

## **APPENDIX 2: Data of EMI test**

### **26dB Emission Bandwidth**

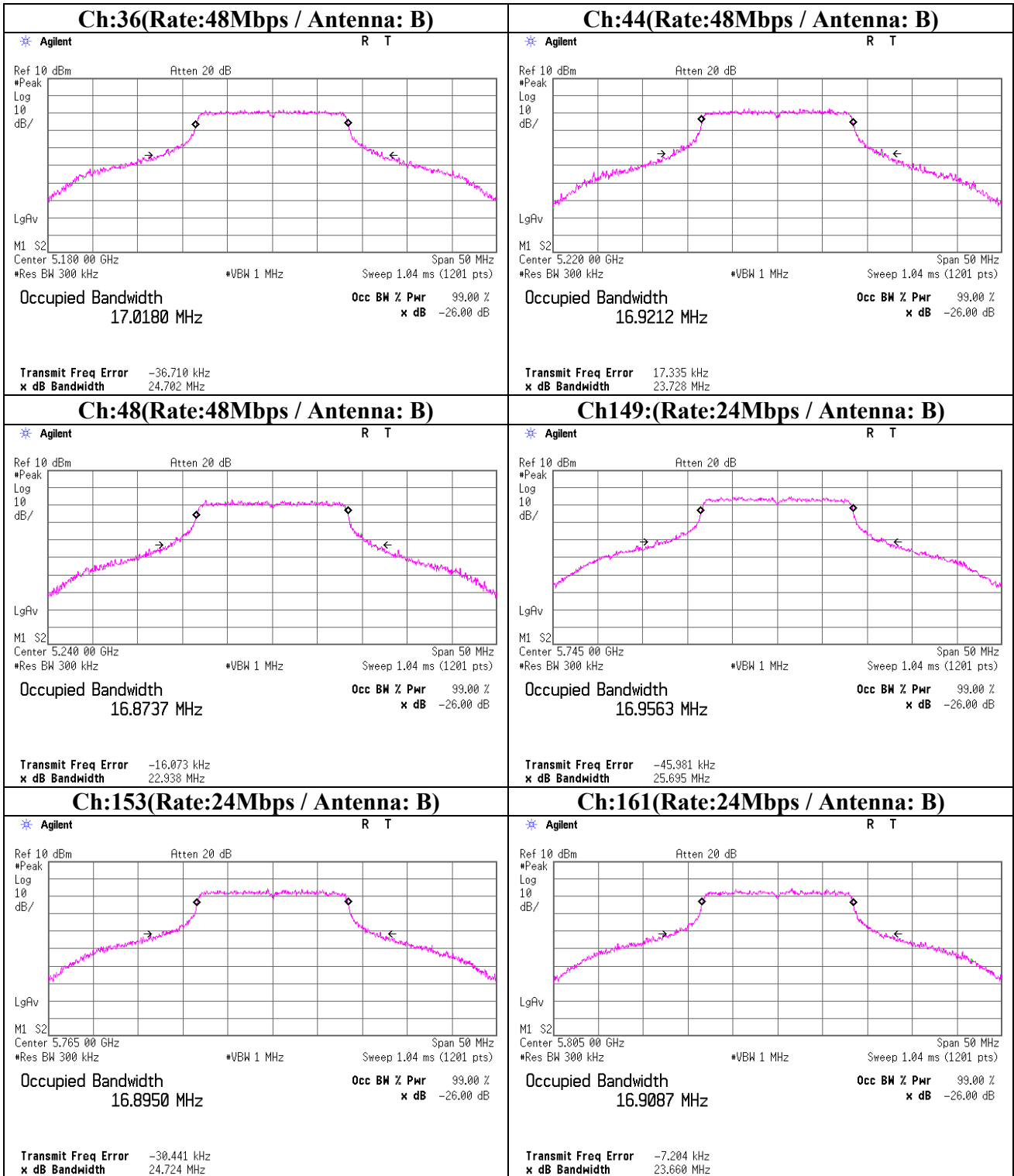
UL Japan, Inc.  
Head Office EMC Lab. No.2 Measurement Room

Company : KOITO INDUSTRIES, LTD.  
Equipment : Wireless LAN Module  
Model : KWM-DS540-N2  
Sample No. : AH0029646  
Power : DC 5.0V  
Mode : Tx IEEE 802.11a

REPORT NO : 27LE0273-HO  
REGULATION : FCC 15.407(a)  
TEST DISTANCE : -  
DATE : 02/27/2008  
TEMPERATURE : 25deg.C  
HUMIDITY : 32%  
ENGINEER : Akio Hayashi

Ch	Freq. [MHz]	26dB Bandwidth [MHz]	Limit [MHz]
36	5180.0	24.702	-
44	5220.0	23.728	-
48	5240.0	22.938	-
149	5745.0	25.695	-
153	5765.0	24.724	-
161	5805.0	23.660	-

### 26dB Emission Bandwidth



### Maximum Peak Output Power

UL Japan, Inc.  
Head Office EMC Lab. No.2 Measurement Room

Company	: KOITO INDUSTRIES, LTD.	REPORT NO	: 27LE0273-HO
Equipment	: Wireless LAN Module	REGULATION	: FCC 15.407(a)
Model	: KWM-DS540-N2	TEST DISTANCE	: -
Sample No.	: AH0029646	DATE	: 02/27/2008
Power	: DC 5.0V	TEMPERATURE	: 25deg.C
Mode	: Tx IEEE 802.11a	HUMIDITY	: 32%
		ENGINEER	: Akio Hayashi

#### Antenna A

Ch	Freq. [MHz]	S/A Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
36	5180.0	-0.29	1.7	10.0	11.45	17.0	5.6
44	5220.0	0.04	1.7	10.0	11.74	17.0	5.3
48	5240.0	-1.32	1.7	10.0	10.38	17.0	6.6
149	5745.0	2.24	1.8	10.0	14.04	30.0	16.0
153	5765.0	0.05	1.9	10.0	11.95	30.0	18.1
161	5805.0	2.29	1.9	10.0	14.19	30.0	15.8

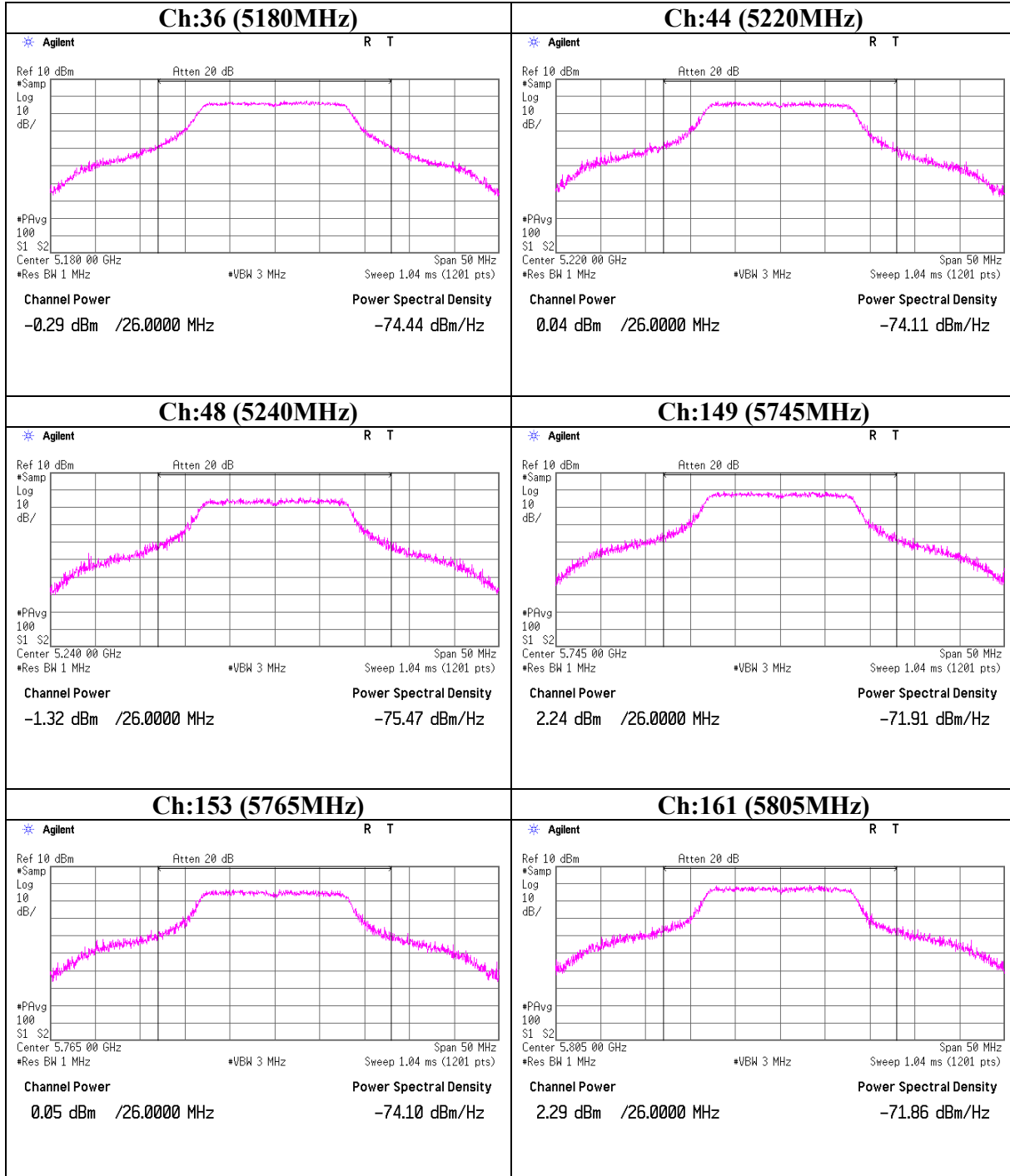
#### Antenna B

Ch	Freq. [MHz]	S/A Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
36	5180.0	1.56	1.7	10.0	13.26	17.0	3.7
44	5220.0	0.16	1.7	10.0	11.86	17.0	5.1
48	5240.0	0.54	1.7	10.0	12.24	17.0	4.8
149	5745.0	2.37	1.8	10.0	14.17	30.0	15.8
153	5765.0	1.94	1.9	10.0	13.84	30.0	16.2
161	5805.0	2.45	1.9	10.0	14.35	30.0	15.7

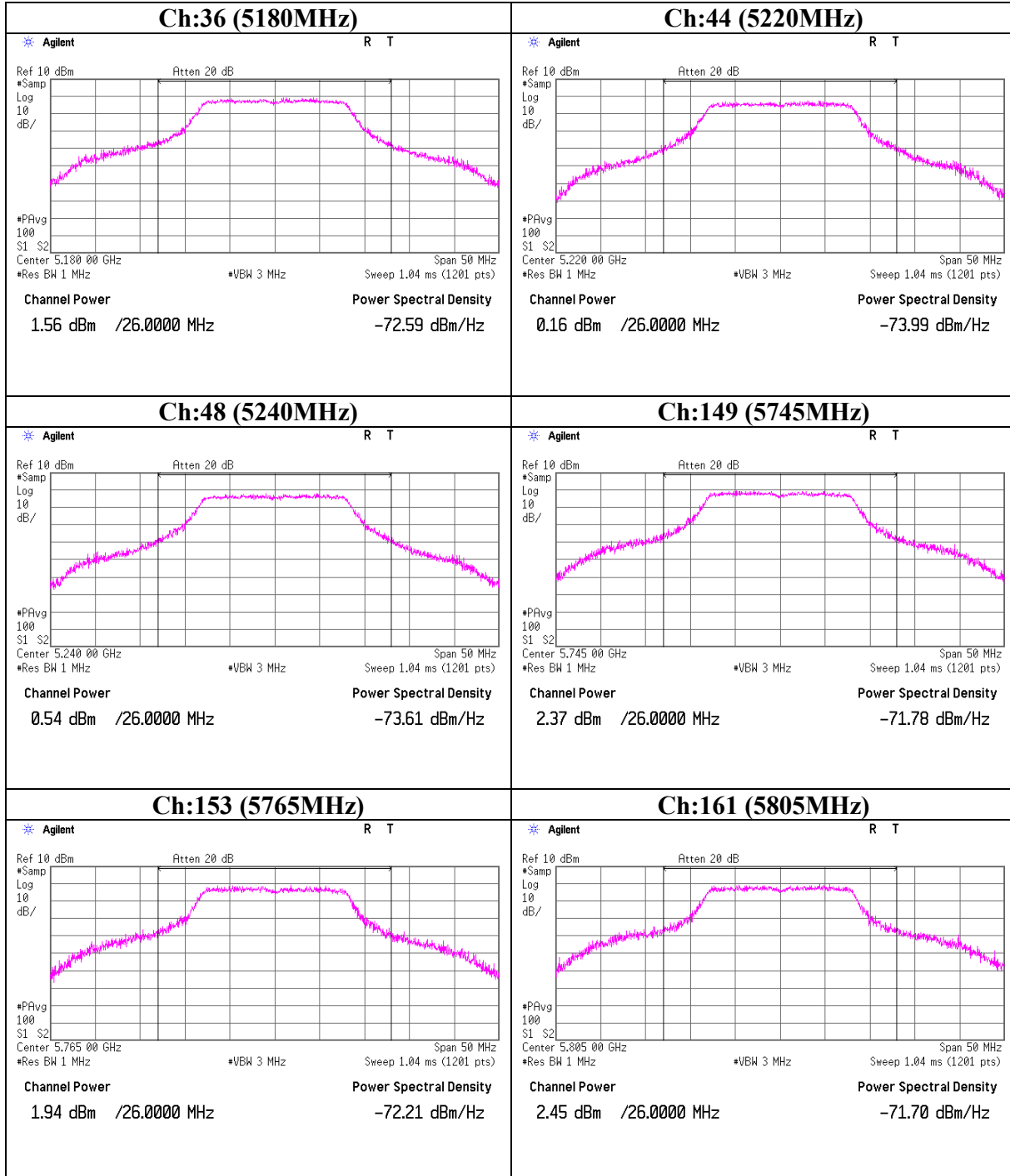
Sample Calculation:

Result = Reading + Cable Loss + Attenuator

**Maximum Peak Output Power**  
**Antenna: A**



**Maximum Peak Output Power**  
**Antenna: B**



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### Peak Power Spectral Density

UL Japan, Inc.  
Head Office EMC Lab. No.2 Measurement Room

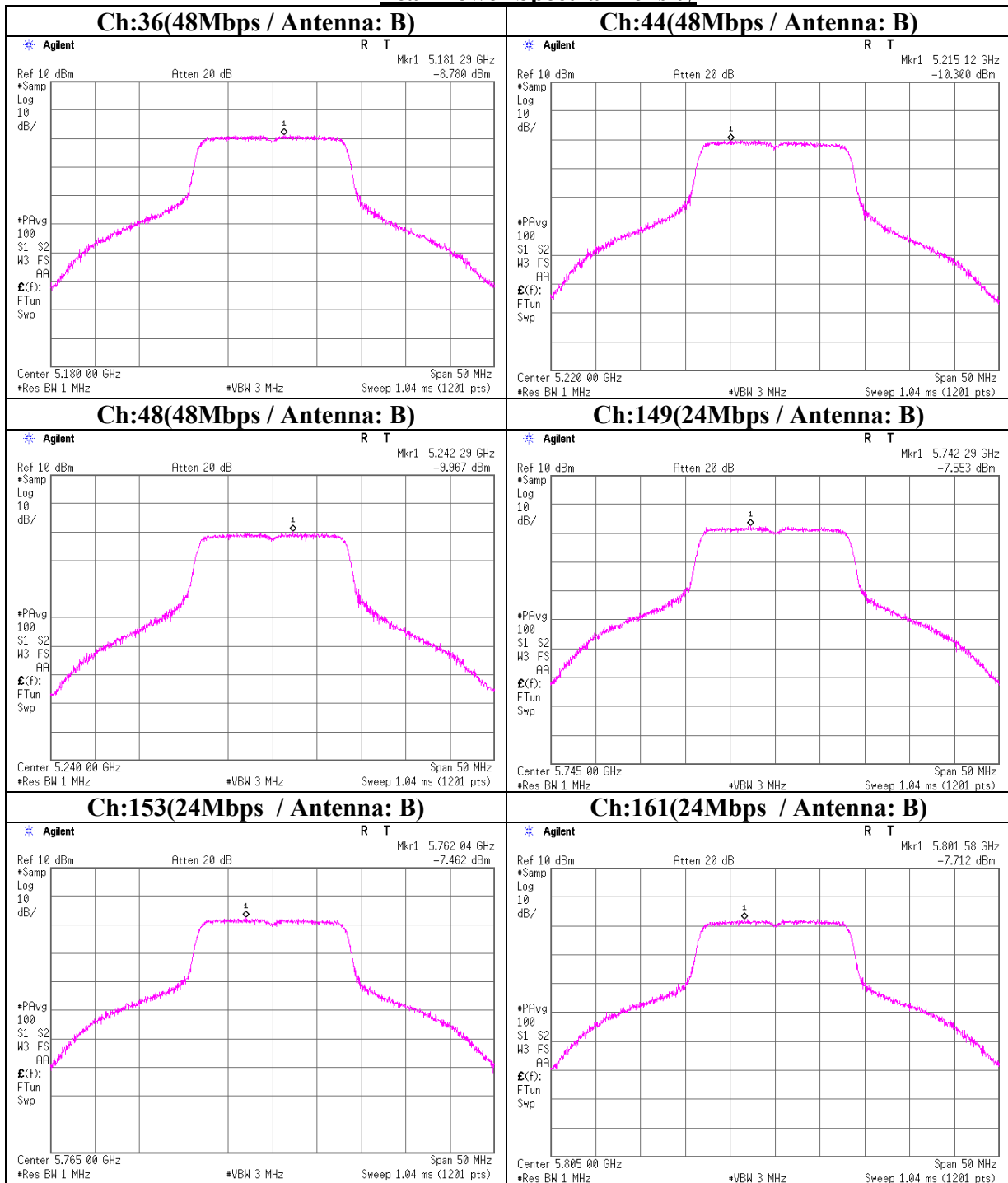
Company : KOITO INDUSTRIES, LTD.      REPORT NO : 27LE0273-HO  
Equipment : Wireless LAN Module      REGULATION : FCC 15.407(a)  
Model : KWM-DS540-N2      TEST DISTANCE : -  
Sample No. : AH0029646      DATE : 02/27/2008  
Power : DC 5.0V      TEMPERATURE : 25deg.C  
Mode : Tx IEEE 802.11a      HUMIDITY : 32%  
ENGINEER : Akio Hayashi

Ch	Freq. [MHz]	Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
36	5180.0	-8.78	1.7	10.0	3.0	4.0	1.0
44	5220.0	-10.30	1.7	10.0	1.4	4.0	2.6
48	5240.0	-9.96	1.7	10.0	1.7	4.0	2.3
149	5745.0	-7.55	1.8	10.0	4.3	17.0	12.8
153	5765.0	-7.46	1.9	10.0	4.4	17.0	12.6
161	5805.0	-7.71	1.9	10.0	4.2	17.0	12.8

Sample Calculation:

Result = Reading + Cable Loss + Attenuator

### Peak Power Spectral Density



Test report No. : 27LE0273-HO-B  
Page : 21 of 50  
Issued date : March 18, 2008  
FCC ID : V5RKWMDS540N2V

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### Peak Excursion Ratio

UL Japan, Inc.  
Head Office EMC Lab. No.6 Measurement Room

Company : KOITO INDUSTRIES, LTD.  
Equipment : Wireless LAN Module  
Model : KWM-DS540-N2  
Sample No. : AH0029646  
Power : DC 5.0V  
Mode : Tx IEEE 802.11a

REPORT NO : 27LE0273-HO  
REGULATION : FCC 15.407(a)(6)  
TEST DISTANCE : -  
DATE : 02/27/2008  
TEMPERATURE : 25deg.C  
HUMIDITY : 32%  
ENGINEER : Akio Hayashi

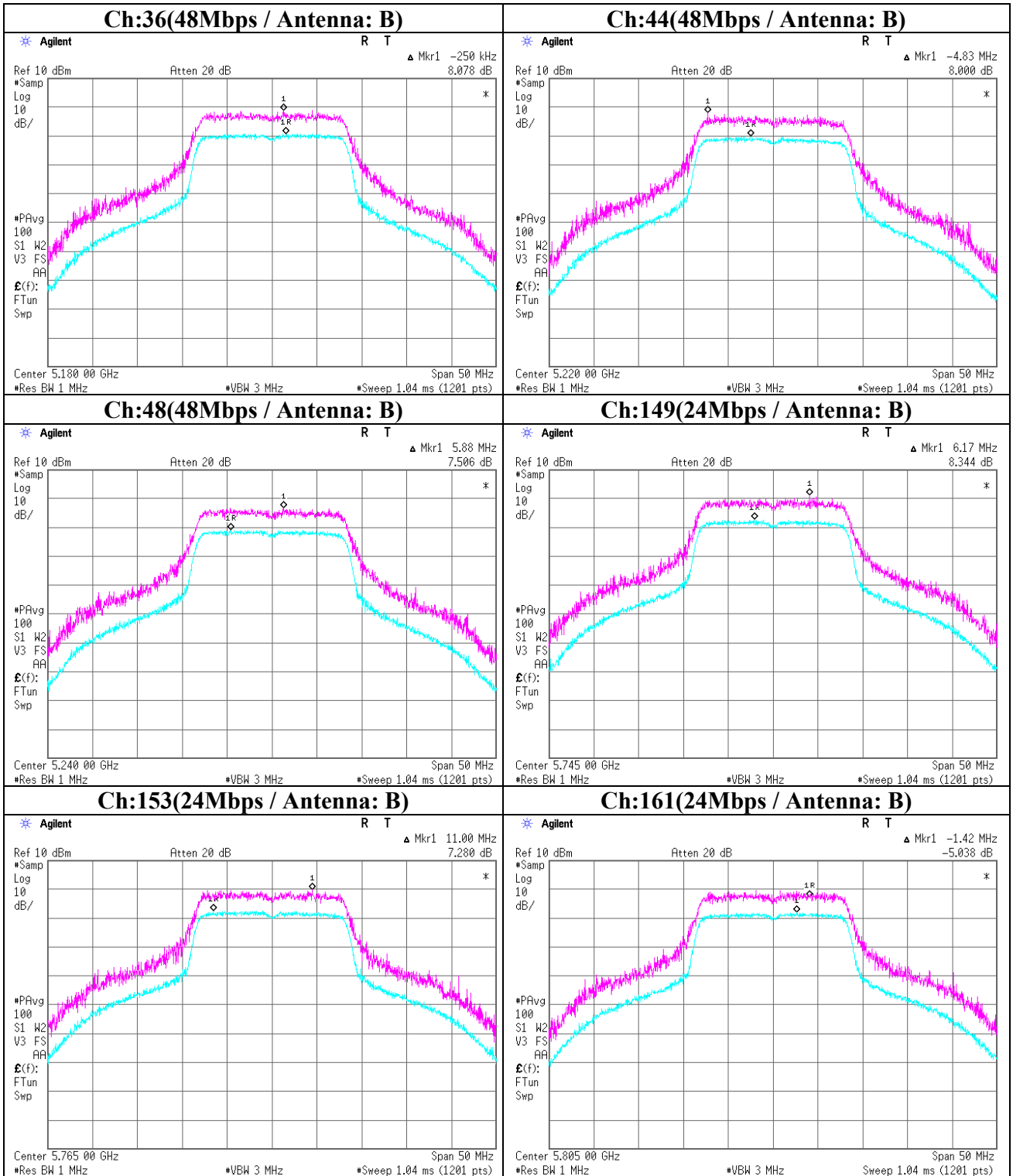
Ch	Freq. [MHz]	Peak Power Excursion [dB]	Limit [dB]
36	5180.0	8.078	13.0
44	5220.0	8.000	13.0
48	5240.0	7.506	13.0
149	5745.0	8.344	13.0
153	5765.0	7.280	13.0
161	5805.0	5.038	13.0

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### Peak Excursion Ratio



**Radiated Spurious Emission (below 1GHz)**  
**Tx, Low band, 5180MHz, 48Mbps**

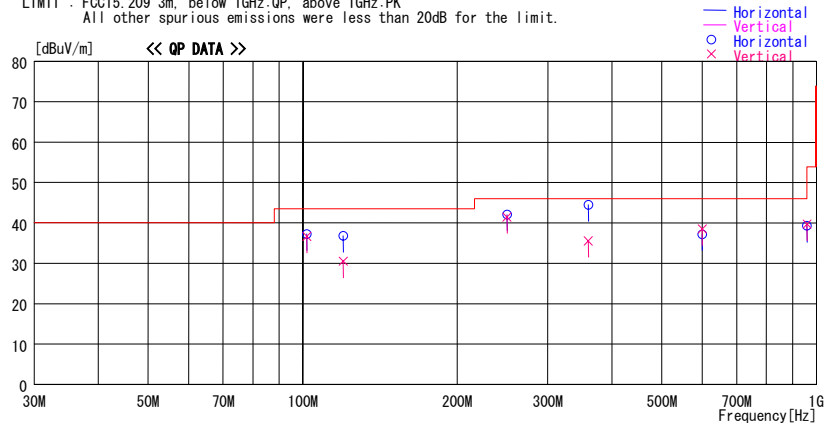
**DATA OF RADIATED EMISSION TEST**

UL Japan Inc. Head Office EMC Lab. No.2 Semi Anechoic Chamber  
Date : 2008/02/26

Applicant : KOITO INDUSTRIES, LTD. Report No. : 27LE0273-HO  
Kind of EUT : Wireless LAN Module Power : DC 5V  
Model No. : KWM-DS540-N2 Temp./ Humi. : 21 deg. C. / 30 %  
Serial No. : AH0029646 Operator : Akio Hayashi

Mode / Remarks : Tx, Low Band, 5180MHz, 48Mbps, PN9, Antenna B, EUT (Normal)

LIMIT : FCC15.209 3m, below 1GHz:QP, above 1GHz:PK  
All other spurious emissions were less than 20dB for the limit.



Frequency [MHz]	Reading [dBuV]	DET	Antenna	Loss	Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]
			Factor [dB/m]	Gain [dB]						
101.882	48.1	QP	10.2	-21.0	37.3	204	291	Hori.	43.5	6.2
101.870	47.4	QP	10.2	-21.0	36.6	299	216	Vert.	43.5	6.9
120.000	45.9	QP	11.8	-20.9	36.8	0	259	Hori.	43.5	6.7
120.005	39.6	QP	11.8	-20.9	30.5	223	100	Vert.	43.5	13.0
250.003	44.1	QP	17.1	-19.2	42.0	205	142	Hori.	46.0	4.0
250.001	43.6	QP	17.1	-19.2	41.5	170	100	Vert.	46.0	4.5
360.002	47.3	QP	16.3	-19.1	44.5	319	100	Hori.	46.0	1.5
359.998	38.4	QP	16.3	-19.1	35.6	218	157	Vert.	46.0	10.4
600.002	36.7	QP	19.3	-18.8	37.2	36	263	Hori.	46.0	8.8
599.996	38.1	QP	19.2	-18.8	38.5	296	100	Vert.	46.0	7.5
959.994	33.1	QP	22.5	-16.3	39.3	153	100	Hori.	46.0	6.7
959.994	33.5	QP	22.5	-16.3	39.7	41	100	Vert.	46.0	6.3

CHART: WITH FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPERIODIC, 1000MHz- HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - GAIN (AMP)

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

Test report No. : 27LE0273-HO-B  
Page : 24 of 50  
Issued date : March 18, 2008  
FCC ID : V5RKWMDS540N2V

**Radiated Spurious Emission (below 1GHz)**  
**Tx, Low band, 5220MHz, 48Mbps**

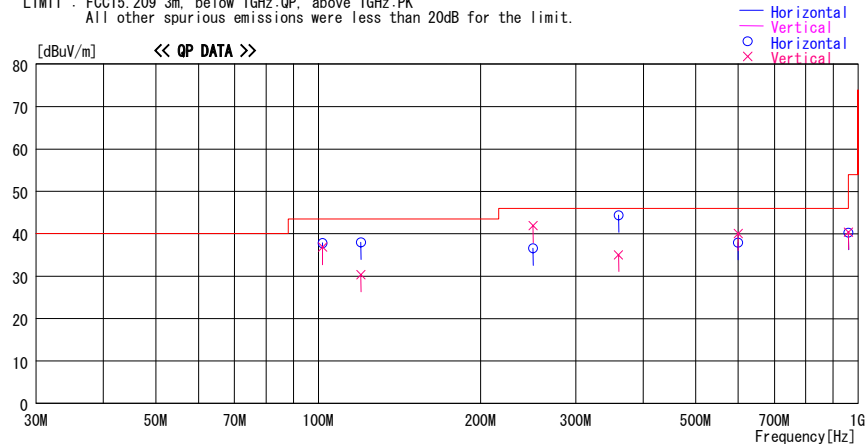
**DATA OF RADIATED EMISSION TEST**

UL Japan Inc. Head Office EMC Lab. No.2 Semi Anechoic Chamber  
Date : 2008/02/26

Applicant : KOITO INDUSTRIES, LTD.  
Kind of EUT : Wireless LAN Module  
Model No. : KWM-DS540-N2  
Serial No. : AH0029646  
Report No. : 27LE0273-H0  
Power : DC 5V  
Temp./ Humi. : 21 deg.C. / 30 %  
Operator : Akio Hayashi

Mode / Remarks : Tx, Low Band, 5220MHz, 48Mbps, PN9, Antenna B, EUT (Normal)

LIMIT : FCC15.209 3m, below 1GHz:QP, above 1GHz:PK  
All other spurious emissions were less than 20dB for the limit.



Frequency	Reading	DET	Antenna		Level	Angle	Height	Polar.	Limit	
			Factor	Gain					[dBuV/m]	[dB]
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]
101.878	48.6	QP	10.2	-21.0	37.8	187	299	Hori.	43.5	5.7
101.874	47.6	QP	10.2	-21.0	36.8	273	100	Vert.	43.5	6.7
120.004	47.1	QP	11.8	-20.9	38.0	359	289	Hori.	43.5	5.5
119.999	39.4	QP	11.8	-20.9	30.3	223	107	Vert.	43.5	13.2
249.999	38.7	QP	17.1	-19.2	36.6	66	207	Hori.	46.0	9.4
250.049	44.0	QP	17.1	-19.2	41.9	140	100	Vert.	46.0	4.1
360.000	47.2	QP	16.3	-19.1	44.4	321	100	Hori.	46.0	1.6
360.002	37.9	QP	16.3	-19.1	35.1	225	162	Vert.	46.0	10.9
599.998	37.5	QP	19.2	-18.8	37.9	34	293	Hori.	46.0	8.1
599.995	39.7	QP	19.2	-18.8	40.1	225	103	Vert.	46.0	5.9
959.994	34.1	QP	22.5	-16.3	40.3	141	100	Hori.	46.0	5.7
960.000	34.2	QP	22.5	-16.3	40.4	45	100	Vert.	46.0	5.6

CHART:WITH FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPERIODIC, 1000MHz- HORN  
CALCULATION:RESULT = READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - GAIN (AMP)

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

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**Radiated Spurious Emission (below 1GHz)**  
**Tx, Low band, 5240MHz, 48Mbps**

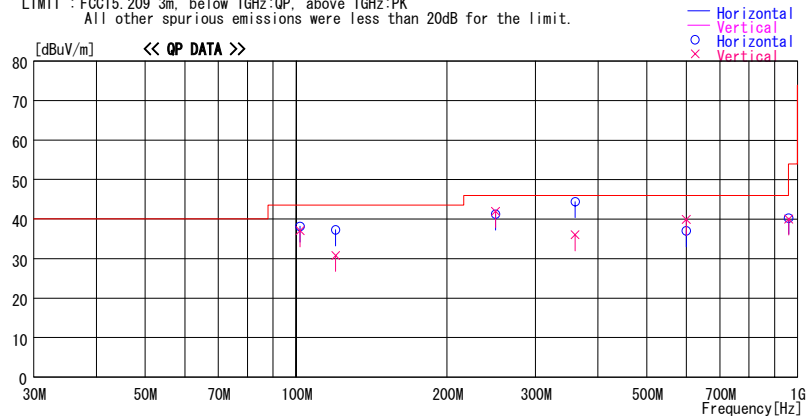
**DATA OF RADIATED EMISSION TEST**

UL Japan Inc. Head Office EMC Lab. No. 2 Semi Anechoic Chamber  
Date : 2008/02/27

Applicant : KOITO INDUSTRIES, LTD.  
Kind of EUT : Wireless LAN Module  
Model No. : KWM-DS540-N2  
Serial No. : AH0029646  
Report No. : 27LE0273-HO  
Power : DC 5V  
Temp./ Humi. : 21 deg. C. / 30 %  
Operator : Akio Hayashi

Mode / Remarks: Tx, Low Band, 5240MHz, 48Mbps, PN9, Antenna B, EUT(Normal)

LIMIT : FCC15.209 3m, below 1GHz:QP, above 1GHz:PK  
All other spurious emissions were less than 20dB for the limit.



Frequency	Reading	DET	Antenna Factor	Loss & Gain	Level	Angle	Height	Polar.	Limit	Margin
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]
101.877	49.0	QP	10.2	-21.0	38.2	189	271	Hori.	43.5	5.3
101.878	47.9	QP	10.2	-21.0	37.1	302	100	Vert.	43.5	6.5
120.002	46.4	QP	11.8	-20.9	37.3	111	278	Hori.	43.5	6.2
120.001	39.9	QP	11.8	-20.9	30.8	214	100	Vert.	43.5	12.7
249.992	43.4	QP	17.1	-19.2	41.3	202	125	Hori.	46.0	4.8
249.992	44.0	QP	17.1	-19.2	41.9	165	100	Vert.	46.0	4.1
359.997	47.2	QP	16.3	-19.1	44.4	190	100	Hori.	46.0	1.6
360.002	38.8	QP	16.3	-19.1	36.0	203	163	Vert.	46.0	10.0
599.993	36.6	QP	19.2	-18.8	37.0	322	100	Hori.	46.0	9.0
600.001	39.4	QP	19.3	-18.8	39.9	227	117	Vert.	46.0	6.1
959.993	34.0	QP	22.5	-16.3	40.2	137	100	Hori.	46.0	5.8
959.990	33.8	QP	22.5	-16.3	40.0	38	100	Vert.	46.0	6.0

CHART: WITH FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPERIODIC, 1000MHz- HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - GAIN (AMP)

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

**Radiated Spurious Emission (below 1GHz)**  
**Tx, High band, 5745MHz, 24Mbps**

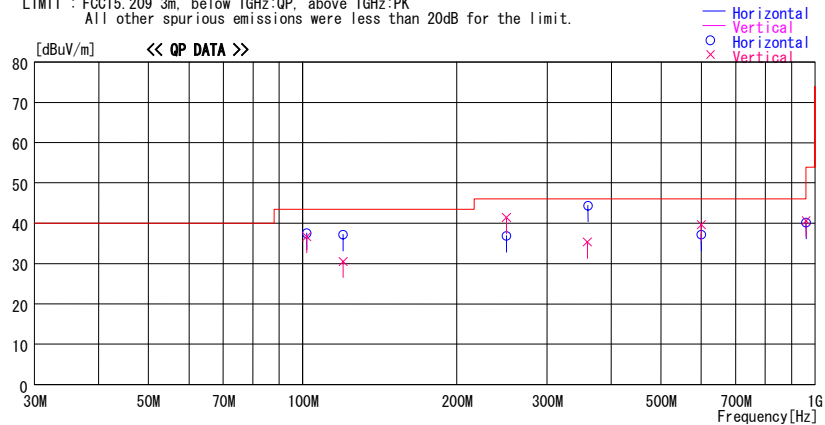
**DATA OF RADIATED EMISSION TEST**

UL Japan Inc. Head Office EMC Lab. No.2 Semi Anechoic Chamber  
Date : 2008/02/27

Applicant : KOITO INDUSTRIES, LTD.  
Kind of EUT : Wireless LAN Module  
Model No. : KWM-DS540-N2  
Serial No. : AH0029646  
Report No. : 27LE0273-HO  
Power : DC 5V  
Temp. / Humi. : 21 deg. C. / 30 %  
Operator : Akio Hayashi

Mode / Remarks : Tx, High Band, 5745MHz, 24Mbps, PN9, Antenna B, EUT(Normal)

LIMIT : FCC15.209 3m, below 1GHz:QP, above 1GHz:PK  
All other spurious emissions were less than 20dB for the limit.



Frequency	Reading	DET	Antenna Factor	Loss & Gain	Level	Angle	Height	Polar.	Limit	Margin
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]
101.875	48.3	QP	10.2	-21.0	37.5	173	276	Hori.	43.5	6.0
101.874	47.5	QP	10.2	-21.0	36.7	290	114	Vert.	43.5	6.8
120.000	46.3	QP	11.8	-20.9	37.2	0	286	Hori.	43.5	6.3
120.001	39.7	QP	11.8	-20.9	30.6	225	100	Vert.	43.5	13.0
249.999	38.9	QP	17.1	-19.2	36.8	61	269	Hori.	46.0	9.2
249.999	43.5	QP	17.1	-19.2	41.4	145	130	Vert.	46.0	4.6
360.005	47.2	QP	16.3	-19.1	44.4	191	100	Hori.	46.0	1.6
359.500	38.2	QP	16.3	-19.1	35.4	214	162	Vert.	46.0	10.7
600.000	36.7	QP	19.3	-18.8	37.2	321	116	Hori.	46.0	8.8
599.997	39.3	QP	19.2	-18.8	39.7	282	100	Vert.	46.0	6.3
959.995	33.9	QP	22.5	-16.3	40.1	143	100	Hori.	46.0	5.9
959.991	34.4	QP	22.5	-16.3	40.6	40	100	Vert.	46.0	5.4

CHART: WITH FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPERIODIC, 1000MHz- HORN  
CALCULATION: RESULT = READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - GAIN (AMP)

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

Test report No. : 27LE0273-HO-B  
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Issued date : March 18, 2008  
FCC ID : V5RKWMDS540N2V

**Radiated Spurious Emission (below 1GHz)**  
**Tx, High band, 5765MHz, 24Mbps**

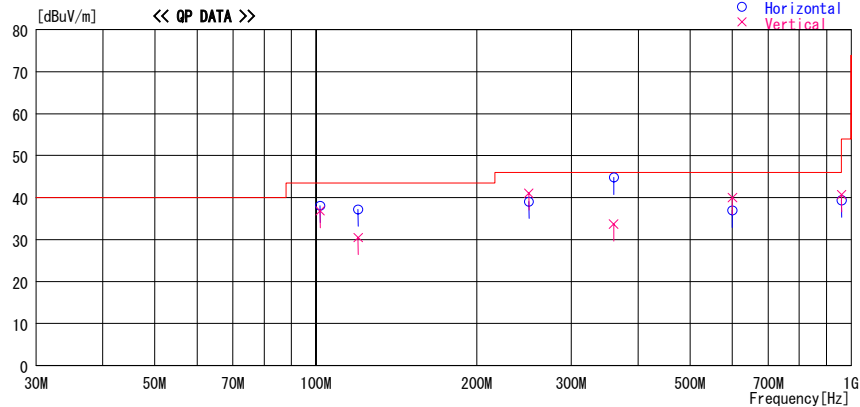
**DATA OF RADIATED EMISSION TEST**

UL Japan Inc. Head Office EMC Lab. No.2 Semi Anechoic Chamber  
Date : 2008/02/27

Applicant : KOITO INDUSTRIES, LTD.  
Kind of EUT : Wireless LAN Module  
Model No. : KWM-DS540-N2  
Serial No. : AH0029646  
Report No. : 27LE0273-HO  
Power : DC 5V  
Temp./Humi. : 21 deg.C. / 30 %  
Operator : Akio Hayashi

Mode / Remarks : Tx, High Band, 5765MHz, 24Mbps, PN9, Antenna B, EUT (Normal)

LIMIT : FCC15.209 3m, below 1GHz:QP, above 1GHz:PK  
All other spurious emissions were less than 20dB for the limit.



Frequency	Reading	DET	Antenna Factor	Loss& Gain	Level	Angle	Height	Polar.	Limit	Margin
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]
101.872	48.9	QP	10.2	-21.0	38.1	192	284	Hori.	43.5	5.4
101.876	47.6	QP	10.2	-21.0	36.8	312	102	Vert.	43.5	6.7
120.006	46.3	QP	11.8	-20.9	37.2	11	289	Hori.	43.5	6.3
120.003	39.5	QP	11.8	-20.9	30.4	218	109	Vert.	43.5	13.1
250.000	41.1	QP	17.1	-19.2	39.0	183	151	Hori.	46.0	7.0
249.998	43.1	QP	17.1	-19.2	41.0	118	100	Vert.	46.0	5.0
360.001	47.6	QP	16.3	-19.1	44.8	320	100	Hori.	46.0	1.2
360.000	36.4	QP	16.3	-19.1	33.6	102	255	Vert.	46.0	12.4
600.000	36.4	QP	19.3	-18.8	36.9	319	118	Hori.	46.0	9.1
599.999	39.5	QP	19.2	-18.8	39.9	226	116	Vert.	46.0	6.1
959.997	33.2	QP	22.5	-16.3	39.4	161	100	Hori.	46.0	6.6
959.996	34.5	QP	22.5	-16.3	40.7	41	100	Vert.	46.0	5.3

CHART:WITH FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPERIODIC, 1000MHz- HORN  
CALCULATION:RESULT = READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - GAIN(AMP)

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

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Facsimile : +81 596 24 8124

**Radiated Spurious Emission (below 1GHz)**  
**Tx, High band, 5805MHz, 24Mbps**

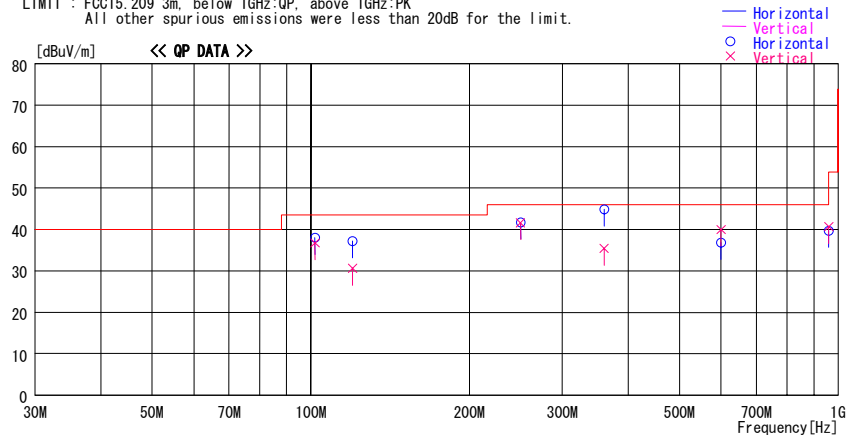
**DATA OF RADIATED EMISSION TEST**

UL Japan Inc. Head Office EMC Lab. No. 2 Semi Anechoic Chamber  
Date : 2008/02/27

Applicant : KOITO INDUSTRIES, LTD.  
Kind of EUT : Wireless LAN Module  
Model No. : KWM-DS540-N2  
Serial No. : AH0029646  
Report No. : 27LE0273-H0  
Power : DC 5V  
Temp. / Humi. : 21 deg. C. / 30 %  
Operator : Akio Hayashi

Mode / Remarks : Tx, High Band, 5805MHz, 24Mbps, PN9, Antenna B, EUT (Normal)

LIMIT : FCC15.209 3m, below 1GHz:QP, above 1GHz:PK  
All other spurious emissions were less than 20dB for the limit.



Frequency	Reading	DET	Antenna Factor	Loss& Gain	Level	Angle	Height	Polar.	Limit	Margin
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]
101.874	48.8	QP	10.2	-21.0	38.0	189	264	Hori.	43.5	5.5
101.874	47.5	QP	10.2	-21.0	36.7	302	100	Vert.	43.5	6.8
120.000	46.3	QP	11.8	-20.9	37.2	11	293	Hori.	43.5	6.3
119.998	39.7	QP	11.8	-20.9	30.6	235	100	Vert.	43.5	12.9
249.997	43.8	QP	17.1	-19.2	41.7	213	11	Hori.	46.0	4.3
250.001	43.7	QP	17.1	-19.2	41.6	166	100	Vert.	46.0	4.4
359.998	47.6	QP	16.3	-19.1	44.8	323	100	Hori.	46.0	1.2
360.002	38.2	QP	16.3	-19.1	35.4	204	100	Vert.	46.0	10.6
599.988	36.4	QP	19.2	-18.8	36.8	323	123	Hori.	46.0	9.2
599.994	39.6	QP	19.2	-18.8	40.0	227	104	Vert.	46.0	6.0
959.975	33.5	QP	22.5	-16.3	39.7	147	100	Hori.	46.0	6.3
959.992	34.5	QP	22.5	-16.3	40.7	40	100	Vert.	46.0	5.3

CHART:WITH FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPERIODIC, 1000MHz-  
CALCULATION:RESULT = READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - GAIN (AMP)

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

## Radiated Spurious Emission (above 1GHz:Inside of the restricted band)

### Tx, Low band, 5180MHz, 48Mbps

Company : KOITO INDUSTRIES, LTD.  
Equipment : Wireless LAN Module  
Model : KWM-DS540-N2  
S/N : AH0029646  
Power : DC 5V  
Mode : Tx, 5180MHz, 48Mbps, PN9, Antenna B  
Position : Normal Position

UL Japan, Inc.  
Head Office EMC Lab. No.2 Semi Anechoic Chamber  
Regulation : FCC Part 15 Subpart E / 15.209  
Test Distance : 3m / 1m  
Date : 02/23/2008, 02/25/2008, 02/26/2008  
Temperature : 22deg.C., 23deg.C., 21deg.C.  
Humidity : 36%, 32%, 30%  
Engineer : Akio Hayashi  
On 02/23/2008 : 1-10GHz was tested.  
On 02/25/2008 : 10-26.5GHz was tested.  
On 02/26/2008 : 26.5-40GHz was tested.

#### PK DETECT

(RBW: 1MHz, VBW: 1MHz)

R-D DETECT (RBW: 1MHz, VBW: 1MHz)												
No.	FREQ [MHz]	S/A READING [dBuV]		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT [dBuV/m]		Limit PK [dBuV/m]	MARGIN [dB]	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	1080.00	52.4	51.4	24.6	33.6	2.2	0.0	45.6	44.6	73.9	28.3	29.3
2	1200.02	49.0	52.2	24.7	33.4	2.2	0.0	42.5	45.7	73.9	31.4	28.2
3	5040.87	39.7	46.7	31.6	31.4	5.1	0.0	45.0	52.0	73.9	28.9	21.9
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
4	15540.00	38.5	35.7	38.2	30.1	8.6	1.1	46.8	44.0	73.9	27.1	29.9
5	20720.00	37.6	36.9	40.0	30.0	9.6	0.0	47.7	47.0	73.9	26.2	26.9

#### AV DETECT

(RBW: 1MHz, VBW: 10Hz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	1080.00	48.4	47.8	24.6	33.6	2.2	0.0	41.6	41.0	53.9	12.3	12.9
2	1200.02	42.2	48.1	24.7	33.4	2.2	0.0	35.7	41.6	53.9	18.2	12.3
3	5040.87	29.2	34.7	31.6	31.4	5.1	0.0	34.5	40.0	53.9	19.4	13.9
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
4	15540.00	27.6	27.6	38.2	30.1	8.6	1.1	35.9	35.9	53.9	18.0	18.0
5	20720.00	29.7	29.7	40.0	30.0	9.6	0.0	39.8	39.8	53.9	14.1	14.1

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.54 dB

Test Distance 0.5m : Distance Factor(Dfac) = 20log(3/0.5) = 15.56 dB

\*Except for the above table : All other spurious emissions were less than 20dB for the limit.

\*Hi-Pass Filter was not used for factor 0.0dB of the above table.

\*In the frequency over the fifth harmonic, the noise from the EUT was not seen. The data above is its base noise.

\*The limit is rounded down to one decimal place.

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

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## Radiated Spurious Emission (above 1GHz:Inside of the restricted band)

### Tx, Low band, 5220MHz, 48Mbps

UL Japan, Inc.

Company : KOITO INDUSTRIES, LTD.  
Equipment : Wireless LAN Module  
Model : KWM-DS540-N2  
S/N : AH0029646  
Power : DC 5V  
Mode : Tx, 5220MHz, 48Mbps, PN9, Antenna B  
Position : Normal Position

Head Office EMC Lab. No.2 Semi Anechoic Chamber  
Regulation : FCC Part 15 Subpart E / 15.209  
Test Distance : 3m / 1m / 0.5m  
Date : 02/25/2008, 02/26/2008  
Temperature : 23deg.C., 21deg.C.  
Humidity : 32%, 30%  
Engineer : Akio Hayashi  
On 02/25/2008 : 1-26.5GHz was tested.  
On 02/26/2008 : 26.5-40GHz was tested.

#### PK DETECT (RBW: 1MHz, VBW: 1MHz)

No.	FREQ  [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	1080.00	49.9	54.5	24.6	33.6	2.2	0.0	43.1	47.7	73.9	30.8	26.2
2	1200.02	51.8	53.3	24.7	33.4	2.4	0.0	45.5	47.0	73.9	28.4	26.9
3	1439.98	48.6	47.4	25.1	33.0	2.7	0.0	43.4	42.2	73.9	30.5	31.7
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
4	15660.00	40.6	45.4	37.7	30.2	8.6	1.1	48.3	53.1	73.9	25.6	20.8
5	20880.00	38.4	37.3	40.0	30.0	9.6	0.0	48.5	47.4	73.9	25.4	26.5
Test distance 0.5meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
6	31320.00	35.3	33.6	43.7	25.2	15.7	0.0	53.9	52.2	73.9	20.0	21.7

#### AV DETECT (RBW: 1MHz, VBW: 10Hz)

No.	FREQ  [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	1080.00	45.2	51.5	24.6	33.6	2.2	0.0	38.4	44.7	53.9	15.5	9.2
2	1200.02	45.5	49.9	24.7	33.4	2.4	0.0	39.2	43.6	53.9	14.7	10.3
3	1439.98	38.0	38.9	25.1	33.0	2.7	0.0	32.8	33.7	53.9	21.1	20.2
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
4	15660.00	30.2	30.5	37.7	30.2	8.6	1.1	37.9	38.2	53.9	16.0	15.7
5	20880.00	29.9	29.7	40.0	30.0	9.6	0.0	40.0	39.8	53.9	13.9	14.1
Test distance 0.5meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
6	31320.00	25.4	25.4	43.7	25.2	15.7	0.0	44.0	44.0	53.9	9.9	9.9

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.54 dB

Test Distance 0.5m : Distance Factor(Dfac) = 20log(3/0.5) = 15.56 dB

\*Except for the above table : All other spurious emissions were less than 20dB for the limit.

\*Hi-Pass Fiter was not used for factor 0.0dB of the above table.

\*In the frequency over the fifth harmonic, the noise from the EUT was not seen.The data above is its base noise.

\*The limit is rounded down to one decimal place.

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

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## Radiated Spurious Emission (above 1GHz:Inside of the restricted band)

### Tx, Low band, 5240MHz, 48Mbps

UL Japan, Inc.

Company : KOITO INDUSTRIES, LTD.  
Equipment : Wireless LAN Module  
Model : KWM-DS540-N2  
S/N : AH0029646  
Power : DC 5V  
Mode : Tx, 5240MHz, 48Mbps, PN9, Antenna B  
Position : Normal Position

Head Office EMC Lab. No.2 Semi Anechoic Chamber  
Regulation : FCC Part 15 Subpart E / 15.209  
Test Distance : 3m / 1m / 0.5m  
Date : 02/23/2008, 02/25/2008, 02/26/2008  
Temperature : 22deg.C., 23deg.C., 21deg.C.  
Humidity : 36%, 32%, 30%  
Engineer : Akio Hayashi  
On 02/23/2008 : 1-10GHz was tested.  
On 02/25/2008 : 10-26.5GHz was tested.  
On 02/26/2008 : 26.5-40GHz was tested.

#### PK DETECT (RBW: 1MHz, VBW: 1MHz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
<b>Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss</b>												
1	1080.00	51.5	52.5	24.6	33.6	2.4	0.0	44.9	45.9	73.9	29.0	28.0
2	1200.00	50.1	50.8	24.7	33.4	2.5	0.0	43.9	44.6	73.9	30.0	29.3
<b>Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac</b>												
3	15720.00	46.5	47.5	37.5	30.2	8.6	1.1	54.0	55.0	73.9	19.9	18.9
4	20960.00	32.4	32.7	40.0	30.1	9.6	0.0	42.4	42.7	73.9	31.5	31.2
<b>Test distance 0.5meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac</b>												
5	31440.00	34.7	35.4	43.8	25.2	15.7	0.0	53.4	54.1	73.9	20.5	19.8

#### AV DETECT (RBW: 1MHz, VBW: 10Hz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
<b>Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss</b>												
1	1080.00	48.2	48.6	24.6	33.6	2.4	0.0	41.6	42.0	53.9	12.3	11.9
2	1200.00	44.4	48.2	24.7	33.4	2.5	0.0	38.2	42.0	53.9	15.7	11.9
<b>Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac</b>												
3	15720.00	32.4	32.6	37.5	30.2	8.6	1.1	39.9	40.1	53.9	14.0	13.8
4	20960.00	28.1	28.0	40.0	30.1	9.6	0.0	38.1	38.0	53.9	15.8	15.9
<b>Test distance 0.5meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac</b>												
5	31440.00	25.2	25.1	43.8	25.2	15.7	0.0	43.9	43.8	53.9	10.0	10.1

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.54 dB

Test Distance 0.5m : Distance Factor(Dfac) = 20log(3/0.5) = 15.56 dB

\*Except for the above table : All other spurious emissions were less than 20dB for the limit.

\*Hi-Pass Filter was not used for factor 0.0dB of the above table.

\*In the frequency over the fifth harmonic, the noise from the EUT was not seen. The data above is its base noise.

\*The limit is rounded down to one decimal place.

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

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## Radiated Spurious Emission (above 1GHz:Inside of the restricted band)

### Tx, High band, 5745MHz, 24Mbps

UL Japan, Inc.

Company : KOITO INDUSTRIES, LTD.  
Equipment : Wireless LAN Module  
Model : KWM-DS540-N2  
S/N : AH0029646  
Power : DC 5V  
Mode : Tx, 5745MHz, 24Mbps, PN9, Antenna B  
Position : Normal Position

Head Office EMC Lab. No.2 Semi Anechoic Chamber  
Regulation : FCC Part 15 Subpart E / 15.209  
Test Distance : 3m / 1m  
Date : 02/23/2008, 02/25/2008, 02/26/2008  
Temperature : 22deg.C., 23deg.C., 21deg.C.  
Humidity : 36%, 32%, 30%  
Engineer : Akio Hayashi  
On 02/23/2008 : 1-10GHz was tested.  
On 02/25/2008 : 10-26.5GHz was tested.  
On 02/26/2008 : 26.5-40GHz was tested.

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	1080.16	54.2	52.1	24.6	33.6	2.2	0.0	47.4	45.3	73.9	26.5	28.6
2	1200.00	50.0	53.4	24.7	33.4	2.4	0.0	43.7	47.1	73.9	30.2	26.8
3	3830.04	46.2	47.2	29.2	31.7	4.7	0.0	48.4	49.4	73.9	25.5	24.5
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
4	11490.00	45.2	51.4	39.8	30.6	7.7	1.0	53.6	59.8	73.9	20.3	14.1
5	22980.00	33.9	35.2	40.7	29.9	10.7	0.0	45.9	47.2	73.9	28.0	26.7

### AV DETECT

(RBW: 1MHz, VBW: 10Hz)

No.	FREQ	S/A READING		ANT Factor	AMP GAIN	CABLE LOSS	Hi-Pass Filter	RESULT		Limit AV	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	1080.16	49.9	50.0	24.6	33.6	2.2	0.0	43.1	43.2	53.9	10.8	10.7
2	1200.00	42.8	48.8	24.7	33.4	2.4	0.0	36.5	42.5	53.9	17.4	11.4
3	3830.04	39.2	42.4	29.2	31.7	4.7	0.0	41.4	44.6	53.9	12.5	9.3
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
4	11490.00	32.8	39.2	39.8	30.6	7.7	1.0	41.2	47.6	53.9	12.7	6.3
5	22980.00	27.2	27.3	40.7	29.9	10.7	0.0	39.2	39.3	53.9	14.7	14.6

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.54 dB

Test Distance 0.5m : Distance Factor(Dfac) = 20log(3/0.5) = 15.56 dB

\*Except for the above table : All other spurious emissions were less than 20dB for the limit.

\*Hi-Pass Fiter was not used for factor 0.0dB of the above table.

\*In the frequency over the fifth harmonic, the noise from the EUT was not seen.The data above is its base noise.

\*The limit is rounded down to one decimal place.

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

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## Radiated Spurious Emission (above 1GHz:Inside of the restricted band)

### Tx, High band, 5765MHz, 24Mbps

UL Japan, Inc.

Company : KOITO INDUSTRIES, LTD.  
Equipment : Wireless LAN Module  
Model : KWM-DS540-N2  
S/N : AH0029646  
Power : DC 5V  
Mode : Tx, 5765MHz, 24Mbps, PN9, Antenna B  
Position : Normal Position

Head Office EMC Lab. No.2 Semi Anechoic Chamber  
Regulation : FCC Part 15 Subpart E / 15.209  
Test Distance : 3m / 1m  
Date : 02/25/2008, 02/26/2008  
Temperature : 23deg.C., 21deg.C.  
Humidity : 32%, 30%  
Engineer : Akio Hayashi  
On 02/25/2008 : 1-26.5GHz was tested.  
On 02/26/2008 : 26.5-40GHz was tested.

No.	FREQ	S/A READING		ANT Factor	AMP GAIN	CABLE LOSS	Hi-Pass Filter	RESULT		Limit PK	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	1080.00	52.8	52.8	24.6	33.6	2.2	0.0	46.0	46.0	73.9	27.9	27.9
2	1200.02	54.5	50.1	24.7	33.4	2.4	0.0	48.2	43.8	73.9	25.7	30.1
3	3843.35	41.7	44.9	29.2	31.7	4.4	0.0	43.6	46.8	73.9	30.3	27.1
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
4	11530.00	44.3	50.6	39.7	30.6	7.8	1.0	52.7	59.0	73.9	21.2	14.9
5	23060.00	37.0	35.3	40.7	29.9	10.2	0.0	48.5	46.8	73.9	25.4	27.1

### AV DETECT

(RBW: 1MHz, VBW: 10Hz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	1080.00	50.4	48.7	24.6	33.6	2.2	0.0	43.6	41.9	53.9	10.3	12.0
2	1200.02	50.6	41.6	24.7	33.4	2.4	0.0	44.3	35.3	53.9	9.6	18.6
3	3843.35	30.6	40.9	29.2	31.7	4.4	0.0	32.5	42.8	53.9	21.4	11.1
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
4	11530.00	30.8	39.2	39.7	30.6	7.8	1.0	39.2	47.6	53.9	14.7	6.3
5	23060.00	26.8	27.1	40.7	29.9	10.2	0.0	38.3	38.6	53.9	15.6	15.3

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.54 dB

Test Distance 0.5m : Distance Factor(Dfac) = 20log(3/0.5) = 15.56 dB

\*Except for the above table : All other spurious emissions were less than 20dB for the limit.

\*Hi-Pass Fiter was not used for factor 0.0dB of the above table.

\*In the frequency over the fifth harmonic, the noise from the EUT was not seen.The data above is its base noise.

\*The limit is rounded down to one decimal place.

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

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## Radiated Spurious Emission (above 1GHz:Inside of the restricted band)

### Tx, High band, 5805MHz, 24Mbps

UL Japan, Inc.

Company : KOITO INDUSTRIES, LTD.  
Equipment : Wireless LAN Module  
Model : KWM-DS540-N2  
S/N : AH0029646  
Power : DC 5V  
Mode : Tx, 5805MHz, 24Mbps, PN9, Antenna B  
Position : Normal Position

Head Office EMC Lab. No.2 Semi Anechoic Chamber  
Regulation : FCC Part 15 Subpart E / 15.209  
Test Distance : 3m / 1m  
Date : 02/23/2008, 02/25/2008, 02/26/2008  
Temperature : 22deg.C., 23deg.C., 21deg.C.  
Humidity : 36%, 32%, 30%  
Engineer : Akio Hayashi  
On 02/23/2008 : 1-10GHz was tested.  
On 02/25/2008 : 10-26.5GHz was tested.  
On 02/26/2008 : 26.5-40GHz was tested.

No.	FREQ  [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	1080.16	51.7	53.0	24.6	33.6	2.4	0.0	45.1	46.4	73.9	28.8	27.5
2	1200.00	49.1	53.3	24.7	33.4	2.5	0.0	42.9	47.1	73.9	31.0	26.8
3	3870.01	47.0	48.4	29.2	31.7	4.7	0.0	49.2	50.6	73.9	24.7	23.3
4	5117.00	41.2	51.2	31.5	31.3	5.2	0.0	46.6	56.6	73.9	27.3	17.3
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
5	11610.00	51.2	51.4	39.5	30.6	7.8	1.0	59.4	59.6	73.9	14.5	14.3

#### AV DETECT

(RBW: 1MHz, VBW: 10Hz)

No.	FREQ	S/A READING		ANT Factor	AMP GAIN	CABLE LOSS	Hi-Pass Filter	RESULT		Limit AV	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	1080.16	47.8	48.8	24.6	33.6	2.4	0.0	41.2	42.2	53.9	12.7	11.7
2	1200.00	42.4	48.6	24.7	33.4	2.5	0.0	36.2	42.4	53.9	17.7	11.5
3	3870.01	42.8	44.1	29.2	31.7	4.7	0.0	45.0	46.3	53.9	8.9	7.6
4	5117.00	29.8	39.5	31.5	31.3	5.2	0.0	35.2	44.9	53.9	18.7	9.0
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
5	11610.00	38.5	39.2	39.5	30.6	7.8	1.0	46.7	47.4	53.9	7.2	6.5

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.54 dB

Test Distance 0.5m : Distance Factor(Dfac) = 20log(3/0.5) = 15.56 dB

\*Except for the above table : All other spurious emissions were less than 20dB for the limit.

\*Hi-Pass Filter was not used for factor 0.0dB of the above table.

\*In the frequency over the fifth harmonic, the noise from the EUT was not seen. The data above is its base noise.

\*The limit is rounded down to one decimal place.

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

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## **Radiated Spurious Emission (above 1GHz:Outside of the restricted band)**

**\*used conversion formula**

### **Tx, Low band, 5180MHz, 48Mbps**

Company	: KOITO INDUSTRIES, LTD.	UL Japan, Inc.
Equipment	: Wireless LAN Module	Head Office EMC Lab. No.2 Semi Anechoic Chamber
Model	: KWM-DS540-N2	Regulation : FCC part 15 Subpart E 15.407
S/N	: AH0029646	Test Distance : 3m / 1m / 0.5m
Power	: DC 5V	Date : 02/23/2008, 02/25/2008, 02/26/2008
Mode	: Tx, 5180MHz, 48Mbps, PN9, Antenna B	Temperature : 22deg.C., 23deg.C., 21deg.C.
Position	: Normal Position	Humidity : 36%, 32%, 30%
		Engineer : Akio Hayashi
		On 02/23/2008 : 1-10GHz was tested.
		On 02/25/2008 : 10-26.5GHz was tested.
		On 02/26/2008 : 26.5-40GHz was tested.

### **PK detect (RBW: 1MHz, VBW: 1MHz)**

No.	Freq. [MHz]	S/A Reading [dBuV]		Antenna Factor [dB/m]	Amp. Gain [dB]	Cable Loss [dB]	ATT or Filter Loss [dB]	Electric Field Strength [dBuV/m]		Result (EIRP) [dBm]		Lmit [dBm]	Margin [dB]	
		HOR	VER					HOR	VER	HOR	VER		HOR	VER
Test distance 3meters, Electric Field Strength =Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac(1m)														
1	3453.28	46.7	48.5	28.7	31.9	4.6	0.0	48.1	49.9	-47.1	-45.3	-27.0	20.1	18.3
Test distance 1meters, Electric Field Strength =Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac(1m)														
2	10360.00	43.8	45.2	39.4	31.1	7.2	0.8	50.6	52.0	-44.6	-43.2	-27.0	17.6	16.2
3	25900.00	41.0	40.4	40.7	29.7	10.9	0.0	53.4	52.8	-41.8	-42.4	-27.0	14.8	15.4
Test distance 0.5meters, Electric Field Strength =Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac(0.5m)														
4	31080.00	30.1	32.3	43.6	25.1	15.5	0.0	48.6	50.8	-46.6	-44.4	-27.0	19.6	17.4
5	36260.00	38.0	39.0	42.9	24.6	16.9	0.0	57.7	58.7	-37.5	-36.5	-27.0	10.5	9.5

Result(EIRP[dBm])=10\*LOG (({ 10 ^ ( Electric Field Strength [dBuV/m] / 20 ) \* 10 ^ (-6) \* Distance:3[m] ) ^ 2 } / 30) \*10^3)

Test Distance 1.0m : Distance Factor(Dfac(1m)) = 20log(3/1.0) = 9.5 dB

Test Distance 0.5m : Distance Factor(Dfac(0.5m)) = 20log(3/0.5) = 15.5 dB

\* Except for the above table : All other spurious emissions were less than 20dB for the limit.

\* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.

\* NS: No detected signal.

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

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**Radiated Spurious Emission (above 1GHz:Outside of the restricted band)**  
**\*used conversion formula**

**Tx, Low band, 5220MHz, 48Mbps**

Company : KOITO INDUSTRIES, LTD.  
Equipment : Wireless LAN Module  
Model : KWM-DS540-N2  
S/N : AH0029646  
Power : DC 5V  
Mode : Tx, 5220MHz, 48Mbps, PN9, Antenna B  
Position : Normal Position

UL Japan, Inc.  
Head Office EMC Lab. No.2 Semi Anechoic Chamber  
Regulation : FCC part 15 Subpart E 15.407  
Test Distance : 3m / 1m / 0.5m  
Date : 02/25/2008, 02/26/2008  
Temperature : 23deg.C., 21deg.C.  
Humidity : 32%, 30%  
Engineer : Akio Hayashi  
On 02/25/2008 : 1-26.5GHz was tested.  
On 02/26/2008 : 26.5-40GHz was tested.

**PK detect** (RBW: 1MHz, VBW: 1MHz)

No.	Freq. [MHz]	S/A Reading [dBuV]		Antenna Factor [dB/m]	Amp. Gain [dB]	Cable Loss [dB]	ATT or Filter Loss [dB]	Electric Field Strength [dBuV/m]		Result (EIRP) [dBm]		Lmit [dBm]	Margin [dB]	
		HOR	VER					HOR	VER	HOR	VER		HOR	VER
Test distance 3meters, Electric Field Strength =Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac(1m)														
1	3480.00	42.5	46.3	28.7	31.9	4.3	0.0	43.6	47.4	-51.6	-47.8	-27.0	24.6	20.8
Test distance 1meters, Electric Field Strength =Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac(1m)														
2	10440.00	49.0	49.7	39.5	31.3	7.2	0.8	55.7	56.4	-39.5	-38.8	-27.0	12.5	11.8
3	20880.00	38.4	37.3	40.0	30.0	9.6	0.0	48.5	47.4	-46.7	-47.8	-27.0	19.7	20.8
Test distance 0.5meters, Electric Field Strength =Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac(0.5m)														
4	36540.00	37.9	37.9	43.0	24.4	17.0	0.0	58.0	58.0	-37.2	-37.2	-27.0	10.2	10.2

Result(EIRP[dBm])=10\*LOG (({ 10 ^ ( Electric Field Strength [dBuV/m] / 20 ) \* 10 ^ (-6) \* Distance:3[m] ) ^ 2 } / 30) \*10^3)

Test Distance 1.0m : Distance Factor(Dfac(1m)) = 20log(3/1.0) = 9.5 dB  
Test Distance 0.5m : Distance Factor(Dfac(0.5m)) = 20log(3/0.5) = 15.5 dB

\* Except for the above table : All other spurious emissions were less than 20dB for the limit.

\* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.

\* NS: No detected signal.

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

## **Radiated Spurious Emission (above 1GHz:Outside of the restricted band)**

**\*used conversion formula**

### **Tx, Low band, 5240MHz, 48Mbps**

Company	: KOITO INDUSTRIES, LTD.	UL Japan, Inc.
Equipment	: Wireless LAN Module	Head Office EMC Lab. No.2 Semi Anechoic Chamber
Model	: KWM-DS540-N2	Regulation : FCC part 15 Subpart E 15.407
S/N	: AH0029646	Test Distance : 3m / 1m / 0.5m
Power	: DC 5V	Date : 02/23/2008, 02/25/2008, 02/26/2008
Mode	: Tx, 5240MHz, 48Mbps, PN9, Antenna B	Temperature : 22deg.C., 23deg.C., 21deg.C.
Position	: Normal Position	Humidity : 36%, 32%, 30%
		Engineer : Akio Hayashi
		On 02/23/2008 : 1-10GHz was tested.
		On 02/25/2008 : 10-26.5GHz was tested.
		On 02/26/2008 : 26.5-40GHz was tested.

### **PK detect (RBW: 1MHz, VBW: 1MHz)**

No.	Freq. [MHz]	S/A Reading [dBuV]		Antenna Factor [dB/m]	Amp. Gain [dB]	Cable Loss [dB]	ATT or Filter Loss [dB]	Electric Field Strength [dBuV/m]		Result (EIRP) [dBm]		Lmit [dBm]	Margin [dB]	
		HOR	VER					HOR	VER	HOR	VER		HOR	VER
Test distance 3meters, Electric Field Strength =Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac(1m)														
1	5178.17	40.4	48.8	31.5	31.3	5.2	0.0	45.8	54.2	-49.4	-41.0	-27.0	22.4	14.0
Test distance 1meters, Electric Field Strength =Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac(1m)														
2	10480.00	44.8	45.1	39.5	31.0	7.2	0.8	51.8	52.1	-43.4	-43.1	-27.0	16.4	16.1
3	26200.00	34.8	34.6	40.5	29.5	11.1	0.0	47.4	47.2	-47.8	-48.0	-27.0	20.8	21.0
Test distance 0.5meters, Electric Field Strength =Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac(0.5m)														
4	36680.00	38.2	37.4	43.0	24.4	17.0	0.0	58.3	57.5	-36.9	-37.7	-27.0	9.9	10.7

Result(EIRP[dBm])=10\*LOG(( { 10 ^ ( Electric Field Strength [dBuV/m] / 20 ) \* 10 ^ (-6) \* Distance:3[m] ) ^ 2 } / 30 ) \*10^3)

Test Distance 1.0m : Distance Factor(Dfac(1m)) = 20log(3/1.0) = 9.5 dB

Test Distance 0.5m : Distance Factor(Dfac(0.5m)) = 20log(3/0.5) = 15.5 dB

\* Except for the above table : All other spurious emissions were less than 20dB for the limit.

\* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.

\* NS: No detected signal.

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

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**Radiated Spurious Emission (above 1GHz:Outside of the restricted band)**  
**\*used conversion formula**

**Tx, High band, 5745MHz, 24Mbps**

UL Japan, Inc.

Head Office EMC Lab. No.2 Semi Anechoic Chamber

Company : KOITO INDUSTRIES, LTD.  
Equipment : Wireless LAN Module  
Model : KWM-DS540-N2  
S/N : AH0029646  
Power : DC 5V  
Mode : Tx, 5745MHz, 24Mbps, PN9, Antenna B  
Position : Normal Position

Regulation : FCC part 15 Subpart E 15.407  
Test Distance : 3m / 1m / 0.5m  
Date : 02/23/2008, 02/25/2008, 02/26/2008  
Temperature : 22deg.C., 23deg.C., 21deg.C.  
Humidity : 36%, 32%, 30%  
Engineer : Akio Hayashi  
On 02/23/2008 : 1-10GHz was tested.  
On 02/25/2008 : 10-26.5GHz was tested.  
On 02/26/2008 : 26.5-40GHz was tested.

**PK detect** (RBW: 1MHz, VBW: 1MHz)

No.	Freq. [MHz]	S/A Reading [dBuV]		Antenna Factor [dB/m]	Amp. Gain [dB]	Cable Loss [dB]	ATT or Filter Loss [dB]	Electric Field Strength [dBuV/m]		Result (EIRP) [dBm]		Lmit [dBm]	Margin [dB]	
		HOR	VER					HOR	VER	HOR	VER		HOR	VER
Test distance 3meters, Electric Field Strength =Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac(1m)														
1	5224.00	42.6	51.3	31.5	31.2	5.3	0.0	48.2	56.9	-47.0	-38.3	-27.0	20.0	11.3
Test distance 1meters, Electric Field Strength =Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac(1m)														
2	17235.00	39.9	41.2	42.1	29.6	9.4	1.1	53.4	54.7	-41.8	-40.5	-27.0	14.8	13.5
Test distance 0.5meters, Electric Field Strength =Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac(0.5m)														
3	28725.00	32.3	33.1	43.6	25.0	15.0	0.0	50.4	51.2	-44.8	-44.0	-27.0	17.8	17.0
4	34470.00	36.5	36.4	43.3	25.2	16.3	0.0	55.4	55.3	-39.8	-39.9	-27.0	12.8	12.9

Result(EIRP[dBm])=10\*LOG (({ 10 ^ ( Electric Field Strength [dBuV/m] / 20 ) \* 10 ^ (-6) \* Distance:3[m] ) ^ 2 } / 30) \*10^3)

Test Distance 1.0m : Distance Factor(Dfac(1m)) = 20log(3/1.0) = 9.5 dB

Test Distance 0.5m : Distance Factor(Dfac(0.5m)) = 20log(3/0.5) = 15.5 dB

\* Except for the above table : All other spurious emissions were less than 20dB for the limit.

\* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.

\* NS: No detected signal.

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

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## Radiated Spurious Emission (above 1GHz:Outside of the restricted band)

\*used conversion formula

### Tx, High band, 5765MHz, 24Mbps

UL Japan, Inc.

Head Office EMC Lab. No.2 Semi Anechoic Chamber

Company : KOITO INDUSTRIES, LTD.  
Equipment : Wireless LAN Module  
Model : KWM-DS540-N2  
S/N : AH0029646  
Power : DC 5V  
Mode : Tx, 5765MHz, 24Mbps, PN9, Antenna B  
Position : Normal Position

Regulation : FCC part 15 Subpart E 15.407  
Test Distance : 3m / 1m / 0.5m  
Date : 02/25/2008, 02/26/2008  
Temperature : 23deg.C., 21deg.C.  
Humidity : 32%, 30%  
Engineer : Akio Hayashi  
On 02/25/2008 : 1-26.5GHz was tested.  
On 02/26/2008 : 26.5-40GHz was tested.

#### PK detect (RBW: 1MHz, VBW: 1MHz)

No.	Freq. [MHz]	S/A Reading [dBuV]		Antenna Factor [dB/m]	Amp. Gain [dB]	Cable Loss [dB]	ATT or Filter Loss [dB]	Electric Field Strength [dBuV/m]		Result (EIRP) [dBm]		Lmit [dBm]	Margin [dB]	
		HOR	VER					HOR	VER	HOR	VER		HOR	VER
Test distance 3meters, Electric Field Strength =Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac(1m)														
1	5190.00	40.3	52.1	31.5	32.1	4.9	0.0	44.6	56.4	-50.6	-38.8	-27.0	23.6	11.8
Test distance 1meters, Electric Field Strength =Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac(1m)														
2	17295.00	42.0	40.3	42.7	29.6	9.4	1.2	56.2	54.5	-39.0	-40.7	-27.0	12.0	13.7
Test distance 0.5meters, Electric Field Strength =Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac(0.5m)														
3	28825.00	31.7	31.1	43.7	25.0	15.1	0.0	50.0	49.4	-45.2	-45.8	-27.0	18.2	18.8
4	34590.00	36.4	34.9	43.2	25.1	16.3	0.0	55.3	53.8	-39.9	-41.4	-27.0	12.9	14.4

Result(EIRP[dBm])=10\*LOG(( { 10 ^ ( Electric Field Strength [dBuV/m] / 20 ) \* 10 ^ (-6) \* Distance:3[m] ) ^ 2 } / 30 ) \*10^3)

Test Distance 1.0m : Distance Factor(Dfac(1m)) = 20log(3/1.0) =

9.5 dB

Test Distance 0.5m : Distance Factor(Dfac(0.5m)) = 20log(3/0.5) =

15.5 dB

\* Except for the above table : All other spurious emissions were less than 20dB for the limit.

\* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.

\* NS: No detected signal.

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

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## **Radiated Spurious Emission (above 1GHz:Outside of the restricted band)**

**\*used conversion formula**

### **Tx, High band, 5805MHz, 24Mbps**

UL Japan, Inc.

Head Office EMC Lab. No.2 Semi Anechoic Chamber

Company : KOITO INDUSTRIES, LTD.  
Equipment : Wireless LAN Module  
Model : KWM-DS540-N2  
S/N : AH0029646  
Power : DC 5V  
Mode : Tx, 5805MHz, 24Mbps, PN9, AntennaB  
Position : Normal Position

Regulation : FCC part 15 Subpart E 15.407  
Test Distance : 1m / 0.5m  
Date : 02/23/2008, 02/25/2008, 02/26/2008  
Temperature : 22deg.C., 23deg.C., 21deg.C.  
Humidity : 36%, 32%, 30%  
Engineer : Akio Hayashi  
On 02/23/2008 : 1-10GHz was tested.  
On 02/25/2008 : 10-26.5GHz was tested.  
On 02/26/2008 : 26.5-40GHz was tested.

**PK detect** (RBW: 1MHz, VBW: 1MHz)

No.	Freq. [MHz]	S/A Reading [dBuV]		Antenna Factor [dB/m]	Amp. Gain [dB]	Cable Loss [dB]	ATT or Filter Loss [dB]	Electric Field Strength [dBuV/m]		Result (EIRP) [dBm]		Lmit [dBm]	Margin [dB]	
		HOR	VER					HOR	VER	HOR	VER		HOR	VER
Test distance 1meters, Electric Field Strength =Reading+ ANT Factor - Amp Gain+ CABLE LOSS + Attenuator (or Filter) - Dfac(1m)														
1	17415.00	45.9	43.0	43.8	29.6	9.4	1.2	61.2	58.3	-34.0	-36.9	-27.0	7.0	9.9
2	23220.00	35.8	33.0	40.5	29.9	10.1	0.0	47.0	44.2	-48.2	-51.0	-27.0	21.2	24.0
Test distance 0.5meters, Electric Field Strength =Reading+ ANT Factor - Amp Gain+ CABLE LOSS + Attenuator (or Filter) - Dfac(0.5m)														
3	29025.00	32.6	32.1	43.7	24.9	15.1	0.0	51.0	50.5	-44.2	-44.7	-27.0	17.2	17.7
4	34830.00	34.9	36.6	43.2	25.1	16.3	0.0	53.8	55.5	-41.4	-39.7	-27.0	14.4	12.7

Result(EIRP[dBm])=10\*LOG (({ 10 ^ ( Electric Field Strength [dBuV/m] / 20 ) \* 10 ^ (-6) \* Distance:3[m] ) ^ 2 } / 30) \*10^3)

Test Distance 1.0m : Distance Factor(Dfac(1m)) = 20log(3/1.0) = 9.5 dB  
Test Distance 0.5m : Distance Factor(Dfac(0.5m)) = 20log(3/0.5) = 15.5 dB

\* Except for the above table : All other spurious emissions were less than 20dB for the limit.

\* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.

\* NS: No detected signal.

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

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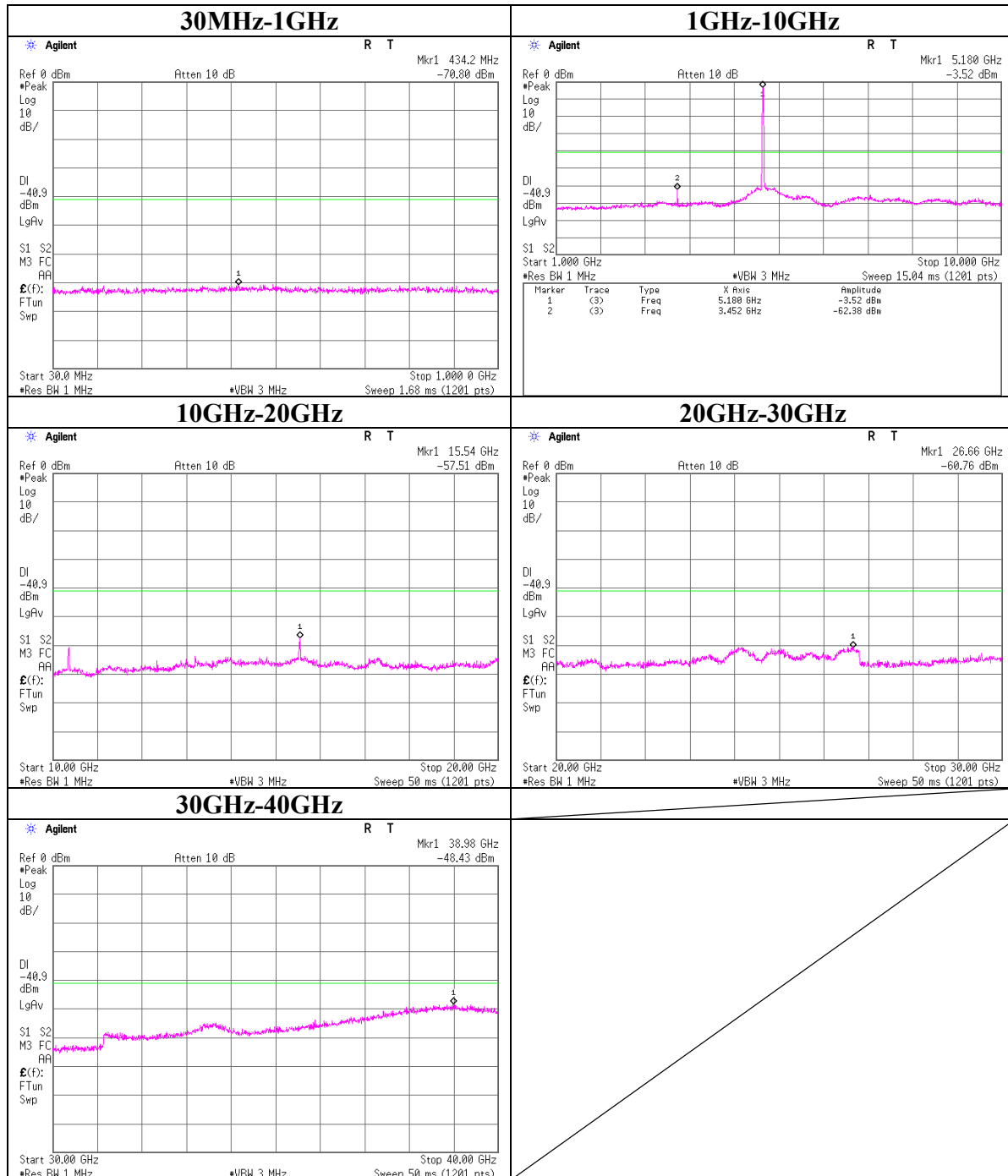
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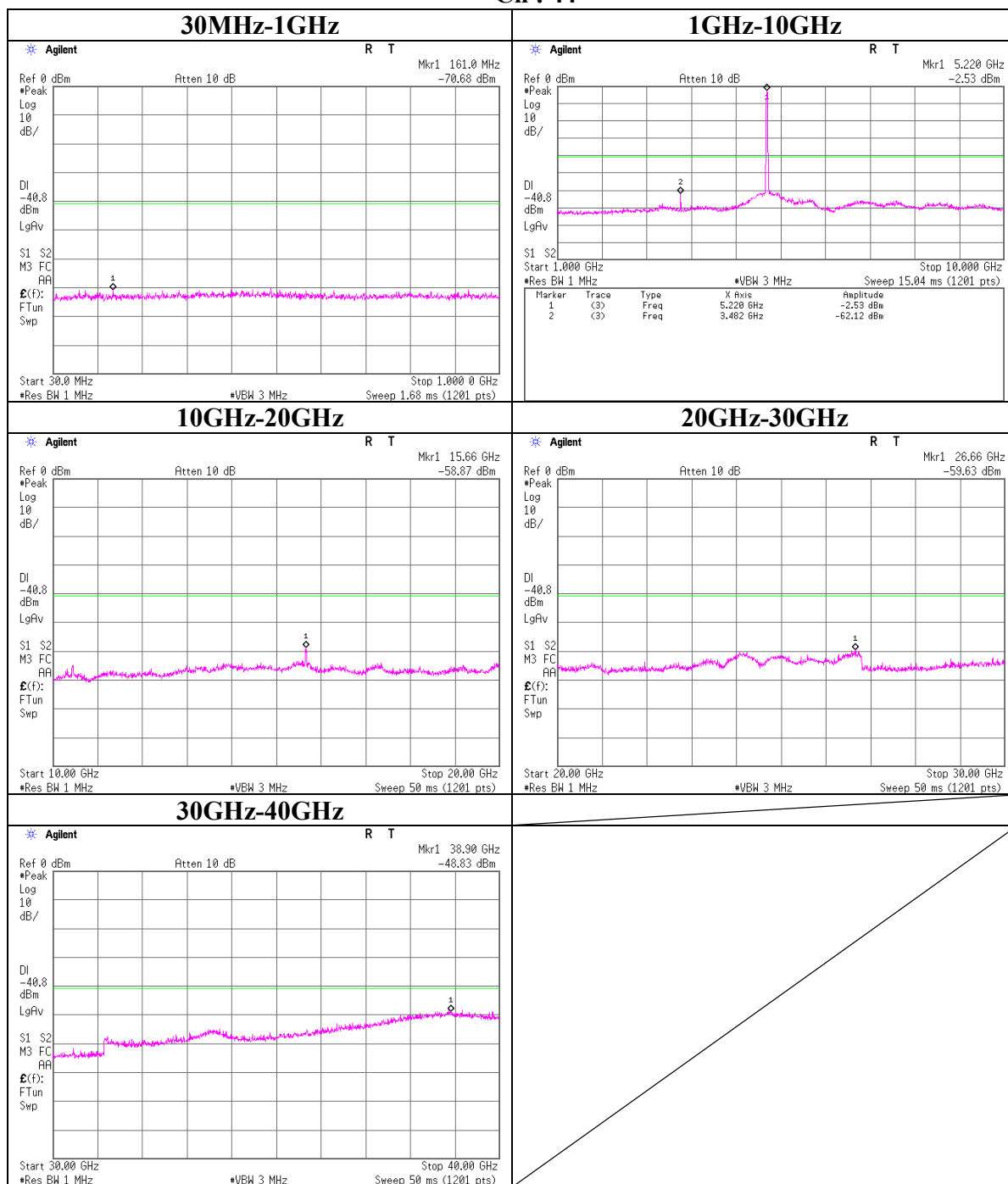
**Conducted Spurious Emission**  
**48Mbps Antenna: B**  
**Ch : 36**



## Conducted Spurious Emission(DSSS and other forms of modulation)

### 48Mbps Antenna: B

Ch : 44



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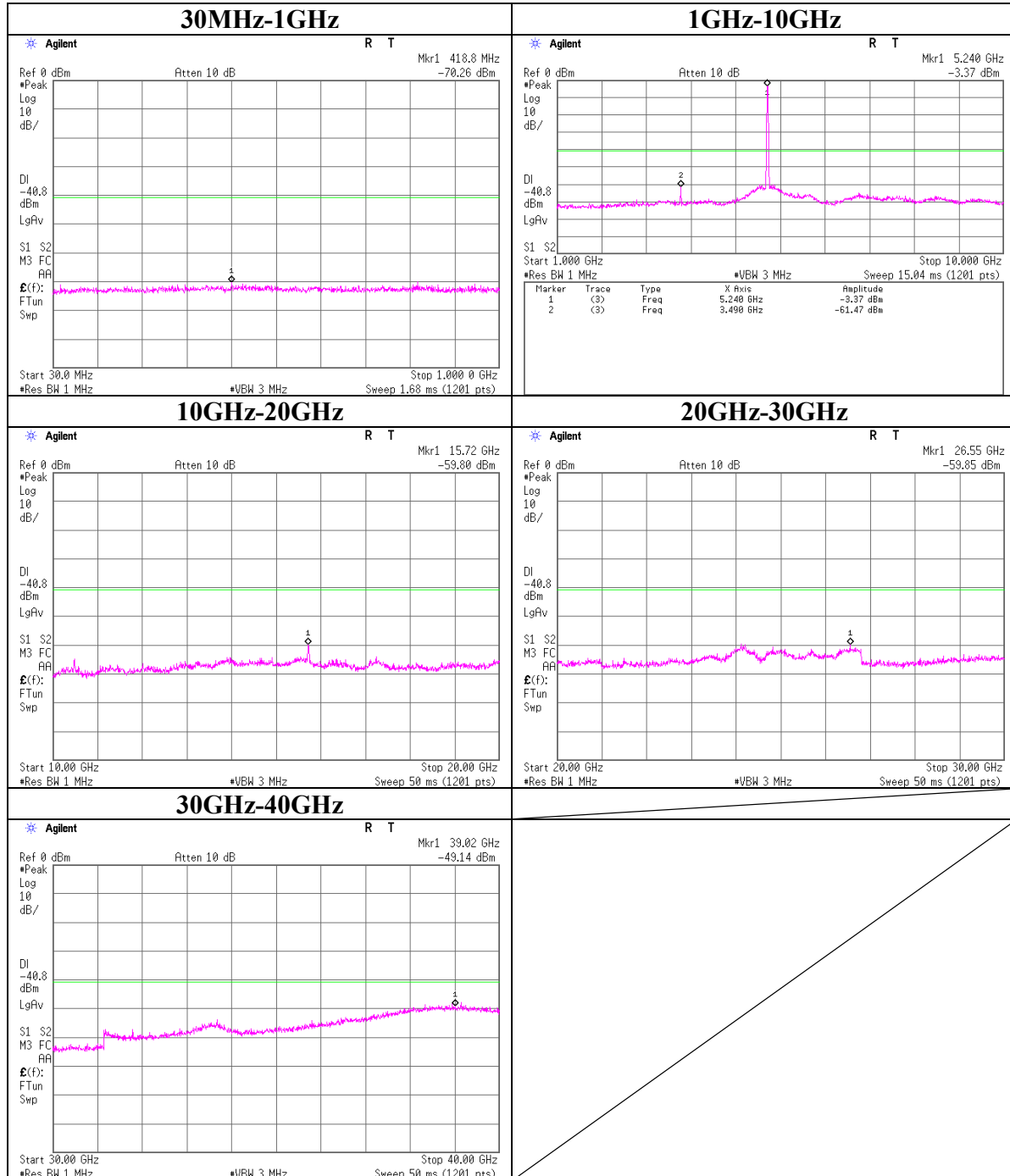
Telephone : +81 596 24 8116

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**Conducted Spurious Emission(DSSS and other forms of modulation)**

**48Mbps Antenna: B**

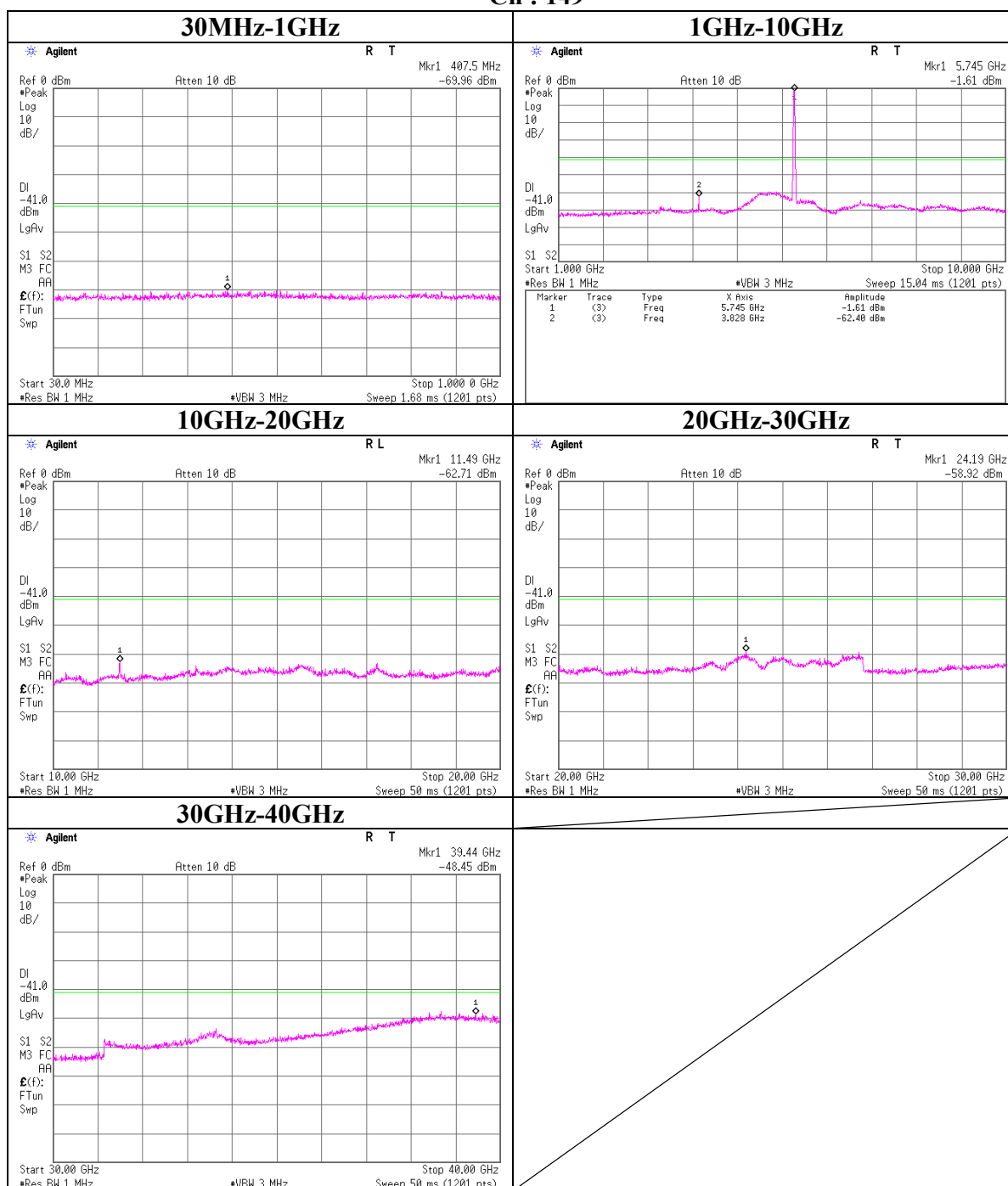
**Ch : 48**



**Conducted Spurious Emission(DSSS and other forms of modulation)**

### 24Mbps Antenna: B

Ch : 149

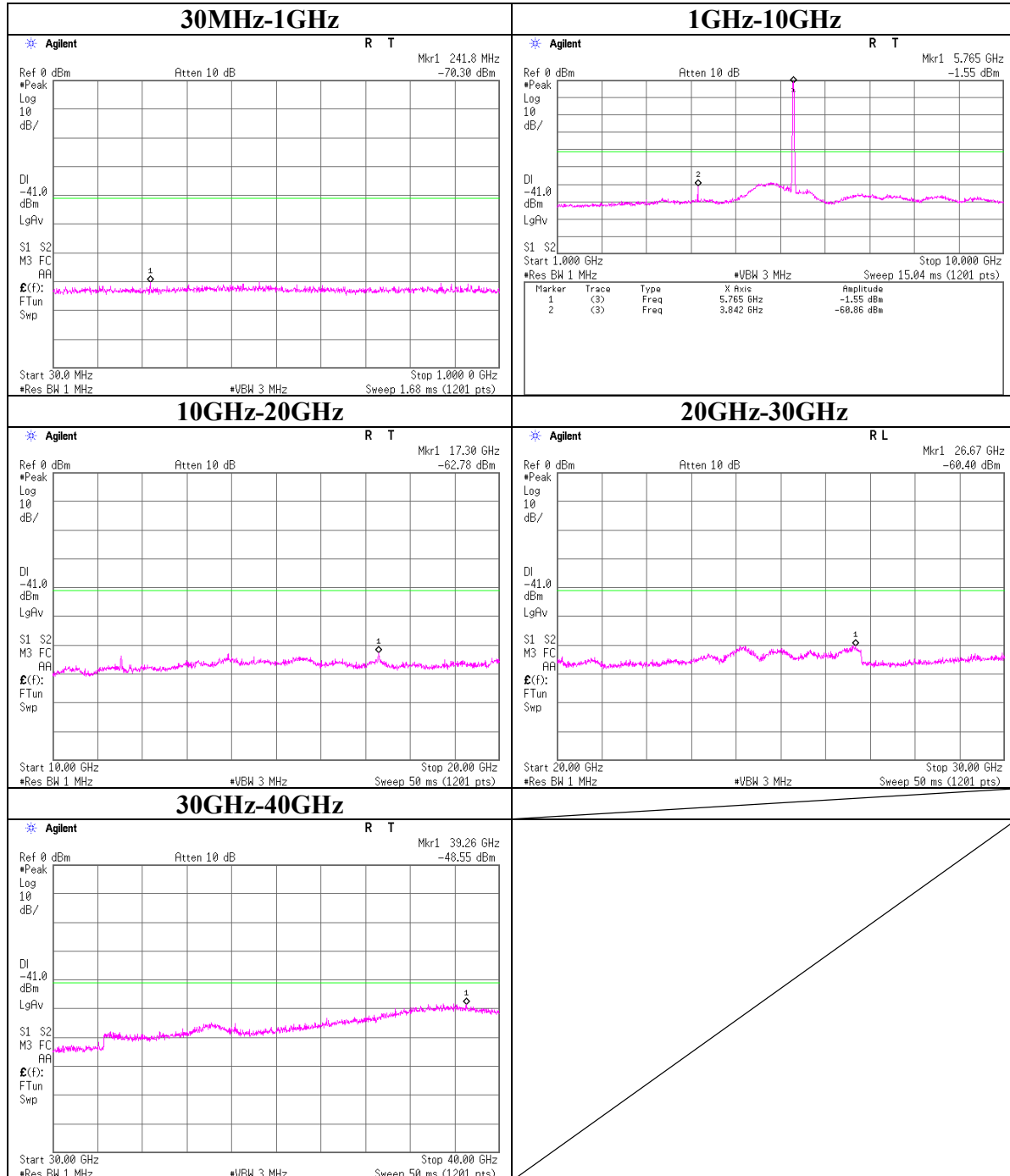


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**Conducted Spurious Emission(DSSS and other forms of modulation)**

**24Mbps Antenna: B**

**Ch : 153**

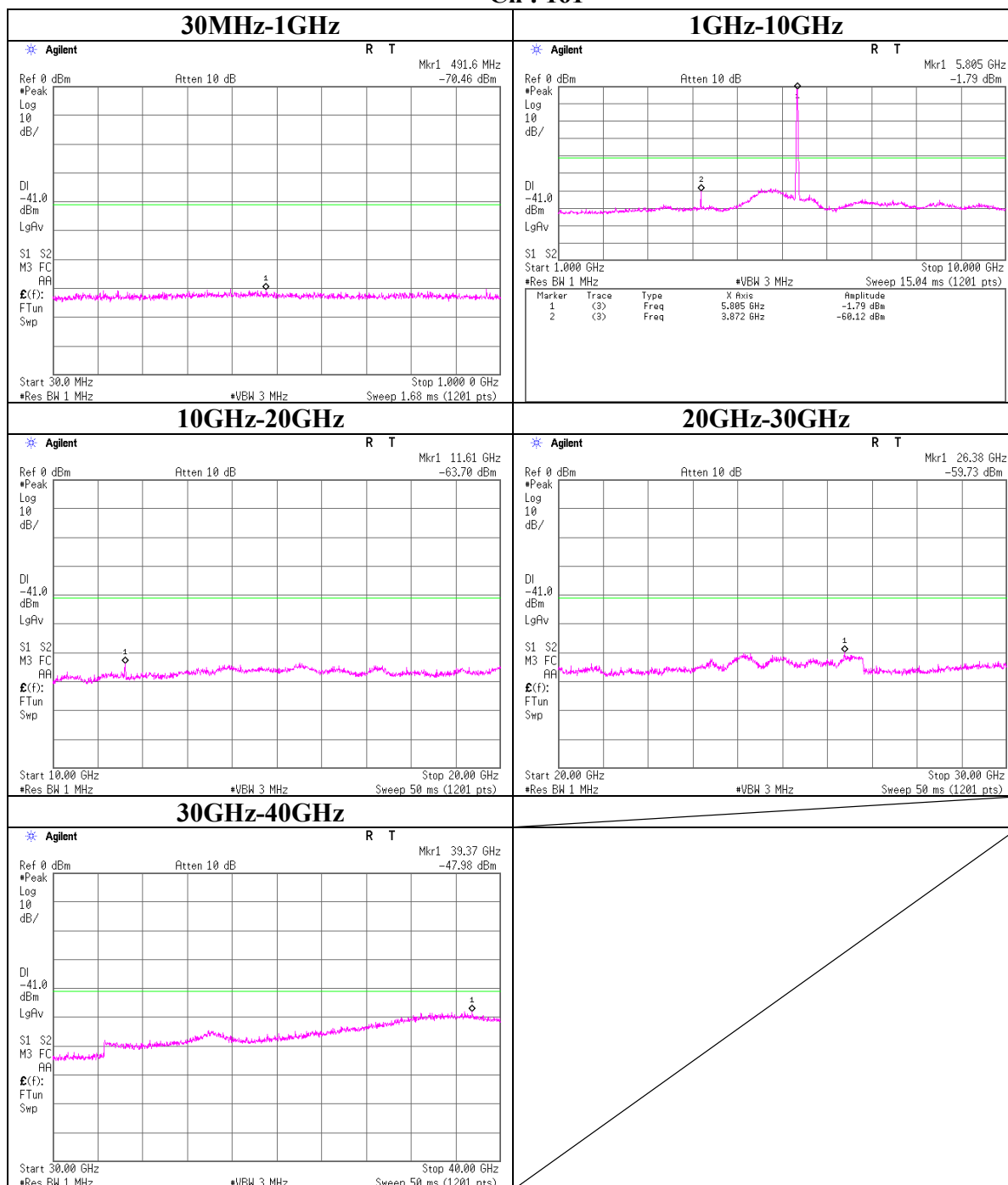




## Conducted Spurious Emission(DSSS and other forms of modulation)

### 24Mbps Antenna: B

Ch : 161



## Radiated emission Band Edge compliance

<p>Company : KOITO INDUSTRIES, LTD.  Equipment : Wireless LAN Module  Model : KWM-DS540-N2  S/N : AH0029646  Power : DC 5V  Mode : Tx, 5805MHz, 24Mbps, PN9, Antenna B  Position : Normal Position</p>	<p style="text-align: right;">UL Japan, Inc.  Head Office EMC Lab. No.2 Semi Anechoic Chamber  Regulation : FCC15.247(d)  Test Distance : 3m / 1m / 0.5m  Date : 02/23/2008, 02/25/2008, 02/26/2008  Temperature : 22deg.C., 23deg.C., 21deg.C.  Humidity : 36%, 32%, 30%  Engineer : Akio Hayashi</p>
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<Test mode>      No.1: 5180MHz, 48Mbps mode      No.2: 5240MHz, 48Mbps mode      No.3: 5745MHz, 24Mbps mode  
                         No.4: 5745MHz, 24Mbps mode      No.5: 5805MHz, 24Mbps mode      No.6: 5805MHz, 24Mbps mode

No.	FREQ	S/A READING		ANT Factor	AMP GAIN	CABLE LOSS	Hi-Pass Filter	RESULT		Limit PK	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	5150.00	40.1	42.1	31.5	31.3	5.2	0.0	45.5	47.5	73.9	28.4	26.4
2	5350.00	37.8	43.0	31.4	31.1	5.5	0.0	43.6	48.8	73.9	30.3	25.1
3	5715.00	41.4	44.9	31.8	31.1	5.7	0.0	47.8	51.3	-	-	-
4	5725.00	54.7	70.3	31.8	31.1	5.7	0.0	61.1	76.7	-	-	-
5	5825.00	58.1	70.2	32.0	31.1	5.7	0.0	64.7	76.8	-	-	-
6	5835.00	42.3	53.0	32.0	31.1	5.7	0.0	48.9	59.6	-	-	-

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.54 dB

\*Except for the above table : All other spurious emissions were less than 20dB for the limit.

\*Hi-Pass Fiter was not used for factor 0.0dB of the above table.

\*In the frequency over the fifth harmonic, the noise from the EUT was not seen.The data above is its base noise.

\*The limit is rounded down to one decimal place.

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

<Test mode>      No.1: 5745MHz, 24Mbps mode      No.2: 5745MHz, 24Mbps mode      No.3: 5805MHz, 24Mbps mode  
                         No.4: 5805MHz, 24Mbps mode

No.	Frequency [MHz]	Electric Field Strength (After Factor Calculation)		SG Reading		Tx	Tx	Tx Ant.	RESULT (ERP)		LIMIT	MARGIN		Mode	A/C	Remarks
		[dBuV/m]		[dBm]		Cable Loss	Ant. Gain	ATT. Loss	[dBm]		[dBm]	[dB]				
		HOR	VER	HOR	VER	[dB]	[dBi]	[dB]	HOR	VER	(ERP)	HOR	VER			
1	5715.00	47.8	51.3	-53.5	-50.6	6.8	13.3	0.0	-49.1	-46.2	-27.0	22.1	19.2	Operating	No2	
2	5725.00	61.1	76.7	-40.2	-25.2	6.8	13.4	0.0	-35.8	-20.8	-17.0	18.8	3.8	Operating	No2	
3	5825.00	64.7	76.8	-36.5	-24.9	6.9	13.4	0.0	-32.2	-20.5	-17.0	15.2	3.5	Operating	No2	
4	5835.00	49.0	59.7	-52.2	-41.9	6.9	13.4	0.0	-47.9	-37.6	-27.0	20.9	10.6	Operating	No2	

CALCULATION RESULT = SG Reading - Tx Loss + Tx Ant. Gain - Tx Ant. ATT. Loss -2.15

Rx-ANTENNA : Biconical Antenna(30M-300MHz), Logperriodic Antenna(300M-1000MHz), Horn Antenna(1G-12.75GHz)

Tx-ANTENNA : 120MHz tuned Dipole Antenna(30M-120MHz), Dipole Antenna(120M-1000MHz), Horn Antenna(1G-12.75GHz)

All other emissions were at least 20dB below the specification limit.

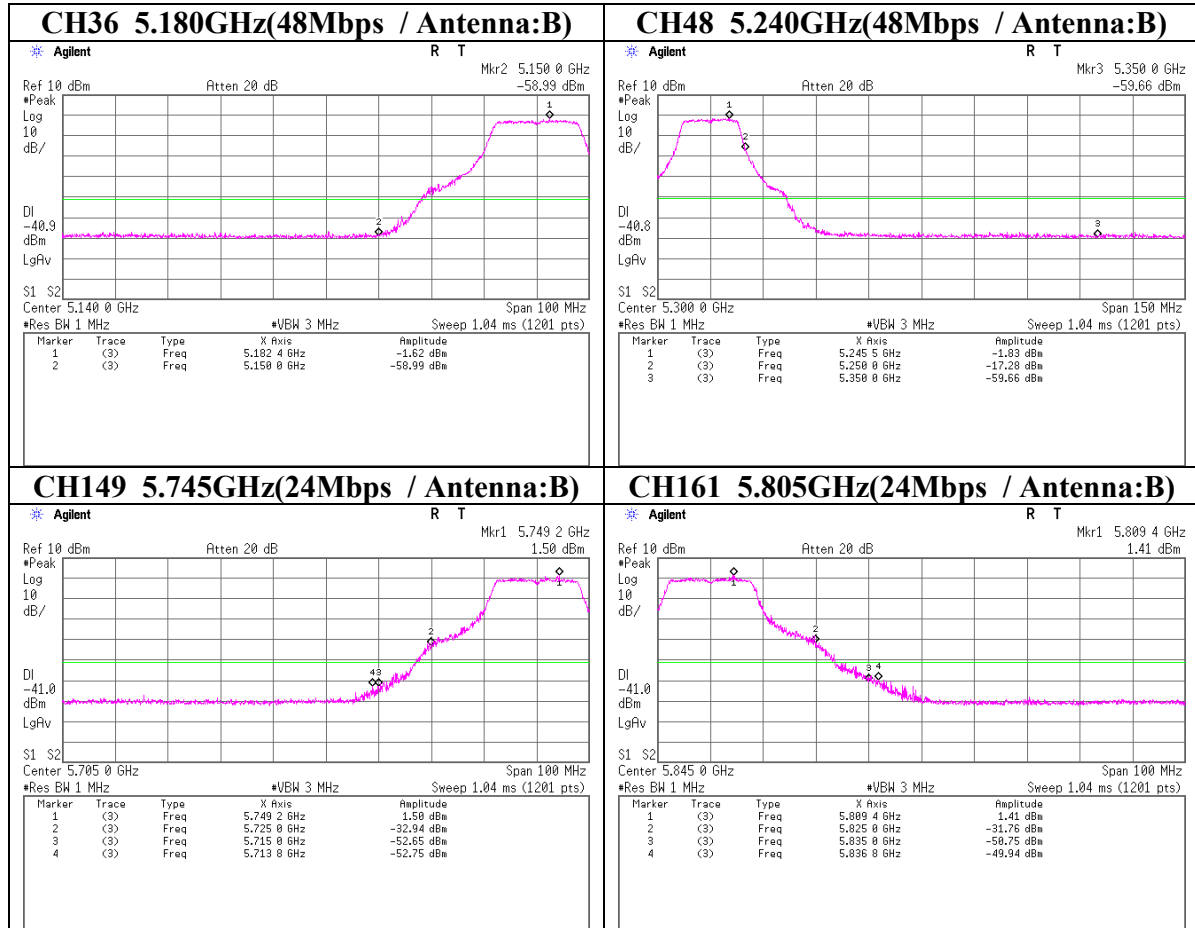
The noise was measured at each position of all three axes X, Y and Z to compare the level, and the maximum noise.

With the result above, the effective radiated power was calculated on the basis of the reference value

- for the calibration data on the substitution measurement.

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

### Conducted emission Band Edge compliance



## APPENDIX 3: Test instruments

### EMI test equipment

Control No.	Instrument	Manufacturer	Model No	Test Item	Calibration Date * Interval(month)
MAEC-04	Anechoic Chamber	TDK	Semi Anechoic Chamber 3m	RE	2007/03/03 * 12
MOS-15	Thermo-Hygrometer	Custom	CTH-180	RE	2008/01/10 * 12
MJM-07	Measure	PROMART	SEN1955	RE	-
MSTW-14	EMI measurement program	TSJ	TEPTO-DV	RE	-
MHA-20	Horn Antenna 1-18GHz	Schwarzbeck	BBHA9120D	RE	2007/04/14 * 12
MCC-57	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	RE	2007/03/30 * 12
MPA-12	MicroWave System Amplifier	Agilent	83017A	RE	2007/03/12 * 12
MAEC-02	Anechoic Chamber	TDK	Semi Anechoic Chamber 3m	RE	2007/04/02 * 12
MSA-04	Spectrum Analyzer	Agilent	E4448A	RE	2007/06/20 * 12
MOS-02	Digital Humidity Indicator	N.T	NT-1800	RE	2007/11/12 * 12
MBM-09	Barometer	Sunoh	SBR121	RE	2007/12/27 * 36
MPA-10	Pre Amplifier	Agilent	8449B	RE	2007/09/27 * 12
MCC-47	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	RE	2007/08/28 * 12
MCC-16	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX 104	RE	2008/02/08 * 12
MHA-06	Horn Antenna	Schwarzbeck	BBHA9120D	RE	2008/01/19 * 12
MJM-05	Measure	PROMART	SEN1955	RE	-
MRENT-62	Spectrum Analyzer	Agilent	E4448A	RE/AT	2007/11/27 * 12
MCC-25	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	RE	2007/08/27 * 12
MHF-16	High Pass Filter 7-20GHz	TOKIMEC	TF37NCCA	RE	2007/12/11 * 12
MCC-77	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	RE	2007/12/26 * 12
MHA-02	Horn Antenna	EMCO	3160-09	RE	2008/01/19 * 12
MPA-03	Microwave System Power Amplifier	Agilent	83050A	RE	2007/06/08 * 12
MPSU-04	Power Supply	Agilent	87421A	RE	Pre Check
MCC-54	Microwave Cable 1G-40GHz	Suhner	SUCOFLEX101	RE	2007/03/08 * 12
MBA-02	Biconical Antenna	Schwarzbeck	BBA9106	RE	2007/10/21 * 12
MLA-02	Logperiodic Antenna	Schwarzbeck	USLP9143	RE/RS	2007/10/21 * 12
MHA-04	Horn Antenna	EMCO	3160-10	RE	2008/01/19 * 12
MAT-07	Attenuator(6dB)	Weinschel Corp	2	RE	2007/11/13 * 12
MCC-54	Microwave Cable 1G-40GHz	Suhner	SUCOFLEX101	RE	2007/03/08 * 12

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

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

Test Item: RE: Radiated Emission

AT: Antenna Terminal Conducted test

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#### EMI test equipment

Control No.	Instrument	Manufacturer	Model No	Test Item	Calibration Date * Interval(month)
MCC-12	Coaxial Cable	Fujikura/Agilent	-	RE	2008/02/15 * 12
MPA-03	Microwave System Power Amplifier	Agilent	83050A	RE	2007/06/08 * 12
MPA-09	Pre Amplifier	Agilent	8447D	RE	2007/09/13 * 12
MOS-22	Thermo-Hygrometer	Custom	CTH-201	AT	2007/12/27 * 12
MPM-09	Power Meter	Anritsu	ML2495A	AT	2007/09/22 * 12
MPSE-12	Power sensor	Anritsu	MA2411B	AT	2007/09/22 * 12
MAT-22	Attenuator(10dB) DC-18GHz	Orient Microwave	BX10-0476-00	AT	2007/03/07 * 12
MCC-65	Microwave Cable 1G-40GHz	Schner	SUCOFLEX102	AT	2007/04/03 * 12

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

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

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