



FCC RF Test Report

Product Name: Smart Phone

Model Number: MAR-LX2J

Report No.: SYBH(Z-RF)20190219010002-2001

FCC ID : QISMAR-LX2J

| Authorized | APPROVED (Lab Manager) | PREPARED (Test Engineer) |
|------------|---------------------------|-----------------------------|
| BY | He Hao | Tao Ming |
| DATE | 2019-03-26 | 2019-03-26 |

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※ ※ Notice ※ ※

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2. The laboratory has been recognized by the US Federal Communications Commission (FCC) to perform compliance testing subject to the Commission's Certification rules. The Designation Number is CN1173, and the Test Firm Registration Number is 294140.
3. The laboratory has been recognized by the Innovation, Science and Economic Development Canada (ISED) to test to Canadian radio equipment requirements. The CAB identifier is CN0003, and the ISED# is 21741.
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MODIFICATION RECORD

| No. | Report No | Modification Description |
|-----|-----------------------------------|--------------------------|
| 1 | SYBH(Z-RF)2019021901000 2-2001 | First release. |

DECLARATION

| Type | Description |
|------------------------------------|---|
| Multiple Models Applications | <input checked="" type="checkbox"/> The present report applies to single model. |
| | <input type="checkbox"/> The present report applies to several models. The practical measurements are performed with the model. |
| | The present report only presents the worst test case of all modes, see relevant test results for detailed. |

1 Table of contents

| | | |
|-----|---|----|
| 1 | Table of contents | 4 |
| 2 | General Information | 5 |
| 2.1 | Test standard/s | 5 |
| 2.2 | Test Environment..... | 5 |
| 2.3 | Test Laboratories..... | 5 |
| 2.4 | Applicant and Manufacturer | 5 |
| 2.5 | Application details..... | 5 |
| 3 | Test Summary..... | 6 |
| 3.1 | Cellular Band (824-849 MHz paired with 869-894 MHz)..... | 6 |
| 3.2 | PCS Band (1850-1910 MHz paired with 1930-1990 MHz)..... | 7 |
| 3.3 | BRS&EBS Band (2500-2570 MHz paired with 2620-2690 MHz)..... | 8 |
| 3.4 | Band (814-824 MHz paired with 859-869MHz) | 10 |
| 3.5 | Band41 (2545-2655 MHz paired with 2545-2655 MHz) | 11 |
| 4 | Description of the Equipment under Test (EUT) | 13 |
| 4.1 | General Description | 13 |
| 4.2 | EUT Identity | 13 |
| 4.3 | Technical Specification..... | 15 |
| 5 | General Test Conditions / Configurations..... | 18 |
| 5.1 | Test Modes | 18 |
| 5.2 | Test Frequency | 19 |
| 5.3 | DESCRIPTION OF TESTS | 24 |
| 5.4 | Test Setups | 28 |
| 5.5 | Test Conditions | 31 |
| 6 | Main Test Instruments..... | 33 |
| 6.1 | Current Test Project/Report | 33 |
| 7 | Measurement Uncertainty | 35 |
| 8 | Appendixes | 36 |

2 General Information

2.1 Test standard/s

| | |
|-----------------|--|
| Applied Rules : | 47 CFR FCC Part 02 47 CFR FCC Part 22 47 CFR FCC Part 24 47 CFR FCC Part 27 47 CFR FCC Part 90 |
| Test Method : | FCC KDB 971168 D01 Power Meas License Digital Systems v03r01 ANSI C63.26 |

2.2 Test Environment

| | | | |
|----------------------------|----------------|----------|----------------------------------|
| Temperature : | TN | 15 to 30 | °C during room temperature tests |
| Ambient Relative Humidity: | 40 to 55 % | | |
| Atmospheric Pressure: | Not applicable | | |
| Power supply : | VL | 3.6 | V |
| | VN | 3.8 | V DC by Battery |
| | VH | 4.35 | V |

NOTE: 1) VN= nominal voltage, VL= low extreme test voltage, VH= High extreme test voltage;

TN= normal temperature, TL= low extreme test temperature, TH= High extreme test temperature.

2.3 Test Laboratories

| | |
|------------------------------|--|
| Test Location 1 : | RELIABILITY LABORATORY OF HUAWEI TECHNOLOGIES CO., LTD. |
| Address of Test Location 1 : | No.2, New City Avenue, Songshan Lake Sci. & Tech. Industry Park, Dongguan, 523808, P.R.C |

2.4 Applicant and Manufacturer

| | |
|----------------|---|
| Company Name : | HUAWEI TECHNOLOGIES CO., LTD |
| Address : | Administration Building, Headquarters of Huawei Technologies Co., Ltd., Bantian, Longgang District, Shenzhen, 518129, P.R.C |

2.5 Application details

| | |
|-------------------------|------------|
| Date of Receipt Sample: | 2019-02-24 |
| Start of test: | 2019-03-01 |
| End of test: | 2019-03-26 |

3 Test Summary

3.1 Cellular Band (824-849 MHz paired with 869-894 MHz)

| Test Item | FCC Rule No. | Requirements | Test Result | Verdict(Note1) |
|--|------------------|---|-------------|------------------|
| Effective (Isotropic) Radiated Power Output Data | §2.1046, §22.913 | FCC: ERP ≤ 7 W. | Appendix A | Pass |
| Peak-Average Ratio | --- | Limits ≤ 13 dB | Appendix B | Pass |
| Modulation Characteristics | §2.1047 | Digital modulation | Appendix C | Pass |
| Bandwidth | §2.1049 | OBW: No limit. EBW: No limit. | Appendix D | Pass |
| Band Edges Compliance | §2.1051, §22.917 | FCC: ≤ -13 dBm/1%*EBW, in 1 MHz bands immediately outside and adjacent to the frequency block. Note 1): EBW is -26 dBc EBW. | Appendix E | Pass |
| Spurious Emission at Antenna Terminals | §2.1051, §22.917 | FCC: ≤ -13 dBm/RefBW, from max(lowest internal frequency, 9 kHz) to min(10 * highest fundamental frequency, 40 GHz), after 1 MHz bands immediately outside and adjacent to the frequency block. (RefBW: ≥100 kHz for frequency below 1 GHz, and =1 MHz above 1 GHz) | Appendix F | Pass |
| Field Strength of Spurious Radiation | §2.1053, §22.917 | FCC: ≤ -13 dBm/RefBW, from max(lowest internal frequency, 9 kHz) to min(10 * highest fundamental frequency, 40 GHz), after 1 MHz bands immediately outside and adjacent to the frequency block. (RefBW: ≥100 kHz for frequency below 1 GHz, and =1 MHz above 1 GHz) | Appendix G | Pass |
| Frequency Stability | §2.1055, §22.355 | ≤ ±2.5ppm | Appendix H | Pass |

NOTE: For the verdict, the "N/A" denotes "not applicable", the "N/T" denotes "not tested".

3.2 PCS Band (1850-1910 MHz paired with 1930-1990 MHz)

| Test Item | FCC Rule No. | Requirements | Test Result | Verdict(Note1) |
|--|---------------------|---|-------------|------------------|
| Effective (Isotropic) Radiated Power Output Data | §2.1046, §24.232 | EIRP ≤ 2 W | Appendix A | Pass |
| Peak-Average Ratio | §2.1046, §24.232 | Limits≤13 dB | Appendix B | Pass |
| Modulation Characteristics | §2.1047 | Digital modulation | Appendix C | Pass |
| Bandwidth | §2.1049 | OBW: No limit. EBW: No limit. | Appendix D | Pass |
| Band Edges Compliance | §2.1051, §24.238 | FCC: ≤ -13 dBm/1%*EBW, in 1 MHz bands immediately outside and adjacent to the frequency block. Note 1): EBW is -26 dBc EBW. | Appendix E | Pass |
| Spurious Emission at Antenna Terminals | §2.1051, §24.238 | FCC: ≤ -13 dBm/1 MHz, from max(lowest internal frequency, 9 kHz) to min(10 * highest fundamental frequency, 40 GHz) but outside authorized operating frequency blocks. | Appendix F | Pass |
| Field Strength of Spurious Radiation | §2.1053, §24.238 | FCC: ≤ -13 dBm/1 MHz, from max(lowest internal frequency, 9 kHz) to min(10 * highest fundamental frequency, 40 GHz) but outside authorized operating frequency blocks | Appendix G | Pass |
| Frequency Stability | §2.1055, §24.235 | FCC: Within authorized bands of operation/frequency block. | Appendix H | Pass |
| NOTE: For the verdict, the "N/A" denotes "not applicable", the "N/T" denotes "not tested". | | | | |

3.3 BRS&EBS Band (2500-2570 MHz paired with 2620-2690 MHz)

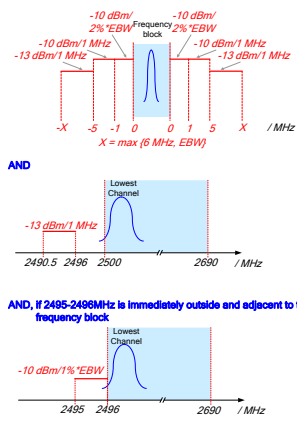
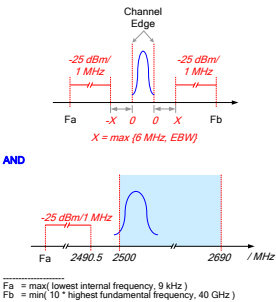
| Test Item | FCC Rule No. | Requirements | Test Result | Verdict (Note1) |
|--|---------------------|---|-------------|-------------------|
| Effective (Isotropic) Radiated Power Output Data | §2.1046, §27.50(h) | EIRP ≤ 2W | Appendix A | Pass |
| Peak-Average Ratio | §27.50(a) | Limit: ≤13 dB | Appendix B | Pass |
| Modulation Characteristics | §2.1047 | Digital modulation | Appendix C | Pass |
| Bandwidth | §2.1049 | OBW: No limit. EBW: No limit. | Appendix D | Pass |
| Band Edges Compliance | §2.1051, §27.53(m4) | <p>FCC:</p> <p>AND</p> <p>AND, if 2495-2496MHz is immediately outside and adjacent to the frequency block</p> <p>Note 1): EBW is -26 dBc EBW.</p> | Appendix E | Pass |
| Spurious Emission at Antenna Terminals | §2.1051, §27.53(m) | <p>FCC:</p> <p>AND</p> <p>Fa = max(lowest internal frequency, 9 kHz) Fb = min(10 * highest fundamental frequency, 40 GHz)</p> <p>Note 1): EBW is -26 dBc EBW. Note 2): MeasFrom: max(lowest internal</p> | Appendix F | Pass |

| Test Item | FCC Rule No. | Requirements | Test Result | Verdict (Note1) |
|--|--------------------|--|-------------|-------------------|
| | | frequency, 9 kHz). Note 3): MeasTo: min(10 * highest fundamental frequency, 40 GHz). | | |
| Field Strength of Spurious Radiation | §2.1053, §27.53(m) | <p>FCC:</p> <p>Note 1): EBW is -26 dBc EBW. Note 2): MeasFrom: max(lowest internal frequency, 9 kHz). Note 3): MeasTo: min(10 * highest fundamental frequency, 40 GHz).</p> | Appendix G | Pass |
| Frequency Stability | §2.1055, §27.54 | Within authorized bands of operation/frequency block. | Appendix H | Pass |
| NOTE: For the verdict, the "N/A" denotes "not applicable", the "N/T" denotes "not tested". | | | | |

3.4 Band (814-824 MHz paired with 859-869MHz)

| Test Item | FCC Rule No. | Requirements | Test Result | Verdict |
|--|------------------|--|-------------|---------|
| Transmitter Conducted Power Output | §2.1046, §90.635 | < 100 W. | Appendix A | PASS |
| Peak-Average Ratio | --- | --- | Appendix B | N/T |
| Modulation Characteristics | §2.1047 | Digital modulation | Appendix C | PASS |
| Bandwidth | §2.1049 | OBW: No limit. EBW: No limit. | Appendix D | PASS |
| Band Edges Compliance | §2.1051, §90.691 | < 50 + 10Log10(P[Watts]) at Band Edge and for all out-of-band emissions within 37.5kHz of Block Edge | Appendix E | PASS |
| Spurious Emission at Antenna Terminals | §2.1051, §90.691 | < 43 + 10Log10(P[Watts]) for all out-of-band emissions | Appendix F | PASS |
| Field Strength of Spurious Radiation | §2.1053, §90.691 | < 43 + 10Log10(P[Watts]) for all out-of-band emissions | Appendix G | PASS |
| Frequency Stability | §2.1055, §90.213 | < ±2.5ppm. | Appendix H | PASS |
| NOTE: For the verdict, the "N/A" denotes "not applicable", the "N/T" denotes "not tested". | | | | |

3.5 Band41 (2545-2655 MHz paired with 2545-2655 MHz)

| Test Item | FCC Rule No. | Requirements | Test Result | Verdict (Note1) |
|--|---------------------|--|-------------|-------------------|
| Effective (Isotropic) Radiated Power Output Data | §2.1046, §27.50(h) | EIRP ≤ 2W | Appendix A | Pass |
| Peak-Average Ratio | §27.50(a) | Limit ≤ 13 dB | Appendix B | Pass |
| Modulation Characteristics | §2.1047 | Digital modulation | Appendix C | Pass |
| Bandwidth | §2.1049 | OBW: No limit. EBW: No limit. | Appendix D | Pass |
| Band Edges Compliance | §2.1051, §27.53(m4) |  <p>FCC:</p> <p>Note 1): EBW is -26 dBc EBW.</p> | Appendix E | Pass |
| Spurious Emission at Antenna Terminals | §2.1051, §27.53(m) | <p>FCC:</p>  <p>Note 1): EBW is -26 dBc EBW. Note 2): MeasFrom: max(lowest internal frequency, 9 kHz). Note 3): MeasTo: min(10 * highest fundamental frequency, 40 GHz).</p> | Appendix F | Pass |
| Field Strength of Spurious Radiation | §2.1053, §27.53(m) | FCC: | Appendix G | Pass |

| Test Item | FCC Rule No. | Requirements | Test Result | Verdict (Note1) |
|--|--------------------|--|-------------|-------------------|
| | | <p>Channel Edge</p> <p>-25 dBm/1 MHz</p> <p>-25 dBm/1 MHz</p> <p>Fa -X 0 X Fb</p> <p>X = max(6 MHz, EBW)</p> <p>AND</p> <p>-25 dBm/1 MHz</p> <p>Fa 2490.5 2500 2690 / MHz</p> <p>Fa = max(lowest internal frequency, 9 kHz) Fb = min(10 * highest fundamental frequency, 40 GHz)</p> <p>Note 1): EBW is -26 dBc EBW. Note 2): MeasFrom: max(lowest internal frequency, 9 kHz). Note 3): MeasTo: min(10 * highest fundamental frequency, 40 GHz).</p> | | |
| Frequency Stability | §2.1055, §27.54 | Within authorized bands of operation/frequency block. | Appendix H | Pass |
| NOTE: For the verdict, the "N/A" denotes "not applicable", the "N/T" denotes "not tested". | | | | |

4 Description of the Equipment under Test (EUT)

4.1 General Description

MAR-LX2J is subscriber equipment in the GSM/WCDMA/LTE system. The GSM frequency band includes GSM850 and GSM900 and DCS1800 and PCS1900. The UMTS frequency band is B1 and B2 and B5 and B6 and B8 and B19. The LTE frequency band is B1 and B3 and B5 and B7 and B8 and B18 and B19 and B26 and B28 and B41. The Mobile Phone implements such functions as RF signal receiving/transmitting, GSM/WCDMA/LTE protocol processing, voice, video MMS service, GPS and WIFI etc. Externally it provides one micro SD card interface (it can also used as SIM card interface), earphone port (to provide voice service) and one SIM card interface. MAR-LX2J are dual SIM and single SIM smart phones, Single SIM delete SIM only by software. It also provides Bluetooth module to synchronize data between a PC and the phone, or to use the built-in modem of the phone to access the Internet with a PC, or to exchange data with other Bluetooth devices.

Note: Only GSM850 and GSM1900,UMTS frequency B2 and B5,LTE frequency B5 and B7 and B26 and B41 bands test data included in this report.







4.2 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.

4.2.1 Board

| Board | | |
|-------------|-----------------------------|------------------|
| Description | Software Version | Hardware Version |
| Main Board | 9.0.1.120(SP1C900E120R1P16) | HL2MARLM |

4.2.2 Sub-Assembly

| Sub-Assembly | | | |
|-------------------|--------------|-------------------------------|---|
| Sub-Assembly Name | Model | Manufacturer | Description |
| Adapter | HW-090200EH0 | Huawei Technologies Co., Ltd. | Input voltage: 100-240V ~50/60Hz 0.5A Output voltage: 5V  2A OR 9V  2A |
| Adapter | HW-090200BH0 | Huawei Technologies Co., Ltd. | Input voltage: 100-240V ~50/60Hz 0.5A Output voltage: 5V  2A OR 9V  2A |
| Adapter | HW-090200JH0 | Huawei Technologies Co., Ltd. | Input voltage: 100-240V ~50/60Hz 0.5A Output voltage: 5V  2A OR 9V  2A |
| Adapter | HW-090200UH0 | Huawei Technologies | Input voltage: 100-240V ~50/60Hz 0.5A |

| Sub-Assembly | | | |
|-------------------|--------------|-------------------------------|--|
| Sub-Assembly Name | Model | Manufacturer | Description |
| | | Co., Ltd. | Output voltage: 5V  2A OR 9V  2A |
| Adapter | HW-059200EHQ | Huawei Technologies Co., Ltd. | Input voltage: 100-240V ~50/60Hz 0.5A Output voltage: 5V  2A OR 9V  2A |
| Battery | HB356687ECW | Huawei Technologies Co., Ltd. | Rated capacity: 3240mAh Nominal Voltage:  +3.82V Charging Voltage:  +4.40V |

4.3 Technical Specification

NOTE: For the detailed technical descriptions, see the applicant/manufacturer's specifications or user manual.

4.3.1 General

| Characteristics | Description | |
|-------------------------------|--|--|
| Radio System Type | <input checked="" type="checkbox"/> GSM <input checked="" type="checkbox"/> UMTS <input checked="" type="checkbox"/> LTE | |
| Supported Frequency Range | GSM850/ WCDMA850 | Transmission (TX): 824 to 849 MHz |
| | | Receiving (RX): 869 to 894 MHz |
| | PCS1900/ WCDMA1900 | Transmission (TX): 1850 to 1910 MHz |
| | | Receiving (RX): 1930 to 1990 MHz |
| | LTE BAND5 | Transmission (TX): 824 to 849 MHz |
| | | Receiving (RX): 869 to 894 MHz |
| | LTE BAND7 | Transmission (TX): 2500 to 2570 MHz |
| | | Receiving (RX): 2620 to 2690 MHz |
| | LTE band 26(814 to 824 MHz) only apply for FCC. | Transmission (TX): 814 to 824MHz |
| | | Receiving (RX): 859 to 869 MHz |
| LTE band 26 (824 to 849 MHz) | Transmission (TX): 824 to 849 MHz | |
| | Receiving (RX): 869 to 894 MHz | |
| LTE Band 41(2545 to 2655 MHz) | Transmission (TX): 2545 to 2655 MHz | |
| | Receiving (RX): 2545 to 2655 MHz | |
| Antenna | Description | Isotropic Antenna |
| | Type | <input checked="" type="checkbox"/> Integral <input type="checkbox"/> External <input type="checkbox"/> Dedicated |
| | TX and RX Antenna Ports(one band) | TX & RX port: 1 TX-only port: 0 RX-only port: 1 |
| | Smart Antenna(for uplink) | <input type="checkbox"/> MIMO <input checked="" type="checkbox"/> Non MIMO |
| | Gain | GSM850: -7.2 dBi (per antenna port, max) PCS1900: -1.8 dBi (per antenna port, max) WCDMA 850: -7.2 dBi (per antenna port, max) WCDMA 1900: -1.8 dBi (per antenna port, max) LTE Band 5: -7.2 dBi (per antenna port, max) LTE Band 7: 0.5 dBi (per antenna port, max) LTE Band 26: -7.2 dBi (per antenna port, max) LTE Band 41: 0.5 dBi (per antenna port, max) |

| Characteristics | Description | |
|---|--|--|
| | Remark | When the EUT is put into service, the practical maximum antenna gain should NOT exceed the value as described above. |
| Target TX Output Power | GSM850: 32.1 dBm GSM1900 30.3 dBm UMTS850 24.0 dBm UMTS1900: 23.5 dBm LTE Band 5: 23.5 dBm LTE Band 7: 23.0 dBm LTE Band 26: 24.0 dBm LTE Band 41: 23.0 dBm | |
| Supported Channel Bandwidth | GSM system: | <input checked="" type="checkbox"/> 200 kHz |
| | UMTS system: | <input checked="" type="checkbox"/> 5 MHz |
| | LTE band 5 | <input checked="" type="checkbox"/> 1.4MHz, <input checked="" type="checkbox"/> 3MHz, <input checked="" type="checkbox"/> 5MHz, <input checked="" type="checkbox"/> 10MHz |
| | LTE band 7 | <input checked="" type="checkbox"/> 5MHz, <input checked="" type="checkbox"/> 10MHz, <input checked="" type="checkbox"/> 15MHz, <input checked="" type="checkbox"/> 20MHz |
| | LTE band 26(814-824MHz) | <input checked="" type="checkbox"/> 1.4MHz, <input checked="" type="checkbox"/> 3MHz, <input checked="" type="checkbox"/> 5MHz, <input checked="" type="checkbox"/> 10MHz |
| | LTE band 26(824-849MHz) | <input checked="" type="checkbox"/> 1.4MHz, <input checked="" type="checkbox"/> 3MHz, <input checked="" type="checkbox"/> 5MHz, <input checked="" type="checkbox"/> 10MHz, <input checked="" type="checkbox"/> 15MHz |
| | LTE band 41(2545-2655MHz) | <input checked="" type="checkbox"/> 5MHz, <input checked="" type="checkbox"/> 10MHz, <input checked="" type="checkbox"/> 15MHz, <input checked="" type="checkbox"/> 20MHz |
| Type of Modulation for uplink | GSM | <input checked="" type="checkbox"/> GMSK <input checked="" type="checkbox"/> 8PSK |
| | WCDMA | <input checked="" type="checkbox"/> QPSK <input type="checkbox"/> 16QAM(only for HSPA+) <input type="checkbox"/> 64QAM |
| | LTE | <input checked="" type="checkbox"/> QPSK <input checked="" type="checkbox"/> 16QAM <input checked="" type="checkbox"/> 64QAM |
| Designation of Emissions (Note: the necessary bandwidth of which is the worst value from the measured occupied bandwidths for each type of channel bandwidth configuration.) | GSM850: | 245KGXW, 254KG7W |
| | GSM1900: | 250KGXW, 255KG7W |
| | UMTS850: | 4M18F9W |
| | UMTS1900: | 4M18F9W |
| | LTE BAND5: | 1M09G7D (1.4 MHz QPSK modulation), 1M10W7D (1.4 MHz 16QAM modulation) 2M71G7D (3 MHz QPSK modulation), 2M71W7D (3 MHz 16QAM modulation) 4M51G7D (5 MHz QPSK modulation), 4M52W7D (5 MHz 16QAM modulation) 9M02G7D (10 MHz QPSK modulation), 9M04W7D (10 MHz 16QAM modulation) |
| | LTE BAND7: | 4M51G7D (5 MHz QPSK modulation), |

| Characteristics | Description | |
|-----------------|------------------------------|--|
| | | 4M52W7D (5 MHz 16QAM modulation) 9M00G7D (10 MHz QPSK modulation), 9M00W7D (10 MHz 16QAM modulation) 13M5G7D (15 MHz QPSK modulation), 13M5W7D (15 MHz 16QAM modulation) 18M0G7D (20 MHz QPSK modulation), 18M0W7D (20 MHz 16QAM modulation) |
| | LTE BAND26(814-824MHz): | 1M10G7D (1.4 MHz QPSK modulation), 1M10W7D (1.4 MHz 16QAM modulation) 2M71G7D (3 MHz QPSK modulation), 2M71W7D (3 MHz 16QAM modulation) 4M51G7D (5 MHz QPSK modulation), 4M52W7D (5 MHz 16QAM modulation) 9M00G7D (10 MHz QPSK modulation), 8M99W7D (10 MHz 16QAM modulation) |
| | LTE BAND26(824-849MHz): | 1M10G7D (1.4 MHz QPSK modulation), 1M10W7D (1.4 MHz 16QAM modulation) 2M71G7D (3 MHz QPSK modulation), 2M71W7D (3 MHz 16QAM modulation) 4M52G7D (5 MHz QPSK modulation), 4M52W7D (5 MHz 16QAM modulation) 9M02G7D (10 MHz QPSK modulation), 9M04W7D (10 MHz 16QAM modulation) 13M5G7D (15 MHz QPSK modulation), 13M5W7D (15 MHz 16QAM modulation) |
| | LTE BAND41(2545-2655MHz): | 4M52G7D (5 MHz QPSK modulation), 4M52W7D (5 MHz 16QAM modulation) 9M00G7D (10 MHz QPSK modulation), 9M04W7D (10 MHz 16QAM modulation) 13M5G7D (15 MHz QPSK modulation), 13M5W7D (15 MHz 16QAM modulation) 18M0G7D (20 MHz QPSK modulation), 18M0W7D (20 MHz 16QAM modulation) |

5 General Test Conditions / Configurations

5.1 Test Modes

NOTE1: The test mode(s) are selected according to relevant radio technology specifications.

NOTE2: The modulation for WCDMA, HSUPA, HSDPA, DC-HSDPA is the same, which is QPSK, and the WCDMA is the worst, so we test the WCDMA only.

NOTE3: The power of LTE system 64QAM modulation is lower than that of 16QAM, so we did not test 64QAM modulation.

| Test Mode | Test Modes Description |
|-----------|---------------------------------------|
| GSM/TM1 | GSM system, GSM/GPRS, GMSK modulation |
| GSM/TM2 | GSM system, EDGE, 8PSK modulation |
| UMTS/TM1 | WCDMA system, QPSK modulation |
| LTE/TM1 | LTE system, QPSK modulation |
| LTE/TM2 | LTE system, 16QAM modulation |

5.2 Test Frequency

| Test Mode | TX / RX | RF Channel | | |
|-----------|---------|--------------|--------------|--------------|
| | | Low (L) | Middle (M) | High (H) |
| GSM850 | TX | Channel 128 | Channel 190 | Channel 251 |
| | | 824.2MHz | 836.6MHz | 848.8MHz |
| | RX | Channel 128 | Channel 190 | Channel 251 |
| | | 869.2MHz | 881.6MHz | 893.8MHz |
| WCDMA850 | TX | Channel 4132 | Channel 4182 | Channel 4233 |
| | | 826.4MHz | 836.4MHz | 846.6MHz |
| | RX | Channel 4357 | Channel 4407 | Channel 4458 |
| | | 871.4MHz | 881.4MHz | 891.6MHz |
| Test Mode | TX / RX | RF Channel | | |
| | | Low (L) | Middle (M) | High (H) |
| GSM1900 | TX | Channel 512 | Channel 661 | Channel 810 |
| | | 1850.2MHz | 1880.0MHz | 1909.8MHz |
| | RX | Channel 512 | Channel 661 | Channel 810 |
| | | 1930.2 MHz | 1960.0 MHz | 1989.8 MHz |
| WCDMA1900 | TX | Channel 9262 | Channel9400 | Channel9538 |
| | | 1852.4MHz | 1880.0MHz | 1907.6MHz |
| | RX | Channel 9662 | Channel 9800 | Channel 9938 |
| | | 1932.4 MHz | 1960.0 MHz | 1987.6 MHz |

| Test Mode | TX / RX | RF Channel | | |
|------------|----------|---------------|---------------|---------------|
| | | Low (B) | Middle (M) | High (T) |
| LTE Band 5 | TX(1.4M) | Channel 20407 | Channel 20525 | Channel 20643 |

| Test Mode | TX / RX | RF Channel | | |
|-----------|----------|---------------|---------------|---------------|
| | | Low (B) | Middle (M) | High (T) |
| | | 824.7 MHz | 836.5 MHz | 848.3 MHz |
| | TX(3M) | Channel 20415 | Channel 20525 | Channel 20635 |
| | | 825.5 MHz | 836.5 MHz | 847.5 MHz |
| | TX(5M) | Channel 20425 | Channel 20525 | Channel 20625 |
| | | 826.5 MHz | 836.5 MHz | 846.5 MHz |
| | TX(10M) | Channel 20450 | Channel 20525 | Channel 20600 |
| | | 829 MHz | 836.5 MHz | 844 MHz |
| | RX(1.4M) | Channel 2407 | Channel 2525 | Channel 2643 |
| | | 869.7 MHz | 881.5 MHz | 893.3 MHz |
| | RX (3M) | Channel 2415 | Channel 2525 | Channel 2635 |
| | | 870.5 MHz | 881.5 MHz | 892.5 MHz |
| | RX(5M) | Channel 2425 | Channel 2525 | Channel 2625 |
| | | 871.5 MHz | 881.5 MHz | 891.5 MHz |
| | RX (10M) | Channel 2450 | Channel 2525 | Channel 2600 |
| | | 874 MHz | 881.5 MHz | 889 MHz |

| Test Mode | TX / RX | RF Channel | | |
|------------|----------|---------------|---------------|---------------|
| | | Low (B) | Middle (M) | High (T) |
| LTE Band 7 | TX (5M) | Channel 20775 | Channel 21100 | Channel 21425 |
| | | 2502.5 MHz | 2535 MHz | 2567.5 MHz |
| | TX (10M) | Channel 20800 | Channel 21100 | Channel 21400 |
| | | 2505 MHz | 2535 MHz | 2565 MHz |
| | TX (15M) | Channel 20825 | Channel 21100 | Channel 21375 |
| | | 2507.5 MHz | 2535 MHz | 2562.5 MHz |

| Test Mode | TX / RX | RF Channel | | |
|-----------|----------|---------------|---------------|---------------|
| | | Low (B) | Middle (M) | High (T) |
| | TX (20M) | Channel 20850 | Channel 21100 | Channel 21350 |
| | | 2510 MHz | 2535 MHz | 2560 MHz |
| | RX (5M) | Channel 2775 | Channel 3100 | Channel 3425 |
| | | 2622.5 MHz | 2655 MHz | 2687.5 MHz |
| | RX (10M) | Channel 2800 | Channel 3100 | Channel 3400 |
| | | 2625 MHz | 2655 MHz | 2685 MHz |
| | RX (15M) | Channel 2825 | Channel 3100 | Channel 3375 |
| | | 2627.5 MHz | 2655 MHz | 2682.5 MHz |
| | RX (20M) | Channel 2850 | Channel 3100 | Channel 3350 |
| | | 2630 MHz | 2655 MHz | 2680 MHz |

| Test Mode | TX / RX | RF Channel | | |
|----------------------------------|-----------|---------------|---------------|---------------|
| | | Low (L) | Middle (M) | High (H) |
| LTE Band 26 (814 to 824 MHz) | TX (1.4M) | Channel 26697 | Channel 26740 | Channel 26783 |
| | | 814.7 MHz | 819 MHz | 823.3 MHz |
| | TX (3M) | Channel 26705 | Channel 26740 | Channel 26775 |
| | | 815.5 MHz | 819 MHz | 822.5 MHz |
| | TX (5M) | Channel 26715 | Channel 26740 | Channel 26765 |
| | | 816.5 MHz | 819 MHz | 821.5 MHz |
| | TX (10M) | Channel 26740 | Channel 26740 | Channel 26740 |
| | | 819 MHz | 819 MHz | 819 MHz |
| | RX (1.4M) | Channel 8697 | Channel 8740 | Channel 8783 |
| | | 859.7 MHz | 864 MHz | 868.3 MHz |
| | RX (3M) | Channel 8705 | Channel 8740 | Channel 8765 |

| Test Mode | TX / RX | RF Channel | | |
|-----------|----------|--------------|--------------|--------------|
| | | Low (L) | Middle (M) | High (H) |
| | | 860.5 MHz | 864 MHz | 867.5 MHz |
| | | Channel 8715 | Channel 8740 | Channel 8765 |
| | RX (5M) | 861.5 MHz | 864 MHz | 866.5 MHz |
| | | Channel 8740 | Channel 8740 | Channel 8740 |
| | RX (10M) | 864 MHz | 864 MHz | 864 MHz |
| | | | | |

| Test Mode | TX / RX | RF Channel | | |
|----------------------------------|-----------|---------------|---------------|---------------|
| | | Low (L) | Middle (M) | High (H) |
| LTE Band 26 (824 to 849 MHz) | TX (1.4M) | Channel 26797 | Channel 26915 | Channel 27033 |
| | | 824.7 MHz | 836.5 MHz | 848.3 MHz |
| | TX (3M) | Channel 26805 | Channel 26915 | Channel 27025 |
| | | 825.5 MHz | 836.5 MHz | 847.5 MHz |
| | TX (5M) | Channel 26815 | Channel 26915 | Channel 27015 |
| | | 826.5 MHz | 836.5 MHz | 846.5 MHz |
| | TX (10M) | Channel 26840 | Channel 26915 | Channel 26990 |
| | | 829 MHz | 836.5 MHz | 844 MHz |
| | TX (15M) | Channel 26865 | Channel 26915 | Channel 26965 |
| | | 831.5 MHz | 836.5 MHz | 841.5 MHz |
| | RX (1.4M) | Channel 8697 | Channel 8915 | Channel 9033 |
| | | 859.7 MHz | 881.5 MHz | 893.3 MHz |
| | RX (3M) | Channel 8805 | Channel 8915 | Channel 9025 |
| | | 860.5 MHz | 881.5 MHz | 892.5 MHz |
| | RX (5M) | Channel 8815 | Channel 8915 | Channel 9015 |
| | | 871.5 MHz | 881.5 MHz | 891.5 MHz |

| Test Mode | TX / RX | RF Channel | | |
|-----------|----------|--------------|--------------|--------------|
| | | Low (L) | Middle (M) | High (H) |
| | RX (10M) | Channel 8840 | Channel 8915 | Channel 8990 |
| | | 874 MHz | 881.5 MHz | 889 MHz |
| | RX (15M) | Channel 8865 | Channel 8915 | Channel 8965 |
| | | 876.5 MHz | 881.5 MHz | 886.5 MHz |

| Test Mode | TX / RX | RF Channel | | |
|---------------------------|---------|---------------|---------------|---------------|
| | | Low (B) | Middle (M) | High (T) |
| LTE Band 41(2545-2655) | TX(5M) | Channel 40165 | Channel 40690 | Channel 41215 |
| | | 2547.5 MHz | 2600 MHz | 2652.5 MHz |
| | TX(10M) | Channel 40190 | Channel 40690 | Channel 41190 |
| | | 2550 MHz | 2600 MHz | 2650 MHz |
| | TX(15M) | Channel 40215 | Channel 40690 | Channel 41165 |
| | | 2552.5 MHz | 2600 MHz | 2647.5 MHz |
| | TX(20M) | Channel 40240 | Channel 40690 | Channel 41140 |
| | | 2555 MHz | 2600 MHz | 2645 MHz |
| | RX(5M) | Channel 40165 | Channel 40690 | Channel 41215 |
| | | 2547.5 MHz | 2600 MHz | 2652.5 MHz |
| | RX(10M) | Channel 40190 | Channel 40690 | Channel 41190 |
| | | 2550 MHz | 2600 MHz | 2650 MHz |
| | RX(15M) | Channel 40215 | Channel 40690 | Channel 41165 |
| | | 2552.5 MHz | 2600 MHz | 2647.5 MHz |
| | RX(20M) | Channel 40240 | Channel 40690 | Channel 41140 |
| | | 2555 MHz | 2600 MHz | 2645 MHz |

5.3 DESCRIPTION OF TESTS

5.3.1 Radiated Power and Radiated Spurious Emissions

Radiated spurious emissions are investigated indoors in a full-anechoic chamber to determine the frequencies producing the worst case emissions. Final measurements for radiated power and radiated spurious emissions are performed on the 3 meter OATS per the guidelines of ANSI/TIA-603-E-2016. The equipment under test was transmitting while connected to its integral antenna and is placed on a wooden turntable 150cm above the ground plane and 3 meters from the receive antenna. The spectrum is scanned from the lowest frequency generated in the equipment up to a frequency including its 10th harmonic. The receive antenna height is adjusted between 1 and 4 meter height, the turntable is rotated through 360 degrees, and the EUT is manipulated through all orthogonal planes representative of its typical use to achieve the highest reading on the receive spectrum analyzer. Emissions are also investigated with the receive antenna horizontally and vertically polarized.

A portable or small unlicensed wireless device shall be placed on a non-metallic test fixture or other non-metallic support during testing. The supporting fixture shall permit orientation of the EUT in each of three orthogonal (x, y, z) axis positions such that emissions from the EUT are maximized. Measure the EUT maximum RF power and record the result.

A half-wave dipole is then substituted in place of the EUT. For emissions above 3GHz, a horn antenna is substituted in place of the EUT. The substitute antenna is driven by a signal generator with the level of the signal generator being adjusted to obtain the same receive spectrum analyzer level previously recorded from the spurious emission from the EUT.

The power of the emission is calculated using the following formula:

$$P_d \text{ [dBm]} = P_g \text{ [dBm]} - \text{cable loss [dB]} + \text{antenna gain [dBd/dBi]}$$

Where, P_d is the dipole equivalent power, P_g is the generator output into the substitution antenna, and the antenna gain is the gain of the substitute antenna used relative to either a half-wave dipole (dBd) or an isotropic source (dBi). The substitute level is equal to $P_g \text{ [dBm]} - \text{cable loss [dB]}$.

The calculated P_d levels are then compared to the absolute spurious emission limit of -13dBm which is equivalent to the required minimum attenuation of $43 + 10\log_{10}(\text{Power}_{\text{[Watts]}})$.

Test Procedures Used

KDB 971168 D01 v03-Section 5

ANSI/TIA-603-E-2016-Section 2.2.17 / ANSI/TIA-603-E-2016-Section 2.2.12

Note: Reference test setup 3

5.3.2 Peak-Average Ratio

A peak to average ratio measurement is performed at the conducted port of the EUT. The spectrum analyzers Complementary Cumulative Distribution Function (CCDF) measurement profile is used to determine the largest deviation between the average and the peak power of the EUT in a given bandwidth.

Test Procedures Used

KDB 971168 D01 v03-Section 5.7.2

Test Settings

- 1、 The signal analyzer's CCDF measurement profile enabled
- 2、 Frequency= carrier center frequency
- 3、 Measurement BW > EBW of signal
- 4、 for continuous transmissions, set to 1ms
- 5、 Record the maximum PAPR level associated with a probability of 0.1%.

Note: Reference test setup 1

5.3.3 Occupied Bandwidth

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission shall be measured. The span of the analyzer shall be set to capture all products of the modulation process, including the emission skirts. The resolution bandwidth shall be set to as close to 1 percent of the selected span as is possible without being below 1 percent. The video bandwidth shall be set to 3 times the resolution bandwidth. Video averaging is not permitted. Where practical, a sampling detector shall be used since a peak or, peak hold, may produce a wider bandwidth than actual. The trace data points are recovered and are directly summed in linear terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 percent of the total is reached and that frequency recorded. The process is repeated for the highest frequency data points. This frequency is recorded. The span between the two recorded frequencies is the occupied bandwidth.

Test Procedures Used

KDB 971168 D01 v03-Section 4.3

Test Settings

- 1、 SET RBW=1-5% of OBW
- 2、 SET VBW \geq 3*RBW
- 3、 Detector: Peak
- 4、 Trace mode= max hold.
- 5、 Sweep= auto couple
- 6、 Steps 1-5 were repeated after it is stable

Note: Reference test setup 1.

5.3.4 Band Edge Compliance

The test complies with the requirements in clause 2 of the present report according to test procedures in KDB 971168 D01 v03-Section 6 with corresponding test settings.

Note: Reference test setup 1.

5.3.5 Spurious and Harmonic Emissions at Antenna Terminal

The test complies with the requirements in clause 2 of the present report according to test procedures in KDB 971168 D01 v03-Section 6 with corresponding test settings.

Note: Reference test setup 1.

5.3.6 Frequency Stability / Temperature Variation

Frequency stability testing is performed in accordance with the guidelines of ANSI/TIA-603-E-2016. The frequency stability of the transmitter is measured by:

- a.) **Temperature:** The temperature is varied from -30°C to +50°C in 10°C increments using an environmental chamber.
- b.) **Primary Supply Voltage:** The primary supply voltage is varied from 85% to 115% of the nominal value for non hand-carried battery and AC powered equipment. For hand-carried, battery-powered equipment, primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacturer.

Specification – The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within $\pm 0.00025\%$ (± 2.5 ppm) of the center frequency.

Time Period and Procedure:

1. The carrier frequency of the transmitter is measured at room temperature (20°C to provide a reference).
2. The equipment is turned on in a “standby” condition for fifteen minutes before applying power to the transmitter. Measurement of the carrier frequency of the transmitter is made within one minute after applying power to the transmitter.
3. Frequency measurements are made at 10°C intervals ranging from -30°C to +50°C. A period of at least one half-hour is provided to allow stabilization of the equipment at each temperature level.

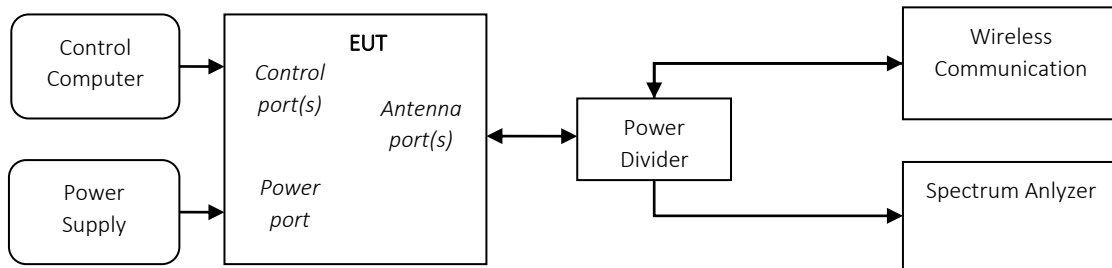
Test Procedures Used

ANSI/TIA-603-E-2016

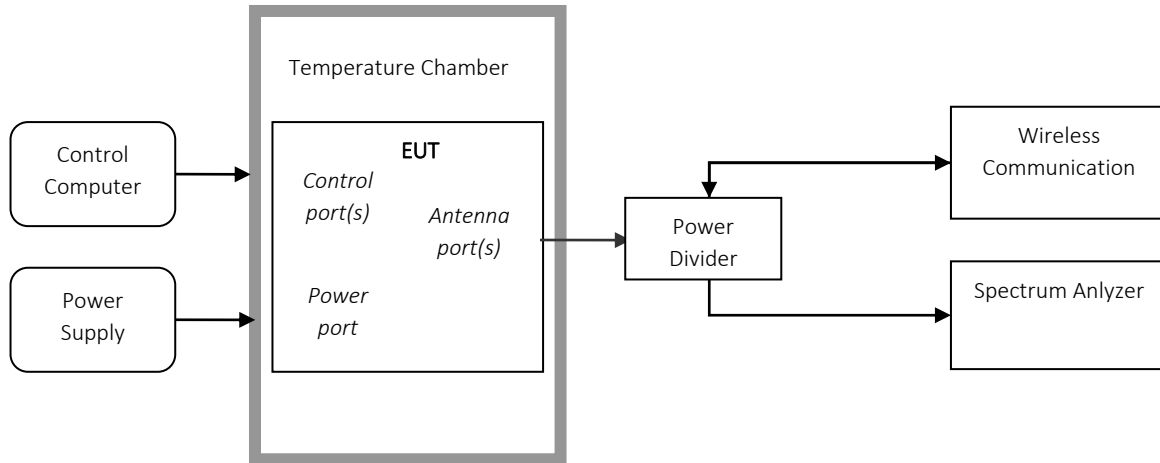
Note: Reference test setup 2.

5.4 Test Setups

5.4.1 Test Setup 1



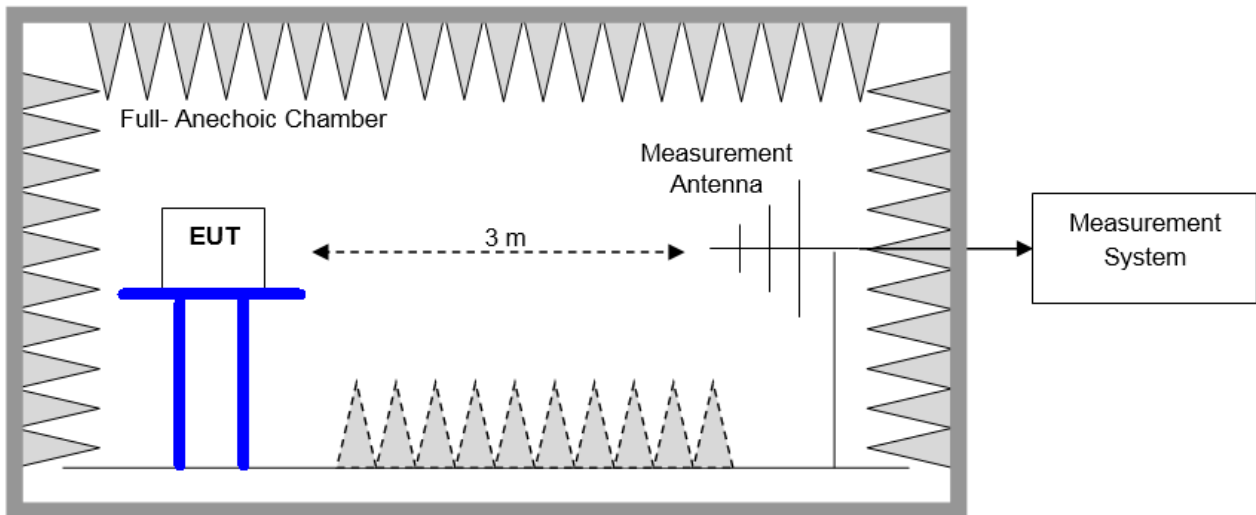
5.4.2 Test Setup 2



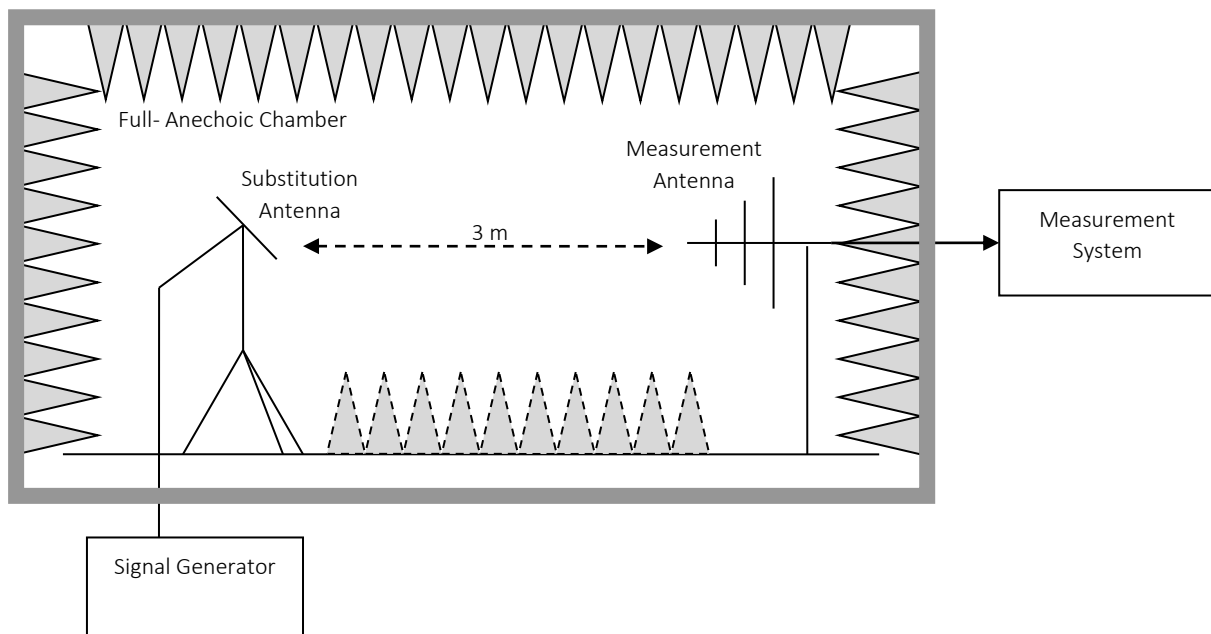
5.4.3 Test Setup 3

NOTE: Effective radiated power (ERP) and Equivalent Isotropic Radiated Power(EIRP) refers to the radiation power output of the EUT, assuming all emissions are radiated from half-wave dipole antennas.

5.4.3.1 Step 1: Pre-test



5.4.3.2 Step 2: Substitution method to verify the maximum ERP/EIRP



5.5 Test Conditions

| Test Case | | Test Conditions | |
|--|---|------------------|--|
| Transmit Output Power Data | Average Power, Total | Test Env. | Ambient Climate & Rated Voltage |
| | | Test Setup | Test Setup 1 |
| | | RF Channels (TX) | L, M, H (L= low channel, M= middle channel, H= high channel) |
| | | Test Mode | GSM/TM1,GSM/TM2,UMTS/TM1,LTE/TM1,LTE/TM2 |
| | Average Power, Spectral Density (if required) | Test Env. | Ambient Climate & Rated Voltage |
| | | Test Setup | Test Setup 1 |
| | | RF Channels (TX) | L, M, H (L= low channel, M= middle channel, H= high channel) |
| | | Test Mode | GSM/TM1,GSM/TM2,UMTS/TM1,LTE/TM1,LTE/TM2 |
| Peak-to-Average Ratio (if required) | | Test Env. | Ambient Climate & Rated Voltage |
| | | Test Setup | Test Setup 1 |
| | | RF Channels (TX) | L, M, H (L= low channel, M= middle channel, H= high channel) |
| | | Test Mode | GSM/TM1,GSM/TM2,UMTS/TM1,LTE/TM1,LTE/TM2 |
| Modulation Characteristics | | Test Env. | Ambient Climate & Rated Voltage |
| | | Test Setup | Test Setup 1 |
| | | RF Channels (TX) | M (L= low channel, M= middle channel, H= high channel) |
| | | Test Mode | GSM/TM1,GSM/TM2,UMTS/TM1,LTE/TM1,LTE/TM2 |
| Bandwidth | Occupied Bandwidth | Test Env. | Ambient Climate & Rated Voltage |
| | | Test Setup | Test Setup 1 |
| | | RF Channels (TX) | L, M, H (L= low channel, M= middle channel, H= high channel) |
| | | Test Mode | GSM/TM1,GSM/TM2,UMTS/TM1,LTE/TM1,LTE/TM2 |
| | Emission Bandwidth (if required) | Test Env. | Ambient Climate & Rated Voltage |
| | | Test Setup | Test Setup 1 |
| | | RF Channels (TX) | L, M, H (L= low channel, M= middle channel, H= high channel) |
| | | Test Mode | GSM/TM1,GSM/TM2,UMTS/TM1,LTE/TM1,LTE/TM2 |
| Band Edges Compliance | | Test Env. | Ambient Climate & Rated Voltage |
| | | Test Setup | Test Setup 1 |
| | | RF Channels (TX) | L, H (L= low channel, M= middle channel, H= high channel) |
| | | Test Mode | GSM/TM1,GSM/TM2,UMTS/TM1,LTE/TM1,LTE/TM2 |
| Spurious Emission at Antenna Terminals | | Test Env. | Ambient Climate & Rated Voltage |
| | | Test Setup | Test Setup 1 |
| | | RF Channels (TX) | L, M, H (L= low channel, M= middle channel, H= high channel) |

| Test Case | Test Conditions | |
|--------------------------------------|------------------|--|
| | Test Mode | GSM/TM1,GSM/TM2,UMTS/TM1,LTE/TM1,LTE/TM2 |
| Field Strength of Spurious Radiation | Test Env. | Ambient Climate & Rated Voltage |
| | Test Setup | Test Setup 3 |
| | Test Mode | GSM/TM1,GSM/TM2,UMTS/TM1/TM2/TM3,LTE/TM1,LTE/TM2 NOTE: If applicable, the EUT conf. that has maximum power density (based on the equivalent power level) is selected. |
| | RF Channels (TX) | L, M, H (L= low channel, M= middle channel, H= high channel) |
| Frequency Stability | Test Env. | (1) -30 °C to +50 °C with step 10 °C at Rated Voltage; (2) VL, VN and VH of Rated Voltage at Ambient Climate. |
| | Test Setup | Test Setup 2 |
| | RF Channels (TX) | L, M, H (L= low channel, M= middle channel, H= high channel) |
| | Test Mode | GSM/TM1,GSM/TM2,UMTS/TM1,LTE/TM1,LTE/TM2 |

6 Main Test Instruments

This table gives a complete overview of the RF measurement equipment.

Devices used during the test described are marked ☒

6.1 Current Test Project/Report

| Main Test Equipments(GSM/WCDMA/LTE test system) | | | | | |
|---|--------------|--------|----------------|------------|------------|
| Equipment Name | Manufacturer | Model | Serial Number | Cal Date | Cal-Due |
| Temperature Chamber | WEISS | WKL64 | 56246002940010 | 2018/10/24 | 2019/10/24 |
| Universal Radio Communication Tester | R&S | CMW500 | 159302 | 2018/07/23 | 2019/07/23 |
| Spectrum Analyzer | Agilent | N9030A | MY49431698 | 2018/07/23 | 2019/07/23 |
| Spectrum Analyzer | Keysight | N9040B | MY57212529 | 2018/06/28 | 2019/06/28 |
| Signal generator | Agilent | E8257D | MY51500314 | 2018/04/27 | 2019/04/27 |

| Main Test Equipments(RSE test system) | | | | | |
|---|---------------|-----------|---------------|------------|------------|
| Equipment Name | Manufacturer | Model | Serial Number | Cal Date | Cal-Due |
| Universal Radio Communication Tester | R&S | CMU200 | 117385 | 2018/05/08 | 2019/05/07 |
| Universal Radio Communication Tester | R&S | MT8821C | 6261760791 | 2018/04/02 | 2019/04/01 |
| Spectrum analyzer | R&S | FSU3 | 200474 | 2019/01/15 | 2020/01/14 |
| Spectrum analyzer | R&S | FSU43 | 100144 | 2019/01/15 | 2020/01/14 |
| Trilog Broadband Antenna (30M~3GHz) | SCHWARZ BECK | VULB 9163 | 9163-521 | 2018/04/09 | 2020/04/08 |
| Double-Ridged Waveguide Horn Antenna (1G~18GHz) | R&S | HF907 | 100304 | 2017/05/27 | 2019/05/26 |
| double ridged horn antenna (0.8G-18GHz) | R&S | HF907 | 100391 | 2017/7/20 | 2019/07/19 |
| Pyramidal Horn Antenna(18GHz-26.5GHz) | ETS-Lindgren | 3160-09 | 5140299 | 2017/07/20 | 2019/07/19 |
| Pyramidal Horn Antenna(26.5GHz-40GHz) | ETS-Lindgren | 3160-10 | 00205695 | 2018/04/20 | 2020/04/19 |
| Pyramidal Horn Antenna(26.5GHz-40GHz) | ETS-Lindgren | 3160-10 | LM5947 | 2017/07/20 | 2019/07/19 |
| Software Information | | | | | |
| Test Item | Software Name | | Manufacturer | Version | |
| RSE | EMC32 | | R&S | V8.40.0 | |

| Main Test Equipments(RE test system) |
|--------------------------------------|
|--------------------------------------|

| Equipment Name | Manufacturer | Model | Serial Number | Cal Date | Cal-Due |
|--|-----------------|-----------|---------------|------------|------------|
| Test receiver | R&S | ESU26 | 100387 | 2019/01/15 | 2020/01/14 |
| Test receiver | R&S | ESU26 | 100387 | 2019/01/15 | 2020/01/14 |
| LOOP Antennas(9kHz-30MHz) | R&S | HFH2-Z2 | 100262 | 2017/04/25 | 2019/04/25 |
| LOOP Antennas(9kHz-30MHz) | R&S | HFH2-Z2 | 100263 | 2017/04/25 | 2019/04/25 |
| Trilog Broadband Antenna (30M~3GHz) | SCHWARZ BECK | VULB 9163 | 9163-357 | 2017/04/21 | 2019/04/20 |
| Trilog Broadband Antenna (30M~3GHz) | SCHWARZ BECK | VULB 9163 | 9163-520 | 2017/3/29 | 2019/03/28 |
| Trilog Broadband Antenna (30M~3GHz) | SCHWARZ BECK | VULB 9163 | 9163-491 | 2017/3/29 | 2019/03/28 |
| Trilog Broadband Antenna (30M~3GHz) | SCHWARZ BECK | VULB 9163 | 9163-356 | 2018/4/9 | 2020/04/08 |
| Software Information | | | | | |
| Test Item | Software Name | | Manufacturer | Version | |
| RE | EMC32 | | R&S | V9.25.0 | |

7 Measurement Uncertainty

For a 95% confidence level ($k = 2$), the measurement expanded uncertainties for defined systems, in accordance with the recommendations of ISO 17025 as following:

| Test Item | | Extended Uncertainty |
|--------------------------------------|-------------------------|---|
| Transmit Output Power Conducted | Power [dBm] | U = 0.64 dB |
| RF Power Density, Conducted | Power [dBm] | U = 0.64 dB |
| Bandwidth | Magnitude [kHz] | 200kHz: U=9.06kHz 1.4MHz: U=9.48kHz 3MHz: U= 10.86kHz 5MHz: U=13.84kHz 10MHz: U=22.32kHz 15MHz: U=31.9kHz 20MHz: U=41.78kHz |
| Band Edge Compliance | Disturbance Power [dBm] | U = 0.9 dB |
| Spurious Emissions, Conducted | Disturbance Power [dBm] | 20MHz~3.6GHz: U=0.88dB 3.6GHz~8.4GHz: U=1.08dB 8.4GHz~13.6GHz: U=1.24dB 13.6GHz~22GHz: U=1.34dB 22GHz~26.5GHz: U=1.36dB |
| Field Strength of Spurious Radiation | ERP/EIRP [dBm] | For 3 m Chamber: U = 5.94 dB (30 MHz to 3GHz) U = 5.54 dB (3GHz to 18GHz) U = 4.94 dB (18GHz to 26.5GHz) |
| Frequency Stability | Frequency Accuracy [Hz] | 800MHz: U=24.08Hz 900MHz: U=24.54Hz 1900MHz: U=34.7Hz 2100MHz: U=36.96Hz 2300MHz: U=39.24Hz 2500MHz: U=41.58Hz 2600MHz: U=42.74Hz |

8 Appendixes

| Appendix No. | Description |
|---------------------------------|-------------------------------------|
| SYBH(Z-RF)20190219010002-2001-A | Appendix_for_GSM |
| SYBH(Z-RF)20190219010002-2001-B | Appendix_for_WCDMA |
| SYBH(Z-RF)20190219010002-2001-C | Appendix_for_LTE_Band_5 |
| SYBH(Z-RF)20190219010002-2001-D | Appendix_for_LTE_Band_7 |
| SYBH(Z-RF)20190219010002-2001-E | Appendix_for_LTE_Band_26(814-824) |
| SYBH(Z-RF)20190219010002-2001-F | Appendix_for_LTE_Band_26(824-849) |
| SYBH(Z-RF)20190219010002-2001-G | Appendix_for_LTE_Band_41(2545-2655) |

| Appendix | Description |
|------------|--|
| Appendix A | Effective (Isotropic) Radiated Power Output Data |
| Appendix B | Peak-Average Ratio |
| Appendix C | Modulation Characteristics |
| Appendix D | Bandwidth |
| Appendix E | Band Edges Compliance |
| Appendix F | Spurious Emission at Antenna Terminals |
| Appendix G | Field Strength of Spurious Radiation |
| Appendix H | Frequency Stability |

Note: For the RSE data we tested ant1&ant2, the data presented is all the antenna mode; the other items we tested all antenna modes, but the data presented is the worst antenna mode.

END