

## APPENDIX 2: Data of EMI test

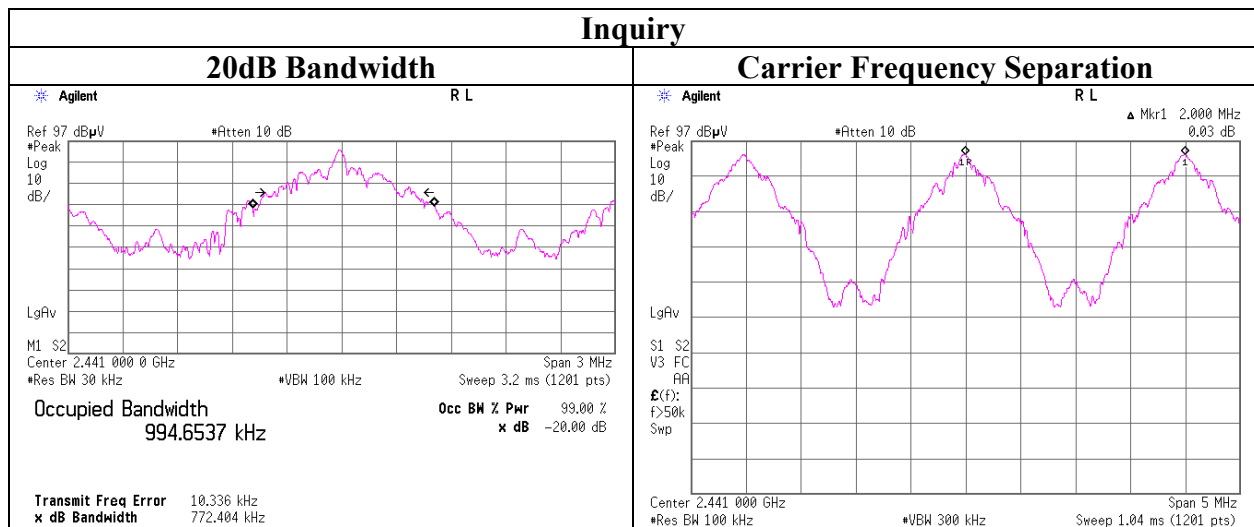
### 20dB Bandwidth and Carrier Frequency Separation

Test place	Head Office EMC Lab. No.11 Measurement Room
Report No.	30KE0073-HO
Date	06/17/2010
Temperature/ Humidity	25 deg.C./ 43%
Engineer	Hisayoshi Sato
Mode	Tx (Hopping on) DH5/3DH5/Inquiry

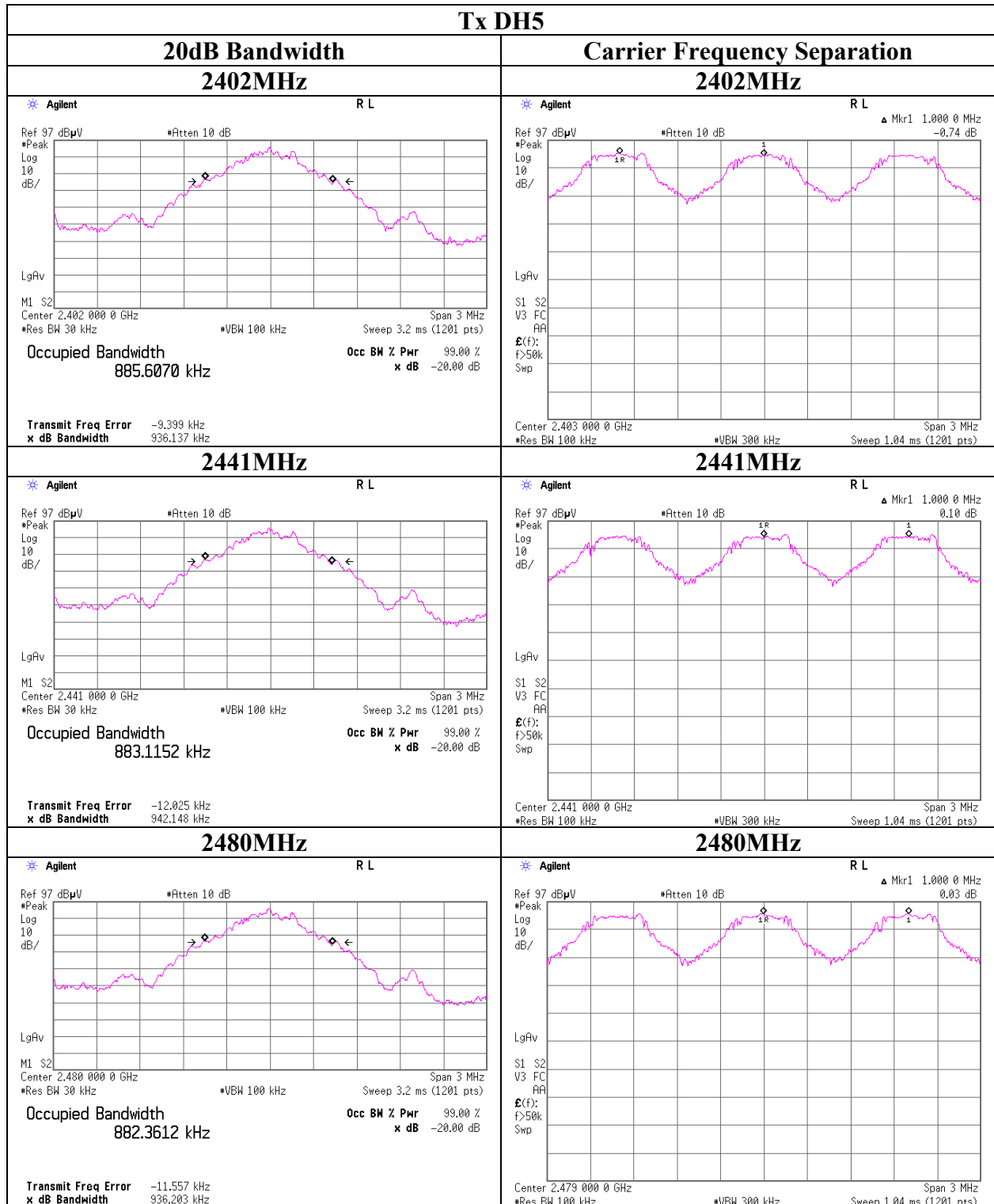
Mode	Freq. [MHz]	20dB Bandwidth [MHz]	Carrier Frequency Separation [MHz]	Limit for Carrier Frequency separation [MHz]
DH5	2402.0	0.936	1.000	$\geq 0.624$
DH5	2441.0	0.942	1.000	$\geq 0.628$
DH5	2480.0	0.936	1.000	$\geq 0.624$
3DH5	2402.0	1.307	1.000	$\geq 0.871$
3DH5	2441.0	1.267	1.000	$\geq 0.845$
3DH5	2480.0	1.262	1.000	$\geq 0.841$
Inquiry	2441.0	0.772	2.000	$\geq 0.515$

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

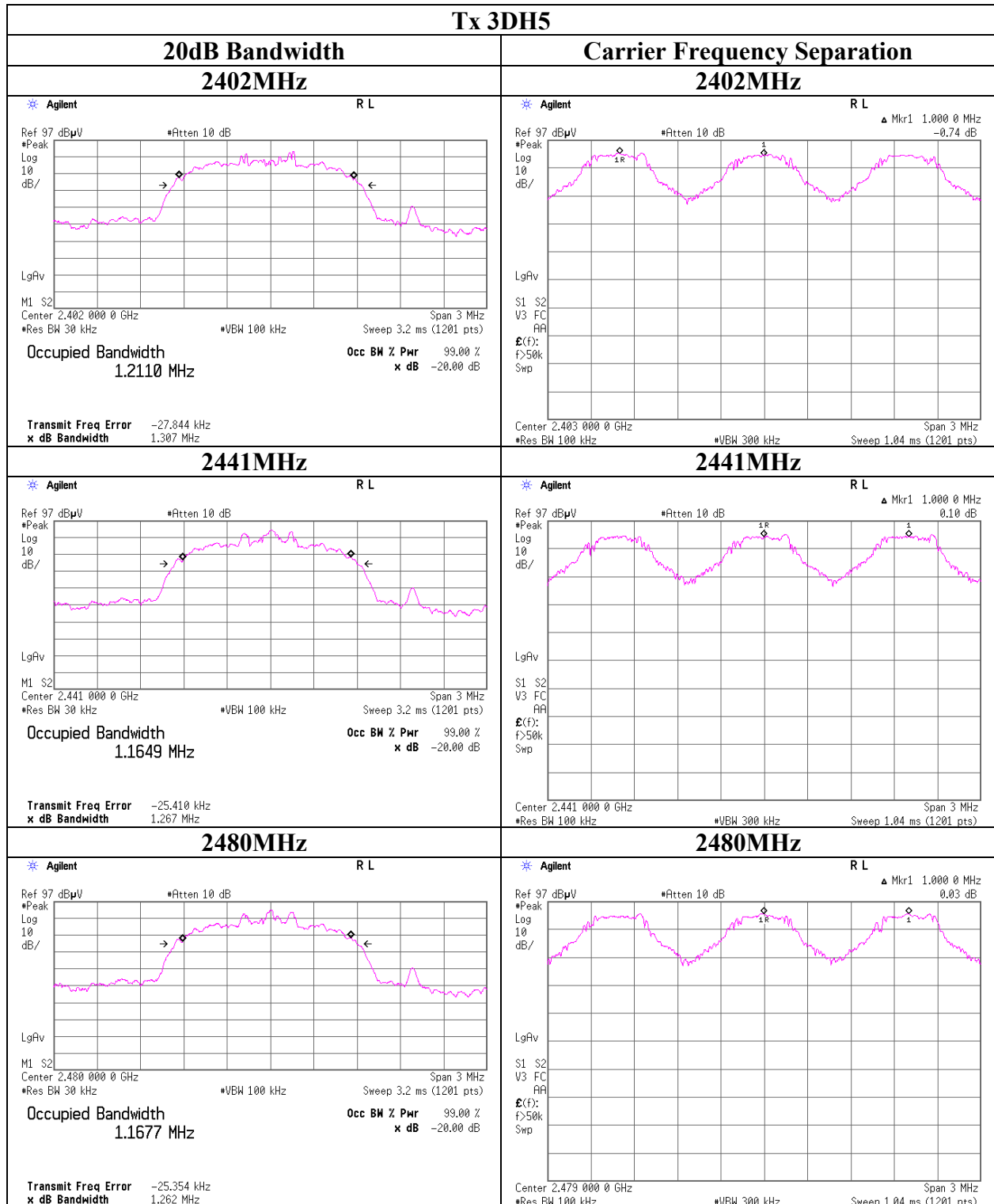
No limit applies to 20dB Bandwidth.



## 20dB Bandwidth and Carrier Frequency Separation



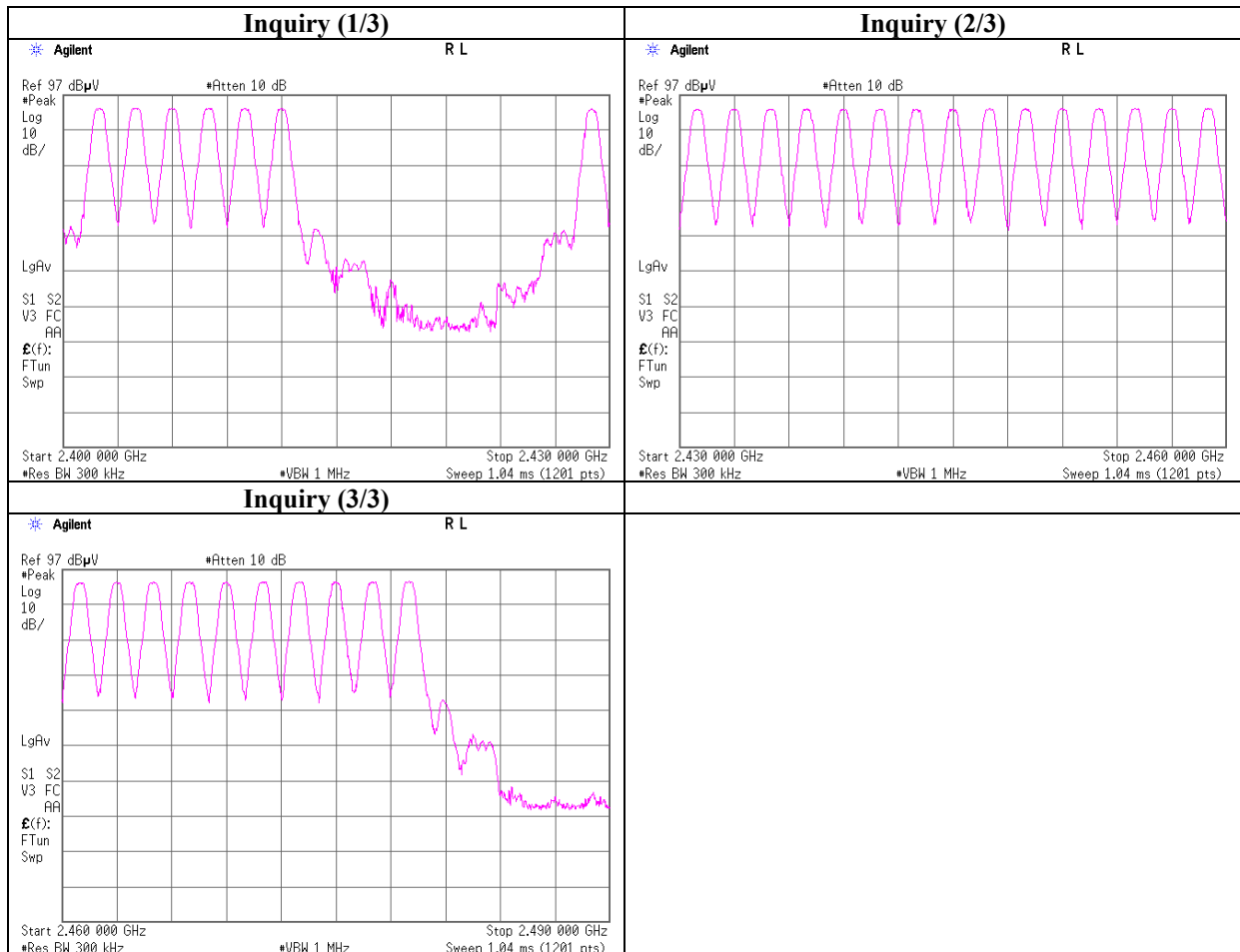
## 20dB Bandwidth and Carrier Frequency Separation



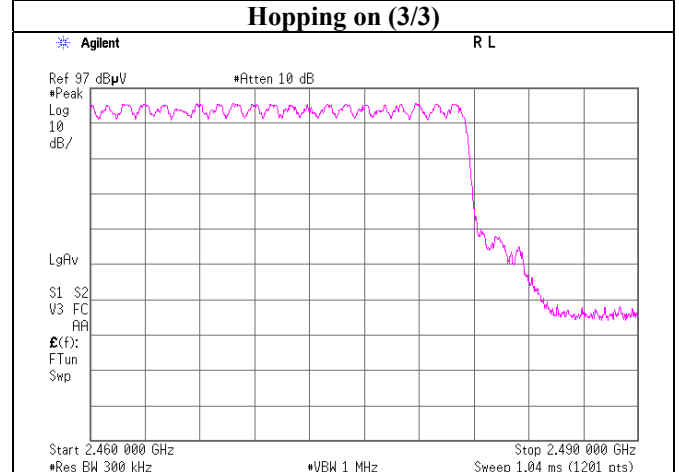
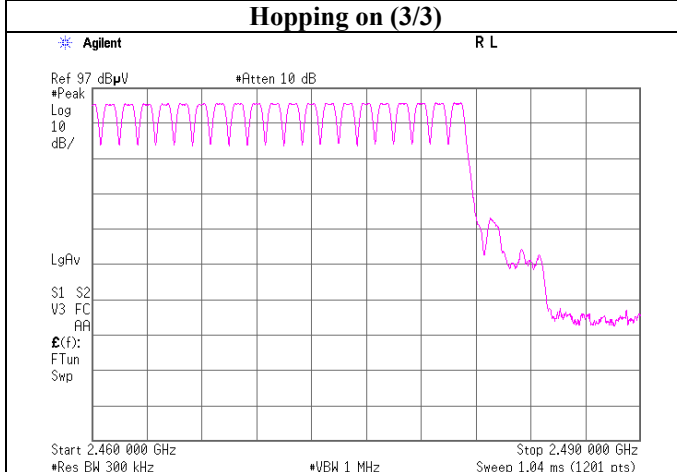
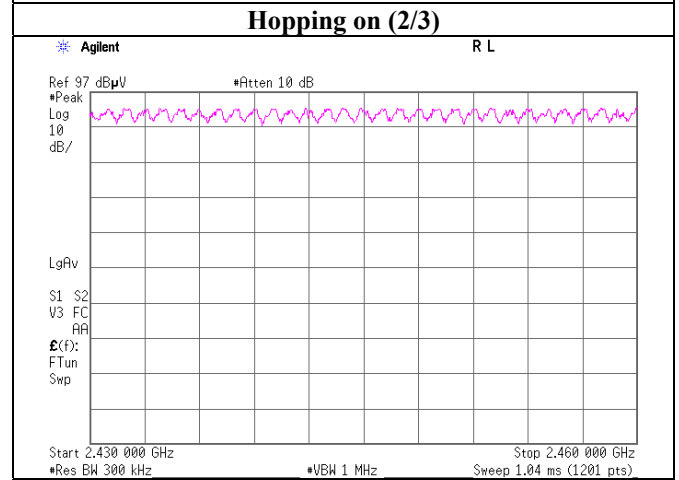
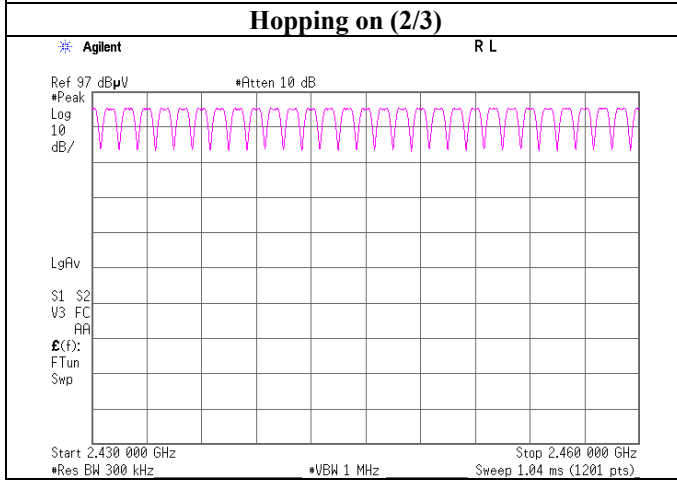
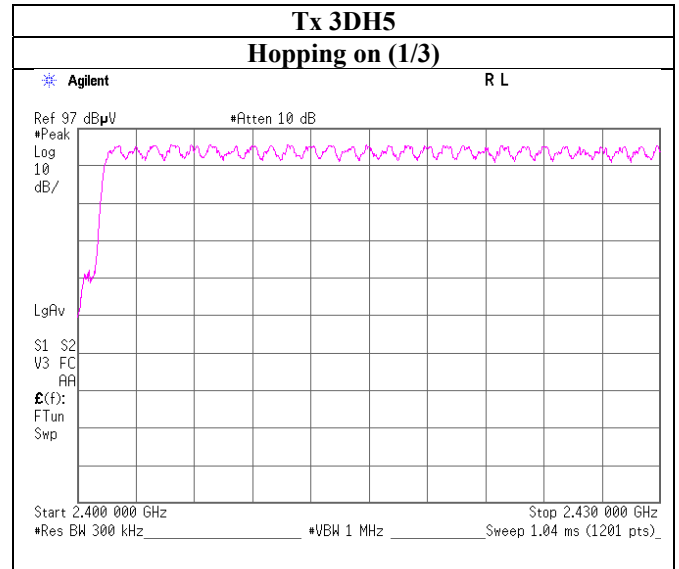
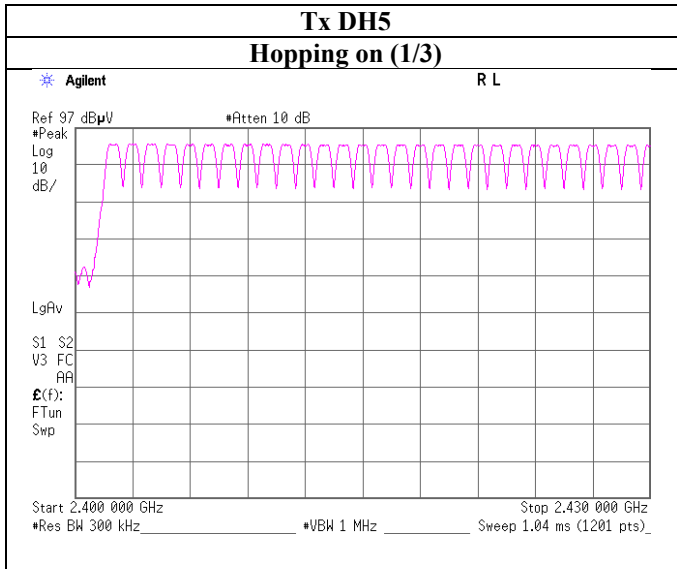
## Number of Hopping Frequency

Test place	Head Office EMC Lab. No.11 Measurement Room
Report No.	30KE0073-HO
Date	06/17/2010
Temperature/ Humidity	25 deg.C./ 43%
Engineer	Hisayoshi Sato
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



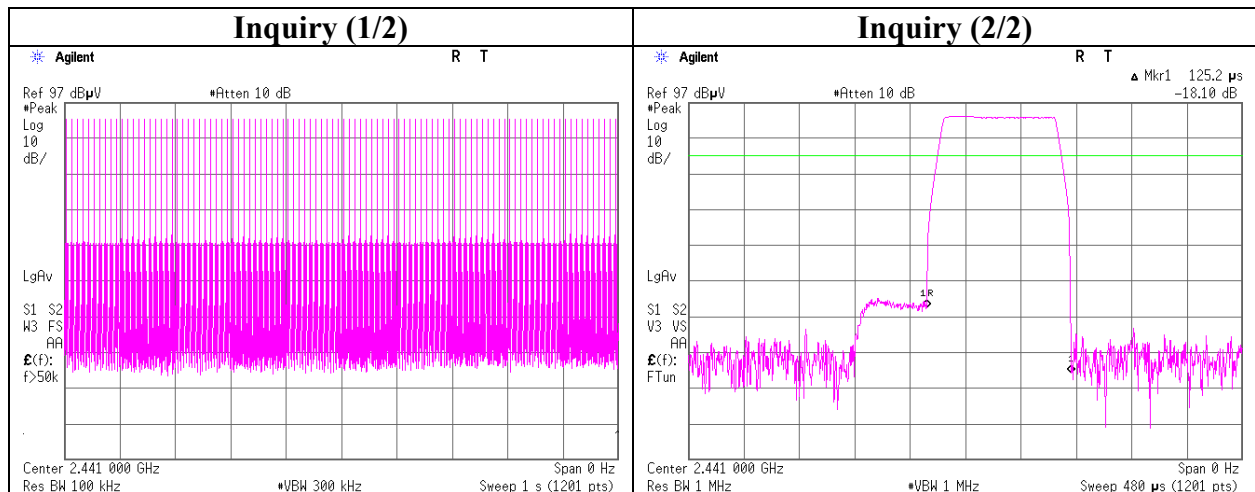
### Dwell time

Test place	Head Office EMC Lab. No.11 Measurement Room
Report No.	30KE0073-HO
Date	06/17/2010
Temperature/ Humidity	25 deg.C./ 43%
Engineer	Hisayoshi Sato
Mode	Tx (Hopping on) DH5/3DH5/Inquiry

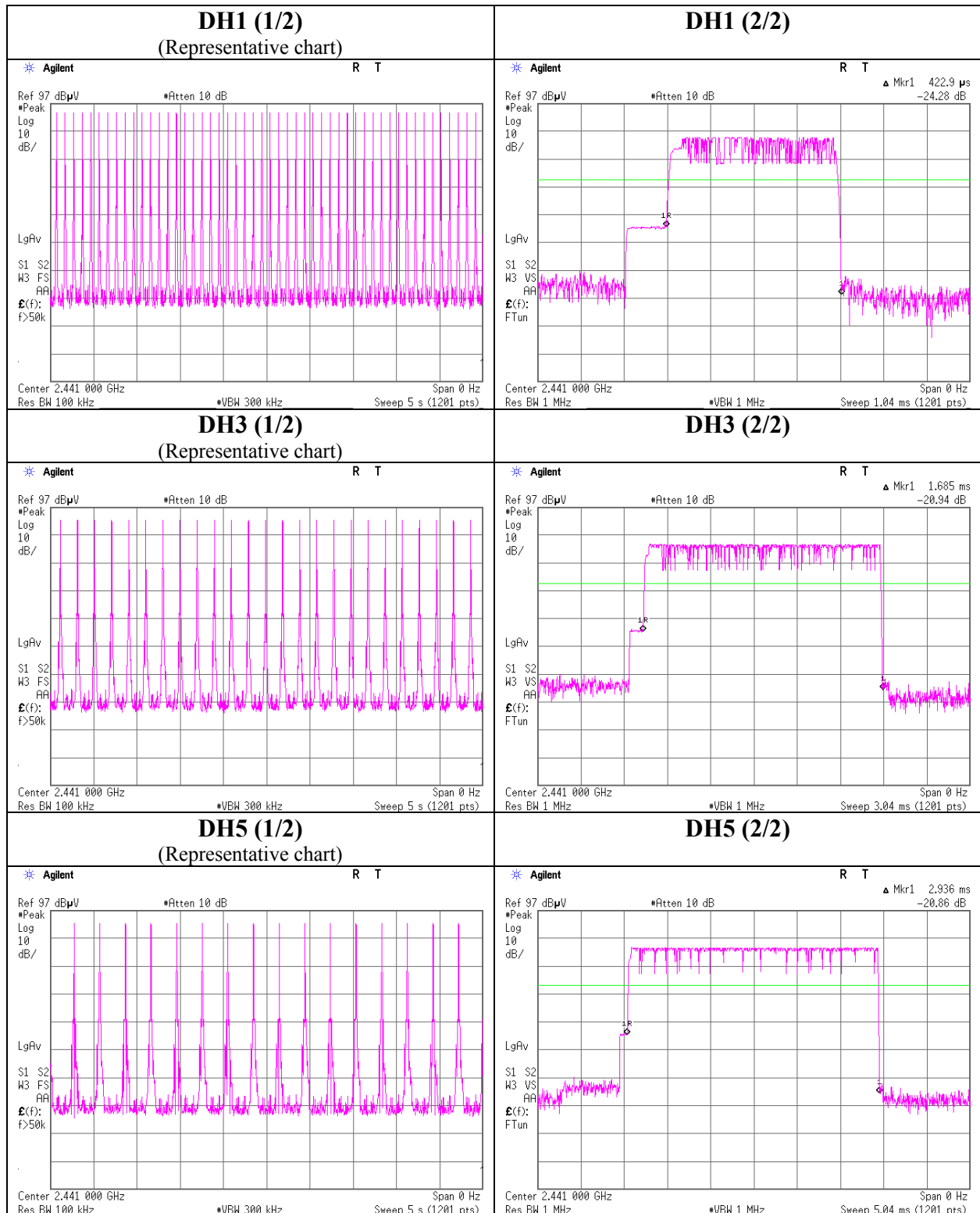
Mode	Number of transmission in a 31.6(79 Hopping x 0.4) / 12.8(32 Hopping x 0.4)second period	Length of transmission time [msec]	Result [msec]	Limit [msec]
DH1	50 times / 5 sec. x 31.6 sec. = 316 times	0.423	134	400
DH3	25 times / 5 sec. x 31.6 sec. = 158 times	1.685	266	400
DH5	16 times / 5 sec. x 31.6 sec. = 102 times	2.936	299	400
3DH1	50 times / 5 sec. x 31.6 sec. = 316 times	0.443	140	400
3DH3	26 times / 5 sec. x 31.6 sec. = 165 times	1.702	281	400
3DH5	17 times / 5 sec. x 31.6 sec. = 108 times	2.953	319	400
Inquiry	100 times / 1 sec. x 12.8 sec. = 1280 times	0.125	160	400

Sample Calculation

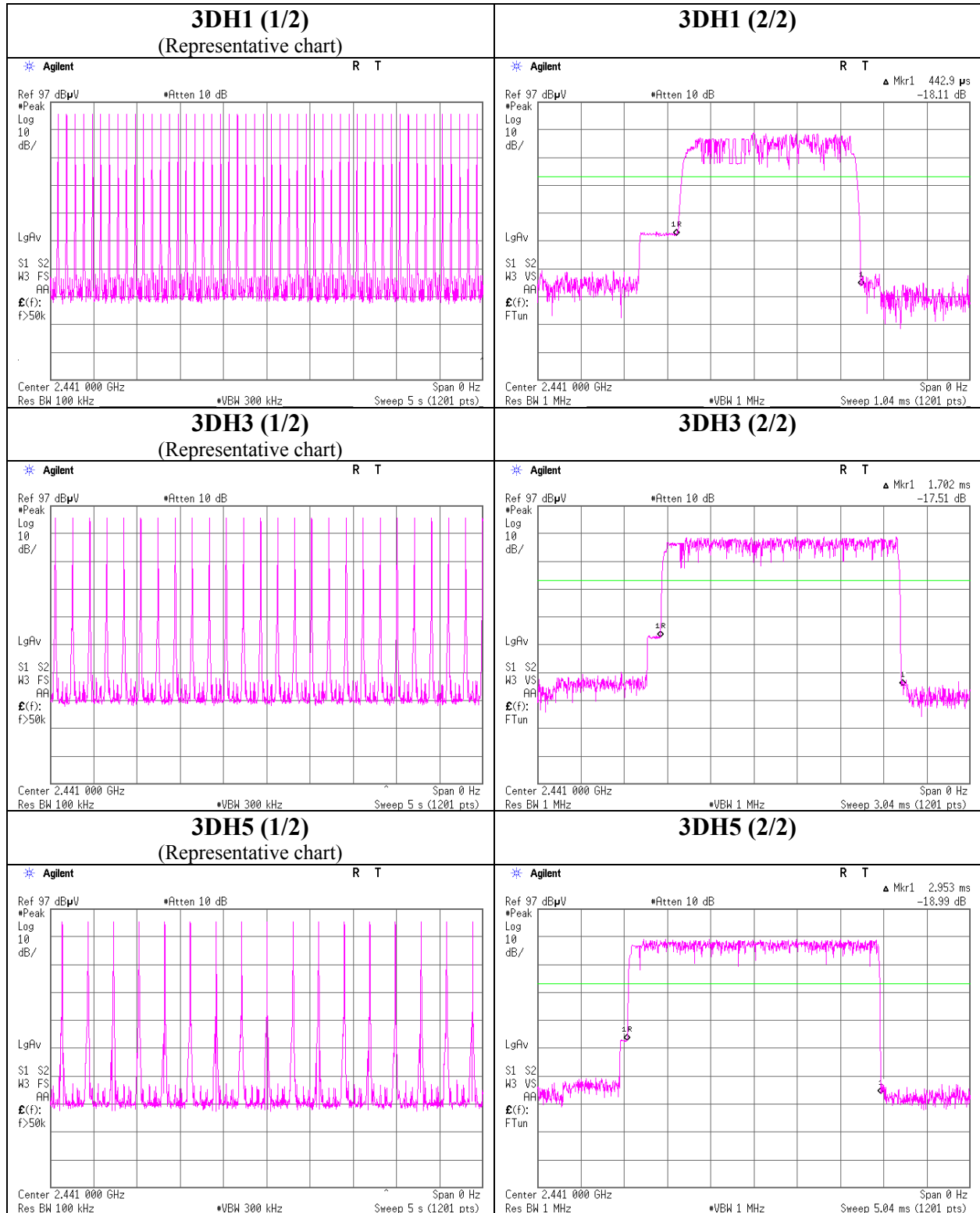
Result = Number of transmission x Length of transmission time



**Dwell time**



**Dwell time**



### Maximum Peak Output Power

Test place Head Office EMC Lab. No.11 Measurement Room  
Report No. 30KE0073-HO  
Date 06/17/2010  
Temperature/ Humidity 25 deg.C./ 43%  
Engineer Hisayoshi Sato  
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	-16.60	1.51	10.00	-5.09	0.31	30.00	1000	35.09
DH5	2441.0	-16.85	1.51	10.00	-5.34	0.29	30.00	1000	35.34
DH5	2480.0	-16.72	1.52	10.00	-5.20	0.30	30.00	1000	35.20
3DH5	2402.0	-15.57	1.51	10.00	-4.06	0.39	30.00	1000	34.06
3DH5	2441.0	-15.81	1.51	10.00	-4.30	0.37	30.00	1000	34.30
3DH5	2480.0	-15.86	1.52	10.00	-4.34	0.37	30.00	1000	34.34
Inquiry	2441.0	-13.84	1.51	10.00	-2.33	0.58	30.00	1000	32.33

Sample Calculation:

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

## Radiated Spurious Emission

Test place Head Office EMC Lab. No.4 Semi Anechoic Chamber  
Report No. 30KE0073-HO  
Date 06/22/2010 06/23/2010  
Temperature/ Humidity 24 deg.C./ 54% 20 deg.C./ 70%  
Engineer Hisayoshi Sato Keisuke Kawamura  
(1-10GHz) (10-26.5GHz / 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	34.050	QP	22.2	16.8	7.0	32.0	14.0	40.0	26.0	
Hori	182.693	QP	22.2	16.4	8.8	31.9	15.5	43.5	28.0	
Hori	332.003	QP	31.2	16.5	9.9	31.9	25.7	46.0	20.3	
Hori	441.165	QP	22.1	18.2	10.6	31.9	19.0	46.0	27.0	
Hori	555.499	QP	22.2	19.6	11.2	32.0	21.0	46.0	25.0	
Hori	706.002	QP	22.4	22.2	12.0	32.2	24.4	46.0	21.6	
Hori	1601.670	PK	54.0	25.4	2.5	33.1	48.8	73.9	25.1	
Hori	2390.000	PK	44.7	26.7	2.9	32.1	42.2	73.9	31.7	
Hori	2400.000	PK	70.6	26.7	2.9	32.1	68.1	-	-	See 20dBc Data Sheet
Hori	4804.000	PK	52.4	30.8	3.9	31.4	55.7	73.9	18.2	
Hori	7206.000	PK	42.3	35.9	5.7	32.3	51.6	73.9	22.3	NS
Hori	9608.000	PK	42.4	37.9	6.8	33.0	54.1	73.9	19.8	NS
Hori	24020.000	PK	47.6	38.1	-1.2	31.7	52.8	73.9	21.1	NS
Hori	1601.670	AV	51.3	25.4	2.5	33.1	46.1	53.9	7.8	
Hori	2390.000	AV	34.5	26.7	2.9	32.1	32.0	53.9	21.9	
Hori	2400.000	AV	65.0	26.7	2.9	32.1	62.5	-	-	See 20dBc Data Sheet
Hori	4804.000	AV	48.0	30.8	3.9	31.4	51.3	-	-	See Dwell time factor Sheet
Hori	7206.000	AV	30.6	35.9	5.7	32.3	39.9	53.9	14.0	NS
Hori	9608.000	AV	30.7	37.9	6.8	33.0	42.4	53.9	11.5	NS
Hori	24020.000	AV	35.6	38.1	-1.2	31.7	40.8	53.9	13.1	NS
Vert	34.950	QP	22.6	16.6	7.1	32.0	14.3	40.0	25.7	
Vert	181.649	QP	22.3	16.4	8.7	31.9	15.5	43.5	28.0	
Vert	335.127	QP	24.6	16.6	9.9	31.9	19.2	46.0	26.8	
Vert	443.499	QP	24.6	18.3	10.6	31.9	21.6	46.0	24.4	
Vert	557.832	QP	22.4	19.6	11.2	32.1	21.1	46.0	24.9	
Vert	704.835	QP	22.3	22.2	12.0	32.2	24.3	46.0	21.7	
Vert	1601.958	PK	56.9	25.4	2.5	33.1	51.7	73.9	22.2	
Vert	2390.000	PK	43.9	26.7	2.9	32.1	41.4	73.9	32.5	
Vert	2400.000	PK	68.8	26.7	2.9	32.1	66.3	-	-	See 20dBc Data Sheet
Vert	4804.000	PK	52.2	30.8	3.9	31.4	55.5	73.9	18.4	
Vert	7206.000	PK	43.1	35.9	5.7	32.3	52.4	73.9	21.5	NS
Vert	9608.000	PK	42.6	37.9	6.8	33.0	54.3	73.9	19.6	NS
Vert	24020.000	PK	47.6	38.1	-1.2	31.7	52.8	73.9	21.1	NS
Vert	1601.958	AV	55.3	25.4	2.5	33.1	50.1	53.9	3.8	
Vert	2390.000	AV	33.4	26.7	2.9	32.1	30.9	53.9	23.0	
Vert	2400.000	AV	63.2	26.7	2.9	32.1	60.7	-	-	See 20dBc Data Sheet
Vert	4804.000	AV	49.1	30.8	3.9	31.4	52.4	-	-	See Dwell time factor Sheet
Vert	7206.000	AV	31.1	35.9	5.7	32.3	40.4	53.9	13.5	NS
Vert	9608.000	AV	31.0	37.9	6.8	33.0	42.7	53.9	11.3	NS
Vert	24020.000	AV	35.6	38.1	-1.2	31.7	40.8	53.9	13.2	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 detected

## Radiated Spurious Emission

Test place : Head Office EMC Lab. No.4 Semi Anechoic Chamber  
Report No. : 30KE0073-HO  
Date : 06/22/2010  
Temperature/ Humidity : 24 deg.C./ 54%  
Engineer : Hisayoshi Sato  
(1-10GHz)  
Mode : Tx, DH5 2402MHz

### 20dBc Data Sheet

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant Factor [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hor	2402.000	PK	102.8	26.7	2.9	32.1	100.3	-	-	Carrier
Hor	2400.000	PK	67.0	26.7	2.9	32.1	64.5	80.3	15.8	
Ver	2402.000	PK	100.8	26.7	2.9	32.1	98.3	-	-	Carrier
Ver	2400.000	PK	65.4	26.7	2.9	32.1	62.9	78.3	15.4	

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	48.0	30.8	3.9	31.4	-29.7	21.6	53.9	32.3	
Ver	4804.000	AV	49.1	30.8	3.9	31.4	-29.7	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).

\*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

Test place Head Office EMC Lab. No.4 Semi Anechoic Chamber  
Report No. 30KE0073-HO  
Date 06/23/2010 06/23/2010  
Temperature/ Humidity 20 deg.C./ 70% 20 deg.C./ 70%  
Engineer Hiroyuki Furutaka Keisuke Kawamura  
(1-10GHz) (10-26.5GHz / 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	37.200	QP	22.5	15.7	7.1	32.0	13.3	40.0	26.7	
Hori	141.600	QP	22.2	14.6	8.4	31.9	13.3	43.5	30.2	
Hori	331.992	QP	31.3	16.5	9.9	31.9	25.8	46.0	20.2	
Hori	395.666	QP	22.0	17.5	10.3	31.9	17.9	46.0	28.1	
Hori	555.499	QP	22.2	19.6	11.2	32.0	21.0	46.0	25.0	
Hori	781.836	QP	22.3	22.9	12.4	31.8	25.8	46.0	20.2	
Hori	1628.000	PK	53.5	25.5	2.5	33.0	48.5	73.9	25.5	
Hori	4882.000	PK	51.0	31.1	5.3	31.4	56.0	73.9	18.0	
Hori	7323.000	PK	42.0	36.1	5.7	32.4	51.4	73.9	22.5	NS
Hori	9764.000	PK	43.0	38.1	6.9	33.0	55.0	73.9	18.9	NS
Hori	24410.000	PK	47.1	38.3	-1.1	31.6	52.7	73.9	21.3	NS
Hori	1628.000	AV	51.4	25.5	2.5	33.0	46.4	53.9	7.5	
Hori	4882.000	AV	44.8	31.1	5.3	31.4	49.8	53.9	4.1	
Hori	7323.000	AV	30.6	36.1	5.7	32.4	40.0	53.9	13.9	NS
Hori	9764.000	AV	30.3	38.1	6.9	33.0	42.3	53.9	11.6	NS
Hori	24410.000	AV	35.0	38.3	-1.1	31.6	40.6	53.9	13.3	NS
Vert	36.750	QP	22.7	15.9	7.1	32.0	13.7	40.0	26.3	
Vert	142.500	QP	22.5	14.6	8.4	31.9	13.6	43.5	29.9	
Vert	333.833	QP	26.7	16.5	9.9	31.9	21.2	46.0	24.8	
Vert	393.333	QP	26.5	17.4	10.3	31.9	22.3	46.0	23.7	
Vert	557.832	QP	22.3	19.6	11.2	32.1	21.0	46.0	25.0	
Vert	780.670	QP	22.4	22.9	12.4	31.8	25.9	46.0	20.1	
Vert	1627.993	PK	57.6	25.5	2.5	33.0	52.6	-	-	See 20dBc Data Sheet
Vert	4882.000	PK	52.7	31.1	5.3	31.4	57.7	73.9	16.3	
Vert	7323.000	PK	42.2	36.1	5.7	32.4	51.6	73.9	22.3	NS
Vert	9764.000	PK	42.6	38.1	6.9	33.0	54.6	73.9	19.3	NS
Vert	24410.000	PK	46.7	38.3	-1.1	31.6	52.3	73.9	21.6	NS
Vert	1627.993	AV	56.4	25.5	2.5	33.0	51.4	-	-	See 20dBc Data Sheet
Vert	4882.000	AV	47.5	31.1	5.3	31.4	52.5	-	-	See Dwell time factor Sheet
Vert	7323.000	AV	30.5	36.1	5.7	32.4	39.9	53.9	14.0	NS
Vert	9764.000	AV	30.2	38.1	6.9	33.0	42.2	53.9	11.7	NS
Vert	24410.000	AV	35.2	38.3	-1.1	31.6	40.8	53.9	13.2	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  $20\log(3.0\text{m}/1.0\text{m})= 9.5\text{dB}$

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

NS: Non Signal detected

## Radiated Spurious Emission

Test place : Head Office EMC Lab. No.4 Semi Anechoic Chamber  
Report No. : 30KE0073-HO  
Date : 06/23/2010  
Temperature/ Humidity : 20 deg.C./ 70%  
Engineer : Hiroyuki Furutaka  
(1-10GHz)  
Mode : Tx, DH5 2441MHz

### 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
Vert	2441.000	PK	99.9	26.8	2.9	32.1	97.5	-	-	Carrier
Vert	1627.993	PK	56.7	25.5	2.5	33.0	51.7	77.5	25.8	

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
Vert	4882.000	AV	47.5	31.1	5.3	31.4	-29.7	22.8	53.9	31.1	

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).

\*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  $20\log(3.0m/0.5m)=15.6dB$

## Radiated Spurious Emission

Test place Head Office EMC Lab. No.4 Semi Anechoic Chamber  
Report No. 30KE0073-HO  
Date 06/23/2010 06/23/2010  
Temperature/ Humidity 20 deg.C./ 70% 20 deg.C./ 70%  
Engineer Hiroyuki Furutaka Keisuke Kawamura  
(1-10GHz) (10-26.5GHz / 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	35.850	QP	22.9	16.2	7.1	32.0	14.2	40.0	25.8	
Hori	142.500	QP	22.4	14.6	8.4	31.9	13.5	43.5	30.0	
Hori	332.001	QP	31.1	16.5	9.9	31.9	25.6	46.0	20.4	
Hori	394.499	QP	21.9	17.4	10.3	31.9	17.7	46.0	28.3	
Hori	567.166	QP	22.3	19.7	11.3	32.1	21.2	46.0	24.8	
Hori	729.335	QP	22.6	22.5	12.1	32.1	25.1	46.0	20.9	
Hori	1653.961	PK	55.7	25.5	2.5	33.0	50.7	73.9	23.3	
Hori	2483.500	PK	58.1	26.9	2.9	32.1	55.8	73.9	18.1	
Hori	4960.000	PK	47.9	31.3	5.4	31.4	53.2	73.9	20.7	
Hori	7440.000	PK	42.9	36.3	5.7	32.4	52.5	73.9	21.4	NS
Hori	9920.000	PK	42.3	38.3	7.1	33.0	54.7	73.9	19.2	NS
Hori	24800.000	PK	48.4	38.4	-1.0	31.5	54.3	73.9	19.6	NS
Hori	1653.961	AV	53.8	25.5	2.5	33.0	48.8	53.9	5.1	
Hori	2483.500	AV	49.5	26.9	2.9	32.1	47.2	53.9	6.7	
Hori	4960.000	AV	42.2	31.3	5.4	31.4	47.5	53.9	6.5	
Hori	7440.000	AV	30.6	36.3	5.7	32.4	40.2	53.9	13.7	NS
Hori	9920.000	AV	30.3	38.3	7.1	33.0	42.7	53.9	11.2	NS
Hori	24800.000	AV	36.6	38.4	-1.0	31.5	42.5	53.9	11.4	NS
Vert	36.300	QP	22.9	16.0	7.1	32.0	14.0	40.0	26.0	
Vert	141.600	QP	22.4	14.6	8.4	31.9	13.5	43.5	30.0	
Vert	332.666	QP	24.4	16.5	9.9	31.9	18.9	46.0	27.1	
Vert	392.166	QP	26.4	17.4	10.3	31.9	22.2	46.0	23.8	
Vert	565.999	QP	22.4	19.7	11.3	32.1	21.3	46.0	24.7	
Vert	730.404	QP	24.7	22.5	12.1	32.1	27.2	46.0	18.8	
Vert	1654.030	PK	60.0	25.5	2.5	33.0	55.0	73.9	18.9	
Vert	2483.500	PK	56.3	26.9	2.9	32.1	54.0	73.9	19.9	
Vert	4960.000	PK	50.8	31.3	5.4	31.4	56.1	73.9	17.8	
Vert	7440.000	PK	43.0	36.3	5.7	32.4	52.6	73.9	21.3	NS
Vert	9920.000	PK	42.7	38.3	7.1	33.0	55.1	73.9	18.8	NS
Vert	24800.000	PK	48.8	38.4	-1.0	31.5	54.7	73.9	19.2	NS
Vert	1654.030	AV	56.5	25.5	2.5	33.0	51.5	53.9	2.4	
Vert	2483.500	AV	48.2	26.9	2.9	32.1	45.9	53.9	8.0	
Vert	4960.000	AV	45.2	31.3	5.4	31.4	50.5	-	-	See Dwell time factor Sheet
Vert	7440.000	AV	30.9	36.3	5.7	32.4	40.5	53.9	13.4	NS
Vert	9920.000	AV	30.4	38.3	7.1	33.0	42.8	53.9	11.1	NS
Vert	24800.000	AV	36.6	38.4	-1.0	31.5	42.5	53.9	11.4	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

NS: Non Signal detected

## Radiated Spurious Emission

Test place                    Head Office EMC Lab. No.4 Semi Anechoic Chamber  
Report No.                    30KE0073-HO  
Date                            06/23/2010  
Temperature/ Humidity      20 deg.C./ 70%  
Engineer                      Hiroyuki Furutaka  
                                      (1-10GHz)  
Mode                            Tx, DH5 2480MHz

**Dwell time factor relaxation**

Polarity	Frequency	Detector	Reading	Ant Factor	Loss	Gain	Dwell Factor	Result	Limit	Margin	Remark
	[MHz]		[dBuV]	[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
Vert	4960.000	AV	45.2	31.3	5.4	31.4	-29.7	20.8	53.9	33.1	

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).

\*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

Test place Head Office EMC Lab. No.4 Semi Anechoic Chamber  
Report No. 30KE0073-HO  
Date 06/23/2010 06/23/2010  
Temperature/ Humidity 20 deg.C./ 70% 20 deg.C./ 70%  
Engineer Hiroyuki Furutaka Keisuke Kawamura  
(1-10GHz) (10-26.5GHz / 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	34.950	QP	22.6	16.6	7.1	32.0	14.3	40.0	25.7	
Hori	139.800	QP	22.1	14.5	8.4	31.9	13.1	43.5	30.4	
Hori	332.001	QP	31.2	16.5	9.9	31.9	25.7	46.0	20.3	
Hori	423.666	QP	22.0	17.9	10.5	31.9	18.5	46.0	27.5	
Hori	509.998	QP	22.1	19.2	11.0	32.0	20.3	46.0	25.7	
Hori	700.168	QP	22.3	22.2	12.0	32.2	24.3	46.0	21.7	
Hori	1601.960	PK	51.8	25.4	2.5	33.1	46.6	73.9	27.4	
Hori	2400.000	PK	65.8	26.7	2.9	32.1	63.3	-	-	See 20dBc Data Sheet
Hori	4804.000	PK	42.9	30.8	5.3	31.4	47.6	73.9	26.3	
Hori	7206.000	PK	42.3	35.9	5.7	32.3	51.6	73.9	22.3	NS
Hori	9608.000	PK	42.9	37.9	6.8	33.0	54.6	73.9	19.3	NS
Hori	24020.000	PK	47.5	38.1	-1.2	31.7	52.7	73.9	21.3	NS
Hori	1601.960	AV	48.9	25.4	2.5	33.1	43.7	53.9	10.3	
Hori	2400.000	AV	52.9	26.7	2.9	32.1	50.4	-	-	See 20dBc Data Sheet
Hori	4804.000	AV	31.9	30.8	5.3	31.4	36.6	53.9	17.3	
Hori	7206.000	AV	30.5	35.9	5.7	32.3	39.8	53.9	14.1	NS
Hori	9608.000	AV	30.9	37.9	6.8	33.0	42.6	53.9	11.3	NS
Hori	24020.000	AV	35.3	38.1	-1.2	31.7	40.5	53.9	13.4	NS
Vert	34.500	QP	22.5	16.7	7.0	32.0	14.2	40.0	25.8	
Vert	141.600	QP	22.2	14.6	8.4	31.9	13.3	43.5	30.2	
Vert	383.999	QP	26.8	17.3	10.2	31.9	22.4	46.0	23.6	
Vert	476.165	QP	25.5	18.8	10.8	32.0	23.1	46.0	22.9	
Vert	629.000	QP	22.3	20.7	11.6	32.1	22.5	46.0	23.5	
Vert	696.668	QP	22.4	22.1	11.9	32.2	24.2	46.0	21.8	
Vert	1602.000	PK	55.8	25.4	2.5	33.1	50.6	73.9	23.3	
Vert	2390.000	PK	47.3	26.7	2.9	32.1	44.8	73.9	29.1	
Vert	2400.000	PK	62.6	26.7	2.9	32.1	60.1	73.9	13.8	
Vert	4804.000	PK	44.3	30.8	5.3	31.4	49.0	73.9	25.0	
Vert	7206.000	PK	43.0	35.9	5.7	32.3	52.3	73.9	21.6	NS
Vert	9608.000	PK	43.3	37.9	6.8	33.0	55.0	73.9	18.9	NS
Vert	24020.000	PK	47.0	38.1	-1.2	31.7	52.2	73.9	21.7	NS
Vert	1602.000	AV	54.1	25.4	2.5	33.1	48.9	53.9	5.0	
Vert	2390.000	AV	37.5	26.7	2.9	32.1	35.0	53.9	18.9	
Vert	2400.000	AV	50.0	26.7	2.9	32.1	47.5	53.9	6.4	
Vert	4804.000	AV	32.3	30.8	5.3	31.4	37.0	53.9	16.9	
Vert	7206.000	AV	30.6	35.9	5.7	32.3	39.9	53.9	14.0	NS
Vert	9608.000	AV	31.1	37.9	6.8	33.0	42.8	53.9	11.1	NS
Vert	24020.000	AV	35.3	38.1	-1.2	31.7	40.5	53.9	13.4	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  $20\log(3.0m/1.0m)= 9.5dB$

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

NS: Non Signal detected

### Radiated Spurious Emission

Test place Head Office EMC Lab. No.4 Semi Anechoic Chamber  
Report No. 30KE0073-HO  
Date 06/23/2010  
Temperature/ Humidity 20 deg.C./ 70%  
Engineer Hiroyuki Furutaka  
(1-10GHz)  
Mode 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	101.0	26.7	2.9	32.1	98.5	-	-	Carrier
Hori	2400.000	PK	53.5	26.7	2.9	32.1	51.0	78.5	27.5	

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).

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

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

Test place Head Office EMC Lab. No.4 Semi Anechoic Chamber  
Report No. 30KE0073-HO  
Date 06/23/2010 06/23/2010  
Temperature/ Humidity 20 deg.C./ 70% 20 deg.C./ 70%  
Engineer Hiroyuki Furutaka Keisuke Kawamura  
Mode (1-10GHz) (10-26.5GHz / below 1GHz)  
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	34.500	QP	22.4	16.7	7.0	32.0	14.1	40.0	25.9	
Hori	139.350	QP	22.2	14.5	8.4	31.9	13.2	43.5	30.3	
Hori	332.001	QP	31.1	16.5	9.9	31.9	25.6	46.0	20.4	
Hori	402.666	QP	21.9	17.6	10.3	31.9	17.9	46.0	28.1	
Hori	533.332	QP	22.2	19.4	11.1	32.0	20.7	46.0	25.3	
Hori	702.502	QP	22.4	22.2	12.0	32.2	24.4	46.0	21.6	
Hori	1628.028	PK	55.0	25.5	2.5	33.0	50.0	73.9	23.9	
Hori	4882.000	PK	42.2	31.1	5.3	31.4	47.2	73.9	26.7	
Hori	7323.000	PK	42.3	36.1	5.7	32.4	51.7	73.9	22.2	NS
Hori	9764.000	PK	42.8	38.1	6.9	33.0	54.8	73.9	19.1	NS
Hori	24410.000	PK	46.6	38.3	-1.1	31.6	52.2	73.9	21.7	NS
Hori	1628.028	AV	53.1	25.5	2.5	33.0	48.1	53.9	5.9	
Hori	4882.000	AV	31.2	31.1	5.3	31.4	36.2	53.9	17.7	
Hori	7323.000	AV	30.4	36.1	5.7	32.4	39.8	53.9	14.1	NS
Hori	9764.000	AV	30.2	38.1	6.9	33.0	42.2	53.9	11.7	NS
Hori	24410.000	AV	34.8	38.3	-1.1	31.6	40.4	53.9	13.5	NS
Vert	32.250	QP	22.6	17.4	7.0	32.1	14.9	40.0	25.1	
Vert	143.400	QP	22.4	14.7	8.4	31.9	13.6	43.5	29.9	
Vert	358.333	QP	26.3	16.9	10.0	31.9	21.3	46.0	24.7	
Vert	470.332	QP	24.9	18.7	10.7	32.0	22.3	46.0	23.7	
Vert	633.667	QP	22.5	20.8	11.6	32.1	22.8	46.0	23.2	
Vert	774.836	QP	22.4	22.9	12.3	31.9	25.7	46.0	20.3	
Vert	1628.013	PK	58.3	25.5	2.5	33.0	53.3	-	-	See 20dBc Data Sheet
Vert	4882.000	PK	44.5	31.1	5.3	31.4	49.5	73.9	24.4	
Vert	7323.000	PK	42.6	36.1	5.7	32.4	52.0	73.9	21.9	NS
Vert	9764.000	PK	42.9	38.1	6.9	33.0	54.9	73.9	19.0	NS
Vert	24410.000	PK	46.7	38.3	-1.1	31.6	52.3	73.9	21.6	NS
Vert	1628.013	AV	55.8	25.5	2.5	33.0	50.8	-	-	See 20dBc Data Sheet
Vert	4882.000	AV	32.8	31.1	5.3	31.4	37.8	53.9	16.2	
Vert	7323.000	AV	30.5	36.1	5.7	32.4	39.9	53.9	14.0	NS
Vert	9764.000	AV	30.3	38.1	6.9	33.0	42.3	53.9	11.7	NS
Vert	24410.000	AV	34.9	38.3	-1.1	31.6	40.5	53.9	13.4	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

Non Signal detected

**Radiated Spurious Emission**

Test place                   Head Office EMC Lab. No.4 Semi Anechoic Chamber  
Report No.                   30KE0073-HO  
Date                           06/23/2010  
Temperature/ Humidity     20 deg.C./ 70%  
Engineer                     Hiroyuki Furutaka  
                                  (1-10GHz)  
Mode                         Tx, 3DH5 2441MHz

**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
Vert	2441.000	PK	97.5	26.8	2.9	32.1	95.1	-	-	Carrier
Vert	1628.013	PK	57.4	25.5	2.5	33.0	52.4	75.1	22.7	

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

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

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

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

## Radiated Spurious Emission

Test place Head Office EMC Lab. No.4 Semi Anechoic Chamber  
Report No. 30KE0073-HO  
Date 06/22/2010 06/23/2010  
Temperature/ Humidity 24 deg.C./ 54% 20 deg.C./ 70%  
Engineer Hisayoshi Sato Keisuke Kawamura  
(1-10GHz) (10-26.5GHz / 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	34.950	QP	22.6	16.6	7.1	32.0	14.3	40.0	25.7	
Hori	147.450	QP	22.4	14.9	8.4	31.9	13.8	43.5	29.7	
Hori	332.001	QP	31.7	16.5	9.9	31.9	26.2	46.0	19.8	
Hori	465.665	QP	22.4	18.6	10.7	32.0	19.7	46.0	26.3	
Hori	594.000	QP	22.4	19.9	11.4	32.1	21.6	46.0	24.4	
Hori	772.503	QP	22.3	22.8	12.3	31.9	25.5	46.0	20.5	
Hori	1653.997	PK	54.3	25.5	2.5	33.0	49.3	73.9	24.6	
Hori	2483.500	PK	62.5	26.9	2.9	32.1	60.2	73.9	13.7	
Hori	4960.000	PK	40.3	31.3	4.0	31.4	44.2	73.9	29.7	
Hori	7440.000	PK	41.9	36.3	5.7	32.4	51.5	73.9	22.4	NS
Hori	9920.000	PK	42.2	38.3	7.1	33.0	54.6	73.9	19.3	NS
Hori	24800.000	PK	48.9	38.4	-1.0	31.5	54.8	73.9	19.1	NS
Hori	1653.997	AV	51.9	25.5	2.5	33.0	46.9	53.9	7.0	
Hori	2483.500	AV	51.3	26.9	2.9	32.1	49.0	-	-	See Dwell time factor Sheet
Hori	4960.000	AV	29.4	31.3	4.0	31.4	33.3	53.9	20.6	
Hori	7440.000	AV	30.6	36.3	5.7	32.4	40.2	53.9	13.7	NS
Hori	9920.000	AV	30.4	38.3	7.1	33.0	42.8	53.9	11.1	NS
Hori	24800.000	AV	36.7	38.4	-1.0	31.5	42.6	53.9	11.3	NS
Vert	33.600	QP	22.1	17.0	7.0	32.0	14.1	40.0	25.9	
Vert	147.900	QP	22.4	14.9	8.5	31.9	13.9	43.5	29.6	
Vert	359.500	QP	27.0	16.9	10.0	31.9	22.0	46.0	24.0	
Vert	443.499	QP	24.6	18.3	10.6	31.9	21.6	46.0	24.4	
Vert	492.498	QP	23.7	19.0	10.9	32.0	21.6	46.0	24.4	
Vert	760.836	QP	22.4	22.7	12.3	31.9	25.5	46.0	20.5	
Vert	1653.950	PK	59.4	25.5	2.5	33.0	54.4	-	-	See 20dBc Data Sheet
Vert	2483.500	PK	58.9	26.9	2.9	32.1	56.6	73.9	17.3	
Vert	4960.000	PK	42.2	31.3	4.0	31.4	46.1	73.9	27.8	
Vert	7440.000	PK	42.6	36.3	5.7	32.4	52.2	73.9	21.7	NS
Vert	9920.000	PK	42.6	38.3	7.1	33.0	55.0	73.9	19.0	NS
Vert	24800.000	PK	48.7	38.4	-1.0	31.5	54.6	73.9	19.3	NS
Vert	1653.950	AV	58.1	25.5	2.5	33.0	53.1	-	-	See 20dBc Data Sheet
Vert	2483.500	AV	47.9	26.9	2.9	32.1	45.6	53.9	8.3	
Vert	4960.000	AV	29.1	31.3	4.0	31.4	33.0	53.9	20.9	
Vert	7440.000	AV	30.5	36.3	5.7	32.4	40.1	53.9	13.8	NS
Vert	9920.000	AV	30.5	38.3	7.1	33.0	42.9	53.9	11.1	NS
Vert	24800.000	AV	36.8	38.4	-1.0	31.5	42.7	53.9	11.2	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 detected

## Radiated Spurious Emission

Test place : Head Office EMC Lab. No.4 Semi Anechoic Chamber  
Report No. : 30KE0073-HO  
Date : 06/22/2010  
Temperature/ Humidity : 24 deg.C./ 54%  
Engineer : Hisayoshi Sato  
(1-10GHz)  
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
Ver	2480.000	PK	95.3	26.9	2.9	32.1	93.0	-	-	Carrier
Ver	1653.950	PK	58.4	25.5	2.5	33.0	53.4	73.0	19.6	

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

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).

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

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

### 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
Ver	2483.500	AV	51.3	26.9	2.9	32.1	-29.7	19.3	53.9	34.6	

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).

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

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

Test place Head Office EMC Lab. No.4 Semi Anechoic Chamber  
Report No. 30KE0073-HO  
Date 06/23/2010  
Temperature/ Humidity 20 deg.C./ 70%  
Engineer Keisuke Kawamura

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	35.400	QP	22.8	16.4	7.1	32.0	14.3	40.0	25.7	
Hori	138.900	QP	22.3	14.4	8.4	31.9	13.2	43.5	30.3	
Hori	332.001	QP	30.8	16.5	9.9	31.9	25.3	46.0	20.7	
Hori	361.833	QP	24.5	17.0	10.1	31.9	19.7	46.0	26.3	
Hori	430.666	QP	22.0	18.0	10.5	31.9	18.6	46.0	27.4	
Hori	562.499	QP	22.3	19.7	11.2	32.1	21.1	46.0	24.9	
Hori	1626.337	PK	53.9	25.5	2.5	33.0	48.9	73.9	25.0	
Hori	2439.533	PK	44.2	26.8	2.9	32.1	41.8	73.9	32.1	
Hori	2441.000	PK	42.5	26.8	2.9	32.1	40.1	73.9	33.8	NS
Hori	4882.000	PK	40.3	31.1	3.9	31.4	43.9	73.9	30.0	NS
Hori	7323.000	PK	42.6	36.1	4.3	32.4	50.6	73.9	23.3	NS
Hori	1626.337	AV	51.9	25.5	2.5	33.0	46.9	53.9	7.0	
Hori	2439.533	AV	34.1	26.8	2.9	32.1	31.7	53.9	22.3	
Hori	2441.000	AV	30.1	26.8	2.9	32.1	27.7	53.9	26.2	NS
Hori	4882.000	AV	29.2	31.1	3.9	31.4	32.8	53.9	21.1	NS
Hori	7323.000	AV	30.6	36.1	4.3	32.4	38.6	53.9	15.3	NS
Vert	35.850	QP	22.9	16.2	7.1	32.0	14.2	40.0	25.8	
Vert	138.900	QP	22.3	14.4	8.4	31.9	13.2	43.5	30.3	
Vert	396.833	QP	27.1	17.5	10.3	31.9	23.0	46.0	23.0	
Vert	476.165	QP	24.4	18.8	10.8	32.0	22.0	46.0	24.0	
Vert	549.666	QP	22.2	19.6	11.2	32.0	21.0	46.0	25.0	
Vert	602.166	QP	22.2	20.0	11.5	32.1	21.6	46.0	24.4	
Vert	1626.337	PK	57.0	25.5	2.5	33.0	52.0	73.9	21.9	
Vert	2439.533	PK	44.6	26.8	2.9	32.1	42.2	73.9	31.7	
Vert	2441.000	PK	42.6	26.8	2.9	32.1	40.2	73.9	33.7	NS
Vert	4882.000	PK	41.0	31.1	3.9	31.4	44.6	73.9	29.3	NS
Vert	7323.000	PK	41.8	36.1	4.3	32.4	49.8	73.9	24.2	NS
Vert	1626.337	AV	55.7	25.5	2.5	33.0	50.7	53.9	3.2	
Vert	2439.533	AV	34.0	26.8	2.9	32.1	31.6	53.9	22.3	
Vert	2441.000	AV	30.1	26.8	2.9	32.1	27.7	53.9	26.2	NS
Vert	4882.000	AV	28.6	31.1	3.9	31.4	32.2	53.9	21.7	NS
Vert	7323.000	AV	30.1	36.1	4.3	32.4	38.1	53.9	15.9	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.

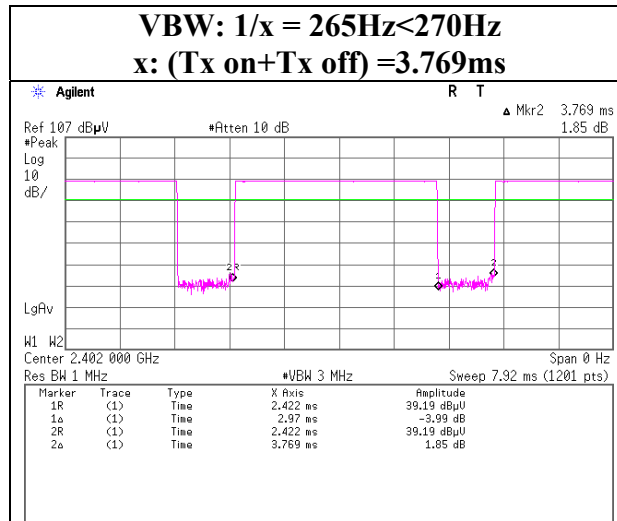
Distance factor: 10GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB

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

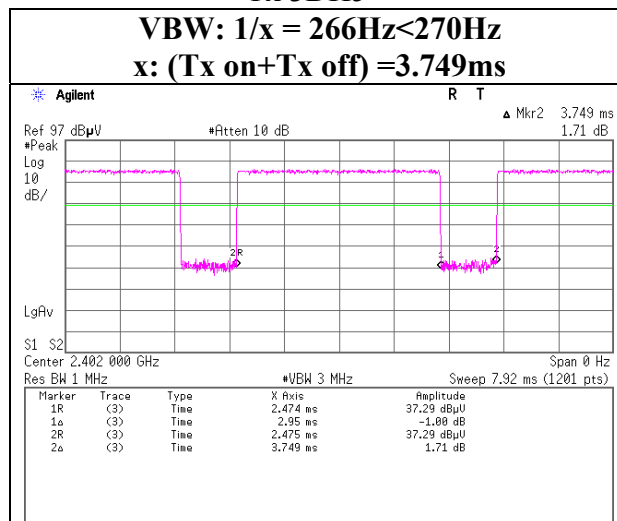
NS: Non Signal detected

## VBW (AV) Calculation

Tx DH5

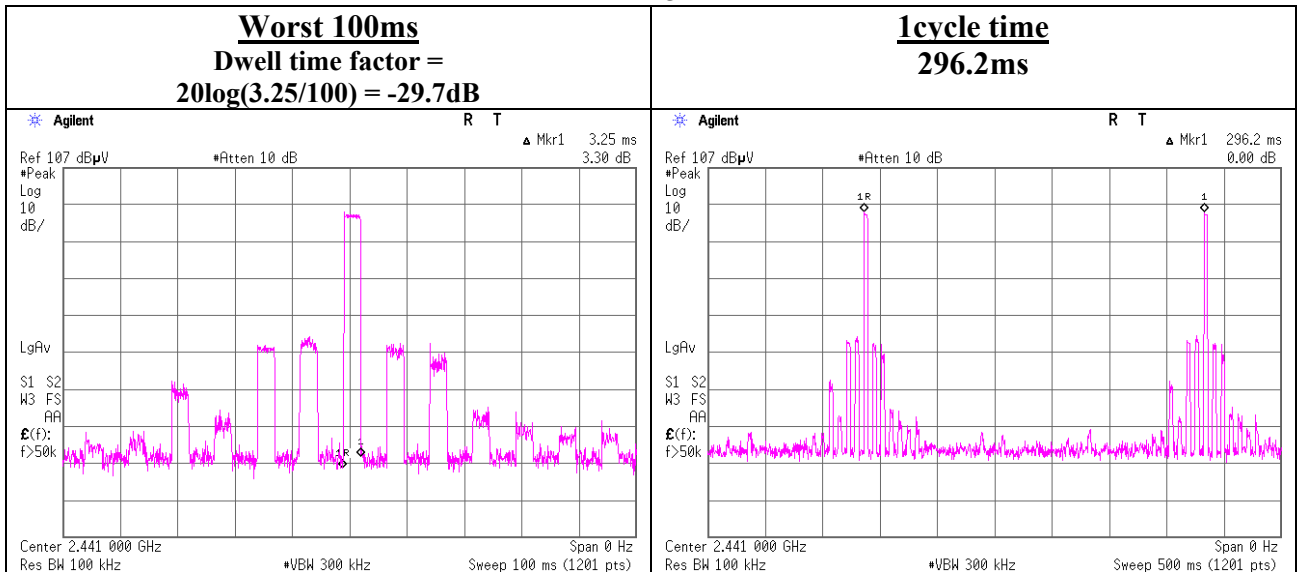


Tx 3DH5

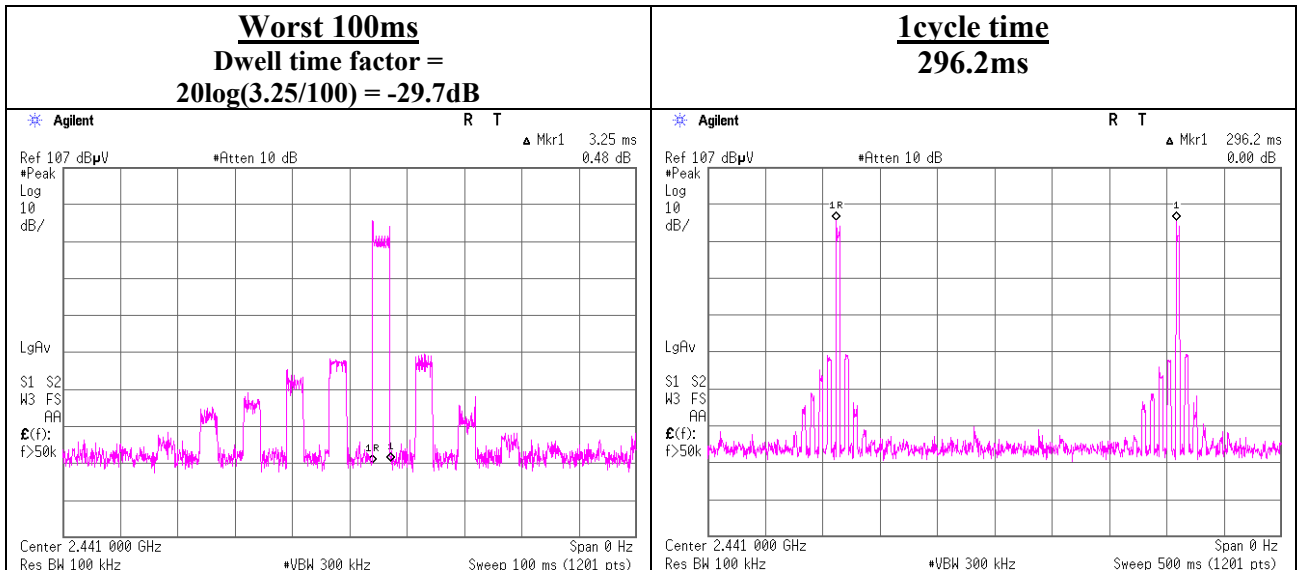


## Dwell time factor

### DH5

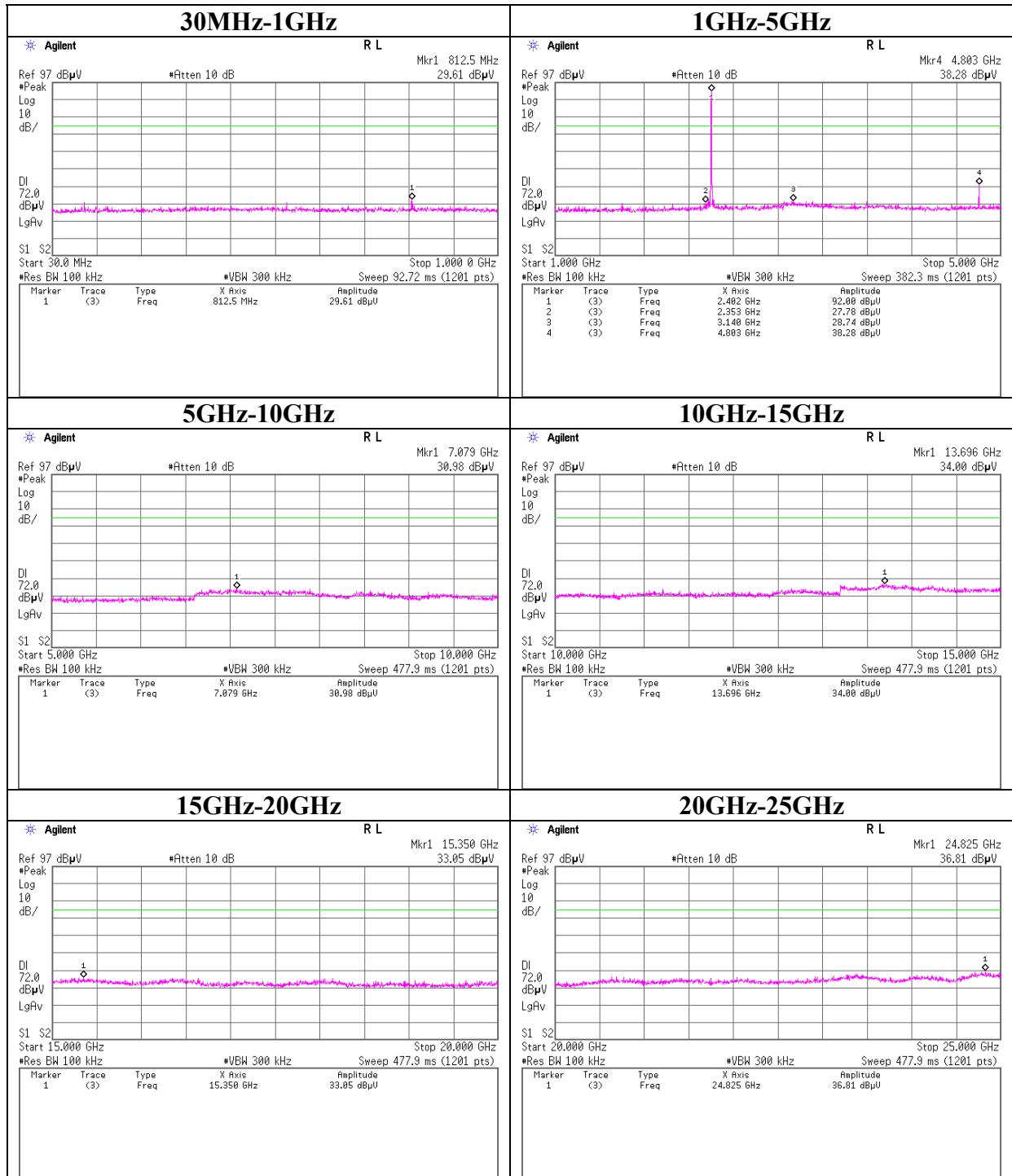


### 3DH5



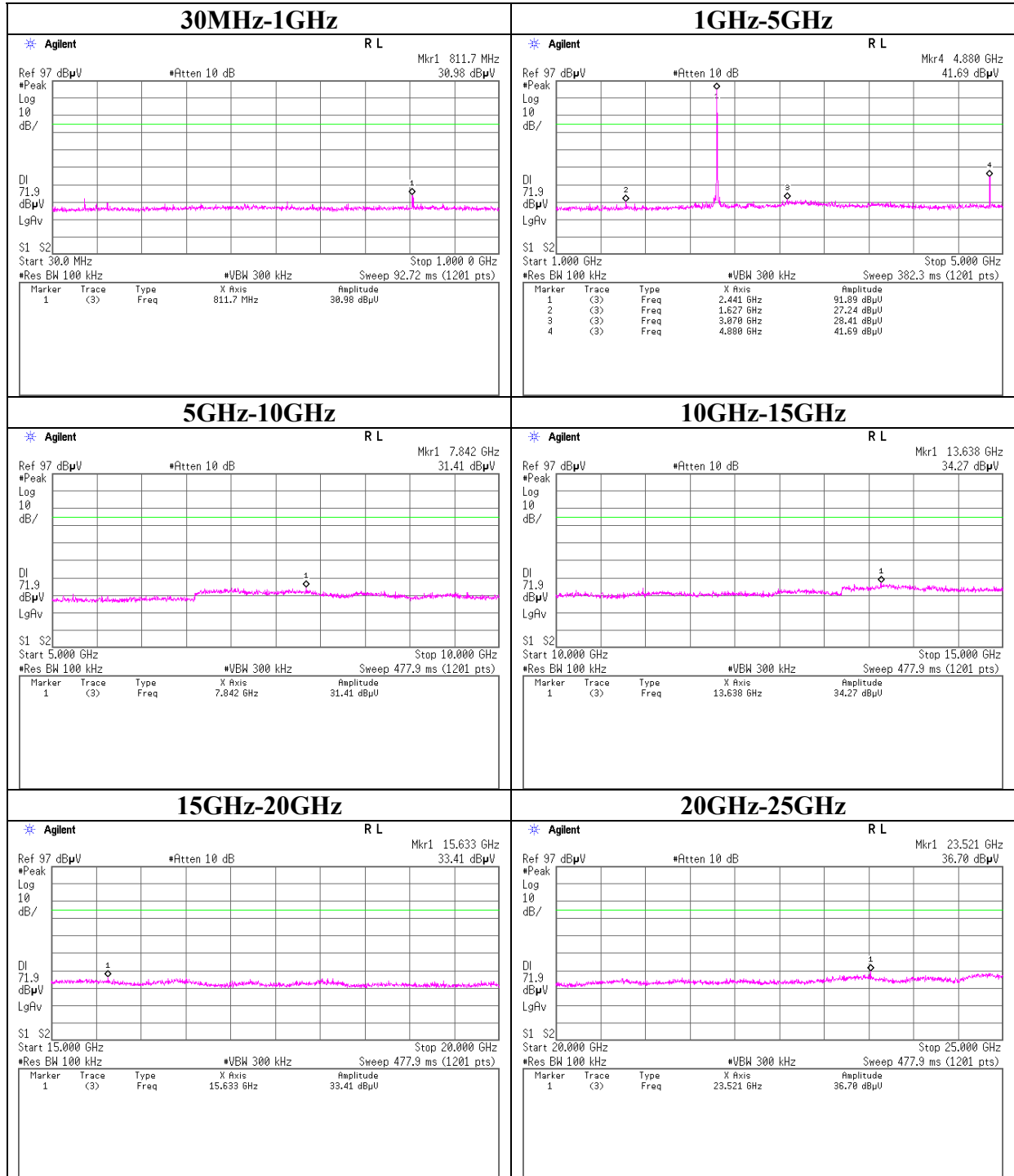
## Conducted Spurious Emission

### Tx DH5 2402MHz



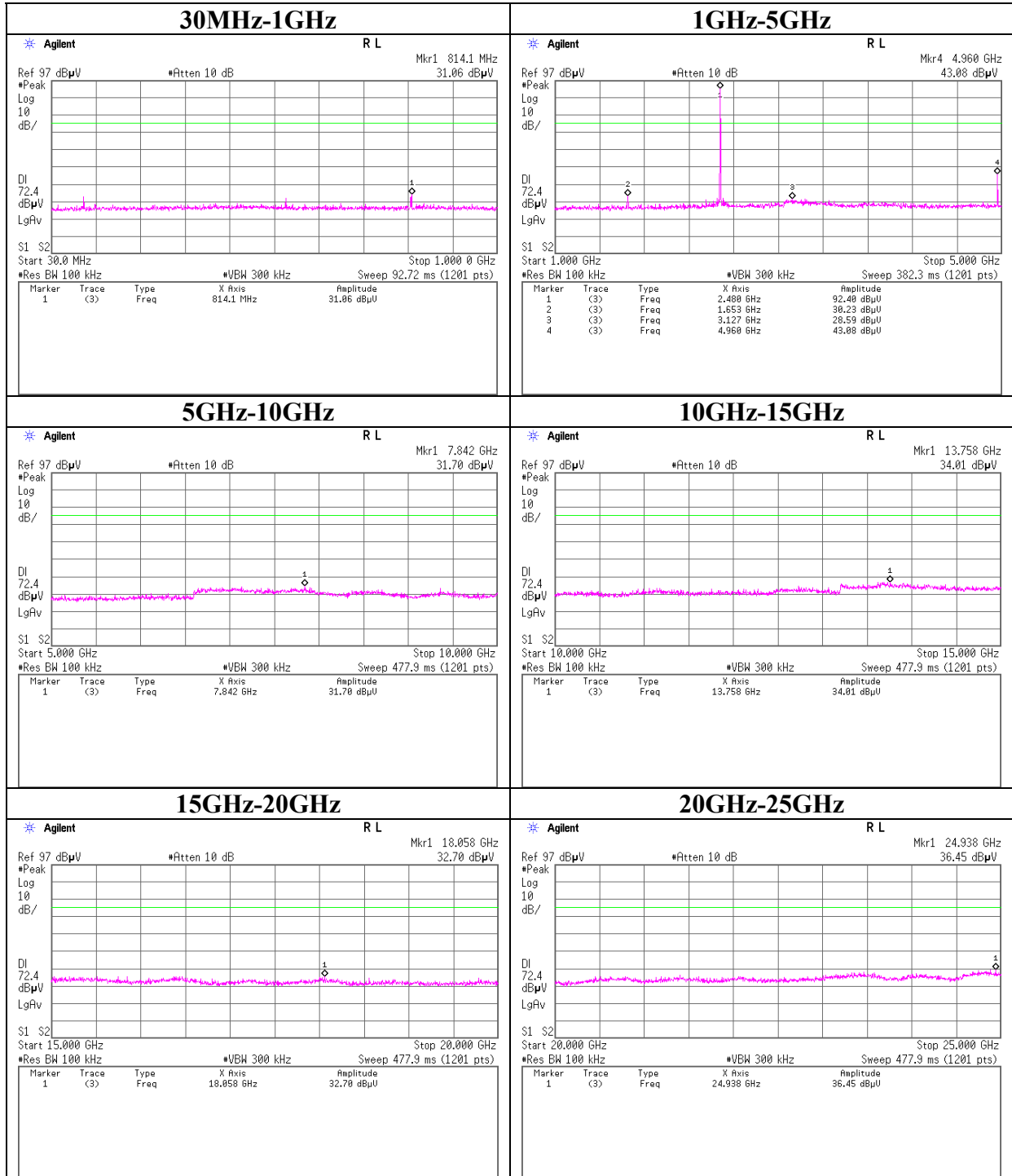
## Conducted Spurious Emission

### Tx DH5 2441MHz



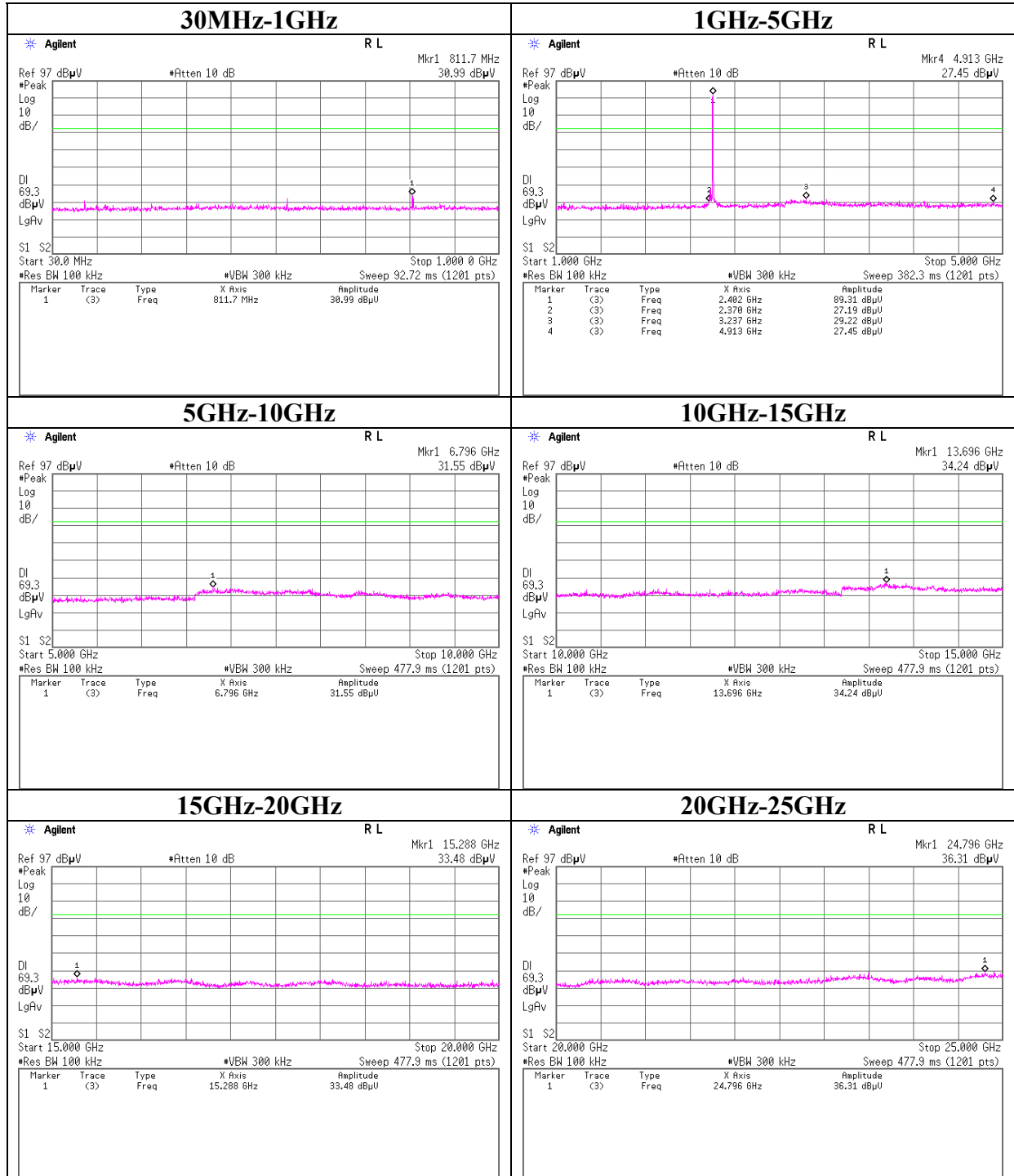
## Conducted Spurious Emission

### Tx DH5 2480MHz



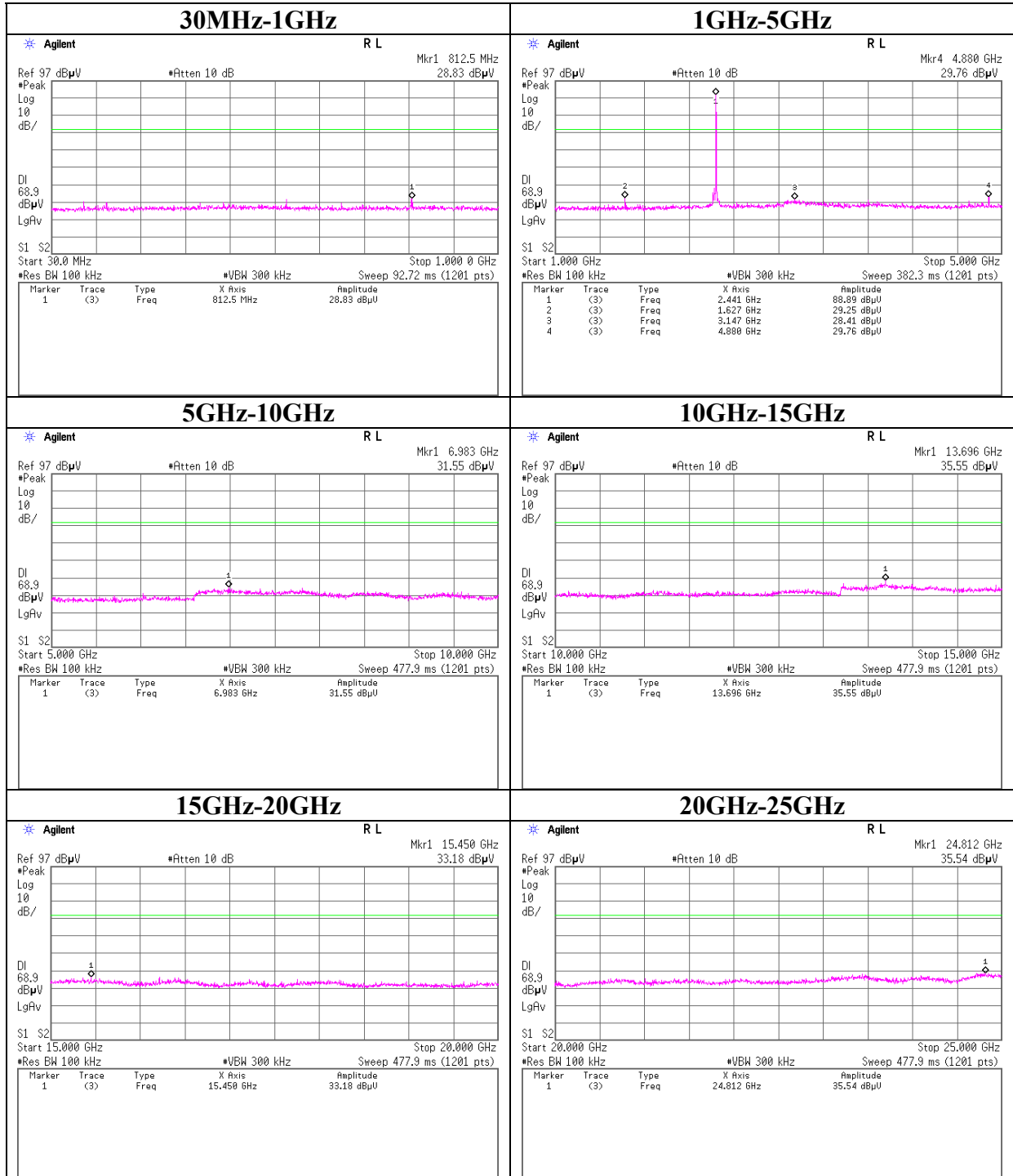
## Conducted Spurious Emission

### Tx 3DH5 2402MHz



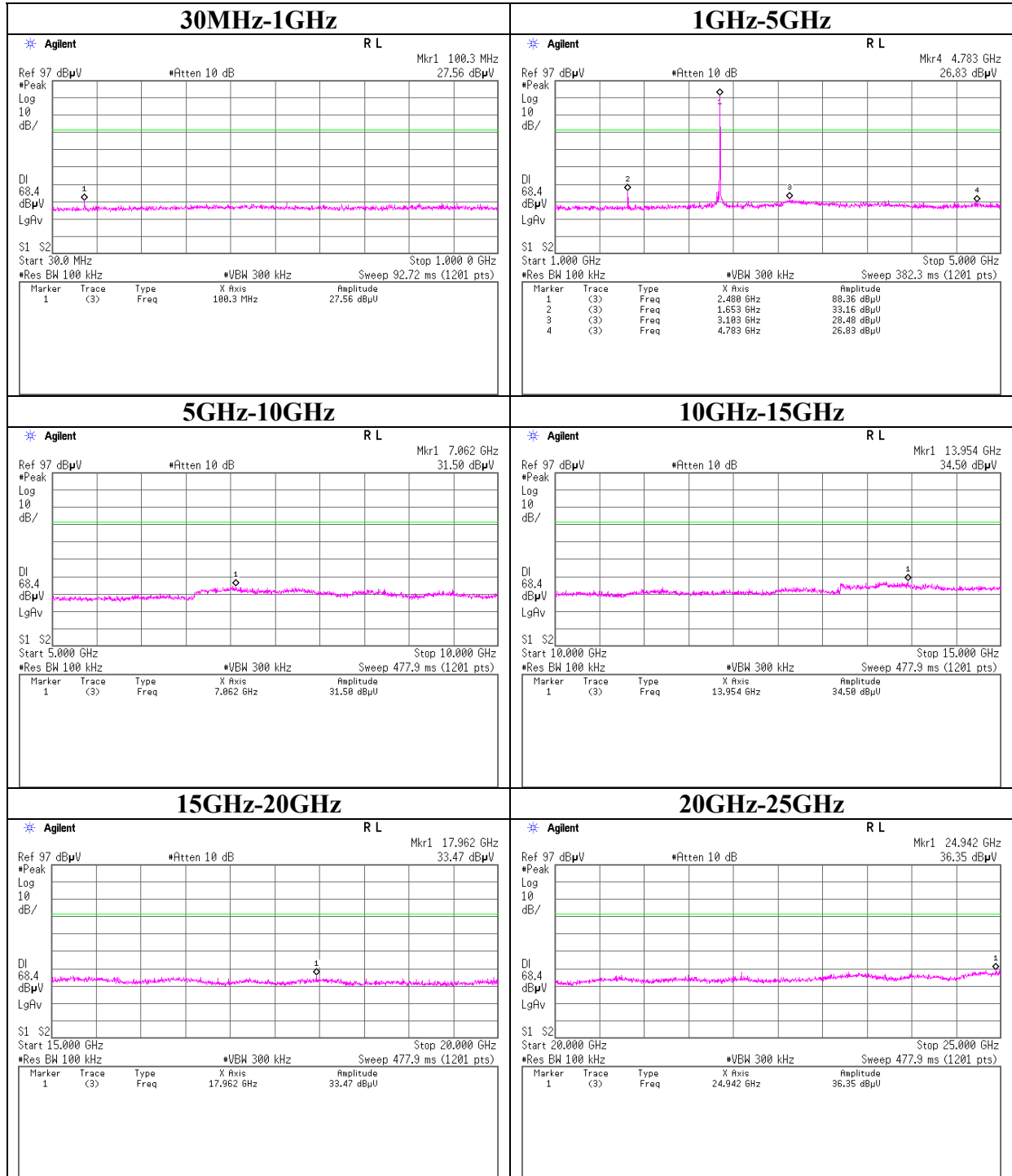
## Conducted Spurious Emission

### Tx 3DH5 2441MHz



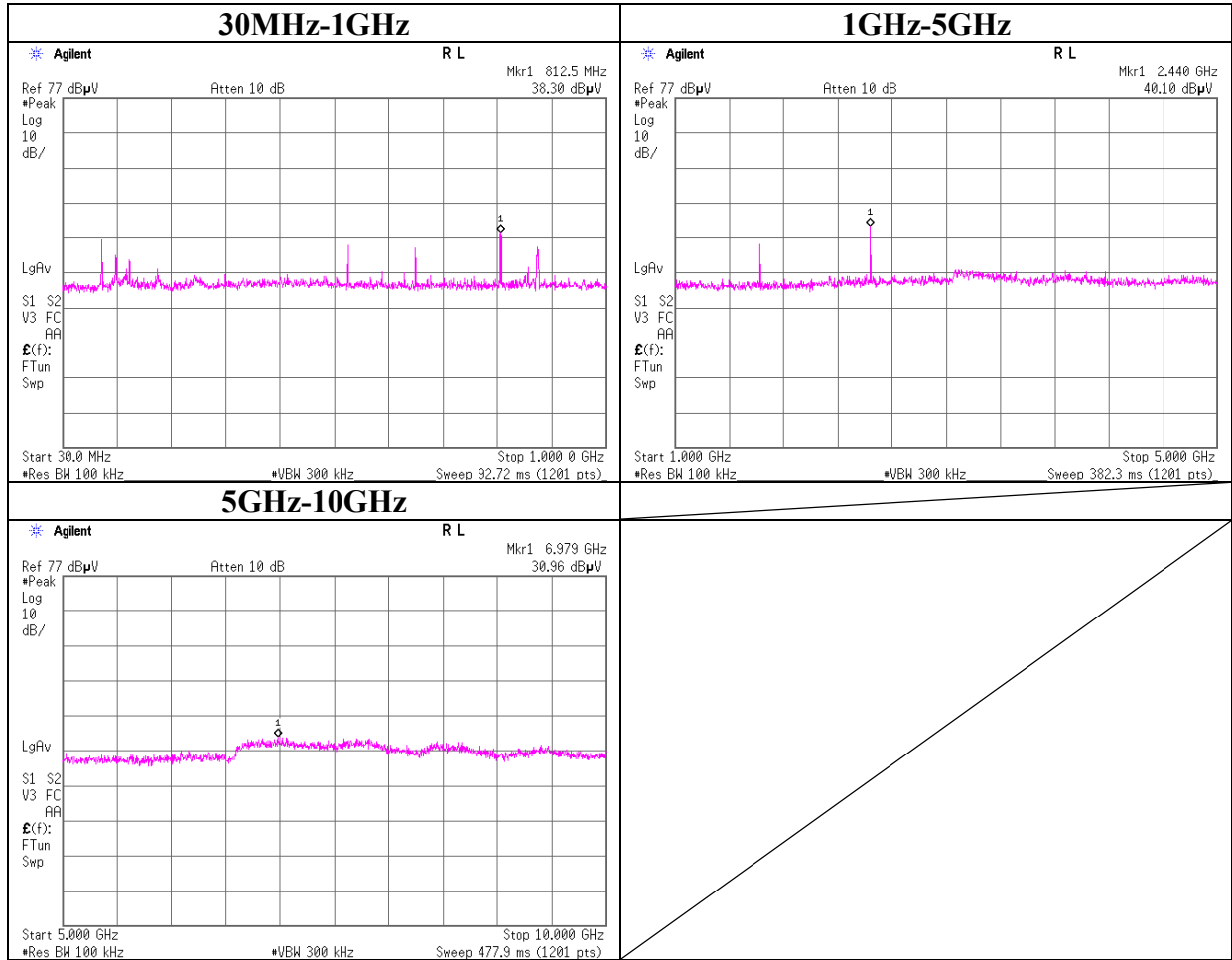
## Conducted Spurious Emission

### Tx 3DH5 2480MHz



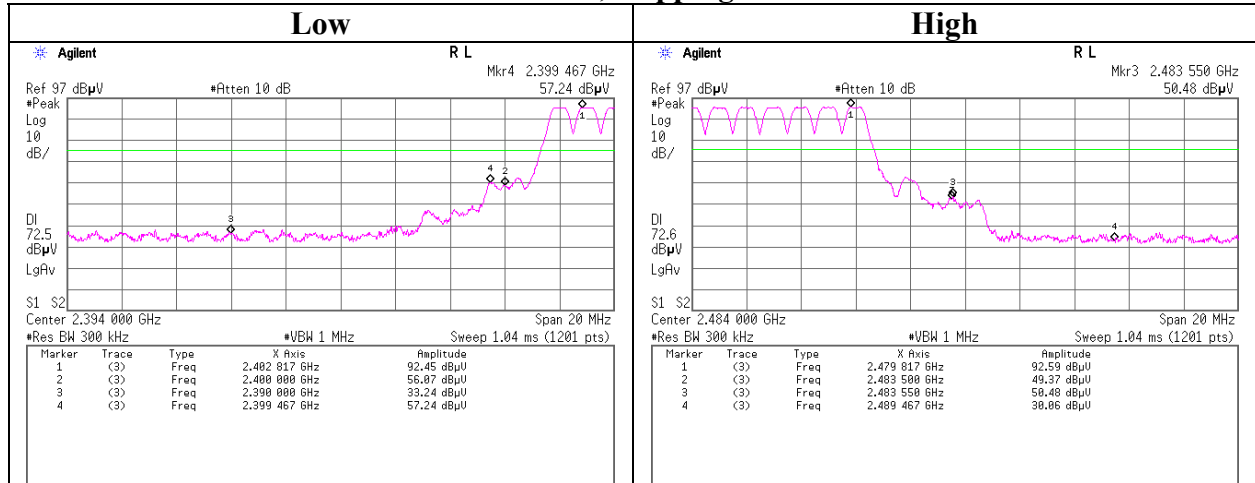
## Conducted Spurious Emission

### Rx 2441MHz

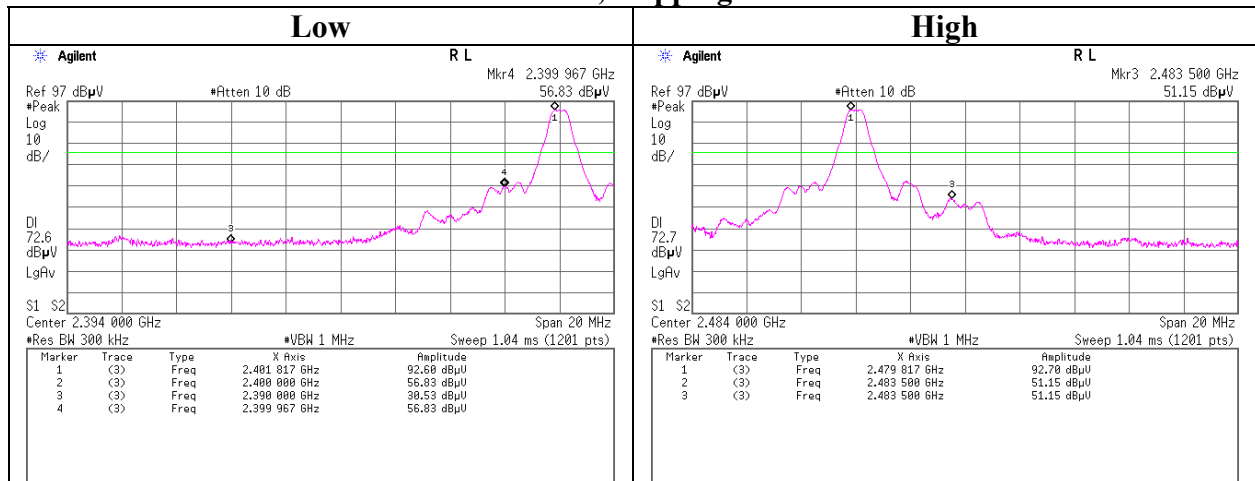


## Conducted Emission Band Edge compliance

### Tx DH5, Hopping on

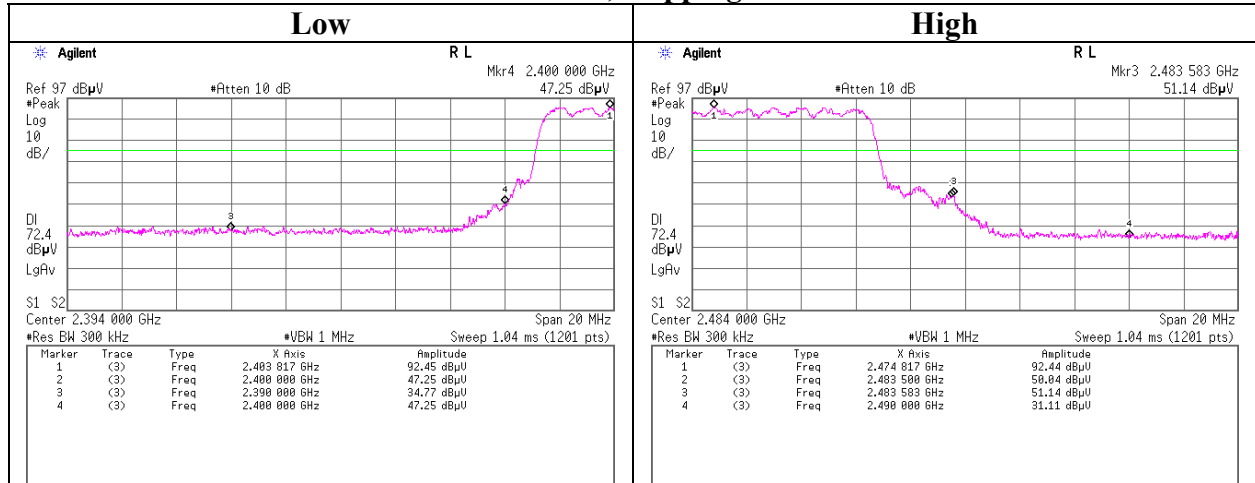


### Tx DH5, Hopping off

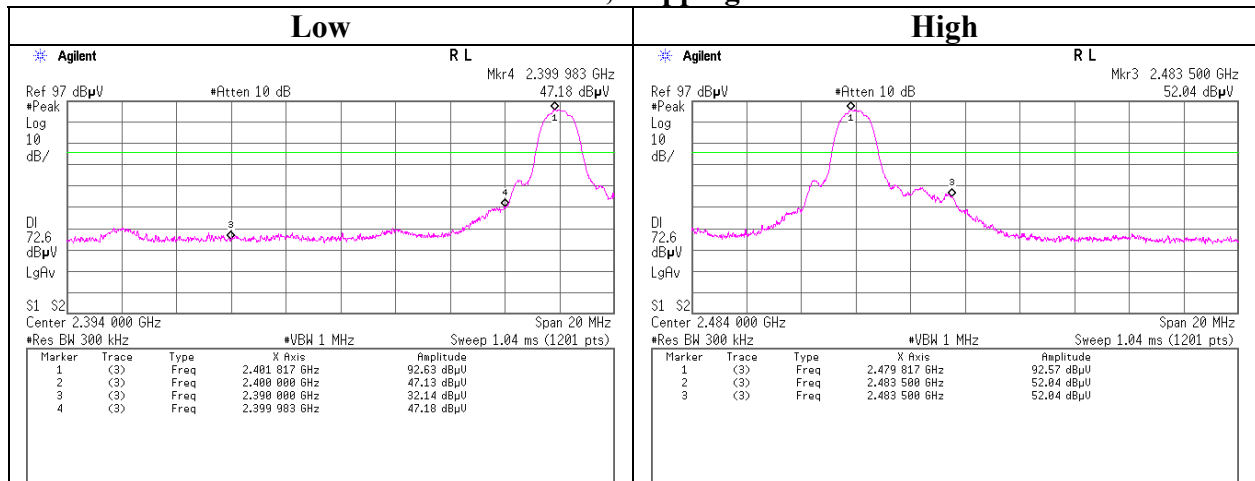


## Conducted Emission Band Edge compliance

### Tx 3DH5, Hopping on



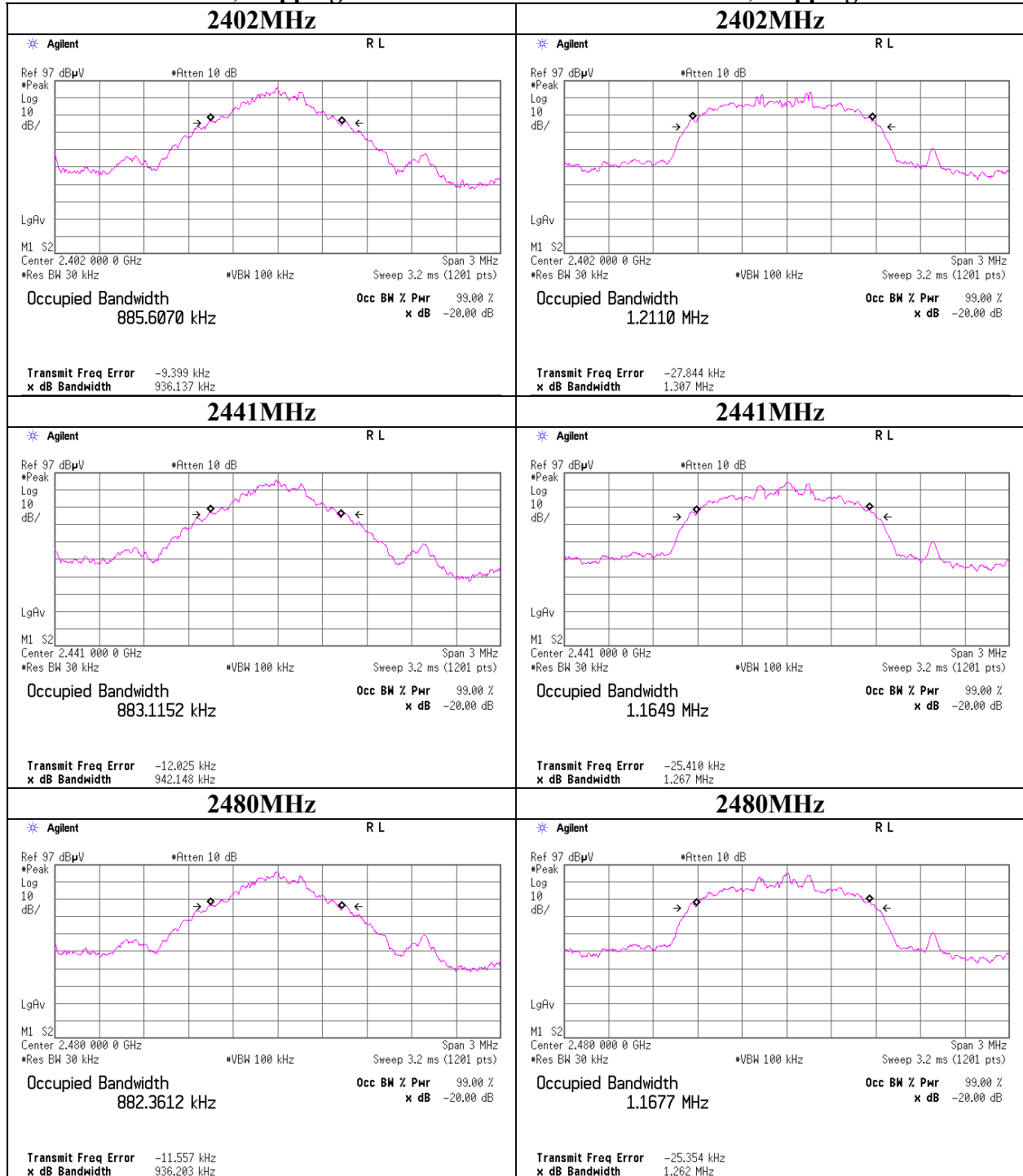
### Tx 3DH5, Hopping off



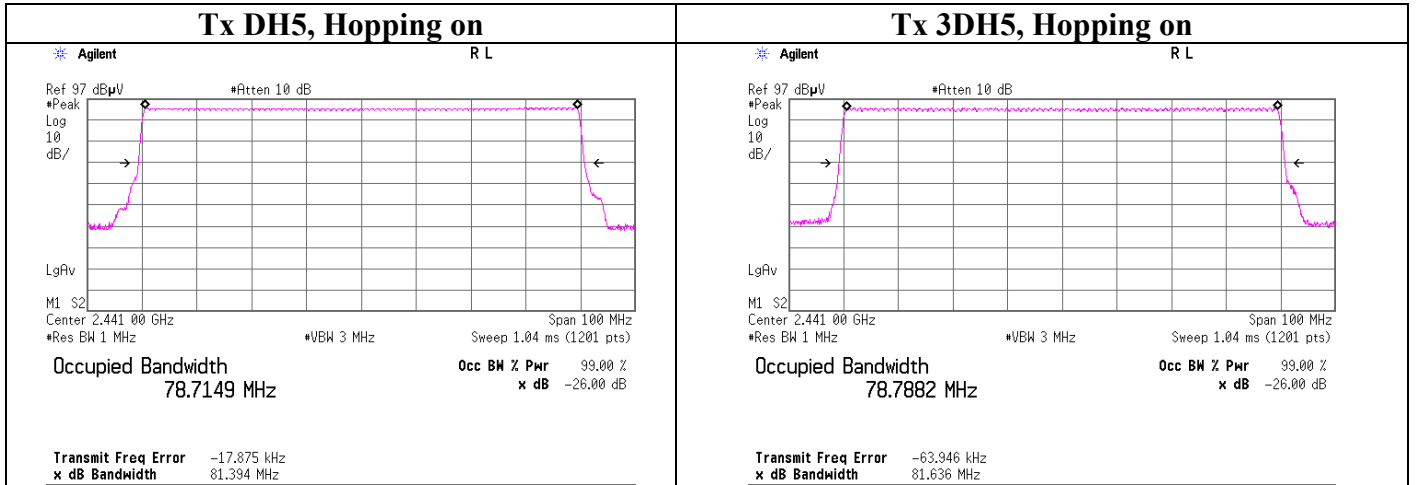
**99% Occupied Bandwidth**

**Tx DH5, Hopping off**

**Tx 3DH5, Hopping off**



**99% Occupied Bandwidth**



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

#### **EMI test equipment**

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
MSA-10	Spectrum Analyzer	Agilent	E4448A	MY46180655	AT	2010/02/03 * 12
MAT-22	Attenuator(10dB) 1-18GHz	Orient Microwave	BX10-0476-00	-	AT	2010/03/01 * 12
MCH-05	Temperature and Humidity Chamber	Espec	PL-1KP	14019569	AT	2010/05/26 * 12
MPSE-17	Power sensor	Anritsu	MA2411B	0738285	AT	2009/08/26 * 12
MPM-12	Power Meter	Anritsu	ML2495A	0825002	AT	2009/08/26 * 12
MCC-116	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	290221/4	AT	2009/08/07 * 12
MAEC-04	Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-10005	RE	2010/02/02 * 12
MOS-15	Thermo-Hygrometer	Custom	CTH-180	-	RE	2010/02/09 * 12
MJM-07	Measure	PROMART	SEN1955	-	RE	-
COTS-MEMI	EMI measurement program	TSJ	TEPTO-DV	-	RE	-
MSA-04	Spectrum Analyzer	Agilent	E4448A	US44300523	RE	2009/08/25 * 12
MHA-21	Horn Antenna 1-18GHz	Schwarzbeck	BBHA9120D	9120D-557	RE	2009/08/10 * 12
MCC-57	Microwave Cable	Suhner	SUCOFLEX104	246769(1m) / 292411(5m)	RE	2009/11/17 * 12
MPA-12	MicroWave System Amplifier	Agilent	83017A	MY39500780	RE	2010/03/16 * 12
MCC-79	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	278923/4	RE	2009/12/19 * 12
MHF-20	High Pass Filter 3.5-18.0GHz	TOKIMEC	TF323DCC	607	RE	2009/12/19 * 12
MHA-17	Horn Antenna 15-40GHz	Schwarzbeck	BBHA9170	BBHA9170307	RE	2009/06/18 * 12
MTR-07	Test Receiver	Rohde & Schwarz	ESCI	100635	RE	2009/10/23 * 12
MBA-05	Biconical Antenna	Schwarzbeck	BBA9106	1302	RE	2010/03/22 * 12
MLA-08	Logperiodic Antenna	Schwarzbeck	UKLP9140-A	N/A	RE	2010/01/23 * 12
MCC-50	Coaxial cable	UL Japan	-	-	RE	2010/03/18 * 12
MAT-51	Attenuator(6dB)	Weinschel	2	AS3557	RE	2010/01/20 * 12
MPA-14	Pre Amplifier	SONOMA INSTRUMENT	310	260833	RE	2010/03/05 * 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: RE: Radiated Emission  
AT: Antenna Terminal Conducted test**