

**APPENDIX 2: Data of EMI test**

**Conducted Emission  
(Power Supply: SONY)**

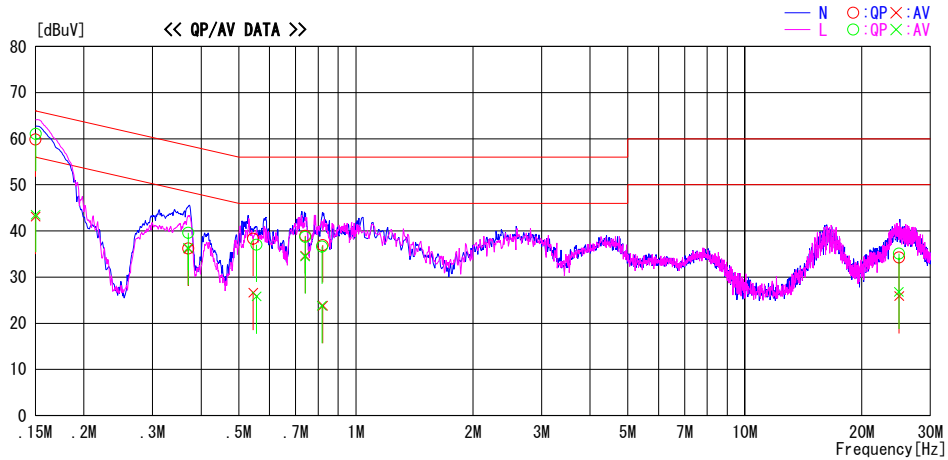
**DATA OF CONDUCTED EMISSION TEST**

UL Japan, Inc. Head Office EMC Lab. No.4 Semi Anechoic Chamber  
Date : 2010/04/09

Report No. : 30HE0264-HO-01  
Temp./Humi. : 24deg. C / 29%  
Engineer : Satofumi Matsuyama

Mode / Remarks : Bluetooth Transmitting mode(Tx) 2441MHz, DH5

LIMIT : FCC15.207 QP  
FCC15.207 AV

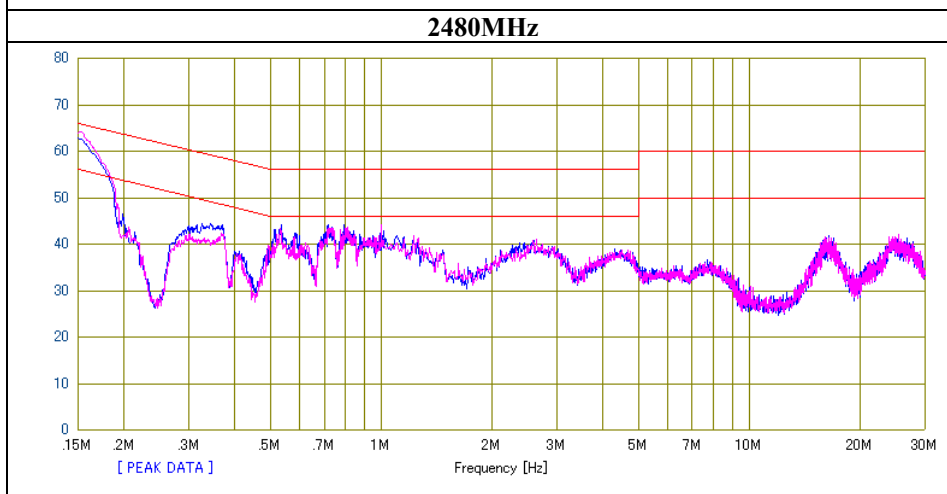
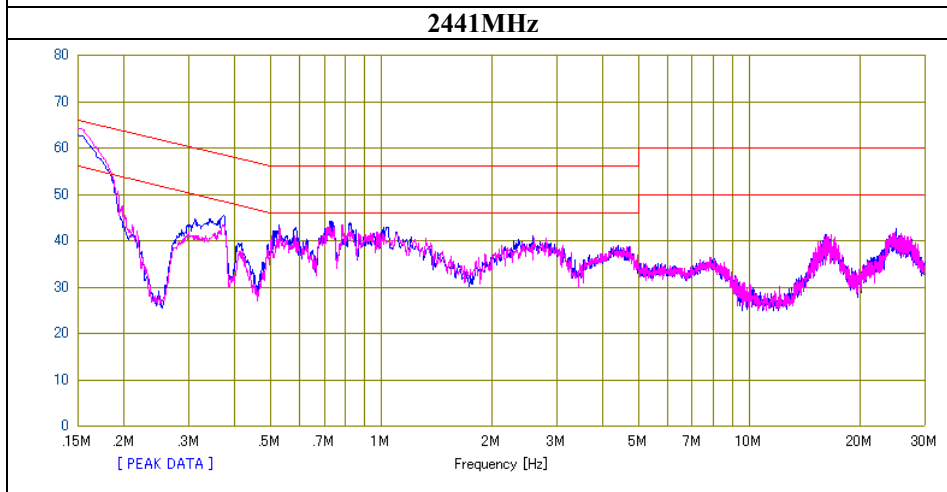
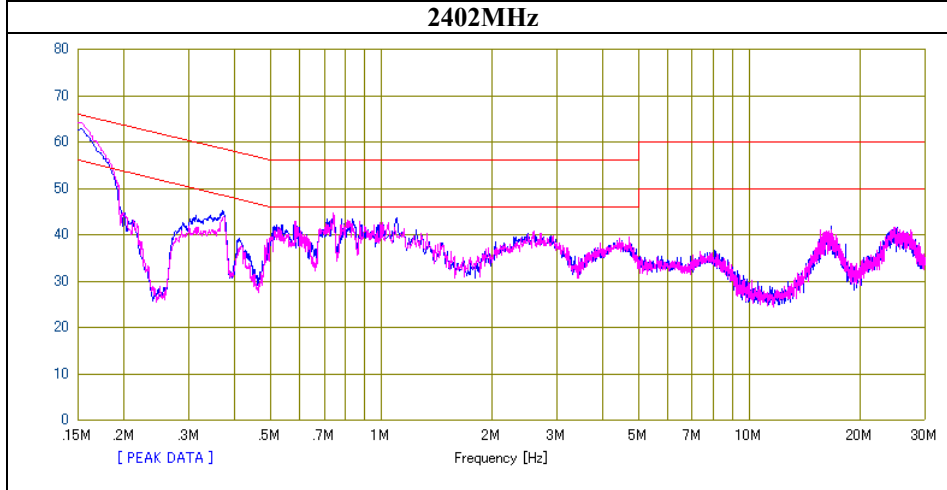


Frequency [MHz]	Reading Level		Corr. Factor	Results		Limit		Margin		Phase	Comment
	QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]		
0.15000	46.5	29.8	13.3	59.8	43.1	66.0	56.0	6.2	12.9	N	
0.37072	22.9	22.9	13.3	36.2	36.2	58.5	48.5	22.3	12.3	N	
0.54467	25.0	13.3	13.3	38.3	26.6	56.0	46.0	17.7	19.4	N	
0.74032	25.7	21.3	13.3	39.0	34.6	56.0	46.0	17.0	11.4	N	
0.82228	23.6	10.5	13.3	36.9	23.8	56.0	46.0	19.1	22.2	N	
24.93638	19.3	10.9	15.0	34.3	25.9	60.0	50.0	25.7	24.1	N	
0.15021	47.7	30.2	13.3	61.0	43.5	66.0	56.0	5.0	12.5	L	
0.37038	26.3	23.0	13.3	39.6	36.3	58.5	48.5	18.9	12.2	L	
0.55511	23.7	12.5	13.3	37.0	25.8	56.0	46.0	19.0	20.2	L	
0.74048	25.4	21.2	13.3	38.7	34.5	56.0	46.0	17.3	11.5	L	
0.81781	23.3	10.5	13.3	36.6	23.8	56.0	46.0	19.4	22.2	L	
24.91643	20.1	11.8	15.0	35.1	26.8	60.0	50.0	24.9	23.2	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**  
**(Power Supply: SONY)**

Test place Head Office EMC Lab. No.4 Semi Anechoic Chamber  
Report No. 30HE0264-HO-01  
Date 04/09/2010  
Temperature/ Humidity 24 deg.C./ 29%  
Engineer Satofumi Matsuyama  
Mode Tx DH5



Y scale [dBuV]

Chart — N — L

## Conducted Emission (Power Supply: SONY)

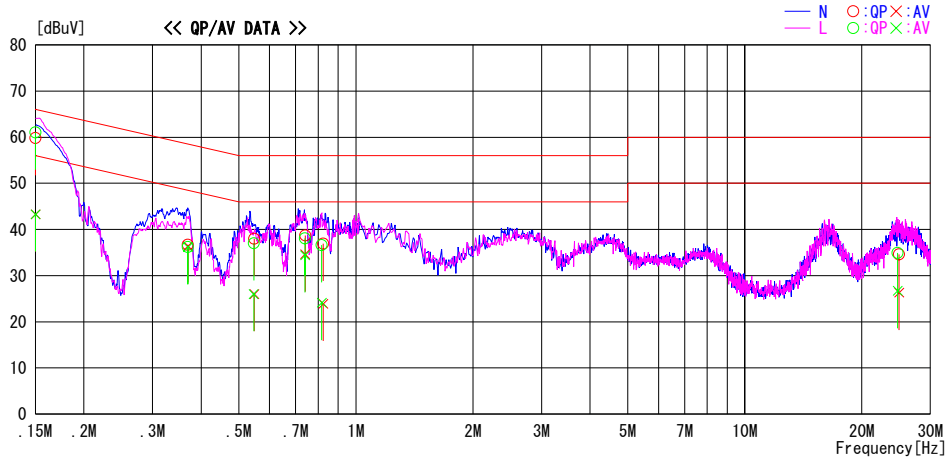
### DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.4 Semi Anechoic Chamber  
Date : 2010/04/10

Report No. : 30HE0264-HO-01  
Temp./Humi. : 24deg. C / 29%  
Engineer : SatoFumi Matsuyama

Mode / Remarks : Bluetooth Transmitting mode(Tx) 2441MHz, 3DH5

LIMIT : FCC15.207 QP  
FCC15.207 AV

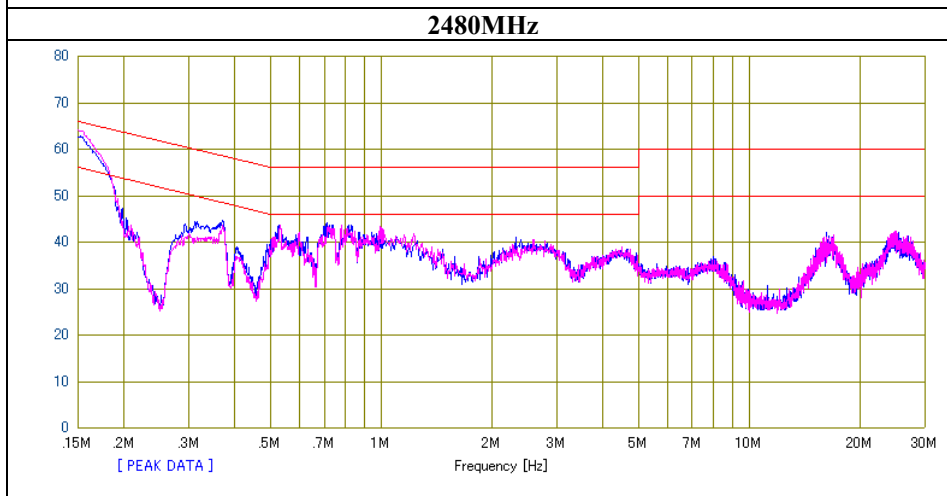
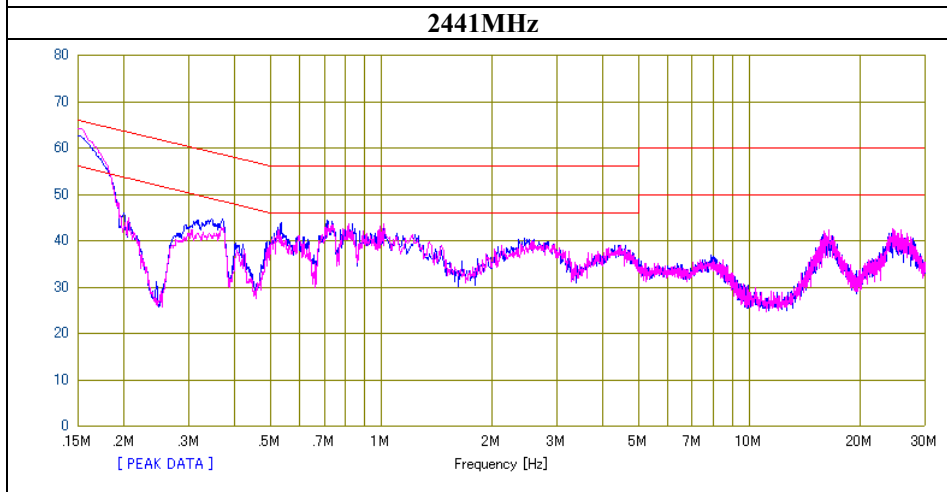
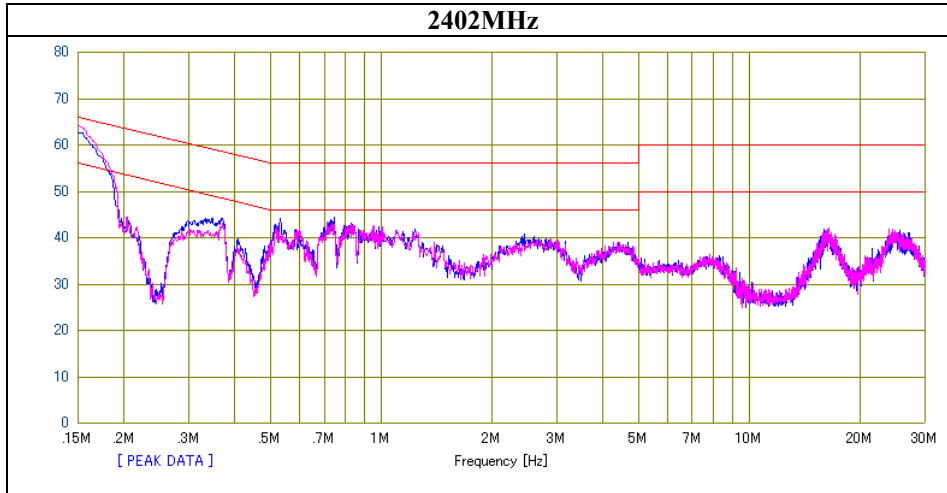


Frequency [MHz]	Reading Level		Corr. Factor [dB]	Results		Limit		Margin		Phase	Comment
	QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]		
0.15000	46.5	30.0	13.3	59.8	43.3	66.0	56.0	6.2	12.7	N	
0.36992	23.4	23.1	13.3	36.7	36.4	58.5	48.5	21.8	12.1	N	
0.54796	24.7	12.7	13.3	38.0	26.0	56.0	46.0	18.0	20.0	N	
0.74076	25.4	21.3	13.3	38.7	34.6	56.0	46.0	17.3	11.4	N	
0.82381	23.6	10.6	13.3	36.9	23.9	56.0	46.0	19.1	22.1	N	
24.92824	19.6	11.3	15.0	34.6	26.3	60.0	50.0	25.4	23.7	N	
0.15000	47.7	30.0	13.3	61.0	43.3	66.0	56.0	5.0	12.7	L	
0.37003	22.9	22.9	13.3	36.2	36.2	58.5	48.5	22.3	12.3	L	
0.54614	23.7	12.7	13.3	37.0	26.0	56.0	46.0	19.0	20.0	L	
0.74017	24.8	21.1	13.3	38.1	34.4	56.0	46.0	17.9	11.6	L	
0.81684	23.3	10.8	13.3	36.6	24.1	56.0	46.0	19.4	21.9	L	
24.72383	19.9	11.7	15.0	34.9	26.7	60.0	50.0	25.1	23.3	L	

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

**Conducted Emission**  
**(Power Supply: SONY)**

Test place Head Office EMC Lab. No.4 Semi Anechoic Chamber  
Report No. 30HE0264-HO-01  
Date 04/09/2010  
Temperature/ Humidity 24 deg.C./ 29%  
Engineer Satofumi Matsuyama  
Mode Tx 3DH5



Y scale [dBuV]

Chart — N — L

**Conducted Emission  
(Power Supply: SONY)**

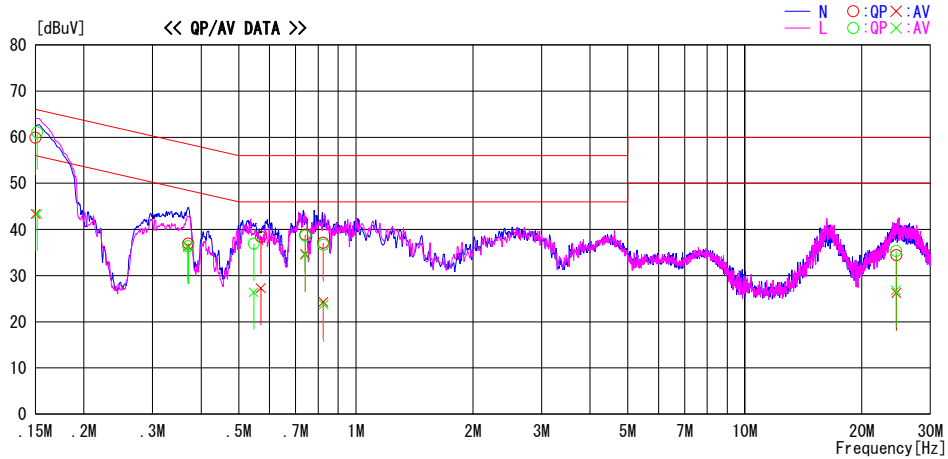
**DATA OF CONDUCTED EMISSION TEST**

UL Japan, Inc. Head Office EMC Lab. No.4 Semi Anechoic Chamber  
Date : 2010/04/10

Report No. : 30HE0264-HO-01  
Temp./Humi. : 24deg. C / 29%  
Engineer : SatoFumi Matsuyama

Mode / Remarks : Bluetooth Receiving mode(Rx) 2441MHz, DH5/3DH5

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]		
0.15000	46.6	30.1	13.3	59.9	43.4	66.0	56.0	6.1	12.6	N	
0.37028	23.6	23.0	13.3	36.9	36.3	58.5	48.5	21.6	12.2	N	
0.56940	25.1	14.0	13.3	38.4	27.3	56.0	46.0	17.6	18.7	N	
0.74043	25.6	21.4	13.3	38.9	34.7	56.0	46.0	17.1	11.3	N	
0.82465	23.8	11.0	13.3	37.1	24.3	56.0	46.0	18.9	21.7	N	
24.51884	19.4	11.2	15.0	34.4	26.2	60.0	50.0	25.6	23.8	N	
0.15174	47.7	30.1	13.3	61.0	43.4	65.9	55.9	4.9	12.5	L	
0.37031	23.1	22.9	13.3	36.4	36.2	58.5	48.5	22.1	12.3	L	
0.54618	23.6	13.1	13.3	36.9	26.4	56.0	46.0	19.1	19.6	L	
0.74040	25.3	21.2	13.3	38.6	34.5	56.0	46.0	17.4	11.5	L	
0.82616	23.4	10.4	13.3	36.7	23.7	56.0	46.0	19.3	22.3	L	
24.47628	20.3	11.8	15.0	35.3	26.8	60.0	50.0	24.7	23.2	L	

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

**Conducted Emission**  
**(Power Supply: DELTA)**

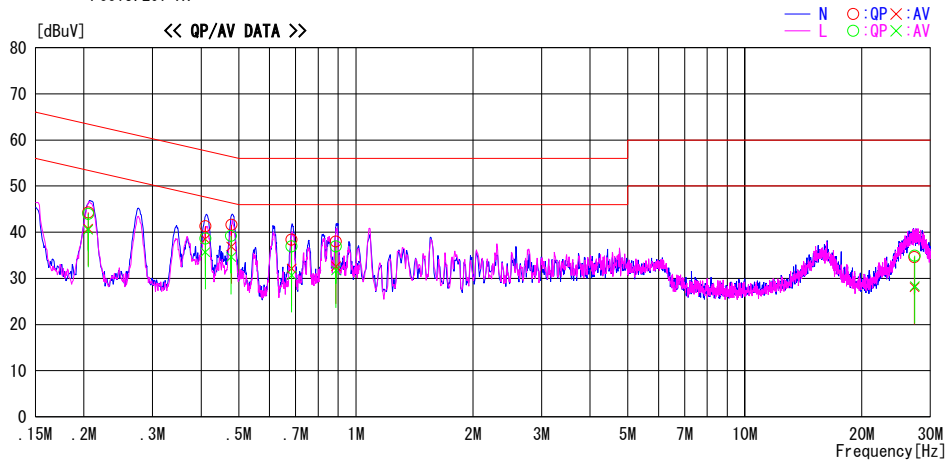
**DATA OF CONDUCTED EMISSION TEST**

UL Japan, Inc. Head Office EMC Lab. No.4 Semi Anechoic Chamber  
Date : 2010/04/09

Report No. : 30HE0264-HO-01  
Temp./Humi. : 24deg. C / 29%  
Engineer : Satofumi Matsuyama

Mode / Remarks : Bluetooth Transmitting mode(Tx) 2441MHz, DH5

LIMIT : FCC15.207 QP  
FCC15.207 AV

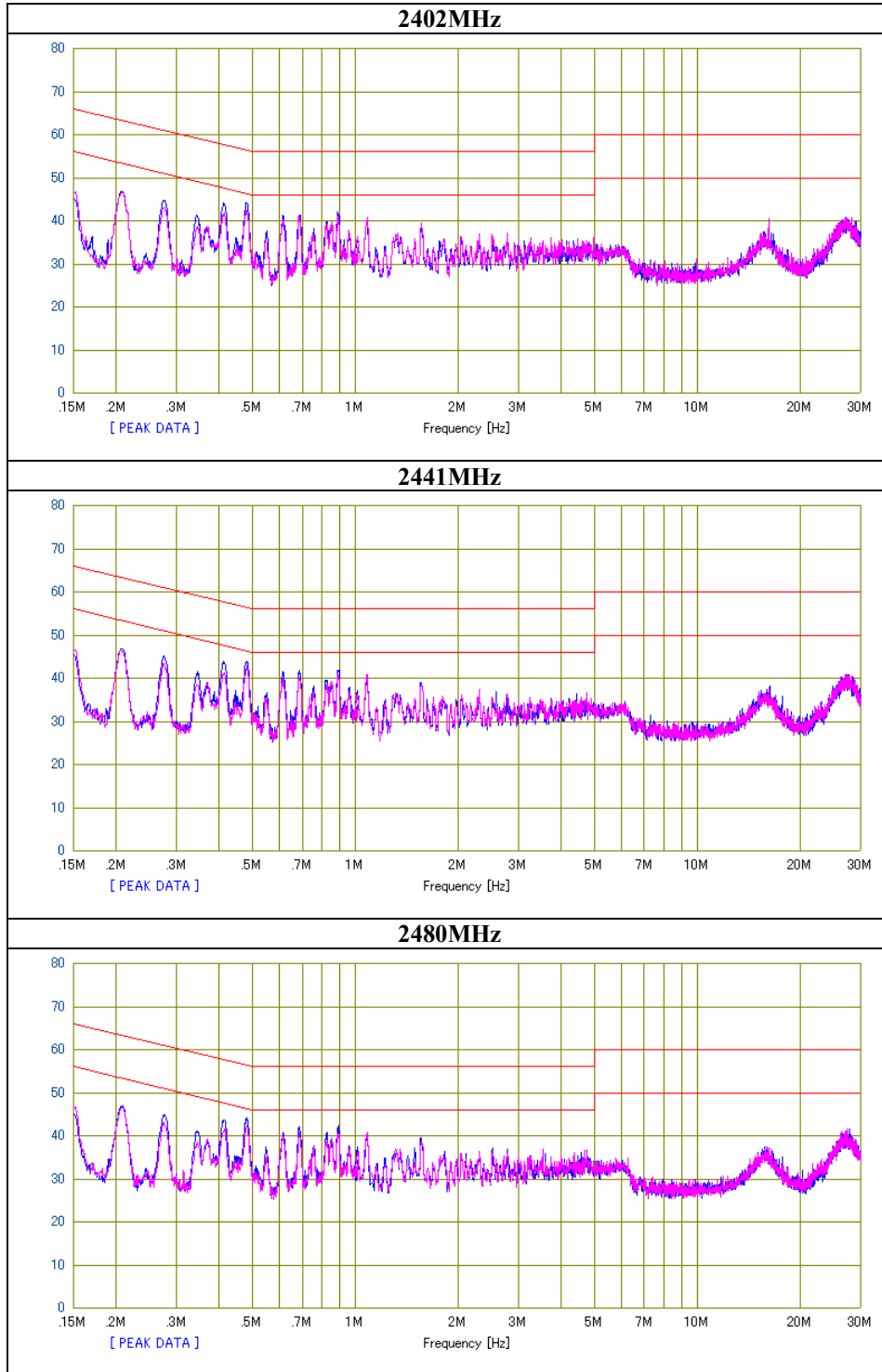


Frequency [MHz]	Reading Level		Corr. [dB]	Results		Limit		Margin		Phase	Comment
	QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]		
0.20503	31.0	27.5	13.3	44.3	40.8	63.4	53.4	19.1	12.6	N	
0.40994	28.0	25.2	13.3	41.3	38.5	57.6	47.6	16.3	9.1	N	
0.47822	28.3	23.6	13.3	41.6	36.9	56.4	46.4	14.8	9.5	N	
0.68326	25.1	18.8	13.3	38.4	32.1	56.0	46.0	17.6	13.9	N	
0.88852	24.7	19.3	13.3	38.0	32.6	56.0	46.0	18.0	13.4	N	
27.27782	19.5	13.0	15.1	34.6	28.1	60.0	50.0	25.4	21.9	N	
0.20498	30.7	27.2	13.3	44.0	40.5	63.4	53.4	19.4	12.9	L	
0.40991	25.3	22.4	13.3	38.6	35.7	57.7	47.7	19.1	12.0	L	
0.47815	25.9	21.3	13.3	39.2	34.6	56.4	46.4	17.2	11.8	L	
0.68326	23.6	17.4	13.3	36.9	30.7	56.0	46.0	19.1	15.3	L	
0.88808	23.6	18.4	13.3	36.9	31.7	56.0	46.0	19.1	14.3	L	
27.34282	19.8	13.2	15.1	34.9	28.3	60.0	50.0	25.1	21.7	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**  
**(Power Supply: DELTA)**

Test place	Head Office EMC Lab. No.4 Semi Anechoic Chamber
Report No.	30HE0264-HO-01
Date	04/09/2010
Temperature/ Humidity	24 deg.C./ 29%
Engineer	Satofumi Matsuyama
Mode	Tx DH5



**Conducted Emission**  
**(Power Supply: DELTA)**

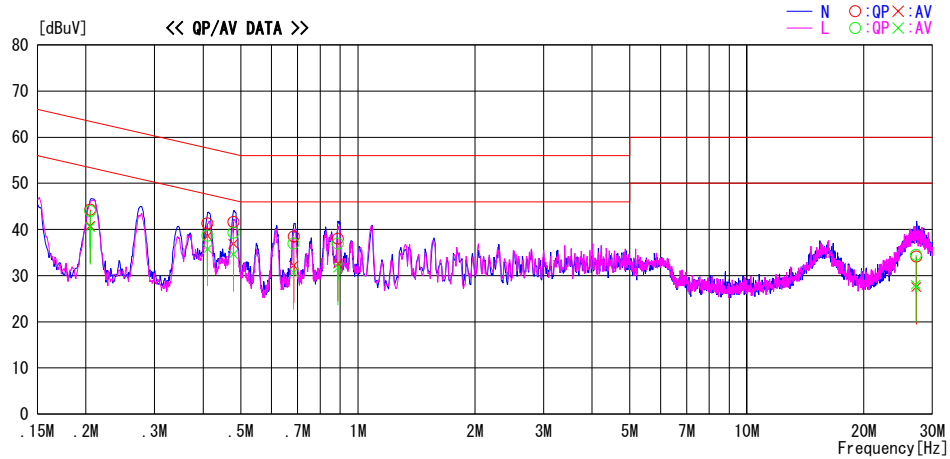
**DATA OF CONDUCTED EMISSION TEST**

UL Japan, Inc. Head Office EMC Lab. No.4 Semi Anechoic Chamber  
Date : 2010/04/09

Report No. : 30HE0264-HO-01  
Temp./Humi. : 24deg. C / 29%  
Engineer : SatoFumi Matsuyama

Mode / Remarks : Bluetooth Transmitting mode(Tx) 2441MHz, 3DH5

LIMIT : FCC15.207 QP  
FCC15.207 AV



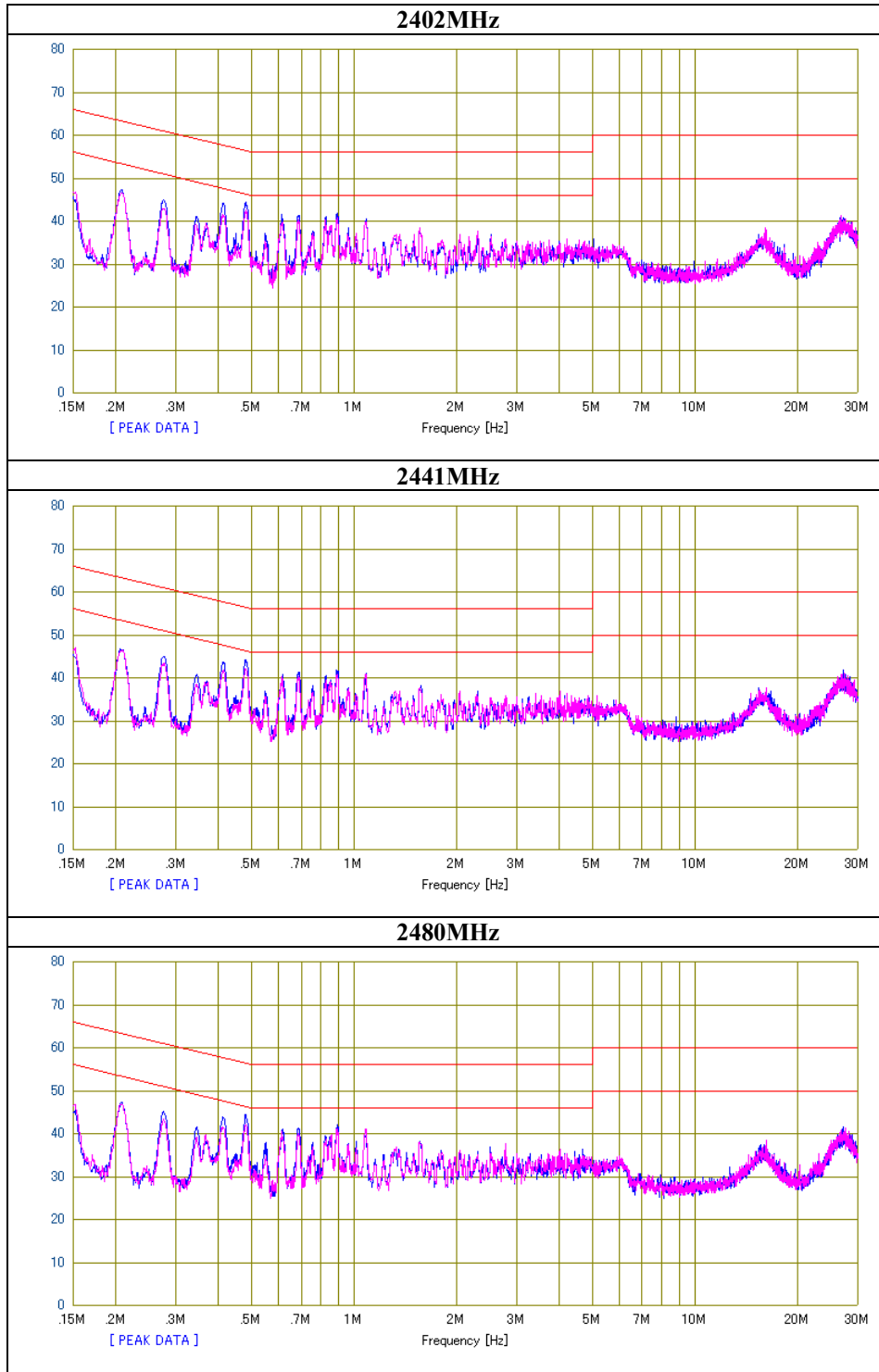
Frequency [MHz]	Reading Level		Corr. Factor	Results		Limit		Margin		Phase	Comment
	QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]		
0.20510	31.0	27.5	13.3	44.3	40.8	63.4	53.4	19.1	12.6	N	
0.41024	28.0	25.3	13.3	41.3	38.6	57.6	47.6	16.3	9.0	N	
0.47838	28.3	23.6	13.3	41.6	36.9	56.4	46.4	14.8	9.5	N	
0.68369	25.2	18.9	13.3	38.5	32.2	56.0	46.0	17.5	13.8	N	
0.88835	24.7	19.3	13.3	38.0	32.6	56.0	46.0	18.0	13.4	N	
27.26431	19.0	12.4	15.1	34.1	27.5	60.0	50.0	25.9	22.5	N	
0.20506	30.7	27.2	13.3	44.0	40.5	63.4	53.4	19.4	12.9	L	
0.41021	25.3	22.5	13.3	38.6	35.8	57.6	47.6	19.0	11.8	L	
0.47849	26.0	21.3	13.3	39.3	34.6	56.4	46.4	17.1	11.8	L	
0.68343	23.6	17.4	13.3	36.9	30.7	56.0	46.0	19.1	15.3	L	
0.88856	23.6	18.4	13.3	36.9	31.7	56.0	46.0	19.1	14.3	L	
27.20831	19.4	12.9	15.1	34.5	28.0	60.0	50.0	25.5	22.0	L	

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



**Conducted Emission**  
**(Power Supply: DELTA)**

Test place	Head Office EMC Lab. No.4 Semi Anechoic Chamber
Report No.	30HE0264-HO-01
Date	04/09/2010
Temperature/ Humidity	24 deg.C./ 29%
Engineer	Satofumi Matsuyama
Mode	Tx 3DH5



**Conducted Emission**  
**(Power Supply: DELTA)**

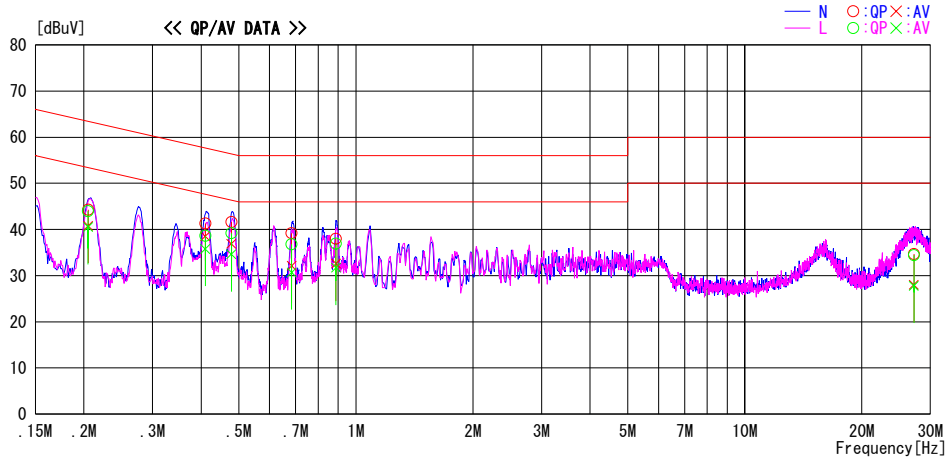
**DATA OF CONDUCTED EMISSION TEST**

UL Japan, Inc. Head Office EMC Lab. No.4 Semi Anechoic Chamber  
Date : 2010/04/09

Report No. : 30HE0264-HO-01  
Temp./Humi. : 24deg. C / 29%  
Engineer : SatoFumi Matsuyama

Mode / Remarks : Bluetooth Receiving mode(Rx) 2441MHz, DH5/3DH5

LIMIT : FCC15.207 QP  
FCC15.207 AV



Frequency [MHz]	Reading Level		Corr. Factor	Results		Limit		Margin		Phase
	QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]	
0.20492	31.0	27.5	13.3	44.3	40.8	63.4	53.4	19.1	12.6	N
0.40997	28.0	25.2	13.3	41.3	38.5	57.6	47.6	16.3	9.1	N
0.47827	28.3	23.6	13.3	41.6	36.9	56.4	46.4	14.8	9.5	N
0.68329	25.9	18.8	13.3	39.2	32.1	56.0	46.0	16.8	13.9	N
0.88843	24.7	19.3	13.3	38.0	32.6	56.0	46.0	18.0	13.4	N
27.20971	19.6	12.9	15.1	34.7	28.0	60.0	50.0	25.3	22.0	N
0.20481	30.7	27.2	13.3	44.0	40.5	63.4	53.4	19.4	12.9	L
0.40982	25.3	22.5	13.3	38.6	35.8	57.7	47.7	19.1	11.9	L
0.47832	25.9	21.3	13.3	39.2	34.6	56.4	46.4	17.2	11.8	L
0.68322	23.5	17.4	13.3	36.8	30.7	56.0	46.0	19.2	15.3	L
0.88816	23.6	18.4	13.3	36.9	31.7	56.0	46.0	19.1	14.3	L
27.21390	19.3	12.7	15.1	34.4	27.8	60.0	50.0	25.6	22.2	L

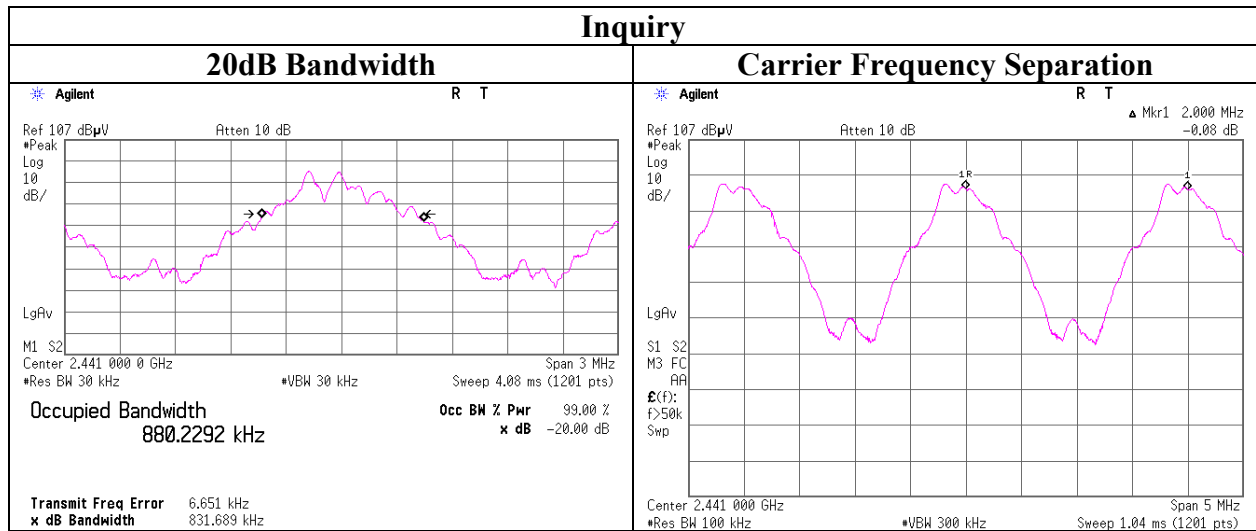
CHART: WITH FACTOR, Peak hold data. CALCULATION: RESULT [dBuV] = READING [dBuV] + C. F [dB] (L ISN LOSS + CABLE LOSS)  
Except for the above table : adequate margin data below the limits.

## 20dB Bandwidth and Carrier Frequency Separation

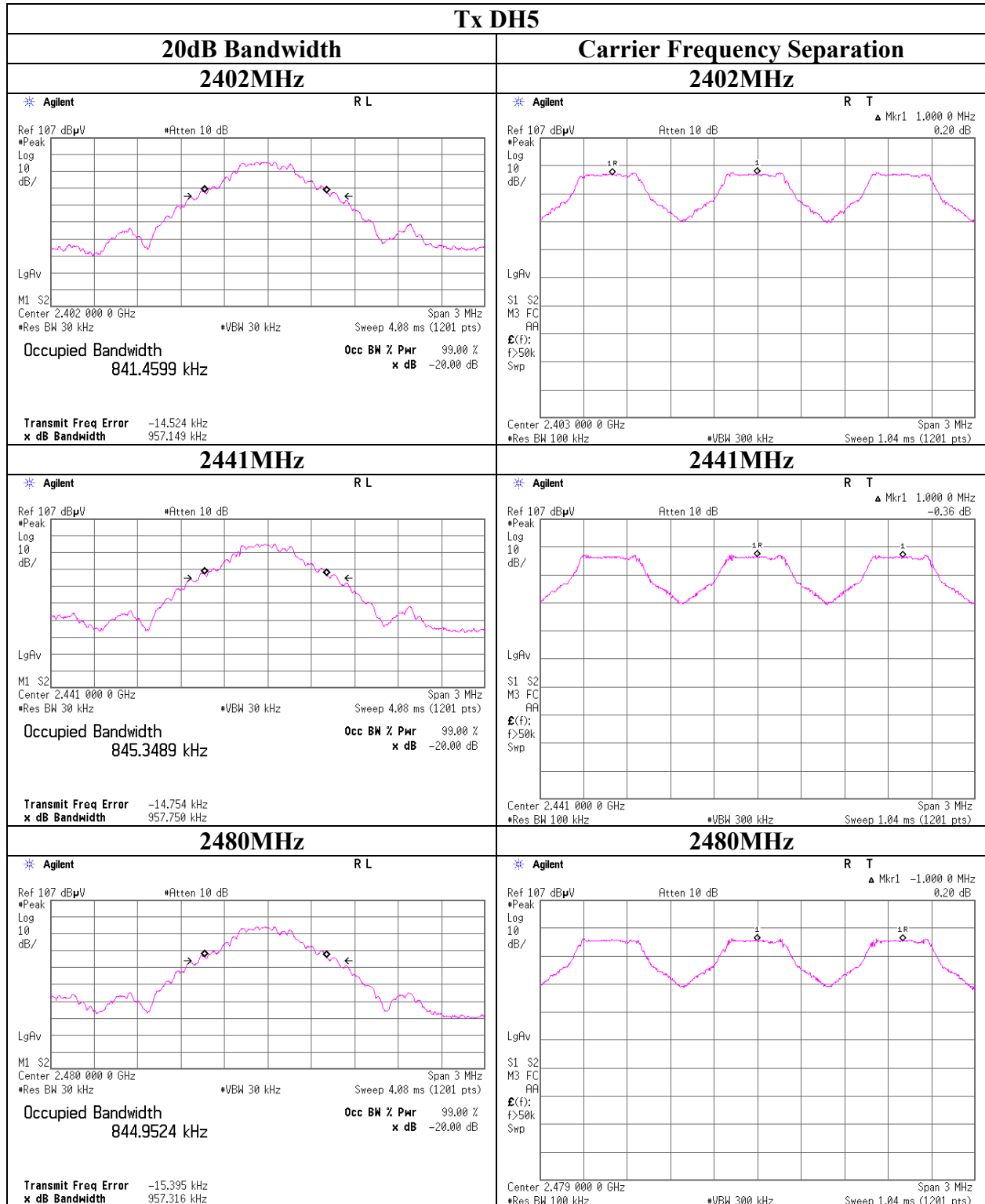
Test place	Head Office EMC Lab. No.3 Measurement Room	
Report No.	30HE0264-HO-01	
Date	04/05/2010	04/14/2010
Temperature/ Humidity	24 deg.C./ 45%	22 deg.C./ 43%
Engineer	Takeshi Choda	Takeshi Choda
Mode	Tx (Hopping on) DH5/3DH5/Inquiry	

Mode	Freq. [MHz]	20dB Bandwidth [MHz]	Carrier Frequency Separation [MHz]	Limit for Carrier Frequency separation [MHz]
DH5	2402.0	0.957	1.000	≥ 0.638
DH5	2441.0	0.958	1.000	≥ 0.639
DH5	2480.0	0.957	1.000	≥ 0.638
3DH5	2402.0	1.302	1.000	≥ 0.868
3DH5	2441.0	1.298	1.000	≥ 0.865
3DH5	2480.0	1.280	1.000	≥ 0.853
Inquiry	2441.0	0.832	2.000	≥ 0.554

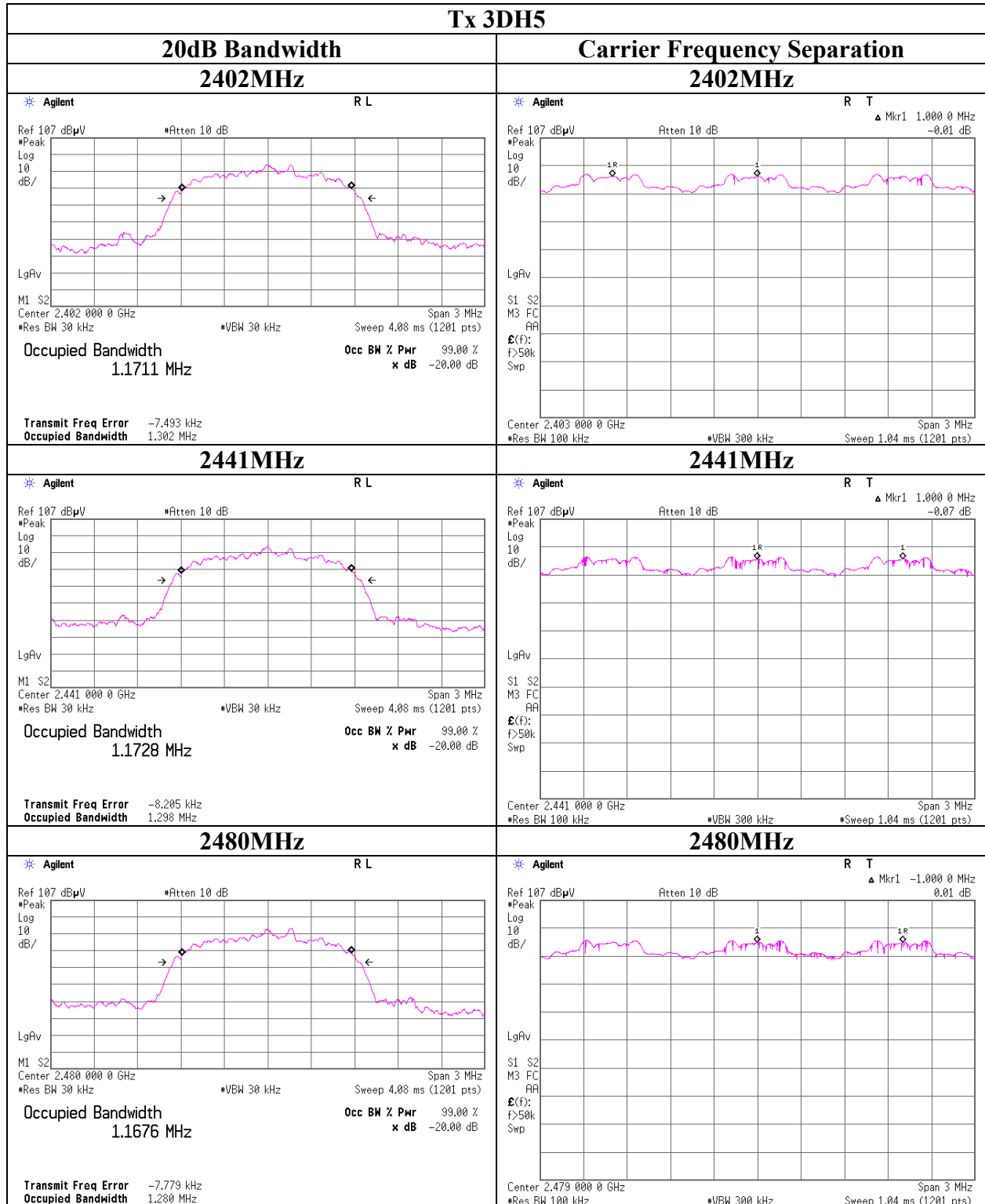
Limit: Two-thirds of 20dB Bandwidth or 25kHz (whichever is greater).  
No limit applies to 20dB Bandwidth.



**20dB Bandwidth and Carrier Frequency Separation**



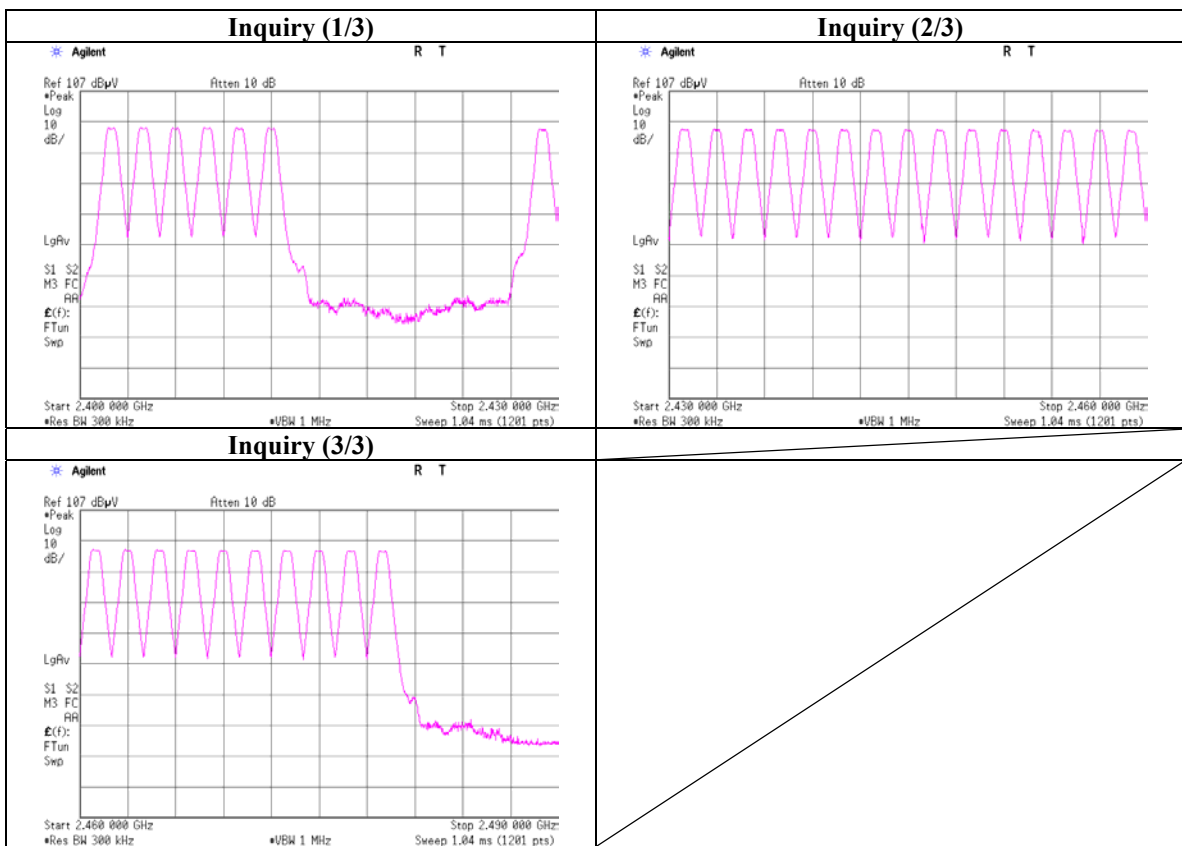
## 20dB Bandwidth and Carrier Frequency Separation



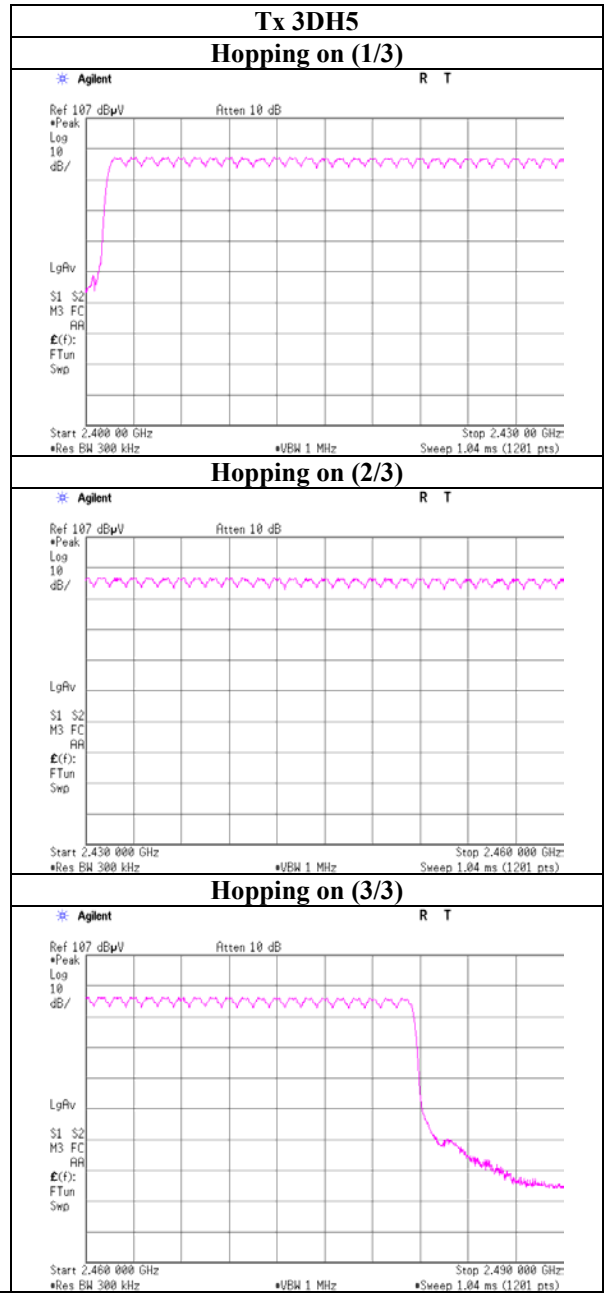
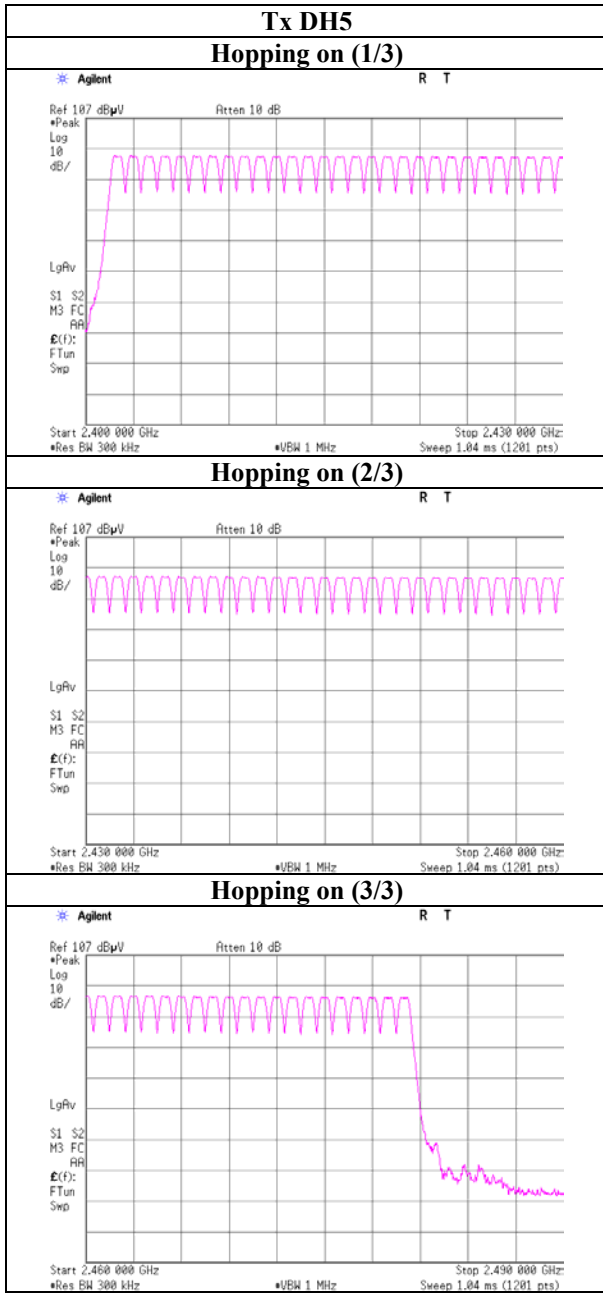
## Number of Hopping Frequency

Test place	Head Office EMC Lab. No.3 Measurement Room
Report No.	30HE0264-HO-01
Date	04/14/2010
Temperature/ Humidity	22 deg.C./ 43%
Engineer	Takeshi Choda
Mode	Tx (Hopping on) DH5/3DH5/Inquiry

Mode	Number of channel [times]	Limit [times]
DH5	79	>= 15
3DH5	79	>= 15
Inquiry	32	>= 15



**Number of Hopping Frequency**



### Dwell time

Test place	Head Office EMC Lab. No.3 Measurement Room
Report No.	30HE0264-HO-01
Date	04/14/2010
Temperature/ Humidity	22 deg.C./ 43%
Engineer	Takeshi Choda
Mode	Tx (Hopping on) DH5/3DH5/Inquiry

Mode	Number of transmission in a 31.6(79 Hopping x 0.4) / 12.8(32 Hopping x 0.4)second period		Length of transmission time [msec]	Result [msec]	Limit [msec]	
DH1	48.8 times /	5 sec. x 31.6 sec. =	309 times	0.418	129	400
DH3	24.8 times /	5 sec. x 31.6 sec. =	157 times	1.677	263	400
DH5	33.0 times /	10 sec. x 31.6 sec. =	105 times	2.927	307	400
3DH1	48.6 times /	5 sec. x 31.6 sec. =	308 times	0.423	130	400
3DH3	22.8 times /	5 sec. x 31.6 sec. =	145 times	1.675	243	400
3DH5	33.6 times /	10 sec. x 31.6 sec. =	107 times	2.927	313	400
Inquiry	100.0 times /	1 sec. x 12.8 sec. =	1280 times	0.124	159	400

Sample Calculation

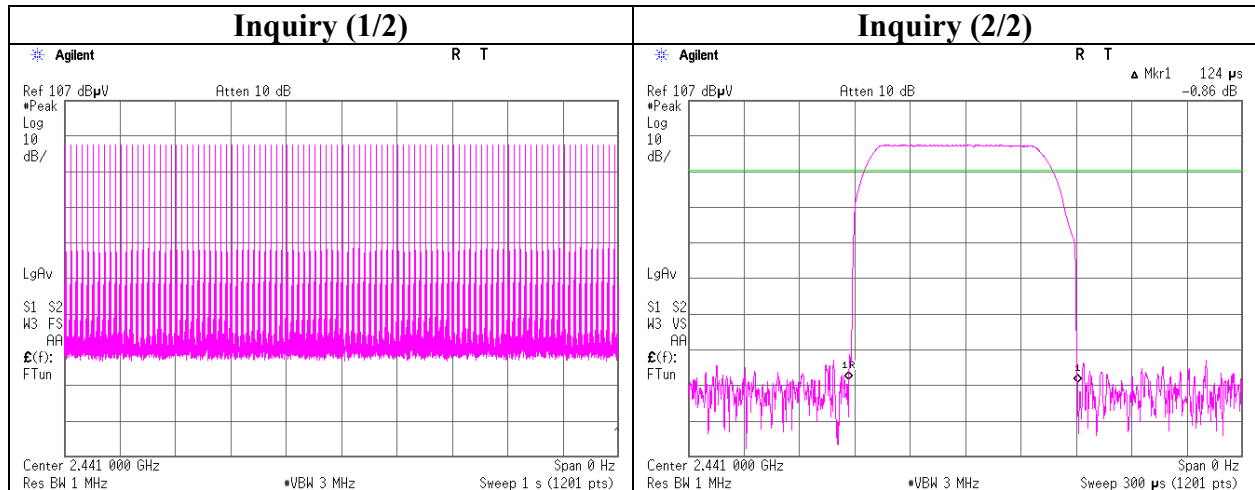
Result = Number of transmission x Length of transmission time

\*Average data of 5 tests.(except Inquiry)

Mode	Sampling [times]					Average [times]
	1	2	3	4	5	
DH1	50	49	49	47	49	48.8
DH3	25	28	23	24	24	24.8
DH5	25	35	38	35	32	33
3DH1	48	49	49	48	49	48.6
3DH3	22	26	24	21	21	22.8
3DH5	39	31	31	31	36	33.6

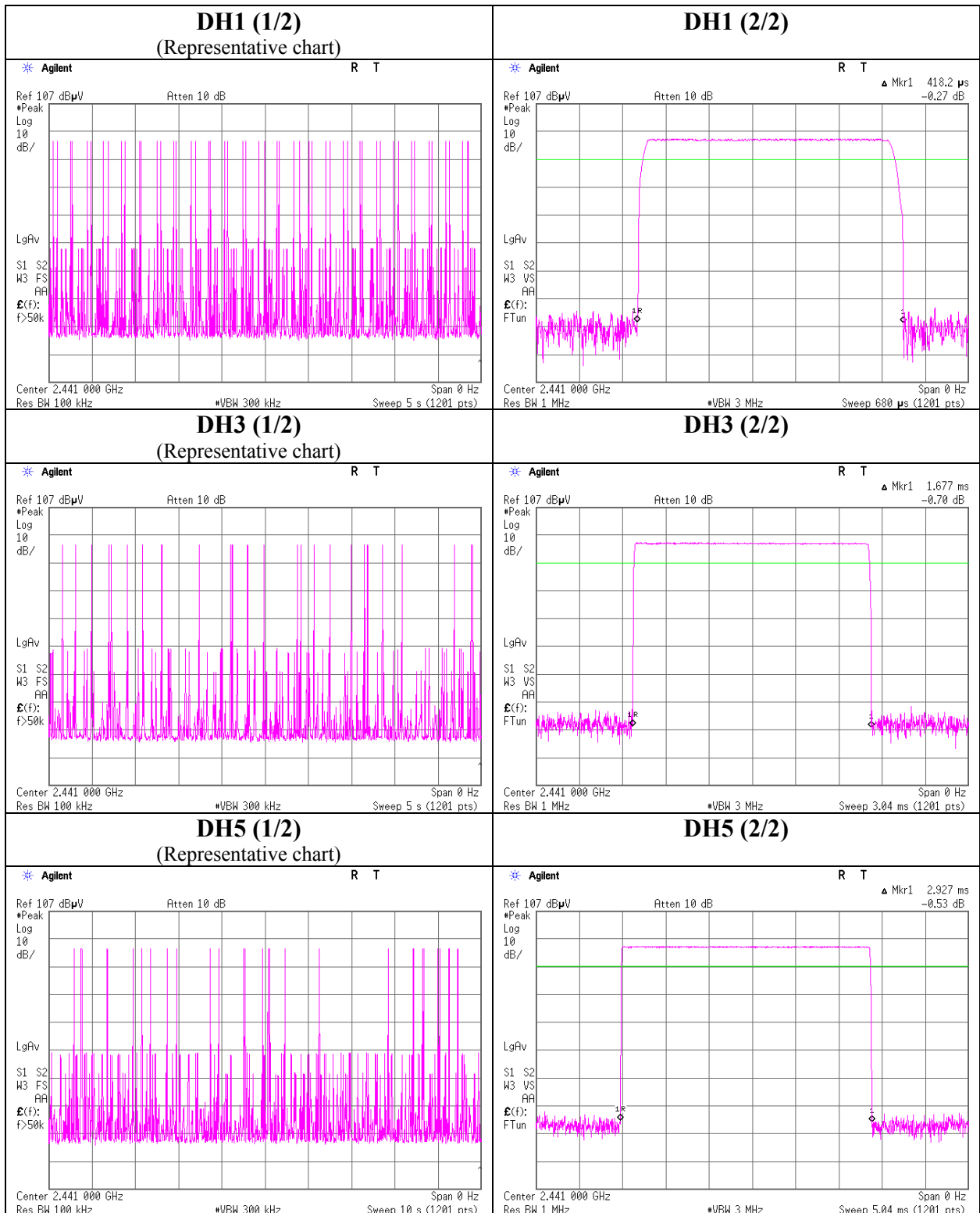
Sample Calculation

Average= Summation(Sampling 1 to 5) / 5

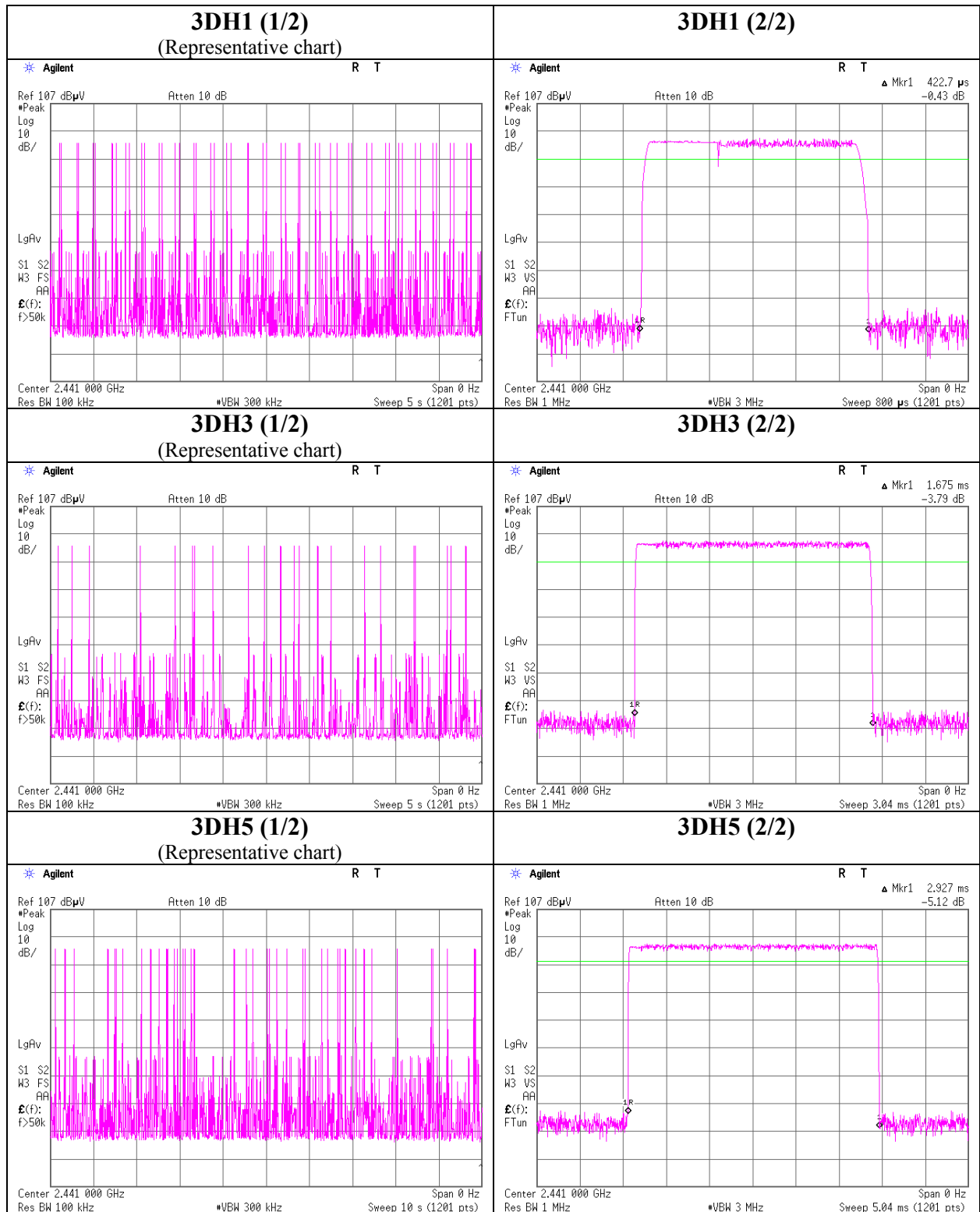




**Dwell time**



**Dwell time**



## Maximum Peak Output Power

Test place : Head Office EMC Lab. No.4 Semi Anechoic Chamber  
Report No. : 30HE0264-HO-01  
Date : 04/05/2010  
Temperature/ Humidity : 24 deg.C./ 44%  
Engineer : Takumi Shimada  
Mode : Tx (Hopping off) DH5/2DH5/3DH5/Inquiry

### DH5/Inquiry

Mode	Freq. [MHz]	Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result		Limit		Margin [dB]
					[dBm]	[mW]	[dBm]	[mW]	
DH5	2402.0	-9.85	0.80	10.00	0.95	1.24	20.97	125	20.02
DH5	2441.0	-10.30	0.80	10.00	0.50	1.12	20.97	125	20.47
DH5	2480.0	-10.98	0.80	10.00	-0.18	0.96	20.97	125	21.15
Inquiry	2441.0	-9.83	0.80	10.00	0.97	1.25	20.97	125	20.00

### 2DH5

Mode	Freq. [MHz]	Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result		Limit		Margin [dB]
					[dBm]	[mW]	[dBm]	[mW]	
2DH5	2402.0	-9.44	0.80	10.00	1.36	1.37	20.97	125	19.61
2DH5	2441.0	-9.88	0.80	10.00	0.92	1.24	20.97	125	20.05
2DH5	2480.0	-10.31	0.80	10.00	0.49	1.12	20.97	125	20.48

### 3DH5

Mode	Freq. [MHz]	Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result		Limit		Margin [dB]
					[dBm]	[mW]	[dBm]	[mW]	
3DH5	2402.0	-9.32	0.80	10.00	1.48	1.41	20.97	125	19.49
3DH5	2441.0	-9.73	0.80	10.00	1.07	1.28	20.97	125	19.90
3DH5	2480.0	-10.11	0.80	10.00	0.69	1.17	20.97	125	20.28

Sample Calculation:

Result = Reading + Cable Loss (including the cable(s) customer supplied)+ Attenuator

Test was not performed at AFH mode, because the decrease of number of channel (min: 20ch) at AFH mode does not influence on the output power and bandwidth of the EUT.

However, the limit level 125mWof AFH mode was used for the 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

**Radiated Spurious Emission**  
**(Power Supply: SONY)**

Test place Head Office EMC Lab. No.4 Semi Anechoic Chamber  
Report No. 30HE0264-HO-01  
Date 04/07/2010 04/06/2010 04/07/2010  
Temperature/ Humidity 21 deg.C./ 43% 22 deg.C./ 41% 21 deg.C./ 43%  
Engineer Satofumi Matsuyama Satofumi Matsuyama Takumi Shimada  
(Below 1GHz) (1-10GHz) (Above 10GHz)  
Mode Tx, DH5 2402MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	31.688	QP	24.3	17.6	7.1	32.1	16.9	40.0	23.1	
Hori	101.871	QP	41.1	10.6	8.1	32.0	27.8	43.5	15.7	
Hori	314.922	QP	35.4	16.2	10.0	31.9	29.7	46.0	16.3	
Hori	374.989	QP	44.6	17.2	10.4	31.9	40.3	46.0	5.7	
Hori	406.425	QP	39.6	17.6	10.6	31.9	35.9	46.0	10.1	
Hori	576.001	QP	38.4	19.8	11.5	32.1	37.6	46.0	8.4	
Hori	1946.402	PK	65.8	25.9	2.7	32.4	62.0	73.9	11.9	
Hori	2390.000	PK	45.9	26.7	2.9	32.1	43.4	73.9	30.5	
Hori	2400.000	PK	60.8	26.7	2.9	32.1	58.3	-	-	See 20dBc Data Sheet
Hori	4804.000	PK	42.1	30.8	5.3	31.4	46.8	73.9	27.1	
Hori	7206.000	PK	43.7	35.9	5.7	32.3	53.0	73.9	20.9	
Hori	9608.000	PK	44.0	37.9	6.8	33.0	55.7	73.9	18.2	
Hori	24020.000	PK	46.4	38.1	-1.2	31.7	51.6	73.9	22.3	
Hori	1946.402	AV	37.4	25.9	2.7	32.4	33.6	53.9	20.3	
Hori	2390.000	AV	33.1	26.7	2.9	32.1	30.6	53.9	23.3	
Hori	2400.000	AV	52.0	26.7	2.9	32.1	49.5	-	-	See 20dBc Data Sheet
Hori	4804.000	AV	30.2	30.8	5.3	31.4	34.9	53.9	19.0	
Hori	7206.000	AV	31.4	35.9	5.7	32.3	40.7	53.9	13.2	
Hori	9608.000	AV	31.4	37.9	6.8	33.0	43.1	53.9	10.8	
Hori	24020.000	AV	35.0	38.1	-1.2	31.7	40.2	53.9	13.7	
Vert	31.751	QP	35.5	17.6	7.1	32.1	28.1	40.0	11.9	
Vert	101.869	QP	49.7	10.6	8.1	32.0	36.4	43.5	7.1	
Vert	306.654	QP	39.5	16.1	9.9	31.9	33.6	46.0	12.4	
Vert	374.988	QP	38.2	17.2	10.4	31.9	33.9	46.0	12.1	
Vert	406.427	QP	39.1	17.6	10.6	31.9	35.4	46.0	10.6	
Vert	576.004	QP	33.0	19.8	11.5	32.1	32.2	46.0	13.8	
Vert	1946.250	PK	69.0	25.9	2.7	32.4	65.2	73.9	8.7	
Vert	2390.000	PK	44.9	26.7	2.9	32.1	42.4	73.9	31.5	
Vert	2400.000	PK	62.7	26.7	2.9	32.1	60.2	-	-	See 20dBc Data Sheet
Vert	4804.000	PK	42.3	30.8	5.3	31.4	47.0	73.9	26.9	
Vert	7206.000	PK	44.3	35.9	5.7	32.3	53.6	73.9	20.3	
Vert	9608.000	PK	43.5	37.9	6.8	33.0	55.2	73.9	18.7	
Vert	24020.000	PK	46.6	38.1	-1.2	31.7	51.8	73.9	22.1	
Vert	1946.250	AV	39.8	25.9	2.7	32.4	36.0	53.9	17.9	
Vert	2390.000	AV	32.5	26.7	2.9	32.1	30.0	53.9	23.9	
Vert	2400.000	AV	53.7	26.7	2.9	32.1	51.2	-	-	See 20dBc Data Sheet
Vert	4804.000	AV	30.2	30.8	5.3	31.4	34.9	53.9	19.0	
Vert	7206.000	AV	31.4	35.9	5.7	32.3	40.7	53.9	13.2	
Vert	9608.000	AV	31.4	37.9	6.8	33.0	43.1	53.9	10.8	
Vert	24020.000	AV	35.1	38.1	-1.2	31.7	40.3	53.9	13.6	

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

**Radiated Spurious Emission**  
**20dBc Data Sheet**  
**(Power Supply: SONY)**

Test place                      Head Office EMC Lab. No.4 Semi Anechoic Chamber  
Report No.                      30HE0264-HO-01  
Date                              04/06/2010  
Temperature/ Humidity        22 deg.C./ 41%  
Engineer                        Satofumi Matsuyama  
                                      (1-10GHz)  
Mode                              Tx, DH5 2402MHz

**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	2402.000	PK	98.4	26.7	2.9	32.1	95.9	-	-	Carrier
Hori	2400.000	PK	43.5	26.7	2.9	32.1	41.0	75.9	34.9	
Vert	2402.000	PK	99.6	26.7	2.9	32.1	97.1	-	-	Carrier
Vert	2400.000	PK	45.5	26.7	2.9	32.1	43.0	77.1	34.1	

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

**Radiated Spurious Emission**  
**(Power Supply: SONY)**

Test place Head Office EMC Lab. No.4 Semi Anechoic Chamber  
Report No. 30HE0264-HO-01  
Date 04/07/2010 04/06/2010 04/07/2010  
Temperature/ Humidity 21 deg.C./ 43% 22 deg.C./ 41% 21 deg.C./ 43%  
Engineer Satofumi Matsuyama Satofumi Matsuyama Takumi Shimada  
(Below 1GHz) (1-10GHz) (Above 10GHz)  
Mode Tx, DH5 2441MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	31.926	QP	23.9	17.5	7.1	32.1	16.4	40.0	23.6	
Hori	101.876	QP	41.2	10.6	8.1	32.0	27.9	43.5	15.6	
Hori	313.632	QP	37.0	16.2	10.0	31.9	31.3	46.0	14.7	
Hori	374.996	QP	42.0	17.2	10.4	31.9	37.7	46.0	8.3	
Hori	406.428	QP	39.2	17.6	10.6	31.9	35.5	46.0	10.5	
Hori	576.003	QP	38.5	19.8	11.5	32.1	37.7	46.0	8.3	
Hori	1942.450	PK	65.3	25.9	2.7	32.4	61.5	73.9	12.4	
Hori	4884.000	PK	43.3	31.1	5.3	31.4	48.3	73.9	25.6	
Hori	7323.000	PK	44.6	36.1	5.7	32.4	54.0	73.9	19.9	
Hori	9764.000	PK	45.3	38.1	6.9	33.0	57.3	73.9	16.6	
Hori	24410.000	PK	46.4	38.3	-1.1	31.6	52.0	73.9	21.9	
Hori	1942.450	AV	37.4	25.9	2.7	32.4	33.6	53.9	20.3	
Hori	4884.000	AV	30.5	31.1	5.3	31.4	35.5	53.9	18.4	
Hori	7323.000	AV	31.6	36.1	5.7	32.4	41.0	53.9	12.9	
Hori	9764.000	AV	31.5	38.1	6.9	33.0	43.5	53.9	10.4	
Hori	24410.000	AV	34.3	38.3	-1.1	31.6	39.9	53.9	14.0	
Vert	31.673	QP	35.6	17.6	7.1	32.1	28.2	40.0	11.8	
Vert	101.873	QP	49.6	10.6	8.1	32.0	36.3	43.5	7.2	
Vert	305.474	QP	39.2	16.1	9.9	31.9	33.3	46.0	12.7	
Vert	374.995	QP	35.7	17.2	10.4	31.9	31.4	46.0	14.6	
Vert	406.427	QP	39.0	17.6	10.6	31.9	35.3	46.0	10.7	
Vert	576.007	QP	35.0	19.8	11.5	32.1	34.2	46.0	11.8	
Vert	1945.217	PK	68.5	25.9	2.7	32.4	64.7	73.9	9.2	
Vert	4884.000	PK	41.6	31.1	5.3	31.4	46.6	73.9	27.3	
Vert	7323.000	PK	43.8	36.1	5.7	32.4	53.2	73.9	20.7	
Vert	9764.000	PK	43.2	38.1	6.9	33.0	55.2	73.9	18.7	
Vert	24410.000	PK	46.6	38.3	-1.1	31.6	52.2	73.9	21.7	
Vert	1945.217	AV	40.0	25.9	2.7	32.4	36.2	53.9	17.7	
Vert	4884.000	AV	30.5	31.1	5.3	31.4	35.5	53.9	18.4	
Vert	7323.000	AV	31.6	36.1	5.7	32.4	41.0	53.9	12.9	
Vert	9764.000	AV	31.5	38.1	6.9	33.0	43.5	53.9	10.4	
Vert	24410.000	AV	34.4	38.3	-1.1	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**  
**(Power Supply: SONY)**

Test place Head Office EMC Lab. No.4 Semi Anechoic Chamber  
Report No. 30HE0264-HO-01  
Date 04/07/2010 04/06/2010 04/07/2010  
Temperature/ Humidity 21 deg.C./ 43% 22 deg.C./ 41% 21 deg.C./ 43%  
Engineer Satofumi Matsuyama Satofumi Matsuyama Takumi Shimada  
(Below 1GHz) (1-10GHz) (Above 10GHz)  
Mode Tx, DH5 2480MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	31.552	QP	24.1	17.6	7.1	32.1	16.7	40.0	23.3	
Hori	101.883	QP	41.1	10.6	8.1	32.0	27.8	43.5	15.7	
Hori	311.288	QP	36.6	16.2	9.9	31.9	30.8	46.0	15.2	
Hori	374.995	QP	42.8	17.2	10.4	31.9	38.5	46.0	7.5	
Hori	406.426	QP	38.6	17.6	10.6	31.9	34.9	46.0	11.1	
Hori	576.009	QP	38.5	19.8	11.5	32.1	37.7	46.0	8.3	
Hori	1947.367	PK	65.9	25.9	2.7	32.4	62.1	73.9	11.8	
Hori	2483.500	PK	46.5	26.9	2.9	32.1	44.2	73.9	29.7	
Hori	4960.000	PK	43.7	31.3	4.0	31.4	47.6	73.9	26.3	
Hori	7440.000	PK	43.6	36.3	4.3	32.4	51.8	73.9	22.1	
Hori	9920.000	PK	44.0	38.3	5.2	33.0	54.5	73.9	19.4	
Hori	24800.000	PK	48.2	38.4	-1.0	31.5	54.1	73.9	19.8	
Hori	1947.367	AV	37.3	25.9	2.7	32.4	33.5	53.9	20.4	
Hori	2483.500	AV	33.1	26.9	2.9	32.1	30.8	53.9	23.1	
Hori	4960.000	AV	30.4	31.3	4.0	31.4	34.3	53.9	19.6	
Hori	7440.000	AV	31.8	36.3	4.3	32.4	40.0	53.9	13.9	
Hori	9920.000	AV	32.0	38.3	5.2	33.0	42.5	53.9	11.4	
Hori	24800.000	AV	36.3	38.4	-1.0	31.5	42.2	53.9	11.7	
Vert	31.499	QP	35.5	17.7	7.1	32.1	28.2	40.0	11.8	
Vert	101.876	QP	49.8	10.6	8.1	32.0	36.5	43.5	7.0	
Vert	305.424	QP	38.7	16.1	9.9	31.9	32.8	46.0	13.2	
Vert	374.999	QP	36.3	17.2	10.4	31.9	32.0	46.0	14.0	
Vert	406.431	QP	37.9	17.6	10.6	31.9	34.2	46.0	11.8	
Vert	576.004	QP	35.1	19.8	11.5	32.1	34.3	46.0	11.7	
Vert	1943.733	PK	67.8	25.9	2.7	32.4	64.0	73.9	9.9	
Vert	2483.500	PK	49.1	26.9	2.9	32.1	46.8	73.9	27.1	
Vert	4960.000	PK	42.3	31.3	4.0	31.4	46.2	73.9	27.7	
Vert	7440.000	PK	43.6	36.3	4.3	32.4	51.8	73.9	22.1	
Vert	9920.000	PK	43.5	38.3	5.2	33.0	54.0	73.9	19.9	
Vert	24800.000	PK	48.1	38.4	-1.0	31.5	54.0	73.9	19.9	
Vert	1943.733	AV	39.2	25.9	2.7	32.4	35.4	53.9	18.5	
Vert	2483.500	AV	34.1	26.9	2.9	32.1	31.8	53.9	22.1	
Vert	4960.000	AV	30.4	31.3	4.0	31.4	34.3	53.9	19.6	
Vert	7440.000	AV	31.7	36.3	4.3	32.4	39.9	53.9	14.0	
Vert	9920.000	AV	32.0	38.3	5.2	33.0	42.5	53.9	11.4	
Vert	24800.000	AV	36.4	38.4	-1.0	31.5	42.3	53.9	11.6	

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

**Radiated Spurious Emission**  
**(Power Supply: SONY)**

Test place Head Office EMC Lab. No.4 Semi Anechoic Chamber  
Report No. 30HE0264-HO-01  
Date 04/07/2010 04/07/2010  
Temperature/ Humidity 21 deg.C./ 43% 21 deg.C./ 43%  
Engineer Satofumi Matsuyama Takumi Shimada  
(Below 1GHz) (Above 1GHz)  
Mode Tx, 3DH5 2402MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	31.658	QP	24.1	17.6	7.1	32.1	16.7	40.0	23.3	
Hori	101.871	QP	41.4	10.6	8.1	32.0	28.1	43.5	15.4	
Hori	312.456	QP	36.9	16.2	9.9	31.9	31.1	46.0	14.9	
Hori	374.996	QP	44.1	17.2	10.4	31.9	39.8	46.0	6.2	
Hori	406.434	QP	38.5	17.6	10.6	31.9	34.8	46.0	11.2	
Hori	576.009	QP	38.4	19.8	11.5	32.1	37.6	46.0	8.4	
Hori	1946.402	PK	65.8	25.9	2.7	32.4	62.0	73.9	11.9	
Hori	2390.000	PK	44.1	26.7	2.9	32.1	41.6	73.9	32.3	
Hori	2400.000	PK	61.9	26.7	2.9	32.1	59.4	73.9	14.5	
Hori	4804.000	PK	42.6	30.8	5.3	31.4	47.3	73.9	26.6	
Hori	7206.000	PK	43.6	35.9	5.7	32.3	52.9	73.9	21.1	
Hori	9608.000	PK	43.3	37.9	6.8	33.0	55.0	73.9	18.9	
Hori	24020.000	PK	46.4	38.1	-1.2	31.7	51.6	73.9	22.3	
Hori	1946.402	AV	37.0	25.9	2.7	32.4	33.2	53.9	20.7	
Hori	2390.000	AV	31.3	26.7	2.9	32.1	28.8	53.9	25.1	
Hori	2400.000	AV	48.6	26.7	2.9	32.1	46.1	53.9	7.8	
Hori	4804.000	AV	30.5	30.8	5.3	31.4	35.2	53.9	18.7	
Hori	7206.000	AV	31.5	35.9	5.7	32.3	40.8	53.9	13.1	
Hori	9608.000	AV	31.5	37.9	6.8	33.0	43.2	53.9	10.7	
Hori	24020.000	AV	34.6	38.1	-1.2	31.7	39.8	53.9	14.1	
Vert	31.537	QP	35.4	17.7	7.1	32.1	28.1	40.0	11.9	
Vert	101.873	QP	49.6	10.6	8.1	32.0	36.3	43.5	7.2	
Vert	306.652	QP	39.1	16.1	9.9	31.9	33.2	46.0	12.8	
Vert	374.998	QP	37.1	17.2	10.4	31.9	32.8	46.0	13.2	
Vert	406.434	QP	38.0	17.6	10.6	31.9	34.3	46.0	11.7	
Vert	576.005	QP	34.8	19.8	11.5	32.1	34.0	46.0	12.0	
Vert	1944.750	PK	67.7	25.9	2.7	32.4	63.9	73.9	10.0	
Vert	2390.000	PK	43.4	26.7	2.9	32.1	40.9	73.9	33.0	
Vert	2400.000	PK	63.5	26.7	2.9	32.1	61.0	73.9	12.9	
Vert	4804.000	PK	42.8	30.8	5.3	31.4	47.5	73.9	26.4	
Vert	7206.000	PK	43.6	35.9	5.7	32.3	52.9	73.9	21.0	
Vert	9608.000	PK	43.7	37.9	6.8	33.0	55.4	73.9	18.6	
Vert	24020.000	PK	46.6	38.1	-1.2	31.7	51.8	73.9	22.1	
Vert	1944.750	AV	37.0	25.9	2.7	32.4	33.2	53.9	20.7	
Vert	2390.000	AV	31.3	26.7	2.9	32.1	28.8	53.9	25.1	
Vert	2400.000	AV	50.2	26.7	2.9	32.1	47.7	53.9	6.2	
Vert	4804.000	AV	30.4	30.8	5.3	31.4	35.1	53.9	18.8	
Vert	7206.000	AV	31.5	35.9	5.7	32.3	40.8	53.9	13.1	
Vert	9608.000	AV	31.5	37.9	6.8	33.0	43.2	53.9	10.7	
Vert	24020.000	AV	34.5	38.1	-1.2	31.7	39.7	53.9	14.2	

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**  
**(Power Supply: SONY)**

Test place Head Office EMC Lab. No.4 Semi Anechoic Chamber  
Report No. 30HE0264-HO-01  
Date 04/07/2010 04/07/2010  
Temperature/ Humidity 21 deg.C./ 43% 21 deg.C./ 43%  
Engineer Satofumi Matsuyama Takumi Shimada  
(Below 1GHz) (Above 1GHz)  
Mode Tx, 3DH5 2441MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	31.186	QP	24.1	17.8	7.1	32.1	16.9	40.0	23.1	
Hori	101.872	QP	41.4	10.6	8.1	32.0	28.1	43.5	15.4	
Hori	313.624	QP	36.8	16.2	10.0	31.9	31.1	46.0	14.9	
Hori	374.998	QP	42.4	17.2	10.4	31.9	38.1	46.0	7.9	
Hori	406.426	QP	38.5	17.6	10.6	31.9	34.8	46.0	11.2	
Hori	576.001	QP	38.5	19.8	11.5	32.1	37.7	46.0	8.3	
Hori	1943.950	PK	64.3	25.9	2.7	32.4	60.5	73.9	13.4	
Hori	4882.000	PK	41.8	31.1	5.3	31.4	46.8	73.9	27.1	
Hori	7323.000	PK	42.6	36.1	5.7	32.4	52.0	73.9	21.9	
Hori	9764.000	PK	43.0	38.1	6.9	33.0	55.0	73.9	18.9	
Hori	24410.000	PK	46.5	38.3	-1.1	31.6	52.1	73.9	21.8	
Hori	1943.950	AV	35.9	25.9	2.7	32.4	32.1	53.9	21.9	
Hori	4882.000	AV	30.5	31.1	5.3	31.4	35.5	53.9	18.4	
Hori	7323.000	AV	31.7	36.1	5.7	32.4	41.1	53.9	12.8	
Hori	9764.000	AV	31.7	38.1	6.9	33.0	43.7	53.9	10.2	
Hori	24410.000	AV	34.3	38.3	-1.1	31.6	39.9	53.9	14.0	
Vert	31.505	QP	35.2	17.7	7.1	32.1	27.9	40.0	12.1	
Vert	101.866	QP	49.4	10.6	8.1	32.0	36.1	43.5	7.4	
Vert	305.424	QP	39.2	16.1	9.9	31.9	33.3	46.0	12.7	
Vert	374.996	QP	35.6	17.2	10.4	31.9	31.3	46.0	14.7	
Vert	406.433	QP	38.2	17.6	10.6	31.9	34.5	46.0	11.5	
Vert	576.001	QP	35.0	19.8	11.5	32.1	34.2	46.0	11.8	
Vert	1944.108	PK	66.5	25.9	2.7	32.4	62.7	73.9	11.2	
Vert	4882.000	PK	41.9	31.1	5.3	31.4	46.9	73.9	27.0	
Vert	7323.000	PK	42.5	36.1	5.7	32.4	51.9	73.9	22.0	
Vert	9764.000	PK	41.9	38.1	6.9	33.0	53.9	73.9	20.0	
Vert	24410.000	PK	46.6	38.3	-1.1	31.6	52.2	73.9	21.7	
Vert	1944.108	AV	35.8	25.9	2.7	32.4	32.0	53.9	21.9	
Vert	4882.000	AV	30.5	31.1	5.3	31.4	35.5	53.9	18.4	
Vert	7323.000	AV	31.6	36.1	5.7	32.4	41.0	53.9	12.9	
Vert	9764.000	AV	31.7	38.1	6.9	33.0	43.7	53.9	10.2	
Vert	24410.000	AV	34.4	38.3	-1.1	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**  
**(Power Supply: SONY)**

Test place Head Office EMC Lab. No.4 Semi Anechoic Chamber  
Report No. 30HE0264-HO-01  
Date 04/07/2010  
Temperature/ Humidity 21 deg.C./ 43% 21 deg.C./ 43%  
Engineer Satofumi Matsuyama Takumi Shimada  
(Below 1GHz) (Above 1GHz)  
Mode Tx, 3DH5 2480MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	31.546	QP	24.2	17.6	7.1	32.1	16.8	40.0	23.2	
Hori	101.876	QP	41.4	10.6	8.1	32.0	28.1	43.5	15.4	
Hori	312.392	QP	36.7	16.2	9.9	31.9	30.9	46.0	15.1	
Hori	374.996	QP	42.2	17.2	10.4	31.9	37.9	46.0	8.1	
Hori	406.427	QP	38.8	17.6	10.6	31.9	35.1	46.0	10.9	
Hori	576.004	QP	38.5	19.8	11.5	32.1	37.7	46.0	8.3	
Hori	1943.975	PK	65.0	25.9	2.7	32.4	61.2	73.9	12.7	
Hori	2483.500	PK	54.9	26.9	2.9	32.1	52.6	73.9	21.3	
Hori	4960.000	PK	41.1	31.3	4.0	31.4	45.0	73.9	28.9	
Hori	7440.000	PK	42.3	36.3	4.3	32.4	50.5	73.9	23.4	
Hori	9920.000	PK	42.7	38.3	5.2	33.0	53.2	73.9	20.7	
Hori	24800.000	PK	48.3	38.4	-1.0	31.5	54.2	73.9	19.7	
Hori	1943.975	AV	36.3	25.9	2.7	32.4	32.5	53.9	21.4	
Hori	2483.500	AV	33.7	26.9	2.9	32.1	31.4	53.9	22.5	
Hori	4960.000	AV	29.3	31.3	4.0	31.4	33.2	53.9	20.7	
Hori	7440.000	AV	30.7	36.3	4.3	32.4	38.9	53.9	15.0	
Hori	9920.000	AV	30.9	38.3	5.2	33.0	41.4	53.9	12.5	
Hori	24800.000	AV	36.4	38.4	-1.0	31.5	42.3	53.9	11.6	
Vert	31.269	QP	35.1	17.7	7.1	32.1	27.8	40.0	12.2	
Vert	101.874	QP	49.4	10.6	8.1	32.0	36.1	43.5	7.4	
Vert	305.428	QP	38.7	16.1	9.9	31.9	32.8	46.0	13.2	
Vert	375.001	QP	34.6	17.2	10.4	31.9	30.3	46.0	15.7	
Vert	406.429	QP	38.9	17.6	10.6	31.9	35.2	46.0	10.8	
Vert	576.001	QP	34.6	19.8	11.5	32.1	33.8	46.0	12.2	
Vert	1944.025	PK	65.9	25.9	2.7	32.4	62.1	73.9	11.8	
Vert	2483.500	PK	56.2	26.9	2.9	32.1	53.9	73.9	20.0	
Vert	4960.000	PK	40.3	31.3	4.0	31.4	44.2	73.9	29.7	
Vert	7440.000	PK	42.5	36.3	4.3	32.4	50.7	73.9	23.2	
Vert	9920.000	PK	42.7	38.3	5.2	33.0	53.2	73.9	20.7	
Vert	24800.000	PK	48.1	38.4	-1.0	31.5	54.0	73.9	19.9	
Vert	1944.025	AV	36.6	25.9	2.7	32.4	32.8	53.9	21.1	
Vert	2483.500	AV	34.2	26.9	2.9	32.1	31.9	53.9	22.0	
Vert	4960.000	AV	29.2	31.3	4.0	31.4	33.1	53.9	20.8	
Vert	7440.000	AV	30.7	36.3	4.3	32.4	38.9	53.9	15.1	
Vert	9920.000	AV	30.9	38.3	5.2	33.0	41.4	53.9	12.5	
Vert	24800.000	AV	36.3	38.4	-1.0	31.5	42.2	53.9	11.7	

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**  
**(Power Supply: SONY)**

Test place Head Office EMC Lab. No.4 Semi Anechoic Chamber  
Report No. 30HE0264-HO-01  
Date 04/07/2010 04/07/2010  
Temperature/ Humidity 21 deg.C./ 43% 21 deg.C./ 43%  
Engineer Satofumi Matsuyama Takumi Shimada  
(Below 1GHz) (Above 1GHz)  
Mode Rx 2441MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	31.220	QP	24.3	17.8	7.1	32.1	17.1	40.0	22.9	
Hori	101.873	QP	41.5	10.6	8.1	32.0	28.2	43.5	15.3	
Hori	313.612	QP	36.6	16.2	10.0	31.9	30.9	46.0	15.1	
Hori	374.992	QP	44.6	17.2	10.4	31.9	40.3	46.0	5.7	
Hori	406.431	QP	38.7	17.6	10.6	31.9	35.0	46.0	11.0	
Hori	576.008	QP	38.5	19.8	11.5	32.1	37.7	46.0	8.3	
Hori	1946.582	PK	64.5	25.9	2.7	32.4	60.7	73.9	13.2	
Hori	2441.000	PK	44.3	26.8	2.9	32.1	41.9	73.9	32.0	
Hori	1946.582	AV	36.2	25.9	2.7	32.4	32.4	53.9	21.5	
Hori	2441.000	AV	31.2	26.8	2.9	32.1	28.8	53.9	25.1	
Vert	31.839	QP	35.7	17.6	7.1	32.1	28.3	40.0	11.7	
Vert	101.869	QP	49.6	10.6	8.1	32.0	36.3	43.5	7.2	
Vert	306.584	QP	38.7	16.1	9.9	31.9	32.8	46.0	13.2	
Vert	375.001	QP	37.6	17.2	10.4	31.9	33.3	46.0	12.7	
Vert	406.428	QP	38.1	17.6	10.6	31.9	34.4	46.0	11.6	
Vert	576.002	QP	34.8	19.8	11.5	32.1	34.0	46.0	12.0	
Vert	1943.833	PK	69.5	25.9	2.7	32.4	65.7	73.9	8.2	
Vert	2441.000	PK	44.2	26.8	2.9	32.1	41.8	73.9	32.2	
Vert	1943.833	AV	39.6	25.9	2.7	32.4	35.8	53.9	18.1	
Vert	2441.000	AV	31.5	26.8	2.9	32.1	29.1	53.9	24.8	

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).

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

**Radiated Spurious Emission**  
**Reference Data**  
**(Power Supply: DELTA)**

Test place Head Office EMC Lab. No.4 Semi Anechoic Chamber  
Report No. 30HE0264-HO-01  
Date 04/09/2010  
Temperature/ Humidity 22 deg.C./ 41%  
Engineer Takumi Shimada  
Mode Tx, DH5 2441MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	30.985	QP	28.7	17.8	7.0	32.1	21.4	40.0	18.6	
Hori	98.313	QP	37.8	9.9	7.9	32.0	23.6	43.5	19.9	
Hori	249.989	QP	40.4	17.4	9.3	31.9	35.2	46.0	10.8	
Hori	374.998	QP	45.8	17.2	10.2	31.9	41.3	46.0	4.7	
Hori	499.999	QP	35.7	19.1	10.9	32.0	33.7	46.0	12.3	
Hori	576.013	QP	37.8	19.8	11.3	32.1	36.8	46.0	9.2	
Hori	1944.183	PK	62.5	25.9	2.7	32.4	58.7	73.9	15.2	
Hori	4882.000	PK	40.3	31.1	5.3	31.4	45.3	73.9	28.6	
Hori	7323.000	PK	41.5	36.1	5.7	32.4	50.9	73.9	23.0	
Hori	9764.000	PK	41.7	38.1	6.9	33.0	53.7	73.9	20.2	
Hori	24410.000	PK	46.7	38.3	-1.1	31.6	52.3	73.9	21.6	
Hori	1944.183	AV	35.0	25.9	2.7	32.4	31.2	53.9	22.7	
Hori	4882.000	AV	29.2	31.1	5.3	31.4	34.2	53.9	19.7	
Hori	7323.000	AV	30.0	36.1	5.7	32.4	39.4	53.9	14.5	
Hori	9764.000	AV	29.9	38.1	6.9	33.0	41.9	53.9	12.0	
Hori	24410.000	AV	35.1	38.3	-1.1	31.6	40.7	53.9	13.2	
Vert	30.621	QP	41.1	18.0	7.0	32.1	34.0	40.0	6.0	
Vert	96.650	QP	47.1	9.6	7.9	32.0	32.6	43.5	10.9	
Vert	249.992	QP	34.1	17.4	9.3	31.9	28.9	46.0	17.1	
Vert	375.001	QP	39.0	17.2	10.2	31.9	34.5	46.0	11.5	
Vert	500.000	QP	35.2	19.1	10.9	32.0	33.2	46.0	12.8	
Vert	576.011	QP	34.1	19.8	11.3	32.1	33.1	46.0	12.9	
Vert	1944.042	PK	65.6	25.9	2.7	32.4	61.8	73.9	12.1	
Vert	4882.000	PK	41.1	31.1	5.3	31.4	46.1	73.9	27.8	
Vert	7323.000	PK	42.4	36.1	5.7	32.4	51.8	73.9	22.1	
Vert	9764.000	PK	41.6	38.1	6.9	33.0	53.6	73.9	20.4	
Vert	24410.000	PK	46.4	38.3	-1.1	31.6	52.0	73.9	21.9	
Vert	1944.042	AV	36.7	25.9	2.7	32.4	32.9	53.9	21.0	
Vert	4882.000	AV	30.1	31.1	5.3	31.4	35.1	53.9	18.8	
Vert	7323.000	AV	30.5	36.1	5.7	32.4	39.9	53.9	14.0	
Vert	9764.000	AV	30.2	38.1	6.9	33.0	42.2	53.9	11.7	
Vert	24410.000	AV	34.9	38.3	-1.1	31.6	40.5	53.9	13.4	

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

### Reference Data

#### (Power Supply: DELTA)

Test place	Head Office EMC Lab. No.4 Semi Anechoic Chamber
Report No.	30HE0264-HO-01
Date	04/09/2010
Temperature/ Humidity	22 deg.C./ 41%
Engineer	Takumi Shimada
Mode	Rx 2441MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	30.679	QP	28.5	17.9	7.0	32.1	21.3	40.0	18.7	
Hori	98.187	QP	36.2	9.9	7.9	32.0	22.0	43.5	21.5	
Hori	249.991	QP	39.0	17.4	9.3	31.9	33.8	46.0	12.2	
Hori	374.998	QP	45.6	17.2	10.2	31.9	41.1	46.0	4.9	
Hori	500.001	QP	35.2	19.1	10.9	32.0	33.2	46.0	12.8	
Hori	576.004	QP	37.9	19.8	11.3	32.1	36.9	46.0	9.1	
Hori	1946.475	PK	66.2	25.9	2.7	32.4	62.4	73.9	11.5	
Hori	2441.000	PK	42.4	26.8	2.9	32.1	40.0	73.9	33.9	
Hori	1946.475	AV	36.8	25.9	2.7	32.4	33.0	53.9	20.9	
Hori	2441.000	AV	31.1	26.8	2.9	32.1	28.7	53.9	25.2	
Vert	30.236	QP	41.1	18.1	7.0	32.1	34.1	40.0	5.9	
Vert	97.854	QP	46.9	9.8	7.9	32.0	32.6	43.5	10.9	
Vert	249.988	QP	33.6	17.4	9.3	31.9	28.4	46.0	17.6	
Vert	374.997	QP	38.6	17.2	10.2	31.9	34.1	46.0	11.9	
Vert	500.001	QP	34.9	19.1	10.9	32.0	32.9	46.0	13.1	
Vert	576.002	QP	34.2	19.8	11.3	32.1	33.2	46.0	12.8	
Vert	1944.048	PK	65.0	25.9	2.7	32.4	61.2	73.9	12.7	
Vert	2441.000	PK	42.4	26.8	2.9	32.1	40.0	73.9	33.9	
Vert	1944.048	AV	35.9	25.9	2.7	32.4	32.1	53.9	21.8	
Vert	2441.000	AV	31.1	26.8	2.9	32.1	28.7	53.9	25.3	

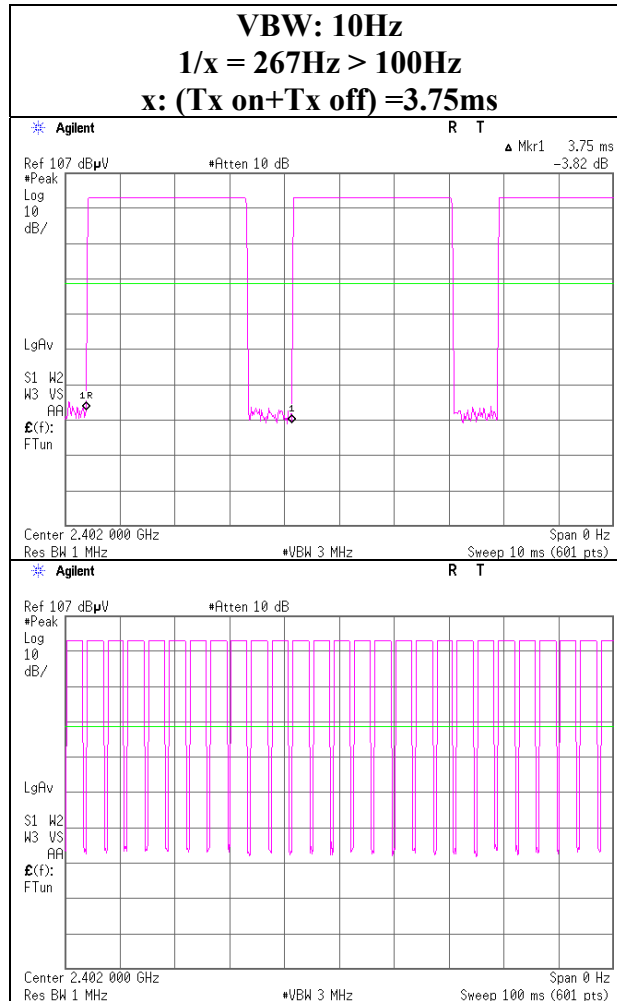
Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier)

\*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.

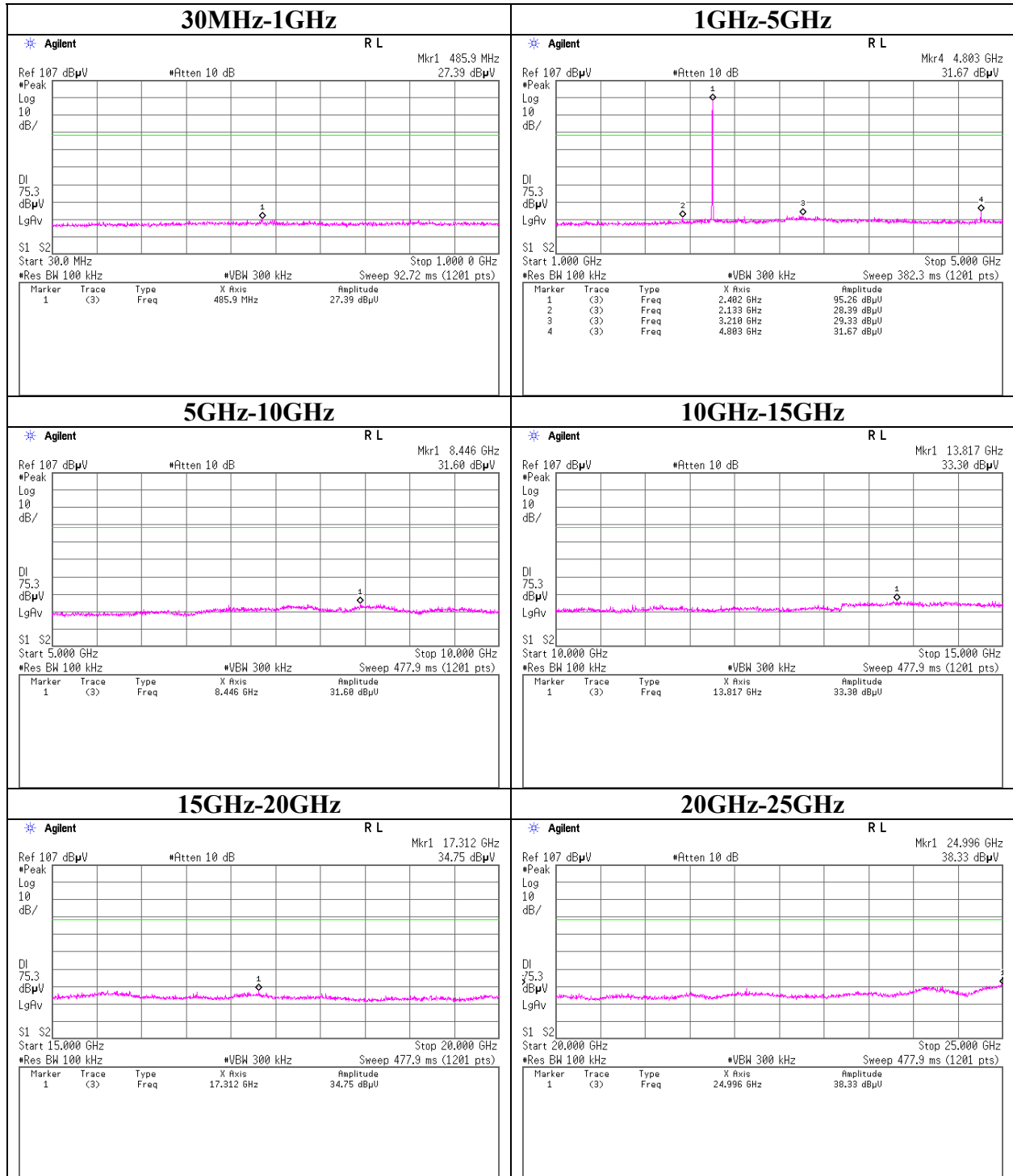
Distance factor: 10GHz-26.5GHz  $20\log(3.0m/1.0m) = 9.5dB$

### VBW (AV) Calculation



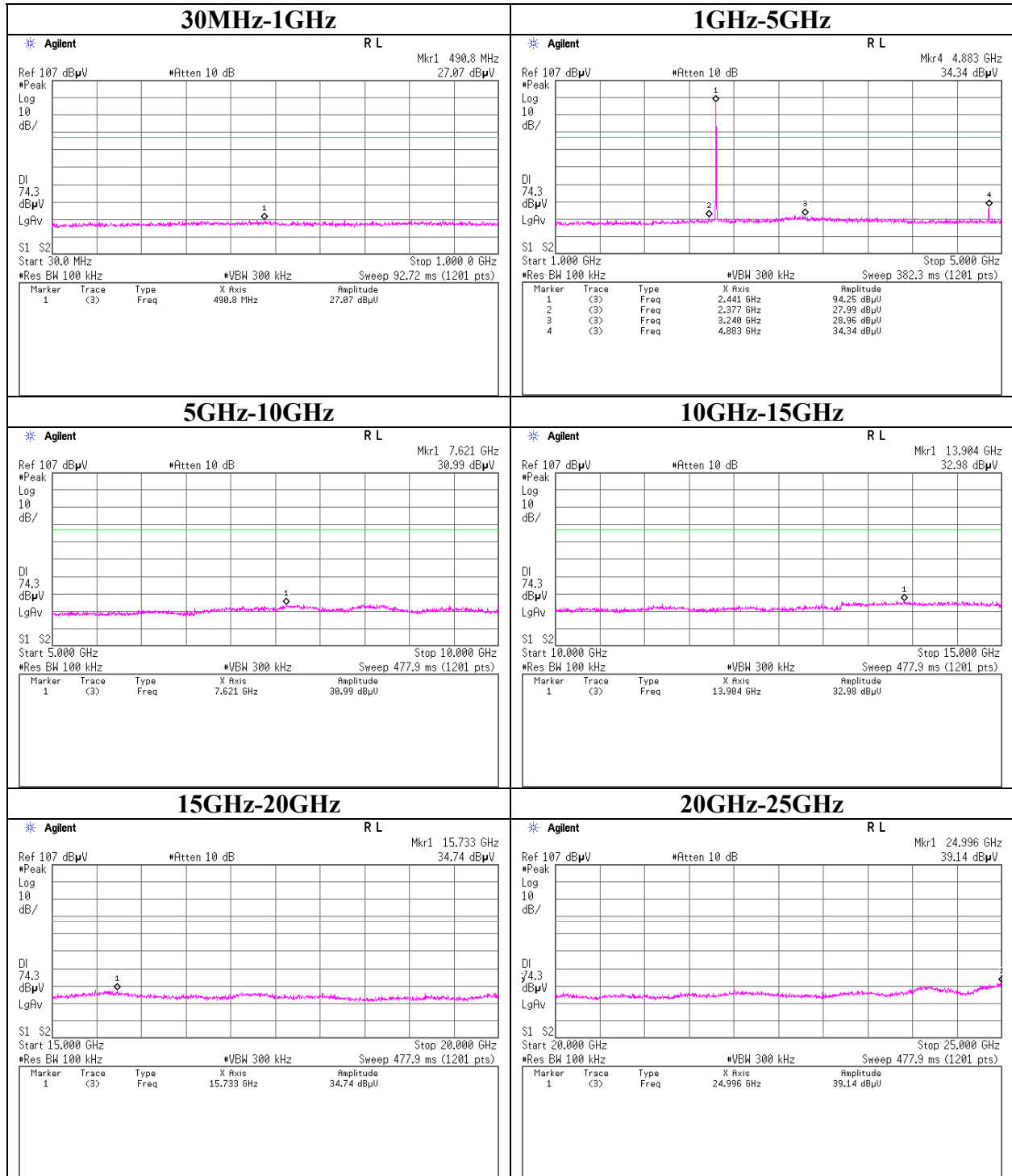
## Conducted Spurious Emission

### Tx DH5 2402MHz



## Conducted Spurious Emission

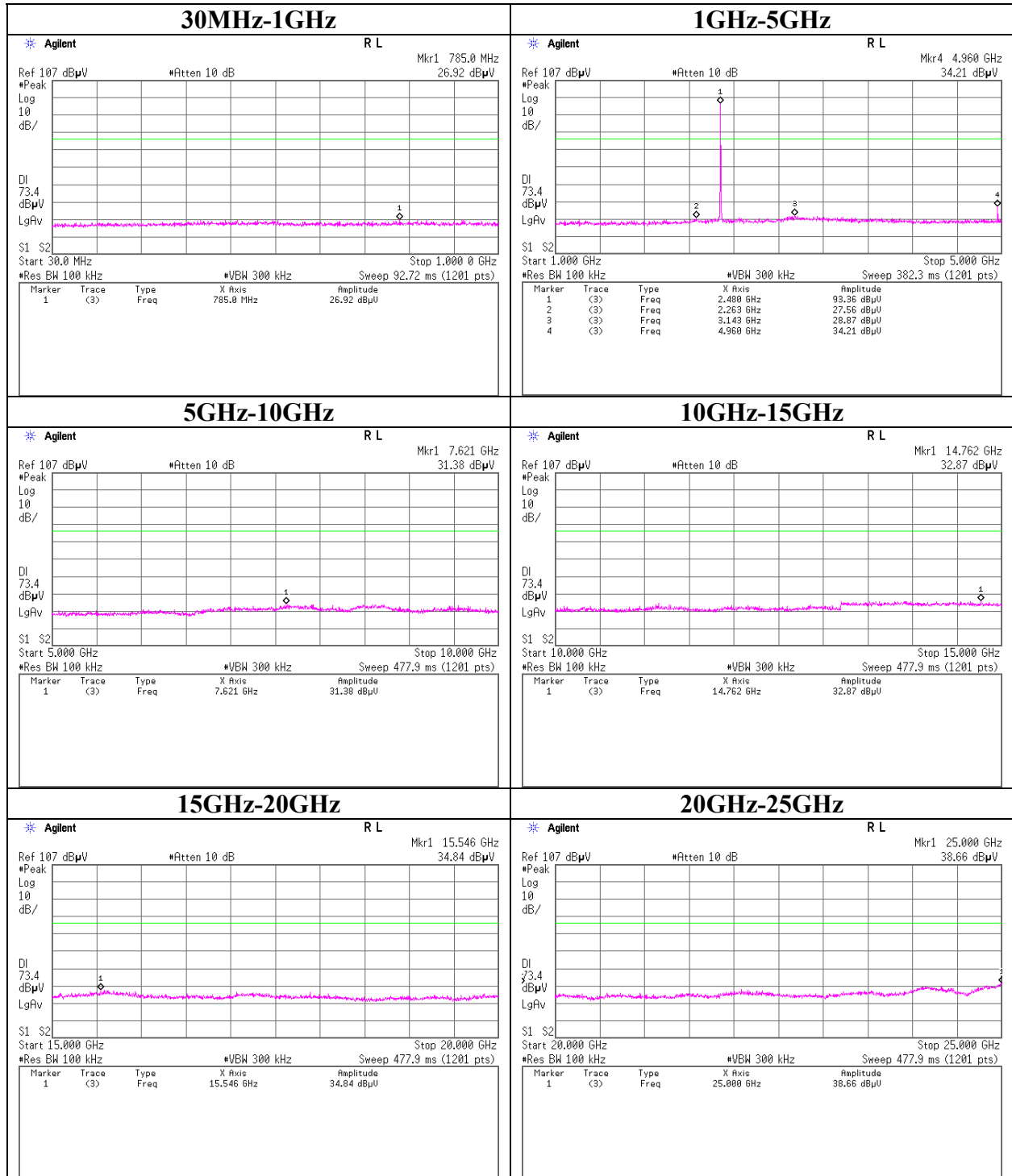
### Tx DH5 2441MHz





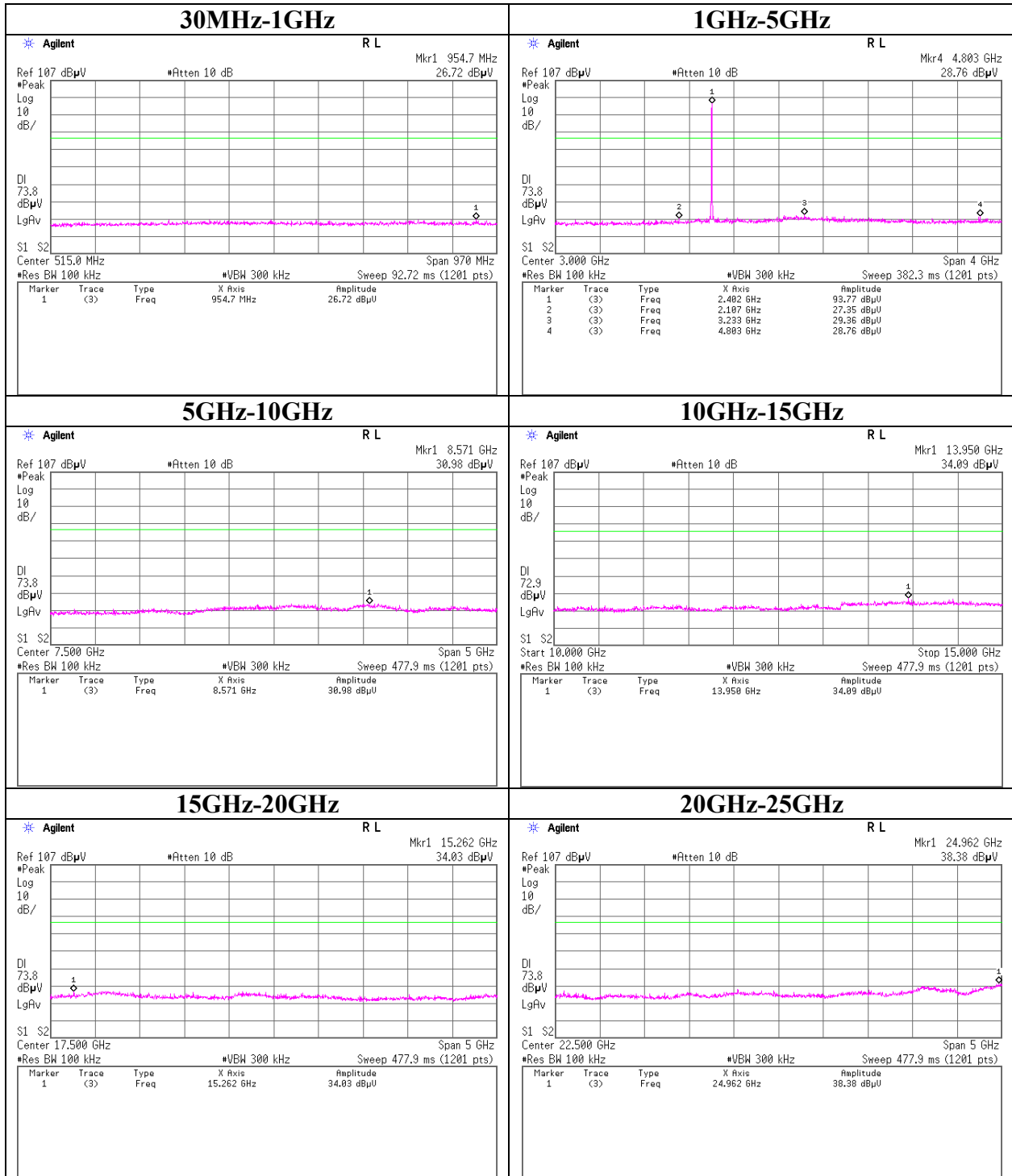
## Conducted Spurious Emission

### Tx DH5 2480MHz



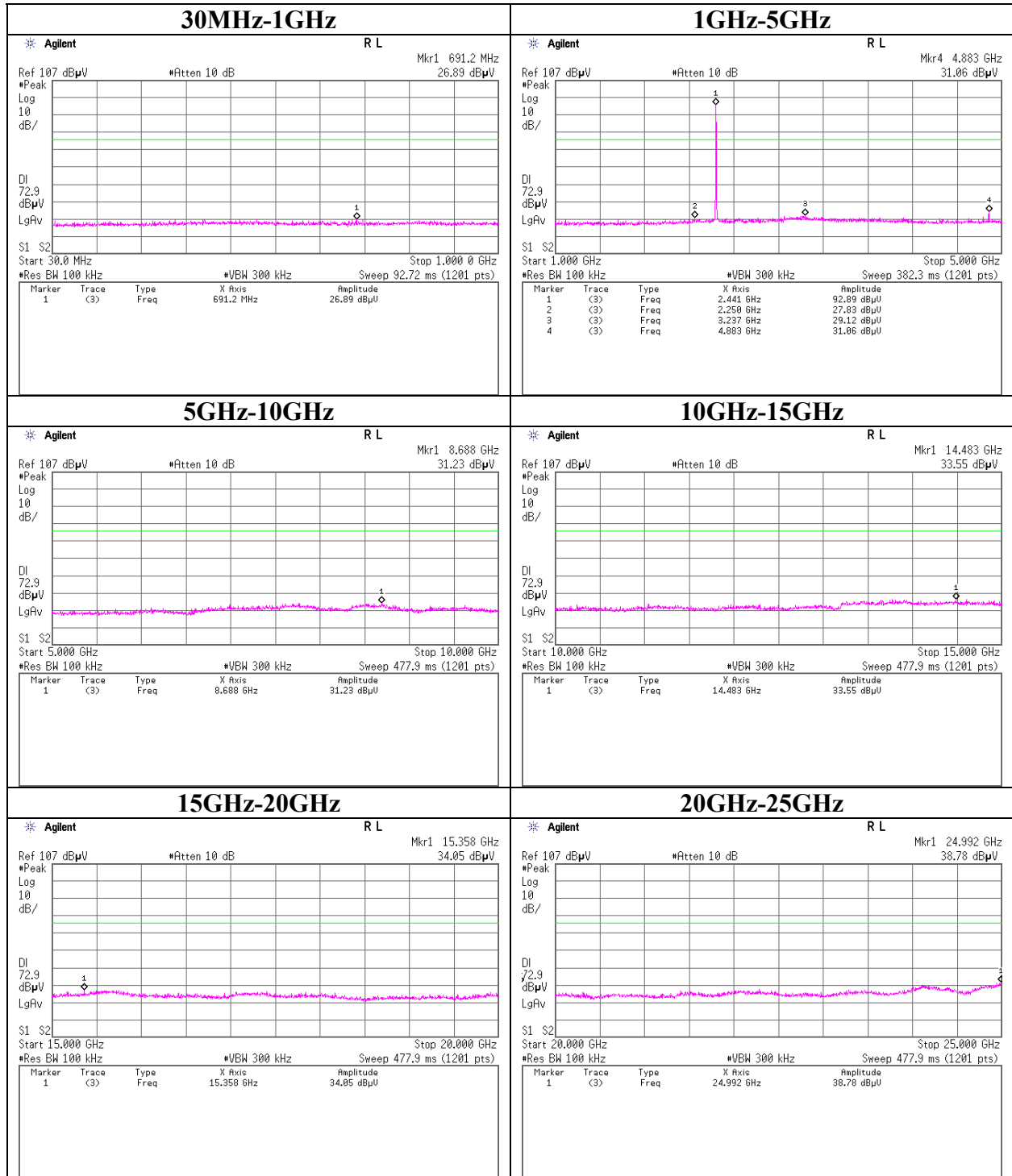
## Conducted Spurious Emission

### Tx 3DH5 2402MHz



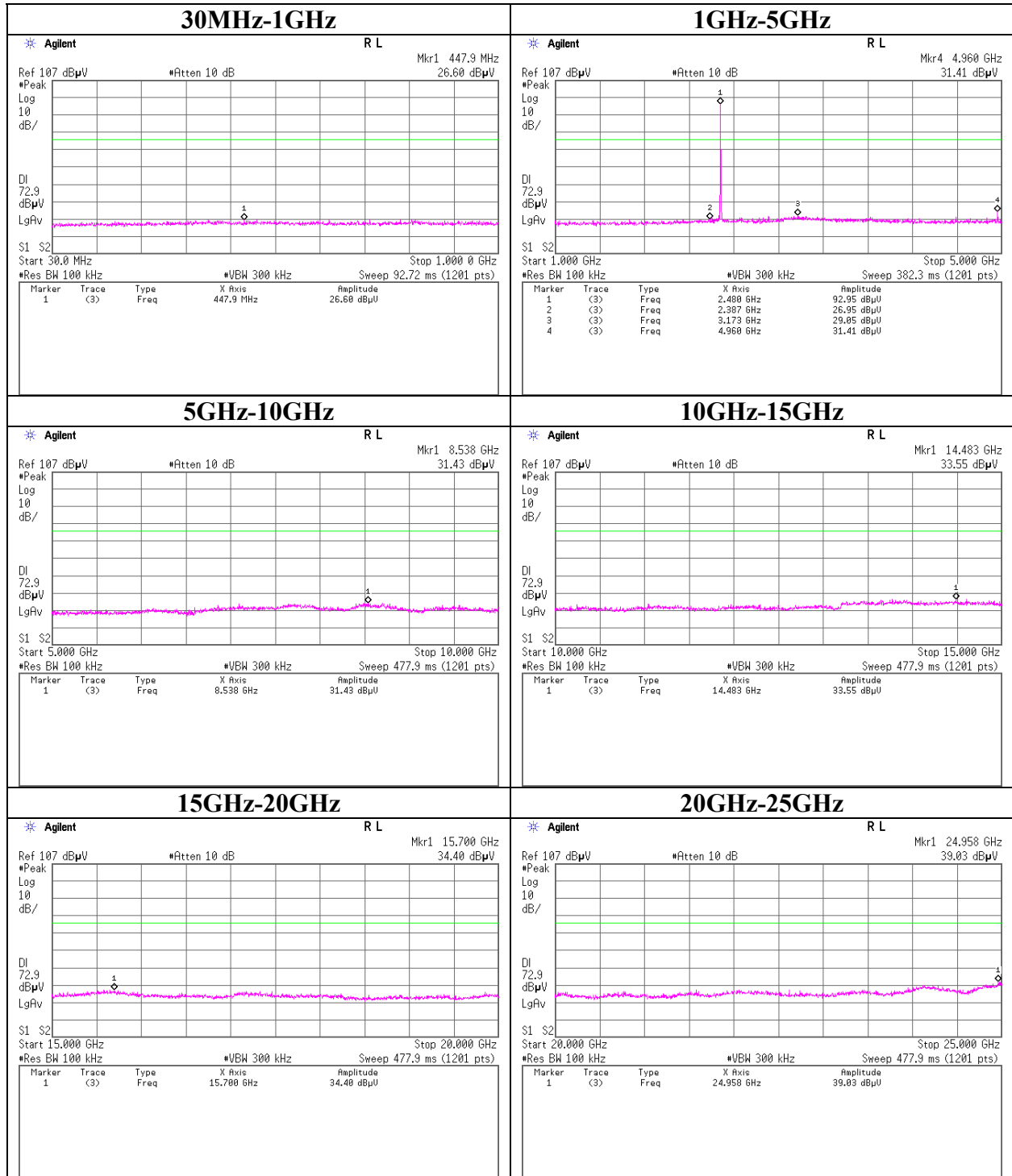
## Conducted Spurious Emission

### Tx 3DH5 2441MHz



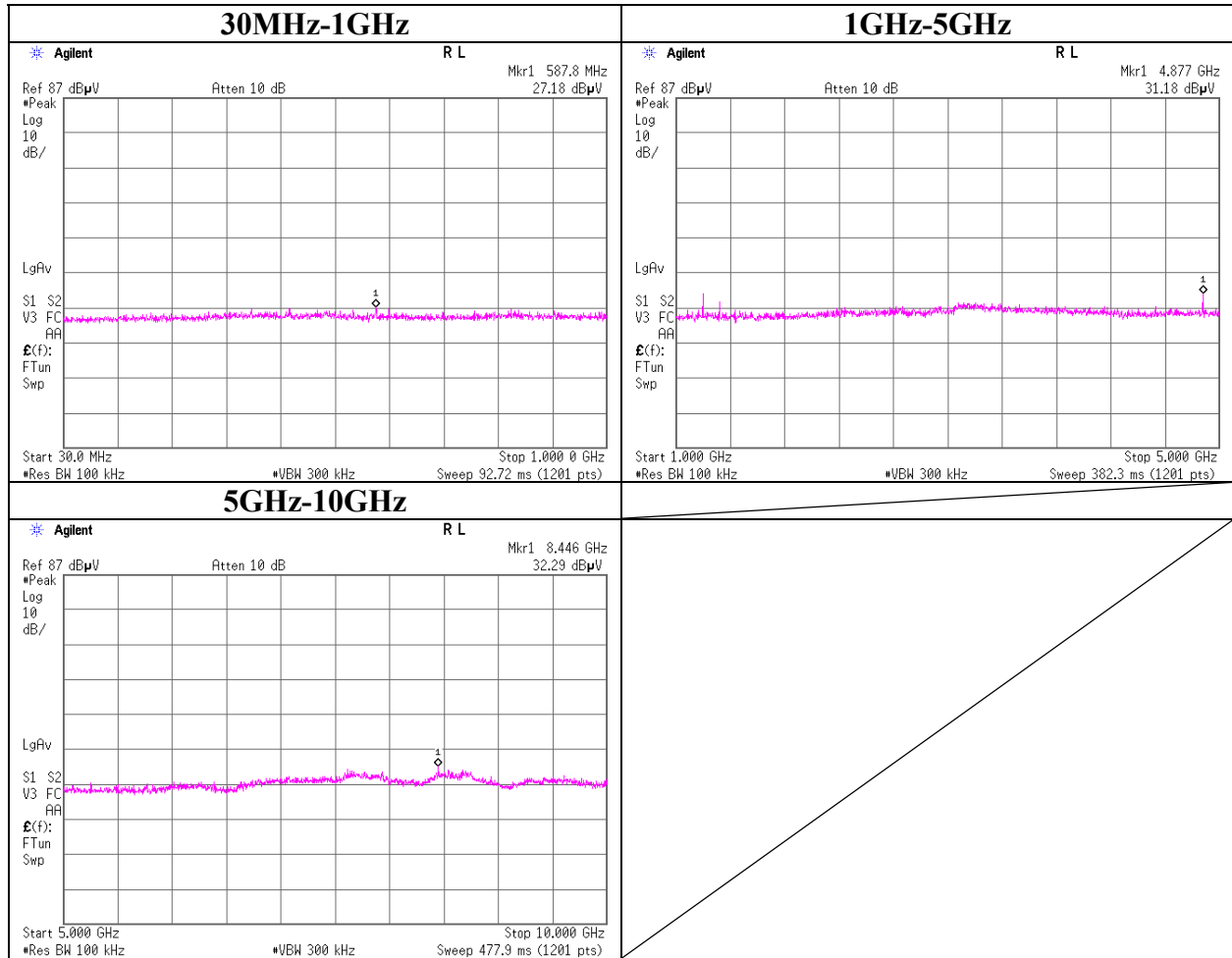
## Conducted Spurious Emission

### Tx 3DH5 2480MHz



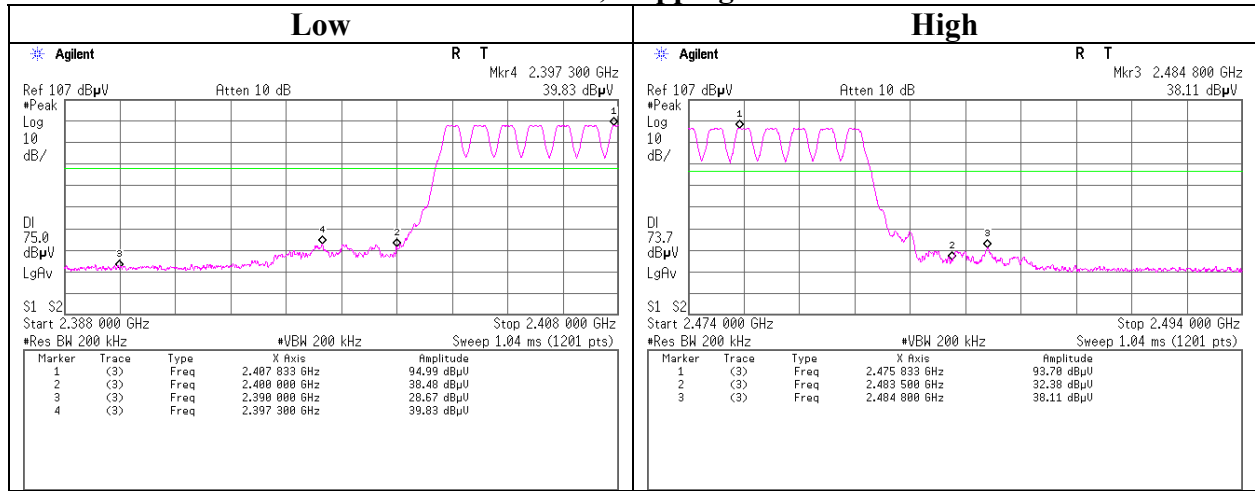
## Conducted Spurious Emission

**Rx 2441MHz**

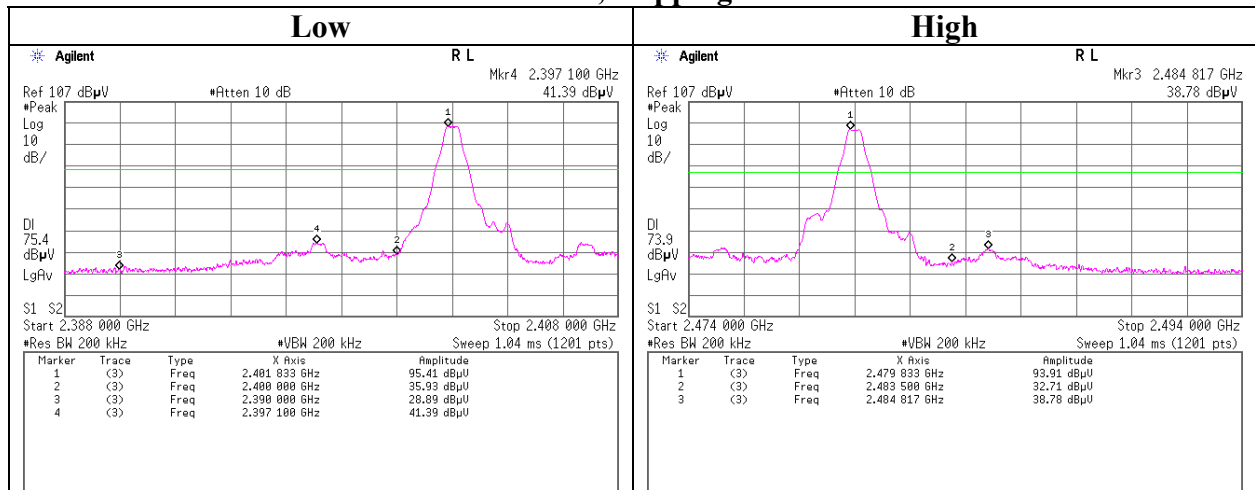


## Conducted Emission Band Edge compliance

### Tx DH5, Hopping on

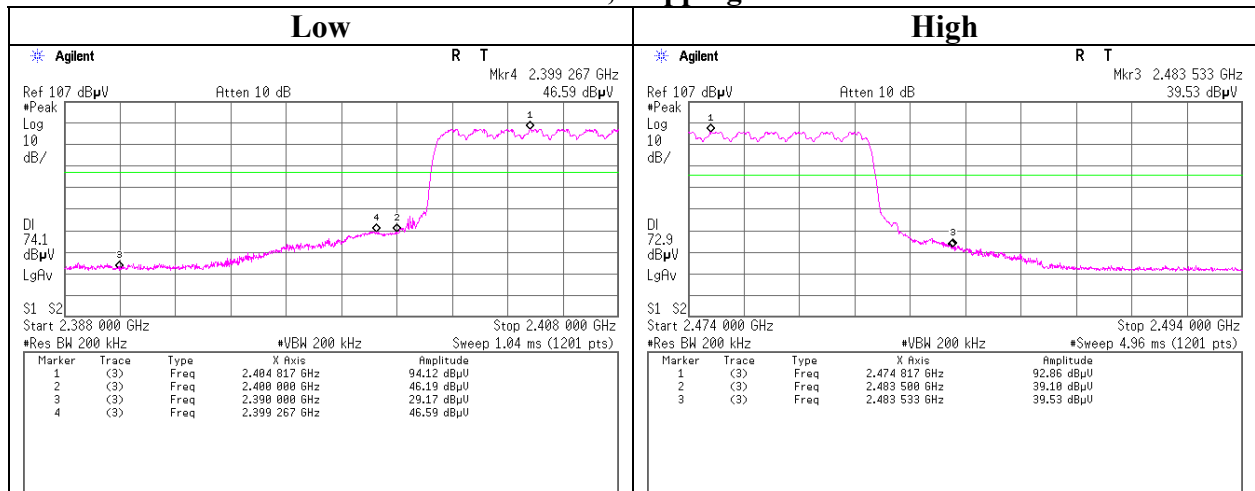


### Tx DH5, Hopping off

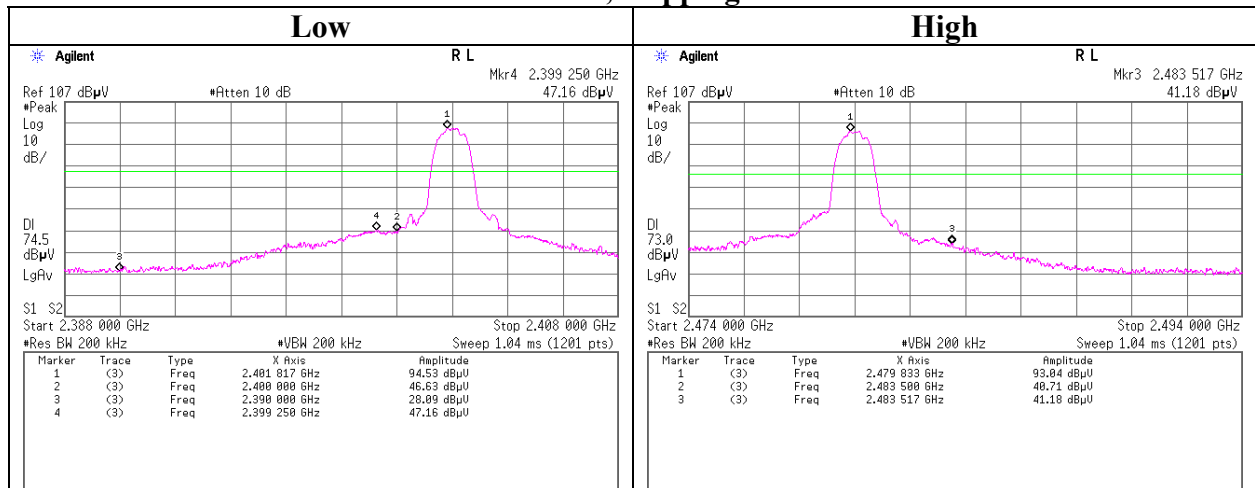


### Conducted Emission Band Edge compliance

#### Tx 3DH5, Hopping on



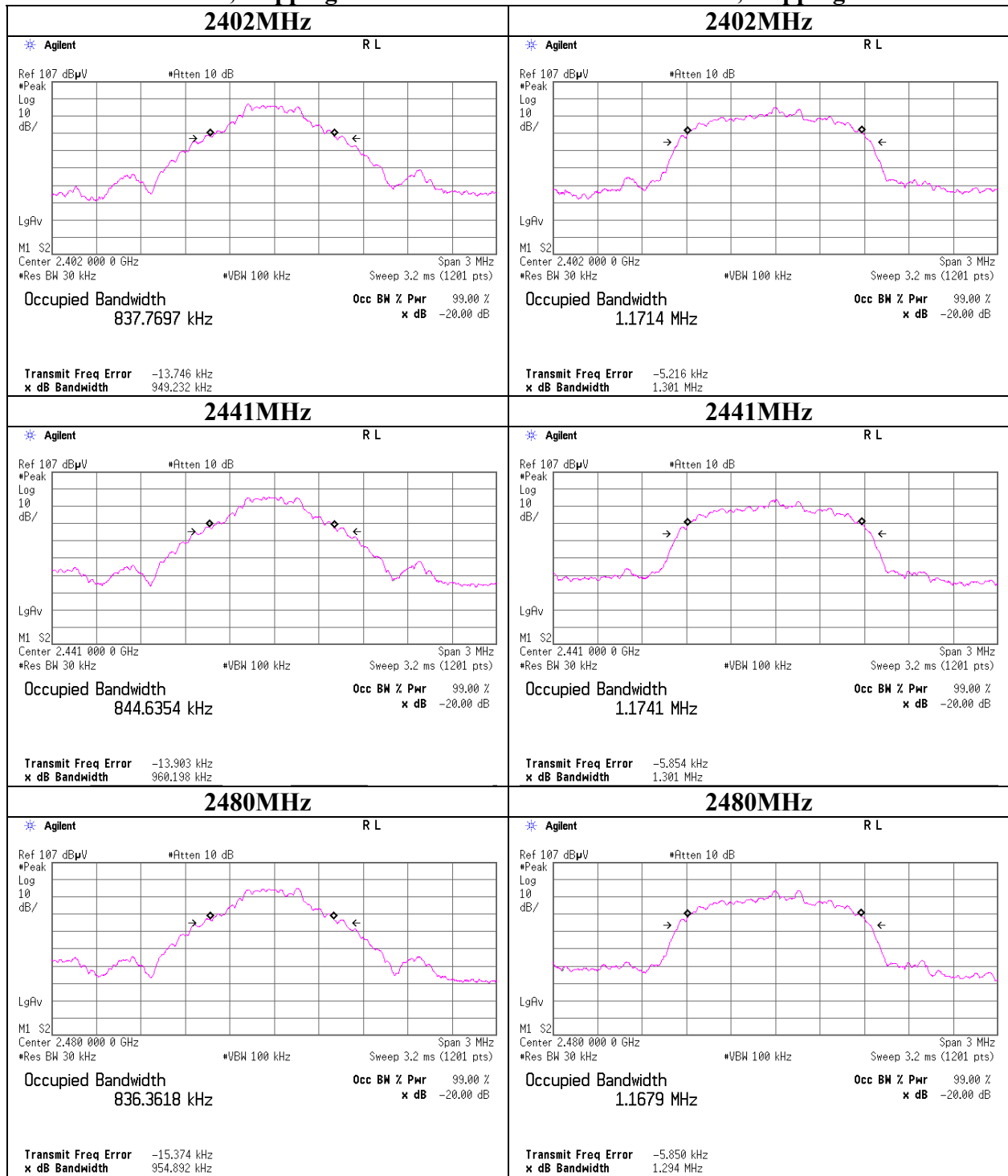
#### Tx 3DH5, Hopping off



**99%Occupied Bandwidth**

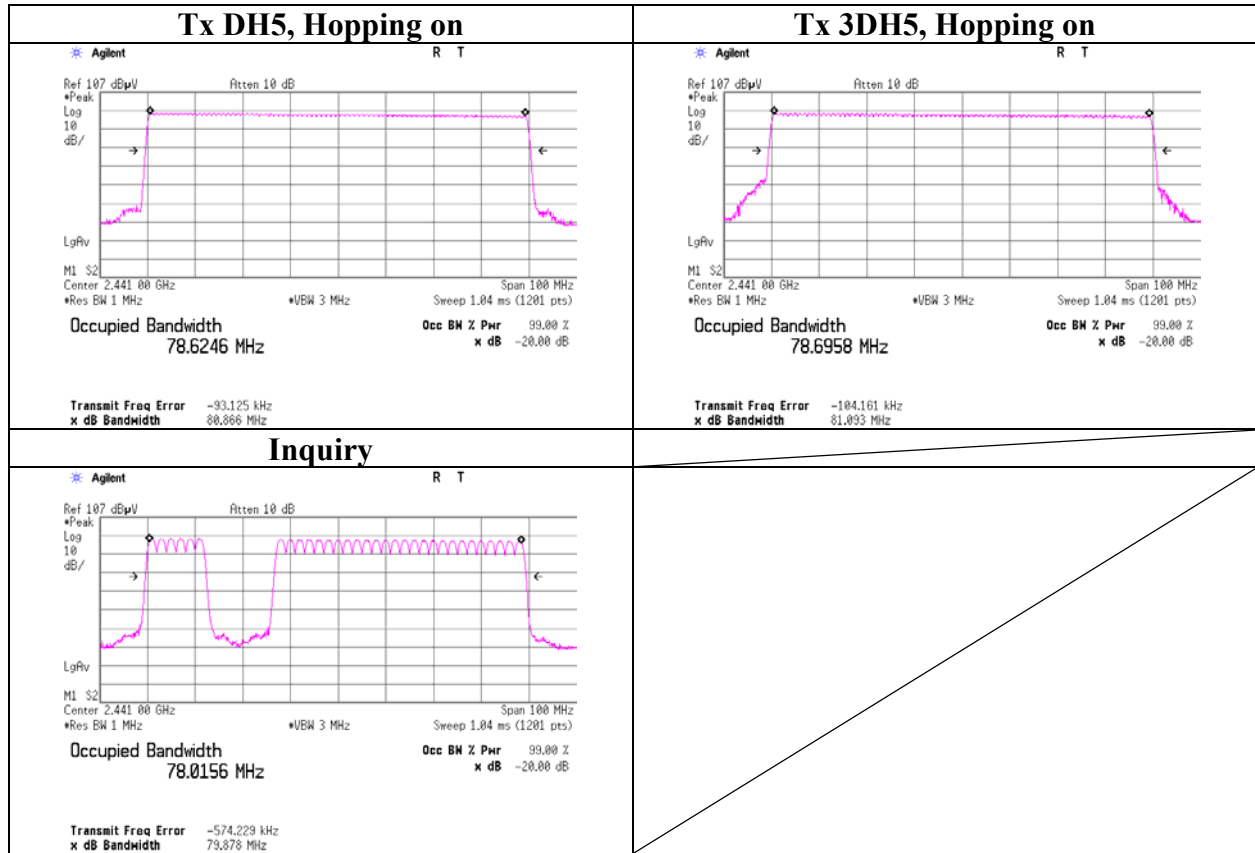
**Tx DH5, Hopping off**

**Tx 3DH5, Hopping off**





**99% Occupied Bandwidth**



### APPENDIX 3: Test instruments

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

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
MPM-12	Power Meter	Anritsu	ML2495A	0825002	AT	2009/08/26 * 12
MPSE-17	Power sensor	Anritsu	MA2411B	0738285	AT	2009/08/26 * 12
MAT-22	Attenuator(10dB) 1-18GHz	Orient Microwave	BX10-0476-00	-	AT	2010/03/01 * 12
MOS-23	Thermo-Hygrometer	Custom	CTH-201	0004	AT	2009/12/22 * 12
MAEC-04	Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-10005	RE/CE	2010/02/02 * 12
MOS-15	Thermo-Hygrometer	Custom	CTH-180	-	RE/CE	2010/02/09 * 12
MJM-07	Measure	PROMART	SEN1955	-	RE/CE	-
COTS-MEMI	EMI measurement program	TSJ	TEPTO-DV	-	RE/CE	-
MSA-03	Spectrum Analyzer	Agilent	E4448A	MY44020357	RE	2009/11/20 * 12
MHA-21	Horn Antenna 1-18GHz	Schwarzbeck	BBHA9120D	9120D-557	RE	2009/08/10 * 12
MCC-57	Microwave Cable	Suhner	SUCOFLEX104	246769(1m) / 292411(5m)	RE	2009/11/17 * 12
MPA-12	MicroWave System Amplifier	Agilent	83017A	MY39500780	RE	2010/03/16 * 12
MHF-20	High Pass Filter 3.5-18.0GHz	TOKIMEC	TF323DCC	607	RE	2009/12/19 * 12
MCC-79	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	278923/4	RE	2009/12/19 * 12
MHA-17	Horn Antenna 15-40GHz	Schwarzbeck	BBHA9170	BBHA917030 7	RE	2009/06/18 * 12
MSA-04	Spectrum Analyzer	Agilent	E4448A	US44300523	AT	2009/08/25 * 12
MAT-22	Attenuator(10dB) 1-18GHz	Orient Microwave	BX10-0476-00	-	AT	2010/03/01 * 12
MCC-66	Microwave Cable 1G-40GHz	Schner	SUCOFLEX102	28636/2	AT	2009/04/21 * 12
MSA-05	Spectrum Analyzer	Advantest	R3273	160400285	RE/CE	2009/12/15 * 12
MTR-07	Test Receiver	Rohde & Schwarz	ESCI	100635	RE/CE	2009/10/23 * 12
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-09	Attenuator(6dB)	Weinschel Corp	2	BK7973	RE	2009/11/12 * 12
MPA-14	Pre Amplifier	SONOMA INSTRUMENT	310	260833	RE	2010/03/05 * 12
MLS-06	LISN(AMN)	Schwarzbeck	NSLK8127	8127363	CE(EU T)	2010/02/04 * 12
MLS-07	LISN(AMN)	Schwarzbeck	NSLK8127	8127364	CE(AE )	2010/02/05 * 12

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

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
MTA-31	Terminator	TME	CT-01	-	CE	2010/01/20 * 12
MCC-113	Coaxial cable	Fujikura/Suhner/TSJ	5D- 2W(10m)/SFM14 1(5m)/421- 010(1m)/sucofor m141- PE(1m)/RFM- E121(Switcher)	-/04178	CE	2009/07/01 * 12
MAT-67	Attenuator(13dB)	JFW Industries, Inc.	50FP-013H2 N	-	CE	2010/02/04 * 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**