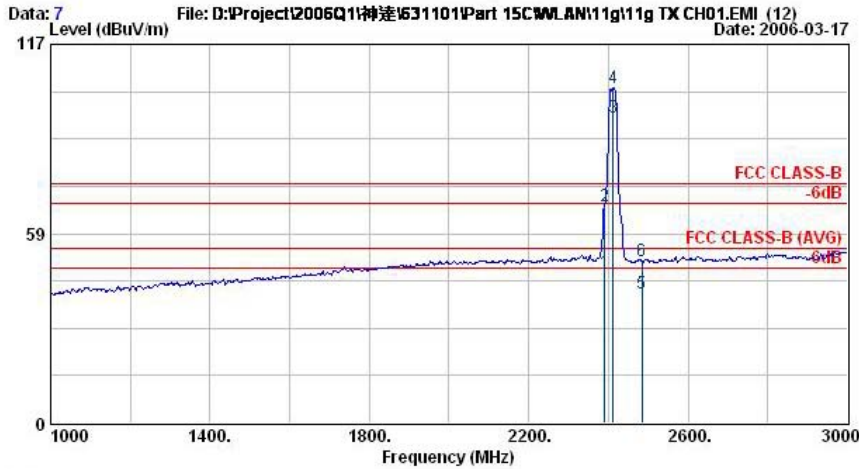


Site : 03CH06-HY  
Condition : HF-ANT-071025-940201 HORIZONTAL  
EUT : GPS Bluetooth PDA  
Power : 120Vac/60Hz  
Model : FR631101  
Memo : 11g TX\_CH01,2412MHz  
Plane : E1



- Polarization : Vertical

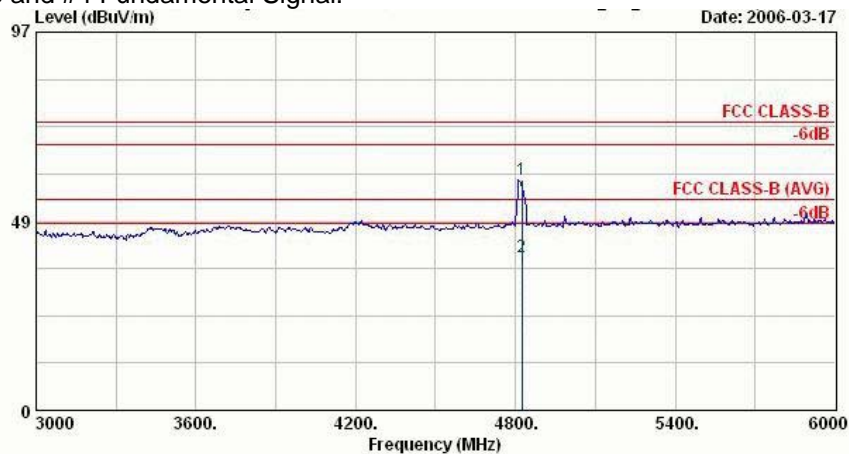
The test that passed at minimum margin was marked by the frame in the following table.



Site : 03CH06-HY  
 Condition : HF-ANT-071025-940201 VERTICAL  
 EUT : GPS Bluetooth PDA  
 Power : 120Vac/60Hz  
 Model : FR631101  
 Memo : 11g\_TX\_CH01\_2412MHz  
 Plane : E1

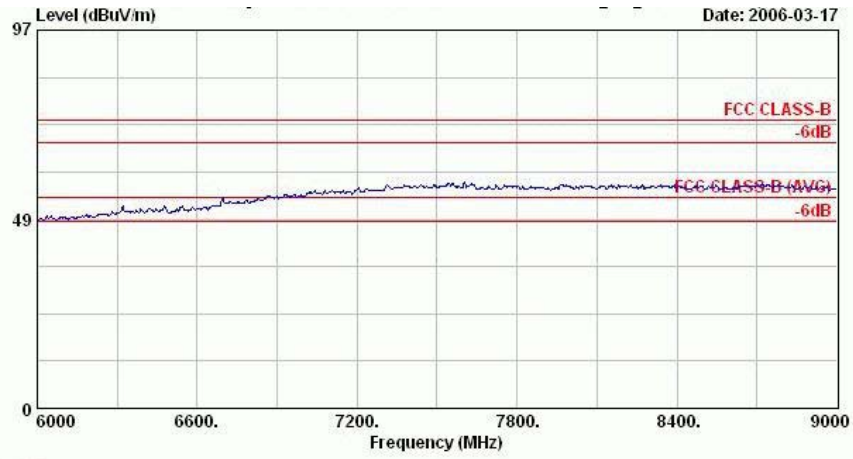
	Freq	Level	Over	Limit	Read	Antenna	Preamp	Cable	Ant	Table	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	Remark
1	2390.00	46.66	-7.34	54.00	47.37	30.48	35.46	4.26	100	275	Average
2	2390.00	67.05	-6.95	74.00	67.76	30.48	35.46	4.26	100	360	Peak
3 @	2412.00	94.49			95.21	30.47	35.46	4.26	100	275	Average
4 X	2412.00	103.68			104.41	30.47	35.46	4.26	100	360	Peak
5	2483.50	39.97	-14.03	54.00	40.71	30.41	35.51	4.36	100	275	Average
6	2483.50	50.12	-23.88	74.00	50.86	30.41	35.51	4.36	100	360	Peak

Remark: #3 and #4 Fundamental Signal.



Site : 03CH06-HY  
 Condition : HF-ANT-071025-940201 VERTICAL  
 EUT : GPS Bluetooth PDA  
 Power : 120Vac/60Hz  
 Model : FR631101  
 Memo : 11g\_TX\_CH01\_2412MHz  
 Plane : E1

	Freq	Level	Over	Limit	Read	Antenna	Preamp	Cable	Ant	Table	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	Remark
1	4824.00	59.31	-14.69	74.00	56.03	33.16	36.10	6.21	200	360	Peak
2	4824.00	39.32	-14.68	54.00	35.98	33.21	36.12	6.24	100	271	Average

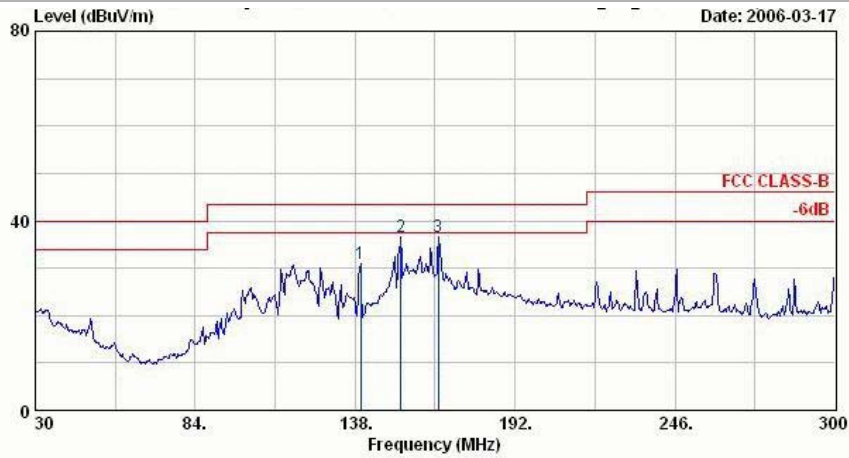


Site : 03CH06-HY  
Condition : HF-ANT-071025-940201 VERTICAL  
EUT : GPS Bluetooth PDA  
Power : 120Vac/60Hz  
Model : FR631101  
Memo : 11g TX\_CH01\_2412MHz  
Plane : E1



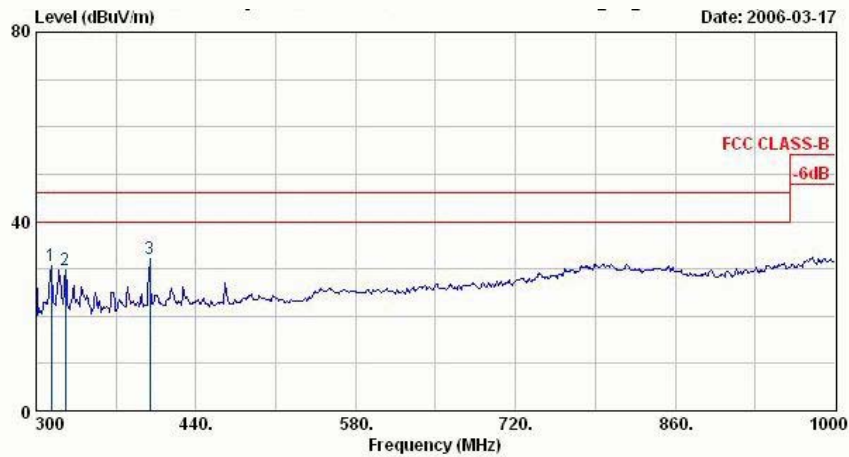
- Test Mode : Mode 5
- Polarization : Horizontal

The test that passed at minimum margin was marked by the frame in the following table.



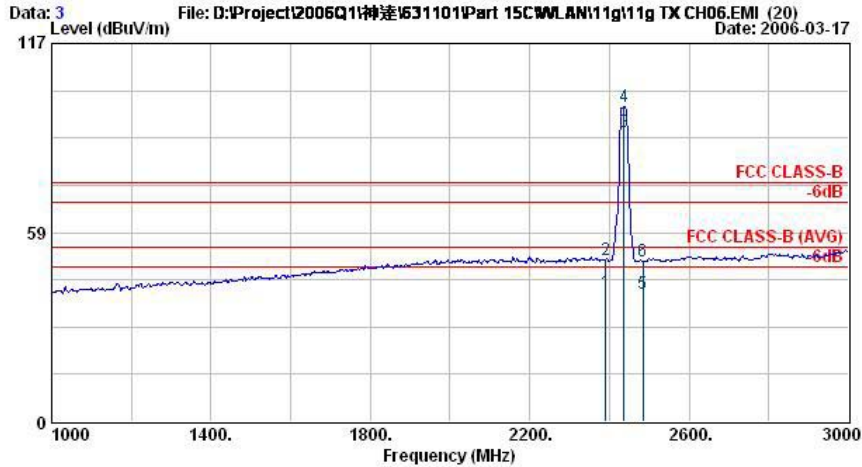
Site : 03CH06-HY  
 Condition : BI-LOG-2004-1122 HORIZONTAL  
 EUT : GPS Bluetooth PDA  
 Power : 120Vac/60Hz  
 Model : FR631101  
 Memo : 11g TX \_CH06,2437MHz  
 Plane : E1

	Freq	Level	Over	Limit	ReadAntenna	Preamp	Cable	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	139.89	30.98	-12.52	43.50	48.64	11.00	31.52	2.86	400	0 Peak
2	153.39	36.47	-7.03	43.50	55.61	9.34	31.52	3.04	400	0 Peak
3 @	166.08	36.52	-6.98	43.50	54.85	9.95	31.47	3.18	114	305 Peak



Site : 03CH06-HY  
 Condition : BI-LOG-2004-1122 HORIZONTAL  
 EUT : GPS Bluetooth PDA  
 Power : 120Vac/60Hz  
 Model : FR631101  
 Memo : 11g TX \_CH06,2437MHz  
 Plane : E1

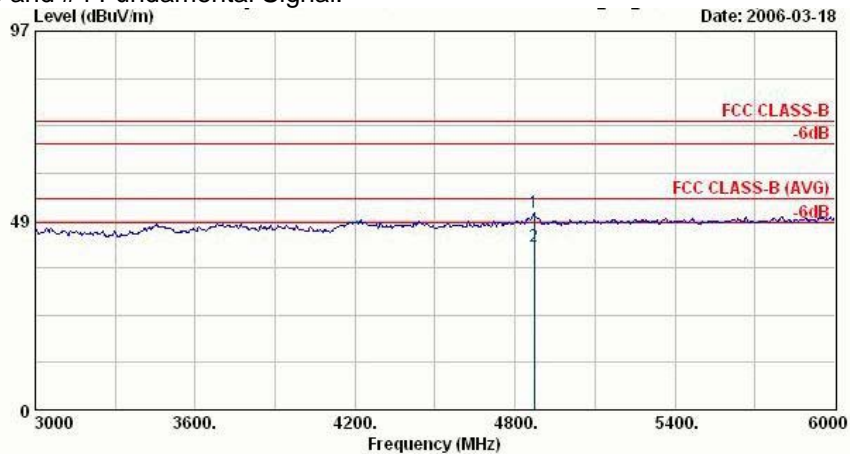
	Freq	Level	Over	Limit	ReadAntenna	Preamp	Cable	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	313.30	30.50	-15.50	46.00	43.37	13.34	30.67	4.47	100	0 Peak
2	325.90	29.76	-16.24	46.00	42.40	13.71	30.94	4.59	100	0 Peak
3	399.40	32.03	-13.97	46.00	41.88	15.87	30.79	5.07	100	0 Peak



Site : 03CH06-HY  
 Condition : HF-ANT-071025-940201 HORIZONTAL  
 EUT : GPS Bluetooth PDA  
 Power : 120Vac/60Hz  
 Model : FR631101  
 Memo : 11g TX\_CH06;2437MHz  
 Plane : E1

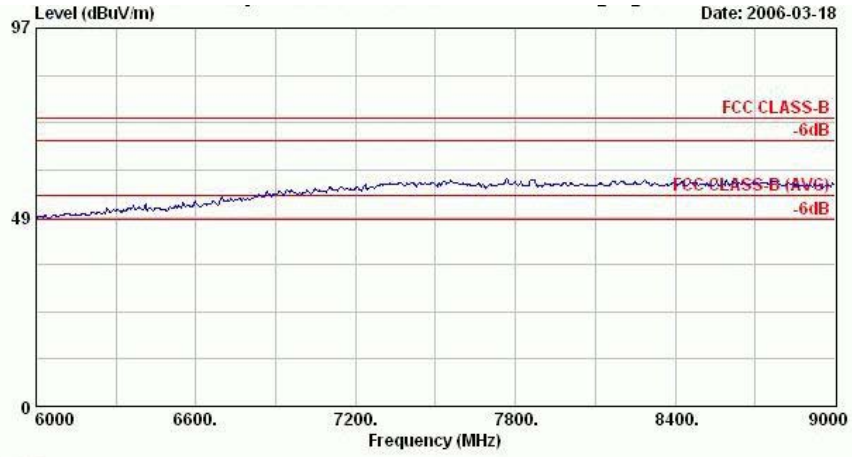
	Freq	Level	Over	Limit	ReadAntenna	Preamp	Cable	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1 @	2390.00	40.14	-13.86	54.00	40.85	30.48	35.46	4.26	100	36 Average
2 @	2390.00	50.15	-23.85	74.00	50.86	30.48	35.46	4.26	100	0 Peak
3 @	2437.00	89.76			90.50	30.44	35.47	4.29	100	36 Average
4 @	2437.00	97.51			98.25	30.44	35.47	4.29	100	0 Peak
5 @	2483.50	39.67	-14.33	54.00	40.41	30.41	35.51	4.36	100	36 Average
6 @	2483.50	49.49	-24.51	74.00	50.23	30.41	35.51	4.36	100	0 Peak

Remark: #3 and #4 Fundamental Signal.



Site : 03CH06-HY  
 Condition : HF-ANT-071025-940201 HORIZONTAL  
 EUT : GPS Bluetooth PDA  
 Power : 120Vac/60Hz  
 Model : FR631101  
 Memo : 11g TX\_CH06;2437MHz  
 Plane : E1

	Freq	Level	Over	Limit	ReadAntenna	Preamp	Cable	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1 @	4872.00	50.33	-23.67	74.00	46.80	33.39	36.16	6.30	200	0 Peak
2 @	4872.00	41.77	-12.23	54.00	38.24	33.39	36.16	6.30	100	157 Average



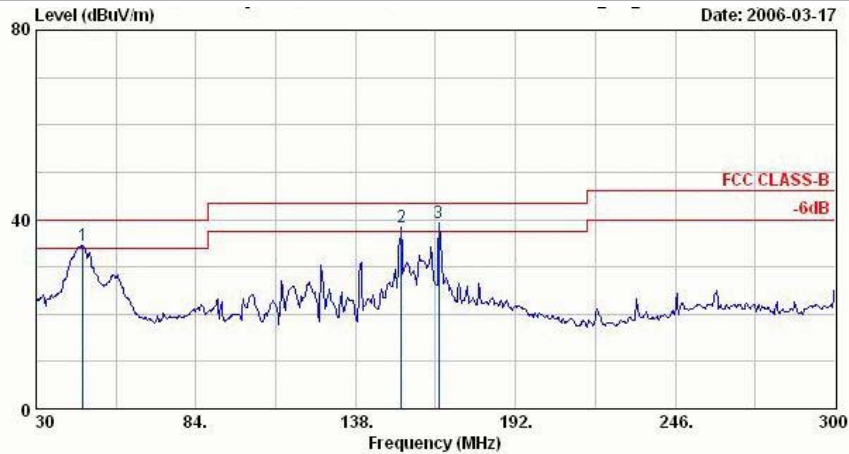
Site : 03CH06-HY  
Condition : HF-ANT-071025-940201 HORIZONTAL  
EUT : GPS Bluetooth PDA  
Power : 120Vac/60Hz  
Model : FR631101  
Memo : 11g TX\_CH06,2437MHz  
Plane : E1





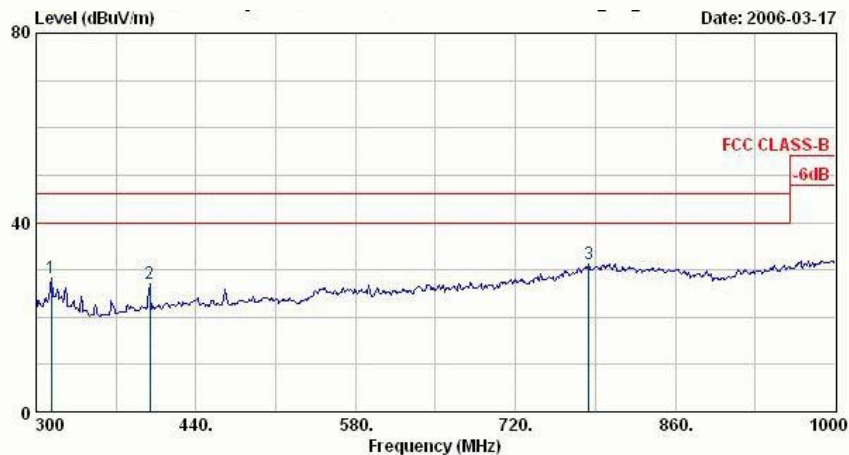
- Polarization : Vertical

The test that passed at minimum margin was marked by the frame in the following table.



Site : 03CH06-HY  
 Condition : BI-LOG-2004-1122 VERTICAL  
 EUT : GPS Bluetooth PDA  
 Power : 120Vac/60Hz  
 Model : FR631101  
 Memo : 11g TX\_CH06,2437MHz  
 Plane : E1

	Freq	Level	Over	Limit	ReadAntenna	Preamp	Cable	Ant	Table	Remark
	MHz	dBUV/m	dB	dBUV/m	dBuV	dB/m	dB	dB	cm	deg
1 @	45.93	34.47	-5.53	40.00	52.67	11.74	31.59	1.65	400	0 Peak
2 @	153.39	38.31	-5.19	43.50	57.44	9.34	31.52	3.04	400	0 Peak
3 @	166.08	39.19	-4.31	43.50	57.53	9.95	31.47	3.18	138	204 Peak



Site : 03CH06-HY  
 Condition : BI-LOG-2004-1122 VERTICAL  
 EUT : GPS Bluetooth PDA  
 Power : 120Vac/60Hz  
 Model : FR631101  
 Memo : 11g TX\_CH06,2437MHz  
 Plane : E1

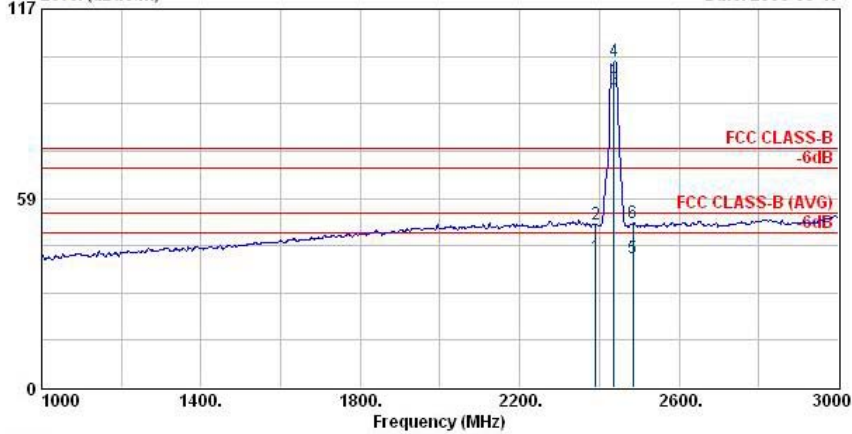
	Freq	Level	Over	Limit	ReadAntenna	Preamp	Cable	Ant	Table	Remark
	MHz	dBUV/m	dB	dBUV/m	dBuV	dB/m	dB	dB	cm	deg
1	313.30	28.28	-17.72	46.00	41.14	13.34	30.67	4.47	100	0 Peak
2	399.40	27.06	-18.94	46.00	36.91	15.87	30.79	5.07	100	0 Peak
3	784.40	31.23	-14.77	46.00	32.48	21.46	30.11	7.41	100	0 Peak



# FCC TEST REPORT

Report No. : FR631101

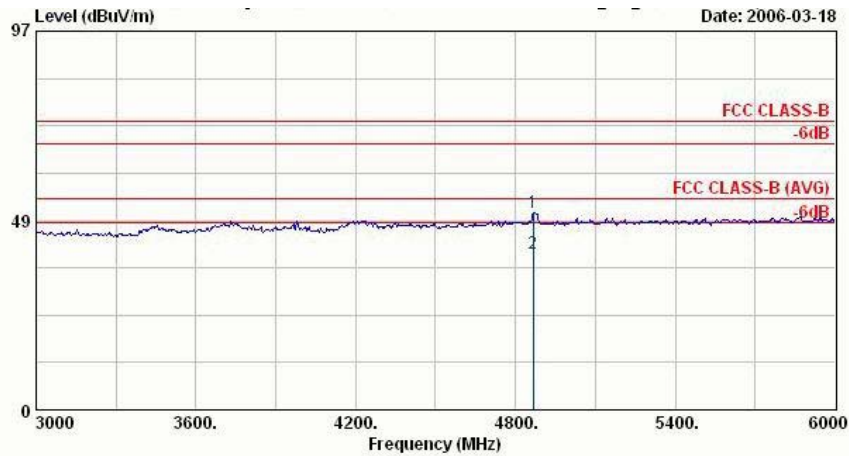
Data: 13 File: D:\Project\2006Q1\神達\631101\Part 15C\WLAN\11g\11g TX CH06.EMI (20) Date: 2006-03-17  
 Level (dBuV/m)



Site : 03CH06-HY  
 Condition : HF-ANT-071025-940201 VERTICAL  
 EUT : GPS Bluetooth PDA  
 Power : 120Vac/60Hz  
 Model : FR631101  
 Memo : 11g TX\_CH06,2437MHz  
 Plane : E1

	Freq	Level	Over	Limit	Read	Antenna	Preamp	Cable	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 @	2390.00	40.61	-13.39	54.00	41.32	30.48	35.46	4.26	100	275	Average
2 @	2390.00	50.45	-23.55	74.00	51.16	30.48	35.46	4.26	100	360	Peak
3 @	2437.00	92.11			92.85	30.44	35.47	4.29	100	275	Average
4 @	2437.00	101.02			101.76	30.44	35.47	4.29	100	360	Peak
5 @	2483.50	39.93	-14.07	54.00	40.67	30.41	35.51	4.36	100	275	Average
6 @	2483.50	50.67	-23.33	74.00	51.41	30.41	35.51	4.36	100	360	Peak

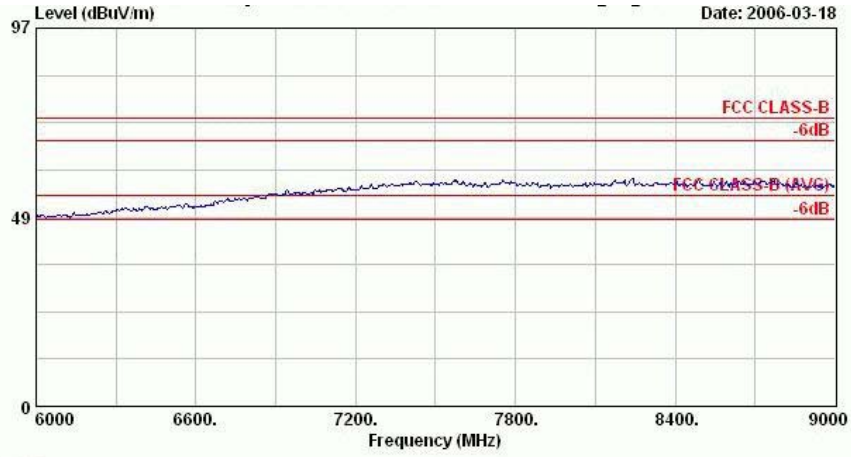
Remark: #3 and #4 Fundamental Signal.



Site : 03CH06-HY  
 Condition : HF-ANT-071025-940201 VERTICAL  
 EUT : GPS Bluetooth PDA  
 Power : 120Vac/60Hz  
 Model : FR631101  
 Memo : 11g TX\_CH06,2437MHz  
 Plane : E1

	Freq	Level	Over	Limit	Read	Antenna	Preamp	Cable	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 @	4866.00	50.63	-23.37	74.00	47.16	33.33	36.16	6.30	200	360	Peak
2 @	4866.00	40.13	-13.87	54.00	36.66	33.33	36.16	6.30	100	339	Average



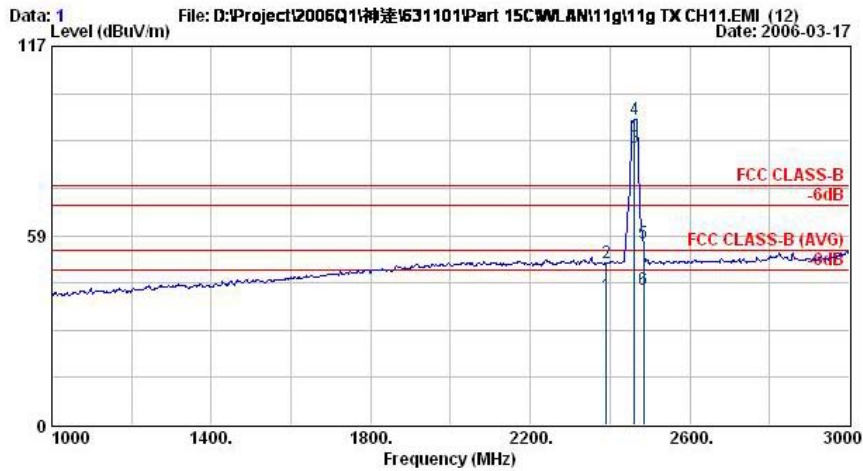


Site : 03CH06-HY  
Condition : HF-ANT-071025-940201 VERTICAL  
EUT : GPS Bluetooth PDA  
Power : 120Vac/60Hz  
Model : FR631101  
Memo : 11g\_TX\_CH06,2437MHz  
Plane : E1



- Test Mode : Mode 6
- Polarization : Horizontal

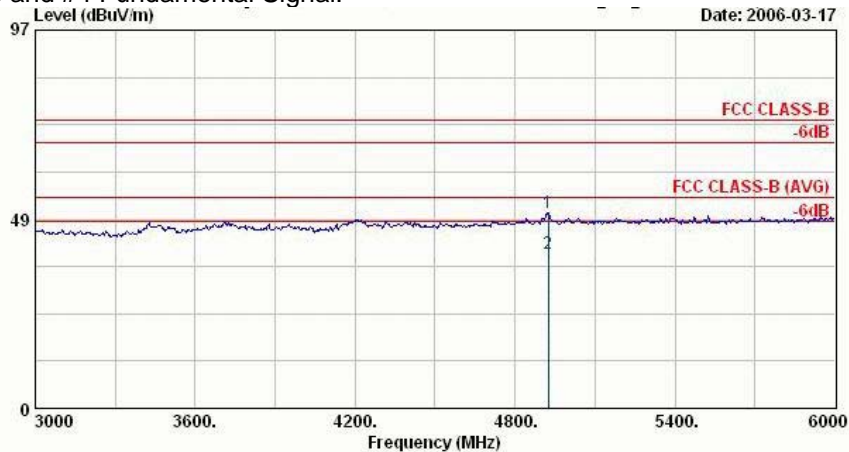
The test that passed at minimum margin was marked by the frame in the following table.



Site : 03CH06-HY  
 Condition : HF-ANT-071025-940201 HORIZONTAL  
 EUT : GPS Bluetooth PDA  
 Power : 120Vac/60Hz  
 Model : FR631101  
 Memo : 11g TX\_CH11\_2462MHz  
 Plane : E1

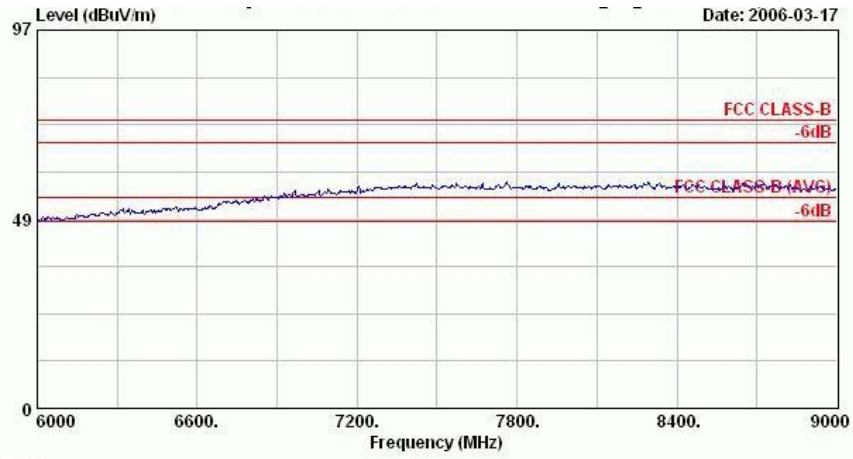
	Freq	Level	Over	Limit	ReadAntenna	Preamp	Cable	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	cm	deg	
1 @	2390.00	40.11	-13.89	54.00	40.82	30.48	35.46	4.26	100	36 Average
2 @	2390.00	49.98	-24.02	74.00	50.69	30.48	35.46	4.26	100	360 Peak
3 @	2462.00	85.89			86.63	30.43	35.49	4.33	100	36 Average
4 @	2462.00	94.44			95.18	30.43	35.49	4.33	100	360 Peak
5 @	2483.50	56.01	-17.99	74.00	56.75	30.41	35.51	4.36	100	360 Peak
6 @	2483.50	41.86	-12.14	54.00	42.60	30.41	35.51	4.36	100	36 Average

Remark: #3 and #4 Fundamental Signal.



Site : 03CH06-HY  
 Condition : HF-ANT-071025-940201 HORIZONTAL  
 EUT : GPS Bluetooth PDA  
 Power : 120Vac/60Hz  
 Model : FR631101  
 Memo : 11g TX\_CH11\_2462MHz  
 Plane : E1

	Freq	Level	Over	Limit	ReadAntenna	Preamp	Cable	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	cm	deg	
1 @	4924.00	50.14	-23.86	74.00	46.42	33.57	36.21	6.36	200	0 Peak
2 @	4924.00	39.57	-14.43	54.00	35.85	33.57	36.21	6.36	149	99 Average

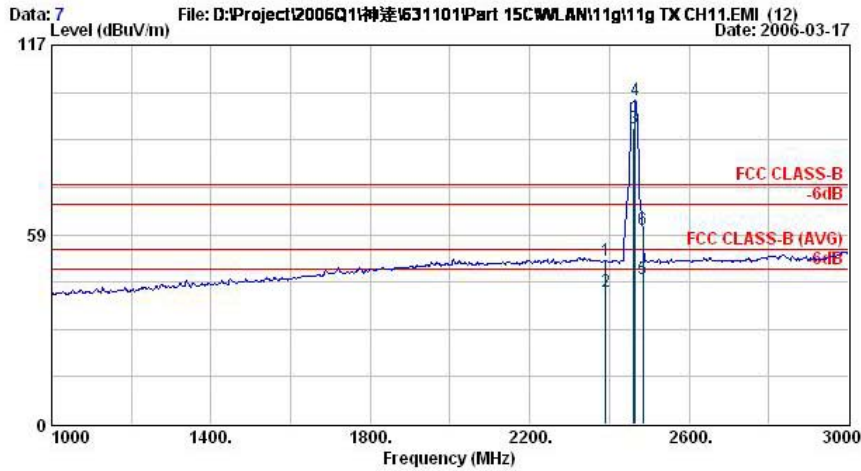


Site : 03CH06-HY  
Condition : HF-ANT-071025-940201 HORIZONTAL  
EUT : GPS Bluetooth PDA  
Power : 120Vac/60Hz  
Model : FR631101  
Memo : 11g TX\_CH11\_2462MHz  
Plane : E1



- Polarization : Vertical

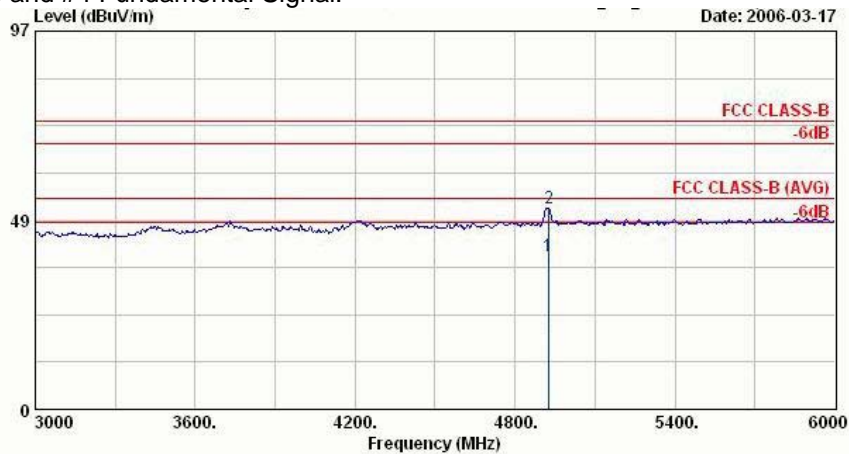
The test that passed at minimum margin was marked by the frame in the following table.



Site : 03CH06-HY  
 Condition : HF-ANT-071025-940201 VERTICAL  
 EUT : GPS Bluetooth PDA  
 Power : 120Vac/60Hz  
 Model : FR631101  
 Memo : 11g TX\_CH11\_2462MHz  
 Plane : E1

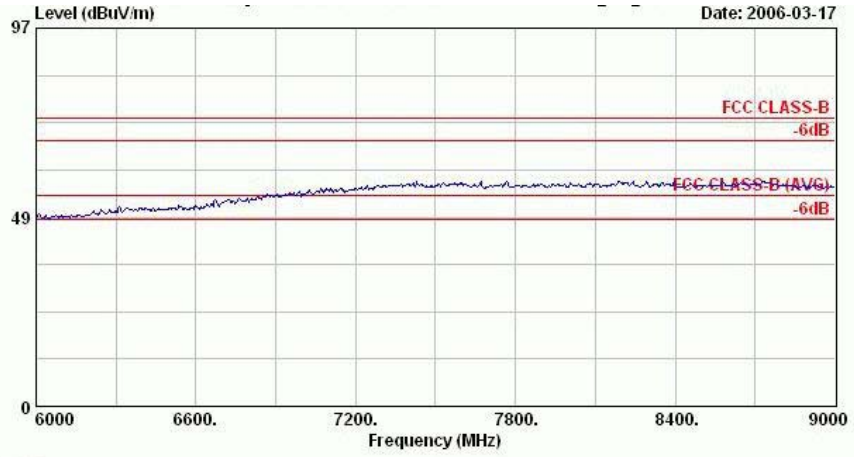
	Freq	Level	Over	Limit	Read	Antenna	Preamp	Cable	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 @	2390.00	50.51	-23.49	74.00	51.22	30.48	35.46	4.26	100	360	Peak
2 @	2390.00	40.71	-13.29	54.00	41.42	30.48	35.46	4.26	100	276	Average
3 @	2462.00	91.21			91.95	30.43	35.49	4.33	100	360	Average
4 @	2464.00	100.00			100.74	30.43	35.49	4.33	100	360	Peak
5 @	2483.50	44.64	-9.36	54.00	45.38	30.41	35.51	4.36	100	276	Average
6 @	2483.50	60.06	-13.94	74.00	60.80	30.41	35.51	4.36	100	360	Peak

Remark: #3 and #4 Fundamental Signal.



Site : 03CH06-HY  
 Condition : HF-ANT-071025-940201 VERTICAL  
 EUT : GPS Bluetooth PDA  
 Power : 120Vac/60Hz  
 Model : FR631101  
 Memo : 11g TX\_CH11\_2462MHz  
 Plane : E1

	Freq	Level	Over	Limit	Read	Antenna	Preamp	Cable	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 @	4924.00	39.40	-14.60	54.00	35.68	33.57	36.21	6.36	159	72	Average
2 @	4926.00	51.73	-22.27	74.00	48.01	33.57	36.21	6.36	200	360	Peak



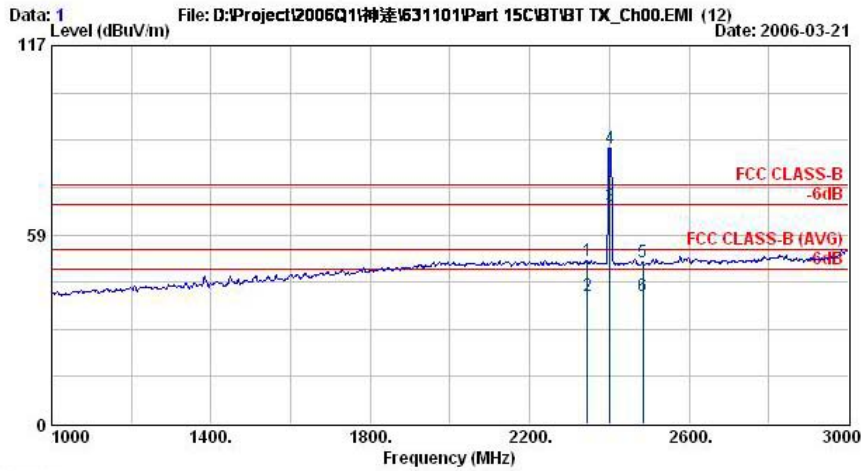
Site : 03CH06-HY  
Condition : HF-ANT-071025-940201 VERTICAL  
EUT : GPS Bluetooth PDA  
Power : 120Vac/60Hz  
Model : FR631101  
Memo : 11g TX\_CH11\_2462MHz  
Plane : E1



Test Mode : Mode 7

- Polarization : Horizontal

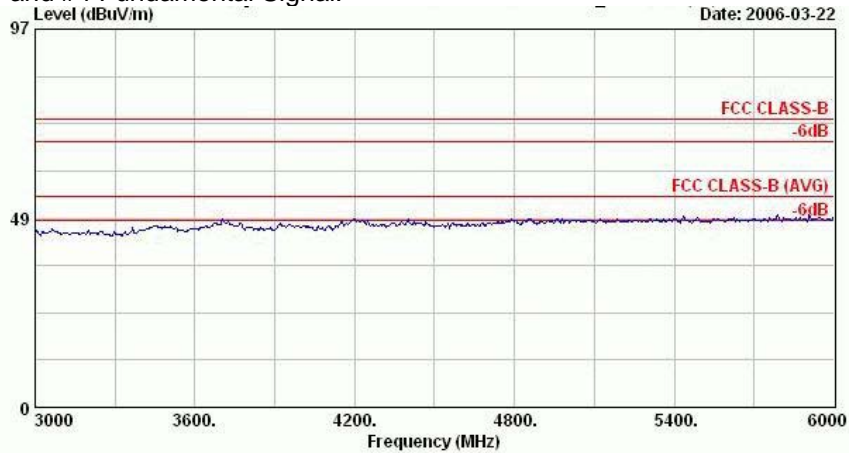
The test that passed at minimum margin was marked by the frame in the following table.



Site : 03CH06-HY  
 Condition : HF-ANT-071025-940201 HORIZONTAL  
 EUT : GPS Bluetooth PDA  
 Power : 120Vac/60Hz  
 Model : FR631101  
 Memo : Bluetooth TX \_CH00;2402MHz  
 Plane : E2

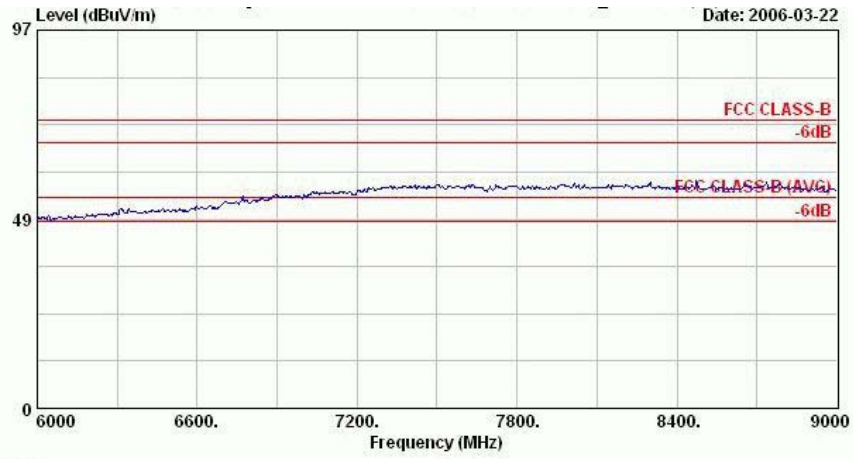
	Freq	Level	Over	Limit	ReadAntenna	Preamp	Cable	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level Factor	Factor	Loss	Pos	Pos	Remark
			dB	dBuV/m	dBuV	dB/m	dB	cm	deg	
1	2344.00	50.60	-23.40	74.00	51.30	30.52	35.42	4.20	100	0 Peak
2	2344.00	39.40	-14.60	54.00	40.10	30.52	35.42	4.20	100	64 Average
3 X	2402.00	67.32			68.03	30.48	35.46	4.26	100	64 Average
4 X	2402.00	85.22			85.93	30.48	35.46	4.26	100	0 Peak
5	2484.00	50.23	-23.77	74.00	50.97	30.41	35.51	4.36	100	0 Peak
6	2484.00	39.43	-14.57	54.00	40.17	30.41	35.51	4.36	100	64 Average

Remark: #3 and #4 Fundamental Signal.



Site : 03CH06-HY  
 Condition : HF-ANT-071025-940201 HORIZONTAL  
 EUT : GPS Bluetooth PDA  
 Power : 120Vac/60Hz  
 Model : FR631101  
 Memo : Bluetooth TX \_CH00;2402MHz  
 Plane : E2



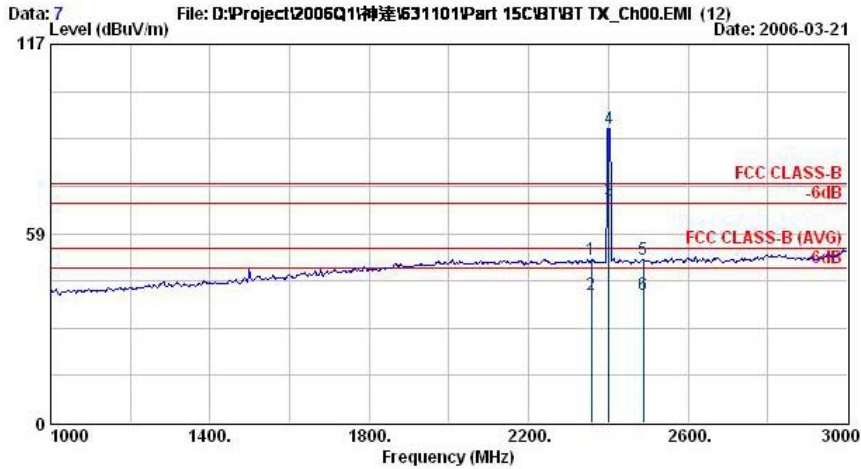


Site : 03CH06-HY  
Condition : HF-ANT-071025-940201 HORIZONTAL  
EUT : GPS Bluetooth PDA  
Power : 120Vac/60Hz  
Model : FR631101  
Memo : Bluetooth TX\_CH00,2402MHz  
Plane : E2



- Polarization : Vertical

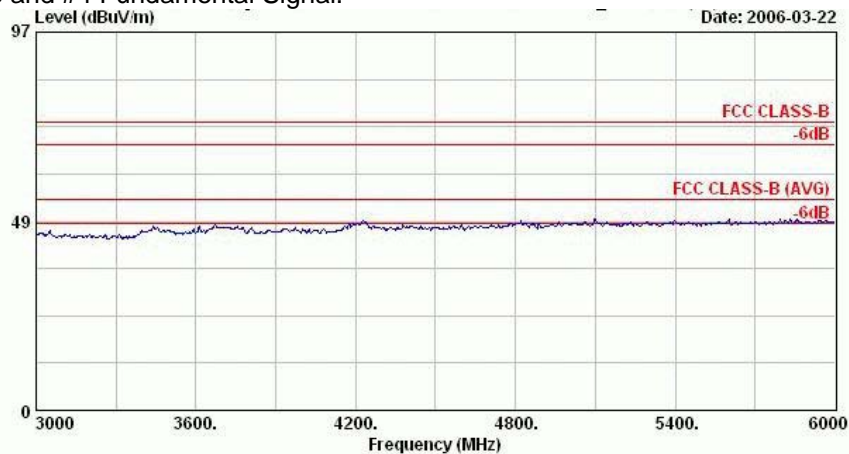
The test that passed at minimum margin was marked by the frame in the following table.



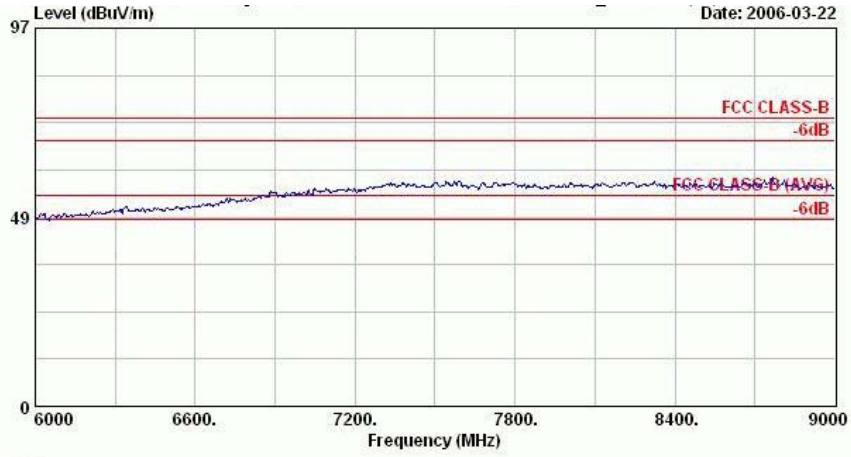
Site : 03CH06-HY  
 Condition : HF-ANT-071025-940201 VERTICAL  
 EUT : GPS Bluetooth PDA  
 Power : 120Vac/60Hz  
 Model : FR631101  
 Memo : Bluetooth TX\_CH00;2402MHz  
 Plane : E2

	Freq	Level	Over	Limit	Read	Antenna	Preamp	Cable	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	2358.00	50.49	-23.51	74.00	51.20	30.51	35.42	4.20	100	360	Peak
2	2358.00	39.43	-14.57	54.00	40.14	30.51	35.42	4.20	100	280	Average
3 X	2402.00	68.64			69.35	30.48	35.46	4.26	100	280	Average
4 @	2402.00	91.09			91.80	30.48	35.46	4.26	100	360	Peak
5	2488.00	50.39	-23.61	74.00	51.14	30.40	35.51	4.36	100	360	Peak
6	2488.00	39.39	-14.61	54.00	40.14	30.40	35.51	4.36	100	280	Average

Remark: #3 and #4 Fundamental Signal.



Site : 03CH06-HY  
 Condition : HF-ANT-071025-940201 VERTICAL  
 EUT : GPS Bluetooth PDA  
 Power : 120Vac/60Hz  
 Model : FR631101  
 Memo : Bluetooth TX\_CH00;2402MHz  
 Plane : E2

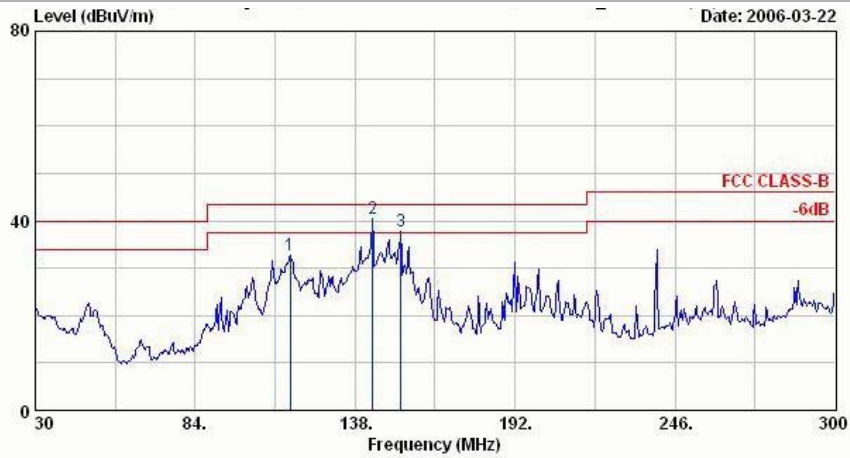


Site : 03CH06-HY  
Condition : HF-ANT-071025-940201 VERTICAL  
EUT : GPS Bluetooth PDA  
Power : 120Vac/60Hz  
Model : FR631101  
Memo : Bluetooth TX \_CH00,2402MHz  
Plane : E2



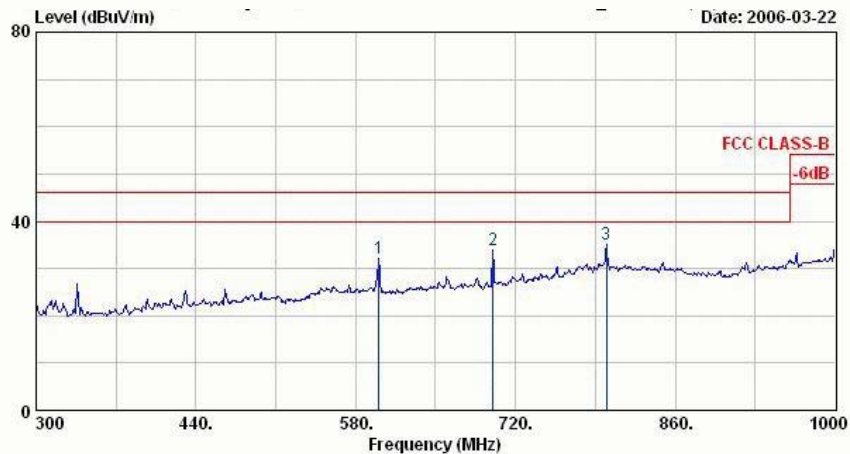
- Test Mode : Mode 8
- Polarization : Horizontal

The test that passed at minimum margin was marked by the frame in the following table.



Site : 03CH06-HY  
 Condition : BI-LOG-2004-1122 HORIZONTAL  
 EUT : GPS Bluetooth PDA  
 Power : 120Vac/60Hz  
 Model : FR631101  
 Memo : Bluetooth TX\_CH39,2441MHz  
 Plane : E2

	Freq	Level	Over	Limit	ReadAntenna	Preamp	Cable	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1 @	116.13	32.66	-10.84	43.50	49.05	12.38	31.35	2.58	400	0 Peak
2 @	143.94	40.39	-3.11	43.50	58.74	10.24	31.50	2.92	400	0 Peak
3 @	153.39	37.86	-5.64	43.50	57.00	9.34	31.52	3.04	400	0 Peak

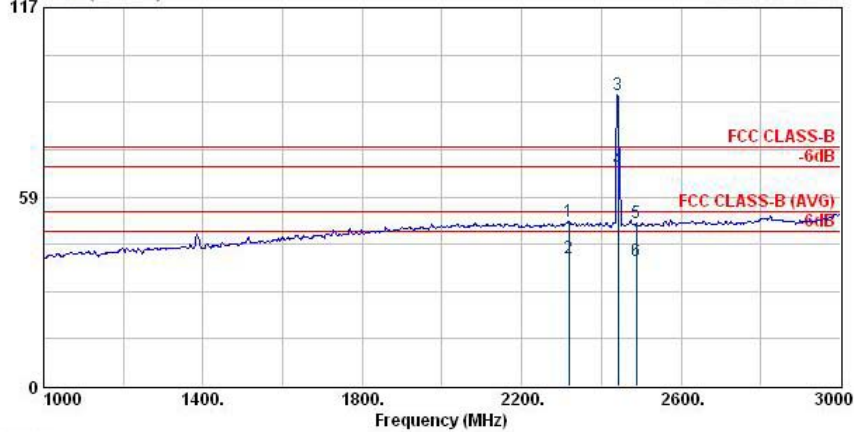


Site : 03CH06-HY  
 Condition : BI-LOG-2004-1122 HORIZONTAL  
 EUT : GPS Bluetooth PDA  
 Power : 120Vac/60Hz  
 Model : FR631101  
 Memo : Bluetooth TX\_CH39,2441MHz  
 Plane : E2

	Freq	Level	Over	Limit	ReadAntenna	Preamp	Cable	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1 @	600.30	32.22	-13.78	46.00	38.56	17.94	30.64	6.35	100	0 Peak
2 @	700.40	33.79	-12.21	46.00	38.43	19.04	30.61	6.93	100	0 Peak
3 @	799.80	35.22	-10.78	46.00	35.99	21.90	30.12	7.45	100	0 Peak



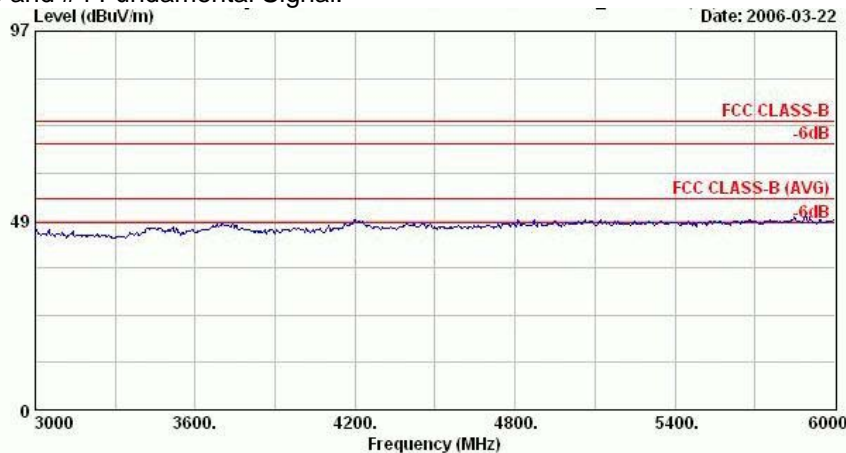
Data: 3 File: D:\Project2006Q1\神達\631101\Part 15C\BTBT TX\_Ch39.EMI (20) Date: 2006-03-22  
 Level (dBuV/m)



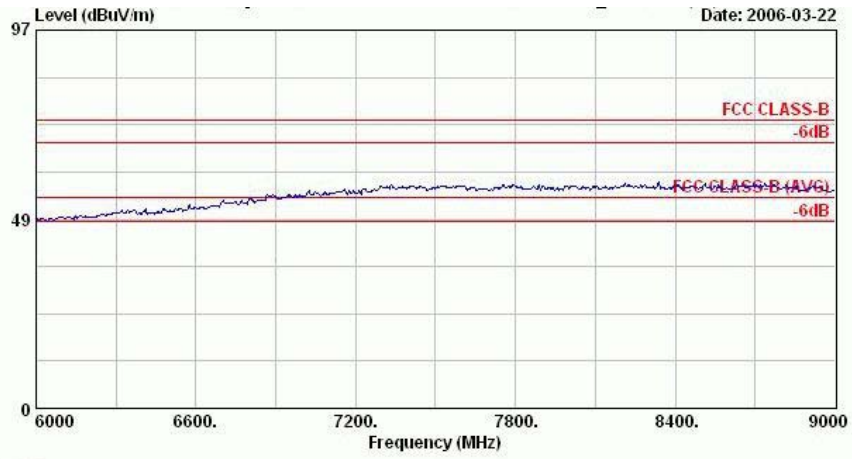
Site : 03CH06-HY  
 Condition : HF-ANT-071025-940201 HORIZONTAL  
 EUT : GPS Bluetooth PDA  
 Power : 120Vac/60Hz  
 Model : FR631101  
 Memo : Bluetooth TX \_CH39,2441MHz  
 Plane : E2

	Freq	Level	Over	Limit	ReadAntenna	Preamp	Cable	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	cm	deg	
1 @	2318.00	50.85	-23.15	74.00	51.55	30.54	35.40	4.17	107	360 Peak
2 @	2318.00	39.38	-14.62	54.00	40.08	30.54	35.40	4.17	100	60 Average
3 @	2441.00	90.04			90.76	30.44	35.49	4.33	107	360 Peak
4 @	2441.00	66.90			67.63	30.44	35.49	4.33	100	60 Average
5 @	2488.00	50.36	-23.64	74.00	51.12	30.40	35.51	4.36	107	360 Peak
6 @	2488.00	38.90	-15.10	54.00	39.65	30.40	35.51	4.36	100	60 Average

Remark: #3 and #4 Fundamental Signal.



Site : 03CH06-HY  
 Condition : HF-ANT-071025-940201 HORIZONTAL  
 EUT : GPS Bluetooth PDA  
 Power : 120Vac/60Hz  
 Model : FR631101  
 Memo : Bluetooth TX \_CH39,2441MHz  
 Plane : E2



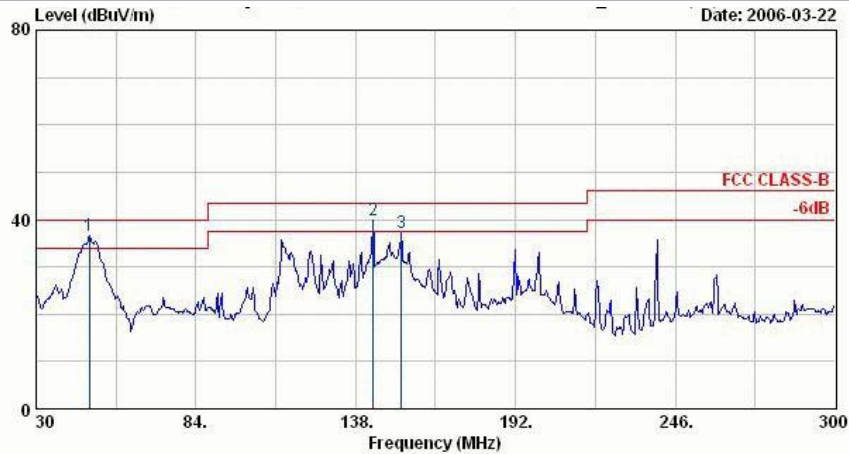
Site : 03CH06-HY  
Condition : HF-ANT-071025-940201 HORIZONTAL  
EUT : GPS Bluetooth PDA  
Power : 120Vac/60Hz  
Model : FR631101  
Memo : Bluetooth TX\_CH39;2441MHz  
Plane : E2





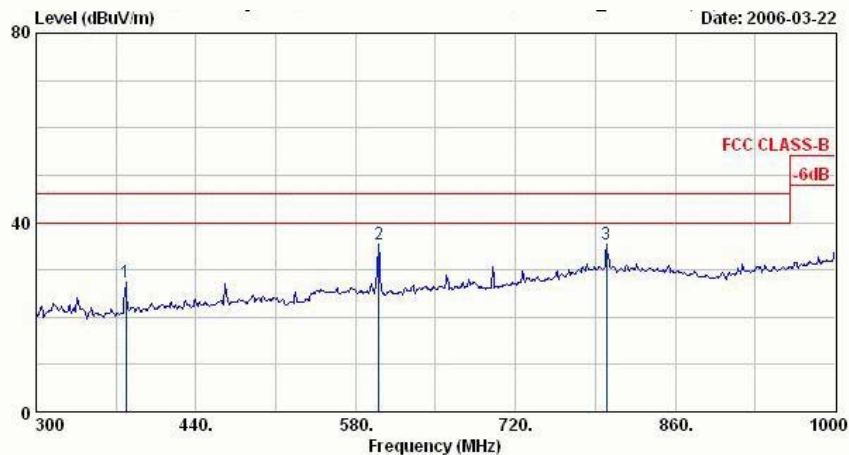
- Polarization : Vertical

The test that passed at minimum margin was marked by the frame in the following table.



Site : 03CH06-HY  
 Condition : BI-LOG-2004-1122 VERTICAL  
 EUT : GPS Bluetooth PDA  
 Power : 120Vac/60Hz  
 Model : FR631101  
 Memo : Bluetooth TX \_CH39,2441MHz  
 Plane : E2

	Freq	Level	Over	Limit	ReadAntenna	Preamp	Cable	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1 @	48.09	36.64	-3.36	40.00	55.82	10.66	31.52	1.69	400	0 Peak
2 @	143.94	39.71	-3.79	43.50	58.05	10.24	31.50	2.92	400	0 Peak
3 @	153.39	37.26	-6.24	43.50	56.40	9.34	31.52	3.04	400	0 Peak

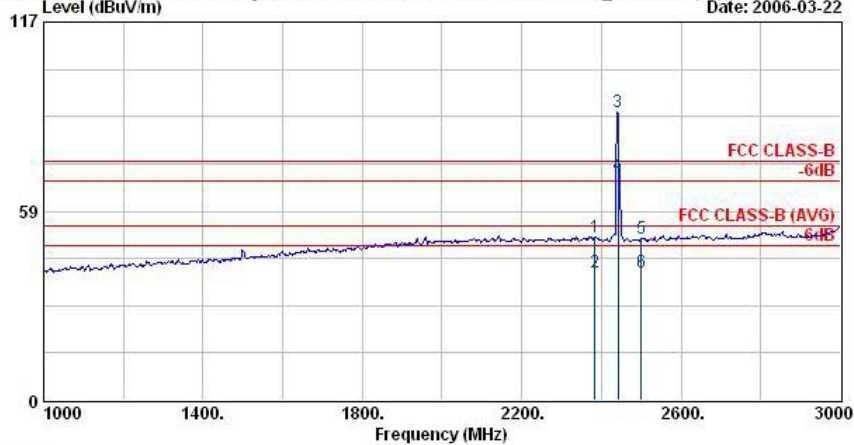


Site : 03CH06-HY  
 Condition : BI-LOG-2004-1122 VERTICAL  
 EUT : GPS Bluetooth PDA  
 Power : 120Vac/60Hz  
 Model : FR631101  
 Memo : Bluetooth TX \_CH39,2441MHz  
 Plane : E2

	Freq	Level	Over	Limit	ReadAntenna	Preamp	Cable	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1 @	378.40	27.36	-18.64	46.00	38.14	15.24	30.90	4.88	100	0 Peak
2 @	600.30	35.27	-10.73	46.00	41.62	17.94	30.64	6.35	100	0 Peak
3 @	799.80	35.52	-10.48	46.00	36.29	21.90	30.12	7.45	100	0 Peak



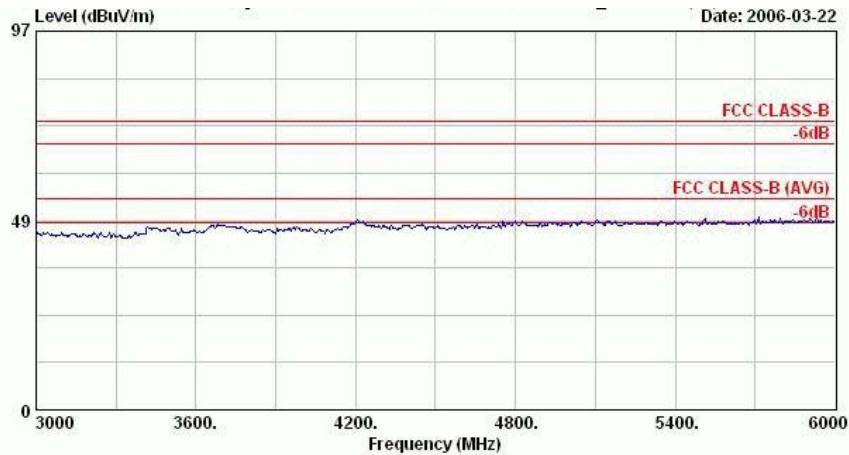
Data: 13 File: D:\Project\2006Q1\神達\631101\Part 15C\BT\BT\_TX\_Ch39.EMI (20) Date: 2006-03-22



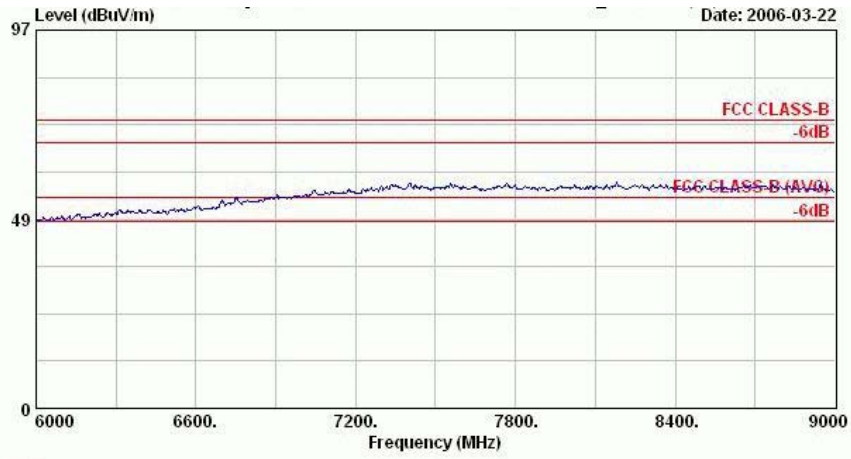
Site : 03CH06-HY  
 Condition : HF-ANT-071025-940201 VERTICAL  
 EUT : GPS Bluetooth PDA  
 Power : 120Vac/60Hz  
 Model : FR631101  
 Memo : Bluetooth TX \_CH39;2441MHz  
 Plane : E2

	Freq	Level	Over	Limit	Read	Antenna	Preamp	Cable	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 @	2384.00	50.63	-23.37	74.00	51.34	30.50	35.44	4.23	100	357	Peak
2 @	2384.00	39.45	-14.55	54.00	40.16	30.50	35.44	4.23	107	32	Average
3 @	2441.00	89.10			89.83	30.44	35.49	4.33	100	357	Peak
4 @	2441.00	69.55			70.28	30.44	35.49	4.33	107	32	Average
5 @	2500.00	49.84	-24.16	74.00	50.58	30.40	35.53	4.39	100	357	Peak
6 @	2500.00	39.44	-14.56	54.00	40.18	30.40	35.53	4.39	107	32	Average

Remark: #3 and #4 Fundamental Signal.



Site : 03CH06-HY  
 Condition : HF-ANT-071025-940201 VERTICAL  
 EUT : GPS Bluetooth PDA  
 Power : 120Vac/60Hz  
 Model : FR631101  
 Memo : Bluetooth TX \_CH39;2441MHz  
 Plane : E2

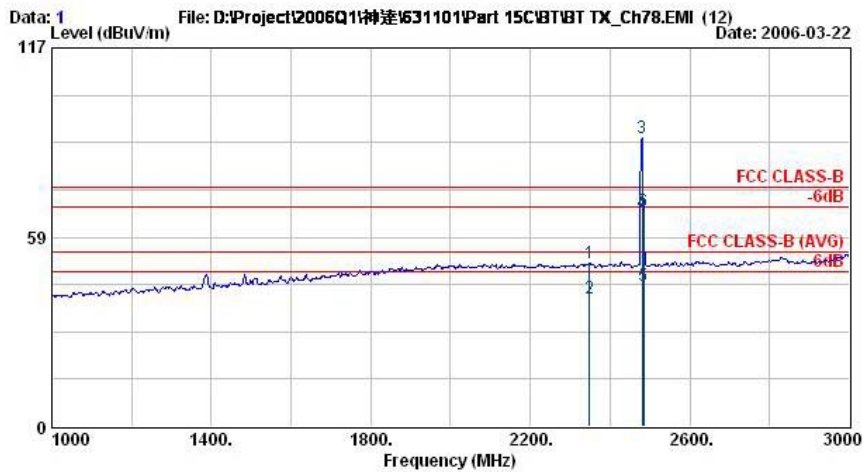


Site : 03CH06-HY  
Condition : HF-ANT-071025-940201 VERTICAL  
EUT : GPS Bluetooth PDA  
Power : 120Vac/60Hz  
Model : FR631101  
Memo : Bluetooth TX\_CH39,2441MHz  
Plane : E2



- Test Mode : Mode 9
- Polarization : Horizontal

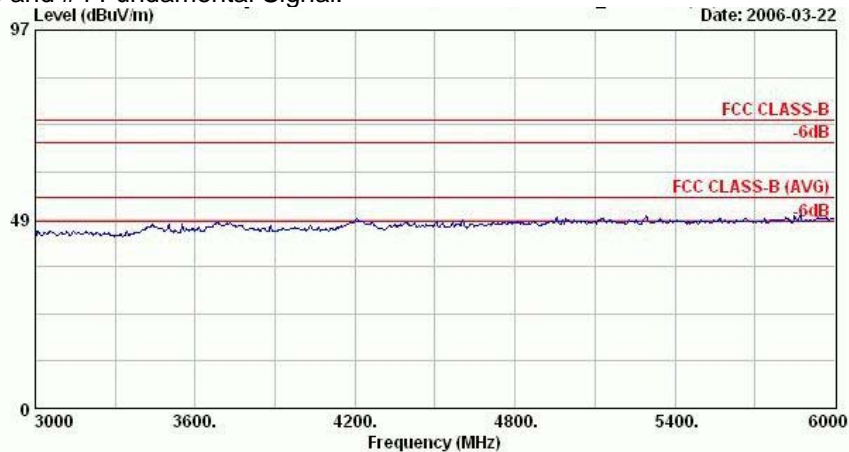
The test that passed at minimum margin was marked by the frame in the following table.



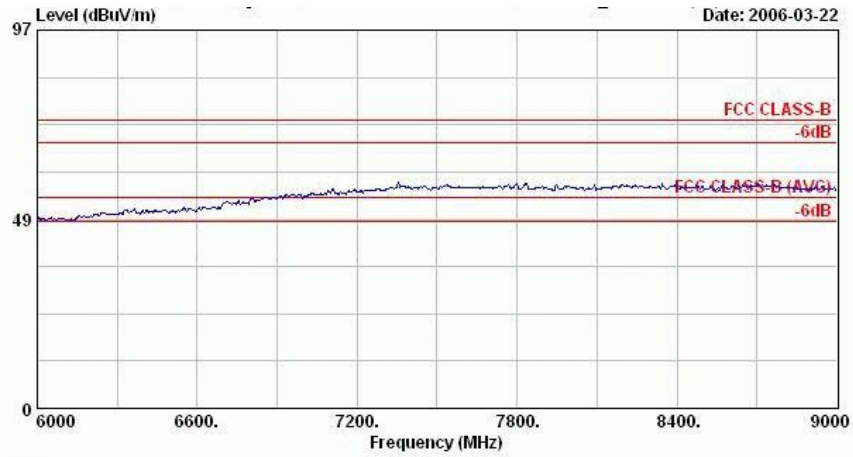
Site : 03CH06-HY  
 Condition : HF-ANT-071025-940201 HORIZONTAL  
 EUT : GPS Buetooth PDA  
 Power : 120Vac/60Hz  
 Model : FR631101  
 Memo : Buetooth TX \_CH78;2480MHz  
 Plane : E2

	Freq	Level	Over	Limit	Read	Antenna	Preamp	Cable	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 @	2348.00	50.42	-23.58	74.00	51.12	30.52	35.42	4.20	100	4	Peak
2 @	2348.00	39.49	-14.51	54.00	40.19	30.52	35.42	4.20	100	25	Average
3 @	2480.00	89.16			89.90	30.41	35.51	4.36	100	4	Peak
4 @	2480.00	66.11			66.85	30.41	35.51	4.36	100	25	Average
5 @	2483.50	43.45	-10.55	54.00	44.19	30.41	35.51	4.36	100	25	Average
6 @	2483.50	66.45	-7.55	74.00	67.19	30.41	35.51	4.36	100	4	Peak

Remark: #3 and #4 Fundamental Signal.



Site : 03CH06-HY  
 Condition : HF-ANT-071025-940201 HORIZONTAL  
 EUT : GPS Buetooth PDA  
 Power : 120Vac/60Hz  
 Model : FR631101  
 Memo : Buetooth TX \_CH78;2480MHz  
 Plane : E2

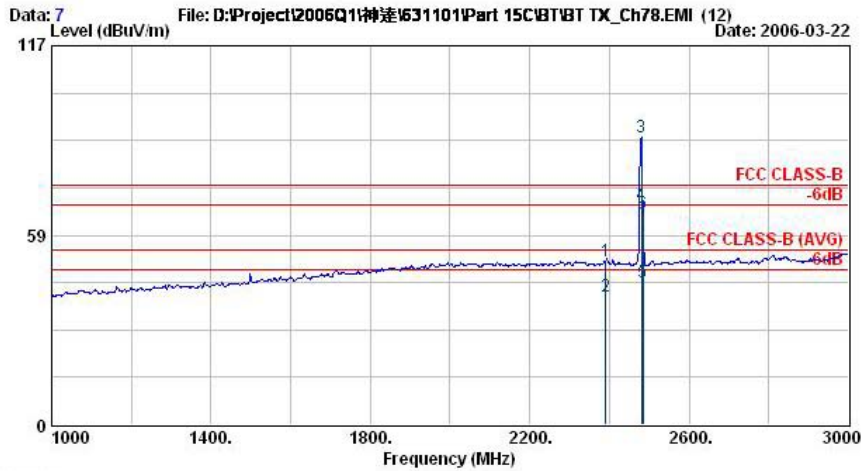


Site : 03CH06-HY  
Condition : HF-ANT-071025-940201 HORIZONTAL  
EUT : GPS Bluetooth PDA  
Power : 120Vac/60Hz  
Model : FR631101  
Memo : Bluetooth TX \_CH78,2480MHz  
Plane : E2



- Polarization : Vertical

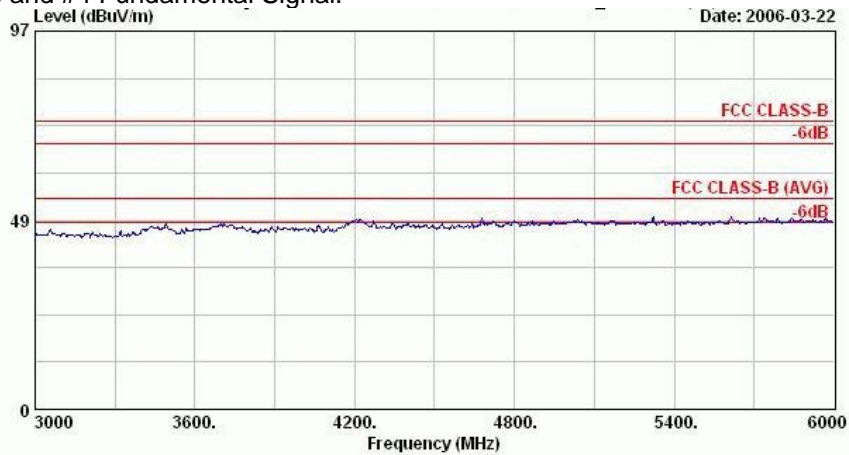
The test that passed at minimum margin was marked by the frame in the following table.



Site : 03CH06-HY  
 Condition : HF-ANT-071025-940201 VERTICAL  
 EUT : GPS Bluetooth PDA  
 Power : 120Vac/60Hz  
 Model : FR631101  
 Memo : Bluetooth TX \_CH78;2480MHz  
 Plane : E2

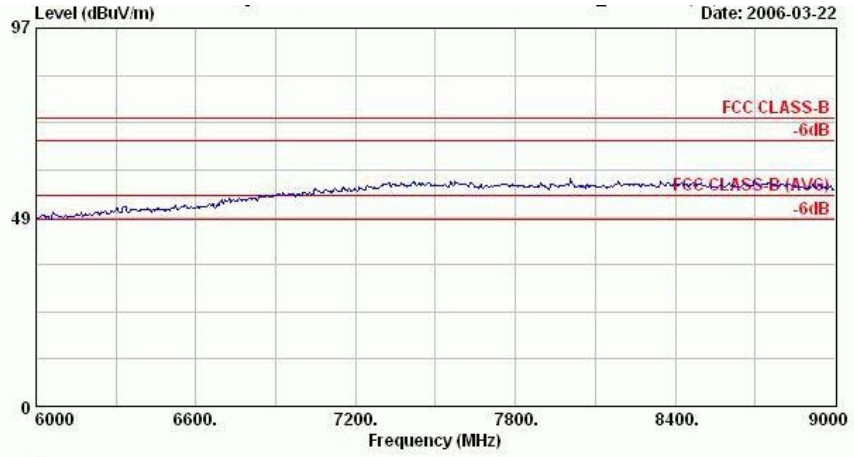
	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Preamp Factor	Cable Loss	Ant Pos	Table Pos	Remark
	MHz	dBUV/m	dB	dBUV/m	dBuV	dB/m	dB	dB	cm	deg	
1 @	2390.00	50.54	-23.46	74.00	51.26	30.48	35.46	4.26	100	333	Peak
2 @	2390.00	39.39	-14.61	54.00	40.10	30.48	35.46	4.26	100	260	Average
3 @	2480.00	88.63			89.37	30.41	35.51	4.36	100	333	Peak
4 @	2480.00	68.00			68.74	30.41	35.51	4.36	100	260	Average
5 @	2483.50	43.92	-10.08	54.00	44.66	30.41	35.51	4.36	100	260	Average
6 @	2483.50	65.43	-8.57	74.00	66.17	30.41	35.51	4.36	100	333	Peak

Remark: #3 and #4 Fundamental Signal.



Site : 03CH06-HY  
 Condition : HF-ANT-071025-940201 VERTICAL  
 EUT : GPS Bluetooth PDA  
 Power : 120Vac/60Hz  
 Model : FR631101  
 Memo : Bluetooth TX \_CH78;2480MHz  
 Plane : E2





Site : 03CH06-HY  
Condition : HF-ANT-071025-940201 VERTICAL  
EUT : GPS Bluetooth PDA  
Power : 120Vac/60Hz  
Model : FR631101  
Memo : Bluetooth TX\_CH78,2480MHz  
Plane : E2

Remark: There is no more obvious spurious emission except the listings above.



## **5.12 Antenna Requirements**

### **5.12.1 Standard Applicable**

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no other antenna except assembled by the responsible party shall be used with the device.

And according to FCC 47 CFR Section 15.247 (b), if directional gain of transmitting antennas is greater than 6dBi, the power shall be reduced by the same level in dB comparing to gain minus 6dBi.

### **5.12.2 Antenna Connected Construction**

The antennas used in this product are patch antenna for both WLAN and BT. There are no connector on antenna port and it is considered to meet antenna requirement of FCC.

### **5.12.3 Antenna Gain**

The antenna gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.



**6. List of Measuring Equipments Used**

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Due Date	Remark
EMC Receiver	R&S	ESCS 30	100174	9kHz – 2.75GHz	Oct. 19, 2005	Oct. 19, 2006	Conduction (CO01-HY)
LISN	MessTec	NNB-2/16Z	2001/009	9kHz – 30MHz	Apr. 26, 2005	Apr. 26, 2006	Conduction (CO01-HY)
LISN (Support Unit)	MessTec	NNB-2/16Z	2001/004	9kHz – 30MHz	Apr. 20, 2005	Apr. 20, 2006	Conduction (CO01-HY)
EMI Filter	LINDGREN	LRE-2060	1004	< 450Hz	N/A	N/A	Conduction (CO01-HY)
EMI Filter	LINDGREN	N6006	201052	0 – 60Hz	N/A	N/A	Conduction (CO01-HY)
RF Cable-CON	Suhner Switzerland	RG223/U	CB029	9kHz – 30MHz	Dec. 22, 2005	Dec. 22, 2006	Conduction (CO01-HY)
Spectrum analyzer	Agilent	E4408B	MY44211030	9KHz-26.5GHz	Jul. 25, 2005	Jul. 24, 2006	Radiation (03CH06-HY)
Receiver	R&S	ESCS30	100356	9KHz-2.75GHz	Jun. 28, 2005	Jun. 27, 2006	Radiation (03CH06-HY)
Controller	CT	SC100	N/A	N/A	N/A	N/A	Radiation (03CH06-HY)
Bilog Antenna	SCHAFFNER	CBL6112B	2885	30MHz -2GHz	Nov. 22, 2004	Nov. 22, 2006	Radiation (03CH06-HY)
Horn Antenna	Com-Power	AH118	071025	1G-18G	Feb. 1, 2005	Feb. 1, 2007	Radiation (03CH06-HY)
SHF-EHF Horn	SCHWARZBECK	BBHA 9170	9170-249	14G - 40G	Jul. 21, 2005	Jul. 20, 2006	Radiation (03CH06-HY)
Amplifier	MITEQ	AMF-6F	997165	26G - 40G	Jul. 21, 2005	Jul. 20, 2006	Radiation (03CH06-HY)
Turn Table	HD	DS 420	420/650/00	0 ~ 360 degree	N/A	N/A	Radiation (03CH06-HY)
Antenna Mast	HD	MA 240	240/560/00	1 m - 4 m	N/A	N/A	Radiation (03CH06-HY)



## 7. Uncertainty Evaluation

### Uncertainty of Conducted Emission Measurement (150kHz ~ 30MHz)

Contribution	Uncertainty of $x_i$		$u(x_i)$
	dB	Probability Distribution	
Receiver reading	0.10	Normal(k=2)	0.05
Cable loss	0.10	Normal(k=2)	0.05
AMN insertion loss	2.50	Rectangular	0.63
Receiver Spec	1.50	Rectangular	0.43
Site imperfection	1.39	Rectangular	0.80
Mismatch	+0.34/-0.35	U-shape	0.24
<b>combined standard uncertainty Uc(y)</b>	<b>1.13</b>		
<b>Measuring uncertainty for a level of confidence of 95% U=2Uc(y)</b>	<b>2.26</b>		

### Uncertainty of Radiated Emission Measurement (30MHz ~ 1000MHz)

Contribution	Uncertainty of $x_i$		$u(x_i)$
	dB	Probability Distribution	
Receiver reading	0.41	Normal(k=2)	0.21
Antenna factor calibration	0.83	Normal(k=2)	0.42
Cable loss calibration	0.25	Normal(k=2)	0.13
Pre Amplifier Gain calibration	0.27	Normal(k=2)	0.14
RCV/SPA specification	2.50	Rectangular	0.72
Antenna Factor Interpolation for Frequency	1.00	Rectangular	0.29
Site imperfection	1.43	Rectangular	0.83
Mismatch	+0.39/-0.41	U-shaped	0.28
<b>combined standard uncertainty Uc(y)</b>	<b>1.27</b>		
<b>Measuring uncertainty for a level of confidence of 95% U=2Uc(y)</b>	<b>2.54</b>		



**Uncertainty of Radiated Emission Measurement (1GHz ~ 40GHz)**

Contribution	Uncertainty of $x_i$		$u(x_i)$	$C_i$	$C_i * u(x_i)$
	dB	Probability Distribution			
Receiver reading	±0.10	Normal(k=1)	0.10	1	0.10
Antenna factor calibration	±1.70	Normal(k=2)	0.85	1	0.85
Cable loss calibration	±0.50	Normal(k=2)	0.25	1	0.25
Receiver Correction	±2.00	Rectangular	1.15	1	1.15
Antenna Factor Directional	±1.50	Rectangular	0.87	1	0.87
Site imperfection	±2.80	Triangular	1.14	1	1.14
Mismatch Receiver VSWR $\Gamma_1 = 0.197$ Antenna VSWR $\Gamma_2 = 0.194$ Uncertainty = $20 \log(1 - \Gamma_1 * \Gamma_2 * \Gamma_3)$	+0.34/-0.35	U-shaped	0.244	1	0.244
<b>Combined standard uncertainty <math>U_c(y)</math></b>	<b>2.36</b>				
<b>Measuring uncertainty for a level of confidence of 95% <math>U = 2U_c(y)</math></b>	<b>4.72</b>				