



中国认可
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检测
TESTING
CNAS L0310



FCC RF Test Report

Product Name: LTE CPE

Model Number: B525s-65a

Report No: SYBH(Z-RF)007012017-2002

FCC ID: QISB525S-65A

Reliability Laboratory of Huawei Technologies Co.

(Global Compliance and Testing Center of Huawei Technologies Co., Ltd)

Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District,
Shenzhen, 518129, P.R.C

Tel: +86 755 28780808

Fax: +86 755 89652518



Notice

1. The laboratory has Passed the accreditation by China National Accreditation Service for Conformity Assessment (CNAS). The accreditation number is L0310.
2. The laboratory has Passed the accreditation by The American Association for Laboratory Accreditation (A2LA). The accreditation number is 2174.01.
3. The laboratory has been listed by the US Federal Communications Commission to perform electromagnetic emission measurements. The site recognition number is 97456.
4. The laboratory has been listed by Industry Canada to perform electromagnetic emission measurements. The recognition numbers of test site are 6369A-1.
5. The test report is invalid if not marked with the signatures of the persons responsible for preparing and approving the test report.
6. The test report is invalid if there is any evidence of erasure and/or falsification.
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8. Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.
9. The laboratory (Reliability Lab of Huawei Technologies Co., Ltd) is also named as “Global Compliance and Testing Center of Huawei Technologies Co., Ltd”, the both names have coexisted since 2009.



Applicant: Huawei Technologies Co., Ltd.
Address: Administration Building, Headquarters of Huawei Technologies Co., Ltd.,
Bantian, Longgang District, Shenzhen, 518129, P.R.C

Date of Receipt Sample: 2017-01-17
Start Date of Test: 2017-01-17
End Date of Test: 2017-02-24

Test Result: Pass

| | | | |
|-------------------------------------|------------|-------------|--------------------|
| Approved by Senior Engineer: | 2017-02-27 | Roger Zhang | <i>Roger Zhang</i> |
| | Date | Name | Signature |

| | | | |
|---------------------|------------|------------|-------------------|
| Prepared by: | 2017-02-27 | zhoulingbo | <i>zhoulingbo</i> |
| | Date | Name | Signature |



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1 General Information

1.1 Applied Standard

Applied Rules: 47 CFR FCC Part 2, Subpart J 2014
47 CFR FCC Part 15, Subpart C 2014

Test Method: FCC KDB 558074 D01 DTS Meas Guidance v03r04
FCC KDB 662911 D01 Multiple Transmitter Output v02

1.2 Test Location

Test Location: Reliability Laboratory of Huawei Technologies Co., Ltd.
Address: Administration Building, Headquarters of Huawei Technologies Co., Ltd.,
Bantian, Longgang District, Shenzhen, 518129, P.R.C

1.3 Test Environment Condition

Ambient Temperature: 19.5to 25 °C
Ambient Relative Humidity: 40 to 55 %
Atmospheric Pressure: Not applicable



2 Test Summary

| Test Item | FCC Part No. | Requirements | Test Result | Verdict |
|---|------------------|---|-------------|---------|
| DTS (6 dB) Bandwidth | 15.247(a)(2) | ≥ 500 kHz. | Appendix A | Pass |
| Occupied Bandwidth | --- | --- | Appendix B | Pass |
| Duty Cycle | KDB 558074 (6.0) | No limit | Appendix C | Pass |
| Maximum Conducted Average Output Power | 15.247(b)(3) | For directional gain: < 30 dBm – (G[dBi] – 6 [dB]), Average; Otherwise: < 30 dBm, Average. | Appendix D | Pass |
| Maximum Power Spectral Density Level | 15.247(e) | For directional gain: < 8 dBm/3 kHz – (G[dBi] – 6 [dB]), Average. Otherwise: < 8 dBm/3 kHz, Average. | Appendix E | Pass |
| Band Edges Compliance | 15.247(d) | < -30 dBm/100 kHz if total average power \leq power limit. | Appendix F | Pass |
| Unwanted Emissions into Non-Restricted Frequency Bands | | | Appendix G | Pass |
| <p>NOTE 1: According to KDB 558074, antenna-port conducted measurements are acceptable as an alternative to radiated measurements for demonstrating compliance to the limits in the restricted frequency bands. If conducted measurements are performed, then proper impedance matching must be ensured and an additional radiated test for cabinet/case emissions will also be required.</p> | | | | |



3 Description of the Equipment under Test (EUT)

3.1 General Description

B525s-65a LTE/DC-HSPA+/WCDMA/EDGE/GPRS/GSM multi-mode LTE CPE is subscriber equipment in the LTE/UMTS/GSM system and support WLAN 802.11a/b/g/n/ac. B525s-65a implement such functions as RF signal receiving/transmitting, LTE/DC-HSPA+/WCDMA and EDGE/GPRS/GSM protocol processing, data service etc. It provides USIM card interface, RJ45/RJ11 Ethernet interface, USB port and external antenna interfaces

NOTE: We do not test RSE data.


3.2 EUT Identity

NOTE: Unless otherwise noted in the report, the functional boards installed in the units shall be selected from the below list, but not means all the functional boards listed below shall be installed in one unit.

3.2.1 Board

| Board | | |
|-------------|------------------|------------------|
| Description | Hardware Version | Software Version |
| Main Board | WL1B525I | 11.232.08.DM.00 |

3.2.2 Sub-Assembly

| Sub-Assembly | | | |
|-------------------|--------------|-------------------------------|--|
| Sub-Assembly Name | Model | Manufacturer | Description |
| Adapter | HW-120200U01 | Huawei Technologies Co., Ltd. | Input Voltage :100-240V ~50/60Hz 0.8A Output Voltage:  12V 2A Rated Power: 24W |



3.3 Technical Description

| Characteristics | Description | | | |
|---------------------------------|---|---|-------------------------------|---------------------------------|
| IEEE 802.11 WLAN Mode Supported | <input checked="" type="checkbox"/> 802.11b (20 MHz channel bandwidth), <input checked="" type="checkbox"/> 802.11g (20 MHz channel bandwidth) <input checked="" type="checkbox"/> 802.11n (20 MHz channel bandwidth), <input checked="" type="checkbox"/> 802.11n (40 MHz channel bandwidth), | | | |
| TX/RX Operating Range | 2432-2462 MHz band | fc = 2407 MHz + N * 5 MHz, where: - fc = "Operating Frequency" in MHz, - N = "Channel Number" with the range from 3 to 11 for the 20 MHz channel bandwidth, N = "Channel Number" with the range from 5 to 9 for the 40 MHz channel bandwidth | | |
| Data Rate | 802.11b | 1 Mbps, 2 Mbps, 5.5 Mbps, 11 Mbps | | |
| | 802.11g | 6 Mbps, 9 Mbps, 12 Mbps, 18 Mbps, 24 Mbps, 36 Mbps, 48 Mbps, 54 Mbps | | |
| | 802.11n (SISO) | MCS 0 to MCS 7 | | |
| | 802.11n (MIMO) | MCS 8 to MCS 15 | | |
| Modulation Type | DBPSK/DQPSK/CCK (DSSS), BPSK/QPSK/16QAM/64QAM (OFDM). | | | |
| Emission Designator | 8M58G7D (for 802.11b mode), 16M5G7D (for 802.11g mod), 17M8G7D (for 802.11n20 mode), 17M8G7D (for 802.11n20m mode) 36M5G7D (for 802.11n40 mode), 36M4G7D (for 802.11n40m mode) | | | |
| TX Power Control | <input type="checkbox"/> Supported, <input checked="" type="checkbox"/> Not Supported | | | |
| Standby Mode | <input type="checkbox"/> Supported, <input checked="" type="checkbox"/> Not Supported | | | |
| Equipment Type | <input type="checkbox"/> Stand-alone equipment, <input type="checkbox"/> Plug-in radio device, <input checked="" type="checkbox"/> Combined equipment | | | |
| Antenna | Description | Isotropic Antenna | | |
| | Type | <input type="checkbox"/> External, <input checked="" type="checkbox"/> Integrated | | |
| | Ports | <input checked="" type="checkbox"/> Ant 1, <input checked="" type="checkbox"/> Ant 2, <input type="checkbox"/> Ant 3 | | |
| | Smart System | <input checked="" type="checkbox"/> SISO (for 802.11b/g/n), <input checked="" type="checkbox"/> MIMO (for 802.11n): 2 Tx & 2 Rx, <input type="checkbox"/> Diversity (for 802.11b/g) : Tx & Rx | | |
| | Gain | ANT1:1 dBi (per antenna port, max.) ANT2:1 dBi(per antenna port, max.) | | |
| | Remark | When the EUT is put into service, the practical maximum antenna gain should NOT exceed the value as described above. | | |
| Power Supply | Type | <input checked="" type="checkbox"/> AC/DC Adapter | <input type="checkbox"/> PoE: | <input type="checkbox"/> Other: |



4 General Test Conditions / Configurations

4.1 Test Modes

NOTE: Worst cases for each IEEE 802.11 mode are selected to perform tests.

| Test Mode | Test Modes Description |
|-----------|--|
| 11B | IEEE 802.11b with data rate of 1 Mbps using SISO mode. |
| 11G | IEEE 802.11g with data rate of 6 Mbps using SISO mode. |
| 11N20 | IEEE 802.11n with data rate of MCS0 and bandwidth of 20 MHz using SISO mode. |
| 11N20m | IEEE 802.11n with data rate of MCS8 and bandwidth of 20 MHz using MIMO mode. |
| 11N40 | IEEE 802.11n with data rate of MCS0 and bandwidth of 40 MHz using SISO mode. |
| 11N40m | IEEE 802.11n with data rate of MCS8 and bandwidth of 40 MHz using MIMO mode. |

4.2 EUT Configurations

4.2.1 General Configurations

| Configuration | Description |
|---------------------|--|
| Test Antenna Ports | Until otherwise specified, <ul style="list-style-type: none">- All TX tests are performed at all TX antenna ports of the EUT, and- All RX tests are performed at all RX antenna ports of the EUT. |
| Multiple RF Sources | Other than the tested RF source of the EUT, other RF source(s) are disabled or shutdown during measurements. |

**4.2.2 Customized Configurations**

| Test Mode | RF Ch. | TX Freq. [MHz] | Antenn a Port | RX Freq. [MHz] | Ch. BW [MHz] | Power Conf., per Port | Duty cycle [%] |
|-----------|--------|----------------------|------------------|----------------------|-----------------|--------------------------|----------------|
| 11B | L | Ch No. 5 / 2432 MHz | Ant1 | --- | 20 | 16 | 99 |
| | | | Ant2 | --- | 20 | 16 | 99 |
| | M | Ch No.8 / 2447 MHz | Ant1 | --- | 20 | 16 | 99 |
| | | | Ant2 | --- | 20 | 16 | 99 |
| | H | Ch No. 11 / 2462 MHz | Ant1 | --- | 20 | 16 | 99 |
| | | | Ant2 | --- | 20 | 16 | 99 |
| 11G | L | Ch No. 5 / 2432 MHz | Ant1 | --- | 20 | 17 | 96.5 |
| | | | Ant2 | --- | 20 | 17 | 96.5 |
| | M | Ch No.8 / 2447 MHz | Ant1 | --- | 20 | 17 | 96.5 |
| | | | Ant2 | --- | 20 | 17 | 96.5 |
| | H | Ch No. 11 / 2462 MHz | Ant1 | --- | 20 | 17 | 96.5 |
| | | | Ant2 | --- | 20 | 17 | 96.5 |
| 11N20 | L | Ch No. 5 / 2432 MHz | Ant1 | --- | 20 | 17 | 76 |
| | | | Ant2 | --- | 20 | 17 | 76 |
| | M | Ch No.8 / 2447 MHz | Ant1 | --- | 20 | 17 | 76 |
| | | | Ant2 | --- | 20 | 17 | 76 |
| | H | Ch No. 11 / 2462 MHz | Ant1 | --- | 20 | 17 | 76 |
| | | | Ant2 | --- | 20 | 17 | 76 |
| 11N20m | L | Ch No. 5 / 2432 MHz | Ant1 | --- | 20 | 14 | 67 |
| | | | Ant2 | --- | 20 | 14 | 67 |
| | M | Ch No.8 / 2447 MHz | Ant1 | --- | 20 | 14 | 67 |
| | | | Ant2 | --- | 20 | 14 | 67 |
| | H | Ch No. 11 / 2462 MHz | Ant1 | --- | 20 | 14 | 67 |
| | | | Ant2 | --- | 20 | 14 | 67 |
| 11N40 | L | Ch No. 7 / 2442 MHz | Ant1 | --- | 20 | 17 | 64.5 |
| | | | Ant2 | --- | 20 | 17 | 64.5 |
| | M | Ch No.8 / 2447 MHz | Ant1 | --- | 20 | 17 | 64.5 |
| | | | Ant2 | --- | 20 | 17 | 64.5 |
| | H | Ch No. 9 / 2452 MHz | Ant1 | --- | 20 | 17 | 64.5 |
| | | | Ant2 | --- | 20 | 17 | 64.5 |
| 11N40m | L | Ch No. 7 / 2442 MHz | Ant1 | --- | 20 | 14 | 60 |
| | | | Ant2 | --- | 20 | 14 | 60 |
| | M | Ch No.8 / 2447 MHz | Ant1 | --- | 20 | 14 | 60 |
| | | | Ant2 | --- | 20 | 14 | 60 |
| | H | Ch No. 9 / 2452 MHz | Ant1 | --- | 20 | 14 | 60 |
| | | | Ant2 | --- | 20 | 14 | 60 |



4.3 Test Environments

NOTE: The values used in the test report may be stringent than the declared.

| Environment Parameter | Selected Values During Tests | | |
|-----------------------|------------------------------|---------|-------------------|
| | Temperature | Voltage | Relative Humidity |
| NTNV | Ambient | 12VDC | Ambient |

4.4 Antenna requirements

Excerpt from §15.203 of the FCC Rules/Regulations:

“An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the responsible party can 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 antennas of the **B525s-65a** are **permanently attached**.
There are no provisions for connection to an external antenna.

Conclusion:

The **EUT FCC ID: QISB525s-65a** unit complies with the requirement of §15.203.

Ch. Frequency (MHz)

| Ch. | Frequency (MHz) |
|-----------|-----------------|
| 05 | 2432 |
| . | . |
| . | . |
| 08 | 2447 |
| . | . |
| . | . |
| 11 | 2462 |

Frequency/ Channel Operations

4.5 Description of tests

4.5.1 Bandwidth measurement

- (a) Connect EUT test port to spectrum analyzer.
- (b) Set the EUT to transmit maximum output power at 2.4GHz, then set the measured frequency number and test the bandwidth with spectrum analyzer.

4.5.2 Duty Cycle measurement

- (a) Connect EUT test port to spectrum analyzer.
- (b) Set the EUT to transmit maximum output power at 2.4GHz, then set the measured frequency number and test the Duty Cycle with spectrum analyzer.

4.5.3 Maximum Conducted Average Output Power

- (a) Connect EUT test port to spectrum analyzer.
- (b) Set the EUT to transmit maximum output power at 2.4GHz.
- (c) Then set the EUT to transmit at high, middle and low frequency and measure the conducted output power separately.

4.5.4 Band edge spurious emission

- (a) Connect EUT test port to spectrum analyzer
- (b) Set the EUT to transmit maximum output power at 2.4GHz.
- (c) Then set the EUT to transmit at high, low frequency and measure the conducted band edge spurious separately.

4.5.5 Conducted RF spurious

- (a) Connect EUT test port to spectrum analyzer
- (b) Set the EUT to transmit maximum output power at 2.4GHz.
- (c) Then set the EUT to transmit at high, middle and low frequency and measure the conducted spurious separately.

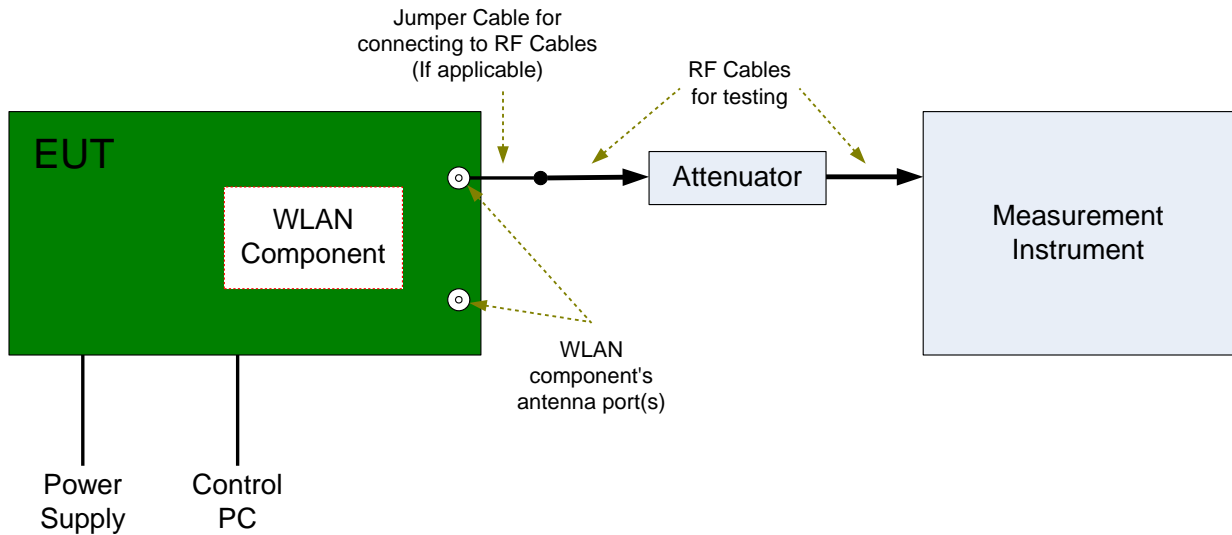
4.5.6 Power spectral density

- (a) Connect EUT test port to spectrum analyzer
- (b) Set the EUT to transmit maximum output power at 2.4GHz.
- (c) Then set the EUT to transmit at high, middle and low frequency and measure the conducted power spectral density.

4.6 Test Setups

4.6.1 Test Setup 1

The WLAN component's antenna ports(s) of the EUT are connected to the measurement instrument per an appropriate attenuator. The EUT is controlled by PC/software to emit the specified signals for the purpose of measurements.



4.7 Test Conditions

| Test Case | Test Conditions | |
|---|--------------------|--|
| | Configuration | Description |
| DTS (6 dB) Bandwidth | Measurement Method | FCC KDB 558074 §8.1 Option 2. |
| | Test Environment | NTNV |
| | Test Setup | Test Setup 1 |
| | EUT Configuration | 11B_L@Ant1, 11B_L@Ant2, 11B_M@Ant1, 11B_M@Ant2, 11B_H@Ant1, 11B_H@Ant2, 11G_L@Ant1, 11G_L@Ant2, 11G_M@Ant1, 11G_M@Ant2, 11G_H@Ant1, 11G_H@Ant2, 11N20_L@Ant1, 11N20_L@Ant2, 11N20_M@Ant1, 11N20_M@Ant2, 11N20_H@Ant1, 11N20_H@Ant2, 11N20m_L@Ant1, 11N20m_L@Ant2, 11N20m_M@Ant1, 11N20m_M@Ant2, 11N20m_H@Ant1, 11N20m_H@Ant2, 11N40_L@Ant1, 11N40_L@Ant2, 11N40_M@Ant1, 11N40_M@Ant2, 11N40_H@Ant1, 11N40_H@Ant2, 11N40m_L@Ant1, 11N40m_L@Ant2, 11N40m_M@Ant1, 11N40m_M@Ant2, 11N40m_H@Ant1, 11N40m_H@Ant2, |
| Occupied Bandwidth | Measurement Method | FCC KDB 558074 §8.2 Option 2. |
| | Test Environment | NTNV |
| | Test Setup | Test Setup 1 |
| | EUT Configuration | 11B_L@Ant1, 11B_L@Ant2, 11B_M@Ant1, 11B_M@Ant2, 11B_H@Ant1, 11B_H@Ant2, 11G_L@Ant1, 11G_L@Ant2, 11G_M@Ant1, 11G_M@Ant2, 11G_H@Ant1, 11G_H@Ant2, 11N20_L@Ant1, 11N20_L@Ant2, 11N20_M@Ant1, 11N20_M@Ant2, 11N20_H@Ant1, 11N20_H@Ant2, 11N20m_L@Ant1, 11N20m_L@Ant2, 11N20m_M@Ant1, 11N20m_M@Ant2, 11N20m_H@Ant1, 11N20m_H@Ant2, 11N40_L@Ant1, 11N40_L@Ant2, 11N40_M@Ant1, 11N40_M@Ant2, 11N40_H@Ant1, 11N40_H@Ant2, 11N40m_L@Ant1, 11N40m_L@Ant2, 11N40m_M@Ant1, 11N40m_M@Ant2, 11N40m_H@Ant1, 11N40m_H@Ant2, |
| Maximum Conducted Average Output Power | Measurement Method | FCC KDB 558074 §9.2 .2. 4 |
| | Test Environment | NTNV |
| | Test Setup | Test Setup 1 |
| | EUT Configuration | 11B_L@Ant1, 11B_L@Ant2, 11B_M@Ant1, 11B_M@Ant2, 11B_H@Ant1, 11B_H@Ant2, 11G_L@Ant1, 11G_L@Ant2, 11G_M@Ant1, 11G_M@Ant2, 11G_H@Ant1, 11G_H@Ant2, 11N20_L@Ant1, 11N20_L@Ant2, 11N20_M@Ant1, 11N20_M@Ant2, 11N20_H@Ant1, 11N20_H@Ant2, |

| Test Case | Test Conditions | |
|--|--------------------|--|
| | Configuration | Description |
| | | 11N20m_L@Ant1, 11N20m_L@Ant2, 11N20m_M@Ant1, 11N20m_M@Ant2, 11N20m_H@Ant1, 11N20m_H@Ant2, 11N40_L@Ant1, 11N40_L@Ant2, 11N40_M@Ant1, 11N40_M@Ant2, 11N40_H@Ant1, 11N40_H@Ant2, 11N40m_L@Ant1, 11N40m_L@Ant2, 11N40m_M@Ant1, 11N40m_M@Ant2, 11N40m_H@Ant1, 11N40m_H@Ant2, |
| Maximum Power Spectral Density Level | Measurement Method | FCC KDB 558074 §10.1 (peak PSD). |
| | Test Environment | NTNV |
| | Test Setup | Test Setup 1 |
| | EUT Configuration | 11B_L@Ant1, 11B_L@Ant2, 11B_M@Ant1, 11B_M@Ant2, 11B_H@Ant1, 11B_H@Ant2, 11G_L@Ant1, 11G_L@Ant2, 11G_M@Ant1, 11G_M@Ant2, 11G_H@Ant1, 11G_H@Ant2, 11N20_L@Ant1, 11N20_L@Ant2, 11N20_M@Ant1, 11N20_M@Ant2, 11N20_H@Ant1, 11N20_H@Ant2, 11N20m_L@Ant1, 11N20m_L@Ant2, 11N20m_M@Ant1, 11N20m_M@Ant2, 11N20m_H@Ant1, 11N20m_H@Ant2, 11N40_L@Ant1, 11N40_L@Ant2, 11N40_M@Ant1, 11N40_M@Ant2, 11N40_H@Ant1, 11N40_H@Ant2, 11N40m_L@Ant1, 11N40m_L@Ant2, 11N40m_M@Ant1, 11N40m_M@Ant2, 11N40m_H@Ant1, 11N40m_H@Ant2, |
| Band Edges Compliance | Measurement Method | FCC KDB 558074 §13.0. |
| | Test Environment | NTNV |
| | Test Setup | Test Setup 1 |
| | EUT Configuration | 11B_L@Ant1, 11B_L@Ant2, 11B_M@Ant1, 11B_M@Ant2, 11B_H@Ant1, 11B_H@Ant2, 11G_L@Ant1, 11G_L@Ant2, 11G_M@Ant1, 11G_M@Ant2, 11G_H@Ant1, 11G_H@Ant2, 11N20_L@Ant1, 11N20_L@Ant2, 11N20_M@Ant1, 11N20_M@Ant2, 11N20_H@Ant1, 11N20_H@Ant2, 11N20m_L@Ant1, 11N20m_L@Ant2, 11N20m_M@Ant1, 11N20m_M@Ant2, 11N20m_H@Ant1, 11N20m_H@Ant2, 11N40_L@Ant1, 11N40_L@Ant2, 11N40_M@Ant1, 11N40_M@Ant2, 11N40_H@Ant1, 11N40_H@Ant2, 11N40m_L@Ant1, 11N40m_L@Ant2, 11N40m_M@Ant1, 11N40m_M@Ant2, 11N40m_H@Ant1, 11N40m_H@Ant2, |
| Unwanted Emissions into Non-Restricted Frequency Bands | Measurement Method | FCC KDB 558074 §11.0 |
| | Test Environment | NTNV |
| | Test Setup | Test Setup 1 |
| | EUT Configuration | 11B_L@Ant1, 11B_L@Ant2, 11B_M@Ant1, 11B_M@Ant2, 11B_H@Ant1, 11B_H@Ant2, 11G_L@Ant1, 11G_L@Ant2, 11G_M@Ant1, 11G_M@Ant2, |



| Test Case | Test Conditions | |
|-----------|-----------------|---|
| | Configuration | Description |
| | | 11G_H@Ant1, 11G_H@Ant2, 11N20_L@Ant1, 11N20_L@Ant2, 11N20_M@Ant1, 11N20_M@Ant2, 11N20_H@Ant1, 11N20_H@Ant2, 11N20m_L@Ant1, 11N20m_L@Ant2, 11N20m_M@Ant1, 11N20m_M@Ant2, 11N20m_H@Ant1, 11N20m_H@Ant2, 11N40_L@Ant1, 11N40_L@Ant2, 11N40_M@Ant1, 11N40_M@Ant2, 11N40_H@Ant1, 11N40_H@Ant2, 11N40m_L@Ant1, 11N40m_L@Ant2, 11N40m_M@Ant1, 11N40m_M@Ant2, 11N40m_H@Ant1, 11N40m_H@Ant2, |

**5 Main Test Instruments**

| Main Test Equipments | | | | | |
|---|--------------|-----------|----------------|------------|------------|
| Equipment Name | Manufacturer | Model | Serial Number | Cal Date | Cal- Due |
| Power supply | KEITHLEY | 2303 | 1342889 | 2016/10/13 | 2017/10/12 |
| Wireless Communication Test set | Agilent | N4010A | MY49081592 | 2016/8/5 | 2017/8/5 |
| Universal Radio Communication Tester | R&S | CMU200 | 123299 | 2016/11/14 | 2017/11/14 |
| Spectrum Analyzer | Agilent | N9020A | MY52090652 | 2016/6/29 | 2017/6/29 |
| Universal Radio Communication Tester | R & S | CMW500 | 126854 | 2016/12/29 | 2017/12/29 |
| Signal Analyzer | R&S | FSQ31 | 200021 | 2016/8/5 | 2017/8/5 |
| Spectrum Analyzer | Agilent | N9030A | MY49431698 | 2016/8/5 | 2017/8/5 |
| Temperature Chamber | WEISS | WKL64 | 56246002940010 | 2016/12/21 | 2017/12/20 |
| Signal generator | Agilent | E8257D | MY49281095 | 2016/8/5 | 2017/8/5 |
| Vector Signal Generator | R&S | SMU200A | 104162 | 2016/8/5 | 2017/8/5 |
| Test receiver | R&S | ESU26 | 100387 | 2016/6/21 | 2017/6/21 |
| Spectrum analyzer | R&S | FSU3 | 200474 | 2016/5/24 | 2017/5/24 |
| Spectrum analyzer | R&S | FSU43 | 100144 | 2016/6/2 | 2017/6/2 |
| LOOP Antennas(9kHz-30MHz) | R&S | HFH2-Z2 | 100262 | 2015/4/30 | 2017/4/29 |
| LOOP Antennas(9kHz-30MHz) | R&S | HFH2-Z2 | 100263 | 2015/4/30 | 2017/4/29 |
| Trilog Broadband Antenna (30M~3GHz) | SCHWARZBECK | VULB 9163 | 9163-490 | 2015/4/30 | 2017/4/29 |
| Trilog Broadband Antenna (30M~3GHz) | SCHWARZBECK | VULB 9163 | 9163-520 | 2015/4/30 | 2017/4/29 |
| Double-Ridged Waveguide Horn Antenna (1G~18GHz) | R&S | HF907 | 100304 | 2015/4/30 | 2017/4/29 |
| double ridged horn antenna (0.8G-18GHz) | R&S | HF907 | 100305 | 2015/4/30 | 2017/4/29 |
| Pyramidal Horn Antenna(18GHz-26.5GHz) | ETS-Lindgren | Sep-60 | 5140299 | 2015/7/15 | 2017/7/14 |
| Artificial Main Network | R&S | ENV4200 | 100134 | 2016/6/2 | 2017/6/2 |
| Line Impedance Stabilization Network | R&S | ENV216 | 100382 | 2016/6/2 | 2017/6/2 |



6 Appendixes

| Appendix No. | Description |
|----------------------------|------------------------|
| SYBH(Z-RF)007012017-2002-A | Appendix for 2.4G WLAN |

END