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FCC TEST REPORT

REPORT NO.: RF130809C12

MODEL NO.: 61298RX

FCC ID: ZHK-61298RX

RECEIVED: Aug. 09, 2013

TESTED: Sep. 08, 2013

ISSUED: Oct. 04, 2013

APPLICANT: SteelSeries ApS.

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ISSUED BY: Bureau Veritas Consumer Products Services (H.K.)
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Table of Contents

RELEASE CONTROL RECORD.....	4
1. CERTIFICATION.....	5
2. SUMMARY OF TEST RESULTS.....	6
2.1 MEASUREMENT UNCERTAINTY.....	6
3. GENERAL INFORMATION.....	7
3.1 GENERAL DESCRIPTION OF EUT.....	7
3.2 DESCRIPTION OF TEST MODES.....	8
3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL.....	8
3.3 GENERAL DESCRIPTION OF APPLIED STANDARDS.....	10
3.4 DESCRIPTION OF SUPPORT UNITS.....	10
3.4.1 CONFIGURATION OF SYSTEM UNDER TEST.....	10
4. TEST TYPES AND RESULTS.....	11
4.1 RADIATED EMISSION AND BANDEDGE MEASUREMENT.....	11
4.1.1 LIMITS OF RADIATED EMISSION AND BANDEDGE MEASUREMENT ...	11
4.1.2 TEST INSTRUMENTS.....	12
4.1.3 TEST PROCEDURES.....	13
4.1.4 DEVIATION FROM TEST STANDARD.....	13
4.1.5 TEST SETUP.....	14
4.1.6 EUT OPERATING CONDITIONS.....	14
4.1.7 TEST RESULTS.....	15
4.2 6dB BANDWIDTH MEASUREMENT.....	19
4.2.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT.....	19
4.2.2 TEST SETUP.....	19
4.2.3 TEST INSTRUMENTS.....	19
4.2.4 TEST PROCEDURE.....	19
4.2.5 DEVIATION FROM TEST STANDARD.....	19
4.2.6 EUT OPERATING CONDITIONS.....	19
4.2.7 TEST RESULTS.....	20
4.3 CONDUCTED OUTPUT POWER.....	21
4.3.1 LIMITS OF CONDUCTED OUTPUT POWER MEASUREMENT.....	21
4.3.2 TEST SETUP.....	21
4.3.3 TEST INSTRUMENTS.....	21
4.3.4 TEST PROCEDURES.....	21
4.3.5 DEVIATION FROM TEST STANDARD.....	21
4.3.6 EUT OPERATING CONDITIONS.....	21
4.3.7 TEST RESULTS.....	22
4.4 POWER SPECTRAL DENSITY MEASUREMENT.....	23
4.4.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT.....	23
4.4.2 TEST SETUP.....	23
4.4.3 TEST INSTRUMENTS.....	23
4.4.4 TEST PROCEDURE.....	23



4.4.5	DEVIATION FROM TEST STANDARD	23
4.4.6	EUT OPERATING CONDITION.....	23
4.4.7	TEST RESULTS	23
4.5	CONDUCTED OUT OF BAND EMISSION MEASUREMENT	24
4.5.1	LIMITS OF OUT OF BAND EMISSION MEASUREMENT.....	24
4.5.2	TEST SETUP.....	24
4.5.3	TEST INSTRUMENTS.....	24
4.5.4	TEST PROCEDURE.....	24
4.5.5	DEVIATION FROM TEST STANDARD.....	25
4.5.6	EUT OPERATING CONDITION.....	25
4.5.7	TEST RESULTS	25
4.5.8	TEST RESULTS	26
5.	PHOTOGRAPHS OF THE TEST CONFIGURATION.....	27
6.	INFORMATION ON THE TESTING LABORATORIES	28
7.	APPENDIX A - MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB	29



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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF130809C12	Original release	Oct. 04, 2013



1. CERTIFICATION

PRODUCT: SteelSeries H Wireless Headset
MODEL NO.: 61298RX
BRAND: SteelSeries
APPLICANT: SteelSeries ApS.
TESTED: Sep. 08, 2013
TEST SAMPLE: Identical Prototype
STANDARDS: **FCC Part 15, Subpart C (Section 15.247)**
ANSI C63.10-2009

The above equipment (model: 61298RX) 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 : Gina Liu , **DATE** : Oct. 04, 2013
Gina Liu / Specialist

APPROVED BY : Sam chen , **DATE** : Oct. 04, 2013
Sam Chen / Assistant Manager

2. SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 15, SUBPART C (SECTION 15.247)			
STANDARD SECTION	TEST TYPE AND LIMIT	RESULT	REMARK
15.247(d) 15.209	Radiated Emissions	PASS	Meet the requirement of limit. Minimum passing margin is -14.66dB at 43.23MHz.
15.247(d)	Band Edge Measurement	PASS	Meet the requirement of limit.
15.247(a)(2)	6dB bandwidth	PASS	Meet the requirement of limit.
15.247(b)	Conducted power	PASS	Meet the requirement of limit.
15.247(e)	Power Spectral Density	PASS	Meet the requirement of limit.
15.203	Antenna Requirement	PASS	No antenna connector is used.

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:

MEASUREMENT	FREQUENCY	UNCERTAINTY
Conducted emissions	9kHz~30MHz	2.44 dB
Radiated emissions	30MHz ~ 200MHz	2.93 dB
	200MHz ~1000MHz	2.95 dB
	1GHz ~ 18GHz	2.26 dB
	18GHz ~ 40GHz	1.94 dB

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

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

EUT	SteelSeries H Wireless Headset
MODEL NO.	61298RX
POWER SUPPLY	3.7Vdc (Li-ion battery)
MODULATION TYPE	$\pi/4$ -QPSK
TRANSFER RATE	1Mbps
OPERATING FREQUENCY	2403.35-2477.35MHz
NUMBER OF CHANNEL	38
CHANNEL SPACING	2MHz
OUTPUT POWER	1.919mW
ANTENNA TYPE	Chip antenna with 2.5dBi gain
ANTENNA CONNECTOR	NA
DATA CABLE	Refer to Note as below
I/O PORTS	Refer to user's manual
ACCESSORY DEVICES	Refer to Note as below

NOTE:

- The EUT contains following accessory devices.

ITEM	BRAND	MODEL	SPECIFICATION
3.5mm Audio Cable (for Headphone)	YT	2K70901	1.2m non-shielded cable without ferrite core
2.5mm Audio Cable	YT	110325001101	1.5m non-shielded cable without ferrite core

- The above EUT information is declared by the manufacturer and for more detailed features description, please refer to the manufacturer's specifications or User's Manual.

3.2 DESCRIPTION OF TEST MODES

38 channels are provided to the EUT.

Channel	Freq. (MHz)
Low	2403.35
Middle	2441.35
High	2477.35

Note: The more detailed channel, please refer to the product specifications.

3.2.1 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

EUT CONFIGURE MODE	APPLICABLE TO			DESCRIPTION
	RE \geq 1G	RE $<$ 1G	APCM	
-	√	√	√	-

Where **RE \geq 1G**: Radiated Emission above 1GHz **RE $<$ 1G**: Radiated Emission below 1GHz
APCM: Antenna Port Conducted Measurement

NOTE: The EUT had been pre-tested on the positioned of each 3 axis. The worst case was found when positioned on **Y-plane**.

RADIATED EMISSION TEST (ABOVE 1GHz):

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

AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TYPE	DATA RATE (Mbps)	Antenna port
1 to 38	1, 20, 38	$\pi/4$ -QPSK	1.0	1

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

RADIATED EMISSION TEST (BELOW 1GHz):

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

AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TYPE	DATA RATE (Mbps)	Antenna port
1 to 38	1	$\pi/4$ -QPSK	1.0	1

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

ANTENNA PORT CONDUCTED MEASUREMENT:

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- Following channel(s) was (were) selected for the final test as listed below.

AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION TYPE	DATA RATE (Mbps)	Antenna port
1 to 38	1, 20, 38	$\pi/4$ -QPSK	1.0	1

TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	INPUT POWER	TESTED BY
RE \geq 1G	25deg. C, 65%RH	3.7Vdc	Anson Lin
RE<1G	25deg. C, 65%RH	3.7Vdc	Anson Lin
APCM	25deg. C, 65%RH	3.7Vdc	Howard Kao

3.3 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 C63.10-2009

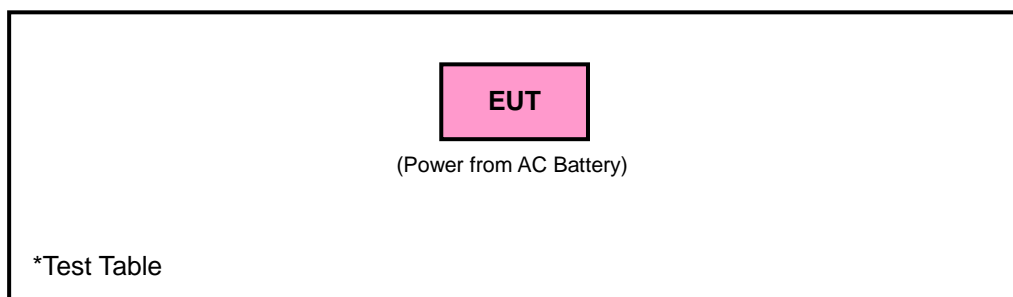
558074 D01 DTS Meas Guidance v03r01

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

NOTE: The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B. The test report has been issued separately.

3.4 DESCRIPTION OF SUPPORT UNITS

3.4.1 CONFIGURATION OF SYSTEM UNDER TEST



4. TEST TYPES AND RESULTS

4.1 RADIATED EMISSION AND BANDEGE MEASUREMENT

4.1.1 LIMITS OF RADIATED EMISSION AND BANDEGE MEASUREMENT

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20dB below the highest level of the desired power:

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. 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.



4.1.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	DATE OF CALIBRATION	DUE DATE OF CALIBRATION
Test Receiver ROHDE & SCHWARZ	ESCI	100744	Apr. 15, 2013	Apr. 14, 2014
Spectrum Analyzer ROHDE & SCHWARZ	FSU43	101261	Dec. 17, 2012	Dec. 16, 2013
BILOG Antenna SCHWARZBECK	VULB9168	9168-472	Mar. 25, 2013	Mar. 24, 2014
HORN Antenna SCHWARZBECK	BBHA 9120 D	9120D-969	Jan. 07, 2013	Jan. 06, 2014
HORN Antenna SCHWARZBECK	BBHA 9170	9170-480	Dec. 25, 2012	Dec. 24, 2013
Loop Antenna	HFH2-Z2	100070	Jan. 31, 2012	Jan. 30, 2014
Preamplifier EMCI	EMC 012645	980115	Dec. 28, 2012	Dec. 27, 2013
Preamplifier EMCI	EMC 184045	980116	Dec. 28, 2012	Dec. 27, 2013
Preamplifier EMCI	EMC 330H	980112	Dec. 28, 2012	Dec. 27, 2013
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	309219/4	Oct. 19, 2012	Oct. 18, 2013
RF signal cable HUBER+SUHNNER	SUCOFLEX 104	250130/4	Oct. 19, 2012	Oct. 18, 2013
RF signal cable Worken	RG-213	NA	Dec. 29, 2012	Dec. 28, 2013
Software	E3 6.120103	NA	NA	NA
Antenna Tower MF	MFA-440H	NA	NA	NA
Turn Table MF	MFT-201SS	NA	NA	NA
Antenna Tower & Turn Table Controller MF	MF-7802	NA	NA	NA

- 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 calibration interval of the loop antenna is 24 months and the calibrations are traceable to NML/ROC and NIST/USA.
 3. The test was performed in HwaYa Chamber 10.
 4. The horn antenna and HP preamplifier (model: 8449B) are used only for the measurement of emission frequency above 1GHz if tested.
 5. The FCC Site Registration No. is 690701.
 6. The IC Site Registration No. is IC 7450F-10.

4.1.3 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meters 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. Height of receiving 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 Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- 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.

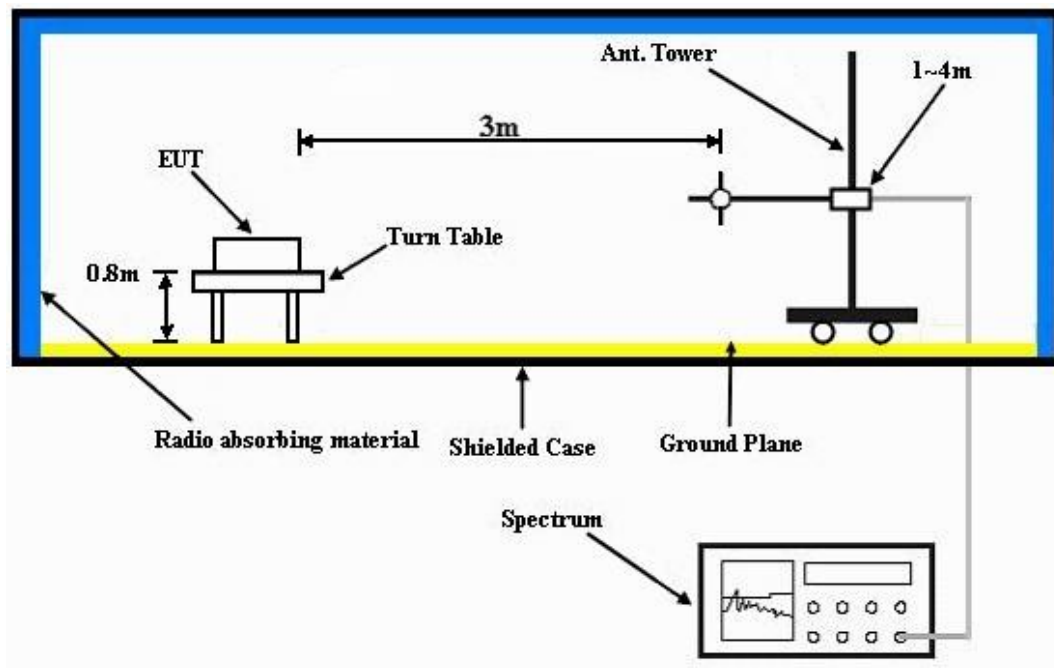
NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported.

4.1.4 DEVIATION FROM TEST STANDARD

No deviation.

4.1.5 TEST SETUP



For the actual test configuration, please refer to the attached file (Test Setup Photo).

4.1.6 EUT OPERATING CONDITIONS

- a. Placed the EUT on a testing table.
- b. Use the software to control the EUT under transmission condition continuously at specific channel frequency.



4.1.7 TEST RESULTS

ABOVE 1GHZ DATA

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 01	FREQUENCY RANGE	1GHz ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Anson Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390	38.31	45.38	54	-15.69	26.91	3.54	37.52	103	196	Average
2390	54.03	61.1	74	-19.97	26.91	3.54	37.52	103	196	Peak
2403.35	94.04	101.06			26.96	3.54	37.52	103	196	Average
2403.35	97.27	104.29			26.96	3.54	37.52	103	196	Peak
2488	33.65	40.15	54	-20.35	27.2	3.62	37.32	103	196	Average
2488	47.08	53.58	74	-26.92	27.2	3.62	37.32	103	196	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2390	37.07	44.14	54	-16.93	26.91	3.54	37.52	100	240	Average
2390	51.99	59.06	74	-22.01	26.91	3.54	37.52	100	240	Peak
2403.35	92.1	99.12			26.96	3.54	37.52	100	240	Average
2403.35	95.34	102.36			26.96	3.54	37.52	100	240	Peak
2496	33.58	40.01	54	-20.42	27.2	3.62	37.25	100	240	Average
2496	47.8	54.23	74	-26.2	27.2	3.62	37.25	100	240	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 2403.35MHz: Fundamental frequency.



EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 20	FREQUENCY RANGE	1GHz ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Anson Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2358	34.67	41.85	54	-19.33	26.81	3.5	37.49	106	188	Average
2358	47.75	54.93	74	-26.25	26.81	3.5	37.49	106	188	Peak
2441.35	92.3	99.05			27.06	3.58	37.39	106	188	Average
2441.35	95.75	102.5			27.06	3.58	37.39	106	188	Peak
2500	34.03	40.46	54	-19.97	27.2	3.62	37.25	106	188	Average
2500	47.86	54.29	74	-26.14	27.2	3.62	37.25	106	188	Peak
ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2386	34.22	41.29	54	-19.78	26.91	3.52	37.5	100	232	Average
2386	47.2	54.27	74	-26.8	26.91	3.52	37.5	100	232	Peak
2441.35	86.55	93.3			27.06	3.58	37.39	100	232	Average
2441.35	90.31	97.06			27.06	3.58	37.39	100	232	Peak
2486	33.52	40.09	54	-20.48	27.15	3.6	37.32	100	232	Average
2486	46.74	53.31	74	-27.26	27.15	3.6	37.32	100	232	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 2441.35MHz: Fundamental frequency.



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EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 38	FREQUENCY RANGE	1GHz ~ 25GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK) Average (AV)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Anson Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2380	33.24	40.36	54	-20.76	26.86	3.52	37.5	100	212	Average
2380	46.52	53.64	74	-27.48	26.86	3.52	37.5	100	212	Peak
2477.35	89.68	96.25			27.15	3.6	37.32	100	212	Average
2477.35	93.19	99.76			27.15	3.6	37.32	100	212	Peak
2484	43.01	49.58	54	-10.99	27.15	3.6	37.32	100	212	Average
2484	55.77	62.34	74	-18.23	27.15	3.6	37.32	100	212	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M										
FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
2380	33.42	40.54	54	-20.58	26.86	3.52	37.5	100	237	Average
2380	46.6	53.72	74	-27.4	26.86	3.52	37.5	100	237	Peak
2477.35	84.36	90.93			27.15	3.6	37.32	100	237	Average
2477.35	87.89	94.46			27.15	3.6	37.32	100	237	Peak
2484	38.26	44.83	54	-15.74	27.15	3.6	37.32	100	237	Average
2484	51.13	57.7	74	-22.87	27.15	3.6	37.32	100	237	Peak

REMARKS:

- Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor
Margin value = Emission level – Limit value
- 2477.35MHz: Fundamental frequency.



BELOW 1GHz WORST-CASE DATA

EUT TEST CONDITION		MEASUREMENT DETAIL	
CHANNEL	Channel 01	FREQUENCY RANGE	25MHz ~ 1GHz
INPUT POWER (SYSTEM)	120Vac, 60 Hz	DETECTOR FUNCTION	Peak (PK)
ENVIRONMENTAL CONDITIONS	25deg. C, 65%RH	TESTED BY	Anson Lin

ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
42.69	24.46	41.26	40	-15.54	13.58	0.7	31.08	100	311	Peak
120.72	17.3	36.92	43.5	-26.2	11.09	1.19	31.9	100	158	Peak
250.05	23.14	41.76	46	-22.86	11.48	1.84	31.94	104	121	Peak
356	20.56	35.94	46	-25.44	14.29	2.25	31.92	100	195	Peak
608.7	23.83	33.09	46	-22.17	19.72	3.12	32.1	100	46	Peak
769	27.31	33.21	46	-18.69	21.79	3.62	31.31	100	79	Peak

ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M

FREQ. (MHz)	EMISSION LEVEL (dBuV/m)	READ LEVEL (dBuV)	LIMIT (dBuV/m)	MARGIN (dB)	ANTENNA FACTOR (dB/m)	CABLE LOSS (dB)	PREAMP FACTOR (dB)	ANTENNA HEIGHT (cm)	TABLE ANGLE (Degree)	REMARK
43.23	25.34	42.15	40	-14.66	13.59	0.71	31.11	106	245	Peak
119.64	17.54	37.32	43.5	-25.96	10.93	1.18	31.89	100	10	Peak
192	16.92	37.14	43.5	-26.58	9.91	1.56	31.69	100	137	Peak
375.6	18.6	33.46	46	-27.4	14.75	2.33	31.94	100	134	Peak
583.5	22.92	32.78	46	-23.08	19.23	3.04	32.13	105	274	Peak
720.7	26.14	33.19	46	-19.86	21.11	3.49	31.65	100	55	Peak

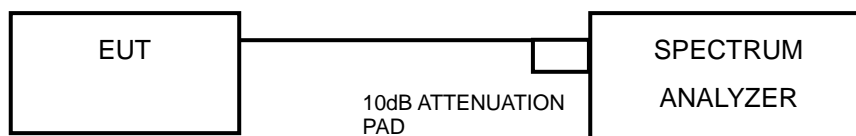
REMARKS: Emission Level = Read Level + Antenna Factor + Cable Loss - Preamp Factor

4.2 6dB BANDWIDTH MEASUREMENT

4.2.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

4.2.2 TEST SETUP



4.2.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

4.2.4 TEST PROCEDURE

1. Set resolution bandwidth (RBW) = approximately 1% of the emission bandwidth
2. Set the video bandwidth (VBW) $\geq 3 \times$ RBW, Detector = Peak.
3. Trace mode = max hold.
4. Sweep = auto couple.
5. Measure the maximum width of the emission that is constrained by the frequencies associated with the two amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

4.2.5 DEVIATION FROM TEST STANDARD

No deviation.

4.2.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

4.2.7 TEST RESULTS

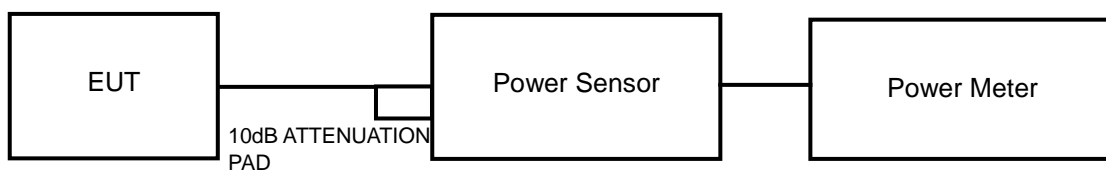
CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (KHz)	MINIMUM LIMIT (MHz)	PASS / FAIL
01	2403.35	1.63	0.5	PASS
20	2441.35	1.63	0.5	PASS
38	2477.35	1.58	0.5	PASS

4.3 CONDUCTED OUTPUT POWER

4.3.1 LIMITS OF CONDUCTED OUTPUT POWER MEASUREMENT

For systems using digital modulation in the 2400–2483.5 MHz: 1 Watt (30dBm)

4.3.2 TEST SETUP



4.3.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

4.3.4 TEST PROCEDURES

A peak power sensor was used on the output port of the EUT. A power meter was used to read the response of the peak power sensor. Record the peak power level.

4.3.5 DEVIATION FROM TEST STANDARD

No deviation.

4.3.6 EUT OPERATING CONDITIONS

Same as Item 4.3.6.

4.3.7 TEST RESULTS

<Antenna 1>

CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
01	2403.35	1.919	2.83	30	PASS
20	2441.35	1.462	1.65	30	PASS
38	2477.35	1.076	0.32	30	PASS

<Antenna 2>

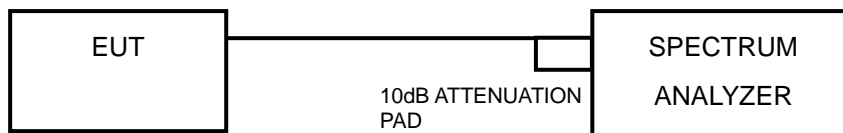
CHANNEL	FREQUENCY (MHz)	PEAK POWER (mW)	PEAK POWER (dBm)	LIMIT (dBm)	PASS/FAIL
01	2403.35	0.081	-10.89	30	PASS
20	2441.35	0.062	-12.06	30	PASS
38	2477.35	0.053	-12.76	30	PASS

4.4 POWER SPECTRAL DENSITY MEASUREMENT

4.4.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm.

4.4.2 TEST SETUP



4.4.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

4.4.4 TEST PROCEDURE

- a. Set the RBW = 3 kHz, VBW =10 kHz, Detector = peak.
- b. Sweep time = auto couple, Trace mode = max hold, allow trace to fully stabilize.
- c. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

4.4.5 DEVIATION FROM TEST STANDARD

No deviation.

4.4.6 EUT OPERATING CONDITION

Same as Item 4.3.6

4.4.7 TEST RESULTS

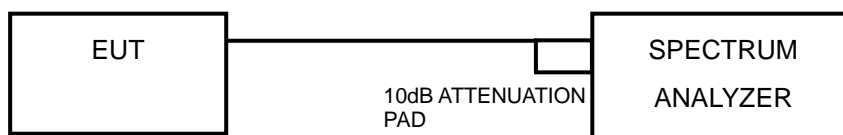
Channel	FREQ. (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	PASS /FAIL
01	2403.35	-15.18	8	PASS
20	2441.35	-17.42	8	PASS
38	2477.35	-17.80	8	PASS

4.5 CONDUCTED OUT OF BAND EMISSION MEASUREMENT

4.5.1 LIMITS OF OUT OF BAND EMISSION MEASUREMENT

Below -20dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).

4.5.2 TEST SETUP



4.5.3 TEST INSTRUMENTS

Refer to section 4.1.2 to get information of above instrument.

4.5.4 TEST PROCEDURE

MEASUREMENT PROCEDURE REF

1. Set the RBW = 100 kHz.
2. Set the VBW \geq 300 kHz.
3. Detector = peak.
4. Sweep time = auto couple.
5. Trace mode = max hold.
6. Allow trace to fully stabilize.
7. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

MEASUREMENT PROCEDURE OOBE

1. Set RBW = 100 kHz.
2. Set VBW \geq 300 kHz.
3. Set span to encompass the spectrum to be examined
4. Detector = peak.
5. Trace Mode = max hold.
6. Sweep = auto couple.

4.5.5 DEVIATION FROM TEST STANDARD

No deviation.

4.5.6 EUT OPERATING CONDITION

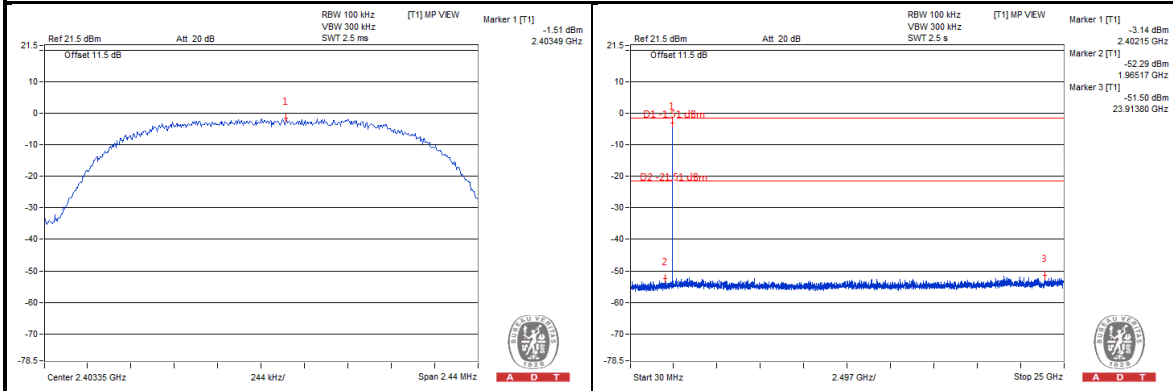
Same as Item 4.3.6

4.5.7 TEST RESULTS

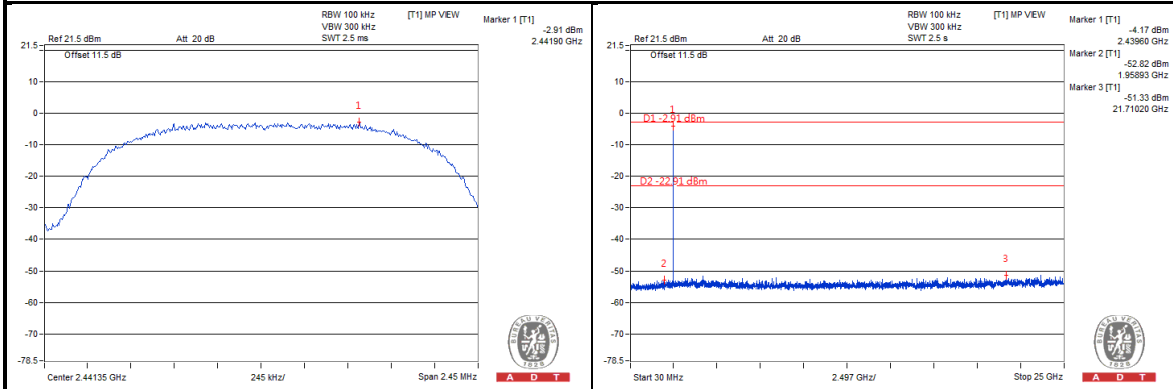
The spectrum plots are attached on the following pages. D1 line indicates the highest level, and D2 line indicates the 20dB offset below D1. It shows compliance with the requirement.

4.5.8 TEST RESULTS

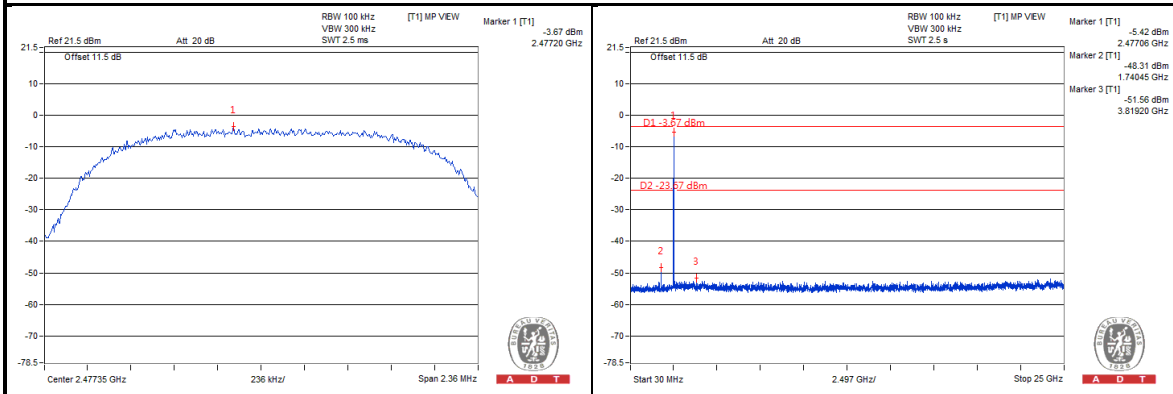
CH 01



CH 20



CH 38





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 according to ISO/IEC 17025.

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

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Tel: 886-3-3183232

Fax: 886-3-3270892

Email: service.adt@tw.bureauveritas.com

Web Site: www.bureauveritas-adt.com

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 modifications were made to the EUT by the lab during the test.

--- END ---