APPENDIX 2: Data of EMI test

Conducted Emission

DATA OF CONDUCTED EMISSION TEST

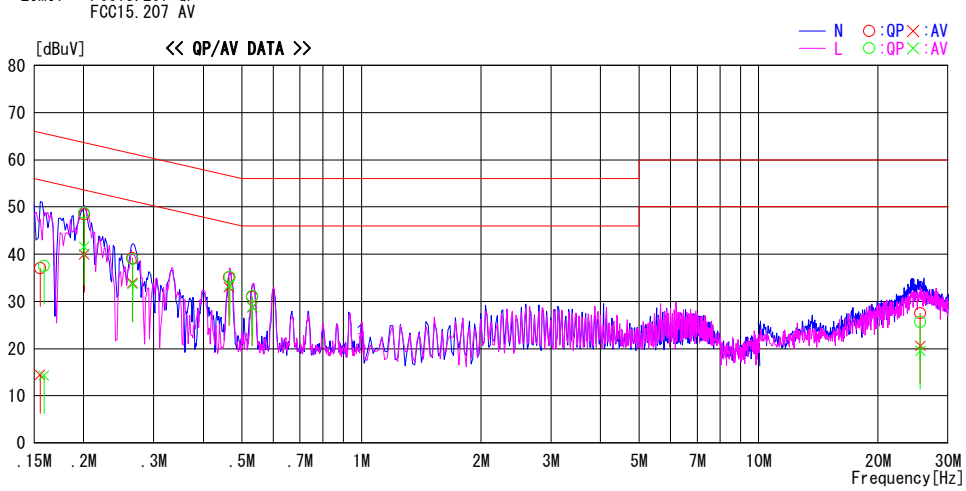
UL Japan, Inc. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2011/08/10

Report No. : 31KE0011-HO-01

Temp./Humi. : 25deg. C / 61% RH
Engineer : Motoya Imura

Mode / Remarks : Tx BDR 2402MHz

LIMIT : FCC15.207 QP
FCC15.207 AV



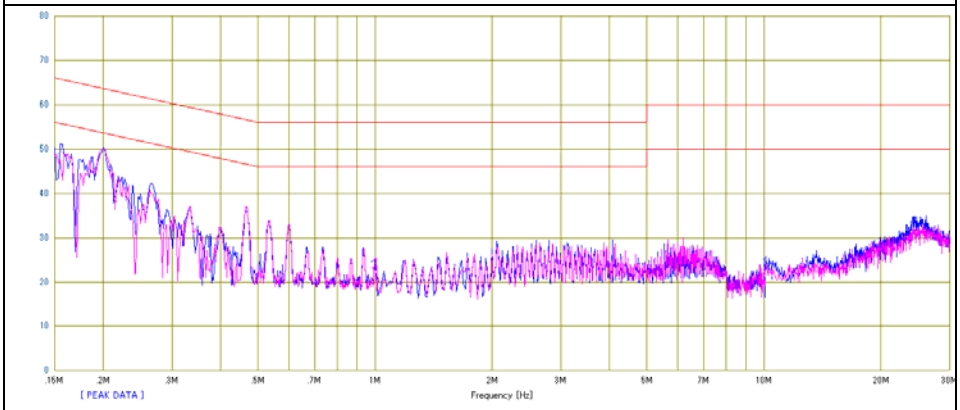
Frequency	Reading Level		Corr.	Results		Limit		Margin		Phase	Comment
	QP	AV	Factor	QP	AV	QP	AV	QP	AV		
[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dB]	[dB]		
0.15523	23.8	1.2	13.2	37.0	14.4	65.7	55.7	28.7	41.3	N	
0.20056	35.2	26.8	13.2	48.4	40.0	63.6	53.6	15.2	13.6	N	
0.26507	25.9	20.7	13.2	39.1	33.9	61.3	51.3	22.2	17.4	N	
0.46406	21.9	19.8	13.2	35.1	33.0	56.6	46.6	21.5	13.6	N	
0.53153	17.8	15.5	13.2	31.0	28.7	56.0	46.0	25.0	17.3	N	
25.53992	12.1	5.2	15.4	27.5	20.6	60.0	50.0	32.5	29.4	N	
0.15872	24.3	1.1	13.2	37.5	14.3	65.5	55.5	28.0	41.2	L	
0.20023	35.5	28.4	13.2	48.7	41.6	63.6	53.6	14.9	12.0	L	
0.26548	25.8	20.5	13.2	39.0	33.7	61.3	51.3	22.3	17.6	L	
0.46617	22.0	20.2	13.2	35.2	33.4	56.6	46.6	21.4	13.2	L	
0.53144	17.9	15.6	13.2	31.1	28.8	56.0	46.0	24.9	17.2	L	
25.53992	10.2	4.1	15.4	25.6	19.5	60.0	50.0	34.4	30.5	L	

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

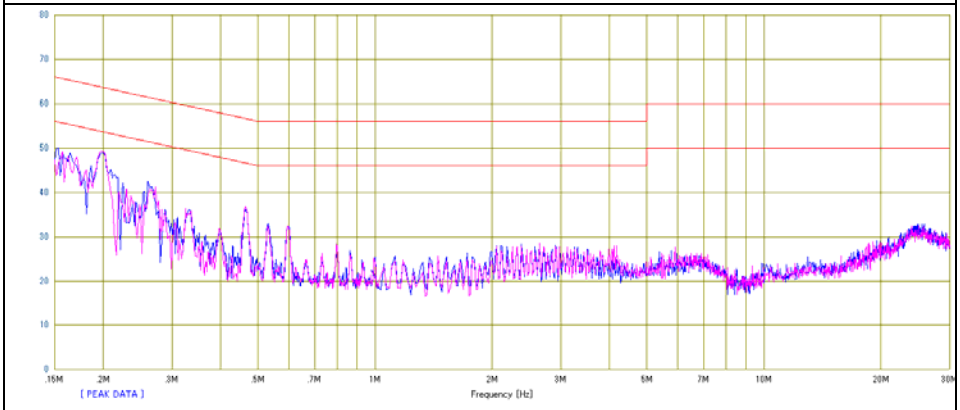
Conducted Emission

Test place	Head Office EMC Lab. No.2 Semi Anechoic Chamber
Report No.	31KE0011-HO-01
Date	08/10/2011
Temperature/ Humidity	25 deg. C / 61% RH
Engineer	Motoya Imura
Mode	Tx DH5

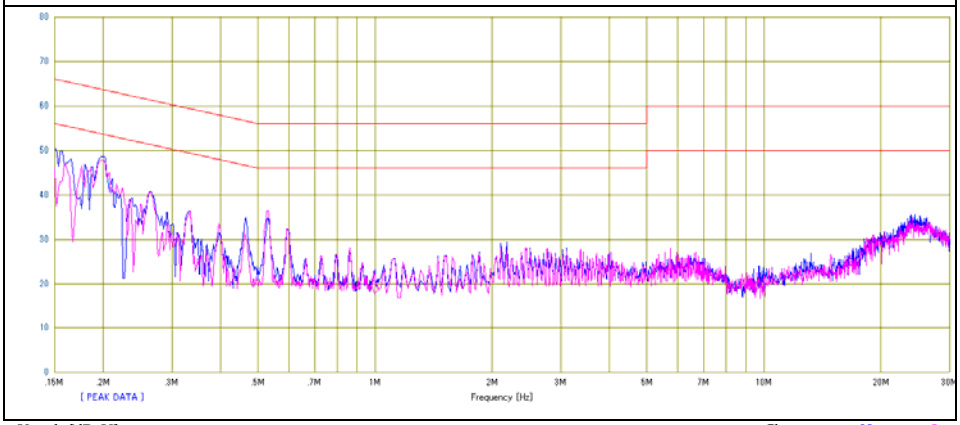
2402MHz



2441MHz



2480MHz



Y scale [dBuV] Chart — N — L

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Telephone : +81 596 24 8116
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Conducted Emission

DATA OF CONDUCTED EMISSION TEST

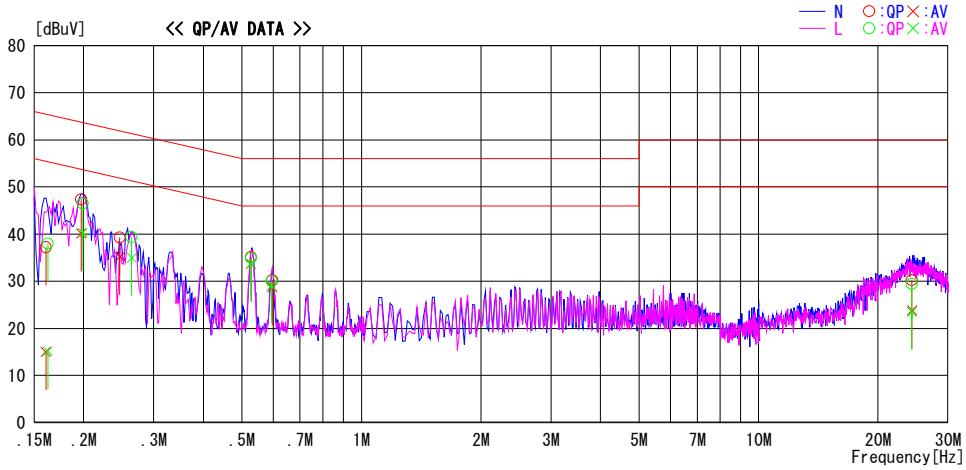
UL Japan, Inc. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2011/08/10

Report No. : 31KE0011-HO-01

Temp./Humi. : 25deg. C / 61% RH
Engineer : Motoya Imura

Mode / Remarks : Tx EDR 2402MHz

LIMIT : FCC15.207 QP
FCC15.207 AV



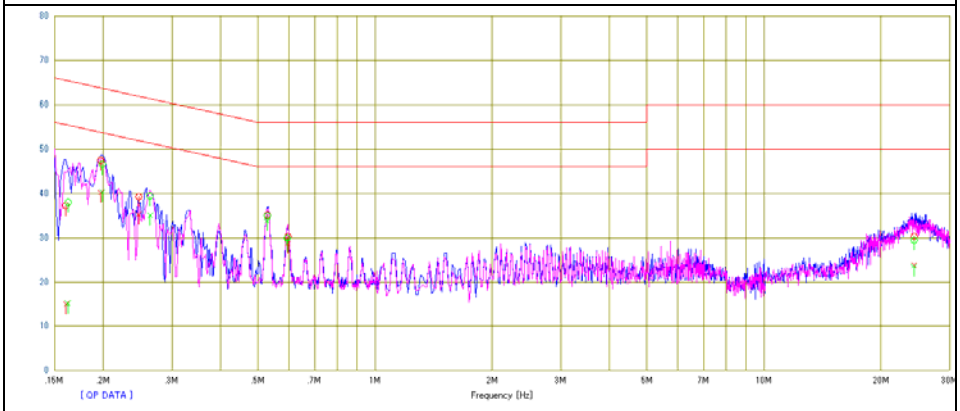
Frequency	Reading Level		Corr.	Results		Limit		Margin		Phase	Comment
	QP	AV	Factor	QP	AV	QP	AV	QP	AV		
[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dB]	[dB]		
0.16046	24.0	1.8	13.2	37.2	15.0	65.4	55.4	28.2	40.4	N	
0.19707	34.2	26.9	13.2	47.4	40.1	63.7	53.7	16.3	13.6	N	
0.24651	26.1	22.0	13.2	39.3	35.2	61.9	51.9	22.6	16.7	N	
0.52730	21.9	20.5	13.2	35.1	33.7	56.0	46.0	20.9	12.3	N	
0.59633	16.9	15.4	13.3	30.2	28.7	56.0	46.0	25.8	17.3	N	
24.33451	14.9	8.5	15.3	30.2	23.8	60.0	50.0	29.8	26.2	N	
0.16220	24.8	2.0	13.2	38.0	15.2	65.4	55.4	27.4	40.2	L	
0.19870	33.3	27.1	13.2	46.5	40.3	63.7	53.7	17.2	13.4	L	
0.26395	26.2	21.8	13.2	39.4	35.0	61.3	51.3	21.9	16.3	L	
0.52768	21.7	20.5	13.2	34.9	33.7	56.0	46.0	21.1	12.3	L	
0.59386	16.7	15.8	13.3	30.0	29.1	56.0	46.0	26.0	16.9	L	
24.29433	14.1	8.2	15.3	29.4	23.5	60.0	50.0	30.6	26.5	L	

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

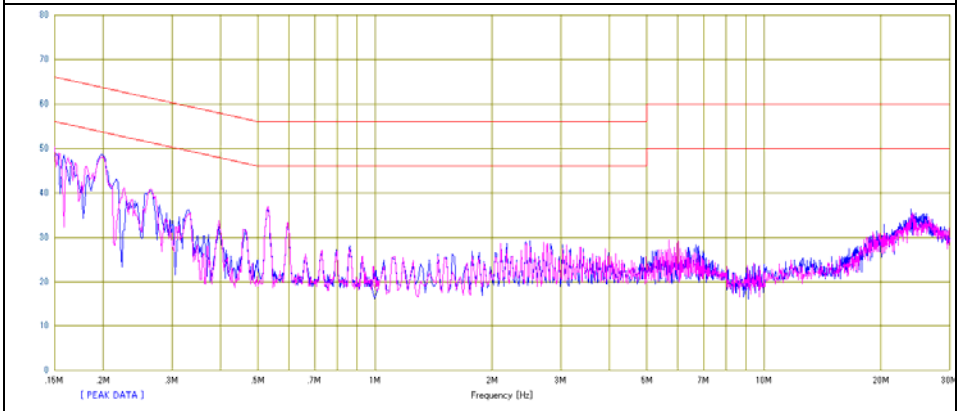
Conducted Emission

Test place	Head Office EMC Lab. No.2 Semi Anechoic Chamber
Report No.	31KE0011-HO-01
Date	08/10/2011
Temperature/ Humidity	25 deg. C / 61% RH
Engineer	Motoya Imura
Mode	Tx 3DH5

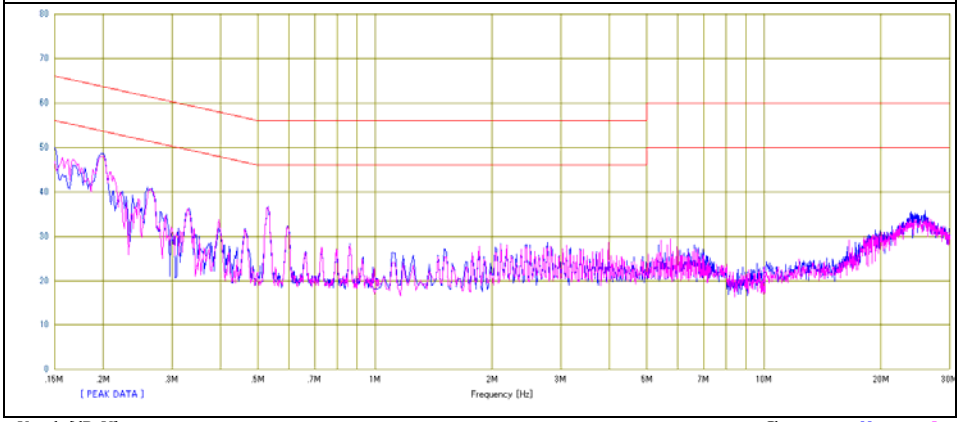
2402MHz



2441MHz



2480MHz



Y scale [dBuV] Chart — N — L

Conducted Emission

DATA OF CONDUCTED EMISSION TEST

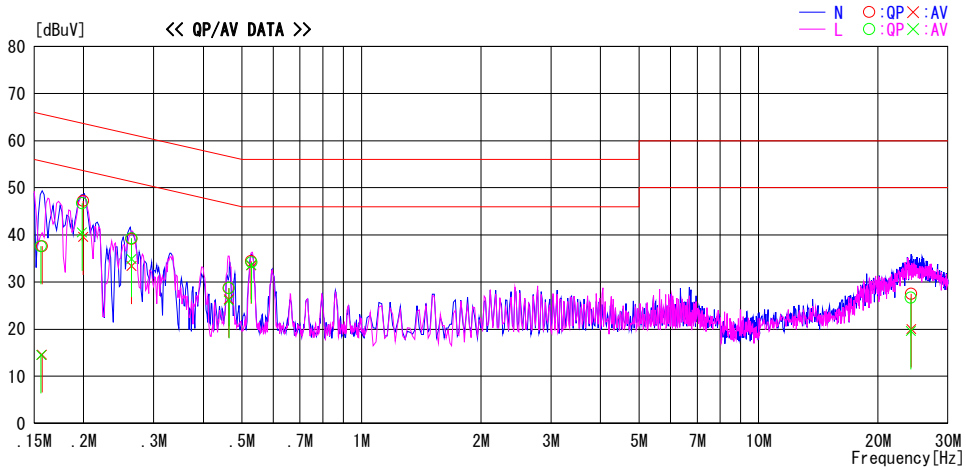
UL Japan, Inc. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2011/08/10

Report No. : 31KE0011-HO-01

Temp./Humi. : 25deg. C / 61% RH
Engineer : Motoya Imura

Mode / Remarks : Rx 2441MHz

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]		
0.15697	24.4	1.4	13.2	37.6	14.6	65.6	55.6	28.0	41.0	N	
0.19916	34.0	26.4	13.2	47.2	39.6	63.6	53.6	16.4	14.0	N	
0.26380	25.9	20.2	13.2	39.1	33.4	61.3	51.3	22.2	17.9	N	
0.46356	15.5	13.1	13.2	28.7	26.3	56.6	46.6	27.9	20.3	N	
0.52798	21.2	20.3	13.2	34.4	33.5	56.0	46.0	21.6	12.5	N	
24.21397	12.2	4.7	15.3	27.5	20.0	60.0	50.0	32.5	30.0	N	
0.15605	24.4	1.3	13.2	37.6	14.5	65.7	55.7	28.1	41.2	L	
0.19799	33.5	27.3	13.2	46.7	40.5	63.7	53.7	17.0	13.2	L	
0.26363	26.1	21.7	13.2	39.3	34.9	61.3	51.3	22.0	16.4	L	
0.46383	15.5	12.9	13.2	28.7	26.1	56.6	46.6	27.9	20.5	L	
0.52833	21.0	20.4	13.2	34.2	33.6	56.0	46.0	21.8	12.4	L	
24.17379	11.4	4.3	15.3	26.7	19.6	60.0	50.0	33.3	30.4	L	

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

20dB Bandwidth and Carrier Frequency Separation

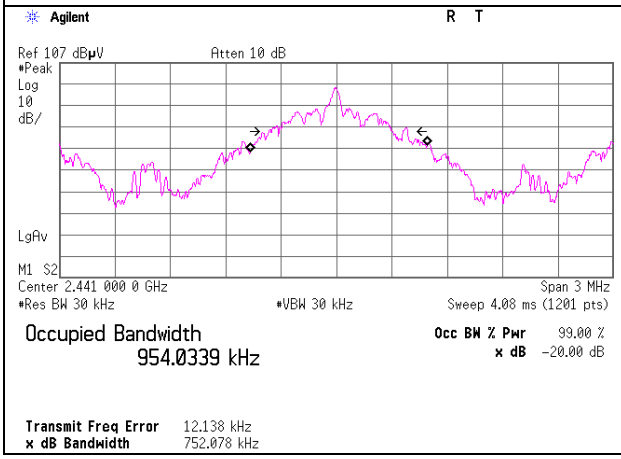
Test place	Head Office EMC Lab. No.7 Measurement Room
Report No.	31KE0011-HO-01
Date	06/23/2011
Temperature/ Humidity	22 deg.C / 56%RH
Engineer	Tomohisa Nakagawa
Mode	Tx (Hopping off) DH5/3DH5/Inquiry

Mode	Freq. [MHz]	20dB Bandwidth [MHz]	Carrier Frequency Separation [MHz]	Limit for Carrier Frequency separation [MHz]
DH5	2402.0	0.918	1.000	>= 0.612
DH5	2441.0	0.922	1.000	>= 0.614
DH5	2480.0	0.921	1.000	>= 0.614
3DH5	2402.0	1.294	1.000	>= 0.863
3DH5	2441.0	1.270	1.000	>= 0.847
3DH5	2480.0	1.269	1.000	>= 0.846
Inquiry	2441.0	0.752	2.000	>= 0.501

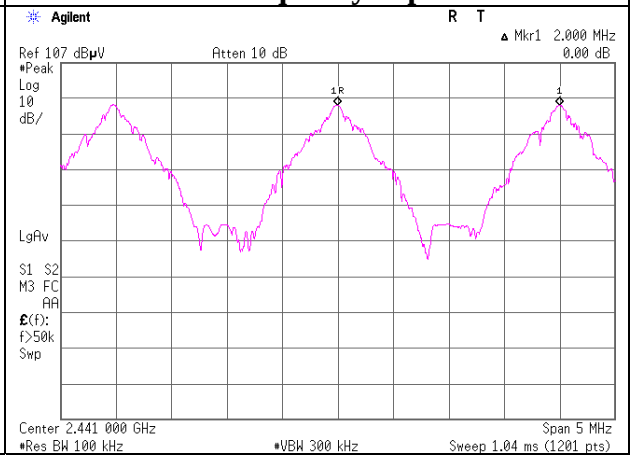
Limit: Two-thirds of 20dB Bandwidth or 25kHz (whichever is greater).
No limit applies to 20dB Bandwidth.

Inquiry

20dB Bandwidth



Carrier Frequency Separation

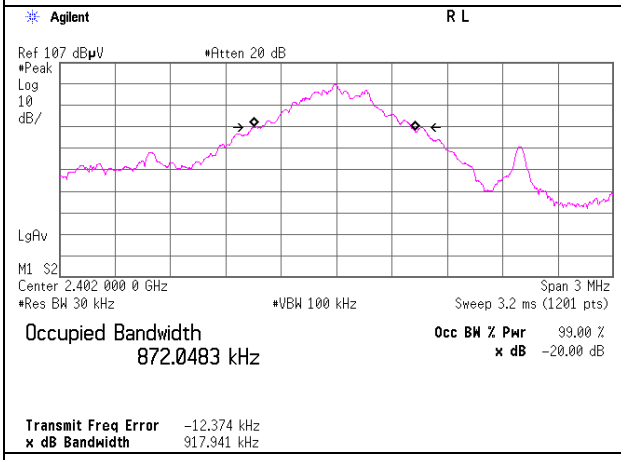


20dB Bandwidth and Carrier Frequency Separation

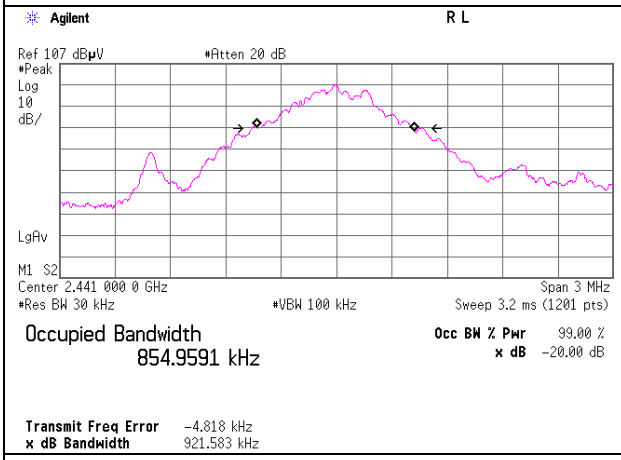
Tx DH5

20dB Bandwidth

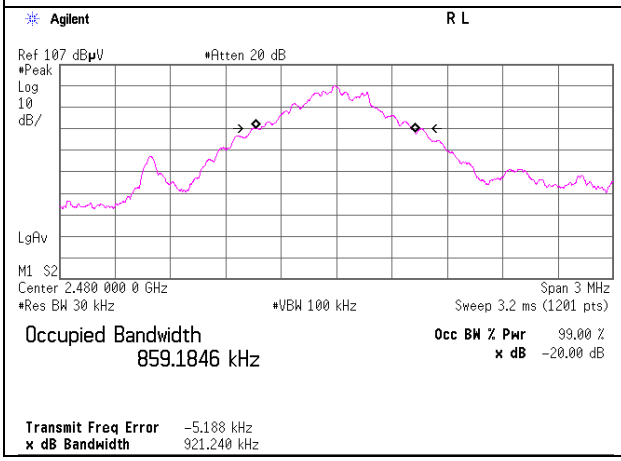
2402MHz



2441MHz

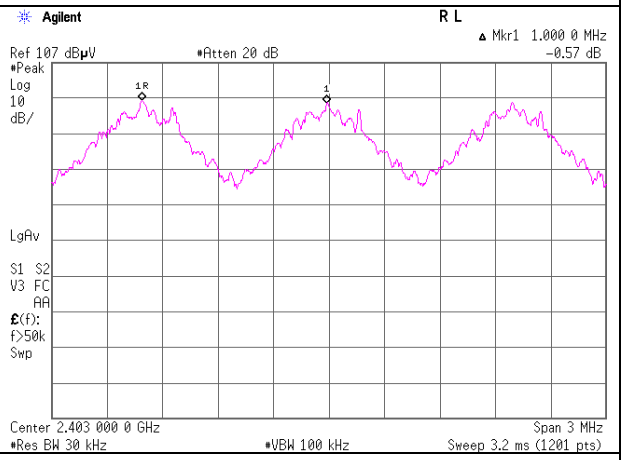


2480MHz

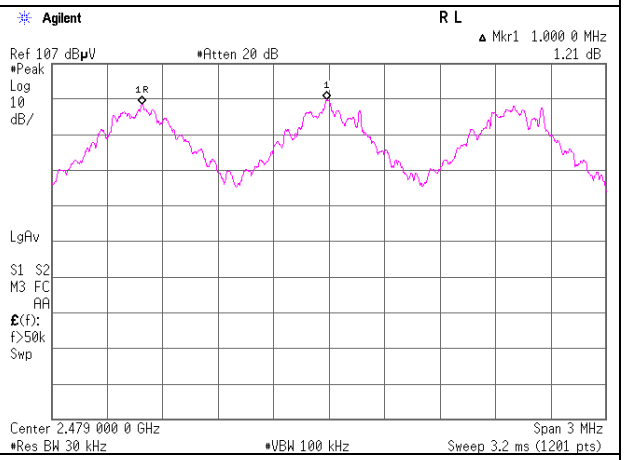


Carrier Frequency Separation

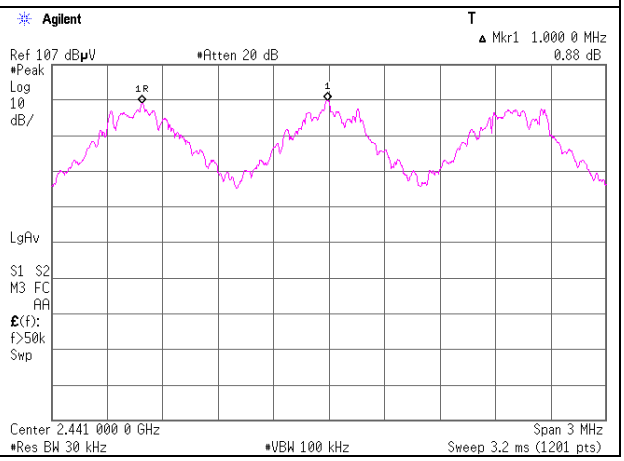
2402MHz



2441MHz



2480MHz

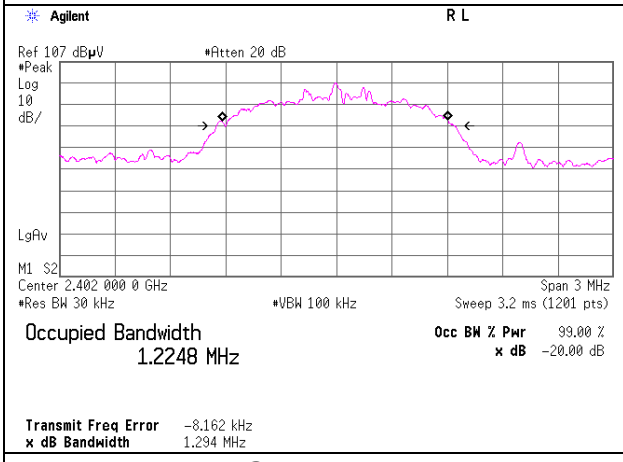


20dB Bandwidth and Carrier Frequency Separation

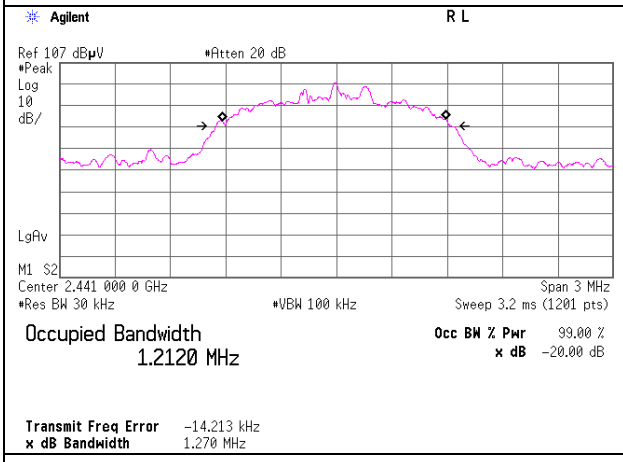
Tx 3DH5

20dB Bandwidth

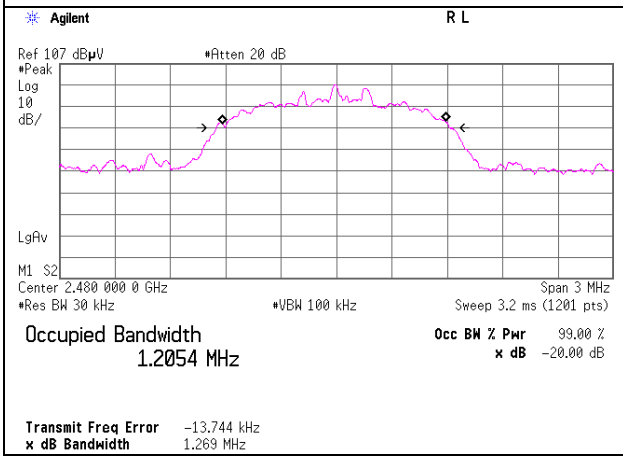
2402MHz



2441MHz

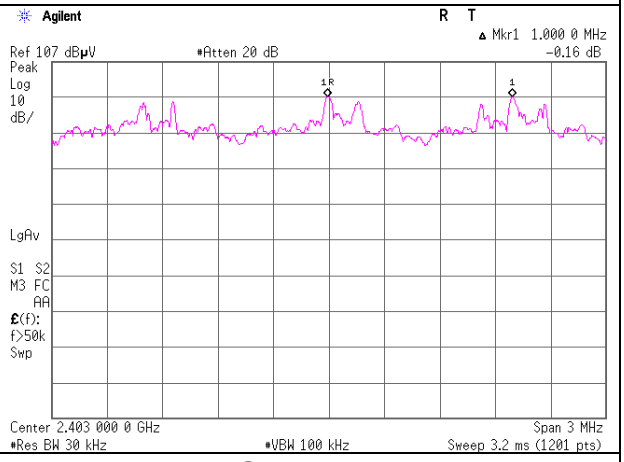


2480MHz

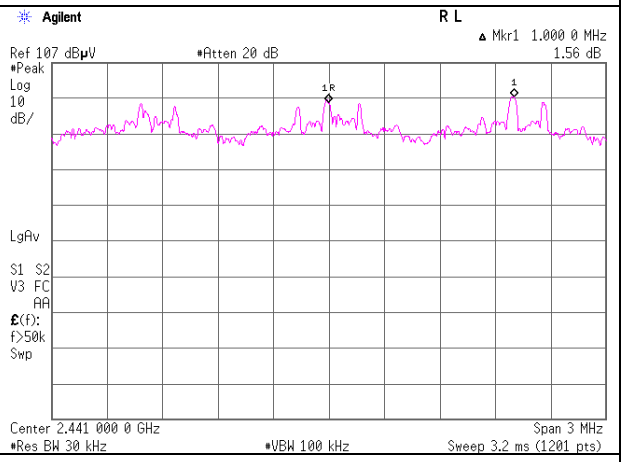


Carrier Frequency Separation

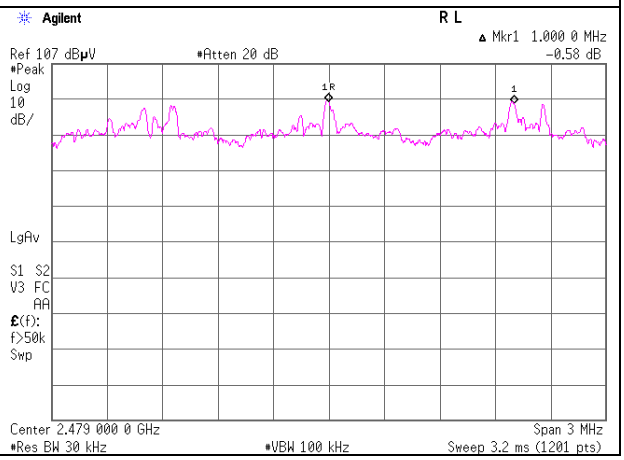
2402MHz



2441MHz



2480MHz

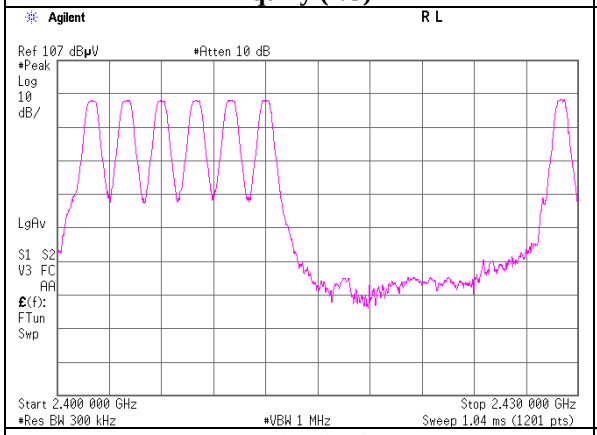


Number of Hopping Frequency

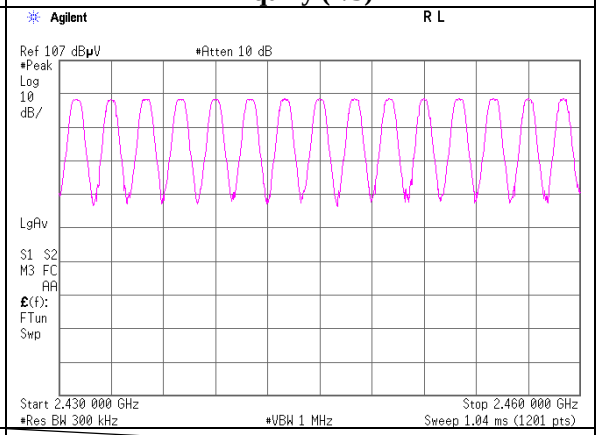
Test place	Head Office EMC Lab. No.7 Measurement Room
Report No.	31KE0011-HO-01
Date	06/23/2011
Temperature/ Humidity	22 deg.C / 56%RH
Engineer	Tomohisa Nakagawa
Mode	Tx (Hopping off) DH5/3DH5/Inquiry

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

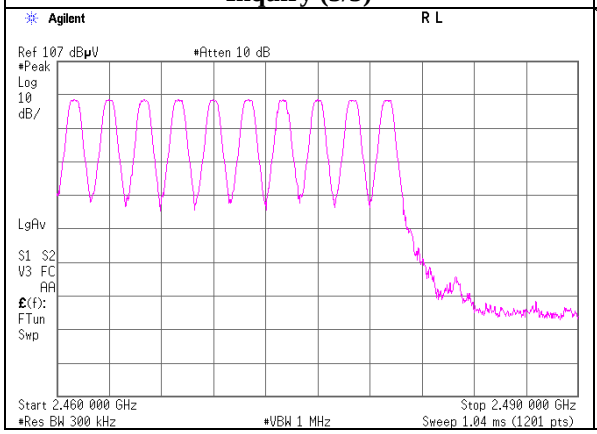
Inquiry (1/3)



Inquiry (2/3)



Inquiry (3/3)



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Head Office EMC Lab.
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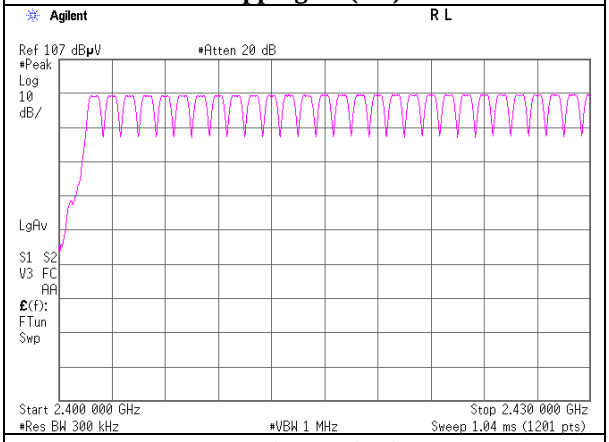
Telephone : +81 596 24 8116
Facsimile : +81 596 24 8124

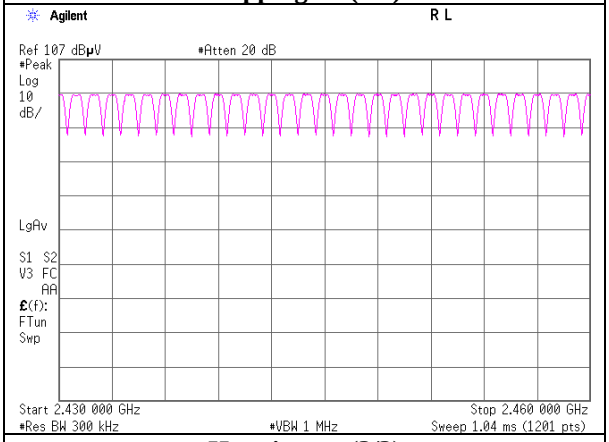
Number of Hopping Frequency

Tx DH5

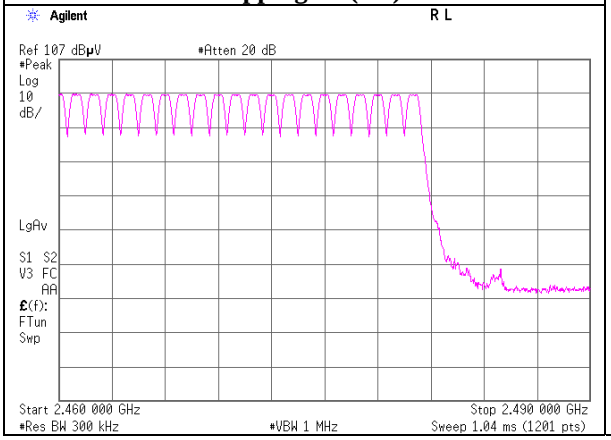
Hopping on (1/3)



Hopping on (2/3)

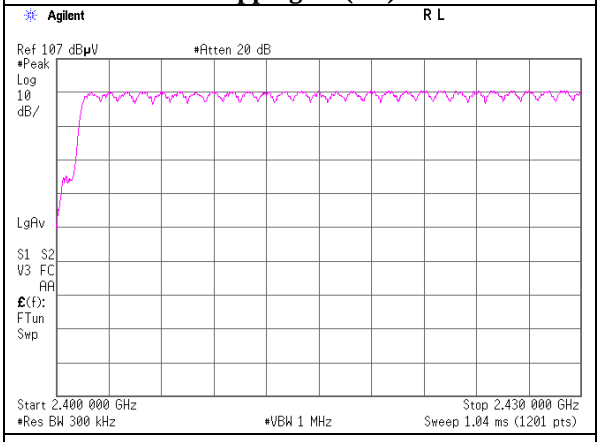


Hopping on (3/3)

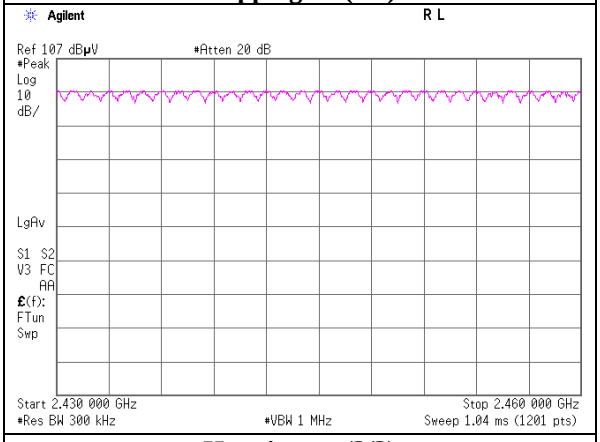


Tx 3DH5

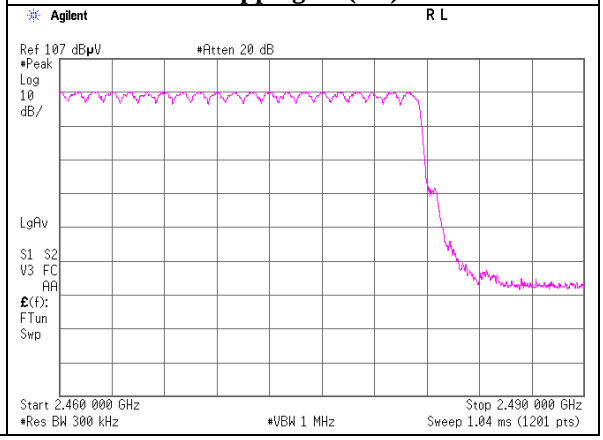
Hopping on (1/3)



Hopping on (2/3)



Hopping on (3/3)



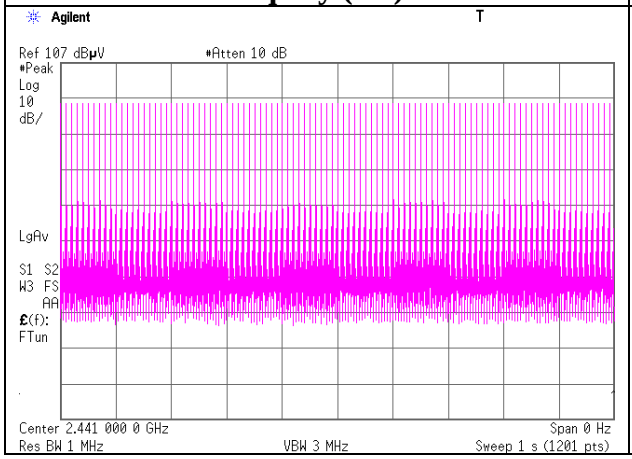
Dwell time

Test place	Head Office EMC Lab. No.7 Measurement Room
Report No.	31KE0011-HO-01
Date	06/23/2011
Temperature/ Humidity	22 deg.C / 56%RH
Engineer	Tomohisa Nakagawa
Mode	Tx (Hopping off) DH5/3DH5/Inquiry

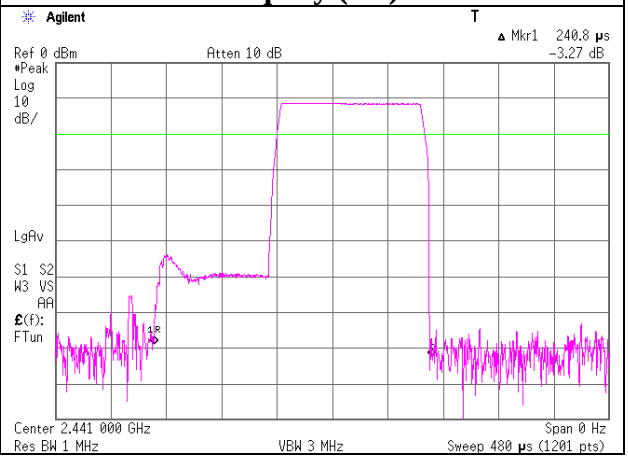
Mode	Number of transmission in a 31.6(79 Hopping x 0.4) / 12.8(32 Hopping x 0.4)second period							Length of transmission time [msec]	Result [msec]	Limit [msec]
DH1	51.0 times	/	5 sec.	x	31.6 sec.	=	323 times	0.546	176	400
DH3	26.0 times	/	5 sec.	x	31.6 sec.	=	165 times	1.805	298	400
DH5	17.0 times	/	5 sec.	x	31.6 sec.	=	108 times	3.075	332	400
3DH1	51.0 times	/	5 sec.	x	31.6 sec.	=	323 times	0.559	181	400
3DH3	25.0 times	/	5 sec.	x	31.6 sec.	=	158 times	1.816	287	400
3DH5	17.0 times	/	5 sec.	x	31.6 sec.	=	108 times	3.066	331	400
Inquiry	100.0 times	/	1 sec.	x	12.8 sec.	=	1280 times	0.241	308	400

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

Inquiry (1/2)

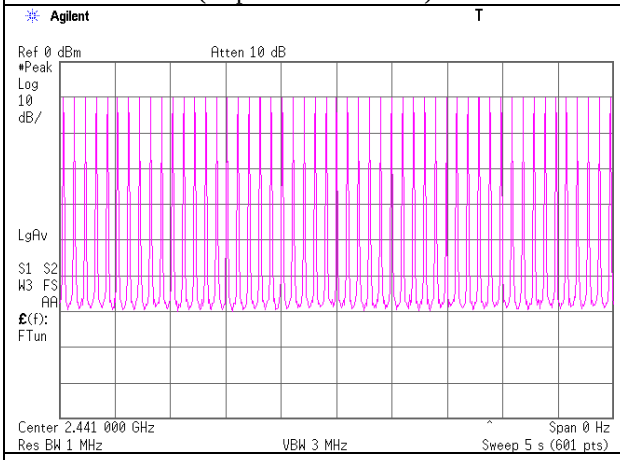


Inquiry (2/2)

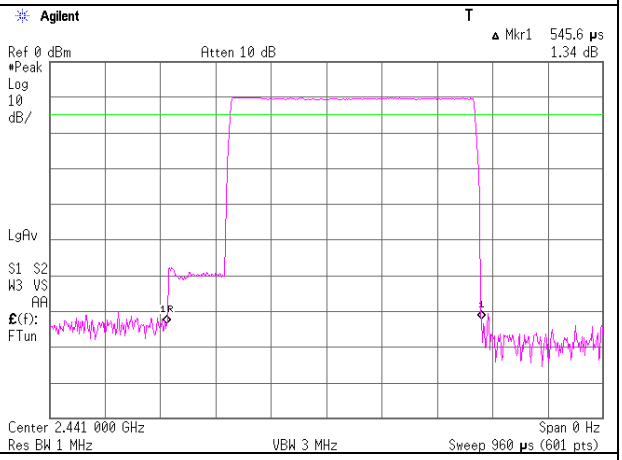


Dwell time

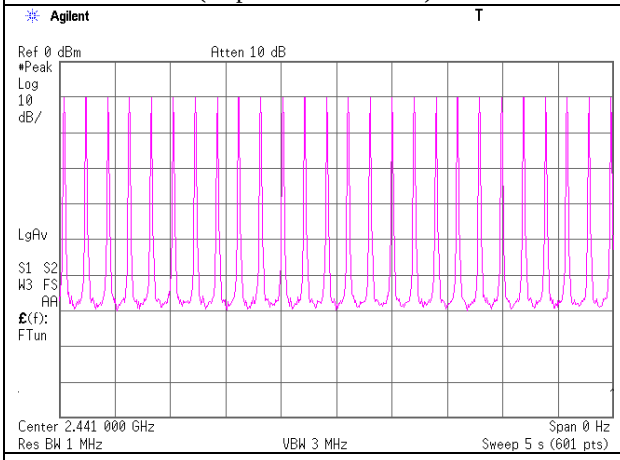
DH1 (1/2)
(Representative chart)



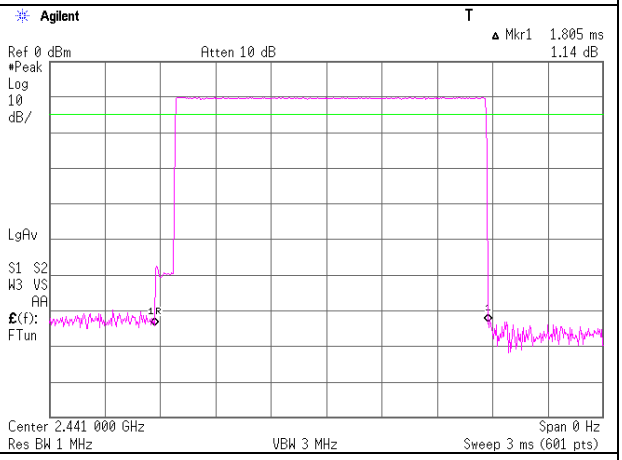
DH1 (2/2)



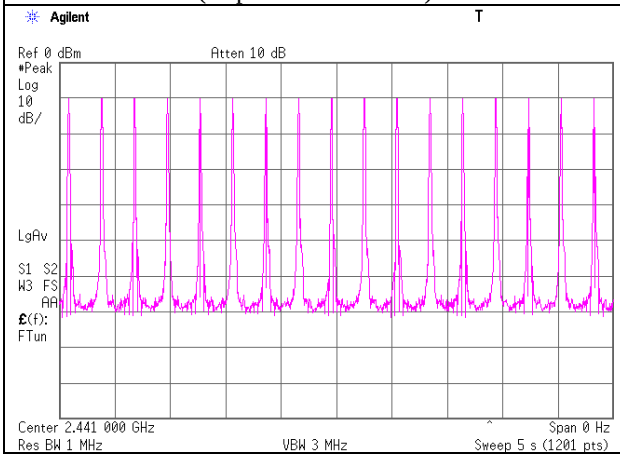
DH3 (1/2)
(Representative chart)



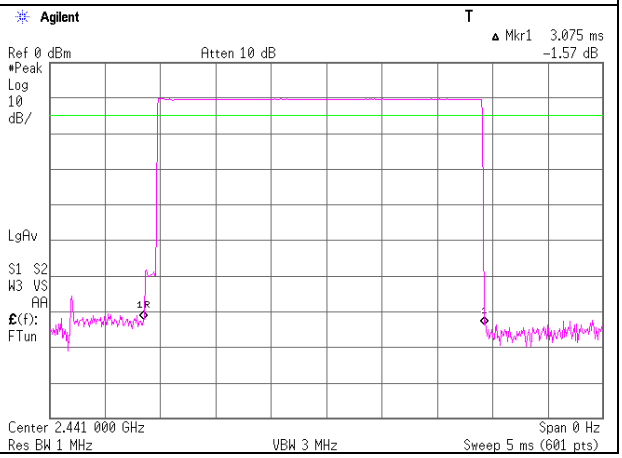
DH3 (2/2)



DH5 (1/2)
(Representative chart)

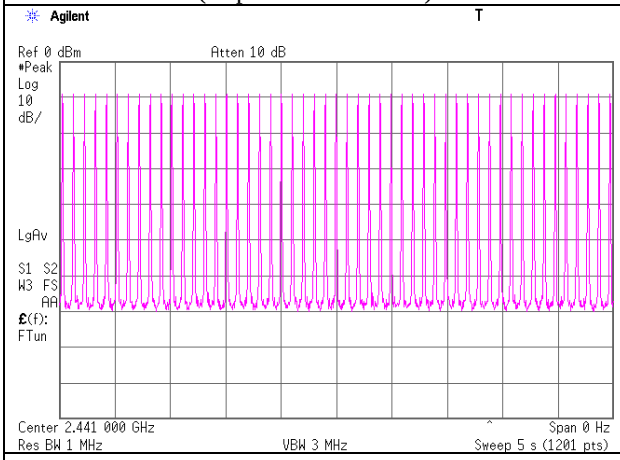


DH5 (2/2)

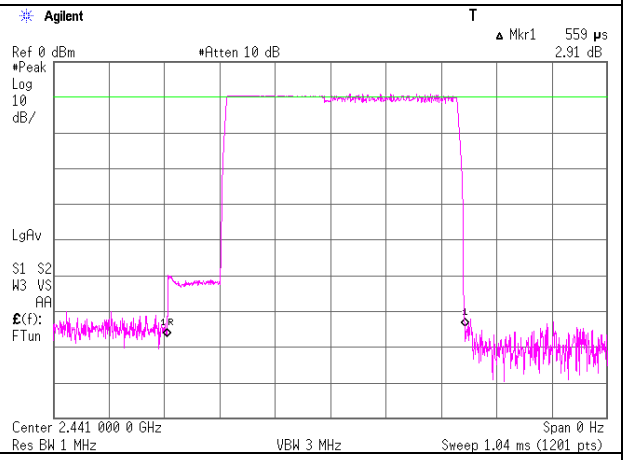


Dwell time

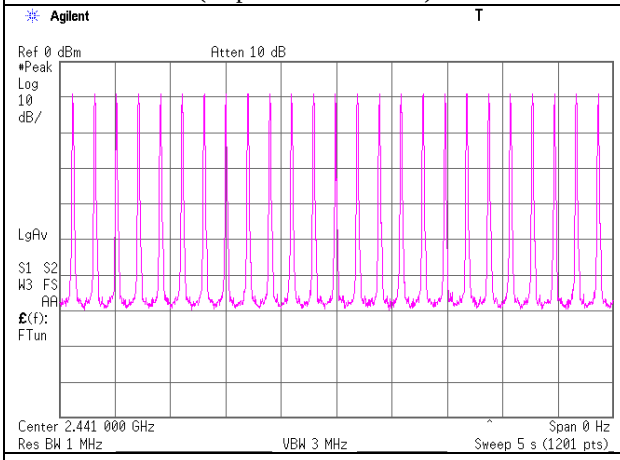
3DH1 (1/2)
(Representative chart)



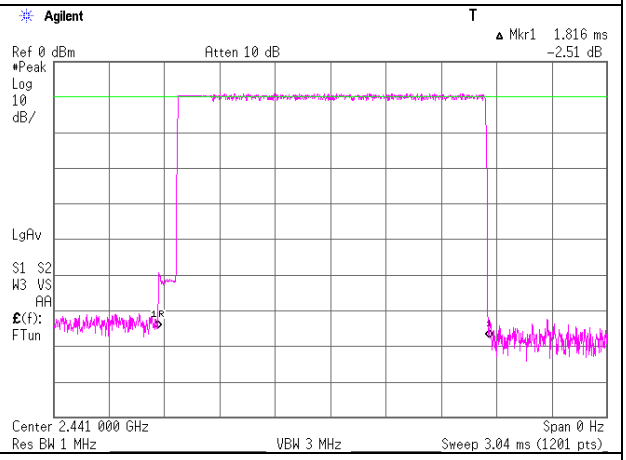
3DH1 (2/2)



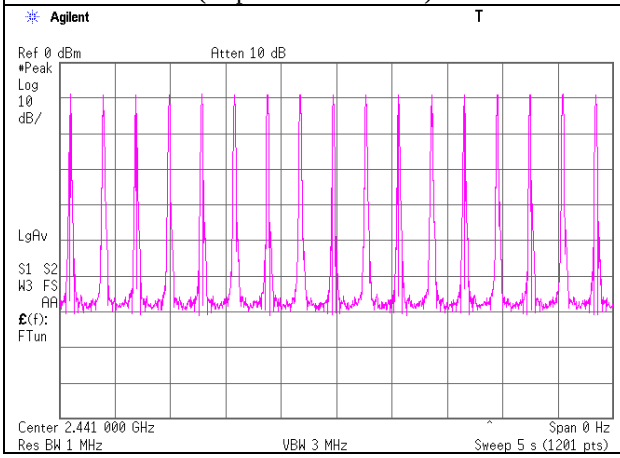
3DH3 (1/2)
(Representative chart)



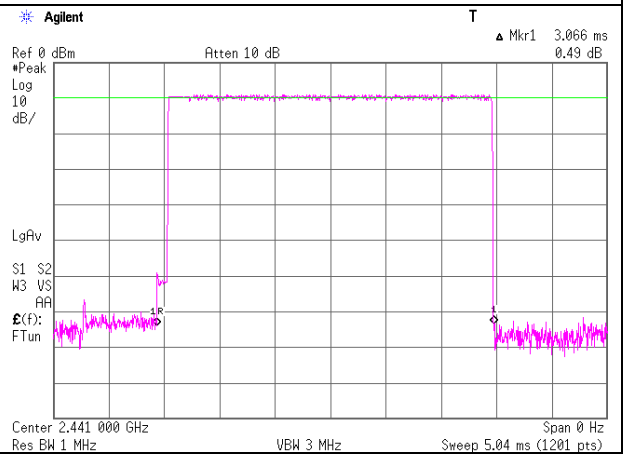
3DH3 (2/2)



3DH5 (1/2)
(Representative chart)



3DH5 (2/2)



Maximum Peak Output Power

Test place	Head Office EMC Lab. No.7 Measurement Room
Report No.	31KE0011-HO-01
Date	06/23/2011
Temperature/ Humidity	22 deg. C / 56% RH
Engineer	Tomohisa Nakagawa
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	-9.99	2.07	10.70	2.78	1.90	20.97	125	18.19
DH5	2441.0	-9.73	2.07	10.70	3.04	2.01	20.97	125	17.93
DH5	2480.0	-9.86	2.08	10.70	2.92	1.96	20.97	125	18.05
2DH5	2402.0	-8.57	2.07	10.70	4.20	2.63	20.97	125	16.77
2DH5	2441.0	-8.37	2.07	10.70	4.40	2.75	20.97	125	16.57
2DH5	2480.0	-8.74	2.08	10.70	4.04	2.54	20.97	125	16.93
3DH5	2402.0	-8.54	2.07	10.70	4.23	2.65	20.97	125	16.74
3DH5	2441.0	-8.42	2.07	10.70	4.35	2.72	20.97	125	16.62
3DH5	2480.0	-8.67	2.08	10.70	4.11	2.58	20.97	125	16.86
Inquiry	2441.0	-12.09	2.07	10.70	0.68	1.17	20.97	125	20.29

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

Test was not performed at AFH mode, because the decrease of number of channel (min: 20ch) at AFH mode does not influence on the output power and bandwidth of the EUT.
However, the limit level 125mWof AFH mode was used for the test.

Radiated Spurious Emission

Test place	Head Office EMC Lab. No.2 Semi Anechoic Chamber	
Report No.	31KE0011HO-01	
Date	08/09/2011	08/10/2011
Temperature/ Humidity	26 deg. C / 62% RH	25 deg. C / 61% RH
Engineer	Hironobu Ohnishi	Takumi Shimada
	Above 1GHz	Below 1GHz
Mode	Tx, DH5 2402MHz	

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	52.000	QP	22.7	10.3	7.0	28.7	11.3	40.0	28.7	NS
Hori	78.000	QP	22.6	6.4	7.3	28.6	7.7	40.0	32.3	NS
Hori	104.000	QP	22.4	10.8	7.5	28.4	12.3	43.5	31.2	NS
Hori	130.000	QP	22.3	14.0	7.7	28.3	15.7	43.5	27.8	NS
Hori	156.000	QP	22.0	15.3	7.9	28.2	17.0	43.5	26.5	NS
Hori	312.000	QP	21.5	15.3	8.8	27.7	17.9	46.0	28.1	NS
Hori	2390.000	PK	45.4	27.4	2.5	32.4	42.9	73.9	31.0	
Hori	2400.000	PK	66.6	27.4	2.5	32.4	64.1	-	-	See 20dBc Data Sheet
Hori	4804.000	PK	43.1	31.3	4.4	31.4	47.4	73.9	26.5	
Hori	7206.000	PK	40.8	35.5	5.1	31.6	49.8	73.9	24.1	
Hori	9608.000	PK	42.7	38.4	5.9	31.9	55.1	73.9	18.8	NS
Hori	24020.000	PK	44.6	40.5	-0.9	29.6	54.6	73.9	19.3	NS
Hori	2390.000	AV	32.7	27.4	2.5	32.4	30.2	53.9	23.7	VBW270Hz
Hori	2400.000	AV	58.0	27.4	2.5	32.4	55.5	-	-	See 20dBc Data Sheet
Hori	4804.000	AV	34.5	31.3	4.4	31.4	38.8	53.9	15.1	VBW270Hz
Hori	7206.000	AV	29.3	35.5	5.1	31.6	38.3	53.9	15.6	VBW270Hz
Hori	9608.000	AV	29.2	38.4	5.9	31.9	41.6	53.9	12.3	NS, VBW10Hz
Hori	24020.000	AV	32.8	40.5	-0.9	29.6	42.8	53.9	11.1	NS, VBW10Hz
Vert	52.000	QP	22.7	10.3	7.0	28.7	11.3	40.0	28.7	NS
Vert	78.000	QP	22.6	6.4	7.3	28.6	7.7	40.0	32.3	NS
Vert	104.000	QP	22.4	10.8	7.5	28.4	12.3	43.5	31.2	NS
Vert	130.000	QP	22.3	14.0	7.7	28.3	15.7	43.5	27.8	NS
Vert	156.000	QP	22.0	15.3	7.9	28.2	17.0	43.5	26.5	NS
Vert	312.000	QP	21.4	15.3	8.8	27.7	17.8	46.0	28.2	NS
Vert	2390.000	PK	43.0	27.4	2.5	32.4	40.5	73.9	33.4	
Vert	2400.000	PK	61.7	27.4	2.5	32.4	59.2	-	-	See 20dBc Data Sheet
Vert	4804.000	PK	43.6	31.3	4.4	31.4	47.9	73.9	26.0	
Vert	7206.000	PK	41.9	35.5	5.1	31.6	50.9	73.9	23.0	
Vert	9608.000	PK	42.3	38.4	5.9	31.9	54.7	73.9	19.2	NS
Vert	24020.000	PK	44.7	40.5	-0.9	29.6	54.7	73.9	19.2	NS
Vert	2390.000	AV	30.9	27.4	2.5	32.4	28.4	53.9	25.5	VBW270Hz
Vert	2400.000	AV	52.9	27.4	2.5	32.4	50.4	-	-	See 20dBc Data Sheet
Vert	4804.000	AV	35.8	31.3	4.4	31.4	40.1	53.9	13.8	VBW270Hz
Vert	7206.000	AV	29.8	35.5	5.1	31.6	38.8	53.9	15.1	VBW270Hz
Vert	9608.000	AV	29.2	38.4	5.9	31.9	41.6	53.9	12.3	NS, VBW10Hz
Vert	24020.000	AV	32.7	40.5	-0.9	29.6	42.7	53.9	11.2	NS, VBW10Hz

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=No signal detected

*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
20dBc Data Sheet

Test place	Head Office EMC Lab. No.2 Semi Anechoic Chamber
Report No.	31KE0011HO-01
Date	08/09/2011
Temperature/ Humidity	26 deg. C / 62% RH
Engineer	Hironobu Ohnishi
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	101.7	27.4	2.5	32.4	99.2	-	-	Carrier
Hori	2400.000	PK	60.6	27.4	2.5	32.4	58.1	79.2	21.1	
Vert	2402.000	PK	96.7	27.4	2.5	32.4	94.2	-	-	Carrier
Vert	2400.000	PK	55.4	27.4	2.5	32.4	52.9	74.2	21.3	

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

Radiated Spurious Emission

Test place	Head Office EMC Lab. No.2 Semi Anechoic Chamber	
Report No.	31KE0011HO-01	
Date	08/09/2011	08/10/2011
Temperature/ Humidity	26 deg. C / 62% RH	25 deg. C / 61% RH
Engineer	Hironobu Ohnishi	Takumi Shimada
	Above 1GHz	Below 1GHz
Mode	Tx, DH5 2441MHz	

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	52.000	QP	22.7	10.3	7.0	28.7	11.3	40.0	28.7	NS
Hori	78.000	QP	22.6	6.4	7.3	28.6	7.7	40.0	32.3	NS
Hori	104.000	QP	22.3	10.8	7.5	28.4	12.2	43.5	31.3	NS
Hori	130.000	QP	22.3	14.0	7.7	28.3	15.7	43.5	27.8	NS
Hori	156.000	QP	22.1	15.3	7.9	28.2	17.1	43.5	26.4	NS
Hori	312.000	QP	21.4	15.3	8.8	27.7	17.8	46.0	28.2	NS
Hori	4882.000	PK	43.6	31.5	4.3	31.3	48.1	73.9	25.8	
Hori	7323.000	PK	42.6	35.7	5.2	31.6	51.9	73.9	22.0	
Hori	9764.000	PK	41.6	38.5	6.0	31.8	54.3	73.9	19.6	NS
Hori	24410.000	PK	45.5	40.4	-0.9	29.5	55.5	73.9	18.4	NS
Hori	4882.000	AV	33.5	31.5	4.3	31.3	38.0	53.9	15.9	VBW270Hz
Hori	7323.000	AV	30.4	35.7	5.2	31.6	39.7	53.9	14.2	VBW270Hz
Hori	9764.000	AV	28.4	38.5	6.0	31.8	41.1	53.9	12.8	NS, VBW10Hz
Hori	24410.000	AV	32.6	40.4	-0.9	29.5	42.6	53.9	11.3	NS, VBW10Hz
Vert	52.000	QP	22.7	10.3	7.0	28.7	11.3	40.0	28.7	NS
Vert	78.000	QP	22.5	6.4	7.3	28.6	7.6	40.0	32.4	NS
Vert	104.000	QP	22.4	10.8	7.5	28.4	12.3	43.5	31.2	NS
Vert	130.000	QP	22.3	14.0	7.7	28.3	15.7	43.5	27.8	NS
Vert	156.000	QP	22.0	15.3	7.9	28.2	17.0	43.5	26.5	NS
Vert	312.000	QP	21.4	15.3	8.8	27.7	17.8	46.0	28.2	NS
Vert	4882.000	PK	43.7	31.5	4.3	31.3	48.2	73.9	25.7	
Vert	7323.000	PK	42.7	35.7	5.2	31.6	52.0	73.9	21.9	
Vert	9764.000	PK	42.0	38.5	6.0	31.8	54.7	73.9	19.2	NS
Vert	24410.000	PK	45.3	40.4	-0.9	29.5	55.3	73.9	18.6	NS
Vert	4882.000	AV	35.5	31.5	4.3	31.3	40.0	53.9	13.9	VBW270Hz
Vert	7323.000	AV	30.7	35.7	5.2	31.6	40.0	53.9	13.9	VBW270Hz
Vert	9764.000	AV	28.5	38.5	6.0	31.8	41.2	53.9	12.7	NS, VBW10Hz
Vert	24410.000	AV	32.7	40.4	-0.9	29.5	42.7	53.9	11.2	NS, VBW10Hz

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=No signal detected

*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.2 Semi Anechoic Chamber	
Report No.	31KE0011HO-01	
Date	08/09/2011	08/10/2011
Temperature/ Humidity	26 deg. C / 62% RH	25 deg. C / 61% RH
Engineer	Hironobu Ohnishi	Takumi Shimada
	Above 1GHz	Below 1GHz
Mode	Tx, DH5 2480MHz	

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	52.000	QP	22.7	10.3	7.0	28.7	11.3	40.0	28.7	NS
Hori	78.000	QP	22.5	6.4	7.3	28.6	7.6	40.0	32.4	NS
Hori	104.000	QP	22.4	10.8	7.5	28.4	12.3	43.5	31.2	NS
Hori	130.000	QP	22.2	14.0	7.7	28.3	15.6	43.5	27.9	NS
Hori	156.000	QP	21.9	15.3	7.9	28.2	16.9	43.5	26.6	NS
Hori	312.000	QP	21.5	15.3	8.8	27.7	17.9	46.0	28.1	NS
Hori	2483.500	PK	53.8	27.6	2.6	32.4	51.6	73.9	22.3	
Hori	2483.700	PK	52.9	27.6	2.6	32.4	50.7	73.9	23.2	
Hori	2484.650	PK	53.2	27.6	2.6	32.4	51.0	73.9	22.9	
Hori	4960.000	PK	43.8	31.7	4.3	31.3	48.5	73.9	25.4	
Hori	7440.000	PK	42.3	35.8	5.2	31.7	51.6	73.9	22.3	
Hori	9920.000	PK	41.4	38.7	6.0	31.8	54.3	73.9	19.6	NS
Hori	24800.000	PK	45.3	40.3	-0.9	29.4	55.3	73.9	18.6	NS
Hori	2483.500	AV	42.5	27.6	2.6	32.4	40.3	53.9	13.6	VBW270Hz
Hori	2483.700	AV	41.7	27.6	2.6	32.4	39.5	53.9	14.4	VBW270Hz
Hori	2484.650	AV	42.3	27.6	2.6	32.4	40.1	53.9	13.8	VBW270Hz
Hori	4960.000	AV	34.6	31.7	4.3	31.3	39.3	53.9	14.6	VBW270Hz
Hori	7440.000	AV	30.6	35.8	5.2	31.7	39.9	53.9	14.0	VBW270Hz
Hori	9920.000	AV	28.4	38.7	6.0	31.8	41.3	53.9	12.6	NS, VBW10Hz
Hori	24800.000	AV	32.7	40.3	-0.9	29.4	42.7	53.9	11.2	NS, VBW10Hz
Vert	52.000	QP	22.7	10.3	7.0	28.7	11.3	40.0	28.7	NS
Vert	78.000	QP	22.6	6.4	7.3	28.6	7.7	40.0	32.3	NS
Vert	104.000	QP	22.4	10.8	7.5	28.4	12.3	43.5	31.2	NS
Vert	130.000	QP	22.3	14.0	7.7	28.3	15.7	43.5	27.8	NS
Vert	156.000	QP	22.0	15.3	7.9	28.2	17.0	43.5	26.5	NS
Vert	312.000	QP	21.4	15.3	8.8	27.7	17.8	46.0	28.2	NS
Vert	2483.500	PK	48.6	27.6	2.6	32.4	46.4	73.9	27.5	
Vert	2483.700	PK	48.5	27.6	2.6	32.4	46.3	73.9	27.6	
Vert	2484.650	PK	48.2	27.6	2.6	32.4	46.0	73.9	27.9	
Vert	4960.000	PK	45.2	31.7	4.3	31.3	49.9	73.9	24.0	
Vert	7440.000	PK	41.9	35.8	5.2	31.7	51.2	73.9	22.7	
Vert	9920.000	PK	41.6	38.7	6.0	31.8	54.5	73.9	19.4	NS
Vert	24800.000	PK	45.0	40.3	-0.9	29.4	55.0	73.9	18.9	NS
Vert	2483.500	AV	37.3	27.6	2.6	32.4	35.1	53.9	18.8	VBW270Hz
Vert	2483.700	AV	36.5	27.6	2.6	32.4	34.3	53.9	19.6	VBW270Hz
Vert	2484.650	AV	37.0	27.6	2.6	32.4	34.8	53.9	19.1	VBW270Hz
Vert	4960.000	AV	36.7	31.7	4.3	31.3	41.4	53.9	12.5	VBW270Hz
Vert	7440.000	AV	30.1	35.8	5.2	31.7	39.4	53.9	14.5	VBW270Hz
Vert	9920.000	AV	28.5	38.7	6.0	31.8	41.4	53.9	12.5	NS, VBW10Hz
Vert	24800.000	AV	32.6	40.3	-0.9	29.4	42.6	53.9	11.3	NS, VBW10Hz

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=No signal detected

*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.2 Semi Anechoic Chamber	
Report No.	31KE0011HO-01	
Date	08/09/2011	08/10/2011
Temperature/ Humidity	26 deg. C / 62% RH	25 deg. C / 61% RH
Engineer	Hironobu Ohnishi	Takumi Shimada
	Above 1GHz	Below 1GHz
Mode	Tx, 3DH5 2402MHz	

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	52.000	QP	22.7	10.3	7.0	28.7	11.3	40.0	28.7	NS
Hori	78.000	QP	22.6	6.4	7.3	28.6	7.7	40.0	32.3	NS
Hori	104.000	QP	22.4	10.8	7.5	28.4	12.3	43.5	31.2	NS
Hori	130.000	QP	22.4	14.0	7.7	28.3	15.8	43.5	27.7	NS
Hori	156.000	QP	22.0	15.3	7.9	28.2	17.0	43.5	26.5	NS
Hori	312.000	QP	21.5	15.3	8.8	27.7	17.9	46.0	28.1	NS
Hori	2390.000	PK	46.0	27.4	2.5	32.4	43.5	73.9	30.4	
Hori	2400.000	PK	76.2	27.4	2.5	32.4	73.7	-	-	See 20dBc Data Sheet
Hori	4804.000	PK	41.6	31.3	4.4	31.4	45.9	73.9	28.0	
Hori	7206.000	PK	41.5	35.5	5.1	31.6	50.5	73.9	23.4	NS
Hori	9608.000	PK	42.2	38.4	5.9	31.9	54.6	73.9	19.3	NS
Hori	24800.000	PK	45.3	40.3	-0.9	29.4	55.3	73.9	18.6	NS
Hori	2390.000	AV	33.1	27.4	2.5	32.4	30.6	53.9	23.3	VBW270Hz
Hori	2400.000	AV	63.0	27.4	2.5	32.4	60.5	-	-	See 20dBc Data Sheet
Hori	4804.000	AV	30.6	31.3	4.4	31.4	34.9	53.9	19.0	VBW270Hz
Hori	7206.000	AV	28.3	35.5	5.1	31.6	37.3	53.9	16.6	NS, VBW10Hz
Hori	9608.000	AV	29.1	38.4	5.9	31.9	41.5	53.9	12.4	NS, VBW10Hz
Hori	24800.000	AV	32.7	40.3	-0.9	29.4	42.7	53.9	11.2	NS, VBW10Hz
Vert	52.000	QP	22.6	10.3	7.0	28.7	11.2	40.0	28.8	NS
Vert	78.000	QP	22.6	6.4	7.3	28.6	7.7	40.0	32.3	NS
Vert	104.000	QP	22.4	10.8	7.5	28.4	12.3	43.5	31.2	NS
Vert	130.000	QP	22.3	14.0	7.7	28.3	15.7	43.5	27.8	NS
Vert	156.000	QP	22.1	15.3	7.9	28.2	17.1	43.5	26.4	NS
Vert	312.000	QP	21.5	15.3	8.8	27.7	17.9	46.0	28.1	NS
Vert	2390.000	PK	43.5	27.4	2.5	32.4	41.0	73.9	32.9	
Vert	2400.000	PK	71.1	27.4	2.5	32.4	68.6	-	-	See 20dBc Data Sheet
Vert	4804.000	PK	43.1	31.3	4.4	31.4	47.4	73.9	26.5	
Vert	7206.000	PK	41.6	35.5	5.1	31.6	50.6	73.9	23.3	NS
Vert	9608.000	PK	41.9	38.4	5.9	31.9	54.3	73.9	19.6	NS
Vert	24800.000	PK	45.0	40.3	-0.9	29.4	55.0	73.9	18.9	NS
Vert	2390.000	AV	31.0	27.4	2.5	32.4	28.5	53.9	25.4	VBW270Hz
Vert	2400.000	AV	57.9	27.4	2.5	32.4	55.4	-	-	See 20dBc Data Sheet
Vert	4804.000	AV	31.5	31.3	4.4	31.4	35.8	53.9	18.1	VBW270Hz
Vert	7206.000	AV	28.3	35.5	5.1	31.6	37.3	53.9	16.6	NS, VBW10Hz
Vert	9608.000	AV	29.1	38.4	5.9	31.9	41.5	53.9	12.4	NS, VBW10Hz
Vert	24800.000	AV	32.6	40.3	-0.9	29.4	42.6	53.9	11.3	NS, VBW10Hz

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=No signal detected

*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
20dBc Data Sheet

Test place	Head Office EMC Lab. No.2 Semi Anechoic Chamber
Report No.	31KE0011HO-01
Date	08/09/2011
Temperature/ Humidity	26 deg. C / 62% RH
Engineer	Hironobu Ohnishi
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	102.3	27.4	2.5	32.4	99.8	-	-	Carrier
Hori	2400.000	PK	60.2	27.4	2.5	32.4	57.7	79.8	22.1	
Vert	2402.000	PK	97.1	27.4	2.5	32.4	94.6	-	-	Carrier
Vert	2400.000	PK	55.2	27.4	2.5	32.4	52.7	74.6	21.9	

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

Radiated Spurious Emission

Test place	Head Office EMC Lab. No.2 Semi Anechoic Chamber	
Report No.	31KE0011HO-01	
Date	08/09/2011	08/10/2011
Temperature/ Humidity	26 deg. C / 62% RH	25 deg. C / 61% RH
Engineer	Hironobu Ohnishi	Takumi Shimada
	Above 1GHz	Below 1GHz
Mode	Tx, 3DH5 2441MHz	

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	52.000	QP	22.7	10.3	7.0	28.7	11.3	40.0	28.7	NS
Hori	78.000	QP	22.6	6.4	7.3	28.6	7.7	40.0	32.3	NS
Hori	104.000	QP	22.4	10.8	7.5	28.4	12.3	43.5	31.2	NS
Hori	130.000	QP	22.4	14.0	7.7	28.3	15.8	43.5	27.7	NS
Hori	156.000	QP	22.0	15.3	7.9	28.2	17.0	43.5	26.5	NS
Hori	312.000	QP	21.4	15.3	8.8	27.7	17.8	46.0	28.2	NS
Hori	4882.000	PK	43.1	31.5	4.3	31.3	47.6	73.9	26.3	
Hori	7323.000	PK	42.1	35.7	5.2	31.6	51.4	73.9	22.5	NS
Hori	9764.000	PK	41.8	38.5	6.0	31.8	54.5	73.9	19.4	NS
Hori	24410.000	PK	45.4	40.4	-0.9	29.5	55.4	73.9	18.5	NS
Hori	4882.000	AV	30.2	31.5	4.3	31.3	34.7	53.9	19.2	VBW270Hz
Hori	7323.000	AV	28.6	35.7	5.2	31.6	37.9	53.9	16.0	NS, VBW10Hz
Hori	9764.000	AV	28.5	38.5	6.0	31.8	41.2	53.9	12.7	NS, VBW10Hz
Hori	24410.000	AV	32.6	40.4	-0.9	29.5	42.6	53.9	11.3	NS, VBW10Hz
Vert	52.000	QP	22.7	10.3	7.0	28.7	11.3	40.0	28.7	NS
Vert	78.000	QP	22.6	6.4	7.3	28.6	7.7	40.0	32.3	NS
Vert	104.000	QP	22.6	10.8	7.5	28.4	12.5	43.5	31.0	NS
Vert	130.000	QP	22.4	14.0	7.7	28.3	15.8	43.5	27.7	NS
Vert	156.000	QP	22.1	15.3	7.9	28.2	17.1	43.5	26.4	NS
Vert	312.000	QP	21.5	15.3	8.8	27.7	17.9	46.0	28.1	NS
Vert	4882.000	PK	43.0	31.5	4.3	31.3	47.5	73.9	26.4	
Vert	7323.000	PK	41.9	35.7	5.2	31.6	51.2	73.9	22.7	
Vert	9764.000	PK	42.1	38.5	6.0	31.8	54.8	73.9	19.1	NS
Vert	24410.000	PK	45.3	40.4	-0.9	29.5	55.3	73.9	18.6	NS
Vert	4882.000	AV	30.9	31.5	4.3	31.3	35.4	53.9	18.5	VBW270Hz
Vert	7323.000	AV	29.2	35.7	5.2	31.6	38.5	53.9	15.4	VBW270Hz
Vert	9764.000	AV	28.5	38.5	6.0	31.8	41.2	53.9	12.7	NS, VBW10Hz
Vert	24410.000	AV	32.6	40.4	-0.9	29.5	42.6	53.9	11.3	NS, VBW10Hz

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=No signal detected

*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.2 Semi Anechoic Chamber	
Report No.	31KE0011HO-01	
Date	08/09/2011	08/10/2011
Temperature/ Humidity	26 deg. C / 62% RH	25 deg. C / 61% RH
Engineer	Hironobu Ohnishi	Takumi Shimada
	Above 1GHz	Below 1GHz
Mode	Tx, 3DH5 2480MHz	

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	52.000	QP	22.6	10.3	7.0	28.7	11.2	40.0	28.8	NS
Hori	78.000	QP	22.6	6.4	7.3	28.6	7.7	40.0	32.3	NS
Hori	104.000	QP	22.5	10.8	7.5	28.4	12.4	43.5	31.1	NS
Hori	130.000	QP	22.4	14.0	7.7	28.3	15.8	43.5	27.7	NS
Hori	156.000	QP	22.1	15.3	7.9	28.2	17.1	43.5	26.4	NS
Hori	312.000	QP	21.4	15.3	8.8	27.7	17.8	46.0	28.2	NS
Hori	2483.500	PK	55.8	27.6	2.6	32.4	53.6	73.9	20.3	
Hori	4960.000	PK	42.3	31.7	4.3	31.3	47.0	73.9	26.9	
Hori	7440.000	PK	42.3	35.8	5.2	31.7	51.6	73.9	22.3	NS
Hori	9920.000	PK	41.2	38.7	6.0	31.8	54.1	73.9	19.8	NS
Hori	24800.000	PK	45.1	40.3	-0.9	29.4	55.1	73.9	18.8	NS
Hori	2483.500	AV	42.0	27.6	2.6	32.4	39.8	53.9	14.1	VBW270Hz
Hori	4960.000	AV	29.9	31.7	4.3	31.3	34.6	53.9	19.3	VBW270Hz
Hori	7440.000	AV	28.6	35.8	5.2	31.7	37.9	53.9	16.0	NS, VBW10Hz
Hori	9920.000	AV	28.3	38.7	6.0	31.8	41.2	53.9	12.7	NS, VBW10Hz
Hori	24800.000	AV	32.6	40.3	-0.9	29.4	42.6	53.9	11.3	NS, VBW10Hz
Vert	52.000	QP	22.7	10.3	7.0	28.7	11.3	40.0	28.7	NS
Vert	78.000	QP	22.7	6.4	7.3	28.6	7.8	40.0	32.2	NS
Vert	104.000	QP	22.6	10.8	7.5	28.4	12.5	43.5	31.0	NS
Vert	130.000	QP	22.4	14.0	7.7	28.3	15.8	43.5	27.7	NS
Vert	156.000	QP	22.1	15.3	7.9	28.2	17.1	43.5	26.4	NS
Vert	312.000	QP	21.5	15.3	8.8	27.7	17.9	46.0	28.1	NS
Vert	2483.500	PK	50.7	27.6	2.6	32.4	48.5	73.9	25.4	
Vert	4960.000	PK	42.7	31.7	4.3	31.3	47.4	73.9	26.5	
Vert	7440.000	PK	41.5	35.8	5.2	31.7	50.8	73.9	23.1	NS
Vert	9920.000	PK	41.9	38.7	6.0	31.8	54.8	73.9	19.1	NS
Vert	24800.000	PK	45.2	40.3	-0.9	29.4	55.2	73.9	18.7	NS
Vert	2483.500	AV	37.3	27.6	2.6	32.4	35.1	53.9	18.8	VBW270Hz
Vert	4960.000	AV	30.5	31.7	4.3	31.3	35.2	53.9	18.7	VBW270Hz
Vert	7440.000	AV	28.4	35.8	5.2	31.7	37.7	53.9	16.2	NS, VBW10Hz
Vert	9920.000	AV	28.3	38.7	6.0	31.8	41.2	53.9	12.7	NS, VBW10Hz
Vert	24800.000	AV	32.7	40.3	-0.9	29.4	42.7	53.9	11.2	NS, VBW10Hz

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=No signal detected

*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.2 Semi Anechoic Chamber	
Report No.	31KE0011HO-01	
Date	08/10/2011	08/10/2011
Temperature/ Humidity	25 deg. C / 61% RH	25 deg. C / 61% RH
Engineer	Takumi Shimada	Takumi Shimada
	Above 1GHz	Below 1GHz
Mode	Rx, 2441MHz	

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	52.000	QP	22.7	10.3	7.0	28.7	11.3	40.0	28.7	NS
Hori	78.000	QP	22.7	6.4	7.3	28.6	7.8	40.0	32.2	NS
Hori	104.000	QP	22.4	10.8	7.5	28.4	12.3	43.5	31.2	NS
Hori	130.000	QP	22.4	14.0	7.7	28.3	15.8	43.5	27.7	NS
Hori	156.000	QP	22.0	15.3	7.9	28.2	17.0	43.5	26.5	NS
Hori	312.000	QP	21.4	15.3	8.8	27.7	17.8	46.0	28.2	NS
Hori	2441.000	PK	41.9	27.5	2.5	32.4	39.5	73.9	34.4	NS
Hori	2442.500	PK	51.5	27.5	2.5	32.4	49.1	73.9	24.8	
Hori	4885.000	PK	41.1	31.5	3.7	31.3	45.0	73.9	29.0	NS
Hori	7327.500	PK	41.2	35.7	4.7	31.6	50.0	73.9	23.9	NS
Hori	2441.000	AV	29.8	27.5	2.5	32.4	27.4	53.9	26.5	NS
Hori	2442.500	AV	48.2	27.5	2.5	32.4	45.8	53.9	8.1	
Hori	4885.000	AV	28.5	31.5	3.7	31.3	32.4	53.9	21.5	NS
Hori	7327.500	AV	28.8	35.7	4.7	31.6	37.6	53.9	16.3	NS
Vert	52.000	QP	22.7	10.3	7.0	28.7	11.3	40.0	28.7	NS
Vert	78.000	QP	22.6	6.4	7.3	28.6	7.7	40.0	32.3	NS
Vert	104.000	QP	22.5	10.8	7.5	28.4	12.4	43.5	31.1	NS
Vert	130.000	QP	22.4	14.0	7.7	28.3	15.8	43.5	27.7	NS
Vert	156.000	QP	22.0	15.3	7.9	28.2	17.0	43.5	26.5	NS
Vert	312.000	QP	21.5	15.3	8.8	27.7	17.9	46.0	28.1	NS
Vert	2441.000	PK	42.3	27.5	2.5	32.4	39.9	73.9	34.0	NS
Vert	2442.500	PK	48.1	27.5	2.5	32.4	45.7	73.9	28.2	
Vert	4885.000	PK	41.1	31.5	3.7	31.3	45.0	73.9	28.9	NS
Vert	7327.500	PK	41.2	35.7	4.7	31.6	50.0	73.9	23.9	NS
Vert	2441.000	AV	29.8	27.5	2.5	32.4	27.4	53.9	26.5	NS
Vert	2442.500	AV	42.2	27.5	2.5	32.4	39.8	53.9	14.1	
Vert	4885.000	AV	28.5	31.5	3.7	31.3	32.4	53.9	21.6	NS
Vert	7327.500	AV	28.8	35.7	4.7	31.6	37.6	53.9	16.3	NS

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

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

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

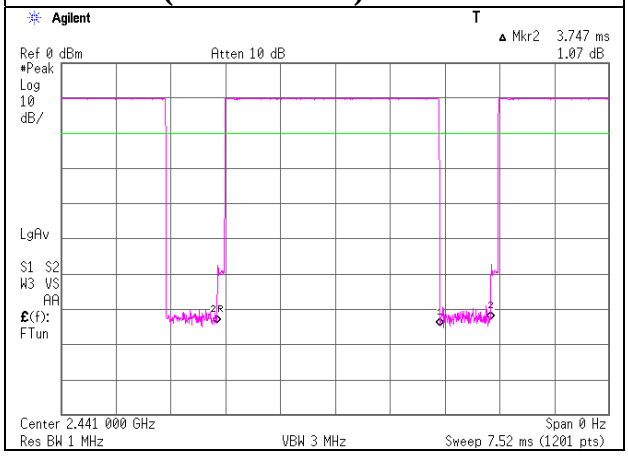
NS=No signal detected

*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.

VBW (AV) Calculation

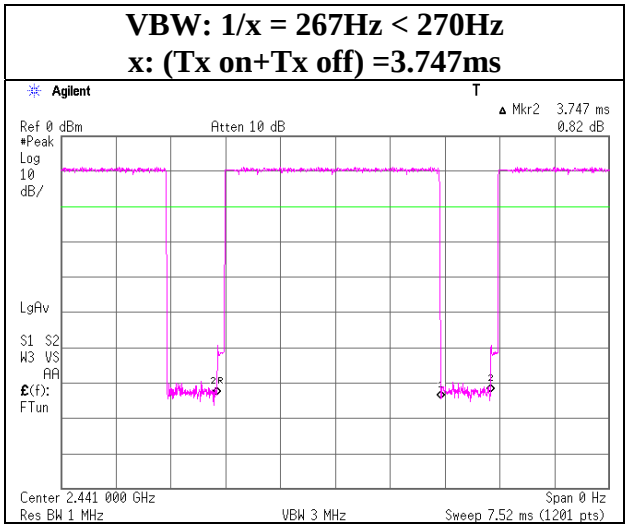
Tx DH5

VBW: 1/x = 267Hz < 270Hz
x: (Tx on+Tx off) =3.747ms



Tx 3DH5

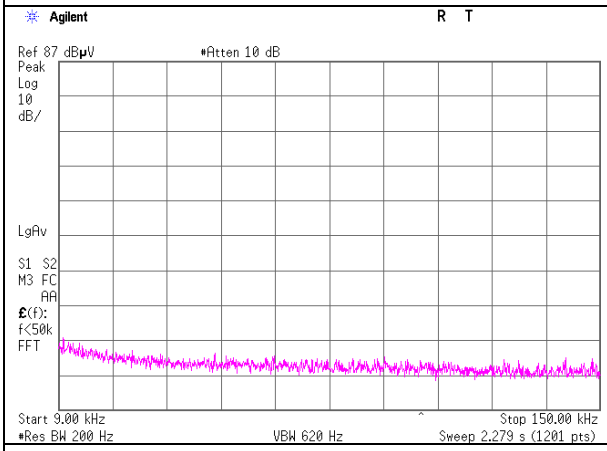
VBW: 1/x = 267Hz < 270Hz
x: (Tx on+Tx off) =3.747ms



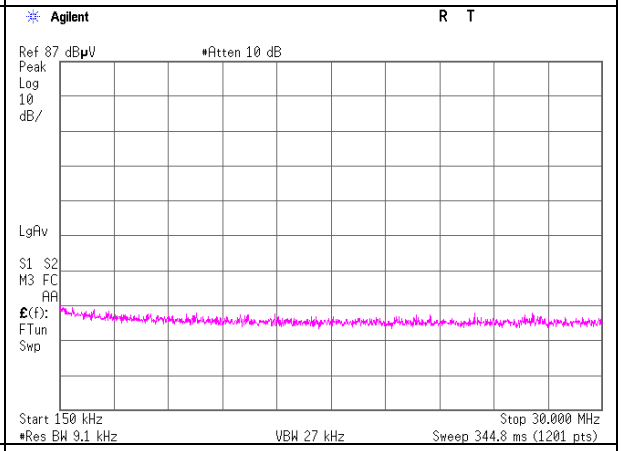
Conducted Spurious Emission

Tx DH5 2402MHz

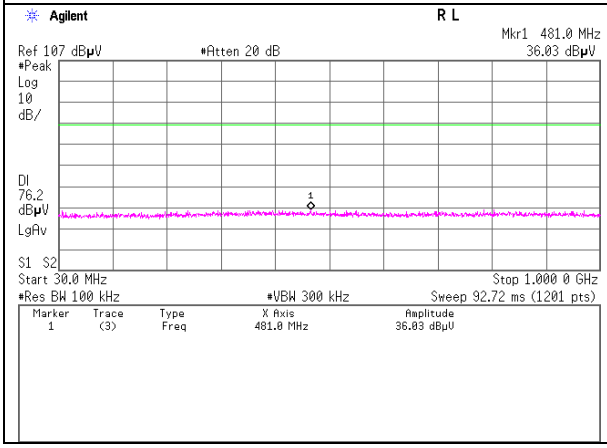
9kHz-150kHz



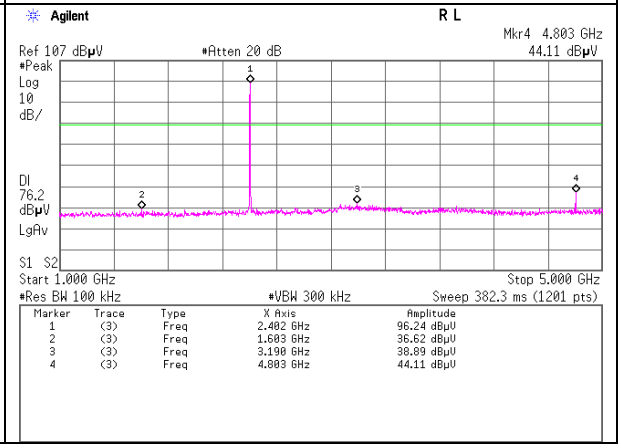
150kHz-30MHz



30MHz-1GHz



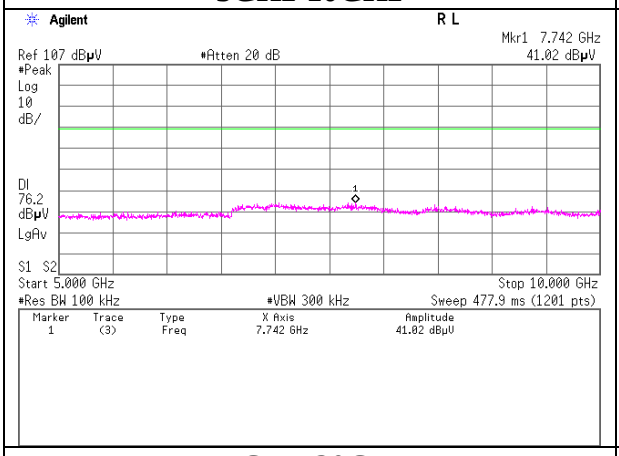
1GHz-5GHz



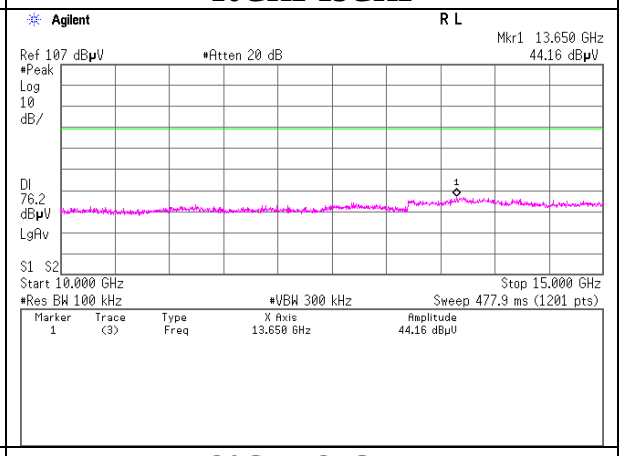
Conducted Spurious Emission

Tx DH5 2402MHz

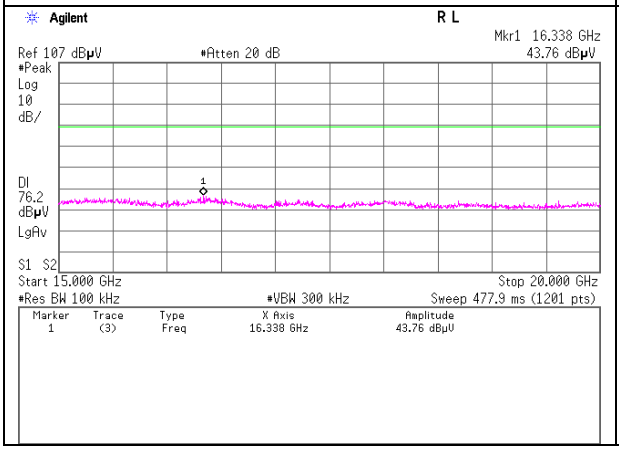
5GHz-10GHz



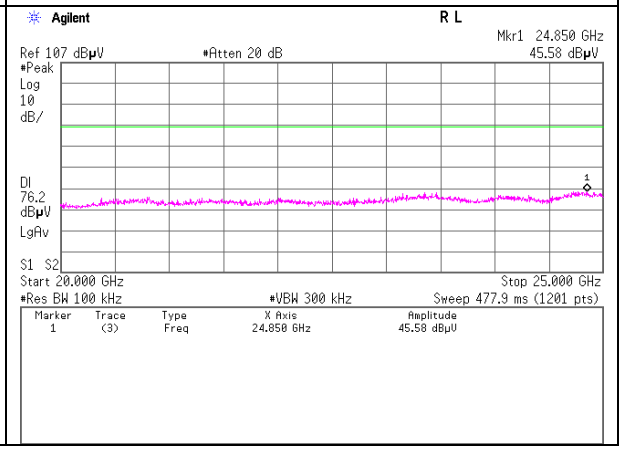
10GHz-15GHz



15GHz-20GHz



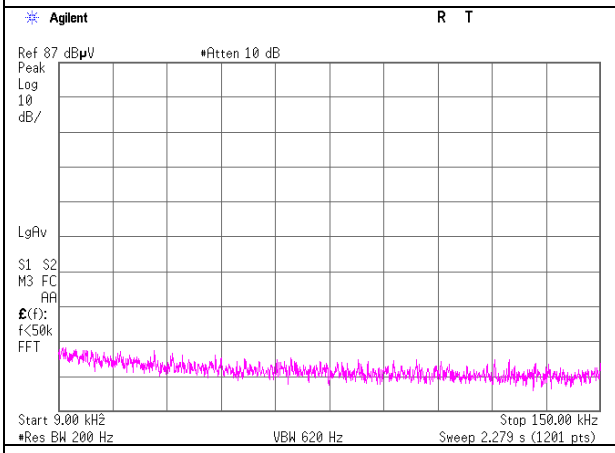
20GHz-25GHz



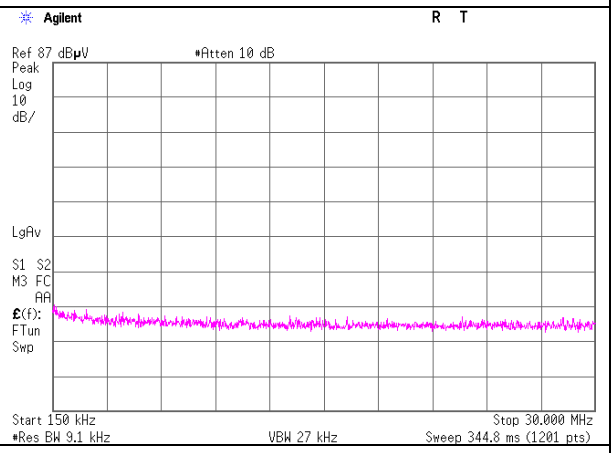
Conducted Spurious Emission

Tx DH5 2441MHz

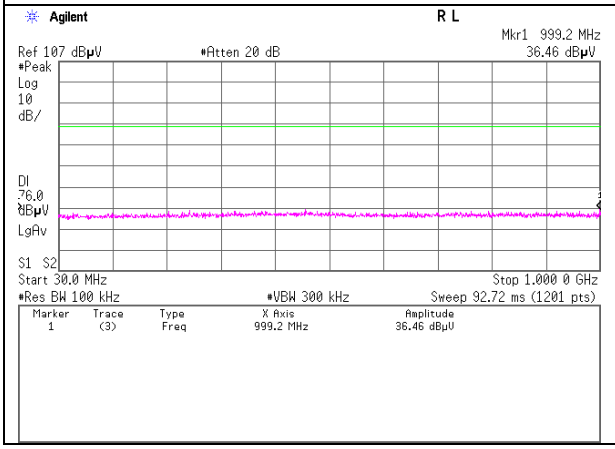
9kHz-150kHz



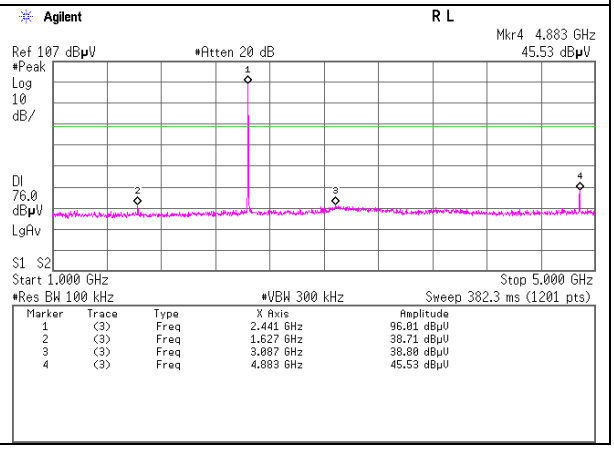
150kHz-30MHz



30MHz-1GHz



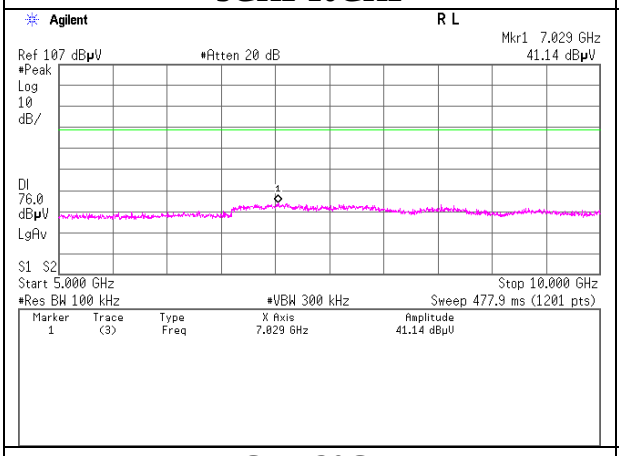
1GHz-5GHz



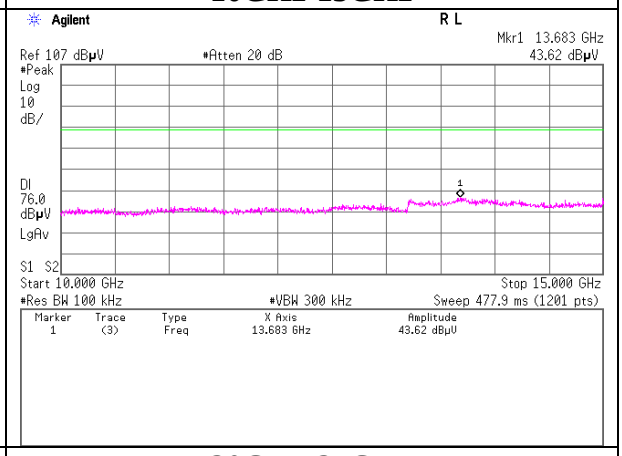
Conducted Spurious Emission

Tx DH5 2441MHz

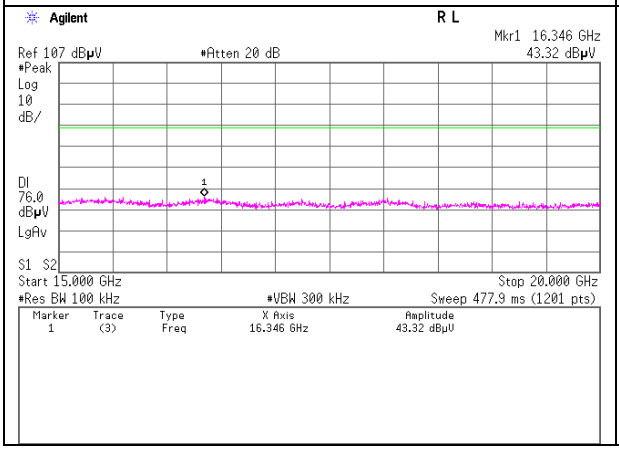
5GHz-10GHz



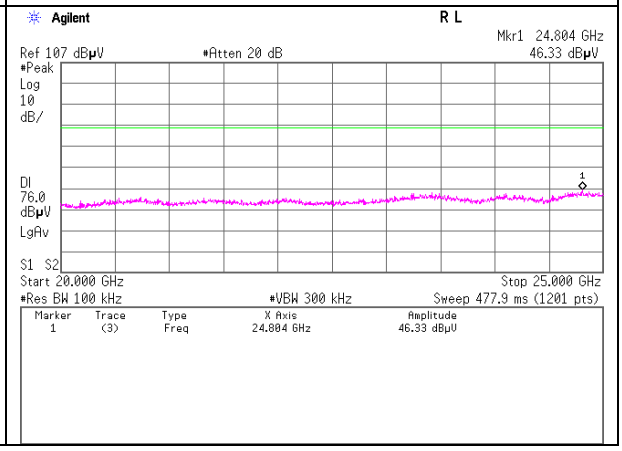
10GHz-15GHz



15GHz-20GHz



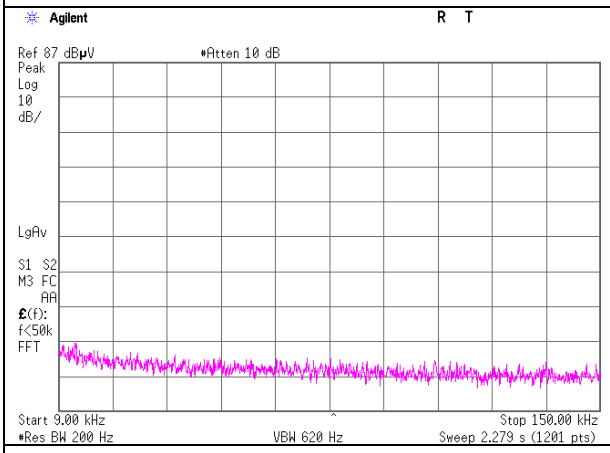
20GHz-25GHz



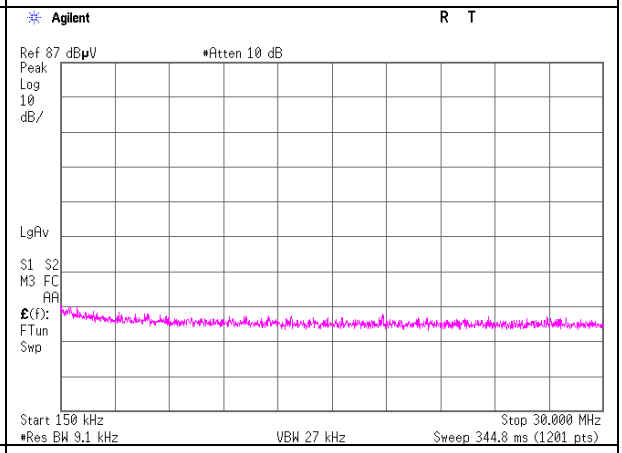
Conducted Spurious Emission

Tx DH5 2480MHz

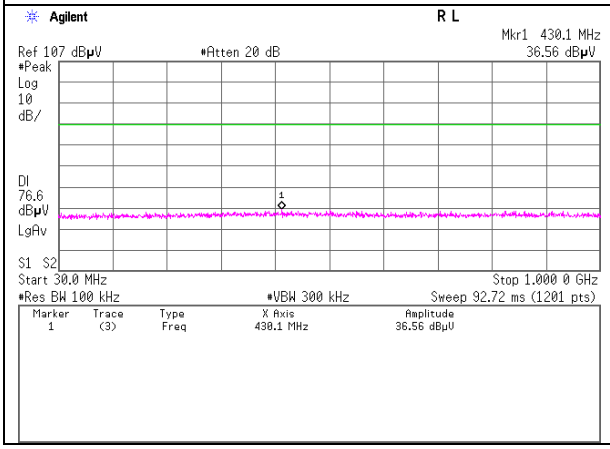
9kHz-150kHz



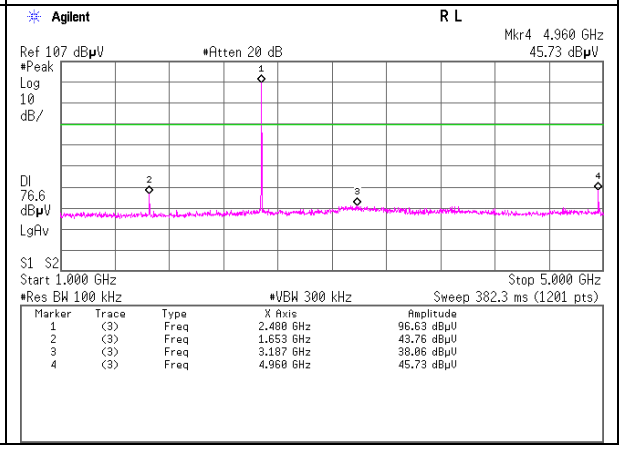
150kHz-30MHz



30MHz-1GHz



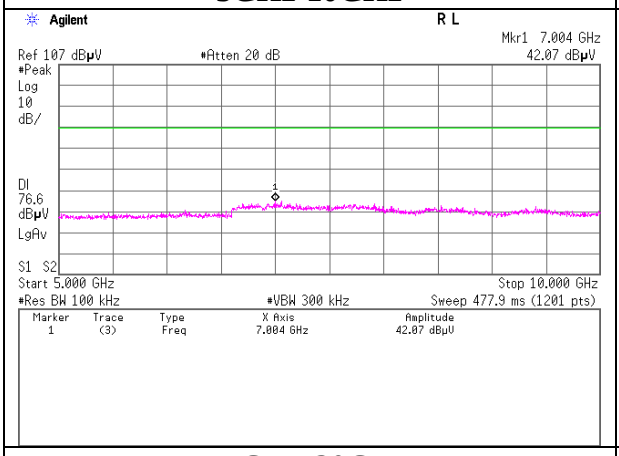
1GHz-5GHz



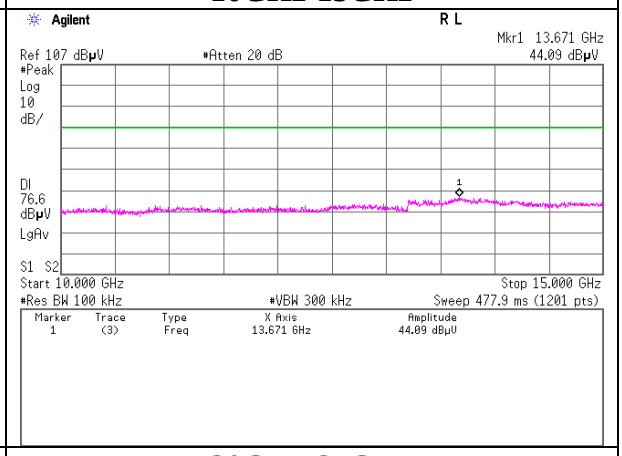
Conducted Spurious Emission

Tx DH5 2480MHz

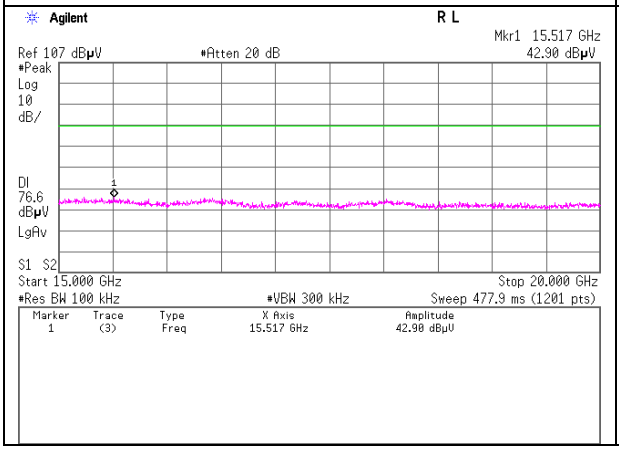
5GHz-10GHz



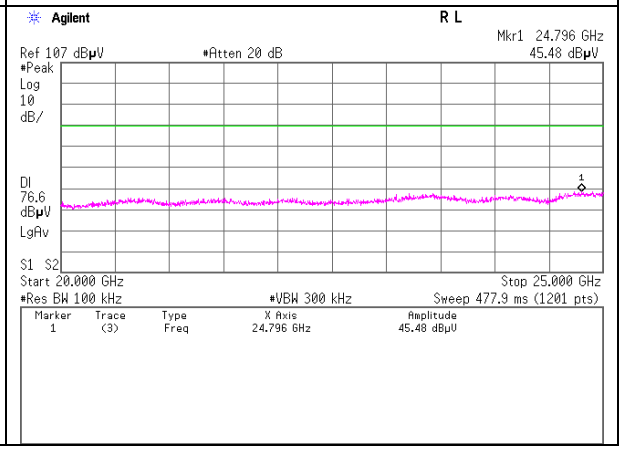
10GHz-15GHz



15GHz-20GHz



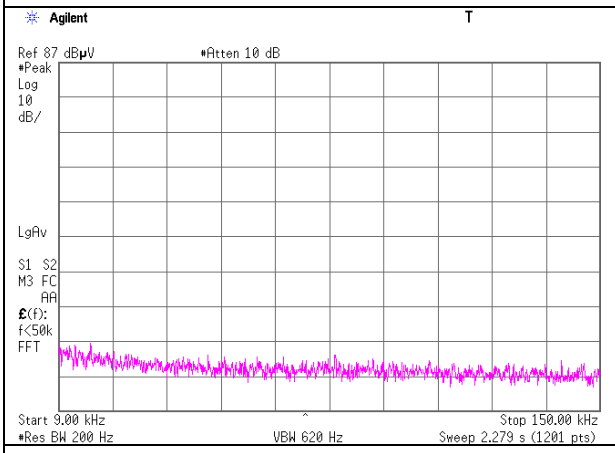
20GHz-25GHz



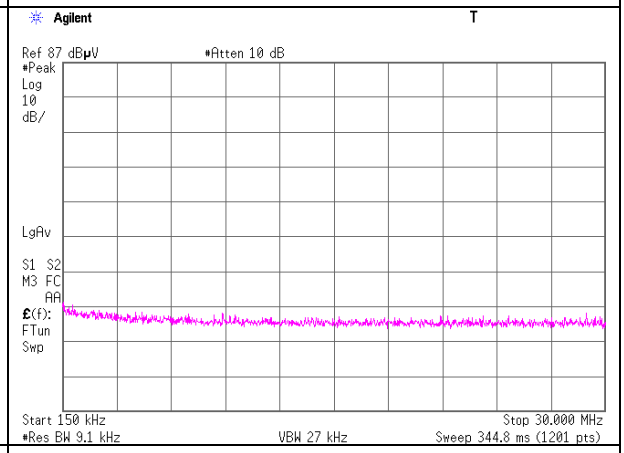
Conducted Spurious Emission

Tx 3DH5 2402MHz

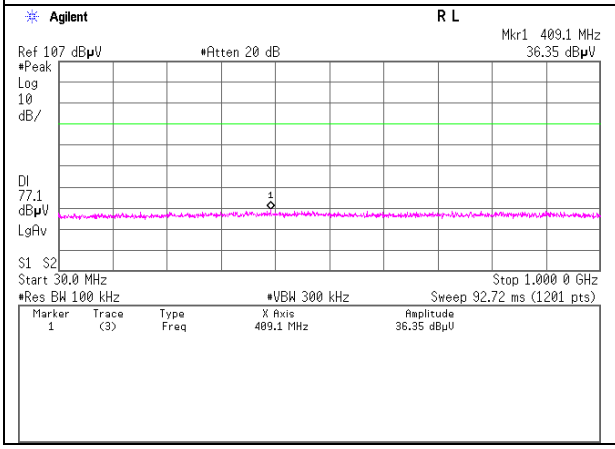
9kHz-150kHz



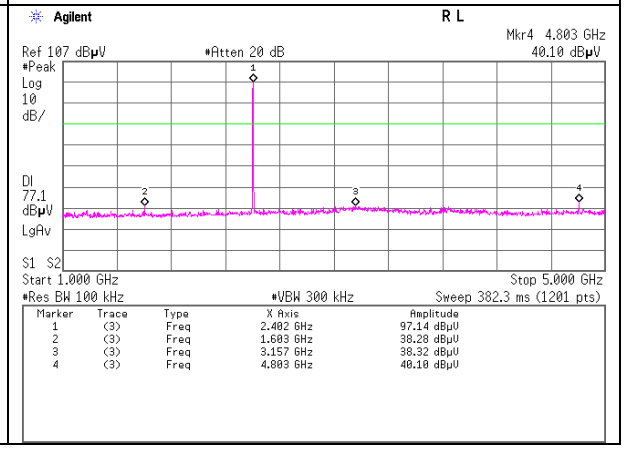
150kHz-30MHz



30MHz-1GHz



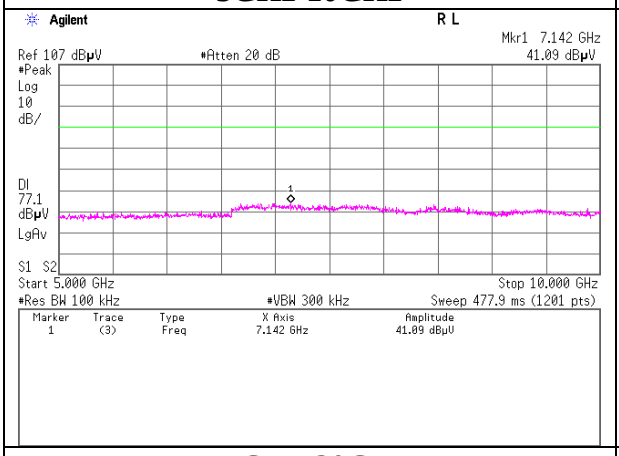
1GHz-5GHz



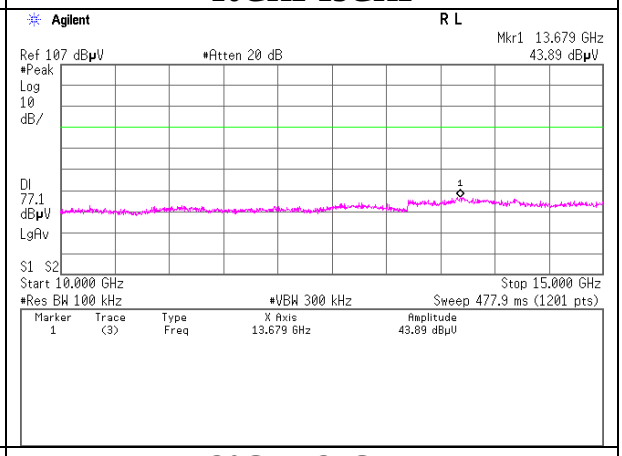
Conducted Spurious Emission

Tx 3DH5 2402MHz

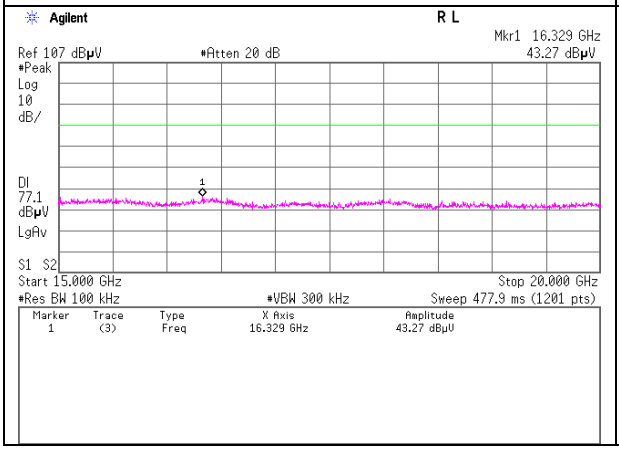
5GHz-10GHz



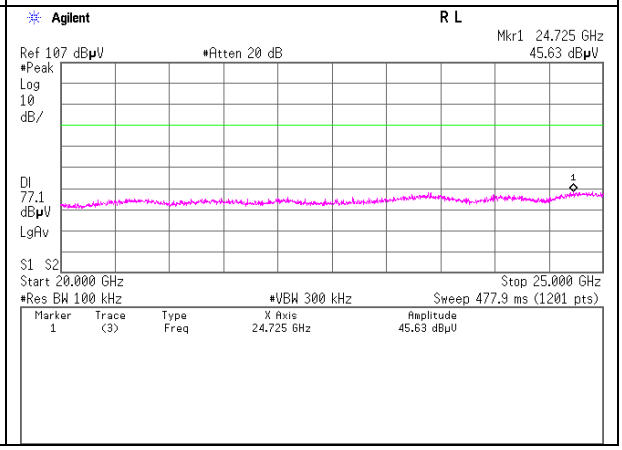
10GHz-15GHz



15GHz-20GHz



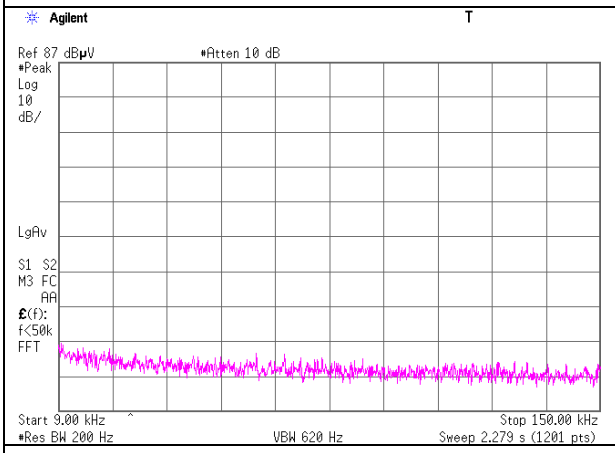
20GHz-25GHz



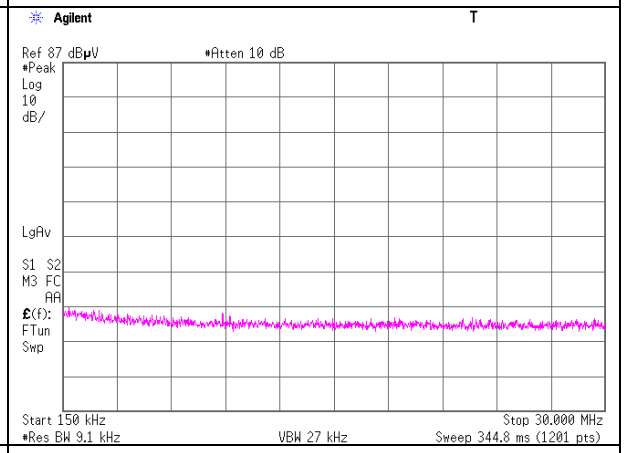
Conducted Spurious Emission

Tx 3DH5 2441MHz

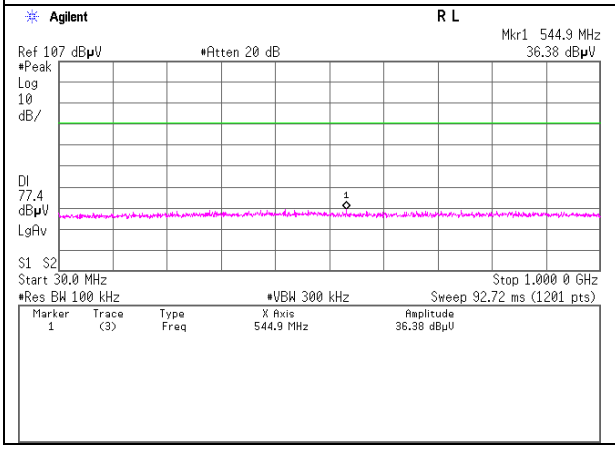
9kHz-150kHz



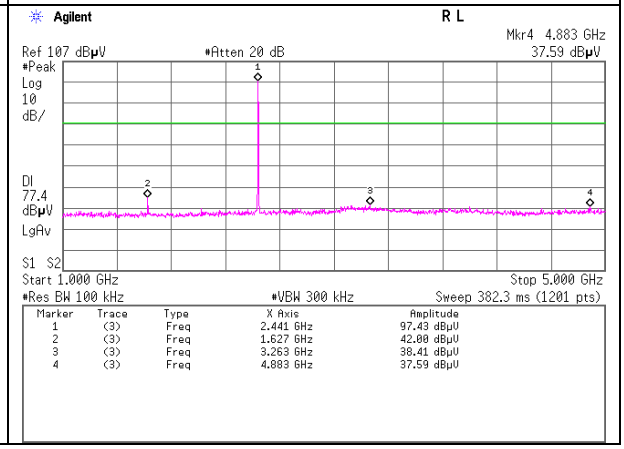
150kHz-30MHz



30MHz-1GHz



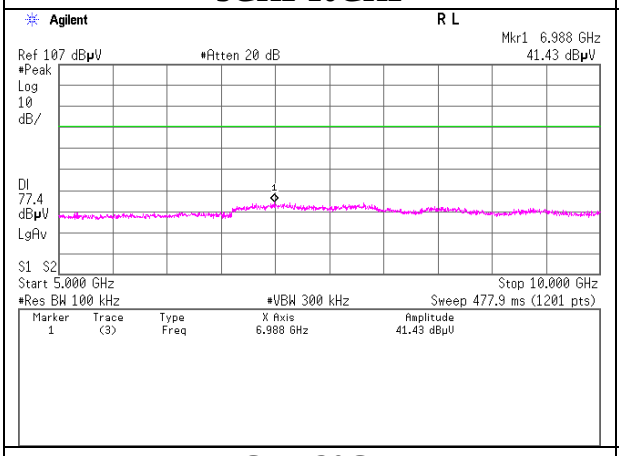
1GHz-5GHz



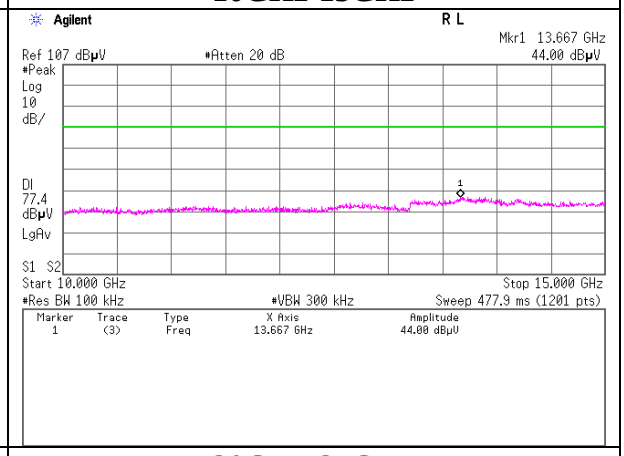
Conducted Spurious Emission

Tx 3DH5 2441MHz

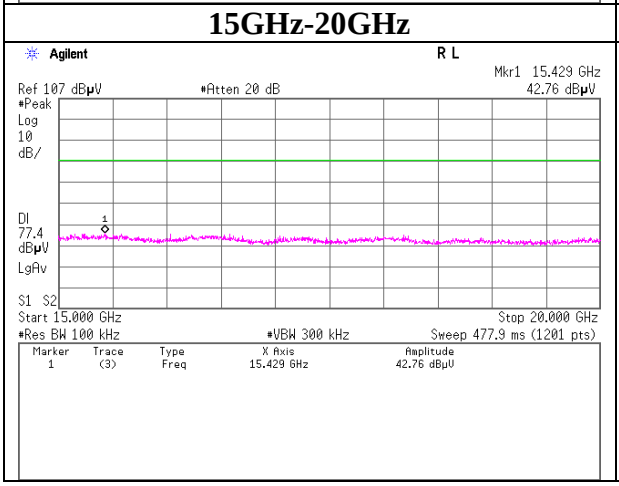
5GHz-10GHz



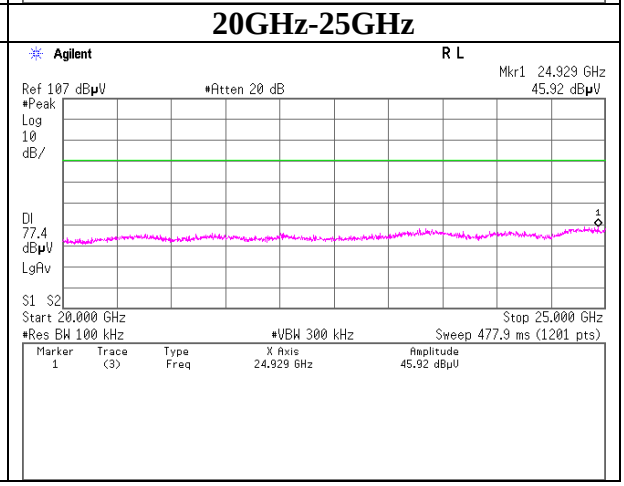
10GHz-15GHz



15GHz-20GHz



20GHz-25GHz



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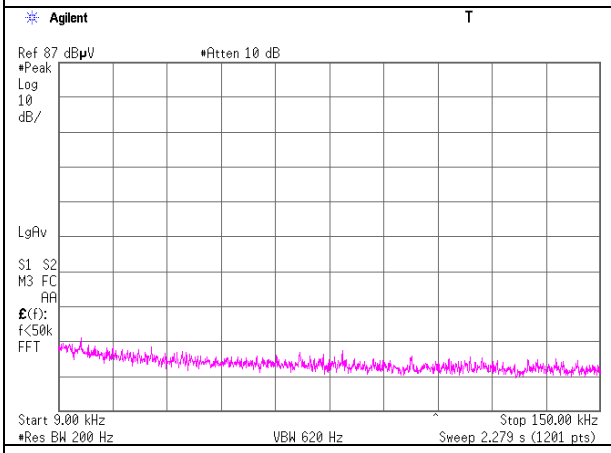
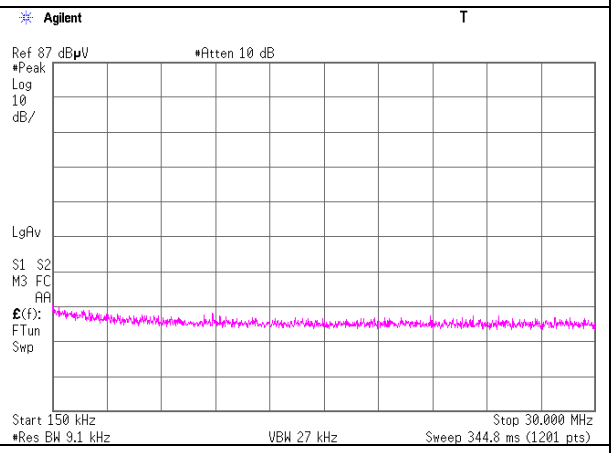
Conducted Spurious Emission

Tx 3DH5 2480MHz

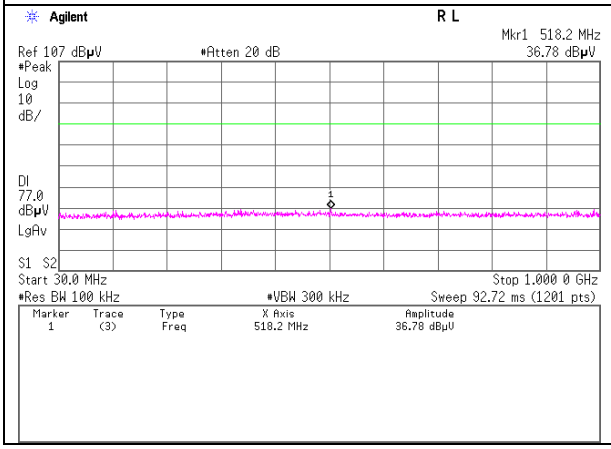
9kHz-150kHz



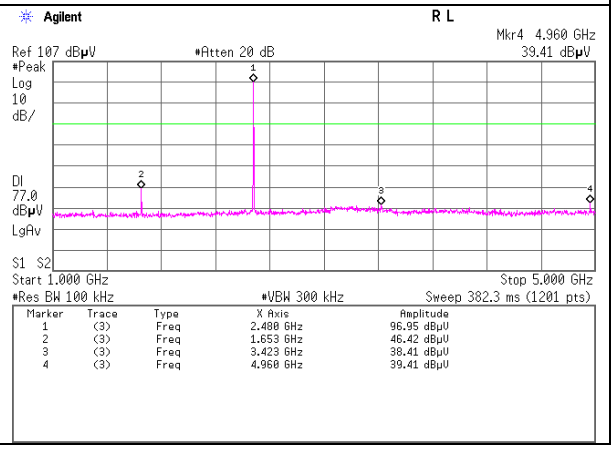
150kHz-30MHz



30MHz-1GHz



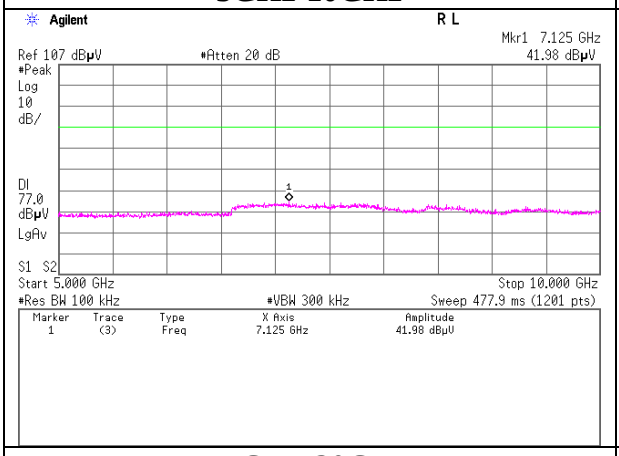
1GHz-5GHz



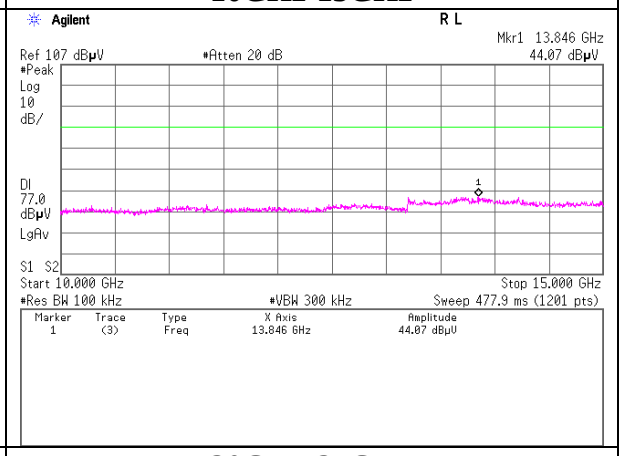
Conducted Spurious Emission

Tx 3DH5 2480MHz

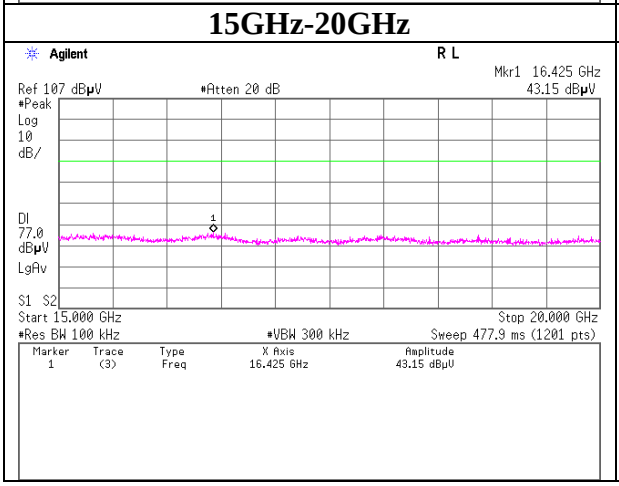
5GHz-10GHz



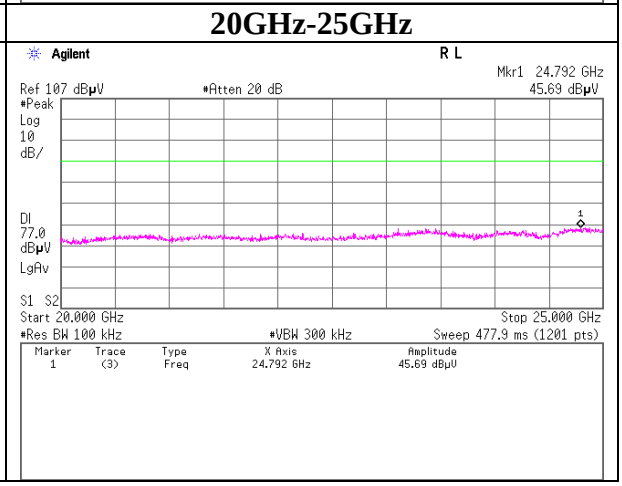
10GHz-15GHz



15GHz-20GHz



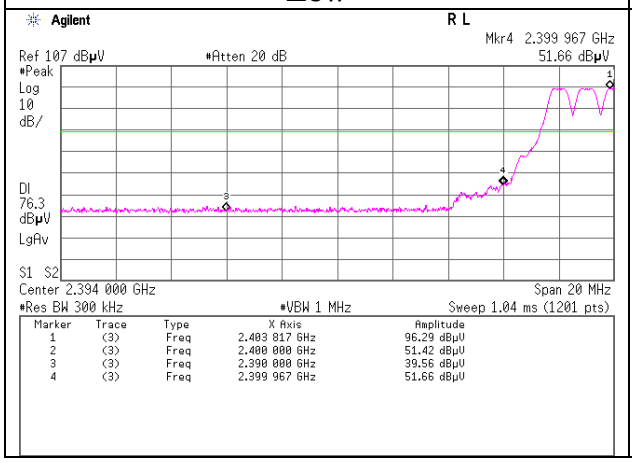
20GHz-25GHz



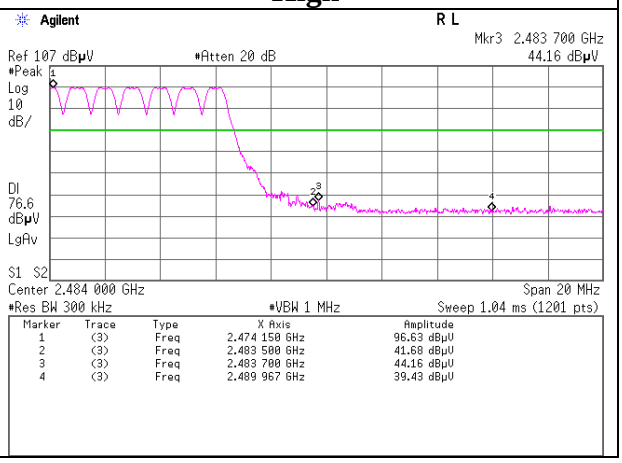
Conducted Emission Band Edge compliance

Tx DH5, Hopping on

Low

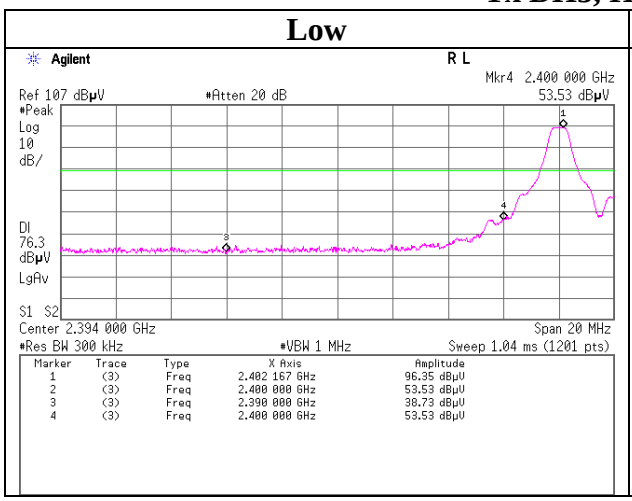


High

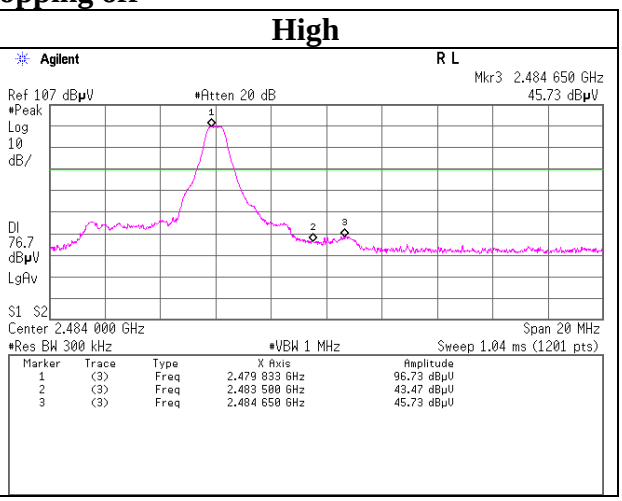


Tx DH5, Hopping off

Low



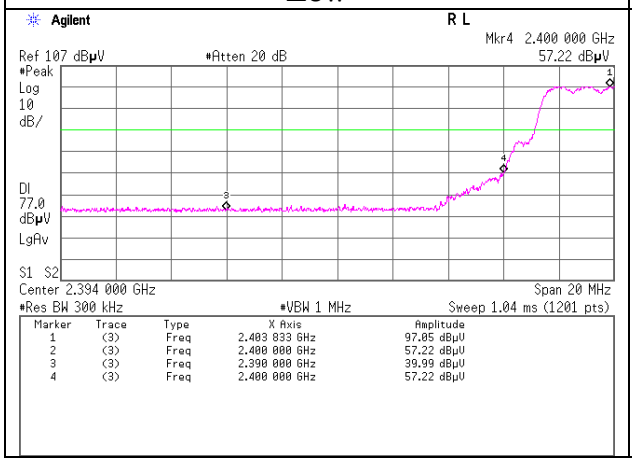
High



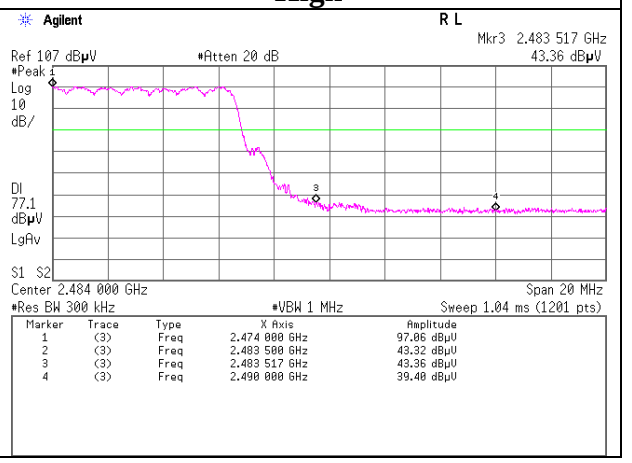
Conducted Emission Band Edge compliance

Tx 3DH5, Hopping on

Low

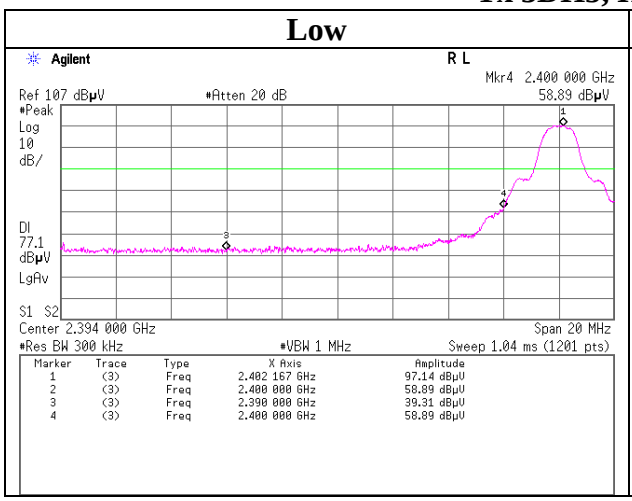


High

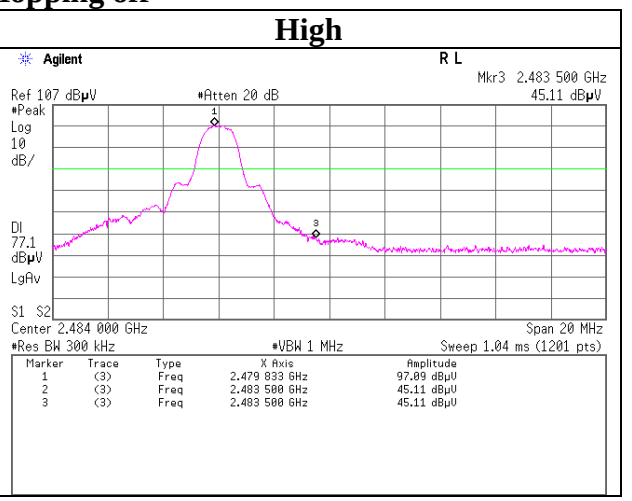


Tx 3DH5, Hopping off

Low



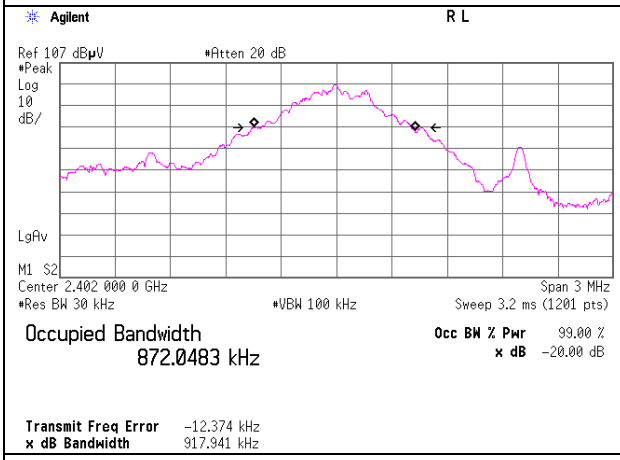
High



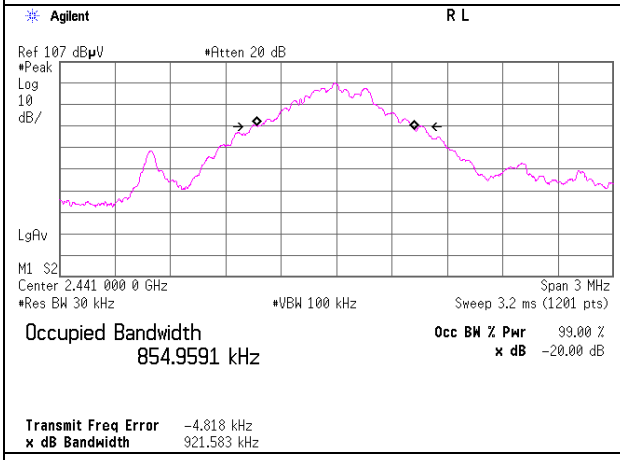
99%Occupied Bandwidth

Tx DH5, Hopping off

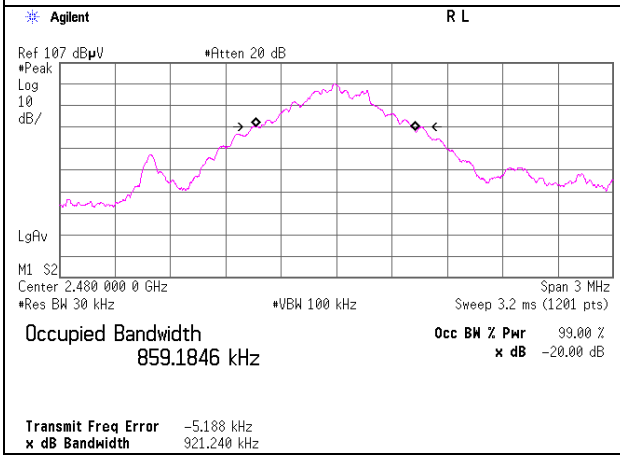
2402MHz



2441MHz

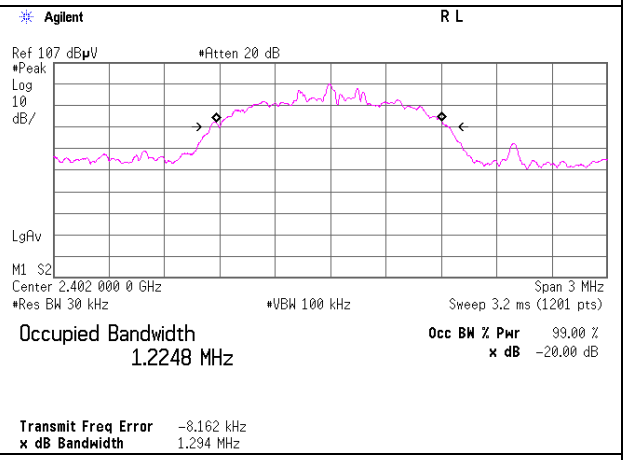


2480MHz

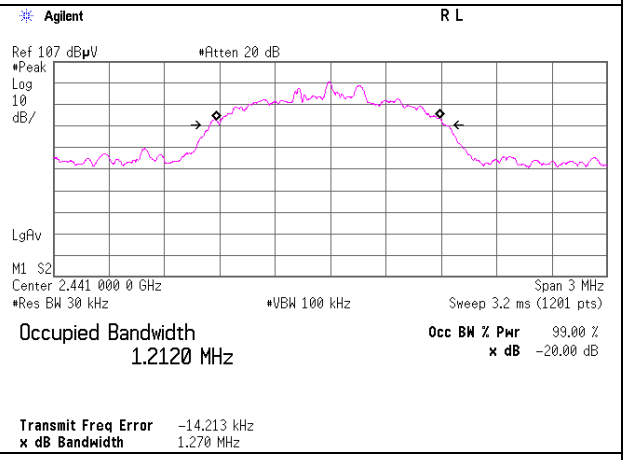


Tx 3DH5, Hopping off

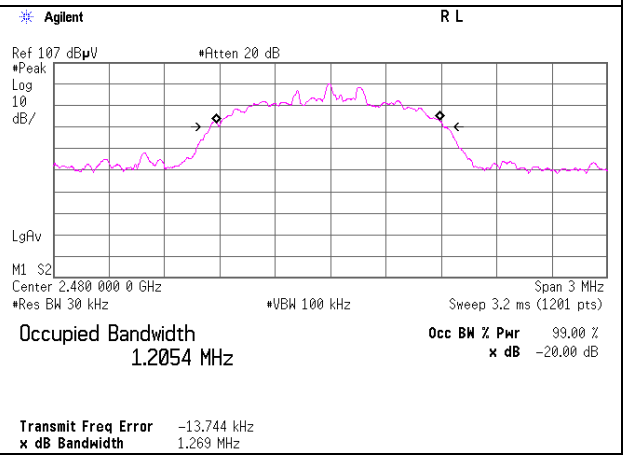
2402MHz



2441MHz

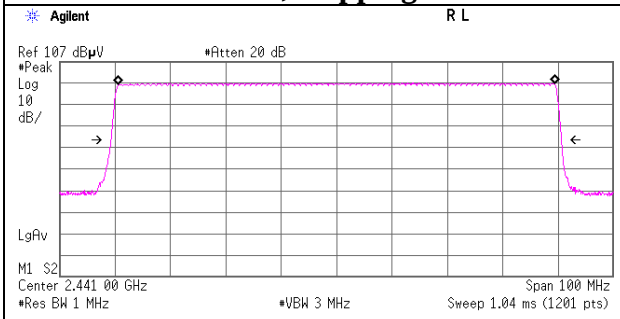


2480MHz

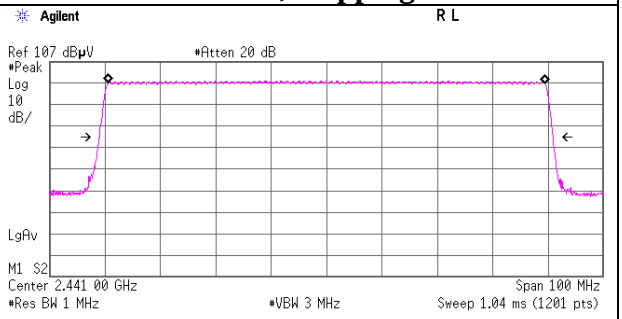


99% Occupied Bandwidth

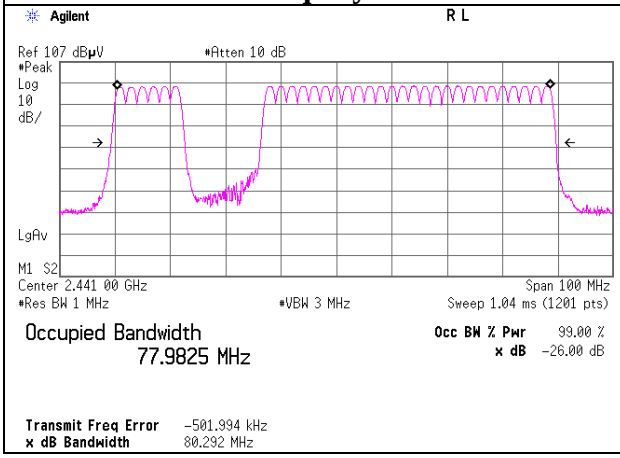
Tx DH5, Hopping on



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)
MSA-10	Spectrum Analyzer	Agilent	E4448A	MY46180655	AT	2011/02/15 * 12
MPM-13	Power Meter	Anritsu	ML2495A	0824014	AT	2010/11/01 * 12
MPSE-18	Power sensor	Anritsu	MA2411B	0738174	AT	2010/11/01 * 12
MCC-66	Microwave Cable 1G-40GHz	Suhner	SUCOFLEX102	28636/2	AT	2011/04/22 * 12
MOS-04	Digital Humidity Indicator	N.T	NT-1800	MOS04	AT	2011/02/23 * 12
MAT-20	Attenuator(10dB)(above1GHz)	HIROSE ELECTRIC CO.,LTD.	AT-110	-	AT	2011/01/06 * 12
MAEC-02	Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-06902	RE/CE	2010/09/01 * 12
MOS-22	Thermo-Hygrometer	Custom	CTH-201	0003	RE/CE	2011/02/23 * 12
MJM-14	Measure	KOMELON	KMC-36	-	RE/CE	-
COTS-MEMI	EMI measurement program	TSJ	TEPTO-DV	-	RE/CE	
MRENT-95	Spectrum Analyzer	Agilent	E4440A	MY45305081	RE/CE	2011/06/30 * 12
MHA-06	Horn Antenna 1-18GHz	Schwarzbeck	BBHA9120D	254	RE	2011/01/16 * 12
MHA-02	Horn Antenna 18-26.5GHz	EMCO	3160-09	1265	RE	2011/01/16 * 12
MPA-10	Pre Amplifier	Agilent	8449B	3008A02142	RE	2010/09/30 * 12
MHF-06	High Pass Filter 3.5-24GHz	TOKIMEC	TF323DCA	601	RE	2011/05/16 * 12
MCC-56	Microwave Cable	Suhner	SUCOFLEX104	270875/4(1m) / 284655(5m)	RE	2011/03/02 * 12
MSA-04	Spectrum Analyzer	Agilent	E4448A	US44300523	RE	2011/04/08 * 12
MTR-03	Test Receiver	Rohde & Schwarz	ESCI	100300	RE/CE	2011/04/15 * 12
MBA-02	Biconical Antenna	Schwarzbeck	BBA9106	VHA91032008	RE	2010/10/11 * 12
MLA-02	Logperiodic Antenna	Schwarzbeck	USLP9143	201	RE	2010/10/11 * 12
MCC-12	Coaxial Cable	Fujikura/Agilent	-	-	RE	2011/02/18 * 12
MAT-07	Attenuator(6dB)	Weinschel Corp	2	BK7970	RE	2010/11/05 * 12
MPA-09	Pre Amplifier	Agilent	8447D	2944A10845	RE	2010/09/09 * 12
MLS-06	LISN(AMN)	Schwarzbeck	NSLK8127	8127363	CE	2011/02/20 * 12
MCC-13	Coaxial Cable	Fujikura	3D-2W(12m)/5D-2W(5m)/5D-2W(0.8m)/5D-2W(1m)	-	CE	2011/02/18 * 12
MAT-65	Attenuator(13dB)	JFW Industries, Inc.	50FP-013H2 N	-	CE	2011/02/21 * 12

The expiration date of the calibration is the end of the expired month.
All equipment is calibrated with valid calibrations. Each measurement data 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