





Full

TEST REPORT

No. I18D00191-SRD04

For

Client: Shanghai Sunmi Technology Co.,Ltd.

Production: POS System

Model Name: L1320/L1322

Brand Name: SUNMI

FCC ID: 2AH25T2MINI

Hardware Version: V1.03

Software Version: MST2MINI_EQ000_2EE0.123BBE2.9530762_

180824_100_V01_T15

Issued date: 2018-12-25

Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of ECIT Shanghai.

The standards accredited by A2LA except ANSI/TIA-603-E and KDB 971168 D01.

Test Laboratory:

ECIT Shanghai, East China Institute of Telecommunications

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RF Test Report

Revision Version

Report No.: I18D00191-SRD04

| Report Number | Revision | Date | Memo |
|-----------------|----------|------------|---------------------------------|
| I18D00191-SRD04 | 00 | 2018-12-25 | Initial creation of test report |

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1. Test Laboratory

1.1. Testing Location

| Company Name: | ECIT Shanghai, East China Institute of Telecommunications | | | | | |
|---------------------|---|--|--|--|--|--|
| Address: | 7-8F, G Area, No. 668, Beijing East Road, Huangpu District, | | | | | |
| | Shanghai, P. R. China | | | | | |
| Postal Code: | 200001 | | | | | |
| Telephone: | (+86)-021-63843300 | | | | | |
| Fax: | (+86)-021-63843301 | | | | | |
| FCC registration No | 958356 | | | | | |

1.2. Testing Environment

| Normal Temperature: | 15-35℃ |
|----------------------|----------|
| Extreme Temperature: | -30/+50℃ |
| Relative Humidity: | 20-75% |

1.3. Project data

| Project Leader: | Zhou Yan |
|---------------------|------------|
| Testing Start Date: | 2018-09-25 |
| Testing End Date: | 2018-10-19 |

1.4. Signature

Yang Dejun

(Prepared this test report)

: 5 of 78

Shi Hongqi

(Reviewed this test report)

Zheng Zhongbin

(Approved this test report)



Address:

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2. Client Information

2.1. Applicant Information

Company Name: Shanghai Sunmi Technology Co.,Ltd.

Room 505, KIC Plaza, No.388 Song Hu Road, Yang Pu District, Shanghai,

Report No.: I18D00191-SRD04

China

Telephone: 8618721763396

Postcode: 200433

2.2. Manufacturer Information

Company Name: Shanghai Sunmi Technology Co.,Ltd.

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3. Equipment Under Test (EUT) and Ancillary Equipment (AE)

3.1. About EUT

| EUT Description | POS System |
|--------------------------|----------------------------------|
| Model name | L1320/L1322 |
| FCC ID | 2AH25T2MINI |
| GSM Frequency Band | GSM 850/GSM 1900 |
| UMTS Frequency Band | Band 2/5 |
| CDMA Frequency Band | BC 0 |
| LTE Frequency Band | Band 38/41 |
| Additional Communication | BT/BLE/2.4G WLAN b/g/n20/n40/NFC |
| Function | |
| Extreme Temperature | -30/+50℃ |
| Nominal Voltage | 24V |
| Extreme High Voltage | 25V |
| Extreme Low Voltage | 23V |

Note: Photographs of EUT are shown in ANNEX A of this test report.

3.2. Internal Identification of EUT used during the test

| EUT ID* | Model Name | SN or IMEI | HW | SW Version | Date of receipt |
|---------|------------|------------|---------|-----------------|-----------------|
| | | | Version | | |
| N02 | L1320 | 1 | V1.03 | MST2MINI_EQ00 | 2018-09-07 |
| | | | | 0_2EE0.123BBE2 | |
| | | | | .9530762_180824 | |
| | | | | _100_V01_T15 | |
| N01 | L1322 | 1 | V1.03 | MST2MINI_EQ00 | 2018-09-07 |
| | | | | 0_2EE0.123BBE2 | |
| | | | | .9530762_180824 | |
| | | | | _100_V01_T15 | |

^{*}EUT ID: is used to identify the test sample in the lab internally.

3.3. Internal Identification of AE used during the test

| AE ID* | Description | SN |
|--------|-------------|----|
| AE1 | RF cable | |

^{*}AE ID: is used to identify the test sample in the lab internally.

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3.4. Statements

The L1320/L1322, supporting GPRS/EDGE/WCDMA/CDMA/LTE/BT/WLAN/BLE/NFC, manufactured by Shanghai Sunmi Technology Co.,Ltd., which is a variant product for testing.

Note: The project has two prototypes, L1320 and L1322. In this report, we only tested the worse case of RSE, the other test cases please refer to the report No: I18D00189-SRD04, which was prepared by East China Institute of Telecommunications.

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ECIT has verified that the compliance of the tested device specified in section 5 of this test report is successfully evaluated according to the procedure and test methods as defined in type certification requirement listed in section 5 of this test report.



4. Reference Documents

4.1. Reference Documents for testing

The following documents listed in this section are referred for testing.

| Reference | Title | Version |
|----------------|--|------------|
| FCC Part 24 | PERSONAL COMMUNICATIONS SERVICES | 2017/10/01 |
| FCC Part 22 | PUBLIC MOBILE SERVICES | 2017/10/01 |
| FCC Part 2 | FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS | 2017/10/01 |
| ANSI-TIA-603-E | Land Mobile FM or PM Communications Equipment Measurement and Performance Standards | 2016 |
| ANSI C63.4 | Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz | 2014 |
| KDB 971168 D01 | Measurement Guidance for Certification of Licensed Digital Transmitters | v03 |

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5. SUMMARY OF TEST RESULTS

| Item | Test items | FCC rules | IC rules | result |
|------|--------------------------------|-------------------------|----------|--------|
| 1 | Output Power | 2.1046/22.913(a)/24.23 | 1 | Pass |
| 2 | Peak-to-Average | 24.232(d) | 1 | Pass |
| 3 | 99%Occupied | 2.1049(h)(i)/ 22.917(b) | 1 | Pass |
| 4 | -26dB Emission | 22.917(b)/§24.238(b) | 1 | Pass |
| 5 | Band Edge at antenna terminals | 22.917(a)/24.238(a) | 1 | Pass |
| 6 | Frequency stability | 2.1055/24.235 | 1 | Pass |
| 7 | Conducted Spurious mission | 2.1053/22.917(a)/24.23 | 1 | Pass |
| 8 | Emission Limit | 2.1051/22.917/24.238/ | 1 | Pass |



6. Test Equipment Utilized

Climate chamber

| No. | Equipment | Model | Serial Number | Manufactur er | Calibration date | Cal.interval |
|-----|-----------------|--------|------------------|------------------|------------------|--------------|
| 1 | Climate chamber | SH-641 | 92012011 | ESPEC | 2017-12-25 | 2 Year |

Radiated emission test system

The test equipment and ancillaries used are as follows.

| No. | Equipment | Model | Serial Number | Manufactur er | Calibration date | Cal.interval |
|-----|--|--------------|------------------|------------------|---------------------|--------------|
| 1 | Universal Radio Communicatio n Tester | CMU20 0 | 123123 | R&S | 2018-05-11 | 1 Year |
| 2 | EMI Test Receiver | ESU40 | 100307 | R&S | 2018-05-11 | 1 Year |
| 3 | TRILOG Broadband Antenna | VULB9 163 | VULB9163- 515 | Schwarzbec k | 2017-02-25 | 3 Year |
| 4 | Double- ridged Waveguide Antenna | ETS-31 17 | 00135890 | ETS | 2017-01-11 | 3 Year |
| 5 | 2-Line V-Network | ENV21 6 | 101380 | R&S | 2018-05-11 | 1 Year |
| 6 | Substitution A ntenna | ETS-31 17 | 00135890 | ETS | 2017-01-11 | 3 Year |
| 7 | RF Signal Generator | SMF10 0A | 102314 | R&S | 2018-05-11 | 1 Year |
| 8 | Substitution A ntenna | VUBA9 117 | 9117-266 | Schwarzbec k | 2017-11-18 | 3 Year |
| 9 | Amplifier | SCU08 | 10146 | R&S | 2018-05-11 | 1 Year |

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Conducted test system

| No. | Name | Type | SN | Manufacture | Calibratio n date | Cal.interval |
|-----|----------------------------------|--------------|----------------------|-------------|----------------------|--------------|
| 1 | Spectrum Analyzer | FSQ26 | 101096 | R&S | 2018-05-11 | 1 Year |
| 2 | Universal Radio Communicat | CMU200 | 123124 | R&S | 2018-05-11 | 1 Year |
| 3 | DC Power Supply | ZUP60-1 4 | LOC-220Z006 -0007 | TDL-Lambda | 2018-05-11 | 1 Year |



7. Test Environment

Shielding Room1 (6.0 meters×3.0 meters×2.7 meters) did not exceed following limits along the conducted RF performance testing:

| Temperature | Min. = 15 ℃, Max. = 35 ℃ | | |
|--------------------------|--------------------------|--|--|
| Relative humidity | Min. = 20 %, Max. = 75 % | | |
| Shielding effectiveness | > 100 dB | | |
| Ground system resistance | < 0.5 | | |

Control room did not exceed following limits along the EMC testing:

| Temperature | Min. = 15 ℃, Max. = 35 ℃ | |
|--------------------------|--------------------------|--|
| Relative humidity | Min. =25 %, Max. = 75 % | |
| Shielding effectiveness | > 100 dB | |
| Electrical insulation | > 10 k | |
| Ground system resistance | < 0.5 | |

Fully-anechoic chamber1 (6.9 meters×10.9 meters×5.4 meters) did not exceed following limits along the EMC testing:

| Temperature | Min. = 15 °C, Max. = 35 °C | |
|------------------------------|--|--|
| Relative humidity | Min. = 25 %, Max. = 75 % | |
| Shielding effectiveness | > 100 dB | |
| Electrical insulation | > 10 k | |
| Ground system resistance | < 0.5 | |
| VSWR | Between 0 and 6 dB, from 1GHz to 18GHz | |
| Site Attenuation Deviation | Between -4 and 4 dB,30MHz to 1GHz | |
| Uniformity of field strength | Between 0 and 6 dB, from 80MHz to 3000 MHz | |

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8. Test Environment

Measurement uncertainty for all the testing in this report are within the limit specified in ECIT documents. The detailed measurement uncertainty to see the column, k=2

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| Measurement Items | Range | Confide nce Level | Calculated Uncertainty |
|---|------------------------|-------------------|---------------------------|
| Maximum Peak Output Power | 30MHz-3600MHz | 95% | \pm 0.88db |
| EBW and VBW | 30MHz-3600MHz | 95% | ±0.031MHz |
| Transmitter Spurious Emission-Conducted | 9KHz-10000MHz | 95% | ±4.56db |
| Transmitter Spurious Emission-Conducted | 10000 MHz -40000MHz | 95% | \pm 5.34db |
| Transmitter Spurious Emission-Radiated | 9KHz-30MHz | 95% | \pm 5.66db |
| Transmitter Spurious Emission-Radiated | 30MHz-1000MHz | 95% | \pm 4.98db |
| Transmitter Spurious Emission-Radiated | 1000MHz -18000MHz | 95% | \pm 5.06db |
| Transmitter Spurious Emission-Radiated | 18000MHz -40000MHz | 95% | \pm 5.20db |
| Frequency stability | 1MHz-16GHz | 95% | 10KHz |

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ANNEX A. MEASUREMENT RESULTS

ANNEX A.1. **OUTPUT POWER**

A.1.1. Summary

During the process of testing, the EUT was controlled Rhode & Schwarz Digital Radio.

Communication tester (CMU-200) to ensure max power transmission and proper modulation.

This result contains peak output power and EIRP measurements for the EUT. In all cases, output power is within the specified limits.

A.1.2. Conducted

A.1.2.1. Method of Measurements

Method of measurements please refer to KDB971168 D01 v03 clause 5.

The EUT was set up for the max output power with pseudo random data modulation.

The power was measured with Rhode & Schwarz Spectrum Analyzer FSQ(peak).

These measurements were done at 3 frequencies, 1850.2 MHz, 1880.0MHz and 1909.8MHz for PCS1900 band; 824.2MHz, 836.6MHz and 848.8MHz for GSM850 band. (bottom, middle and top of operational frequency range).

These measurements were done at 3 frequencies, 1852.4 MHz, 1880.0MHz and 1907.6MHz for WCDMA Band II; 826.4MHz, 836.6MHz and 846.6MHz for WCDMA Band V. (bottom, middle and top of operational frequency range).

A.1.2.2 Test procedures:

- 1. The transmitter output port was connected to base station.
- 2. Set the EUT at maximum power through base station.
- 3. Select lowest, middle, and highest channels for each band and different modulation.
- 4. Measure the maximum burst average power for GSM and maximum average power for other modulation signal.

A.1.2.3 Limit:

22.913(a) Mobile stations are limited to 7watts.

24.232(c) Mobile and portable stations are limited to 2 watts.

A.1.2.4 Test Procedure:

The transmitter output power was connected to calibrated attenuator, the other end of which was connected to signal analyzer. Transmitter output power was read off the power in dBm. The power outputs at the transmitter antenna port was determined by adding the value of attenuator to the signal analyzer reading.

A.1.2.5 GSM Test Condition:

| RBW | VBW | Sweep time | Span |
|------|-------|------------|-------|
| 3MHz | 10MHz | Auto | 50MHz |

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A.1.2.6 WCDMA Test Condition:

| RBW | VBW | Sweep time | Span |
|-------|-------|------------|-------|
| 10MHz | 30MHz | Auto | 50MHz |

A.1.2.7 Measurement results:

| GPRS 850 (GMSK 1 Slot) | | | |
|------------------------|------------------|----------------|--|
| Channel/fc(MHz) | Peak power (dBm) | AV power (dBm) | |
| Mid 189/836.4 | 33.39 | 32.92 | |
| Low 128/824.2 | 33.43 | 33.01 | |
| High 251/848.8 | 33.52 | 33.13 | |
| EDGE 850 (| 8PSK 1 Slot) | | |
| Channel/fc(MHz) | Peak power (dBm) | AV power (dBm) | |
| Mid 189/836.4 | 29.81 | 26.43 | |
| Low 128/824.2 | 29.79 | 26.52 | |
| High 251/848.8 | 29.9 | 26.65 | |

| GPRS 1900 (GMSK 1 Slot) | | | | | |
|-------------------------|-------------------------|----------------|--|--|--|
| Channel/fc(MHz) | Peak power (dBm) | AV power (dBm) | | | |
| Mid 661/1880 | 30.02 | 29.6 | | | |
| Low 512/1850.2 | 30.04 | 29.65 | | | |
| High 810/1909.8 | 29.75 | 29.43 | | | |
| EDGE 1900 | EDGE 1900 (8PSK 1 Slot) | | | | |
| Channel/fc(MHz) | Peak power (dBm) | AV power (dBm) | | | |
| Mid 661/1880 | 28.93 | 25.54 | | | |
| Low 512/1850.2 | 28.82 | 25.41 | | | |
| High 810/1909.8 | 28.84 | 25.44 | | | |

| WCDMA II |
|----------|

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| Channel/fc(MHz) | Peak power (dBm) | AV power (dBm) | | | |
|------------------|------------------|----------------|--|--|--|
| Mid 9400 /1880 | 25.65 | 22.82 | | | |
| Low 9262/1852.4 | 25.87 | 22.70 | | | |
| High 9538/1907.6 | 25.80 | 22.78 | | | |
| WCDMA | WCDMA BAND V | | | | |
| Channel/fc(MHz) | Peak power (dBm) | AV power (dBm) | | | |
| Mid 4183/836.6 | 27.08 | 23.65 | | | |
| Low 4132/826.4 | 27.20 | 23.73 | | | |
| High 4233/846.6 | 26.87 | 23.42 | | | |
| | | | | | |

Conclusion: PASS

ANNEX A.2. Peak-to-Average Power Ratio

Method of test measurements please refer to KDB971168 D01 v03 clause 5.7.

A.2.1 PAPR Limit

The peak-to-average power ratio (PAPR) of the transmission may not exceed 13dB

A.2.2 Test procedures

- 1. The EUT was connected to the spectrum analyzer and system simulator via a power divider.
- 2.
- 1) Select the spectrum analyzer CCDF function.
- 2) Set RBW ≥ signal's occupied bandwidth.
- 3) Set the number of counts to a value that stabilizes the measured CCDF cure;
- 4) Sweep time \geq 1s.
- 3. Record the maximum PAPR level associated with a probability of 0.1%.

A.2.3 Test results:

| GPRS850 | | | |
|-----------------|-------|-------|-------|
| Channel | 128 | 189 | 251 |
| Frequency (MHz) | 824.2 | 836.4 | 848.8 |
| PAPR(dB) | 10.32 | 10.39 | 7.96 |
| EDGE850 | | | |
| Channel | 128 | 189 | 251 |

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| Frequency (MHz) | 824.2 | 836.4 | 848.8 |
|-----------------|-------|-------|-------|
| PAPR(dB) | 10.34 | 10.39 | 7.54 |

| GPRS1900 | | | |
|-----------------|--------|-------|--------|
| Channel | 512 | 661 | 810 |
| Frequency (MHz) | 1850.2 | 1880 | 1909.8 |
| PAPR(dB) | 10.38 | 10.31 | 8.32 |
| EDGE1900 | | | |
| Channel | 512 | 661 | 810 |
| Frequency (MHz) | 1850.2 | 1880 | 1909.8 |
| PAPR(dB) | 10.35 | 10.34 | 8.41 |

| | WCDMA Band II | | |
|-----------------|---------------|-------|--------|
| Channel | 9262 | 9400 | 9538 |
| Frequency (MHz) | 1852.4 | 1880 | 1907.6 |
| PAPR(dB) | 5.77 | 5.45 | 5.77 |
| WCDMA Band V | | | |
| Channel | 4132 | 4183 | 4233 |
| Frequency (MHz) | 826.4 | 836.4 | 846.6 |
| PAPR(dB) | 4.17 | 4.13 | 4.78 |

Conclusion: PASS

ANNEX A.3. Occupied Bandwidth

Method of test please refer to KDB971168 D01 v03 clause 4.0.

A.3.1. Occupied Bandwidth

Similar to conducted emissions; occupied bandwidth measurements are only provided for selected frequencies in order to reduce the amount of submitted data. Data were taken at the extreme and mid frequencies of GSM850, PCS1900, WCDMA BANDII and WCDMA BANDV.

A.3.2 Test Procedure:

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- 2. RBW was set to about 1% of emission BW, VBW >= 3 times RBW,.
- 3. 99% bandwidth were measured, the occupied bandwidth is delta frequency between the two points where the display line intersects the signal trace.

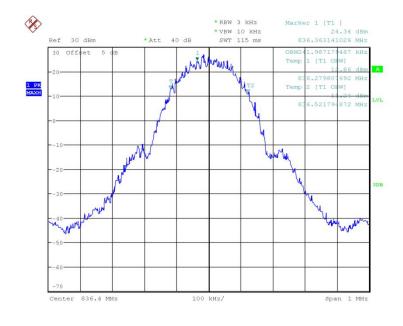
The EUT output RF connector was connected with a short cable to the signal analyzer.

A.3.3 Test result:

| | GPRS850 | |
|--------------|-----------------|--------------------------------|
| Test channel | Frequency (MHz) | 99% Occupied Bandwidth(kHz) |
| Mid 189 | 836.4 | 245.192 |
| Low 128 | 824.2 | 243.59 |
| High 251 | 848.8 | 243.59 |
| | EDGE850 | |
| Test channel | Frequency (MHz) | 99% Occupied Bandwidth(kHz) |
| Mid 189 | 836.4 | 243.59 |
| Low 128 | 824.2 | 240.385 |
| High 251 | 848.8 | 245.192 |

Conclusion: PASS

GPRS 850

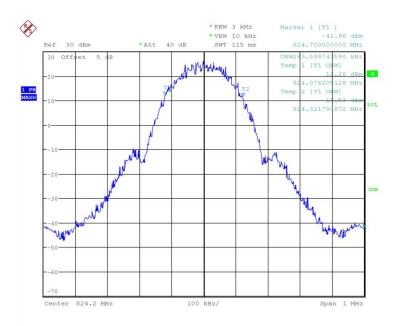


Date: 25.SEP.2018 04:03:09

Fig.1 Channel 189-Occupied Bandwidth (99%)

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Date: 25.SEP.2018 04:03:56

Fig.2 Channel 128-Occupied Bandwidth (99%)



Fig.3 Channel 251-Occupied Bandwidth (99%)

EDGE 850

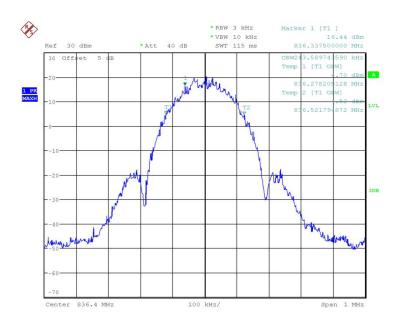




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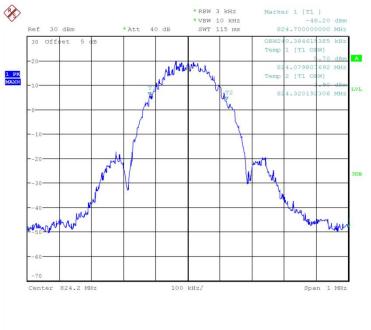
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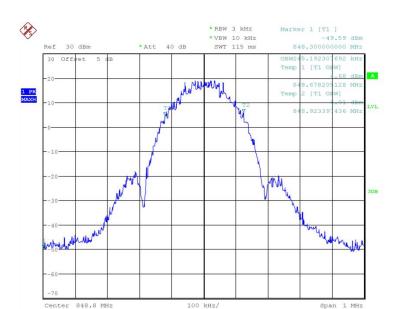
Fig.4 Channel 189-Occupied Bandwidth (99%)



Date: 25.SEP.2018 04:08:25

Fig.5 Channel 128-Occupied Bandwidth (99%)





Date: 25.SEP.2018 04:09:13

Fig.6 Channel 251-Occupied Bandwidth (99%)

| GPRS1900 | | | |
|--------------|-----------------|-----------------------------|--|
| Test channel | Frequency (MHz) | 99% Occupied Bandwidth(kHz) | |
| Mid 661 | 1880 | 246.795 | |
| Low 512 | 1850.2 | 245.192 | |
| High 810 | 1909.8 | 246.795 | |
| | EDGE1900 | | |
| Test channel | Frequency (MHz) | 99% Occupied Bandwidth(kHz) | |
| Mid 661 | 1880 | 243.59 | |
| Low 512 | 1850.2 | 243.59 | |
| High 810 | 1909.8 | 246.795 | |

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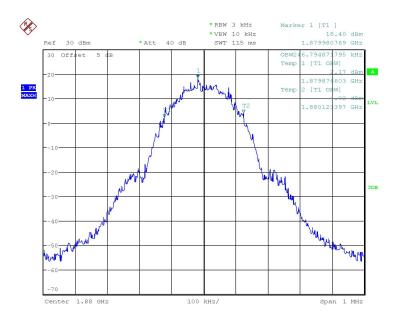
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Conclusion: PASS

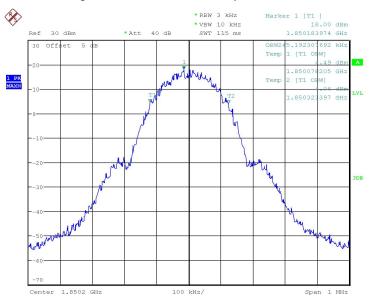
GPRS 1900





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Fig.7 Channel 661-Occupied Bandwidth

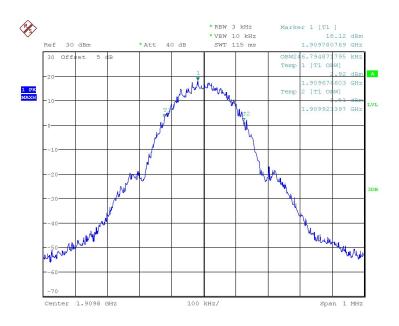


Date: 26.SEP.2018 08:29:46

Fig.8 Channel 512-Occupied Bandwidth

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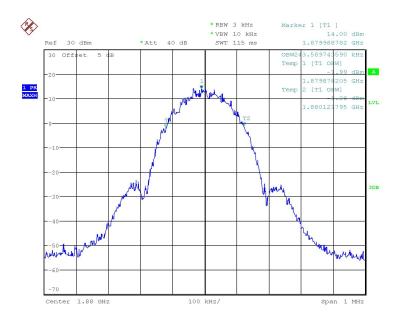




Date: 26.SEP.2018 08:30:43

Fig.9 Channel 810-Occupied Bandwidth

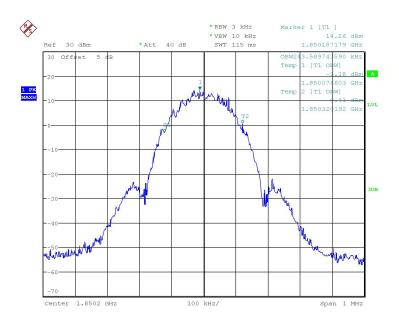
EDGE 1900



Date: 26.SEP.2018 08:38:35

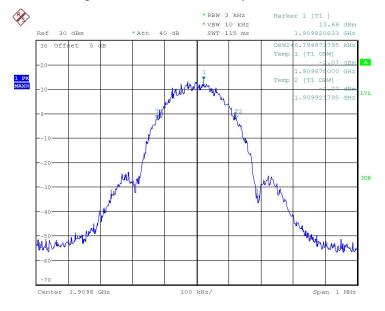
Fig.10 Channel 661-Occupied Bandwidth





Date: 26.SEP.2018 08:40:10

Fig.11 Channel 512-Occupied Bandwidth



Date: 26.SEP.2018 08:40:57

Fig.12 Channel 810-Occupied Bandwidth

| WCDMA BAND II | | |
|---------------|-----------------|--------------------------------|
| Test channel | Frequency (MHz) | 99% Occupied Bandwidth(MHz) |
| Mid 9400 | 1880 | 4.151 |
| Low 9262 | 1852.4 | 4.151 |

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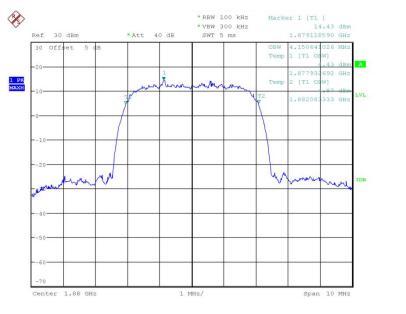
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High 9538 1907.6 4.151

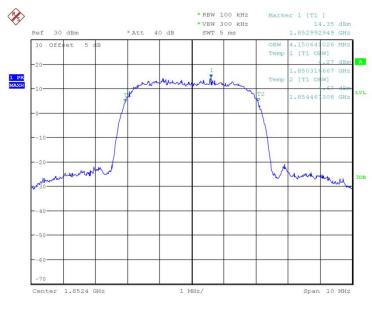
Report No.: I18D00191-SRD04

Conclusion: PASS WCDMA BAND II



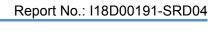
Date: 25.SEP.2018 05:38:03

Fig.13 Channel 9400-Occupied Bandwidth



Date: 25.SEP.2018 05:39:05

Fig.14 Channel 9262-Occupied Bandwidth



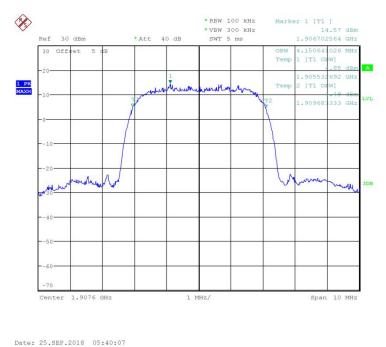


Fig.15 Channel 9538-Occupied Bandwidth

| WCDMA BAND V | | |
|--------------|-----------------|--------------------------------|
| Test channel | Frequency (MHz) | 99% Occupied Bandwidth(MHz) |
| Mid 4183 | 836.6 | 4.135 |
| Low 4132 | 826.4 | 4.119 |
| High 4233 | 846.6 | 4.119 |

Page Number

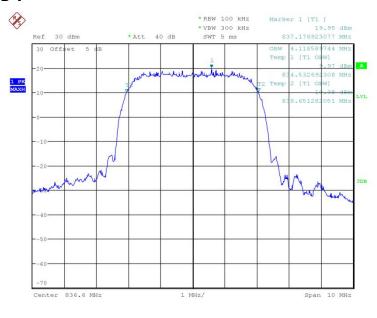
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Conclusion: PASS



WCDMA BAND V



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Fig.16 Channel 4183-Occupied Bandwidth

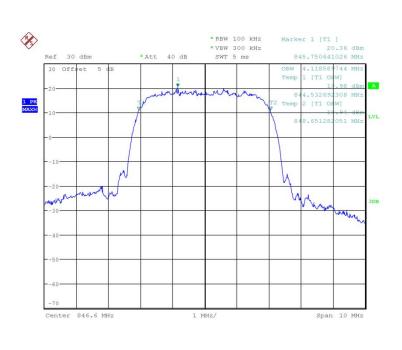


Date: 25.SEP.2018 05:42:23

Fig.17 Channel 4132-Occupied Bandwidth

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Fig.18 Channel 4233-Occupied Bandwidth

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ANNEX A.4. -26dB Emission Bandwidth

Method of test please refer to KDB971168 D01 v03 clause 4.0.

A.4.1. -26dB Emission Bandwidth

Similar to conducted emissions; occupied bandwidth measurements are only provided for selected frequencies in order to reduce the amount of submitted data. Data were taken at the extreme and mid frequencies of GSM850, PCS1900, WCDMA BANDII and WCDMA BANDV.

A.4.2 Test Procedure:

- 1. The EUT output RF connector was connected with a short cable to the signal analyzer.
- RBW was set to about 1% of emission BW, VBW >= 3 times RBW,.
- 3. 26dB bandwidth were measured, the occupied bandwidth is delta frequency between the two points where the display line intersects the signal trace.

A.4.3 Measurement methods:

For GSM: signal analyzer setting as: RBW=3KHz;VBW=10KHz;Span=1MHz.

For WCDMA: signal analyzer setting as: RBW=50KHz;VBW=200KHz;Span=10MHz.

A.4.4 Test results:

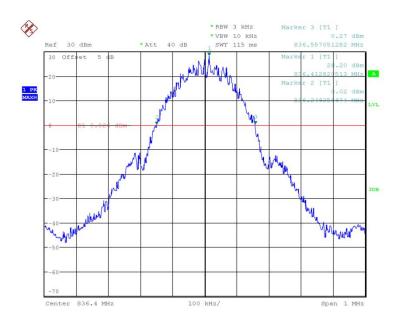
| GPRS 850 | | | |
|--------------|-----------------|-----------------------------------|--|
| Test channel | Frequency (MHz) | –26dBc Emission Bandwidth(kHz) | |
| Mid 189 | 836.4 | 307.692 | |
| Low 128 | 824.2 | 312.5 | |
| High 251 | 848.8 | 307.692 | |
| EDGE 850 | | | |
| Test channel | Frequency (MHz) | –26dBc Emission Bandwidth(kHz) | |
| Mid 189 | 836.4 | 309.295 | |
| Low 128 | 824.2 | 310.897 | |
| High 251 | 848.8 | 306.09 | |

Conclusion: PASS

GPRS 850

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Fig.19 Channel 189- Emission Bandwidth (-26dBc BW)

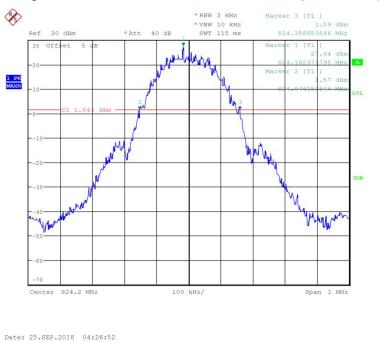
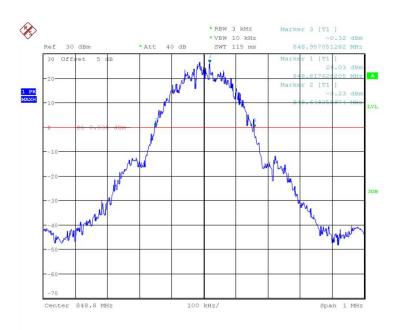


Fig.20 Channel 128- Emission Bandwidth (-26dBc BW)

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Fig.21 Channel 251- Emission Bandwidth (-26dBc BW)

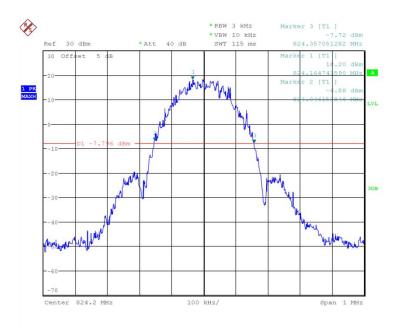
EDGE 850



Fig.22 Channel 189- Emission Bandwidth (-26dBc BW)

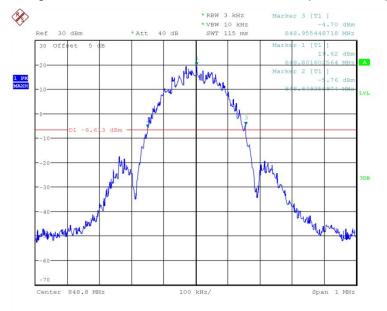
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Fig.23 Channel 128- Emission Bandwidth (-26dBc BW)



Date: 25.SEP.2018 04:31:15

Fig.24 Channel 251- Emission Bandwidth (-26dBc BW)

| 1.9.2.1 | | | |
|--------------|-----------------|-----------------------------------|--|
| GPRS1900 | | | |
| Test channel | Frequency (MHz) | –26dBc Emission Bandwidth(kHz) | |
| Mid 661 | 1880 | 310.897 | |
| Low 512 | 1850.2 | 312.5 | |

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| High 810 | 1909.8 | 318.91 |
|--------------|-----------------|-----------------------------------|
| | | |
| Test channel | Frequency (MHz) | –26dBc Emission Bandwidth(kHz) |
| Mid 661 | 1880 | 306.09 |
| Low 512 | 1850.2 | 302.885 |
| High 810 | 1909.8 | 309.295 |

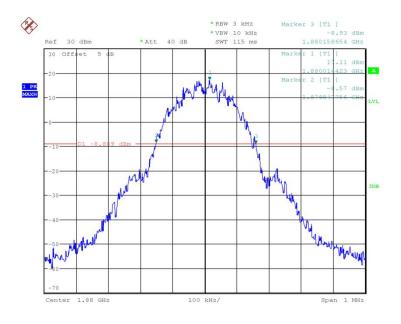
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Conclusion: PASS

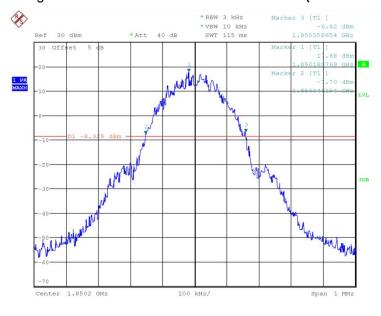


GPRS 1900



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Fig.25 Channel 661- Emission Bandwidth (-26dBc BW)

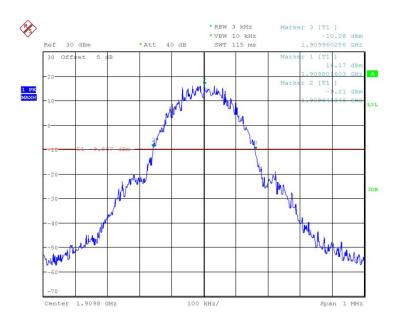


Date: 25.SEP.2018 04:38:19

Fig.26 Channel 512- Emission Bandwidth (-26dBc BW)

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Fig.27 Channel 810- Emission Bandwidth (-26dBc BW)

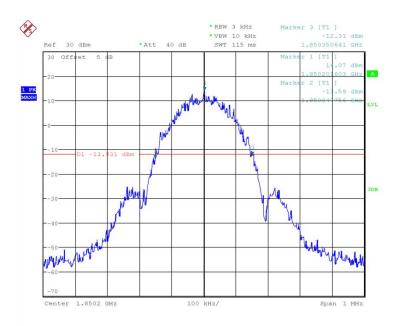
EDGE 1900



Fig.28 Channel 661- Emission Bandwidth (-26dBc BW)

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Fig.29 Channel512- Emission Bandwidth (-26dBc BW)

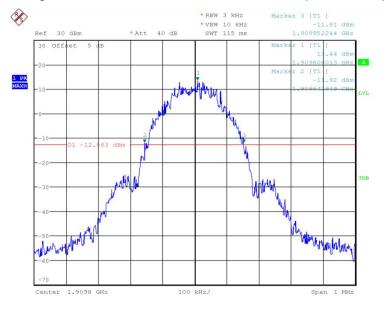


Fig.30 Channel 810- Emission Bandwidth (-26dBc BW)

| | WCDMA BAND II | |
|--------------|-----------------|-----------------------------------|
| Test channel | Frequency (MHz) | –26dBc Emission Bandwidth(MHz) |
| Mid 9400 | 1880 | 4.728 |

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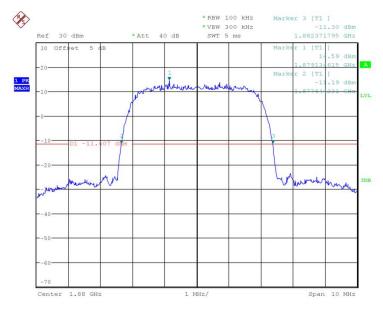
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| Low 9262 | 1852.4 | 4.744 |
|-----------|--------|-------|
| High 9538 | 1907.6 | 4.728 |

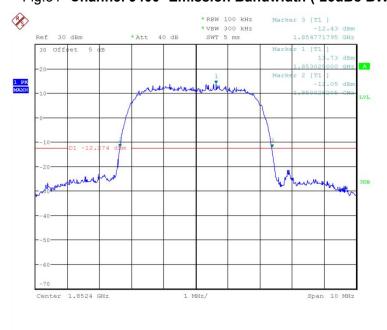
Conclusion: PASS

WCDMA BAND II



Date: 26.SEP.2018 07:40:21

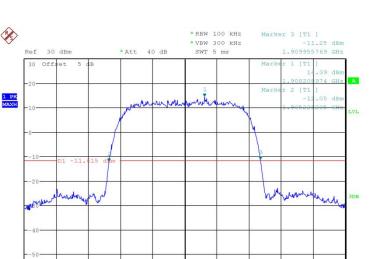
Fig.31 Channel 9400- Emission Bandwidth (-26dBc BW)



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Fig.32 Channel 9262- Emission Bandwidth (-26dBc BW)

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Center 1.9076 GHz

Fig.33 Channel 9538- Emission Bandwidth (-26dBc BW)

Span 10 MHz

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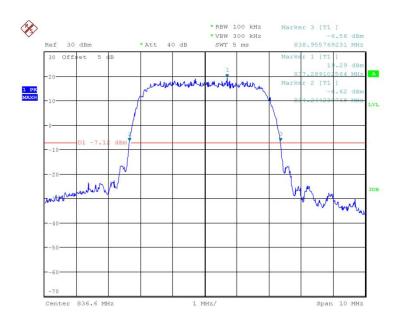
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| WCDMA BAND V | | | |
|--------------|-----------------|-----------------------------------|--|
| Test channel | Frequency (MHz) | –26dBc Emission Bandwidth(MHz) | |
| Mid 4183 | 836.6 | 4.712 | |
| Low 4132 | 826.4 | 4.712 | |
| High 4233 | 846.6 | 4.696 | |

Conclusion: PASS

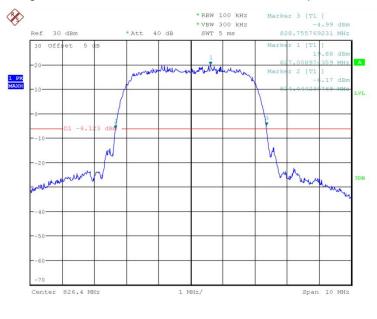
WCDMA BAND V





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Fig.34 Channel 4183- Emission Bandwidth (-26dBc BW)



Date: 26.SEP.2018 07:42:34

Fig.35 Channel4132- Emission Bandwidth (-26dBc BW)

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