

APPENDIX 2: Data of EMI test

Conducted Emission

Tx, 11b, Ch: Low

DATA OF CONDUCTED EMISSION TEST

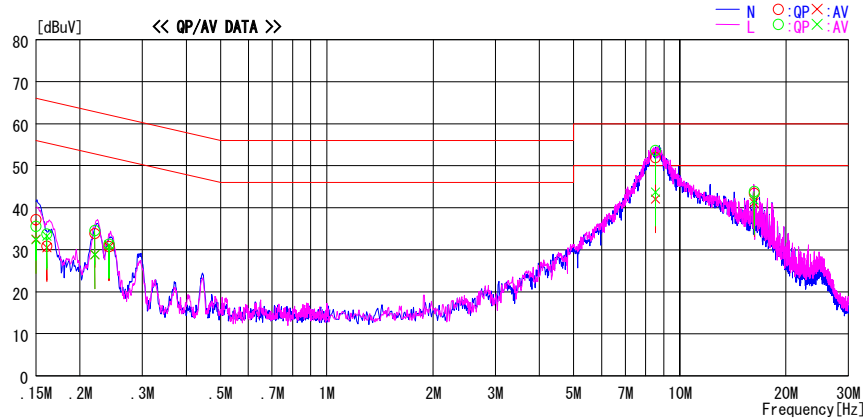
UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber
Date : 2009/04/12

Company : SANYO Electric Co., Ltd.
Kind of EUT : WLAN Module
Model No. : TAV4U19B25500
Serial No. : 001F1F3E707B

Report No. : 29FE0119-HO-01
Power : AC 120V / 60Hz
Temp./Humi. : 22deg. C / 43%
Engineer : Hironobu Ohnishi

Mode / Remarks : 802.11b, Tx 2412MHz

LIMIT : FCC15.207 QP
FCC15.207 AV



Frequency [MHz]	Reading Level		Corr. Factor	Results		Limit		Margin		Phase	Comment
	QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]		
0.15000	36.9	32.2	0.3	37.2	32.5	66.0	56.0	28.8	23.5	N	
0.16108	30.6	30.2	0.3	30.9	30.5	65.4	55.4	34.5	24.9	N	
0.22032	33.6	28.5	0.3	33.9	28.8	62.8	52.8	28.9	24.0	N	
0.24160	30.5	30.4	0.3	30.8	30.7	62.0	52.0	31.2	21.3	N	
8.52800	51.1	41.2	0.9	52.0	42.1	60.0	50.0	8.0	7.9	N	
16.22646	41.9	39.7	1.5	43.4	41.2	60.0	50.0	16.6	8.8	N	
0.15000	35.3	32.1	0.3	35.6	32.4	66.0	56.0	30.4	23.6	L	
0.16108	33.5	33.0	0.3	33.8	33.3	65.4	55.4	31.6	22.1	L	
0.22032	34.3	28.5	0.3	34.6	28.8	62.8	52.8	28.2	24.0	L	
0.24160	31.0	30.9	0.3	31.3	31.2	62.0	52.0	30.7	20.8	L	
8.52800	52.8	42.8	0.9	53.7	43.7	60.0	50.0	6.3	6.3	L	
16.22646	42.4	40.3	1.5	43.9	41.8	60.0	50.0	16.1	8.2	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.

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

Conducted Emission Tx, 11b, Ch: Mid

DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber
Date : 2009/04/12

Company : SANYO Electric Co., Ltd.
Kind of EUT : WLAN Module
Model No. : 1AV4U19B25500
Serial No. : 001F1F3E707B

Report No. : 29FE0119-HO-01
Power : AC 120V / 60Hz
Temp./Humi. : 22deg. C / 43%
Engineer : Hironobu Ohnishi

Mode / Remarks : 802.11b, Tx 2437MHz

LIMIT : FCC15.207 QP
FCC15.207 AV

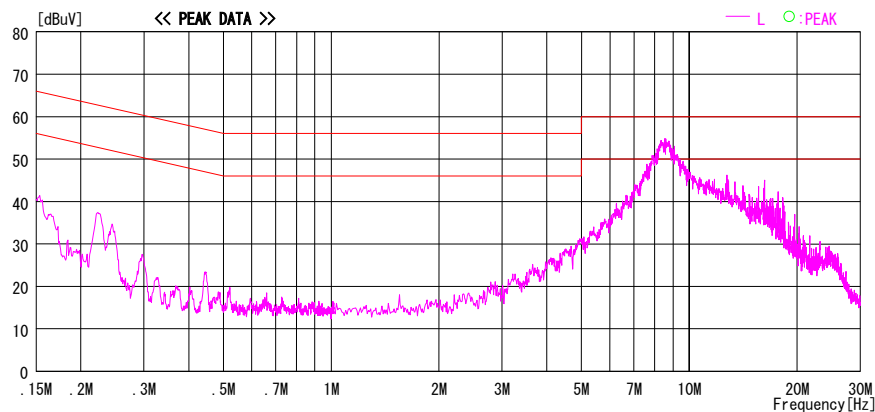
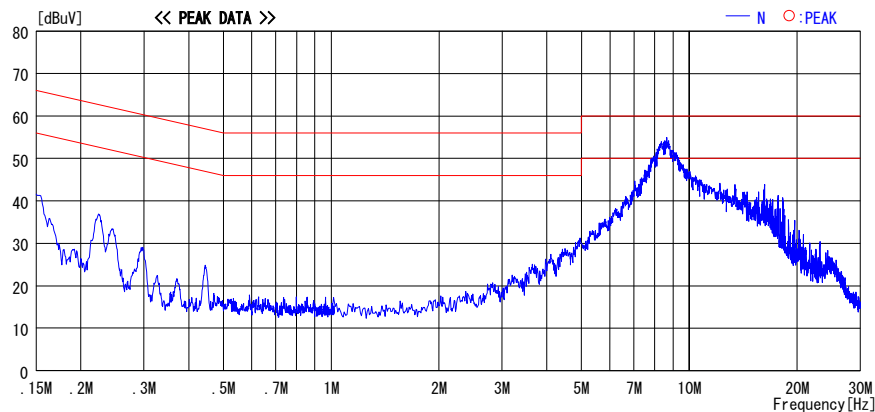


CHART: WITH FACTOR, Peak hold data. CALCULATION: RESULT[dBuV]=READING[dBuV]+C.F[dB] (LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

Conducted Emission Tx, 11b, Ch: High

DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber
Date : 2009/04/12

Company : SANYO Electric Co., Ltd.
Kind of EUT : WLAN Module
Model No. : 1AV4U19B25500
Serial No. : 001F1F3E707B

Report No. : 29FE0119-HO-01
Power : AC 120V / 60Hz
Temp./Humi. : 22deg. C / 43%
Engineer : Hironobu Ohnishi

Mode / Remarks : 802.11b, Tx 2462MHz

LIMIT : FCC15.207 QP
FCC15.207 AV

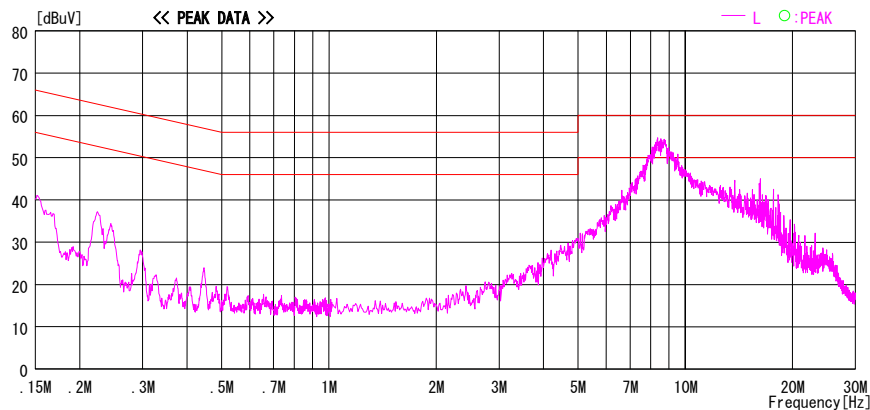
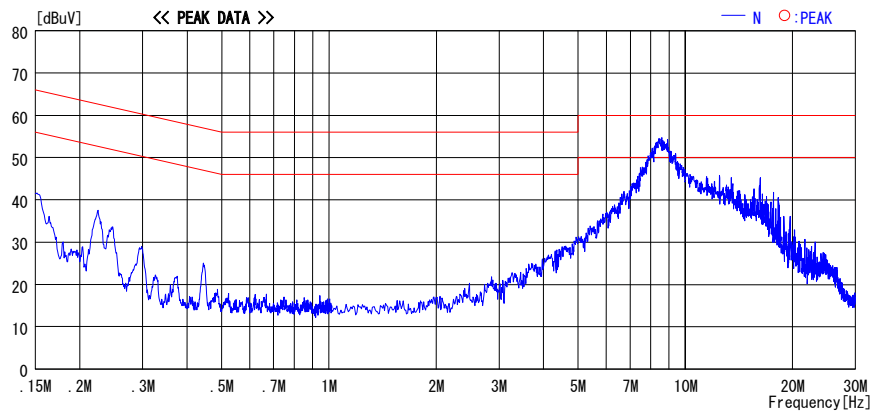


CHART: WITH FACTOR, Peak hold data. CALCULATION: RESULT [dBuV] = READING [dBuV] + C.F [dB] (LISN LOSS + CABLE LOSS)
Except for the above table : adequate margin data below the limits.

Conducted Emission

Tx, 11g, Ch: Low

DATA OF CONDUCTED EMISSION TEST

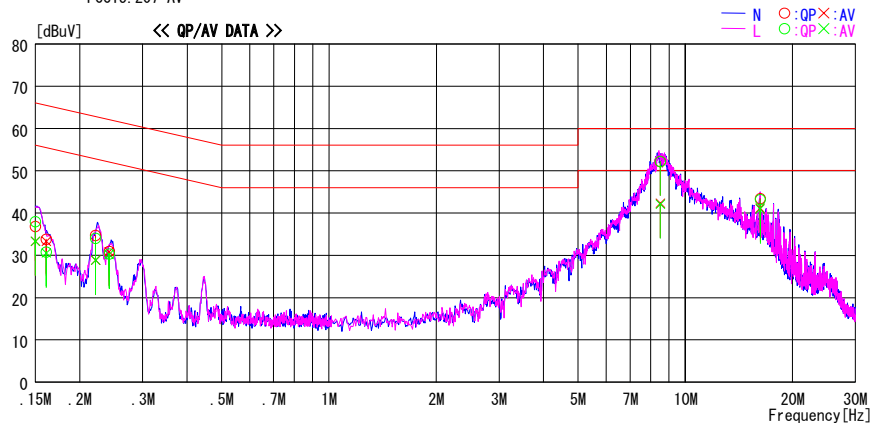
UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber
Date : 2009/04/12

Company : SANYO Electric Co., Ltd.
Kind of EUT : WLAN Module
Model No. : 1AV4U19B25500
Serial No. : 001F1F3E707B

Report No. : 29FE0119-HO-01
Power : AC 120V / 60Hz
Temp./Humi. : 22deg. C / 43%
Engineer : Hironobu Ohnishi

Mode / Remarks : 802.11g, Tx 2412MHz

LIMIT : FCC15.207 QP
FCC15.207 AV



Frequency [MHz]	Reading Level		Corr. Factor	Results		Limit		Margin		Phase
	QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]	
0.15000	36.5	33.0	0.3	36.8	33.3	66.0	56.0	29.2	22.7	N
0.16108	33.5	33.0	0.3	33.8	33.3	65.4	55.4	31.6	22.1	N
0.22130	34.4	28.5	0.3	34.7	28.8	62.8	52.8	28.1	24.0	N
0.24164	30.6	30.5	0.3	30.9	30.8	62.0	52.0	31.1	21.2	N
8.51600	51.3	41.4	0.9	52.2	42.3	60.0	50.0	7.8	7.7	N
16.22652	41.9	39.7	1.5	43.4	41.2	60.0	50.0	16.6	8.8	N
0.15000	37.7	33.0	0.3	38.0	33.3	66.0	56.0	28.0	22.7	L
0.16108	30.5	30.2	0.3	30.8	30.5	65.4	55.4	34.6	24.9	L
0.22126	33.7	28.5	0.3	34.0	28.8	62.8	52.8	28.8	24.0	L
0.24158	30.0	29.9	0.3	30.3	30.2	62.0	52.0	31.7	21.8	L
8.51600	51.3	41.2	0.9	52.2	42.1	60.0	50.0	7.8	7.9	L
16.22652	41.7	39.4	1.5	43.2	40.9	60.0	50.0	16.8	9.1	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.

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

Conducted Emission Tx, 11g, Ch: Mid

DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber
Date : 2009/04/12

Company : SANYO Electric Co., Ltd.
Kind of EUT : WLAN Module
Model No. : 1AV4U19B25500
Serial No. : 001F1F3E707B

Report No. : 29FE0119-HO-01
Power : AC 120V / 60Hz
Temp./Humi. : 22deg. C / 43%
Engineer : Hironobu Ohnishi

Mode / Remarks : 802.11g, Tx 2437MHz

LIMIT : FCC15.207 QP
FCC15.207 AV

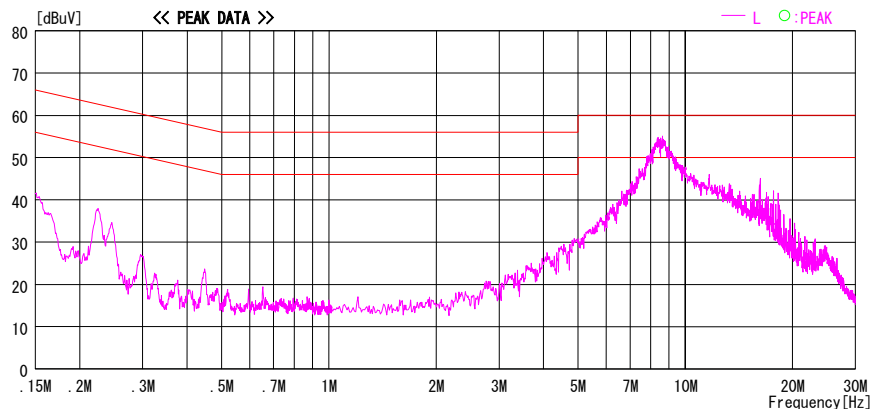
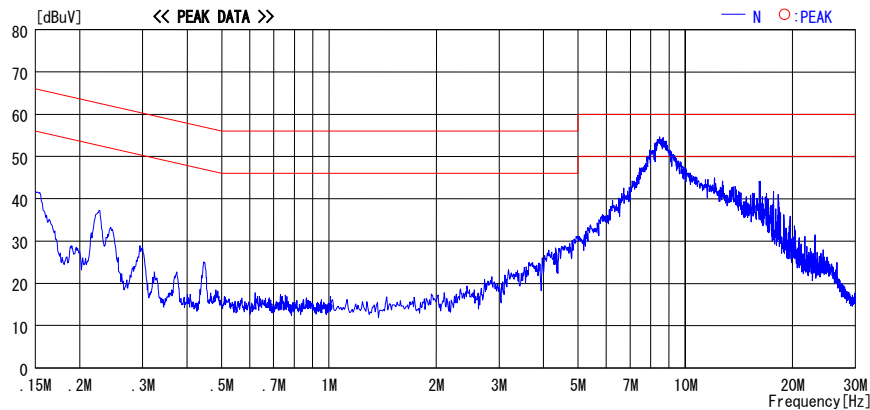


CHART: WITH FACTOR, Peak hold data. CALCULATION: RESULT[dBuV]=READING[dBuV]+C.F[dB] (LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

Conducted Emission
Tx, 11g, Ch: High

DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber
Date : 2009/04/12

Company : SANYO Electric Co., Ltd.
Kind of EUT : WLAN Module
Model No. : 1AV4U19B25500
Serial No. : 001F1F3E707B

Report No. : 29FE0119-HO-01
Power : AC 120V / 60Hz
Temp./Humi. : 22deg. C / 43%
Engineer : Hironobu Ohnishi

Mode / Remarks : 802.11g, Tx 2462MHz

LIMIT : FCC15.207 QP
FCC15.207 AV

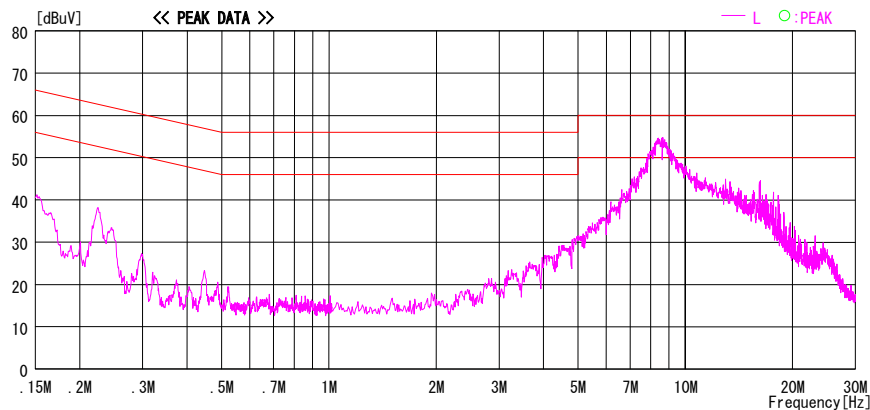
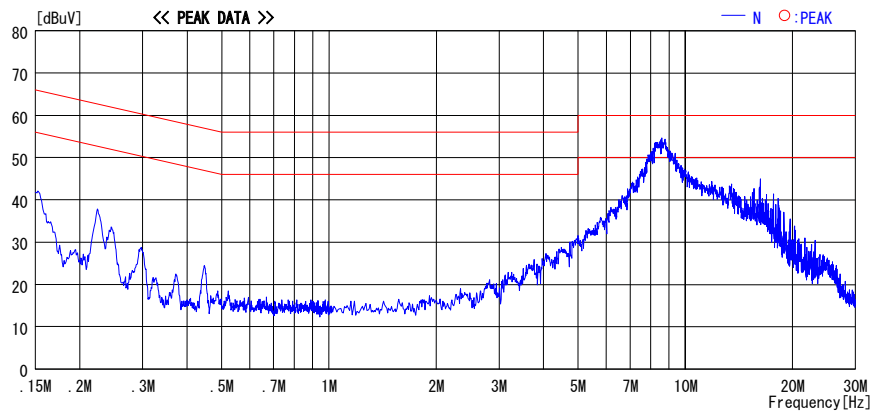


CHART:WITH FACTOR,Peak hold data. CALCURATION:RESULT[dBuV]=READING[dBuV]+C.F[dB] (LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

Conducted Emission
Tx, 11n (20HT), Ch: Low

DATA OF CONDUCTED EMISSION TEST

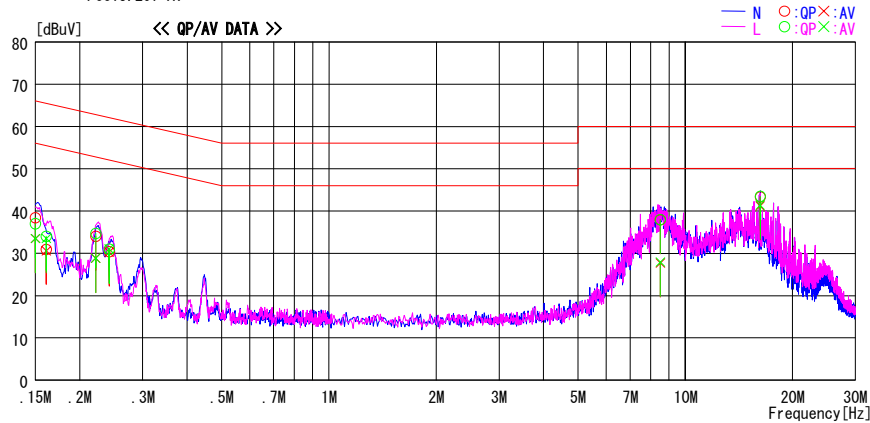
UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber
Date : 2009/04/12

Company : SANYO Electric Co., Ltd.
Kind of EUT : WLAN Module
Model No. : 1AV4U19B25500
Serial No. : 001F1F3E707B

Report No. : 29FE0119-HO-01
Power : AC 120V / 60Hz
Temp./Humi. : 22deg. C / 43%
Engineer : Hironobu Ohnishi

Mode / Remarks : 802.11n 20HT, Tx 2412MHz

LIMIT : FCC15.207 QP
FCC15.207 AV



Frequency [MHz]	Reading Level		Corr. Factor	Results		Limit		Margin		Phase
	QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]	
0.15000	38.1	33.2	0.3	38.4	33.5	66.0	56.0	27.6	22.5	N
0.16106	30.6	30.3	0.3	30.9	30.6	65.4	55.4	34.5	24.8	N
0.22154	33.7	28.5	0.3	34.0	28.8	62.8	52.8	28.8	24.0	N
0.24162	30.1	30.0	0.3	30.4	30.3	62.0	52.0	31.6	21.7	N
8.51400	37.0	26.8	0.9	37.9	27.7	60.0	50.0	22.1	22.3	N
16.22648	41.8	39.7	1.5	43.3	41.2	60.0	50.0	16.7	8.8	N
0.15000	36.7	33.2	0.3	37.0	33.5	66.0	56.0	29.0	22.5	L
0.16106	33.7	33.2	0.3	34.0	33.5	65.4	55.4	31.4	21.9	L
0.22154	34.4	28.5	0.3	34.7	28.8	62.8	52.8	28.1	24.0	L
0.24162	30.7	30.7	0.3	31.0	31.0	62.0	52.0	31.0	21.0	L
8.51400	37.1	27.0	0.9	38.0	27.9	60.0	50.0	22.0	22.1	L
16.22648	42.0	39.9	1.5	43.5	41.4	60.0	50.0	16.5	8.6	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.

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

Conducted Emission
Tx, 11n (20HT), Ch: Mid

DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber
Date : 2009/04/12

Company : SANYO Electric Co., Ltd.
Kind of EUT : WLAN Module
Model No. : 1AV4U19B25500
Serial No. : 001F1F3E707B

Report No. : 29FE0119-HO-01
Power : AC 120V / 60Hz
Temp./Humi. : 22deg. C / 43%
Engineer : Hironobu Ohnishi

Mode / Remarks : 802.11n 20HT, Tx 2437MHz

LIMIT : FCC15.207 QP
FCC15.207 AV

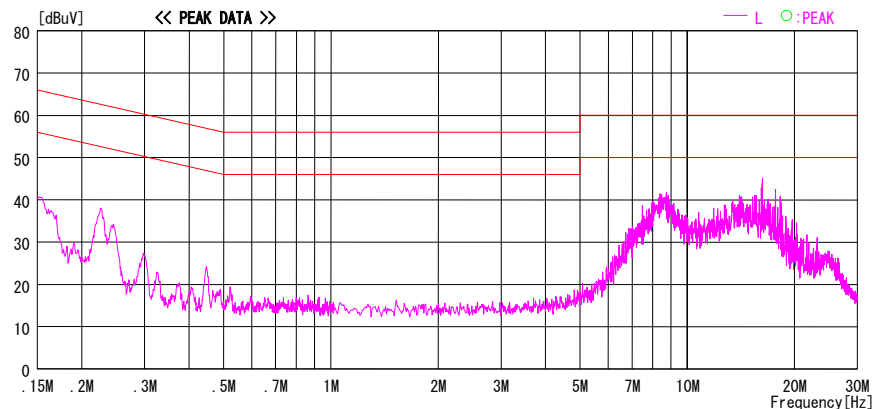
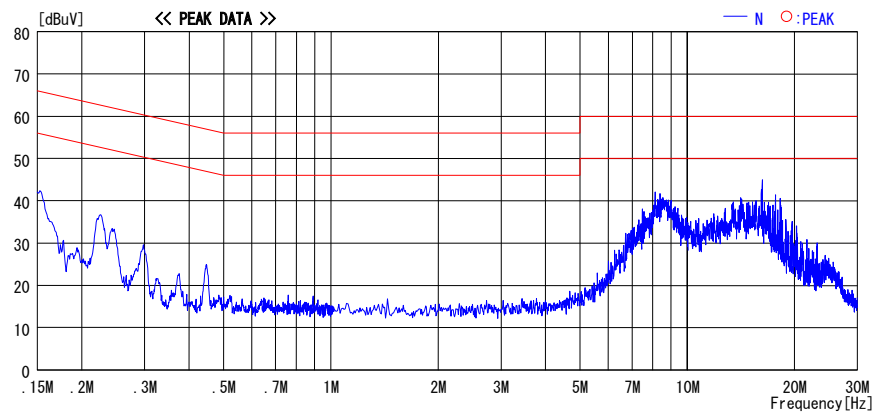


CHART: WITH FACTOR, Peak hold data. CALCULATION: RESULT[dBuV]=READING[dBuV]+C.F[dB] (LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

Conducted Emission
Tx, 11n (20HT), Ch: High

DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber
Date : 2009/04/12

Company : SANYO Electric Co., Ltd.
Kind of EUT : WLAN Module
Model No. : 1AV4U19B25500
Serial No. : 001F1F3E707B

Report No. : 29FE0119-HO-01
Power : AC 120V / 60Hz
Temp./Humi. : 22deg. C / 43%
Engineer : Hironobu Ohnishi

Mode / Remarks : 802.11n 20HT, Tx 2462MHz

LIMIT : FCC15.207 QP
FCC15.207 AV

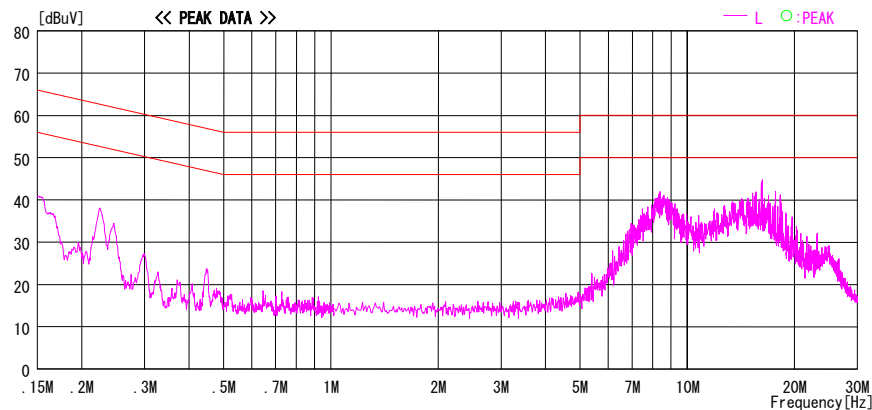
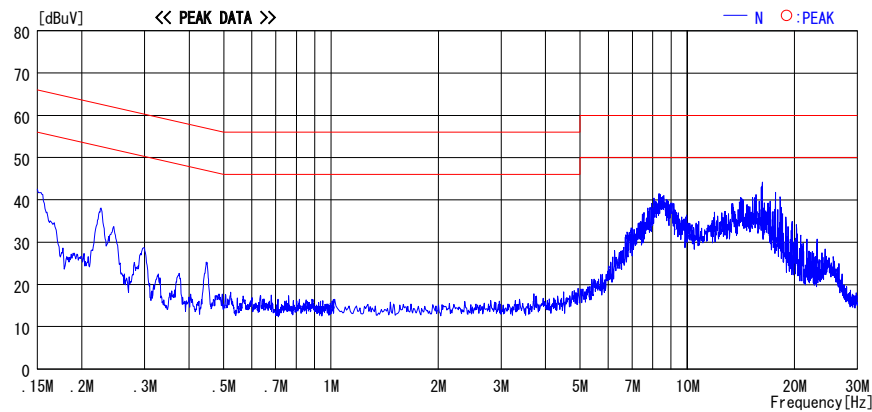


CHART: WITH FACTOR, Peak hold data. CALCULATION: RESULT[dBuV]=READING[dBuV]+C.F[dB] (LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

Conducted Emission
Tx, 11n (40HT), Ch: Low

DATA OF CONDUCTED EMISSION TEST

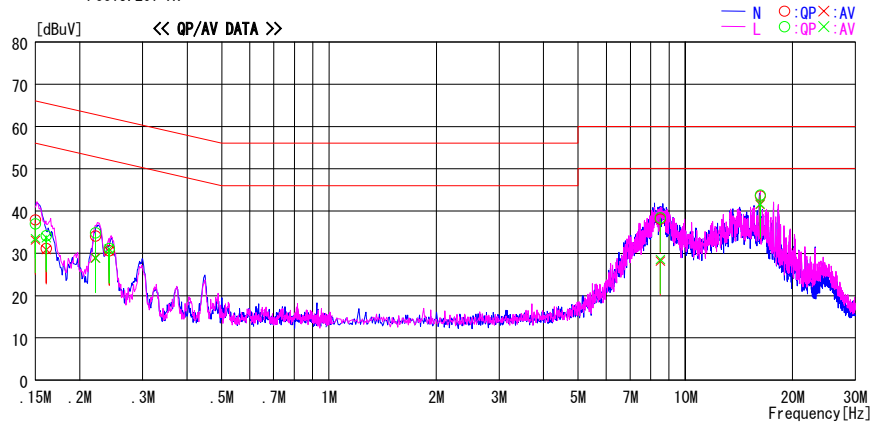
UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber
Date : 2009/04/12

Company : SANYO Electric Co., Ltd.
Kind of EUT : WLAN Module
Model No. : 1AV4U19B25500
Serial No. : 001F1F3E707B

Report No. : 29FE0119-HO-01
Power : AC 120V / 60Hz
Temp./Humi. : 22deg. C / 43%
Engineer : Hironobu Ohnishi

Mode / Remarks : 802.11n 40HT, Tx 2422MHz

LIMIT : FCC15.207 QP
FCC15.207 AV



Frequency [MHz]	Reading Level		Corr. Factor	Results		Limit		Margin		Phase
	QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]	
0.15000	37.6	32.8	0.3	37.9	33.1	66.0	56.0	28.1	22.9	N
0.16108	30.8	30.5	0.3	31.1	30.8	65.4	55.4	34.3	24.6	N
0.22102	33.8	28.6	0.3	34.1	28.9	62.8	52.8	28.7	23.9	N
0.24161	30.3	30.2	0.3	30.6	30.5	62.0	52.0	31.4	21.5	N
8.51400	37.2	27.3	0.9	38.1	28.2	60.0	50.0	21.9	21.8	N
16.22648	42.1	40.0	1.5	43.6	41.5	60.0	50.0	16.4	8.5	N
0.15000	36.6	33.2	0.3	36.9	33.5	66.0	56.0	29.1	22.5	L
0.16102	33.9	33.4	0.3	34.2	33.7	65.4	55.4	31.2	21.7	L
0.22136	34.5	28.5	0.3	34.8	28.8	62.8	52.8	28.0	24.0	L
0.24161	30.8	30.7	0.3	31.1	31.0	62.0	52.0	30.9	21.0	L
8.51400	37.5	27.6	0.9	38.4	28.5	60.0	50.0	21.6	21.5	L
16.22648	42.3	40.2	1.5	43.8	41.7	60.0	50.0	16.2	8.3	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.

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

Conducted Emission
Tx, 11n (40HT), Ch: Mid

DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber
Date : 2009/04/12

Company : SANYO Electric Co., Ltd.
Kind of EUT : WLAN Module
Model No. : 1AV4U19B25500
Serial No. : 001F1F3E707B

Report No. : 29FE0119-HO-01
Power : AC 120V / 60Hz
Temp./Humi. : 22deg. C / 43%
Engineer : Hironobu Ohnishi

Mode / Remarks : 802.11n 40HT, Tx 2437MHz

LIMIT : FCC15.207 QP
FCC15.207 AV

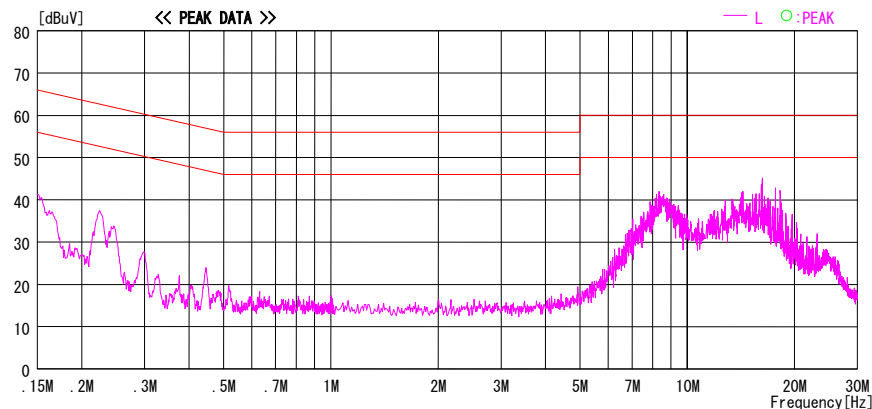
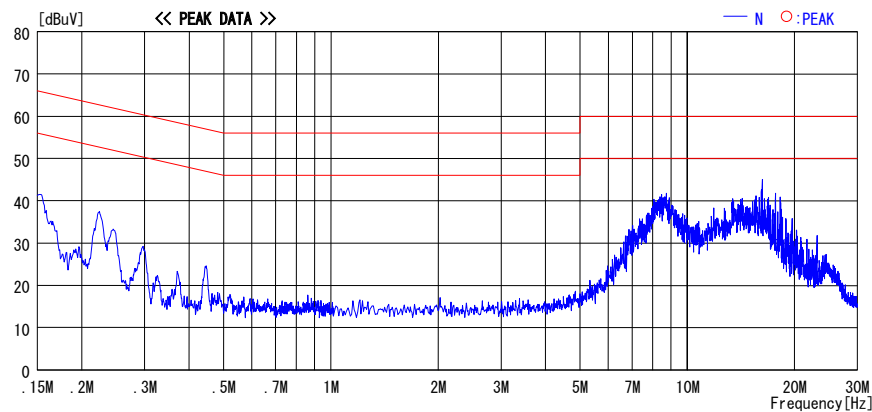


CHART: WITH FACTOR, Peak hold data. CALCULATION: RESULT[dBuV]=READING[dBuV]+C.F[dB] (LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

Conducted Emission
Tx, 11n (40HT), Ch: High

DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber
Date : 2009/04/12

Company : SANYO Electric Co., Ltd.
Kind of EUT : WLAN Module
Model No. : 1AV4U19B25500
Serial No. : 001F1F3E707B

Report No. : 29FE0119-HO-01
Power : AC 120V / 60Hz
Temp./Humi. : 22deg. C / 43%
Engineer : Hironobu Ohnishi

Mode / Remarks : 802.11n 40HT, Tx 2452MHz

LIMIT : FCC15.207 QP
FCC15.207 AV

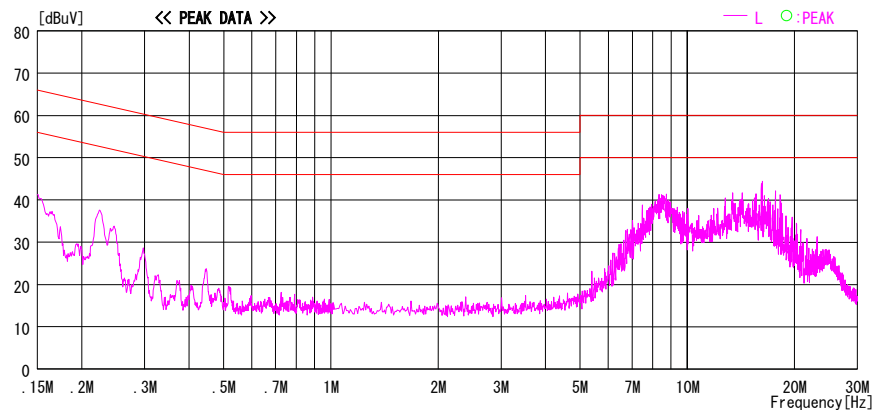
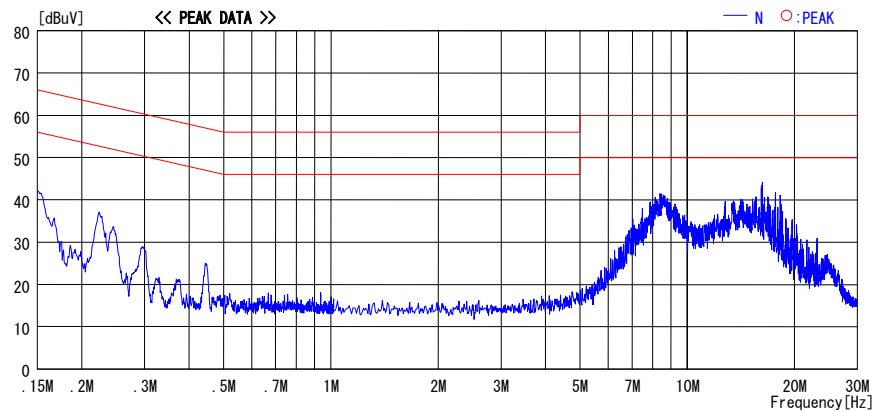


CHART: WITH FACTOR, Peak hold data. CALCULATION: RESULT[dBuV]=READING[dBuV]+C.F[dB] (LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

Conducted Emission
Rx, 11b, Ch: Mid

DATA OF CONDUCTED EMISSION TEST

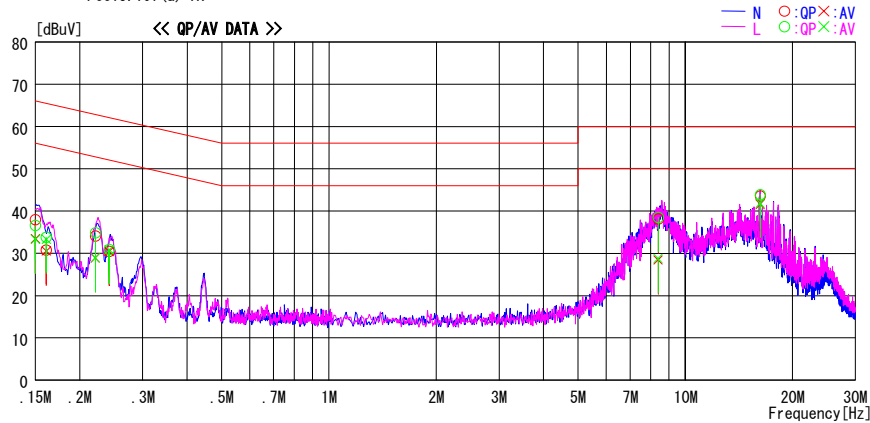
UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber
Date : 2009/04/12

Company : SANYO Electric Co., Ltd.
Kind of EUT : WLAN Module
Model No. : 1AV4U19B25500
Serial No. : 001F1F3E707B

Report No. : 29FE0119-HO-01
Power : AC 120V / 60Hz
Temp./Humi. : 22deg. C / 43%
Engineer : Hironobu Ohnishi

Mode / Remarks : 802.11b, Rx 2437MHz

LIMIT : FCC15.107(a) QP
FCC15.107(a) AV



Frequency [MHz]	Reading Level		Corr. Factor	Results		Limit		Margin		Phase
	QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]	
0.15000	37.7	33.1	0.3	38.0	33.4	66.0	56.0	28.0	22.6	N
0.16108	30.5	30.2	0.3	30.8	30.5	65.4	55.4	34.6	24.9	N
0.22106	33.8	28.6	0.3	34.1	28.9	62.8	52.8	28.7	23.9	N
0.24160	30.2	30.1	0.3	30.5	30.4	62.0	52.0	31.5	21.6	N
8.38600	37.2	27.5	0.9	38.1	28.4	60.0	50.0	21.9	21.6	N
16.22652	42.1	40.1	1.5	43.6	41.6	60.0	50.0	16.4	8.4	N
0.15000	36.3	33.0	0.3	36.6	33.3	66.0	56.0	29.4	22.7	L
0.16108	33.5	33.0	0.3	33.8	33.3	65.4	55.4	31.6	22.1	L
0.22106	34.5	28.6	0.3	34.8	28.9	62.8	52.8	28.0	23.9	L
0.24160	30.6	30.5	0.3	30.9	30.8	62.0	52.0	31.1	21.2	L
8.38600	37.6	27.8	0.9	38.5	28.7	60.0	50.0	21.5	21.3	L
16.22652	42.4	40.3	1.5	43.9	41.8	60.0	50.0	16.1	8.2	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.

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

Conducted Emission Rx, 11g, Ch: Mid

DATA OF CONDUCTED EMISSION TEST

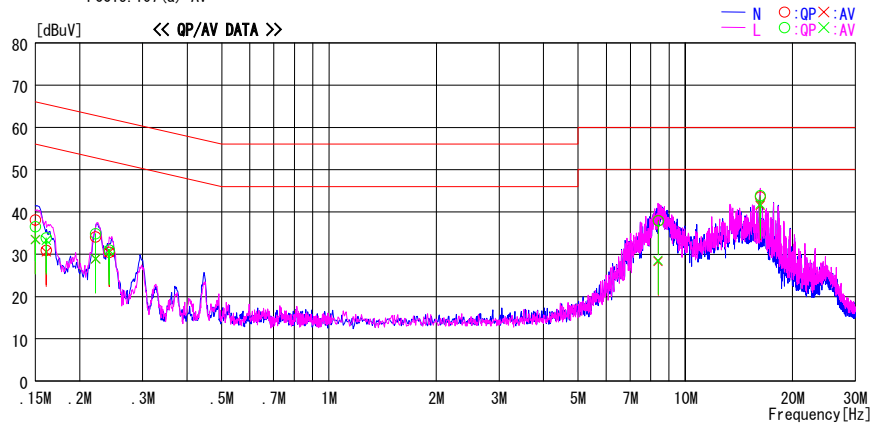
UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber
Date : 2009/04/12

Company : SANYO Electric Co., Ltd.
Kind of EUT : WLAN Module
Model No. : 1AV4U19B25500
Serial No. : 001F1F3E707B

Report No. : 29FE0119-HO-01
Power : AC 120V / 60Hz
Temp./Humi. : 22deg. C / 43%
Engineer : Hironobu Ohnishi

Mode / Remarks : 802.11g, Rx 2437MHz

LIMIT : FCC15.107(a) QP
FCC15.107(a) AV



Frequency [MHz]	Reading Level		Corr. Factor	Results		Limit		Margin		Phase
	QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]	
0.15000	37.8	33.2	0.3	38.1	33.5	66.0	56.0	27.9	22.5	N
0.16108	30.6	30.2	0.3	30.9	30.5	65.4	55.4	34.5	24.9	N
0.22119	33.8	28.6	0.3	34.1	28.9	62.8	52.8	28.7	23.9	N
0.24162	30.2	30.1	0.3	30.5	30.4	62.0	52.0	31.5	21.6	N
8.38600	37.1	27.4	0.9	38.0	28.3	60.0	50.0	22.0	21.7	N
16.22650	42.1	40.0	1.5	43.6	41.5	60.0	50.0	16.4	8.5	N
0.15000	36.2	33.1	0.3	36.5	33.4	66.0	56.0	29.5	22.6	L
0.16108	33.6	33.0	0.3	33.9	33.3	65.4	55.4	31.5	22.1	L
0.22119	34.5	28.6	0.3	34.8	28.9	62.8	52.8	28.0	23.9	L
0.24162	30.7	30.6	0.3	31.0	30.9	62.0	52.0	31.0	21.1	L
8.38600	37.0	27.6	0.9	37.9	28.5	60.0	50.0	22.1	21.5	L
16.22650	42.4	40.3	1.5	43.9	41.8	60.0	50.0	16.1	8.2	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.

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

Conducted Emission
Rx, 11n (20HT), Ch: Mid

DATA OF CONDUCTED EMISSION TEST

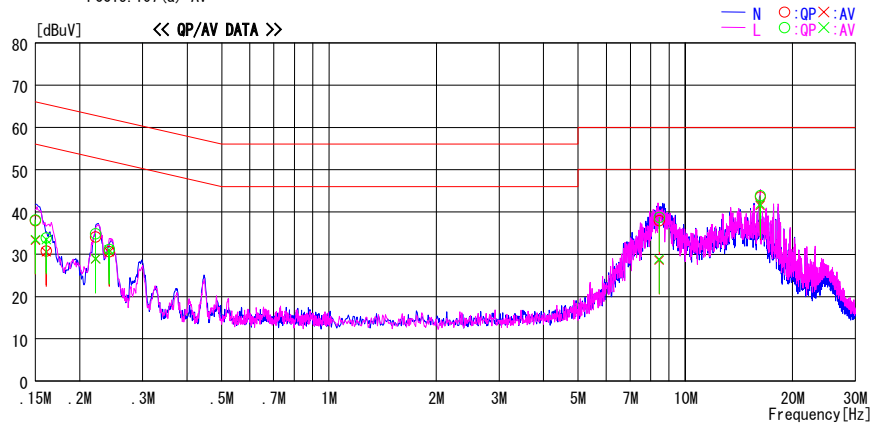
UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber
Date : 2009/04/12

Company : SANYO Electric Co., Ltd.
Kind of EUT : WLAN Module
Model No. : 1AV4U19B25500
Serial No. : 001F1F3E707B

Report No. : 29FE0119-HO-01
Power : AC 120V / 60Hz
Temp./Humi. : 22deg. C / 43%
Engineer : Hironobu Ohnishi

Mode / Remarks : 802.11n 20HT, Rx 2437MHz

LIMIT : FCC15.107(a) QP
FCC15.107(a) AV



Frequency [MHz]	Reading Level		Corr. Factor	Results		Limit		Margin		Phase
	QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]	
0.15000	37.7	33.0	0.3	38.0	33.3	66.0	56.0	28.0	22.7	N
0.16106	30.5	30.2	0.3	30.8	30.5	65.4	55.4	34.6	24.9	N
0.22121	33.8	28.6	0.3	34.1	28.9	62.8	52.8	28.7	23.9	N
0.24162	30.3	30.2	0.3	30.6	30.5	62.0	52.0	31.4	21.5	N
8.45000	37.1	27.7	0.9	38.0	28.6	60.0	50.0	22.0	21.4	N
16.22652	42.1	40.0	1.5	43.6	41.5	60.0	50.0	16.4	8.5	N
0.15000	37.8	33.2	0.3	38.1	33.5	66.0	56.0	27.9	22.5	L
0.16106	33.6	33.1	0.3	33.9	33.4	65.4	55.4	31.5	22.0	L
0.22121	34.5	28.6	0.3	34.8	28.9	62.8	52.8	28.0	23.9	L
0.24162	30.8	30.7	0.3	31.1	31.0	62.0	52.0	30.9	21.0	L
8.45000	37.8	27.9	0.9	38.7	28.8	60.0	50.0	21.3	21.2	L
16.22652	42.4	40.3	1.5	43.9	41.8	60.0	50.0	16.1	8.2	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.

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

Conducted Emission
Rx, 11n (40HT), Ch: Mid

DATA OF CONDUCTED EMISSION TEST

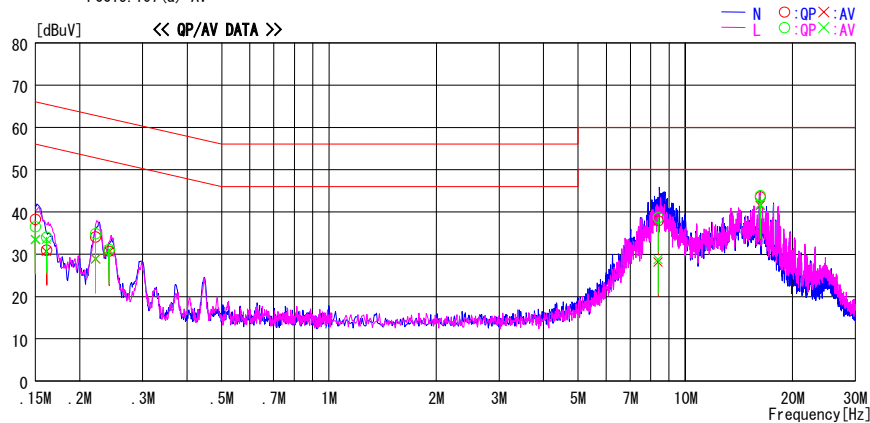
UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber
Date : 2009/04/12

Company : SANYO Electric Co., Ltd.
Kind of EUT : WLAN Module
Model No. : 1AV4U19B25500
Serial No. : 001F1F3E707B

Report No. : 29FE0119-HO-01
Power : AC 120V / 60Hz
Temp./Humi. : 22deg. C / 43%
Engineer : Hironobu Ohnishi

Mode / Remarks : 802.11n 40HT, Rx 2437MHz

LIMIT : FCC15.107(a) QP
FCC15.107(a) AV



Frequency [MHz]	Reading Level		Corr. Factor	Results		Limit		Margin		Phase
	QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]	
0.15000	37.9	33.2	0.3	38.2	33.5	66.0	56.0	27.8	22.5	N
0.16112	30.7	30.4	0.3	31.0	30.7	65.4	55.4	34.4	24.7	N
0.22128	33.8	28.6	0.3	34.1	28.9	62.8	52.8	28.7	23.9	N
0.24164	30.4	30.3	0.3	30.7	30.6	62.0	52.0	31.3	21.4	N
8.38600	37.0	27.3	0.9	37.9	28.2	60.0	50.0	22.1	21.8	N
16.22650	42.1	40.0	1.5	43.6	41.5	60.0	50.0	16.4	8.5	N
0.15000	36.2	33.1	0.3	36.5	33.4	66.0	56.0	29.5	22.6	L
0.16112	33.7	33.2	0.3	34.0	33.5	65.4	55.4	31.4	21.9	L
0.22128	34.5	28.6	0.3	34.8	28.9	62.8	52.8	28.0	23.9	L
0.24164	30.8	30.7	0.3	31.1	31.0	62.0	52.0	30.9	21.0	L
8.38600	37.7	27.8	0.9	38.6	28.7	60.0	50.0	21.4	21.3	L
16.22650	42.4	40.3	1.5	43.9	41.8	60.0	50.0	16.1	8.2	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.

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

6dB Bandwidth

UL Japan, Inc.

Head Office EMC Lab. No.6 , 7 shielded room

Company SANYO Electric Co., Ltd
Equipment WLAN Module
Model No. 1AV4U19B25500
Serial No. 001F1F3E7077
Power AC 120V / 60 Hz
Mode Transmitting mode

Regulation FCC15.247(e)/RSS-210A8.2(b)
Test Distance -
Date 03/9/2009 03/12/2009 03/10/2009
Temperature 16 dege. C 20 dege. C 21 deg. C
Humidity 46% 20% 43 %
Engineer Tomohisa Nakagawa Takeshi Choda

[IEEE802.11b]

Ch	Freq.	6dB Bandwidth	Limit
	[MHz]	[MHz]	[kHz]
Low	2412.0	11.292	>500
Mid	2437.0	11.294	>500
High	2462.0	11.285	>500

[IEEE802.11g]

Ch	Freq.	6dB Bandwidth	Limit
	[MHz]	[MHz]	[kHz]
Low	2412.0	16.548	>500
Mid	2437.0	16.569	>500
High	2462.0	16.545	>500

[IEEE802.11n, 20HT]

Ch	Freq.	6dB Bandwidth	Limit
	[MHz]	[MHz]	[kHz]
Low	2412.0	17.685	>500
Mid	2437.0	17.659	>500
High	2462.0	17.655	>500

[IEEE802.11n, 40HT]

Ch	Freq.	6dB Bandwidth	Limit
	[MHz]	[MHz]	[kHz]
Low	2422.0	36.354	>500
Mid	2437.0	36.347	>500
High	2452.0	36.359	>500

UL Japan, Inc.

Head Office EMC Lab.

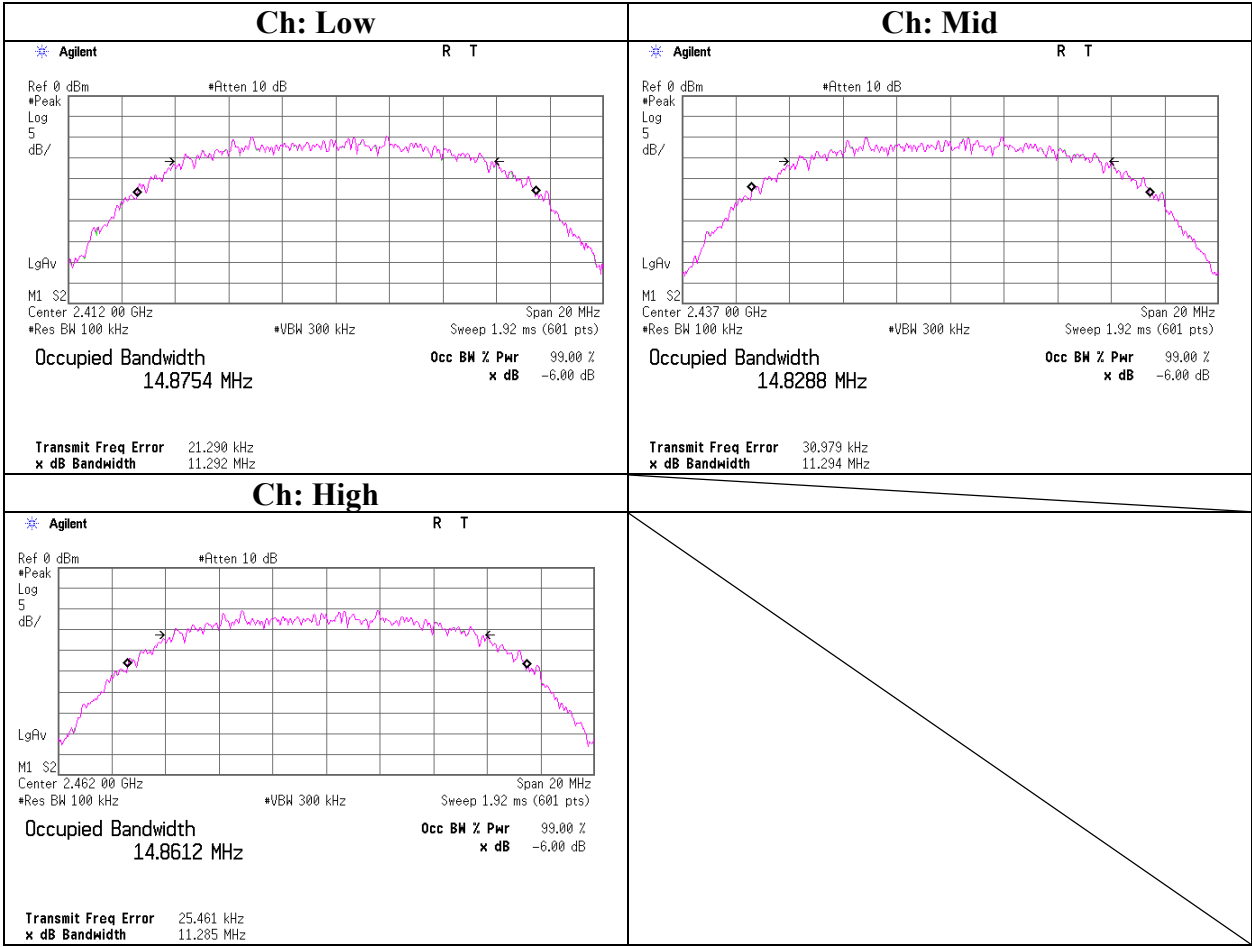
4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

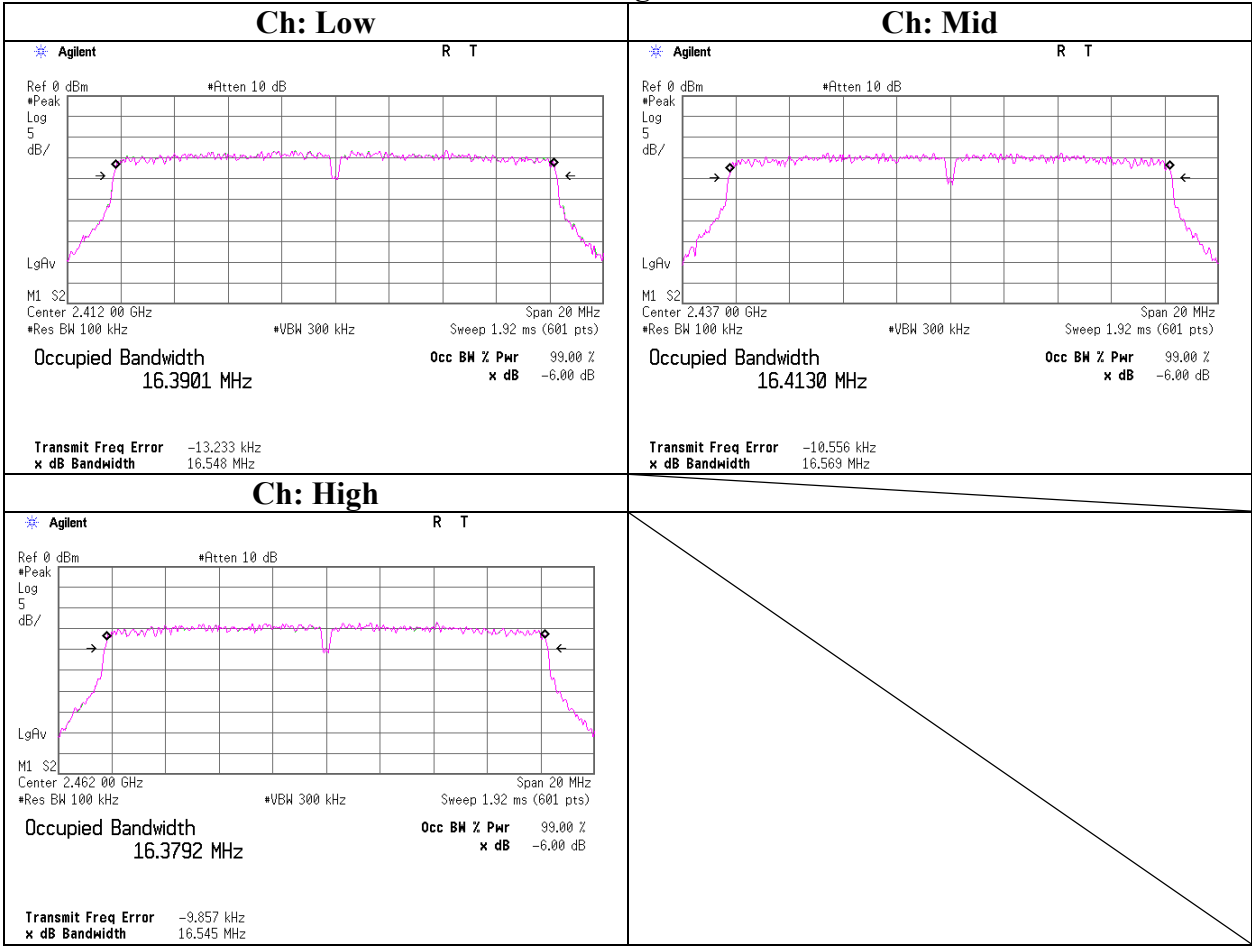
6dB Bandwidth

11b

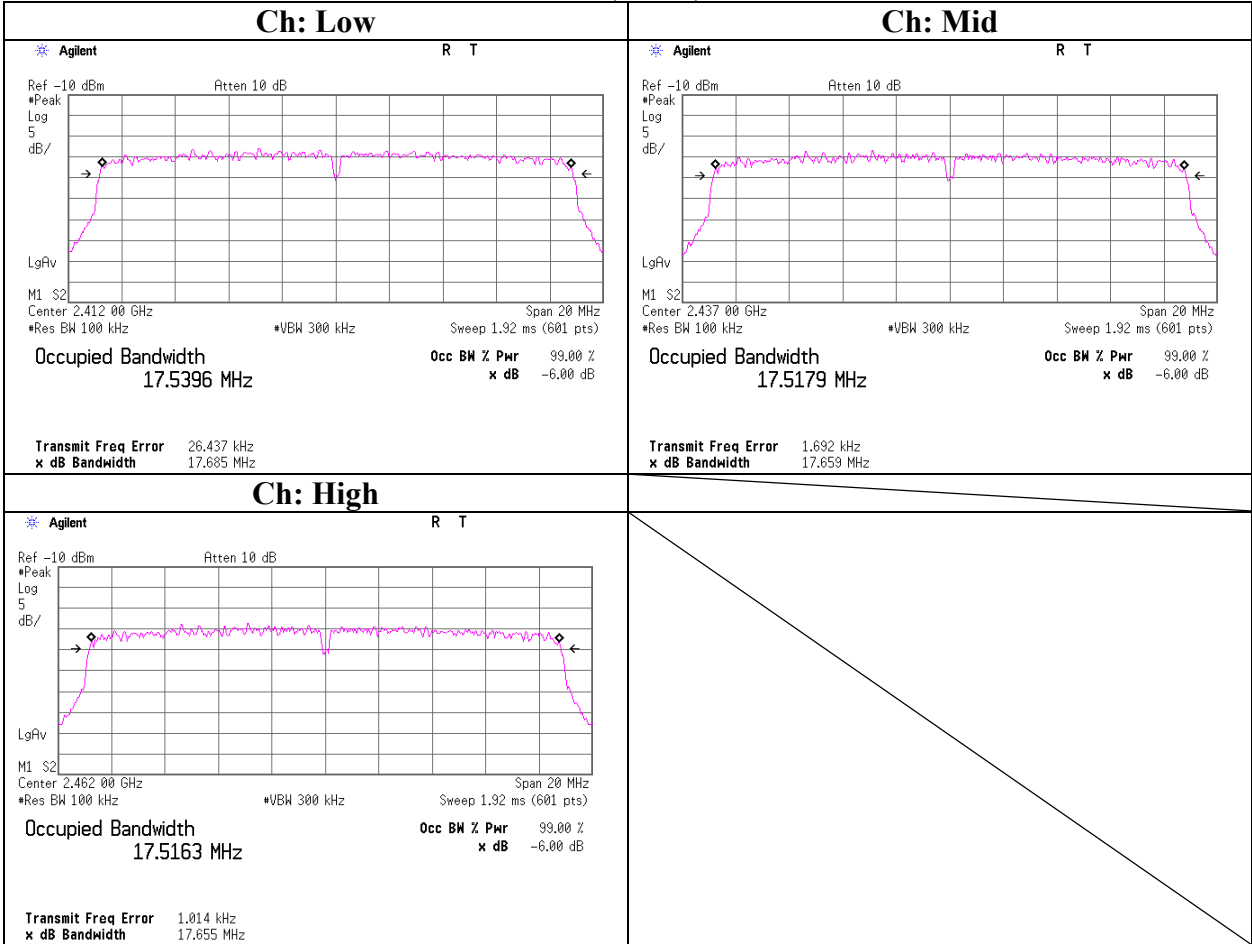


6dB Bandwidth

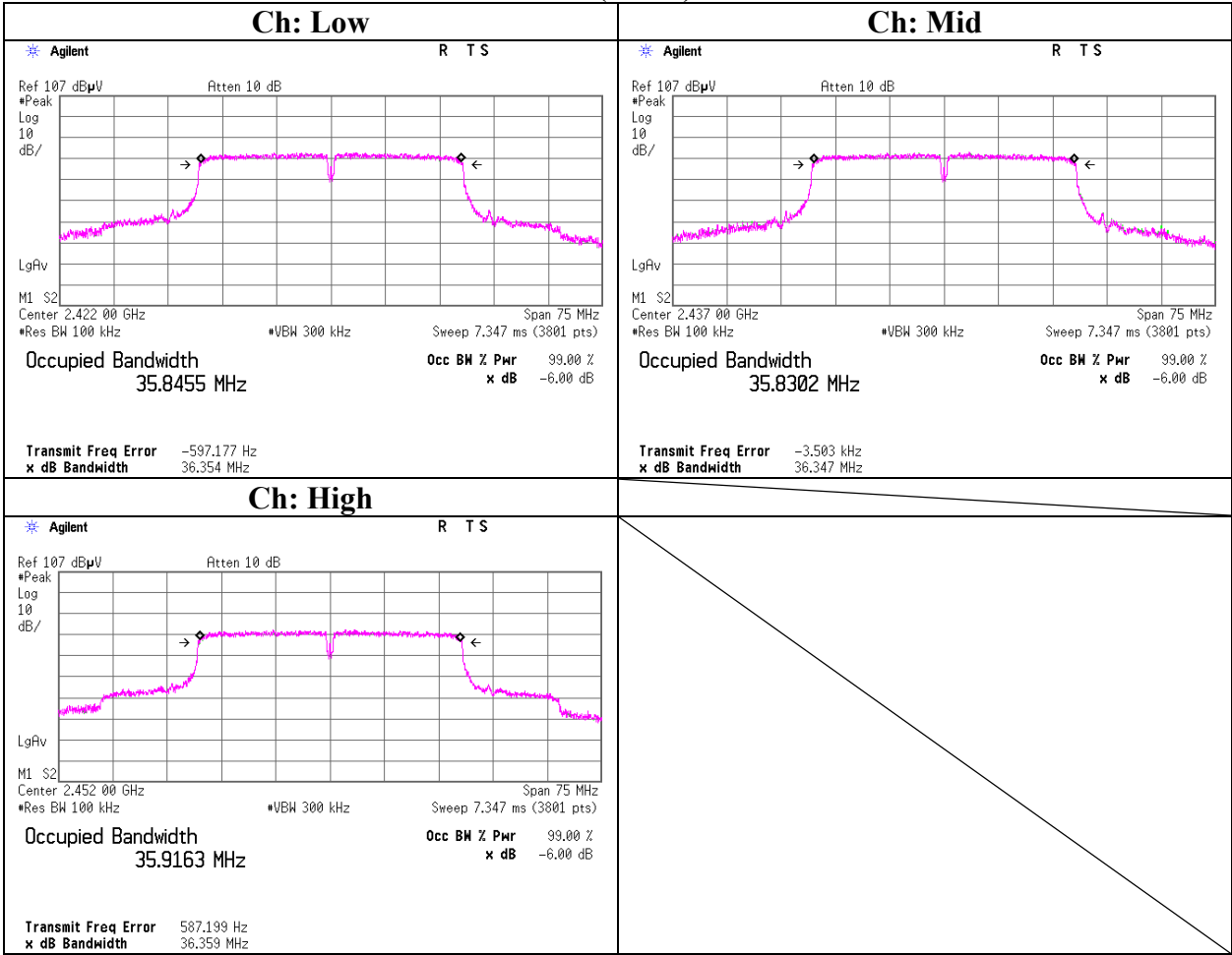
11g



6dB Bandwidth
11n (20HT)



6dB Bandwidth
11n (40HT)



Maximum Peak Output Power

UL Japan, Inc.

Head Office EMC Lab. No.6 Measurement room

Company SANYO Electric Co., Ltd
Equipment WLAN Module
Model No. 1AV4U19B25500
Serial No. 001F1F3E7077
Power AC 120V / 60 Hz
Mode Transmitting mode

Regulation FCC15.247(e)/RSS-210A8.2(b)
Test Distance -
Date 03/09/2009 03/10/2009
Temperature 16 deg. C 21 deg. C
Humidity 46 % 43 %
Engineer Tomohisa Nakagawa Takeshi Choda

[IEEE802.11b 11Mbps]

Ch	Freq. [MHz]	P/M (PK) Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result		Limit		Margin
					[dBm]	[mW]	[dBm]	[mW]	[dB]
Low	2412.0	-6.56	1.87	19.98	15.29	33.81	30.00	1000	14.71
Mid	2437.0	-6.77	1.88	19.98	15.09	32.28	30.00	1000	14.91
High	2462.0	-7.06	1.88	19.98	14.80	30.20	30.00	1000	15.20

Sample Calculation:

Result = Reading + Cable Loss + Attenuator

[IEEE802.11g 6Mbps]

Ch	Freq. [MHz]	P/M (PK) Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result		Limit		Margin
					[dBm]	[mW]	[dBm]	[mW]	[dB]
Low	2412.0	-1.63	1.87	19.98	20.22	105.20	30.00	1000	9.78
Mid	2437.0	-1.74	1.88	19.98	20.12	102.80	30.00	1000	9.88
High	2462.0	-1.83	1.88	19.98	20.03	100.69	30.00	1000	9.97

Sample Calculation:

Result = Reading + Cable Loss + Attenuator

*The equipment and cables were not used for factor 0.0dB of the above table.

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

UL Japan, Inc.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

Maximum Peak Output Power
11n (20HT)

UL Japan, Inc.
Head Office EMC Lab. No.11 Measurement Room

COMPANY	: SANYO Electric Co., Ltd.	REPORT NO	: 29FE0119-HO-01
EQUIPMENT	: WLAN Module	REGULATION	: FCC15.247(e)/RSS-210A8.2(b)
MODEL NO.	: 1AV4U19B25500	TEST DISTANCE	: -
SERIAL NO.	: 001F1F3E7077	DATE	: 3/13/2009
POWER	: AC 120V / 60Hz	TEMPERATURE	: 22 deg. C
MODE	: Tx , IEEE802.11n 20 HT (MCS 0)	HUMIDITY	: 48 %
		ENGINEER	: Kazufumi Nakai

Ch	Freq. [MHz]	P/M (PK) Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result		Limit		Margin [dB]
					[dBm]	[mW]	[dBm]	[mW]	
Low	2412.0	0.19	1.87	19.98	22.04	159.96	30.00	1000	7.96
Mid	2437.0	0.41	1.87	19.98	22.26	168.27	30.00	1000	7.74
High	2462.0	0.38	1.88	19.98	22.24	167.49	30.00	1000	7.76

[IEEE802.11n 20HT]

Data rate [MCS No]	Freq. [MHz]	P/M (PK) Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result [dBm]	Remarks
0	2437.0	0.37	1.87	19.98	22.22	Worst
1	2437.0	0.20	1.87	19.98	22.05	
2	2437.0	0.32	1.87	19.98	22.17	
3	2437.0	0.35	1.87	19.98	22.20	
4	2437.0	-0.74	1.87	19.98	21.11	
5	2437.0	-0.56	1.87	19.98	21.29	
6	2437.0	-1.13	1.87	19.98	20.72	
7	2437.0	-1.61	1.87	19.98	20.24	

Sample Calculation:

Result = Reading + Cable Loss + Attenuator Loss

*The equipment and cables were not used for factor 0.0dB of the above table.

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

Maximum Peak Output Power
11n (40HT)

UL Japan, Inc.
Head Office EMC Lab. No.11 Measurement Room

COMPANY	: SANYO Electric Co., Ltd.	REPORT NO	: 29FE0119-HO-01
EQUIPMENT	: WLAN Module	REGULATION	: FCC15.247(e)/RSS-210A8.2(b)
MODEL NO.	: 1AV4U19B25500	TEST DISTANCE	: -
SERIAL NO.	: 001F1F3E7077	DATE	: 3/13/2009
POWER	: AC 120V / 60Hz	TEMPERATURE	: 22 deg. C
MODE	: Tx , IEEE802.11n 40 HT (MCS 0)	HUMIDITY	: 48 %
		ENGINEER	: Kazufumi Nakai

Ch	Freq. [MHz]	P/M (PK) Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result		Limit		Margin [dB]
					[dBm]	[mW]	[dBm]	[mW]	
Low	2422.0	0.32	1.87	19.98	22.17	164.82	30.00	1000	7.83
Mid	2437.0	0.32	1.87	19.98	22.17	164.82	30.00	1000	7.83
High	2452.0	0.39	1.88	19.98	22.25	167.88	30.00	1000	7.75

[IEEE802.11n 40HT]

Data rate [MCS No]	Freq. [MHz]	P/M (PK) Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result [dBm]	Remarks
0	2437.0	0.31	1.87	19.98	22.16	Worst
1	2437.0	0.28	1.87	19.98	22.13	
2	2437.0	0.21	1.87	19.98	22.06	
3	2437.0	0.19	1.87	19.98	22.04	
4	2437.0	-0.44	1.87	19.98	21.41	
5	2437.0	-0.27	1.87	19.98	21.58	
6	2437.0	-0.68	1.87	19.98	21.17	
7	2437.0	-1.55	1.87	19.98	20.30	

Sample Calculation:

Result = Reading + Cable Loss + Attenuator Loss

*The equipment and cables were not used for factor 0.0dB of the above table.

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

Maximum Peak Output Power (Reference data)

UL Japan, Inc.

Head Office EMC Lab. No.6 Measurement room

Company SANYO Electric Co., Ltd
Equipment WLAN Module
Model No. 1AV4U19B25500
Serial No. 001F1F3E7077
Power AC 120V / 60 Hz
Mode Transmitting mode

Regulation FCC15.247(e)/RSS-210A8.2(b)
Test Distance -
Date 03/09/2009
Temperature 16 deg. C
Humidity 46 %
Engineer Tomohisa Nakagawa

[IEEE802.11b]

Data rate [Mbps]	Freq. [MHz]	P/M(PK) Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result		Remarks
					[dBm]	[mW]	
1	2412.0	-5.80	1.00	19.98	15.18	32.96	
2	2412.0	-5.71	1.00	19.98	15.27	33.65	
5.5	2412.0	-5.75	1.00	19.98	15.23	33.34	
11	2412.0	-5.69	1.00	19.98	15.29	33.81	Worst

[IEEE802.11g]

Data rate [Mbps]	Freq. [MHz]	P/M(PK) Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result		Remarks
					[dBm]	[mW]	
6	2412.0	-0.76	1.00	19.98	20.22	105.20	Worst
9	2412.0	-0.93	1.00	19.98	20.05	101.16	
12	2412.0	-2.78	1.00	19.98	18.20	66.07	
18	2412.0	-1.12	1.00	19.98	19.86	96.83	
24	2412.0	-1.35	1.00	19.98	19.63	91.83	
36	2412.0	-1.23	1.00	19.98	19.75	94.41	
48	2412.0	-1.39	1.00	19.98	19.59	90.99	
54	2412.0	-1.28	1.00	19.98	19.70	93.33	

Result = Reading + Cable Loss + Attenuator Loss

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

Radiated Spurious Emission (below 1GHz)

Tx, 11b, Ch: Low

DATA OF RADIATED EMISSION TEST

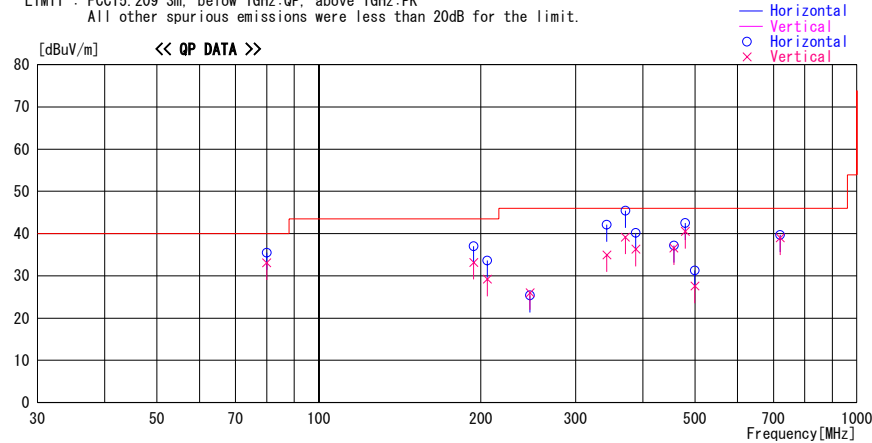
UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber
Date : 2009/04/24

Company : SANYO Electric Co., Ltd.
Kind of EUT : WLAN Module
Model No. : 1AV4U19B25500
Serial No. : 001F1F3E707B

Report No. : 29FE0119-HO-01
Power : AC 120V/60Hz
Temp./Humi. : 20deg.C / 35%
Engineer : Takeshi Choda

Mode / Remarks : 802.11b, Tx 2412MHz, Normal Position

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		Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]	Comment
			Factor [dB/m]	Gain [dB]							
79.997	51.2	QP	6.1	-24.2	33.1	318	152	Vert.	40.0	6.9	
79.998	53.6	QP	6.1	-24.2	35.5	67	228	Hori.	40.0	4.5	
194.061	39.8	QP	16.4	-23.0	33.2	359	100	Vert.	43.5	10.3	
194.061	43.6	QP	16.4	-23.0	37.0	276	175	Hori.	43.5	6.5	
205.688	35.3	QP	16.7	-22.8	29.2	339	100	Vert.	43.5	14.3	
205.688	39.7	QP	16.7	-22.8	33.6	315	159	Hori.	43.5	9.9	
246.890	31.3	QP	17.2	-22.5	26.0	54	100	Vert.	46.0	20.0	
246.894	30.7	QP	17.2	-22.5	25.4	0	199	Hori.	46.0	20.6	
342.814	41.0	QP	15.8	-21.8	35.0	344	181	Vert.	46.0	11.0	
342.814	48.1	QP	15.8	-21.8	42.1	34	100	Hori.	46.0	3.9	
371.320	50.4	QP	16.6	-21.6	45.4	22	100	Hori.	46.0	0.6	
371.323	44.2	QP	16.6	-21.6	39.2	359	145	Vert.	46.0	6.8	
388.121	44.7	QP	17.0	-21.5	40.2	127	114	Hori.	46.0	5.8	
388.121	40.8	QP	17.0	-21.5	36.3	165	134	Vert.	46.0	9.7	
456.741	40.2	QP	18.0	-21.0	37.2	241	100	Hori.	46.0	8.8	
456.742	39.6	QP	18.0	-21.0	36.6	13	100	Vert.	46.0	9.4	
479.939	45.1	QP	18.3	-20.9	42.5	208	100	Hori.	46.0	3.5	
499.986	33.5	QP	18.6	-20.8	31.3	223	100	Hori.	46.0	14.7	
479.939	43.1	QP	18.3	-20.9	40.5	260	126	Vert.	46.0	5.5	
499.986	29.8	QP	18.6	-20.8	27.6	239	126	Vert.	46.0	18.4	
720.077	38.7	QP	20.4	-19.4	39.7	49	113	Hori.	46.0	6.3	
720.077	38.0	QP	20.4	-19.4	39.0	12	100	Vert.	46.0	7.0	

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 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.

Radiated Spurious Emission (below 1GHz)

Tx, 11b, Ch: Mid

DATA OF RADIATED EMISSION TEST

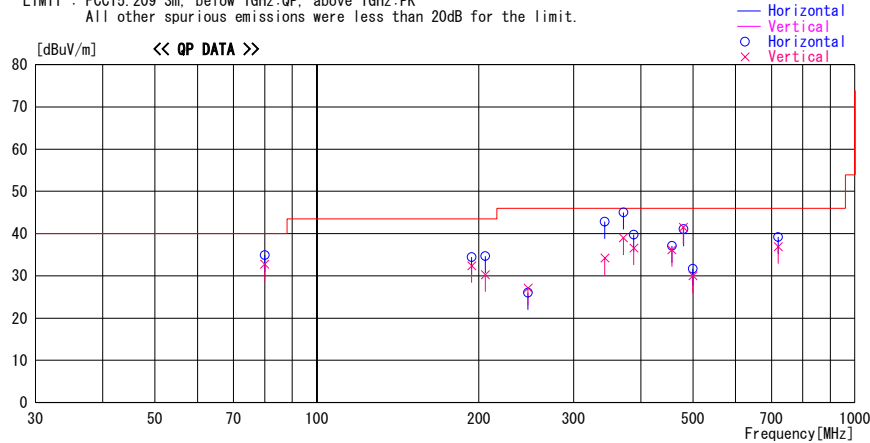
UL Japan, Inc. Head Office EMC Lab. No. 3 Semi Anechoic Chamber
Date : 2009/04/24

Company : SANYO Electric Co., Ltd.
Kind of EUT : WLAN Module
Model No. : 1AV4U19B25500
Serial No. : 001F1F3E707B

Report No. : 29FE0119-HO-01
Power : AC 120V/60Hz
Temp./Humi. : 20deg.C / 35%
Engineer : Takeshi Choda

Mode / Remarks : 802.11b, Tx 2437MHz, Normal Position

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		Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit	Margin	Comment
			Factor [dB/m]	Gain [dB]					[dBuV/m]	[dB]	
79.998	50.9	QP	6.1	-24.2	32.8	328	135	Vert.	40.0	7.2	
79.998	53.0	QP	6.1	-24.2	34.9	54	227	Hori.	40.0	5.1	
194.061	39.0	QP	16.4	-23.0	32.4	344	100	Vert.	43.5	11.1	
194.061	41.0	QP	16.4	-23.0	34.4	276	173	Hori.	43.5	9.1	
205.688	36.4	QP	16.7	-22.8	30.3	296	100	Vert.	43.5	13.2	
205.688	40.8	QP	16.7	-22.8	34.7	45	164	Hori.	43.5	8.8	
246.890	32.4	QP	17.2	-22.5	27.1	54	100	Vert.	46.0	18.9	
246.893	31.3	QP	17.2	-22.5	26.0	21	204	Hori.	46.0	20.0	
342.814	40.2	QP	15.8	-21.8	34.2	125	130	Vert.	46.0	11.8	
342.814	48.8	QP	15.8	-21.8	42.8	42	100	Hori.	46.0	3.2	
371.318	50.0	QP	16.6	-21.6	45.0	15	100	Hori.	46.0	1.0	
371.323	44.0	QP	16.6	-21.6	39.0	356	142	Vert.	46.0	7.0	
388.121	44.3	QP	17.0	-21.5	39.8	131	100	Hori.	46.0	6.2	
388.121	41.1	QP	17.0	-21.5	36.6	165	135	Vert.	46.0	9.4	
456.741	40.1	QP	18.0	-21.0	37.1	238	100	Hori.	46.0	8.9	
456.742	39.2	QP	18.0	-21.0	36.2	16	100	Vert.	46.0	9.8	
480.051	43.7	QP	18.3	-20.9	41.1	28	100	Hori.	46.0	4.9	
479.939	44.1	QP	18.3	-20.9	41.5	260	136	Vert.	46.0	4.5	
499.986	33.9	QP	18.6	-20.8	31.7	140	100	Hori.	46.0	14.3	
499.986	32.2	QP	18.6	-20.8	30.0	22	100	Vert.	46.0	16.0	
720.077	38.2	QP	20.4	-19.4	39.2	49	112	Hori.	46.0	6.8	
720.077	35.9	QP	20.4	-19.4	36.9	11	100	Vert.	46.0	9.1	

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 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.

Radiated Spurious Emission (below 1GHz)

Tx, 11b, Ch: High

DATA OF RADIATED EMISSION TEST

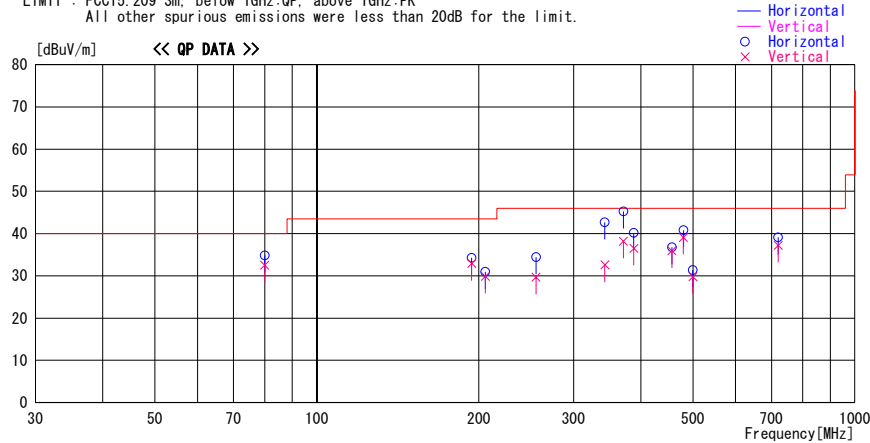
UL Japan, Inc. Head Office EMC Lab. No. 3 Semi Anechoic Chamber
Date : 2009/04/24

Company : SANYO Electric Co., Ltd.
Kind of EUT : WLAN Module
Model No. : 1AV4U19B25500
Serial No. : 001F1F3E707B

Report No. : 29FE0119-HO-01
Power : AC 120V/60Hz
Temp./Humi. : 20deg.C / 35%
Engineer : Takeshi Choda

Mode / Remarks : 802.11b, Tx 2462MHz, Normal Position

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		Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit	Margin	Comment
			Factor [dB/m]	Gain [dB]					[dBuV/m]	[dB]	
79.998	50.6	QP	6.1	-24.2	32.5	320	162	Vert.	40.0	7.5	
79.998	52.9	QP	6.1	-24.2	34.8	69	240	Hori.	40.0	5.2	
194.061	39.5	QP	16.4	-23.0	32.9	345	100	Vert.	43.5	10.6	
194.061	40.9	QP	16.4	-23.0	34.3	287	100	Hori.	43.5	9.2	
205.688	36.0	QP	16.7	-22.8	29.9	346	100	Vert.	43.5	13.6	
205.688	37.1	QP	16.7	-22.8	31.0	43	159	Hori.	43.5	12.5	
255.440	34.6	QP	17.5	-22.4	29.7	292	100	Vert.	46.0	16.3	
255.430	39.3	QP	17.5	-22.4	34.4	26	131	Hori.	46.0	11.6	
342.814	38.6	QP	15.8	-21.8	32.6	131	127	Vert.	46.0	13.4	
342.814	48.7	QP	15.8	-21.8	42.7	28	100	Hori.	46.0	3.3	
371.337	50.3	QP	16.6	-21.6	45.3	14	100	Hori.	46.0	0.7	
371.301	43.2	QP	16.6	-21.6	38.2	359	146	Vert.	46.0	7.8	
388.122	44.7	QP	17.0	-21.5	40.2	25	100	Hori.	46.0	5.8	
388.122	41.0	QP	17.0	-21.5	36.5	159	126	Vert.	46.0	9.5	
456.741	39.8	QP	18.0	-21.0	36.8	238	100	Hori.	46.0	9.2	
456.742	38.9	QP	18.0	-21.0	35.9	15	100	Vert.	46.0	10.1	
480.051	43.4	QP	18.3	-20.9	40.8	28	100	Hori.	46.0	5.2	
479.939	41.7	QP	18.3	-20.9	39.1	25	163	Vert.	46.0	6.9	
499.987	33.6	QP	18.6	-20.8	31.4	137	100	Hori.	46.0	14.6	
499.986	32.0	QP	18.6	-20.8	29.8	22	119	Vert.	46.0	16.2	
720.077	38.1	QP	20.4	-19.4	39.1	51	115	Hori.	46.0	6.9	
720.077	36.2	QP	20.4	-19.4	37.2	11	100	Vert.	46.0	8.8	

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 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.

Radiated Spurious Emission (below 1GHz)
Tx, 11g, Ch: Low

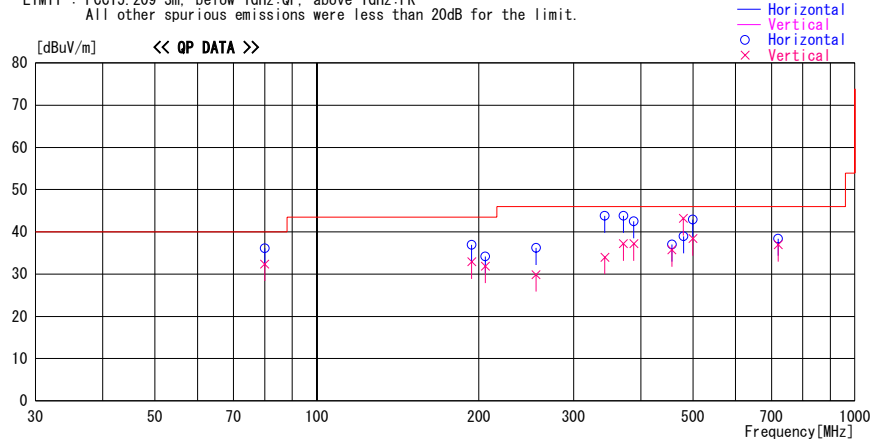
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No. 3 Semi Anechoic Chamber
Date : 2009/04/24

Company : SANYO Electric Co., Ltd. Report No. : 29FE0119-HO-01
Kind of EUT : WLAN Module Power : AC 120V/60Hz
Model No. : 1AV4U19B25500 Temp./Humi. : 20deg. C. / 35%
Serial No. : 001F1F3E707B Engineer : Takeshi Choda

Mode / Remarks : 802.11g, Tx 2412MHz, Normal Position

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	Margin	Comment
			Factor [dB/m]	Gain [dB]					[dBuV/m]	[dB]	
79.998	50.5	QP	6.1	-24.2	32.4	324	162	Vert.	40.0	7.6	
79.998	54.2	QP	6.1	-24.2	36.1	54	240	Hori.	40.0	3.9	
194.061	39.5	QP	16.4	-23.0	32.9	350	100	Vert.	43.5	10.6	
194.061	43.5	QP	16.4	-23.0	36.9	279	174	Hori.	43.5	6.6	
205.688	38.0	QP	16.7	-22.8	31.9	352	100	Vert.	43.5	11.6	
205.688	40.3	QP	16.7	-22.8	34.2	45	165	Hori.	43.5	9.3	
255.438	34.8	QP	17.5	-22.4	29.9	317	100	Vert.	46.0	16.1	
255.441	41.1	QP	17.5	-22.4	36.2	23	137	Hori.	46.0	9.8	
342.814	40.0	QP	15.8	-21.8	34.0	113	134	Vert.	46.0	12.0	
342.814	49.8	QP	15.8	-21.8	43.8	29	100	Hori.	46.0	2.2	
371.367	48.8	QP	16.6	-21.6	43.8	17	100	Hori.	46.0	2.2	
371.304	42.2	QP	16.6	-21.6	37.2	359	153	Vert.	46.0	8.8	
388.122	47.0	QP	17.0	-21.5	42.5	19	100	Hori.	46.0	3.5	
388.122	41.7	QP	17.0	-21.5	37.2	162	100	Vert.	46.0	8.8	
456.741	40.0	QP	18.0	-21.0	37.0	244	100	Hori.	46.0	9.0	
456.742	38.8	QP	18.0	-21.0	35.8	12	244	Vert.	46.0	10.2	
480.051	41.6	QP	18.3	-20.9	39.0	203	100	Hori.	46.0	7.0	
479.940	45.8	QP	18.3	-20.9	43.2	265	100	Vert.	46.0	2.8	
499.985	45.1	QP	18.6	-20.8	42.9	144	100	Hori.	46.0	3.1	
499.985	40.6	QP	18.6	-20.8	38.4	46	124	Vert.	46.0	7.6	
720.077	37.4	QP	20.4	-19.4	38.4	42	115	Hori.	46.0	7.6	
720.077	36.0	QP	20.4	-19.4	37.0	13	100	Vert.	46.0	9.0	

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 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.

Radiated Spurious Emission (below 1GHz)
Tx, 11g, Ch: Mid

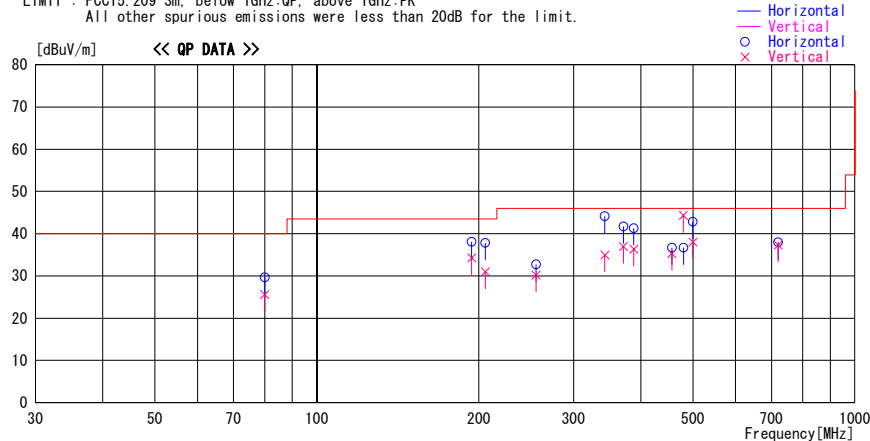
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber
Date : 2009/04/24

Company : SANYO Electric Co., Ltd.
Kind of EUT : WLAN Module
Model No. : 1AV4U19B25500
Serial No. : 001F1F3E707B
Report No. : 29FE0119-HO-01
Power : AC 120V/60Hz
Temp./Humi. : 20deg. C. / 35%
Engineer : Takeshi Choda

Mode / Remarks : 802.11g, Tx 2437MHz, Normal Position

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	Comment
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]	
79.998	43.7	QP	6.1	-24.2	25.6	24	100	Vert.	40.0	14.4	
79.998	47.8	QP	6.1	-24.2	29.7	39	230	Hori.	40.0	10.3	
194.061	40.9	QP	16.4	-23.0	34.3	352	100	Vert.	43.5	9.2	
194.061	44.7	QP	16.4	-23.0	38.1	255	173	Hori.	43.5	5.4	
205.688	37.1	QP	16.7	-22.8	31.0	359	100	Vert.	43.5	12.5	
205.688	43.9	QP	16.7	-22.8	37.8	124	168	Hori.	43.5	5.7	
255.449	35.1	QP	17.5	-22.4	30.2	303	100	Vert.	46.0	15.8	
255.425	37.6	QP	17.5	-22.4	32.7	28	133	Hori.	46.0	13.3	
342.814	41.0	QP	15.8	-21.8	35.0	110	147	Vert.	46.0	11.0	
342.814	50.1	QP	15.8	-21.8	44.1	33	100	Hori.	46.0	1.9	
371.246	46.7	QP	16.6	-21.6	41.7	15	100	Hori.	46.0	4.3	
371.274	42.0	QP	16.6	-21.6	37.0	359	149	Vert.	46.0	9.0	
388.122	45.8	QP	17.0	-21.5	41.3	23	100	Hori.	46.0	4.7	
388.122	40.8	QP	17.0	-21.5	36.3	162	100	Vert.	46.0	9.7	
456.741	39.7	QP	18.0	-21.0	36.7	239	100	Hori.	46.0	9.3	
456.742	38.3	QP	18.0	-21.0	35.3	30	212	Vert.	46.0	10.7	
480.051	39.3	QP	18.3	-20.9	36.7	193	100	Hori.	46.0	9.3	
479.940	46.9	QP	18.3	-20.9	44.3	261	100	Vert.	46.0	1.7	
499.985	45.0	QP	18.6	-20.8	42.8	145	100	Hori.	46.0	3.2	
499.985	40.2	QP	18.6	-20.8	38.0	48	119	Vert.	46.0	8.0	
720.077	37.0	QP	20.4	-19.4	38.0	41	109	Hori.	46.0	8.0	
720.077	36.3	QP	20.4	-19.4	37.3	12	100	Vert.	46.0	8.7	

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 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.

Radiated Spurious Emission (below 1GHz)
Tx, 11g, Ch: High

DATA OF RADIATED EMISSION TEST

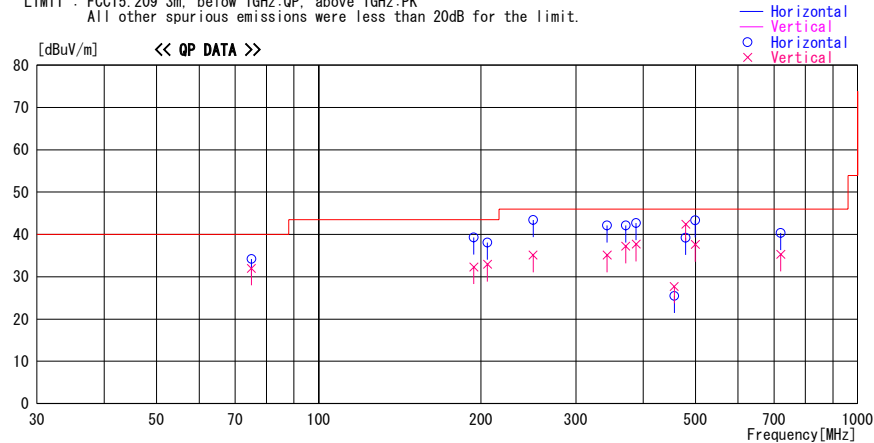
UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber
Date : 2009/04/25

Company : SANYO Electric Co., Ltd.
Kind of EUT : WLAN Module
Model No. : 1AV4U19B25500
Serial No. : 001F1F3E707B

Report No. : 29FE0119-HO-01
Power : AC 120V/60Hz
Temp./Humi. : 22deg.C / 54%
Engineer : Takeshi Choda

Mode / Remarks : 802.11g, Tx 2462MHz, Normal Position

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	Loss&	Level	Angle	Height	Polar.	Limit	Margin	Comment
[MHz]	[dBuV]		Factor	Gain	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]	
74.998	50.1	QP	6.2	-24.3	32.0	3	100	Vert.	40.0	8.0	
74.998	52.3	QP	6.2	-24.3	34.2	48	240	Hori.	40.0	5.8	
194.061	38.9	QP	16.4	-23.0	32.3	353	100	Vert.	43.5	11.2	
194.061	45.9	QP	16.4	-23.0	39.3	279	100	Hori.	43.5	4.2	
205.688	39.0	QP	16.7	-22.8	32.9	150	126	Vert.	43.5	10.6	
205.688	44.2	QP	16.7	-22.8	38.1	117	158	Hori.	43.5	5.4	
249.942	40.3	QP	17.3	-22.5	35.1	352	100	Vert.	46.0	10.9	
249.993	48.6	QP	17.3	-22.5	43.4	341	132	Hori.	46.0	2.6	
342.814	41.1	QP	15.8	-21.8	35.1	223	169	Vert.	46.0	10.9	
342.814	48.1	QP	15.8	-21.8	42.1	39	100	Hori.	46.0	3.9	
371.246	47.1	QP	16.6	-21.6	42.1	22	100	Hori.	46.0	3.9	
371.284	42.2	QP	16.6	-21.6	37.2	259	125	Vert.	46.0	8.8	
388.122	47.2	QP	17.0	-21.5	42.7	25	100	Hori.	46.0	3.3	
388.122	42.2	QP	17.0	-21.5	37.7	158	100	Vert.	46.0	8.3	
456.741	28.5	QP	18.0	-21.0	25.5	255	100	Hori.	46.0	20.5	
456.742	30.7	QP	18.0	-21.0	27.7	30	212	Vert.	46.0	18.3	
479.940	41.8	QP	18.3	-20.9	39.2	148	100	Hori.	46.0	6.8	
479.939	45.0	QP	18.3	-20.9	42.4	263	100	Vert.	46.0	3.6	
499.985	45.5	QP	18.6	-20.8	43.3	149	100	Hori.	46.0	2.7	
499.988	39.8	QP	18.6	-20.8	37.6	34	109	Vert.	46.0	8.4	
720.077	39.3	QP	20.4	-19.4	40.3	55	116	Hori.	46.0	5.7	
720.077	34.3	QP	20.4	-19.4	35.3	45	100	Vert.	46.0	10.7	

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 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.

Radiated Spurious Emission (below 1GHz)

Rx, 11b, Ch: Mid

DATA OF RADIATED EMISSION TEST

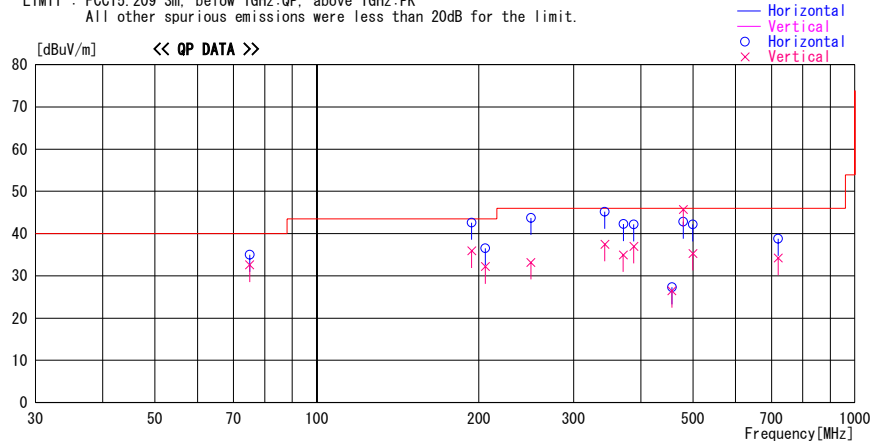
UL Japan, Inc. Head Office EMC Lab. No. 3 Semi Anechoic Chamber
Date : 2009/04/25

Company : SANYO Electric Co., Ltd.
Kind of EUT : WLAN Module
Model No. : 1AV4U19B25500
Serial No. : 001F1F3E707B

Report No. : 29FE0119-HO-01
Power : AC 120V/60Hz
Temp./Humi. : 22deg. C. / 54%
Engineer : Takeshi Choda

Mode / Remarks : 802.11b, Rx 2437MHz, Normal Position

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	Margin	Comment
			Factor [dB/m]	Gain [dB]					[dBuV/m]	[dB]	
74.998	50.7	QP	6.2	-24.3	32.6	0	100	Vert.	40.0	7.4	
74.998	53.1	QP	6.2	-24.3	35.0	47	243	Hori.	40.0	5.0	
194.061	42.5	QP	16.4	-23.0	35.9	351	100	Vert.	43.5	7.6	
194.061	49.2	QP	16.4	-23.0	42.6	271	173	Hori.	43.5	0.9	
205.688	38.3	QP	16.7	-22.8	32.2	138	100	Vert.	43.5	11.3	
205.688	42.6	QP	16.7	-22.8	36.5	121	159	Hori.	43.5	7.0	
249.993	38.4	QP	17.3	-22.5	33.2	69	100	Vert.	46.0	12.8	
249.993	48.9	QP	17.3	-22.5	43.7	0	134	Hori.	46.0	2.3	
342.814	43.5	QP	15.8	-21.8	37.5	199	159	Vert.	46.0	8.5	
342.814	51.2	QP	15.8	-21.8	45.2	33	100	Hori.	46.0	0.8	
371.370	47.3	QP	16.6	-21.6	42.3	14	100	Hori.	46.0	3.7	
370.982	40.0	QP	16.6	-21.6	35.0	265	130	Vert.	46.0	11.0	
388.121	46.7	QP	17.0	-21.5	42.2	206	100	Hori.	46.0	3.8	
388.122	41.5	QP	17.0	-21.5	37.0	153	100	Vert.	46.0	9.0	
456.906	30.3	QP	18.0	-21.0	27.3	181	100	Hori.	46.0	18.7	
456.742	29.5	QP	18.0	-21.0	26.5	327	100	Vert.	46.0	19.5	
479.939	45.4	QP	18.3	-20.9	42.8	19	100	Hori.	46.0	3.2	
479.940	48.3	QP	18.3	-20.9	45.7	270	106	Vert.	46.0	0.3	
499.986	44.4	QP	18.6	-20.8	42.2	141	100	Hori.	46.0	3.8	
499.985	37.5	QP	18.6	-20.8	35.3	32	100	Vert.	46.0	10.7	
720.077	37.8	QP	20.4	-19.4	38.8	69	100	Hori.	46.0	7.2	
720.077	33.2	QP	20.4	-19.4	34.2	294	100	Vert.	46.0	11.8	

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 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.

Radiated Spurious Emission (below 1GHz)

Rx, 11g, Ch: Mid

DATA OF RADIATED EMISSION TEST

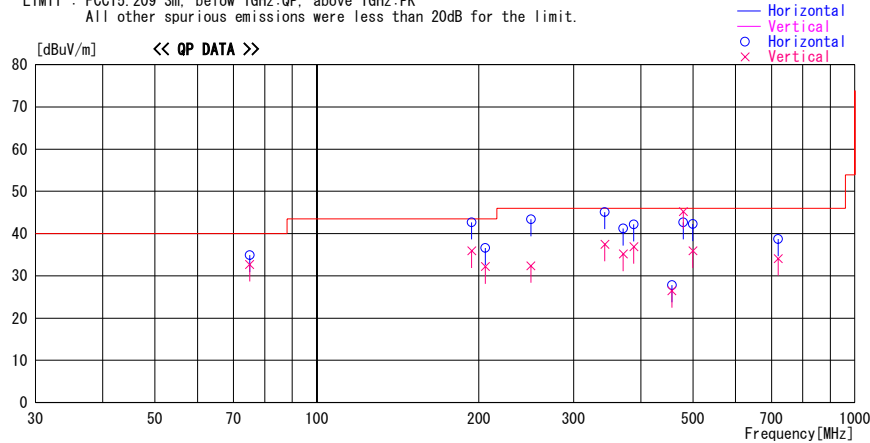
UL Japan, Inc. Head Office EMC Lab. No. 3 Semi Anechoic Chamber
Date : 2009/04/25

Company : SANYO Electric Co., Ltd.
Kind of EUT : WLAN Module
Model No. : 1AV4U19B25500
Serial No. : 001F1F3E707B

Report No. : 29FE0119-HO-01
Power : AC 120V/60Hz
Temp./Humi. : 22deg.C / 54%
Engineer : Takeshi Choda

Mode / Remarks : 802.11g, Rx 2437MHz, Normal Position

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		Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]	Comment
			Factor [dB/m]	Gain [dB]							
74.998	50.8	QP	6.2	-24.3	32.7	0	100	Vert.	40.0	7.3	
74.998	53.0	QP	6.2	-24.3	34.9	49	249	Hori.	40.0	5.1	
194.061	42.5	QP	16.4	-23.0	35.9	349	100	Vert.	43.5	7.6	
194.061	49.3	QP	16.4	-23.0	42.7	268	165	Hori.	43.5	0.8	
205.688	38.3	QP	16.7	-22.8	32.2	141	100	Vert.	43.5	11.3	
205.688	42.7	QP	16.7	-22.8	36.6	123	165	Hori.	43.5	6.9	
249.993	37.6	QP	17.3	-22.5	32.4	57	100	Vert.	46.0	13.6	
249.993	48.6	QP	17.3	-22.5	43.4	358	142	Hori.	46.0	2.6	
342.814	43.5	QP	15.8	-21.8	37.5	199	168	Vert.	46.0	8.5	
342.814	51.1	QP	15.8	-21.8	45.1	39	100	Hori.	46.0	0.9	
370.933	46.2	QP	16.6	-21.6	41.2	17	100	Hori.	46.0	4.8	
370.982	40.2	QP	16.6	-21.6	35.2	260	129	Vert.	46.0	10.8	
388.121	46.7	QP	17.0	-21.5	42.2	207	100	Hori.	46.0	3.8	
388.122	41.4	QP	17.0	-21.5	36.9	156	100	Vert.	46.0	9.1	
456.906	30.8	QP	18.0	-21.0	27.8	138	100	Hori.	46.0	18.2	
456.742	29.5	QP	18.0	-21.0	26.5	325	100	Vert.	46.0	19.5	
479.939	45.3	QP	18.3	-20.9	42.7	151	100	Hori.	46.0	3.3	
479.939	47.8	QP	18.3	-20.9	45.2	262	107	Vert.	46.0	0.8	
499.986	44.5	QP	18.6	-20.8	42.3	143	100	Hori.	46.0	3.7	
499.985	38.1	QP	18.6	-20.8	35.9	35	100	Vert.	46.0	10.1	
720.077	37.7	QP	20.4	-19.4	38.7	68	100	Hori.	46.0	7.3	
720.077	33.1	QP	20.4	-19.4	34.1	295	100	Vert.	46.0	11.9	

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 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.

Radiated Spurious Emission (below 1GHz)
Tx, 11n (20HT), Ch: Low

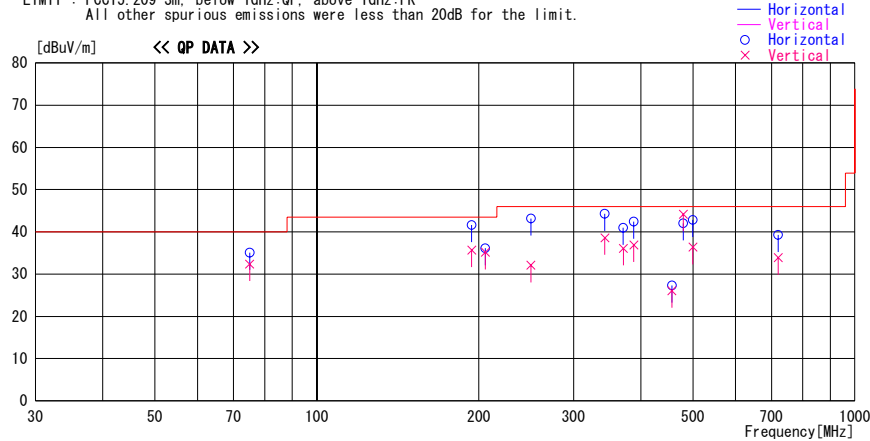
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber
Date : 2009/04/25

Company : SANYO Electric Co., Ltd. Report No. : 29FE0119-HO-01
Kind of EUT : WLAN Module Power : AC 120V/60Hz
Model No. : 1AV4U19B25500 Temp./Humi. : 22deg.C / 54%
Serial No. : 001F1F3E707B Engineer : Takeshi Choda

Mode / Remarks : 802.11n(20HT), Tx 2412MHz, Normal Position

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	Margin	Comment
			Factor [dB]	Gain [dB]					[dBuV/m]	[dB]	
74.998	50.5	QP	6.2	-24.3	32.4	2	100	Vert.	40.0	7.6	
74.998	53.2	QP	6.2	-24.3	35.1	47	235	Hori.	40.0	4.9	
194.061	42.3	QP	16.4	-23.0	35.7	354	100	Vert.	43.5	7.8	
194.061	48.2	QP	16.4	-23.0	41.6	281	161	Hori.	43.5	1.9	
205.688	41.3	QP	16.7	-22.8	35.2	166	100	Vert.	43.5	8.3	
205.688	42.2	QP	16.7	-22.8	36.1	125	164	Hori.	43.5	7.4	
249.993	37.3	QP	17.3	-22.5	32.1	70	100	Vert.	46.0	13.9	
249.993	48.4	QP	17.3	-22.5	43.2	2	138	Hori.	46.0	2.8	
342.813	44.6	QP	15.8	-21.8	38.6	55	151	Vert.	46.0	7.4	
342.814	50.3	QP	15.8	-21.8	44.3	30	100	Hori.	46.0	1.7	
370.981	46.0	QP	16.6	-21.6	41.0	22	100	Hori.	46.0	5.0	
371.326	41.1	QP	16.6	-21.6	36.1	249	124	Vert.	46.0	9.9	
388.121	46.9	QP	17.0	-21.5	42.4	25	100	Hori.	46.0	3.6	
388.121	41.4	QP	17.0	-21.5	36.9	158	100	Vert.	46.0	9.1	
456.793	30.3	QP	18.0	-21.0	27.3	147	100	Hori.	46.0	18.7	
456.742	29.1	QP	18.0	-21.0	26.1	356	120	Vert.	46.0	19.9	
479.941	44.6	QP	18.3	-20.9	42.0	151	100	Hori.	46.0	4.0	
479.939	46.8	QP	18.3	-20.9	44.2	268	100	Vert.	46.0	1.8	
499.986	45.0	QP	18.6	-20.8	42.8	143	100	Hori.	46.0	3.2	
499.985	38.6	QP	18.6	-20.8	36.4	35	115	Vert.	46.0	9.6	
720.077	38.3	QP	20.4	-19.4	39.3	52	116	Hori.	46.0	6.7	
720.077	32.9	QP	20.4	-19.4	33.9	40	100	Vert.	46.0	12.1	

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 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.

Radiated Spurious Emission (below 1GHz)
Tx, 11n (20HT), Ch: Mid

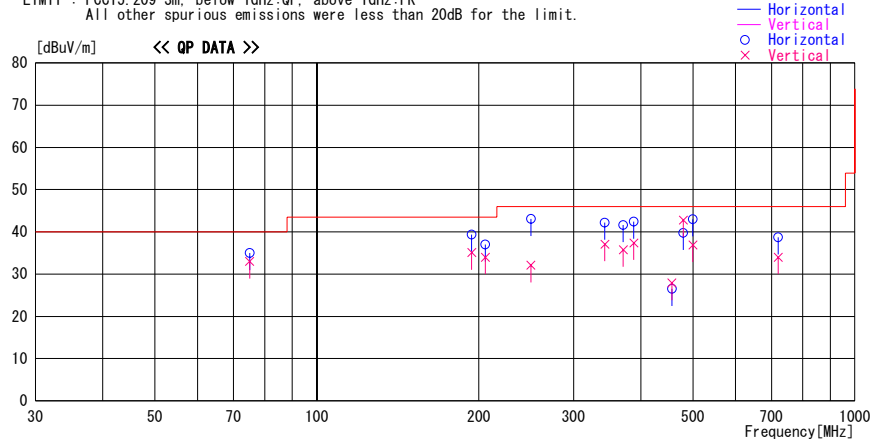
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber
Date : 2009/04/25

Company : SANYO Electric Co., Ltd. Report No. : 29FE0119-HO-01
Kind of EUT : WLAN Module Power : AC 120V/60Hz
Model No. : 1AV4U19B25500 Temp./Humi. : 22deg. C. / 54%
Serial No. : 001F1F3E707B Engineer : Takeshi Choda

Mode / Remarks : 802.11n(20HT), Tx 2437MHz, Normal Position

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	Margin	Comment
			Factor [dB]	Gain [dB]					[dBuV/m]	[dB]	
74.998	51.1	QP	6.2	-24.3	33.0	0	100	Vert.	40.0	7.0	
74.998	53.1	QP	6.2	-24.3	35.0	38	243	Hori.	40.0	5.0	
194.061	41.7	QP	16.4	-23.0	35.1	357	100	Vert.	43.5	8.4	
194.061	46.0	QP	16.4	-23.0	39.4	281	171	Hori.	43.5	4.1	
205.688	40.1	QP	16.7	-22.8	34.0	159	100	Vert.	43.5	9.5	
205.688	43.1	QP	16.7	-22.8	37.0	117	163	Hori.	43.5	6.5	
249.993	37.3	QP	17.3	-22.5	32.1	67	100	Vert.	46.0	13.9	
249.993	48.3	QP	17.3	-22.5	43.1	359	196	Hori.	46.0	2.9	
342.813	43.1	QP	15.8	-21.8	37.1	68	141	Vert.	46.0	8.9	
342.814	48.2	QP	15.8	-21.8	42.2	32	100	Hori.	46.0	3.8	
370.981	46.6	QP	16.6	-21.6	41.6	22	100	Hori.	46.0	4.4	
370.982	40.8	QP	16.6	-21.6	35.8	267	124	Vert.	46.0	10.2	
388.121	46.9	QP	17.0	-21.5	42.4	26	100	Hori.	46.0	3.6	
388.121	41.9	QP	17.0	-21.5	37.4	153	100	Vert.	46.0	8.6	
456.793	29.5	QP	18.0	-21.0	26.5	142	100	Hori.	46.0	19.5	
456.742	30.9	QP	18.0	-21.0	27.9	356	120	Vert.	46.0	18.1	
479.940	42.4	QP	18.3	-20.9	39.8	149	100	Hori.	46.0	6.2	
479.939	45.4	QP	18.3	-20.9	42.8	266	100	Vert.	46.0	3.2	
499.985	45.2	QP	18.6	-20.8	43.0	142	100	Hori.	46.0	3.0	
499.985	39.1	QP	18.6	-20.8	36.9	34	100	Vert.	46.0	9.1	
720.077	37.7	QP	20.4	-19.4	38.7	56	114	Hori.	46.0	7.3	
720.077	33.0	QP	20.4	-19.4	34.0	43	100	Vert.	46.0	12.0	

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 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.

Radiated Spurious Emission (below 1GHz)
Tx, 11n (20HT), Ch: High

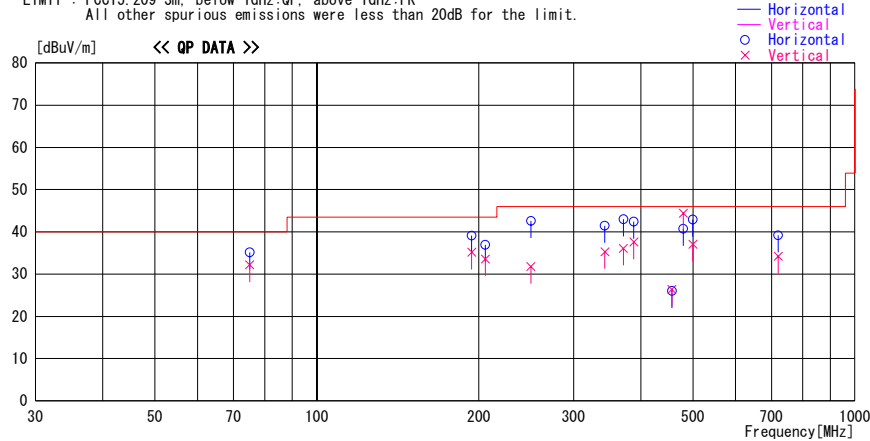
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber
Date : 2009/04/25

Company : SANYO Electric Co., Ltd. Report No. : 29FE0119-HO-01
Kind of EUT : WLAN Module Power : AC 120V/60Hz
Model No. : 1AV4U19B25500 Temp./Humi. : 22deg. C. / 54%
Serial No. : 001F1F3E707B Engineer : Takeshi Choda

Mode / Remarks : 802.11n(20HT), Tx 2462MHz, Normal Position

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	Margin	Comment
			Factor [dB/m]	Gain [dB]					[dBuV/m]	[dB]	
74.998	50.3	QP	6.2	-24.3	32.2	2	100	Vert.	40.0	7.8	
74.998	53.3	QP	6.2	-24.3	35.2	46	246	Hori.	40.0	4.8	
194.061	41.8	QP	16.4	-23.0	35.2	0	100	Vert.	43.5	8.3	
194.061	45.7	QP	16.4	-23.0	39.1	279	100	Hori.	43.5	4.4	
205.688	39.7	QP	16.7	-22.8	33.6	159	123	Vert.	43.5	9.9	
205.688	43.0	QP	16.7	-22.8	36.9	118	165	Hori.	43.5	6.6	
249.993	37.0	QP	17.3	-22.5	31.8	342	100	Vert.	46.0	14.2	
249.993	47.8	QP	17.3	-22.5	42.6	342	137	Hori.	46.0	3.4	
342.814	41.3	QP	15.8	-21.8	35.3	49	148	Vert.	46.0	10.7	
342.814	47.5	QP	15.8	-21.8	41.5	28	100	Hori.	46.0	4.5	
371.246	48.0	QP	16.6	-21.6	43.0	24	100	Hori.	46.0	3.0	
371.178	41.1	QP	16.6	-21.6	36.1	258	127	Vert.	46.0	9.9	
388.122	46.9	QP	17.0	-21.5	42.4	25	100	Hori.	46.0	3.6	
388.121	42.1	QP	17.0	-21.5	37.6	154	100	Vert.	46.0	8.4	
456.793	29.0	QP	18.0	-21.0	26.0	255	100	Hori.	46.0	20.0	
456.742	29.4	QP	18.0	-21.0	26.4	77	100	Vert.	46.0	19.6	
479.939	43.3	QP	18.3	-20.9	40.7	147	100	Hori.	46.0	5.3	
479.939	47.0	QP	18.3	-20.9	44.4	263	100	Vert.	46.0	1.6	
499.985	45.1	QP	18.6	-20.8	42.9	141	100	Hori.	46.0	3.1	
499.985	39.3	QP	18.6	-20.8	37.1	33	113	Vert.	46.0	8.9	
720.077	38.2	QP	20.4	-19.4	39.2	56	114	Hori.	46.0	6.8	
720.077	33.2	QP	20.4	-19.4	34.2	45	100	Vert.	46.0	11.8	

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 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.

Radiated Spurious Emission (below 1GHz)
Tx, 11n (40HT), Ch: Low

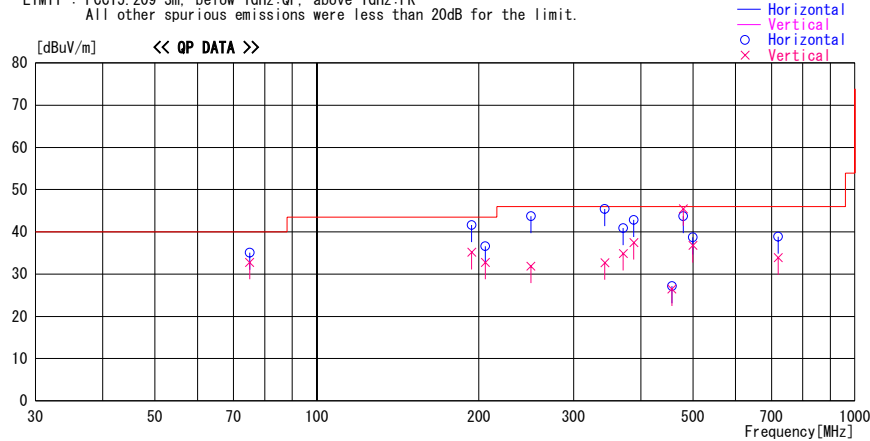
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber
Date : 2009/04/25

Company : SANYO Electric Co., Ltd. Report No. : 29FE0119-HO-01
Kind of EUT : WLAN Module Power : AC 120V/60Hz
Model No. : 1AV4U19B25500 Temp./Humi. : 22deg. C. / 54%
Serial No. : 001F1F3E707B Engineer : Takeshi Choda

Mode / Remarks : 802.11n(40HT), Tx 2422MHz, Normal Position

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	Margin	Comment
			Factor [dB/m]	Gain [dB]					[dBuV/m]	[dB]	
74.998	50.9	QP	6.2	-24.3	32.8	0	100	Vert.	40.0	7.2	
74.998	53.2	QP	6.2	-24.3	35.1	50	250	Hori.	40.0	4.9	
194.061	41.8	QP	16.4	-23.0	35.2	351	100	Vert.	43.5	8.3	
194.061	48.2	QP	16.4	-23.0	41.6	265	100	Hori.	43.5	1.9	
205.689	38.9	QP	16.7	-22.8	32.8	155	100	Vert.	43.5	10.7	
205.688	42.7	QP	16.7	-22.8	36.6	127	154	Hori.	43.5	6.9	
249.993	37.1	QP	17.3	-22.5	31.9	55	100	Vert.	46.0	14.1	
249.993	48.9	QP	17.3	-22.5	43.7	7	141	Hori.	46.0	2.3	
342.813	38.7	QP	15.8	-21.8	32.7	140	138	Vert.	46.0	13.3	
342.814	51.4	QP	15.8	-21.8	45.4	48	174	Hori.	46.0	0.6	
370.981	45.9	QP	16.6	-21.6	40.9	23	100	Hori.	46.0	5.1	
370.982	39.9	QP	16.6	-21.6	34.9	262	121	Vert.	46.0	11.1	
388.121	47.3	QP	17.0	-21.5	42.8	27	100	Hori.	46.0	3.2	
388.121	42.0	QP	17.0	-21.5	37.5	146	100	Vert.	46.0	8.5	
456.793	30.2	QP	18.0	-21.0	27.2	133	100	Hori.	46.0	18.8	
456.742	29.5	QP	18.0	-21.0	26.5	356	120	Vert.	46.0	19.5	
479.939	46.3	QP	18.3	-20.9	43.7	61	247	Hori.	46.0	2.3	
479.939	48.1	QP	18.3	-20.9	45.5	268	115	Vert.	46.0	0.5	
499.986	40.9	QP	18.6	-20.8	38.7	27	100	Hori.	46.0	7.3	
499.985	39.0	QP	18.6	-20.8	36.8	35	109	Vert.	46.0	9.2	
720.077	37.9	QP	20.4	-19.4	38.9	67	100	Hori.	46.0	7.1	
720.077	32.9	QP	20.4	-19.4	33.9	109	100	Vert.	46.0	12.1	

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 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.

Radiated Spurious Emission (below 1GHz)
Tx, 11n (40HT), Ch: Mid

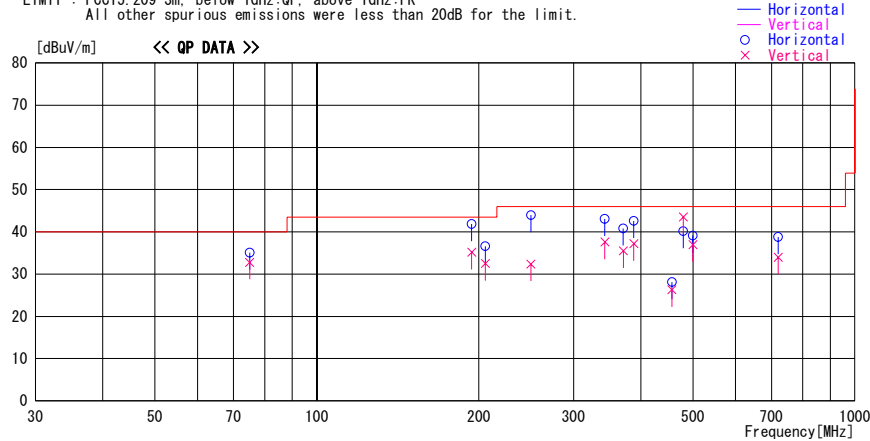
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber
Date : 2009/04/25

Company : SANYO Electric Co., Ltd. Report No. : 29FE0119-HO-01
Kind of EUT : WLAN Module Power : AC 120V/60Hz
Model No. : 1AV4U19B25500 Temp./Humi. : 22deg. C. / 54%
Serial No. : 001F1F3E707B Engineer : Takeshi Choda

Mode / Remarks : 802.11n(40HT), Tx 2437MHz, Normal Position

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	Margin	Comment
			Factor [dB]	Gain [dB]					[dBuV/m]	[dB]	
74.998	50.9	QP	6.2	-24.3	32.8	0	100	Vert.	40.0	7.2	
74.998	53.2	QP	6.2	-24.3	35.1	52	234	Hori.	40.0	4.9	
194.061	41.8	QP	16.4	-23.0	35.2	350	100	Vert.	43.5	8.3	
194.061	48.5	QP	16.4	-23.0	41.9	275	165	Hori.	43.5	1.6	
205.689	38.6	QP	16.7	-22.8	32.5	154	100	Vert.	43.5	11.0	
205.688	42.7	QP	16.7	-22.8	36.6	121	166	Hori.	43.5	6.9	
249.993	37.6	QP	17.3	-22.5	32.4	77	100	Vert.	46.0	13.6	
249.993	49.2	QP	17.3	-22.5	44.0	13	138	Hori.	46.0	2.0	
342.814	43.6	QP	15.8	-21.8	37.6	72	163	Vert.	46.0	8.4	
342.814	49.1	QP	15.8	-21.8	43.1	31	174	Hori.	46.0	2.9	
370.981	45.8	QP	16.6	-21.6	40.8	27	100	Hori.	46.0	5.2	
371.221	40.5	QP	16.6	-21.6	35.5	270	126	Vert.	46.0	10.5	
388.121	47.1	QP	17.0	-21.5	42.6	25	100	Hori.	46.0	3.4	
388.121	41.7	QP	17.0	-21.5	37.2	145	100	Vert.	46.0	8.8	
456.793	31.1	QP	18.0	-21.0	28.1	142	106	Hori.	46.0	17.9	
456.742	29.3	QP	18.0	-21.0	26.3	359	113	Vert.	46.0	19.7	
479.939	42.8	QP	18.3	-20.9	40.2	61	148	Hori.	46.0	5.8	
479.939	46.1	QP	18.3	-20.9	43.5	265	118	Vert.	46.0	2.5	
499.986	41.3	QP	18.6	-20.8	39.1	23	100	Hori.	46.0	6.9	
499.985	39.2	QP	18.6	-20.8	37.0	35	118	Vert.	46.0	9.0	
720.077	37.8	QP	20.4	-19.4	38.8	69	100	Hori.	46.0	7.2	
720.077	33.0	QP	20.4	-19.4	34.0	115	100	Vert.	46.0	12.0	

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 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.

Radiated Spurious Emission (below 1GHz)
Tx, 11n (40HT), Ch: High

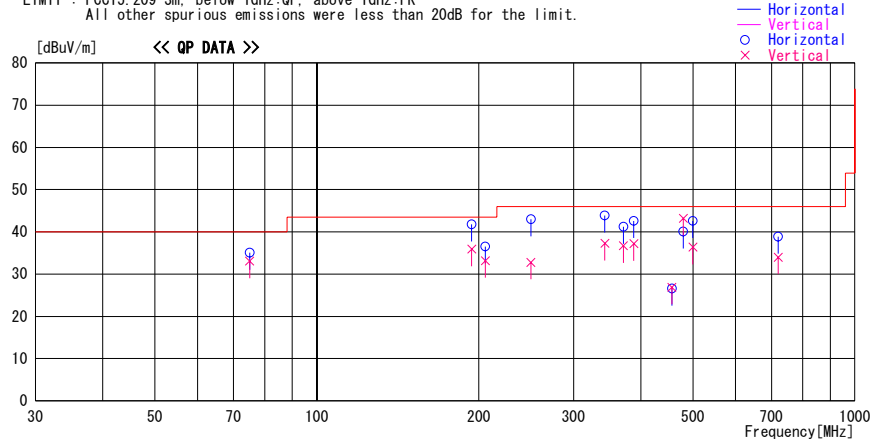
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber
Date : 2009/04/25

Company : SANYO Electric Co., Ltd. Report No. : 29FE0119-HO-01
Kind of EUT : WLAN Module Power : AC 120V/60Hz
Model No. : 1AV4U19B25500 Temp./Humi. : 22deg. C. / 54%
Serial No. : 001F1F3E707B Engineer : Takeshi Choda

Mode / Remarks : 802.11n(40HT), Tx 2452MHz, Normal Position

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	Margin	Comment
			Factor [dB]	Gain [dB]					[dBuV/m]	[dB]	
74.998	51.2	QP	6.2	-24.3	33.1	0	100	Vert.	40.0	6.9	
74.998	53.2	QP	6.2	-24.3	35.1	43	242	Hori.	40.0	4.9	
194.062	42.5	QP	16.4	-23.0	35.9	358	100	Vert.	43.5	7.6	
194.061	48.4	QP	16.4	-23.0	41.8	271	175	Hori.	43.5	1.7	
205.689	39.3	QP	16.7	-22.8	33.2	150	100	Vert.	43.5	10.3	
205.688	42.6	QP	16.7	-22.8	36.5	121	165	Hori.	43.5	7.0	
249.993	38.0	QP	17.3	-22.5	32.8	65	100	Vert.	46.0	13.2	
249.993	48.2	QP	17.3	-22.5	43.0	28	141	Hori.	46.0	3.0	
342.814	43.3	QP	15.8	-21.8	37.3	68	148	Vert.	46.0	8.7	
342.814	49.9	QP	15.8	-21.8	43.9	31	100	Hori.	46.0	2.1	
371.222	46.2	QP	16.6	-21.6	41.2	22	100	Hori.	46.0	4.8	
371.221	41.7	QP	16.6	-21.6	36.7	267	125	Vert.	46.0	9.3	
388.122	47.1	QP	17.0	-21.5	42.6	27	100	Hori.	46.0	3.4	
388.122	41.7	QP	17.0	-21.5	37.2	140	100	Vert.	46.0	8.8	
456.906	29.6	QP	18.0	-21.0	26.6	142	112	Hori.	46.0	19.4	
456.742	29.9	QP	18.0	-21.0	26.9	342	121	Vert.	46.0	19.1	
479.939	42.7	QP	18.3	-20.9	40.1	18	100	Hori.	46.0	5.9	
479.939	45.8	QP	18.3	-20.9	43.2	266	116	Vert.	46.0	2.8	
499.985	44.8	QP	18.6	-20.8	42.6	146	100	Hori.	46.0	3.4	
499.985	38.6	QP	18.6	-20.8	36.4	33	119	Vert.	46.0	9.6	
720.077	37.9	QP	20.4	-19.4	38.9	69	100	Hori.	46.0	7.1	
720.077	33.0	QP	20.4	-19.4	34.0	109	100	Vert.	46.0	12.0	

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 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.

Radiated Spurious Emission (below 1GHz)
Rx, 11n (20HT), Ch: Mid

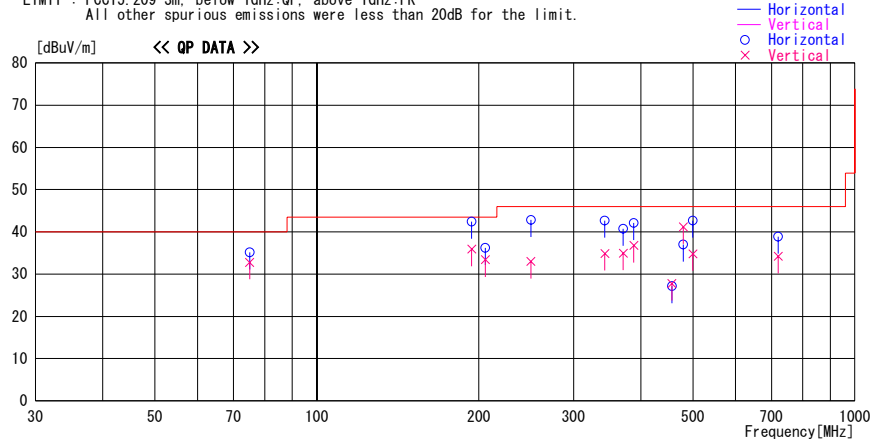
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber
Date : 2009/04/25

Company : SANYO Electric Co., Ltd. Report No. : 29FE0119-HO-01
Kind of EUT : WLAN Module Power : AC 120V/60Hz
Model No. : 1AV4U19B25500 Temp./Humi. : 22deg. C. / 54%
Serial No. : 001F1F3E707B Engineer : Takeshi Choda

Mode / Remarks : 802.11n(20HT), Rx 2437MHz, Normal Position

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	Margin	Comment
			Factor [dB/m]	Gain [dB]					[dBuV/m]	[dB]	
74.998	50.9	QP	6.2	-24.3	32.8	0	100	Vert.	40.0	7.2	
74.998	53.3	QP	6.2	-24.3	35.2	45	251	Hori.	40.0	4.8	
194.061	42.5	QP	16.4	-23.0	35.9	349	100	Vert.	43.5	7.6	
194.061	49.0	QP	16.4	-23.0	42.4	245	100	Hori.	43.5	1.1	
205.688	39.5	QP	16.7	-22.8	33.4	159	100	Vert.	43.5	10.1	
205.688	42.3	QP	16.7	-22.8	36.2	130	160	Hori.	43.5	7.3	
249.993	38.2	QP	17.3	-22.5	33.0	57	100	Vert.	46.0	13.0	
249.993	48.0	QP	17.3	-22.5	42.8	358	131	Hori.	46.0	3.2	
342.814	40.9	QP	15.8	-21.8	34.9	195	155	Vert.	46.0	11.1	
342.814	48.7	QP	15.8	-21.8	42.7	32	100	Hori.	46.0	3.3	
370.933	45.7	QP	16.6	-21.6	40.7	19	100	Hori.	46.0	5.3	
370.981	40.0	QP	16.6	-21.6	35.0	257	121	Vert.	46.0	11.0	
388.121	46.6	QP	17.0	-21.5	42.1	206	100	Hori.	46.0	3.9	
388.122	41.3	QP	17.0	-21.5	36.8	163	100	Vert.	46.0	9.2	
456.906	30.2	QP	18.0	-21.0	27.2	141	112	Hori.	46.0	18.8	
456.742	30.8	QP	18.0	-21.0	27.8	348	100	Vert.	46.0	18.2	
479.939	39.6	QP	18.3	-20.9	37.0	135	100	Hori.	46.0	9.0	
479.939	43.8	QP	18.3	-20.9	41.2	265	118	Vert.	46.0	4.8	
499.986	44.9	QP	18.6	-20.8	42.7	143	100	Hori.	46.0	3.3	
499.985	37.0	QP	18.6	-20.8	34.8	36	100	Vert.	46.0	11.2	
720.077	37.9	QP	20.4	-19.4	38.9	66	109	Hori.	46.0	7.1	
720.077	33.2	QP	20.4	-19.4	34.2	294	100	Vert.	46.0	11.8	

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 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.

Radiated Spurious Emission (below 1GHz)
Rx, 11n (40HT), Ch: Mid

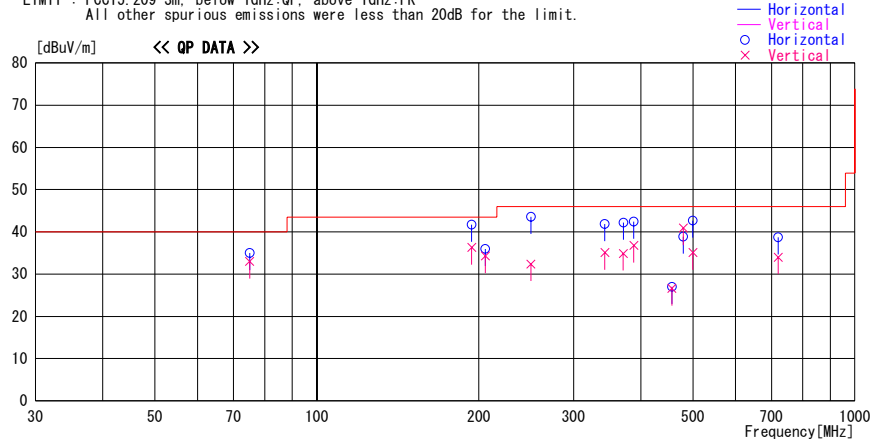
DATA OF RADIATED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.3 Semi Anechoic Chamber
Date : 2009/04/25

Company : SANYO Electric Co., Ltd. Report No. : 29FE0119-HO-01
Kind of EUT : WLAN Module Power : AC 120V/60Hz
Model No. : 1AV4U19B25500 Temp./Humi. : 22deg. C. / 54%
Serial No. : 001F1F3E707B Engineer : Takeshi Choda

Mode / Remarks : 802.11n(40HT), Rx 2437MHz, Normal Position

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	Margin	Comment
			Factor [dB]	Gain [dB]					[dBuV/m]	[dB]	
74.998	51.1	QP	6.2	-24.3	33.0	0	100	Vert.	40.0	7.0	
74.998	53.1	QP	6.2	-24.3	35.0	48	262	Hori.	40.0	5.0	
194.061	42.9	QP	16.4	-23.0	36.3	359	100	Vert.	43.5	7.2	
194.061	48.3	QP	16.4	-23.0	41.7	280	100	Hori.	43.5	1.8	
205.688	40.4	QP	16.7	-22.8	34.3	163	100	Vert.	43.5	9.2	
205.688	42.1	QP	16.7	-22.8	36.0	126	167	Hori.	43.5	7.5	
249.993	37.6	QP	17.3	-22.5	32.4	69	100	Vert.	46.0	13.6	
249.993	48.8	QP	17.3	-22.5	43.6	4	146	Hori.	46.0	2.4	
342.814	41.1	QP	15.8	-21.8	35.1	203	155	Vert.	46.0	10.9	
342.814	47.9	QP	15.8	-21.8	41.9	29	100	Hori.	46.0	4.1	
371.326	47.2	QP	16.6	-21.6	42.2	18	100	Hori.	46.0	3.8	
370.981	39.9	QP	16.6	-21.6	34.9	253	122	Vert.	46.0	11.1	
388.122	46.9	QP	17.0	-21.5	42.4	204	100	Hori.	46.0	3.6	
388.122	41.3	QP	17.0	-21.5	36.8	145	100	Vert.	46.0	9.2	
456.906	30.0	QP	18.0	-21.0	27.0	137	109	Hori.	46.0	19.0	
456.742	29.6	QP	18.0	-21.0	26.6	13	100	Vert.	46.0	19.4	
479.939	41.5	QP	18.3	-20.9	38.9	143	100	Hori.	46.0	7.1	
479.939	43.5	QP	18.3	-20.9	40.9	264	117	Vert.	46.0	5.1	
499.985	44.9	QP	18.6	-20.8	42.7	144	100	Hori.	46.0	3.3	
499.985	37.3	QP	18.6	-20.8	35.1	35	100	Vert.	46.0	10.9	
720.077	37.7	QP	20.4	-19.4	38.7	68	100	Hori.	46.0	7.3	
720.077	33.0	QP	20.4	-19.4	34.0	294	100	Vert.	46.0	12.0	

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 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.

Radiated Spurious Emission (above 1GHz)

Tx, 11b, Ch: Low

UL Japan, Inc.
Head Office EMC Lab. No.3Semi Anechoic Chamber

Company : SANYO Electric Co., Ltd. Equipment : WLAN Module Model : 1AV4U19B25500 Serial No. : 001F1F3E707B Power : AC 120 V / 60 Hz Mode : Tx, IEEE802.11b, 11Mbps, 2412MHz Remarks : Normal Position	REPORT NO : 29FE0119-HO-01 REGULATION : FCC15.247(d)/RSS-210A8.5 TEST DISTANCE : 3/1m DATE : 03/04/2009 03/04/2009 TEMPERATURE : 20deg.C 20deg.C HUMIDITY : 38% 38% ENGINEER : Satofumi Matsuyama Tomohisa Nakagawa
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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]		[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2357.2	51.0	56.5	26.6	32.8	2.7	0.0	47.5	53.0	73.9	26.4	20.9
2	2390.0	52.2	60.9	26.7	32.8	2.7	0.0	48.8	57.5	73.9	25.1	16.4
3*	2400.0	61.3	70.7	26.7	32.8	2.7	0.0	57.9	67.3	-	-	-
4	3216.0	50.0	51.3	28.4	32.3	3.1	0.0	49.2	50.5	73.9	24.7	23.4
5	4824.0	48.1	49.6	31.2	30.7	3.7	1.0	53.3	54.8	73.9	20.6	19.1
6	7236.0	46.4	44.0	35.7	31.4	4.7	0.9	56.3	53.9	73.9	17.6	20.0
7*	9648.0	51.3	49.3	38.3	32.0	5.4	1.2	64.2	62.2	-	-	-
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
8	12060.0	47.6	42.4	38.7	32.4	7.0	0.6	52.0	46.8	73.9	21.9	27.1
9	14472.0	NS	NS	-	-	-	-	-	-	73.9	-	-
10	16884.0	NS	NS	-	-	-	-	-	-	73.9	-	-
11	19296.0	NS	NS	-	-	-	-	-	-	73.9	-	-
12	21708.0	NS	NS	-	-	-	-	-	-	73.9	-	-
13	24120.0	48.6	48.4	38.5	31.0	8.0	0.0	54.6	54.4	73.9	19.3	19.5

* Reference data

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]		[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2357.2	40.0	45.1	26.6	32.8	2.7	0.0	36.5	41.6	53.9	17.4	12.3
2	2390.0	38.9	48.1	26.7	32.8	2.7	0.0	35.5	44.7	53.9	18.4	9.2
3*	2400.0	47.5	57.6	26.7	32.8	2.7	0.0	44.1	54.2	-	-	-
4	3216.0	46.2	48.5	28.4	32.3	3.1	0.0	45.4	47.7	53.9	8.5	6.2
5	4824.0	32.2	36.1	31.2	30.7	3.7	1.0	37.4	41.3	53.9	16.5	12.6
6	7236.0	34.4	31.6	35.7	31.4	4.7	0.9	44.3	41.5	53.9	9.6	12.4
7*	9648.0	46.6	43.7	38.3	32.0	5.4	1.2	59.5	56.6	-	-	-
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
8	12060.0	34.5	30.1	38.7	32.4	7.0	0.6	38.9	34.5	53.9	15.0	19.4
9	14472.0	NS	NS	-	-	-	-	-	-	53.9	-	-
10	16884.0	NS	NS	-	-	-	-	-	-	53.9	-	-
11	19296.0	NS	NS	-	-	-	-	-	-	53.9	-	-
12	21708.0	NS	NS	-	-	-	-	-	-	53.9	-	-
13	24120.0	36.6	36.5	38.5	31.0	8.0	0.0	42.6	42.5	53.9	11.3	11.4

* Reference data

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

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

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

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

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

Radiated Spurious Emission (above 1GHz) Tx, 11b, Ch: Low

UL Japan, Inc.
 Head Office EMC Lab. No.3Semi Anechoic Chamber

Company : SANYO Electric Co., Ltd. Equipment : WLAN Module Model : 1AV4U19B25500 Serial No. : 001F1F3E707B Power : AC 120 V / 60 Hz Mode : Tx, IEEE802.11b, 11Mbps, 2412MHz Remarks : Normal Position	REPORT NO : 29FE0119-HO-01 REGULATION : FCC15.247(d)/RSS-210A8.5 TEST DISTANCE : 3m DATE : 03/04/2009 TEMPERATURE : 20deg.C HUMIDITY : 38% ENGINEER : Tomohisa Nakagawa
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20dBc(Fundamental 2412MHz) (RBW: 100kHz, VBW: 300kHz)												
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 20dBc [dBuV/m]	MARGIN [dB]	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
0	2412.0	96.0	105.1	26.7	32.8	2.7	0.0	92.6	101.7	-	-	-
3	2400.0	50.6	60.1	26.8	32.8	2.7	0.0	47.3	56.8	Funda-20dB	25.3	24.9
7	9648.0	48.1	45.5	38.3	32.0	5.4	1.2	61.0	58.4	Funda-20dB	11.6	23.3

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5dB
 *Except for the above table : All other spurious emissions were less than 20dB for the limit.
 *In the frequency over the fifth harmonic, the noise from the EUT was not seen.The data above is its base noise.
 *The test result is round off to one or two decimal places, so some differences might be observed.
 *Hi-Pass Fiter was not used for factor 0.0dB of the above table.

Radiated Spurious Emission Tx, 11b, Ch: Mid

UL Japan, Inc.
Head Office EMC Lab. No.3 Semi Anechoic Chamber

Company	: SANYO Electric Co., Ltd.	REPORT NO	: 29FE0119-HO-01
Equipment	: WLAN Module	REGULATION	: FCC15.247(d)/RSS-210A8.5
Model	: 1AV4U19B25500	TEST DISTANCE	: 3/1m
Serial No.	: 001F1F3E707B	DATE	: 03/04/2009
Power	: AC 120 V / 60 Hz	TEMPERATURE	: 20deg.C
Mode	: Tx, IEEE802.11b, 11Mbps, 2437MHz	HUMIDITY	: 38%
Remarks	: Normal Position	ENGINEER	: Satofumi Matsuyama

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	3249.2	46.2	50.3	28.4	32.2	3.1	0.0	45.5	49.6	73.9	28.4	24.3
2	4874.0	45.9	48.1	31.3	30.6	3.7	0.9	51.2	53.4	73.9	22.7	20.5
3	7311.0	42.8	42.0	35.8	31.4	4.7	0.9	52.8	52.0	73.9	21.1	21.9
4*	9748.0	49.6	47.1	38.4	32.1	5.4	1.2	62.5	60.8	-	-	-
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
5	12185.0	NS	NS	-	-	-	-	-	-	73.9	-	-
6	14622.0	NS	NS	-	-	-	-	-	-	73.9	-	-
7	17059.0	NS	NS	-	-	-	-	-	-	73.9	-	-
8	19496.0	NS	NS	-	-	-	-	-	-	73.9	-	-
9	21933.0	NS	NS	-	-	-	-	-	-	73.9	-	-
10	24370.0	47.8	47.9	38.6	30.6	8.0	0.0	54.3	54.4	73.9	19.6	19.5

* Reference data

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	3249.2	40.0	47.6	28.4	32.2	3.1	0.0	39.3	46.9	53.9	14.6	7.0
2	4874.0	30.7	31.8	31.3	30.6	3.7	0.9	36.0	37.1	53.9	17.9	16.8
3	7311.0	29.6	30.4	35.8	31.4	4.7	0.9	39.6	40.4	53.9	14.3	13.5
4*	9748.0	44.6	41.9	38.4	32.1	5.4	1.2	57.5	54.8	-	-	-
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
5	12185.0	NS	NS	-	-	-	-	-	-	53.9	-	-
6	14622.0	NS	NS	-	-	-	-	-	-	53.9	-	-
7	17059.0	NS	NS	-	-	-	-	-	-	53.9	-	-
8	19496.0	NS	NS	-	-	-	-	-	-	53.9	-	-
9	21933.0	NS	NS	-	-	-	-	-	-	53.9	-	-
10	24370.0	35.9	36.0	38.6	30.6	8.0	0.0	42.4	42.5	53.9	11.5	11.4

* Reference data

20dBc(Fundamental 2437MHz) (RBW: 100kHz, VBW: 300kHz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit 20dBc [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												
0	2437.0	95.2	101.2	26.8	32.8	2.8	0.0	92.0	98.0	-	-	-
4	9748.0	47.1	44.4	38.4	32.1	5.4	1.2	60.0	57.3	Funda-20dB	12.0	20.7

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

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

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

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

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

Radiated Spurious Emission Tx, 11b, Ch: High

UL Japan, Inc.
Head Office EMC Lab. No.3Semi Anechoic Chamber

Company : SANYO Electric Co., Ltd.	REPORT NO : 29FE0119-HO-01
Equipment : WLAN Module	REGULATION : FCC15.247(d)/RSS-210A8.5
Model : 1AV4U19B25500	TEST DISTANCE : 3/1m
Serial No. : 001F1F3E707B	DATE : 03/04/2009
Power : AC 120 V / 60 Hz	TEMPERATURE : 20deg.C
Mode : Tx, IEEE802.11b, 11Mbps, 2462MHz	HUMIDITY : 38%
Remarks : Normal Position	ENGINEER : Satofumi Matsuyama

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	2367.6	49.1	55.6	26.7	32.8	2.7	0.0	45.7	52.2	73.9	28.2	21.7
2	2483.5	44.2	49.9	26.9	32.8	2.8	0.0	41.1	46.8	73.9	32.8	27.1
3	3282.8	47.7	50.1	28.5	32.2	3.1	0.0	47.1	49.5	73.9	26.8	24.4
4	4924.0	43.0	45.9	31.4	30.6	3.7	0.9	48.4	51.3	73.9	25.5	22.6
5	7386.0	44.0	42.4	35.9	31.4	4.7	0.9	54.1	52.5	73.9	19.8	21.4
6	9848.0	45.2	37.1	38.4	32.2	5.4	1.3	58.1	50.0	73.9	15.8	23.9
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
7	12310.0	NS	NS	-	-	-	-	-	-	73.9	-	-
8	14772.0	NS	NS	-	-	-	-	-	-	73.9	-	-
9	17234.0	NS	NS	-	-	-	-	-	-	73.9	-	-
10	19696.0	NS	NS	-	-	-	-	-	-	73.9	-	-
11	22158.0	NS	NS	-	-	-	-	-	-	73.9	-	-
12	24620.0	47.3	47.4	38.8	30.2	8.1	0.0	54.5	54.6	73.9	19.4	19.3

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	2367.6	35.8	41.6	26.7	32.8	2.7	0.0	32.4	38.2	53.9	21.5	15.7
2	2483.5	31.1	37.5	26.9	32.8	2.8	0.0	28.0	34.4	53.9	25.9	19.5
3	3282.8	43.3	46.3	28.5	32.2	3.1	0.0	42.7	45.7	53.9	11.2	8.2
4	4924.0	29.4	31.3	31.4	30.6	3.7	0.9	34.8	36.7	53.9	19.1	17.2
5	7386.0	28.9	28.7	35.9	31.4	4.7	0.9	39.0	38.8	53.9	14.9	15.1
6	9848.0	36.1	28.8	38.4	32.2	5.4	1.3	49.0	41.7	53.9	4.9	12.2
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
7	12310.0	NS	NS	-	-	-	-	-	-	53.9	-	-
8	14772.0	NS	NS	-	-	-	-	-	-	53.9	-	-
9	17234.0	NS	NS	-	-	-	-	-	-	53.9	-	-
10	19696.0	NS	NS	-	-	-	-	-	-	53.9	-	-
11	22158.0	NS	NS	-	-	-	-	-	-	53.9	-	-
12	24620.0	32.4	32.4	38.8	30.2	8.1	0.0	39.6	39.6	53.9	14.3	14.3

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5dB
*Except for the above table : All other spurious emissions were less than 20dB for the limit.
*In the frequency over the fifth harmonic, the noise from the EUT was not seen.The data above is its base noise.
*The test result is round off to one or two decimal places, so some differences might be observed.
*Hi-Pass Fiter was not used for factor 0.0dB of the above table.

Radiated Spurious Emission

Tx, 11g, Ch: Low

UL Japan, Inc.
Head Office EMC Lab. No.3Semi Anechoic Chamber

Company	: SANYO Electric Co., Ltd.	REPORT NO	: 29FE0119-HO-01
Equipment	: WLAN Module	REGULATION	: FCC15.247(d)/RSS-210A8.5
Model	: 1AV4U19B25500	TEST DISTANCE	: 3/1m
Serial No.	: 001F1F3E707B	DATE	: 03/04/2009 03/04/2009
Power	: AC 120 V / 60 Hz	TEMPERATURE	: 20deg. C 20deg. C
Mode	: Tx, IEEE802.11g, 6Mbps, 2412MHz	HUMIDITY	: 38% 38%
Remarks	: Normal Position	ENGINEER	: Satofumi Matsuyama Tomohisa Nakagawa

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	2359.9	53.0	62.6	26.6	32.8	2.7	0.0	49.5	59.1	73.9	24.4	14.8
2	2390.0	61.2	68.9	26.7	32.8	2.7	0.0	57.8	65.5	73.9	16.1	8.4
3 *	2400.0	71.1	78.9	26.7	32.8	2.7	0.0	67.7	75.5	-	-	-
4	3216.3	48.4	50.6	28.4	32.3	3.1	0.0	47.6	49.8	73.9	26.3	24.1
5	4824.0	46.4	48.3	31.2	30.7	3.7	1.0	51.6	53.5	73.9	22.3	20.4
6	7236.0	47.4	44.0	35.7	31.4	4.7	0.9	57.3	53.9	73.9	16.6	20.0
7	9648.0	50.3	45.0	38.3	32.0	5.4	1.2	63.2	57.9	73.9	10.7	16.0
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
8	12060.0	48.2	38.8	38.7	32.4	7.0	0.6	52.6	43.2	73.9	21.3	30.7
9	14472.0	NS	NS	-	-	-	-	-	-	73.9	-	-
10	16884.0	NS	NS	-	-	-	-	-	-	73.9	-	-
11	19296.0	NS	NS	-	-	-	-	-	-	73.9	-	-
12	21708.0	NS	NS	-	-	-	-	-	-	73.9	-	-
13	24120.0	48.6	48.4	38.5	31.0	8.0	0.0	54.6	54.4	73.9	19.3	19.5

* Reference data

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	2359.9	42.5	51.5	26.6	32.8	2.7	0.0	39.0	48.0	53.9	14.9	5.9
2	2390.0	41.8	49.2	26.7	32.8	2.7	0.0	38.4	45.8	53.9	15.5	8.1
3 *	2400.0	53.8	61.9	26.7	32.8	2.7	0.0	50.4	58.5	-	-	-
4	3216.3	43.4	48.3	28.4	32.3	3.1	0.0	42.6	47.5	53.9	11.3	6.4
5	4824.0	33.5	35.6	31.2	30.7	3.7	1.0	38.7	40.8	53.9	15.2	13.1
6	7236.0	33.3	30.6	35.7	31.4	4.7	0.9	43.2	40.5	53.9	10.7	13.4
7	9648.0	35.7	31.6	38.3	32.0	5.4	1.2	48.6	44.5	53.9	5.3	9.4
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
8	12060.0	37.8	30.5	38.7	32.4	7.0	0.6	42.2	34.9	53.9	11.7	19.0
9	14472.0	NS	NS	-	-	-	-	-	-	53.9	-	-
10	16884.0	NS	NS	-	-	-	-	-	-	53.9	-	-
11	19296.0	NS	NS	-	-	-	-	-	-	53.9	-	-
12	21708.0	NS	NS	-	-	-	-	-	-	53.9	-	-
13	24120.0	36.6	36.5	38.5	31.0	8.0	0.0	42.6	42.5	53.9	11.3	11.4

* Reference data

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

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

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

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

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

Radiated Spurious Emission **Tx, 11g, Ch: Low**

UL Japan, Inc.
 Head Office EMC Lab. No.3Semi Anechoic Chamber

Company : SANYO Electric Co., Ltd. Equipment : WLAN Module Model : 1AV4U19B25500 Serial No. : 001F1F3E707B Power : AC 120 V / 60 Hz Mode : Tx, IEEE802.11g, 6Mbps, 2412MHz Remarks : Normal Position	REPORT NO : 29FE0119-HO-01 REGULATION : FCC15.247(d)/RSS-210A8.5 TEST DISTANCE : 3m DATE : 03/04/2009 TEMPERATURE : 20deg.C HUMIDITY : 38% ENGINEER : Tomohisa Nakagawa
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20dBc(Fundamental 2412MHz) (RBW: 100kHz, VBW: 300kHz)												
No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit 20dBc [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												
0	2412.0	95.0	99.4	26.8	32.8	2.7	0.0	91.7	96.1	-	-	-
3	2400.0	58.6	66.6	30.9	39.9	5.5	0.0	55.1	63.1	Funda-20dB	16.6	13.0

*Except for the above table : All other spurious emissions were less than 20dB for the limit.
 *In the frequency over the fifth harmonic, the noise from the EUT was not seen.The data above is its base noise.
 *The test result is round off to one or two decimal places, so some differences might be observed.
 *Hi-Pass Fiter was not used for factor 0.0dB of the above table.

Radiated Spurious Emission

Tx, 11g, Ch: Mid

UL Japan, Inc.
Head Office EMC Lab. No.3 Semi Anechoic Chamber

Company : SANYO Electric Co., Ltd.	REPORT NO : 29FE0119-HO-01
Equipment : WLAN Module	REGULATION : FCC15.247(d)/RSS-210A8.5
Model : 1AV4U19B25500	TEST DISTANCE : 3/1m
Serial No. : 001F1F3E707B	DATE : 03/04/2009
Power : AC 120 V / 60 Hz	TEMPERATURE : 20deg.C
Mode : Tx, IEEE802.11g, 6Mbps, 2437MHz	HUMIDITY : 38%
Remarks : Normal Position	ENGINEER : Tomohisa Nakagawa

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	3249.3	49.7	50.9	28.4	32.2	3.1	0.0	49.0	50.2	73.9	24.9	23.7
2	4874.0	45.6	47.5	31.3	30.6	3.7	0.9	50.9	52.8	73.9	23.0	21.1
3	7311.0	47.5	44.3	35.8	31.4	4.7	0.9	57.5	54.3	73.9	16.4	19.6
4	9748.0	50.0	47.1	38.4	32.1	5.4	1.2	62.9	60.0	73.9	11.0	13.9
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
5	12185.0	NS	NS	-	-	-	-	-	-	73.9	-	-
6	14622.0	NS	NS	-	-	-	-	-	-	73.9	-	-
7	17059.0	NS	NS	-	-	-	-	-	-	73.9	-	-
8	19496.0	NS	NS	-	-	-	-	-	-	73.9	-	-
9	21933.0	NS	NS	-	-	-	-	-	-	73.9	-	-
10	24370.0	47.2	46.4	38.6	30.6	8.0	0.0	53.7	52.9	73.9	20.2	21.0

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	3249.3	45.5	48.6	28.4	32.2	3.1	0.0	44.8	47.9	53.9	9.1	6.0
2	4874.0	33.5	34.3	31.3	30.6	3.7	0.9	38.8	39.6	53.9	15.1	14.3
3	7311.0	34.3	31.0	35.8	31.4	4.7	0.9	44.3	41.0	53.9	9.6	12.9
4	9748.0	35.7	32.6	38.4	32.1	5.4	1.2	48.6	45.5	53.9	5.3	8.4
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
5	12185.0	NS	NS	-	-	-	-	-	-	53.9	-	-
6	14622.0	NS	NS	-	-	-	-	-	-	53.9	-	-
7	17059.0	NS	NS	-	-	-	-	-	-	53.9	-	-
8	19496.0	NS	NS	-	-	-	-	-	-	53.9	-	-
9	21933.0	NS	NS	-	-	-	-	-	-	53.9	-	-
10	24370.0	34.4	34.3	38.6	30.6	8.0	0.0	40.9	40.8	53.9	13.0	13.1

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5dB
*Except for the above table : All other spurious emissions were less than 20dB for the limit.
*In the frequency over the fifth harmonic, the noise from the EUT was not seen.The data above is its base noise.
*The test result is round off to one or two decimal places, so some differences might be observed.
*Hi-Pass Fiter was not used for factor 0.0dB of the above table.

Radiated Spurious Emission

Tx, 11g, Ch: High

UL Japan, Inc.
Head Office EMC Lab. No.3Semi Anechoic Chamber

Company : SANYO Electric Co., Ltd.	REPORT NO : 29FE0119-HO-01
Equipment : WLAN Module	REGULATION : FCC15.247(d)/RSS-210A8.5
Model : 1AV4U19B25500	TEST DISTANCE : 3/1m
Serial No. : 001F1F3E707B	DATE : 03/04/2009
Power : AC 120 V / 60 Hz	TEMPERATURE : 20deg.C
Mode : Tx, IEEE802.11g, 6Mbps, 2462MHz	HUMIDITY : 38%
Remarks : Normal Position	ENGINEER : Satofumi Matsuyama

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	2375.6	47.6	54.7	26.7	32.8	2.7	0.0	44.2	51.3	73.9	29.7	22.6
2	2483.5	45.0	52.7	26.9	32.8	2.8	0.0	41.9	49.6	73.9	32.0	24.3
3	3282.6	47.3	49.2	28.5	32.2	3.1	0.0	46.7	48.6	73.9	27.2	25.3
4	4924.0	43.5	45.0	31.4	30.6	3.7	0.9	48.9	50.4	73.9	25.0	23.5
5	7386.0	41.9	42.9	35.9	31.4	4.7	0.9	52.0	53.0	73.9	21.9	20.9
6	9848.0	44.7	40.8	38.4	32.2	5.4	1.3	57.6	53.7	73.9	16.3	20.2
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
7	12310.0	NS	NS	-	-	-	-	-	-	73.9	-	-
8	14772.0	NS	NS	-	-	-	-	-	-	73.9	-	-
9	17234.0	NS	NS	-	-	-	-	-	-	73.9	-	-
10	19696.0	NS	NS	-	-	-	-	-	-	73.9	-	-
11	22158.0	NS	NS	-	-	-	-	-	-	73.9	-	-
12	24620.0	47.1	46.4	38.8	30.2	8.1	0.0	54.3	53.6	73.9	19.6	20.3

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	2375.6	34.7	41.2	26.7	32.8	2.7	0.0	31.3	37.8	53.9	22.6	16.1
2	2483.5	29.6	34.7	26.9	32.8	2.8	0.0	26.5	31.6	53.9	27.4	22.3
3	3282.6	42.9	44.5	28.5	32.2	3.1	0.0	42.3	43.9	53.9	11.6	10.0
4	4924.0	32.7	31.4	31.4	30.6	3.7	0.9	38.1	36.8	53.9	15.8	17.1
5	7386.0	30.0	29.1	35.9	31.4	4.7	0.9	40.1	39.2	53.9	13.8	14.7
6	9848.0	29.1	29.4	38.4	32.2	5.4	1.3	42.0	42.3	53.9	11.9	11.6
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
7	12310.0	NS	NS	-	-	-	-	-	-	53.9	-	-
8	14772.0	NS	NS	-	-	-	-	-	-	53.9	-	-
9	17234.0	NS	NS	-	-	-	-	-	-	53.9	-	-
10	19696.0	NS	NS	-	-	-	-	-	-	53.9	-	-
11	22158.0	NS	NS	-	-	-	-	-	-	53.9	-	-
12	24620.0	32.9	32.9	38.8	30.2	8.1	0.0	40.1	40.1	53.9	13.8	13.8

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

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

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

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

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

Radiated Spurious Emission (above 1GHz)
Tx, 11n(20HT), Ch: Low

UL Japan, Inc.
Head Office EMC Lab. No.2Semi Anechoic Chamber

Company : SANYO Electric Co., Ltd.
Equipment : WLAN Module
Model : 1AV4U19B25500
Serial No. : 001F1F3E707B
Power : AC 120 V / 60 Hz
Mode : Tx, IEEE802.11n(20HT) , MCS0, 2412MHz
Remarks : Normal Position

REPORT NO : 29FE0119-HO-01
REGULATION : FCC15.247(d)/RSS-210A8.5
TEST DISTANCE : 3/1m
DATE : 04/07/2009
TEMPERATURE : 24deg.C
HUMIDITY : 42%
ENGINEER : Takeshi Choda

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	2390.0	67.6	74.6	27.1	32.4	2.6	0.0	64.9	71.9	73.9	9.0	2.0
2 *	2400.0	74.4	82.1	27.1	32.4	2.6	0.0	71.7	79.4	-	-	-
3	3216.0	45.2	50.8	28.6	32.0	3.1	0.0	44.9	50.5	73.9	29.0	23.4
4	4824.0	51.0	50.2	31.3	31.4	3.9	1.1	55.9	55.1	73.9	18.0	18.8
5	7236.0	46.6	46.3	35.6	31.2	4.4	1.1	56.5	56.2	73.9	17.4	17.7
6	9648.0	48.3	46.0	38.4	32.0	5.2	1.3	61.2	58.9	74.9	13.7	16.0
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
7	12060.0	NS	NS	-	-	-	-	-	-	73.9	-	-
8	14472.0	NS	NS	-	-	-	-	-	-	73.9	-	-
9	16884.0	NS	NS	-	-	-	-	-	-	73.9	-	-
10	19296.0	NS	NS	-	-	-	-	-	-	73.9	-	-
11	21708.0	NS	NS	-	-	-	-	-	-	73.9	-	-
12	24120.0	46.8	47.1	40.4	29.0	7.9	0.0	56.6	56.9	73.9	17.3	17.0

* Reference data

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	2390.0	43.8	50.7	27.1	32.4	2.6	0.0	41.1	48.0	53.9	12.8	5.9
2 *	2400.0	56.3	64.1	27.1	32.4	2.6	0.0	53.6	61.4	-	-	-
3	3216.0	36.9	46.5	28.6	32.0	3.1	0.0	36.6	46.2	53.9	17.3	7.7
4	4824.0	35.5	35.1	31.3	31.4	3.9	1.1	40.4	40.0	53.9	13.5	13.9
5	7236.0	32.5	32.3	35.6	31.2	4.4	1.1	42.4	42.2	53.9	11.5	11.7
6	9648.0	33.0	32.4	38.4	32.0	5.2	1.3	45.9	45.3	53.9	8.0	8.6
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
7	12060.0	NS	NS	-	-	-	-	-	-	53.9	-	-
8	14472.0	NS	NS	-	-	-	-	-	-	53.9	-	-
9	16884.0	NS	NS	-	-	-	-	-	-	53.9	-	-
10	19296.0	NS	NS	-	-	-	-	-	-	53.9	-	-
11	21708.0	NS	NS	-	-	-	-	-	-	53.9	-	-
12	24120.0	32.9	32.9	40.4	29.0	7.9	0.0	42.7	42.7	53.9	11.2	11.2

* Reference data

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

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

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

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

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

Radiated Spurious Emission (above 1GHz) Tx, 11n(20HT), Ch: Low

UL Japan, Inc.
 Head Office EMC Lab. No.2Semi Anechoic Chamber

Company : SANYO Electric Co., Ltd. Equipment : WLAN Module Model : 1AV4U19B25500 Serial No. : 001F1F3E707B Power : AC 120 V / 60 Hz Mode : Tx, IEEE802.11n(20HT) , MCS0, 2412MHz Remarks : Normal Position	REPORT NO : 29FE0119-HO-01 REGULATION : FCC15.247(d)/RSS-210A8.5 TEST DISTANCE : 3m DATE : 04/07/2009 TEMPERATURE : 24deg.C HUMIDITY : 42% ENGINEER : Takeshi Choda
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20dBc(Fundamental 2412 MHz) (RBW: 100kHz, VBW: 300kHz)												
No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit 20dBc [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												
0	2412.0	91.3	97.2	27.2	32.4	2.6	0.0	88.7	94.6	-	-	-
2	2400.0	59.5	67.5	27.1	32.4	2.6	0.0	56.8	64.8	Funda-20dB	11.9	9.8

*Except for the above table : All other spurious emissions were less than 20dB for the limit.
 *In the frequency over the fifth harmonic, the noise from the EUT was not seen.The data above is its base noise.
 *The test result is round off to one or two decimal places, so some differences might be observed.
 *Hi-Pass Fiter was not used for factor 0.0dB of the above table.

Radiated Spurious Emission Tx, 11n(20HT), Ch: Mid

UL Japan, Inc.
Head Office EMC Lab. No.2 Semi Anechoic Chamber

Company : SANYO Electric Co., Ltd.
Equipment : WLAN Module
Model : 1AV4U19B25500
Serial No. : 001F1F3E707B
Power : AC 120 V / 60 Hz
Mode : Tx, IEEE802.11n(20HT), MCS0, 2437MHz
Remarks : Normal Position

REPORT NO : 29FE0119-HO-01
REGULATION : FCC15.247(d)/RSS-210A8.5
TEST DISTANCE : 3/1m
DATE : 04/07/2009
TEMPERATURE : 24deg.C
HUMIDITY : 42%
ENGINEER : Takeshi Choda

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	2385.5	53.5	61.4	27.1	32.4	2.6	0.0	50.8	58.7	73.9	23.1	15.2
2	3249.4	46.2	51.0	28.6	32.0	3.1	0.0	45.9	50.7	73.9	28.0	23.2
3	4874.0	49.3	50.3	31.3	31.3	4.0	1.1	54.4	55.4	73.9	19.5	18.5
4	7311.0	49.8	48.2	35.8	31.2	4.4	1.1	59.9	58.3	73.9	14.0	15.6
5	9748.0	51.3	45.6	38.5	32.0	5.2	1.3	64.3	58.6	73.9	9.6	15.3
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
6	12185.0	NS	NS	-	-	-	-	-	-	73.9	-	-
7	14622.0	NS	NS	-	-	-	-	-	-	73.9	-	-
8	17059.0	NS	NS	-	-	-	-	-	-	73.9	-	-
9	19496.0	NS	NS	-	-	-	-	-	-	73.9	-	-
10	21933.0	NS	NS	-	-	-	-	-	-	73.9	-	-
11	24370.0	47.6	47.7	40.4	29.0	8.0	0.0	57.5	57.6	73.9	16.4	16.3

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	2385.5	43.3	49.7	27.1	32.4	2.6	0.0	40.6	47.0	53.9	13.3	6.9
2	3249.4	37.1	47.2	28.6	32.0	3.1	0.0	36.8	46.9	53.9	17.1	7.0
3	4874.0	35.9	34.6	31.3	31.3	4.0	1.1	41.0	39.7	53.9	12.9	14.2
4	7311.0	35.5	33.6	35.8	31.2	4.4	1.1	45.6	43.7	53.9	8.3	10.2
5	9748.0	35.6	32.3	38.5	32.0	5.2	1.3	48.6	45.3	53.9	5.3	8.6
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
6	12185.0	NS	NS	-	-	-	-	-	-	53.9	-	-
7	14622.0	NS	NS	-	-	-	-	-	-	53.9	-	-
8	17059.0	NS	NS	-	-	-	-	-	-	53.9	-	-
9	19496.0	NS	NS	-	-	-	-	-	-	53.9	-	-
10	21933.0	NS	NS	-	-	-	-	-	-	53.9	-	-
11	24370.0	33.2	33.3	40.4	29.0	8.0	0.0	43.1	43.2	53.9	10.8	10.7

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

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

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

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

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

Radiated Spurious Emission Tx, 11n(20HT), Ch: High

UL Japan, Inc.
Head Office EMC Lab. No.2Semi Anechoic Chamber

Company : SANYO Electric Co., Ltd.
Equipment : WLAN Module
Model : 1AV4U19B25500
Serial No. : 001F1F3E707B
Power : AC 120 V / 60 Hz
Mode : Tx, IEEE802.11n(20HT) , MCS0, 2462MHz
Remarks : Normal Position

REPORT NO : 29FE0119-HO-01
REGULATION : FCC15.247(d)/RSS-210A8.5
TEST DISTANCE : 3/1m
DATE : 04/07/2009
TEMPERATURE : 24deg.C
HUMIDITY : 42%
ENGINEER : Takeshi Choda

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	2377.3	50.7	54.9	27.1	32.4	2.6	0.0	48.0	52.2	73.9	25.9	21.7
2	2483.5	53.4	55.6	27.3	32.4	2.7	0.0	51.0	53.2	73.9	22.9	20.7
3	3282.7	45.5	50.8	28.6	32.0	3.1	0.0	45.2	50.5	73.9	28.7	23.4
4	4924.0	45.6	46.4	31.4	31.3	4.0	1.1	50.8	51.6	73.9	23.1	22.3
5	7386.0	47.6	45.2	35.9	31.2	4.5	1.1	57.9	55.5	73.9	16.0	18.4
6	9848.0	47.6	44.8	38.7	32.0	5.2	1.3	60.8	58.0	73.9	13.1	15.9
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
7	12310.0	NS	NS	-	-	-	-	-	-	73.9	-	-
8	14772.0	NS	NS	-	-	-	-	-	-	73.9	-	-
9	17234.0	NS	NS	-	-	-	-	-	-	73.9	-	-
10	19696.0	NS	NS	-	-	-	-	-	-	73.9	-	-
11	22158.0	NS	NS	-	-	-	-	-	-	73.9	-	-
12	24620.0	46.0	46.3	40.4	28.9	8.2	0.0	56.2	56.5	73.9	17.7	17.4

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	2377.3	37.2	41.3	27.1	32.4	2.6	0.0	34.5	38.6	53.9	19.4	15.3
2	2483.5	35.9	37.3	27.3	32.4	2.7	0.0	33.5	34.9	53.9	20.4	19.0
3	3282.7	37.0	46.5	28.6	32.0	3.1	0.0	36.7	46.2	53.9	17.2	7.7
4	4924.0	33.2	35.2	31.4	31.3	4.0	1.1	38.4	40.4	53.9	15.5	13.5
5	7386.0	33.2	31.7	35.9	31.2	4.5	1.1	43.5	42.0	53.9	10.4	11.9
6	9848.0	32.8	31.6	38.7	32.0	5.2	1.3	46.0	44.8	53.9	7.9	9.1
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
7	12310.0	NS	NS	-	-	-	-	-	-	53.9	-	-
8	14772.0	NS	NS	-	-	-	-	-	-	53.9	-	-
9	17234.0	NS	NS	-	-	-	-	-	-	53.9	-	-
10	19696.0	NS	NS	-	-	-	-	-	-	53.9	-	-
11	22158.0	NS	NS	-	-	-	-	-	-	53.9	-	-
12	24620.0	31.9	32.0	40.4	28.9	8.2	0.0	42.1	42.2	53.9	11.8	11.7

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

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

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

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

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

Radiated Spurious Emission Tx, 11n(40HT), Ch: Low

UL Japan, Inc.
Head Office EMC Lab. No.2Semi Anechoic Chamber

Company : SANYO Electric Co., Ltd.
Equipment : WLAN Module
Model : 1AV4U19B25500
Serial No. : 001F1F3E707B
Power : AC 120 V / 60 Hz
Mode : Tx, IEEE802.11n(40HT), MCS0, 2422MHz
Remarks : Normal Position

REPORT NO : 29FE0119-HO-01
REGULATION : FCC15.247(d)/RSS-210A8.5
TEST DISTANCE : 3/1m
DATE : 04/07/2009
TEMPERATURE : 24deg.C
HUMIDITY : 42%
ENGINEER : Takeshi Choda

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	2390.0	66.4	74.2	27.1	32.4	2.6	0.0	63.7	71.5	73.9	10.2	2.4
2 *	2400.0	68.9	74.6	27.1	32.4	2.6	0.0	66.2	71.9	-	-	-
3	3229.3	45.1	50.7	28.6	32.0	3.1	0.0	44.8	50.4	73.9	29.1	23.5
4	4844.0	44.1	45.4	31.3	31.4	4.0	1.1	49.1	50.4	73.9	24.8	23.5
5	7266.0	45.6	44.2	35.7	31.2	4.4	1.1	55.6	54.2	73.9	18.3	19.7
6	9688.0	46.3	43.8	38.5	32.0	5.2	1.3	59.3	56.8	73.9	14.6	17.1
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
7	12110.0	NS	NS	-	-	-	-	-	-	73.9	-	-
8	14532.0	NS	NS	-	-	-	-	-	-	73.9	-	-
9	16954.0	NS	NS	-	-	-	-	-	-	73.9	-	-
10	19376.0	NS	NS	-	-	-	-	-	-	73.9	-	-
11	21798.0	NS	NS	-	-	-	-	-	-	73.9	-	-
12	24220.0	48.4	47.9	40.4	29.0	8.0	0.0	58.3	57.8	73.9	15.6	16.1

* Reference data

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	2390.0	47.7	55.3	27.1	32.4	2.6	0.0	45.0	52.6	53.9	8.9	1.3
2 *	2400.0	55.3	61.2	27.1	32.4	2.6	0.0	52.6	58.5	-	-	-
3	3229.3	35.5	46.7	28.6	32.0	3.1	0.0	35.2	46.4	53.9	18.7	7.5
4	4844.0	32.1	32.6	31.3	31.4	4.0	1.1	37.1	37.6	53.9	16.8	16.3
5	7266.0	31.8	30.7	35.7	31.2	4.4	1.1	41.8	40.7	53.9	12.1	13.2
6	9688.0	32.5	31.6	38.5	32.0	5.2	1.3	45.5	44.6	53.9	8.4	9.3
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
7	12110.0	NS	NS	-	-	-	-	-	-	53.9	-	-
8	14532.0	NS	NS	-	-	-	-	-	-	53.9	-	-
9	16954.0	NS	NS	-	-	-	-	-	-	53.9	-	-
10	19376.0	NS	NS	-	-	-	-	-	-	53.9	-	-
11	21798.0	NS	NS	-	-	-	-	-	-	53.9	-	-
12	24220.0	34.3	34.1	40.4	29.0	8.0	0.0	44.2	44.0	53.9	9.7	9.9

* Reference data

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

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

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

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

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

Radiated Spurious Emission **Tx, 11n(40HT), Ch: Low**

UL Japan, Inc.
 Head Office EMC Lab. No.2Semi Anechoic Chamber

Company : SANYO Electric Co., Ltd. Equipment : WLAN Module Model : 1AV4U19B25500 Serial No. : 001F1F3E707B Power : AC 120 V / 60 Hz Mode : Tx, IEEE802.11n(40HT) , MCS0, 2422MHz Remarks : Normal Position	REPORT NO : 29FE0119-HO-01 REGULATION : FCC15.247(d)/RSS-210A8.5 TEST DISTANCE : 3m DATE : 04/07/2009 TEMPERATURE : 24deg.C HUMIDITY : 42% ENGINEER : Takeshi Choda
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20dBc(Fundamental 2422MHz) (RBW: 100kHz, VBW: 300kHz)												
No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit 20dBc [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]	[dBuV]					[dBuV/m]	[dBuV/m]		[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
0	2422.0	86.3	91.7	27.2	32.4	2.6	0.0	83.7	89.1	-	-	-
2	2400.0	56.5	62.0	27.1	32.4	2.6	0.0	53.8	59.3	Funda-20dB	9.9	9.8

*Except for the above table : All other spurious emissions were less than 20dB for the limit.
 *In the frequency over the fifth harmonic, the noise from the EUT was not seen.The data above is its base noise.
 *The test result is round off to one or two decimal places, so some differences might be observed.
 *Hi-Pass Fiter was not used for factor 0.0dB of the above table.

Radiated Spurious Emission Tx, 11n(40HT), Ch: Mid

UL Japan, Inc.
Head Office EMC Lab. No.2 Semi Anechoic Chamber

Company : SANYO Electric Co., Ltd.
Equipment : WLAN Module
Model : 1AV4U19B25500
Serial No. : 001F1F3E707B
Power : AC 120 V / 60 Hz
Mode : Tx, IEEE802.11n(40HT), MCS0, 2437MHz
Remarks : Normal Position

REPORT NO : 29FE0119-HO-01
REGULATION : FCC15.247(d)/RSS-210A8.5
TEST DISTANCE : 3/1m
DATE : 04/07/2009
TEMPERATURE : 24deg.C
HUMIDITY : 42%
ENGINEER : Takeshi Choda

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	2334.9	49.5	56.2	27.0	32.5	2.6	0.0	46.6	53.3	73.9	27.3	20.6
2	3249.3	45.3	50.6	28.6	32.0	3.1	0.0	45.0	50.3	73.9	28.9	23.6
3	4874.0	45.3	46.3	31.3	31.3	4.0	1.1	50.4	51.4	73.9	23.5	22.5
4	7311.0	45.1	44.9	35.8	31.2	4.4	1.1	55.2	55.0	73.9	18.7	18.9
5	9748.0	48.2	44.1	38.5	32.0	5.2	1.3	61.2	57.1	73.9	12.7	16.8
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
6	12185.0	NS	NS	-	-	-	-	-	-	73.9	-	-
7	14622.0	NS	NS	-	-	-	-	-	-	73.9	-	-
8	17059.0	NS	NS	-	-	-	-	-	-	73.9	-	-
9	19496.0	NS	NS	-	-	-	-	-	-	73.9	-	-
10	21933.0	NS	NS	-	-	-	-	-	-	73.9	-	-
11	24370.0	48.6	47.8	40.4	29.0	8.0	0.0	58.5	57.7	73.9	15.4	16.2

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	3249.3	36.9	43.8	27.0	32.5	2.6	0.0	34.0	40.9	53.9	19.9	13.0
2	4874.0	36.4	46.7	28.6	32.0	3.1	0.0	36.1	46.4	53.9	17.8	7.5
3	7311.0	32.6	34.8	31.3	31.3	4.0	1.1	37.7	39.9	53.9	16.2	14.0
4	9748.0	31.6	31.4	35.8	31.2	4.4	1.1	41.7	41.5	53.9	12.2	12.4
5	12185.0	35.5	31.1	38.5	32.0	5.2	1.3	48.5	44.1	53.9	5.4	9.8
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
6	14622.0	NS	NS	-	-	-	-	-	-	53.9	-	-
7	17059.0	NS	NS	-	-	-	-	-	-	53.9	-	-
8	19496.0	NS	NS	-	-	-	-	-	-	53.9	-	-
9	19496.0	NS	NS	-	-	-	-	-	-	53.9	-	-
10	21933.0	NS	NS	-	-	-	-	-	-	53.9	-	-
11	24370.0	33.9	33.9	40.4	29.0	8.0	0.0	43.8	43.8	53.9	10.1	10.1

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

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

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

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

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

Radiated Spurious Emission Tx, 11n(40HT), Ch: High

UL Japan, Inc.
Head Office EMC Lab. No.2Semi Anechoic Chamber

Company : SANYO Electric Co., Ltd.
Equipment : WLAN Module
Model : 1AV4U19B25500
Serial No. : 001F1F3E707B
Power : AC 120 V / 60 Hz
Mode : Tx, IEEE802.11n(40HT) , MCS0, 2452MHz
Remarks : Normal Position

REPORT NO : 29FE0119-HO-01
REGULATION : FCC15.247(d)/RSS-210A8.5
TEST DISTANCE : 3/1m
DATE : 04/07/2009
TEMPERATURE : 24deg.C
HUMIDITY : 42%
ENGINEER : Takeshi Choda

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	2349.0	50.7	56.8	27.0	32.5	2.6	0.0	47.8	53.9	73.9	26.1	20.0
2	2483.5	57.3	60.7	27.3	32.4	2.7	0.0	54.9	58.3	73.9	19.0	15.6
3	3269.3	46.4	50.9	28.6	32.0	3.1	0.0	46.1	50.6	73.9	27.8	23.3
4	4904.0	44.5	45.1	31.4	31.3	4.0	1.1	49.7	50.3	73.9	24.2	23.6
5	7356.0	44.7	43.4	35.9	31.2	4.4	1.1	54.9	53.6	73.9	19.0	20.3
6	9808.0	46.6	43.1	38.6	32.0	5.2	1.3	59.7	56.2	73.9	14.2	17.7
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
7	12260.0	NS	NS	-	-	-	-	-	-	73.9	-	-
8	14712.0	NS	NS	-	-	-	-	-	-	73.9	-	-
9	17164.0	NS	NS	-	-	-	-	-	-	73.9	-	-
10	19616.0	NS	NS	-	-	-	-	-	-	73.9	-	-
11	22068.0	NS	NS	-	-	-	-	-	-	73.9	-	-
12	24520.0	46.4	46.5	40.4	28.9	8.1	0.0	56.5	56.6	73.9	17.4	17.3

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	2349.0	38.0	44.5	27.0	32.5	2.6	0.0	35.1	41.6	53.9	18.8	12.3
2	2483.5	37.7	40.8	27.3	32.4	2.7	0.0	35.3	38.4	53.9	18.6	15.5
3	3269.3	36.5	46.9	28.6	32.0	3.1	0.0	36.2	46.6	53.9	17.7	7.3
4	4904.0	31.8	31.5	31.4	31.3	4.0	1.1	37.0	36.7	53.9	16.9	17.2
5	7356.0	31.3	30.3	35.9	31.2	4.4	1.1	41.5	40.5	53.9	12.4	13.4
6	9808.0	33.1	30.2	38.6	32.0	5.2	1.3	46.2	43.3	53.9	7.7	10.6
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
7	12260.0	NS	NS	-	-	-	-	-	-	53.9	-	-
8	14712.0	NS	NS	-	-	-	-	-	-	53.9	-	-
9	17164.0	NS	NS	-	-	-	-	-	-	53.9	-	-
10	19616.0	NS	NS	-	-	-	-	-	-	53.9	-	-
11	22068.0	NS	NS	-	-	-	-	-	-	53.9	-	-
12	24520.0	32.5	32.5	40.4	28.9	8.1	0.0	42.6	42.6	53.9	11.3	11.3

Test Distance 1.0m : Distance Factor(Dfac) = $20\log(3/1.0) = 9.5\text{dB}$

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

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

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

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

Radiated Spurious Emission Rx, 11b, Ch: Mid

UL Japan, Inc.
Head Office EMC Lab. No.3Semi Anechoic Chamber

Company : SANYO Electric Co., Ltd.	REPORT NO : 29FE0119-HO-01
Equipment : WLAN Module	REGULATION : FCC15.247(d)/RSS-210A8.5
Model : 1AV4U19B25500	TEST DISTANCE : 3m
Serial No. : 001F1F3E707B	DATE : 03/04/2009
Power : AC 120 V / 60 Hz	TEMPERATURE : 20deg.C
Mode : Rx, IEEE802.11b, 2437MHz	HUMIDITY : 38%
Remarks : Normal Position	ENGINEER : Satofumi Matsuyama

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	2437.0	41.7	43.1	26.8	32.8	2.8	0.0	38.5	39.9	73.9	35.4	34.0
2	3216.0	46.9	49.9	28.4	32.3	3.1	0.0	46.1	49.1	73.9	27.8	24.8
3	4874.0	40.3	39.8	31.3	30.6	3.4	0.0	44.4	43.9	73.9	29.5	30.0
4	7311.0	41.7	41.7	35.8	31.4	4.2	0.0	50.3	50.3	73.9	23.6	23.6

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	2437.0	30.1	28.7	26.8	32.8	2.8	0.0	26.9	25.5	53.9	27.0	28.4
2	3216.0	42.2	48.5	28.4	32.3	3.1	0.0	41.4	47.7	53.9	12.5	6.2
3	4874.0	26.9	27.0	31.3	30.6	3.4	0.0	31.0	31.1	53.9	22.9	22.8
4	7311.0	28.6	29.1	35.8	31.4	4.2	0.0	37.2	37.7	53.9	16.7	16.2

*Except for the above table : All other spurious emissions were less than 20dB for the limit.
*The test result is round off to one or two decimal places, so some differences might be observed.
*Hi-Pass Fiter was not used for factor 0.0dB of the above table.

Radiated Spurious Emission Rx, 11g, Ch: Mid

UL Japan, Inc.
Head Office EMC Lab. No.3Semi Anechoic Chamber

Company : SANYO Electric Co., Ltd.	REPORT NO : 29FE0119-HO-01
Equipment : WLAN Module	REGULATION : FCC15.247(d)/RSS-210A8.5
Model : 1AV4U19B25500	TEST DISTANCE : 3m
Serial No. : 001F1F3E707B	DATE : 03/04/2009
Power : AC 120 V / 60 Hz	TEMPERATURE : 20deg.C
Mode : Rx, IEEE802.11g, 2437MHz	HUMIDITY : 38%
Remarks : Normal Position	ENGINEER : Satofumi Matsuyama

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	2437.0	42.3	42.2	26.8	32.8	2.8	0.0	39.1	39.0	73.9	34.8	34.9
2	3216.0	45.6	50.7	28.4	32.3	3.1	0.0	44.8	49.9	73.9	29.1	24.0
3	4874.0	40.7	42.0	31.3	30.6	3.4	0.0	44.8	46.1	73.9	29.1	27.8
4	7311.0	42.7	42.6	35.8	31.4	4.2	0.0	51.3	51.2	73.9	22.6	22.7

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	2437.0	30.0	30.2	26.8	32.8	2.8	0.0	26.8	27.0	53.9	27.1	26.9
2	3216.0	39.7	47.9	28.4	32.3	3.1	0.0	38.9	47.1	53.9	15.0	6.8
3	4874.0	27.0	27.6	31.3	30.6	3.4	0.0	31.1	31.7	53.9	22.8	22.2
4	7311.0	28.6	29.1	35.8	31.4	4.2	0.0	37.2	37.7	53.9	16.7	16.2

*Except for the above table : All other spurious emissions were less than 20dB for the limit.
*The test result is round off to one or two decimal places, so some differences might be observed.
*Hi-Pass Fiter was not used for factor 0.0dB of the above table.

Radiated Spurious Emission Rx, 11n(20HT), Ch: Mid

UL Japan, Inc.
Head Office EMC Lab. No.2Semi Anechoic Chamber

Company : SANYO Electric Co., Ltd.
Equipment : WLAN Module
Model : 1AV4U19B25500
Serial No. : 001F1F3E707B
Power : AC 120 V / 60 Hz
Mode : Rx, IEEE802.11n(20HT), 2437MHz
Remarks : Normal Position

REPORT NO : 29FE0119-HO-01
REGULATION : FCC15.247(d)/RSS-210A8.5
TEST DISTANCE : 3m
DATE : 04/07/2009
TEMPERATURE : 24deg.C
HUMIDITY : 42%
ENGINEER : Takeshi Choda

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	2437.0	42.7	43.0	27.2	32.4	2.6	0.0	40.1	40.4	73.9	33.8	33.5
2	3216.0	46.7	50.9	28.6	32.0	3.1	0.0	46.4	50.6	73.9	27.5	23.3
3	4874.0	42.3	42.7	31.3	31.3	3.7	0.0	46.0	46.4	73.9	27.9	27.5
4	7311.0	43.3	42.3	35.8	31.2	4.0	0.0	51.9	50.9	73.9	22.0	23.0

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	2437.0	29.8	29.8	27.2	32.4	2.6	0.0	27.2	27.2	53.9	26.7	26.7
2	3216.0	37.3	47.0	28.6	32.0	3.1	0.0	37.0	46.7	53.9	16.9	7.2
3	4874.0	28.6	28.6	31.3	31.3	3.7	0.0	32.3	32.3	53.9	21.6	21.6
4	7311.0	29.4	29.6	35.8	31.2	4.0	0.0	38.0	38.2	53.9	15.9	15.7

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

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

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

Radiated Spurious Emission Rx, 11n(40HT), Ch: Mid

UL Japan, Inc.
Head Office EMC Lab. No.2Semi Anechoic Chamber

Company : SANYO Electric Co., Ltd.
Equipment : WLAN Module
Model : 1AV4U19B25500
Serial No. : 001F1F3E707B
Power : AC 120 V / 60 Hz
Mode : Rx, IEEE802.11n(40HT), 2437MHz
Remarks : Normal Position

REPORT NO : 29FE0119-HO-01
REGULATION : FCC15.247(d)/RSS-210A8.5
TEST DISTANCE : 3m
DATE : 04/07/2009
TEMPERATURE : 24deg.C
HUMIDITY : 42%
ENGINEER : Takeshi Choda

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	2437.0	43.9	43.7	27.2	32.4	2.6	0.0	41.3	41.1	73.9	32.6	32.8
2	3216.0	46.7	51.1	28.6	32.0	3.1	0.0	46.4	50.8	73.9	27.5	23.1
3	4874.0	41.5	42.1	31.3	31.3	3.7	0.0	45.2	45.8	73.9	28.7	28.1
4	7311.0	43.2	43.2	35.8	31.2	4.0	0.0	51.8	51.8	73.9	22.1	22.1

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	2437.0	30.0	29.8	27.2	32.4	2.6	0.0	27.4	27.2	53.9	26.5	26.7
2	3216.0	34.8	46.8	28.6	32.0	3.1	0.0	34.5	46.5	53.9	19.4	7.4
3	4874.0	28.6	28.7	31.3	31.3	3.7	0.0	32.3	32.4	53.9	21.6	21.5
4	7311.0	29.6	29.6	35.8	31.2	4.0	0.0	38.2	38.2	53.9	15.7	15.7

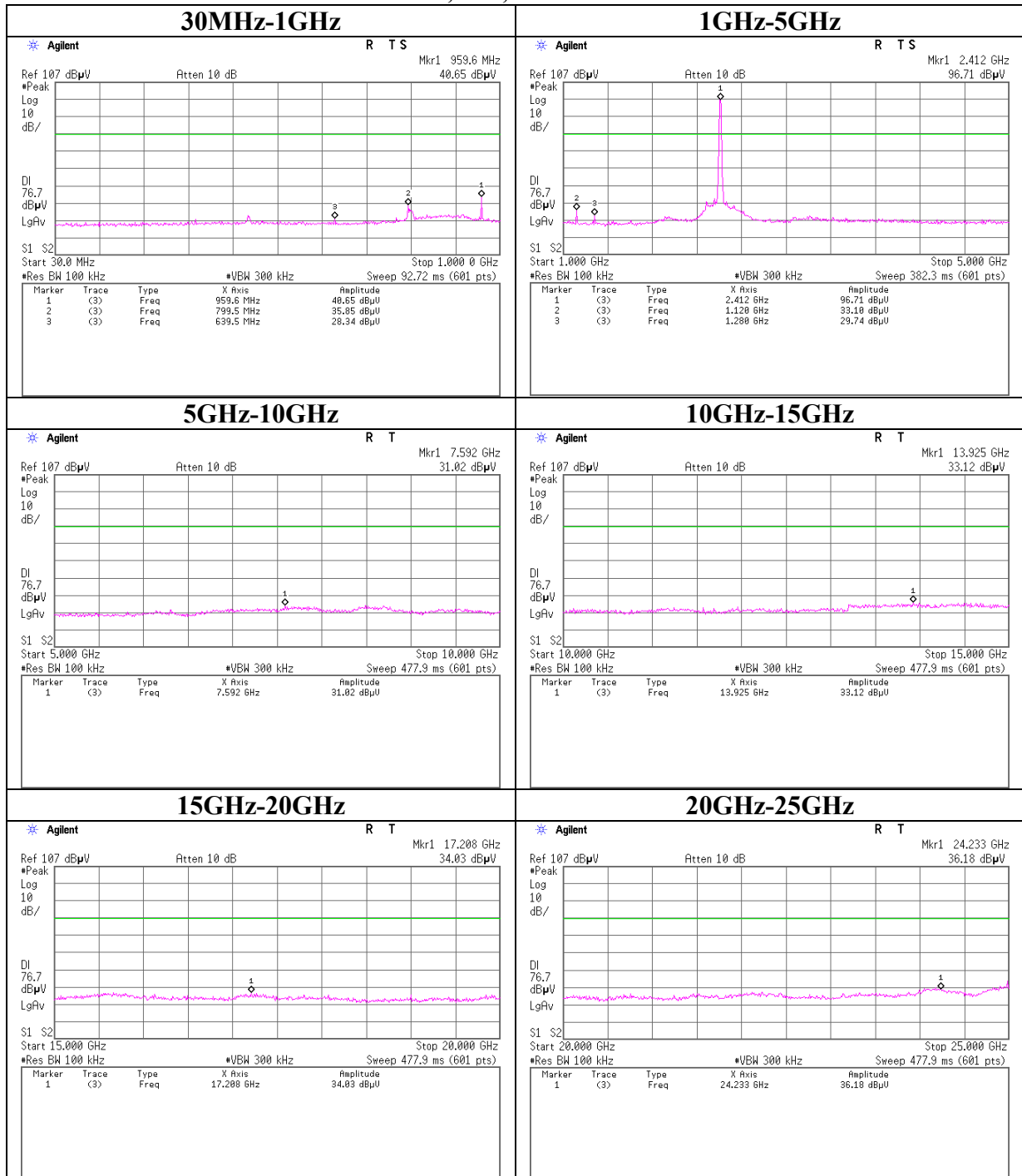
*Except for the above table : All other spurious emissions were less than 20dB for the limit.

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

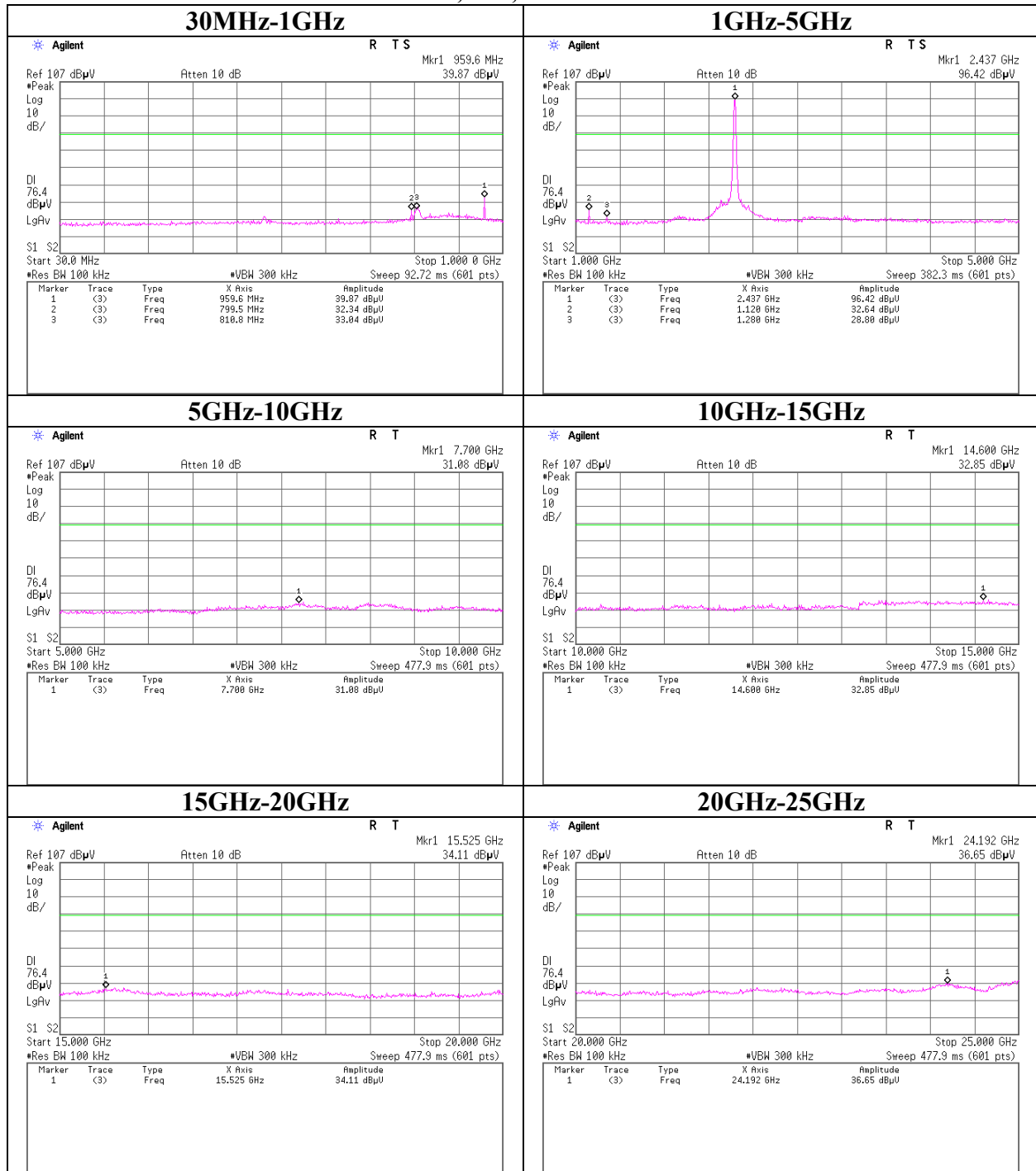
*Hi-Pass Fiter was not used for factor 0.0dB of the above table.

Conducted Spurious Emission

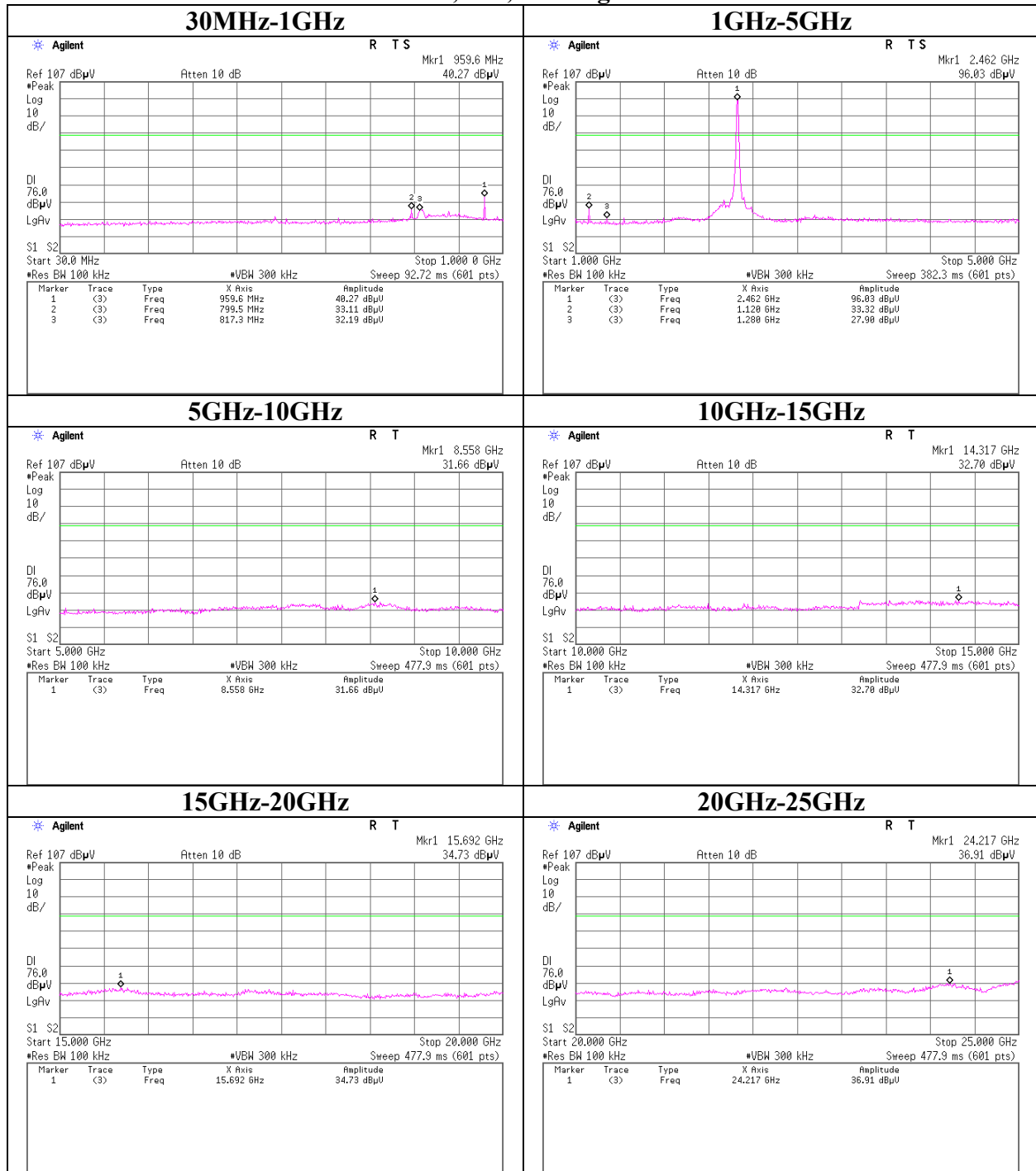
Tx, 11b, Ch: Low



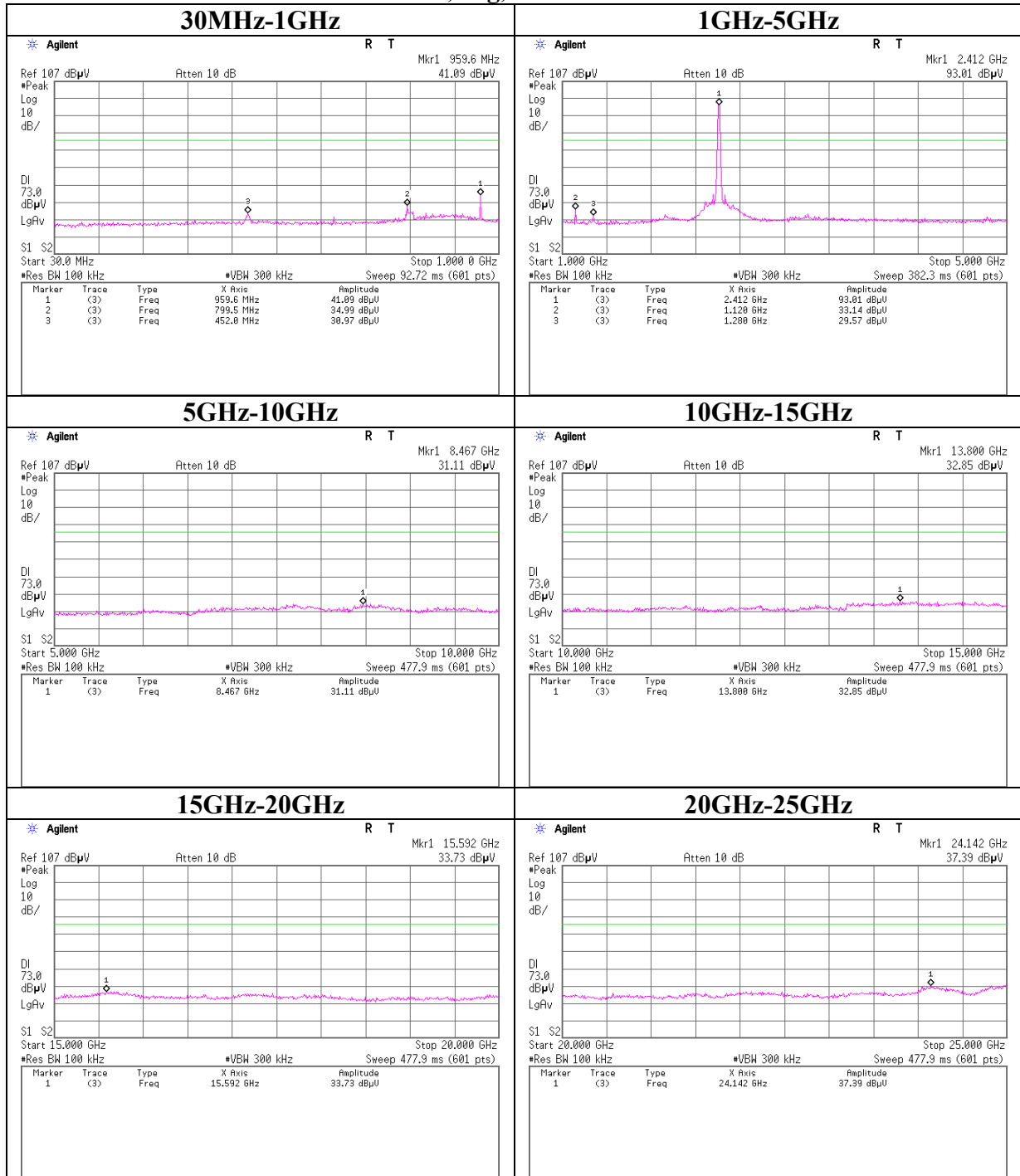
Conducted Spurious Emission
Tx, 11b, Ch: Mid



Conducted Spurious Emission
Tx, 11b, Ch: High

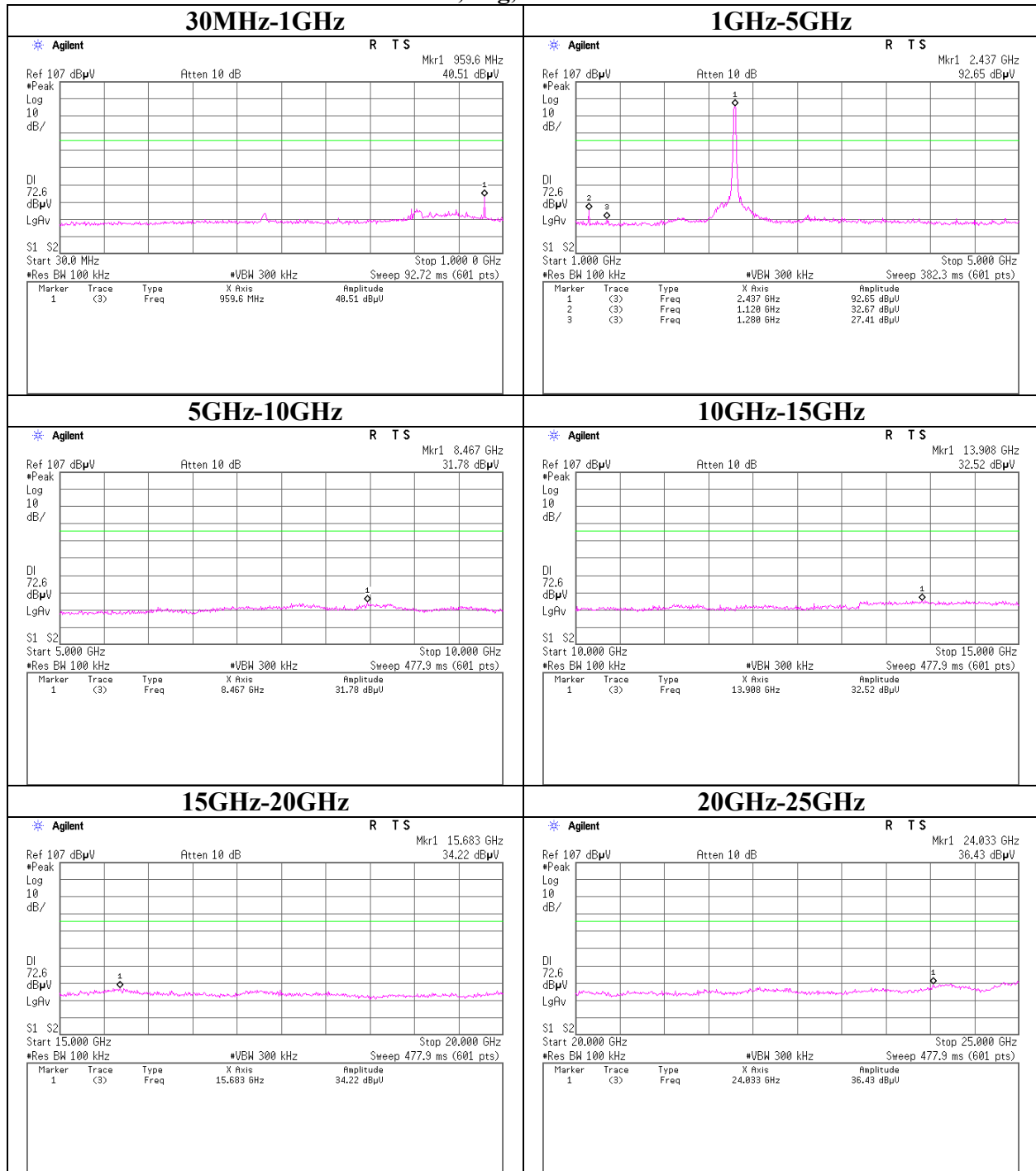


Conducted Spurious Emission
Tx, 11g, Ch: Low



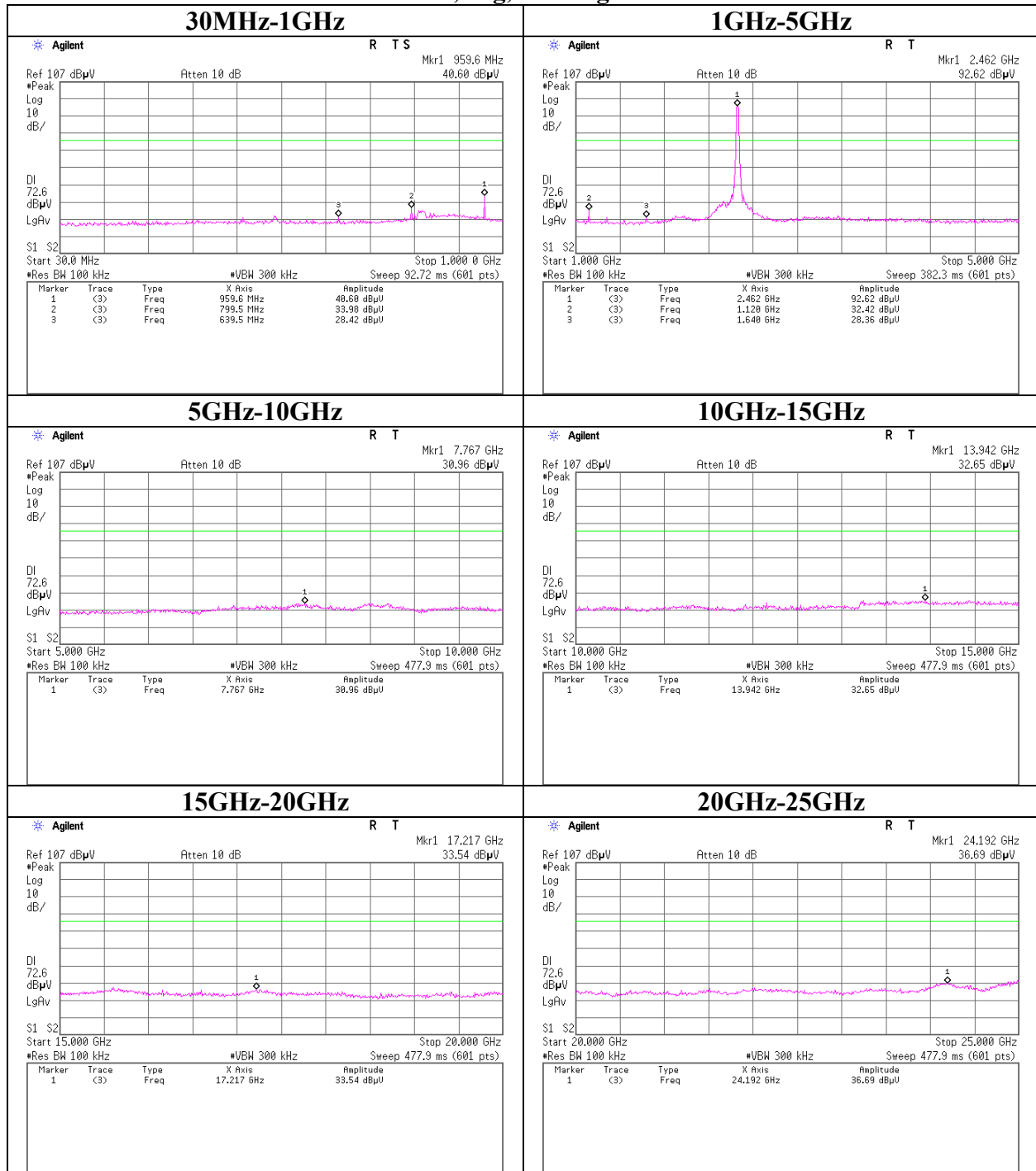
Conducted Spurious Emission

Tx, 11g, Ch: Mid

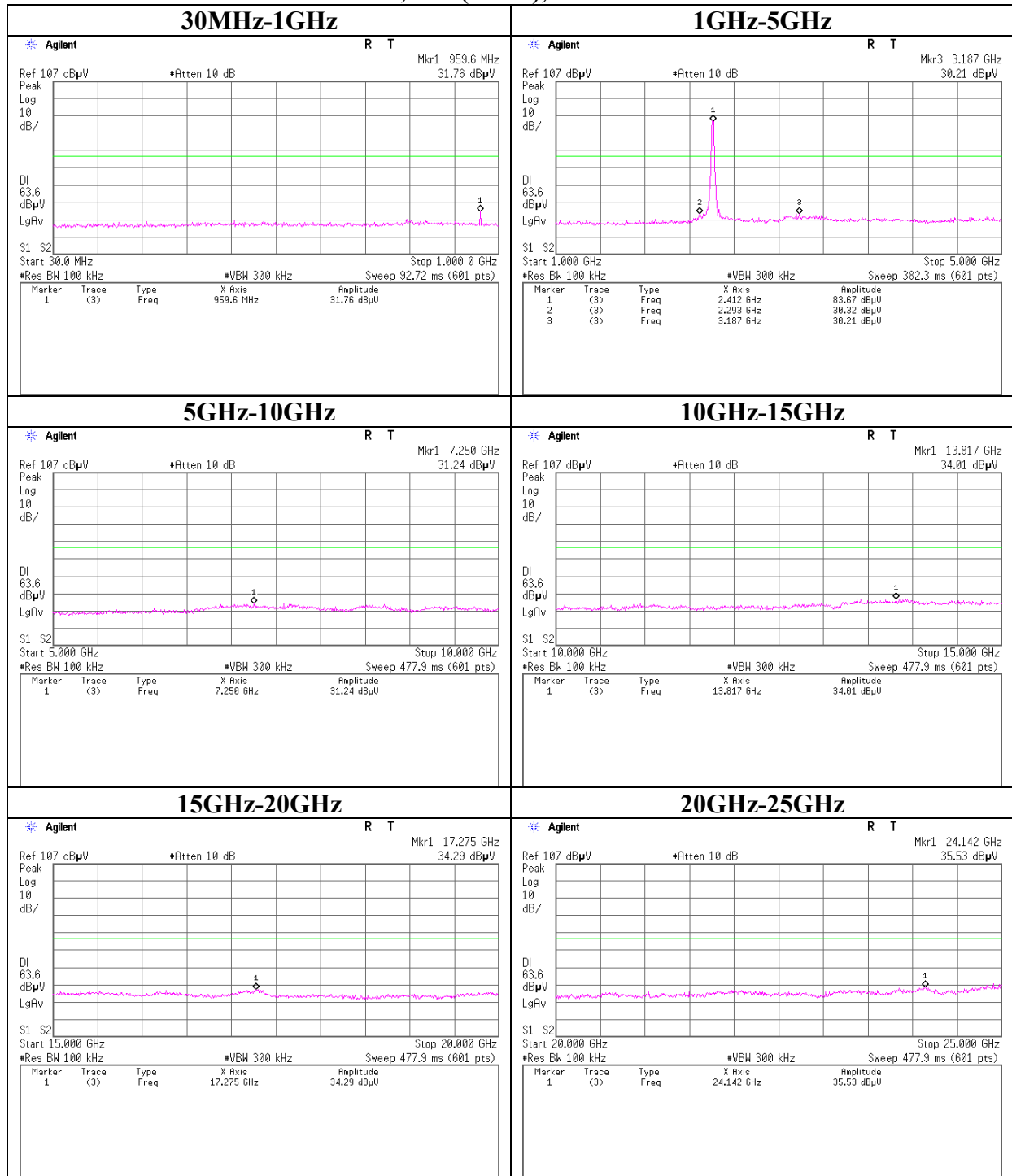


Conducted Spurious Emission

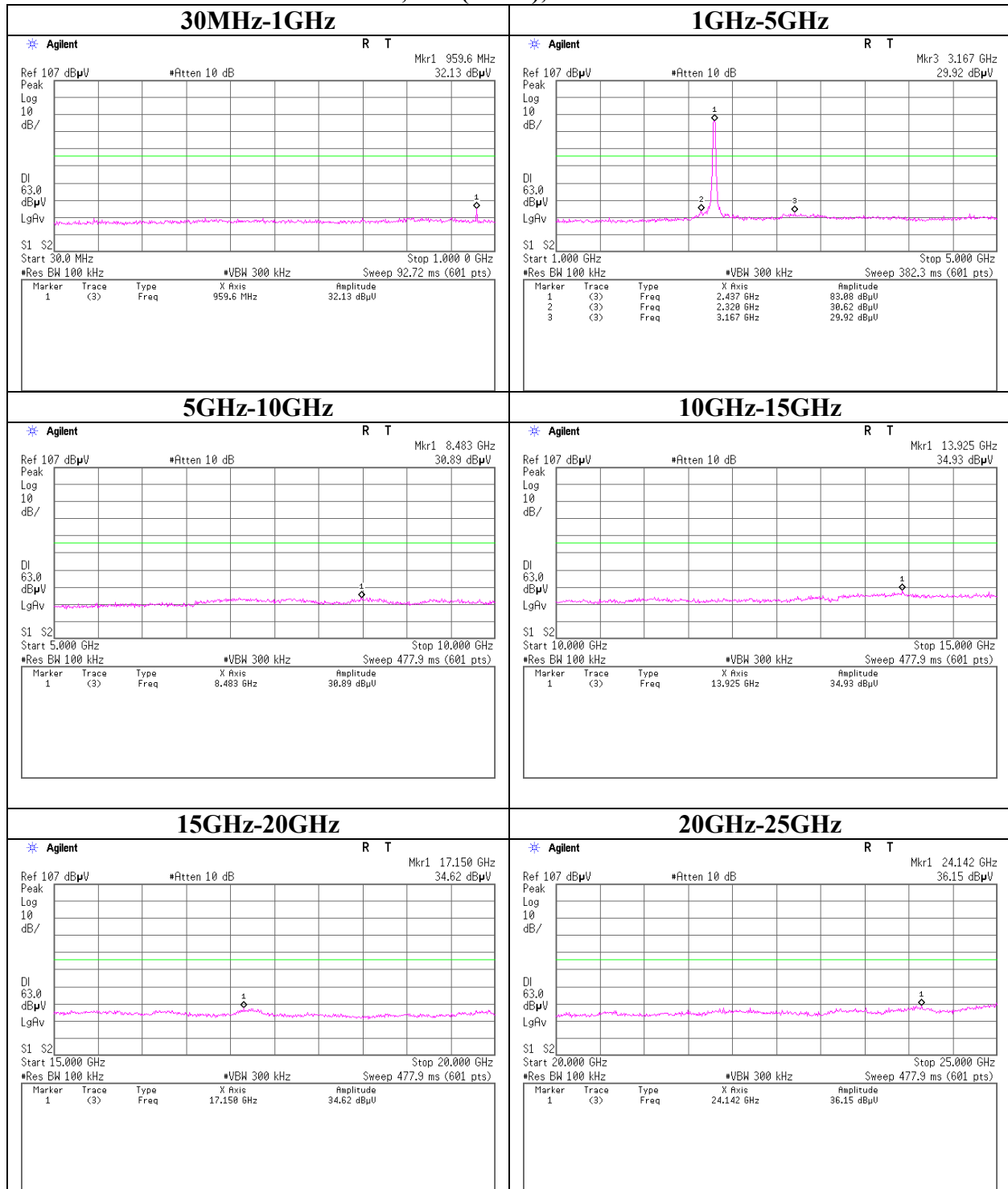
Tx, 11g, Ch: High



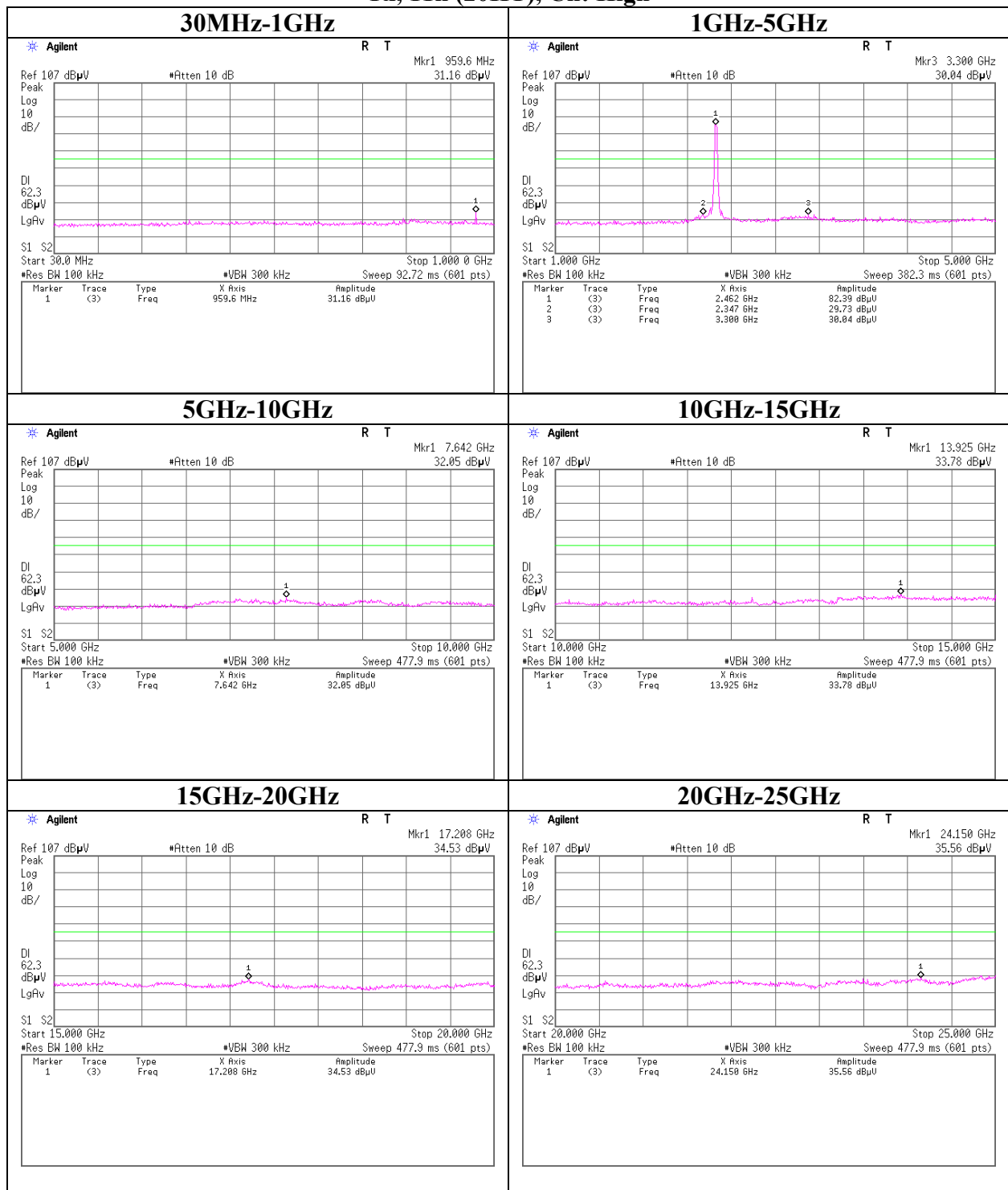
Conducted Spurious Emission
Tx, 11n (20HT), Ch: Low



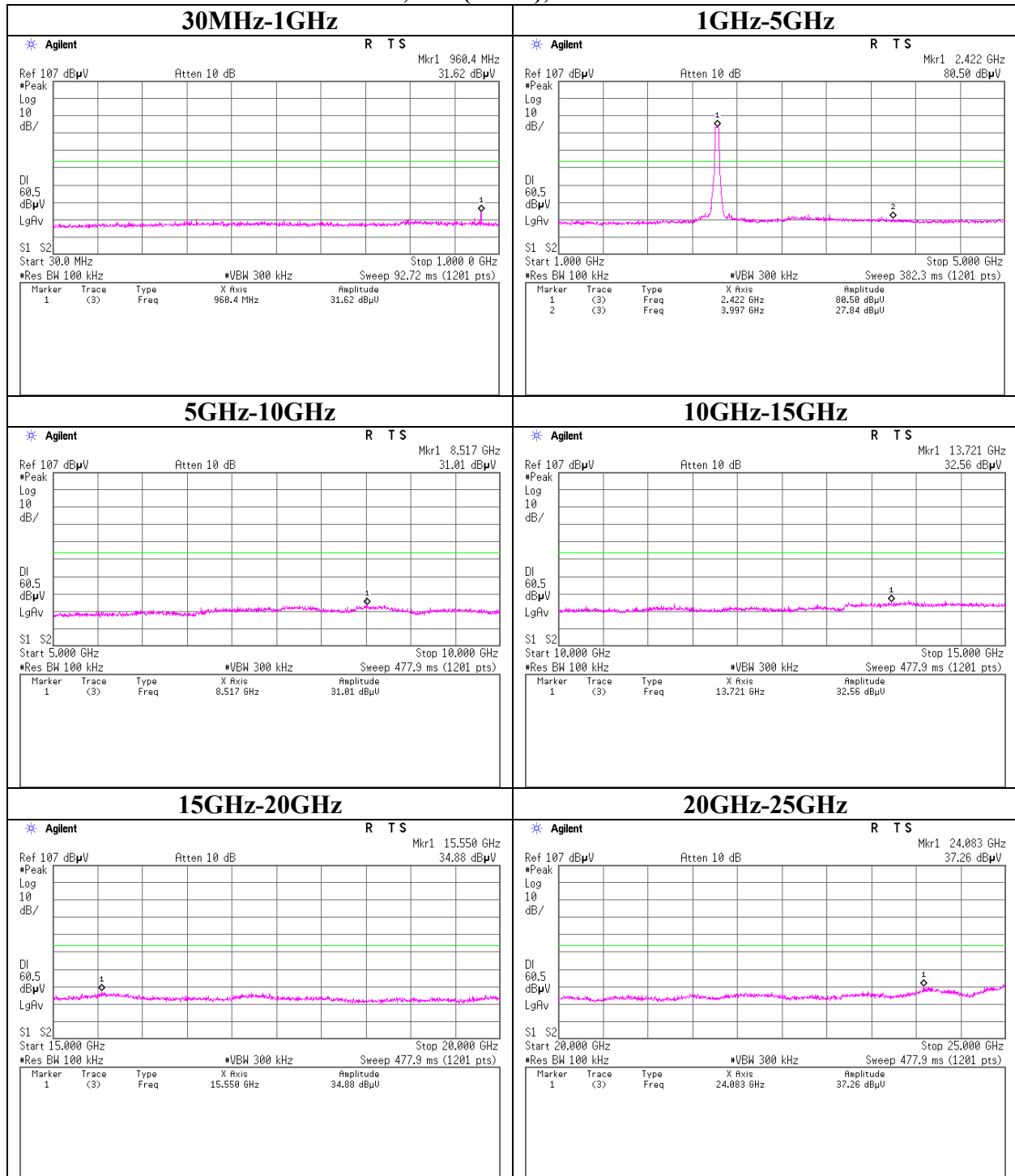
Conducted Spurious Emission
Tx, 11n (20HT), Ch: Mid



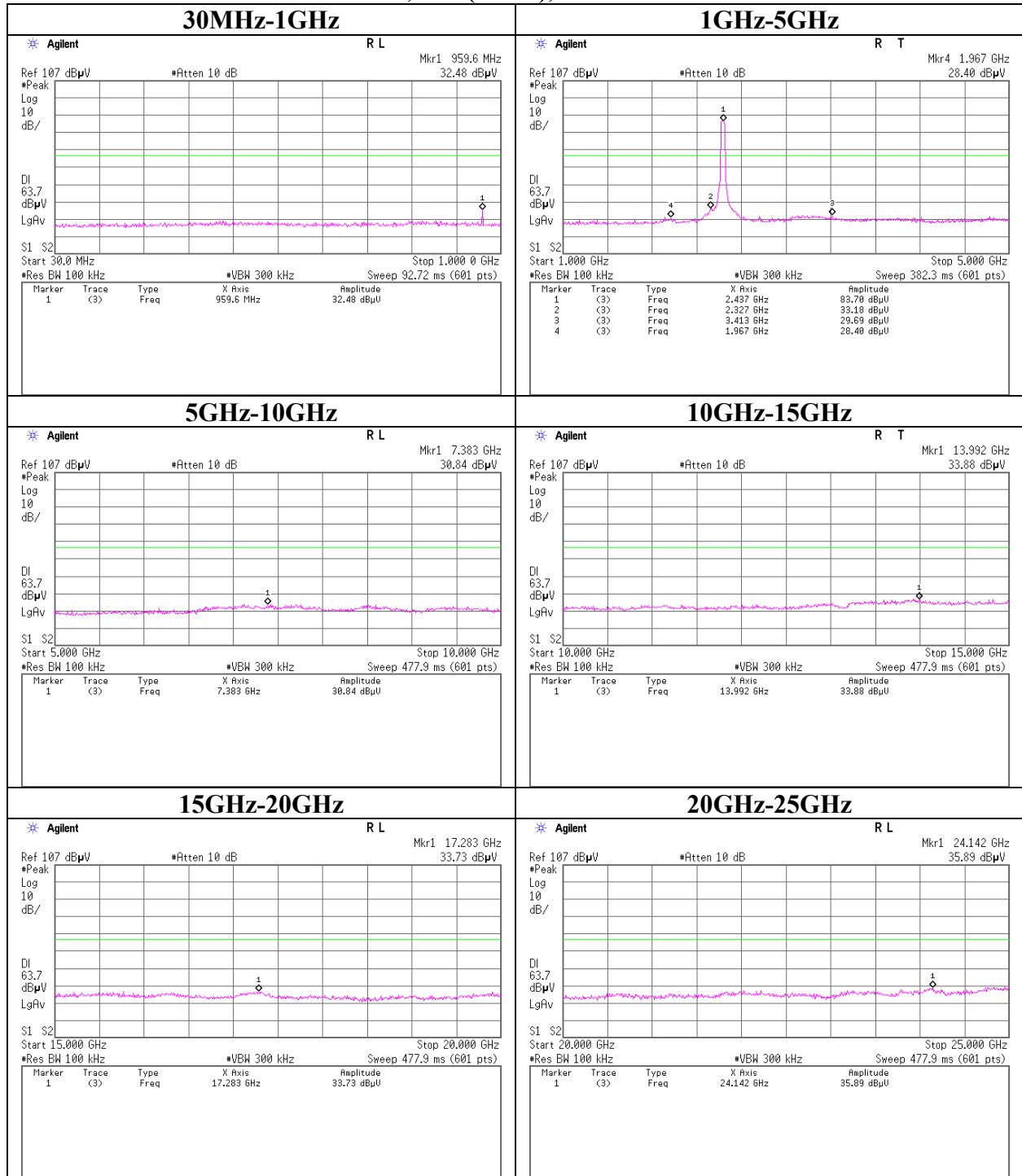
Conducted Spurious Emission
Tx, 11n (20HT), Ch: High



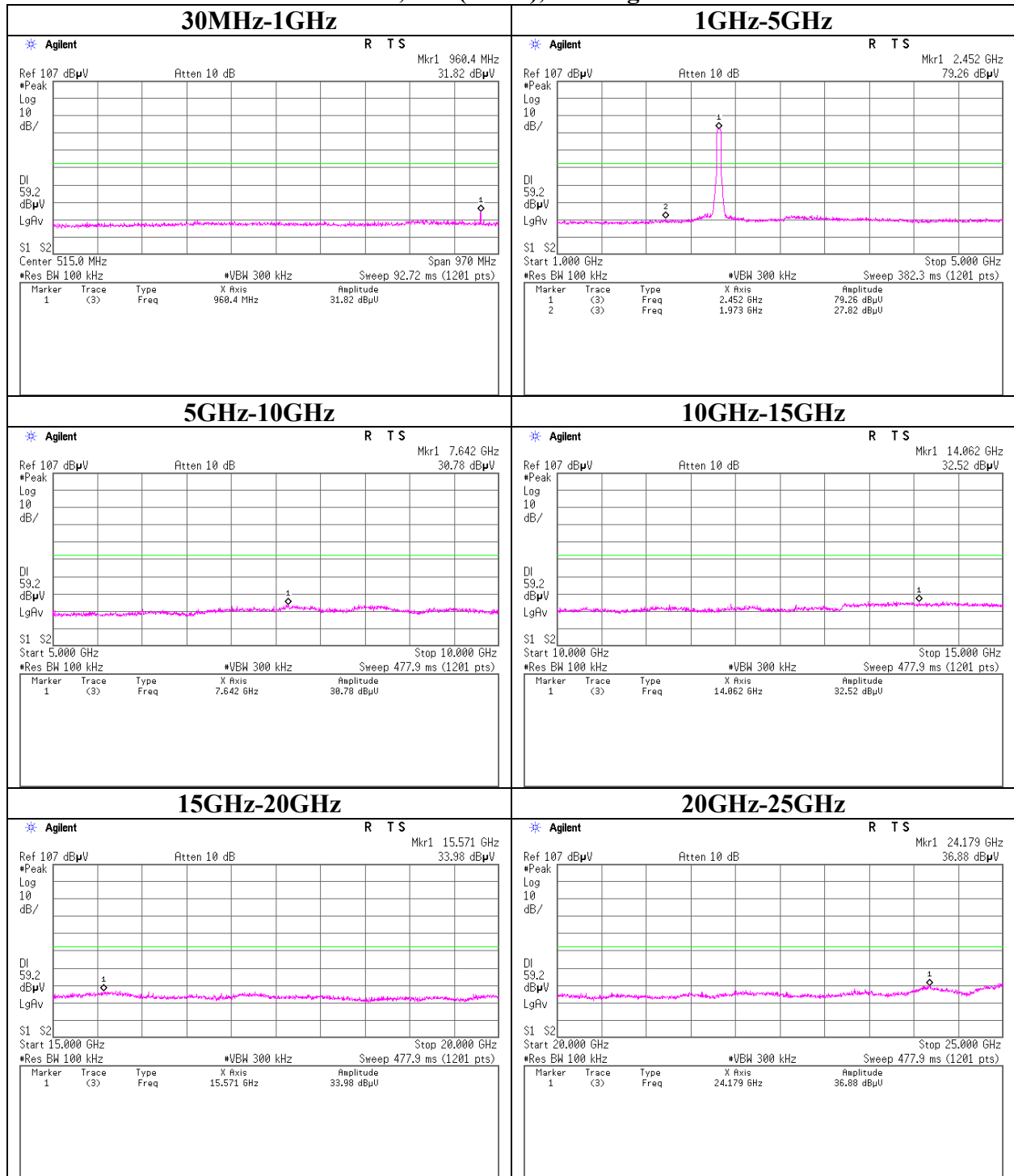
Conducted Spurious Emission
Tx, 11n (40HT), Ch: Low



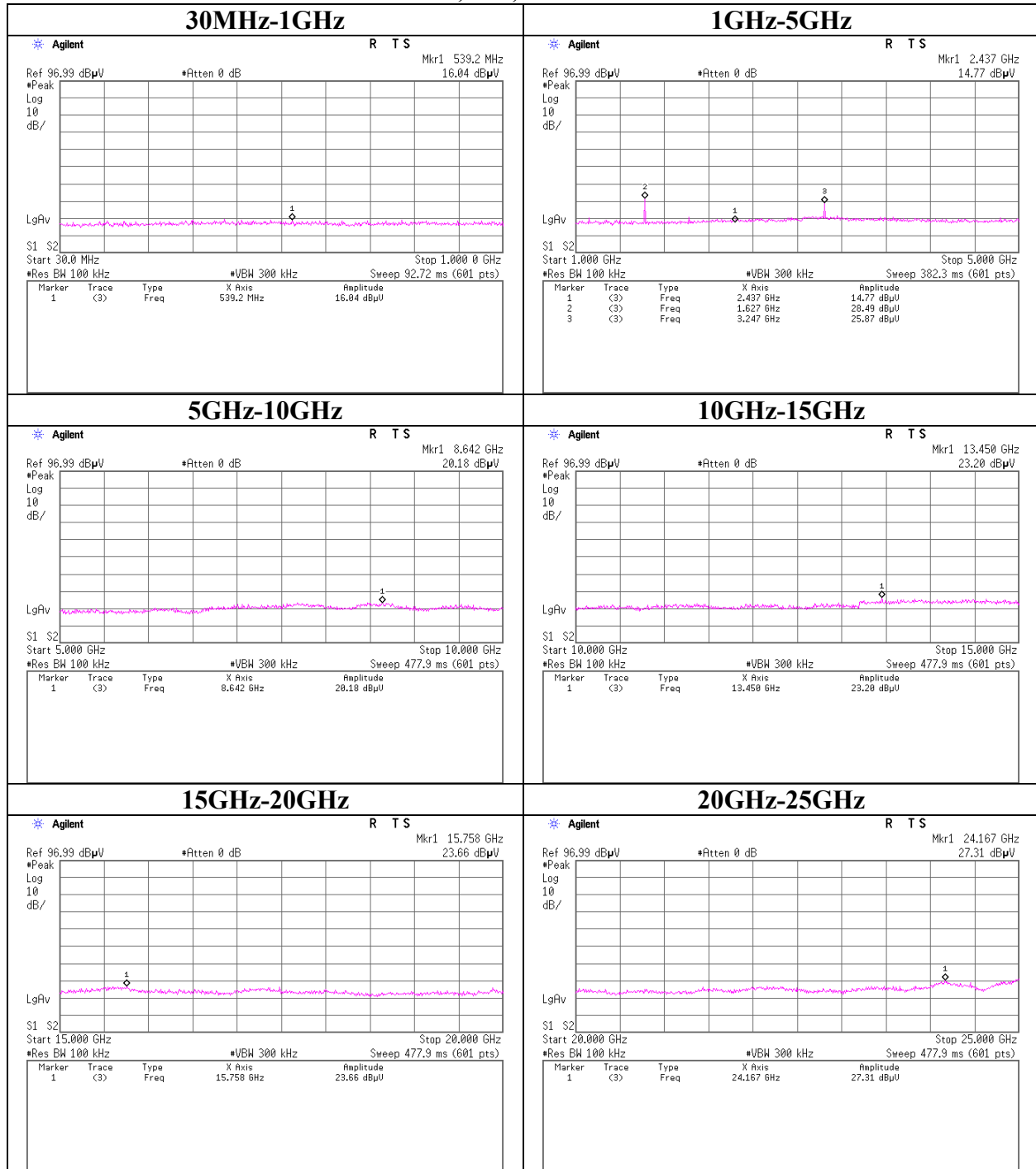
Conducted Spurious Emission
Tx, 11n (40HT), Ch: Mid



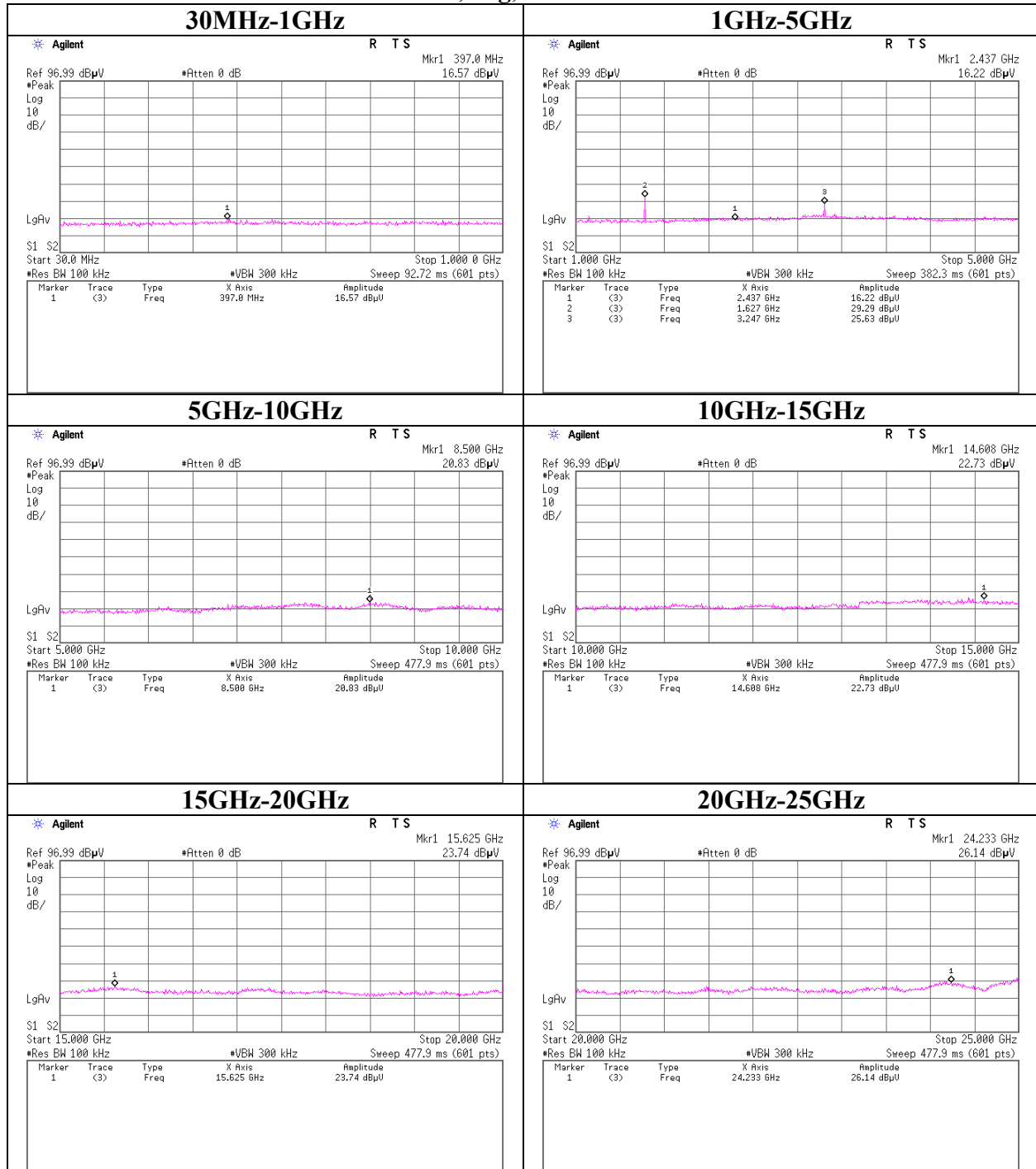
Conducted Spurious Emission
Tx, 11n (40HT), Ch: High



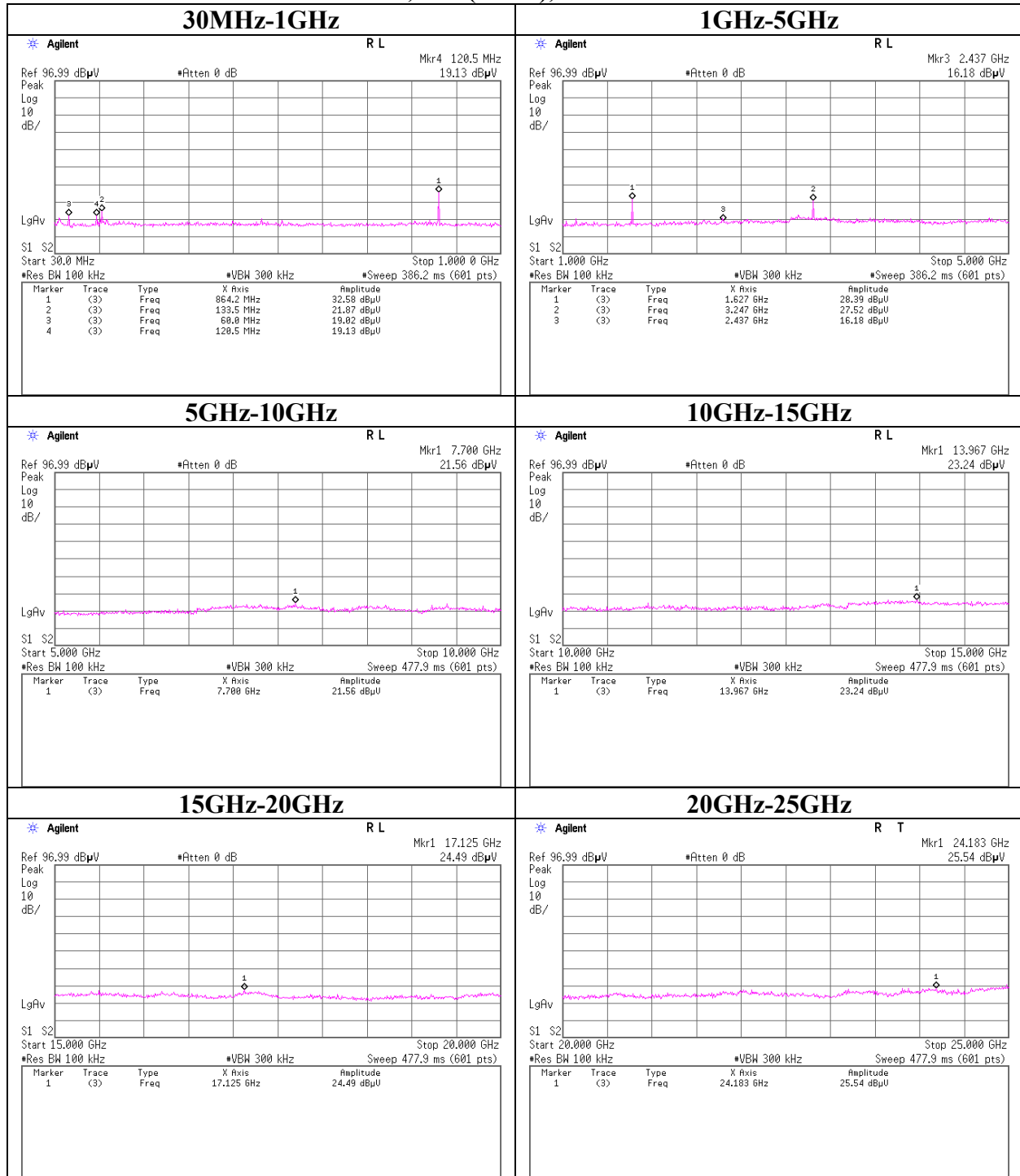
Conducted Spurious Emission
Rx, 11b, Ch: Mid



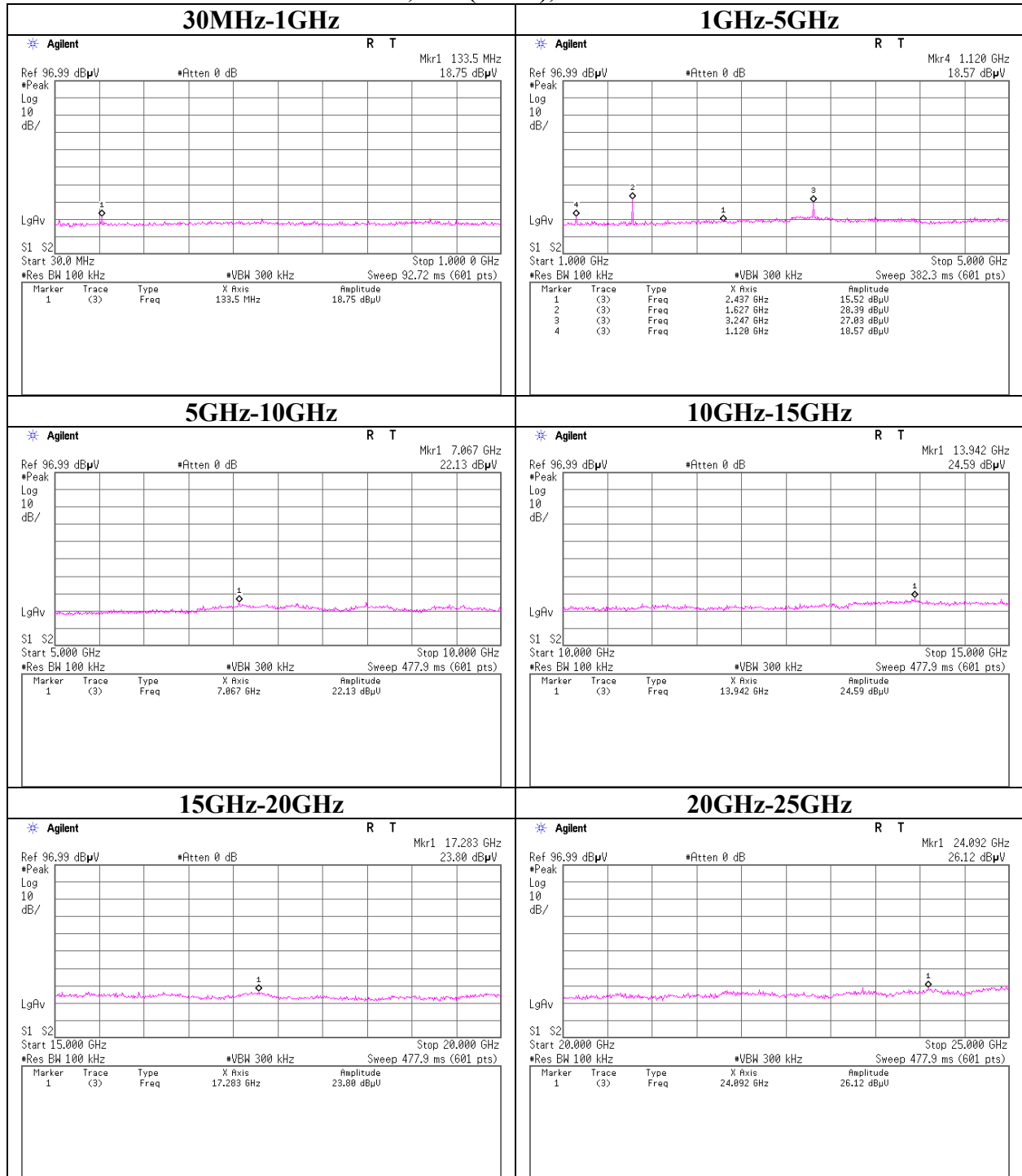
Conducted Spurious Emission
Rx, 11g, Ch: Mid



Conducted Spurious Emission
Rx, 11n (20HT), Ch: Mid

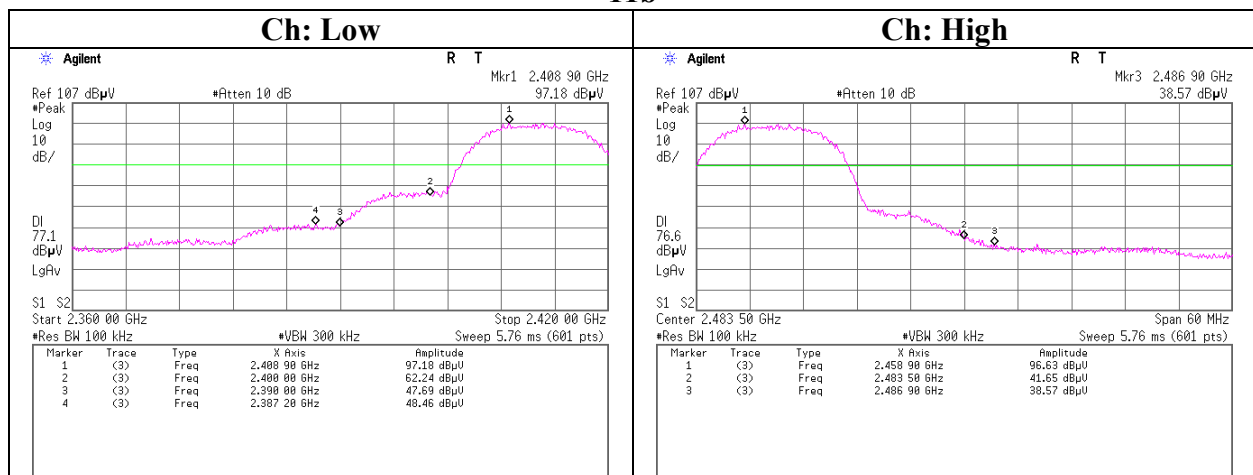


Conducted Spurious Emission
Rx, 11n (40HT), Ch: Mid

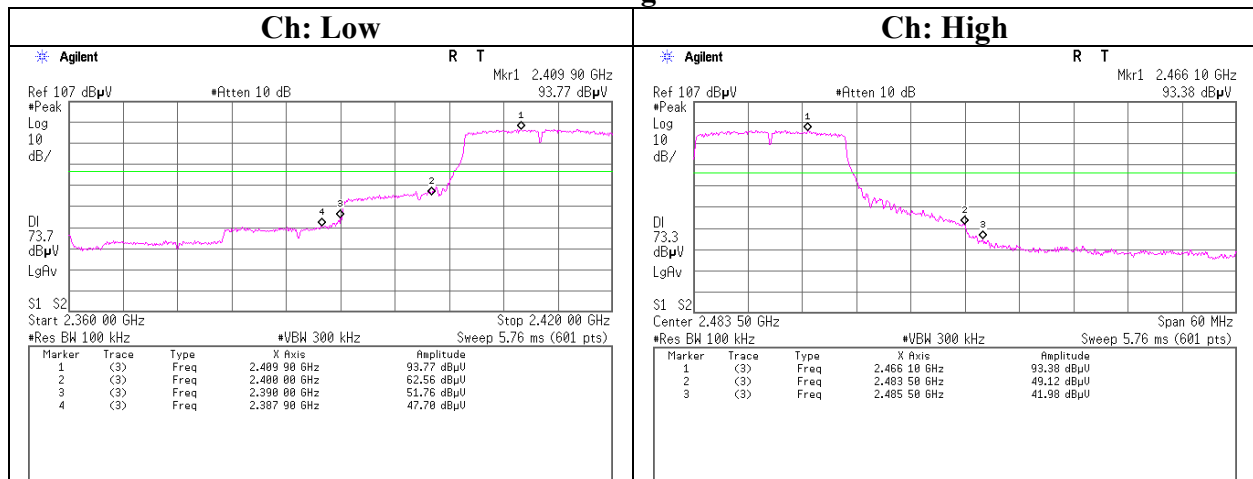


Conducted emission Band Edge compliance

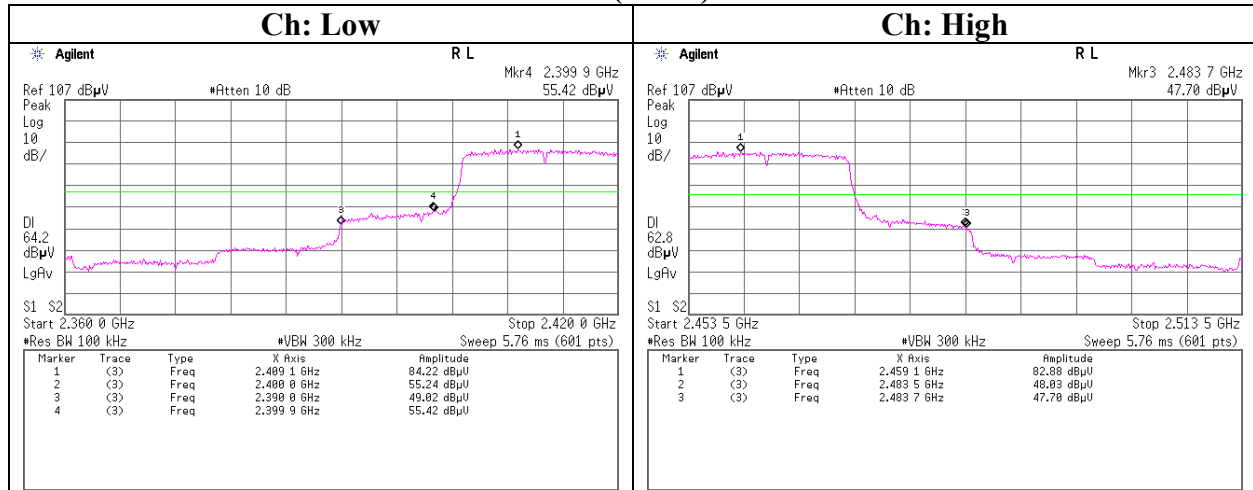
11b



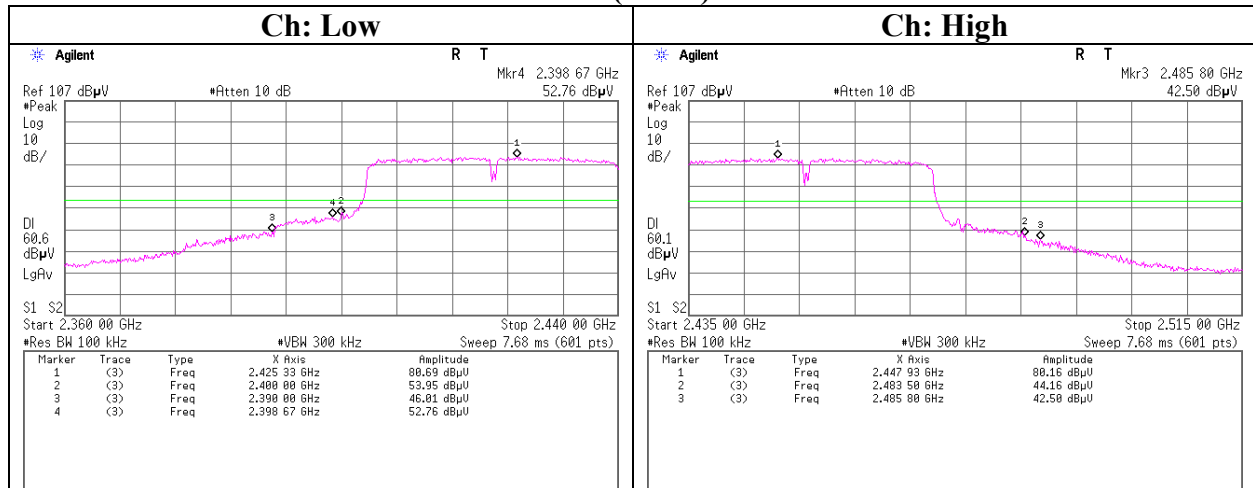
11g



Conducted emission Band Edge compliance
11n (20HT)



11n (40HT)



Power Density
11b / 11g

UL Japan, Inc.

Head Office EMC Lab. No.6 Measurement room

Company SANYO Electric Co., Ltd
Equipment WLAN Module
Model No. 1AV4U19B25500
Serial No. 001F1F3E7077
Power AC 120V / 60 Hz
Mode Transmitting mode

Regulation FCC15.247(e)/RSS-210A8.2(b)
Test Distance -
Date 03/09/2009 03/10/2009
Temperature 16 deg. C 21 deg. C
Humidity 46 % 43 %
Engineer Tomohisa Nakagawa Takeshi Choda

[IEEE802.11b]

Ch	Freq. [MHz]	Reading [dBm]	Cable [dB]	Atten. [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
Low	2409.9	-14.99	1.87	10.04	-3.08	8.00	11.08
Mid	2434.9	-15.29	1.88	10.04	-3.37	8.00	11.37
High	2459.9	-15.57	1.88	10.04	-3.65	8.00	11.65

Sample Calculation:

Result = Reading + Cable Loss + Attenuator

[IEEE802.11g]

Ch	Freq. [MHz]	Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
Low	2412.6	-16.82	1.87	10.04	-4.91	8.00	12.91
Mid	2438.9	-16.96	1.88	10.04	-5.04	8.00	13.04
High	2462.6	-17.46	1.88	10.04	-5.54	8.00	13.54

Sample Calculation:

Result = Reading + Cable Loss + Attenuator

Power Density
11n (20HT) / 11n (40HT)

UL Japan, Inc.
Head Office EMC Lab. No.6, 7 Measurement room

Company SANYO Electric Co., Ltd
Equipment WLAN Module
Model No. 1AV4U19B25500
Serial No. 001F1F3E7077
Power AC 120V / 60 Hz
Mode Transmitting mode

Regulation FCC15.247(e)/RSS-210A8.2(b)
Test Distance -
Date 03/12/2009 03/10/2009
Temperature 20 deg. C 21 deg. C
Humidity 20 % 43 %
Engineer Tomohisa Nakagawa Takeshi Choda

[IEEE802.11n, 20HT]

Ch	Freq. [MHz]	Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
Low	2409.9	-26.02	1.87	19.98	-4.17	8.00	12.17
Mid	2437.6	-26.50	1.87	19.98	-4.65	8.00	12.65
High	2462.6	-26.96	1.88	19.98	-5.10	8.00	13.10

Sample Calculation:

Result = Reading + Cable Loss + Attenuator

[IEEE802.11n, 40HT]

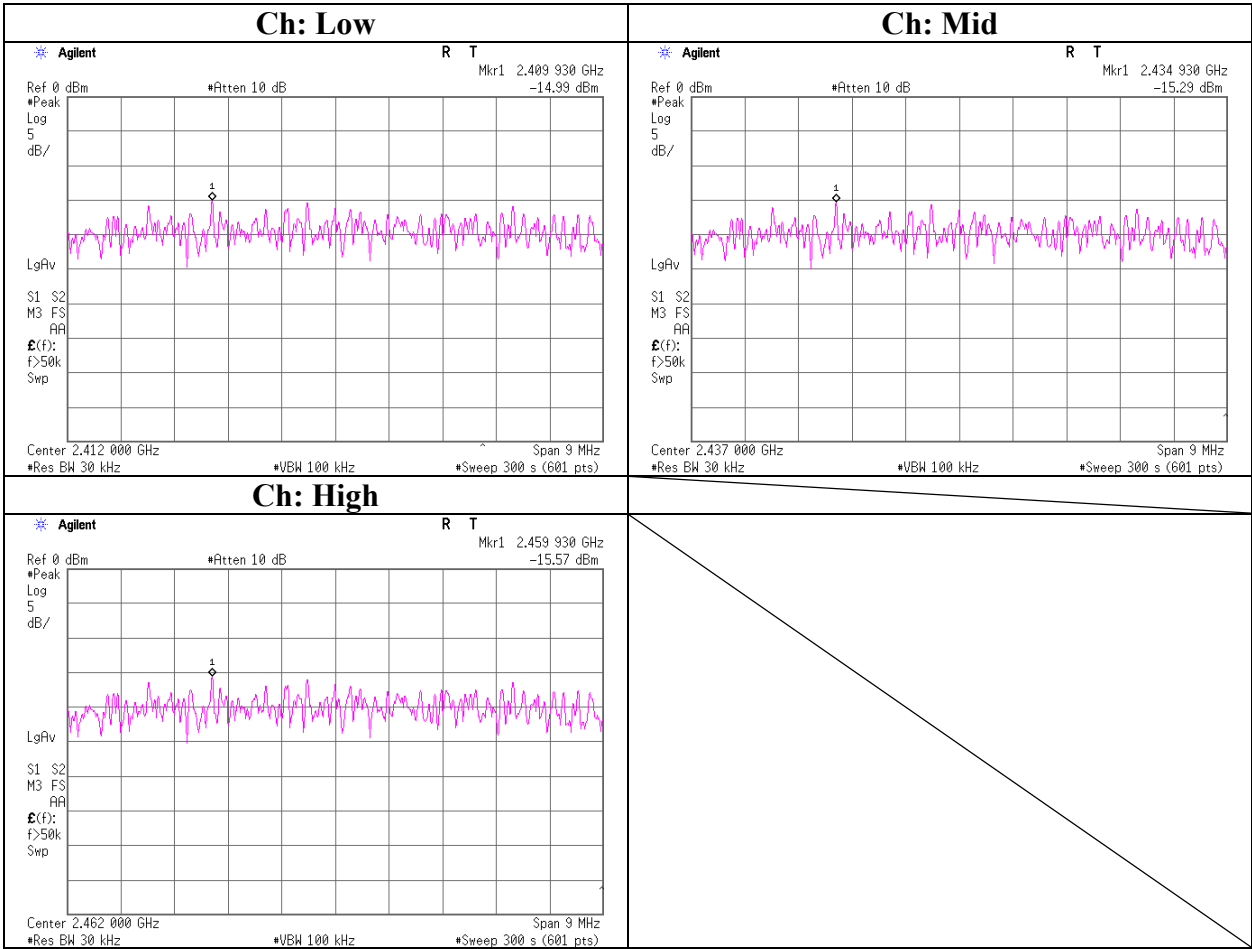
Ch	Freq. [MHz]	Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
Low	2414.1	-29.30	1.87	19.98	-7.45	8.00	15.45
Mid	2429.1	-29.47	1.87	19.98	-7.62	8.00	15.62
High	2444.1	-29.65	1.87	19.98	-7.80	8.00	15.80

Sample Calculation:

Result = Reading + Cable Loss + Attenuator

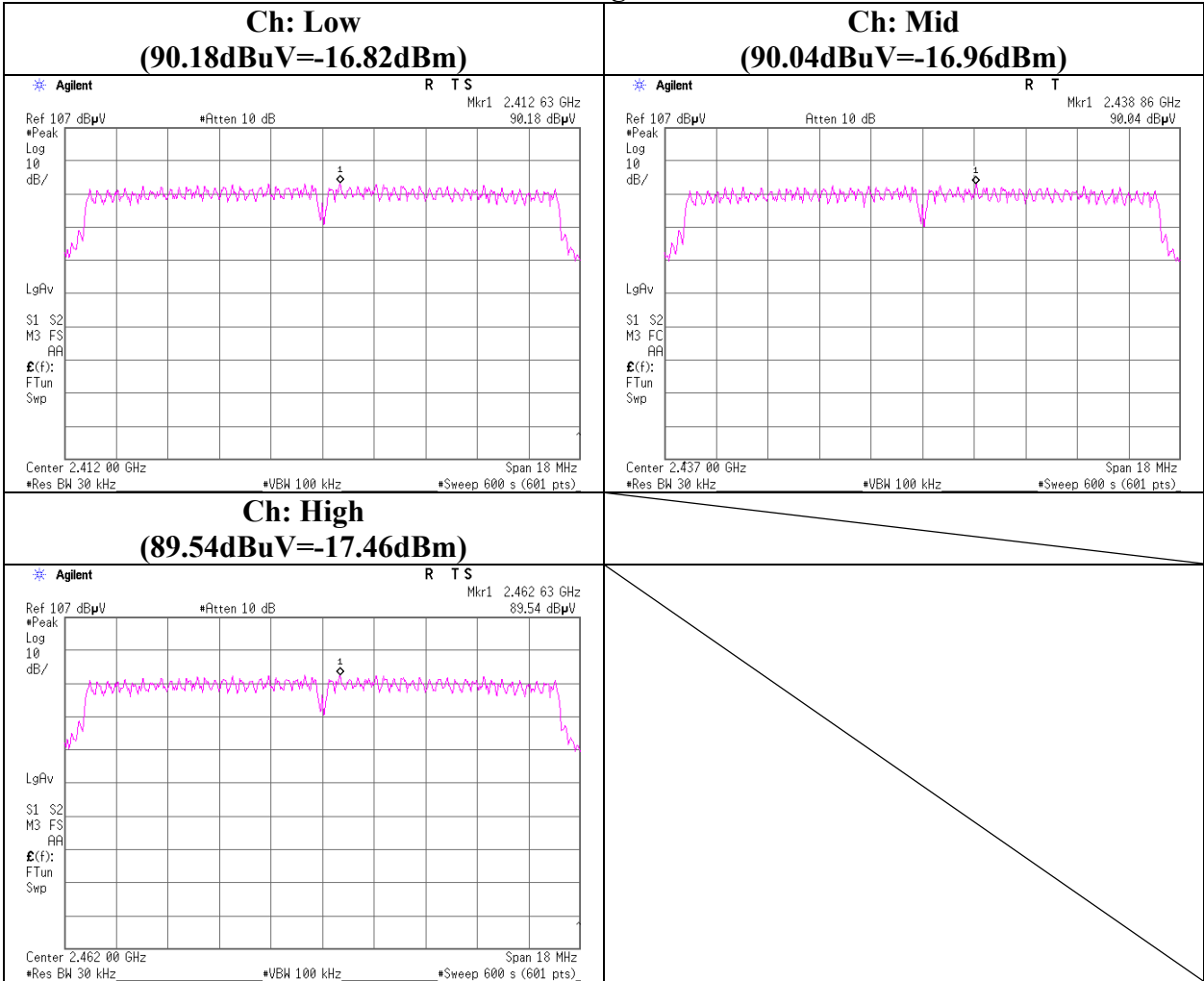
Power Density

11b

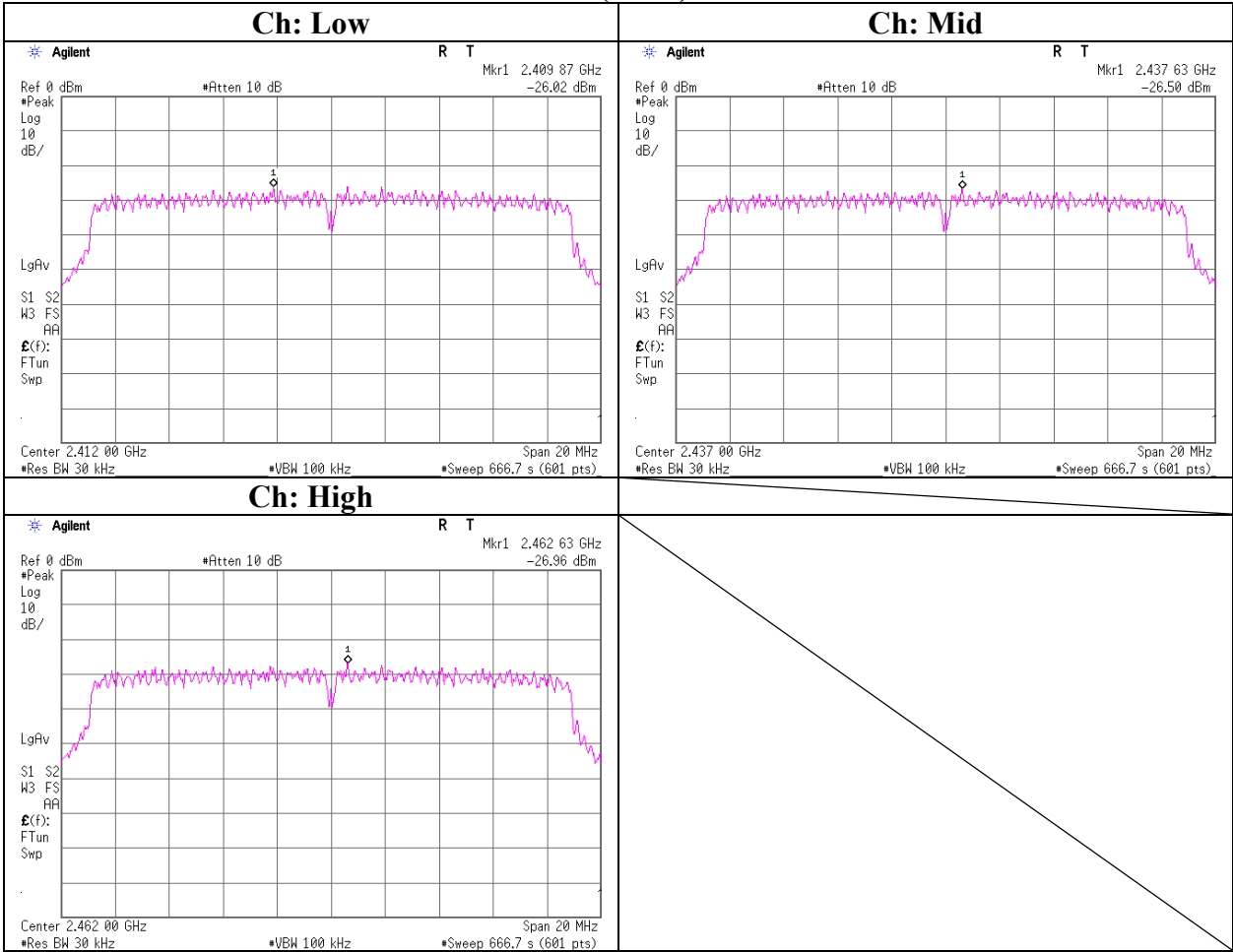


Power Density

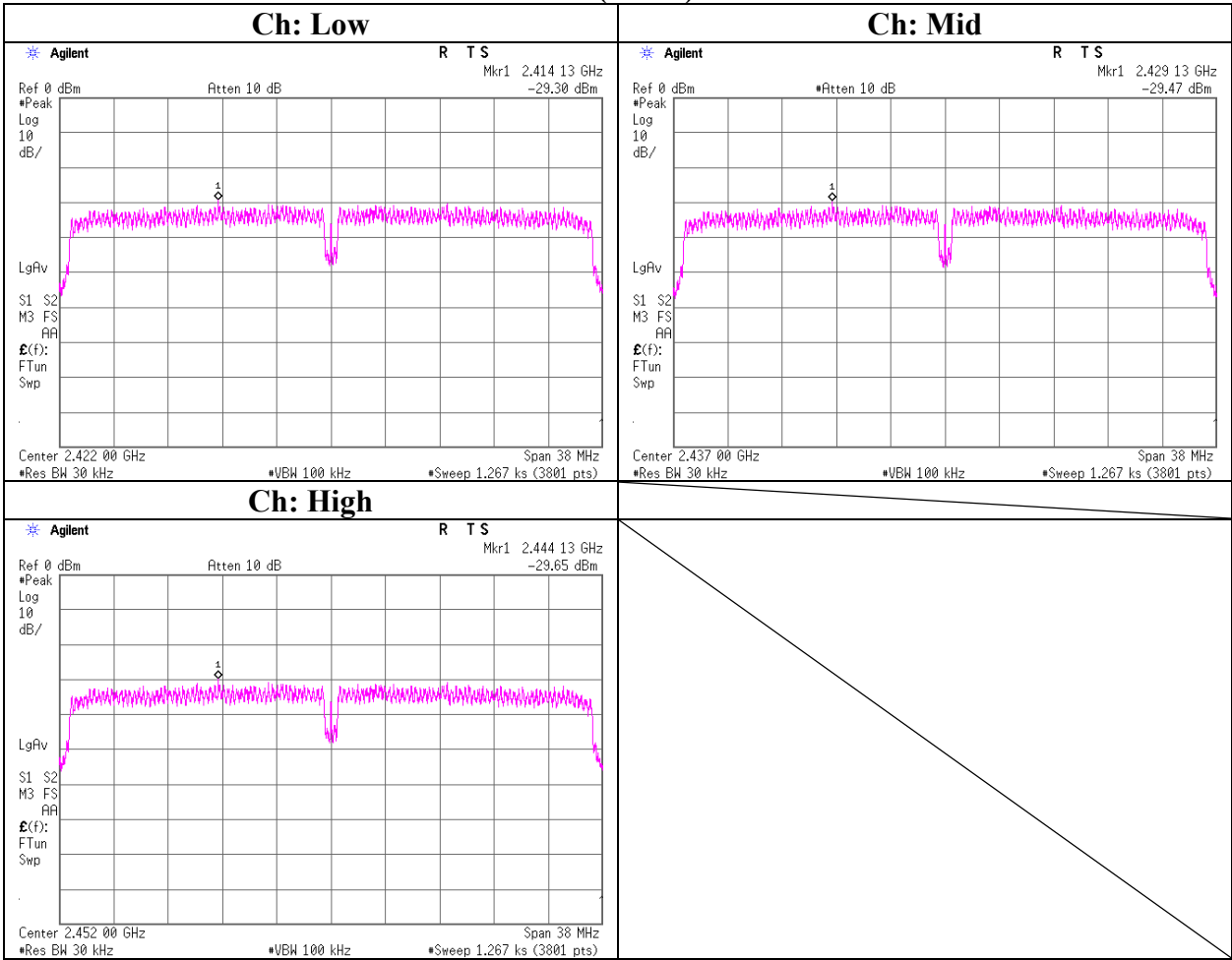
11g



Power Density
11n (20HT)

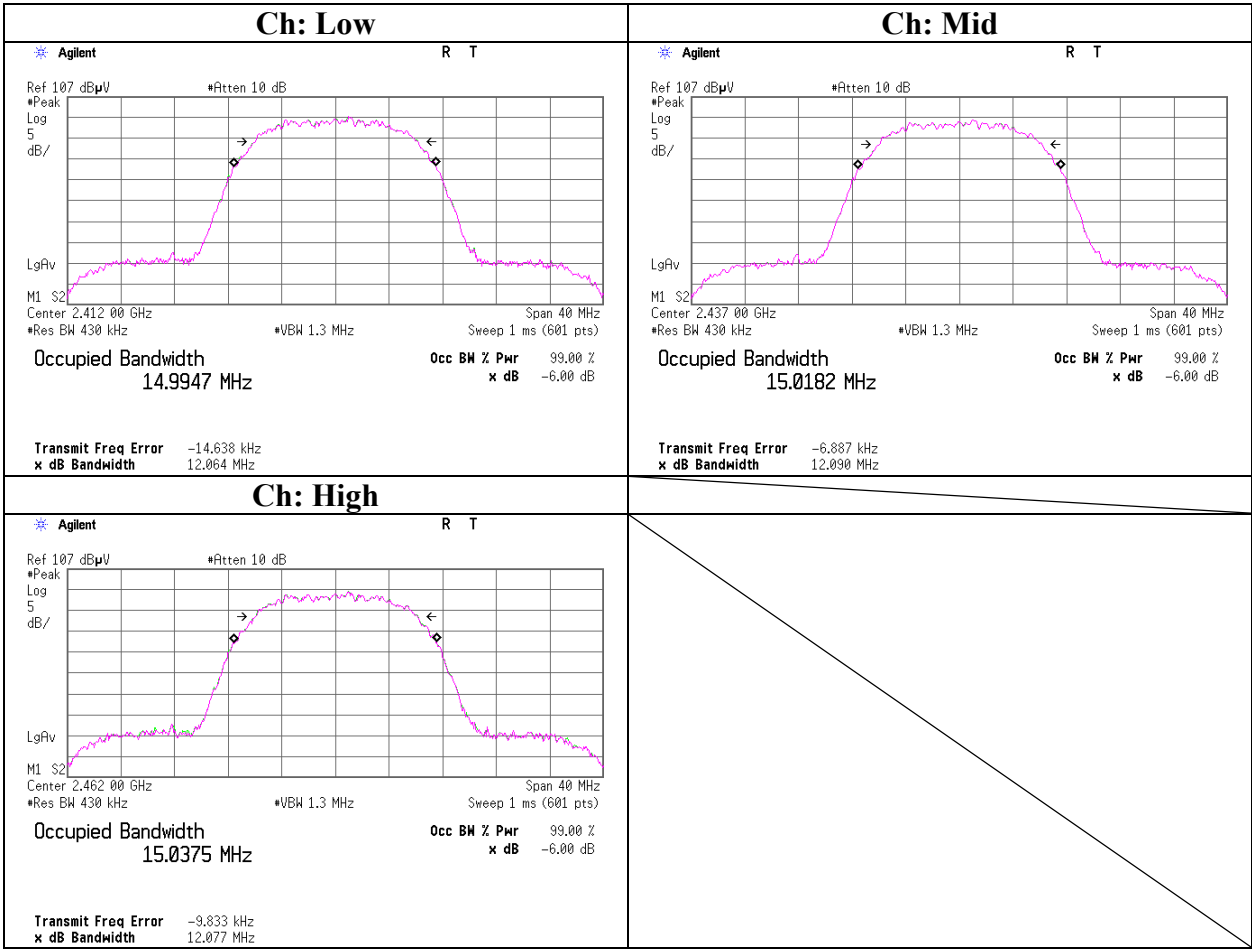


Power Density
11n (40HT)



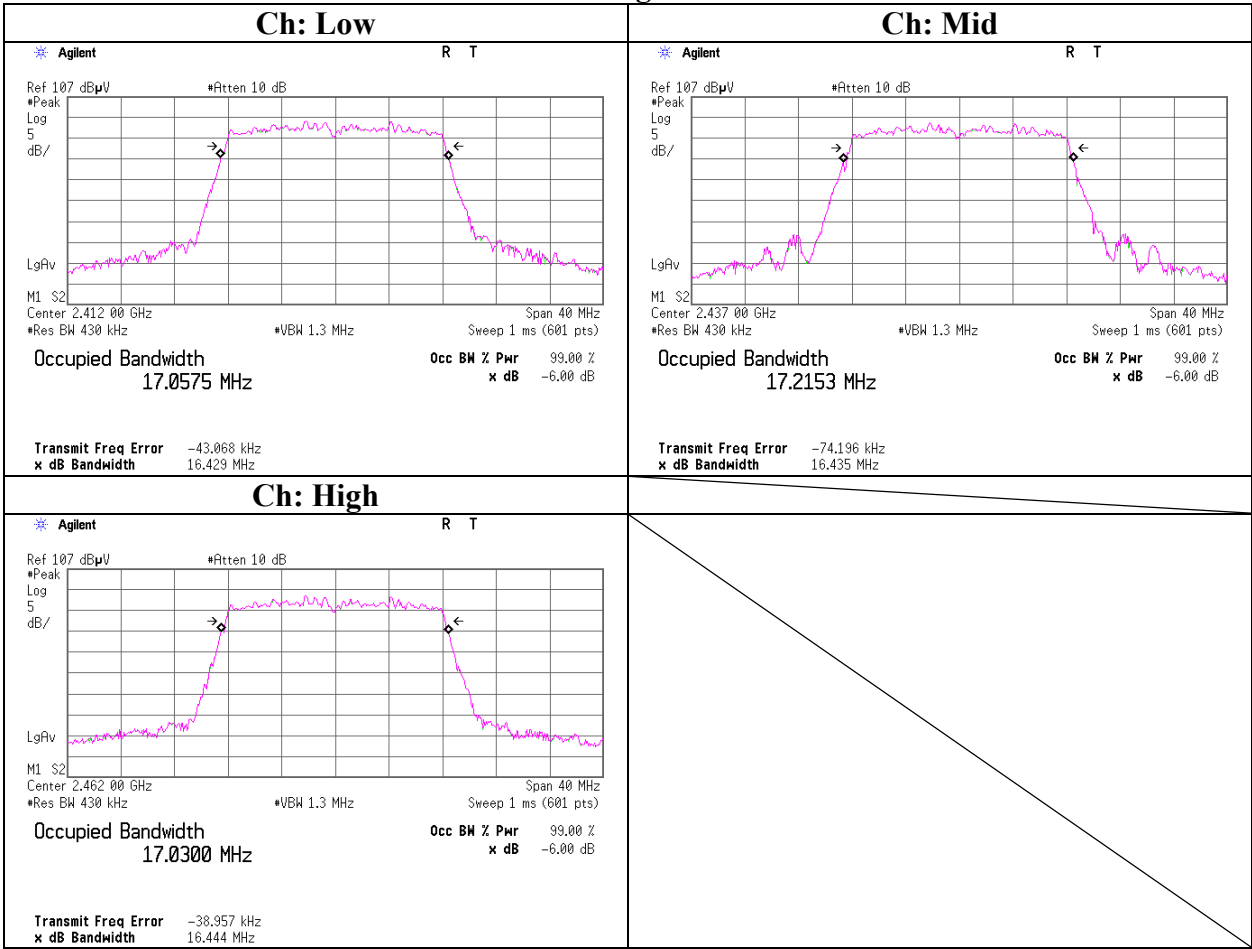
99%Occupied Bandwidth

11b



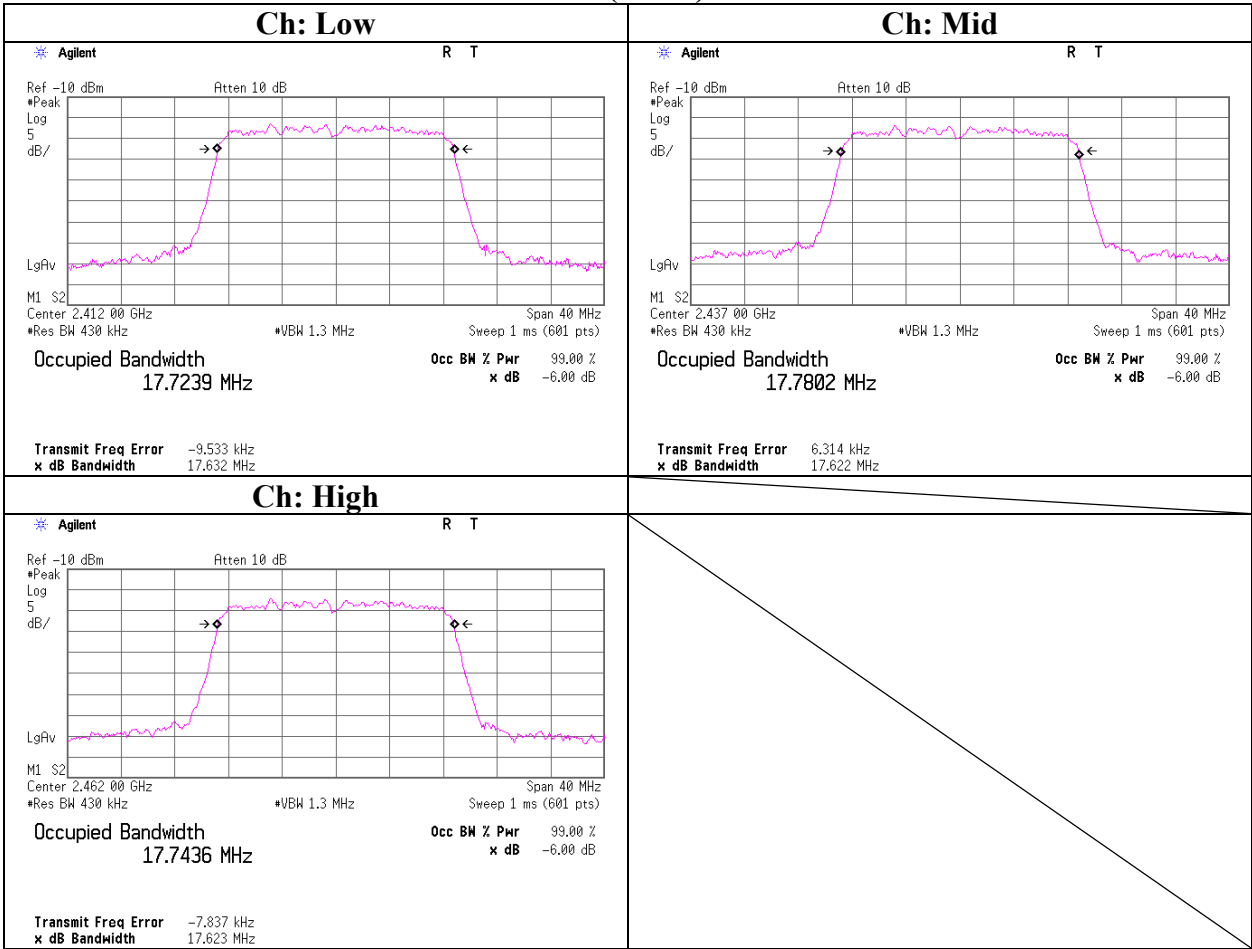
99%Occupied Bandwidth

11g



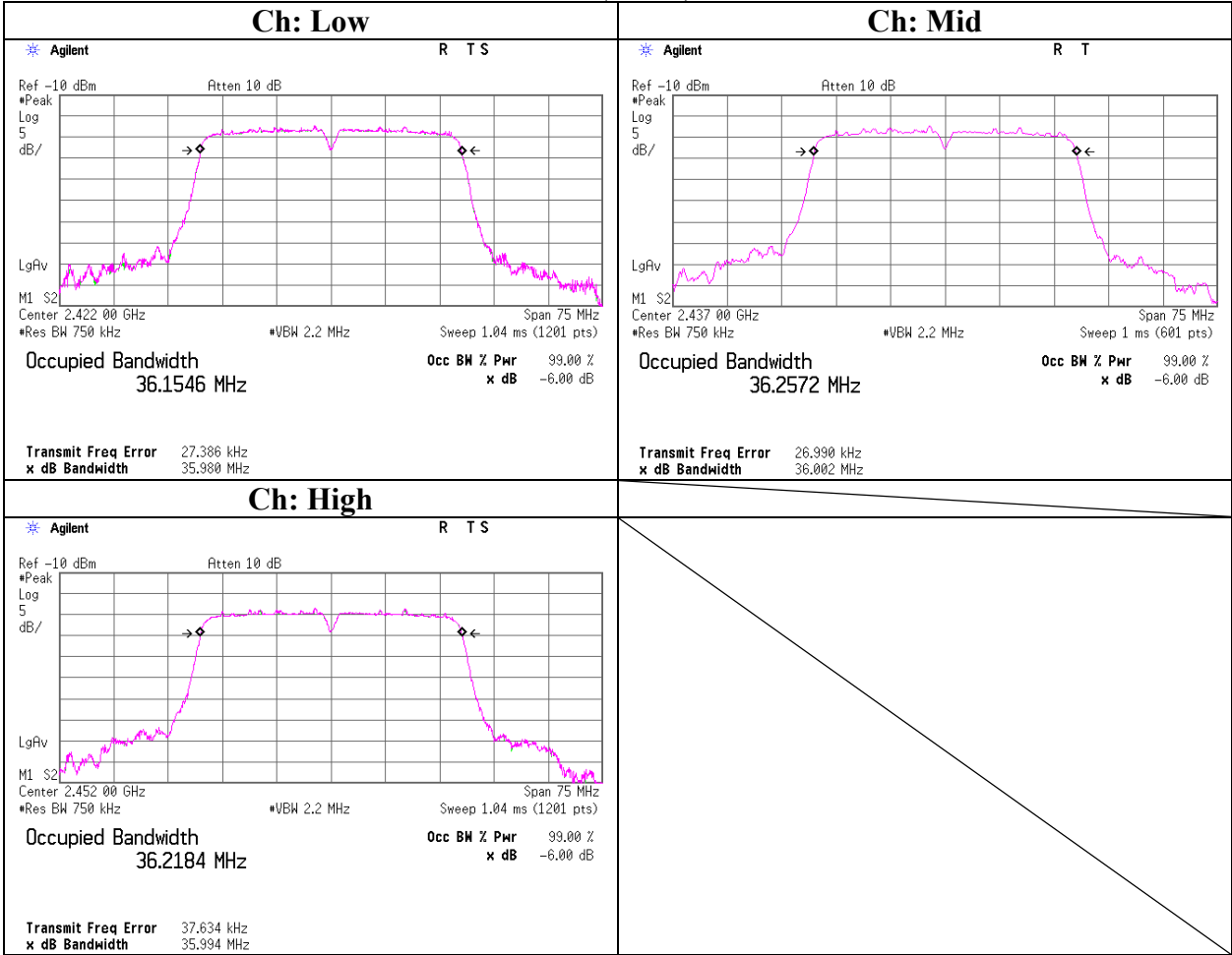
99%Occupied Bandwidth

11n (20HT)



99%Occupied Bandwidth

11n (40HT)



APPENDIX 3: Test instruments

EMI test equipment(1/2)

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
MHA-20	Horn Antenna 1-18GHz	Schwarzbeck	BBHA9120D	258	RE	2008/04/23 * 12
MCC-56	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	174410(1m) / 284655(5m)	RE	2009/01/07 * 12
MPA-11	MicroWave System Amplifier	Agilent	83017A	MY39500779	RE	2009/03/19 * 12
MHF-19	High Pass Filter 3.5-18.0GHz	TOKIMEC	TF323DCA	602	RE	2008/12/16 * 12
MCC-78	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	278993/4	RE	2008/12/17 * 12
MTR-08	Test Receiver	Rohde & Schwarz	ESCI	100767	RE	2008/06/12 * 12
MHA-16	Horn Antenna 15-40GHz	Schwarzbeck	BBHA9170	BBHA917030 6	RE	2008/04/30 * 12
MAEC-02	Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-06902	RE	2008/04/17 * 12
MOS-22	Thermo-Hygrometer	Custom	CTH-201	0003	RE	2009/02/05 * 12
MJM-05	Measure	PROMART	SEN1955	-	RE	-
MRENT-62	Spectrum Analyzer	Agilent	E4448A	MY46180856	RE	2008/11/25 * 12
MTR-03	Test Receiver	Rohde & Schwarz	ESCI	100300	RE	2008/04/02 * 12
MBA-02	Biconical Antenna	Schwarzbeck	BBA9106	VHA91032008	RE	2008/10/18 * 12
MLA-02	Logperiodic Antenna	Schwarzbeck	USLP9143	201	RE	2008/10/18 * 12
MCC-12	Coaxial Cable	Fujikura/Agilent	-	-	RE	2009/02/16 * 12
MAT-07	Attenuator(6dB)	Weinschel Corp	2	BK7970	RE	2008/11/14 * 12
MPA-09	Pre Amplifier	Agilent	8447D	2944A10845	RE	2008/09/04 * 12
MHA-06	Horn Antenna 1-18GHz	Schwarzbeck	BBHA9120D	254	RE	2009/01/31 * 12
MCC-47	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	295123(5m) / 287573(1m)	RE	2008/11/27 * 12
MPA-10	Pre Amplifier	Agilent	8449B	3008A02142	RE	2008/09/17 * 12
MHA-02	Horn Antenna 18-26.5GHz	EMCO	3160-09	1265	RE	2009/01/31 * 12
MHF-18	High Pass Filter 3.5-18.0GHz	TOKIMEC	TF323DCA	7002	RE	2008/12/16 * 12
MCC-77	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	278942/4	RE	2008/12/17 * 12
MBA-03	Biconical Antenna	Schwarzbeck	BBA9106	1915	RE	2009/01/19 * 12
MLA-03	Logperiodic Antenna	Schwarzbeck	USLP9143	174	RE	2009/01/10 * 12
MCC-51	Coaxial cable	UL Japan	-	-	RE	2008/07/18 * 12
MAT-30	Attenuator(6dB)	TME	UFA-01	-	RE	2009/03/02 * 12
MPA-13	Pre Amplifier	SONOMA INSTRUMENT	310	260834	RE	2009/03/18 * 12

EMI test equipment(2/2)

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
CUST-MSTW-14	EMI measurement program	TSJ	TEPTO-DV	-	RE/CE	-
MAEC-03	Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-10005	RE/CE	2009/02/02 * 12
MOS-13	Thermo-Hygrometer	Custom	CTH-180	-	RE/CE	2009/02/06 * 12
MJM-06	Measure	PROMART	SEN1955	-	RE/CE	-
MSA-09	Spectrum Analyzer	Advantest	R3273	95090115	RE/CE	2008/12/24 * 12
MTR-08	Test Receiver	Rohde & Schwarz	ESCI	100767	RE/CE	2008/06/12 * 12
MLS-06	LISN(AMN)	Schwarzbeck	NSLK8127	8127363	CE(EUT)	2009/02/18 * 12
MLS-07	LISN(AMN)	Schwarzbeck	NSLK8127	8127364	CE(AE)	2009/02/18 * 12
MTA-07	Terminator	MCL	BTRM-50	1 9944	CE	2009/02/17 * 12
MCC-112	Coaxial cable	Fujikura/Suhner/TSJ	-	-	CE	2008/07/03 * 12
MPSE-11	Power sensor	Anritsu	MA2411B	011737	AT	2008/09/24 * 12
MPM-08	Power Meter	Anritsu	ML2495A	6K00003338	AT	2008/09/24 * 12
MAT-21	Attenuator(20dB) (above1GHz)	HIROSE ELECTRIC CO.,LTD.	AT-120	901247	AT	2009/01/16 * 12
MAT-25	Attenuator(10dB) (above1GHz)	Agilent	8493C	71642	AT	2008/06/25 * 12
MCC-114	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	290212/4	AT	2008/08/01 * 12
MSA-04	Spectrum Analyzer	Agilent	E4448A	US44300523	AT	2008/08/18 * 12
MOS-14	Thermo-Hygrometer	Custom	CTH-180	-	AT	2009/02/04 * 12
MOS-04	Digital Humidity Indicator	N.T	NT-1800	MOS04	AT	2009/02/04 * 12
MCC-115	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	290211/4	AT	2008/08/04 * 12
MCC-116	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	290221/4	AT	2008/08/04 * 12
MOS-19	Thermo-Hygrometer	Custom	CTH-201	0001	AT	2008/12/08 * 12
MAT-09	Attenuator(6dB)	Weinschel Corp	2	BK7973	RE	2008/11/14 * 12

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

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

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

Test Item: CE: Conducted Emission

RE: Radiated Emission

AT: Antenna Terminal Conducted test

UL Japan, Inc.

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