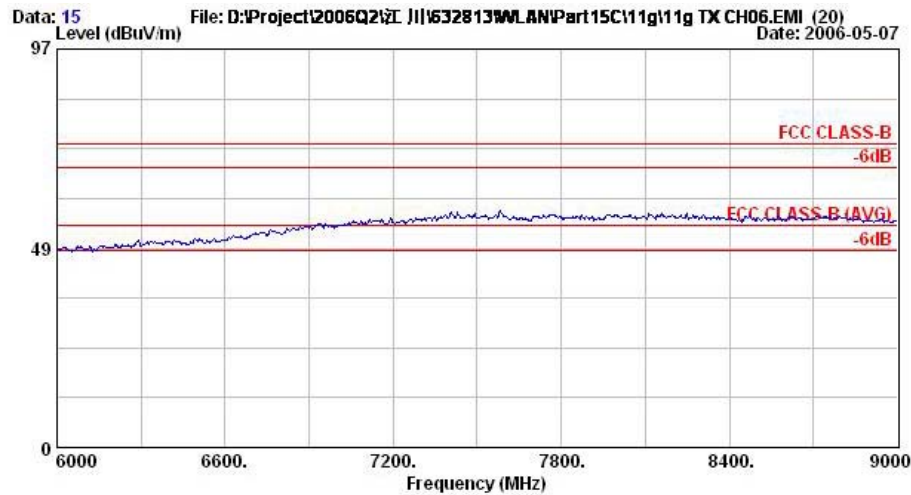




FCC TEST REPORT

Report No. : FR632813-A



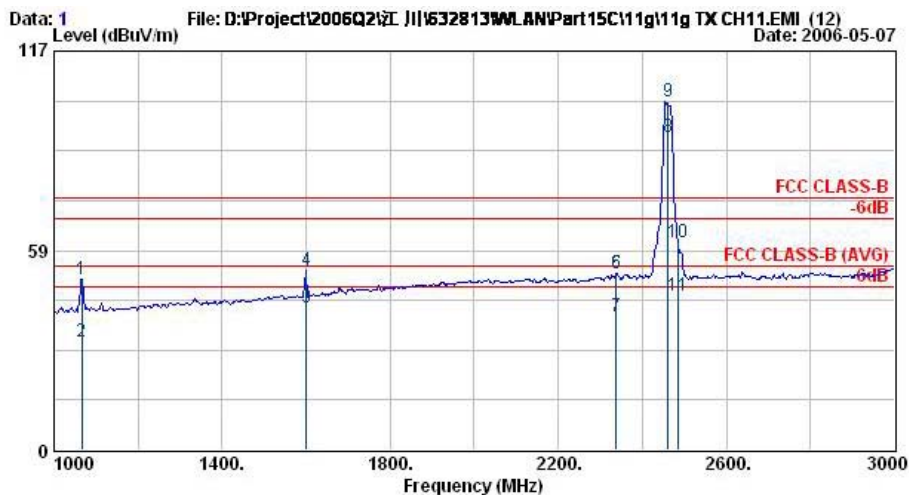
Site : 03CH06-HY
Condition : HF-ANT-060410 VERTICAL
EUT : VM(CPU type:ULV/dual core, LV/single
: core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : 11g TX_CH06_2437MHz

Remark : Frequency from 9GHz to 25GHz, the emission emitted by the EUT is too low to be measured.



- 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-060410 HORIZONTAL
EUT : VM(CPU type:ULV/dual core, LV/single core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : 11g TX_CH11_2462MHz

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	1066.00	50.08	-23.92	74.00	59.27	24.46	2.82	36.46	100	0	Peak
2	1066.00	31.59	-22.41	54.00	40.78	24.46	2.82	36.46	115	279	Average
3	1600.00	41.80	-12.20	54.00	47.01	26.90	3.48	35.59	112	75	Average
4	1600.00	52.58	-21.42	74.00	57.84	26.90	3.46	35.62	100	0	Peak
5	2338.00	51.85	-22.15	74.00	52.85	30.24	4.17	35.40	100	0	Peak
6	2338.00	51.85	-22.15	74.00	52.85	30.24	4.17	35.40	100	0	Peak
7	2338.00	39.29	-14.71	54.00	40.29	30.24	4.17	35.40	103	41	Average
8 @	2462.00	91.60			92.48	30.29	4.33	35.49	103	41	Average
9 X	2462.00	102.35			103.23	30.29	4.33	35.49	100	0	Peak
10	2483.50	60.68	-13.32	74.00	61.54	30.29	4.36	35.51	100	0	Peak
11	2483.50	45.32	-8.68	54.00	46.18	30.29	4.36	35.51	103	41	Average

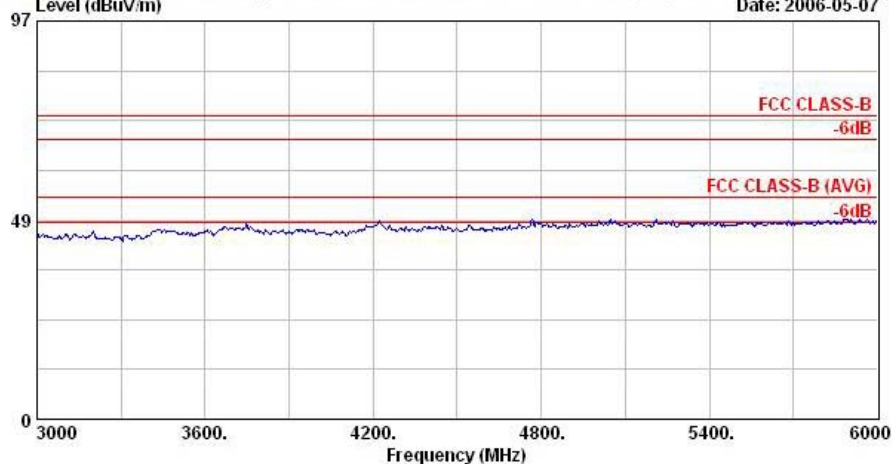
Remark: #8 and #9 Fundamental Signal



FCC TEST REPORT

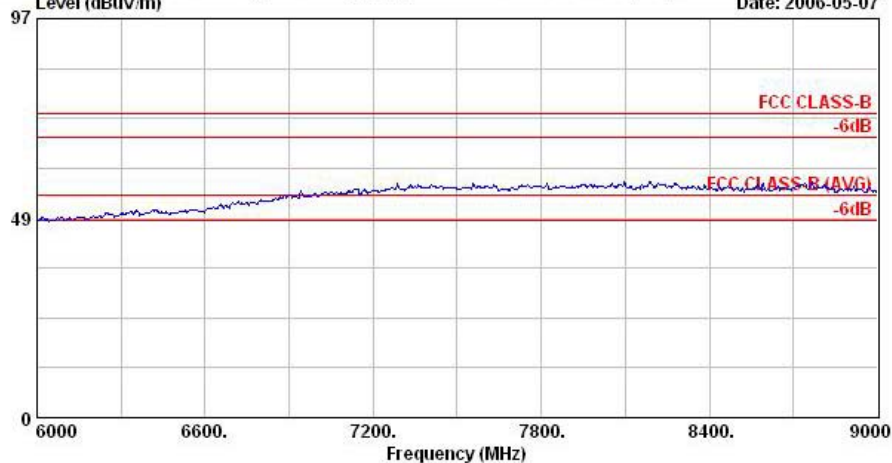
Report No. : FR632813-A

Data: 2 File: D:\Project\2006Q2\Z J\632813\WLAN\Part15C\11g\11g TX CH11.EMI (12) Level (dBuV/m) Date: 2006-05-07



Site : 03CH06-HY
Condition : HF-ANT-060410 HORIZONTAL
EUT : VM(CPU type:ULV/dual core, LV/single core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : 11g TX_CH11,2462MHz

Data: 3 File: D:\Project\2006Q2\Z J\632813\WLAN\Part15C\11g\11g TX CH11.EMI (12) Level (dBuV/m) Date: 2006-05-07

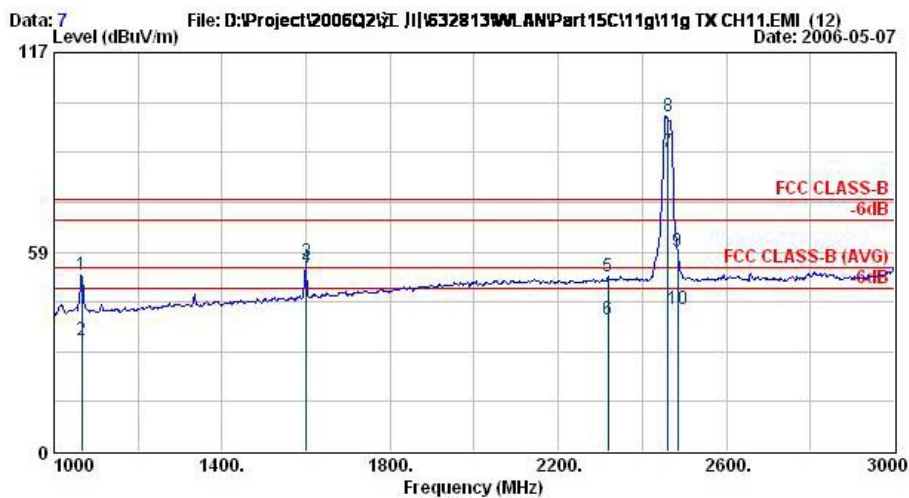


Site : 03CH06-HY
Condition : HF-ANT-060410 HORIZONTAL
EUT : VM(CPU type:ULV/dual core, LV/single core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : 11g TX_CH11,2462MHz



- Polarization : Vertical

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



Site : 03CH06-HY
Condition : HF-ANT-060410 VERTICAL
EUT : VM(CPU type:ULV/dual core, LV/single
: core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : 11g TX_CH11.2462MHz

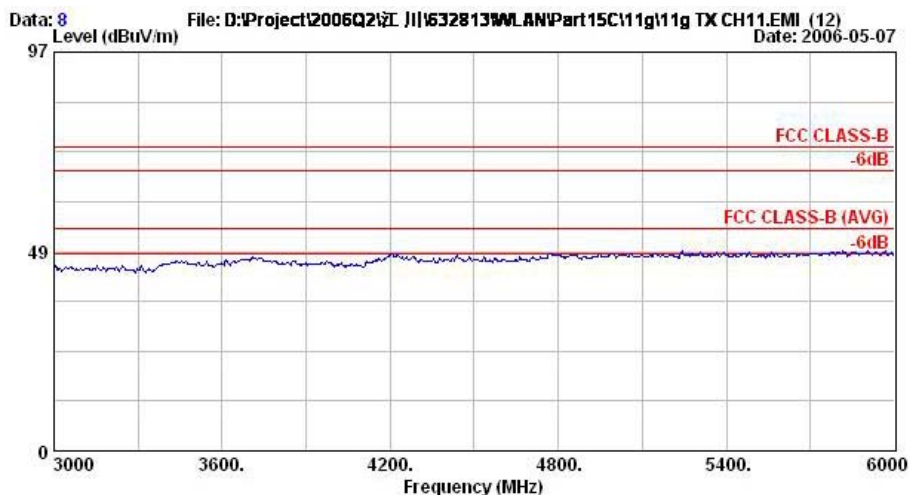
	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos Remark
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	1066.00	51.68	-22.32	74.00	60.87	24.46	2.82	36.46	100	360 Peak
2	1066.00	32.46	-21.54	54.00	41.65	24.46	2.82	36.46	119	343 Average
3	1600.00	55.56	-18.44	74.00	60.82	26.90	3.46	35.62	100	360 Peak
4	1600.00	53.74	-0.26	54.00	58.95	26.90	3.48	35.59	136	174 Average
5	2318.00	51.29	-22.71	74.00	52.29	30.23	4.17	35.40	100	360 Peak
6	2318.00	38.72	-15.28	54.00	39.72	30.23	4.17	35.40	100	307 Average
7 X	2462.00	87.86			88.74	30.29	4.33	35.49	100	307 Average
8 X	2462.00	98.21			99.09	30.29	4.33	35.49	100	360 Peak
9	2483.50	58.84	-15.16	74.00	59.70	30.29	4.36	35.51	100	360 Peak
10	2483.50	41.87	-12.13	54.00	42.73	30.29	4.36	35.51	100	307 Average

Remark: #7 and #8 Fundamental Signal

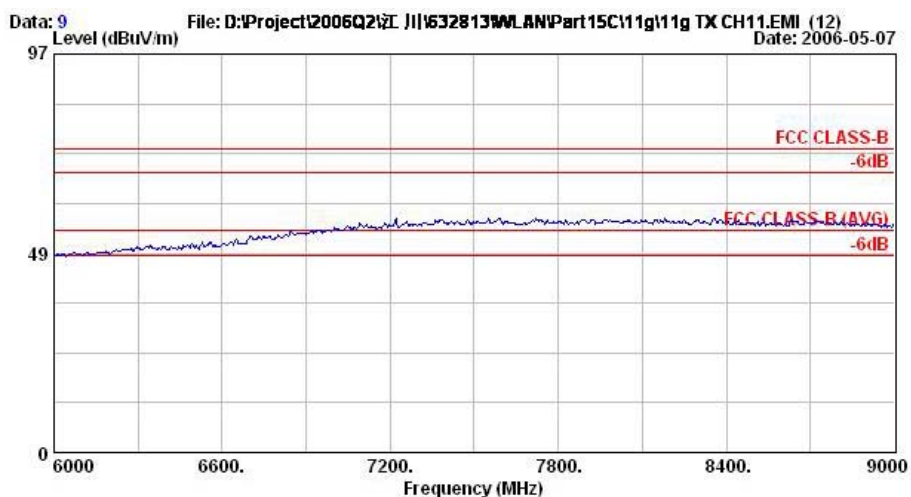


FCC TEST REPORT

Report No. : FR632813-A



Site : 03CH06-HY
Condition : HF-ANT-060410 VERTICAL
EUT : VM(CPU type:ULV/dual core, LV/single core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : 11g TX_CH11,2462MHz



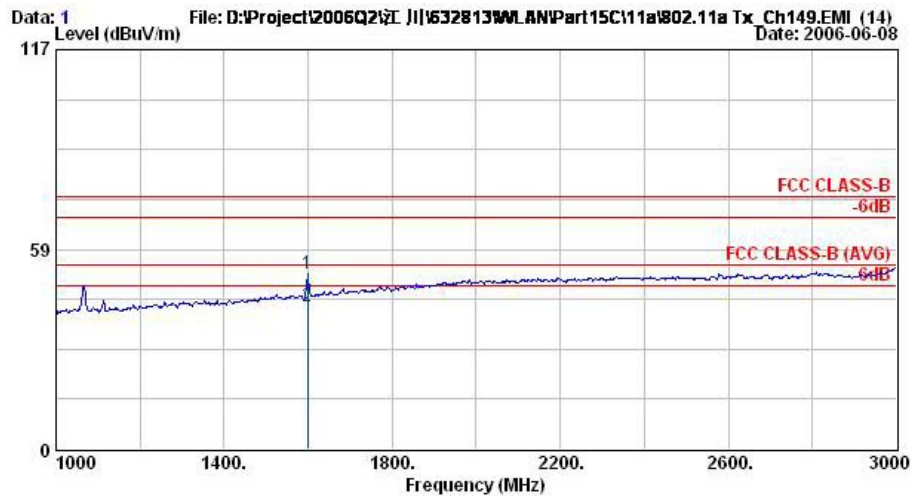
Site : 03CH06-HY
Condition : HF-ANT-060410 VERTICAL
EUT : VM(CPU type:ULV/dual core, LV/single core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : 11g TX_CH11,2462MHz

Remark : Frequency from 9GHz to 25GHz, the emission emitted by the EUT is too low to be measured.



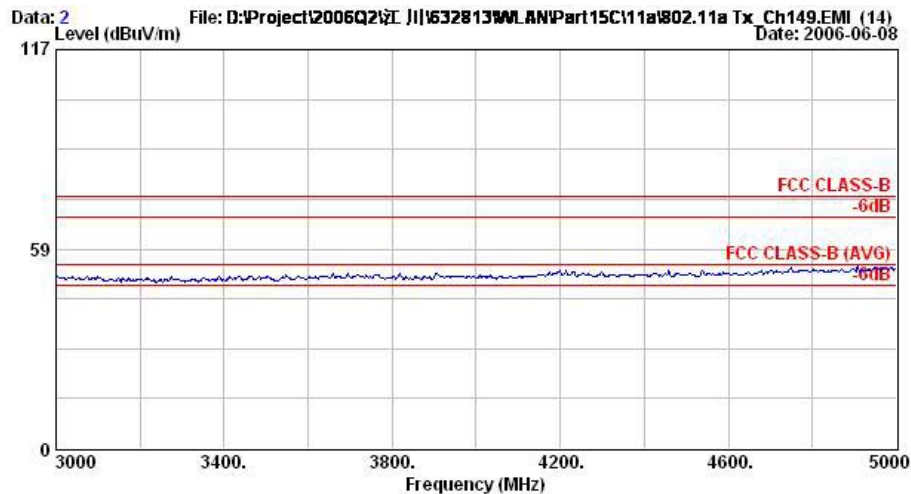
- Test Mode : Mode 7
- Polarization : Horizontal

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



Site : 03CH06-HY
Condition : HF-ANT-060410 HORIZONTAL
EUT : VM(CPU type:ULV/dual core, LV/single core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : 802.11a TX CH149 5745MHz

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	1598.00	51.17	-22.83	74.00	56.43	26.90	3.46	35.62	100	360
2 @	1598.00	41.89	-12.11	54.00	47.15	26.90	3.46	35.62	100	36

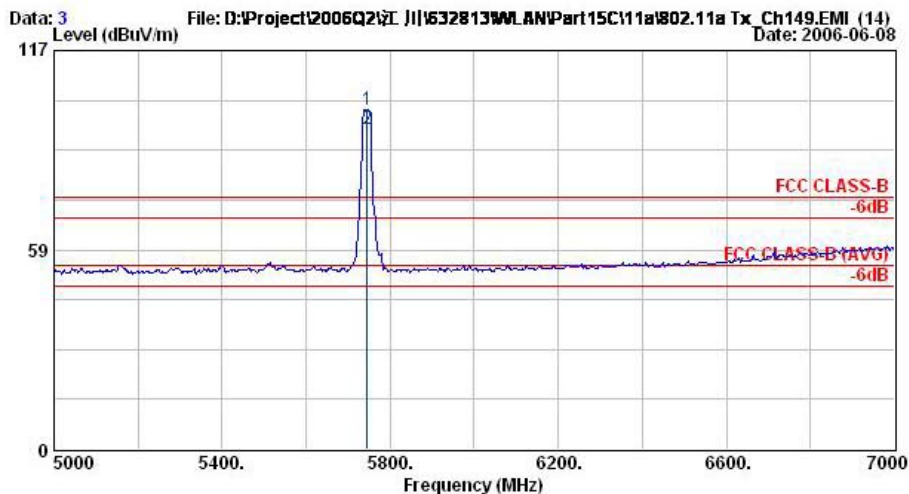


Site : 03CH06-HY
Condition : HF-ANT-060410 HORIZONTAL
EUT : VM(CPU type:ULV/dual core, LV/single core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : 802.11a TX CH149 5745MHz



FCC TEST REPORT

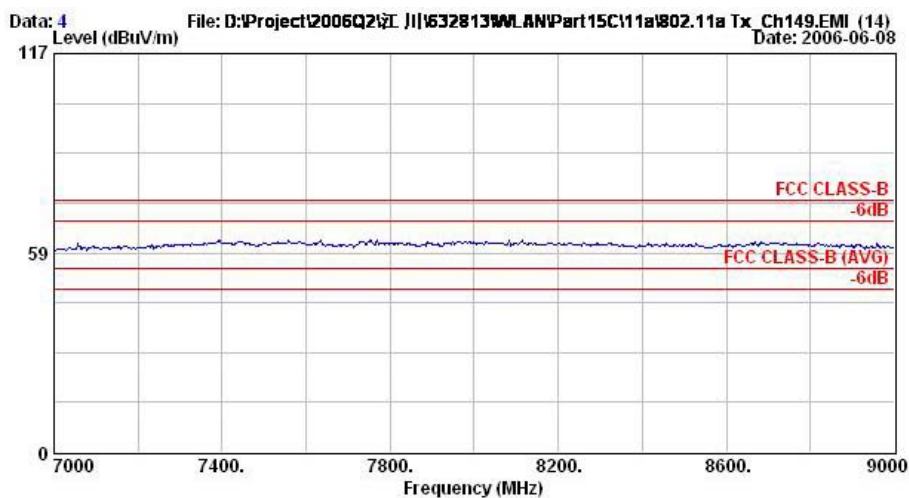
Report No. : FR632813-A



Site : 03CH06-HY
Condition : HF-ANT-060410 HORIZONTAL
EUT : VM(CPU type:ULV/dual core, LV/single
: core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : 802.11a TX CH149 5745MHz

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos
			dB	dBuV/m	dBuV		dB		cm	deg
1 @	5745.00	99.78			95.15	33.84	6.64	35.85	100	360
2 @	5745.00	93.78			89.15	33.84	6.64	35.85	133	87

Remark: #1 and #2 Fundamental Signal

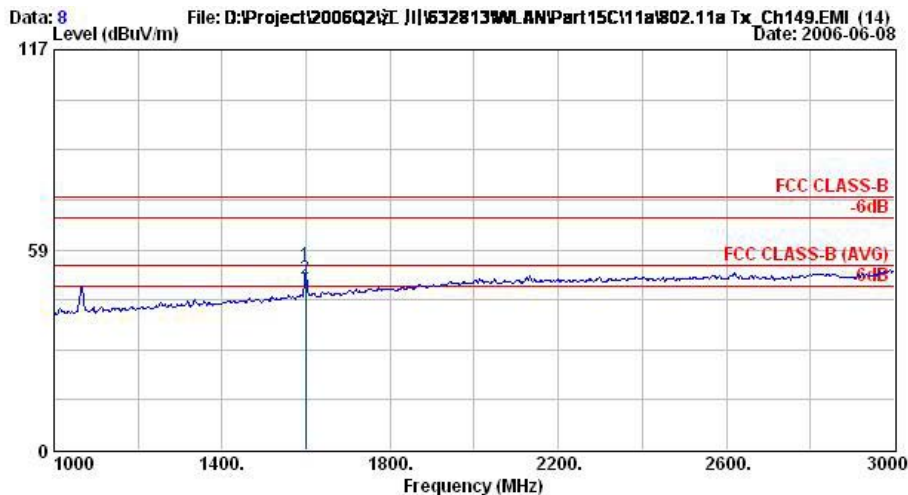


Site : 03CH06-HY
Condition : HF-ANT-060410 HORIZONTAL
EUT : VM(CPU type:ULV/dual core, LV/single
: core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : 802.11a TX CH149 5745MHz



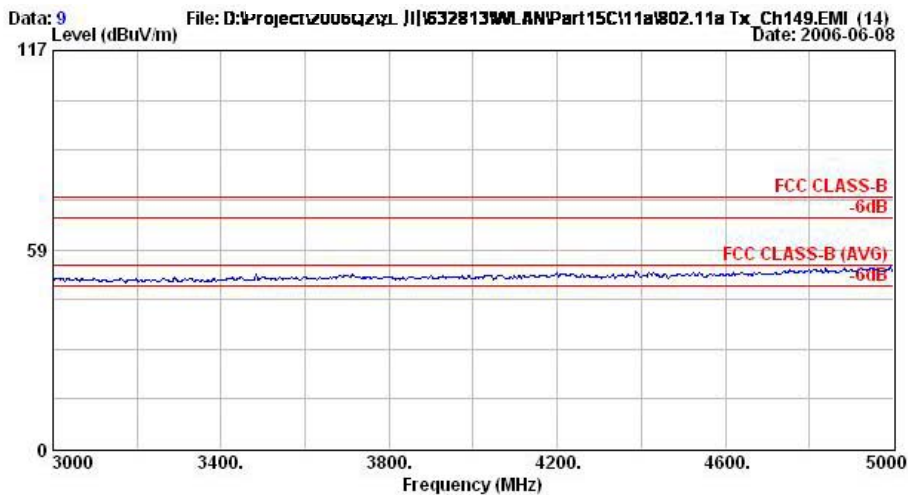
- Polarization : Vertical

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



Site : 03CH06-HY
Condition : HF-ANT-060410 VERTICAL
EUT : VM(CPU type:ULV/dual core, LV/single core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : 802.11a TX CH149 5745MHz

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Remark
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	1598.00	53.79	-20.21	74.00	59.05	26.90	3.46	35.62	100	360	Peak
2 @	1598.00	50.09	-3.91	54.00	55.35	26.90	3.46	35.62	100	224	Average

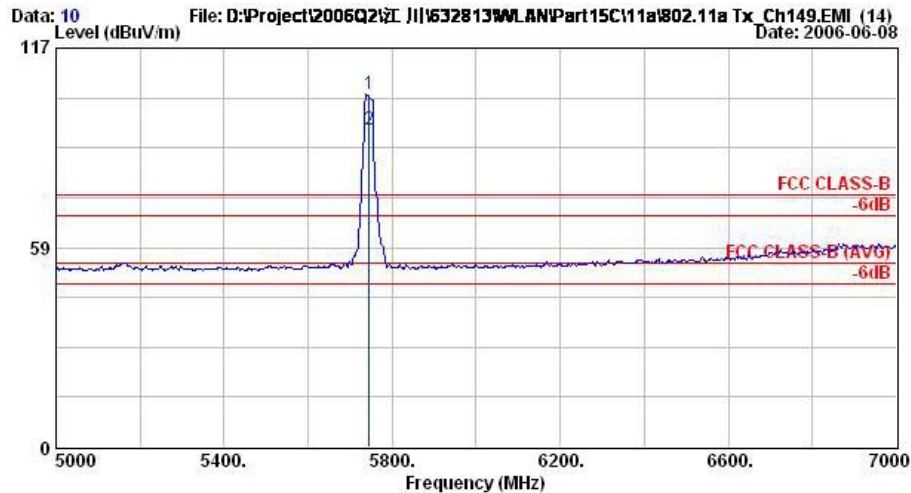


Site : 03CH06-HY
Condition : HF-ANT-060410 VERTICAL
EUT : VM(CPU type:ULV/dual core, LV/single core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : 802.11a TX CH149 5745MHz



FCC TEST REPORT

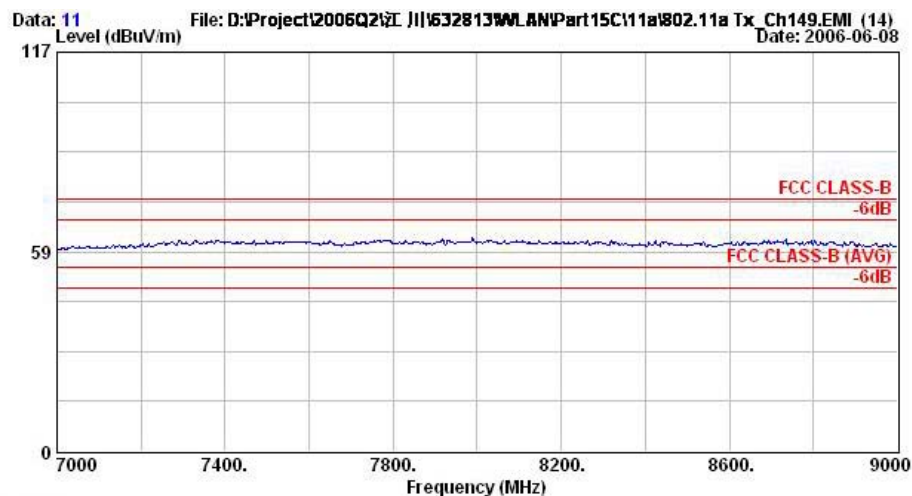
Report No. : FR632813-A



Site : 03CH06-HY
Condition : HF-ANT-060410 VERTICAL
EUT : VM(CPU type:ULV/dual core, LV/single
: core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : 802.11a TX CH149 5745MHz

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Remark
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 @	5745.00	103.35			98.72	33.84	6.64	35.85	100	360	Peak
2 @	5745.00	93.18			88.55	33.84	6.64	35.85	130	204	Average

Remark: #1 and #2 Fundamental Signal



Site : 03CH06-HY
Condition : HF-ANT-060410 VERTICAL
EUT : VM(CPU type:ULV/dual core, LV/single
: core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : 802.11a TX CH149 5745MHz

Remark : Frequency from 9GHz to 40GHz, the emission emitted by the EUT is too low to be measured.



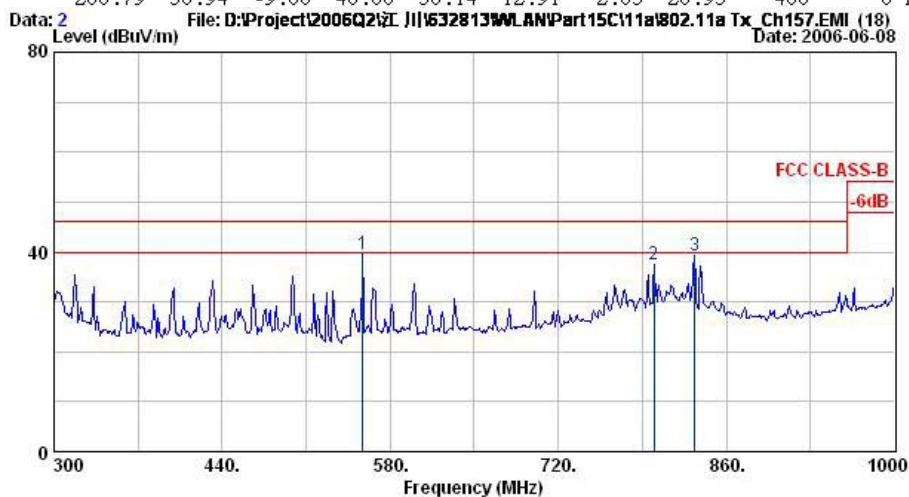
- Test Mode : Mode 8
- Polarization : Horizontal

■ 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 : VM(CPU type:ULV/dual core, LV/single core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : 802.11a TX CH157 5785MHz

1802.11412 GHz/37.585MHz											
	Freq	Level	Over Limit	Limit Line	ReadAntenna Level Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	216.03	32.89	-13.11	46.00	49.41	9.58	2.69	28.78	400	0	Peak
2 @	238.44	37.56	-8.44	46.00	52.82	10.87	2.79	28.93	400	0	Peak
3	266.79	36.94	-9.06	46.00	50.14	12.91	2.85	28.95	400	0	Peak



Site : 03CH06-HY
Condition : BI-LOG-2004-1122 HORIZONTAL
EUT : VM(CPU type:ULV/dual core, LV/single core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : 802.11a TX CH157 5785MHz

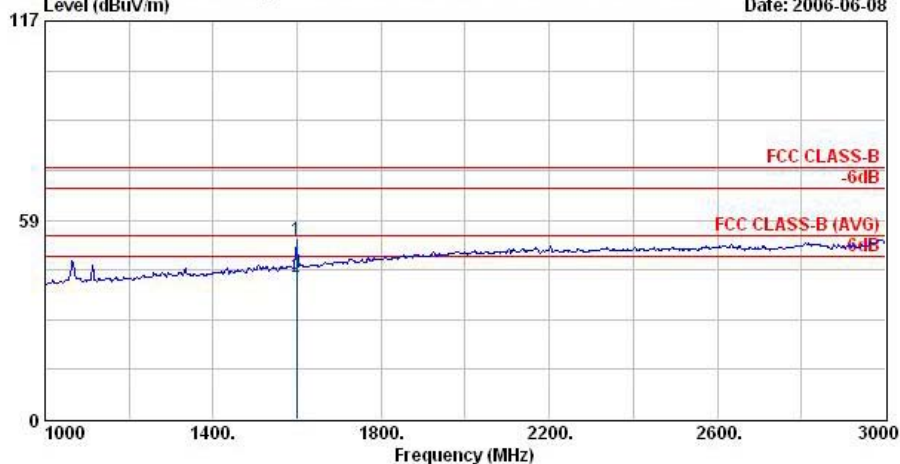
		Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table		
	Freq	Level	Limit	Level	Factor	Loss	Factor	Pos	Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	cm	deg	
1 @	556.90	39.53	-6.47	46.00	45.64	18.59	4.36	29.06	127	314 Peak
2	799.80	37.49	-8.51	46.00	38.84	21.90	5.62	28.87	100	0 Peak
3 @	833.40	39.23	-6.77	46.00	41.44	21.25	5.59	29.05	100	0 Peak



FCC TEST REPORT

Report No. : FR632813-A

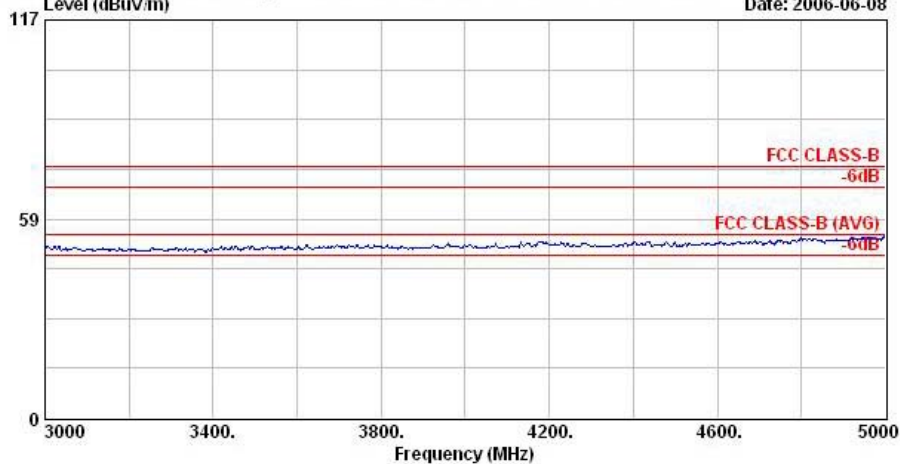
Data: 3 File: D:\Project\2006Q2\江川\632813\WLAN\Part15C\11a\802.11a Tx_Ch157.EMI (18)
Level (dBuV/m) Date: 2006-06-08



Site : 03CH06-HY
Condition : HF-ANT-060410 HORIZONTAL
EUT : VM(CPU type:ULV/dual core, LV/single core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : 802.11a TX CH157 5785MHz

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Remark
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	1598.00	52.59	-21.41	74.00	57.85	26.90	3.46	35.62	100	360	Peak
2	1598.00	41.59	-12.41	54.00	46.85	26.90	3.46	35.62	100	37	Average

Data: 4 File: D:\Project\2006Q2\江川\632813\WLAN\Part15C\11a\802.11a Tx_Ch157.EMI (18)
Level (dBuV/m) Date: 2006-06-08



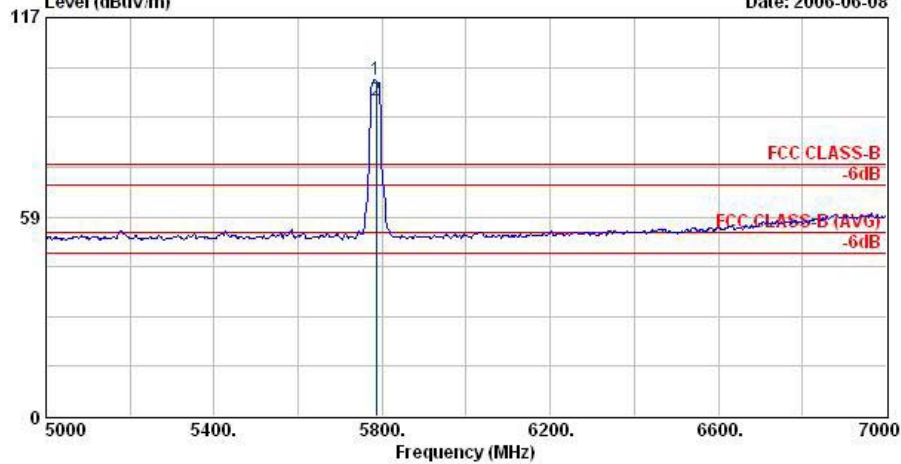
Site : 03CH06-HY
Condition : HF-ANT-060410 HORIZONTAL
EUT : VM(CPU type:ULV/dual core, LV/single core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : 802.11a TX CH157 5785MHz



FCC TEST REPORT

Report No. : FR632813-A

Data: 5 File: D:\Project\2006Q2\江川\632813\WLAN\Part15C\11a\802.11a Tx_Ch157.EMI (18)
Level (dBuV/m) Date: 2006-06-08

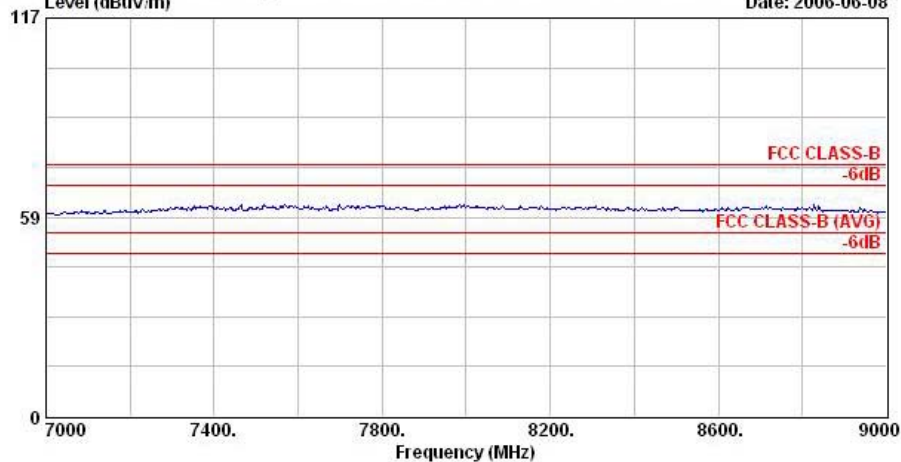


Site : 03CH06-HY
Condition : HF-ANT-060410 HORIZONTAL
EUT : VM(CPU type:ULV/dual core, LV/single core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : 802.11a TX CH157 5785MHz

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 @	5785.00	98.73			94.05	33.88	6.64	35.83	100	360	Peak
2 @	5785.00	92.59			87.88	33.88	6.64	35.81	135	89	Peak

Remark: #1 and #2 Fundamental Signal

Data: 6 File: D:\Project\2006Q2\江川\632813\WLAN\Part15C\11a\802.11a Tx_Ch157.EMI (18)
Level (dBuV/m) Date: 2006-06-08

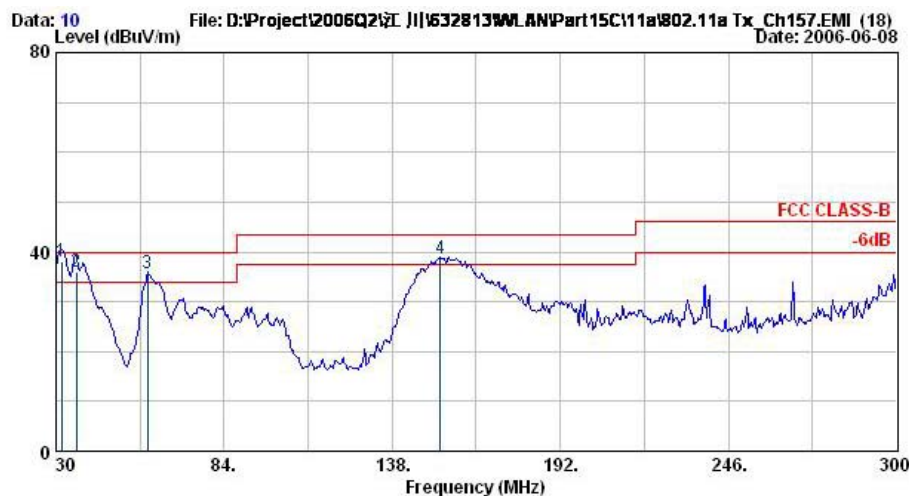


Site : 03CH06-HY
Condition : HF-ANT-060410 HORIZONTAL
EUT : VM(CPU type:ULV/dual core, LV/single core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : 802.11a TX CH157 5785MHz



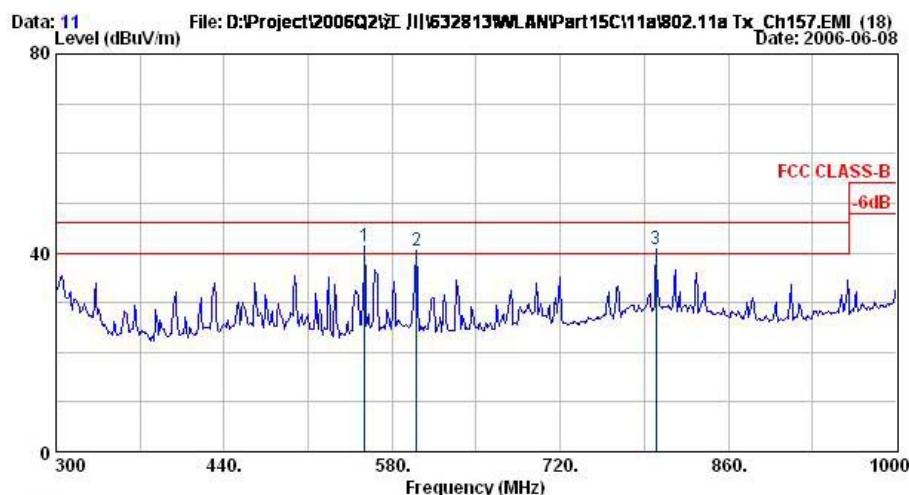
Polarization : Vertical

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



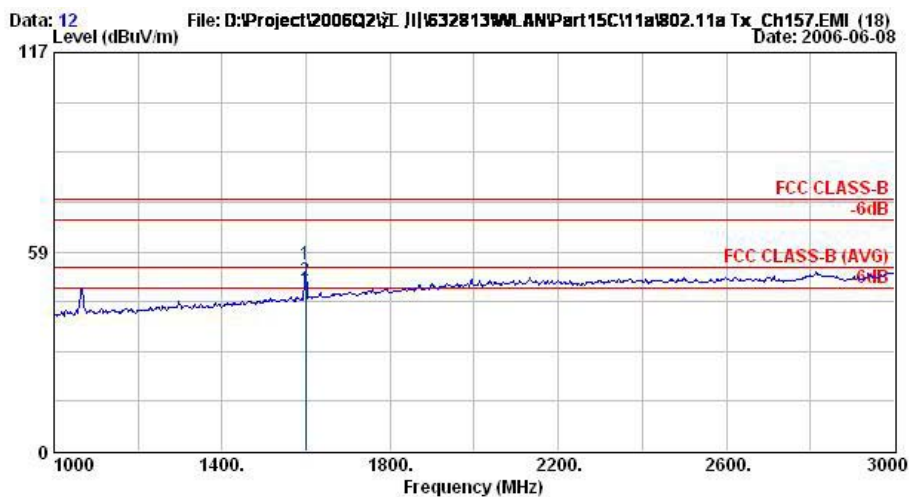
Site : 03CH06-HY
Condition : BI-LOG-2004-1122 VERTICAL
EUT : VM(CPU type:ULV/dual core, LV/single core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : 802.11a TX CH157 5785MHz

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Pos	Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1 @	31.89	38.01	-1.99	40.00	47.60	18.07	0.97	28.63	100	356 QP
2 @	36.48	35.93	-4.07	40.00	47.25	16.17	1.16	28.65	100	356 QP
3 @	59.43	35.79	-4.21	40.00	56.33	6.89	1.21	28.65	400	0 Peak
4 @	153.39	38.79	-4.71	43.50	56.08	9.34	2.19	28.82	400	0 Peak



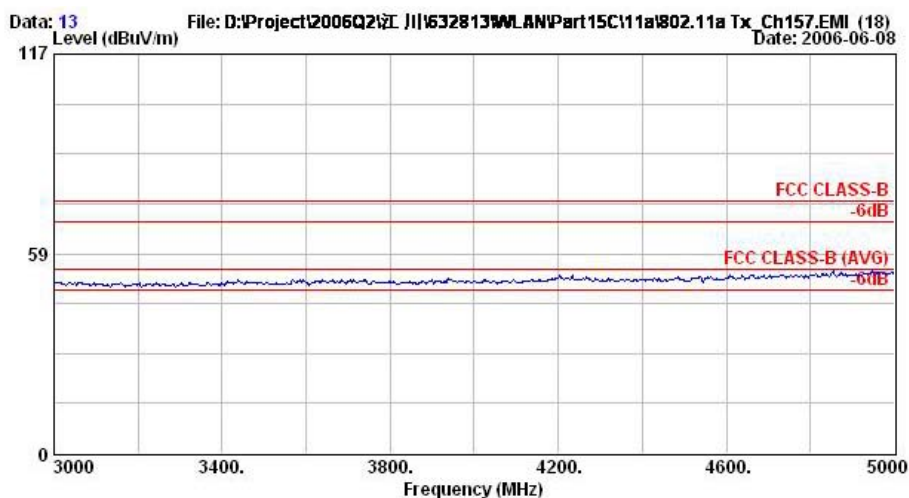
Site : 03CH06-HY
Condition : BI-LOG-2004-1122 VERTICAL
EUT : VM(CPU type:ULV/dual core, LV/single core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : 802.11a TX CH157 5785MHz

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Pos	Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1 @	556.90	41.41	-4.59	46.00	47.52	18.59	4.36	29.06	100	0 Peak
2 @	600.30	40.30	-5.70	46.00	46.48	17.94	4.65	28.77	100	0 Peak
3 @	799.80	40.87	-5.13	46.00	42.22	21.90	5.62	28.87	100	0 Peak



Site : 03CH06-HY
Condition : HF-ANT-060410 VERTICAL
EUT : VM(CPU type:ULV/dual core, LV/single core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : 802.11a TX CH157 5785MHz

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level Factor	Loss Factor	Factor	Pos	Pos	
			dB	dBuV/m	dBuV	dB/m	dB	cm	deg	
1	1598.00	54.66	-19.34	74.00	59.92	26.90	3.46	35.62	100	360 Peak
2 @	1598.00	50.18	-3.82	54.00	55.44	26.90	3.46	35.62	100	222 Average

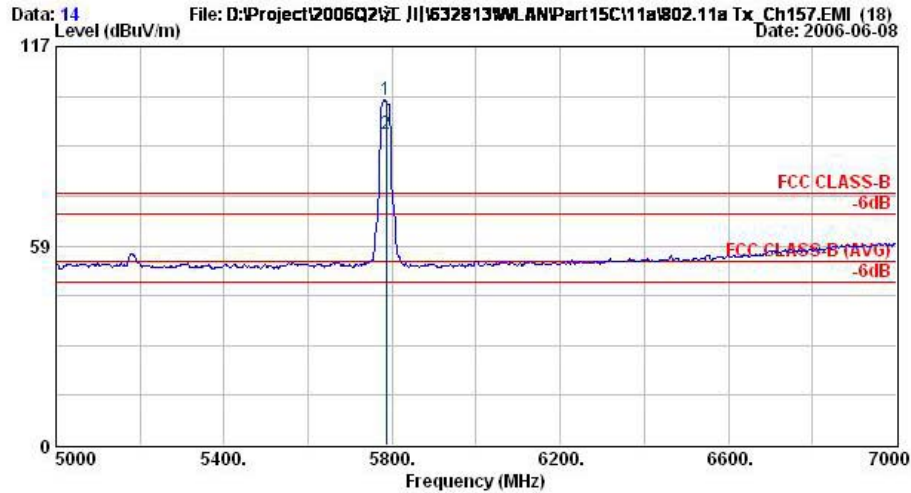


Site : 03CH06-HY
Condition : HF-ANT-060410 VERTICAL
EUT : VM(CPU type:ULV/dual core, LV/single core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : 802.11a TX CH157 5785MHz



FCC TEST REPORT

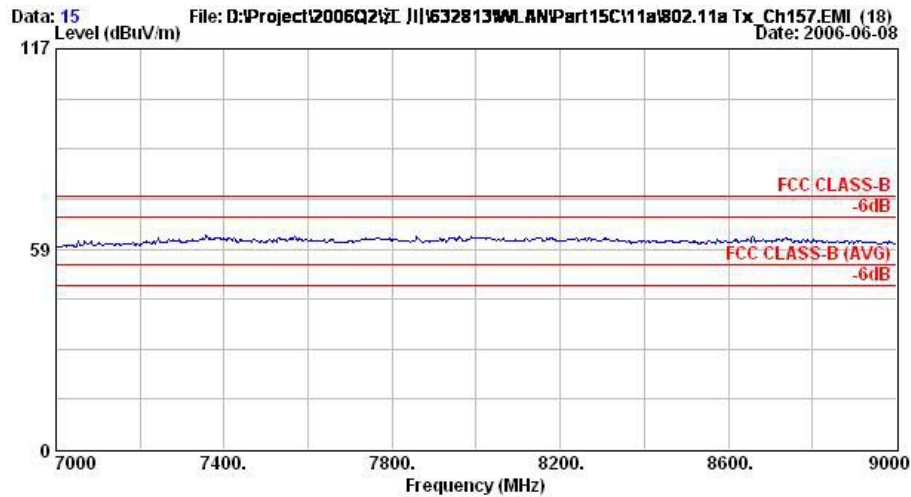
Report No. : FR632813-A



Site : 03CH06-HY
Condition : HF-ANT-060410 VERTICAL
EUT : VM(CPU type:ULV/dual core, LV/single
: core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : 802.11a TX CH157 5785MHz

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Pos	Pos	Remark
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1 @	5785.00	101.38			96.70	33.88	6.64	35.83	100	360 Peak
2 @	5785.00	91.50			86.79	33.88	6.64	35.81	100	202 Average

Remark: #1 and #2 Fundamental Signal



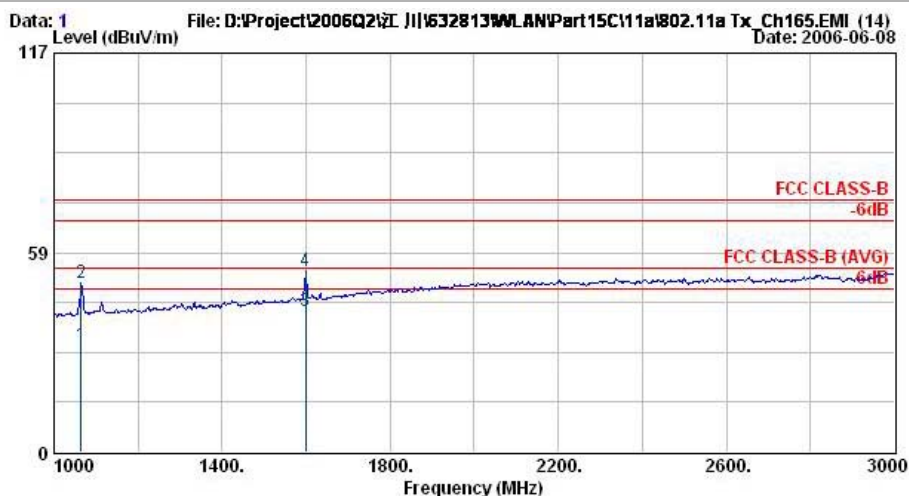
Site : 03CH06-HY
Condition : HF-ANT-060410 VERTICAL
EUT : VM(CPU type:ULV/dual core, LV/single
: core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : 802.11a TX CH157 5785MHz

Remark : Frequency from 9GHz to 40GHz, the emission emitted by the EUT is too low to be measured.



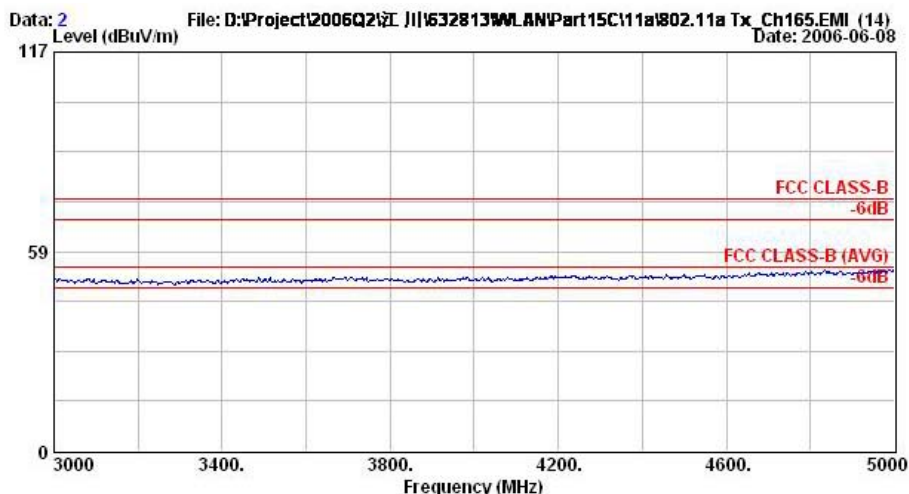
- Test Mode : Mode 9
- Polarization : Horizontal

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



Site : 03CH06-HY
Condition : HF-ANT-060410 HORIZONTAL
EUT : VM(CPU type:ULV/dual core, LV/single core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : 802.11a TX CH165 5825MHz

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1 @	1064.00	31.46	-22.54	54.00	40.65	24.46	2.82	36.46	100	185
2 @	1064.00	49.72	-24.28	74.00	58.91	24.46	2.82	36.46	100	360
3 @	1598.00	41.16	-12.84	54.00	46.42	26.90	3.46	35.62	100	36
4 @	1598.00	53.14	-20.86	74.00	58.40	26.90	3.46	35.62	100	360



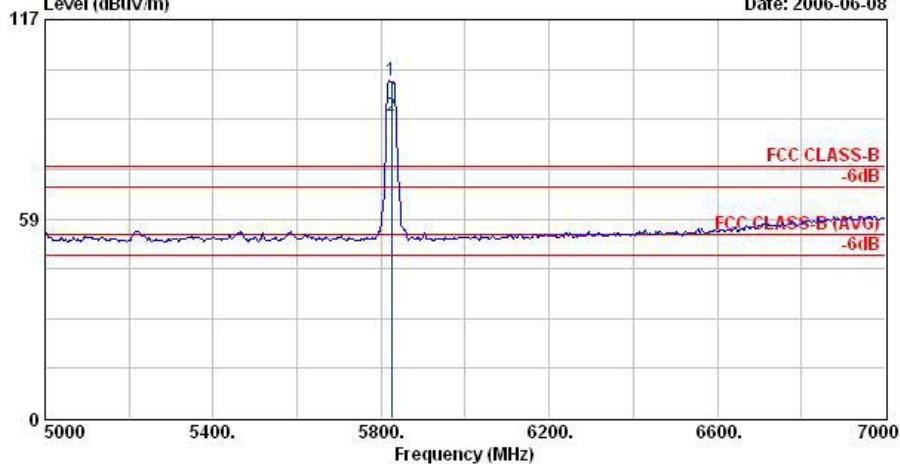
Site : 03CH06-HY
Condition : HF-ANT-060410 HORIZONTAL
EUT : VM(CPU type:ULV/dual core, LV/single core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : 802.11a TX CH165 5825MHz



FCC TEST REPORT

Report No. : FR632813-A

Data: 3 File: D:\Project\2006Q2\江川\632813\WLAN\Part15C\11a\802.11a Tx_Ch165.EMI (14)
Level (dBuV/m) Date: 2006-06-08

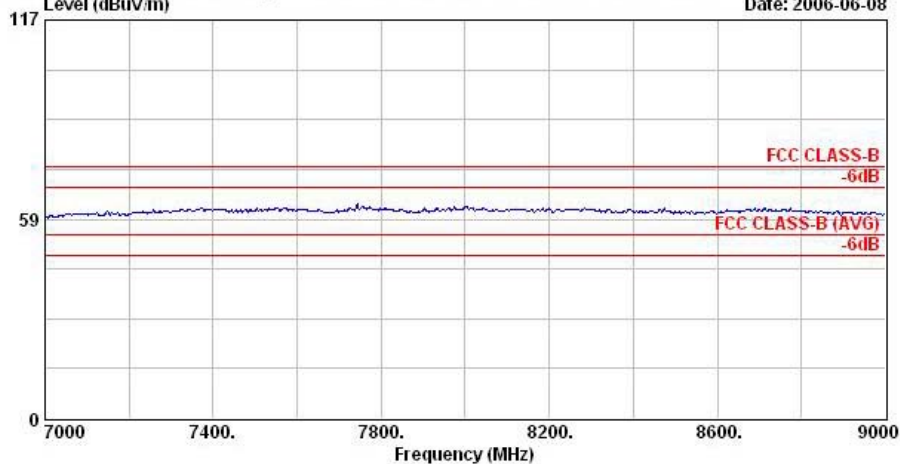


Site : 03CH06-HY
Condition : HF-ANT-060410 HORIZONTAL
EUT : VM(CPU type:ULV/dual core, LV/single core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : 802.11a TX CH165 5825MHz

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	Ant Pos	Table Pos	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 @	5825.00	99.00			94.24	33.91	6.65	35.80	100	360	Peak
2 @	5825.00	88.73			83.95	33.93	6.65	35.80	105	19	Average

Remark: #1 and #2 Fundamental Signal

Data: 4 File: D:\Project\2006Q2\江川\632813\WLAN\Part15C\11a\802.11a Tx_Ch165.EMI (14)
Level (dBuV/m) Date: 2006-06-08

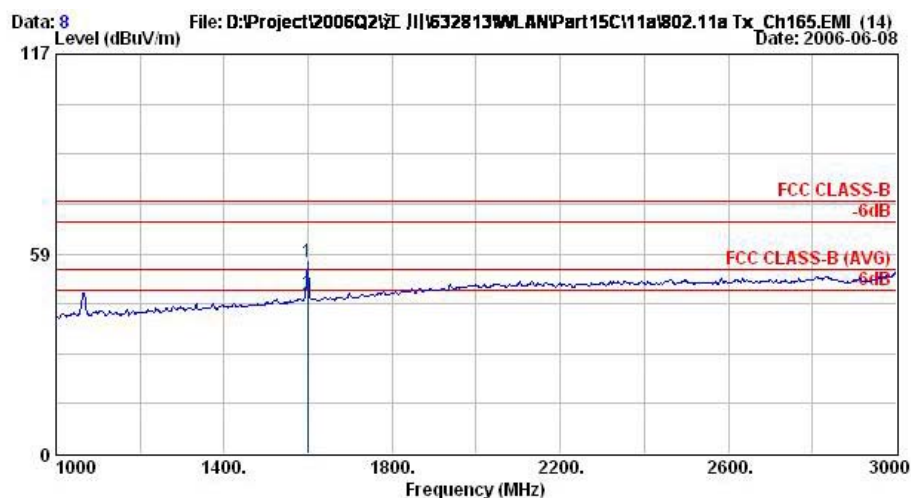


Site : 03CH06-HY
Condition : HF-ANT-060410 HORIZONTAL
EUT : VM(CPU type:ULV/dual core, LV/single core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : 802.11a TX CH165 5825MHz



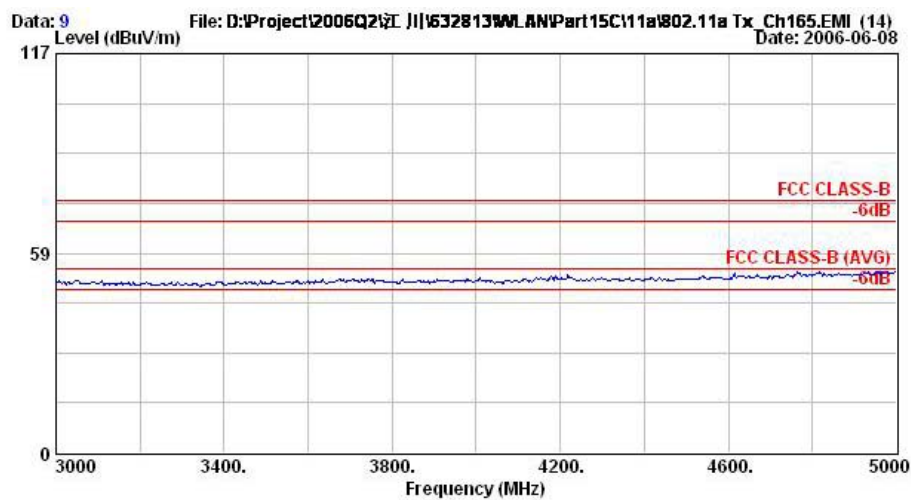
- Polarization : Vertical

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



Site : 03CH06-HY
Condition : HF-ANT-060410 VERTICAL
EUT : VM(CPU type:ULV/dual core, LV/single core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : 802.11a TX CH165 5825MHz

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Pos	Pos	Remark
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1 @	1598.00	56.01	-17.99	74.00	61.27	26.90	3.46	35.62	100	360 Peak
2 @	1598.00	46.33	-7.67	54.00	51.59	26.90	3.46	35.62	100	218 Average

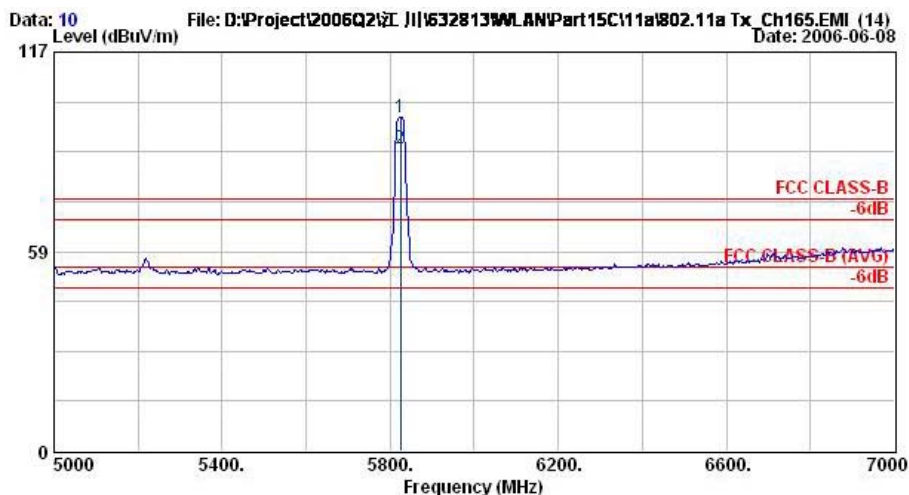


Site : 03CH06-HY
Condition : HF-ANT-060410 VERTICAL
EUT : VM(CPU type:ULV/dual core, LV/single core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : 802.11a TX CH165 5825MHz



FCC TEST REPORT

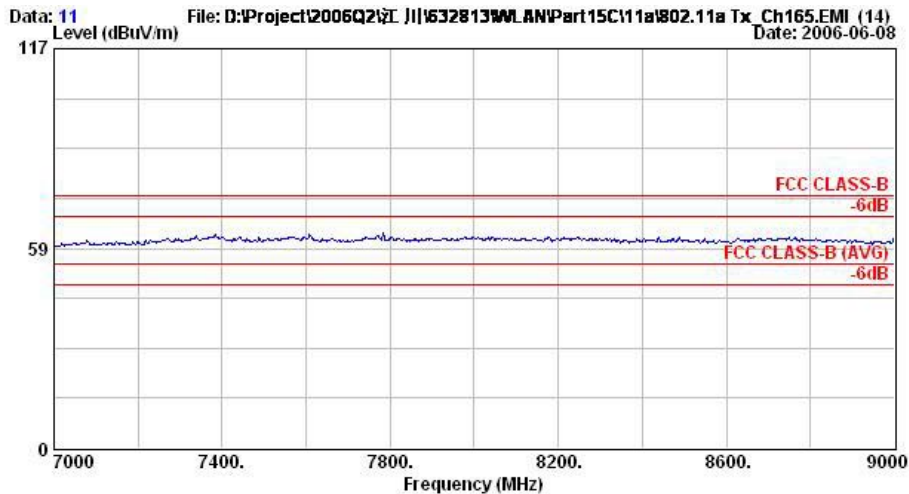
Report No. : FR632813-A



Site : 03CH06-HY
Condition : HF-ANT-060410 VERTICAL
EUT : VM(CPU type:ULV/dual core, LV/single core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : 802.11a TX CH165 5825MHz

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1 @	5825.00	98.01			93.24	33.93	6.65	35.80	100	360
2 @	5825.00	88.90			84.12	33.93	6.65	35.80	120	208

Remark: #1 and #2 Fundamental Signal



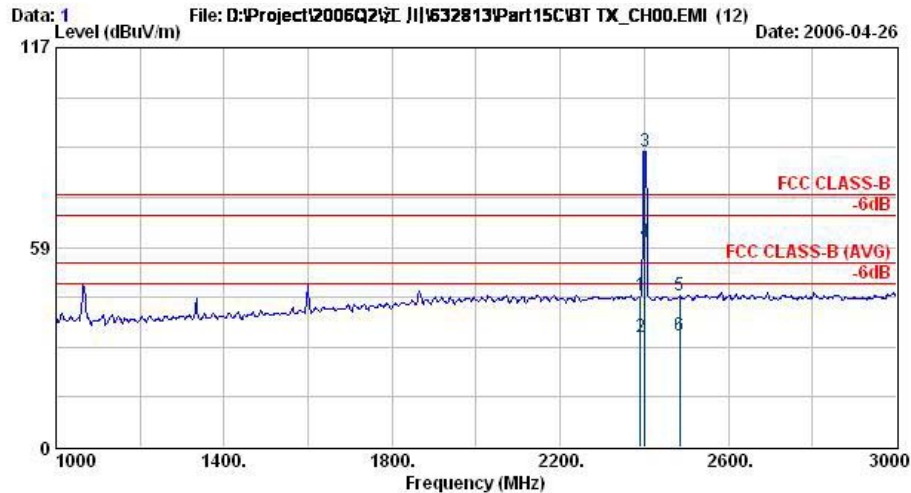
Site : 03CH06-HY
Condition : HF-ANT-060410 VERTICAL
EUT : VM(CPU type:ULV/dual core, LV/single core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : 802.11a TX CH165 5825MHz

Remark : Frequency from 9GHz to 40GHz, the emission emitted by the EUT is too low to be measured.



- Test Mode : Mode 10
- Polarization : Horizontal

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



Site : 03CH06-HY
Condition : HF-ANT-060410 HORIZONTAL
EUT : VM(CPU type:ULV/dual core, LV/single
: core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : Bluetooth TX_CH00,2402MHz

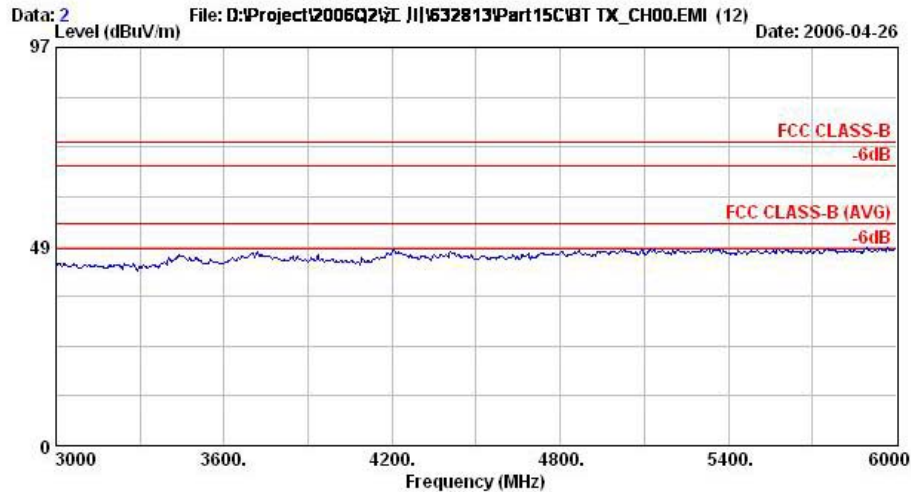
	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Pos	Pos	Remark
			dB	dBuV/m	dBuV	dB	dB	cm	deg	
1	2390.00	44.24	-29.76	74.00	45.18	30.26	4.26	35.46	100	0 Peak
2	2390.00	32.24	-21.76	54.00	33.18	30.26	4.26	35.46	136	349 Average
3 @	2402.00	86.37			87.31	30.26	4.26	35.46	100	0 Peak
4 @	2402.00	60.00			60.94	30.26	4.26	35.46	136	349 Average
5	2484.00	44.17	-29.83	74.00	45.03	30.29	4.36	35.51	100	0 Peak
6	2484.00	32.46	-21.54	54.00	33.32	30.29	4.36	35.51	136	349 Average

Remark: #3 and #4 Fundamental Signal

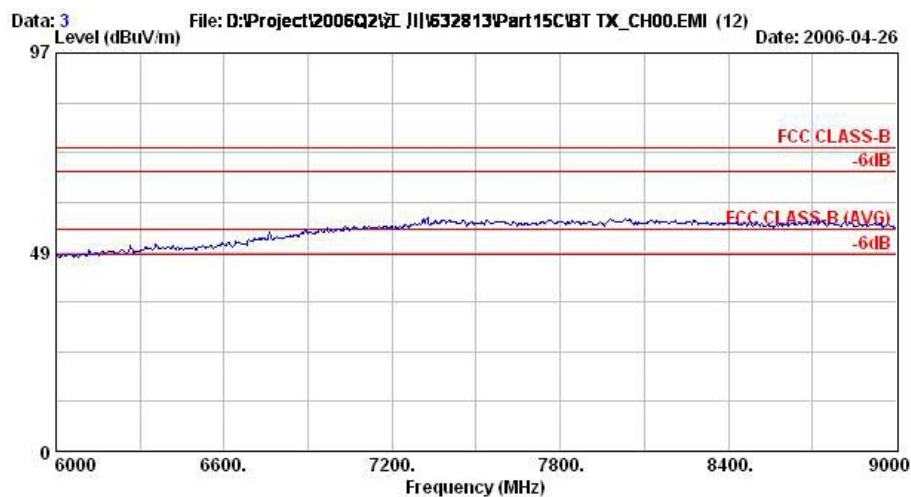


FCC TEST REPORT

Report No. : FR632813-A



Site : 03CH06-HY
Condition : HF-ANT-060410 HORIZONTAL
EUT : VM(CPU type:ULV/dual core, LV/single
: core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : Bluetooth TX_CH00,2402MHz

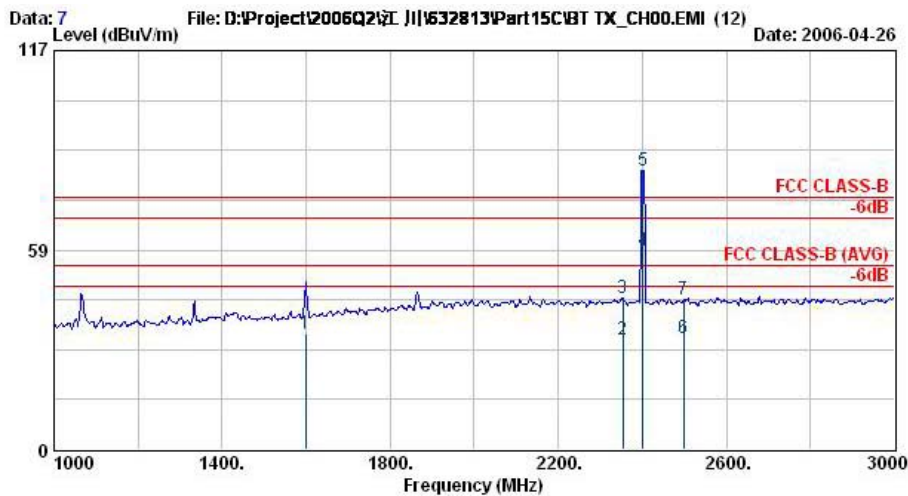


Site : 03CH06-HY
Condition : HF-ANT-060410 HORIZONTAL
EUT : VM(CPU type:ULV/dual core, LV/single
: core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : Bluetooth TX_CH00,2402MHz



- Polarization : Vertical

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



Site : 03CH06-HY
Condition : HF-ANT-060410 VERTICAL
EUT : VM(CPU type:ULV/dual core, LV/single core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : Bluetooth TX_CH00,2402MHz

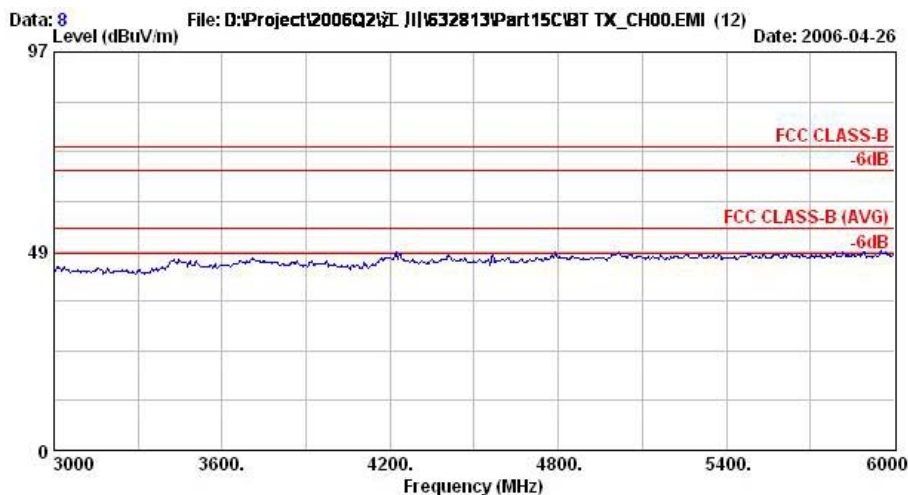
	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Remark
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1	1598.00	33.95	-20.05	54.00	39.21	26.90	3.46	35.62	100	28	Average
2	2354.00	32.17	-21.83	54.00	33.15	30.24	4.20	35.42	110	200	Average
3	2354.00	44.45	-29.55	74.00	45.43	30.24	4.20	35.42	100	0	Peak
4 @	2402.00	58.35			59.29	30.26	4.26	35.46	110	200	Average
5 @	2402.00	81.64			82.58	30.26	4.26	35.46	100	0	Peak
6	2498.00	32.55	-21.45	54.00	33.39	30.30	4.39	35.53	110	200	Average
7	2498.00	44.13	-29.87	74.00	44.97	30.30	4.39	35.53	100	0	Peak

Remark: #4 and #5 Fundamental Signal

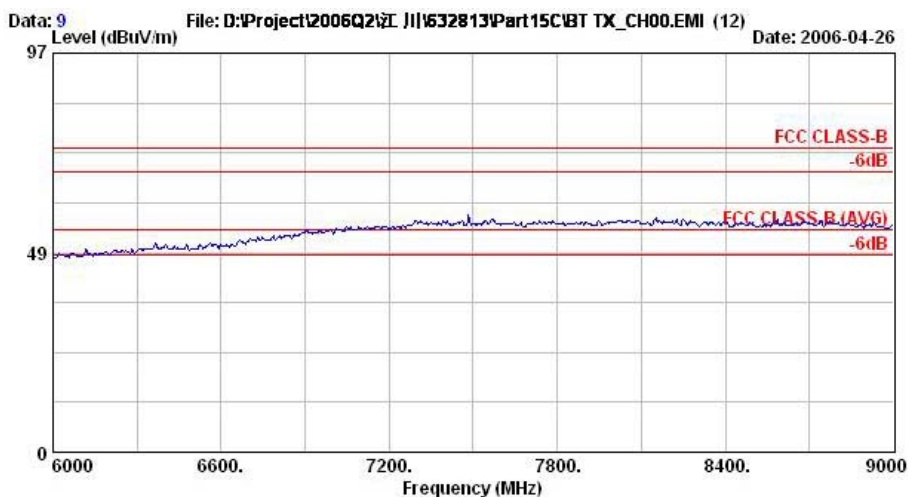


FCC TEST REPORT

Report No. : FR632813-A



Site : 03CH06-HY
Condition : HF-ANT-060410 VERTICAL
EUT : VM(CPU type:ULV/dual core, LV/single
: core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : Bluetooth TX_CH00,2402MHz



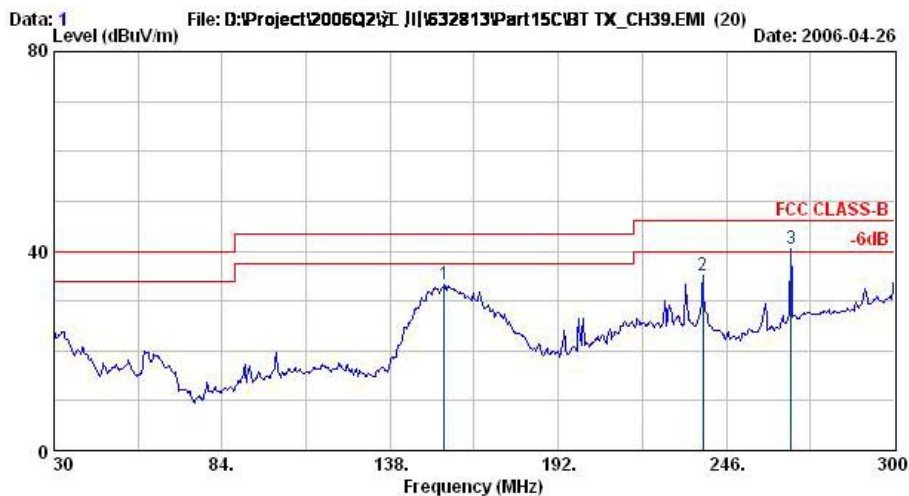
Site : 03CH06-HY
Condition : HF-ANT-060410 VERTICAL
EUT : VM(CPU type:ULV/dual core, LV/single
: core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : Bluetooth TX_CH00,2402MHz

Remark : Frequency from 9GHz to 25GHz, the emission emitted by the EUT is too low to be measured.



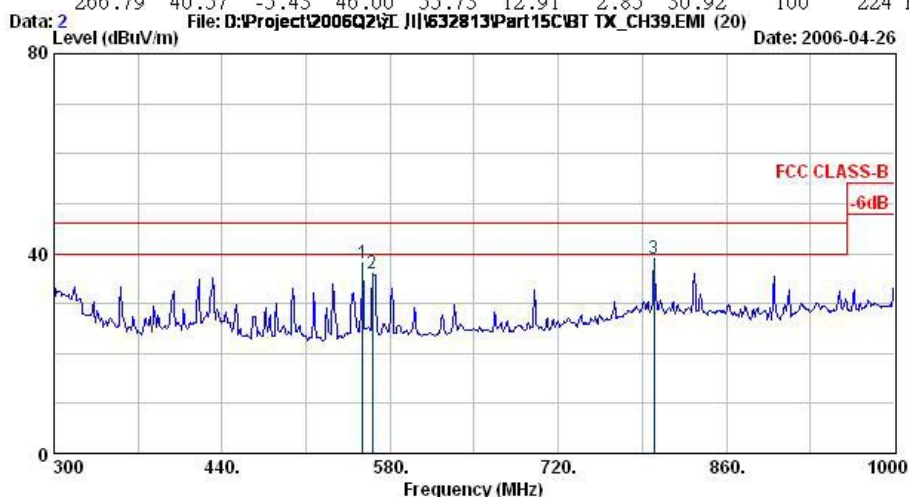
- Test Mode : Mode 11
- Polarization : Horizontal

■ 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 : VM(CPU type:ULV/dual core, LV/single core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : Bluetooth TX_CH39,2441MHz

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	155.28	33.36	-10.14	43.50	53.09	9.64	2.19	31.56	400	0
2	238.44	35.13	-10.87	46.00	52.68	10.87	2.79	31.21	400	0
3	266.79	40.57	-5.43	46.00	55.73	12.91	2.85	30.92	100	224



Site : 03CH06-HY
Condition : BI-LOG-2004-1122 HORIZONTAL
EUT : VM(CPU type:ULV/dual core, LV/single core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : Bluetooth TX_CH39,2441MHz

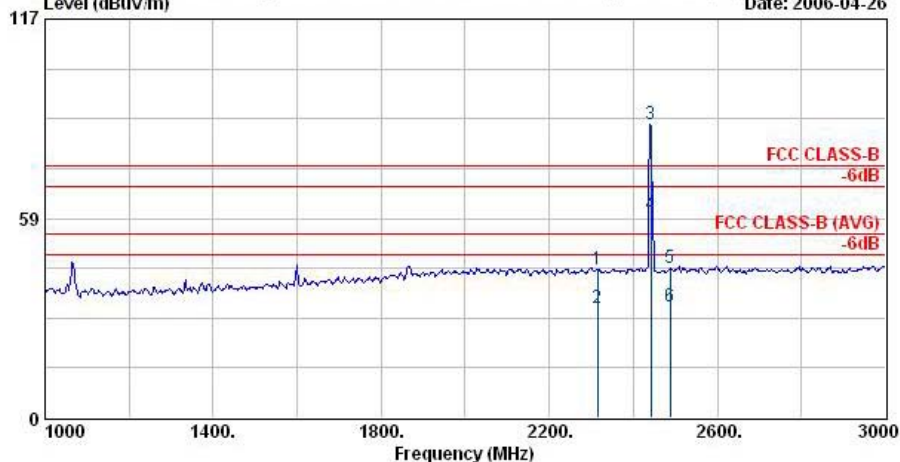
	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1	556.90	38.05	-7.95	46.00	45.74	18.59	4.36	30.64	100	0
2	565.30	35.87	-10.13	46.00	43.63	18.46	4.45	30.68	100	0
3	799.80	38.94	-7.06	46.00	41.54	21.90	5.62	30.12	100	0



FCC TEST REPORT

Report No. : FR632813-A

Data: 3 File: D:\Project\2006Q2\江川\632813\Part15C\BT_TX_CH39.EMI (20) Date: 2006-04-26
Level (dBuV/m)

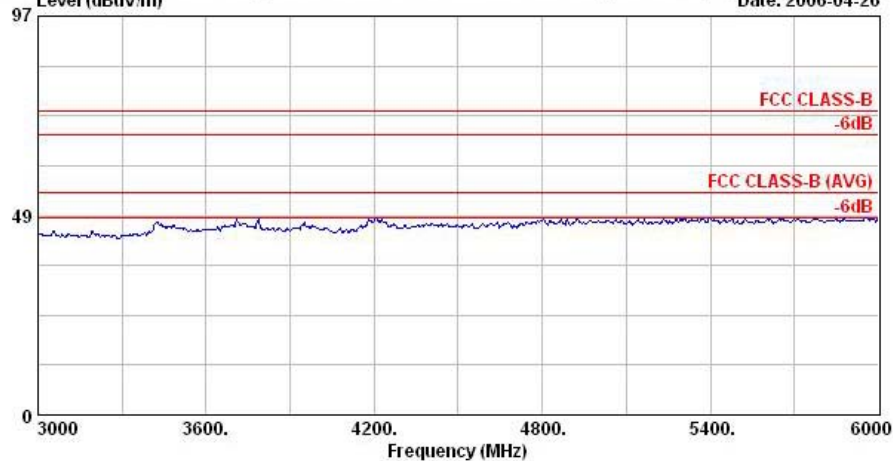


Site : 03CH06-HY
Condition : HF-ANT-060410 HORIZONTAL
EUT : VM(CPU type:ULV/dual core, LV/single core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : Bluetooth TX_CH39,2441MHz

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Pos	Pos	Remark
			dB	dBuV/m	dBuV	dB	dB	cm	deg	
1	2314.00	43.37	-30.63	74.00	44.38	30.22	4.17	35.40	100	0 Peak
2	2314.00	31.97	-22.03	54.00	32.98	30.22	4.17	35.40	128	342 Average
3	2441.00	86.22			87.12	30.28	4.29	35.47	100	0 Peak
4 X	2441.00	59.54			60.44	30.28	4.29	35.47	128	342 Average
5	2488.00	43.86	-30.14	74.00	44.71	30.30	4.36	35.51	100	0 Peak
6	2488.00	32.47	-21.53	54.00	33.32	30.30	4.36	35.51	128	342 Average

Remark: #3 and #4 Fundamental Signal

Data: 4 File: D:\Project\2006Q2\江川\632813\Part15C\BT_TX_CH39.EMI (20) Date: 2006-04-26
Level (dBuV/m)

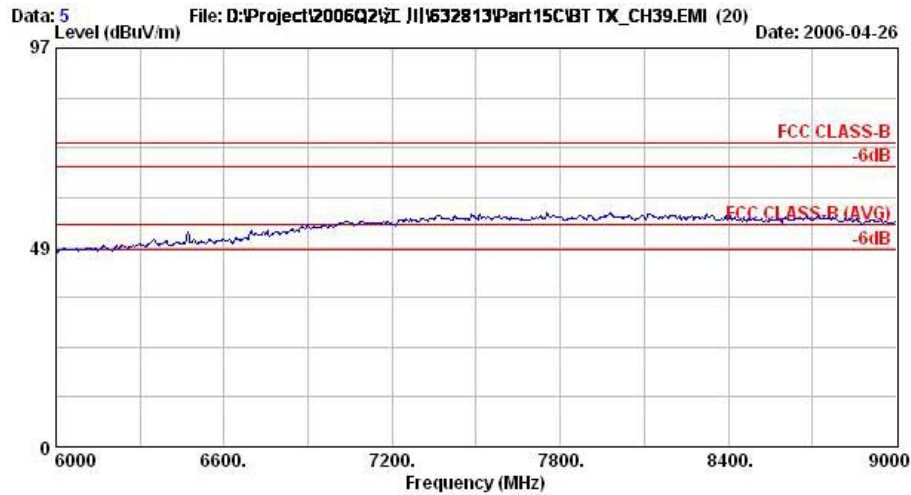


Site : 03CH06-HY
Condition : HF-ANT-060410 HORIZONTAL
EUT : VM(CPU type:ULV/dual core, LV/single core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : Bluetooth TX_CH39,2441MHz



FCC TEST REPORT

Report No. : FR632813-A

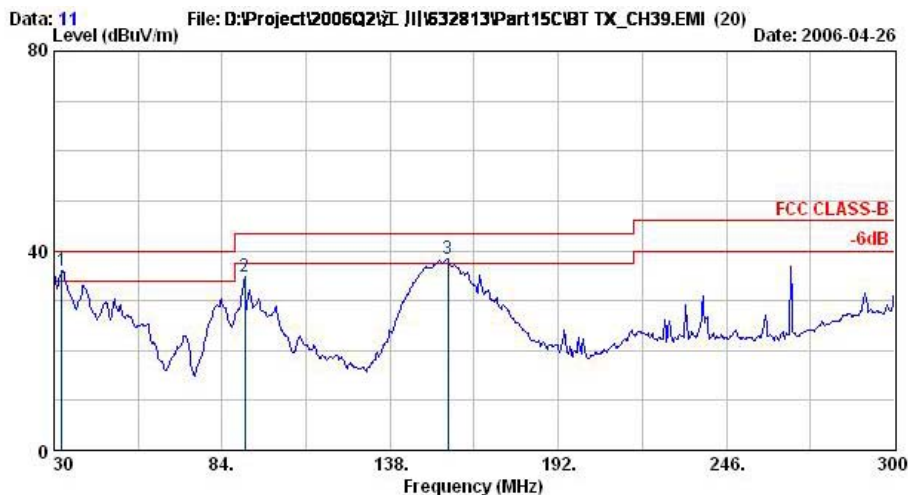


Site : 03CH06-HY
Condition : HF-ANT-060410 HORIZONTAL
EUT : VM(CPU type:ULV/dual core, LV/single
: core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : Bluetooth TX_CH39_2441MHz



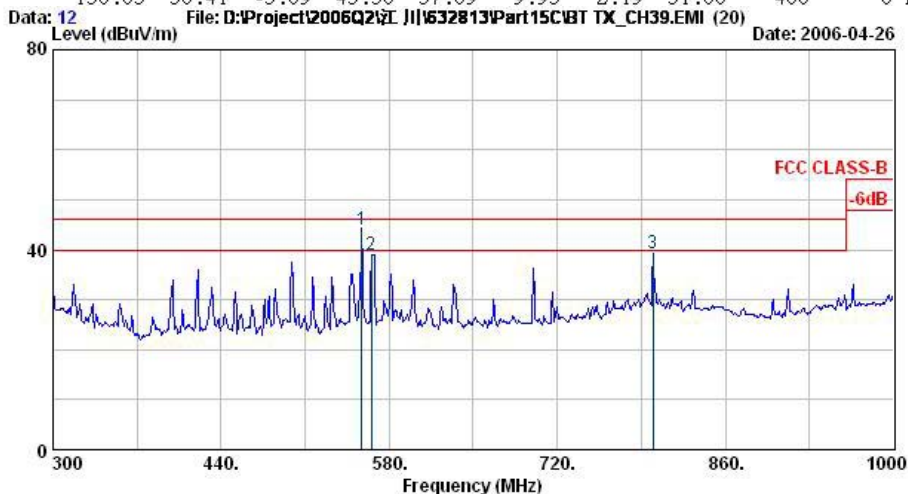
- Polarization : Vertical

■ 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 : VM(CPU type:ULV/dual core, LV/single core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : Bluetooth TX_CH39,2441MHz

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1 !	32.43	35.99	-4.01	40.00	48.82	17.73	1.01	31.58	400	0 Peak
2	91.29	34.88	-8.62	43.50	55.53	9.18	1.68	31.52	400	0 Peak
3 !	156.63	38.41	-5.09	43.50	57.89	9.93	2.19	31.60	400	0 Peak



Site : 03CH06-HY
Condition : BI-LOG-2004-1122 VERTICAL
EUT : VM(CPU type:ULV/dual core, LV/single core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : Bluetooth TX_CH39,2441MHz

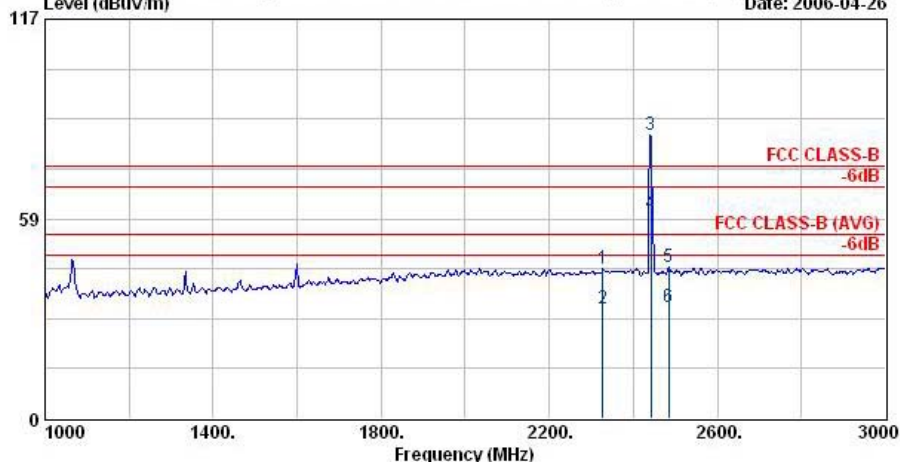
	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg
1 !	556.90	44.11	-1.89	46.00	51.80	18.59	4.36	30.64	100	357 OP
2	565.30	39.03	-6.97	46.00	46.80	18.46	4.45	30.68	100	0 Peak
3	799.80	39.12	-6.88	46.00	41.72	21.90	5.62	30.12	100	0 Peak



FCC TEST REPORT

Report No. : FR632813-A

Data: 13 File: D:\Project\2006Q2\江川\632813\Part15C\BT_TX_CH39.EMI (20) Date: 2006-04-26
Level (dBuV/m)

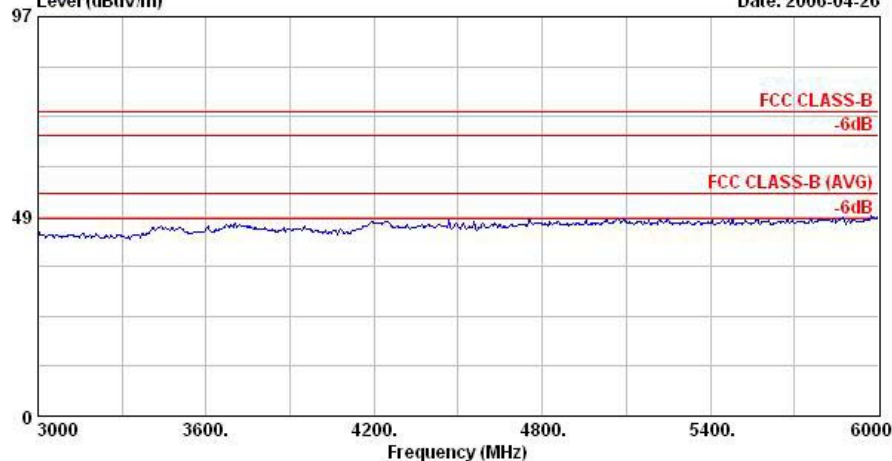


Site : 03CH06-HY
Condition : HF-ANT-060410 VERTICAL
EUT : VM(CPU type:ULV/dual core, LV/single core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : Bluetooth TX_CH39,2441MHz

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Pos	Pos	Remark
			dB	dBuV/m	dBuV	dB	dB	cm	deg	
1	2328.00	43.81	-30.19	74.00	44.81	30.23	4.17	35.40	110	200 Peak
2	2328.00	32.39	-21.61	54.00	33.39	30.23	4.17	35.40	141	197 Average
3	2441.00	83.23			84.14	30.28	4.29	35.47	110	200 Peak
4 X	2441.00	60.14			61.04	30.28	4.29	35.47	141	197 Average
5	2484.00	44.37	-29.63	74.00	45.22	30.29	4.36	35.51	110	200 Peak
6	2484.00	32.47	-21.53	54.00	33.33	30.29	4.36	35.51	141	197 Average

Remark: #3 and #4 Fundamental Signal

Data: 14 File: D:\Project\2006Q2\江川\632813\Part15C\BT_TX_CH39.EMI (20) Date: 2006-04-26
Level (dBuV/m)

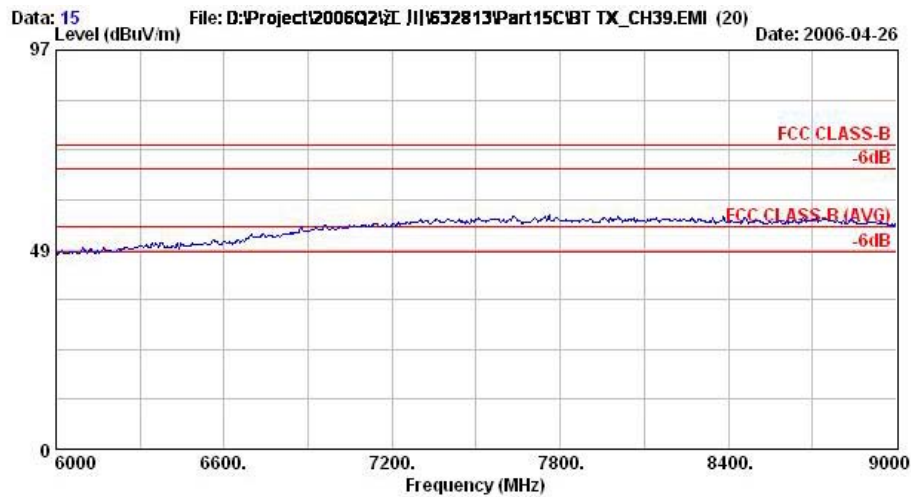


Site : 03CH06-HY
Condition : HF-ANT-060410 VERTICAL
EUT : VM(CPU type:ULV/dual core, LV/single core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : Bluetooth TX_CH39,2441MHz



FCC TEST REPORT

Report No. : FR632813-A



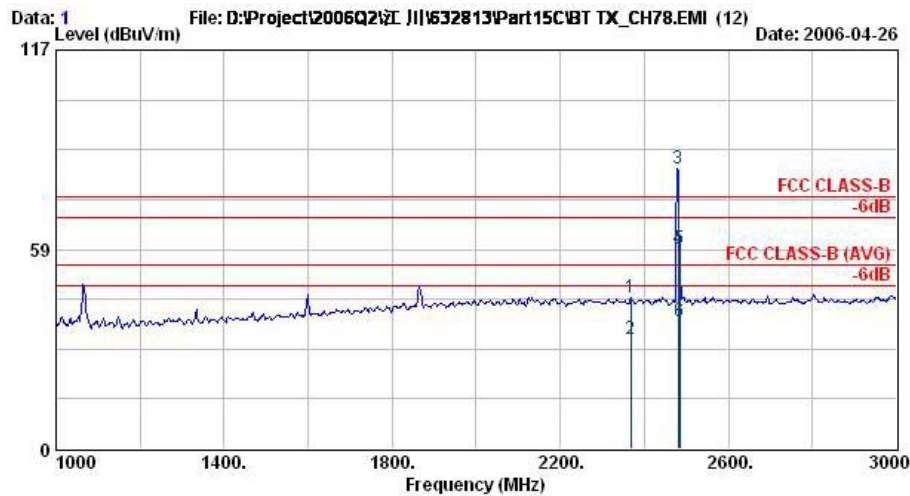
Site : 03CH06-HY
Condition : HF-ANT-060410 VERTICAL
EUT : VM(CPU type:ULV/dual core, LV/single
: core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : Bluetooth TX_CH39_2441MHz

Remark : Frequency from 9GHz to 25GHz, the emission emitted by the EUT is too low to be measured.



- Test Mode : Mode 12
- Polarization : Horizontal

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



Site : 03CH06-HY
Condition : HF-ANT-060410 HORIZONTAL
EUT : VM(CPU type:ULV/dual core, LV/single
: core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : Bluetooth TX_CH78,2480MHz

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Pos	Pos	
			dB	dBuV/m	dBuV	dB	dB	cm	deg	
1 @	2368.00	44.35	-29.65	74.00	45.31	30.24	4.23	35.44	100	360 Peak
2 @	2368.00	32.05	-21.95	54.00	33.01	30.24	4.23	35.44	129	342 Average
3 @	2480.00	82.38			83.24	30.29	4.36	35.51	100	360 Peak
4 @	2480.00	58.51			59.37	30.29	4.36	35.51	129	342 Average
5 @	2483.50	58.59	-15.41	74.00	59.45	30.29	4.36	35.51	100	360 Peak
6 @	2483.50	37.22	-16.78	54.00	38.08	30.29	4.36	35.51	129	342 Average

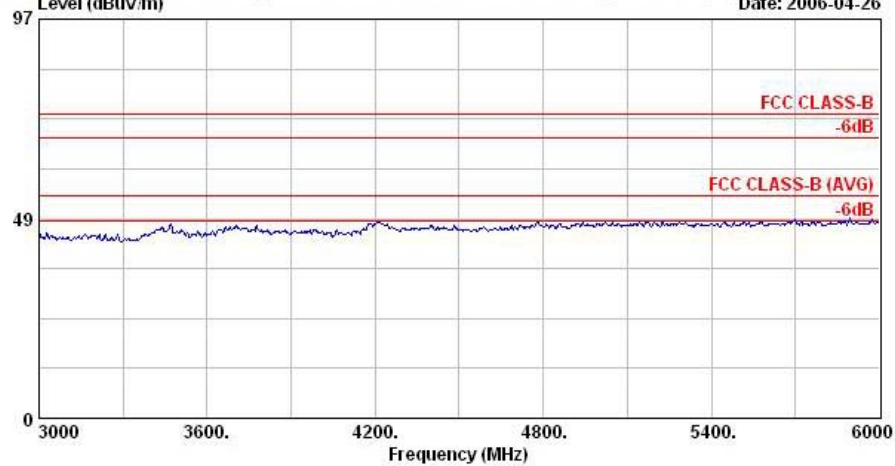
Remark: #3 and #4 Fundamental Signal



FCC TEST REPORT

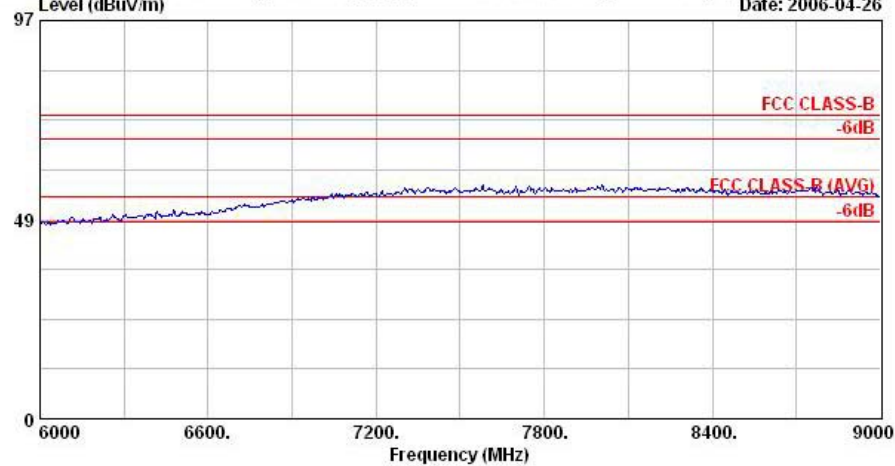
Report No. : FR632813-A

Data: 2 File: D:\Project\2006Q2\江川\632813\Part15C\BT TX_CH78.EMI (12) Date: 2006-04-26
Level (dBuV/m)



Site : 03CH06-HY
Condition : HF-ANT-060410 HORIZONTAL
EUT : VM(CPU type:ULV/dual core, LV/single
: core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : Bluetooth TX_CH78,2480MHz

Data: 3 File: D:\Project\2006Q2\江川\632813\Part15C\BT TX_CH78.EMI (12) Date: 2006-04-26
Level (dBuV/m)

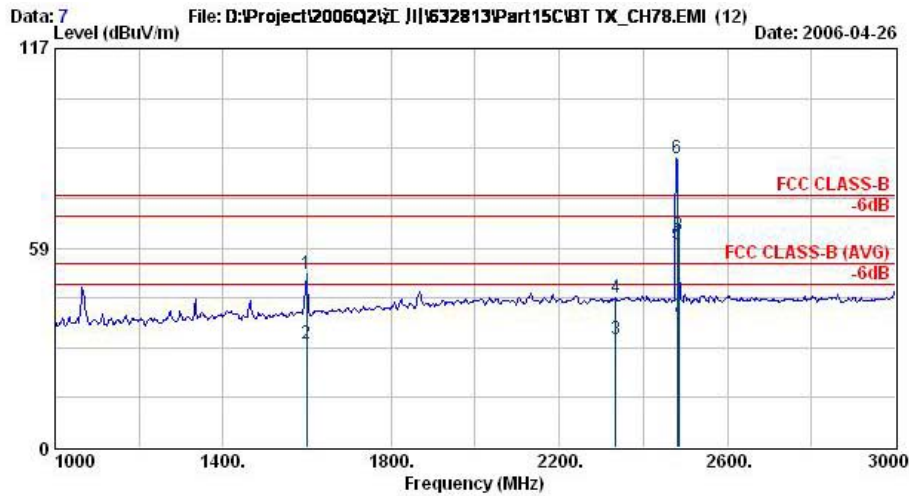


Site : 03CH06-HY
Condition : HF-ANT-060410 HORIZONTAL
EUT : VM(CPU type:ULV/dual core, LV/single
: core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : Bluetooth TX_CH78,2480MHz



- Polarization : Vertical

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



Site : 03CH06-HY
Condition : HF-ANT-060410 VERTICAL
EUT : VM(CPU type:ULV/dual core, LV/single
: core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : Bluetooth TX_CH78,2480MHz

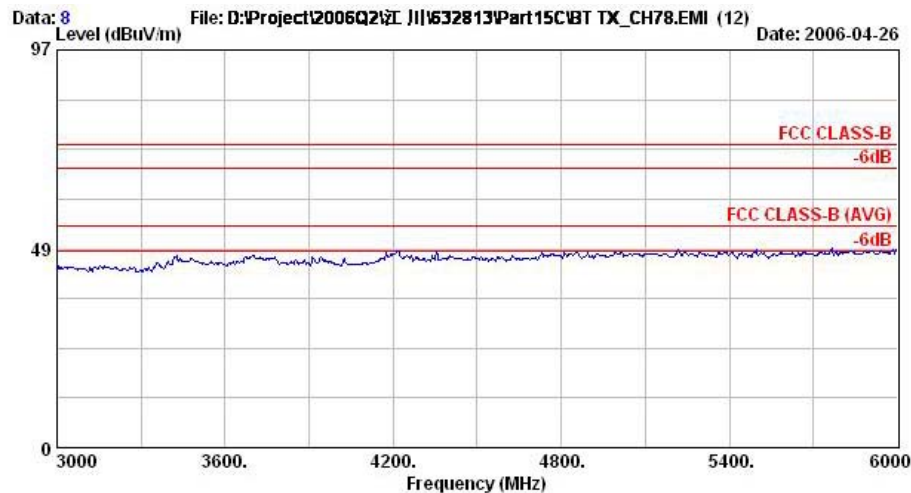
	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Remark
			dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	
1 @	1598.00	50.97	-23.03	74.00	56.23	26.90	3.46	35.62	100	360	Peak
2 @	1598.00	30.43	-23.57	54.00	35.69	26.90	3.46	35.62	100	24	Average
3 @	2334.00	31.90	-42.10	74.00	32.90	30.23	4.17	35.40	100	360	Peak
4 @	2334.00	44.02	-29.98	74.00	45.02	30.23	4.17	35.40	100	360	Peak
5 @	2480.00	59.67			60.53	30.29	4.36	35.51	100	177	Average
6 @	2480.00	84.98			85.84	30.29	4.36	35.51	100	360	Peak
7 @	2483.50	38.39	-15.61	54.00	39.25	30.29	4.36	35.51	100	177	Average
8 @	2483.50	62.01	-11.99	74.00	62.87	30.29	4.36	35.51	100	360	Peak

Remark: #5 and #6 Fundamental Signal

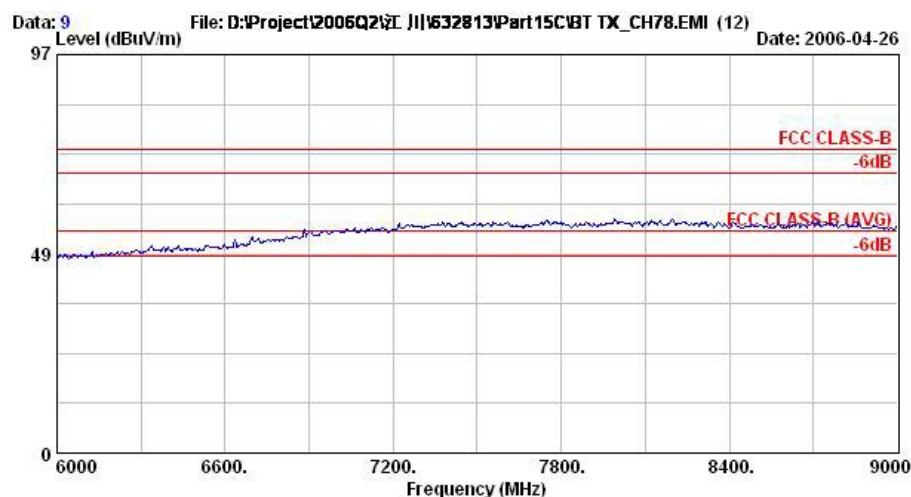


FCC TEST REPORT

Report No. : FR632813-A



Site : 03CH06-HY
Condition : HF-ANT-060410 VERTICAL
EUT : VM(CPU type:ULV/dual core, LV/single
: core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : Bluetooth TX_CH78,2480MHz



Site : 03CH06-HY
Condition : HF-ANT-060410 VERTICAL
EUT : VM(CPU type:ULV/dual core, LV/single
: core)
Power : 120Vac/60Hz
Model : FR 632813
Memo : Bluetooth TX_CH78,2480MHz

Remark : Frequency from 9GHz to 25GHz, the emission emitted by the EUT is too low to be measured.



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 PIFAs for both WLAN and BT. The connector is I-PEX 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	Feb. 22, 2006	Feb. 22, 2007	Conduction (CO01-HY)
LISN	MessTec	NNB-2/16Z	2001/009	9kHz – 30MHz	Mar. 29, 2006	Mar. 29, 2007	Conduction (CO01-HY)
LISN (Support Unit)	MessTec	NNB-2/16Z	2001/004	9kHz – 30MHz	Apr. 19, 2006	Apr. 19, 2007	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	Dec. 22, 2005	Dec. 22, 2006	Radiation (03CH06-HY)
Receiver	R&S	ESCS30	100356	9KHz-2.75GHz	Jul. 25, 2005	Jul. 24, 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	N/A	N/A	Radiation (03CH06-HY)
Horn Antenna	Com-Power	AH118	071025	1G-18G	Nov. 22, 2004	Nov. 22, 2006	Radiation (03CH06-HY)
SHF-EHF Horn	SCHWARZBECK	BBHA 9170	9170-249	14G - 40G	Feb. 1, 2005	Feb. 1, 2007	Radiation (03CH06-HY)
HF Amplifier	MITEQ	AFS44	973248	0.1G - 26.5G	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
combined standard uncertainty Uc(y)	1.13		
Measuring uncertainty for a level of confidence of 95% U=2Uc(y)	2.26		

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
combined standard uncertainty Uc(y)	1.27		
Measuring uncertainty for a level of confidence of 95% U=2Uc(y)	2.54		

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
Combined standard uncertainty $U_c(y)$	2.36				
Measuring uncertainty for a level of confidence of 95% $U = 2U_c(y)$	4.72				