TCT 通测检测 TESTING CENTRE TECHNOLOGY

TEST REPORT

FCC ID: YPVITALCOMB1

Product: Smart phone

Model No.: B1

Additional Model No.: -

Trade Mark: NYX

Report No.: TCT181116E011

Issued Date: Nov. 14, 2018

Issued for:

ITALCOM GROUP

1728 Coral Way, Coral Gables, Miami, Florida, United States

Issued By:

Shenzhen Tongce Testing Lab.

1B/F., Building 1, Yibaolai Industrial Park, Qiaotou, Fuyong, Baoan District, Shenzhen, Guangdong, China

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Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com

1. Test Certification

Product:	Smart phone
Model No.:	B1
Additional Model No.:	-
Trade Mark:	NYX
Applicant:	ITALCOM GROUP
Address:	1728 Coral Way, Coral Gables, Miami, Florida, United States
Manufacturer:	UTCOM TECHNOLOGY CO., LIMITED
Address:	4C, Block A, Central Avenue Building, BaoYuan Road, Xixiang Town, Baoan District, Shenzhen 518012, China
Date of Test:	Oct. 24, 2018 – Nov. 13, 2018
Applicable Standards:	FCC CFR Title 47 Part 15 Subpart E Section 15.407: 2017 ANSI C63.10-2013 KDB789033 D02 General U-NII Test Procedures New Rules v02

The above equipment has been tested by Shenzhen Tongce Testing Lab. and found compliance with the requirements set forth in the technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Tested By:	Brews Xu	***Date:***	***Nov. 13, 2018***
Reviewed By:	Beryl Zhao	***Date:***	***Nov. 14, 2018***
Approved By:	Tomsin	***Date:***	***Nov. 14, 2018***

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2. Test Result Summary

Requirement	CFR 47 Section	Result
Antenna requirement	§15.203	PASS
AC Power Line Conducted Emission	§15.207	PASS
Maximum Conducted Output Power	§15.407(a) §2.1046	PASS
26dB Emission Bandwidth& 99% Occupied Bandwidth	§15.407(a) §2.1049	PASS
Power Spectral Density	§15.407(a)	PASS
Band edge	§15.407(a)	PASS
Radiated Emission	§15.407(a) §2.1053	PASS
Frequency Stability	§15.407(g) §2.1055	PASS

Note:

1. PASS: Test item meets the requirement.

2. Fail: Test item does not meet the requirement.

3. N/A: Test case does not apply to the test object.

4. The test result judgment is decided by the limit of test standard.

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3. EUT Description

Product:	Smart phone
Model No.:	B1
Additional Model No.:	-
Trade Mark:	NYX
Operation Frequency:	Band I: 5150MHz~5250MHz
Channel Bandwidth:	802.11a/n(HT20): 20MHz 802.11n(HT40): 40MHz
Modulation Technology:	Orthogonal Frequency Division Multiplexing(OFDM)
Modulation Type	BPSK, QPSK, 16QAM, 64QAM
Antenna Type:	FPC Antenna
Antenna Gain:	1.0 dBi
Power Supply:	DC 3.8V for internal battery
Adapter:	Input:100-240Va.c., 50/60Hz,0.15A Output: 5Vd.c., 1.0A

Operation Frequency each of channel

20MHz		40MHz	
Channel	Frequency	Channel	Frequency
36	5180	38	5190
44	5220	-	-
48	5240	46	5230

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

For 802.11a/n (HT20)

Band I (5150 - 5250 MHz)		
Channel Number	Channel	Frequency (MHz)
36	Low	5180
44	Mid	5220
48	High	5240

For 802.11n (HT40)

Band I (5150 - 5250 MHz)		
Channel Number	Channel	Frequency (MHz)
38	Low	5190
46	High	5230

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4. General Information

4.1. Test environment and mode

Operating Environment:	
Temperature:	25.0 °C
Humidity:	56 % RH
Atmospheric Pressure:	1010 mbar
Test Mode:	
Engineering mode:	Keep the EUT in continuous transmitting by select channel and modulations(The value of duty cycle is 100%)
The sample was placed 0.8m/1.5m for blow/above 1GHz above the ground plane of 3m chamber. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case are shown in Test Results of the following pages.	

We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows:

Per-scan all kind of data rate in lowest channel, and found the follow list which it was worst case.	
Mode	Data rate
802.11a	6 Mbps
802.11n(HT20)	MCS0
802.11n(HT40)	MCS0
Final Test Mode:	
Operation mode:	Keep the EUT in continuous transmitting with modulation

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4.2. Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Equipment	Model No.	Serial No.	FCC ID	Trade Name
/	/	/	/	/

Note:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.

2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

3. For conducted measurements (Output Power, Emission Bandwidth, Power Spectral Density, Spurious Emissions), the antenna of EUT is connected to the test equipment via temporary antenna connector, the antenna connector is soldered on the antenna port of EUT, and the temporary antenna connector is listed in the Test Instruments.

5. Facilities and Accreditations

5.1. Facilities

The test facility is recognized, certified, or accredited by the following organizations:

- FCC - Registration No.: 645098

  Shenzhen Tongce Testing Lab

  The 3m Semi-anechoic chamber has been registered and fully described in a report with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

- IC - Registration No.: 10668A-1

  The 3m Semi-anechoic chamber of Shenzhen TCT Testing Technology Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing

5.2. Location

Shenzhen Tongce Testing Lab

Address: 1B/F., Building 1, Yibaolai Industrial Park, Qiaotou, Fuyong, Baoan District, Shenzhen, Guangdong, China

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5.3. Measurement Uncertainty

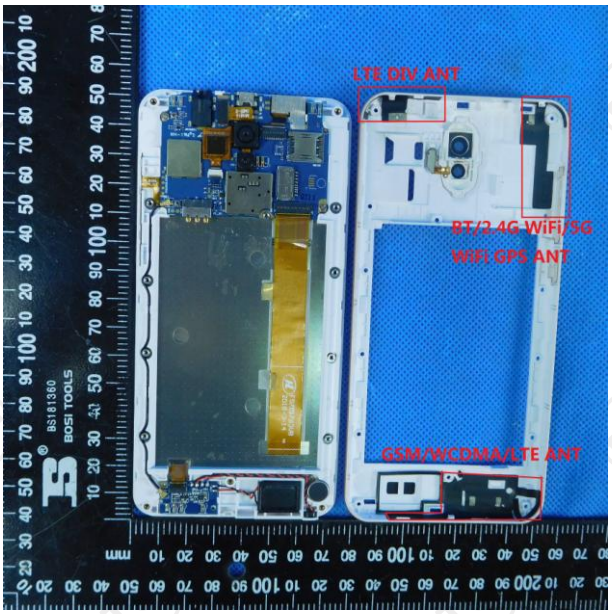
The reported uncertainty of measurement y ± U, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95 %.

No.	Item	MU
1	Conducted Emission	±2.56dB
2	RF power, conducted	±0.12dB
3	Spurious emissions, conducted	±0.11dB
4	All emissions, radiated(<1G)	±3.92dB
5	All emissions, radiated(>1G)	±4.28dB
6	Temperature	±0.1°C
7	Humidity	±1.0%

6. Test Results and Measurement Data

6.1. Antenna requirement

Standard requirement:	FCC Part15 C Section 15.203
15.203 requirement: 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, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.	
E.U.T Antenna:	
The directional gain of the antenna less than 6 dBi, please refer to the below antenna photo.	



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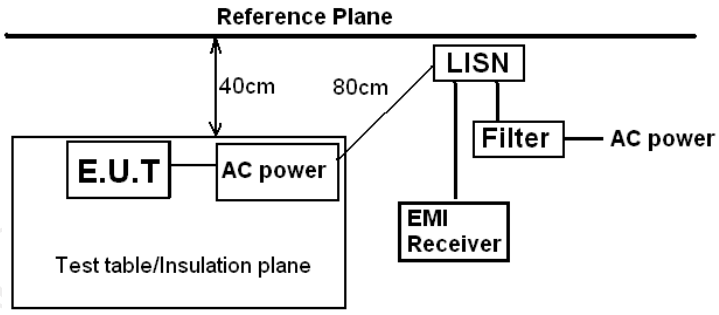
6.2. Conducted Emission

6.2.1. Test Specification

<table>
<tr><td>Test Requirement:</td><td>FCC Part15 C Section 15.207</td></tr>
<tr><td>Test Method:</td><td>ANSI C63.10:2013</td></tr>
<tr><td>Frequency Range:</td><td>150 kHz to 30 MHz</td></tr>
<tr><td>Receiver setup:</td><td>RBW=9 kHz, VBW=30 kHz, Sweep time=auto</td></tr>
<tr><td>Limits:</td><td>
<table>
<tr><td rowspan="2">Frequency range (MHz)</td><td colspan="2">Limit (dBuV)</td></tr>
<tr><td>Quasi-peak</td><td>Average</td></tr>
<tr><td>0.15-0.5</td><td>66 to 56*</td><td>56 to 46*</td></tr>
<tr><td>0.5-5</td><td>56</td><td>46</td></tr>
<tr><td>5-30</td><td>60</td><td>50</td></tr>
</table>
</td></tr>
<tr><td>Test Setup:</td><td> 

Remark:
E.U.T: Equipment Under Test
LISN: Line Impedence Stabilization Network
Test table height=0.8m</td></tr>
<tr><td>Test Mode:</td><td>Tx Mode</td></tr>
<tr><td>Test Procedure:</td><td>1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment.
2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs).
3. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10: 2013 on conducted measurement.</td></tr>
<tr><td>Test Result:</td><td>PASS</td></tr>
</table>

6.2.2. Test Instruments

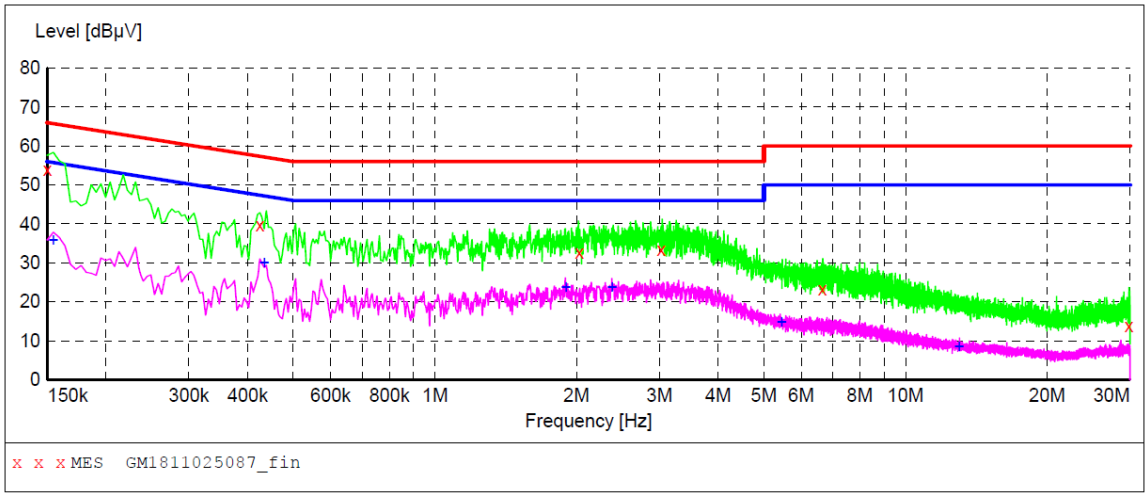
Conducted Emission Shielding Room Test Site (843)				
Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Due**
Test Receiver	R&S	ESPI	101401	Aug. 27, 2019
LISN	Schwarzbeck	NSLK 8126	8126453	Aug. 27, 2019
Coax cable (9KHz-30MHz)	TCT	CE-05	N/A	Aug. 27, 2019
EMI Test Software	Shurple Technology	EZ-EMC	N/A	N/A

Note: *The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).*

Test data

Please refer to following diagram for individual

Conducted Emission on Line Terminal of the power line



MEASUREMENT RESULT: "GM1811025087_fin"

11/2/2018 5:09PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.150000	53.90	10.1	66	12.1	QP	L1	GND
0.424500	39.60	10.1	57	17.8	QP	L1	GND
2.026500	32.70	10.0	56	23.3	QP	L1	GND
3.021000	33.30	10.0	56	22.7	QP	L1	GND
6.652500	23.20	10.0	60	36.8	QP	L1	GND
29.832000	13.80	10.5	60	46.2	QP	L1	GND

MEASUREMENT RESULT: "GM1811025087_fin2"

11/2/2018 5:09PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.154500	35.80	10.1	56	20.0	AV	L1	GND
0.433500	30.10	10.1	47	17.1	AV	L1	GND
1.896000	23.70	10.0	46	22.3	AV	L1	GND
2.377500	23.80	10.0	46	22.2	AV	L1	GND
5.446500	14.80	10.0	50	35.2	AV	L1	GND
12.988500	8.60	10.2	50	41.4	AV	L1	GND

Remark:
Transd = Cable lose+ PULSE LIMITER factor + ARTIFICIAL MAINS factor; Margin= Limit - Level

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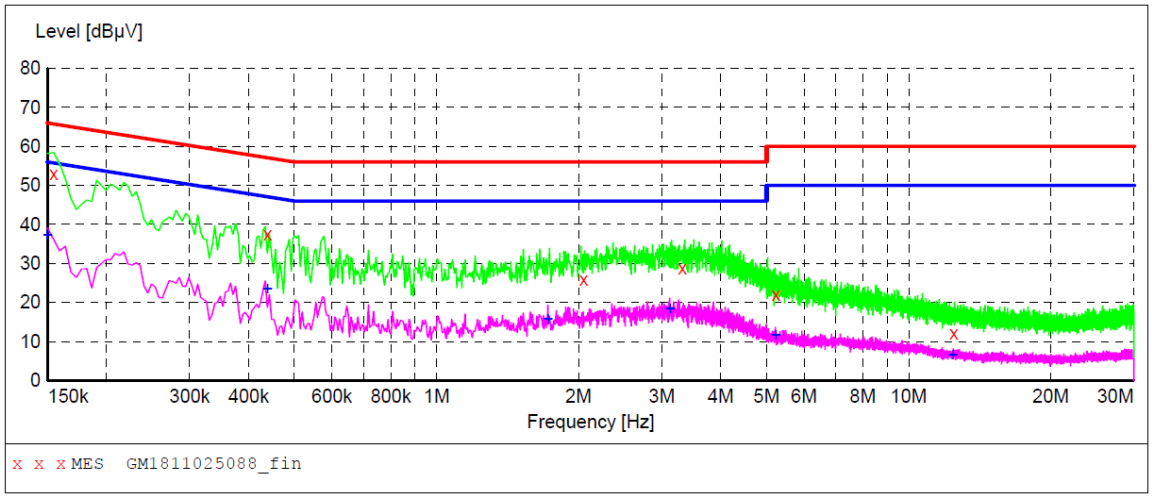
Conducted Emission on Neutral Terminal of the power line



MEASUREMENT RESULT: "GM1811025088_fin"

11/2/2018 5:11PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.154500	53.00	10.1	66	12.8	QP	N	GND
0.438000	37.50	10.1	57	19.6	QP	N	GND
2.049000	25.90	10.0	56	30.1	QP	N	GND
3.313500	28.80	10.0	56	27.2	QP	N	GND
5.239500	22.00	10.0	60	38.0	QP	N	GND
12.462000	12.20	10.2	60	47.8	QP	N	GND

MEASUREMENT RESULT: "GM1811025088_fin2"

11/2/2018 5:11PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.150000	37.30	10.1	56	18.7	AV	N	GND
0.438000	23.50	10.1	47	23.6	AV	N	GND
1.720500	15.70	10.0	46	30.3	AV	N	GND
3.120000	18.30	10.0	46	27.7	AV	N	GND
5.230500	11.60	10.0	50	38.4	AV	N	GND
12.394500	6.50	10.2	50	43.5	AV	N	GND

Remark:
Transd = Cable lose+ PULSE LIMITER factor + ARTIFICIAL MAINS factor; Margin= Limit - Level

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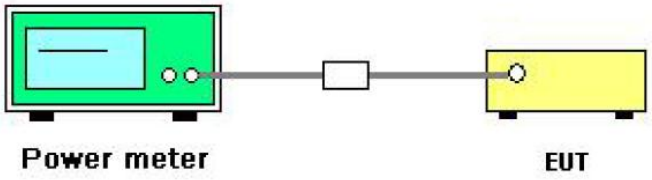
6.3. Maximum Conducted Output Power

6.3.1. Test Specification

<table>
<tr><td>Test Requirement:</td><td>FCC Part15 E Section 15.407(a)& Part 2 J Section 2.1046</td></tr>
<tr><td>Test Method:</td><td>KDB789033 D02 General UNII Test Procedures New Rules v02 Section E</td></tr>
<tr><td>Limit:</td><td>
<table>
<tr><td>Frequency Band (MHz)</td><td>Limit</td></tr>
<tr><td>5150-5250</td><td>250mW for client devices</td></tr>
<tr><td colspan="2">Note: For those cases where it is specified that the conducted output power be reduced by the amount in dB that the directional gain of the transmitting antenna exceeds 6 dBi, the output power effective limit shall be calculated as follows in Equation:
Pout = PLimit - (directional gain - 6)</td></tr>
</table>
</td></tr>
<tr><td>Test Setup:</td><td> 
</td></tr>
<tr><td>Test Mode:</td><td>Transmitting mode with modulation</td></tr>
<tr><td>Test Procedure:</td><td>1. The testing follows the Measurement Procedure of KDB789033 D02 General UNII Test Procedures New Rules v02 Section E, 3, a
2. The RF output of EUT was connected to the power meter by RF cable and attenuator. The path loss was compensated to the results for each measurement.
3. Set to the maximum power setting and enable the EUT transmit continuously.
5. Measure the conducted output power and record the results in the test report.</td></tr>
<tr><td>Test Result:</td><td>PASS</td></tr>
<tr><td>Remark:</td><td>Conducted output power= measurement power +10log(1/x) X is duty cycle=1, so 10log(1/1)=0
Conducted output power= measurement power</td></tr>
</table>

6.3.2. Test Instruments

RF Test Room				
Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Due**
Spectrum Analyzer	Agilent	N9020A	MY49100060	Aug. 27, 2019
Power Meter	Agilent	N1911A	MY45101557	Aug. 27, 2019
Power Sensor	Agilent	N1922A	MY44124432	Aug. 27, 2019
RF Cable (9KHz-40GHz)	TCT	RE-03	N/A	Aug. 27, 2019
Antenna Connector	TCT	RFC-03	N/A	Aug. 27, 2019

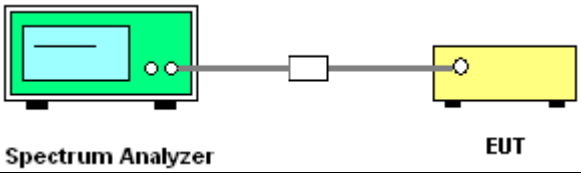
Note: *The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).*

6.3.3. Test Data

Configuration Band I (5150 - 5250 MHz)				
Mode	Test channel	Maximum Conducted Output Power (dBm)	FCC Limit (dBm)	Result
11a	CH36	15.78	24	PASS
11a	CH40	16.13	24	PASS
11a	CH48	15.96	24	PASS
11n(HT20)	CH36	15.96	24	PASS
11n(HT20)	CH40	16.25	24	PASS
11n(HT20)	CH48	16.07	24	PASS
11n(HT40)	CH38	12.23	24	PASS
11n(HT40)	CH46	12.32	24	PASS

6.4. 26dB Bandwidth and 99% Occupied Bandwidth

6.4.1. Test Specification

Test Requirement:	47 CFR Part 15C Section 15.407 (a)& Part 2 J Section 2.1049
Test Method:	KDB789033 D02 General UNII Test Procedures New Rules v02 Section D
Limit:	No restriction limits
Test Setup:	
Test Mode:	Transmitting mode with modulation
Test Procedure:	1. KDB789033 D02 General UNII Test Procedures New Rules v02 Section D 2. Set to the maximum power setting and enable the EUT transmit continuously. 3. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. Set the Video bandwidth (VBW) = 300 kHz. In order to make an accurate measurement. 4. Measure and record the results in the test report.
Test Result:	PASS

6.4.2. Test Instruments

RF Test Room				
Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Due**
Spectrum Analyzer	Agilent	N9020A	MY49100060	Aug. 27, 2019
RF Cable (9KHz-40GHz)	TCT	RE-03	N/A	Aug. 27, 2019
Antenna Connector	TCT	RFC-03	N/A	Aug. 27, 2019

Note: *The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).*

6.4.3. Test data

Band I

Mode	Test channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99% Bandwidth (MHz)
11a	CH36	5180	19.95	16.57
11a	CH44	5220	19.71	16.54
11a	CH48	5240	19.26	16.51
11n(HT20)	CH36	5180	20.31	17.62
11n(HT20)	CH44	5220	19.83	17.53
11n(HT20)	CH48	5240	19.71	17.59
11n(HT40)	CH38	5190	40.32	36.44
11n(HT40)	CH46	5230	40.44	36.32

Test plots as follows:

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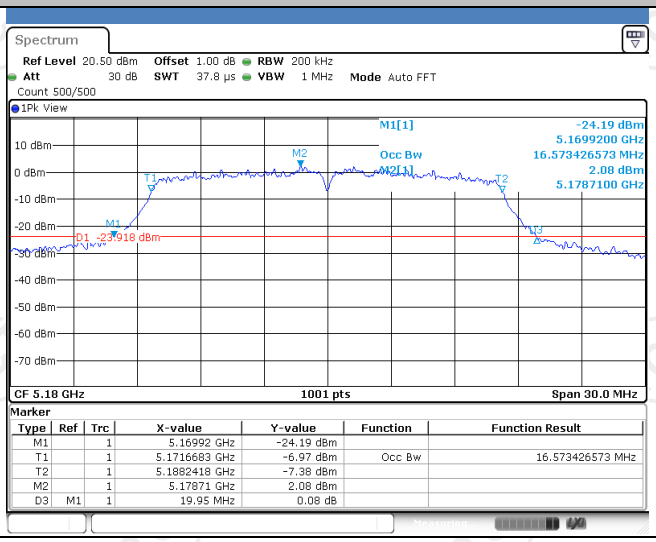
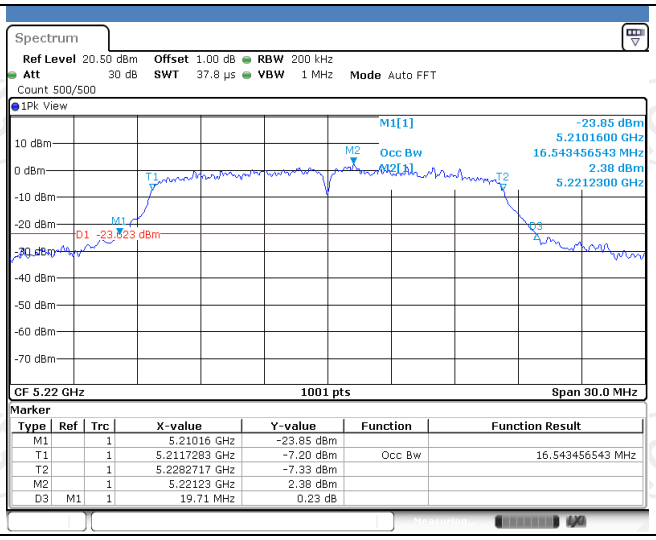
Band I （5150 – 5250 MHz）

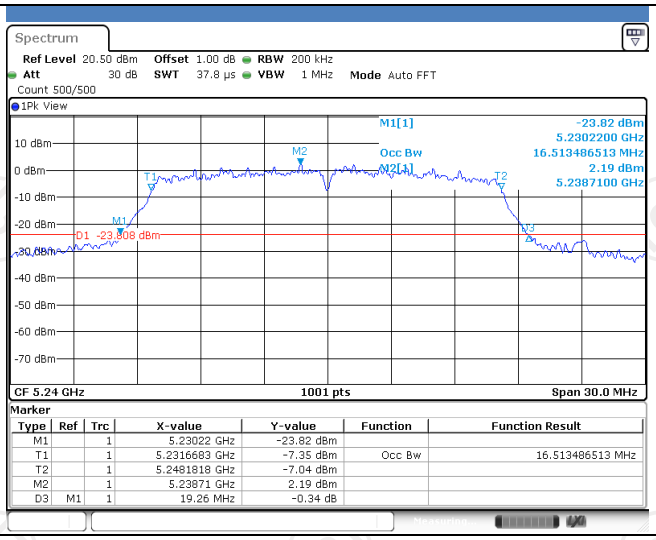
802.11a



Low

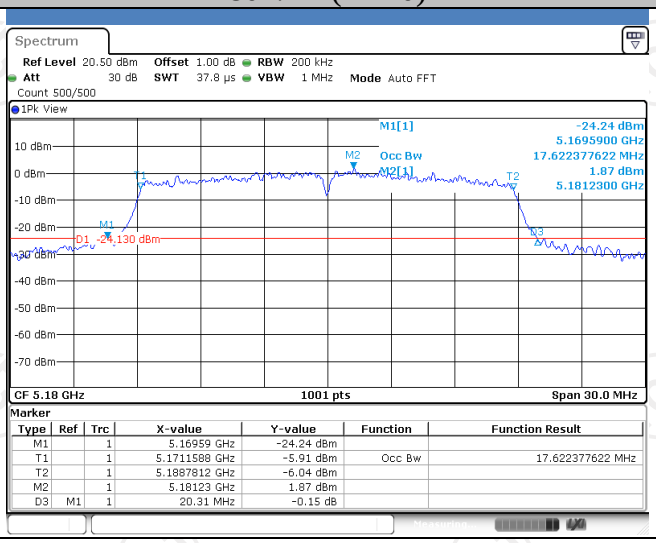


Mid

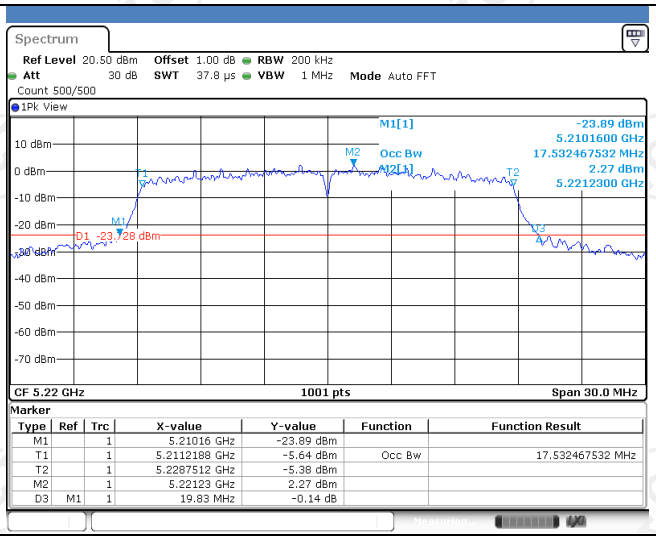


High

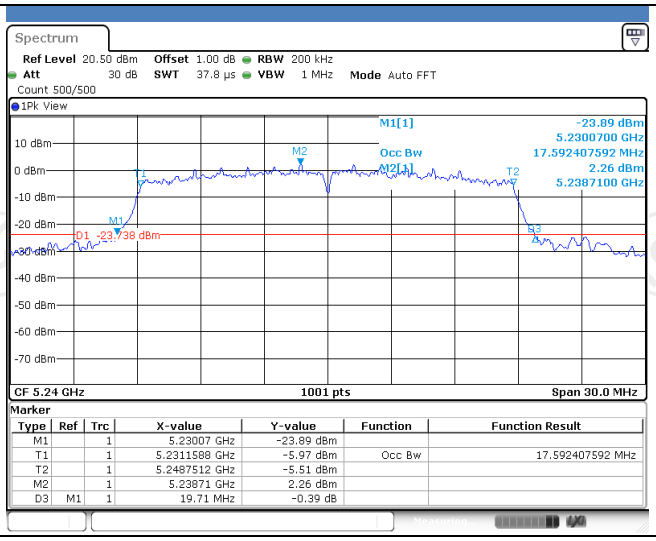
802.11n(HT20)



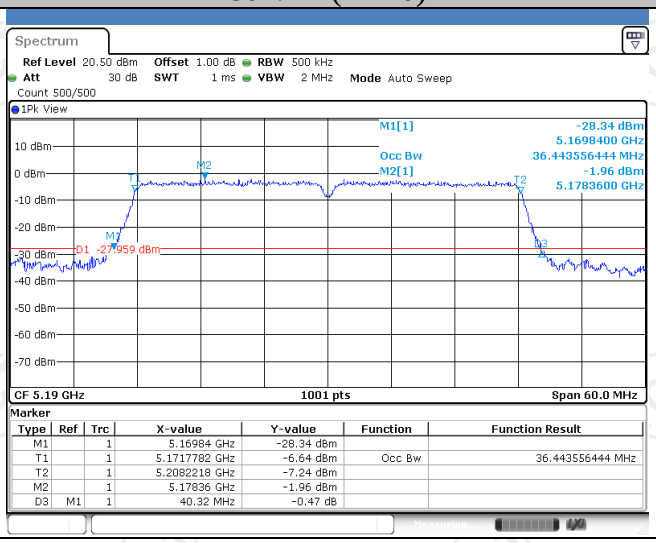
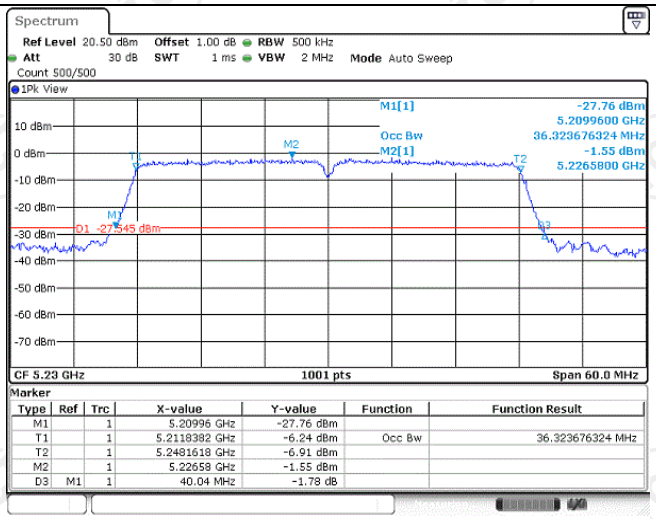
Low



Mid



High

802.11n(HT40)

Low

High

6.5. Power Spectral Density

6.5.1. Test Specification

Test Requirement:	FCC Part15 E Section 15.407 (a)
Test Method:	KDB789033 D02 General UNII Test Procedures New Rules v02 Section F
Limit:	≤11.00dBm/MHz for Band I 5150MHz-5250MHz The e.i.r.p spectral density for Band I 5150MHz – 5250 MHz should not exceed 10dBm/MHz Note: For those cases where it is specified that the conducted output power be reduced by the amount in dB that the directional gain of the transmitting antenna exceeds 6 dBi, the PSD effective limit shall be calculated as follows in Equation: PSDout = PSDLimit - (directional gain - 6)
Test Setup:	
Test Mode:	Transmitting mode with modulation
Test Procedure:	1. Set the spectrum analyzer or EMI receiver span to view the entire emission bandwidth. 1. Set RBW = 500 kHz/1 MHz, VBW ≥ 3*RBW, Sweep time = Auto, Detector = RMS. 2. Allow the sweeps to continue until the trace stabilizes. 3. Use the peak marker function to determine the maximum amplitude level. 4. The E.I.R.P spectral density used radiated test method. At a test site that has been validated using the procedures of ANSI C63.4 or the latest CISPR 16-1-4 for measurements above 1 GHz, so as to simulate a near free-space environment.
Test Result:	PASS

6.5.2. Test Instruments

RF Test Room				
Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Due**
Spectrum Analyzer	Agilent	N9020A	MY49100060	Aug. 27, 2019
Spectrum Analyzer	ROHDE&SCHWARZ	FSP40	100056	Aug. 27, 2019
RF Cable (9KHz-40GHz)	TCT	RE-03	N/A	Aug. 27, 2019
Antenna Connector	TCT	RFC-03	N/A	Aug. 27, 2019

Note: *The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).*

6.5.3. Test data

Configuration Band I (5150 - 5250 MHz)				
Mode	Test channel	Power Spectral Density	Limit (dBm/MHz)	Result
11a	CH36	5.70	11	PASS
11a	CH44	6.42	11	PASS
11a	CH48	5.84	11	PASS
11n(HT20)	CH36	5.57	11	PASS
11n(HT20)	CH44	5.92	11	PASS
11n(HT20)	CH48	5.96	11	PASS
11n(HT40)	CH38	-2.07	11	PASS
11n(HT40)	CH46	-1.89	11	PASS

Test plots as follows:

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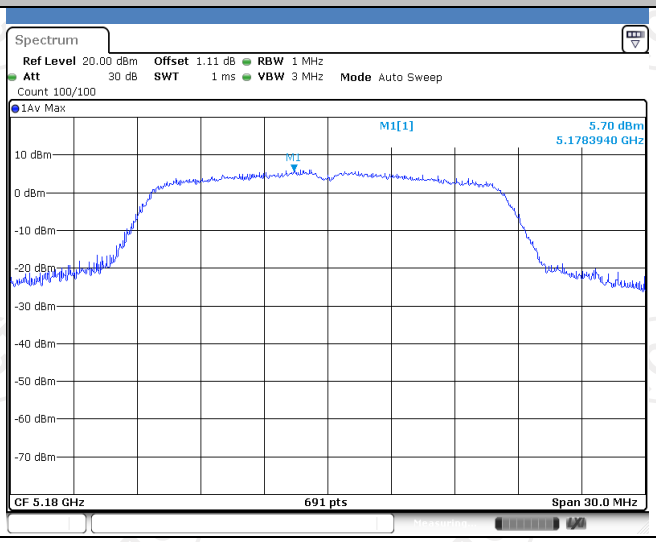
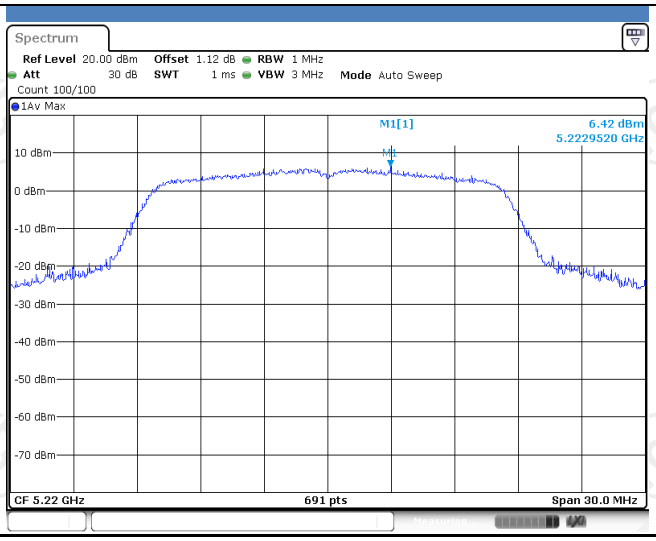
Band I （5150 – 5250 MHz）

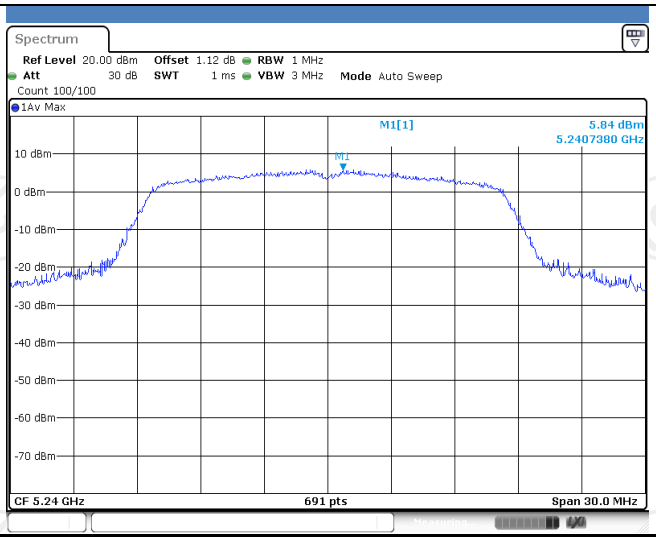
802.11a



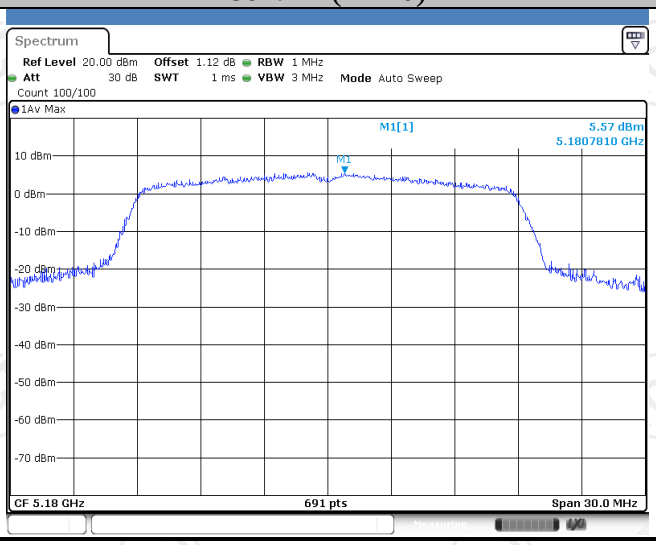
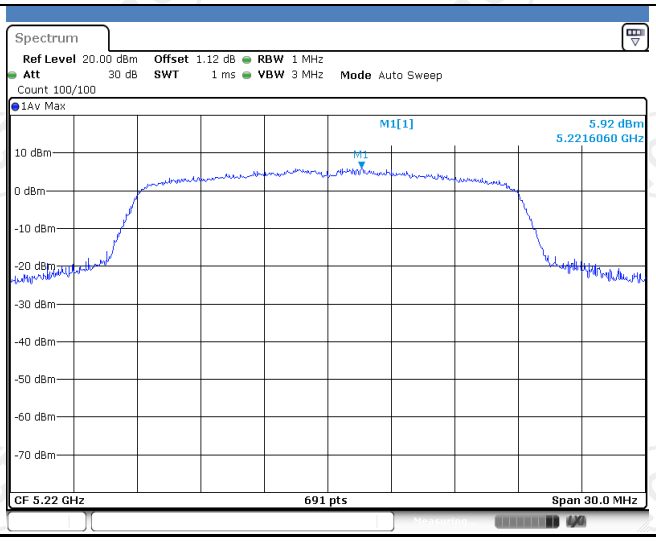
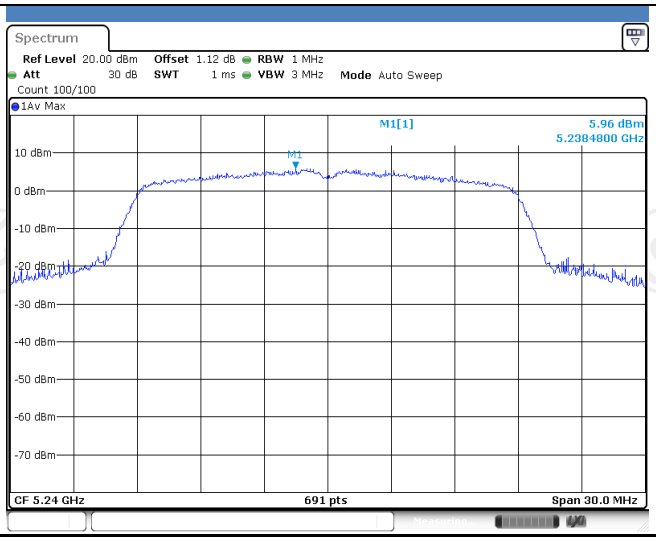
Low

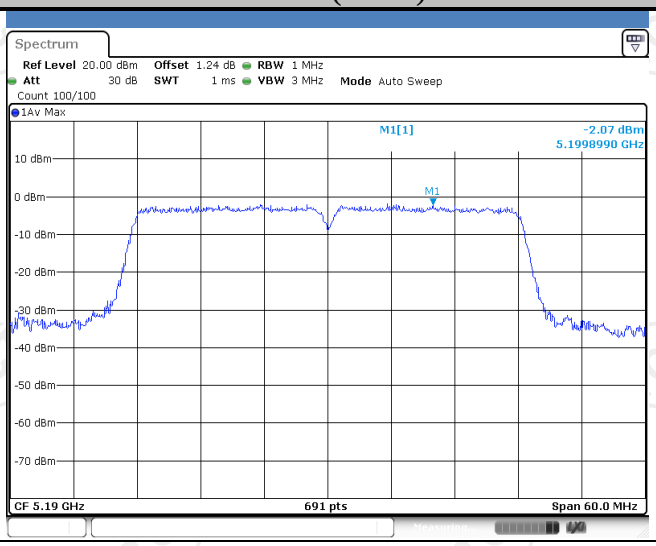
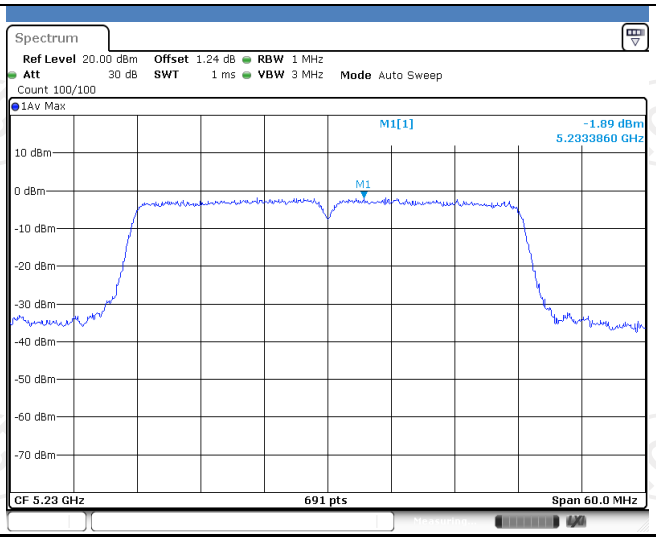


Mid



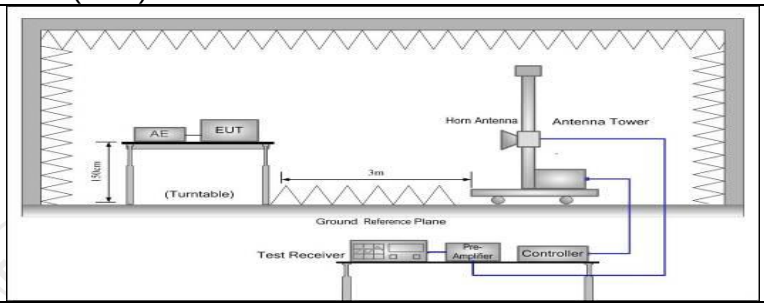
High

802.11n(HT20)

Low

Mid

High

802.11n(HT40)

Low

High

6.6. Band edge

6.6.1. Test Specification

Test Requirement:	FCC CFR47 Part 15E Section 15.407
Test Method:	ANSI C63.10 2013
Limit:	For band I: E[dBμV/m] = EIRP[dBm] + 95.2=68.2 dBμV/m, for EIRP(dBm)= **-27dBm**
Test Setup:	
Test Mode:	Transmitting mode with modulation
Test Procedure:	1. The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation. 2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. 3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. 4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable was turned from 0 degrees to 360 degrees to find the maximum reading. 5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. 6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasipeak or average method as specified and then reported in a data sheet.
Test Result:	PASS

6.6.2. Test Instruments

Radiated Emission Test Site (966)				
Name of Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Due**
Test Receiver	ROHDE&SCHWARZ	ESVD	100008	Aug. 27, 2019
Spectrum Analyzer	ROHDE&SCHWARZ	FSQ	200061	Aug. 27, 2019
Spectrum Analyzer	ROHDE&SCHWARZ	FSP40	100056	Aug. 27, 2019
Spectrum Analyzer	Agilent	N9020A	MY49100060	Aug. 27, 2019
Pre-amplifier	EM Electronics Corporation CO.,LTD	EM30265	07032613	Aug. 27, 2019
Pre-amplifier	HP	8447D	2727A05017	Aug. 27, 2019
Loop antenna	ZHINAN	ZN30900A	12024	Aug. 27, 2019
Broadband Antenna	Schwarzbeck	VULB9163	340	Aug. 27, 2019
Horn Antenna	Schwarzbeck	BBHA 9120D	631	Aug. 27, 2019
Horn Antenna	Schwarzbeck	BBH 9170	582	Aug. 27, 2019
Coax cable (9KHz-1GHz)	TCT	RE-low-01	N/A	Aug. 27, 2019
Coax cable (9KHz-40GHz)	TCT	RE-high-02	N/A	Aug. 27, 2019
Coax cable (9KHz-1GHz)	TCT	RE-low-03	N/A	Aug. 27, 2019
Coax cable (9KHz-40GHz)	TCT	RE-high-04	N/A	Aug. 27, 2019
Antenna Mast	Keleto	CC-A-4M	N/A	N/A
EMI Test Software	Shurple Technology	EZ-EMC	N/A	N/A

Note: *The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).*

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6.6.3. Test Data

Band I for Band edge emission									
Bandwidth:	20MHz	Worst mode:	802.11a	Test channel:	Low				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin Limit (dB)	Polarization	Detector
5150.00	18.38	31.70	9.79	0.00	59.87	68.20	-8.33	Horizontal	Peak
5350.00	21.02	31.40	9.91	0.00	62.33	68.20	-5.87	Horizontal	Peak
5150.00	17.27	31.70	9.79	0.00	58.76	68.20	-9.44	Vertical	Peak
5350.00	17.81	31.40	9.91	0.00	59.12	68.20	-9.08	Vertical	Peak
5150.00	10.37	31.70	9.79	0.00	51.86	54.00	-2.14	Horizontal	Average
5350.00	9.35	31.40	9.91	0.00	50.66	54.00	-3.34	Horizontal	Average
5150.00	9.18	31.70	9.79	0.00	50.67	54.00	-3.33	Vertical	Average
5350.00	8.83	31.40	9.91	0.00	50.14	54.00	-3.86	Vertical	Average

Band I for Band edge emission									
Bandwidth:	20MHz	Worst mode:	802.11a	Test channel:	High				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin Limit (dB)	Polarization	Detector
5150.00	17.54	31.70	9.79	0.00	59.03	68.20	-9.17	Horizontal	Peak
5350.00	19.26	31.40	9.91	0.00	60.57	68.20	-7.63	Horizontal	Peak
5150.00	18.48	31.70	9.79	0.00	59.97	68.20	-8.23	Vertical	Peak
5350.00	19.91	31.40	9.91	0.00	61.22	68.20	-6.98	Vertical	Peak
5150.00	6.86	31.73	10.47	0.00	49.06	54.00	-4.94	Horizontal	Average
5350.00	7.88	32.20	10.61	0.00	50.69	54.00	-3.31	Horizontal	Average
5150.00	7.76	31.70	9.79	0.00	49.25	54.00	-4.75	Vertical	Average
5350.00	10.76	31.40	9.91	0.00	52.07	54.00	-1.93	Vertical	Average

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Band I for Band edge emission									
Bandwidth:		20MHz		Worst mode:		802.11n	Test channel:		Low
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin Limit (dB)	Polarization	Detector
5150.00	19.38	31.70	9.79	0.00	60.87	68.20	-7.33	Horizontal	Peak
5350.00	18.02	31.40	9.91	0.00	59.33	68.20	-8.87	Horizontal	Peak
5150.00	18.27	31.70	9.79	0.00	59.76	68.20	-8.44	Vertical	Peak
5350.00	20.81	31.40	9.91	0.00	62.12	68.20	-6.08	Vertical	Peak
5150.00	6.37	31.70	9.79	0.00	47.86	54.00	-6.14	Horizontal	Average
5350.00	9.35	31.40	9.91	0.00	50.66	54.00	-3.34	Horizontal	Average
5150.00	7.18	31.70	9.79	0.00	48.67	54.00	-5.33	Vertical	Average
5350.00	7.83	31.40	9.91	0.00	49.14	54.00	-4.86	Vertical	Average

Band I for Band edge emission									
Bandwidth:		20MHz		Worst mode:		802.11n	Test channel:		High
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin Limit (dB)	Polarization	Detector
5150.00	19.85	31.70	9.79	0.00	61.34	68.20	-6.86	Horizontal	Peak
5350.00	18.83	31.40	9.91	0.00	60.14	68.20	-8.06	Horizontal	Peak
5150.00	18.08	31.70	9.79	0.00	59.57	68.20	-8.63	Vertical	Peak
5350.00	21.52	31.40	9.91	0.00	62.83	68.20	-5.37	Vertical	Peak
5150.00	9.09	31.70	9.79	0.00	50.58	54.00	-3.42	Horizontal	Average
5350.00	7.92	31.40	9.91	0.00	49.23	54.00	-4.77	Horizontal	Average
5150.00	7.79	31.70	9.79	0.00	49.28	54.00	-4.72	Vertical	Average
5350.00	7.17	31.40	9.91	0.00	48.48	54.00	-5.52	Vertical	Average

Band I for Band edge emission									
Bandwidth:		40MHz		Worst mode:		802.11n	Test channel:		Low
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin Limit (dB)	Polarization	Detector
5150.00	16.95	31.70	9.79	0.00	58.44	68.20	-9.76	Horizontal	Peak
5350.00	18.82	31.40	9.91	0.00	60.13	68.20	-8.07	Horizontal	Peak
5150.00	19.71	31.70	9.79	0.00	61.20	68.20	-7.00	Vertical	Peak
5350.00	17.87	31.40	9.91	0.00	59.18	68.20	-9.02	Vertical	Peak
5150.00	6.33	31.70	9.79	0.00	47.82	54.00	-6.18	Horizontal	Average
5350.00	8.50	31.40	9.91	0.00	49.81	54.00	-4.19	Horizontal	Average
5150.00	6.81	31.70	9.79	0.00	48.30	54.00	-5.70	Vertical	Average
5350.00	6.25	31.40	9.91	0.00	47.56	54.00	-6.44	Vertical	Average

Band I for Band edge emission									
Bandwidth:		40MHz		Worst mode:		802.11n	Test channel:		High
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin Limit (dB)	Polarization	Detector
5150.00	14.85	31.70	9.79	0.00	56.34	68.20	-11.86	Horizontal	Peak
5350.00	15.83	31.40	9.91	0.00	57.14	68.20	-11.06	Horizontal	Peak
5150.00	16.08	31.70	9.79	0.00	57.57	68.20	-10.63	Vertical	Peak
5350.00	16.52	31.40	9.91	0.00	57.83	68.20	-10.37	Vertical	Peak
5150.00	8.09	31.70	9.79	0.00	49.58	54.00	-4.42	Horizontal	Average
5350.00	8.92	31.40	9.91	0.00	50.23	54.00	-3.77	Horizontal	Average
5150.00	7.79	31.70	9.79	0.00	49.28	54.00	-4.72	Vertical	Average
5350.00	10.17	31.40	9.91	0.00	51.48	54.00	-2.52	Vertical	Average

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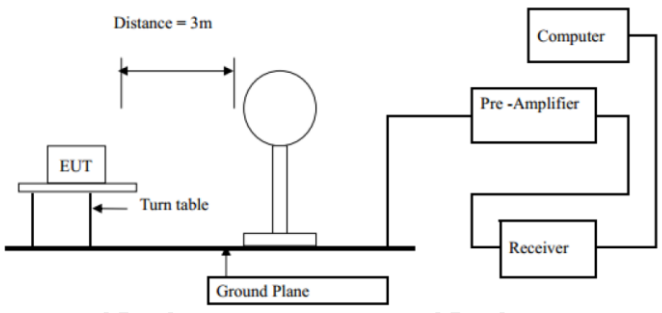
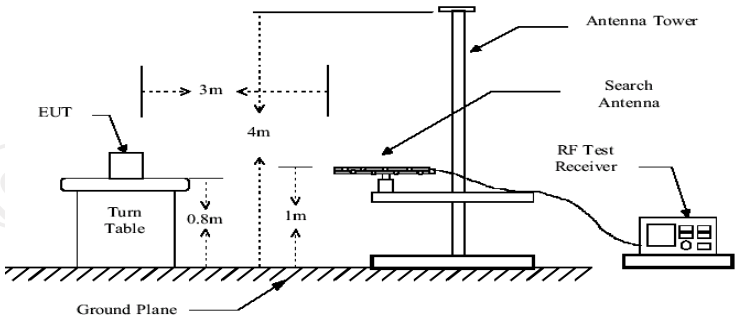
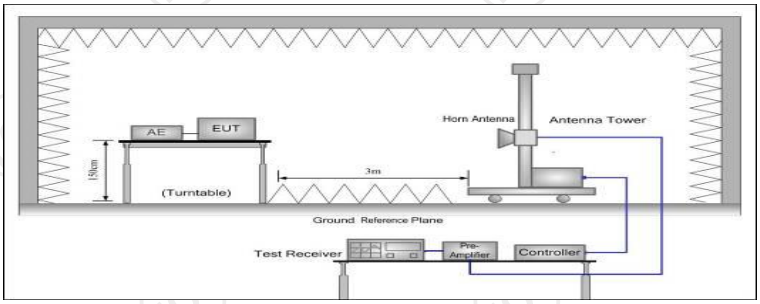
6.7. Spurious Emission

6.7.1.1. Test Specification

<table>
<tr><td>Test Requirement:</td><td>FCC CFR47 Part 15 Section 15.407 & 15.209 & 15.205</td></tr>
<tr><td>Test Method:</td><td>KDB 789033 D02 v02r01</td></tr>
<tr><td>Frequency Range:</td><td>9kHz to 40GHz</td></tr>
<tr><td>Measurement Distance:</td><td>3 m</td></tr>
<tr><td>Antenna Polarization:</td><td>Horizontal & Vertical</td></tr>
<tr><td>Operation mode:</td><td>Transmitting mode with modulation</td></tr>
<tr><td>Receiver Setup:</td><td>
<table>
<tr><td>Frequency</td><td>Detector</td><td>RBW</td><td>VBW</td><td>Remark</td></tr>
<tr><td>9kHz- 150kHz</td><td>Quasi-peak</td><td>200Hz</td><td>1kHz</td><td>Quasi-peak Value</td></tr>
<tr><td>150kHz-30MHz</td><td>Quasi-peak</td><td>9kHz</td><td>30kHz</td><td>Quasi-peak Value</td></tr>
<tr><td>30MHz-1GHz</td><td>Quasi-peak</td><td>120KHz</td><td>300KHz</td><td>Quasi-peak Value</td></tr>
<tr><td rowspan="2">Above 1GHz</td><td>Peak</td><td>1MHz</td><td>3MHz</td><td>Peak Value</td></tr>
<tr><td>Peak</td><td>1MHz</td><td>10Hz</td><td>Average Value</td></tr>
</table>
</td></tr>
<tr><td>Limit:</td><td>Unwanted spurious emissions fallen in restricted bands per FCC Part15.205 shall comply with the general field strength limits set forth in § 15.209 as below table,
<table>
<tr><td>Frequency</td><td>Field Strength (microvolts/meter)</td><td>Measurement Distance (meters)</td></tr>
<tr><td>0.009-0.490</td><td>2400/F(KHz)</td><td>300</td></tr>
<tr><td>0.490-1.705</td><td>24000/F(KHz)</td><td>30</td></tr>
<tr><td>1.705-30</td><td>30</td><td>30</td></tr>
<tr><td>30-88</td><td>100</td><td>3</td></tr>
<tr><td>88-216</td><td>150</td><td>3</td></tr>
<tr><td>216-960</td><td>200</td><td>3</td></tr>
<tr><td>Above 960</td><td>500</td><td>3</td></tr>
</table>
<table>
<tr><td>Frequency</td><td>Limit (dBuV/m @3m)</td><td>Detector</td></tr>
<tr><td rowspan="2">Above 1G</td><td>74.0</td><td>Peak</td></tr>
<tr><td>54.0</td><td>Average</td></tr>
</table>
</td></tr>
<tr><td>Test setup:</td><td>For radiated emissions below 30MHz


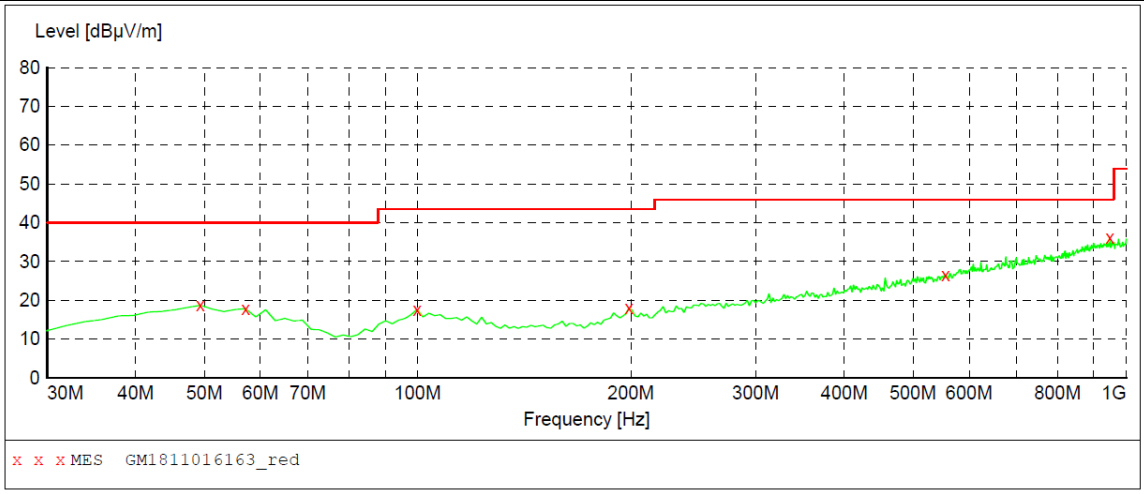
</td></tr>
</table>

	30MHz to 1GHz  Above 1GHz 
Test Procedure:	1. The EUT was placed on the top of a rotating table 0.8/1.5 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation. 2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. 3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. 4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable was turned from 0 degrees to 360 degrees to find the maximum reading. 5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. 6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
Test results:	PASS

6.7.2. Test Data

Please refer to following diagram for individual

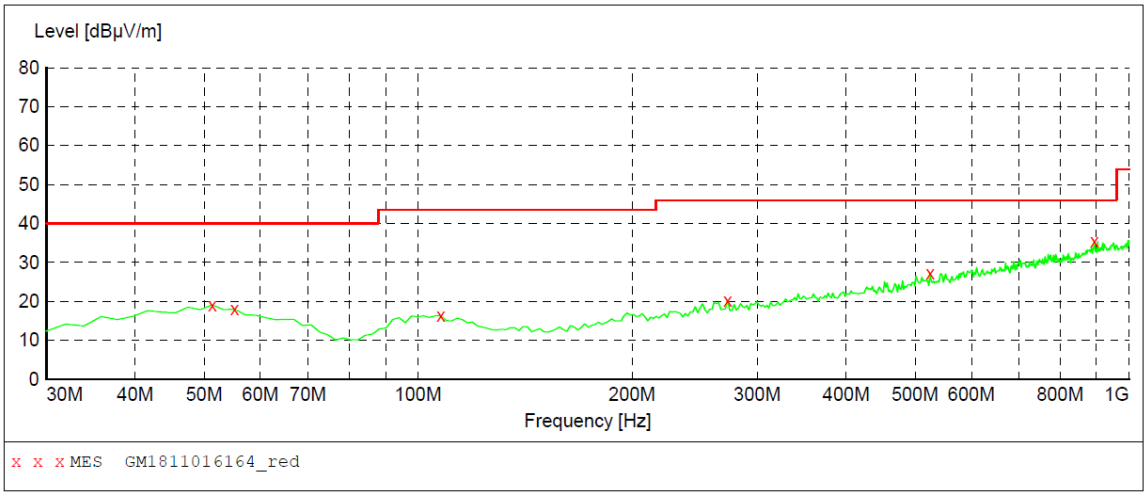
Below 1GHz



MEASUREMENT RESULT: "GM1811016163_red"

11/1/2018 11:49PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
49.400000	18.70	-8.7	40.0	21.3	QP	300.0	337.00	HORIZONTAL
57.160000	17.80	-9.3	40.0	22.2	QP	300.0	360.00	HORIZONTAL
99.840000	17.70	-10.3	43.5	25.8	QP	100.0	26.00	HORIZONTAL
198.780000	18.00	-9.5	43.5	25.5	QP	100.0	360.00	HORIZONTAL
555.740000	26.50	0.0	46.0	19.5	QP	100.0	118.00	HORIZONTAL
947.620000	36.20	8.2	46.0	9.8	QP	300.0	314.00	HORIZONTAL



MEASUREMENT RESULT: "GM1811016164_red"

11/1/2018 11:51PM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
51.340000	19.10	-8.8	40.0	20.9	QP	100.0	22.00	VERTICAL
55.220000	18.00	-9.1	40.0	22.0	QP	100.0	285.00	VERTICAL
107.600000	16.40	-10.5	43.5	27.1	QP	100.0	192.00	VERTICAL
272.500000	20.30	-7.6	46.0	25.7	QP	100.0	352.00	VERTICAL
524.700000	27.20	-0.6	46.0	18.8	QP	100.0	352.00	VERTICAL
893.300000	35.40	7.4	46.0	10.6	QP	100.0	0.00	VERTICAL

Remark:

1. Transd = Cable lose + Antenna factor - Pre-amplifier; Margin = Limit – Level

2. The low frequency, which started from 9KHz~30MHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported

3. Pre-scan the 802.11a and 802.11n test mode, found that 802.11a and band 1 mode for low channel was the worst mode, and the report showed only the test results of the worst mode.

Above 1GHz

Band I for Low									
Bandwidth:			20MHz			Worst mode:		802.11a	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin Limit (dB)	Polarization	Test value
3200.50	37.48	28.80	7.72	38.20	35.80	74.00	-38.20	Horizontal	Peak
3883.62	35.66	29.68	8.62	38.18	35.78	74.00	-38.22	Horizontal	Peak
7027.82	31.52	35.38	11.85	34.83	43.92	74.00	-30.08	Horizontal	Peak
9019.05	32.22	37.96	13.33	34.55	48.96	74.00	-25.04	Horizontal	Peak
2854.11	34.65	28.32	7.40	38.32	32.05	74.00	-41.95	Vertical	Peak
3834.51	35.40	29.63	8.55	38.21	35.37	74.00	-38.63	Vertical	Peak
6628.18	31.87	34.20	11.39	35.31	42.15	74.00	-31.85	Vertical	Peak
8637.08	31.87	37.52	12.93	34.48	47.84	74.00	-26.16	Vertical	Peak

Band I for Mid									
Bandwidth:			20MHz			Worst mode:		802.11a	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin Limit (dB)	Polarization	Test value
1260.67	35.32	26.24	4.76	36.54	29.78	74.00	-44.22	Horizontal	Peak
3873.75	34.60	29.67	8.60	38.19	34.68	74.00	-39.32	Horizontal	Peak
7451.57	30.96	36.20	12.24	34.86	44.54	74.00	-29.46	Horizontal	Peak
10833.22	30.28	40.37	13.58	34.51	49.72	74.00	-24.28	Horizontal	Peak
2637.54	34.57	27.91	7.00	37.94	31.54	74.00	-42.46	Vertical	Peak
3834.51	35.40	29.63	8.55	38.21	35.37	74.00	-38.63	Vertical	Peak
6886.15	30.78	34.60	11.71	34.90	42.19	74.00	-31.81	Vertical	Peak
8484.55	30.79	36.85	12.87	34.37	46.14	74.00	-27.86	Vertical	Peak

Band I for High									
Bandwidth:			20MHz			Worst mode:		802.11a	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin Limit (dB)	Polarization	Test value
1491.30	33.83	25.81	5.26	36.58	28.32	74.00	-45.68	Horizontal	Peak
3308.19	34.64	28.20	7.85	38.39	32.30	74.00	-41.70	Horizontal	Peak
6577.75	31.22	34.16	11.32	35.35	41.35	74.00	-32.65	Horizontal	Peak
9490.10	31.08	39.03	13.71	35.24	48.58	74.00	-25.42	Horizontal	Peak
2584.37	34.72	27.71	6.90	37.84	31.49	74.00	-42.51	Vertical	Peak
4377.20	33.77	30.43	9.11	37.57	35.74	74.00	-38.26	Vertical	Peak
6921.30	31.03	34.83	11.75	34.87	42.74	74.00	-31.26	Vertical	Peak
9734.78	31.44	39.10	13.67	35.52	48.69	74.00	-25.31	Vertical	Peak

Remark:

1. Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.
3. Measuring frequencies from 1 GHz to 40GHz of highest fundamental frequency.

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Band I for Low									
Bandwidth:			20MHz			Worst mode:		802.11n	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin Limit (dB)	Polarization	Test value
1573.19	33.68	25.14	5.49	36.69	27.62	74.00	-46.38	Horizontal	Peak
4895.97	32.55	31.41	9.60	36.69	36.87	74.00	-37.13	Horizontal	Peak
7624.25	29.71	36.18	12.79	34.99	43.69	74.00	-30.31	Horizontal	Peak
9346.26	31.51	39.11	13.64	35.45	48.81	74.00	-25.19	Horizontal	Peak
2747.18	31.49	28.10	7.25	38.22	28.62	74.00	-45.38	Vertical	Peak
3690.85	34.40	29.30	8.37	38.25	33.82	74.00	-40.18	Vertical	Peak
4641.12	32.76	31.02	9.48	37.17	36.09	74.00	-37.91	Vertical	Peak
7585.53	29.74	36.19	12.67	34.97	43.63	74.00	-30.37	Vertical	Peak

Band I for Mid									
Bandwidth:			20MHz			Worst mode:		802.11n	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin Limit (dB)	Polarization	Test value
1464.96	33.75	25.83	5.19	36.54	28.23	74.00	-45.77	Horizontal	Peak
2861.38	34.29	28.35	7.40	38.32	31.72	74.00	-42.28	Horizontal	Peak
4332.85	32.75	30.30	9.07	37.59	34.53	74.00	-39.47	Horizontal	Peak
8681.17	31.80	37.79	12.98	34.42	48.15	74.00	-25.85	Horizontal	Peak
2657.76	31.61	27.97	7.04	37.99	28.63	74.00	-45.37	Vertical	Peak
3634.91	33.74	29.30	8.31	38.26	33.09	74.00	-40.91	Vertical	Peak
7840.75	30.25	36.35	13.06	34.96	44.70	74.00	-29.30	Vertical	Peak
9562.85	31.16	39.05	13.73	35.19	48.75	74.00	-25.25	Vertical	Peak

Band I for High									
Bandwidth:			20MHz			Worst mode:		802.11n	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin Limit (dB)	Polarization	Test value
1395.80	32.66	25.91	4.99	36.46	27.10	74.00	-46.90	Horizontal	Peak
3480.97	34.07	28.85	8.09	38.44	32.57	74.00	-41.43	Horizontal	Peak
7045.74	30.44	35.44	11.85	34.86	42.87	74.00	-31.13	Horizontal	Peak
9019.05	32.22	37.96	13.33	34.55	48.96	74.00	-25.04	Horizontal	Peak
2525.84	34.61	27.36	6.86	37.86	30.97	74.00	-43.03	Vertical	Peak
4014.29	34.31	29.73	8.79	38.08	34.75	74.00	-39.25	Vertical	Peak
7027.82	30.04	35.38	11.85	34.83	42.44	74.00	-31.56	Vertical	Peak
9181.20	31.50	38.53	13.48	35.71	47.80	74.00	-26.20	Vertical	Peak

Remark:

1. Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.
3. Measuring frequencies from 1 GHz to 40GHz of highest fundamental frequency.

Band I for Low									
Bandwidth:			40MHz		Worst mode:			802.11n	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin Limit (dB)	Polarization	Test value
1395.80	32.66	25.91	4.99	36.46	27.10	74.00	-46.90	Horizontal	Peak
3480.97	34.07	28.85	8.09	38.44	32.57	74.00	-41.43	Horizontal	Peak
7045.74	30.44	35.44	11.85	34.86	42.87	74.00	-31.13	Horizontal	Peak
9019.05	32.22	37.96	13.33	34.55	48.96	74.00	-25.04	Horizontal	Peak
2525.84	34.61	27.36	6.86	37.86	30.97	74.00	-43.03	Vertical	Peak
4014.29	34.31	29.73	8.79	38.08	34.75	74.00	-39.25	Vertical	Peak
7027.82	30.04	35.38	11.85	34.83	42.44	74.00	-31.56	Vertical	Peak
9181.20	31.50	38.53	13.48	35.71	47.80	74.00	-26.20	Vertical	Peak

Band I for High									
Bandwidth:			40MHz		Worst mode:			802.11n	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin Limit (dB)	Polarization	Test value
2942.64	33.77	28.54	7.45	38.27	31.49	74.00	-42.51	Horizontal	Peak
4138.80	33.36	29.94	8.89	37.79	34.40	74.00	-39.60	Horizontal	Peak
7045.74	30.44	35.44	11.85	34.86	42.87	74.00	-31.13	Horizontal	Peak
9490.10	31.08	39.03	13.71	35.24	48.58	74.00	-25.42	Horizontal	Peak
3258.04	34.96	28.45	7.79	38.30	32.90	74.00	-41.10	Vertical	Peak
4664.81	32.79	31.10	9.49	37.14	36.24	74.00	-37.76	Vertical	Peak
6283.16	30.62	33.07	11.00	35.30	39.39	74.00	-34.61	Vertical	Peak
8506.17	31.11	36.92	12.87	34.40	46.50	74.00	-27.50	Vertical	Peak

Remark:

1. Final Level =Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
2. The emission levels of other frequencies are very lower than the limit and not show in test report.
3. Measuring frequencies from 1 GHz to 40GHz of highest fundamental frequency.

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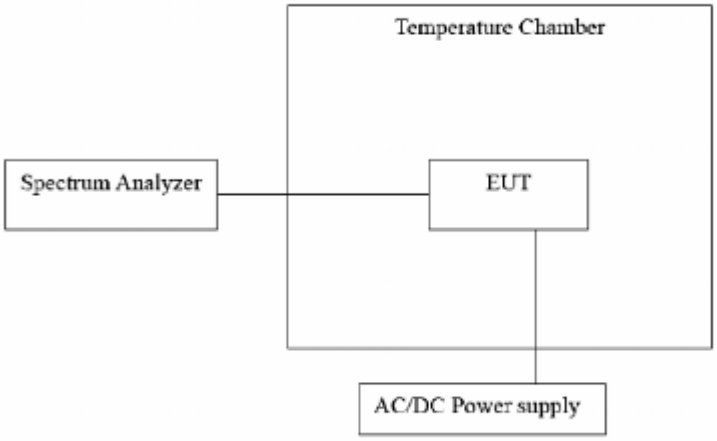
6.8. Frequency Stability Measurement

6.8.1. Test Specification

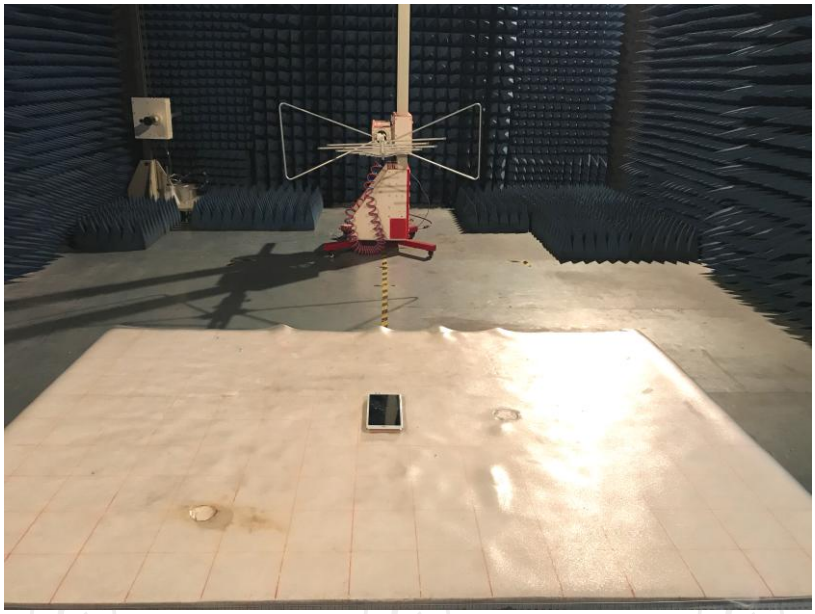
Test Requirement:	FCC Part15 Section 15.407(g) &Part2 J Section 2.1055
Test Method:	ANSI C63.10: 2013
Limit:	The frequency tolerance shall be maintained within the band of operation frequency over a temperature variation of -30 degrees to 50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C.
Test Setup:	
Test Procedure:	The EUT was placed inside the environmental test chamber and powered by nominal AC/DC voltage. b. Turn the EUT on and couple its output to a spectrum analyzer. c. Turn the EUT off and set the chamber to the highest temperature specified. d. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize. e. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature. f. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.
Test Result:	PASS
Remark:	Pre-scan was performed at Low/ Mid /High channel, the worst case was found. Only the test data of Low channel was shown in this report.

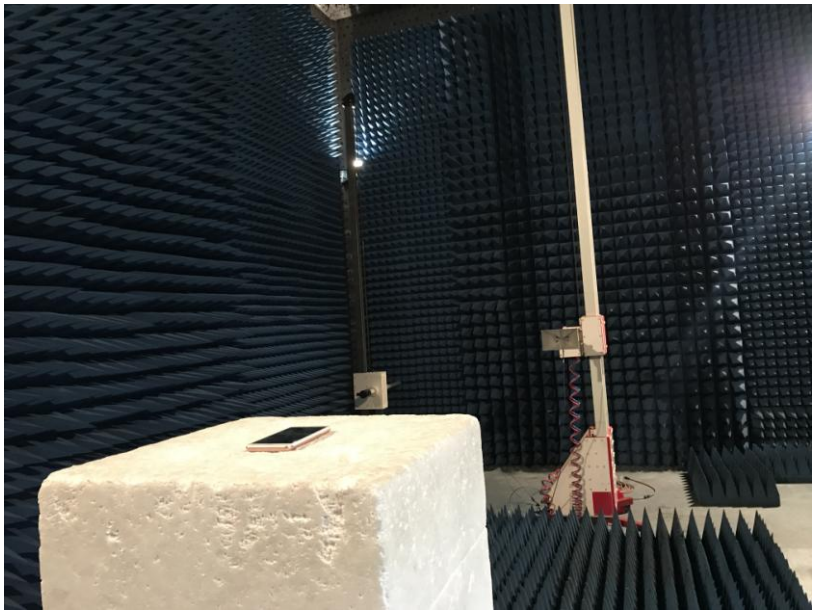
Test plots as follows:

Band I for 802.11a Low					
Voltage(%)	Power(VDC)	TEMP(°C)	Test Frequency (MHz)	Freq.Dev (Hz)	Deviation (ppm)
100%	3.80	-20	5180	20000	3.86100
100%		-10	5180	19000	3.66795
100%		0	5180	18000	3.47490
100%		10	5180	18000	3.47490
100%		20	5180	18000	3.47490
100%		30	5180	18000	3.47490
100%		40	5180	18000	3.47490
100%		50	5180	19000	3.66795
85%	3.23	25	5180	18000	3.47490
115%	4.37	25	5180	18000	3.47490

Appendix A: Photographs of Test Setup

Radiated Emission





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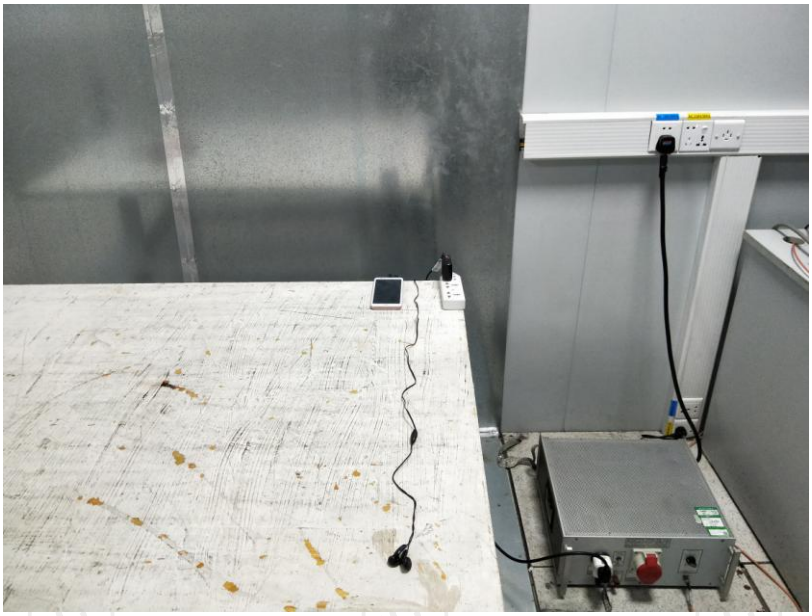

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Appendix B: Photographs of EUT

Reference to the test report No.: TRE1810019101.

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

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