

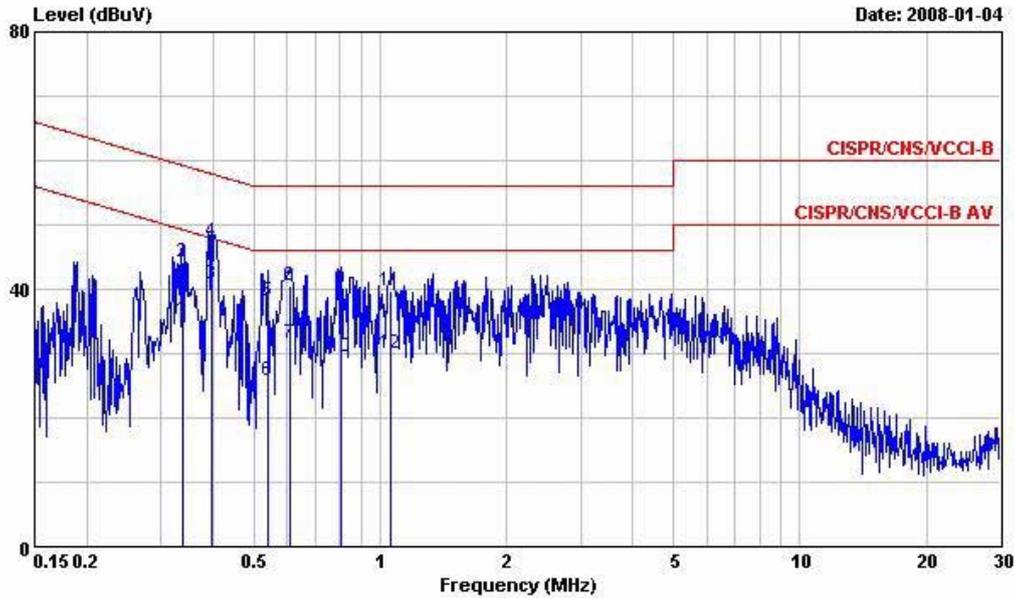
Site : CO01-HY  
 Condition : CNS/VCCI/CISPR-B 2001/004 200604 NEUTRAL  
 EUT : GSM/EDGE(Class 12) 850/900/1800/1900  
 : UMTS/HSDPA 850/2100(Band I and V)with  
 : BT\_EDR Phone\_Slide Type  
 Power : 120Vac/60Hz  
 Model : FR 792103  
 Memo : PCS1900 Idle+BT Link+Camera A+Adaptor B

	Freq	Level	Over	Limit	Read	Cable	Probe	Remark
	MHz	dBuV	Limit	Line	Level	Loss	Factor	
			dB	dBuV	dBuV	dB	dB	
1	0.404	48.47	-9.30	57.77	48.25	0.12	0.10	QP
2	0.404	40.74	-7.03	47.77	40.52	0.12	0.10	Average
3	0.541	42.62	-13.38	56.00	42.38	0.14	0.10	QP
4	0.541	32.34	-13.66	46.00	32.10	0.14	0.10	Average
5	0.595	31.43	-14.57	46.00	31.19	0.14	0.10	Average
6	0.595	41.25	-14.75	56.00	41.01	0.14	0.10	QP
7	0.809	29.76	-16.24	46.00	29.50	0.16	0.10	Average
8	0.809	41.18	-14.82	56.00	40.92	0.16	0.10	QP
9	1.080	39.48	-16.52	56.00	39.21	0.17	0.10	QP
10	1.080	28.90	-17.10	46.00	28.63	0.17	0.10	Average
11	2.280	38.33	-17.67	56.00	38.06	0.17	0.10	QP
12	2.280	27.15	-18.85	46.00	26.88	0.17	0.10	Average



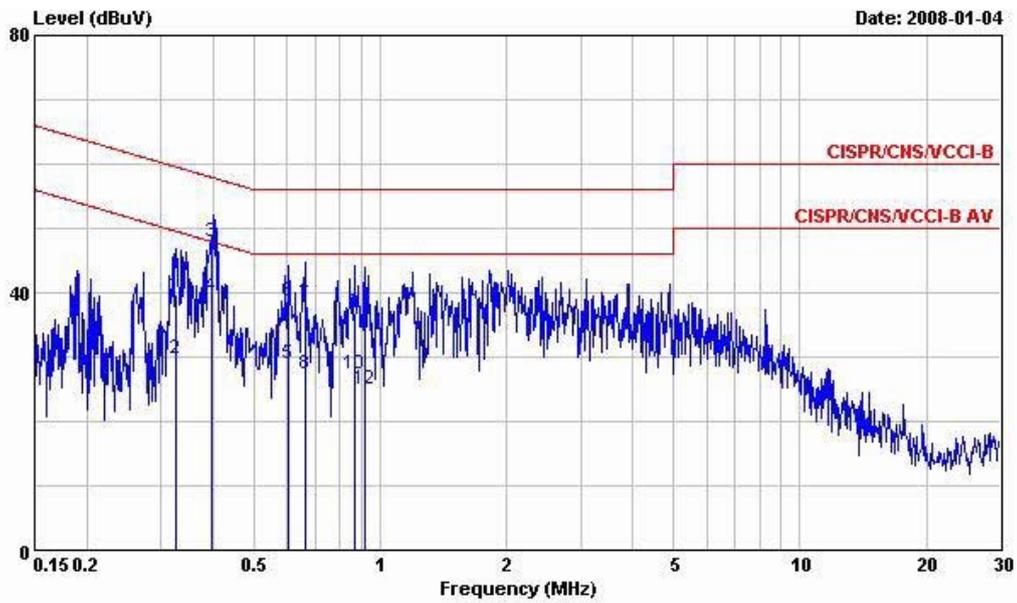
- Temperature : 21~24°C
- Relative Humidity : 49~52%
- Test Enginner : Sun
- Test Mode : Mode 9

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



Site : CO04-HY  
 Condition : CISPR/CNS/VCCI-B LISN 200604 99041 LINE  
 EUT : GSM/EDGE(Class 12) 850/900/1800/1900  
 : UMTS/HSDPA 850/2100  
 : with BT EDR Phone\_Slide  
 POWER: 120Vac/60Hz  
 Model : FR 792103-04  
 Memo : HSDPA Idle + BT Link + Camera A  
 Memo : + Adaptor B

	Over	Limit	Read	LISN	Cable		
Freq	Level	Limit	Line	Level	Factor	Loss	Remark
MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.3374030	35.32 -13.95	49.27	34.82	0.10	0.40	Average
2	0.3374030	44.20 -15.07	59.27	43.70	0.10	0.40	QP
3	0.3976300	40.70 -7.20	47.90	40.20	0.10	0.40	Average
4	0.3976300	47.44 -10.46	57.90	46.94	0.10	0.40	QP
5	0.5378230	38.13 -17.87	56.00	37.55	0.10	0.48	QP
6	0.5378230	25.88 -20.12	46.00	25.30	0.10	0.48	Average
7	0.6107510	31.45 -14.55	46.00	30.95	0.10	0.40	Average
8	0.6107510	40.48 -15.52	56.00	39.98	0.10	0.40	QP
9	0.8044850	40.00 -16.00	56.00	39.40	0.10	0.50	QP
10	0.8044850	29.59 -16.41	46.00	28.99	0.10	0.50	Average
11	1.060	39.75 -16.25	56.00	39.15	0.10	0.50	QP
12	1.060	29.90 -16.10	46.00	29.30	0.10	0.50	Average



Site : C004-HY  
 Condition : CISPR/CNS/VCCI-B LISN 200604 99041 NEUTRAL  
 EUT : GSM/EDGE(Class 12) 850/900/1800/1900  
 : UMTS/HSDPA 850/2100  
 : with BT\_EDR Phone\_Slide  
 POWER: 120Vac/60Hz  
 Model : FR 792103-04  
 Memo : HSDPA Idle + BT Link + Camera A  
 Memo : + Adaptor B

	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	0.3268460	39.76	-19.77	59.53	39.26	0.10	0.40	QP
2	0.3268460	29.71	-19.82	49.53	29.21	0.10	0.40	Average
3	0.3964680	47.84	-10.09	57.93	47.34	0.10	0.40	QP
4	0.3964680	39.49	-8.44	47.93	38.99	0.10	0.40	Average
5	0.6043130	29.01	-16.99	46.00	28.51	0.10	0.40	Average
6	0.6043130	38.75	-17.25	56.00	38.25	0.10	0.40	QP
7	0.6612710	38.03	-17.97	56.00	37.53	0.10	0.40	QP
8	0.6612710	27.47	-18.53	46.00	26.97	0.10	0.40	Average
9	0.8664270	36.80	-19.20	56.00	36.20	0.10	0.50	QP
10	0.8664270	27.36	-18.64	46.00	26.76	0.10	0.50	Average
11	0.9184250	36.78	-19.22	56.00	36.18	0.10	0.50	QP
12	0.9184250	25.12	-20.88	46.00	24.52	0.10	0.50	Average



## **5.9 Radiated Emission Measurement**

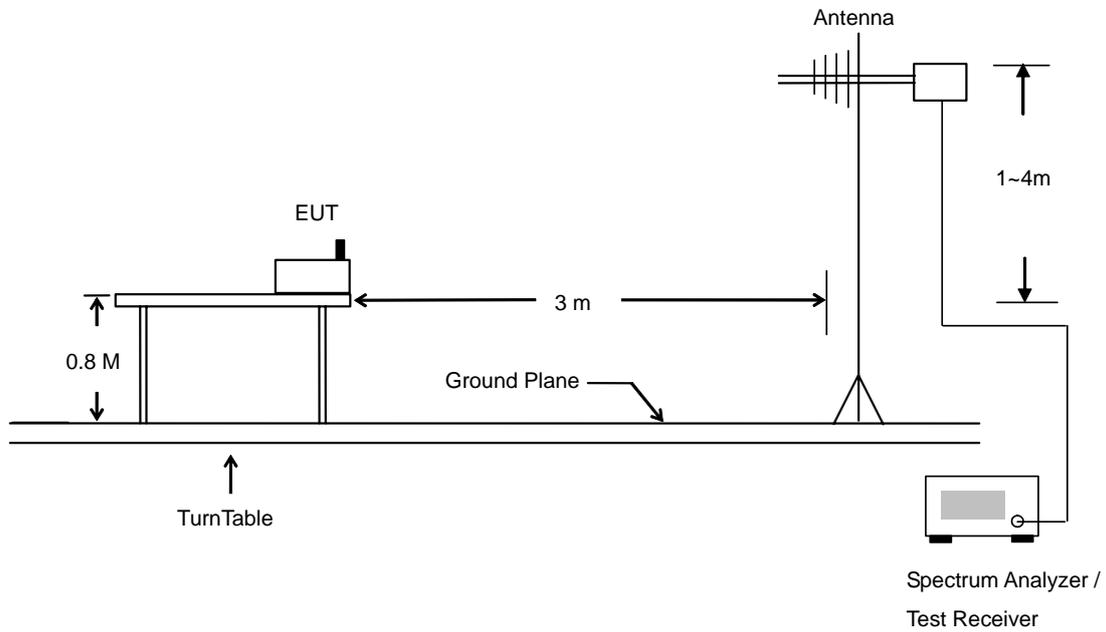
### **5.9.1 Measuring Instruments**

As described in chapter 6 of this Report.

### **5.9.2 Test Procedures**

- a. The EUT was placed on a rotatable table top 0.8 meter above ground.
- b. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
- c. The table was rotated 360 degrees to determine the position of the highest radiation.
- d. The antenna is a broadband antenna and its height is varied between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
- e. For each suspected emission, the EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
- f. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function and specified bandwidth with Maximum Hold Mode.
- g. For testing below 1GHz, If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the quasi-peak method and reported.
- h. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

5.9.3 Typical Test Setup Layout of Radiated Emission

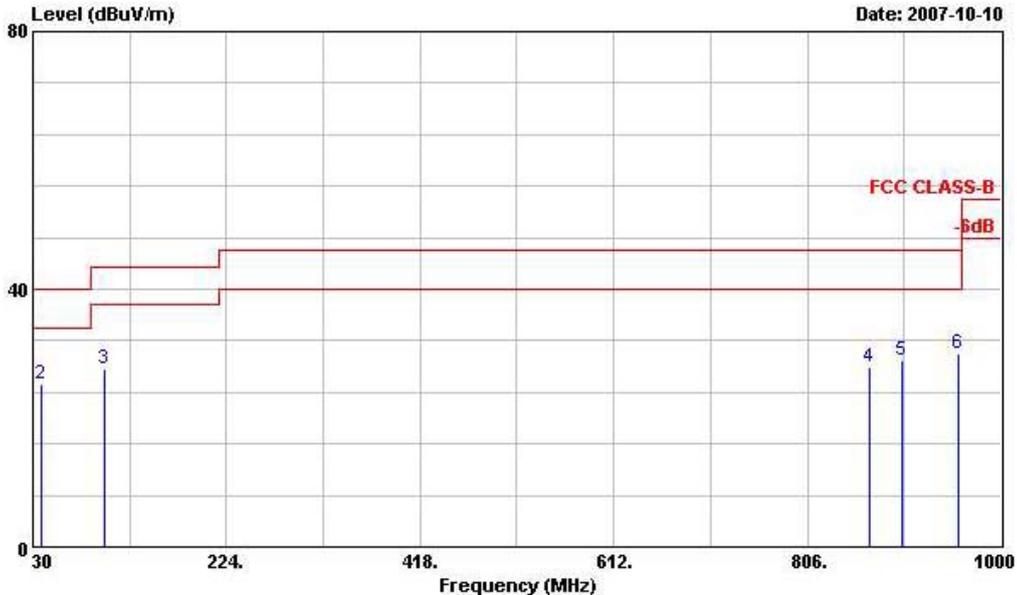




5.9.4 Test Data

- Temperature : 26~27°C
- Relating Humidity : 48~50%
- Test Enginner : Derek
- Test Mode : Mode 1
- Polarization : Horizontal (30MHz-1GHz)

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



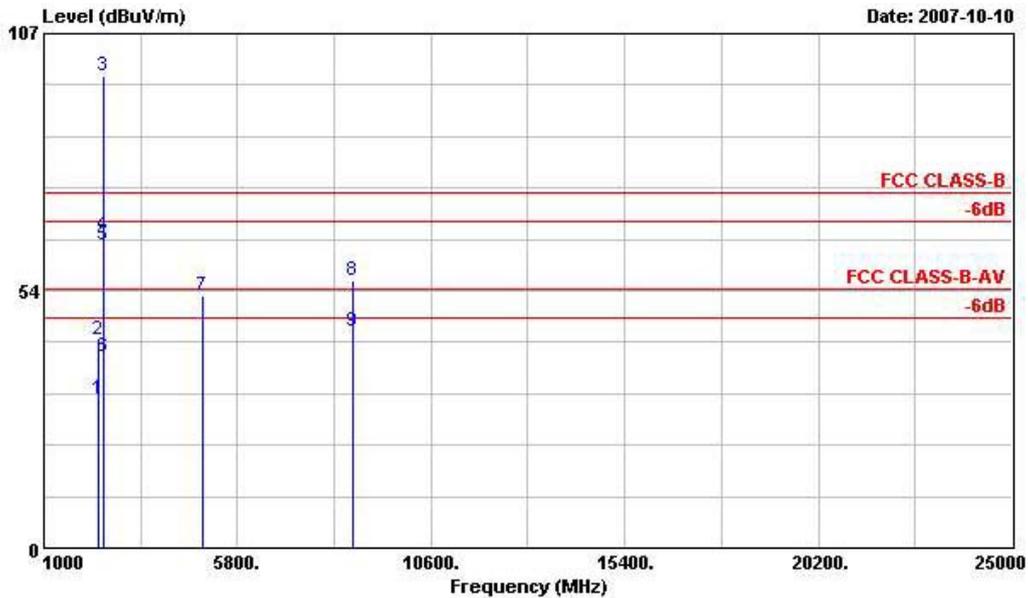
Site : 03CH04-HY  
 Condition: FCC CLASS-B 3m ANT2724 HORIZONTAL  
 EUT : GSM/EDGE (Class12) 850/900/1800/  
 . : 1900 UMTS/HSDPA 850/2100 (BAND I and  
 . : V) with BT\_EDR Phone\_Slide Type  
 POWER : 120Vac/60Hz  
 MODEL : FR 792103  
 MOME : Bluetooth Tx\_Ch78;2480MHz  
 DATA RATE: DH1  
 PLANE : E2  
 ADAPTOR : B

	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	30.540	32.41	-7.59	40.00	41.85	16.36	0.87	26.67	100	42	Peak
2	39.180	25.24	-14.76	40.00	38.21	12.71	0.96	26.64	---	---	Peak
3	101.820	27.66	-15.84	43.50	44.51	8.22	1.39	26.45	---	---	Peak
4	867.700	27.82	-18.18	46.00	28.26	22.34	3.90	26.68	---	---	Peak
5	900.600	29.05	-16.95	46.00	28.18	23.53	3.96	26.62	---	---	Peak
6	956.600	30.13	-15.87	46.00	27.77	24.94	3.98	26.56	---	---	Peak



- Polarization : Horizontal (1GHz-25GHz)

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



Site : 03CH04-HY  
 Condition: FCC CLASS-B 3m HF-ANT-6903 HORIZONTAL  
 EUT : GSM/EDGE(Class12) 850/900/1800/  
 . : 1900 UMTS/HSDPA 850/2100(BAND I and  
 . : V) with BT\_EDR Phone\_Slide Type  
 POWER : 120Vac/60Hz  
 MODEL : FR 792103  
 MOME : Bluetooth Tx\_Ch78;2480MHz  
 DATA RATE:DH1  
 PLANE : E2  
 ADAPTOR : B

	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	2350.000	30.96	-23.04	54.00	33.08	27.96	3.69	33.77	100	358	Average
2	2350.000	43.43	-30.57	74.00	45.55	27.96	3.69	33.77	100	0	Peak
3 @	2480.000	98.18			99.88	28.26	3.84	33.80	100	0	Peak
4 X	2480.000	65.16			66.86	28.26	3.84	33.80	100	358	Average
5	2483.500	62.90	-11.10	74.00	64.60	28.26	3.84	33.80	100	0	Peak
6	2483.500	39.74	-14.26	54.00	41.44	28.26	3.84	33.80	100	358	Average
7	4950.000	52.48	-21.52	74.00	47.71	33.11	5.96	34.30	100	0	Peak
8	8649.000	55.67	-18.33	74.00	45.41	37.68	7.10	34.52	100	0	Peak
9	8649.000	45.14	-8.86	54.00	34.88	37.68	7.10	34.52	100	170	Average

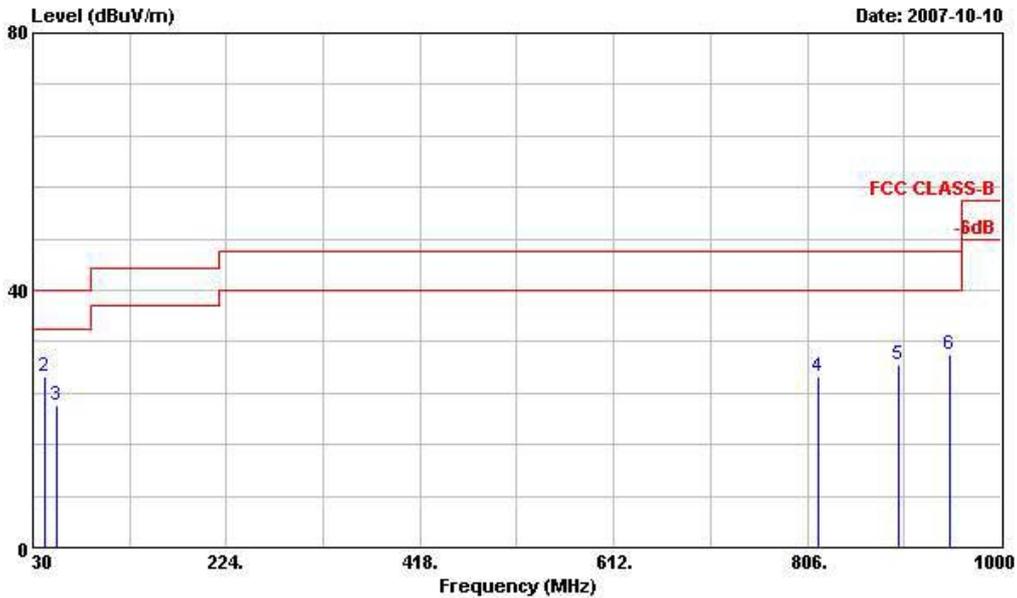
Remark:

1. "3" represents the Fundamental Signal
2. "4" represents the Fundamental Signal



- Polarization : Vertical (30MHz-1GHz)

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



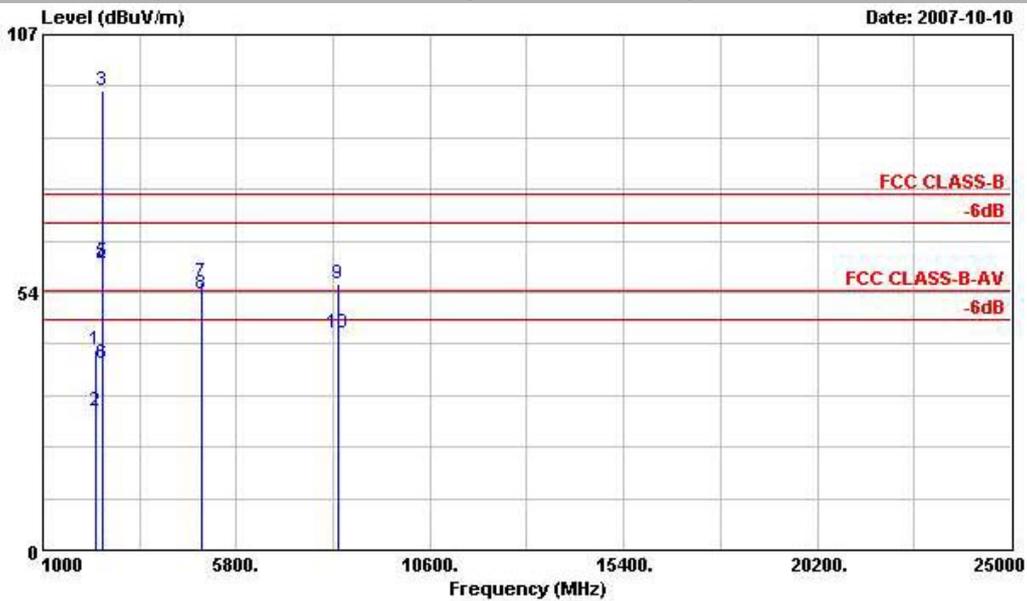
Site : 03CH04-HY  
 Condition: FCC CLASS-B 3m ANT2724 VERTICAL  
 EUT : GSM/EDGE(Class12) 850/900/1800/  
 : 1900 UITS/HSDPA 850/2100(BAND I and  
 : V) with BT\_EDR Phone\_Slide Type  
 POWER : 120Vac/60Hz  
 MODEL : FR 792103  
 HOME : Bluetooth Tx\_Ch78;2480MHz  
 DATA RATE:DH1  
 PLANE : E2  
 ADAPTOR : B

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	dB	dBuV/m	dBuV	Loss	Factor	Pos	Pos	Remark
					dB/m	dB	dB	cm	deg	
1	30.540	29.51	-10.49	40.00	38.95	16.36	0.87	26.67	100	247 Peak
2	42.690	26.64	-13.36	40.00	41.54	10.75	0.97	26.63	---	---
3	54.570	21.99	-18.01	40.00	41.95	5.57	1.07	26.60	---	---
4	817.300	26.53	-19.47	46.00	29.16	20.49	3.66	26.78	---	---
5	897.800	28.42	-17.58	46.00	27.65	23.44	3.95	26.62	---	---
6	948.900	30.03	-15.97	46.00	27.88	24.74	3.98	26.57	---	---



- Polarization : Vertical (1GHz-25GHz)

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



Site : 03CH04-HY  
 Condition: FCC CLASS-B 3m HF-ANT-6903 VERTICAL  
 EUT : GSM/EDGE(Class12) 850/900/1800/  
 . : 1900 UMTS/HSDPA 850/2100(BAND I and  
 . : V) with BT\_EDR Phone\_Slide Type  
 POWER : 120Vac/60Hz  
 MODEL : FR 792103  
 HOME : Bluetooth Tx\_Ch78;2480MHz  
 DATA RATE:DHL  
 PLANE : E2  
 ADAPTOR : B

	Freq	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg	Remark
1	2326.000	41.64	-32.36	74.00	43.82	27.92	3.66	33.77	100	0	Peak
2	2326.000	28.87	-25.13	54.00	31.05	27.92	3.66	33.77	100	153	Average
3	2480.000	95.34			97.04	28.26	3.84	33.80	100	0	Peak
4	2480.000	58.62			60.32	28.26	3.84	33.80	100	153	Average
5	2483.500	59.73	-14.27	74.00	61.43	28.26	3.84	33.80	100	0	Peak
6	2483.500	38.86	-15.14	54.00	40.56	28.26	3.84	33.80	100	153	Average
7	4950.000	55.49	-18.51	74.00	50.72	33.11	5.96	34.30	100	0	Peak
8	4950.000	53.26	-0.74	54.00	48.49	33.11	5.96	34.30	100	12	Average
9	8310.000	55.42	-18.58	74.00	45.37	37.23	6.92	34.11	100	0	Peak
10	8310.000	45.21	-8.79	54.00	35.16	37.23	6.92	34.11	100	165	Average

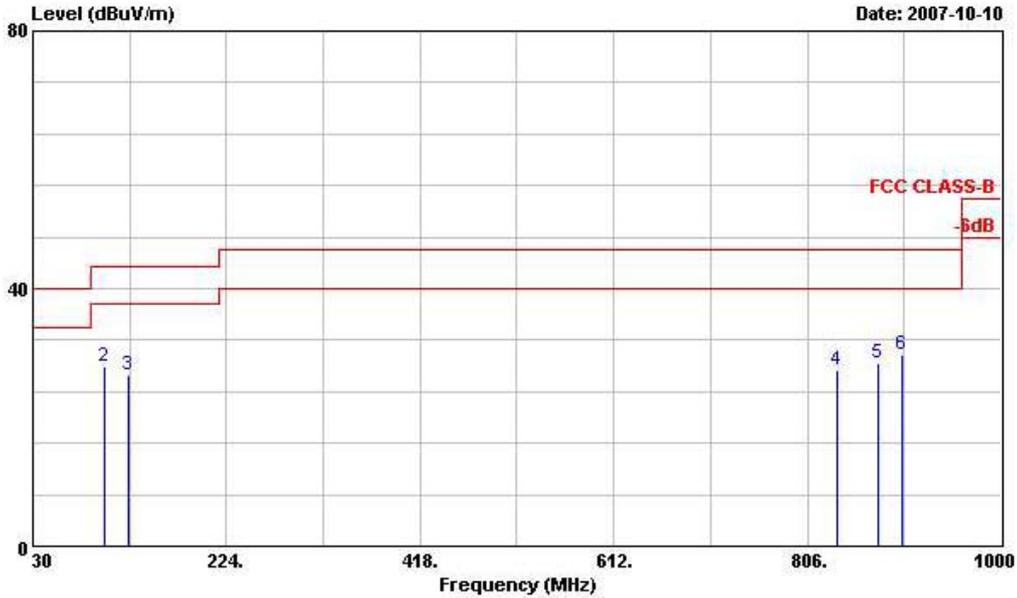
Remark:

1. "3" represents the Fundamental Signal
2. "4" represents the Fundamental Signal



- Test Mode : Mode 2
- Polarization : Horizontal (30MHz-1GHz)

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



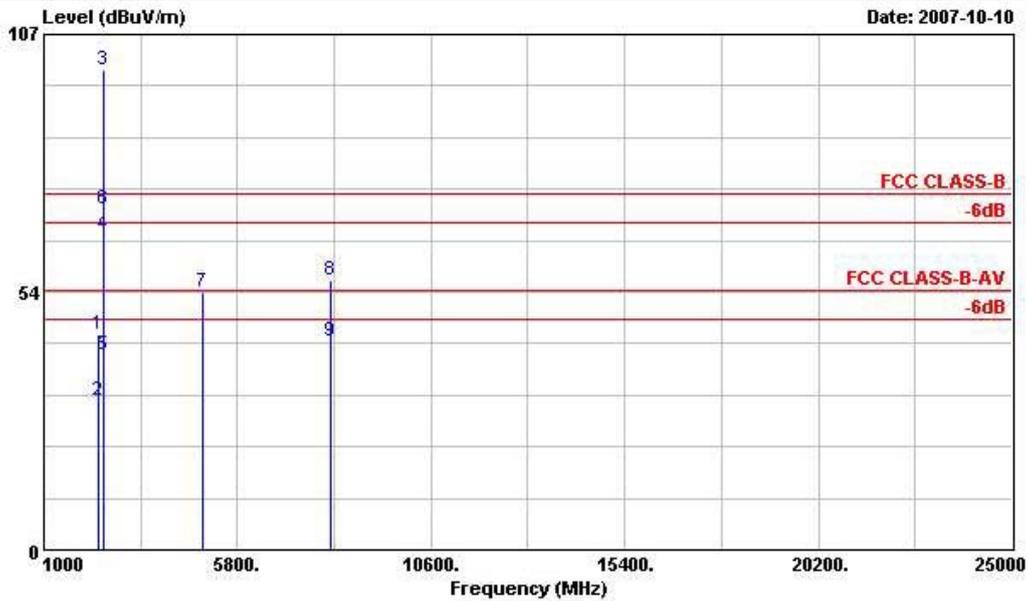
Site : 03CH04-HY  
 Condition: FCC CLASS-B 3m ANT2724 HORIZONTAL  
 EUT : GSM/EDGE (Class12) 850/900/1800/  
 . : 1900 UMTS/HSDEPA 850/2100 (BAND I and  
 . : V) with BT\_EDR Phone\_Slide Type  
 POWER : 120Vac/60Hz  
 MODEL : FR 792103  
 MOME : Bluetooth Tx\_Ch78;2480MHz  
 DATA RATE: 2DH1  
 PLANE : E2  
 ADAPTOR : B

	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	30.540	27.93	-12.07	40.00	37.37	16.36	0.87	26.67	100	169	Peak
2	101.820	28.02	-15.48	43.50	44.87	8.22	1.39	26.45	---	---	Peak
3	125.580	26.69	-16.81	43.50	39.73	11.81	1.51	26.37	---	---	Peak
4	836.200	27.43	-18.57	46.00	29.23	21.16	3.78	26.75	---	---	Peak
5	876.100	28.32	-17.68	46.00	28.45	22.62	3.92	26.67	---	---	Peak
6	900.600	29.76	-16.24	46.00	28.89	23.53	3.96	26.62	---	---	Peak



- Polarization : Horizontal (1GHz-25GHz)

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



Site : 03CH04-HY  
 Condition: FCC CLASS-B 3m HF-ANT-6903 HORIZONTAL  
 EUT : GSM/EDGE(Class12) 850/900/1800/  
 . : 1900 UMTS/HSDPA 850/2100(BAND I and  
 . : V) with BT\_EDR Phone\_Slide Type  
 POWER : 120Vac/60Hz  
 MODEL : FR 792103  
 MOME : Bluetooth Tx\_Ch78;2480MHz  
 DATA RATE: 2DH1  
 PLANE : E2  
 ADAPTOR : B

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	cm	deg	
1	2350.000	44.59	-29.41	74.00	46.71	27.96	3.69	33.77	100	0 Peak
2	2350.000	31.00	-23.00	54.00	33.12	27.96	3.69	33.77	100	359 Average
<b>3 @</b>	<b>2480.000</b>	<b>99.45</b>			<b>101.15</b>	<b>28.26</b>	<b>3.84</b>	<b>33.80</b>	<b>100</b>	<b>0 Peak</b>
4 X	2480.000	65.39			67.09	28.26	3.84	33.80	100	359 Average
5	2483.500	40.50	-13.50	54.00	42.20	28.26	3.84	33.80	100	359 Average
6 !	2483.500	70.72	-3.28	74.00	72.42	28.26	3.84	33.80	100	0 Peak
7	4950.000	53.43	-20.57	74.00	48.66	33.11	5.96	34.30	100	0 Peak
8	8121.000	55.86	-18.14	74.00	45.84	36.97	6.82	33.77	100	0 Peak
9	8121.000	43.46	-10.54	54.00	33.44	36.97	6.82	33.77	100	67 Average

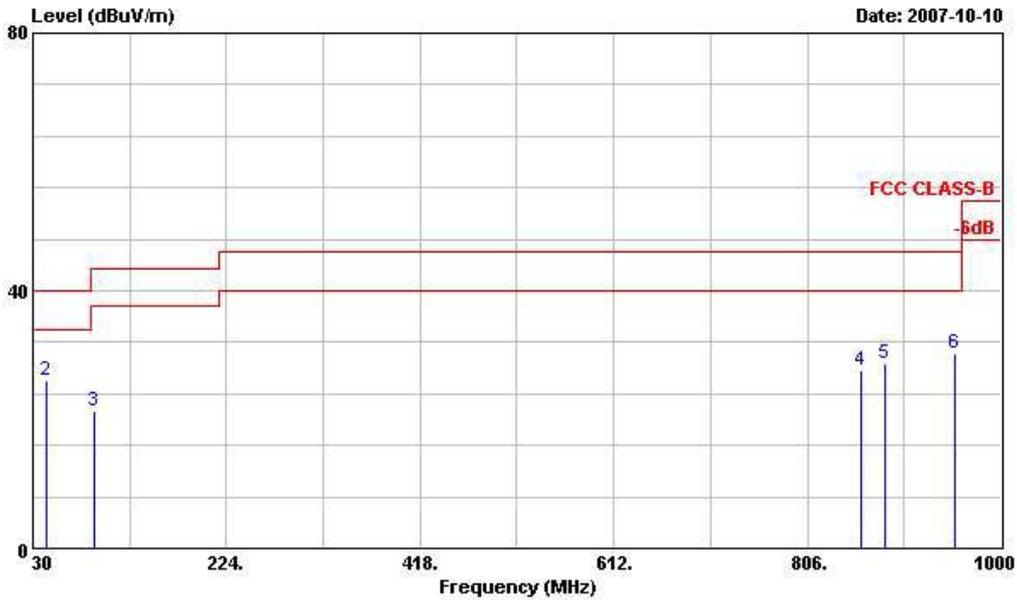
Remark:

1. "3" represents the Fundamental Signal
2. "4" represents the Fundamental Signal



- Polarization : Vertical (30MHz-1GHz)

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



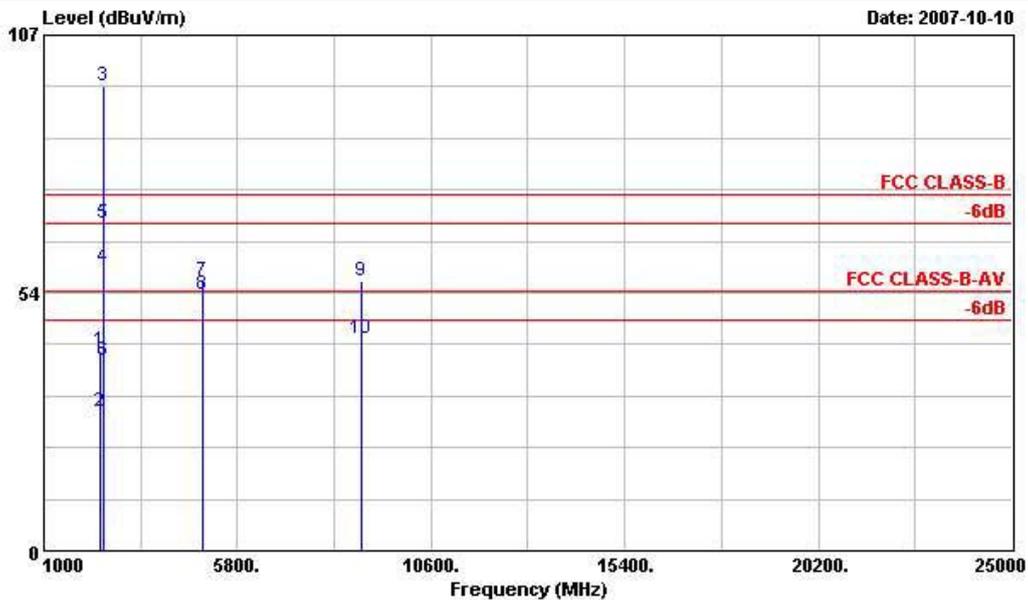
Site : 03CH04-HY  
 Condition: FCC CLASS-B 3m ANT2724 VERTICAL  
 EUT : GSM/EDGE(Class12) 850/900/1800/  
 : 1900 UMTS/HSDPA 850/2100(BAND I and  
 : V) with BT\_EDR Phone\_Slide Type  
 POWER : 120Vac/60Hz  
 MODEL : FR 792103  
 HOME : Bluetooth Tx\_Ch78;2480MHz  
 DATA RATE: 2DHL  
 PLANE : E2  
 ADAPTOR : B

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	dB	dBuV/m	dBuV	Loss	Factor	Pos	Pos	Remark
					dB/m	dB	dB	cm	deg	
1	30.540	28.14	-11.86	40.00	37.58	16.36	0.87	26.67	100	267 Peak
2	43.500	26.08	-13.92	40.00	41.33	10.40	0.98	26.63	---	---
3	92.370	21.35	-22.15	43.50	38.95	7.53	1.35	26.48	---	---
4	859.300	27.57	-18.43	46.00	28.36	22.02	3.89	26.70	---	---
5	884.500	28.60	-17.40	46.00	28.38	22.94	3.93	26.65	---	---
6	953.800	30.19	-15.81	46.00	27.91	24.87	3.98	26.57	---	---



- Polarization : Vertical (1GHz-25GHz)

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



Site : 03CH04-HY  
 Condition: FCC CLASS-B 3m HF-ANT-6903 VERTICAL  
 EUT : GSM/EDGE(Class12) 850/900/1800/  
 : 1900 UMTS/HSDPA 850/2100(BAND I and  
 : V) with BT\_EDR Phone\_Slide Type  
 POWER : 120Vac/60Hz  
 MODEL : FR 792103  
 MOMM : Bluetooth Tx\_Ch78;2480MHz  
 DATA RATE: 2DHL  
 PLANE : E2  
 ADAPTOR : B

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	Limit	Line	Level	Loss	Factor	Pos	Pos	Remark
			dB	dBuV/m	dBuV	Factor	dB	cm	deg	
1	2390.000	41.57	-32.43	74.00	43.54	28.07	3.74	33.78	100	0 Peak
2	2390.000	28.83	-25.17	54.00	30.80	28.07	3.74	33.78	100	154 Average
3 @	2480.000	96.38			98.08	28.26	3.84	33.80	100	0 Peak
4 X	2480.000	58.63			60.33	28.26	3.84	33.80	100	154 Average
5	2483.500	67.87	-6.13	74.00	69.57	28.26	3.84	33.80	100	0 Peak
6	2483.500	39.56	-14.44	54.00	41.26	28.26	3.84	33.80	100	154 Average
7	4950.000	55.95	-18.05	74.00	51.18	33.11	5.96	34.30	100	0 Peak
8 !	4950.000	53.19	-0.81	54.00	48.42	33.11	5.96	34.30	100	8 Average
9	8865.000	55.92	-18.08	74.00	45.45	37.94	7.21	34.68	100	0 Peak
10	8865.000	43.87	-10.13	54.00	33.40	37.94	7.21	34.68	100	128 Average

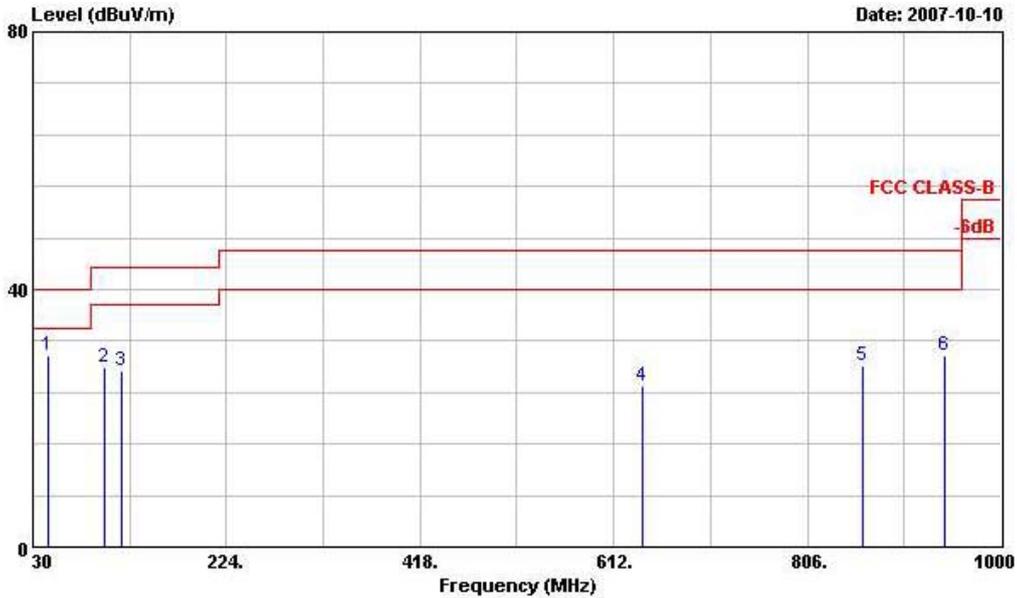
Remark:

1. "3" represents the Fundamental Signal
2. "4" represents the Fundamental Signal



- Test Mode : Mode 3
- Polarization : Horizontal (30MHz-1GHz)

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



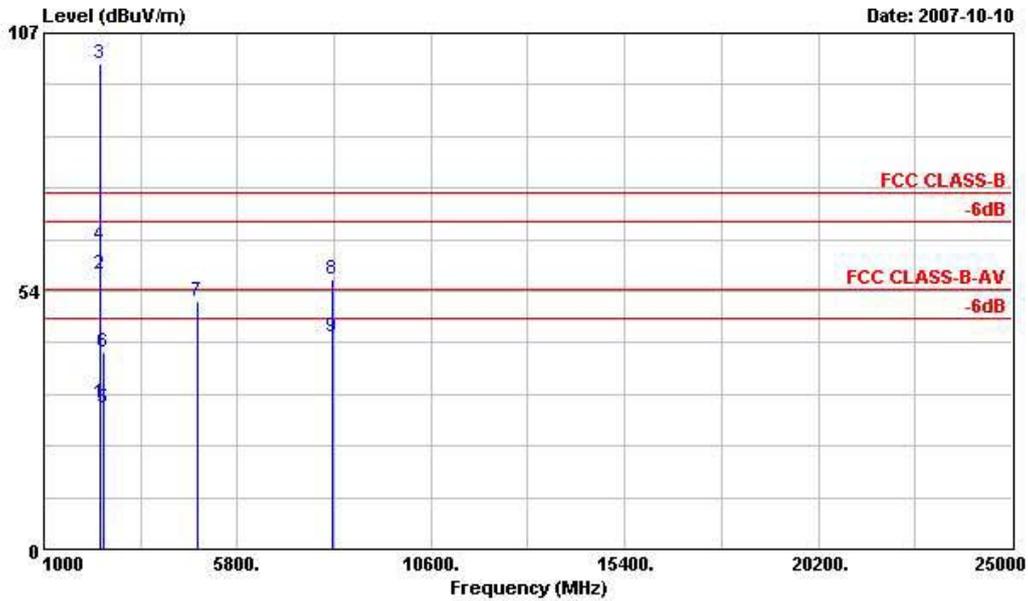
Site : 03CH04-HY  
 Condition: FCC CLASS-B 3m ANT2724 HORIZONTAL  
 EUT : GSM/EDGE (Class12) 850/900/1800/  
 . : 1900 UMTS/HSDPA 850/2100 (BAND I and  
 . : V) with BT\_EDR Phone\_Slide Type  
 POWER : 120Vac/60Hz  
 MODEL : FR 792103  
 MOME : Bluetooth Tx\_Ch00;2402MHz  
 DATA RATE: 3DH1  
 PLANE : E2  
 ADAPTOR : B

	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	44.580	29.63	-10.37	40.00	45.23	10.04	0.98	26.62	100	135	Peak
2	101.820	27.78	-15.72	43.50	44.63	8.22	1.39	26.45	---	---	Peak
3	119.100	27.42	-16.08	43.50	41.73	10.61	1.47	26.39	---	---	Peak
4	640.900	24.87	-21.13	46.00	28.54	20.00	3.37	27.03	---	---	Peak
5	861.400	28.11	-17.89	46.00	28.82	22.09	3.89	26.70	---	---	Peak
6	943.300	29.70	-16.30	46.00	27.68	24.62	3.98	26.58	---	---	Peak



- Polarization : Horizontal (1GHz-25GHz)

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



Site : 03CH04-HY  
 Condition: FCC CLASS-B 3m HF-ANT-6903 HORIZONTAL  
 EUT : GSM/EDGE(Class12) 850/900/1800/  
 : 1900 UMITS/HSDPA 850/2100(BAND I and  
 : V) with BT\_EDR Phone\_Slide Type  
 POWER : 120Vac/60Hz  
 MODEL : FR 792103  
 HOME : Bluetooth Tx\_Ch00;2402MHz  
 DATA RATE: 3DHL  
 PLANE : E2  
 ADAPTOR : B

	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	2390.000	30.26	-23.74	54.00	32.23	28.07	3.74	33.78	100	354	Average
2	2390.000	57.16	-16.84	74.00	59.13	28.07	3.74	33.78	100	0	Peak
3 @	2402.000	100.63			102.56	28.11	3.74	33.78	100	0	Peak
4 X	2402.000	62.98			64.95	28.07	3.74	33.78	100	354	Average
5	2492.000	29.24	-24.76	54.00	30.90	28.30	3.84	33.80	100	354	Average
6	2492.000	40.90	-33.10	74.00	42.56	28.30	3.84	33.80	100	0	Peak
7	4794.000	51.32	-22.68	74.00	46.93	32.83	5.86	34.30	100	0	Peak
8	8157.000	56.02	-17.98	74.00	46.02	37.02	6.83	33.85	100	0	Peak
9	8157.000	43.83	-10.17	54.00	33.83	37.02	6.83	33.85	100	173	Average

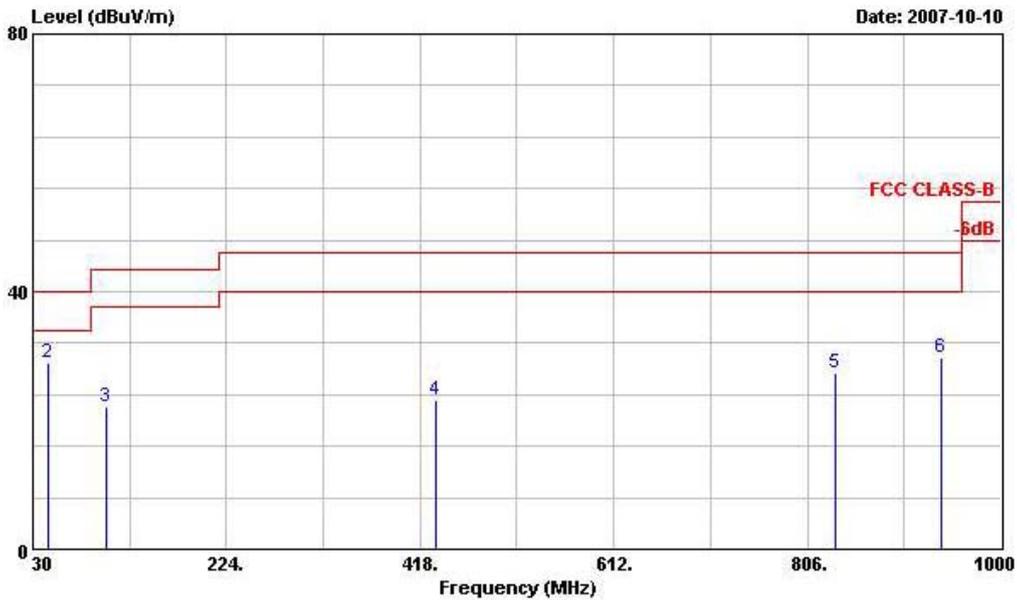
Remark:

1. "3" represents the Fundamental Signal
2. "4" represents the Fundamental Signal



- Polarization : Vertical (30MHz-1GHz)

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



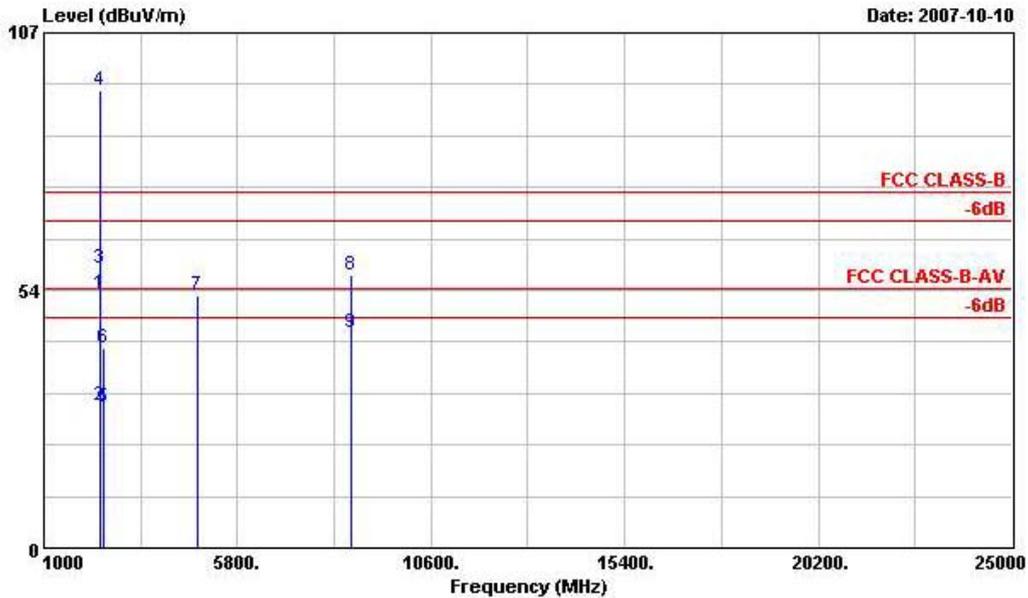
Site : 03CH04-HY  
 Condition: FCC CLASS-B 3m ANT2724 VERTICAL  
 EUT : GSM/EDGE(Class12) 850/900/1800/  
 . : 1900 UMTS/HSDPA 850/2100(BAND I and  
 . : V) with BT\_EDR Phone\_Slide Type  
 POWER : 120Vac/60Hz  
 MODEL : FR 792103  
 MOME : Bluetooth Tx\_Ch00;2402MHz  
 DATA RATE: 3DH1  
 PLANE : E2  
 ADAPTOR : B

	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	30.540	23.49	-16.51	40.00	32.93	16.36	0.87	26.67	---	---	Peak
2	44.850	28.91	-11.09	40.00	44.51	10.04	0.98	26.62	100	286	Peak
3	103.170	22.17	-21.33	43.50	38.88	8.35	1.39	26.45	---	---	Peak
4	433.000	23.13	-22.87	46.00	30.96	16.13	2.68	26.63	---	---	Peak
5	834.100	27.35	-18.65	46.00	29.24	21.09	3.77	26.75	---	---	Peak
6	939.800	29.74	-16.26	46.00	27.82	24.52	3.98	26.58	---	---	Peak



- Polarization : Vertical (1GHz-25GHz)

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



Site : 03CH04-HY  
 Condition: FCC CLASS-B 3m HF-ANT-6903 VERTICAL  
 EUT : GSM/EDGE(Class12) 850/900/1800/  
 . : 1900 UMTS/HSDPA 850/2100(BAND I and  
 . : V) with BT\_EDR Phone\_Slide Type  
 POWER : 120Vac/60Hz  
 MODEL : FR 792103  
 MOMIE : Bluetooth Tx\_Ch00;2402MHz  
 DATA RATE: 3DH1  
 PLANE : E2  
 ADAPTOR : B

	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	2390.000	52.86	-21.14	74.00	54.83	28.07	3.74	33.78	100	0	Peak
2	2390.000	29.42	-24.58	54.00	31.39	28.07	3.74	33.78	100	150	Average
3 X	2402.000	58.00			59.97	28.07	3.74	33.78	100	150	Average
4 @	2402.000	95.15			97.08	28.11	3.74	33.78	100	0	Peak
5	2486.000	29.20	-24.80	54.00	30.90	28.26	3.84	33.80	100	150	Average
6	2486.000	41.49	-32.51	74.00	43.19	28.26	3.84	33.80	100	0	Peak
7	4794.000	52.35	-21.65	74.00	47.96	32.83	5.86	34.30	100	0	Peak
8	8634.000	56.68	-17.32	74.00	46.44	37.66	7.08	34.50	100	0	Peak
9	8634.000	44.57	-9.43	54.00	34.33	37.66	7.08	34.50	100	198	Average

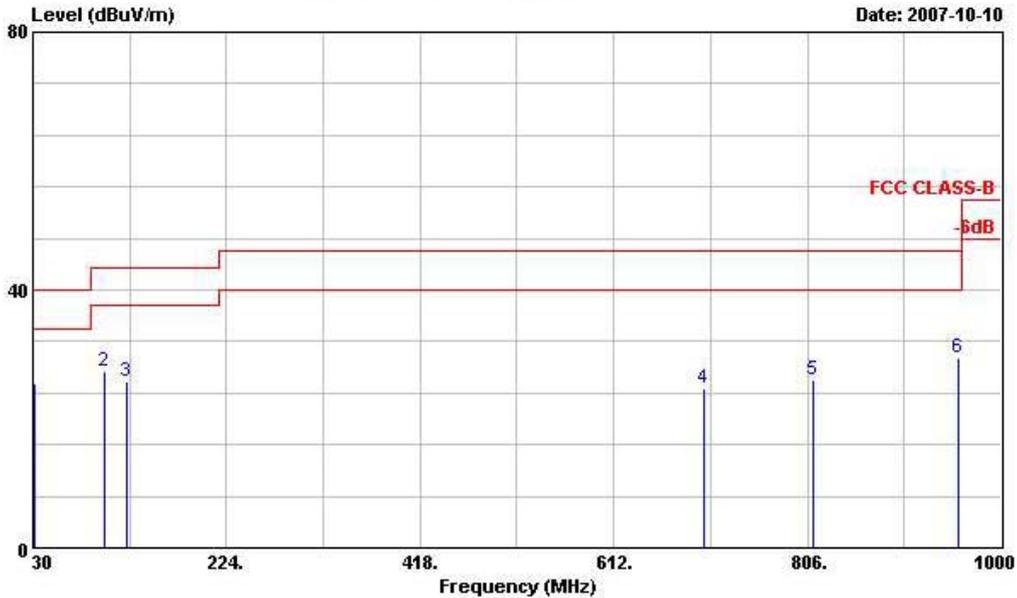
Remark:

1. "3" represents the Fundamental Signal
2. "4" represents the Fundamental Signal



- Test Mode : Mode 4
- Polarization : Horizontal (30MHz-1GHz)

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



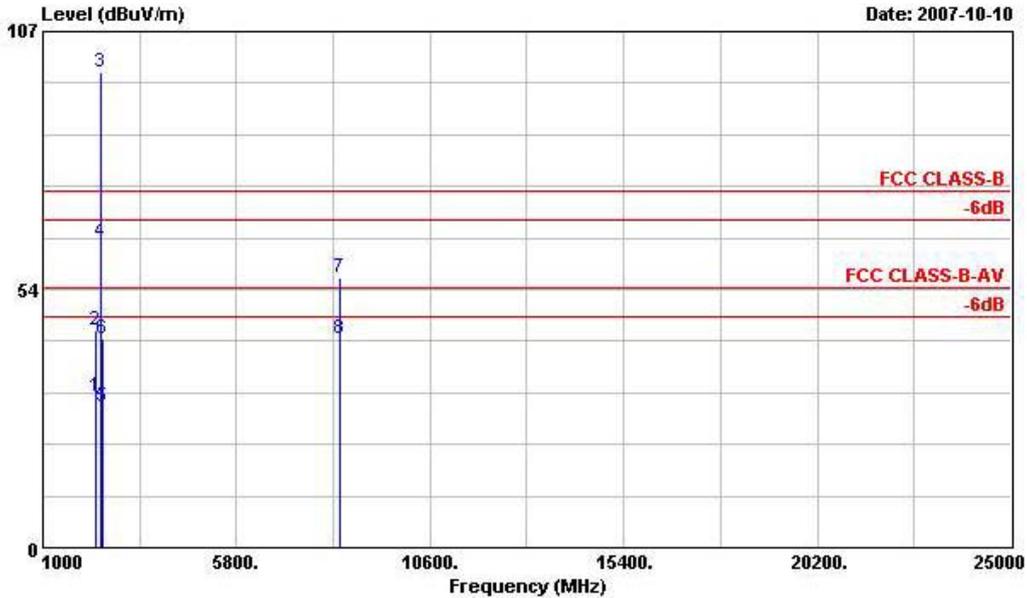
Site : 03CH04-HY  
 Condition: FCC CLASS-B 3m ANT2724 HORIZONTAL  
 EUT : GSM/EDGE (Class12) 850/900/1800/  
 . : 1900 UMTS/HSDPA 850/2100 (BAND I and  
 . : V) with BT\_EDR Phone\_Slide Type  
 POWER : 120Vac/60Hz  
 MODEL : FR 792103  
 MOME : Bluetooth Tx\_Ch39;2441MHz  
 DATA RATE: 3DH1  
 PLANE : E2  
 ADAPTOR : B

	Freq	Level	Over Limit	Limit Line	ReadAntenna	Cable	Preamp	Ant	Table	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	cm	deg	
1 @	31.890	25.62	-14.38	40.00	35.05	16.34	0.89	26.66	100	193 Peak
2	101.820	27.31	-16.19	43.50	44.16	8.22	1.39	26.45	---	Peak
3	123.690	25.88	-17.62	43.50	39.08	11.67	1.50	26.37	---	Peak
4	702.500	24.82	-21.18	46.00	28.19	20.13	3.50	27.00	---	Peak
5	811.000	25.95	-20.05	46.00	28.89	20.24	3.62	26.79	---	Peak
6	956.600	29.58	-16.42	46.00	27.22	24.94	3.98	26.56	---	Peak



- Polarization : Horizontal (1GHz-25GHz)

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



Site : 03CH04-HY  
 Condition: FCC CLASS-B 3m HF-ANT-6903 HORIZONTAL  
 EUT : GSM/EDGE(Class12) 850/900/1800/  
 . : 1900 UMTS/HSDPA 850/2100(BAND I and  
 . : V) with BT\_EDR Phone\_Slide Type  
 POWER : 120Vac/60Hz  
 MODEL : FR 792103  
 MOMIE : Bluetooth Tx\_Ch39;2441MHz  
 DATA RATE: 3DHL  
 PLANE : E2  
 ADAPTOR : B

	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	2310.000	31.26	-22.74	54.00	33.47	27.88	3.66	33.76	100	352	Average
2	2310.000	44.93	-29.07	74.00	47.14	27.88	3.66	33.76	100	0	Peak
3 @	2441.000	98.70			100.52	28.19	3.79	33.79	100	0	Peak
4 @	2441.000	63.23			65.05	28.19	3.79	33.79	100	352	Average
5	2494.000	29.22	-24.78	54.00	30.88	28.30	3.84	33.80	100	352	Average
6	2494.000	43.23	-30.77	74.00	44.89	28.30	3.84	33.80	100	0	Peak
7	8346.000	55.81	-18.19	74.00	45.74	37.28	6.93	34.15	100	0	Peak
8 @	8346.000	43.18	-10.82	54.00	33.11	37.28	6.93	34.15	100	186	Average

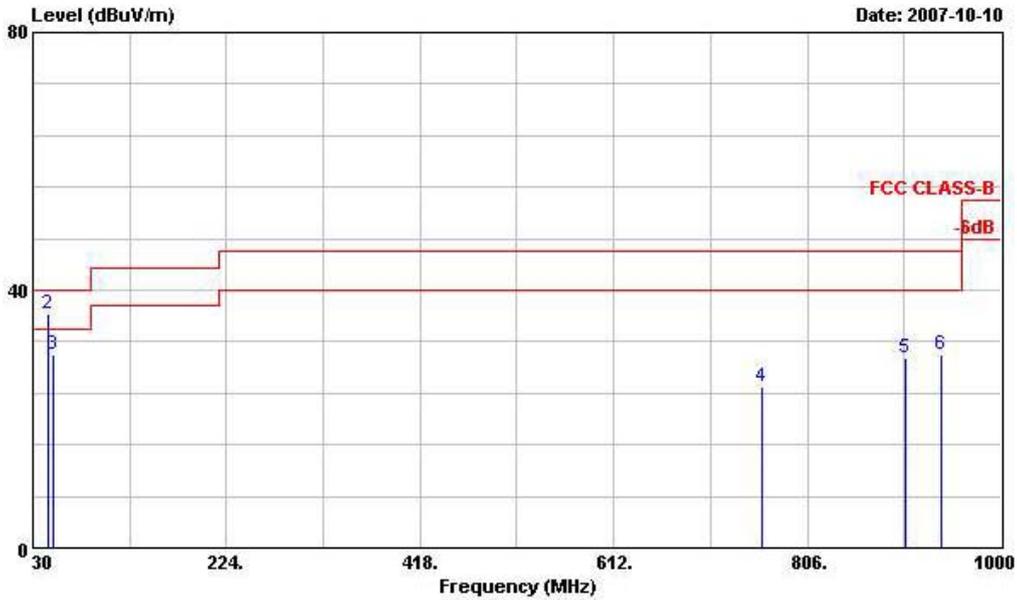
Remark:

1. "3" represents the Fundamental Signal
2. "4" represents the Fundamental Signal



- Polarization : Vertical (30MHz-1GHz)

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



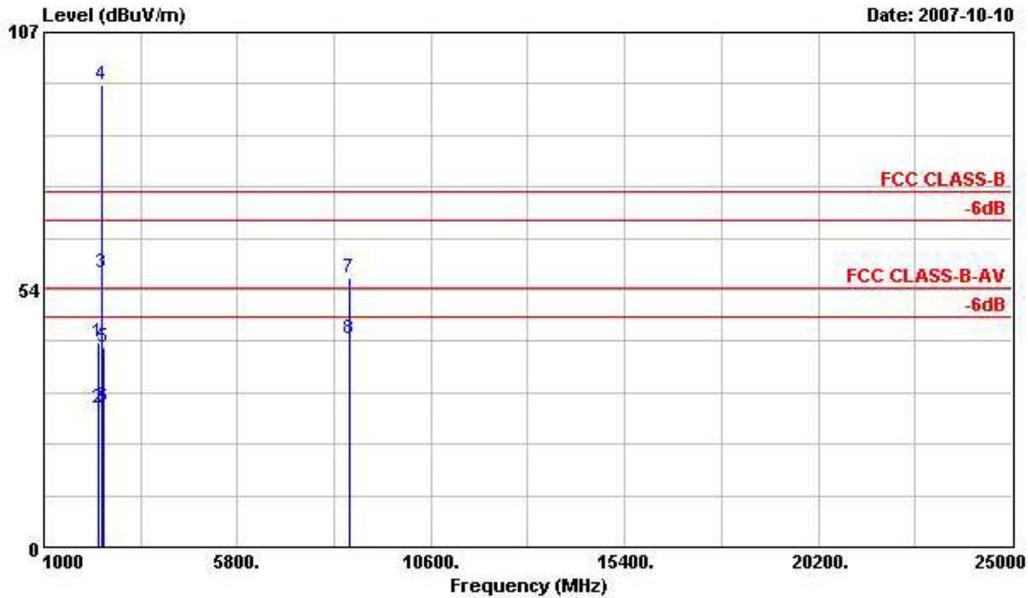
Site : 03CH04-HY  
 Condition: FCC CLASS-B 3m ANT2724 VERTICAL  
 EUT : GSM/EDGE(Class12) 850/900/1800/  
 . : 1900 UMTS/HSDPA 850/2100(BAND I and  
 . : V) with BT\_EDR Phone\_Slide Type  
 POWER : 120Vac/60Hz  
 MODEL : FR 792103  
 MOMIE : Bluetooth Tx\_Ch39;2441MHz  
 DATA RATE: 3DHL  
 PLANE : E2  
 ADAPTOR : B

	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 @	30.540	27.82	-12.18	40.00	37.26	16.36	0.87	26.67	---	---	Peak
<b>2 @</b>	<b>44.850</b>	<b>36.22</b>	<b>-3.78</b>	<b>40.00</b>	<b>51.82</b>	<b>10.04</b>	<b>0.98</b>	<b>26.62</b>	<b>100</b>	<b>68</b>	<b>Peak</b>
3 @	49.980	30.11	-9.89	40.00	48.66	7.02	1.03	26.61	---	---	Peak
4	761.300	25.02	-20.98	46.00	28.39	19.96	3.56	26.89	---	---	Peak
5	904.100	29.38	-16.62	46.00	28.43	23.61	3.96	26.62	---	---	Peak
6	939.800	29.97	-16.03	46.00	28.05	24.52	3.98	26.58	---	---	Peak



- Polarization : Vertical (1GHz-25GHz)

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



Site : 03CH04-HY  
 Condition: FCC CLASS-B 3m HF-ANT-6903 VERTICAL  
 EUT : GSM/EDGE(Class12) 850/900/1800/  
 . : 1900 UMTS/HSDPA 850/2100(BAND I and  
 . : V) with BT\_EDR Phone\_Slide Type  
 POWER : 120Vac/60Hz  
 MODEL : FR 792103  
 MOMI : Bluetooth Tx\_Ch39;2441MHz  
 DATA RATE: 3DHL  
 PLANE : E2  
 ADAPTOR : B

	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	2374.000	42.61	-31.39	74.00	44.64	28.03	3.71	33.78	100	0	Peak
2	2374.000	28.75	-25.25	54.00	30.78	28.03	3.71	33.78	100	153	Average
3 @	2441.000	56.96			58.78	28.19	3.79	33.79	100	153	Average
4 @	2441.000	96.00			97.82	28.19	3.79	33.79	100	0	Peak
5	2486.000	41.57	-32.43	74.00	43.27	28.26	3.84	33.80	100	0	Peak
6	2486.000	29.19	-24.81	54.00	30.89	28.26	3.84	33.80	100	153	Average
7	8574.000	55.98	-18.02	74.00	45.78	37.60	7.06	34.46	100	0	Peak
8 @	8574.000	43.45	-10.55	54.00	33.25	37.60	7.06	34.46	100	135	Average

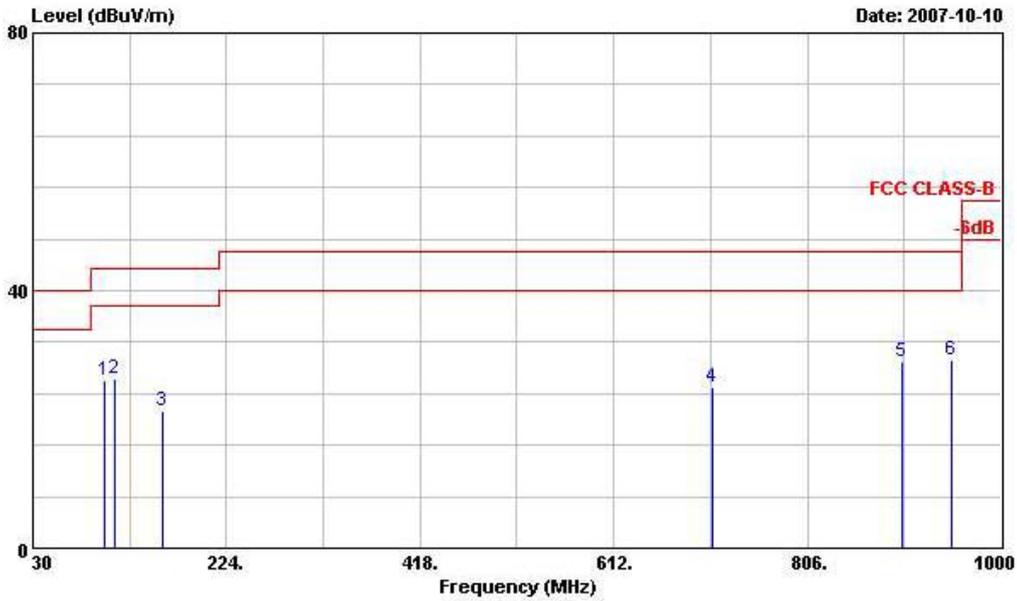
Remark:

1. "3" represents the Fundamental Signal
2. "4" represents the Fundamental Signal



- Test Mode : Mode 5
- Polarization : Horizontal (30MHz-1GHz)

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



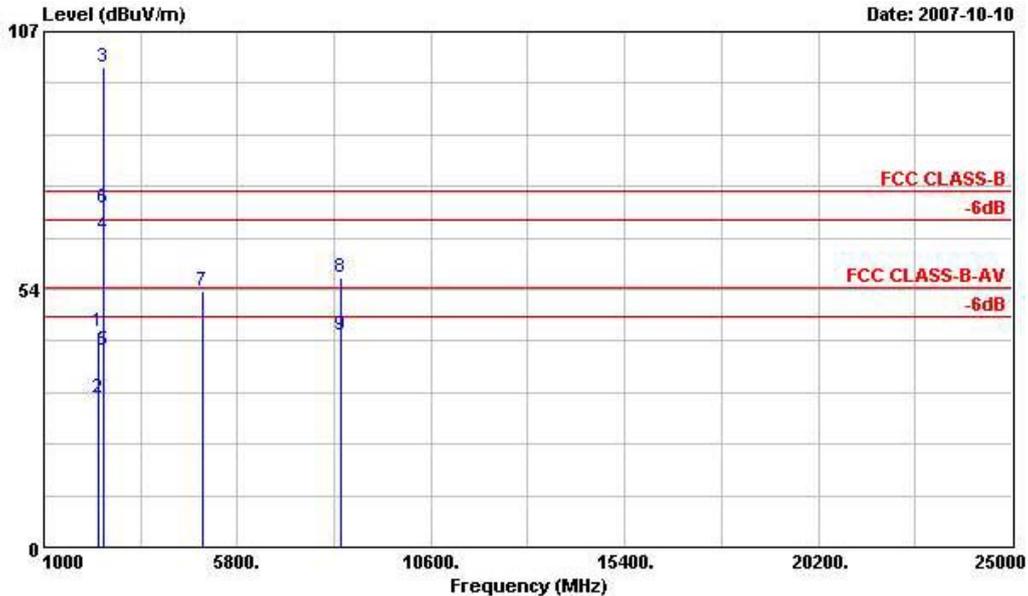
Site : 03CH04-HY  
 Condition: FCC CLASS-B 3m ANT2724 HORIZONTAL  
 EUT : GSM/EDGE (Class12) 850/900/1800/  
 . : 1900 UMTS/HSDPA 850/2100 (BAND I and  
 . : V) with BT\_EDR Phone\_Slide Type  
 POWER : 120Vac/60Hz  
 MODEL : FR 792103  
 MOME : Bluetooth Tx\_Ch78;2480MHZ  
 DATA RATE: 3DH1  
 PLANE : E2  
 ADAPTOR : B

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table		
	MHz	dBUV/m	dB	dBUV/m	dBuV	dB/m	dB	dB	cm	deg	
1	101.820	25.99	-17.51	43.50	42.84	8.22	1.39	26.45	---	---	Peak
2	111.540	26.19	-17.31	43.50	41.63	9.54	1.43	26.42	---	---	Peak
3	160.410	21.23	-22.27	43.50	36.58	9.20	1.69	26.24	---	---	Peak
4	710.200	25.11	-20.89	46.00	28.48	20.11	3.51	26.99	---	---	Peak
5	901.300	28.84	-17.16	46.00	27.97	23.53	3.96	26.62	---	---	Peak
6	951.000	29.24	-16.76	46.00	27.03	24.79	3.98	26.57	100	87	Peak



- Polarization : Horizontal (1GHz-25GHz)

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



Site : 03CH04-HY  
 Condition: FCC CLASS-B 3m HF-ANT-6903 HORIZONTAL  
 EUT : GSM/EDGE(Class12) 850/900/1800/  
 : 1900 UMTS/HSDPA 850/2100(BAND I and  
 : V) with BT\_EDR Phone\_Slide Type  
 POWER : 120Vac/60Hz  
 MODEL : FR 792103  
 MOME : Bluetooth Tx\_Ch78;2480MHz  
 DATA RATE: 3DHL  
 PLANE : E2  
 ADAPTOR : B

	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	2350.000	44.76	-29.24	74.00	46.88	27.96	3.69	33.77	100	0	Peak
2	2350.000	30.85	-23.15	54.00	32.97	27.96	3.69	33.77	100	359	Average
<b>3 @</b>	<b>2480.000</b>	<b>99.65</b>			<b>101.35</b>	<b>28.26</b>	<b>3.84</b>	<b>33.80</b>	<b>100</b>	<b>0</b>	<b>Peak</b>
4 X	2480.000	64.81			66.51	28.26	3.84	33.80	100	359	Average
5	2483.500	40.68	-13.32	54.00	42.38	28.26	3.84	33.80	100	359	Average
6 !	2483.500	70.52	-3.48	74.00	72.22	28.26	3.84	33.80	100	0	Peak
7	4950.000	53.08	-20.92	74.00	48.31	33.11	5.96	34.30	100	0	Peak
8	8385.000	56.02	-17.98	74.00	45.96	37.33	6.96	34.23	100	0	Peak
9	8385.000	43.89	-10.11	54.00	33.83	37.33	6.96	34.23	100	169	Average

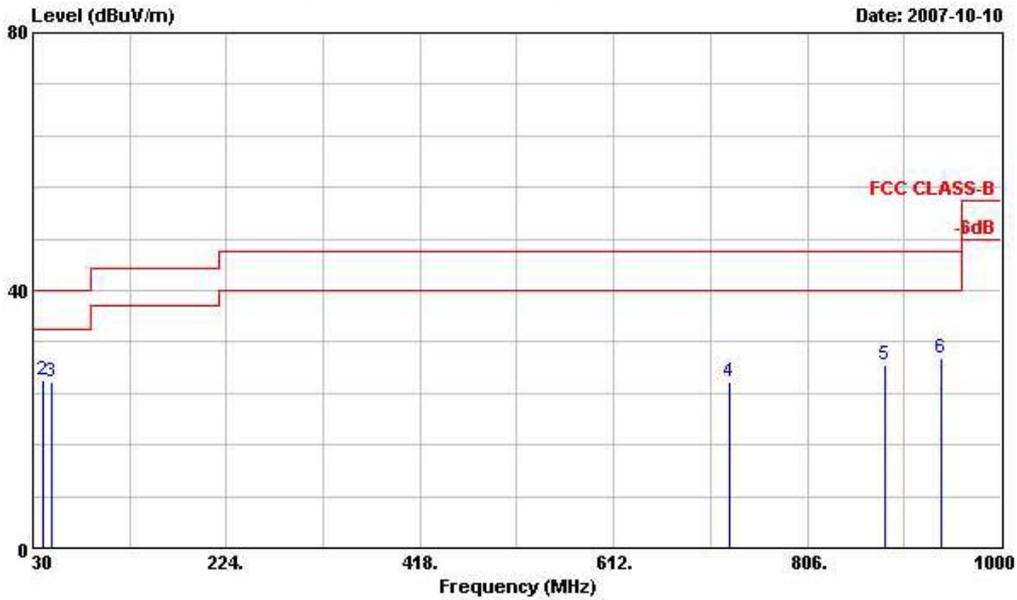
Remark:

1. "3" represents the Fundamental Signal
2. "4" represents the Fundamental Signal



- Polarization : Vertical (30MHz-1GHz)

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



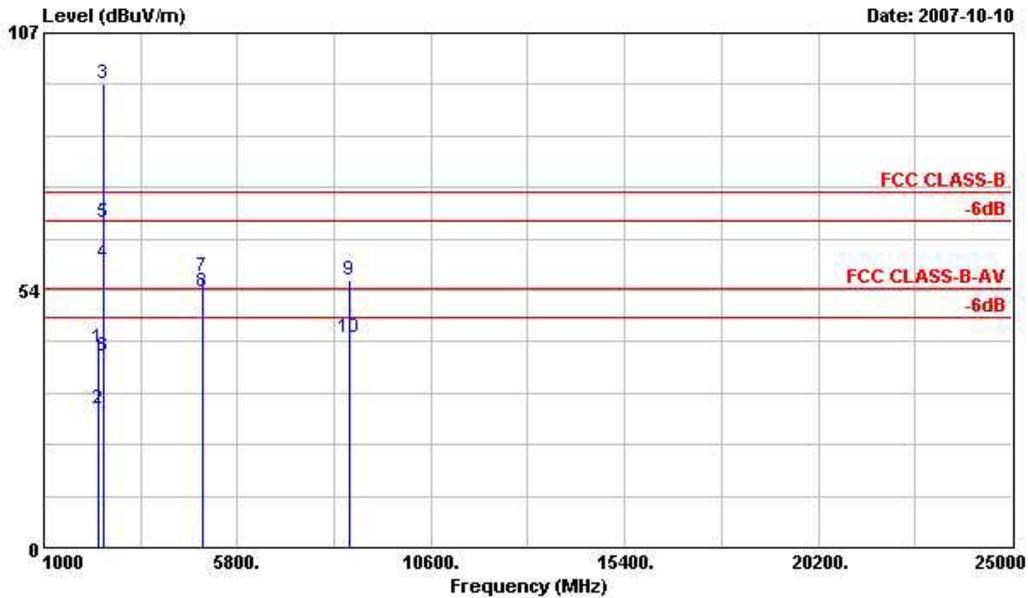
Site : 03CH04-HY  
 Condition: FCC CLASS-B 3m ANT2724 VERTICAL  
 EUT : GSM/EDGE (Class12) 850/900/1800/  
 . : 1900 UMTS/HSDPA 850/2100 (BAND I and  
 . : V) with BT\_EDR Phone\_Slide Type  
 POWER : 120Vac/60Hz  
 MODEL : FR 792103  
 MOME : Bluetooth Tx\_Ch78;2480MHz  
 DATA RATE: 3DH1  
 PLANE : E2  
 ADAPTOR : B

	Freq	Level	Over	Limit	ReadAntenna	Cable	Preamp	Ant	Table	
	MHz	dBuV/m	dB	dBuV/m	dBuV	Loss	Factor	Pos	Pos	Remark
					dB/m	dB	dB	cm	deg	
1	30.540	25.06	-14.94	40.00	34.50	16.36	0.87	26.67	---	Peak
2	40.260	26.03	-13.97	40.00	40.23	11.46	0.97	26.64	100	258 Peak
3	48.900	25.73	-14.27	40.00	43.29	8.03	1.02	26.61	---	Peak
4	727.700	25.69	-20.31	46.00	29.05	20.06	3.53	26.96	---	Peak
5	884.500	28.43	-17.57	46.00	28.21	22.94	3.93	26.65	---	Peak
6	939.800	29.55	-16.45	46.00	27.63	24.52	3.98	26.58	---	Peak



- Polarization : Vertical (1GHz-25GHz)

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



Site : 03CH04-HY  
 Condition: FCC CLASS-B 3m HF-ANT-6903 VERTICAL  
 EUT : GSM/EDGE(Class12) 850/900/1800/  
 : 1900 UMITS/HSDPA 850/2100(BAND I and  
 : (V) with BT\_EDR Phone\_Slide Type  
 POWER : 120Vac/60Hz  
 MODEL : FR 792103  
 MOME : Bluetooth Tx\_Ch78;2480MHz  
 DATA RATE: 3DHL  
 PLANE : E2  
 ADAPTOR : B

	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	2356.000	41.37	-32.63	74.00	43.46	28.00	3.69	33.77	100	0	Peak
2	2356.000	28.70	-25.30	54.00	30.79	28.00	3.69	33.77	100	154	Average
<b>3 @</b>	<b>2480.000</b>	<b>96.56</b>			<b>98.26</b>	<b>28.26</b>	<b>3.84</b>	<b>33.80</b>	<b>100</b>	<b>0</b>	<b>Peak</b>
4 X	2480.000	59.17			60.87	28.26	3.84	33.80	100	154	Average
5	2483.500	67.47	-6.53	74.00	69.17	28.26	3.84	33.80	100	0	Peak
6	2483.500	39.64	-14.36	54.00	41.34	28.26	3.84	33.80	100	154	Average
7	4950.000	56.15	-17.85	74.00	51.40	33.11	5.95	34.30	100	0	Peak
<b>8 !</b>	<b>4950.000</b>	<b>53.10</b>	<b>-0.90</b>	<b>54.00</b>	<b>48.35</b>	<b>33.11</b>	<b>5.95</b>	<b>34.30</b>	<b>100</b>	<b>6</b>	<b>Average</b>
9	8586.000	55.44	-18.56	74.00	45.24	37.60	7.06	34.46	100	0	Peak
10	8586.000	43.56	-10.44	54.00	33.36	37.60	7.06	34.46	100	187	Average

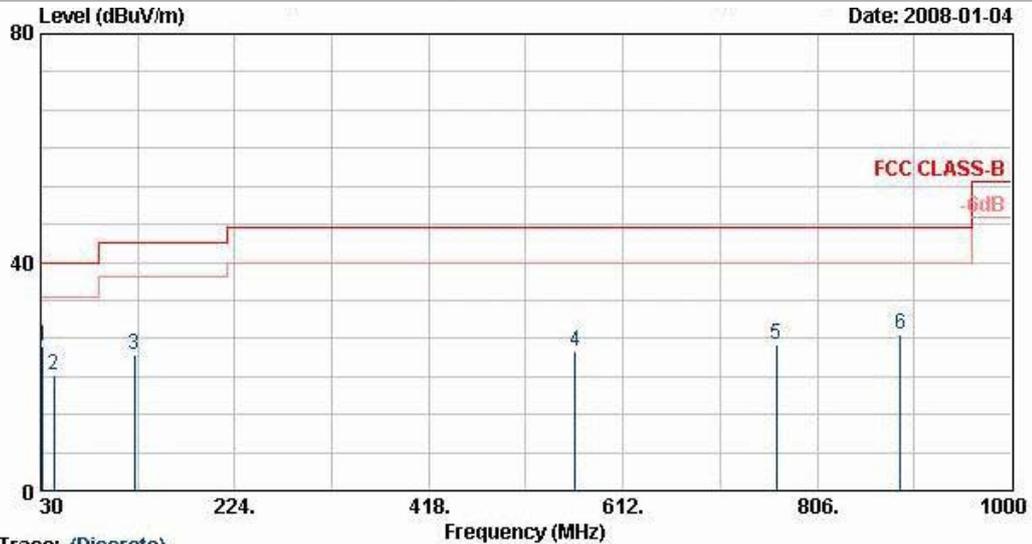
Remark:

1. "3" represents the Fundamental Signal
2. "4" represents the Fundamental Signal



- Temperature : 18~20°C
- Relating Humidity : 51~53%
- Test Enginner : Sam
- Test Mode : Mode 6
- Polarization : Horizontal (30MHz-1GHz)

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



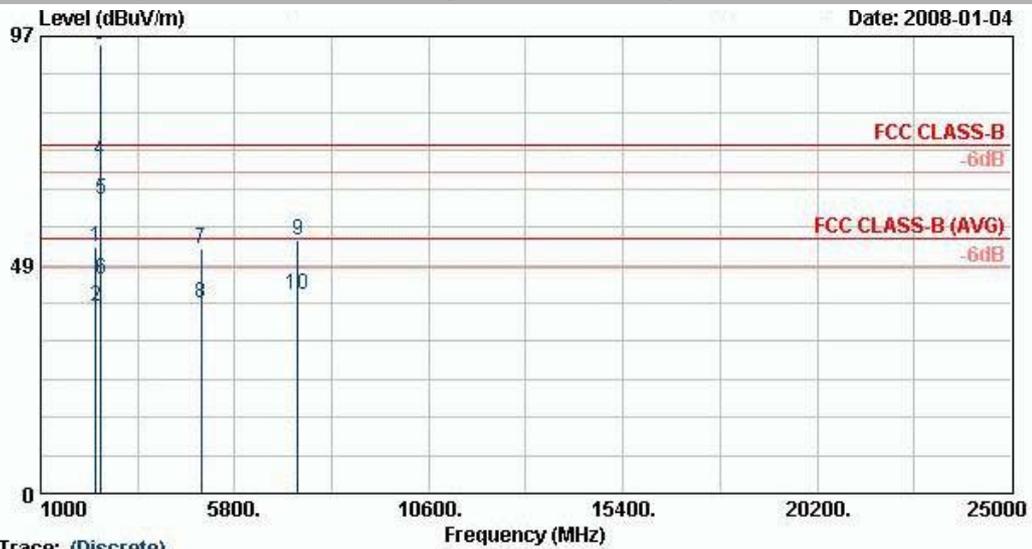
Trace: (Discrete)  
 Site : D3CH06-HY  
 Condition : FCC CLASS-B 3m LF-ANT(051121) HORIZONTAL  
 EUT : GSM/EDGE(Class 12) 850/900/1800/1900  
 EUT : UMTS/HSDPA 850/2100 with  
 EUT : BT\_EDR Phone\_Slide  
 Power : 120Vac/60Hz  
 Model : FR 792103-04  
 Mode : BT Tx\_CH78;2480MHz + Adaptor  
 Plane : E2  
 Adaptor : B

	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 @	32.43	25.36	-14.64	40.00	37.77	17.54	0.84	30.80	100	88	Peak
2	43.23	20.18	-19.82	40.00	38.49	11.52	0.98	30.81	---	---	Peak
3	123.69	23.90	-19.60	43.50	40.29	12.64	1.69	30.72	---	---	Peak
4	563.90	24.34	-21.66	46.00	32.86	18.09	3.75	30.35	---	---	Peak
5	764.80	25.54	-20.46	46.00	31.86	19.49	4.40	30.21	---	---	Peak
6	889.40	27.24	-18.76	46.00	32.10	20.45	4.89	30.20	---	---	Peak



- Polarization : Horizontal (1GHz-25GHz)

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



Trace: (Discrete)  
 Site : 03CH06-HY  
 Condition : FCC CLASS-B 3m SHF-EHF HORN HORIZONTAL  
 EUT : GSM/EDGE(Class 12) 850/900/1800/1900  
 EUT : UMTS/HSDPA 850/2100 with  
 EUT : BT\_EPR\_Phone\_Slide  
 Power : 120Vac/60Hz  
 Model : FR 792103-04  
 Mode : BT Tx\_CH78;2480MHz + Adaptor  
 Plane : E2  
 Adaptor : B

	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	2364.00	52.22	-21.78	74.00	52.20	31.81	3.89	35.67	100	0	Peak
2 @	2364.00	39.67	-14.33	54.00	39.65	31.81	3.89	35.67	148	32	Average
3 @	2480.00	95.31			94.98	31.98	4.05	35.70	100	0	Peak
4 @	2480.00	70.81			70.48	31.98	4.05	35.70	148	32	Average
5 @	2483.50	62.50	-11.50	74.00	62.17	31.98	4.05	35.70	100	0	Peak
<b>6 @</b>	<b>2483.50</b>	<b>45.56</b>	<b>-8.44</b>	<b>54.00</b>	<b>45.23</b>	<b>31.98</b>	<b>4.05</b>	<b>35.70</b>	<b>148</b>	<b>32</b>	<b>Average</b>
7	4960.00	51.95	-22.05	74.00	47.51	34.19	5.87	35.62	100	0	Peak
8 @	4960.00	40.41	-13.59	54.00	35.98	34.19	5.87	35.62	117	211	Average
9	7362.00	53.78	-20.22	74.00	47.05	35.66	7.22	36.14	100	0	Peak
10 @	7362.00	42.06	-11.94	54.00	35.33	35.66	7.22	36.14	100	83	Average

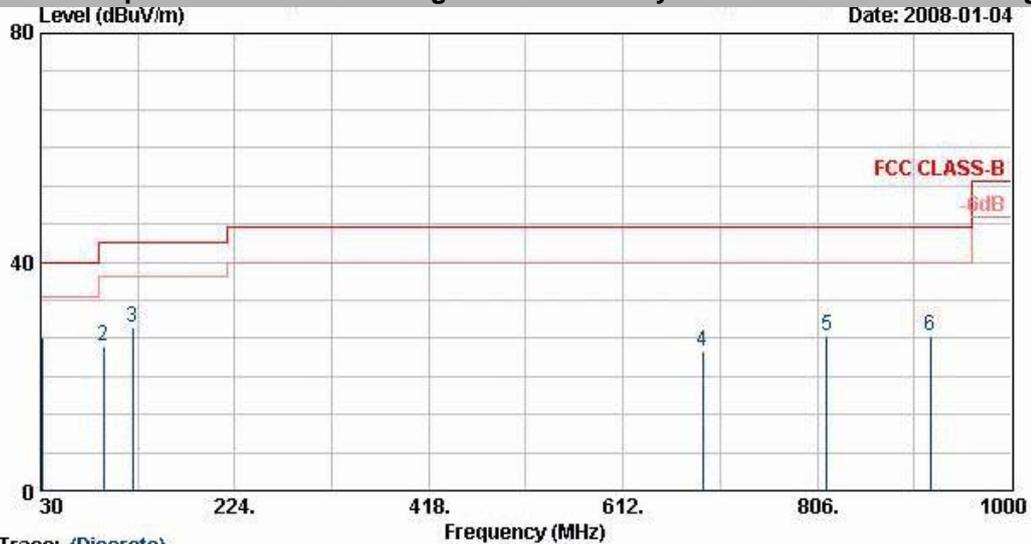
Remark:

1. "3" represents the Fundamental Signal
2. "4" represents the Fundamental Signal



- Polarization : Vertical (30MHz-1GHz)

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



Trace: (Discrete)

```

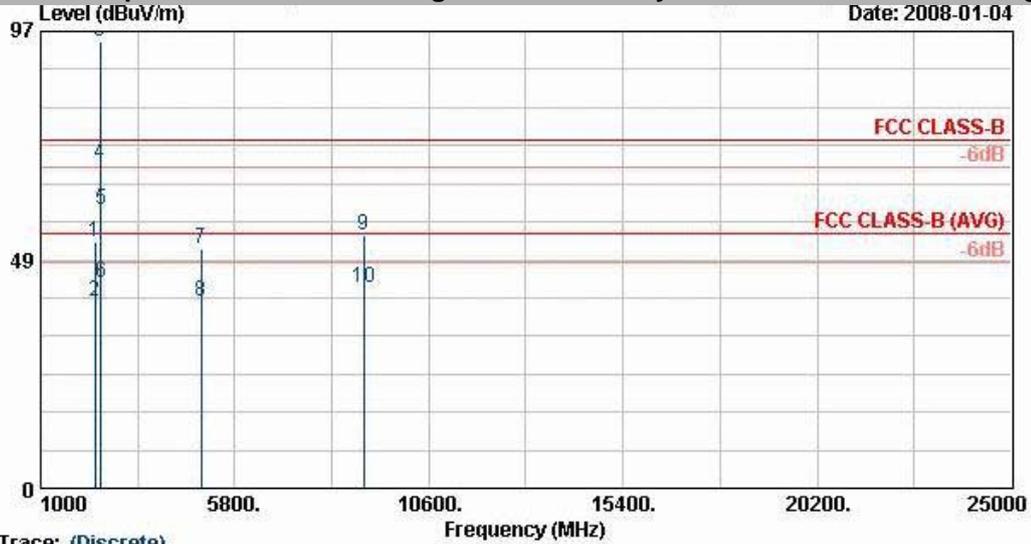
Site      : 03CH06-HY
Condition : FCC CLASS-B 3m LF-ANT(951121) VERTICAL
EUT      : GSM/EDGE(Class 12) 850/900/1800/1900
EUT      : UMTS/HSDPA 850/2100 with
EUT      : BT_EDR Phone_Slide
Power    : 120Vac/60Hz
Model    : FR 792103-04
Mode     : BT Tx_CH78;2480MHz + Adaptor
Plane   : E2
Adaptor  : B
    
```

	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 @	31.08	26.63	-13.37	40.00	37.64	18.95	0.82	30.79	100	320	Peak
2	92.64	25.37	-18.13	43.50	45.09	9.62	1.46	30.80	---	---	Peak
3	121.53	28.42	-15.08	43.50	44.87	12.60	1.67	30.72	---	---	Peak
4	691.30	24.27	-21.73	46.00	31.53	18.85	4.17	30.29	---	---	Peak
5	815.90	26.98	-19.02	46.00	32.65	19.93	4.58	30.17	---	---	Peak
6	918.80	27.11	-18.89	46.00	31.66	20.66	4.96	30.18	---	---	Peak



- Polarization : Vertical (1GHz-25GHz)

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



Trace: (Discrete)

Site : D3CH06-HY  
 Condition : FCC CLASS-B 3m SHF-EHF HORN VERTICAL  
 EUT : GSM/EDGE(Class 12) 850/900/1800/1900  
 EUT : UMTS/HSDPA 850/2100 with  
 EUT : BT\_EDR Phone\_Slide  
 Power : 120Vac/60Hz  
 Model : FR 792103-04  
 Mode : BT Tx\_CH78;2480MHz + Adaptor  
 Plane : E2  
 Adaptor : B

	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	2354.00	52.14	-21.86	74.00	52.15	31.81	3.86	35.67	100	0 Peak
2 @	2354.00	39.68	-14.32	54.00	39.69	31.81	3.86	35.67	100	12 Average
3 @	2480.00	94.69			94.36	31.98	4.05	35.70	100	0 Peak
4 @	2480.00	68.77			68.44	31.98	4.05	35.70	100	12 Average
5	2483.50	59.01	-14.99	74.00	58.68	31.98	4.05	35.70	100	0 Peak
6 @	2483.50	43.55	-10.45	54.00	43.22	31.98	4.05	35.70	100	12 Average
7	4960.00	50.69	-23.31	74.00	46.26	34.19	5.87	35.62	100	0 Peak
8 @	4960.00	39.78	-14.22	54.00	35.35	34.19	5.87	35.62	132	253 Average
9	8982.00	53.58	-20.42	74.00	45.89	36.48	7.80	36.59	100	0 Peak
10 @	8982.00	42.67	-11.33	54.00	34.98	36.48	7.80	36.59	100	23 Average

Remark:

1. "3" represents the Fundamental Signal
2. "4" represents the Fundamental Signal



## **5.10 Antenna Requirements**

### **5.10.1 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.

### **5.10.2 Antenna Connected Construction**

The antennas used in this product are PIFA Antenna for BT and it is considered to meet antenna requirement of FCC.

### **5.10.3 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 Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Due Date	Remark
EMC Receiver	R&S	ESCS 30	100132	9kHz – 2.75GHz	Jul. 14, 2007	Jul. 13, 2008	Conduction (CO01-HY)
LISN	MessTec	NNB-2/16Z	2001/004	9kHz – 30MHz	Mar. 30, 2007	Mar. 29, 2008	Conduction (CO01-HY)
LISN (Support Unit)	MessTec	NNB-2/16Z	2001/009	9kHz – 30MHz	Mar. 30, 2007	Mar. 29, 2008	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. 04, 2006	Dec. 03, 2007	Conduction (CO01-HY)
Isolation Transformer	Erika Fiedler OHG	D-65396 Walluf	58	45MHz-2.15GHz	N/A	N/A	Conduction (CO01-HY)
EMC Receiver	R&S	ESCS 30	100359	9kHz – 2.75GHz	Mar. 03, 2007	Mar. 02, 2008	Conduction (CO04-HY)
LISN	MessTec	NNB-2/16Z	99079	9kHz – 30MHz	Mar. 20, 2007	Mar. 19, 2008	Conduction (CO04-HY)
LISN (Support Unit)	EMCO	3810/2NM	9703-1839	9kHz – 30MHz	Mar. 22, 2007	Mar. 21, 2008	Conduction (CO04-HY)
RF Cable-CON	UTIFLEX	3102-26886-4	CB049	9kHz – 30MHz	Apr. 20, 2007	Apr. 19, 2008	Conduction (CO04-HY)
ISN	SCHAFFNER	ISN T400	21653	9kHz –30MHz	Mar. 27, 2007	Mar. 26, 2008	Conduction (CO04-HY)
EMI Filter	LINDGREN	LRE-2030	2651	< 450 Hz	N/A	N/A	Conduction (CO04-HY)
3m Semi Anechoic	TDK	SAC-3M	03CH04-HY	30 MHz - 1 GHz 3m	Oct. 29, 2007	Oct. 28, 2008	Radiation (03CH04-HY)
Amplifier	HP	87405A	3950M00135	10MHz - 3 GHz	Mar. 02, 2007	Mar. 01, 2008	Radiation (03CH04-HY)
Spectrum Analyzer	R&S	FSP30	100792	9 kHz – 30GHz	Dec. 13, 2006	Dec. 12, 2007	Radiation (03CH04-HY)
Bilog Antenna	SCHAFFNER	CBL6112B	2724	30 MHz - 1 GHz	Aug. 13, 2007	Aug. 12 2008	Radiation (03CH04-HY)
Turn Table	HD	Deis HD 2000	420/610	0 - 360 degree	N/A	N/A	Radiation (03CH04-HY)
Antenna Mast	Chaintek	3000	N/A	1 m - 4 m	N/A	N/A	Radiation (03CH04-HY)
RF Cable-R03m	Suhner Switzerland +	RG223/U +RG8/U	CB024	30 MHz - 1 GHz	Sep. 20, 2007	Sep. 19, 2008	Radiation (03CH04-HY)
Isolation Transformer	Erika FiedLer OHG	D-65396 Walluf	N/A	45 MHz – 2.15 GHz	N/A	N/A	Radiation (03CH04-HY)



<b>Instrument</b>	<b>Manufacturer</b>	<b>Model No.</b>	<b>Serial No.</b>	<b>Characteristics</b>	<b>Calibration Date</b>	<b>Due Date</b>	<b>Remark</b>
Spectrum Analyzer	Agilent	E4408B	MY44211028	9KHz-26.5GHz	Oct. 17, 2007	Oct. 16, 2008	Radiation (03CH06-HY)
EMI Test Receiver	R&S	ESCS30	100356	9KHz-2.75GHz	Jul. 26, 2007	Jul. 25, 2008	Radiation (03CH06-HY)
Bilog Antenna	SCHAFFNER	CBL6112B	2885	30MHz -2GHz	Dec. 01, 2007	Nov. 30, 2008	Radiation (03CH06-HY)
Double Ridge Horn Antenna	Com-Power	AH118	071025	1G~18G	Jun. 04, 2007	Jun. 03, 2008	Radiation (03CH06-HY)
SHF-EHF Horn	SCHWARZBECK	BBHA 9170	9170-251	14G - 40G	Oct. 17, 2007	Oct. 16, 2008	Radiation (03CH06-HY)
Pre Amplifier	Agilent	8449B	3008A01917	1G - 26.5G	Nov. 22, 2007	Nov. 21, 2008	Radiation (03CH06-HY)
PreAmplifier	EMEC	PA303	PA303-SMA-05	100K~3GHz	Nov. 26, 2007	Nov. 25, 2008	Radiation (03CH06-HY)
Base Station Simulator	R & S	CMU200	103937	Third-Band	Oct. 19, 2007	Oct. 18, 2008	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	0.11	Normal(k=2)	0.06
Antenna factor calibration	0.91	Normal(k=2)	0.46
Cable loss calibration	0.12	Normal(k=2)	0.06
Pre Amplifier Gain calibration	0.15	Normal(k=2)	0.08
RCV/SPA specification	2.50	Rectangular	0.72
Antenna Factor Interpolation for Frequency	1.00	Rectangular	0.29
Site imperfection	1.52	Rectangular	0.88
Mismatch	+0.45/-0.48	U-shaped	0.33
<b>Combined standard uncertainty Uc(y)</b>	<b>1.30</b>		
<b>Measuring uncertainty for a level of Confidence of 95% U=2Uc(y)</b>	<b>2.60</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>				

The measured result is :  $y$  dBuV  $\pm U$  dB  
for a level of confidence of approximately 95% , (  $k = 2$  )