FCC/IC RADIO TEST REPORT

according to

47 CFR FCC Part 15 Subpart C § 15.249

Equipment	:	**Smart phone**
Brand Name	:	**SONY**
Model No.	:	**D2302**
Type Name	:	**PM-0721-BV**
Applicant	:	**Sony Mobile Communications AB** Nya Vattentornet, 22188 Lund, Sweden
FCC ID	:	**PY7PM-0721**
Manufacturer	:	**Compal Communications, INC.** No. 385, Yangguang Street, Neihu, Taipei 11491, Taiwan
Received Date	:	Nov. 02, 2013
Final Test Date	:	Mar. 14, 2014

Statement

The test result in this report refers exclusively to the presented test model / sample.

Without written approval of SPORTON International Inc., the test report shall not be reproduced except in full.

The measurements and test results shown in this test report were made in accordance with the procedures and found in compliance with the limit given in **ANSI C63.4-2003** and **47 CFR FCC Part 15 Subpart C** and **IC RSS-210 issue 8**.

The test equipment used to perform the test is calibrated and traceable to NML/ROC.

Testing Laboratory
1190

SPORTON INTERNATIONAL INC.

No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR3N0205F	Rev. 01	Initial issue of report	Mar. 14, 2014

CERTIFICATE OF COMPLIANCE

according to

47 CFR FCC Part 15 Subpart C § 15.249

Equipment	**:**	**Smart phone**
Brand Name	**:**	**SONY**
Model No.	**:**	**D2302**
Type Name	**:**	**PM-0721-BV**
Applicant	**:**	**Sony Mobile Communications AB**
		Nya Vattentornet, 22188 Lund, Sweden

Sporton International as requested by the applicant to evaluate the EMC performance of the product sample received on Nov. 02, 2013 would like to declare that the tested sample has been evaluated and found to be in compliance with the tested rule parts. The data recorded as well as the test configuration specified is true and accurate for showing the sample's EMC nature.

Reviewed by: Joseph Lin / Supervisor

Approved by: Jones Tsai / Manager

SPORTON INTERNATIONAL INC.

No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.

1. SUMMARY OF THE TEST RESULT

Applied Standard: 47 CFR FCC Part 15 Subpart C					
Part	**FCC Rule**	**IC Rule**	**Description of Test**	**Result**	**Under Limit**
3.1	15.207	RSS-GEN 7.2.4	AC Power Line Conducted Emissions	Complies	5.70dB at 0.374MHz
3.2	2.1049	RSS-GEN 4.6.1	20dB & 99% Occupied Bandwidth	Complies	-
3.3	15.249(a)	RSS-210 A2.9	Field Strength of Fundamental Emissions	Complies	18.36dB at 2442MHz
3.4	15.249(a)(d)	RSS-210 A2.9	Radiated Spurious Emissions	Complies	14.35dB at 664.7MHz
3.5	15.203	-	Antenna Requirements	Complies	-

Test Items	Uncertainty	Remark
AC Power Line Conducted Emissions	±2.3dB	Confidence levels of 95%
Field Strength of Fundamental Emissions	±0.8dB	Confidence levels of 95%
Bandwidth	$\pm 8.5\times10^{-8}$	Confidence levels of 95%
Radiated Emissions (30MHz~1000MHz)	±1.9dB	Confidence levels of 95%
Temperature	±0.7℃	Confidence levels of 95%
Humidity	±3.2%	Confidence levels of 95%
DC / AC Power Source	±1.4%	Confidence levels of 95%

2. GENERAL INFORMATION

2.1 Product Details

For more detailed features description, please refer to the manufacturer's specifications or user's manual.

Items	Description
Modulation	GFSK
Channel Bandwidth (99%)	1.014MHz
Max. Field Strength(Peak)	95.64dBμV/m
Max. Field Strength(Average)	59.16dBμV/m
ANT+ Channel Number	79
ANT+ Frequency Range	2402-2480MHz

2.2 Table for Test Modes

Investigation has been done on all the possible configurations for searching the worst cases. The following table is a list of the test modes shown in this test report.

Test Items	Mode
AC Power Line Conducted Emissions	CTX
Field Strength of Fundamental Emissions	CTX
Bandwidth	CTX
Radiated Emissions	CTX

Note:

1, CTX=continuously transmitting.

2, The programmed RF utility, "QRCT Tool" installed in the notebook to make the EUT get into the engineering modes to continuously transmit.

2.3 Table for Testing Locations

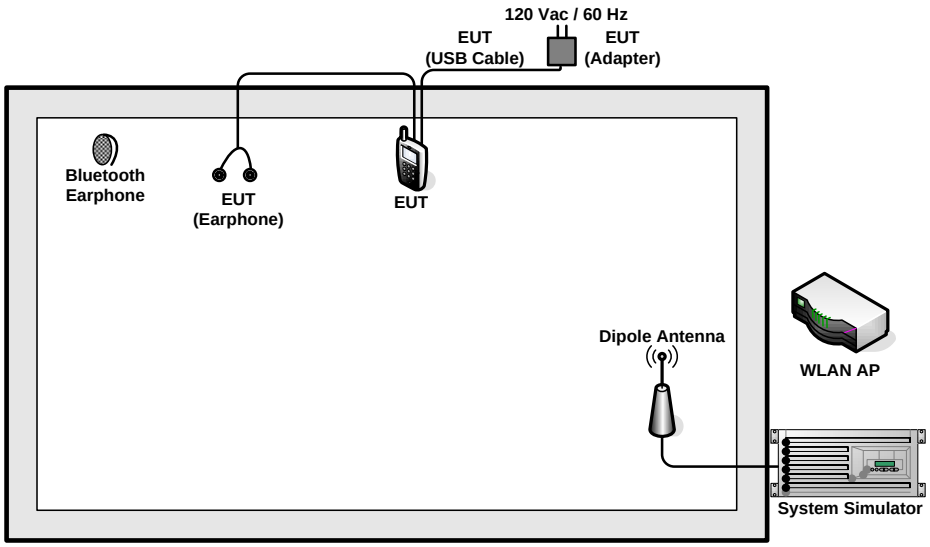
Test Site	SPORTON INTERNATIONAL INC.		
Test Site Location	No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. TEL: +886-3-327-3456 FAX: +886-3-328-4978		
Test Site No.	Sporton Site No.		
	TH02-HY	03CH07-HY	CO05-HY

2.4 Table for Supporting Units

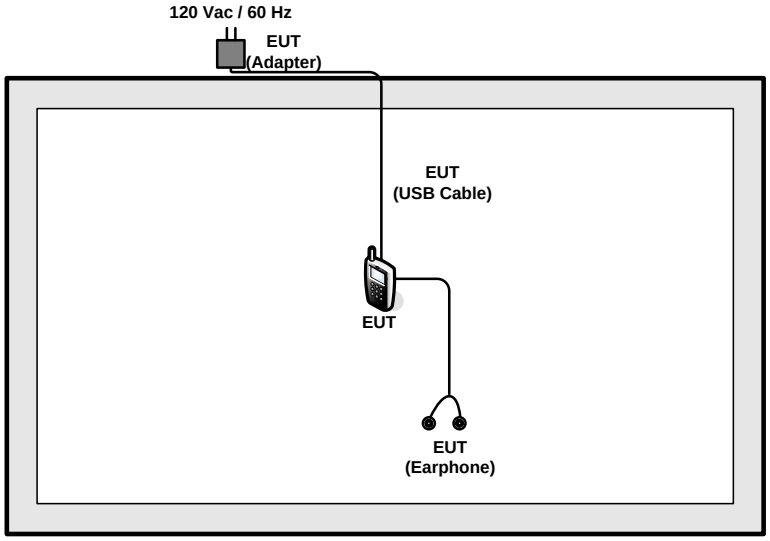
Support Unit	Manufacturer	Model	FCC ID
Bluetooth Earphone	Sony Ericsson	SBH20	PY7-RD0010

2.5 Test Configurations

<AC Conducted Emissions>



<Radiated Spurious Emissions>



3. TEST RESULT

3.1 AC Power Line Conducted Emissions Measurement

3.1.1 Limit

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

Frequency (MHz)	QP Limit (dBμV)	AV Limit (dBμV)
0.15~0.5	66~56	56~46
0.5~5	56	46
5~30	60	50

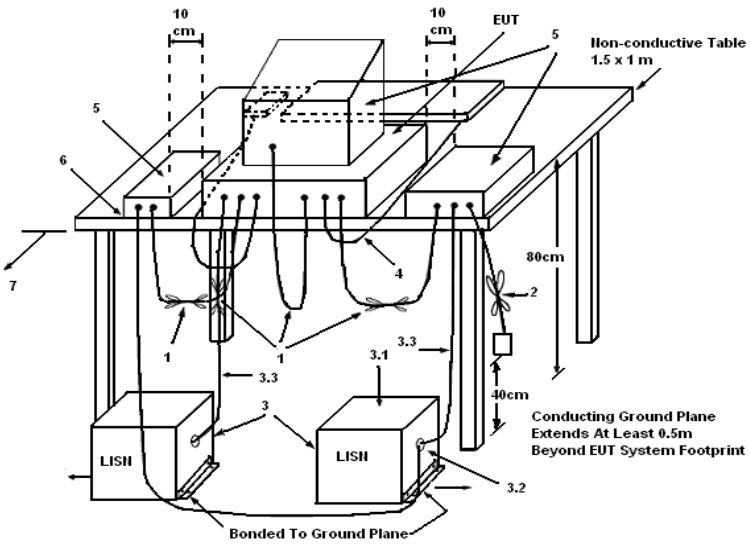
3.1.2 Measuring Instruments

Please refer to section 4 of equipment list in this report.

3.1.3 Test Procedures

1. Configure the EUT according to ANSI C63.4. The EUT or host of EUT has to be placed 0.4 meter far from the conducting wall of the shielding room and at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT or host of EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connected to the other LISNs. The LISN should provide 50uH/50ohms coupling impedance.
4. The frequency range from 150 kHz to 30 MHz was searched.
5. Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
6. The measurement has to be done between each power line and ground at the power terminal.

3.1.4 Test Setup Layout



LEGEND:

(1) 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.

(2) 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.

(3) EUT connected to one LISN. Unused LISN measuring port connectors shall be terminated in 50 Ω. LISN can be placed on top of, or immediately beneath, reference ground plane.

(3.1) All other equipment powered from additional LISN(s).

(3.2) Multiple outlet strip can be used for multiple power cords of non-EUT equipment.

(3.3) LISN at least 80 cm from nearest part of EUT chassis.

(4) Cables of hand-operated devices, such as keyboards, mice, etc., shall be placed as for normal use.

(5) Non-EUT components of EUT system being tested.

(6) Rear of EUT, including peripherals, shall all be aligned and flush with rear of tabletop.

(7) Rear of tabletop shall be 40 cm removed from a vertical conducting plane that is bonded to the ground plane.

3.1.5 Test Deviation

There is no deviation with the original standard.

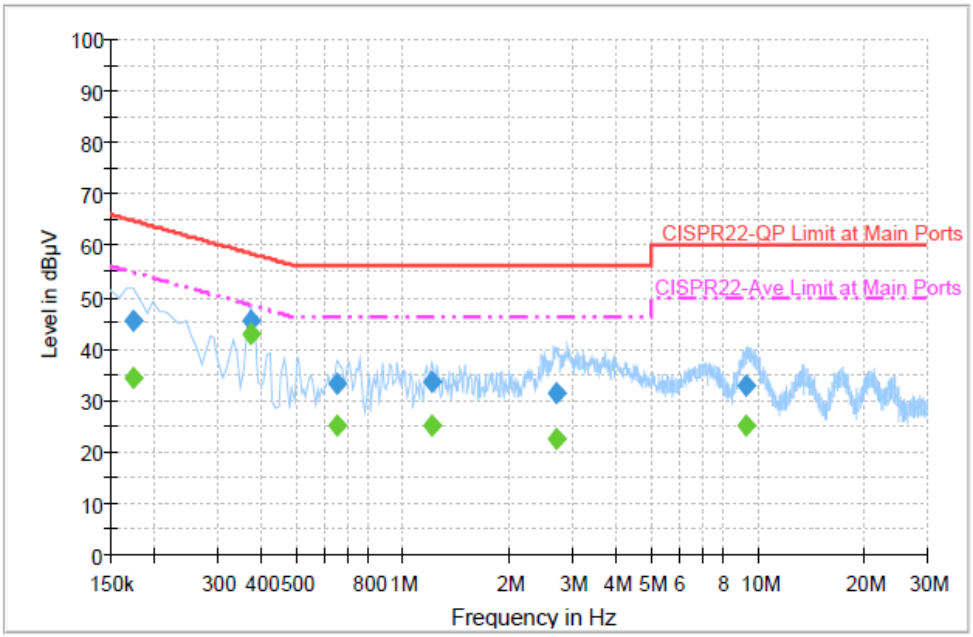
3.1.6 EUT Operation during Test

The EUT was placed on the test table and programmed in transmitting function.

3.1.7 Results of AC Power Line Conducted Emissions Measurement

Test Date	Mar. 14, 2014	Test Site No.	CO05-HY
Temperature	20~22°C	Humidity	45~47%
Test Engineer	Kai Chu	Configuration	ANT+ Transmitting Mode
Mode	GSM1900 Idle +Bluetooth Idle + WLAN Idle + ANT+ Tx + Earphone + Adapter + MP3 + Battery		

Line



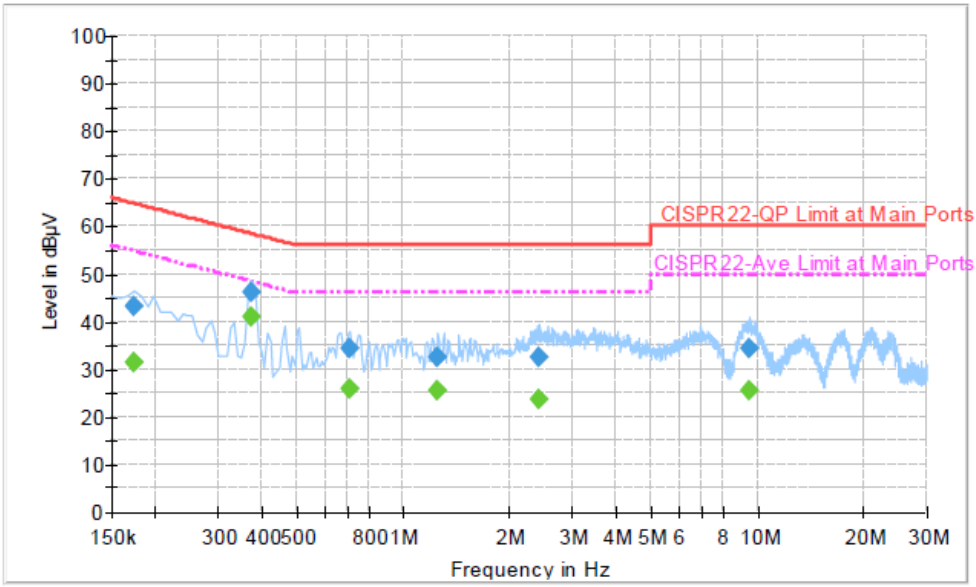
Final Result: Quasi-Peak

Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.174000	45.4	Off	L1	19.3	19.4	64.8
0.374000	45.3	Off	L1	19.4	13.1	58.4
0.654000	33.3	Off	L1	19.4	22.7	56.0
1.206000	33.7	Off	L1	19.6	22.3	56.0
2.718000	31.2	Off	L1	19.5	24.8	56.0
9.286000	32.9	Off	L1	19.6	27.1	60.0

Final Result: Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.174000	34.1	Off	L1	19.3	20.7	54.8
0.374000	42.7	Off	L1	19.4	5.7	48.4
0.654000	25.0	Off	L1	19.4	21.0	46.0
1.206000	25.2	Off	L1	19.6	20.8	46.0
2.718000	22.5	Off	L1	19.5	23.5	46.0
9.286000	25.1	Off	L1	19.6	24.9	50.0

Neutral



Final Result: Quasi-Peak

Frequency (MHz)	Quasi-Peak (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.174000	43.3	Off	N	19.3	21.5	64.8
0.374000	46.1	Off	N	19.4	12.3	58.4
0.710000	34.3	Off	N	19.5	21.7	56.0
1.254000	32.5	Off	N	19.5	23.5	56.0
2.430000	32.4	Off	N	19.7	23.6	56.0
9.526000	34.2	Off	N	19.7	25.8	60.0

Final Result: Average

Frequency (MHz)	Average (dBµV)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.174000	31.4	Off	N	19.3	23.4	54.8
0.374000	40.9	Off	N	19.4	7.5	48.4
0.710000	26.0	Off	N	19.5	20.0	46.0
1.254000	25.3	Off	N	19.5	20.7	46.0
2.430000	23.5	Off	N	19.7	22.5	46.0
9.526000	25.5	Off	N	19.7	24.5	50.0

3.2 20dB and & 99% Occupied Bandwidth

3.2.1 Limit

Intentional radiators must be designed to ensure that the 20 dB bandwidth of the emissions in the specific band.

3.2.2 Measuring Instruments

Please refer to section 4 of equipment list in this report.

3.2.3 Test Procedures

1. The transmitter output port was connected to the spectrum analyzer.
2. Measured the spectrum width with highest power setting.

3.2.4 Test Setup Layout

3.2.5 Test Deviation

There is no deviation with the original standard.

3.2.6 EUT Operation during Test

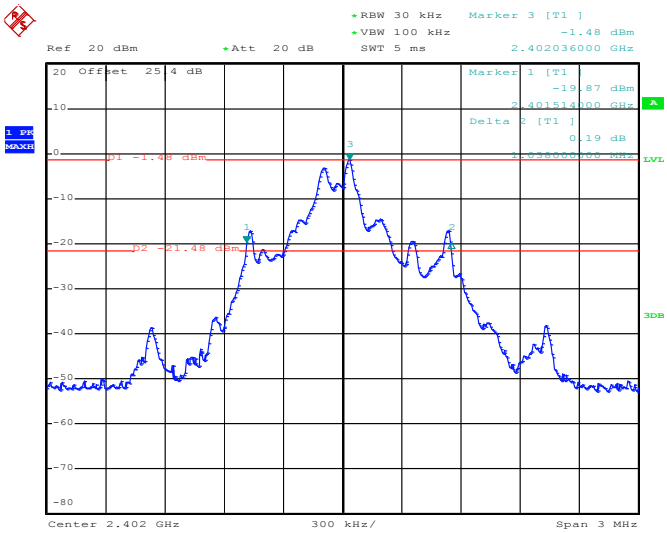
The EUT was programmed to be in continuously transmitting mode.

3.2.7 Test Result of 20dB Spectrum Bandwidth

Final Test Date	Mar. 12, 2014	Test Site No.	TH02-HY
Temperature	22~25°C	Humidity	53~55%
Test Engineer	Bill Kuo		

Frequency	20dB BW (MHz)	99% OBW (MHz)
2402MHz	1.038	1.014
2441MHz	1.038	1.014
2480MHz	1.038	1.014

20 dB Bandwidth Plot on 2402MHz



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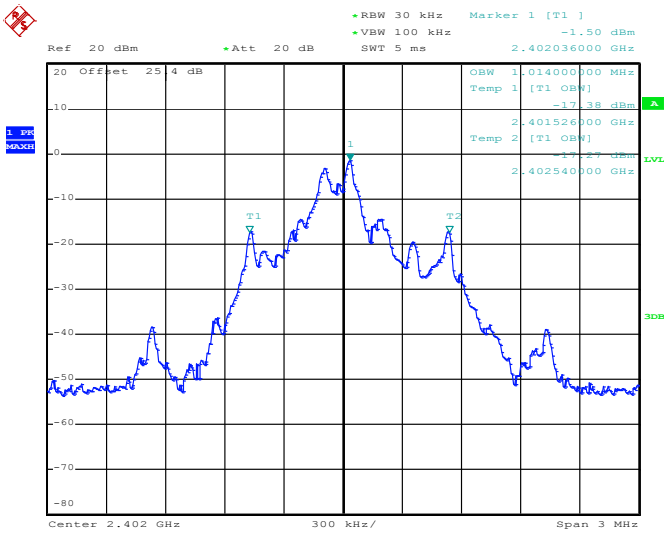
99% Bandwidth Plot on 2402MHz



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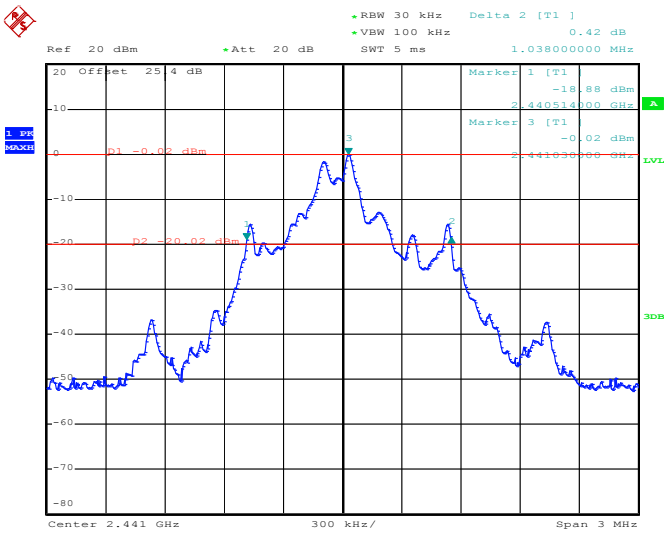
20 dB Bandwidth Plot on 2441MHz



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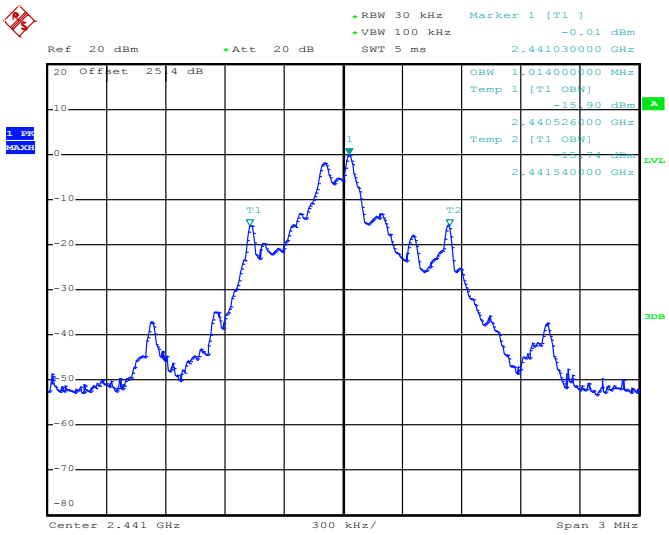
99% Bandwidth Plot on 2441MHz



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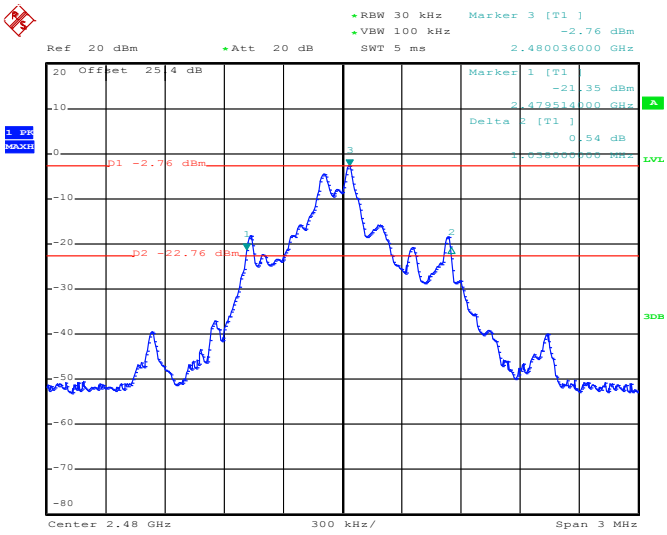
20 dB Bandwidth Plot on 2480MHz



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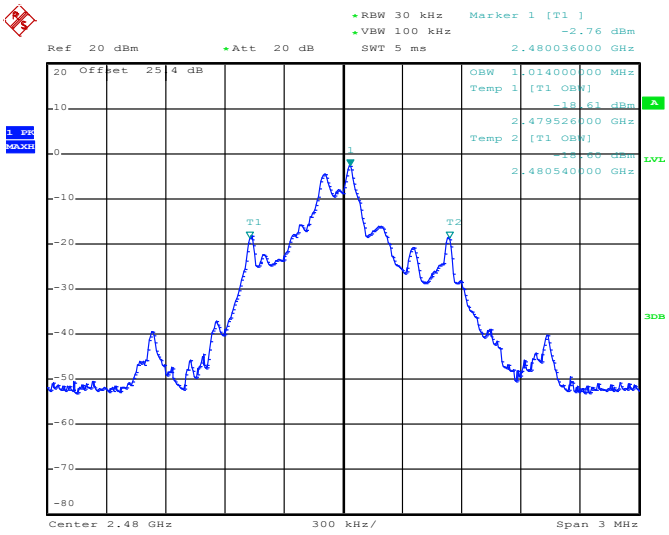
99% Bandwidth Plot on 2480MHz



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3.3 Field Strength of Fundamental Emissions and Radiated Spurious Emissions

3.3.1 Limit

The field strength measured at 3 meters shall not exceed the limits in the following table:

Fundamental Frequencies(MHz)	Field Strength(millivolts/m)	
	Fundamental	Harmonics
902~928	50	0.5
2400~2483.5	50	0.5
5725~5875	50	0.5

Note: The limits shown in the above table are based on measurements using an average detector, except for the fundamental emission in the frequency band 902-928 MHz, which is based on measurements using a CISPR quasi-peak detector.

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general field strength limits listed in 15.209 as below, whichever is less stringent.

Frequency (MHz)	Field Strength (microvolts/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

3.3.2 Measuring Instruments

Please refer to section 4 of equipment list in this report.

3.3.3 Test Procedures

1. The EUT was placed on a turntable with 0.8 meter above ground.
2. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.
3. For each suspected emission, the EUT was arranged to its worst case and then tune the Antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level to comply with the guidelines.
4. Set to the maximum power setting and enable the EUT transmit continuously.

Remark:

1. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level
2. For average measurement: use duty cycle correction factor method per 15.35(c).

   Duty cycle = On time/100 milliseconds

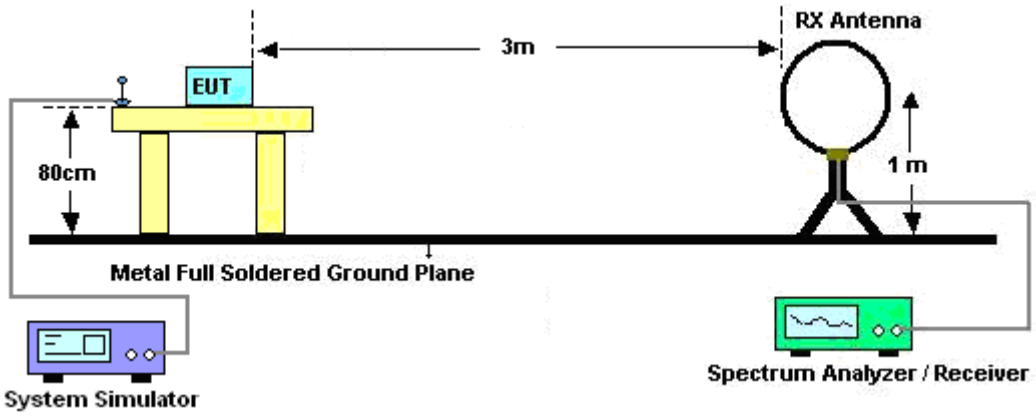
   On time = N1*L1+N2*L2+...+Nn-1*LNn-1+Nn*Ln

   Where N1 is number of type 1 pulses, L1 is length of type 1 pulses, etc.

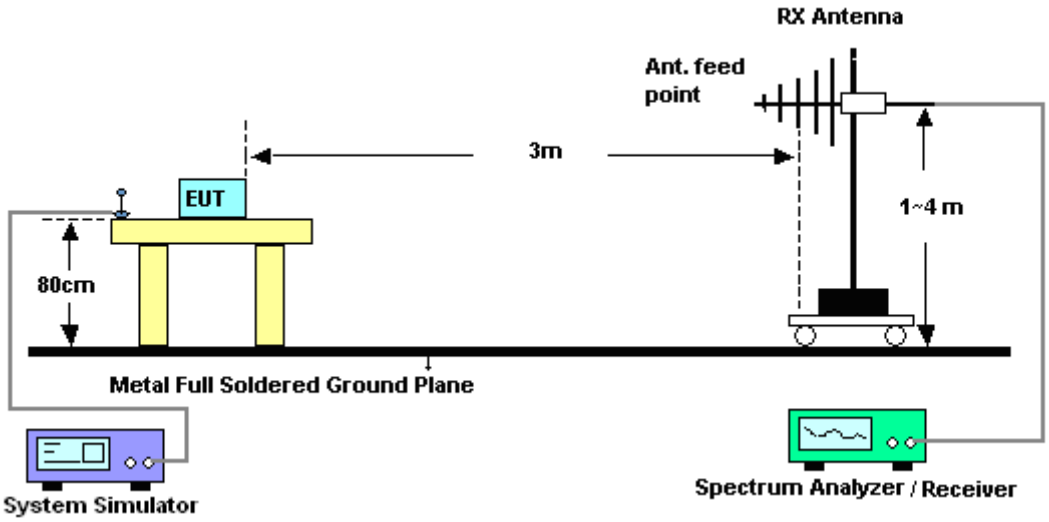
   Average Emission Level = Peak Emission Level + 20*log(Duty cycle)

3.3.4 Test Setup Layout

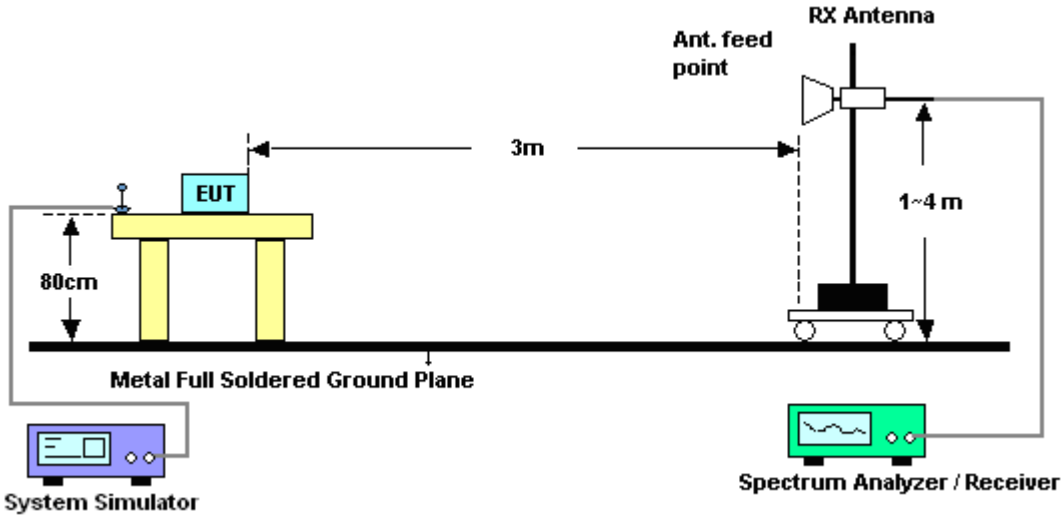
For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



3.3.5 Test Deviation

There is no deviation with the original standard.

3.3.6 EUT Operation during Test

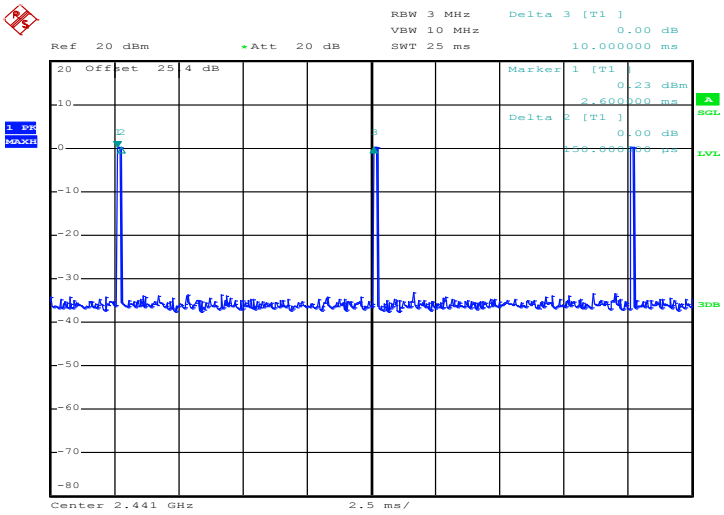
The EUT was programmed to be in continuously transmitting mode.

3.3.7 Test Results of Radiated Spurious Emissions (9 kHz ~ 30 MHz)

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.

3.3.8 Duty cycle correction factor for average measurement

On time (One Pulse) Plot on 2441MHz



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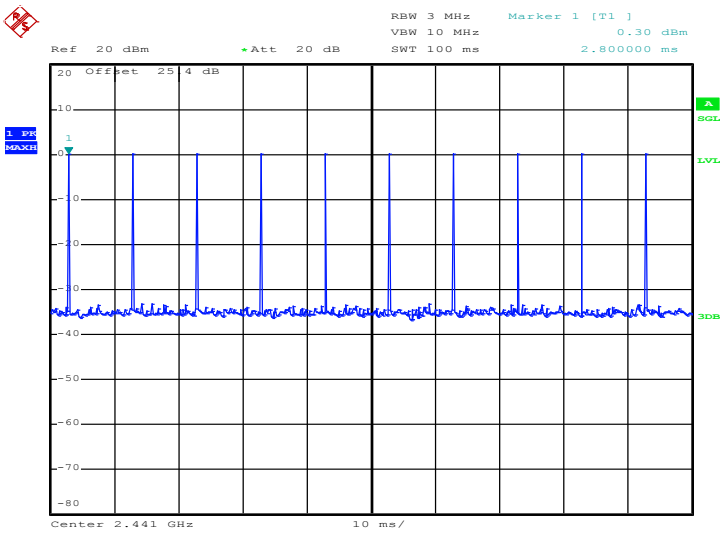
On time (Count Pulses) Plot on 2441MHz



Date: 12.MAR.2014 16:56:33

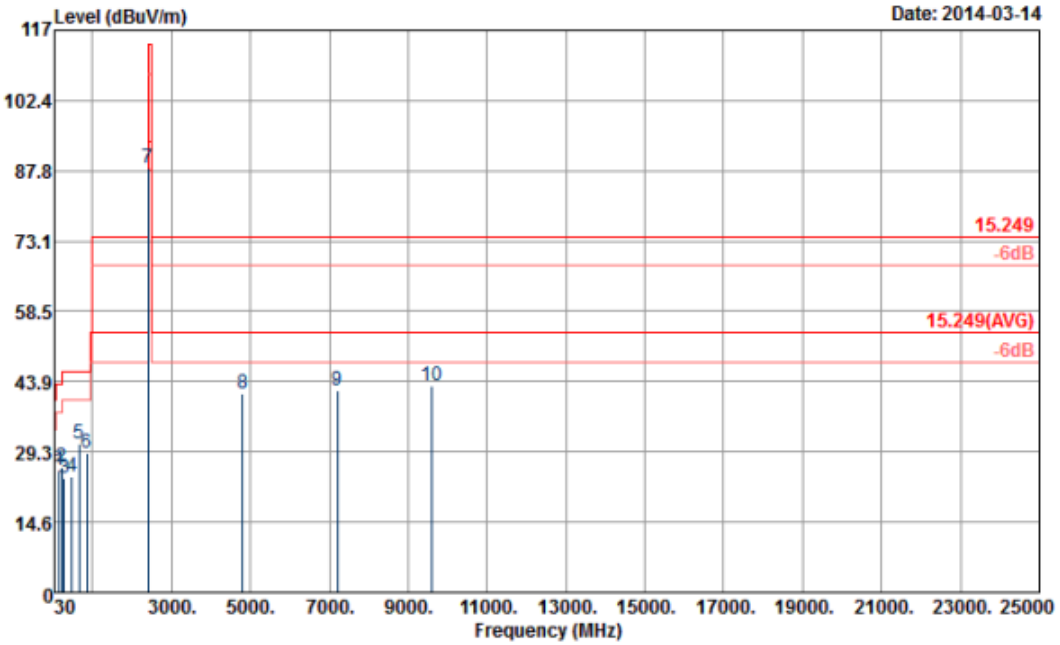
Note:

1. Worst case Duty cycle = on time/100 milliseconds = 10 * 0.15 / 100 = 1.5 %
2. Worst case Duty cycle correction factor = 20*log(Duty cycle) = -36.48 dB

3.3.9 Test Result of Field Strength of Fundamental Emissions and Spurious Emissions

Test Date	Mar. 14, 2014	Test Engineer	Eric Shih
Temperature	21~23°C	Humidity	40~42%

2402MHz



Site : 03CH07-HY
Condition : 15.249 3m SHF-EHF_131029 HORIZONTAL
Project : FR 3N0205
Mode : 1

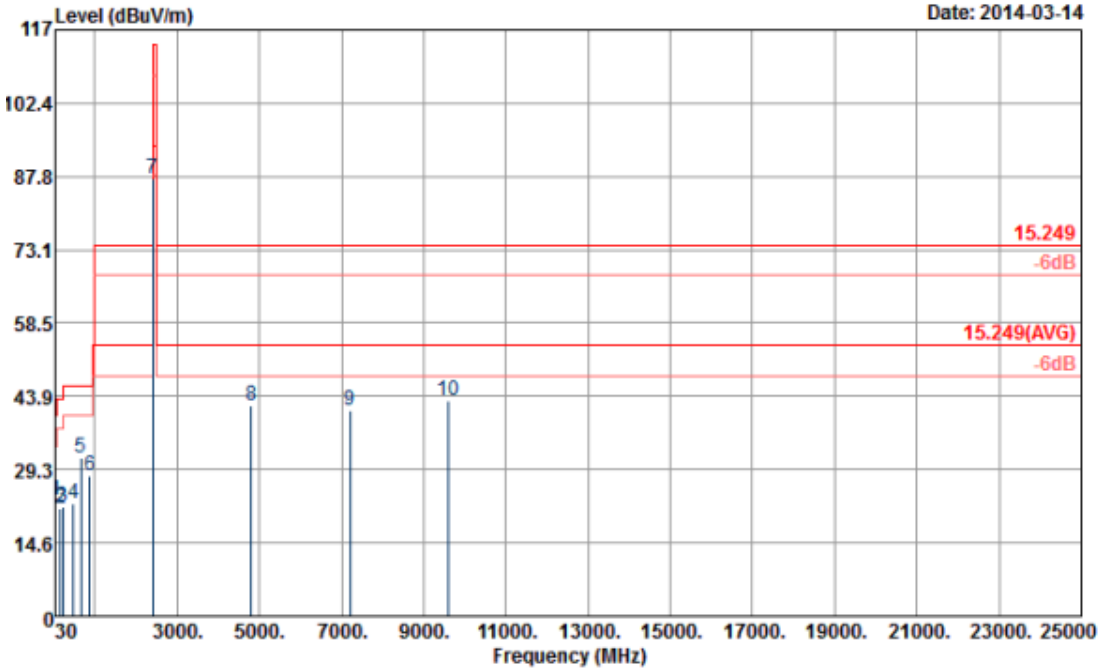
	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	156.09	25.30	-18.20	43.50	44.58	10.66	1.22	31.16	---	---	Peak
2	217.92	25.99	-20.01	46.00	46.32	9.28	1.41	31.02	---	---	Peak
3	272.46	23.65	-22.35	46.00	40.11	12.87	1.64	30.97	---	---	Peak
4	467.30	24.01	-21.99	46.00	35.00	17.47	2.34	30.80	---	---	Peak
5	664.00	31.05	-14.95	46.00	38.30	20.35	2.87	30.47	125	89	Peak
6	855.80	28.96	-17.04	46.00	32.82	23.25	3.28	30.39	---	---	Peak
7	2402.00	88.19	-25.81	114.00	83.28	32.30	6.91	34.30	190	141	Peak
8	4803.00	41.31	-32.69	74.00	57.54	33.98	8.75	58.96	100	0	Peak
9	7206.00	42.03	-31.97	74.00	53.29	35.56	10.81	57.63	100	0	Peak
10	9609.00	42.91	-31.09	74.00	51.45	36.44	13.70	58.68	100	0	Peak

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2402	88.19	-25.81	114	83.28	32.3	6.91	34.3	190	141	Peak
2402	51.71	-42.29	94	-	-	-	-	-	-	Avg.

Note: For average measurement: use duty cycle correction factor method per 15.35(c).

Average measurement was not performed if peak level went lower than the average limit.

Test result of emissions which are 20 dB lower than the limit is not reported per15.31.



Site : 03CH07-HY
Condition : 15.249 3m SHF-EHF_131029 VERTICAL
Project : FR 3N0205
Mode : 1

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	38.91	23.21	-16.79	40.00	39.38	14.44	0.61	31.22	---	---	Peak
2	158.79	21.35	-22.15	43.50	40.78	10.54	1.22	31.19	---	---	Peak
3	214.95	21.87	-21.63	43.50	42.28	9.25	1.39	31.05	---	---	Peak
4	479.90	22.64	-23.36	46.00	33.46	17.60	2.38	30.80	---	---	Peak
5	664.70	31.65	-14.35	46.00	38.90	20.35	2.87	30.47	172	256	Peak
6	867.70	27.87	-18.13	46.00	31.89	23.04	3.30	30.36	---	---	Peak
7	2402.00	87.23	-26.77	114.00	82.32	32.30	6.91	34.30	131	247	Peak
8	4803.00	41.89	-32.11	74.00	58.12	33.98	8.75	58.96	100	0	Peak
9	7206.00	41.02	-32.98	74.00	52.28	35.56	10.81	57.63	100	0	Peak
10	9609.00	43.05	-30.95	74.00	51.59	36.44	13.70	58.68	100	0	Peak

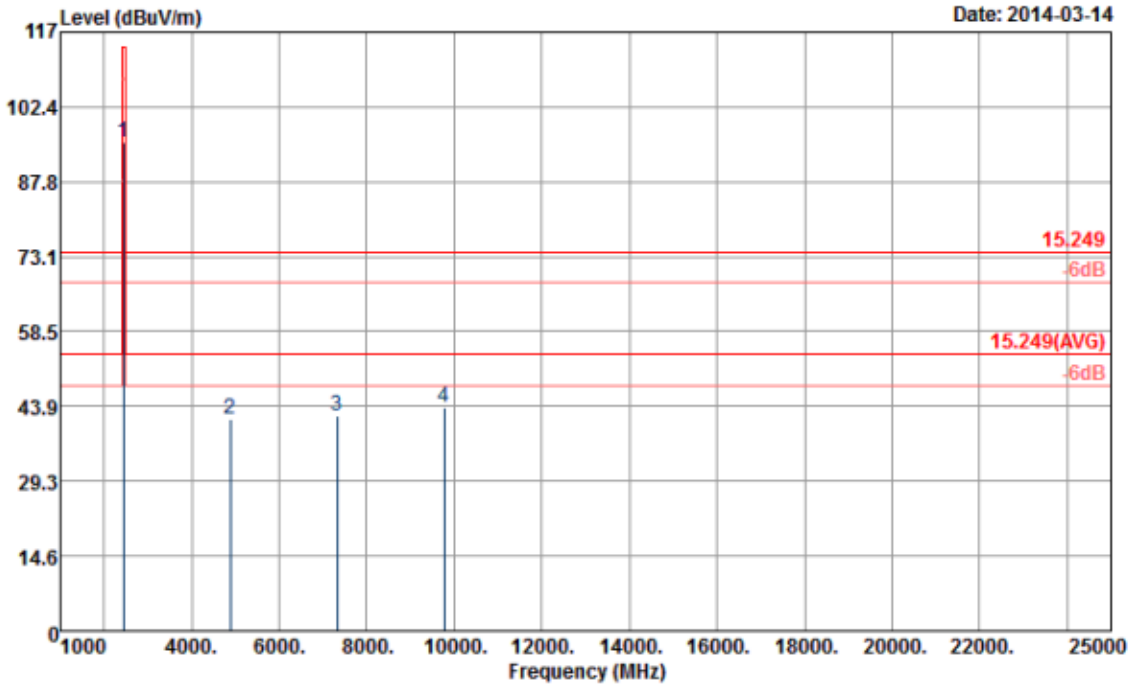
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2402	87.23	-26.77	114	82.32	32.3	6.91	34.3	131	247	Peak
2402	50.75	-43.25	94	-	-	-	-	-	-	Avg.

Note: For average measurement: use duty cycle correction factor method per 15.35(c).

Average measurement was not performed if peak level went lower than the average limit.

Test result of emissions which are 20 dB lower than the limit is not reported per15.31.

2441MHz



Site : 03CH07-HY
Condition : 15.249 3m SHF-EHF_131029 HORIZONTAL
Project : FR 3N0205
Mode : 2

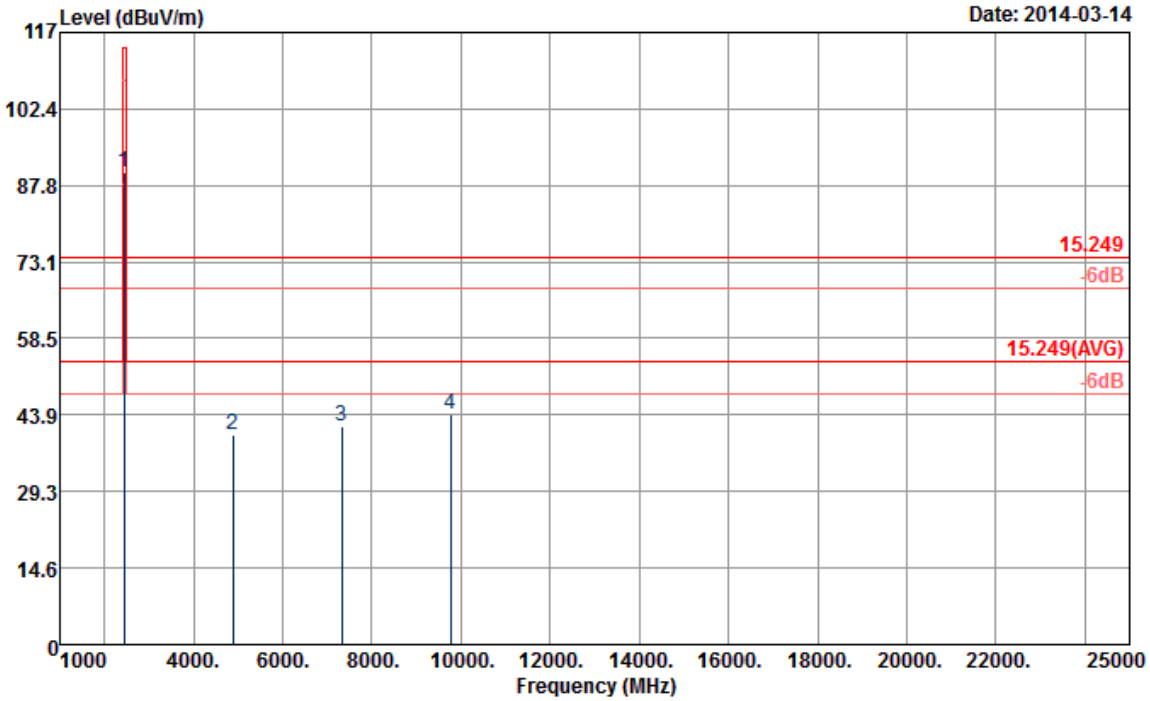
	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2442.00	95.64	-18.36	114.00	90.69	32.35	6.99	34.39	183	198	Peak
2	4881.00	41.39	-32.61	74.00	57.42	33.95	8.85	58.83	100	0	Peak
3	7323.00	42.12	-31.88	74.00	53.42	35.53	10.91	57.74	100	0	Peak
4	9765.00	43.52	-30.48	74.00	51.87	36.69	13.69	58.73	100	0	Peak

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2442	95.64	-18.36	114	90.69	32.35	6.99	34.39	183	198	Peak
2442	59.16	-34.84	94	-	-	-	-	-	-	Avg.

Note: For average measurement: use duty cycle correction factor method per 15.35(c).

Average measurement was not performed if peak level went lower than the average limit.

Test result of emissions which are 20 dB lower than the limit is not reported per15.31.



Site : 03CH07-HY
Condition : 15.249 3m SHF-EHF_131029 VERTICAL
Project : FR 3N0205
Mode : 2

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2442.00	90.32	-23.68	114.00	85.37	32.35	6.99	34.39	100	260	Peak
2	4881.00	40.12	-33.88	74.00	56.15	33.95	8.85	58.83	100	0	Peak
3	7323.00	41.60	-32.40	74.00	52.90	35.53	10.91	57.74	100	0	Peak
4	9765.00	44.07	-29.93	74.00	52.42	36.69	13.69	58.73	100	0	Peak

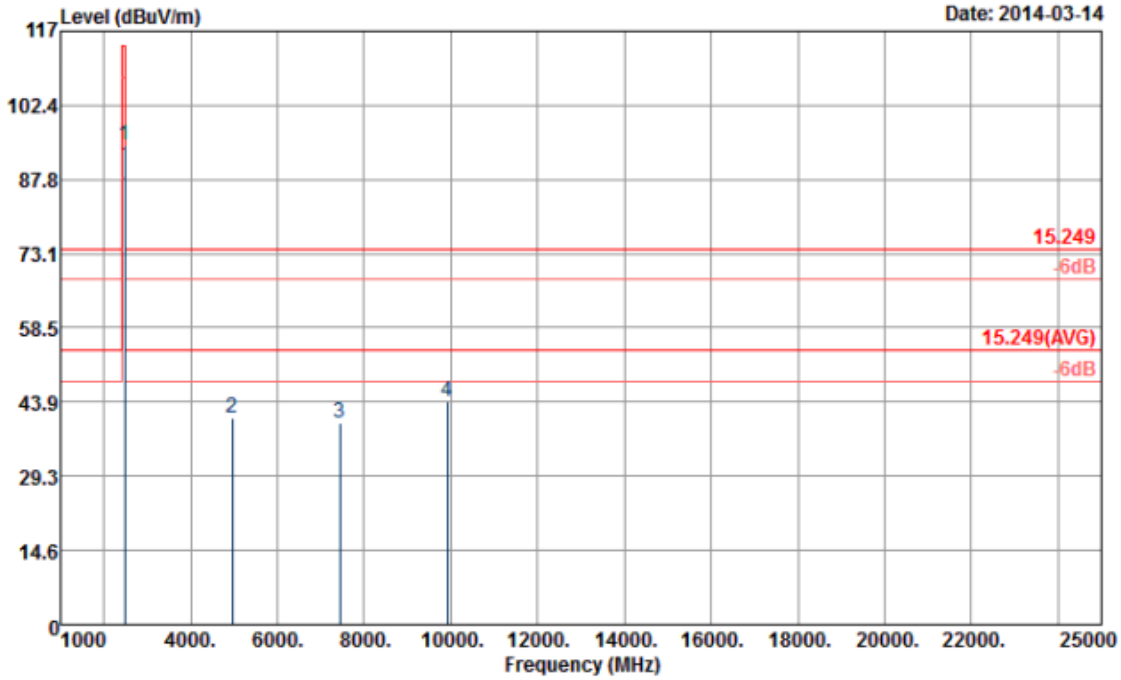
Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2442	90.32	-23.68	114	85.37	32.35	6.99	34.39	100	260	Peak
2442	53.84	-40.16	94	-	-	-	-	-	-	Avg.

Note: For average measurement: use duty cycle correction factor method per 15.35(c).

Average measurement was not performed if peak level went lower than the average limit.

Test result of emissions which are 20 dB lower than the limit is not reported per15.31.

2480MHz



Site : 03CH07-HY
Condition : 15.249 3m SHF-EHF_131029 HORIZONTAL
Project : FR 3N0205
Mode : 3

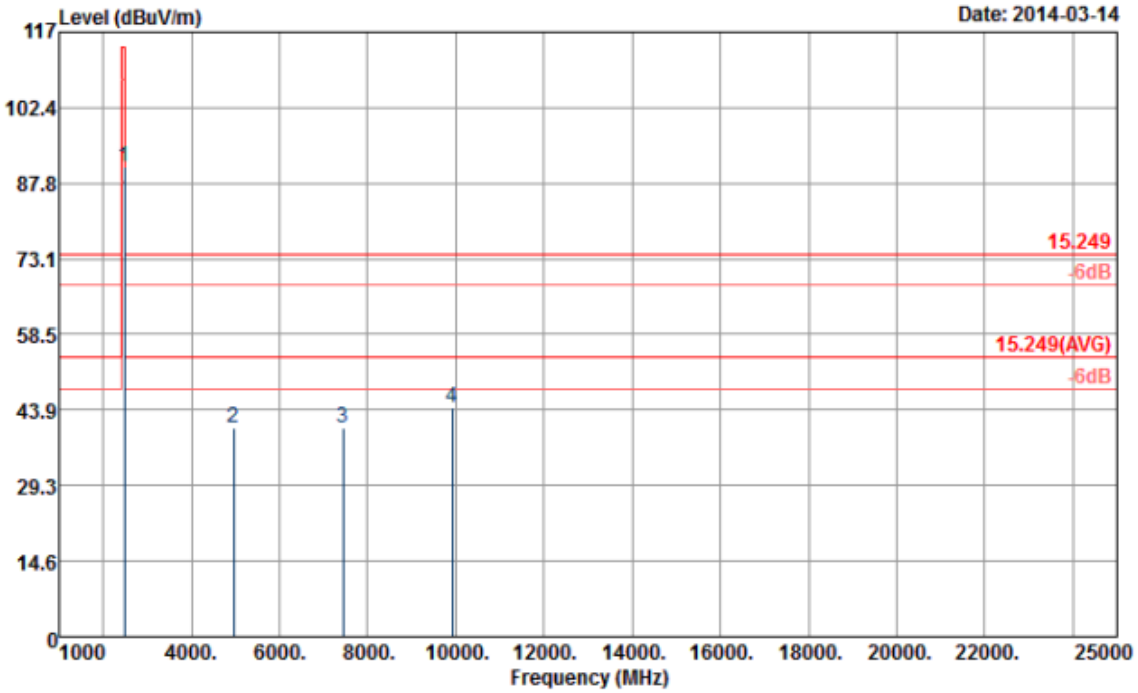
	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2480.00	94.37	-19.63	114.00	89.36	32.38	7.06	34.43	109	1	Peak
2	4959.00	40.66	-33.34	74.00	56.49	33.91	8.92	58.66	100	0	Peak
3	7440.00	39.90	-34.10	74.00	51.20	35.51	11.04	57.85	100	0	Peak
4	9921.00	44.06	-29.94	74.00	52.26	36.90	13.68	58.78	100	0	Peak

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2480	94.37	-19.63	114	89.36	32.38	7.06	34.43	109	1	Peak
2480	57.89	-36.11	94	-	-	-	-	-	-	Avg.

Note: For average measurement: use duty cycle correction factor method per 15.35(c).

Average measurement was not performed if peak level went lower than the average limit.

Test result of emissions which are 20 dB lower than the limit is not reported per15.31.



Site : 03CH07-HY
Condition : 15.249 3m SHF-EHF_131029 VERTICAL
Project : FR 3N0205
Mode : 3

	Freq	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2480.00	90.91	-23.09	114.00	85.90	32.38	7.06	34.43	130	240	Peak
2	4959.00	40.53	-33.47	74.00	56.36	33.91	8.92	58.66	100	0	Peak
3	7440.00	40.50	-33.50	74.00	51.80	35.51	11.04	57.85	100	0	Peak
4	9921.00	44.29	-29.71	74.00	52.49	36.90	13.68	58.78	100	0	Peak

Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
2480	90.91	-23.09	114	85.9	32.38	7.06	34.43	130	240	Peak
2480	54.43	-39.57	94	-	-	-	-	-	-	Avg.

Note: For average measurement: use duty cycle correction factor method per 15.35(c).

Average measurement was not performed if peak level went lower than the average limit.

Test result of emissions which are 20 dB lower than the limit is not reported per15.31.

3.4 Antenna Requirements

3.4.1 Limit

Except for special regulations, the Low-power Radio-frequency Devices must not be equipped with any jacket for installing an antenna with extension cable. 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 the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited.

3.4.2 Antenna Connector Construction

Enbedded in Antenna.

4. LIST OF MEASURING EQUIPMENT

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	Rohde & Schwarz	FSP40	100055	9kHz~40GHz	Jun. 07, 2013	Mar. 12, 2014	Jun. 06, 2014	Conducted (TH02-HY)
Power Meter	Agilent	E4416A	GB41292344	300MHz~40GHz	Jan. 28, 2014	Mar. 12, 2014	Jan. 27, 2015	Conducted (TH02-HY)
Power Sensor	Agilent	E9327A	US40441548	300MHz~40GHz	Jan. 28, 2014	Mar. 12, 2014	Jan. 27, 2015	Conducted (TH02-HY)
Hygrometer	Testo	608-H1	34897199	N/A	May 07, 2013	Mar. 12, 2014	May 06, 2014	Conducted (TH02-HY)
RF cable	HONOVA	MF86	N/A	N/A	Nov. 25, 2013	Mar. 12, 2014	Nov. 24, 2014	Conducted (TH02-HY)
EMI Test Receiver	Rohde & Schwarz	ESCI 7	100724	9kHz~7GHz	Sep. 06, 2013	Mar. 14, 2014	Sep. 05, 2014	Radiation (03CH07-HY
Spectrum Analyzer	Rohde & Schwarz	FSP30	101067	9 kHz ~ 30 GHz	Nov. 20, 2013	Mar. 14, 2014	Nov. 19, 2014	Radiation (03CH07-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	860004/0001	9 kHz~30 MhZ	Jul. 03, 2012	Mar. 14, 2014	Jul. 03, 2014	Radiation (03CH07-HY
Bilog Antenna	Schaffner	CBL6111C	2726	30MHz ~ 1GHz	Oct. 10, 2013	Mar. 14, 2014	Oct. 09, 2014	Radiation (03CH07-HY
Double Ridge Horn Antenna	ESCO	3117	75962	1GHz~18GHz	Aug. 22, 2013	Mar. 14, 2014	Aug. 21, 2014	Radiation (03CH07-HY
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170251	15GHz- 40GHz	Oct. 03, 2013	Mar. 14, 2014	Oct. 02, 2014	Radiation (03CH07-HY
Preamplifier	SONOMA	310N	187231	9kHz~1GHz	May 15, 2013	Mar. 14, 2014	May 14, 2014	Radiation (03CH07-HY
Preamplifier	Agilent	8449B	3008A02362	1 GHz~26.5 GHz	Nov. 29, 2013	Mar. 14, 2014	Nov. 28, 2014	Radiation (03CH07-HY
Preamplifier	MITEQ	AMF-7D-0010 1800-30-10P	159088	DC~18 G High Gain	Feb. 27, 2014	Mar. 14, 2014	Feb. 26, 2015	Radiation (03CH07-HY)
Turn Table	ChainTek	ChainTek 3000	N/A	0 ~ 360 degree	N/A	Mar. 14, 2014	N/A	Radiation (03CH07-HY
Antenna Mast	ChainTek	ChainTek 3000	N/A	N/A	N/A	Mar. 14, 2014	N/A	Radiation (03CH07-HY
High Pass Filter	Microwave	H03G18G3	N/A	3GHz HPF	Nov. 25, 2013	Mar. 14, 2014	Nov. 24, 2014	Radiation (03CH07-HY
High Pass Filter	Microwave	H07G18G3	282388	7GHz HPF	Nov. 28, 2013	Mar. 14, 2014	Nov. 27, 2014	Radiation (03CH07-HY
Low Pass Filter	Wainwright	WLKS1200-8SS	SN2	1.2GHz LPF	Nov. 28, 2013	Mar. 14, 2014	Nov. 27, 2014	Radiation (03CH07-HY
Test Software	Audix	E3	Version 6.2009-08-24	N/A	N/A	Mar. 14, 2014	N/A	Radiation (03CH07-HY
Hygrometer	Testo	608-H1	34897197	N/A	May 07, 2013	Mar. 14, 2014	May 06, 2014	Radiation (03CH07-HY
EMI Test Receiver	Rohde & Schwarz	ESCS 30	100356	9kHz ~ 2.75GHz	Nov. 15, 2013	Mar. 13, 2014	Nov. 14, 2014	Conduction (CO05-HY)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
LISN (for auxiliary equipment)	Rohde & Schwarz	ENV216	100081	9kHz ~ 30MHz	Dec. 12, 2013	Mar. 13, 2014	Dec. 11, 2014	Conduction (CO05-HY)
LISN	Rohde & Schwarz	ENV216	100080	9kHz ~ 30MHz	Dec. 04, 2013	Mar. 13, 2014	Dec. 03, 2014	Conduction (CO05-HY)
AC Power Source	APC	APC-1000W	N/A	N/A	N/A	Mar. 13, 2014	N/A	Conduction (CO05-HY)
Test Software	N/A	EMC32	8.40.0	N/A	N/A	Mar. 13, 2014	N/A	Conduction (CO05-HY)
Hygrometer	Testo	608-H1	34913912	N/A	Apr. 25, 2013,	Mar. 13, 2014	Apr. 24, 2014	Conduction (CO05-HY)
LF Cable	Shuner	RG-402	N/A	N/A	Oct. 17, 2013	Mar. 13, 2014	Oct. 16, 2014	Conduction (CO05-HY)

Note: Test equipment calibration is traceable to the procedure of ISO17025.