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# Test report

## 284168-5TRFWL

Date of issue: December 1, 2018

Applicant:

Deltanode Solutions AB

Product:

PCS1900

Model:

DHR819

FCC ID: V5FDHR002 IC: 11014A-DHR002

Specifications:

FCC Part 24E, RSS-131 Issue 3, RSS-133 Issue 6

Test location

| | |
|---|---|
| Company name | Nemko Canada Inc. |
| Address | 303 River Road |
| City | Ottawa |
| Province | Ontario |
| Postal code | K1V 1H2 |
| Country | Canada |
| Telephone | +1 613 737 9680 |
| Facsimile | +1 613 737 9691 |
| Toll free | +1 800 563 6336 |
| Website | www.nemko.com |
| Site number | FCC test site registration number: 175281, IC: 2040A-4 (3 m semi anechoic chamber) |

| | |
|---|---|
| Tested by | Kevin Rose, Wireless/EMC Specialist |
| Reviewed by | Russell Grant, Senior Technical Assessor |
| Date | December 1, 2018 |
| Signature | Russell Grant |

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 Canada's ISO/IEC 17025 accreditation.

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# Section 1. Report summary

## 1.1 Applicant and manufacturer

| | |
|---|---|
| Company name | Deltanode Solutions AB |
| Address | Hammarby Fabriksvag 61 |
| City | Stockholm |
| Province/State | |
| Postal/Zip code | SE-120 30 |
| Country | Sweden |

## 1.2 Test specifications

| | |
|---|---|
| FCC Part 24E | Broadband PCS |
| 935210 D05 Indus Booster Basic Meas v01r02 | MEASUREMENTS GUIDANCE FOR INDUSTRIAL AND NON-CONSUMER SIGNAL BOOSTER, REPEATER, AND AMPLIFIER DEVICES |
| RSS-131 Issue 3<br>RSS-133 Issue 6 | Zone Enhancers<br>2 GHz Personal Communications Services |

## 1.3 Statement of compliance

In the configuration tested, the EUT was found compliant.

Testing was completed against all relevant requirements of the test standard. Results obtained indicate that the product under test complies in full with the requirements tested. The test results relate only to the items tested.

See “Summary of test results” for full details.

## 1.4 Exclusions

None

## 1.5 Test report revision history

| Revision # | Details of changes made to test report |
|---|---|
| TRF | Original report issued |

# Section 2. Summary of test results

## 2.1 FCC Part 24E, RSS-131 Issue 3, RSS-133 Issue 6

| Part | Test description | Verdict |
|---|---|---|
| KDB 935210 D05 3.2 | Measuring AGC threshold level | Reported |
| RSS-131 5.2.1, KDB 935210 D05 3.3 | Out-of-band-rejection | Pass |
| RSS-131 5.2.2, KDB 935210 D05 3.4 | Input vs. Output Signal Comparison | Pass |
| FCC 24.232, RSS-131 5.2.3, RSS-133 6.4, KDB 935210 D05 3.5 | Mean output power and amplifier/booster gain | Pass |
| FCC 24.238(a), RSS-133 6.5, KDB 935210 D05 3.6.2 | Out-of-band/out-of-block emissions conducted measurements | Pass |
| FCC 24.238(a), RSS-133 6.5, KDB 935210 D05 3.6.3 | Spurious emissions conducted measurements | Pass |
| FCC 24.235, RSS-131 5.2.4, RSS-133 6.3, 935210 D05 3.7 | Frequency stability measurements | N/A[1] |
| FCC 24.238(a), RSS-133 6.5, KDB 935210 D05 3.8 | Spurious emissions radiated measurements | Pass |

Notes: [1]The signal booster does not alter the input signal in any way.

# Section 3. Equipment under test (EUT) details

## 3.1 Sample information

| | |
|---|---|
| Receipt date | November 8, 2018 |
| Nemko sample ID number | 13300321 |

## 3.2 EUT information

| | |
|---|---|
| Product name | PCS1900 |
| Model | DHR819 |
| Serial number | 10189 |

## 3.3 Technical information

| | |
|---|---|
| Operating band | 1850 – 1915 / 1930 – 1995 MHz |
| Modulation type | GSM, EDGE, CDMA 1.25, WCDMA 5, LTE 1.4-3-5-10-15-20 |
| Channel Spacing | Standard |
| Power requirements | 110 $V_{AC}$, ~3 A for entire system tested |
| Emission designator | GSM. EDGE: GXW<br>CDMA: F9W<br>LTE: D7W<br>200KGXW, 1M25F9W, 5M00F9W, 1M40D7W, 3M00D7W, 5M00D7W, 10M0D7W, 15M0D7W, 20M0D7W |
| Gain | 80 dB |
| Antenna information | External Antenna is not provided EUT used a 50 Ω termination. |

## 3.4 Product description and theory of operation

Off air high power repeater – 33dBm of output power on DL, 25dBm of output power on UL, 80dB gain in both DL and UL

## 3.5 EUT exercise details

The EUT was controlled via a Laptop interface with GUI to configure the system The EUT uses set channels Bandwidths user settable to a maximum of 15 MHz.

## 3.6 EUT setup diagram

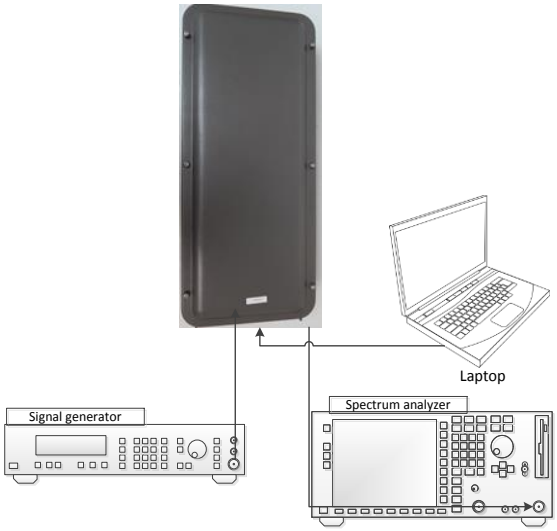



***Figure 3.6-1:*** *Setup diagram*

# **Section 4.** Engineering considerations

## 4.1 Modifications incorporated in the EUT

There were no modifications performed to the EUT during this assessment.

## 4.2 Technical judgment

None

## 4.3 Deviations from laboratory tests procedures

No deviations were made from laboratory procedures.

# Section 5. Test conditions

## 5.1 Atmospheric conditions

| | |
|---|---|
| Temperature | 15–30 °C |
| Relative humidity | 20–75 % |
| Air pressure | 860–1060 mbar |

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 purpose of 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

Measurement uncertainty budgets for the tests are detailed below. Measurement uncertainty calculations assume a coverage factor of K = 2 with 95% certainty.

| Test name | Measurement uncertainty, dB |
|---|---|
| All antenna port measurements | 0.55 |
| Conducted spurious emissions | 1.13 |
| Radiated spurious emissions | 3.78 |

# Section 7. Test equipment

## 7.1 Test equipment list

***Table 7.1-1:*** *Equipment list*

| Equipment | Manufacturer | Model no. | Serial no. | Asset no. | Cal./Ver. cycle | Next cal./ver. |
|---|---|---|---|---|---|---|
| 3 m EMI test chamber | TDK | SAC-3 | | FA003012 | 1 year | Aug. 22/19 |
| Flush mount turntable | SUNAR | FM2022 | | FA003006 | — | NCR |
| Controller | SUNAR | SC110V | 050118-1 | FA002976 | — | NCR |
| Antenna mast | SUNAR | TLT2 | 042418-5 | FA003007 | — | NCR |
| AC Power source | Chroma | | | FA003020 | — | NCR |
| Receiver/spectrum analyzer | Rohde & Schwarz | ESR26 | 101367 | FA002969 | 1 year | Jan. 30/19 |
| Spectrum analyzer | Rohde & Schwarz | FSW43 | 104437 | FA002971 | 1 year | Mar. 16/19 |
| Horn antenna (1–18 GHz) | ETS-Lindgren | 3117 | 00052793 | FA002911 | 1 year | Aug. 16/19 |
| Preamp (1–18 GHz) | ETS-Lindgren | 124334 | 00224880 | FA002956 | 1 year | Sept 18/19 |
| Bilog antenna (30–2000 MHz) | SUNAR | JB1 | A053018-1 | FA003009 | 1 year | Sept. 6/19 |
| Vector Signal Generator | Rohde & Schwarz | SMW200A | 101857 | FA002970 | 1 year | Feb. 2/19 |

Note: NCR - no calibration required, VOU - verify on use

# Section 8. Testing data

## 8.1 KDB 935210 D05 3.2, Measuring AGC threshold level

### 8.1.1 Definitions and limits

The AGC threshold is the input power at which a 1 dB increase in the input signal power no longer causes a 1 dB increase in the output power.

### 8.1.2 Test summary

| | | | |
|---|---|---|---|
| Test date | November 7, 2018 | Temperature | 22 °C |
| Test engineer | Kevin Rose | Air pressure | 1003 mbar |
| Verdict | Pass | Relative humidity | 33 % |

### 8.1.3 Observations, settings and special notes

Test receiver settings:

| | |
|---|---|
| Detector mode | RMS (for average), Peak (for peak) |
| Resolution bandwidth | 20 kHz |
| Integration bandwidth | >OBW |
| Video bandwidth | >RBW |
| Trace mode | Power Average (for average), Max Hold (for peak) |
| Measurement time | Auto |

### 8.1.4 Test data

***Table 8.1-1:*** *AGC Threshold*

| Modulation | Frequency, MHz | RF input power AVG, dBm |
|---|---|---|
| AWGN AGC +1dB | 1882.5 | -56.93 |
| MSK AGC +1dB | 1882.5 | -56.95 |
| AWGN AGC +1dB | 1962.5 | -50.94 |
| MSK AGC +1dB | 1962.5 | -51.95 |

## 8.2 RSS-131 5.2.1, KDB 935210 D05 3.3, Out-of-band-rejection

### 8.2.1 Definitions and limits

RSS-131 5.2.1
The gain-versus-frequency response and the 20 dB bandwidth of the zone enhancer shall be reported. The zone enhancer shall reject amplification of other signals outside the passband of the zone enhancer.

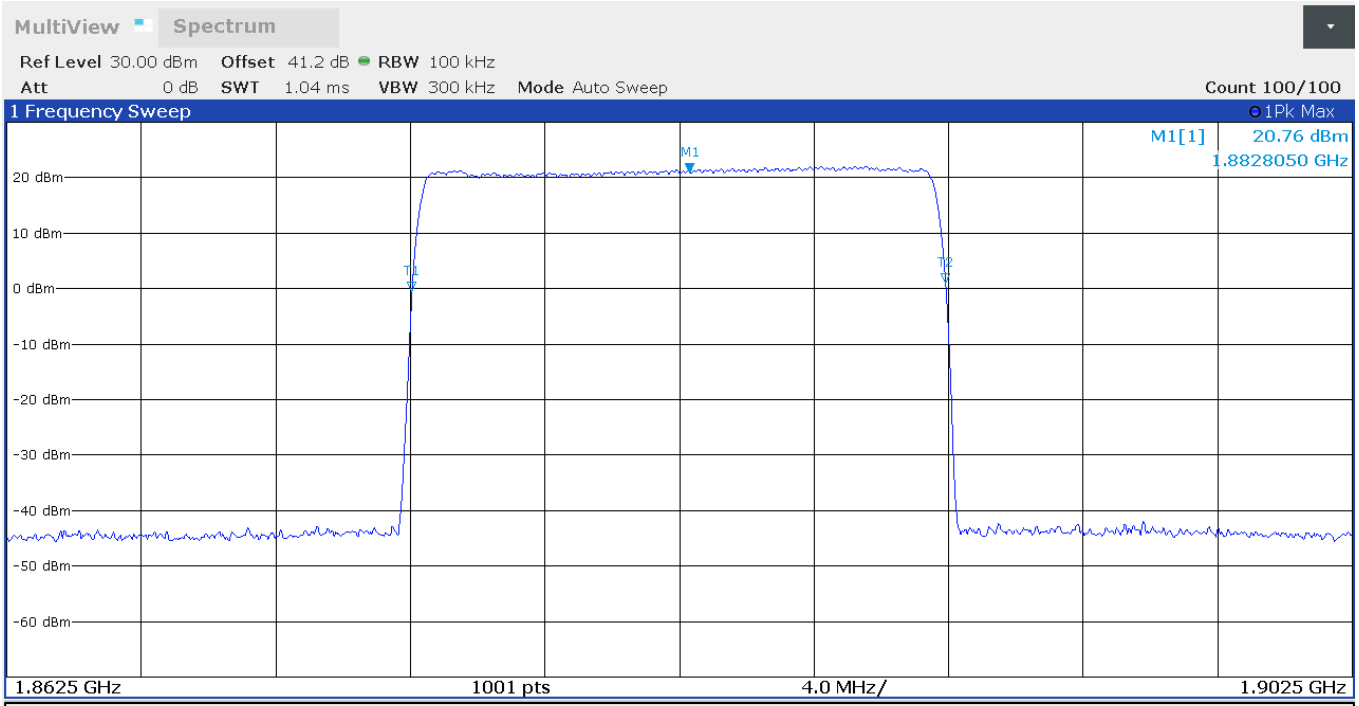
### 8.2.2 Test summary

| | | | |
|---|---|---|---|
| Test date | November 7, 2018 | Temperature | 21 °C |
| Test engineer | Kevin Rose | Air pressure | 1000 mbar |
| Verdict | Pass | Relative humidity | 42 % |

### 8.2.3 Observations, settings and special notes

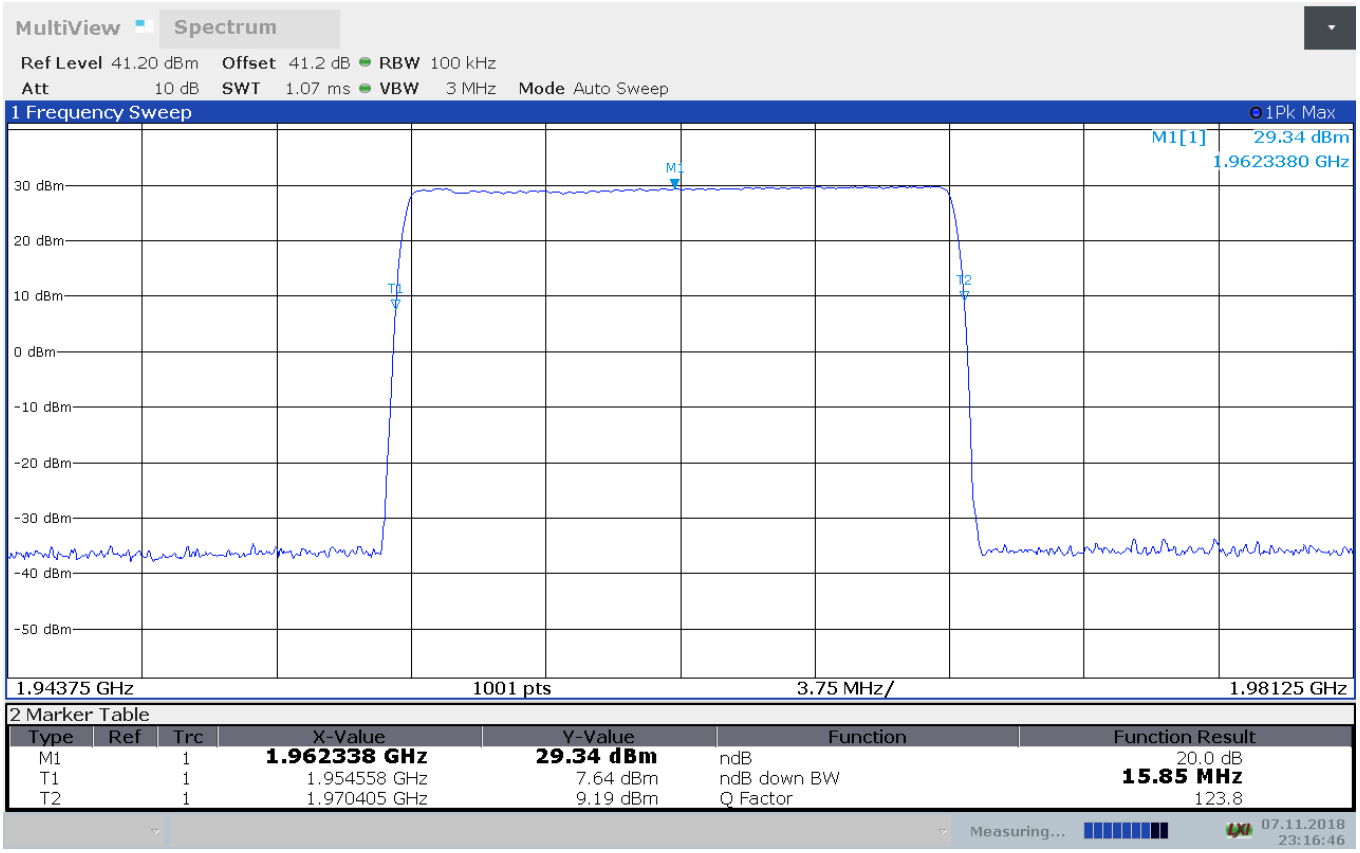
| | |
|---|---|
| Frequency range | 30 MHz to 10th harmonic |
| Detector mode | Peak |
| Resolution bandwidth sweep | 100 kHz (below 1 GHz), 1000 kHz (above 1 GHz) |
| Video bandwidth | >RBW |
| Trace mode | Max Hold |
| Measurement time | Auto |

### 8.2.4 Test data




**15:27:10 07.11.2018**

***Figure 8.2-1:*** *Passband Uplink*




**23:16:47 07.11.2018**

***Figure 8.2-2:*** *Passband Downlink*

## 8.3 RSS-131 5.2.2, KDB 935210 D05 3.4, Input-versus-output signal comparison

### 8.3.1 Definitions and limits

RSS-131 5.2.2
The spectral growth of the 26 dB bandwidth of the output signal shall be less than 5% of the input signal spectrum.

KDB 935210 D05 3.4
A 26 dB bandwidth measurement shall be performed on the input signal and the output signal; alternatively, the 99% OBW can be measured and used.
See KDB Publication 971168[R8]for more information on measuring OBW

### 8.3.2 Test summary

| | | | |
|---|---|---|---|
| Test date | November 8, 2018 | Temperature | 22 °C |
| Test engineer | Kevin Rose | Air pressure | 1001 mbar |
| Verdict | Pass | Relative humidity | 32 % |

### 8.3.3 Observations, settings and special notes

Receiver settings were:

| | |
|---|---|
| Frequency range | 250% of OBW |
| Detector mode | Peak |
| Resolution bandwidth | 1 % to 5 % of the anticipated OBW |
| Video bandwidth | >RBW |
| Trace mode | Max Hold |

### 8.3.4 Test data

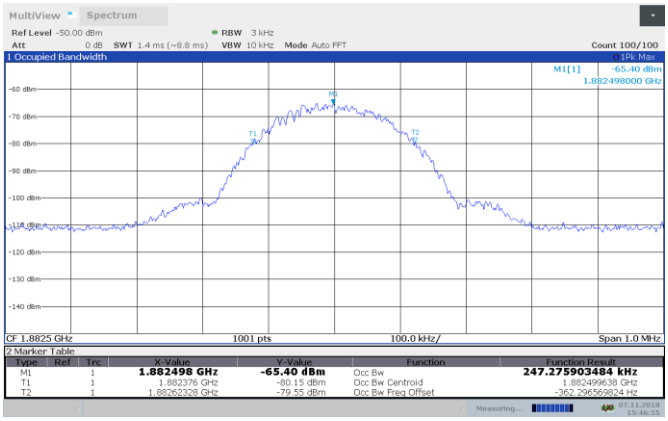



***Figure 8.3-1:*** *MSK AGC-0.5 dB 1882.5 MHz input 99% BW UL*

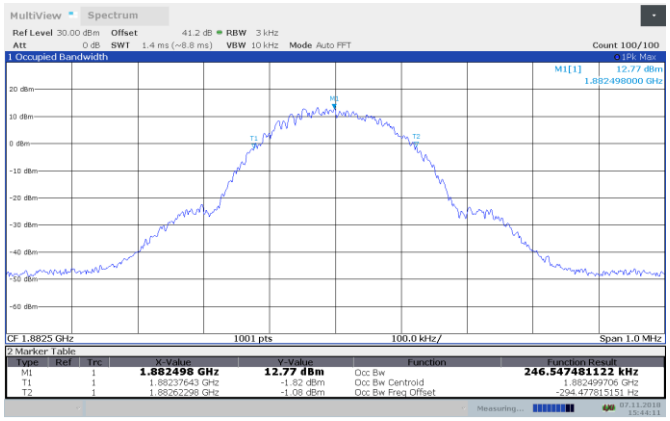



***Figure 8.3-2:*** *MSK AGC-0.5 dB1882.5 MHz output 99% BW UL*

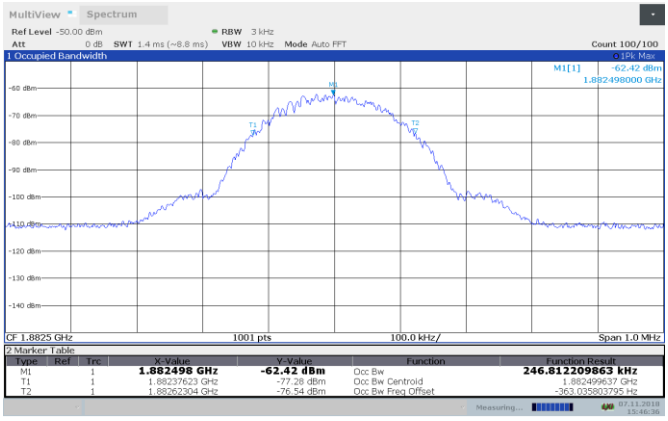



***Figure 8.3-3:*** *MSK AGC+3 dB 1882.5 MHz input 99% BW UL*

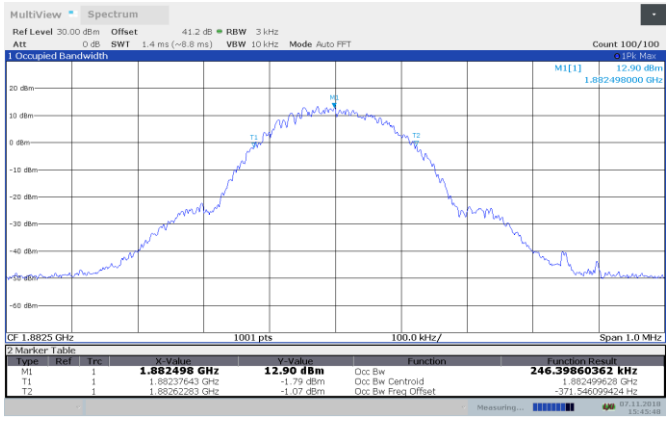



***Figure 8.3-4:*** *MSK AGC +3 dB 1882.5 MHz output 99% BW UL*

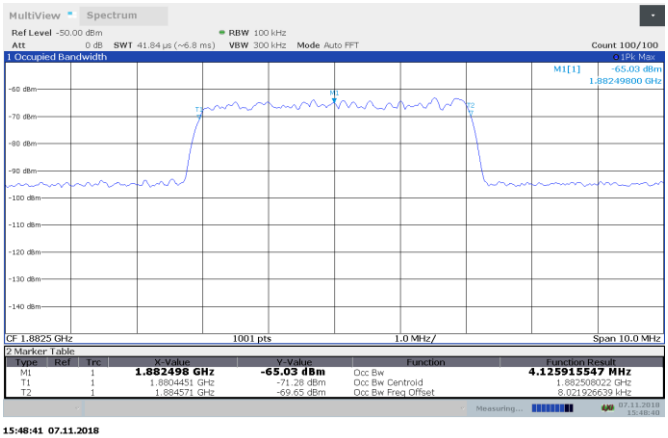



***Figure 8.3-5:*** *AWGN AGC -0.5 dB 1882.5 MHz input 99% BW UL*

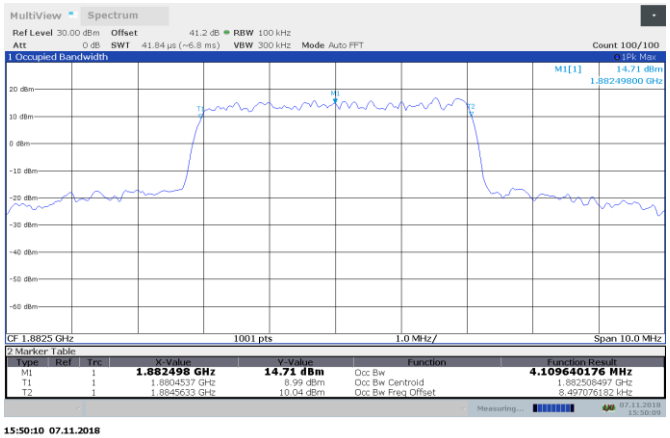



***Figure 8.3-6:*** *AWGN AGC -0.5 dB 1882.5 MHz output 99% BW UL*

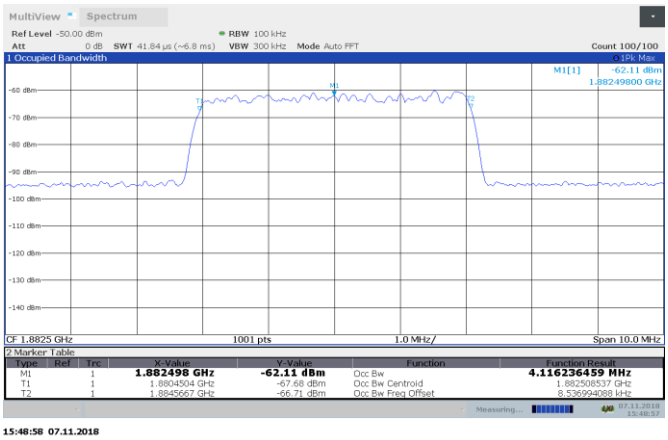



***Figure 8.3-7:*** *AWGN AGC+-3 dB 1882.5 MHz input 99% BW UL*

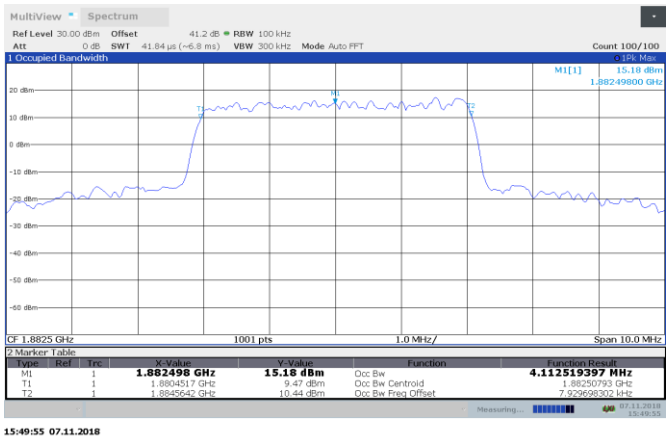



***Figure 8.3-8:*** *AWGN AGC+-3 dB 1882.5 MHz output 99% BW UL*

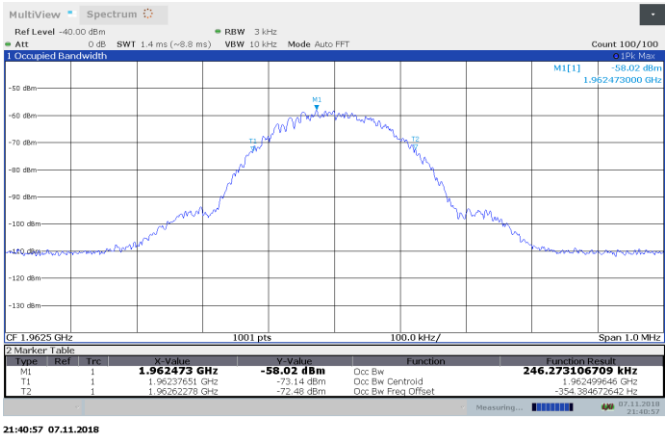



***Figure 8.3-9:*** *MSK AGC-0.5 dB 1962.5 MHz input 99% BW DL*

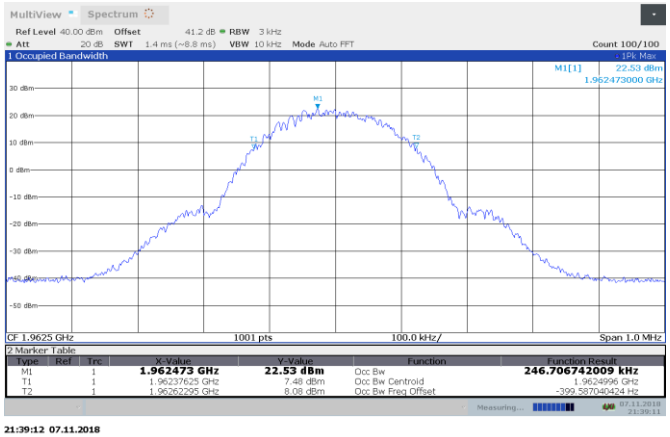



***Figure 8.3-10:*** *MSK AGC-0.5 dB 1962.5 MHz output 99% BW DL*

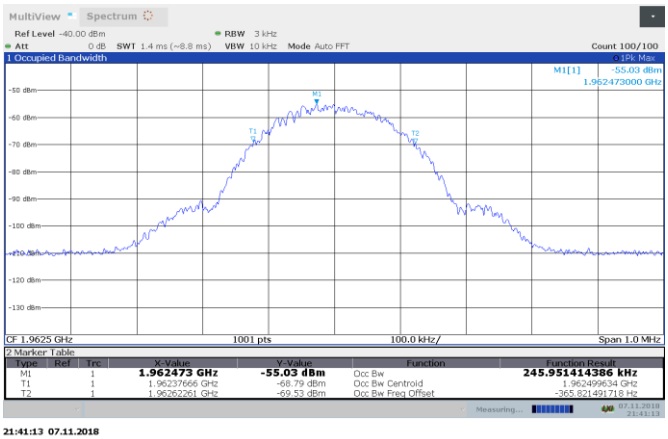



***Figure 8.3-11:*** *MSK AGC+3 dB 1962.5 MHz input 99% BW DL*

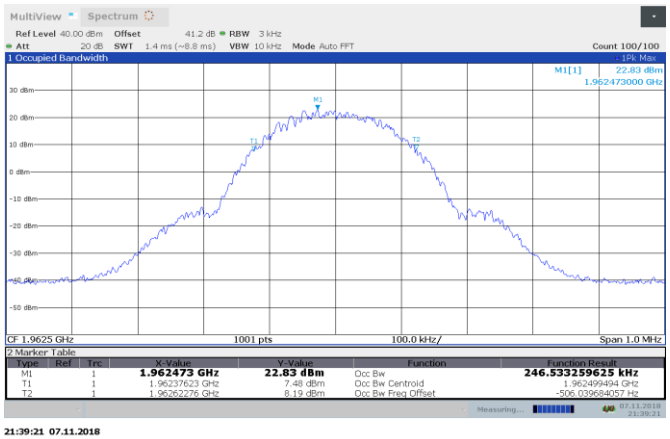



***Figure 8.3-12:*** *MSK AGC +3 dB 1962.5 MHz output 99% BW DL*

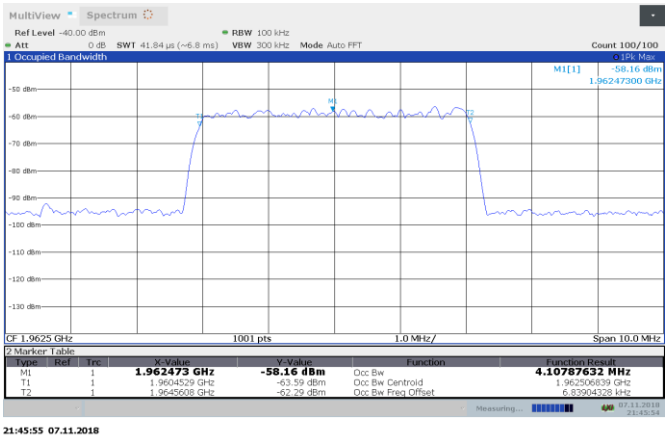



***Figure 8.3-13:*** *AWGN AGC -0.5 dB 1962.5 MHz input 99% BW DL*

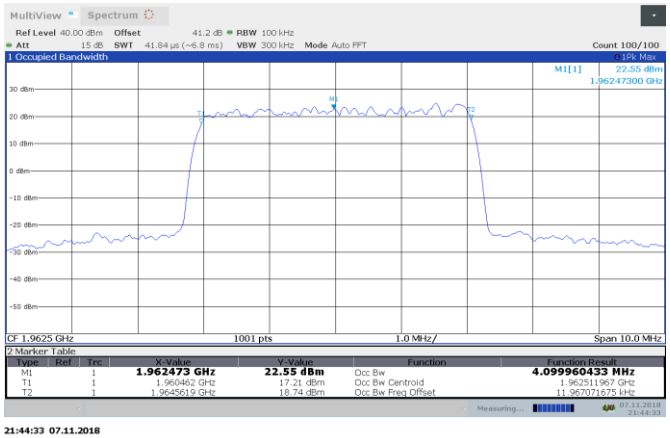



***Figure 8.3-14:*** *AWGN AGC -0.5 dB 1962.5 MHz output 99% BW DL*

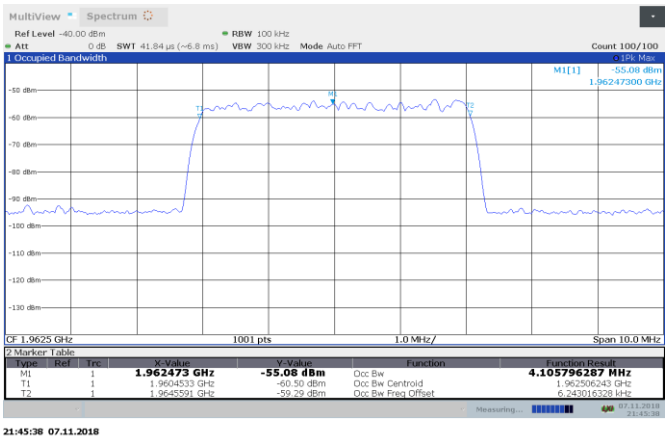



***Figure 8.3-15:*** *AWGN AGC+-3 dB 1962.5 MHz input 99% BW DL*

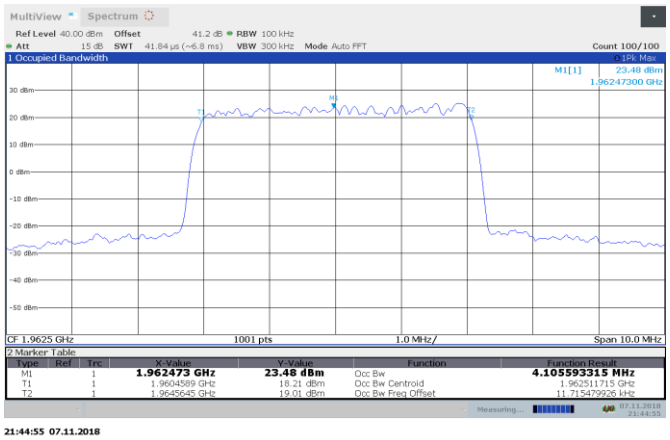



***Figure 8.3-16:*** *AWGN AGC+-3 dB 1962.5 MHz output 99% BW DL*

## 8.4 FCC 24.232, RSS-131 5.2.3, RSS-133 6.4, KDB 935210 D05 3.5, Mean output power and amplifier/booster gain

### 8.4.1 Definitions and limits

FCC 24.232
High Density: 1640 W EIRP or 1640 W/MHz EIRP if the emission bandwidth is > 1 MHz
Low Density: 3280 W EIRP or 3280 W/MHz EIRP if the emission bandwidth is > 1 MHz
The peak-to-average ratio (PAR) of the transmission may not exceed 13 dB

RSS-131 5.2.3
The zone enhancer gain shall not exceed the nominal gain by more than 1.0 dB. Outside of the 20 dB bandwidth, the gain shall not exceed the gain at the 20 dB point

RSS-133 6.4 refer to SRSP-510. In addition, the transmitter's peak-to-average power ratio (PAPR) shall not exceed 13 dB for more than 0.1% of the time using a signal corresponding to the highest PAPR during periods of continuous transmission.

### 8.4.2 Test summary

| | | | |
|---|---|---|---|
| Test date | November 8, 2018 | Temperature | 22 °C |
| Test engineer | Kevin Rose | Air pressure | 1001 mbar |
| Verdict | Pass | Relative humidity | 32 % |

### 8.4.3 Observations, settings and special notes

The 99% occupied bandwidth was used.

Spectrum analyzer settings:

| | |
|---|---|
| Detector mode | RMS (for average), Peak (for peak) |
| Resolution bandwidth | 100 kHz |
| Integration bandwidth | >OBW |
| Video bandwidth | >RBW |
| Trace mode | Power Average (for average), Max Hold (for peak) |
| Measurement time | Auto |

***Table 8.4-1:*** *Output power results*

| Frequency, MHz | RF output power Peak, dBm |
|---|---|
| 1882.5 AWGN | 24.42 |
| Gain = 81.73dB | |
| 1882.5 MSK | 22.37 |
| Gain = 79.76 | |
| 1962.5 AWGN | 32.64 |
| Gain = 83.52 | |
| 1962.5 MSK | 30.23 |
| Gain = 80.99 | |

### 8.4.4 Test data

***Figure 8.4-1:*** *MSK AGC—0.5 dB 1882.5 MHz PAR UL*

***Figure 8.4-2:*** *AWGN AGC—0.5 dB 1882.5 MHz PAR UL*

***Figure 8.4-3:*** *MSK AGC—0.5 dB 1962.5 MHz PAR DL*

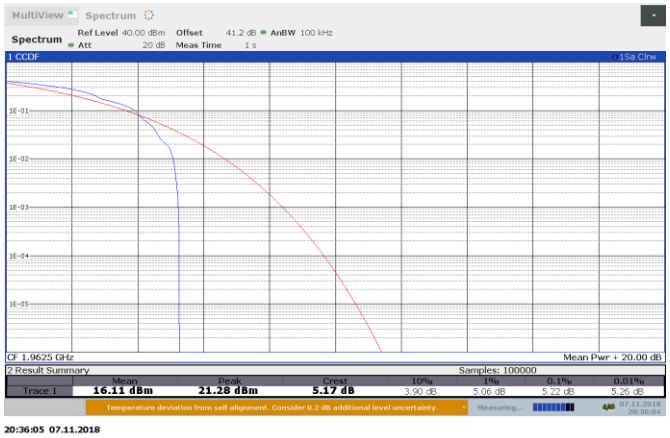



***Figure 8.4-4:*** *MSK AWGN AGC—0.5 dB 1962.5 MHz PAR DL*

## 8.5 FCC 24.238(a), RSS-133 6.5, KDB 935210 D05 3.6.2, Out-of-band/out-of-block emissions conducted measurements

### 8.5.1 Definitions and limits

24.238(a) / RSS-133 6.5 The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. = -13dBm

### 8.5.2 Test summary

| | | | |
|---|---|---|---|
| Test date | November 8, 2018 | Temperature | 22 °C |
| Test engineer | Kevin Rose | Air pressure | 1001 mbar |
| Verdict | Pass | Relative humidity | 32 % |

### 8.5.3 Observations, settings and special notes

Test receiver settings:

| | |
|---|---|
| Detector mode | RMS |
| Resolution bandwidth | 3 kHz |
| Integration bandwidth | >OBW |
| Video bandwidth | >RBW |
| Trace mode | Power Average (100 sweeps) |
| Measurement time | Auto |

### 8.5.4 Test data

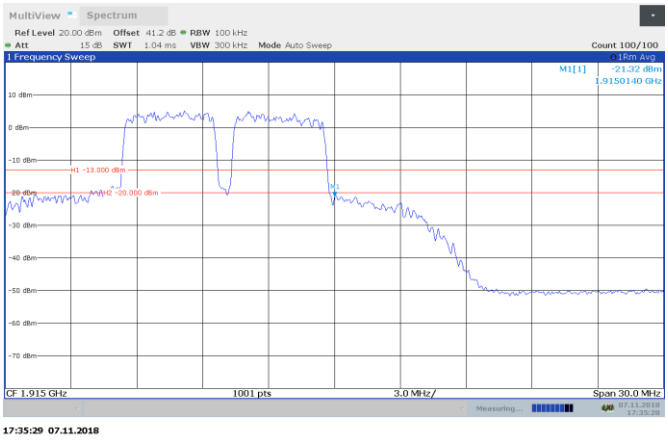



***Figure 8.5-1:*** *AWGN 1907.5 and1912.5 MHz AGC - 0.5dB Out-of-block UL*

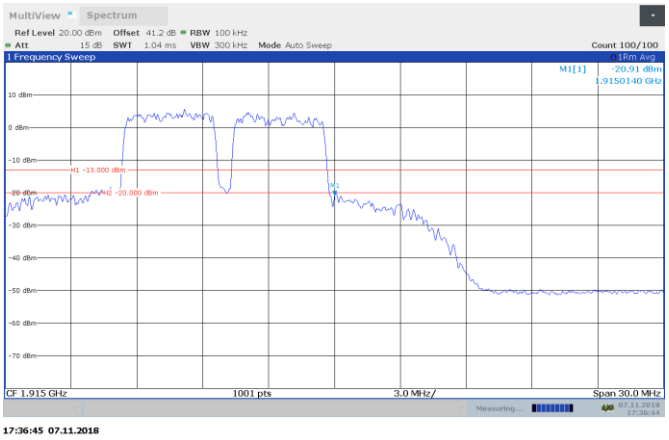



***Figure 8.5-2:*** *AWGN 1907.5 and1912.5 MHz AGC + 3dB Out-of-block UL*

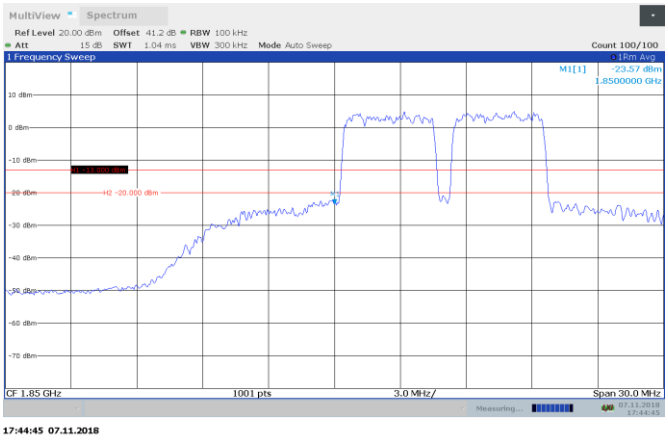



***Figure 8.5-3:*** *AWGN 1852.5 and 1857.5 MHz AGC – 0.5dB Out-of-block UL*

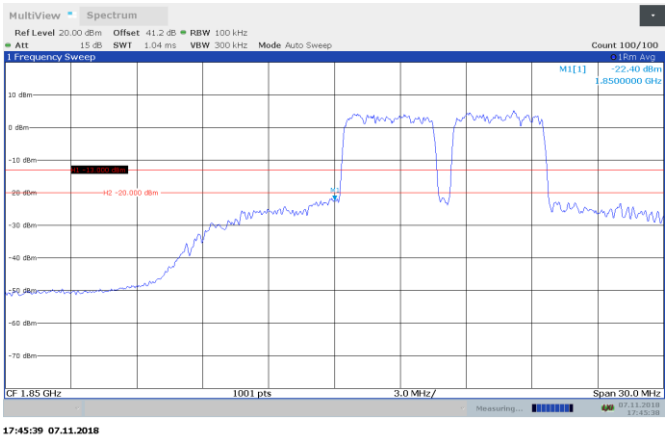
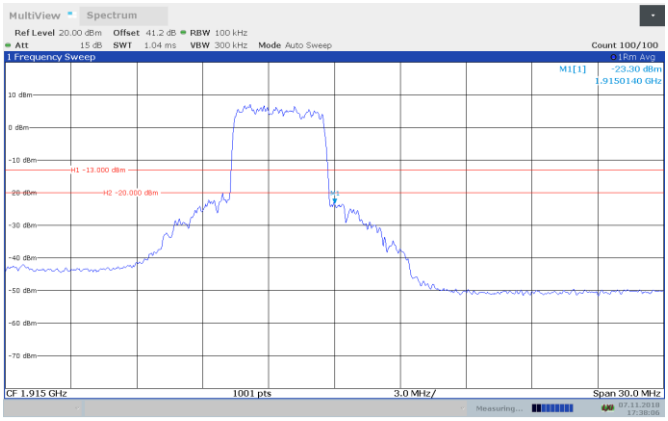
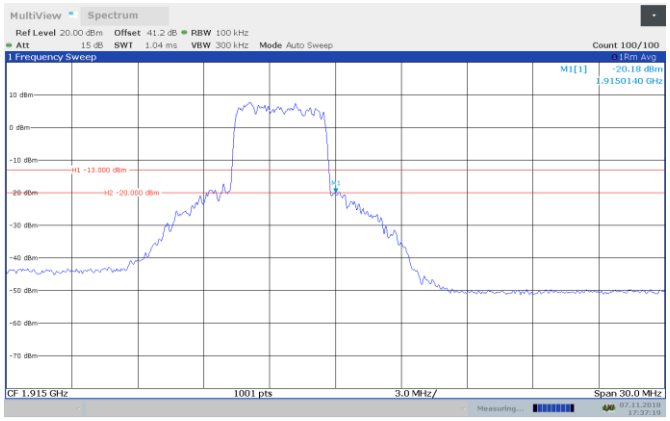



***Figure 8.5-4:*** *AWGN 1852.5 and 1857.5 MHz AGC + 3dB Out-of-block UL*



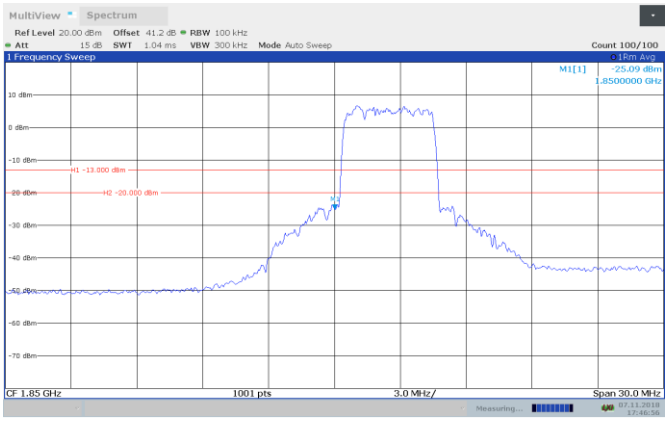

17:38:06 07.11.2018

***Figure 8.5-5:*** *AWGN 1912.5 MHz AGC - 0.5dB Out-of-block UL*



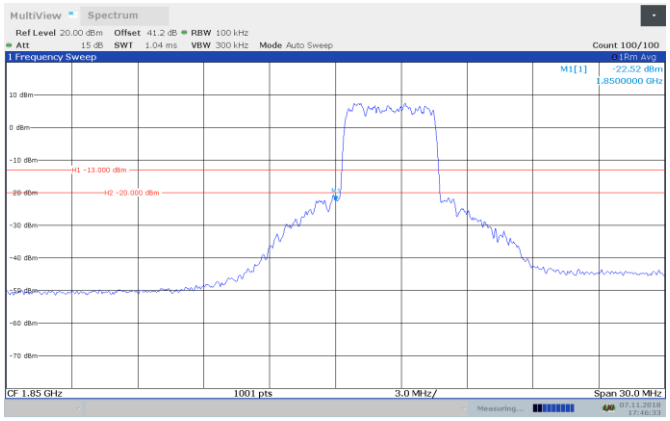

17:37:20 07.11.2018

***Figure 8.5-6:*** *AWGN 1912.5 MHz AGC + 3dB Out-of-block UL*



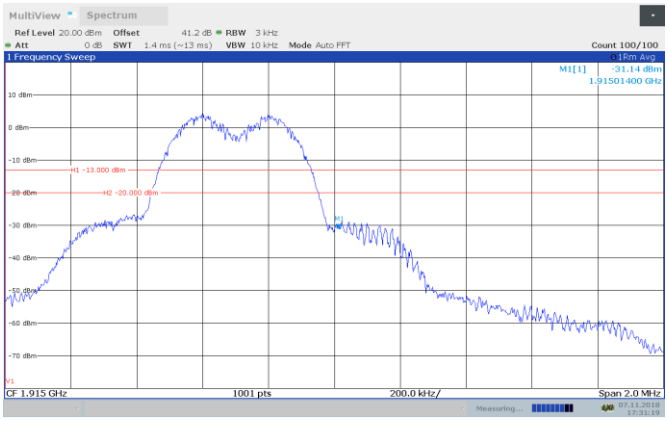

17:46:57 07.11.2018

***Figure 8.5-7:*** *AWGN 1852.5 MHz AGC – 0.5dB Out-of-block UL*



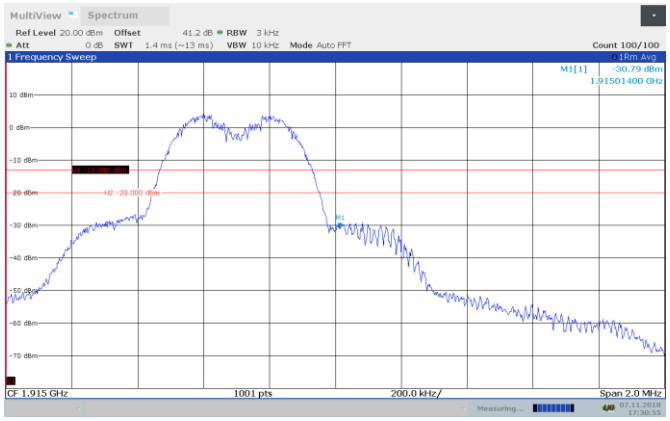

17:46:33 07.11.2018

***Figure 8.5-8:*** *AWGN 1852.5 MHz AGC + 3dB Out-of-block UL*



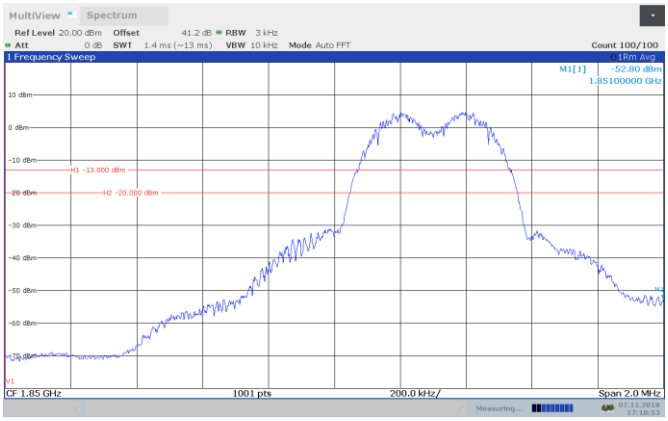

17:31:20 07.11.2018

***Figure 8.5-9:*** *MSK 1914.6 and 1914.8 MHz AGC - 0.5dB Out-of-block UL*



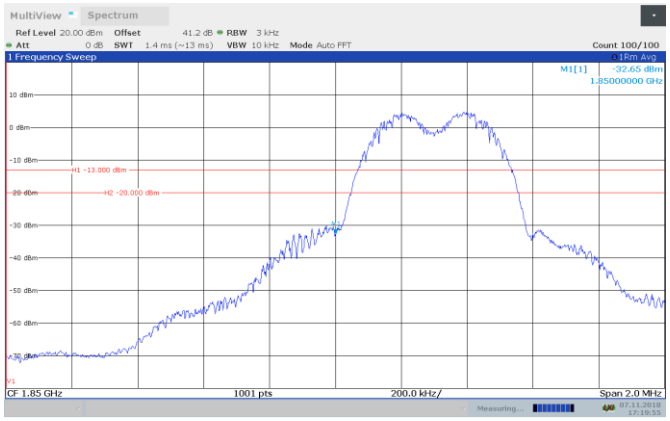

17:30:55 07.11.2018

***Figure 8.5-10:*** *MSK 1914.6 and 1914.8 MHz AGC +3dB Out-of-block UL*



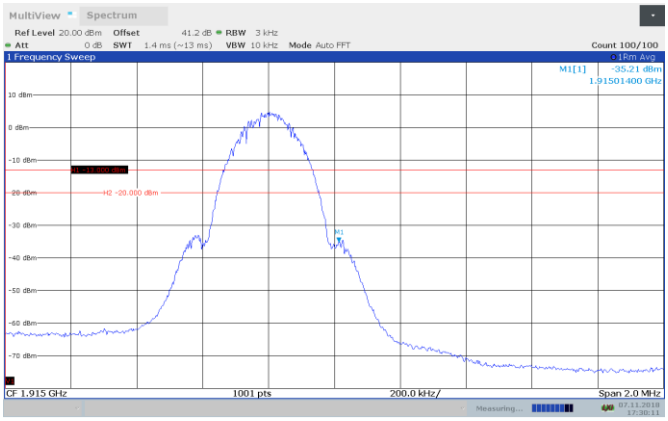

17:18:54 07.11.2018

***Figure 8.5-11:*** *MSK 1850.2 and 1850.4 MHz AGC – 0.5dB Out-of-block UL*



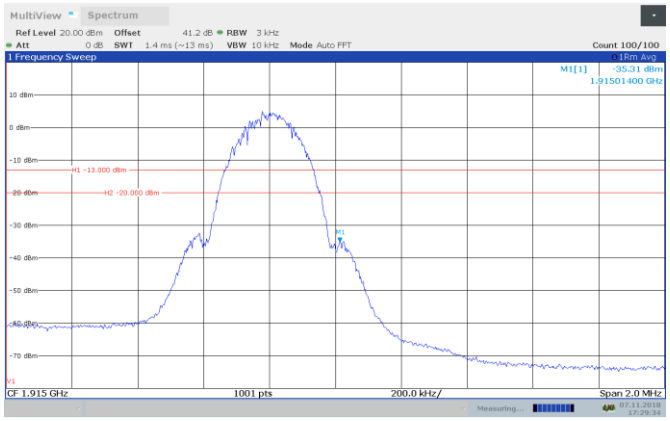

17:19:55 07.11.2018

***Figure 8.5-12:*** *MSK 1850.2 and 1850.4 MHz AGC + 3dB Out-of-block UL*



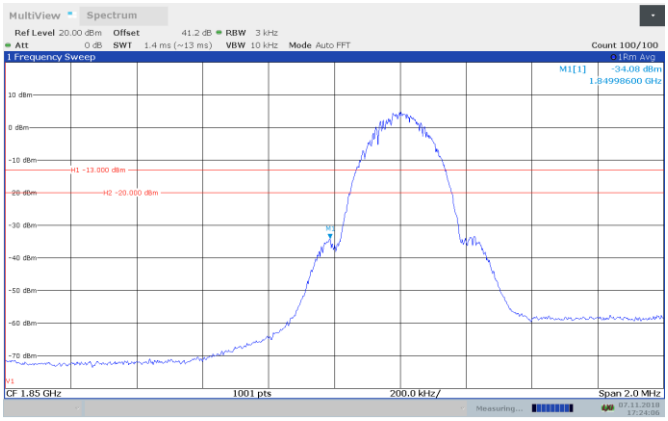

17:30:11 07.11.2018

***Figure 8.5-13:*** *MSK 1914.8 MHz AGC - 0.5dB Out-of-block UL*



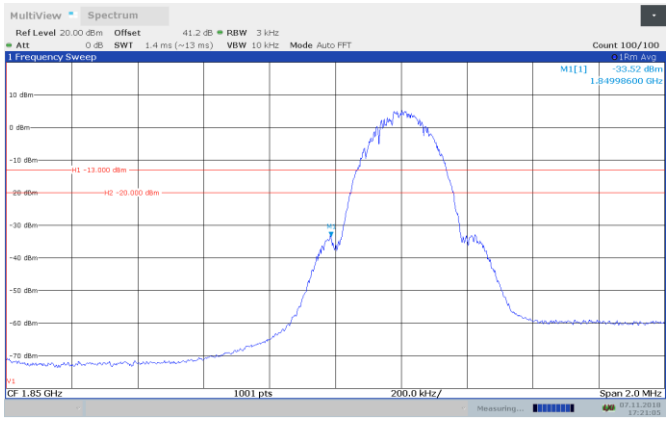

17:29:34 07.11.2018

***Figure 8.5-14:*** *MSK 1914.8 MHz AGC + 3dB Out-of-block UL*




17:24:06 07.11.2018

***Figure 8.5-15:*** *MSK 1850.2 MHz AGC - 0.5dB Out-of-block UL*




17:21:06 07.11.2018

***Figure 8.5-16:*** *MSK 1850.2 MHz AGC + 3dB Out-of-block UL*

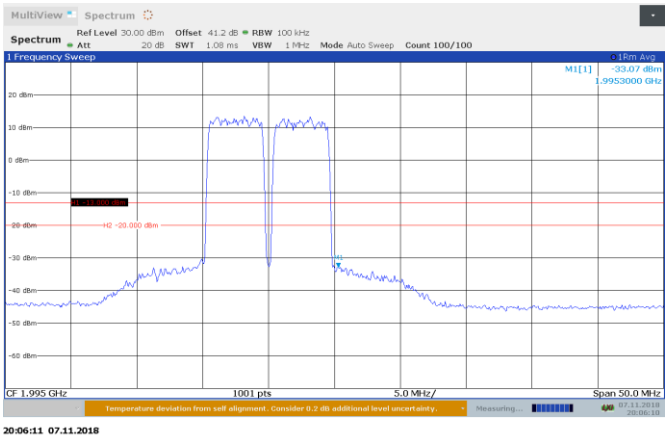



***Figure 8.5-17:*** *AWGN 1987.5 and1992.5 MHz AGC - 0.5dB Out-of-block DL*

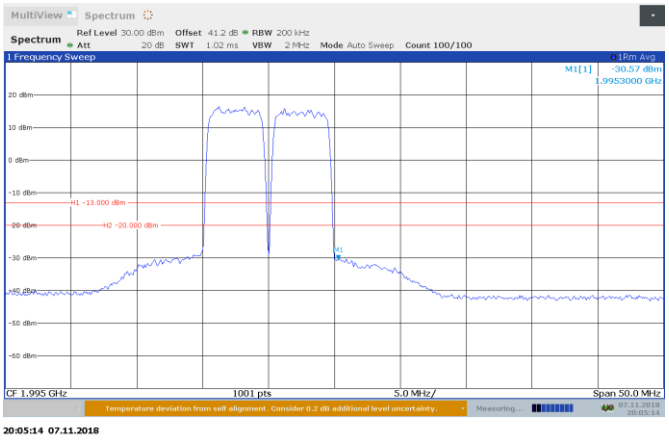



***Figure 8.5-18:*** *AWGN 1987.5 and1992.5 MHz AGC + 3dB Out-of-block DL*

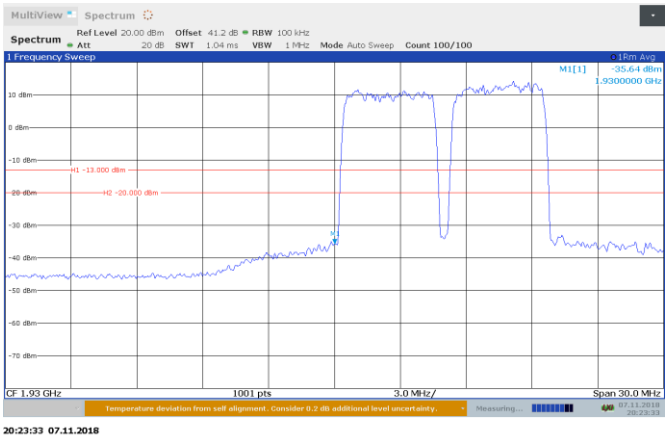



***Figure 8.5-19:*** *AWGN 1932.5 and 1937.5 MHz AGC – 0.5dB Out-of-block DL*

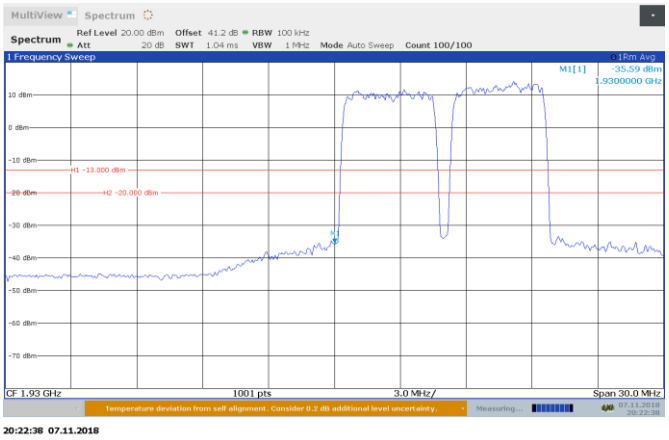
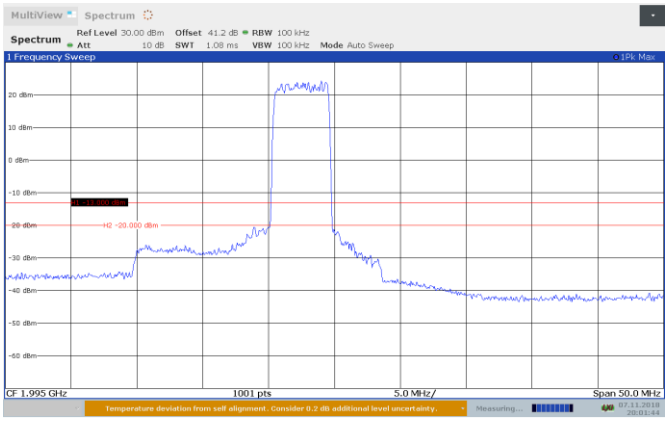
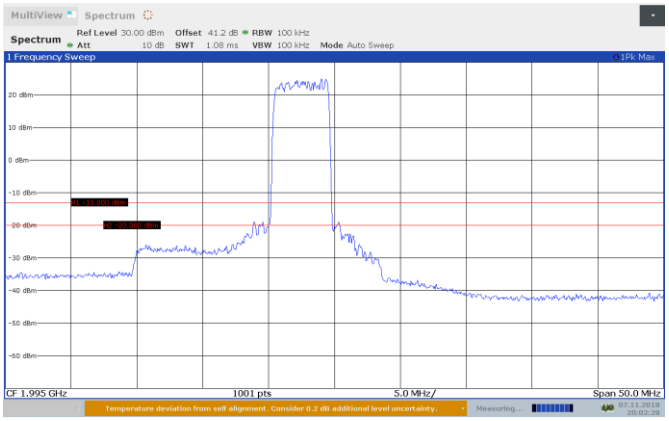



***Figure 8.5-20:*** *AWGN 1932.5 and 1937.5 MHz AGC + 3dB Out-of-block DL*



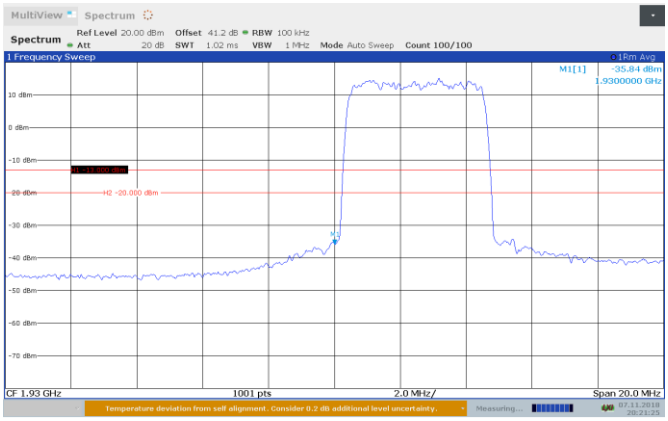

20:01:44 07.11.2018

***Figure 8.5-21:*** *AWGN 1992.5 MHz AGC - 0.5dB Out-of-block DL*



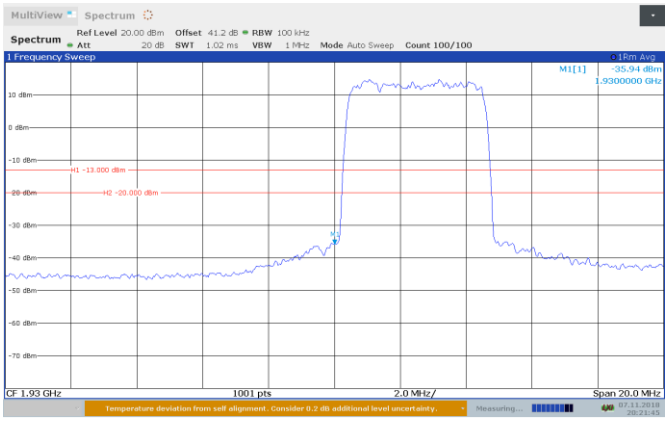

20:02:29 07.11.2018

***Figure 8.5-22:*** *AWGN 1992.5 MHz AGC+ 3dB Out-of-block DL*




20:21:25 07.11.2018

***Figure 8.5-23:*** *AWGN 1932.5 MHz AGC – 0.5dB Out-of-block DL*




20:21:46 07.11.2018

***Figure 8.5-24:*** *AWGN 1932.5 MHz AGC + 3dB Out-of-block DL*

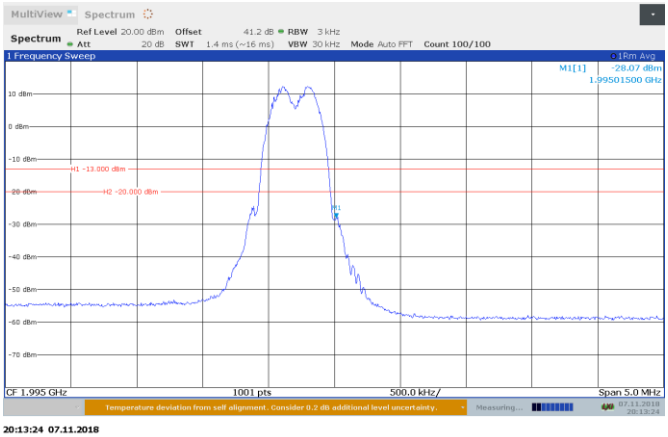



***Figure 8.5-25:*** *MSK 1994.6 and 1994.8 MHz AGC - 0.5dB Out-of-block DL*

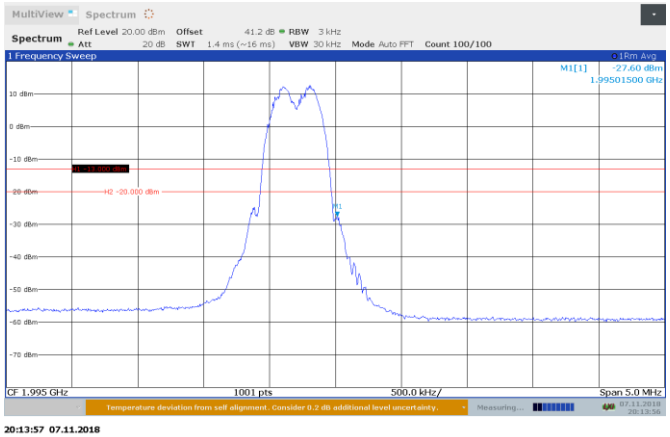



***Figure 8.5-26:*** *MSK 1994.6 and 1994.8 MHz AGC +3dB Out-of-block DL*

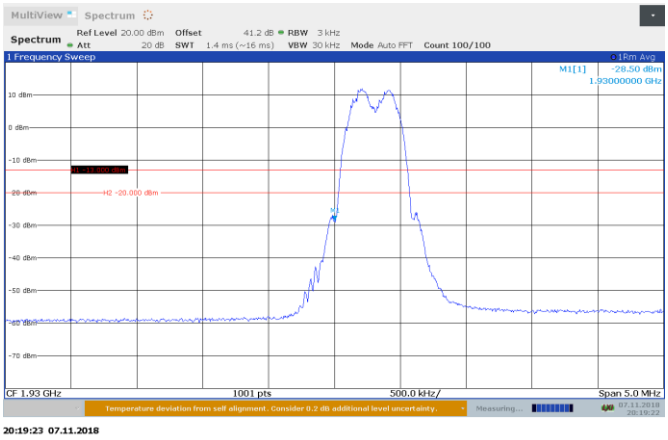



***Figure 8.5-27:*** *MSK 1930.2 and 1930.4 MHz AGC – 0.5dB Out-of-block DL*

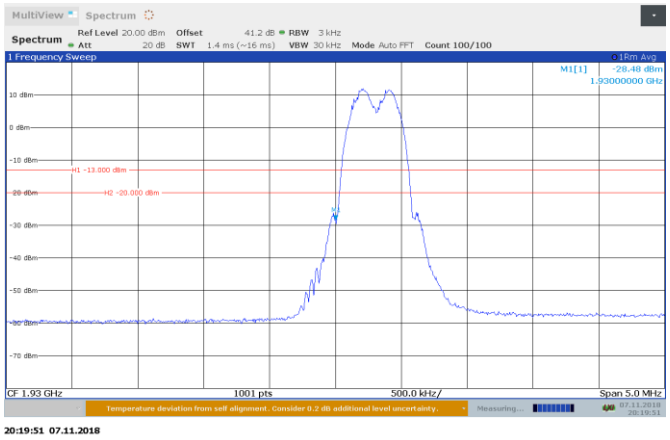
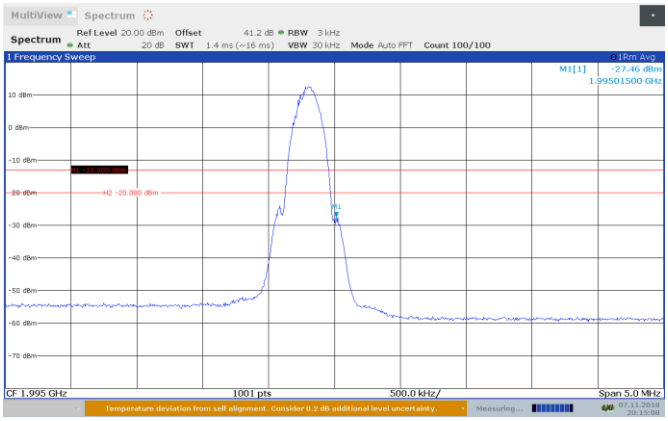
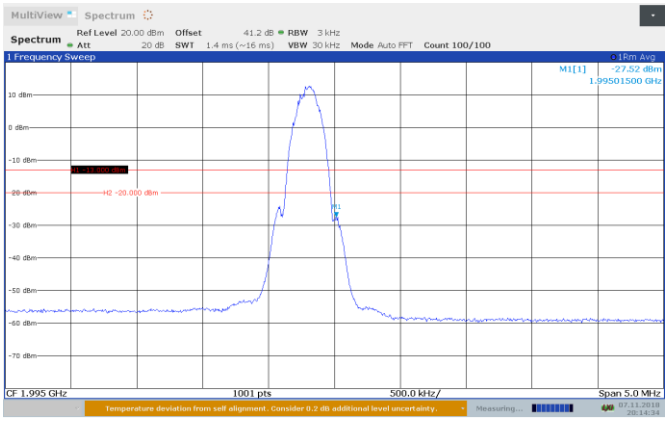



***Figure 8.5-28:*** *MSK 1930.2 and 1930.4 MHz AGC + 3dB Out-of-block DL*



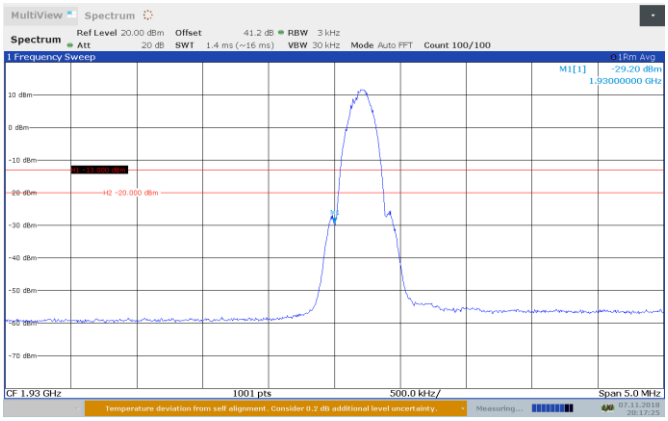

20:15:08 07.11.2018

***Figure 8.5-29:*** *MSK 1994.8 MHz AGC - 0.5dB Out-of-block DL*



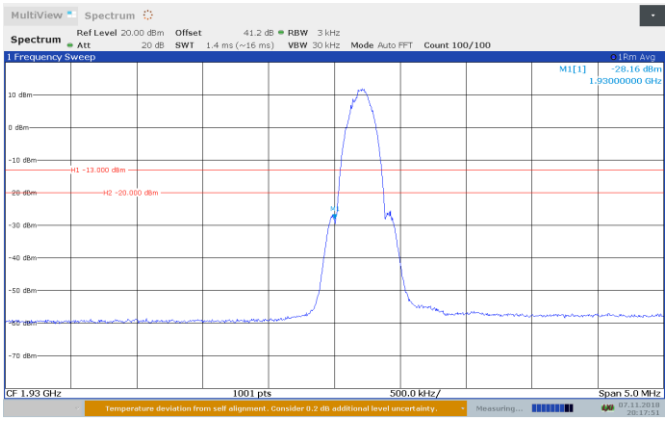

20:14:35 07.11.2018

***Figure 8.5-30:*** *MSK 1994.8 MHz AGC + 3dB Out-of-block DL*




20:17:26 07.11.2018

***Figure 8.5-31:*** *MSK 1930.2 MHz AGC - 0.5dB Out-of-block DL*




20:17:51 07.11.2018

***Figure 8.5-32:*** *MSK 1930.2 MHz AGC + 3dB Out-of-block DL*

## 8.6 FCC 24.238(a), RSS-133 6.5, KDB 935210 D05 3.6.3, Spurious emissions conducted measurements

24.238(a) / RSS-133 6.5 The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. = -13dBm

### 8.6.1 Test summary

| | | | |
|---|---|---|---|
| Test date | November 8, 2018 | Temperature | 21 °C |
| Test engineer | Kevin Rose | Air pressure | 1000 mbar |
| Verdict | Pass | Relative humidity | 42 % |

### 8.6.2 Observations, settings and special notes

| | |
|---|---|
| Frequency range | 30 MHz to 10th harmonic |
| Detector mode | Peak |
| Resolution bandwidth sweep | 100 kHz (below 1 GHz), 1000 kHz (above 1 GHz) |
| Video bandwidth | >RBW |
| Trace mode | Max Hold |
| Measurement time | Auto |

### 8.6.3 Test data

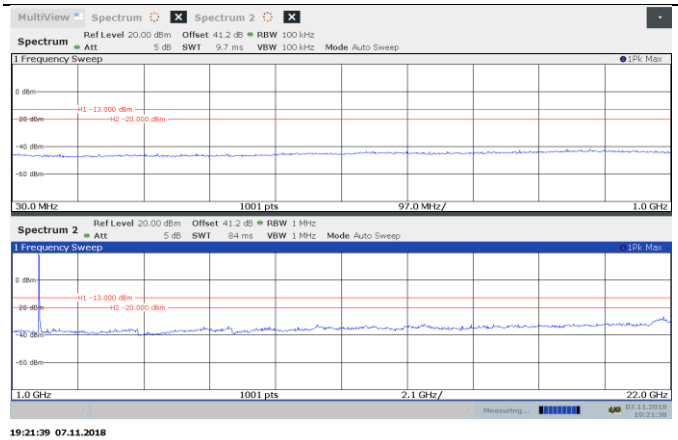



***Figure 8.6-1:*** *AWGN 1852.5MHz conducted emission UL*

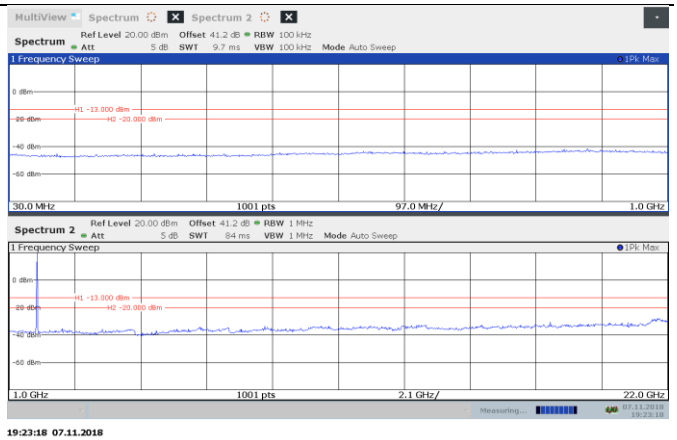



***Figure 8.6-2:*** *AWGN 1882.5 MHz conducted emission UL*

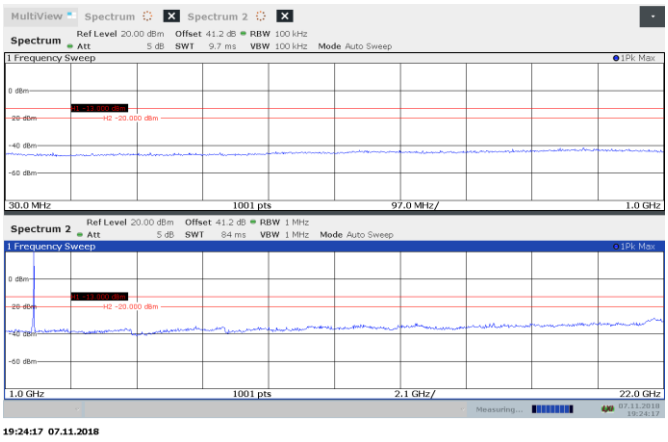



***Figure 8.6-3:*** *AWGN 1912.5 MHz conducted emission UL*

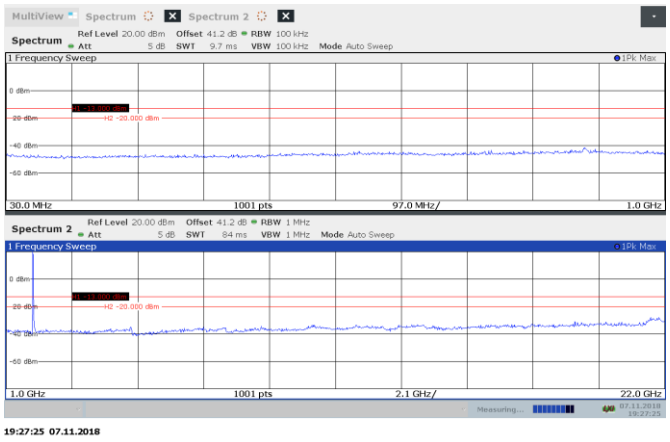



***Figure 8.6-4:*** *MSK 1850.2 MHz conducted emission UL*

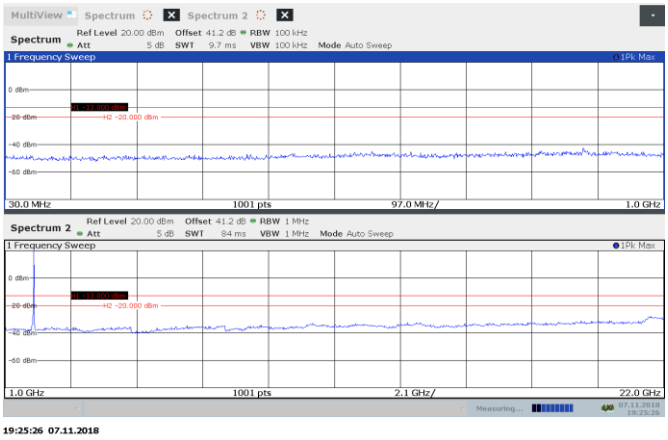



***figure 8.6-5:*** *MSK 1882.5 MHz conducted emission UL*

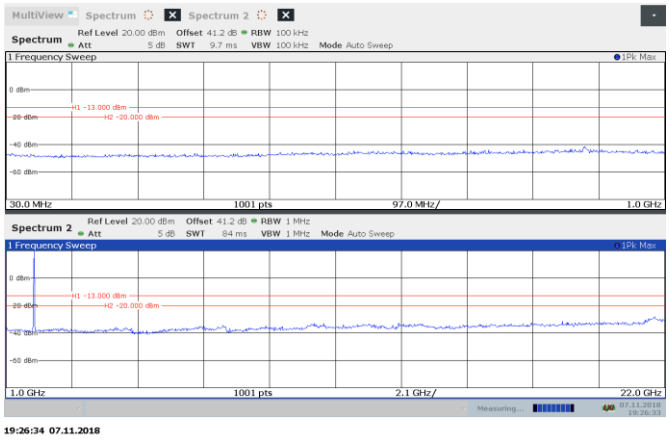
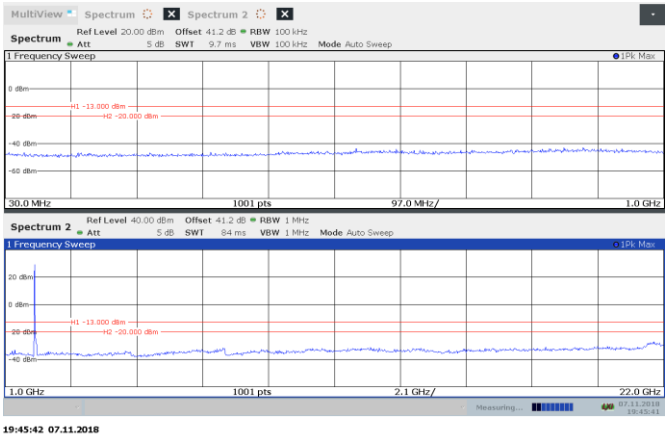
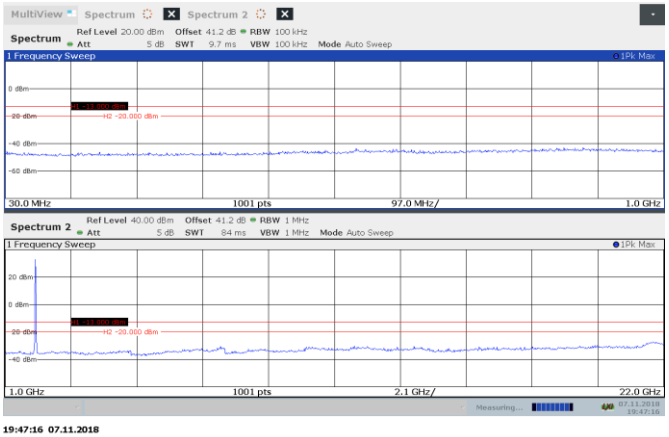



***Figure 8.6-6:*** *MSK 1914.8 MHz conducted emission UL*



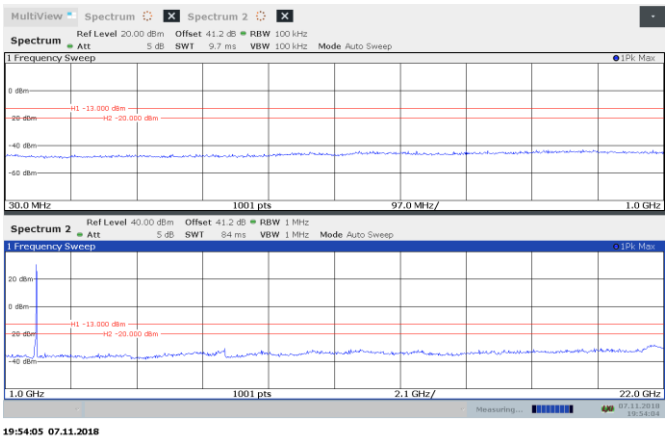

19:45:42 07.11.2018

***Figure 8.6-7:*** *AWGN 1932.5MHz conducted emission DL*



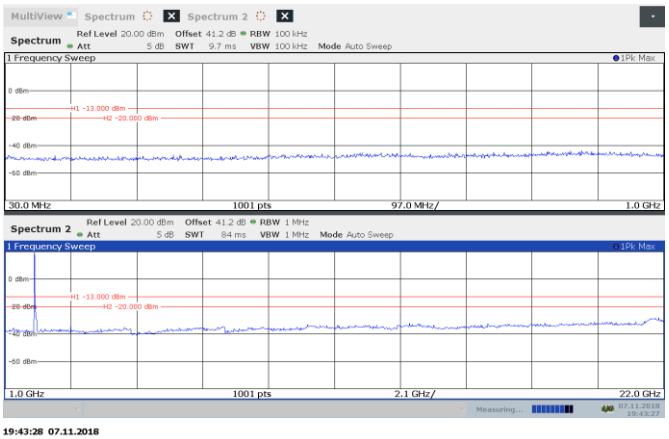

19:47:16 07.11.2018

***Figure 8.6-8:*** *AWGN 1962.5 MHz conducted emission DL*



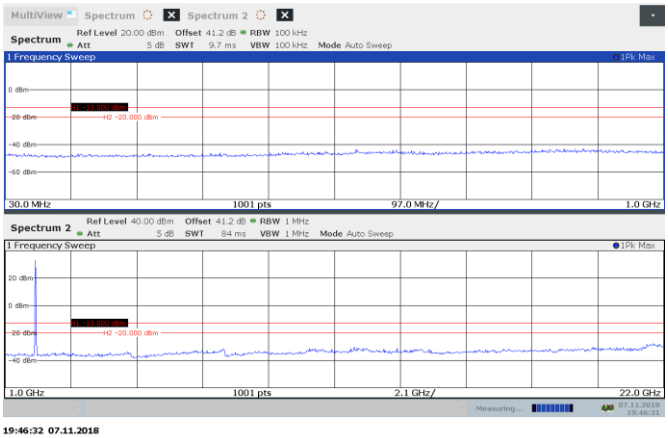

19:54:05 07.11.2018

***Figure 8.6-9:*** *AWGN 1992.5 MHz conducted emission DL*



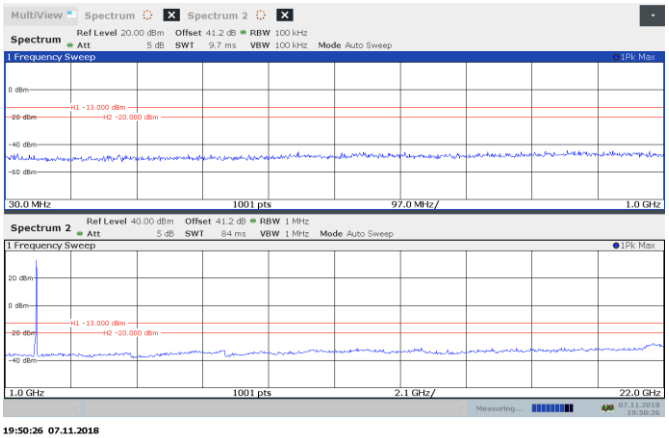

19:43:28 07.11.2018

***Figure 8.6-10:*** *MSK 1930.2 MHz conducted emission DL*




19:46:32 07.11.2018

***figure 8.6-11:*** *MSK 1962.5 MHz conducted emission DL*




19:50:26 07.11.2018

***Figure 8.6-12:*** *MSK 1994.8 MHz conducted emission DL*

## 8.7 FCC 24.238(a), RSS-133 6.5, KDB 935210 D05 3.8, Spurious emissions radiated measurements

### 8.7.1 Definitions and limits

24.238(a) / RSS-133 6.5 The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. = -13dBm

### 8.7.2 Test summary

| | | | |
|---|---|---|---|
| Test date | June 27, 2018 | Temperature | 21 °C |
| Test engineer | Kevin Rose | Air pressure | 1000 mbar |
| Verdict | Pass | Relative humidity | 42 % |

### 8.7.3 Observations, settings and special notes

Worst case examples are provided. No emssions within 20 dB of the limit were detected.

Receiver settings were:

| | |
|---|---|
| Frequency range | 30 MHz to 10th harmonic |
| Detector mode | Peak |
| Resolution bandwidth | 100 kHz (below 1 GHz), 1000 kHz (above 1 GHz) |
| Video bandwidth | >RBW |
| Trace mode | Max Hold |

### 8.7.4 Test data

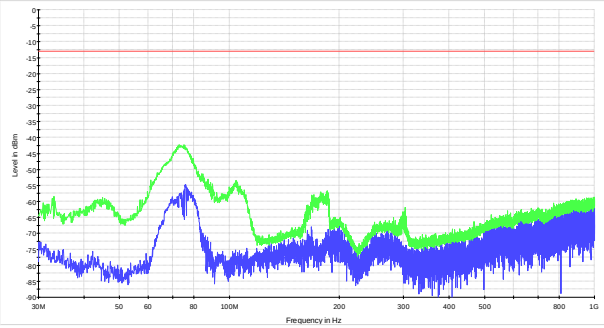



***Figure 8.7-1:*** *30 MHz to 1 GHz Radiated*

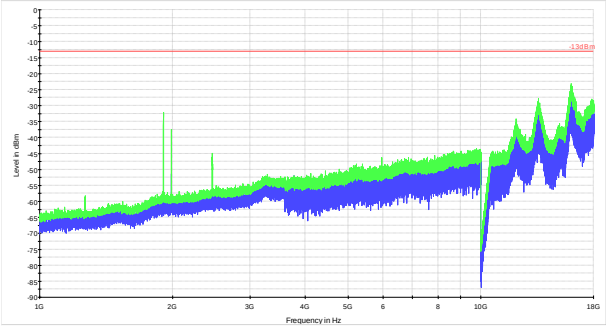



***Figure 8.7-2:*** *1GHz to 18 GHz Radiated*

# **Section 9.** Setup Photos

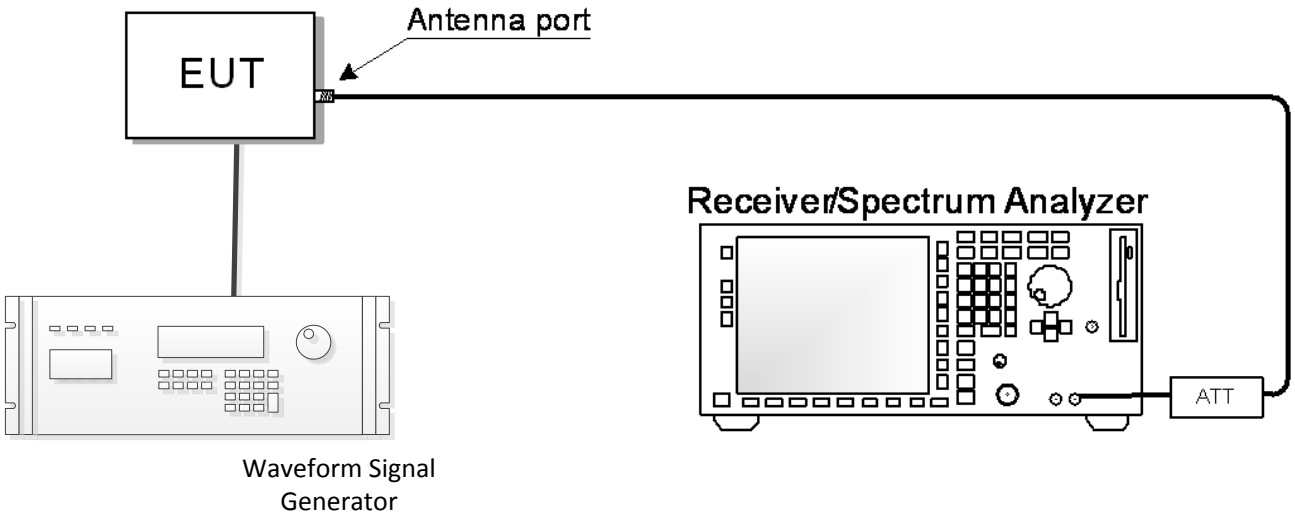
## 9.1 Set-up

***Figure 9.1-1:*** *Radiated setup photo*

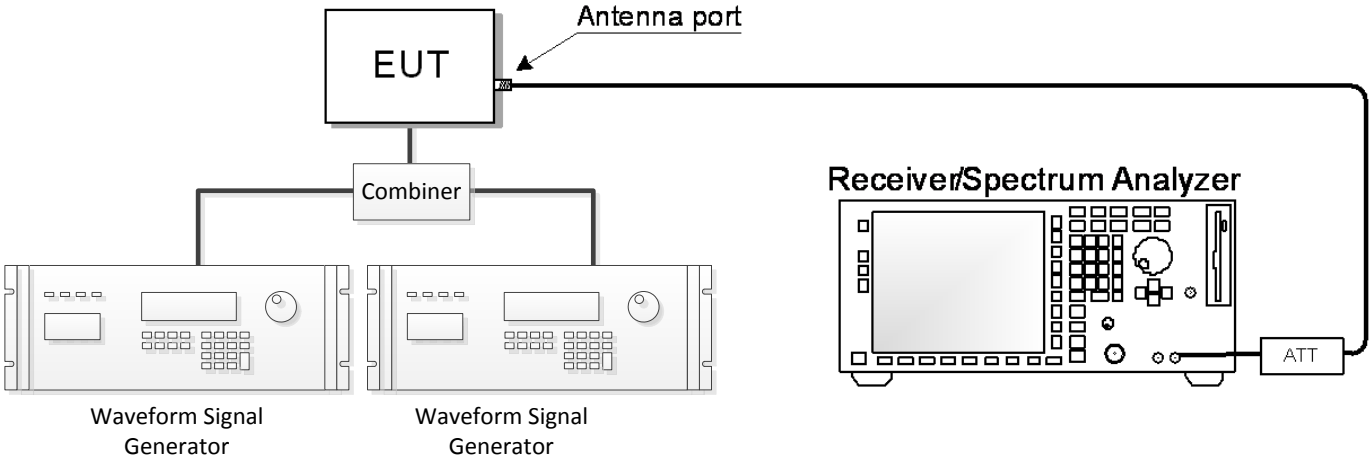
***Figure 9.1-2:*** *Conducted setup photo*

# **Section 10.** Block diagrams of test set-ups

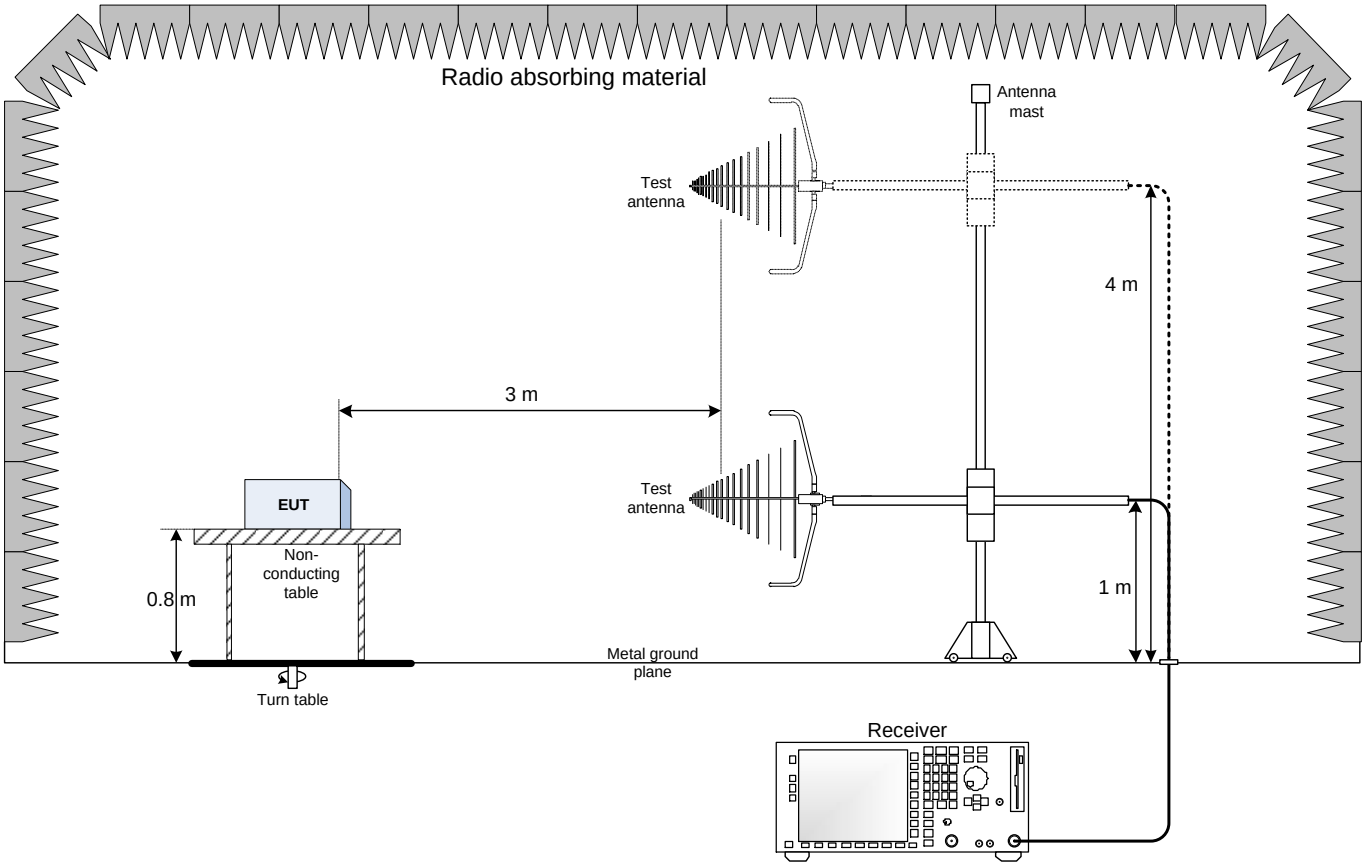
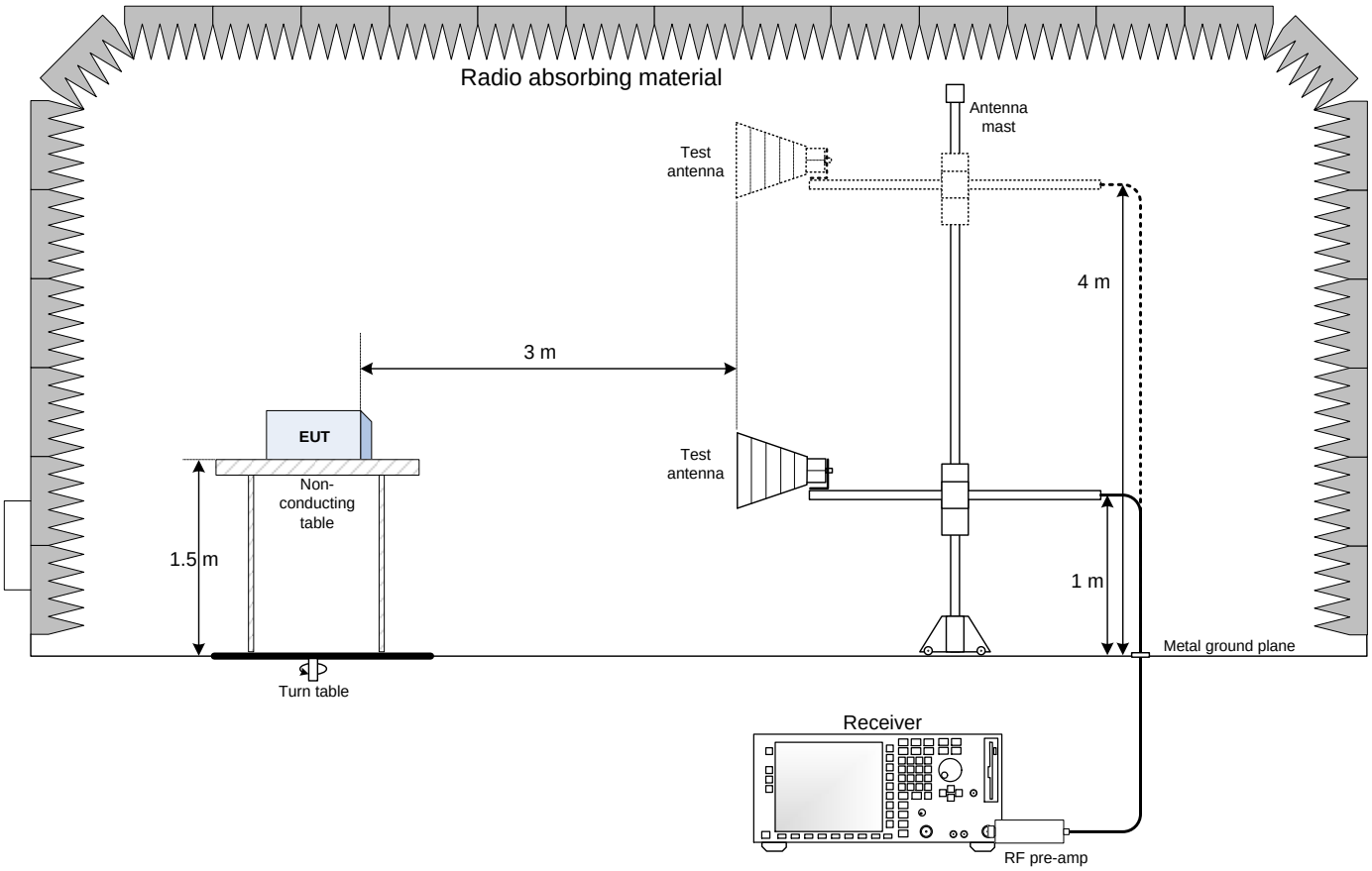
## 10.1 Measuring AGC threshold level, Out-of-band-rejection, Input-versus-output signal comparison, Mean output power and amplifier/booster gain, Spurious emissions conducted measurements




## 10.2 Out-of-band/out-of-block emissions conducted measurements (intermodulation)



## 10.3 Spurious emissions radiated measurements



## 10.4 Spurious emissions radiated measurements (above 1GHz)