APPENDIX 2: Data of EMI test

Conducted Emission

DATA OF CONDUCTED EMISSION TEST

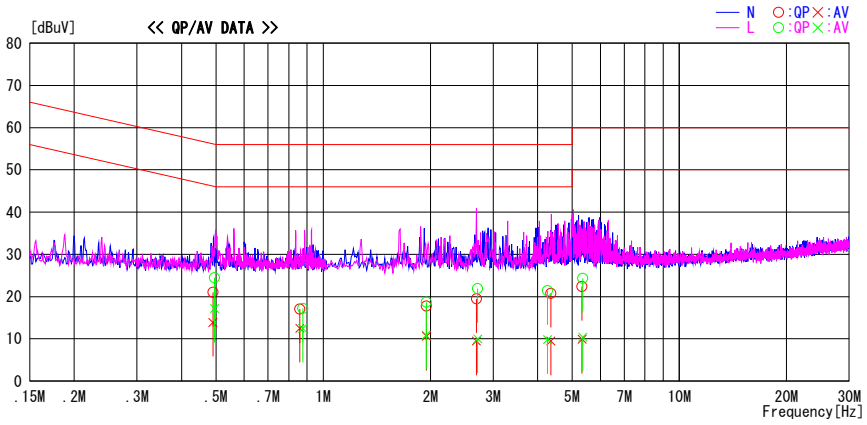
UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber
Date : 2011/03/27

Report No. : 30FE0167-HO-02

Temp./Humi. : 20deg.C / 32% RH
Engineer : Kazuya Yoshioka

Mode / Remarks : BT Tx DH5 2402MHz

LIMIT : FCC15.207 QP
FCC15.207 AV



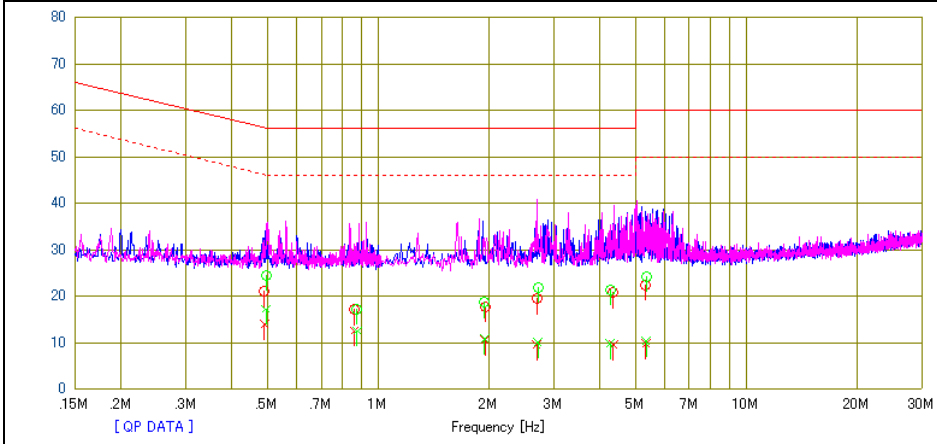
Frequency	Reading Level		Corr.	Results		Limit		Margin		Phase	Comment
	QP	AV	Factor	QP	AV	QP	AV	QP	AV		
[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dB]	[dB]		
0.49005	7.7	0.6	13.3	21.0	13.9	56.2	46.2	35.2	32.3	N	
0.85975	3.7	-0.9	13.4	17.1	12.5	56.0	46.0	38.9	33.5	N	
1.94835	4.3	-2.9	13.5	17.8	10.6	56.0	46.0	38.2	35.4	N	
2.69302	5.9	-4.1	13.6	19.5	9.5	56.0	46.0	36.5	36.5	N	
4.35546	6.8	-4.5	14.0	20.8	9.5	56.0	46.0	35.2	36.5	N	
5.33237	8.3	-4.2	14.1	22.4	9.9	60.0	50.0	37.6	40.1	N	
0.49512	11.2	3.9	13.3	24.5	17.2	56.1	46.1	31.6	28.9	L	
0.87581	3.8	-0.9	13.4	17.2	12.5	56.0	46.0	38.8	33.5	L	
1.94635	5.2	-2.6	13.5	18.7	10.9	56.0	46.0	37.3	35.1	L	
2.71395	8.3	-3.6	13.6	21.9	10.0	56.0	46.0	34.1	36.0	L	
4.26639	7.4	-4.2	14.0	21.4	9.8	56.0	46.0	34.6	36.2	L	
5.35544	10.2	-3.7	14.1	24.3	10.4	60.0	50.0	35.7	39.6	L	

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

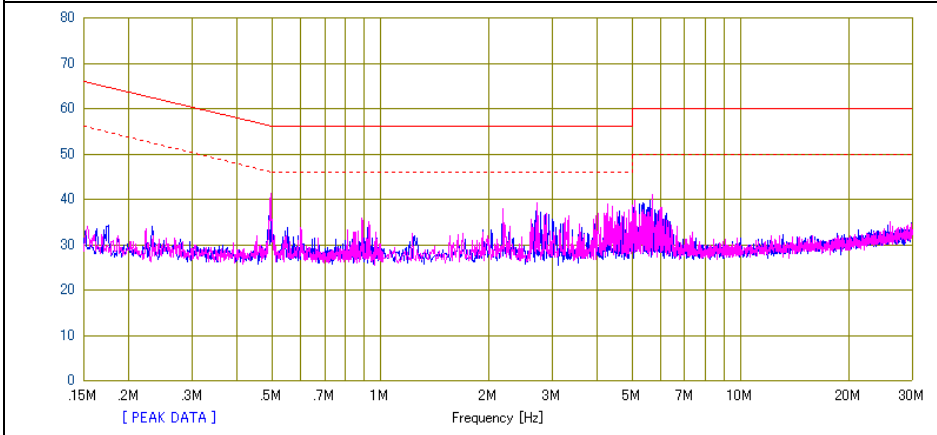
Conducted Emission

Test place	Head Office EMC Lab. No.3 Semi Anechoic Chamber
Report No.	30FE0167-HO-02
Date	03/27/2011
Temperature/ Humidity	20 deg.C/ 32% RH
Engineer	Kazuya Yoshioka
Mode	Tx DH5

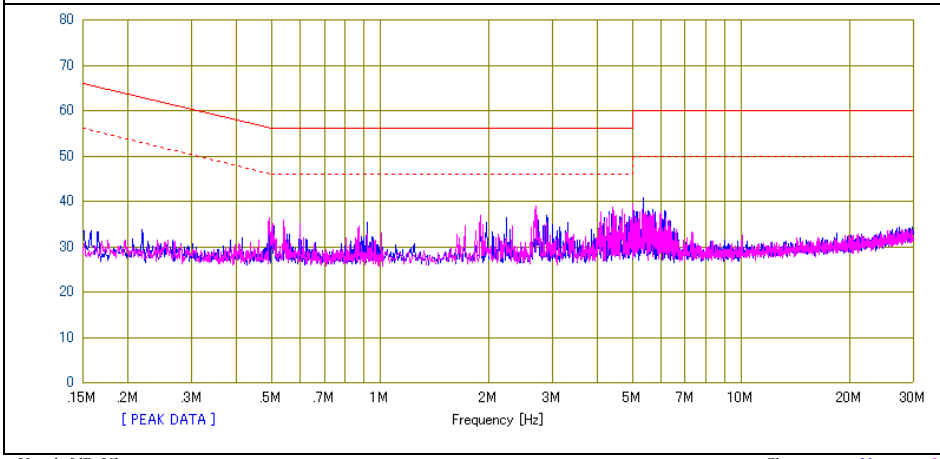
2402MHz



2441MHz



2480MHz



Y scale [dBuV] Chart — N — L

Conducted Emission

DATA OF CONDUCTED EMISSION TEST

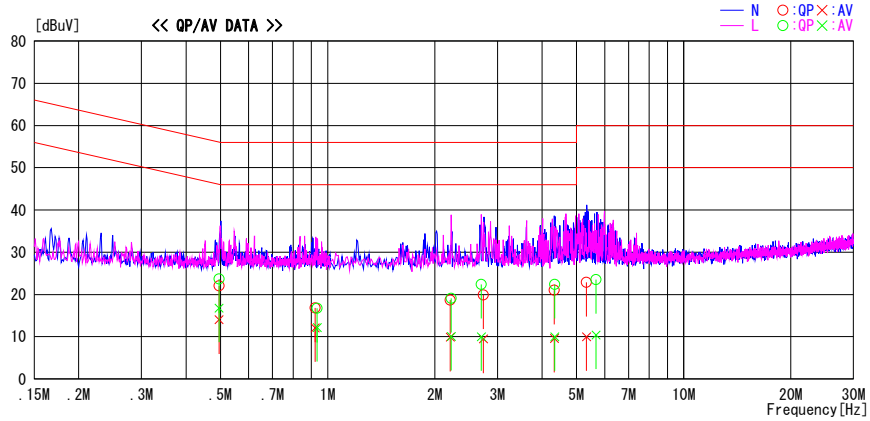
UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber
Date : 2011/03/27

Report No. : 30FE0167-HO-02

Temp./Humi. : 20deg.C / 32% RH
Engineer : Kazuya Yoshioka

Mode / Remarks : BT Tx 3DH5 2402MHz

LIMIT : FCC15.207 QP
FCC15.207 AV



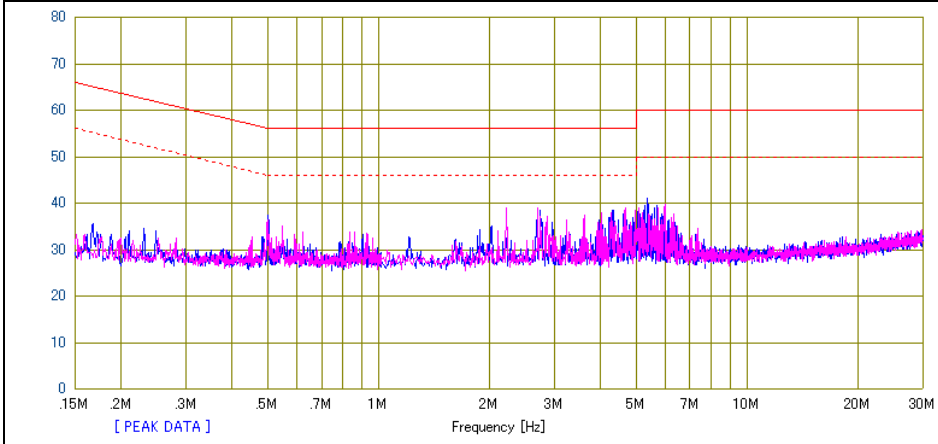
Frequency	Reading Level		Corr.	Results		Limit		Margin		Phase	Comment
	QP	AV	Factor	QP	AV	QP	AV	QP	AV		
[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dB]	[dB]		
0.49588	8.8	0.7	13.3	22.1	14.0	56.1	46.1	34.0	32.1	N	
0.92291	3.4	-1.3	13.4	16.8	12.1	56.0	46.0	39.2	33.9	N	
2.21046	5.1	-3.7	13.6	18.7	9.9	56.0	46.0	37.3	36.1	N	
2.73905	6.3	-4.1	13.6	19.9	9.5	56.0	46.0	36.1	36.5	N	
4.33081	7.0	-4.4	14.0	21.0	9.6	56.0	46.0	35.0	36.4	N	
5.32964	8.8	-4.1	14.1	22.9	10.0	60.0	50.0	37.1	40.0	N	
0.49548	10.4	3.5	13.3	23.7	16.8	56.1	46.1	32.4	29.3	L	
0.93524	3.3	-1.2	13.4	16.7	12.2	56.0	46.0	39.3	33.8	L	
2.22459	5.5	-3.5	13.6	19.1	10.1	56.0	46.0	36.9	35.9	L	
2.70158	8.8	-3.6	13.6	22.4	10.0	56.0	46.0	33.6	36.0	L	
4.34081	8.4	-4.0	14.0	22.4	10.0	56.0	46.0	33.6	36.0	L	
5.66851	9.3	-3.8	14.2	23.5	10.4	60.0	50.0	36.5	39.6	L	

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

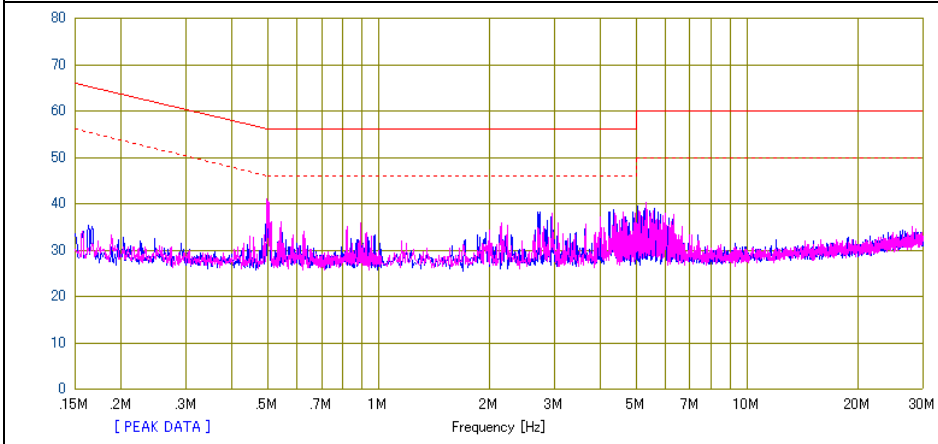
Conducted Emission

Test place	Head Office EMC Lab. No.3 Semi Anechoic Chamber
Report No.	30FE0167-HO-02
Date	03/27/2011
Temperature/ Humidity	20 deg.C/ 32% RH
Engineer	Kazuya Yoshioka
Mode	Tx 3DH5

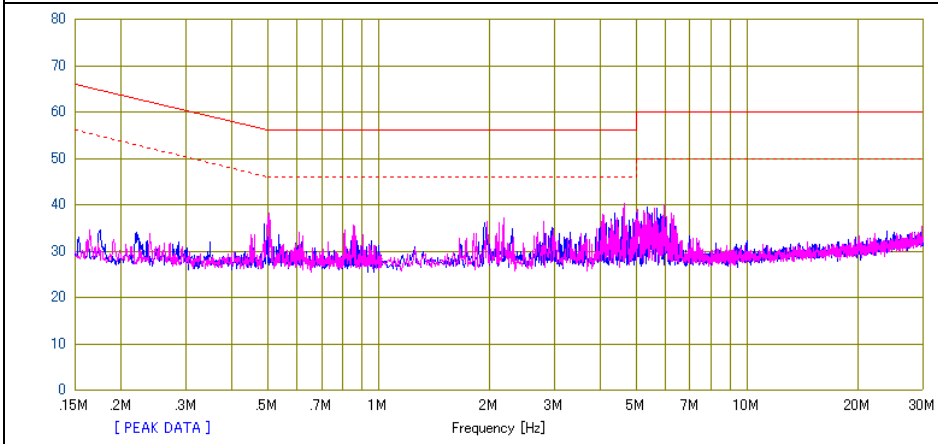
2402MHz



2441MHz



2480MHz



Y scale [dBuV] Chart — N — L

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20dB Bandwidth and Carrier Frequency Separation

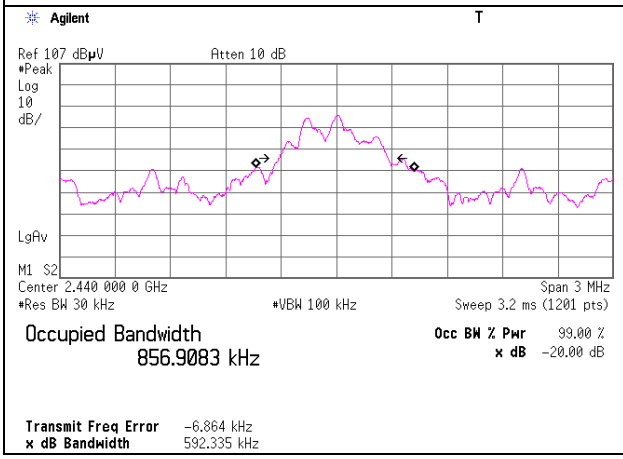
Test place	Head Office EMC Lab. No.6 Measurement Room
Report No.	30FE0167-HO-02
Date	03/25/2011
Temperature/ Humidity	25 deg.C/ 40% RH
Engineer	Katsunori Okai
Mode	Tx (Hopping on) DH5/3DH5/Inquiry

Mode	Freq. [MHz]	20dB Bandwidth [MHz]	Carrier Frequency Separation [MHz]	Limit for Carrier Frequency separation [MHz]
DH5	2402.0	0.949	1.000	>= 0.633
DH5	2441.0	0.921	1.000	>= 0.614
DH5	2480.0	0.928	1.000	>= 0.618
3DH5	2402.0	1.270	1.000	>= 0.847
3DH5	2441.0	1.278	1.000	>= 0.852
3DH5	2480.0	1.266	1.000	>= 0.844
Inquiry	2440.0	0.592	2.000	>= 0.395

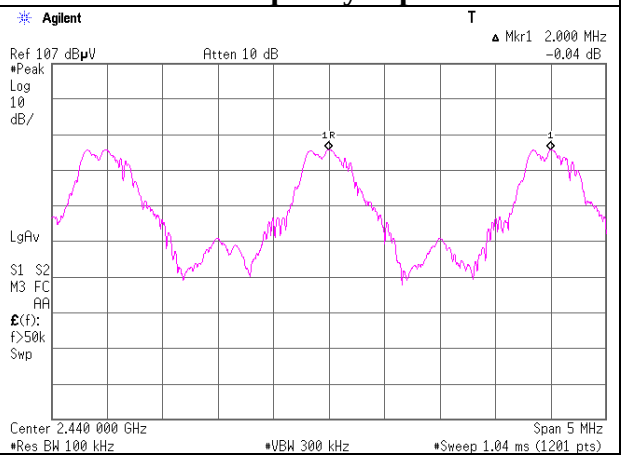
Limit: Two-thirds of 20dB Bandwidth or 25kHz (whichever is greater).
No limit applies to 20dB Bandwidth.

Inquiry

20dB Bandwidth



Carrier Frequency Separation



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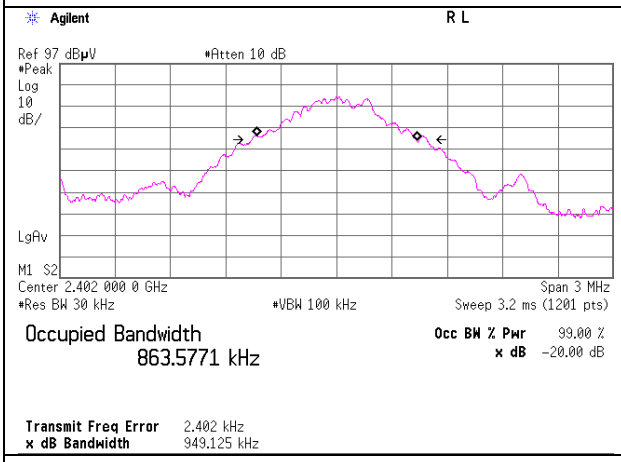
20dB Bandwidth and Carrier Frequency Separation

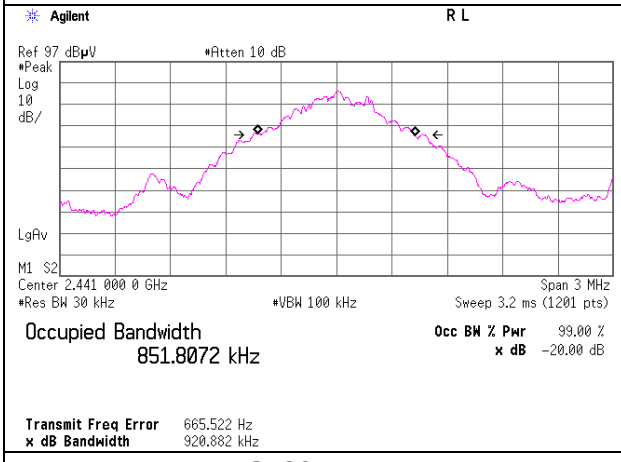
Tx DH5

20dB Bandwidth

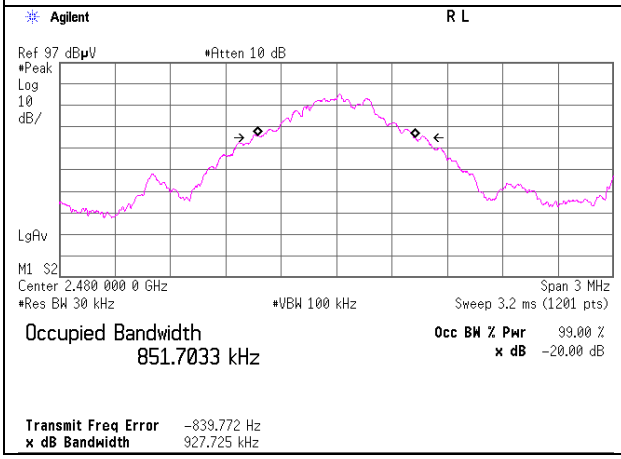
2402MHz



2441MHz

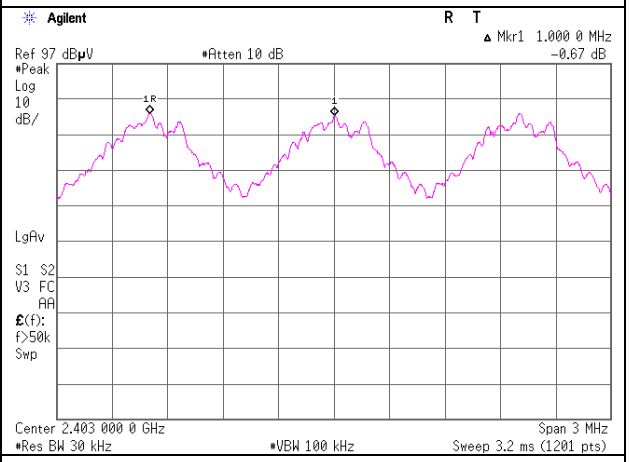


2480MHz

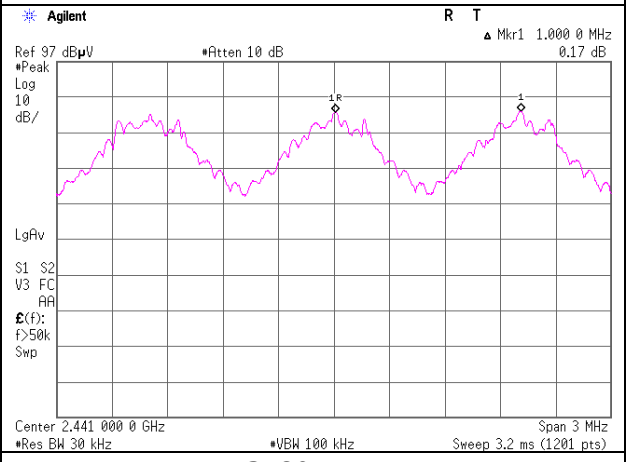


Carrier Frequency Separation

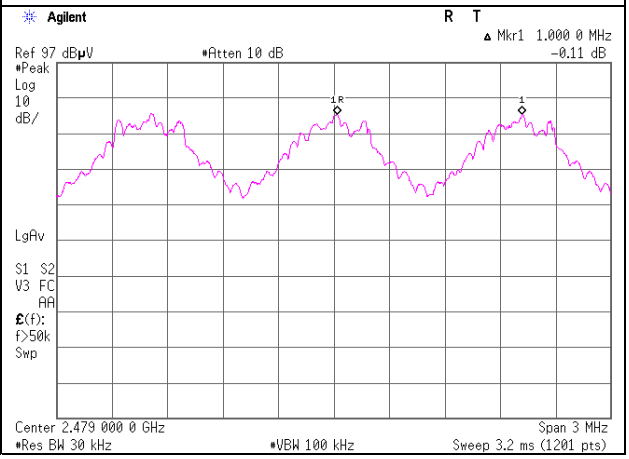
2402MHz



2441MHz



2480MHz

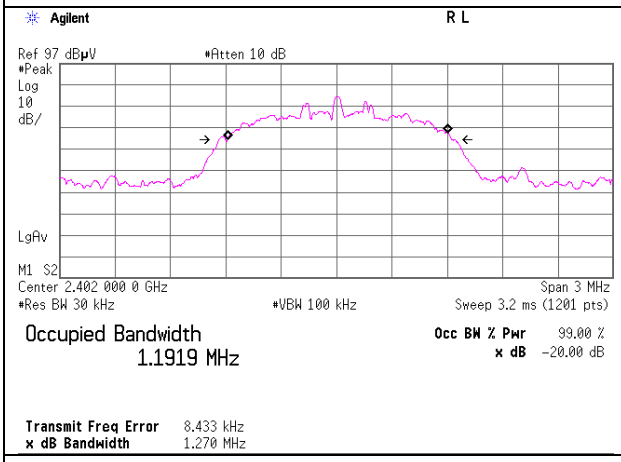


20dB Bandwidth and Carrier Frequency Separation

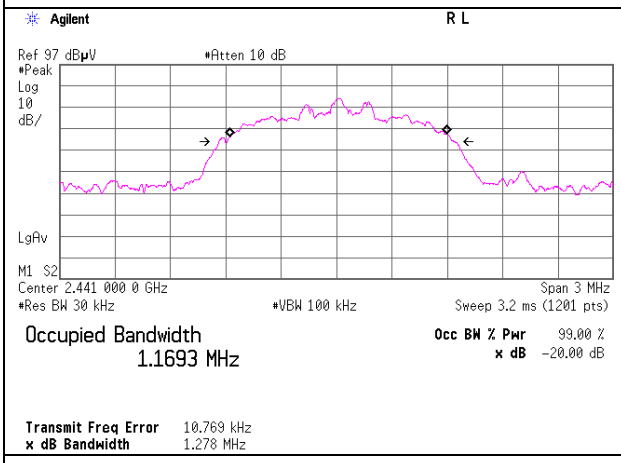
Tx 3DH5

20dB Bandwidth

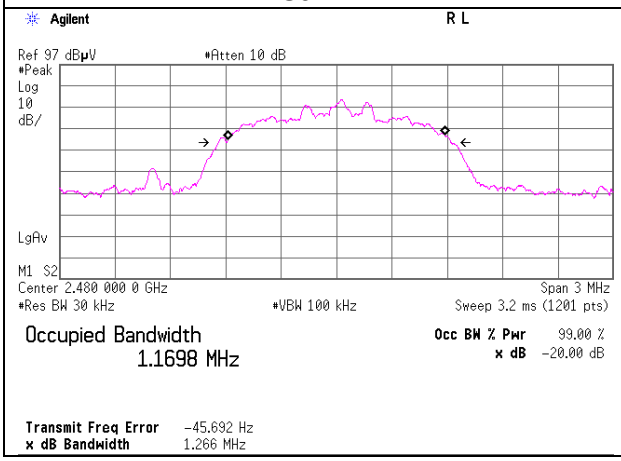
2402MHz



2441MHz

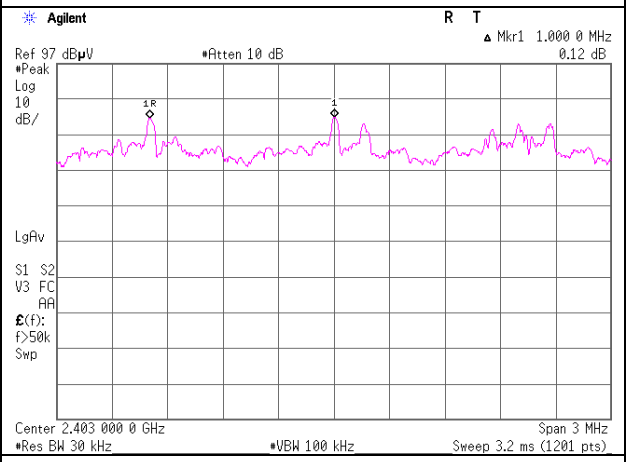


2480MHz

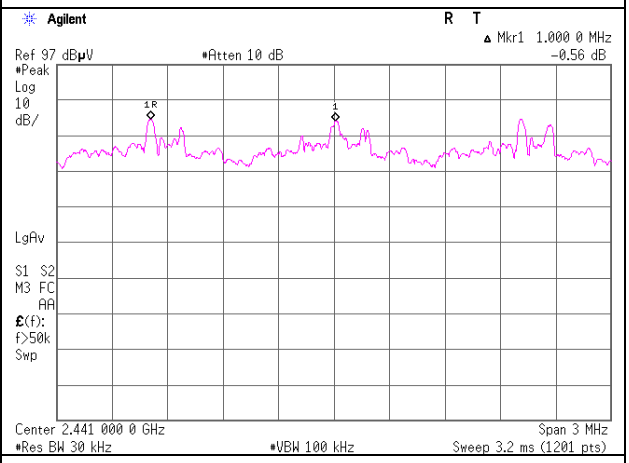


Carrier Frequency Separation

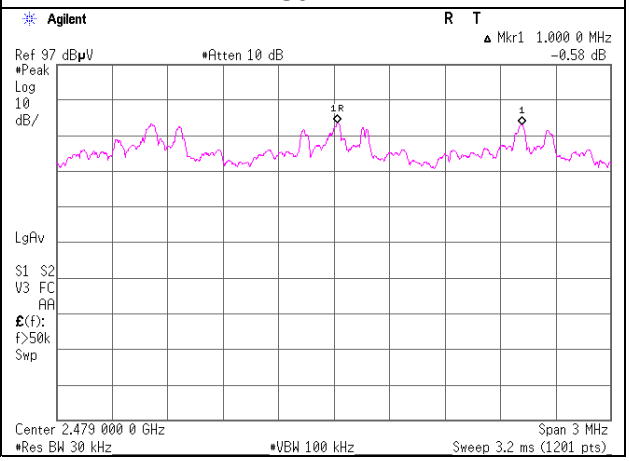
2402MHz



2441MHz



2480MHz

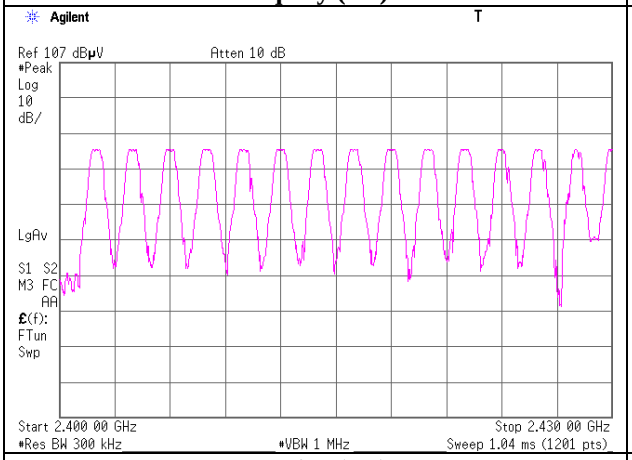


Number of Hopping Frequency

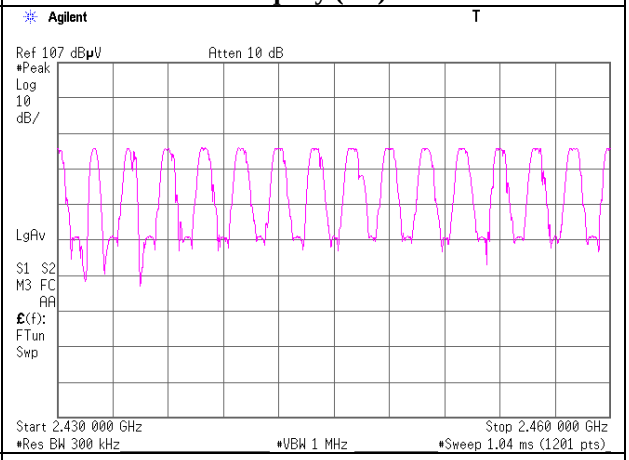
Test place	Head Office EMC Lab. No.6 Measurement Room
Report No.	30FE0167-HO-02
Date	03/25/2011
Temperature/ Humidity	25 deg.C/ 40% RH
Engineer	Katsunori Okai
Mode	Tx (Hopping on) DH5/3DH5/Inquiry

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

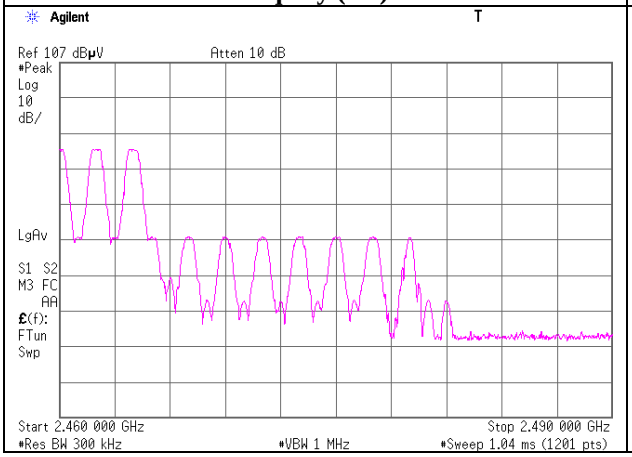
Inquiry (1/3)



Inquiry (2/3)



Inquiry (3/3)



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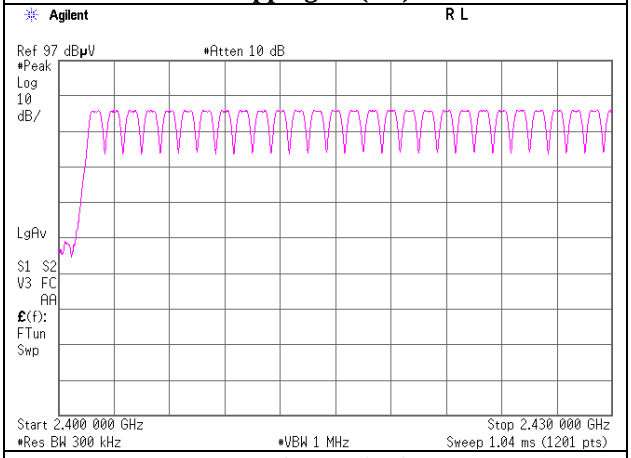
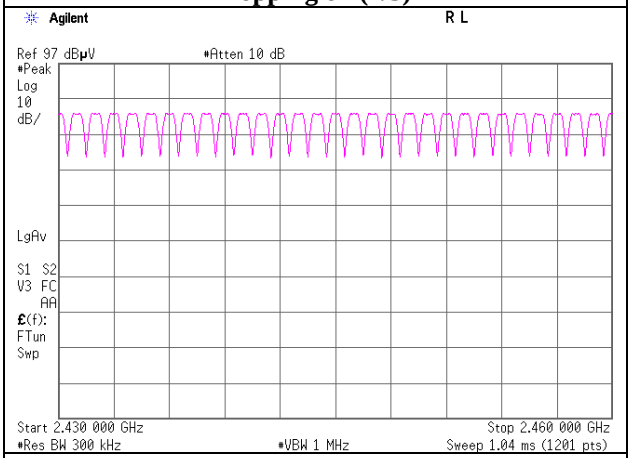
Number of Hopping Frequency

Tx DH5

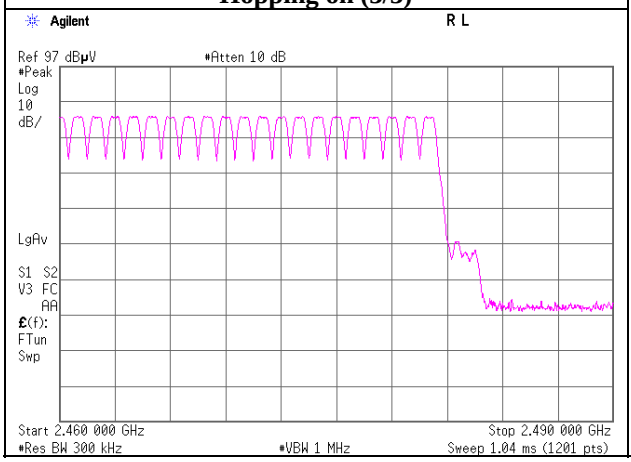
Hopping on (1/3)



Hopping on (2/3)

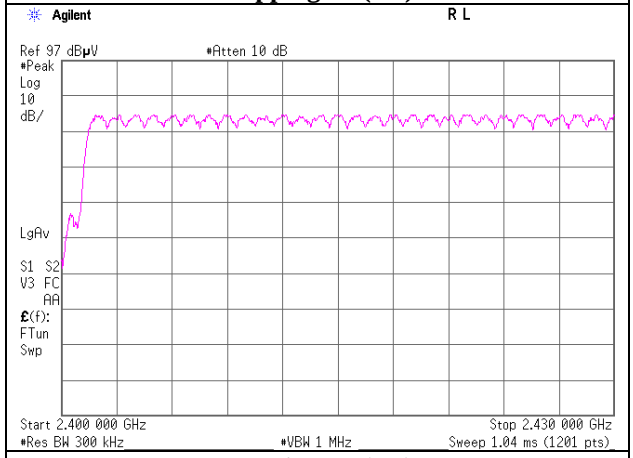


Hopping on (3/3)

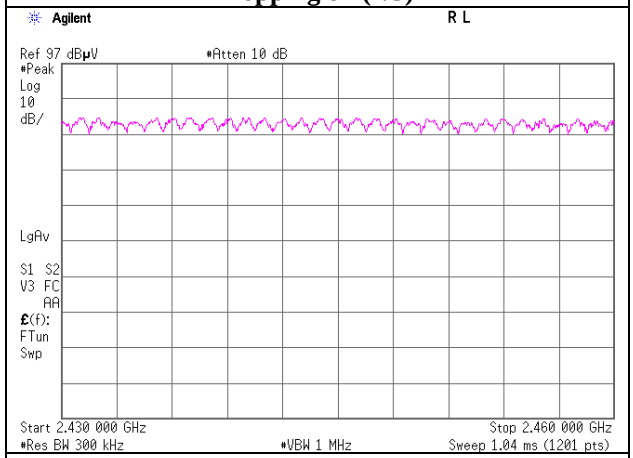


Tx 3DH5

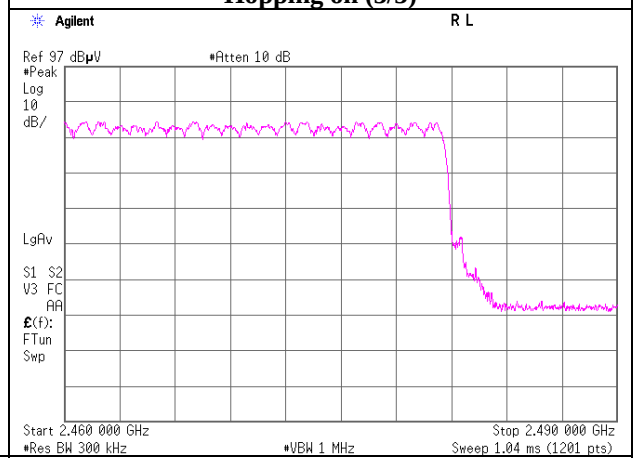
Hopping on (1/3)



Hopping on (2/3)



Hopping on (3/3)



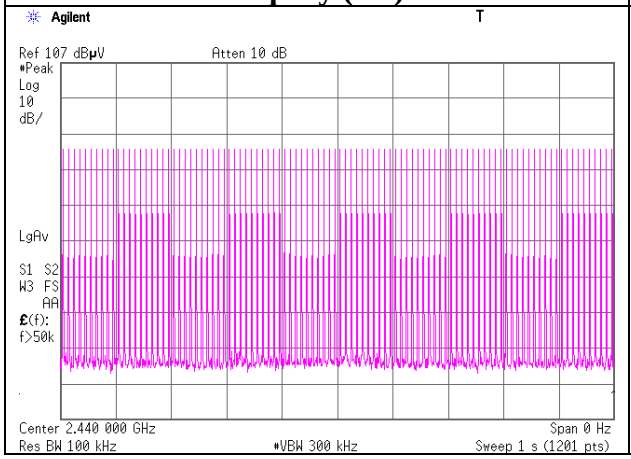
Dwell time

Test place	Head Office EMC Lab. No.6 Measurement Room
Report No.	30FE0167-HO-02
Date	03/25/2011
Temperature/ Humidity	25 deg.C/ 40% RH
Engineer	Katsunori Okai
Mode	Tx (Hopping on) DH5/3DH5/Inquiry

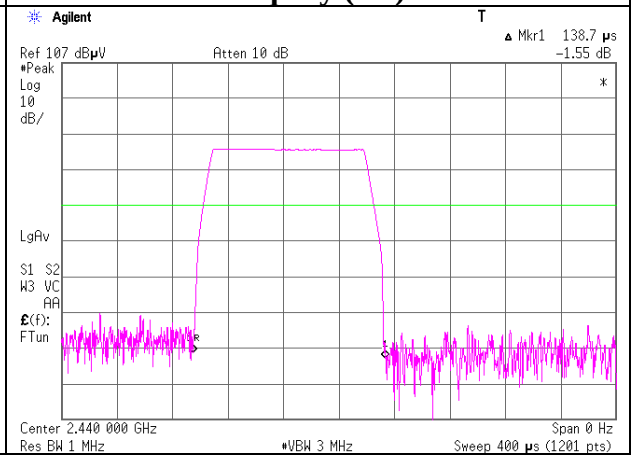
Mode	Number of transmission in a 31.6(79 Hopping x 0.4) / 12.8(32 Hopping x 0.4)second period					Length of transmission time [msec]	Result [msec]	Limit [msec]
DH1	51.0 times	/	5 sec.	x	31.6 sec. = 323 times	0.437	141	400
DH3	25.0 times	/	5 sec.	x	31.6 sec. = 158 times	1.702	269	400
DH5	17.0 times	/	5 sec.	x	31.6 sec. = 108 times	2.948	318	400
3DH1	51.0 times	/	5 sec.	x	31.6 sec. = 323 times	0.452	146	400
3DH3	25.0 times	/	5 sec.	x	31.6 sec. = 158 times	1.705	269	400
3DH5	17.0 times	/	5 sec.	x	31.6 sec. = 108 times	2.974	321	400
Inquiry	100.0 times	/	1 sec.	x	12.8 sec. = 1280 times	0.139	178	400

Sample Calculation
Result = Number of transmission x Length of transmition time

Inquiry (1/2)

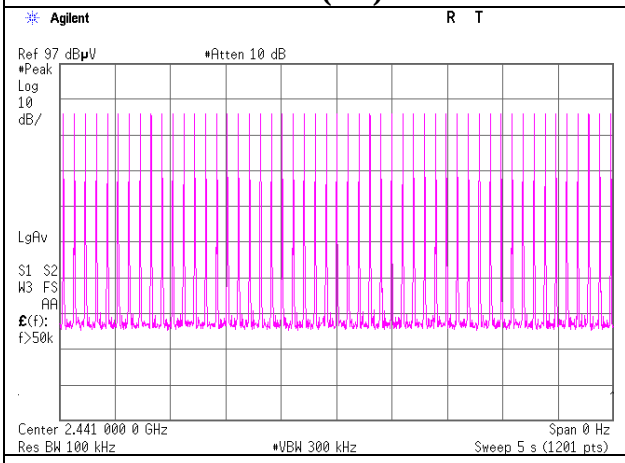


Inquiry (2/2)

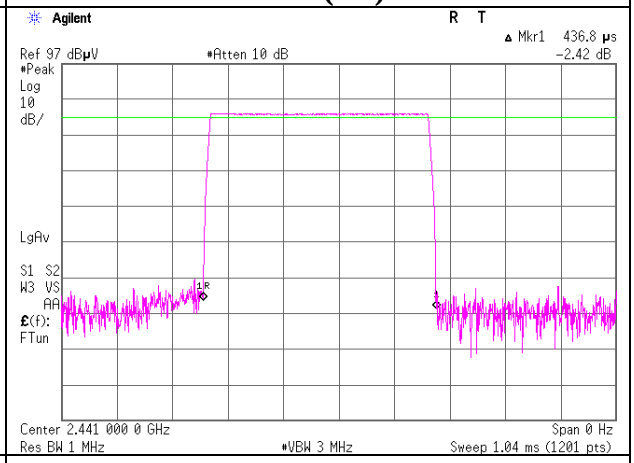


Dwell time

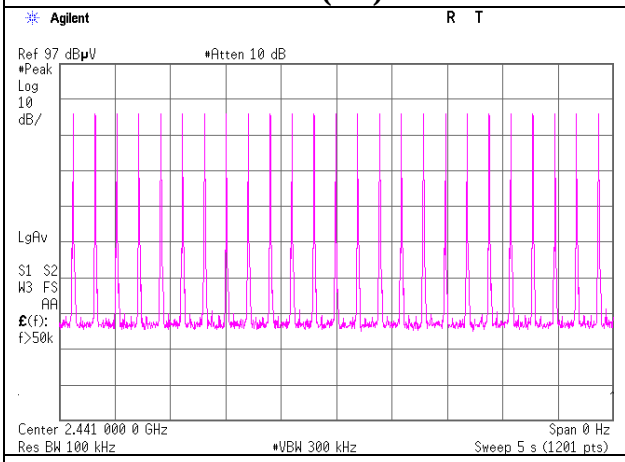
DH1 (1/2)



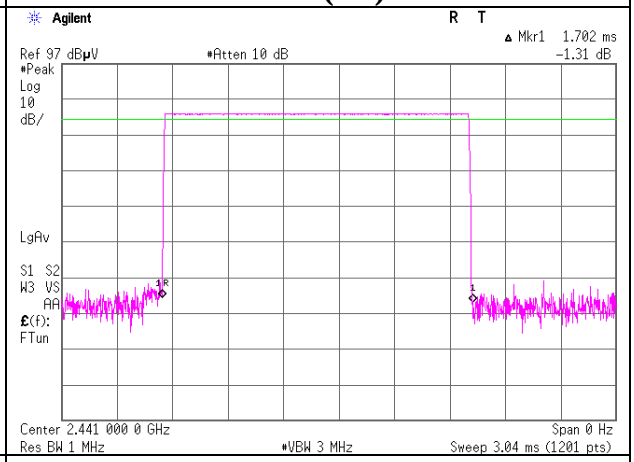
DH1 (2/2)



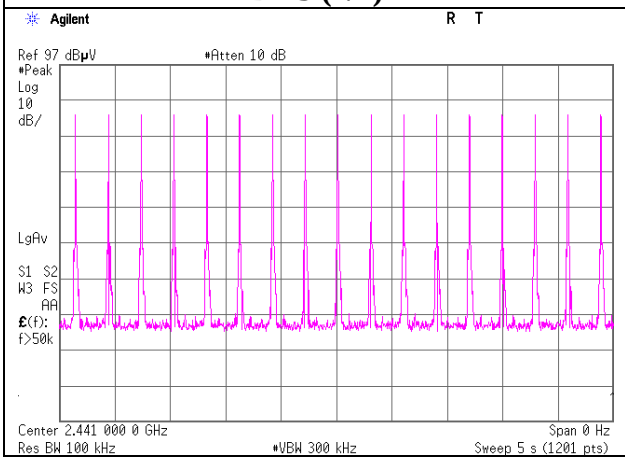
DH3 (1/2)



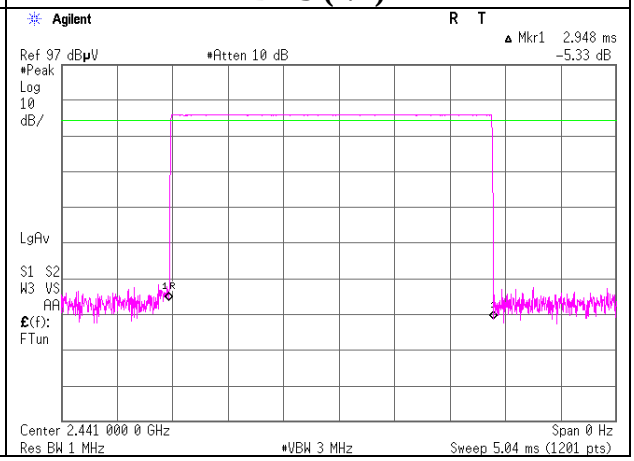
DH3 (2/2)



DH5 (1/2)

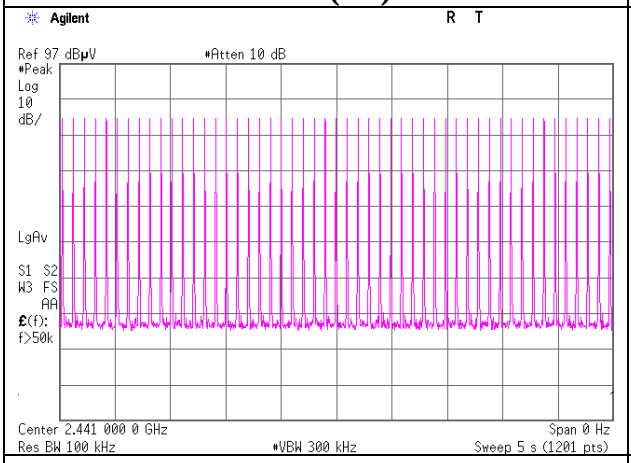


DH5 (2/2)

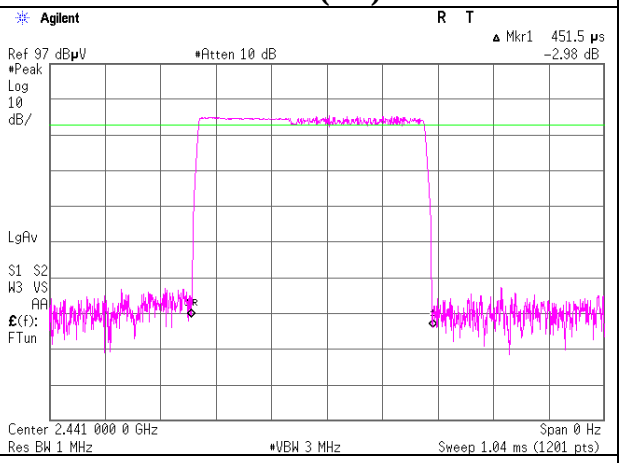


Dwell time

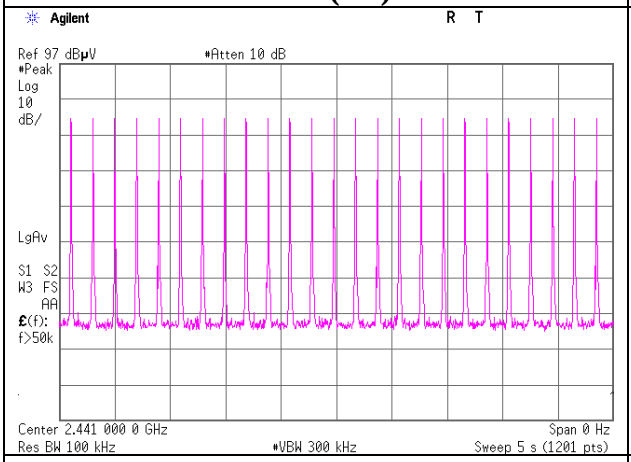
3DH1 (1/2)



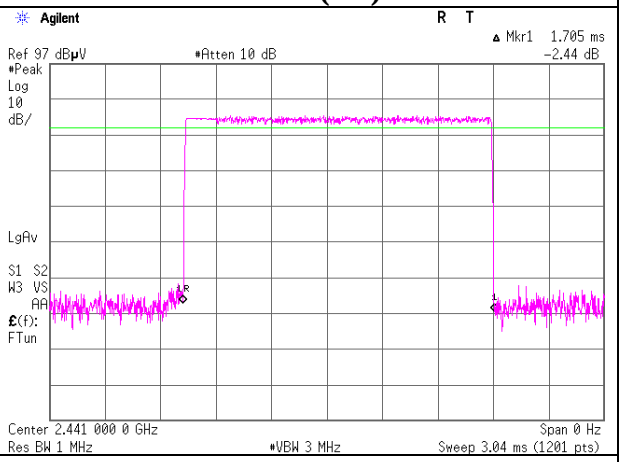
3DH1 (2/2)



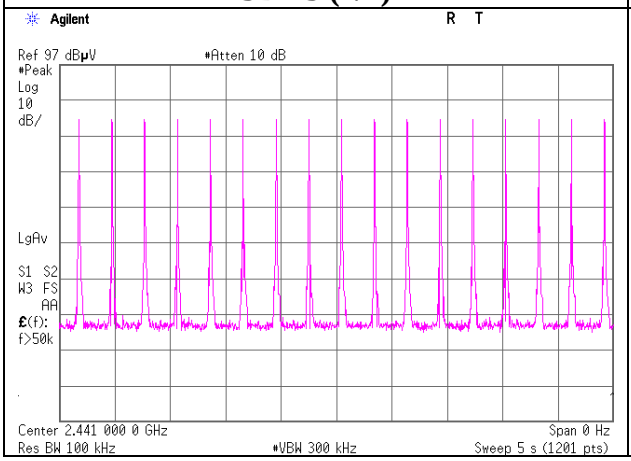
3DH3 (1/2)



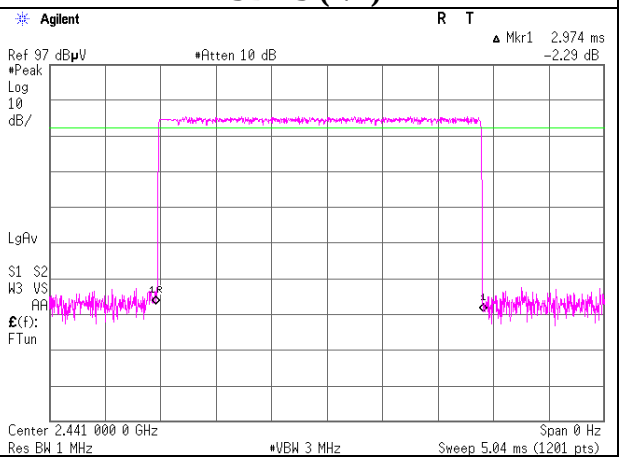
3DH3 (2/2)



3DH5 (1/2)



3DH5 (2/2)



Maximum Peak Output Power

Test place	Head Office EMC Lab. No.6 Measurement Room
Report No.	30FE0167-HO-02
Date	03/25/2011
Temperature/ Humidity	25 deg.C/ 40% RH
Engineer	Katsunori Okai
Mode	Tx (Hopping off) DH5/3DH5/Inquiry

Mode	Freq.	Reading	Cable Loss	Atten.	Result		Limit		Margin
	[MHz]	[dBm]	[dB]	[dB]	[dBm]	[mW]	[dBm]	[mW]	[dB]
DH5	2402.0	-4.33	1.51	10.07	7.25	5.31	20.97	125	13.72
DH5	2441.0	-4.37	1.52	10.07	7.22	5.27	20.97	125	13.75
DH5	2480.0	-4.60	1.53	10.07	7.00	5.01	20.97	125	13.97
3DH5	2402.0	-4.90	1.51	10.07	6.68	4.66	20.97	125	14.29
3DH5	2441.0	-4.81	1.52	10.07	6.78	4.76	20.97	125	14.19
3DH5	2480.0	-5.17	1.53	10.07	6.43	4.40	20.97	125	14.54
Inquiry	2440.0	-4.36	1.52	10.07	7.23	5.28	20.97	125	13.74

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

Test was not performed at AFH mode, because the decrease of number of channel (min: 20ch) at AFH mode does not influence on the output power and bandwidth of the EUT.
As this device had AFH mode and frequency separation could not meet the requirement of over 20dB BW without 2/3 relaxation, 125mW power limit was applied to it.

Radiated Spurious Emission

Test place	Head Office EMC Lab. No.3 Semi Anechoic Chamber	
Report No.	30FE0167-HO-02	
Date	03/26/2011	03/27/2011
Temperature/ Humidity	23 deg.C/ 36% RH	20 deg.C/ 32% RH
Engineer	Takeshi Choda	Kazuya Yoshioka
	(above 1GHz)	(below 1GHz)
Mode	Tx, DH5 2402MHz	

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	36.859	QP	22.6	16.1	7.2	32.2	13.7	40.0	26.3	
Hori	51.127	QP	41.3	10.6	7.5	32.2	27.2	40.0	12.8	
Hori	71.481	QP	26.7	6.5	7.7	32.1	8.8	40.0	31.2	
Hori	104.761	QP	24.0	10.7	8.2	32.1	10.8	43.5	32.7	
Hori	125.099	QP	28.0	13.2	8.4	32.1	17.5	43.5	26.0	
Hori	405.100	QP	21.3	17.5	10.6	32.0	17.4	46.0	28.6	NS
Hori	2277.000	PK	41.7	27.8	2.3	32.7	39.1	73.9	34.8	NS
Hori	2390.000	PK	46.6	27.7	2.3	32.6	44.0	73.9	29.9	
Hori	2399.983	PK	71.9	27.7	2.4	32.6	69.4	73.9	-	See 20dBc Data Sheet
Hori	2400.000	PK	71.9	27.7	2.4	32.6	69.4	73.9	-	See 20dBc Data Sheet
Hori	3250.000	PK	41.4	29.5	2.8	32.2	41.5	73.9	32.4	NS
Hori	4804.000	PK	46.9	31.6	4.9	31.9	51.5	73.9	22.4	
Hori	7206.000	PK	42.6	36.2	6.0	32.4	52.4	73.9	21.5	NS
Hori	9608.000	PK	42.2	38.0	6.8	32.9	54.1	73.9	19.8	NS
Hori	24020.000	PK	45.4	37.8	-1.4	31.6	50.2	73.9	23.7	NS
Hori	2277.000	AV	29.8	27.8	2.3	32.7	27.2	53.9	26.7	NS *1)
Hori	2390.000	AV	31.2	27.7	2.3	32.6	28.6	53.9	25.3	
Hori	2399.983	AV	56.3	27.7	2.4	32.6	53.8	53.9	-	See 20dBc Data Sheet
Hori	2400.000	AV	56.4	27.7	2.4	32.6	53.9	53.9	-	See 20dBc Data Sheet
Hori	3250.000	AV	29.6	29.5	2.8	32.2	29.7	53.9	24.2	NS *1)
Hori	4804.000	AV	32.1	31.6	4.9	31.9	36.7	53.9	17.2	
Hori	7206.000	AV	30.4	36.2	6.0	32.4	40.2	53.9	13.7	NS
Hori	9608.000	AV	29.9	38.0	6.8	32.9	41.8	53.9	12.1	NS
Hori	24020.000	AV	33.3	37.8	-1.4	31.6	38.1	53.9	15.8	NS
Vert	36.860	QP	33.6	16.1	7.2	32.2	24.7	40.0	15.3	
Vert	51.988	QP	46.8	10.4	7.5	32.2	32.5	40.0	7.5	
Vert	71.482	QP	39.2	6.5	7.7	32.1	21.3	40.0	18.7	
Vert	104.688	QP	34.0	10.7	8.2	32.1	20.8	43.5	22.7	
Vert	125.102	QP	26.0	13.2	8.4	32.1	15.5	43.5	28.0	
Vert	405.100	QP	21.3	17.5	10.6	32.0	17.4	46.0	28.6	NS
Vert	2277.000	PK	42.2	27.8	2.3	32.7	39.6	73.9	34.3	NS
Vert	2390.000	PK	45.1	27.7	2.3	32.6	42.5	73.9	31.4	
Vert	2399.983	PK	71.6	27.7	2.4	32.6	69.1	73.9	-	See 20dBc Data Sheet
Vert	2400.000	PK	71.7	27.7	2.4	32.6	69.2	73.9	-	See 20dBc Data Sheet
Vert	3250.000	PK	42.4	29.5	2.8	32.2	42.5	73.9	31.4	NS
Vert	4804.000	PK	47.1	31.6	4.9	31.9	51.7	73.9	22.2	
Vert	7206.000	PK	42.8	36.2	6.0	32.4	52.6	73.9	21.3	NS
Vert	9608.000	PK	42.3	38.0	6.8	32.9	54.2	73.9	19.7	NS
Vert	24020.000	PK	45.1	37.8	-1.4	31.6	49.9	73.9	24.0	NS
Vert	2277.000	AV	29.8	27.8	2.3	32.7	27.2	53.9	26.7	NS *1)
Vert	2390.000	AV	31.0	27.7	2.3	32.6	28.4	53.9	25.5	
Vert	2399.983	AV	56.1	27.7	2.4	32.6	53.6	53.9	-	See 20dBc Data Sheet
Vert	2400.000	AV	56.2	27.7	2.4	32.6	53.7	53.9	-	See 20dBc Data Sheet
Vert	3250.000	AV	30.5	29.5	2.8	32.2	30.6	53.9	23.3	NS *1)
Vert	4804.000	AV	32.5	31.6	4.9	31.9	37.1	53.9	16.8	
Vert	7206.000	AV	30.3	36.2	6.0	32.4	40.1	53.9	13.8	NS
Vert	9608.000	AV	29.7	38.0	6.8	32.9	41.6	53.9	12.3	NS
Vert	24020.000	AV	33.3	37.8	-1.4	31.6	38.1	53.9	15.8	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.

*1) RBW/VBW: 1M/10Hz, Above 1GHz frequency except for *1) : 1M/270Hz

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

NS: No Signal detect

*For the band edge of the carrier and the harmonics that emission was found, the test was performed with VBW of the average detector set at 270Hz. For other average detectors, VBW was set at 10Hz.

Radiated Spurious Emission

Test place	Head Office EMC Lab. No.3 Semi Anechoic Chamber
Report No.	30FE0167-HO-02
Date	03/26/2011
Temperature/ Humidity	23 deg.C/ 36% RH
Engineer	Takeshi Choda
	(above 1GHz)
Mode	Tx, DH5 2402MHz

20dBc Data Sheet

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant Factor [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	2402.000	PK	105.5	27.7	2.4	32.6	103.0	-	-	Carrier
Hori	2399.983	PK	69.4	27.7	2.4	32.6	67.0	83.0	16.0	
Hori	2400.000	PK	69.5	27.7	2.4	32.6	67.0	83.0	16.0	
Vert	2402.000	PK	105.2	27.7	2.4	32.6	102.7	-	-	Carrier
Vert	2399.983	PK	69.3	27.7	2.4	32.6	66.8	82.7	15.9	
Vert	2400.000	PK	69.3	27.7	2.4	32.6	66.8	82.7	15.9	

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amprifier)
*For the band edge of the carrier and the harmonics that emission was found, the test was performed with VBW of the average detector set at 270Hz.
For other average detectors, VBW was set at 10Hz.

Radiated Spurious Emission

Test place	Head Office EMC Lab. No.3 Semi Anechoic Chamber	
Report No.	30FE0167-HO-02	
Date	03/26/2011	03/27/2011
Temperature/ Humidity	23 deg.C/ 36% RH	20 deg.C/ 32% RH
Engineer	Takeshi Choda	Kazuya Yoshioka
	(above 1GHz)	(below 1GHz)
Mode	Tx, DH5 2441MHz	

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	36.569	QP	22.2	16.2	7.2	32.2	13.4	40.0	26.6	
Hori	52.502	QP	34.1	10.2	7.5	32.2	19.6	40.0	20.4	
Hori	71.399	QP	22.4	6.5	7.7	32.1	4.5	40.0	35.5	
Hori	105.797	QP	22.0	10.9	8.2	32.1	9.0	43.5	34.5	
Hori	116.159	QP	22.2	12.3	8.3	32.1	10.7	43.5	32.8	
Hori	922.400	QP	20.9	22.4	13.4	30.9	25.8	46.0	20.2	NS
Hori	2357.000	PK	42.2	27.8	2.3	32.7	39.6	73.9	34.3	NS
Hori	3183.000	PK	42.1	29.4	2.8	32.2	42.1	73.9	31.8	NS
Hori	4882.000	PK	47.8	31.9	5.0	31.9	52.8	73.9	21.1	
Hori	7323.000	PK	41.9	36.2	6.1	32.4	51.8	73.9	22.1	NS
Hori	9764.000	PK	41.8	38.1	6.8	32.9	53.8	73.9	20.1	NS
Hori	24410.000	PK	46.5	37.9	-1.3	31.4	51.7	73.9	22.2	NS
Hori	2357.000	AV	30.0	27.8	2.3	32.7	27.4	53.9	26.5	NS *1)
Hori	3183.000	AV	29.4	29.4	2.8	32.2	29.4	53.9	24.5	NS *1)
Hori	4882.000	AV	38.2	31.9	5.0	31.9	43.2	53.9	10.7	
Hori	7323.000	AV	30.1	36.2	6.1	32.4	40.0	53.9	13.9	NS
Hori	9764.000	AV	29.7	38.1	6.8	32.9	41.7	53.9	12.2	NS
Hori	24410.000	AV	34.2	37.9	-1.3	31.4	39.4	53.9	14.5	NS
Vert	36.579	QP	28.1	16.2	7.2	32.2	19.3	40.0	20.7	
Vert	52.838	QP	43.0	10.1	7.5	32.2	28.4	40.0	11.6	
Vert	71.635	QP	33.0	6.5	7.7	32.1	15.1	40.0	24.9	
Vert	106.217	QP	26.5	10.9	8.2	32.1	13.5	43.5	30.0	
Vert	116.244	QP	27.8	12.3	8.3	32.1	16.3	43.5	27.2	
Vert	922.400	QP	20.9	22.4	13.4	30.9	25.8	46.0	20.2	NS
Vert	2357.000	PK	42.4	27.8	2.3	32.7	39.8	73.9	34.1	NS
Vert	3183.000	PK	41.9	29.4	2.8	32.2	41.9	73.9	32.0	NS
Vert	4882.000	PK	45.8	31.9	5.0	31.9	50.8	73.9	23.1	
Vert	7323.000	PK	42.3	36.2	6.1	32.4	52.2	73.9	21.7	NS
Vert	9764.000	PK	42.0	38.1	6.8	32.9	54.0	73.9	19.9	NS
Vert	24410.000	PK	46.8	37.9	-1.3	31.4	52.0	73.9	21.9	NS
Vert	2357.000	AV	30.0	27.8	2.3	32.7	27.4	53.9	26.5	NS *1)
Vert	3183.000	AV	29.4	29.4	2.8	32.2	29.4	53.9	24.5	NS *1)
Vert	4882.000	AV	36.0	31.9	5.0	31.9	41.0	53.9	12.9	
Vert	7323.000	AV	30.2	36.2	6.1	32.4	40.1	53.9	13.8	NS
Vert	9764.000	AV	29.7	38.1	6.8	32.9	41.7	53.9	12.2	NS
Vert	24410.000	AV	34.2	37.9	-1.3	31.4	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).

*1) RBW/VBW: 1M/10Hz, Above 1GHz frequency except for *1) : 1M/270Hz

*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: No Signal detect

*For the band edge of the carrier and the harmonics that emission was found, the test was performed with VBW of the average detector set at 270Hz. For other average detectors, VBW was set at 10Hz.

Radiated Spurious Emission

Test place	Head Office EMC Lab. No.3 Semi Anechoic Chamber	
Report No.	30FE0167-HO-02	
Date	03/26/2011	03/27/2011
Temperature/ Humidity	23 deg.C/ 36% RH	20 deg.C/ 32% RH
Engineer	Takeshi Choda	Kazuya Yoshioka
	(above 1GHz)	(below 1GHz)
Mode	Tx, DH5 2480MHz	

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	36.755	QP	22.1	16.1	7.2	32.2	13.2	40.0	26.8	
Hori	52.530	QP	34.4	10.2	7.5	32.2	19.9	40.0	20.1	
Hori	71.397	QP	22.4	6.5	7.7	32.1	4.5	40.0	35.5	
Hori	105.936	QP	22.0	10.9	8.2	32.1	9.0	43.5	34.5	
Hori	116.168	QP	22.1	12.3	8.3	32.1	10.6	43.5	32.9	
Hori	418.800	QP	21.8	17.6	10.7	32.0	18.1	46.0	27.9	NS
Hori	2323.000	PK	42.1	27.8	2.3	32.7	39.5	73.9	34.4	NS
Hori	2483.500	PK	56.4	27.6	2.4	32.6	53.8	73.9	20.1	
Hori	2484.533	PK	51.0	27.6	2.4	32.6	48.4	73.9	25.5	
Hori	3223.000	PK	42.5	29.5	2.8	32.2	42.6	73.9	31.3	NS
Hori	4960.000	PK	47.0	32.1	4.9	31.9	52.1	73.9	21.8	
Hori	7440.000	PK	42.8	36.2	6.1	32.4	52.7	73.9	21.2	NS
Hori	9920.000	PK	43.0	38.2	6.9	32.9	55.2	73.9	18.7	NS
Hori	24800.000	PK	48.4	38.0	-1.1	31.2	54.1	73.9	19.8	NS
Hori	2323.000	AV	29.8	27.8	2.3	32.7	27.2	53.9	26.7	NS *1)
Hori	2483.500	AV	45.6	27.6	2.4	32.6	43.0	53.9	10.9	
Hori	2484.533	AV	38.5	27.6	2.4	32.6	35.9	53.9	18.0	
Hori	3223.000	AV	29.8	29.5	2.8	32.2	29.9	53.9	24.0	NS *1)
Hori	4960.000	AV	39.4	32.1	4.9	31.9	44.5	53.9	9.4	
Hori	7440.000	AV	30.2	36.2	6.1	32.4	40.1	53.9	13.8	NS
Hori	9920.000	AV	30.1	38.2	6.9	32.9	42.3	53.9	11.6	NS
Hori	24800.000	AV	36.4	38.0	-1.1	31.2	42.1	53.9	11.8	NS
Vert	36.617	QP	28.6	16.2	7.2	32.2	19.8	40.0	20.2	
Vert	52.838	QP	42.8	10.1	7.5	32.2	28.2	40.0	11.8	
Vert	71.607	QP	32.3	6.5	7.7	32.1	14.4	40.0	25.6	
Vert	106.176	QP	26.6	10.9	8.2	32.1	13.6	43.5	29.9	
Vert	116.104	QP	27.9	12.3	8.3	32.1	16.4	43.5	27.1	
Vert	418.800	QP	21.8	17.6	10.7	32.0	18.1	46.0	27.9	NS
Vert	2323.000	PK	42.3	27.8	2.3	32.7	39.7	73.9	34.2	NS
Vert	2483.500	PK	59.7	27.6	2.4	32.6	57.1	73.9	16.8	
Vert	2484.533	PK	53.9	27.6	2.4	32.6	51.3	73.9	22.6	
Vert	3223.000	PK	42.1	29.5	2.8	32.2	42.2	73.9	31.7	NS
Vert	4960.000	PK	46.5	32.1	4.9	31.9	51.6	73.9	22.3	
Vert	7440.000	PK	43.6	36.2	6.1	32.4	53.5	73.9	20.4	NS
Vert	9920.000	PK	42.8	38.2	6.9	32.9	55.0	73.9	18.9	NS
Vert	24800.000	PK	48.2	38.0	-1.1	31.2	53.9	73.9	20.0	NS
Vert	2323.000	AV	29.7	27.8	2.3	32.7	27.1	53.9	26.8	NS *1)
Vert	2483.500	AV	49.2	27.6	2.4	32.6	46.6	53.9	7.3	
Vert	2484.533	AV	41.5	27.6	2.4	32.6	38.9	53.9	15.0	
Vert	3223.000	AV	29.9	29.5	2.8	32.2	30.0	53.9	23.9	NS *1)
Vert	4960.000	AV	38.5	32.1	4.9	31.9	43.6	53.9	10.3	
Vert	7440.000	AV	30.1	36.2	6.1	32.4	40.0	53.9	13.9	NS
Vert	9920.000	AV	30.1	38.2	6.9	32.9	42.3	53.9	11.6	NS
Vert	24800.000	AV	36.4	38.0	-1.1	31.2	42.1	53.9	11.8	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).

*1) RBW/VBW: 1M/10Hz, Above 1GHz frequency except for *1) : 1M/270Hz

*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: No Signal detect

*For the band edge of the carrier and the harmonics that emission was found, the test was performed with VBW of the average detector set at 270Hz.
For other average detectors, VBW was set at 10Hz.

Radiated Spurious Emission

Test place	Head Office EMC Lab. No.3 Semi Anechoic Chamber	
Report No.	30FE0167-HO-02	
Date	03/26/2011	03/27/2011
Temperature/ Humidity	23 deg.C/ 36% RH	20 deg.C/ 32% RH
Engineer	Takeshi Choda	Kazuya Yoshioka
	(above 1GHz)	(below 1GHz)
Mode	Tx, 3DH5 2402MHz	

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	36.653	QP	22.2	16.2	7.2	32.2	13.4	40.0	26.6	
Hori	51.082	QP	35.8	10.6	7.5	32.2	21.7	40.0	18.3	
Hori	71.564	QP	22.3	6.5	7.7	32.1	4.4	40.0	35.6	
Hori	105.578	QP	22.0	10.9	8.2	32.1	9.0	43.5	34.5	
Hori	113.660	QP	22.6	12.0	8.3	32.1	10.8	43.5	32.7	
Hori	720.300	QP	21.4	20.7	12.4	31.8	22.7	46.0	23.3	NS
Hori	1963.000	PK	41.8	28.1	2.1	33.0	39.0	73.9	34.9	NS
Hori	2390.000	PK	44.4	27.7	2.3	32.6	41.8	73.9	32.1	
Hori	2399.933	PK	67.4	27.7	2.4	32.6	64.9	73.9	-	See 20dBc Data Sheet
Hori	2400.000	PK	68.1	27.7	2.4	32.6	65.6	73.9	-	See 20dBc Data Sheet
Hori	3203.990	PK	48.9	29.4	2.8	32.2	48.9	73.9	25.0	
Hori	4804.000	PK	42.7	31.6	4.9	31.9	47.3	73.9	26.6	NS
Hori	7206.000	PK	42.6	36.2	6.0	32.4	52.4	73.9	21.5	NS
Hori	9608.000	PK	42.0	38.0	6.8	32.9	53.9	73.9	20.0	NS
Hori	24020.000	PK	45.6	37.8	-1.4	31.6	50.4	73.9	23.5	NS
Hori	1963.000	AV	30.3	28.1	2.1	33.0	27.5	53.9	26.4	NS *1)
Hori	2390.000	AV	31.7	27.7	2.3	32.6	29.1	53.9	24.8	
Hori	2399.933	AV	53.2	27.7	2.4	32.6	50.7	53.9	-	See 20dBc Data Sheet
Hori	2400.000	AV	53.9	27.7	2.4	32.6	51.4	53.9	-	See 20dBc Data Sheet
Hori	3203.990	AV	43.3	29.4	2.8	32.2	43.3	53.9	10.6	*1)
Hori	4804.000	AV	29.5	31.6	4.9	31.9	34.1	53.9	19.8	NS
Hori	7206.000	AV	30.3	36.2	6.0	32.4	40.1	53.9	13.8	NS
Hori	9608.000	AV	29.7	38.0	6.8	32.9	41.6	53.9	12.3	NS
Hori	24020.000	AV	33.3	37.8	-1.4	31.6	38.1	53.9	15.8	NS
Vert	36.879	QP	27.5	16.1	7.2	32.2	18.6	40.0	21.4	
Vert	51.510	QP	42.3	10.5	7.5	32.2	28.1	40.0	11.9	
Vert	71.580	QP	33.0	6.5	7.7	32.1	15.1	40.0	24.9	
Vert	105.762	QP	26.5	10.9	8.2	32.1	13.5	43.5	30.0	
Vert	113.680	QP	28.9	12.0	8.3	32.1	17.1	43.5	26.4	
Vert	720.300	QP	21.4	20.7	12.4	31.8	22.7	46.0	23.3	NS
Vert	1963.000	PK	42.0	28.1	2.1	33.0	39.2	73.9	34.7	NS *1)
Vert	2390.000	PK	46.4	27.7	2.3	32.6	43.8	73.9	30.1	
Vert	2399.933	PK	70.1	27.7	2.4	32.6	67.6	73.9	-	See 20dBc Data Sheet
Vert	2400.000	PK	71.0	27.7	2.4	32.6	68.5	73.9	-	See 20dBc Data Sheet
Vert	3203.990	PK	52.5	29.4	2.8	32.2	52.5	73.9	21.4	*1)
Vert	4804.000	PK	42.5	31.6	4.9	31.9	47.1	73.9	26.8	NS
Vert	7206.000	PK	42.1	36.2	6.0	32.4	51.9	73.9	22.0	NS
Vert	9608.000	PK	42.3	38.0	6.8	32.9	54.2	73.9	19.7	NS
Vert	24020.000	PK	45.4	37.8	-1.4	31.6	50.2	73.9	23.7	NS
Vert	1963.000	AV	30.3	28.1	2.1	33.0	27.5	53.9	26.4	NS
Vert	2390.000	AV	33.0	27.7	2.3	32.6	30.4	53.9	23.5	
Vert	2399.933	AV	56.0	27.7	2.4	32.6	53.5	53.9	-	See 20dBc Data Sheet
Vert	2400.000	AV	56.5	27.7	2.4	32.6	54.0	53.9	-	See 20dBc Data Sheet
Vert	3203.990	AV	48.0	29.4	2.8	32.2	48.0	53.9	5.9	
Vert	4804.000	AV	29.2	31.6	4.9	31.9	33.8	53.9	20.1	NS
Vert	7206.000	AV	30.2	36.2	6.0	32.4	40.0	53.9	13.9	NS
Vert	9608.000	AV	29.7	38.0	6.8	32.9	41.6	53.9	12.3	NS
Vert	24020.000	AV	33.3	37.8	-1.4	31.6	38.1	53.9	15.8	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).

*1) RBW/VBW: 1M/10Hz, Above 1GHz frequency except for *1) : 1M/270Hz

*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: No Signal detect

*For the band edge of the carrier and the harmonics that emission was found, the test was performed with VBW of the average detector set at 270Hz.
For other average detectors, VBW was set at 10Hz.

Radiated Spurious Emission

Test place	Head Office EMC Lab. No.3 Semi Anechoic Chamber
Report No.	30FE0167-HO-02
Date	03/26/2011
Temperature/ Humidity	23 deg.C/ 36% RH
Engineer	Takeshi Choda
	(above 1GHz)
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	101.1	27.7	2.4	32.6	98.6	-	-	Carrier
Hori	2399.933	PK	56.9	27.7	2.4	32.6	54.4	78.6	24.2	
Hori	2400.000	PK	59.1	27.7	2.4	32.6	56.6	78.6	22.0	
Vert	2402.000	PK	103.6	27.7	2.4	32.6	101.1	-	-	Carrier
Vert	2399.933	PK	59.3	27.7	2.4	32.6	56.8	81.1	24.3	
Vert	2400.000	PK	62.2	27.7	2.4	32.6	59.7	81.1	21.4	

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

*For the band edge of the carrier and the harmonics that emission was found, the test was performed with VBW of the average detector set at 270Hz.
For other average detectors, VBW was set at 10Hz.

Radiated Spurious Emission

Test place	Head Office EMC Lab. No.3 Semi Anechoic Chamber	
Report No.	30FE0167-HO-02	
Date	03/26/2011	03/27/2011
Temperature/ Humidity	23 deg.C/ 36% RH	20 deg.C/ 32% RH
Engineer	Takeshi Choda	Kazuya Yoshioka
	(above 1GHz)	(below 1GHz)
Mode	Tx, 3DH5 2441MHz	

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	36.578	QP	22.2	16.2	7.2	32.2	13.4	40.0	26.6	
Hori	51.522	QP	36.7	10.5	7.5	32.2	22.5	40.0	17.5	
Hori	71.625	QP	22.3	6.5	7.7	32.1	4.4	40.0	35.6	
Hori	105.725	QP	21.9	10.9	8.2	32.1	8.9	43.5	34.6	
Hori	116.112	QP	22.9	12.3	8.3	32.1	11.4	43.5	32.1	
Hori	355.800	QP	21.3	16.5	10.3	32.0	16.1	46.0	29.9	NS
Hori	2377.000	PK	41.8	27.7	2.3	32.6	39.2	73.9	34.7	NS
Hori	3257.000	PK	48.8	29.5	2.8	32.2	48.9	73.9	25.0	
Hori	4882.000	PK	41.8	31.9	5.0	31.9	46.8	73.9	27.1	NS
Hori	7323.000	PK	42.3	36.2	6.1	32.4	52.2	73.9	21.7	NS
Hori	9764.000	PK	41.9	38.1	6.8	32.9	53.9	73.9	20.0	NS
Hori	24410.000	PK	46.6	37.9	-1.3	31.4	51.8	73.9	22.1	NS
Hori	2377.000	AV	29.6	27.7	2.3	32.6	27.0	53.9	26.9	NS *1)
Hori	3257.000	AV	44.2	29.5	2.8	32.2	44.3	53.9	9.6	*1)
Hori	4882.000	AV	29.2	31.9	5.0	31.9	34.2	53.9	19.7	NS
Hori	7323.000	AV	29.9	36.2	6.1	32.4	39.8	53.9	14.1	NS
Hori	9764.000	AV	30.0	38.1	6.8	32.9	42.0	53.9	11.9	NS
Hori	24410.000	AV	34.2	37.9	-1.3	31.4	39.4	53.9	14.5	NS
Vert	36.603	QP	28.7	16.2	7.2	32.2	19.9	40.0	20.1	
Vert	51.551	QP	42.0	10.5	7.5	32.2	27.8	40.0	12.2	
Vert	71.617	QP	33.2	6.5	7.7	32.1	15.3	40.0	24.7	
Vert	105.761	QP	26.5	10.9	8.2	32.1	13.5	43.5	30.0	
Vert	116.120	QP	28.2	12.3	8.3	32.1	16.7	43.5	26.8	
Vert	355.800	QP	21.3	16.5	10.3	32.0	16.1	46.0	29.9	NS
Vert	2377.000	PK	41.7	27.7	2.3	32.6	39.1	73.9	34.8	NS
Vert	3257.000	PK	49.8	29.5	2.8	32.2	49.9	73.9	24.0	
Vert	4882.000	PK	42.1	31.9	5.0	31.9	47.1	73.9	26.8	NS
Vert	7323.000	PK	42.4	36.2	6.1	32.4	52.3	73.9	21.6	NS
Vert	9764.000	PK	41.8	38.1	6.8	32.9	53.8	73.9	20.1	NS
Vert	24410.000	PK	46.7	37.9	-1.3	31.4	51.9	73.9	22.0	NS
Vert	2377.000	AV	29.6	27.7	2.3	32.6	27.0	53.9	26.9	NS *1)
Vert	3257.000	AV	44.8	29.5	2.8	32.2	44.9	53.9	9.0	*1)
Vert	4882.000	AV	29.1	31.9	5.0	31.9	34.1	53.9	19.8	NS
Vert	7323.000	AV	29.9	36.2	6.1	32.4	39.8	53.9	14.1	NS
Vert	9764.000	AV	30.0	38.1	6.8	32.9	42.0	53.9	11.9	NS
Vert	24410.000	AV	34.2	37.9	-1.3	31.4	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).

*1) RBW/VBW: 1M/10Hz, Above 1GHz frequency except for *1) : 1M/270Hz

*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: No Signal detect

*For the band edge of the carrier and the harmonics that emission was found, the test was performed with VBW of the average detector set at 270Hz. For other average detectors, VBW was set at 10Hz.

Radiated Spurious Emission

Test place	Head Office EMC Lab. No.3 Semi Anechoic Chamber	
Report No.	30FE0167-HO-02	
Date	03/26/2011	03/27/2011
Temperature/ Humidity	23 deg.C/ 36% RH	20 deg.C/ 32% RH
Engineer	Takeshi Choda	Kazuya Yoshioka
	(above 1GHz)	(below 1GHz)
Mode	Tx, 3DH5 2480MHz	

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	36.662	QP	22.2	16.2	7.2	32.2	13.4	40.0	26.6	
Hori	51.532	QP	37.3	10.5	7.5	32.2	23.1	40.0	16.9	
Hori	71.591	QP	22.4	6.5	7.7	32.1	4.5	40.0	35.5	
Hori	105.745	QP	22.0	10.9	8.2	32.1	9.0	43.5	34.5	
Hori	116.121	QP	22.8	12.3	8.3	32.1	11.3	43.5	32.2	
Hori	501.300	QP	21.3	18.1	11.2	32.0	18.6	46.0	27.4	NS
Hori	2330.000	PK	42.2	27.8	2.3	32.7	39.6	73.9	34.3	NS
Hori	2483.500	PK	63.6	27.6	2.4	32.6	61.0	73.9	12.9	
Hori	2483.617	PK	62.4	27.6	2.4	32.6	59.8	73.9	14.1	
Hori	3307.000	PK	47.8	29.6	2.8	32.1	48.1	73.9	25.8	
Hori	4960.000	PK	42.0	32.1	4.9	31.9	47.1	73.9	26.8	NS
Hori	7440.000	PK	42.9	36.2	6.1	32.4	52.8	73.9	21.1	NS
Hori	9920.000	PK	42.7	38.2	6.9	32.9	54.9	73.9	19.0	NS
Hori	2330.000	AV	29.7	27.8	2.3	32.7	27.1	53.9	26.8	NS *1)
Hori	2483.500	AV	51.5	27.6	2.4	32.6	48.9	53.9	5.0	
Hori	2483.617	AV	50.9	27.6	2.4	32.6	48.3	53.9	5.6	
Hori	3307.000	AV	41.9	29.6	2.8	32.1	42.2	53.9	11.7	*1)
Hori	4960.000	AV	29.8	32.1	4.9	31.9	34.9	53.9	19.0	NS
Hori	7440.000	AV	30.8	36.2	4.5	32.4	39.1	53.9	14.8	NS
Hori	9920.000	AV	30.2	38.2	6.9	32.9	42.4	53.9	11.5	NS
Vert	36.653	QP	29.2	16.2	7.2	32.2	20.4	40.0	19.6	
Vert	51.810	QP	42.0	10.4	7.5	32.2	27.7	40.0	12.3	
Vert	71.599	QP	33.7	6.5	7.7	32.1	15.8	40.0	24.2	
Vert	105.739	QP	26.3	10.9	8.2	32.1	13.3	43.5	30.2	
Vert	116.137	QP	28.1	12.3	8.3	32.1	16.6	43.5	26.9	
Vert	501.300	QP	21.3	18.1	11.2	32.0	18.6	46.0	27.4	NS
Vert	2330.000	PK	41.8	27.8	2.3	32.7	39.2	73.9	34.7	NS
Vert	2483.500	PK	64.3	27.6	2.4	32.6	61.7	73.9	12.2	
Vert	2483.617	PK	63.5	27.6	2.4	32.6	60.9	73.9	13.0	
Vert	3307.000	PK	51.3	29.6	2.8	32.1	51.6	73.9	22.3	
Vert	4960.000	PK	42.3	32.1	4.9	31.9	47.4	73.9	26.5	NS
Vert	7440.000	PK	42.3	36.2	6.1	32.4	52.2	73.9	21.7	NS
Vert	9920.000	PK	42.8	38.2	6.9	32.9	55.0	73.9	18.9	NS
Vert	2330.000	AV	29.7	27.8	2.3	32.7	27.1	53.9	26.8	NS *1)
Vert	2483.500	AV	52.4	27.6	2.4	32.6	49.8	53.9	4.1	
Vert	2483.617	AV	51.9	27.6	2.4	32.6	49.3	53.9	4.6	
Vert	3307.000	AV	46.7	29.6	2.8	32.1	47.0	53.9	6.9	*1)
Vert	4960.000	AV	29.8	32.1	4.9	31.9	34.9	53.9	19.0	NS
Vert	7440.000	AV	30.8	36.2	6.1	32.4	40.7	53.9	13.2	NS
Vert	9920.000	AV	30.1	38.2	6.9	32.9	42.3	53.9	11.6	NS

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

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

*1) RBW/VBW: 1M/10Hz, Above 1GHz frequency except for *1) : 1M/270Hz

*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 : No Signal detect

*For the band edge of the carrier and the harmonics that emission was found, the test was performed with VBW of the average detector set at 270Hz.
For other average detectors, VBW was set at 10Hz.

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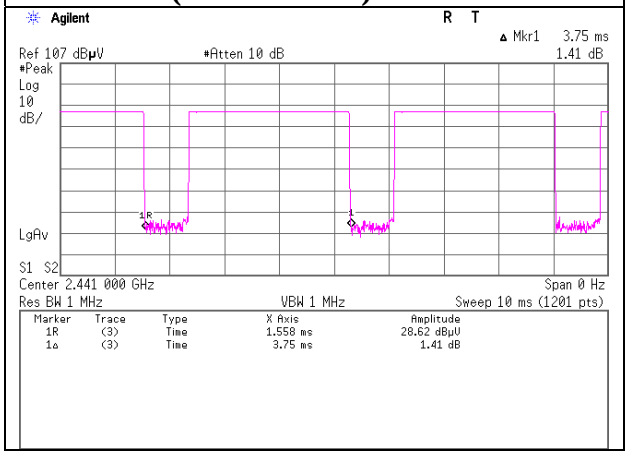
VBW (AV) Calculation

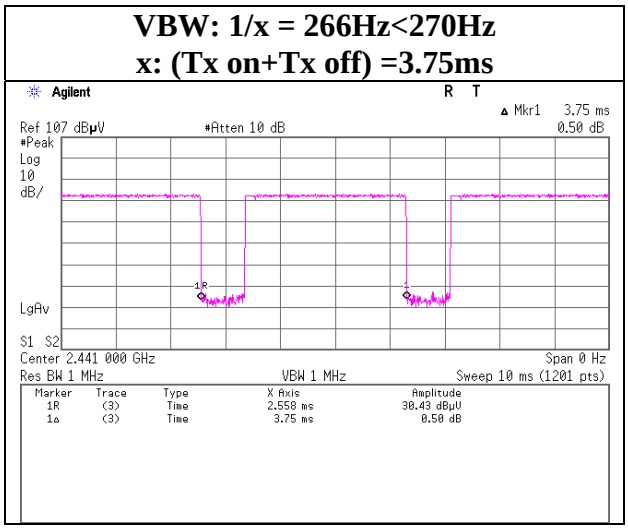
DH5

VBW: 1/x = 266Hz<270Hz
x: (Tx on+Tx off) =3.75ms



3DH5

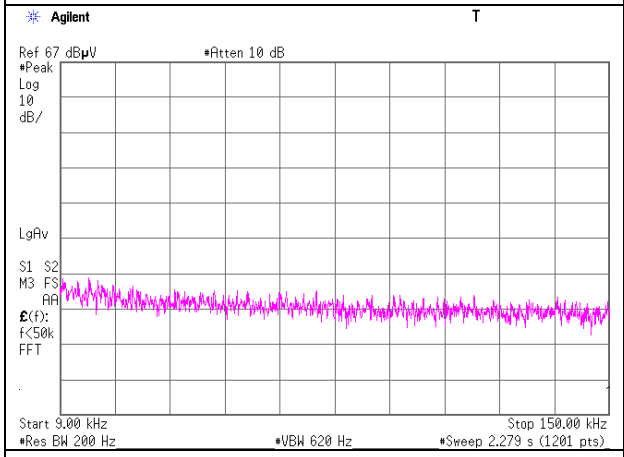
VBW: 1/x = 266Hz<270Hz
x: (Tx on+Tx off) =3.75ms



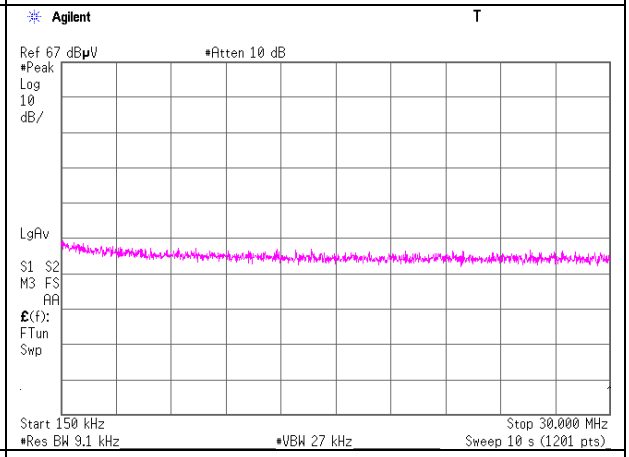
Conducted Spurious Emission

Tx DH5 2402MHz

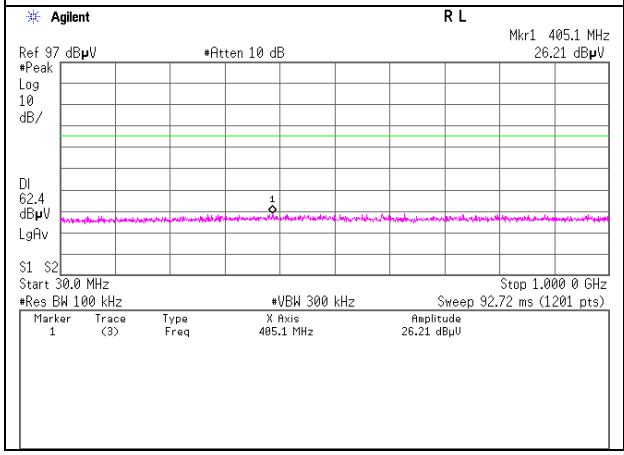
9kHz-150kHz



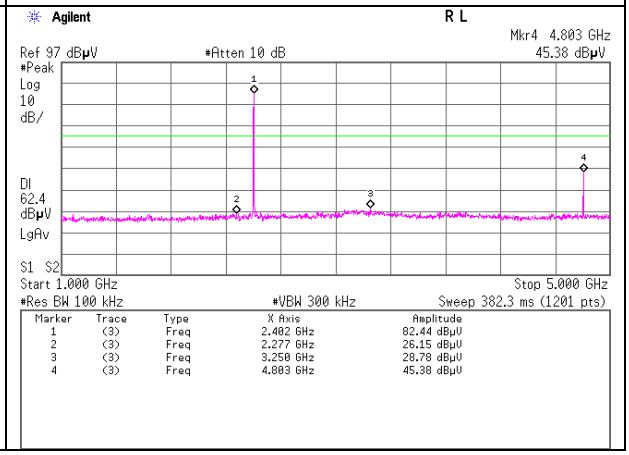
150kHz-30MHz



30MHz-1GHz



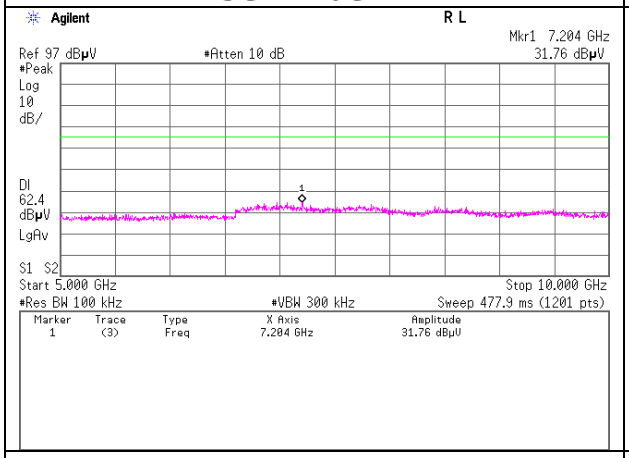
1GHz-5GHz



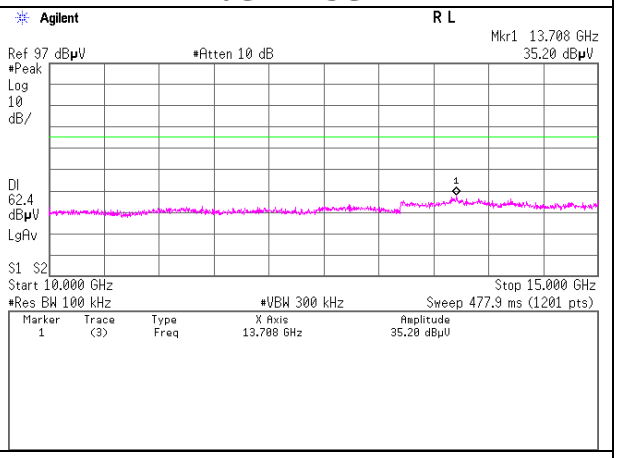
Conducted Spurious Emission

Tx DH5 2402MHz

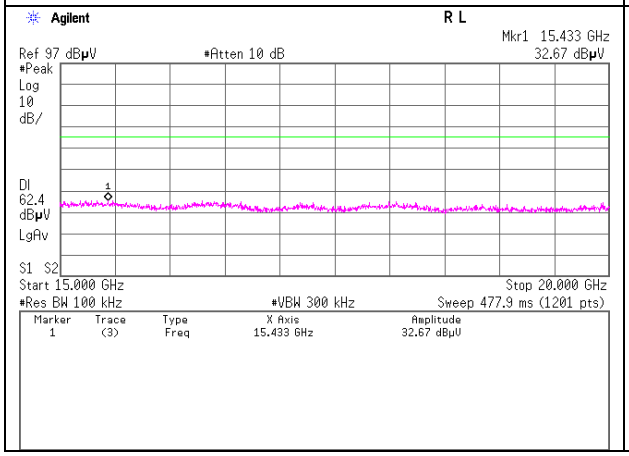
5GHz-10GHz



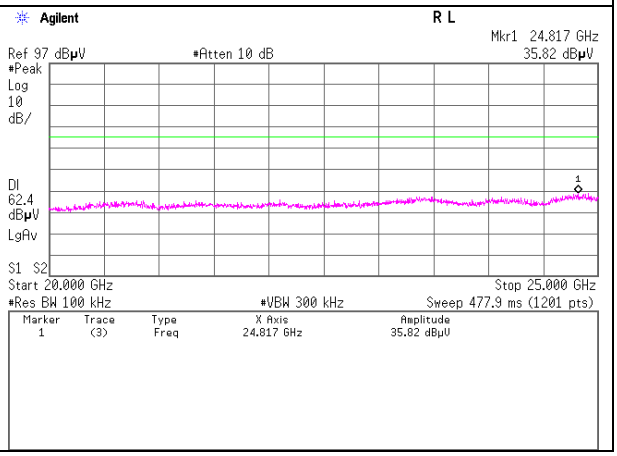
10GHz-15GHz



15GHz-20GHz



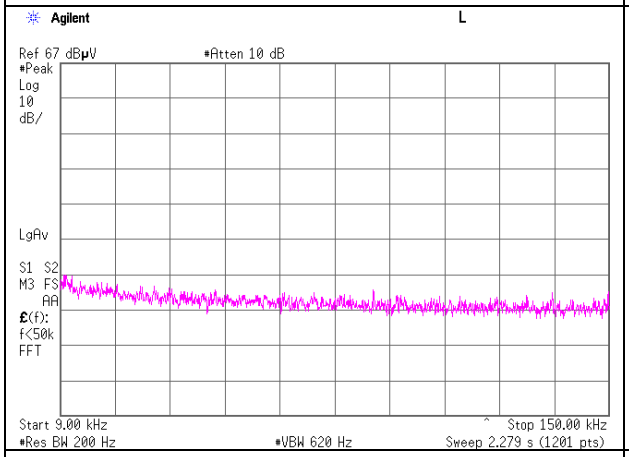
20GHz-25GHz



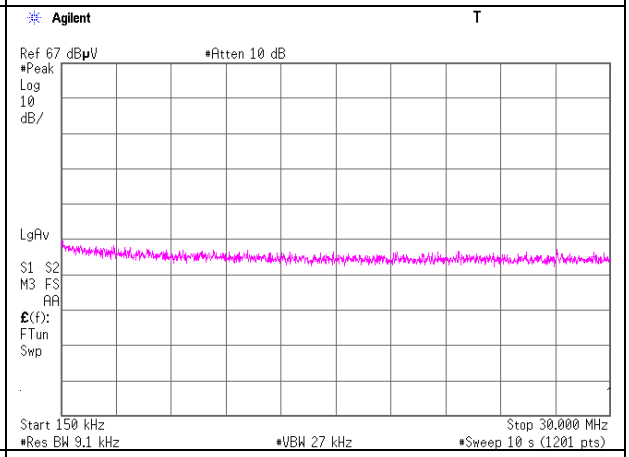
Conducted Spurious Emission

Tx DH5 2441MHz

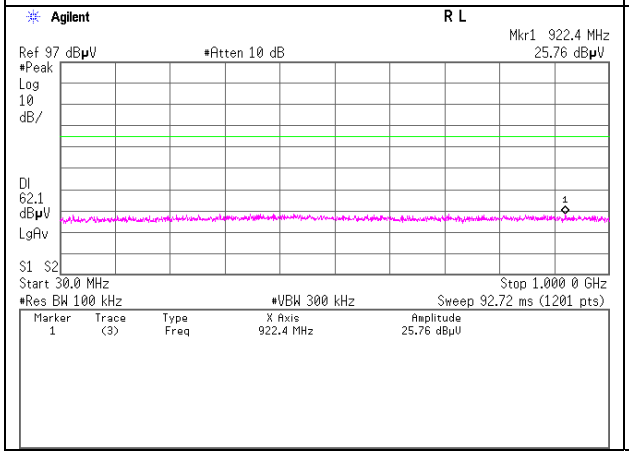
9kHz-150kHz



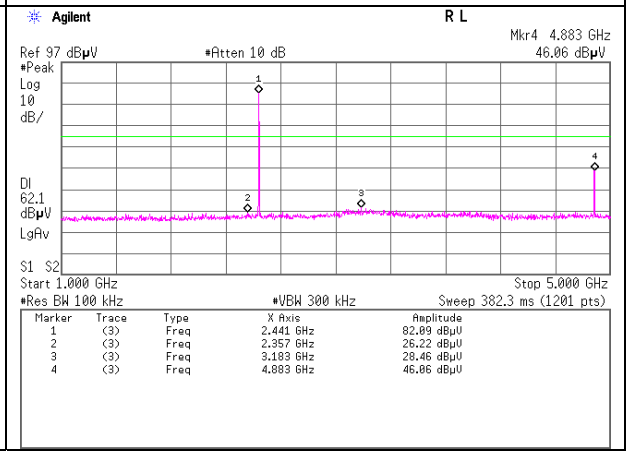
150kHz-30MHz



30MHz-1GHz



1GHz-5GHz



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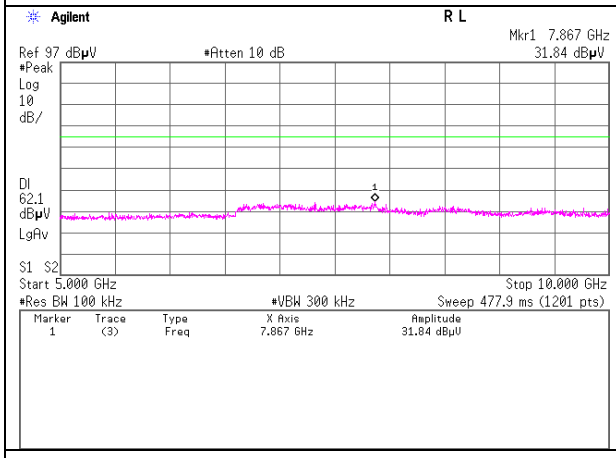
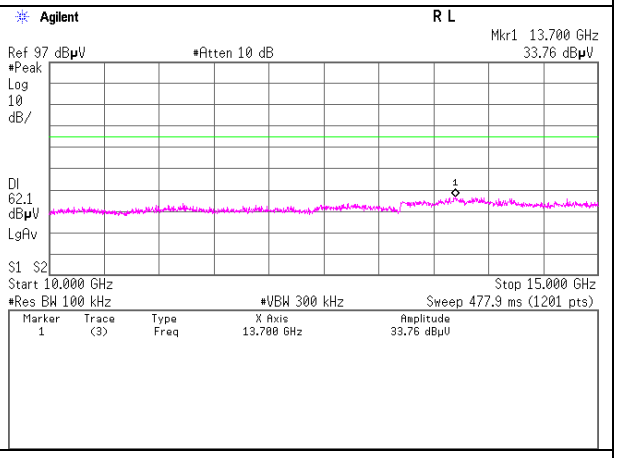
Conducted Spurious Emission

Tx DH5 2441MHz

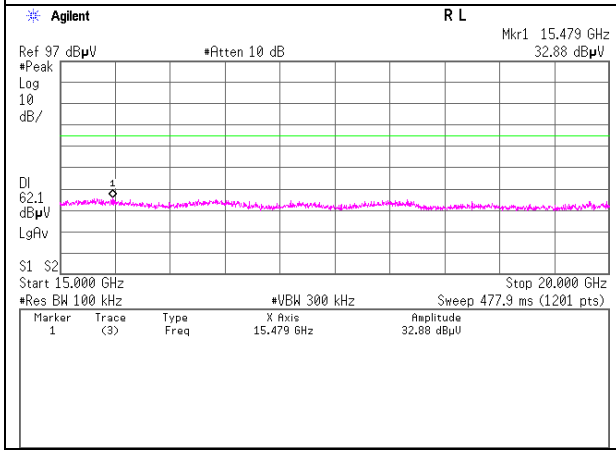
5GHz-10GHz



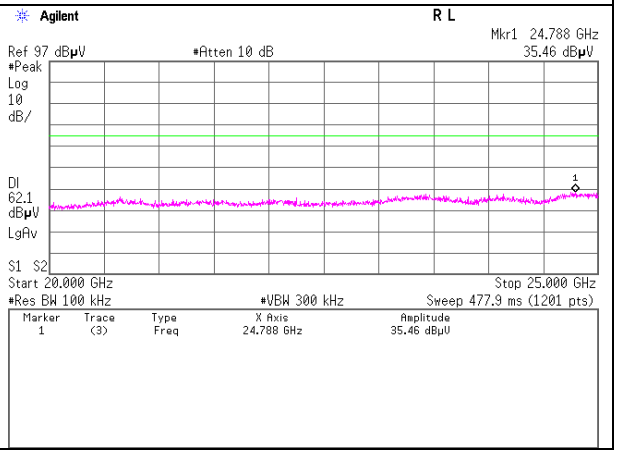
10GHz-15GHz



15GHz-20GHz



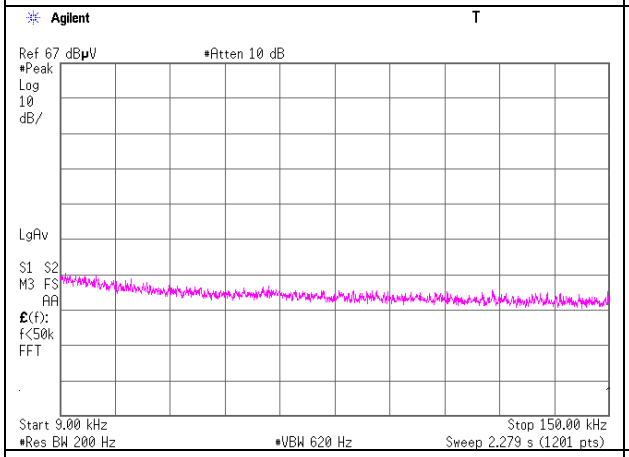
20GHz-25GHz



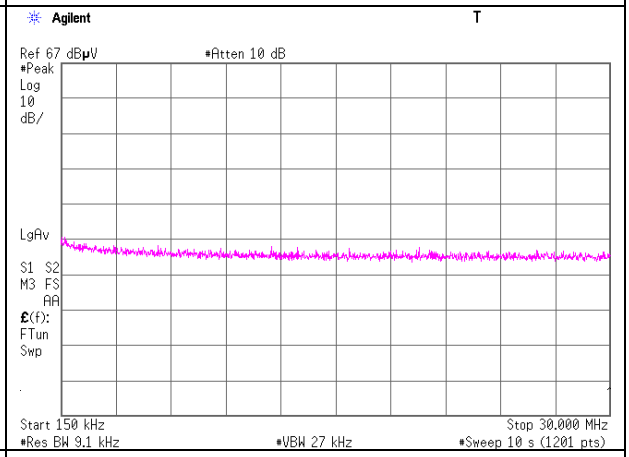
Conducted Spurious Emission

Tx DH5 2480MHz

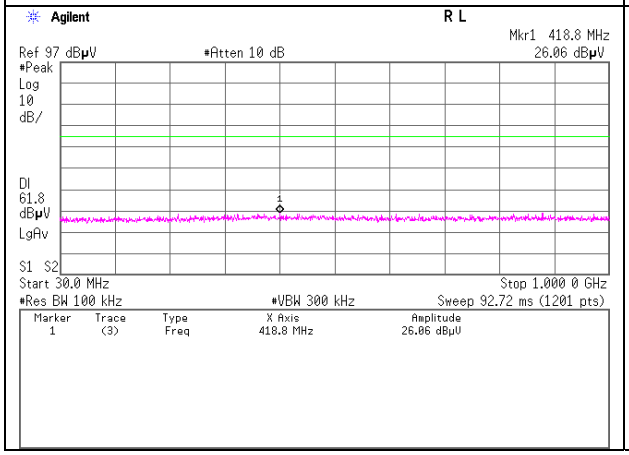
9kHz-150kHz



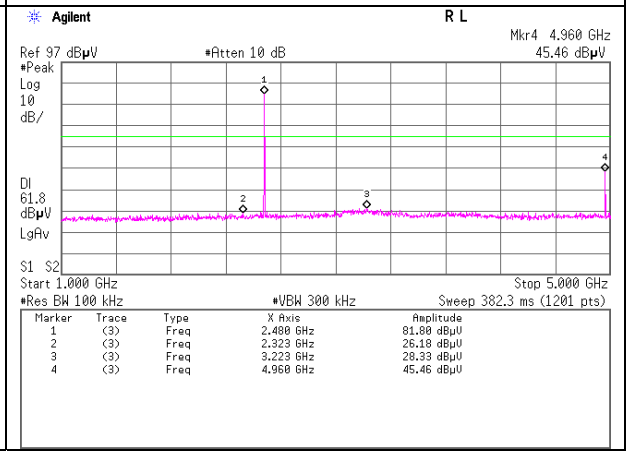
150kHz-30MHz



30MHz-1GHz



1GHz-5GHz



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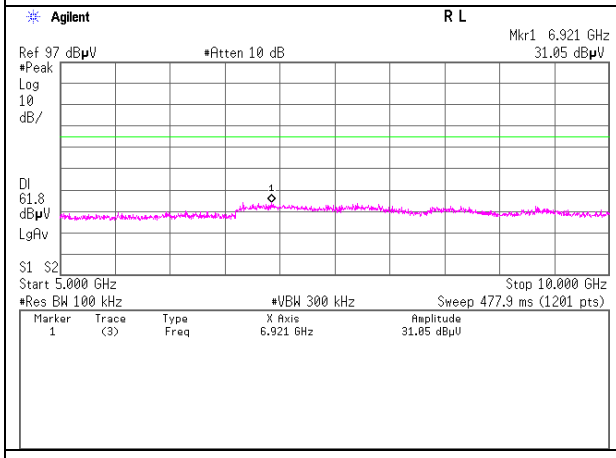
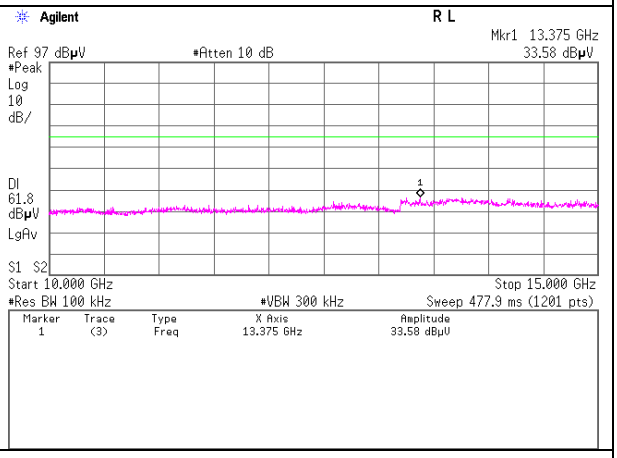
Conducted Spurious Emission

Tx DH5 2480MHz

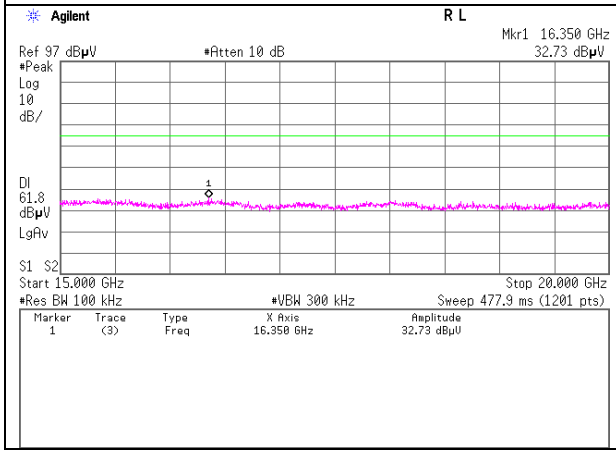
5GHz-10GHz



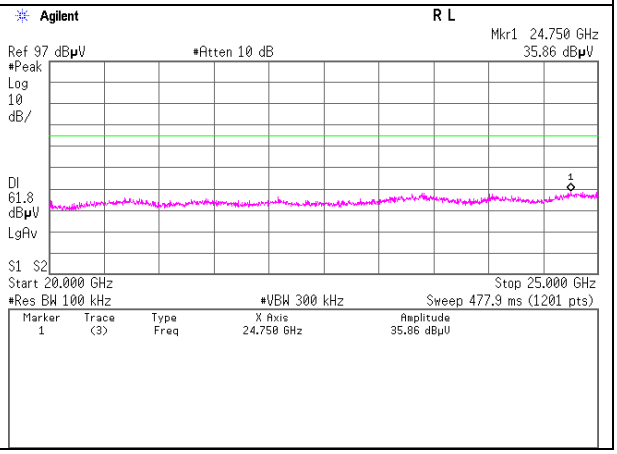
10GHz-15GHz



15GHz-20GHz



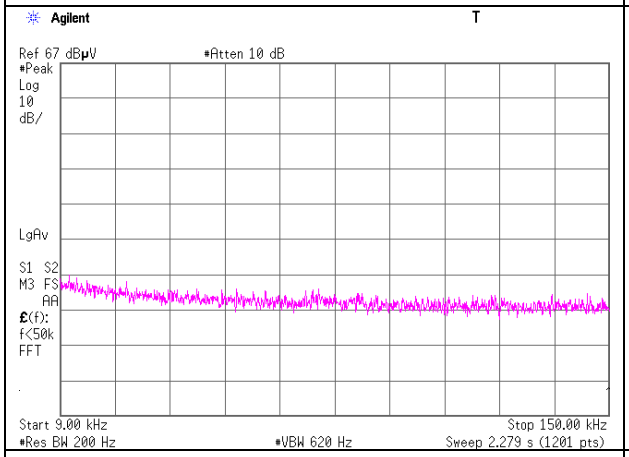
20GHz-25GHz



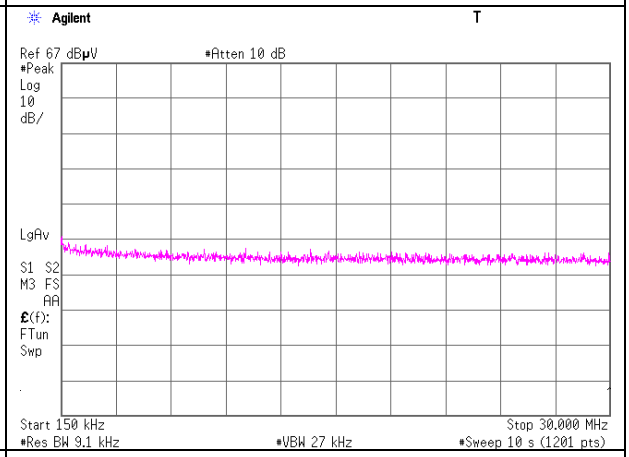
Conducted Spurious Emission

Tx 3DH5 2402MHz

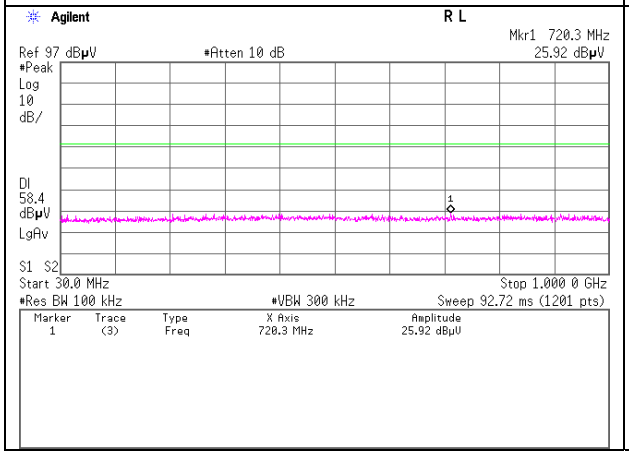
9kHz-150kHz



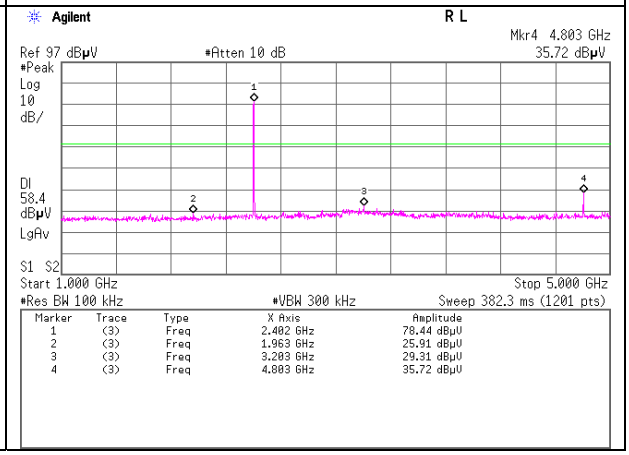
150kHz-30MHz



30MHz-1GHz



1GHz-5GHz



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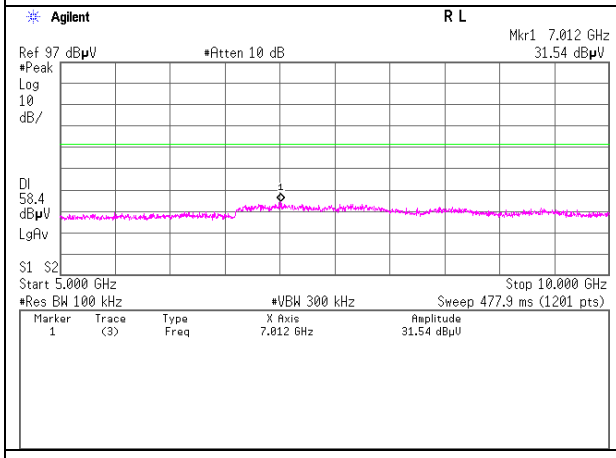
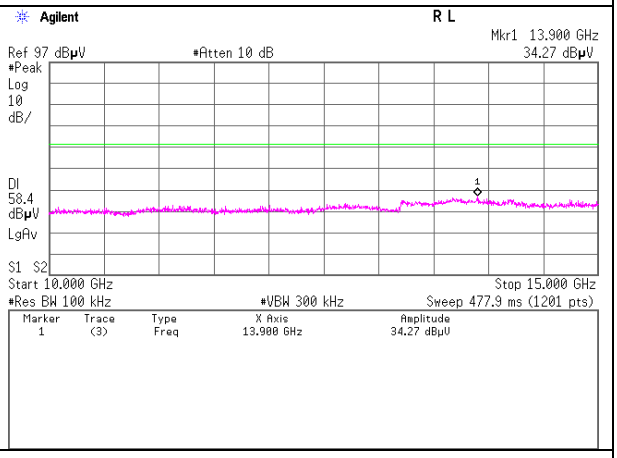
Conducted Spurious Emission

Tx 3DH5 2402MHz

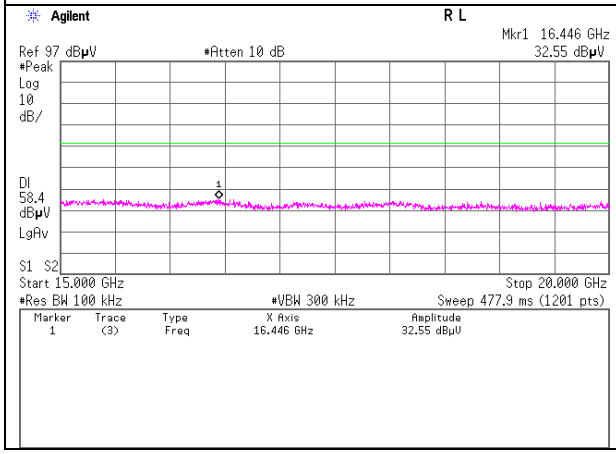
5GHz-10GHz



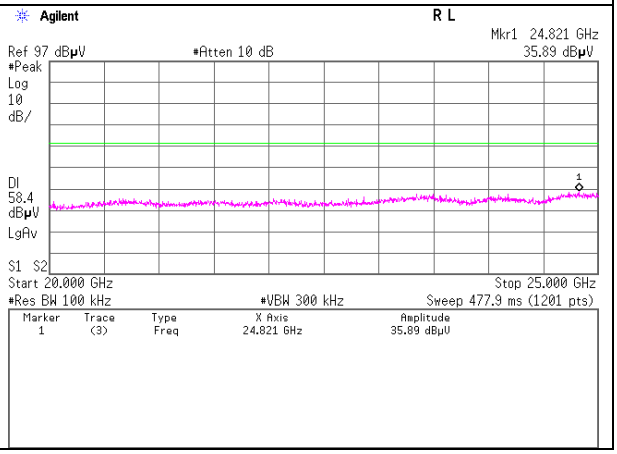
10GHz-15GHz



15GHz-20GHz



20GHz-25GHz



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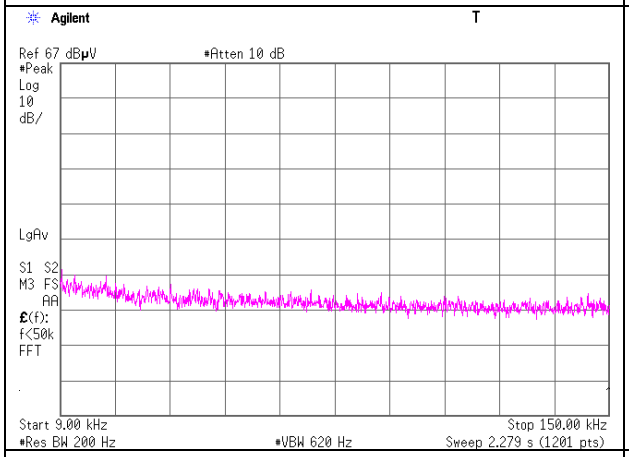
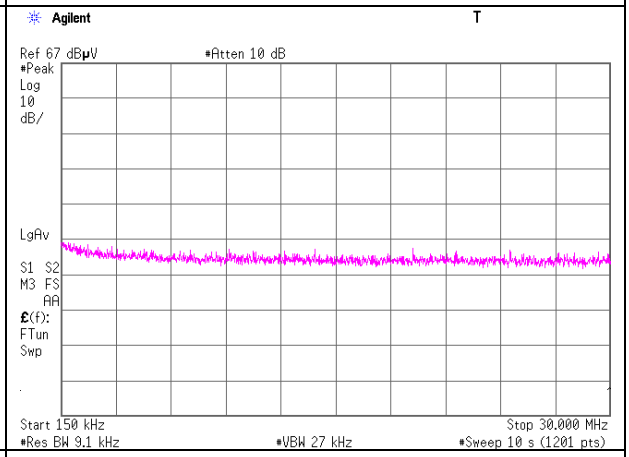
Conducted Spurious Emission

Tx 3DH5 2441MHz

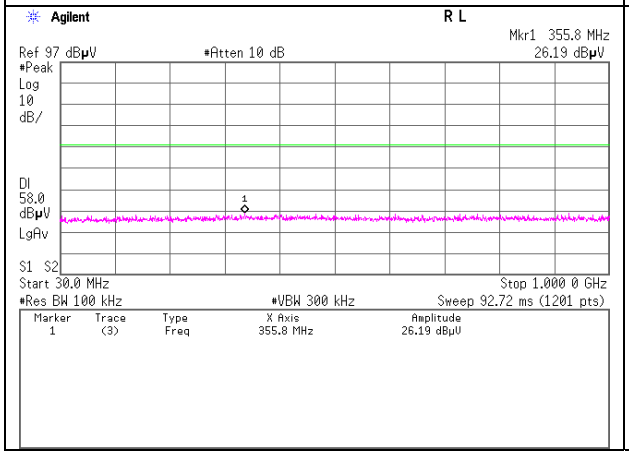
9kHz-150kHz



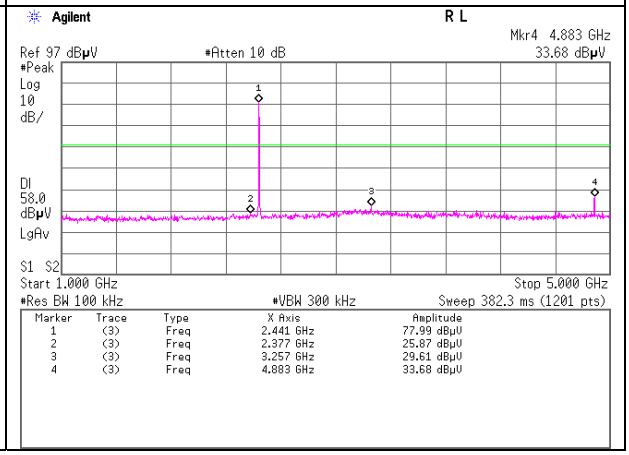
150kHz-30MHz



30MHz-1GHz



1GHz-5GHz



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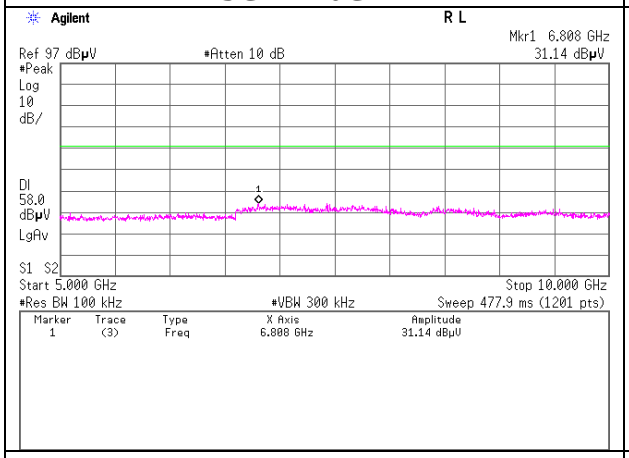
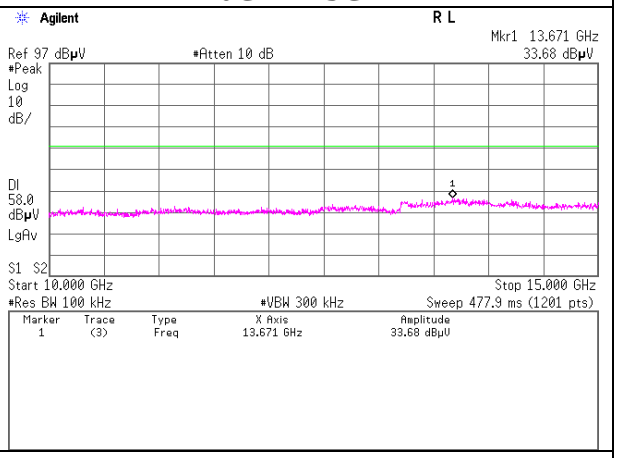
Conducted Spurious Emission

Tx 3DH5 2441MHz

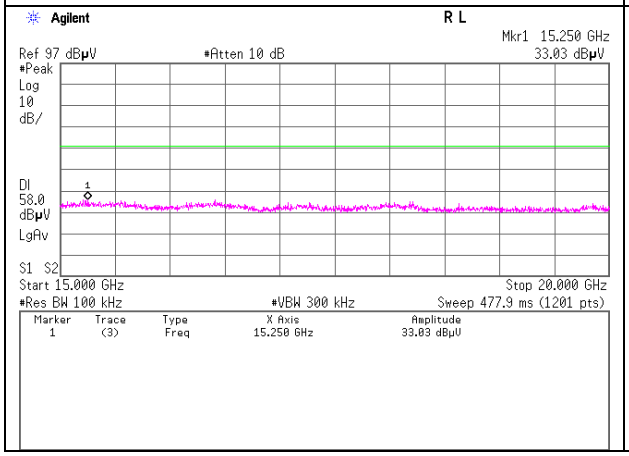
5GHz-10GHz



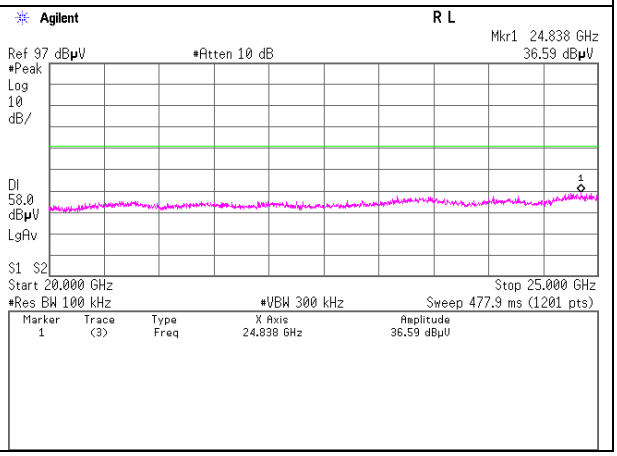
10GHz-15GHz



15GHz-20GHz



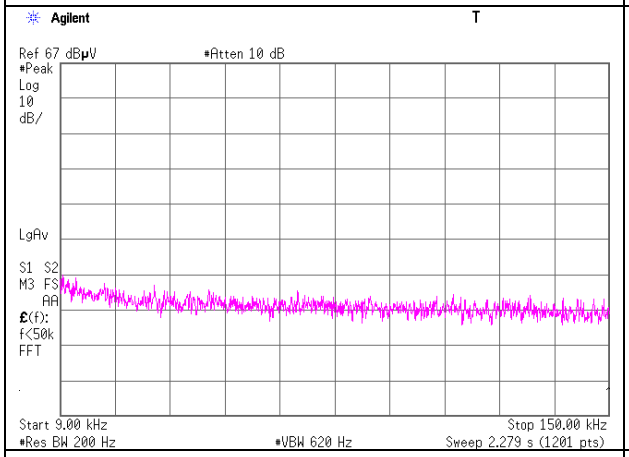
20GHz-25GHz



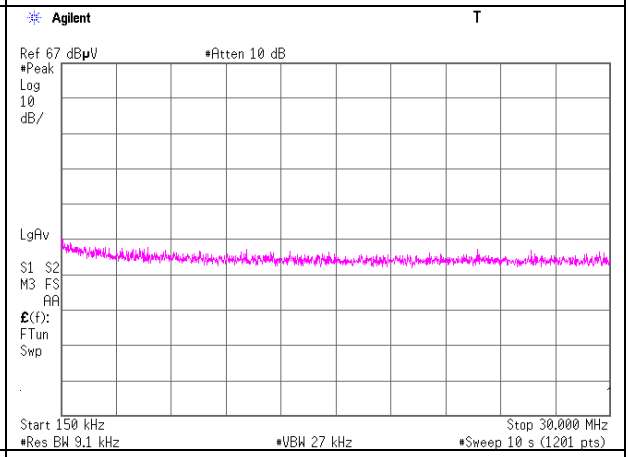
Conducted Spurious Emission

Tx 3DH5 2480MHz

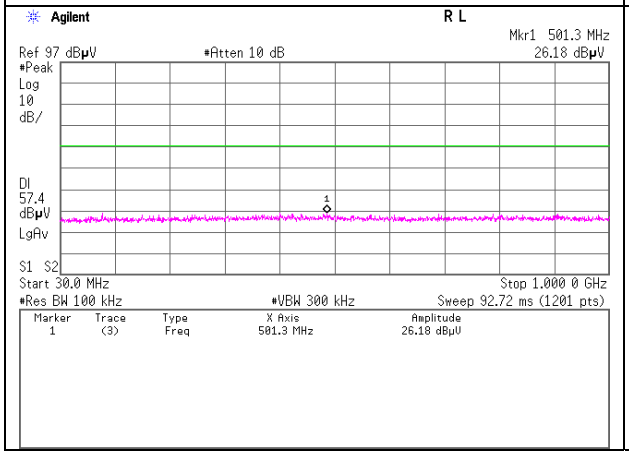
9kHz-150kHz



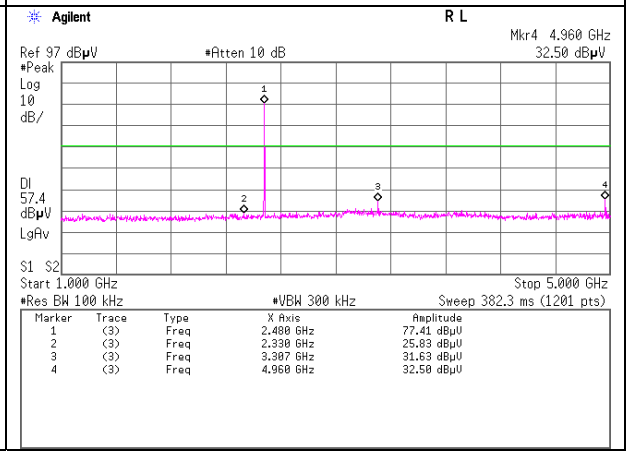
150kHz-30MHz



30MHz-1GHz



1GHz-5GHz



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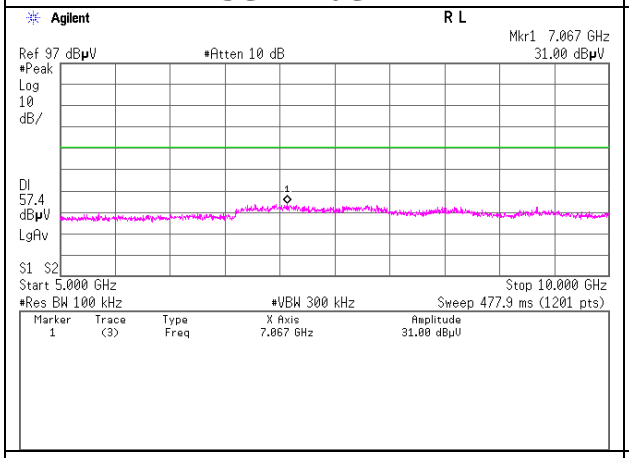
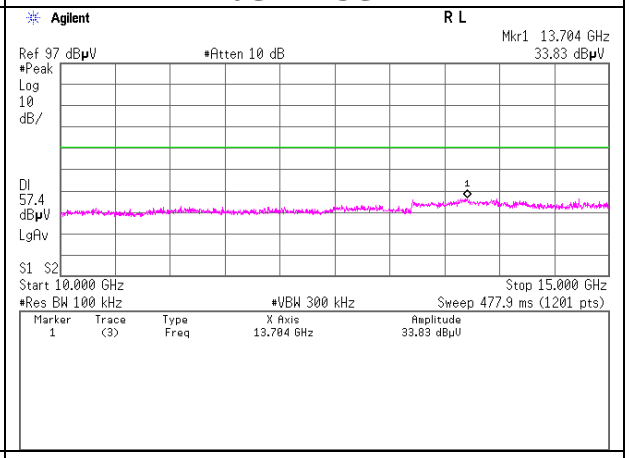
Conducted Spurious Emission

Tx 3DH5 2480MHz

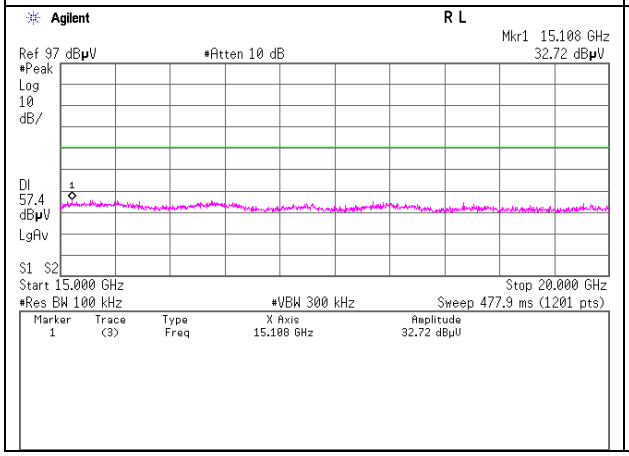
5GHz-10GHz



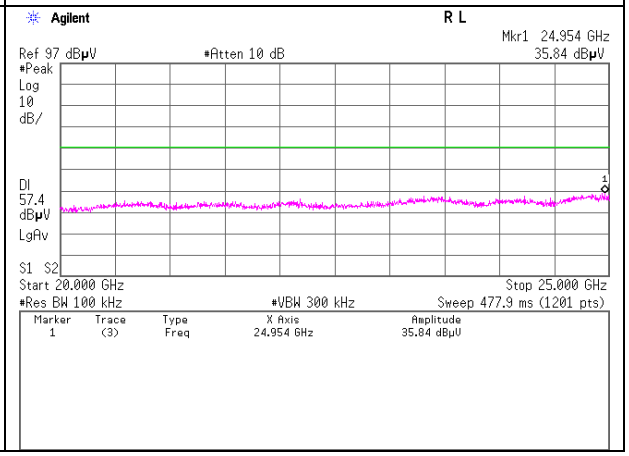
10GHz-15GHz



15GHz-20GHz



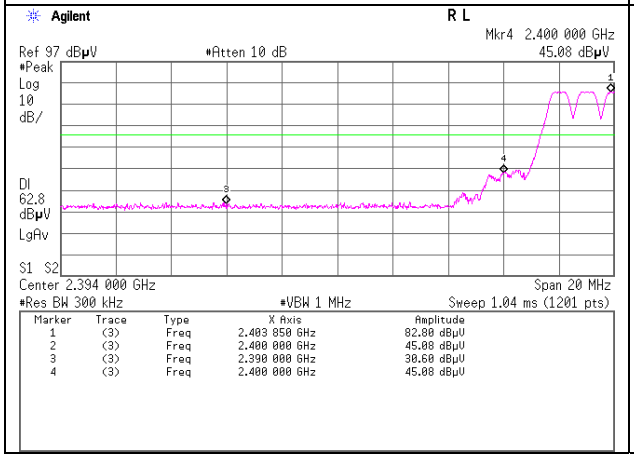
20GHz-25GHz



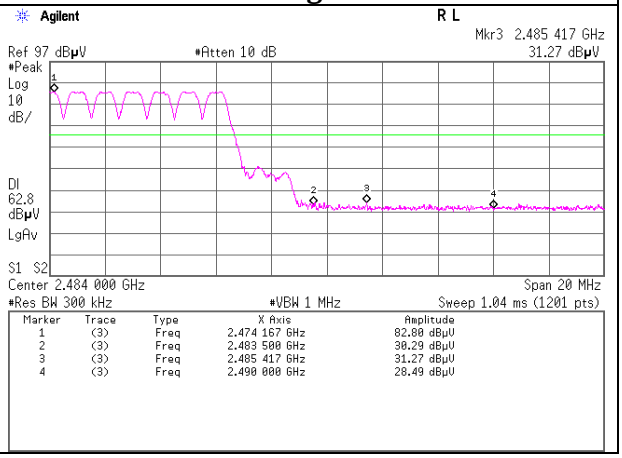
Conducted Emission Band Edge compliance

Tx DH5, Hopping on

Low

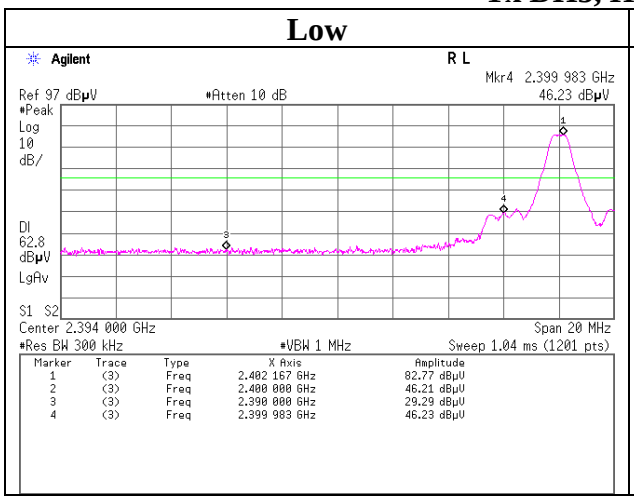


High

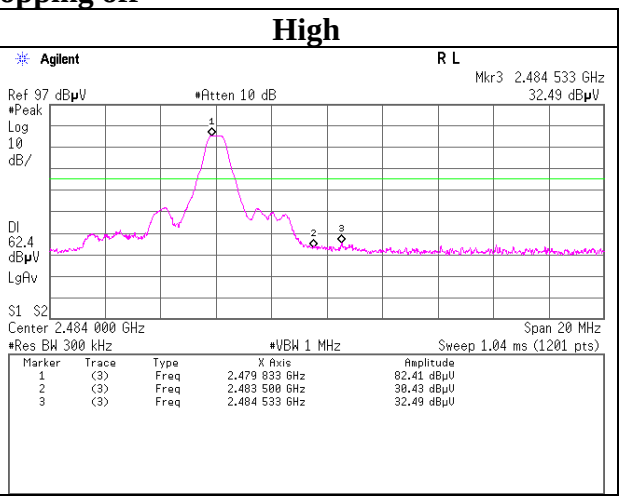


Tx DH5, Hopping off

Low



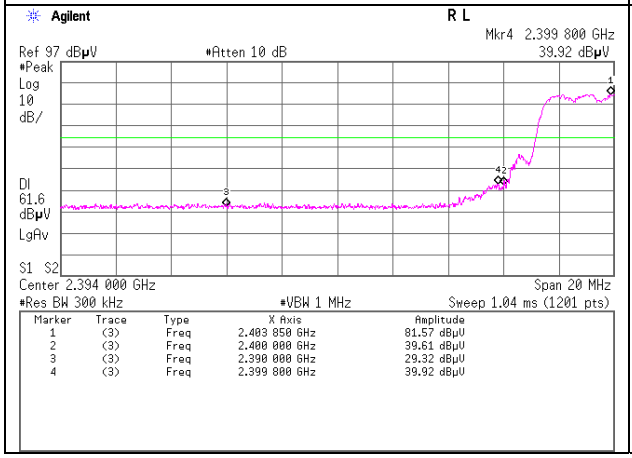
High



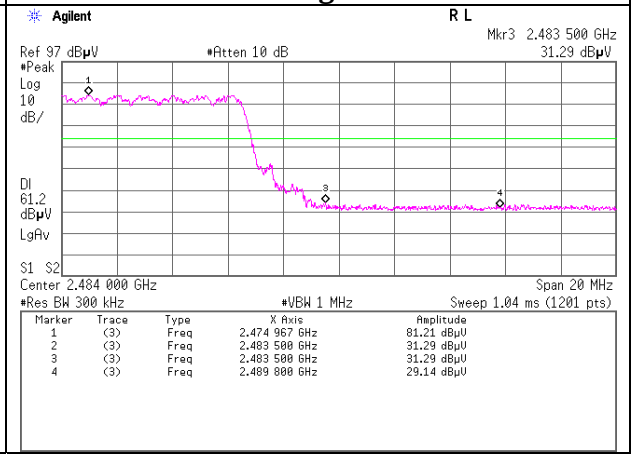
Conducted Emission Band Edge compliance

Tx 3DH5, Hopping on

Low

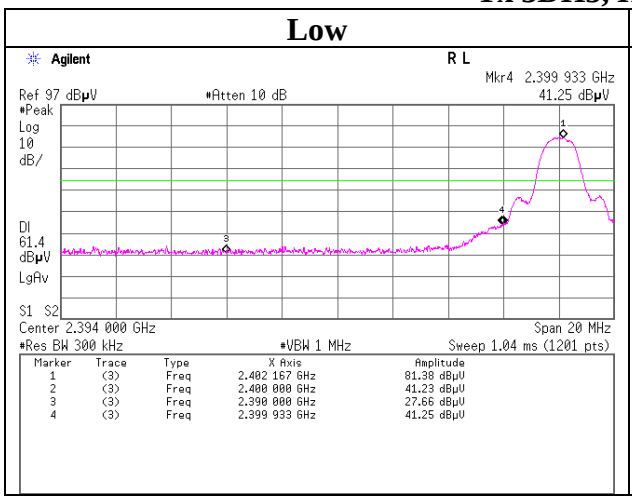


High

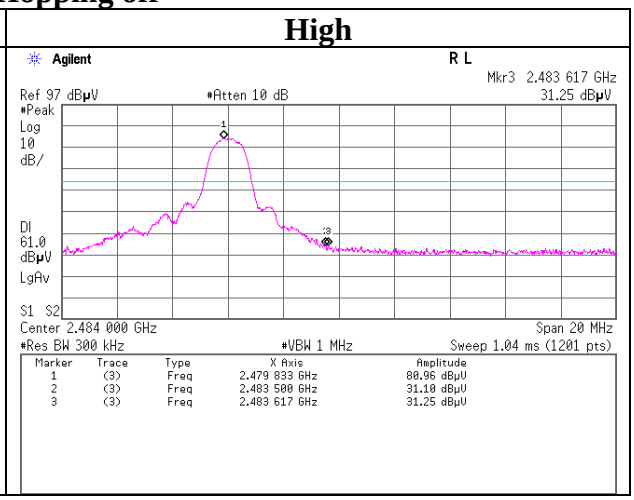


Tx 3DH5, Hopping off

Low



High



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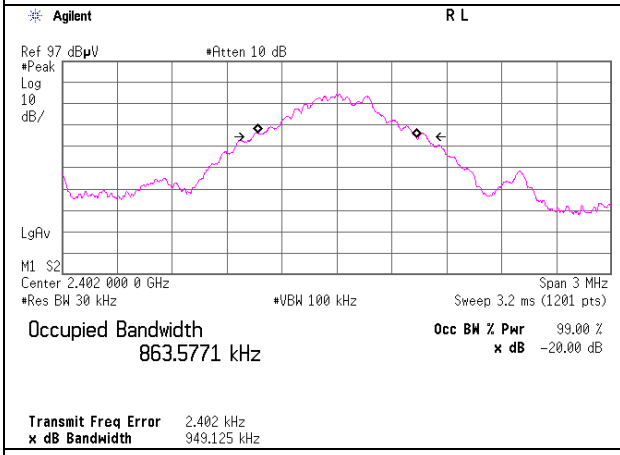
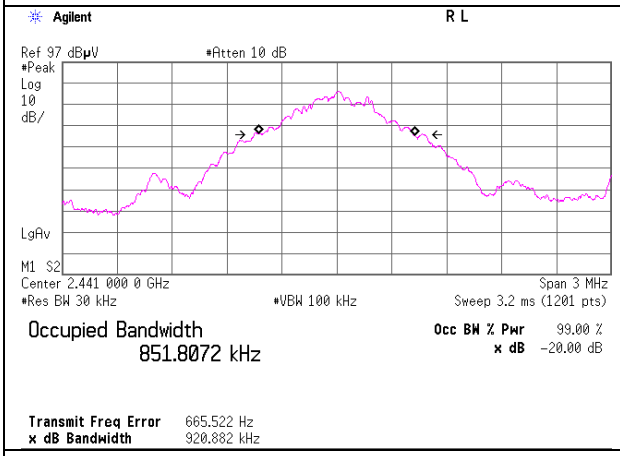
99%Occupied Bandwidth

Tx DH5, Hopping off

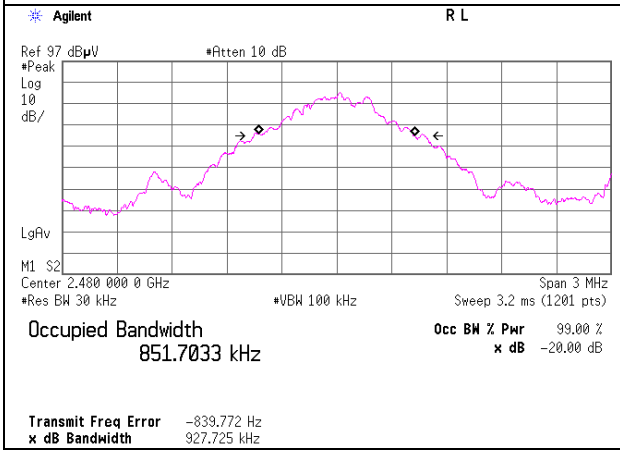
2402MHz



2441MHz

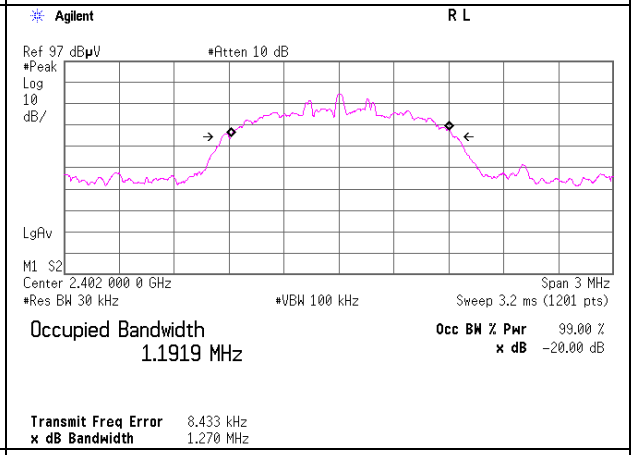


2480MHz



Tx 3DH5, Hopping off

2402MHz



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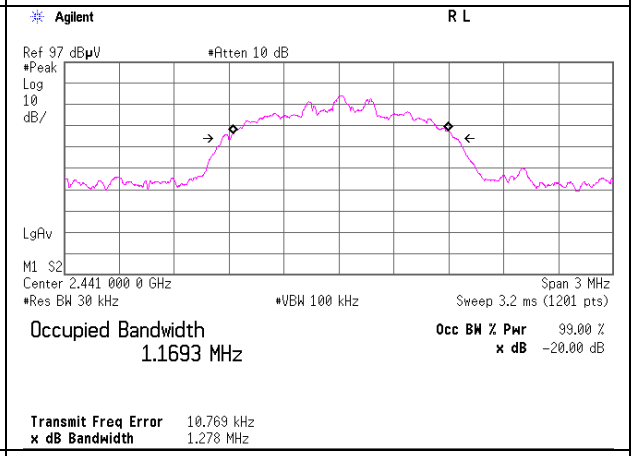
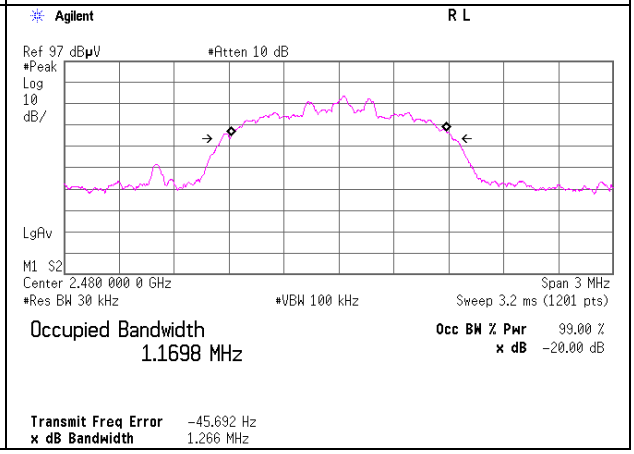
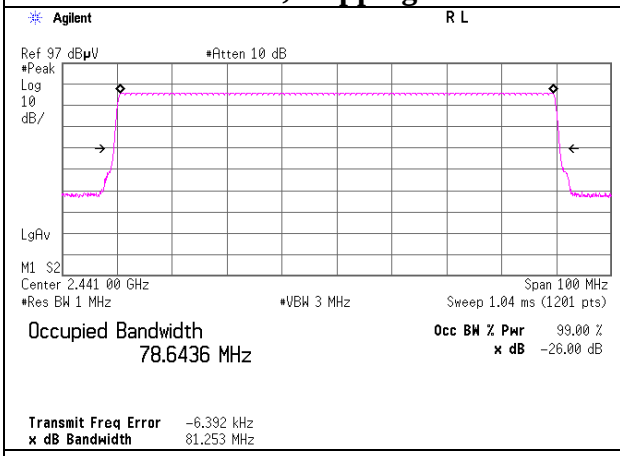


2480MHz

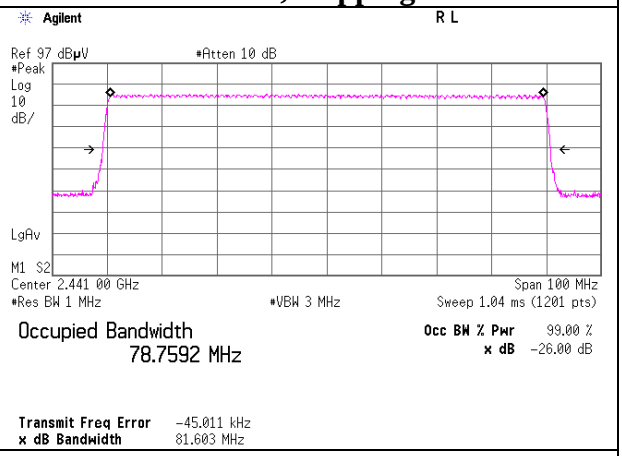


99% Occupied Bandwidth

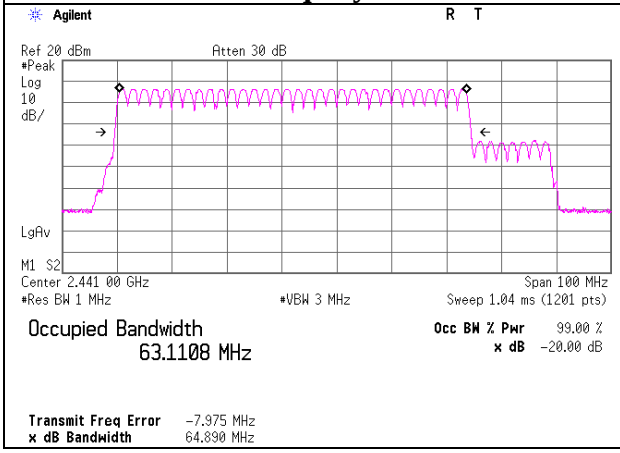
Tx DH5, Hopping on



Tx 3DH5, Hopping on



Inquiry



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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)
MOS-14	Thermo-Hygrometer	Custom	CTH-201	-	AT	2011/02/23 * 12
MSA-10	Spectrum Analyzer	Agilent	E4448A	MY46180655	AT/RE	2011/02/15 * 12
MPSE-12	Power sensor	Anritsu	MA2411B	011598	AT	2010/09/10 * 12
MPM-09	Power Meter	Anritsu	ML2495A	6K00003348	AT	2010/09/10 * 12
MAT-21	Attenuator(20dB) (above1GHz)	HIROSE ELECTRIC CO.,LTD.	AT-120	901247	AT	2011/01/06 * 12
MAT-23	Attenuator(10dB) 1-18GHz	Orient Microwave	BX10-0476-00	-	AT	2011/03/14 * 12
MCC-116	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	290221/4	AT	2010/08/05 * 12
MAEC-03	Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-10005	RE/CE	2011/02/22 * 12
MOS-13	Thermo-Hygrometer	Custom	CTH-180	-	RE/CE	2011/02/23 * 12
MJM-06	Measure	PROMART	SEN1955	-	RE/CE	-
COTS-MEMI	EMI measurement program	TSJ	TEPTO-DV	-	RE/CE	-
MHA-20	Horn Antenna 1-18GHz	Schwarzbeck	BBHA9120D	258	RE	2010/05/07 * 12
MCC-58	Microwave Cable	Suhner	SUCOFLEX104	246770(1m) / 250655(5m)	RE	2011/03/02 * 12
MPA-11	MicroWave System Amplifier	Agilent	83017A	MY39500779	RE	2011/03/10 * 12
MHA-16	Horn Antenna 15-40GHz	Schwarzbeck	BBHA9170	BBHA9170306	RE	2010/05/07 * 12
MCC-79	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	278923/4	RE	2010/12/02 * 12
MHF-19	High Pass Filter 3.5-18.0GHz	TOKIMEC	TF323DCA	602	RE	2010/09/21 * 12
MSA-09	Spectrum Analyzer	Advantest	R3273	95090115	RE/CE	2010/11/18 * 12
MTR-08	Test Receiver	Rohde & Schwarz	ESCI	100767	RE/CE	2010/08/23 * 12
MBA-03	Biconical Antenna	Schwarzbeck	BBA9106	1915	RE	2010/10/11 * 12
MLA-03	Logperiodic Antenna	Schwarzbeck	USLP9143	174	RE	2010/10/11 * 12
MCC-51	Coaxial cable	UL Japan	-	-	RE	2010/07/06 * 12
MAT-09	Attenuator(6dB)	Weinschel Corp	2	BK7973	RE	2010/11/05 * 12
MPA-13	Pre Amplifier	SONOMA INSTRUMENT	310	260834	RE	2011/03/04 * 12
MLS-07	LISN(AMN)	Schwarzbeck	NSLK8127	8127364	CE(EUT)	2011/02/22 * 12
MCC-112	Coaxial cable	Fujikura/Suhner/TSJ	5D-2W(10m)/SFM141(3m)/ sucoform141-PE(1m)/ 421-010(1.5m)/RFM-E321(Switcher)	-/00640	CE	2010/07/23 * 12
MAT-66	Attenuator(13dB)	JFW Industries, Inc.	50FP-013H2 N	-	CE	2011/02/22 * 12

The expiration date of the calibration is the end of the expired month.
All equipment is calibrated with traceable calibrations. Each calibration is traceable to the national or international standards. As for some calibrations performed after the tested dates, those test equipment have been controlled by means of an unbroken chains of calibrations.

Test Item: CE: Conducted Emission
RE: Radiated Emission
AT: Antenna Terminal Conducted test