

Test report

REP032370-1TRFWL

Date of issue: May 13, 2024

Applicant:

Maven Wireless Inc.

Product description:

20W Exo Repeater

Model:

RAH00030

Product marketing name(s):

None

FCC ID:

2BE5B-RAH00030

Specifications:

- FCC 47 CFR Part 24 Personal Communication Services
- FCC 47 CFR Part 27 Miscellaneous Wireless Communication Services

www.nemko.com

WL_FCC Signal Boosters.dotm, Version V1.0

Nemko USA Inc., a testing laboratory, is accredited by ANAB. The tests included in this report are within the scope of this accreditation.





Lab and test locations

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| State | California |
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| Country | USA |
| Telephone | +1 760 444 3500 |
| Website | www.nemko.com |
| FCC Site Number | Test Firm Registration Number: 392943; Designation Number: US3165 |
| ISED Test Site | 2040B |
| | |
| Tested by | Lan Sayasane, EMC Test Engineer |
| Reviewed by | James Cunningham, EMC/WL Manager |
| Review date | May 13, 2024 |
| Reviewer signature | 281 |

Limits of responsibility

Note that the results contained in this report relate only to the items tested and were obtained in the period between the date of initial receipt of samples and the date of issue of the report.

This test report has been completed in accordance with the requirements of ISO/IEC 17025. All results contain in this report are within Nemko USA's ISO/IEC 17025 accreditation.

This report must not be used by the client to claim product certification, approval, or endorsement by ANAB, NIST, or any agency of the U.S. Government.

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Section 1 Report summary

1.1 Test specifications

| FCC 47 CFR Part 24 | Personal Communication Services |
|---------------------------|--|
| FCC 47 CFR Part 27 | Miscellaneous Wireless Communication Services |
| 1.2 Test methods | |
| ANSI C63.26 – 2015 | American National Standard for Compliance Testing of Transmitters Used in Licensed Services; Section 7 – RF Repeaters, amplifiers, and boosters testing |
| FCC KDB 935210 D05 v01r04 | Measurements Guidance for Industrial, and Non-Consumer Signal Booster, Repeater, and Amplifier Devices |

1.3 Exclusions

None.

1.4 Statement of compliance

Testing was performed against all relevant requirements of the test standard(s).

Results obtained indicate that the product under test complies in full with the tested requirements.

The test results relate only to the item(s) tested.

See "Section 2 Summary of test results" for full details.

1.5 Test report revision history

| | | Table 1.5-1: Test report revision history |
|-------------------|--------------|---|
| Revision # | Issue Date | Details of changes made to test report |
| REP032370-1TRFEMC | May 13, 2024 | Original report issued |



Section 2 Summary of test results

2.1 Sample information

| Receipt date | 18-Mar-24 |
|------------------------|-----------|
| Nemko sample ID number | REP032370 |

Testing period 2.2

| Test start date | 21-Mar-24 |
|-----------------|-----------|
| Test end date | 27-Mar-24 |

2.3 Test results

| Table 2.3-1: Summary of results | | | | |
|--|---|---|-----------------------------|--|
| FCC Part | Test method | Test description | Verdict | |
| | KDB 935210 D05V01r04 (3.2) ANSI C63.26 7.2.2.1 | AGC threshold | Pass | |
| | KDB 935210 D05v01r04 (3.3) ANSI C63.26 7.2.2.2 | Out of band rejection | Pass | |
| FCC Part 2.1049 | KDB 935210 D05v01r05 (3.4) ANSI C63.26 7.2.2.3 | Occupied bandwidth / Input-versus-output spectrum | Pass | |
| FCC Part 24.232 (band 25 operation) FCC Part 27.50(d) (band 66 operation) | KDB 935210 D05v01r05 (3.5) ANSI C63.26 7.2.2.4 | Input/output power and amplifier/booster gain | Pass | |
| FCC Part 24.238 (band 25 operation) FCC Part 27.53(h) (band 66 operation) | KDB 935210 D05v01r05 (3.6) ANSI C63.26 7.2.2.5 | Spurious emissions at RF antenna connector | Pass | |
| FCC Part 24.235 (band 25 operation) FCC Part 27.54 (band 66 operation) | KDB 935210 D05v01r05 (3.7) ANSI C63.26 7.2.2.6 | Frequency stability | Not applicable ¹ | |
| FCC Part 24.238 (band 25 operation) FCC Part 27.53(h) (band 66 operation) | KDB 935210 D05v01r05 (3.8) ANSI C63.26 7.2.2.7 | Radiated spurious emissions | Pass | |

¹ Per ANSI C63.26-2015 clause 7.2.2.6 and KDB 935210 Clause 3.7, frequency stability testing is not required if the EUT does not process the input signal in a manner Notes: that can influence the output signal frequency/frequencies.



Section 3 Equipment under test (EUT) details

3.1 Disclaimer

This section contains information provided by the applicant and has been utilized to support the test plan. Inaccurate information provided by the applicant can affect the validity of the results within this test report. Nemko accepts no responsibility for the information contained within this section and the impact it may have on the test plan and resulting measurements.

3.2 Applicant

| Company name | Maven Wireless Inc. |
|-----------------|---------------------------|
| Address | 222 Pacific Coast Highway |
| City | El Segundo |
| State | CA |
| Postal/Zip code | 90245 |
| Country | USA |

3.3 Manufacturer

| Company name | Maven Wireless Inc. |
|-----------------|---------------------------|
| Address | 222 Pacific Coast Highway |
| City | El Segundo |
| State | CA |
| Postal/Zip code | 90245 |
| Country | USA |

3.4 EUT information

| Product name | 20W Exo Repeater | | |
|-----------------------------------|---|--|--|
| Model | RAH00030 | | |
| Variant(s) | None | | |
| Serial number | 017E0 | | |
| Part number | RAH00030, Rev. B | | |
| Power requirements | 115-230 VAC, 50/60 Hz, 5.2-206 A rms | | |
| Description/theory of operation | The Maven digital off-air repeater is a bidirectional frequency-selective amplifier: Downlink signals from the base (donor) antenna port are digitized, the signals which should be amplified are selected by digital filtering and are re- transmitted with the wanted gain on the mobile (server) antenna port. Uplink signals from the mobile (server) antenna port are similarly digitised, filtered and re-transmitted on the base (donor) port. In both directions, excessive signal levels are limited by fast-acting automatic level control (ALC). The isolation between antennas is monitored to prevent oscillation in case of inadequate isolation margin. | | |
| Operational frequencies | Band 25: 1930 – 1995 MHz DL / 1850 – 1915 MHz UL Band 66: 2110 – 2180 MHz DL / 1710 – 1760 MHz UL (*) | | |
| Software details | N/A | | |
| Type of signal booster | FCC: □ Consumer Signal Booster □ Provider-Specific Consumer Signal Booster □ Industrial Signal Booster ISED: □ Consumer Zone Enhancer □ Fixed Consumer Zone Enhancer □ Industrial Zone Enhancer □ Mobile Consumer Zone Enhancer | | |
| Note this is a subset of the full | Provider-Specific Consumer Zone Enhancer | | |



3.5 Transmitter Information

| | Band 25: 1930 – 1995 MHz DL / 1850 – 1915 MHz UL |
|----------------------------------|--|
| Frequency band(s) | Band 66: 2110 – 2180 MHz DL / 1710 – 1760 MHz UL |
| Antenna information | One output antenna port. |
| | None - antenna connectors only |
| Nominal gain (*) | 15 to 45 dB in 0.1 dB steps |
| Gain-versus-frequency response | Gain is nominally flat across the frequency bands. See out-of-band rejection data in section 8.2 for verification. |
| (*) | Sam is nonimally had across the nequency bands, see out-of-band rejection data in section 8.2 for vehication. |
| Rated mean output power Prated | 43 dBm |
| (*) | |
| Output signal coupling | 0 dB |
| attenuation (*) | |
| Mobile Station Coupling Loss (*) | N/A (EUT is not a Wideband Consumer Zone Enhancer) |
| Base Station Coupling Loss (*) | N/A (EUT is not a Provider-Specific Consumer Zone Enhancer) |
| Input port impedance | 50 ohms |
| Output port impedance | 50 ohms |

3.6 EUT setup details

| Description | Brand name | Model/Part number | Serial number | Rev. |
|--------------------------|--------------|---------------------|---------------|------|
| None | N/A | N/A | N/A | N/A |
| | Table 3.6-2: | EUT interface ports | | |
| Description | | | | Qty. |
| AC Input | | | | 1 |
| BASE Input | | | | 1 |
| MOBILE Output | | | | 1 |
| SIM Card Slot | | | | 1 |
| External Alarm Connector | | | | 1 |
| SFP+ Fiber Ports | | | | 4 |
| Local Management Port | | | | 1 |
| AUX/USB Port | | | | 1 |
| QSFP+ Fiber Ports | | | | 3 |

| Description | Brand name | Model/Part number | Serial number | Rev. |
|-------------------------|-----------------|-------------------|---------------|------|
| Laptop | DELL | Latitude | N/A | N/A |
| Vector Signal Generator | Rohde & Schwarz | SMW200A | N/A | N/A |

Table 3.6-4: Inter-connection cables

| Cable description | From | То | Length (m) |
|-------------------|-------------------------|--------------|------------|
| AC power cable | Building | Exo Repeater | 2 |
| USB cable | Laptop | Exo Repeater | 2 |
| SMA cable | Vector Signal Generator | Exo Repeater | 2 |

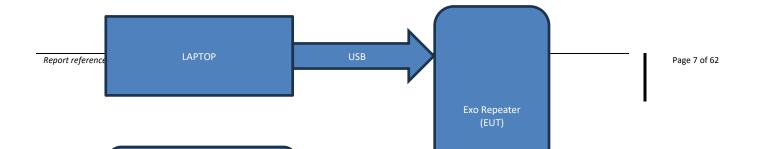




Figure 3.6-1: Test setup diagram



Section 4 Engineering considerations

4.1 Modifications incorporated in the EUT

None.

4.2 Technical judgement

None.

4.3 Deviations from laboratory test procedures

None.



Section 5 Test conditions

5.1 Atmospheric conditions

| Temperature | 15–30 °C |
|-------------------|------------|
| Relative humidity | 20–75 % |
| Air pressure | 86–106 kPa |

When it is impracticable to carry out tests under these conditions, a note to this effect stating the ambient temperature and relative humidity during the tests shall be recorded and stated.

5.2 Power supply range

The normal test voltage for equipment to be connected to the mains shall be the nominal mains voltage. For the present document, the nominal voltage shall be the declared voltage, or any of the declared voltages ±5 %, for which the equipment was designed.



Section 6 Measurement uncertainty

6.1 Uncertainty of measurement

Nemko USA Inc. has calculated measurement uncertainty and is documented in EMC/MUC/001 "Uncertainty in EMC measurements." Measurement uncertainty was calculated using the methods described in CISPR 16-4-2 Specification for radio disturbance and immunity measuring apparatus and methods – Part 4-2: Uncertainties, statistics, and limit modelling – Measurement instrumentation uncertainty. The expression of Uncertainty in EMC testing. Measurement uncertainty calculations assume a coverage factor of K=2 with 95% certainty.

Table 6.1-1: Measurement uncertainty calculations

| Measurement | | U _{cispr} dB | U _{lab} dB |
|--|-------------------|-----------------------|---------------------|
| Conducted disturbance at AC mains and other port power using a V-AMN | 9 kHz to 150 kHz | 3.8 | 2.9 |
| | 150 kHz to 30 MHz | 3.4 | 2.3 |
| Conducted disturbance at telecommunication port using AAN | 150 kHz to 30 MHz | 5.0 | 4.3 |
| Conducted disturbance at telecommunication port using CVP | 150 kHz to 30 MHz | 3.9 | 2.9 |
| Conducted disturbance at telecommunication port using CP | 150 kHz to 30 MHz | 2.9 | 1.4 |
| Conducted disturbance at telecommunication port using CP and CVP | 150 kHz to 30 MHz | 4.0 | 3.1 |
| Radiated disturbance (electric field strength in a SAC) | 30 MHz to 1 GHz | 6.3 | 5.5 |
| Radiated disturbance (electric field strength in a FAR) | 1 GHz to 6 GHz | 5.2 | 4.7 |
| Radiated disturbance (electric field strength in a FAR) | 6 GHz to 18 GHz | 5.5 | 5.0 |

Notes: Compliance assessment:

If U_{lab} is less than or equal to U_{cispr} then:

- compliance is deemed to occur is no measured disturbance level exceeds the disturbance limit.
- non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit

If U_{lab} is greater than U_{cispr} then:

- compliance is deemed to occur is no measured disturbance level, increased by (U_{lab} U_{cispr}), exceeds the disturbance limit.
- non-compliance is deemed to occur if any measured disturbance level, increased by (U_{lab} U_{cispr}), exceeds the disturbance limit
- V-AMN: V type artificial mains network
- AAN: Asymmetric artificial network
- CP: Current probe
- CVP: Capacitive voltage probe
- SAC: Semi-anechoic chamber
- FAR: Fully anechoic room



Section 7 Test equipment

7.1 Test equipment list

Table 7.1-1: Test Equipment List

| Equipment | Manufacturer | Model no. | Asset no. | Cal cycle | Next cal. |
|--|-----------------|----------------|-----------|-----------|-------------|
| Signal and Spectrum Analyzer | Rohde & Schwarz | FSV40 | E1120 | 2 years | 14-Dec-2025 |
| Vector Signal Generator | Rohde & Schwarz | SMW200A | E1156 | 3 years | 10-May-2024 |
| EMI Test Receiver | Rohde & Schwarz | ESU 40 | E1121 | 1 year | 23-Aug-2024 |
| System Controller | Sunol Sciences | SC104V | E1191 | NCR | NCR |
| Antenna, Bilog | Schaffner-Chase | CBL6111C | 1480 | 1 year | 21-Feb-2025 |
| Antenna, DRG Horn | ETS-Lindgren | 3117-PA | E1160 | 1 year | 13-Feb-2025 |
| Antenna, Horn (18-26.5 GHz) | Eravant | SAZ-2410-42-S1 | EW107 | 1 year | 05-Dec-2024 |
| Termination, 50 ohms | Diamond Antenna | DC-500MHz | N/A | NCR | NCR |
| Attenuator, 30dB | Pasternack | PE7388-30 | E1325 | VBU | VBU |
| Power Splitter | Mini-Circuits | ZFRSC-123-S+ | E1215 | NCR | NCR |
| Notes: NCR: no calibration requi VBU: verify before use | red | | | | |

vbo. verny before use

7.2 Test software list

Table 7.2-1: Test Software

| Manufacturer | Details |
|-----------------|---|
| Rohde & Schwarz | EMC 32 V10.60.10 (AC conducted emissions) |
| Rohde & Schwarz | EMC 32 V10.60.15 (radiated emissions) |



Section 8 Testing data

8.1 AGC Threshold

8.1.1 References and limits

- ANSI C63.26 Section 7.2.2.1

- KDB 935210 D05v01r04 Clause 3.2

8.1.2 Test summary

| Verdict | Pass | | |
|---------------|---|-------------------|-----------|
| Test date | March 21, 2024 | Temperature | 21 °C |
| Test engineer | Lan Sayasane, EMC Test Engineer | Air pressure | 1009 mbar |
| Test location | 10m semi anechoic chamber 3m semi anechoic chamber Wireless bench Other: | Relative humidity | 52 % |

8.1.3 Notes

Per KDB 935210 D05 v01r04, Clause 3.1 and ANSI C63.26 Clause 7.2.2.1, testing was performed with a narrowband test signal (MSK modulated, gaussian filter of 0.3 and data rate 270 kbps) and a broadband signal (AWGN, 4.1 MHz 99% occupied bandwidth).

8.1.4 Setup details

| EUT power input during test | 120 VAC / 60 Hz |
|-----------------------------|--|
| EUT setup configuration | 🛛 Table-top |
| | Floor standing |
| | Other: |
| Measurement details | The automatic gain control (AGC) threshold is determined as follows: |
| | a) Connect a signal generator to the input of the EUT. |
| | b) Connect a spectrum analyzer or power meter to the output of the EUT using appropriate attenuation. |
| | c) The signal generator must be set to either of the required modulation signals. |
| | d) Set the frequency to the middle frequency of the EUT operating band. |
| | e) While monitoring the output of the EUT using the method of ANSI C63.26 7.2.2.4.2 or 7.2.2.4.3, increase |
| | the input level until a 1 dB increase in the input signal no longer causes a 1 dB increase in the output signal. |
| | f) This is the AGC threshold level of the EUT. |
| | g) Repeat for the other modulation signal. |

8.1.5 Test data

Table 8.1-1: AGC Threshold results

| Operating frequency band | Input signal type | AGC Threshold Level (dBm) |
|--------------------------|-------------------|---------------------------|
| Band 25: 1930 – 1995 MHz | Narrowband | -7.0 |
| | Broadband | -8.0 |
| Band 66: 2110 – 2180 MHz | Narrowband | -8.0 |
| | Broadband | -9.0 |



8.2 Out of band rejection

8.2.1 References and limits

- ANSI C63.26 Section 7.2.2.2

- KDB 935210 D05v01r04 Clause 3.3

8.2.2 Test summary

| Verdict | Pass | | |
|---------------|---|-------------------|-----------|
| Test date | March 21, 2024 | Temperature | 21 °C |
| Test engineer | Lan Sayasane, EMC Test Engineer | Air pressure | 1009 mbar |
| Test location | 10m semi anechoic chamber 3m semi anechoic chamber Wireless bench Other: | Relative humidity | 52 % |

8.2.3 Notes

The EUT can only be configured to operate in defined 20 MHz sub-bands of the supported operating bands. Therefore, out-of-band rejection tests were performed with the EUT configured to operate on the lowest, middle and highest 20 MHz sub-bands for band 25 and lowest and middle 20 MHz sub-bands for band 66.

8.2.4 Setup details

| EUT power input during test | 120 VAC / 60 Hz |
|-----------------------------|---|
| EUT setup configuration | ☑ Table-top □ Floor standing □ Other: |
| Measurement details | The out-of-band rejection is measured as follows: a. Connect a signal generator to the input of the EUT. b. Configure a swept CW signal with the following parameters: 1) Frequency range = ± 250 % of the passband from the center of the passband, for each applicable operating frequency band. 2) Level = a sufficient level to affirm that the out-of-band rejection is > 20 dB above the noise floor and will not engage the AGC during the entire sweep. 3) Dwell time = approximately 10 ms. 4) Number of points = SPAN/(RBW/2). c. Connect a spectrum analyzer to the output of the EUT using appropriate attenuation. d. Set the span of the spectrum analyzer to be 1% to 5% of the EUT passband and the VBW shall be set to ≥ 3 x RBW. f. Set the detector to Peak Max-Hold and wait for the spectrum analyzer's display to fill. g. Capture the frequency response of the EUT. h. Please a marker to the peak of the frequency response and record this frequency as f₀. i. Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display such that each marker is at or slightly below the -20 dB down amplitude to determine the 20 dB bandwidth. j. Repeat for all frequency bands applicable for use by the EUT. |



8.2.5 Test data

8.2.5.1 Operating frequency band: Band 25: 1930 – 1995 MHz

Table 8.2-1: Out of band rejection results, low sub-band

| | Ра | rameter | Va | lue | | |
|-------------------------------------|-------|---------------------|-----------|------------|----------------------|----------------------|
| | fo | | 19 | 39.058 | | |
| | fi | | 19 | 27.906 | | |
| | fh | | | 50.21 | | |
| | | dB bandwid | - | | | |
| | | dB bandwid | tn 22 | .304 | | - |
| Spectrum | | | | | | - CEC |
| Ref Level 53 Att 56L Count 11 | 40 dB | | | Node Sweep | | 191.91 |
| Controlled by 1 | | | | _ | | |
| 50 dBm | | | ML. | M12[1] | | 3.47 dBn 9050 CHi |
| 40 dBm | | | Ma. | -MSET1 | 2 | 4.59 dBa 7906 CH |
| 30 dBm- | | | Ma | - | | |
| 20 dBm | | | | | | |
| 1D dBm | | | | | | |
| 0 dBm | | | | | | _ |
| -inanti- | | and all all and all | l kupa | - | and when the company | al and a second |
| -zo dan | | | - | | | _ |
| -90 dBm | | | | | | - |
| -40 dBm | | | - | | | |
| CF 1.9625 G | 1Z | | 715 pts | | Spen 37 | 5.0 MHz |
| Marker Type Ref | 701 | X-value | Y-value | Function | Function Result | |
| M1 | L L | 1.090058 GHz | 43,47 d8m | Function | Function Result | |
| MZ | i. | 1.927906 GHz | 24,59 d8m | | | |
| Ma | 15 | 1.99021 GHz | 29,44 d8m | | | |

Out of leand rejection, 1990-1996 MHz

Figure 8.2-1: Out of band rejection results, low sub-band

| | | Pa | rameter | | , | /alue | | | | |
|-------------------------|--------------------|----------------|--------------|-------|------------------------|----------|-----------------|--------|------------|--------|
| | | f ₀ | | | : | 1961.8 | | | | |
| | | fi | | | : | 1950.2 | 1 | | | |
| | | fh | | | : | 1973.4 | 24 | | | |
| | | 20 | dB band | lwidt | h 2 | 23.214 | | | | |
| Spect | rum - | | | | | | | | | |
| Ref Le Att 56L GD | vel 53. unt 11/ | | BWT TOF | | RBW 1 MH2 VBW 5 MH2 | Mode St | weep | | | 1.00 |
| | | emia///1 | T 🔮 1 Pk Mai | | | _ | | | | |
| 5D dBm- | - | _ | | | N | | (1[1] | | 42.7 | 0 d8m |
| O dBm- | | | | | ~ | | 2111 | | | 15 den |
| | | | | | 1 | 10 13 | Constant of the | 11 | 1.9502 | 10 GH2 |
| 0 dBm- | - | | | | MP | - | 1 | | | - |
| | | | | | 1 | | | | | |
| D dBm- | | | | | | | | | | |
| D dBm | _ | | | | | - | | | | _ |
| | | | | | 1 | | | | | |
| dBm- | | | | | | - | | | | |
| tootin | inter | Almira | manager | mine | mound | Variant. | INCALA MINA | | employment | m |
| zo deri | _ | | | | | | | | | |
| 30 dBr | | | | | | | | | | |
| 20,000 | | | | | | | | | | |
| 40 dBm | +- | | | | - | | | | | _ |
| F 1.96 | 525 GH | z | | | 715 | pts | | | Spen 325.0 | 0 MHz |
| larker | | | | | | 1000171 | | | | |
| | Rof | | X-value | | Y-value | Func | tion | Functi | ion Result | - |
| M1 M2 | | - | 1.961817 | | 42.70 dB | | | | | |
| | | - L - | 1.95021 | GHz | 23.35 dB | | | | | |

Table 8.2-2: Out of band rejection results, mid sub-band

Out of loand rejection, 1990-1996 MHz

Figure 8.2-2: Out of band rejection results, mid sub-band



Table 8.2-3: Out of band rejection results, high sub-band

| | | Ра | rameter | V | alue | | | | |
|--------------------------|--------|----------------|------------------------------|------------------------------|----------------------|------------|---|--|--|
| | | f ₀ | | 19 | 1984.349 1972.969 | | | | |
| | | f | | 19 | | | | | |
| | | fh | | 19 | 95.728 | | | | |
| | | | dB bandwid | | 2.759 | | | | |
| Spectr | 100 | | | - | | | | | |
| Ref Les Att SGL CO | ANT 11 | | | | Mode Sweep | | 12 | | |
| 50 dBm | | ventew | I OIPE Mai | | MALTI | | 42.60 (8) | | |
| 40 dBm- | - | | | | MPIXI | | 1.984949 CH 20.45 d8/ 1.972999 CH | | |
| 30 dBm- | - | | | | 1 12 | | | | |
| 20 dBm- | _ | | | | - | _ | | | |
| 1D dBm- | - | | | | | | | | |
| 0 dBm— | - | | | | | _ | | | |
| nan de ² | | rially. | - the working down | and the second second second | lund | Made years | an intersection | | |
| -zo dan | - | | | - | | | | | |
| -30 dBm | + | | | | | | | | |
| -40 d&n | - | | | | | | | | |
| CF 1.96 | 25 G | +z | | 715 pt | ¢ | | Spen 325.0 MHz | | |
| Marker | | | | Souther | | | | | |
| Type | Rof | | X-value 1.984349 GHz | Y-value | Function | Fur | ction Result | | |
| M1 M2 | | 1 | 1.984349 GHz 1.972969 GHz | 42.60 d8m 23.45 d8m | | | | | |
| M3 | - | 15 | 1.995728 GHz | 28,78 d8m | | | | | |
| - | _ | | | | | | 4.95 | | |
| | | | | | | | AND IN THE REAL OF | | |

Figure 8.2-3: Out of band rejection results, high sub-band

8.2.5.2 Operating frequency band: Band 66: 2110 – 2200 MHz

Table 8.2-4: Out of band rejection results, low sub-band

| | Ра | rameter | Va | alue | | | | |
|-------------------------------------|----------------|---------------------|-----------|---------------------|-----------------------|----------------------------|--|--|
| | f ₀ | | 21 | 2119.51 | | | | |
| | fi | | 21 | .08.362 | | | | |
| | fh | | 21 | .30.657 | | | | |
| | 20 | dB bandwid | th 22 | .295 | | | | |
| Spectrum | | | | | | E C | | |
| Ref Level 53 Att SSL Count 10 | 30 dB | | | Node Sweep | | 1.0 | | |
| Controlled by M | | TT 🔵 1 Pk. Mai | | | | | | |
| SD dBm | | | Mi | M1[1] | | 42.88 dBn 2.119510 GH | | |
| 40 dBm | | | Ma. | -MSI 11 | | 24.10 dBin 2.108362 GHz | | |
| 30 dBm | | | | | - | | | |
| 20 dBm | | | | | | | | |
| 1D dBm | | | | | | | | |
| 0 dBm | | | 1 | | | | | |
| -10060 | المهممة | and a march marrier | rd have | and an and a second | and the second second | www.webecom.com | | |
| -zo dari | | | - | | - | | | |
| -30 dBm | | | | | | | | |
| -40 dBm | | | | | | | | |
| CF 2.155 GH | | | 990 pt- | | | Span 450.0 MHz | | |
| Marker | | | | | | | | |
| Type Rof | | X-value | Y-value | Function | Functio | an Result | | |
| M1 | L L | 2.11951 GHz | 42.88 dam | | | | | |
| M2 | 1 | 2.108362 GHz | 24.10 d8m | | | | | |
| M3 | 15 | 2.130657 GHz | 30,35 d8m | | | | | |

Out of band rejection, 2110-2200 MHz

Figure 8.2-4: Out of band rejection results, low sub-band

| Table 8.2-5: Out o | f band reiection | results. m | id sub-band |
|--------------------|------------------|------------|-------------|
| | | | |

| Parameter | Value |
|-----------------|----------|
| fo | 2154.317 |
| fi | 2142.942 |
| fh | 2165.693 |
| 20 dB bandwidth | 22.751 |

Report reference ID: REP032370-1TRFEMC



| Att 56L Count 1 | 30 dē 0/10 | BWT ims | VBW 5 MHz | Mode Sweep | | |
|--------------------|---------------|------------------------------|------------------------|---------------------------------|--|--|
| Controlled by | NemiaWT | T e 1Pk Max | | | | _ |
| 50 dBm | | | N | Ma[1] | | 43.48 dBr 2.154317 GH 24.39 dBr 7.147942 GH |
| 30 dBm- | | - | | - | | - |
| 2D dBm | | | | | | |
| 1D dBm | | | 1000 | | | _ |
| 0 dBm | | | | han har and | يورون والمحافظة والمحافظة المحافظة والمحافظة والمحافظة والمحافظة والمحافظة والمحافظة والمحافظة والمحافظة والمح | and the second second |
| -10.000 | and the first | - Aller since donuments | | and a set of the set of the set | | |
| -zo dan | | | - | | - | - |
| -30 dBm | | | | | | |
| -40 dBm | | | - | | | |
| CF 2.155 GH | iz . | | 990 pt | s . | Spe | IN 450.0 MHz |
| Marker | | | | 2001 | | |
| Type Rof | | X-value | Y-value | Function | Function Res | wit |
| MI | L | 2.154317 GHz | 43.08 d8m | | | |
| M2 M3 | 1 | 2.142942 GHz 2.165693 GHz | 24.39 d8m 30.84 d8m | | | |
| | | | | | | |

Figure 8.2-5: Out of band rejection results, mid sub-band



8.3 Occupied bandwidth / Input Versus Output Comparison

8.3.1 References and limits

- FCC 47 CFR Part 2.1049

- ANSI C63.26 Clause 7.2.2.4
- KDB 935210 D05v01r04 Clause 3.4

8.3.2 Test summary

| Verdict | Pass | | |
|---------------|---|-------------------|-----------|
| Test date | March 21, 2024 | Temperature | 21 °C |
| Test engineer | Lan Sayasane, EMC Test Engineer | Air pressure | 1009 mbar |
| Test location | 10m semi anechoic chamber 3m semi anechoic chamber Wireless bench Other: | Relative humidity | 52 % |

8.3.3 Notes

Per KDB 935210 D05 v01r04, Clause 3.3 and ANSI C63.26 Clause 7.2.2.3, testing was performed with a narrowband test signal (MSK modulated, gaussian filter of 0.3 and data rate 270 kbps) and a broadband signal (AWGN, 4.1 MHz 99% occupied bandwidth).

8.3.4 Setup details

| EUT power input during test | 120 VAC / 60 Hz |
|-----------------------------|--|
| EUT setup configuration | ⊠ Table-top |
| | □ Floor standing |
| | □ Other: |
| Measurement details | A 26 dB bandwidth measurement shall be performed on the input and the output signal. |
| | a. Connect a signal generator to the EUT. |
| | b. Configure the signal generator to transmit the AWGN signal. |
| | c. Configure the signal level to be just below the AGC threshold, but not more than 015 dB below. |
| | d. Connect a spectrum analyzer to the output of the EUT using appropriate attenuation. |
| | e. Set the spectrum analyzer center frequency to the nominal EUT channel center frequency. The span |
| | range of the spectrum analyzer shall be between 2 x OBW and 5 x OBW. |
| | f. The nominal RBW shall be in the range of 1% to 5% of the anticipated OBW and the VBW shall be \ge 3 x |
| | RBW. |
| | g. Set the reference level of the instrument as required, to prevent the signal from exceeding the |
| | maximum spectrum analyzer input mixer level for linear operation. In general, the peak of the spectral |
| | envelope must be more than [10 log (OBW / RBW)] below the reference level. Step f) and step g) can |
| | require iteration to enable adjustments within the specified tolerances. |
| | h. The noise floor of the spectrum analyzer at the selected RBW shall be at least 36 dB below the reference |
| | level. |
| | i. Set spectrum analyzer detection mode to peak, and the trace mode to max hold. |
| | j. Determine the reference value: Set the EUT to transmit a modulated signal. Allow the trace to stabilize. |
| | Set the spectrum analyzer marker to the highest level of the displayed trace (this is the reference level). |
| | k. Determine the -26 dB down amplitude by placing two markers, one at the lowest and the other at the |
| | highest frequency of the envelope of the spectral display such that each marker is at or slightly below |
| | the-26 dB down amplitude. If a marker is below the -26 dB down value, it should be as close as possible |
| | to this value. The OBW is the positive frequency difference between the two markers. |
| | I. Repeat step 3) to step k) to measure the input signal to the EUT (i.e., signal generator output). Compare |
| | the 26 dB bandwidths to affirm they are similar. |
| | m. Repeat step e) to step I) with the input signal to the EUT set to 3 dB above the AGC threshold. |
| | n. Repeat step e) to step m) with the signal generator set to the narrowband signal. |
| | Repeat step e) to step n) for all bands used by the EUT. |
| | |



36.09 d 1.96254667 d

10.99 d8 1.96734681 CH

May

700.0 kHa

Function Result

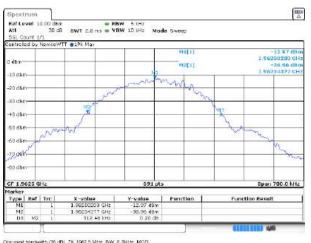
8.3.5 Test data

8.3.5.1 Operating frequency band: Band 25: 1930 – 1995 MHz

| Condition | Test Frequency (MHz) | 26 dB Bandwidth (Input Signal) (MHz) | 26 dB Bandwidth (Output Signal) (MHz) |
|---|-------------------------|--|---|
| Input Level = AGC Threshold0.5 dB Input signal = narrowband | 1962.5 | 0.30942 | 0.30841 |
| Input Level = AGC Threshold + 3 dB Input signal = narrowband | 1962.5 | 0.31246 | 0.30841 |
| Input Level = AGC Threshold0.5 dB Input signal = broadband | 1962.5 | 4.6667 | 4.6667 |
| Input Level = AGC Threshold + 3 dB Input signal = broadband | 1962.5 | 4.6667 | 4.692 |



Figure 8.3-1: Occupied bandwidth / Input Versus Output Comparison results, narrowband signal, 0.5 dB below AGC threshold, input and output signal respectively





Occupied bandwidth (26 dB), TX 1962.5 MHz, BW 6 28/Hz, MOD

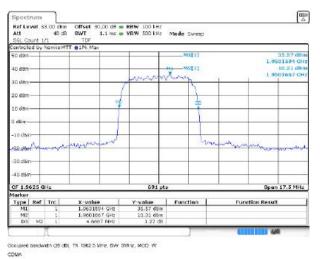


Figure 8.3-2: Occupied bandwidth / Input Versus Output Comparison results, narrowband signal, 3.0 dB above AGC threshold, input and output signal respectively

Section 8 Testing data Test name Occupied bandwidth / Input Versus Output Comparison

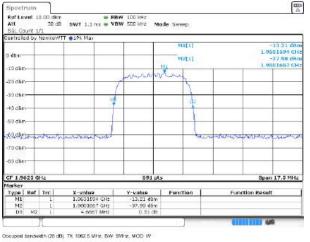


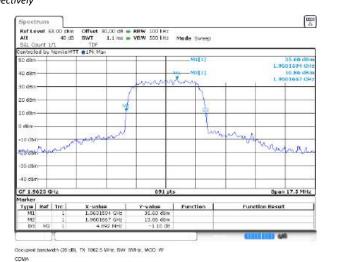
| | unt 1 | a | SWT 1.3 ms | 101 | | ade Swa | 9P. | | | |
|------------|-------|----------------------|-----------------------------|------|------------|-----------|----------------------------------|--------------|---------------|--|
| 0 dbm | + | NUT THE REAL PARTY I | | | | | 11 12 12 12 12 12 | | 1.96 | 16.72 dBa 31594 CH: 41.78 dBa 01697 CH: |
| | | | | | | M1 X | | | | |
| 20 dBr | -+- | | | N | innun n | (Sector) | 1 | - | - | |
| 30 disr | - | | 5 | 1 | 2. | | 1 | -24 | | |
| | | | | ne. | | | 1 | | | |
| +0 dBr | + | | | 1 | | | 40 | | | |
| 50 dBr | | | | | | | | | | |
| OD OD4 | 1 | | | | | | | | | |
| 60 dbr | -the | the Martin | montaint | nd - | | | 1 | ummuna | mounter | antitur |
| -70 dar | 100 | Cast Contra | Constant State | | | | 0.474 | New Westward | O CORRECTOR | Construction of |
| -70'061 | | | | | | | | | | |
| -op dør | - | | | | | | | _ | | |
| | | | | | | | | | | |
| CF 1.9 | 625 G | Hz | | | 691 pt | 5 | | | Span | 17.5 MHz |
| larker | | | | | | | | | | |
| Type | Ref | Trc | X-value | 11 | Y-value | Euno | tien | Fu | nction Result | () |
| M1 | | 1 | 1.9631594 G | | -16.72 dBm | | | | | |
| M2 D3 M | | 1 | 1.9601667 GHz 5.6607 MHz | | -41.78 d8m | | | | | |



Occupied bandwidth (25 dB), TX 1962.5 MHz, BW SMHz, MOD W CDMA

Figure 8.3-3: Occupied bandwidth / Input Versus Output Comparison results, broadband signal, 0.5 dB below AGC threshold, input and output signal respectively





COMA

Figure 8.3-4: Occupied bandwidth / Input Versus Output Comparison results, broadband signal, 3.0 dB above AGC threshold, input and output signal respectively



8.3.5.2 Operating frequency band: Band 66: 2110 – 2200 MHz

Table 8.3-2: Occupied bandwidth / Input Versus Output Comparison results

| Condition | Test Frequency (MHz) | 26 dB Bandwidth (Input Signal) (MHz) | 26 dB Bandwidth (Output Signal) (MHz) |
|---|-------------------------|--|---|
| Input Level = AGC Threshold0.5 dB Input signal = narrowband | 2155 | 0.30841 | 0.30841 |
| Input Level = AGC Threshold + 3 dB Input signal = narrowband | 2155 | 0.30841 | 0.30841 |
| Input Level = AGC Threshold0.5 dB Input signal = broadband | 2155 | 4.6667 | 4.6667 |
| Input Level = AGC Threshold + 3 dB Input signal = broadband | 2155 | 4.6667 | 4.692 |





Occupied bandwidth (25 dB), TX 2185 NHz, BW 9.2MHz, MOD: G SM

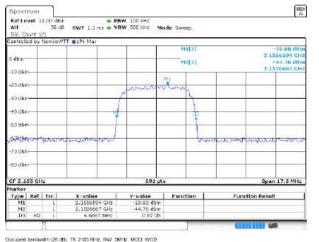
Figure 8.3-5: Occupied bandwidth / Input Versus Output Comparison results, narrowband signal, 0.5 dB below AGC threshold, input and output signal respectively

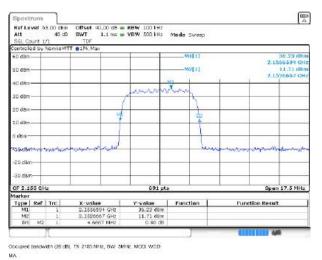


Figure 8.3-6: Occupied bandwidth / Input Versus Output Comparison results, narrowband signal, 3.0 dB above AGC threshold, input and output signal respectively

Section 8 Testing data Test name Occupied bandwidth / Input Versus Output Comparison







MA

Figure 8.3-7: Occupied bandwidth / Input Versus Output Comparison results, broadband signal, 0.5 dB below AGC threshold, input and output signal

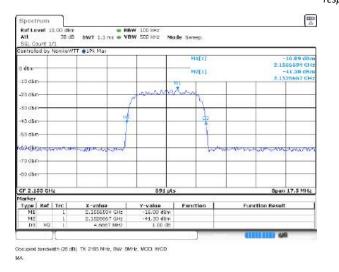




Figure 8.3-8: Occupied bandwidth / Input Versus Output Comparison results, broadband signal, 3.0 dB above AGC threshold, input and output signal respectively



8.4 Output power / Mean output power and amplifier gain

8.4.1 References and limits

- FCC Part 24.232 (band 25 operation)
- FCC Part 27.50(d) (band 66 operation)
- ANSI C63.26 Clause 7.2.2.4
- KDB 935210 D05v01r05 Clause 3.5

8.4.2 Test summary

| Verdict | Pass | | |
|---------------|---|-------------------|-----------|
| Test date | March 21, 2024 | Temperature | 21 °C |
| Test engineer | Lan Sayasane, EMC Test Engineer | Air pressure | 1009 mbar |
| Test location | □ 10m semi anechoic chamber □ 3m semi anechoic chamber ⊠ Wireless bench □ Other: | Relative humidity | 52 % |

8.4.3 Notes

Per KDB 935210 D05 v01r04, Clause 3.4 and ANSI C63.26 Clause 7.2.2.4, testing was performed with a narrowband test signal (MSK modulated, gaussian filter of 0.3 and data rate 270 kbps) and a broadband signal (AWGN, 4.1 MHz 99% occupied bandwidth).

8.4.4 Setup details

| EUT power input during test | 120 VAC / 60 Hz |
|-----------------------------|--|
| EUT setup configuration | 🛛 Table-top |
| | □ Floor standing |
| | □ Other: |
| Measurement details | Adjust the internal gain control of the EUT to the maximum gain for which the equipment certification is sought. |
| | Any EUT attenuation settings shall be set to their minimum value. |
| | a. Connect a signal generator to the input of the EUT. |
| | b. The modulation shall be set to the AWGN signal. |
| | c. The frequency of the signal generator shall be set to the frequency f ₀ as determined during the out-of- |
| | band rejection measurement. |
| | d. Connect a spectrum analyzer or power meter to the output of the EUT using appropriate attenuation, |
| | e. Set the level of the signal generator to a level that produces an output just below the AGC threshold, |
| | but not more than 015 dB below. |
| | f. Measure the output power of the EUT. |
| | g. Remove the EUT from the measurement set-up. Using the same signal generator settings, repeat the |
| | power measurement on the input signal to the EUT (i.e., the signal generator output). Calculate the |
| | amplifier gain as follows: |
| | Gain (dB) = output (dBm) – input (dBm). |
| | h. Repeat step f) and g) with the input level set to a level that is 3 dB above the AGC threshold. |
| | Repeat step e) to step h) with the input refer set to a refer that is a doubte the root investigation. |
| | |
| | j. Repeat step e) to step i) for all bands used by the EUT. |

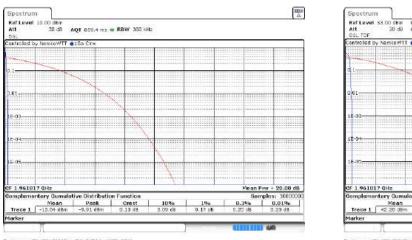


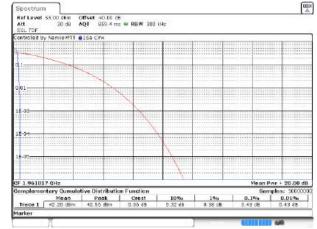
8.4.5 Test data

8.4.5.1 Operating frequency band: Band 25: 1930 – 1995 MHz

Table 8.4-1: Output power / Mean output power and amplifier gain test data

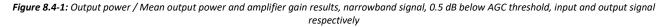
| Condition | Test frequency (MHz) | Input power (dBm / MHz) | Output power (dBm/MHz) | Amplifier gain (dB) | 0.1 % PAPR (dB) |
|---|-------------------------|----------------------------|---------------------------|------------------------|--------------------|
| Input Level = AGC Threshold0.5 dB Input signal = narrowband | 1961.817 | -10.04 | 42.20 | 52.24 | 0.43 |
| Input Level = AGC Threshold + 3 dB Input signal = narrowband | 1961.817 | -6.47 | 42.17 | 48.64 | 0.38 |
| Input Level = AGC Threshold0.5 dB Input signal = broadband | 1961.817 | -9.95 | 42.24 | 52.19 | 4.43 |
| Input Level = AGC Threshold + 3 dB Input signal = broadband | 1961.817 | -6.41 | 42.39 | 48.80 | 3.65 |





Peak power, TX 1951.817 MHz, 800: 0.2MHz, MCC: GSM

Peak power, TX 1961.917 MHz, BUU 0.2MHz, MOC: GSM



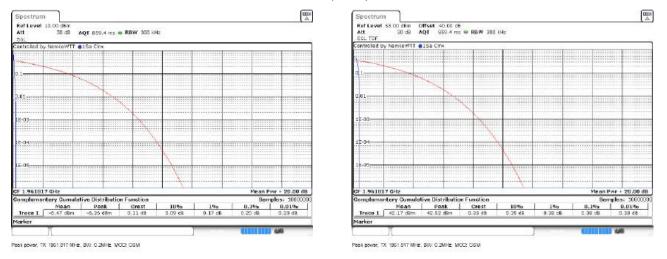


Figure 8.4-2: Output power / Mean output power and amplifier gain results, narrowband signal, 3 dB above AGC threshold, input and output signal respectively





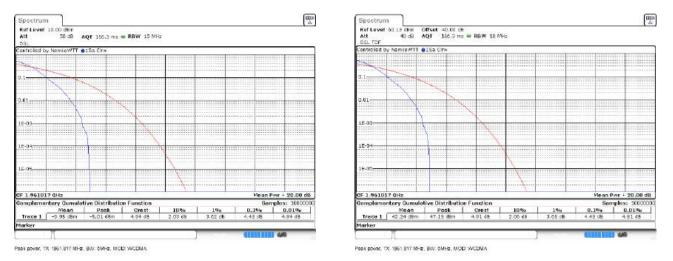
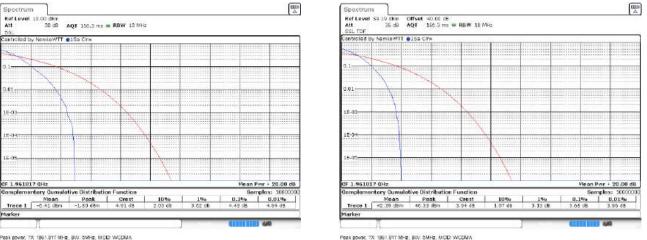


Figure 8.4-3: Output power / Mean output power and amplifier gain results, broadband signal, 0.5 dB below AGC threshold, input and output signal respectively



Peak power, TX 1861,817 MHz, BW: SMHz, MOD: WCDMA

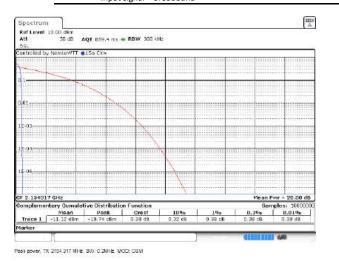
Figure 8.4-4: Output power / Mean output power and amplifier gain results, broadband signal, 3 dB above AGC threshold, input and output signal respectively

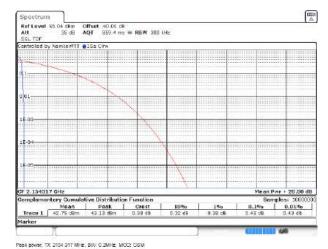


8.4.5.2 Operating frequency band: Band 66: 2110 – 2200 MHz

Table 8.4-2: Output power / Mean output power and amplifier gain test data

| Condition | Test frequency (MHz) | Input power (dBm / MHz) | Output power (dBm/MHz) | Amplifier gain (dB) | 0.1 % PAPR (dB) |
|---|-------------------------|----------------------------|---------------------------|------------------------|--------------------|
| Input Level = AGC Threshold0.5 dB Input signal = narrowband | 2154.317 | -11.12 | 42.75 | 53.87 | 0.43 |
| Input Level = AGC Threshold + 3 dB Input signal = narrowband | 2154.317 | -9.59 | 42.82 | 52.41 | 0.38 |
| Input Level = AGC Threshold0.5 dB Input signal = broadband | 2154.317 | -12.83 | 42.99 | 55.82 | 4.46 |
| Input Level = AGC Threshold + 3 dB Input signal = broadband | 2154.317 | -9.32 | 43.03 | 52.35 | 3.83 |





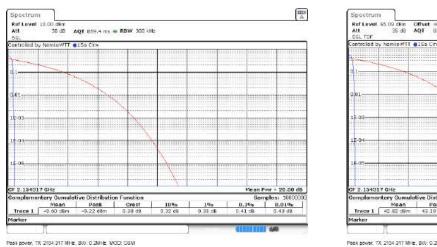


Figure 8.4-5: Output power / Mean output power and amplifier gain results, narrowband signal, 0.5 dB below AGC threshold, input and output signal respectively

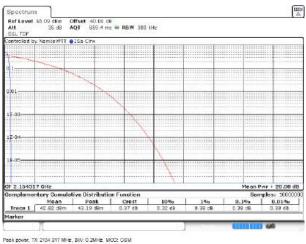


Figure 8.4-6: Output power / Mean output power and amplifier gain results, narrowband signal, 3 dB above AGC threshold, input and output signal

respectively





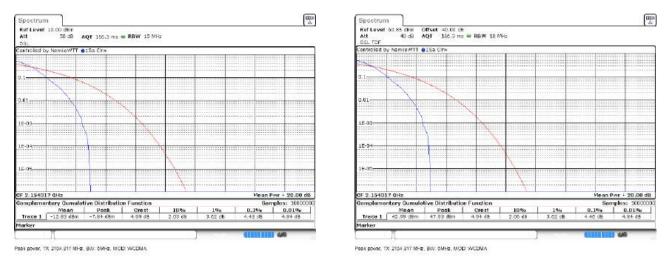
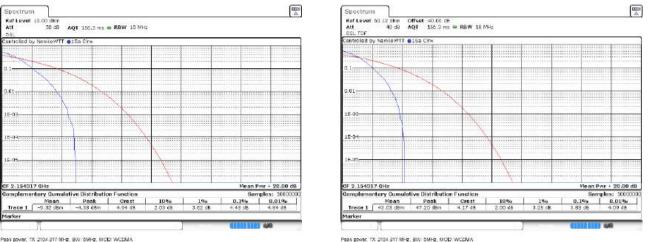


Figure 8.4-7: Output power / Mean output power and amplifier gain results, broadband signal, 0.5 dB below AGC threshold, input and output signal respectively



Peak power, TX 2104 317 MHz, BW: SMHz, MOD: WODMA

Figure 8.4-8: Output power / Mean output power and amplifier gain results, broadband signal, 3 dB above AGC threshold, input and output signal respectively



8.5 Spurious emissions at RF connector

8.5.1 References and limits

- FCC Part 24.232 (band 25 operation)
- FCC Part 27.50(a) & RSS-195 (band 30 operation)
- FCC Part 27.50(d) (band 66 operation)
- ANSI C63.26 Clause 7.2.2.5
- KDB 935210 D05v01r05 Clause 3.6

8.5.2 Test summary

| Verdict | Pass | | |
|---------------|---|-------------------|-----------|
| Test date | March 21, 2024 | Temperature | 21 °C |
| Test engineer | Lan Sayasane, EMC Test Engineer | Air pressure | 1009 mbar |
| Test location | 10m semi anechoic chamber 3m semi anechoic chamber Wireless bench Other: | Relative humidity | 52 % |

8.5.3 Notes

Per KDB 935210 D05 v01r04, Clause 3.4 and ANSI C63.26 Clause 7.2.2.4, testing was performed with a narrowband test signal (MSK modulated, gaussian filter of 0.3 and data rate 270 kbps) and a broadband signal (AWGN, 4.1 MHz 99% occupied bandwidth).

For intermodulation products and out-of-channel block tests, testing is performed under the following two conditions (per ANSI C63.26 7.2.2.5.1 and KDB 935210 D05v01r04 Section 3.6):

- a) Two modulated signals set to the lower or upper block edge.
- b) A single modulated signal set to the low or high channel

Since the EUT does not support operation in the highest sub-band of band 66 (only operation from 2110 MHz to 2180 MHz out of entire band 2110 – 2200 MHz), out-of-channel block tests were only performed on the lowest operating sub-band.

8.5.4 Setup details

| EUT power input during test | 120 VAC / 60 Hz |
|-----------------------------|---|
| EUT setup configuration | 🖾 Table-top |
| | □ Floor standing |
| | Other: |
| Measurement details | Out-of-channel-block and out-of-band emissions: |
| | a. Connect a signal generator to the input of the EUT. If the signal generator is not capable of generating |
| | two modulated carriers at one time, then it may be replaced by two signal generators connected with |
| | an appropriate combining network |
| | b. Set the signal generator to produce 2 AWGN signals. |
| | c. The frequencies shall be set so that the AWGN signals occupy adjacent channels, as defined by industry |
| | standards such as 3GPP or3GPP2, at the upper block edge of the frequency band under test. |
| | d. The composite power levels shall be set so that the signal is just below the AGC threshold, but not more |
| | than 0.5 dB below. The composite power can be measured using the methods described in the output |
| | power methods, however, it will be necessary to measure the composite power by increasing the band |
| | power integration bandwidth to include both transmit channels, or alternatively, this measurement can |
| | be performed using an average power meter. |
| | e. Connect a spectrum analyzer to the output of the EUT using appropriate attenuation. |
| | f. Set the RBW= reference bandwidth in the applicable rule section for the supported frequency band |
| | (typically 1% of the EBW or 100 kHz or 1 MHz). |
| | g. Set the VBW = $3 \times RBW$. |
| | h. Set the detector to power averaging (rms) detector. |
| | i. Set the sweep time = auto couple. |
| | j. Set the spectrum analyzer start frequency to the upper block edge frequency and the stop frequency to |
| | the upper block edge frequency plus 300 kHz or 3 MHz for frequencies below and above 1 GHz, |
| | respectively. |
| | k. Trace average at least one hundred traces in power averaging (i.e., rms) mode. |
| | k. Hate average at least one numbred traces in power averaging (i.e., fins) mode. |



| l. | Use the marker function to find the maximum power level. |
|----------|---|
| m. | Capture the spectrum analyzer trace of the power level for inclusion in the test report. |
| n. | Repeat step k) and step m) with the input level set to 3 dB above the AGC threshold. |
| о. | Set the frequencies of the input signals to the lower block edge of the frequency band under test. |
| р. | Reset the analyzer start frequency to the lower block edge frequency minus 300 kHz or 3 MHz for |
| | frequencies below and above 1 GHZ, respectively, and the stop frequency to the lower block edge |
| | frequency. |
| q. | Repeat step k) to step n). |
| r. | Repeat step a) to step q) with the signal generator set to only a single signal closest to the block edges. |
| s. | Repeat step a) to step r) with the narrowband signal. |
| t. | Repeat step a) to step s) for all bands used by the EUT. |
| Conducte | d spurious: |
| a. | Connect a signal generator to the input of the EUT. |
| b. | Set the signal generator to produce the AWGN signal. |
| с. | Set the frequency of the signal to the lowest channel within the frequency block. |
| d. | The power levels shall be set so that the signal is just below the AGC threshold, but not more than 0.5 |
| | dB below. |
| e. | Connect a spectrum analyzer to the output of the EUT using appropriate attenuation. |
| f. | Set the RBW = reference bandwidth in the applicable rule section for the supported frequency band |
| | (typically 100 kHz or 1 MHz). |
| g. | Set the VBW = 3 x RBW. |
| h. | Set the sweep time = auto-couple. |
| i. | Set the spectrum analyzer start frequency to the lowest RF signal generated in the equipment, without |
| | going below 9 kHz, and the stop frequency to the lower band/block edge frequency minus 100 kHz to 1 |
| | MHz, as specified in the applicable rule part. The number of measurement points in each sweep must |
| | be \geq (2 x span/RBW), which may require that the measurement range defined by the start and stop |
| | frequencies be subdivided depending on the available number of measurement points provided by the |
| | spectrum analyzer. |
| j. | Trace average at least ten traces in power averaging (i.e., rms) mode. |
| k. | Use the peak marker function to identify the highest amplitude level over each of measured frequency |
| | range. Record the frequency and amplitude and capture a plot for inclusion in the test report. |
| Ι. | Reset the spectrum analyzer start frequency to the upper band/block edge frequency plus 100 kHz or 1 |
| | MHz, as specified in the applicable rule part, and the spectrum analyzer stop frequency to ten times the |
| | highest frequency of the fundamental emission. The number of measurement points in each sweep |
| | must be \geq (2 x span/RBW), which may require that the measurement range defined by the start and |
| | stop frequencies be subdivided, depending on the available number of measurement points provided by |
| | the spectrum analyzer. |
| m. | Trace average at least ten traces in power averaging (i.e., rms) mode. |
| n. | Use the peak marker function to identify the highest amplitude level over each of the measured |
| | frequency ranges. Record the frequency and amplitude and capture a plot for inclusion in the test |
| - | report; also provide tabular data, if required. |
| 0. | Repeat step i) to step n) with the input signal firstly set to a middle channel frequency and then tuned to |
| ~ | a high channel frequency. |
| р. ~ | Repeat step c) to step o) with the narrowband signal. |
| q. | Repeat step b) to step p) for all bands used by the EUT |



8.5.5 Test data – out-of-channel block and out-of-band emissions

8.5.5.1 Operating frequency band: Band 25: 1930 – 1995 MHz

Table 8.5-1: Spurious emissions at RF connector test data, narrowband

| Condition | Frequency of highest emission (MHz) | Level (dBm) | Limit (dBm) |
|---|---|-------------|-------------|
| Input Level = AGC Threshold - 0.5 dB Input signal = narrowband Number of signals: 2 Low band edge | 1929.981 | -26.38 | -13.00 |
| Input Level = AGC Threshold - 0.5 dB Input signal = narrowband Number of signals: 1 Low band edge | 1929.990 | -18.87 | -13.00 |
| Input Level = AGC Threshold +3 dB Input signal = narrowband Number of signals: 2 Low band edge | 1929.990 | -26.63 | -13.00 |
| Input Level = AGC Threshold + 3 dB Input signal = narrowband Number of signals: 1 Low band edge | 1929.996 | -18.87 | -13.00 |
| Input Level = AGC Threshold - 0.5 dB Input signal = narrowband Number of signals: 2 High band edge | 1995.088 | -21.99 | -13.00 |
| Input Level = AGC Threshold - 0.5 dB Input signal = narrowband Number of signals: 1 High band edge | 1995.010 | -18.61 | -13.00 |
| Input Level = AGC Threshold +3 dB Input signal = narrowband Number of signals: 2 High band edge | 1995.010 | -26.12 | -13.00 |
| Input Level = AGC Threshold + 3 dB Input signal = narrowband Number of signals: 1 High band edge | 1995.004 | -19.01 | -13.00 |

Narrowband signal(s):





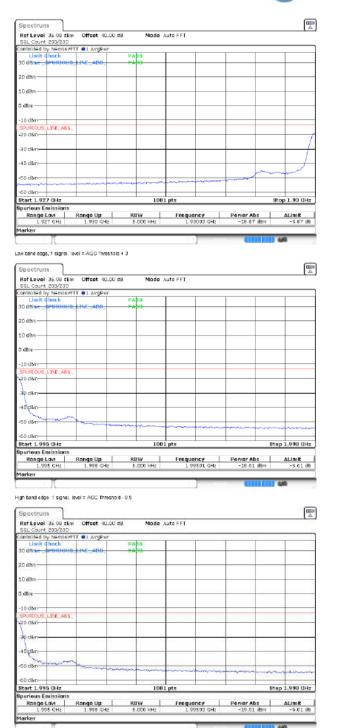
Low band edge, 2 signals, level = AGC Threshold = 0.8

Low band edge, 1 signal, level = AGC Threshold - 0.5 $\,$

Section 8 Testing data Test name Spurious emissions at RF connector



High band edge, 2 signals, level = AGC Threshold + 3



Low band edge, 1 signal, lovel = AGC Threshold + 3

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Nèmko



Table 8.5-2: Spurious emissions at RF connector test data, broadband

| Condition | Frequency of highest emission (MHz) | Level (dBm) | Limit (dBm) |
|---|---|-------------|-------------|
| Input Level = AGC Threshold - 0.5 dB Input signal = broadband Number of signals: 2 Low band edge | 1929.950 | -20.08 | -13.00 |
| Input Level = AGC Threshold - 0.5 dB Input signal = broadband Number of signals: 1 Low band edge | 1929.998 | -32.89 | -13.00 |
| Input Level = AGC Threshold +3 dB Input signal = broadband Number of signals: 2 Low band edge | 1929.998 | -26.71 | -13.00 |
| Input Level = AGC Threshold + 3 dB Input signal = broadband Number of signals: 1 Low band edge | 1929.998 | -26.93 | -13.00 |
| Input Level = AGC Threshold - 0.5 dB Input signal = broadband Number of signals: 2 High band edge | 1997.930 | -51.37 | -13.00 |
| Input Level = AGC Threshold - 0.5 dB Input signal = broadband Number of signals: 1 High band edge | 1995.001 | -33.18 | -13.00 |
| Input Level = AGC Threshold +3 dB Input signal = broadband Number of signals: 2 High band edge | 1995.001 | -25.46 | -13.00 |
| Input Level = AGC Threshold + 3 dB Input signal = broadband Number of signals: 1 High band edge | 1995.001 | -24.70 | -13.00 |

Broadband signals:

| Range Lovi 1.927 GHz | Range Up 1.930 GHz | 8BW 50.000 kHz | Frequency 1.92995 GHz | -20,08 dBm | ΔLimit -7.08 d |
|--|-----------------------|-------------------|--------------------------|------------|-------------------|
| purious Emission | | | | | |
| tort 1.927 CHz | | 1001 | pts | | 8top 1.93 GH |
| sudan- | | | | | |
| 60 dilin | | | | | |
| 50 dBm | | | | | |
| | | | | | |
| 40 dBm | | | | | |
| 30 dBm | | | | | |
| | + | -m | | | ~ r |
| 20 dBin | | | | tonto | the |
| PURCOUS_LINE_AB | 5 | | | | _ |
| 10 d8m | | | | | _ |
| dBm | | | | | |
| | | | | | |
| D dBm | | | | | |
| | | | | | |
| D dBm | | | | | _ |
| Line_SPURIO | JS_LINE_ABS_ | PASS | | | |
| o delimit Check | witi 💽 avgew | PASS | | | |
| 56L Count 200/200 antrolled by Nemico | | | | | |
| | Bm Offset 40.00 c | iB Miode ∦ | uta FFT | | |

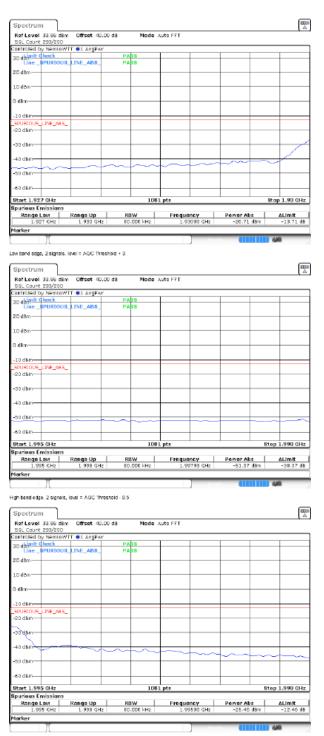


Low band edge, 2 signals, level = AGC Threshold - 0.5

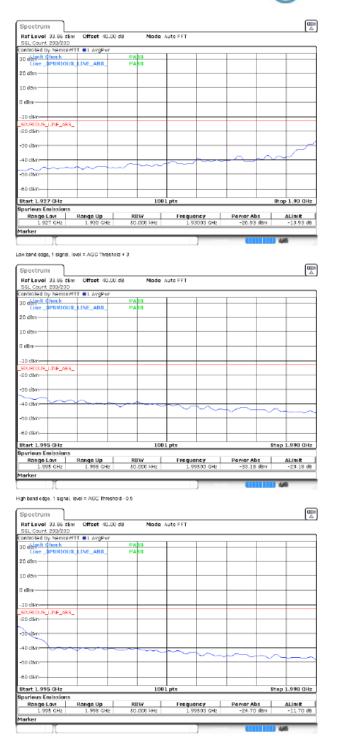
Low band edge, 1 signal, level = AGC Threshold - 0.5 $\,$

Section 8 Test name

Testing data Spurious emissions at RF connector



High band edge, 2 signals, level = AGC Threshold + 3



Low band edge, 1 signal, level = AGC Threshold + 3

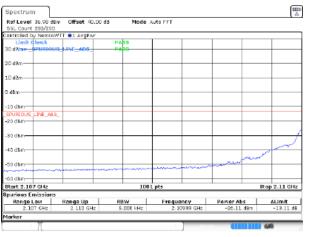
Nèmko



8.5.5.2 Operating frequency band: Band 66: 2110 – 2200 MHz

Table 8.5-3: Spurious emissions at RF connector test data, narrowband

| • | | | |
|---|---|----------------|----------------|
| Condition | Frequency of highest emission (MHz) | Level (dBm) | Limit (dBm) |
| Input Level = AGC Threshold - 0.5 dB Input signal = narrowband Number of signals: 2 Low band edge | 2109.993 | -26.11 | -13.00 |
| Input Level = AGC Threshold - 0.5 dB Input signal = narrowband Number of signals: 1 Low band edge | 2109.996 | -18.04 | -13.00 |
| Input Level = AGC Threshold +3 dB Input signal = narrowband Number of signals: 2 Low band edge | 2109.996 | -26.39 | -13.00 |
| Input Level = AGC Threshold + 3 dB Input signal = narrowband Number of signals: 1 Low band edge | 2109.996 | -18.18 | -13.00 |
| Input Level = AGC Threshold - 0.5 dB Input signal = narrowband Number of signals: 2 High band edge | Not Applicable | Not Applicable | Not Applicable |
| Input Level = AGC Threshold - 0.5 dB Input signal = narrowband Number of signals: 1 High band edge | Not Applicable | Not Applicable | Not Applicable |
| Input Level = AGC Threshold +3 dB Input signal = narrowband Number of signals: 2 High band edge | Not Applicable | Not Applicable | Not Applicable |
| Input Level = AGC Threshold + 3 dB Input signal = narrowband Number of signals: 1 High band edge | Not Applicable | Not Applicable | Not Applicable |



| 2.11 GH |
|---------------|
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| / |
| \rightarrow |
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| |
| |
| |

Low band edge, 2 signals, level = AGC Threshold - 0.5

Low band edge, 1 signal, level = AGC Threshold - 0.5

Testing data Section 8 Test name Spurious emissions at RF connector



Stop 2.11 GHz





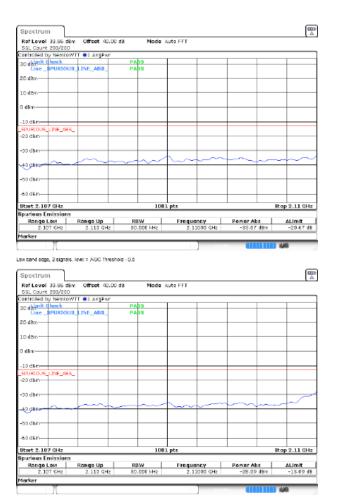
Table 8.5-4: Spurious emissions at RF connector test data, broadband

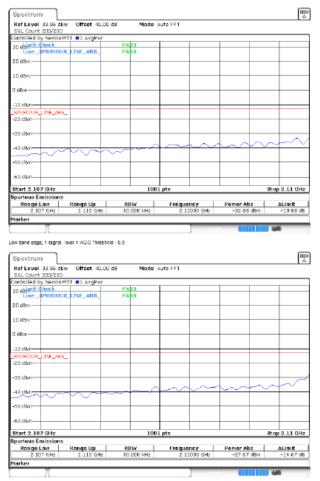
| Condition | Frequency of highest emission (MHz) | Level (dBm) | Limit (dBm) |
|--|---|----------------|----------------|
| Input Level = AGC Threshold - 0.5 dB Input signal = broadband Number of signals: 2 Low band edge | 2109.998 | -33.67 | -13.00 |
| Input Level = AGC Threshold - 0.5 dB Input signal = broadband Number of signals: 1 Low band edge | 2109.998 | -32.88 | -13.00 |
| Input Level = AGC Threshold +3 dB Input signal = broadband Number of signals: 2 Low band edge | 2109.998 | -28.09 | -13.00 |
| Input Level = AGC Threshold + 3 dB Input signal = broadband Number of signals: 1 Low band edge | 2109.998 | -27.67 | -13.00 |
| Input Level = AGC Threshold - 0.5 dB Input signal = broadband Number of signals: 2 High band edge | Not Applicable | Not Applicable | Not Applicable |
| Input Level = AGC Threshold - 0.5 dB Input signal = broadband Number of signals: 1 High band edge | Not Applicable | Not Applicable | Not Applicable |
| Input Level = AGC Threshold +3 dB Input signal = broadband Number of signals: 2 High band edge | Not Applicable | Not Applicable | Not Applicable |
| Input Level = AGC Threshold + 3 dB Input signal = broadband Number of signals: 1 High band edge | Not Applicable | Not Applicable | Not Applicable |

-

Section 8 Test name

Testing data Spurious emissions at RF connector





Low band edge, 2 signals, level = AGC Threshold + 3

Low band edge, 1 signal, lovel = AGC Threshold + 3

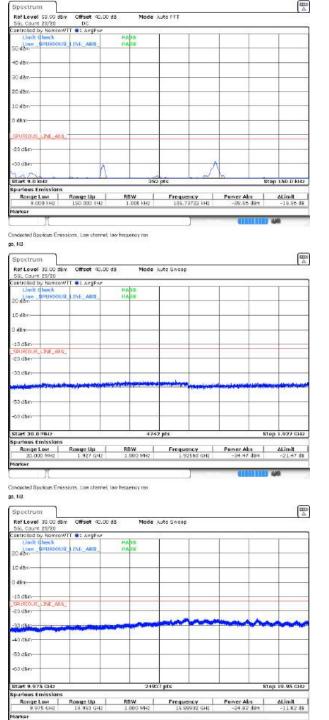




8.5.6 Test data - conducted spurious emissions:

8.5.6.1 Operating frequency band: Band 25: 1930 – 1995 MHz

Input signal = lowest channel within the frequency block; narrowband:



| Spectrur Ref Lovel | n | Offset 40 | .00 dB Mode | e Auto FFT | | | L A |
|-----------------------|---------------|-----------------------|--------------|-------------------|------------|-------------------------|---------------------|
| 56L Count | 20/20 | DC. | NENCOS | 98649311CP | | | |
| | | T 🛛 1 AegPw | | - <u>12</u> | | C | |
| Limit | spurious_ | LINE ABS | PASS | | | | |
| 50 dBm | | | | | | | _ |
| 40 dBm | - | | | | | | |
| 30 dBm — | - | | | - | | | |
| 20 dBm | | | | - | _ | | |
| 10 d6m | | | | - | | | - |
| 0 dBm | | | | | | | |
| spukrous | LINE ABS | | | - | | | _ |
| -20 dBm | | | | - | | | |
| -30 dBm | White Hereit | ar bes labore | | witherway | Alleringer | - | - |
| Start 150. | U RH2 | and a reason of the | 74 | 162 pts | 1.01 | 1. The second second | Step 38.8 MHz |
| spurious E | missions | | 12 | 10 T | | 15 | 11 - 11 oraș - 14 |
| Ronge 198.0 | Law OD kH2 | Ronge Up 30.000 MH | 2 20.000 kH2 | Frequen 11.509 | | Pewer Abs -31.95 dan | ALimit -18.96 dB |
| Marker | 302 | | | | | | |

Conducted Spurious Emissions, Low channel, low frequency ran

go, NB

| Spectrum | | | | | |
|---------------------------------------|------------------------|------------------|--------------------------|--------------------------|---|
| Ref Level 30.00 d S&L Count 20/20 | Bm Offset 40.00 | dB Mode) | uta Sweep | | |
| entrolled by Nemze | WTT . 1 AvgPwr | - 31 - X | 2 21 | V (V | - S |
| Limit Check Line_\$PURIO 20 dBm | US_LINE_ABS_ | PA35 PA35 | | | |
| LO dBm | _ | _ | | | |
| d9m | | _ | | | _ |
| 10 dBm | | _ | | | |
| SPURIOUS_LINE_AB | 8_ | | | | |
| 30 dBm | | and and a second | No. of Concession, Name | | |
| urobin | and anticestication in | | | | |
| 50 dBm | | | | | - |
| oodan | | | | | - |
| atant 1.999 CH2 | in | 1004 | 2 pts | 51 | op 9.975 GHz |
| ourious Emission | \$ | 20 | 100 | 75 82 | 10 and |
| Ronge Love 1.998 GH2 | 9.975 GH2 | 1.000 MH2 | Frequency 5.96472 GH2 | Perver Abs -29.74 dan | -15 74 d8 |
| larker | | | | | |
| | | | - | | 140 |

Conducted Spurious Emissions, Low channel, low frequency ran

go, NB

Conducted Spurious Emissions, Low channel, low frequency ran go, NB

Report reference ID: REP032370-1TRFEMC



Input signal = middle channel within the frequency block; narrowband:

| controlled by Nemicov | VTT @1.3.VgPwr | | - 322 | - 14 | |
|--|-------------------------|-----------------|----------------------------|---|---------------|
| Limit Check Line _\$PURIOU: 50 dBm | ALINE_ARS_ | PA33 PASS | | | |
| 40 dBm | | | | | _ |
| 30 dBm | | | | | - |
| 20 dBm | ++ | | | - | - |
| 10 d0m | | | | | _ |
| 0 dBm | | | | | |
| SPURCOUS LINE ARE | - | | - | | _ |
| -20 dBm | + + | | | | |
| -90 dBm | | 8 | n / | W | - |
| Start 9.0 kHz | 1 ! | | 352 pts | N 3 | top 150.0 kHz |
| purious Emissions | | 9 | and a second second | () () () () () () () () () () | |
| Range Lovi 9.000 kHz | Range Up 1SD 000 kHz | RBW 1.000 kH | Frequency 104.53551 kHz | Power Abs -32.21 dBm | -19.21 dB |
| Aarker | | 21000 110 | | | |
| T N | | | | | 100 |
| and united Solutions Error | sions. Midale cha | nani NB | | | |
| anduated Spurious Emis | sions, Midale cha | nnol, NB | | | |

| Controlled i | by Nemtow | TT @ 1 JavgPwa | e | 0 | 30 - C | (h | 18 | | - 00 |
|----------------|-----------|----------------|---------------|--|---------------|-------------|----------|--------------------|-------------|
| i imit | therk | LINE_ABS_ | PA | | | | | | |
| 10 dBm — | - | - | | | | | | | - |
| 0 dBm | | | | | - | | | | - |
| -10 dBm- | | | | | | | - | | |
| -20 dBm | Lint_ann. | - | | | | | | | |
| -30 dBm | | 1 2 | W. I | 0.5% | 25000.500 | | | | |
| and the shared | - | ter states | CONTRACTOR OF | No. of Concession, Spinster, Spinste | a substanting | August dise | - | an a second second | - |
| -50 d&n | - | | | | - | | | | |
| -60 dBm | - | | | | - | | - | | - |
| Start 30.0 | MHz | | | 4743 | 2 pts | | | Sto | p 1.927 GHz |
| Sparious E | missions | 1 | | | 0.000 | | | 1.1 | |
| Range | | Range Up | | w | Freque | | Perver A | | ALINIK |
| 30.0 | 00 MHz | 1.927 GH | : 1 | 2HM 000 | 848.68 | 631 MHz | -35.17 | neh ' | -22.17.dB |
| Marker | 1.1.2 | | | | | | | | |

Condusted Spurious Emissions, Midale channel, NE

| 56L Count 20/20 | and the second second | - 200 a | | | |
|--------------------------------------|-----------------------|---|----------------------|---|--------------|
| Controlled by Nemi | OWIT . T WAR | | | | |
| Limit Check Line_SPURIO 20 dBm | | PA30 PA85 | | | |
| 20 dBm | | | | | - |
| 1D dBm | | | | | |
| 0 dBm | | | | | |
| O OBM | | | | | |
| -10 dBm | | | | | - |
| -20 dBm | 50 | | | | |
| | | 25/25/2010 | the second second se | the second second | - alasta |
| -30 dbm. | | and the second second | | The second se | |
| | | | | | |
| -49 dbm | | | | | |
| 100526 | | | | | |
| -40 dbn -50 dbn | | | | | - |
| 100526 | | | | | |
| -50 dbm | | 2495 | 37 pts | st | op 19.95 GHz |
| -50 dbn -60 dbn | 13 | 2495 | 37 pts | 5t | op 19.95 GHz |

Conducted Spurious Emissions, Middle channel, NB

| Ref Level 50.99 | | .00 dB Mode | a Auto FFT | | |
|--|--|--|----------------------------|--|---------------------|
| 56L Count 20/20 antrolled by Nemi | DC. DWTT @1 AVgPwr | O) | 30 00 | 1.7 4.8 | |
| Limit Charle | | PA33 | 1 1 | 1 | 1 |
| iD dBm | NUS_LINE_ABS_ | PASS | | | |
| iD dBm | | | | | - |
| ID dBm | | | | | - |
| O dBm | | | - | | - |
| .0 dBm | | | | | |
| l dBm | | | | | |
| anti accordura | <u>дс_</u> | | | | - |
| 20 dBm | | | | | |
| 30 dbm | | a log and a set | | 100000000000 | and the second |
| Rart 150.0 kHz | the second second | net all a state of the second | Ho 2 pts | A DESCRIPTION OF A DESC | Step 30.0 MHz |
| parious Emissio | | | | | |
| | | 1 | | | |
| Range Low 150.000 kHz | Range Up 30.000 MHz | RBW 10.000 kHz | Frequency 150,00057 kHz | Power Abs -30.92 dBm | ALImit -17.92 dB |
| 150.000 kHz arker | Range Up | : 10.000 kHz | | | |
| 150.000 kHz larker | Range Up 30.000 MHz | : 10.000 kHz | | | -17 92 dB |
| 150.000 kHz larker nausted Spintus E Spectrum Raf Lavel 30.00 | Range Up 30.000 MHz | 2 10.000 kHz | | | |
| 150.000 kHz arker neucted Spuncus E Spectrum Ref Level 30.00 SSL Court 20/20 | Range Up 30.000 MHz missions, Midale cha dBm Offset 40. | r 10.000 kHz annol, NB 00 dB Miade | 153,00957 kHz | | -17 92 dB |
| 150.000 kHz arker naucted Spurious E Spectrum Ref Level 30.00 SSL Court 25/20 antrolied by Nem | Range Up 30.000 MHz missions, Widale chi dBm Officet 40, aWTT ©1 AvgPw; | r 10.000 kHz annol, NB 00 dB Miade | 153,00957 kHz | | -17 92 dB |
| 150.000 kHz arker naucted Spurious E Spectrum Ref Level 30.00 SSL Court 25/20 antrolied by Nem | Range Up 30.000 MHz missions, Widale chi dBm Officet 40, aWTT ©1 AvgPw; | 2 10.000 kHz annol, NB .00 dB Mode | 153,00957 kHz | | -17 92 dB |
| 150.000 kHz larker nausted Spurtus E Spectrum Ref Level 30 00 SSL Court 20/20 ontroled by New K Unit (New K Unit (New K Unit (New K) | Range Up 30.000 MHz missions, Widale chi dBm Officet 40, aWTT ©1 AvgPw; | 2) 30.000 kHz annol, NS CO dž Mode | 153,00957 kHz | | -17 92 dB |
| 150.000 kHz iarker neusted Spuncus E Spectrum Ref Level 30.00 SEL Court: 20/20 ontrolled by Nem Umit Check Umit Check Umit Check Umit Check | Range Up 30.000 MHz missions, Widale chi dBm Officet 40, aWTT ©1 AvgPw; | 2) 30.000 kHz annol, NS CO dž Mode | 153,00957 kHz | | -17 92 dB |
| 150.000 HHz iarker industed Spintus E Spectrum Ref Level 30.00 SEL Court: 20/20 ontroled by Herek Line Line D dBm 10 dBm | Ronge Up 30.000 MHz missions, Middle che dem Offset 40, GWTT 01, AVGP or 3008, UNIT 648.8 | 2) 30.000 kHz annol, NS CO dž Mode | 153,00957 kHz | | -17 92 dB |
| 150,000 kHz tarker neutod Spurtus E Spectrum Raf Lavel 30,00 SSL Court 20/20 antroled by Neur Umit (heck Umit (heck Umit (heck Umit 10 km 10 dbm | Ronge Up 30.000 MHz missions, Middle che dem Offset 40, GWTT 01, AVGP or 3008, UNIT 648.8 | 2) 30.000 kHz annol, NS CO dž Mode | 153,00957 kHz | | -17 92 dB |
| 150.000 kHz larker nausted Spinus E Spectrum Raf Lavel 30.00 SSL Court. 20/20 Unite Check Unite Spiller Unite Check Line Spiller Unite Check 10 dbm 10 dbm | Ronge Up 30.000 MHz missions, Middle che dem Offset 40, GWTT 01, AVGP or 3008, UNIT 648.8 | 2) 30.000 kHz annol, NS CO dž Mode | 153,00957 kHz | | -17 92 dB |
| 150.000 kHz iarker nausted Spinsus E Spectrum Raf Lavel 30.00 SSL Court 20/20 United Spinsus E United Spinsus E United Spinsus E United Spinsus E United Spinsus E United Spinsus E 10 dBm 10 dBm 20 dBm 20 dBm 20 dBm | Ronge Up 30.000 MHz missions, Middle che dem Offset 40, GWTT 01, AVGP or 3008, UNIT 648.8 | 2) 30.000 kHz annol, NS CO dž Mode | 153,00957 kHz | | -17 92 dB |
| 150.000 kHz larker Industed Spinicus E Spectrum Ref Level 30.00 SGL Count, 20/20 ontrolled by Nemi | Ronge Up 30.000 MHz missions, Middle che dem Offset 40, GWTT 01, AVGP or 3008, UNIT 648.8 | 2) 30.000 kHz annol, NS CO dž Mode | 153,00957 kHz | | -17 92 dB |
| 150.000 kHz larker nausted Spinus E Spectrum Rat Lovel 30 00 SSL Court 20/20 Unite Check Unite Check Unite Check 10 dbm 10 dbm 20 dbm 20 dbm 20 dbm 40 dbm | Ronge Up 30.000 MHz missions, Middle che dem Offset 40, GWTT 01, AVGP or 3008, UNIT 648.8 | 2) 30.000 kHz annol, NS CO dž Mode | 153,00957 kHz | | -17 92 dB |

Marker
Conducted Spurtures Emissions, Middle chernel, NE



(

Input signal = highest channel within the frequency block; narrowband:

| Limit (| theck seturious_ | INF ARS | PA | | | | | | |
|--|---------------------|------------------------|----------------|-----------|-------------------|-----|-----------|---------------------|---------------------|
| 50 dBm | | | | - | | | | | - |
| 40 dBm | | | - | | | | | | - |
| 30 dBm | | | | | | | | | |
| 20 dBm | - | - | | - | | | | | - |
| 10 dBm — | | | | | | | | | |
| 0 dBm | | | | | | | | | |
| enuiscoue | LINE ARE | | | | | | | | |
| -20 dBm | - | - | | - | | | | | - |
| -30 dbn | | - | \$35 | | | A | | | - |
| nin | 0.0 | 1 | Λ | 0 | 8 | 1 | 1 | | |
| Start 9.0 k | | 0-46-4 | 200 <u>–</u> 1 | 352 | pts | | | Sto | p 150.0 kHz |
| Sparious E Range I 9.00 | | Range Up 1SD-000 kH | | W 000 kHz | Frequer 105.33 | NCY | Perver Ab | | ALImit -17.99 dB |
| Marker | | | | | | | | and a second second | |
| and the local diversion of the local diversio | 1 | | | | | | | 111111 | 30 |

| Controlled by Nemito | WTT @1.8VgPwr | | 20 00 | 10 M | |
|--|-------------------------------|-----------------|--|---|--------------------------|
| Limit Check Line_\$PURIOL 20 dBm | 38_LINE_AB8_ | PA33 PASS | | | |
| 1D dBm- | | | | | _ |
| 0 dBm | | | | | |
| -10 dBm | | | | | - |
| SPURIDUS LINE AN | 8 | | | | |
| -20.dbm | 80 | | | | - |
| -30 dBm | | and some starts | | | |
| | transpi paripatriana da tritt | | Station of the state of the sta | and the special design of the second s | nahlana ja hoisana |
| -50 d&n | | | | | - |
| -60 dBm | | | | | - |
| Start 30.0 MHz | | 474 | 2 pts | 51 | op 1.927 GHz |
| Sparious Emission | | X | | | 1000 C 100 C 100 C 100 C |
| Range Love 30.000 MHz | Range Up 1.927 GHz | 1.000 MHz | 997.50200 MHz | -35.41 dBm | -22.41 dB |

Conducted Spurious Emissions, High citorinal, NB

| 56L Count 20/20 | and the second second | are seeder | | | |
|--------------------------------------|---|--------------|--------------|------------|--------------|
| Controlled by Nemic | INALL OF TANGLINE | | <u> </u> | | |
| Limit Check Line_SPURIO 20 dBm | US_LINE_ABS_ | PA33 PA85 | | | _ |
| 1D dBm | | | | | _ |
| 0 dBm | | | | | - |
| -10 dBm | | | | | - |
| -20.dbn | 9- | | | | |
| -90 dan | and the second se | | | m | - |
| -40 dbm | | | | | - |
| -Stidbin | | | | | - |
| -60 dbm | | | | | - |
| Start 9.975 CHz | | 249 | 37 pts | st | op 19.95 GHz |
| Spurious Emission | | | - | | |
| Range Lovi 9.975 GHz | Range Up 19.950 GHz | 1.000 MHz | 18.24777 GHz | -24.89 dBm | -11.89 dB |

Conducted Spurious Emissions, High citatinal, NB

| Ref Level 50.99 (SGL Count 20/20 | DC | | | | |
|---|---|--|---------------|-------------|---------------|
| antrolled by Nemi | | r () | ¥30 7.72 | 1.2 +0 | |
| Limit Check | | PASS | 1 1 | 1 | 1 |
| | US_LINE_ABS_ | PASE | | | |
| iD dBm | | - | | | |
| 1D dBm | _ | | - | | |
| 20 dBm | - | | - | | - |
| LO dBm | _ | | | | - |
| 1 dBm | _ | | | | |
| anuérous Line A | 16 | | | | _ |
| 20 dBm | | | | | |
| 30 dbn | | MAN AND MAN | | - | and market |
| itert 150.0 kHz | water water | 2 March 1997 | 462 pts | | Step 30.0 MHz |
| parious Emission | | 10 | 1000 C | | |
| | | RBW | Frequency | Power Abs | ALInsit |
| Range Lovi | Range Up | | | -70 Re. 42- | |
| 150.000 kHz arker nauctod Spurtous Er | 30.000 MH | z 10.000 kHz | 153,00057 kHz | n8h 36.06- | -17.86 dB |
| 150.000 kHz larker | 30.000 MH missions, High citor | 2 10.000 kH2 mel, NB | 183,00057 kHz | -30.86 dBn | 449 |
| 150.000 kHz larker nausted Spundus Er Spectnum Raf Lavol 30.00 | 30.000 MH missions, High citor | 2 10.000 kH2 mel, NB | | -30.86 dBn | 449 |
| 150.000 kHz larker nausted Spurlaus El Spectrum Ref Level 30.00 SSL Court. 20/20 | 30.000 MH missions, High choi JEim Offiset 40 | z 10,806 kHz mai, NB .00 dB Miad | 183,00057 kHz | -30.85 dBn | 449 |
| 150.000 kHz arker nausted Spurlaus El Spectrum Ref Level 30.00 SEL Court. 20/20 antrolled by Nemr | 30.000 MH missions, High choi JEmi Offiset 40 owTT @3.849Pw | z 10,806 kHz mai, NB .00 dB Miad | 183,00057 kHz | -30.85 dBn | 449 |
| 150.000 kHz arker nausted Spurlaus El Spectrum Ref Level 30.00 SEL Court. 20/20 antrolled by Nemr | 30.000 MH missions, High choi JEmi Offiset 40 owTT @3.849Pw | z 10.000 kHz mat NB .00 dB Miad | 183,00057 kHz | neh 66.06- | 449 |
| ISO.000 He arker nautod Sputtus Er Spectrum RafLevel 30.00 SSL Court 20/20 Initroled by Nemt Limit Check Unit Check Unit Check Unit Check | 30.000 MH missions, High choi JEmi Offiset 40 owTT @3.849Pw | z 10.000 HH3 mel N8 .00 d8 Mod | 183,00057 kHz | -80.85 (Bri | 449 |
| 150.000 He larker nauctod Sputtus E Spectrum Raf Levol 30.00 antrolad by New Unit (Heck Unit (Heck Dolb | 30.000 MH missions, High choi JEmi Offiset 40 owTT @3.849Pw | z 10.000 HH3 mel N8 .00 d8 Mod | 183,00057 kHz | -30.85 494 | 449 |
| 150.000 He arker Adveted Sputtus Ei Spectrum Spectrum Umit Check Umit Check Umit Check Umit Check 10 dbm 10 dbm | 30.000 MH westens, High often Stim Officet 40 ownt #1 August USA LINE ARS | z 10.000 HH3 mel N8 .00 d8 Mod | 183,00057 kHz | -30.85 494 | 449 |
| ISB.000 He iarker nauttod Sputtus El Spectrum Raf Level 30.00 SSL Court 2020 Unit Check Unit Check Unit Check Unit Check Unit Check 1 and 1 and | 30.000 MH westens, High often Stim Officet 40 ownt #1 August USA LINE ARS | z 10.000 HH3 mel N8 .00 d8 Mod | 183,00057 kHz | -30.80 494 | 440 |
| 150.001 Hz iarker industed Spurtus Ei Spectrum Raf Level 30.00 SSL Court 2020 Unite Check | 30.000 MH westens, High often Stim Officet 40 ownt #1 August USA LINE ARS | z 10.000 HH3 mel N8 .00 d8 Mod | 183,00057 kHz | -90.80.494 | 440 |
| 150.000 Hes iarker Aducted Spurtus Ei Spectrum Ref Livel 30.00 SSL Court 20/20 United Spurtus United Spurtus United Spurtus United Spurtus United Spurtus United Spurtus United Spurtus 10 dBm 10 dBm 20 dBm 20 dBm | 30.000 MH westens, High often Stim Officet 40 ownt #1 August USA LINE ARS | z 10.000 HH3 mel N8 .00 d8 Mod | 183,00057 kHz | -90.80.494 | 449 |
| 150.000 He iarker Aducted Spurtus El Spectrum Ref Level 20.00 Sol. Courte 20/20 Sol. Courte 20/20 Sol | 30.000 MH westens, High often Stim Officet 40 ownt #1 August USA LINE ARS | z 10.000 HH3 mel N8 .00 d8 Mod | 183,00057 kHz | -20.80.494 | 440 |
| 150.001 Hz iarker iarker inducted Sputcus Ei Spectrum Rat Level 30.00 Sputculd by New Linik (heek Lini | 30.000 MH westens, High often Stim Officet 40 ownt #1 August USA LINE ARS | z 10.000 kH3 mel N8 .00 d8 Mod | 183,00057 kHz | -20.80.494 | 440 |
| 150.000 kHz larker nausted Spurlaus Er Spectrum Raf Level 30.00 SGL Count 20/20 antrolled by Nemi | 38.000 MH | 2 10.000 H42 | 183,00057 kHz | | 440 |

Conducted Spurious Emissions, High Steamal, NB

Input signal = **lowest channel** within the frequency block; **broadband**:

| I freedly of larger | mzaWTT 🗣1 AvgPy | PASS | T T | 1 | |
|-----------------------|-----------------|------------------|--|--|---------------------|
| 40 deme \$PUS | TOUS LINE ABS | PASS | | | |
| 30 dBm | | | | | _ |
| 20 dBm- | | · · · · | 20 20 | 2 | |
| 10 d8m | | | | - | - |
| 0 dBm | | | | | |
| SPORTOLIS | 4852 | | | | _ |
| -20 dBm | | | | | _ |
| -20 dMn | | | | | - |
| -40 dBm | | A | 1 7 | | |
| Start 9.0 kHz | | 10 3 | 52 ptc | in the second se | Top 150.0 kH |
| spurious Emiss | ions | 19 | 1997 - 19 | 15 N | |
| Range Law 9.000 kH | Ronge Up | RBW 1.000 kHz | Frequency 105.72722 kHz | Perver Abs | ALImit -26.35 de |

Conducted Spurious Emissions, Low channel, low frequency ran

go, 68

| Spectrum | | | | | |
|--|------------------------|---------------------------|---------------------------------|---------------|--------------------------|
| Ref Level 30.00 1 56L Count 20/20 | dBm O ffsot 40. | .00 dB Mod | le Auto Swoop | | 1953 |
| controlled by Nemz | aWTT 🛛 1 AvgPva | | - Y2 | | - S |
| Limit Check Line _\$PURIO 20 dbm | US_LINE_ABS_ | PA35 PASE | | | |
| 20.66m | | | | | |
| 10 dBm | - | | | | |
| 0 dBm | _ | | | _ | - |
| 10 dBm | | | - | | _ |
| SPURIOUS_LINE_A | 88 | | 6 | | |
| -20 dbm | | | | | - |
| -30 d&m | _ | | | _ | |
| | | ali na dini pada di sebat | Contractor of the sector of the | | nhanga késtér (Pros. Aya |
| -S0 dBm | | | | | _ |
| -60 dBm | | | | | _ |
| Start 20.0 MH2 | | a | 1742 pts | s | 10p 1.927 GHz |
| purious Emission | 16 | 10 | 11 ^{- 22} | - 35 - 15 - 1 | di stan di |
| Range Loss | Ronge Up | RBW | Frequency | Perver Abs | ALImit |
| 30.000 MH2 | 1.927 GH | 1.000 MH | 5 T 85980 GH | R -94 so dan | -21.50 dB |
| narker | | | | | |
| | | | | | 100 |

Conducted Spurious Emissions, Low alternet, low frequency ran go, BB

| Controlled by Nemice Limit Check | | PASS | | | 1 |
|--|---------------|-------------|-------|--------------------|---------------|
| Line_\$PURIO | IS_LINE_ABS_ | PASE | | | |
| 10 dBm | | | | | - |
| 0 d9m | | | | | |
| 10 dBm | | | | | _ |
| SPURIOUS_LINE_AB | 8 | | | | |
| -20.dbm | | | | | - |
| -30 dht | | | - | may mark the state | - |
| | | | | | |
| | | _ | | | - |
| -40 dBm | | | | | _ |
| 100000 | | | | | |
| -40 dBm | | | | | |
| -S0 d&n | | | | | - |
| -50 dbm -60 dbm Start 9.075 (342 | | 2402 |) pts | ST | top 19.95 CH2 |
| -50 dbn | s Ronge Up | 2492 RBW | 7 pts | Pewer Abs | op 19.95 CH |

Conducted Spurious Emissions, Low channel, low frequency ran

go, 88

| Rof Lovel 40.20 dB 56L Count 20/20 | DC. | dB Mode | kuta FFT | | |
|--|--|--|---|--------------------------|---|
| antrolled by Nemzav Limit Check | TT O1 AvgPwe | PASS | 2. <u> </u> | × | - |
| 10 dem \$PURIOU | LINE ABS | PASS | | | |
| | | | | | |
| 20 dBm | | | | | |
| 20 dBm | | | | | |
| 1D d8m- | | | | | |
| 0 dBm | | | | | - |
| SPURIOUS_LINE_465 | 2 | | | | _ |
| -20 dBm | | | | | - |
| 20 dMn | | | | | - |
| 40 dBm | | | | | |
| www.humphrougha | with the lot | and a stand of the | ether phinting the second s | | 1 to the second s |
| Start 150.0 kHz | | 746 | 2 ptc | | top 38.8 MHz |
| Range Low 150.000 kHz | Ronge Up | RBW 10.000 kH2 | Frequency 154.00094 kHz | Perver Abs | ALImit -29.19.de |
| 158.000 FH2 | 30.000 MH2 | 10-000 KH2 | 194/00094 KHS | -42.19 094 | -59,19,08 |
| orducted Spurious Erns | isions, Low channel | law fequency ran | | | 40 |
| ndusted Spuricus Errie 6, 88 Spectrum Raf Lovel 30.00 dB | | | luta Sweep | anne | 448 [00 [|
| s 68 Spectrum Rof Lovel 30.00 dB S5L Count 20/20 | m Offset 40.00 | | luta Sweep | anne | |
| secured Spiricus Erres 6 88 Spectrum Ref Leviel 30.00 dB 51. Count 20/20 antroled by Nerraev | n Offset 40.00 | dB Mode . | Luta Sweep | | (¹ 2 |
| secured Spiricus Erres 6 88 Spectrum Ref Leviel 30.00 dB 51. Count 20/20 antroled by Nerraev | n Offset 40.00 | dB Mode . | Nuto Sweep | | |
| Anducted Spuricus Emis 5, 69 Rof Lovel 30,00 db S5, Count 20/20 Unit Check Unit Check Unit Check Unit Check | n Offset 40.00 | dB Mode . | Luta Sweep | | |
| And Antices Emergence Emer | n Offset 40.00 | dB Mode . | Luta Sweep | | |
| s 68 Spectrum Raf Lovel 30.00 dB SSL Count 20/20 Sontrolod by Nomzov | n Offset 40.00 | dB Mode . | Luta Sweep | | |
| Spectrum Ref Lovol 30,00 G Spectrum Ref Lovol 30,00 G Sin Court 20/20 antrolod by Nemice Unit (Henck Unit (Henck Unit (Henck Unit (Henck Unit (Henck Unit (Henck Unit (Henck Unit (Henck) 10 den | n Offset 40.00 PTT #1 AvgPar 5_11NE_ABS_ | dB Mode . | Luto Sweep | | |
| Spectrum Ref Lovol 30,00 G Sist, Caurt 20/20 antrolod by Nemice Unit (Henck Unit (Henck Unit (Henck) Unit (Henck) Unit (Henck) Unit (Henck) Unit (Henck) Unit (Henck) Unit (Henck) Unit (Henck) Unit (Henck) Unit (Henck) | n Offset 40.00 PTT #1 AvgPar 5_11NE_ABS_ | dB Mode . | | | |
| Spectrum Ref Lovol 30,00 G Sist, Caurt 20/20 antrolod by Nemice Unit (Henck Unit (Henck Unit (Henck) Unit (Henck) Unit (Henck) Unit (Henck) Unit (Henck) Unit (Henck) Unit (Henck) Unit (Henck) Unit (Henck) Unit (Henck) | n Offset 40.00 PTT #1 AvgPar 5_11NE_ABS_ | dB Mode . | uto Sweep | | |
| Spectrum Ref Level 32.00 df Spectrum Ref Level 32.00 df Spectrum Spectrum Controlled by Namer Umit (Henck Umit (He | n Offset 40.00 PTT #1 AvgPar 5_11NE_ABS_ | dB Mode . | uto Sweep | | |
| Spectrum Ref Level 30.00 de Spectrum Ref Level 30.00 de SSL Gaint 20/20 Cantrolod by Namiak Limit (flam SPUIRIOS) Limit (flam SPUIRIOS) | n Offset 40.00 PTT #1 AvgPar 5_11NE_ABS_ | dB Mode . | Luta Sweep | | |
| Conducted Spurious Emer B Spectrum Ref Level 30 00 de Spic Sur 20/20 Controlod by Nomeau Limit Character Control by Nomeau Limit Character Limit Character Control by Nomeau Limit Character Limit Character Control by Nomeau Limit Character Limit Charact | n Offset 40.00 PTT #1 AvgPar 5_11NE_ABS_ | dB Mode . | | | |
| Controlled Spurious Emer Sea Spectrum Ref Level 30 00 db Spectrum Controlled by Nome Solder Solder Solder Solder Solder | n Offset 40.00 PTT #1 AvgPar 5_11NE_ABS_ | d3 Node . | | | |
| Conducted Spurious Ernst BB Spectrum Ref Level 30 00 0 SSL Caurk 20/20 Controlod by Nomice Limit Clean Color Col | n Offset 40.00 PTT #1 AvgPar 5_11NE_ABS_ | d3 Node . | Luta Sweep | | (m) (m) (m) (m) (m) (m) (m) (m) (m) (m) |
| Conducted Spurious Emer Ref Level 30 00 dis Ref Level 30 00 dis Spectrum Ref Level 30 00 dis Controlod by Nomeou Limit Chan Spectrum Spectrum Spectrum Spectrum Spectrum Spectrum Spectrum Spectrum Spectrum Spectrum Spectrum Spectrum Spectrum Spectrum Spectrum Spectru | n Offset 40.00 PTT #1 AvgPar 5_11NE_ABS_ | d3 Node . | | Perce Abs. -29 40 dan | |

Conducted Spurious Emissions, Low channel, low frequency ran

go, 68



Input signal = middle channel within the frequency block; broadband:

| Limit Check 40 dbme_\$PURIO | US_LINE_ABS_ | PASS PASS | | | |
|--------------------------------|-------------------------|--------------|----------------------------|------------|---------------|
| 40 Mon | | | | | |
| 3D dBm | | | | | |
| 20 dBm | | | | | _ |
| LO dBm | | | | | |
| dBm | | | | | _ |
| PUROUS LINE A | 55_ | | | | _ |
| 20 d&m | | | | | _ |
| 30 dBm | | | | | _ |
| 40 dBm | | | | | _ |
| m | -hr A | | a Ala | | |
| Start 9.0 kHz | | 35 | 2 pts | 8 | top 150.0 kHz |
| purious Emission | | | | | |
| Range Lovi 9.000 kHz | Range Up 150.000 kHz | 1.000 kHz | Frequency 105,73722 kHz | -40.52 dBm | -27.52 dB |

| -50 dbn | | | | | | | | | - |
|-------------------------------|--------------------------|-----------------|--------------------|----------------------|-----------|----------------------|-------------|---|---|
| -50 d&n | | | - | | | | | | |
| 10000000000 | | | | | | | | | - |
| | | | | 1.4 | | Contract of Contract | AND A TRACT | | |
| | all of the second second | dan kanali kina | No the part of the | a here is the second | - | | - | - | |
| -30 dBm | | | | and the second | att rough | | | | - |
| 3002381 | | | | | | | | | |
| 20.dbm | TSE_ADD_ | | | | | | | | |
| -10 dBm | | | | | | | - | | - |
| J dBm | | | | | | | | | |
| 1022 | | | | | | | | | |
| 1D dBm | | - | - | | | | - | | - |
| 20 dBm | manoora_ | LINE_ADIO_ | | | | | | | - |
| Limit Ci Line_Si 20 dBm | ieck | | PA | | | | | | 1 |

Conducted Spurious Emissions, Middle channel, 88

| dBm | | | | | |
|-----------------|------------------|--|----------|---------|--------------|
| dBm | | | <u> </u> | | _ |
| 10 dBm | | | | | |
| 20.dBn | 90 | | | | |
| OD dBio | | State of the state | - | man has | - |
| 40 dBm | an na state a st | 12. 2 | | | 1.00 |
| S0 dBm | _ | | | | _ |
| 60 dbn | | | | | _ |
| 222200 | | | | | |
| Start 9.975 CHz | | 2490 | 37 pts | St | op 19.95 GHz |

Conducted Spurious Emissions, Middle channel, BB

| ectrum | | | | | |
|--|--|---|-------------------------|-----------------------|---|
| of Level 40.20 d SL Count 20/20 | BM Offset 40.00 DC | 0.08 Mode | Auta FFT | | |
| strated by Nemico | WTT @1.5VgPwr | | 22 - 22 | 53 - 19 <u>5</u> | - 22 |
| Limit Check | | PASS | | | |
| dem SPURIO | US_LINE_ABS_ | PASS | | | - |
| 0 dBm | | | | | |
| dBm | | | | | - |
| dBm | | | | | - |
| dBm | | - | | | |
| PUREOUS LINE AD | 8 | | | | _ |
| 0 dBm | | | | | |
| ið däm | | | | | - |
| 0 dBm | | and the second second | C. A. C. C. C. C. C. C. | | all have she have a |
| Willinstrationly | Providence of the other | and the second se | | and the second second | a she takes |
| tart 150.0 kHz | and the second second | 746 | 2 pts | | Step 30.0 MHz |
| Range Lovi | Range Up | RBW | Frequency | Perver Abs | ALImit |
| | | | | | |
| 150.000 kHz | 30.000 MHz | 10.000 kHz | 11.43276 MHz | -41.78 dBm | -28.78 dB |
| 150.000 kHz rker zueted Spurious En | 30.000 MHz | nol, 88 | 11.43276 MHz | -41,78 d9n | -28.78 06 |
| 150.000 kHz arker Ructod Spurtous En pectrum tof Level 30.00 d | 30.000 MHz visions, Midale cham Em Offset 40.00 | nol, 88 | 11.43276 MHz | -41.78 dBm | 68 |
| 150.000 kHz inker auctod Spurtous En poetnum af Lovol 30.00 d GL Count: 20/20 introled by Nemto | 30.000 MHz visions, Midale cham Em Offset 40.00 | nel, 88 0 dB Mode . | 11.43276 MHz | -41.78 dan | 68 |
| 150.000 kHz inker ducted Spurious En pectrum laf Level 30.00 d SL Count 20/20 ntrolled by Nemico Lineid Hark | 30.000 MHz vesions, Midale chem Em Offset 40.00 | nol, 88 | 11.43276 MHz | -41.78 dan | 68 |
| 150.000 HHz arker dueted Spurtous Em peetrum af Level 30.00 d GL Count 20/20 nitrolied by Nemic Umit (Hez Umit (Hez Umit (Hez) dbm | 30.000 MHz vesions, Midale chem Em Offset 40.00 | nol, 88 o dB Made , PA ls | 11.43276 MHz | -41.78 dan | 68 |
| ISB.000 HHz arker austed Spuncus Em poetnum of Level 30.00 d G. Count 20/20 Instelled by Nemeth Line _SPERIOL dBm | 30.000 MHz vesions, Midale chem Em Offset 40.00 | nol, 88 o dB Made , PA ls | 11.43276 MHz | -41.79 HBm | 68 |
| ISB.000 kHz urker seuted Spartous Err poetrum poetrum of Level 30.00 d SiL can 20/20 Umit (Breck Umit | 38.000 MHz vesions. Middle cherv Em Ciffset 90.00 WTT @3.2xgPwr 199.17NE_ARS | nol, 88 o dB Made , PA ls | 11.43276 MHz | -41.79 #8n | 68 |
| 150.000 kHz arker pectrum pectrum 15L Count. 20/20 artoled by Nemto | 38.000 MHz vesions. Middle cherv Em Ciffset 90.00 WTT @3.2xgPwr 199.17NE_ARS | nol, 88 o dB Made , PA ls | 11.43276 MHz | -41.79 #8n | 68 |
| ISB.000 kHz wher souted Spunous Err poetnum ar Loand 30.00 d G. Gaunt 20/20 Unit Check Unit Check Unit Check Unit Check Unit Check Julian dBm 0 dBm 0 dBm 0 dBm | 38.000 MHz vesions. Middle cherv Em Ciffset 90.00 WTT @3.2xgPwr 199.17NE_ARS | nol, 88 o dB Made , PA ls | 11.43276 MHz | -41.79 #8n | 68 |
| 155.000 kHz Inker autod Spanous En poetrum af Level 32 00 d SL Gourk 28/20 Unit Check Unit Chec | 38.000 MHz vesions. Middle cherv Em Ciffset 90.00 WTT @3.2xgPwr 199.17NE_ARS | nol, 88 o dB Made , PA ls | 11.43276 MHz | -41.79 #8n | 68 |
| 155.000 kHz inter | 38.000 MHz vesions. Middle cherv Em Ciffset 90.00 WTT @3.2xgPwr 199.17NE_ARS | nol, 88 o dB Made , PA ls | 11.43276 MHz | -41.79 iBn | 68 |
| 155.000 kHz inter inter aboted Spuntous Err poetrum of Lovel 30.000 bit Count 20/20 bit Count | 38.000 MHz vesions. Middle cherv Em Ciffset 90.00 WTT @3.2xgPwr 199.17NE_ARS | nol, 88 o dB Made , PA ls | 11.43276 MHz | -41.79 iBn | 68 |
| 155.000 kHz inker isotod Spuncus Erf poctrum of Level 32 000 isotod 200 isotod 40 isot | 38.000 MHz vesions. Middle cherv Em Ciffset 90.00 WTT @3.2xgPwr 199.17NE_ARS | rol, 88 V dB Node / PA IS PA IS | 11.43276 MHz | | 68 |
| 155.000 kHz inker isotod Spuncus En poetrum po | 38.000 MHz issions, Midde cherri Em Coffset 90.00 WYTT 92.4xgBwr 18. INE_ARS 19. INE 19. IN | ni, BB D dB Node - PA IS PA IS | 11.43276 MHz | 8 | (m / / / / / / / / / / / / / / / / / / / |
| ISB.000 KHz arker sected Spantus Ent poctnum laf Level 30 00 d Sis Count 28/20 Unit Check Unit Check Unit Check Unit Check dbm dbm dbm | 38.000 MHz vesions, Middle cherr mediate che | rol, 88 V dB Node / PA IS PA IS | 11.43276 MHz | | |

Conducted Spurious Emissions, Middle channel, 88





Input signal = highest channel within the frequency block; broadband:

| 0 d8m | | | |
|--------------------------|--------|--|--|
| SPURCOUS LINE ADS | | | |
|) dBm | | | |
| | | | |
| LD dBm | | | |
| 20 dBm | | | |
| o deme _SPURIOUS_LINE_AB | 8 PA55 | | |

| 30.000 MHz | 1.927 GHz | 1.000 MHz | 800.68758 MHz | -35,46 dBm | -22.46 dB |
|--|---------------------------------------|--|-------------------|------------|-----------------|
| Parious Emissio Range Lovi | Range Up | RBW | Frequency | Perver Abs | ALIMIT |
| Start 30.0 MHz | | 474 | 2 pts | St | op 1,927 GHz |
| | | | | | |
| 000001 | | | | | |
| 60 dbn | | | | | |
| Südan | | | | | - |
| 674467 Sec. 5.4.9 | A A A A A A A A A A A A A A A A A A A | | | | |
| No. of Concession, Name | while any provide the last | all states and a second se | | | minest shipping |
| | | time and the second | | | |
| 30 dBm | | | | | _ |
| 20.000 | | | | | |
| 20 dbn | 25.0 | | | | |
| -10 dBm | - | | | | _ |
| | | | | | |
| d dBm | | | | | _ |
| | | | | | |
| 1D dBm | | | a | | |
| 20 dBm | | | | | _ |
| Limit Check Line _\$PURD | OUS LINE ABS | PARE | | | |
| and strend in the second in the second second in | LOWIT • 2 AVGPWP | PASS | 1 T | | |
| 56L Count 20/20 | and the second second | 0222 02220 | 00/00/00/00/00/00 | | |
| Ref Level 30.00 | dBm Offset 40.00 | dB Mode | Auto Sweep | | 1919 |
| Spectrum | | | | | 1 4 |

| Spurious Emissions, | | |
|---------------------|--|--|
| | | |
| | | |

| SGL Count 20/20 Controlled by Nemi | OWTT . LAVOPW | 1.0 | 200 0.00 | 1.2 40 | |
|---------------------------------------|---|--------------|---------------------------|------------|--------------|
| Limit Check Line_SPURIO | and the second se | PASS PASS | | | |
| 1D dBm- | | | | | |
| 0 dBm | | | | | |
| -10 dBm | | | - | | - |
| -20 dbn | 69_ | | | | _ |
| -op dan | Long and the second | | | | |
| -40 dbn | A CONTRACTOR OF | | | | - |
| -Stidan | _ | | | | - |
| -60 dBm | _ | | | _ | |
| Start 9.975 CHz | | 24 | 137 pts | St | op 19.95 GHz |
| Spurious Emissia | | RBW | | Perver Abs | ALIMIT |
| Range Lovi 9.975 GHz | Range Up 19.950 GHz | 1.000 MHz | Frequency 16.27413 GHz | -25.11 dBm | -12.11 dB |

Conducted Spurious Emissions, High citatinal, BB

| Ref Level 40.20 dBm SGL Count 20/20 | DC. | dB Mode / | uta FFT | | |
|--|---|-----------------|--|--------------------|-----------------------|
| ontrolled by Nemtow | TT 💿 1 JavgPwr | | | (| |
| Limit Check | | PA38 | | | |
| to dem _ SPURIOUS | LINE_ABS | PASS | | | - |
| 30 dBm | | | | | |
| 20 dBm | | - | | | - |
| .0 d8m | | | | | - |
|) dBm | | - | | | - |
| SPURIOUS LINE ADS | | | | | _ |
| 20 dBm | | | · · · · · · · · · · · · · · · · · · · | | - |
| 30 dBm | | | | | - |
| 40 dBm | 1.1.500 | | Support of the second second | ad a standard from | and the second second |
| Start 150.0 kHz | Constraint of the Party of the | 7462 | window with the second states and the second s | | Step 30.0 MHz |
| parious Emissions | | | | 1 | |
| Range Lovi | Range Up | RBW | Frequency | Perver Abs | ALImit |
| 150.000 kHz | 30.000 MHz | 10.000 kHz | 150.00057 kHz | -41.83 dBm | -28.83 dB |
| naucted Spurious Emiss | ions, High channel, | |] | | 1 449 (m |
| nquetod Spurlous Emiss | | 88 | uto Sweep | COLUMN | 449 (111 (\] |
| Ref Level 30.00 dBy Sbectrum | Offset 40.00 | 88 |) | CHANNE | ₩ (∰ |
| Inqueted Spurious Emiss Spectrum Ref Lavel 30.00 dBin SSL Count 20/20 antrolled by Nemcow | Offset 40.00 | BB dB Mode J |) | anni | (m) |
| nausted Spundus Emiss Spectnum Ref Level 33.00 dBm SSL Count: 20/20 antralied by Nemrow | Coffset 40.00 | 88 |) | | (cc) |
| Inducted Spartous Emission Spectrum Ref Level 30.00 dBin SEL Gount 20/20 antroled by Nemrow Limit Check Line Service Course 20 dBm | Coffset 40.00 | dB Mode / |) | | |
| ndusted Spundus Emess Spectrum Raf Level 33.00 dBm SSL Caurk 20/20 antroled by NemicaW Umit (heek Umit (heek Umit (heek Umit (heek Umit (heek Umit (heek Umit (heek Umit (heek) Umit (heek Umit (heek) Umit (heek) | Coffset 40.00 | dB Mode / |) | | |
| Ref Level 30 00 dBn Spectrum Ref Level 30 00 dBn SBL Courk 20/20 Ontricked by Nemtow Unit Gheck Unit Gheck Unit Gheck D dBm 1 dBm | Coffset 40.00 | dB Mode / |) | | |
| Innueted Spynaus Erner Spectrum Ref Level 33.00 dBin Ref Level 33.00 dBin Stil Court 20/20 antroled by Nematik Unit Chemistry Spectrum Unit Chemistry Spectrum Spectrum Spectrum Spectrum Spectrum Spectrum Spectrum Spectrum Spectrum Spectrum Spectrum Spectrum | Coffset 40.00 | dB Mode / |) | | |
| neutod Spuncus Emer Spectrum Ref Level 33.00 dBm SSL Court 20/20 Unin Check Unin Check U | Coffset 40.00 | dB Mode / |) | | |
| neutod Spancus Emer Spectrum Har Level 33.00 dan Sal. Court 20/20 Daniel day Nemtow Daniel day Nemtow Daniel Court Data Data Data Data Data Data Data Da | Coffset 40.00 | dB Mode / |) | | |
| Inducted Sparcus Errer Spectrum Ret Level 33.00 dan Sal. Court 20/20 Unit Check 20 dbm D dbm D dbm D dbm D dbm 20 dbm 20 dbm 20 dbm 20 dbm 20 dbm | Coffset 40.00 | dB Mode / |) | | |
| Inducted Spulture Emer Spectrum Ref Level 30.00 den St. Conte 2000 Umit Check Umit Check | Coffset 40.00 | dB Mode / |) | | |
| neutrod Sponcus Emer Spectrum Har Level 30 00 dan St. Cante 200 dan Dintic Bad by Nemock Unite dhenek Unite dhenek Unite dhenek Unite dhenek Unite dhenek Unite dhenek Unite dhenek Di dan Spotshon, Lint Scho 20 dan Spotshon, Lint Scho | Coffset 40.00 | dB Mode / | uto Sweep | | 100 9.975 GHz |

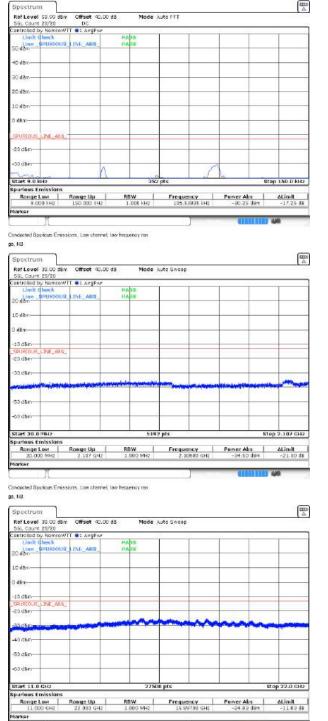
Л. Conducted Spurious Emissions, High channel, BB



8.5.7 Test data - conducted spurious emissions:

8.5.7.1 Operating frequency band: Band 66: 2110 – 2200 MHz

Input signal = lowest channel within the frequency block; narrowband:



| Spectrur | 50.99 dBm | Offset 40.0 | n da | Mode A | to FFT | | | | L A |
|-------------|-----------------------------------|-----------------------|---------|---------|---------------|----------------|------------------------|--------------|---------------|
| 56L Count | 20/20 | DC. | AC 88 | Mode A | ato Pri | | | | |
| ontrolled b | y Namzaw | ∏ ⊜1 жедРже | | () | <u>)</u> | 2 | 2 - C | | |
| Limit | theck | | PA | | | | | | |
| 50 d8m | SPURIOUS, | LINE_ABS_ | PA | 58 | | | | | |
| | | | | | | | | | |
| 40 dBm | | ++ | | | | | | | + |
| 30 d8m | | | | | | | | | |
| 30 dism- | | | | | | | | | |
| 20 dBm | | + | | | | | | | - |
| | | | | | | | | | |
| 10 d0m- | | ++ | | | | | | | - |
| 0 dBm | | | | | | | | | |
| 3 GB 0 | | | | | | | | | |
| spuiscous | LINE ARS | ++ | | | | | | _ | - |
| 10000 | | | | | | | | | |
| 20 dBm- | | ++ | | | | | | | |
| -30 dBm | | | | | | | | | |
| | 1.0 | | - | 1000 | | and a start of | the life of the second | and second | distant in |
| Start 150 | With Av Av | All the second second | HALAL L | 7467 | and the later | A A AUGULAN | Same Property | ALL DATE AND | 38.0 MHz |
| purious E | a close of the local data and the | | | 7462 | pre | | | stop | 5 30.0 MH2 |
| Range | | Ronge Up | RB | w I | Freque | nee 1 | Perver Ab | s | ALImit |
| | OB kH2 | 30.000 MH2 | | 000 kH2 | | 0067 kH2 | -31.24 | | -18.24 d8 |
| larker | | | | | | | | | |

Conducted Spurious Emissions, Low channel, low frequency ran

go, NB

| Ref Level S6L Count | 20/20 | | 00 09208 | luta Sweep | | |
|------------------------|--|-------------|-------------------------|---|---------------|----------------------------|
| | | ∏ ●1 жүдРум | | 2 37 | ¥ | 100 |
| Line 1 20 dBm | heck PURIOUS | LINE_ABS_ | PA35 PA58 | | | |
| LO dem | | - | | | | - |
| dilm | | | | | | |
| 10 dBm | | | | | | _ |
| PURIOUS, | THE ABS | | | | | _ |
| 20.dbm | 20022-00 | | | | | |
| 30 dBm | | | No. of Concession, Name | and the second se | | And the owner of the owner |
| a dan | and the second | | | 5460 mm | | and the second |
| 50 d&m | | | | | | |
| 60 dBm | | | | | | |
| ant 2.20 | the second s | 194 - 194 - | 2100 | 2 pts | <u>d d 13</u> | Rop 11.0 GHz |
| purious E Ronge I | | Ronge Up | RBW | Frequency | Perver Abs | Alimit |
| | 3 GH2 | 11.000 GH2 | 1.000 MH2 | 4-22125 GH2 | -27.21 dan | -14.21 dB |

Conducted Spurious Emissions, Low channel, low frequency ran

go, NB

1.45

Conducted Spurious Emissions, Low channel, low frequency ran

go, NB



Input signal = middle channel within the frequency block; narrowband:

| | the second se | T 🖬 1 AVGPV | | | 2 | _ | | | - |
|---------------------------|---|-------------|----------|---------|---------|---------|--------------|------|-----------|
| Limit | Check SPURIOUS_ | | PA | | | | | | |
| 50 dBm | protectiona_ | LUNE_ADO | | | | - | | | - |
| 40 dBm | | | - | | | | | | - |
| 3D dBm | | | | | | | | | |
| 20 dBm | | | | | | | | | |
| 10 dBm — | | | | | | | | | |
| 0 dBm | | | | | | | | | |
| snuktous | LINE MAL | | | - | | | | | |
| -20 dBin | | - | | | - | | | | - |
| 30 dbn— | - | - | | _ | | 2 | | | - |
| miny | a. | | <u>n</u> | | L A | 1 | 10 | | |
| Start 9.0 | | 8 <u>8</u> | 048 | 352 | pts | | 32. <u> </u> | Stop | 150.0 kHz |
| Range | Love | Range Up | | w I | Frequer | | Pewer Ab | | ALImit |
| CONTRACTOR OF STREET, ST. | OB kHz | 1SD 000 kH | łz 1 | DDC kHz | 105,53 | 835 kHz | -31.48 | ri9m | -18,48 dB |
| 1arker | 101 | | | | | | | | |
| | 11 | | | | 10 | | | | <i>10</i> |

| 56L Count 20/20 Controlled by Nemico | WTT . 2 AVGPWP | | 100 000 | 18 | - C. |
|---|----------------------------------|---|--|------------|----------------|
| Limit Check Line_SPURIO | | PA30 PASE | | | |
| 1D dBm | | | | | _ |
| 0 dBm | - | | | | |
| -10 dBm | | | | | - |
| -20 dbm | 9- | | | | |
| -90 dBin | - | 1 Executive Second | a second | | C192(12/10) |
| MONE CARACTER MARKED | a a second de relation de la des | (And the second s | Whether and a state of the stat | | and the second |
| -Südan | | | - | | - |
| -60 dbm | | | | | |
| Start 30.0 MHz | | 519 | 92 pts | 51 | top 2,107 GHz |
| Spurious Emission | | RBW | Concernence 1 | Perver Abs | ALImit |
| Range Love 30.000 MHz | Range Up 2,107 GHz | 1.000 MHz | Frequency 1.97159 GHz | -34.57 dBm | -21.57 dB |

Conducted Spurious Emissions, Midale channel, NB

| 56L Count 20/20 | and the second second | 1.65 200.020 | | | |
|--------------------------------------|-----------------------|--------------|--------------|------------|--------------|
| Controlled by Nemico | WTT . 2 24gPwr | | <u> </u> | | |
| Limit Check Line_SPURIO 20 dBm | US_LINE_ABS_ | PASS PASS | | | _ |
| 10 dBm | | | | | |
| 0 dBm | | | | | - |
| -10 dBm | | | | | - |
| -20.dbn | 9 | | | | |
| an dag | | | | m | - |
| -40 dbm | | · · · | | | |
| -50 dBm | | - | | | - |
| -60 dBm | | | | | - |
| Start 11.0 GHz | <u>.</u> | 2750 | 0 pts | | Rop 22.0 GHz |
| Range Lovi | Range Up | RBW | Frequency | Pewer Abs | ALImit |
| 11.000 GHz | 22.000 GHz | 1.000 MHz | 15.86500 GHz | -24.91 dBm | -11.91 dB |

Conducted Spurious Emissions, Middle channel, NB

| Ref Level 50.99 dBm SGL Count 20/20 | Offset 40.00 | dB Mode | Auto FFT | | |
|--|--|--------------------------------|---------------------------|-------------------------|---------------------|
| ontrolled by NemtoWTI | | | 22 | | - 22 |
| Limit Check | | PA38 | | | 1 |
| Line_\$PURIOUS_ 10 dBm | INE_ABS_ | PASS | | | |
| | | | | | |
| HD dBm | | | | | - |
| ID dBm | | | | | |
| U dbm | | | | | |
| O dBm | | | | | |
| 0.000 | | | | | |
| .0 dBm | | | | | - |
| dBm | | | | | |
| | | | | | |
| COURCOUS LINE ARE | | | | | - |
| | | | | | |
| 20.dbm | | | | | |
| 30 d&n | | | | | - |
| | and so that a first lite | and the second second | antifution and the state | A BALLER LANDER LAND | with dame with |
| tort 150.0 kHz | Characteristic and the | 746 | 2 pts | In subscription of a | tep 30.0 MHz |
| parious Emissions | | | | | |
| | | | | | |
| | lange Up | RBW | Frequency | Pewer Abs | ALImit |
| 150.000 kHz | 30.000 MHz | 10.000 kHz | Frequency 150,00057 kHz | Power Abs -31.77 dBm | ALIMIK -18.77.dB |
| 150.000 kHz larker | 30.000 MHz | 10.000 kHz | | | |
| 150.000 kHz larker | 30 000 MHz | 10.000 kHz | 153,00057 kHz | | |
| 150.000 kHz larker Industed Spurious Emissio Spectrum Ref Leviel 30.00 dBm SSL Court: 20/28 | 30.000 MHz ns, Widsk channe Offset 40.00 | 10.000 kHz | | | |
| 150.000 kHz larker nauctod Spurious Emissic Spectrum Ref Lavel 30.00 dBm SGL Court: 20/20 antroled by NemicoWT1 | 30.000 MHz ns, Widsk channe Offset 40.00 | 10.000 HHz H, NB dB Mode | 153,00057 kHz | | |
| 150.000 kHz arker nausted Spurious Emissic Spectrum Raf Leviel 30.00 dBm SG. Court. 20/20 antroled by NemicoWT | 30.000 MHz ns, Midsk channe Offset 40.00 | 10.000 HHz N, NB dB Mode | 153,00057 kHz | | |
| 150.000 kHz arker nausted Spurious Emissic Spectrum Raf Leviel 30.00 dBm SG. Court. 20/20 antroled by NemicoWT | 30.000 MHz ns, Midsk channe Offset 40.00 | 10.000 HHz H, NB dB Mode | 153,00057 kHz | | |
| Iso.cog hHz Iarker nautod Sputcus Emissic Spectrum Rat Level 30.00 dBm SSL Caurt 20/20 antroled by NemtaWTI Limit (Theck Line SPURTOUS) 0 dbm | 30.000 MHz ns, Midsk channe Offset 40.00 | 10.000 HHz N, NB dB Mode | 153,00057 kHz | | |
| Iso.cog hHz Iarker nautod Sputcus Emissic Spectrum Rat Level 30.00 dBm SSL Caurt 20/20 antroled by NemtaWTI Limit (Theck Line SPURTOUS) 0 dbm | 30.000 MHz ns, Midsk channe Offset 40.00 | 10.000 HHz N, NB dB Mode | 153,00057 kHz | | |
| 150.001 Hz larker nauchod Spurtous Emesic Spectrum Ref Level 30.00 dEm SSL Court: 20/20 anticleid Dy NeminaWTI Linite Gheek Ulare SPURTOUS D dEm | 30.000 MHz ns, Midsk channe Offset 40.00 | 10.000 HHz N, NB dB Mode | 153,00057 kHz | | |
| ISB.003 Hz Iarker noucled Sputous Emesic Spectrum Reflevel 33.00 dim Reflevel 33.00 dim SSL Court: 23/20 antroled by Newnow/TI Umit Gheck Umit Gheck Line SPURTOUS D dbm Ib dbm | 30.000 MHz ns, Midsk channe Offset 40.00 | 10.000 HHz N, NB dB Mode | 153,00057 kHz | | |
| 150.003 Hz isrker naucted Sputtus Emissic Spectrum Ref Level 30.00 dbm SSL Caut: 20/20 anticial by Nemicent Usel (theck Usel (theck 10 dbm 10 dbm 10 dbm | 30.000 MHz ns, Midsk channe Offset 40.00 | 10.000 HHz N, NB dB Mode | 153,00057 kHz | | |
| ISB.000 Hz iarker inducted Sputous Emesic Spectrum RefLevel 30 00 dim SSL Court 23/20 unitched by Newnow/TI Umit Check Umit Check | 30.000 MHz ns, Midsk channe Offset 40.00 | 10.000 HHz N, NB dB Mode | 153,00057 kHz | | |
| ISB.000 Hz iarker inducted Sputous Emesic Spectrum RefLevel 30 00 dim SSL Court 23/20 unitched by Newnow/TI Umit Check Umit Check | 30.000 MHz ns, Midsk channe Offset 40.00 | 10.000 HHz N, NB dB Mode | 153,00057 kHz | | |
| ISB.003 Hz IsB.003 Hz Isrker Aducted Spurtus Emesic Spectrum Ref Lovel 30 00 dim SSL Court 20/28 anticled 29 Memory 11 United April Memory 11 United April 10 dim 10 dim 10 dim 20 | 30.000 MHz ns, Midsk channe Offset 40.00 | 10.000 HHz N, NB dB Mode | 153,00057 kHz | | |
| 150.003 Hz iarker iarker indukted Spurtus Emesic Spectrum Ref Level 30.00 dim SSL Court 20/28 anticled 29.00 minuted and ye memory 1 UmR dheck 20.00 b dm 10.00 b dm 10.00 b dm 20.00 b | 30.000 MHz ns, Midsk channe Offset 40.00 | 10.000 HHz N, NB dB Mode | 153,00057 kHz | | |
| ISB.003 Hz IsB.003 Hz Isrker Aducted Spurtus Emesic Spectrum Ref Lovel 30 00 dim SSL Court 20/28 anticled 29 Memory 11 United April Memory 11 United April 10 dim 10 dim 10 dim 20 | 30.000 MHz ns, Midsk channe Offset 40.00 | 10.000 HHz N, NB dB Mode | 153,00057 kHz | | |
| 150.003 Hz iarker iarker indukted Spurtus Emesic Spectrum Ref Level 30.00 dim SSL Court 20/28 anticled 29.00 minuted and ye memory 1 UmR dheck 20.00 b dm 10.00 b dm 10.00 b dm 20.00 b | 30.000 MHz ns, Midsk channe Offset 40.00 | 10.000 HHz N, NB dB Mode | 153,00057 kHz | | |
| 150.000 Hz iarker iarker indukted Spurtuus Emesic Spectrum Ref Level 30 00 Bim Sal. Court. 20/20 multicled Cys. Mannavri Umrt die Arg. Mannavri Umrt die Arg. Mannavri Umrt die Arg. Mannavri Umrt die Arg. Mannavri Bibm D die Arg. 20 die | 30.000 MHz ns, Midsk channe Offset 40.00 | 10.000 HHz N, NB dB Mode | 153,00057 kHz | | |
| 150.000 Hz iarker iarker indukted Spurtuus Emesic Spectrum Ref Level 30 00 Bim SSL Court 20/20 multicleid Dy NemtoWT UmR (Deck Udbm DD dbm Dd | 30.000 MHz ns, Midsk channe Offset 40.00 | 10.000 HHz N, NB dB Mode | 153,00057 kHz | | |

 Range Low
 Range Up
 RBW
 Frequency
 Perver Abc
 Allmit

 2.000 GHz
 11.000 GHz
 1.000 MHz
 4.31005 GHz
 -23.30 dBm
 -10.30 dB

Conducted Spurious Emissions, Middle channel, NB

Input signal = **lowest channel** within the frequency block; **broadband**:

| 20 dbm | |
|---|---------|
| 20 dkm | 2.D-KHO |
| 20 dBm | |
| 20 dkn | |
| 20 dkn | |
| 20 d8n | |
| 20 d8n | |
| 20 dkm | |
| 20 dkm | |
| 20 dkm | |
| 20 dèn- | |
| | |
| | |
| 20 dam- | |
| | |
| 40 dgmMasaPapa | |
| Umit Check PA58 40 dems \$PURIOUS_LINE_ABSPA58 | |

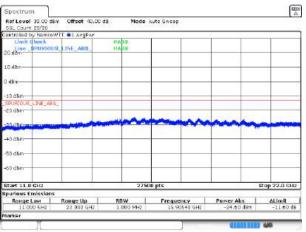
Conducted Spurious Emissions, Low channel, low frequency ran

go, 88

| Spectrum | | | | | |
|--------------------------------------|------------------|--------------------------|-------------|-------------------------------|---------------|
| Rof Lovel 30.00 c 56L Count 20/20 | iam Offset 40.00 | dB Mode | Auto Sweep | | 1953 |
| entrolled by Nemzi | WTT 🗣 1 AVGPWK | | 25 | N | |
| Limit Check Line_SPURIO 20 dBm | US_LINE_ABS_ | PA35 PASE | | | |
| 10 dBm- | _ | _ | | - | - |
|) dBm | _ | | | | |
| 10 dBm | | | | | _ |
| SPURIOUS_LIVE_A | S | | | | |
| -20 dBm | | | | | |
| -38 d&m | | | | | - |
| and the second second | WW S LONG TO THE | and the statement of the | - | defensite entre en en entre b | Strange and |
| 50 dBm | | | | | |
| -60 dBm | | | | | - |
| Start 30.0 MHz | in | 510 | 2 ptc | S. | 10p 2.107 GHz |
| purious Emission | 15 | | - 222 | - 16 N | 19 - 19 Sec |
| Range Law | Ronge Up | RBW | Frequency | Perver Abs | ALIMIT |
| 30.000 MH2 | 2.107 GH2 | 1.000 MH2 | 1.99759 GH2 | ~33.95 dan | -20.95 d8 |
| narker | | | | quilli | 449 |

Conducted Spurious Emissions, Low channel, low frequency ran

go, 68



Conducted Spuricus Emissions, Low channel, low frequency ran

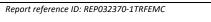
go, 68

| BB pectrum of Level 30.00 dis- locant 20/20 Instaled by Nemta Limit (Henrich 1000) Limit (Henrich 1000) | WTT 01 Xx000wr JR INE_AB3_ S_ S_ | d3 Node / | 2 pts | Percer Abs | (m) stop 11.0 GHz stop 11.0 GHz -10.74 dB |
|---|---|----------------------------|-----------------------|-------------------------------|--|
| ES pectrum lot Level 30 cod list. Caurt 20'20 introlod by Name Umit (Hench. Umit | WTT 01 Xx000wr JR INE_AB3_ S_ S_ | d3 Node / | | | |
| BB postrum of Level 30.00 d Si. Caunt 20/20 Instellad by Nemica Unit (Hench. Unit (Hench. Uni | WIT 01 AvgPwr 18 11NE ABS | dB Mode / | uta Sweep | | |
| BB pectrum of Level 30.00 dis- dis-Count 20/20 Instellad by Nemica Unit (Herch, Linn, SPURION Unit (Herch, Linn, SPURION Unit (Herch, Linn, SPURION Distribution, Linn, Li | WIT 01 AvgPwr 18 11NE ABS | dB Mode / | uta Sweep | | |
| BB Dectrum of Level 33.00 d Loant 20/20 Umit (heck Line SPURION dBm dBm dBm dBm dBm dBm dBm dBm | WIT 01 AvgPwr 18 11NE ABS | dB Mode / | Luta Sweep | | |
| BB pectrum of Level 30 cod accurt 20/20 arrolad by Name Jumit (Hench Jumit (Henc | WIT 01 AvgPwr 18 11NE ABS | dB Mode / | uta Swebp | | |
| BB af Lovel 30.00 dl G. Gunk 20/20 Unit Clerk Unit Clerk Unit Clerk Unit Clerk dbm dbm dbm bddbm bd | WIT 01 AvgPwr 18 11NE ABS | dB Mode / | uto Sweep | | |
| BB af Lovel 30.00 dl G. Gunk 20/20 Unit Clerk Unit Clerk Unit Clerk Unit Clerk dbm dbm dbm bddbm bd | WIT 01 AvgPwr 18 11NE ABS | dB Mode / | uta Sweep | | |
| BB of Lovel 30.00 dl L. Caurt 20/20 Uml Check Uml Check Uml Check Uml Check Uml Check Hom BURION BURION BURION BURION BURION LINE _ JANE _ JAN | WIT 01 AvgPwr 18 11NE ABS | dB Mode / | Luta Gweep | | |
| BB peetrum of Lovel 30.00 dl GL caunt 20/20 Introled by Nemce Umit (Jeeck Line _SPURIOL dem | WIT 01 AvgPwr 18 11NE ABS | dB Mode / | uuta Simeop | | |
| 68 of Lovel 30.00 d L Court 20/20 Introled by Nameo Unit Gleack Unit Gleack Unit Gleack Unit Gleack dem | WTT 🕒 1 XegPwr | dB Mode / | Luta Sweep | | |
| BB of Lovel 30.00 d SL Count 20.00 d SL Count 20/20 Introled by Nemte Unit Check Unit Check Unit Check Unit Check Unit Check Unit Check | WTT 🕒 1 XegPwr | dB Mode / | Luta Sweep | | |
| es of Lovel 30.00 dl GL caurk 20/20 Line (check Line _\$PURIOL J dbm | WTT 🕒 1 XegPwr | dB Mode / | uta Sweep | | |
| es of Lovel 30.00 dl GL caurk 20/20 Line (check Line _\$PURIOL J dbm | WTT 🕒 1 XegPwr | dB Mode / | uto Sweep | | |
| BB pectrum of Lovel 30.00 dl 5L Count 20/20 ntroled by Nemto | WTT 🕒 1 XegPwr | dB Mode / | uto Sweep | | |
| BB pectrum Iof Level 30.00 dl SL Count 20/20 Introled by Names | WTT 🕒 1 XegPwr | dB Mode / | uuto Sweep | <u> </u> | |
| BB pectrum of Lovel 30.00 dl SL Caunt 20/20 Introled by Nemio | | dB Mode / | luta Sweep | x | |
| BB pectrum | Bm O ffset 40.00 | | luto Sweep | | ∫ m∆ |
| | | | | | |
| ducted Spurious Em | assions, Low channel, | low frequency ran | | | |
| N | | |) | CITER OF COLUMN | 449 |
| arker | | | (C) | | |
| 158-000 kH2 | 30.000 MH2 | 10.000 kH2 | 155.00040 kH2 | -42.15 dan | -29.16 dB |
| Range Low | s Ronge Up | RBW | Frequency | Perver Abs | ALImit |
| art 150.0 kHz | peli 000 | 746 | 2 pts | 0 | ктөр 38.8 MHz |
| Manufacture and and | and the painting in the second | State of the second second | | A MARKAN MARKAN AND A | wining and a second of a |
| 0 dBm | 19-28000 | Cale Maria Co | and the second second | And a new party of the second | A CONTRACT |
| 5158X0.0 | | | | | |
| in dam | | | | | |
| 20 dBm | | | | | - |
| PURTOUS_LIVE_AS | 5 | | | | _ |
| | | | | | |
| dBm | | | | | - |
| 0 d 8m | | | | | - |
| 0 dBm | | | | | |
| | | | | | |
| 0 dBm | | | | | |
| N. MIRTH | DS_LINE_ABS_ | PAPE | · · · · · | | - |
| LINE SPURIOR | 10 1 10 1 10 10 10 10 10 10 10 10 10 10 | PA35 PASE | | | |
| Limit Check | | | | | |
| strolled by Nemza | WTT O1 XegPwe | | 92. CS2 | | |
| 6L Count 20/20 Introlled by Nemze Limit Cherck | DC. WTT @1 AvgPwr | www | 97. CD | | |

Conducted Spurious Emissions, Low channel, low frequency ran

go, 68

Spectrum





Input signal = middle channel within the frequency block; broadband:

| Limit | theore is | T 💶 1 AVgPwr | PASS | | | |
|-----------|-----------|--------------|-----------|---------------|------------|---------------|
| 40 dem - | SPURIOUS | LINE_ABS_ | PASS | | | _ |
| 30 dBm | | | | | | _ |
| 20 dBm | | | | | | |
| 10 dBm | | | | | | |
| 0 dBm | | | | | | _ |
| SPUREOUS | LINE ADS | | | | | _ |
| 20 dBm- | | | | | | _ |
| 30 d&m | | | | | | _ |
| 40 dBm- | | Δ. | | | 1 | - |
| my | | In a M | <u> </u> | - A A a | | |
| Start 9.0 | missions | | 31 | 92 pts | 8 | top 150.0 kHz |
| Range | | Range Up | RBW | Frequency | Perver Abs | ΔLimit |
| | OD kHz | 150.000 kHz | 1.000 kHz | 105.53835 kHz | -41.01 dBm | -28.01 d8 |

Spectrum Appendix Raf Level 33.00 Bin Offset 40.00 dB S6L Court 20/20 Controlled by NemtoWTT #1 AvgPwr Umit (heek Line _SPURIOUS_UNE_ARS 20 dbm Mode Auto Sweep 1D dBm d dBm -10 dBm nt_ana -20.dbm--30 dBin-S0 d&n 60 dbm Start 30.0 MHz 5192 pts Stop 2,107 GHz Purious Emissions Range Lovi Range Up 30.000 MHz 2.107 GHz
 RBW
 Frequency
 Perver Abs
 ALImit

 1.000 MHz
 1.08439 GHz
 -34.32 dBm
 -21.32 dB

Canausted Spurious Emissions, Middle channel, 88

| 56L Count 20/20 | | vi else i constantio | | | |
|--------------------------------------|------------------------|----------------------|---|------------|---------------------|
| Controlled by Nemin | | | <u>22 - 22</u> | | |
| Limit Check Line_SPURIO 20 dBm | US_LINE_ABS_ | PA30 PASE | | | |
| 1D dBm- | | | | | _ |
| 0 dBm | _ | | | | |
| -10 dBm | | | | | - |
| -20.dbm | 89- | - | | | |
| 20,d8m | | | | man | - |
| -40 dbm | | | | | |
| -S0 dBm | | | | | - |
| -60 dbm | - | | | | |
| Start 11.0 GHz | | 27 | i00 pts | 1 | top 22.0 GHz |
| Spurious Emission | 5 | | 1000 March 1 | 10 | |
| Range Lovi 11.000 GHz | Range Up 22.000 GHz | RBW 1.000 MHz | Frequency 15.86020 GHz | -24.77 dBm | ALImit -11.77.dB |

Conducted Spurious Emissions, Middle channel, BB

| lef Level 40.20 dl SGL Count 20/20 | m Offset 40. DC | 00 dB Miod | e Auto FFT | | |
|---|--|-----------------------------|---------------------------|-------------------------|---------------|
| antrolled by Nemia | | 111 | 200 7.77 | 1.2 40 | |
| I freeling of hearth | | PASS | 1 1 | - T | 1 |
| to dem SPURIOL | S LINE ABS | PARE | | | |
| io dem | | 2 | - 21 | | |
| 10 dBm | _ | | | | |
| 7.510.00 | | | | | |
| 2D dBm | | | | | |
| 10 dBm- | | | | | |
| Lo Mort | | | | | |
| 0 dBm | - | | + + | - | |
| | | | | | |
| SPUREOUS LINE AS | | | | | |
| 20 d8n | | - | | - | |
| 2003202 | | | | | |
| -30 dBm | | | | | |
| 40 dBm | | | | | |
| 1.00 | in case and | and the state of the second | and a submer of the state | Here all and the second | - |
| We have been a second | | SPECIFIC STREET | 162 pts | and the second | Step 30.0 MHz |
| Start 150.0 kHz purious Emissions | | 1 | 102 015 | | atop 30.0 MHz |
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| 150.000 kHz | 30.000 MHz | | | | |
| | | | | | |
| tarker | | | | | |
| nqueted Spurious Em | | | e Auto Swoop | 1997 - 2 911 | 84 |
| Spectrum Raf Level 33.00 dl 55L Court: 20/20 | m Offset 40. | | e Auto,Swaop | | 600 |
| Ref Level 33.00 di S5L Court 20/20 antroled by Nemto Limit Cherck | m Offset 40. WTT •1 AvgPwr | | e Auto Swoop | | |
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| Rof Lovel 33.00 di S5L Court 23/20 antroled by Nemico Limit Cherck | m Offset 40. WTT •1 AvgPwr | 00 dB Mod | e Auto Sweep | | (A |
| 56L Count 20/20 antrolled by Nemica | m Offset 40. WTT •1 AvgPwr | 00 dB Mod | a Auto Sweep | | |
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| Ref Level 30.00 dl SEL Court: 20/20 Jantroled by Nemico Umit (Heek Umit 20/20 | m Offset 40. WTT •1 AvgPwr | 00 dB Mod | e Auto Swoop | | |
| Inducted Spursus Em Spectrum Ref Level 30.00 dl SSL Count 20/20 Jant Clear dry Nemet Umit (Hench Umit | m Offset 40. WTT •1 AvgPwr | 00 dB Mod | a Auto Sweep | | |
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| naucted Spancus Em Spectrum Ref Level 33.00 dl Sal. Court. 83/20 Limit Check Di dina 20 dina 10 dina 10 dina 10 dina 20 dina 20 dina 20 dina 20 dina | m Offset 40. | 00 dB Mod | a Auto Sweep | | |
| Inducted Souncus Em Spectrum Ref Level 33.00 dl SSL Court. 20/20 Limit Check Limit Check 20 dbm 10 dbm 10 dbm 20 dbm 20 dbm | m Offset 40. | 00 dB Mod | Auto Sweep | | |
| Inducted Sourcus Em Spectrum Ref Lovel 30 col 4 Sin Court 20/20 Ontrolled by Nemic Limit (Heck Limit (H | m Offset 40. | 00 dB Mod | e Auto Sweep | | |
| Inducted Souncus Em Spectrum Ref Level 33.00 dl SSL Court. 20/20 Limit Check Limit Check 20 dbm 10 dbm 10 dbm 20 dbm 20 dbm | m Offset 40. | 00 dB Mod | Auto Sweep | | |
| naucted Spuncus Em Spectrum Ref Level 32 cool 35 Sin Caure 8780 antroliad by Nemico Unit Glack Unit Glack Unit Glack 10 dbm Spuncus I me _of 20 dbm spuncus I me _of 20 dbm and bm | m Offset 40. | 00 dB Mod | Auto Sweep | | |
| Inducted Sourcus Em Spectrum Ref Lovel 30 cod 10 Spectrum Link (Heck Unit Glack Unit Glack 10 dbm 10 dbm 20 dbm 10 dbm 10 dbm 10 dbm 10 dbm 50 dbm 10 dbm 10 dbm 50 dbm | m Offset 40. | 00 dB Mod | a Auto Sweep | | |
| naucted Spuncus Em Ref Level 30 cod 10 Spectrum Land Buck Unit Glack Unit Glack Unit Glack 10 dbn Spuncus, 1 mt_an 20 dbn 10 dbn 10 dbn 10 dbn 10 dbn 10 dbn | m Offset 40. | 00 dB Mod | Auto Sweep | | |
| Inducted Spurcus Em Ref Lavel 33 cod di Spectrum Ref Lavel 33 cod di SSL Carter 2020 antrolead by Nemical United Hench United Hench Sol dari Sol dari Sol dari Sol dari | m Offset 40. | 00 dB Nod | | | |
| naucted Spuncus Em Ref Lovel 30 cod 10 Spectrum Ref Lovel 30 cod 10 Sin Court 20/20 antrolid by Nemic Umit (Harch Umit (Harch Umit (Harch 20 dBm 10 | n Offset 4J, VIT #2.4vgber 8.JNE_ARS | 00 dB Nod | a Auto Sweep | | |
| nausted Spuricus Em Ref Level 32 00 di Spectrum Ref Level 32 00 di Stil Cart 2014 Linkit (hench Linkit (hench Linkit (hench Linkit (hench Linkit (hench Linkit (hench Linkit (hench Linkit (hench Still | m Offset 43. | 20 dB Nod | 1992 pts | | 8top 11.0 GHz |
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Conducted Spurious Emissions, Middle channel, 88

Spectrum





8.6 Radiated spurious emissions

8.6.1 References and limits

- FCC Part 24.238 (band 25 operation)
- FCC Part 27.53(h) (band 66 operation)
- ANSI C63.26 Clause 7.2.2.5
- KDB 935210 D05v01r05 Clause 3.8

8.6.2 Test summary

| Test date March 26, 2024 March 27, 2024 Temperature 22 °C Test engineer Lan Sayasane, EMC Test Engineer Air pressure 1008 mbar Image: Test location Image: 10m semi anechoic chamber Image: 3m semi anechoic chamber Image: 0 ther: Relative humidity 51 % | Verdict | Pass | | |
|--|---------------|---------------------------------|-------------------|-----------|
| Image: Test location Image: Test location <td>Test date</td> <td></td> <td>Temperature</td> <td>22 °C</td> | Test date | | Temperature | 22 °C |
| Test location Image: Structure of the struct | Test engineer | Lan Sayasane, EMC Test Engineer | Air pressure | 1008 mbar |
| | Test location | 🖾 3m semi anechoic chamber | Relative humidity | 51 % |

8.6.3 Notes

Testing was performed with a narrowband test signal (MSK modulated, gaussian filter of 0.3 and data rate 270 kbps) and a broadband signal (AWGN, 4.1 MHz 99% occupied bandwidth) on lowest, middle, and highest channels of each supported frequency band. Only the worst-case data (broadband signal) are presented here.

8.6.4 Setup details

| EUT power input during test | 120 VAC / 60 Hz | |
|-----------------------------|----------------------------|---|
| EUT setup configuration | 🛛 Table-top | |
| | □ Floor standing | |
| | □ Other: | |
| Measurement details | Receiver/spectrum analyzer | settings for frequencies below 1 GHz: |
| | Resolution bandwidth | 100 kHz |
| | Detector mode | Peak (Preview measurement) |
| | Trace mode | Max Hold |
| | Measurement time | 100 ms (Peak preview measurement) |
| | | 5000 ms (Peak final measurement) |
| | Receiver/spectrum analyzer | settings for frequencies above 1 GHz: |
| | Resolution bandwidth | 1 MHz |
| | Detector mode | Peak (Preview measurement) |
| | | Peak (Final measurement) |
| | Trace mode | Max Hold |
| | Measurement time | 100 ms (Peak preview measurement) |
| | | 5000 ms (Peak final measurement) |



8.6.5 Test data

8.6.5.1 Operating frequency band: Band 25: 1930 – 1995 MHz

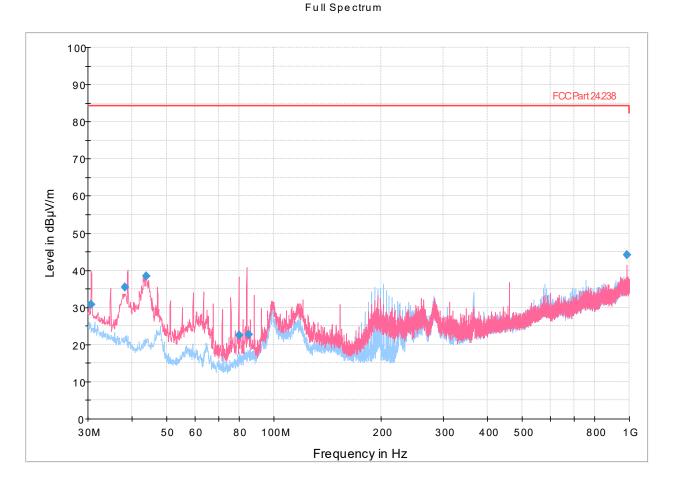


Figure 8.6-1: Radiated emissions spectral plot (30 MHz - 1 GHz) – Band 25 (1930 MHz)

| | Table 8.6-1. Radiated emissions results | | | | | | | | | | | |
|--------------------|---|-------------------|----------------|-----------------------|--------------------|----------------|-----|------------------|-----------------|--|--|--|
| Frequency (MHz) | MaxPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) | | | |
| 30.640000 | 30.86 | 84.38 | 53.52 | 5000.0 | 100.000 | 139.0 | V | 177.0 | 24.9 | | | |
| 38.191667 | 35.43 | 84.38 | 48.95 | 5000.0 | 100.000 | 100.0 | V | 22.0 | 20.2 | | | |
| 43.842500 | 38.52 | 84.38 | 45.86 | 5000.0 | 100.000 | 100.0 | V | 296.0 | 17.0 | | | |
| 80.014167 | 22.57 | 84.38 | 61.81 | 5000.0 | 100.000 | 143.0 | V | 276.0 | 14.0 | | | |
| 84.775833 | 22.82 | 84.38 | 61.56 | 5000.0 | 100.000 | 114.0 | V | 291.0 | 14.4 | | | |
| 983.045833 | 44.23 | 84.38 | 40.15 | 5000.0 | 100.000 | 104.0 | V | 48.0 | 35.5 | | | |

Table 8.6-1: Radiated emissions results

¹ Field strength (dB V/m) = receiver/spectrum analyzer value (dB V) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)

³ Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

Notes:



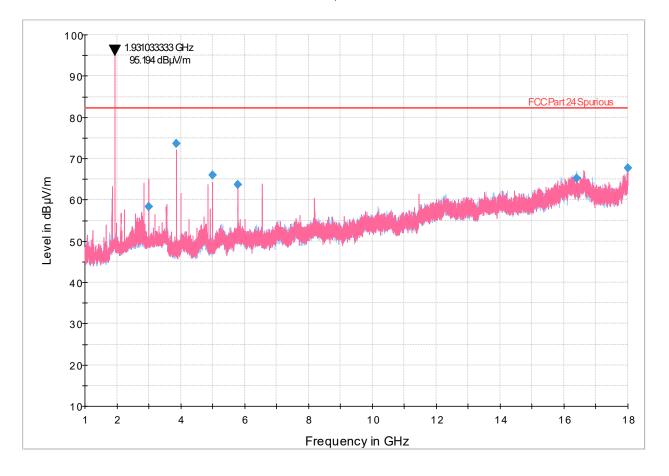


Figure 8.6-2: Radiated emissions spectral plot (1 GHz - 18 GHz) – Band 25 (1930 MHz)

| Table 8.6-2: Radiated emissions result: | Table | 8.6-2: | Radiated | emissions | results |
|---|-------|--------|----------|-----------|---------|
|---|-------|--------|----------|-----------|---------|

| Frequency (MHz) | MaxPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|--------------------|---------------------|-------------------|----------------|-----------------------|--------------------|----------------|-----|------------------|-----------------|
| 3000.166667 | 58.39 | 82.23 | 23.84 | 100.0 | 1000.000 | 140.0 | V | 168.0 | 7.6 |
| 3862.233333 | 73.63 | 82.23 | 8.60 | 100.0 | 1000.000 | 249.0 | V | 303.0 | 9.3 |
| 4999.933333 | 66.04 | 82.23 | 16.19 | 100.0 | 1000.000 | 100.0 | V | 178.0 | 11.5 |
| 5794.000000 | 63.72 | 82.23 | 18.51 | 100.0 | 1000.000 | 212.0 | V | 347.0 | 13.9 |
| 16398.466667 | 65.18 | 82.23 | 17.05 | 100.0 | 1000.000 | 218.0 | н | 152.0 | 32.9 |
| 17997.566667 | 67.70 | 82.23 | 14.53 | 100.0 | 1000.000 | 139.0 | Н | 0.0 | 35.2 |

Notes:

¹ Field strength (dB V/m) = receiver/spectrum analyzer value (dB V) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)



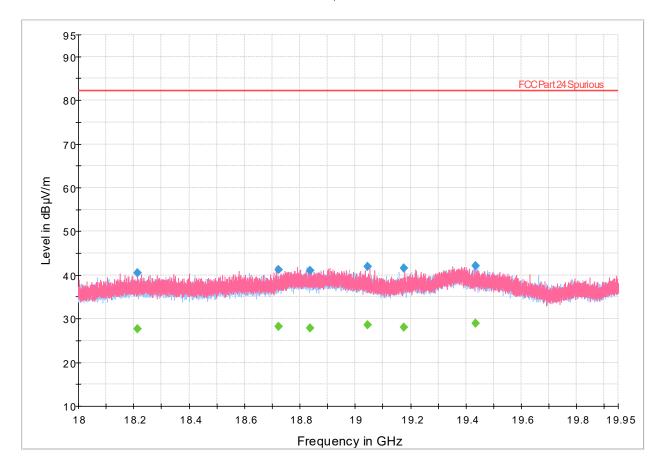


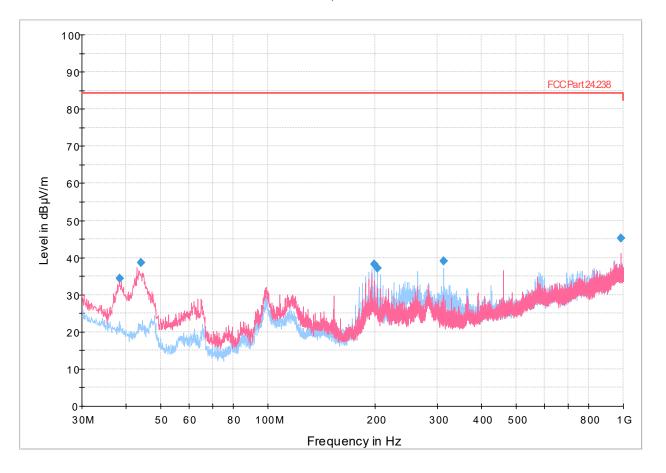
Figure 8.6-3: Radiated emissions spectral plot (18 GHz - 19.95 GHz) - Band 25 (1930 MHz)

| Frequency (MHz) | MaxPeak (dBµV/m) | CAverage (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Meas. Time | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|--------------------|---------------------|----------------------|-------------------|----------------|---------------|--------------------|----------------|-----|------------------|-----------------|
| | | | | | (ms) | | | | | |
| 18214.781250 | 40.47 | | 82.23 | 41.76 | 5000.0 | 1000.000 | 376.0 | V | 339.0 | 15.6 |
| 18214.781250 | | 27.72 | | | 5000.0 | 1000.000 | 376.0 | V | 339.0 | 15.6 |
| 18721.940625 | 41.22 | | 82.23 | 41.01 | 5000.0 | 1000.000 | 325.0 | V | 34.0 | 15.9 |
| 18721.940625 | | 28.30 | | | 5000.0 | 1000.000 | 325.0 | V | 34.0 | 15.9 |
| 18837.637500 | | 27.94 | | | 5000.0 | 1000.000 | 157.0 | Н | 0.0 | 15.9 |
| 18837.637500 | 41.07 | | 82.23 | 41.16 | 5000.0 | 1000.000 | 157.0 | Н | 0.0 | 15.9 |
| 19044.487500 | | 28.58 | | | 5000.0 | 1000.000 | 166.0 | V | 90.0 | 16.0 |
| 19044.487500 | 41.86 | | 82.23 | 40.37 | 5000.0 | 1000.000 | 166.0 | V | 90.0 | 16.0 |
| 19174.931250 | | 28.04 | | | 5000.0 | 1000.000 | 400.0 | V | 148.0 | 16.2 |
| 19174.931250 | 41.55 | | 82.23 | 40.68 | 5000.0 | 1000.000 | 400.0 | V | 148.0 | 16.2 |
| 19435.734375 | | 29.02 | | | 5000.0 | 1000.000 | 352.0 | Н | 0.0 | 16.5 |
| 19435.734375 | 42.18 | | 82.23 | 40.05 | 5000.0 | 1000.000 | 352.0 | н | 0.0 | 16.5 |

¹ Field strength (dB V/m) = receiver/spectrum analyzer value (dB V) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)





| Figure 8.6-4: Radiated emissions sp | nectral nlat | (30 MH7 - 1 GH7 |) _ Band 25 / | (1062 5 MHz) |
|--------------------------------------|--------------|--------------------|---------------|---------------|
| rigule 0.0-4. Ruululeu ellissions sp | pectiai piot | (50 10172 - 1 072) |) — Бини 25 (| 1902.5 10102) |

Table 8.6-4: Radiated emissions results

| Frequency (MHz) | MaxPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|--------------------|---------------------|-------------------|----------------|-----------------------|--------------------|----------------|-----|------------------|-----------------|
| 38.305000 | 34.39 | 84.38 | 49.99 | 5000.0 | 100.000 | 111.0 | V | 59.0 | 20.1 |
| 43.992500 | 38.62 | 84.38 | 45.76 | 5000.0 | 100.000 | 104.0 | V | 355.0 | 16.9 |
| 199.689167 | 38.18 | 84.38 | 46.20 | 5000.0 | 100.000 | 100.0 | Н | 190.0 | 16.3 |
| 203.528333 | 37.07 | 84.38 | 47.31 | 5000.0 | 100.000 | 107.0 | Н | 176.0 | 16.4 |
| 312.007500 | 39.00 | 84.38 | 45.38 | 5000.0 | 100.000 | 107.0 | Н | 357.0 | 21.4 |
| 983.045833 | 45.20 | 84.38 | 39.18 | 5000.0 | 100.000 | 128.0 | V | 256.0 | 35.5 |

Notes:

¹ Field strength (dB V/m) = receiver/spectrum analyzer value (dB V) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)



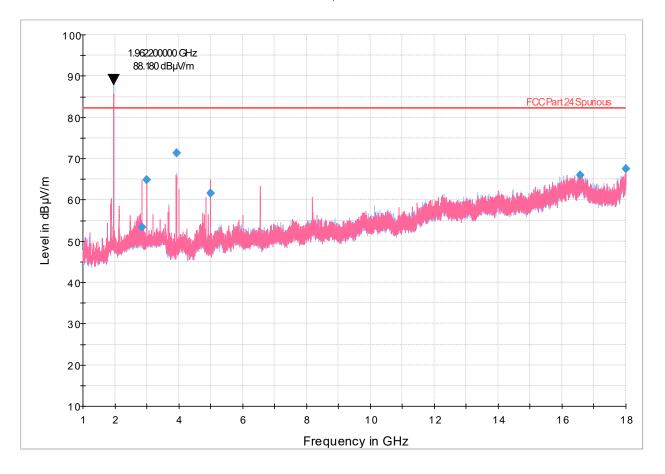


Figure 8.6-5: Radiated emissions spectral plot (1 GHz - 18 GHz) – Band 25 (1962.5 MHz)

| Table 8.6-5: Radiated emissions results |
|---|
|---|

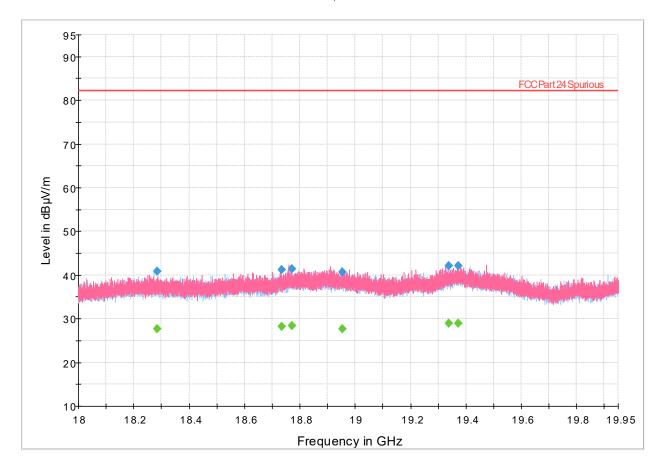
| Frequency (MHz) | MaxPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|--------------------|---------------------|-------------------|----------------|-----------------------|--------------------|----------------|-----|------------------|-----------------|
| 2852.966667 | 53.44 | 82.23 | 28.79 | 100.0 | 1000.000 | 100.0 | V | 190.0 | 7.1 |
| 3000.166667 | 64.80 | 82.23 | 17.43 | 100.0 | 1000.000 | 126.0 | V | 176.0 | 7.6 |
| 3926.966667 | 71.27 | 82.23 | 10.96 | 100.0 | 1000.000 | 252.0 | Н | 74.0 | 9.7 |
| 4999.933333 | 61.62 | 82.23 | 20.61 | 100.0 | 1000.000 | 222.0 | V | 175.0 | 11.5 |
| 16571.500000 | 66.07 | 82.23 | 16.16 | 100.0 | 1000.000 | 189.0 | V | 0.0 | 32.2 |
| 17998.866667 | 67.60 | 82.23 | 14.63 | 100.0 | 1000.000 | 222.0 | Н | 320.0 | 35.2 |

Notes:

¹ Field strength (dB V/m) = receiver/spectrum analyzer value (dB V) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)





| Figure 8.6-6: Radiated emissions s | nactral plat (19 C | 10 0E CU-1 | Pand 25 (1062 5 MU- | - 1 |
|--|--------------------|--------------------|--------------------------|-----|
| Figure 6.6-6. Ruuluteu ennissions s | pectiui piot (18 G | 1nz - 19.95 Gnzj · | – bullu 25 (1902.5 IVINZ | |

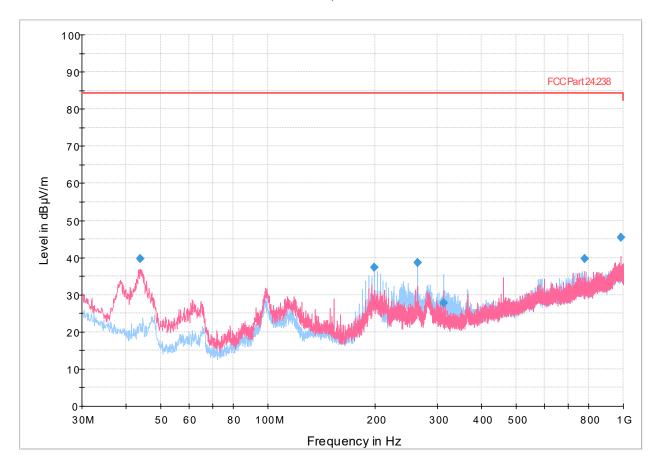
| | Table 8.6-6: Radiated emissions results | | | | | | | | | | |
|--------------------|---|----------------------|-------------------|----------------|-----------------------|--------------------|----------------|-----|------------------|-----------------|--|
| Frequency (MHz) | MaxPeak (dBµV/m) | CAverage (dBμV/m) | Limit (dBµV/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) | |
| 18283.321875 | 40.91 | | 82.23 | 41.32 | 5000.0 | 1000.000 | 312.0 | Н | 176.0 | 15.5 | |
| 18283.321875 | | 27.62 | | | 5000.0 | 1000.000 | 312.0 | Н | 176.0 | 15.5 | |
| 18733.903125 | | 28.26 | | | 5000.0 | 1000.000 | 400.0 | V | 323.0 | 15.9 | |
| 18733.903125 | 41.29 | | 82.23 | 40.94 | 5000.0 | 1000.000 | 400.0 | V | 323.0 | 15.9 | |
| 18772.059375 | 41.37 | | 82.23 | 40.86 | 5000.0 | 1000.000 | 375.0 | V | 243.0 | 15.9 | |
| 18772.059375 | | 28.33 | | | 5000.0 | 1000.000 | 375.0 | V | 243.0 | 15.9 | |
| 18952.246875 | 40.75 | | 82.23 | 41.48 | 5000.0 | 1000.000 | 400.0 | н | 140.0 | 15.9 | |
| 18952.246875 | | 27.65 | | | 5000.0 | 1000.000 | 400.0 | н | 140.0 | 15.9 | |
| 19336.978125 | | 28.90 | | | 5000.0 | 1000.000 | 367.0 | V | 324.0 | 16.7 | |
| 19336.978125 | 42.11 | | 82.23 | 40.12 | 5000.0 | 1000.000 | 367.0 | V | 324.0 | 16.7 | |
| 19373.343750 | 42.11 | | 82.23 | 40.12 | 5000.0 | 1000.000 | 128.0 | V | 329.0 | 16.7 | |
| 19373.343750 | | 28.91 | | | 5000.0 | 1000.000 | 128.0 | V | 329.0 | 16.7 | |

Notes: ¹ Field strength (dB V/m) = receiver/spectrum analyzer value (dB V) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)

I





| Figure 9 C 7. Dadiated emissions | cnoctral plat (20 NALL- | 1 CUL-) Dand 7 | F (100F MIII) |
|------------------------------------|---------------------------------|-------------------|-----------------------|
| Figure 8.6-7: Radiated emissions s | 2021.11 11 11 11 11 13 11 11 11 | - 1 GHZI – BUNU Z | 2 I 1 9 9 2 IVI M 2 I |
| | | | |

| Table 8.6-7: | Radiated | emissions | results |
|--------------|----------|------------|---------|
| TUDIC 0.0-7. | nuuluteu | ennissions | resuits |

| Frequency (MHz) | MaxPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|--------------------|---------------------|-------------------|----------------|-----------------------|--------------------|----------------|-----|------------------|-----------------|
| 43.682500 | 39.64 | 84.38 | 44.74 | 5000.0 | 100.000 | 104.0 | V | 21.0 | 17.1 |
| 199.689167 | 37.44 | 84.38 | 46.94 | 5000.0 | 100.000 | 144.0 | Н | 197.0 | 16.3 |
| 263.992500 | 38.58 | 84.38 | 45.80 | 5000.0 | 100.000 | 104.0 | н | 357.0 | 21.8 |
| 312.006667 | 27.82 | 84.38 | 56.56 | 5000.0 | 100.000 | 104.0 | Н | 210.0 | 21.4 |
| 779.992500 | 39.79 | 84.38 | 44.59 | 5000.0 | 100.000 | 125.0 | V | 333.0 | 32.1 |
| 983.045833 | 45.44 | 84.38 | 38.94 | 5000.0 | 100.000 | 104.0 | V | 276.0 | 35.5 |

Notes:

¹ Field strength (dB V/m) = receiver/spectrum analyzer value (dB V) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)



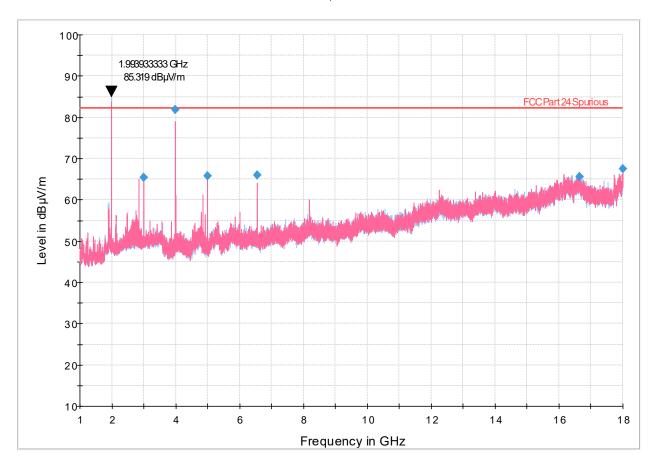


Figure 8.6-8: Radiated emissions spectral plot (1 GHz - 18 GHz) – Band 25 (1995 MHz)

Table 8.6-8: Radiated emissions results

| Frequency (MHz) | MaxPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|--------------------|---------------------|-------------------|----------------|-----------------------|--------------------|----------------|-----|------------------|-----------------|
| 3000.166667 | 65.39 | 82.23 | 16.84 | 100.0 | 1000.000 | 122.0 | V | 178.0 | 7.6 |
| 3986.900000 | 81.78 | 82.23 | 0.45 | 100.0 | 1000.000 | 162.0 | V | 110.0 | 10.0 |
| 4999.933333 | 65.75 | 82.23 | 16.48 | 100.0 | 1000.000 | 100.0 | V | 193.0 | 11.5 |
| 6553.733333 | 66.05 | 82.23 | 16.18 | 100.0 | 1000.000 | 281.0 | V | 0.0 | 14.5 |
| 16643.166667 | 65.52 | 82.23 | 16.71 | 100.0 | 1000.000 | 116.0 | Н | 353.0 | 33.3 |
| 17993.633333 | 67.47 | 82.23 | 14.76 | 100.0 | 1000.000 | 302.0 | V | 0.0 | 34.9 |

Notes:

¹ Field strength (dB V/m) = receiver/spectrum analyzer value (dB V) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)



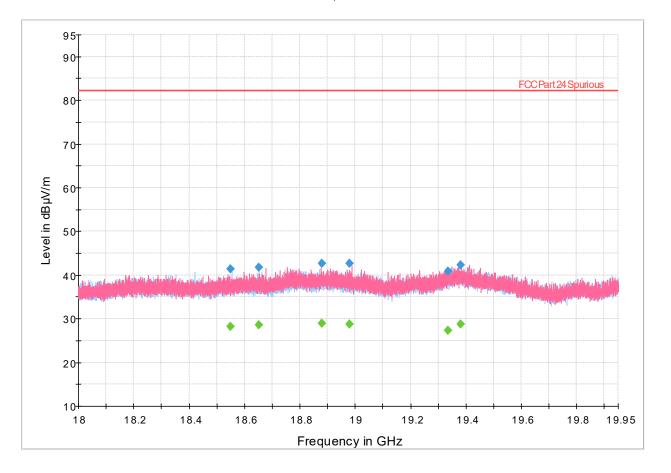


Figure 8.6-9: Radiated emissions spectral plot (18 GHz - 19.95 GHz) – Band 25 (1995 MHz)

| Frequency (MHz) | MaxPeak (dBµV/m) | CAverage (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Meas. Time | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|--------------------|---------------------|----------------------|-------------------|----------------|----------------|--------------------|----------------|-----|------------------|-----------------|
| 18549.450000 | 41.37 | | 82.23 | 40.86 | (ms) 5000.0 | 1000.000 | 372.0 | Н | 0.0 | 16.0 |
| 18549.450000 | | 28.29 | | | 5000.0 | 1000.000 | 372.0 | н | 0.0 | 16.0 |
| 18651.018750 | | 28.52 | | | 5000.0 | 1000.000 | 269.0 | Н | 32.0 | 16.0 |
| 18651.018750 | 41.83 | | 82.23 | 40.40 | 5000.0 | 1000.000 | 269.0 | Н | 32.0 | 16.0 |
| 18878.559375 | 42.74 | | 82.23 | 39.49 | 5000.0 | 1000.000 | 216.0 | V | 267.0 | 15.9 |
| 18878.559375 | | 29.03 | | | 5000.0 | 1000.000 | 216.0 | V | 267.0 | 15.9 |
| 18979.453125 | | 28.81 | | | 5000.0 | 1000.000 | 258.0 | V | 0.0 | 16.0 |
| 18979.453125 | 42.63 | | 82.23 | 39.60 | 5000.0 | 1000.000 | 258.0 | V | 0.0 | 16.0 |
| 19334.184375 | 40.90 | | 82.23 | 41.33 | 5000.0 | 1000.000 | 243.0 | Н | 354.0 | 16.7 |
| 19334.184375 | | 27.39 | | | 5000.0 | 1000.000 | 243.0 | Н | 354.0 | 16.7 |
| 19381.696875 | 42.23 | | 82.23 | 40.00 | 5000.0 | 1000.000 | 280.0 | Н | 32.0 | 16.6 |
| 19381.696875 | | 28.74 | | | 5000.0 | 1000.000 | 280.0 | Н | 32.0 | 16.6 |

¹ Field strength (dB V/m) = receiver/spectrum analyzer value (dB V) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)



8.6.5.2 Operating frequency band: Band 66: 2110 – 2200 MHz



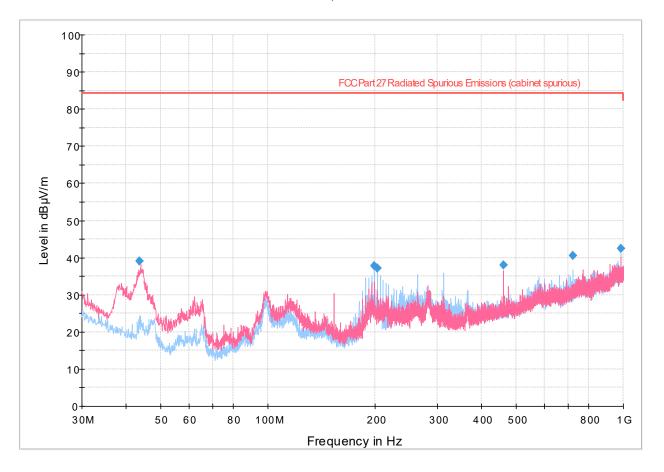


Figure 8.6-10: Radiated emissions spectral plot (30 MHz - 1 GHz) - Band 66 (2110 MHz)

Table 8.6-10: Radiated emissions results

| Frequency (MHz) | MaxPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Meas. Time | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|--------------------|---------------------|-------------------|----------------|---------------|--------------------|----------------|-----|------------------|-----------------|
| | | | | (ms) | | | | | |
| 43.643333 | 39.05 | 84.38 | 45.33 | 5000.0 | 100.000 | 114.0 | V | 34.0 | 17.1 |
| 199.689167 | 37.74 | 84.38 | 46.64 | 5000.0 | 100.000 | 144.0 | н | 196.0 | 16.3 |
| 203.528333 | 37.11 | 84.38 | 47.27 | 5000.0 | 100.000 | 129.0 | н | 196.0 | 16.4 |
| 460.780833 | 38.04 | 84.38 | 46.34 | 5000.0 | 100.000 | 104.0 | V | 172.0 | 26.0 |
| 720.013333 | 40.65 | 84.38 | 43.73 | 5000.0 | 100.000 | 125.0 | н | 246.0 | 31.1 |
| 983.085833 | 42.42 | 84.38 | 41.96 | 5000.0 | 100.000 | 115.0 | Н | 301.0 | 35.5 |

Notes:

¹ Field strength (dB V/m) = receiver/spectrum analyzer value (dB V) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)



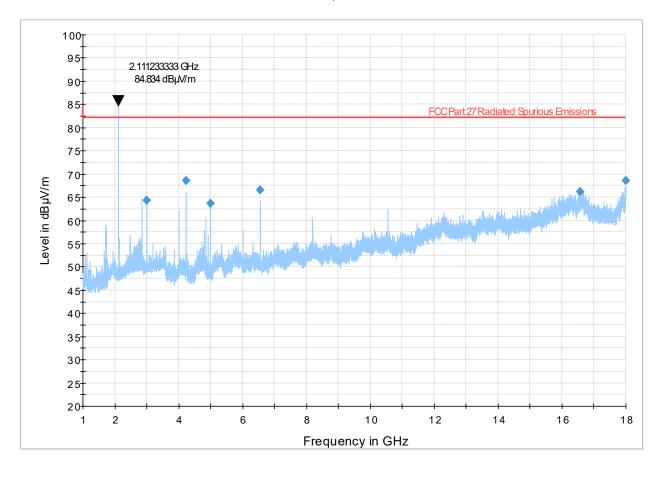


Figure 8.6-11: Radiated emissions spectral plot (1 GHz - 18 GHz) - Band 66 (2110 MHz)

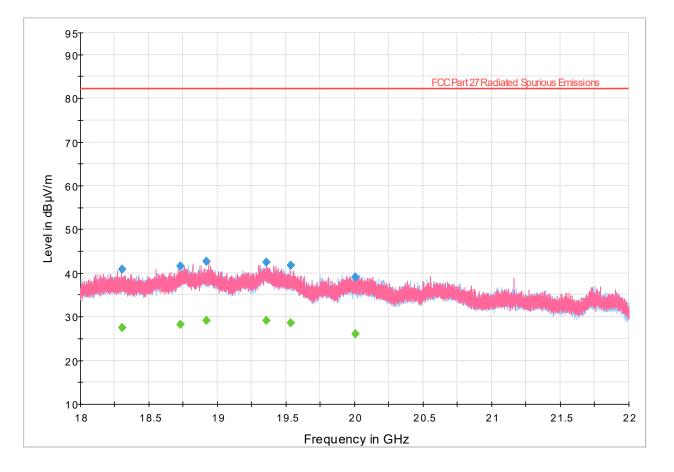
| Frequency (MHz) | MaxPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|--------------------|---------------------|-------------------|----------------|-----------------------|--------------------|----------------|-----|------------------|-----------------|
| 3000.166667 | 64.27 | 82.23 | 17.96 | 5000.0 | 1000.000 | 130.0 | V | 175.0 | 7.6 |
| 4222.466667 | 68.55 | 82.23 | 13.68 | 5000.0 | 1000.000 | 164.0 | V | 295.0 | 10.5 |
| 4999.933333 | 63.62 | 82.23 | 18.61 | 5000.0 | 1000.000 | 171.0 | V | 176.0 | 11.5 |
| 6553.733333 | 66.53 | 82.23 | 15.70 | 5000.0 | 1000.000 | 281.0 | V | 0.0 | 14.5 |
| 16575.100000 | 66.16 | 82.23 | 16.07 | 5000.0 | 1000.000 | 210.0 | Н | 314.0 | 32.2 |
| 17993.600000 | 68.64 | 82.23 | 13.59 | 5000.0 | 1000.000 | 279.0 | V | 222.0 | 34.9 |

Notes:

¹ Field strength (dB V/m) = receiver/spectrum analyzer value (dB V) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)





| | Table 8.6-12: Radiated emissions results | | | | | | | | | |
|--------------------|--|----------------------|-------------------|----------------|-----------------------|--------------------|----------------|-----|------------------|-----------------|
| Frequency (MHz) | MaxPeak (dBµV/m) | CAverage (dBμV/m) | Limit (dBµV/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
| 18303.900000 | 40.82 | | 82.23 | 41.41 | 5000.0 | 1000.000 | 100.0 | V | 0.0 | 15.4 |
| 18303.900000 | | 27.50 | | | 5000.0 | 1000.000 | 100.0 | V | 0.0 | 15.4 |
| 18728.500000 | | 28.31 | | | 5000.0 | 1000.000 | 351.0 | V | 0.0 | 15.9 |
| 18728.500000 | 41.60 | | 82.23 | 40.63 | 5000.0 | 1000.000 | 351.0 | V | 0.0 | 15.9 |
| 18920.500000 | 42.72 | | 82.23 | 39.51 | 5000.0 | 1000.000 | 346.0 | V | 151.0 | 15.9 |
| 18920.500000 | | 29.08 | | | 5000.0 | 1000.000 | 346.0 | V | 151.0 | 15.9 |
| 19354.400000 | 42.40 | | 82.23 | 39.83 | 5000.0 | 1000.000 | 166.0 | V | 311.0 | 16.7 |
| 19354.400000 | | 29.09 | | | 5000.0 | 1000.000 | 166.0 | V | 311.0 | 16.7 |
| 19537.250000 | 41.67 | | 82.23 | 40.56 | 5000.0 | 1000.000 | 228.0 | V | 280.0 | 16.3 |
| 19537.250000 | | 28.64 | | | 5000.0 | 1000.000 | 228.0 | V | 280.0 | 16.3 |
| 20006.000000 | | 26.06 | | | 5000.0 | 1000.000 | 120.0 | Н | 278.0 | 16.5 |
| 20006.000000 | 39.11 | | 82.23 | 43.12 | 5000.0 | 1000.000 | 120.0 | Н | 278.0 | 16.5 |

Notes: ¹ Field strength (dB V/m) = receiver/spectrum analyzer value (dB V) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)



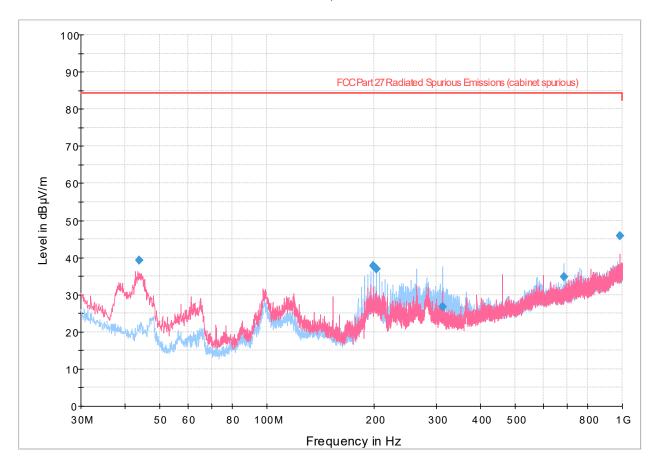


Table 8.6-13: Radiated emissions results

| Frequency (MHz) | MaxPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|--------------------|---------------------|-------------------|----------------|-----------------------|--------------------|----------------|-----|------------------|-----------------|
| 43.791667 | 39.22 | 84.38 | 45.16 | 5000.0 | 100.000 | 114.0 | V | 0.0 | 17.0 |
| 199.689167 | 37.69 | 84.38 | 46.69 | 5000.0 | 100.000 | 100.0 | Н | 198.0 | 16.3 |
| 203.528333 | 36.99 | 84.38 | 47.39 | 5000.0 | 100.000 | 144.0 | Н | 186.0 | 16.4 |
| 312.006667 | 26.69 | 84.38 | 57.69 | 5000.0 | 100.000 | 104.0 | Н | 10.0 | 21.4 |
| 685.712500 | 34.83 | 84.38 | 49.55 | 5000.0 | 100.000 | 269.0 | н | 299.0 | 30.2 |
| 983.045833 | 45.95 | 84.38 | 38.43 | 5000.0 | 100.000 | 151.0 | V | 34.0 | 35.5 |

Notes:

¹ Field strength (dB V/m) = receiver/spectrum analyzer value (dB V) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)



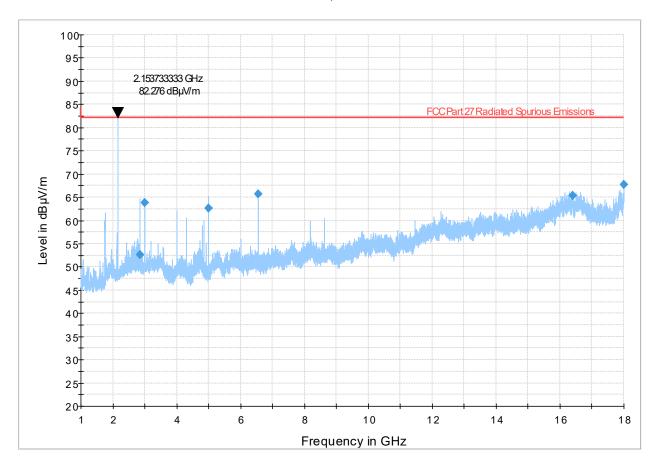


Figure 8.6-14: Radiated emissions spectral plot (1 GHz - 18 GHz) - Band 66 (2155 MHz)

| Table 8.6-14: R | Radiated emission | is results |
|-----------------|-------------------|------------|
|-----------------|-------------------|------------|

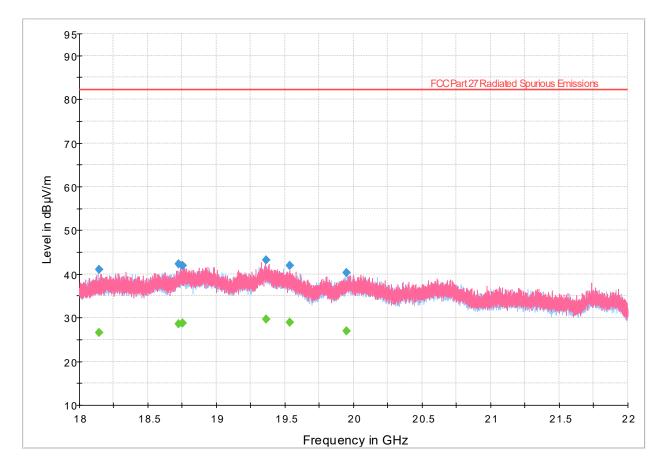
| Frequency (MHz) | MaxPeak (dBµV/m) | Limit (dBµV/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
|--------------------|---------------------|-------------------|----------------|-----------------------|--------------------|----------------|-----|------------------|-----------------|
| 2853.366667 | 52.54 | 82.23 | 29.69 | 100.0 | 1000.000 | 168.0 | V | 187.0 | 7.1 |
| 3000.166667 | 63.89 | 82.23 | 18.34 | 100.0 | 1000.000 | 148.0 | V | 174.0 | 7.6 |
| 4999.933333 | 62.71 | 82.23 | 19.52 | 100.0 | 1000.000 | 227.0 | V | 175.0 | 11.5 |
| 6553.733333 | 65.61 | 82.23 | 16.62 | 100.0 | 1000.000 | 119.0 | V | 339.0 | 14.5 |
| 16400.433333 | 65.36 | 82.23 | 16.88 | 100.0 | 1000.000 | 207.0 | V | 264.0 | 32.9 |
| 17999.666667 | 67.71 | 82.23 | 14.52 | 100.0 | 1000.000 | 114.0 | Н | 203.0 | 35.3 |

Notes:

¹ Field strength (dB V/m) = receiver/spectrum analyzer value (dB V) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)





| Table 8.6-15: Radiated emissions results | | | | | | | | | | |
|--|---------------------|----------------------|-------------------|----------------|-----------------------|--------------------|----------------|-----|------------------|-----------------|
| Frequency (MHz) | MaxPeak (dBµV/m) | CAverage (dBμV/m) | Limit (dBµV/m) | Margin (dB) | Meas. Time (ms) | Bandwidth (kHz) | Height (cm) | Pol | Azimuth (deg) | Corr. (dB/m) |
| 18142.600000 | | 26.69 | | | 5000.0 | 1000.000 | 217.0 | Н | 347.0 | 15.6 |
| 18142.600000 | 40.99 | | 82.23 | 41.24 | 5000.0 | 1000.000 | 217.0 | Н | 347.0 | 15.6 |
| 18726.950000 | 42.26 | | 82.23 | 39.97 | 5000.0 | 1000.000 | 380.0 | V | 199.0 | 15.9 |
| 18726.950000 | | 28.57 | | | 5000.0 | 1000.000 | 380.0 | V | 199.0 | 15.9 |
| 18753.350000 | 41.86 | | 82.23 | 40.37 | 5000.0 | 1000.000 | 325.0 | V | 270.0 | 15.9 |
| 18753.350000 | | 28.75 | | | 5000.0 | 1000.000 | 325.0 | V | 270.0 | 15.9 |
| 19360.550000 | | 29.75 | | | 5000.0 | 1000.000 | 346.0 | V | 114.0 | 16.7 |
| 19360.550000 | 43.14 | | 82.23 | 39.09 | 5000.0 | 1000.000 | 346.0 | V | 114.0 | 16.7 |
| 19532.000000 | 41.97 | | 82.23 | 40.26 | 5000.0 | 1000.000 | 366.0 | V | 219.0 | 16.3 |
| 19532.000000 | | 28.89 | | | 5000.0 | 1000.000 | 366.0 | V | 219.0 | 16.3 |
| 19945.600000 | 40.29 | | 82.23 | 41.94 | 5000.0 | 1000.000 | 248.0 | Н | 341.0 | 16.2 |
| 19945.600000 | | 26.97 | | | 5000.0 | 1000.000 | 248.0 | Н | 341.0 | 16.2 |

Notes: ¹ Field strength (dB V/m) = receiver/spectrum analyzer value (dB V) + correction factor (dB)

² Correction factors = antenna factor ACF (dB) + cable loss (dB)

³ Emissions that were continuously present for a minimum of 1 second and occurred more than once for every 15 seconds observation period were considered valid emissions. The maximum value of valid emissions has been recorded.

End of test report