Report No.: SZ13030226W02

# FCC PART 15C TEST

MORLAB

Issued to

ESTING AS L3572

#### SZ DJI TECHNOLOGY CO.,LTD

For

Phantom

art C
28

Shenzhen M	By IORLAB Composite	ication Technolog	gy Co., Ltd,
Tested by <u>Me Man</u> Nie Quan (Test Engineer) Date 2013. 7. 19	Approved by Certific Geng I Denurimen Date	Dexin Letter Date	Peng Huarui (Project Manager)
LAB CODE 20081223-00	DFTA 訊管理局	TAF Testing Laboratory 200	BQTF FCC Reg. No. 695796

The report refers only to the sample tested and does not apply to the bulk. This report is issued in confidence to the client and it will be strictly treated as such by the Shenzhen MORLAB Communication Technology Co., Ltd. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it. or a certified copy there of prepared by the Shenzhen MORLAB Telecommunication Co., Ltd to his customer. Supplier or others persons directly concerned. Shenzhen MORLAB Telecommunication Co., Ltd will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report. In the event of the improper use of the report, Shenzhen MORLAB Telecommunication Co., Ltd report, Shenzhen MORLAB Telecommunication Co., Ltd will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report. In the event of the improper use of the report, Shenzhen MORLAB Telecommunication Co., Ltd report, Shenzhen MORLAB Telecommunication Co., Ltd report, Shenzhen MORLAB Telecommunication Co., Ltd will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report. In the event of the improper use of the report, Shenzhen MORLAB Telecommunication Co., Ltd reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.

Shenzhen MORLAB Communication Technology Co., Ltd. Tel: +86 755 36698555 Fax: +86 755 36698615 FL3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China 518101



# DIRECTORY

1. (	GENERAL INFORMATION	3
1.1.	EUT Description	3
1.2.	Test Standards and Results	4
1.3.	Facilities and Accreditations	5
2. 4	47 CFR PART 15C REQUIREMENTS	6
2.1.	Antenna requirement	6
2.2.	Peak Output Power	6
2.3.	Bandwidth	8
2.4.	Conducted Spurious Emissions and Band Edge	.11
2.5.	Power spectral density (PSD)	.15
2.6.	Restricted Frequency Bands	.18
2.7.	Conducted Emission	.22
2.8.	Radiated Emission	.24
2.9.	RF Exposure Evaluation	.33

Change History					
Issue	Date	Reason for change			
1.0	July 19, 2013	First edition			



# **1. General Information**

# **1.1. EUT Description**

EUT Type:	
Serial No:	(n.a, marked #1 by test site)
Hardware Version:	V5
Software Version:	0.02
Applicant:	SZ DJI TECHNOLOGY CO.,LTD
	Room 613、614, 6/F, HKUST SZ IER Bldg, No.9 Yuexing 1st Rd
	Hi-Tech Park(South), Nanshan District, Shenzhen, Guangdong,
	China
Manufacturer:	SZ DJI TECHNOLOGY CO.,LTD(Baoan Branch)
	Room 311~320,Office Bldg.,Zhongyuntai Industrial Park,Songbai
	Rd., Shiyan Town, Bao'an District, Shenzhen, Guangdong, China
Frequency Range:	2404.867MHz~2476.547MHz
Channel Number:	36
Modulation Type:	DSSS
Antenna Type:	Dipole Antenna
Antenna Gain:	2.0dBi
Note 1: The EUT is Phantom, it	t operating at 2.4GHz ISM band, the frequencies allocated is F (MHz)
=2404.867+2.048*(n-1	) (1<=n<=36). The lowest, middle, highest channel numbers of the
EUT used and tested in	this report are separately 1 (2405.376MHz), 18 (2440.192MHz) and
36 (2477.056MHz).	
Note 3: For a more detailed de	scription, please refer to Specification or User's Manual supplied by

Note 3: For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.

Note 4: The antenna connector of EUT is designed with permanent attachment and no consideration of replacement.



## **1.2.** Test Standards and Results

The objective of the report is to perform testing according to 47 CFR Part 15 Subpart C (Wi-Fi, 2.4GHz ISM band radiators) for the EUT FCC ID Certification:

No.	Identity	Document Title
1	47 CFR Part 15	Radio Frequency Devices
	(10-1-09 Edition)	

Test detailed items/section required by FCC rules and results are as below:

No.	Section	Description	Result
1	15.203	Antenna Requirement	PASS
2	15.247(b)	Peak Output Power	PASS
3	15.247(a)	Bandwidth	PASS
4	15.247(d)	Conducted Spurious Emission and Band edge	PASS
5	15.247(d)	Restricted Frequency Bands	PASS
6	15.207	Conducted Emission	N/A
7	15.209 ,15.247(d)	Radiated Emission	PASS
8	15.247(e)	Power spectral density (PSD)	PASS
9	15.247(i).	RF Exposure Evaluation	PASS
	§ 1.1307&2.1091		

The tests of Conducted Emission and Radiated Emission were performed according to the method of measurements prescribed in ANSI C63.4 2009.

These RF tests were performed according to the method of measurements prescribed in KDB558074 D01 V02 10/04/2012.



## **1.3.** Facilities and Accreditations

## 1.3.1. Facilities

Shenzhen Morlab Communications Technology Co., Ltd. Morlab Laboratory is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L3572.

All measurement facilities used to collect the measurement data are located at FL.1, Building A, FeiYang Science Park, Block 67, BaoAn District, Shenzhen, 518101 P. R. China. The test site is constructed in conformance with the requirements of ANSI C63.10 2009, ANSI C63.4 2009 and CISPR Publication 22; the FCC registration number is 695796.

#### **1.3.2.** Test Environment Conditions

During the measurement, the environmental conditions were within the listed ranges:

Temperature (°C):	15 - 35
Relative Humidity (%):	30 -60
Atmospheric Pressure (kPa):	86-106



# 2. 47 CFR Part 15C Requirements

## 2.1. Antenna requirement

## 2.1.1. Applicable Standard

According to FCC 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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

## **2.1.2. Result:** Compliant

The EUT has a permanently and irreplaceable attached antenna. Please refer to the EUT internal photos.

## 2.2. Peak Output Power

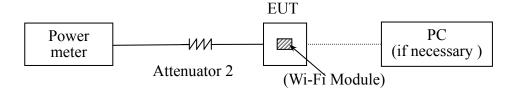
#### 2.2.1. Requirement

According to FCC section 15.247(b)(3), For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: The maximum peak conducted output power of the intentional radiator shall not exceed1 Watt.

## 2.2.2. Test Description

The measured output power was calculated by the reading of the Power Meter and calibration.

#### A. Test Setup:



The EUT (Equipment under the test) which is powered by the Battery is coupled to the Power Meter; the RF load attached to the EUT antenna terminal is 500hm; the path loss as the factor is calibrated to correct the reading, all test result in power meter.

#### **B.** Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
EPM Series Power Meter	Agilent	E4418B	GB43318055	2013.05.12	2014.05.11
Power Sensor	Agilent	8482A	MY41091706	2013.05.12	2014.05.11



## 2.2.3. Test Result

The lowest, middle and highest channels are selected to perform testing to verify the conducted RF output peak power of the Module.

Channel Frequency (MHz)		Measured	Output Peak Power	Limi	t	Verdict
Channel	Frequency (MHz)	dBm	W	dBm	W	veruiet
1	2404.867	8.134	0.006507			PASS
18	2439.683	8.705	0.007422	30	1	PASS
36	2476.547	8.879	0.007725			PASS



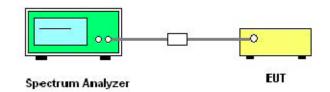
## 2.3. Bandwidth

## 2.3.1. Requirement

According to FCC section 15.247(a) (2), Systems using digital modulation techniques may operate in the 902 - 928 MHz, 2400 - 2483.5 MHz, and 5725 - 5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

#### 2.3.2. Test Description

#### A. Test Set:



The EUT which is powered by the Battery, is coupled to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 500hm; the path loss as the factor is calibrated to correct the reading.

Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. In order to make an accurate measurement, set the span greater than RBW.

#### **B.** Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Receiver	Agilent	E7405A	US44210471	2013.05.12	2014.05.11

## 2.3.3. Test Result

The lowest, middle and highest channels are selected to perform testing to record the 6 dB bandwidth of the Module.

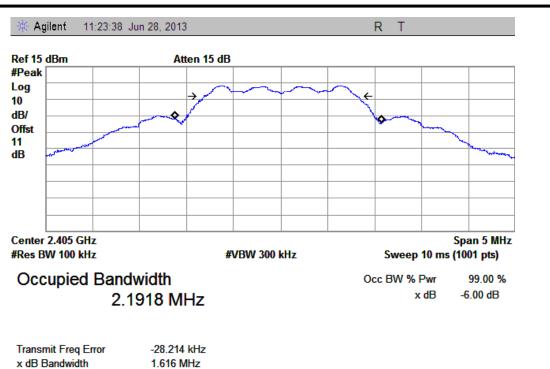
#### A. Test Verdict:

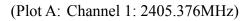
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Refer to Plot	Limits(kHz)	Result
1	2404.867	1.616	Plot A	≥500	PASS
18	2439.683	1.591	Plot B	≥500	PASS
36	2476.547	1.617	Plot C	≥500	PASS

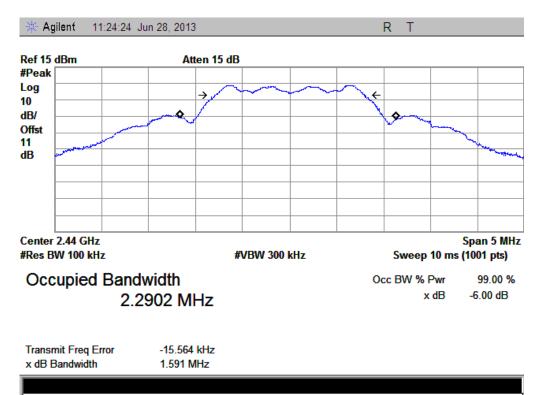
#### **B.** Test Plots



#### SZ13030226W02



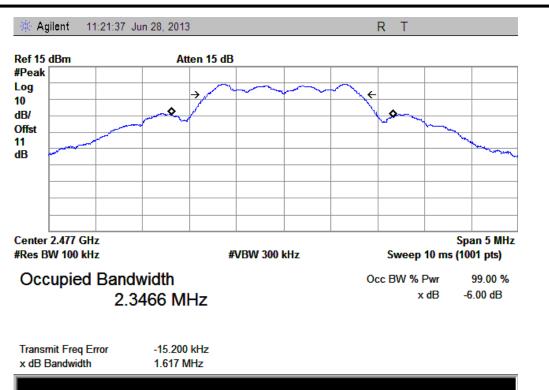




(Plot B: Channel 18: 2440.192MHz)



#### SZ13030226W02



(Plot C: Channel 36: 2477.056MHz)



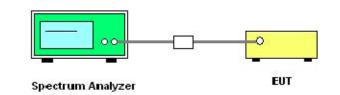
## 2.4. Conducted Spurious Emissions and Band Edge

#### 2.4.1. Requirement

According to FCC section 15.247(c), in any 100kHz 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 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

## 2.4.2. Test Description

#### A. Test Set:



The EUT which is powered by the Battery, is coupled to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 500hm; the path loss as the factor is calibrated to correct the reading.

Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. In order to make an accurate measurement, set the span greater than RBW.

#### **B.** Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Receiver	Agilent	E7405A	US44210471	2013.05.12	2014.05.11

#### 2.4.3. Test Result

The measurement frequency range is from 30MHz to the 10th harmonic of the fundamental frequency. The lowest, middle and highest channels are tested to verify the spurious emissions.

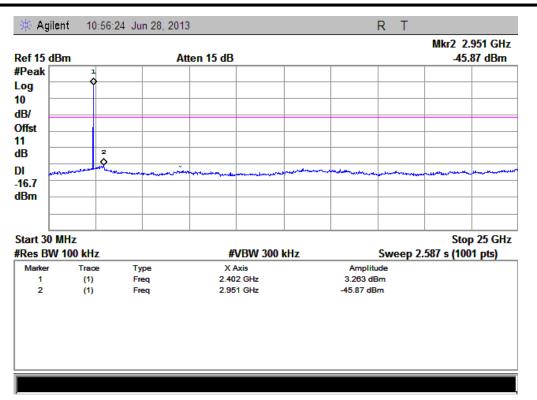
#### A. Test Verdict:

Ena guar av		Measured Max.		Limit (dBm)		
Channel	Frequency	Out of Band	Refer to Plot	Carrier	Calculated	Verdict
(MHz)	Emission (dBm)		Level	-20dBc Limit		
1	2404.867	-45.87	Plot A.1	3.263	-16.7	PASS
18	2439.683	-44.98	Plot B.1	4.078	-16.0	PASS
36	2476.547	-45.40	Plot C.1	4.345	-15.7	PASS

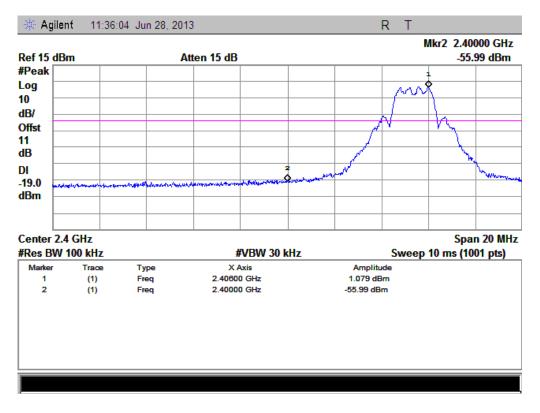
#### **B.** Test Plots:

Note: the power of the Module transmitting frequency should be ignored.



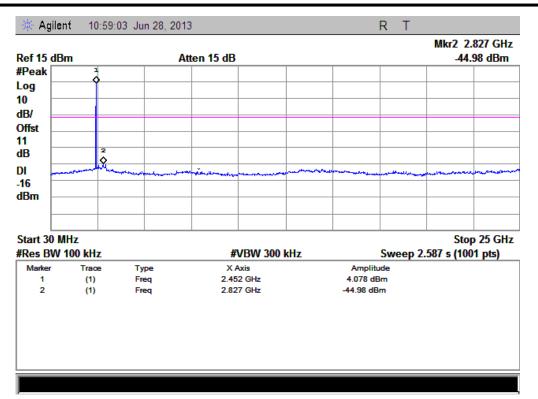


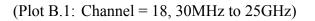
#### (Plot A.1: Channel = 1, 30MHz to 25GHz)

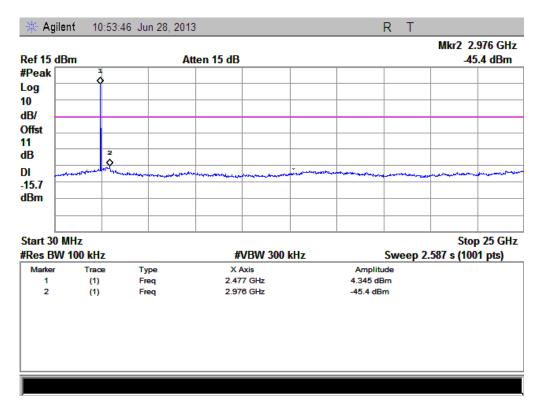


(Band edge @Channel = 1)



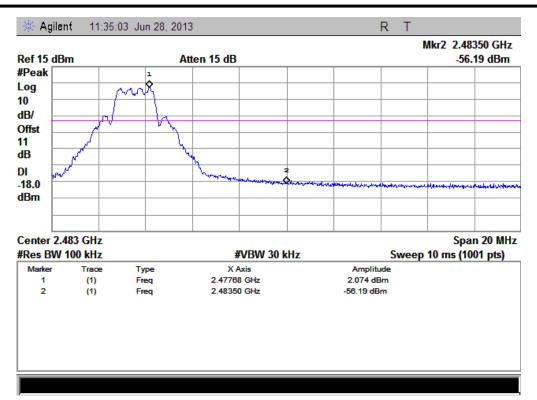






(Plot C.1: Channel = 36, 30MHz to 25GHz)





(Band edge @Channel = 36)



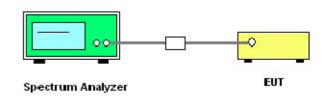
# 2.5. Power spectral density (PSD)

## 2.5.1. Requirement

According to FCC section 15.247(e), the same method of determining the conducted output power shall be used to determine the power spectral density. If a peak output power is measured, then a peak power spectral density measurement is required. If an average output power is measured, then an average power spectral density measurement should be used.

## 2.5.2. Test Description

#### A. Test Set:



The EUT which is powered by the Battery, is coupled to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 500hm; the path loss as the factor is calibrated to correct the reading.

#### **B.** Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Receiver	Agilent	E7405A	US44210471	2013.05.12	2014.05.11

#### 2.5.3. Test Result

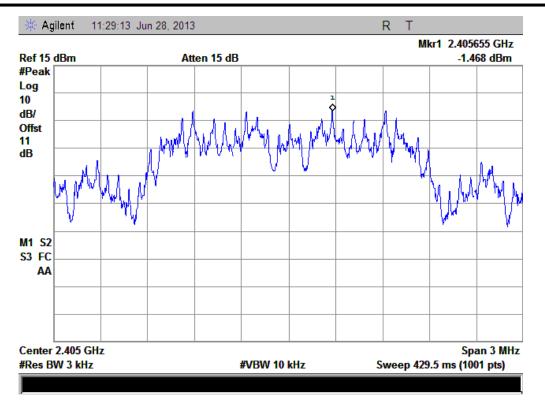
#### A. Test Verdict:

	Spectral power density (dBm/3kHz)								
Channel	Frequency	Measured PSD	Defer to Plat	Limit	Verdict				
Channel	(MHz)	(dBm/3kHz) Refer to Plot		(dBm/3kHz)	veruici				
1	2404.867	-1.468	Plot A	8	PASS				
18	2439.683	-1.025	Plot B	8	PASS				
36	2476.547	-0.824	Plot C	8	PASS				
Measure	Measurement uncertainty: ±1.3dB								

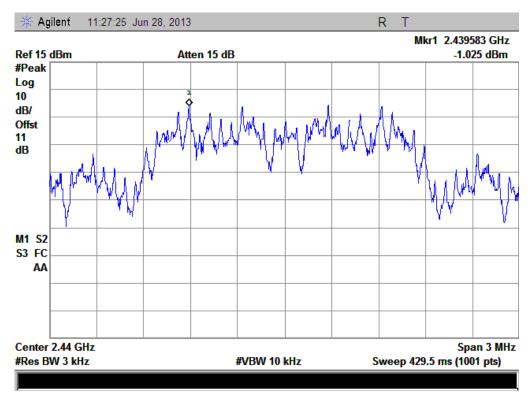
#### **B.** Test Plots:

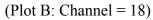
#### SZ13030226W02



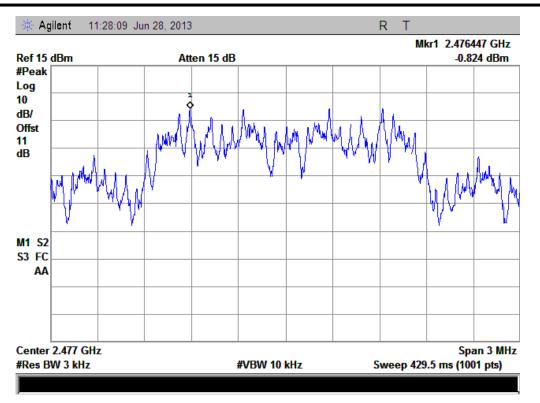


(Plot A:	Channel =	1)
----------	-----------	----









(Plot C: Channel = 36)



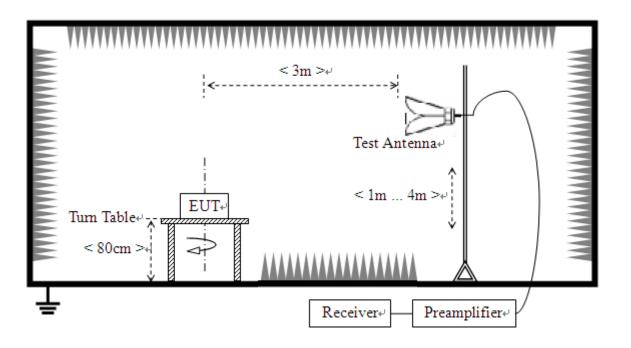
# 2.6. Restricted Frequency Bands

## 2.6.1. Requirement

According to FCC section 15.247(d), in any 100kHz 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 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, as defined in 15.205(a), must also comply with the radiated emission limits specified in 15.209(a).

## 2.6.2. Test Description

## A. Test Setup



The Module is located in a 3m Semi-Anechoic Chamber; the antenna factors, cable loss and so on of the site as factors are calculated to correct the reading.

For the Test Antenna:

Test Antenna is 3m away from the EUT. Test Antenna height is varied from 1m to 4m above the ground to determine the maximum value of the field strength.



#### **B.** Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Receiver	Agilent	E7405A	US44210471	2013.05.12	2014.05.11
Full-Anechoic Chamber	Albatross	9m*6m*6m	(n.a.)	2012.05.12	2014.05.11
Test Antenna	Schwarzbeck	BBHA 9120D	9120D-963	2013.05.12	2014.05.11

## 2.6.3. Test Result

The lowest and highest channels are tested to verify the Restricted Frequency Bands.

The measurement results are obtained as below: E  $[dB \mu V/m] = U_R + A_T + A_{Factor} [dB]; A_T = L_{Cable loss} [dB] - G_{preamp} [dB]$ A<sub>T</sub>: Total correction Factor except Antenna U<sub>R</sub>: Receiver Reading G<sub>preamp</sub>: Preamplifier Gain A<sub>Factor</sub>: Antenna Factor at 3m

Note: restricted frequency bands were performed when antenna was at vertical and horizontal polarity, and only the worse test condition (vertical) was recorded in this test report.

## 2.6.3.1. Test mode

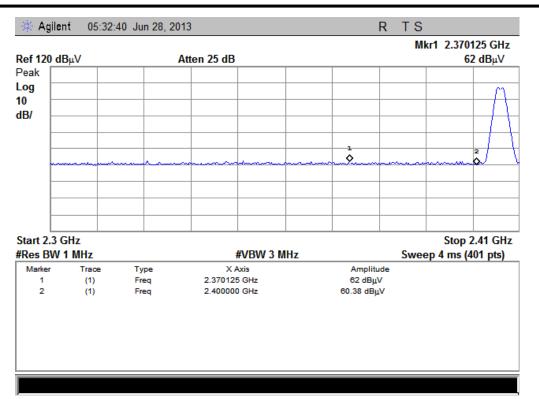
The lowest and highest channels are tested to verify the Restricted Frequency Bands.

#### A. Test Verdict:

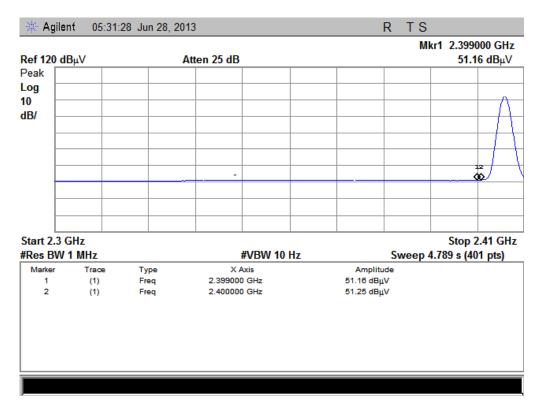
Channel	Frequency (MHz)	Detector PK/ AV	Receiver Reading UR (dBuV)	AT (dB)	AFactor (dB@3m)	Max. Emission E (dBµV/m)	Limit (dBµV/m)	Verdict
1	2370.13	РК	62.00	-30.93	32.56	63.63	74	Pass
1	2399.00	AV	51.16	-30.93	32.56	52.79	54	Pass
36	2486.05	РК	61.68	-29.05	32.50	65.13	74	Pass
36	2483.50	AV	50.11	-29.05	32.50	53.56	54	Pass

#### **B.** Test Plots:



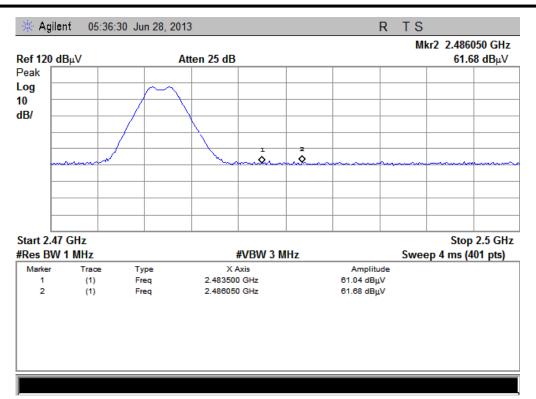


(Plot A1: Channel = 1 PEAK)

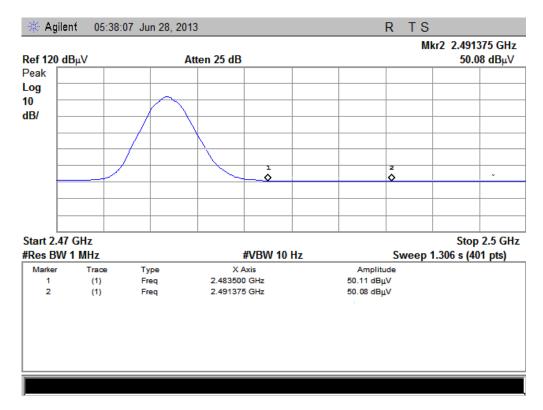


(Plot A2: Channel = 1 AVG)





(Plot B1: Channel = 11 PEAK)



(Plot B2: Channel = 11 AVG)



## 2.7. Conducted Emission

## 2.7.1. Requirement

According to FCC section 15.207, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency within the band 150kHz to 30MHz shall not exceed the limits in the following table, as measured using a  $50\mu$ H/50 $\Omega$  line impedance stabilization network (LISN).

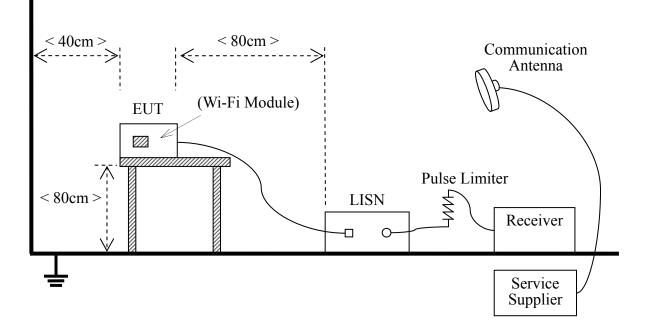
Eraguanay ranga (MHz)	Conducted Limit (dBµV)			
Frequency range (MHz)	Quai-peak	Average		
0.15 - 0.50	66 to 56	56 to 46		
0.50 - 5	56	46		
5 - 30	60	50		

NOTE:

- (a) The lower limit shall apply at the band edges.
- (b) The limit decreases linearly with the logarithm of the frequency in the range 0.15 0.50MHz.

## 2.7.2. Test Description

#### A. Test Setup:



The Table-top EUT was placed upon a non-metallic table 0.8m above the horizontal metal reference ground plane. EUT was connected to LISN and LISN was connected to reference Ground Plane. EUT was 80cm from LISN. The set-up and test methods were according to ANSI C63.4:2009

#### **B.** Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Receiver	Agilent	E7405A	US44210471	2013.05.12	2014.05.11



Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
LISN	Schwarzbeck	NSLK 8127	812744	2013.05.12	2014.05.11
Service Supplier	R&S	CMU200	100448	2013.05.12	2014.05.11
Pulse Limiter (20dB)	Schwarzbeck	VTSD 9561-D	9391	(n.a.)	(n.a.)

#### 2.7.3. Test Result

The EUT is designed can not to be connected to the public utility (AC) power line, so conducted emission is unnecessary.



## 2.8. Radiated Emission

#### 2.8.1. Requirement

According to FCC section 15.247(d), radiated emission outside the frequency band attenuation below the general limits specified in FCC section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in FCC section 15.205(a), must also comply with the radiated emission limits specified in FCC section 15.209(a).

According to FCC section 15.209 (a), except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (µV/m)	Measurement Distance (m)
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. For Above 1000MHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit.
- 2. For above 1000MHz, limit field strength of harmonics: 54dBuV/m@3m (AV) and 74dBuV/m@3m (PK)

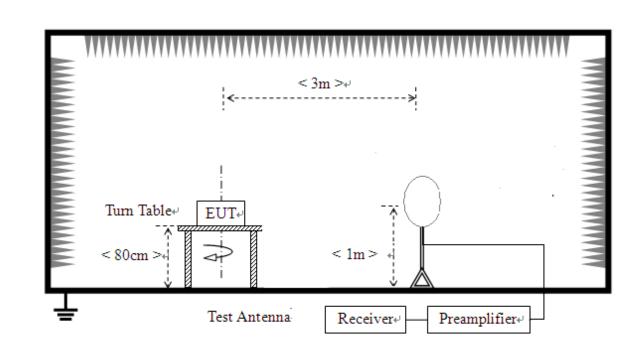
In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), also should comply with the radiated emission limits specified in Section 15.209(a)(above table)

## 2.8.2. Test Description

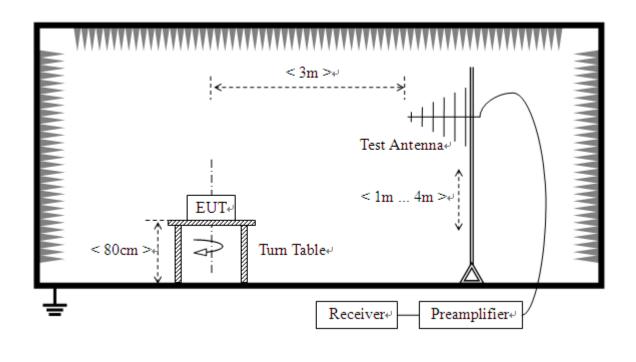
#### A. Test Setup:

1) For radiated emissions from 9kHz to 30MHz



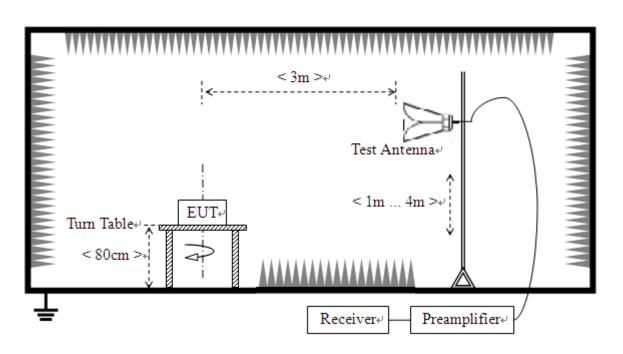


2) For radiated emissions from 30MHz to1GHz





3) For radiated emissions above 1GHz



The test site semi-anechoic chamber has met the requirement of NSA tolerance 4dB according to the standards: ANSI C63.4 (2009). The EUT was set-up on insulator 80cm above the Ground Plane. The set-up and test methods were according to ANSI C63.4.

The EUT of the EUT is powered by the Battery charged with the AC Adapter which is powered by 120V, 60Hz AC mains supply. The Module is located in a 3m Semi-Anechoic Chamber; the antenna factors, cable loss and so on of the site as factors are calculated to correct the reading. During the measurement, the EUT is activated and controlled by the Wireless Router via a Common Antenna, and is set to operate under hopping-on test mode.

For the Test Antenna:

(a) In the frequency range of 9kHz to 30MHz, magnetic field is measured with Loop Test Antenna. The Test Antenna is positioned with its plane vertical at 1m distance from the EUT. The center of the Loop Test Antenna is 1m above the ground. During the measurement the Loop Test Antenna rotates about its vertical axis for maximum response at each azimuth about the EUT.

(b) In the frequency range above 30MHz, Bi-Log Test Antenna (30MHz to 2GHz) and Horn Test Antenna (above 2GHz) are used. Test Antenna is 3m away from the EUT. Test Antenna height is varied from 1m to 4m above the ground to determine the maximum value of the field strength. The emission levels at both horizontal and vertical polarizations should be tested.

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
System Simulator	R&S	CMU200	100448	2013.05.12	2014.05.11
Receiver	Agilent	E7405A	US44210471	2013.05.12	2014.05.11
Full-Anechoic Chamber	Albatross	9m*6m*6m	(n.a.)	2013.05.12	2014.05.11
Test Antenna - Bi-Log	Schwarzbeck	VULB 9163	9163-274	2013.05.12	2014.05.11

#### **B.** Equipments List:



Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Test Antenna - Horn	Schwarzbeck	BBHA 9120D	9120D-963	2013.05.12	2014.05.11
Test Antenna - Horn	R&S	HL050S7	71688	2013.05.12	2014.05.11
Test Antenna -Loop	Schwarzbeck	FMZB 1519	1519-022	2013.05.12	2014.05.11

## 2.8.3. Test Result

According to ANSI C63.4 selection 4.2.2, because of peak detection will yield amplitudes equal to or greater than amplitudes measured with the quasi-peak (or average) detector, the measurement data from a spectrum analyzer peak detector will represent the worst-case results, if the peak measured value complies with the quasi-peak limit, it is unnecessary to perform an quasi-peak measurement.

The measurement results are obtained as below:

E  $[dB \mu V/m] = U_R + A_T + A_{Factor} [dB]; A_T = L_{Cable loss} [dB] - G_{preamp} [dB]$ AT: Total correction Factor except Antenna UR: Receiver Reading G<sub>preamp</sub>: Preamplifier Gain A<sub>Factor</sub>: Antenna Factor at 3m

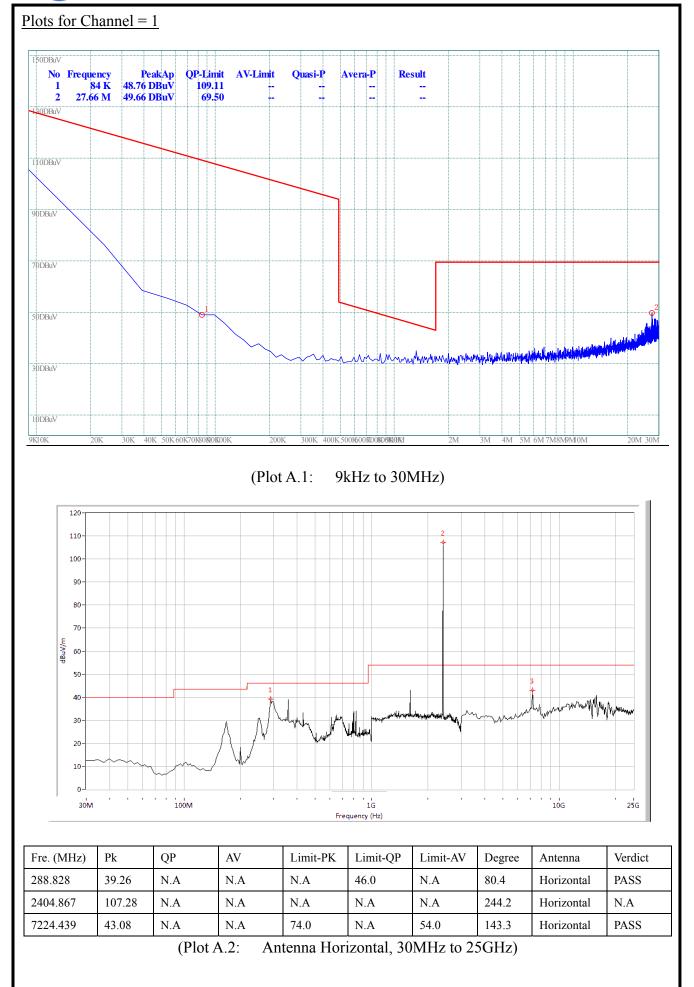
During the test, the total correction Factor AT and  $A_{\mbox{\tiny Factor}}$  were built in test software.

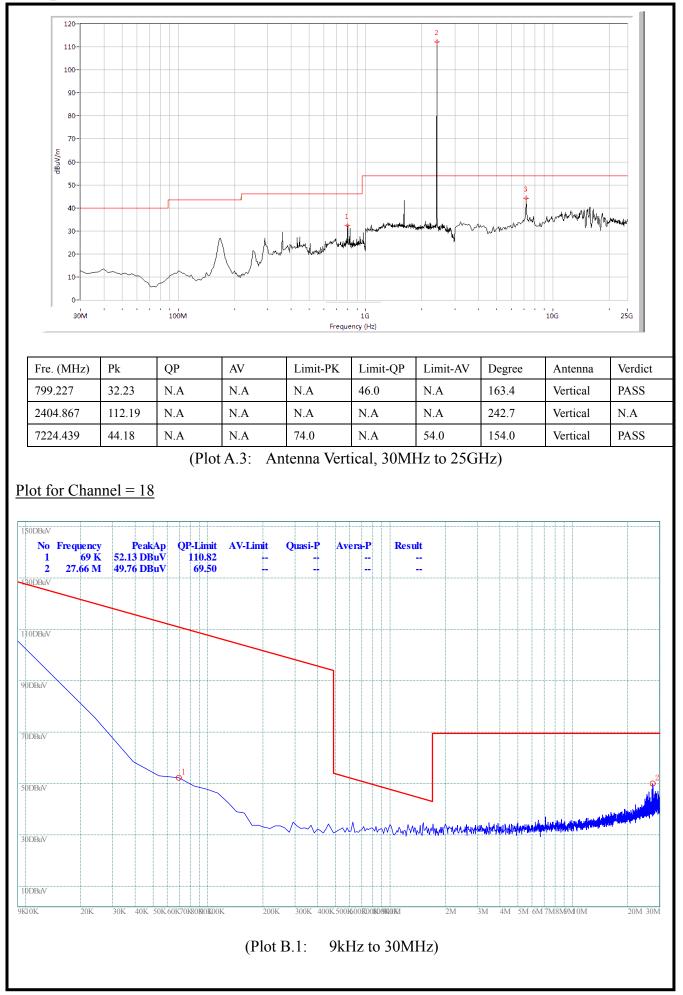
Note: All radiated emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

## 2.8.3.1. Test mode

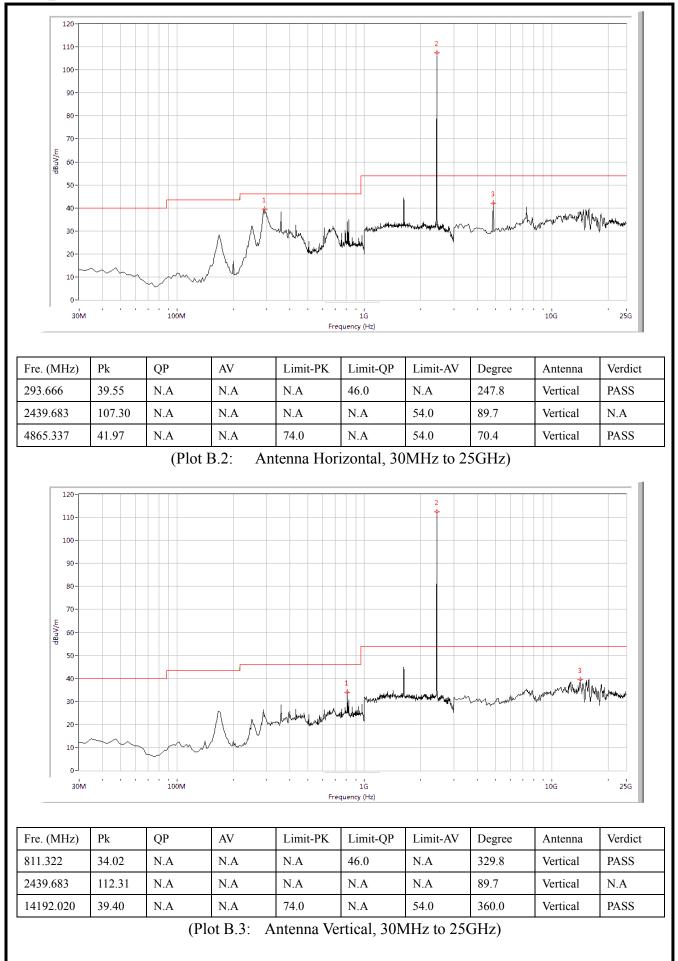
#### A. Test Plots for the Whole Measurement Frequency Range:





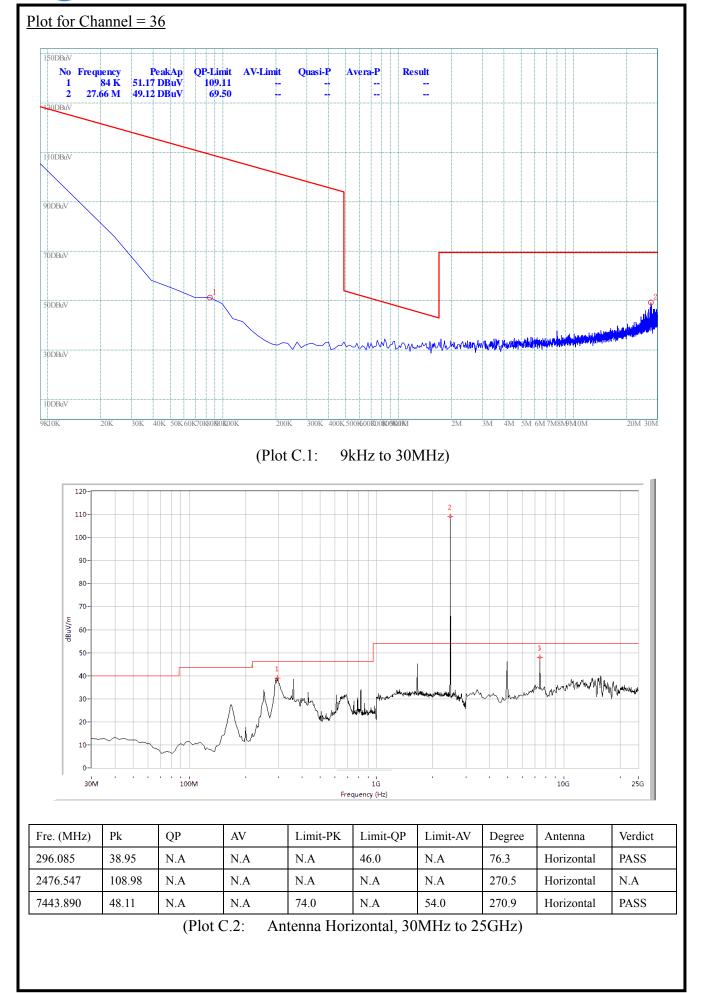


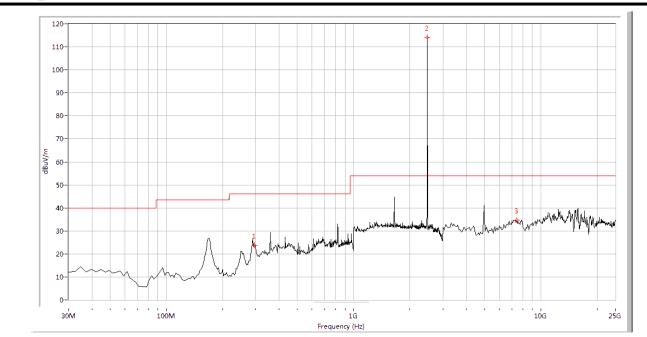
MORLAB



MORLAB







MORLAB

Fre. (MHz)	Pk	QP	AV	Limit-PK	Limit-QP	Limit-AV	Degree	Antenna	Verdict
296.085	23.88	N.A	N.A	N.A	46.0	N.A	190.2	Vertical	PASS
2476.547	113.99	N.A	N.A	N.A	N.A	N.A	267.6	Vertical	N.A
7443.890	34.67	N.A	N.A	74.0	N.A	54.0	53.8	Vertical	PASS

(Plot C.3: Antenna Vertical, 30MHz to 25GHz)

## 2.9. **RF Exposure Evaluation**

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = \frac{PG}{4 \pi R^2}$$

Where:

MORL

S = power density

P = power input to the antenna

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

#### 2.9.1. Limits for Maximum Permissible Exposure

According to FCC Part 1.1307, systems operating under the provisions of this section shall be operated in a manner the ensures that the public is not exposed to radio frequency energy level in excess of the commission's guidelines.

According to FCC Part 1.1310 RF exposure is calculated.

Limits for General Population/ Uncontrolled Exposure						
Frequency Range	Electric Field Magnetic Field		Power Density			
(MHz)	Strength(E)(V/m)	Strength (H)(A/m)	(S)(mW/cm2)			
0.3-1.34	614	1.63	(100)*			
1.34-30	824/f	2.19/f	(180/f2)*			
30-300	27.5	0.073	0.2			
300-1500			f/1500			
1500-100,000			1.0			



## **2.9.1.1.** Test result

Maximum peak output power at antenna input terminal(dBm):	8.879
Maximum peak output power at antenna input terminal(mW):	7.725
Source-based time-averaged output power:	
Prediction distance(cm):	20
Predication frequency(MHz):	2476.547
Antenna Gain (typical) (dBi):	2.0
Power density at predication frequency at $20 \text{ cm}(\text{mW/cm}^2)$ :	0.002436
MPE limit for RF exposure at prediction frequency(mW/cm <sup>2</sup> ):	1.0

## 2.9.2. Conclusion

Since the test result is passed, the SAR measurement is not required.

\*\* END OF REPORT \*\*