FCC TEST REPORT

REPORT NO.:	RF980622A10B
MODEL NO.:	BH-607
VERSION:	HW: v1.1, ME: v1.2, SW: v1.5
RECEIVED:	Oct. 6, 2009
TESTED:	Oct. 6, 2009
ISSUED:	Oct. 19, 2009

APPLICANT:	Nokia Corporation
ADDRESS:	Joensuunkatu 7, P.O. Box: 86, Salo, Finland

ISSUED BY:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
LAB LOCATION:	No. 47, 14th Ling, Chia Pau Tsuen, Lin Kou Hsiang, Taipei Hsien, 244 Taiwan

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1. CERTIFICATION

PRODUCT:	Bluetooth Headset
BRAND NAME:	NOKIA
MODEL NO.:	BH-607
APPLICANT:	Nokia Corporation
TESTED:	Oct. 6, 2009
TEST SAMPLE:	ENGINEERING SAMPLE
STANDARDS:	FCC Part 15, Subpart C (Section 15.247), ANSI C63.4-2003

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY : Annie Chang , **DATE:** Oct. 19, 2009
(Annie Chang / Senior Specialist)

TECHNICAL ACCEPTANCE : Jamison Chan , **DATE:** Oct. 19, 2009
Responsible for RF
(Jamison Chan / Supervisor)

APPROVED BY : Ken Liu , **DATE:** Oct. 19, 2009
(Ken Liu / Assistant Manager)

2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC Part 15, Subpart C			
STANDARD SECTION	**TEST TYPE AND LIMIT**	**RESULT**	**REMARK**
15.207	AC Power Conducted Emission	NA	Refer to NOTE below
15.247(a)(1)(iii)	Number of Hopping Frequency Used Spec.: At least 15 channels	NA	Refer to NOTE below
15.247(a)(1)(iii)	Dwell Time on Each Channel Spec. : Max. 0.4 second within 31.6 second	NA	Refer to NOTE below
15.247(a)(1)	1. Hopping Channel Separation Spec. : Min. 25 kHz or 20 dB bandwidth, whichever is greater (see Note) 2. Spectrum Bandwidth of a Frequency Hopping Sequence Spread Spectrum System	NA	Refer to NOTE below
15.247(b)	Maximum Peak Output Power Spec.: max. 21dBm (see Note)	NA	Refer to NOTE below
15.247(d)	Transmitter Radiated Emissions Spec.: Table 15.209	PASS	Meet the requirement of limit. Minimum passing margin is –9.4dB at 2390.00MHz.
15.247(d)	Band Edge Measurement	PASS	Meet the requirement of limit
15.203	Antenna Requirement	PASS	No antenna connector is used.

NOTE: Test items for Radiated Emission & Band Edge Measurement were performed for this addendum. Other testing data refer to original report.

2.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

MEASUREMENT	FREQUENCY	UNCERTAINTY
Radiated emissions	30MHz ~ 1GHz	3.72 dB
	Above 1GHz	2.89 dB

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Bluetooth Headset
MODEL NO.	BH-607
FCC ID	PYABH-607
POWER SUPPLY	5Vdc from adapter, 3.7Vdc from battery
MODULATION TYPE	GFSK, π /4-DQPSK, 8DPSK
RADIO TECHNOLOGY	FHSS
TRANSFER RATE	1/2/3Mbps
OPERATING FREQUENCY	2402 ~ 2480MHz
NUMBER OF CHANNEL	79
OUTPUT POWER	5.1mW
ANTENNA TYPE	FPC Antenna with 1.78dBi gain
ANTENNA CONNECTOR	N/A
I/O PORTS	N/A
DATA CABLE	N/A
ASSOCIATED DEVICES	Refer to note 4 below

NOTE:

1. This report is a supplementary report or original one (BV CPS report no.: RF980622A10) issued on Aug. 20, 2009 to verify test result for some electronic and mechanical changes. The main changes are as follows:
   - ✧ Change L4 to 5.1nH
   - ✧ Alternate battery vender (brand: Synergy model:AHB371333TPI)
2. This report is prepared for FCC class II permissive change.
3. The EUT is a Bluetooth Headset.
4. The EUT was power supplied from the following power adapter or battery:

Item	Brand	Model	Spec.
Adapter	NOKIA	AC-5U	AC I/P: 100-240V, 50-60Hz, 180mA DC O/P: 5.0V, 800mA Non-shielded DC cable (1.8m), AC 2 pin
Battery	-	-	3.7Vdc

5. For more detailed features description, please refer to the manufacturer's specifications or User's Manual.

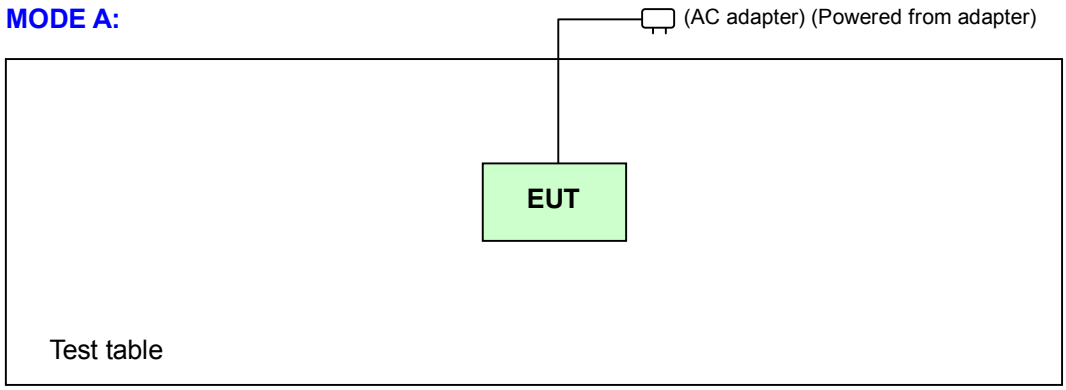
3.2 DESCRIPTION OF TEST MODES

79 channels are provided to this EUT:

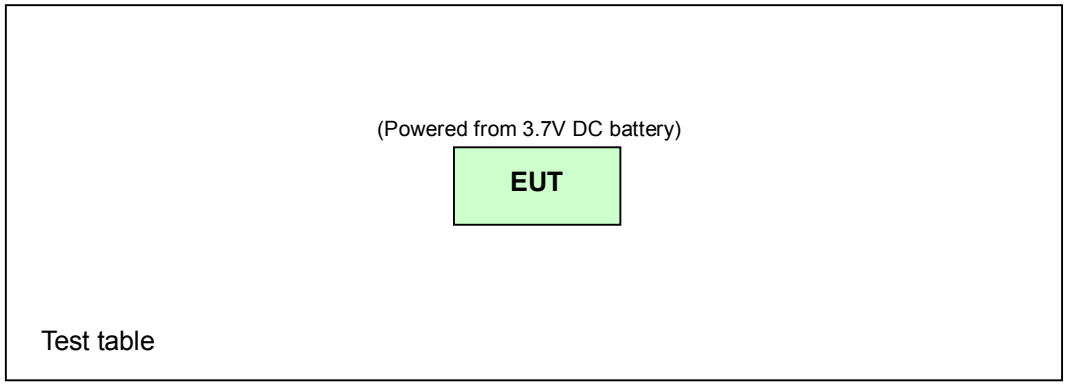
CHANNEL	FREQ. (MHz)	CHANNEL	FREQ. (MHz)	CHANNEL	FREQ. (MHz)	CHANNEL	FREQ. (MHz)
0	2402	20	2422	40	2442	60	2462
1	2403	21	2423	41	2443	61	2463
2	2404	22	2424	42	2444	62	2464
3	2405	23	2425	43	2445	63	2465
4	2406	24	2426	44	2446	64	2466
5	2407	25	2427	45	2447	65	2467
6	2408	26	2428	46	2448	66	2468
7	2409	27	2429	47	2449	67	2469
8	2410	28	2430	48	2450	68	2470
9	2411	29	2431	49	2451	69	2471
10	2412	30	2432	50	2452	70	2472
11	2413	31	2433	51	2453	71	2473
12	2414	32	2434	52	2454	72	2474
13	2415	33	2435	53	2455	73	2475
14	2416	34	2436	54	2456	74	2476
15	2417	35	2437	55	2457	75	2477
16	2418	36	2438	56	2458	76	2478
17	2419	37	2439	57	2459	77	2479
18	2420	38	2440	58	2460	78	2480
19	2421	39	2441	59	2461		

3.2.1 CONFIGURATION OF SYSTEM UNDER TEST

FOR MODE A:



FOR MODE B:



3.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	Applicable to				Description
	PLC	RE<1G	RE≥1G	APCM	
A	Note 1	√	√	Note 1	Operating Mode (EUT+adapter)
B	Note 2	√	-	-	Operating Mode (EUT only)

Where **PLC:** Power Line Conducted Emission **RE<1G:** Radiated Emission below 1GHz

RE≥1G: Radiated Emission above 1GHz **APCM:** Antenna Port Conducted Measurement

NOTE: 1. No need to re-tested the test item due to the change should not influence test result.

2. No need to concern of Conducted Emission due to the EUT is powered by battery.

RADIATED EMISSION TEST (BELOW 1 GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, packet types data rate, XYZ axis and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	PACKET TYPE	DATE RATE	AXIS
A	0 to 78	0	FHSS	GFSK	DH5	1	X
B	0 to 78	0	FHSS	GFSK	DH5	1	X

RADIATED EMISSION TEST (ABOVE 1 GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, packet types data rate, XYZ axis and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	PACKET TYPE	DATE RATE	AXIS
A	0 to 78	0, 39, 78	FHSS	GFSK	DH5	1	X
A	0 to 78	0, 39, 78	FHSS	8DPSK	DH5	3	X

BANDEDGE MEASUREMENT:

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations and packet types of the antenna and antenna ports (if EUT with antenna diversity architecture).

☒ Following channel(s) was (were) selected for the final test as listed below.

EUT CONFIGURE MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TECHNOLOGY	MODULATION TYPE	PACKET TYPE	DATE RATE
A	0 to 78	0, 78	FHSS	GFSK	DH5	1
A	0 to 78	0, 78	FHSS	8DPSK	DH5	3

3.2.3 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC Part 15, Subpart C. (15.247)
ANSI C63.4- 2003

All test items have been performed and recorded as per the above standards.

3.2.4 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together without any necessary accessory or support unit.

4. TEST TYPES AND RESULTS

4.1 CONDUCTED EMISSION MEASUREMENT

N/A

4.2 RADIATED EMISSION MEASUREMENT

4.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

Emissions radiated outside of the specified bands, shall be according to the general radiated limits in 15.209 as following:

FREQUENCIES (MHz)	FIELD STRENGTH (microvolts/meter)	MEASUREMENT DISTANCE (meters)
0.009 ~ 0.490	2400/F(kHz)	300
0.490 ~ 1.705	24000/F(kHz)	30
1.705 ~ 30.0	30	30
30 ~ 88	100	3
88 ~ 216	150	3
216 ~ 960	200	3
Above 960	500	3

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

4.2.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
HP Preamplifier	8447D	2432A03504	May 04, 2009	May 03, 2010
HP Preamplifier	8449B	3008A01924	Aug. 31, 2009	Aug. 30, 2010
HP Preamplifier	8449B	3008A01292	Aug. 10, 2009	Aug. 09, 2010
ROHDE & SCHWARZ TEST RECEIVER	ESI7	836697/012	Dec. 04, 2008	Dec. 03, 2009
Schwarzbeck Antenna	VULB 9168	137	Apr. 29, 2009	Apr. 28, 2010
Schwarzbeck Antenna	VHBA 9123	480	Apr. 21, 2009	Apr. 20, 2010
EMCO Horn Antenna	3115	6714	Oct. 21, 2008	Oct. 20, 2009
EMCO Horn Antenna	3115	9312-4192	Apr. 17, 2009	Apr. 16, 2010
ADT. Turn Table	TT100	0306	NA	NA
ADT. Tower	AT100	0306	NA	NA
Software	ADT_Radiated_ V7.6.15.9.2	NA	NA	NA
SUHNER RF cable	SF104-26.5	CABLE-CH6-17 m-01	Aug. 20, 2009	Aug. 19, 2010
ROHDE & SCHWARZ Spectrum Analyzer	FSP 40	100036	Apr. 03, 2009	Apr. 02, 2010

NOTE: 1. The calibration interval of the above test instruments is 12 months. And the calibrations are traceable to NML/ROC and NIST/USA.
2. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
3. The test was performed in Chamber No. 6.
4. The Industry Canada Reference No. IC 7450E-6.
5. The FCC Site Registration No. is 447212.

4.2.3 TEST PROCEDURES

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

f. If the emission level of the EUT in peak mode was lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

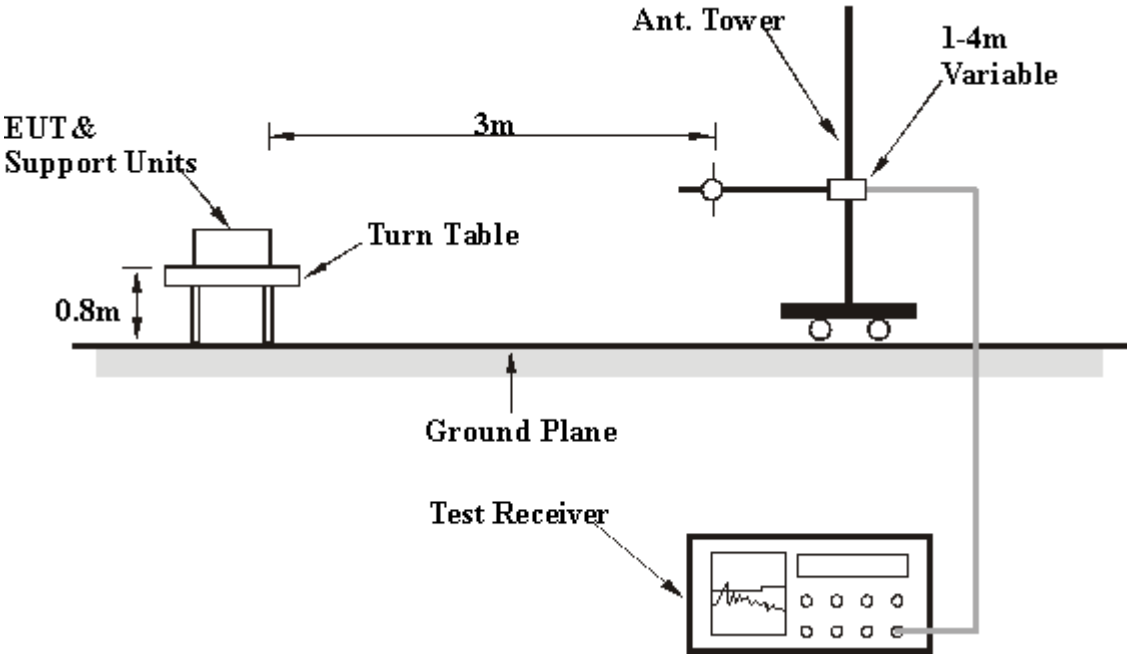
NOTE:

1. The resolution bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth is 1MHz and video bandwidth of test receiver/spectrum analyzer is 3MHz for Peak detection at frequency above 1GHz. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz for Average detection (AV) at frequency above 1GHz.

4.2.4 DEVIATION FROM TEST STANDARD

No deviation

4.2.5 TEST SETUP



For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

4.2.6 EUT OPERATING CONDITIONS

For Mode A:

a. Connected the EUT with AC adapter placed on testing table.
b. Set the EUT under transmission/receiving condition continuously at specific channel frequency.

For Mode B:

Set the EUT under transmission/receiving condition continuously at specific channel frequency.

4.2.7 TEST RESULTS

GFSK MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 0	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 78%RH 1008hPa	TESTED BY	Nick Chen
TEST MODE	A		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1602.00	44.1 PK	74.0	-29.9	1.00 H	92	14.7	29.4
2	1602.00	40.2 AV	54.0	-13.8	1.00 H	92	10.8	29.4
3	2390.00	56.6 PK	74.0	-17.4	1.15 H	200	24.0	32.6
4	2390.00	44.5 AV	54.0	-9.5	1.15 H	200	11.9	32.6
5	#2400.00	66.8 PK	85.4	-18.6	1.15 H	200	34.2	32.6
6	#2400.00	36.7 AV	55.3	-18.6	1.15 H	200	4.1	32.6
7	*2402.00	105.4 PK			1.15 H	200	72.8	32.6
8	*2402.00	75.3 AV			1.15 H	200	42.7	32.6
9	4804.00	51.4 PK	74.0	-22.6	1.02 H	307	11.6	39.8
10	4804.00	21.3 AV	54.0	-32.7	1.02 H	307	-18.5	39.8

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. The DH5 packet was the worse case duty cycle for a transmit dwell time on a channel, based upon bluetooth theory the transmitter is on 0.625 * 5 per 296.25 ms per channel. Therefore, the duty cycle correlation factor be equal to: 20log(3.125 / 100)= -30.1 dB.
7. Average value = peak reading + 20log(duty cycle).
8. "#":The radiated frequency is out the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 0	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 78%RH 1008hPa	TESTED BY	Nick Chen
TEST MODE	A		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1602.00	41.9 PK	74.0	-32.1	1.00 V	280	12.5	29.4
2	1602.00	34.9 AV	54.0	-19.1	1.00 V	280	5.5	29.4
3	2390.00	56.6 PK	74.0	-17.4	1.00 V	149	24.0	32.6
4	2390.00	44.3 AV	54.0	-9.7	1.00 V	149	11.7	32.6
5	#2400.00	65.2 PK	83.8	-18.6	1.00 V	149	32.6	32.6
6	#2400.00	35.1 AV	53.7	-18.6	1.00 V	149	2.5	32.6
7	*2402.00	103.8 PK			1.00 V	149	71.2	32.6
8	*2402.00	73.7 AV			1.00 V	149	41.1	32.6
9	4804.00	57.8 PK	74.0	-16.2	1.00 V	106	18.0	39.8
10	4804.00	27.7 AV	54.0	-26.3	1.00 V	106	-12.1	39.8

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. The DH5 packet was the worse case duty cycle for a transmit dwell time on a channel, based upon bluetooth theory the transmitter is on 0.625 * 5 per 296.25 ms per channel. Therefore, the duty cycle correlation factor be equal to: 20log(3.125 / 100)= -30.1 dB.
7. Average value = peak reading + 20log(duty cycle).
8. "#":The radiated frequency is out the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 39	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 78%RH 1008hPa	TESTED BY	Nick Chen
TEST MODE	A		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#1628.00	44.5 PK	87.1	-42.6	1.00 H	65	15.0	29.5
2	#1628.00	40.5 AV	57.0	-16.5	1.00 H	65	11.0	29.5
3	*2441.00	107.1 PK			1.00 H	119	74.4	32.7
4	*2441.00	77.0 AV			1.00 H	119	44.3	32.7
5	4882.00	48.7 PK	74.0	-25.3	1.00 H	312	8.6	40.1
6	4882.00	18.6 AV	54.0	-35.4	1.00 H	312	-21.5	40.1
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#1628.00	41.0 PK	83.1	-42.1	1.00 H	65	11.5	29.5
2	#1628.00	33.5 AV	53.0	-19.5	1.00 H	65	4.0	29.5
3	*2441.00	103.1 PK			1.00 H	119	70.4	32.7
4	*2441.00	73.0 AV			1.00 H	119	40.3	32.7
5	4882.00	56.7 PK	74.0	-17.3	1.00 H	312	16.6	40.1
6	4882.00	26.6 AV	54.0	-27.4	1.00 H	312	-13.5	40.1

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. The DH5 packet was the worse case duty cycle for a transmit dwell time on a channel, based upon bluetooth theory the transmitter is on 0.625 * 5 per 296.25 ms per channel. Therefore, the duty cycle correlation factor be equal to: 20log(3.125 / 100)= -30.1 dB.
7. Average value = peak reading + 20log(duty cycle).
8. "#":The radiated frequency is out the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 78	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 78%RH 1008hPa	TESTED BY	Nick Chen
TEST MODE	A		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#1654.00	48.3 PK	85.2	-36.9	1.00 H	85	18.6	29.7
2	#1654.00	42.6 AV	55.1	-12.5	1.00 H	85	12.9	29.7
3	*2480.00	105.2 PK			1.00 H	117	72.4	32.8
4	*2480.00	75.1 AV			1.00 H	117	42.3	32.8
5	2483.50	54.9 PK	74.0	-19.1	1.00 H	117	22.1	32.8
6	2483.50	24.8 AV	54.0	-29.2	1.00 H	117	-8.0	32.8
7	4960.00	48.1 PK	74.0	-25.9	1.00 H	301	7.9	40.2
8	4960.00	18.0 AV	54.0	-36.0	1.00 H	301	-22.2	40.2
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#1654.00	41.8 PK	82.4	-40.6	1.00 V	163	12.1	29.7
2	#1654.00	35.5 AV	52.3	-16.8	1.00 V	163	5.8	29.7
3	*2480.00	102.4 PK			1.22 V	151	69.6	32.8
4	*2480.00	72.3 AV			1.22 V	151	39.5	32.8
5	2483.50	52.1 PK	74.0	-21.9	1.22 V	151	19.3	32.8
6	2483.50	22.0 AV	54.0	-32.0	1.22 V	151	-10.8	32.8
7	4960.00	54.0 PK	74.0	-20.0	1.00 V	90	13.8	40.2
8	4960.00	23.9 AV	54.0	-30.1	1.00 V	90	-16.3	40.2

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. The DH5 packet was the worse case duty cycle for a transmit dwell time on a channel, based upon bluetooth theory the transmitter is on 0.625 * 5 per 296.25 ms per channel. Therefore, the duty cycle correlation factor be equal to: 20log(3.125 / 100)= -30.1 dB.
7. Average value = peak reading + 20log(duty cycle).
8. "#":The radiated frequency is out the restricted band.

8DPSK MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 0	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 78%RH 1008hPa	TESTED BY	Nick Chen
TEST MODE	A		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1602.00	44.5 PK	74.0	-29.5	1.00 H	92	15.1	29.4
2	1602.00	39.5 AV	54.0	-14.5	1.00 H	92	10.1	29.4
3	2390.00	57.7 PK	74.0	-16.3	1.03 H	119	25.1	32.6
4	2390.00	44.5 AV	54.0	-9.5	1.03 H	119	11.9	32.6
5	#2400.00	58.1 PK	83.3	-25.2	1.03 H	119	25.5	32.6
6	#2400.00	28.0 AV	53.2	-25.2	1.03 H	119	-4.6	32.6
7	*2402.00	103.3 PK			1.03 H	119	70.7	32.6
8	*2402.00	73.2 AV			1.03 H	119	40.6	32.6
9	4804.00	47.9 PK	74.0	-26.1	1.02 H	324	8.1	39.8
10	4804.00	17.8 AV	54.0	-36.2	1.02 H	324	-22.0	39.8

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. The DH5 packet was the worse case duty cycle for a transmit dwell time on a channel, based upon bluetooth theory the transmitter is on 0.625 * 5 per 296.25 ms per channel. Therefore, the duty cycle correlation factor be equal to: 20log(3.125 / 100)= -30.1 dB.
7. Average value = peak reading + 20log(duty cycle).
8. "#":The radiated frequency is out the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 0	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 78%RH 1008hPa	TESTED BY	Nick Chen
TEST MODE	A		

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	1602.00	42.2 PK	74.0	-31.8	1.00 V	296	12.8	29.4
2	1602.00	35.4 AV	54.0	-18.6	1.00 V	296	6.0	29.4
3	2390.00	57.1 PK	74.0	-16.9	1.00 V	165	24.5	32.6
4	**2390.00**	**44.6 AV**	**54.0**	**-9.4**	**1.00 V**	**165**	**12.0**	**32.6**
5	#2400.00	56.7 PK	81.9	-25.2	1.00 V	165	24.1	32.6
6	#2400.00	26.6 AV	51.8	-25.2	1.00 V	165	-6.0	32.6
7	*2402.00	101.9 PK			1.00 V	165	69.3	32.6
8	*2402.00	71.8 AV			1.00 V	165	39.2	32.6
9	4804.00	53.8 PK	74.0	-20.2	1.06 V	179	14.0	39.8
10	4804.00	23.7 AV	54.0	-30.3	1.06 V	179	-16.1	39.8

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. The DH5 packet was the worse case duty cycle for a transmit dwell time on a channel, based upon bluetooth theory the transmitter is on 0.625 * 5 per 296.25 ms per channel. Therefore, the duty cycle correlation factor be equal to: 20log(3.125 / 100)= -30.1 dB.
7. Average value = peak reading + 20log(duty cycle).
8. "#":The radiated frequency is out the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 39	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 78%RH 1008hPa	TESTED BY	Nick Chen
TEST MODE	A		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#1628.00	44.2 PK	84.4	-40.2	1.00 H	113	14.7	29.5
2	#1628.00	40.0 AV	54.3	-14.3	1.00 H	113	10.5	29.5
3	*2441.00	104.4 PK			1.00 H	111	71.7	32.7
4	*2441.00	74.3 AV			1.00 H	111	41.6	32.7
5	4882.00	49.2 PK	74.0	-24.8	1.00 H	298	9.1	40.1
6	4882.00	19.1 AV	54.0	-34.9	1.00 H	298	-21.0	40.1
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#1628.00	41.8 PK	79.1	-37.3	1.00 V	263	12.3	29.5
2	#1628.00	35.1 AV	49.0	-13.9	1.00 V	263	5.6	29.5
3	*2441.00	99.1 PK			1.22 V	145	66.4	32.7
4	*2441.00	69.0 AV			1.22 V	145	36.3	32.7
5	4882.00	52.5 PK	74.0	-21.5	1.00 V	103	12.4	40.1
6	4882.00	22.4 AV	54.0	-31.6	1.00 V	103	-17.7	40.1

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. The DH5 packet was the worse case duty cycle for a transmit dwell time on a channel, based upon bluetooth theory the transmitter is on 0.625 * 5 per 296.25 ms per channel. Therefore, the duty cycle correlation factor be equal to: 20log(3.125 / 100)= -30.1 dB.
7. Average value = peak reading + 20log(duty cycle).
8. "#":The radiated frequency is out the restricted band.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 78	FREQUENCY RANGE	1 ~ 25GHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	26deg. C, 78%RH 1008hPa	TESTED BY	Nick Chen
TEST MODE	A		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#1654.00	46.6 PK	83.3	-36.7	1.00 H	86	16.9	29.7
2	#1654.00	43.5 AV	53.2	-9.7	1.00 H	86	13.8	29.7
3	*2480.00	103.3 PK			1.00 H	119	70.5	32.8
4	*2480.00	73.2 AV			1.00 H	119	40.4	32.8
5	2483.50	47.4 PK	74.0	-26.6	1.00 H	119	14.6	32.8
6	2483.50	17.3 AV	54.0	-36.7	1.00 H	119	-15.5	32.8
7	4960.00	48.5 PK	74.0	-25.5	1.00 H	312	8.3	40.2
8	4960.00	18.4 AV	54.0	-35.6	1.00 H	312	-21.8	40.2
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	#1654.00	42.7 PK	79.6	-36.9	1.00 V	118	13.0	29.7
2	#1654.00	36.4 AV	49.5	-13.1	1.00 V	118	6.7	29.7
3	*2480.00	99.6 PK			1.25 V	153	66.8	32.8
4	*2480.00	69.5 AV			1.25 V	153	36.7	32.8
5	2483.50	43.7 PK	74.0	-30.3	1.25 V	153	10.9	32.8
6	2483.50	13.6 AV	54.0	-40.4	1.25 V	153	-19.2	32.8
7	4960.00	50.5 PK	74.0	-23.5	1.00 V	116	10.3	40.2
8	4960.00	20.4 AV	54.0	-33.6	1.00 V	116	-19.8	40.2

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.
5. " * ": Fundamental frequency.
6. The DH5 packet was the worse case duty cycle for a transmit dwell time on a channel, based upon bluetooth theory the transmitter is on 0.625 * 5 per 296.25 ms per channel. Therefore, the duty cycle correlation factor be equal to: 20log(3.125 / 100)= -30.1 dB.
7. Average value = peak reading + 20log(duty cycle).
8. "#":The radiated frequency is out the restricted band.

BELOW 1GHz WORST-CASE DATA：GFSK MODULATION

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 0	FREQUENCY RANGE	Below 1000MHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	26deg. C, 78%RH 1008hPa	TESTED BY	Nick Chen
TEST MODE	A		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	33.89	22.6 QP	40.0	-17.4	1.04 H	184	10.3	12.3
2	399.34	30.2 QP	46.0	-15.8	1.13 H	166	12.1	18.1
3	813.39	25.2 QP	46.0	-20.8	1.31 H	58	-1.6	26.8
4	852.26	25.9 QP	46.0	-20.1	1.05 H	130	-1.5	27.4
5	893.09	25.9 QP	46.0	-20.1	1.12 H	124	-2.1	28.0
6	908.64	26.3 QP	46.0	-19.7	1.30 H	28	-1.8	28.1
7	957.23	26.7 QP	46.0	-19.3	1.07 H	274	10.3	12.3
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	39.72	30.5 QP	40.0	-9.5	1.05 V	121	17.2	13.3
2	68.88	21.8 QP	40.0	-18.2	1.13 V	265	9.5	12.3
3	399.34	25.6 QP	46.0	-20.4	1.27 V	190	7.5	18.1
4	813.39	25.2 QP	46.0	-20.8	1.16 V	151	-1.6	26.8
5	848.38	25.6 QP	46.0	-20.4	1.22 V	37	-1.8	27.4
6	887.25	26.0 QP	46.0	-20.0	1.27 V	292	-1.9	27.9
7	928.08	26.8 QP	46.0	-19.2	1.11 V	124	-1.6	28.4

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 0	FREQUENCY RANGE	Below 1000MHz
INPUT POWER	120Vac, 60Hz	DETECTOR FUNCTION	Quasi-Peak
ENVIRONMENTAL CONDITIONS	26deg. C, 78%RH 1008hPa	TESTED BY	Nick Chen
TEST MODE	B		

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	760.90	25.0 QP	46.0	-21.0	1.06 H	190	-1.0	26.0
2	803.67	24.3 QP	46.0	-21.7	1.18 H	19	-2.4	26.7
3	834.77	25.0 QP	46.0	-21.0	1.26 H	253	-2.2	27.2
4	867.82	25.5 QP	46.0	-20.5	1.42 H	103	-2.1	27.6
5	902.81	26.4 QP	46.0	-19.6	1.07 H	10	-1.7	28.1
6	933.91	26.5 QP	46.0	-19.5	1.16 H	256	-1.9	28.4
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M								
NO.	FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA HEIGHT (m)	TABLE ANGLE (Degree)	RAW VALUE (dBuV)	CORRECTION FACTOR (dB/m)
1	33.89	21.4 QP	40.0	-18.6	1.14 V	10	9.1	12.3
2	801.72	24.2 QP	46.0	-21.8	1.29 V	10	-2.4	26.6
3	834.77	25.1 QP	46.0	-20.9	1.18 V	265	-2.1	27.2
4	871.70	25.7 QP	46.0	-20.3	1.23 V	184	-2.0	27.7
5	914.47	26.5 QP	46.0	-19.5	1.00 V	220	-1.7	28.2
6	947.52	26.3 QP	46.0	-19.7	1.08 V	10	-2.3	28.6

REMARKS: 1. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m).
2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB).
3. The other emission levels were very low against the limit.
4. Margin value = Emission level – Limit value.

4.8 BAND EDGES MEASUREMENT

4.8.1 LIMITS OF BAND EDGES MEASUREMENT

Below –20dB of the highest emission level of operating band (in 100KHz RBW).

4.8.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
SPECTRUM ANALYZER	FSP 40	100036	Apr. 03, 2009	Apr. 02, 2010

NOTE: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.8.3 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer via a low lose cable. Set both RBW and VBW of spectrum analyzer to 100 kHz and 300 kHz with suitable frequency span including 100 MHz bandwidth from band edge. The band edges was measured and recorded.
The spectrum plots are attached on the following pages.

4.8.4 DEVIATION FROM TEST STANDARD

No deviation.

4.8.5 EUT OPERATING CONDITION

The software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel frequencies individually.

4.8.6 TEST RESULTS

The spectrum plots are attached on the following 8 images. D1 line indicates the highest level, D2 line indicates the 20dB offset below D1. It shows compliance with the requirement in part 15.247(d).

Mode A: FOR GFSK

RESTRICT BAND (2310 ~ 2390 MHz)

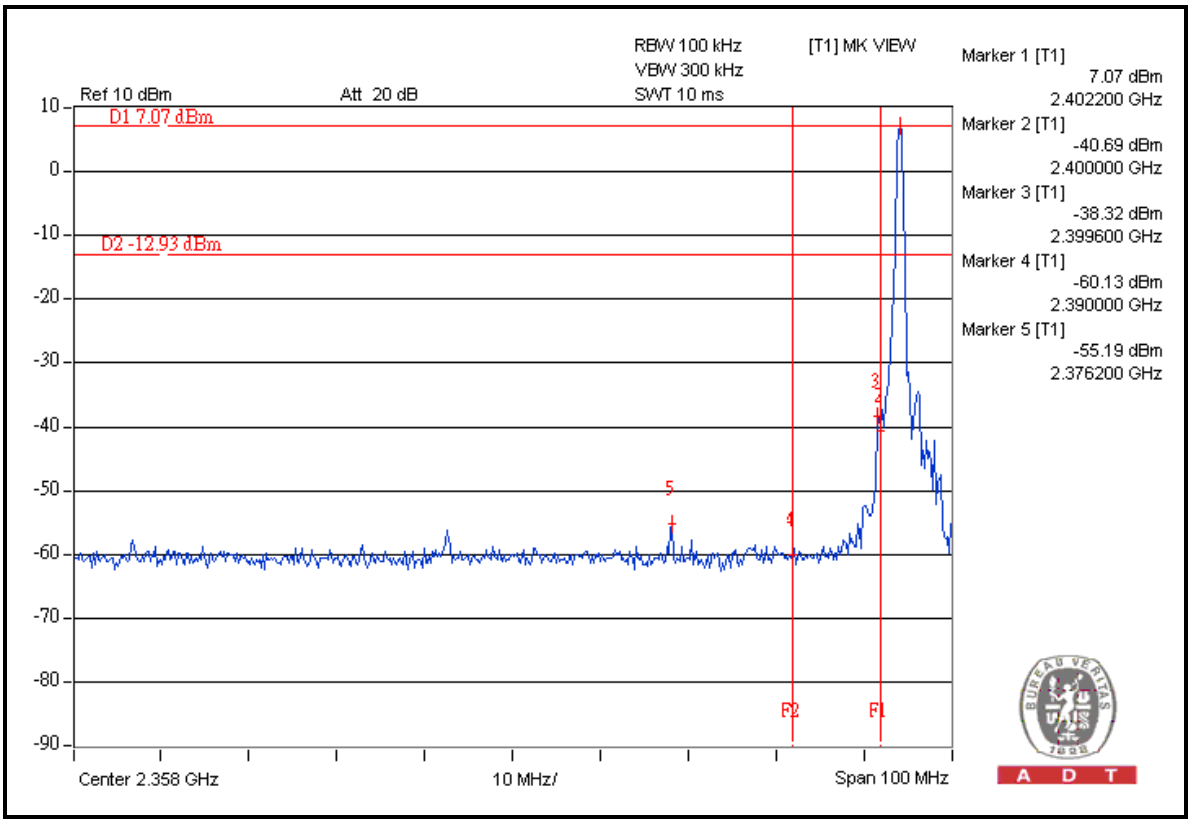
FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2402.00 (PK)	105.4	62.3	43.1	74.00
2402.00 (AV)	-	-	13.0	54.00

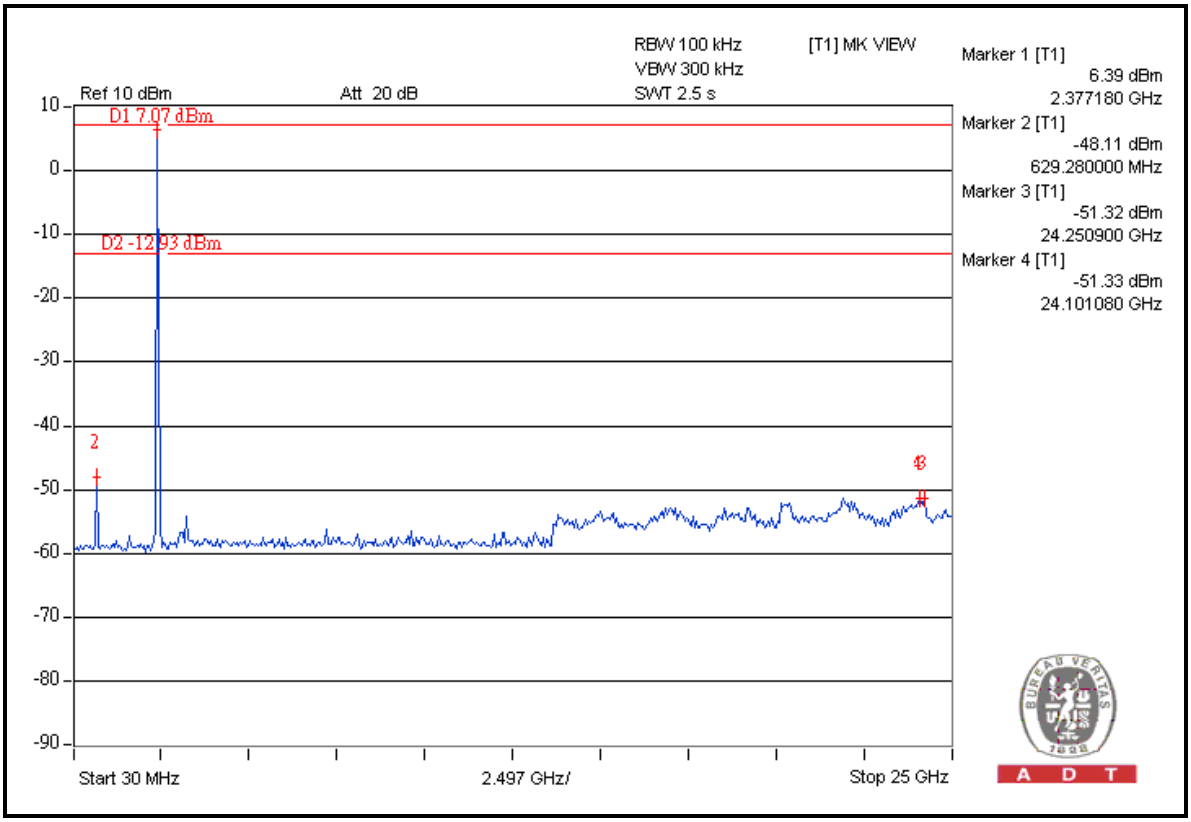
RESTRICT BAND (2483.5 ~ 2500 MHz)

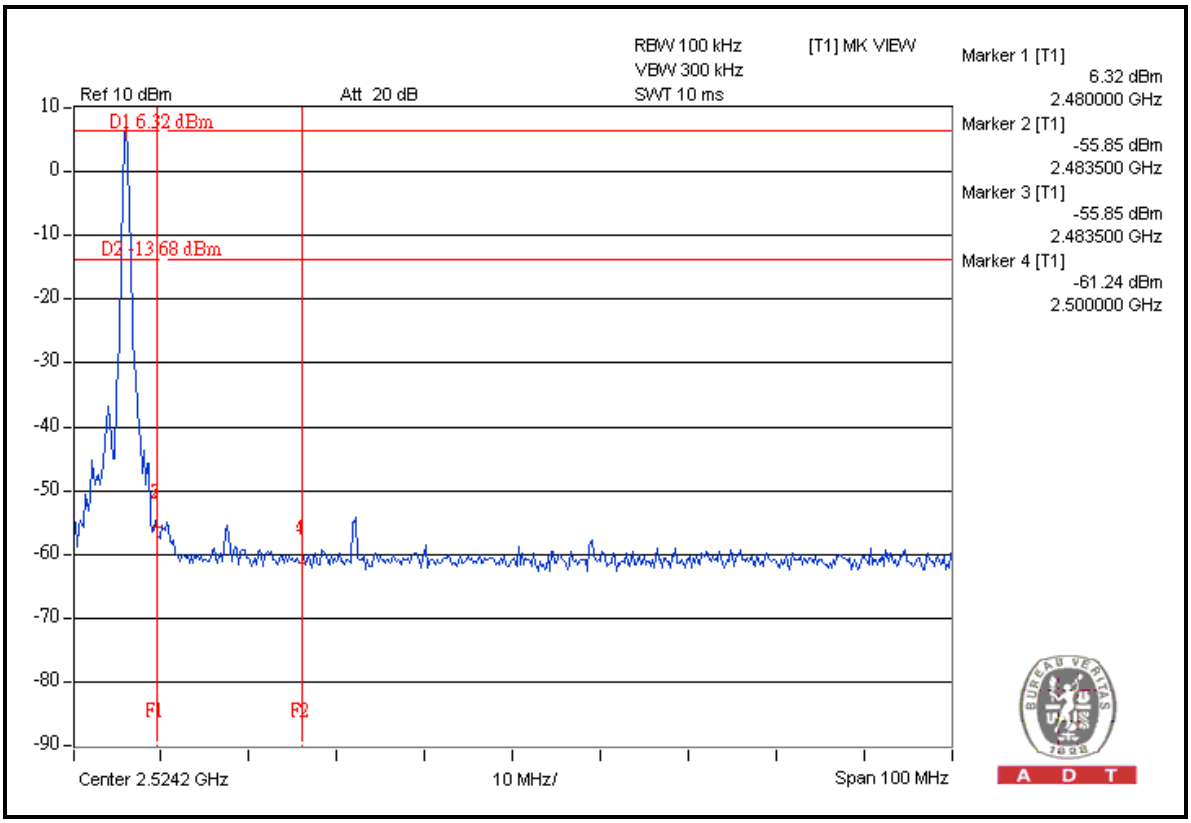
FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2480.00 (PK)	105.2	62.2	43.0	74.00
2480.00 (AV)	-	-	12.9	54.00

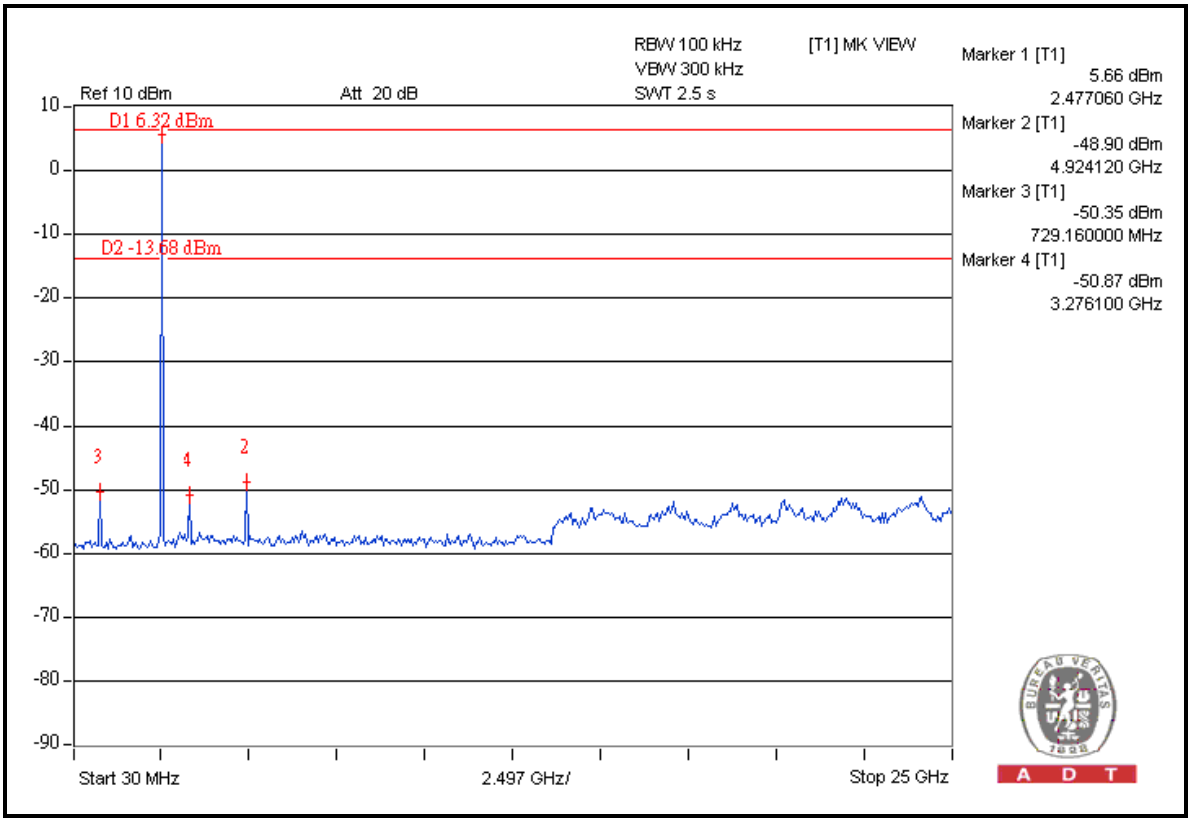
NOTE:

1. Delta = Amplitude between the peak of the fundamental and the peak of the band edge emission. Please check following 2 pages.
2. Maximum field strength in restrict band (PK value) = Fundamental emission (PK value) – Delta.
3. Average value =Peak value + 20 Log (duty cycle) = Peak value – 30.1dB.
4. The DH5 packet was the worse case duty cycle for a transmit dwell time on a channel, based upon Bluetooth theory the transmitter is on 0.625 * 5 per 296.25 ms per channel. Therefore, the duty cycle correction factor be equal to: 20log (3.125/100)= -30.1 dB.


RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 10 dBm
Att 20 dB
D1 7.07 dBm
D2 -12.93 dBm
Marker 1 [T1]
7.07 dBm
2.402200 GHz
Marker 2 [T1]
-40.69 dBm
2.400000 GHz
Marker 3 [T1]
-38.32 dBm
2.399600 GHz
Marker 4 [T1]
-60.13 dBm
2.390000 GHz
Marker 5 [T1]
-55.19 dBm
2.376200 GHz
Center 2.358 GHz
10 MHz/
Span 100 MHz


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 10 dBm
Att 20 dB
D1 7.07 dBm
D2 -12.93 dBm
Marker 1 [T1]
6.39 dBm
2.377180 GHz
Marker 2 [T1]
-48.11 dBm
629.280000 MHz
Marker 3 [T1]
-51.32 dBm
24.250900 GHz
Marker 4 [T1]
-51.33 dBm
24.101080 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz


RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 10 dBm
Att 20 dB
D1 6.32 dBm
D2 -13.68 dBm
Marker 1 [T1]
6.32 dBm
2.480000 GHz
Marker 2 [T1]
-55.85 dBm
2.483500 GHz
Marker 3 [T1]
-55.85 dBm
2.483500 GHz
Marker 4 [T1]
-61.24 dBm
2.500000 GHz
F1
F2
Center 2.5242 GHz
10 MHz/
Span 100 MHz


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 10 dBm
Att 20 dB
D1 6.32 dBm
D2 -13.68 dBm
Marker 1 [T1]
5.66 dBm
2.477060 GHz
Marker 2 [T1]
-48.90 dBm
4.924120 GHz
Marker 3 [T1]
-50.35 dBm
729.160000 MHz
Marker 4 [T1]
-50.87 dBm
3.276100 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz

Mode A: FOR 8DPSK

RESTRICT BAND (2310 ~ 2390 MHz)

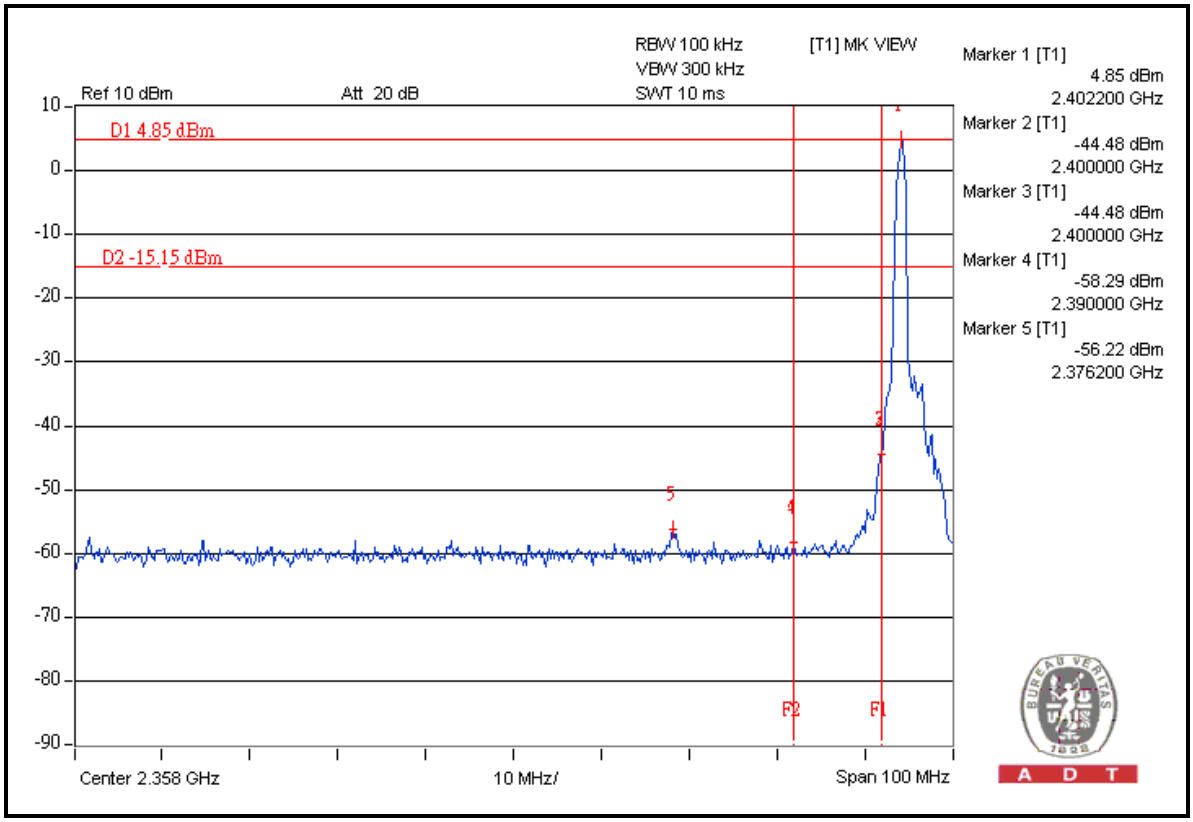
FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2402.00 (PK)	103.3	61.1	42.2	74.00
2402.00 (AV)	-	-	12.1	54.00

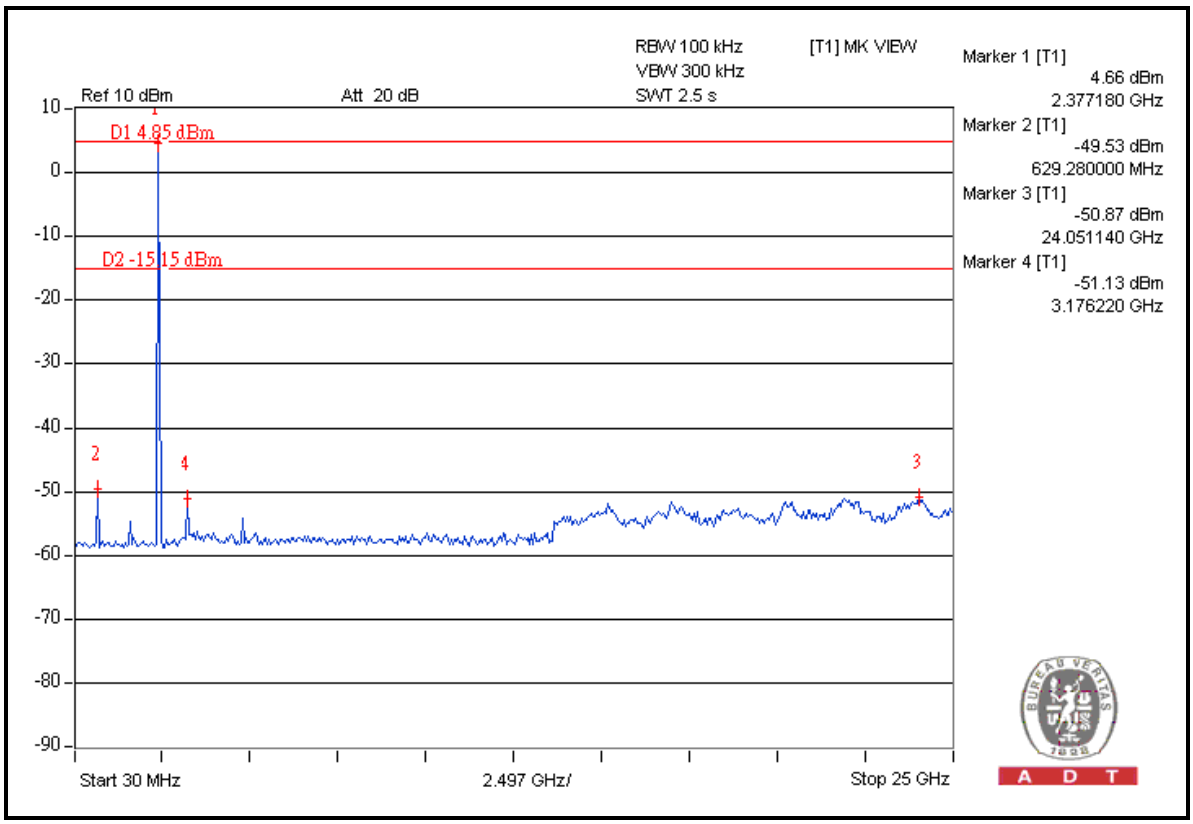
RESTRICT BAND (2483.5 ~ 2500 MHz)

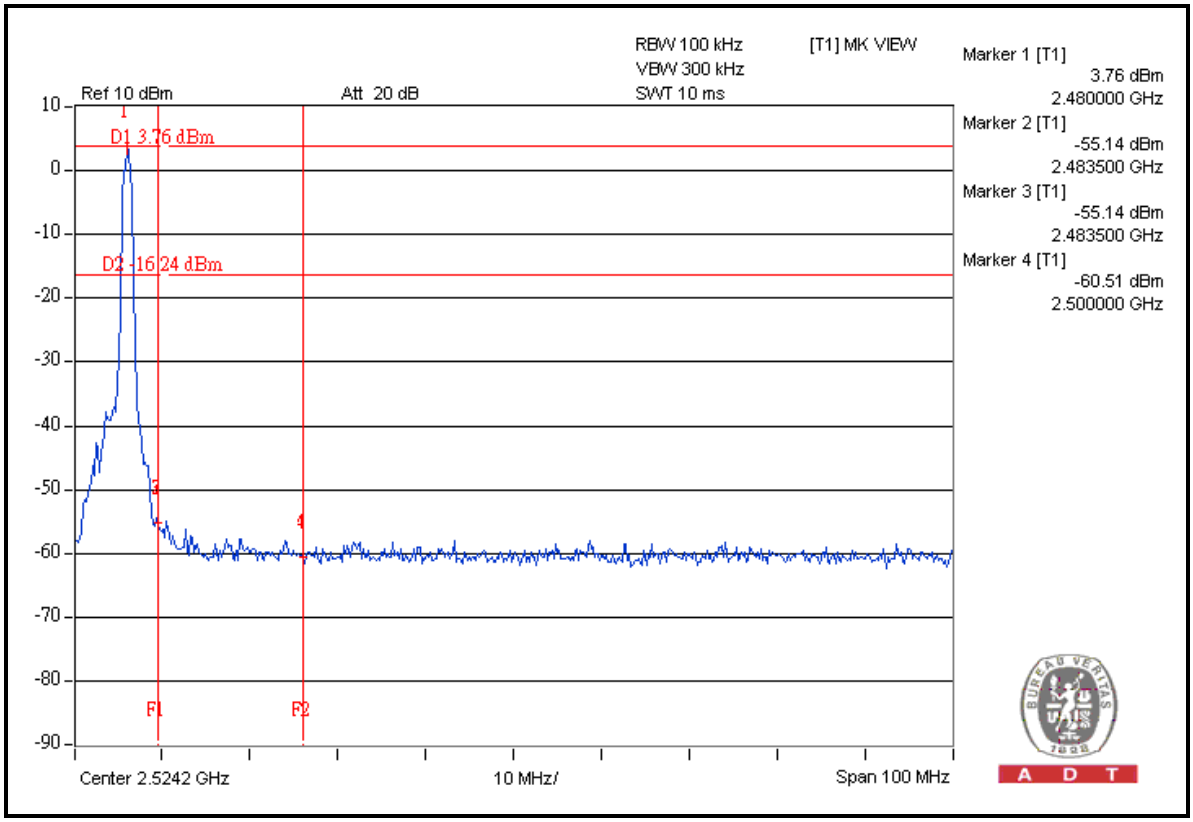
FREQUENCY (MHz)	FUNDAMENTAL EMISSION (dBuV/m)	DELTA (dB)	MAXIMUM FIELD STRENGTH IN RESTRICT BAND (dBuV/m)	LIMIT (dBuV/m)
2480.00 (PK)	103.3	58.9	44.4	74.00
2480.00 (AV)	-	-	14.3	54.00

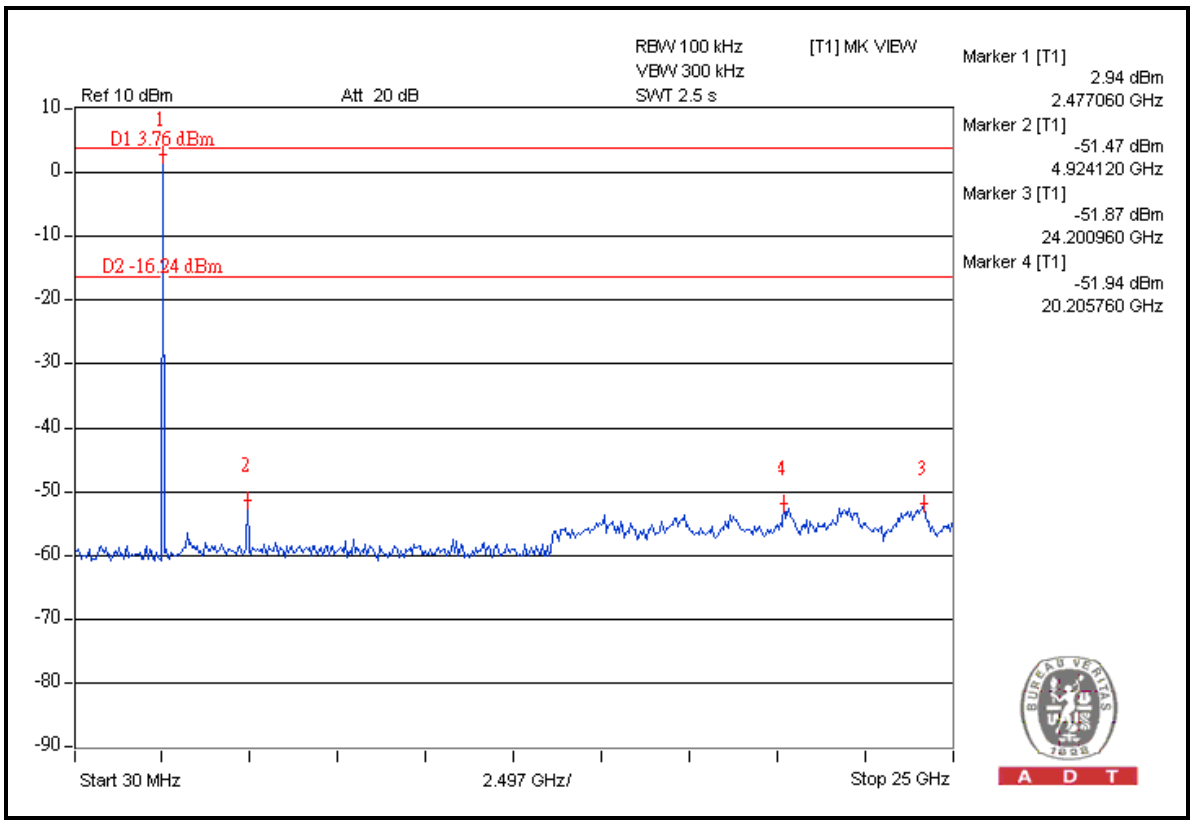
NOTE:

1. Delta = Amplitude between the peak of the fundamental and the peak of the band edge emission. Please check following 2 pages.
2. Maximum field strength in restrict band (PK value) = Fundamental emission (PK value) – Delta.
3. Average value =Peak value + 20 Log (duty cycle) = Peak value – 30.1dB.
4. The DH5 packet was the worse case duty cycle for a transmit dwell time on a channel, based upon Bluetooth theory the transmitter is on 0.625 * 5 per 296.25 ms per channel. Therefore, the duty cycle correction factor be equal to: 20log (3.125/100)= -30.1 dB.


RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 10 dBm
Att 20 dB
D1 4.85 dBm
D2 -15.15 dBm
Marker 1 [T1]
4.85 dBm
2.402200 GHz
Marker 2 [T1]
-44.48 dBm
2.400000 GHz
Marker 3 [T1]
-44.48 dBm
2.400000 GHz
Marker 4 [T1]
-58.29 dBm
2.390000 GHz
Marker 5 [T1]
-56.22 dBm
2.376200 GHz
Center 2.358 GHz
10 MHz/
Span 100 MHz


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 10 dBm
Att 20 dB
D1 4.85 dBm
D2 -15.15 dBm
Marker 1 [T1]
4.66 dBm
2.377180 GHz
Marker 2 [T1]
-49.53 dBm
629.280000 MHz
Marker 3 [T1]
-50.87 dBm
24.051140 GHz
Marker 4 [T1]
-51.13 dBm
3.176220 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz


RBW 100 kHz
VBW 300 kHz
SWT 10 ms
[T1] MK VIEW
Ref 10 dBm
Att 20 dB
D1 3.76 dBm
D2 -16.24 dBm
Marker 1 [T1]
3.76 dBm
2.480000 GHz
Marker 2 [T1]
-55.14 dBm
2.483500 GHz
Marker 3 [T1]
-55.14 dBm
2.483500 GHz
Marker 4 [T1]
-60.51 dBm
2.500000 GHz
F1
F2
Center 2.5242 GHz
10 MHz/
Span 100 MHz


RBW 100 kHz
VBW 300 kHz
SWT 2.5 s
[T1] MK VIEW
Ref 10 dBm
Att 20 dB
D1 3.76 dBm
D2 -16.24 dBm
Marker 1 [T1]
2.94 dBm
2.477060 GHz
Marker 2 [T1]
-51.47 dBm
4.924120 GHz
Marker 3 [T1]
-51.87 dBm
24.200960 GHz
Marker 4 [T1]
-51.94 dBm
20.205760 GHz
Start 30 MHz
2.497 GHz/
Stop 25 GHz

5. PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).

6. INFORMATION ON THE TESTING LABORATORIES

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

USA	FCC, NVLAP
Germany	TUV Rheinland
Japan	VCCI
Norway	NEMKO
Canada	INDUSTRY CANADA, CSA
R.O.C.	TAF, BSMI, NCC
Netherlands	Telefication
Singapore	GOST-ASIA (MOU)
Russia	CERTIS (MOU)

Copies of accreditation certificates of our laboratories obtained from approval agencies can be downloaded from our web site: www.adt.com.tw/index.5/phtml.
If you have any comments, please feel free to contact us at the following:

Linko EMC/RF Lab:
Tel: 886-2-26052180
Fax: 886-2-26051924

Hsin Chu EMC/RF Lab:
Tel: 886-3-5935343
Fax: 886-3-5935342

Hwa Ya EMC/RF/Safety Telecom Lab:
Tel: 886-3-3183232
Fax: 886-3-3185050

Web Site: www.adt.com.tw

The address and road map of all our labs can be found in our web site also.

7. APPENDIX A – MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications are made to the EUT by the lab during the test.

---END---