APPENDIX 2: Data of EMI test

Conducted Emission

DATA OF CONDUCTED EMISSION TEST

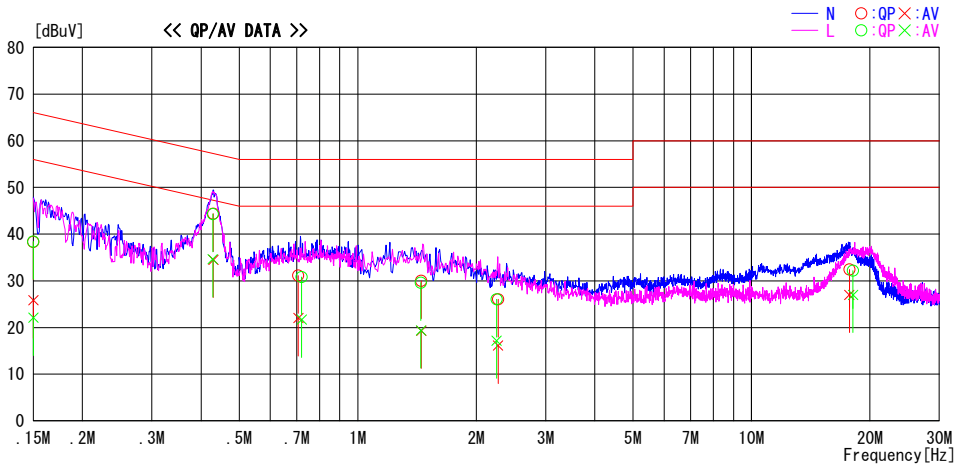
UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber
Date : 2011/04/21

Report No. : 31DE0278-HO-01

Temp./Humi. : 25 deg C / 37% RH
Engineer : Satofumi Matsuyama

Mode / Remarks : Tx 2404MHz Antenna 2

LIMIT : FCC15.207 QP
FCC15.207 AV



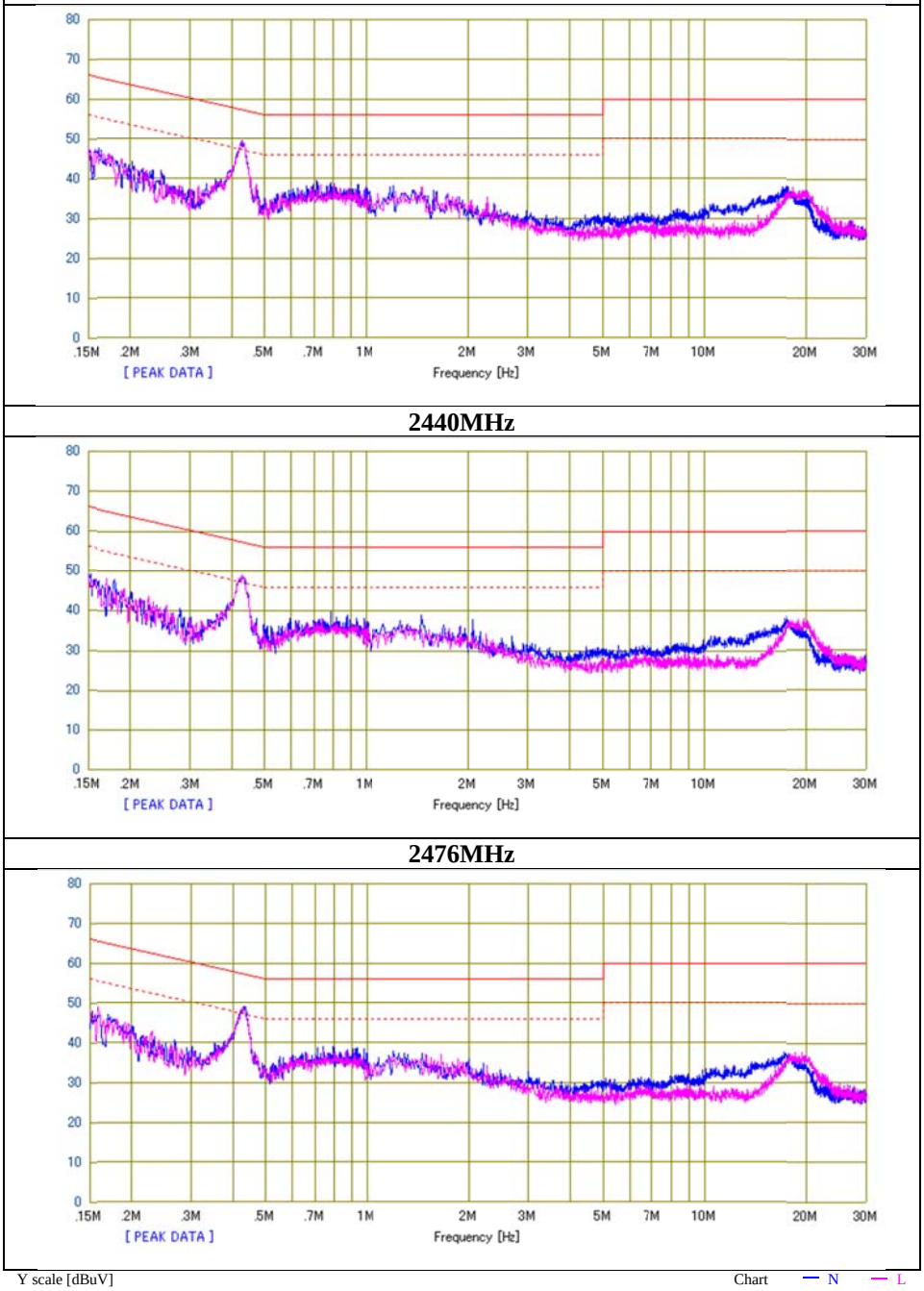
Frequency	Reading Level		Corr.	Results		Limit		Margin		Phase	Comment
	QP	AV	Factor	QP	AV	QP	AV	QP	AV		
[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dB]	[dB]		
0.15000	25.2	12.7	13.1	38.3	25.8	66.0	56.0	27.7	30.2	N	
0.42983	31.1	21.2	13.3	44.4	34.5	57.3	47.3	12.9	12.8	N	
0.70652	17.8	8.7	13.3	31.1	22.0	56.0	46.0	24.9	24.0	N	
1.45052	16.6	5.9	13.4	30.0	19.3	56.0	46.0	26.0	26.7	N	
2.27129	12.6	2.7	13.4	26.0	16.1	56.0	46.0	30.0	29.9	N	
17.72468	18.0	12.6	14.4	32.4	27.0	60.0	50.0	27.6	23.0	N	
0.15000	25.3	9.0	13.1	38.4	22.1	66.0	56.0	27.6	33.9	L	
0.42841	31.0	21.3	13.3	44.3	34.6	57.3	47.3	13.0	12.7	L	
0.72051	17.5	8.4	13.3	30.8	21.7	56.0	46.0	25.2	24.3	L	
1.44732	16.2	6.0	13.4	29.6	19.4	56.0	46.0	26.4	26.6	L	
2.25255	12.6	3.8	13.4	26.0	17.2	56.0	46.0	30.0	28.8	L	
18.10077	17.7	12.5	14.5	32.2	27.0	60.0	50.0	27.8	23.0	L	

CHART:WITH FACTOR,Peak hold data. CALCULATION:RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

Conducted Emission

Test place	Head Office EMC Lab. No.3 Semi Anechoic Chamber
Report No.	31DE0278-HO-01
Date	04/21/2011
Temperature/ Humidity	25 deg.C / 37% RH
Engineer	Satofumi Matsuyama
Mode	Tx Antenna 2

2404MHz



2440MHz

2476MHz

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6dB Bandwidth

Test place	Head Office EMC Lab. No.7 Shielded Room
Report No.	31DE0278-HO-01
Date	04/19/2011
Temperature/ Humidity	22deg. C / 33% RH
Engineer	Motoya Imura
Mode	Tx, Antenna 2

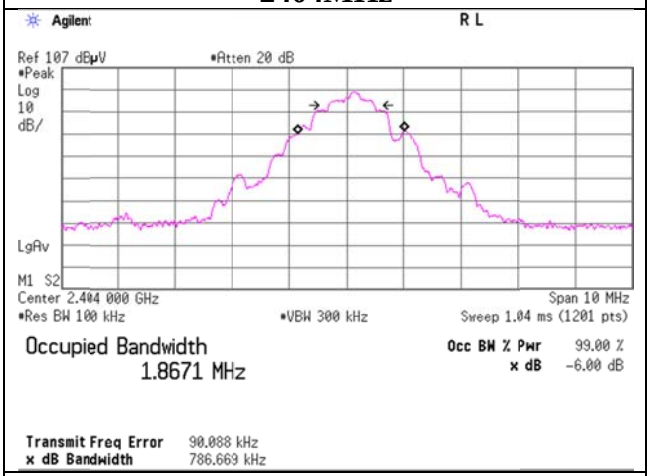
Antenna 2

Frequency [MHz]	6dB Bandwidth [MHz]	Limit [kHz]
2404	0.787	>500
2440	0.725	>500
2476	0.744	>500

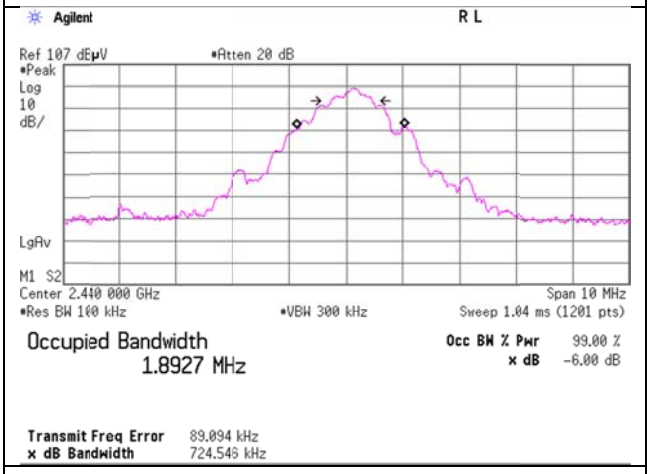
6dB Bandwidth

Antenna 2

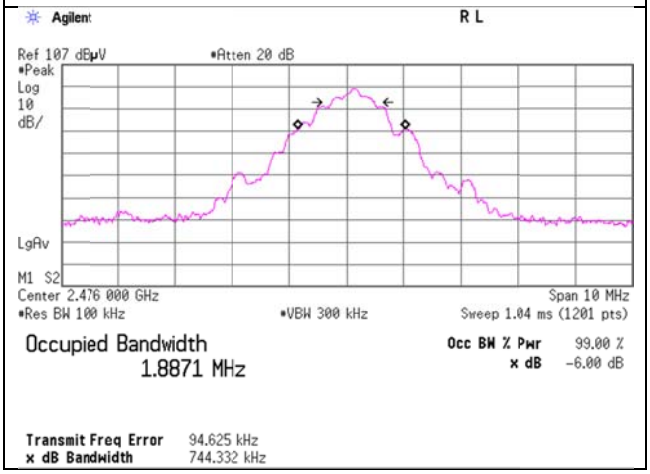
2404MHz



2440MHz



2476MHz



Maximum Peak Output Power

Test place	Head Office EMC Lab. No.7 Shielded Room
Report No.	31DE0278-HO-01
Date	04/19/2011
Temperature/ Humidity	22deg. C / 33% RH
Engineer	Motoya Imura
Mode	Tx Antenna 1, Antenna 2

Antenna 1

Freq.	Reading	Cable Loss	Atten.	Result		Limit		Margin
[MHz]	[dBm]	[dB]	[dB]	[dBm]	[mW]	[dBm]	[mW]	[dB]
2404	-10.08	2.63	0.00	-7.45	0.18	30.00	1000	37.45
2440	-10.04	2.64	0.00	-7.40	0.18	30.00	1000	37.40
2476	-10.14	2.65	0.00	-7.49	0.18	30.00	1000	37.49

Antenna 2

Freq.	Reading	Cable Loss	Atten.	Result		Limit		Margin
[MHz]	[dBm]	[dB]	[dB]	[dBm]	[mW]	[dBm]	[mW]	[dB]
2404	-10.01	2.63	0.00	-7.38	0.18	30.00	1000	37.38
2440	-9.95	2.64	0.00	-7.31	0.19	30.00	1000	37.31
2476	-9.98	2.65	0.00	-7.33	0.18	30.00	1000	37.33

Sample Calculation:
Result = Reading + Cable Loss (including the cable(s)) + Attenuator

Radiated Spurious Emission

Test place	Head Office EMC Lab. No.3 and 4 Semi Anechoic Chamber	
Report No.	31DE0278-HO-01	
Date	04/20/2011	04/21/2011
Temperature/ Humidity	24deg. C / 39% RH	25deg. C / 37% RH
Engineer	Hisayoshi Sato (30MHz-10GHz)	Satofumi Matsuyama (Above 10GHz)
Mode	Tx 2404MHz, Antenna 2	

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	79.500	QP	24.4	6.8	7.3	28.6	9.9	40.0	30.1	
Hori	100.650	QP	25.1	10.3	7.4	28.4	14.4	43.5	29.1	
Hori	108.300	QP	32.4	11.4	7.5	28.4	22.9	43.5	20.6	
Hori	539.165	QP	22.4	18.6	9.9	28.8	22.1	46.0	23.9	
Hori	1202.052	PK	50.5	24.6	1.8	34.2	42.7	73.9	31.2	
Hori	2388.180	PK	45.4	27.4	2.5	32.4	42.9	73.9	31.0	
Hori	2390.000	PK	40.7	27.4	2.5	32.4	38.2	73.9	35.7	
Hori	2400.000	PK	43.2	27.4	2.5	32.4	40.7	73.9	33.2	
Hori	2749.798	PK	43.2	28.0	2.7	32.4	41.5	73.9	32.4	
Hori	3606.151	PK	42.4	29.4	3.2	31.7	43.3	73.9	30.6	
Hori	4808.000	PK	43.7	31.3	5.1	31.3	48.8	73.9	25.2	
Hori	7212.000	PK	35.8	35.5	6.1	31.6	45.8	73.9	28.1	
Hori	9616.000	PK	39.7	38.4	6.7	31.9	52.9	73.9	21.0	
Hori	24040.000	PK	47.2	37.8	-1.4	31.6	52.0	73.9	21.9	
Hori	1202.052	AV	46.5	24.6	1.8	34.2	38.7	53.9	15.2	
Hori	2388.180	AV	32.9	27.4	2.5	32.4	30.4	53.9	23.5	
Hori	2390.000	AV	29.5	27.4	2.5	32.4	27.0	53.9	26.9	
Hori	2400.000	AV	31.8	27.4	2.5	32.4	29.3	53.9	24.6	
Hori	2749.798	AV	40.1	28.0	2.7	32.4	38.4	53.9	15.5	
Hori	3606.151	AV	32.9	29.4	3.2	31.7	33.8	53.9	20.1	
Hori	4808.000	AV	32.1	31.3	5.1	31.3	37.2	53.9	16.7	
Hori	7212.000	AV	27.0	35.5	6.1	31.6	37.0	53.9	16.9	
Hori	9616.000	AV	27.4	38.4	6.7	31.9	40.6	53.9	13.3	
Hori	24040.000	AV	35.2	37.8	-1.4	31.6	40.0	53.9	13.9	
Vert	79.950	QP	35.1	6.8	7.3	28.6	20.6	40.0	19.4	
Vert	100.200	QP	36.5	10.3	7.4	28.4	25.8	43.5	17.7	
Vert	108.750	QP	26.3	11.5	7.5	28.4	16.9	43.5	26.6	
Vert	535.665	QP	24.5	18.5	9.9	28.8	24.1	46.0	21.9	
Vert	1202.051	PK	50.8	24.6	1.8	34.2	43.0	73.9	30.9	
Vert	2387.978	PK	46.2	27.4	2.5	32.4	43.7	73.9	30.2	
Vert	2390.000	PK	43.0	27.4	2.5	32.4	40.5	73.9	33.4	
Vert	2400.000	PK	44.7	27.4	2.5	32.4	42.2	73.9	31.7	
Vert	2749.798	PK	49.4	28.0	2.7	32.4	47.7	73.9	26.2	
Vert	3606.152	PK	42.1	29.4	3.2	31.7	43.0	73.9	30.9	
Vert	4808.000	PK	50.0	31.3	5.1	31.3	55.1	73.9	18.8	
Vert	7212.000	PK	37.9	35.5	6.1	31.6	47.9	73.9	26.0	
Vert	9616.000	PK	39.8	38.4	6.7	31.9	53.0	73.9	20.9	
Vert	24040.000	PK	46.8	37.8	-1.4	31.6	51.6	73.9	22.3	
Vert	1202.051	AV	46.8	24.6	1.8	34.2	39.0	53.9	14.9	
Vert	2387.978	AV	33.8	27.4	2.5	32.4	31.3	53.9	22.6	
Vert	2390.000	AV	31.0	27.4	2.5	32.4	28.5	53.9	25.4	
Vert	2400.000	AV	33.5	27.4	2.5	32.4	31.0	53.9	22.9	
Vert	2749.798	AV	46.6	28.0	2.7	32.4	44.9	53.9	9.0	
Vert	3606.152	AV	31.8	29.4	3.2	31.7	32.7	53.9	21.2	
Vert	4808.000	AV	42.3	31.3	5.1	31.3	47.4	53.9	6.5	
Vert	7212.000	AV	27.5	35.5	6.1	31.6	37.5	53.9	16.4	
Vert	9616.000	AV	27.6	38.4	6.7	31.9	40.8	53.9	13.1	
Vert	24040.000	AV	35.2	37.8	-1.4	31.6	40.0	53.9	13.9	

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier)

*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

*The 10th harmonic was not seen so the result was its base noise level.

Distance factor: 10GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB

Radiated Spurious Emission

Test place	Head Office EMC Lab. No.3 and 4 Semi Anechoic Chamber	
Report No.	31DE0278-HO-01	
Date	04/20/2011	04/21/2011
Temperature/ Humidity	24deg. C / 39% RH	25deg. C / 37% RH
Engineer	Hisayoshi Sato (30MHz-10GHz)	Satofumi Matsuyama (Above 10GHz)
Mode	Tx 2440MHz, Antenna 2	

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	33.600	QP	25.3	17.2	6.8	28.7	20.6	40.0	19.4	
Hori	61.950	QP	24.3	7.6	7.1	28.6	10.4	40.0	29.6	
Hori	98.400	QP	25.0	10.0	7.4	28.4	14.0	43.5	29.5	
Hori	100.200	QP	24.4	10.3	7.4	28.4	13.7	43.5	29.8	
Hori	108.300	QP	30.4	11.4	7.5	28.4	20.9	43.5	22.6	
Hori	539.165	QP	23.1	18.6	9.9	28.8	22.8	46.0	23.2	
Hori	1220.058	PK	50.6	24.7	1.8	34.1	43.0	73.9	30.9	
Hori	2749.798	PK	43.0	28.0	2.7	32.4	41.3	73.9	32.6	
Hori	3660.174	PK	42.8	29.4	3.2	31.7	43.7	73.9	30.2	
Hori	4880.000	PK	43.2	31.5	5.1	31.3	48.5	73.9	25.4	
Hori	7320.000	PK	35.5	35.7	6.2	31.6	45.8	73.9	28.1	
Hori	9760.000	PK	39.5	38.5	6.8	31.8	53.0	73.9	20.9	
Hori	24400.000	PK	46.0	37.9	-1.3	31.4	51.2	73.9	22.7	
Hori	1220.058	AV	45.9	24.7	1.8	34.1	38.3	53.9	15.6	
Hori	2749.798	AV	40.0	28.0	2.7	32.4	38.3	53.9	15.6	
Hori	3660.174	AV	32.1	29.4	3.2	31.7	33.0	53.9	20.9	
Hori	4880.000	AV	31.9	31.5	5.1	31.3	37.2	53.9	16.7	
Hori	7320.000	AV	26.9	35.7	6.2	31.6	37.2	53.9	16.7	
Hori	9760.000	AV	27.1	38.5	6.8	31.8	40.6	53.9	13.3	
Hori	24400.000	AV	34.2	37.9	-1.3	31.4	39.4	53.9	14.5	
Vert	32.700	QP	26.5	17.4	6.8	28.7	22.0	40.0	18.0	
Vert	61.500	QP	34.1	7.7	7.1	28.6	20.3	40.0	19.7	
Vert	98.400	QP	34.6	10.0	7.4	28.4	23.6	43.5	19.9	
Vert	100.200	QP	34.9	10.3	7.4	28.4	24.2	43.5	19.3	
Vert	107.850	QP	25.1	11.4	7.5	28.4	15.6	43.5	27.9	
Vert	537.999	QP	23.1	18.6	9.9	28.8	22.8	46.0	23.2	
Vert	1220.054	PK	50.2	24.7	1.8	34.1	42.6	73.9	31.3	
Vert	2749.798	PK	49.1	28.0	2.7	32.4	47.4	73.9	26.5	
Vert	3660.172	PK	42.7	29.4	3.2	31.7	43.6	73.9	30.3	
Vert	4880.000	PK	48.9	31.5	5.1	31.3	54.2	73.9	19.7	
Vert	7320.000	PK	37.6	35.7	6.2	31.6	47.9	73.9	26.0	
Vert	9760.000	PK	39.4	38.5	6.8	31.8	52.9	73.9	21.0	
Vert	24400.000	PK	45.8	37.9	-1.3	31.4	51.0	73.9	22.9	
Vert	1220.054	AV	45.9	24.7	1.8	34.1	38.3	53.9	15.6	
Vert	2749.798	AV	46.3	28.0	2.7	32.4	44.6	53.9	9.3	
Vert	3660.172	AV	32.1	29.4	3.2	31.7	33.0	53.9	20.9	
Vert	4880.000	AV	41.4	31.5	5.1	31.3	46.7	53.9	7.2	
Vert	7320.000	AV	27.3	35.7	6.2	31.6	37.6	53.9	16.3	
Vert	9760.000	AV	27.1	38.5	6.8	31.8	40.6	53.9	13.3	
Vert	24400.000	AV	34.2	37.9	-1.3	31.4	39.4	53.9	14.5	

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier)

*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

*The 10th harmonic was not seen so the result was its base noise level.

Distance factor: 10GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB

Radiated Spurious Emission

Test place	Head Office EMC Lab. No.3 and 4 Semi Anechoic Chamber	
Report No.	31DE0278-HO-01	
Date	04/20/2011	04/21/2011
Temperature/ Humidity	24deg. C / 39% RH	25deg. C / 37% RH
Engineer	Hisayoshi Sato (30MHz-10GHz)	Satofumi Matsuyama (Above 10GHz)
Mode	Tx 2476MHz, Antenna 2	

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	98.400	QP	30.7	10.0	7.4	28.4	19.7	43.5	23.8	
Hori	99.750	QP	26.8	10.2	7.4	28.4	16.0	43.5	27.5	
Hori	108.300	QP	33.0	11.4	7.5	28.4	23.5	43.5	20.0	
Hori	533.332	QP	24.3	18.5	9.9	28.8	23.9	46.0	22.1	
Hori	1237.956	PK	50.4	24.8	1.8	34.1	42.9	73.9	31.0	
Hori	2483.500	PK	42.5	27.6	2.6	32.4	40.3	73.9	33.6	
Hori	2492.084	PK	45.4	27.6	2.6	32.4	43.2	73.9	30.7	
Hori	2749.798	PK	43.2	28.0	2.7	32.4	41.5	73.9	32.4	
Hori	3713.820	PK	42.7	29.5	3.2	31.7	43.7	73.9	30.2	
Hori	4952.000	PK	45.2	31.7	5.1	31.3	50.7	73.9	23.2	
Hori	7428.000	PK	38.1	35.8	6.3	31.7	48.5	73.9	25.4	
Hori	9904.000	PK	40.2	38.7	7.0	31.8	54.1	73.9	19.8	
Hori	24760.000	PK	47.6	38.0	-1.2	31.2	53.2	73.9	20.7	
Hori	1237.956	AV	46.0	24.8	1.8	34.1	38.5	53.9	15.4	
Hori	2483.500	AV	30.9	27.6	2.6	32.4	28.7	53.9	25.2	
Hori	2492.084	AV	33.1	27.6	2.6	32.4	30.9	53.9	23.0	
Hori	2749.798	AV	40.1	28.0	2.7	32.4	38.4	53.9	15.5	
Hori	3713.820	AV	31.9	29.5	3.2	31.7	32.9	53.9	21.0	
Hori	4952.000	AV	31.9	31.7	5.1	31.3	37.4	53.9	16.5	
Hori	7428.000	AV	27.4	35.8	6.3	31.7	37.8	53.9	16.1	
Hori	9904.000	AV	27.8	38.7	7.0	31.8	41.7	53.9	12.2	
Hori	24760.000	AV	35.7	38.0	-1.2	31.2	41.3	53.9	12.6	
Vert	98.400	QP	33.3	10.0	7.4	28.4	22.3	43.5	21.2	
Vert	100.200	QP	34.3	10.3	7.4	28.4	23.6	43.5	19.9	
Vert	109.200	QP	26.3	11.6	7.5	28.4	17.0	43.5	26.5	
Vert	534.499	QP	25.3	18.5	9.9	28.8	24.9	46.0	21.1	
Vert	1237.952	PK	50.4	24.8	1.8	34.1	42.9	73.9	31.0	
Vert	2483.500	PK	41.6	27.6	2.6	32.4	39.4	73.9	34.5	
Vert	2492.092	PK	47.9	27.6	2.6	32.4	45.7	73.9	28.2	
Vert	2749.798	PK	50.1	28.0	2.7	32.4	48.4	73.9	25.5	
Vert	3713.818	PK	42.5	29.5	3.2	31.7	43.5	73.9	30.4	
Vert	4952.000	PK	47.0	31.7	5.1	31.3	52.5	73.9	21.4	
Vert	7428.000	PK	38.0	35.8	6.3	31.7	48.4	73.9	25.5	
Vert	9904.000	PK	40.0	38.7	7.0	31.8	53.9	73.9	20.0	
Vert	24760.000	PK	47.6	38.0	-1.2	31.2	53.2	73.9	20.7	
Vert	1237.952	AV	45.8	24.8	1.8	34.1	38.3	53.9	15.6	
Vert	2483.500	AV	31.1	27.6	2.6	32.4	28.9	53.9	25.0	
Vert	2492.092	AV	36.2	27.6	2.6	32.4	34.0	53.9	19.9	
Vert	2749.798	AV	46.9	28.0	2.7	32.4	45.2	53.9	8.7	
Vert	3713.818	AV	31.9	29.5	3.2	31.7	32.9	53.9	21.0	
Vert	4952.000	AV	38.0	31.7	5.1	31.3	43.5	53.9	10.4	
Vert	7428.000	AV	27.7	35.8	6.3	31.7	38.1	53.9	15.8	
Vert	9904.000	AV	27.9	38.7	7.0	31.8	41.8	53.9	12.1	
Vert	24760.000	AV	35.7	38.0	-1.2	31.2	41.3	53.9	12.6	

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier)

*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

*The 10th harmonic was not seen so the result was its base noise level.

Distance factor: 10GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB

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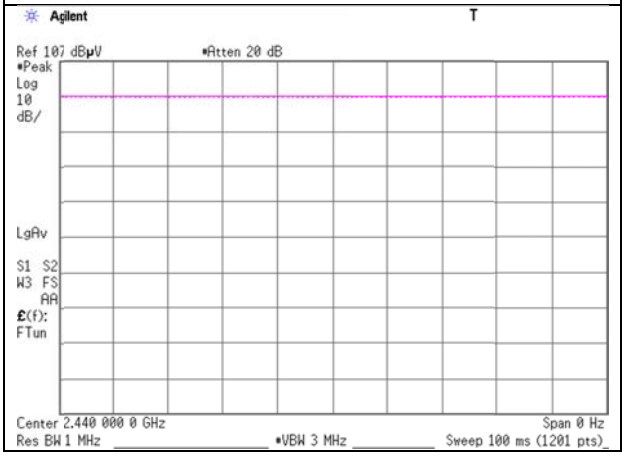
VBW (AV) Calculation

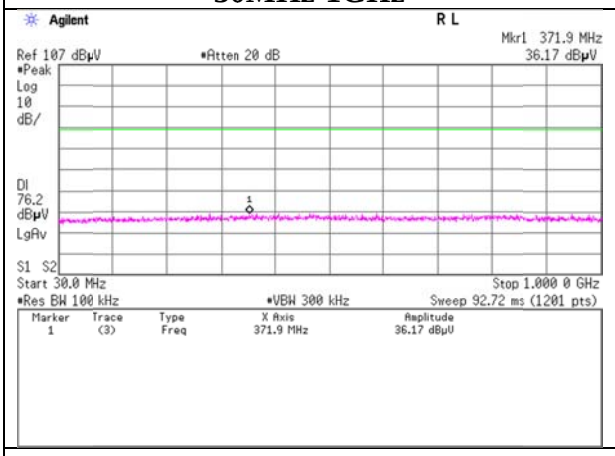
VBW : 10Hz



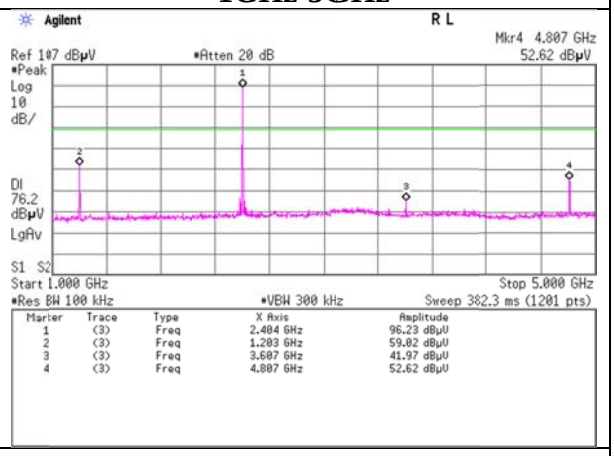
Conducted Spurious Emission

Antenna 2 2404MHz

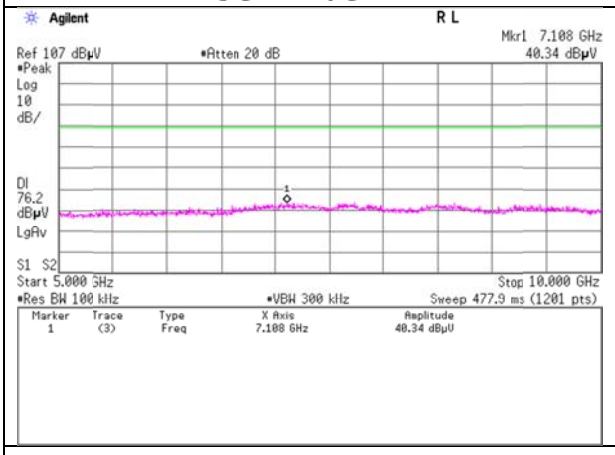
30MHz-1GHz



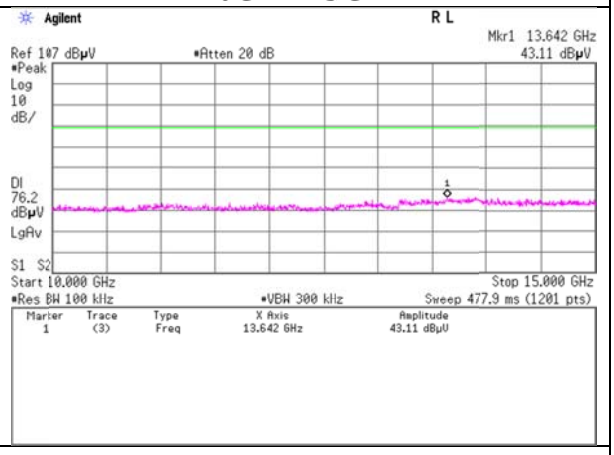
1GHz-5GHz



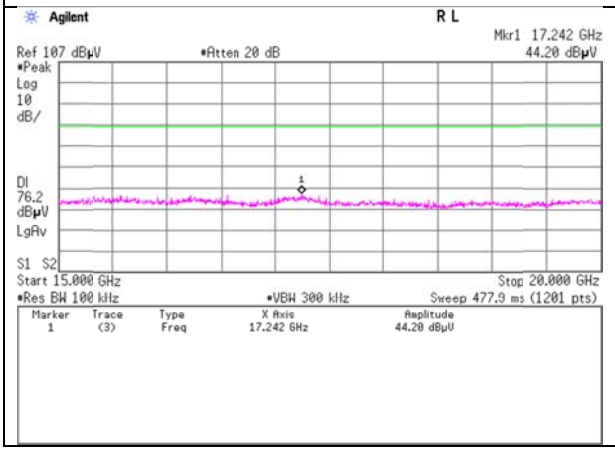
5GHz-10GHz



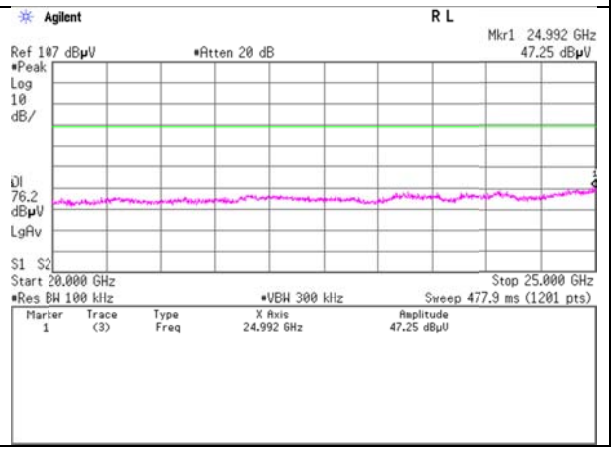
10GHz-15GHz



15GHz-20GHz



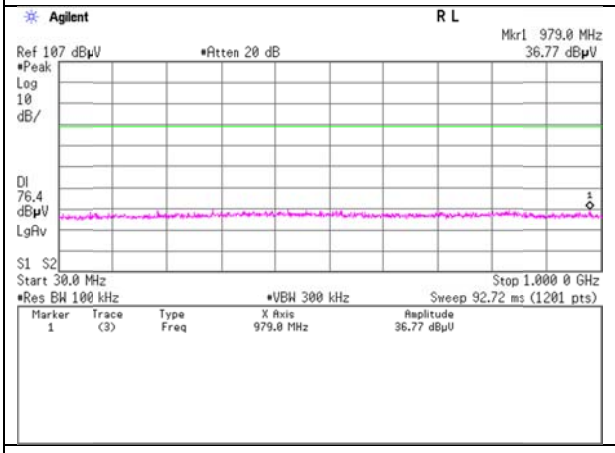
20GHz-25GHz



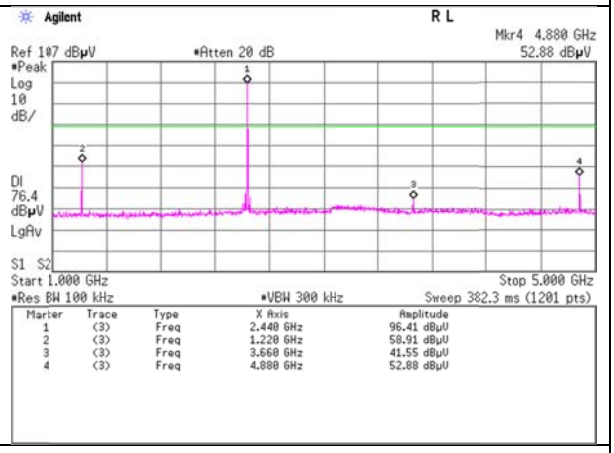
Conducted Spurious Emission

Antenna 2 Tx 2440MHz

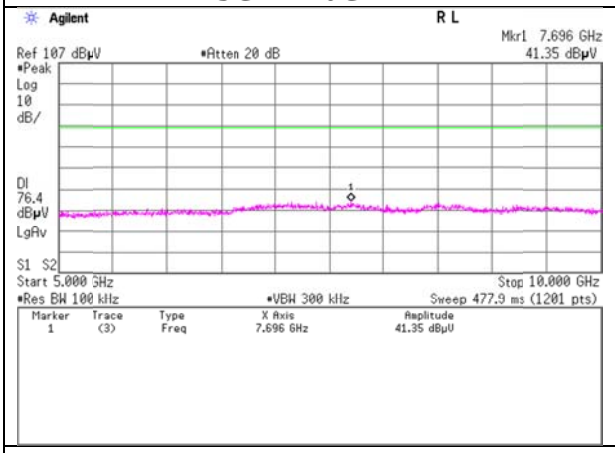
30MHz-1GHz



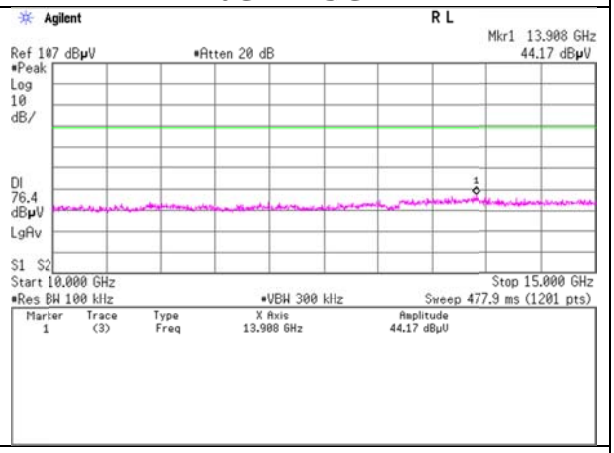
1GHz-5GHz



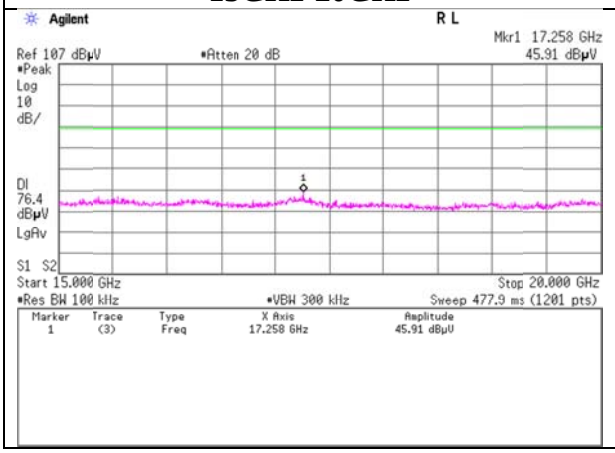
5GHz-10GHz



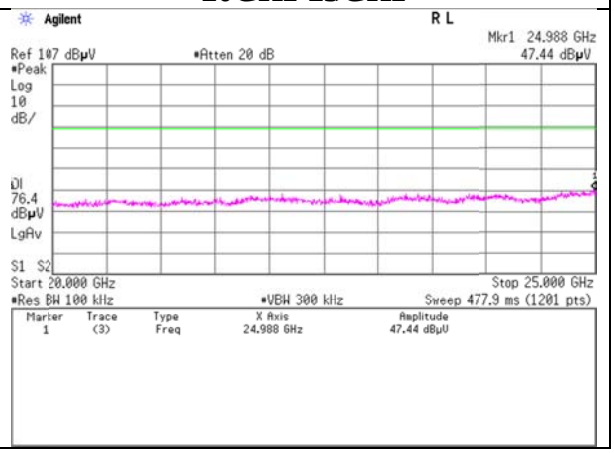
10GHz-15GHz



15GHz-20GHz



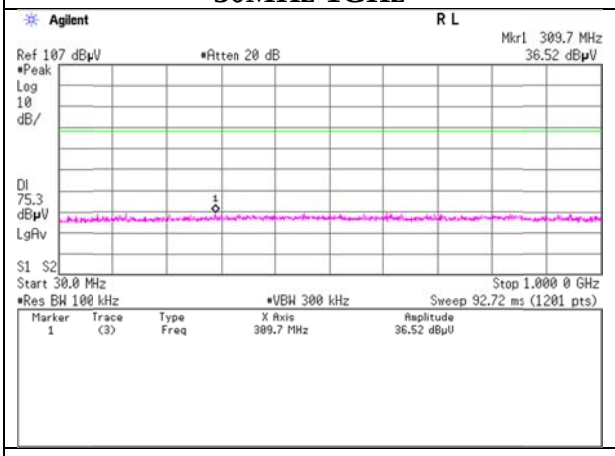
20GHz-25GHz



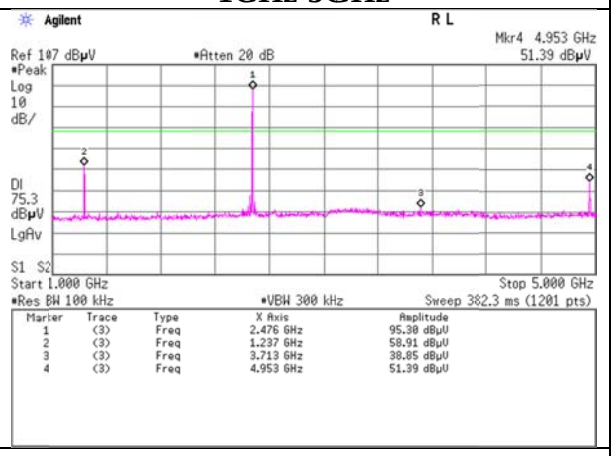
Conducted Spurious Emission

Antenna 2 Tx 2476MHz

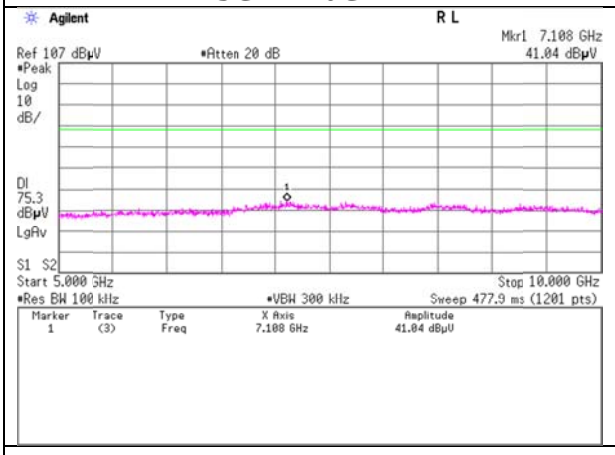
30MHz-1GHz



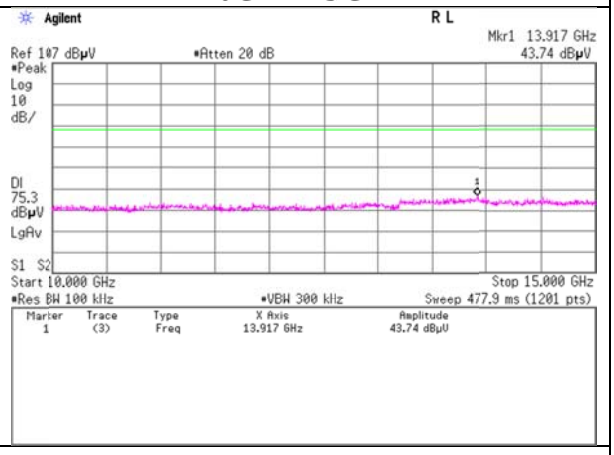
1GHz-5GHz



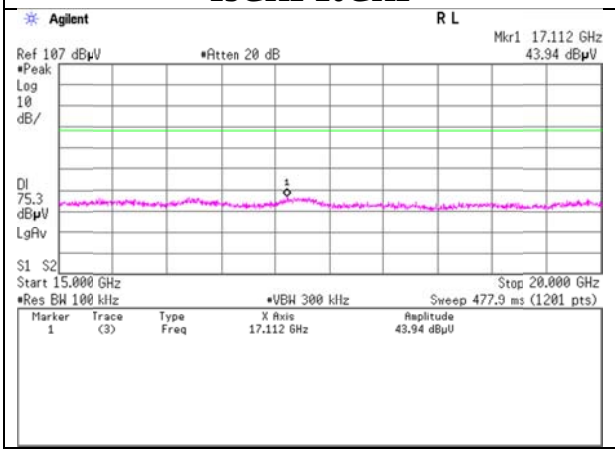
5GHz-10GHz



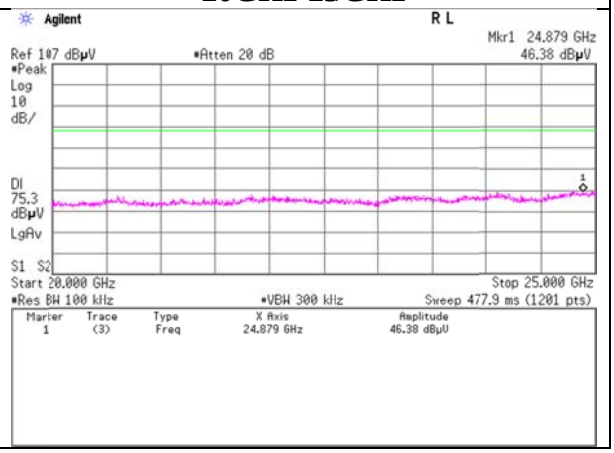
10GHz-15GHz



15GHz-20GHz



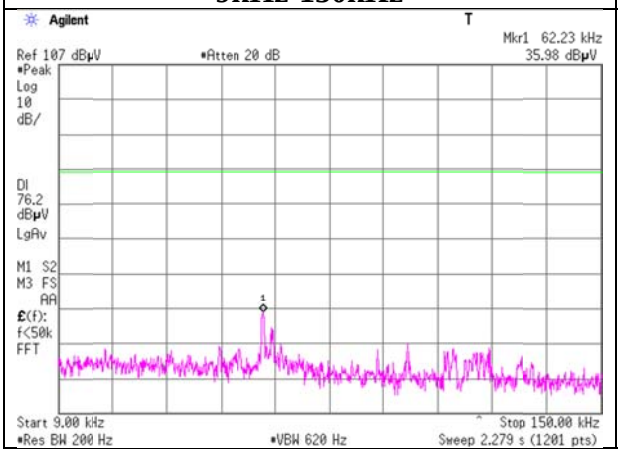
20GHz-25GHz



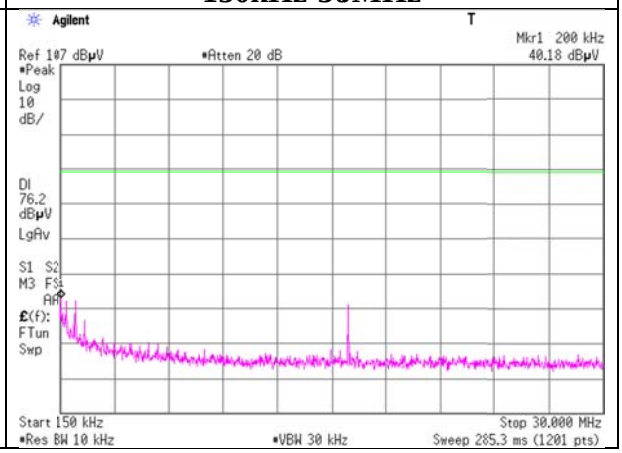
Conducted Spurious Emission(below 30MHz)

Tx 2404MHz

9kHz-150kHz

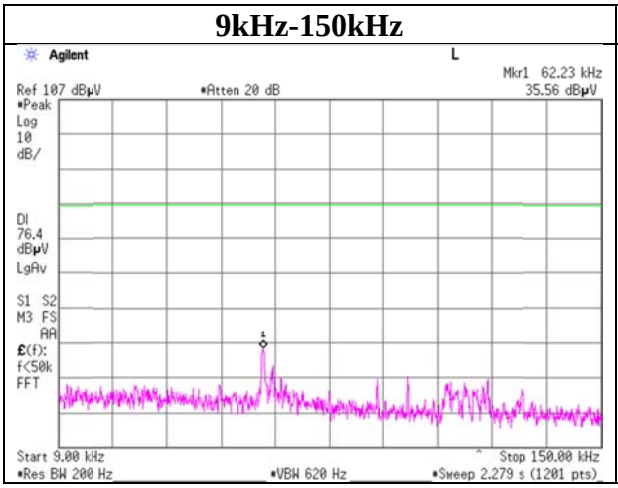


150kHz-30MHz

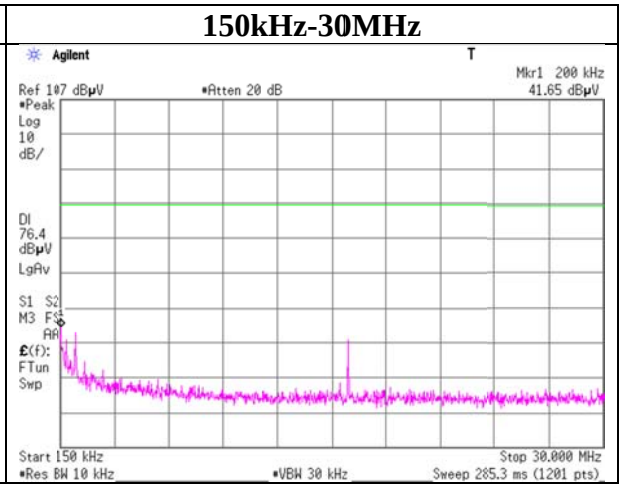


Tx 2440MHz

9kHz-150kHz

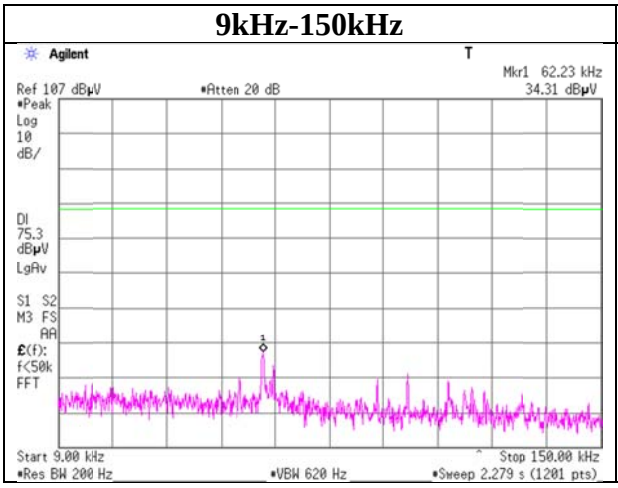


150kHz-30MHz

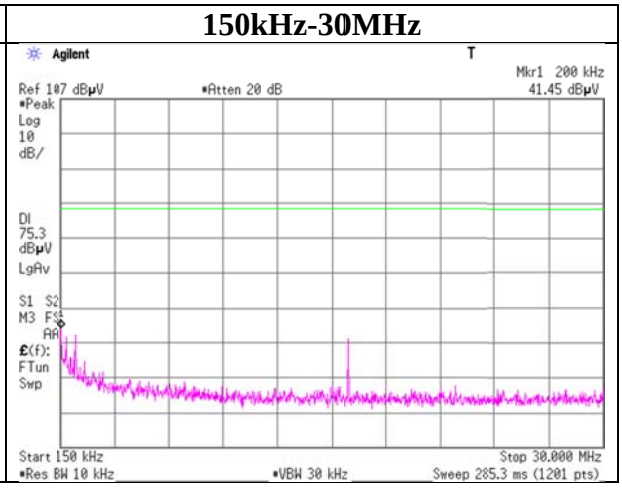


Tx 2476MHz

9kHz-150kHz



150kHz-30MHz



*It was confirmed that there was enough margin to the limit of FCC15.209 at Radiated Spurious emission test.

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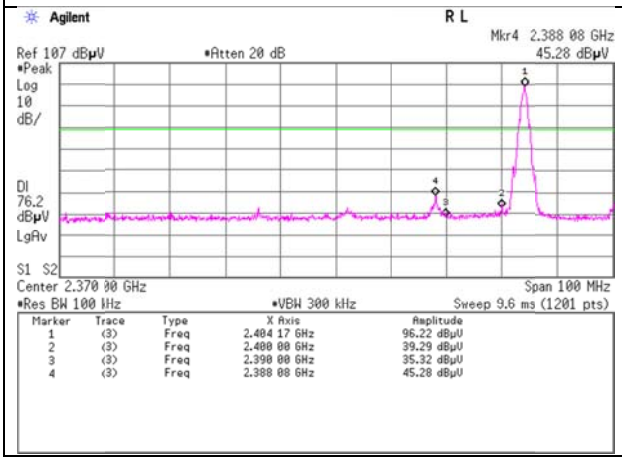
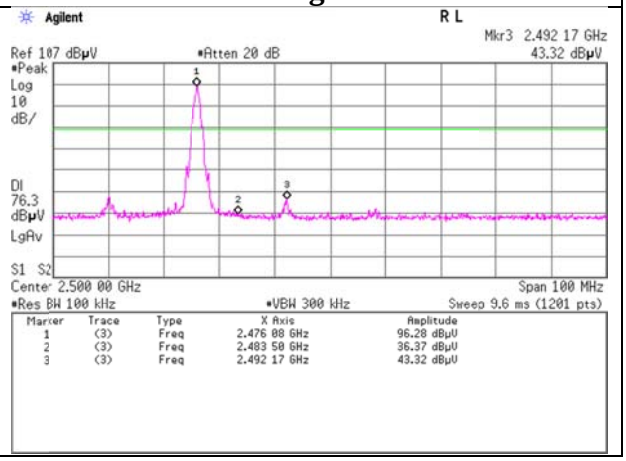
Conducted Emission Band Edge compliance

Antenna 2

Low



High



Power Density

Test place	Head Office EMC Lab. No.7 Shielded Room
Report No.	31DE0278-HO-01
Date	04/19/2011
Temperature/ Humidity	22deg. C / 33% RH
Engineer	Motoya Imura
Mode	Tx, Antenna 2

Antenna 2

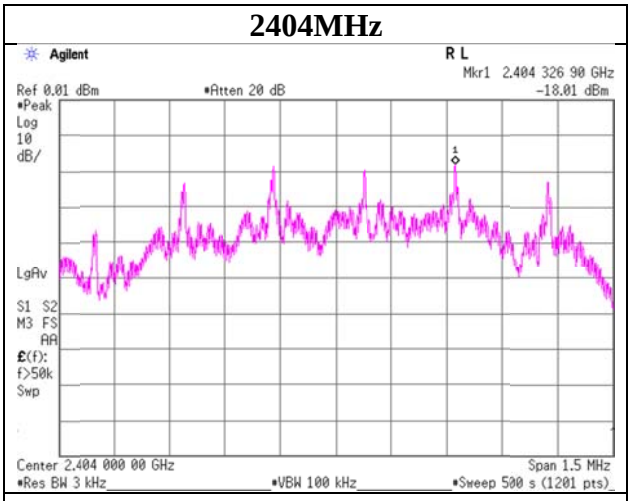
Freq. [MHz]	Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
2404.00	-18.01	2.63	0.00	-15.38	8.00	23.38
2440.00	-17.32	2.64	0.00	-14.68	8.00	22.68
2476.00	-17.26	2.65	0.00	-14.61	8.00	22.61

Sample Calculation:
Result = Reading + Cable Loss (including the cable(s)) + Attenuator

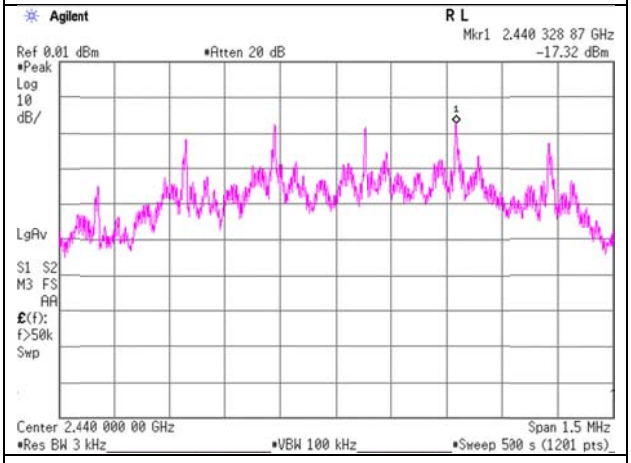
Power Density

Antenna 2

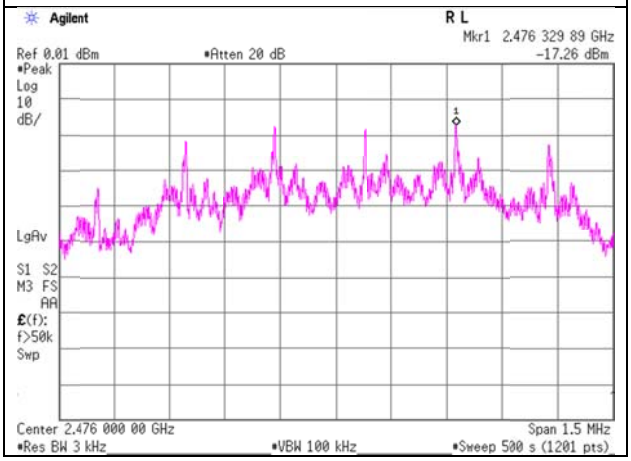
2404MHz



2440MHz



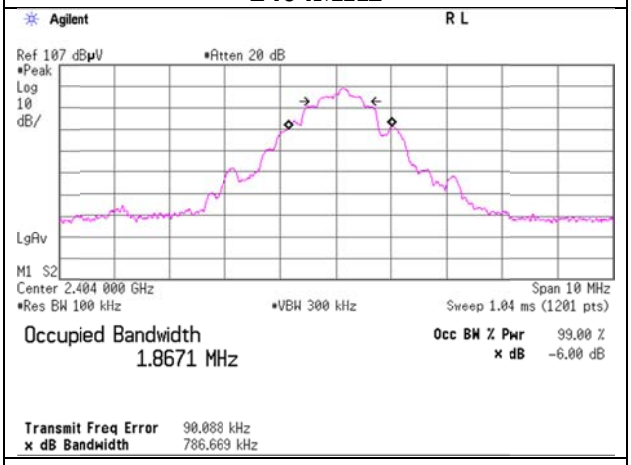
2476MHz



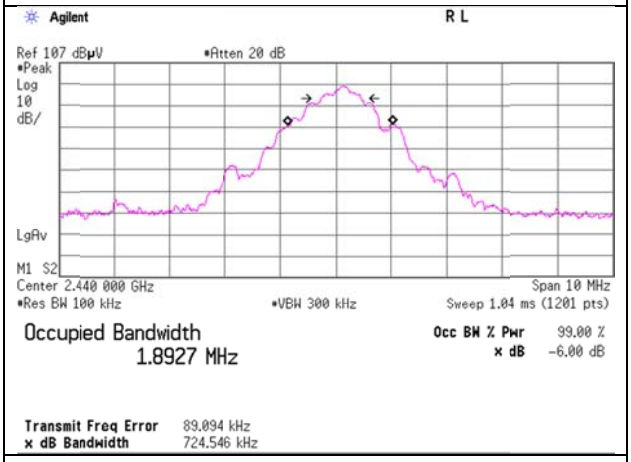
99%Occupied Bandwidth

Antenna 2

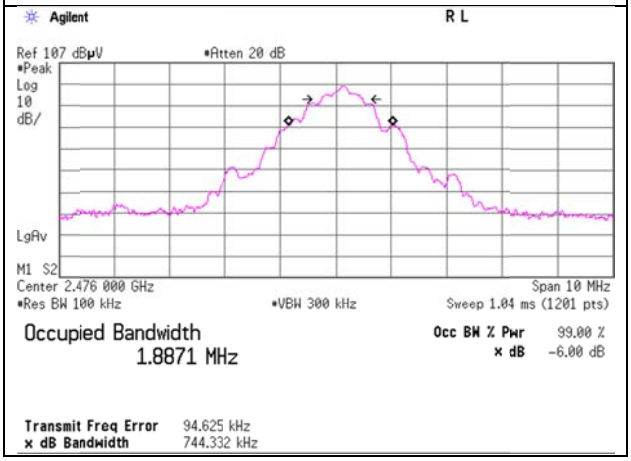
2404MHz



2440MHz



2476MHz



APPENDIX 3: Test instruments

EMI test equipment (1/2)

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
MSA-03	Spectrum Analyzer	Agilent	E4448A	MY44020357	AT, RE	2010/11/30 * 12
MPM-12	Power Meter	Anritsu	ML2495A	0825002	AT	2010/08/20 * 12
MPSE-17	Power sensor	Anritsu	MA2411B	0738285	AT	2010/08/20 * 12
MCC-36	Microwave Cable	Hirose Electric	U.FL-2LP-066-A-(200)	-	AT	2010/09/29 * 12
MCC-115	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	290211/4	AT	2010/08/05 * 12
MDCB-01	DC Block	Agilent	N9398C	51053	AT	2010/11/16 * 12
MBM-11	Barometer	Sunoh	SBR121	839	AT	2010/12/13 * 36
MOS-04	Digital Humidity Indicator	N.T	NT-1800	MOS04	AT	2011/02/23 * 12
MAEC-02	Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-06902	RE	2010/09/01 * 12
MOS-22	Thermo-Hygrometer	Custom	CTH-201	0003	RE	2011/02/23 * 12
MJM-05	Measure	PROMART	SEN1955	-	RE	-
COTS-MEMI	EMI measurement program	TSJ	TEPTO-DV	-	RE	-
MTR-03	Test Receiver	Rohde & Schwarz	ESCI	100300	RE	2011/04/15 * 12
MBA-02	Biconical Antenna	Schwarzbeck	BBA9106	VHA91032008	RE	2010/10/11 * 12
MLA-02	Logperiodic Antenna	Schwarzbeck	USLP9143	201	RE	2010/10/11 * 12
MCC-12	Coaxial Cable	Fujikura/Agilent	-	-	RE	2011/02/18 * 12
MAT-07	Attenuator(6dB)	Weinschel Corp	2	BK7970	RE	2010/11/05 * 12
MPA-09	Pre Amplifier	Agilent	8447D	2944A10845	RE	2010/09/09 * 12
MHA-06	Horn Antenna 1-18GHz	Schwarzbeck	BBHA9120D	254	RE	2011/01/16 * 12
MPA-10	Pre Amplifier	Agilent	8449B	3008A02142	RE	2010/09/30 * 12
MHF-18	High Pass Filter 3.5-18.0GHz	TOKIMEC	TF323DCA	7002	RE	2010/09/21 * 12
MCC-77	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	278942/4	RE	2010/12/02 * 12
MCC-56	Microwave Cable	Suhner	SUCOFLEX104	270875/4(1m) / 284655(5m)	RE	2011/03/02 * 12
MAEC-03	Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-10005	CE	2011/02/22 * 12
MOS-13	Thermo-Hygrometer	Custom	CTH-180	-	CE	2011/02/23 * 12
MJM-06	Measure	PROMART	SEN1955	-	CE	-
MSA-05	Spectrum Analyzer	Advantest	R3273	160400285	CE	2010/11/18 * 12
MTR-08	Test Receiver	Rohde & Schwarz	ESCI	100767	CE	2010/08/23 * 12
MLS-07	LISN(AMN)	Schwarzbeck	NSLK8127	8127364	CE	2011/02/22 * 12
MCC-112	Coaxial cable	Fujikura/Suhner/TSJ	5D-2W(10m)/SFM141(3m)/sucoform141-PE(1m)/421-010(1.5m)/RFM-E321(Switcher)	-/00640	CE	2010/07/23 * 12
MAT-66	Attenuator(13dB)	JFW Industries, Inc.	50FP-013H2 N	-	CE	2011/02/22 * 12

EMI test equipment (2/2)

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
MAEC-03	Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-10005	RE	2011/02/22 * 12
MOS-13	Thermo-Hygrometer	Custom	CTH-180	-	RE	2011/02/23 * 12
MJM-06	Measure	PROMART	SEN1955	-	RE	-
COTS-MEMI	EMI measurement program	TSJ	TEPTO-DV	-	RE	-
MHA-20	Horn Antenna 1-18GHz	Schwarzbeck	BBHA9120D	258	RE	2010/05/07 * 12
MCC-58	Microwave Cable	Suhner	SUCOFLEX104	246770(1m) / 250655(5m)	RE	2011/03/02 * 12
MPA-11	MicroWave System Amplifier	Agilent	83017A	MY39500779	RE	2011/03/10 * 12
MHA-16	Horn Antenna 15-40GHz	Schwarzbeck	BBHA9170	BBHA9170306	RE	2010/05/07 * 12
MSA-09	Spectrum Analyzer	Advantest	R3273	95090115	RE/AT	2010/11/18 *12

The expiration date of the calibration is the end of the expired month.
All equipment is calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

As for some calibrations performed after the tested dates, those test equipment have been controlled by means of an unbroken chains of calibrations.

Test Item: CE: Conducted Emission
RE: Radiated Emission
AT: Antenna Terminal Conducted test