

20dB Bandwidth and Carrier Frequency Separation

Test place UL Japan, Inc. Shonan EMC Lab. No.5 Shielded Room
Date 2010/10/25
Temperature / Humidity 24deg.C. , 55%
Engineer Hikaru Shirasawa
Mode Tx,

Mode	Freq. [MHz]	20dB Bandwidth [MHz]	Carrier Frequency Separation [MHz]	Limit for Carrier Frequency Separation [MHz]
DH5	2402.0	0.930	1.000	>= 0.620
DH5	2441.0	0.935	1.000	>= 0.623
DH5	2480.0	0.930	1.000	>= 0.620
3DH5	2402.0	1.275	1.000	>= 0.850
3DH5	2441.0	1.278	1.000	>= 0.852
3DH5	2480.0	1.283	1.000	>= 0.855
Inquiry	2441.0	0.800	2.012	>= 0.533

Limit: Two-thirds of 20dB Bandwidth or 25kHz (whichever is greater).

No limit applies to 20dB Bandwidth.

UL Japan, Inc.

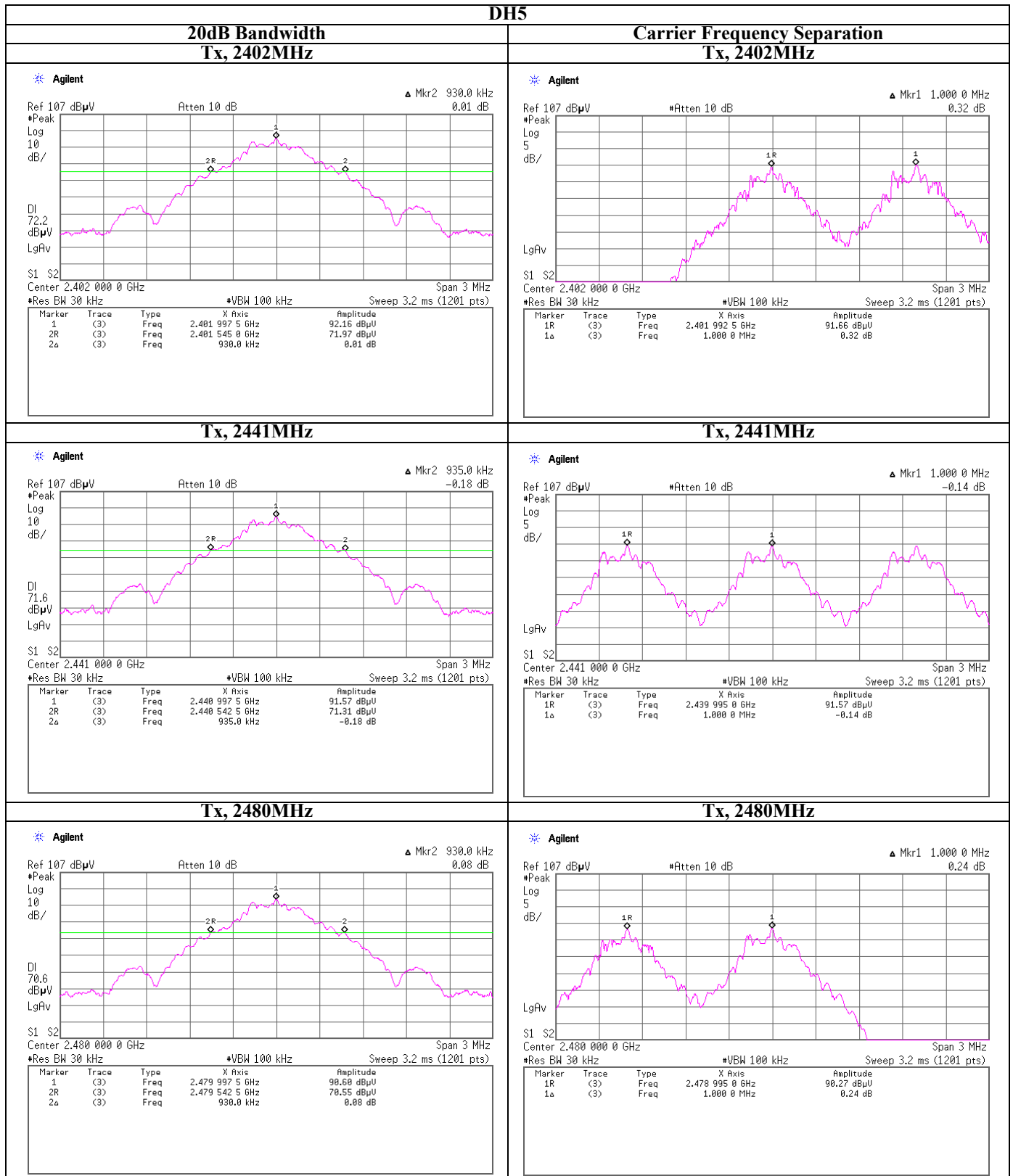
Shonan EMC Lab.

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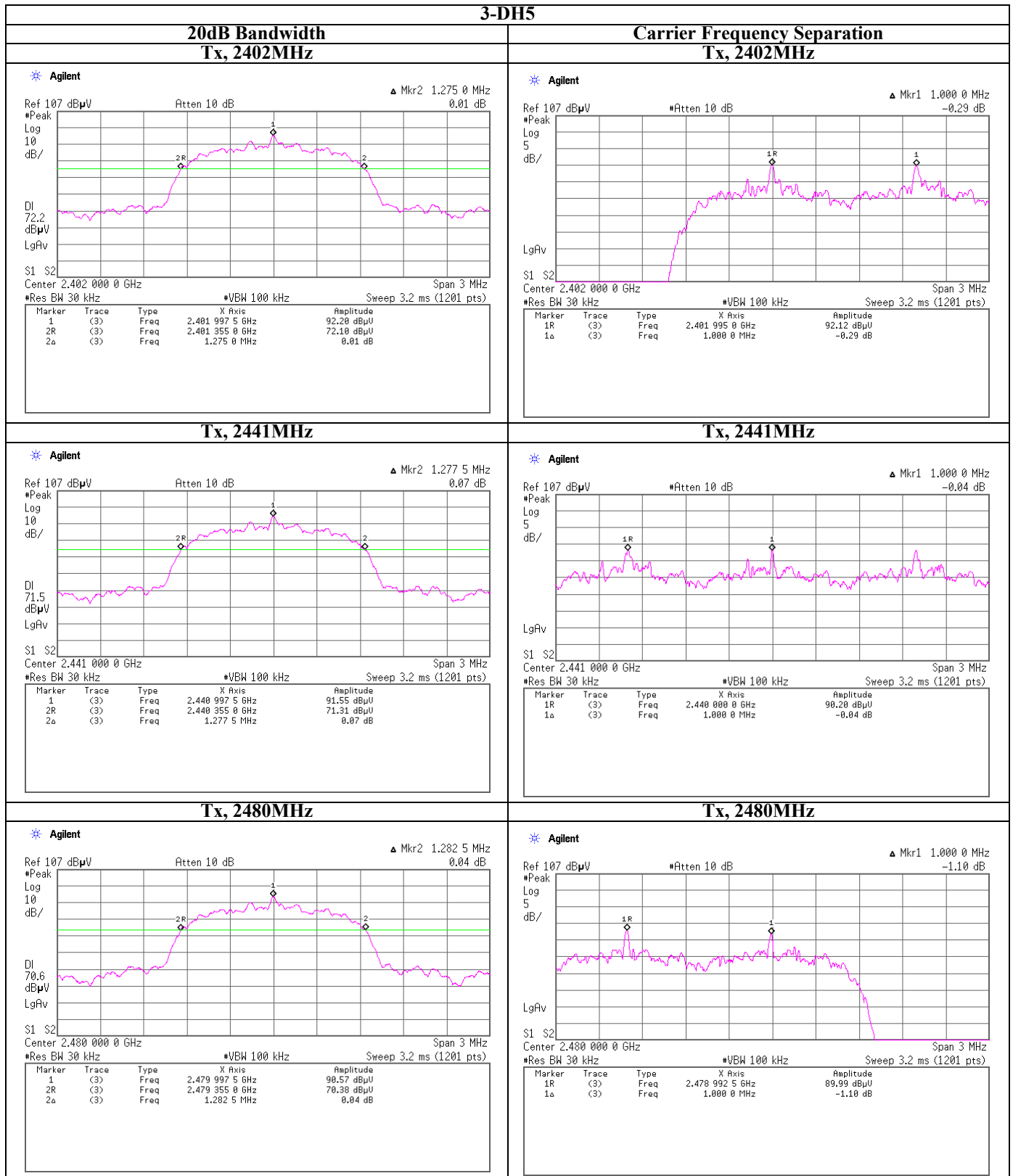
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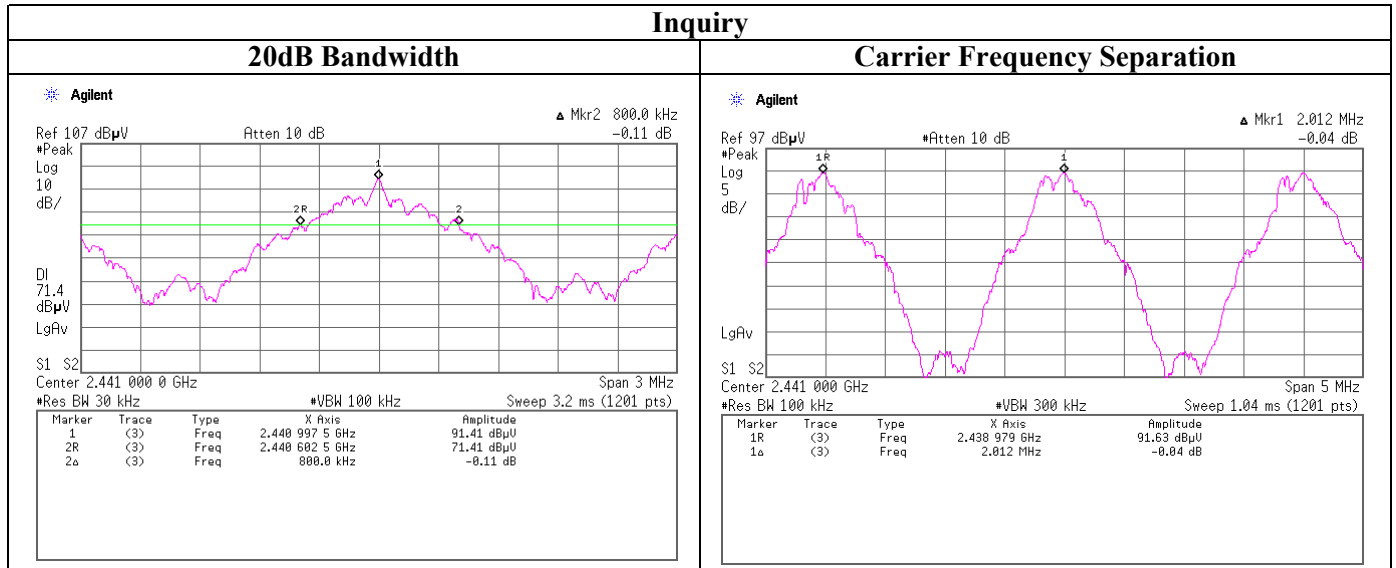
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Number of Hopping Frequency (Conducted)

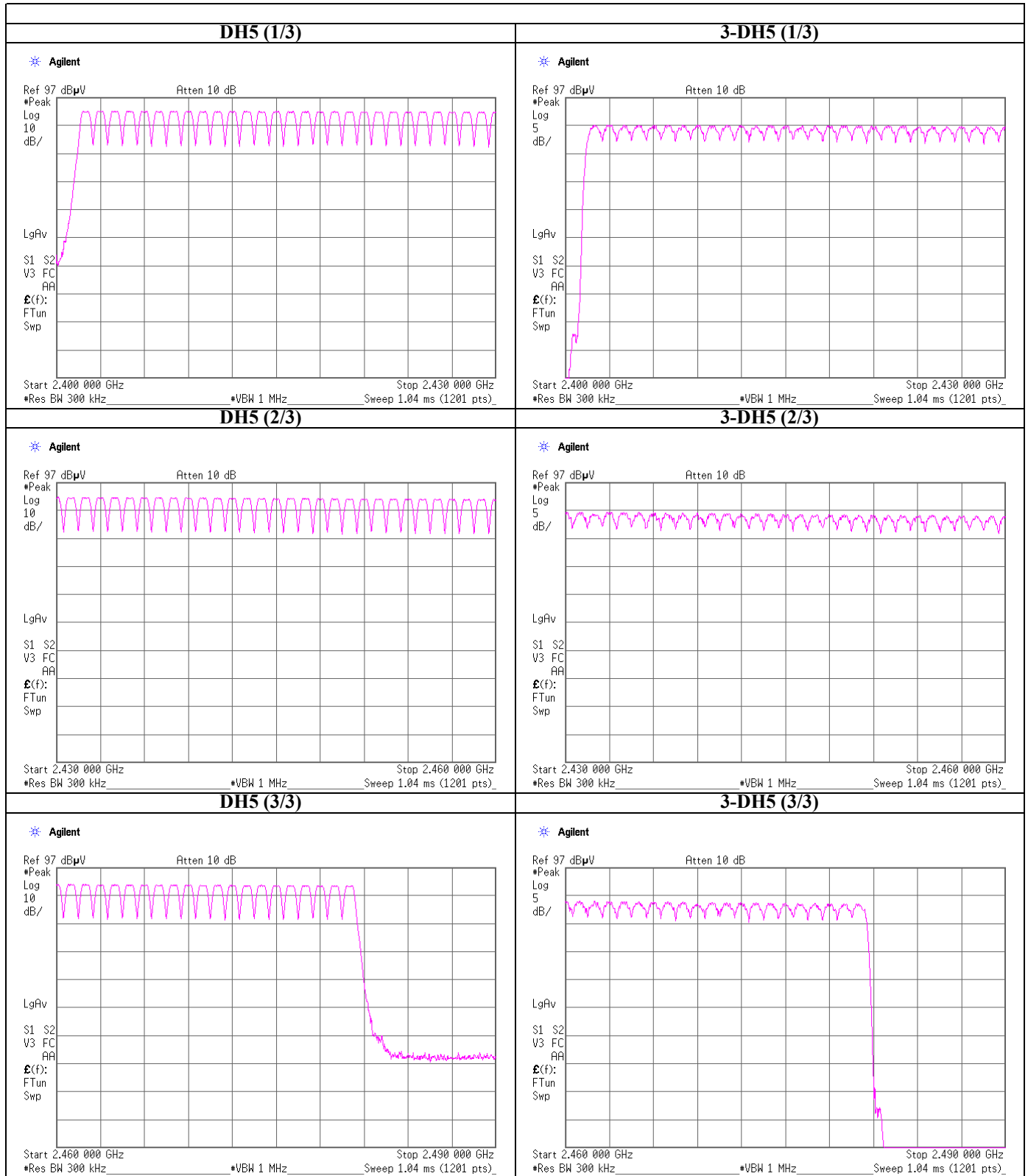
Test place UL Japan, Inc. Shonan EMC Lab. No.5 Shielded Room
Date 2010/10/25
Temperature / Humidity 24deg.C ,55%
Engineer Hikaru Shirasawa
Mode Tx,

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

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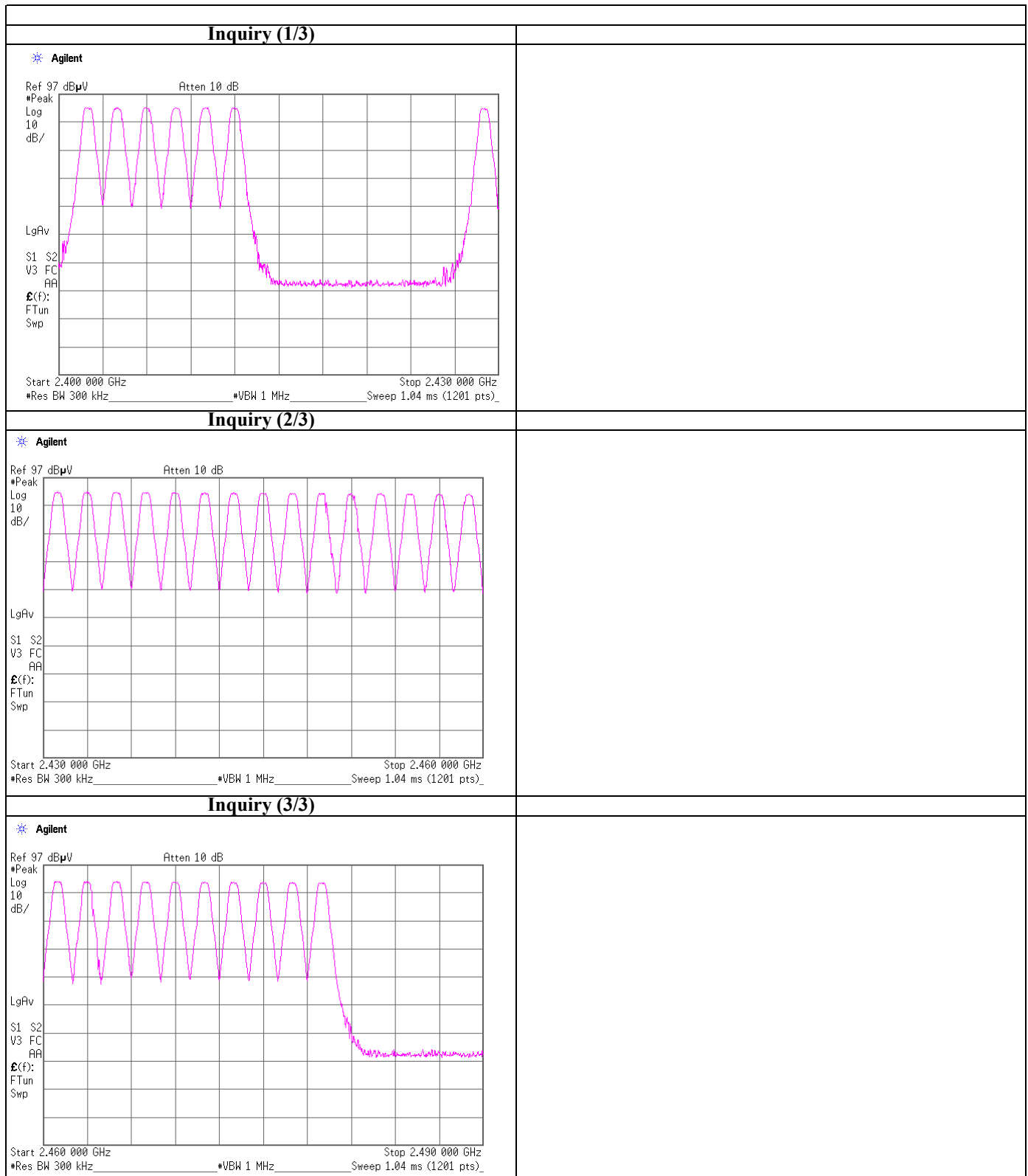
Number of Hopping Frequency



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Number of Hopping Frequency



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Dwell Time (Conducted)

Test place UL Japan, Inc. Shonan EMC Lab. No.5 Shielded Room
Date 2010/10/25
Temperature / Humidity 24deg.C ,55%
Engineer Hikaru Shirasawa
Mode Tx,

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	47.4 times / 5 sec. x 31.6 sec. = 300 times	0.454	136	400
DH3	25.2 times / 5 sec. x 31.6 sec. = 160 times	1.712	274	400
DH5	17.4 times / 5 sec. x 31.6 sec. = 110 times	2.960	326	400
3DH1	47.6 times / 5 sec. x 31.6 sec. = 301 times	0.452	136	400
3DH3	26.0 times / 5 sec. x 31.6 sec. = 165 times	1.705	281	400
3DH5	16.6 times / 5 sec. x 31.6 sec. = 105 times	2.960	311	400
Inquiry	50.0 times / 0.5 sec. x 12.8 sec. = 1280 times	0.143	183	400

Sample Calculation

Result = Number of transmission x Length of transmission time

*Average data of 5 tests.(except Inquiry)

Mode	Sampling [times]					Average [times]
	1	2	3	4	5	
DH1	47	48	48	48	46	47.4
DH3	26	21	29	27	23	25.2
DH5	18	21	20	13	15	17.4
3DH1	49	49	47	45	48	47.6
3DH3	25	29	25	24	27	26
3DH5	16	17	17	15	18	16.6
Inquiry	50	50	50	50	50	50

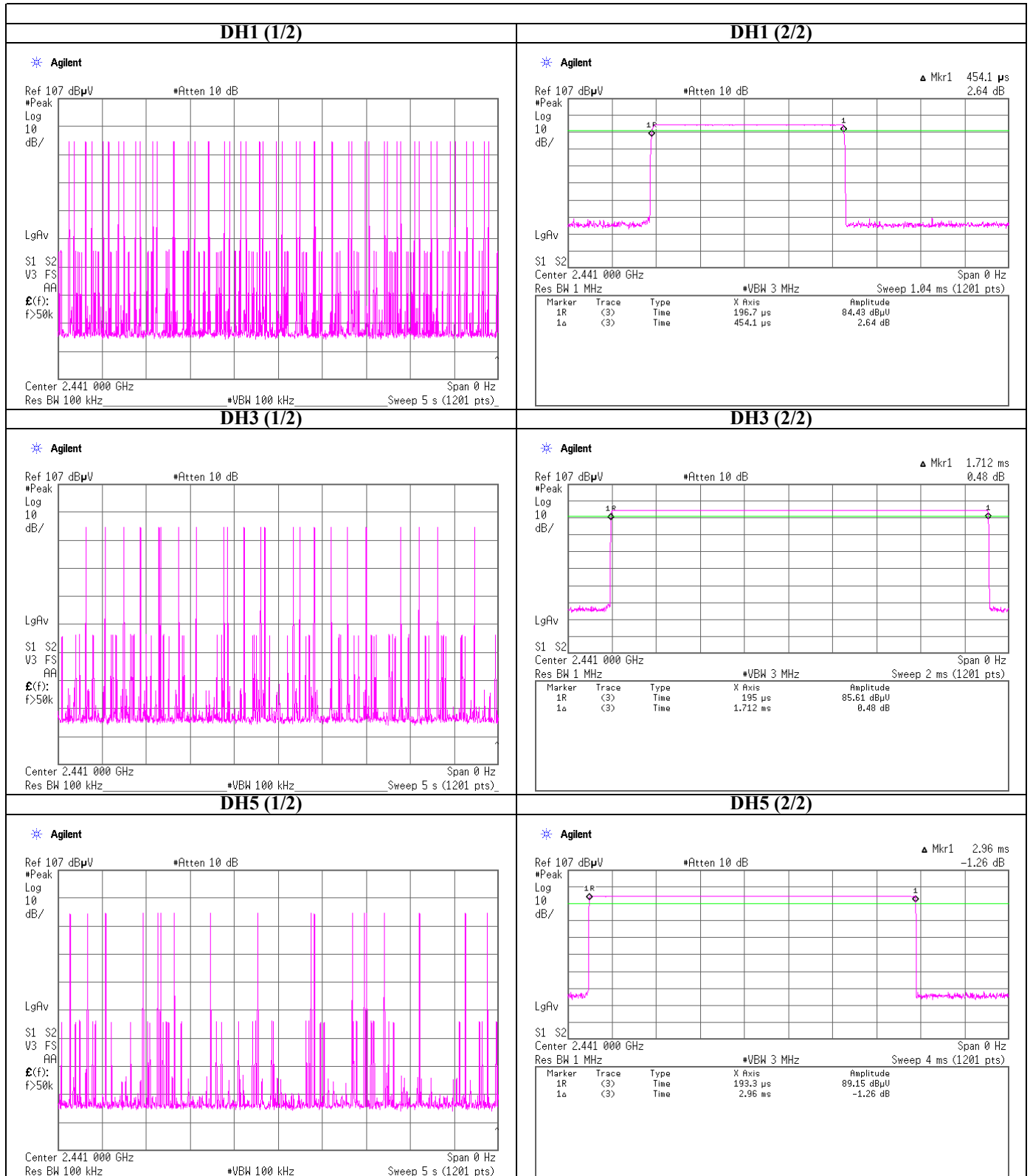
Sample Calculation

Average= Summation(Sampling 1 to 5) / 5

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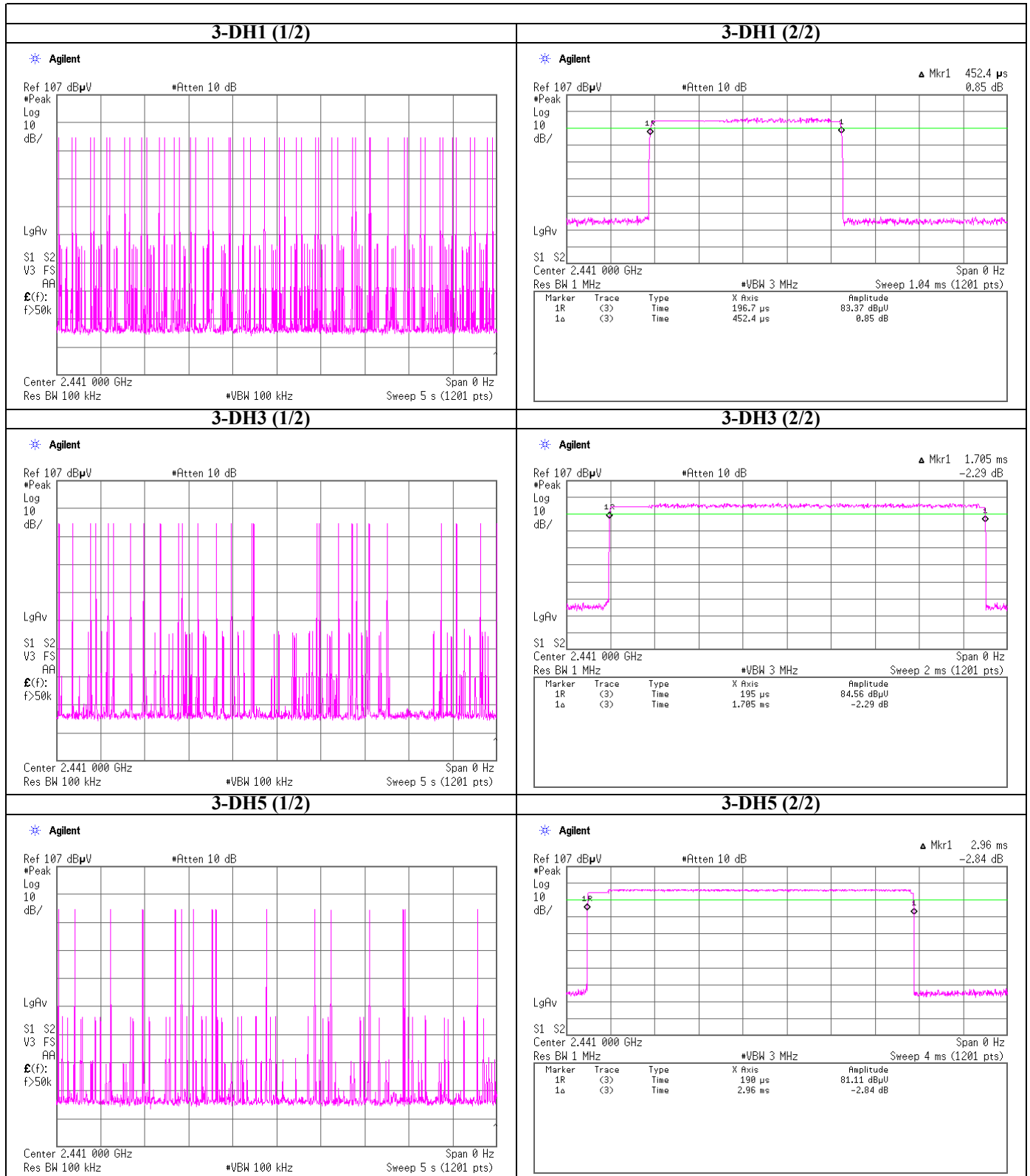
Dwell time



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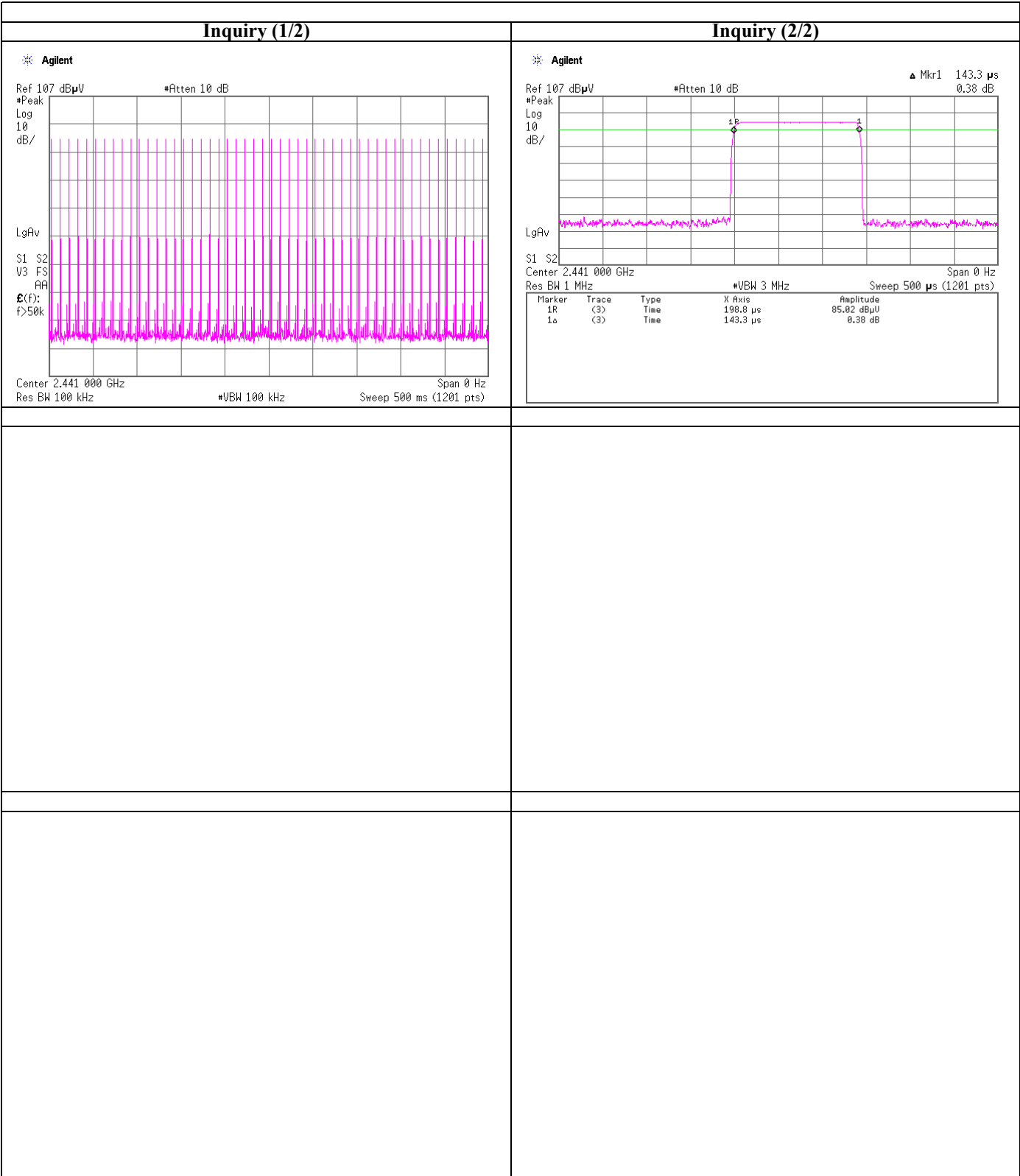
Dwell time



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Dwell time



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Peak Output Power (Conducted)

Test place UL Japan, Inc. Shonan EMC Lab. No.5 Shielded Room
Date 2010/10/25
Temperature / Humidity 24deg.C ,55%
Engineer Hikaru Shirasawa
Mode Tx,

BDR (DH5)

Ch	Freq. [MHz]	P/M (PK) Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result		Limit		Margin [dB]
					[dBm]	[mW]	[dBm]	[mW]	
Low	2402.0	-14.88	1.79	9.98	-3.11	0.49	20.97	125	24.08
Mid	2441.0	-15.46	1.80	9.98	-3.68	0.43	20.97	125	24.65
High	2480.0	-16.42	1.81	9.98	-4.63	0.34	20.97	125	25.60

EDR (2-DH5)

Ch	Freq. [MHz]	P/M (PK) Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result		Limit		Margin [dB]
					[dBm]	[mW]	[dBm]	[mW]	
Low	2402.0	-14.12	1.79	9.98	-2.35	0.58	20.97	125	23.32
Mid	2441.0	-14.70	1.80	9.98	-2.92	0.51	20.97	125	23.89
High	2480.0	-15.66	1.81	9.98	-3.87	0.41	20.97	125	24.84

EDR (3-DH5)

Ch	Freq. [MHz]	P/M (PK) Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result		Limit		Margin [dB]
					[dBm]	[mW]	[dBm]	[mW]	
Low	2402.0	-13.88	1.79	9.98	-2.11	0.62	20.97	125	23.08
Mid	2441.0	-14.51	1.80	9.98	-2.73	0.53	20.97	125	23.70
High	2480.0	-15.45	1.81	9.98	-3.66	0.43	20.97	125	24.63

Sample Calculation:

Result = Reading + Cable Loss (supplied by customer) + Atten. Loss

*The test result is rounded off to one or two decimal places, so some differences might be observed.

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Radiated Emission

Test place: UL Japan, Inc. Shonan EMC Lab. No.3 Semi anechoic chamber
Date: 2010/10/24
Temperature / Humidity: 24deg.C., 43% 24Deg.C., 43%
Engineer: Makoto Hosaka Wataru Kojima
Mode: Tx, 2402 MHz
Bluetooth, DH5,

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	156.056	QP	38.6	14.9	7.6	32.0	29.1	43.5	14.4	300	305	
Hori.	167.339	QP	43.4	15.5	7.7	32.0	34.6	43.5	8.9	200	146	
Hori.	171.833	QP	36.0	15.5	7.7	32.0	27.2	43.5	16.3	150	150	
Hori.	228.577	QP	38.6	16.8	8.0	32.0	31.4	46.0	14.6	150	227	
Hori.	792.038	QP	33.7	20.2	10.3	31.6	32.6	46.0	13.4	150	287	
Hori.	960.078	QP	40.6	21.3	10.9	30.5	42.3	53.9	11.6	100	144	
Hori.	1632.016	PK	51.1	25.6	12.7	40.1	49.3	73.9	24.6	111	280	
Hori.	1860.000	PK	47.1	26.6	12.9	40.3	46.3	73.9	27.6	100	0	
Hori.	2390.000	PK	47.5	27.5	13.3	40.2	48.1	73.9	25.8	108	330	
Hori.	2400.000	PK	47.7	27.5	13.3	40.2	48.3	73.9	25.6	108	330	
Hori.	4804.000	PK	54.8	31.5	5.5	40.1	51.7	73.9	22.2	129	313	
Hori.	7206.000	PK	47.1	36.4	6.7	38.3	51.9	73.9	22.0	100	0	
Hori.	9608.000	PK	45.8	37.9	7.8	37.3	54.2	73.9	19.7	100	0	
Hori.	12010.000	PK	48.1	39.4	9.0	38.4	58.1	73.9	15.8	100	0	
Hori.	1632.016	AV	42.7	25.6	12.7	40.1	40.9	53.9	13.0	111	280	VBW:10Hz
Hori.	1860.000	AV	34.0	26.6	12.9	40.3	33.2	53.9	20.7	100	0	VBW:10Hz
Vert.	156.056	QP	39.5	14.9	7.6	32.0	30.0	43.5	13.5	100	202	
Vert.	167.339	QP	42.3	15.5	7.7	32.0	33.4	43.5	10.1	100	331	
Vert.	171.833	QP	37.7	15.5	7.7	32.0	28.9	43.5	14.6	100	290	
Vert.	228.577	QP	38.0	16.8	8.0	32.0	30.8	46.0	15.2	100	331	
Vert.	792.038	QP	36.9	20.2	10.3	31.6	35.8	46.0	10.2	100	174	
Vert.	960.078	QP	39.3	21.3	10.9	30.5	41.0	53.9	12.9	100	98	
Vert.	1632.016	PK	54.0	25.6	12.7	40.1	52.2	73.9	21.7	100	353	
Vert.	1860.000	PK	48.2	26.6	12.9	40.3	47.4	73.9	26.5	100	0	
Vert.	2390.000	PK	48.1	27.5	13.3	40.2	48.7	73.9	25.2	175	344	
Vert.	2400.000	PK	48.4	27.5	13.3	40.2	49.0	73.9	24.9	175	344	
Vert.	4804.000	PK	54.8	31.5	5.5	40.1	51.7	73.9	22.2	101	238	
Vert.	7206.000	PK	47.2	36.4	6.7	38.3	52.0	73.9	21.9	100	0	
Vert.	9608.000	PK	45.3	37.9	7.8	37.3	53.7	73.9	20.2	100	0	
Vert.	12010.000	PK	48.0	39.4	9.0	38.4	58.0	73.9	15.9	100	0	
Vert.	1632.016	AV	47.0	25.6	12.7	40.1	45.2	53.9	8.7	100	353	VBW:10Hz
Vert.	1860.000	AV	34.0	26.6	12.9	40.3	33.2	53.9	20.7	100	0	VBW:10Hz

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 13GHz)) - Gain(Amplifier)

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

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

Distance factor: 13GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB

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.	2390.000	AV	34.6	27.5	13.3	40.2	-24.7	10.5	53.9	43.4	VBW:300Hz
Hori.	2400.000	AV	35.5	27.5	13.3	40.2	-24.7	11.4	53.9	42.5	VBW:300Hz
Hori.	4804.000	AV	51.0	31.5	5.5	40.1	-24.7	23.2	53.9	30.7	VBW:300Hz
Hori.	7206.000	AV	35.3	36.4	6.7	38.3	-24.7	15.4	53.9	38.5	VBW:300Hz
Hori.	9608.000	AV	33.7	37.9	7.8	37.3	-24.7	17.4	53.9	36.5	VBW:300Hz
Hori.	12010.000	AV	35.3	39.4	9.0	38.4	-24.7	20.6	53.9	33.3	VBW:300Hz
Vert.	2390.000	AV	34.6	27.5	13.3	40.2	-24.7	10.5	53.9	43.4	VBW:300Hz
Vert.	2400.000	AV	36.3	27.5	13.3	40.2	-24.7	12.2	53.9	41.7	VBW:300Hz
Vert.	4804.000	AV	51.1	31.5	5.5	40.1	-24.7	23.3	53.9	30.6	VBW:300Hz
Vert.	7206.000	AV	35.3	36.4	6.7	38.3	-24.7	15.4	53.9	38.5	VBW:300Hz
Vert.	9608.000	AV	33.4	37.9	7.8	37.3	-24.7	17.1	53.9	36.8	VBW:300Hz
Vert.	12010.000	AV	35.3	39.4	9.0	38.4	-24.7	20.6	53.9	33.3	VBW:300Hz

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 13GHz))

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

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

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

Distance factor: 13GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB

Dwell factor: 20log(5.834ms/100ms)=-24.68dB

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Radiated Emission

Test place	UL Japan, Inc. Shonan EMC Lab.	No.3 Semi anechoic chamber
Date	2010/10/24	2010/10/25
Temperature / Humidity	24deg.C. , 43%	24Deg.C. ,43%
Engineer	Makoto Hosaka	Wataru Kojima
Mode	Tx, 2441 MHz Bluetooth, DH5,	

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	156.072	QP	41.3	14.9	7.6	32.0	31.8	43.5	11.7	300	283	
Hori.	169.599	QP	43.5	15.5	7.7	32.0	34.7	43.5	8.8	200	224	
Hori.	171.764	QP	37.4	15.5	7.7	32.0	28.6	43.5	14.9	200	148	
Hori.	228.036	QP	41.3	16.7	8.0	32.0	34.0	46.0	12.0	150	243	
Hori.	792.385	QP	33.1	20.2	10.3	31.6	32.0	46.0	14.0	100	173	
Hori.	960.721	QP	39.0	21.3	10.9	30.5	40.7	53.9	13.2	100	145	
Hori.	1632.016	PK	50.9	25.6	12.7	40.1	49.1	73.9	24.8	109	282	
Hori.	1860.000	PK	46.3	26.6	12.9	40.3	45.5	73.9	28.4	100	0	
Hori.	4882.000	PK	53.6	31.7	5.6	40.0	50.9	73.9	23.0	129	313	
Hori.	7323.000	PK	45.9	36.7	6.9	38.5	51.0	73.9	22.9	100	0	
Hori.	9764.000	PK	45.4	38.2	7.8	37.4	54.0	73.9	19.9	100	0	
Hori.	12205.000	PK	45.9	39.2	9.1	38.1	56.1	73.9	17.8	100	0	
Hori.	1632.016	AV	43.6	25.6	12.7	40.1	41.8	53.9	12.1	109	282	VBW:10Hz
Hori.	1860.000	AV	34.4	26.6	12.9	40.3	33.6	53.9	20.3	100	0	VBW:10Hz
Vert.	156.072	QP	42.8	14.9	7.6	32.0	33.3	43.5	10.2	100	249	
Vert.	169.599	QP	43.2	15.5	7.7	32.0	34.4	43.5	9.1	100	321	
Vert.	171.764	QP	39.1	15.5	7.7	32.0	30.3	43.5	13.2	100	251	
Vert.	228.036	QP	41.4	16.7	8.0	32.0	34.1	46.0	11.9	100	184	
Vert.	792.385	QP	36.3	20.2	10.3	31.6	35.2	46.0	10.8	100	158	
Vert.	960.721	QP	39.6	21.3	10.9	30.5	41.3	53.9	12.6	100	93	
Vert.	1632.016	PK	52.9	25.6	12.7	40.1	51.1	73.9	22.8	100	353	
Vert.	1860.000	PK	45.7	26.6	12.9	40.3	44.9	73.9	29.0	100	0	
Vert.	4882.000	PK	54.0	31.7	5.6	40.0	51.3	73.9	22.6	101	238	
Vert.	7323.000	PK	46.9	36.7	6.9	38.5	52.0	73.9	21.9	100	0	
Vert.	9764.000	PK	45.1	38.2	7.8	37.4	53.7	73.9	20.2	100	0	
Vert.	12205.000	PK	45.8	39.2	9.1	38.1	56.0	73.9	17.9	100	0	
Vert.	1632.016	AV	46.5	25.6	12.7	40.1	44.7	53.9	9.2	100	353	VBW:10Hz
Vert.	1860.000	AV	34.1	26.6	12.9	40.3	33.3	53.9	20.6	100	0	VBW:10Hz

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 13GHz)) - Gain(Amplifier)

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

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

Distance factor: 13GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB

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	49.4	31.7	5.6	40.0	-24.7	22.0	53.9	31.9	VBW:300Hz
Hori.	7323.000	AV	34.3	36.7	6.9	38.5	-24.7	14.7	53.9	39.2	VBW:300Hz
Hori.	9764.000	AV	33.2	38.2	7.8	37.4	-24.7	17.1	53.9	36.8	VBW:300Hz
Hori.	12205.000	AV	33.7	39.2	9.1	38.1	-24.7	19.2	53.9	34.7	VBW:300Hz
Vert.	4882.000	AV	50.0	31.7	5.6	40.0	-24.7	22.6	53.9	31.3	VBW:300Hz
Vert.	7323.000	AV	34.2	36.7	6.9	38.5	-24.7	14.6	53.9	39.3	VBW:300Hz
Vert.	9764.000	AV	32.9	38.2	7.8	37.4	-24.7	16.8	53.9	37.1	VBW:300Hz
Vert.	12205.000	AV	33.8	39.2	9.1	38.1	-24.7	19.3	53.9	34.6	VBW:300Hz

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 13GHz))

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

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

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

Distance factor: 13GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB

Dwell factor: 20log(5.834ms/100ms)=-24.68dB

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Radiated Emission

Test place: UL Japan, Inc. Shonan EMC Lab. No.3 Semi anechoic chamber
Date: 2010/10/24 2010/10/25
Temperature / Humidity: 24deg.C., 43% 24Deg.C., 43%
Engineer: Makoto Hosaka Wataru Kojima
Mode: Tx, 2480 MHz
Bluetooth, DH5,

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	156.082	QP	38.3	14.9	7.6	32.0	28.8	43.5	14.7	287	291	
Hori.	169.341	QP	43.4	15.5	7.7	32.0	34.6	43.5	8.9	287	212	
Hori.	171.829	QP	36.3	15.5	7.7	32.0	27.5	43.5	16.0	194	139	
Hori.	229.11	QP	38.0	16.8	8.0	32.0	30.8	46.0	15.2	189	242	
Hori.	792.042	QP	34.3	20.2	10.3	31.6	33.2	46.0	12.8	100	182	
Hori.	960.079	QP	38.9	21.3	10.9	30.5	40.6	53.9	13.3	100	150	
Hori.	1632.016	PK	50.6	25.6	12.7	40.1	48.8	73.9	25.1	109	179	
Hori.	1860.000	PK	45.9	26.6	12.9	40.3	45.1	73.9	28.8	100	0	
Hori.	2483.500	PK	46.6	27.6	13.4	40.1	47.5	73.9	26.4	104	149	
Hori.	4960.000	PK	51.8	31.9	5.6	40.0	49.3	73.9	24.6	118	267	
Hori.	7440.000	PK	46.1	36.9	7.1	38.7	51.4	73.9	22.5	100	0	
Hori.	9920.000	PK	44.3	38.4	8.0	37.5	53.2	73.9	20.7	100	0	
Hori.	12400.000	PK	44.8	39.1	9.4	37.9	55.4	73.9	18.5	100	0	
Hori.	1632.016	AV	43.9	25.6	12.7	40.1	42.1	53.9	11.8	109	179	VBW:10Hz
Hori.	1860.000	AV	34.0	26.6	12.9	40.3	33.2	53.9	20.7	100	0	VBW:10Hz
Vert.	156.082	QP	39.2	14.9	7.6	32.0	29.7	43.5	13.8	100	215	
Vert.	169.341	QP	42.9	15.5	7.7	32.0	34.1	43.5	9.4	100	311	
Vert.	171.829	QP	37.4	15.5	7.7	32.0	28.6	43.5	14.9	100	249	
Vert.	229.11	QP	37.8	16.8	8.0	32.0	30.6	46.0	15.4	100	316	
Vert.	792.042	QP	36.8	20.2	10.3	31.6	35.7	46.0	10.3	100	194	
Vert.	960.079	QP	39.4	21.3	10.9	30.5	41.1	53.9	12.8	100	108	
Vert.	1632.016	PK	52.6	25.6	12.7	40.1	50.8	73.9	23.1	100	352	
Vert.	1860.000	PK	46.9	26.6	12.9	40.3	46.1	73.9	27.8	100	0	
Vert.	2483.500	PK	46.5	27.6	13.4	40.1	47.4	73.9	26.5	169	345	
Vert.	4960.000	PK	53.5	31.9	5.6	40.0	51.0	73.9	22.9	108	134	
Vert.	7440.000	PK	46.1	36.9	7.1	38.7	51.4	73.9	22.5	100	0	
Vert.	9920.000	PK	44.0	38.4	8.0	37.5	52.9	73.9	21.0	100	0	
Vert.	12400.000	PK	44.4	39.1	9.4	37.9	55.0	73.9	18.9	100	0	
Vert.	1632.016	AV	46.5	25.6	12.7	40.1	44.7	53.9	9.2	100	352	VBW:10Hz
Vert.	1860.000	AV	34.1	26.6	12.9	40.3	33.3	53.9	20.6	100	0	VBW:10Hz

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 have enough margin (more than 20dB).

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

Distance factor: 13GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB

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.	2483.500	AV	34.8	27.6	13.4	40.1	-24.7	11.0	53.9	42.9	VBW:300Hz
Hori.	4960.000	AV	45.6	31.9	5.6	40.0	-24.7	18.4	53.9	35.5	VBW:300Hz
Hori.	7440.000	AV	34.0	36.9	7.1	38.7	-24.7	14.6	53.9	39.3	VBW:300Hz
Hori.	9920.000	AV	31.9	38.4	8.0	37.5	-24.7	16.1	53.9	37.8	VBW:300Hz
Hori.	12400.000	AV	32.0	39.1	9.4	37.9	-24.7	17.9	53.9	36.0	VBW:300Hz
Vert.	2483.500	AV	34.9	27.6	13.4	40.1	-24.7	11.1	53.9	42.8	VBW:300Hz
Vert.	4960.000	AV	49.4	31.9	5.6	40.0	-24.7	22.2	53.9	31.7	VBW:300Hz
Vert.	7440.000	AV	34.0	36.9	7.1	38.7	-24.7	14.6	53.9	39.3	VBW:300Hz
Vert.	9920.000	AV	31.9	38.4	8.0	37.5	-24.7	16.1	53.9	37.8	VBW:300Hz
Vert.	12400.000	AV	32.1	39.1	9.4	37.9	-24.7	18.0	53.9	35.9	VBW:300Hz

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 have enough margin (more than 20dB).

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

Distance factor: 13GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB

Dwell factor: 20log(5.834ms/100ms)=-24.68dB

UL Japan, Inc.

Shonan EMC Lab.

1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa 259-1220 JAPAN

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Radiated Emission

Test place UL Japan, Inc. Shonan EMC Lab. No.3 Semi anechoic chamber
Date 2010/10/24 2010/10/25
Temperature / Humidity 24deg.C. , 43% 24Deg.C. ,43%
Engineer Makoto Hosaka Wataru Kojima
Mode Tx, 2402 MHz
Bluetooth, 3-DH5,

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	156.025	QP	38.2	14.9	7.6	32.0	28.7	43.5	14.8	283	290	
Hori.	169.342	QP	43.6	15.5	7.7	32.0	34.8	43.5	8.7	286	212	
Hori.	171.838	QP	35.8	15.5	7.7	32.0	27.0	43.5	16.5	285	189	
Hori.	229.108	QP	37.8	16.8	8.0	32.0	30.6	46.0	15.4	197	217	
Hori.	792.048	QP	33.9	20.2	10.3	31.6	32.8	46.0	13.2	100	186	
Hori.	960.083	QP	40.6	21.3	10.9	30.5	42.3	53.9	11.6	210	60	
Hori.	1632.016	PK	51.2	25.6	12.7	40.1	49.4	73.9	24.5	109	278	
Hori.	1860.000	PK	47.0	26.6	12.9	40.3	46.2	73.9	27.7	100	0	
Hori.	2390.000	PK	47.5	27.5	13.3	40.2	48.1	73.9	25.8	119	315	
Hori.	2400.000	PK	51.3	27.5	13.3	40.2	51.9	73.9	22.0	119	315	
Hori.	4804.000	PK	55.1	31.5	5.5	40.1	52.0	73.9	21.9	129	313	
Hori.	7206.000	PK	47.8	36.4	6.7	38.3	52.6	73.9	21.3	100	0	
Hori.	9608.000	PK	45.3	37.9	7.8	37.3	53.7	73.9	20.2	100	0	
Hori.	12010.000	PK	47.5	39.4	9.0	38.4	57.5	73.9	16.4	100	0	
Hori.	1632.016	AV	43.9	25.6	12.7	40.1	42.1	53.9	11.8	109	278	VBW:10Hz
Hori.	1860.000	AV	34.0	26.6	12.9	40.3	33.2	53.9	20.7	100	0	VBW:10Hz
Vert.	156.025	QP	39.1	14.9	7.6	32.0	29.6	43.5	13.9	100	220	
Vert.	169.342	QP	43.2	15.5	7.7	32.0	34.4	43.5	9.1	100	304	
Vert.	171.838	QP	37.4	15.5	7.7	32.0	28.6	43.5	14.9	100	276	
Vert.	229.108	QP	37.8	16.8	8.0	32.0	30.6	46.0	15.4	100	317	
Vert.	792.048	QP	36.8	20.2	10.3	31.6	35.7	46.0	10.3	100	166	
Vert.	960.083	QP	39.5	21.3	10.9	30.5	41.2	53.9	12.7	100	103	
Vert.	1632.016	PK	52.6	25.6	12.7	40.1	50.8	73.9	23.1	100	353	
Vert.	1860.000	PK	47.1	26.6	12.9	40.3	46.3	73.9	27.6	100	0	
Vert.	2390.000	PK	47.7	27.5	13.3	40.2	48.3	73.9	25.6	174	357	
Vert.	2400.000	PK	54.0	27.5	13.3	40.2	54.6	73.9	19.3	174	357	
Vert.	4804.000	PK	54.9	31.5	5.5	40.1	51.8	73.9	22.1	101	238	
Vert.	7206.000	PK	47.9	36.4	6.7	38.3	52.7	73.9	21.2	100	0	
Vert.	9608.000	PK	46.2	37.9	7.8	37.3	54.6	73.9	19.3	100	0	
Vert.	12010.000	PK	47.3	39.4	9.0	38.4	57.3	73.9	16.6	100	0	
Vert.	1632.016	AV	46.5	25.6	12.7	40.1	44.7	53.9	9.2	100	353	VBW:10Hz
Vert.	1860.000	AV	34.0	26.6	12.9	40.3	33.2	53.9	20.7	100	0	VBW:10Hz

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 have enough margin (more than 20dB).

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

Distance factor: 13GHz-26.5GHz $20\log(3.0m/1.0m) = 9.5dB$

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.	2390.000	AV	34.6	27.5	13.3	40.2	-24.7	10.5	53.9	43.4	VBW:300Hz
Hori.	2400.000	AV	38.0	27.5	13.3	40.2	-24.7	13.9	53.9	40.0	VBW:300Hz
Hori.	4804.000	AV	51.2	31.5	5.5	40.1	-24.7	23.4	53.9	30.5	VBW:300Hz
Hori.	7206.000	AV	35.1	36.4	6.7	38.3	-24.7	15.2	53.9	38.7	VBW:300Hz
Hori.	9608.000	AV	33.3	37.9	7.8	37.3	-24.7	17.0	53.9	36.9	VBW:300Hz
Hori.	12010.000	AV	35.4	39.4	9.0	38.4	-24.7	20.7	53.9	33.2	VBW:300Hz
Vert.	2390.000	AV	34.7	27.5	13.3	40.2	-24.7	10.6	53.9	43.3	VBW:300Hz
Vert.	2400.000	AV	40.2	27.5	13.3	40.2	-24.7	16.1	53.9	37.8	VBW:300Hz
Vert.	4804.000	AV	50.9	31.5	5.5	40.1	-24.7	23.1	53.9	30.8	VBW:300Hz
Vert.	7206.000	AV	35.1	36.4	6.7	38.3	-24.7	15.2	53.9	38.7	VBW:300Hz
Vert.	9608.000	AV	33.3	37.9	7.8	37.3	-24.7	17.0	53.9	36.9	VBW:300Hz
Vert.	12010.000	AV	35.2	39.4	9.0	38.4	-24.7	20.5	53.9	33.4	VBW:300Hz

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 have enough margin (more than 20dB).

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

Distance factor: 13GHz-26.5GHz $20\log(3.0m/1.0m) = 9.5dB$

Dwell factor: $20\log(5.834ms/100ms) = -24.68dB$

UL Japan, Inc.
Shonan EMC Lab.
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa 259-1220 JAPAN
Telephone : +81 463 50 6400
Facsimile : +81 463 50 6401

Radiated Emission

Test place	UL Japan, Inc. Shonan EMC Lab.	No.3 Semi anechoic chamber
Date	2010/10/24	2010/10/25
Temperature / Humidity	24deg.C. , 43%	24Deg.C. ,43%
Engineer	Makoto Hosaka	Wataru Kojima
Mode	Tx, 2441 MHz Bluetooth, 3-DH5,	

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	158.051	QP	37.0	15.1	7.6	32.0	27.7	43.5	15.8	292	159	
Hori.	169.344	QP	43.4	15.5	7.7	32.0	34.6	43.5	8.9	291	216	
Hori.	171.827	QP	36.0	15.5	7.7	32.0	27.2	43.5	16.3	300	319	
Hori.	229.106	QP	38.2	16.8	8.0	32.0	31.0	46.0	15.0	154	222	
Hori.	792.04	QP	33.4	20.2	10.3	31.6	32.3	46.0	13.7	100	184	
Hori.	960.082	QP	40.3	21.3	10.9	30.5	42.0	53.9	11.9	210	60	
Hori.	1632.016	PK	51.5	25.6	12.7	40.1	49.7	73.9	24.2	110	287	
Hori.	1860.000	PK	47.4	26.6	12.9	40.3	46.6	73.9	27.3	100	0	
Hori.	4882.000	PK	53.9	31.7	5.6	40.0	51.2	73.9	22.7	130	311	
Hori.	7323.000	PK	46.8	36.7	6.9	38.5	51.9	73.9	22.0	100	0	
Hori.	9764.000	PK	46.3	38.2	7.8	37.4	54.9	73.9	19.0	100	0	
Hori.	12205.000	PK	46.6	39.2	9.1	38.1	56.8	73.9	17.1	100	0	
Hori.	1632.016	AV	43.8	25.6	12.7	40.1	42.0	53.9	11.9	110	287	VBW:10Hz
Hori.	1860.000	AV	34.0	26.6	12.9	40.3	33.2	53.9	20.7	100	0	VBW:10Hz
Vert.	158.051	QP	38.3	15.1	7.6	32.0	29.0	43.5	14.5	100	255	
Vert.	169.344	QP	42.9	15.5	7.7	32.0	34.1	43.5	9.4	100	289	
Vert.	171.827	QP	37.6	15.5	7.7	32.0	28.8	43.5	14.7	100	270	
Vert.	229.106	QP	38.0	16.8	8.0	32.0	30.8	46.0	15.2	100	308	
Vert.	792.04	QP	36.5	20.2	10.3	31.6	35.4	46.0	10.6	100	182	
Vert.	960.082	QP	39.2	21.3	10.9	30.5	40.9	53.9	13.0	106	110	
Vert.	1632.016	PK	52.7	25.6	12.7	40.1	50.9	73.9	23.0	100	353	
Vert.	1860.000	PK	46.2	26.6	12.9	40.3	45.4	73.9	28.5	100	0	
Vert.	4882.000	PK	54.5	31.7	5.6	40.0	51.8	73.9	22.1	100	237	
Vert.	7323.000	PK	46.6	36.7	6.9	38.5	51.7	73.9	22.2	100	0	
Vert.	9764.000	PK	45.5	38.2	7.8	37.4	54.1	73.9	19.8	100	0	
Vert.	12205.000	PK	47.0	39.2	9.1	38.1	57.2	73.9	16.7	100	0	
Vert.	1632.016	AV	46.5	25.6	12.7	40.1	44.7	53.9	9.2	100	353	VBW:10Hz
Vert.	1860.000	AV	34.1	26.6	12.9	40.3	33.3	53.9	20.6	100	0	VBW:10Hz

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 13GHz)) - Gain(Amplifier)

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

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

Distance factor: 13GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB

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	49.3	31.7	5.6	40.0	-24.7	21.9	53.9	32.0	VBW:300Hz
Hori.	7323.000	AV	34.3	36.7	6.9	38.5	-24.7	14.7	53.9	39.2	VBW:300Hz
Hori.	9764.000	AV	33.2	38.2	7.8	37.4	-24.7	17.1	53.9	36.8	VBW:300Hz
Hori.	12205.000	AV	33.8	39.2	9.1	38.1	-24.7	19.3	53.9	34.6	VBW:300Hz
Vert.	4882.000	AV	50.1	31.7	5.6	40.0	-24.7	22.7	53.9	31.2	VBW:300Hz
Vert.	7323.000	AV	34.3	36.7	6.9	38.5	-24.7	14.7	53.9	39.2	VBW:300Hz
Vert.	9764.000	AV	33.0	38.2	7.8	37.4	-24.7	16.9	53.9	37.0	VBW:300Hz
Vert.	12205.000	AV	33.9	39.2	9.1	38.1	-24.7	19.4	53.9	34.5	VBW:300Hz

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 have enough margin (more than 20dB).

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

Distance factor: 13GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB

Dwell factor: 20log(5.834ms/100ms)=-24.68dB

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Radiated Emission

Test place: UL Japan, Inc. Shonan EMC Lab. No.3 Semi anechoic chamber
Date: 2010/10/24
Temperature / Humidity: 24deg.C. , 43% 24Deg.C. ,43%
Engineer: Makoto Hosaka Wataru Kojima
Mode: Tx, 2480 MHz
Bluetooth, 3-DH5,

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	158.057	QP	37.2	15.1	7.6	32.0	27.9	43.5	15.6	194	152	
Hori.	169.343	QP	43.5	15.5	7.7	32.0	34.7	43.5	8.8	289	217	
Hori.	171.835	QP	35.6	15.5	7.7	32.0	26.8	43.5	16.7	291	320	
Hori.	229.108	QP	38.2	16.8	8.0	32.0	31.0	46.0	15.0	152	230	
Hori.	792.045	QP	34.0	20.2	10.3	31.6	32.9	46.0	13.1	100	182	
Hori.	960.08	QP	40.6	21.3	10.9	30.5	42.3	53.9	11.6	201	51	
Hori.	1632.016	PK	51.2	25.6	12.7	40.1	49.4	73.9	24.5	111	288	
Hori.	1860.000	PK	46.0	26.6	12.9	40.3	45.2	73.9	28.7	100	0	
Hori.	2483.500	PK	46.3	27.6	13.4	40.1	47.2	73.9	26.7	104	149	
Hori.	4960.000	PK	51.9	31.9	5.6	40.0	49.4	73.9	24.5	118	268	
Hori.	7440.000	PK	46.8	36.9	7.1	38.7	52.1	73.9	21.8	100	0	
Hori.	9920.000	PK	43.4	38.4	8.0	37.5	52.3	73.9	21.6	100	0	
Hori.	12400.000	PK	43.8	39.1	9.4	37.9	54.4	73.9	19.5	100	0	
Hori.	1632.016	AV	43.8	25.6	12.7	40.1	42.0	53.9	11.9	111	288	VBW:10Hz
Hori.	1860.000	AV	33.9	26.6	12.9	40.3	33.1	53.9	20.8	100	0	VBW:10Hz
Vert.	158.057	QP	38.5	15.3	7.6	32.0	29.4	43.5	14.1	100	289	
Vert.	169.343	QP	43.2	15.5	7.7	32.0	34.4	43.5	9.1	100	291	
Vert.	171.835	QP	37.9	15.5	7.7	32.0	29.1	43.5	14.4	100	273	
Vert.	229.108	QP	38.0	16.8	8.0	32.0	30.8	46.0	15.2	100	303	
Vert.	792.045	QP	36.4	20.2	10.3	31.6	35.3	46.0	10.7	100	164	
Vert.	960.08	QP	39.4	21.3	10.9	30.5	41.1	53.9	12.8	100	94	
Vert.	1632.016	PK	52.6	25.6	12.7	40.1	50.8	73.9	23.1	100	352	
Vert.	1860.000	PK	46.5	26.6	12.9	40.3	45.7	73.9	28.2	100	0	
Vert.	2483.500	PK	47.6	27.6	13.4	40.1	48.5	73.9	25.4	169	345	
Vert.	4960.000	PK	53.6	31.9	5.6	40.0	51.1	73.9	22.8	108	134	
Vert.	7440.000	PK	45.8	36.9	7.1	38.7	51.1	73.9	22.8	100	0	
Vert.	9920.000	PK	43.7	38.4	8.0	37.5	52.6	73.9	21.3	100	0	
Vert.	12400.000	PK	43.6	39.1	9.4	37.9	54.2	73.9	19.7	100	0	
Vert.	1632.016	AV	46.4	25.6	12.7	40.1	44.6	53.9	9.3	100	352	VBW:10Hz
Vert.	1860.000	AV	34.0	26.6	12.9	40.3	33.2	53.9	20.7	100	0	VBW:10Hz

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 13GHz)) - Gain(Amplifier)

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

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

Distance factor: 13GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB

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.	2483.500	AV	34.7	27.6	13.4	40.1	-24.7	10.9	53.9	43.0	VBW: 300Hz
Hori.	4960.000	AV	45.8	31.9	5.6	40.0	-24.7	18.6	53.9	35.3	VBW: 300Hz
Hori.	7440.000	AV	34.2	36.9	7.1	38.7	-24.7	14.8	53.9	39.1	VBW: 300Hz
Hori.	9920.000	AV	32.0	38.4	8.0	37.5	-24.7	16.2	53.9	37.7	VBW: 300Hz
Hori.	12400.000	AV	32.1	39.1	9.4	37.9	-24.7	18.0	53.9	35.9	VBW: 300Hz
Vert.	2483.500	AV	34.9	27.6	13.4	40.1	-24.7	11.1	53.9	42.8	VBW: 300Hz
Vert.	4960.000	AV	49.5	31.9	5.6	40.0	-24.7	22.3	53.9	31.6	VBW: 300Hz
Vert.	7440.000	AV	34.2	36.9	7.1	38.7	-24.7	14.8	53.9	39.1	VBW: 300Hz
Vert.	9920.000	AV	32.0	38.4	8.0	37.5	-24.7	16.2	53.9	37.7	VBW: 300Hz
Vert.	12400.000	AV	32.1	39.1	9.4	37.9	-24.7	18.0	53.9	35.9	VBW: 300Hz

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 have enough margin (more than 20dB).

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

Distance factor: 13GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB

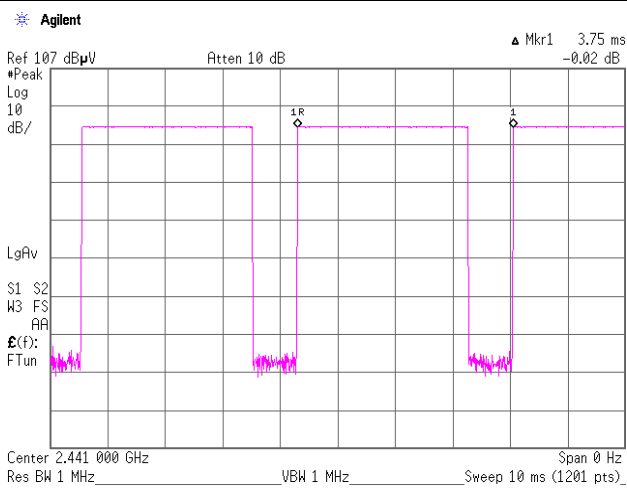
Dwell factor: 20log(5.834ms/100ms)=-24.68dB

Spurious emission (Radiated)

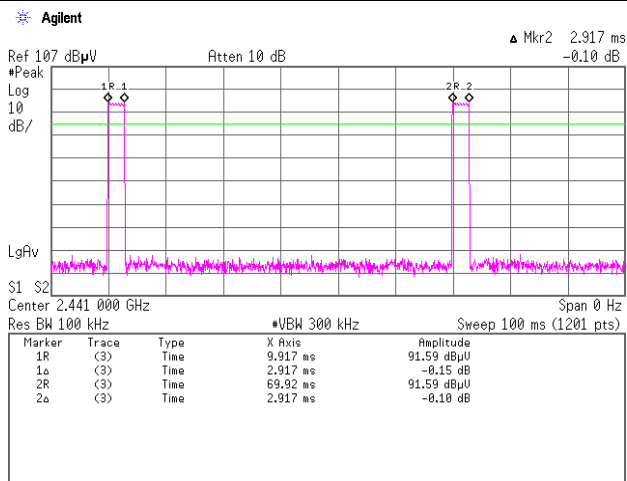
DH5,

VBW (AV) Calculation

VBW: $1/x = 266\text{Hz} < 300\text{Hz}$
 $x: (\text{Tx on} + \text{Tx off}) = 3.75\text{ms}$



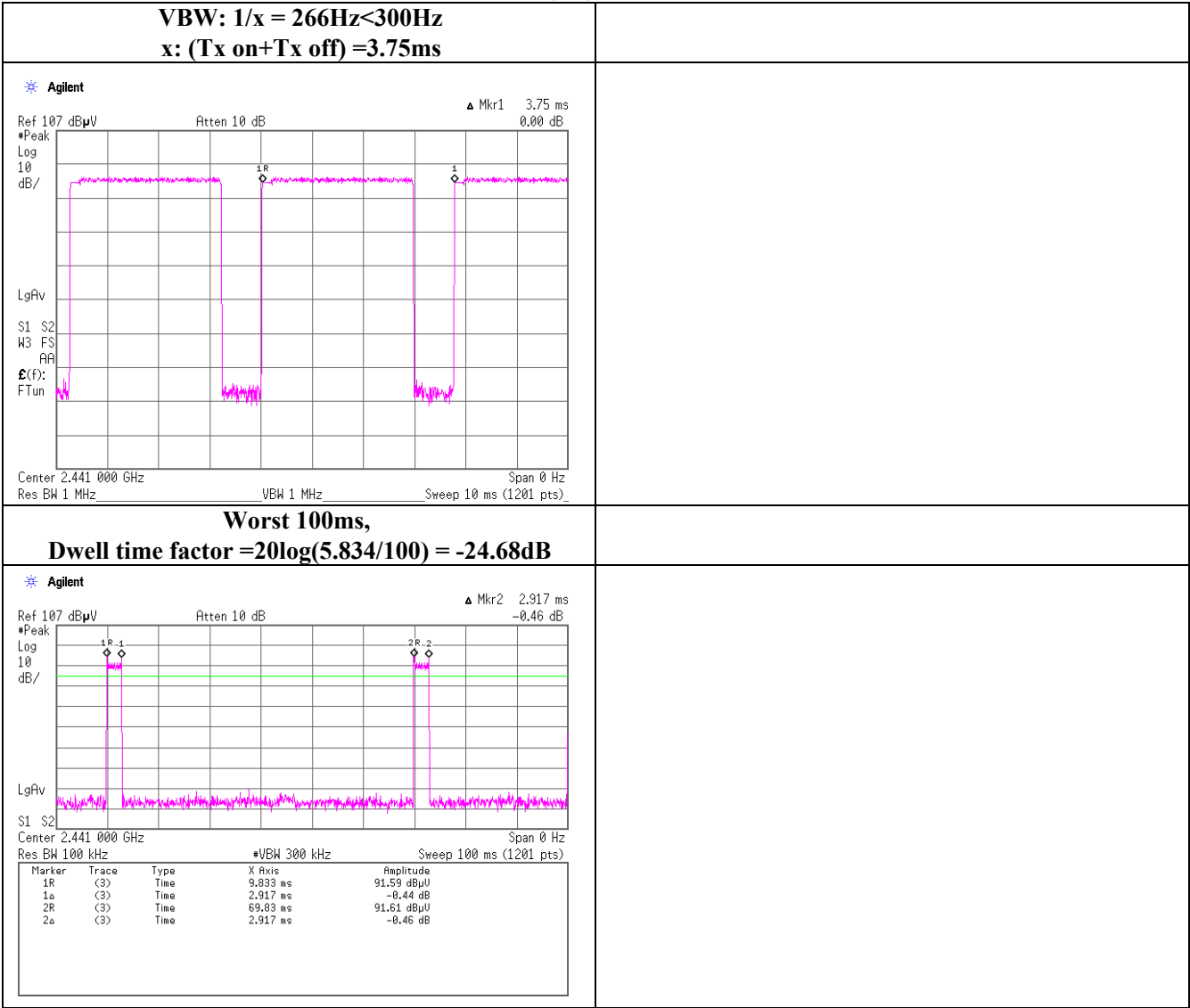
Worst 100ms,
Dwell time factor $= 20\log(5.834/100) = -24.68\text{dB}$



Spurious emission (Radiated)

3-DH5,

VBW (AV) Calculation

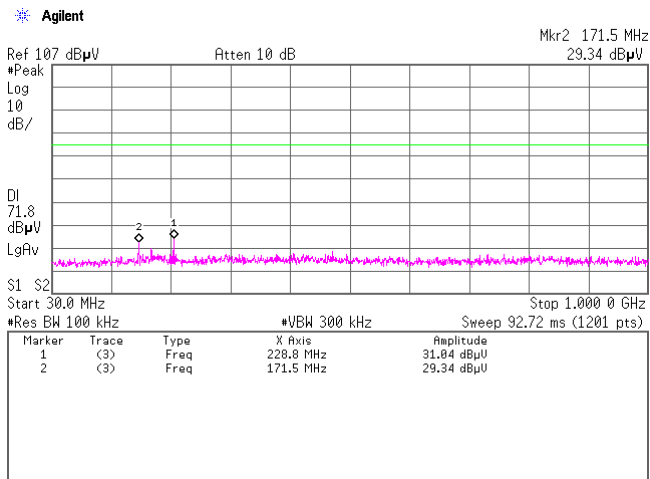


Spurious emission (Conducted)

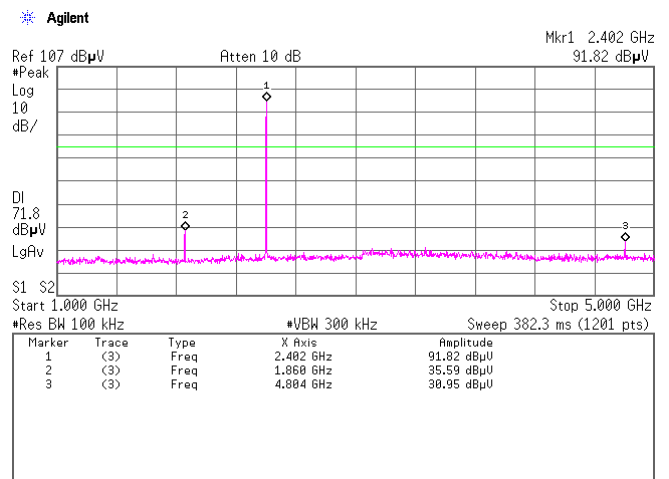
DH5,

Tx, 2402MHz

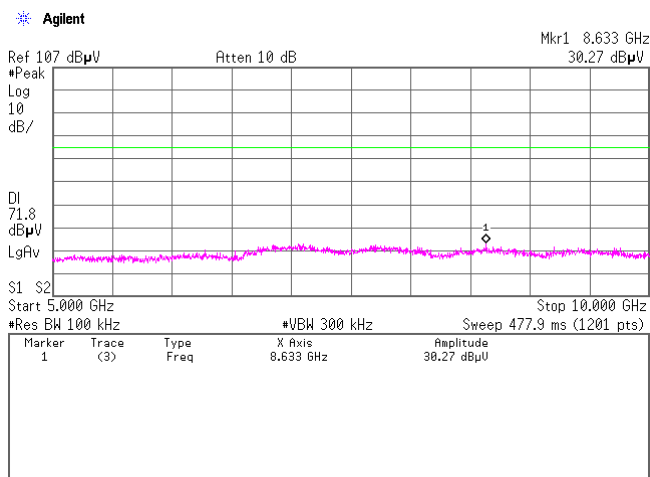
30MHz - 1GHz



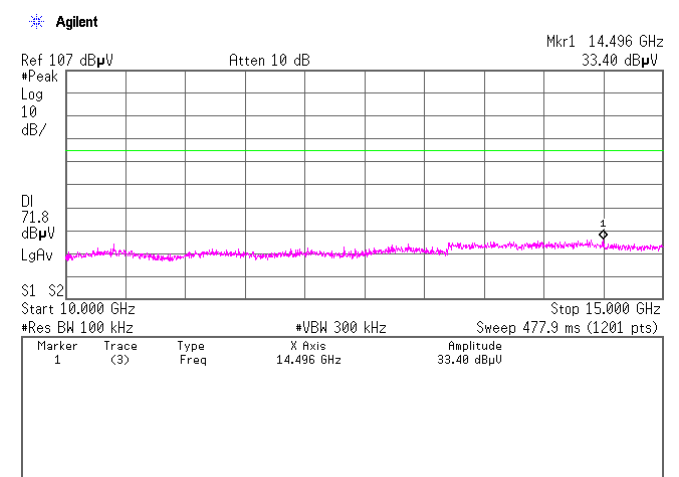
1GHz - 5GHz



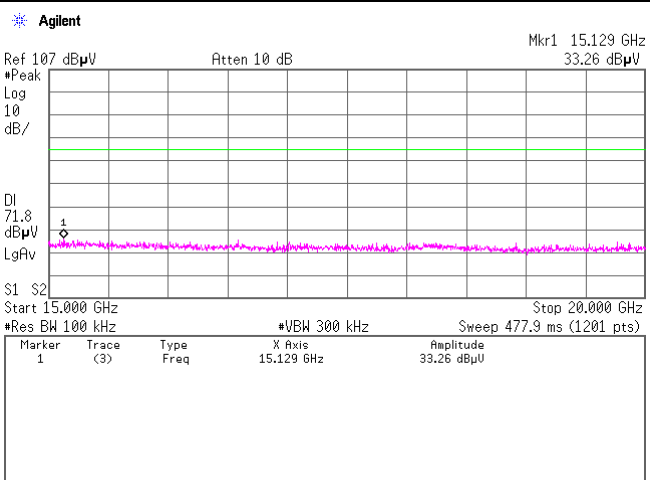
5GHz - 10GHz



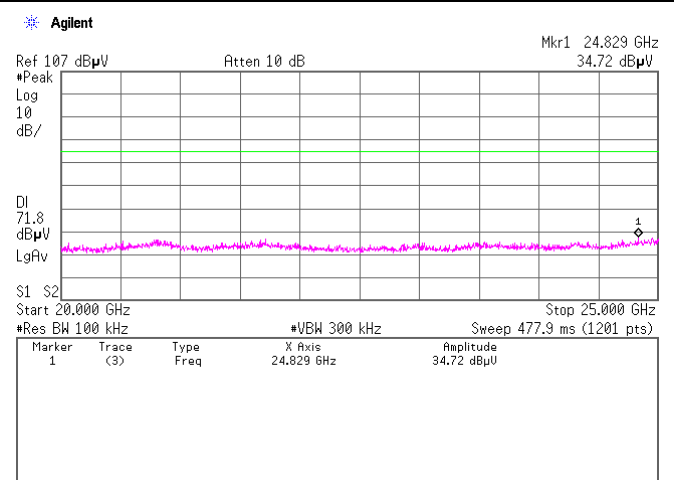
10GHz - 15GHz



15GHz - 20GHz



20GHz - 25GHz

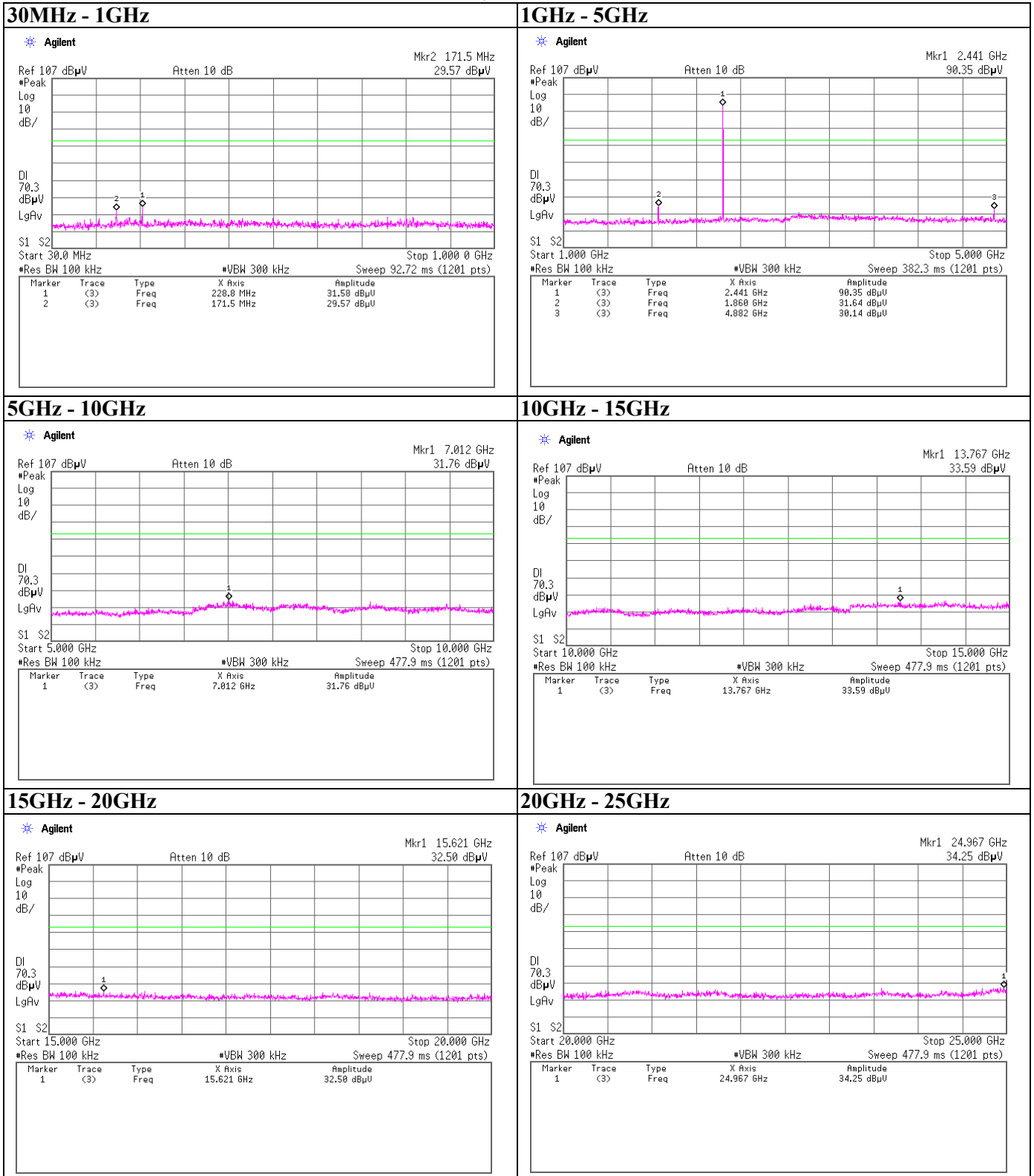


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Spurious emission (Conducted)

DH5,
Tx, 2441MHz



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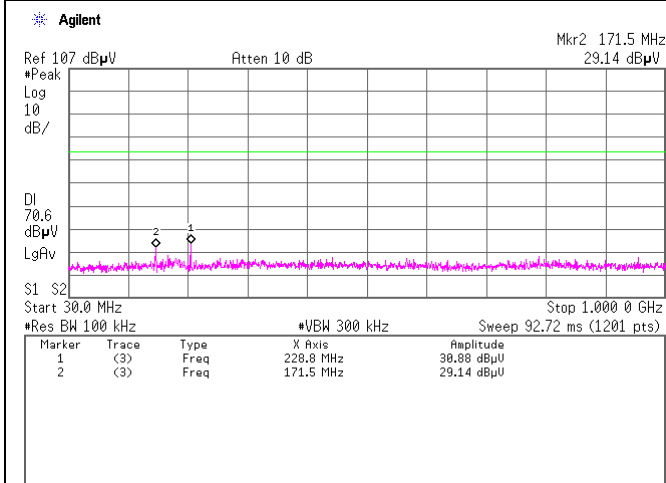
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Telephone : +81 463 50 6400
Facsimile : +81 463 50 6401

Spurious emission (Conducted)

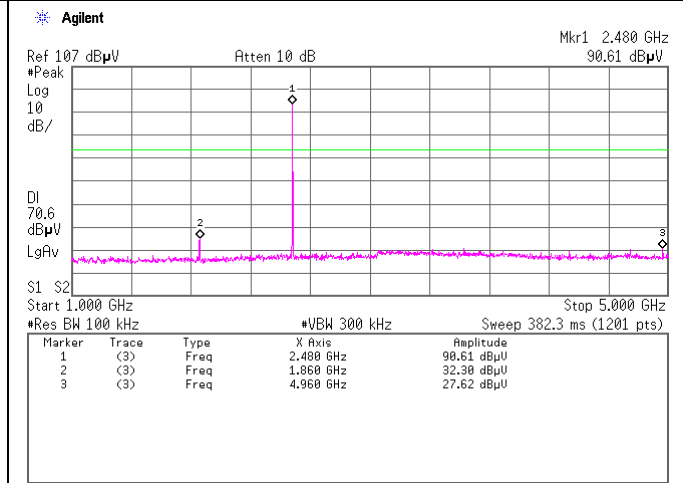
DH5,

Tx, 2480MHz

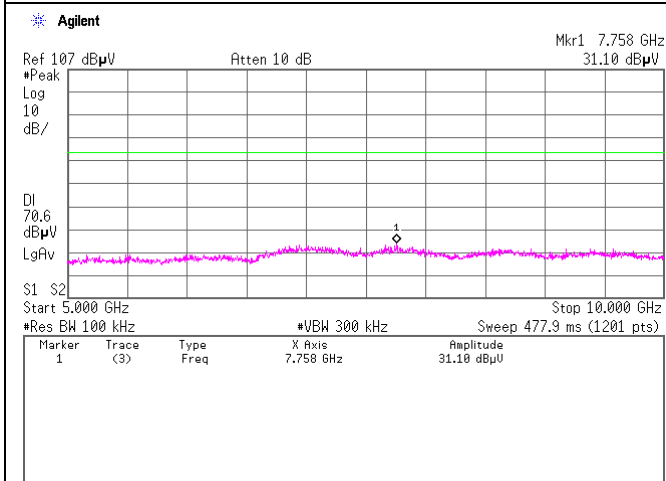
30MHz - 1GHz



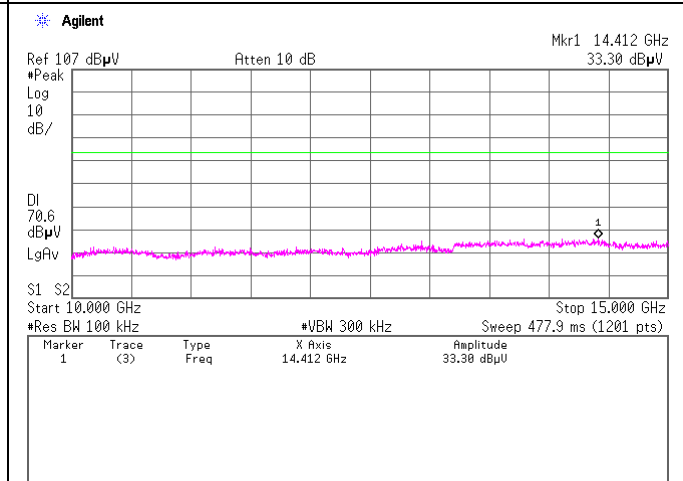
1GHz - 5GHz



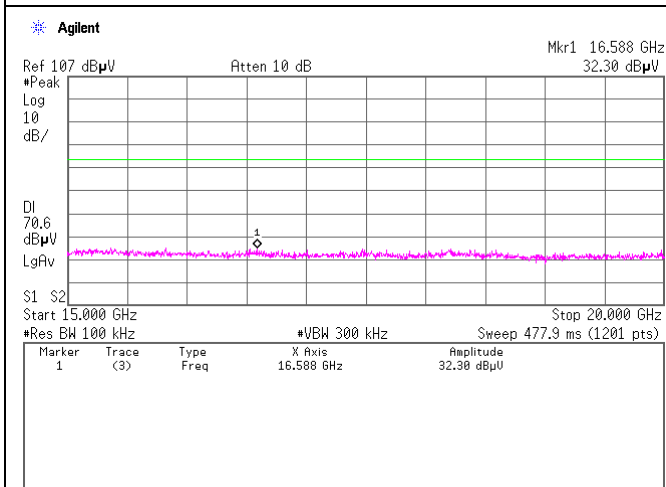
5GHz - 10GHz



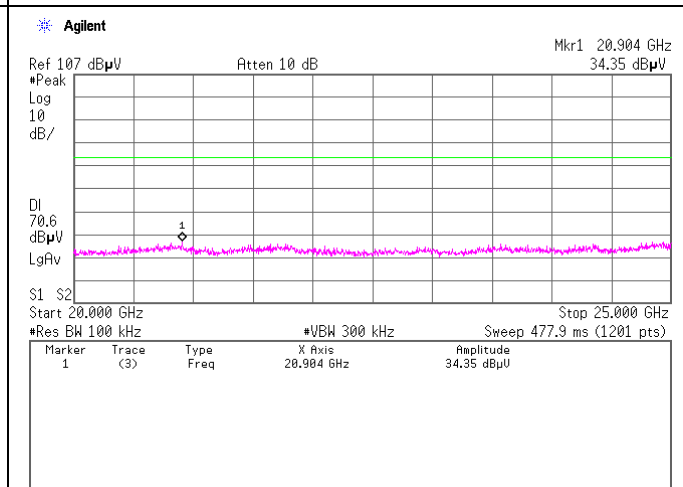
10GHz - 15GHz



15GHz - 20GHz



20GHz - 25GHz



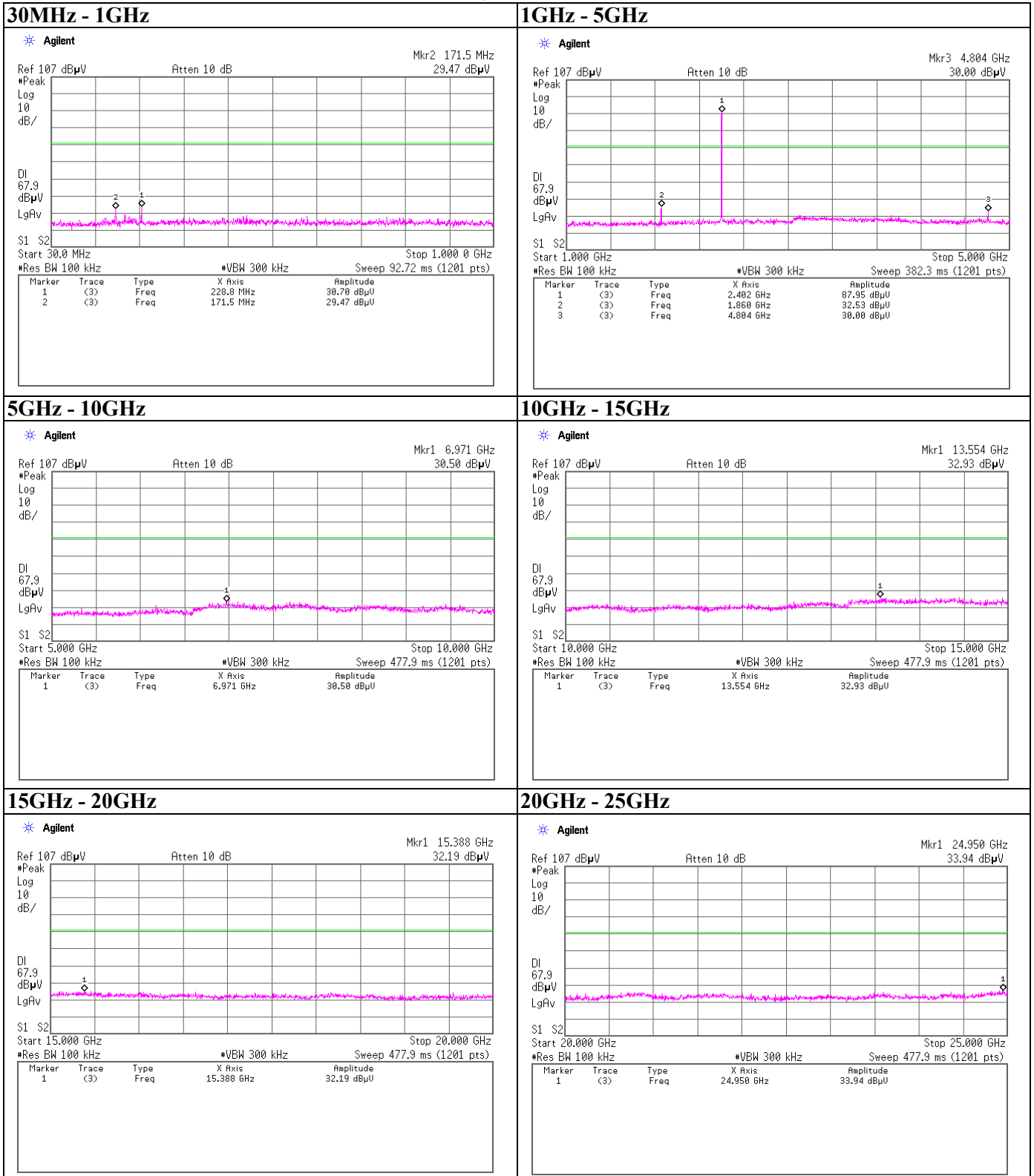
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Spurious emission (Conducted)

3-DH5,

Tx, 2402MHz



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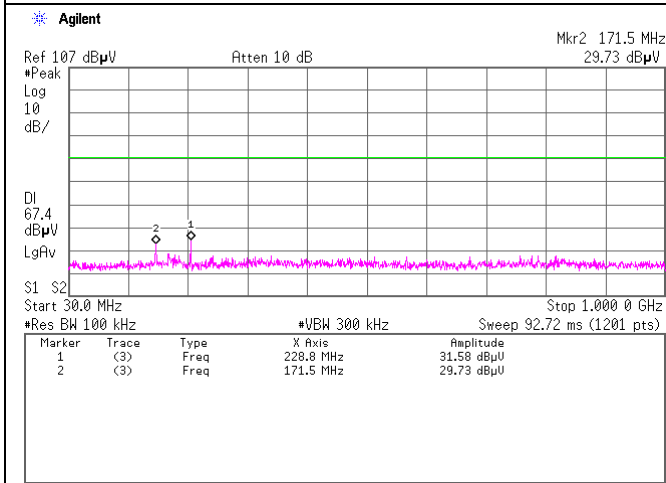
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Spurious emission (Conducted)

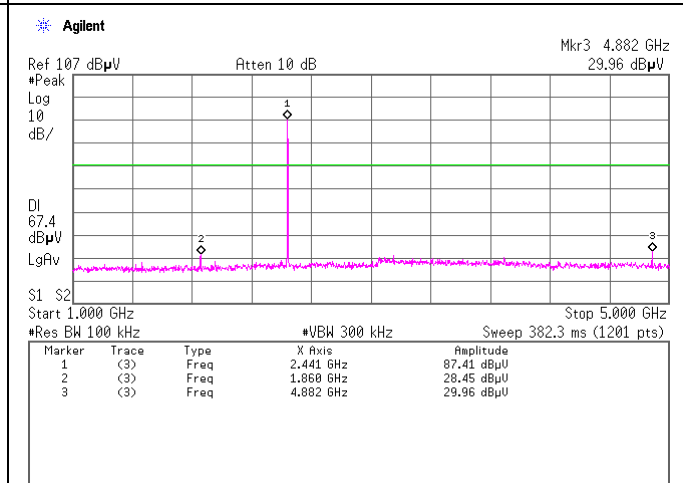
3-DH5,

Tx, 2441MHz

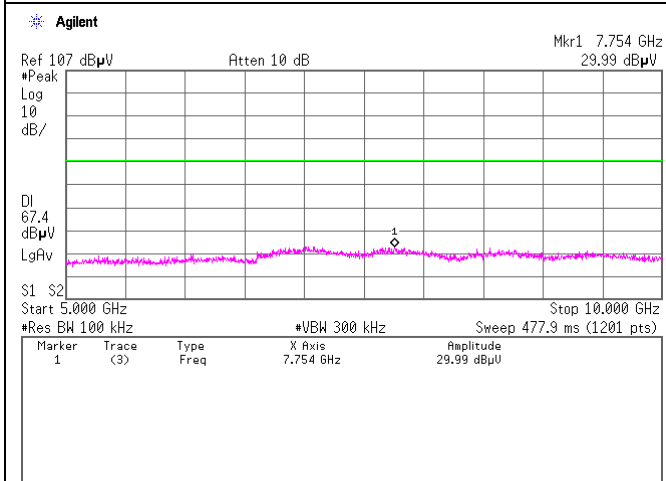
30MHz - 1GHz



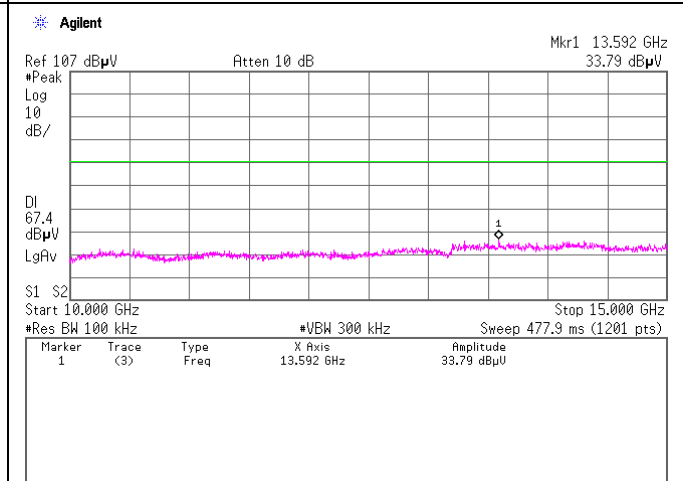
1GHz - 5GHz



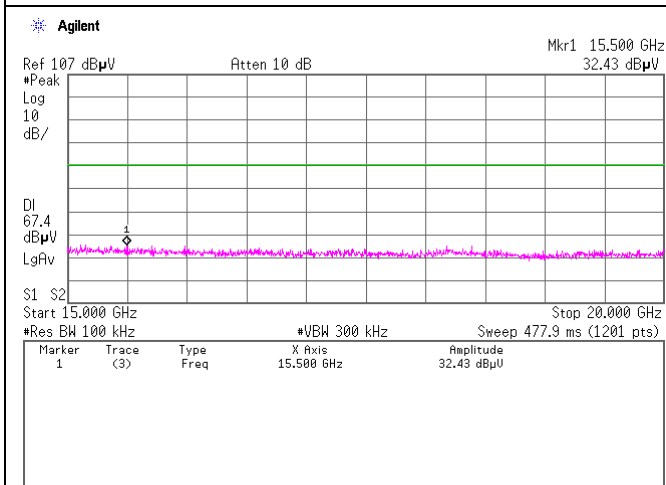
5GHz - 10GHz



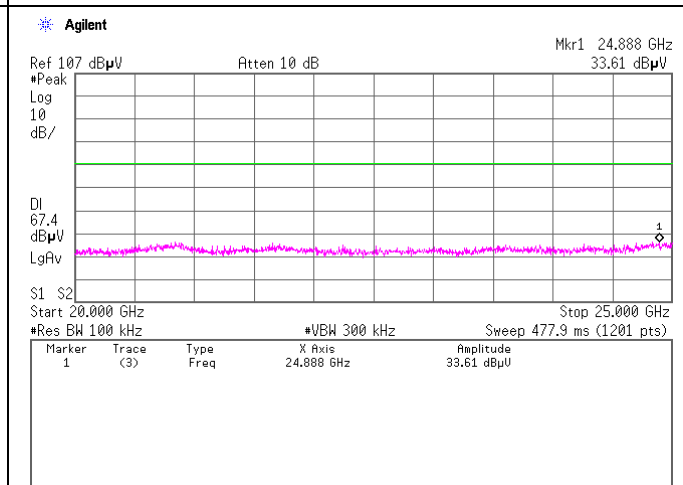
10GHz - 15GHz



15GHz - 20GHz



20GHz - 25GHz



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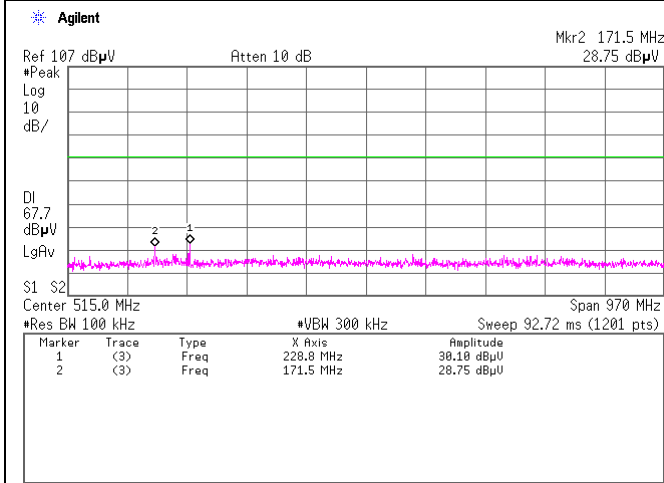
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Spurious emission (Conducted)

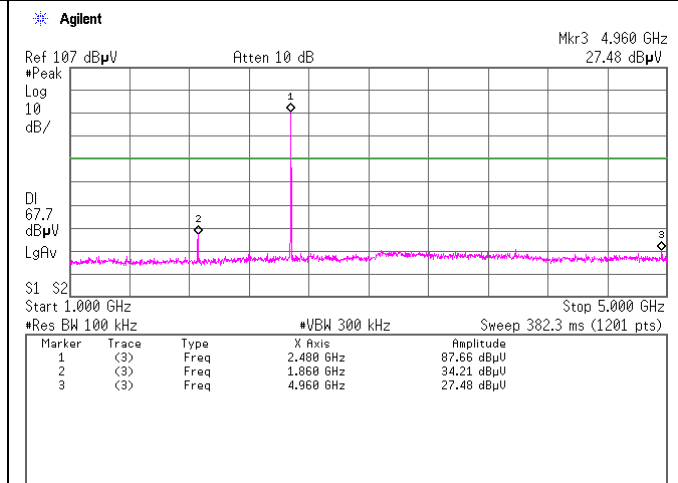
3-DH5,

Tx, 2480MHz

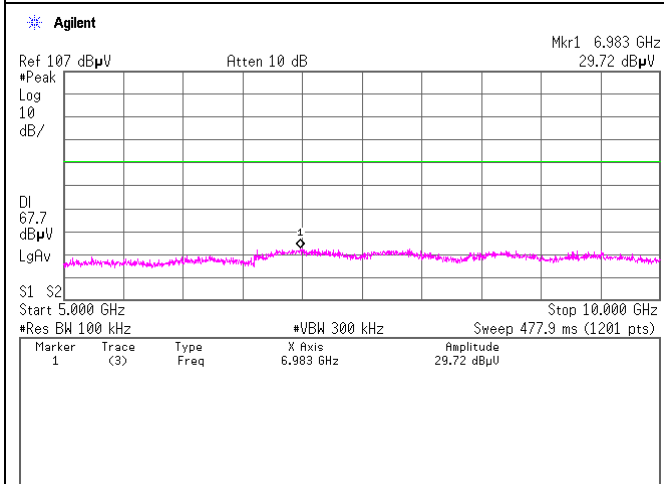
30MHz - 1GHz



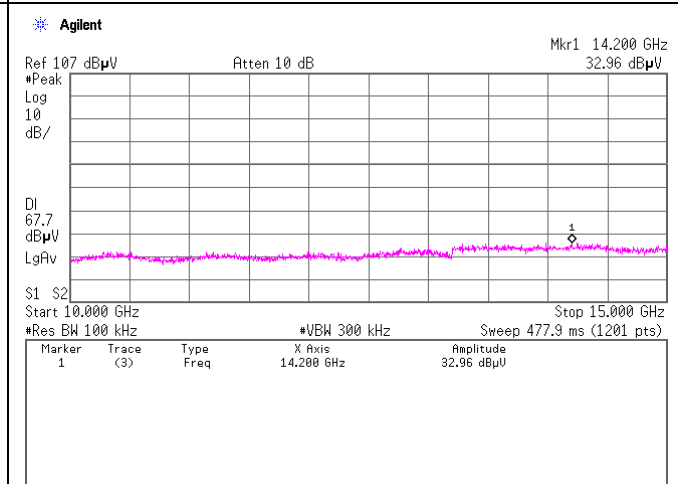
1GHz - 5GHz



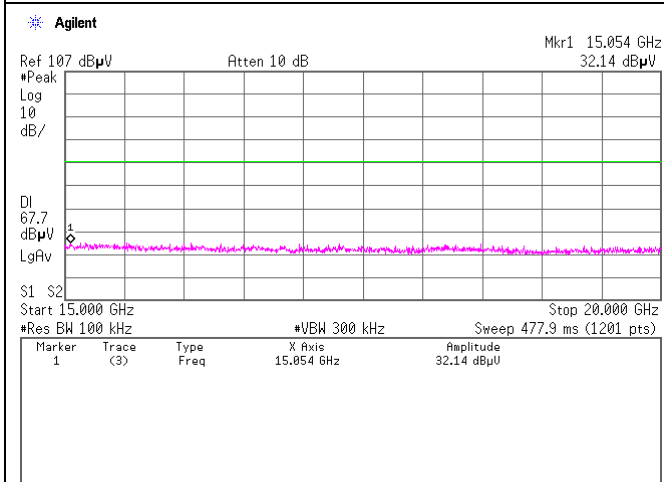
5GHz - 10GHz



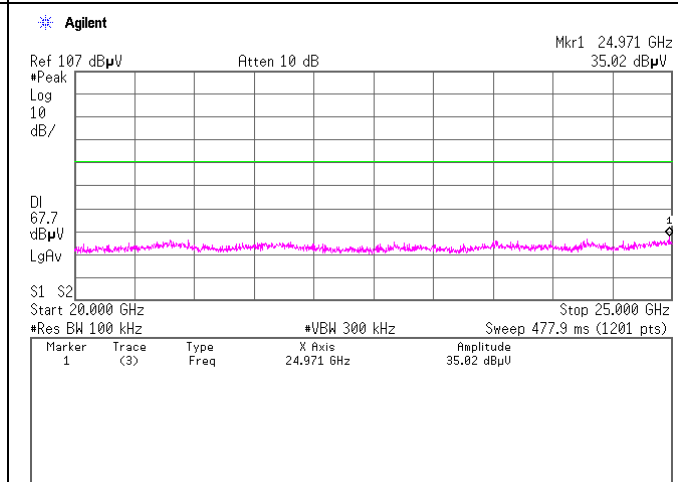
10GHz - 15GHz



15GHz - 20GHz



20GHz - 25GHz



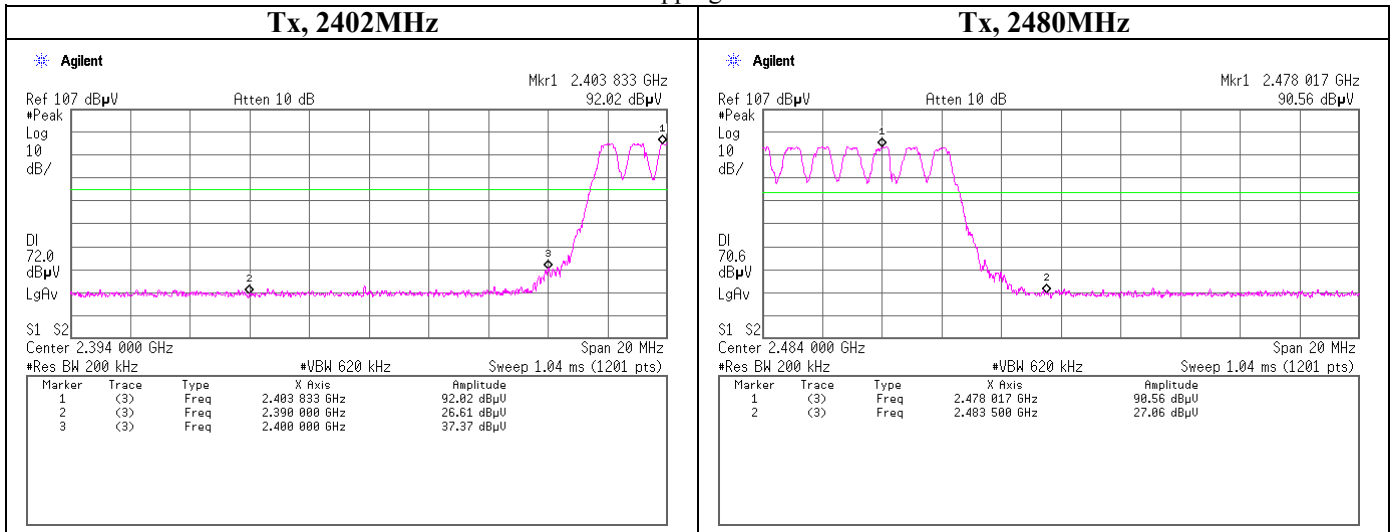
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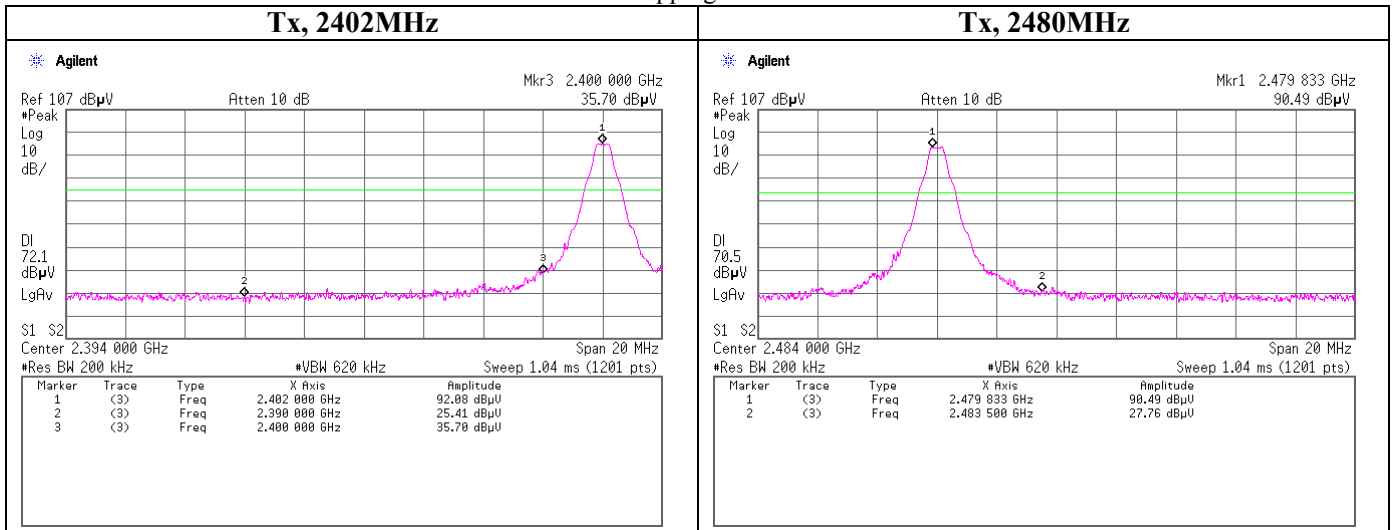
Spurious emission (Conducted)

Band Edge compliance
DH5,

Hopping ON



Hopping OFF



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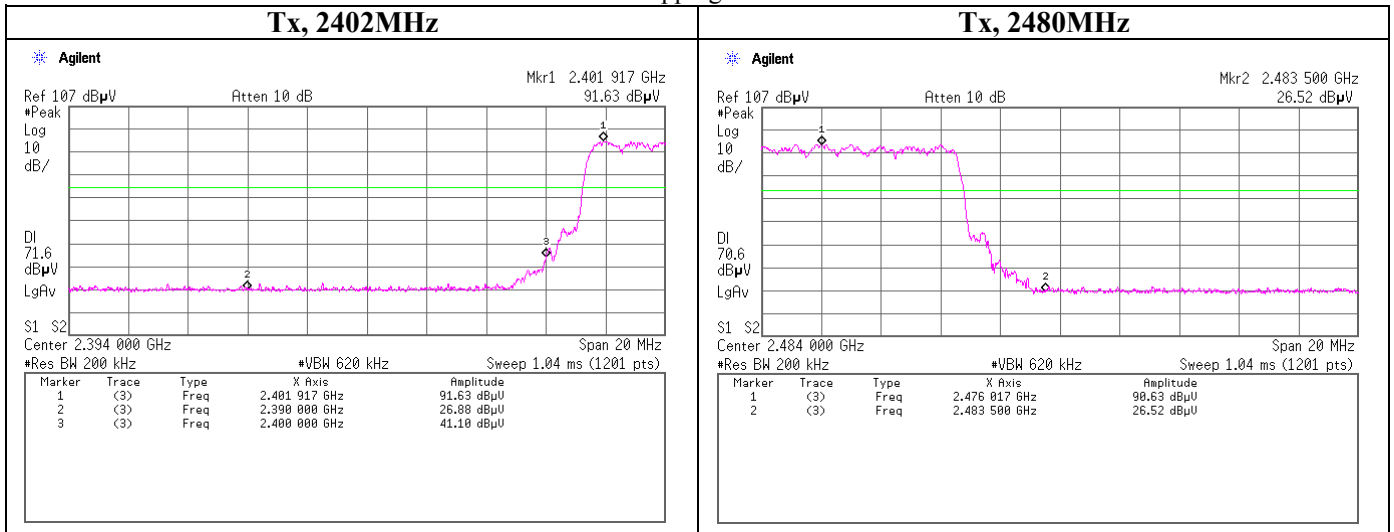
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Spurious emission (Conducted)

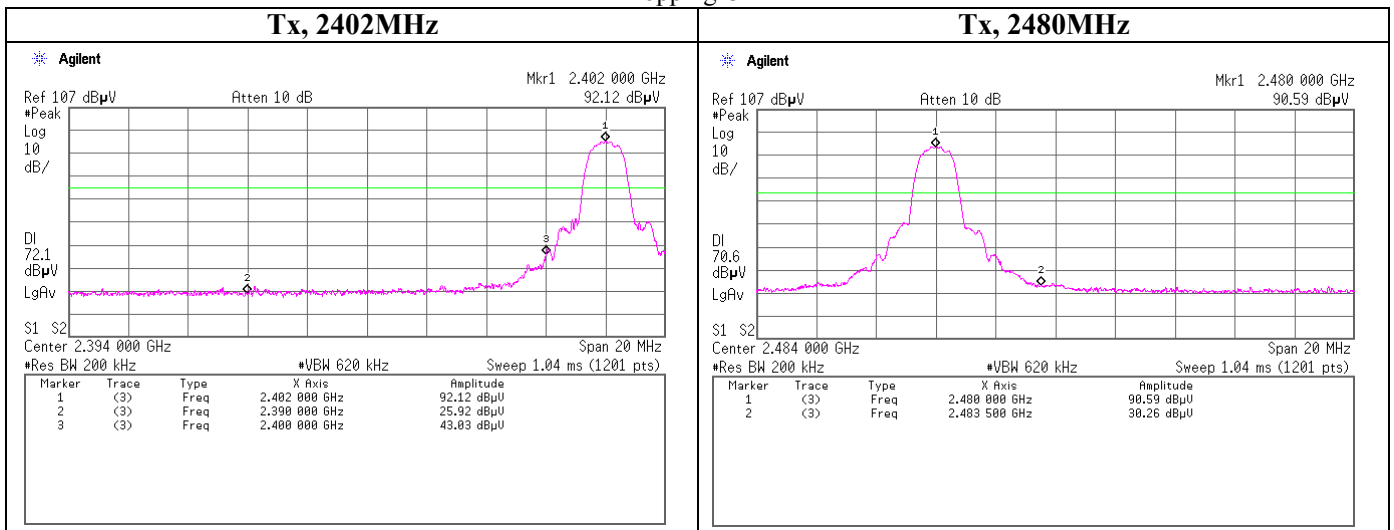
Band Edge compliance

3-DH5,

Hopping ON



Hopping OFF

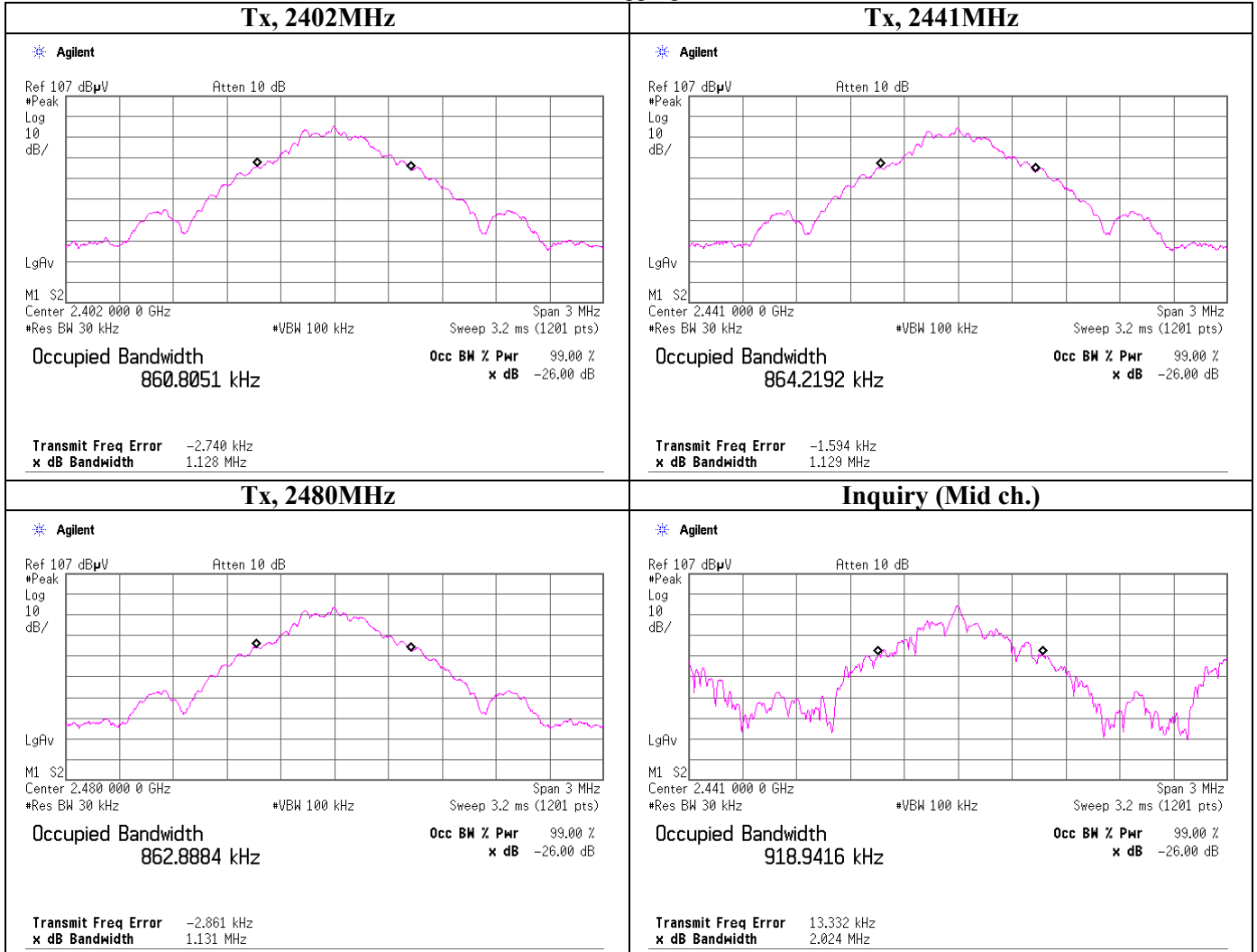


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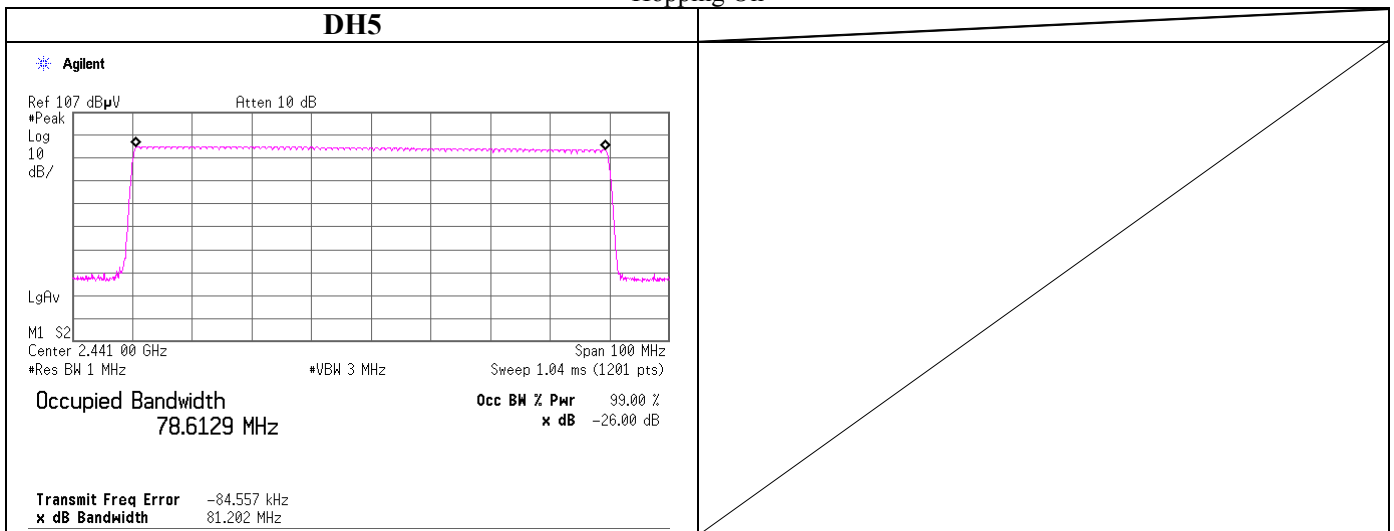
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa 259-1220 JAPAN
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99% Occupied Bandwidth

DH5, Hopping Off



Hopping On

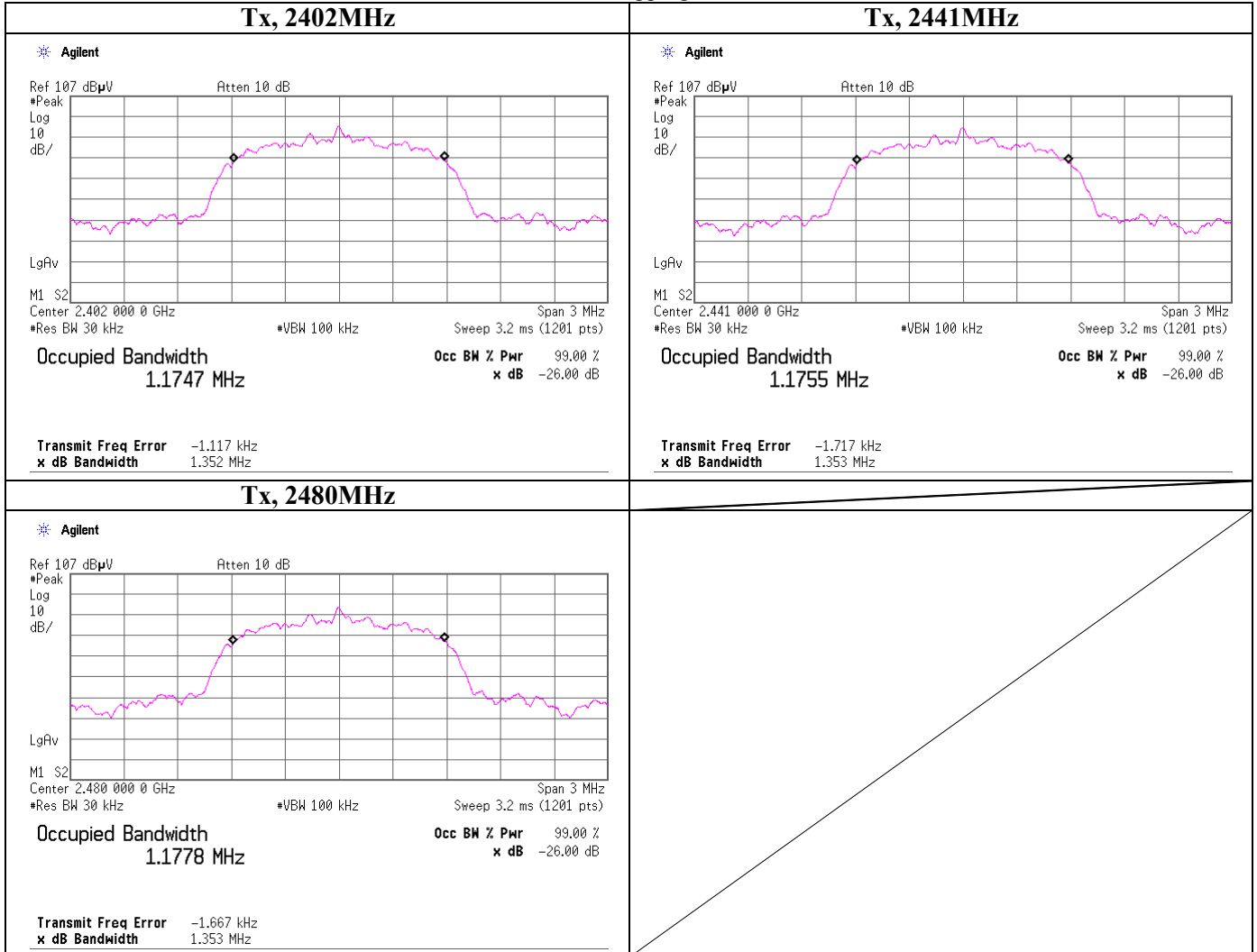


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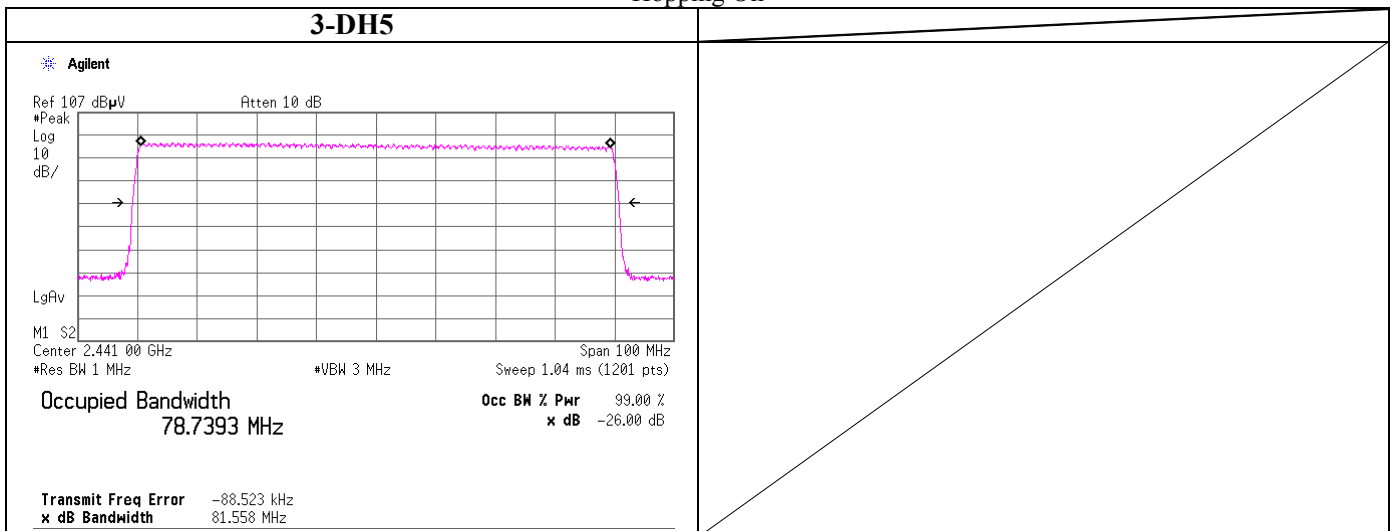
1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa 259-1220 JAPAN
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99% Occupied Bandwidth

3-DH5, Hopping Off



Hopping On



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APPENDIX 3 Test Instruments

EMI test equipment

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
SSA-02	Spectrum Analyzer	Agilent	E4448A	MY48250106	AT,RE	2010/06/22 * 12
SCC-G12	Coaxial Cable	Suhner	SUCOFLEX 102	30790/2	AT	2010/03/09 * 12
SAT10-06	Attenuator(above1GHz)	Agilent	8493C-010	74865	AT	2010/03/05 * 12
SOS-06	Humidity Indicator	A&D	AD-5681	4062118	AT	2010/02/17 * 12
SAF-06	Pre Amplifier	TOYO Corporation	TPA0118-36	1440491	RE	2010/03/09 * 12
SCC-G03	Coaxial Cable	Suhner	SUCOFLEX 104A	46499/4A	RE	2010/04/16 * 12
SCC-G23	Coaxial Cable	Suhner	SUCOFLEX 104	297342/4	RE	2010/05/27 * 12
SHA-03	Horn Antenna	Schwarzbeck	BBHA9120D	9120D-739	RE	2010/08/17 * 12
SOS-05	Humidity Indicator	A&D	AD-5681	4062518	RE	2010/02/09 * 12
SJM-10	Measure	PROMART	SEN1935	-	RE	-
COTS-SEMI-I	EMI Software	TSJ	TEPTO-DV	-	RE	-
SAT10-04	Attenuator(above1GHz)	Agilent	8493C-010	74863	RE	2010/03/05 * 12
SFL-02	Highpass Filter	MICRO-TRONICS	HPM50111	051	RE	2009/12/04 * 12
SHA-04	Horn Antenna	ETS LINDGREN	3160-09	LM3640	RE	2010/03/29 * 12
SAF-08	Pre Amplifier	TOYO Corporation	HAP18-26W	00000019	RE	2010/03/02 * 12
SCC-G17	Coaxial Cable	Suhner	SUCOFLEX 104A	46291/4A	RE	2010/03/02 * 12
SPM-06	Power Meter	Anritsu	ML2495A	0850009	AT	2010/04/01 * 12
SPSS-01	Power Sensor	Anritsu	MA2444D	0738366	AT	2010/04/01 * 12
SCC-G14	Coaxial Cable	Suhner	SUCOFLEX 102	31600/2	AT	2010/03/09 * 12
SBM-09	Barometer	Sunoh	SBR121	001074	AT	2009/02/05 * 36
SAF-03	Pre Amplifier	SONOMA	310N	290213	RE	2010/02/06 * 12
SAT6-03	Attenuator	JFW	50HF-006N	-	RE	2010/02/06 * 12
SBA-03	Biconical Antenna	Schwarzbeck	BBA9106	91032666	RE	2010/10/15 * 12
SCC-C1/C2/C3/C4/C5/C10/SRSE-03	Coaxial Cable&RF Selector	Fujikura/Fujikura/Suhner/Suhner/Suhner/TOYO	8D2W/12DSFA/141PE/141PE/141PE/141PE/NS4906	-/0901-271(RF Selector)	RE	2010/04/02 * 12
SLA-03	Logperiodic Antenna	Schwarzbeck	UHALP9108A	UHALP 9108-A 0901	RE	2010/10/15 * 12
STR-03	Test Receiver	Rohde & Schwarz	ES140	100054/040	RE	2010/07/21 * 12
SAEC-03(NSA)	Semi-Anechoic Chamber	TDK	SAEC-03(NSA)	3	RE	2010/09/13 * 12

The expiration date of the calibration is the end of the expired month .

As for some calibrations performed after the tested dates , those test equipment have been controlled by means of an unbroken chains of calibrations .

All equipment is calibrated with traceable calibrations . Each calibration is traceable to the national or international standards .

Test Item :

RE: Radiated emission test

AT: Antenna terminal conducted test