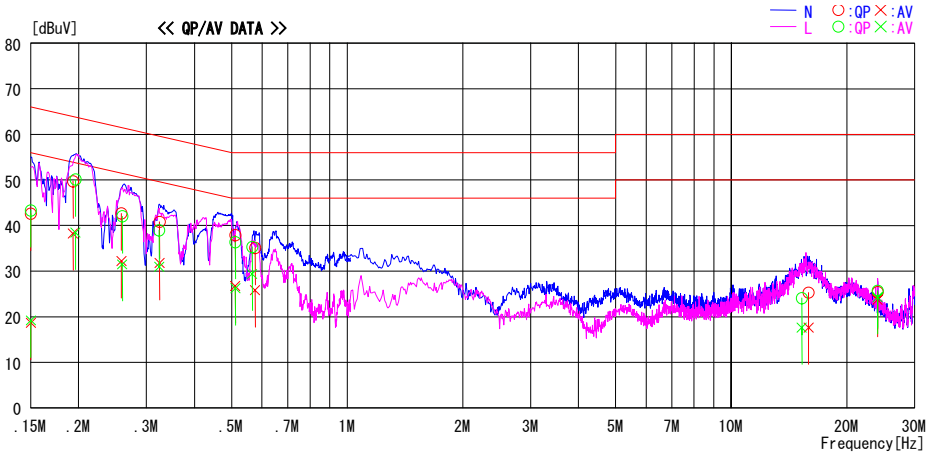
APPENDIX 2: Data of EMI test

Conducted Emission

Test place	Head Office EMC Lab. No.4 Semi Anechoic Chamber
Report No.	29IE0011-HO-01
Date	05/27/2009
Temperature/ Humidity	23 deg.C./ 58%
Engineer	Tomohisa Nakagawa
Mode	11b Tx 2412MHz



Frequency	Reading Level		Corr.	Results		Limit		Margin		Phase
	QP	AV	Factor	QP	AV	QP	AV	QP	AV	
[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dB]	[dB]	
0.15000	42.4	18.4	0.2	42.6	18.6	66.0	56.0	23.4	37.4	N
0.19322	49.4	38.0	0.3	49.7	38.3	63.9	53.9	14.2	15.6	N
0.25833	42.4	31.9	0.3	42.7	32.2	61.5	51.5	18.8	19.3	N
0.32464	40.5	31.5	0.3	40.8	31.8	59.6	49.6	18.8	17.8	N
0.51110	37.6	26.4	0.3	37.9	26.7	56.0	46.0	18.1	19.3	N
0.57586	34.8	25.5	0.3	35.1	25.8	56.0	46.0	20.9	20.2	N
15.89786	23.8	16.1	1.5	25.3	17.6	60.0	50.0	34.7	32.4	N
24.05033	23.5	21.8	1.9	25.4	23.7	60.0	50.0	34.6	26.3	N
0.15000	43.1	19.0	0.2	43.3	19.2	66.0	56.0	22.7	36.8	L
0.19611	49.8	38.1	0.3	50.1	38.4	63.8	53.8	13.7	15.4	L
0.25962	41.7	31.2	0.3	42.0	31.5	61.4	51.4	19.4	19.9	L
0.32400	38.7	30.6	0.3	39.0	30.9	59.6	49.6	20.6	18.7	L
0.51160	36.1	25.9	0.3	36.4	26.2	56.0	46.0	19.6	19.8	L
0.56565	35.0	29.1	0.3	35.3	29.4	56.0	46.0	20.7	16.6	L
15.26240	22.7	16.2	1.4	24.1	17.6	60.0	50.0	35.9	32.4	L
24.04970	23.8	22.4	1.9	25.7	24.3	60.0	50.0	34.3	25.7	L

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

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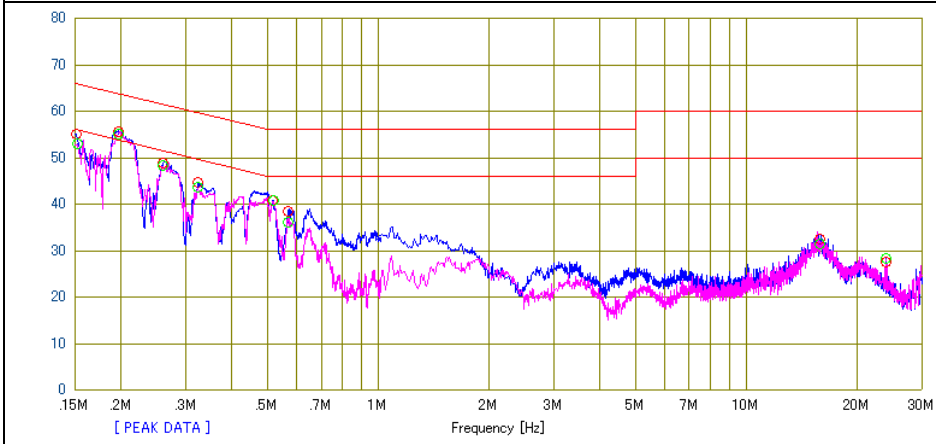
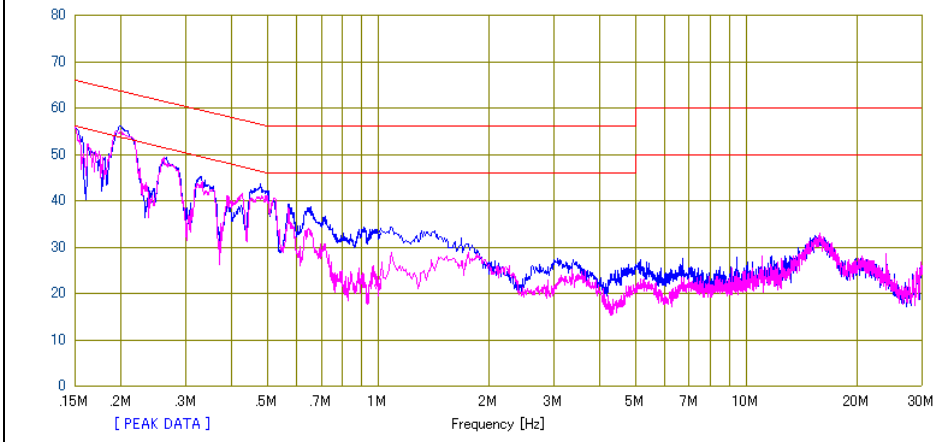
Conducted Emission

Test place	Head Office EMC Lab. No.4 Semi Anechoic Chamber
Report No.	29IE0011-HO-01
Date	05/27/2009
Temperature/ Humidity	23 deg.C./ 58%
Engineer	Tomohisa Nakagawa
Mode	11b Tx

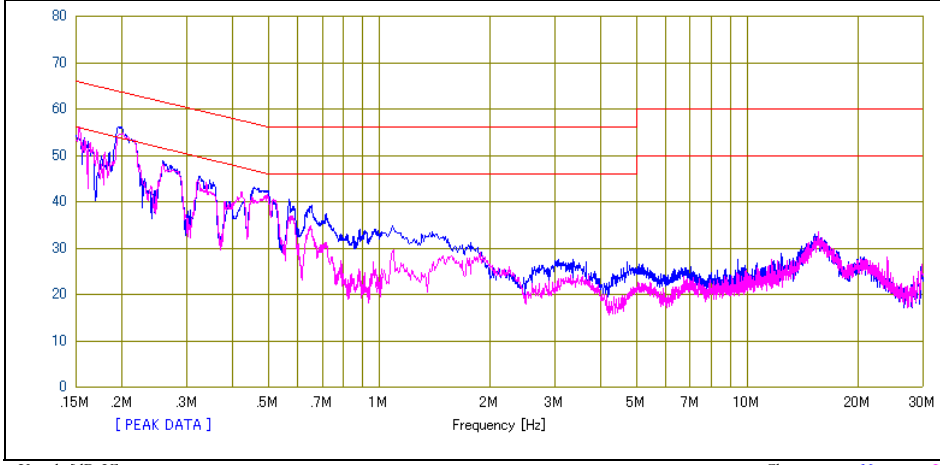
2412MHz



2437MHz



2462MHz



Y scale [dBuV] Chart — N — L

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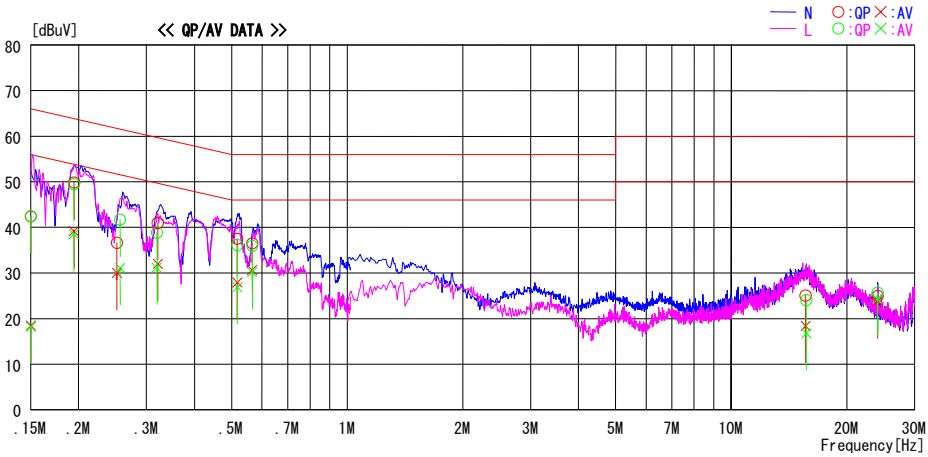
Conducted Emission

Test place	Head Office EMC Lab. No.4 Semi Anechoic Chamber
Report No.	29IE0011-HO-01
Date	05/27/2009
Temperature/ Humidity	23 deg.C./ 58%
Engineer	Tomohisa Nakagawa
Mode	11g Tx 2412MHz



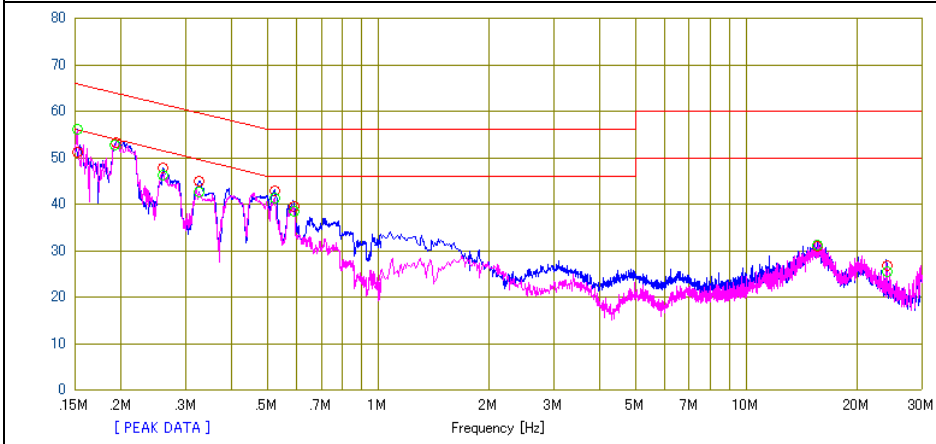
Frequency	Reading Level		Corr.	Results		Limit		Margin		Phase
	QP	AV	Factor	QP	AV	QP	AV	QP	AV	
[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dB]	[dB]	
0.15000	42.2	18.3	0.2	42.4	18.5	66.0	56.0	23.6	37.5	N
0.19456	49.6	38.9	0.3	49.9	39.2	63.8	53.8	13.9	14.6	N
0.25133	36.3	29.7	0.3	36.6	30.0	61.7	51.7	25.1	21.7	N
0.32140	40.7	31.7	0.3	41.0	32.0	59.7	49.7	18.7	17.7	N
0.51736	37.2	27.6	0.3	37.5	27.9	56.0	46.0	18.5	18.1	N
0.56559	36.2	30.4	0.3	36.5	30.7	56.0	46.0	19.5	15.3	N
15.62416	23.7	17.0	1.4	25.1	18.4	60.0	50.0	34.9	31.6	N
24.04939	23.1	21.9	1.9	25.0	23.8	60.0	50.0	35.0	26.2	N
0.15000	42.3	18.0	0.2	42.5	18.2	66.0	56.0	23.5	37.8	L
0.19426	49.2	38.2	0.3	49.5	38.5	63.9	53.9	14.4	15.4	L
0.25660	41.4	30.8	0.3	41.7	31.1	61.5	51.5	19.8	20.4	L
0.31954	38.6	30.9	0.3	38.9	31.2	59.7	49.7	20.8	18.5	L
0.51720	35.8	26.6	0.3	36.1	26.9	56.0	46.0	19.9	19.1	L
0.56557	35.7	29.9	0.3	36.0	30.2	56.0	46.0	20.0	15.8	L
15.69120	22.7	15.4	1.4	24.1	16.8	60.0	50.0	35.9	33.2	L
24.04967	23.8	22.4	1.9	25.7	24.3	60.0	50.0	34.3	25.7	L

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

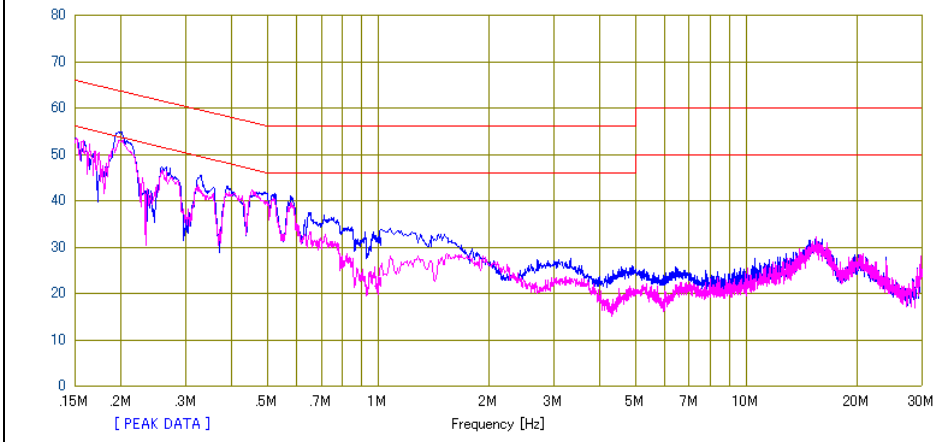
Conducted Emission

Test place	Head Office EMC Lab. No.4 Semi Anechoic Chamber
Report No.	29IE0011-HO-01
Date	05/27/2009
Temperature/ Humidity	23 deg.C./ 58%
Engineer	Tomohisa Nakagawa
Mode	11g Tx

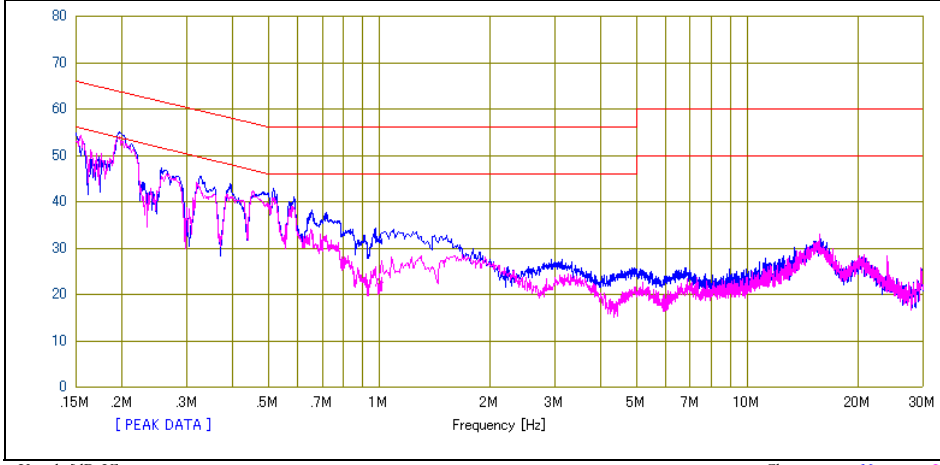
2412MHz



2437MHz



2462MHz



Y scale [dBuV] Chart — N — L

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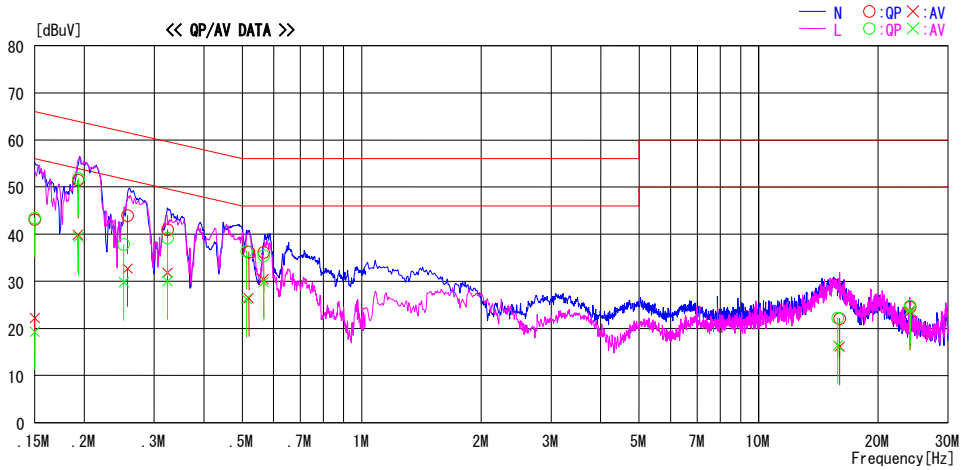
Conducted Emission

Test place	Head Office EMC Lab. No.4 Semi Anechoic Chamber
Report No.	29IE0011-HO-01
Date	05/27/2009
Temperature/ Humidity	23 deg.C./ 58%
Engineer	Tomohisa Nakagawa
Mode	11b/g Rx 2437MHz



Frequency	Reading Level		Corr.	Results		Limit		Margin		Phase
	QP	AV	Factor	QP	AV	QP	AV	QP	AV	
[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dB]	[dB]	
0.15000	42.9	22.0	0.2	43.1	22.2	66.0	56.0	22.9	33.8	N
0.19284	51.2	39.6	0.3	51.5	39.9	63.9	53.9	12.4	14.0	N
0.25708	43.7	32.4	0.3	44.0	32.7	61.5	51.5	17.5	18.8	N
0.32396	40.7	31.5	0.3	41.0	31.8	59.6	49.6	18.6	17.8	N
0.51902	35.9	26.1	0.3	36.2	26.4	56.0	46.0	19.8	19.6	N
0.56578	35.8	30.1	0.3	36.1	30.4	56.0	46.0	19.9	15.6	N
15.99540	20.6	14.6	1.5	22.1	16.1	60.0	50.0	37.9	33.9	N
24.04992	22.6	21.6	1.9	24.5	23.5	60.0	50.0	35.5	26.5	N
0.15000	43.2	19.1	0.2	43.4	19.3	66.0	56.0	22.6	36.7	L
0.19330	51.5	39.1	0.3	51.8	39.4	63.9	53.9	12.1	14.5	L
0.25143	37.5	29.5	0.3	37.8	29.8	61.7	51.7	23.9	21.9	L
0.32415	38.9	29.7	0.3	39.2	30.0	59.6	49.6	20.4	19.6	L
0.51275	36.1	25.9	0.3	36.4	26.2	56.0	46.0	19.6	19.8	L
0.56581	35.2	29.5	0.3	35.5	29.8	56.0	46.0	20.5	16.2	L
15.81830	20.7	14.9	1.5	22.2	16.4	60.0	50.0	37.8	33.6	L
24.05003	22.9	21.9	1.9	24.8	23.8	60.0	50.0	35.2	26.2	L

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

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6dB Bandwidth

Test place	Head Office EMC Lab. No.6 Measurement Room
Report No.	29IE0011-HO-01
Date	05/28/2009
Temperature/ Humidity	24 deg.C./ 60%
Engineer	Keisuke Kawamura
Mode	Tx

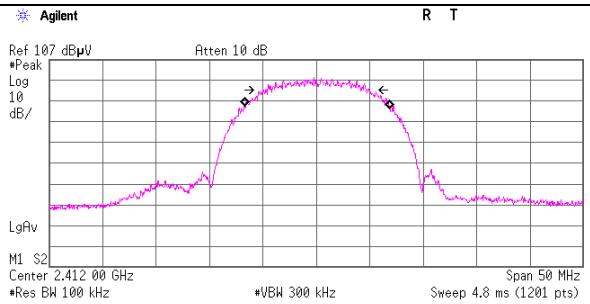
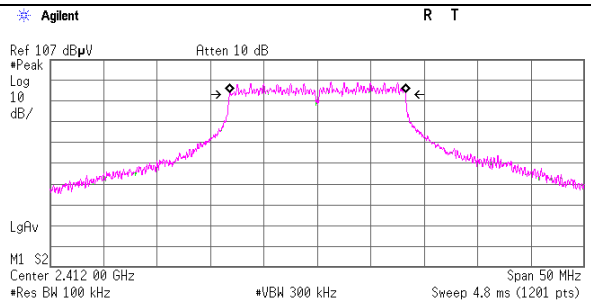
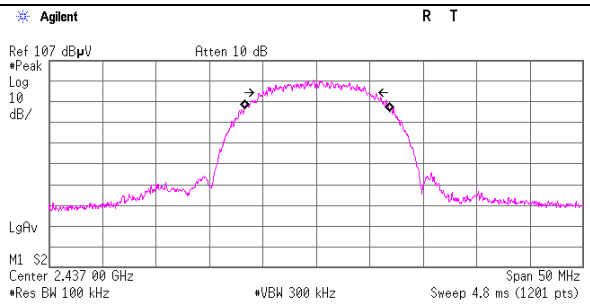
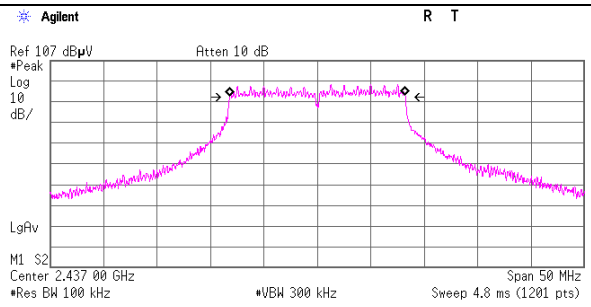
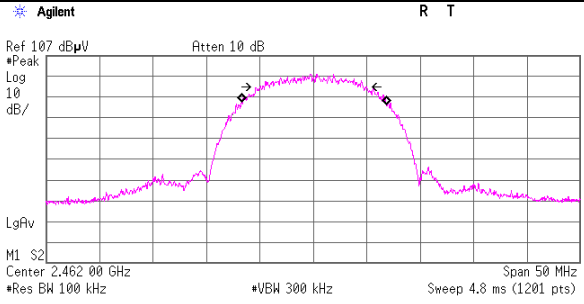
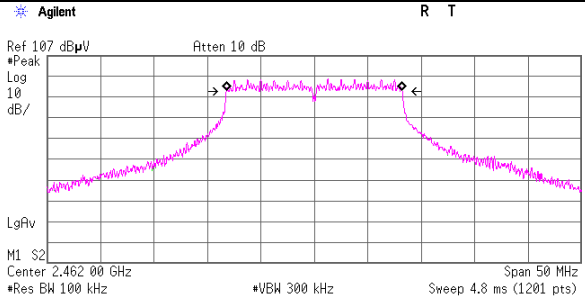
11b

Frequency [MHz]	6dB Bandwidth [MHz]	Limit [kHz]
2412	10.027	>500
2437	9.996	>500
2462	9.603	>500

11g

Frequency [MHz]	6dB Bandwidth [MHz]	Limit [kHz]
2412	16.480	>500
2437	16.430	>500
2462	16.458	>500

6dB Bandwidth

11b	11g
2412MHz	**2412MHz**
	
2437MHz	**2437MHz**
	
2462MHz	**2462MHz**
	

Maximum Peak Output Power

Test place	Head Office EMC Lab. No.6 Measurement Room
Report No.	29IE0011-HO-01
Date	05/28/2009
Temperature/ Humidity	24 deg.C./ 60%
Engineer	Keisuke Kawamura
Mode	11b Tx

Freq.	Reading	Cable Loss	Atten.	Result		Limit		Margin
[MHz]	[dBm]	[dB]	[dB]	[dBm]	[mW]	[dBm]	[mW]	[dB]
2412	2.62	0.87	10.08	13.57	22.75	30.00	1000	16.43
2437	2.37	0.87	10.08	13.32	21.48	30.00	1000	16.68
2462	2.55	0.88	10.08	13.51	22.44	30.00	1000	16.49

Sample Calculation:
Result = Reading + Cable Loss + Attenuator

2437MHz

Rate [Mbps]	Reading PK [dBm]	Reading AV [dBm]	Remark
1	2.21	-3.01	
2	2.35	-2.89	
5.5	2.14	-1.08	*AV
11	2.37	-2.70	*PK

*: Worst Rate
All comparison were carried out on same frequency and measurement factors.

Maximum Peak Output Power

Test place	Head Office EMC Lab. No.6 Measurement Room
Report No.	29IE0011-HO-01
Date	05/28/2009
Temperature/ Humidity	24 deg.C./ 60%
Engineer	Keisuke Kawamura
Mode	11g Tx

Freq.	Reading	Cable Loss	Atten.	Result		Limit		Margin
[MHz]	[dBm]	[dB]	[dB]	[dBm]	[mW]	[dBm]	[mW]	[dB]
2412	8.30	0.87	10.08	19.25	84.14	30.00	1000	10.75
2437	8.08	0.87	10.08	19.03	79.98	30.00	1000	10.97
2462	8.25	0.88	10.08	19.21	83.37	30.00	1000	10.79

Sample Calculation:
Result = Reading + Cable Loss + Attenuator

2437MHz

Rate [Mbps]	Reading PK [dBm]	Reading AV [dBm]	Remark
6	7.55	-2.69	*AV
9	7.44	-4.10	
12	7.76	-4.93	
18	7.48	-6.76	
24	8.08	-7.85	*PK
36	7.57	-9.30	
48	7.72	-10.24	
54	7.64	-10.52	

*: Worst Rate
All comparison were carried out on same frequency and measurement factors.

Radiated Spurious Emission

Test place	Head Office EMC Lab. No.3 and 4 Semi Anechoic Chamber		
Report No.	29IE0011-HO-01		
Date	05/26/2009	05/27/2009	05/27/2009
Temperature/ Humidity	23 deg.C./ 53%	23 deg.C./ 58%	23 deg.C./ 50%
Engineer	Hironobu Ohnishi (10-26.5GHz)	Tomohisa Nakagawa (1-10GHz)	Keisuke Kawamura (30M-1GHz)
	No. 4 Semi Anechoic Chamber	No.4 Semi Anechoic Chamber	No. 3 Semi Anechoic Chamber
Mode	11b Tx 2412MHz		

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	84.090	QP	48.5	6.7	7.9	32.1	31.0	40.0	9.0	
Hori	189.643	QP	34.8	16.2	9.0	32.1	27.9	43.5	15.6	
Hori	287.521	QP	37.9	18.8	9.8	32.0	34.5	46.0	11.5	
Hori	311.993	QP	46.1	15.0	10.0	32.0	39.1	46.0	6.9	
Hori	336.460	QP	44.3	15.7	10.2	32.0	38.2	46.0	7.8	
Hori	385.401	QP	36.6	16.9	10.5	32.0	32.0	46.0	14.0	
Hori	2390.000	PK	52.0	27.2	2.8	32.7	49.3	73.9	24.6	
Hori	2400.000	PK	58.3	27.2	2.8	32.7	55.6	73.9	18.3	
Hori	2412.000	PK	102.8	27.2	2.8	32.7	100.1	-	-	100k/300kHz
Hori	4824.000	PK	44.1	31.6	5.2	31.9	49.0	73.9	24.9	
Hori	7236.000	PK	41.9	36.0	5.7	32.6	51.0	73.9	22.9	
Hori	9648.000	PK	42.3	38.4	6.9	33.4	54.2	73.9	19.7	
Hori	24120.000	PK	45.9	38.7	-1.1	32.4	51.1	73.9	22.8	
Hori	2390.000	AV	32.8	27.2	2.8	32.7	30.1	53.9	23.9	
Hori	2400.000	AV	42.4	27.2	2.8	32.7	39.7	53.9	14.2	
Hori	4824.000	AV	33.8	31.6	5.2	31.9	38.7	53.9	15.2	
Hori	7236.000	AV	30.0	36.0	5.7	32.6	39.1	53.9	14.8	
Hori	9648.000	AV	29.7	38.4	6.9	33.4	41.6	53.9	12.3	
Hori	24120.000	AV	31.7	38.7	-1.1	32.4	36.9	53.9	17.0	
Vert	84.110	QP	40.3	6.7	7.9	32.1	22.8	40.0	17.2	
Vert	190.160	QP	29.7	16.2	9.0	32.1	22.8	43.5	20.7	
Vert	287.523	QP	31.0	18.8	9.8	32.0	27.6	46.0	18.4	
Vert	312.004	QP	33.8	15.0	10.0	32.0	26.8	46.0	19.2	
Vert	336.461	QP	34.3	15.7	10.2	32.0	28.2	46.0	17.8	
Vert	385.401	QP	32.3	16.9	10.5	32.0	27.7	46.0	18.3	
Vert	2390.000	PK	48.0	27.2	2.8	32.7	45.3	73.9	28.6	
Vert	2400.000	PK	54.7	27.2	2.8	32.7	52.0	73.9	21.9	
Vert	2412.000	PK	98.5	27.2	2.8	32.7	95.8	-	-	100k/300kHz
Vert	4824.000	PK	45.1	31.6	5.2	31.9	50.0	73.9	23.9	
Vert	7236.000	PK	42.1	36.0	5.7	32.6	51.2	73.9	22.7	
Vert	9648.000	PK	42.6	38.4	6.9	33.4	54.5	73.9	19.4	
Vert	24120.000	PK	45.6	38.7	-1.1	32.4	50.8	73.9	23.1	
Vert	2390.000	AV	36.7	27.2	2.8	32.7	34.0	53.9	19.9	
Vert	2400.000	AV	48.6	27.2	2.8	32.7	45.9	53.9	8.0	
Vert	4824.000	AV	37.9	31.6	5.2	31.9	42.8	53.9	11.1	
Vert	7236.000	AV	30.0	36.0	5.7	32.6	39.1	53.9	14.8	
Vert	9648.000	AV	29.9	38.4	6.9	33.4	41.8	53.9	12.1	
Vert	24120.000	AV	31.7	38.7	-1.1	32.4	36.9	53.9	17.0	

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
26.5GHz-40GHz 20log(3.0m/0.5m)=15.6dB

UL Japan, Inc.
Head Office EMC Lab.
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Radiated Spurious Emission

Test place	Head Office EMC Lab. No.3 and 4 Semi Anechoic Chamber		
Report No.	29IE0011-HO-01		
Date	05/26/2009	05/27/2009	05/27/2009
Temperature/ Humidity	23 deg.C./ 53%	23 deg.C./ 58%	23 deg.C./ 50%
Engineer	Hironobu Ohnishi (10-26.5GHz)	Tomohisa Nakagawa (1-10GHz)	Keisuke Kawamura (30M-1GHz)
	No. 4 Semi Anechoic Chamber	No.4 Semi Anechoic Chamber	No. 3 Semi Anechoic Chamber
Mode	11b Tx 2437MHz		

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	84.110	QP	50.0	6.7	7.9	32.1	32.5	40.0	7.5	
Hori	189.644	QP	34.4	16.2	9.0	32.1	27.5	43.5	16.0	
Hori	287.522	QP	40.3	18.8	9.8	32.0	36.9	46.0	9.1	
Hori	311.990	QP	45.5	15.0	10.0	32.0	38.5	46.0	7.5	
Hori	336.461	QP	44.6	15.7	10.2	32.0	38.5	46.0	7.5	
Hori	385.400	QP	37.0	16.9	10.5	32.0	32.4	46.0	13.6	
Hori	2437.000	PK	102.7	27.2	2.8	32.7	100.0	-	-	100k/300kHz
Hori	4874.000	PK	44.0	31.7	5.3	31.9	49.1	73.9	24.8	
Hori	7311.000	PK	42.6	36.1	5.7	32.6	51.8	73.9	22.1	
Hori	9748.000	PK	41.7	38.5	6.9	33.4	53.7	73.9	20.2	
Hori	24370.000	PK	45.5	38.9	-1.1	32.3	51.0	73.9	22.9	
Hori	4874.000	AV	33.9	31.7	5.3	31.9	39.0	53.9	14.9	
Hori	7311.000	AV	30.3	36.1	5.7	32.6	39.5	53.9	14.4	
Hori	9748.000	AV	29.9	38.5	6.9	33.4	41.9	53.9	12.0	
Hori	24370.000	AV	31.7	38.9	-1.1	32.3	37.2	53.9	16.7	
Vert	85.120	QP	40.3	6.9	7.9	32.1	23.0	40.0	17.0	
Vert	189.643	QP	28.7	16.2	9.0	32.1	21.8	43.5	21.7	
Vert	287.521	QP	31.7	18.8	9.8	32.0	28.3	46.0	17.7	
Vert	311.991	QP	33.7	15.0	10.0	32.0	26.7	46.0	19.3	
Vert	336.462	QP	33.9	15.7	10.2	32.0	27.8	46.0	18.2	
Vert	385.401	QP	31.9	16.9	10.5	32.0	27.3	46.0	18.7	
Vert	2437.000	PK	99.2	27.2	2.8	32.7	96.5	-	-	100k/300kHz
Vert	4874.000	PK	44.7	31.7	5.3	31.9	49.8	73.9	24.1	
Vert	7311.000	PK	41.9	36.1	5.7	32.6	51.1	73.9	22.8	
Vert	9748.000	PK	42.8	38.5	6.9	33.4	54.8	73.9	19.1	
Vert	24370.000	PK	44.8	38.9	-1.1	32.3	50.3	73.9	23.6	
Vert	4874.000	AV	37.1	31.7	5.3	31.9	42.2	53.9	11.7	
Vert	7311.000	AV	30.0	36.1	5.7	32.6	39.2	53.9	14.7	
Vert	9748.000	AV	29.8	38.5	6.9	33.4	41.8	53.9	12.1	
Vert	24370.000	AV	31.9	38.9	-1.1	32.3	37.4	53.9	16.5	

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
26.5GHz-40GHz 20log(3.0m/0.5m)=15.6dB

Radiated Spurious Emission

Test place	Head Office EMC Lab. No.3 and 4 Semi Anechoic Chamber		
Report No.	29IE0011-HO-01		
Date	05/26/2009	05/27/2009	05/27/2009
Temperature/ Humidity	23 deg.C./ 53%	23 deg.C./ 58%	23 deg.C./ 50%
Engineer	Hironobu Ohnishi (10-26.5GHz)	Tomohisa Nakagawa (1-10GHz)	Keisuke Kawamura (30M-1GHz)
	No. 4 Semi Anechoic Chamber	No.4 Semi Anechoic Chamber	No. 3 Semi Anechoic Chamber
Mode	11b Tx 2462MHz		

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	84.390	QP	50.2	6.8	7.9	32.1	32.8	40.0	7.2	
Hori	189.643	QP	35.7	16.2	9.0	32.1	28.8	43.5	14.7	
Hori	287.522	QP	39.6	18.8	9.8	32.0	36.2	46.0	9.8	
Hori	311.989	QP	43.4	15.0	10.0	32.0	36.4	46.0	9.6	
Hori	336.461	QP	44.8	15.7	10.2	32.0	38.7	46.0	7.3	
Hori	385.401	QP	37.7	16.9	10.5	32.0	33.1	46.0	12.9	
Hori	2462.000	PK	100.7	27.3	2.8	32.7	98.1	-	-	100k/300kHz
Hori	2483.500	PK	49.4	27.3	2.8	32.7	46.8	73.9	27.1	
Hori	4924.000	PK	44.5	31.7	5.3	31.9	49.6	73.9	24.3	
Hori	7389.000	PK	41.8	36.2	5.8	32.6	51.2	73.9	22.7	
Hori	9848.000	PK	41.3	38.5	6.9	33.5	53.2	73.9	20.7	
Hori	24620.000	PK	44.3	39.0	-1.0	32.2	50.1	73.9	23.8	
Hori	2483.500	AV	36.7	27.3	2.8	32.7	34.1	53.9	19.8	
Hori	4924.000	AV	36.4	31.7	5.3	31.9	41.5	53.9	12.4	
Hori	7389.000	AV	29.9	36.2	5.8	32.6	39.3	53.9	14.6	
Hori	9848.000	AV	29.9	38.5	6.9	33.5	41.8	53.9	12.1	
Hori	24620.000	AV	31.3	39.0	-1.0	32.2	37.1	53.9	16.8	
Vert	85.020	QP	40.0	6.9	7.9	32.1	22.7	40.0	17.3	
Vert	189.643	QP	28.9	16.2	9.0	32.1	22.0	43.5	21.5	
Vert	287.523	QP	32.0	18.8	9.8	32.0	28.6	46.0	17.4	
Vert	311.993	QP	32.3	15.0	10.0	32.0	25.3	46.0	20.7	
Vert	336.461	QP	35.0	15.7	10.2	32.0	28.9	46.0	17.1	
Vert	385.401	QP	31.8	16.9	10.5	32.0	27.2	46.0	18.8	
Vert	2462.000	PK	95.2	27.3	2.8	32.7	92.6	-	-	100k/300kHz
Vert	2483.500	PK	46.4	27.3	2.8	32.7	43.8	73.9	30.1	
Vert	4924.000	PK	45.5	31.7	5.3	31.9	50.6	73.9	23.3	
Vert	7389.000	PK	42.7	36.2	5.8	32.6	52.1	73.9	21.8	
Vert	9848.000	PK	41.9	38.5	6.9	33.5	53.8	73.9	20.1	
Vert	24620.000	PK	44.5	39.0	-1.0	32.2	50.3	73.9	23.6	
Vert	2483.500	AV	35.0	27.3	2.8	32.7	32.4	53.9	21.5	
Vert	4924.000	AV	37.1	31.7	5.3	31.9	42.2	53.9	11.7	
Vert	7389.000	AV	30.4	36.2	5.8	32.6	39.8	53.9	14.1	
Vert	9848.000	AV	29.8	38.5	6.9	33.5	41.7	53.9	12.2	
Vert	24620.000	AV	31.3	39.0	-1.0	32.2	37.1	53.9	16.8	

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
26.5GHz-40GHz 20log(3.0m/0.5m)=15.6dB

Radiated Spurious Emission

Test place	Head Office EMC Lab. No.3 and 4 Semi Anechoic Chamber	
Report No.	29IE0011-HO-01	
Date	05/26/2009	05/27/2009
Temperature/ Humidity	23 deg.C./ 53%	23 deg.C./ 50%
Engineer	Hironobu Ohnishi (10-26.5GHz)	Keisuke Kawamura (30M-10GHz)
	No. 4 Semi Anechoic Chamber	No.3 Semi Anechoic Chamber
Mode	11g Tx 2412MHz	

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	85.386	QP	50.0	6.9	7.9	32.1	32.7	40.0	7.3	
Hori	189.646	QP	36.8	16.2	9.0	32.1	29.9	43.5	13.6	
Hori	287.530	QP	40.7	18.8	9.8	32.0	37.3	46.0	8.7	
Hori	311.992	QP	45.3	15.0	10.0	32.0	38.3	46.0	7.7	
Hori	336.461	QP	44.1	15.7	10.2	32.0	38.0	46.0	8.0	
Hori	385.402	QP	36.7	16.9	10.5	32.0	32.1	46.0	13.9	
Hori	2390.000	PK	64.8	27.2	2.8	32.7	62.1	73.9	11.8	
Hori	2400.000	PK	80.4	27.2	2.8	32.7	77.7	-	-	See 20dBc Data Sheet
Hori	2412.000	PK	98.6	27.2	2.8	32.7	95.9	-	-	100k/300kHz
Hori	4824.000	PK	41.4	31.6	5.3	31.9	46.4	73.9	27.5	
Hori	7236.000	PK	42.1	36.0	5.6	32.6	51.1	73.9	22.8	
Hori	9648.000	PK	41.9	38.4	6.9	33.4	53.8	73.9	20.1	
Hori	24120.000	PK	44.7	38.7	-1.1	32.4	49.9	73.9	24.0	
Hori	2390.000	AV	41.5	27.2	2.8	32.7	38.8	53.9	15.1	
Hori	2400.000	AV	50.2	27.2	2.8	32.7	47.5	-	-	See 20dBc Data Sheet
Hori	4824.000	AV	28.3	31.6	5.3	31.9	33.3	53.9	20.6	
Hori	7236.000	AV	30.0	36.0	5.6	32.6	39.0	53.9	14.9	
Hori	9648.000	AV	29.7	38.4	6.9	33.4	41.6	53.9	12.3	
Hori	24120.000	AV	31.9	38.7	-1.1	32.4	37.1	53.9	16.8	
Vert	84.800	QP	41.1	6.8	7.9	32.1	23.7	40.0	16.3	
Vert	189.643	QP	27.5	16.2	9.0	32.1	20.6	43.5	22.9	
Vert	287.522	QP	31.1	18.8	9.8	32.0	27.7	46.0	18.3	
Vert	311.990	QP	34.6	15.0	10.0	32.0	27.6	46.0	18.4	
Vert	336.461	QP	35.3	15.7	10.2	32.0	29.2	46.0	16.8	
Vert	385.401	QP	32.7	16.9	10.5	32.0	28.1	46.0	17.9	
Vert	2390.000	PK	63.1	27.2	2.8	32.7	60.4	73.9	13.5	
Vert	2400.000	PK	78.5	27.2	2.8	32.7	75.8	-	-	See 20dBc Data Sheet
Vert	2412.000	PK	96.7	27.2	2.8	32.7	94.0	-	-	100k/300kHz
Vert	4824.000	PK	43.7	31.6	5.3	31.9	48.7	73.9	25.2	
Vert	7236.000	PK	41.1	36.0	5.6	32.6	50.1	73.9	23.8	
Vert	9648.000	PK	42.4	38.4	6.9	33.4	54.3	73.9	19.6	
Vert	24120.000	PK	45.2	38.7	-1.1	32.4	50.4	73.9	23.5	
Vert	2390.000	AV	41.1	27.2	2.8	32.7	38.4	53.9	15.5	
Vert	2400.000	AV	49.0	27.2	2.8	32.7	46.3	-	-	See 20dBc Data Sheet
Vert	4824.000	AV	30.0	31.6	5.3	31.9	35.0	53.9	18.9	
Vert	7236.000	AV	30.3	36.0	5.6	32.6	39.3	53.9	14.7	
Vert	9648.000	AV	29.6	38.4	6.9	33.4	41.5	53.9	12.4	
Vert	24120.000	AV	31.8	38.7	-1.1	32.4	37.0	53.9	16.9	

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
26.5GHz-40GHz 20log(3.0m/0.5m)=15.6dB

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Radiated Spurious Emission

Test place	Head Office EMC Lab. No.4 Semi Anechoic Chamber
Report No.	29IE0011-HO-01
Date	05/27/2009
Temperature/ Humidity	23 deg.C./ 50%
Engineer	Keisuke Kawamura
Mode	11g Tx 2412MHz

20dBc Data Sheet

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant Factor [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	2412.000	PK	98.6	27.2	2.8	32.7	95.9	-	-	Carrier
Hori	2400.000	PK	66.2	27.2	2.8	32.7	63.5	75.9	12.4	
Vert	2412.000	PK	96.7	27.2	2.8	32.7	94.0	-	-	Carrier
Vert	2400.000	PK	64.4	27.2	2.8	32.7	61.7	74.0	12.3	

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

*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
26.5GHz-40GHz 20log(3.0m/0.5m)=15.6dB

Radiated Spurious Emission

Test place	Head Office EMC Lab. No.3 and 4 Semi Anechoic Chamber		
Report No.	29IE0011-HO-01		
Date	05/26/2009	05/27/2009	05/27/2009
Temperature/ Humidity	23 deg.C./ 53%	23 deg.C./ 50%	25 deg.C./ 48%
Engineer	Hironobu Ohnishi (10-26.5GHz)	Keisuke Kawamura (30M-1GHz)	Keisuke Kawamura (1-10GHz)
	No. 4 Semi Anechoic Chamber	No.3 Semi Anechoic Chamber	No. 4 Semi Anechoic Chamber
Mode	11g Tx 2437MHz		

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	85.399	QP	50.9	6.9	7.9	32.1	33.6	40.0	6.4	
Hori	189.659	QP	36.8	16.2	9.0	32.1	29.9	43.5	13.6	
Hori	287.528	QP	40.1	18.8	9.8	32.0	36.7	46.0	9.3	
Hori	311.988	QP	43.4	15.0	10.0	32.0	36.4	46.0	9.6	
Hori	336.463	QP	44.8	15.7	10.2	32.0	38.7	46.0	7.3	
Hori	385.400	QP	36.9	16.9	10.5	32.0	32.3	46.0	13.7	
Hori	2437.000	PK	98.9	27.2	2.8	32.7	96.2	-	-	100k/300kHz
Hori	4874.000	PK	41.3	31.7	5.3	31.9	46.4	73.9	27.5	
Hori	7311.000	PK	41.3	36.1	5.6	32.6	50.4	73.9	23.5	
Hori	9748.000	PK	41.5	38.5	6.9	33.4	53.5	73.9	20.4	
Hori	24370.000	PK	45.4	38.9	-1.1	32.3	50.9	73.9	23.0	
Hori	4874.000	AV	29.2	31.7	5.3	31.9	34.3	53.9	19.6	
Hori	7311.000	AV	30.4	36.1	5.6	32.6	39.5	53.9	14.4	
Hori	9748.000	AV	29.4	38.5	6.9	33.4	41.4	53.9	12.5	
Hori	24370.000	AV	31.9	38.9	-1.1	32.3	37.4	53.9	16.5	
Vert	85.379	QP	42.6	6.9	7.9	32.1	25.3	40.0	14.7	
Vert	189.648	QP	29.9	16.2	9.0	32.1	23.0	43.5	20.5	
Vert	287.525	QP	31.6	18.8	9.8	32.0	28.2	46.0	17.8	
Vert	311.996	QP	31.5	15.0	10.0	32.0	24.5	46.0	21.5	
Vert	336.458	QP	36.4	15.7	10.2	32.0	30.3	46.0	15.7	
Vert	385.406	QP	33.0	16.9	10.5	32.0	28.4	46.0	17.6	
Vert	2437.000	PK	93.2	27.2	2.8	32.7	90.5	-	-	100k/300kHz
Vert	4874.000	PK	42.7	31.7	5.3	31.9	47.8	73.9	26.1	
Vert	7311.000	PK	41.4	36.1	5.6	32.6	50.5	73.9	23.4	
Vert	9748.000	PK	41.4	38.5	6.9	33.4	53.4	73.9	20.5	
Vert	24370.000	PK	45.1	38.9	-1.1	32.3	50.6	73.9	23.3	
Vert	4874.000	AV	29.6	31.7	5.3	31.9	34.7	53.9	19.2	
Vert	7311.000	AV	29.7	36.1	5.6	32.6	38.8	53.9	15.1	
Vert	9748.000	AV	29.5	38.5	6.9	33.4	41.5	53.9	12.4	
Vert	24370.000	AV	31.6	38.9	-1.1	32.3	37.1	53.9	16.8	

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
26.5GHz-40GHz 20log(3.0m/0.5m)=15.6dB

Radiated Spurious Emission

Test place	Head Office EMC Lab. No.3 and 4 Semi Anechoic Chamber	
Report No.	29IE0011-HO-01	
Date	05/26/2009	05/27/2009
Temperature/ Humidity	23 deg.C./ 53%	23 deg.C./ 50%
Engineer	Hironobu Ohnishi	Keisuke Kawamura
	(10-26.5GHz)	(30M-10GHz)
	No. 4 Semi Anechoic Chamber	No.3 Semi Anechoic Chamber
Mode	11g Tx 2462MHz	

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	85.380	QP	51.1	6.9	7.9	32.1	33.8	40.0	6.2	
Hori	189.646	QP	36.1	16.2	9.0	32.1	29.2	43.5	14.3	
Hori	287.527	QP	40.9	18.8	9.8	32.0	37.5	46.0	8.5	
Hori	311.982	QP	43.1	15.0	10.0	32.0	36.1	46.0	9.9	
Hori	336.462	QP	44.7	15.7	10.2	32.0	38.6	46.0	7.4	
Hori	385.403	QP	37.5	16.9	10.5	32.0	32.9	46.0	13.1	
Hori	2462.000	PK	99.0	27.3	2.8	32.7	96.4	-	-	100k/300kHz
Hori	2483.500	PK	64.7	27.3	2.8	32.7	62.1	73.9	11.8	
Hori	4924.000	PK	43.3	31.7	5.3	31.9	48.4	73.9	25.5	
Hori	7386.000	PK	42.2	36.2	5.7	32.6	51.5	73.9	22.4	
Hori	9848.000	PK	42.3	38.5	6.9	33.5	54.2	73.9	19.8	
Hori	24620.000	PK	44.6	39.0	-1.0	32.2	50.4	73.9	23.5	
Hori	2483.500	AV	41.3	27.3	2.8	32.7	38.7	53.9	15.2	
Hori	4924.000	AV	29.6	31.7	5.3	31.9	34.7	53.9	19.2	
Hori	7386.000	AV	29.6	36.2	5.7	32.6	38.9	53.9	15.0	
Hori	9848.000	AV	29.4	38.5	6.9	33.5	41.3	53.9	12.6	
Hori	24620.000	AV	31.3	39.0	-1.0	32.2	37.1	53.9	16.8	
Vert	85.380	QP	41.4	6.9	7.9	32.1	24.1	40.0	15.9	
Vert	189.640	QP	28.4	16.2	9.0	32.1	21.5	43.5	22.0	
Vert	287.522	QP	31.3	18.8	9.8	32.0	27.9	46.0	18.1	
Vert	312.003	QP	31.2	15.0	10.0	32.0	24.2	46.0	21.8	
Vert	336.460	QP	35.3	15.7	10.2	32.0	29.2	46.0	16.8	
Vert	385.410	QP	32.4	16.9	10.5	32.0	27.8	46.0	18.2	
Vert	2462.000	PK	94.9	27.3	2.8	32.7	92.3	-	-	100k/300kHz
Vert	2483.500	PK	60.9	27.3	2.8	32.7	58.3	73.9	15.6	
Vert	4924.000	PK	43.0	31.7	5.3	31.9	48.1	73.9	25.8	
Vert	7386.000	PK	42.2	36.2	5.7	32.6	51.5	73.9	22.4	
Vert	9848.000	PK	41.6	38.5	6.9	33.5	53.5	73.9	20.4	
Vert	24620.000	PK	44.8	39.0	-1.0	32.2	50.6	73.9	23.3	
Vert	2483.500	AV	38.8	27.3	2.8	32.7	36.2	53.9	17.7	
Vert	4924.000	AV	29.5	31.7	5.3	31.9	34.6	53.9	19.3	
Vert	7386.000	AV	29.6	36.2	5.7	32.6	38.9	53.9	15.0	
Vert	9848.000	AV	29.2	38.5	6.9	33.5	41.1	53.9	12.8	
Vert	24620.000	AV	31.3	39.0	-1.0	32.2	37.1	53.9	16.8	

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
26.5GHz-40GHz 20log(3.0m/0.5m)=15.6dB

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Radiated Spurious Emission

Test place	Head Office EMC Lab. No.3 Semi Anechoic Chamber	
Report No.	29IE0011-HO-01	
Date	05/26/2009	05/27/2009
Temperature/ Humidity	23 deg.C./ 53%	23 deg.C./ 50%
Engineer	Hironobu Ohnishi	Keisuke Kawamura
	(1-10GHz)	(30M-1GHz)
	No. 4 Semi Anechoic Chamber	No.3 Semi Anechoic Chamber
Mode	11b/g Rx 2437MHz	

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	85.388	QP	51.0	6.9	7.9	32.1	33.7	40.0	6.3	
Hori	189.650	QP	36.2	16.2	9.0	32.1	29.3	43.5	14.2	
Hori	287.525	QP	41.1	18.8	9.8	32.0	37.7	46.0	8.3	
Hori	312.000	QP	44.3	15.0	10.0	32.0	37.3	46.0	8.7	
Hori	336.460	QP	45.6	15.7	10.2	32.0	39.5	46.0	6.5	
Hori	385.400	QP	37.9	16.9	10.5	32.0	33.3	46.0	12.7	
Hori	2437.000	PK	42.2	27.2	2.8	32.7	39.5	73.9	34.4	
Hori	2437.000	AV	28.1	27.2	2.8	32.7	25.4	53.9	28.5	VBW=10Hz
Vert	85.376	QP	41.1	6.9	7.9	32.1	23.8	40.0	16.2	
Vert	189.644	QP	28.7	16.2	9.0	32.1	21.8	43.5	21.7	
Vert	287.525	QP	32.1	18.8	9.8	32.0	28.7	46.0	17.3	
Vert	311.991	QP	30.5	15.0	10.0	32.0	23.5	46.0	22.5	
Vert	336.463	QP	33.7	15.7	10.2	32.0	27.6	46.0	18.4	
Vert	385.404	QP	31.6	16.9	10.5	32.0	27.0	46.0	19.0	
Vert	2437.000	PK	41.7	27.2	2.8	32.7	39.0	73.9	34.9	
Vert	2437.000	AV	28.1	27.2	2.8	32.7	25.4	53.9	28.5	VBW=10Hz

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).

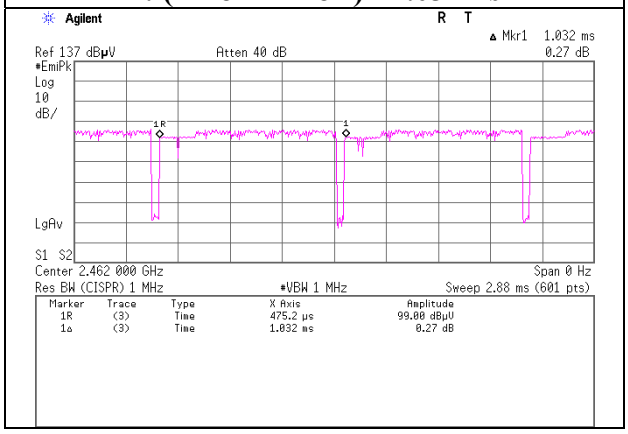
*The 10th harmonic was not seen so the result was its base noise level.

Distance factor: 10GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB
26.5GHz-40GHz 20log(3.0m/0.5m)=15.6dB

VBW (AV) Calculation

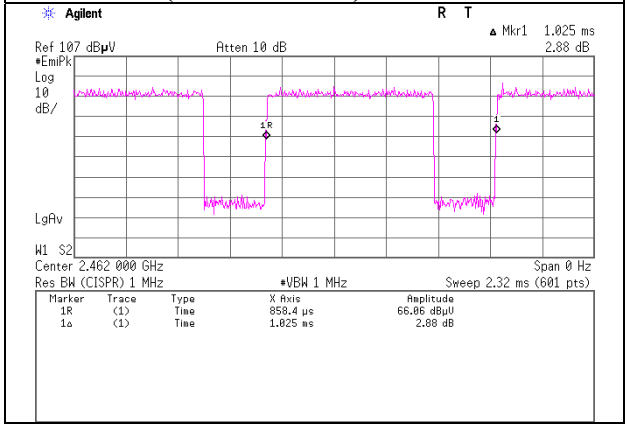
11b 5.5Mbps

VBW: 1/x = 969.0Hz<1kHz
x: (Tx on+Tx off) =1.032ms



11g 6Mbps

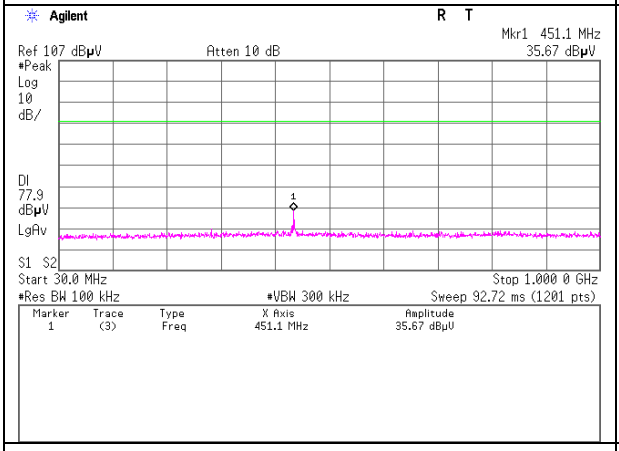
VBW: 1/x = 975.6Hz<1kHz
x: (Tx on+Tx off) =1.025ms



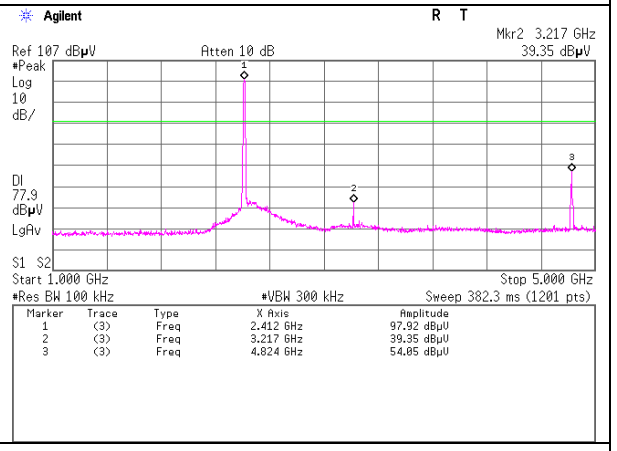
Conducted Spurious Emission

11b Tx 2412MHz

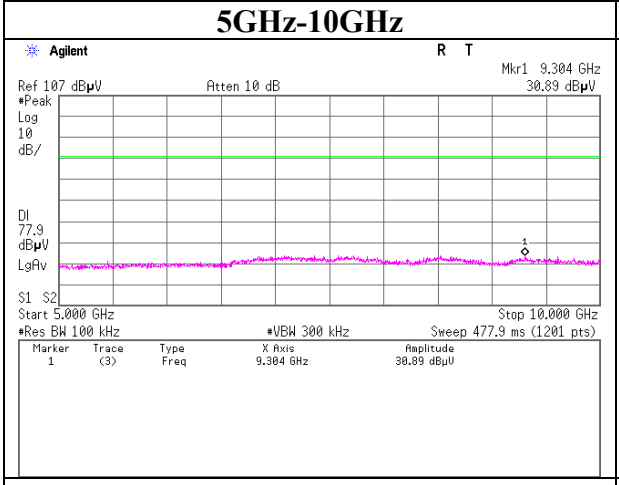
30MHz-1GHz



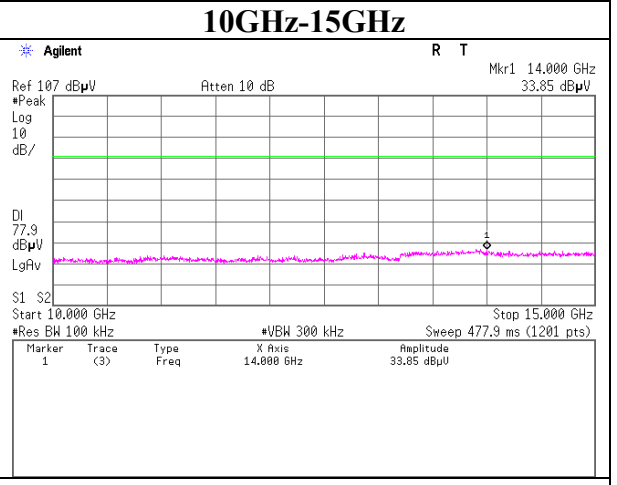
1GHz-5GHz



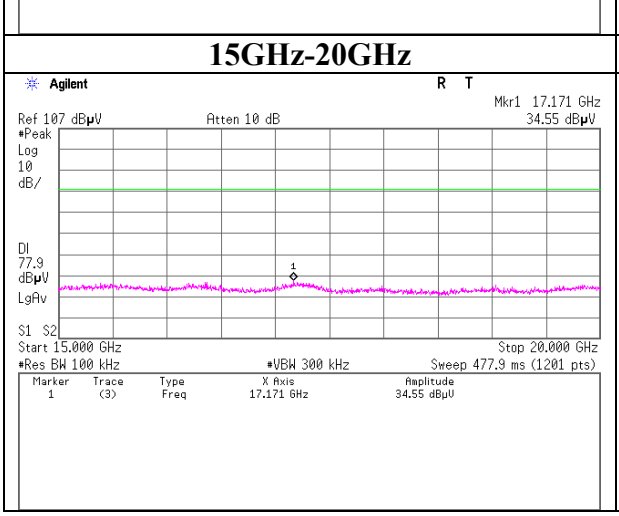
5GHz-10GHz



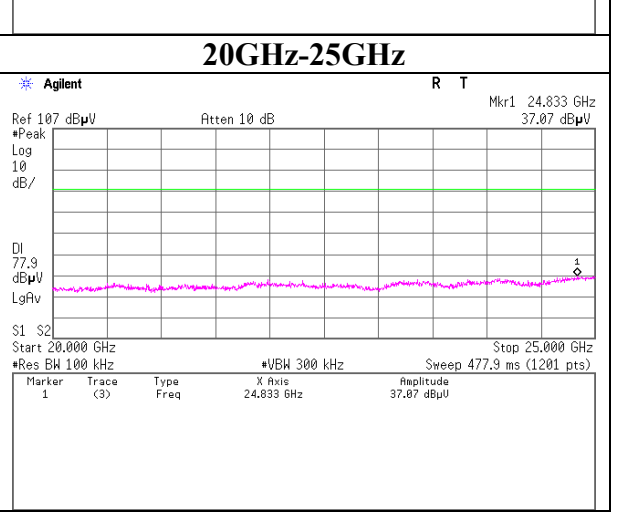
10GHz-15GHz



15GHz-20GHz



20GHz-25GHz



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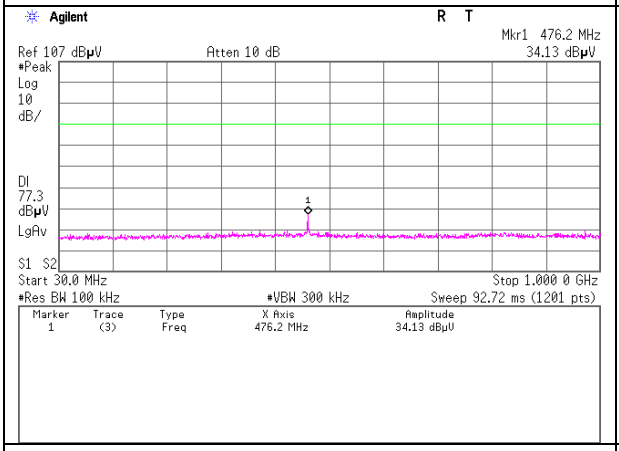
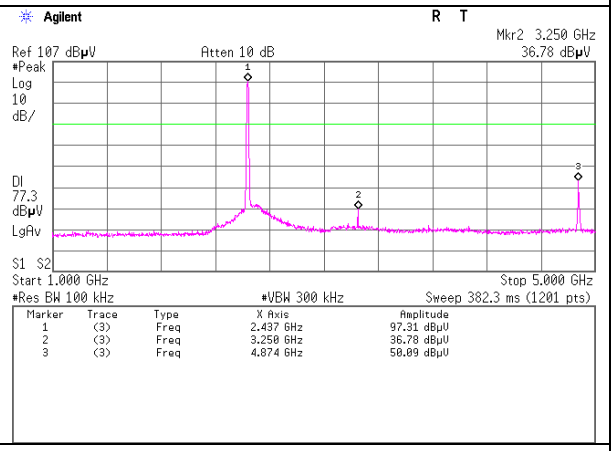
Conducted Spurious Emission

11b Tx 2437MHz

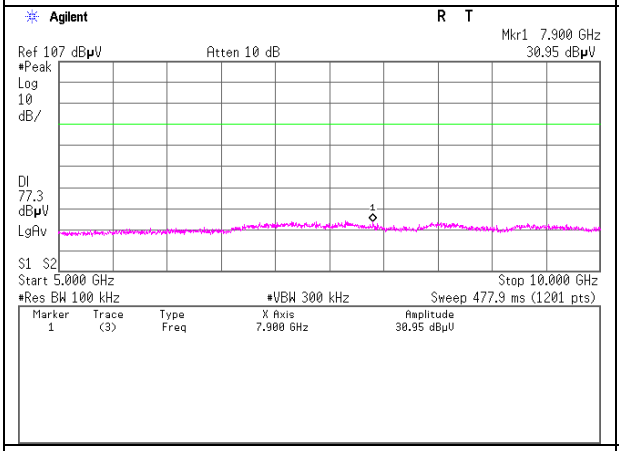
30MHz-1GHz



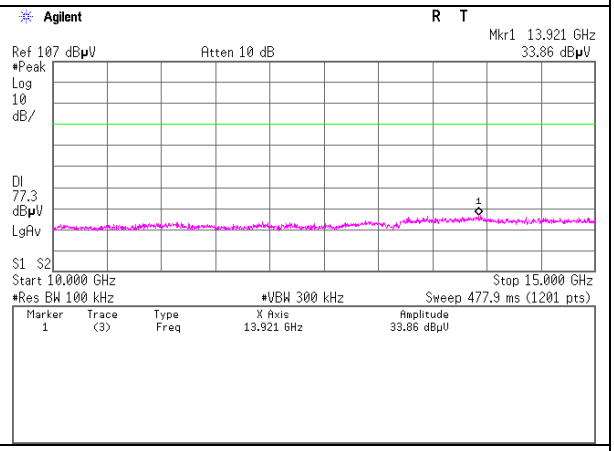
1GHz-5GHz



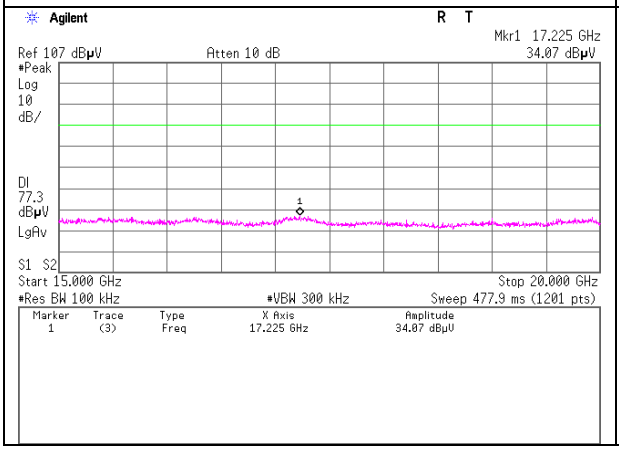
5GHz-10GHz



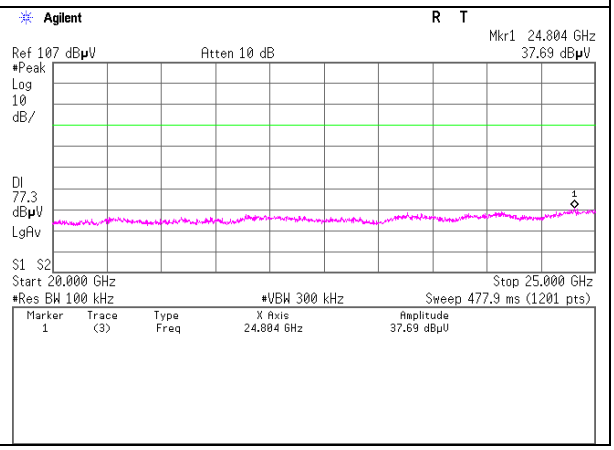
10GHz-15GHz



15GHz-20GHz



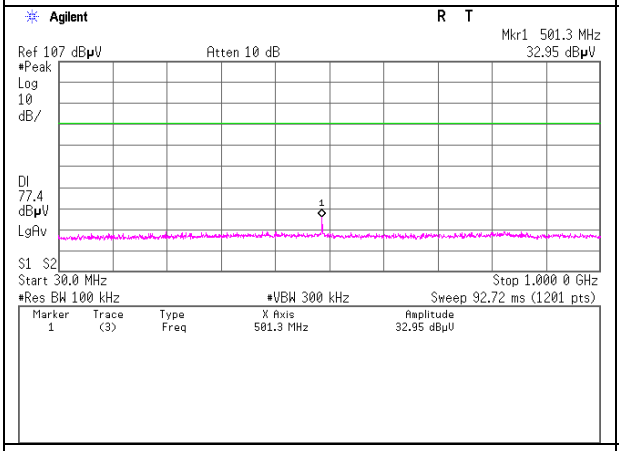
20GHz-25GHz



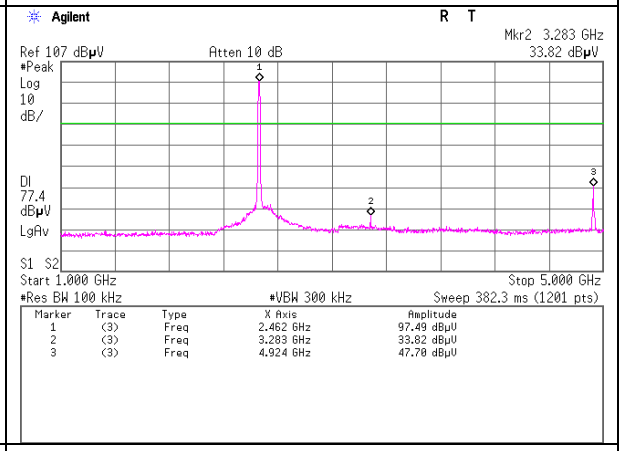
Conducted Spurious Emission

11b Tx 2462MHz

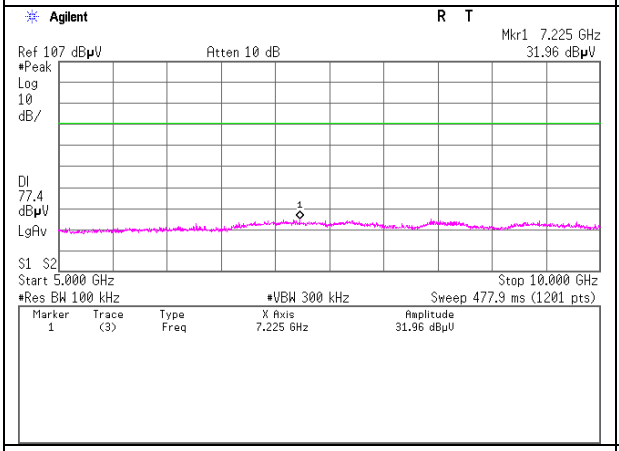
30MHz-1GHz



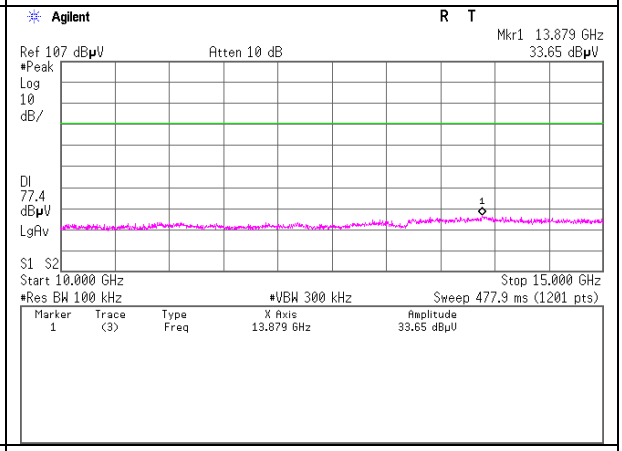
1GHz-5GHz



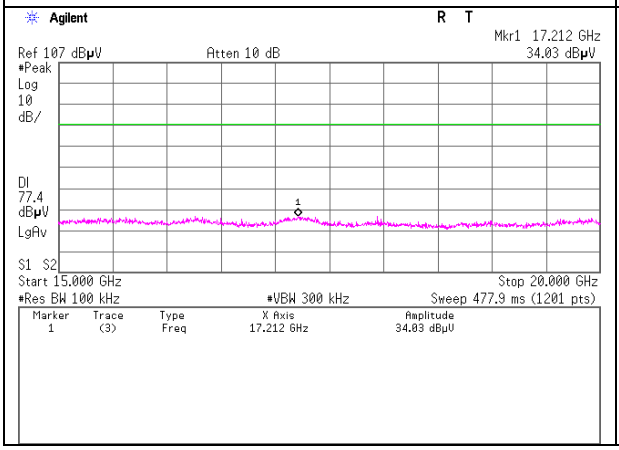
5GHz-10GHz



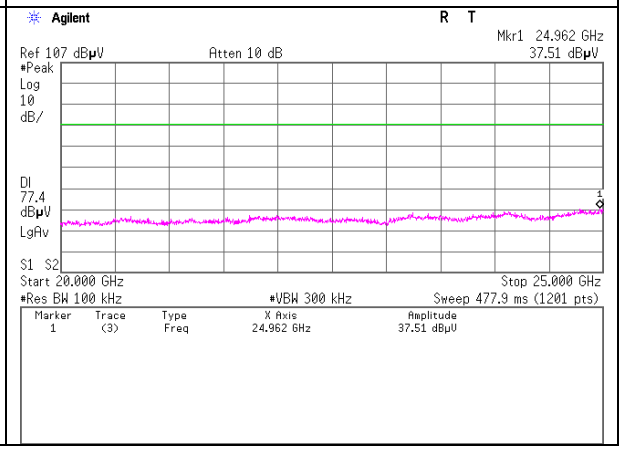
10GHz-15GHz



15GHz-20GHz



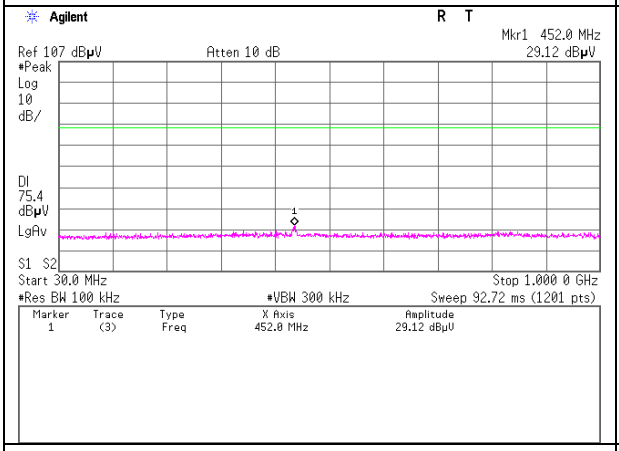
20GHz-25GHz



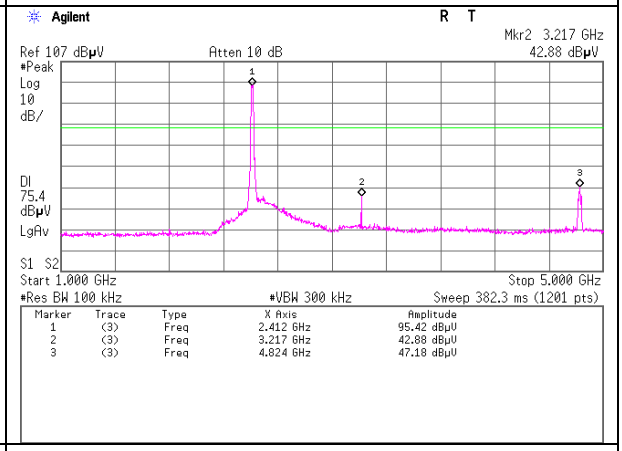
Conducted Spurious Emission

11g Tx 2412MHz

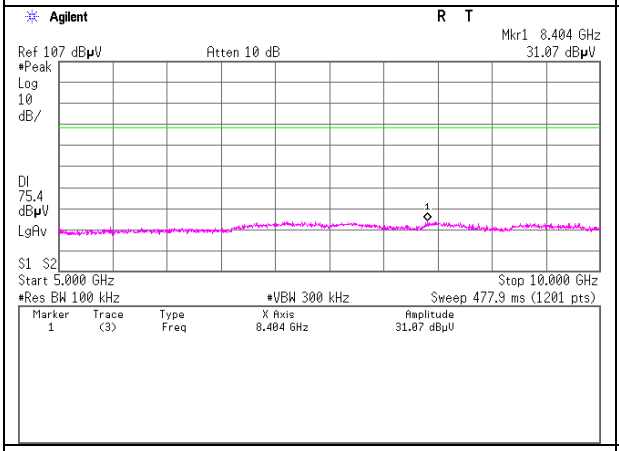
30MHz-1GHz



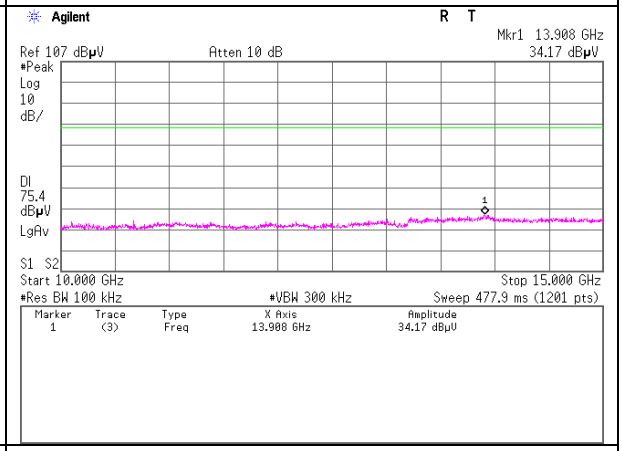
1GHz-5GHz



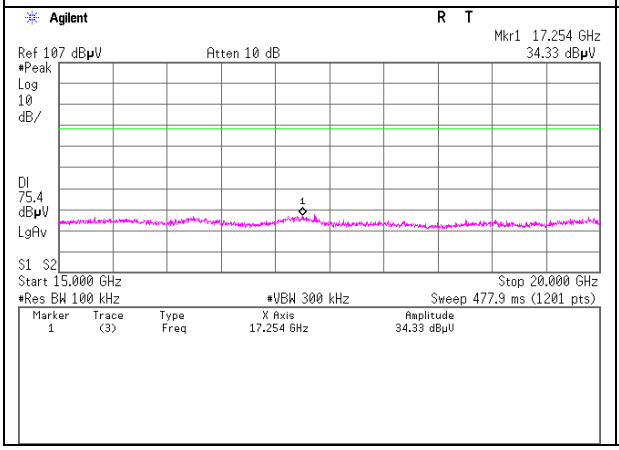
5GHz-10GHz



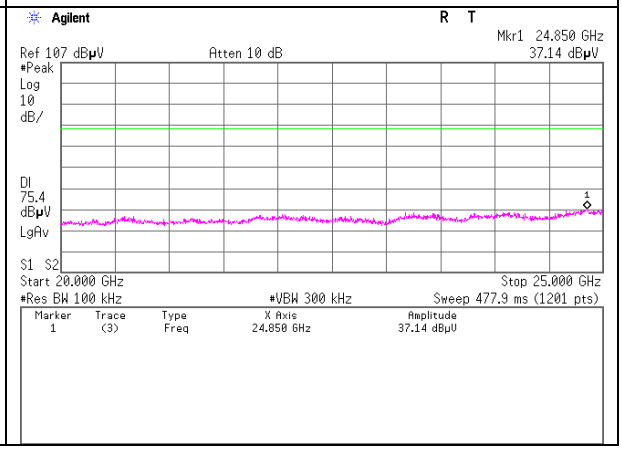
10GHz-15GHz



15GHz-20GHz



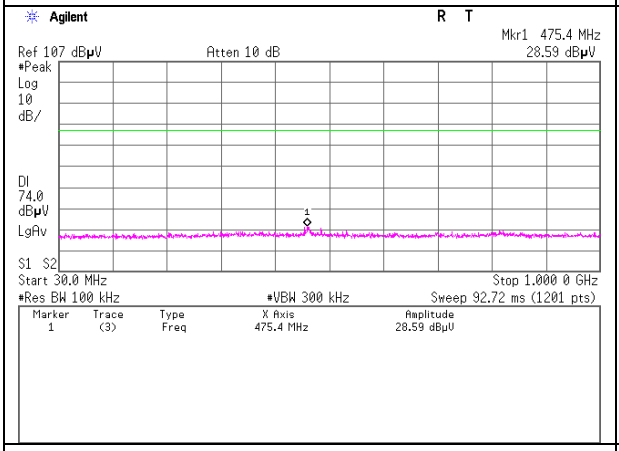
20GHz-25GHz



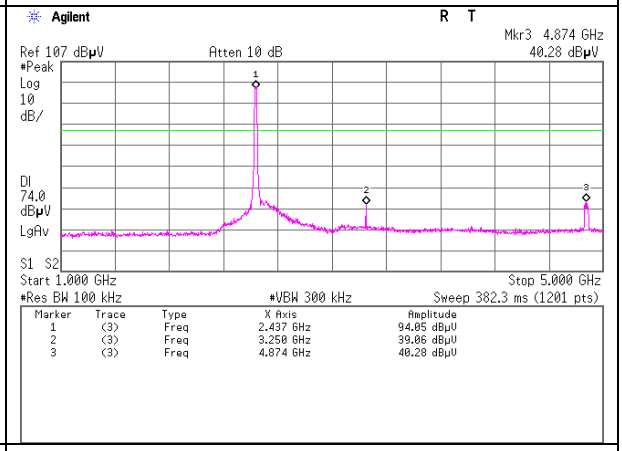
Conducted Spurious Emission

11g Tx 2437MHz

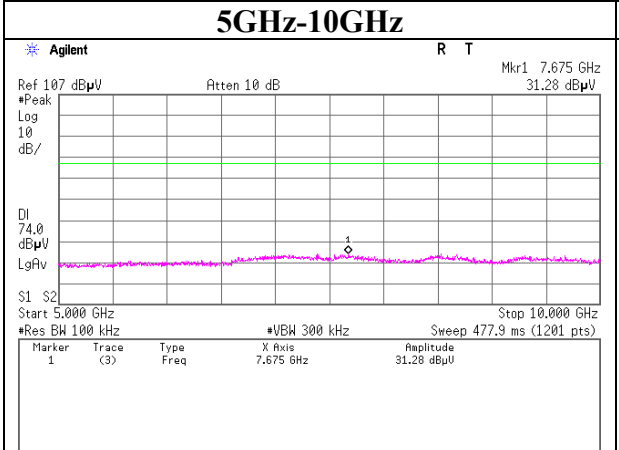
30MHz-1GHz



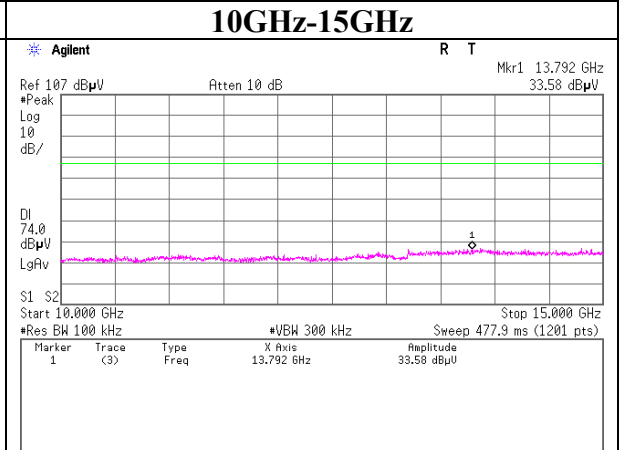
1GHz-5GHz



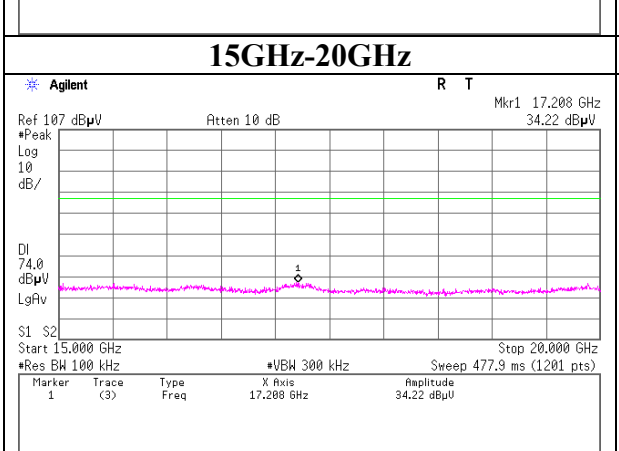
5GHz-10GHz



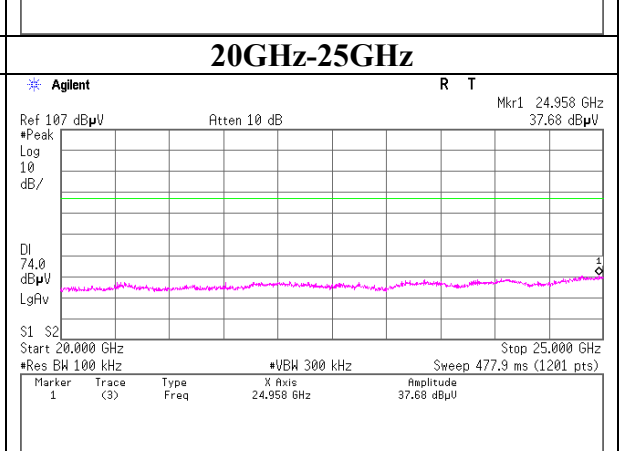
10GHz-15GHz



15GHz-20GHz



20GHz-25GHz



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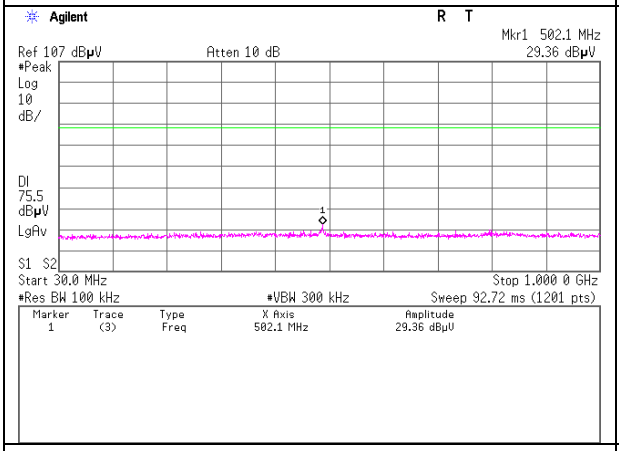
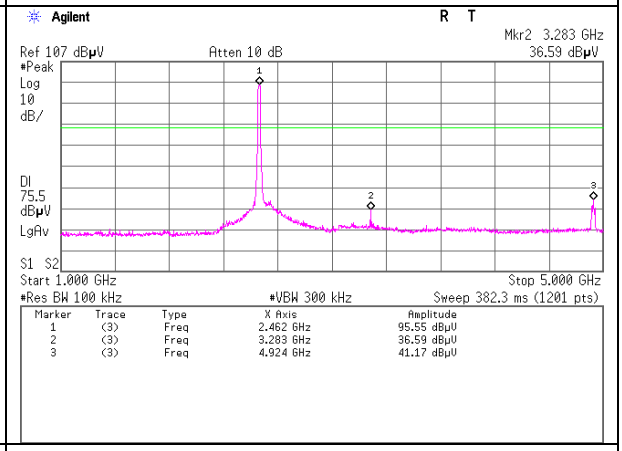
Conducted Spurious Emission

11g Tx 2462MHz

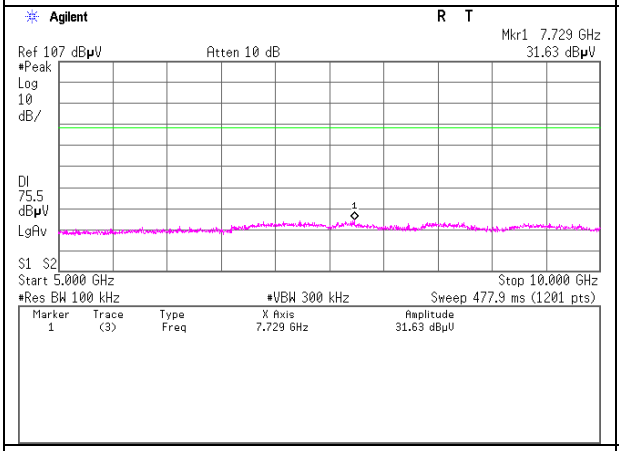
30MHz-1GHz



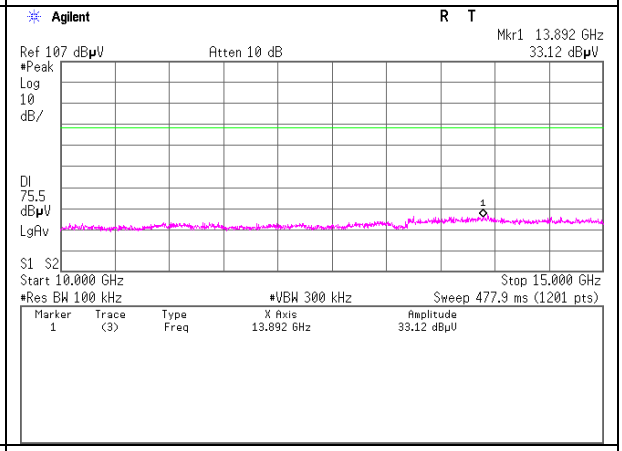
1GHz-5GHz



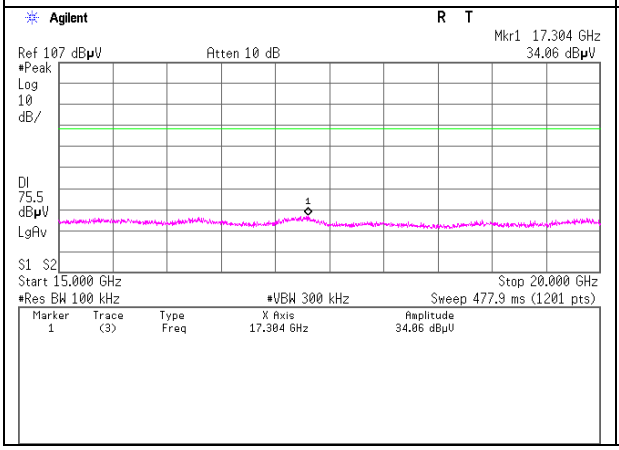
5GHz-10GHz



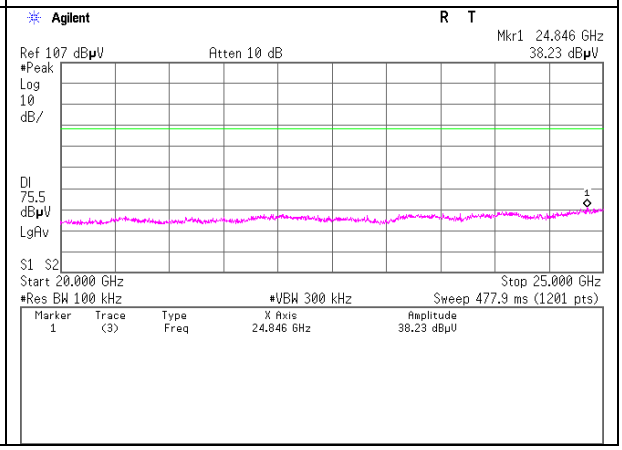
10GHz-15GHz



15GHz-20GHz



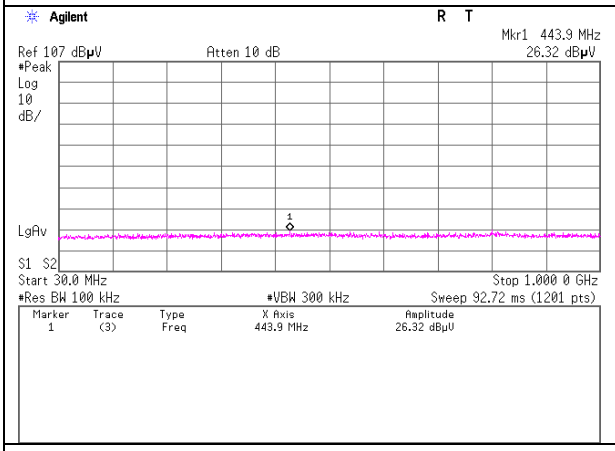
20GHz-25GHz



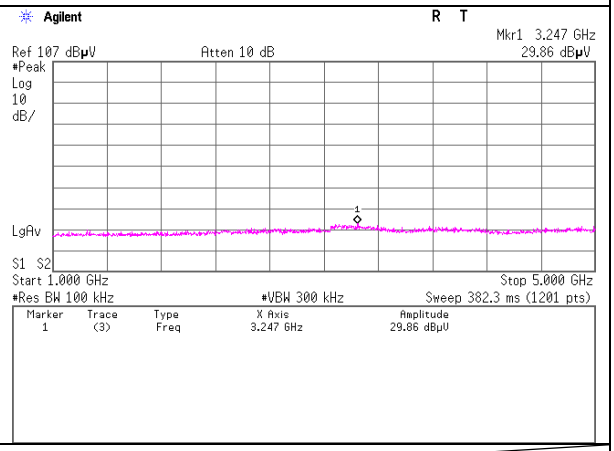
Conducted Spurious Emission

11b/g Rx 2437MHz

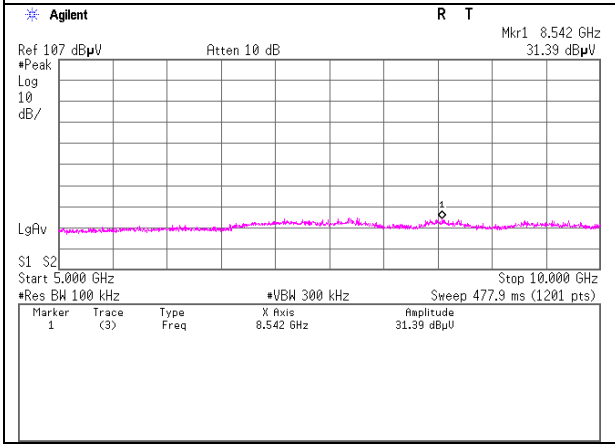
30MHz-1GHz



1GHz-5GHz



5GHz-10GHz



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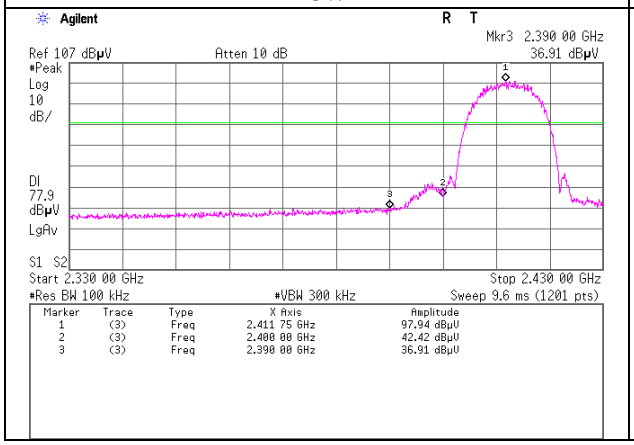
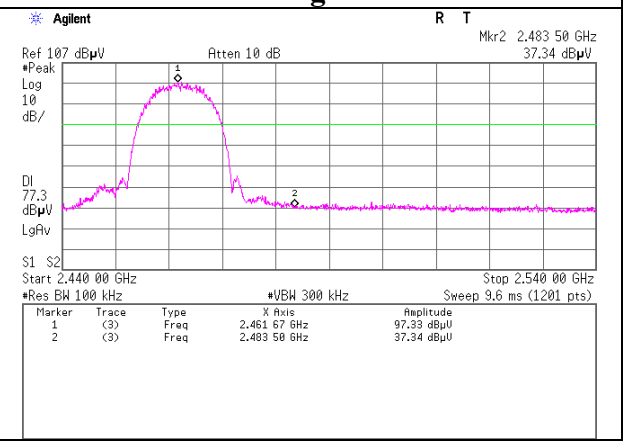
Conducted Emission Band Edge compliance

11b Tx

Low

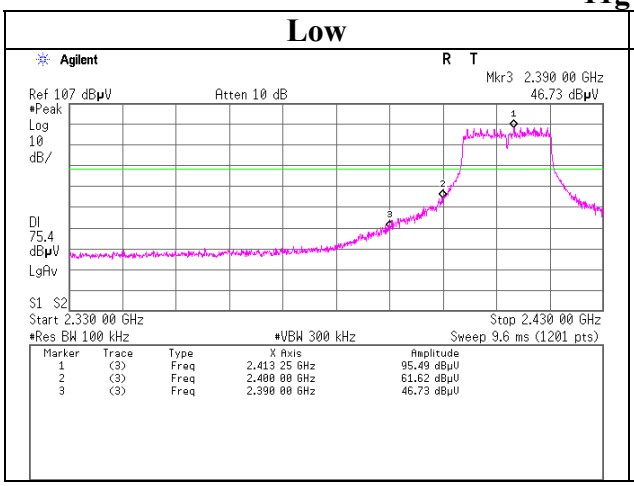


High

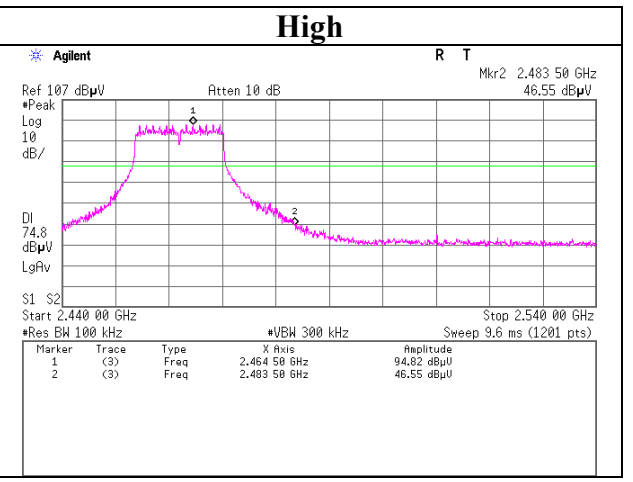


11g Tx

Low



High



Power Density

Test place	Head Office EMC Lab. No.6 Measurement Room
Report No.	29IE0011-HO-01
Date	05/28/2009
Temperature/ Humidity	24 deg.C./ 60%
Engineer	Keisuke Kawamura
Mode	11b Tx, 11g Tx

11b

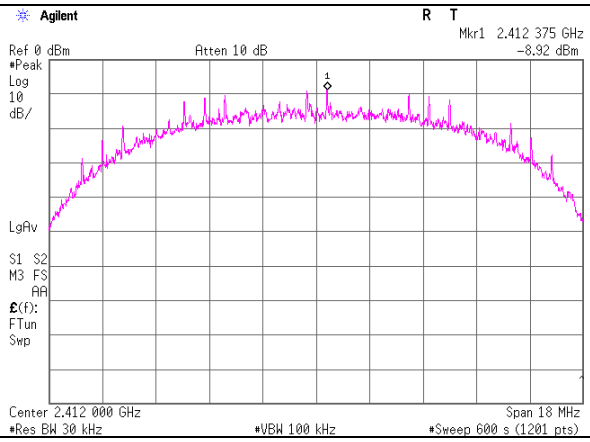
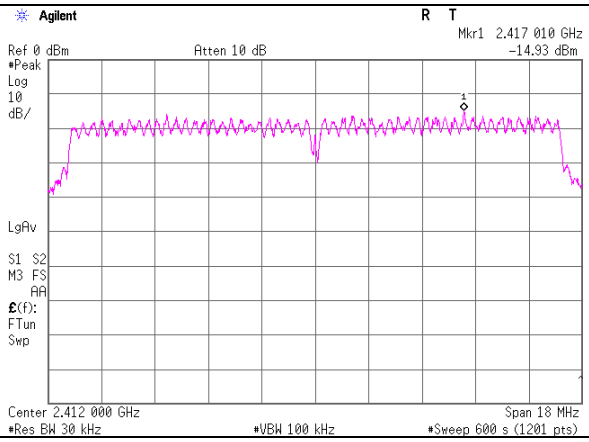
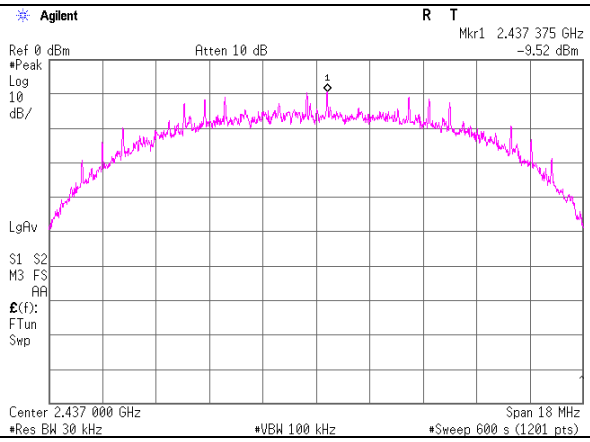
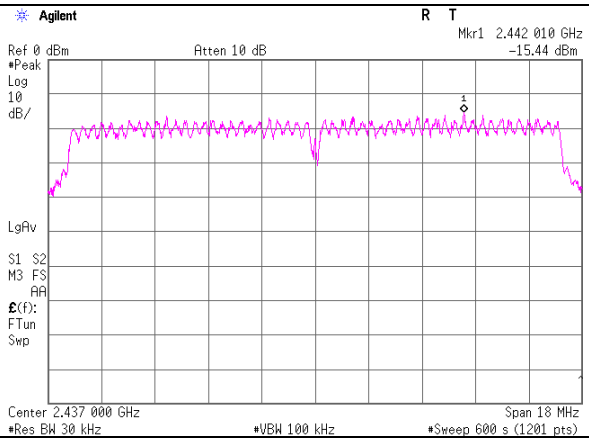
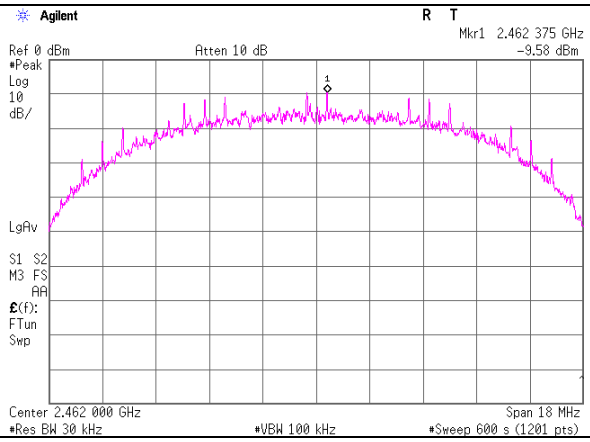
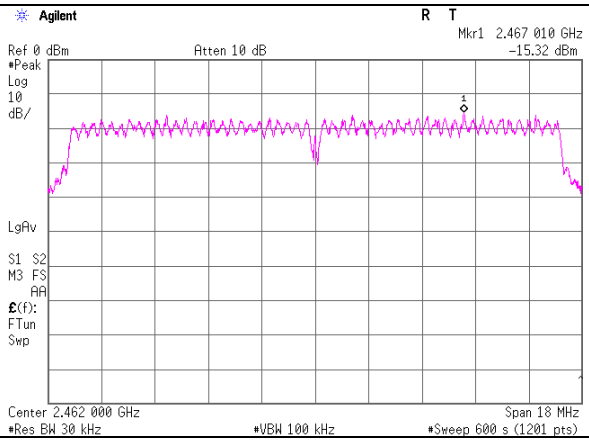
Freq. [MHz]	Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
2412.38	-8.92	0.87	10.08	2.03	8.00	5.97
2437.38	-9.52	0.87	10.08	1.43	8.00	6.57
2462.38	-9.58	0.88	10.08	1.38	8.00	6.62

11g

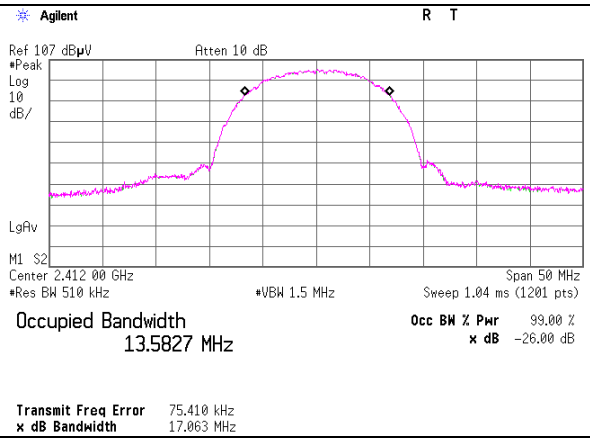
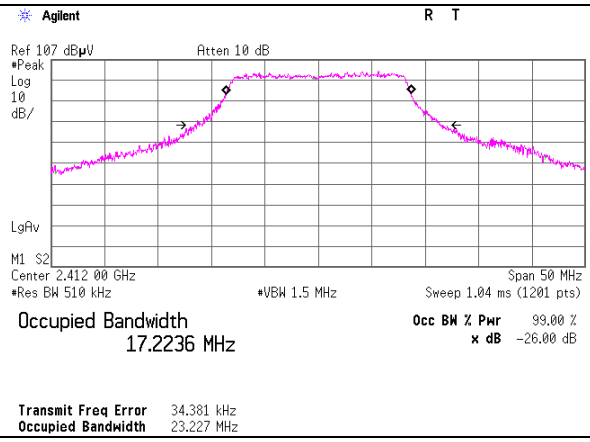
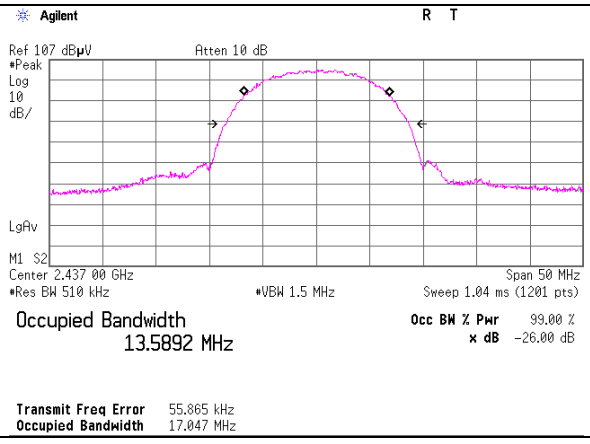
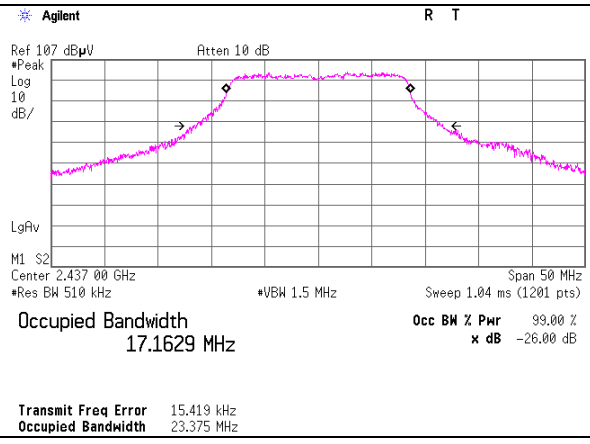
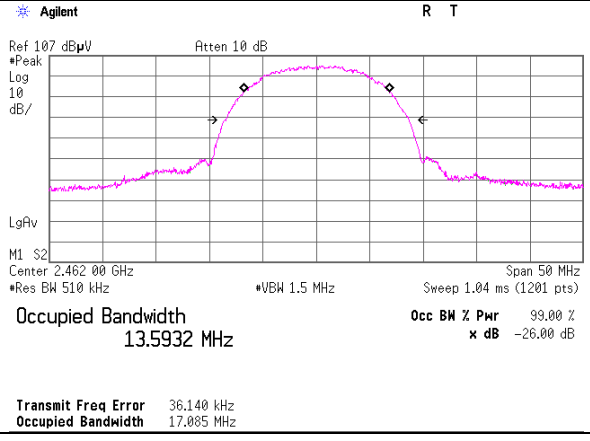
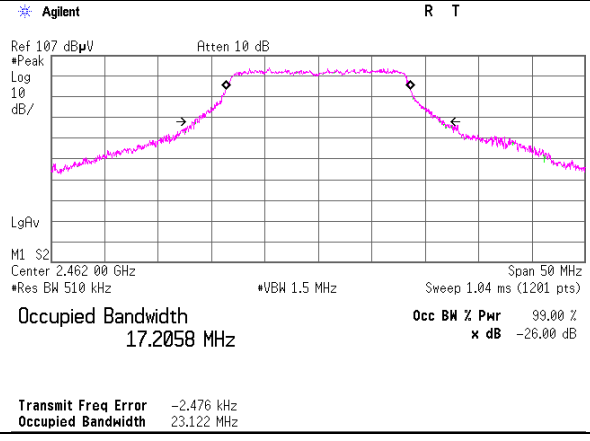
Freq. [MHz]	Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
2417.01	-14.93	0.87	10.08	-3.98	8.00	11.98
2442.01	-15.44	0.87	10.08	-4.49	8.00	12.49
2467.01	-15.32	0.88	10.08	-4.36	8.00	12.36

Sample Calculation:
Result = Reading + Cable Loss + Attenuator

Power Density

11b	11g
2412MHz	2412MHz
	
2437MHz	2437MHz
	
2462MHz	2462MHz
	

99% Occupied Bandwidth

11b	11g
2412MHz	**2412MHz**
	
2437MHz	**2437MHz**
	
2462MHz	**2462MHz**
	

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APPENDIX 3: Test instruments

EMI test equipment

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
MAEC-04	Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-10005	RE/CE	2009/02/03 * 12
MOS-15	Thermo-Hygrometer	Custom	CTH-180	-	RE/CE	2009/02/06 * 12
MJM-07	Measure	PROMART	SEN1955	-	RE/CE	-
COTS-MEMI	EMI measurement program	TSJ	TEPTO-DV	-	RE/CE	-
MSA-05	Spectrum Analyzer	Advantest	R3273	160400285	CE	2008/06/25 * 12
MTR-07	Test Receiver	Rohde & Schwarz	ESCI	100635	CE	2008/10/03 * 12
MLS-06	LISN(AMN)	Schwarzbeck	NSLK8127	8127363	CE(EUT)	2009/02/18 * 12
MLS-07	LISN(AMN)	Schwarzbeck	NSLK8127	8127364	CE(AE)	2009/02/18 * 12
MTA-07	Terminator	MCL	BTRM-50	1 9944	CE	2009/02/17 * 12
MCC-113	Coaxial cable	Fujikura/Suhner/TSJ	-	-	CE	2008/07/03 * 12
MSA-04	Spectrum Analyzer	Agilent	E4448A	US44300523	RE	2008/08/18 * 12
MHA-21	Horn Antenna 1-18GHz	Schwarzbeck	BBHA9120D	9120D-557	RE	2008/08/11 * 12
MCC-57	Microwave Cable 1G-26.5GHz 6m	Suhner	SUCOFLEX104	246769(1m) / 292411(5m)	RE	2008/11/05 * 12
MPA-12	MicroWave System Amplifier	Agilent	83017A	MY39500780	RE	2009/03/19 * 12
MHF-20	High Pass Filter 3.5-18.0GHz	TOKIMEC	TF323DCC	607	RE	2008/12/12 * 12
MCC-79	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	278923/4	RE	2008/12/17 * 12
MHA-17	Horn Antenna 15-40GHz	Schwarzbeck	BBHA9170	BBHA9170307	RE	2009/04/30 * 12
MAEC-03	Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-10005	RE	2009/02/02 * 12
MOS-13	Thermo-Hygrometer	Custom	CTH-180	-	RE	2009/02/06 * 12
MJM-06	Measure	PROMART	SEN1955	-	RE	-
MTR-08	Test Receiver	Rohde & Schwarz	ESCI	100767	RE	2008/06/12 * 12
MBA-03	Biconical Antenna	Schwarzbeck	BBA9106	1915	RE	2009/01/19 * 12
MLA-03	Logperiodic Antenna	Schwarzbeck	USLP9143	174	RE	2009/01/10 * 12
MCC-51	Coaxial cable	UL Japan	-	-	RE	2008/07/18 * 12
MAT-09	Attenuator(6dB)	Weinschel Corp	2	BK7973	RE	2008/11/14 * 12
MPA-13	Pre Amplifier	SONOMA INSTRUMENT	310	260834	RE	2009/03/18 * 12
MSA-03	Spectrum Analyzer	Agilent	E4448A	MY44020357	AT	2008/11/07 * 12
MPM-13	Power Meter	Anritsu	ML2495A	0824014	AT	2008/08/13 * 12
MPSE-18	Power sensor	Anritsu	MA2411B	0738174	AT	2008/08/13 * 12
MCC-116	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	290221/4	AT	2008/08/04 * 12
MAT-20	Attenuator(10dB)(above 1GHz)	HIROSE ELECTRIC CO.,LTD.	AT-110	-	AT	2009/01/16 * 12
MOS-14	Thermo-Hygrometer	Custom	CTH-180	-	AT	2009/02/04 * 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

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