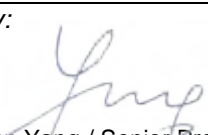
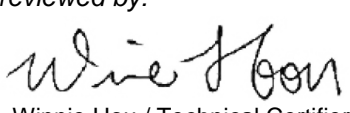


Prüfbericht-Nr.: <i>Test report No.:</i>	50056923 001	Auftrags-Nr.: <i>Order No.:</i>	164071232	Seite 1 von 28 <i>Page 1 of 28</i>	
Kunden-Referenz-Nr.: <i>Client reference No.:</i>	N/A	Auftragsdatum: <i>Order date.:</i>	10.08.2016		
Auftraggeber: <i>Client:</i>	Binatone Electronics International Ltd. Floor 23A, 9 Des Voeux Road West, Sheung Wan, Hong Kong				
Prüfgegenstand: <i>Test item:</i>	Digital Video Baby Monitor (Baby Unit)				
Bezeichnung / Typ-Nr.: <i>Identification / Type No.:</i>	MBP483BU (motorola)				
Auftrags-Inhalt: <i>Order content:</i>	FCC and IC approval				
Prüfgrundlage: <i>Test specification:</i>	CFR47 FCC Part 15: Subpart C Section 15.247 RSS-247 Issue 1 May 2015 CFR47 FCC Part 15: Subpart C Section 15.207 RSS-Gen Issue 4 November 2014 CFR47 FCC Part 15: Subpart C Section 15.209 RSS-102 Issue 5 March 2015 CFR47 FCC Part 2: Section 2.1091				
Wareneingangsdatum: <i>Date of receipt:</i>	16.08.2016	Please refer to photo documents			
Prüfmuster-Nr.: <i>Test sample No.:</i>	A000405259 001-002				
Prüfzeitraum: <i>Testing period:</i>	17.08.2016 - 10.10.2016				
Ort der Prüfung: <i>Place of testing:</i>	Shenzhen Huatongwei International Insp. Co., Ltd.				
Prüflaboratorium: <i>Testing laboratory:</i>	TÜV Rheinland (Shenzhen) Co., Ltd.				
Prüfergebnis*: <i>Test result*:</i>	Pass				
geprüft von / tested by:		kontrolliert von / reviewed by:			
					
26.10.2016	Ryan Yang / Senior Project Engineer	26.10.2016	Winnie Hou / Technical Certifier		
Datum <i>Date</i>	Name/Stellung <i>Name/Position</i>	Unterschrift <i>Signature</i>	Datum <i>Date</i>	Name/Stellung <i>Name/Position</i>	Unterschrift <i>Signature</i>
Sonstiges / Other:					
FCC ID: VLJ-MBP483BU IC: 4522A-MBP483BU HVIN: MBP483BU					
Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of the test item at delivery:</i>			Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged:</i>		
* Legende: 1 = sehr gut 2 = gut 3 = befriedigend 4 = ausreichend 5 = mangelhaft P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet Legend: 1 = very good 2 = good 3 = satisfactory 4 = sufficient 5 = poor P(ass) = passed a.m. test specifications(s) F(ail) = failed a.m. test specifications(s) N/A = not applicable N/T = not tested					
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.					
<i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>					

V04

Test Summary

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1 General Remarks

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix A: Test Results of General 2.4GHz wireless of Conducted Testing

Appendix B: Test Results of General 2.4GHz wireless of Radiated Testing

2 Test Sites

2.1 Test Facilities

Shenzhen Huatongwei International Insp. Co., Ltd.

Bldg3, Hongfa Hi-tech Industrial Park, Genyu Road, Shenzhen, China

FCC Registration No.: 317478

Test site Industry Canada No.: 5377B

The tests at the test sites have been conducted under the supervision of a TÜV engineer.

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Shenzhen Huatongwei International Insp. Co., Ltd.

Radio Spectrum Test				
Equipment	Manufacturer	Model No.	Serial No.	Cal. Until
Spectrum Analyzer	Kysight	N9030A	ATO-67098	18.07.2017
Spurious Emission, Below 1GHz				
Equipment	Manufacturer	Model No.	Serial No.	Cal. Until
EMI Test Receiver	R&S	ESCI	101247	31.10.2016
Rod Ant	R&S	HFH2-Z6	A0805563	03.07.2017
Ultra-Broadband Antenna	SCHWARZBECK	VULB9163	538	07.11.2017
Pre-amplifier	SCHWARZBECK	BBV 9743	9743-0022	31.10.2016
Turntable	Maturo Germany	TT2.0-1T	N/A	N/A
Antenna Mast	Maturo Germany	CAM-4.0-P-12	N/A	N/A
Spurious Emission, Above 1GHz				
Equipment	Manufacturer	Model No.	Serial No.	Cal. Until
Ultra-Broadband Antenna	SCHWARZBECK	VULB9163	546	07.11.2017
Double-Ridged-Waveguide Horn Antenna	SCHWARZBECK	9120D	1011	07.11.2017
Spectrum Analyzer	R&S	FSP40	100597	31.10.2016
Pre-amplifier	SCHWARZBECK	BBV 9743	9743-0022	31.10.2016
Broadband Preampfier	SCHWARZBECK	BBV 9718	9718-248	31.10.2016
Turntable	Maturo Germany	TT2.0-1T	N/A	N/A
Antenna Mast	Maturo Germany	CAM-4.0-P-12	N/A	N/A
Conducted Emission on AC Mains				
Equipment	Manufacturer	Model No.	Serial No.	Cal. Until
EMI Test Receiver	R&S	ESCI	101247	31.10.2016
Artificial Mains	SCHWARZBECK	NNLK 8121	573	31.10.2016
Pulse Limiter	R&S	ESH3-Z2	101488	31.10.2016

2.3 Traceability

All measurement equipment calibrations are traceable to NIM (National Institute of Metrology) or where calibration is performed in other countries, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

2.5 Measurement Uncertainty

The estimated combined standard uncertainty for radiated emissions and conducted emissions measurements as below table

Item	Extended Uncertainty
Conducted Emission	± 3.39 dB
Radiated Emission (30-1000MHz)	Field strength (dB μ V/m) U=4.24dB, k=2, σ =95%
Radiated Emission (above 1000MHz)	Field strength (dB μ V/m) U=5.16dB, k=2, σ =95%
Radio Spectrum	± 0.57 dB

2.6 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix A & B of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) file for certification follow-up purposes.

2.7 Status of Facility Used for Testing

The Shenzhen Huatongwei International Insp. Co., Ltd. Test facility located at Bldg3, Hongfa Hi-tech Industrial Park, Genyu Road, Shenzhen, China is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

3 General Product Information

3.1 Product Function and Intended Use

The EUT is a Digital Video Baby Monitor (Baby Unit) device, it supports general 2.4GHz wireless technology.

For details refer to the User Manual, Technical Description and Circuit Diagram.

3.2 Ratings and System Details

Table 2: Technical Specification of EUT

General Information of EUT	Value
Kind of Equipment	Digital Video Baby Monitor (Baby Unit)
Type Designation	MBP483BU
Trade Mark	motorola
FCC ID	VLJ-MBP483BU
IC / HVIN	4522A-MBP483BU / MBP483BU
Operating Temperature Range	5 °C ~ +45 °C
Operating Voltage	DC 6.0V 500mA input via AC/DC adapter DC 6.0V 600mA input via AC/DC adapter
Testing Voltage	AC 120V, 60Hz
AC/DC Adapter #1	Model: S003GU0600050 Input: AC 100-240V~50/60Hz, 150mA Output: DC 6.0V~500mA
AC/DC Adapter #2	Model: S006AKU0600060 Input: AC 100-240V~50/60Hz, 200mA Output: DC 6.0V~600mA
Technical Specification of general 2.4GHz wireless	
Operating Frequency	2405 - 2475 MHz
Type of Modulation	FSK
Channel Number	32 physical channels
Channel Separation	2.0 / 2.5 / 3.0 MHz
Antenna Type	Integral Antenna
Antenna Gain	0 dBi

Table 3: RF Channel and Frequency of general 2.4GHz wireless

RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
01	2405	12	2428	23	2454
02	2407	13	2430	24	2456
03	2409	14	2433	25	2458.5
04	2411	15	2435	26	2460.5
05	2413	16	2437	27	2462.5
06	2415	17	2439	28	2467
07	2418	18	2441	29	2469
08	2420	19	2444	30	2471
09	2422	20	2446	31	2473
10	2424	21	2450	32	2475
11	2426	22	2452	/	/

3.3 Independent Operation Modes

The basic operation modes are:

- A. On, General 2.4GHz wireless transmitting with adapter #1
 - 1. Low channel
 - 2. Middle channel
 - 3. High channel
- B. On, Transmitting on hopping channel with adapter #1
- C. On, General 2.4GHz wireless transmitting with adapter #1, adapter #2
- D. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to Circuit Diagram for further details.

3.5 Submitted Documents

- Application Form
- Block Diagram
- FCC/IC Label and Location Info
- Operation Description
- PCB Layout
- Photo Document
- Schematics
- User Manual

4 Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

Radio Spectrum: The equipment under test (EUT) was configured at its highest power output in order to measure its highest possible radiation and conducted level. The test modes were adapted accordingly in reference to the instructions for use.

Emission: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5. All testing were performed according to the procedures in ANSI C63.10: 2013.

According to clause 3.2, Radio Spectrum and Radiated Spurious Emission tests were performed on model MBP483BU with adapter #1, and Conducted Emission tests were performed on model MBP483BU with adapter #1, #2 in this report.

4.3 Special Accessories and Auxiliary Equipment

Table 4: List of Accessories and Auxiliary Equipment

Description	Manufacturer	Model	S/N	Rating
Laptop	DELL	Laititude E6420	N/A	N/A
Digital Video Baby Monitor (Parent Unit)	VTech (Dongguan) Telecommunications Ltd.	MBP483PU	N/A	N/A

4.4 Countermeasures to Achieve EMC Compliance

The test sample which has been tested contained the noise suppression parts as described in the Technical Construction File (TCF).

No additional measures were employed to achieve compliance.

4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test (Below 1GHz)

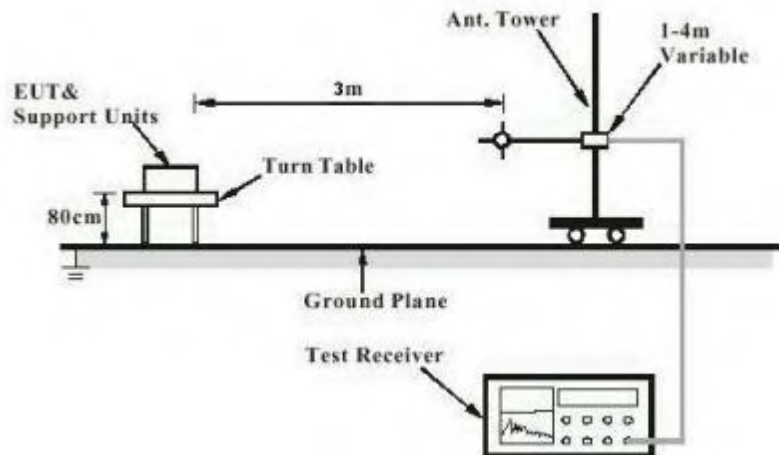


Diagram of Measurement Configuration for Radiation Test (Above 1GHz)

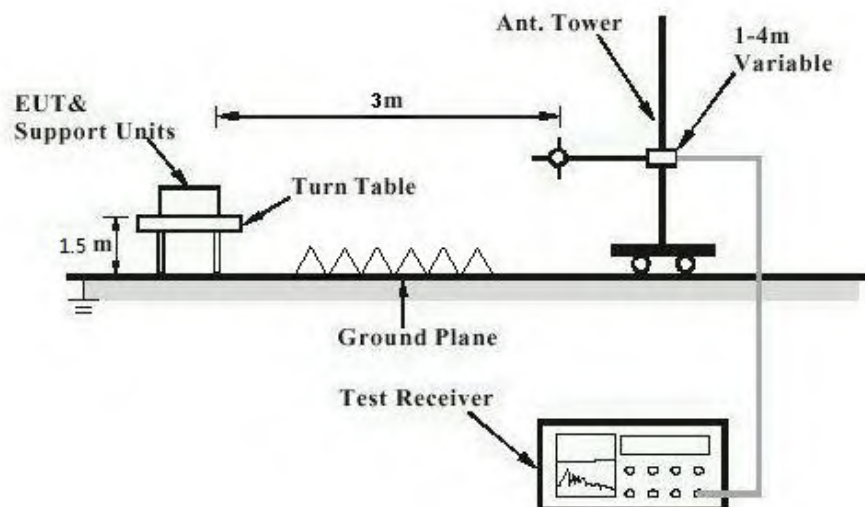


Diagram of Measurement Configuration for Mains Conduction Measurement

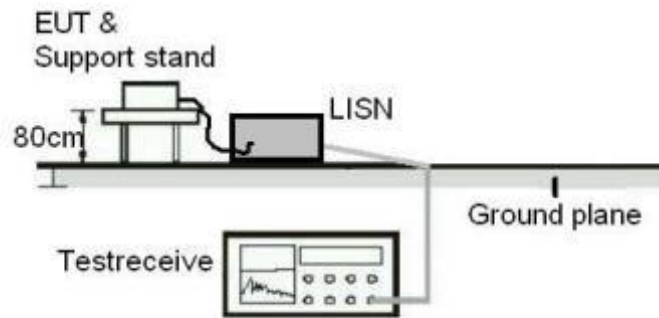
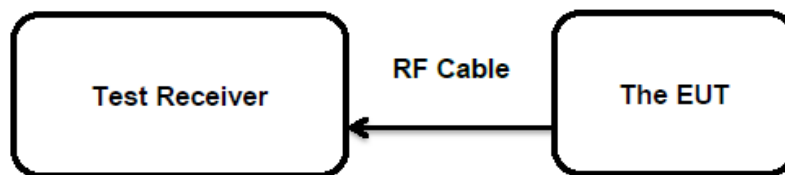


Diagram of Measurement Configuration for Conducted Transmitter Measurement



5 Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT:**Pass****Test Specification**

Test standard : FCC Part 15.247(b)(4) and Part 15.203

According to the manufacturer declared, the EUT has an internal antenna, the directional gain of antenna is 0 dBi, and the antenna connector is designed with permanent attachment and no consideration of replacement. Therefore the EUT is considered sufficient to comply with the provision.

Therefore the EUT is considered sufficient to comply with the provision.

Refer to EUT Photo for further details.

5.1.2 Maximum Peak Conducted Output Power**RESULT:****Pass****Test Specification**

Test standard	:	FCC Part 15.247(b)(1) RSS-247 Clause 5.4(2)
Basic standard	:	ANSI C63.10: 2013
Limits	:	0.125 Watts
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	30.08.2016
Input voltage	:	AC 120V, 60Hz
Operation mode	:	A
Test channel	:	Low / Middle / High
Ambient temperature	:	25 °C
Relative humidity	:	56 %
Atmospheric pressure	:	101 kPa

Table 5: Test Result of Maximum Peak Conducted Output Power

Test EUT	Channel Frequency (MHz)	Measured Peak Output Power		Limit (W)
		(dBm)	(W)	
BU	2405	17.19	0.05236	< 0.125
	2437	16.54	0.04508	
	2475	15.92	0.03908	
Maximum Measured Value		17.19	0.05236	

Note: The cable loss 0.5dB is taken into account in results.

For the measurement records, refer to the appendix A.

5.1.3 99% Bandwidth

RESULT:
Pass
Test Specification

Test standard : RSS-Gen Clause 6.6
 Basic standard : ANSI C63.10: 2013
 Kind of test site : Shielded Room

Test Setup

Date of testing : 30.08.2016
 Input voltage : AC 120V, 60Hz
 Operation mode : A
 Test channel : Low / Middle / High
 Ambient temperature : 25 °C
 Relative humidity : 56 %
 Atmospheric pressure : 101 kPa

Table 6: Test Result of 99% Bandwidth

Test EUT	Test Channel (MHz)	99% Bandwidth (MHz)	Limit (kHz)
BU	2405	2.394	/
	2437	2.394	
	2475	2.306	
Minimum Measured Value		2.306	

For the measurement records, refer to the appendix A.

5.1.4 Conducted Spurious Emissions Measured in 100 kHz Bandwidth

RESULT: **Pass****Test Specification**

Test standard	: FCC Part 15.247(d) RSS-247 Clause 5.5
Basic standard	: ANSI C63.10: 2013
Limits	: 20dB (below that in the 100kHz bandwidth within the band that contains the highest level of the desired power); In addition, radiated emissions which fall in the restricted bands, must also comply with the radiated emission limits specified in 15.209(a)
Kind of test site	: Shielded Room

Test Setup

Date of testing	: 30.08.2016
Input voltage	: AC 120V, 60Hz
Operation mode	: A
Test channel	: Low / Middle / High
Ambient temperature	: 25 °C
Relative humidity	: 56 %
Atmospheric pressure	: 101 kPa

Test results of 100kHz Bandwidth of Frequency Band Edge by Conducted method refer to following test plot, and compliance is achieved as well.

For the measurement records, refer to the appendix A.

5.1.5 Radiated Spurious Emission

RESULT:**Pass****Test Specification**

Test standard	: FCC Part 15.247(d) & FCC Part 15.205 RSS-247 Clause 3.3
Basic standard	: ANSI C63.10: 2013
Limits	: Refer to 15.209(a) of FCC part 15.247(d) RSS-Gen Issue 4 Table 4
Kind of test site	: 3m Semi-anechoic Chamber

Test Setup

Date of testing	: 30.08.2016
Input voltage	: AC 120V, 60Hz
Operation mode	: A
Test channel	: Low / Middle / High
Ambient temperature	: 25 °C
Relative humidity	: 56 %
Atmospheric pressure	: 101 kPa

Remark:

Testing was carried out within frequency range 9kHz – 30MHz and 18GHz - 26.5GHz, and the measurements with active antenna were greater than 20dB below the limit, so the test data were not recorded in the test report.

For the measurement records, refer to the appendix B.

5.1.6 20dB Bandwidth

RESULT:**Pass****Test Specification**

Test standard : FCC Part 15.247(a)(1)
RSS-247 Clause 5.1(1)
Basic standard : ANSI C63.10: 2013
Kind of test site : Shielded Room

Test Setup

Date of testing : 30.08.2016
Input voltage : AC 120V, 60Hz
Operation mode : A
Test channel : Low / Middle / High
Ambient temperature : 25 °C
Relative humidity : 56 %
Atmospheric pressure : 101 kPa

Table 7: Test Result of 20dB Bandwidth

Test EUT	Channel Frequency (MHz)	20dB Bandwidth (kHz)	2/3 of 20dB Bandwidth (kHz)	Limit (MHz)
BU	2405	2539.00	1692.667	/
	2437	2485.00	1656.667	
	2475	2482.00	1654.667	
Maximum Measured Value		2539.00	1692.667	/

For the measurement records, refer to the appendix A.

5.1.7 Carrier Frequency Separation

RESULT:
Pass
Test Specification

Test standard	: FCC Part 15.247(a)(1) RSS-247 Clause 5.1(2)
Basic standard	: ANSI C63.10: 2013
Limits	: $\geq 25\text{kHz}$ or 2/3 of 20dB bandwidth, whichever is greater
Kind of test site	: Shielded Room

Test Setup

Date of testing	: 30.08.2016 & 22.09.2016
Input voltage	: AC 120V, 60Hz
Operation mode	: B
Test channel	: Low / Middle / High
Ambient temperature	: 25 °C
Relative humidity	: 56 %
Atmospheric pressure	: 101 kPa

Table 8: Test Result of Carrier Frequency Separation

Test EUT	Test Channel	Channel Frequency (MHz)	Measured Channel Separation (KHz)	Limit (kHz)
BU	Low Channel	2405	2040.0	$\geq 25\text{kHz}$ or 2/3 of 20dB bandwidth
	Adjacency Channel	2407		
	Middle Channel	2437	1998.0	
	Adjacency Channel	2439		
	High Channel	2475	1968.0	
	Adjacency Channel	2473		

Note: The limit is maximum 2/3 of the 20 dB bandwidth: 1692.667 KHz.

For the measurement records, refer to the appendix A.

5.1.8 Number of Hopping Frequency

RESULT:**Pass****Test Specification**

Test standard : FCC part 15.247(a)(1)(iii)
RSS-247 Clause 5.1(4)

Basic standard : ANSI C63.10: 2013

Limits : ≥ 15 non-overlapping channels

Kind of test site : Shielded Room

Test Setup

Date of testing : 09.10.2016

Input voltage : AC 120V, 60Hz

Operation mode : B

Ambient temperature : 25 °C

Relative humidity : 56 %

Atmospheric pressure : 101 kPa

Table 9: Test Result of Number of Hopping Frequency

Test EUT	Frequency Range	Measured Quantity of Hopping Channel	Limit
BU	2405 - 2475 MHz	17	≥ 15

For the measurement records, refer to the appendix A.

5.1.9 Time of Occupancy

RESULT:
Pass
Test Specification

Test standard : FCC part 15.247(a)(1)(iii)
 RSS-247 Clause 5.1(4)

Basic standard : ANSI C63.10: 2013

Limits : < 0.4s

Kind of test site : Shielded Room

Test Setup

Date of testing : 09.10.2016

Input voltage : AC 120V, 60Hz

Operation mode : B

Test channel : Low / Middle / High

Ambient temperature : 25 °C

Relative humidity : 56 %

Atmospheric pressure : 101 kPa

Table 10: Test Result of Time of Occupancy

Test EUT	Test Channel (MHz)	Pulse width (ms)	Number of Channels	Measured Dwell time (s)	Limit (s)
BU	2405	1.08	264	0.285	0.4s
	2437	1.07	264	0.282	
	2475	1.08	264	0.285	

Note:

$$\text{Dwell time} = \text{Pulse width} \times \text{Number of channels in Period}$$

$$\text{Period} = 0.4 \text{ (seconds/ channel)} \times 17 \text{ (channel)} = 6.8 \text{ seconds}$$

For the measurement records, refer to the appendix A.

5.1.10 Conducted Emission on AC Mains**RESULT:****Pass****Test Specification**

Test standard	: FCC Part 15.207(a) RSS-Gen Clause 8.8
Basic standard	: ANSI C63.10: 2013
Frequency range	: 0.15 – 30MHz
Limits	: FCC Part 15.207(a) RSS-Gen Table 3
Kind of test site	: Shielded Room

Test Setup

Date of testing	: Refer to test plots
Input voltage	: AC 120V, 60Hz
Operation mode	: C
Earthing	: Not connected
Ambient temperature	: 24 °C
Relative humidity	: 53 %
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the appendix B.

6 Safety Human Exposure

6.1 Radio Frequency Exposure Compliance

6.1.1 Electromagnetic Fields

RESULT:

Pass

Test Specification

Test standard : CFR47 FCC Part 2: Section 2.1091
CFR47 FCC Part 1: Section 1.1310
FCC KDB Publication 447498 v06
FCC KDB Publication 865664 D02 v01r02
OET Bulletin 65 (Edition 97-01)
RSS-102 Issue 5 March 2015

➤ FCC requirements

FCC requirement: Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 20cm normally can be maintained between the user and the device.

MPE Calculation Method according to OET Bulletin 65

Power Density: $S_{(mW/cm^2)} = PG/4\pi R^2$ or $EIRP/4\pi R^2$

Where:

S = power density (mW/cm²)

P = power input to the antenna (mW)

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna (cm)

The nominal conducted output power specified:

2.4GHz FHSS: 18.00 dBm (Tolerance: ± 2 dB)

From the peak RF output power, the minimum mobile separation distance, d=20 cm, as well as the antenna gain (Max. 0.0 dBi for 2.4GHz FHSS), the RF power density can be calculated as below:

For 2.4GHz FHSS: $S_{(mW/cm^2)} = PG/4\pi R^2 = 0.020$ mW/cm²

Limits for Maximum Permissible Exposure (MPE) according to FCC Part 1.1310:

1.0 mW/cm²

➤ **IC requirements:** The EUT shall comply with the requirement of RSS-102 section 2.5.2.

Exemption from Routine Evaluation Limits – RF Exposure Evaluation

RF exposure evaluation is required if the separation distance between the user and/or bystander and the device's radiating element is greater than 20 cm, except when the device operates as follows:

at or above 300 MHz and below 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than $1.31 \times 10^{-2} f^{0.6834}$ W (adjusted for tune-up tolerance), where f is in MHz;

- RF exposure evaluation exempted power for 2.4GHz FHSS: 2.679 W

The nominal conducted output power specified:

2.4GHz FHSS: 18.00 dBm (Tolerance: ± 2 dB)

Antenna Gain: 0.0 dBi for 2.4GHz FHSS

The Max. e.i.r.p. for 2.4GHz FHSS = 18.00 dBm ≈ 0.063 W is less than the RF exposure evaluation exempted power. So RF exposure evaluation is not required.

“RF Radiation Exposure Statement Caution: This Transmitter must be installed to provide a separation distance of at least 20 cm from all persons.”

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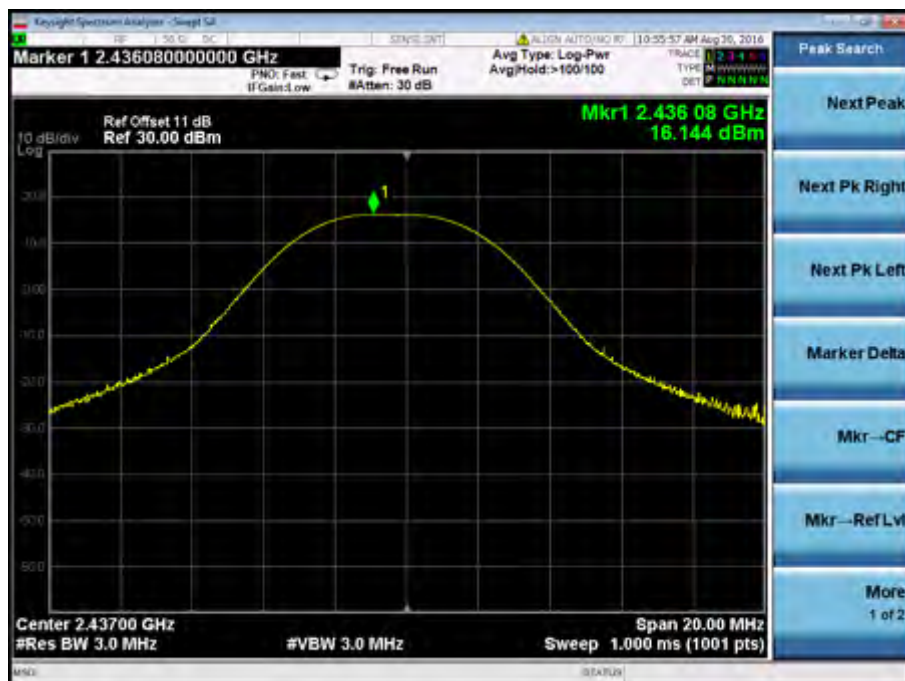
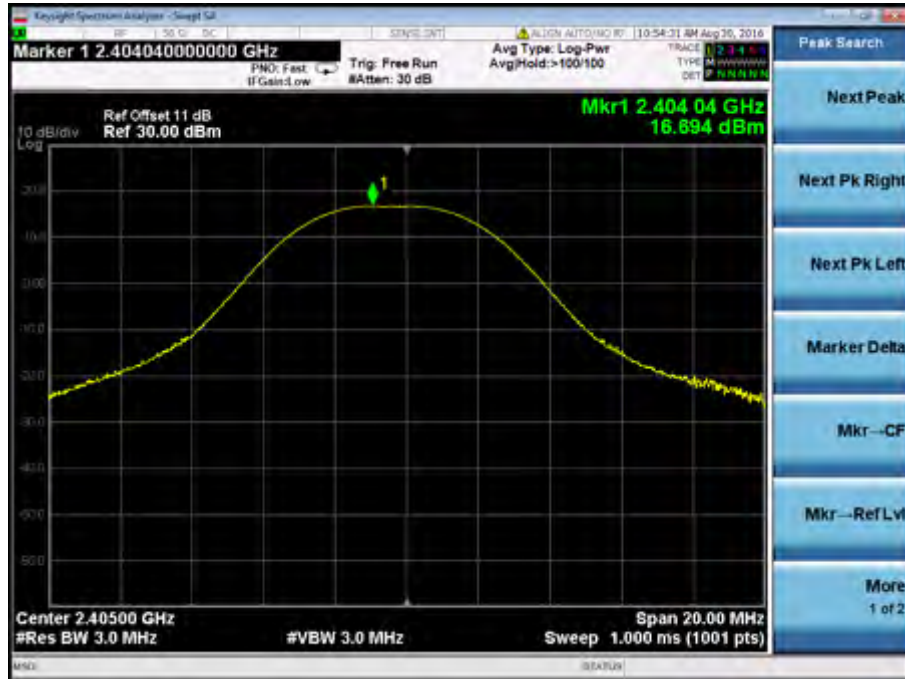
Appendix A

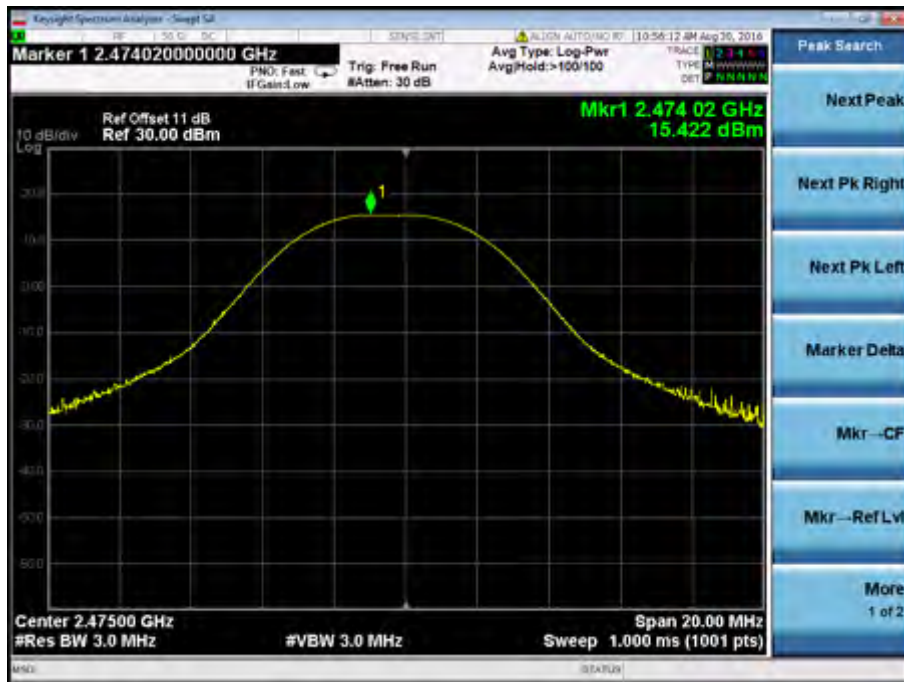
Test Results of General 2.4GHz wireless of Conducted Testing

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Appendix A.1: Maximum Peak Conducted OutBUt Power

BU Unit

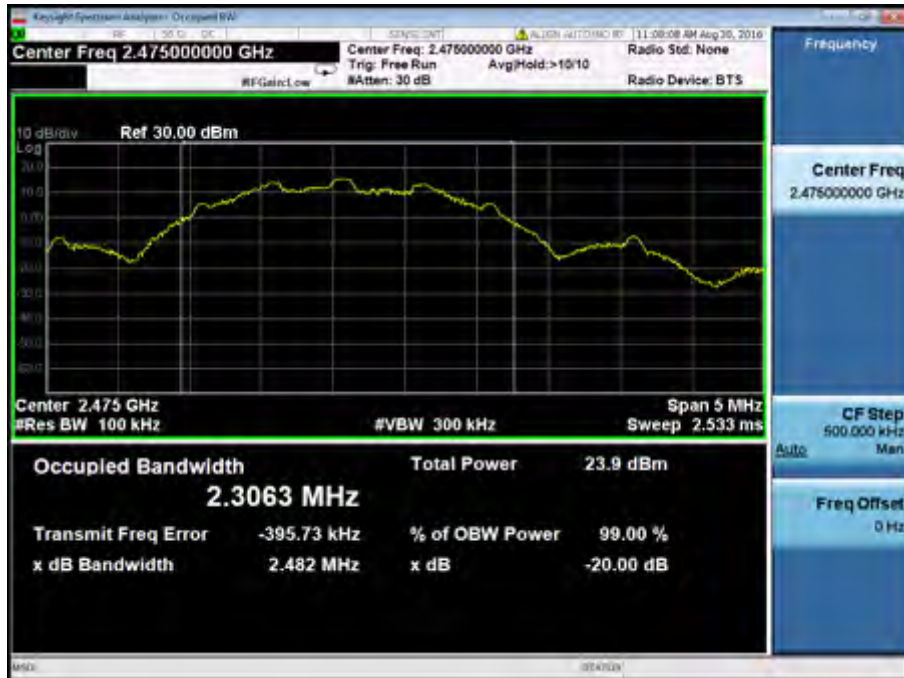




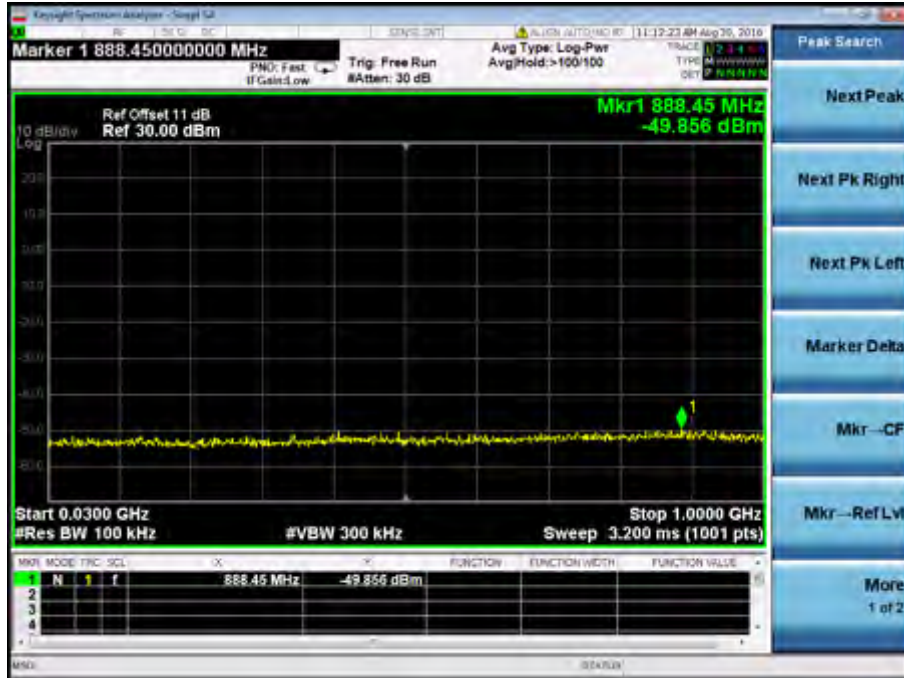
Appendix A.2: 99% Bandwidth & 20dB Bandwidth

BU Unit

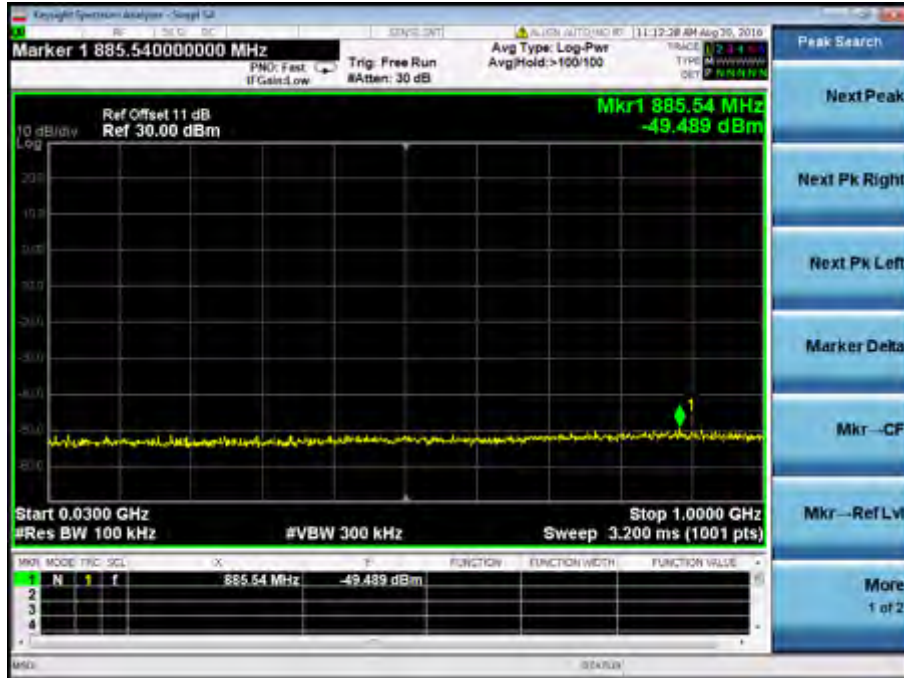




Middle Channel

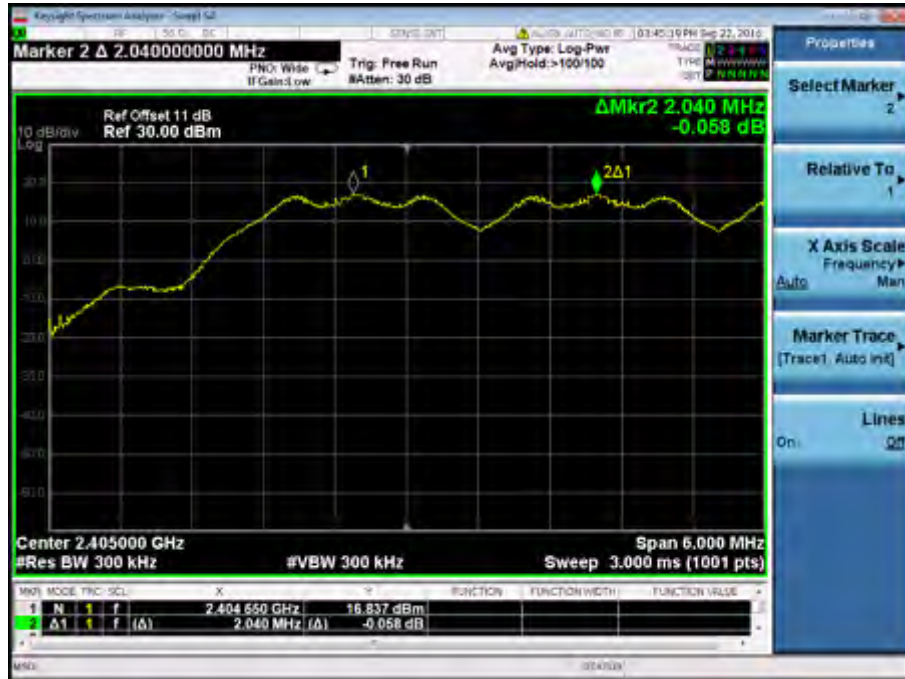


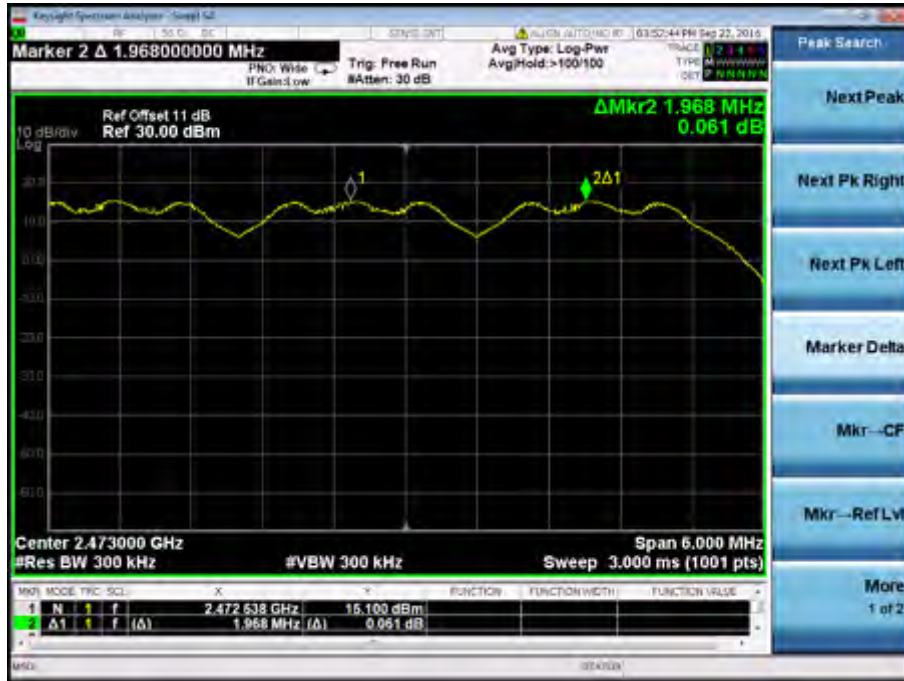
High Channel



Appendix A.4: Carrier Frequency Separation

BU Unit





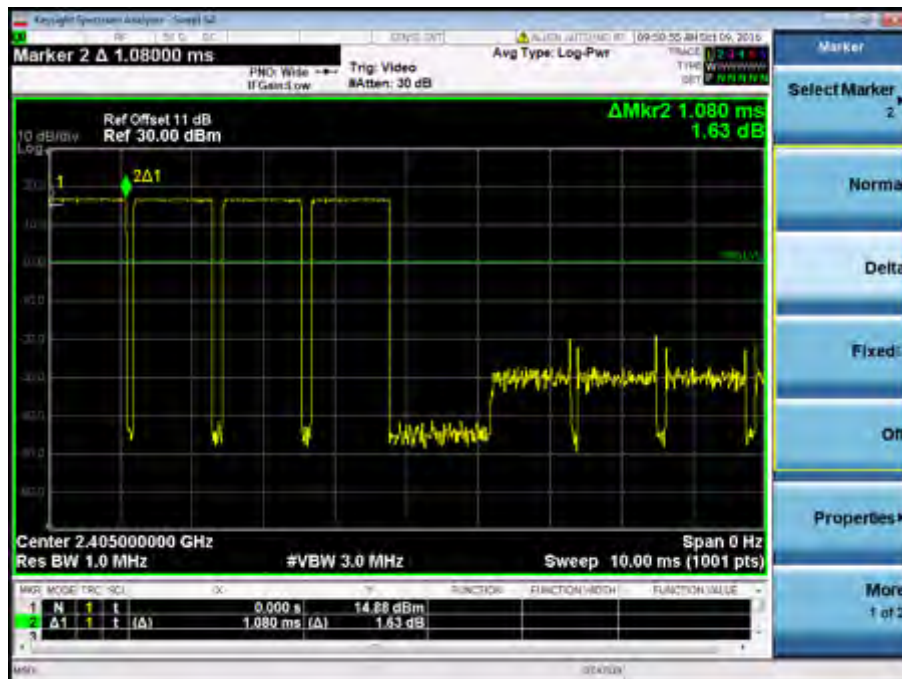
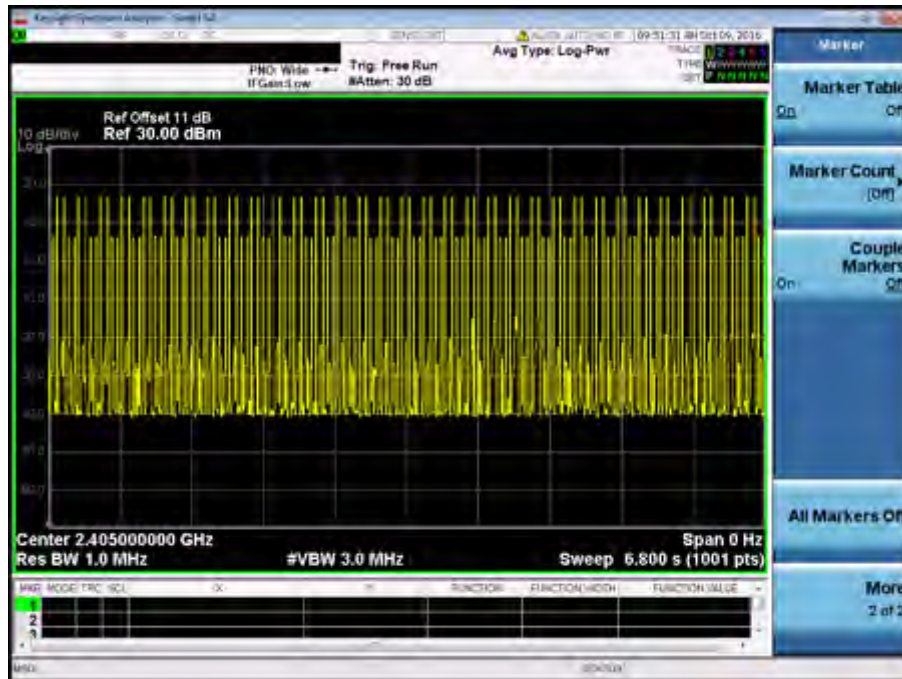
Appendix A.5: Number of Hopping Frequency

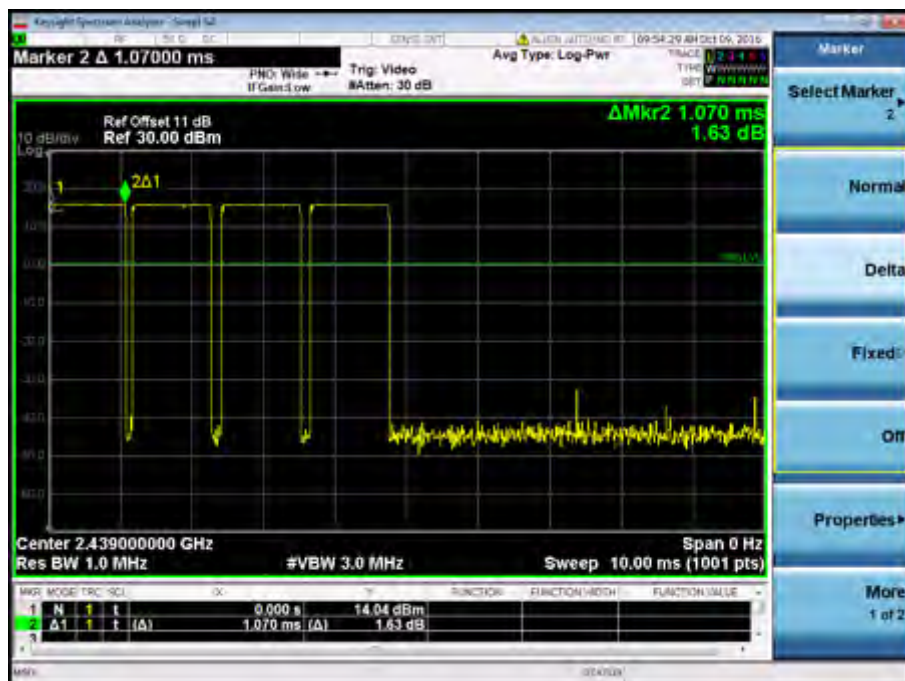
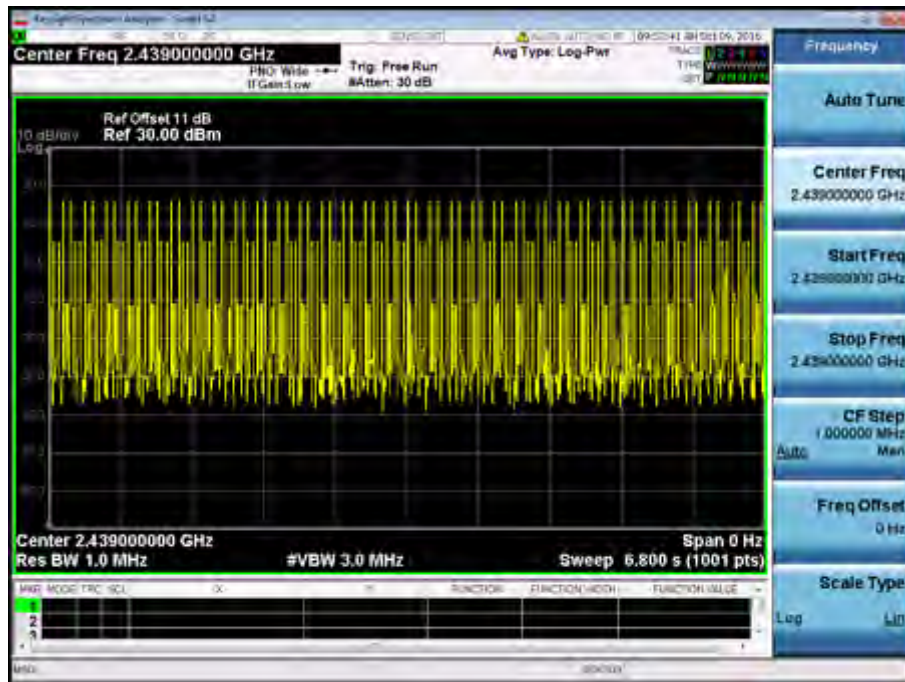
BU Unit



Appendix A.6: Time of Occupancy

BU Unit







Appendix B

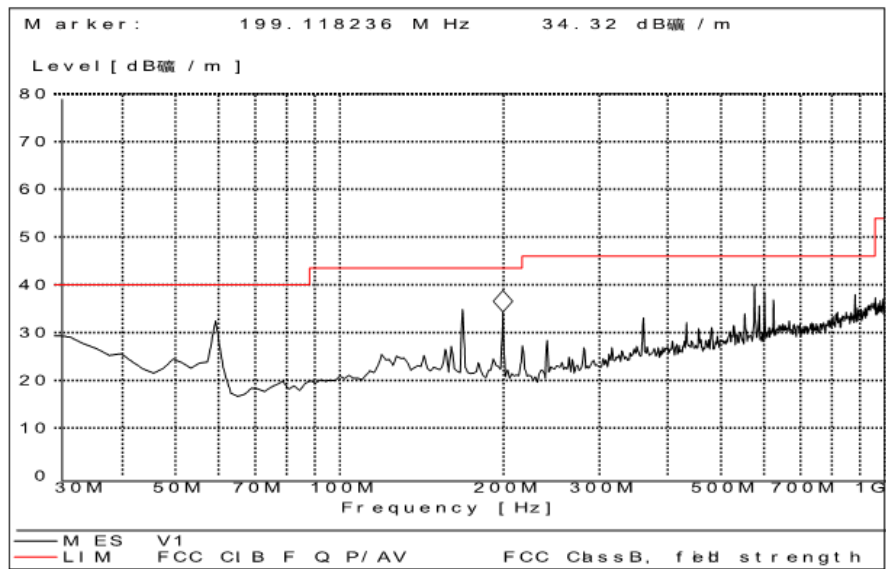
Test Results of General 2.4GHz wireless of Radiated Testing

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Appendix B.1: Test Plots of Radiated Spurious Emission

BU Unit, 30MHz - 1GHz

EUT: S003GU0600050_BU
Manufacturer:
Operating Condition: LOW Channel
Test Site: Shenzhen Huatongwei International Co., Ltd
Operator:
Test Specification: V



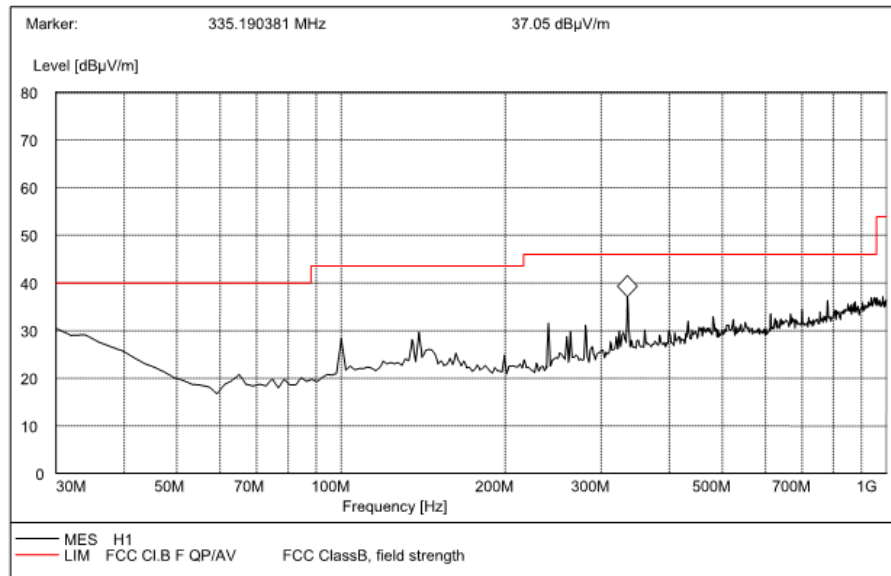
MEASUREMENT RESULT: "QuasiPeak"

2016-10-13 23:31

Frequency MHz	Level dB μ V/m	Limit dB μ V/m
59.160000	30.46	40.0
168.020000	32.83	43.5
199.120000	32.25	46.0

2016-10-13 23:31

EUT: S003GU0600050_BU
Manufacturer::
Operating Condition: MID Channel
Test Site: Shenzhen Huatongwei International Co., Ltd
Operator:
Test Specification: H



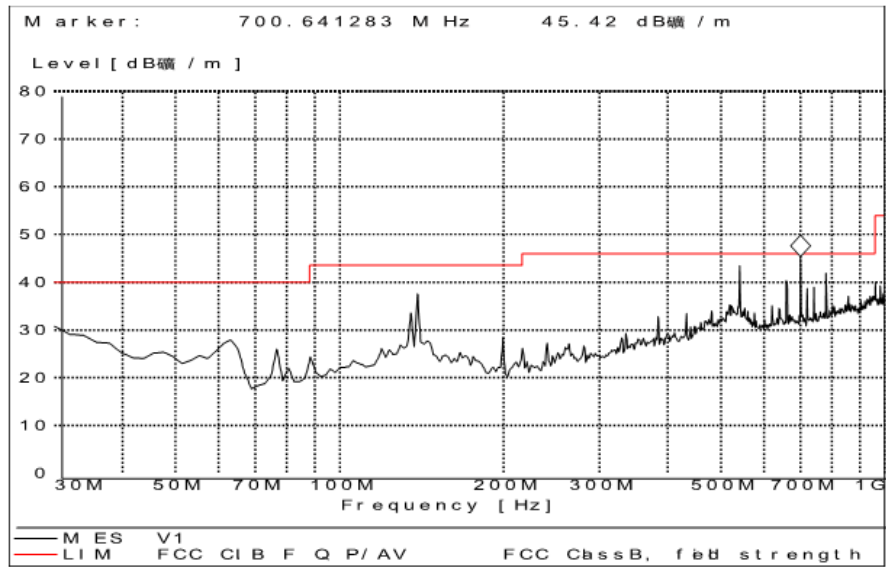
MEASUREMENT RESULT: "QuasiPeak"

2016-8-18 8:17

Frequency MHz	Level dB μ V/m	Limit dB μ V/m
99.980000	26.40	43.5
138.850000	27.62	43.5
335.190000	35.04	46.0

2016-8-18 8:17

EUT: S003GU0600050_BU
 Manufacturer::
 Operating Condition: MID Channel
 Test Site: Shenzhen Huatongwei International Co., Ltd
 Operator:
 Test Specification: V



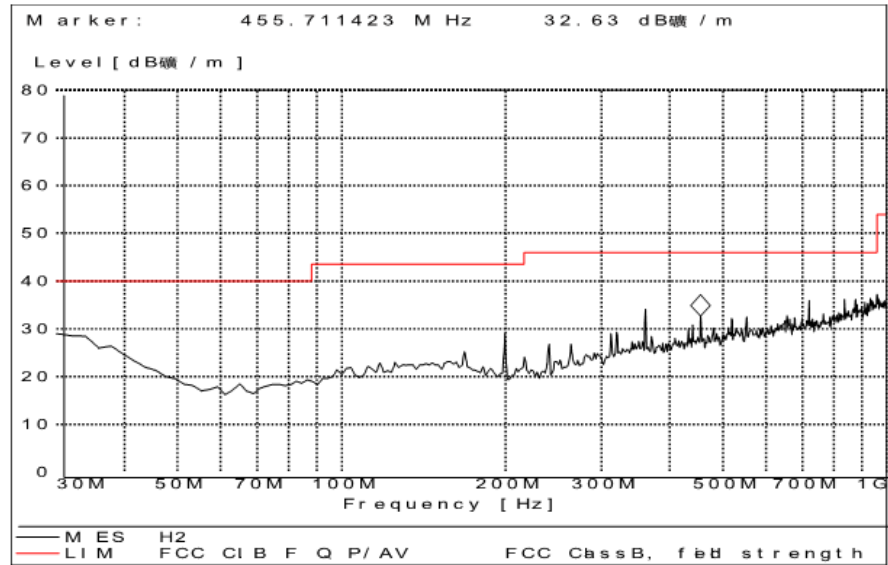
MEASUREMENT RESULT: "QuasiPeak"

2016-8-18 8:19

Frequency MHz	Level dB μ /m	Limit dB μ /m
138.850000	35.53	43.5
541.240000	41.48	46.0
700.640000	45.24	46.0

2016-8-18 8:19

EUT: S003GU0600050_BU
 Manufacturer::
 Operating Condition: HIGH Channel
 Test Site: Shenzhen Huatongwei International Co., Ltd
 Operator:
 Test Specification: H



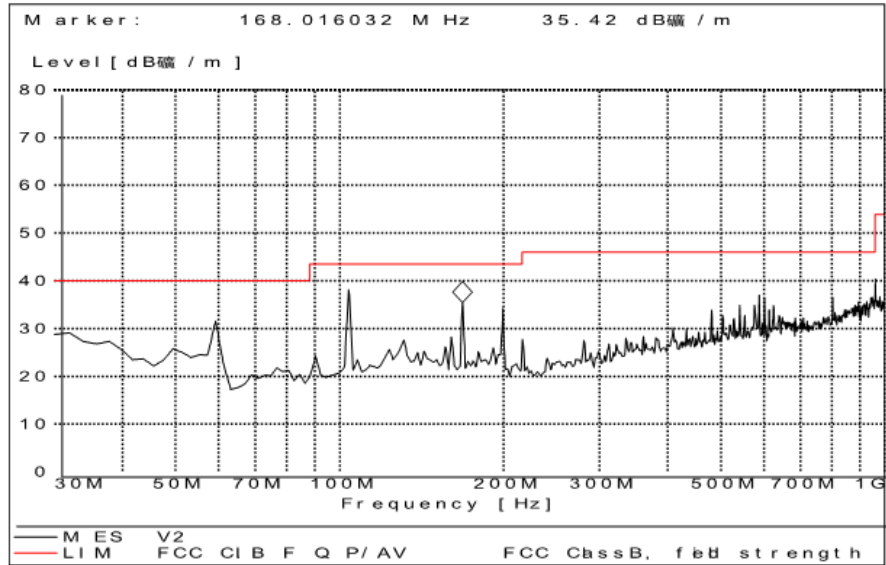
MEASUREMENT RESULT: "QuasiPeak"

2016-10-13 23:27

Frequency MHz	Level dB μ V/m	Limit dB μ V/m
199.120000	27.01	43.5
360.460000	32.03	46.0
455.710000	30.63	46.0

2016-10-13 23:28

EUT: S003GU0600050_BU
 Manufacturer::
 Operating Condition: HIGH Channel
 Test Site: Shenzhen Huatongwei International Co., Ltd
 Operator:
 Test Specification: V



MEASUREMENT RESULT: "QuasiPeak"

2016-10-14 8:07

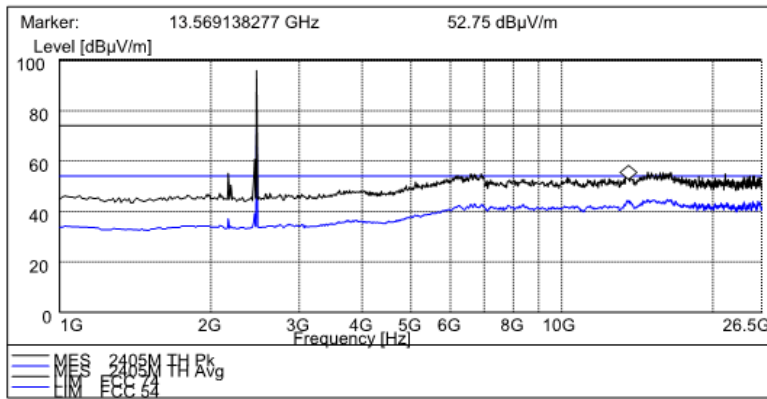
Frequency MHz	Level dB μ V/m	Limit dB μ V/m
59.160000	29.57	40.0
103.870000	36.14	43.5
168.020000	33.44	43.5

2016-10-14 8:07

BU Unit, 1GHz - 26.5GHz

TEST

EUT: S003GU0600050_BU
 Manufacturer:
 Operating Condition: LOW Channel
 Test Site: Shenzhen Huatongwei International Co., Ltd
 Operator:
 Test Specification: HOR
 Comment:



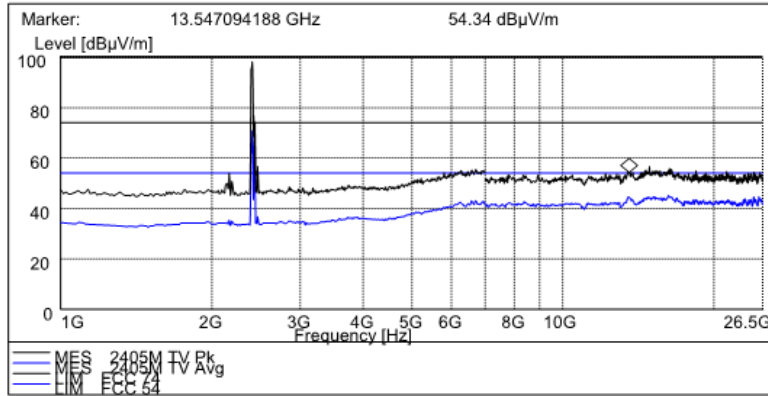
MEASUREMENT RESULT: "RE QP1"

2016/10/13 09:35nm

Frequency GHz	Level dBµV	QP Limit dBµV/m	AV Level dBµV/m	AV Limit dBµV/m
6.122400000	53.64	74	41.54	54.00
10.262500000	53.45	74	41.70	54.00
13.525000000	53.62	74	43.93	54.00

TEST

EUT: S003GU0600050_BU
 Manufacturer:
 Operating Condition: LOW Channel
 Test Site: Shenzhen Huatongwei International Co., Ltd
 Operator:
 Test Specification: VER
 Comment:



MEASUREMENT RESULT: "RE QP1"

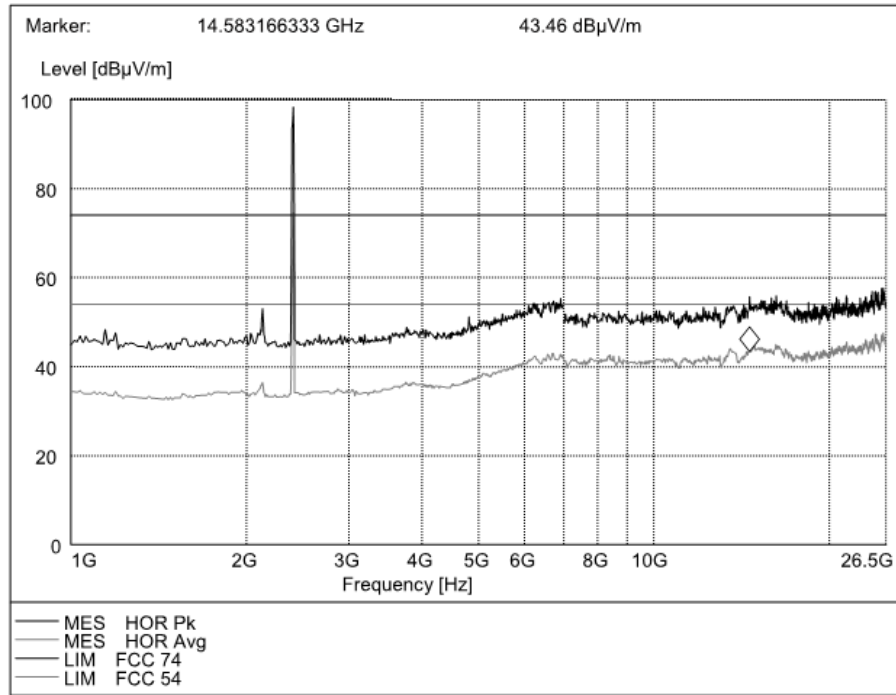
2016/10/13 09:33nm

Frequency GHz	Level dBµV	QP Limit dBµV/m	AV Level dBµV/m	AV Limit dBµV/m
6.230400000	54.43	74	42.32	54.00
7.815600000	53.31	74	42.27	54.00
13.503000000	55.87	74	44.60	54.00

2016/10/13 09:33nm

TEST

EUT: S003GU0600050_BU
 Manufacturer:
 Operating Condition: MID Channel
 Test Site: Shenzhen Huatongwei International Co., Ltd
 Operator:
 Test Specification: HOR
 Comment:



MEASUREMENT RESULT: "RE QP2"

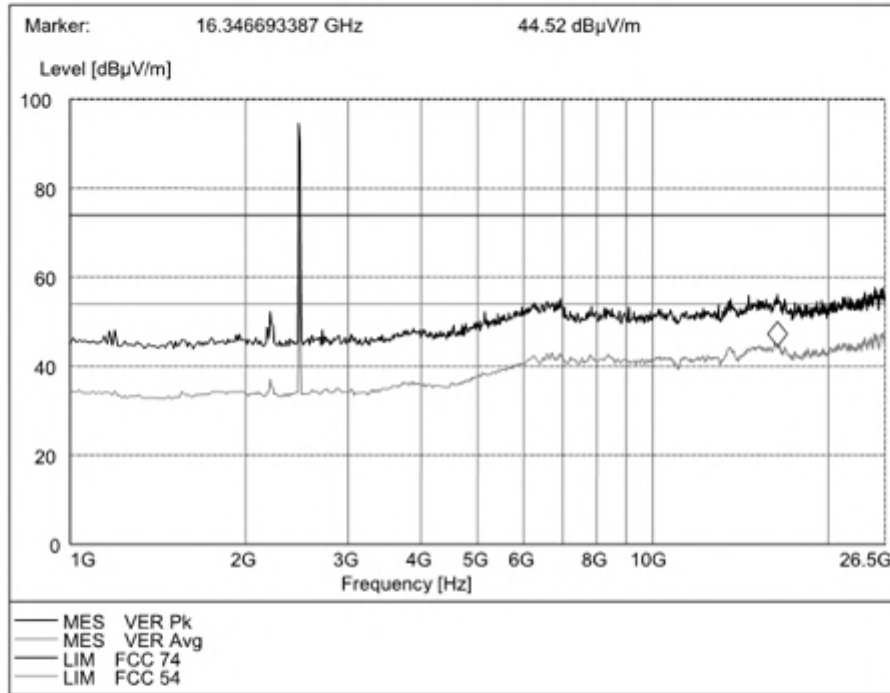
2016/09/06 07:33nm

Frequency MHz	Level dBµV	Limit dBµV/m	Level AV dBµV/m	Limit AV dBµV/m
2130.0	53.1	74.0	36.4	54.0
6206.0	54.3	74.0	42.1	54.0
13701.0	53.1	74.0	43.5	54.0
14583.0	55.7	74.0	43.5	54.0

2016/09/06 07:33nm

TEST

EUT: S003GU0600050_BU
 Manufacturer:
 Operating Condition: MID Channel
 Test Site: Shenzhen Huatongwei International Co., Ltd
 Operator:
 Test Specification: VER
 Comment:



MEASUREMENT RESULT: "RE QP2"

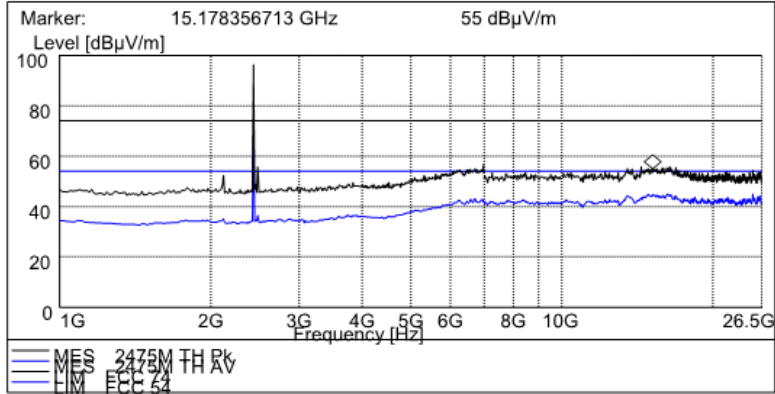
2016/09/06 07:52nm

Frequency MHz	Level dBµV	Limit dBµV/m	Level AV dBµV/m	Limit AV dBµV/m
2202.0	52.3	74.0	37.1	54.0
6230.0	53.2	74.0	42.3	54.0
13591.0	55.2	74.0	44.2	54.0
16346.0	56.2	74.0	44.5	54.0

2016/09/06 07:52nm

TEST

EUT: S003GU0600050_BU
Manufacturer:
Operating Condition: HIGH Channel
Test Site: Shenzhen Huatongwei International Co., Ltd
Operator:
Test Specification: HOR
Comment:



MEASUREMENT RESULT: "RE QP1"

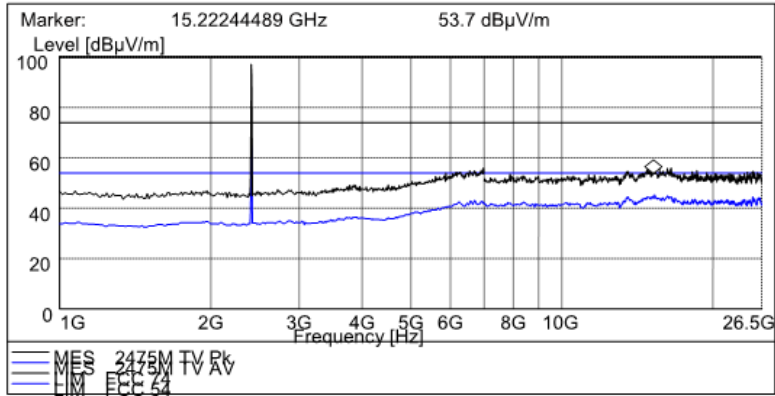
2016/10/13 10:31nm

Frequency GHz	Level dB μ V	QP Limit dB μ V/m	AV Level dB μ V/m	AV Limit dB μ V/m
6.242500000	54.19	74.00	42.58	54.00
13.547000000	53.35	74.00	44.06	54.00
15.156300000	53.50	74.00	44.06	54.00

2016/10/13 10:31nm

TEST

EUT: S003GU0600050_BU
 Manufacturer:
 Operating Condition: HIGH Channel
 Test Site: Shenzhen Huatongwei International Co., Ltd
 Operator:
 Test Specification: VER
 Comment:



MEASUREMENT RESULT: "RE QP1"

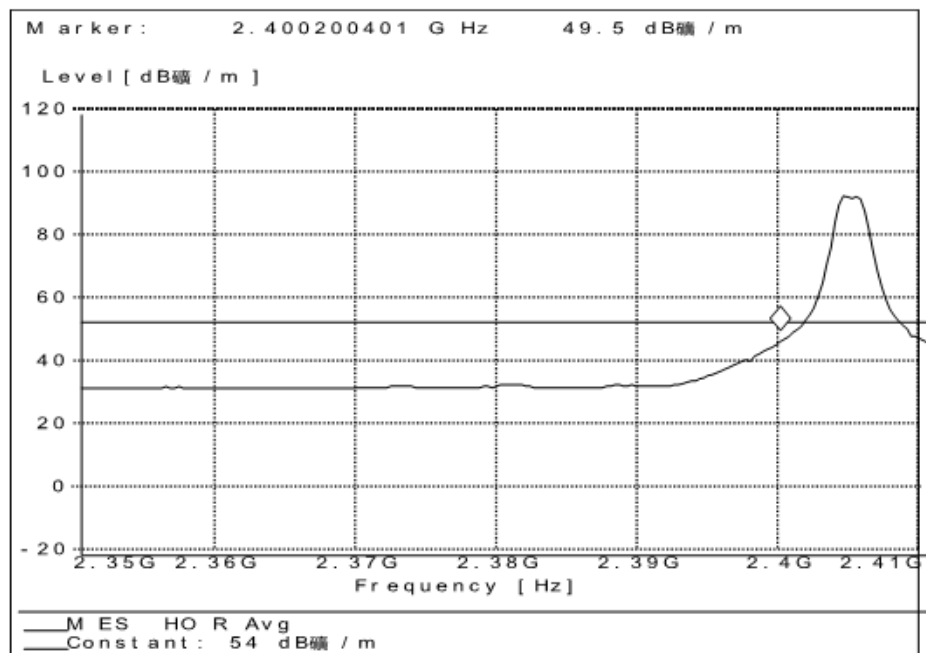
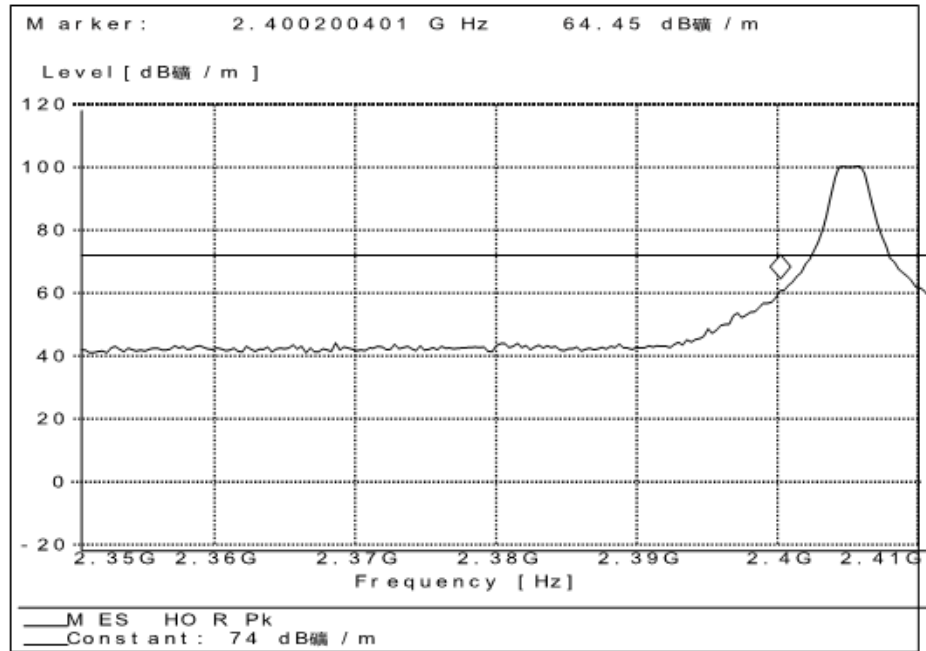
2016/10/13 10:33nm

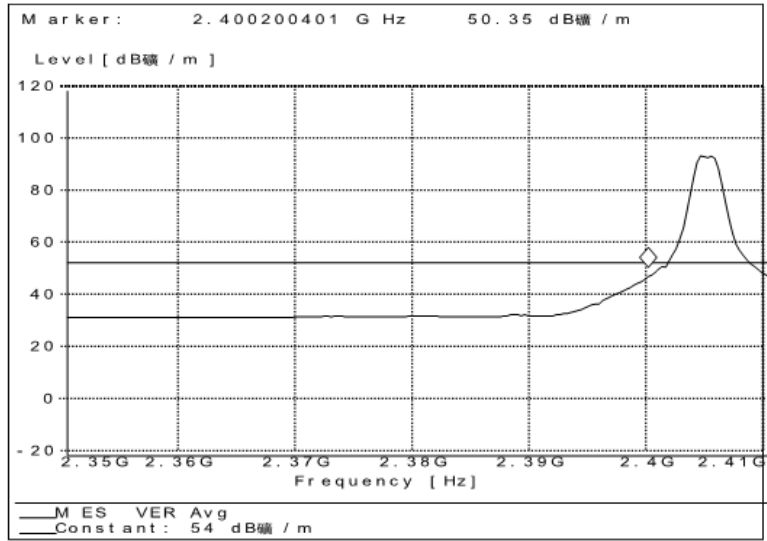
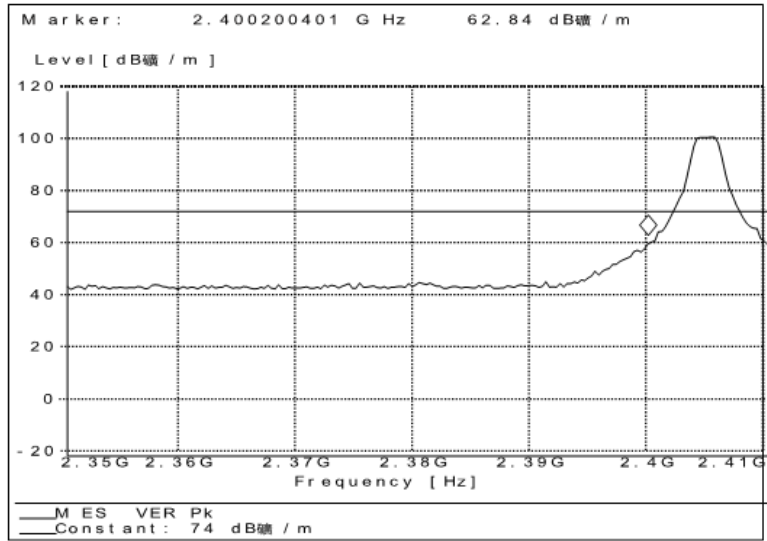
Frequency GHz	Level dBµV	QP Limit dBµV/m	AV Level dBµV/m	AV Limit dBµV/m
6.254500000	54.23	74.00	42.37	54.00
13.458900000	54.45	74.00	44.03	54.00
15.178300000	55.13	74.00	44.59	54.00

2016/10/13 10:33nm

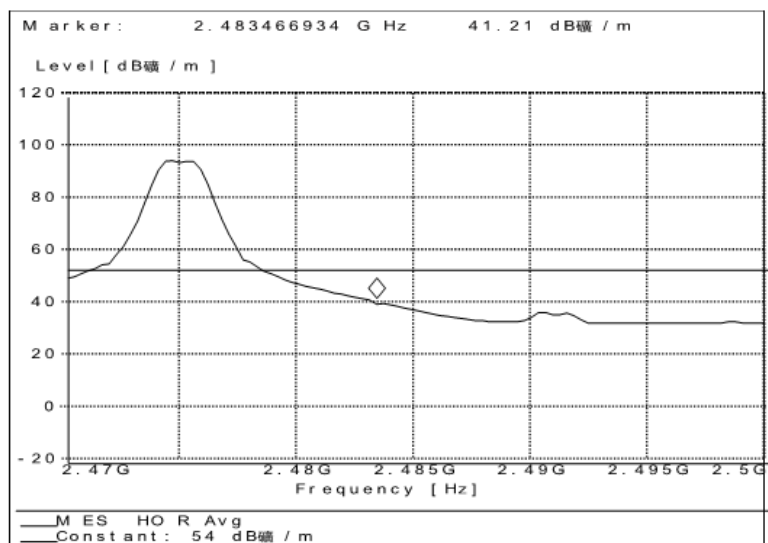
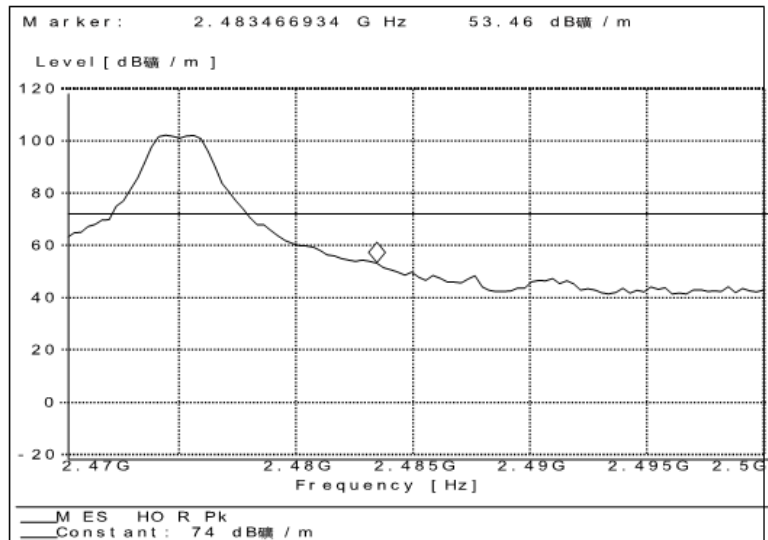
Appendix B.2: Test Plots of Band Edge (Radiated)

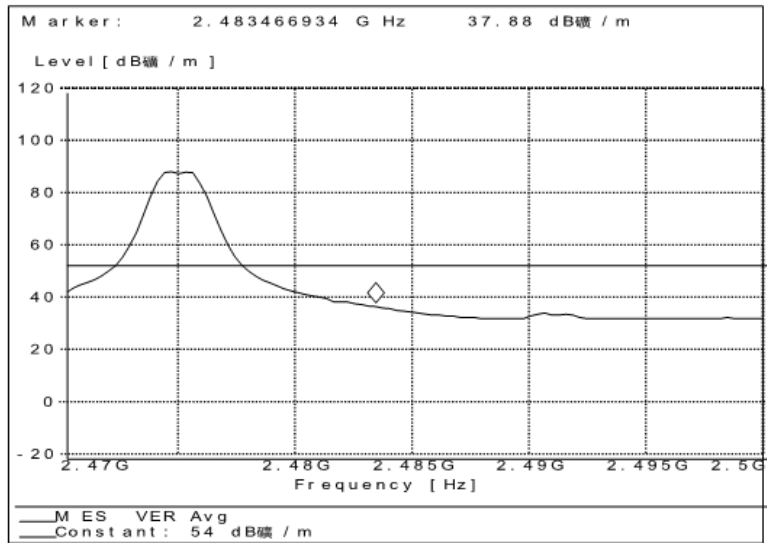
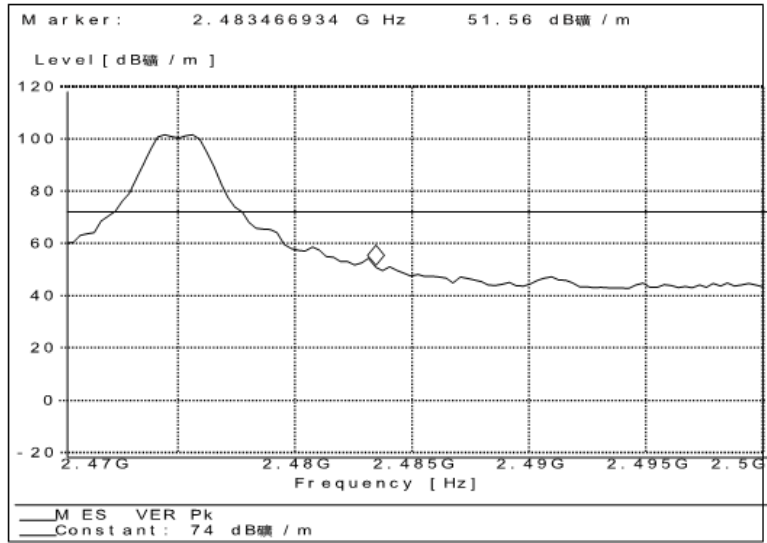
BU Unit, Low Channel





BU Unit, High Channel





Appendix B.3: Test Plots of Conducted Emission on AC Mains
BU Unit, C mode, Adapter #1

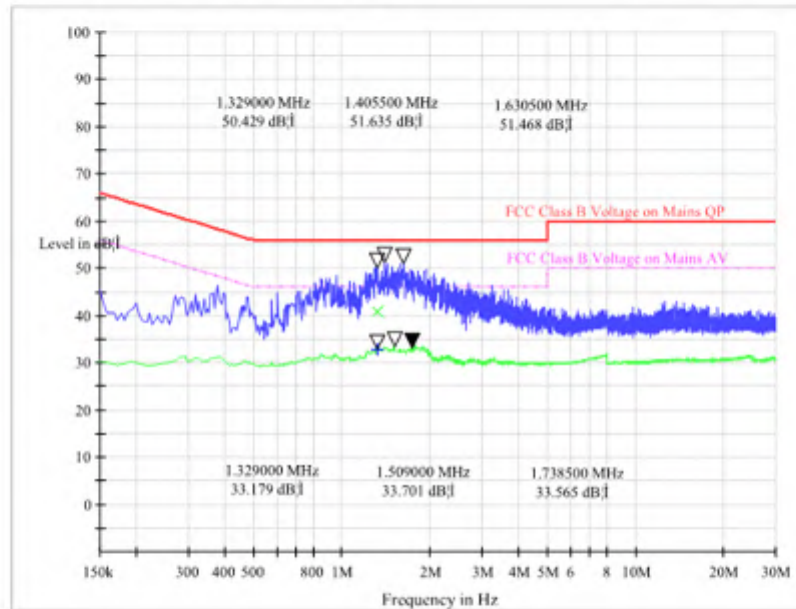
16-15847 L2

EMC32 Report

Common Information

Test Description: EMC32 Standard Report Setup
 Operating Conditions: Connecting BU to PU with general 2.4GHz wireless
 Operator Name:
 EUT: S003GU0600050-BU

FCC Class B Voltage Test



Limit and Margin

Frequency (MHz)	MaxPeak (dB µV)	QuasiPeak (dB µV)	Average (dB µV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)	Margin - QPK (dB)
1.329000	---	40.86	32.85	1000.0	4.500	L1	OFF	20.0	15.14
1.405500	---	42.24	33.38	1000.0	4.500	L1	OFF	20.0	13.76
1.630500	---	42.52	33.14	1000.0	4.500	L1	OFF	20.0	13.48

(continuation of the "Limit and Margin" table from column 15 ...)

Frequency (MHz)	Limit - QPK (dB µV)	Comment
1.329000	56.0	
1.405500	56.0	
1.630500	56.0	

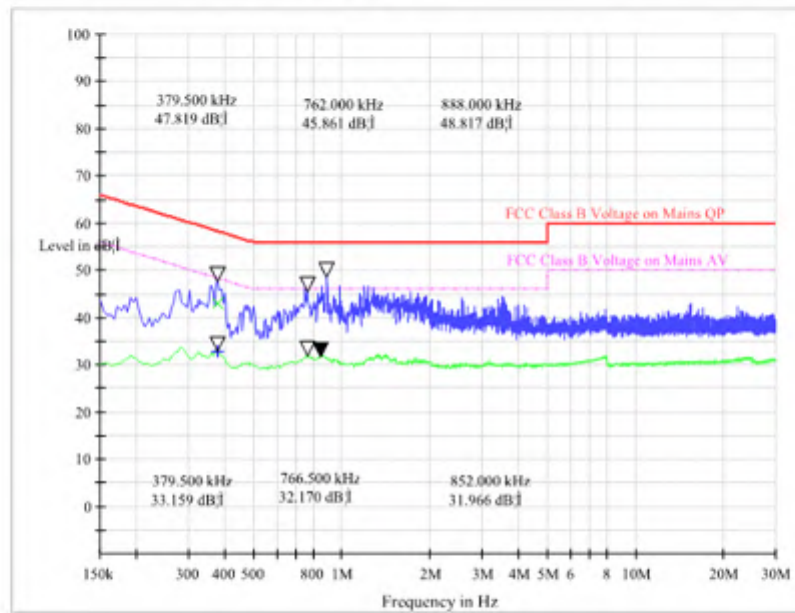
16-15847 N2

EMC32 Report

Common Information

Test Description: EMC32 Standard Report Setup
 Operating Conditions: Connecting BU to PU with general 2.4GHz wireless
 Operator Name:
 EUT: S003GU0600050-BU

FCC Class B Voltage Test



Limit and Margin

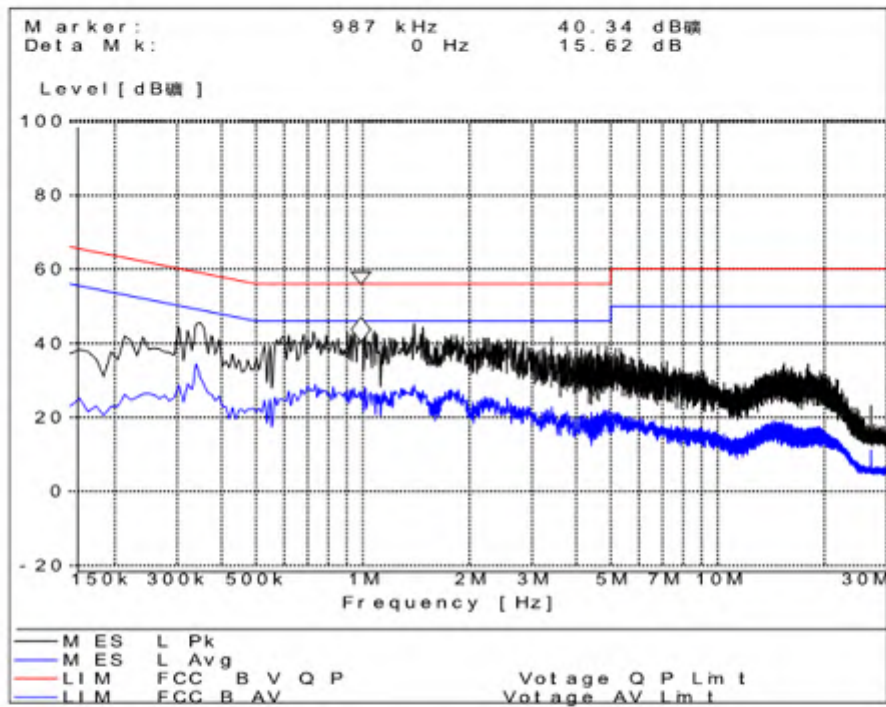
Frequency (MHz)	MaxPeak (dB µV)	QuasiPeak (dB µV)	Average (dB µV)	Meas. Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)	Margin - QPK (dB)
0.379500	---	43.12	32.78	1000.0	4.500	N	OFF	20.0	15.17
0.762000	---	41.54	32.22	1000.0	4.500	N	OFF	20.0	14.46
0.888000	---	43.87	32.14	1000.0	4.500	N	OFF	20.0	12.13

(continuation of the "Limit and Margin" table from column 15 ...)

Frequency (MHz)	Limit - QPK (dB µV)	Comment
0.379500	58.3	
0.762000	56.0	
0.888000	56.0	

BU Unit, C mode, Adapter #2

Test Site: Shenzhen Huatongwei International Co., Ltd
 EUT: S006AKU0600060_BU
 Job :
 Model No:
 Operatin Condition: Connecting BU to PU with general 2.4GHz wireless
 Test Part : L
 Test Result : PASS
 :



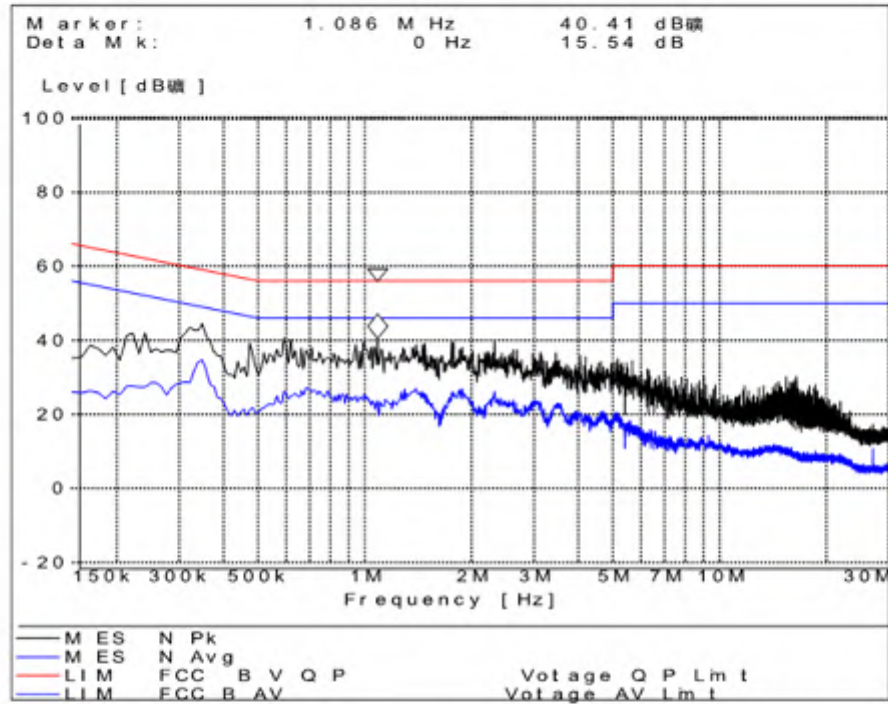
MEASUREMENT RESULT: "EN 55022 Volt QP-AV"

2016-8-23 19:10

Frequency MHz	Level dBpV	Limit-QP dBpV	Level dBpV	Limit-AV dBpV
0.339000	43.42	59.00	34.37	49.00
0.726000	41.03	56.00	27.09	46.00
0.996000	42.22	56.00	26.93	46.00

2016-8-23 19:10

Test Site: Shenzhen Huatongwei International Co., Ltd
 EUT: S006AKU0600060_BU
 Job :
 Model No:
 Operatin Condition: Connecting BU to PU with general 2.4GHz wireless
 Test Part : N
 Test Result : PASS
 :



MEASUREMENT RESULT: "EN 55022 Volt QP-AV"

2016-8-23 19:09

Frequency MHz	Level dBμV	Limit-QP dBμV	Level dBμV	Limit-AV dBμV
0.348000	42.48	59.00	34.68	49.00
0.591000	38.63	56.00	26.21	46.00
1.086000	38.41	56.00	23.64	46.00

2016-8-23 19:09