



RADIO TEST REPORT

For

Shenzhen Huafului Technology Co., Ltd.

Smartphone

Test Model: KINGKONG STAR 2

Prepared for : Shenzhen Huafului Technology Co., Ltd.
Address : Unit 601-03, 6/F, Block A, Building 1, Ganfeng Technology Building, No. 993 Jiaxian Road, Xiangjiaotang Community, Bantian Street, Longgang District, Shenzhen, P.R. China

Prepared by : Shenzhen LCS Compliance Testing Laboratory Ltd.
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Date of receipt of test sample : July 17, 2024
Number of tested samples : 2
Sample No. : A240711041-1, A240711041-2
Serial number : Prototype
Date of Test : July 17, 2024 ~ August 22, 2024
Date of Report : August 23, 2024



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| RADIO TEST REPORT | |
|---|--|
| ETSI EN 301 908-1 V15.2.1 (2023-01)&ETSI EN 301 908-2 V13.1.1 (2020-06) | |
| Report Reference No. | LCSA07124057EI |
| Date of Issue | August 23, 2024 |
| Testing Laboratory Name | Shenzhen LCS Compliance Testing Laboratory Ltd. |
| Address | Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Bao'an District, Shenzhen, Guangdong, China |
| Testing Location/ Procedure | Full application of Harmonised standards <input checked="" type="checkbox"/> Partial application of Harmonised standards <input type="checkbox"/> Other standard testing method <input type="checkbox"/> |
| Applicant's Name | Shenzhen Huafurui Technology Co., Ltd. |
| Address | Unit 601-03, 6/F, Block A, Building 1, Ganfeng Technology Building, No. 993 Jiaxian Road, Xiangjiaotang Community, Bantian Street, Longgang District, Shenzhen, P.R. China |
| Test Specification | |
| Standard | ETSI EN 301 908-1 V15.2.1 (2023-01) ETSI EN 301 908-2 V13.1.1 (2020-06) |
| Test Report Form No | TRF-4-E-141 A/0 |
| TRF Originator | Shenzhen LCS Compliance Testing Laboratory Ltd. |
| Master TRF | Dated 2017-06 |
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| Test Item Description : Smartphone | |
| Trade Mark | CUBOT |
| Test Model | KINGKONG STAR 2 |
| Ratings | Please Refer to Page 6 |
| Result | Positive |

Compiled by:

Martin Lee/ Administrator

Supervised by:

Cary Luo/ Technique principal

Approved by:

Gavin Liang/ Manager



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RADIO -- TEST REPORT

| | |
|---|---|
| Test Report No. : LCSA07124057EI | August 23, 2024 Date of issue |
|---|---|

| | |
|--------------------------|--|
| Test Model..... | : KINGKONG STAR 2 |
| EUT..... | : Smartphone |
| Applicant..... | : Shenzhen Huafurui Technology Co., Ltd. |
| Address..... | : Unit 601-03, 6/F, Block A, Building 1, Ganfeng Technology Building, No. 993 Jiaxian Road, Xiangjiaotang Community, Bantian Street, Longgang District, Shenzhen, P.R. China |
| Telephone..... | : / |
| Fax..... | : / |
| Manufacturer..... | : Shenzhen Huafurui Technology Co., Ltd. |
| Address..... | : Unit 601-03, 6/F, Block A, Building 1, Ganfeng Technology Building, No. 993 Jiaxian Road, Xiangjiaotang Community, Bantian Street, Longgang District, Shenzhen, P.R. China |
| Telephone..... | : / |
| Fax..... | : / |
| Factory..... | : Shenzhen Huafurui Technology Co., Ltd. |
| Address..... | : Unit 601-03, 6/F, Block A, Building 1, Ganfeng Technology Building, No. 993 Jiaxian Road, Xiangjiaotang Community, Bantian Street, Longgang District, Shenzhen, P.R. China |
| Telephone..... | : / |
| Fax..... | : / |

| | |
|--------------------|-----------------|
| Test Result | Positive |
|--------------------|-----------------|

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



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Revision History

| Report Version | Issue Date | Revision Content | Revised By |
|----------------|-----------------|------------------|------------|
| 000 | August 23, 2024 | Initial Issue | --- |
| | | | |
| | | | |



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1. GENERAL INFORMATION

1.1. Product Description for Equipment Under Test (EUT)

| | |
|---------------------|--|
| EUT | : Smartphone |
| Test Model | : KINGKONG STAR 2 |
| Ratings | : Input: DC 5.0V, 3.0A For AC Adapter Input: 100-240V~, 50/60Hz, 0.8A Adapter Output: 5.0V=3.0A 15.0W OR 9.0V=3.0A 27.0W OR 12.0V=2.75A 33.0W MAX DC 3.87V by Rechargeable Li-ion Battery, 5100mAh |
| Hardware Version | : G3331P-ME-V1.0 |
| Software Version | : CUBOT_KINGKONG STAR 2_E031C_V01 |
| Bluetooth | : |
| Frequency Range | : 2402MHz~2480MHz |
| Channel Number | : 79 channels for Bluetooth V5.3 (BDR/EDR) 40 channels for Bluetooth V5.3 (BT LE/ BT 2LE) |
| Channel Spacing | : 1MHz for Bluetooth V5.3 (BDR/EDR) 2MHz for Bluetooth V5.3 (BT LE/ BT 2LE) |
| Modulation Type | : GFSK, $\pi/4$ -DQPSK, 8-DPSK for Bluetooth V5.3 (BDR/EDR) GFSK for Bluetooth V5.3 (BT LE/ BT 2LE) |
| Bluetooth Version | : V5.3 |
| Antenna Description | : FPC Antenna, 0.33dBi(Max.) |
| WIFI(2.4G Band) | : |
| Frequency Range | : 2412MHz~2472MHz |
| Channel Spacing | : 5MHz |
| Channel Number | : 13 Channel for 20MHz bandwidth(2412~2472MHz) 9 channels for 40MHz bandwidth(2422~2462MHz) |
| Modulation Type | : 802.11b: DSSS (CCK, DQPSK, DBPSK) 802.11g/n: OFDM (64QAM, 16QAM, QPSK, BPSK) 802.11ax: OFDM (1024QAM, 256QAM, 64QAM, 16QAM, QPSK, BPSK) |
| Antenna Description | : Ant6: FPC Antenna, 0.33dBi(Max.) Ant7: FPC Antenna, 0.33dBi(Max.) |
| WIFI(5.2G Band) | : |
| Frequency Range | : 5180MHz~5240MHz |
| Channel Number | : 4 channels for 20MHz bandwidth(5180~5240MHz) 2 channels for 40MHz bandwidth(5190~5230MHz) 1 channels for 80MHz bandwidth(5210MHz) |



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Modulation Type : 802.11a/n: OFDM (64QAM, 16QAM, QPSK, BPSK)
802.11ac: OFDM (256QAM, 64QAM, 16QAM, QPSK, BPSK)
802.11ax: OFDM (1024QAM, 256QAM, 64QAM, 16QAM, QPSK, BPSK)

Antenna Description : Ant6: FPC Antenna, -1.07dBi(Max.)
Ant7: FPC Antenna, -1.07dBi(Max.)

WIFI(5.8G Band) :

Frequency Range : 5745MHz~5825MHz

Channel Number : 5 channels for 20MHz bandwidth(5745~5825MHz)
2 channels for 40MHz bandwidth(5755~5795MHz)
1 channels for 80MHz bandwidth(5775MHz)

Modulation Type : 802.11a/n: OFDM (64QAM, 16QAM, QPSK, BPSK)
802.11ac: OFDM (256QAM, 64QAM, 16QAM, QPSK, BPSK)
802.11ax: OFDM (1024QAM, 256QAM, 64QAM, 16QAM, QPSK, BPSK)

Antenna Description : Ant6: FPC Antenna, -0.66dBi(Max.)
Ant7: FPC Antenna, -0.66dBi(Max.)

2G :

Support Band : ☒ GSM 900 (EU-Band) ☒ DCS 1800 (EU-Band)
☒ GSM 850 (U.S.-Band) ☒ PCS 1900 (U.S.-Band)

Release Version : R99

GPRS Class : Class 12

EGPRS Class : Class 12

Uplink : GSM 900: 880MHz~915MHz
DCS 1800: 1710MHz~1785MHz

Downlink : GSM 900: 925MHz~960MHz
DCS 1800: 1805MHz~1880MHz

Type Of Modulation : GMSK for GSM/GPRS; GMSK/8PSK for EGPRS

Antenna Description : Ant0: FPC Antenna
-2.34dBi (max.) For GSM 900
-1.18dBi (max.) For DCS 1800

Power Class : GSM 900: Level 5, DCS 1800: Level 0
EGPRS 900: Level 8, EGPRS 1800: Level 2

3G :

Support Band : ☒ WCDMA Band I (EU-Band)
☒ WCDMA Band VIII (EU-Band)

Release Version : R8

Uplink : WCDMA Band I: 1920MHz~1980MHz
WCDMA Band VIII: 880MHz~915MHz

Downlink : WCDMA Band I: 2110MHz~2170MHz
WCDMA Band VIII: 925MHz~960MHz



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Type Of Modulation : QPSK/16QAM

Antenna Description : Ant0: FPC Antenna
0.46dBi (max.) For WCDMA Band I
-2.34dBi (max.) For WCDMA Band VIII

Power Class : Level 3

LTE :

Support Band : ☒ E-UTRA Band 1(EU-Band)
☒ E-UTRA Band 3(EU-Band)
☒ E-UTRA Band 7(EU-Band)
☒ E-UTRA Band 8(EU-Band)
☒ E-UTRA Band 20(EU-Band)
☒ E-UTRA Band 28(EU-Band)
☒ E-UTRA Band 38(EU-Band)
☒ E-UTRA Band 40(EU-Band)

LTE Release Version : R12

FDD Band : Uplink: E-UTRA Band 1: 1920MHz~1980MHz
E-UTRA Band 3: 1710MHz~1785MHz
E-UTRA Band 7: 2500MHz~2570MHz
E-UTRA Band 8: 880MHz~915MHz
E-UTRA Band 20: 832MHz~862MHz
E-UTRA Band 28: 703MHz~748MHz
Downlink: E-UTRA Band 1: 2110MHz~2170MHz
E-UTRA Band 3: 1805MHz~1880MHz
E-UTRA Band 7: 2620MHz~2690MHz
E-UTRA Band 8: 925MHz~960MHz
E-UTRA Band 20: 791MHz~821MHz
E-UTRA Band 28: 758MHz~803MHz

TDD Band : E-UTRA Band 38: 2570MHz ~ 2620MHz
E-UTRA Band 40: 2300MHz ~ 2400MHz

Type Of Modulation : QPSK/16QAM

Antenna Description : Ant0: FPC Antenna
Ant2: FPC Antenna
Ant3: FPC Antenna
Ant4: FPC Antenna
0.46dBi (max.) For E-UTRA Band 1
-1.18dBi (max.) For E-UTRA Band 3
1.93dBi (max.) For E-UTRA Band 7
-2.34dBi (max.) For E-UTRA Band 8
-5.25dBi (max.) For E-UTRA Band 20
-1.56dBi (max.) For E-UTRA Band 28
-1.97dBi (max.) For E-UTRA Band 38
1.74dBi (max.) For E-UTRA Band 40



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| | |
|---------------------|--|
| Power Class | : Class 3 |
| NR | : |
| Operation Band | : n1: UL: 1920MHz~1980MHz, DL: 2110MHz~2170MHz n3: UL: 1710MHz~1785MHz, DL: 1805MHz~1880MHz n7: UL: 2500MHz~2570MHz, DL: 2620MHz~2690MHz |
| Support Type | : <input checked="" type="checkbox"/> SA |
| Sub carrier Spacing | : 15KHz |
| Modulation Type | : DFT-BPSK, DFT-QPSK, DFT-16QAM, DFT-64QAM, DFT-256QAM, CP-QPSK, CP-16QAM, CP-64QAM, CP-256QAM |
| NR Release Version | : 15 |
| Power Class | : NR Band 1/3/7: PC3 |
| Antenna Description | : Ant2: FPC Antenna Ant3: FPC Antenna Ant4: FPC Antenna Ant5: FPC Antenna n1: 0.46dBi Max n3: -1.18dBi Max n7: 1.93dBi Max |
| GPS Receiver | : |
| Receive Frequency | : 1575.42MHz |
| Channel Number | : 1 |
| Antenna Description | : FPC Antenna, 0.79dBi(Max.) |
| GLONASS Receiver | : |
| Receive Frequency | : 1602.5625MHz |
| Channel Number | : 1 |
| Antenna Description | : FPC Antenna, 0.79dBi(Max.) |
| Galileo Receiver | : |
| Receive Frequency | : 1589.74MHz |
| Channel Number | : 1 |
| Antenna Description | : FPC Antenna, 0.79dBi(Max.) |
| BDS Receiver | : |
| Receive Frequency | : 1561.098MHz |
| Channel Number | : 1 |
| Antenna Description | : FPC Antenna, 0.79dBi(Max.) |
| NFC | : |
| Frequency Range | : 13.56MHz |



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Modulation Type : ASK

Antenna Description : FPC Antenna, 0dBi(Max.)





1.2. Support Equipment List

| Manufacturer | Description | Model | Serial Number | Certificate |
|---|------------------|-------------|---------------|-------------|
| Shenzhen Huajin Electronics Co., Ltd | Fast Charger | HJ-PD33W-EU | --- | CE |
| Zhengyuhong Electronics (dongguan) Co., Ltd | AC Power Adapter | ZYH-J330 | --- | CE |

1.3. External I/O

| I/O Port Description | Quantity | Cable |
|----------------------|----------|-----------------------------------|
| Type-C USB Port | 1 | USB Cable: 1.0m, unshielded |
| Headphone Port | 1 | Headphone Cable: 1.2m, unshielded |

1.4. Objective

| Standard Referenced | Standard Title | Standard Version |
|---------------------|--|-------------------|
| ETSI EN 301 908-1 | IMT cellular networks; Harmonised Standard for access to radio spectrum; Part 1: Introduction and common requirements; Release 15 | V15.2.1 (2023-01) |
| ETSI EN 301 908-2 | IMT cellular networks; Harmonised Standard for access to radio spectrum; Part 2: CDMA Direct Spread (UTRA FDD) User Equipment (UE) | V13.1.1 (2020-06) |

The objective is to determine compliance with ETSI EN 301 908-1 V15.2.1 (2023-01) & ETSI EN 301 908-2 V13.1.1 (2020-06).

1.5. Test Conditions

| Conditions | Temperature | Voltage |
|--|-------------|----------|
| Normal | 21-25°C | DC 3.87V |
| Low extreme Temperature/Low extreme Voltage (TL/VL); | -20°C | DC 3.48V |
| Low extreme Temperature/High extreme Voltage (TL/VH); | -20°C | DC 4.45V |
| High extreme Temperature/Low extreme Voltage (TH/VL); | 45°C | DC 3.48V |
| High extreme Temperature/High extreme Voltage (TH/VH). | 45°C | DC 4.45V |

Note1: For all conditions, the humidity range is:40-75%, the pressure range is 86-106kPa. The High Voltage DC 4.45V and Low Voltage DC 3.48V was declared by manufacturer



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1.6. Description Of Test Mode

1. WCDMA Band I

- 1). Low Channel Operation(9612Channel)
- 2). Middle Channel Operation(9750Channel)
- 3). High Channel Operation(9888Channel)

2. WCDMA Band VIII

- 1). Low Channel Operation(2713Channel)
- 2). Middle Channel Operation(2788Channel)
- 3). High Channel Operation(2862Channel)

1.7. Measurement Uncertainty (95% confidence levels, k=2)

| Test Item | | Uncertainty |
|-------------------------------|---|----------------------|
| Radio Frequency | : | 0.9×10^{-4} |
| Total RF Power, Conducted | : | 1.0 dB |
| RF Power Density, Conducted | : | 1.8 dB |
| Spurious Emissions, Conducted | : | 1.8 dB |
| All Emissions, Radiated | : | 3.1 dB |
| Temperature | : | 0.5°C |
| Humidity | : | 1 % |
| DC And Low Frequency Voltages | : | 1 % |

1.8. Description of Test Facility

NVLAP Accreditation Code is 600167-0.

FCC Designation Number is CN5024.

CAB identifier is CN0071.

CNAS Registration Number is L4595.



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2. SYSTEM TEST CONFIGURATION

2.1. Justification

N/A

2.2. EUT Exercise Software

N/A

2.3. Special Accessories

The special accessories were supplied by Shenzhen LCS Compliance Testing Laboratory Ltd.

2.4. Block Diagram/Schematics

Please refer to the related document.

2.5. Equipment Modifications

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

2.6. Test Setup

Please refer to the test setup photo.





3. SUMMARY OF TEST RESULTS

| | | |
|------------------------|---|---------------|
| Test Engineer | : | Paddi Chen |
| Temperature/ Humidity: | : | 23.6°C/ 52.8% |

| Reference Clause No. (ETSI EN 301 908-2) | Description of Test Items | WCDMA Band VIII | WCDMA Band I |
|---|---|-----------------|--------------|
| | | Result | Result |
| 4.2.2 | Transmitter maximum output power | | |
| | Normal | Pass | Pass |
| | TL/VL | Pass | Pass |
| | TL/VH | Pass | Pass |
| | TH/VL | Pass | Pass |
| | TH/VH | Pass | Pass |
| | Transmitter maximum output power for HSDPA & HSUPA | | |
| | Normal | Pass | Pass |
| | TL/VL | Pass | Pass |
| | TL/VH | Pass | Pass |
| | TH/VL | Pass | Pass |
| | TH/VH | Pass | Pass |
| 4.2.3 | Transmitter spectrum emission mask | | |
| | Normal | Pass | Pass |
| | Transmitter spectrum emission mask for HSDPA & HSUPA | | |
| | Normal | Pass | Pass |
| 4.2.4 | Transmitter spurious emissions | | |
| | Normal | Pass | Pass |
| | Transmitter spurious emission for HSDPA & HSUPA | | |
| | Normal | Pass | Pass |
| 4.2.5 | Transmitter minimum output power | | |
| | Normal | Pass | Pass |
| | TL/VL | Pass | Pass |
| | TL/VH | Pass | Pass |
| | TH/VL | Pass | Pass |
| | TH/VH | Pass | Pass |
| 4.2.6 | Receiver Adjacent Channel Selectivity (ACS) | | |
| | NT / NV | Pass | Pass |
| | Receiver Adjacent Channel Selectivity for HSDPA & HSUPA | | |
| | NT / NV | Pass | Pass |
| 4.2.7 | Receiver blocking characteristics | | |
| | Normal | Pass | Pass |
| 4.2.8 | Receiver spurious response | | |
| | Normal | Pass | Pass |
| 4.2.9 | Receiver intermodulation characteristics | | |



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| | | | |
|--------|---|------|------|
| | Normal | Pass | Pass |
| 4.2.10 | Receiver spurious emissions | | |
| | Normal | Pass | Pass |
| 4.2.11 | Out-of-synchronization handling of output power | | |
| | Normal | Pass | Pass |
| 4.2.12 | Transmitter Adjacent Channel Leakage power Ratio (ACLR) | | |
| | Normal | Pass | Pass |
| | TL/VL | Pass | Pass |
| | TL/VH | Pass | Pass |
| | TH/VL | Pass | Pass |
| | TH/VH | Pass | Pass |
| | Transmitter Adjacent Channel Leakage power Ratio (ACLR) for HSDPA & HSUPA | | |
| | Normal | Pass | Pass |
| | TL/VL | Pass | Pass |
| | TL/VH | Pass | Pass |
| | TH/VL | Pass | Pass |
| | TH/VH | Pass | Pass |
| 4.2.13 | Receiver Reference Sensitivity level | | |
| | Normal | Pass | Pass |
| | TL/VL | Pass | Pass |
| | TL/VH | Pass | Pass |
| | TH/VL | Pass | Pass |
| | TH/VH | Pass | Pass |
| | Receiver Reference Sensitivity level for HSDPA & HSUPA | | |
| | Normal | Pass | Pass |
| | TL/VL | Pass | Pass |
| | TL/VH | Pass | Pass |
| | TH/VL | Pass | Pass |
| | TH/VH | Pass | Pass |

| Reference Clause No. (ETSI EN 301 908-1) | Description of Test Items | WCDMA Band VIII | WCDMA Band I |
|---|---------------------------------------|-----------------|--------------|
| | | Result | Result |
| 4.2.2 | Radiated emissions (UE) | | |
| | Normal | Pass | Pass |
| 4.2.4 | Control and monitoring functions (UE) | | |
| | Normal | Pass | Pass |

***Note:

Result: Describes test result of Test Case.

Pass: Test Case passed on specified conformance test platform.

Normal(TN/VN): Normal temperature – 25°C; Normal voltage. – DC 3.87V

TH: High extreme Temperature – +45°C

VH: High extreme Voltage – DC 4.45V

TL: Low extreme Temperature – -20°C

VL: Low extreme Voltage – DC 3.48V

N/A: Not applicable.

—: Not test.



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4. LIST OF MEASURING EQUIPMENT

| Item | Equipment | Manufacturer | Model No. | Serial No. | Cal Date | Due Date |
|------|-------------------------------------|-------------------|------------|-------------|------------|------------|
| 1 | LTE Test Software | Tonscend | JS1120-1 | N/A | N/A | N/A |
| 2 | RF Control Unit | Tonscend | JS0806-1 | 158060009 | 2023-10-18 | 2024-10-17 |
| 3 | MXA Signal Analyzer | Agilent | N9020A | MY51250905 | 2023-10-18 | 2024-10-17 |
| 4 | DC Power Supply | Agilent | E3642A | N/A | 2023-10-18 | 2024-10-17 |
| 5 | MXG Vector Signal Generator | Agilent | N5182A | MY47071151 | 2024-06-06 | 2025-06-05 |
| 6 | PSG Analog Signal Generator | Agilent | E8257D | MY4520521 | 2024-06-06 | 2025-06-05 |
| 7 | Temperature & Humidity Chamber | GUANGZHOU GOGNWEN | GDS-100 | 70932 | 2023-10-05 | 2024-10-04 |
| 8 | EMI Test Software | Farad | EZ | / | N/A | N/A |
| 9 | 3m Full Anechoic Chamber | MRDIANZI | FAC-3M | MR009 | 2022-08-17 | 2025-08-16 |
| 10 | Positioning Controller | Max-Full | MF7802BS | MF780208586 | N/A | N/A |
| 11 | Active Loop Antenna | SCHWARZBECK | FMZB 1519B | 00005 | 2024-07-13 | 2027-07-12 |
| 12 | By-log Antenna | SCHWARZBECK | VULB9163 | 9163-470 | 2021-09-12 | 2024-09-11 |
| 13 | Horn Antenna | SCHWARZBECK | BBHA 9120D | 9120D-1925 | 2021-09-05 | 2024-09-04 |
| 14 | Broadband Horn Antenna | SCHWARZBECK | BBHA 9170 | 791 | 2021-08-29 | 2024-08-28 |
| 15 | Broadband Preamplifier | SCHWARZBECK | BBV9719 | 9719-025 | 2021-08-29 | 2024-08-28 |
| 16 | EMI Test Receiver | R&S | ESR 7 | 101181 | 2024-06-06 | 2025-06-05 |
| 17 | RS SPECTRUM ANALYZER | R&S | FSP40 | 100503 | 2024-06-06 | 2025-06-05 |
| 18 | Low-frequency amplifier | SchwarzZBECK | BBV9745 | 00253 | 2023-10-18 | 2024-10-17 |
| 19 | High-frequency amplifier | JS Denki Pte | PA0118-43 | JSPA21009 | 2023-10-18 | 2024-10-17 |
| 20 | WIDEBAND RADIO COMMUNICATION TESTER | R&S | CMW 500 | 103818 | 2024-06-06 | 2025-06-05 |
| 21 | RF Filter | Micro-Tronics | BRC50718 | 017 | 2023-10-18 | 2024-10-17 |
| 22 | RF Filter | Micro-Tronics | BRC50719 | 011 | 2023-10-18 | 2024-10-17 |
| 23 | RF Filter | Micro-Tronics | BRC50720 | 011 | 2023-10-18 | 2024-10-17 |
| 24 | RF Filter | Micro-Tronics | BRC50721 | 013 | 2023-10-18 | 2024-10-17 |
| 25 | RF Filter | Micro-Tronics | BRM50702 | 195 | 2024-06-06 | 2025-06-05 |
| 26 | 6dB Attenuator | / | 100W/6dB | 1172040 | 2024-06-06 | 2025-06-05 |
| 27 | 3dB Attenuator | / | 2N-3dB | / | 2023-10-18 | 2024-10-17 |



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5. PHOTOGRAPHS OF TEST SETUP

Please refer to separated files Appendix D for Photographs of Test Setup_RF.

6. PHOTOGRAPHS OF THE EUT

Please refer to separated files Appendix C for Photographs of The EUT.





Annex A

Transmitter maximum output power

The worst test result of maximum output power for WCDMA Band I

| Test Condition | | Measure Result (dBm) | | | Nominal Output Power (dBm) | Conclusion |
|------------------|---------------|----------------------|---------------------|-------------------|----------------------------|------------|
| Temperature (°C) | Voltage (Vdc) | Low Channel 9612 | Middle Channel 9750 | High Channel 9888 | | |
| TL | VL | 22.83 | 22.85 | 22.94 | 24 | Pass |
| | VN | 23.16 | 23.09 | 23.14 | | Pass |
| | VH | 22.95 | 22.94 | 22.92 | | Pass |
| TN | VL | 23.32 | 23.30 | 23.28 | | Pass |
| | VN | 23.47 | 23.55 | 23.60 | | Pass |
| | VH | 23.09 | 23.17 | 23.11 | | Pass |
| TH | VL | 23.04 | 23.05 | 23.03 | | Pass |
| | VN | 22.78 | 22.71 | 22.75 | | Pass |
| | VH | 22.95 | 22.94 | 22.96 | | Pass |

The worst test result of maximum output power for WCDMA Band I (HSUPA)

| Test Condition | | Measure Result (dBm) | | | Nominal Output Power (dBm) | Conclusion |
|------------------|---------------|----------------------|---------------------|-------------------|----------------------------|------------|
| Temperature (°C) | Voltage (Vdc) | Low Channel 9612 | Middle Channel 9750 | High Channel 9888 | | |
| TL | VL | 21.44 | 21.39 | 21.39 | 24 | Pass |
| | VN | 22.28 | 22.33 | 22.29 | | Pass |
| | VH | 21.99 | 22.05 | 22.01 | | Pass |
| TN | VL | 22.14 | 22.14 | 22.09 | | Pass |
| | VN | 22.36 | 22.37 | 22.37 | | Pass |
| | VH | 22.02 | 22.02 | 21.97 | | Pass |
| TH | VL | 21.76 | 21.76 | 21.71 | | Pass |
| | VN | 22.21 | 22.21 | 22.24 | | Pass |
| | VH | 21.58 | 21.55 | 21.50 | | Pass |

The worst test result of maximum output power for WCDMA Band I (HSDPA)

| Test Condition | | Measure Result (dBm) | | | Nominal Output Power (dBm) | Conclusion |
|------------------|---------------|----------------------|---------------------|-------------------|----------------------------|------------|
| Temperature (°C) | Voltage (Vdc) | Low Channel 9612 | Middle Channel 9750 | High Channel 9888 | | |
| TL | VL | 21.96 | 21.98 | 21.95 | 24 | Pass |
| | VN | 22.07 | 22.08 | 22.08 | | Pass |
| | VH | 21.89 | 21.93 | 22.03 | | Pass |
| TN | VL | 22.23 | 22.15 | 22.09 | | Pass |
| | VN | 22.92 | 22.84 | 22.83 | | Pass |
| | VH | 22.06 | 22.08 | 22.09 | | Pass |
| TH | VL | 21.93 | 22.00 | 22.01 | | Pass |
| | VN | 21.80 | 21.75 | 21.71 | | Pass |
| | VH | 21.61 | 21.60 | 21.66 | | Pass |



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The worst test result of maximum output power for WCDMA Band VIII

| Test Condition | | Measure Result (dBm) | | | Nominal Output Power (dBm) | Conclusion |
|------------------|---------------|----------------------|---------------------|-------------------|----------------------------|------------|
| Temperature (°C) | Voltage (Vdc) | Low Channel 2713 | Middle Channel 2788 | High Channel 2862 | | |
| TL | VL | 22.50 | 22.47 | 22.38 | 24 | Pass |
| | VN | 23.07 | 23.14 | 23.12 | | Pass |
| | VH | 23.05 | 23.09 | 23.01 | | Pass |
| TN | VL | 22.93 | 22.95 | 22.90 | | Pass |
| | VN | 23.43 | 23.42 | 23.41 | | Pass |
| | VH | 23.22 | 23.21 | 23.20 | | Pass |
| TH | VL | 22.92 | 22.93 | 22.94 | | Pass |
| | VN | 22.82 | 22.83 | 22.81 | | Pass |
| | VH | 23.10 | 23.10 | 23.09 | | Pass |

The worst test result of maximum output power for WCDMA Band VIII (HSUPA)

| Test Condition | | Measure Result (dBm) | | | Nominal Output Power (dBm) | Conclusion |
|------------------|---------------|----------------------|---------------------|-------------------|----------------------------|------------|
| Temperature (°C) | Voltage (Vdc) | Low Channel 2713 | Middle Channel 2788 | High Channel 2862 | | |
| TL | VL | 21.76 | 21.78 | 21.72 | 24 | Pass |
| | VN | 22.12 | 22.14 | 22.17 | | Pass |
| | VH | 21.89 | 21.89 | 21.91 | | Pass |
| TN | VL | 22.67 | 22.62 | 22.58 | | Pass |
| | VN | 22.08 | 22.07 | 22.11 | | Pass |
| | VH | 22.14 | 22.18 | 22.11 | | Pass |
| TH | VL | 21.75 | 21.74 | 21.74 | | Pass |
| | VN | 21.63 | 21.61 | 21.59 | | Pass |
| | VH | 22.13 | 22.15 | 22.14 | | Pass |

The worst test result of maximum output power for WCDMA Band VIII (HSDPA)

| Test Condition | | Measure Result (dBm) | | | Nominal Output Power (dBm) | Conclusion |
|------------------|---------------|----------------------|---------------------|-------------------|----------------------------|------------|
| Temperature (°C) | Voltage (Vdc) | Low Channel 2713 | Middle Channel 2788 | High Channel 2862 | | |
| TL | VL | 22.29 | 22.34 | 22.34 | 24 | Pass |
| | VN | 21.86 | 21.84 | 21.90 | | Pass |
| | VH | 22.05 | 22.11 | 22.20 | | Pass |
| TN | VL | 22.38 | 22.35 | 22.35 | | Pass |
| | VN | 22.24 | 22.24 | 22.23 | | Pass |
| | VH | 21.91 | 21.91 | 21.83 | | Pass |
| TH | VL | 21.97 | 21.94 | 21.97 | | Pass |
| | VN | 21.56 | 21.49 | 21.53 | | Pass |
| | VH | 21.86 | 21.86 | 21.84 | | Pass |



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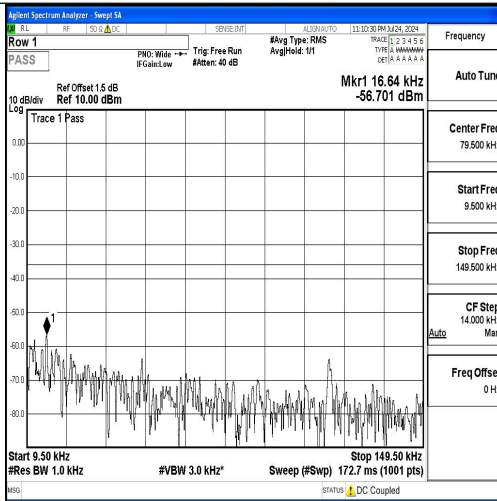
Scan code to check authenticity



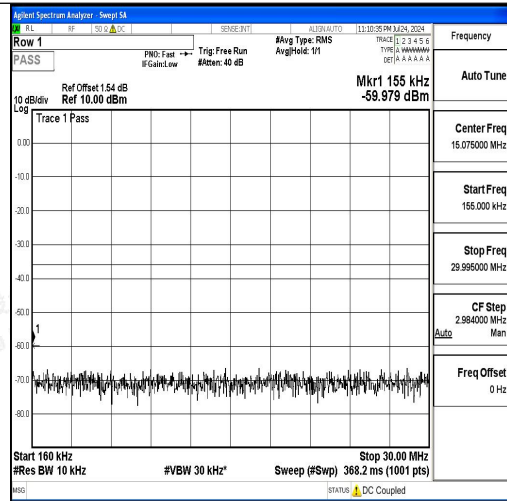
Transmitter spurious emissions

(Note: Only Record The Worst Test Result.)

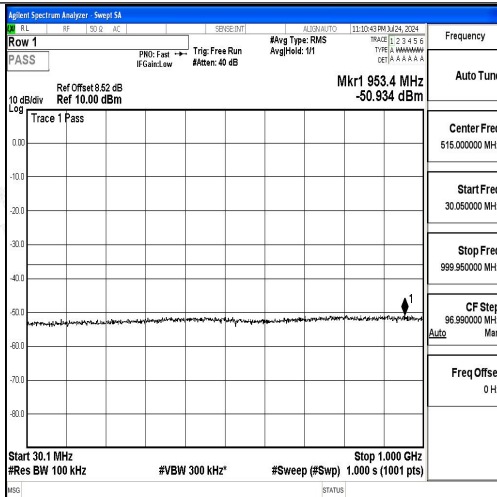
The Worst Test Result of Spurious Emissions for Band I (Middle Channel, Traffic)



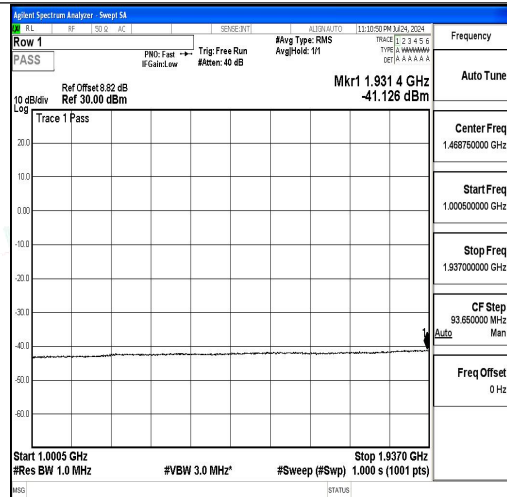
9.5KHz~149.5KHz



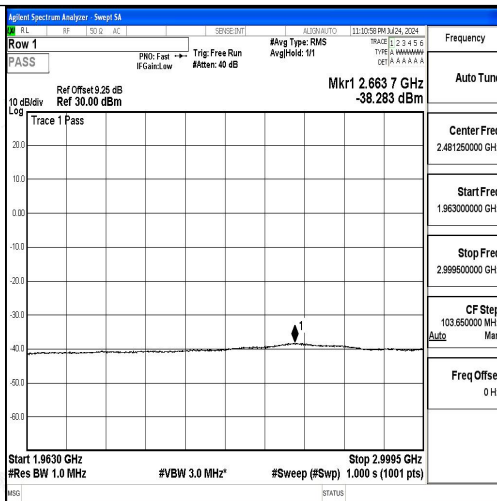
160KHz~30MKHz



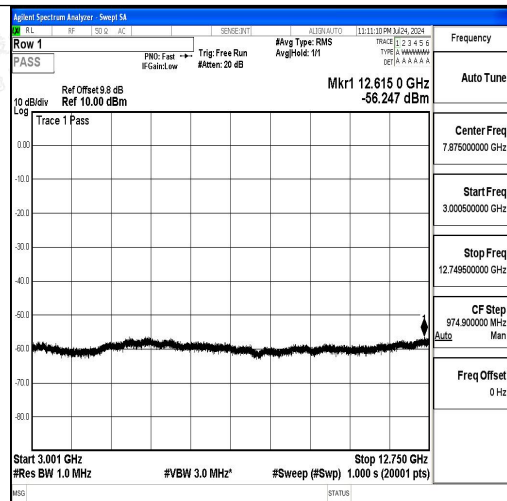
30.1MKHz~1GHz



1.005GHz~1.937GHz



1.963GHz~2.9995GHz



3.001GHz~12.75GHz



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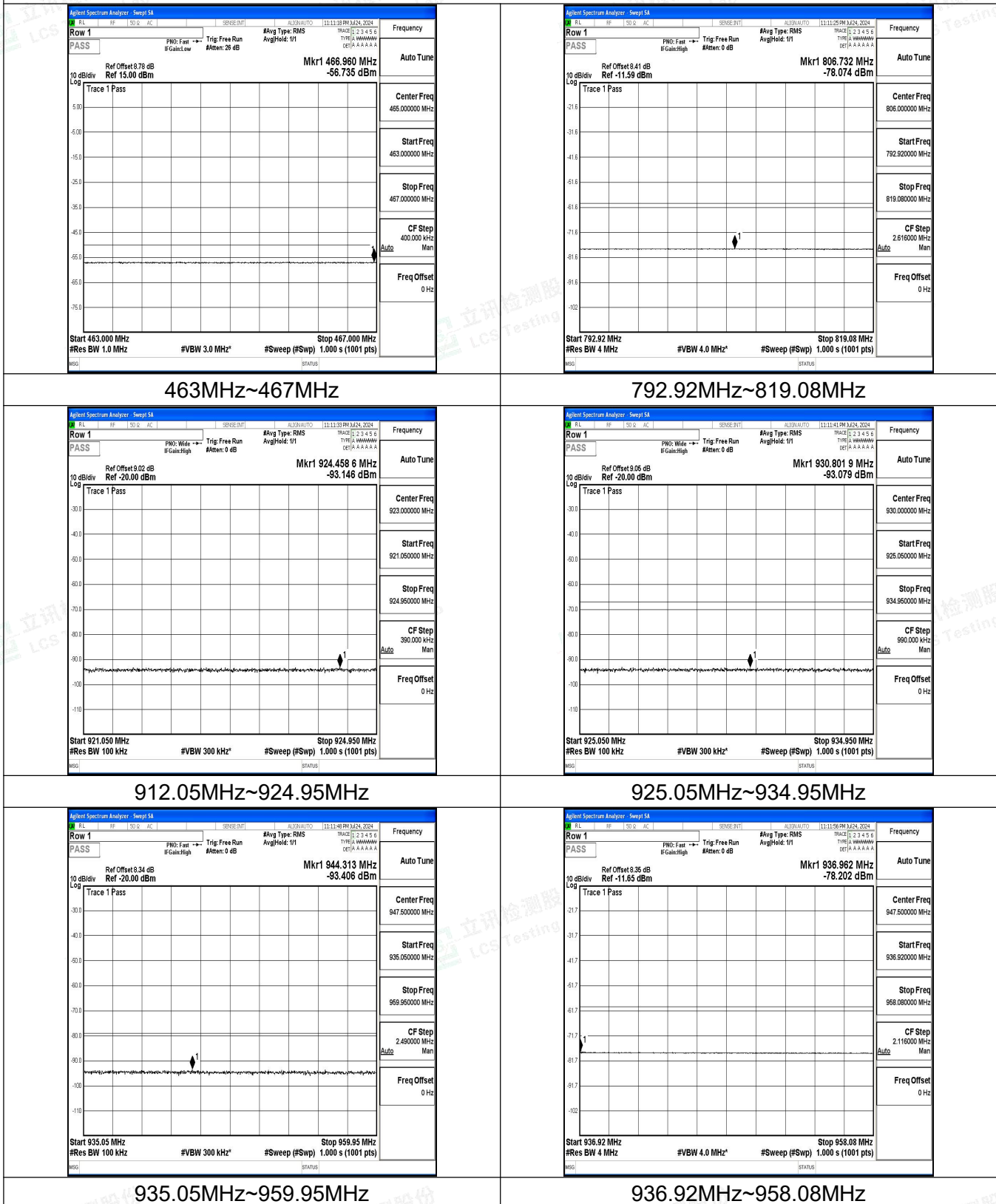
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The Worst Test Result of Spurious Emissions for Band I (Middle Channel, Traffic)



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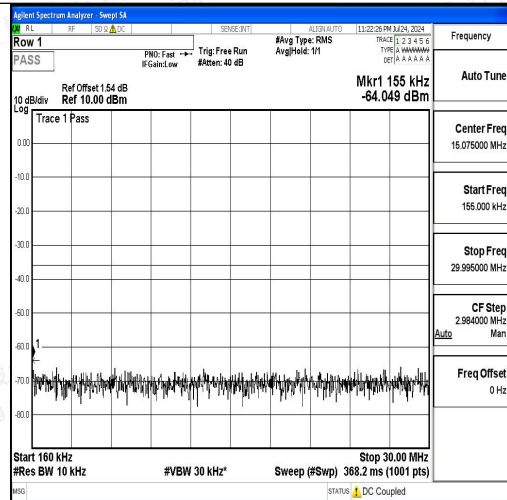
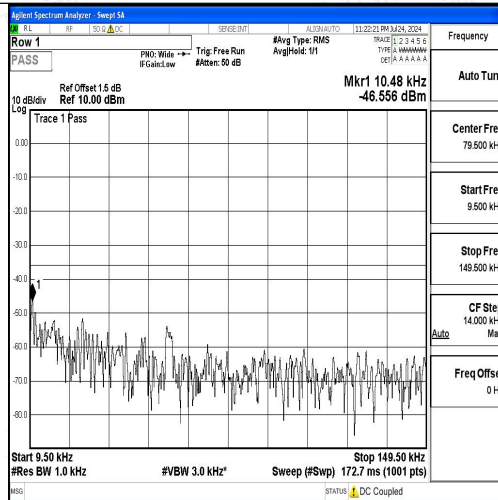
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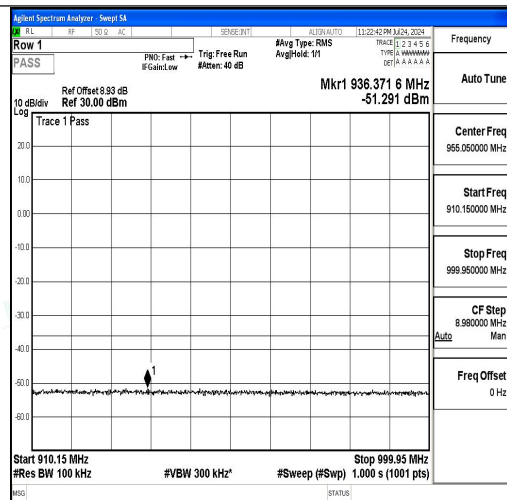
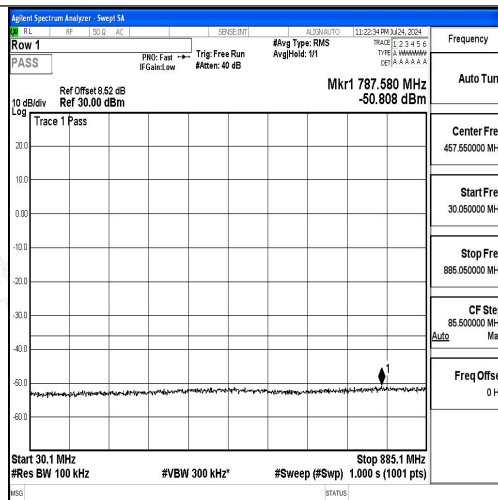


The Worst Test Result of Spurious Emissions for Band VIII (Middle Channel, Traffic)



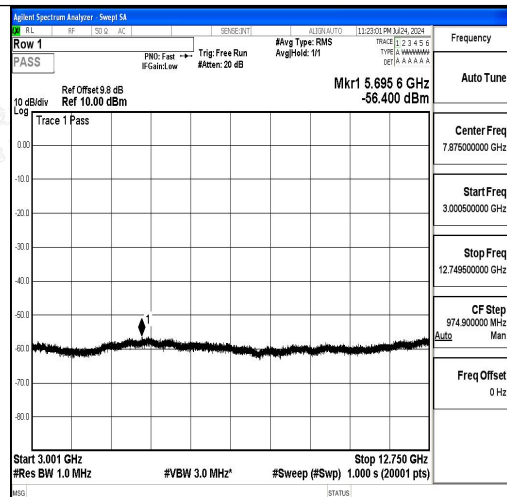
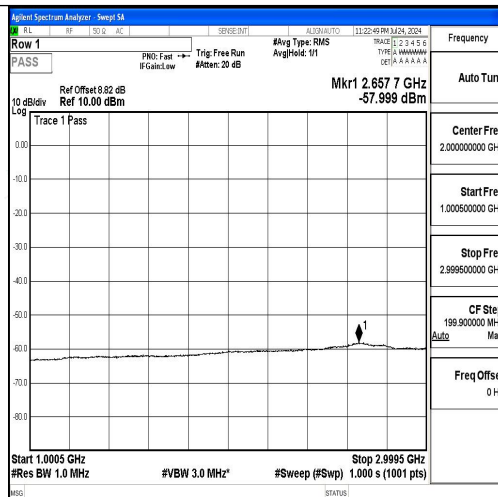
9.5KHz~149.5KHz

160KHz~30MHz



30.1MHz~885.1MHz

910.15MHz~999.95MHz



1.0005GHz~2.9995GHz

3.001GHz~12.75GHz

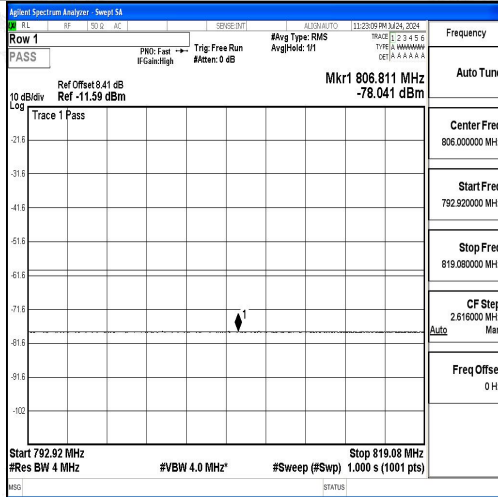
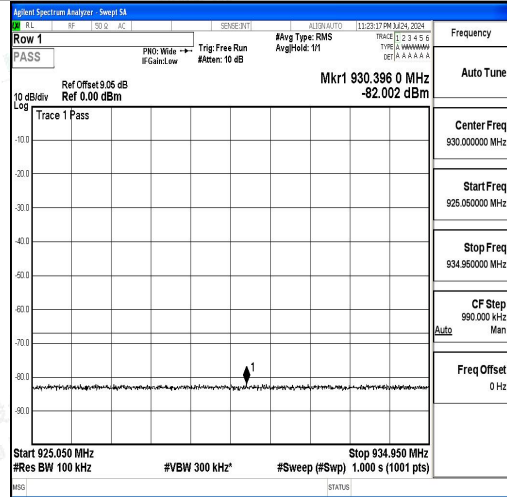
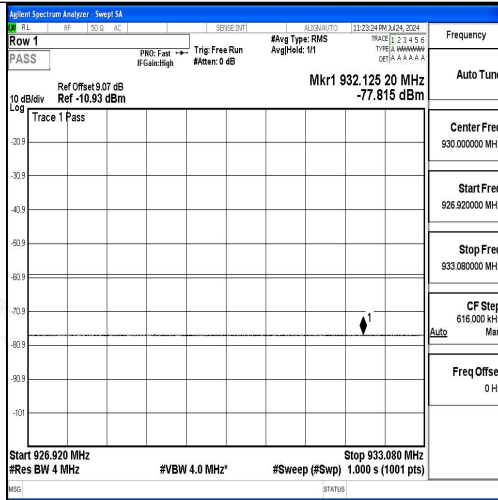
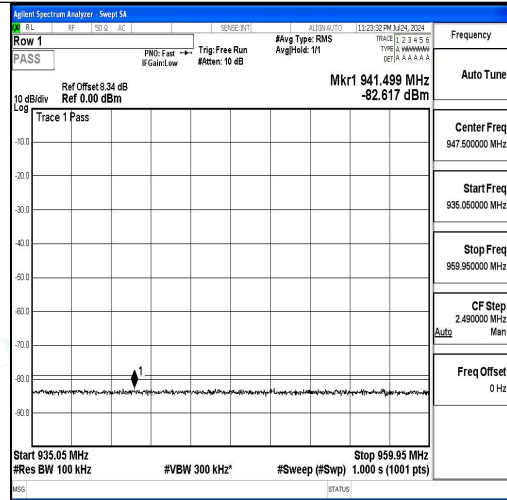
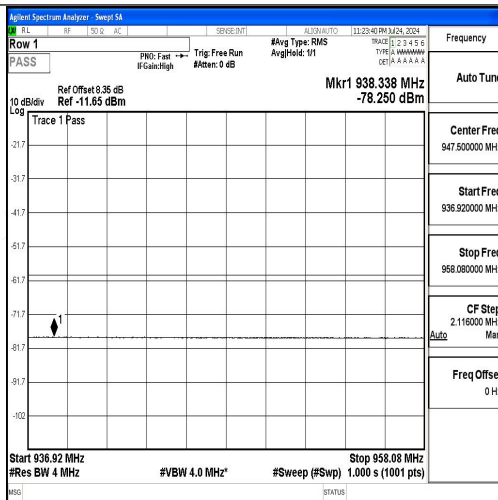
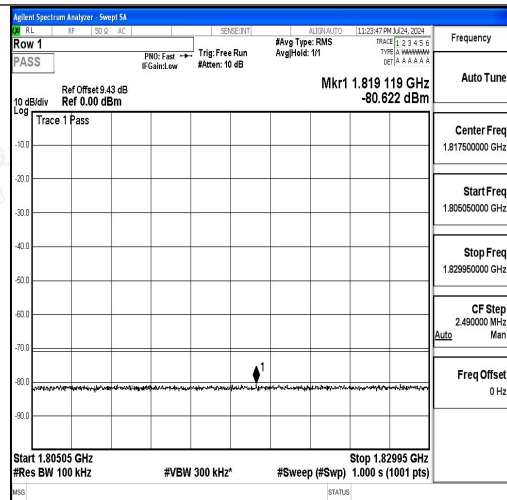


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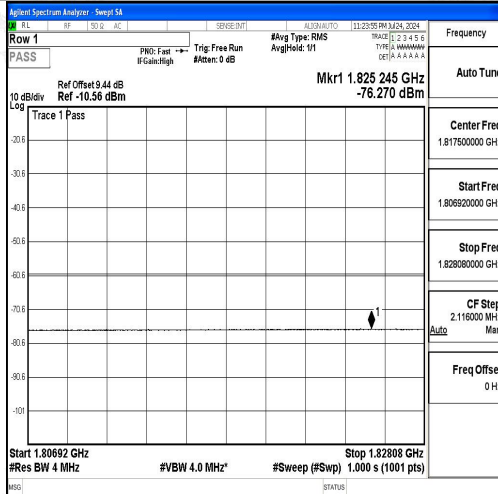
**The Worst Test Result of Spurious Emissions for Band VIII (Middle Channel, Traffic)****792.92MHz~819.08MHz****952.05MHz~934.95MHz****926.92MHz~933.08MHz****935.05MHz~959.95MHz****936.92MHz~959.08MHz****1.80505GHz~1.82995GHz**

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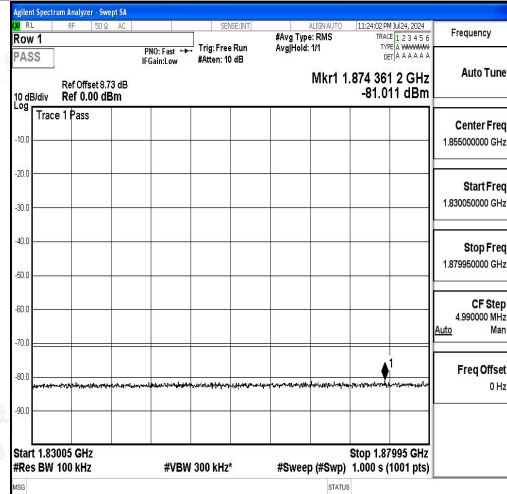
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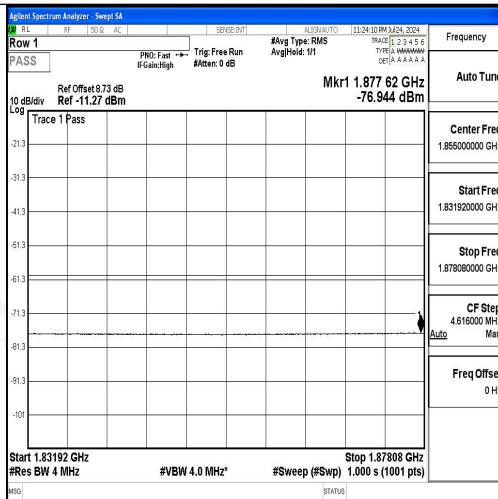
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**The Worst Test Result of Spurious Emissions for Band VIII (Middle Channel, Traffic)**

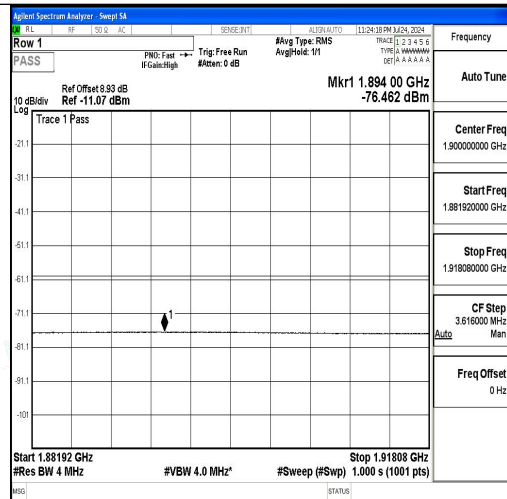
1.80692GHz~1.82808GHz



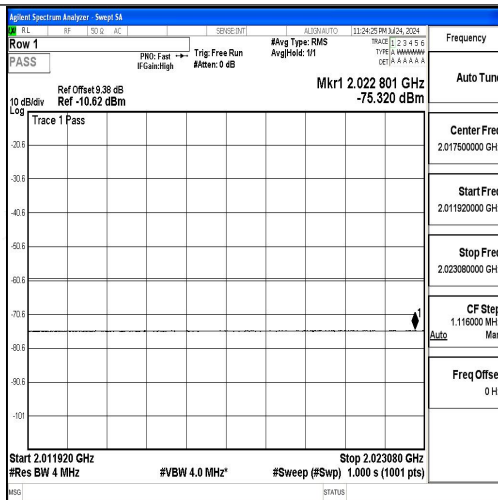
1.83005GHz~1.87995GHz



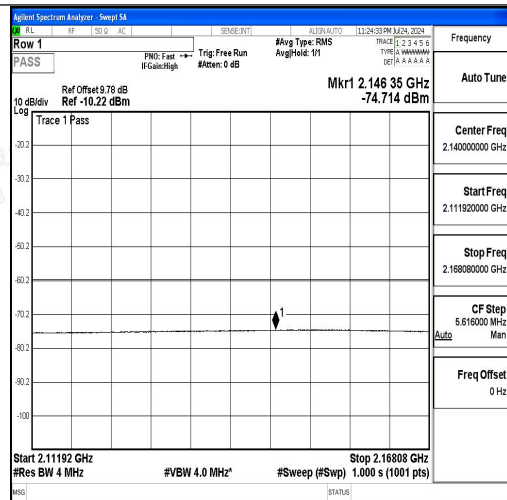
1.83192GHz~1.87808GHz



1.88192GHz~1.91808GHz



2.01192GHz~2.02308GHz



2.11192GHz~2.16808GHz

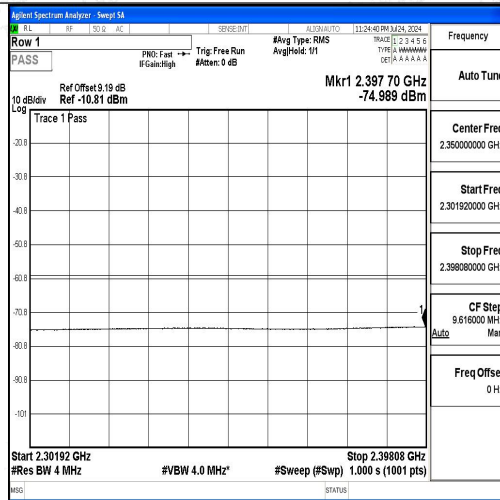


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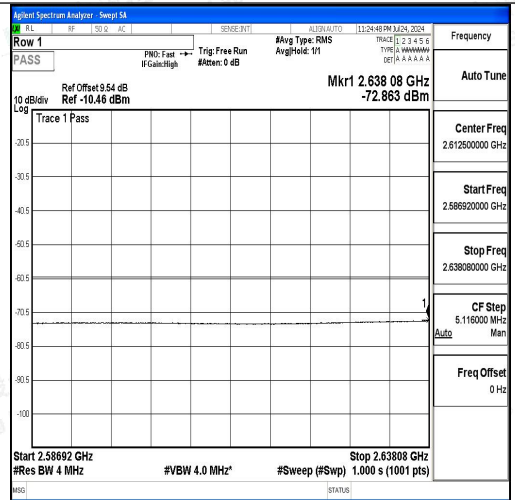
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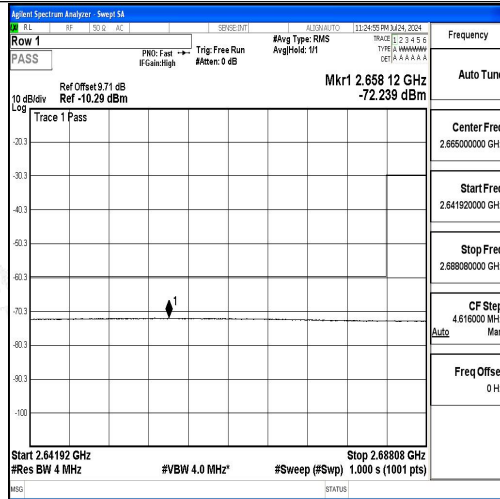
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**The Worst Test Result of Spurious Emissions for Band VIII (Middle Channel, Traffic)**

2.30192GHz~2.39808GHz



2.58692GHz~2.63808GHz



2.64192GHz~2.68808GHz



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Transmitter spurious emissions

Radiated spurious emissions - MS allocated a channel(Worst Case)

| WCDMA Band I: Middle Channel, Normal condition | | | | |
|--|----------------------------|------------|-------------|-------------|
| Frequency (MHz) | Radiated Spurious Emission | | Limit (dBm) | Test Result |
| | Polarization | Level(dBm) | | |
| 52.60 | Horizontal | -78.46 | -36.00 | Pass |
| 776.05 | H | -80.68 | -36.00 | |
| 3824.28 | H | -66.31 | -30.00 | |
| 5731.69 | H | -51.58 | -30.00 | |
| 7640.14 | H | -52.87 | -30.00 | |
| WCDMA Band I: Middle Channel, Normal condition | | | | |
| Frequency (MHz) | Radiated Spurious Emission | | Limit (dBm) | Test Result |
| | Polarization | Level(dBm) | | |
| 58.87 | Vertical | -72.13 | -36.00 | Pass |
| 946.72 | V | -74.41 | -36.00 | |
| 3825.10 | V | -69.61 | -30.00 | |
| 5730.52 | V | -53.86 | -30.00 | |
| 7643.99 | V | -56.44 | -30.00 | |

| WCDMA Band VIII: Middle Channel, Normal condition | | | | |
|---|----------------------------|------------|-------------|-------------|
| Frequency (MHz) | Radiated Spurious Emission | | Limit (dBm) | Test Result |
| | Polarization | Level(dBm) | | |
| 53.91 | Horizontal | -74.45 | -36.00 | Pass |
| 963.37 | H | -70.60 | -36.00 | |
| 1281.58 | H | -65.60 | -30.00 | |
| 2585.17 | H | -56.80 | -30.00 | |
| 3505.72 | H | -51.28 | -30.00 | |
| WCDMA Band VIII: Middle Channel, Normal condition | | | | |
| Frequency (MHz) | Radiated Spurious Emission | | Limit (dBm) | Test Result |
| | Polarization | Level(dBm) | | |
| 56.36 | Vertical | -78.28 | -36.00 | Pass |
| 898.91 | V | -76.79 | -36.00 | |
| 1282.81 | V | -68.18 | -30.00 | |
| 2582.87 | V | -50.95 | -30.00 | |
| 3504.75 | V | -58.02 | -30.00 | |



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Radiated spurious emissions - MS in Idle Mode(Worst Case)

| WCDMA Band I: Middle Channel, Normal condition | | | | |
|--|----------------------------|------------|-------------|-------------|
| Frequency (MHz) | Radiated Spurious Emission | | Limit (dBm) | Test Result |
| | Polarization | Level(dBm) | | |
| 55.77 | Horizontal | -70.75 | -57.00 | Pass |
| 873.23 | H | -75.14 | -57.00 | |
| 1791.82 | H | -70.91 | -47.00 | |
| 2703.45 | H | -55.78 | -47.00 | |
| 3612.94 | H | -56.44 | -47.00 | |
| WCDMA Band I: Middle Channel, Normal condition | | | | |
| Frequency (MHz) | Radiated Spurious Emission | | Limit (dBm) | Test Result |
| | Polarization | Level(dBm) | | |
| 57.80 | Vertical | -77.77 | -57.00 | Pass |
| 773.15 | V | -75.35 | -57.00 | |
| 1792.45 | V | -60.12 | -47.00 | |
| 2700.92 | V | -50.73 | -47.00 | |
| 3617.21 | V | -59.64 | -47.00 | |

| WCDMA Band VIII: Middle Channel, Normal condition | | | | |
|---|----------------------------|------------|-------------|-------------|
| Frequency (MHz) | Radiated Spurious Emission | | Limit (dBm) | Test Result |
| | Polarization | Level(dBm) | | |
| 52.93 | Horizontal | -80.68 | -57.00 | Pass |
| 919.65 | H | -70.13 | -57.00 | |
| 1699.02 | H | -70.84 | -47.00 | |
| 2675.39 | H | -60.18 | -47.00 | |
| 3250.88 | H | -54.56 | -47.00 | |
| WCDMA Band VIII: Middle Channel, Normal condition | | | | |
| Frequency (MHz) | Radiated Spurious Emission | | Limit (dBm) | Test Result |
| | Polarization | Level(dBm) | | |
| 50.41 | Vertical | -77.48 | -57.00 | Pass |
| 979.28 | V | -71.71 | -57.00 | |
| 1694.57 | V | -60.19 | -47.00 | |
| 2672.29 | V | -55.37 | -47.00 | |
| 3242.33 | V | -60.13 | -47.00 | |

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



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