

APPENDIX 2:Test instruments

EMI test equipment

Control No.	Instrument	Manufacturer	Model No	Test Item	Calibration Date * Interval(month)
MSA-03	Spectrum Analyzer	Agilent	E4448A	AT	2005/09/16 * 12
MCC-22	Microwave Cable 1G-50GHz	Storm	421-011 (90-011-080)	AT	2005/04/29 * 12
MOS-03	Digital Humidity Indicator	N.T	NT-1800	AT	2004/11/25 * 24
MAEC-02	Anechoic Chamber	TDK	Semi Anechoic Chamber 3m	RE	2005/04/11 * 12
MCC-16	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX 104	RE	2006/02/02 * 12
MCC-47	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX1 04	RE	2005/08/30 * 12
MPA-10	Pre Amplifier	Agilent	8449B	RE	2005/09/07 * 12
MHA-06	Horn Antenna	Schwarzbeck	BBHA9120D	RE	2006/01/09 * 12
MHA-01	Horn Antenna	EMCO	3160-09	RE	2006/01/09 * 12
MRENT-23	Spectrum Analyzer	Advantest	R3273	RE	2006/01/10 * 12
MCC-12	Coaxial Cable	Fujikura/Agilent	-	RE	2005/02/24 * 12
MAT-07	Attenuator(6dB)	Weinschel Corp	2	RE	2005/12/16 * 12
MTR-02	Test Receiver	Rohde & Schwarz	ESCS30	RE	2006/02/02 * 12
MPA-09	Pre Amplifier	Agilent	8447D	RE	2005/09/07 * 12
MBA-02	Biconical Antenna	Schwarzbeck	BBA9106	RE	2005/10/10 * 12
MLA-02	Logperiodic Antenna	Schwarzbeck	USLP9143	RE	2005/10/14 * 12
MOS-02	Digital Humidity Indicator	N.T	NT-1800	RE	2004/11/25 * 24
MAT-21	Attenuator(20dB)(above 1GHz)	HIROSE ELECTRIC CO.,LTD.	AT-120	AT	2006/01/10 * 12
MHA-02	Horn Antenna	EMCO	3160-09	RE (MW)	2006/01/09 * 12
MCC-25	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX1 04	RE	2005/08/30 * 12
MPSE-03	Power sensor	Agilent	E9327A	AT	2005/11/23 * 12
MPM-03	Power Meter	Rohde & Schwarz	NRVD	AT	2005/07/22 * 36

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

Test Item:

RE: Radiated Emission test

AT: Antenna Terminal Conducted test

UL Apex Co., Ltd.

Head Office EMC Lab.

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MF060b(14.06.06)

APPENDIX 3: Data of EMI test

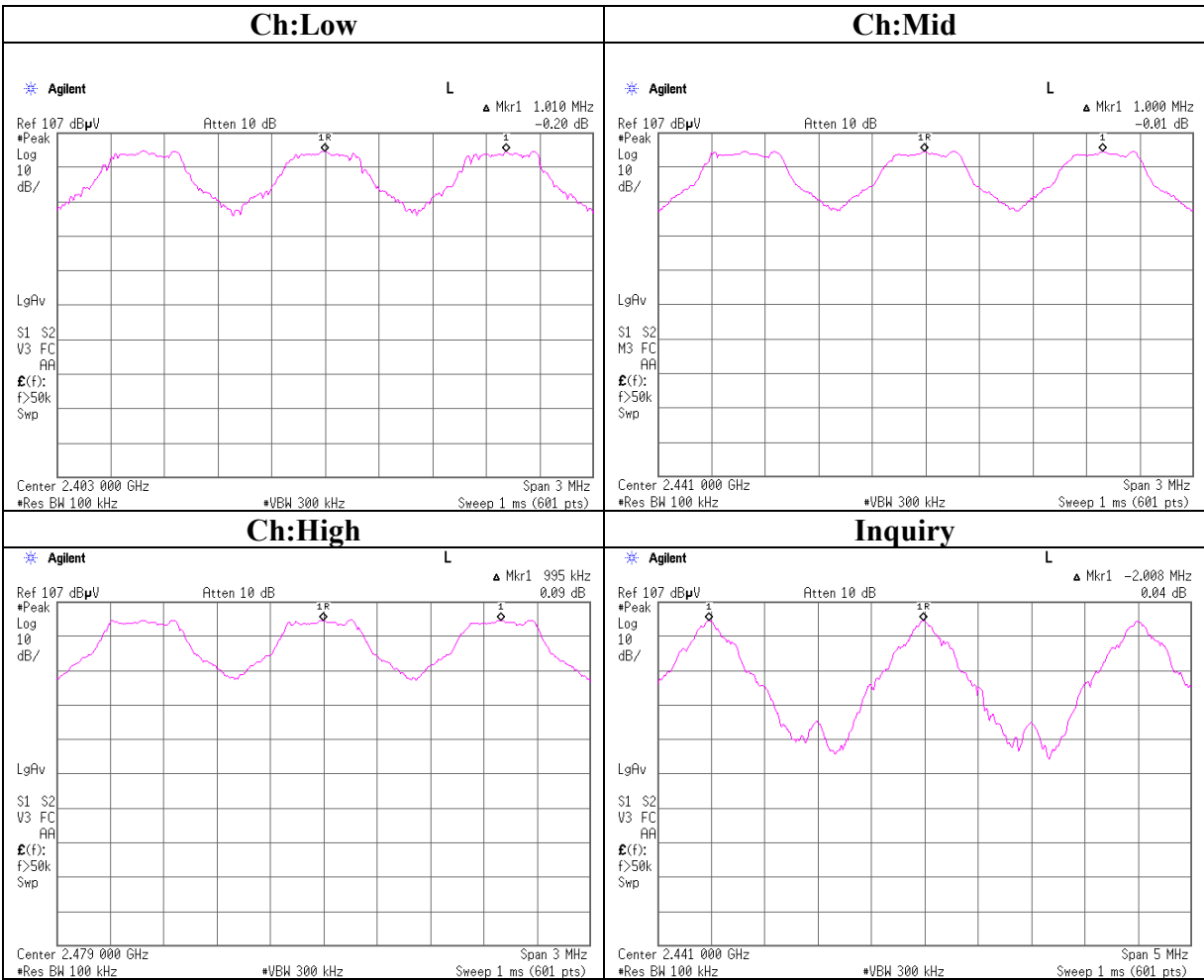
Carrier Frequency Separation

UL Apex Co., Ltd.
Head Office EMC Lab. No.3 Shielded Room

COMPANY	: FURUNO SYSTEMS CO., LTD.	REGULATION	: FCC Part15 Subpart C 15.247(a)(1)
EQUIPMENT	: Handy Terminal	TEST DISTANCE	: -
MODEL	: PI13500-W	DATE	: 02/21/2006
S/N	: 7038-6346	TEMPERATURE	: 24deg.C
POWER	: Battery DC3.7V	HUMIDITY	: 33%
MODE	: Tx(Hopping on)/Inquiry	ENGINEER	: Yutaka Yoshida

Ch	Freq. [MHz]	Channel separation [MHz]	Limit
Low	2402.0	1.010	>two-thirds of the 20dB Bandwidth or 25[kHz](whichever is greater)
Mid	2441.0	1.000	>two-thirds of the 20dB Bandwidth or 25[kHz](whichever is greater)
High	2480.0	0.995	>two-thirds of the 20dB Bandwidth or 25[kHz](whichever is greater)
Inquiry	2441.0	2.008	>two-thirds of the 20dB Bandwidth or 25[kHz](whichever is greater)

Carrier Frequency Separation



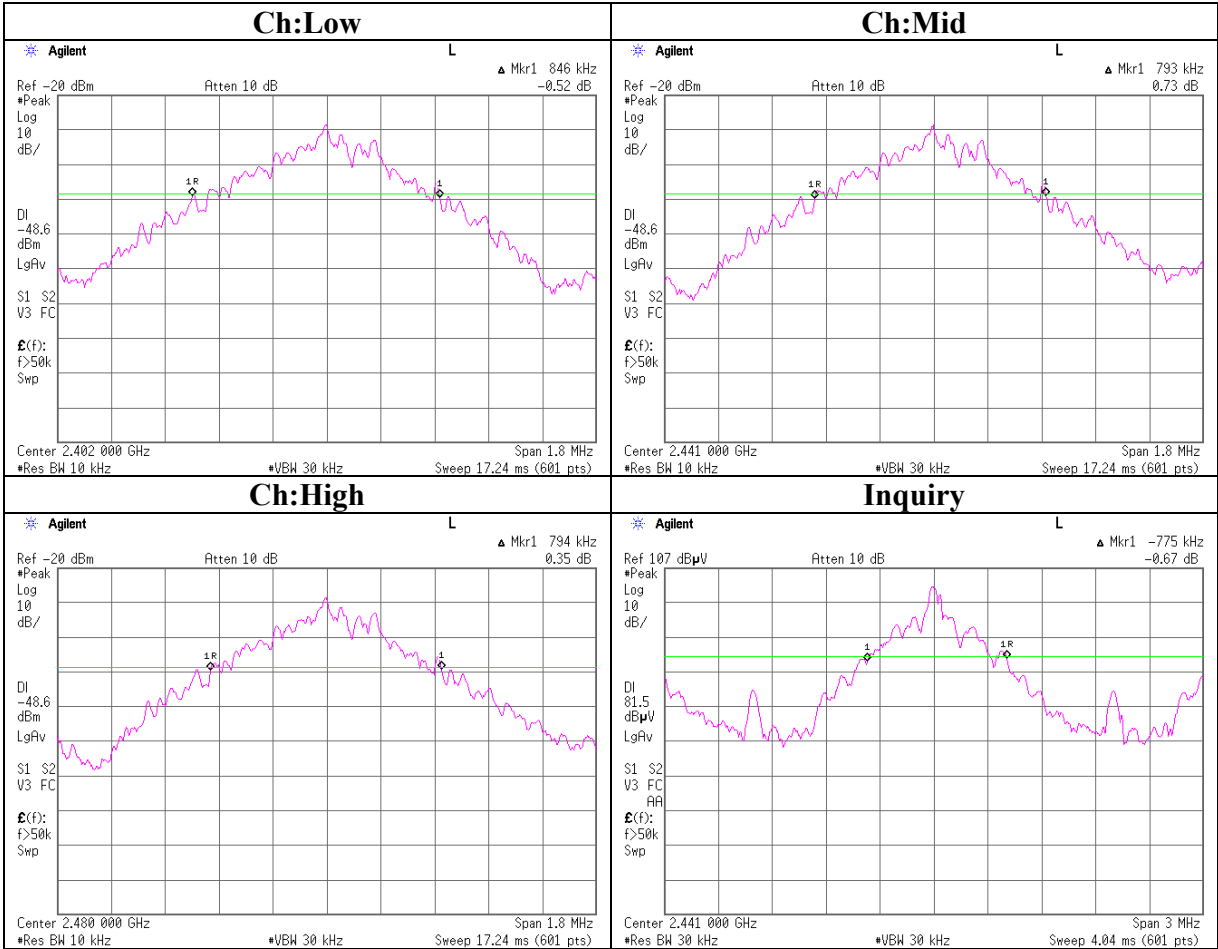
20dB Bandwidth

UL Apex Co., Ltd.
Head Office EMC Lab. No.3 Shielded Room

COMPANY	: FURUNO SYSTEMS CO., LTD.	REGULATION	: FCC Part15 Subpart C 15.247(a)(1)
EQUIPMENT	: Handy Terminal	TEST DISTANCE	: -
MODEL	: PI13500-W	DATE	: 02/21/2006
S/ N	: 7038-6346	TEMPERATURE	: 24deg.C
POWER	: Battery DC3.7V	HUMIDITY	: 33%
MODE	: Tx (Hopping off) /Inquiry	ENGINEER	: Yutaka Yoshida

Ch	Freq.	20dB Bandwidth	Limit
	[MHz]	[MHz]	[MHz]
Low	2402.0	0.846	-
Mid	2441.0	0.793	-
High	2480.0	0.794	-
Inquiry	2441.0	0.775	-

20dB Bandwidth



Number of Hopping Frequency

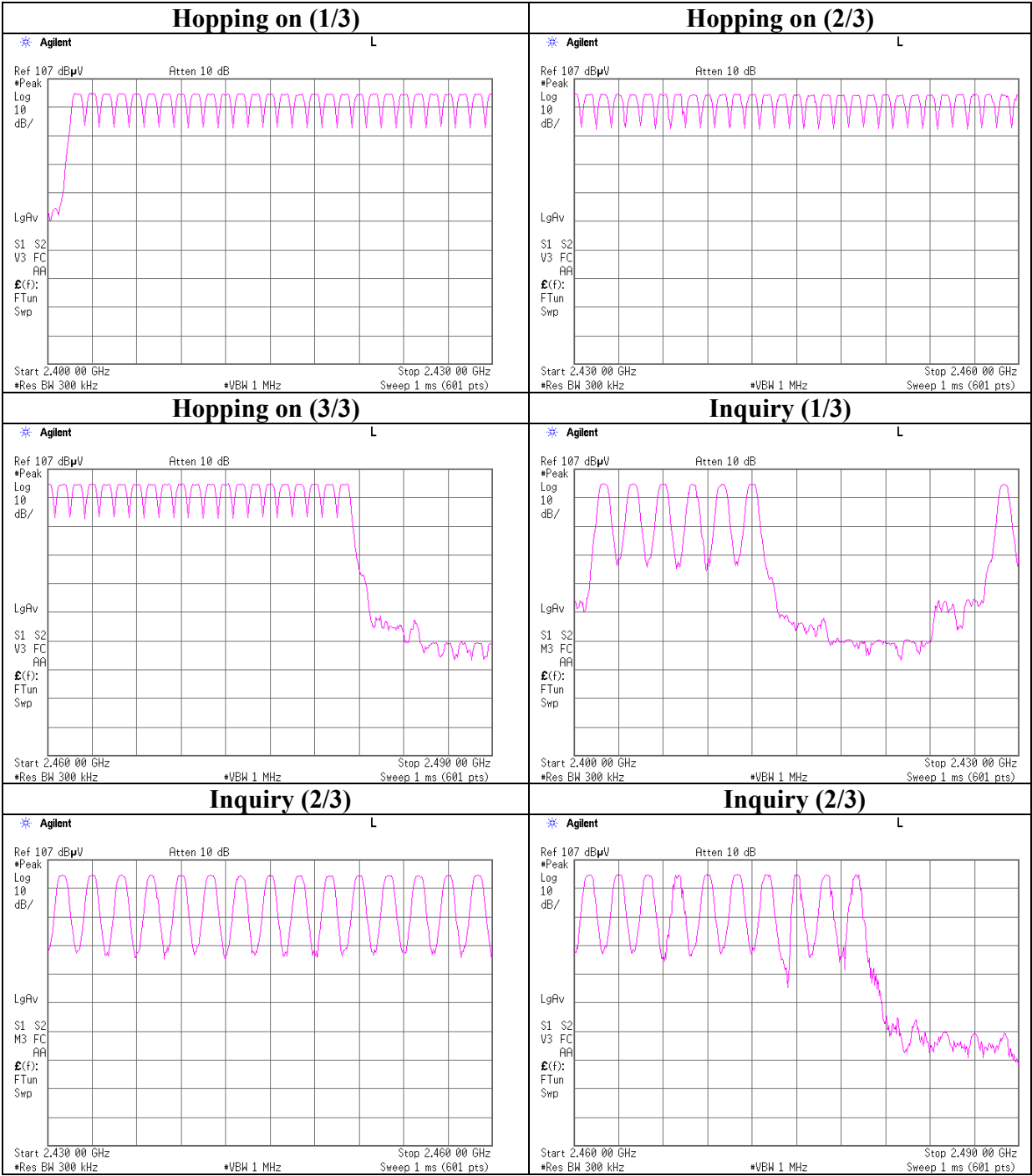
UL Apex Co., Ltd.
Head Office EMC Lab. No.3 Shielded Room

COMPANY	: FURUNO SYSTEMS CO., LTD.	REGULATION	: FCC Part15 Subpart C 15.247(a)(1)(iii)
EQUIPMENT	: Handy Terminal	TEST DISTANCE	: -
MODEL	: PI13500-W	DATE	: 02/21/2006
S/ N	: 7038-6346	TEMPERATURE	: 24deg.C
POWER	: Battery DC3.7V	HUMIDITY	: 33%
MODE	: Tx (Hopping on) /Inquiry	ENGINEER	: Yutaka Yoshida

Mode	Number of channel	Limit
	[time]	[time]
Tx(Hoppng on)	79	≥ 15

Mode	Number of channel	Limit
	[time]	[time]
Inquiry	32	≥ 15

Number of Hopping Frequency



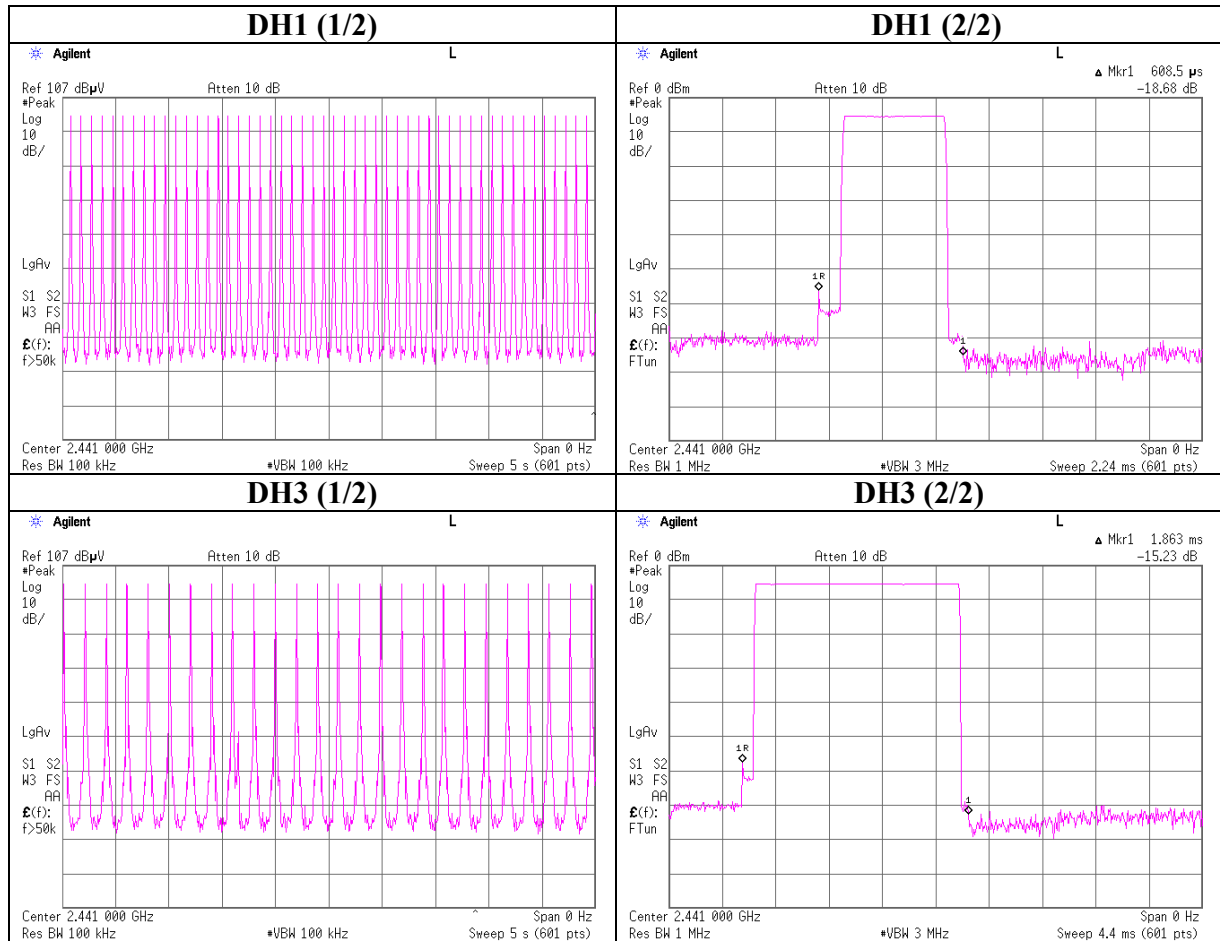
Dwell time

UL Apex Co., Ltd.
Head Office EMC Lab. No.3 Shielded Room

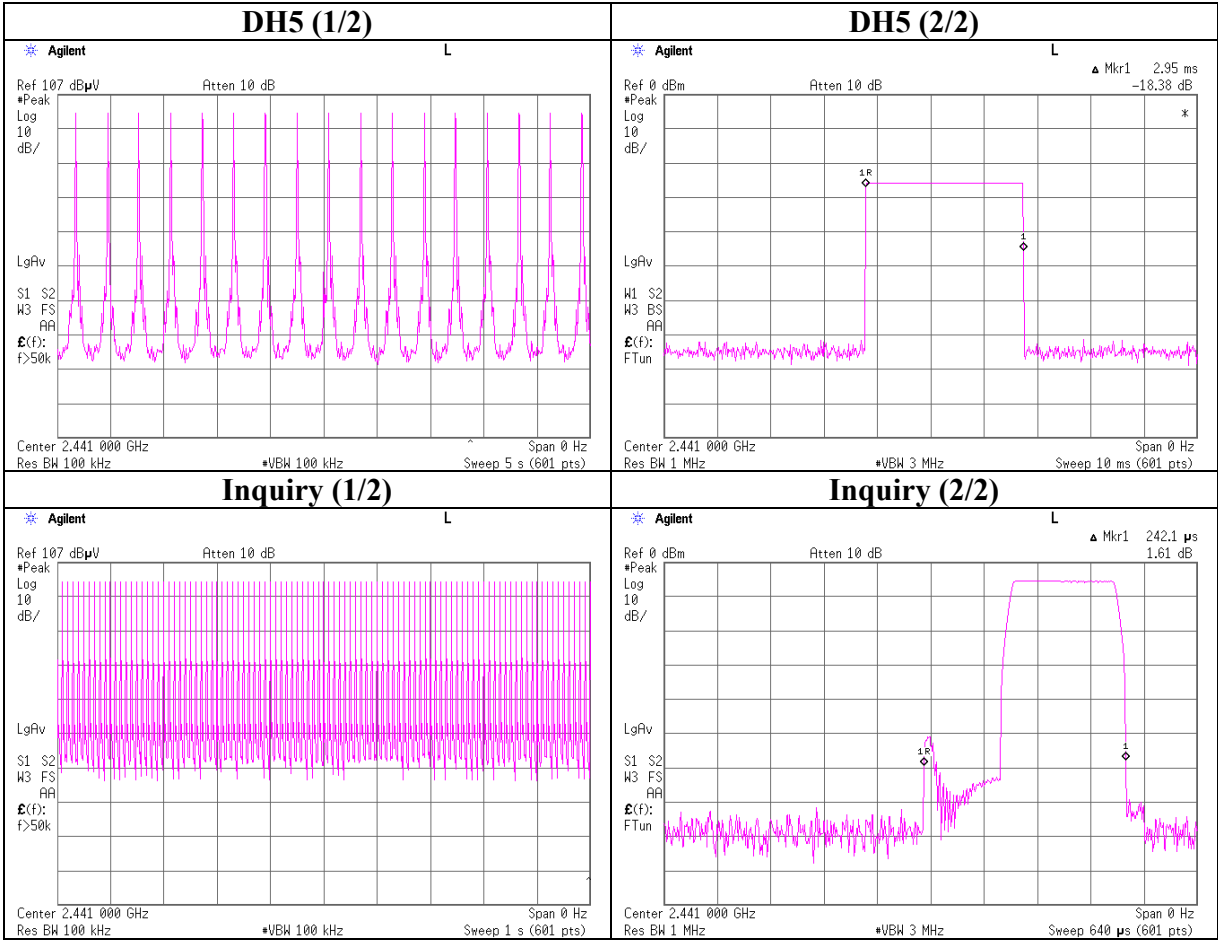
COMPANY	: FURUNO SYSTEMS CO., LTD.	REGULATION	: FCC Part15 Subpart C 15.247(a)(1)(iii)
EQUIPMENT	: Handy Terminal	TEST DISTANCE	: -
MODEL	: PI13500-W	DATE	: 02/21/2006
S/ N	: 7038-6346	TEMPERATURE	: 24deg.C
POWER	: Battery DC3.7V	HUMIDITY	: 33%
MODE	: Tx (Hopping on) /Inquiry	ENGINEER	: Yutaka Yoshida

Mode	Number of transmission in a 31.6(79 Hopping x 0.4) / 12.8(32 Hopping x 0.4)second period	Length of transmission time [msec]	Result [msec]	Limit [msec]
DH1	50 times /5sec. x 31.6 = 316 times	0.609	192	400
DH3	26 times / 5sec. x 31.6 = 164 times	1.863	306	400
DH5	17 times / 5 sec. x 31.6 = 107 times	2.950	316	400
Inquiry	100 times / 1sec. x 12.8 = 1280 times	0.242	310	400

Dwell time



Dwell time



Maximum Peak Output Power

UL Apex Co., Ltd.
Head Office EMC Lab. No.3 Shielded Room

COMPANY	: FURUNO SYSTEMS CO., LTD.	REGULATION	: FCC Part15 Subpart C 15.247(b)(1)
EQUIPMENT	: Handy Terminal	TEST DISTANCE	: -
MODEL	: PI13500-W	DATE	: 02/21/2006
S/ N	: 7038-6346	TEMPERATURE	: 24deg.C
POWER	: Battery DC3.7V	HUMIDITY	: 33%
MODE	: Tx(Hopping Off)/Inquiry	ENGINEER	: Yutaka Yoshida

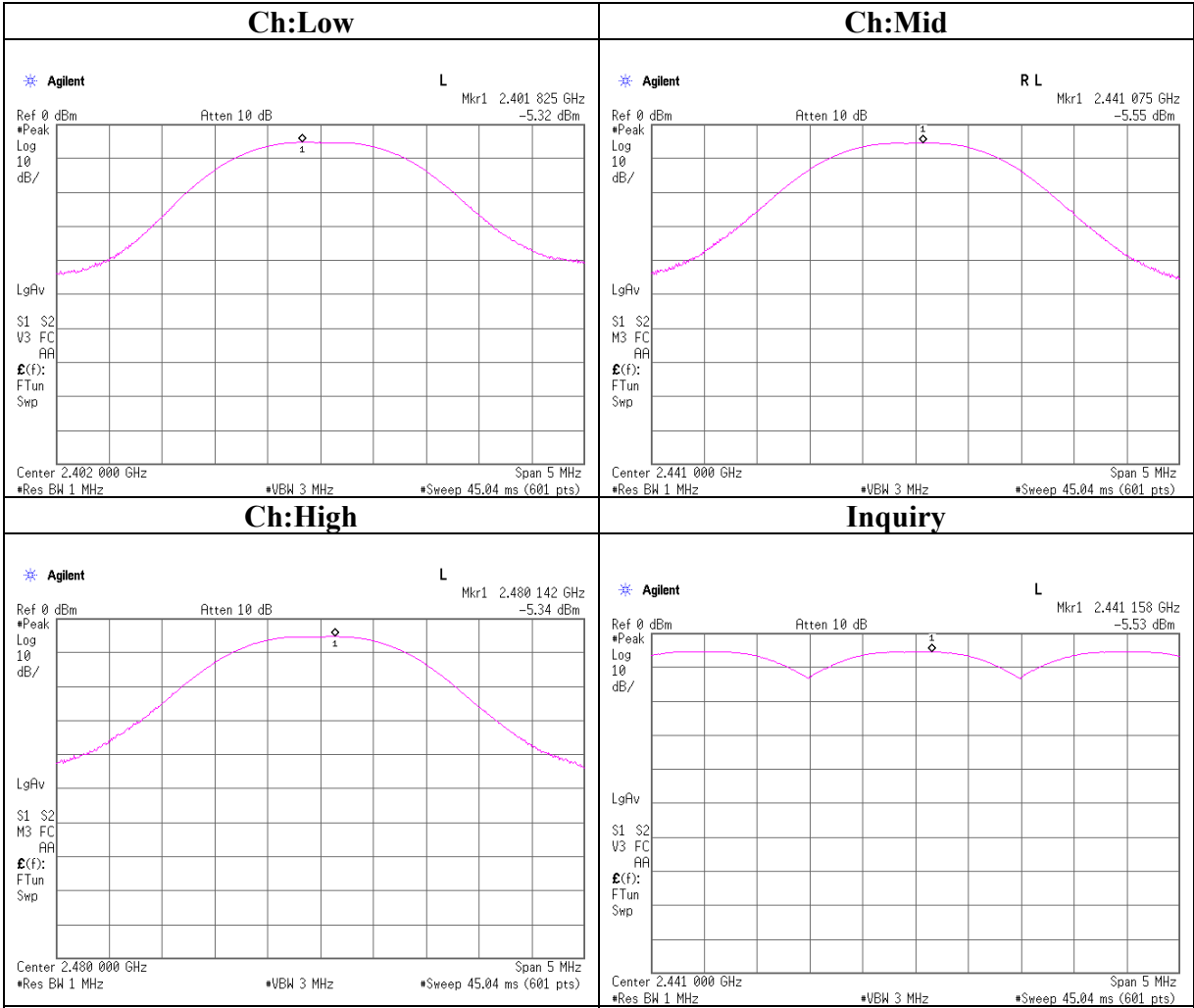
Ch	Freq. [MHz]	S/A Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result		Limit		Margin [dB]
					[dBm]	[mW]	[dBm]	[mW]	
Low	2402.0	-5.32	1.86	0.00	-3.46	0.45	30.00	1000	33.46
Mid	2441.0	-5.55	1.89	0.00	-3.66	0.43	30.00	1000	33.66
High	2480.0	-5.34	1.90	0.00	-3.44	0.45	30.00	1000	33.44
Inquiry	2441.0	-5.53	1.89	0.00	-3.64	0.43	20.97	125	24.61

Sample Calculation:

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

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

Maximum Peak Output Power



Radiated Spurious Emission

DATA OF RADIATED EMISSION TEST

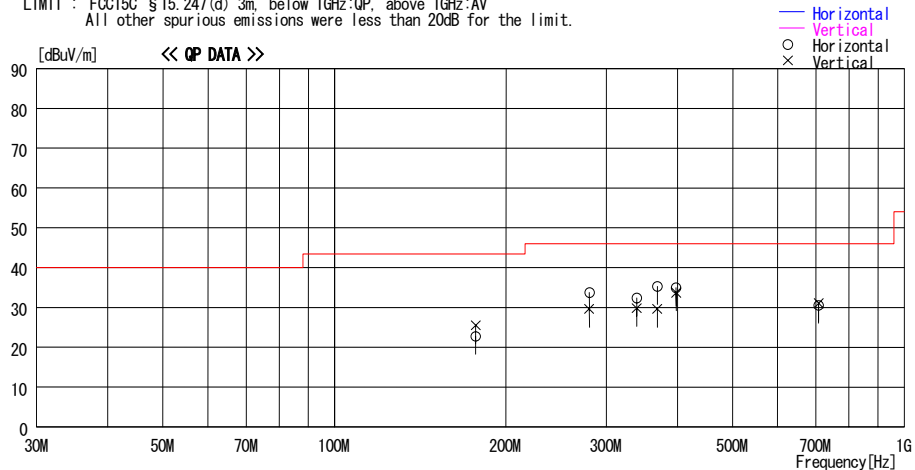
UL Apex Co., Ltd. Head Office EMC Lab. No. 2 Semi Anechoic Chamber
Date : 2006/02/22 01:31:20

Applicant : FURUNO SYSTEMS CO.,LTD.
Kind of EUT : Handy terminal
Model No. : PI-13500-W
Serial No. : 7038-6350

Report No. : 26GE0204-HO
Power : Battery DC3.7V
Temp./Humi. : 23deg.C / 32%
Operator : Mitsuru Fujimura

Mode / Remarks : BT Tx:2.402GHz DH5 Hori-Xaxis, Ver-Yaxis

LIMIT : FCC15C §15.247(d) 3m, below 1GHz:QP, above 1GHz:AV
All other spurious emissions were less than 20dB for the limit.



Frequency	Reading	DET	Antenna		Level	Angle	Height	Polar.	Limit	
			Factor	Gain					[dBuV/m]	[dB]
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]			
176.945	27.7	QP	15.9	-20.9	22.7	270	110	Hori.	43.5	20.8
176.945	30.5	QP	15.9	-20.9	25.5	29	100	Vert.	43.5	18.0
280.159	34.9	QP	19.0	-20.2	33.7	87	126	Hori.	46.0	12.3
280.159	30.8	QP	19.0	-20.2	29.6	191	100	Vert.	46.0	16.4
339.141	36.2	QP	15.7	-19.5	32.4	200	100	Hori.	46.0	13.6
339.141	33.6	QP	15.7	-19.5	29.8	21	100	Vert.	46.0	16.2
368.632	38.4	QP	16.7	-19.8	35.3	253	100	Hori.	46.0	10.7
368.632	32.7	QP	16.7	-19.8	29.6	359	100	Vert.	46.0	16.4
398.120	37.2	QP	17.7	-20.0	34.9	82	100	Hori.	46.0	11.1
398.120	36.0	QP	17.7	-20.0	33.7	51	205	Vert.	46.0	12.3
707.782	29.2	QP	20.7	-18.8	31.1	148	100	Vert.	46.0	14.9
707.782	28.7	QP	20.7	-18.8	30.6	313	100	Hori.	46.0	15.4

CHART:WITH FACTOR ANT TYPE : ~30MHz LOOP, 30~300MHz BICONICAL, 300MHz~1000MHz LOGPERIODIC, 1000MHz~ HORN

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

Radiated Spurious Emission

DATA OF RADIATED EMISSION TEST

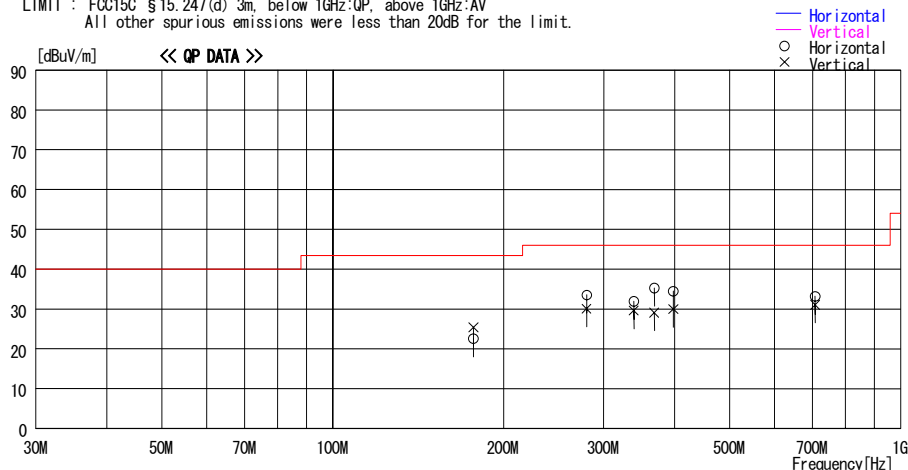
UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2006/02/22 02:34:42

Applicant : FURUNO SYSTEMS CO.,LTD.
Kind of EUT : Handy terminal
Model No. : PI-13500-W
Serial No. : 7038-6350

Report No. : 26GE0204-HO
Power : Battery DC3.7V
Temp./Humi. : 23deg.C / 32%
Operator : Mitsuru Fujimura

Mode / Remarks : BT Tx:2.441GHz DH5 Hori-Xaxis ,Ver-Yaxis

LIMIT : FCC15C §15.247(d) 3m, below 1GHz:QP, above 1GHz:AV
All other spurious emissions were less than 20dB for the limit.



Frequency [MHz]	Reading [dBuV]	DET	Antenna	Loss&	Level	Angle	Height	Polar.	Limit	Margin
			Factor	Gain						
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]
176.945	27.6	QP	15.9	-20.9	22.6	243	100	Hori.	43.5	20.9
176.945	30.4	QP	15.9	-20.9	25.4	74	100	Vert.	43.5	18.1
280.159	34.8	QP	19.0	-20.2	33.6	77	130	Hori.	46.0	12.4
280.159	31.3	QP	19.0	-20.2	30.1	199	100	Vert.	46.0	15.9
339.141	35.7	QP	15.7	-19.5	31.9	218	100	Hori.	46.0	14.1
339.141	33.4	QP	15.7	-19.5	29.6	359	100	Vert.	46.0	16.4
368.632	38.4	QP	16.7	-19.8	35.3	246	100	Hori.	46.0	10.7
368.632	32.2	QP	16.7	-19.8	29.1	6	100	Vert.	46.0	16.9
398.120	36.8	QP	17.7	-20.0	34.5	71	100	Hori.	46.0	11.5
398.120	32.3	QP	17.7	-20.0	30.0	310	100	Vert.	46.0	16.0
707.782	31.3	QP	20.7	-18.8	33.2	129	126	Hori.	46.0	12.8
707.782	29.2	QP	20.7	-18.8	31.1	171	124	Vert.	46.0	14.9

CHART:WITH FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPERIODIC, 1000MHz- HORN

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

Radiated Spurious Emission

DATA OF RADIATED EMISSION TEST

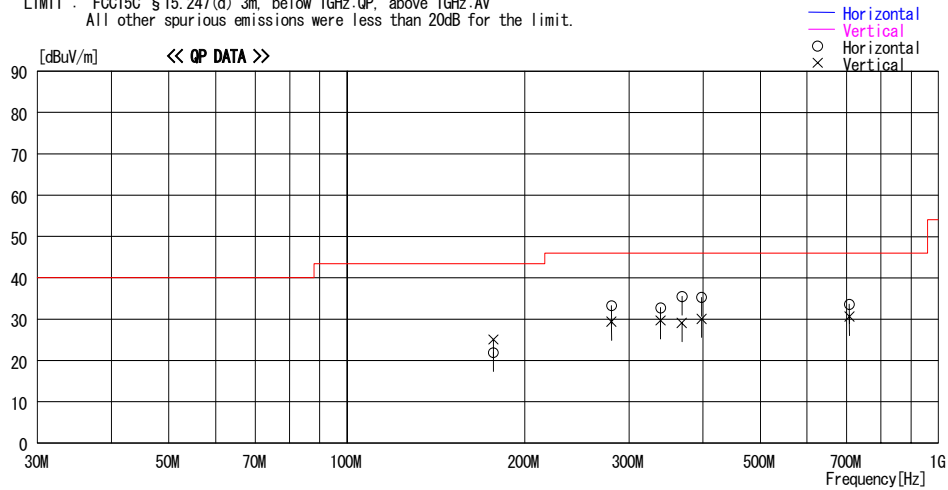
UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2006/02/22 03:13:36

Applicant : FURUNO SYSTEMS CO.,LTD.
Kind of EUT : Handy terminal
Model No. : PI-13500-W
Serial No. : 7038-6350

Report No. : 26GE0204-HO
Power : Battery DC3.7V
Temp./Humi. : 23deg.C / 32%
Operator : Mitsuru Fujimura

Mode / Remarks : BT Tx:2.480GHz DH5 Hori-Yaxis, Ver-Yaxis

LIMIT : FCC15C §15.247(d) 3m, below 1GHz:QP, above 1GHz:AV
All other spurious emissions were less than 20dB for the limit.



Frequency	Reading	DET	Antenna		Level	Angle	Height	Polar.	Limit	Margin
			Factor	Gain						
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg.]	[cm]		[dBuV/m]	[dB]
176.945	30.1	QP	15.9	-20.9	25.1	102	100	Vert.	43.5	18.4
176.945	26.9	QP	15.9	-20.9	21.9	215	100	Hori.	43.5	21.6
280.159	34.5	QP	19.0	-20.2	33.3	78	132	Hori.	46.0	12.7
280.159	30.6	QP	19.0	-20.2	29.4	184	100	Vert.	46.0	16.6
339.141	36.5	QP	15.7	-19.5	32.7	207	100	Hori.	46.0	13.3
339.141	33.5	QP	15.7	-19.5	29.7	12	100	Vert.	46.0	16.3
368.632	38.6	QP	16.7	-19.8	35.5	254	100	Hori.	46.0	10.5
368.632	32.2	QP	16.7	-19.8	29.1	355	100	Vert.	46.0	16.9
398.120	37.6	QP	17.7	-20.0	35.3	91	100	Hori.	46.0	10.7
398.120	32.4	QP	17.7	-20.0	30.1	313	232	Vert.	46.0	15.9
707.782	31.7	QP	20.7	-18.8	33.6	120	131	Hori.	46.0	12.4
707.782	28.7	QP	20.7	-18.8	30.6	359	128	Vert.	46.0	15.4

CHART:WITH FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPERIODIC, 1000MHz- HORN

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

Test report No. : 26GE0204-HO-B
Page : 27 of 34
Issued date : June 30, 2006
FCC ID : T87SS23BTXXT

Radiated Spurious Emission

Company : FURUNO SYSTEMS CO.,LTD. REPORT NO : 26GE0204-HO
Equipment : Handy terminal REGULATION : Fcc Part15 Subpart C 15.247(d)
Model : PI-13500-W TEST DISTANCE : 3/1m
Sample No. : 7038-6350 DATE : 02/21/2006
Power : Battery DC 3.7V TEMPERATURE : 23deg.C
Mode : Bluetooth, Tx 2402MHz HUMIDITY : 32%
Remarks : Hor X-axis/Ver:Y-axis ENGINEER : Mitsuru Fujimura
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	2367.5	45.2	45.0	30.7	32.4	3.3	0.0	46.7	46.6	74.0	27.3	27.4
2*	2399.7	69.9	70.7	30.6	32.4	3.3	0.0	71.4	72.1	74.0	-	-
3	4804.0	42.7	41.6	35.7	31.9	4.6	0.0	51.1	50.0	74.0	22.9	24.0
4	7206.0	41.6	41.0	37.5	31.5	5.6	0.0	53.3	52.7	74.0	20.7	21.3
5	9608.0	43.5	43.2	36.6	31.7	6.5	0.0	55.0	54.6	74.0	19.1	19.4
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
6	12010.0	N/S	N/S	-	-	-	-	-	-	74.0	-	-
7	14412.0	N/S	N/S	-	-	-	-	-	-	74.0	-	-
8	16814.0	N/S	N/S	-	-	-	-	-	-	74.0	-	-
9	19216.0	N/S	N/S	-	-	-	-	-	-	74.0	-	-
10	21618.0	N/S	N/S	-	-	-	-	-	-	74.0	-	-
11	24020.0	44.2	45.5	39.7	30.4	11.2	0.0	55.3	56.6	74.0	18.7	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	2367.5	35.1	35.9	30.7	32.4	3.3	0.0	36.6	37.5	54.0	17.4	16.5
2*	2399.7	58.9	59.5	30.6	32.4	3.3	0.0	60.3	60.9	54.0	-	-
3	4804.0	30.7	29.3	35.7	31.9	4.6	0.0	39.1	37.7	54.0	14.9	16.3
4	7206.0	28.9	29.3	37.5	31.5	5.6	0.0	40.6	41.0	54.0	13.4	13.0
5	9608.0	30.9	30.9	36.6	31.7	6.5	0.0	42.4	42.3	54.0	11.7	11.7
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
6	12010.0	N/S	N/S	-	-	-	-	-	-	54.0	-	-
7	14412.0	N/S	N/S	-	-	-	-	-	-	54.0	-	-
8	16814.0	N/S	N/S	-	-	-	-	-	-	54.0	-	-
9	19216.0	N/S	N/S	-	-	-	-	-	-	54.0	-	-
10	21618.0	N/S	N/S	-	-	-	-	-	-	54.0	-	-
11	24020.0	33.4	33.4	39.7	30.4	11.2	0.0	44.5	44.5	54.0	9.5	9.5

* Reference data

20dBc(Fundamental 2402MHz) (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 [dBuV/m]	VER [dB]			
		[dBuV]										
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
0	2402.0	94.4	94.9	30.6	32.4	3.3	0.0	95.9	96.4	-	-	-
2	2399.7	44.5	45.0	30.6	32.4	3.3	0.0	46.0	46.5	Funda-20dB	29.9	29.9

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 result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

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

UL Apex Co., Ltd.

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MF060b(14.06.06)

Radiated Spurious Emission

UL Apex Co., Ltd.
Head Office EMC Lab. No.2 Semi Anechoic Chamber

Company : FURUNO SYSTEMS CO.,LTD.	REPORT NO : 26GE0204-HO
Equipment : Handy terminal	REGULATION : Fcc Part15 Subpart C 15.247(d)
Model : PI-13500-W	TEST DISTANCE : 3/1m
Sample No. : 7038-6350	DATE : 02/21/2006
Power : Battery DC 3.7V	TEMPERATURE : 23deg.C
Mode : Bluetooth, Tx 2441MHz	HUMIDITY : 32%
Remarks : Hor X-axis/Ver:Y-axis	ENGINEER : Mitsuru Fujimura

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	4882.0	41.9	41.9	36.2	31.8	4.7	0.0	50.9	50.9	74.0	23.1	23.1
2	7323.0	42.0	41.6	37.9	31.7	5.7	0.0	53.8	53.5	74.0	20.2	20.5
3	9764.0	43.6	43.9	36.6	31.8	6.6	0.0	54.9	55.2	74.0	19.1	18.8
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
4	12205.0	N/S	N/S	-	-	-	-	-	-	74.0	-	-
5	14646.0	N/S	N/S	-	-	-	-	-	-	74.0	-	-
6	17087.0	N/S	N/S	-	-	-	-	-	-	74.0	-	-
7	19528.0	N/S	N/S	-	-	-	-	-	-	74.0	-	-
8	21969.0	N/S	N/S	-	-	-	-	-	-	74.0	-	-
9	24410.0	43.3	43.6	39.8	30.5	11.3	0.0	54.5	54.8	74.0	19.6	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	4882.0	32.1	29.4	36.2	31.8	4.7	0.0	41.0	38.4	54.0	13.0	15.6
2	7323.0	29.3	29.1	37.9	31.7	5.7	0.0	41.2	41.0	54.0	12.9	13.0
3	9764.0	31.0	31.0	36.6	31.8	6.6	0.0	42.3	42.3	54.0	11.7	11.7
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
4	12205.0	N/S	N/S	-	-	-	-	-	-	54.0	-	-
5	14646.0	N/S	N/S	-	-	-	-	-	-	54.0	-	-
6	17087.0	N/S	N/S	-	-	-	-	-	-	54.0	-	-
7	19528.0	N/S	N/S	-	-	-	-	-	-	54.0	-	-
8	21969.0	N/S	N/S	-	-	-	-	-	-	54.0	-	-
9	24410.0	33.1	33.1	39.8	30.5	11.3	0.0	44.3	44.3	54.0	9.7	9.7

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 result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

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

Radiated Spurious Emission

UL Apex Co., Ltd.
Head Office EMC Lab. No.2 Semi Anechoic Chamber

Company : FURUNO SYSTEMS CO.,LTD.	REPORT NO : 26GE0204-HO
Equipment : Handy terminal	REGULATION : Fee Part15 Subpart C 15.247(d)
Model : PI-13500-W	TEST DISTANCE : 3/1m
Sample No. : 7038-6350	DATE : 02/21/2006
Power : Battery DC 3.7V	TEMPERATURE : 23deg.C
Mode : Bluetooth, Tx 2480MHz	HUMIDITY : 32%
Remarks : Hor X-axis/Ver:Y-axis	ENGINEER : Mitsuru Fujimura

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	2483.5	57.9	54.9	31.0	36.2	5.6	0.0	58.3	55.3	74.0	15.7	18.7
2	4960.0	42.9	41.7	36.6	31.8	4.7	0.0	52.4	51.2	74.0	21.6	22.8
3	7440.0	41.5	40.9	38.2	31.9	5.7	0.0	53.5	52.9	74.0	20.5	21.1
4	9920.0	43.8	43.5	36.5	32.0	6.7	0.0	55.0	54.7	74.0	19.0	19.3
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
5	12400.0	N/S	N/S	-	-	-	-	-	-	74.0	-	-
6	14880.0	N/S	N/S	-	-	-	-	-	-	74.0	-	-
7	17360.0	N/S	N/S	-	-	-	-	-	-	74.0	-	-
8	19840.0	N/S	N/S	-	-	-	-	-	-	74.0	-	-
9	22320.0	N/S	N/S	-	-	-	-	-	-	74.0	-	-
10	24800.0	43.6	43.3	40.0	30.6	11.5	0.0	55.0	54.7	74.0	19.0	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	2483.5	49.9	47.2	31.0	36.2	5.6	0.0	50.3	47.6	54.0	3.7	6.4
2	4960.0	29.5	29.7	36.6	31.8	4.7	0.0	39.0	39.2	54.0	15.1	14.8
3	7440.0	29.3	29.3	38.2	31.9	5.7	0.0	41.3	41.3	54.0	12.7	12.7
4	9920.0	31.0	31.0	36.5	32.0	6.7	0.0	42.2	42.2	54.0	11.8	11.8
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss - Dfac												
5	12400.0	N/S	N/S	-	-	-	-	-	-	54.0	-	-
6	14880.0	N/S	N/S	-	-	-	-	-	-	54.0	-	-
7	17360.0	N/S	N/S	-	-	-	-	-	-	54.0	-	-
8	19840.0	N/S	N/S	-	-	-	-	-	-	54.0	-	-
9	22320.0	N/S	N/S	-	-	-	-	-	-	54.0	-	-
10	24800.0	32.7	32.7	40.0	30.6	11.5	0.0	44.1	44.1	54.0	9.9	9.9

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.

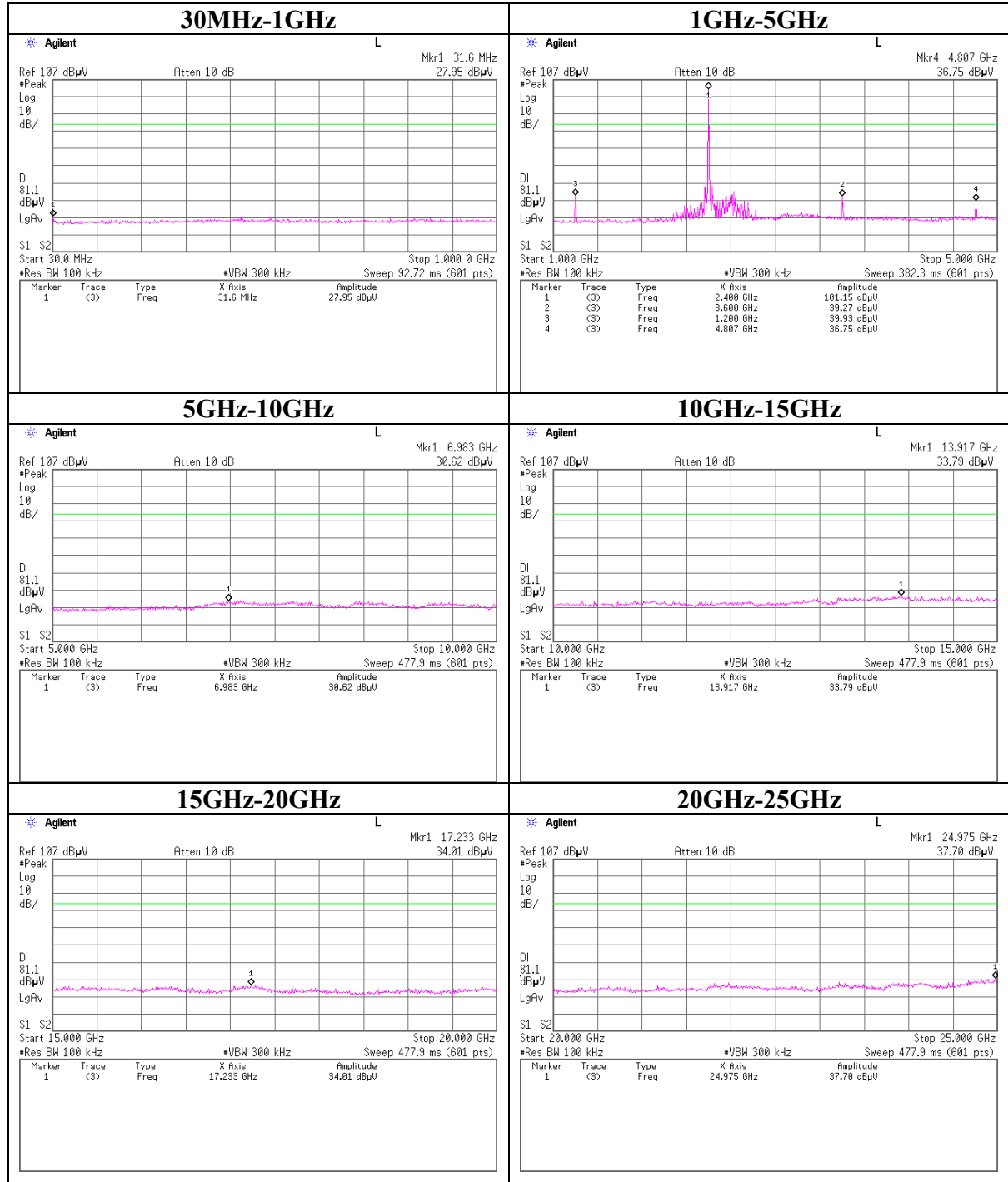
*In the frequency over the fifth harmonic, the noise from the EUT was not seen.The data above is its base noise.

*The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

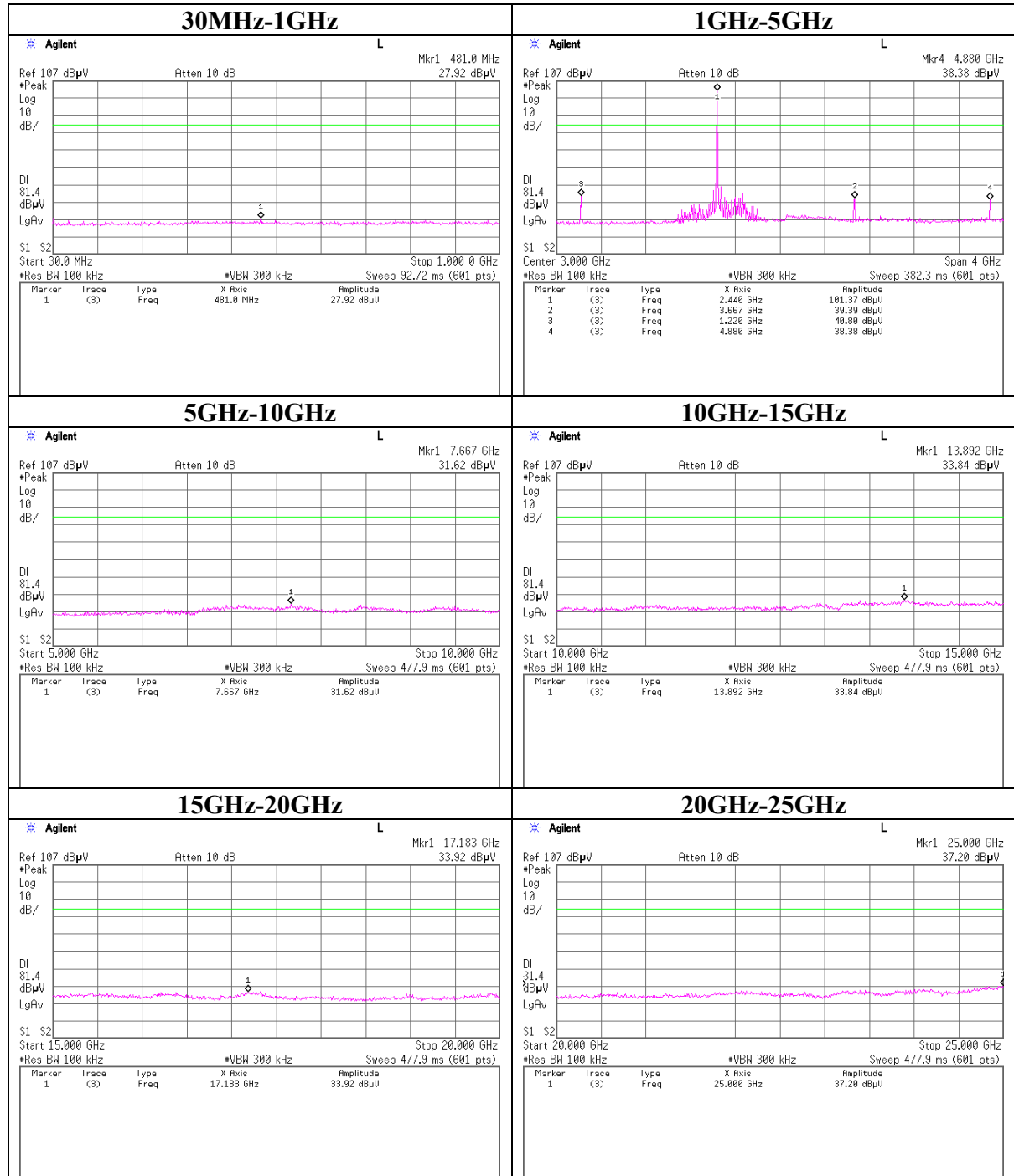
*Hi-Pass Fiter was not used for factor 0.0dB of the above table.

Conducted Spurious Emission

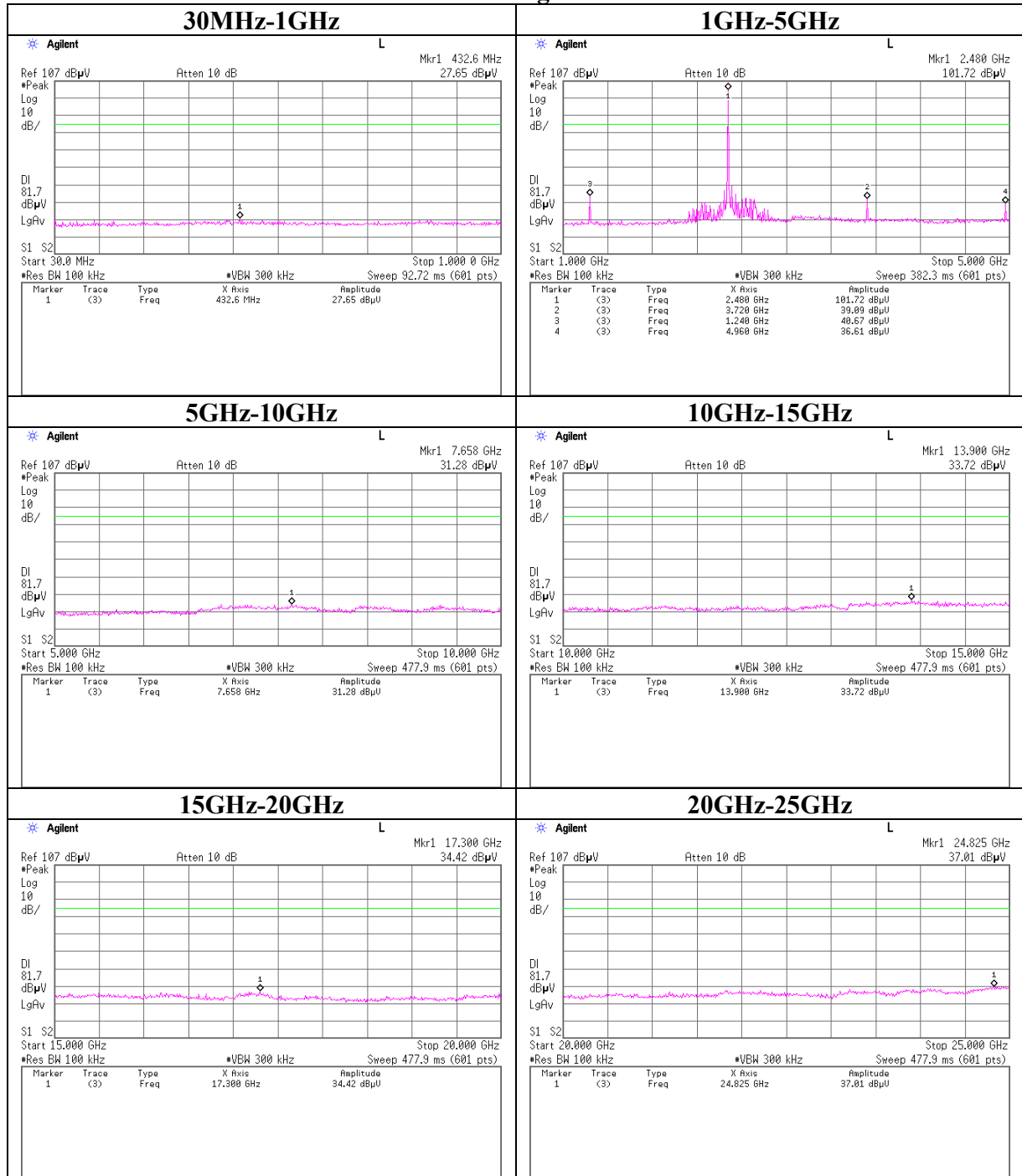
Ch:Low



Conducted Spurious Emission
Ch:Mid



Conducted Spurious Emission
Ch:High



Conducted Spurious Emission
Band Edge compliance



99% Occupied Bandwidth

