

APPENDIX 2: Data of EMI test

Conducted Emission

DATA OF CONDUCTED EMISSION TEST

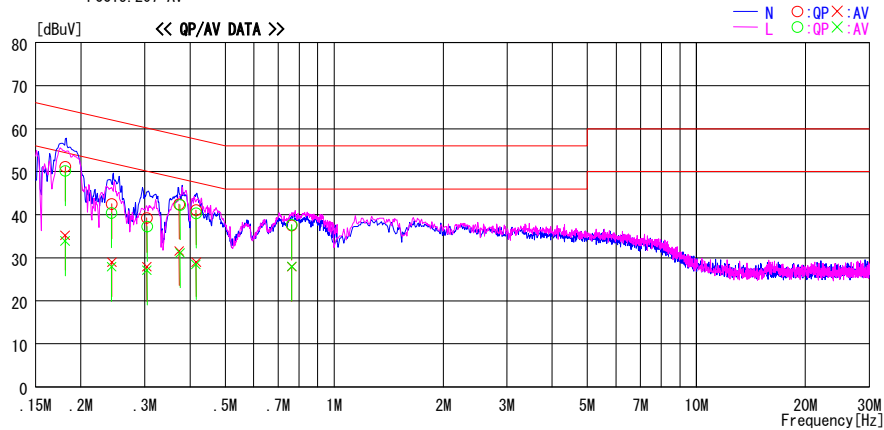
UL Japan, Inc. Head Office EMC Lab. No.4 Semi Anechoic Chamber
Date : 2010/07/30

Report No. : 30GE0232-HO-02

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

Mode / Remarks : BT Tx DH5 2402MHz

LIMIT : FCC15.207 QP
FCC15.207 AV

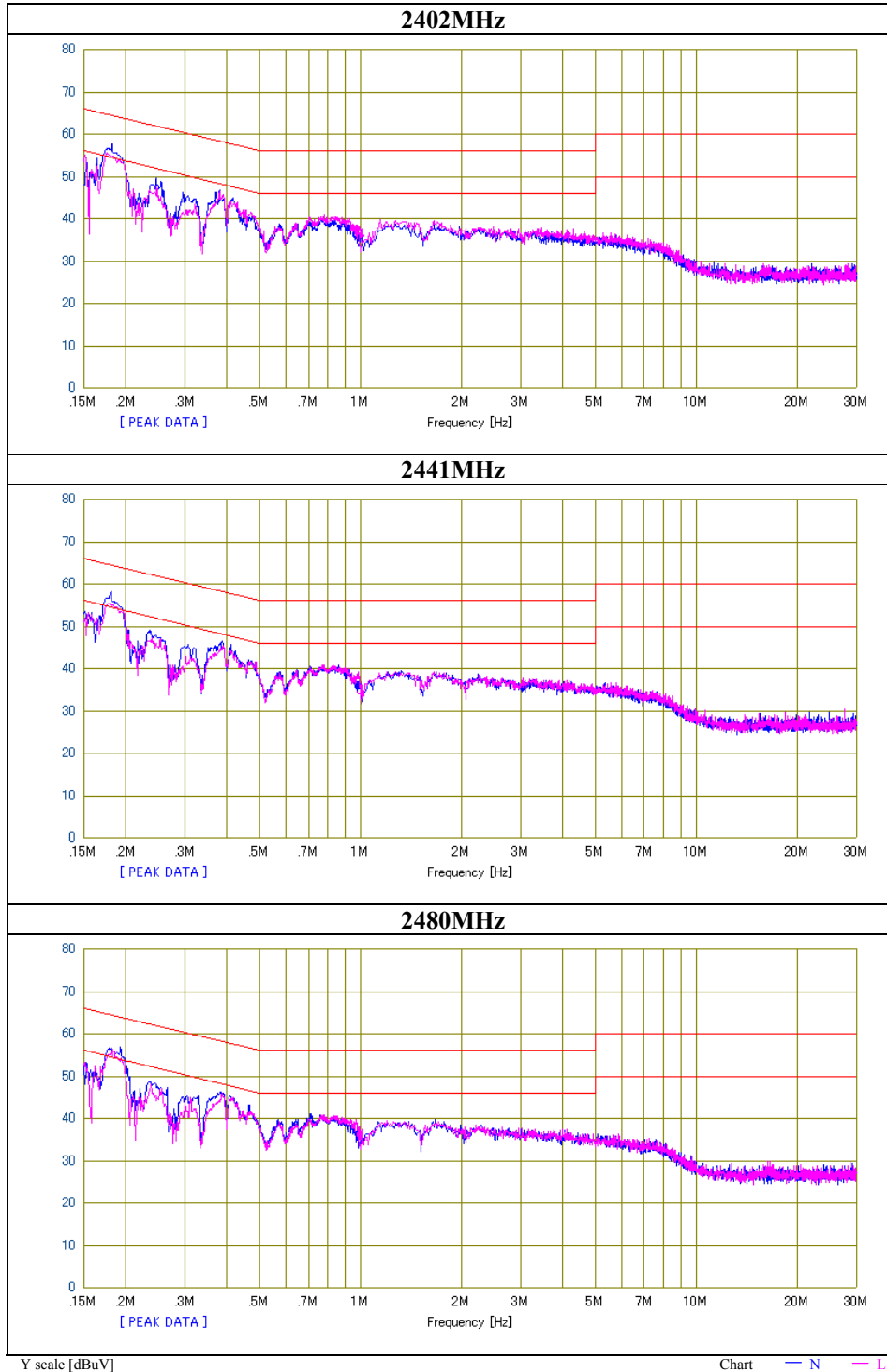


Frequency [MHz]	Reading Level		Corr. Factor [dB]	Results		Limit		Margin		Phase	Comment
	QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]		
0.18082	38.0	22.0	13.2	51.2	35.2	64.4	54.4	13.2	19.2	N	
0.24322	29.2	15.7	13.3	42.5	29.0	62.0	52.0	19.5	23.0	N	
0.30412	26.0	14.6	13.3	39.3	27.9	60.1	50.1	20.8	22.2	N	
0.37313	29.1	18.3	13.3	42.4	31.6	58.4	48.4	16.0	16.8	N	
0.41567	27.8	15.7	13.3	41.1	29.0	57.5	47.5	16.4	18.5	N	
0.76340	24.2	14.6	13.3	37.5	27.9	56.0	46.0	18.5	18.1	N	
0.18088	37.0	20.7	13.2	50.2	33.9	64.4	54.4	14.2	20.5	L	
0.24272	27.1	14.6	13.3	40.4	27.9	62.0	52.0	21.6	24.1	L	
0.30441	24.0	13.8	13.3	37.3	27.1	60.1	50.1	22.8	23.0	L	
0.37517	29.0	17.8	13.3	42.3	31.1	58.4	48.4	16.1	17.3	L	
0.41530	27.0	15.1	13.3	40.3	28.4	57.5	47.5	17.2	19.1	L	
0.76260	24.4	14.7	13.3	37.7	28.0	56.0	46.0	18.3	18.0	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

Test place : Head Office EMC Lab. No.4 Semi Anechoic Chamber
Report No. : 30GE0232-HO-02
Date : 07/29/2010
Temperature/ Humidity : 26 deg. C. / 59%
Engineer : Takayuki Shimada
Mode : BT Tx DH5



Conducted Emission

DATA OF CONDUCTED EMISSION TEST

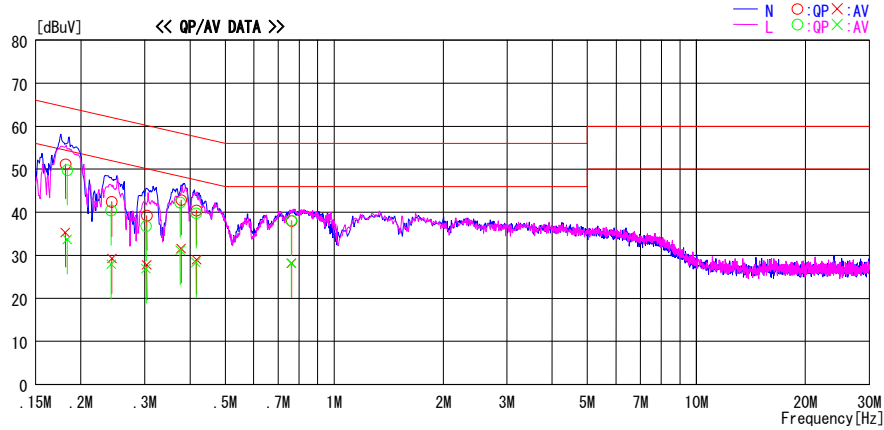
UL Japan, Inc. Head Office EMC Lab. No. 4 Semi Anechoic Chamber
Date : 2010/07/30

Report No. : 30GE0232-HO-02

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

Mode / Remarks : BT Tx 3DH5 2402MHz

LIMIT : FCC15.207 QP
FCC15.207 AV

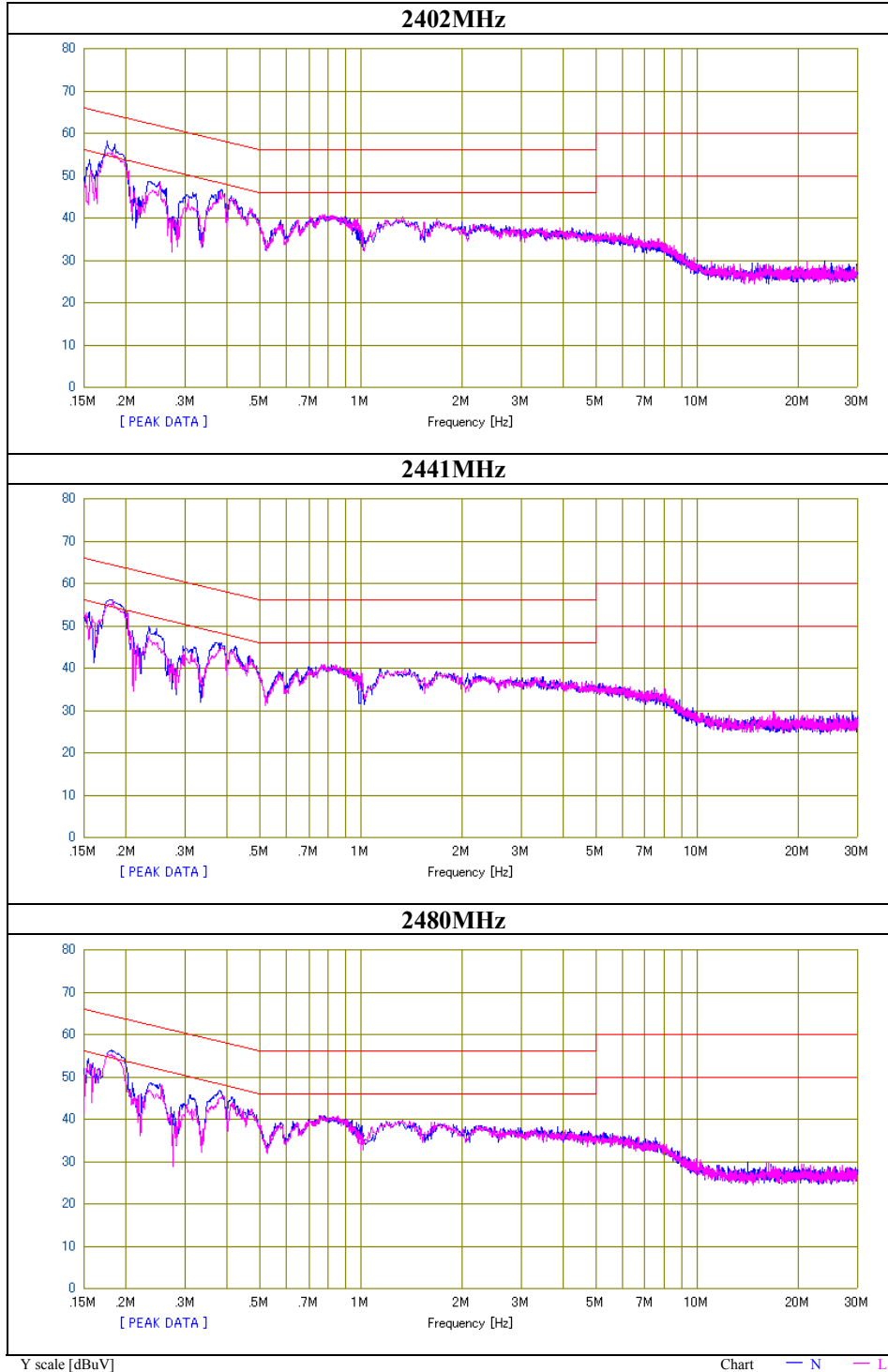


Frequency [MHz]	Reading Level		Corr. Factor [dB]	Results		Limit		Margin		Phase	Comment
	QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]		
0.18124	38.0	22.1	13.2	51.2	35.3	64.4	54.4	13.2	19.1	N	
0.24321	29.1	15.9	13.3	42.4	29.2	62.0	52.0	19.6	22.8	N	
0.30384	25.9	14.5	13.3	39.2	27.8	60.1	50.1	20.9	22.3	N	
0.37797	29.5	18.3	13.3	42.8	31.6	58.3	48.3	15.5	16.7	N	
0.41672	27.1	15.7	13.3	40.4	29.0	57.5	47.5	17.1	18.5	N	
0.76232	24.7	14.9	13.3	38.0	28.2	56.0	46.0	18.0	17.8	N	
0.18330	36.6	20.5	13.2	49.8	33.7	64.3	54.3	14.5	20.6	L	
0.24231	27.1	14.6	13.3	40.4	27.9	62.0	52.0	21.6	24.1	L	
0.30243	23.5	13.6	13.3	36.8	26.9	60.2	50.2	23.4	23.3	L	
0.37574	29.0	17.9	13.3	42.3	31.2	58.4	48.4	16.1	17.2	L	
0.41537	26.5	15.0	13.3	39.8	28.3	57.5	47.5	17.7	19.2	L	
0.76072	24.8	14.9	13.3	38.1	28.2	56.0	46.0	17.9	17.8	L	

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

Conducted Emission

Test place	Head Office EMC Lab. No.4 Semi Anechoic Chamber
Report No.	30GE0232-HO-02
Date	07/29/2010
Temperature/ Humidity	26 deg. C. / 59%
Engineer	Takayuki Shimada
Mode	BT Tx 3DH5



Conducted Emission

DATA OF CONDUCTED EMISSION TEST

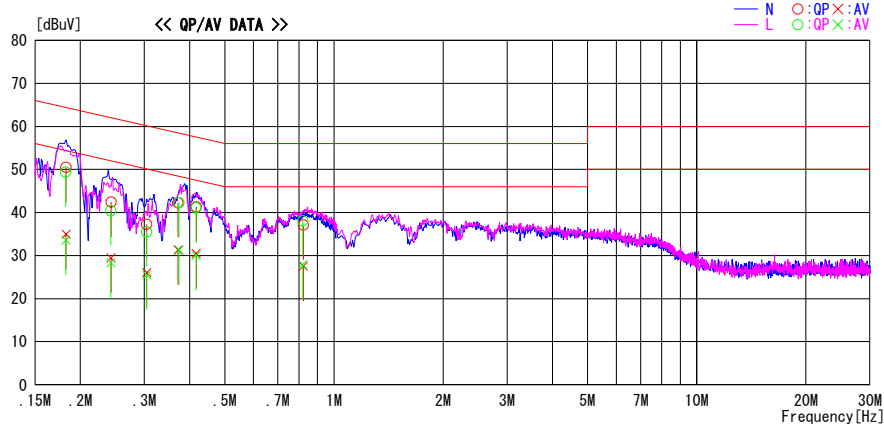
UL Japan, Inc. Head Office EMC Lab. No. 4 Semi Anechoic Chamber
Date : 2010/07/30

Report No. : 30GE0232-HO-02

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

Mode / Remarks : BT Rx 2441MHz

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]		
0.18269	37.3	21.8	13.2	50.5	35.0	64.4	54.4	13.9	19.4	N	
0.24305	29.1	16.2	13.3	42.4	29.5	62.0	52.0	19.6	22.5	N	
0.30482	24.0	12.8	13.3	37.3	26.1	60.1	50.1	22.8	24.0	N	
0.37151	29.0	18.0	13.3	42.3	31.3	58.5	48.5	16.2	17.2	N	
0.41722	28.0	17.2	13.3	41.3	30.5	57.5	47.5	16.2	17.0	N	
0.82306	23.8	14.2	13.3	37.1	27.5	56.0	46.0	18.9	18.5	N	
0.18214	36.2	20.4	13.2	49.4	33.6	64.4	54.4	15.0	20.8	L	
0.24268	27.1	15.0	13.3	40.4	28.3	62.0	52.0	21.6	23.7	L	
0.30462	22.2	12.2	13.3	35.5	25.5	60.1	50.1	24.6	24.6	L	
0.37415	29.0	18.0	13.3	42.3	31.3	58.4	48.4	16.1	17.1	L	
0.41677	27.8	16.7	13.3	41.1	30.0	57.5	47.5	16.4	17.5	L	
0.81946	24.8	14.6	13.3	38.1	27.9	56.0	46.0	17.9	18.1	L	

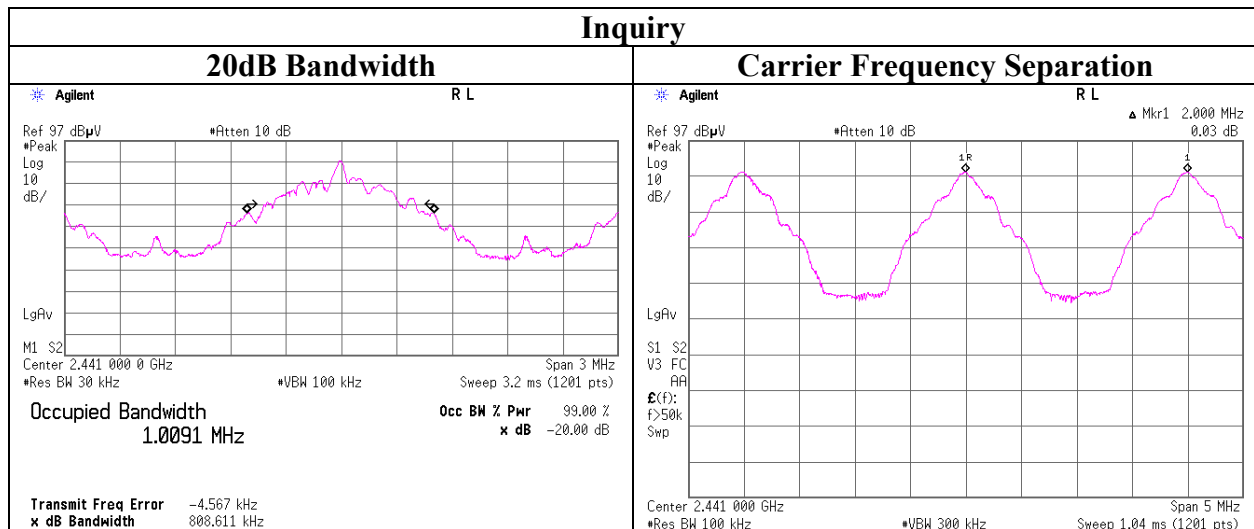
CHART: WITH FACTOR, Peak hold data. CALCULATION: RESULT[dBuV]=READING[dBuV]+C.F[dB] (LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

20dB Bandwidth and Carrier Frequency Separation

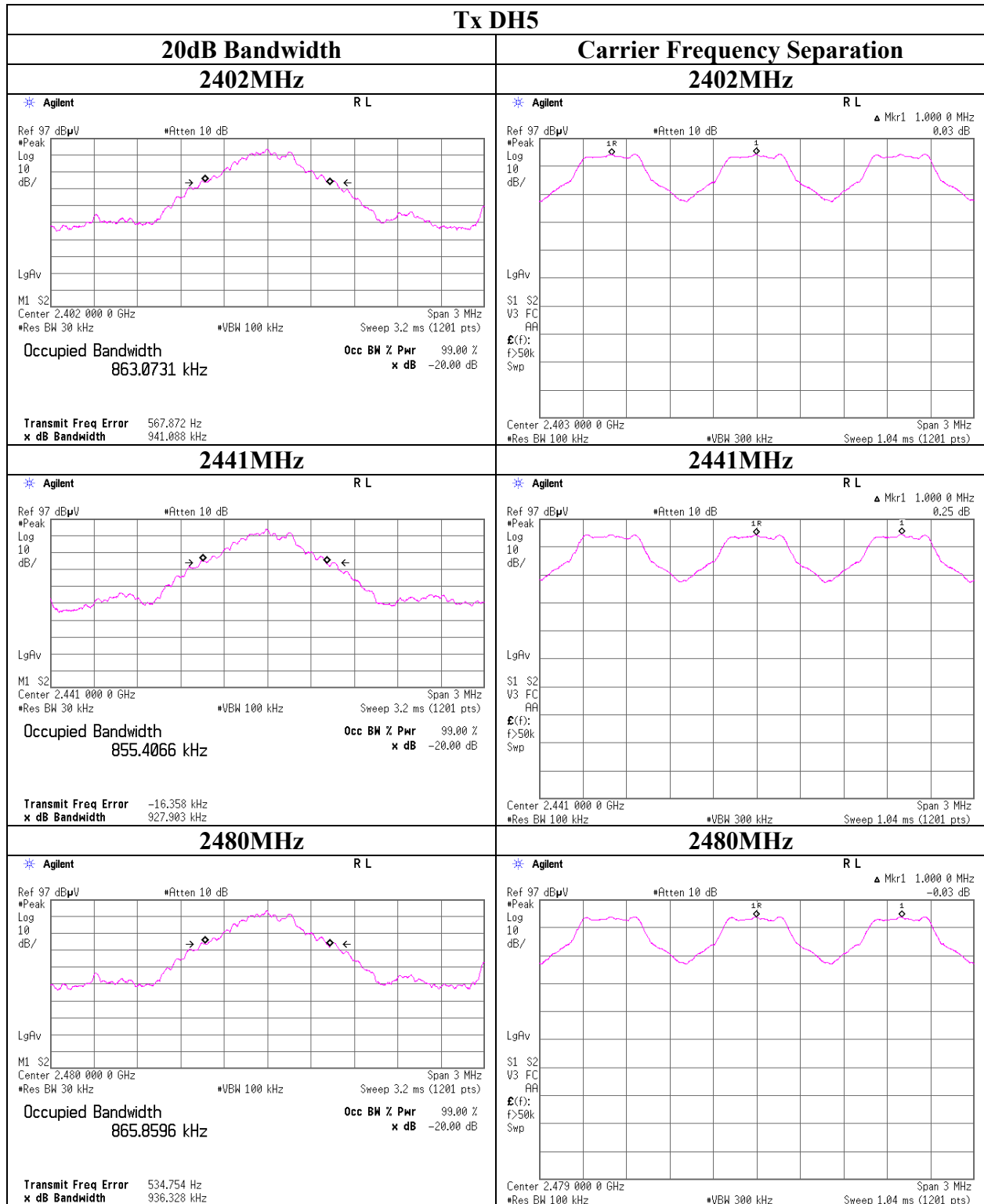
Report No.	30GE0232-HO-02	
Test place	Head Office EMC Lab.	
Measurement Room	No.6	No.6
Date	07/12/2010	10/13/2010
Temperature/ Humidity	25 deg. C. / 58%	24 deg. C. / 62%
Engineer	Takeshi Choda	Takeshi Choda
Mode	BT Tx (Hopping off) DH5/3DH5/Inquiry	

Mode	Freq. [MHz]	20dB Bandwidth [MHz]	Carrier Frequency Separation [MHz]	Limit for Carrier Frequency separation [MHz]
DH5	2402.0	0.941	1.000	≥ 0.627
DH5	2441.0	0.928	1.000	≥ 0.619
DH5	2480.0	0.936	1.000	≥ 0.624
3DH5	2402.0	1.268	1.000	≥ 0.845
3DH5	2441.0	1.261	1.000	≥ 0.841
3DH5	2480.0	1.261	1.000	≥ 0.841
Inquiry	2441.0	0.809	2.000	≥ 0.539

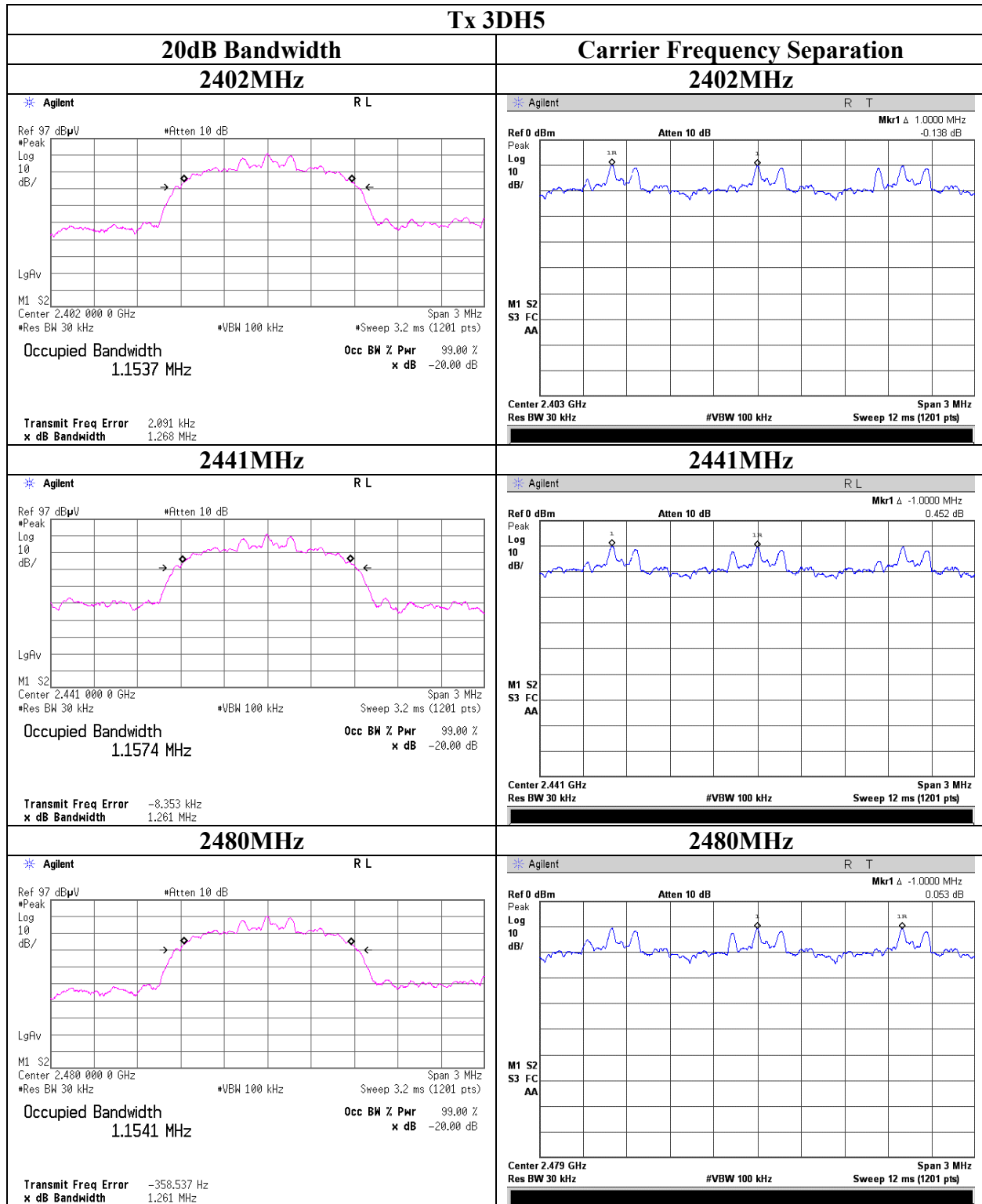
Limit: Two-thirds of 20dB Bandwidth or 25kHz (whichever is greater).
 No limit applies to 20dB Bandwidth.



20dB Bandwidth and Carrier Frequency Separation



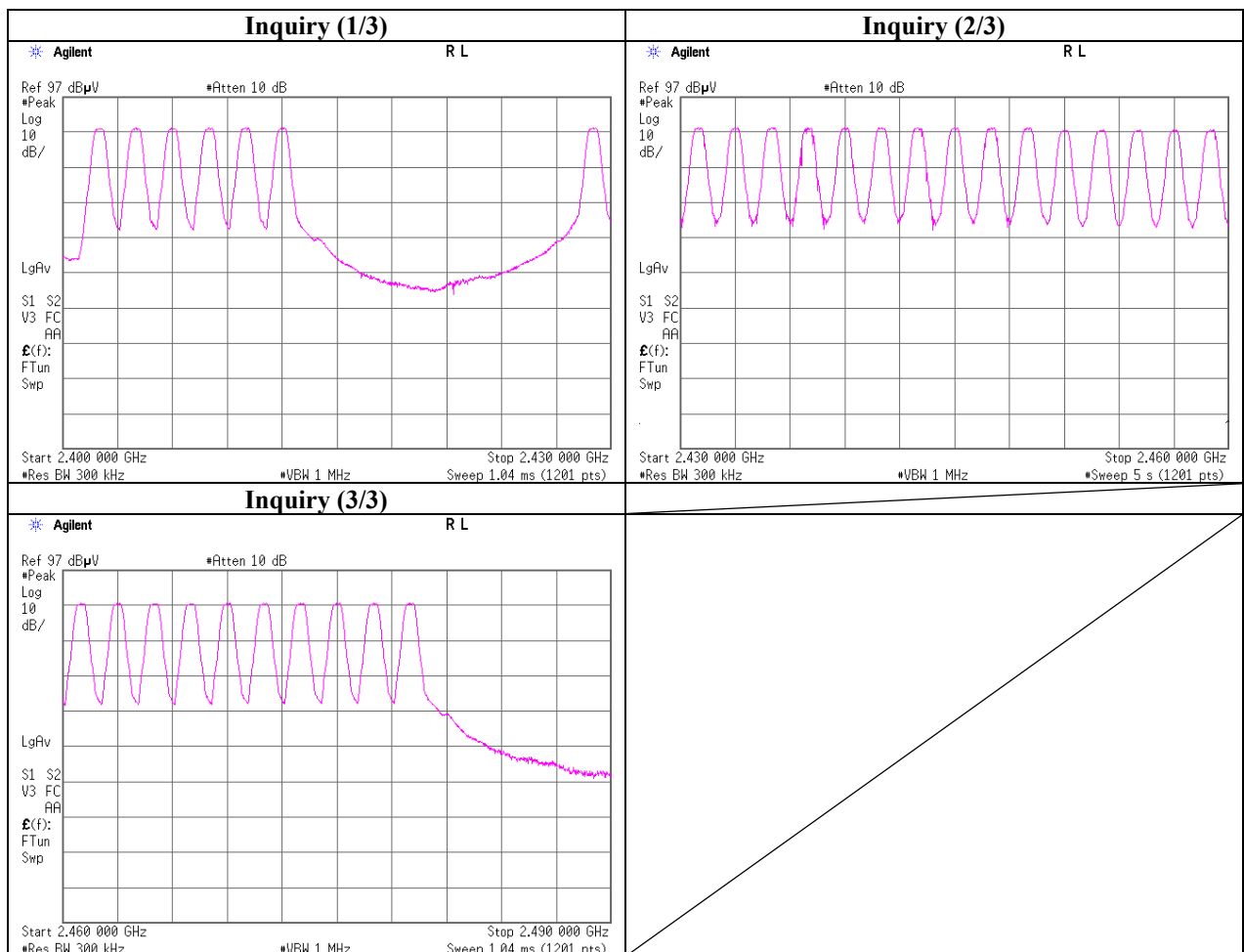
20dB Bandwidth and Carrier Frequency Separation



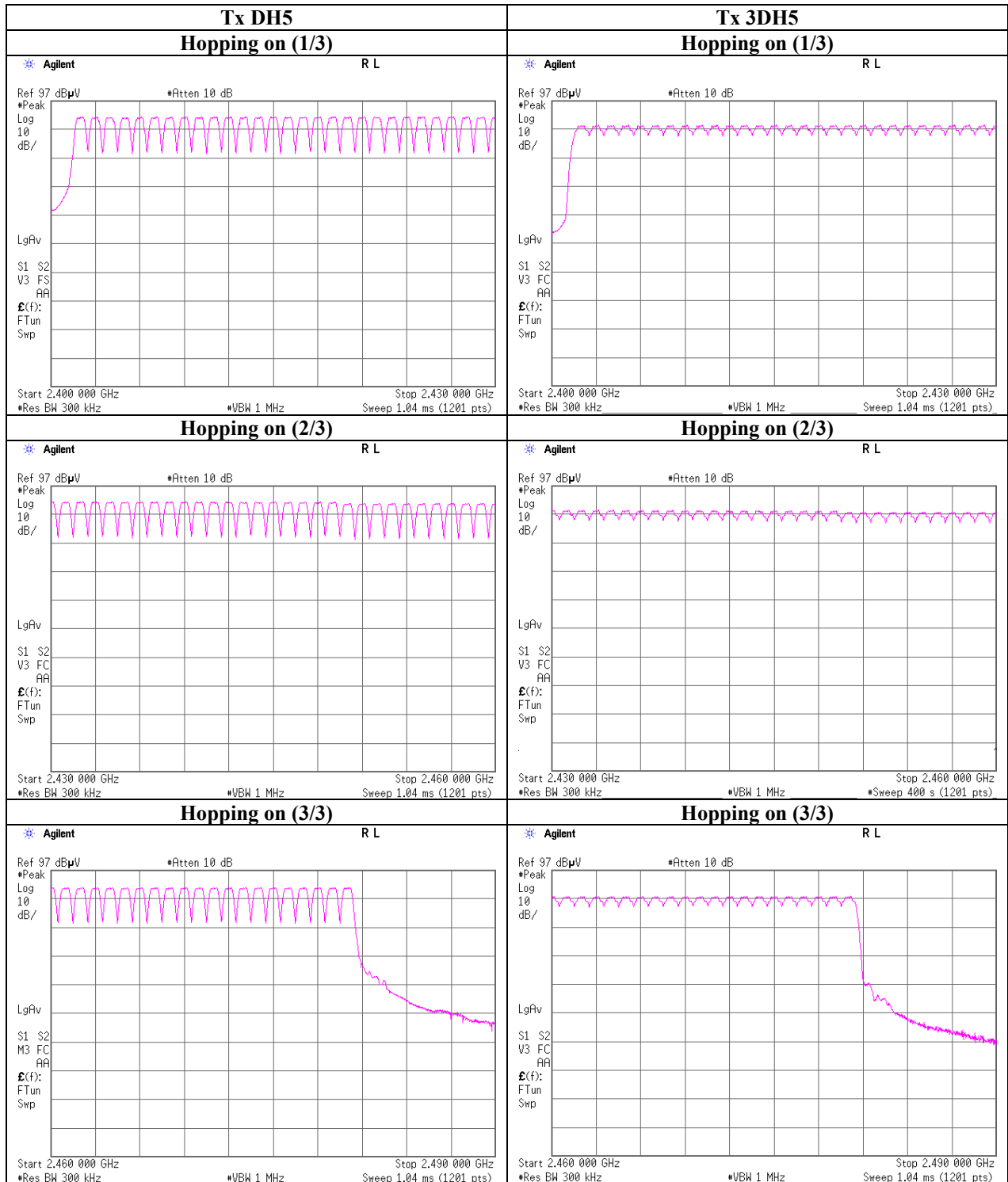
Number of Hopping Frequency

Report No.	30GE0232-HO-02
Test place	Head Office EMC Lab.
Measurement Room	No.7
Date	07/12/2010
Temperature/ Humidity	25 deg. C. / 58%
Engineer	Takeshi Choda
Mode	BT 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



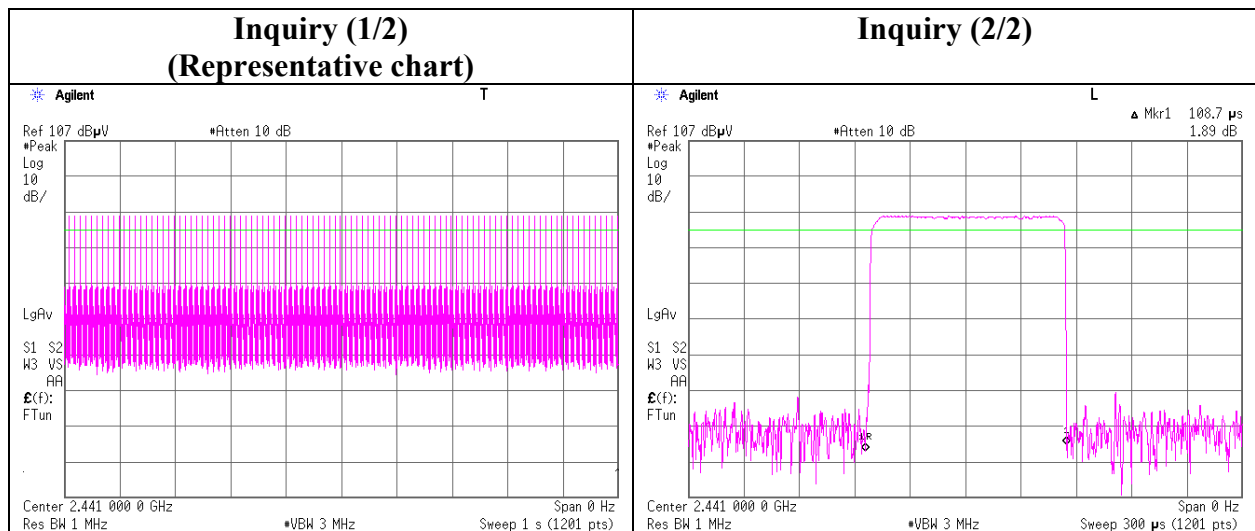
Dwell time

Report No. 30GE0232-HO-02
Test place Head Office EMC Lab.
Measurement Room No.7
Date 06/04/2010
Temperature/ Humidity 26 deg. C. / 41%
Engineer Takeshi Choda
Mode BT Tx (Hopping on) DH5/3DH5/Inquiry

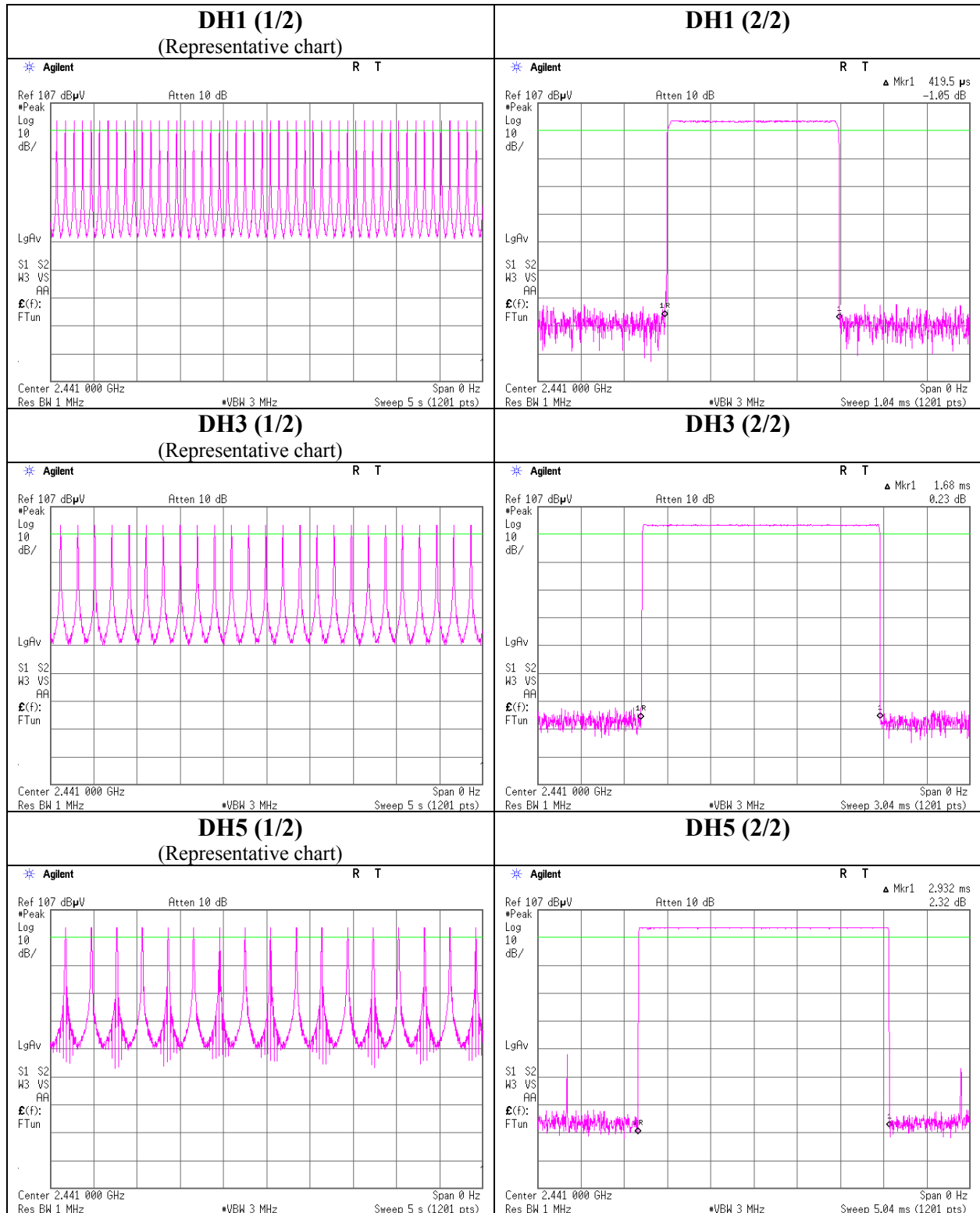
Mode	Number of transmission in a 31.6(79 Hopping x 0.4) / 12.8(32 Hopping x 0.4)second period			Length of transmission time [msec]	Result [msec]	Limit [msec]	
DH1	50.0 times /	5 sec. x	31.6 sec. =	316 times	0.420	133	400
DH3	25.0 times /	5 sec. x	31.6 sec. =	158 times	1.680	265	400
DH5	17.0 times /	5 sec. x	31.6 sec. =	108 times	2.932	317	400
3DH1	50.0 times /	5 sec. x	31.6 sec. =	316 times	0.433	137	400
3DH3	25.0 times /	5 sec. x	31.6 sec. =	158 times	1.687	267	400
3DH5	17.0 times /	5 sec. x	31.6 sec. =	108 times	2.944	318	400
Inquiry	100.0 times /	1 sec. x	12.8 sec. =	1280 times	0.109	139	400

Sample Calculation

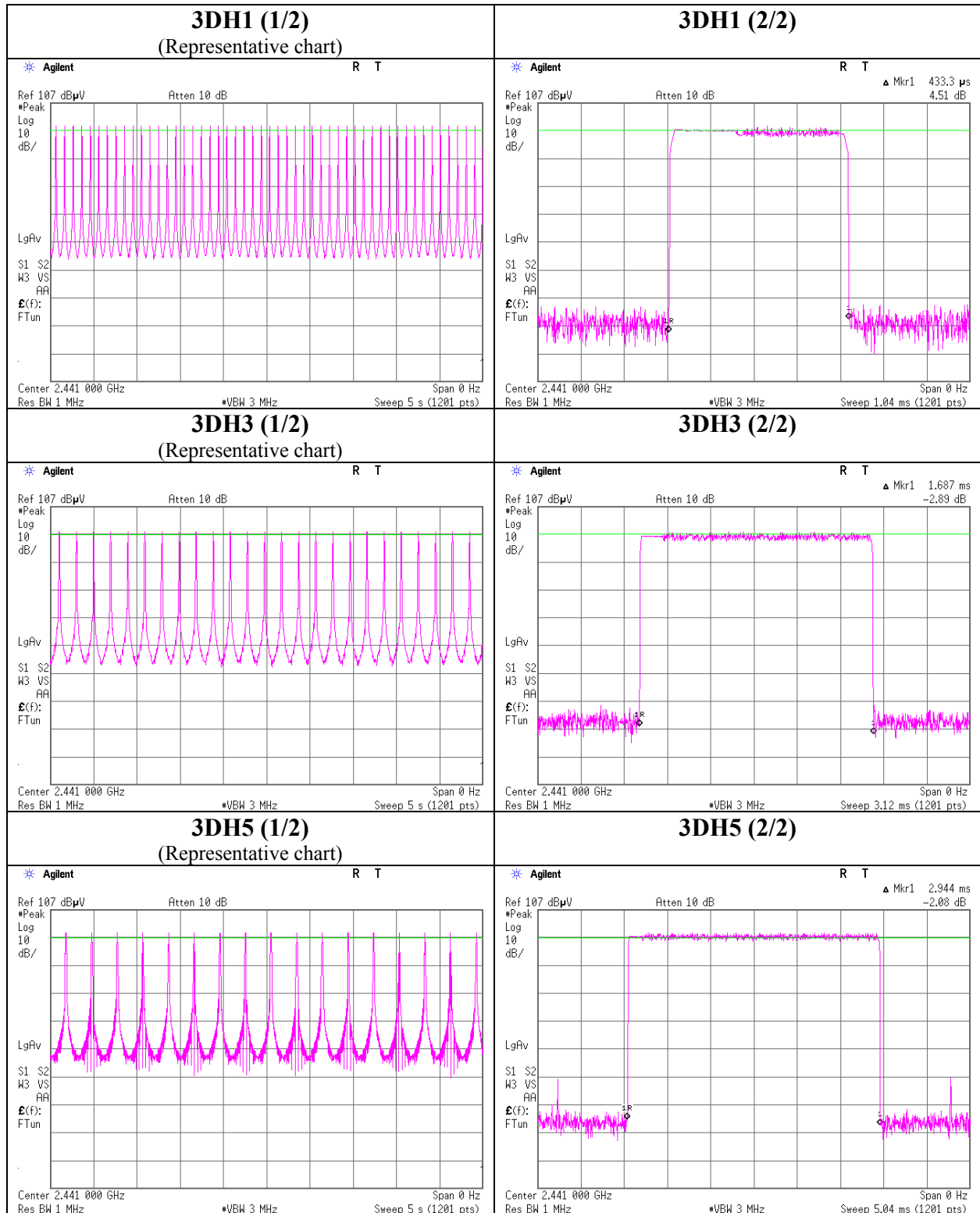
Result = Number of transmission x Length of transmittion time



Dwell time



Dwell time



Maximum Peak Output Power

Report No. 30GE0232-HO-02
Test place Head Office EMC Lab.
Measurement Room No.2
Date 07/05/2010
Temperature/ Humidity 20 deg. C. / 57%
Engineer Takeshi Choda
Mode BT 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	-14.74	1.01	19.96	6.23	4.20	20.97	125	14.74
DH5	2441.0	-14.65	1.01	19.96	6.32	4.29	20.97	125	14.65
DH5	2480.0	-15.43	1.02	19.96	5.55	3.59	20.97	125	15.42
3DH5	2402.0	-16.33	1.01	19.96	4.64	2.91	20.97	125	16.33
3DH5	2441.0	-16.61	1.01	19.96	4.36	2.73	20.97	125	16.61
3DH5	2480.0	-16.94	1.02	19.96	4.04	2.54	20.97	125	16.93
Inquiry	2441.0	-17.83	1.01	19.96	3.14	2.06	20.97	125	17.83

Sample Calculation:
Result = Reading + Cable Loss + 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.

Radiated Spurious Emission

Report No.	30GE0232-HO-02		
Test place	Head Office EMC Lab.		
Semi Anechoic Chamber	No.2	No.3	No.4
Date	07/21/2010	07/22/2010	07/28/2010
Temperature/ Humidity	21 deg. C. / 59%	25 deg. C. / 62%	26 deg. C. / 52%
Engineer	Takumi Shimada (1-10GHz)	Takeshi Choda (above 10GHz)	Takayuki Shimada (below 1GHz)
Mode	BT 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	37.999	QP	23.8	15.4	7.1	32.0	14.3	40.0	25.7	
Hori	151.999	QP	30.4	15.1	8.5	31.9	22.1	43.5	21.4	
Hori	341.996	QP	36.8	16.7	9.9	31.9	31.5	46.0	14.5	
Hori	645.994	QP	36.4	21.0	11.7	32.2	36.9	46.0	9.1	
Hori	797.990	QP	36.4	23.1	12.5	31.8	40.2	46.0	5.8	
Hori	873.990	QP	32.0	23.5	12.8	31.5	36.8	46.0	9.2	
Hori	2390.000	PK	60.9	27.1	2.9	32.4	58.5	73.9	15.4	
Hori	2400.000	PK	77.5	27.1	2.9	32.4	75.1	-	-	- See 20dBc Data Sheet
Hori	2557.823	PK	49.0	27.8	2.7	32.4	47.1	73.9	26.8	
Hori	4804.000	PK	52.8	30.5	5.2	31.3	57.2	73.9	16.7	
Hori	7206.000	PK	44.2	35.1	5.9	31.1	54.1	73.9	19.8	
Hori	9608.000	PK	43.7	37.6	6.9	31.4	56.8	73.9	17.1	
Hori	24020.000	PK	44.9	37.8	-1.3	31.0	50.4	73.9	23.5	NS
Hori	2390.000	AV	30.4	27.1	2.9	32.4	28.0	53.9	25.9	
Hori	2400.000	AV	52.7	27.1	2.9	32.4	50.3	-	-	- See 20dBc Data Sheet
Hori	2557.823	AV	42.4	27.8	2.7	32.4	40.5	53.9	13.4	
Hori	4804.000	AV	49.6	30.5	5.2	31.3	54.0	-	-	- See Dwell time factor relaxation
Hori	7206.000	AV	35.4	35.1	5.9	31.1	45.3	53.9	8.6	
Hori	9608.000	AV	35.4	37.6	6.9	31.4	48.5	53.9	5.4	
Hori	24020.000	AV	33.9	37.8	-1.3	31.0	39.4	53.9	14.5	NS
Vert	37.999	QP	29.0	15.4	7.1	32.0	19.5	40.0	20.5	
Vert	151.999	QP	32.7	15.1	8.5	31.9	24.4	43.5	19.1	
Vert	341.996	QP	30.4	16.7	9.9	31.9	25.1	46.0	20.9	
Vert	645.994	QP	36.0	21.0	11.7	32.2	36.5	46.0	9.5	
Vert	797.990	QP	34.3	23.1	12.5	31.8	38.1	46.0	7.9	
Vert	873.990	QP	29.3	23.5	12.8	31.5	34.1	46.0	11.9	
Vert	2390.000	PK	55.7	27.1	2.9	32.4	53.3	73.9	20.6	
Vert	2400.000	PK	71.7	27.1	2.9	32.4	69.3	-	-	- See 20dBc Data Sheet
Vert	2558.037	PK	50.2	27.8	2.7	32.4	48.3	73.9	25.6	
Vert	4804.000	PK	49.8	30.5	5.2	31.3	54.2	73.9	19.7	
Vert	7206.000	PK	41.4	35.1	5.9	31.1	51.3	73.9	22.6	
Vert	9608.000	PK	42.4	37.6	6.9	31.4	55.5	73.9	18.4	
Vert	24020.000	PK	45.3	37.8	-1.3	31.0	50.8	73.9	23.1	NS
Vert	2390.000	AV	30.1	27.1	2.9	32.4	27.7	53.9	26.3	
Vert	2400.000	AV	47.0	27.1	2.9	32.4	44.6	-	-	- See 20dBc Data Sheet
Vert	2558.037	AV	40.2	27.8	2.7	32.4	38.3	53.9	15.6	
Vert	4804.000	AV	46.1	30.5	5.2	31.3	50.5	-	-	- See Dwell time factor relaxation
Vert	7206.000	AV	30.9	35.1	5.9	31.1	40.8	53.9	13.2	
Vert	9608.000	AV	30.6	37.6	6.9	31.4	43.7	53.9	10.2	
Vert	24020.000	AV	33.9	37.8	-1.3	31.0	39.4	53.9	14.5	NS

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

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

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

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

Radiated Spurious Emission

Report No. 30GE0232-HO-02
Test place Head Office EMC Lab.
Semi Anechoic Chamber No.2
Date 07/21/2010
Temperature/ Humidity 21 deg. C. / 59%
Engineer Takumi Shimada
Mode BT 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	102.9	27.1	2.9	32.4	100.5	-	-	Carrier
Hori	2400.000	PK	61.4	27.1	2.9	32.4	59.0	80.5	21.5	
Vert	2402.000	PK	99.4	27.1	2.9	32.4	97.0	-	-	Carrier
Vert	2400.000	PK	56.2	27.1	2.9	32.4	53.8	77.0	23.2	

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

Dwell time factor relaxation

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant Factor [dB/m]	Loss [dB]	Gain [dB]	Dwell Factor [dB]	Result dBuV/m	Limit dBuV/m	Margin [dB]	Remark
Hori	4804.000	AV	49.6	30.5	5.2	31.3	-30.0	24.0	53.9	29.9	
Vert	4804.000	AV	46.1	30.5	5.2	31.3	-30.0	20.5	53.9	33.4	

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

- Gain(Amplifier) + Dwell time factor (Refer to dwell time data sheet)

*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

Radiated Spurious Emission

Report No.	30GE0232-HO-02		
Test place	Head Office EMC Lab.		
Semi Anechoic Chamber	No.2	No.3	No.4
Date	07/21/2010	07/22/2010	07/28/2010
Temperature/ Humidity	21 deg. C. / 59%	25 deg. C. / 62%	26 deg. C. / 52%
Engineer	Takumi Shimada (1-10GHz)	Takeshi Choda (above 10GHz)	Takayuki Shimada (below 1GHz)
Mode	BT 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	37.999	QP	23.8	15.4	7.1	32.0	14.3	40.0	25.7	
Hori	151.999	QP	29.9	15.1	8.5	31.9	21.6	43.5	21.9	
Hori	341.996	QP	36.4	16.7	9.9	31.9	31.1	46.0	14.9	
Hori	645.994	QP	37.0	21.0	11.7	32.2	37.5	46.0	8.5	
Hori	797.991	QP	36.0	23.1	12.5	31.8	39.8	46.0	6.2	
Hori	873.991	QP	32.0	23.5	12.8	31.5	36.8	46.0	9.2	
Hori	2287.000	PK	42.8	27.0	2.8	32.4	40.2	73.9	33.7	
Hori	2597.043	PK	46.3	27.2	3.0	32.4	44.1	73.9	29.8	
Hori	4882.000	PK	53.5	30.6	5.2	31.3	58.0	73.9	15.9	
Hori	7323.000	PK	44.2	35.3	5.9	31.1	54.3	73.9	19.6	
Hori	9764.000	PK	42.4	37.9	6.9	31.4	55.8	73.9	18.1	
Hori	24410.000	PK	45.6	37.8	-1.3	31.0	51.1	73.9	22.8	NS
Hori	2287.000	AV	30.3	27.0	2.8	32.4	27.7	53.9	26.2	
Hori	2597.043	AV	37.8	27.9	2.8	32.4	36.1	53.9	17.8	
Hori	4882.000	AV	50.4	30.6	5.2	31.3	54.9	-	-	See Dwell time factor relaxation
Hori	7323.000	AV	35.9	35.3	5.9	31.1	46.0	53.9	7.9	
Hori	9764.000	AV	31.1	37.9	6.9	31.4	44.5	53.9	9.4	
Hori	24410.000	AV	34.0	37.8	-1.3	31.0	39.5	53.9	14.4	NS
Vert	37.999	QP	29.3	15.4	7.1	32.0	19.8	40.0	20.2	
Vert	151.999	QP	33.1	15.1	8.5	31.9	24.8	43.5	18.7	
Vert	341.996	QP	30.3	16.7	9.9	31.9	25.0	46.0	21.0	
Vert	645.994	QP	36.0	21.0	11.7	32.2	36.5	46.0	9.5	
Vert	797.991	QP	34.2	23.1	12.5	31.8	38.0	46.0	8.0	
Vert	873.991	QP	29.2	23.5	12.8	31.5	34.0	46.0	12.0	
Vert	2287.000	PK	42.9	27.9	2.6	32.5	40.9	73.9	33.0	
Vert	2596.968	PK	48.7	27.9	2.8	32.4	47.0	73.9	26.9	
Vert	4882.000	PK	49.1	30.6	5.2	31.3	53.6	73.9	20.3	
Vert	7323.000	PK	43.3	35.3	5.9	31.1	53.4	73.9	20.5	
Vert	9764.000	PK	41.7	37.9	6.9	31.4	55.1	73.9	18.9	
Vert	24410.000	PK	44.4	37.8	-1.3	31.0	49.9	73.9	24.0	NS
Vert	2287.000	AV	30.3	27.9	2.6	32.5	28.3	53.9	25.6	
Vert	2596.968	AV	39.8	27.9	2.8	32.4	38.1	53.9	15.8	
Vert	4882.000	AV	43.8	30.6	5.2	31.3	48.3	-	-	See Dwell time factor relaxation
Vert	7323.000	AV	32.2	35.3	5.9	31.1	42.3	53.9	11.6	
Vert	9764.000	AV	31.0	37.9	6.9	31.4	44.4	53.9	9.5	
Vert	24410.000	AV	34.0	37.8	-1.3	31.0	39.5	53.9	14.4	NS

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

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

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

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

Radiated Spurious Emission

Report No. 30GE0232-HO-02
 Test place Head Office EMC Lab.
 Semi Anechoic Chamber No.2
 Date 07/21/2010
 Temperature/ Humidity 21 deg. C. / 59%
 Engineer Takumi Shimada
 Mode BT Tx DH5 2441MHz

Dwell time factor relaxation

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant Factor [dB/m]	Loss [dB]	Gain [dB]	Dwell Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	4882.000	AV	50.4	30.6	5.2	31.3	-30.0	24.9	53.9	29.0	
Vert	4882.000	AV	43.8	30.6	5.2	31.3	-30.0	18.3	53.9	35.6	

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

- Gain(Amplifier) + Dwell time factor (Refer to dwell time data sheet)

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

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

Radiated Spurious Emission

Report No.	30GE0232-HO-02		
Test place	Head Office EMC Lab.		
Semi Anechoic Chamber	No.2	No.3	No.4
Date	07/21/2010	07/22/2010	07/28/2010
Temperature/ Humidity	21 deg. C. / 59%	25 deg. C. / 62%	26 deg. C. / 52%
Engineer	Takumi Shimada (1-10GHz)	Takeshi Choda (above 10GHz)	Takayuki Shimada (below 1GHz)
Mode	BT 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	37.999	QP	23.7	15.4	7.1	32.0	14.2	40.0	25.8	
Hori	151.999	QP	29.9	15.1	8.5	31.9	21.6	43.5	21.9	
Hori	341.996	QP	36.5	16.7	9.9	31.9	31.2	46.0	14.8	
Hori	645.994	QP	36.8	21.0	11.7	32.2	37.3	46.0	8.7	
Hori	797.992	QP	36.2	23.1	12.5	31.8	40.0	46.0	6.0	
Hori	873.991	QP	32.0	23.5	12.8	31.5	36.8	46.0	9.2	
Hori	2323.000	PK	42.3	27.8	2.6	32.5	40.2	73.9	33.7	
Hori	2483.500	PK	71.8	27.2	2.9	32.4	69.5	73.9	4.4	
Hori	2636.083	PK	46.8	28.1	2.8	32.3	45.4	73.9	28.5	
Hori	4960.000	PK	54.4	30.7	5.3	31.3	59.1	73.9	14.8	
Hori	7440.000	PK	44.7	35.5	6.0	31.1	55.1	73.9	18.8	
Hori	9920.000	PK	41.3	38.2	7.0	31.4	55.1	73.9	18.8	
Hori	24800.000	PK	45.8	38.0	-1.1	30.5	52.2	73.9	21.7	NS
Hori	2323.000	AV	30.8	27.8	2.6	32.5	28.7	53.9	25.2	
Hori	2483.500	AV	41.1	27.2	2.9	32.4	38.8	53.9	15.2	
Hori	2636.083	AV	38.5	28.1	2.8	32.3	37.1	53.9	16.8	
Hori	4960.000	AV	51.6	30.7	5.3	31.3	56.3	-	-	See Dwell time factor relaxation
Hori	7440.000	AV	36.3	35.5	6.0	31.1	46.7	53.9	7.3	
Hori	9920.000	AV	30.3	38.2	7.0	31.4	44.1	53.9	9.8	
Hori	24800.000	AV	35.1	38.0	-1.1	30.5	41.5	53.9	12.4	NS
Vert	37.999	QP	29.2	15.4	7.1	32.0	19.7	40.0	20.3	
Vert	151.999	QP	32.6	15.1	8.5	31.9	24.3	43.5	19.2	
Vert	341.996	QP	30.4	16.7	9.9	31.9	25.1	46.0	20.9	
Vert	645.994	QP	35.9	21.0	11.7	32.2	36.4	46.0	9.6	
Vert	797.992	QP	34.5	23.1	12.5	31.8	38.3	46.0	7.7	
Vert	873.991	QP	29.1	23.5	12.8	31.5	33.9	46.0	12.1	
Vert	2323.000	PK	42.0	27.8	2.6	32.5	39.9	73.9	34.0	
Vert	2483.500	PK	71.2	27.2	2.9	32.4	68.9	73.9	5.0	
Vert	2636.042	PK	46.0	28.1	2.8	32.3	44.6	73.9	29.3	
Vert	4960.000	PK	49.8	30.7	5.3	31.3	54.5	73.9	19.4	
Vert	7440.000	PK	43.6	35.5	6.0	31.1	54.0	73.9	19.9	
Vert	9920.000	PK	41.5	38.2	7.0	31.4	55.3	73.9	18.6	
Vert	24800.000	PK	45.7	38.0	-1.1	30.5	52.1	73.9	21.8	NS
Vert	2323.000	AV	30.9	27.8	2.6	32.5	28.8	53.9	25.1	
Vert	2483.500	AV	40.5	27.2	2.9	32.4	38.2	53.9	15.8	
Vert	2636.042	AV	37.7	28.1	2.8	32.3	36.3	53.9	17.6	
Vert	4960.000	AV	48.0	30.7	5.3	31.3	52.7	-	-	See Dwell time factor relaxation
Vert	7440.000	AV	32.3	35.5	6.0	31.1	42.7	53.9	11.2	
Vert	9920.000	AV	30.4	38.2	7.0	31.4	44.2	53.9	9.7	
Vert	24800.000	AV	35.1	38.0	-1.1	30.5	41.5	53.9	12.4	NS

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

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

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

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

Radiated Spurious Emission

Report No. 30GE0232-HO-02
Test place Head Office EMC Lab.
Semi Anechoic Chamber No.2
Date 07/21/2010
Temperature/ Humidity 21 deg. C. / 59%
Engineer Takumi Shimada
Mode BT Tx DH5 2480MHz

Dwell time factor relaxation

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant Factor [dB/m]	Loss [dB]	Gain [dB]	Dwell Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	4960.000	AV	51.6	30.7	5.3	31.3	-30.0	26.3	53.9	27.6	
Vert	4960.000	AV	48.0	30.7	5.3	31.3	-30.0	22.7	53.9	31.2	

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

- Gain(Amplifier) + Dwell time factor (Refer to dwell time data sheet)

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

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

Radiated Spurious Emission

Report No.	30GE0232-HO-02		
Test place	Head Office EMC Lab.		
Semi Anechoic Chamber	No.2	No.3	No.4
Date	07/21/2010	07/22/2010	07/28/2010
Temperature/ Humidity	21 deg. C. / 59%	25 deg. C. / 62%	26 deg. C. / 52%
Engineer	Takumi Shimada (1-10GHz)	Takeshi Choda (above 10GHz)	Takayuki Shimada (below 1GHz)
Mode	BT 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	37.999	QP	23.7	15.4	7.1	32.0	14.2	40.0	25.8	
Hori	151.998	QP	29.9	15.1	8.5	31.9	21.6	43.5	21.9	
Hori	341.997	QP	36.4	16.7	9.9	31.9	31.1	46.0	14.9	
Hori	645.994	QP	37.0	21.0	11.7	32.2	37.5	46.0	8.5	
Hori	797.992	QP	36.3	23.1	12.5	31.8	40.1	46.0	5.9	
Hori	873.991	QP	32.0	23.5	12.8	31.5	36.8	46.0	9.2	
Hori	2390.000	PK	55.1	27.1	2.9	32.4	52.7	73.9	21.2	
Hori	2400.000	PK	68.6	27.1	2.9	32.4	66.2	-	-	See 20dBc Data Sheet
Hori	2558.032	PK	47.0	27.2	3.0	32.4	44.8	73.9	29.1	
Hori	4804.000	PK	51.6	30.5	5.2	31.3	56.0	73.9	17.9	
Hori	7206.000	PK	43.7	35.1	5.9	31.1	53.6	73.9	20.3	
Hori	9608.000	PK	43.9	37.6	6.9	31.4	57.0	73.9	16.9	
Hori	24120.000	PK	45.4	37.9	-1.3	31.0	51.0	73.9	22.9	NS
Hori	2390.000	AV	30.1	27.1	2.9	32.4	27.7	53.9	26.2	
Hori	2400.000	AV	50.0	27.1	2.9	32.4	47.6	-	-	See 20dBc Data Sheet
Hori	2558.032	AV	38.3	27.2	3.0	32.4	36.1	53.9	17.8	
Hori	4804.000	AV	43.5	30.5	5.2	31.3	47.9	53.9	6.0	
Hori	7206.000	AV	32.6	35.1	5.9	31.1	42.5	53.9	11.4	
Hori	9608.000	AV	31.7	37.6	6.9	31.4	44.8	53.9	9.1	
Hori	24120.000	AV	34.0	37.9	-1.3	31.0	39.6	53.9	14.3	NS
Vert	37.999	QP	29.3	15.4	7.1	32.0	19.8	40.0	20.2	
Vert	151.998	QP	32.6	15.1	8.5	31.9	24.3	43.5	19.2	
Vert	341.997	QP	30.4	16.7	9.9	31.9	25.1	46.0	20.9	
Vert	645.994	QP	36.0	21.0	11.7	32.2	36.5	46.0	9.5	
Vert	797.992	QP	34.1	23.1	12.5	31.8	37.9	46.0	8.1	
Vert	873.991	QP	29.1	23.5	12.8	31.5	33.9	46.0	12.1	
Vert	2390.000	PK	56.4	27.1	2.9	32.4	54.0	73.9	19.9	
Vert	2400.000	PK	69.4	27.1	2.9	32.4	67.0	-	-	See 20dBc Data Sheet
Vert	2558.315	PK	47.2	27.2	3.0	32.4	45.0	73.9	28.9	
Vert	4804.000	PK	47.4	30.5	5.2	31.3	51.8	73.9	22.1	
Vert	7206.000	PK	43.6	35.1	5.9	31.1	53.5	73.9	20.4	
Vert	9608.000	PK	43.4	37.6	6.9	31.4	56.5	73.9	17.4	
Vert	24120.000	PK	45.3	37.9	-1.3	31.0	50.9	73.9	23.0	NS
Vert	2390.000	AV	31.7	27.1	2.9	32.4	29.3	53.9	24.6	
Vert	2400.000	AV	55.3	27.1	2.9	32.4	52.9	-	-	See 20dBc Data Sheet
Vert	2558.315	AV	37.9	27.2	3.0	32.4	35.7	53.9	18.2	
Vert	4804.000	AV	39.5	30.5	5.2	31.3	43.9	53.9	10.0	
Vert	7206.000	AV	31.7	35.1	5.9	31.1	41.6	53.9	12.3	
Vert	9608.000	AV	31.7	37.6	6.9	31.4	44.8	53.9	9.1	
Vert	24120.000	AV	33.8	37.9	-1.3	31.0	39.4	53.9	14.5	NS

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

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

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

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

Radiated Spurious Emission

Report No. 30GE0232-HO-02
 Test place Head Office EMC Lab.
 Semi Anechoic Chamber No.2
 Date 07/21/2010
 Temperature/ Humidity 21 deg. C. / 59%
 Engineer Takumi Shimada
 Mode BT Tx 3DH5 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	100.0	27.1	2.9	32.4	97.6	-	-	Carrier
Hori	2400.000	PK	54.2	27.1	2.9	32.4	51.8	77.6	25.8	
Vert	2402.000	PK	96.8	27.1	2.9	32.4	94.4	-	-	Carrier
Vert	2400.000	PK	53.2	27.1	2.9	32.4	50.8	74.4	23.6	

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

Radiated Spurious Emission

Report No.	30GE0232-HO-02		
Test place	Head Office EMC Lab		
Semi Anechoic Chamber	No.2	No.3	No.4
Date	07/21/2010	07/22/2010	07/28/2010
Temperature/ Humidity	21 deg. C. / 59%	25 deg. C. / 62%	26 deg. C. / 52%
Engineer	Takumi Shimada (1-10GHz)	Takeshi Choda (above 10GHz)	Takayuki Shimada (below 1GHz)
Mode	BT 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	37.999	QP	23.8	15.4	7.1	32.0	14.3	40.0	25.7	
Hori	151.998	QP	30.2	15.1	8.5	31.9	21.9	43.5	21.6	
Hori	341.997	QP	36.3	16.7	9.9	31.9	31.0	46.0	15.0	
Hori	645.994	QP	37.3	21.0	11.7	32.2	37.8	46.0	8.2	
Hori	797.992	QP	36.1	23.1	12.5	31.8	39.9	46.0	6.1	
Hori	873.991	QP	31.9	23.5	12.8	31.5	36.7	46.0	9.3	
Hori	2283.000	PK	42.5	27.0	2.8	32.4	39.9	73.9	34.0	
Hori	2596.960	PK	44.8	27.2	3.0	32.4	42.6	73.9	31.3	
Hori	4882.000	PK	50.9	30.6	5.2	31.3	55.4	73.9	18.5	
Hori	7323.000	PK	43.4	35.3	5.9	31.1	53.5	73.9	20.4	
Hori	9764.000	PK	41.7	37.9	6.9	31.4	55.1	73.9	18.8	
Hori	24410.000	PK	45.2	37.9	-1.2	30.8	51.1	73.9	22.8	NS
Hori	2283.000	AV	29.4	27.0	2.8	32.4	26.8	53.9	27.1	
Hori	2596.960	AV	34.0	27.2	3.0	32.4	31.8	53.9	22.1	
Hori	4882.000	AV	43.4	30.6	5.2	31.3	47.9	53.9	6.0	
Hori	7323.000	AV	31.6	35.3	5.9	31.1	41.7	53.9	12.2	
Hori	9764.000	AV	30.0	37.9	6.9	31.4	43.4	53.9	10.5	
Hori	24410.000	AV	34.1	37.9	-1.2	30.8	40.0	53.9	13.9	NS
Vert	37.999	QP	29.1	15.4	7.1	32.0	19.6	40.0	20.4	
Vert	151.998	QP	32.6	15.1	8.5	31.9	24.3	43.5	19.2	
Vert	341.997	QP	30.7	16.7	9.9	31.9	25.4	46.0	20.6	
Vert	645.994	QP	35.9	21.0	11.7	32.2	36.4	46.0	9.6	
Vert	797.992	QP	34.1	23.1	12.5	31.8	37.9	46.0	8.1	
Vert	873.991	QP	29.1	23.5	12.8	31.5	33.9	46.0	12.1	
Vert	2283.000	PK	42.3	27.0	2.8	32.4	39.7	73.9	34.2	
Vert	2596.840	PK	44.8	27.2	3.0	32.4	42.6	73.9	31.3	
Vert	4882.000	PK	46.6	30.6	5.2	31.3	51.1	73.9	22.8	
Vert	7323.000	PK	41.6	35.3	5.9	31.1	51.7	73.9	22.2	
Vert	9764.000	PK	41.3	37.9	6.9	31.4	54.7	73.9	19.2	
Vert	24410.000	PK	44.9	37.9	-1.2	30.8	50.8	73.9	23.1	NS
Vert	2283.000	AV	30.0	27.0	2.8	32.4	27.4	53.9	26.5	
Vert	2596.840	AV	34.0	27.2	3.0	32.4	31.8	53.9	22.1	
Vert	4882.000	AV	38.0	30.6	5.2	31.3	42.5	53.9	11.4	
Vert	7323.000	AV	30.0	35.3	5.9	31.1	40.1	53.9	13.8	
Vert	9764.000	AV	30.0	37.9	6.9	31.4	43.4	53.9	10.5	
Vert	24410.000	AV	34.2	37.9	-1.2	30.8	40.1	53.9	13.8	NS

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

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

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

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

Radiated Spurious Emission

Report No.	30GE0232-HO-02		
Test place	Head Office EMC Lab.		
Semi Anechoic Chamber	No.2	No.3	No.4
Date	07/21/2010	07/22/2010	07/28/2010
Temperature/ Humidity	21 deg. C. / 59%	25 deg. C. / 62%	26 deg. C. / 52%
Engineer	Takumi Shimada (1-10GHz)	Takeshi Choda (above 10GHz)	Takayuki Shimada (below 1GHz)
Mode	BT 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	37.999	QP	23.7	15.4	7.1	32.0	14.2	40.0	25.8	
Hori	151.998	QP	30.1	15.1	8.5	31.9	21.8	43.5	21.7	
Hori	341.996	QP	36.3	16.7	9.9	31.9	31.0	46.0	15.0	
Hori	645.994	QP	37.1	21.0	11.7	32.2	37.6	46.0	8.4	
Hori	797.992	QP	36.2	23.1	12.5	31.8	40.0	46.0	6.0	
Hori	873.991	QP	32.0	23.5	12.8	31.5	36.8	46.0	9.2	
Hori	2483.500	PK	66.4	27.2	2.9	32.4	64.1	73.9	9.8	
Hori	2636.203	PK	42.8	28.1	2.8	32.3	41.4	73.9	32.5	
Hori	4960.000	PK	50.3	30.7	5.3	31.3	55.0	73.9	18.9	
Hori	7440.000	PK	43.4	35.5	6.0	31.1	53.8	73.9	20.1	
Hori	9920.000	PK	41.7	38.2	7.0	31.4	55.5	73.9	18.4	
Hori	24800.000	PK	45.7	38.0	-1.1	30.5	52.1	73.9	21.8	NS
Hori	2483.500	AV	42.9	27.2	2.9	32.4	40.6	53.9	13.3	
Hori	2636.203	AV	34.9	28.1	2.8	32.3	33.5	53.9	20.4	
Hori	4960.000	AV	43.6	30.7	5.3	31.3	48.3	53.9	5.7	
Hori	7440.000	AV	32.1	35.5	6.0	31.1	42.5	53.9	11.4	
Hori	9920.000	AV	30.2	38.2	7.0	31.4	44.0	53.9	9.9	
Hori	24800.000	AV	35.3	38.0	-1.1	30.5	41.7	53.9	12.2	NS
Vert	37.999	QP	27.8	15.4	7.1	32.0	18.3	40.0	21.7	
Vert	151.998	QP	32.0	15.1	8.5	31.9	23.7	43.5	19.8	
Vert	341.996	QP	29.9	16.7	9.9	31.9	24.6	46.0	21.4	
Vert	645.994	QP	36.2	21.0	11.7	32.2	36.7	46.0	9.3	
Vert	797.992	QP	34.3	23.1	12.5	31.8	38.1	46.0	7.9	
Vert	873.991	QP	29.1	23.5	12.8	31.5	33.9	46.0	12.1	
Vert	2483.500	PK	68.3	27.2	2.9	32.4	66.0	73.9	7.9	
Vert	2636.018	PK	45.3	28.1	2.8	32.3	43.9	73.9	30.0	
Vert	4960.000	PK	47.5	30.7	5.3	31.3	52.2	73.9	21.7	
Vert	7440.000	PK	43.0	35.5	6.0	31.1	53.4	73.9	20.5	
Vert	9920.000	PK	41.5	38.2	7.0	31.4	55.3	73.9	18.6	
Vert	24800.000	PK	45.4	38.0	-1.1	30.5	51.8	73.9	22.1	NS
Vert	2483.500	AV	41.2	27.2	2.9	32.4	38.9	53.9	15.0	
Vert	2636.018	AV	38.4	28.1	2.8	32.3	37.0	53.9	16.9	
Vert	4960.000	AV	39.2	30.7	5.3	31.3	43.9	53.9	10.1	
Vert	7440.000	AV	30.2	35.5	6.0	31.1	40.6	53.9	13.3	
Vert	9920.000	AV	30.1	38.2	7.0	31.4	43.9	53.9	10.1	
Vert	24800.000	AV	35.3	38.0	-1.1	30.5	41.7	53.9	12.2	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

Radiated Spurious Emission

Report No.	30GE0232-HO-02	
Test place	Head Office EMC Lab.	
Semi Anechoic Chamber	No.2	No.4
Date	07/21/2010	07/28/2010
Temperature/ Humidity	21 deg. C. / 59%	26 deg. C. / 52%
Engineer	Takumi Shimada (above 1GHz)	Takayuki Shimada (below 1GHz)
Mode	BT 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	37.999	QP	24.0	15.4	7.1	32.0	14.5	40.0	25.5	
Hori	151.999	QP	30.2	15.1	8.5	31.9	21.9	43.5	21.6	
Hori	341.996	QP	36.0	16.7	9.9	31.9	30.7	46.0	15.3	
Hori	645.993	QP	36.8	21.0	11.7	32.2	37.3	46.0	8.7	
Hori	797.991	QP	35.8	23.1	12.5	31.8	39.6	46.0	6.4	
Hori	873.991	QP	31.7	23.5	12.8	31.5	36.5	46.0	9.5	
Hori	2441.000	PK	42.9	27.2	2.9	32.4	40.6	73.9	33.3	
Hori	4882.000	PK	41.5	30.6	3.9	31.3	44.7	73.9	29.2	
Hori	7323.000	PK	40.9	35.3	4.3	31.1	49.4	73.9	24.6	
Hori	2441.000	AV	30.5	27.2	2.9	32.4	28.2	53.9	25.8	
Hori	4882.000	AV	29.2	30.6	3.9	31.3	32.4	53.9	21.6	
Hori	7323.000	AV	29.4	35.3	4.3	31.1	37.9	53.9	16.0	
Vert	37.999	QP	29.3	15.4	7.1	32.0	19.8	40.0	20.2	
Vert	151.999	QP	33.3	15.1	8.5	31.9	25.0	43.5	18.5	
Vert	341.996	QP	30.3	16.7	9.9	31.9	25.0	46.0	21.0	
Vert	645.993	QP	35.9	21.0	11.7	32.2	36.4	46.0	9.6	
Vert	797.991	QP	34.2	23.1	12.5	31.8	38.0	46.0	8.0	
Vert	873.991	QP	29.3	23.5	12.8	31.5	34.1	46.0	11.9	
Vert	2441.000	PK	42.1	27.2	2.9	32.4	39.8	73.9	34.1	
Vert	4882.000	PK	41.0	30.6	3.9	31.3	44.2	73.9	29.7	
Vert	7323.000	PK	41.3	35.3	4.3	31.1	49.8	73.9	24.1	
Vert	2441.000	AV	30.4	27.2	2.9	32.4	28.1	53.9	25.8	
Vert	4882.000	AV	29.5	30.6	3.9	31.3	32.7	53.9	21.2	
Vert	7323.000	AV	29.9	35.3	4.3	31.1	38.4	53.9	15.5	

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

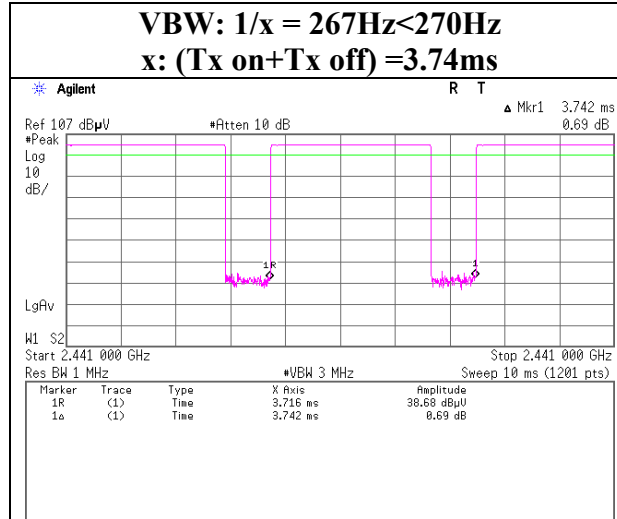
*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

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

VBW (AV) Calculation

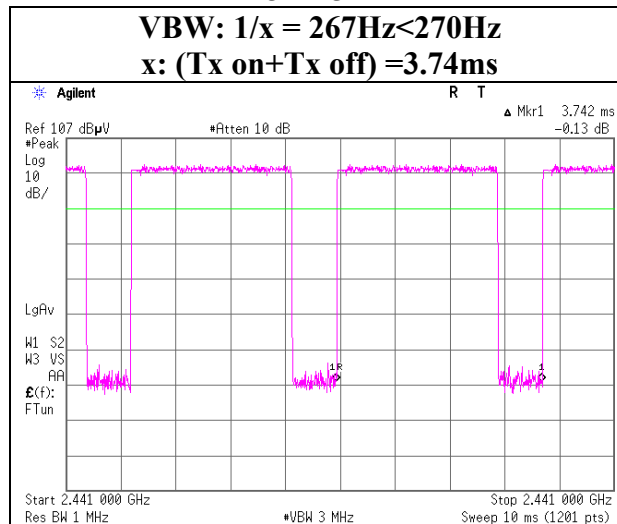
DH5

VBW: $1/x = 267\text{Hz} < 270\text{Hz}$
 $x: (\text{Tx on} + \text{Tx off}) = 3.74\text{ms}$



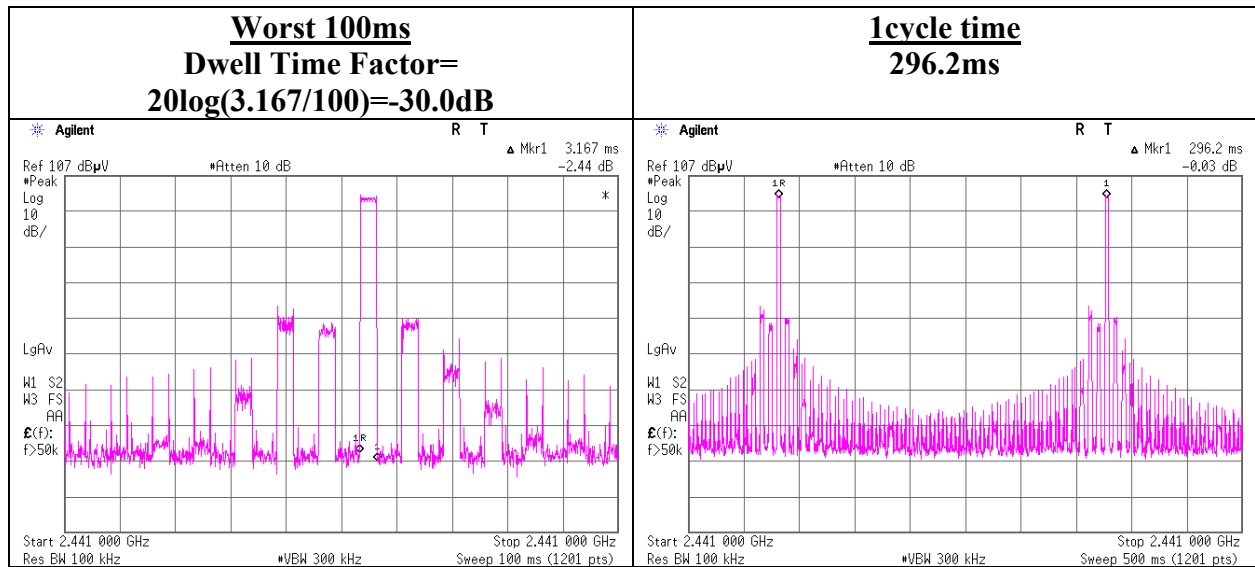
3DH5

VBW: $1/x = 267\text{Hz} < 270\text{Hz}$
 $x: (\text{Tx on} + \text{Tx off}) = 3.74\text{ms}$

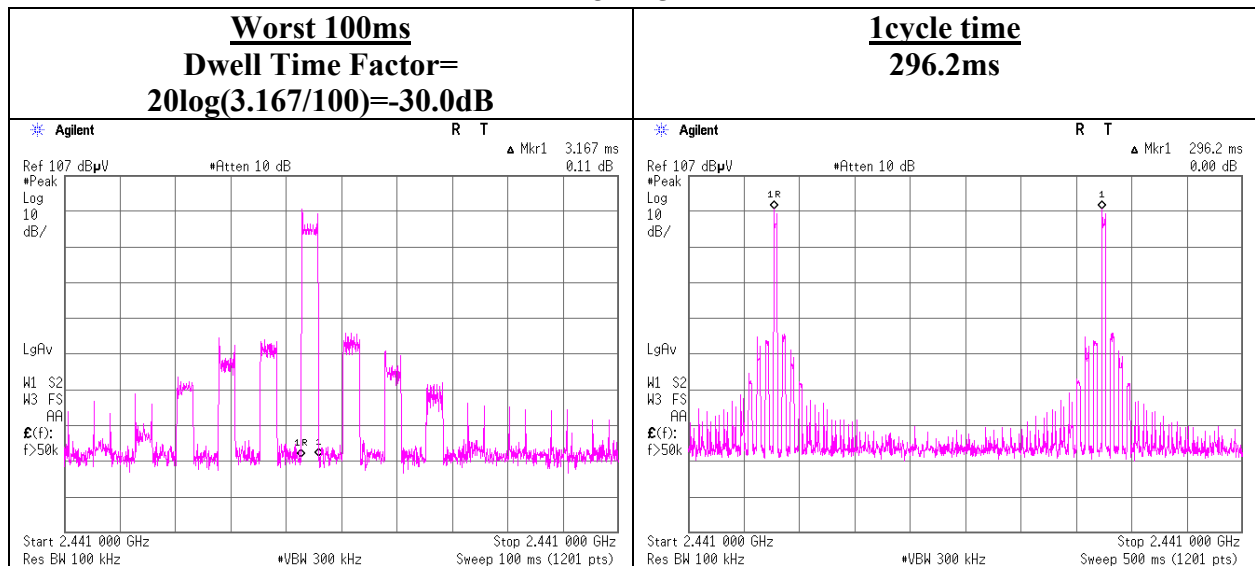


Dwell time factor

DH5

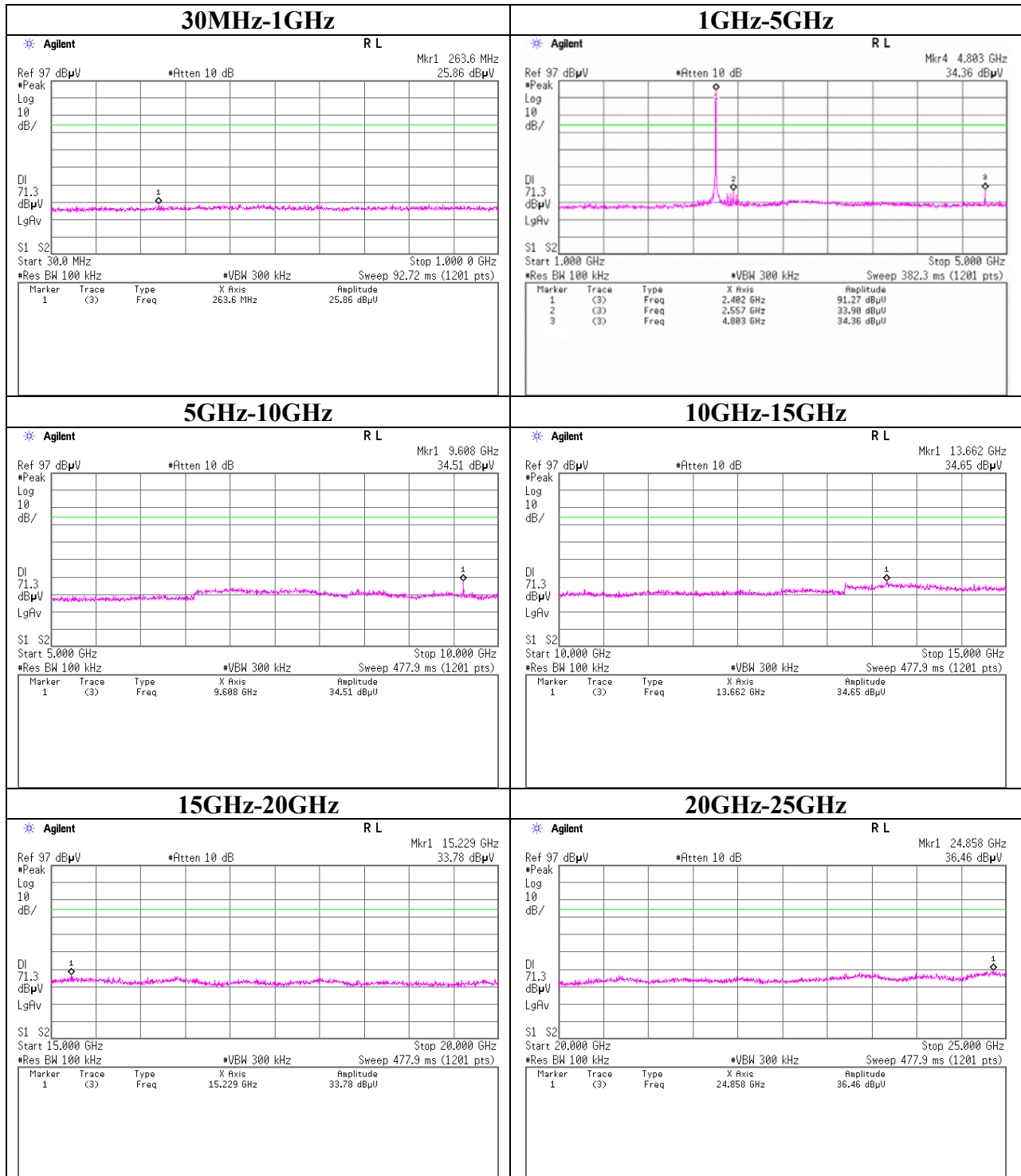


3DH5



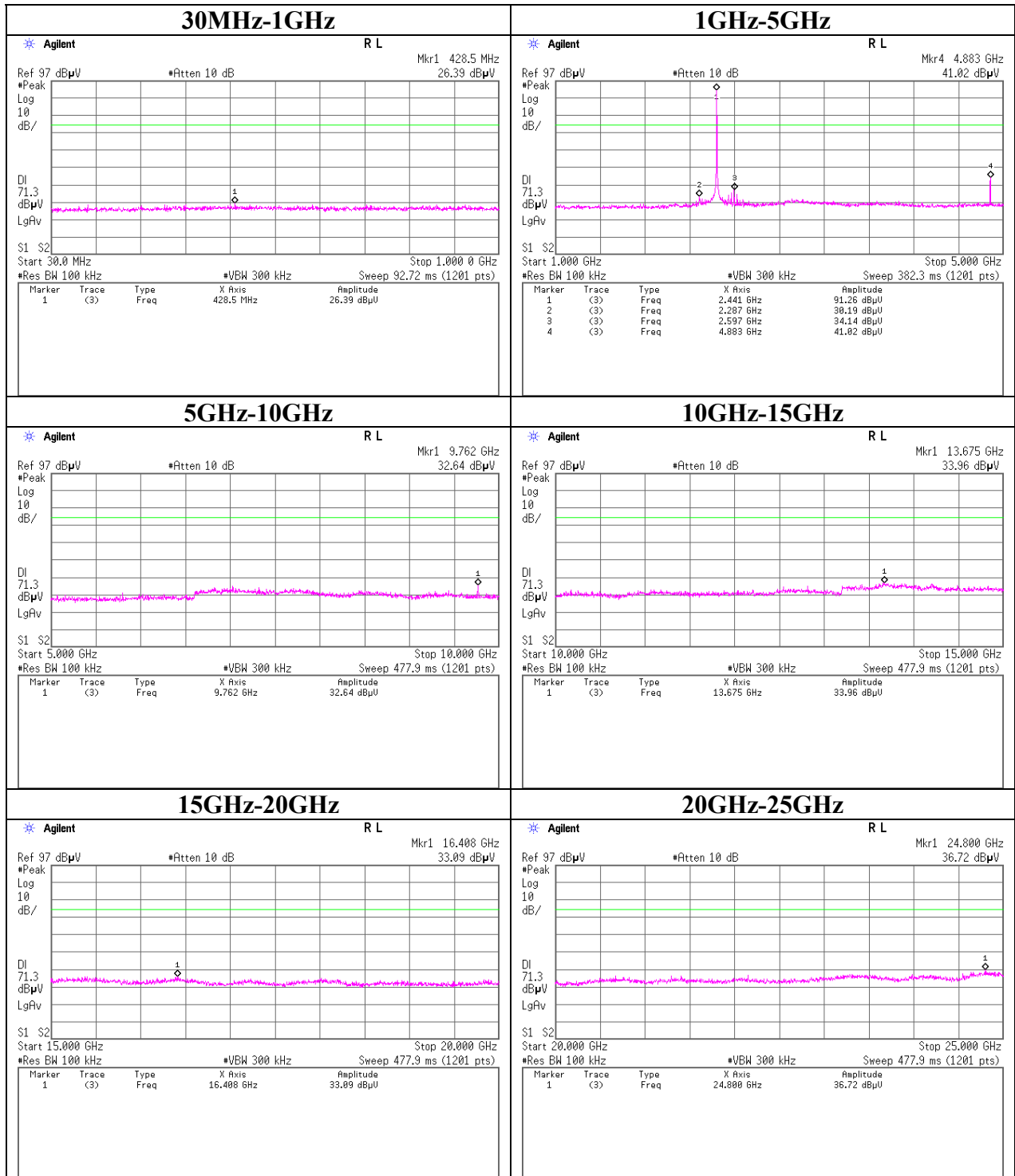
Conducted Spurious Emission

Tx DH5 2402MHz



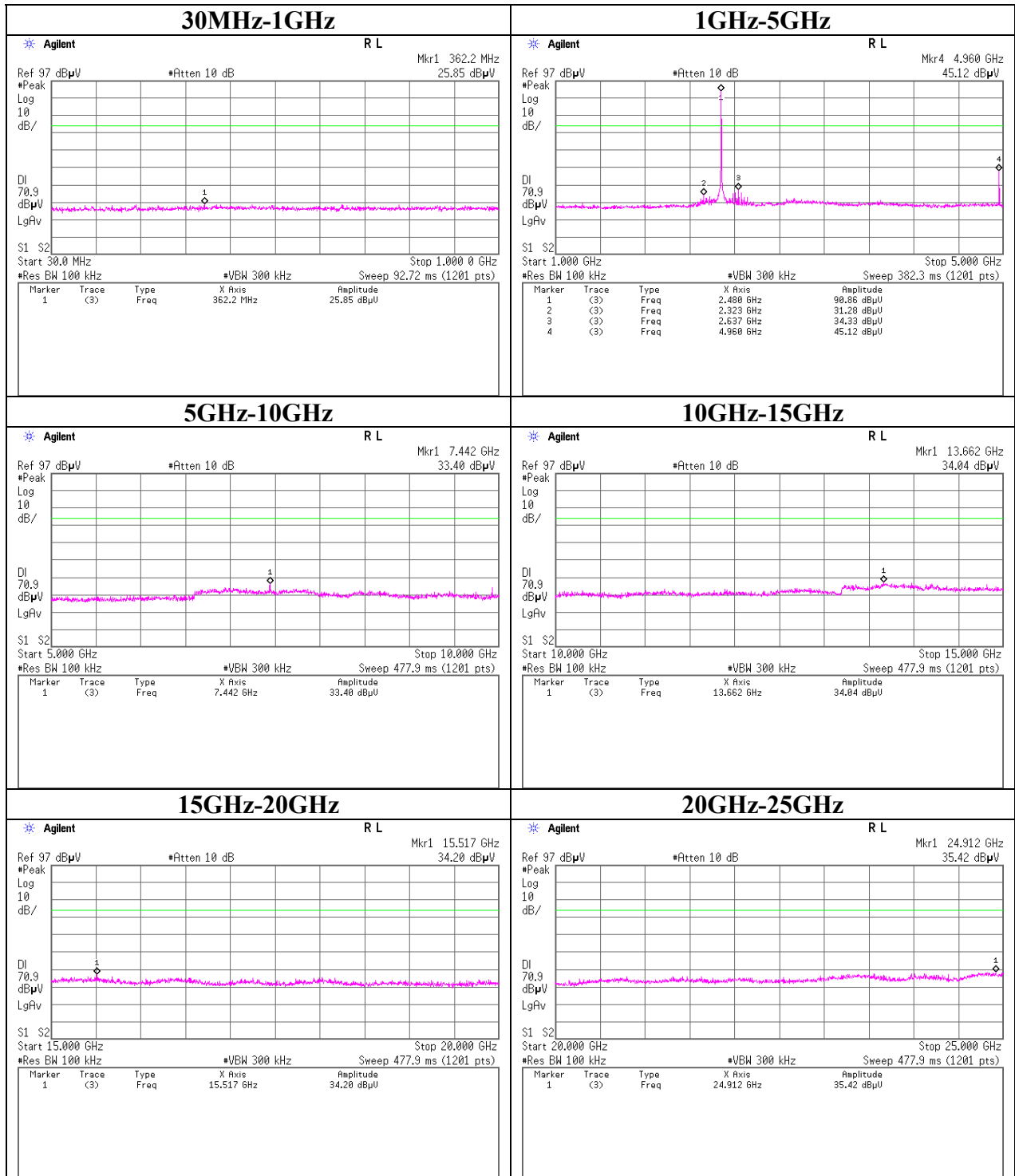
Conducted Spurious Emission

Tx DH5 2441MHz



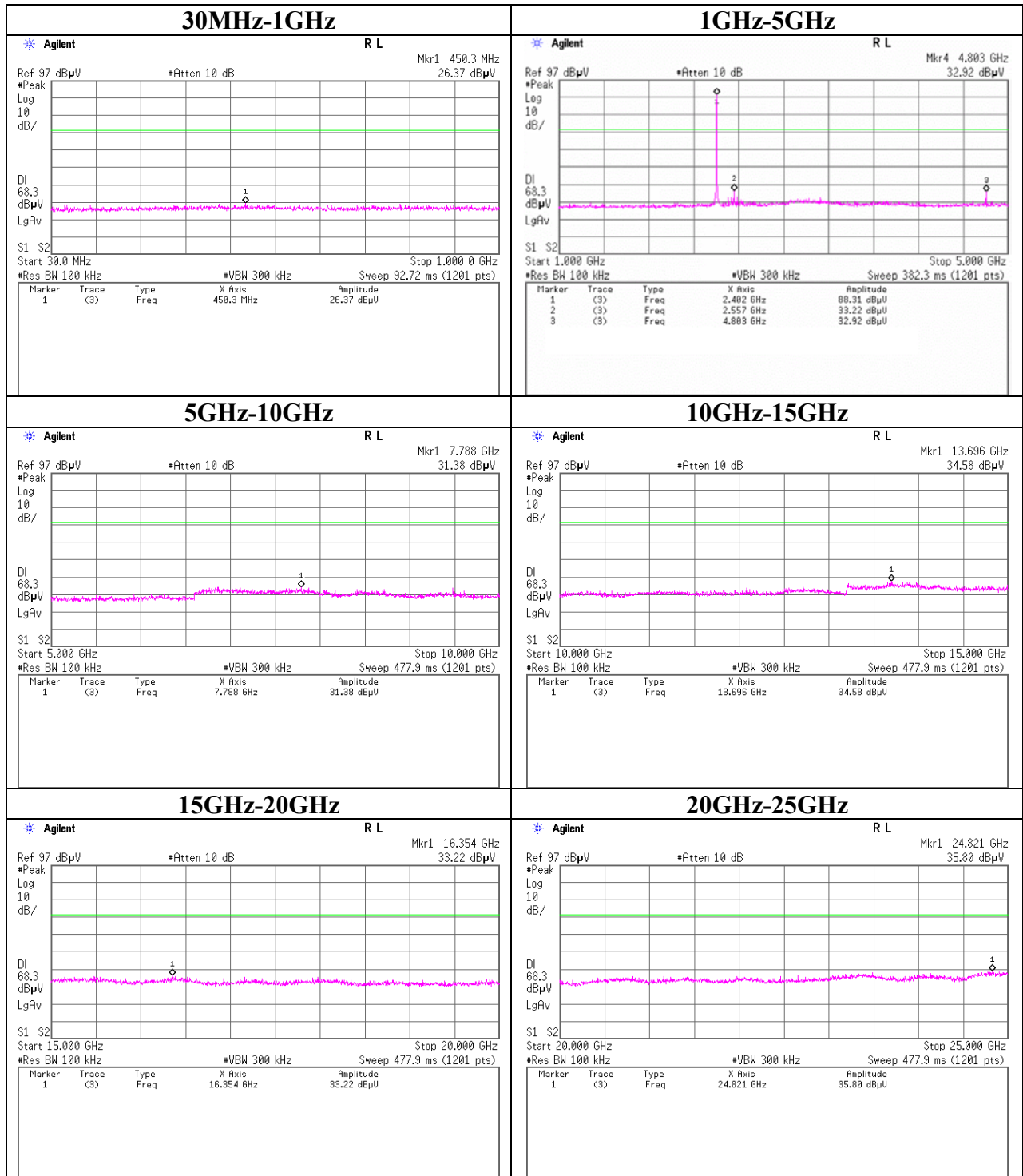
Conducted Spurious Emission

Tx DH5 2480MHz



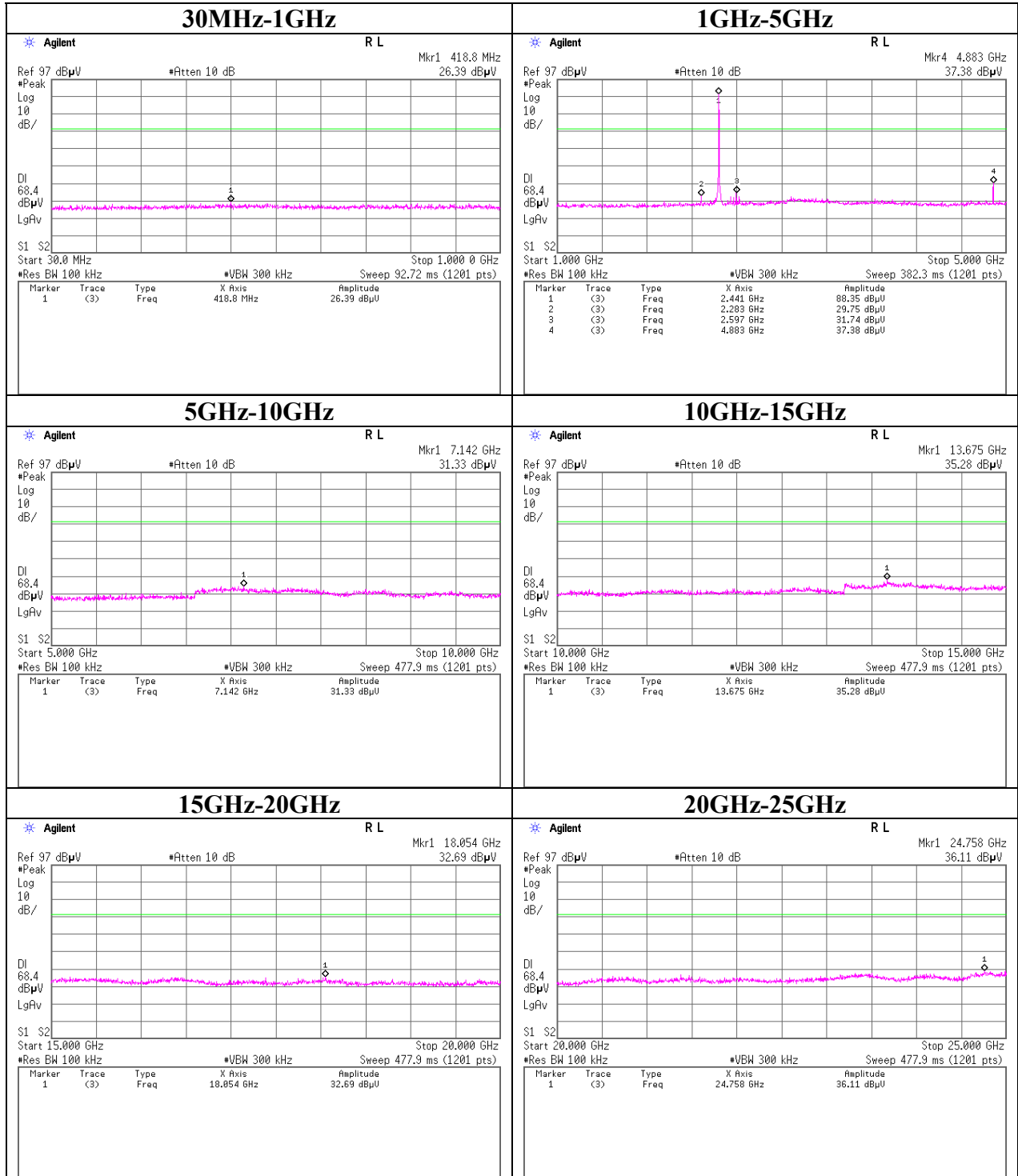
Conducted Spurious Emission

Tx 3DH5 2402MHz



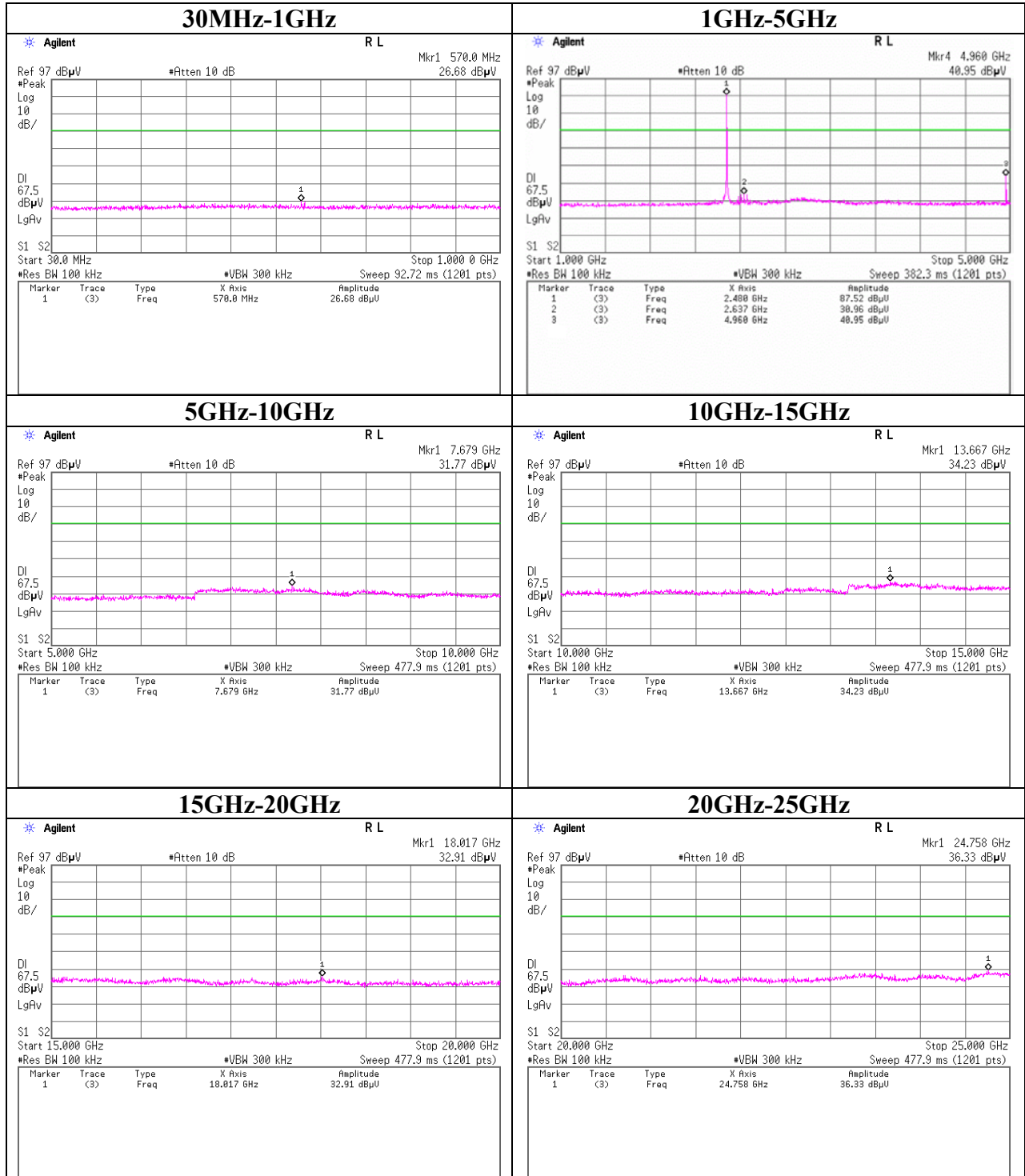
Conducted Spurious Emission

Tx 3DH5 2441MHz



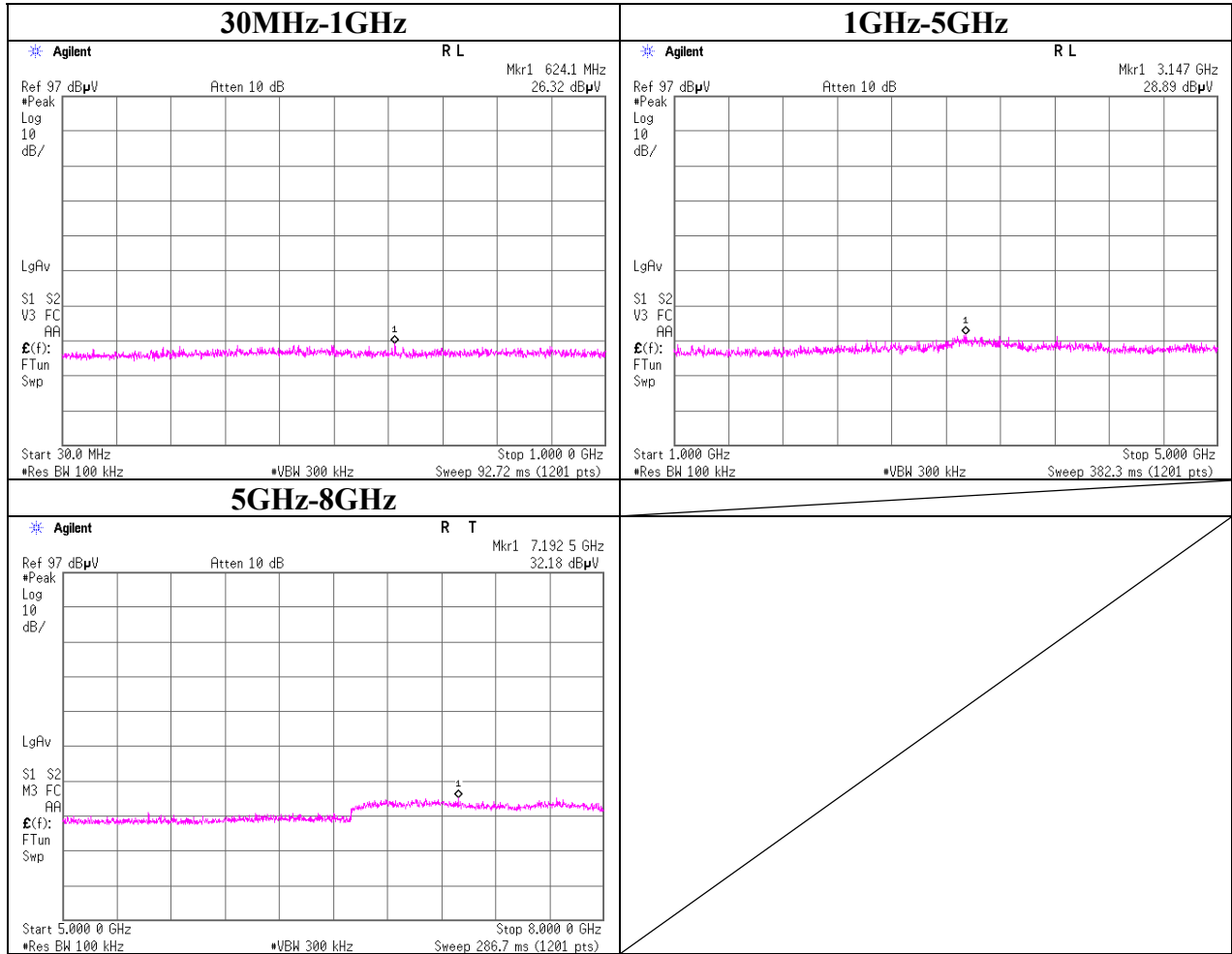
Conducted Spurious Emission

Tx 3DH5 2480MHz



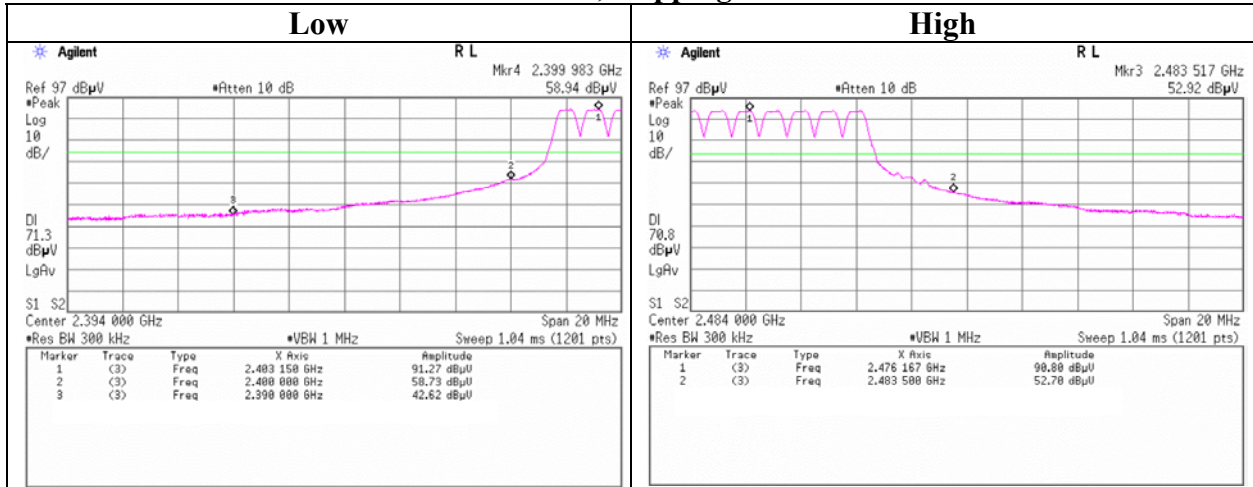
Conducted Spurious Emission

Rx 2441MHz

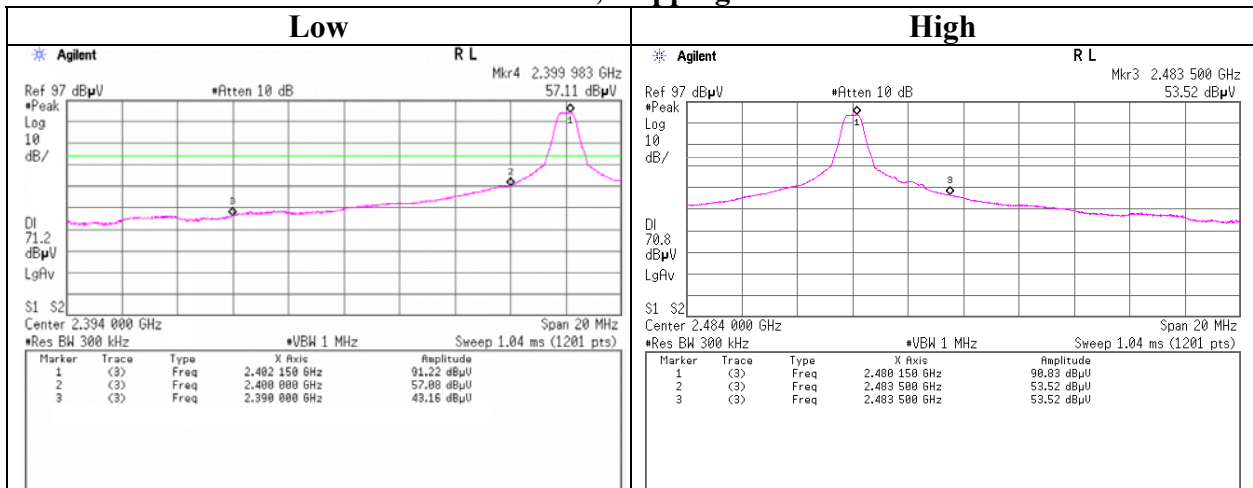


Conducted Emission Band Edge compliance

Tx DH5, Hopping on

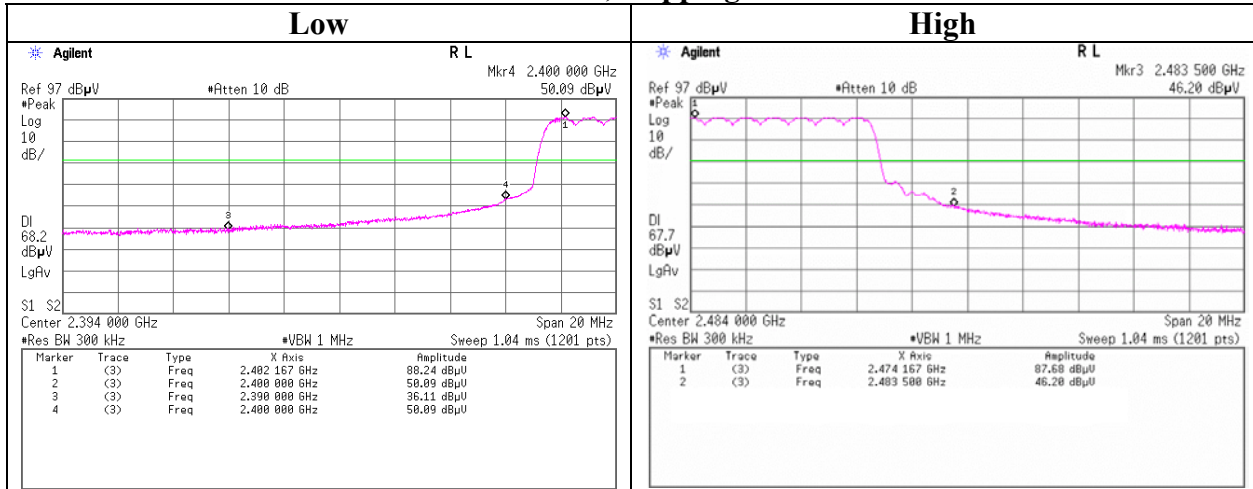


Tx DH5, Hopping off

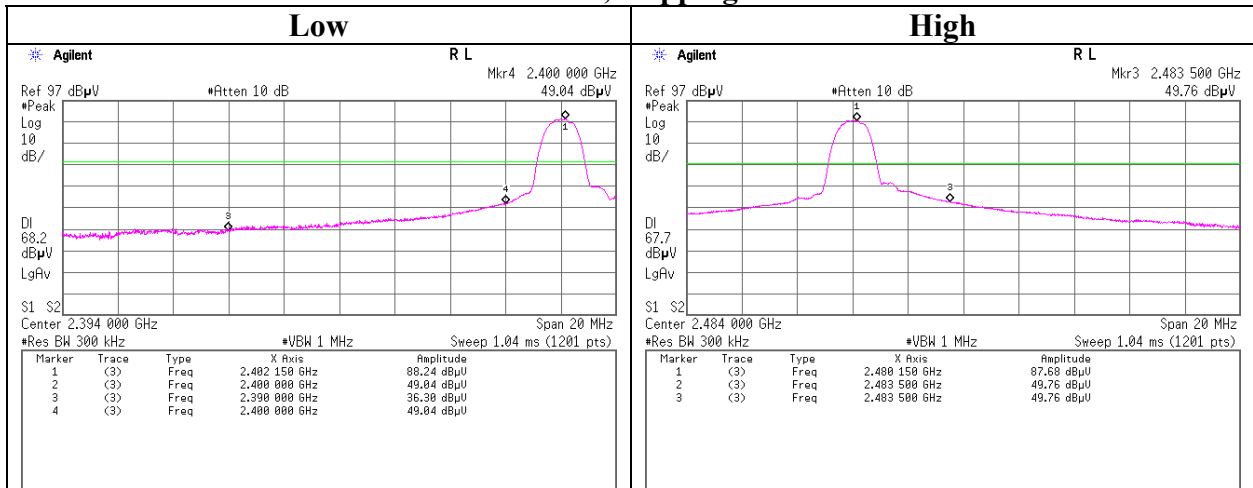


Conducted Emission Band Edge compliance

Tx 3DH5, Hopping on



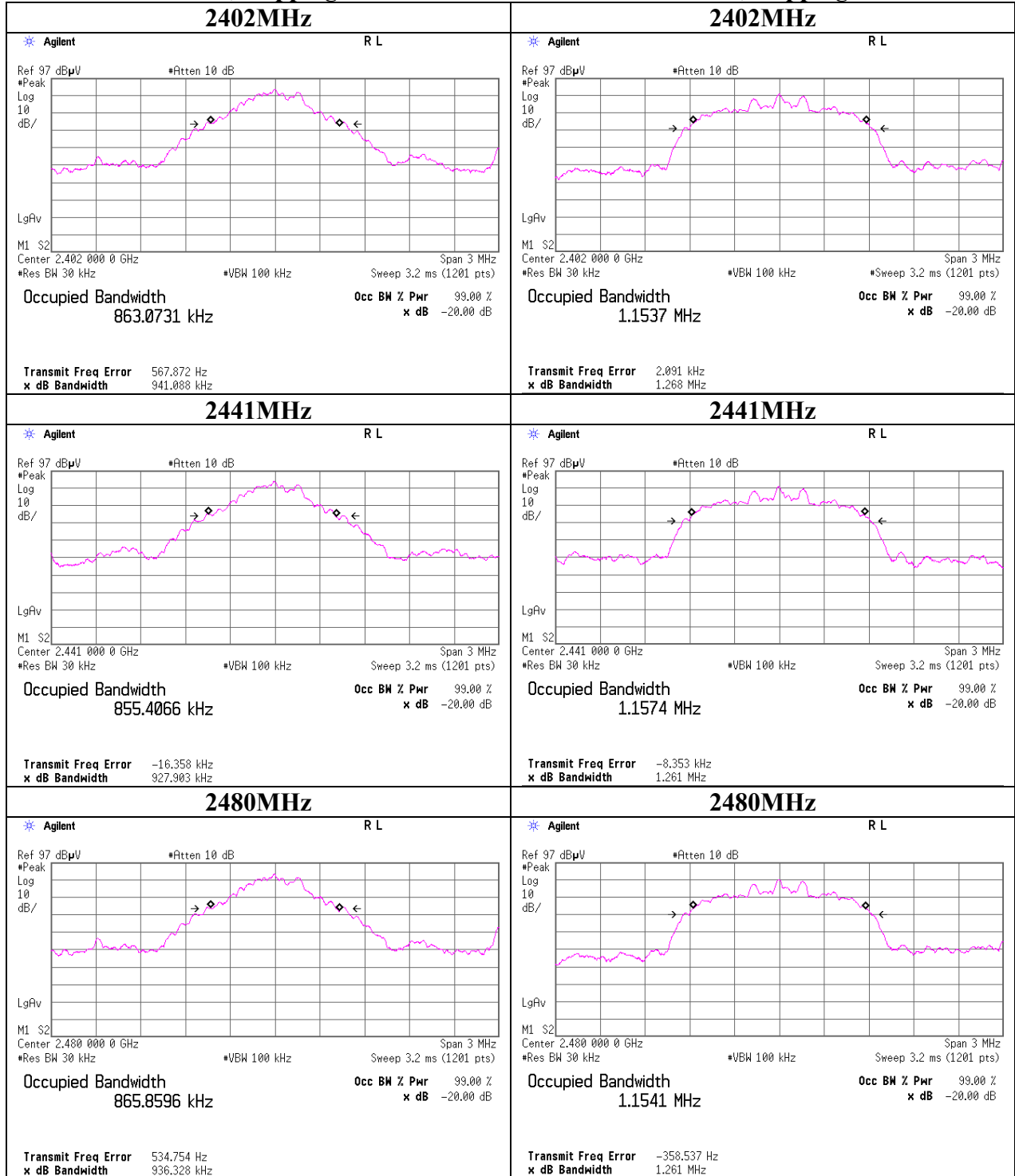
Tx 3DH5, Hopping off



99%Occupied Bandwidth

Tx DH5, Hopping off

Tx 3DH5, Hopping off



UL Japan, Inc.

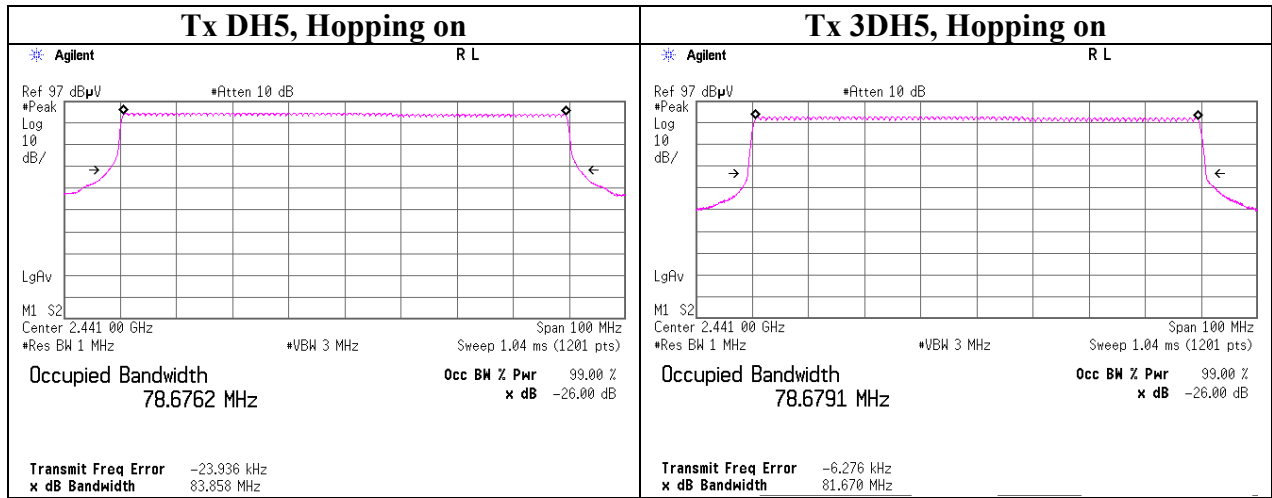
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99% Occupied Bandwidth



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

APPENDIX 3: Test instruments

EMI test equipment (1/2)

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/RE	2010/02/02 * 12
MOS-15	Thermo-Hygrometer	Custom	CTH-180	-	CE/RE	2010/02/09 * 12
MJM-07	Measure	PROMART	SEN1955	-	CE/RE	-
COTS-MEMI	EMI measurement program	TSJ	TEPTO-DV	-	CE/RE	-
MSA-05	Spectrum Analyzer	Advantest	R3273	160400285	CE/RE	2009/12/15 * 12
MTR-07	Test Receiver	Rohde & Schwarz	ESCI	100635	CE/RE	2009/10/23 * 12
MLS-06	LISN(AMN)	Schwarzbeck	NSLK8127	8127363	CE(EUT)	2010/02/04 * 12
MLS-07	LISN(AMN)	Schwarzbeck	NSLK8127	8127364	CE(AE)	2010/02/05 * 12
MTA-31	Terminator	TME	CT-01	-	CE	2010/01/20 * 12
MAT-67	Attenuator(13dB)	JFW Industries, Inc.	50FP-013H2 N	-	CE	2010/02/04 * 12
MCC-113	Coaxial cable	Fujikura/Suhner/TSJ	5D-2W(10m)/ SFM141(5m)/ 421-010(1m)/ sucoform141- PE(1m)/RFM- E121(Switcher)	-/04178	CE	2010/07/21 * 12
MOS-22	Thermo-Hygrometer	Custom	CTH-201	0003	AT / RE	2010/02/09 * 12
MAT-21	Attenuator(20dB) (above1GHz)	HIROSE ELECTRIC CO.,LTD.	AT-120	901247	AT	2010/01/26 * 12
MCC-45	Microwave Cable	Murata	MXGS83RK3000	-	AT	2010/07/26 * 12
MPM-12	Power Meter	Anritsu	ML2495A	0825002	AT	2009/08/26 * 12 *1)
MPSE-17	Power sensor	Anritsu	MA2411B	0738285	AT	2009/08/26 * 12 *1)
MOS-14	Thermo-Hygrometer	Custom	CTH-201	-	AT	2010/05/19 * 12
MSA-10	Spectrum Analyzer	Agilent	E4448A	MY46180655	AT/RE	2010/02/03 * 12
MAEC-02	Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-06902	RE	2009/08/17 * 12
MJM-05	Measure	PROMART	SEN1955	-	RE	-
MSA-03	Spectrum Analyzer	Agilent	E4448A	MY44020357	RE	2009/11/20 * 12
MHA-06	Horn Antenna 1- 18GHz	Schwarzbeck	BBHA9120D	254	RE	2010/01/19 * 12
MCC-57	Microwave Cable	Suhner	SUCOFLEX104	246769(1m) / 292411(5m)	RE	2009/11/17 * 12
MPA-10	Pre Amplifier	Agilent	8449B	3008A02142	RE	2009/09/14 * 12
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
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	-
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

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EMI test equipment (2/2)

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
MPA-11	MicroWave System Amplifier	Agilent	83017A	MY39500779	RE	2010/03/03 * 12
MHA-16	Horn Antenna 15-40GHz	Schwarzbeck	BBHA9170	BBHA9170306	RE	2010/05/07 * 12
MHF-19	High Pass Filter 3.5-18.0GHz	TOKIMEC	TF323DCA	602	RE	2009/12/19 * 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-51	Attenuator(6dB)	Weinschel	2	AS3557	RE	2010/01/20 * 12
MPA-14	Pre Amplifier	SONOMA INSTRUMENT	310	260833	RE	2010/03/05 * 12
MAT-22	Attenuator(10dB) 1-18GHz	Orient Microwave	BX10-0476-00	-	AT	2010/03/01 * 12
MCC-46	Microwave Cable	Murata	MXGS83RK3000	-	AT	2010/07/26 * 12
MSA-13	Spectrum Analyzer	Agilent	E4448A	MY46180655	AT	2010/02/03 * 12

***1) This test equipment was used for the tests before the expiration date of the calibration.**

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**