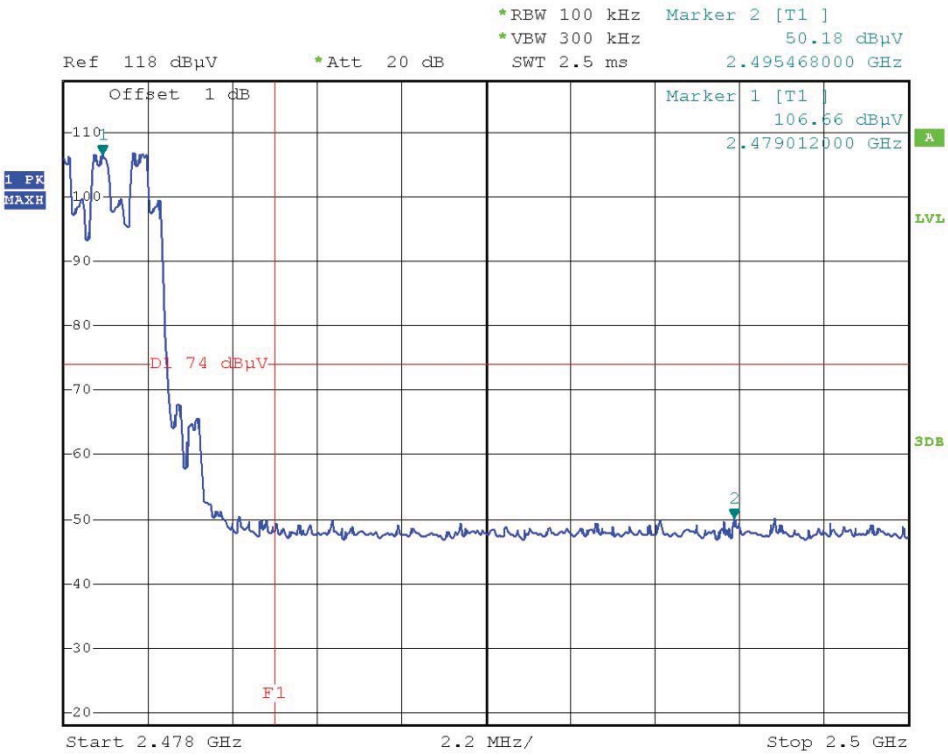
(Plot D1: Channel = 78 PEAK @ ∏/4-DQPSK)

(hopping)

Channel	Frequency (MHz)	Detector PK/ AV	Receiver Reading UR (dBuV)	AT (dB)	AFactor (dB@3m)	Max. Emission E (dBµV/m)	Limit (dBµV/m)	Verdict
0	2347.216	PK	50.11	-31.65	28.5	46.96	74	Pass
0	2347.216	AV	45.52	-31.65	28.5	42.37	54	Pass
0	2399.632	PK	52.51	-31.82	28.1	48.79	74	Pass
0	2399.632	AV	43.28	-31.82	28.1	39.56	54	Pass
78	2488.604	PK	49.93	-29.45	29.2	49.68	74	Pass
78	2488.604	AV	48.90	-29.45	29.2	48.65	54	Pass
78	2495.468	PK	50.18	-29.45	29.2	49.93	74	Pass
78	2495.468	AV	48.85	-29.45	29.2	48.60	54	Pass



(Plot C1-1: Channel = 0 PEAK)



(Plot D1-1: Channel = 78 PEAK)

2.8.4.3. 8-DPSK Mode

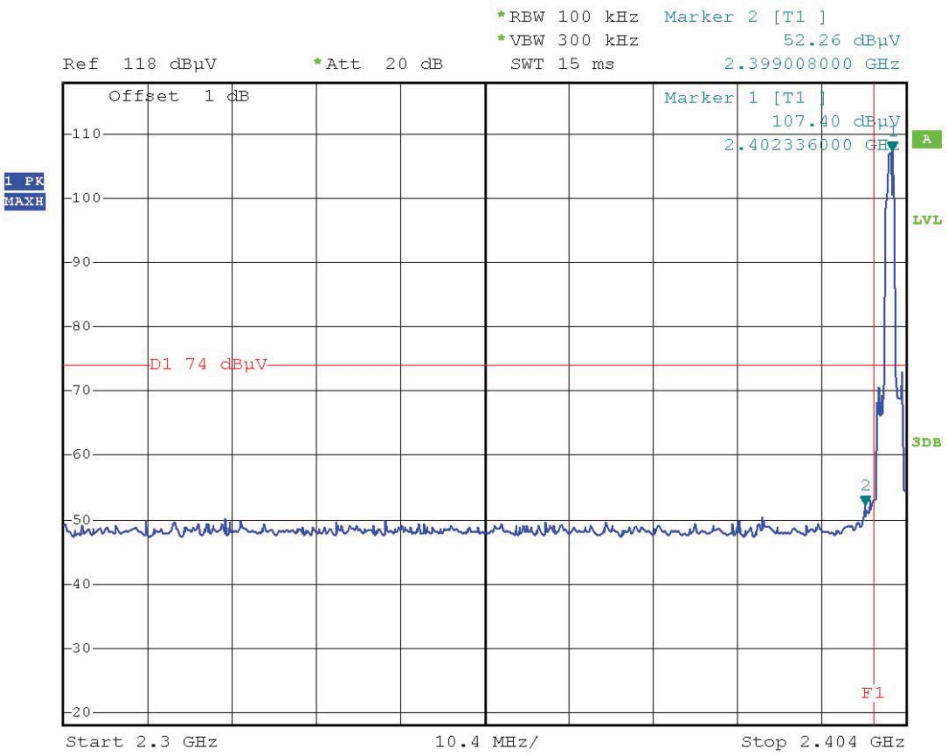
A. Test Verdict:

(Un-hopping)

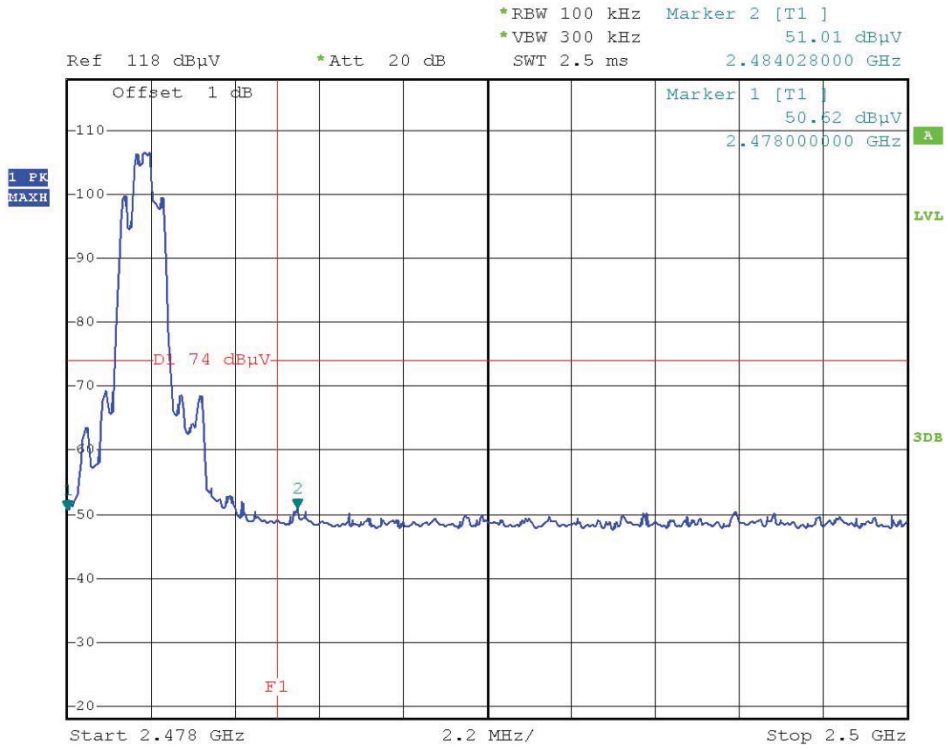
Channel	Frequency (MHz)	Detector PK/ AV	Receiver Reading UR (dBuV)	AT (dB)	AFactor (dB@3m)	Max. Emission E (dBμV/m)	Limit (dBμV/m)	Verdict
0	2336.400	PK	49.98	-31.81	28.1	46.27	74	Pass
0	2336.400	AV	45.19	-31.70	28.3	41.79	54	Pass
0	2399.008	PK	52.26	-31.81	28.1	48.55	74	Pass
0	2399.008	AV	43.11	-31.70	28.3	39.71	54	Pass
78	2484.028	PK	51.01	-29.45	29.2	50.76	74	Pass
78	2484.028	AV	47.69	-29.45	29.2	47.44	54	Pass

Channel	Frequency (MHz)	Detector	Receiver Reading UR (dBuV)	AT (dB)	AFactor (dB@3m)	Max. Emission E (dBμV/m)	Limit (dBμV/m)	Verdict
		PK/ AV						
78	2494.632	PK	50.03	-29.45	29.2	49.78	74	Pass
78	2494.632	AV	48.90	-29.45	29.2	48.65	54	Pass

B. Test Plots:



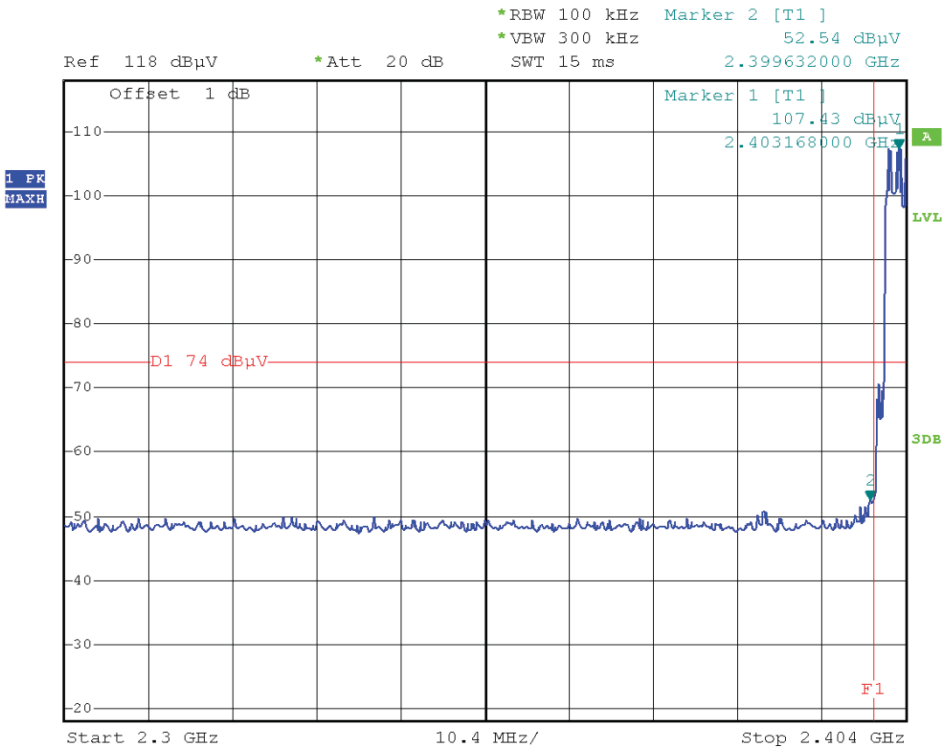
(Plot E1: Channel = 0 PEAK @ 8-DPSK Mode)



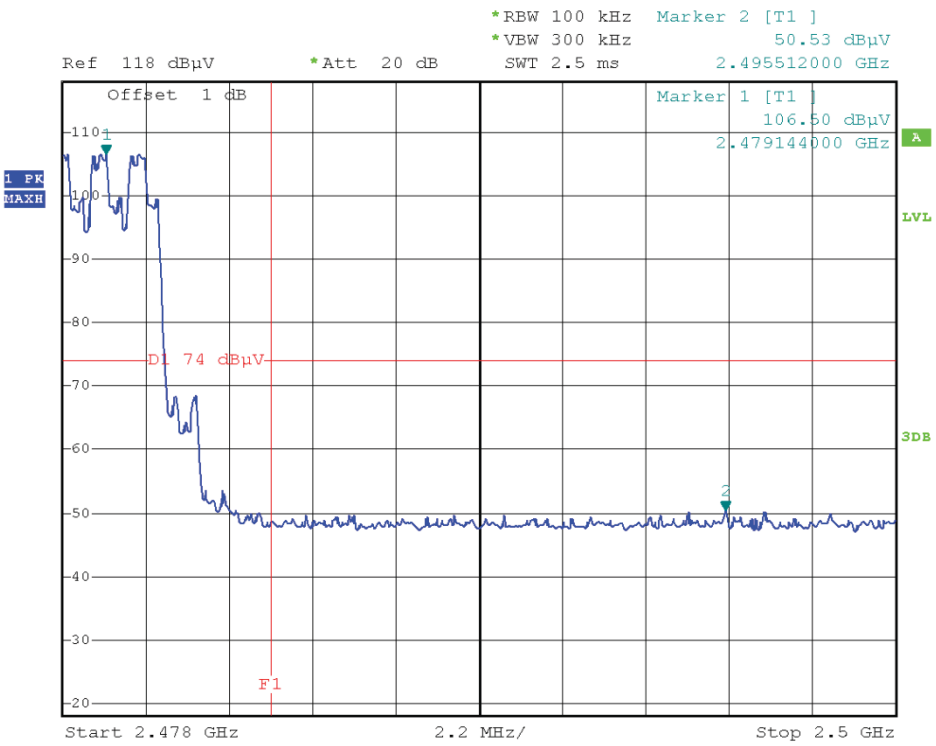
(Plot F1: Channel = 78 PEAK @ 8-DPSK Mode)

(hopping)

Channel	Frequency (MHz)	Detector	Receiver Reading UR (dBuV)	AT (dB)	AFactor (dB@3m)	Max. Emission E (dBμV/m)	Limit (dBμV/m)	Verdict
		PK/ AV						
0	2390.896	PK	51.83	-31.7	28.3	48.43	74	Pass
0	2390.896	AV	45.13	-31.7	28.3	41.73	54	Pass
0	2399.632	PK	52.54	-31.7	28.3	49.14	74	Pass
0	2399.632	AV	43.37	-31.7	28.3	39.97	54	Pass
78	2492.036	PK	49.98	-29.25	29.3	50.03	74	Pass
78	2492.036	AV	49.56	-29.25	29.3	49.61	54	Pass
78	2495.512	PK	50.53	-29.45	29.2	50.28	74	Pass
78	2495.512	AV	49.49	-29.45	29.2	49.24	54	Pass



(Plot E1-1: Channel = 0 PEAK)



(Plot F1-1: Channel = 78 PEAK)

2.9. Conducted Emission

2.9.1. Requirement

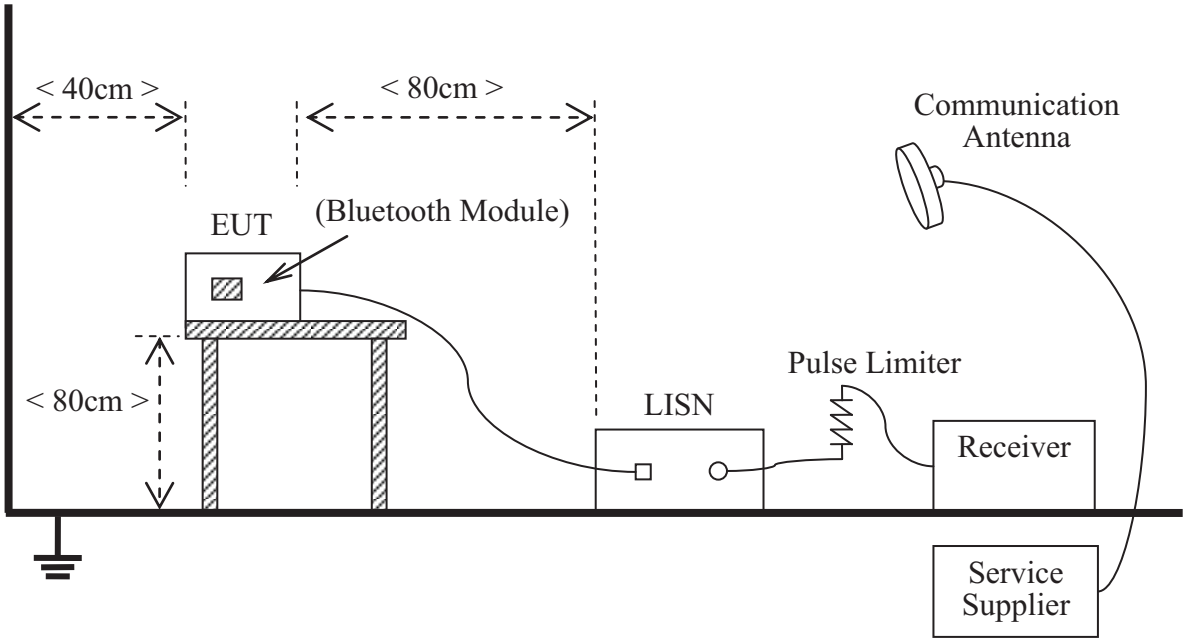
According to FCC section 15.207, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency within the band 150kHz to 30MHz shall not exceed the limits in the following table, as measured using a 50μH/50Ω line impedance stabilization network (LISN).

Frequency range (MHz)	Conducted Limit (dBμV)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
0.50 - 30	60	50

NOTE:
(a) The lower limit shall apply at the band edges.
(b) The limit decreases linearly with the logarithm of the frequency in the range 0.15 - 0.50MHz.

2.9.2. Test Description

A. Test Setup:



The Table-top EUT was placed upon a non-metallic table 0.8m above the horizontal metal reference ground plane. EUT was connected to LISN and LISN was connected to reference Ground Plane. EUT was 80cm from LISN. The set-up and test methods were according to ANSI C63.4:2009

The Bluetooth Module of the EUT is powered by the PC. The factors of the site are calibrated to correct the reading. During the measurement, the Bluetooth Module is activated and controlled by the Bluetooth Service Supplier (SS) via a Common Antenna, and is set to operate under hopping-on test mode transmitting 339 bytes DH5 packages at maximum power.

Equipments List:

Description	Manufacturer	Model	Serial No.	Calibration Due. Date
Test Receiver	ROHDE&SCHWARZ	ESCS30	A0304260	2014.06.10
LISN	ROHDE&SCHWARZ	ESH2-Z5	A0304221	2014.06.10

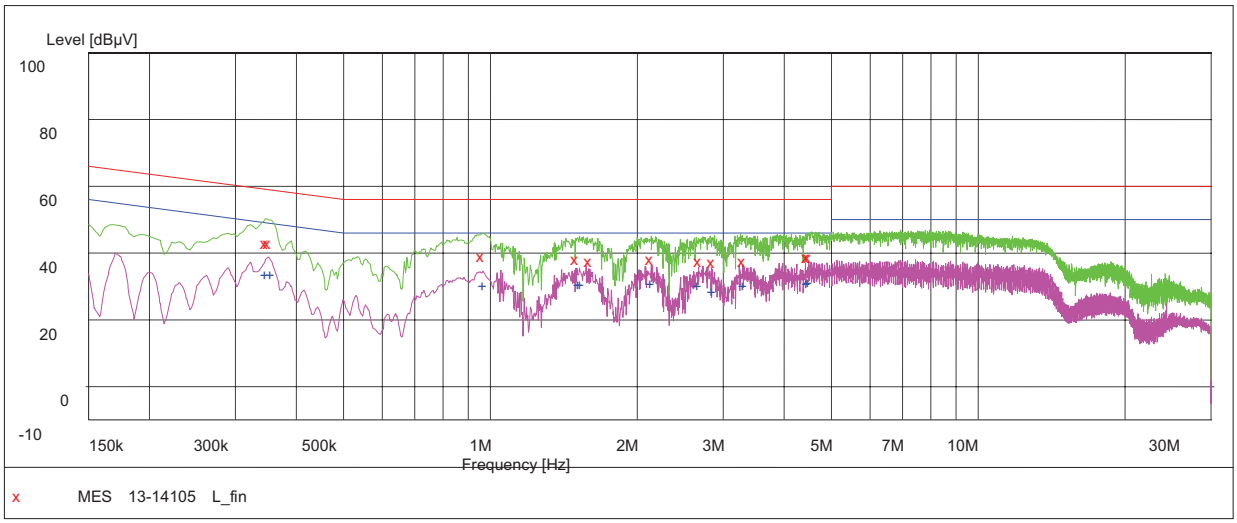
2.9.3. Test Result

The maximum conducted interference is searched using Peak (PK), if the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. Refer to recorded points and plots below.

A. Test setup:

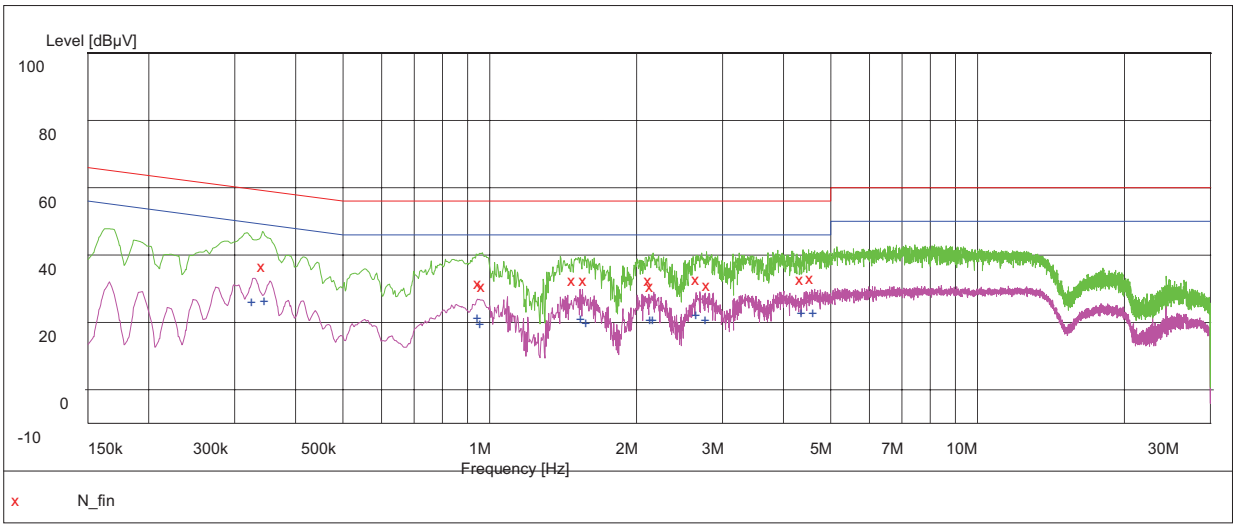
The EUT configuration of the emission tests is EUT + PC.

B. Test Plots:



Conducted Disturbance at Mains Terminals							
L Test Data							
QP				AV			
Frequency (MHz)	Limits (dBµV)	Measurement Value (dBµV)	Margin (dB)	Frequency (MHz)	Limits (dBµV)	Measurement Value (dBµV)	Margin (dB)
0.3500	59	47.30	11.70	0.3500	49	37.80	11.20
2.1520	56	42.30	13.70	2.1560	46	34.70	11.30
4.5240	56	42.80	13.20	4.5240	46	35.00	11.00
L Test Curve							

(Plot A: L Phase)



Conducted Disturbance at Mains Terminals							
N Test Data							
QP				AV			
Frequency (MHz)	Limits (dBµV)	Measurement Value (dBµV)	Margin (dB)	Frequency (MHz)	Limits (dBµV)	Measurement Value (dBµV)	Margin (dB)
0.3460	59	40.90	18.10	0.3300	50	30.00	20.00
2.1640	56	34.80	21.20	2.1640	46	24.80	21.20
4.5960	56	37.00	19.00	4.6640	46	26.80	19.20
N Test Curve							

(Plot B: N Phase)

Test Result: PASS

2.10. Radiated Emission

2.10.1. Requirement

According to FCC section 15.247(c), radiated emission outside the frequency band attenuation below the general limits specified in FCC section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in FCC section 15.205(a), must also comply with the radiated emission limits specified in FCC section 15.209(a).

According to FCC section 15.209 (a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (μV/m)	Measurement Distance (m)
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:

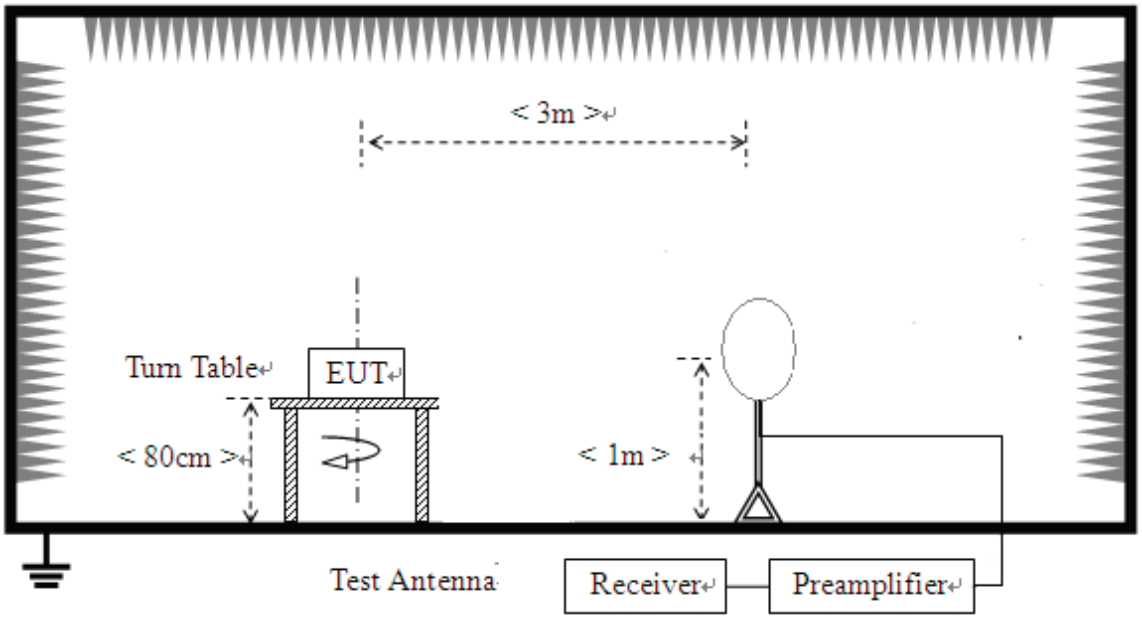
1. For Above 1000MHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit.
2. For above 1000MHz, limit field strength of harmonics: 54dBuV/m@3m (AV) and 74dBuV/m@3m (PK)

In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), also should comply with the radiated emission limits specified in Section 15.209(a)(above table)

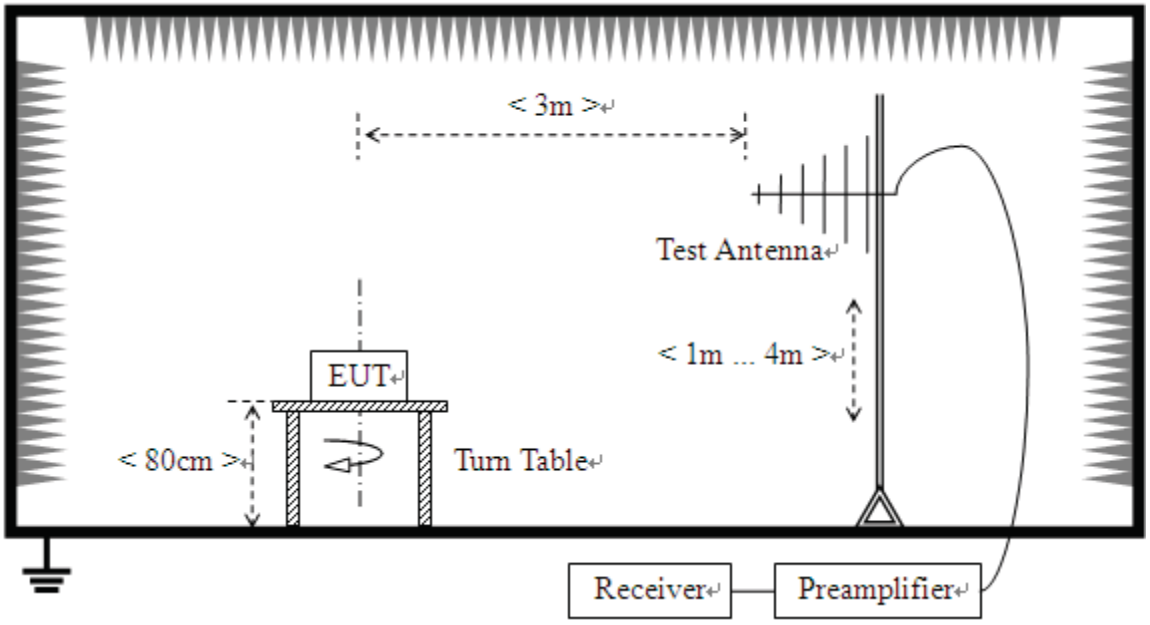
2.10.2. Test Description

A. Test Setup:

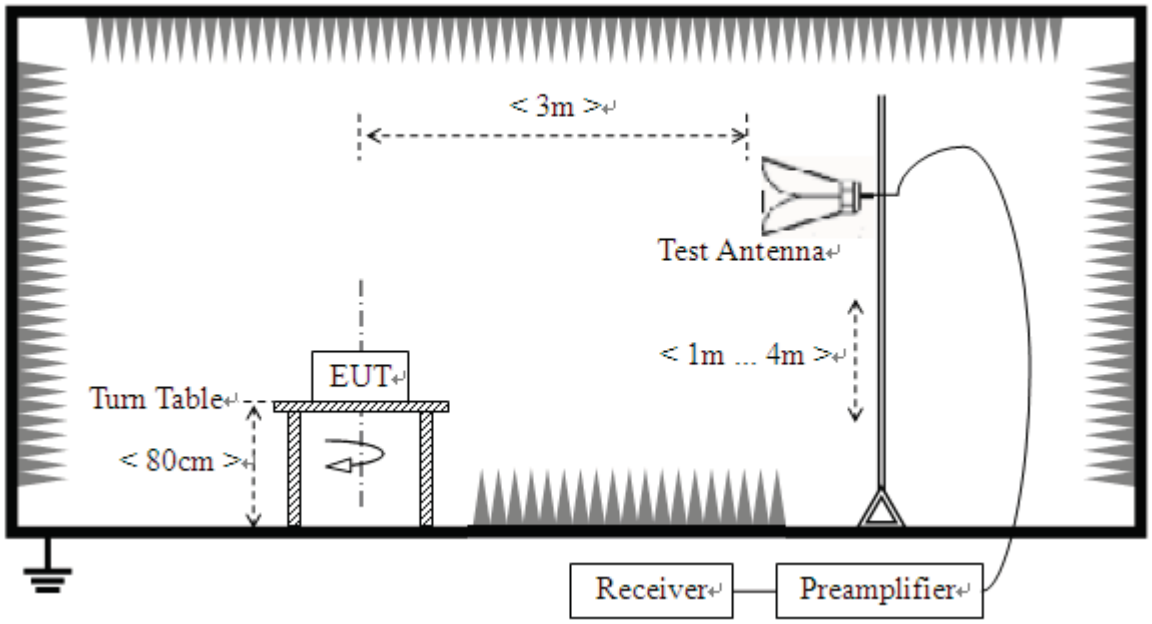
1) For radiated emissions from 9kHz to 30MHz



2) For radiated emissions from 30MHz to1GHz



3) For radiated emissions above 1GHz



The test site semi-anechoic chamber has met the requirement of NSA tolerance 4dB according to the standards: ANSI C63.4 (2009). The EUT was set-up on insulator 80cm above the Ground Plane. The set-up and test methods were according to ANSI C63.4.

The EUT is powered by the PC. The Module is located in a 3m Semi-Anechoic Chamber; the antenna factors, cable loss and so on of the site as factors are calculated to correct the reading. During the measurement, the frequency hopping operation of the hybrid system, with the direct sequence operation turned off, the Module is activated and controlled by the PC, set to operate under hopping-on test mode transmitting 339 bytes DH5 packages at maximum power.

For the Test Antenna:

(a) In the frequency range of 9kHz to 30MHz, magnetic field is measured with Loop Test Antenna. The Test Antenna is positioned with its plane vertical at 1m distance from the EUT. The center of the Loop Test Antenna is 1m above the ground. During the measurement the Loop Test Antenna rotates about its vertical axis for maximum response at each azimuth about the EUT.
(b) In the frequency range above 30MHz, Bi-Log Test Antenna (30MHz to 1GHz) and Horn Test Antenna (above 1GHz) are used. Test Antenna is 3m away from the EUT. Test Antenna height is varied from 1m to 4m above the ground to determine the maximum value of the field strength. The emission levels at both horizontal and vertical polarizations should be tested.

B. Equipments List:

Description	Manufacturer	Model	Serial No.	Calibration Due. Date
Receiver	R&S	ESIB26	A0304218	2014.06.07
Full-Anechoic Chamber	Albatross	12.8m*6.8m*6.4m	A0412372	2014.06.07
Test Antenna - Bi-Log	Schwarzbeck	VULB 9163	9163-274	2014.06.09
Test Antenna - Horn	R&S	BBHA 9120D	9120C-963	2014.06.09
Test Antenna - Horn	R&S	HF960	100150	2014.06.10
Test Antenna – Horn (18-25GHz)	ETS	UG-596A/U	A0902607	2014.06.05
Test Antenna -Loop	Schwarzbeck	HFH2-Z2	100047	2014.06.02
Ampilier 1G~18GHz	R&S	MITEQ AFS42-00101800	25-S-42	2014.06.05
Ampilier 18G~40GHz	R&S	JS42-18002600-28-5A	12111.0980.00	2014.06.05
amplifier 20M~3GHz	R&S	PAP-0203H	22018	2014.06.10

2.10.3. Test Procedure

For below 1G :QP detector RBW 120KHz ,VBW 300KHz.
For Above 1G: PK detector RBW 1MHz,VBW 3MHz for PK value ;PK detector RBW 1MHz, VBW 10Hz for AV value.

2.10.4. Test Result

According to ANSI C63.4 selection 4.2.2, because of peak detection will yield amplitudes equal to or greater than amplitudes measured with the quasi-peak (or average) detector, the measurement data from a spectrum analyzer peak detector will represent the worst-case results, if the peak measured value complies with the quasi-peak limit, it is unnecessary to perform an quasi-peak measurement.

The measurement results are obtained as below:

$E\ [dB\mu V/m] = U_R + A_T + A_{Factor}\ [dB]$; $A_T = L_{Cable\ loss}\ [dB] - G_{preamp}\ [dB]$

A_T: Total correction Factor except Antenna

U_R: Receiver Reading

G_{preamp}: Preamplifier Gain

A_{Factor}: Antenna Factor at 3m

During the test, the total correction Factor AT and A_{Factor} were built in test software.

Note1: All radiated emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

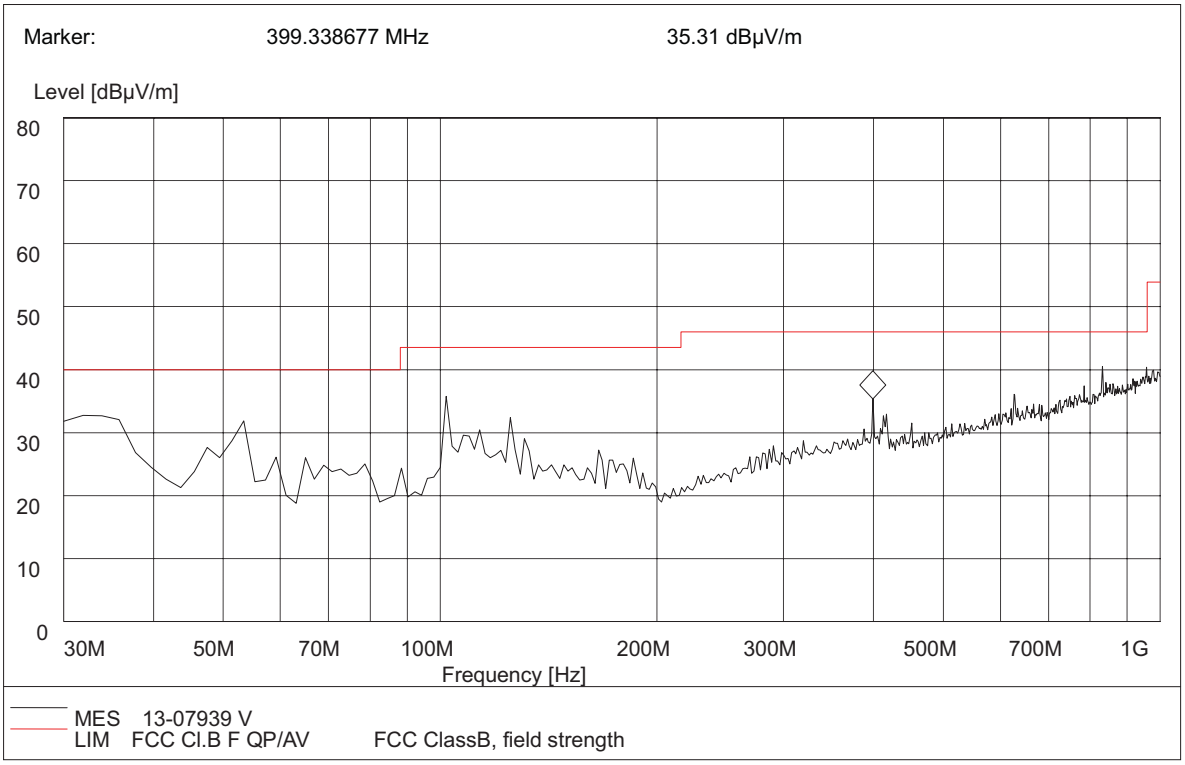
Note2: The EUT has two different mainboards, both of which have been tested， but only worse case is reported.

2.10.4.1. The EUT of first mainboard

For 9KHz to 30MHz

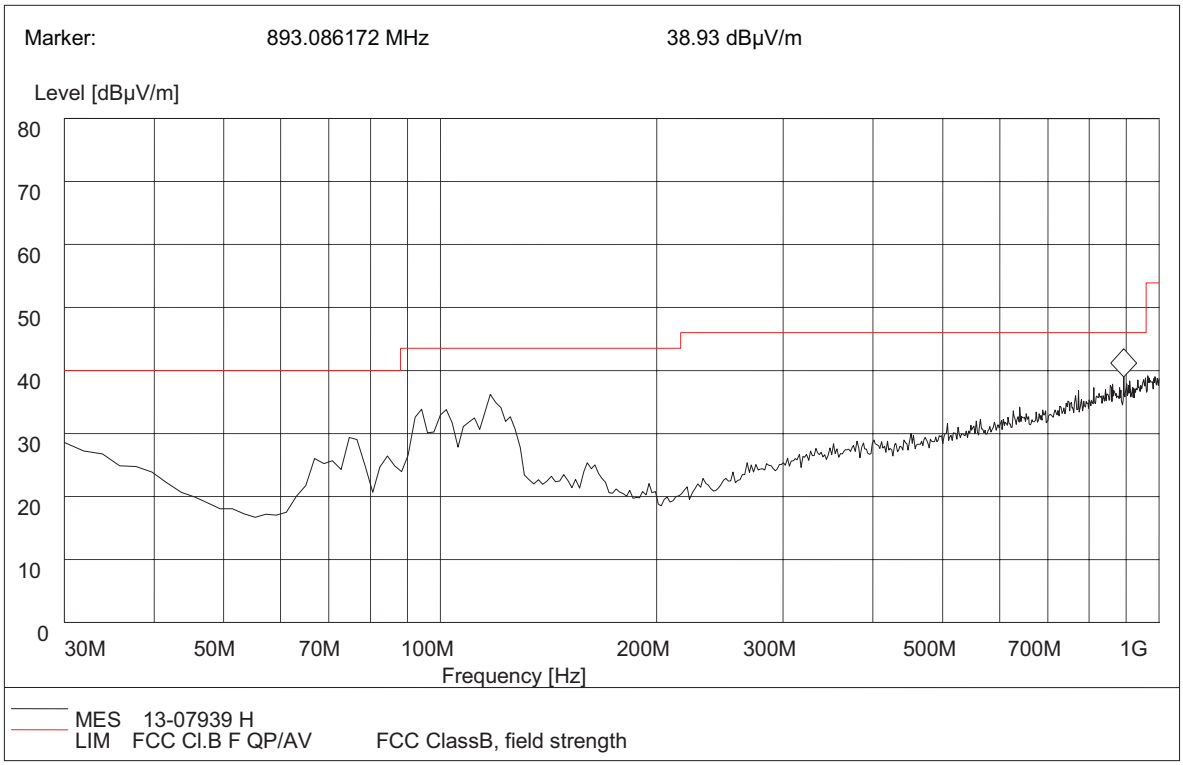
The test has been performed, and the Radiated Emission level is too low to the limit.

For 30MHz to 1000 MHz



Frequency (MHz)	QuasiPeak (dBµ V/m)	Bandwidth (kHz)	Antenna height (cm)	Limit (dBµ V/m)	Margin (dB)	Antenna	Verdict
35.8310	32.05	120.000	100.0	40.00	7.95	Vertical	Pass
101.928	35.71	120.000	100.0	43.50	7.79	Vertical	Pass
399.338	35.31	120.000	100.0	46.00	10.69	Vertical	Pass

(Plot A: 30MHz to 1GHz, Antenna Vertical)



Frequency (MHz)	QuasiPeak (dBµV/m)	Bandwidth (kHz)	Antenna height (cm)	Limit (dBµV/m)	Margin (dB)	Antenna	Verdict
74.7094	29.40	120.000	100.0	40.00	10.60	Horizontal	Pass
117.4700	36.22	120.000	100.0	43.50	7.28	Horizontal	Pass
893.0860	38.93	120.000	100.0	46.00	7.07	Horizontal	Pass

(Plot B: 30MHz to 1GHz, Antenna Horizontal)

For 1GHz to 25GHz

GFSK Mode:

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（0CH_2402MHz）											
No.	Frequency (MHz)	Emssion Level		Limit (dBuV/m)	Margin (dB)	Antenna Height	Table Angle	Raw Value	Antenna Factor	Cable Factor	Pre-amplifier
1	*2402.00	104.54	PK	/	/	1.00 H	112	107.94	28.3	4.90	-36.6
1	*2402.00	97.73	AV	/	/	1.00 H	112	101.13	28.3	4.90	-36.6
2	4804.00	48.29	PK	74	25.71	1.00 H	254	45.09	32.7	7.00	-36.5
2	4804.00	41.9	AV	54	12.1	1.00 H	254	38.7	32.7	7.00	-36.5
3	7206.00	49.79	PK	74	24.21	1.00 H	104	40.39	35.8	8.90	-35.3
3	7206.00	44.26	AV	54	9.74	1.00 H	104	34.86	35.8	8.90	-35.3
4	9608.00	48.74	PK	74	25.26	1.00 H	10	36.14	37.2	10.20	-34.8
4	9608.00	45.09	AV	54	8.91	1.00 H	10	32.49	37.2	10.20	-34.8

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（0CH_2402MHz）											
No.	Frequency (MHz)	Emssion Level		Limit (dBuV/m)	Margin (dB)	Antenna Height	Table Angle	Raw Value	Antenna Factor	Cable Factor	Pre-amplifier
1	*2402.00	103.51	PK	/	/	1.00 V	84	106.91	28.3	4.90	-36.6
1	*2402.00	95.41	AV	/	/	1.00 V	84	98.81	28.3	4.90	-36.6
2	4804.00	48.40	PK	74	25.60	1.00 V	109	45.2	32.7	7.00	-36.5
2	4804.00	45.01	AV	54	8.99	1.00 V	109	41.81	32.7	7.00	-36.5
3	7206.00	49.53	PK	74	24.47	1.00 V	22	40.13	35.8	8.90	-35.3
3	7206.00	42.67	AV	54	11.33	1.00 V	22	33.27	35.8	8.90	-35.3
4	9608.00	50.79	PK	74	23.21	1.00 V	323	38.19	37.2	10.20	-34.8
4	9608.00	44.55	AV	54	9.45	1.00 V	323	31.95	37.2	10.20	-34.8

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（39CH_2441MHz）											
No.	Frequency (MHz)	Emssion Level		Limit (dBuV/m)	Margin (dB)	Antenna Height	Table Angle	Raw Value	Antenna Factor	Cable Factor	Pre-amplifier
1	*2441.00	104.73	PK	/	/	1.00 H	15	107.93	28.3	5.10	-36.6
1	*2441.00	98.39	AV	/	/	1.00 H	15	101.59	28.3	5.10	-36.6
2	4882.00	46.78	PK	74	27.08	1.00 H	28	43.38	32.3	7.60	-36.5
2	4882.00	42.52	AV	54	11.29	1.00 H	28	39.12	32.3	7.60	-36.5
3	7323.00	51.64	PK	74	22.18	1.00 H	39	42.24	36.1	8.60	-35.3
3	7323.00	45.88	AV	54	7.95	1.00 H	39	36.48	36.1	8.60	-35.3
4	9764.00	50.23	PK	74	23.63	1.00 H	205	37.63	37.2	10.20	-34.8
4	9764.00	45.03	AV	54	8.85	1.00 H	205	32.43	37.2	10.20	-34.8

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（39CH_2441MHz）											
No.	Frequency (MHz)	Emssion Level		Limit (dBuV/m)	Margin (dB)	Antenna Height	Table Angle	Raw Value	Antenna Factor	Cable Factor	Pre-amplifier
1	*2441.00	104.67	PK	/	/	1.00 V	87	107.87	28.3	5.10	-36.6
1	*2441.00	96.81	AV	/	/	1.00 V	87	100.01	28.3	5.10	-36.6
2	4882.00	47.83	PK	74	26.17	1.00 V	112	44.43	32.3	7.60	-36.5
2	4882.00	41.65	AV	54	12.35	1.00 V	112	38.25	32.3	7.60	-36.5
3	7323.00	54.21	PK	74	19.79	1.00 V	91	44.81	36.1	8.60	-35.3
3	7323.00	46.76	AV	54	7.24	1.00 V	91	37.36	36.1	8.60	-35.3
4	9764.00	49.48	PK	74	24.52	1.00 V	336	36.88	37.2	10.20	-34.8
4	9764.00	44.56	AV	54	9.44	1.00 V	336	31.96	37.2	10.20	-34.8

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（78CH_2480MHz）											
No.	Frequency (MHz)	Emssion Level		Limit (dBuV/m)	Margin (dB)	Antenna Height	Table Angle	Raw Value	Antenna Factor	Cable Factor	Pre-amplifier
1	*2480.00	105.51	PK	/	/	1.00 H	15	108.81	28.6	4.70	-36.6
1	*2480.00	98.15	AV	/	/	1.00 H	15	101.45	28.6	4.70	-36.6
2	4960.00	50.89	PK	74	23.11	1.00 H	99	47.09	33	7.00	-36.2
2	4960.00	43.66	AV	54	10.34	1.00 H	99	39.86	33	7.00	-36.2
3	7440.00	49.78	PK	74	24.22	1.00 H	215	40.38	36.2	8.50	-35.3
3	7440.00	43.31	AV	54	10.69	1.00 H	215	33.91	36.2	8.50	-35.3
4	9920.00	50.69	PK	74	23.31	1.00 H	9	38.09	37.2	10.20	-34.8
4	9920.00	41.55	AV	54	12.45	1.00 H	9	28.95	37.2	10.20	-34.8

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（78CH_2480MHz）

No.	Frequency (MHz)	Emssion Level		Limit (dBuV/m)	Margin (dB)	Antenna Height	Table Angle	Raw Value	Antenna Factor	Cable Factor	Pre-amplifier
1	*2480.00	104.70	PK	/	/	1.00 V	29	108	28.6	4.70	-36.6
1	*2480.00	97.51	AV	/	/	1.00 V	29	100.81	28.6	4.70	-36.6
2	4960.00	49.86	PK	74	24.14	1.00 V	114	46.06	33	7.00	-36.2
2	4960.00	47.94	AV	54	6.06	1.00 V	114	44.14	33	7.00	-36.2
3	7440.00	49.67	PK	74	24.33	1.00 V	87	40.27	36.2	8.50	-35.3
3	7440.00	44.10	AV	54	9.90	1.00 V	87	34.7	36.2	8.50	-35.3
4	9920.00	49.65	PK	74	24.35	1.00 V	168	37.05	37.2	10.20	-34.8
4	9920.00	44.85	AV	54	9.15	1.00 V	168	32.25	37.2	10.20	-34.8

∏/4-DQPSK Mode:

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（0CH_2402MHz）

No.	Frequency (MHz)	Emssion Level		Limit (dBuV/m)	Margin (dB)	Antenna Height	Table Angle	Raw Value	Antenna Factor	Cable Factor	Pre-amplifier
1	*2402.00	103.64	PK	/	/	1.00 H	106	107.04	28.3	4.90	-36.6
1	*2402.00	95.86	AV	/	/	1.00 H	106	99.26	28.3	4.90	-36.6
2	4804.00	49.77	PK	74	24.23	1.00 H	88	46.57	32.7	7.00	-36.5
2	4804.00	42.41	AV	54	11.59	1.00 H	88	39.21	32.7	7.00	-36.5
3	7206.00	50.85	PK	74	23.15	1.00 H	305	41.45	35.8	8.90	-35.3
3	7206.00	43.36	AV	54	10.64	1.00 H	305	33.96	35.8	8.90	-35.3
4	9608.00	49.44	PK	74	24.56	1.00 H	1	36.84	37.2	10.20	-34.8
4	9608.00	45.60	AV	54	8.40	1.00 H	1	33	37.2	10.20	-34.8

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（0CH_2402MHz）

No.	Frequency (MHz)	Emssion Level		Limit (dBuV/m)	Margin (dB)	Antenna Height	Table Angle	Raw Value	Antenna Factor	Cable Factor	Pre-amplifier
1	*2402.00	103.87	PK	/	/	1.00 V	7	107.27	28.3	4.90	-36.6
1	*2402.00	95.36	AV	/	/	1.00 V	7	98.76	28.3	4.90	-36.6
2	4804.00	50.03	PK	74	23.97	1.00 V	118	46.83	32.7	7.00	-36.5
2	4804.00	43.74	AV	54	10.26	1.00 V	118	40.54	32.7	7.00	-36.5
3	7206.00	49.86	PK	74	24.14	1.00 V	215	40.46	35.8	8.90	-35.3
3	7206.00	44.60	AV	54	9.40	1.00 V	215	35.2	35.8	8.90	-35.3
4	9608.00	48.56	PK	74	25.44	1.00 V	43	35.96	37.2	10.20	-34.8
4	9608.00	45.24	AV	54	8.76	1.00 V	43	32.64	37.2	10.20	-34.8

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（39CH_2441MHz）

No.	Frequency (MHz)	Emssion Level		Limit (dBuV/m)	Margin (dB)	Antenna Height	Table Angle	Raw Value	Antenna Factor	Cable Factor	Pre-amplifier
1	*2441.00	104.12	PK	/	/	1.00 H	196	107.32	28.3	5.10	-36.6
1	*2441.00	98.12	AV	/	/	1.00 H	196	101.32	28.3	5.10	-36.6
2	4882.00	51.85	PK	74	22.15	1.00 H	75	48.45	32.3	7.60	-36.5
2	4882.00	45.62	AV	54	8.38	1.00 H	75	42.22	32.3	7.60	-36.5
3	7323.00	49.92	PK	74	24.08	1.00 H	178	40.52	36.1	8.60	-35.3
3	7323.00	44.37	AV	54	9.63	1.00 H	178	34.97	36.1	8.60	-35.3
4	9764.00	51.65	PK	74	22.35	1.00 H	150	39.05	37.2	10.20	-34.8
4	9764.00	44.94	AV	54	9.06	1.00 H	150	32.34	37.2	10.20	-34.8

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（39CH_2441MHz）

No.	Frequency (MHz)	Emssion Level		Limit (dBuV/m)	Margin (dB)	Antenna Height	Table Angle	Raw Value	Antenna Factor	Cable Factor	Pre-amplifier
1	*2441.00	104.87	PK	/	/	1.00 V	357	108.07	28.3	5.10	-36.6
1	*2441.00	95.22	AV	/	/	1.00 V	357	98.42	28.3	5.10	-36.6
2	4882.00	51.61	PK	74	22.39	1.00 V	21	48.21	32.3	7.60	-36.5
2	4882.00	47.15	AV	54	6.85	1.00 V	21	43.75	32.3	7.60	-36.5
3	7323.00	53.69	PK	74	20.31	1.00 V	95	44.29	36.1	8.60	-35.3
3	7323.00	46.93	AV	54	7.07	1.00 V	95	37.53	36.1	8.60	-35.3
4	9764.00	55.08	PK	74	18.92	1.00 V	327	42.48	37.2	10.20	-34.8
4	9764.00	48.50	AV	54	5.50	1.00 V	327	35.9	37.2	10.20	-34.8

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（78CH_2480MHz）

No.	Frequency (MHz)	Emssion Level		Limit (dBuV/m)	Margin (dB)	Antenna Height	Table Angle	Raw Value	Antenna Factor	Cable Factor	Pre-amplifier
1	*2480.00	105.35	PK	/	/	1.00 H	17	108.65	28.6	4.70	-36.6
1	*2480.00	95.48	AV	/	/	1.00 H	17	98.78	28.6	4.70	-36.6
2	4960.00	50.98	PK	74	23.02	1.00 H	209	47.18	33	7.00	-36.2
2	4960.00	43.84	AV	54	10.16	1.00 H	209	40.04	33	7.00	-36.2
3	7440.00	52.95	PK	74	21.05	1.00 H	188	43.55	36.2	8.50	-35.3
3	7440.00	44.24	AV	54	9.76	1.00 H	188	34.84	36.2	8.50	-35.3
4	9920.00	51.37	PK	74	22.63	1.00 H	34	38.77	37.2	10.20	-34.8
4	9920.00	43.22	AV	54	10.78	1.00 H	34	30.62	37.2	10.20	-34.8

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（78CH_2480MHz）

No.	Frequency (MHz)	Emssion Level		Limit (dBuV/m)	Margin (dB)	Antenna Height	Table Angle	Raw Value	Antenna Factor	Cable Factor	Pre-amplifier
1	*2480.00	105.52	PK	/	/	1.00 V	59	108.82	28.6	4.70	-36.6
1	*2480.00	93.71	AV	/	/	1.00 V	59	97.01	28.6	4.70	-36.6
2	4960.00	50.95	PK	74	23.05	1.00 V	102	47.15	33	7.00	-36.2
2	4960.00	43.88	AV	54	10.12	1.00 V	102	40.08	33	7.00	-36.2
3	7440.00	55.12	PK	74	18.88	1.00 V	134	45.72	36.2	8.50	-35.3
3	7440.00	43.79	AV	54	10.21	1.00 V	134	34.39	36.2	8.50	-35.3
4	9920.00	50.06	PK	74	23.94	1.00 V	304	37.46	37.2	10.20	-34.8
4	9920.00	43.95	AV	54	10.05	1.00 V	304	31.35	37.2	10.20	-34.8

8-DPSK Mode:

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（0CH_2402MHz）											
No.	Frequency (MHz)	Emssion Level		Limit (dBuV/m)	Margin (dB)	Antenna Height	Table Angle	Raw Value	Antenna Factor	Cable Factor	Pre-amplifier
1	*2402.00	105.65	PK	/	/	1.00 H	20	109.05	28.3	4.90	-36.6
1	*2402.00	93.86	AV	/	/	1.00 H	20	97.26	28.3	4.90	-36.6
2	4804.00	52.01	PK	74	21.99	1.00 H	309	48.81	32.7	7.00	-36.5
2	4804.00	43.66	AV	54	10.34	1.00 H	309	40.46	32.7	7.00	-36.5
3	7206.00	51.19	PK	74	22.81	1.00 H	164	41.79	35.8	8.90	-35.3
3	7206.00	45.00	AV	54	9.00	1.00 H	164	35.6	35.8	8.90	-35.3
4	9608.00	50.27	PK	74	23.73	1.00 H	199	37.67	37.2	10.20	-34.8
4	9608.00	43.81	AV	54	10.19	1.00 H	199	31.21	37.2	10.20	-34.8

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（0CH_2402MHz）											
No.	Frequency (MHz)	Emssion Level		Limit (dBuV/m)	Margin (dB)	Antenna Height	Table Angle	Raw Value	Antenna Factor	Cable Factor	Pre-amplifier
1	*2402.00	105.27	PK	/	/	1.00 V	51	108.67	28.3	4.90	-36.6
1	*2402.00	93.12	AV	/	/	1.00 V	51	96.52	28.3	4.90	-36.6
2	4804.00	50.81	PK	74	23.19	1.00 V	176	47.61	32.7	7.00	-36.5
2	4804.00	44.04	AV	54	9.96	1.00 V	176	40.84	32.7	7.00	-36.5
3	7206.00	52.21	PK	74	21.79	1.00 V	85	42.81	35.8	8.90	-35.3
3	7206.00	43.97	AV	54	10.03	1.00 V	85	34.57	35.8	8.90	-35.3
4	9608.00	51.00	PK	74	23.00	1.00 V	332	38.4	37.2	10.20	-34.8
4	9608.00	45.24	AV	54	8.76	1.00 V	332	32.64	37.2	10.20	-34.8

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（39CH_2441MHz）											
No.	Frequency (MHz)	Emssion Level		Limit (dBuV/m)	Margin (dB)	Antenna Height	Table Angle	Raw Value	Antenna Factor	Cable Factor	Pre-amplifier
1	*2441.00	106.13	PK	/	/	1.00 H	57	109.33	28.3	5.10	-36.6
1	*2441.00	98.14	AV	/	/	1.00 H	57	101.34	28.3	5.10	-36.6
2	4882.00	50.18	PK	74	23.82	1.00 H	169	46.78	32.3	7.60	-36.5
2	4882.00	43.19	AV	54	10.81	1.00 H	169	39.79	32.3	7.60	-36.5
3	7323.00	51.55	PK	74	22.45	1.00 H	76	42.15	36.1	8.60	-35.3
3	7323.00	45.15	AV	54	8.85	1.00 H	76	35.75	36.1	8.60	-35.3
4	9764.00	52.23	PK	74	21.77	1.00 H	111	39.63	37.2	10.20	-34.8
4	9764.00	45.18	AV	54	8.82	1.00 H	111	32.58	37.2	10.20	-34.8

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（39CH_2441MHz）											
No.	Frequency (MHz)	Emssion Level		Limit (dBuV/m)	Margin (dB)	Antenna Height	Table Angle	Raw Value	Antenna Factor	Cable Factor	Pre-amplifier
1	*2441.00	105.50	PK	/	/	1.00 V	61	108.7	28.3	5.10	-36.6
1	*2441.00	93.93	AV	/	/	1.00 V	61	97.13	28.3	5.10	-36.6
2	4882.00	50.93	PK	74	23.07	1.00 V	175	47.53	32.3	7.60	-36.5
2	4882.00	45.20	AV	54	8.80	1.00 V	175	41.8	32.3	7.60	-36.5
3	7323.00	51.85	PK	74	22.15	1.00 V	34	42.45	36.1	8.60	-35.3
3	7323.00	43.81	AV	54	10.19	1.00 V	34	34.41	36.1	8.60	-35.3
4	9764.00	52.00	PK	74	22.00	1.00 V	309	39.4	37.2	10.20	-34.8
4	9764.00	46.14	AV	54	7.86	1.00 V	309	33.54	37.2	10.20	-34.8

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（78CH_2480MHz）

No.	Frequency (MHz)	Emssion Level		Limit (dBuV/m)	Margin (dB)	Antenna Height	Table Angle	Raw Value	Antenna Factor	Cable Factor	Pre-amplifier
1	*2480.00	106.13	PK	/	/	1.00 H	83	109.43	28.6	4.70	-36.6
1	*2480.00	98.20	AV	/	/	1.00 H	83	101.5	28.6	4.70	-36.6
2	4960.00	52.56	PK	74	21.44	1.00 H	174	48.76	33	7.00	-36.2
2	4960.00	46.21	AV	54	7.79	1.00 H	174	42.41	33	7.00	-36.2
3	7440.00	53.61	PK	74	20.39	1.00 H	152	44.21	36.2	8.50	-35.3
3	7440.00	48.24	AV	54	5.76	1.00 H	152	38.84	36.2	8.50	-35.3
4	9920.00	51.92	PK	74	22.08	1.00 H	337	39.32	37.2	10.20	-34.8
4	9920.00	46.23	AV	54	7.77	1.00 H	337	33.63	37.2	10.20	-34.8

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（78CH_2480MHz）

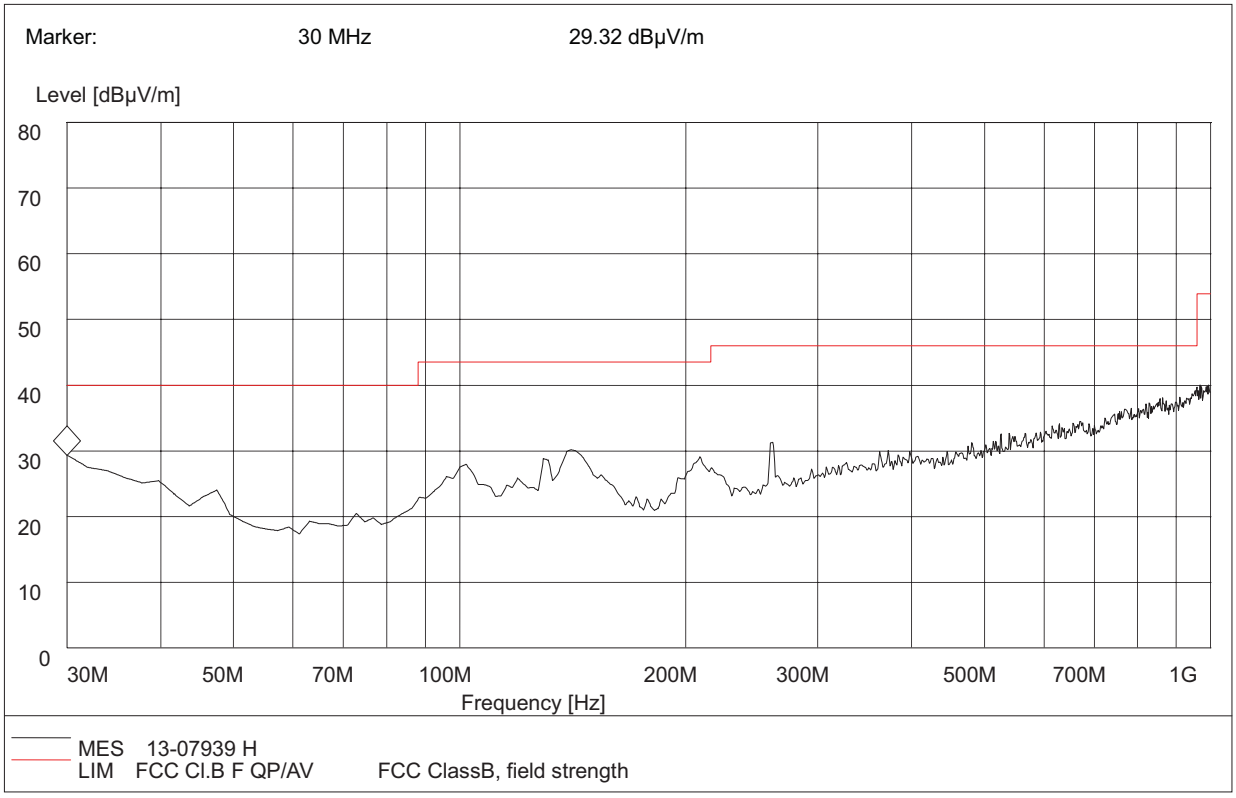
No.	Frequency (MHz)	Emssion Level		Limit (dBuV/m)	Margin (dB)	Antenna Height	Table Angle	Raw Value	Antenna Factor	Cable Factor	Pre-amplifier
1	*2480.00	106.15	PK	/	/	1.00 V	118	109.45	28.6	4.70	-36.6
1	*2480.00	96.26	AV	/	/	1.00 V	118	99.56	28.6	4.70	-36.6
2	4960.00	50.65	PK	74	23.35	1.00 V	92	46.85	33	7.00	-36.2
2	4960.00	43.06	AV	54	10.94	1.00 V	92	39.26	33	7.00	-36.2
3	7440.00	51.68	PK	74	22.32	1.00 V	13	42.28	36.2	8.50	-35.3
3	7440.00	44.19	AV	54	9.81	1.00 V	13	34.79	36.2	8.50	-35.3
4	9920.00	53.22	PK	74	20.78	1.00 V	67	40.62	37.2	10.20	-34.8
4	9920.00	43.81	AV	54	10.19	1.00 V	67	31.21	37.2	10.20	-34.8

2.10.4.2. The EUT of second mainboard

For 9KHz to 30MHz

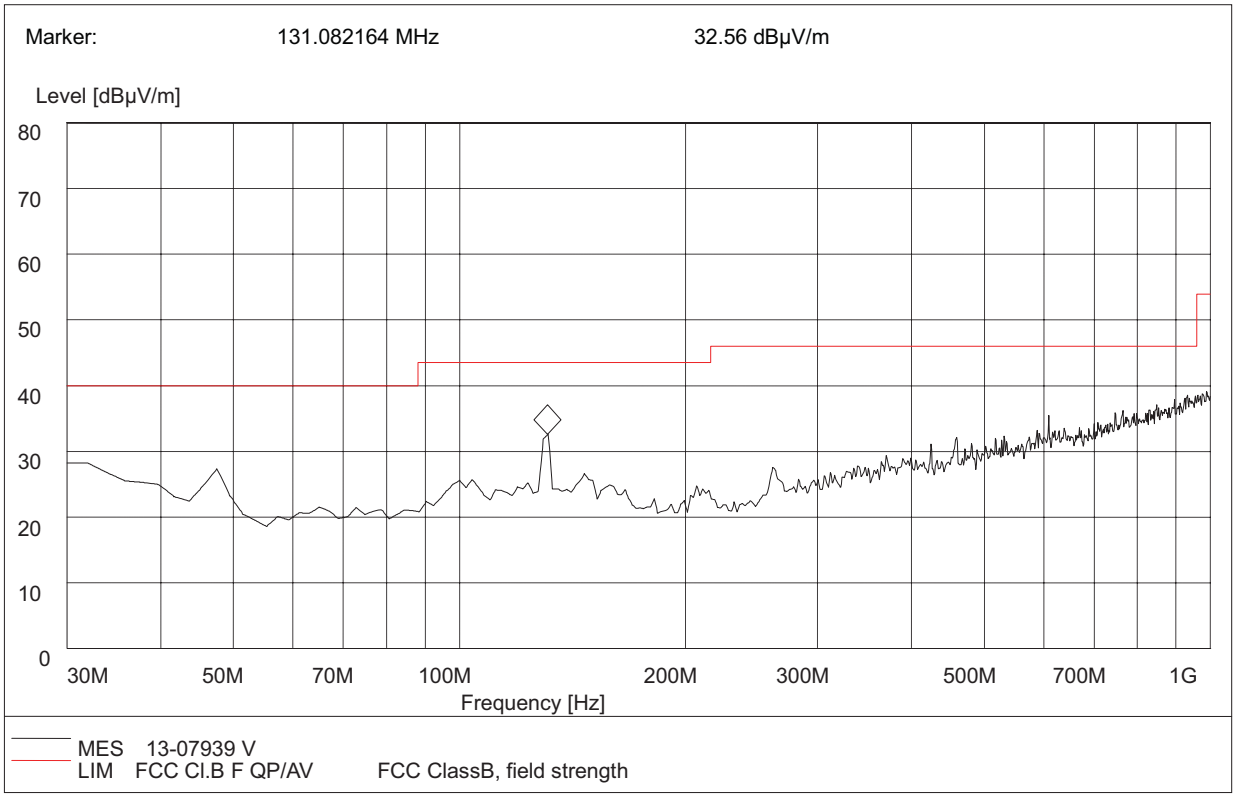
The test has been performed, and the Radiated Emission level is too low to the limit.

For 30MHz to 1000 MHz



(Plot A: 30MHz to 1GHz, Antenna Horizontal)

Frequency (MHz)	QuasiPeak (dBµ V/m)	Bandwidth (kHz)	Antenna height (cm)	Limit (dBµ V/m)	Margin (dB)	Antenna	Verdict
30.000	29.32	120.000	100.0	40.00	10.68	Vertical	Pass
151.928	30.71	120.000	100.0	43.50	12.79	Vertical	Pass
269.338	31.31	120.000	100.0	46.00	14.69	Vertical	Pass



(Plot B: 30MHz to 1GHz, Antenna Vertical)

Frequency (MHz)	QuasiPeak (dBµ V/m)	Bandwidth (kHz)	Antenna height (cm)	Limit (dBµ V/m)	Margin (dB)	Antenna	Verdict
30.000	28.55	120.000	100.0	40.00	11.45	Vertical	Pass
131.082	32.56	120.000	100.0	43.50	10.94	Vertical	Pass
605.338	35.62	120.000	100.0	46.00	10.38	Vertical	Pass

For 1GHz to 25GHz

GFSK Mode：

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（0CH_2402MHz）											
No.	Frequency (MHz)	Emssion Level		Limit (dBuV/m)	Margin (dB)	Antenna Height	Table Angle	Raw Value	Antenna Factor	Cable Factor	Pre-amplifier
1	*2402	107.45	PK	/	/	1.00 H	91	110.65	28.2	5.2	-36.6
1	*2402	96.74	AV	/	/	1.00 H	91	99.94	28.2	5.2	-36.6
2	4804	54.81	PK	74	19.19	1.00 H	295	51.01	33	7	-36.2
2	4804	47.20	AV	54	6.80	1.00 H	295	43.40	33	7	-36.2
3	7206	54.86	PK	74	19.14	1.00 H	121	45.46	36.2	8.5	-35.3
3	7206	47.15	AV	54	6.85	1.00 H	121	37.75	36.2	8.5	-35.3
4	9608	52.03	PK	74	21.97	1.00 H	214	39.43	37.3	10.1	-34.8
4	9608	44.33	AV	54	9.67	1.00 H	214	31.73	37.3	10.1	-34.8

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（0CH_2402MHz）											
No.	Frequency (MHz)	Emssion Level		Limit (dBuV/m)	Margin (dB)	Antenna Height	Table Angle	Raw Value	Antenna Factor	Cable Factor	Pre-amplifier
1	*2402	109.83	PK	/	/	1.00 V	277	113.03	28.2	5.2	-36.6
1	*2402	100.50	AV	/	/	1.00 V	277	103.70	28.2	5.2	-36.6
2	4804	54.81	PK	74	19.19	1.00 V	197	51.01	33	7	-36.2
2	4804	47.81	AV	54	6.19	1.00 V	197	44.01	33	7	-36.2
3	7206	52.74	PK	74	21.26	1.00 V	72	43.34	36.2	8.5	-35.3
3	7206	45.88	AV	54	8.12	1.00 V	72	36.48	36.2	8.5	-35.3
4	9608	54.62	PK	74	19.38	1.00 V	265	42.02	37.3	10.1	-34.8
4	9608	47.68	AV	54	6.32	1.00 V	265	35.08	37.3	10.1	-34.8

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（39CH_2441MHz）											
No.	Frequency (MHz)	Emssion Level		Limit (dBuV/m)	Margin (dB)	Antenna Height	Table Angle	Raw Value	Antenna Factor	Cable Factor	Pre-amplifier
1	*2441	112.83	PK	/	/	1.00 H	237	116.03	28.2	5.2	-36.6
1	*2441	102.66	AV	/	/	1.00 H	237	105.86	28.2	5.2	-36.6
2	4882	50.42	PK	74	23.58	1.00 H	155	46.62	33	7	-36.2
2	4882	42.61	AV	54	11.39	1.00 H	155	38.81	33	7	-36.2
3	7323	51.66	PK	74	22.34	1.00 H	258	42.26	36.2	8.5	-35.3
3	7323	44.63	AV	54	9.37	1.00 H	258	35.23	36.2	8.5	-35.3
4	9764	51.60	PK	74	22.40	1.00 H	131	39.00	37.3	10.1	-34.8
4	9764	44.15	AV	54	9.85	1.00 H	131	31.55	37.3	10.1	-34.8

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（39CH_2441MHz）											
No.	Frequency (MHz)	Emssion Level		Limit (dBuV/m)	Margin (dB)	Antenna Height	Table Angle	Raw Value	Antenna Factor	Cable Factor	Pre-amplifier
1	*2441	110.17	PK	/	/	1.00 V	185	113.37	28.2	5.2	-36.6
1	*2441	101.00	AV	/	/	1.00 V	185	104.20	28.2	5.2	-36.6
2	4882	50.42	PK	74	23.58	1.00 V	51	46.62	33	7	-36.2
2	4882	43.14	AV	54	10.86	1.00 V	51	39.34	33	7	-36.2
3	7323	53.23	PK	74	20.77	1.00 V	236	43.83	36.2	8.5	-35.3
3	7323	46.86	AV	54	7.14	1.00 V	236	37.46	36.2	8.5	-35.3
4	9764	52.37	PK	74	21.63	1.00 V	294	39.77	37.3	10.1	-34.8
4	9764	44.77	AV	54	9.23	1.00 V	294	32.17	37.3	10.1	-34.8

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（78CH_2480MHz）											
No.	Frequency (MHz)	Emssion Level		Limit (dBuV/m)	Margin (dB)	Antenna Height	Table Angle	Raw Value	Antenna Factor	Cable Factor	Pre-amplifier
1	*2480	109.20	PK	/	/	1.00 H	341	112.40	28.2	5.2	-36.6
1	*2480	99.34	AV	/	/	1.00 H	341	102.54	28.2	5.2	-36.6
2	4960	52.06	PK	74	21.94	1.00 H	357	48.26	33	7	-36.2
2	4960	45.26	AV	54	8.74	1.00 H	357	41.46	33	7	-36.2
3	7440	53.81	PK	74	20.19	1.00 H	104	44.41	36.2	8.5	-35.3
3	7440	47.11	AV	54	6.89	1.00 H	104	37.71	36.2	8.5	-35.3
4	9920	53.42	PK	74	20.58	1.00 H	60	40.82	37.3	10.1	-34.8
4	9920	45.84	AV	54	8.16	1.00 H	60	33.24	37.3	10.1	-34.8

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（78CH_2480MHz）											
No.	Frequency (MHz)	Emssion Level		Limit (dBuV/m)	Margin (dB)	Antenna Height	Table Angle	Raw Value	Antenna Factor	Cable Factor	Pre-amplifier
1	*2480	107.58	PK	/	/	1.00 V	116	110.78	28.2	5.2	-36.6
1	*2480	97.53	AV	/	/	1.00 V	116	100.73	28.2	5.2	-36.6
2	4960	54.67	PK	74	19.33	1.00 V	38	50.87	33	7	-36.2
2	4960	47.31	AV	54	6.69	1.00 V	38	43.51	33	7	-36.2
3	7440	51.37	PK	74	22.63	1.00 V	120	41.97	36.2	8.5	-35.3
3	7440	43.80	AV	54	10.20	1.00 V	120	34.40	36.2	8.5	-35.3
4	9920	53.08	PK	74	20.92	1.00 V	167	40.48	37.3	10.1	-34.8
4	9920	46.67	AV	54	7.33	1.00 V	167	34.07	37.3	10.1	-34.8

∏/4-DQPSK Mode：

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（0CH_2402MHz）											
No.	Frequency (MHz)	Emssion Level		Limit (dBuV/m)	Margin (dB)	Antenna Height	Table Angle	Raw Value	Antenna Factor	Cable Factor	Pre-amplifier
1	*2402	110.70	PK	/	/	1.00 H	101	113.90	28.2	5.2	-36.6
1	*2402	100.48	AV	/	/	1.00 H	101	103.68	28.2	5.2	-36.6
2	4804	53.77	PK	74	20.23	1.00 H	254	49.97	33	7	-36.2
2	4804	46.03	AV	54	7.97	1.00 H	254	42.23	33	7	-36.2
3	7206	52.58	PK	74	21.42	1.00 H	227	43.18	36.2	8.5	-35.3
3	7206	44.94	AV	54	9.06	1.00 H	227	35.54	36.2	8.5	-35.3
4	9608	51.35	PK	74	22.65	1.00 H	346	38.75	37.3	10.1	-34.8
4	9608	44.74	AV	54	9.26	1.00 H	346	32.14	37.3	10.1	-34.8

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（0CH_2402MHz）											
No.	Frequency (MHz)	Emssion Level		Limit (dBuV/m)	Margin (dB)	Antenna Height	Table Angle	Raw Value	Antenna Factor	Cable Factor	Pre-amplifier
1	*2402	112.17	PK	/	/	1.00 V	87	115.37	28.2	5.2	-36.6
1	*2402	102.48	AV	/	/	1.00 V	87	105.68	28.2	5.2	-36.6
2	4804	51.64	PK	74	22.36	1.00 V	77	47.84	33	7	-36.2
2	4804	44.27	AV	54	9.73	1.00 V	77	40.47	33	7	-36.2
3	7206	51.55	PK	74	22.45	1.00 V	219	42.15	36.2	8.5	-35.3
3	7206	44.48	AV	54	9.52	1.00 V	219	35.08	36.2	8.5	-35.3
4	9608	53.91	PK	74	20.09	1.00 V	56	41.31	37.3	10.1	-34.8
4	9608	46.07	AV	54	7.93	1.00 V	56	33.47	37.3	10.1	-34.8

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（39CH_2441MHz）											
No.	Frequency (MHz)	Emssion Level		Limit (dBuV/m)	Margin (dB)	Antenna Height	Table Angle	Raw Value	Antenna Factor	Cable Factor	Pre-amplifier
1	*2441	107.96	PK	/	/	1.00 H	89	111.16	28.2	5.2	-36.6
1	*2441	97.39	AV	/	/	1.00 H	89	100.59	28.2	5.2	-36.6
2	4882	50.45	PK	74	23.55	1.00 H	349	46.65	33	7	-36.2
2	4882	43.89	AV	54	10.11	1.00 H	349	40.09	33	7	-36.2
3	7323	52.97	PK	74	21.03	1.00 H	325	43.57	36.2	8.5	-35.3
3	7323	46.08	AV	54	7.92	1.00 H	325	36.68	36.2	8.5	-35.3
4	9764	50.43	PK	74	23.57	1.00 H	107	37.83	37.3	10.1	-34.8
4	9764	44.34	AV	54	9.66	1.00 H	107	31.74	37.3	10.1	-34.8

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（39CH_2441MHz）											
No.	Frequency (MHz)	Emssion Level		Limit (dBuV/m)	Margin (dB)	Antenna Height	Table Angle	Raw Value	Antenna Factor	Cable Factor	Pre-amplifier
1	*2441	110.81	PK	/	/	1.00 V	300	114.01	28.2	5.2	-36.6
1	*2441	100.28	AV	/	/	1.00 V	300	103.48	28.2	5.2	-36.6
2	4882	53.54	PK	74	20.46	1.00 V	340	49.74	33	7	-36.2
2	4882	47.20	AV	54	6.80	1.00 V	340	43.40	33	7	-36.2
3	7323	53.70	PK	74	20.30	1.00 V	62	44.30	36.2	8.5	-35.3
3	7323	47.01	AV	54	6.99	1.00 V	62	37.61	36.2	8.5	-35.3
4	9764	53.42	PK	74	20.58	1.00 V	271	40.82	37.3	10.1	-34.8
4	9764	45.95	AV	54	8.05	1.00 V	271	33.35	37.3	10.1	-34.8

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（78CH_2480MHz）											
No.	Frequency (MHz)	Emssion Level		Limit (dBuV/m)	Margin (dB)	Antenna Height	Table Angle	Raw Value	Antenna Factor	Cable Factor	Pre-amplifier
1	*2480	107.86	PK	/	/	1.00 H	250	111.06	28.2	5.2	-36.6
1	*2480	97.10	AV	/	/	1.00 H	250	100.30	28.2	5.2	-36.6
2	4960	50.17	PK	74	23.83	1.00 H	149	46.37	33	7	-36.2
2	4960	43.95	AV	54	10.05	1.00 H	149	40.15	33	7	-36.2
3	7440	53.90	PK	74	20.10	1.00 H	224	44.50	36.2	8.5	-35.3
3	7440	46.71	AV	54	7.29	1.00 H	224	37.31	36.2	8.5	-35.3
4	9920	52.32	PK	74	21.68	1.00 H	102	39.72	37.3	10.1	-34.8
4	9920	45.64	AV	54	8.36	1.00 H	102	33.04	37.3	10.1	-34.8

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（78CH_2480MHz）											
No.	Frequency (MHz)	Emssion Level		Limit (dBuV/m)	Margin (dB)	Antenna Height	Table Angle	Raw Value	Antenna Factor	Cable Factor	Pre-amplifier
1	*2480	112.87	PK	/	/	1.00 V	67	116.07	28.2	5.2	-36.6
1	*2480	102.88	AV	/	/	1.00 V	67	106.08	28.2	5.2	-36.6
2	4960	53.89	PK	74	20.11	1.00 V	280	50.09	33	7	-36.2
2	4960	47.41	AV	54	6.59	1.00 V	280	43.61	33	7	-36.2
3	7440	54.91	PK	74	19.09	1.00 V	288	45.51	36.2	8.5	-35.3
3	7440	48.31	AV	54	5.69	1.00 V	288	38.91	36.2	8.5	-35.3
4	9920	52.67	PK	74	21.33	1.00 V	238	40.07	37.3	10.1	-34.8
4	9920	45.98	AV	54	8.02	1.00 V	238	33.38	37.3	10.1	-34.8

8-DPSK Mode：

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（0CH_2402MHz）											
No.	Frequency (MHz)	Emssion Level		Limit (dBuV/m)	Margin (dB)	Antenna Height	Table Angle	Raw Value	Antenna Factor	Cable Factor	Pre-amplifier
1	*2402	108.81	PK	/	/	1.00 H	101	112.01	28.2	5.2	-36.6
1	*2402	98.55	AV	/	/	1.00 H	101	101.75	28.2	5.2	-36.6
2	4804	53.51	PK	74	20.49	1.00 H	254	49.71	33	7	-36.2
2	4804	45.72	AV	54	8.28	1.00 H	254	41.92	33	7	-36.2
3	7206	52.36	PK	74	21.64	1.00 H	227	42.96	36.2	8.5	-35.3
3	7206	44.79	AV	54	9.21	1.00 H	227	35.39	36.2	8.5	-35.3
4	9608	51.09	PK	74	22.91	1.00 H	346	38.49	37.3	10.1	-34.8
4	9608	44.43	AV	54	9.57	1.00 H	346	31.83	37.3	10.1	-34.8

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（0CH_2402MHz）											
No.	Frequency (MHz)	Emssion Level		Limit (dBuV/m)	Margin (dB)	Antenna Height	Table Angle	Raw Value	Antenna Factor	Cable Factor	Pre-amplifier
1	*2402	109.94	PK	/	/	1.00 V	87	113.14	28.2	5.2	-36.6
1	*2402	100.17	AV	/	/	1.00 V	87	103.37	28.2	5.2	-36.6
2	4804	51.13	PK	74	22.87	1.00 V	77	47.33	33	7	-36.2
2	4804	44.04	AV	54	9.96	1.00 V	77	40.24	33	7	-36.2
3	7206	51.09	PK	74	22.91	1.00 V	219	41.69	36.2	8.5	-35.3
3	7206	44.04	AV	54	9.96	1.00 V	219	34.64	36.2	8.5	-35.3
4	9608	53.56	PK	74	20.44	1.00 V	56	40.96	37.3	10.1	-34.8
4	9608	45.60	AV	54	8.40	1.00 V	56	33.00	37.3	10.1	-34.8

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（39CH_2441MHz）											
No.	Frequency (MHz)	Emssion Level		Limit (dBuV/m)	Margin (dB)	Antenna Height	Table Angle	Raw Value	Antenna Factor	Cable Factor	Pre-amplifier
1	*2441	105.84	PK	/	/	1.00 H	89	109.04	28.2	5.2	-36.6
1	*2441	95.17	AV	/	/	1.00 H	89	98.37	28.2	5.2	-36.6
2	4882	50.00	PK	74	24.00	1.00 H	349	46.20	33	7	-36.2
2	4882	43.73	AV	54	10.27	1.00 H	349	39.93	33	7	-36.2
3	7323	52.63	PK	74	21.37	1.00 H	325	43.23	36.2	8.5	-35.3
3	7323	45.7	AV	54	8.30	1.00 H	325	36.30	36.2	8.5	-35.3
4	9764	50.07	PK	74	23.93	1.00 H	107	37.47	37.3	10.1	-34.8
4	9764	43.96	AV	54	10.04	1.00 H	107	31.36	37.3	10.1	-34.8

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（39CH_2441MHz）											
No.	Frequency (MHz)	Emssion Level		Limit (dBuV/m)	Margin (dB)	Antenna Height	Table Angle	Raw Value	Antenna Factor	Cable Factor	Pre-amplifier
1	*2441	109.69	PK	/	/	1.00 V	300	112.89	28.2	5.2	-36.6
1	*2441	98.39	AV	/	/	1.00 V	300	101.59	28.2	5.2	-36.6
2	4882	53.31	PK	74	20.69	1.00 V	340	49.51	33	7	-36.2
2	4882	46.98	AV	54	7.02	1.00 V	340	43.18	33	7	-36.2
3	7323	53.44	PK	74	20.56	1.00 V	62	44.04	36.2	8.5	-35.3
3	7323	46.77	AV	54	7.23	1.00 V	62	37.37	36.2	8.5	-35.3
4	9764	53.14	PK	74	20.86	1.00 V	271	40.54	37.3	10.1	-34.8
4	9764	45.72	AV	54	8.28	1.00 V	271	33.12	37.3	10.1	-34.8

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M（78CH_2480MHz）											
No.	Frequency (MHz)	Emssion Level		Limit (dBuV/m)	Margin (dB)	Antenna Height	Table Angle	Raw Value	Antenna Factor	Cable Factor	Pre-amplifier
1	*2480	105.63	PK	/	/	1.00 H	250	108.83	28.2	5.2	-36.6
1	*2480	95.09	AV	/	/	1.00 H	250	98.29	28.2	5.2	-36.6
2	4960	49.53	PK	74	24.47	1.00 H	149	45.73	33	7	-36.2
2	4960	43.37	AV	54	10.63	1.00 H	149	39.57	33	7	-36.2
3	7440	53.34	PK	74	20.66	1.00 H	224	43.94	36.2	8.5	-35.3
3	7440	46.17	AV	54	7.83	1.00 H	224	36.77	36.2	8.5	-35.3
4	9920	51.77	PK	74	22.23	1.00 H	102	39.17	37.3	10.1	-34.8
4	9920	45.08	AV	54	8.92	1.00 H	102	32.48	37.3	10.1	-34.8

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M（78CH_2480MHz）											
No.	Frequency (MHz)	Emssion Level		Limit (dBuV/m)	Margin (dB)	Antenna Height	Table Angle	Raw Value	Antenna Factor	Cable Factor	Pre-amplifier
1	*2480	110.74	PK	/	/	1.00 V	67	113.94	28.2	5.2	-36.6
1	*2480	100.85	AV	/	/	1.00 V	67	104.05	28.2	5.2	-36.6
2	4960	53.24	PK	74	20.76	1.00 V	280	49.44	33	7	-36.2
2	4960	47.06	AV	54	6.94	1.00 V	280	43.26	33	7	-36.2
3	7440	54.45	PK	74	19.55	1.00 V	288	45.05	36.2	8.5	-35.3
3	7440	47.75	AV	54	6.25	1.00 V	288	38.35	36.2	8.5	-35.3
4	9920	52.39	PK	74	21.61	1.00 V	238	39.79	37.3	10.1	-34.8
4	9920	45.61	AV	54	8.39	1.00 V	238	33.01	37.3	10.1	-34.8

REMARKS: 1. Emission level (dBuV/m) =Raw Value (dBuV) +Antenna Factor (dB/m) + Cable Factor (dB) +Pre-amplifier Factor

2. The other emission levels were very low against the limit.

3. The other emission levels were very low against the limit.

4. Margin value = Limit value- Emission level.

5. The limit value is defined as per 15.247

6. " * " : Fundamental frequency

Annex A EUT Photos

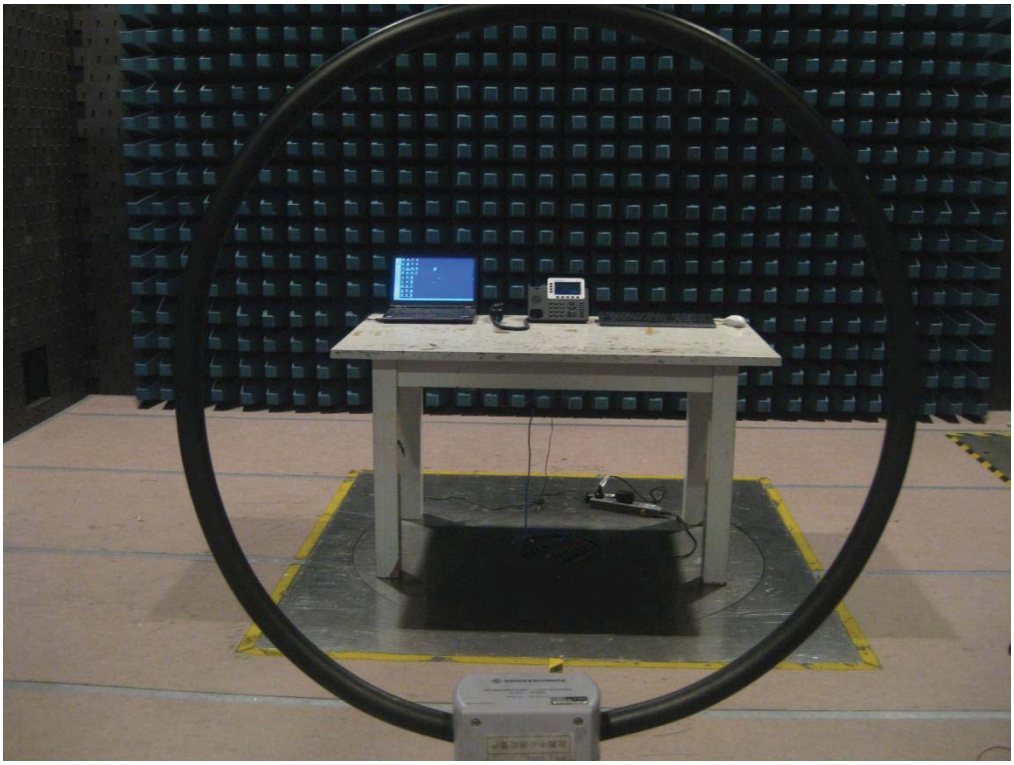
Annex B Test setup photos

1. CSE

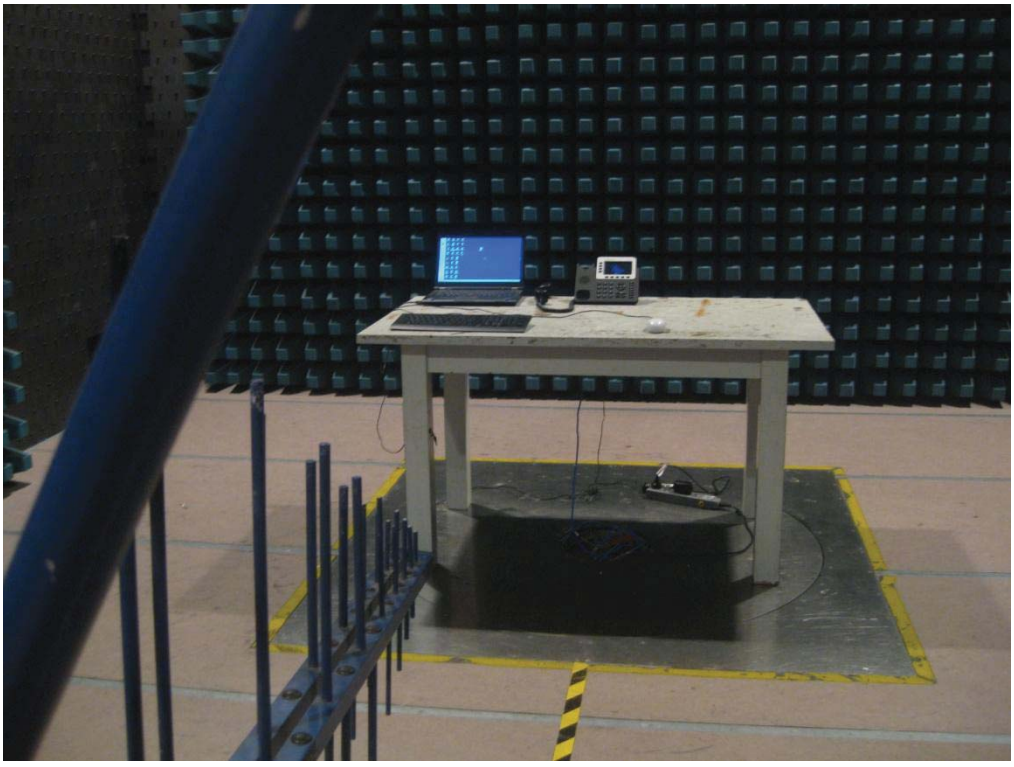
2. CE

3. RE

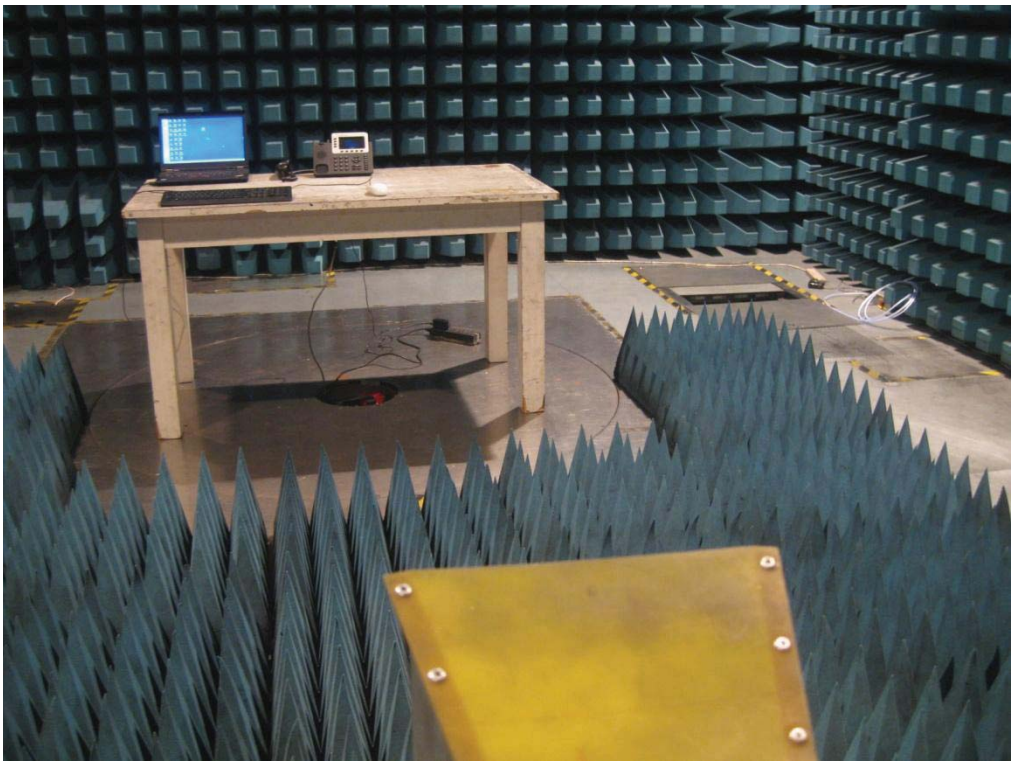
9K~30MHz



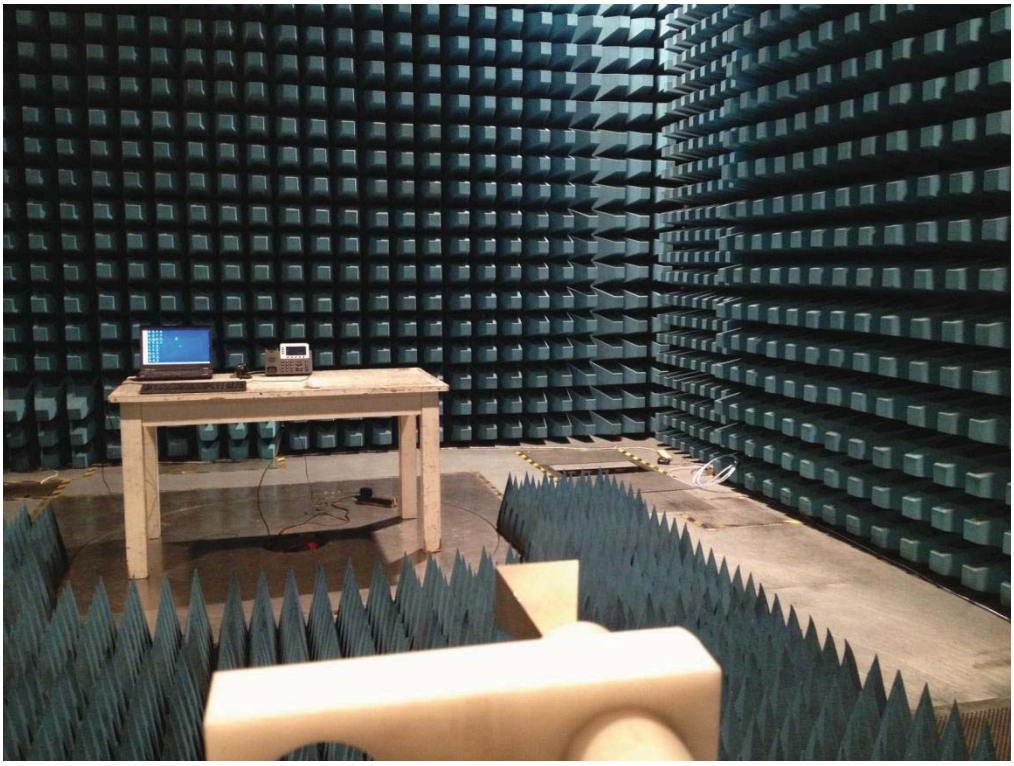
30MHz~1GHz



1GHz~18GHz



18GHz~25GHz



** END OF REPORT **