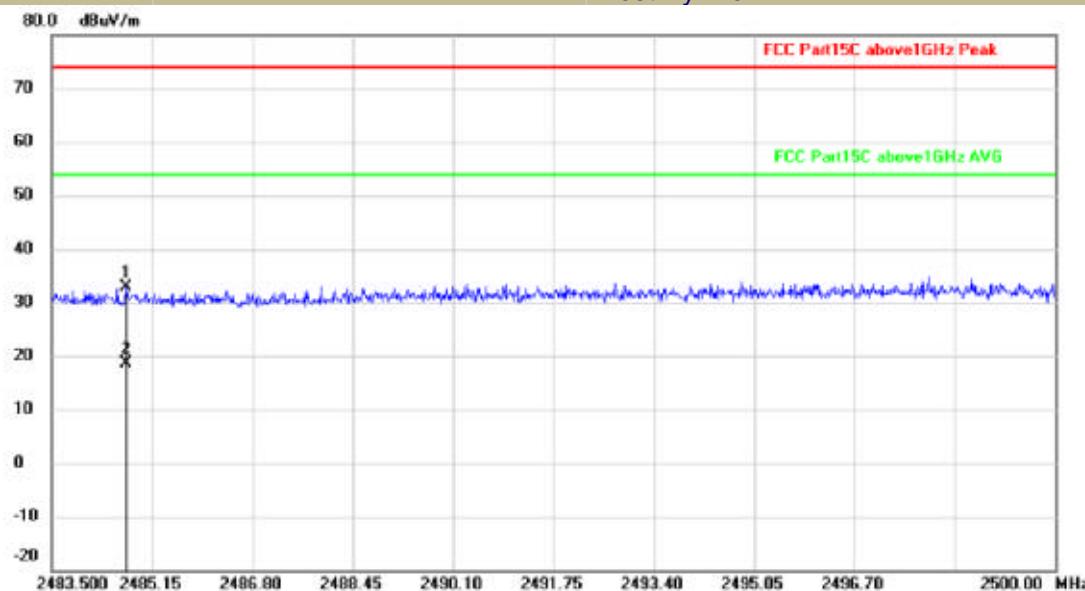
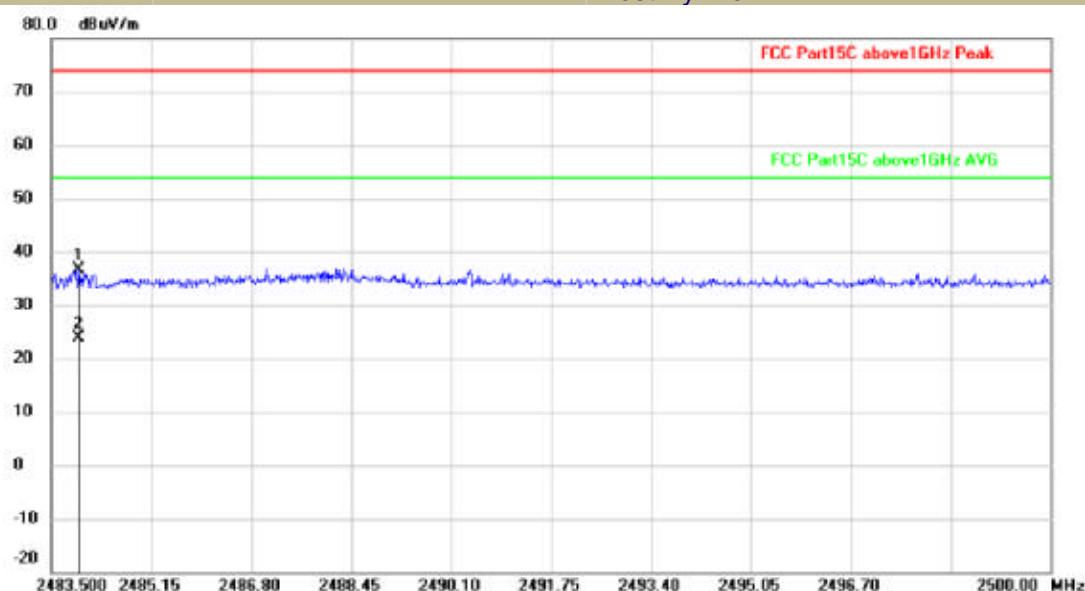


Test Model	Spurious Emission in Restricted Band 2483.5-2500MHz Bluetooth V5.0 Channel 78: 2480MHz	GFSK	H
		Test By: Ken	



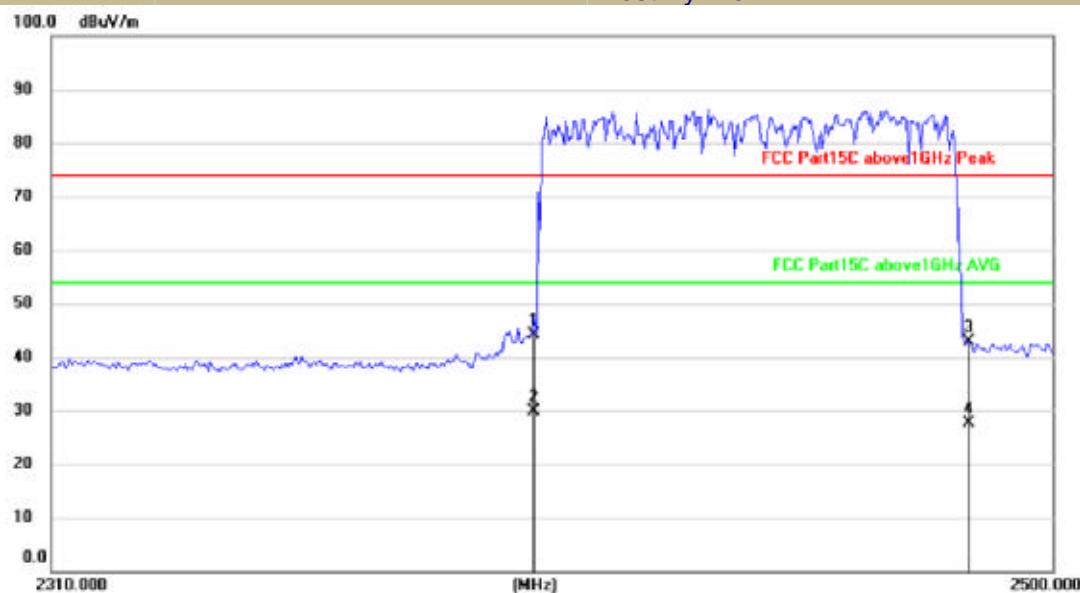
Site	Polarization: Horizontal	Temperature: 23.6 °C
Limit: FCC Part15C above1GHz Peak	Power: DC 5 V	Humidity: 53 %

Test Model	Spurious Emission in Restricted Band 2483.5-2500MHz Bluetooth V5.0 Channel 78: 2480MHz	GFSK	V
		Test By: Ken	



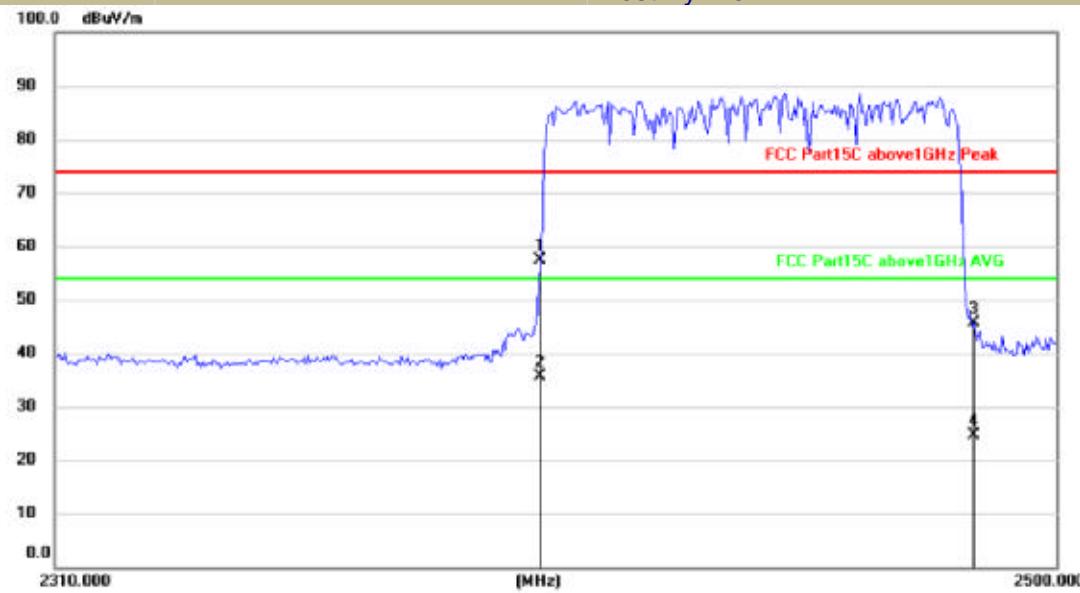
Site	Polarization: Vertical	Temperature: 23.6 °C
Limit: FCC Part15C above1GHz Peak	Power: DC 5 V	Humidity: 53 %

Test Model	Spurious Emission in Restricted Band 2310-2390MHz and 2400-2483.5MHz Bluetooth V5.0 Hopping	GFSK	H
		Test By: Ken	



Site: Polarization: *Horizontal* Temperature: 23.6 °C
Limit: FCC Part15C above1GHz Peak Power: DC 5 V Humidity: 53 %

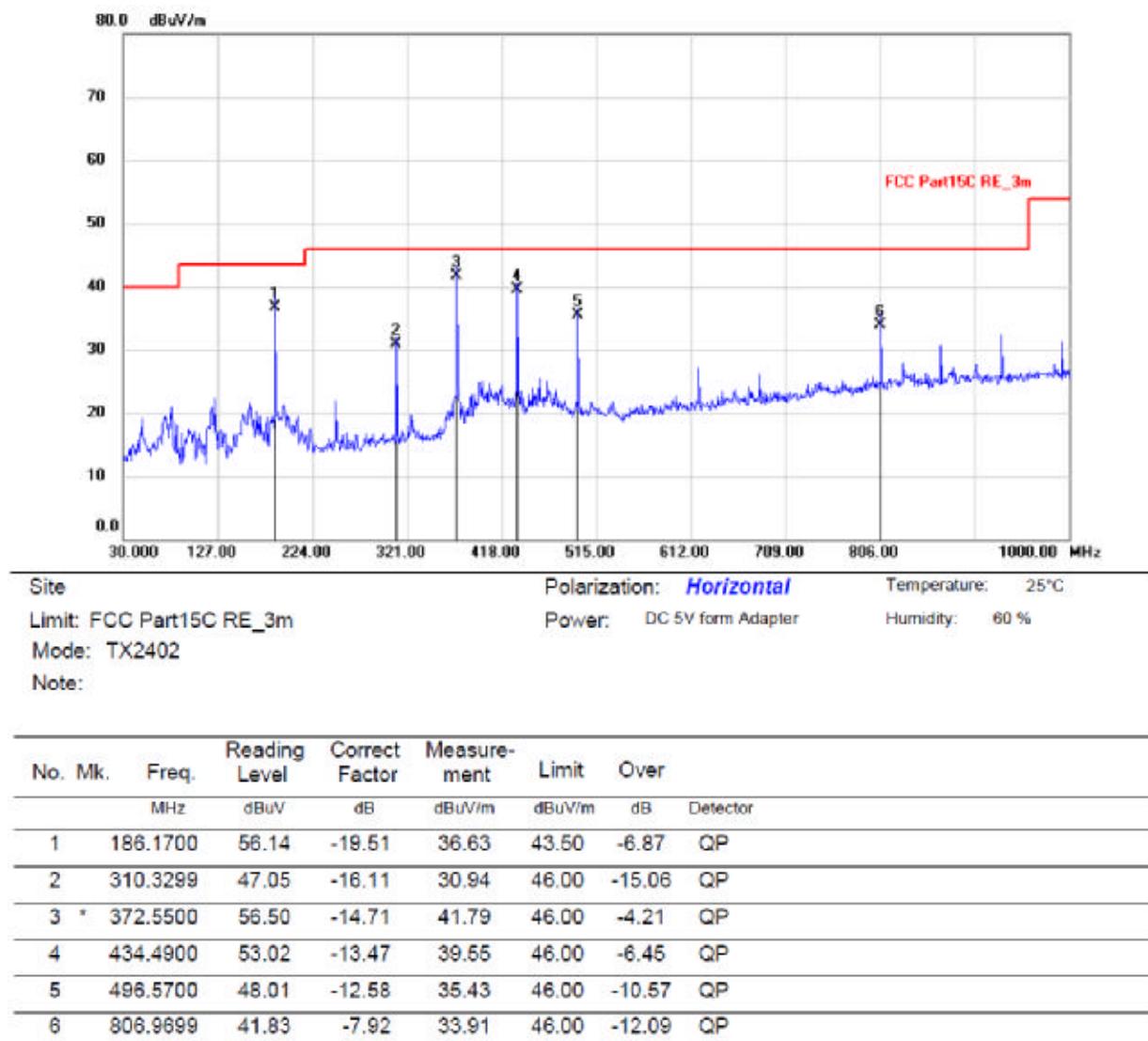
Test Model	Spurious Emission in Restricted Band 2310-2390MHz and 2400-2483.5MHz Bluetooth V5.0 Hopping	GFSK	V
		Test By: Ken	



Site: Polarization: *Vertical* Temperature: 23.6 °C
Limit: FCC Part15C above1GHz Peak Power: DC 5 V Humidity: 53 %

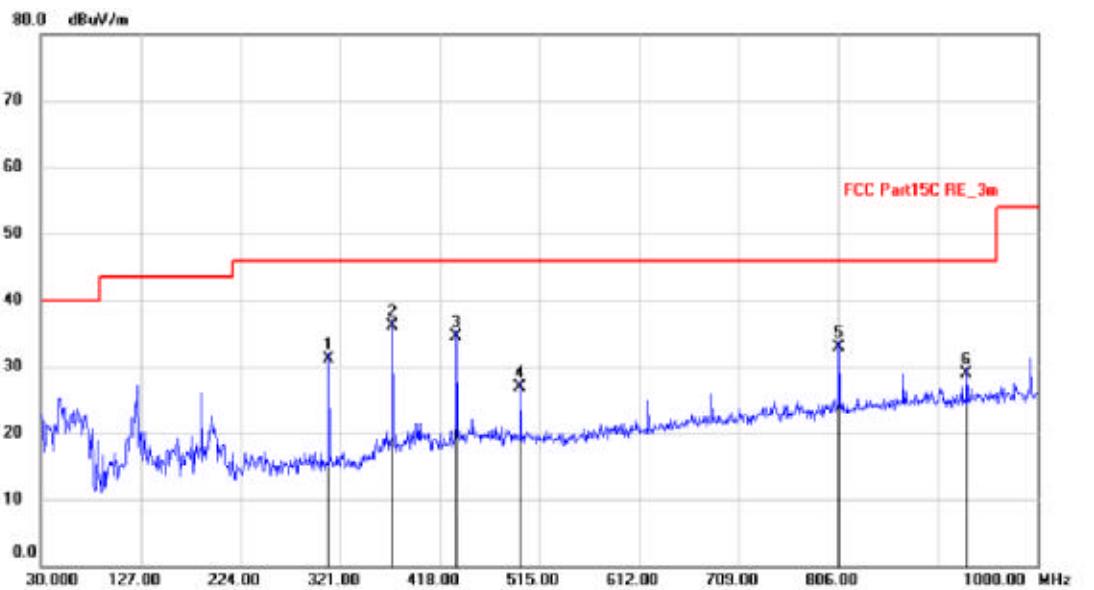
■ Spurious Emission below 1GHz (30MHz to 1GHz)

Bluetooth (GFSK, pi/4-DQPSK, 8DPSK) mode have been tested, and the worst result(GFSK) was report as below:



*:Maximum data x:Over limit !:over margin

(Reference Only)



Site: Polarization: *Vertical* Temperature: 25 °C

Limit: FCC Part15C RE_3m Power: DC 5V form Adapter Humidity: 60 %

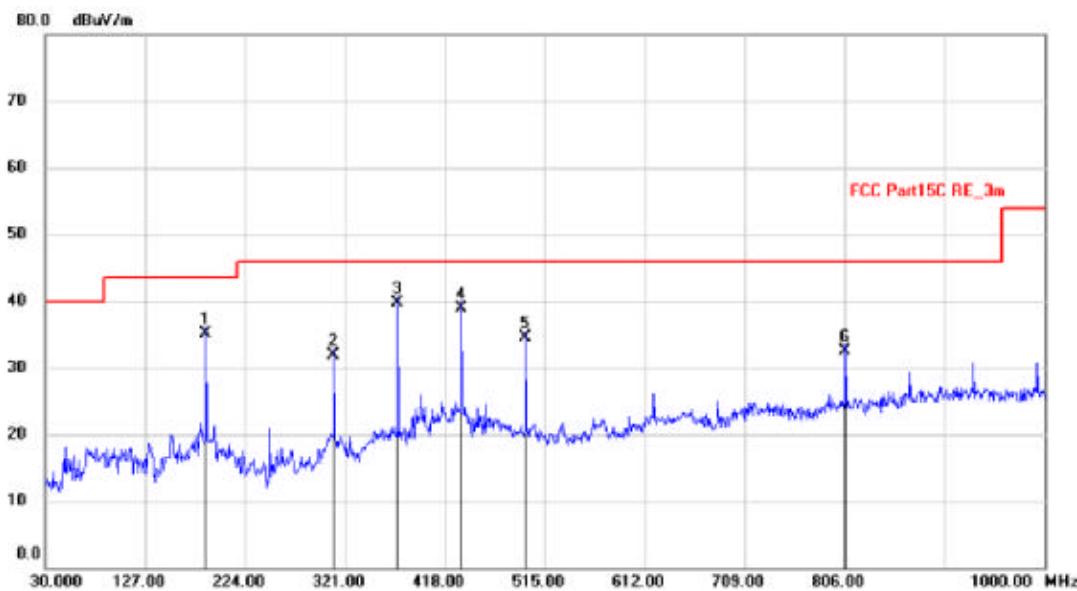
Mode: TX2402

Note:

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over
			Level	Factor	ment		
		MHz	dBuV	dB	dBuV/m	dB	Detector
1		310.3299	47.23	-16.11	31.12	46.00	-14.88 QP
2	*	372.4100	50.76	-14.71	36.05	46.00	-9.95 QP
3		434.4900	48.03	-13.47	34.56	46.00	-11.44 QP
4		496.5700	39.58	-12.58	27.00	46.00	-19.00 QP
5		806.9699	40.85	-7.92	32.93	46.00	-13.07 QP
6		931.1300	35.68	-6.79	28.89	46.00	-17.11 QP

*:Maximum data x:Over limit !:over margin

(Reference Only)



Site: Polarization: *Horizontal* Temperature: 25 °C

Limit: FCC Part15C RE_3m Power: DC 5V form Adapte

Humidity: 60 %

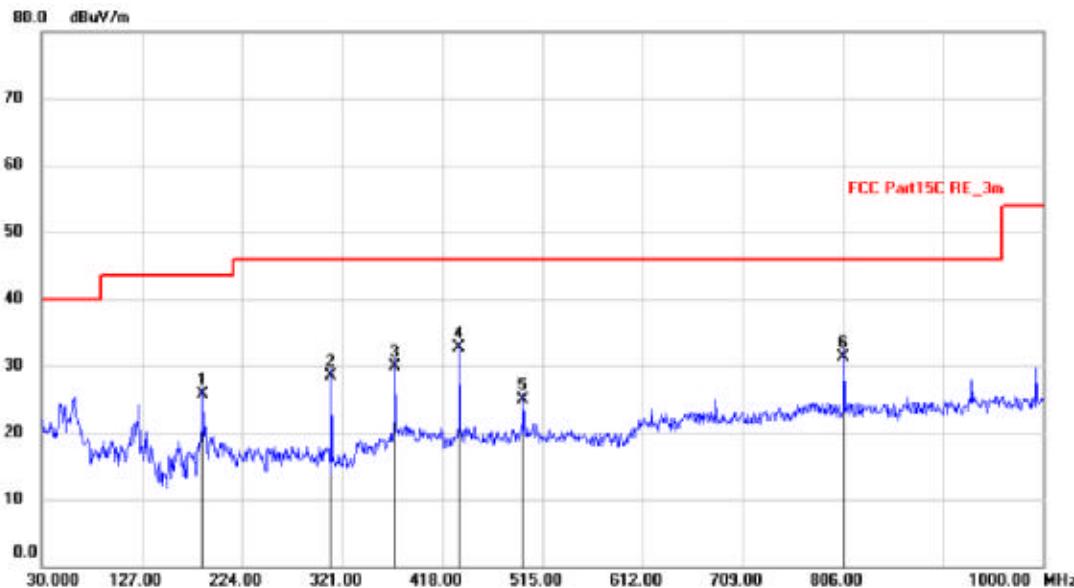
Mode: TX2441

Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over
		MHz	dBuV	dB	dBuV/m	dB	Detector
1		186.1700	54.53	-19.51	35.02	43.50	-8.48 QP
2		310.3299	48.11	-16.11	32.00	46.00	-14.00 QP
3	*	372.4100	54.39	-14.71	39.88	46.00	-6.32 QP
4		434.4900	62.44	-13.47	38.97	46.00	-7.03 QP
5		496.5700	47.04	-12.58	34.46	46.00	-11.54 QP
6		806.9699	40.42	-7.92	32.50	46.00	-13.50 QP

*:Maximum data x:Over limit !:over margin

(Reference Only)



Site: Polarization: *Vertical* Temperature: 25 °C

Limit: FCC Part15C RE_3m Power: DC 5V form Adapte

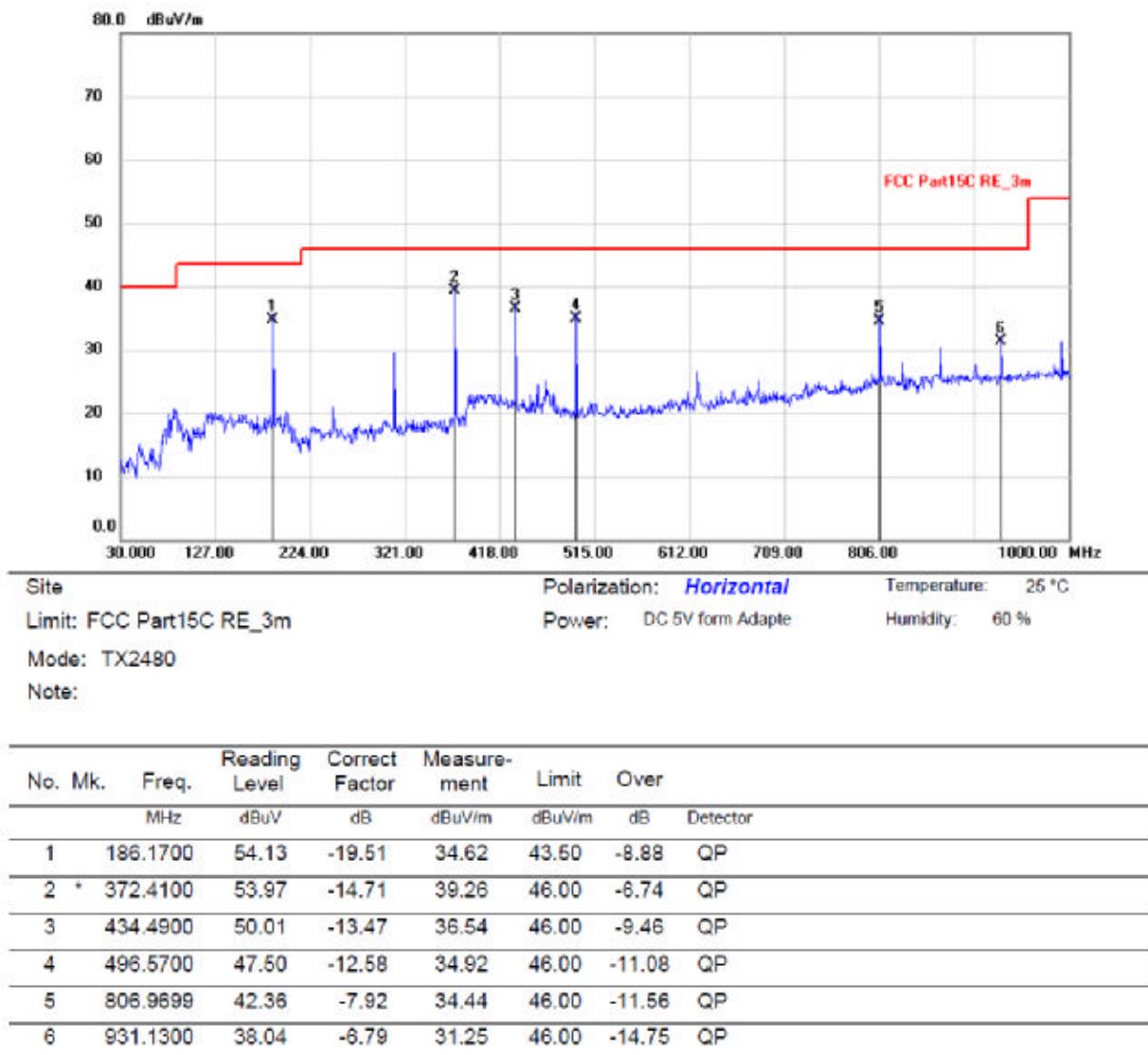
Mode: TX2441

Note:

No.	Mk.	Freq. MHz	Reading Level	Correct Factor	Measure- ment	Limit	Over
			dBuV	dB	dBuV/m	dB	Detector
1	186.1700	45.15	-19.51	25.64	43.50	-17.86	QP
2	310.3299	44.62	-16.11	28.51	46.00	-17.49	QP
3	372.4100	44.52	-14.71	29.81	46.00	-16.19	QP
4	* 434.4900	46.10	-13.47	32.63	46.00	-13.37	QP
5	496.5700	37.42	-12.58	24.84	46.00	-21.16	QP
6	806.9699	39.13	-7.92	31.21	46.00	-14.79	QP

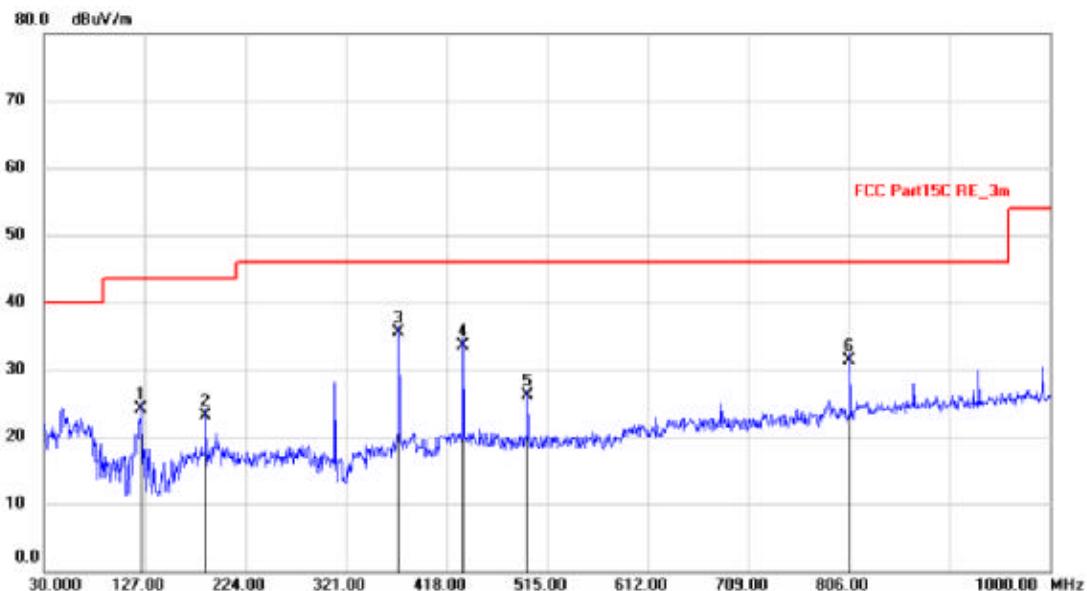
*:Maximum data x:Over limit !:over margin

(Reference Only)



*:Maximum data x:Over limit l:over margin

(Reference Only)



Site: Polarization: **Vertical** Temperature: 25 °C
 Limit: FCC Part15C RE_3m Power: DC 5V form Adapte
 Mode: TX2480 Humidity: 60 %

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	124.0900	44.53	-20.48	24.05	43.50	-19.45	QP	
2	186.1700	42.62	-19.51	23.11	43.50	-20.39	QP	
3	* 372.4100	50.14	-14.71	35.43	46.00	-10.57	QP	
4	434.4900	47.07	-13.47	33.60	46.00	-12.40	QP	
5	496.5700	38.70	-12.58	26.12	46.00	-19.88	QP	
6	806.9699	39.25	-7.92	31.33	46.00	-14.67	QP	

*:Maximum data x:Over limit !:over margin

(Reference Only)

7.8 CONDUCTED EMISSION TEST

7.8.1 Applicable Standard

According to FCC Part 15.207(a)

7.8.2 Conformance Limit

Conducted Emission Limit		
Frequency(MHz)	Quasi-peak	Average
0.15-0.5	66-56	56-46
0.5-5.0	56	46
5.0-30.0	60	50

Note: 1. The lower limit shall apply at the transition frequencies
 2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

Remark: Test results were obtained from the following equation:

$$\text{Measurement (dB}\mu\text{V)} = \text{LISN Factor (dB)} + \text{Cable Loss (dB)} + \text{Reading (dB}\mu\text{V)}$$

$$\text{Margin (dB)} = \text{Measurement (dB}\mu\text{V)} - \text{Limit (dB}\mu\text{V)}$$

7.8.3 Test Configuration

Test according to clause 6.3 conducted emission test setup

7.8.4 Test Procedure

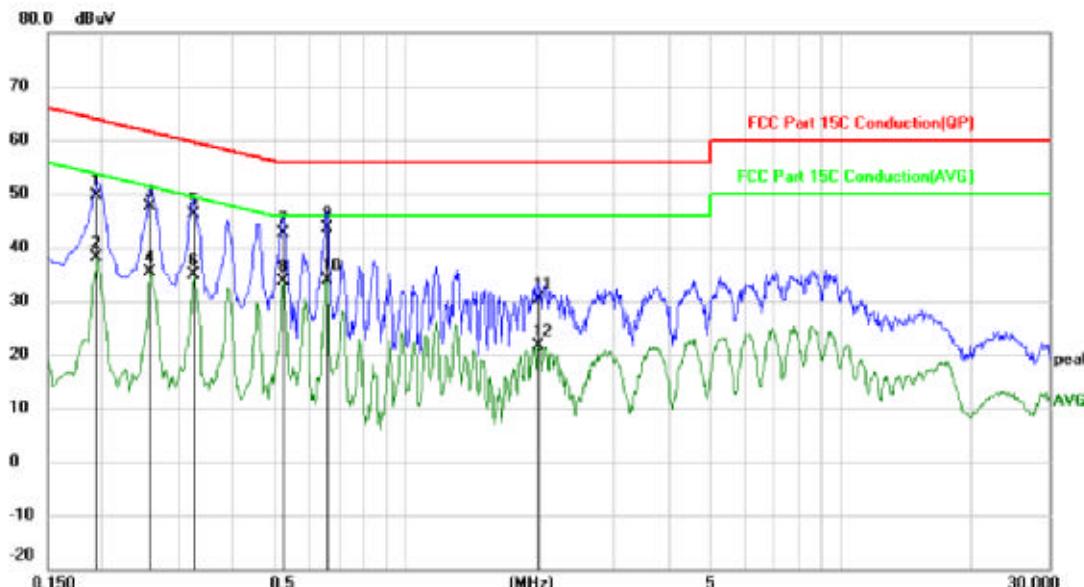
The EUT was placed on a table which is 0.8m above ground plane.

Maximum procedure was performed on the highest emissions to ensure EUT compliance.

Repeat above procedures until all frequency measured were complete.

7.8.5 Test Results

PASS



Site: **N** Temperature: 22.5

Limit: FCC Part 15C Conduction(QP) Power: DC 5 V form Adapter Humidity: 49 %

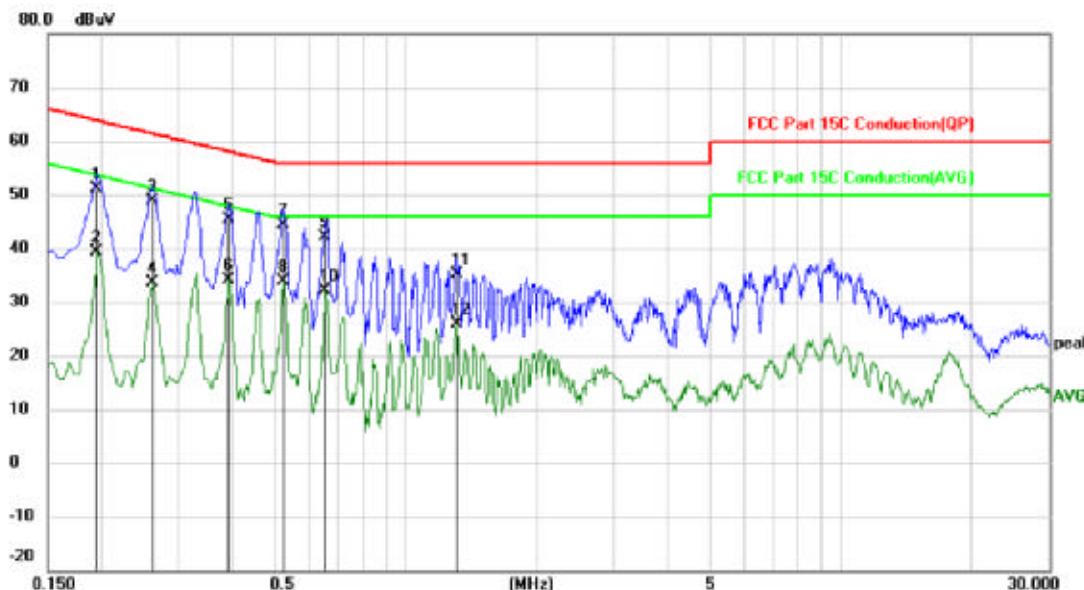
Mode: BT Mode

Note:

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	Detector	Comment
			Level	Factor	ment				
		MHz	dBuV	dB	dBuV	dBuV	dB		
1	0.1949	39.48	10.04	49.52	63.83	-14.31	QP		
2	0.1949	28.02	10.04	38.06	53.83	-15.77	AVG		
3	0.2580	37.67	10.04	47.71	61.50	-13.79	QP		
4	0.2580	25.45	10.04	35.49	51.50	-16.01	AVG		
5	0.3255	36.06	10.04	46.09	59.57	-13.48	QP		
6	0.3255	24.81	10.04	34.85	49.57	-14.72	AVG		
7	0.5234	32.60	10.04	42.64	56.00	-13.36	QP		
8	0.5234	23.60	10.04	33.64	46.00	-12.36	AVG		
9	0.6584	33.45	10.06	43.51	56.00	-12.49	QP		
10	*	0.6584	23.78	10.06	33.84	46.00	-12.16	AVG	
11	2.0129	20.18	10.13	30.31	56.00	-25.69	QP		
12	2.0129	11.39	10.13	21.52	46.00	-24.48	AVG		

*:Maximum data x:Over limit !:over margin

⟨Reference Only



Site

Phase: L1

Temperature: 22.5

Limit: FCC Part 15C Conduction(QP)

Power: DC 5 V form Adapter

Humidity: 49 %

Mode: BT Mode

Note:

No. Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit		Over Detector	Comment
					Limit	Over		
1	0.1949	41.00	10.04	51.04	63.83	-12.79	QP	
2	0.1949	29.33	10.04	39.37	53.83	-14.46	AVG	
3	0.2625	38.81	10.04	48.85	61.35	-12.50	QP	
4	0.2625	23.49	10.04	33.53	51.35	-17.82	AVG	
5	0.3930	35.25	10.05	45.30	58.00	-12.70	QP	
6	0.3930	24.03	10.05	34.08	48.00	-13.92	AVG	
7 *	0.5234	34.22	10.04	44.26	56.00	-11.74	QP	
8	0.5234	23.81	10.04	33.85	46.00	-12.15	AVG	
9	0.6539	32.01	10.06	42.07	56.00	-13.93	QP	
10	0.6539	21.98	10.06	32.04	46.00	-13.96	AVG	
11	1.3109	25.05	10.12	35.17	56.00	-20.83	QP	
12	1.3109	16.86	10.12	25.98	46.00	-20.02	AVG	

*:Maximum data x:Over limit !:over margin

(Reference Only)

7.9 ANTENNA APPLICATION

7.9.1 Antenna Requirement

Standard	Requirement
FCC CRF Part 15.203	An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, §15.213, §15.217, §15.219, or §15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

7.9.2 Result

PASS.

The EUT has 1 antenna: PCB Antenna for BT V5.0 with classic model, the gain is -0.58 dBi;

Note: Antenna use a permanently attached antenna which is not replaceable.
 Not using a standard antenna jack or electrical connector for antenna replacement
 The antenna has to be professionally installed (please provide method of installation)

which in accordance to section 15.203, please refer to the internal photos.

----- END OF REPORT -----