FCC TEST REPORT

FOR

Apulsetech Co., Ltd.

RFID Handheld Reader

Model No.: a811

Additional Model No.: α811

Prepared for	:	Apulsetech Co., Ltd.
Address	:	C-1211, Gwangmyeongtechnopark, 60, Haan-ro, Gwangmyeong-si, Gyeonggi-do 14322, Republic of Korea
Prepared by	:	Shenzhen LCS Compliance Testing Laboratory Ltd.
Address	:	1/F., Xingyuan Industrial Park, Tongda Road, Bao'an Avenue, Bao'an District, Shenzhen, Guangdong, China
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Web	:	www.LCS-cert.com
Mail	:	webmaster@LCS-cert.com
Date of receipt of test sample	:	Dec 20, 2017
Number of tested samples	:	1
Serial number	:	Prototype
Date of Test	:	Dec 20, 2017~Feb 27, 2019
Date of Report	:	Feb 27, 2019

FCC TEST REPORT

FCC CFR 47 PART 15 C(15.247)

Report Reference No.	**:**	**LCS190130003AEE**
Date of Issue.....	:	Feb 27, 2019
Testing Laboratory Name	**:**	**Shenzhen LCS Compliance Testing Laboratory Ltd.**
Address.....	:	1/F., Xingyuan Industrial Park, Tongda Road, Bao'an Avenue, Bao'an District, Shenzhen, Guangdong, China
Testing Location/ Procedure.....	:	Full application of Harmonised standards ■ Partial application of Harmonised standards □ Other standard testing method □
Applicant's Name.....	**:**	**Apulsetech Co., Ltd.**
Address.....	:	C-1211, Gwangmyeongtechnopark, 60, Haan-ro, Gwangmyeong-si, Gyeonggi-do 14322, Republic of Korea
Test Specification		
Standard.....	:	FCC CFR 47 PART 15 C(15.247)
Test Report Form No.	:	LCSEMC-1.0
TRF Originator	:	Shenzhen LCS Compliance Testing Laboratory Ltd.
Master TRF	:	Dated 2011-03

Test Item Description.	**:**	**RFID Handheld Reader**
Trade Mark.....	:	Apulsetech
Model/ Type reference.....	:	a811
Ratings.....	:	DC 3.7V by Li-ion battery(6800mAh) Recharged by DC 5V/2A Adapter
Result	**:**	**Positive**

Compiled by:	**Supervised by:**	**Approved by:**
Calvin Weng	Leo Lee	Gavin Liang
Calvin Weng/ Administrators	Calvin Weng/ Technique principal	Gavin Liang/ Manager

FCC -- TEST REPORT

Test Report No. : **LCS190130003AEE**	Feb 27, 2019 Date of issue

EUT.....	: RFID Handheld Reader
Type / Model.....	: a811
Applicant.....	**: Apulsetech Co., Ltd.**
Address.....	: C-1211, Gwangmyeongtechnopark, 60, Haan-ro, Gwangmyeong-si, Gyeonggi-do 14322, Republic of Korea
Telephone.....	:
Fax.....	:
Manufacturer.....	**: Apulsetech Co., Ltd.**
Address.....	: C-1211, Gwangmyeongtechnopark, 60, Haan-ro, Gwangmyeong-si, Gyeonggi-do 14322, Republic of Korea
Telephone.....	:
Fax.....	:
Factory.....	: **Apulsetech Co., Ltd.**
Address.....	: C-1211, Gwangmyeongtechnopark, 60, Haan-ro, Gwangmyeong-si, Gyeonggi-do 14322, Republic of Korea
Telephone.....	:
Fax.....	:

Test Result	**Positive**

The test report merely corresponds to the test sample.
It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

Revision History

Revision	Issue Date	Revisions	Revised By
000	Feb 27, 2019	Initial Issue	Gavin Liang

TABLE OF CONTENTS

1. GENERAL INFORMATION

1.1 Description of Device (EUT)

Name of EUT	RFID Handheld Reader
Model Number	a811, α811
Modulation Type	GMSK for GSM/GPRS, 8-PSK for EDGE,QPSK for UMTS
Antenna Gain	0.3dBi (max.) For GSM 850; 0.3dBi (max.) For GSM 900; 0.3dBi (max.) For DCS 1800; 0.3dBi (max.) For PCS 1900; 0.5dBi (max.) For WCDMA Band II; 0.5dBi (max.) For WCDMA Band V; 0dBi (max.) For BT, 2.4G WLAN & 5G WLAN 0dBi (max.) For NFC, RFID
Hardware version	ZH811F_Rev0.2
Software version	a811AV093T171208ALKRSTD
GSM/EDGE/GPRS Operation Frequency Band	GSM850/PCS1900/GPRS850/GPRS1900/EDGE850/EDGE1900
UMTS Operation Frequency Band	UMTS FDD Band II/V
LTE Operation Frequency Band	Not supported
GSM/EDGE/GPRS	Supported GSM/GPRS/EDGE
GSM Release Version	R99
GSM/EDGE/GPRS Power Class	GSM850:Power Class 4/ PCS1900:Power Class 1
GPRS/EDGE Multislot Class	GPRS/EDGE: Multi-slot Class 12
GPRS operation mode	Class B
WCDMA Release Version	R99
HSDPA Release Version	Release 8
HSUPA Release Version	Release 6
DC-HSUPA Release Version	Not Supported
LTE Release Version	Not Supported
LTE/UMTS Power Class	Class 3
WLAN FCC Modulation Type	IEEE 802.11b: DSSS(CCK,DQPSK,DBPSK) IEEE 802.11g: OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n HT20:OFDM (64QAM, 16QAM, QPSK,BPSK) IEEE 802.11n HT40:OFDM (64QAM, 16QAM, QPSK,BPSK) IEEE 802.11a: OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE 802.11ac VHT20:OFDM (64QAM, 16QAM, QPSK,BPSK) IEEE 802.11ac VHT40:OFDM (64QAM, 16QAM, QPSK,BPSK) IEEE 802.11ac VHT80:OFDM (64QAM, 16QAM, QPSK,BPSK)
WLAN FCC Operation frequency	IEEE 802.11b:2412-2462MHz IEEE 802.11g:2412-2462MHz IEEE 802.11n HT20:2412-2462MHz,5180-5240MHz,5745-5825MHz IEEE 802.11n HT40:2422-2452MHz,5190-5230MHz,5755-5795MHz IEEE 802.11a:5180-5240MHz, 5745-5825MHz IEEE 802.11ac VHT20:5180-5240MHz, 5745-5825MHz IEEE 802.11ac VHT40:5190-5230MHz, 5755-5795MHz IEEE 802.11ac VHT80:5210MHz
Antenna Type	PIFA Antenna for BT/WIFI/2G/3G/GPS/NFC, PCB antenna for RFID
BT Modulation Type	GFSK,8-DPSK,π/4-DQPSK(BT V4.1)
Extreme temp. Tolerance	-30°C to +50°C
GPS function	Support and only RX
NFC Function	Support, 13.56MHz
RFID function	Support, 902.75MHz~927.25MHz(50 channels, spacing: 0.5MHz)
Extreme vol. Limits	3.20VDC to 4.20VDC (nominal: 3.70VDC)

1.2. Host System Configuration List and Details

Manufacturer	Description	Model	Serial Number	Certificate
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1.3. External I/O Cable

I/O Port Description	Quantity	Cable
USB Port	4	N/A
Earphone	1	N/A
RJ45 Port	1	N/A
RS232 Port	1	N/A

1.4. Description of Test Facility

FCC Registration Number is 254912.
Industry Canada Registration Number is 9642A-1.
ESMD Registration Number is ARCB0108.
UL Registration Number is 100571-492.
TUV SUD Registration Number is SCN1081.
TUV RH Registration Number is UA 50296516-001

The 3m-Semi anechoic test site fulfils CISPR 16-1-4 according to ANSI C63.4:2014 and CISPR 16-1-4:2010 SVSWR requirement for radiated emission above 1GHz.

1.5. Statement of the Measurement Uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 – 4 “Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements” and is documented in the LCS quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

1.6. Measurement Uncertainty

Test Item		Frequency Range	Uncertainty	Note
Radiation Uncertainty	:	9KHz~30MHz	±3.10dB	(1)
		30MHz~200MHz	±2.96dB	(1)
		200MHz~1000MHz	±3.10dB	(1)
		1GHz~26GHz	±3.80dB	(1)
		26GHz~40GHz	±3.90dB	(1)
Conduction Uncertainty	:	150kHz~30MHz	±1.63dB	(1)
Power disturbance	:	30MHz~300MHz	±1.60dB	(1)

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

1.7 Description of Test Modes

RFID operates in the unlicensed Band at 900MHz, using GFSK techniques. The EUT works in the X-axis, Y-axis, Z-axis. The following operating modes were applied for the related test items. All test modes were tested, only the result of the worst case was recorded in the report.

Mode of Operations	Frequency Range (MHz)
RFID	902.75
	915.25
	927.25
For Conducted Emission	
Test Mode	TX Mode
For Radiated Emission	
Test Mode	TX Mode

Worst-case mode and channel used for 150 KHz-30 MHz power line conducted emissions was the mode and channel with the highest output power that was determined to be TX mode.

Worst-case mode and channel used for 9kHz-1000 MHz radiated emissions was the mode and channel with the highest output power, that was determined to be TX(Mid Channel).

AC conducted emission pre-test at both at AC 120V/60Hz and AC 240V/50Hz modes, recorded worst case;

AC conducted emission pre-test at both at power adapter and power from PC modes, recorded worst case;

Frequency & channel list:

Channel	Frequency(MHz)	Channel	Frequency(MHz)
1	902.75	27	915.75
2	903.25	28	916.25
--	--	--	--
25	914.75	49	926.75
26	915.25	50	927.25

Note:

1. Channel 1, 26, 50 are used for test.

2. Channel spacing is 500KHz.

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.10-2013, FCC CFR PART 15C 15.207, 15.209, 15.247 and DA 00-705.

2.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner that intends to maximize its emission characteristics in a continuous normal application.

2.2 EUT Exercise

The EUT was operated in the engineering mode to fix the TX frequency that was for the purpose of the measurements.

According to its specifications, the EUT must comply with the requirements of the Section 15.207, 15.209, 15.247 under the FCC Rules Part 15 Subpart C.

2.3 General Test Procedures

2.3.1 Conducted Emissions

The EUT is directly placed on the ground. According to the requirements in Section 6.2.1 of ANSI C63.10-2013 Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using Quasi-peak and average detector modes.

2.3.2 Radiated Emissions

The EUT is placed on a turntable, which is directly placed on the ground. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna, which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the maximum emissions, exploratory radiated emission measurements were made according to the requirements in Section 6.3 of ANSI C63.10-2013.

3. SYSTEM TEST CONFIGURATION

3.1 Justification

The system was configured for testing in a continuous transmits condition.

3.2 EUT Exercise Software

The sample will be controlled by RFtest tool to enter RF test mode to control sample change channel, modulation and so on;

3.3 Special Accessories

No.	Equipment	Manufacturer	Model No.	Serial No.	Length	shielded/ unshielded	Notes
1	PC	Lenovo	Ideapad	A131101550	/	/	DOC
2	Power adapter	Lenovo	CPA-A090	36200414	1.00m	unshielded	DOC

3.4 Block Diagram/Schematics

Please refer to the related document.

3.5 Equipment Modifications

Shenzhen LCS Compliance Testing Laboratory Ltd. has not done any modification on the EUT.

3.6 Test Setup

Please refer to the test setup photo.

4. SUMMARY OF TEST RESULTS

Applied Standard: FCC Part 15 Subpart C		
FCC Rules	Description of Test	Result
§15.247(b)(2)	Maximum Conducted Output Power	Compliant
§15.247(c)	Frequency Separation And 20 dB Bandwidth	Compliant
§15.247(a)(1)(i)	Number Of Hopping Frequency	Compliant
§15.247(a)(1)(i)	Time Of Occupancy (Dwell Time)	Compliant
§15.209, §15.205	Conducted Spurious Emissions and Band Edges Test	Compliant
§15.209, §15.247(d)	Radiated and Conducted Spurious Emissions	Compliant
§15.205	Emissions at Restricted Band	Compliant
§15.207(a)	Conducted Emissions	Compliant
§15.203	Antenna Requirements	Compliant
§15.247(i)§2.1093	RF Exposure	Compliant

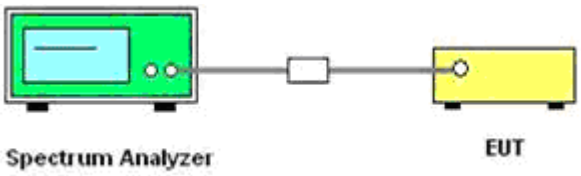
5. SUMMARY OF TEST EQUIPMENT

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1	Power Meter	R & S	NRVS	100444	2018-06-16	2019-06-15
2	Power Sensor	R & S	NRV-Z81	100458	2018-06-16	2019-06-15
3	Power Sensor	R & S	NRV-Z32	10057	2018-06-16	2019-06-15
4	EPM Series Power Meter	Agilent	E4419B	MY45104493	2018-06-16	2019-06-15
5	E-SERIES AVG POWER SENSOR	Agilent	E9301H	MY41495234	2018-06-16	2019-06-15
6	ESA-E SERIES SPECTRUM ANALYZER	Agilent	E4407B	MY41440754	2018-11-17	2019-11-16
7	MXA Signal Analyzer	Agilent	N9020A	MY49100040	2018-06-16	2019-06-15
8	SPECTRUM ANALYZER	R&S	FSP	100503	2018-06-16	2019-06-15
9	3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	2018-06-16	2019-06-15
10	Positioning Controller	MF	MF-7082	/	2018-06-16	2019-06-15
11	EMI Test Software	AUDIX	E3	N/A	2018-06-16	2019-06-15
12	EMI Test Receiver	R & S	ESR 7	101181	2018-06-16	2019-06-15
13	AMPLIFIER	QuieTek	QTK-A2525G	CHM10809065	2018-11-17	2019-11-16
14	Active Loop Antenna	SCHWARZBECK	FMZB 1519B	00005	2018-06-22	2019-06-21
15	By-log Antenna	SCHWARZBECK	VULB9163	9163-470	2018-05-01	2019-04-30
16	Horn Antenna	EMCO	3115	6741	2018-06-22	2019-06-21
17	RF Cable-R03m	Jye Bao	RG142	CB021	2018-06-16	2019-06-15
18	RF Cable-HIGH	SUHNER	SUCOFLEX 106	03CH03-HY	2018-06-16	2019-06-15
19	TEST RECEIVER	R&S	ESCI	101142	2018-06-16	2019-06-15
20	RF Cable-CON	UTIFLEX	3102-26886-4	CB049	2018-06-16	2019-06-15
21	10dB Attenuator	SCHWARZBECK	MTS-IMP136	261115-001-0032	2018-06-16	2019-06-15
22	Artificial Mains	R&S	ENV216	101288	2018-06-16	2019-06-15
23	X-series USB Peak and Average Power Sensor Aglient	Agilent	U2021XA	MY54080022	2018-10-26	2019-10-25
24	4 CH. Simultaneous Sampling 14 Bits 2MS/s	Agilent	U2531A	MY54080016	2018-10-26	2019-10-25
25	Test Software	Ascentest	AT890-SW	20160630	N/A	N/A
26	RF Control Unit	Ascentest	AT890-RFB	N/A	2018-06-16	2019-06-15
27	Universal Radio Communication Tester	R&S	CMU 200	105788	2018-06-16	2019-06-15
28	WIDEBAND RADIO COMMUNICATION TESTER	R&S	CMW 500	103818	2018-06-16	2019-06-15
29	RF Control Unit	Tonscend	JS0806-1	N/A	2018-06-16	2019-06-15
30	DC Power Supply	Agilent	E3642A	N/A	2018-11-17	2019-11-16
31	LTE Test Software	Tonscend	JS1120-1	N/A	N/A	N/A

6. ANTENNA PORT MEASUREMENT

6.1 Peak Power

6.1.1 Block Diagram of Test Setup



6.1.2 Limit

According to §15.247(b)(2), For frequency hopping systems operating in the 902-928 MHz band: 1 watt for systems employing at least 50 hopping channels; and, 0.25 watts for systems employing less than 50 hopping channels, but at least 25 hopping channels

6.1.3 Test Procedure

Use the following spectrum analyzer settings:

Span = approximately 5 times the 20 dB bandwidth, centered on a hopping channel

RBW > the 20 dB bandwidth of the emission being measured

VBW ≥ RBW

Sweep = auto

Detector function = peak

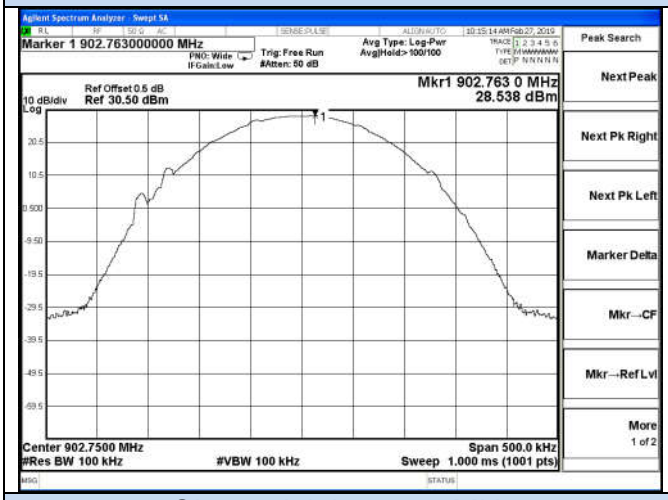
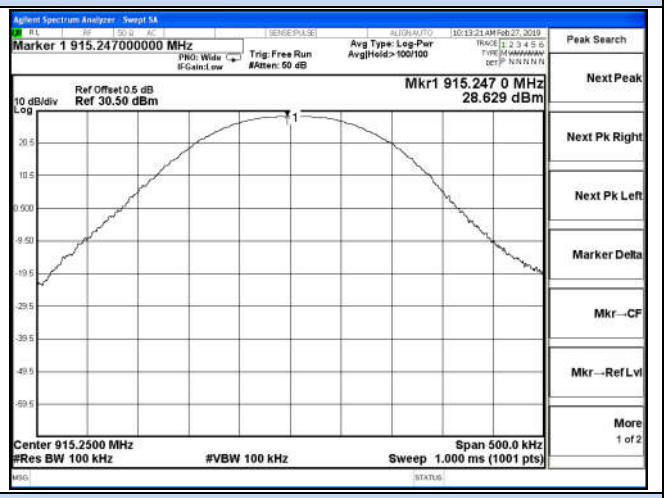
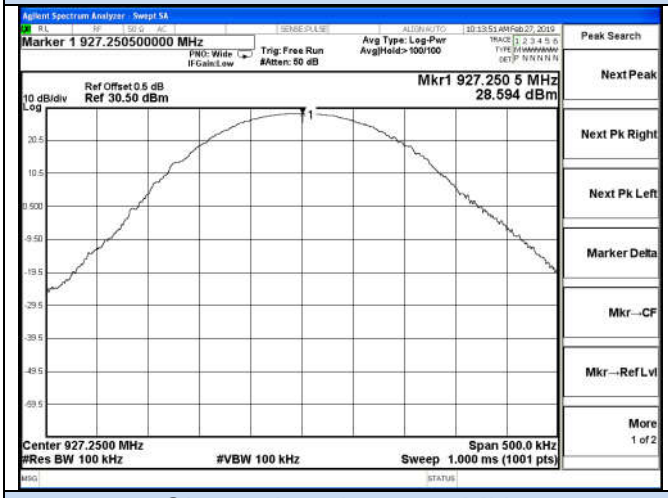
Trace = max hold

Allow the trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission. The indicated level is the peak output power

6.1.4 Test Results

Test Mode	Channel	Frequency (MHz)	Measured Maximum Power (dBm)	Limits (dBm)	Verdict
TX	1	902.75	28.538	30.00	PASS
	25	915.25	28.629		
	50	927.25	28.594		

Remark:
1. *Test results including cable loss;*
2. *Please refer to following test plots.*

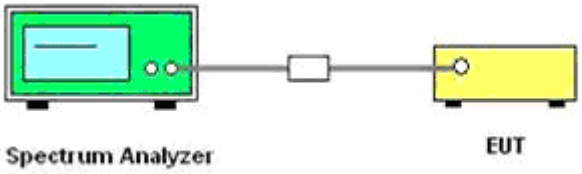
Peak Output Power	
	
Channel 1 / 902.75 MHz	Channel 26 / 915.25 MHz
	
Channel 50 / 927.25 MHz	

6.2 Frequency Separation and 20 dB Bandwidth

6.2.1 Limit

§ 15.247(a) (1) Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

6.2.2 Block Diagram of Test Setup



6.2.3 Test Procedure

Frequency separation test procedure：

1). Place the EUT on the table and set it in transmitting mode.

2). Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the Spectrum Analyzer.

3). Set center frequency of Spectrum Analyzer = middle of hopping channel.

4). Set the Spectrum Analyzer as RBW = 100 KHz, VBW = 300 KHz, Span = wide enough to capture the peaks of two adjacent channels, Sweep = auto.

5). Max hold, mark 2 peaks of hopping channel and record the 2 peaks frequency.

20dB bandwidth test procedure：

1). Span = approximately 2 to 3 times the 20 dB bandwidth, centered on a hopping channel.

2). RBW ≥ 1% of the 20dB bandwidth, VBW ≥ RBW.

3). Detector function = peak.

4). Trace = max hold.

6.2.4 Test Results

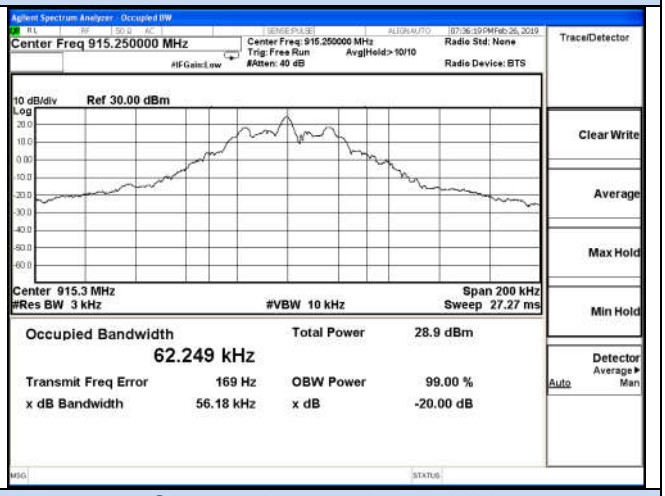
6.2.4.1 20dB Bandwidth

Test Mode	Channel	Frequency (MHz)	Measured Bandwidth (KHz)		Limits (KHz)	Verdict
			99%	20dB		
TX	1	902.75	59.356	58.17	No Limits	PASS
	26	915.25	62.249	56.18		
	50	927.25	61.735	58.95		

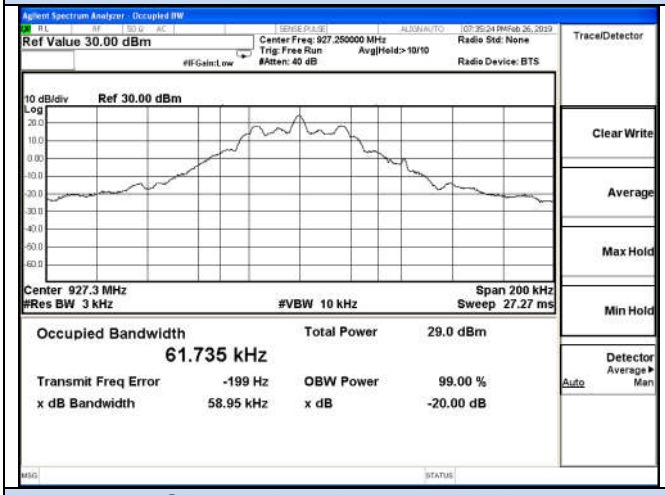
Remark:
1. *Test results including cable loss;*
2. *Please refer following test plots;*

20dB Bandwidth and 99% Bandwidth

Channel 1 / 902.75 MHz



Channel 26 / 915.25 MHz



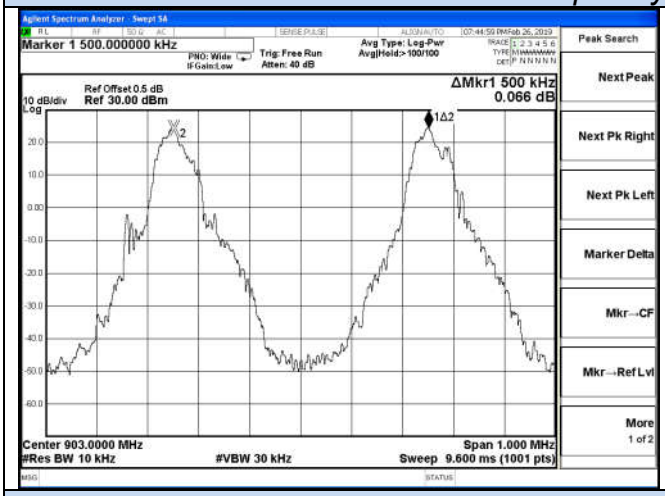
Channel 50 / 927.25 MHz

6.2.4.2 Frequency Separation

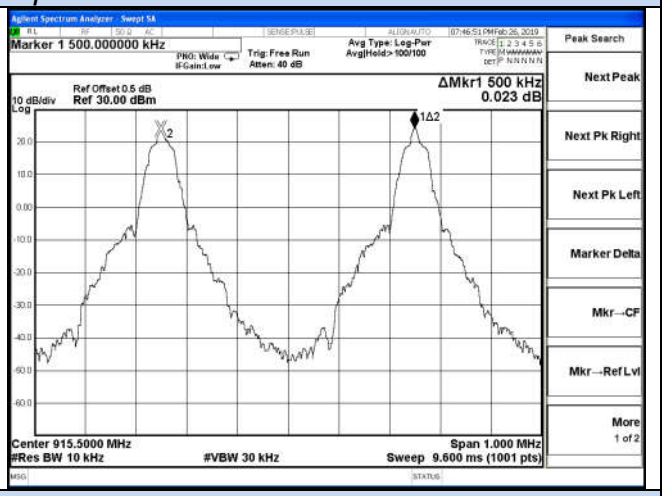
Channel	20dB Bandwidth (KHz)	Channel Separation (KHz)	Limit (KHz)	Result
Low	58.17	500	≥58.17	PASS
Middle	56.18	500	≥56.18	PASS
High	58.95	500	≥58.95	PASS

Remark:
1. *Test results including cable loss;*
2. *Please refer to following plots;*

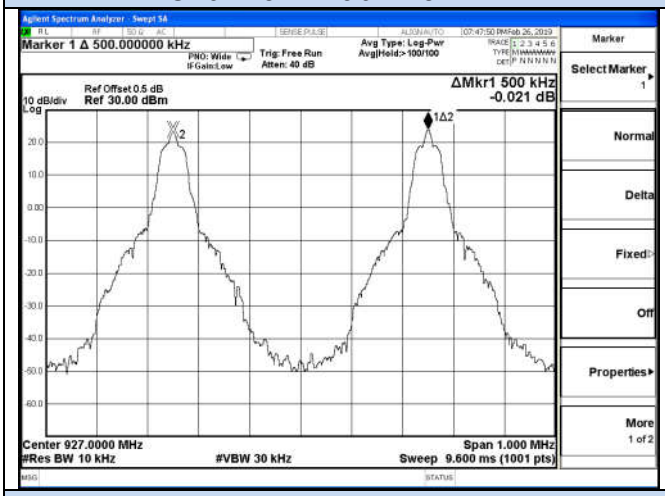
Frequency Separation



Channel 1 / 902.75 MHz



Channel 26 / 915.25 MHz



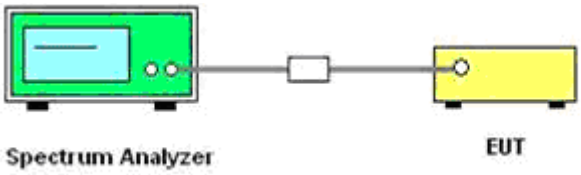
Channel 50 / 927.25 MHz

6.3 Number of Hopping Frequency

6.3.1 Limit

According to §15.247(a)(1)(i), For frequency hopping systems operating in the 902-928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period; if the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period. The maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.

6.3.2 Block Diagram of Test Setup



6.3.3 Test Procedure

1). Place the EUT on the table and set it in transmitting mode.

2). Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the Spectrum Analyzer.

3). Set Spectrum Analyzer Start=900MHz, Stop = 930MHz, Sweep = auto.

4). Set the Spectrum Analyzer as RBW = 1 MHz, VBW=1MHz.

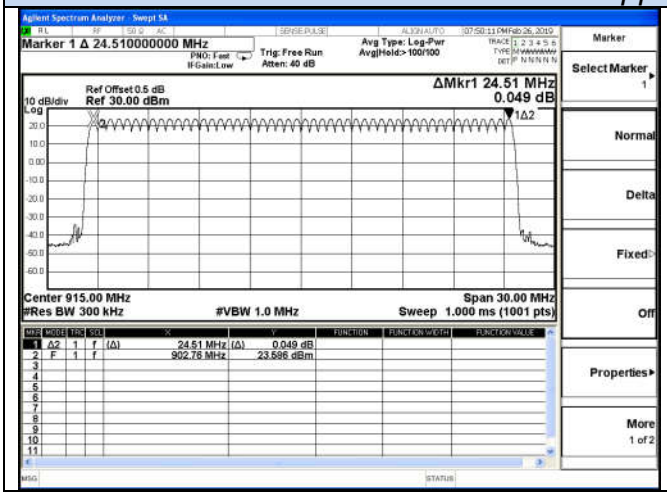
5). Max hold, view and count how many channel in the band.

6.3.4 Test Results

Test Mode	Measurement Result (No. of Channels)	Limit (No. of Channels)	Result
TX	50	≥50	PASS

Remark:
1. *Test results including cable loss;*
2. *Please refer following test plots;*

Number of Hopping Frequency

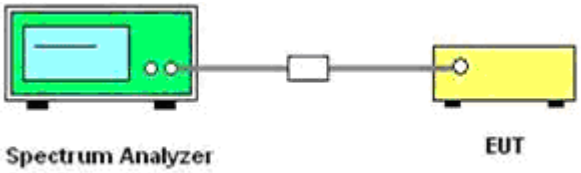


6.4 Time of Occupancy (Dwell Time)

6.4.1 Limit

According to §15.247(a)(1)(i), For frequency hopping systems operating in the 902-928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period; if the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period. The maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.

6.4.2 Block Diagram of Test Setup



6.4.3 Test Procedure

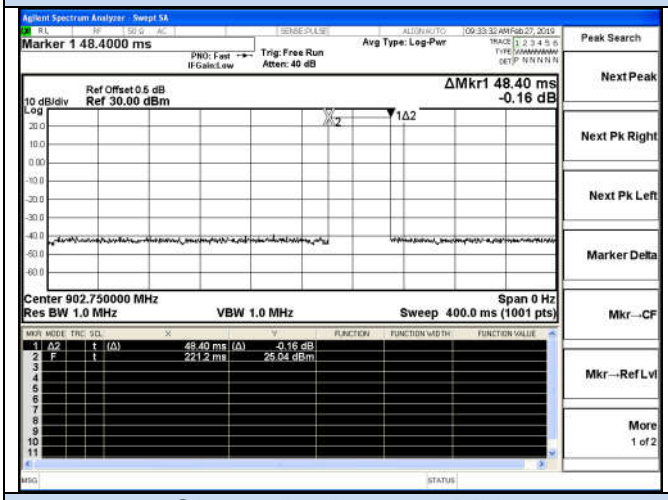
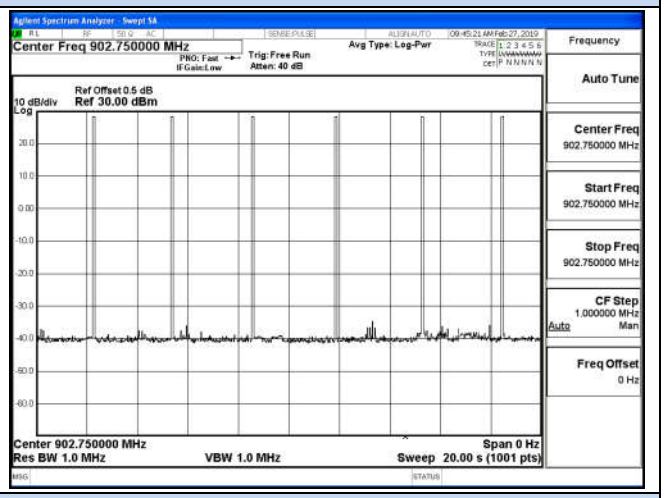
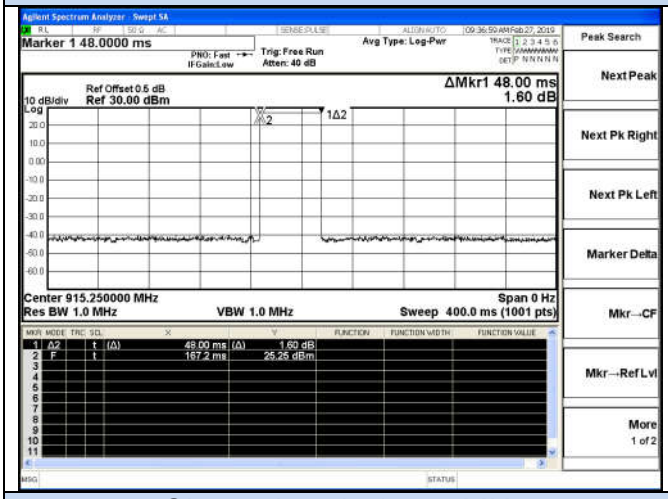
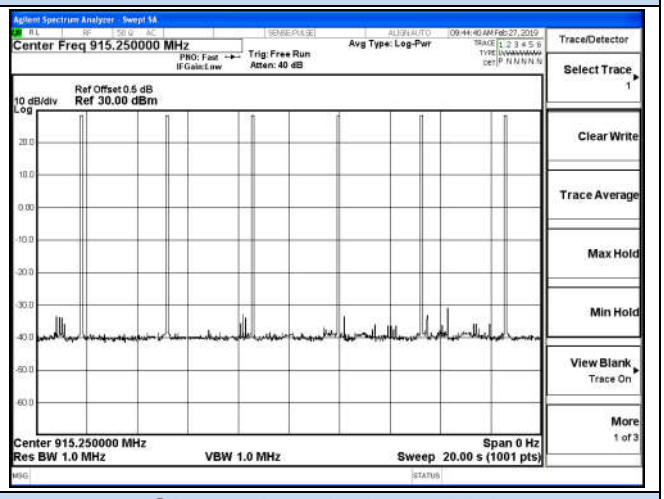
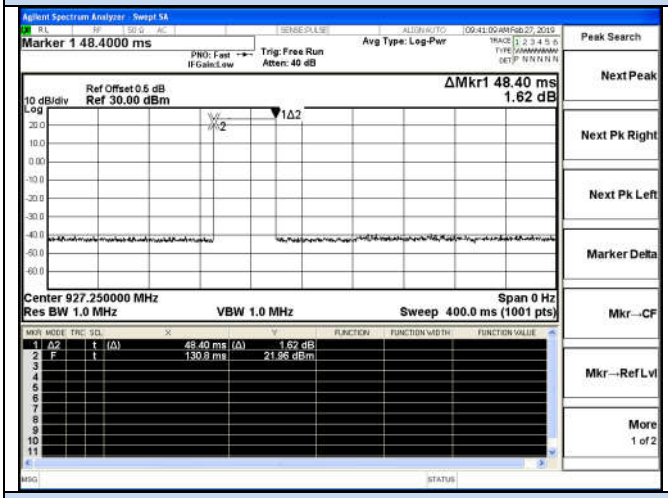
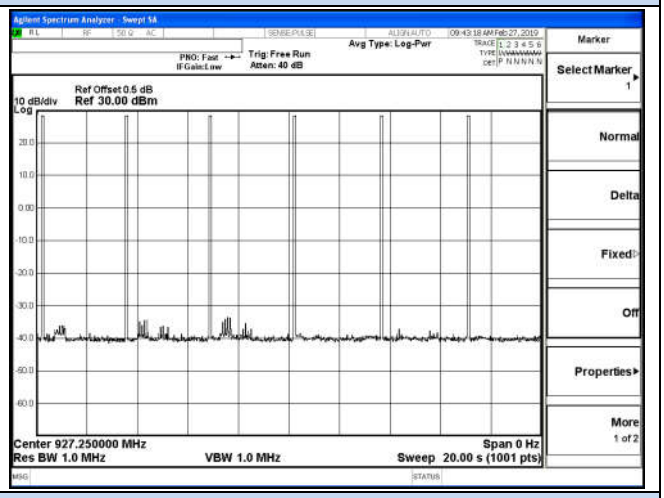
1). Place the EUT on the table and set it in transmitting mode.
2). Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the Spectrum Analyzer.
3). Set center frequency of Spectrum Analyzer = operating frequency.
4). Set the Spectrum Analyzer as RBW, VBW=1MHz, Span = 0Hz, Sweep = auto.
5). Repeat above procedures until all frequency measured was complete.

6.4.4 Test Results

The Dwell Time=Burst Width*Total Hops. The detailed calculations are showed as follows:
The duration for dwell time calculation: 0.4[s]*hopping number=0.4[s]*50[ch] =20[s*ch];
The burst width [ms/hop/ch], which is directly measured, refers to the duration on one channel hop.

Mode	Frequency (MHz)	Pulse Width (ms)	Pulse number	Dwell Time (S)	Limit (S)	Verdict
TX	902.75	48.4	6	0.290	0.4	PASS
	915.25	48.0	6	0.288	0.4	PASS
	927.25	48.4	6	0.290	0.4	PASS

Remark:
1. *Test results including cable loss;*
2. *Please refer to following plots;*
3. *Measured at low, middle and high channel, recorded worst at middle channel;*

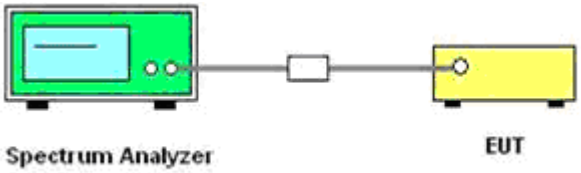
Dwell time	
	
Channel 1 / 902.75 MHz	Channel 1 / 902.75 MHz
	
Channel 26 / 915.25 MHz	Channel 26 / 915.25 MHz
	
Channel 50 / 927.25 MHz	Channel 50 / 927.25 MHz

6.5 Conducted Spurious Emissions and Band Edges Test

6.5.1 Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required.

6.5.2 Block Diagram of Test Setup



6.5.3 Test Procedure

Conducted RF measurements of the transmitter output were made to confirm that the EUT antenna port conducted emissions meet the specified limit and to identify any spurious signals that require further investigation or measurements on the radiated emissions site.
The transmitter output is connected to the spectrum analyzer. The resolution bandwidth is set to 100 KHz. The video bandwidth is set to 300 KHz.
Measurements are made over the 9 KHz to 10GHz range with the transmitter set to the lowest, middle, and highest channels

6.5.4 Test Results of Conducted Spurious Emissions

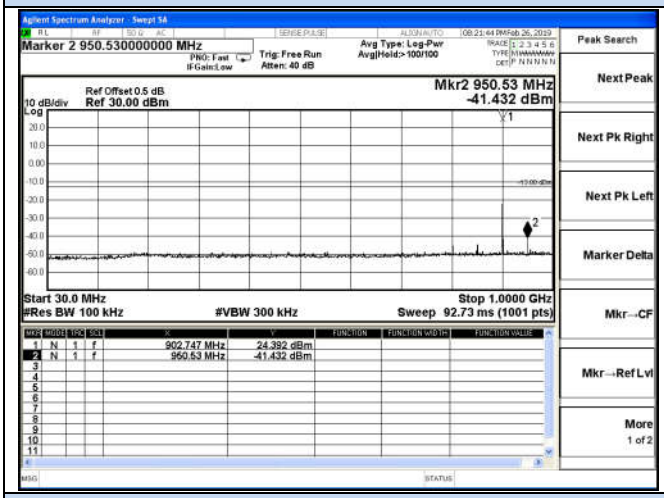
No non-compliance noted. Only record the worst test result in this report. The test data refer to the following page.

Test Mode	Channel	Frequency (MHz)	Spurious RF Conducted Emission (dBc)	Limits (dBc)	Verdict
TX	1	902.75	<-20	-20	PASS
	25	915.25	<-20		
	50	927.25	<-20		

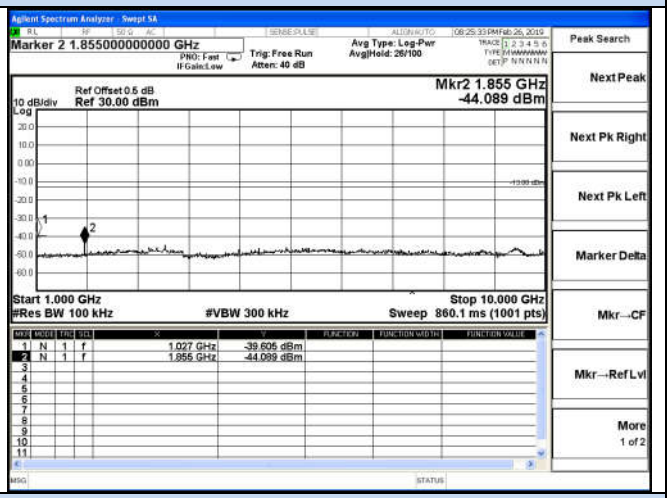
Remark:
1. *Test results including cable loss;*
2. *Please refer to following plots;*
3. *For frequency below 30MHz, no emission was found, therefore, it's not recorded.*

RF Conducted Spurious Emissions

Channel 1 / 902.75 MHz

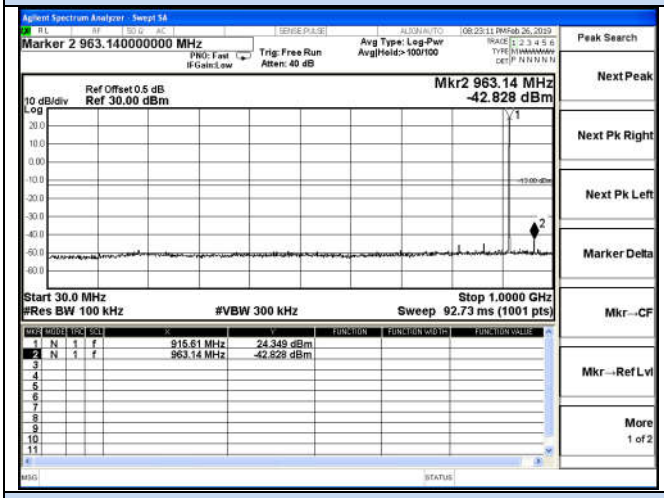


30 MHz - 1 GHz

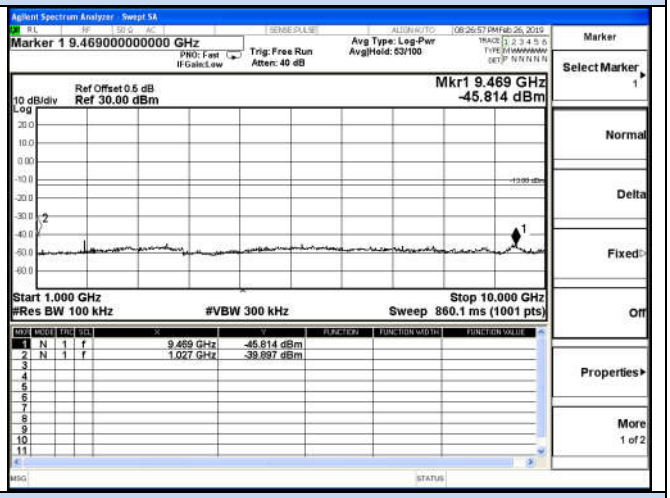


1 GHz - 10 GHz

Channel 26 / 915.25 MHz

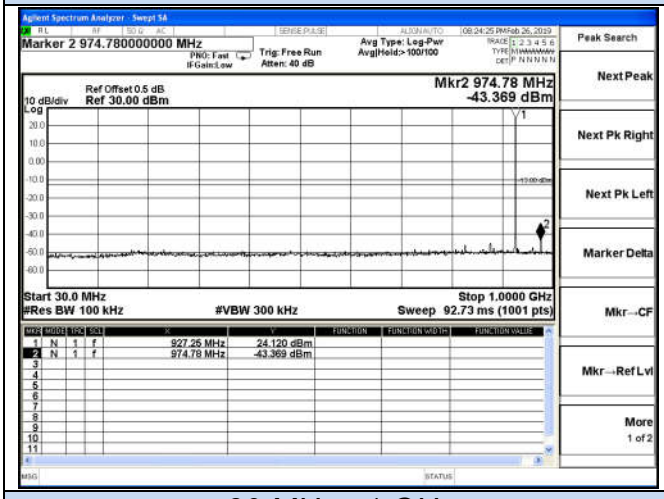


30 MHz - 1 GHz

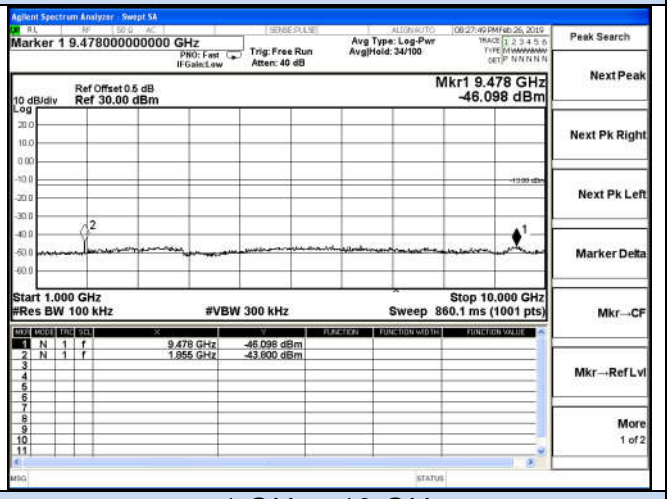


1 GHz - 10 GHz

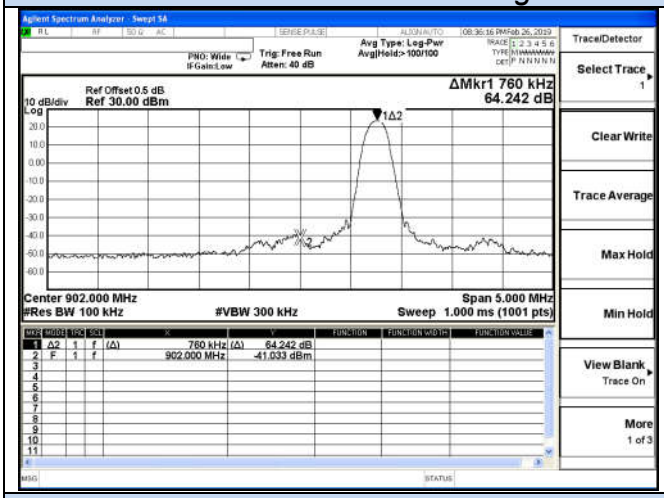
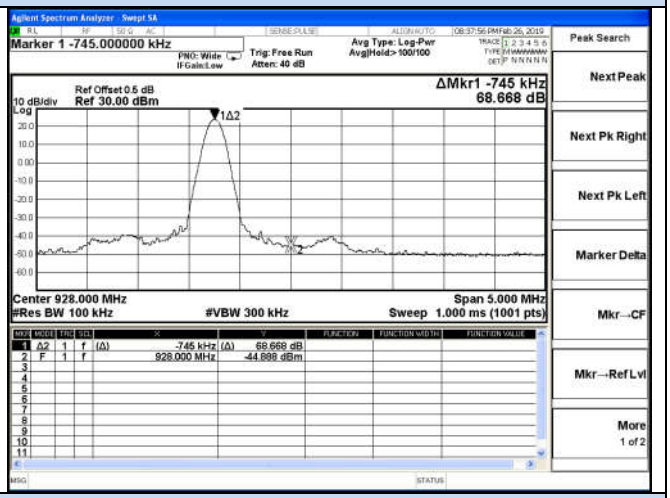
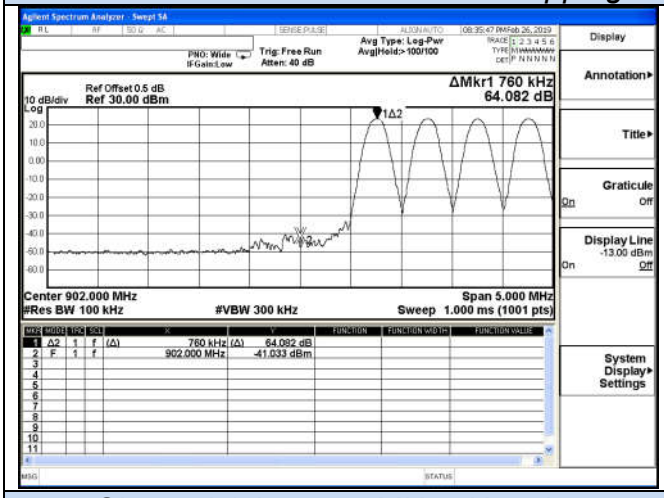
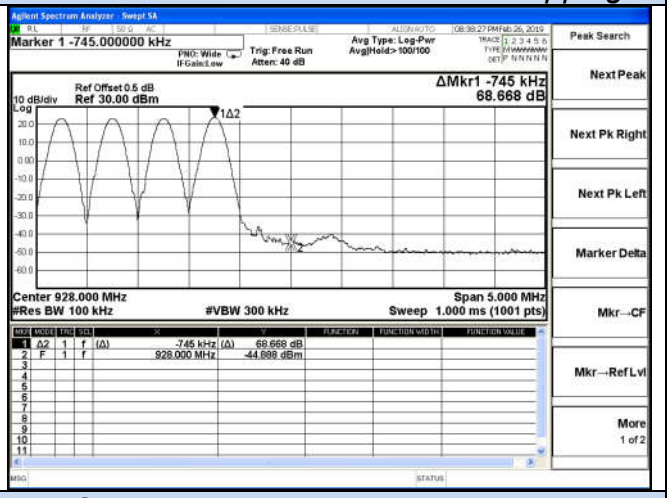
Channel 50 / 927.25 MHz



30 MHz - 1 GHz

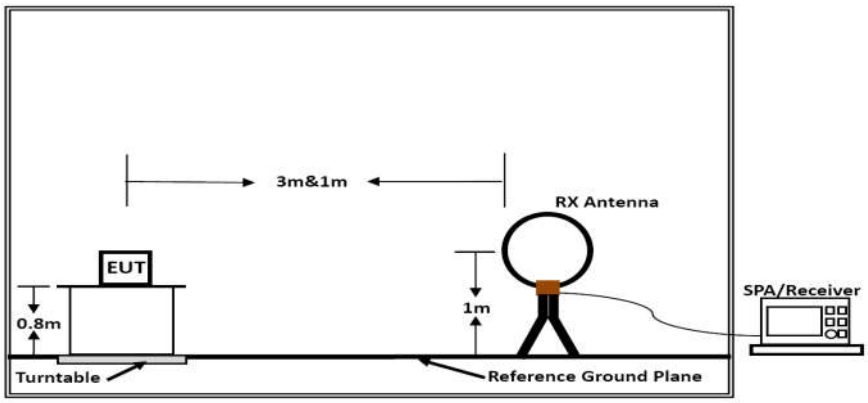


1 GHz - 10 GHz

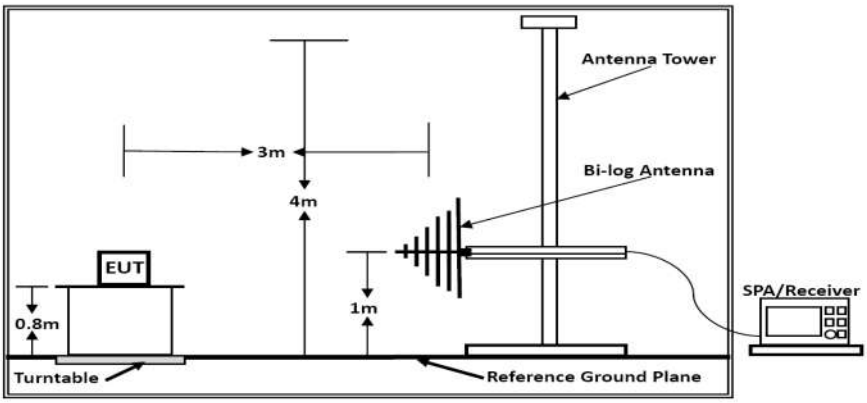
Band-edge for RF conducted emissions	
	
Channel 1 / 902.75 MHz – Non-Hopping	Channel 50 / 927.25 MHz – Non-Hopping
	
Channel 1 / 902.75 MHz –Hopping	Channel 50 / 927.25 MHz – Hopping

7. RADIATED MEASUREMENT

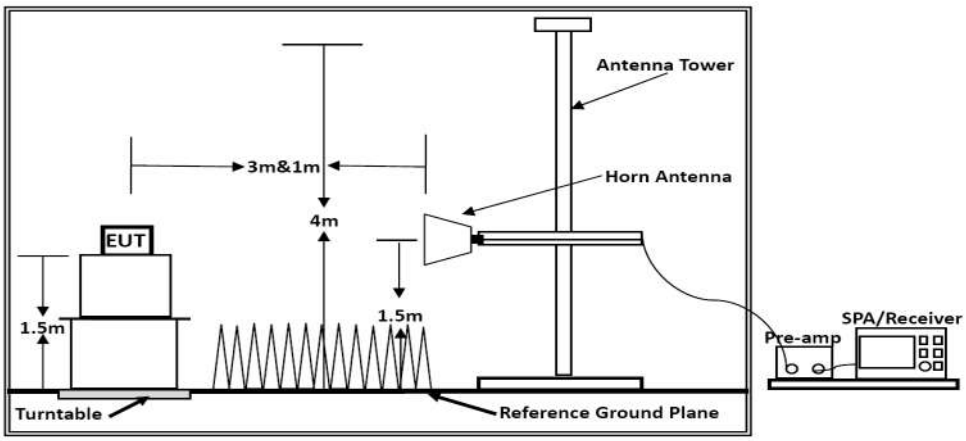
7.1 Block Diagram of Test Setup



Below 30MHz



Below 1GHz



Above 1GHz

Above 18 GHz shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade form 3m to 1m.

Distance extrapolation factor = 20 log (specific distanc [3m] / test distance [1.5m]) (dB);

Limit line = specific limits (dBuV) + distance extrapolation factor [6 dB].

7.2 Restricted Band Emission Limit

15.205 (a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
\1\ 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293.	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	(\2\)
13.36-13.41			

\1\ Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

\2\ Above 38.6

According to §15.247 (d): 20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

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

7.3 Instruments Setting

Please refer to equipment list in this report. The following table is the setting of spectrum analyzer and receiver.

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10^{th} carrier harmonic
RB / VB (Emission in restricted band)	1MHz / 1MHz for Peak, 1 MHz / 1/B kHz for Average
RB / VB (Emission in non-restricted band)	1MHz / 1MHz for Peak, 1 MHz / 1/B kHz for Average

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB/VB 200Hz/1KHz for QP/AVG
Start ~ Stop Frequency	150kHz~30MHz / RB/VB 9kHz/30KHz for QP/AVG
Start ~ Stop Frequency	30MHz~1000MHz / RB/VB 120kHz/1MHz for QP

7.4 Test Procedures

1) Sequence of testing 9 kHz to 30 MHz

Setup:

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.

--- If the EUT is a tabletop system, a rotatable table with 0.8 m height is used.

--- If the EUT is a floor standing device, it is placed on the ground.

--- Auxiliary equipment and cables were positioned to simulate normal operation conditions.

--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.

--- The measurement distance is 3 meter.

--- The EUT was set into operation.

Premeasurement:

--- The turntable rotates from 0° to 315° using 45° steps.

--- The antenna height is 0.8 meter.

--- At each turntable position the analyzer sweeps with peak detection to find the maximum of all emissions

Final measurement:

--- Identified emissions during the premeasurement the software maximizes by rotating the turntable position (0° to 360°) and by rotating the elevation axes (0° to 360°).

--- The final measurement will be done in the position (turntable and elevation) causing the highest emissions with QPK detector.

--- The final levels, frequency, measuring time, bandwidth, turntable position, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement and the limit will be stored.

2) Sequence of testing 30 MHz to 1 GHz

Setup:

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.

--- If the EUT is a tabletop system, a table with 0.8 m height is used, which is placed on the ground plane.

--- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.

--- Auxiliary equipment and cables were positioned to simulate normal operation conditions

--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.

--- The measurement distance is 3 meter.

--- The EUT was set into operation.

Premeasurement:

--- The turntable rotates from 0° to 315° using 45° steps.

--- The antenna is polarized vertical and horizontal.

--- The antenna height changes from 1 to 3 meter.

--- At each turntable position, antenna polarization and height the analyzer sweeps three times in peak to find the maximum of all emissions.

Final measurement:

--- The final measurement will be performed with minimum the six highest peaks.

--- According to the maximum antenna and turntable positions of premeasurement the software maximize the peaks by changing turntable position (± 45°) and antenna movement between 1 and 4 meter.

--- The final measurement will be done with QP detector with an EMI receiver.

--- The final levels, frequency, measuring time, bandwidth, antenna height, antenna polarization, turntable angle, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement with marked maximum final measurements and the limit will be stored.

3) Sequence of testing 1 GHz to 18 GHz

Setup:

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.

--- If the EUT is a tabletop system, a rotatable table with 1.5 m height is used.

--- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.

--- Auxiliary equipment and cables were positioned to simulate normal operation conditions

--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.

--- The measurement distance is 3 meter.

--- The EUT was set into operation.

Premeasurement:

--- The turntable rotates from 0° to 315° using 45° steps.

--- The antenna is polarized vertical and horizontal.

--- The antenna height scan range is 1 meter to 2.5 meter.

--- At each turntable position and antenna polarization the analyzer sweeps with peak detection to find the maximum of all emissions.

Final measurement:

--- The final measurement will be performed with minimum the six highest peaks.

--- According to the maximum antenna and turntable positions of premeasurement the software maximize the peaks by changing turntable position (± 45°) and antenna movement between 1 and 4 meter. This procedure is repeated for both antenna polarizations.

--- The final measurement will be done in the position (turntable, EUT-table and antenna polarization) causing the highest emissions with Peak and Average detector.

--- The final levels, frequency, measuring time, bandwidth, turntable position, EUT-table position, antenna polarization, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement with marked maximum final measurements and the limit will be stored.

4) Sequence of testing above 18 GHz

Setup:

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.

--- If the EUT is a tabletop system, a rotatable table with 1.5 m height is used.

--- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.

--- Auxiliary equipment and cables were positioned to simulate normal operation conditions

--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.

--- The measurement distance is 1 meter.

--- The EUT was set into operation.

Premeasurement:

--- The antenna is moved spherical over the EUT in different polarizations of the antenna.

Final measurement:

--- The final measurement will be performed at the position and antenna orientation for all detected emissions that were found during the premeasurements with Peak and Average detector.

--- The final levels, frequency, measuring time, bandwidth, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement and the limit will be stored.

7.5 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

7.6 Test Results

Radiated Emissions (9 KHz~30MHz)

Temperature	23.3℃	Humidity	53.4%
Test Engineer	Tom Liu	Configurations	RFID

Freq. (MHz)	Level (dBuV)	Over Limit (dB)	Over Limit (dBuV)	Remark
-	-	-	-	See Note

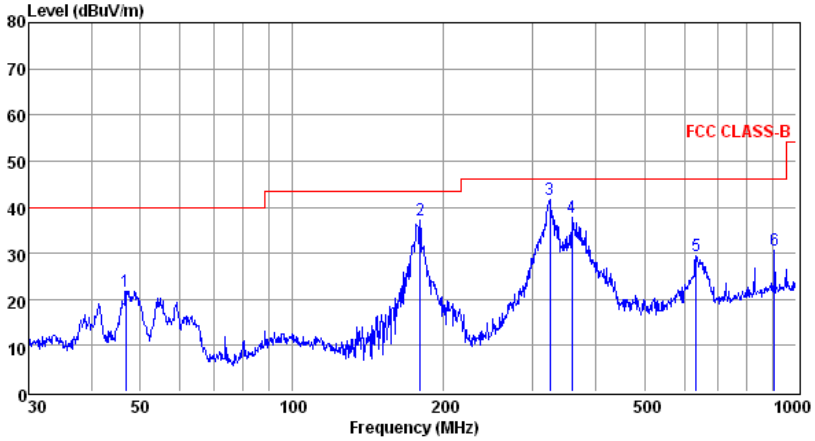
Note:
The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.
Distance extrapolation factor = 40 log (specific distance / test distance) (dB);
Limit line = specific limits (dBuV) + distance extrapolation factor.

PASS.

Pre-scan all modes and recorded the worst case results in this report (TX-Mid Channel).
The test data please refer to following page.

Below 1GHz (Worst case: High Channel)

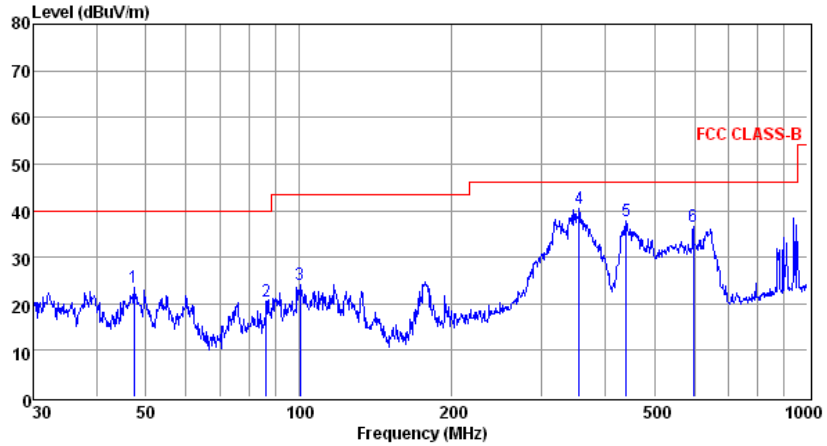
Vertical:



	Freq	Reading	CabLos	Antfac	Measured	Limit	Over	Remark
	MHz	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB	
1	46.83	8.03	0.35	13.44	21.82	40.00	-18.18	QP
2	179.39	26.77	0.89	9.64	37.30	43.50	-6.20	QP
3	324.46	27.12	1.10	13.51	41.73	46.00	-4.27	QP
4	359.19	22.05	1.18	14.42	37.65	46.00	-8.35	QP
5	633.91	9.43	1.50	18.57	29.50	46.00	-16.50	QP
6	906.48	7.40	2.03	21.13	30.56	46.00	-15.44	QP

Note: 1. All readings are Quasi-peak values.
2. Measured= Reading + Antenna Factor + Cable Loss
3. The emission that are 20db below the official limit are not reported

Horizontal:



	Freq	Reading	CabLos	Antfac	Measured	Limit	Over	Remark
	MHz	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB	
1	47.33	9.71	0.35	13.41	23.47	40.00	-16.53	QP
2	86.20	9.27	0.47	10.69	20.43	40.00	-19.57	QP
3	100.58	10.31	0.60	13.11	24.02	43.50	-19.48	QP
4	355.43	24.79	1.18	14.36	40.33	46.00	-5.67	QP
5	440.20	20.82	1.27	15.56	37.65	46.00	-8.35	QP
6	597.22	16.58	1.50	18.40	36.48	46.00	-9.52	QP

Note: 1. All readings are Quasi-peak values.
2. Measured= Reading + Antenna Factor + Cable Loss
3. The emission that are 20db below the official limit are not reported

Note:

1). Pre-scan all modes and recorded the worst case results in this report (High Channel). Emission level (dBuV/m) = 20 log Emission level (uV/m).
2). Corrected Reading: Antenna Factor + Cable Loss + Read Level = Level.

Above 1GHz

Note: Only recorded the worst test result.

Low Channel

Freq. MHz	Reading Level dBuV	Ant. Fac. dB/m	Pre. Fac. dB	Cab. Loss dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol.
1805.50	52.68	33.06	35.04	2.14	52.84	74.00	-21.16	Peak	Horizontal
1805.50	35.67	33.06	35.04	2.14	35.83	54.00	-18.17	Average	Horizontal
1805.50	54.92	33.06	35.04	2.14	55.08	74.00	-18.92	Peak	Vertical
1805.50	36.04	33.06	35.04	2.14	36.20	54.00	-17.80	Average	Vertical
2708.25	52.47	33.11	35.09	2.72	53.21	74.00	-20.79	Peak	Horizontal
2708.25	34.57	33.11	35.09	2.72	35.31	54.00	-18.69	Average	Horizontal
2708.25	55.10	33.11	35.09	2.72	55.84	74.00	-18.16	Peak	Vertical
2708.25	36.46	33.11	35.09	2.72	37.20	54.00	-16.80	Average	Vertical
3611.00	52.09	33.03	35.07	3.12	53.17	74.00	-20.83	Peak	Horizontal
3611.00	34.44	33.03	35.07	3.12	35.52	54.00	-18.48	Average	Horizontal
3611.00	55.74	33.03	35.07	3.12	56.82	74.00	-17.18	Peak	Vertical
3611.00	36.92	33.03	35.07	3.12	38.00	54.00	-16.00	Average	Vertical
4513.75	52.16	33.26	35.14	3.98	54.26	74.00	-19.74	Peak	Horizontal
4513.75	35.58	33.26	35.14	3.98	37.68	54.00	-16.32	Average	Horizontal
4513.75	55.29	33.26	35.14	3.98	57.39	74.00	-16.61	Peak	Vertical
4513.75	36.50	33.26	35.14	3.98	38.60	54.00	-15.40	Average	Vertical

Mid Channel

Freq. MHz	Reading Level dBuV	Ant. Fac. dB/m	Pre. Fac. dB	Cab. Loss dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol.
1830.50	53.18	33.06	35.04	2.14	53.34	74.00	-20.66	Peak	Horizontal
1830.50	34.54	33.06	35.04	2.14	34.70	54.00	-19.30	Average	Horizontal
1830.50	54.33	33.06	35.04	2.14	54.49	74.00	-19.51	Peak	Vertical
1830.50	37.16	33.06	35.04	2.14	37.32	54.00	-16.68	Average	Vertical
2745.75	53.01	33.11	35.09	2.72	53.75	74.00	-20.25	Peak	Horizontal
2745.75	35.35	33.11	35.09	2.72	36.09	54.00	-17.91	Average	Horizontal
2745.75	54.97	33.11	35.09	2.72	55.71	74.00	-18.29	Peak	Vertical
2745.75	36.99	33.11	35.09	2.72	37.73	54.00	-16.27	Average	Vertical
3661.00	52.20	33.03	35.07	3.12	53.28	74.00	-20.72	Peak	Horizontal
3661.00	35.12	33.03	35.07	3.12	36.20	54.00	-17.80	Average	Horizontal
3661.00	54.70	33.03	35.07	3.12	55.78	74.00	-18.22	Peak	Vertical
3661.00	37.96	33.03	35.07	3.12	39.04	54.00	-14.96	Average	Vertical
4576.25	52.31	33.26	35.14	3.98	54.41	74.00	-19.59	Peak	Horizontal
4576.25	35.61	33.26	35.14	3.98	37.71	54.00	-16.29	Average	Horizontal
4576.25	54.10	33.26	35.14	3.98	56.20	74.00	-17.80	Peak	Vertical
4576.25	36.16	33.26	35.14	3.98	38.26	54.00	-15.74	Average	Vertical

High Channel

Freq. MHz	Reading Level dBuV	Ant. Fac. dB/m	Pre. Fac. dB	Cab. Loss dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark	Pol.
1854.50	52.76	33.06	35.04	2.14	52.92	74.00	-21.08	Peak	Horizontal
1854.50	34.13	33.06	35.04	2.14	34.29	54.00	-19.71	Average	Horizontal
1854.50	55.45	33.06	35.04	2.14	55.61	74.00	-18.39	Peak	Vertical
1854.50	36.05	33.06	35.04	2.14	36.21	54.00	-17.79	Average	Vertical
2781.75	53.00	33.11	35.09	2.72	53.74	74.00	-20.26	Peak	Horizontal
2781.75	34.98	33.11	35.09	2.72	35.72	54.00	-18.28	Average	Horizontal
2781.75	55.18	33.11	35.09	2.72	55.92	74.00	-18.08	Peak	Vertical
2781.75	36.94	33.11	35.09	2.72	37.68	54.00	-16.32	Average	Vertical
3709.00	53.42	33.03	35.07	3.12	54.50	74.00	-19.50	Peak	Horizontal
3709.00	35.11	33.03	35.07	3.12	36.19	54.00	-17.81	Average	Horizontal
3709.00	54.76	33.03	35.07	3.12	55.84	74.00	-18.16	Peak	Vertical
3709.00	36.93	33.03	35.07	3.12	38.01	54.00	-15.99	Average	Vertical
4636.25	52.93	33.26	35.14	3.98	55.03	74.00	-18.97	Peak	Horizontal
4636.25	35.27	33.26	35.14	3.98	37.37	54.00	-16.63	Average	Horizontal
4636.25	54.99	33.26	35.14	3.98	57.09	74.00	-16.91	Peak	Vertical
4636.25	36.82	33.26	35.14	3.98	38.92	54.00	-15.08	Average	Vertical

Notes:

1). Measuring frequencies from 9 KHz - 10th harmonic (ex. 10GHz), No emission found between lowest internal used/generated frequency to 30 MHz.

2). Radiated emissions measured in frequency range from 9 KHz - 10th harmonic (ex. 10GHz) were made with an instrument using Peak detector mode.

8. POWER LINE CONDUCTED EMISSIONS

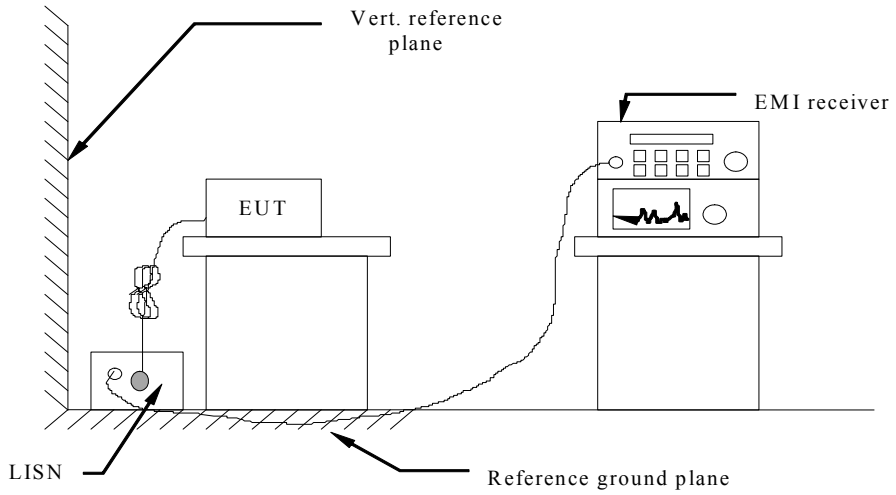
8.1 Standard Applicable

According to §15.207 (a): For an intentional radiator which 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 or frequencies within the band 150 KHz to 30 MHz shall not exceed 250 microvolts (The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz). The limits at specific frequency range are listed as follows:

Frequency Range (MHz)	Limits (dBμV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50

* Decreasing linearly with the logarithm of the frequency

8.2 Block Diagram of Test Setup



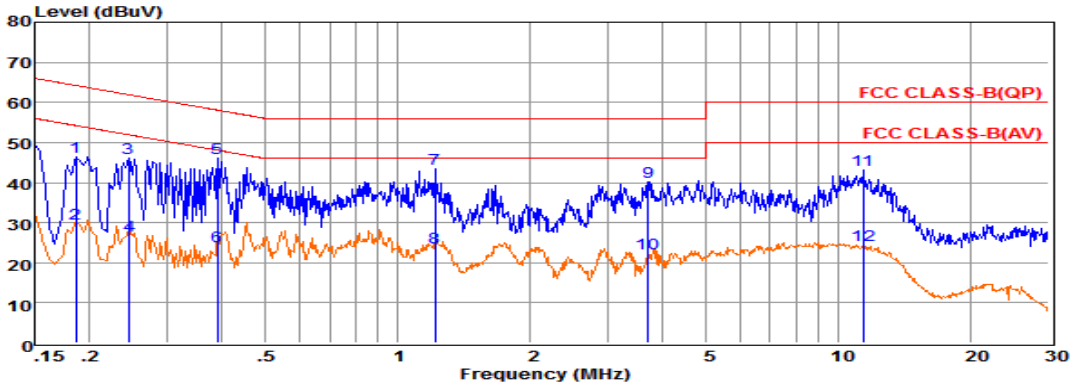
8.3 Test Results

PASS.

The test data please refer to following page.

AC Conducted Emission of power adapter @ AC 120V/60Hz (worst case)

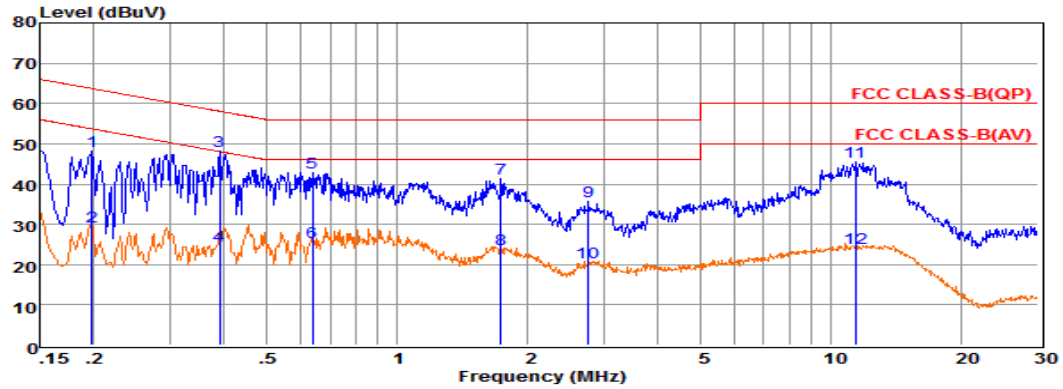
Line:



	Freq	Reading	LISNFac	CabLos	Aux2Fac	Measured	Limit	Over	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dB	
1	0.19	26.83	9.62	0.02	10.00	46.47	64.20	-17.73	QP
2	0.19	9.98	9.62	0.02	10.00	29.62	54.19	-24.57	Average
3	0.25	26.45	9.63	0.03	10.00	46.11	61.91	-15.80	QP
4	0.25	6.99	9.63	0.03	10.00	26.65	51.90	-25.25	Average
5	0.39	26.33	9.62	0.04	10.00	45.99	58.08	-12.09	QP
6	0.39	4.37	9.62	0.04	10.00	24.03	48.08	-24.05	Average
7	1.22	23.80	9.63	0.05	10.00	43.48	56.00	-12.52	QP
8	1.22	4.05	9.63	0.05	10.00	23.73	46.00	-22.27	Average
9	3.70	20.44	9.65	0.06	10.00	40.15	56.00	-15.85	QP
10	3.70	2.58	9.65	0.06	10.00	22.29	46.00	-23.71	Average
11	11.38	23.39	9.70	0.09	10.00	43.18	60.00	-16.82	QP
12	11.38	4.56	9.70	0.09	10.00	24.35	50.00	-25.65	Average

Remarks: 1. Measured = Reading + LISNFac + Cable Loss + Aux2 Fac.
2. The emission levels that are 20dB below the official limit are not reported.

Neutral:



	Freq	Reading	LISNFac	CabLos	Aux2Fac	Measured	Limit	Over	Remark
	MHz	dBuV	dB	dB	dB	dBuV	dBuV	dB	
1	0.20	28.70	9.59	0.02	10.00	48.31	63.71	-15.40	QP
2	0.20	9.86	9.59	0.02	10.00	29.47	53.71	-24.24	Average
3	0.39	28.42	9.61	0.04	10.00	48.07	58.08	-10.01	QP
4	0.39	5.03	9.61	0.04	10.00	24.68	48.08	-23.40	Average
5	0.64	23.19	9.63	0.04	10.00	42.86	56.00	-13.14	QP
6	0.64	5.79	9.63	0.04	10.00	25.46	46.00	-20.54	Average
7	1.73	21.56	9.63	0.05	10.00	41.24	56.00	-14.76	QP
8	1.74	4.01	9.63	0.05	10.00	23.69	46.00	-22.31	Average
9	2.76	15.96	9.64	0.05	10.00	35.65	56.00	-20.35	QP
10	2.77	0.86	9.64	0.05	10.00	20.55	46.00	-25.45	Average
11	11.38	25.55	9.73	0.09	10.00	45.37	60.00	-14.63	QP
12	11.38	4.40	9.73	0.09	10.00	24.22	50.00	-25.78	Average

Remarks: 1. Measured = Reading + LISNFac + Cable Loss + Aux2 Fac.
2. The emission levels that are 20dB below the official limit are not reported.

****Note: Pre-scan all modes and recorded the worst case results in this report;*

9. ANTENNA REQUIREMENT

9.1 Standard Applicable

According to antenna requirement of §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. The manufacturer may design the unit so that a broken antenna can be re-placed by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of Sections 15.211, 15.213, 15.217, 15.219, or 15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with Section 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this Part are not exceeded.

And according to §15.247(4)(1), system operating in the 2400-2483.5MHz bands that are used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum peak output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.

9.2 Antenna Connected Construction

9.2.1. Standard Applicable

According to § 15.203 & RSS-Gen, 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.

9.2.2. Antenna Connector Construction

The directional gains of antenna used for transmitting is 0dBi, and the antenna is a PIFA antenna connect to PCB board and no consideration of replacement. Please see EUT photo for details.
The WLAN and BT share same antenna;

9.2.3. Results: Compliance.

10. TEST SETUP PHOTOGRAPHS OF EUT

Please refer to separate file for test setup photographs.

11. EXTERIOR PHOTOGRAPHS OF THE EUT

Please refer to separate file for exterior photographs of eut.

12. INTERIOR PHOTOGRAPHS OF THE EUT

Please refer to separate file for interior photographs of eut.

----------THE END OF REPORT----------