

APPENDIX 2: Data of EMI test

**Conducted Emission
(Sony)**

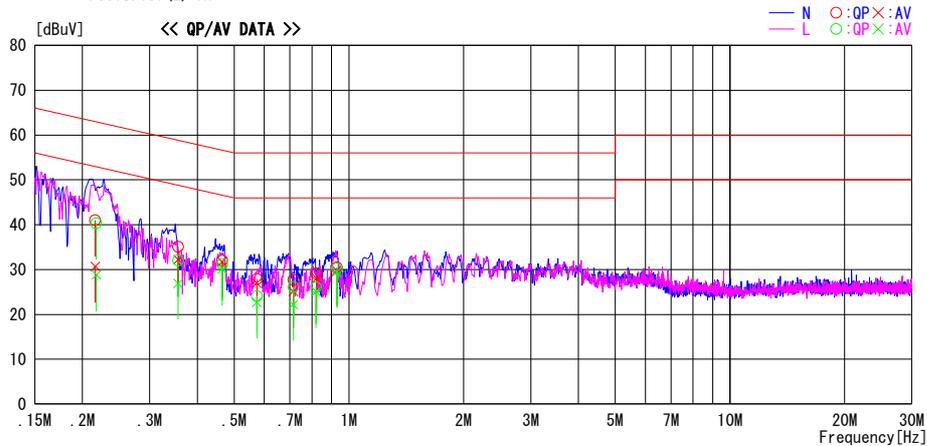
DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No. 4 Semi Anechoic Chamber
Date : 2010/05/31

Report No. : 30JE0265-HO-01
Temp./Humi. : 24deg.C / 39%
Engineer : Tomohisa Nakagawa

Mode / Remarks : BT Tx 2402MHz DH5

LIMIT : FCC15.107(a) QP
FCC15.107(a) AV

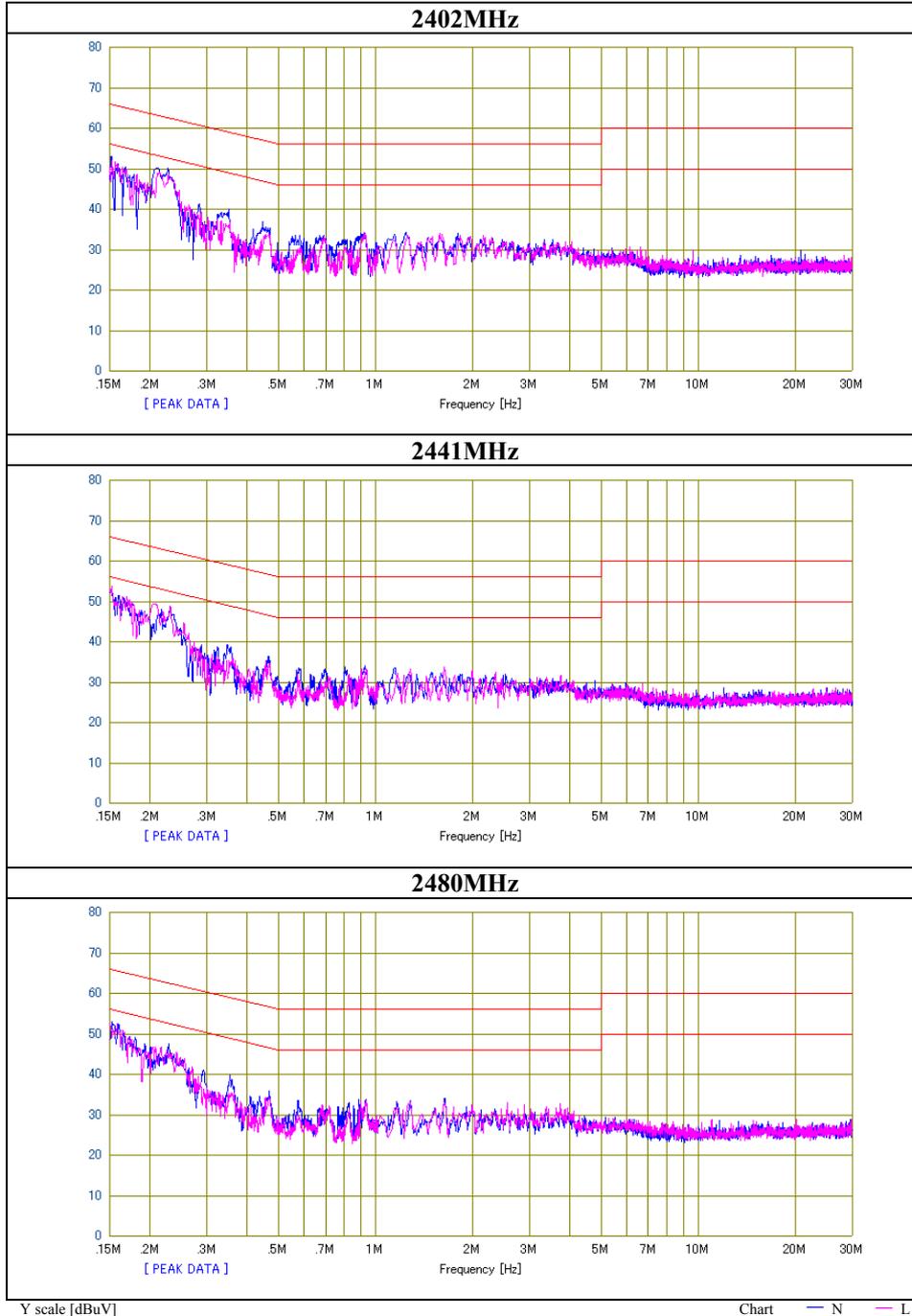


Frequency [MHz]	Reading Level		Corr. Factor [dB]	Results		Limit		Margin		Phase	Comment
	QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]		
0.21606	27.7	17.4	13.3	41.0	30.7	63.0	53.0	22.0	22.3	N	
0.35650	21.8	18.9	13.3	35.1	32.2	58.8	48.8	23.7	16.6	N	
0.46507	18.7	18.4	13.3	32.0	31.7	56.6	46.6	24.6	14.9	N	
0.57306	14.6	13.7	13.3	27.9	27.0	56.0	46.0	28.1	19.0	N	
0.71452	14.4	11.8	13.3	27.7	25.1	56.0	46.0	28.3	20.9	N	
0.82230	15.8	14.7	13.3	29.1	28.0	56.0	46.0	26.9	18.0	N	
0.92970	17.2	16.5	13.3	30.5	29.8	56.0	46.0	25.5	16.2	N	
0.21742	27.0	15.5	13.3	40.3	28.8	62.9	52.9	22.6	24.1	L	
0.35655	18.7	13.6	13.3	32.0	26.9	58.8	48.8	26.8	21.9	L	
0.46477	17.9	16.8	13.3	31.2	30.1	56.6	46.6	25.4	16.5	L	
0.57310	10.8	9.4	13.3	24.1	22.7	56.0	46.0	31.9	23.3	L	
0.71496	12.8	8.9	13.3	26.1	22.2	56.0	46.0	29.9	23.8	L	
0.82060	12.7	11.8	13.3	26.0	25.1	56.0	46.0	30.0	20.9	L	
0.92948	16.9	16.2	13.3	30.2	29.5	56.0	46.0	25.8	16.5	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 (Sony)

Test place	Head Office EMC Lab. No.4 Semi Anechoic Chamber
Report No.	30JE0265-HO-01
Date	May 31, 2010
Temperature/ Humidity	24 deg.C/ 39%
Engineer	Tomohisa Nakagawa
Mode	Tx DH5



Conducted Emission
(Sony)

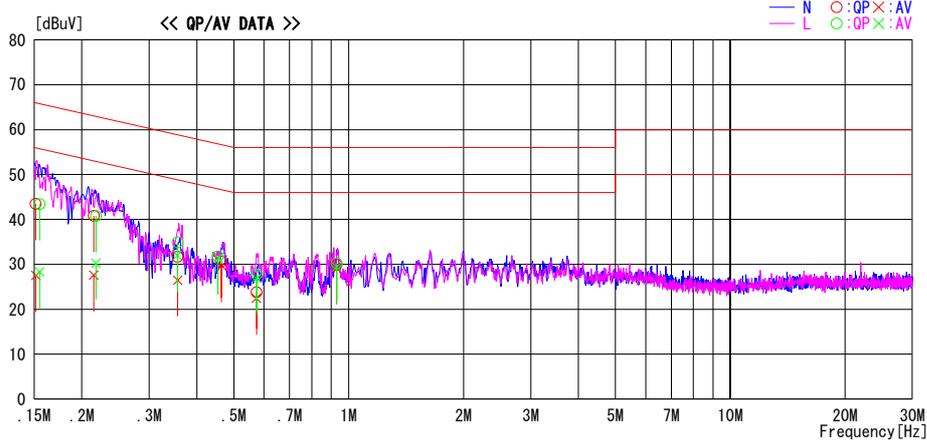
DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.4 Semi Anechoic Chamber
Date : 2010/05/31

Report No. : 30JE0265-HO-01
Temp./Humi. : 24deg. C / 39%
Engineer : Tomohisa Nakagawa

Mode / Remarks : BT Tx 2402MHz 3DH5

LIMIT : FCC15.107(a) QP
FCC15.107(a) 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]		
0.15135	30.2	14.2	13.3	43.5	27.5	65.9	55.9	22.4	28.4	N	
0.21477	27.5	14.3	13.3	40.8	27.6	63.0	53.0	22.2	25.4	N	
0.35618	18.4	13.2	13.3	31.7	26.5	58.8	48.8	27.1	22.3	N	
0.46430	17.3	16.4	13.3	30.6	29.7	56.6	46.6	26.0	16.9	N	
0.57330	10.5	9.1	13.3	23.8	22.4	56.0	46.0	32.2	23.6	N	
0.92932	16.6	15.9	13.3	29.9	29.2	56.0	46.0	26.1	16.8	N	
0.15493	30.1	15.0	13.3	43.4	28.3	65.7	55.7	22.3	27.4	L	
0.21760	27.4	17.0	13.3	40.7	30.3	62.9	52.9	22.2	22.6	L	
0.35610	21.6	18.7	13.3	34.9	32.0	58.8	48.8	23.9	16.8	L	
0.45451	18.5	18.1	13.3	31.8	31.4	56.8	46.8	25.0	15.4	L	
0.57329	14.4	13.6	13.3	27.7	26.9	56.0	46.0	28.3	19.1	L	
0.92964	16.9	16.1	13.3	30.2	29.4	56.0	46.0	25.8	16.6	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 (Sony)

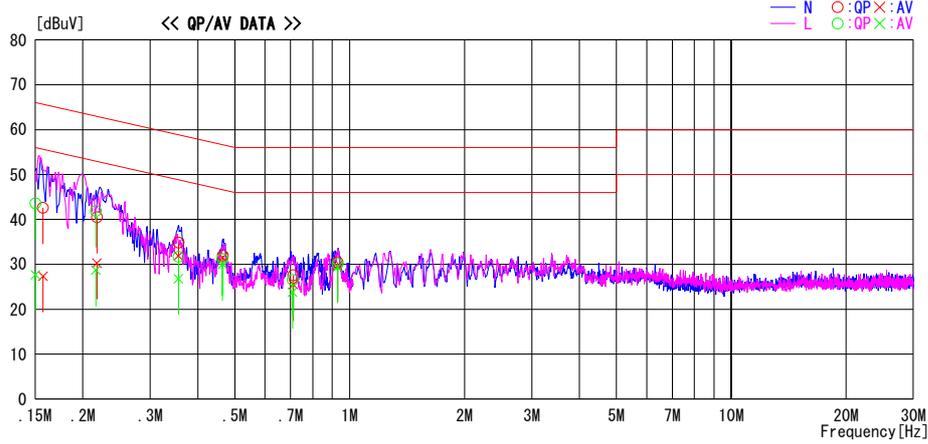
DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.4 Semi Anechoic Chamber
Date : 2010/06/01

Report No. : 30JE0265-HO-01
Temp./Humi. : 24deg. C / 39%
Engineer : Tomohisa Nakagawa

Mode / Remarks : BT Rx 2441MHz

LIMIT : FCC15.107 (a) QP
FCC15.107 (a) 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]		
0.15715	29.3	14.1	13.3	42.6	27.4	65.6	55.6	23.0	28.2	N	
0.21760	27.2	17.0	13.3	40.5	30.3	62.9	52.9	22.4	22.6	N	
0.35590	21.5	18.6	13.3	34.8	31.9	58.8	48.8	24.0	16.9	N	
0.46490	18.6	18.2	13.3	31.9	31.5	56.6	46.6	24.7	15.1	N	
0.71214	14.3	12.2	13.3	27.6	25.5	56.0	46.0	28.4	20.5	N	
0.92928	17.2	16.4	13.3	30.5	29.7	56.0	46.0	25.5	16.3	N	
0.15025	30.3	14.4	13.3	43.6	27.7	66.0	56.0	22.4	28.3	L	
0.21616	28.6	15.4	13.3	41.9	28.7	63.0	53.0	21.1	24.3	L	
0.35604	18.4	13.5	13.3	31.7	26.8	58.8	48.8	27.1	22.0	L	
0.46457	17.8	16.7	13.3	31.1	30.0	56.6	46.6	25.5	16.6	L	
0.70882	13.2	10.5	13.3	26.5	23.8	56.0	46.0	29.5	22.2	L	
0.92964	16.8	16.1	13.3	30.1	29.4	56.0	46.0	25.9	16.6	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 (ST)

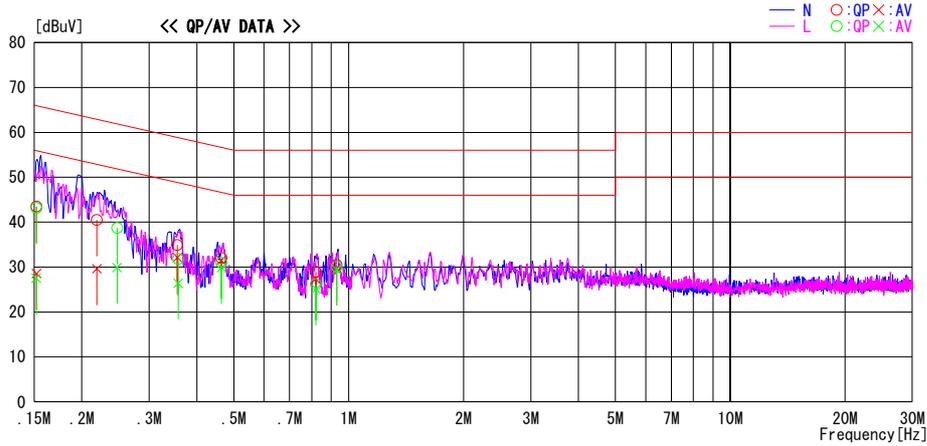
DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.4 Semi Anechoic Chamber
Date : 2010/05/31

Report No. : 30JE0265-HO-01
Temp./Humi. : 24deg. C / 39%
Engineer : Tomohisa Nakagawa

Mode / Remarks : BT Tx 2402MHz DH5

LIMIT : FCC15.107(a) QP
FCC15.107(a) AV

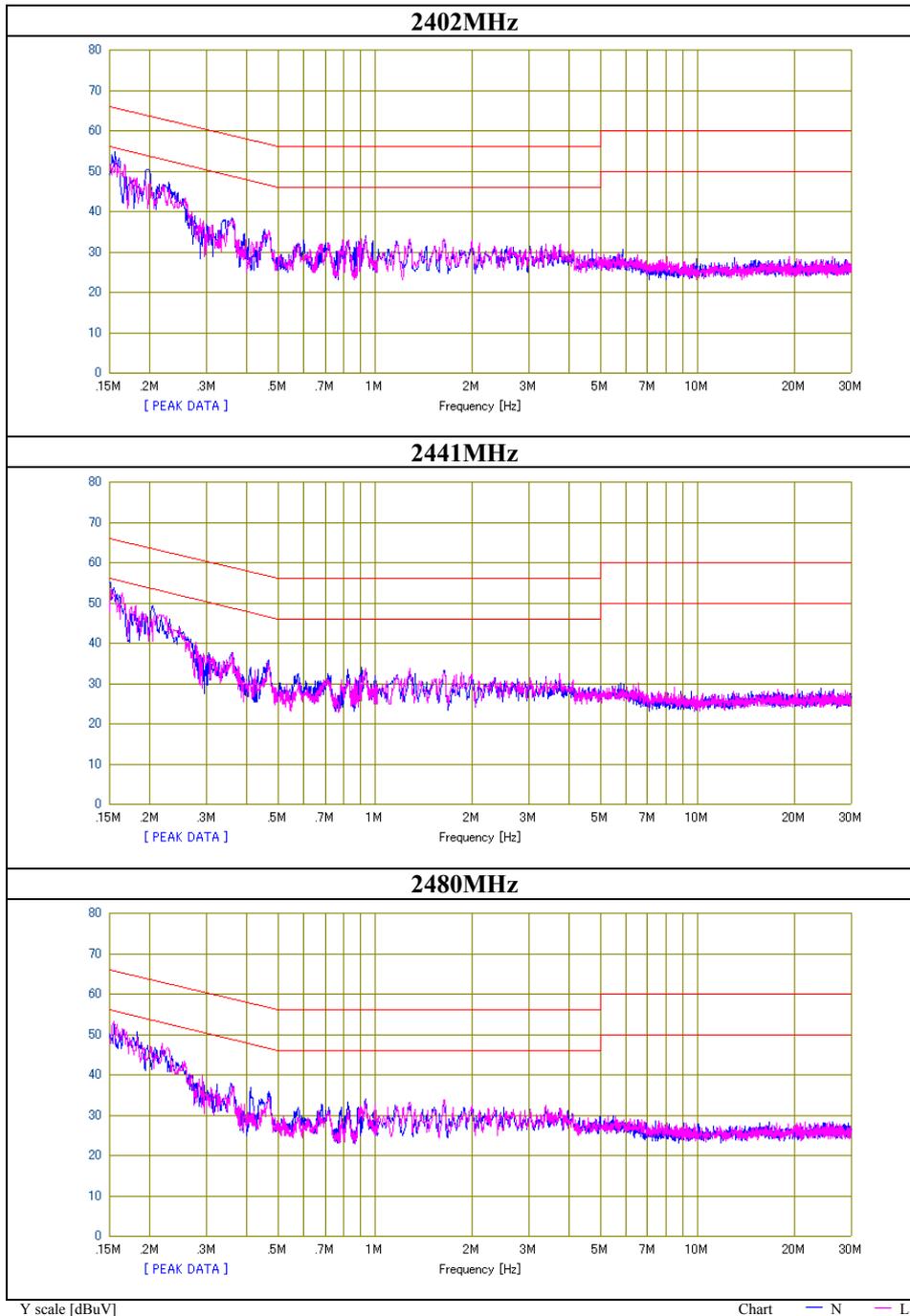


Frequency [MHz]	Reading Level		Corr. Factor [dB]	Results		Limit		Margin		Phase	Comment
	QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]		
0.15206	30.2	15.3	13.3	43.5	28.6	65.9	55.9	22.4	27.3	N	
0.21876	27.2	16.3	13.3	40.5	29.6	62.9	52.9	22.4	23.3	N	
0.35574	21.6	18.8	13.3	34.9	32.1	58.8	48.8	23.9	16.7	N	
0.46392	18.7	18.2	13.3	32.0	31.5	56.6	46.6	24.6	15.1	N	
0.81974	15.6	14.1	13.3	28.9	27.4	56.0	46.0	27.1	18.6	N	
0.92928	17.2	16.3	13.3	30.5	29.6	56.0	46.0	25.5	16.4	N	
0.15192	29.9	14.2	13.3	43.2	27.5	65.9	55.9	22.7	28.4	L	
0.24732	25.4	16.6	13.3	38.7	29.9	61.8	51.8	23.1	21.9	L	
0.35756	18.5	13.1	13.3	31.8	26.4	58.8	48.8	27.0	22.4	L	
0.46418	17.7	16.6	13.3	31.0	29.9	56.6	46.6	25.6	16.7	L	
0.82098	12.9	11.8	13.3	26.2	25.1	56.0	46.0	29.8	20.9	L	
0.92967	16.8	16.2	13.3	30.1	29.5	56.0	46.0	25.9	16.5	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 (ST)

Test place	Head Office EMC Lab. No.4 Semi Anechoic Chamber
Report No.	30JE0265-HO-01
Date	May 31, 2010
Temperature/ Humidity	24 deg.C/ 39%
Engineer	Tomohisa Nakagawa
Mode	Tx DH5



Conducted Emission (ST)

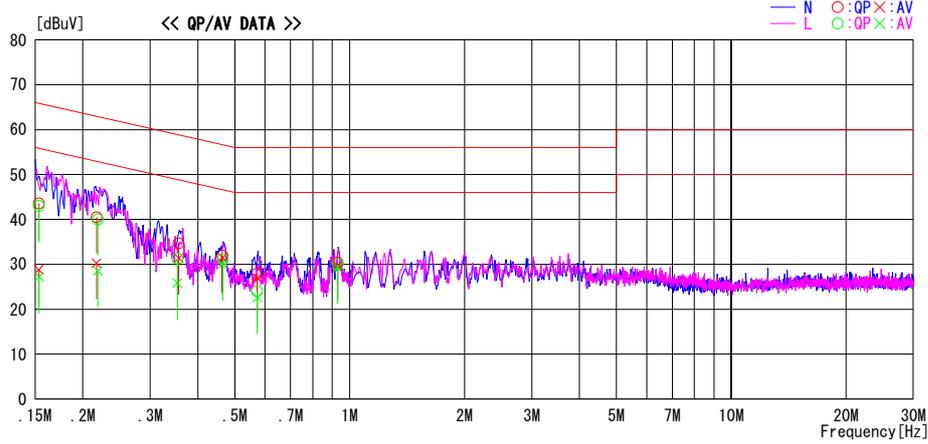
DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No. 4 Semi Anechoic Chamber
Date : 2010/06/01

Report No. : 30JE0265-HO-01
Temp./Humi. : 24deg. C / 39%
Engineer : Tomohisa Nakagawa

Mode / Remarks : BT Tx 2402MHz 3DH5

LIMIT : FCC15.107(a) QP
FCC15.107(a) AV

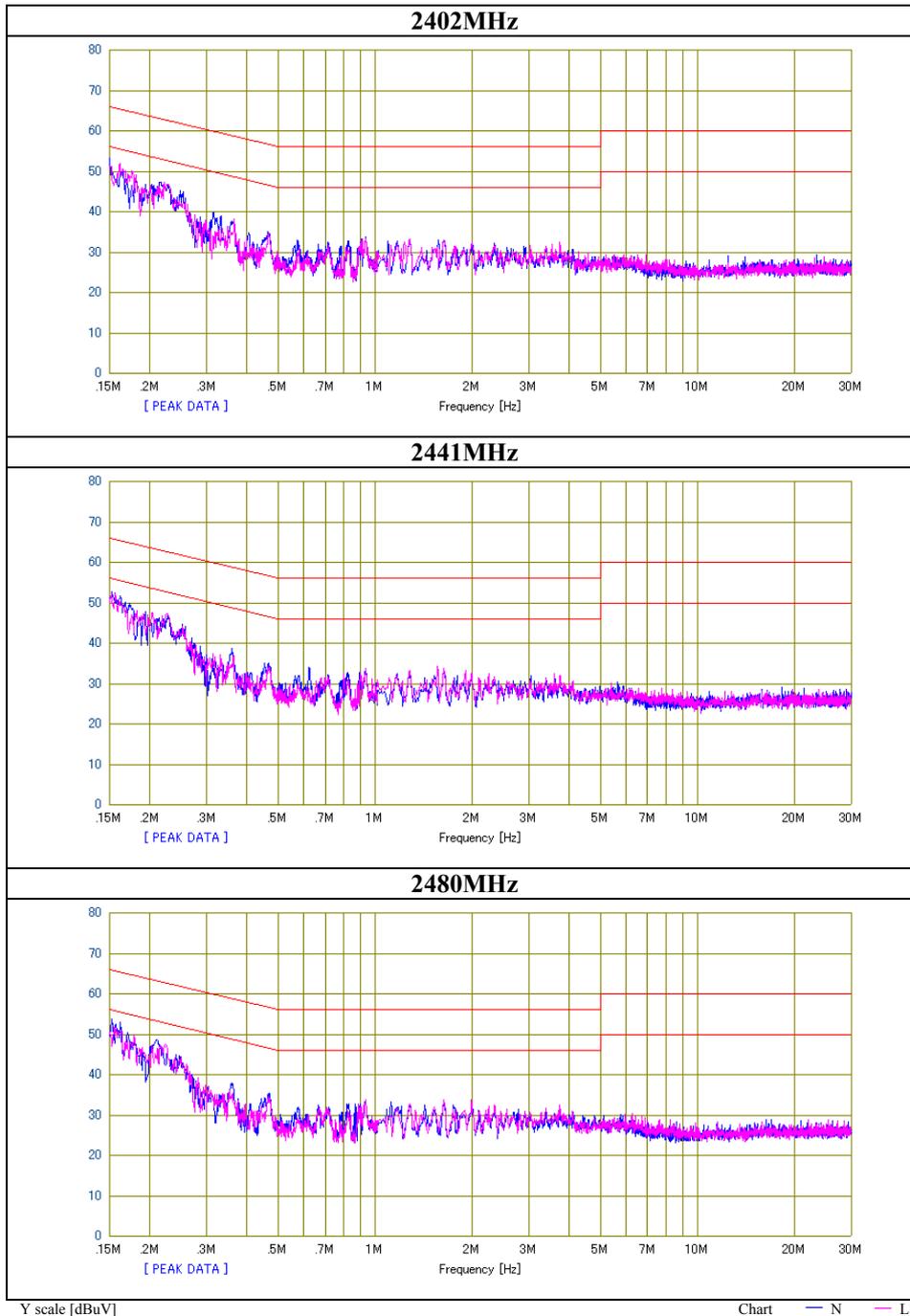


Frequency [MHz]	Reading Level		Corr. Factor [dB]	Results		Limit		Margin		Phase	Comment
	QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]		
0.15319	30.3	15.5	13.3	43.6	28.8	65.8	55.8	22.2	27.0	N	
0.21705	27.2	17.0	13.3	40.5	30.3	62.9	52.9	22.4	22.6	N	
0.35620	21.4	18.1	13.3	34.7	31.4	58.8	48.8	24.1	17.4	N	
0.46444	18.6	18.2	13.3	31.9	31.5	56.6	46.6	24.7	15.1	N	
0.57288	14.6	13.7	13.3	27.9	27.0	56.0	46.0	28.1	19.0	N	
0.92930	17.1	16.3	13.3	30.4	29.6	56.0	46.0	25.6	16.4	N	
0.15346	29.7	13.9	13.3	43.0	27.2	65.8	55.8	22.8	28.6	L	
0.21888	26.7	15.3	13.3	40.0	28.6	62.9	52.9	22.9	24.3	L	
0.35362	18.0	12.5	13.3	31.3	25.8	58.9	48.9	27.6	23.1	L	
0.46474	17.8	16.7	13.3	31.1	30.0	56.6	46.6	25.5	16.6	L	
0.57288	10.7	9.3	13.3	24.0	22.6	56.0	46.0	32.0	23.4	L	
0.92966	16.7	16.0	13.3	30.0	29.3	56.0	46.0	26.0	16.7	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 (ST)

Test place	Head Office EMC Lab. No.4 Semi Anechoic Chamber
Report No.	30JE0265-HO-01
Date	May 31, 2010
Temperature/ Humidity	24 deg.C / 39%
Engineer	Tomohisa Nakagawa
Mode	Tx 3DH5



Conducted Emission (ST)

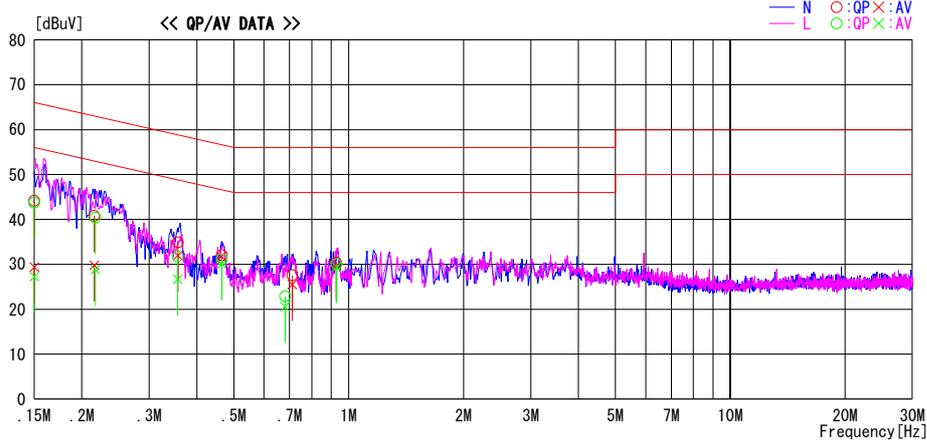
DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.4 Semi Anechoic Chamber
Date : 2010/06/01

Report No. : 30JE0265-HO-01
Temp./Humi. : 24deg. C / 39%
Engineer : Tomohisa Nakagawa

Mode / Remarks : BT Rx 2441MHz

LIMIT : FCC15.107 (a) QP
FCC15.107 (a) 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	30.8	16.1	13.3	44.1	29.4	66.0	56.0	21.9	26.6	N	
0.21542	27.5	16.5	13.3	40.8	29.8	63.0	53.0	22.2	23.2	N	
0.35682	21.6	18.7	13.3	34.9	32.0	58.8	48.8	23.9	16.8	N	
0.46468	18.7	18.4	13.3	32.0	31.7	56.6	46.6	24.6	14.9	N	
0.71198	14.3	12.2	13.3	27.6	25.5	56.0	46.0	28.4	20.5	N	
0.92895	17.1	16.4	13.3	30.4	29.7	56.0	46.0	25.6	16.3	N	
0.15000	30.4	14.0	13.3	43.7	27.3	66.0	56.0	22.3	28.7	L	
0.21676	27.1	15.5	13.3	40.4	28.8	62.9	52.9	22.5	24.1	L	
0.35650	18.5	13.4	13.3	31.8	26.7	58.8	48.8	27.0	22.1	L	
0.46469	17.8	16.8	13.3	31.1	30.1	56.6	46.6	25.5	16.5	L	
0.68102	9.6	7.3	13.3	22.9	20.6	56.0	46.0	33.1	25.4	L	
0.92948	16.8	16.1	13.3	30.1	29.4	56.0	46.0	25.9	16.6	L	

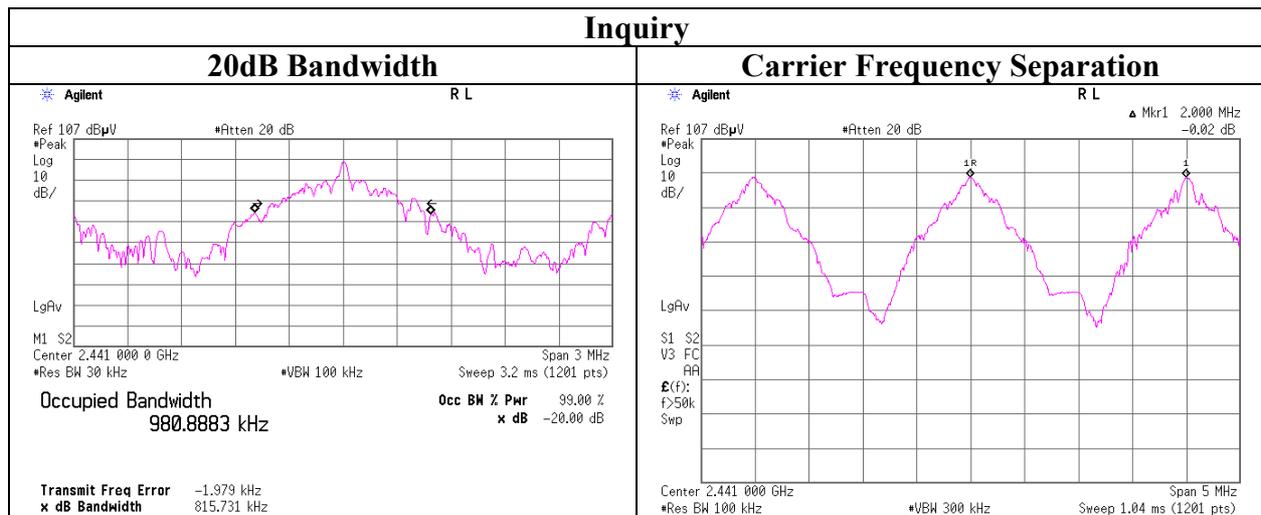
CHART: WITH FACTOR, Peak hold data. CALCULATION: RESULT [dBuV] = READING [dBuV] + C. F [dB] (LISN LOSS + CABLE LOSS)
Except for the above table : adequate margin data below the limits.

20dB Bandwidth and Carrier Frequency Separation

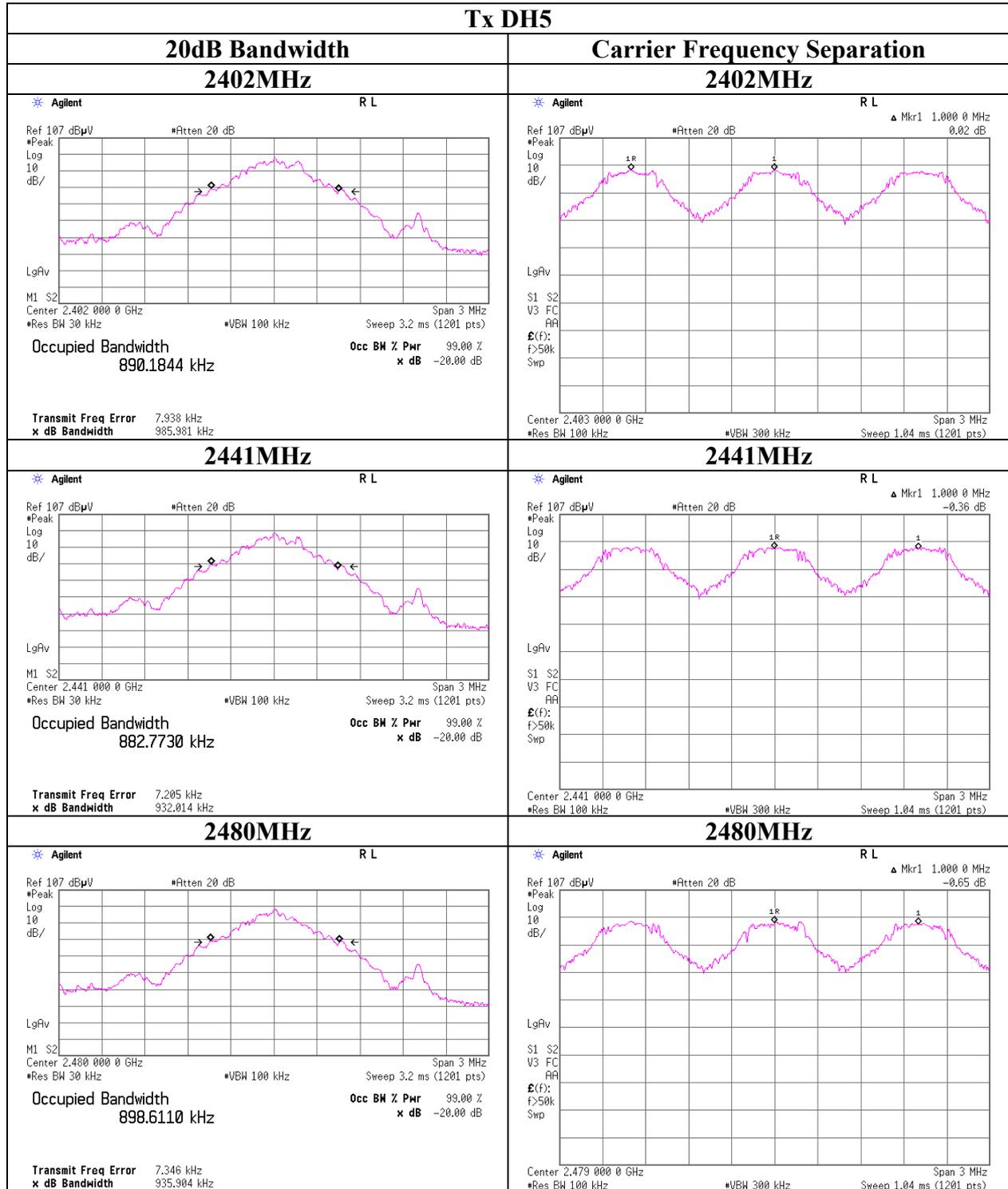
Test place	Head Office EMC Lab. No.6 Measurement Room
Report No.	30JE0265-HO-01
Date	June 09, 2010
Temperature/ Humidity	24 deg.C./ 65%
Engineer	Takumi Shimada
Mode	Tx (Hopping on) DH5/3DH5/Inquiry

Mode	Freq. [MHz]	20dB Bandwidth [MHz]	Carrier Frequency Separation [MHz]	Limit for Carrier Frequency separation [MHz]
DH5	2402.0	0.986	1.000	≥ 0.657
DH5	2441.0	0.932	1.000	≥ 0.621
DH5	2480.0	0.936	1.000	≥ 0.624
3DH5	2402.0	1.263	1.000	≥ 0.842
3DH5	2441.0	1.267	1.000	≥ 0.845
3DH5	2480.0	1.263	1.000	≥ 0.842
Inquiry	2441.0	0.816	2.000	≥ 0.544

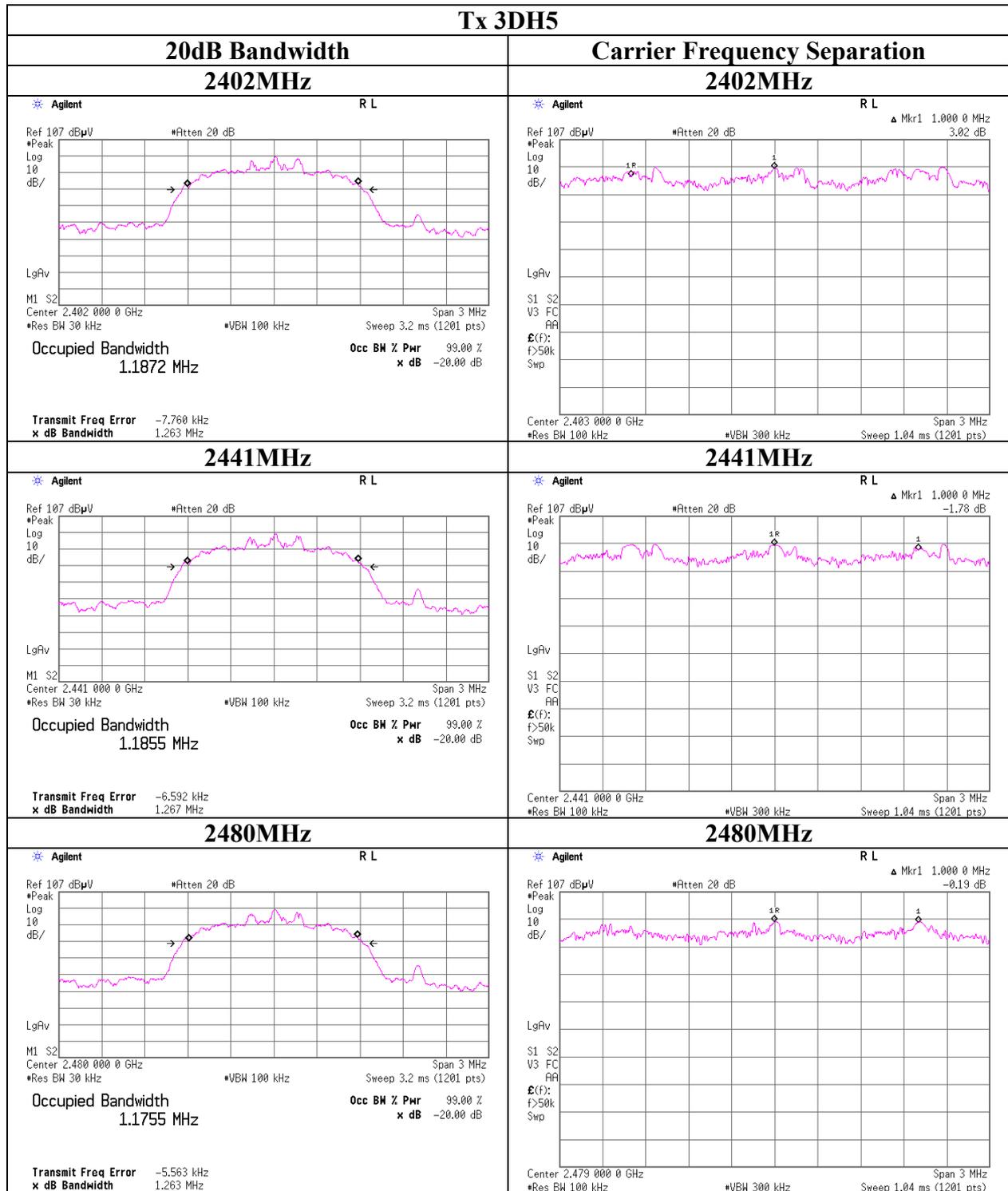
Limit: Two-thirds of 20dB Bandwidth or 25kHz (whichever is greater).
No limit applies to 20dB Bandwidth.



20dB Bandwidth and Carrier Frequency Separation



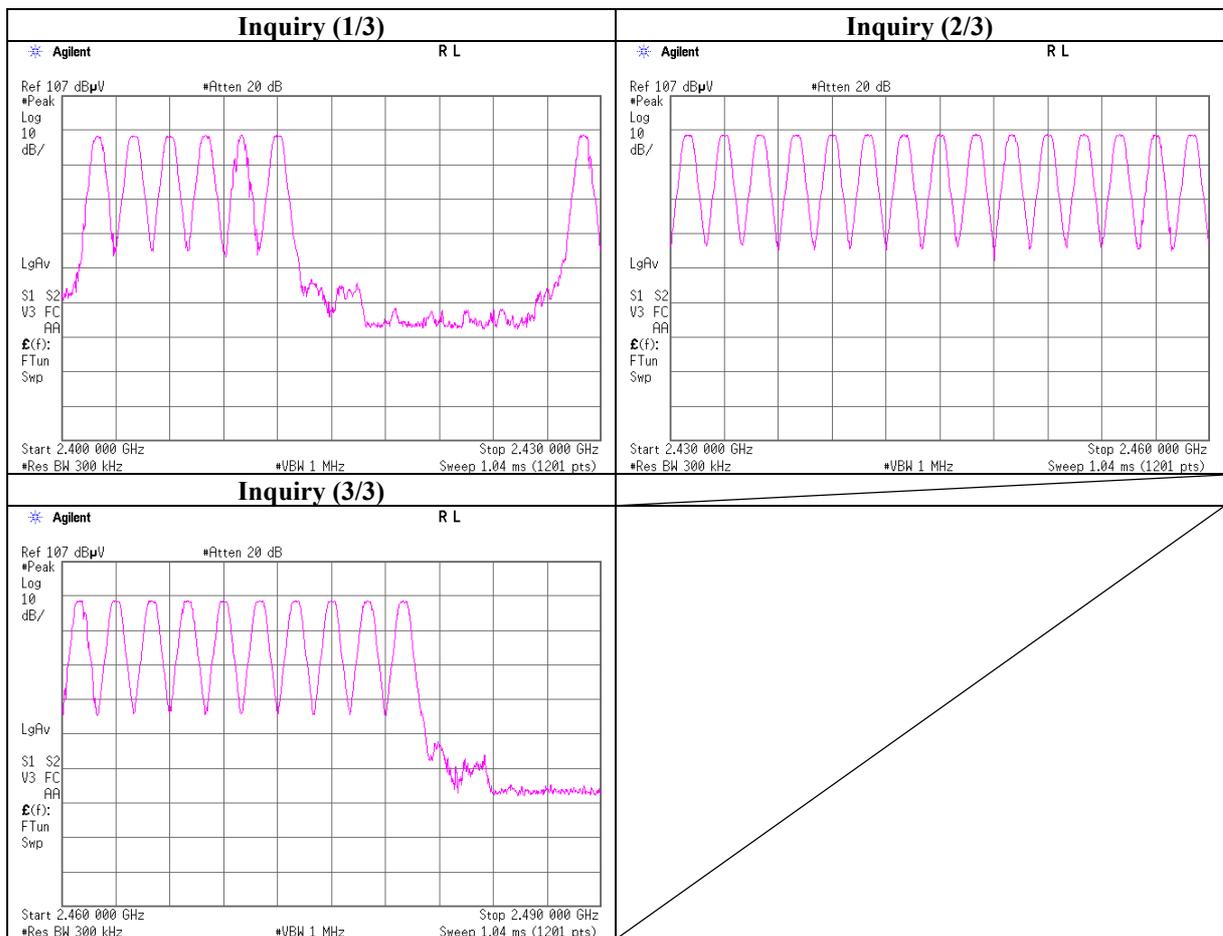
20dB Bandwidth and Carrier Frequency Separation



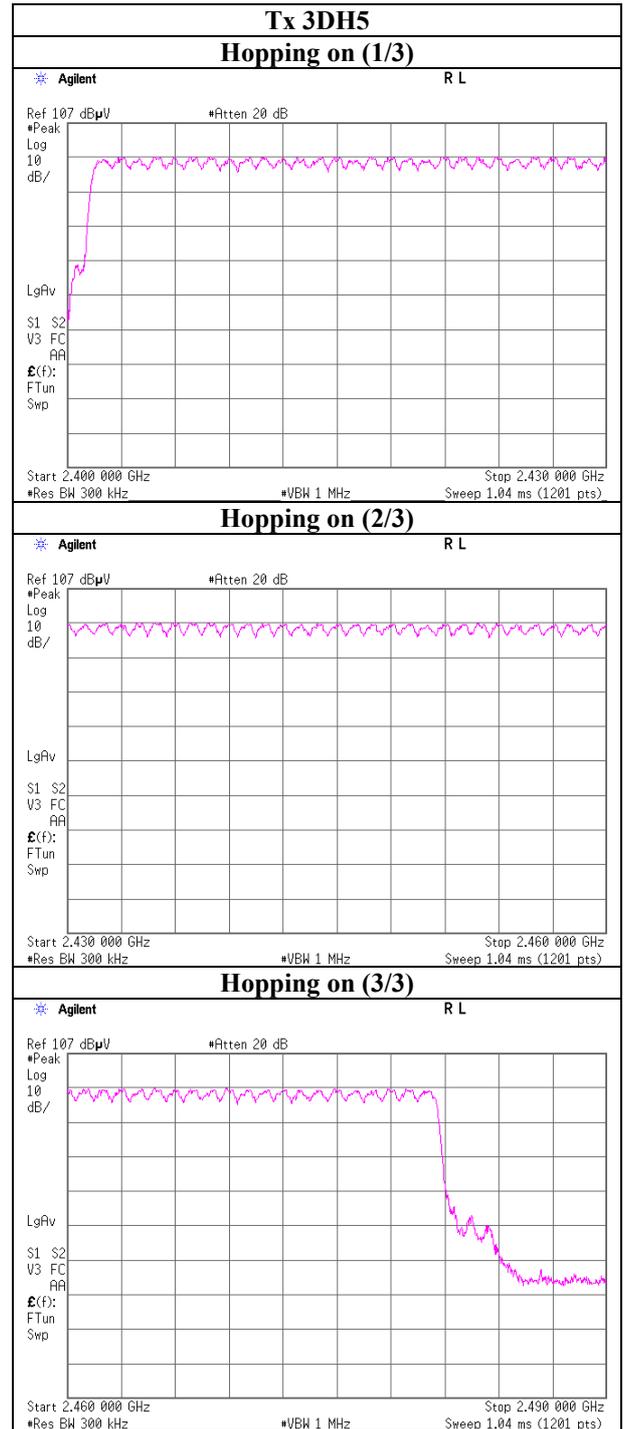
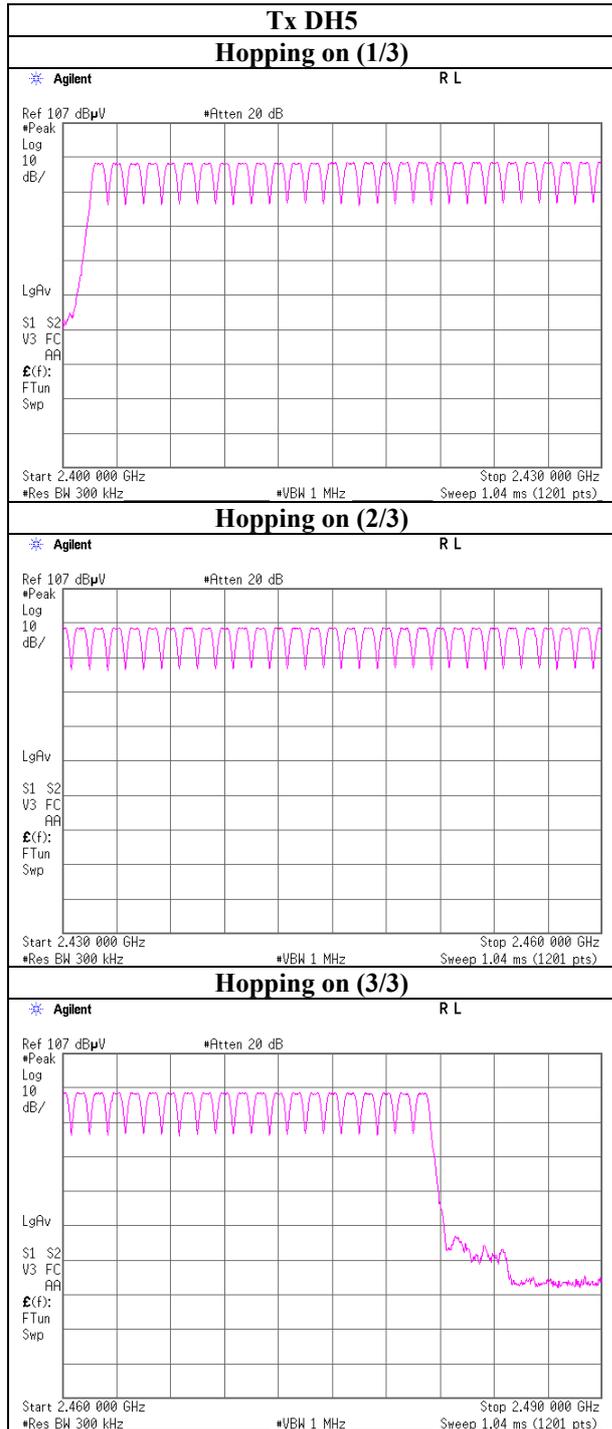
Number of Hopping Frequency

Test place	Head Office EMC Lab. No.6 Measurement Room
Report No.	30JE0265-HO-01
Date	June 09, 2010
Temperature/ Humidity	24 deg.C/ 65%
Engineer	Takumi Shimada
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



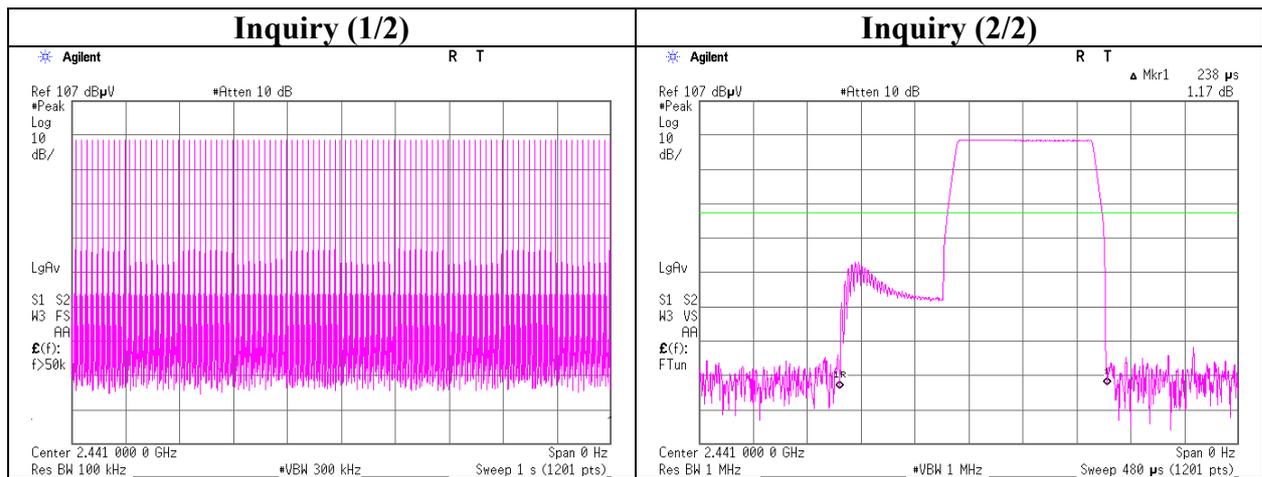
Dwell time

Test place	Head Office EMC Lab. No.6 Measurement Room
Report No.	30GE0005-HO-01
Date	June 09, 2010
Temperature/ Humidity	24 deg.C/ 65%
Engineer	Takumi Shimada
Mode	Tx (Hopping on) DH5/3DH5/Inquiry

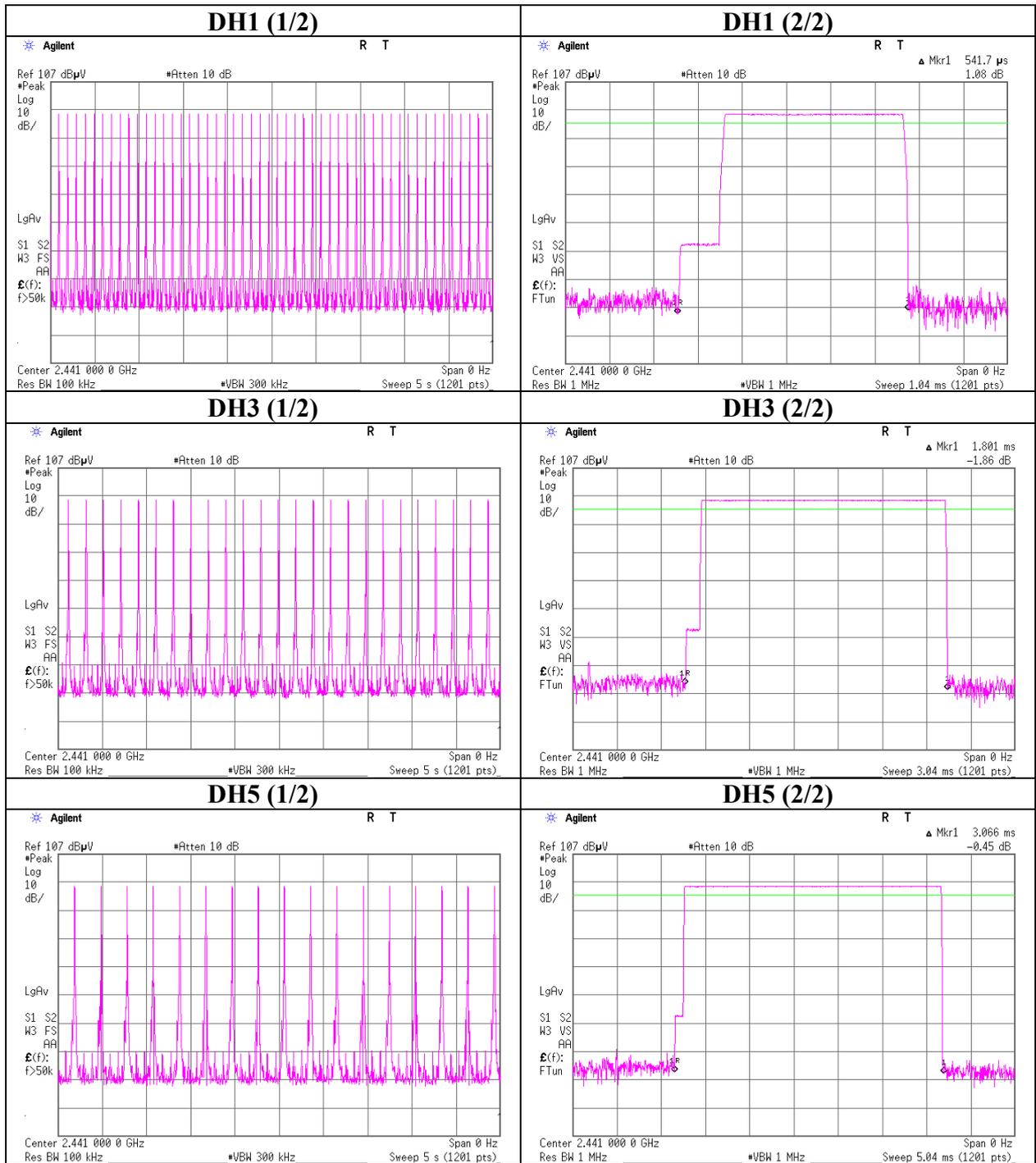
Mode	Number of transmission in a 31.6(79 Hopping x 0.4) / 12.8(32 Hopping x 0.4)second period	Length of transmission time [msec]	Result [msec]	Limit [msec]
DH1	50.0 times / 5 sec. x 31.6 sec. = 316 times	0.542	171	400
DH3	25.0 times / 5 sec. x 31.6 sec. = 158 times	1.801	285	400
DH5	17.0 times / 5 sec. x 31.6 sec. = 108 times	3.066	331	400
3DH1	50.0 times / 5 sec. x 31.6 sec. = 316 times	0.560	177	400
3DH3	26.0 times / 5 sec. x 31.6 sec. = 165 times	1.827	301	400
3DH5	17.0 times / 5 sec. x 31.6 sec. = 108 times	3.100	335	400
Inquiry	100.0 times / 1 sec. x 12.8 sec. = 1280 times	0.238	305	400

Sample Calculation

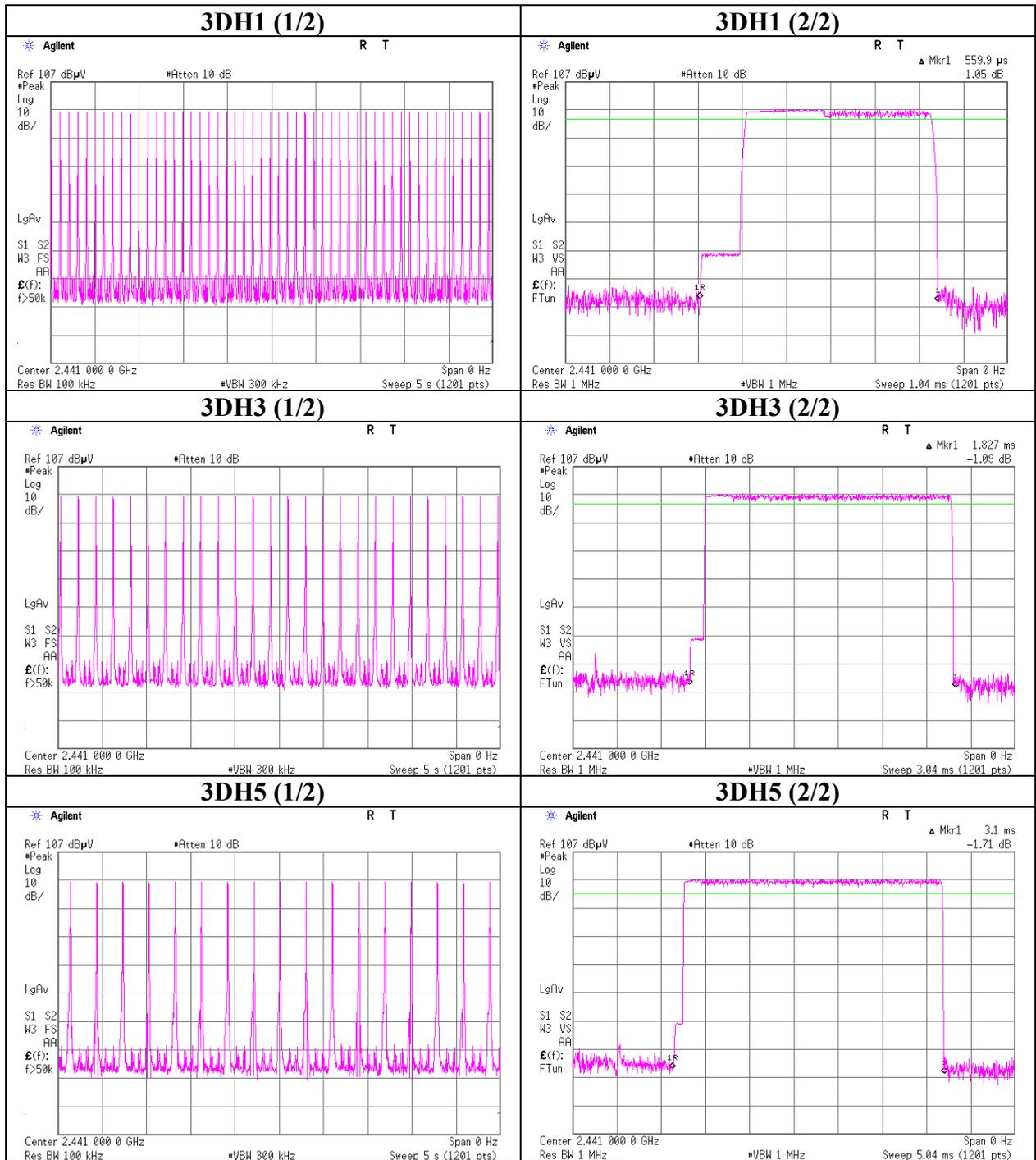
Result = Number of transmission x Length of transmission time



Dwell time



Dwell time



Maximum Peak Output Power

Test place Head Office EMC Lab. No.6 Measurement Room
Report No. 30JE0265-HO-01
Date June 09, 2010
Temperature/ Humidity 24 deg.C./ 65%
Engineer Takumi Shimada
Mode Tx (Hopping off) DH5/3DH5/Inquiry

Mode	Freq. [MHz]	Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result		Limit		Margin [dB]
					[dBm]	[mW]	[dBm]	[mW]	
DH5	2402.0	-11.87	0.50	10.00	-1.37	0.73	20.97	125	22.34
DH5	2441.0	-11.55	0.50	10.00	-1.05	0.79	20.97	125	22.02
DH5	2480.0	-11.62	0.50	10.00	-1.12	0.77	20.97	125	22.09
2DH5	2402.0	-9.28	0.50	10.00	1.22	1.32	20.97	125	19.75
2DH5	2441.0	-9.35	0.50	10.00	1.15	1.30	20.97	125	19.82
2DH5	2480.0	-9.77	0.50	10.00	0.73	1.18	20.97	125	20.24
3DH5	2402.0	-9.12	0.50	10.00	1.38	1.37	20.97	125	19.59
3DH5	2441.0	-9.29	0.50	10.00	1.21	1.32	20.97	125	19.76
3DH5	2480.0	-9.66	0.50	10.00	0.84	1.21	20.97	125	20.13
Inquiry	2441.0	-11.61	0.50	10.00	-1.11	0.77	20.97	125	22.08

Sample Calculation:

Result = Reading + Cable Loss (supplied by customer)+ Attenuator

Radiated Spurious Emission
(Sony)

Test place Head Office EMC Lab. No.3 and No.2 Semi Anechoic Chamber
Report No. 30GE0005-HO-01
Date June 01, 2010 June 05, 2010
Temperature/ Humidity 24deg.C./ 52% 25deg.C./ 49%
Engineer Kazuya Yoshioka Satofumi Matsuyama
(Above 1GHz) (Below 1GHz)
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	52.000	QP	23.7	10.7	7.0	28.7	12.7	40.0	27.3	NS
Hori	78.000	QP	23.6	7.0	7.3	28.5	9.4	40.0	30.6	NS
Hori	104.000	QP	23.2	11.2	7.5	28.5	13.4	43.5	30.1	NS
Hori	130.000	QP	23.1	14.4	7.7	28.4	16.8	43.5	26.7	NS
Hori	156.000	QP	22.9	15.9	7.9	28.3	18.4	43.5	25.1	NS
Hori	312.000	QP	22.6	15.2	8.9	27.9	18.8	46.0	27.2	NS
Hori	2390.000	PK	43.8	27.7	2.6	32.5	41.6	73.9	32.3	
Hori	2400.000	PK	58.1	27.7	2.6	32.5	55.9	73.9	18.0	
Hori	4804.000	PK	42.1	31.6	5.1	31.8	47.0	73.9	26.9	
Hori	7206.000	PK	42.3	36.2	6.1	32.4	52.2	73.9	21.7	NS
Hori	9608.000	PK	42.6	38.0	6.8	32.9	54.5	73.9	19.4	NS
Hori	24020.000	PK	46.8	39.8	-1.3	29.1	56.2	73.9	17.7	NS
Hori	2390.000	AV	31.2	27.7	2.6	32.5	29.0	53.9	24.9	
Hori	2400.000	AV	47.6	27.7	2.6	32.5	45.4	53.9	8.5	
Hori	4804.000	AV	29.9	31.6	5.1	31.8	34.8	53.9	19.1	
Hori	7206.000	AV	30.0	36.2	6.1	32.4	39.9	53.9	14.0	NS
Hori	9608.000	AV	30.5	38.0	6.8	32.9	42.4	53.9	11.5	NS
Hori	24020.000	AV	35.0	39.8	-1.3	29.1	44.4	53.9	9.5	NS
Vert	52.000	QP	23.7	10.7	7.0	28.7	12.7	40.0	27.3	NS
Vert	78.000	QP	23.6	7.0	7.3	28.5	9.4	40.0	30.6	NS
Vert	104.000	QP	23.1	11.2	7.5	28.5	13.3	43.5	30.2	NS
Vert	130.000	QP	23.1	14.4	7.7	28.4	16.8	43.5	26.7	NS
Vert	156.000	QP	22.9	15.9	7.9	28.3	18.4	43.5	25.1	NS
Vert	312.000	QP	22.7	15.2	8.9	27.9	18.9	46.0	27.1	NS
Vert	2390.000	PK	43.0	27.7	2.6	32.5	40.8	73.9	33.1	
Vert	2400.000	PK	54.9	27.7	2.6	32.5	52.7	73.9	21.2	
Vert	4804.000	PK	44.5	31.6	5.1	31.8	49.4	73.9	24.5	
Vert	7206.000	PK	41.9	36.2	6.1	32.4	51.8	73.9	22.1	NS
Vert	9608.000	PK	42.1	38.0	6.8	32.9	54.0	73.9	19.9	NS
Vert	24020.000	PK	46.8	39.8	-1.3	29.1	56.2	73.9	17.7	NS
Vert	2390.000	AV	30.2	27.7	2.6	32.5	28.0	53.9	25.9	
Vert	2400.000	AV	44.0	27.7	2.6	32.5	41.8	53.9	12.1	
Vert	4804.000	AV	35.6	31.6	5.1	31.8	40.5	53.9	13.4	
Vert	7206.000	AV	30.0	36.2	6.1	32.4	39.9	53.9	14.0	NS
Vert	9608.000	AV	30.3	38.0	6.8	32.9	42.2	53.9	11.7	NS
Vert	24020.000	AV	35.0	39.8	-1.3	29.1	44.4	53.9	9.5	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

NS:Non Signal

Radiated Spurious Emission
(Sony)

Test place Head Office EMC Lab. No.3 and No.2 Semi Anechoic Chamber
Report No. 30GE0005-HO-01
Date June 01, 2010 June 05, 2010
Temperature/ Humidity 24deg.C./ 52% 25deg.C./ 49%
Engineer Kazuya Yoshioka Satofumi Matsuyama
(Above 1GHz) (Below 1GHz)
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	52.000	QP	23.5	10.7	7.0	28.7	12.5	40.0	27.5	NS
Hori	78.000	QP	23.3	7.0	7.3	28.5	9.1	40.0	30.9	NS
Hori	104.000	QP	23.1	11.2	7.5	28.5	13.3	43.5	30.2	NS
Hori	130.000	QP	23.0	14.4	7.7	28.4	16.7	43.5	26.8	NS
Hori	156.000	QP	22.8	15.9	7.9	28.3	18.3	43.5	25.2	NS
Hori	312.000	QP	22.5	15.2	8.9	27.9	18.7	46.0	27.3	NS
Hori	4882.000	PK	42.2	31.9	5.2	31.8	47.5	73.9	26.4	
Hori	7323.000	PK	42.4	36.2	6.1	32.4	52.3	73.9	21.6	NS
Hori	9764.000	PK	42.1	38.1	6.8	32.9	54.1	73.9	19.8	NS
Hori	24410.000	PK	45.7	39.9	-1.3	29.0	55.3	73.9	18.6	NS
Hori	4882.000	AV	31.4	31.9	5.2	31.8	36.7	53.9	17.2	
Hori	7323.000	AV	30.0	36.2	6.1	32.4	39.9	53.9	14.0	NS
Hori	9764.000	AV	30.0	38.1	6.8	32.9	42.0	53.9	11.9	NS
Hori	24410.000	AV	33.7	39.9	-1.3	29.0	43.3	53.9	10.6	NS
Vert	52.000	QP	23.5	10.7	7.0	28.7	12.5	40.0	27.5	NS
Vert	78.000	QP	23.3	7.0	7.3	28.5	9.1	40.0	30.9	NS
Vert	104.000	QP	23.1	11.2	7.5	28.5	13.3	43.5	30.2	NS
Vert	130.000	QP	23.1	14.4	7.7	28.4	16.8	43.5	26.7	NS
Vert	156.000	QP	22.9	15.9	7.9	28.3	18.4	43.5	25.1	NS
Vert	312.000	QP	22.5	15.2	8.9	27.9	18.7	46.0	27.3	NS
Vert	4882.000	PK	44.4	31.9	5.2	31.8	49.7	73.9	24.2	
Vert	7323.000	PK	42.1	36.2	6.1	32.4	52.0	73.9	21.9	NS
Vert	9764.000	PK	41.4	38.1	6.8	32.9	53.4	73.9	20.5	NS
Vert	24410.000	PK	45.6	39.9	-1.3	29.0	55.2	73.9	18.7	NS
Vert	4882.000	AV	36.3	31.9	5.2	31.8	41.6	53.9	12.3	
Vert	7323.000	AV	30.0	36.2	6.1	32.4	39.9	53.9	14.0	NS
Vert	9764.000	AV	29.7	38.1	6.8	32.9	41.7	53.9	12.2	NS
Vert	24410.000	AV	33.7	39.9	-1.3	29.0	43.3	53.9	10.6	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

NS:Non Signal

Radiated Spurious Emission
(Sony)

Test place Head Office EMC Lab. No.2 Semi Anechoic Chamber
Report No. 30GE0005-HO-01
Date June 04, 2010 June 05, 2010
Temperature/ Humidity 24deg.C./ 52% 25deg.C./ 49%
Engineer Takumi Shimada Satofumi Matsuyama
(Above 1GHz) (Below 1GHz)
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	52.000	QP	23.5	10.7	7.0	28.7	12.5	40.0	27.5	NS
Hori	78.000	QP	23.3	7.0	7.3	28.5	9.1	40.0	30.9	NS
Hori	104.000	QP	23.1	11.2	7.5	28.5	13.3	43.5	30.2	NS
Hori	130.000	QP	23.0	14.4	7.7	28.4	16.7	43.5	26.8	NS
Hori	156.000	QP	22.8	15.9	7.9	28.3	18.3	43.5	25.2	NS
Hori	312.000	QP	22.5	15.2	8.9	27.9	18.7	46.0	27.3	NS
Hori	2483.500	QP	55.3	27.2	2.8	32.4	52.9	73.9	21.0	
Hori	4960.000	PK	43.0	30.7	5.2	31.3	47.6	73.9	26.3	
Hori	7440.000	PK	42.0	35.5	6.0	31.1	52.4	73.9	21.5	NS
Hori	9920.000	PK	43.1	38.2	6.7	31.4	56.6	73.9	17.3	NS
Hori	24800.000	PK	47.7	39.9	-1.2	29.0	57.4	73.9	16.5	NS
Hori	2483.500	AV	46.3	27.2	2.8	32.4	43.9	53.9	10.0	
Hori	4960.000	AV	32.7	30.7	5.2	31.3	37.3	53.9	16.6	
Hori	7440.000	AV	29.8	35.5	6.0	31.1	40.2	53.9	13.7	NS
Hori	9920.000	AV	30.7	38.2	6.7	31.4	44.2	53.9	9.7	NS
Hori	24800.000	AV	36.0	39.9	-1.2	29.0	45.7	53.9	8.2	NS
Vert	52.000	QP	23.6	10.7	7.0	28.7	12.6	40.0	27.4	NS
Vert	78.000	QP	23.3	7.0	7.3	28.5	9.1	40.0	30.9	NS
Vert	104.000	QP	23.1	11.2	7.5	28.5	13.3	43.5	30.2	NS
Vert	130.000	QP	23.0	14.4	7.7	28.4	16.7	43.5	26.8	NS
Vert	156.000	QP	22.8	15.9	7.9	28.3	18.3	43.5	25.2	NS
Vert	312.000	QP	22.6	15.2	8.9	27.9	18.8	46.0	27.2	NS
Vert	2483.500	PK	55.5	27.2	2.8	32.4	53.1	73.9	20.8	
Vert	4960.000	PK	43.3	30.7	5.2	31.3	47.9	73.9	26.0	
Vert	7440.000	PK	41.4	35.5	6.0	31.1	51.8	73.9	22.1	NS
Vert	9920.000	PK	41.5	38.2	6.7	31.4	55.0	73.9	18.9	NS
Vert	24800.000	PK	47.9	39.9	-1.2	29.0	57.6	73.9	16.3	NS
Vert	2483.500	AV	44.6	27.2	2.8	32.4	42.2	53.9	11.7	
Vert	4960.000	AV	33.7	30.7	5.2	31.3	38.3	53.9	15.6	
Vert	7440.000	AV	30.0	35.5	6.0	31.1	40.4	53.9	13.5	NS
Vert	9920.000	AV	30.8	38.2	6.7	31.4	44.3	53.9	9.6	NS
Vert	24800.000	AV	36.0	39.9	-1.2	29.0	45.7	53.9	8.2	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

NS:Non Signal

Radiated Spurious Emission
(Sony)

Test place : Head Office EMC Lab. No.2 Semi Anechoic Chamber
Report No. : 30GE0005-HO-01
Date : June 04, 2010 June 05, 2010
Temperature/ Humidity : 24deg.C./ 52% 25deg.C./ 49%
Engineer : Takumi Shimada Satofumi Matsuyama
(Above 1GHz) (Below 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	52.000	QP	23.6	10.7	7.0	28.7	12.6	40.0	27.4	NS
Hori	78.000	QP	23.3	7.0	7.3	28.5	9.1	40.0	30.9	NS
Hori	104.000	QP	23.1	11.2	7.5	28.5	13.3	43.5	30.2	NS
Hori	130.000	QP	23.0	14.4	7.7	28.4	16.7	43.5	26.8	NS
Hori	156.000	QP	22.8	15.9	7.9	28.3	18.3	43.5	25.2	NS
Hori	312.000	QP	22.6	15.2	8.9	27.9	18.8	46.0	27.2	NS
Hori	2390.000	PK	44.6	27.1	2.7	32.4	42.0	73.9	31.9	
Hori	2400.000	PK	66.2	27.1	2.7	32.4	63.6	-	-	- See 20dBc Data Sheet
Hori	4804.000	PK	40.8	30.5	5.1	31.3	45.1	73.9	28.8	NS
Hori	7206.000	PK	41.8	35.1	5.8	31.1	51.6	73.9	22.3	NS
Hori	9608.000	PK	42.0	37.6	6.6	31.4	54.8	73.9	19.1	NS
Hori	24020.000	PK	46.8	39.8	-1.3	29.1	56.2	73.9	17.7	NS
Hori	2390.000	AV	33.7	27.1	2.7	32.4	31.1	53.9	22.8	
Hori	2400.000	AV	52.8	27.1	2.7	32.4	50.2	-	-	- See 20dBc Data Sheet
Hori	4804.000	AV	29.3	30.5	5.1	31.3	33.6	53.9	20.3	NS
Hori	7206.000	AV	29.6	35.1	5.8	31.1	39.4	53.9	14.5	NS
Hori	9608.000	AV	29.9	37.6	6.6	31.4	42.7	53.9	11.2	NS
Hori	24020.000	AV	35.0	39.8	-1.3	29.1	44.4	53.9	9.5	NS
Vert	52.000	QP	23.5	10.7	7.0	28.7	12.5	40.0	27.5	NS
Vert	78.000	QP	23.3	7.0	7.3	28.5	9.1	40.0	30.9	NS
Vert	104.000	QP	23.1	11.2	7.5	28.5	13.3	43.5	30.2	NS
Vert	130.000	QP	23.0	14.4	7.7	28.4	16.7	43.5	26.8	NS
Vert	156.000	QP	22.8	15.9	7.9	28.3	18.3	43.5	25.2	NS
Vert	312.000	QP	22.5	15.2	8.9	27.9	18.7	46.0	27.3	NS
Vert	2390.000	PK	44.4	27.1	2.7	32.4	41.8	73.9	32.1	
Vert	2400.000	PK	64.1	27.1	2.7	32.4	61.5	-	-	- See 20dBc Data Sheet
Vert	4804.000	PK	41.4	30.5	5.1	31.3	45.7	73.9	28.2	NS
Vert	7206.000	PK	41.1	35.1	5.8	31.1	50.9	73.9	23.0	NS
Vert	9608.000	PK	41.4	37.6	6.6	31.4	54.2	73.9	19.7	NS
Vert	24020.000	PK	47.0	39.8	-1.3	29.1	56.4	73.9	17.5	NS
Vert	2390.000	AV	31.9	27.1	2.7	32.4	29.3	53.9	24.6	
Vert	2400.000	AV	50.9	27.1	2.7	32.4	48.3	-	-	- See 20dBc Data Sheet
Vert	4804.000	AV	29.2	30.5	5.1	31.3	33.5	53.9	20.4	NS
Vert	7206.000	AV	29.5	35.1	5.8	31.1	39.3	53.9	14.6	NS
Vert	9608.000	AV	29.9	37.6	6.6	31.4	42.7	53.9	11.2	NS
Vert	24020.000	AV	35.0	39.8	-1.3	29.1	44.4	53.9	9.5	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

NS:Non Signal

Radiated Spurious Emission
20dBc Data Sheet
(Sony)

Test place : Head Office EMC Lab. No.2 Semi Anechoic Chamber
Report No. : 30GE0005-HO-01
Date : June 04, 2010
Temperature/ Humidity : 24deg.C./ 52%
Engineer : Takumi Shimada
(Above 1GHz)
Mode : Tx, 3DH5 2480MHz

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	99.9	27.1	2.7	32.4	97.3	-	-	Carrier
Hori	2400.000	PK	53.5	27.1	2.7	32.4	50.9	77.3	26.4	
Vert	2402.000	PK	97.6	27.1	2.7	32.4	95.0	-	-	Carrier
Vert	2400.000	PK	51.6	27.1	2.7	32.4	49.0	75.0	26.0	

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

Radiated Spurious Emission
(Sony)

Test place Head Office EMC Lab. No.2 Semi Anechoic Chamber
Report No. 30GE0005-HO-01
Date June 04, 2010 June 05, 2010
Temperature/ Humidity 24deg.C./ 52% 25deg.C./ 49%
Engineer Takumi Shimada Satofumi Matsuyama
(Above 1GHz) (Below 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	52.000	QP	23.6	10.7	7.0	28.7	12.6	40.0	27.4	NS
Hori	78.000	QP	23.4	7.0	7.3	28.5	9.2	40.0	30.8	NS
Hori	104.000	QP	23.1	11.2	7.5	28.5	13.3	43.5	30.2	NS
Hori	130.000	QP	23.0	14.4	7.7	28.4	16.7	43.5	26.8	NS
Hori	156.000	QP	22.8	15.9	7.9	28.3	18.3	43.5	25.2	NS
Hori	312.000	QP	22.5	15.2	8.9	27.9	18.7	46.0	27.3	NS
Hori	4882.000	PK	41.1	30.6	5.1	31.3	45.5	73.9	28.4	NS
Hori	7323.000	PK	41.8	35.3	5.8	31.1	51.8	73.9	22.1	NS
Hori	9764.000	PK	42.1	37.9	6.7	31.4	55.3	73.9	18.6	NS
Hori	24410.000	PK	45.8	39.9	-1.3	29.0	55.4	73.9	18.5	NS
Hori	4882.000	AV	29.2	30.6	5.1	31.3	33.6	53.9	20.3	NS
Hori	7323.000	AV	29.6	35.3	5.8	31.1	39.6	53.9	14.3	NS
Hori	9764.000	AV	29.8	37.9	6.7	31.4	43.0	53.9	10.9	NS
Hori	24410.000	AV	33.7	39.9	-1.3	29.0	43.3	53.9	10.6	NS
Vert	52.000	QP	23.6	10.7	7.0	28.7	12.6	40.0	27.4	NS
Vert	78.000	QP	23.3	7.0	7.3	28.5	9.1	40.0	30.9	NS
Vert	104.000	QP	23.1	11.2	7.5	28.5	13.3	43.5	30.2	NS
Vert	130.000	QP	23.0	14.4	7.7	28.4	16.7	43.5	26.8	NS
Vert	156.000	QP	22.8	15.9	7.9	28.3	18.3	43.5	25.2	NS
Vert	312.000	QP	22.5	15.2	8.9	27.9	18.7	46.0	27.3	NS
Vert	4882.000	PK	41.0	30.6	5.1	31.3	45.4	73.9	28.5	NS
Vert	7323.000	PK	42.5	35.3	5.8	31.1	52.5	73.9	21.4	NS
Vert	9764.000	PK	42.3	37.9	6.7	31.4	55.5	73.9	18.4	NS
Vert	24410.000	PK	45.7	39.9	-1.3	29.0	55.3	73.9	18.6	NS
Vert	4882.000	AV	29.5	30.6	5.1	31.3	33.9	53.9	20.0	NS
Vert	7323.000	AV	29.6	35.3	5.8	31.1	39.6	53.9	14.3	NS
Vert	9764.000	AV	29.9	37.9	6.7	31.4	43.1	53.9	10.8	NS
Vert	24410.000	AV	33.7	39.9	-1.3	29.0	43.3	53.9	10.6	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

NS:Non Signal

Radiated Spurious Emission
(Sony)

Test place Head Office EMC Lab. No.2 Semi Anechoic Chamber
Report No. 30GE0005-HO-01
Date June 04, 2010 June 05, 2010
Temperature/ Humidity 24deg.C./ 52% 25deg.C./ 49%
Engineer Takumi Shimada Satofumi Matsuyama
(Above 1GHz) (Below 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	52.000	QP	23.6	10.7	7.0	28.7	12.6	40.0	27.4	NS
Hori	78.000	QP	23.3	7.0	7.3	28.5	9.1	40.0	30.9	NS
Hori	104.000	QP	23.1	11.2	7.5	28.5	13.3	43.5	30.2	NS
Hori	130.000	QP	23.0	14.4	7.7	28.4	16.7	43.5	26.8	NS
Hori	156.000	QP	22.8	15.9	7.9	28.3	18.3	43.5	25.2	NS
Hori	312.000	QP	22.6	15.2	8.9	27.9	18.8	46.0	27.2	NS
Hori	2483.500	PK	65.2	27.2	2.8	32.4	62.8	-	-	See Marker Delta Method Sheet
Hori	4960.000	PK	41.1	30.7	5.2	31.3	45.7	73.9	28.2	NS
Hori	7440.000	PK	42.2	35.5	6.0	31.1	52.6	73.9	21.3	NS
Hori	9920.000	PK	43.0	38.2	6.7	31.4	56.5	73.9	17.4	NS
Hori	24800.000	PK	47.8	39.9	-1.2	29.0	57.5	73.9	16.4	NS
Hori	2483.500	AV	54.3	27.2	2.8	32.4	51.9	-	-	See Marker Delta Method Sheet
Hori	4960.000	AV	29.1	30.7	5.2	31.3	33.7	53.9	20.3	NS
Hori	7440.000	AV	29.8	35.5	6.0	31.1	40.2	53.9	13.7	NS
Hori	9920.000	AV	30.3	38.2	6.7	31.4	43.8	53.9	10.1	NS
Hori	24800.000	AV	36.0	39.9	-1.2	29.0	45.7	53.9	8.2	NS
Vert	52.000	QP	23.6	10.7	7.0	28.7	12.6	40.0	27.4	NS
Vert	78.000	QP	23.4	7.0	7.3	28.5	9.2	40.0	30.8	NS
Vert	104.000	QP	23.0	11.2	7.5	28.5	13.2	43.5	30.3	NS
Vert	130.000	QP	23.0	14.4	7.7	28.4	16.7	43.5	26.8	NS
Vert	156.000	QP	22.9	15.9	7.9	28.3	18.4	43.5	25.1	NS
Vert	312.000	QP	22.6	15.2	8.9	27.9	18.8	46.0	27.2	NS
Vert	2483.500	PK	63.9	27.2	2.8	32.4	61.5	-	-	See Marker Delta Method Sheet
Vert	4960.000	PK	40.7	30.7	5.2	31.3	45.3	73.9	28.6	NS
Vert	7440.000	PK	41.8	35.5	6.0	31.1	52.2	73.9	21.7	NS
Vert	9920.000	PK	42.1	38.2	6.7	31.4	55.6	73.9	18.3	NS
Vert	24800.000	PK	47.7	39.9	-1.2	29.0	57.4	73.9	16.5	NS
Vert	2483.500	AV	52.9	27.2	2.8	32.4	50.5	-	-	See Marker Delta Method Sheet
Vert	4960.000	AV	29.0	30.7	5.2	31.3	33.6	53.9	20.3	NS
Vert	7440.000	AV	29.9	35.5	6.0	31.1	40.3	53.9	13.6	NS
Vert	9920.000	AV	30.3	38.2	6.7	31.4	43.8	53.9	10.1	NS
Vert	24800.000	AV	36.1	39.9	-1.2	29.0	45.8	53.9	8.1	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

NS:Non Signal

Radiated Spurious Emission
Marker Delta Method Sheet
(Sony)

Test place Head Office EMC Lab. No.2 Semi Anechoic Chamber
Report No. 30GE0005-HO-01
Date June 04, 2010
Temperature/ Humidity 24deg.C./ 52%
Engineer Takumi Shimada
(Above 1GHz)
Mode Tx, 3DH5 2480MHz

Marker Delta Method(Test distance 3meters)

		Polarity	Hor[dBμV/m]		Ver[dBμV/m]	
		Detector	PK	AV	PK	AV
		RBW \ VBW	3MHz	270Hz	3MHz	270Hz
Step1	Fundamental(2480.0MHz)	1MHz	99.3	95.1	97.7	94.1
Step2	Fundamental(2480.0MHz)	30kHz	98.1	-	97.3	-
	Band-edge(2483.5MHz)	30kHz	49.4	-	47.7	-
	Amplitude delta*1	-	48.7	48.7	49.6	49.6
Step3	Field strength of band-edge*2	-	50.6	46.4	48.1	44.5
	Limit	-	73.9	53.9	73.9	53.9
	Margin	-	23.3	7.5	25.8	9.4

*1 Amplitude delta = Fundamental(RBW:30kHz,VBW:3MHz) - Band-edge(RBW:30kHz,VBW:3MHz)

*2Field strength of band-edge = Fundamental(RBW:1MHz) - Amplitude delta

Radiated Spurious Emission
(Sony)

Test place Head Office EMC Lab. No.2 Semi Anechoic Chamber
Report No. 30JE0265-HO-01
Date June 05, 2010 June 05, 2010
Temperature/ Humidity 24deg.C./ 52% 25deg.C./ 49%
Engineer Takumi Shimada Satofumi Matsuyama
(Above 1GHz) (Below 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	52.000	QP	23.5	10.7	7.0	28.7	12.5	40.0	27.5	NS
Hori	78.000	QP	23.4	7.0	7.3	28.5	9.2	40.0	30.8	NS
Hori	104.000	QP	23.1	11.2	7.5	28.5	13.3	43.5	30.2	NS
Hori	130.000	QP	23.1	14.4	7.7	28.4	16.8	43.5	26.7	NS
Hori	156.000	QP	22.8	15.9	7.9	28.3	18.3	43.5	25.2	NS
Hori	312.000	QP	22.5	15.2	8.9	27.9	18.7	46.0	27.3	NS
Hori	1626.350	PK	45.7	25.8	2.3	32.8	41.0	73.9	32.9	
Hori	2439.500	PK	45.8	27.2	2.8	32.4	43.4	73.9	30.5	
Hori	2441.000	PK	41.4	27.2	2.8	32.4	39.0	73.9	34.9	NS
Hori	4879.000	PK	40.9	30.6	3.8	31.3	44.0	73.9	29.9	NS
Hori	7318.500	PK	40.7	35.3	4.2	31.1	49.1	73.9	24.8	NS
Hori	1626.350	AV	39.6	25.8	2.3	32.8	34.9	53.9	19.0	
Hori	2439.500	AV	39.7	27.2	2.8	32.4	37.3	53.9	16.6	
Hori	2441.000	AV	29.3	27.2	2.8	32.4	26.9	53.9	27.0	NS
Hori	4879.000	AV	28.7	30.6	3.8	31.3	31.8	53.9	22.1	NS
Hori	7318.500	AV	29.3	35.3	4.2	31.1	37.7	53.9	16.2	NS
Vert	52.000	QP	23.5	10.7	7.0	28.7	12.5	40.0	27.5	NS
Vert	78.000	QP	23.4	7.0	7.3	28.5	9.2	40.0	30.8	NS
Vert	104.000	QP	23.1	11.2	7.5	28.5	13.3	43.5	30.2	NS
Vert	130.000	QP	23.0	14.4	7.7	28.4	16.7	43.5	26.8	NS
Vert	156.000	QP	22.8	15.9	7.9	28.3	18.3	43.5	25.2	NS
Vert	312.000	QP	22.6	15.2	8.9	27.9	18.8	46.0	27.2	NS
Vert	1626.350	PK	44.6	25.8	2.3	32.8	39.9	73.9	34.0	
Vert	2439.500	PK	45.1	27.2	2.8	32.4	42.7	73.9	31.2	
Vert	2441.000	PK	41.4	27.2	2.8	32.4	39.0	73.9	34.9	NS
Vert	4879.000	PK	40.8	30.6	3.8	31.3	43.9	73.9	30.0	NS
Vert	7318.500	PK	41.0	35.3	4.2	31.1	49.4	73.9	24.5	NS
Vert	1626.350	AV	37.1	25.8	2.3	32.8	32.4	53.9	21.5	
Vert	2439.500	AV	39.6	27.2	2.8	32.4	37.2	53.9	16.7	
Vert	2441.000	AV	29.3	27.2	2.8	32.4	26.9	53.9	27.0	NS
Vert	4879.000	AV	28.6	30.6	3.8	31.3	31.7	53.9	22.2	NS
Vert	7318.500	AV	29.3	35.3	4.2	31.1	37.7	53.9	16.2	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).

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

Radiated Spurious Emission (ST)

Test place Head Office EMC Lab. No.2 Semi Anechoic Chamber
Report No. 30JE0265-HO-01
Date June 05, 2010 June 06, 2010
Temperature/ Humidity 24deg.C./ 52% 24deg.C./ 46%
Engineer Takayuki Shimada Norihisa Hashimoto
(Above 1GHz) (Below 1GHz)
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	52.000	QP	23.6	10.7	7.0	28.7	12.6	40.0	27.4	NS
Hori	78.000	QP	23.3	7.0	7.3	28.5	9.1	40.0	30.9	NS
Hori	104.000	QP	23.1	11.2	7.5	28.5	13.3	43.5	30.2	NS
Hori	130.000	QP	23.0	14.4	7.7	28.4	16.7	43.5	26.8	NS
Hori	156.000	QP	22.9	15.9	7.9	28.3	18.4	43.5	25.1	NS
Hori	312.000	QP	22.6	15.2	8.9	27.9	18.8	46.0	27.2	NS
Hori	2390.000	PK	43.4	27.1	2.7	32.4	40.8	73.9	33.1	
Hori	2400.000	PK	56.8	27.1	2.7	32.4	54.2	73.9	19.7	
Hori	4804.000	PK	42.0	30.5	5.1	31.3	46.3	73.9	27.6	
Hori	7206.000	PK	40.9	35.1	5.8	31.1	50.7	73.9	23.2	NS
Hori	9608.000	PK	41.2	37.6	6.6	31.4	54.0	73.9	19.9	NS
Hori	24020.000	PK	46.7	39.8	-1.3	29.1	56.1	73.9	17.8	NS
Hori	2390.000	AV	31.8	27.1	2.7	32.4	29.2	53.9	24.7	
Hori	2400.000	AV	47.5	27.1	2.7	32.4	44.9	53.9	9.0	
Hori	4804.000	AV	33.5	30.5	5.1	31.3	37.8	53.9	16.1	
Hori	7206.000	AV	29.5	35.1	5.8	31.1	39.3	53.9	14.6	NS
Hori	9608.000	AV	29.9	37.6	6.6	31.4	42.7	53.9	11.2	NS
Hori	24020.000	AV	35.0	39.8	-1.3	29.1	44.4	53.9	9.5	NS
Vert	52.000	QP	23.6	10.7	7.0	28.7	12.6	40.0	27.4	NS
Vert	78.000	QP	23.4	7.0	7.3	28.5	9.2	40.0	30.8	NS
Vert	104.000	QP	23.1	11.2	7.5	28.5	13.3	43.5	30.2	NS
Vert	130.000	QP	23.1	14.4	7.7	28.4	16.8	43.5	26.7	NS
Vert	156.000	QP	22.9	15.9	7.9	28.3	18.4	43.5	25.1	NS
Vert	312.000	QP	22.6	15.2	8.9	27.9	18.8	46.0	27.2	NS
Vert	2390.000	PK	42.4	27.1	2.7	32.4	39.8	73.9	34.1	
Vert	2400.000	PK	54.2	27.1	2.7	32.4	51.6	73.9	22.3	
Vert	4804.000	PK	45.3	30.5	5.1	31.3	49.6	73.9	24.3	
Vert	7206.000	PK	40.7	35.1	5.8	31.1	50.5	73.9	23.4	NS
Vert	9608.000	PK	41.1	37.6	6.6	31.4	53.9	73.9	20.0	NS
Vert	24020.000	PK	46.9	39.8	-1.3	29.1	56.3	73.9	17.6	NS
Vert	2390.000	AV	30.7	27.1	2.7	32.4	28.1	53.9	25.8	
Vert	2400.000	AV	45.6	27.1	2.7	32.4	43.0	53.9	10.9	
Vert	4804.000	AV	37.0	30.5	5.1	31.3	41.3	53.9	12.6	
Vert	7206.000	AV	29.5	35.1	5.8	31.1	39.3	53.9	14.6	NS
Vert	9608.000	AV	29.9	37.6	6.6	31.4	42.7	53.9	11.2	NS
Vert	24020.000	AV	35.0	39.8	-1.3	29.1	44.4	53.9	9.5	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 $20\log(3.0m/1.0m)= 9.5dB$

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

NS:Non Signal

Radiated Spurious Emission
(ST)

Test place Head Office EMC Lab. No.2 Semi Anechoic Chamber
Report No. 30JE0265-HO-01
Date June 05, 2010 June 06, 2010
Temperature/ Humidity 24deg.C./ 52% 24deg.C./ 46%
Engineer Takayuki Shimada Norihisa Hashimoto
(Above 1GHz) (Below 1GHz)
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	52.000	QP	23.6	10.7	7.0	28.7	12.6	40.0	27.4	NS
Hori	78.000	QP	23.4	7.0	7.3	28.5	9.2	40.0	30.8	NS
Hori	104.000	QP	23.1	11.2	7.5	28.5	13.3	43.5	30.2	NS
Hori	130.000	QP	23.0	14.4	7.7	28.4	16.7	43.5	26.8	NS
Hori	156.000	QP	22.9	15.9	7.9	28.3	18.4	43.5	25.1	NS
Hori	312.000	QP	22.6	15.2	8.9	27.9	18.8	46.0	27.2	NS
Hori	2483.500	PK	55.9	27.2	2.8	32.4	53.5	73.9	20.4	
Hori	4960.000	PK	42.4	30.7	5.2	31.3	47.0	73.9	26.9	
Hori	7440.000	PK	41.2	35.5	6.0	31.1	51.6	73.9	22.3	NS
Hori	9920.000	PK	41.7	38.2	6.7	31.4	55.2	73.9	18.7	NS
Hori	24800.000	PK	48.0	39.9	-1.2	29.0	57.7	73.9	16.2	NS
Hori	2483.500	AV	46.2	27.2	2.8	32.4	43.8	53.9	10.1	
Hori	4960.000	AV	34.2	30.7	5.2	31.3	38.8	53.9	15.1	
Hori	7440.000	AV	29.8	35.5	6.0	31.1	40.2	53.9	13.7	NS
Hori	9920.000	AV	30.3	38.2	6.7	31.4	43.8	53.9	10.1	NS
Hori	24800.000	AV	36.0	39.9	-1.2	29.0	45.7	53.9	8.2	NS
Vert	52.000	QP	23.6	10.7	7.0	28.7	12.6	40.0	27.4	NS
Vert	78.000	QP	23.3	7.0	7.3	28.5	9.1	40.0	30.9	NS
Vert	104.000	QP	23.2	11.2	7.5	28.5	13.4	43.5	30.1	NS
Vert	130.000	QP	23.1	14.4	7.7	28.4	16.8	43.5	26.7	NS
Vert	156.000	QP	22.8	15.9	7.9	28.3	18.3	43.5	25.2	NS
Vert	312.000	QP	22.6	15.2	8.9	27.9	18.8	46.0	27.2	NS
Vert	2483.500	PK	55.2	27.2	2.8	32.4	52.8	73.9	21.1	
Vert	4960.000	PK	43.5	30.7	5.2	31.3	48.1	73.9	25.8	
Vert	7440.000	PK	41.3	35.5	6.0	31.1	51.7	73.9	22.2	NS
Vert	9920.000	PK	41.6	38.2	6.7	31.4	55.1	73.9	18.8	NS
Vert	24800.000	PK	47.8	39.9	-1.2	29.0	57.5	73.9	16.4	NS
Vert	2483.500	AV	45.6	27.2	2.8	32.4	43.2	53.9	10.7	
Vert	4960.000	AV	36.3	30.7	5.2	31.3	40.9	53.9	13.0	
Vert	7440.000	AV	29.8	35.5	6.0	31.1	40.2	53.9	13.7	NS
Vert	9920.000	AV	30.3	38.2	6.7	31.4	43.8	53.9	10.1	NS
Vert	24800.000	AV	36.0	39.9	-1.2	29.0	45.7	53.9	8.2	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

NS: Non Signal

Radiated Spurious Emission (ST)

Test place Head Office EMC Lab. No.2 Semi Anechoic Chamber
Report No. 30JE0265-HO-01
Date June 05, 2010 June 06, 2010
Temperature/ Humidity 24deg.C./ 52% 24deg.C./ 46%
Engineer Takayuki Shimada Norihisa Hashimoto
(Above 1GHz) (Below 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	52.000	QP	23.5	10.7	7.0	28.7	12.5	40.0	27.5	NS
Hori	78.000	QP	23.4	7.0	7.3	28.5	9.2	40.0	30.8	NS
Hori	104.000	QP	23.2	11.2	7.5	28.5	13.4	43.5	30.1	NS
Hori	130.000	QP	23.0	14.4	7.7	28.4	16.7	43.5	26.8	NS
Hori	156.000	QP	22.9	15.9	7.9	28.3	18.4	43.5	25.1	NS
Hori	312.000	QP	22.6	15.2	8.9	27.9	18.8	46.0	27.2	NS
Hori	2390.000	PK	47.0	27.1	2.7	32.4	44.4	73.9	29.5	
Hori	2400.000	PK	67.6	27.1	2.7	32.4	65.0	-	-	See 20dBc Data Sheet
Hori	4804.000	PK	40.2	30.5	5.1	31.3	44.5	73.9	29.4	NS
Hori	7206.000	PK	40.9	35.1	5.8	31.1	50.7	73.9	23.2	NS
Hori	9608.000	PK	41.2	37.6	6.6	31.4	54.0	73.9	19.9	NS
Hori	24020.000	PK	46.6	39.8	-1.3	29.1	56.0	73.9	17.9	NS
Hori	2390.000	AV	35.0	27.1	2.7	32.4	32.4	53.9	21.5	
Hori	2400.000	AV	54.0	27.1	2.7	32.4	51.4	-	-	See 20dBc Data Sheet
Hori	4804.000	AV	28.9	30.5	5.1	31.3	33.2	53.9	20.7	NS
Hori	7206.000	AV	29.5	35.1	5.8	31.1	39.3	53.9	14.6	NS
Hori	9608.000	AV	29.9	37.6	6.6	31.4	42.7	53.9	11.2	NS
Hori	24020.000	AV	35.0	39.8	-1.3	29.1	44.4	53.9	9.5	NS
Vert	52.000	QP	23.6	10.7	7.0	28.7	12.6	40.0	27.4	NS
Vert	78.000	QP	23.3	7.0	7.3	28.5	9.1	40.0	30.9	NS
Vert	104.000	QP	23.2	11.2	7.5	28.5	13.4	43.5	30.1	NS
Vert	130.000	QP	23.1	14.4	7.7	28.4	16.8	43.5	26.7	NS
Vert	156.000	QP	22.9	15.9	7.9	28.3	18.4	43.5	25.1	NS
Vert	312.000	QP	22.6	15.2	8.9	27.9	18.8	46.0	27.2	NS
Vert	2390.000	PK	44.6	27.1	2.7	32.4	42.0	73.9	31.9	
Vert	2400.000	PK	62.8	27.1	2.7	32.4	60.2	-	-	See 20dBc Data Sheet
Vert	4804.000	PK	40.3	30.5	5.1	31.3	44.6	73.9	29.3	NS
Vert	7206.000	PK	40.8	35.1	5.8	31.1	50.6	73.9	23.3	NS
Vert	9608.000	PK	41.3	37.6	6.6	31.4	54.1	73.9	19.8	NS
Vert	24020.000	PK	46.7	39.8	-1.3	29.1	56.1	73.9	17.8	NS
Vert	2390.000	AV	32.1	27.1	2.7	32.4	29.5	53.9	24.4	
Vert	2400.000	AV	50.3	27.1	2.7	32.4	47.7	-	-	See 20dBc Data Sheet
Vert	4804.000	AV	29.0	30.5	5.1	31.3	33.3	53.9	20.6	NS
Vert	7206.000	AV	29.5	35.1	5.8	31.1	39.3	53.9	14.6	NS
Vert	9608.000	AV	29.9	37.6	6.6	31.4	42.7	53.9	11.2	NS
Vert	24020.000	AV	35.0	39.8	-1.3	29.1	44.4	53.9	9.5	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

NS:Non Signal

Radiated Spurious Emission
20dBc Data Sheet
(ST)

Test place Head Office EMC Lab. No.2 Semi Anechoic Chamber
Report No. 30GE0005-HO-01
Date June 05, 2010
Temperature/ Humidity 24deg.C./ 52%
Engineer Takayuki Shimada
 (Above 1GHz)
Mode Tx, 3DH5 2480MHz

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	102.1	27.1	2.7	32.4	99.5	-	-	Carrier
Hori	2400.000	PK	55.2	27.1	2.7	32.4	52.6	79.5	26.9	
Vert	2412.000	PK	97.8	27.1	2.7	32.4	95.2	-	-	Carrier
Vert	2400.000	PK	40.3	27.1	2.7	32.4	37.7	75.2	37.5	

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

Radiated Spurious Emission
(ST)

Test place Head Office EMC Lab. No.2 Semi Anechoic Chamber
Report No. 30JE0265-HO-01
Date June 05, 2010 June 06, 2010
Temperature/ Humidity 24deg.C./ 52% 24deg.C./ 46%
Engineer Takayuki Shimada Norihisa Hashimoto
(Above 1GHz) (Below 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	52.000	QP	23.6	10.7	7.0	28.7	12.6	40.0	27.4	NS
Hori	78.000	QP	23.3	7.0	7.3	28.5	9.1	40.0	30.9	NS
Hori	104.000	QP	23.2	11.2	7.5	28.5	13.4	43.5	30.1	NS
Hori	130.000	QP	23.0	14.4	7.7	28.4	16.7	43.5	26.8	NS
Hori	156.000	QP	22.9	15.9	7.9	28.3	18.4	43.5	25.1	NS
Hori	312.000	QP	22.5	15.2	8.9	27.9	18.7	46.0	27.3	NS
Hori	4882.000	PK	41.0	30.6	5.1	31.3	45.4	73.9	28.5	NS
Hori	7323.000	PK	41.1	35.3	5.8	31.1	51.1	73.9	22.8	NS
Hori	9764.000	PK	41.4	37.9	6.7	31.4	54.6	73.9	19.3	NS
Hori	24410.000	PK	45.7	39.9	-1.3	29.0	55.3	73.9	18.6	NS
Hori	4882.000	AV	29.0	30.6	5.1	31.3	33.4	53.9	20.5	NS
Hori	7323.000	AV	29.6	35.3	5.8	31.1	39.6	53.9	14.3	NS
Hori	9764.000	AV	30.0	37.9	6.7	31.4	43.2	53.9	10.7	NS
Hori	24410.000	AV	33.7	39.9	-1.3	29.0	43.3	53.9	10.6	NS
Vert	52.000	QP	23.6	10.7	7.0	28.7	12.6	40.0	27.4	NS
Vert	78.000	QP	23.4	7.0	7.3	28.5	9.2	40.0	30.8	NS
Vert	104.000	QP	23.2	11.2	7.5	28.5	13.4	43.5	30.1	NS
Vert	130.000	QP	23.0	14.4	7.7	28.4	16.7	43.5	26.8	NS
Vert	156.000	QP	22.9	15.9	7.9	28.3	18.4	43.5	25.1	NS
Vert	312.000	QP	22.6	15.2	8.9	27.9	18.8	46.0	27.2	NS
Vert	4882.000	PK	41.1	30.6	5.1	31.3	45.5	73.9	28.4	NS
Vert	7323.000	PK	41.2	35.3	5.8	31.1	51.2	73.9	22.7	NS
Vert	9764.000	PK	41.5	37.9	6.7	31.4	54.7	73.9	19.2	NS
Vert	24410.000	PK	45.8	39.9	-1.3	29.0	55.4	73.9	18.5	NS
Vert	4882.000	AV	29.0	30.6	5.1	31.3	33.4	53.9	20.5	NS
Vert	7323.000	AV	29.6	35.3	5.8	31.1	39.6	53.9	14.3	NS
Vert	9764.000	AV	30.0	37.9	6.7	31.4	43.2	53.9	10.7	NS
Vert	24410.000	AV	33.7	39.9	-1.3	29.0	43.3	53.9	10.6	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

NS: Non Signal

Radiated Spurious Emission
(ST)

Test place Head Office EMC Lab. No.2 Semi Anechoic Chamber
Report No. 30JE0265-HO-01
Date June 05, 2010 June 06, 2010
Temperature/ Humidity 24deg.C./ 52% 24deg.C./ 46%
Engineer Takayuki Shimada Norihisa Hashimoto
(Above 1GHz) (Below 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	52.000	QP	23.5	10.7	7.0	28.7	12.5	40.0	27.5	NS
Hori	78.000	QP	23.4	7.0	7.3	28.5	9.2	40.0	30.8	NS
Hori	104.000	QP	23.2	11.2	7.5	28.5	13.4	43.5	30.1	NS
Hori	130.000	QP	23.1	14.4	7.7	28.4	16.8	43.5	26.7	NS
Hori	156.000	QP	22.9	15.9	7.9	28.3	18.4	43.5	25.1	NS
Hori	312.000	QP	22.6	15.2	8.9	27.9	18.8	46.0	27.2	NS
Hori	2483.500	PK	64.9	27.2	2.8	32.4	62.5	-	-	See Marker Delta Method Sheet
Hori	4960.000	PK	40.0	30.7	5.2	31.3	44.6	73.9	29.3	NS
Hori	7440.000	PK	41.2	35.5	6.0	31.1	51.6	73.9	22.3	NS
Hori	9920.000	PK	41.7	38.2	6.7	31.4	55.2	73.9	18.7	NS
Hori	24800.000	PK	47.9	39.9	-1.2	29.0	57.6	73.9	16.3	NS
Hori	2483.500	AV	54.1	27.2	2.8	32.4	51.7	-	-	See Marker Delta Method Sheet
Hori	4960.000	AV	28.9	30.7	5.2	31.3	33.5	53.9	20.4	NS
Hori	7440.000	AV	29.8	35.5	6.0	31.1	40.2	53.9	13.7	NS
Hori	9920.000	AV	30.3	38.2	6.7	31.4	43.8	53.9	10.1	NS
Hori	24800.000	AV	36.0	39.9	-1.2	29.0	45.7	53.9	8.2	NS
Vert	52.000	QP	23.6	10.7	7.0	28.7	12.6	40.0	27.4	NS
Vert	78.000	QP	23.4	7.0	7.3	28.5	9.2	40.0	30.8	NS
Vert	104.000	QP	23.2	11.2	7.5	28.5	13.4	43.5	30.1	NS
Vert	130.000	QP	23.0	14.4	7.7	28.4	16.7	43.5	26.8	NS
Vert	156.000	QP	22.9	15.9	7.9	28.3	18.4	43.5	25.1	NS
Vert	312.000	QP	22.6	15.2	8.9	27.9	18.8	46.0	27.2	NS
Vert	2483.500	PK	64.0	27.2	2.8	32.4	61.6	-	-	See Marker Delta Method Sheet
Vert	4960.000	PK	40.2	30.7	5.2	31.3	44.8	73.9	29.1	NS
Vert	7440.000	PK	41.2	35.5	6.0	31.1	51.6	73.9	22.3	NS
Vert	9920.000	PK	41.7	38.2	6.7	31.4	55.2	73.9	18.7	NS
Vert	24800.000	PK	47.8	39.9	-1.2	29.0	57.5	73.9	16.4	NS
Vert	2483.500	AV	53.2	27.2	2.8	32.4	50.8	-	-	See Marker Delta Method Sheet
Vert	4960.000	AV	29.0	30.7	5.2	31.3	33.6	53.9	20.3	NS
Vert	7440.000	AV	29.8	35.5	6.0	31.1	40.2	53.9	13.7	NS
Vert	9920.000	AV	30.3	38.2	6.7	31.4	43.8	53.9	10.1	NS
Vert	24800.000	AV	36.0	39.9	-1.2	29.0	45.7	53.9	8.2	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

NS: Non Signal

Radiated Spurious Emission
Marker Delta Method Sheet
(ST)

Test place Head Office EMC Lab. No.2 Semi Anechoic Chamber
Report No. 30JE0265-HO-01
Date June 05, 2010
Temperature/ Humidity 24deg.C./ 52%
Engineer Takayuki Shimada
(Above 1GHz)
Mode Tx, 3DH5 2480MHz

Marker Delta Method(Test distance 3meters)

		Polarity	Hor[dBμV/m]		Ver[dBμV/m]	
		Detector	PK	AV	PK	AV
		RBW \ VBW	3MHz	270Hz	3MHz	270Hz
Step1	Fundamental(2480.0MHz)	1MHz	99.1	95.5	97	93.3
Step2	Fundamental(2480.0MHz)	30kHz	98.7	-	96.6	-
	Band-edge(2483.5MHz)	30kHz	49.7	-	47.9	-
	Amplitude delta*1	-	49	49	48.7	48.7
Step3	Field strength of band-edge*2	-	50.1	46.5	48.3	44.6
	Limit	-	73.9	53.9	73.9	53.9
	Margin	-	23.8	7.4	25.6	9.3

*1 Amplitude delta = Fundamental(RBW:30kHz,VBW:3MHz) - Band-edge(RBW:30kHz,VBW:3MHz)

*2Field strength of band-edge = Fundamental(RBW:1MHz) - Amplitude delta

Radiated Spurious Emission
(ST)

Test place Head Office EMC Lab. No.2 Semi Anechoic Chamber
Report No. 30JE0265-HO-01
Date June 05, 2010 June 06, 2010
Temperature/ Humidity 24deg.C./ 52% 24deg.C./ 46%
Engineer Takayuki Shimada Norihisa Hashimoto
(Above 1GHz) (Below 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	52.000	QP	23.5	10.7	7.0	28.7	12.5	40.0	27.5	NS
Hori	78.000	QP	23.4	7.0	7.3	28.5	9.2	40.0	30.8	NS
Hori	104.000	QP	23.2	11.2	7.5	28.5	13.4	43.5	30.1	NS
Hori	130.000	QP	23.0	14.4	7.7	28.4	16.7	43.5	26.8	NS
Hori	156.000	QP	22.8	15.9	7.9	28.3	18.3	43.5	25.2	NS
Hori	312.000	QP	22.6	15.2	8.9	27.9	18.8	46.0	27.2	NS
Hori	1626.350	PK	46.0	25.8	2.3	32.8	41.3	73.9	32.6	
Hori	2439.500	PK	45.5	27.2	2.8	32.4	43.1	73.9	30.8	
Hori	2441.000	PK	41.5	27.2	2.8	32.4	39.1	73.9	34.8	NS
Hori	4879.000	PK	40.9	30.6	3.8	31.3	44.0	73.9	29.9	NS
Hori	7318.500	PK	40.9	35.3	4.2	31.1	49.3	73.9	24.6	NS
Hori	1626.350	AV	40.0	25.8	2.3	32.8	35.3	53.9	18.6	
Hori	2439.500	AV	39.7	27.2	2.8	32.4	37.3	53.9	16.6	
Hori	2441.000	AV	29.3	27.2	2.8	32.4	26.9	53.9	27.0	NS
Hori	4879.000	AV	28.7	30.6	3.8	31.3	31.8	53.9	22.1	NS
Hori	7318.500	AV	29.3	35.3	4.2	31.1	37.7	53.9	16.2	NS
Vert	52.000	QP	23.6	10.7	7.0	28.7	12.6	40.0	27.4	NS
Vert	78.000	QP	23.4	7.0	7.3	28.5	9.2	40.0	30.8	NS
Vert	104.000	QP	23.1	11.2	7.5	28.5	13.3	43.5	30.2	NS
Vert	130.000	QP	23.0	14.4	7.7	28.4	16.7	43.5	26.8	NS
Vert	156.000	QP	22.9	15.9	7.9	28.3	18.4	43.5	25.1	NS
Vert	312.000	QP	22.5	15.2	8.9	27.9	18.7	46.0	27.3	NS
Vert	1626.350	PK	45.6	25.8	2.3	32.8	40.9	73.9	33.0	
Vert	2439.500	PK	45.2	27.2	2.8	32.4	42.8	73.9	31.1	
Vert	2441.000	PK	41.4	27.2	2.8	32.4	39.0	73.9	34.9	NS
Vert	4879.000	PK	40.9	30.6	3.8	31.3	44.0	73.9	29.9	NS
Vert	7318.500	PK	40.9	35.3	4.2	31.1	49.3	73.9	24.6	NS
Vert	1626.350	AV	38.4	25.8	2.3	32.8	33.7	53.9	20.2	
Vert	2439.500	AV	39.7	27.2	2.8	32.4	37.3	53.9	16.6	
Vert	2441.000	AV	29.3	27.2	2.8	32.4	26.9	53.9	27.0	NS
Vert	4879.000	AV	28.6	30.6	3.8	31.3	31.7	53.9	22.2	NS
Vert	7318.500	AV	29.3	35.3	4.2	31.1	37.7	53.9	16.2	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).

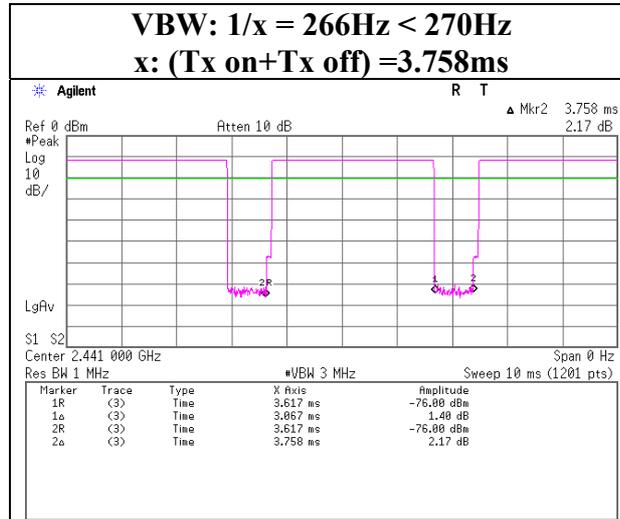
Distance factor: 10GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB
26.5GHz-40GHz 20log(3.0m/0.5m)=15.6dB

NS: Non Signal

VBW (AV) Calculation

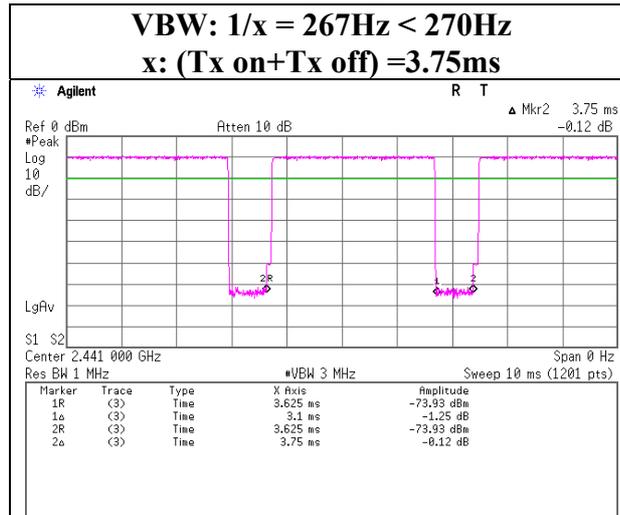
Tx DH5

VBW: $1/x = 266\text{Hz} < 270\text{Hz}$
x: (Tx on+Tx off) = 3.758ms



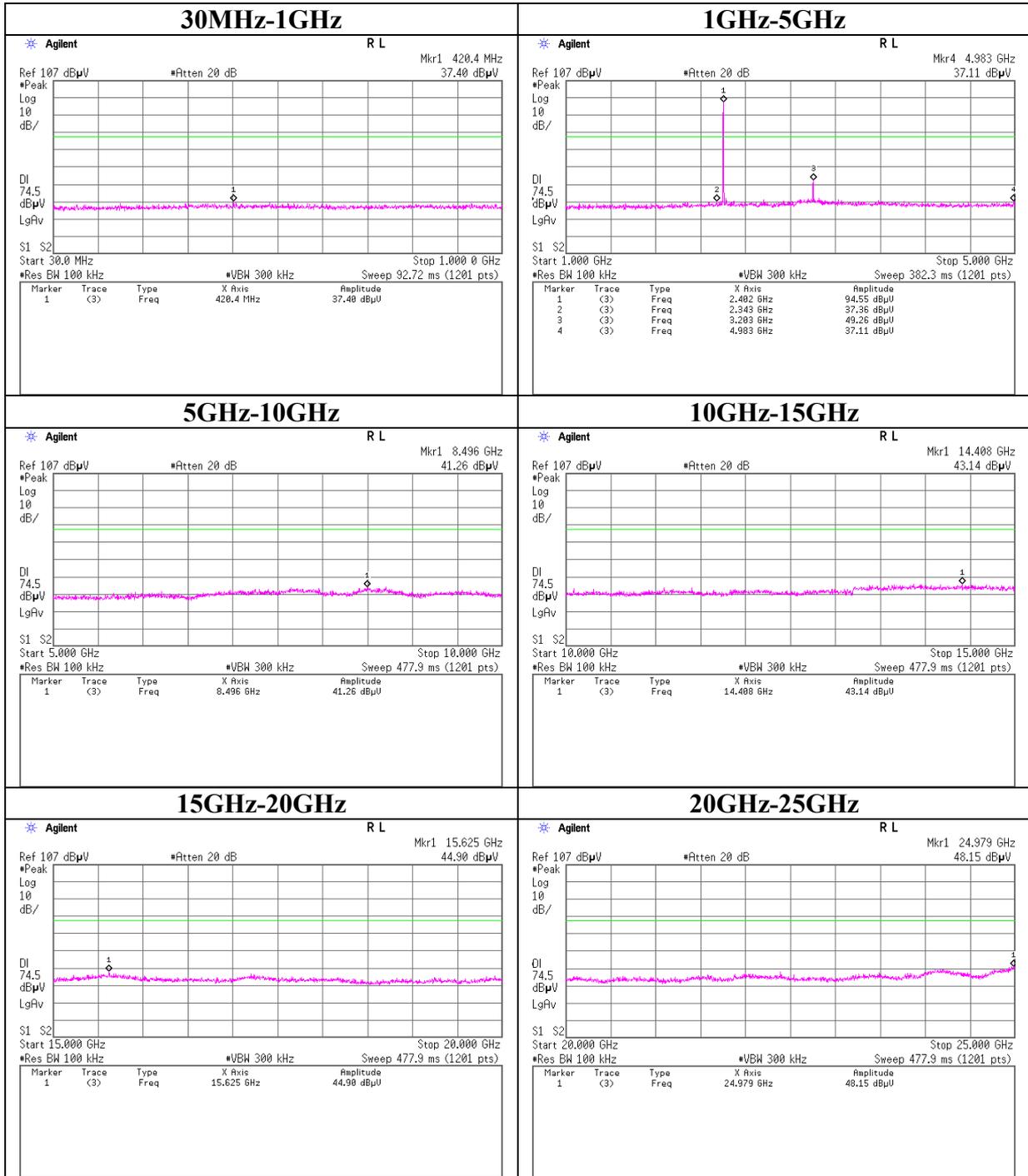
Tx 3DH5

VBW: $1/x = 267\text{Hz} < 270\text{Hz}$
x: (Tx on+Tx off) = 3.75ms



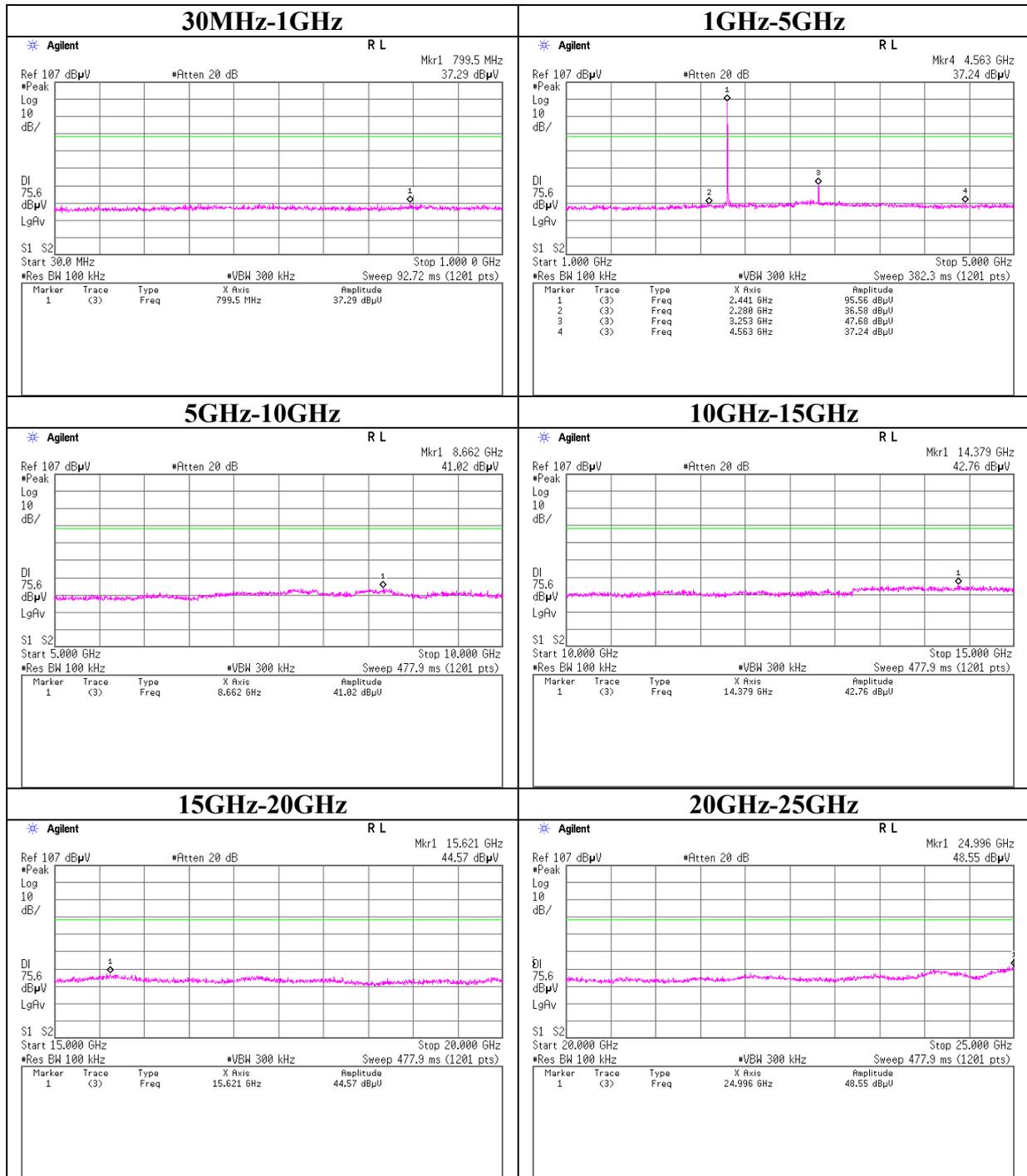
Conducted Spurious Emission

Tx DH5 2402MHz



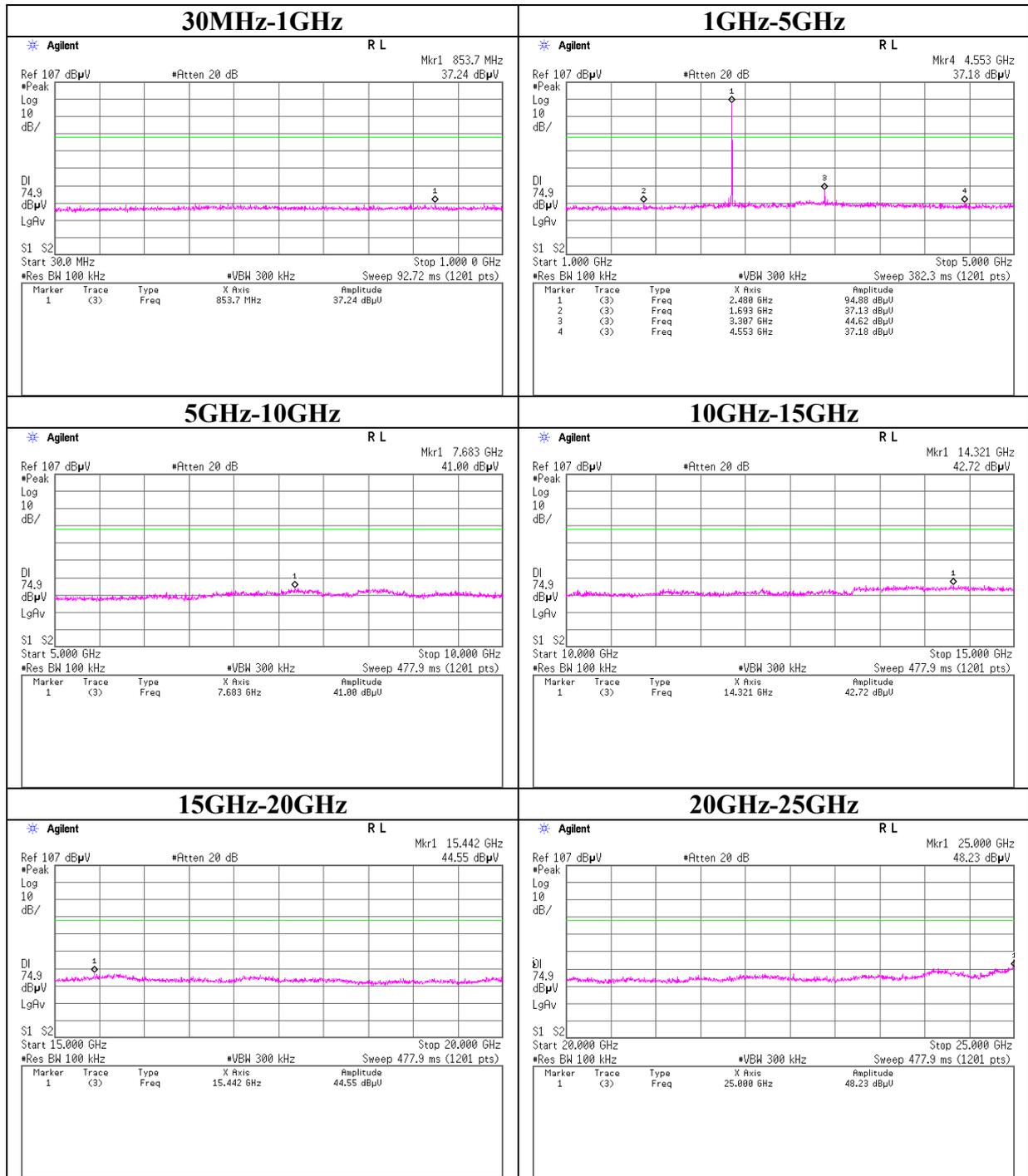
Conducted Spurious Emission

Tx DH5 2441MHz



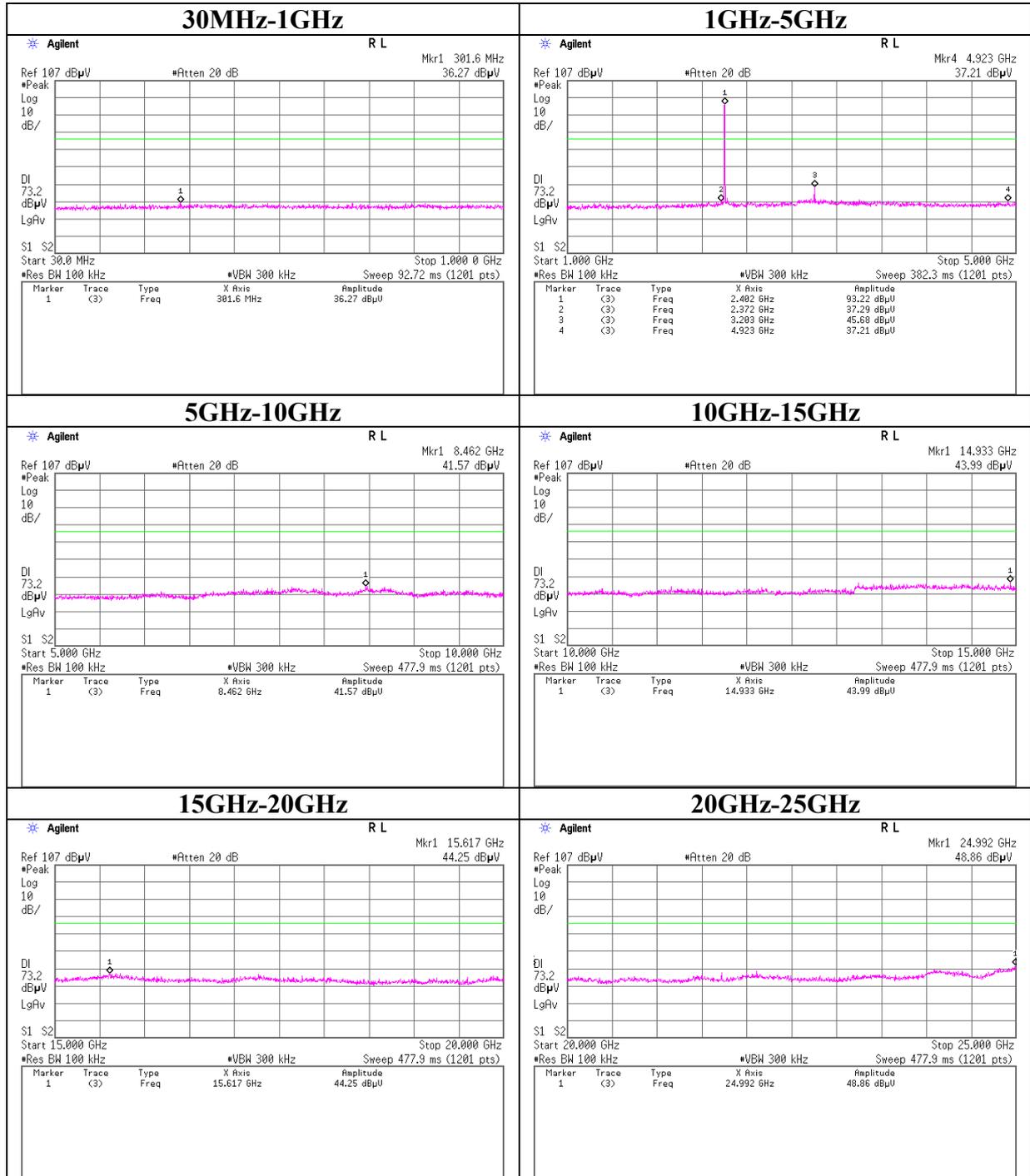
Conducted Spurious Emission

Tx DH5 2480MHz



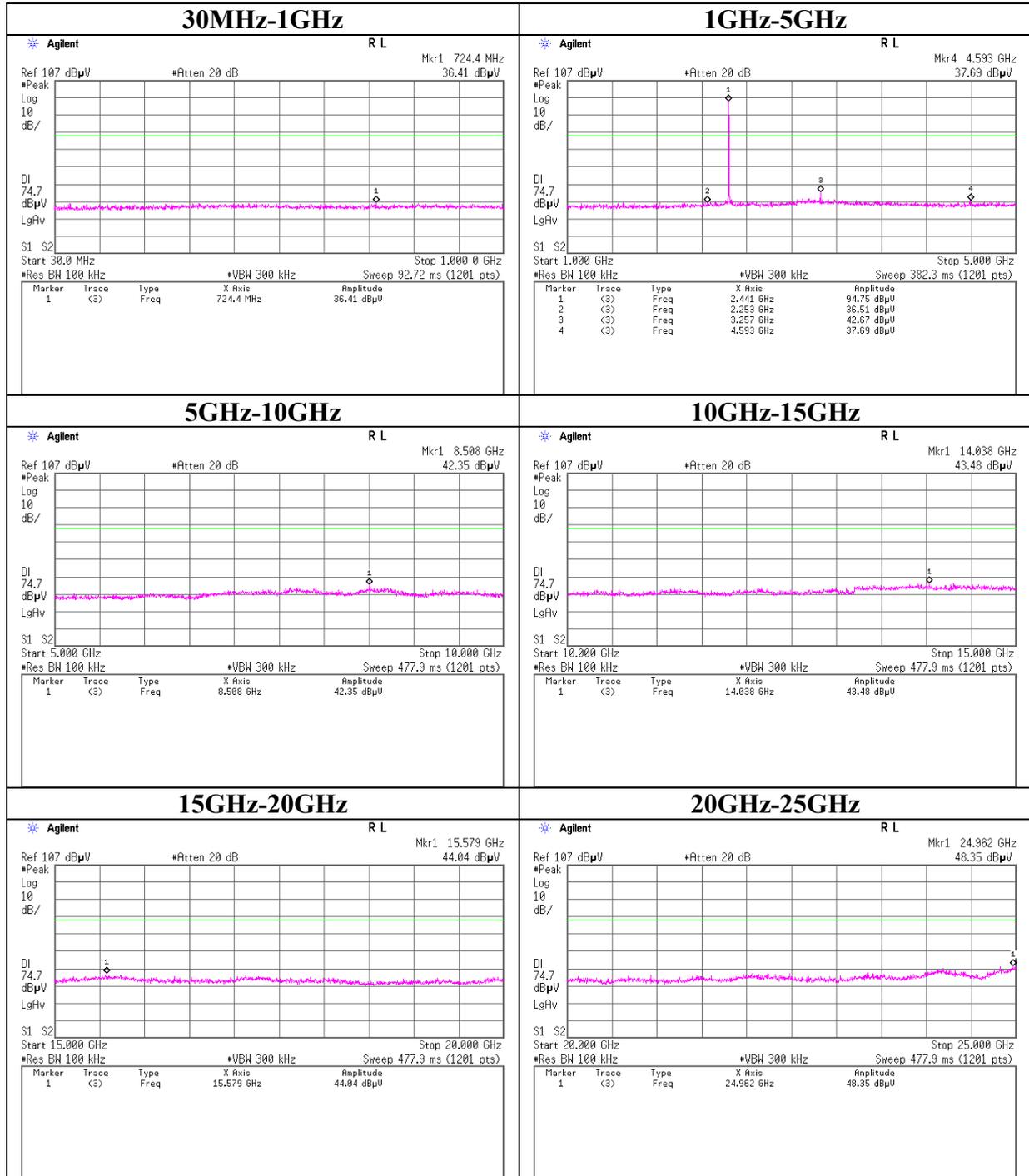
Conducted Spurious Emission

Tx 3DH5 2402MHz



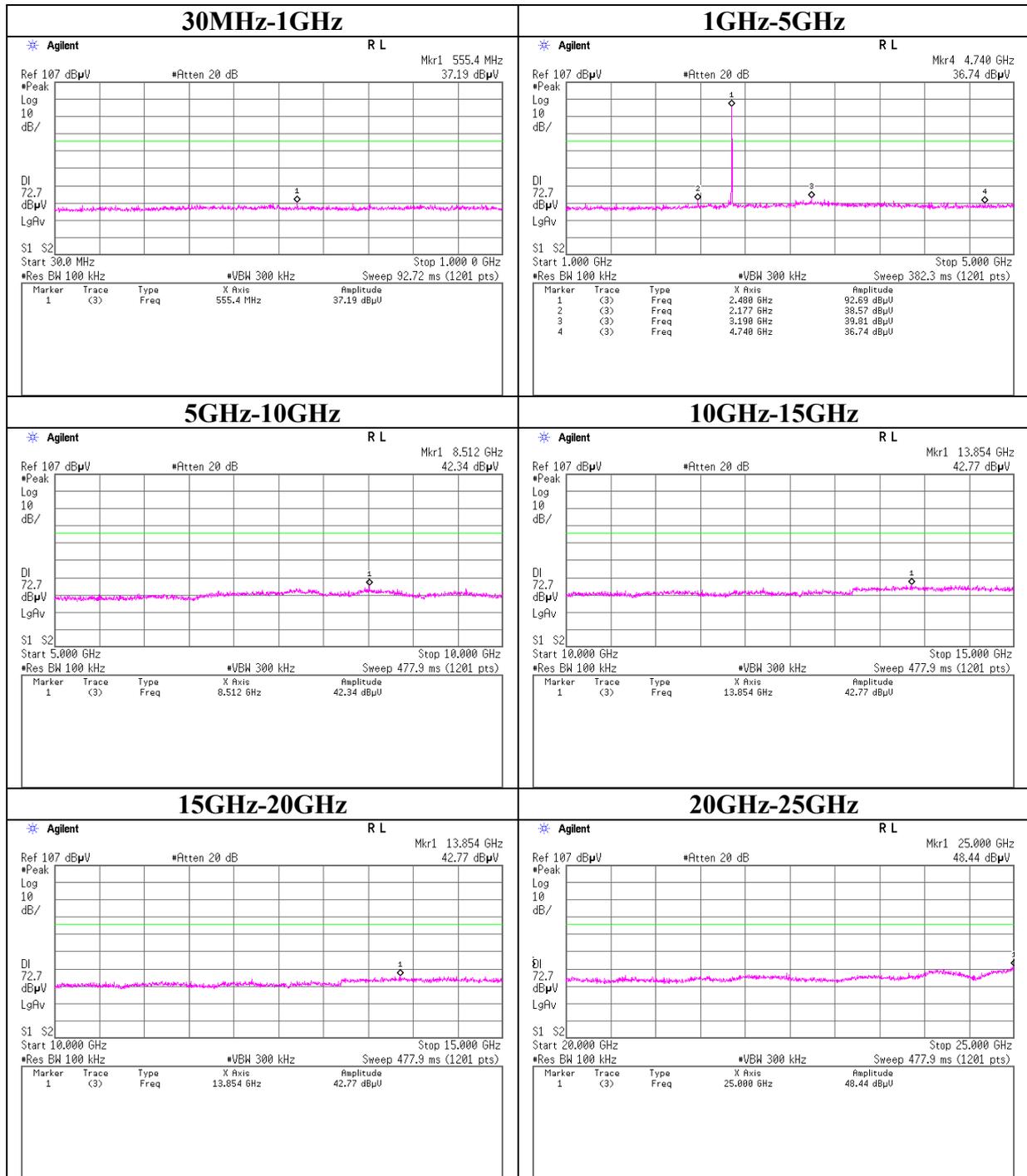
Conducted Spurious Emission

Tx 3DH5 2441MHz



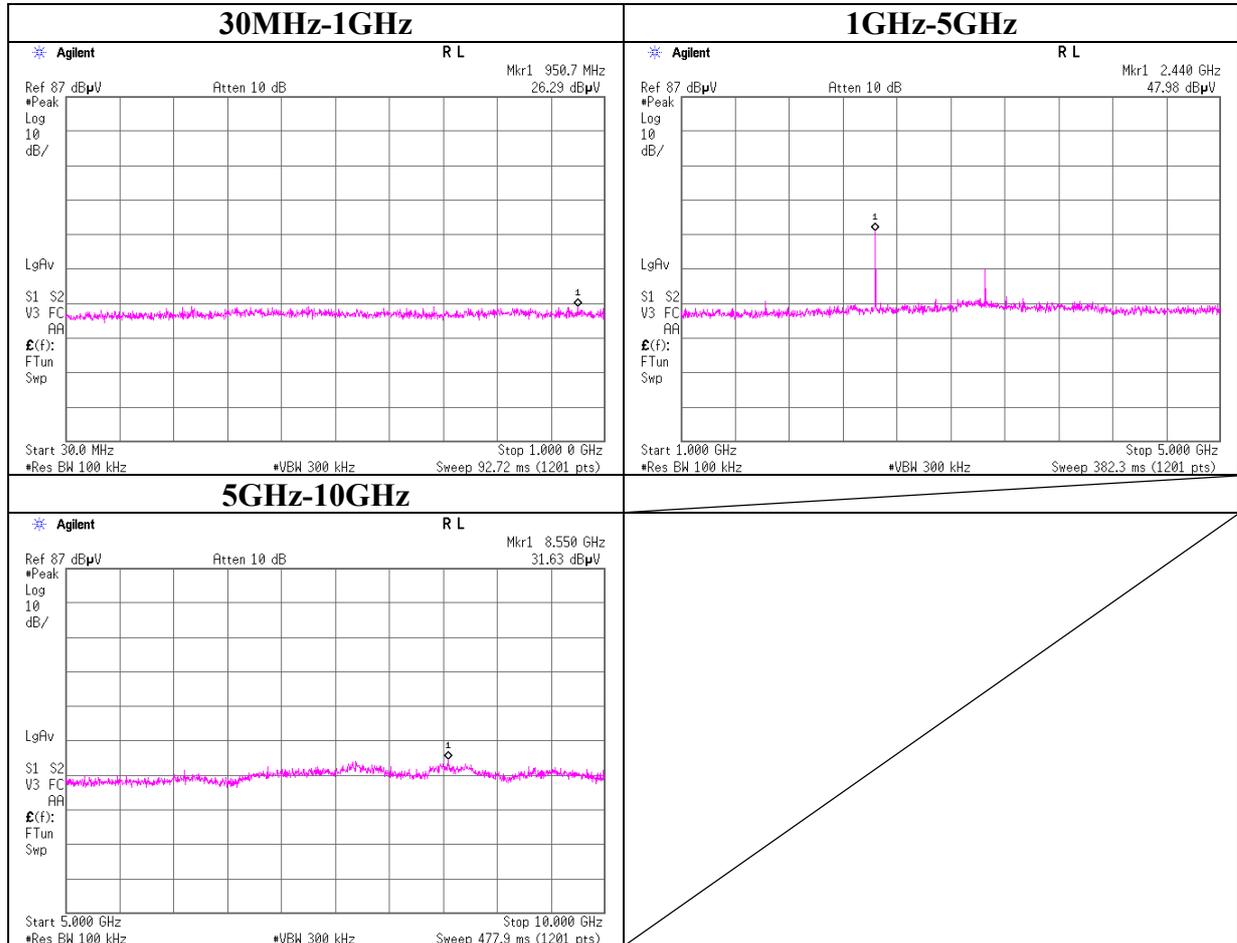
Conducted Spurious Emission

Tx 3DH5 2480MHz



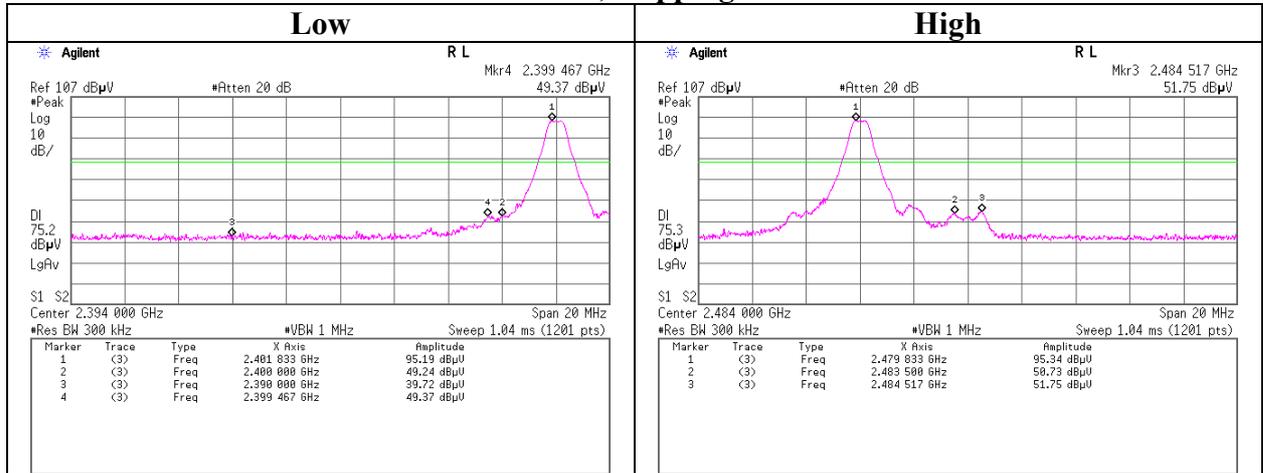
Conducted Spurious Emission

Rx 2441MHz

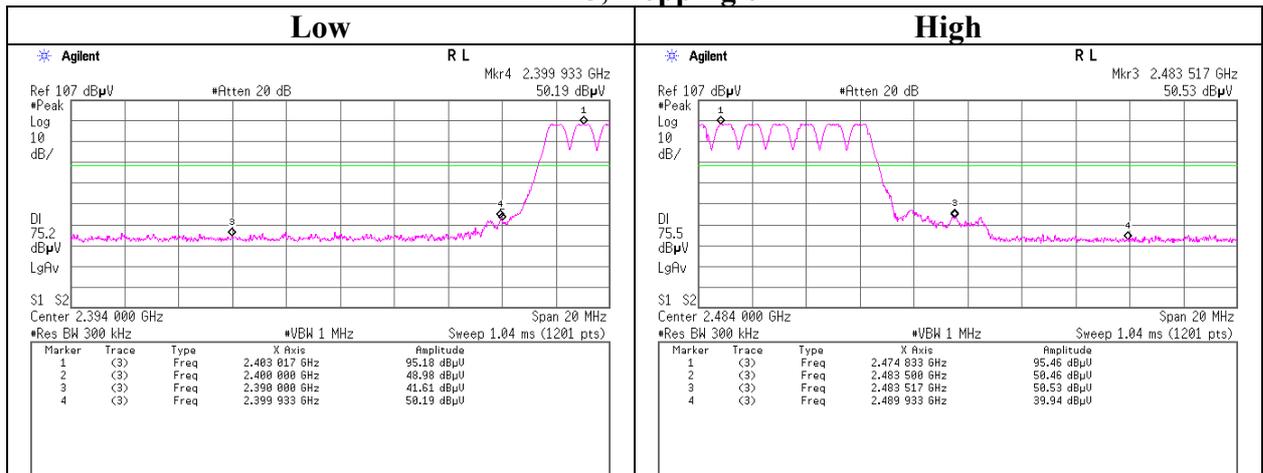


Conducted Emission Band Edge compliance

Tx DH5, Hopping off

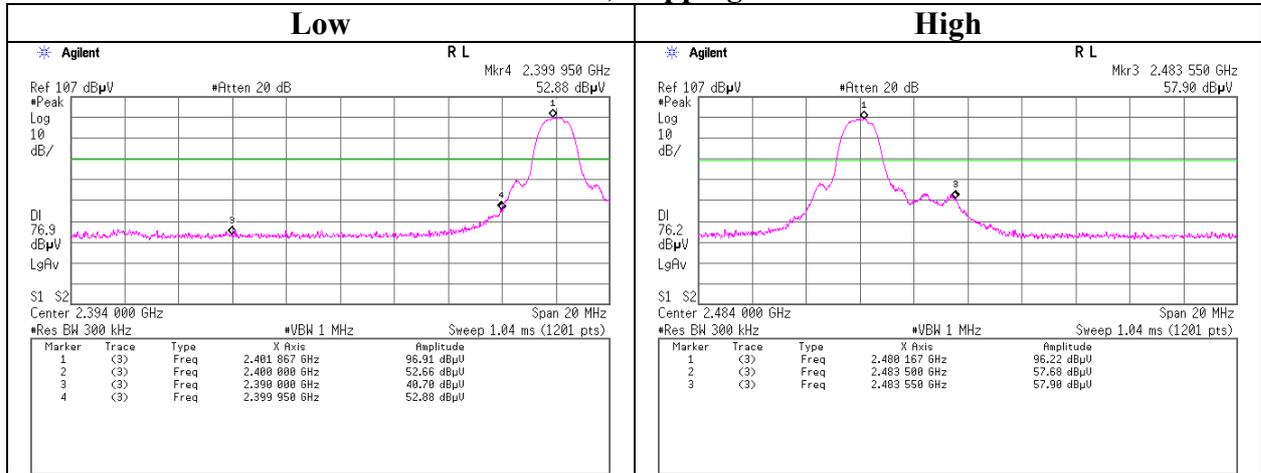


Tx DH5, Hopping on

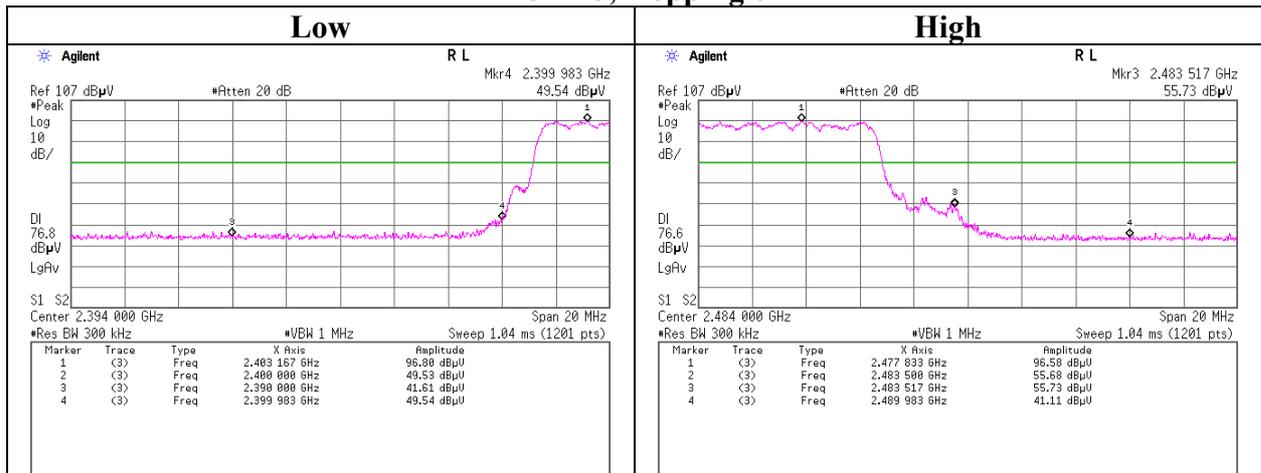


Conducted Emission Band Edge compliance

Tx 3DH5, Hopping off



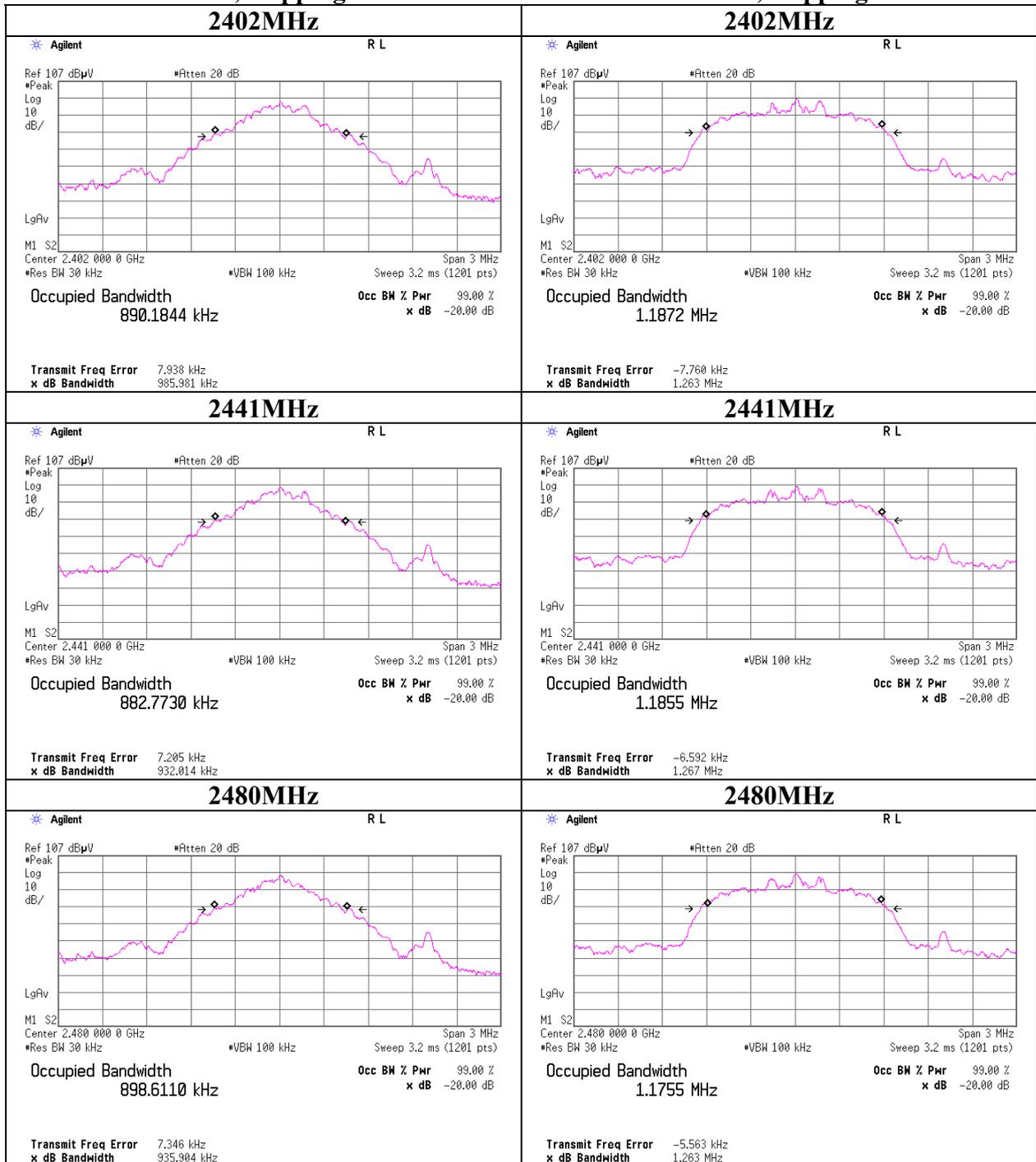
Tx 3DH5, Hopping on



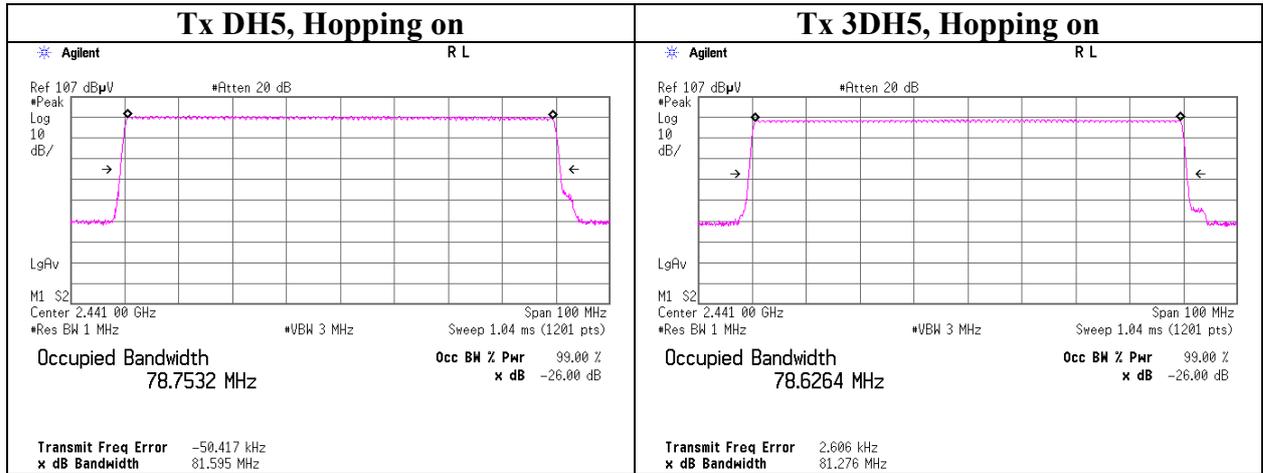
99%Occupied Bandwidth

Tx DH5, Hopping off

Tx 3DH5, Hopping off



99% Occupied Bandwidth



*Refer to 20dB Bandwidth for 99% Bandwidth inquiry mode.

APPENDIX 3: Test instruments

EMI test equipment

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
MAEC-04	Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-10005	CE	2010/02/02 * 12
MOS-15	Thermo-Hygrometer	Custom	CTH-180	-	CE	2010/02/09 * 12
MJM-07	Measure	PROMART	SEN1955	-	CE	-
COTS-MEMI	EMI measurement program	TSJ	TEPTO-DV	-	CE/RE	-
MSA-05	Spectrum Analyzer	Advantest	R3273	160400285	CE	2009/12/15 * 12
MTR-07	Test Receiver	Rohde & Schwarz	ESCI	100635	CE	2009/10/23 * 12
MLS-07	LISN(AMN)	Schwarzbeck	NSLK8127	8127364	CE	2010/02/05 * 12
MTA-31	Terminator	TME	CT-01	-	CE	2010/01/20 * 12
MCC-113	Coaxial cable	Fujikura/Suhner/TSJ	5D-2W(10m)/SFM141(5m)/421-010(1m)/sucoform141-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
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-04	Spectrum Analyzer	Agilent	E4448A	US44300523	RE, AT	2009/08/25 * 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-78	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	278993/4	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-47	Microwave Cable	Suhner	SUCOFLEX104	295123(5m) / 287573(1m)	RE	2009/11/19 * 12

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Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
MPA-10	Pre Amplifier	Agilent	8449B	3008A02142	RE	2009/09/14 * 12
MHA-02	Horn Antenna 18-26.5GHz	EMCO	3160-09	1265	RE	2010/01/19 * 12
MCC-77	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	278942/4	RE	2009/12/19 * 12
MHF-18	High Pass Filter 3.5-18.0GHz	TOKIMEC	TF323DCA	7002	RE	2009/12/19 * 12
MTR-03	Test Receiver	Rohde & Schwarz	ESCI	100300	RE	2010/04/19 * 12
MBA-02	Biconical Antenna	Schwarzbeck	BBA9106	VHA91032008	RE	2009/10/05 * 12
MLA-02	Logperiodic Antenna	Schwarzbeck	USLP9143	201	RE	2009/10/05 * 12
MCC-12	Coaxial Cable	Fujikura/Agilent	-	-	RE	2010/02/22 * 12
MAT-07	Attenuator(6dB)	Weinschel Corp	2	BK7970	RE	2009/11/12 * 12
MPA-09	Pre Amplifier	Agilent	8447D	2944A10845	RE	2009/09/02 * 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
MAT-22	Attenuator(10dB) 1-18GHz	Orient Microwave	BX10-0476-00	-	AT	2010/03/01 * 12
MOS-14	Thermo-Hygrometer	Custom	CTH-201	-	AT	2010/05/19 * 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**