NVLAP LAB CODE 200707-0

FCC PART 15.247

MEASUREMENT AND TEST REPORT

For

KINGJON TECHNOLOGY (HK) CO., LIMITED

UNIT D, 10/F, CHINA OVERSEAS BUILDING, 139 HENNESSY ROAD, WANCHAI HK

FCC ID: S7O0013EF3

This Report Concerns:	Equipment Type:
☒ Original Report	Bluetooth Stereo Headset

Test Engineer:	Merry Zhao
Report No.:	RSZ07102601
Test Date:	2007-10-31 to 2007-11-09
Report Date:	2007-12-05
Reviewed By:	EMC Manager: Green Xu
Prepared By:	Bay Area Compliance Laboratories Corp.(Shenzhen) 6/F, the 3rd Phase of WanLi Industrial Building, ShiHua Road, FuTian Free Trade Zone Shenzhen, Guangdong, China Tel: +86-755-33320018 Fax: +86-755-33320008

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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

The *KINGJON TECHNOLOGY (HK) CO., LIMITED*'s product, model number: *BTH-310 o*r the "EUT" as referred to in this report is a *Bluetooth stereo headset*, which measures approximately 5.5 cm L x 2.8 cm W x 1.5 cm H, rated input voltage: DC 3.7V Battery.

Adapter:
Model: WQ-5W 05003005ZB, Input: 100-240 V~50/60 Hz 0.15A MAX, Output: 5.0 V 300 mA

** All measurement and test data in this report was gathered from production sample serial number: 0710020 (Assigned by BACL, Shenzhen). The EUT was received on 2007-10-26.*

Objective

This Type approval report is prepared on behalf of *KINGJON TECHNOLOGY (HK) CO., LIMITED* in accordance with Part 2, Subpart J, Part 15, Subparts A, B and C of the Federal Communication Commissions rules.

The tests were performed in order to determine compliance with FCC Part 15, Subpart C, and section 15.203,15.205, 15.209 and 15.247 rules.

Related Submittal(s)/Grant(s)

No related submittal(s).

Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2003, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

All emissions measurement was performed and Bay Area Compliance Laboratories Corp.(Shenzhen). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp.(Shenzhen) to collect test data is located in the 6/F, the 3rd Phase of WanLi Industrial Building, ShiHua Road, FuTian Free Trade Zone Shenzhen, Guangdong, China.

Test site at Bay Area Compliance Laboratories Corp.(Shenzhen) has been fully described in reports submitted to the Federal Communication Commission (FCC). The details of these reports have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on November 04, 2004. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2003.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 382179. The test site has been approved by the FCC for public use and is listed in the FCC Public Access Link (PAL) database.

Additionally, Bay Area Compliance Laboratories Corp.(Shenzhen) is a National Institute of Standards and Technology (NIST) accredited laboratory, under the National Voluntary Laboratory Accredited Program (Lab Code 200707-0).

NVLAP LAB CODE 200707-0

The current scope of accreditations can be found at http://ts.nist.gov/Standards/scopes/2007070.htm .

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The system was configured for testing in a typical fashion (as normally used by a typical user).

EUT Exercise Software

N/A.

Special Accessories

N/A.

Equipment Modifications

No modification was made to the unit tested.

Host System Configuration List and Details

Manufacturer	Description	Model	Serial Number	FCC ID
DELL	PC	DELL 170L	CN-0TC670-70821-560-F4Q6	DoC
DELL	Keyboard	SK-8110	CN07N244-71616-56A-1B1E	DoC
DELL	Mouse	M071KC	520027907	DoC
DELL	LCD Monitor	1505FP	Y4287-7168-571-GBSH	DoC
ProMOS	Memory	V826632K24SATG-C0	0525-K1933700	DoC
Intel	CPU	Celeron D-2533	N/A	DoC

Local Support Equipment List and Details

Manufacturer	Description	Model	Serial Number	FCC ID
DELL	Motherboard	OWC297	CN-OWC297-70821-564-00NI	DoC
DELL	Power	NPS-250KB D	CN-0H2678-17972-56E-80BM	DoC
Seagate	Hard Disk	ST340014A	5JXK3GXE	DoC
DELL	3.5' Floppy	N/A	CN-0N8893-69802-54Q-02P0	DoC
Lite-ON	CD-Rom	LTN-489S	N/A	DoC
Intel	Ethernet	PRO 10/100 VE	N/A	DoC
CS	Smart Card	ACOS2	N/A	DoC

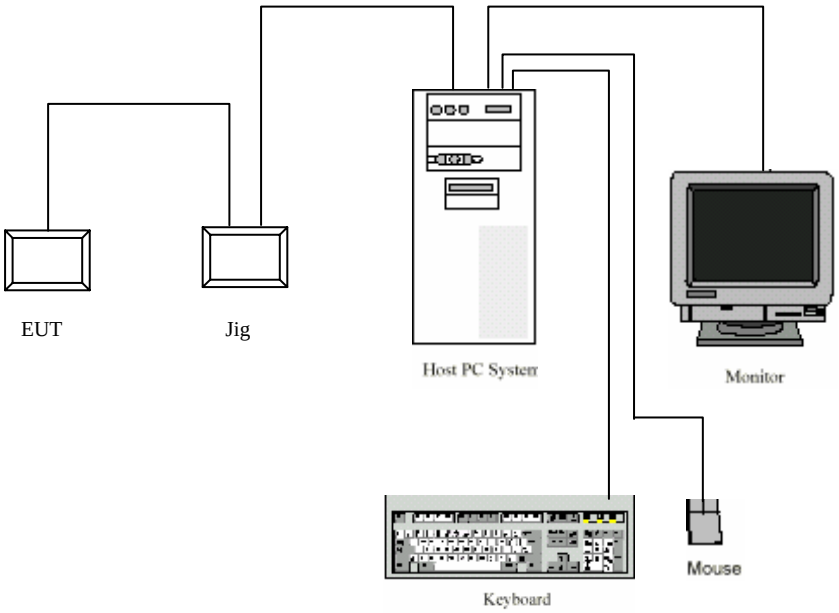
External I/O Cable

Cable Description	Length (M)	From Port	To
Shielded Detachable K/B Cable	1.5	K/B Port /Host	K/B
Shielded Detachable Mouse Cable	1.5	Mouse Port /Host	Mouse
Shielded Detachable VGA Cable	1.5	VGA Port /Host	Monitor
Shielded Detachable USB Cable	1.1	EUT	Adapter

Configuration of Test Setup

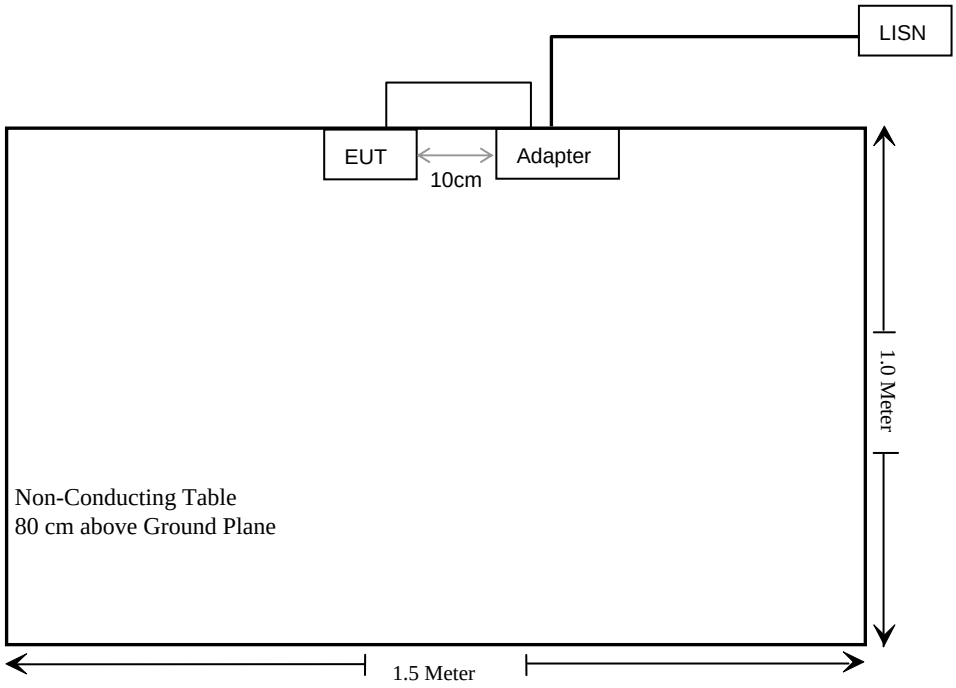
Charging mode:

Transmitting mode:

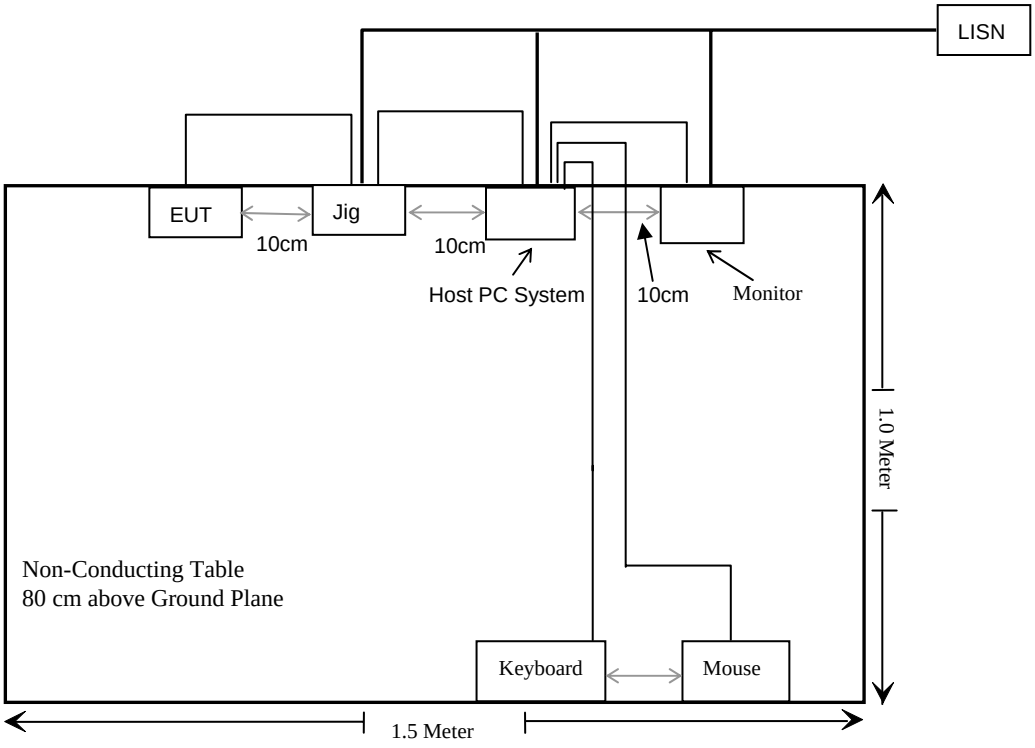


Block Diagram of Test Setup

Charging mode:



Transmitting mode:



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§15.247 (i) & §2.1093	RF Exposure	Compliant
§15.203	Antenna Requirement	Compliant
§15.109, §15.205, §15.209, §15.247(d)	Radiated Emission	Compliant*
§15.247(a)(1)	Channel Separation Test	Compliant
§15.247(a)(1)(iii)	Time of occupancy (Dwell Time)	Compliant
§15.247(a)(1)(iii)	Quantity of hopping channel Test	Compliant
§15.247(b)(1)	Peak Output Power Measurement	Compliant
§15.247(d)	Band edges testing	Compliant

** Within measurement uncertainty*

§15.247 (i) & §2.1093 - RF EXPOSURE

Standard Applicable

According to § 1.1310, systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.
According to FCC Exclusion list, In the following table, f_{GHz} is mid-band frequency in GHz, and d is the distance to a person'sbody, excluding hands, wrists, feet, and ankles.

Exposure category	low threshold	high threshold
general population	$(60/f_{GHz})$ mW, $d < 2.5$ cm $(120/f_{GHz})$ mW, $d \geq 2.5$ cm	$(900/f_{GHz})$ mW, $d < 20$ cm
occupational	$(375/f_{GHz})$ mW, $d < 2.5$ cm $(900/f_{GHz})$ mW, $d \geq 2.5$ cm	$(2250/f_{GHz})$ mW, $d < 20$ cm

Routine SAR evaluation refers to that specifically required by § 2.1093, using measurements or computer simulation. When routine SAR evaluation is not required, portable transmitters with output power greater than the applicable low threshold require SAR evaluation to qualify for TCB approval.

Measurement Result:

This is a portable device and the Max peak output power is 2.2029mW<737.402mW= (900/2.441GHz) mW*2

The SAR measurement is not required.

§15.203 - ANTENNA REQUIREMENT

Standard Applicable

According to § 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

This product has a integral antenna fulfillthe requirement of this section. Antenna gain is less than 0dBi.

Result: Compliant.

Please refer to the EUT internal photos.

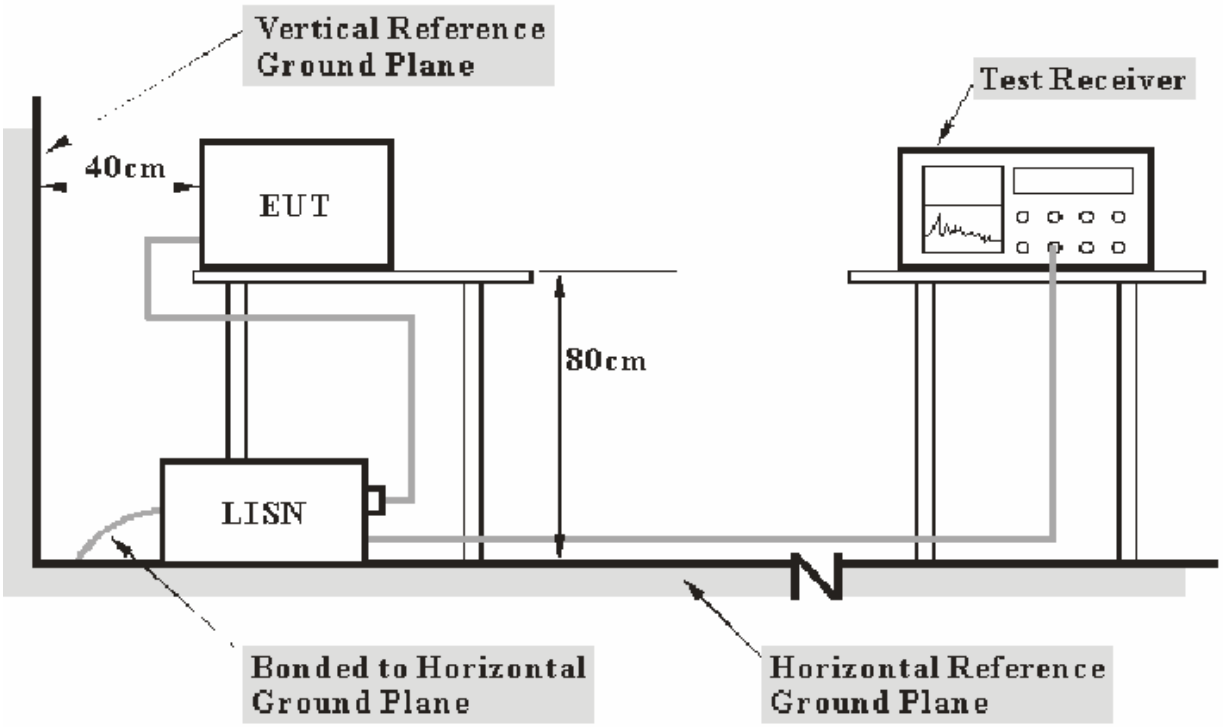
§15.207 (a) - CONDUCTED EMISSIONS

Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, and LISN.

Based on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any conducted emissions measurement at Bay Area Compliance Laboratories Corp.(Shenzhen) is ±2.4 dB.

EUT Setup



Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with per ANSI C63.4-2003 measurement procedure. The specification used was with the FCC Part 15 Class B limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The adapter was connected to a 120 VAC/60 Hz power source.

EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	***IF B/W***
150 kHz – 30 MHz	9 kHz

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Com-Power	L.I.S.N.	LI-200	12005	N/A	N/A
Com-Power	L.I.S.N.	LI-200	12008	N/A	N/A
Rohde & Schwarz	EMI Test Receiver	ESCI	100035	2007-10-26	2008-10-26
Rohde & Schwarz	L.I.S.N.	ESH2-Z5	892107/021	2007-03-26	2008-03-26

***** Com-Power's LISN were used as the supporting equipment.
*** Statement of Traceability:** Bay Area Compliance Laboratories Corp.(Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Test Procedure

During the conducted emission test, the adapter was connected to the outlet of the LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All data was recorded in the Quasi-peak and average detection mode.

Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Part 15.207, with the worst margin reading of:

11.90 dB at **3.520 MHz** in the **Neutral** conductor mode

Test Data

Environmental Conditions

Temperature:	25 ° C
Relative Humidity:	56 %
ATM Pressure:	100.0 kPa

The testing was performed by Merry Zhao on 2007-10-31.

Test Mode: Charging

Line Conducted Emissions				FCC Part 15 Class B	
Frequency (MHz)	**Amplitude (dBμV)**	**Detector (QP/AV)**	**Phase (Hot/Neutral)**	**Limit (dBμV)**	**Margin (dB)**
3.520	44.10	QP	Neutral	56.00	11.90
1.820	42.10	QP	Hot	56.00	13.90
0.740	41.60	QP	Hot	56.00	14.40
0.430	42.40	QP	Hot	57.30	14.90
1.290	37.90	QP	Hot	56.00	18.10
27.910	41.50	QP	Neutral	60.00	18.50
0.210	42.60	QP	Neutral	63.00	20.40
0.170	43.70	QP	Neutral	65.00	21.30
0.330	38.10	QP	Neutral	59.50	21.40
19.470	37.50	QP	Neutral	60.00	22.50
0.260	36.30	QP	Hot	61.40	25.10
0.190	38.60	QP	Hot	64.00	25.40
0.330	23.00	AV	Neutral	49.50	26.50
0.260	18.10	AV	Hot	51.40	33.30
19.620	16.20	AV	Neutral	50.00	33.80
0.430	13.30	AV	Hot	47.30	34.00
0.740	11.30	AV	Hot	46.00	34.70
0.210	17.90	AV	Neutral	53.20	35.30
1.820	9.90	AV	Hot	46.00	36.10
1.290	9.20	AV	Hot	46.00	36.80
3.520	7.40	AV	Neutral	46.00	38.60
0.190	13.80	AV	Hot	54.00	40.20
27.790	9.20	AV	Neutral	50.00	40.80
0.170	10.90	AV	Neutral	55.00	44.10

Plot(s) of Test Data

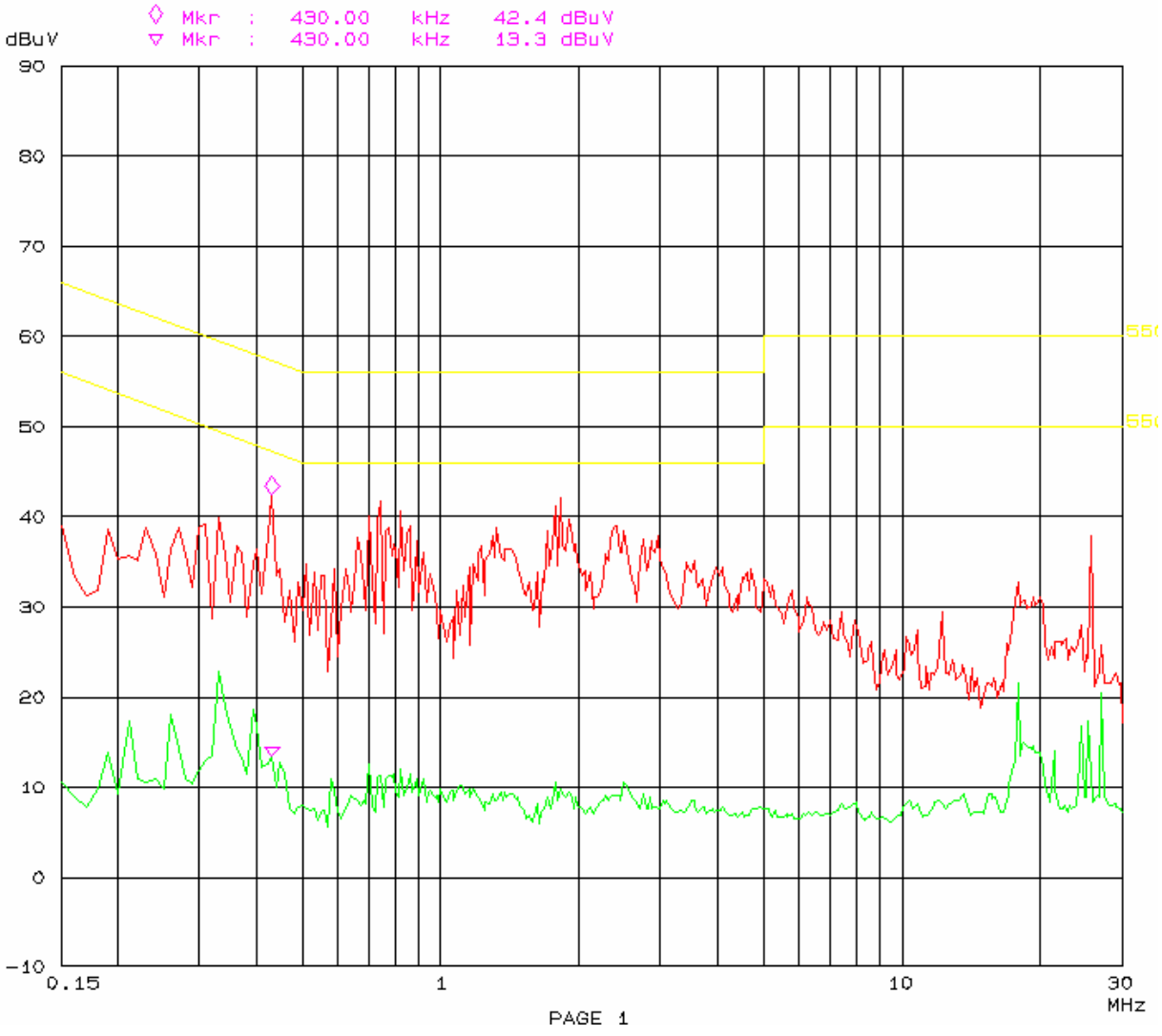
Plot(s) of Test Data is presented hereinafter as reference.

Conducted Emission Test

31. Oct 07 13:59

FCC part 15 B

EUT: Bluetooth Stereo headset M/N: BTH-310
Manuf: KINGJON
Op Cond: Charging
Operator: **Merry**
Test Spec: AC120V/60Hz L
Comment: temp: 25 Humi 56%

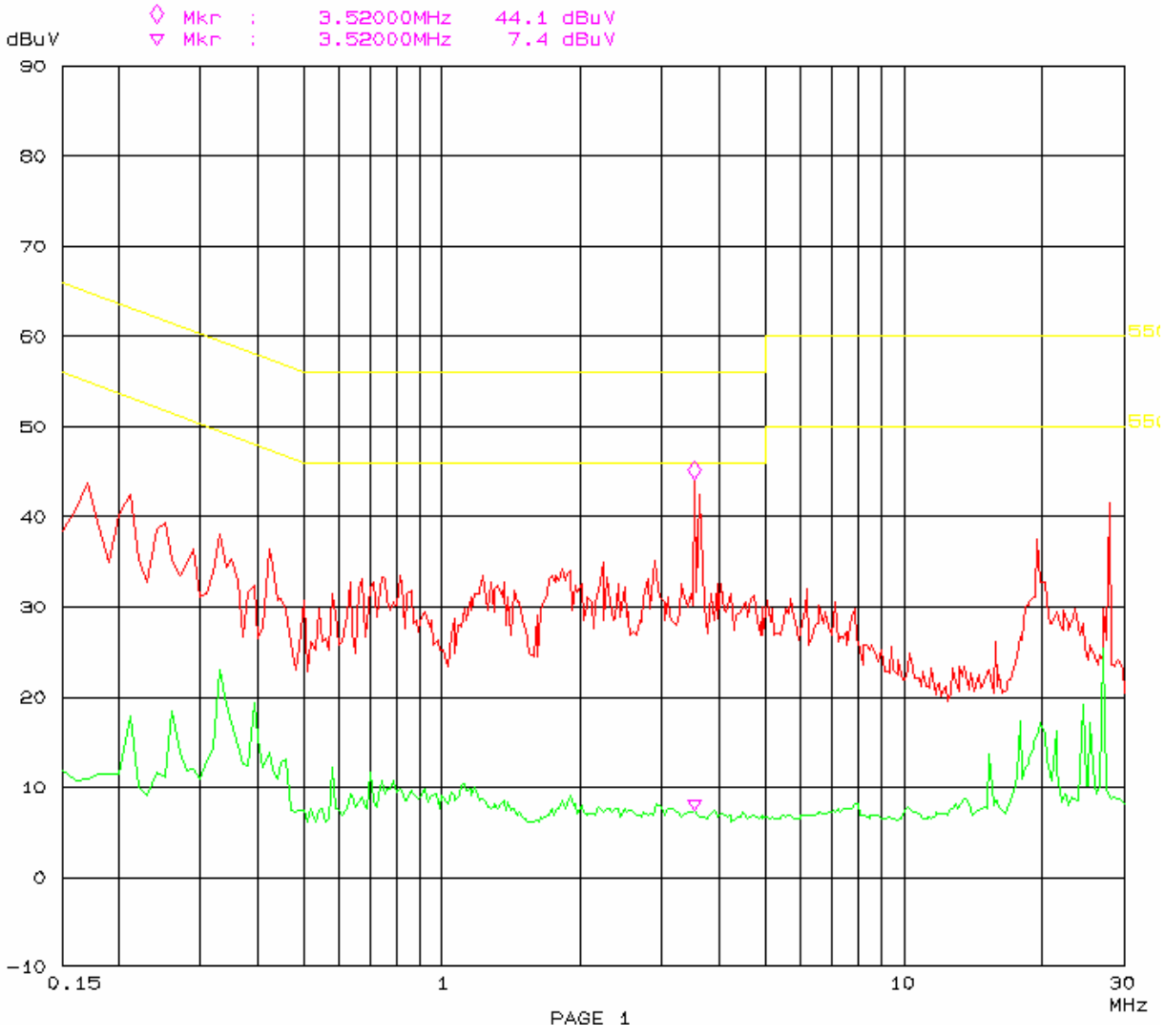


Conducted Emission Test

31. Oct 07 13:47

FCC part 15 B

EUT: Bluetooth Stereo headset M/N: BTH-310
Manuf: KINGJON
Op Cond: Charging
Operator: Merry
Test Spec: AC120V/60Hz N
Comment: temp: 25 Humi 56%



§15.109, §15.205, §15.209, §15.247 - RADIATED EMISSIONS

Applicable Standard

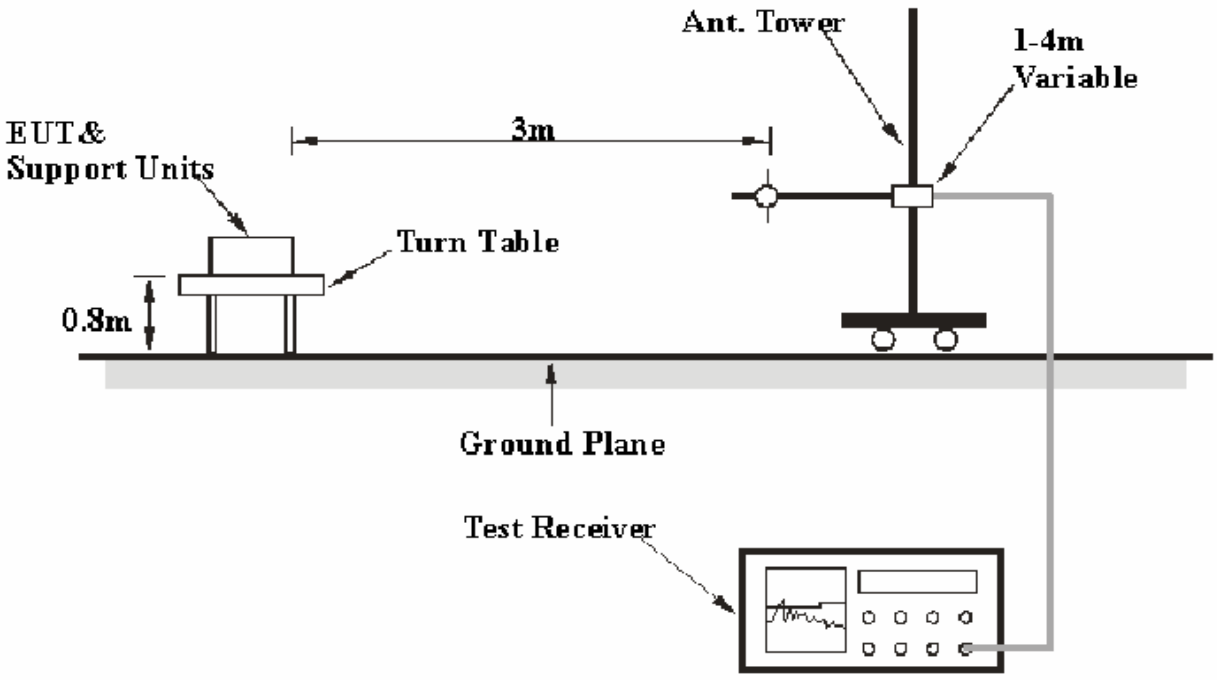
According to FCC §15.247 (d)

Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, antenna factor calibration, antenna directivity, antenna factor variation with height, antenna phase center variation, antenna factor frequency interpolation, measurement distance variation, site imperfections, mismatch (average), and system repeatability.

Based on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of a radiation emissions measurement at Bay Area Compliance Laboratories Corp.(Shenzhen) is ±4.0 dB.

EUT Setup



The radiated emission tests were performed in the 3 meters chamber B test site, using the setup accordance with the ANSI C63.4-2003. The specification used was the FCC 15.109, FCC 15.209 and FCC 15.247 limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

For Charging Mode:

The adapter was connected to a 120 VAC/60 Hz power source.

For Transmitting Mode:

The spacing between the peripherals was 10 cm.

The adapter was connected to a 120 VAC/60 Hz power source.

EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 30 MHz to 25 GHz.

During the radiated emission test, the EMI test receiver & Spectrum Analyzer Setup were set with the following configurations:

Frequency Range	***RBW***	***Video B/W***
30 MHz – 1000 MHz	100 kHz	300 kHz
1000 MHz – 25 GHz	1 MHz	3 MHz

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
HP	Amplifier	HP8447D	2944A09795	2007-11-15	2008-11-15
Rohde & Schwarz	EMI Test Receiver	ESCI	100035	2007-10-16	2008-10-16
Sunol Sciences	Broadband Antenna	JB1	A040904-1	2007-08-14	2008-08-14
HP	Amplifier	8449B	3008A00277	2007-09-29	2008-09-29
Sunol Sciences	Horn Antenna	DRH-118	A052604	2007-09-25	2008-09-25
Agilent	Spectrum Analyzer	8564E	3943A01781	2007-11-22	2008-11-22

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp.(Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Test Procedure

For Charging mode:
For the radiated emissions test, the adapter was connected to the outlet of the first LISN.

For Transmitting mode:
For the radiated emissions test, the Jig, host PC and Monitor were connected to the outlet of the first LISN.

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

All data was recorded in the PK&AV detection mode.

Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Loss and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

Corrected Amplitude = Meter Reading + Antenna Loss + Cable Loss- Amplifier Gain

The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7dB means the emission is 7dB below the maximum limit. The equation for margin calculation is as follows:

Margin = Limit - Corrected Amplitude

Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Title 47, Part 15, Subpart C, section 15.109, 15.205, 15.209, and 15.247, with the worst margin reading of:

Charging mode:

10.3 dB at **33.634125 MHz** in the **Vertical** polarization

Transmitting mode:

10.1 dB at **36.668000 MHz** in the **Vertical** polarization, **for up to 1 GHz**
4.63 dB at **4804.0 MHz** in the **Vertical** polarization, **for above 1 GHz (Low Channel)**
0.69 dB at **4882.0 MHz** in the **Horizontal** polarization, **for above 1 GHz (Middle Channel)**
1.44 dB at **4960.0 MHz** in the **Horizontal** polarization, **for above 1 GHz (High Channel)**

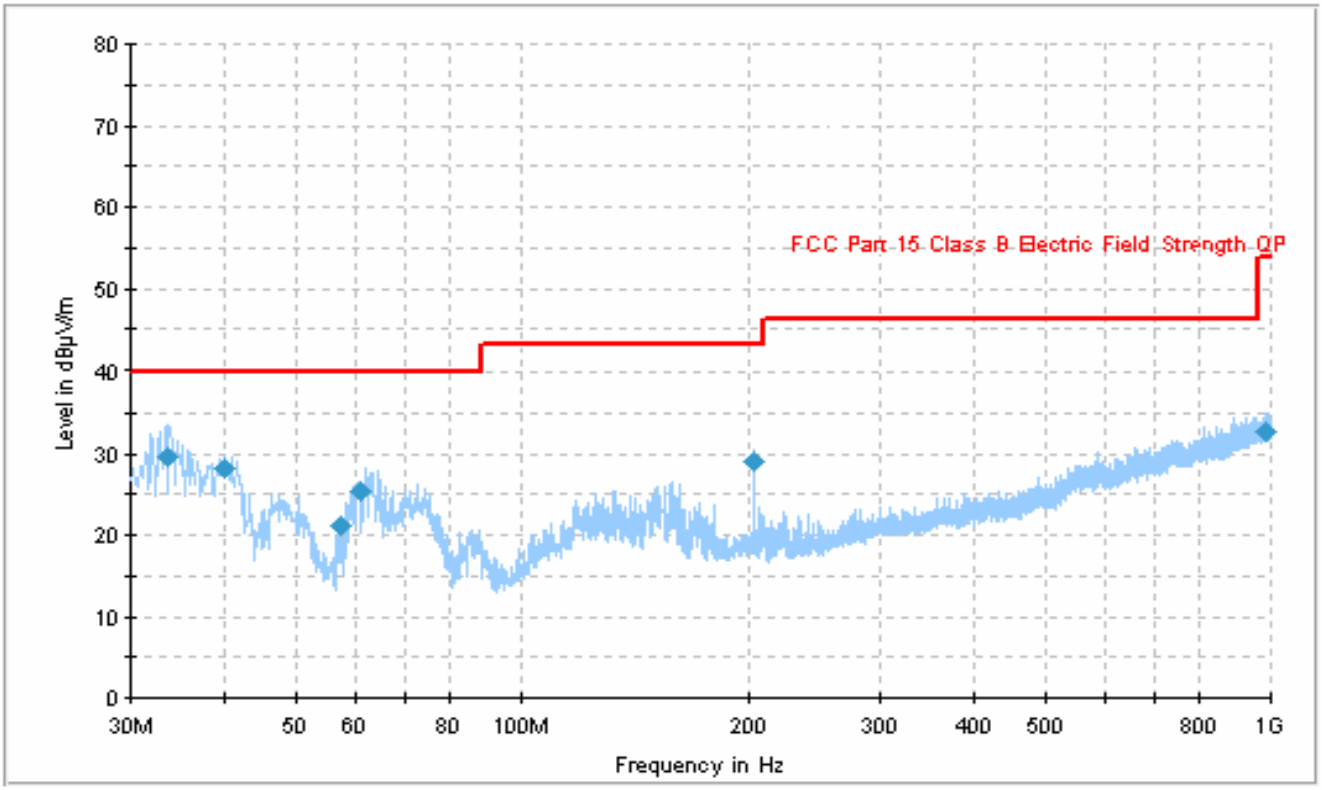
Test Data

Environmental Conditions

Temperature:	25 ° C
Relative Humidity:	52 %
ATM Pressure:	100.9 kPa

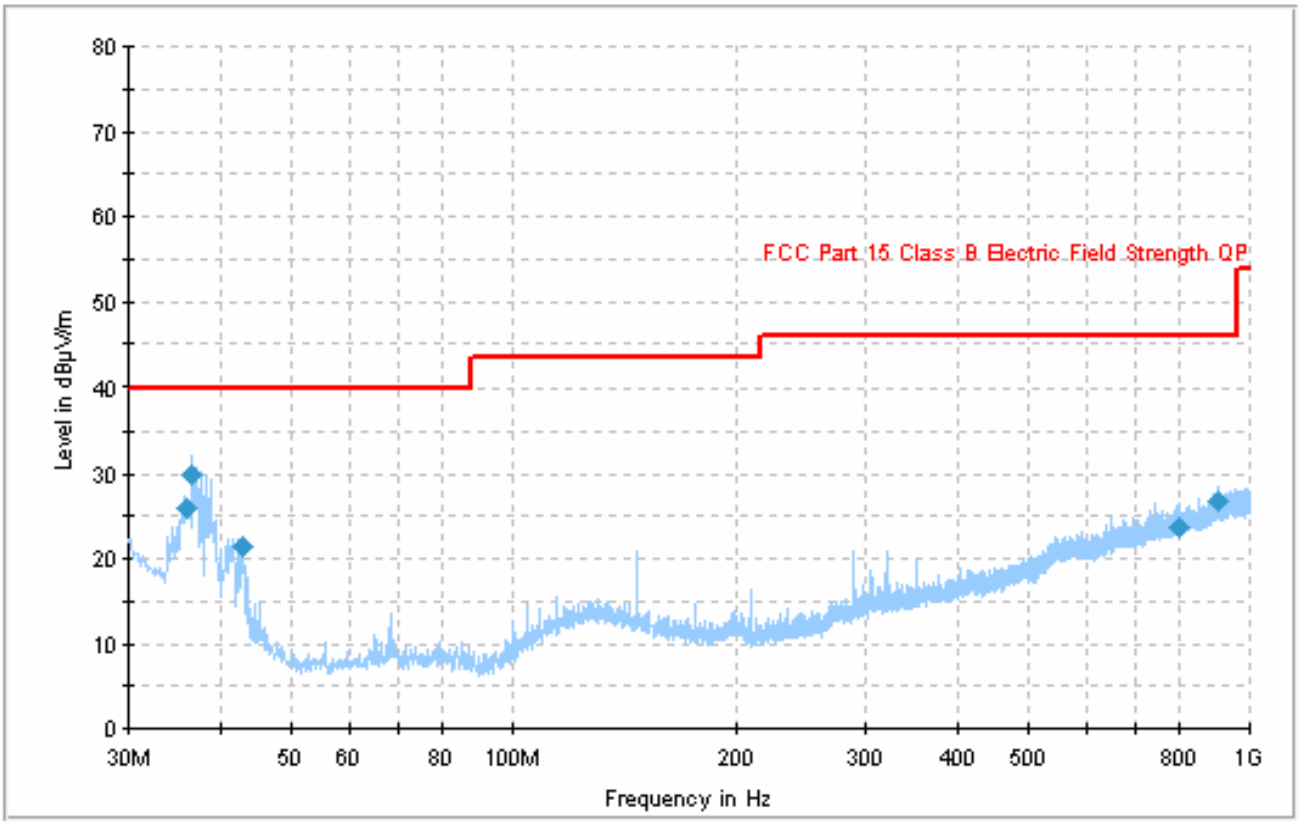
The testing was performed by Merry Zhao on 2007-11-07

Test Mode: Charging



Frequency (MHz)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Polarity (H/V)	Turntable Position (deg)	Correction Factor (dB)	Limit (dBµV/m)	Margin (dB)
33.634125	29.7	116.0	V	53.0	-7.6	40.0	10.3
39.936875	28.3	101.0	V	20.0	-7.8	40.0	11.7
202.794375	28.9	144.0	H	84.0	-12.5	43.5	14.6
60.910750	25.3	122.0	V	142.0	-17.6	40.0	14.7
57.197000	21.2	115.0	V	170.0	-17.7	40.0	18.8
988.473125	32.7	236.0	H	141.0	1.7	54.0	21.3

Test Mode: Transmiting



Frequency (MHz)	Corrected Amplitude (dBµV/m)	Antenna Height (cm)	Polarity (H/V)	Turntable Position (deg)	Correction Factor (dB)	Limit (dBµV/m)	Margin (dB)
36.668000	29.9	376.0	V	0.0	-8.9	40.0	10.1
35.951875	25.9	401.0	V	136.0	-8.5	40.0	14.2
42.973000	21.3	401.0	V	126.0	-13.8	40.0	18.7
905.842125	26.8	256.0	H	104.0	0.6	46.0	19.2
799.697075	23.7	322.0	H	208.0	-0.7	46.0	22.3

Test Mode: Transmiting

(Above 1 GHz)

Freq. (MHz)	Meter Reading (dBuV)	Detector PK/QP/AV	Direction Degree	Antenna			Cable Loss (dB)	Pre-Amp. Gain (dB)	Corrected Amp. (dBuV/m)	FCC Part 15.247/205/209		
				Height (m)	Polar (H/V)	Factor (dB/m)				Limit (dBuV/m)	Margin (dB)	Remarks
Low Channel												
2402.0	90.54	PK	90	1.0	V	30.6	3.61	35.0	89.75			Fund.
2402.0	89.90	AV	45	1.0	V	30.6	3.61	35.0	89.11			Fund.
2402.0	85.83	PK	90	1.0	H	30.6	3.61	35.0	85.04			Fund.
2402.0	84.41	AV	45	1.0	H	30.6	3.61	35.0	83.62			Fund.
4804.0	42.73	AV	90	1.0	V	35.4	4.64	33.4	49.37	54	4.63	Harmonic
4804.0	41.05	AV	90	1.0	H	36.6	4.64	33.4	48.89	54	5.11	Harmonic
1601.0	49.44	AV	180	1.2	V	26.0	2.77	35.0	43.21	54	10.79	Spurious
1601.0	48.32	AV	180	1.2	H	26.5	2.77	35.0	42.59	54	11.41	Spurious
1246.5	48.85	AV	180	1.2	H	25.6	2.50	36.0	40.95	54	13.05	Spurious
1354.7	48.20	AV	180	1.2	V	24.8	2.50	36.0	39.50	54	14.50	Spurious
4804.0	48.65	PK	180	1.2	H	36.6	4.64	33.4	56.49	74	17.51	Harmonic
4804.0	48.83	PK	180	1.2	V	35.4	4.64	33.4	55.47	74	18.53	Harmonic
1601.0	52.49	PK	45	1.2	V	26.0	2.77	35.0	46.26	74	27.74	Spurious
1601.0	51.27	PK	45	1.2	H	26.5	2.77	35.0	45.54	74	28.46	Spurious
1354.7	53.11	PK	45	1.2	V	24.8	2.50	36.0	44.41	74	29.59	Spurious
1246.5	52.16	PK	45	1.2	H	25.6	2.50	36.0	44.26	74	29.74	Spurious
Middle Channel												
2441.0	93.45	PK	60	1.4	V	30.6	3.61	35.0	92.66			Fund.
2441.0	92.15	AV	152	1.3	V	30.6	3.61	35.0	91.36			Fund.
2441.0	85.84	PK	128	1.5	H	30.6	3.61	35.0	85.05			Fund.
2441.0	84.01	AV	156	1.2	H	30.6	3.61	35.0	83.22			Fund.
4882.0	45.47	AV	243	1.4	H	36.6	4.64	33.4	53.31	54	0.69*	Harmonic
4882.0	42.29	AV	142	1.6	V	35.4	4.64	33.4	48.93	54	5.07	Harmonic
1627.7	49.16	AV	135	1.3	V	26.0	2.77	35.0	42.93	54	11.07	Spurious
1627.8	49.32	AV	85	1.5	H	26.5	2.77	36.0	42.59	54	11.41	Spurious
1354.7	47.83	AV	180	1.2	V	24.8	2.50	36.0	39.13	54	14.87	Spurious
4882.0	49.75	PK	153	1.5	H	36.6	4.64	33.4	57.59	74	16.41	Harmonic
4882.0	49.81	PK	234	1.8	V	35.4	4.64	33.4	56.45	74	17.55	Harmonic
1246.49	34.53	AV	180	1.2	H	25.6	2.50	36.0	26.63	54	27.37	Spurious
1627.7	52.63	PK	156	1.4	V	26.0	2.77	35.0	46.40	74	27.60	Spurious
1627.8	52.57	PK	265	1.4	H	26.5	2.77	36.0	45.84	74	28.16	Spurious
1246.49	53.66	PK	45	1.2	H	25.6	2.50	36.0	45.76	74	28.24	Spurious
1354.7	51.87	PK	45	1.2	V	24.8	2.50	36.0	43.17	74	30.83	Spurious

Freq. (MHz)	Meter Reading (dBuV)	Detector PK/QP/AV	Direction Degree	Antenna			Cable Loss (dB)	Pre-Amp. Gain (dB)	Corrected Amp. (dBuV/m)	FCC Part 15.247/205/209		
				Height (m)	Polar (H/V)	Factor (dB/m)				Limit (dBuV/m)	Margin (dB)	Remarks
High Channel												
2480.0	88.58	PK	89	1.5	H	30.6	3.61	35.0	87.79			Fund.
2480.0	84.71	AV	65	1.5	H	30.6	3.61	35.0	83.92			Fund.
2480.0	92.52	PK	65	1.4	V	30.6	3.61	35.0	91.73			Fund.
2480.0	88.77	AV	65	1.6	V	30.6	3.61	35.0	87.98			Fund.
4960.0	44.81	AV	256	1.8	H	36.6	4.55	33.4	52.56	54	1.44*	Harmonic
4960.0	41.16	AV	142	1.5	V	35.4	4.55	33.4	47.71	54	6.29	Harmonic
1653.0	49.07	AV	210	1.2	V	26.0	2.77	35.0	42.84	54	11.16	Spurious
1653.3	46.92	AV	156	1.2	H	26.5	2.77	35.0	41.19	54	12.81	Spurious
1354.7	47.90	AV	324	1.2	V	24.8	2.50	36.0	39.20	54	14.80	Spurious
4960.0	51.22	PK	145	1.4	H	36.6	4.55	33.4	58.97	74	15.03	Harmonic
4960.0	46.63	PK	142	1.4	V	35.4	4.55	33.4	53.18	74	20.82	Harmonic
1354.7	36.89	AV	175	1.2	H	25.6	2.50	36.0	28.99	54	25.01	Spurious
1653.0	53.70	PK	240	1.4	V	26.0	2.77	35.0	47.47	74	26.53	Spurious
1653.3	51.33	PK	128	1.5	H	26.5	2.77	35.0	45.60	74	28.40	Spurious
1354.7	52.02	PK	150	1.0	H	25.6	2.50	36.0	44.12	74	29.88	Spurious
1354.7	51.63	PK	324	1.3	V	24.8	2.50	36.0	42.93	74	31.07	Spurious

Spurious emission in restricted band: (RBW=1MHz, VBW=3MHz)

Freq. (MHz)	Reading (dBuV)	Detector PK/QP/AV	Direction Degree	Antenna			Cable Loss (dB)	Pre-Amp. Gain (dB)	Corrected Amp. (dBuV/m)	FCC 15.205/209	
				Height (m)	Polar (H / V)	Factor (dB/m)				Limit (dBuV/m)	Margin (dB)
Out of left side band (2310 – 2390 MHz)											
2372.88	47.76	PK	90	1.1	V	30.6	3.61	35	46.97	74	27.03
2310.80	47.48	PK	180	1.2	H	30.6	3.61	35	46.69	74	27.31
2325.00	47.35	PK	90	1	H	30.6	3.61	35	46.56	74	27.44
2385.99	47.13	PK	45	1.2	V	30.6	3.61	35	46.34	74	27.66
2365.00	47.07	PK	180	1.2	V	30.6	3.61	35	46.28	74	27.72
2349.91	46.17	PK	45	1.2	H	30.6	3.61	35	45.38	74	28.62
Out of Reft side band (2483.5 – 2500 MHz)											
2483.66	47.08	PK	234	1.8	V	30.6	3.61	35	46.29	74	27.71
2486.91	46.82	PK	156	1.4	V	30.6	3.61	35	46.03	74	27.97
2483.60	46.53	PK	153	1.5	H	30.6	3.61	35	45.74	74	28.26
2491.93	46.37	PK	243	1.4	H	30.6	3.61	35	45.58	74	28.42

** Within measurement uncertainty.*

Note: Above PEAK measured spurious emission values are complied with the average limit (54 dBuV/m), thus average measurement has been omitted.

§15.247(a) (1)-CHANNEL SEPARATION TEST

Applicable Standard

Frequency hopping systems shall have hoping channel carrier frequencies separated by a minimum of 25 kHz or the 20dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20dB bandwidth of the hopping channel, whichever is greater provided the systems operate with an output power no greater than 125 mW.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESCI	100035	2007-10-16	2008-10-16

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp.(Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Test Procedure

1. Set the EUT in transmitting mode, spectrum Bandwidth was set at 100 kHz, maxhold the channel.
2. Set the adjacent channel of the EUT maxhold another truce
3. Measure the channel separation.

Test Data

Environmental Conditions

Temperature:	25 °C
Relative Humidity:	56 %
ATM Pressure:	100.0 kPa

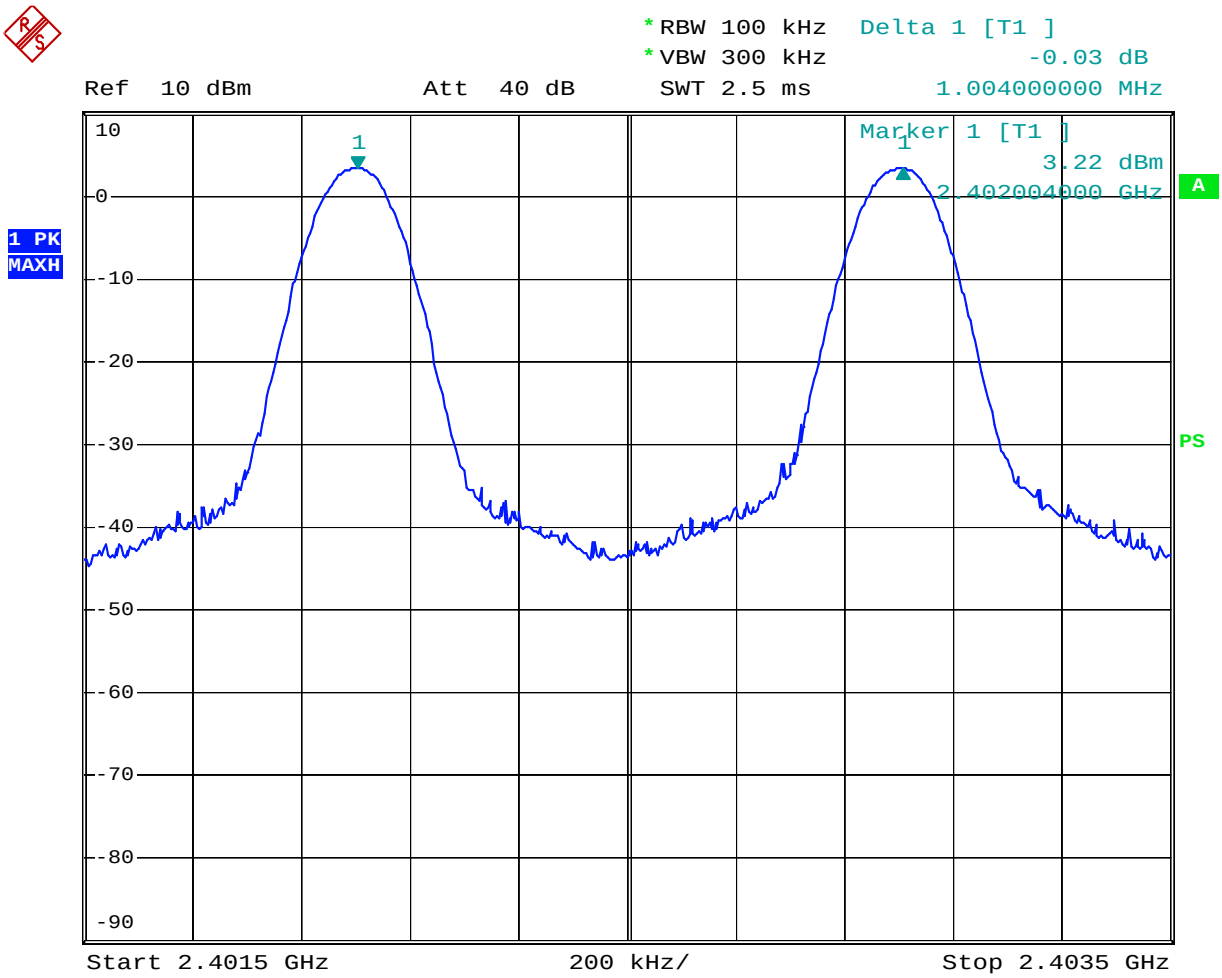
The testing was performed by Merry Zhao on 2007-11-09.

Test Result: Compliant.

Please refer to following tables and plots.

Channel	Channel Frequency (MHz)	Channel Separation (MHz)	Limit (MHz)	Result
Low Channel	2402	1.004	181.33	Pass
Adjacency Channel	2403			
Mid Channel	2441	1.000	182.67	Pass
Adjacency Channel	2442			
High Channel	2480	1.008	182.67	Pass
Adjacent Channel	2479			

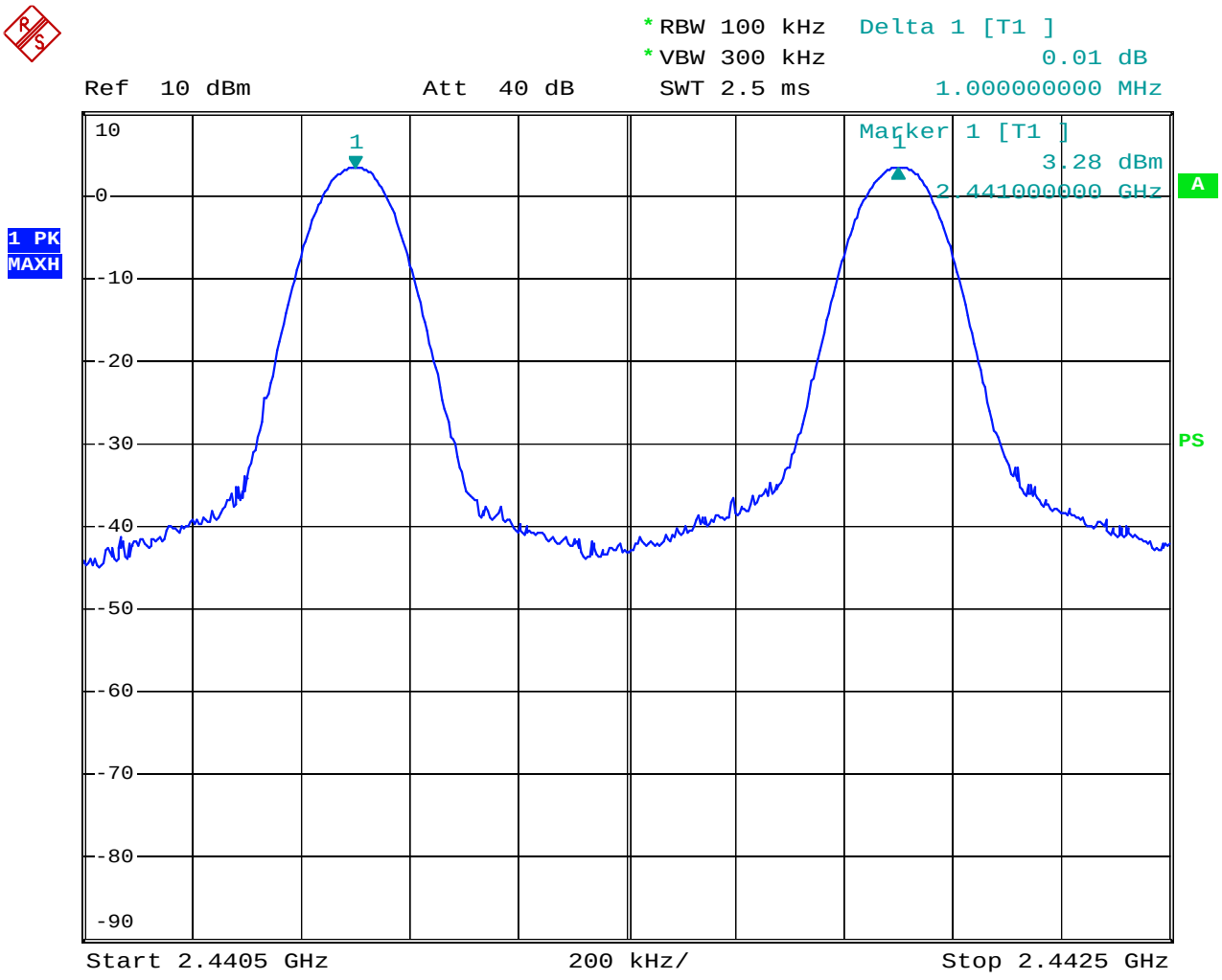
Low Channel



Kingjon BTH-310, channel seperaton, low channel

Date: 9.NOV.2007 20:52:06

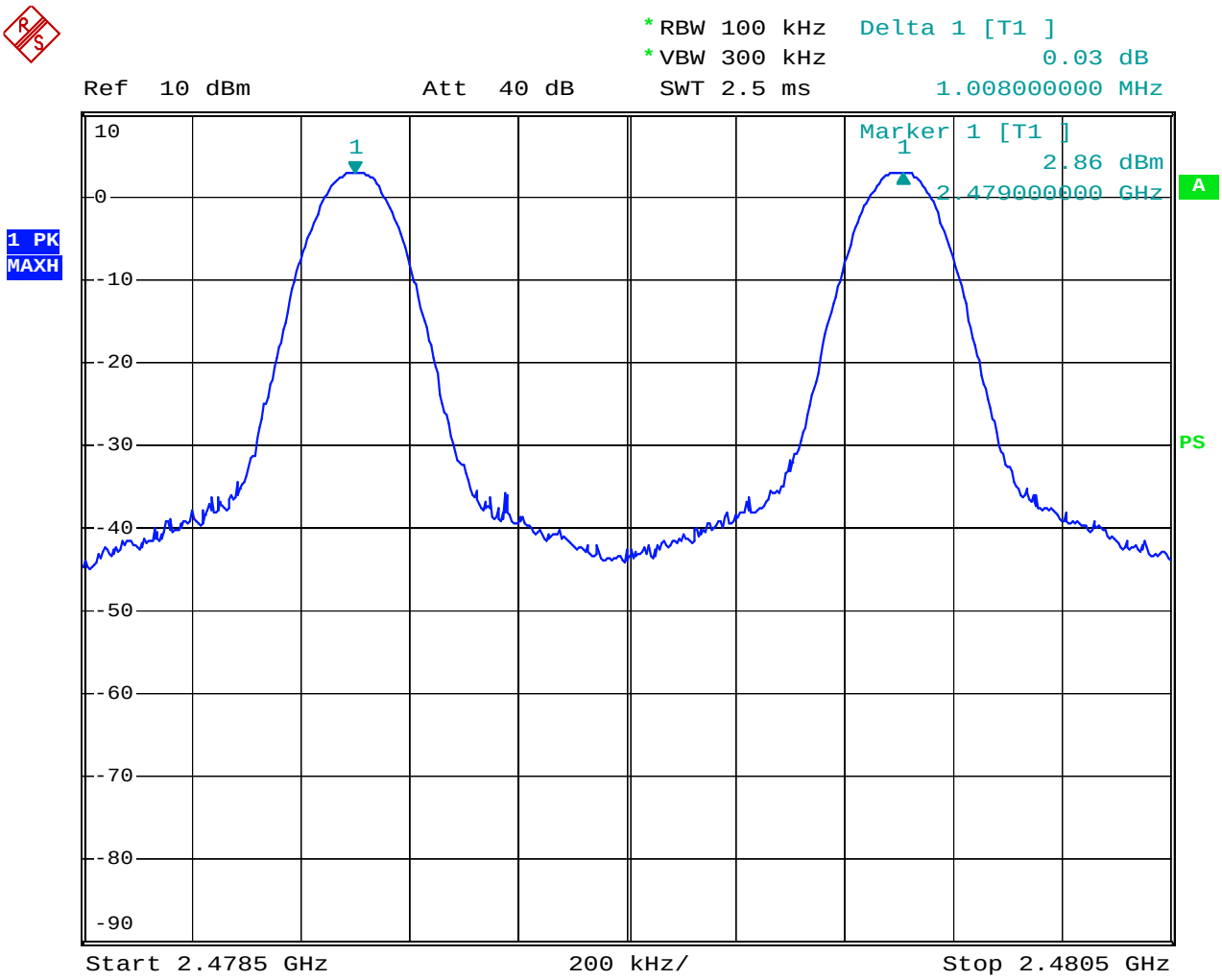
Middle Channel



Kingjon BTH-310, channel seperaton, middle channel

Date: 9.NOV.2007 20:59:34

High Channel



Kingjon BTH-310, channel seperaton, high channel

Date: 9.NOV.2007 21:02:10

§15.247(a) (1) –20dB BANDWIDTH TESTING

Applicable Standard

Alternatively, frequency hopping systems operating in the 2400–2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125mW.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESCI	100035	2007-10-16	2008-10-16

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp.(Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Test Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.
3. Measure the frequency difference of two frequencies that were attenuated 20 dB from the reference level. Record the frequency difference as the emission bandwidth.
4. Repeat above procedures until all frequencies measured were complete.

Test Data

Environmental Conditions

Temperature:	25 ° C
Relative Humidity:	53 %
ATM Pressure:	100.9 kPa

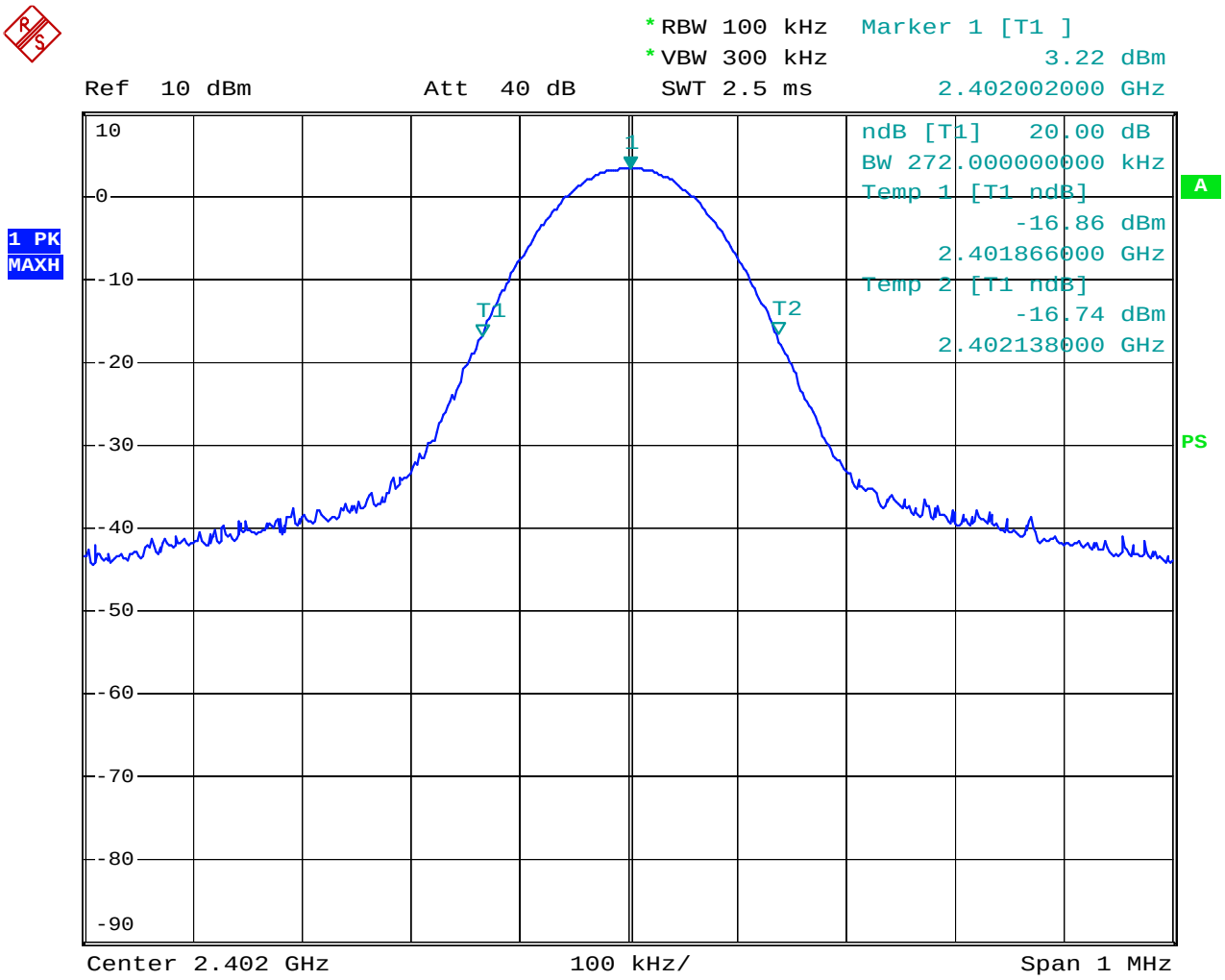
The testing was performed by Merry Zhao on 2007-11-09.

Test Mode: Transmitting

Please refer to the following table and plots.

Channel	Channel Frequency (MHz)	20dB Bandwidth (kHz)
Low	2402	272
Mid	2441	274
High	2480	274

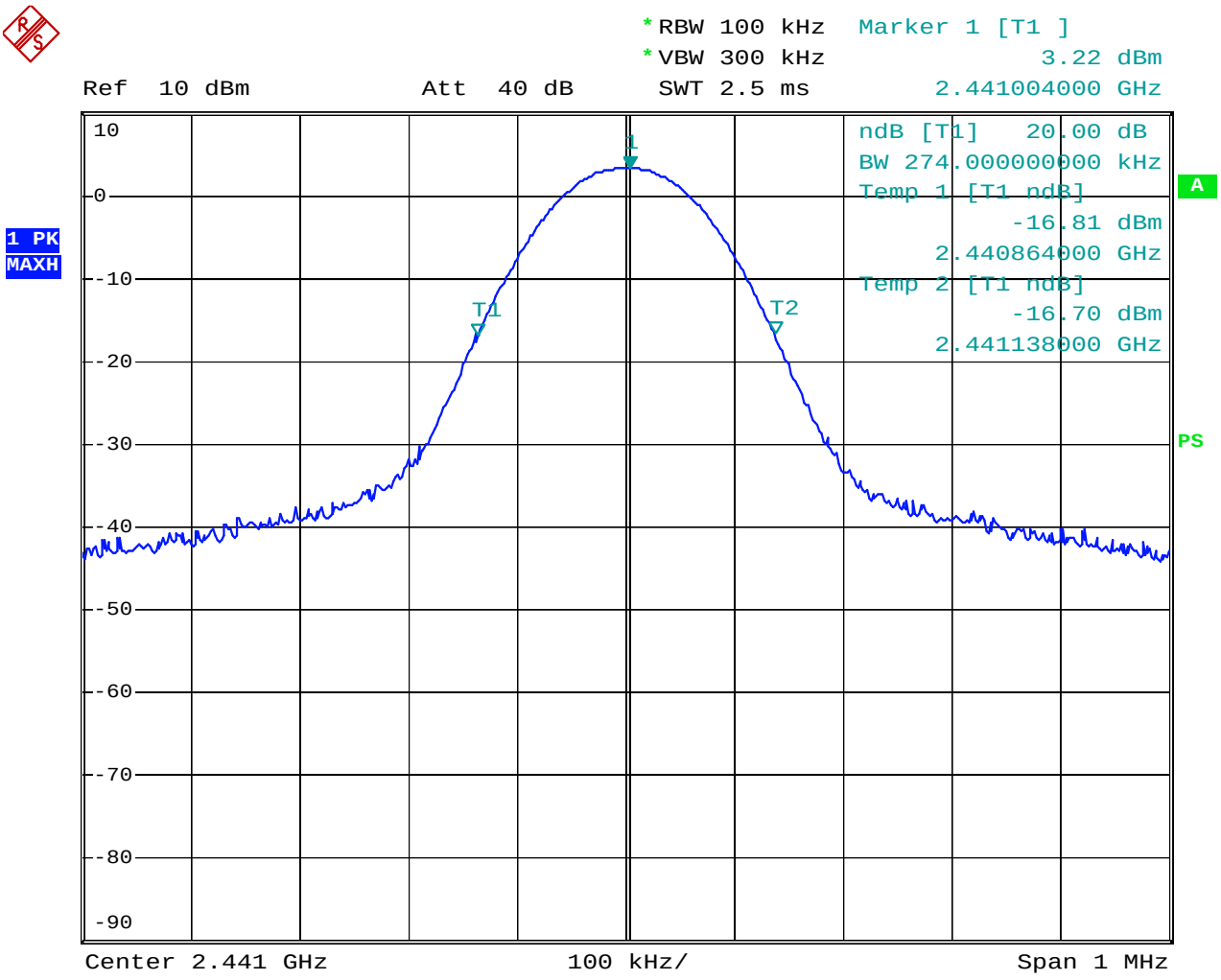
Low Channel



Kingjon BTH-310, 20dB bandwith, low channel

Date: 9.NOV.2007 20:48:07

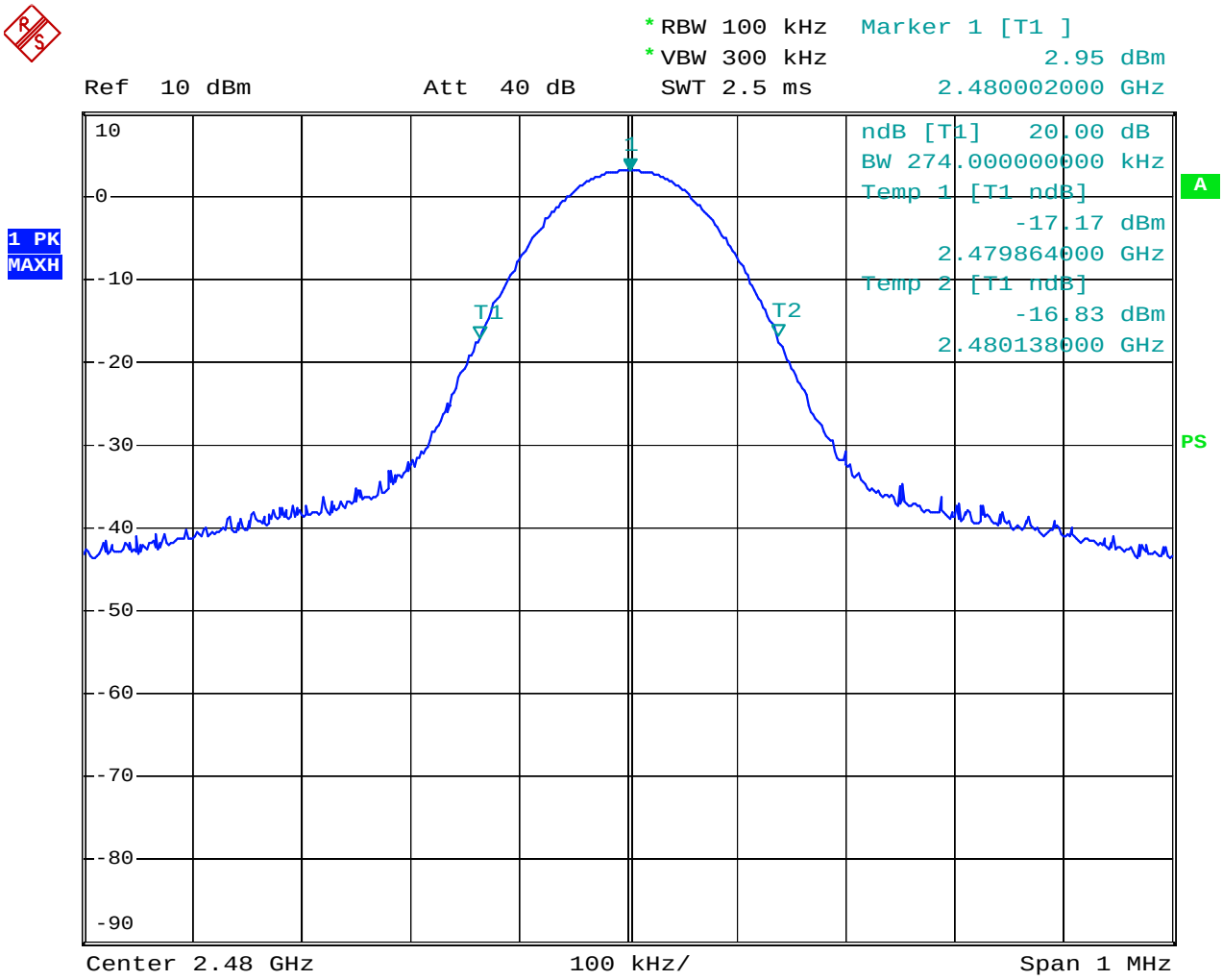
Middle Channel



Kingjon BTH-310, 20dB bandwith, middle channel

Date: 9.NOV.2007 20:46:57

High Channel



Kingjon BTH-310, 20dB bandwith, high channel

Date: 9.NOV.2007 20:45:14

§15.247(a) (1) (iii)-QUANTITY OF HOPPING CHANNEL TEST

Applicable Standard

Frequency hopping systems in the 2400–2483.5 MHz band shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESCI	100035	2007-10-16	2008-10-16

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp.(Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Test Procedure

1. Check the calibration of the measuring instrument (SA) using either an internal calibrator or a known signal from an external generator.
2. Set the EUT in transmitting mode from first channel to last.
3. By using the Max-Hold function record the Quantity of the channel.

Test Data

Environmental Conditions

Temperature:	25 °C
Relative Humidity:	56 %
ATM Pressure:	100.0 kPa

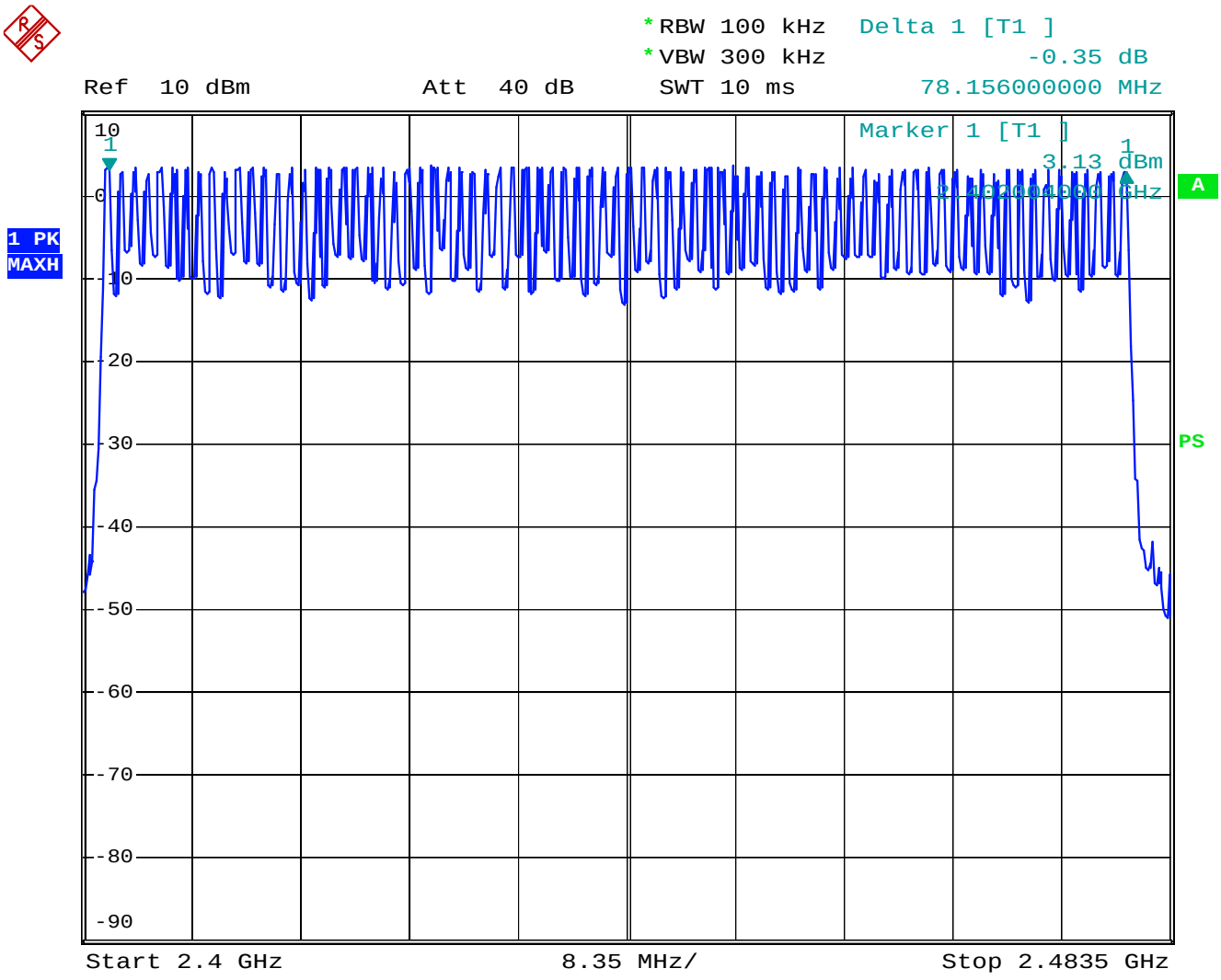
The testing was performed by Merry Zhao on 2007-11-09.

Test mode: Transmitting

Test Result: Compliant.

Pleasew refer to the following plot.

Hopping Channel Numbers



Kingjon BTH-310, hopping channels

Date: 9.NOV.2007 21:10:18

§15.247(a) (1) (iii) -TIME OF OCCUPANCY (DWELL TIME)

Applicable Standard

Frequency hopping systems in the 2400-2483.5 MHz shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESCI	100035	2007-09-29	2008-09-29

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp.(Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Test Procedure

The EUT was worked in channel hopping; Spectrum SPAN was set as 0. Sweep was set as 0.4 X channel no. (s), the quantity of pulse was get from single sweep. In addition, the time of single pulses was tested.

Dwell Time= time slot length * [hop rate/2/number of hopping channels]* 31.6s

Hop rate=1600/s

Test Data

Environmental Conditions

Temperature:	25 °C
Relative Humidity:	56 %
ATM Pressure:	100.0 kPa

The testing was performed by Merry Zhao on 2007-11-09.

Test mode: Transmitting

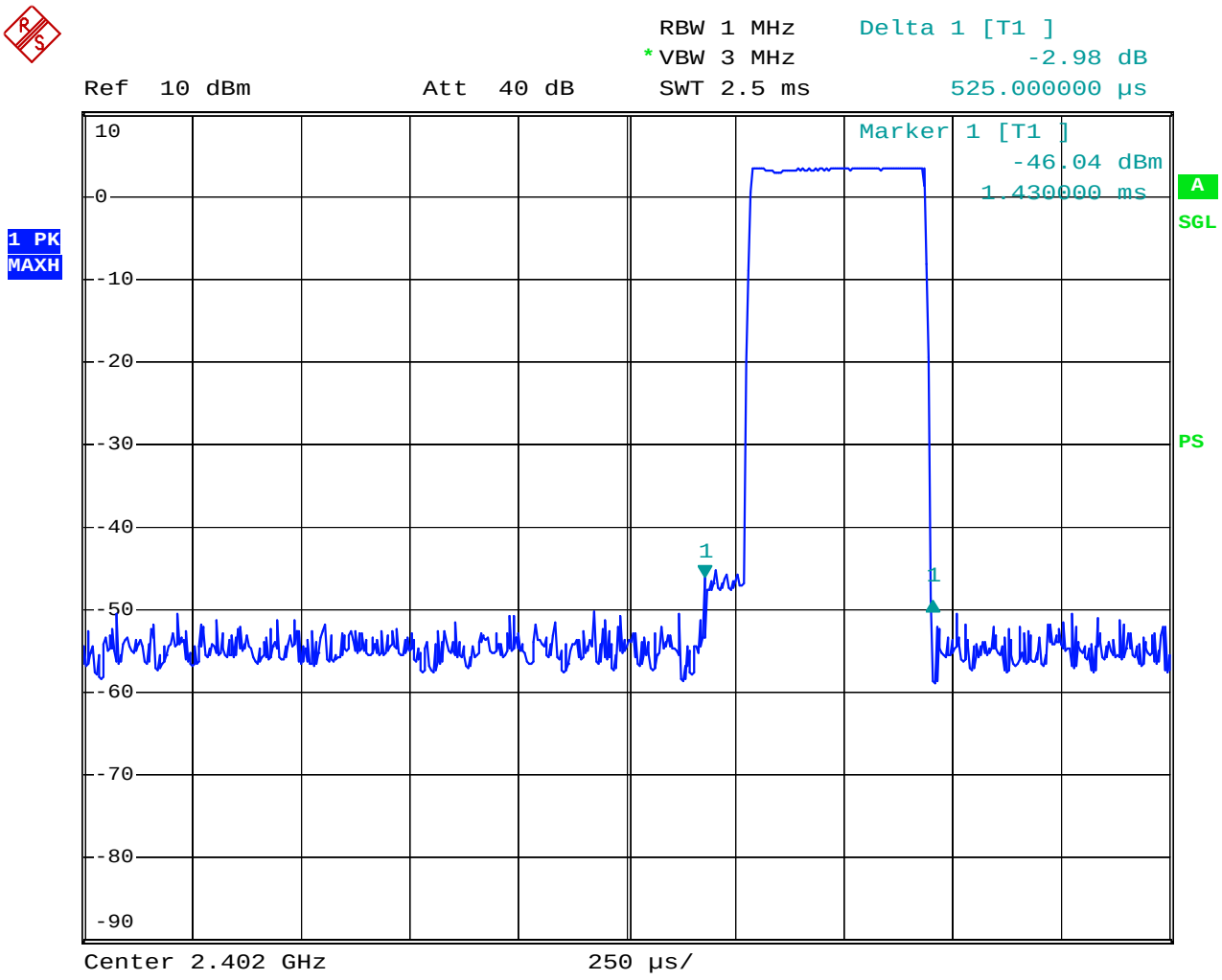
Test Result: Complaint.

Please refer to following table and plots.

Channel	Pulse Width (ms)	Dwell Time (s)	Limit (s)	Result
Low	0.525	0.168	0.4	Pass
Mid	0.525	0.168	0.4	Pass
High	0.525	0.168	0.4	Pass

NOTE: Dwell time= Pulse time × [1600 ÷ 2 ÷ 79] ×31.6 Second

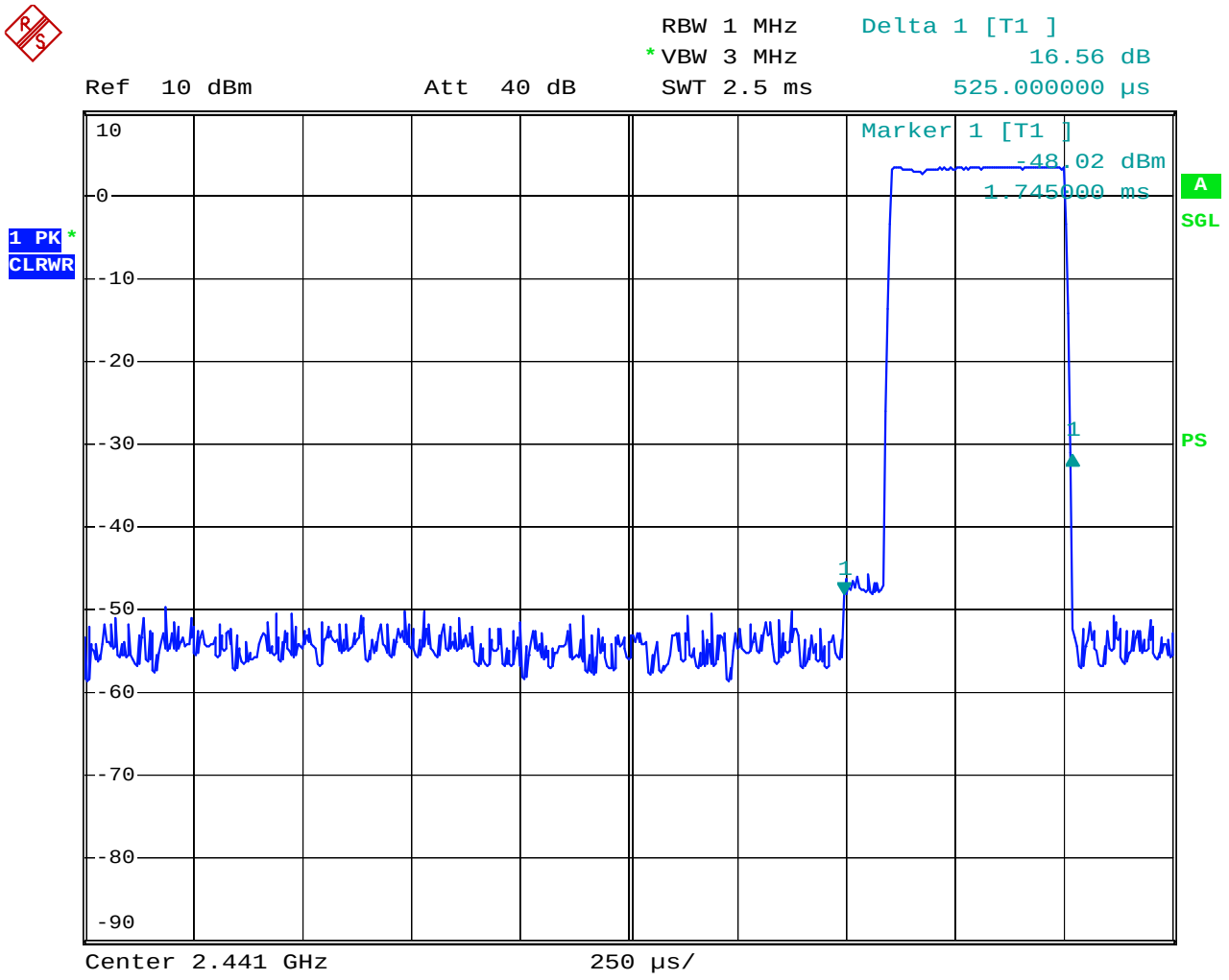
Low Channel



Kingjon BTH-310, low channel , dwell time

Date: 9.NOV.2007 21:16:05

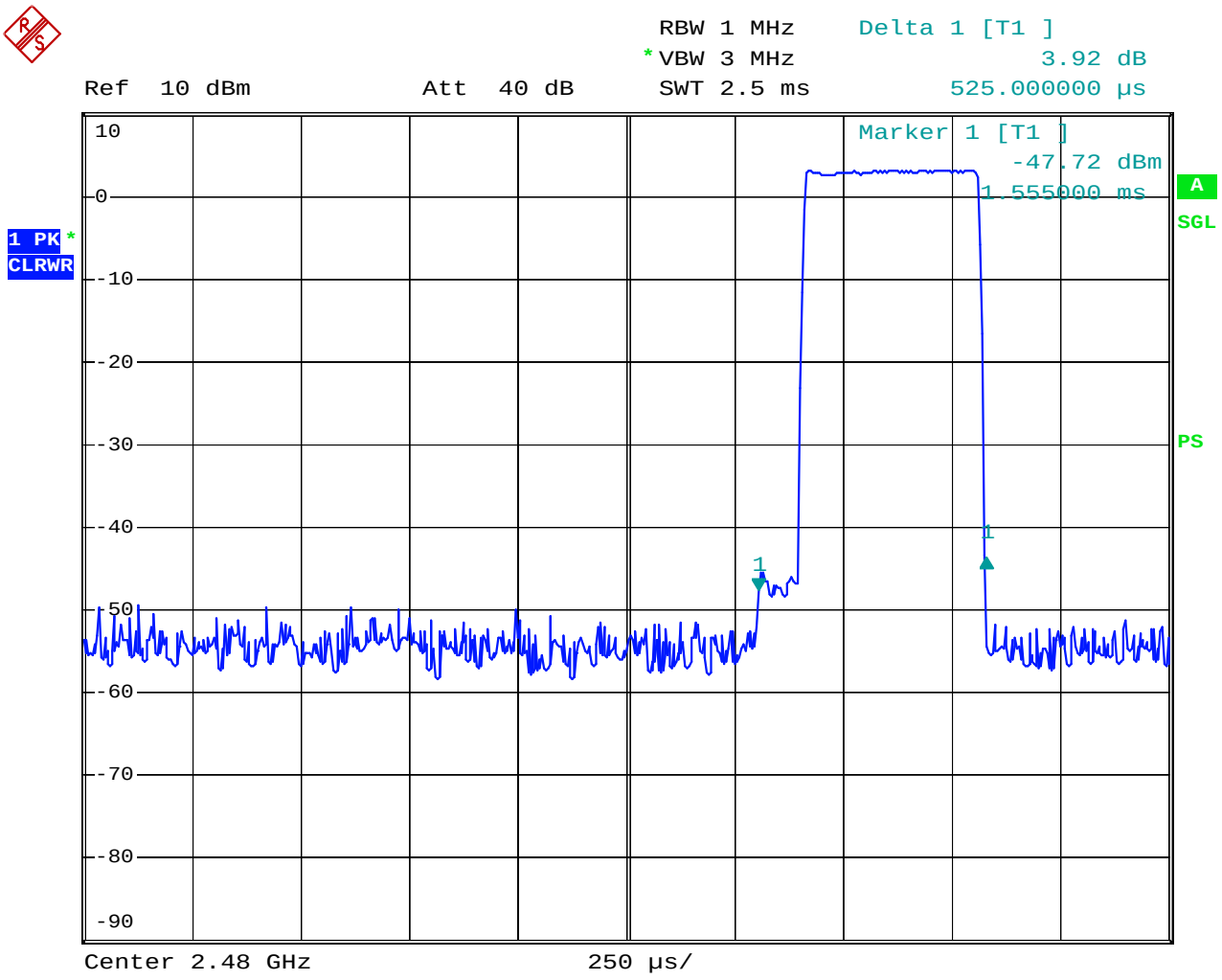
Middle Channel



Kingjon BTH-310, middle channel , dwell time

Date: 9.NOV.2007 21:19:52

High Channel



Kingjon BTH-310, high channel , dwell time

Date: 9.NOV.2007 21:22:02

§15.247(b) (1) - PEAK OUTPUT POWER MEASUREMENT

Applicable Standard

According to §15.247(b) (1), for frequency hopping systems operating in the 2400–2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400–2483.5 MHz band: 0.125 watts.

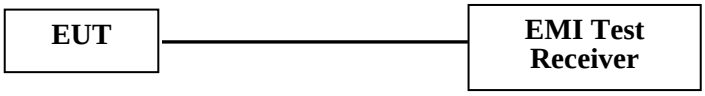
Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESCI	100035	2007-10-16	2008-10-16

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp.(Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Test Procedure

1. Place the EUT on a bench and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to an EMI Test Receiver.
3. Add a correction factor to the display.



Test Data

Environmental Conditions

Temperature:	25 ° C
Relative Humidity:	56 %
ATM Pressure:	100.0 kPa

The testing was performed by Merry Zhao on 2007-11-09.

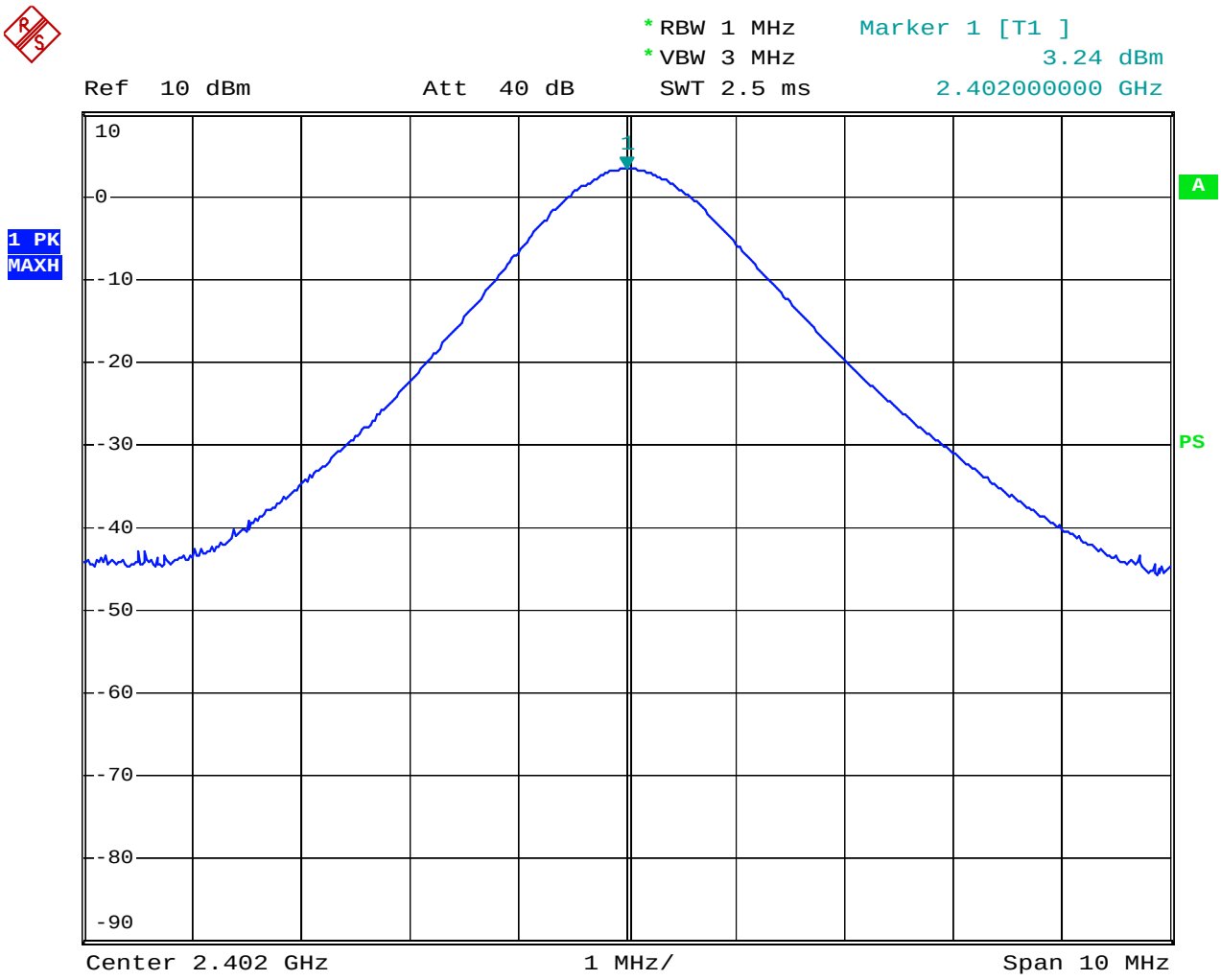
Test Mode: Transmitting

Test Result: Complaint.

Please refer to the following table and plots.

Channel	Channel Frequency (MHz)	Power Output		Limit (watt)
		(dBm)	(mw)	
Low	2402	3.24	2.1086	1
Mid	2441	3.43	2.2029	1
High	2480	2.98	1.9860	1

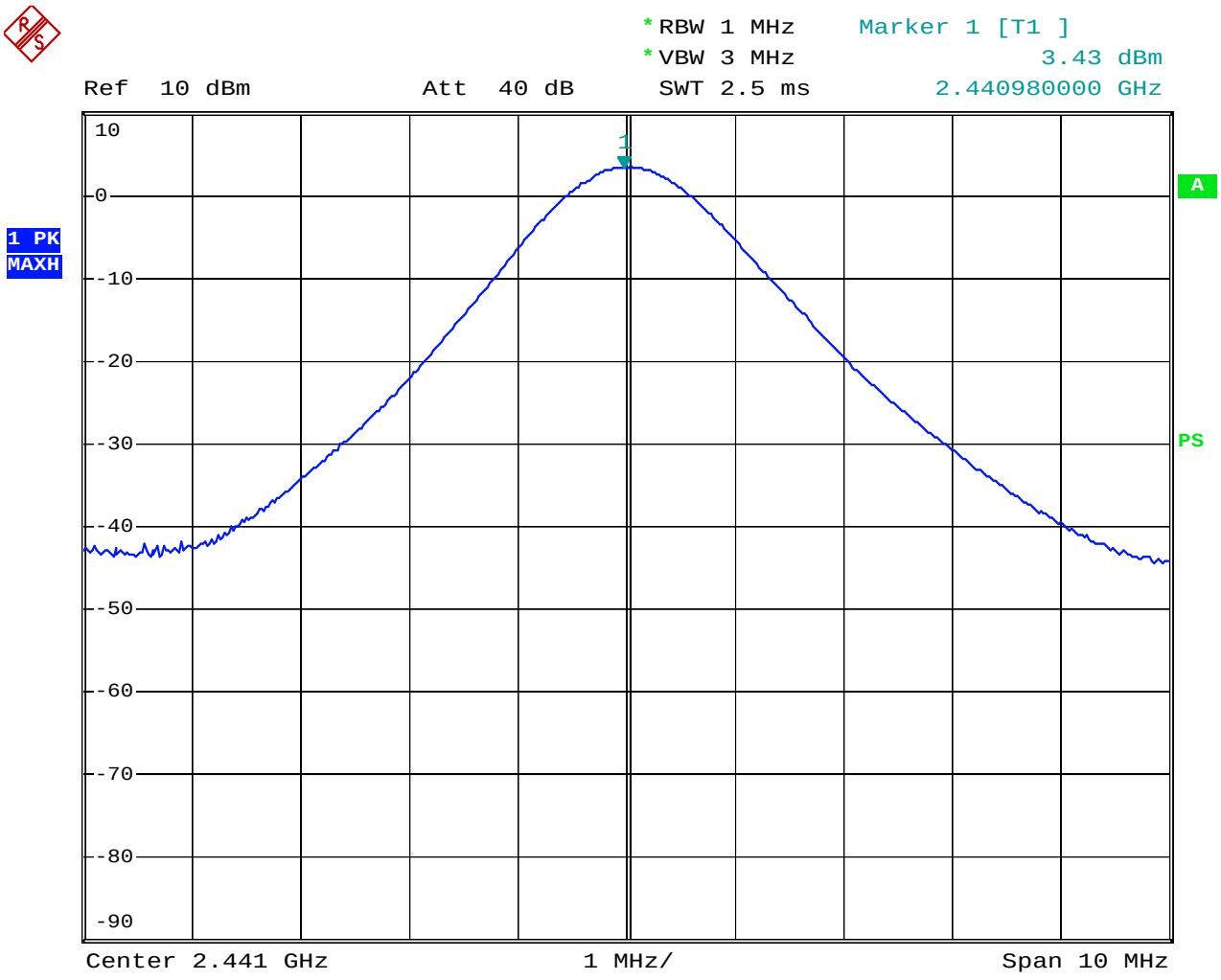
Low Channel



Kingjon BTH-310, peak output power, low channel

Date: 9.NOV.2007 20:41:00

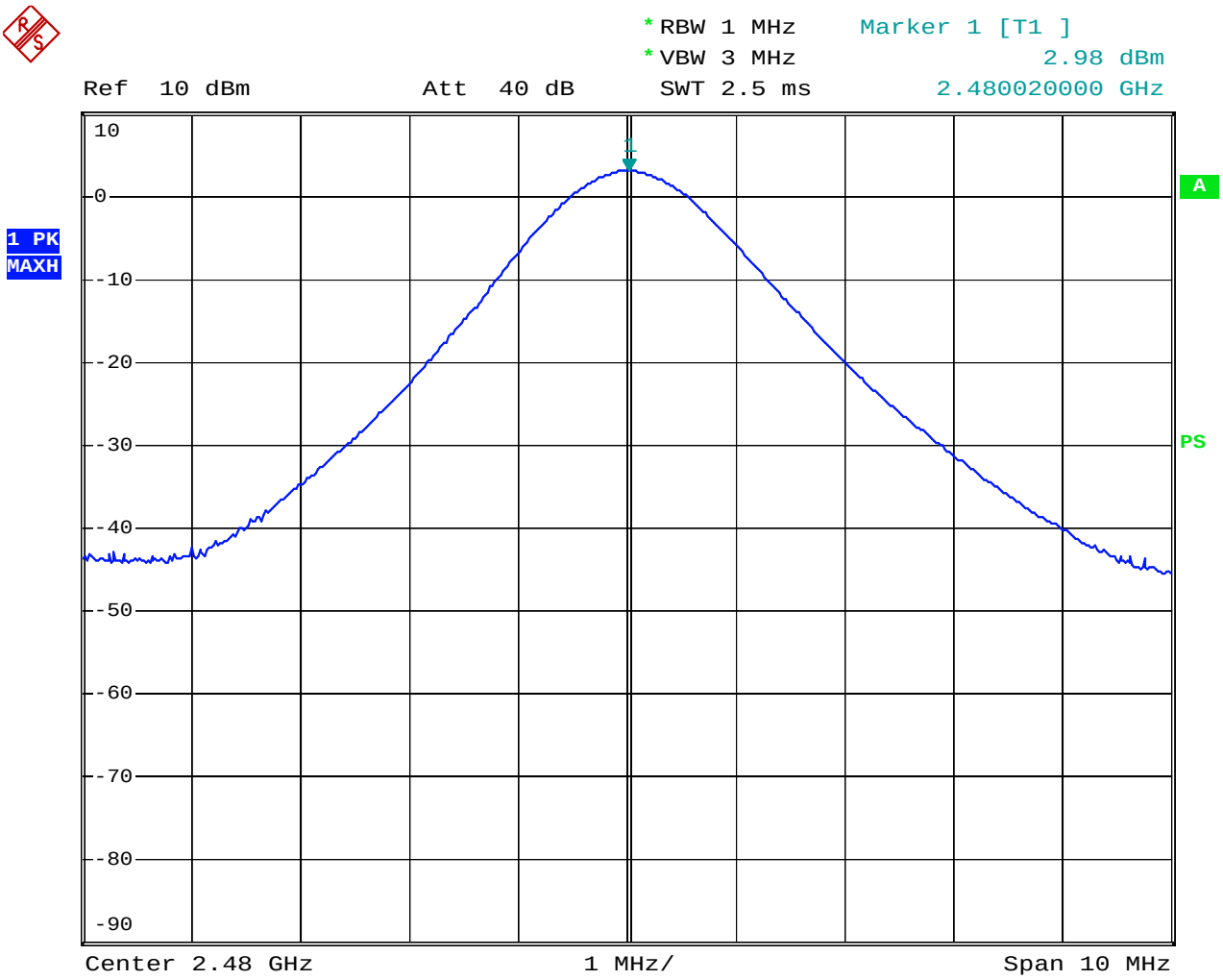
Middle Channel



Kingjon BTH-310, peak output power, middle channel

Date: 9.NOV.2007 20:39:54

High Channel



Kingjon BTH-310, peak output power, high channel

Date: 9.NOV.2007 20:42:14

§15.247(d) - BAND EDGES TESTING

Applicable Standard

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESCI	100035	2007-10-16	2008-10-16

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp.(Shenzhen) attests that all calibrations have been performed in accordance to NVLAP requirements, traceable to the NIST.

Test Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT without connection to measurement instrument. Put it on the Rotated table and turn on the EUT and make it operate in transmitting mode. Then set it to Low Channel and High Channel within its operating range, and make sure the instrument is operated in its linear range.
3. Set both RBW and VBW of spectrum analyzer to 100 kHz with a convenient frequency span including 100kHz bandwidth from band edge, for Radiated emissions restricted band RBW=1MHz, VBW=3MHz.
4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
5. Repeat above procedures until all measured frequencies were complete.

Test Data

Environmental Conditions

Temperature:	25 °C
Relative Humidity:	56 %
ATM Pressure:	100.0 kPa

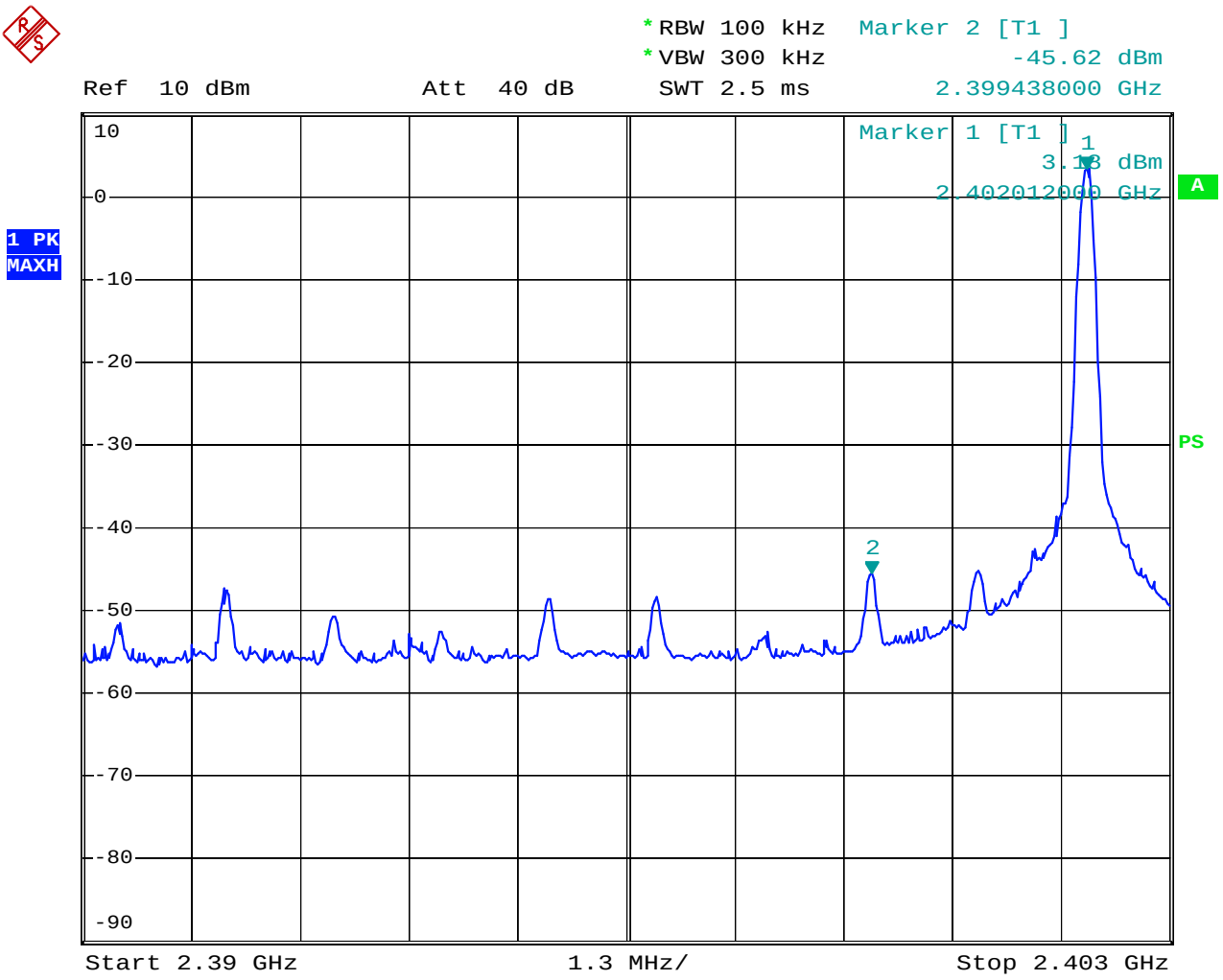
The testing was performed by Merry Zhao on 2007-11-09.

Test Result: Pass

Please refer to the following table and plots.

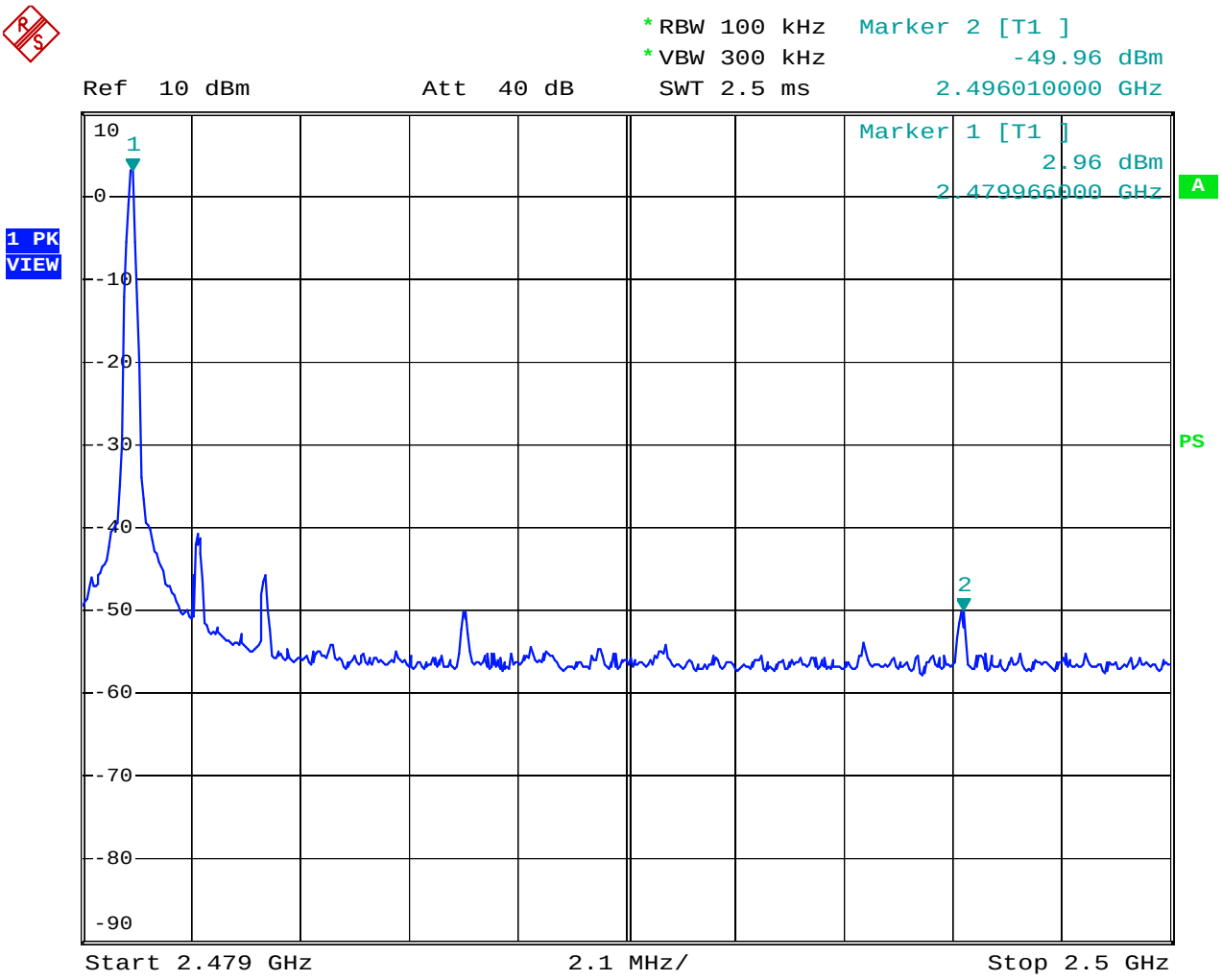
Frequency (MHz)	Attenuation (dBc)	Limit (dBc)
2399.438	48.80	20
2496.010	52.92	20

Note: Attenuation = Highest Peak – Emission Level



Kingjon BTH-310, out of bandedge, left

Date: 9.NOV.2007 21:40:11



Kingjon BTH-310, out of bandedge, right

Date: 9.NOV.2007 21:28:47

******* END OF REPORT *******