

**APPENDIX 2: Data of EMI test**

**Conducted Emission**

**DATA OF CONDUCTED EMISSION TEST**

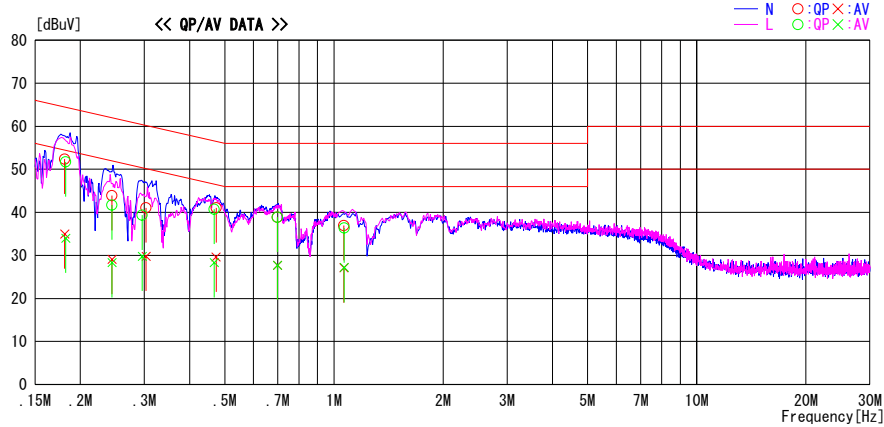
UL Japan, Inc. Head Office EMC Lab. No. 4 Semi Anechoic Chamber  
Date : 2010/07/30

Report No. : 30GE0232-H0-02

Temp./Humi. : 26deg. C / 59%  
Engineer : Takayuki Shimada

Mode / Remarks : WLAN 11b Tx 2412MHz, 1Mbps

LIMIT : FCC15.207 QP  
FCC15.207 AV

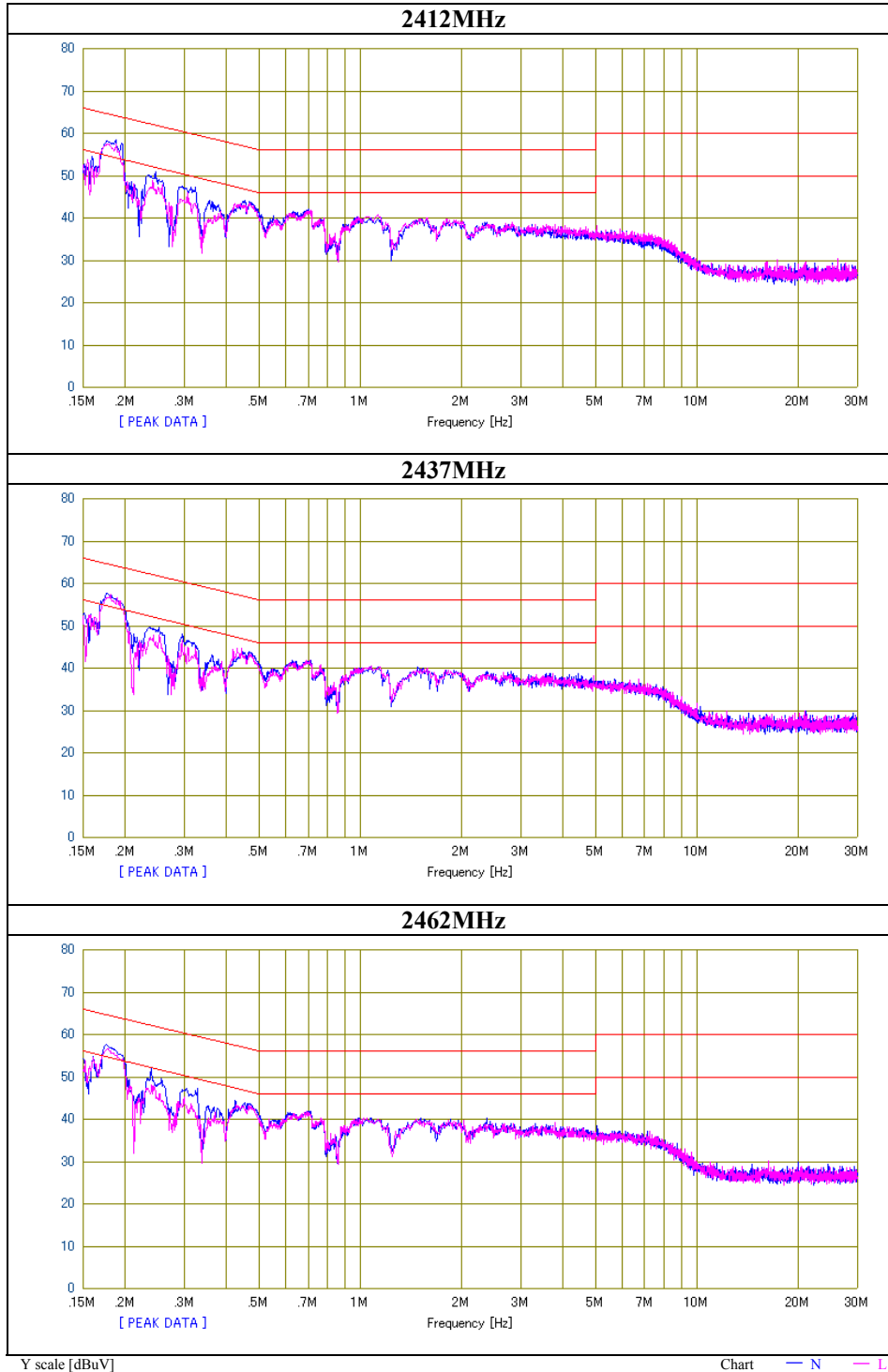


Frequency [MHz]	Reading Level		Corr. Factor [dB]	Results		Limit		Margin		Phase	Comment
	QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]		
0.18098	39.2	21.8	13.2	52.4	35.0	64.4	54.4	12.0	19.4	N	
0.24438	30.6	15.8	13.3	43.9	29.1	61.9	51.9	18.0	22.8	N	
0.30333	27.8	16.5	13.3	41.1	29.8	60.2	50.2	19.1	20.4	N	
0.47316	27.8	16.3	13.3	41.1	29.6	56.5	46.5	15.4	16.9	N	
0.69858	25.6	14.4	13.3	38.9	27.7	56.0	46.0	17.1	18.3	N	
1.06472	23.7	13.9	13.2	36.9	27.1	56.0	46.0	19.1	18.9	N	
0.18210	38.5	20.8	13.2	51.7	34.0	64.4	54.4	12.7	20.4	L	
0.24424	28.4	15.0	13.3	41.7	28.3	62.0	52.0	20.3	23.7	L	
0.29619	26.1	16.5	13.3	39.4	29.8	60.3	50.3	20.9	20.5	L	
0.46744	27.4	15.0	13.3	40.7	28.3	56.6	46.6	15.9	18.3	L	
0.69855	25.6	14.4	13.3	38.9	27.7	56.0	46.0	17.1	18.3	L	
1.06732	23.2	14.0	13.2	36.4	27.2	56.0	46.0	19.6	18.8	L	

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

## Conducted Emission

Report No. 30GE0232-HO-02  
Test place Head Office EMC Lab.  
Semi Anechoic Chamber No.4  
Date 07/29/2010  
Temperature/ Humidity 26 deg. C. / 59%  
Engineer Takayuki Shimada  
Mode 11b Tx



**Conducted Emission**

**DATA OF CONDUCTED EMISSION TEST**

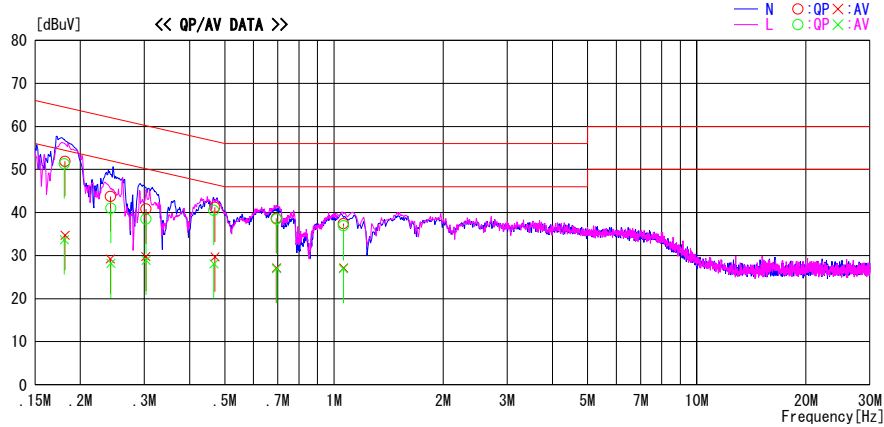
UL Japan, Inc. Head Office EMC Lab. No. 4 Semi Anechoic Chamber  
Date : 2010/07/30

Report No. : 30GE0232-HO-02

Temp./Humi. : 26deg. C / 59%  
Engineer : Takayuki Shimada

Mode / Remarks : WLAN 11g Tx 2412MHz, 6Mbps

LIMIT : FCC15.207 QP  
FCC15.207 AV

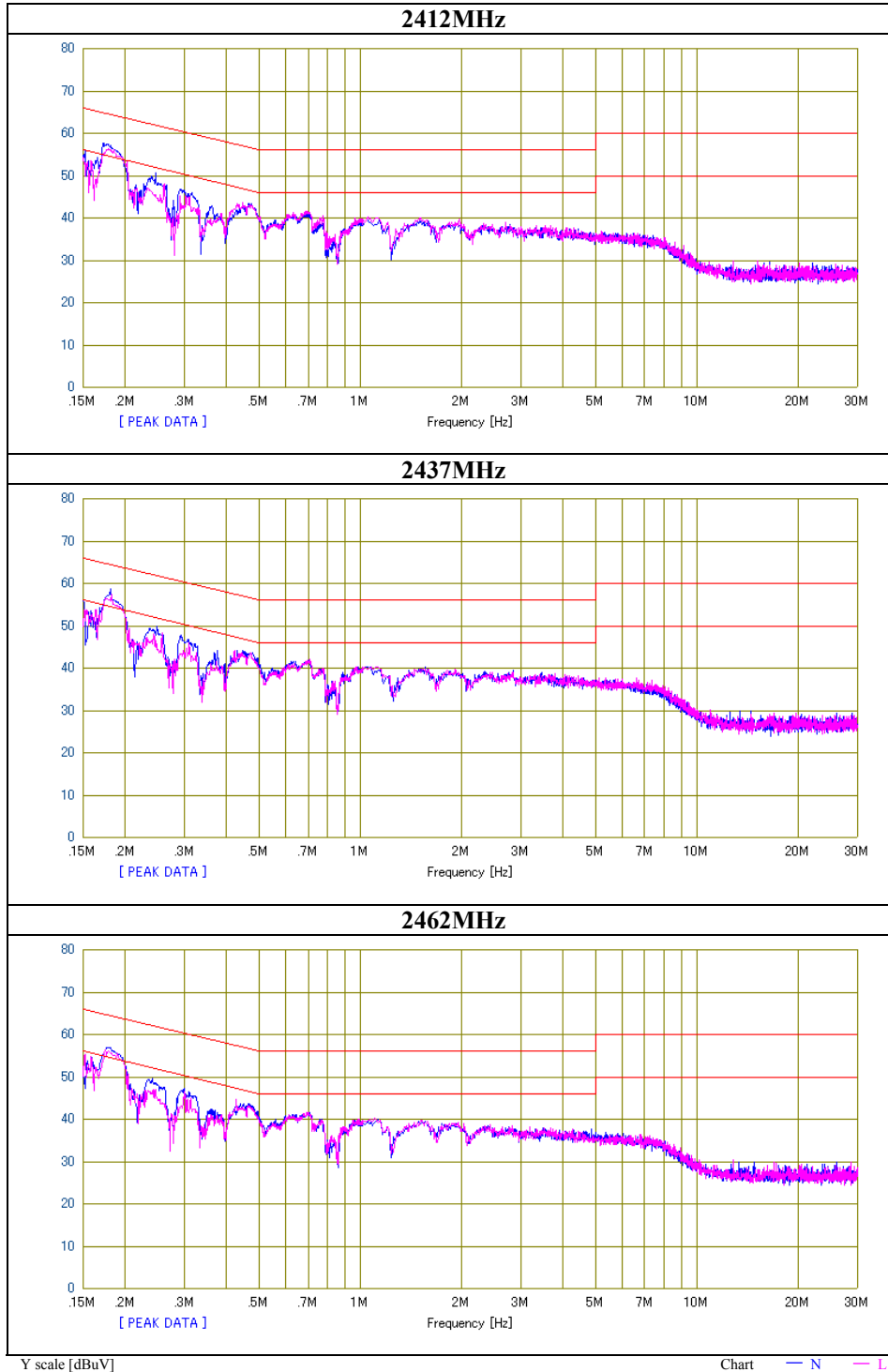


Frequency [MHz]	Reading Level		Corr. Factor [dB]	Results		Limit		Margin		Phase	Comment
	QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]		
0.18132	38.7	21.5	13.2	51.9	34.7	64.4	54.4	12.5	19.7	N	
0.24203	30.4	15.9	13.3	43.7	29.2	62.0	52.0	18.3	22.8	N	
0.30312	27.5	16.5	13.3	40.8	29.8	60.2	50.2	19.4	20.4	N	
0.46949	27.9	16.4	13.3	41.2	29.7	56.5	46.5	15.3	16.8	N	
0.69421	25.3	13.8	13.3	38.6	27.1	56.0	46.0	17.4	18.9	N	
1.06296	24.2	13.9	13.2	37.4	27.1	56.0	46.0	18.6	18.9	N	
0.18068	38.1	20.5	13.2	51.3	33.7	64.5	54.5	13.2	20.8	L	
0.24283	27.7	14.9	13.3	41.0	28.2	62.0	52.0	21.0	23.8	L	
0.30331	25.2	15.6	13.3	38.5	28.9	60.2	50.2	21.7	21.3	L	
0.46661	27.2	14.8	13.3	40.5	28.1	56.6	46.6	16.1	18.5	L	
0.69461	25.2	13.7	13.3	38.5	27.0	56.0	46.0	17.5	19.0	L	
1.06096	23.7	13.8	13.2	36.9	27.0	56.0	46.0	19.1	19.0	L	

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

## Conducted Emission

Report No.	30GE0232-HO-02
Test place	Head Office EMC Lab.
Semi Anechoic Chamber	No.4
Date	07/29/2010
Temperature/ Humidity	26 deg. C. / 59%
Engineer	Takayuki Shimada
Mode	11g Tx



**Conducted Emission**

**DATA OF CONDUCTED EMISSION TEST**

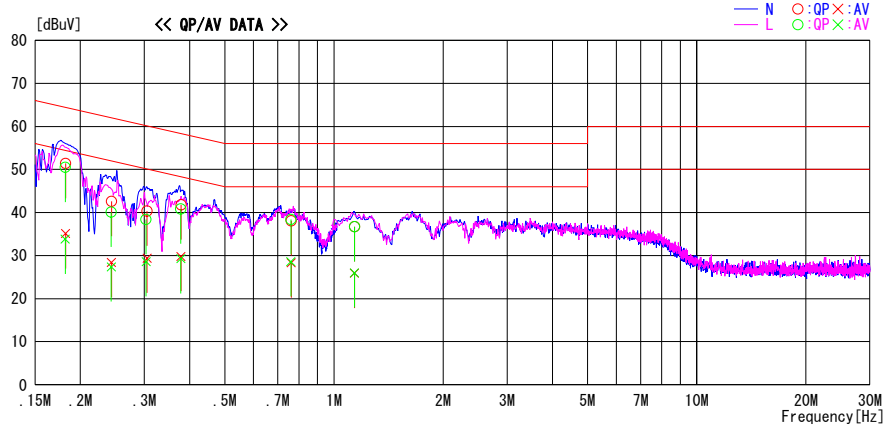
UL Japan, Inc. Head Office EMC Lab. No. 4 Semi Anechoic Chamber  
Date : 2010/07/30

Report No. : 30GE0232-HO-02

Temp./Humi. : 26deg. C / 59%  
Engineer : Takayuki Shimada

Mode / Remarks : WLAN 11b/g Rx 2437MHz

LIMIT : FCC15.207 QP  
FCC15.207 AV



Frequency [MHz]	Reading Level		Corr. Factor [dB]	Results		Limit		Margin		Phase	Comment
	QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]		
0.18205	38.2	21.9	13.2	51.4	35.1	64.4	54.4	13.0	19.3	N	
0.24362	29.3	15.1	13.3	42.6	28.4	62.0	52.0	19.4	23.6	N	
0.30521	27.0	16.1	13.3	40.3	29.4	60.1	50.1	19.8	20.7	N	
0.37871	28.5	16.5	13.3	41.8	29.8	58.3	48.3	16.5	18.5	N	
0.76207	24.8	15.0	13.3	38.1	28.3	56.0	46.0	17.9	17.7	N	
1.13899	23.4	12.6	13.3	36.7	25.9	56.0	46.0	19.3	20.1	N	
0.18158	37.3	20.6	13.2	50.5	33.8	64.4	54.4	13.9	20.6	L	
0.24322	26.8	14.1	13.3	40.1	27.4	62.0	52.0	21.9	24.6	L	
0.30349	25.1	15.3	13.3	38.4	28.6	60.1	50.1	21.7	21.5	L	
0.37844	27.5	16.0	13.3	40.8	29.3	58.3	48.3	17.5	19.0	L	
0.76047	25.1	15.3	13.3	38.4	28.6	56.0	46.0	17.6	17.4	L	
1.13859	23.4	12.7	13.3	36.7	26.0	56.0	46.0	19.3	20.0	L	

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

### 6dB Bandwidth

Report No. 30GE0232-HO-02  
Test place Head Office EMC Lab.  
Measurement Room No.6 No.11  
Date 07/12/2010 07/23/2010  
Temperature/ Humidity 25 deg. C. / 58% 24 deg. C. / 64%  
Engineer Takeshi Choda Keisuke Kawamura  
Mode 11g Tx 11b Tx

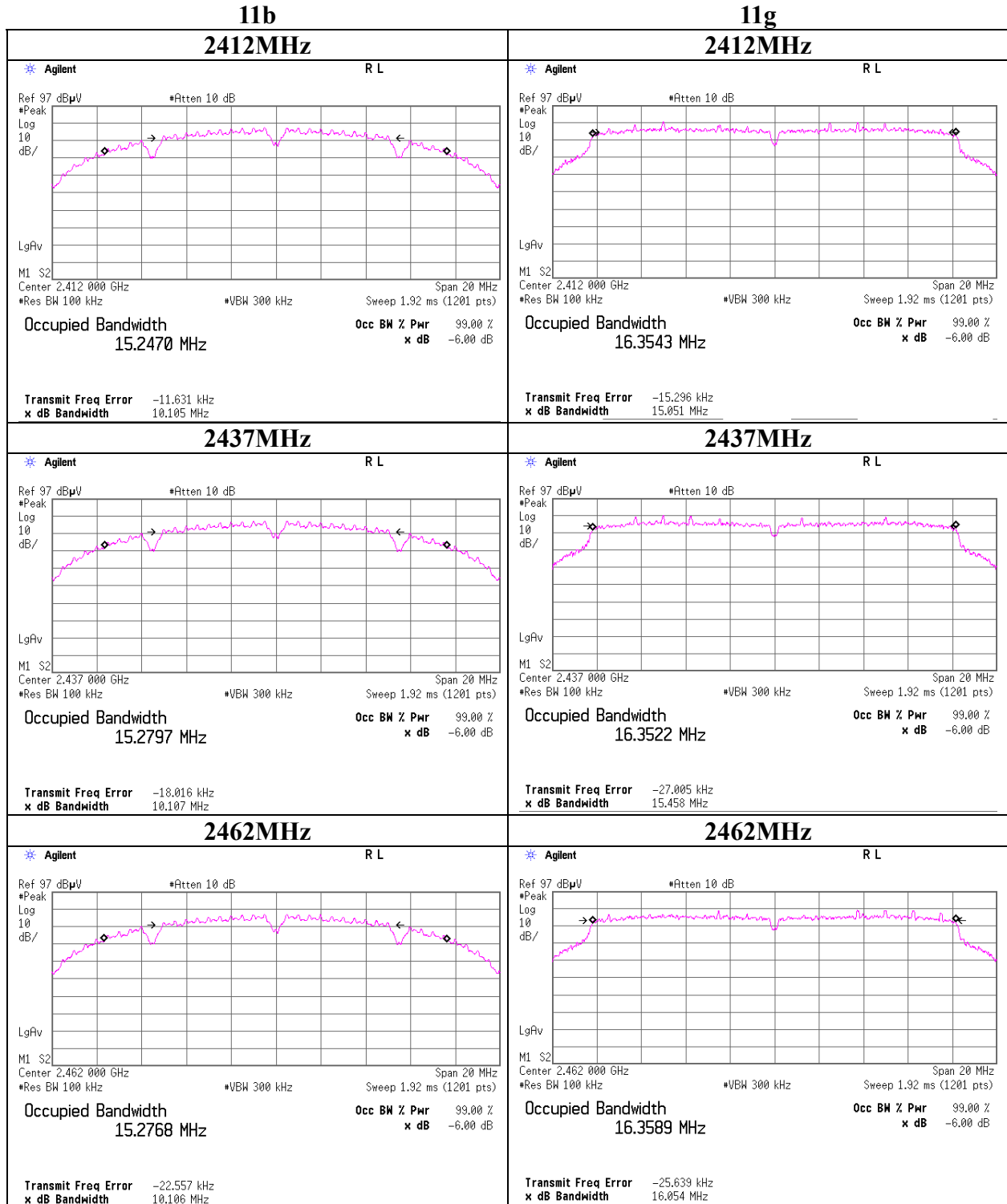
11b

Frequency [MHz]	6dB Bandwidth [MHz]	Limit [kHz]
2412	10.105	>500
2437	10.107	>500
2462	10.106	>500

11g

Frequency [MHz]	6dB Bandwidth [MHz]	Limit [kHz]
2412	15.051	>500
2437	15.458	>500
2462	16.054	>500

### 6dB Bandwidth



### Maximum Peak Output Power

Report No. 30GE0232-HO-02  
 Test place Head Office EMC Lab.  
 Measurement Room No.3  
 Date 07/22/2010  
 Temperature/ Humidity 25 deg. C. / 55%  
 Engineer Katsunori Okai  
 Mode 11b Tx

Freq. [MHz]	Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result		Limit		Margin [dB]
				[dBm]	[mW]	[dBm]	[mW]	
2412	-7.79	1.01	19.96	13.18	20.80	30.00	1000	16.82
2437	-7.70	1.01	19.96	13.27	21.23	30.00	1000	16.73
2462	-7.87	1.02	19.96	13.11	20.46	30.00	1000	16.89

Sample Calculation:  
 Result = Reading + Cable Loss + Attenuator

Tx 2437MHz

Rate [Mbps]	Reading [dBm]	Remark
1	-7.70	*
2	-8.08	
5.5	-8.04	
11	-8.11	

\*: Worst Rate

All comparizon were carried out on same frequency and measurement factors.



## Maximum Peak Output Power

Report No. 30GE0232-HO-02  
 Test place Head Office EMC Lab.  
 Measurement Room No.2  
 Date 07/05/2010  
 Temperature/ Humidity 20 deg. C. / 57%  
 Engineer Takeshi Choda  
 Mode 11g Tx

Freq. [MHz]	Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result		Limit		Margin [dB]
				[dBm]	[mW]	[dBm]	[mW]	
2412	1.57	1.01	19.96	22.54	179.47	30.00	1000	7.46
2437	1.65	1.01	19.96	22.62	182.81	30.00	1000	7.38
2462	1.56	1.02	19.96	22.54	179.47	30.00	1000	7.46

Sample Calculation:

Result = Reading + Cable Loss + Attenuator

Tx 2437MHz

Rate [Mbps]	Reading [dBm]	Remark
6	1.65	*
9	1.53	
12	1.47	
18	1.16	
24	1.17	
36	1.16	
48	1.29	
54	1.51	

\*: Worst Rate

All comparison were carried out on same frequency and measurement factors.

## Radiated Spurious Emission

Report No.	30GE0232-HO-02		
Test place	Head Office EMC Lab.		
Semi Anechoic Chamber	No.2	No.3	No.4
Date	07/21/2010	07/22/2010	07/28/2010
Temperature/ Humidity	21 deg. C. / 59%	25 deg. C. / 62%	27 deg. C. / 64%
Engineer	Hiroshi Kukita (1-10GHz)	Takeshi Choda (above 10GHz)	Takeshi Choda (below 1GHz)
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	37.999	QP	24.1	15.4	7.2	32.0	14.7	40.0	25.3	
Hori	119.998	QP	29.9	13.3	8.3	32.0	19.5	43.5	24.0	
Hori	151.998	QP	29.6	15.1	8.6	31.9	21.4	43.5	22.1	
Hori	359.995	QP	38.1	17.0	10.3	31.9	33.5	46.0	12.5	
Hori	645.993	QP	36.9	21.0	11.9	32.2	37.6	46.0	8.4	
Hori	797.991	QP	34.8	23.1	12.7	31.8	38.8	46.0	7.2	
Hori	2390.000	PK	62.2	27.1	2.9	32.4	59.8	73.9	14.1	
Hori	2398.090	PK	67.3	27.1	2.9	32.4	64.9	-	-	- See 20dBc Data Sheet
Hori	2400.000	PK	70.4	27.1	2.9	32.4	68.0	-	-	- See 20dBc Data Sheet
Hori	4824.000	PK	44.8	30.5	5.2	31.3	49.2	73.9	24.7	
Hori	7236.000	PK	42.0	35.1	5.9	31.1	51.9	73.9	22.0	
Hori	9648.000	PK	45.2	37.7	6.9	31.4	58.4	-	-	- See 20dBc Data Sheet
Hori	24120.000	PK	45.7	37.9	-1.3	31.0	51.3	73.9	22.6	NS
Hori	2390.000	AV	37.7	27.1	2.9	32.4	35.3	53.9	18.6	
Hori	2398.090	AV	52.5	27.1	2.9	32.4	50.1	-	-	- See 20dBc Data Sheet
Hori	2400.000	AV	47.4	27.1	2.9	32.4	45.0	-	-	- See 20dBc Data Sheet
Hori	4824.000	AV	40.3	30.5	5.2	31.3	44.7	53.9	9.2	
Hori	7236.000	AV	30.3	35.1	5.9	31.1	40.2	53.9	13.7	
Hori	9648.000	AV	37.5	37.7	6.9	31.4	50.7	-	-	- See 20dBc Data Sheet
Hori	24120.000	AV	33.9	37.9	-1.3	31.0	39.5	53.9	14.4	NS
Vert	37.999	QP	28.7	15.4	7.2	32.0	19.3	40.0	20.7	
Vert	119.998	QP	34.2	13.3	8.3	32.0	23.8	43.5	19.7	
Vert	151.998	QP	32.4	15.1	8.6	31.9	24.2	43.5	19.3	
Vert	359.995	QP	32.4	17.0	10.3	31.9	27.8	46.0	18.2	
Vert	645.993	QP	36.8	21.0	11.9	32.2	37.5	46.0	8.5	
Vert	797.991	QP	34.1	23.1	12.7	31.8	38.1	46.0	7.9	
Vert	2390.000	PK	58.3	27.1	2.9	32.4	55.9	73.9	18.0	
Vert	2398.150	PK	62.8	27.1	2.9	32.4	60.4	-	-	- See 20dBc Data Sheet
Vert	2400.000	PK	65.3	27.1	2.9	32.4	62.9	-	-	- See 20dBc Data Sheet
Vert	4824.000	PK	43.2	30.5	5.2	31.3	47.6	73.9	26.3	
Vert	7236.000	PK	43.3	35.1	5.9	31.1	53.2	73.9	20.7	
Vert	9648.000	PK	45.3	37.7	6.9	31.4	58.5	-	-	- See 20dBc Data Sheet
Vert	24120.000	PK	45.3	37.9	-1.3	31.0	50.9	73.9	23.0	NS
Vert	2390.000	AV	43.3	27.1	2.9	32.4	40.9	53.9	13.0	
Vert	2398.150	AV	48.0	27.1	2.9	32.4	45.6	-	-	- See 20dBc Data Sheet
Vert	2400.000	AV	45.0	27.1	2.9	32.4	42.6	-	-	- See 20dBc Data Sheet
Vert	4824.000	AV	34.5	30.5	5.2	31.3	38.9	53.9	15.0	
Vert	7236.000	AV	32.0	35.1	5.9	31.1	41.9	53.9	12.0	
Vert	9648.000	AV	38.5	37.7	6.9	31.4	51.7	-	-	- See 20dBc Data Sheet
Vert	24120.000	AV	33.8	37.9	-1.3	31.0	39.4	53.9	14.5	NS

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

Report No. 30GE0232-HO-02  
 Test place Head Office EMC Lab.  
 Semi Anechoic Chamber No.2  
 Date 07/21/2010  
 Temperature/ Humidity 21 deg. C. / 59%  
 Engineer Hiroshi Kukita  
 Mode 11b 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	98.0	27.1	2.9	32.4	95.6	-	-	Carrier
Hori	2398.090	PK	52.4	27.1	2.9	32.4	50.0	75.6	25.6	
Hori	2400.000	PK	54.3	27.1	2.9	32.4	51.9	75.6	23.7	
Hori	9648.000	PK	40.8	37.7	6.9	31.4	54.0	75.6	21.6	
Vert	2412.000	PK	93.1	27.1	2.9	32.4	90.7	-	-	Carrier
Vert	2398.150	PK	51.8	27.1	2.9	32.4	49.4	70.7	21.3	
Vert	2400.000	PK	50.1	27.1	2.9	32.4	47.7	70.7	23.0	
Vert	9648.000	PK	40.2	37.7	6.9	31.4	53.4	70.7	17.3	

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

## Radiated Spurious Emission

Report No.	30GE0232-HO-02		
Test place	Head Office EMC Lab.		
Semi Anechoic Chamber	No.2	No.3	No.4
Date	07/21/2010	07/22/2010	07/28/2010
Temperature/ Humidity	21 deg. C. / 59%	25 deg. C. / 62%	27 deg. C. / 64%
Engineer	Hiroshi Kukita (1-10GHz)	Takeshi Choda (above 10GHz)	Takeshi Choda (below 1GHz)
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	37.999	QP	24.2	15.4	7.2	32.0	14.8	40.0	25.2	
Hori	119.998	QP	29.8	13.3	8.3	32.0	19.4	43.5	24.1	
Hori	151.998	QP	28.9	15.1	8.6	31.9	20.7	43.5	22.8	
Hori	359.995	QP	36.6	17.0	10.3	31.9	32.0	46.0	14.0	
Hori	645.993	QP	36.9	21.0	11.9	32.2	37.6	46.0	8.4	
Hori	797.991	QP	36.2	23.1	12.7	31.8	40.2	46.0	5.8	
Hori	4874.000	PK	45.3	30.6	5.2	31.3	49.8	73.9	24.1	
Hori	7311.000	PK	41.6	35.3	5.9	31.1	51.7	73.9	22.2	
Hori	9748.000	PK	45.1	37.9	6.9	31.4	58.5	-	-	See 20dBc Data Sheet
Hori	24370.000	PK	45.5	37.9	-1.2	30.8	51.4	73.9	22.5	NS
Hori	4874.000	AV	36.7	30.6	5.2	31.3	41.2	53.9	12.7	
Hori	7311.000	AV	29.9	35.3	5.9	31.1	40.0	53.9	13.9	
Hori	9748.000	AV	38.3	37.9	6.9	31.4	51.7	-	-	See 20dBc Data Sheet
Hori	24370.000	AV	34.1	37.9	-1.2	30.8	40.0	53.9	13.9	NS
Vert	37.999	QP	28.8	15.4	7.2	32.0	19.4	40.0	20.6	
Vert	119.998	QP	35.9	13.3	8.3	32.0	25.5	43.5	18.0	
Vert	151.998	QP	31.9	15.1	8.6	31.9	23.7	43.5	19.8	
Vert	359.995	QP	35.3	17.0	10.3	31.9	30.7	46.0	15.3	
Vert	645.993	QP	33.4	21.0	11.9	32.2	34.1	46.0	11.9	
Vert	797.991	QP	34.3	23.1	12.7	31.8	38.3	46.0	7.7	
Vert	4874.000	PK	45.0	30.6	5.2	31.3	49.5	73.9	24.4	
Vert	7311.000	PK	41.8	35.3	5.9	31.1	51.9	73.9	22.0	
Vert	9748.000	PK	45.5	37.9	6.9	31.4	58.9	-	-	See 20dBc Data Sheet
Vert	24370.000	PK	44.8	37.9	-1.2	30.8	50.7	73.9	23.2	NS
Vert	4874.000	AV	36.3	30.6	5.2	31.3	40.8	53.9	13.1	
Vert	7311.000	AV	30.2	35.3	5.9	31.1	40.3	53.9	13.6	
Vert	9748.000	AV	39.4	37.9	6.9	31.4	52.8	-	-	See 20dBc Data Sheet
Vert	24370.000	AV	33.9	37.9	-1.2	30.8	39.8	53.9	14.1	NS

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

Report No. 30GE0232-HO-02  
Test place Head Office EMC Lab.  
Semi Anechoic Chamber No.2  
Date 07/21/2010  
Temperature/ Humidity 21 deg. C. / 59%  
Engineer Hiroshi Kukita  
Mode 11b Tx 2437MHz

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	2437.000	PK	97.5	27.2	2.9	32.4	95.2	-	-	Carrier
Hori	9748.000	PK	40.5	37.9	6.9	31.4	53.9	75.2	21.3	
Vert	2437.000	PK	92.5	27.2	2.9	32.4	90.2	-	-	Carrier
Vert	9748.000	PK	41.4	37.9	6.9	31.4	54.8	70.2	15.4	

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

## Radiated Spurious Emission

Report No.	30GE0232-HO-02		
Test place	Head Office EMC Lab.		
Semi Anechoic Chamber	No.2	No.3	No.4
Date	07/21/2010	07/22/2010	07/28/2010
Temperature/ Humidity	21 deg. C. / 59%	25 deg. C. / 62%	27 deg. C. / 64%
Engineer	Hiroshi Kukita (1-10GHz)	Takeshi Choda (above 10GHz)	Takeshi Choda (below 1GHz)
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	37.999	QP	22.9	15.4	7.2	32.0	13.5	40.0	26.5	
Hori	119.998	QP	29.9	13.3	8.3	32.0	19.5	43.5	24.0	
Hori	151.998	QP	28.4	15.1	8.6	31.9	20.2	43.5	23.3	
Hori	359.995	QP	37.7	17.0	10.3	31.9	33.1	46.0	12.9	
Hori	645.993	QP	36.8	21.0	11.9	32.2	37.5	46.0	8.5	
Hori	797.991	QP	36.0	23.1	12.7	31.8	40.0	46.0	6.0	
Hori	2483.500	PK	63.3	27.2	2.9	32.4	61.0	73.9	12.9	
Hori	4924.000	PK	46.4	30.6	5.3	31.3	51.0	73.9	22.9	
Hori	7386.000	PK	41.1	35.4	5.9	31.1	51.3	73.9	22.6	
Hori	9848.000	PK	44.0	38.1	6.9	31.4	57.6	-	-	- See 20dBc Data Sheet
Hori	24620.000	PK	45.2	38.0	-1.2	30.6	51.4	73.9	22.5	NS
Hori	2483.500	AV	35.6	27.2	2.9	32.4	33.3	53.9	20.6	
Hori	4924.000	AV	42.0	30.6	5.3	31.3	46.6	53.9	7.3	
Hori	7386.000	AV	30.7	35.4	5.9	31.1	40.9	53.9	13.0	
Hori	9848.000	AV	36.5	38.1	6.9	31.4	50.1	-	-	- See 20dBc Data Sheet
Hori	24620.000	AV	34.2	38.0	-1.2	30.6	40.4	53.9	13.5	NS
Vert	37.999	QP	28.8	15.4	7.2	32.0	19.4	40.0	20.6	
Vert	119.998	QP	36.1	13.3	8.3	32.0	25.7	43.5	17.8	
Vert	151.998	QP	32.0	15.1	8.6	31.9	23.8	43.5	19.7	
Vert	359.995	QP	32.9	17.0	10.3	31.9	28.3	46.0	17.7	
Vert	645.993	QP	36.6	21.0	11.9	32.2	37.3	46.0	8.7	
Vert	797.991	QP	34.5	23.1	12.7	31.8	38.5	46.0	7.5	
Vert	2483.500	PK	58.6	27.2	2.9	32.4	56.3	73.9	17.6	
Vert	4924.000	PK	43.3	30.6	5.3	31.3	47.9	73.9	26.0	
Vert	7386.000	PK	42.1	35.4	5.9	31.1	52.3	73.9	21.6	
Vert	9848.000	PK	45.5	38.1	6.9	31.4	59.1	-	-	- See 20dBc Data Sheet
Vert	24620.000	PK	45.1	38.0	-1.2	30.6	51.3	73.9	22.6	NS
Vert	2483.500	AV	32.7	27.2	2.9	32.4	30.4	53.9	23.5	
Vert	4924.000	AV	35.6	30.6	5.3	31.3	40.2	53.9	13.7	
Vert	7386.000	AV	31.0	35.4	5.9	31.1	41.2	53.9	12.7	
Vert	9848.000	AV	39.0	38.1	6.9	31.4	52.6	-	-	- See 20dBc Data Sheet
Vert	24620.000	AV	34.2	38.0	-1.2	30.6	40.4	53.9	13.5	NS

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

Report No. 30GE0232-HO-02  
Test place Head Office EMC Lab.  
Semi Anechoic Chamber No.2  
Date 07/21/2010  
Temperature/ Humidity 21 deg. C. / 59%  
Engineer Hiroshi Kukita  
Mode 11b Tx 2462MHz

**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	2462.000	PK	97.1	2.9	32.4	0.0	94.8	-	-	Carrier
Hori	9848.000	PK	38.3	6.9	31.4	0.0	51.9	74.8	22.9	
Vert	2462.000	PK	91.3	2.9	32.4	0.0	89.0	-	-	Carrier
Vert	9848.000	PK	41.4	6.9	31.4	0.0	55.0	69.0	14.0	

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

## Radiated Spurious Emission

Report No.	30GE0232-HO-02		
Test place	Head Office EMC Lab.		
Semi Anechoic Chamber	No.3	No.3	No.4
Date	07/20/2010	07/22/2010	07/28/2010
Temperature/ Humidity	25 deg. C. / 67%	25 deg. C. / 62%	26 deg. C. / 52%
Engineer	Takeshi Choda (1-10GHz)	Takeshi Choda (above 10GHz)	Takayuki Shimada (below 1GHz)
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	37.999	QP	23.6	15.4	7.1	32.0	14.1	40.0	25.9	
Hori	119.998	QP	30.8	13.3	8.2	32.0	20.3	43.5	23.2	
Hori	151.999	QP	29.8	15.1	8.5	31.9	21.5	43.5	22.0	
Hori	359.996	QP	40.8	17.0	10.1	31.9	36.0	46.0	10.0	
Hori	645.993	QP	37.7	21.0	11.7	32.2	38.2	46.0	7.8	
Hori	797.991	QP	36.1	23.1	12.5	31.8	39.9	46.0	6.1	
Hori	2390.000	PK	63.3	27.7	2.6	32.5	61.1	73.9	12.8	
Hori	2399.317	PK	74.2	27.7	2.6	32.5	72.0	-	-	- See 20dBc Data Sheet
Hori	2400.000	PK	76.0	27.7	2.6	32.5	73.8	-	-	- See 20dBc Data Sheet
Hori	4824.000	PK	47.0	31.7	5.1	31.8	52.0	73.9	21.9	
Hori	7236.000	PK	44.5	36.2	6.1	32.4	54.4	73.9	19.5	
Hori	9648.000	PK	46.0	38.0	6.8	32.9	57.9	73.9	16.0	
Hori	24120.000	PK	45.3	37.9	-1.3	31.0	50.9	73.9	23.0	NS
Hori	2390.000	AV	44.4	27.7	2.6	32.5	42.2	53.9	11.7	
Hori	2399.317	AV	54.7	27.7	2.6	32.5	52.5	-	-	- See 20dBc Data Sheet
Hori	2400.000	AV	53.7	27.7	2.6	32.5	51.5	-	-	- See 20dBc Data Sheet
Hori	4824.000	AV	35.1	31.7	5.1	31.8	40.1	53.9	13.8	
Hori	7236.000	AV	31.6	36.2	6.1	32.4	41.5	53.9	12.4	
Hori	9648.000	AV	37.7	38.0	6.8	32.9	49.6	53.9	4.3	
Hori	24120.000	AV	33.7	37.9	-1.3	31.0	39.3	53.9	14.6	NS
Vert	37.999	QP	28.9	15.4	7.1	32.0	19.4	40.0	20.6	
Vert	119.998	QP	39.0	13.3	8.2	32.0	28.5	43.5	15.0	
Vert	151.999	QP	32.6	15.1	8.5	31.9	24.3	43.5	19.2	
Vert	359.996	QP	33.8	17.0	10.1	31.9	29.0	46.0	17.0	
Vert	645.993	QP	35.9	21.0	11.7	32.2	36.4	46.0	9.6	
Vert	797.991	QP	33.8	23.1	12.5	31.8	37.6	46.0	8.4	
Vert	2390.000	PK	62.1	27.7	2.6	32.5	59.9	73.9	14.0	
Vert	2399.313	PK	72.4	27.7	2.6	32.5	70.2	-	-	- See 20dBc Data Sheet
Vert	2400.000	PK	72.8	27.7	2.6	32.5	70.6	-	-	- See 20dBc Data Sheet
Vert	4824.000	PK	43.5	31.7	5.1	31.8	48.5	73.9	25.4	
Vert	7236.000	PK	46.5	36.2	6.1	32.4	56.4	73.9	17.5	
Vert	9648.000	PK	45.9	38.0	6.8	32.9	57.8	73.9	16.1	
Vert	24120.000	PK	44.8	37.9	-1.3	31.0	50.4	73.9	23.5	NS
Vert	2390.000	AV	43.1	27.7	2.6	32.5	40.9	53.9	13.0	
Vert	2399.313	AV	53.7	27.7	2.6	32.5	51.5	-	-	- See 20dBc Data Sheet
Vert	2400.000	AV	52.9	27.7	2.6	32.5	50.7	-	-	- See 20dBc Data Sheet
Vert	4824.000	AV	30.9	31.7	5.1	31.8	35.9	53.9	18.0	
Vert	7236.000	AV	32.3	36.2	6.1	32.4	42.2	53.9	11.7	
Vert	9648.000	AV	37.5	38.0	6.8	32.9	49.4	53.9	4.5	
Vert	24120.000	AV	33.9	37.9	-1.3	31.0	39.5	53.9	14.4	NS

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

Report No. 30GE0232-HO-02  
 Test place Head Office EMC Lab.  
 Semi Anechoic Chamber No.3  
 Date 07/20/2010  
 Temperature/ Humidity 25 deg. C. / 67%  
 Engineer Takeshi Choda  
 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	99.7	27.7	2.6	32.5	97.5	-	-	Carrier
Hori	2399.317	PK	61.0	27.7	2.6	32.5	58.8	77.5	18.7	
Hori	2400.000	PK	61.4	27.7	2.6	32.5	59.2	77.5	18.3	
Vert	2412.000	PK	96.7	27.7	2.6	32.5	94.5	-	-	Carrier
Vert	2399.313	PK	58.4	27.7	2.6	32.5	56.2	74.5	18.3	
Vert	2400.000	PK	58.6	27.7	2.6	32.5	56.4	74.5	18.1	

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

## Radiated Spurious Emission

Report No.	30GE0232-HO-02		
Test place	Head Office EMC Lab.		
Semi Anechoic Chamber	No.3	No.3	No.4
Date	07/20/2010	07/22/2010	07/28/2010
Temperature/ Humidity	25 deg. C. / 67%	25 deg. C. / 62%	26 deg. C. / 52%
Engineer	Takeshi Choda (1-10GHz)	Takeshi Choda (above 10GHz)	Takayuki Shimada (below 1GHz)
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	37.999	QP	23.7	15.4	7.1	32.0	14.2	40.0	25.8	
Hori	119.999	QP	30.7	13.3	8.2	32.0	20.2	43.5	23.3	
Hori	151.999	QP	29.4	15.1	8.5	31.9	21.1	43.5	22.4	
Hori	359.996	QP	40.0	17.0	10.1	31.9	35.2	46.0	10.8	
Hori	645.994	QP	36.8	21.0	11.7	32.2	37.3	46.0	8.7	
Hori	797.991	QP	36.2	23.1	12.5	31.8	40.0	46.0	6.0	
Hori	4874.000	PK	47.9	31.9	5.2	31.8	53.2	73.9	20.7	
Hori	7311.000	PK	44.6	36.2	6.1	32.4	54.5	73.9	19.4	
Hori	9748.000	PK	46.6	38.1	6.8	32.9	58.6	-	-	- See 20dBc Data Sheet
Hori	24370.000	PK	44.8	37.9	-1.2	30.8	50.7	73.9	23.2	NS
Hori	4874.000	AV	34.3	31.9	5.2	31.8	39.6	53.9	14.3	
Hori	7311.000	AV	31.6	36.2	6.1	32.4	41.5	53.9	12.4	
Hori	9748.000	AV	38.6	38.1	6.8	32.9	50.6	-	-	- See 20dBc Data Sheet
Hori	24370.000	AV	34.3	37.9	-1.2	30.8	40.2	53.9	13.7	NS
Vert	37.999	QP	29.1	15.4	7.1	32.0	19.6	40.0	20.4	
Vert	119.999	QP	38.9	13.3	8.2	32.0	28.4	43.5	15.1	
Vert	151.999	QP	32.8	15.1	8.5	31.9	24.5	43.5	19.0	
Vert	359.996	QP	34.2	17.0	10.1	31.9	29.4	46.0	16.6	
Vert	645.994	QP	36.2	21.0	11.7	32.2	36.7	46.0	9.3	
Vert	797.991	QP	34.3	23.1	12.5	31.8	38.1	46.0	7.9	
Vert	4874.000	PK	45.7	31.9	5.2	31.8	51.0	73.9	22.9	
Vert	7311.000	PK	46.1	36.2	6.1	32.4	56.0	73.9	17.9	
Vert	9748.000	PK	45.9	38.1	6.8	32.9	57.9	-	-	- See 20dBc Data Sheet
Vert	24370.000	PK	45.3	37.9	-1.2	30.8	51.2	73.9	22.7	NS
Vert	4874.000	AV	32.7	31.9	5.2	31.8	38.0	53.9	15.9	
Vert	7311.000	AV	33.3	36.2	6.1	32.4	43.2	53.9	10.7	
Vert	9748.000	AV	37.2	38.1	6.8	32.9	49.2	-	-	- See 20dBc Data Sheet
Vert	24370.000	AV	33.5	37.9	-1.2	30.8	39.4	53.9	14.5	NS

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

Report No. 30GE0232-HO-02  
Test place Head Office EMC Lab.  
Semi Anechoic Chamber No.3  
Date 07/20/2010  
Temperature/ Humidity 25 deg. C. / 67%  
Engineer Takeshi Choda  
Mode 11g Tx 2437MHz

**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	2437.000	PK	99.4	27.7	2.9	32.4	97.6	-	-	Carrier
Hori	9748.000	PK	42.0	38.1	6.8	32.9	54.0	77.6	23.6	
Vert	2437.000	PK	97.1	27.7	2.9	32.4	95.3	-	-	Carrier
Vert	9748.000	PK	42.0	38.1	6.8	32.9	54.0	75.3	21.3	

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

## Radiated Spurious Emission

Report No.	30GE0232-HO-02		
Test place	Head Office EMC Lab.		
Semi Anechoic Chamber	No.3	No.3	No.4
Date	07/20/2010	07/22/2010	07/28/2010
Temperature/ Humidity	25 deg. C. / 67%	25 deg. C. / 62%	26 deg. C. / 52%
Engineer	Takeshi Choda (1-10GHz)	Takeshi Choda (above 10GHz)	Takayuki Shimada (below 1GHz)
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	37.999	QP	23.7	15.4	7.1	32.0	14.2	40.0	25.8	
Hori	119.998	QP	30.7	13.3	8.2	32.0	20.2	43.5	23.3	
Hori	151.999	QP	29.1	15.1	8.5	31.9	20.8	43.5	22.7	
Hori	359.996	QP	39.4	17.0	10.1	31.9	34.6	46.0	11.4	
Hori	645.992	QP	36.4	21.0	11.7	32.2	36.9	46.0	9.1	
Hori	797.990	QP	36.1	23.1	12.5	31.8	39.9	46.0	6.1	
Hori	2483.500	PK	68.1	27.2	2.8	32.4	65.7	73.9	8.2	
Hori	4924.000	PK	43.8	30.6	5.2	31.3	48.3	73.9	25.7	
Hori	7386.000	PK	48.2	35.4	5.8	31.1	58.3	73.9	15.6	
Hori	9848.000	PK	43.6	38.1	6.7	31.4	57.0	73.9	16.9	
Hori	24620.000	PK	46.1	38.0	-1.2	30.6	52.3	73.9	21.6	NS
Hori	2483.500	AV	50.5	27.2	2.8	32.4	48.1	53.9	5.8	
Hori	4924.000	AV	31.5	30.6	5.2	31.3	36.0	53.9	17.9	
Hori	7386.000	AV	35.6	35.4	5.8	31.1	45.7	53.9	8.2	
Hori	9848.000	AV	33.4	38.1	6.7	31.4	46.8	53.9	7.1	
Hori	24620.000	AV	34.5	38.0	-1.2	30.6	40.7	53.9	13.2	NS
Vert	37.999	QP	29.2	15.4	7.1	32.0	19.7	40.0	20.3	
Vert	119.998	QP	38.0	13.3	8.2	32.0	27.5	43.5	16.0	
Vert	151.999	QP	32.7	15.1	8.5	31.9	24.4	43.5	19.1	
Vert	359.996	QP	34.3	17.0	10.1	31.9	29.5	46.0	16.5	
Vert	645.992	QP	36.5	21.0	11.7	32.2	37.0	46.0	9.0	
Vert	797.990	QP	34.2	23.1	12.5	31.8	38.0	46.0	8.0	
Vert	2483.500	PK	69.0	27.2	2.8	32.4	66.6	73.9	7.3	
Vert	4924.000	PK	43.0	30.6	5.2	31.3	47.5	73.9	26.4	
Vert	7386.000	PK	49.3	35.4	5.8	31.1	59.4	73.9	14.5	
Vert	9848.000	PK	43.6	38.1	6.7	31.4	57.0	73.9	16.9	
Vert	24620.000	PK	45.2	38.0	-1.2	30.6	51.4	73.9	22.5	NS
Vert	2483.500	AV	51.2	27.2	2.8	32.4	48.8	53.9	5.1	
Vert	4924.000	AV	31.0	30.6	5.2	31.3	35.5	53.9	18.4	
Vert	7386.000	AV	36.6	35.4	5.8	31.1	46.7	53.9	7.2	
Vert	9848.000	AV	33.6	38.1	6.7	31.4	47.0	53.9	6.9	
Vert	24620.000	AV	34.2	38.0	-1.2	30.6	40.4	53.9	13.5	NS

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

Report No.	30GE0232-HO-02	
Test place	Head Office EMC Lab.	
Semi Anechoic Chamber	No.2	No.4
Date	07/21/2010	07/28/2010
Temperature/ Humidity	21 deg. C./ 59%	26 deg. C. / 52%
Engineer	Takumi Shimada (1-10GHz)	Takayuki Shimada (below 1GHz)
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	37.999	QP	23.2	15.4	7.1	32.0	13.7	40.0	26.3	
Hori	119.999	QP	30.1	13.3	8.2	32.0	19.6	43.5	23.9	
Hori	151.999	QP	29.6	15.1	8.5	31.9	21.3	43.5	22.2	
Hori	359.997	QP	38.7	17.0	10.1	31.9	33.9	46.0	12.1	
Hori	645.994	QP	37.5	21.0	11.7	32.2	38.0	46.0	8.0	
Hori	797.991	QP	35.9	23.1	12.5	31.8	39.7	46.0	6.3	
Hori	2437.000	PK	41.3	27.2	2.9	32.4	39.0	73.9	34.9	
Hori	4874.000	PK	41.4	30.6	3.9	31.3	44.6	73.9	29.3	
Hori	7311.000	PK	41.5	35.3	4.3	31.1	50.0	73.9	23.9	
Hori	2437.000	AV	29.8	27.2	2.9	32.4	27.5	53.9	26.4	
Hori	4874.000	AV	29.8	30.6	3.9	31.3	33.0	53.9	20.9	
Hori	7311.000	AV	29.9	35.3	4.3	31.1	38.4	53.9	15.5	
Vert	37.999	QP	28.9	15.4	7.1	32.0	19.4	40.0	20.6	
Vert	119.999	QP	38.1	13.3	8.2	32.0	27.6	43.5	15.9	
Vert	151.999	QP	32.5	15.1	8.5	31.9	24.2	43.5	19.3	
Vert	359.997	QP	33.8	17.0	10.1	31.9	29.0	46.0	17.0	
Vert	645.994	QP	36.6	21.0	11.7	32.2	37.1	46.0	8.9	
Vert	797.991	QP	34.0	23.1	12.5	31.8	37.8	46.0	8.2	
Vert	2437.000	PK	41.2	27.2	2.9	32.4	38.9	73.9	35.0	
Vert	4874.000	PK	41.3	30.6	3.9	31.3	44.5	73.9	29.4	
Vert	7311.000	PK	41.3	35.3	4.3	31.1	49.8	73.9	24.1	
Vert	2437.000	AV	29.9	27.2	2.9	32.4	27.6	53.9	26.3	
Vert	4874.000	AV	29.9	30.6	3.9	31.3	33.1	53.9	20.8	
Vert	7311.000	AV	29.8	35.3	4.3	31.1	38.3	53.9	15.6	

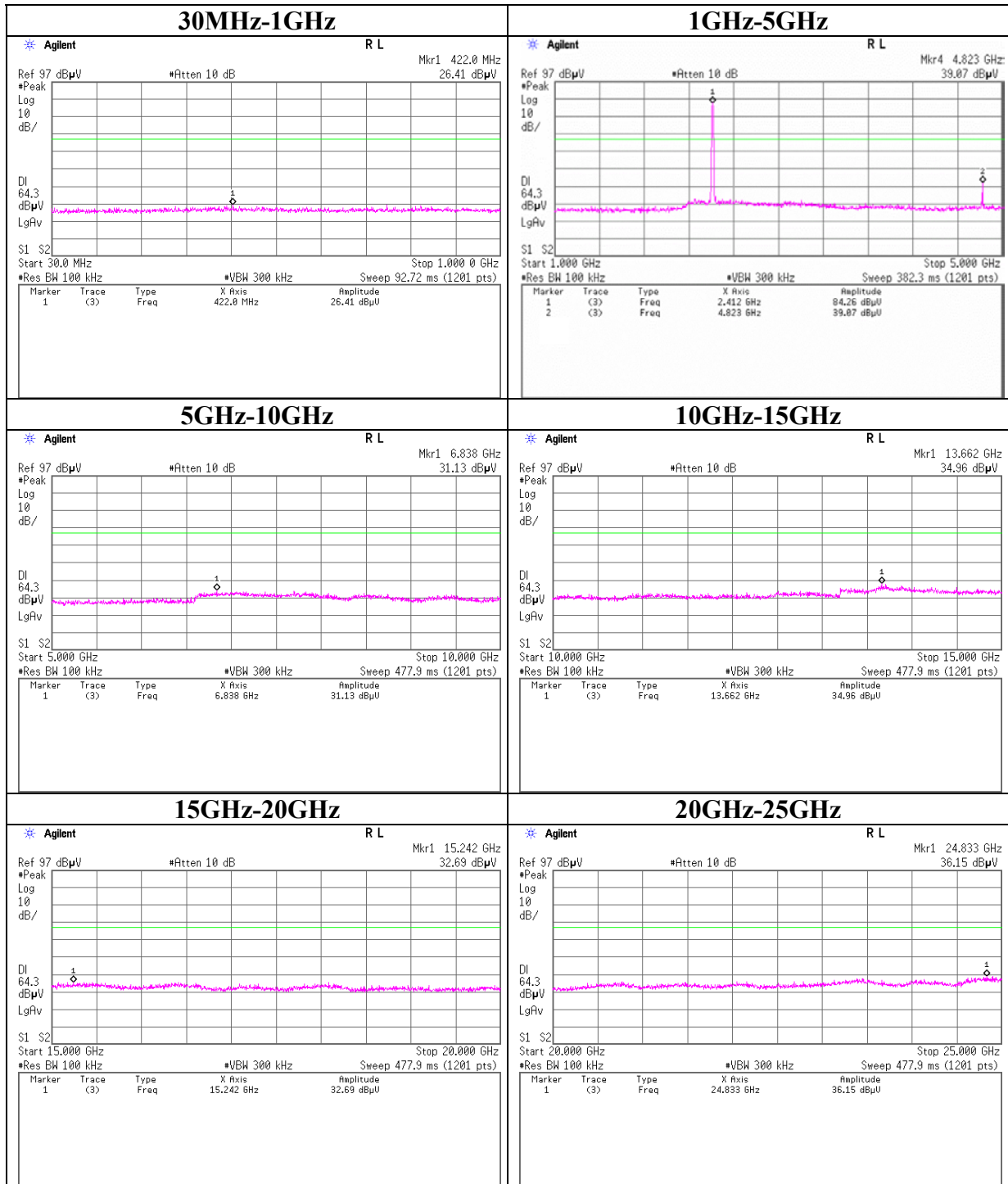
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier)

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

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

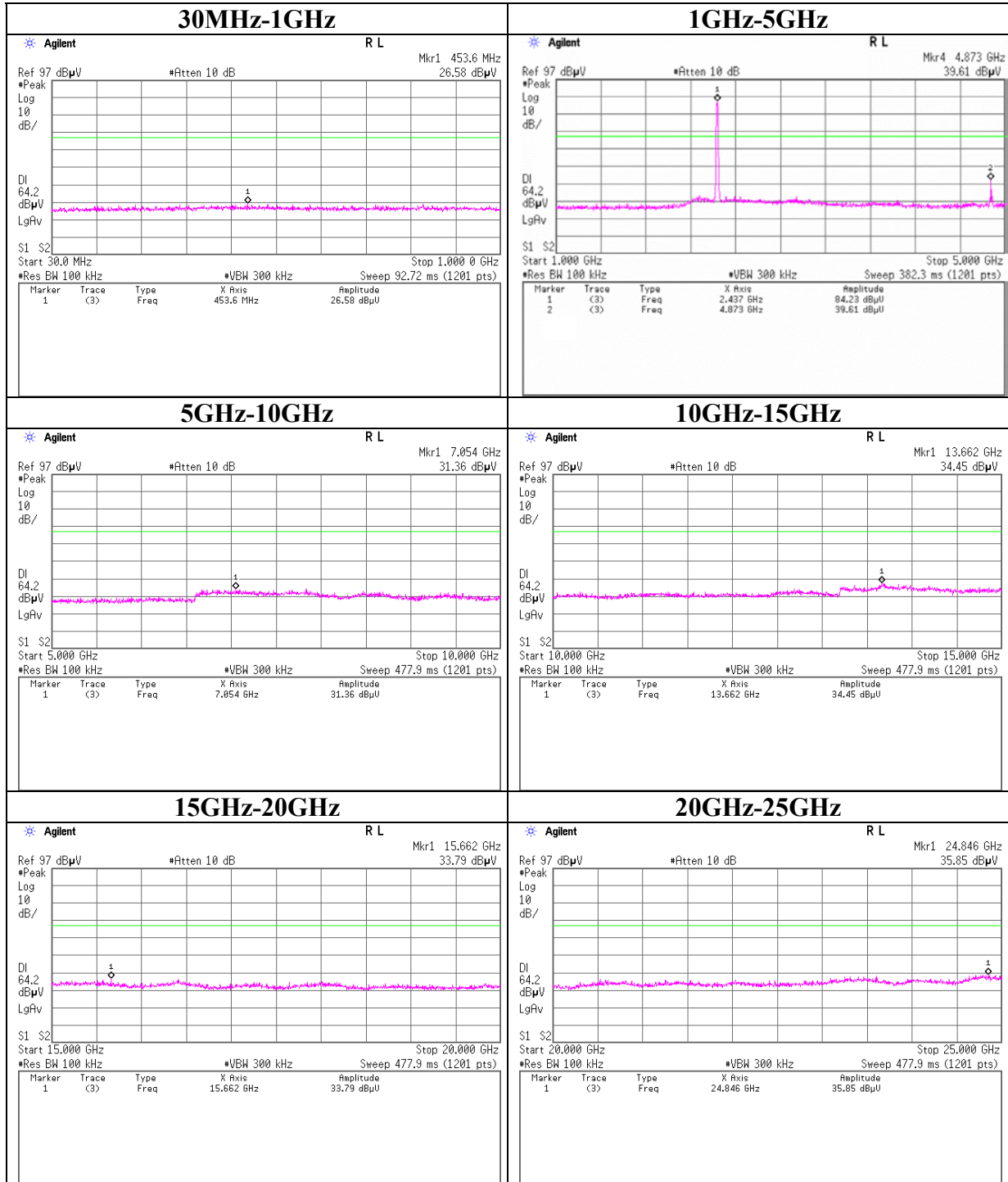
## Conducted Spurious Emission

### 11b Tx 2412MHz



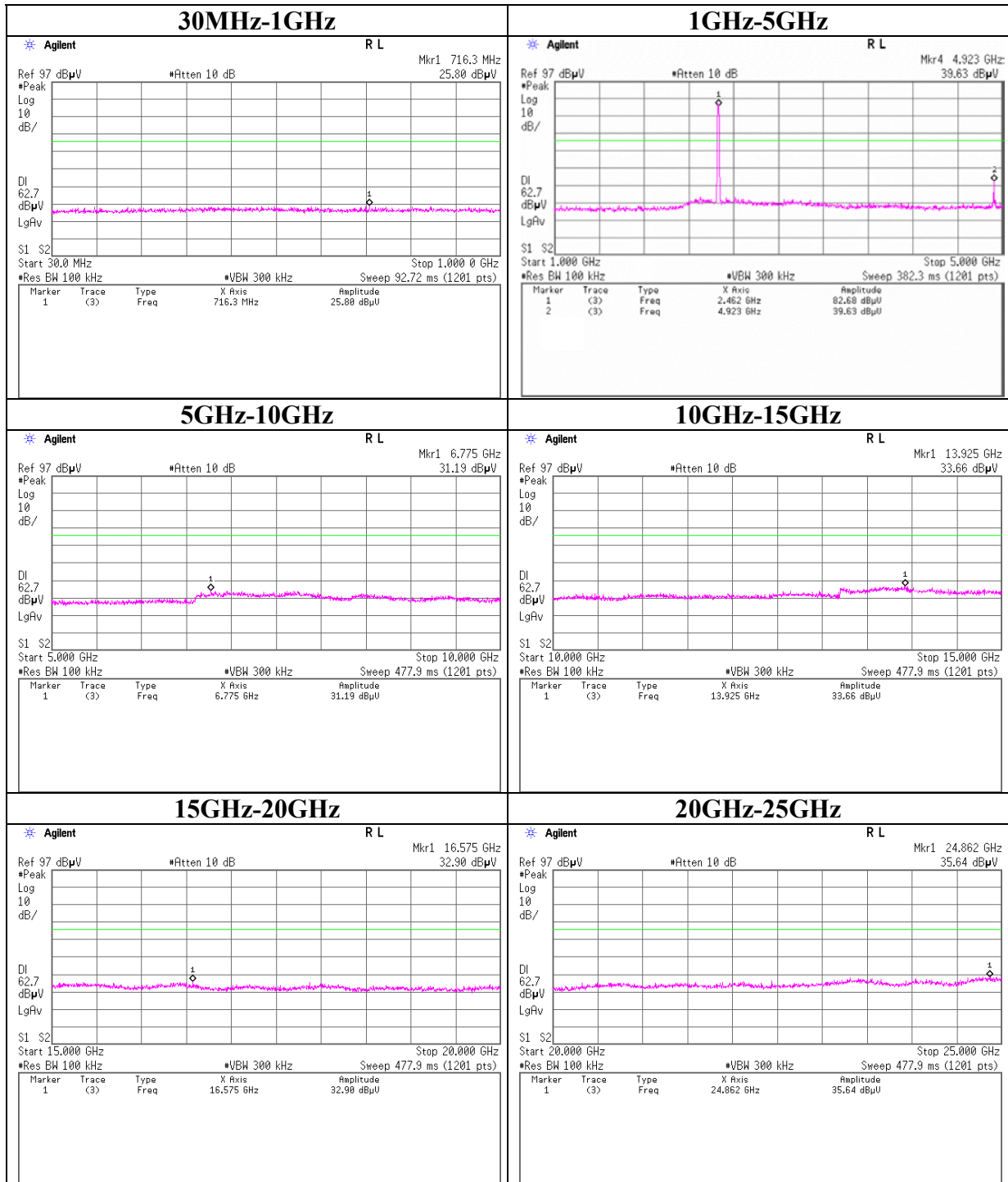
## Conducted Spurious Emission

### 11b Tx 2437MHz



## Conducted Spurious Emission

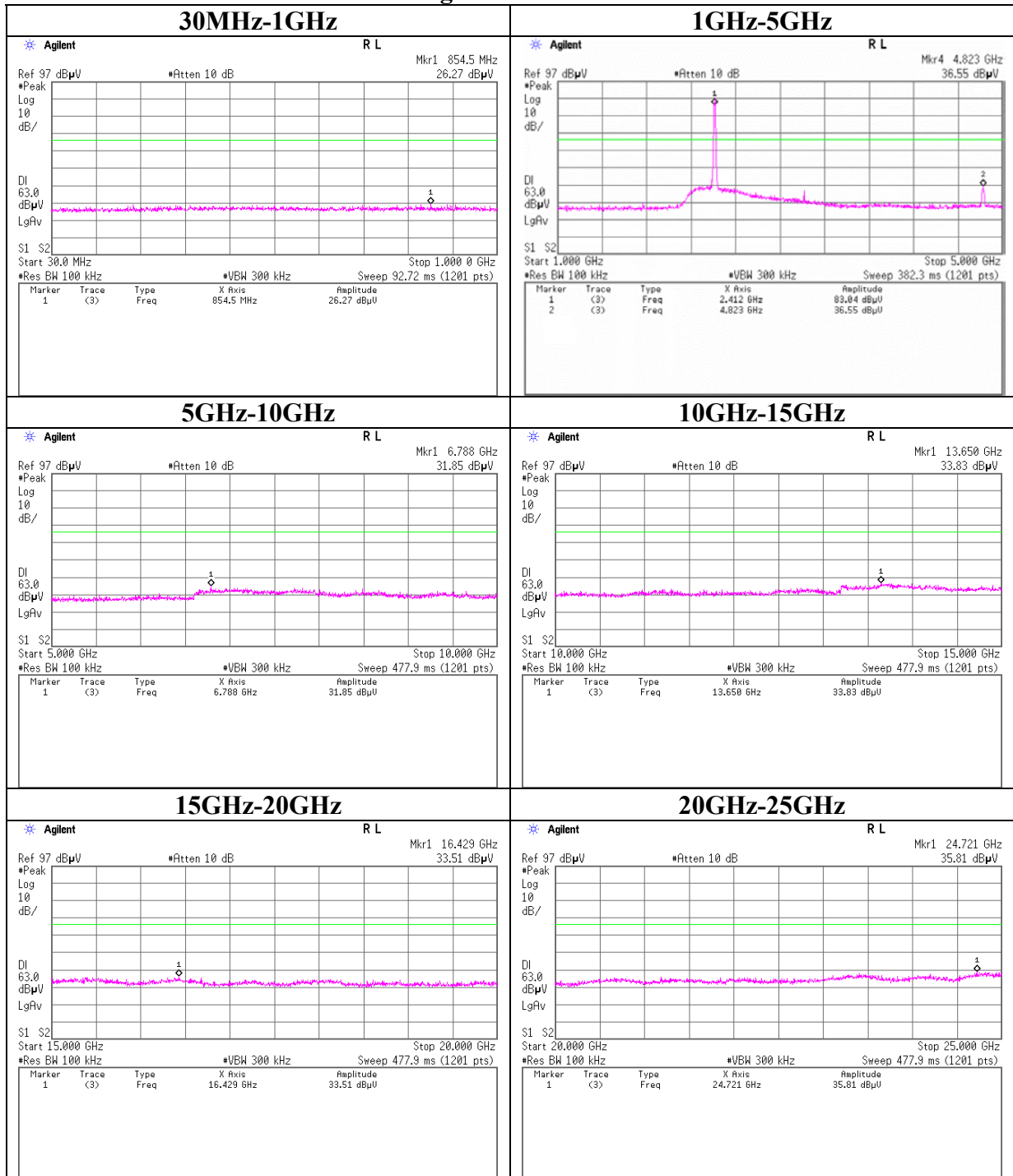
### 11b Tx 2462MHz





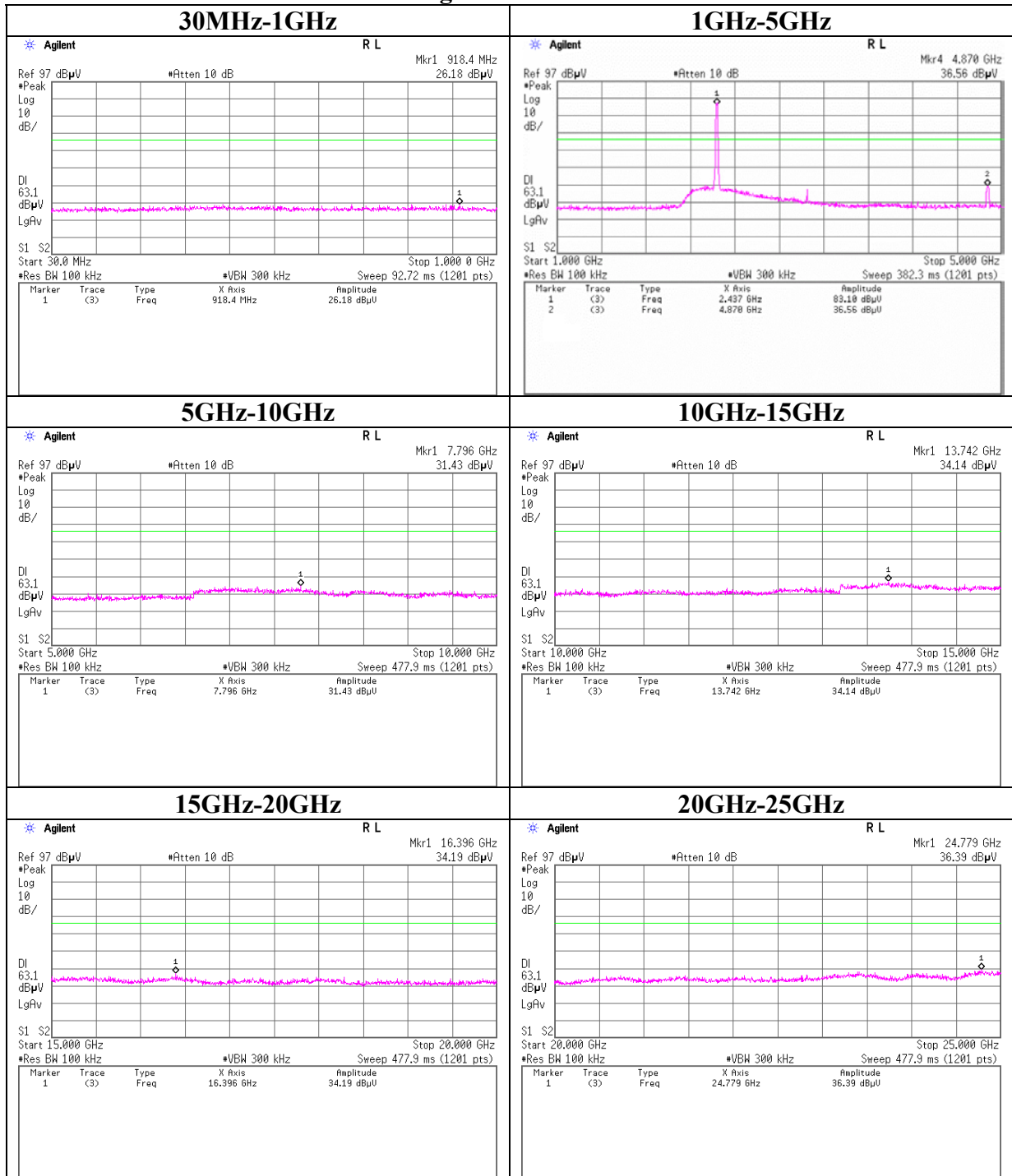
## Conducted Spurious Emission

### 11g Tx 2412MHz



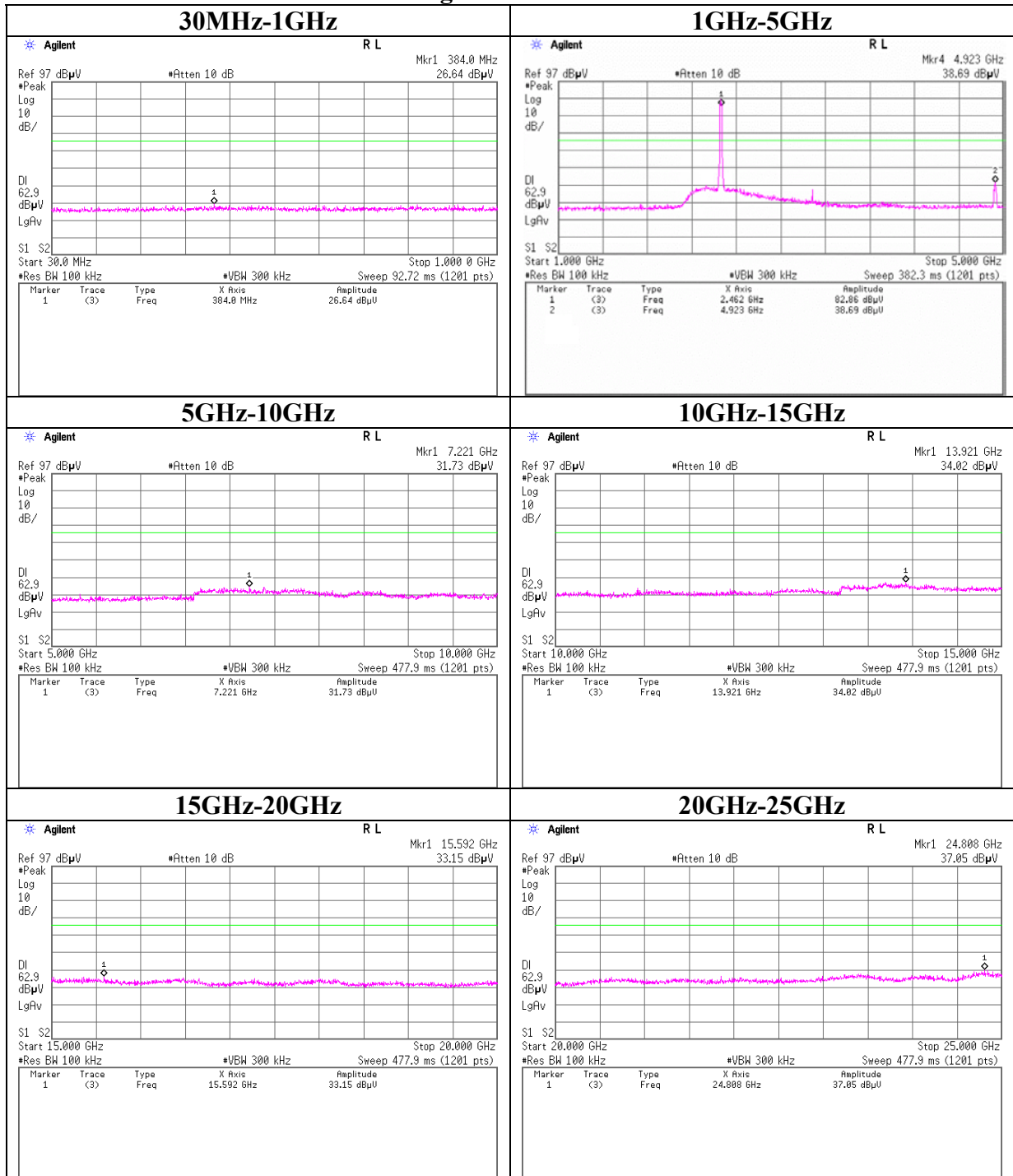
**Conducted Spurious Emission**

**11g Tx 2437MHz**



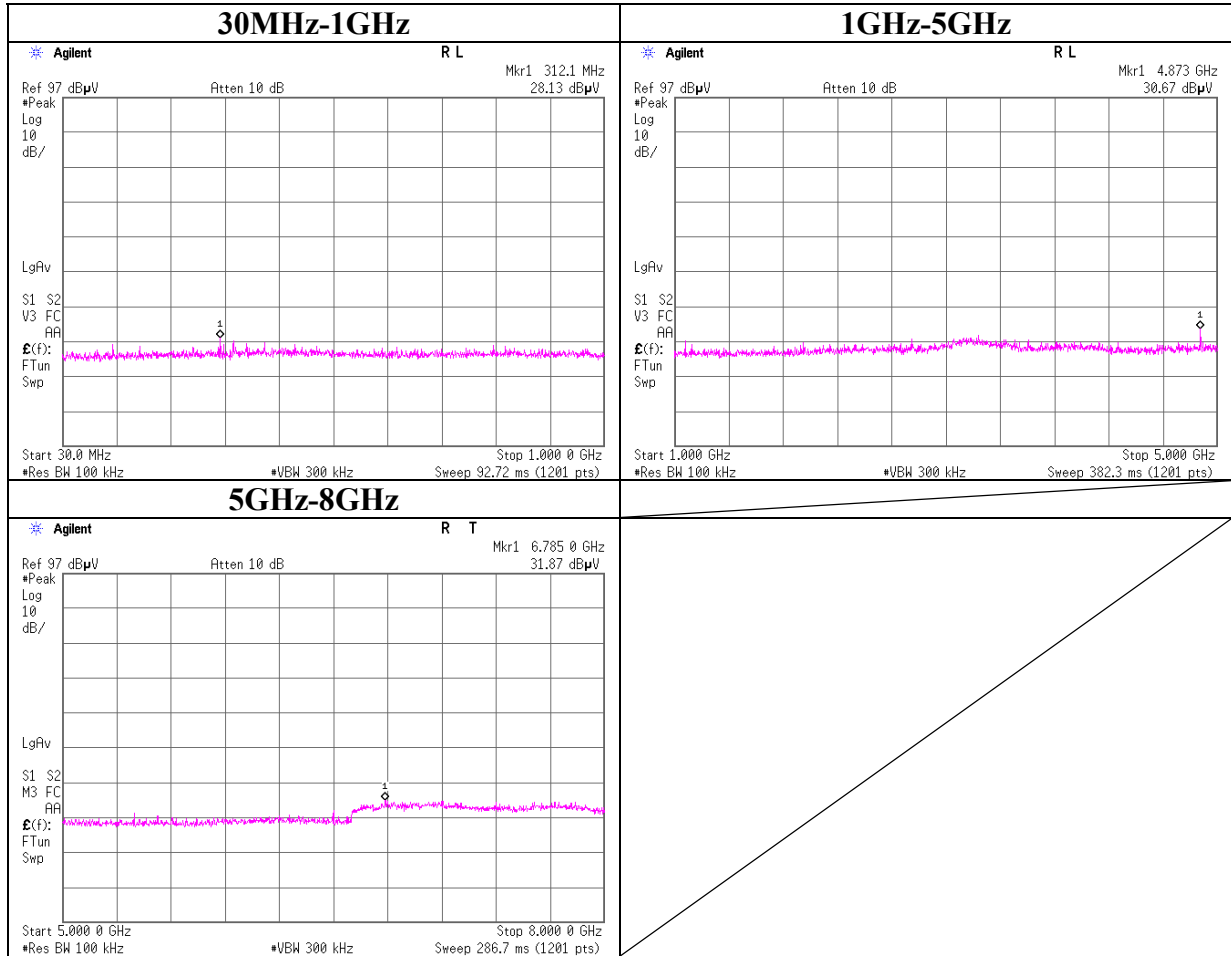
## Conducted Spurious Emission

### 11g Tx 2462MHz



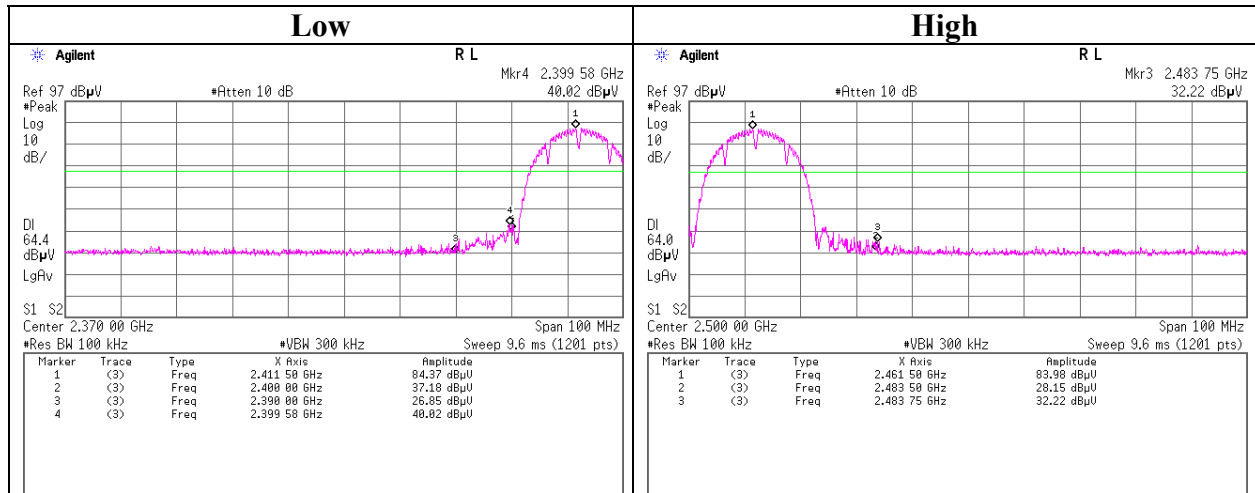
**Conducted Spurious Emission**

**Rx 2437MHz**

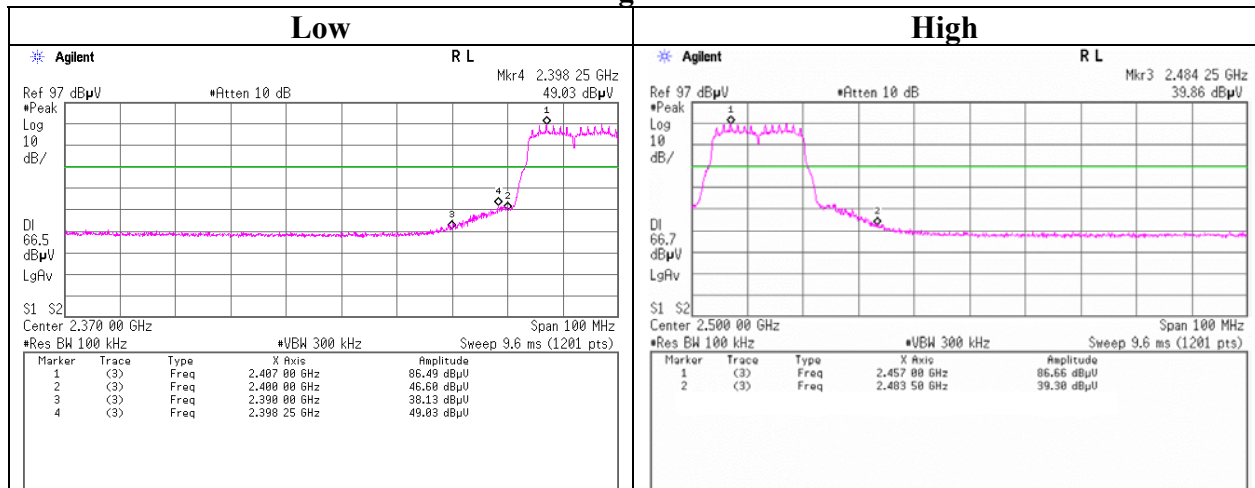


## Conducted Emission Band Edge compliance

### 11b Tx



### 11g Tx



### Power Density

Report No. 30GE0232-HO-02  
Test place Head Office EMC Lab.  
Measurement Room No.6 No.11  
Date 07/07/2010 07/23/2010  
Temperature/ Humidity 22 deg. C. / 62% 24 deg. C. / 64%  
Engineer Takeshi Choda Keisuke Kawamura  
Mode 11g Tx 11b Tx

11b

Freq.	Reading	Cable Loss	Atten.	Result	Limit	Margin
[MHz]	[dBm]	[dB]	[dB]	[dBm]	[dBm]	[dB]
2412.00	-24.23	1.87	19.96	-2.40	8.00	10.40
2437.00	-24.16	1.87	19.96	-2.33	8.00	10.33
2462.00	-26.25	1.88	19.96	-4.41	8.00	12.41

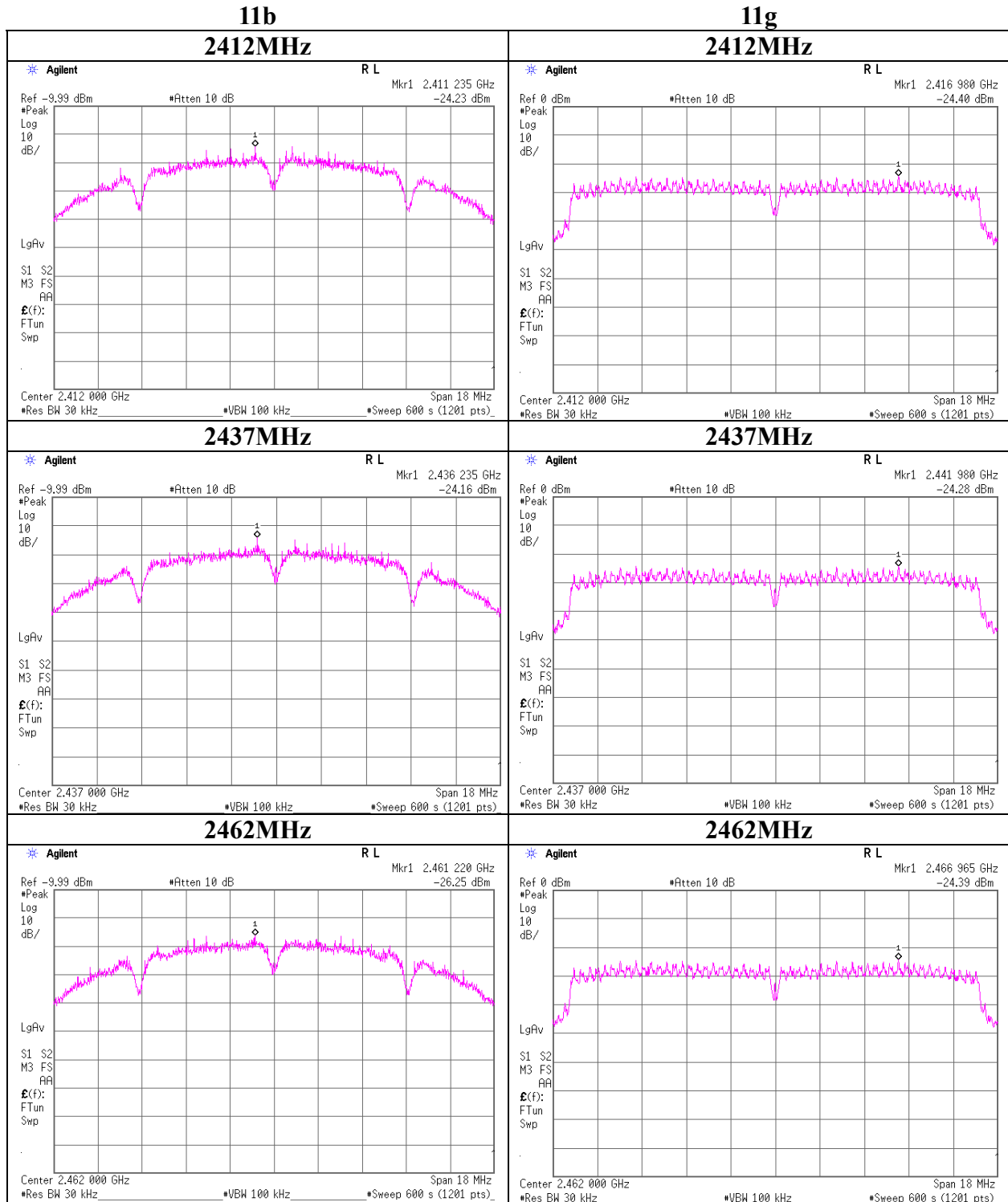
11g

Freq.	Reading	Cable Loss	Atten.	Result	Limit	Margin
[MHz]	[dBm]	[dB]	[dB]	[dBm]	[dBm]	[dB]
2412.00	-24.40	1.01	19.96	-3.43	8.00	11.43
2437.00	-24.28	1.01	19.96	-3.31	8.00	11.31
2462.00	-24.39	1.02	19.96	-3.41	8.00	11.41

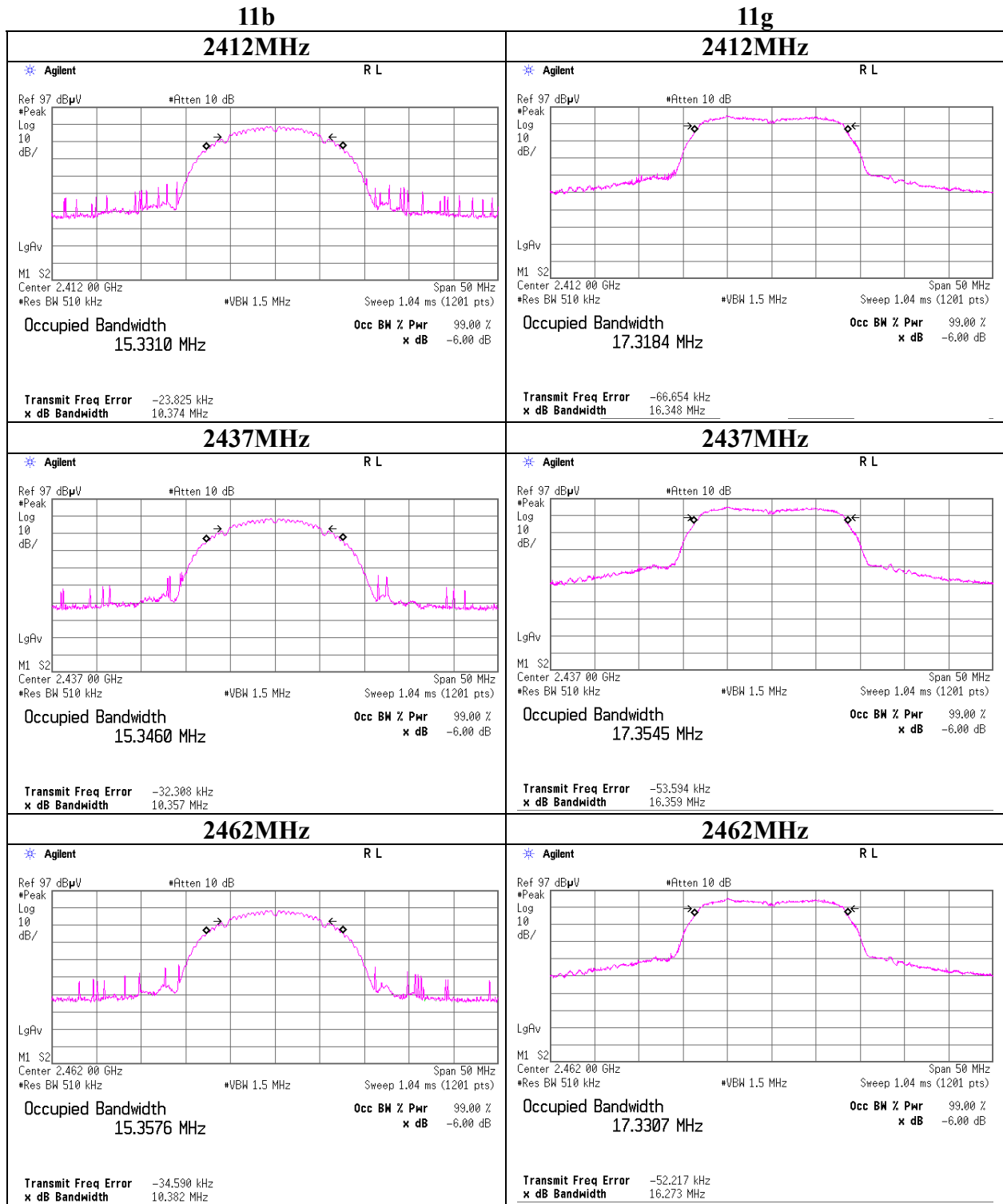
Sample Calculation:

Result = Reading + Cable Loss + Attenuator

**Power Density**



### 99% Occupied Bandwidth





### **APPENDIX 3: Test instruments**

#### **EMI test equipment (1/2)**

<b>Control No.</b>	<b>Instrument</b>	<b>Manufacturer</b>	<b>Model No</b>	<b>Serial No</b>	<b>Test Item</b>	<b>Calibration Date * Interval(month)</b>
MAEC-04	Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-10005	CE/RE	2010/02/02 * 12
MOS-15	Thermo-Hygrometer	Custom	CTH-180	-	CE/RE	2010/02/09 * 12
MJM-07	Measure	PROMART	SEN1955	-	CE/RE	-
COTS-MEMI	EMI measurement program	TSJ	TEPTO-DV	-	CE/RE	-
MSA-05	Spectrum Analyzer	Advantest	R3273	160400285	CE/RE	2009/12/15 * 12
MTR-07	Test Receiver	Rohde & Schwarz	ESCI	100635	CE/RE	2009/10/23 * 12
MLS-06	LISN(AMN)	Schwarzbeck	NSLK8127	8127363	CE(EUT)	2010/02/04 * 12
MLS-07	LISN(AMN)	Schwarzbeck	NSLK8127	8127364	CE(AE)	2010/02/05 * 12
MTA-31	Terminator	TME	CT-01	-	CE	2010/01/20 * 12
MAT-67	Attenuator(13dB)	JFW Industries, Inc.	50FP-013H2 N	-	CE	2010/02/04 * 12
MCC-113	Coaxial cable	Fujikura/Suhner/TSJ	5D-2W(10m)/ SFM141(5m)/ 421-010(1m)/ sucoform141- PE(1m)/RFM- E121(Switcher)	-/04178	CE	2010/07/21 * 12
MAEC-03	Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-10005	RE	2010/02/01 * 12
MOS-13	Thermo-Hygrometer	Custom	CTH-180	-	RE	2010/02/09 * 12
MJM-06	Measure	PROMART	SEN1955	-	RE	-
MSA-10	Spectrum Analyzer	Agilent	E4448A	MY46180655	RE/AT	2010/02/03 * 12
MHA-20	Horn Antenna 1-18GHz	Schwarzbeck	BBHA9120D	258	RE	2010/05/07 * 12
MCC-56	Microwave Cable	Suhner	SUCOFLEX104	174410(1m) / 284655(5m)	RE	2010/01/25 * 12
MPA-11	MicroWave System Amplifier	Agilent	83017A	MY39500779	RE	2010/03/03 * 12
MHF-19	High Pass Filter 3.5-18.0GHz	TOKIMEC	TF323DCA	602	RE	2009/12/19 * 12
MCC-77	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	278942/4	RE	2009/12/19 * 12
MAEC-02	Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-06902	RE	2009/08/17 * 12
MOS-22	Thermo-Hygrometer	Custom	CTH-201	0003	RE	2010/02/09 * 12
MJM-05	Measure	PROMART	SEN1955	-	RE	-
MSA-03	Spectrum Analyzer	Agilent	E4448A	MY44020357	RE	2009/11/20 * 12
MHA-06	Horn Antenna 1-18GHz	Schwarzbeck	BBHA9120D	254	RE	2010/01/19 * 12
MCC-57	Microwave Cable	Suhner	SUCOFLEX104	246769(1m) / 292411(5m)	RE	2009/11/17 * 12
MPA-10	Pre Amplifier	Agilent	8449B	3008A02142	RE	2009/09/14 * 12
MHF-18	High Pass Filter 3.5-18.0GHz	TOKIMEC	TF323DCA	7002	RE	2009/12/19 * 12
MHA-16	Horn Antenna 15-40GHz	Schwarzbeck	BBHA9170	BBHA9170306	RE	2010/05/07 * 12

**EMI test equipment (2/2)**

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
MBA-05	Biconical Antenna	Schwarzbeck	BBA9106	1302	RE	2010/03/22 * 12
MLA-08	Logperiodic Antenna	Schwarzbeck	UKLP9140-A	N/A	RE	2010/01/23 * 12
MCC-50	Coaxial cable	UL Japan	-	-	RE	2010/03/18 * 12
MAT-07	Attenuator(6dB)	Weinschel Corp	2	BK7970	RE	2009/11/12 * 12
MPA-14	Pre Amplifier	SONOMA INSTRUMENT	310	260833	RE	2010/03/05 * 12
MAT-51	Attenuator(6dB)	Weinschel	2	AS3557	RE	2010/01/20 * 12
MOS-22	Thermo-Hygrometer	Custom	CTH-201	0003	AT	2010/02/09 * 12
MAT-21	Attenuator(20dB) (above1GHz)	HIROSE ELECTRIC CO.,LTD.	AT-120	901247	AT	2010/01/26 * 12
MCC-45	Microwave Cable	Murata	MXGS83RK3000	-	AT	2009/07/06 * 12
MPM-12	Power Meter	Anritsu	ML2495A	0825002	AT	2009/08/26 * 12
MPSE-17	Power sensor	Anritsu	MA2411B	0738285	AT	2009/08/26 * 12
MOS-14	Thermo-Hygrometer	Custom	CTH-201	-	AT	2010/05/19 * 12
MOS-12	Thermo-Hygrometer	Custom	CTH-180	-	AT	2010/01/28 * 12
MOS-19	Thermo-Hygrometer	Custom	CTH-201	0001	AT	2009/12/22 * 12
MCC-116	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	290221/4	AT	2009/08/07 * 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**

**UL Japan, Inc.**

**Head Office EMC Lab.**

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124