■ Field strength of fundamental and harmonics

Frequency (MHz)	Polarity	Antenna Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)	Limits (dBuV/m)	Emission (dBuV/m)	Margin (dB)	Detect Mode
2400.960	H	28.19	1.72	102.09	41.14	-	90.86	-	Peak
2400.960	H	28.19	1.72	101.73	41.14	-	90.50	-	A.V.
2400.840	V	28.19	1.72	107.70	41.14	-	96.47	-	Peak
2400.840	V	28.19	1.72	107.49	41.14	-	96.26	-	A.V.
4801.980	H	32.99	2.42	54.64	42.32	74.00	47.73	-26.27	Peak
4801.980	H	32.99	2.42	52.84	42.32	54.00	45.93	-8.07	A.V.
4801.940	V	32.99	2.42	52.41	42.32	74.00	45.50	-28.50	Peak
4801.940	V	32.99	2.42	48.53	42.32	54.00	41.62	-12.38	A.V.
7206.000	V/H	-	-	-	-	-	-	-	Peak, A.V.
9608.000	V/H	-	-	-	-	-	-	-	Peak, A.V.
12010.000	V/H	-	-	-	-	-	-	-	Peak, A.V.
14412.000	V/H	-	-	-	-	-	-	-	Peak, A.V.
16814.000	V/H	-	-	-	-	-	-	-	Peak, A.V.
19216.000	V/H	-	-	-	-	-	-	-	Peak, A.V.
21618.000	V/H	-	-	-	-	-	-	-	Peak, A.V.
24020.000	V/H	-	-	-	-	-	-	-	Peak, A.V.

Remark: The emission emitted by the EUT is too low to be measured except the emission listed above

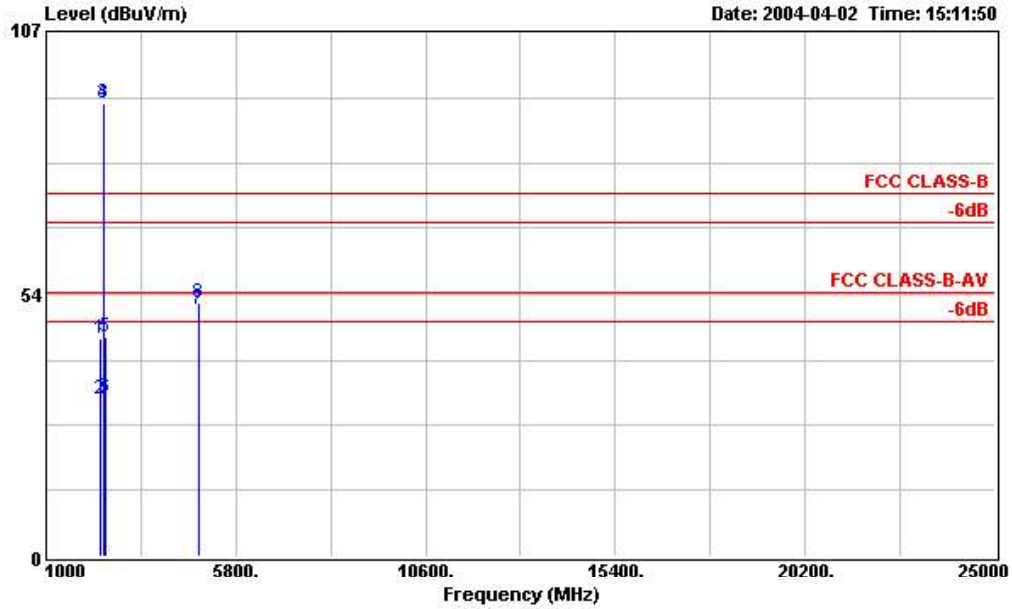
Test Engineer: _____

Jay

- Test Mode: Mode 2
- Test Distance: 3 M
- Temperature: 26 °C
- Relative Humidity: 48 %
- Test Date: Apr. 02, 2004
- Emission level (dBuV/m) = 20 log Emission level (uV/m)
- Corrected Reading: Probe Factor + Cable Loss + Read Level - Preamp Factor = Level

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

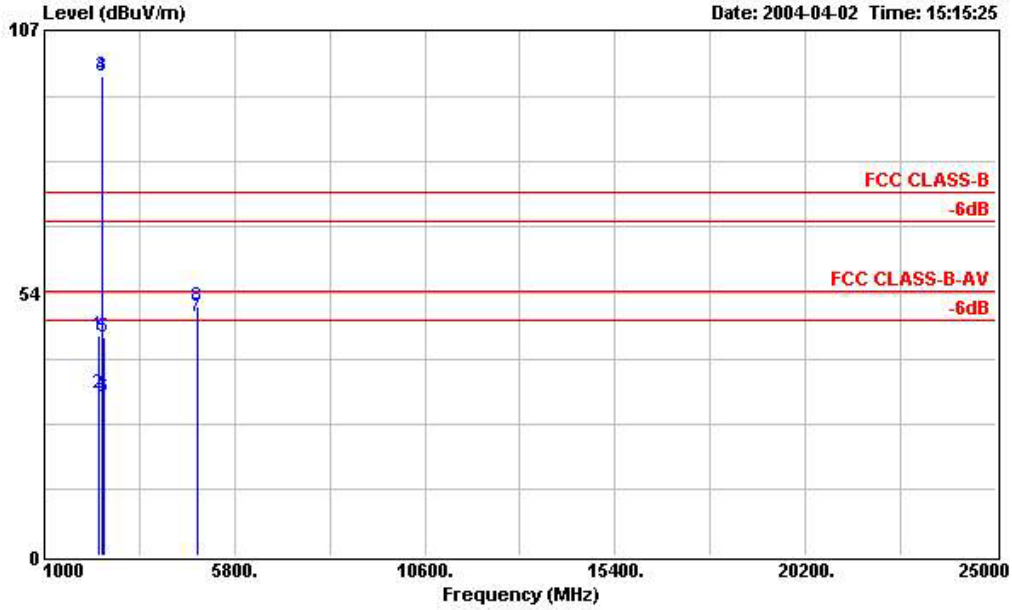
■ Spurious Emission



Site : 03CH03-HY
Condition : FCC CLASS-B 3m HORN-ANT-6741 HORIZONTAL
EUT :
Power : 110V/60Hz
Model :
Memo : Cradle mode Bluetooth TX CH39 2441MHz

		Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1		2390.000	44.37	-29.63	74.00	55.60	28.19	1.72	41.14	Peak	---	---
2		2390.000	32.11	-21.89	54.00	43.34	28.19	1.72	41.14	Average	---	---
3	X	2440.990	92.51			103.63	28.30	1.75	41.17	Peak	---	---
4	X	2440.990	92.34			103.46	28.30	1.75	41.17	Average	---	---
5		2483.500	44.72	-29.28	74.00	55.70	28.40	1.82	41.20	Peak	---	---
6		2483.500	32.30	-21.70	54.00	43.28	28.40	1.82	41.20	Average	---	---
7	!	4880.890	50.21	-3.79	54.00	56.97	33.19	2.51	42.46	Average	102	315
8		4880.890	51.81	-22.19	74.00	58.57	33.19	2.51	42.46	Peak	102	315

Remark: The “X” represent a fundamental frequency.



Site : 03CH03-HY
Condition : FCC CLASS-B 3m HORN-ANT-6741 VERTICAL
EUT :
Power : 110V/60Hz
Model :
Memo : Cradle mode Bluetooth TX CH39 2441MHz

		Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1		2390.000	44.97	-29.03	74.00	56.20	28.19	1.72	41.14	Peak	---	---
2		2390.000	32.92	-21.08	54.00	44.15	28.19	1.72	41.14	Average	---	---
3	X	2440.970	97.76			108.88	28.30	1.75	41.17	Average	---	---
4	X	2440.970	97.78			108.90	28.30	1.75	41.17	Peak	---	---
5		2483.500	44.60	-29.40	74.00	55.58	28.40	1.82	41.20	Peak	---	---
6		2483.500	32.31	-21.69	54.00	43.29	28.40	1.82	41.20	Average	---	---
7	!	4880.950	48.48	-5.52	54.00	55.24	33.19	2.51	42.46	Average	---	---
8		4880.950	50.67	-23.33	74.00	57.43	33.19	2.51	42.46	Peak	---	---

Remark: The “X” represent a fundamental frequency.

- For 4.88095GHz ~ 25GHz
  Remark: Frequency from 4880.95MHz to 25000MHz, the emission emitted by the EUT is too low to be measured

■ Field strength of fundamental and harmonics

Frequency (MHz)	Polarity	Antenna Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)	Limits (dBuV/m)	Emission (dBuV/m)	Margin (dB)	Detect Mode
2440.990	H	28.30	1.75	103.63	41.17	-	92.51	-	Peak
2440.990	H	28.30	1.75	103.46	41.17	-	92.34	-	A.V.
2440.970	V	28.30	1.75	108.90	41.17	-	97.78	-	Peak
2440.970	V	28.30	1.75	108.88	41.17	-	97.76	-	A.V.
4880.890	H	33.19	2.51	58.57	42.46	74.00	51.81	-22.19	Peak
4880.890	H	33.19	2.51	56.97	42.46	54.00	50.21	-3.79	A.V.
4880.950	V	33.19	2.51	57.43	42.46	74.00	50.67	-23.33	Peak
4880.950	V	33.19	2.51	55.24	42.46	54.00	48.48	-5.52	A.V.
7323.000	V/H	-	-	-	-	-	-	-	Peak, A.V.
9764.000	V/H	-	-	-	-	-	-	-	Peak, A.V.
12205.000	V/H	-	-	-	-	-	-	-	Peak, A.V.
14646.000	V/H	-	-	-	-	-	-	-	Peak, A.V.
17087.000	V/H	-	-	-	-	-	-	-	Peak, A.V.
19528.000	V/H	-	-	-	-	-	-	-	Peak, A.V.
21969.000	V/H	-	-	-	-	-	-	-	Peak, A.V.
24410.000	V/H	-	-	-	-	-	-	-	Peak, A.V.

Remark: The emission emitted by the EUT is too low to be measured except the emission listed above

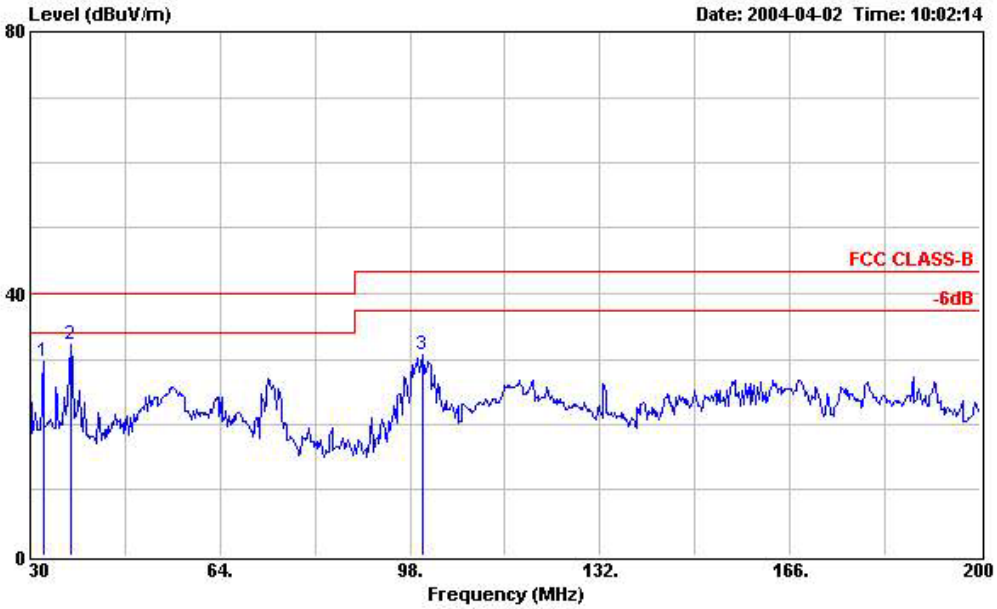
Test Engineer: _____

Jay

- Test Mode: Mode 3
- Test Distance: 3 M
- Temperature: 26 °C
- Relative Humidity: 48 %
- Test Date: Apr. 02, 2004
- Emission level (dBuV/m) = 20 log Emission level (uV/m)
- Corrected Reading: Probe Factor + Cable Loss + Read Level - Preamp Factor = Level

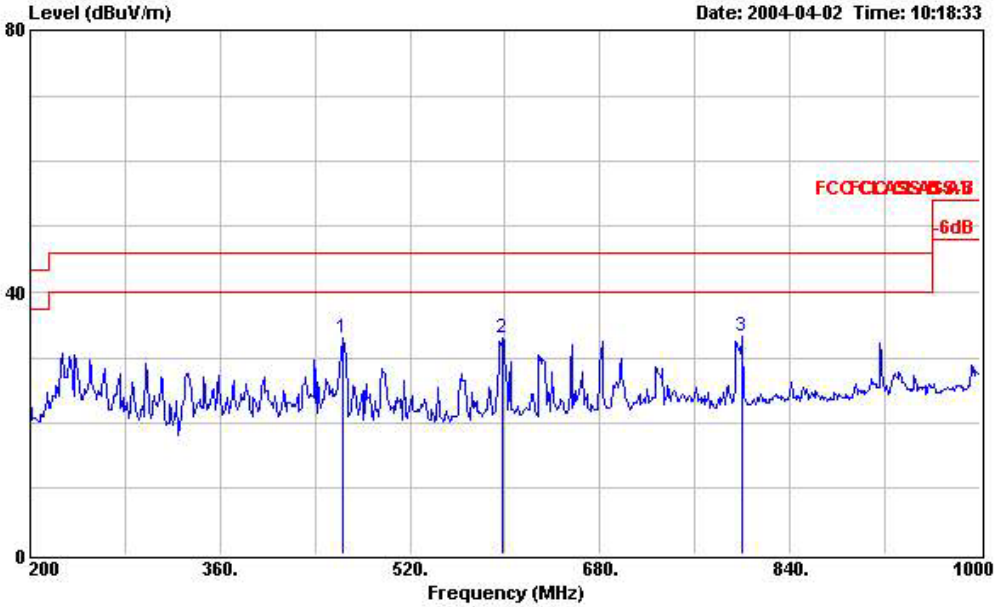
The test that passed at the minimum margin was marked by the frame in the following test record

■ Spurious Emission



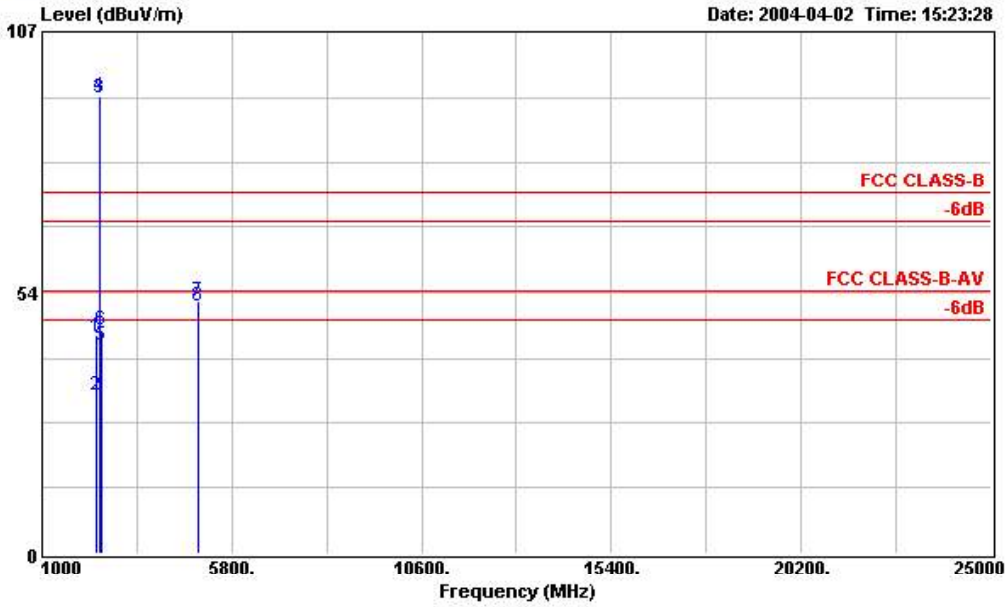
Site : 03CH03-HY
Condition : FCC CLASS-B 3m BIC-9124--301 HORIZONTAL
EUT :
Power : 110V/60Hz
Model :
Memo : Cradle mode Bluetooth TX CH78 2480MHz

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	32.380	29.51	-10.49	40.00	43.00	13.57	0.98	28.04	Peak	---	---
2	37.310	32.23	-7.77	40.00	46.89	12.33	1.04	28.03	Peak	---	---
3	100.380	30.57	-12.93	43.50	46.86	9.82	1.79	27.90	Peak	---	---



Site : 03CH03-HY
Condition : FCC CLASS-B 3m LOG-9111-221 HORIZONTAL
EUT :
Power : 110V/60Hz
Model :
Memo : Cradle mode Bluetooth TX CH78 2480MHz

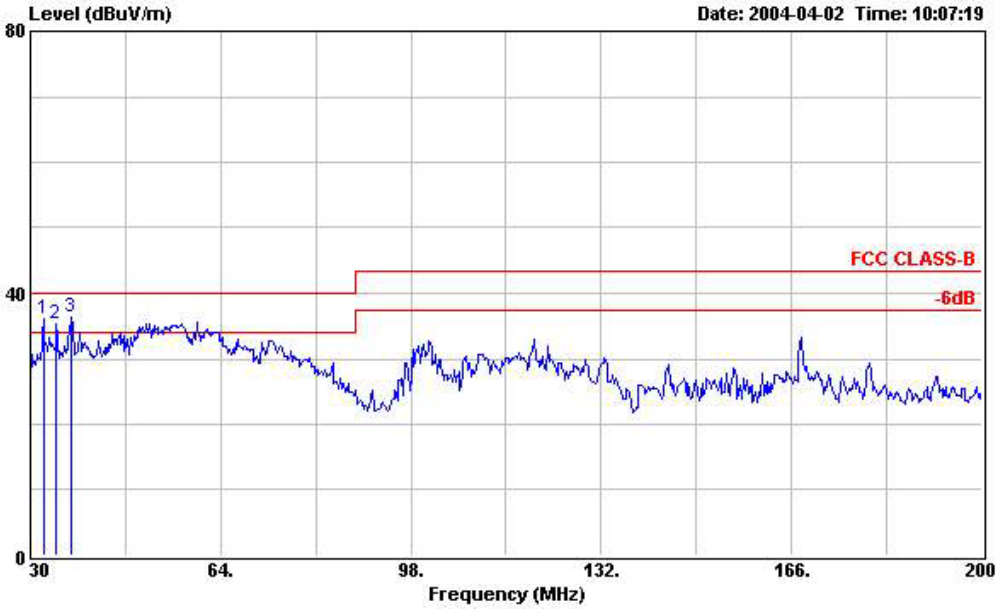
	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	464.000	32.95	-13.05	46.00	40.72	16.81	3.79	28.37	Peak	---	---
2	598.400	33.08	-12.92	46.00	38.55	18.96	4.37	28.80	Peak	---	---
3	800.000	33.23	-12.77	46.00	36.51	20.38	5.14	28.80	Peak	---	---



Site : 03CH03-HY
Condition : FCC CLASS-B 3m HORN-ANT-6741 HORIZONTAL
EUT :
Power : 110V/60Hz
Model :
Memo : Cradle mode Bluetooth TX CH78 2480MHz

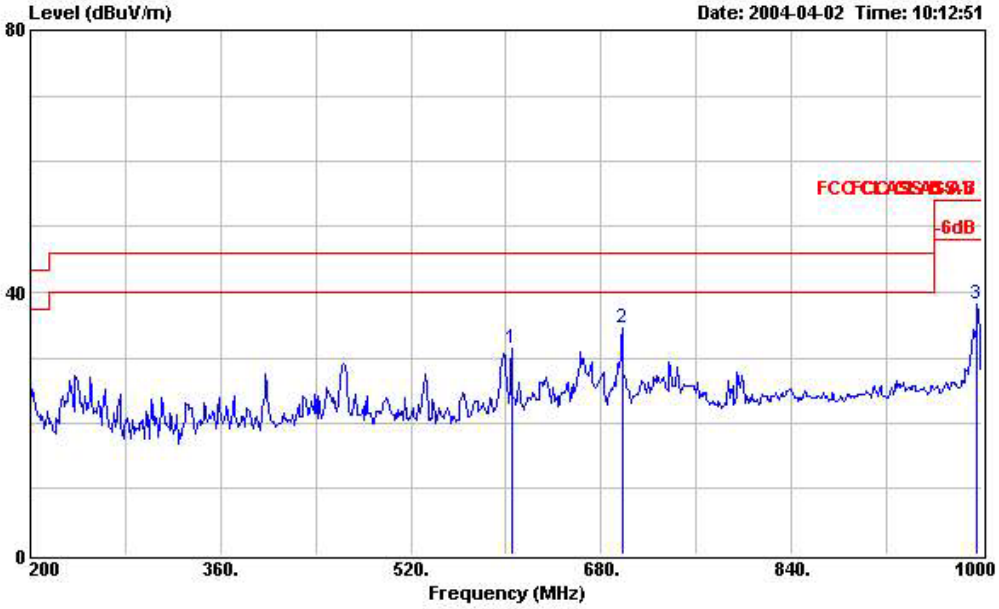
		Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1		2390.000	44.59	-29.41	74.00	55.82	28.19	1.72	41.14	Peak	---	---
2		2390.000	32.33	-21.67	54.00	43.56	28.19	1.72	41.14	Average	---	---
3	X	2478.960	93.53			04.51	28.40	1.82	41.20	Average	---	---
4	X	2478.960	93.72			04.70	28.40	1.82	41.20	Peak	---	---
5		2483.500	42.89	-11.11	54.00	53.87	28.40	1.82	41.20	Average	---	---
6		2483.500	45.74	-28.26	74.00	56.72	28.40	1.82	41.20	Peak	---	---
7		4958.000	51.89	-22.11	74.00	58.65	33.33	2.44	42.53	Peak	107	326
8	!	4958.000	50.77	-3.23	54.00	57.53	33.33	2.44	42.53	Average	107	326

Remark: The “X” represent a fundamental frequency.



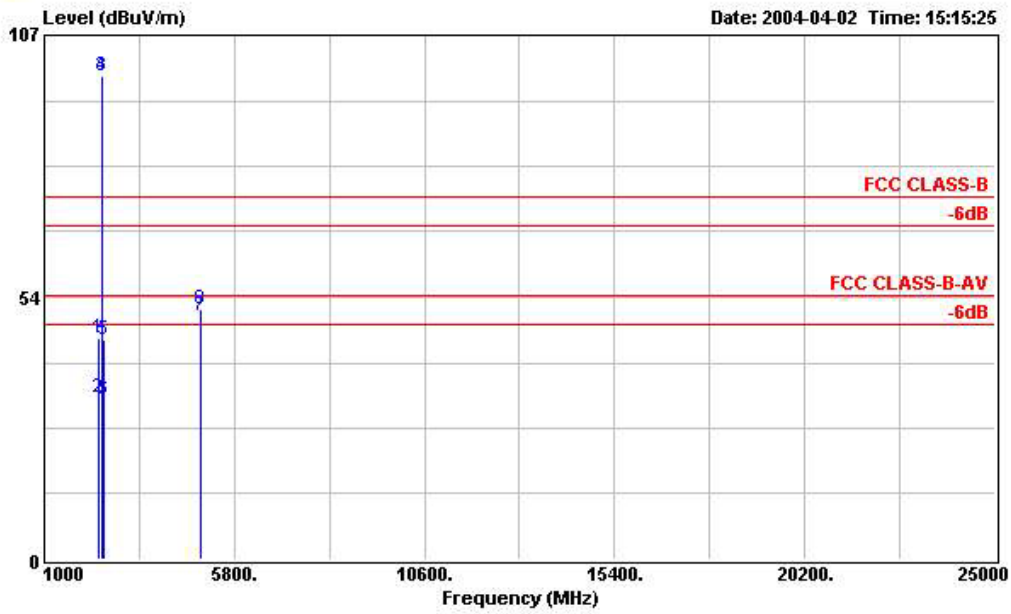
Site : 03CH03-HY
Condition : FCC CLASS-B 3m BIC-9124--301 VERTICAL
EUT :
Power : 110V/60Hz
Model :
Memo : Cradle mode Bluetooth TX CH78 2480MHz

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1 !	32.380	36.07	-3.93	40.00	49.56	13.57	0.98	28.04	Peak	---	---
2 !	34.590	35.27	-4.73	40.00	49.16	13.14	1.01	28.04	Peak	---	---
3 !	37.310	36.33	-3.67	40.00	50.99	12.33	1.04	28.03	Peak	112	342



Site : 03CH03-HY
Condition : FCC CLASS-B 3m LOG-9111-221 VERTICAL
EUT :
Power : 110V/60Hz
Model :
Memo : Cradle mode Bluetooth TX CH78 2480MHz

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	604.800	31.40	-14.60	46.00	36.79	18.98	4.42	28.79	Peak	---	---
2	697.600	34.65	-11.35	46.00	38.95	19.75	4.65	28.70	Peak	---	---
3	996.000	38.10	-15.90	54.00	38.42	22.20	5.68	28.20	Peak	---	---



Site : 03CH03-HY
Condition : FCC CLASS-B 3m HORN-ANT-6741 VERTICAL
EUT :
Power : 110V/60Hz
Model :
Memo : Cradle mode Bluetooth TX CH78 2480MHz

		Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
		MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1		2390.000	45.19	-28.81	74.00	56.42	28.19	1.72	41.14	Peak	---	---
2		2390.000	33.12	-20.88	54.00	44.35	28.19	1.72	41.14	Average	---	---
3	X	2478.970	98.83			109.81	28.40	1.82	41.20	Peak	---	---
4	X	2478.970	98.76			109.74	28.40	1.82	41.20	Average	---	---
5		2483.500	44.78	-29.22	74.00	55.76	28.40	1.82	41.20	Peak	---	---
6		2483.500	32.54	-21.46	54.00	43.52	28.40	1.82	41.20	Average	---	---
7	!	4958.000	49.67	-4.33	54.00	56.43	33.33	2.44	42.53	Average	---	---
8		4958.000	50.93	-23.07	74.00	57.69	33.33	2.44	42.53	Peak	---	---

Remark: The “X” represent a fundamental frequency.

- For 4.958GHz ~ 25GHz
  Remark: Frequency from 4958MHz to 25000MHz, the emission emitted by the EUT is too low to be measured

■ Field strength of fundamental and harmonics

Frequency (MHz)	Polarity	Antenna Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Preamp Factor (dB)	Limits (dBuV/m)	Emission (dBuV/m)	Margin (dB)	Detect Mode
2478.960	H	28.40	1.82	104.70	41.20	-	93.72	-	Peak
2478.960	H	28.40	1.82	104.51	41.20	-	93.53	-	A.V.
2478.970	V	28.40	1.82	109.81	41.20	-	98.83	-	Peak
2478.970	V	28.40	1.82	109.74	41.20	-	98.76	-	A.V.
4958.000	H	33.33	2.44	58.65	42.53	74.00	51.89	-22.11	Peak
4958.000	H	33.33	2.44	57.53	42.53	54.00	50.77	-3.23	A.V.
4958.000	V	33.33	2.44	57.69	42.53	74.00	50.93	-23.07	Peak
4958.000	V	33.33	2.44	56.43	42.53	54.00	49.67	-4.33	A.V.
7440.000	V/H	-	-	-	-	-	-	-	Peak, A.V.
9920.000	V/H	-	-	-	-	-	-	-	Peak, A.V.
12400.000	V/H	-	-	-	-	-	-	-	Peak, A.V.
14880.000	V/H	-	-	-	-	-	-	-	Peak, A.V.
17360.000	V/H	-	-	-	-	-	-	-	Peak, A.V.
19840.000	V/H	-	-	-	-	-	-	-	Peak, A.V.
22320.000	V/H	-	-	-	-	-	-	-	Peak, A.V.
24800.000	V/H	-	-	-	-	-	-	-	Peak, A.V.

Remark: The emission emitted by the EUT is too low to be measured except the emission listed above

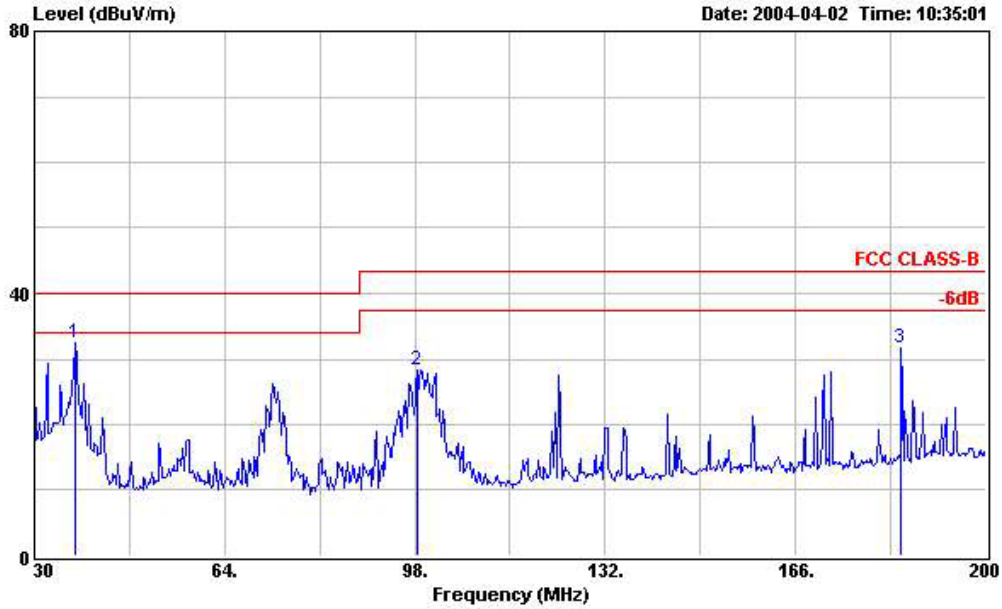
Test Engineer: _____

Jay

- Test Mode: Mode 4
- Test Distance: 3 M
- Temperature: 26 °C
- Relative Humidity: 48 %
- Test Date: Apr. 02, 2004
- Emission level (dBuV/m) = 20 log Emission level (uV/m)
- Corrected Reading: Probe Factor + Cable Loss + Read Level - Preamp Factor = Level

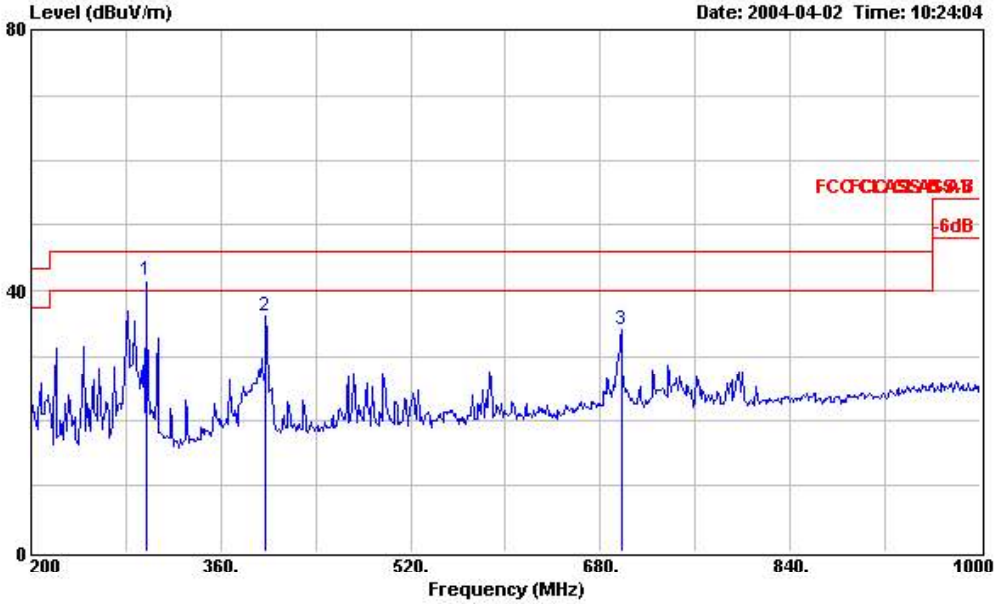
The test that passed at the minimum margin was marked by the frame in the following test record

■ Spurious Emission



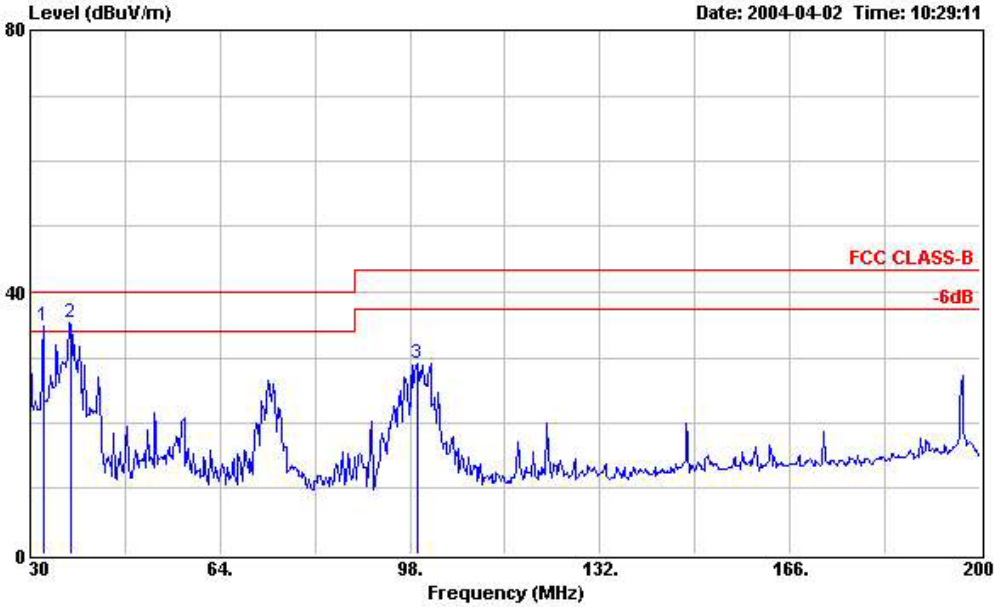
Site : 03CH03-HY
Condition : FCC CLASS-B 3m BIC-9124--301 HORIZONTAL
EUT :
Power : 110V/60Hz
Model :
Memo : Earphone_X Bluetooth TX CH78 2480MHz

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	37.310	32.52	-7.48	40.00	47.18	12.33	1.04	28.03	Peak	---	---
2	98.340	28.37	-15.13	43.50	44.87	9.65	1.75	27.90	Peak	---	---
3	184.870	31.76	-11.74	43.50	42.98	14.06	2.45	27.73	Peak	---	---



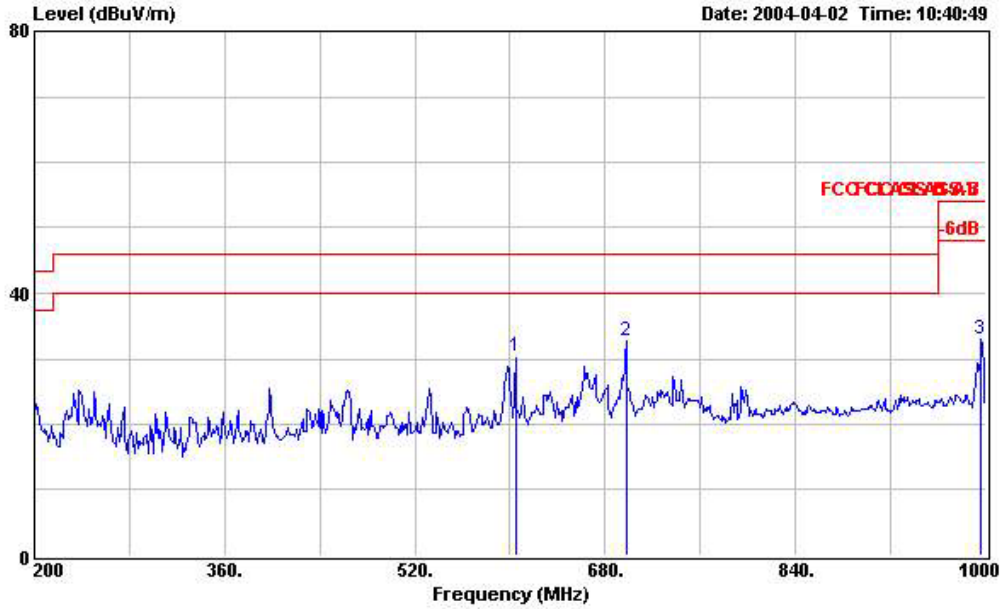
Site : 03CH03-HY
Condition : FCC CLASS-B 3m LOG-9111-221 HORIZONTAL
EUT :
Power : 110V/60Hz
Model :
Memo : Earphone_X Bluetooth TX CH78 2480MHz

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1 !	297.600	41.61	-4.39	46.00	52.71	13.14	3.07	27.31	Peak	105	342
2	397.600	36.09	-9.91	46.00	44.68	15.74	3.46	27.79	Peak	---	---
3	697.600	34.15	-11.85	46.00	38.45	19.75	4.65	28.70	Peak	---	---



Site : 03CH03-HY
Condition : FCC CLASS-B 3m BIC-9124--301 VERTICAL
EUT :
Power : 110V/60Hz
Model :
Memo : Earphone_X Bluetooth TX CH78 2480MHz

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1 !	32.380	34.84	-5.16	40.00	48.33	13.57	0.98	28.04	Peak	---	---
2 !	37.310	35.31	-4.69	40.00	49.97	12.33	1.04	28.03	Peak	---	---
3	99.190	29.22	-14.28	43.50	45.63	9.72	1.77	27.90	Peak	---	---



Site : 03CH03-HY
Condition : FCC CLASS-B 3m LOG-9111-221 VERTICAL
EUT :
Power : 110V/60Hz
Model :
Memo : Earphone_X Bluetooth TX CH78 2480MHz

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	604.800	30.40	-15.60	46.00	35.79	18.98	4.42	28.79	Peak	---	---
2	697.600	32.65	-13.35	46.00	36.95	19.75	4.65	28.70	Peak	---	---
3	996.000	33.10	-20.90	54.00	33.42	22.20	5.68	28.20	Peak	---	---

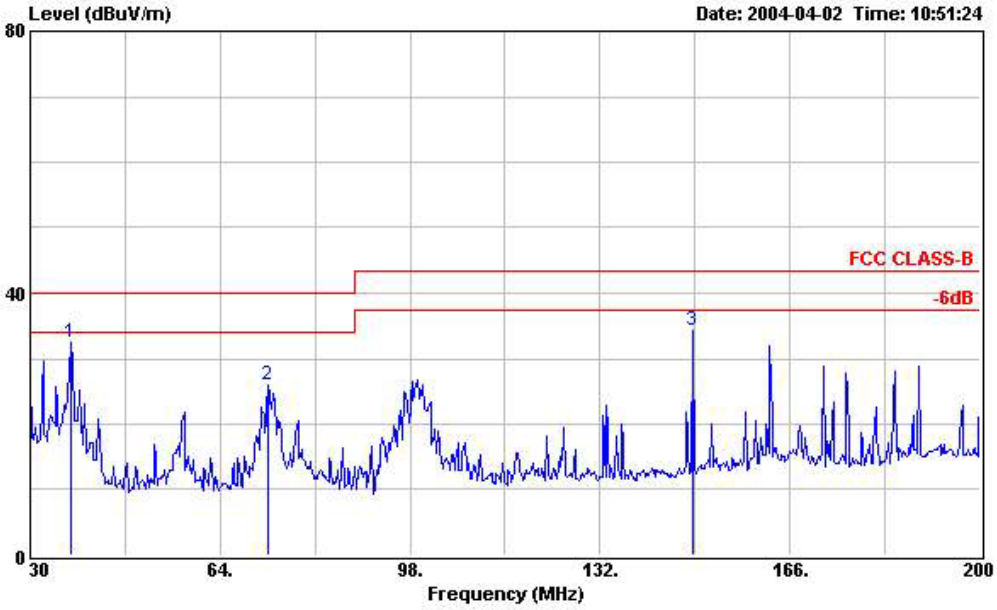
Test Engineer: _____

Jay

- Test Mode: Mode 5
- Test Distance: 3 M
- Temperature: 26 °C
- Relative Humidity: 48 %
- Test Date: Apr. 02, 2004
- Emission level (dBuV/m) = 20 log Emission level (uV/m)
- Corrected Reading: Probe Factor + Cable Loss + Read Level - Preamp Factor = Level

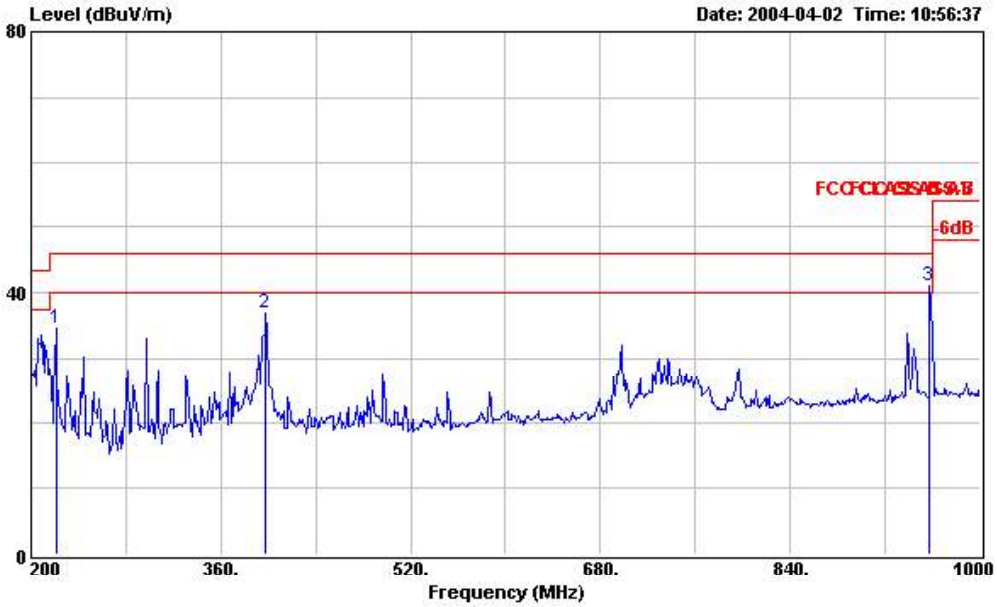
The test that passed at the minimum margin was marked by the frame in the following test record

■ Spurious Emission



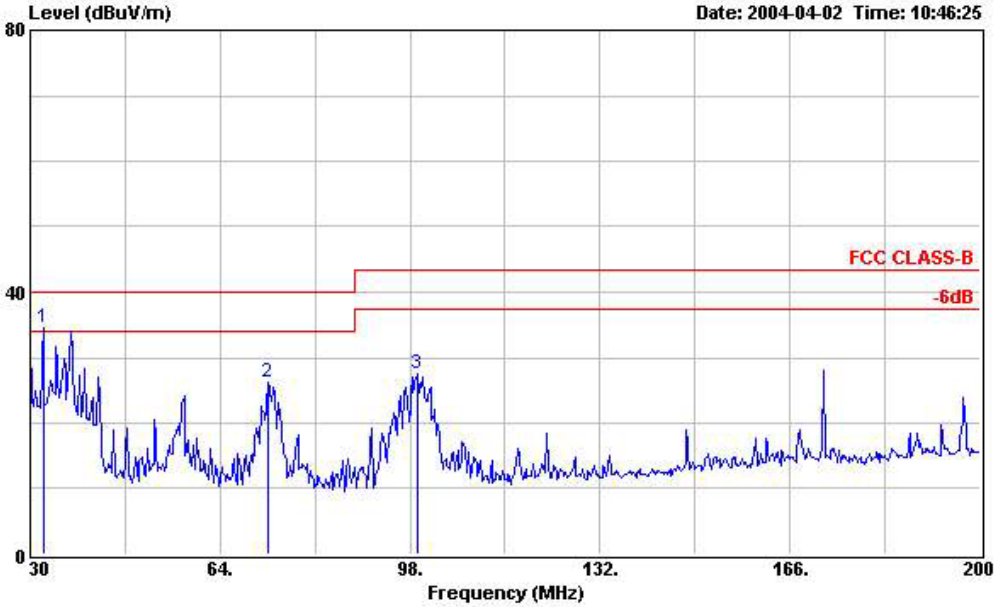
Site : 03CH03-HY
Condition : FCC CLASS-B 3m BIC-9124--301 HORIZONTAL
EUT :
Power : 110V/60Hz
Model :
Memo : Earphone_Y Bluetooth TX CH78 2480MHz

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	37.310	32.56	-7.44	40.00	47.22	12.33	1.04	28.03	Peak	---	---
2	72.670	25.85	-14.15	40.00	43.35	9.01	1.44	27.95	Peak	---	---
3	148.660	34.38	-9.12	43.50	47.64	12.30	2.24	27.80	Peak	---	---



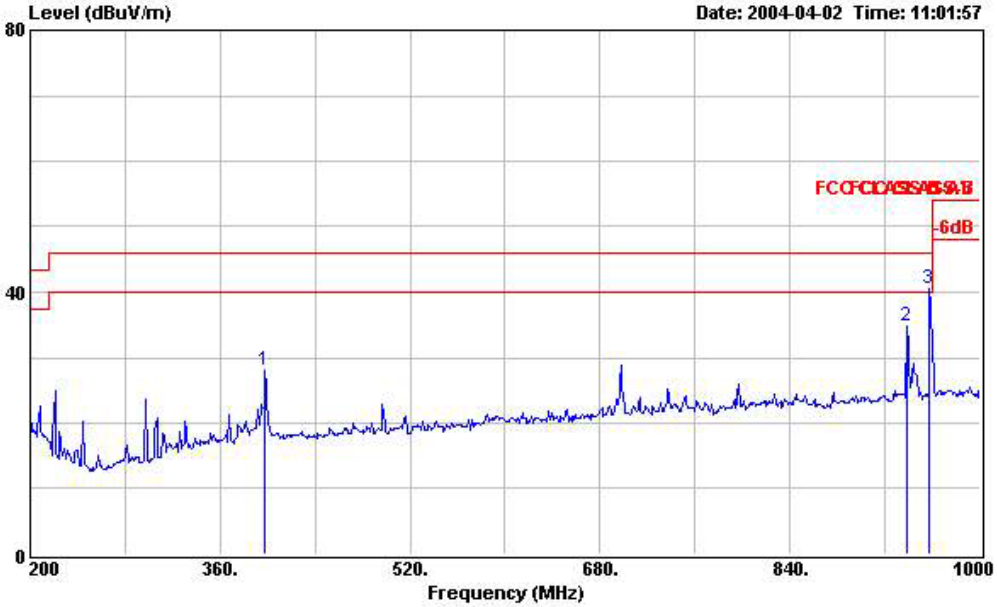
Site : 03CH03-HY
Condition : FCC CLASS-B 3m LOG-9111-221 HORIZONTAL
EUT :
Power : 110V/60Hz
Model :
Memo : Earphone_Y Bluetooth TX CH78 2480MHz

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	220.800	34.63	-11.37	46.00	45.55	14.03	2.67	27.62	Peak	---	---
2	397.600	36.84	-9.16	46.00	45.43	15.74	3.46	27.79	Peak	---	---
3 !	957.600	41.00	-5.00	46.00	41.69	21.90	5.65	28.24	Peak	121	342



Site : 03CH03-HY
Condition : FCC CLASS-B 3m BIC-9124--301 VERTICAL
EUT :
Power : 110V/60Hz
Model :
Memo : Earphone_Y Bluetooth TX CH78 2480MHz

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1 !	32.380	34.59	-5.41	40.00	48.08	13.57	0.98	28.04	Peak	---	---
2	72.670	26.11	-13.89	40.00	43.61	9.01	1.44	27.95	Peak	---	---
3	99.190	27.51	-15.99	43.50	43.92	9.72	1.77	27.90	Peak	---	---



Site : 03CH03-HY
Condition : FCC CLASS-B 3m LOG-9111-221 VERTICAL
EUT :
Power : 110V/60Hz
Model :
Memo : Earphone_Y Bluetooth TX CH78 2480MHz

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	397.600	27.94	-18.06	46.00	36.53	15.74	3.46	27.79	Peak	---	---
2	938.400	34.86	-11.14	46.00	36.01	21.66	5.45	28.26	Peak	---	---
3 !	957.600	40.54	-5.46	46.00	41.23	21.90	5.65	28.24	Peak	---	---

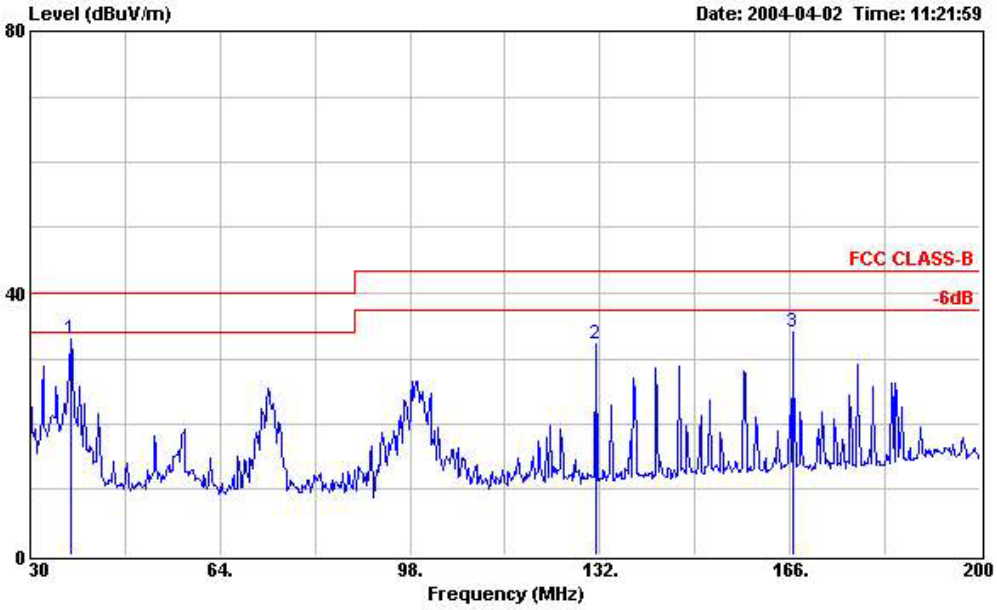
Test Engineer: _____

Jay

- Test Mode: Mode 6
- Test Distance: 3 M
- Temperature: 26 °C
- Relative Humidity: 48 %
- Test Date: Apr. 02, 2004
- Emission level (dBuV/m) = 20 log Emission level (uV/m)
- Corrected Reading: Probe Factor + Cable Loss + Read Level - Preamp Factor = Level

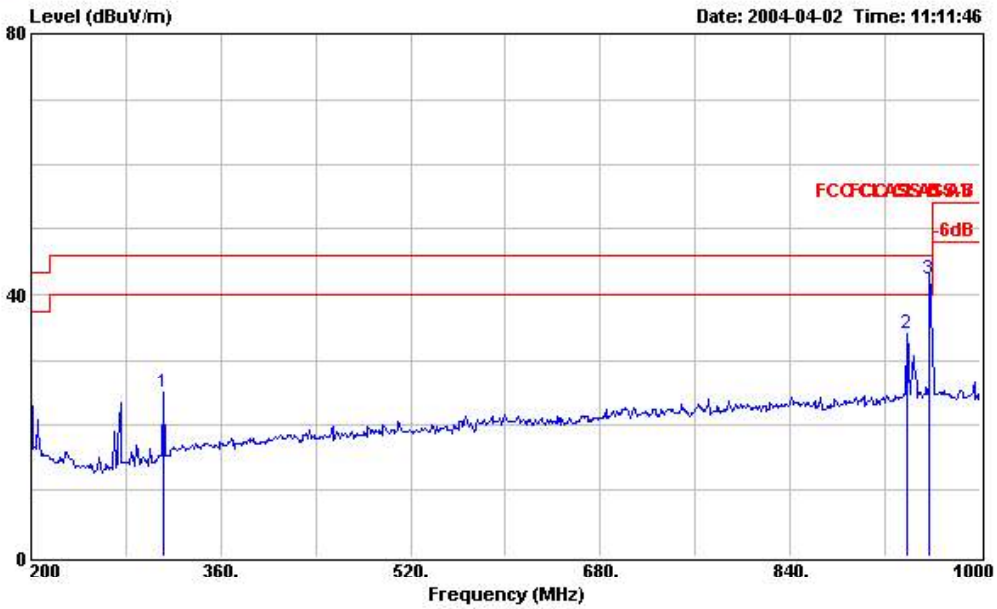
The test that passed at the minimum margin was marked by the frame in the following test record

- Spurious Emission



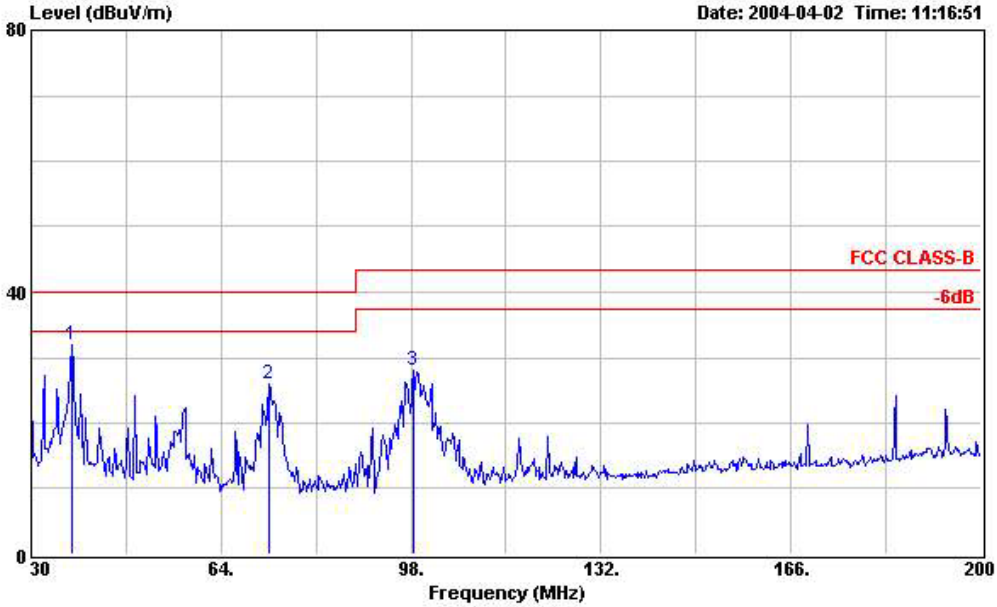
Site : 03CH03-HY
Condition : FCC CLASS-B 3m BIC-9124--301 HORIZONTAL
EUT :
Power : 110V/60Hz
Model :
Memo : Earphone_Z Bluetooth TX CH78 2480MHz

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	37.310	32.96	-7.04	40.00	47.62	12.33	1.04	28.03	Peak	---	---
2	131.150	32.15	-11.35	43.50	46.49	11.42	2.08	27.84	Peak	---	---
3	166.510	34.07	-9.43	43.50	46.44	13.06	2.34	27.77	Peak	---	---



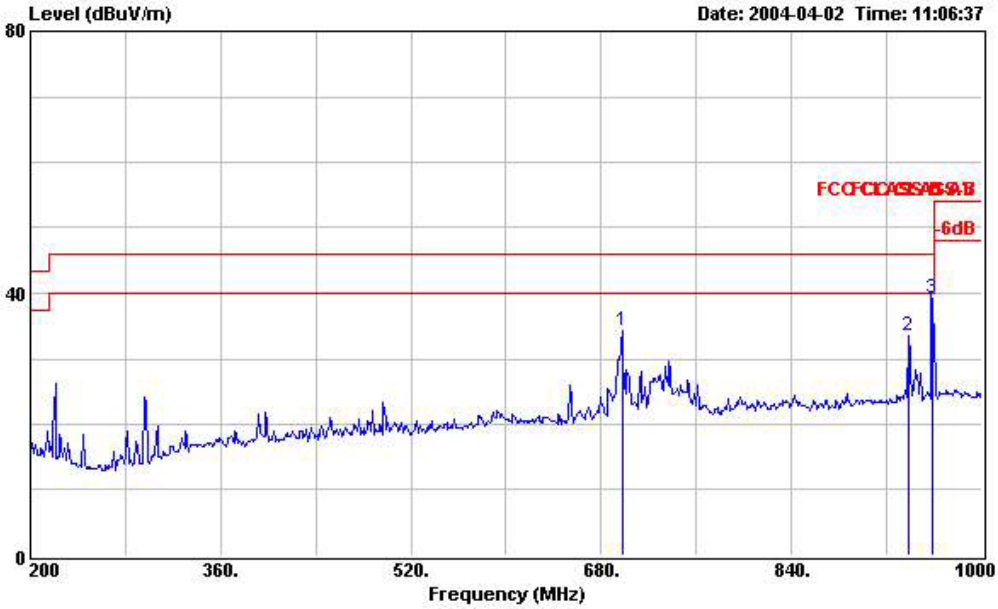
Site : 03CH03-HY
Condition : FCC CLASS-B 3m LOG-9111-221 HORIZONTAL
EUT :
Power : 110V/60Hz
Model :
Memo : Earphone_Z Bluetooth TX CH78 2480MHz

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	311.200	24.89	-21.11	46.00	35.25	13.86	3.14	27.36	Peak	---	---
2	938.400	34.08	-11.92	46.00	35.23	21.66	5.45	28.26	Peak	---	---
3 !	957.600	42.25	-3.75	46.00	42.94	21.90	5.65	28.24	Peak	109	324



Site : 03CH03-HY
Condition : FCC CLASS-B 3m BIC-9124--301 VERTICAL
EUT :
Power : 110V/60Hz
Model :
Memo : Earphone_Z Bluetooth TX CH78 2480MHz

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	37.310	31.82	-8.18	40.00	46.48	12.33	1.04	28.03	Peak	---	---
2	72.670	25.86	-14.14	40.00	43.36	9.01	1.44	27.95	Peak	---	---
3	98.340	28.16	-15.34	43.50	44.66	9.65	1.75	27.90	Peak	---	---



Site : 03CH03-HY
Condition : FCC CLASS-B 3m LOG-9111-221 VERTICAL
EUT :
Power : 110V/60Hz
Model :
Memo : Earphone_Z Bluetooth TX CH78 2480MHz

	Freq	Level	Over Limit	Limit Line	Read Level	Probe Factor	Cable Loss	Preamp Factor	Remark	Ant Pos	Table Pos
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB	dB	dB		cm	deg
1	697.600	34.27	-11.73	46.00	38.57	19.75	4.65	28.70	Peak	---	---
2	938.400	33.44	-12.56	46.00	34.59	21.66	5.45	28.26	Peak	---	---
3	958.400	39.28	-6.72	46.00	39.97	21.90	5.65	28.24	Peak	---	---

Test Engineer: _____

Jay

6. Antenna Requirements

The EUT use a printed antenna. It is considered to meet antenna requirement of FCC.

Standard Applicable

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 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 greater than 6dBi are used, the power shall be reduced by the same amount in unit dB comparing to the directional gain of the antenna minus 6dBi.

Antenna Connected Construction

The antenna used in this product is printed antenna without connector.

7. RF Exposure

FCC Rules and Regulations Part 1.1307,1.1310,2.1091,2.1093:

RF Exposure Compliance

7.1 Limit For Maximum Permissible Exposure (MPE)

(A) Limits for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm^2)	Averaging Time $\|E\|^2$,$\|H\|^2$ or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f)*	6
30-300	61.4	0.163	1.0	6
300-1500			F/300	6
1500-100,000			5	6

(B) Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $\|E\|^2$,$\|H\|^2$ or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1.0	30

F=frequency in MHz *Plane-wave equivalent power density

7.2 MPE Calculations

Power Density =Pd (mW/cm^2) = EIRP/4π d^2

EIRP = P · G

P＝Peak output power (mW)

G＝Antenna numeric gain (numeric)

d＝Separation distance (cm)

Because the EUT belongs to General Population/ Uncontrolled Exposure, the limit of power density is 1.0 mW/cm^2.

Channel NO.	Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Calculated RF Exposure at d=20cm (mW/cm^2)	Limit (mW/cm^2)
Channel 00	0.00	1.00	0.51	1.12	0.0002	1.00
Channel 39	0.00	1.00	0.48	1.12	0.0002	1.00
Channel 78	0.00	1.00	0.41	1.10	0.0002	1.00

7.3 FCC Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the FCC radio frequency exposure limits, human proximity to the antenna shall not be less than 20cm during normal operation.

8. List of Measuring Equipments Used

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
EMC Receiver	R&S	ESCS 30	100132	9 KHz – 2.75 GHz	Jun. 12, 2003	Conduction
LISN	MessTec	NNB-2/16Z	2001-008	9 KHz – 30 MHz	Apr. 30, 2003	Conduction
LISN	MessTec	NNB-2/16Z	2001-009	9 KHz – 30 MHz	Apr. 30, 2003	Conduction
EMI Filter	LINDGREN	LRE-2060	1004	< 450 Hz	N/A	Conduction
EMI Filter	LINDGREN	N6006	201052	0 ~ 60 Hz	N/A	Conduction
RF Cable-CON	Suhner Switzerland	RG223/U	CB029	9KHz~30MHz	Dec. 24, 2003	Conduction
50 ohm BNC type	NOBLE	50ohm	TM013	50 ohm	Apr. 24, 2003	Conduction
3m Semi Anechoic	SIDT FRANKONIA	SAC-3M	03CH03-HY	30MHz~1GHz	Jun. 21, 2003	Radiation
Spectrum analyzer	R&S	FSP40	100004	9KHZ~40GHz	Aug. 23, 2003	Radiation
Amplifier	HP	8447D	2944A09072	100KHz – 1.3GHz	Nov. 05, 2003	Radiation
Biconical Antenna	SCHWARZBECK	VHBB 9124	301	30MHz –200MHz	Jul. 24, 2003	Radiation (03CH03-HY)
Log Antenna	SCHWARZBECK	VUSLP 9111	221	200MHz -1GHz	Jul. 24, 2003	Radiation (03CH03-HY)
RF Cable-R03m	Jye Bao	RG142	CB021	30MHz~1GHz	Dec. 03, 2003	Radiation
Amplifier	MITEQ	AFS44	879981	100MHz~26.5GHz	Jul. 23, 2003	Radiation
Horn Antenna	COM-POWER	3115	6741	1GHz – 18GHz	Apr. 08, 2004	Radiation
Turn Table	HD	DS 420	420/650/00	0 ~ 360 degree	N/A	Radiation
Antenna Mast	HD	MA 240	240/560/00	1 m - 4 m	N/A	Radiation
Horn Antenna	Schwarzbeck	BBHA9170	154	15GHz~40GHz	Jun. 02, 2004	Radiation
RF Cable-HIGH	Jye Bao	RG142	CB030-HIGH	1GHz~29.5GHz	Dec. 05, 2003	Radiation

※ Calibration Interval of instruments listed above is one year.

※ Calibration Interval of instruments listed above is one year, except for Horn Antenna, BBHA9170.

※ Calibration Interval of Horn Antenna, BBHA9170, is three years.

9. Uncertainty of Test Site

Uncertainty of Conducted Emission Measurement (30MHz ~ 1000MHz)

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 Receiver VSWR Γ1= LISN VSWR Γ2= Uncertainty=20log(1-Γ1*Γ2)	+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 (150kHz ~ 30MHz)

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 Receiver VSWR Γ1= 0.20 Antenna VSWR Γ2= 0.23 Uncertainty=20log(1-Γ1*Γ2)	+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**		

$U=\sqrt{\{(1/2)^2+(0.3/2)^2+(2^2+0.5^2+2^2+0.25^2+2^2)/3+(0.54)^2/2\}}=2.2$ for 10m test distance

$U=\sqrt{\{(1/2)^2+(0.3/2)^2+(2^2+3^2+2^2+0.25^2+2^2)/3+(0.54)^2/2\}}=2.7$ for 3m test distance

Uncertainty of Conducted Emission Measurement (1GHz ~ 40GHz)

Contribution	Uncertainty of x_i		$u(x_i)$	Ci	$Ci*u($
	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 Γ1= 0.197 Antenna VSWR Γ2= 0.194 Uncertainty=20log(1-Γ1*Γ2*Γ3)	+0.34/-0.35	U-shaped	0.244	1	0.244
Combined standard uncertainty Uc(y)	**2.36**				
Measuring uncertainty for a level of confidence of 95% U=2Ue(y)	**4.72**				

U=√{(0.3/2)² +(2²+1.5²+0.2²)/3+(0.2)²/2}=1.66