



RF – TEST REPORT

- FCC Part 15.247, RSS-247 -

Type / Model Name : DePLife

Product Description : Through-wall imaging system

Applicant : MaXentric Technologies LLC

Address : 7590 Fay Ave #301
92037 SAN DIEGO, U.S.A.

Manufacturer : MaXentric Technologies LLC

Address : 7590 Fay Ave #301
92037 SAN DIEGO, U.S.A.

Test Result according to the standards
listed in clause 1 test standards:

POSITIVE

Test Report No. : 80219970-00 Rev_1

11. April 2025
Date of issue



Deutsche
Akkreditierungsstelle
D-PL-12030-01-00

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ATTACHMENT A as separate supplement

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

1 TEST STANDARDS

The tests were performed according to following standards:

FCC Rules and Regulations Part 15, Subpart A - General (August 2024)

Part 15, Subpart A, Section 15.31	Measurement standards
Part 15, Subpart A, Section 15.33	Frequency range of radiated measurements
Part 15, Subpart A, Section 15.35	Measurement detector functions and bandwidths

FCC Rules and Regulations Part 15, Subpart C - Intentional Radiators (August 2024)

Part 15, Subpart C, Section 15.203	Antenna requirement
Part 15, Subpart C, Section 15.204	External radio frequency power amplifiers and antenna modifications
Part 15, Subpart C, Section 15.205	Restricted bands of operation
Part 15, Subpart C, Section 15.207	Conducted limits
Part 15, Subpart C, Section 15.209	Radiated emission limits, general requirements
Part 15, Subpart C, Section 15.247	Operation within the bands 902 - 928 MHz, 2400 - 2483.5 MHz and 5725 - 5850 MHz

ANSI C63.10: 2013	Testing Unlicensed Wireless Devices
ETSI TR 100 028 V1.3.1: 2001-03	Electromagnetic Compatibility and Radio Spectrum Matters (ERM); Uncertainties in the Measurement of Mobile Radio Equipment Characteristics—Part 1 and Part 2
KDB 558074 D01 v05	Guidance for compliance measurements on DTS; FHSS and hybrid system devices operating under Section 15.247 of the FCC rules, April 2, 2019.

FCC ID: 2BKU8DEPLIFE-1

IC: 33302-DEPLIFE1

2 EQUIPMENT UNDER TEST

2.1 Information provided by the Client

Please note, we do not take any responsibility for information provided by the client or his representative which may have an influence on the validity of the test results.

2.2 Sampling

The customer is responsible for the choice of sample. Sample configuration, start-up and operation is carried out by the customer or according to his/her instructions.

2.3 Photo documentation of the EUT – Detailed photos see ATTACHMENT A

2.4 General remarks

None.

2.5 Equipment type

WLAN - AP, mobile equipment

2.6 Short description of the equipment under test (EUT)

The DePLife system is an ultra-wide band (UWB) radar for detecting the presence of life through walls made of modern building materials. The data is transmitted to a smart phone via Wi-fi for remote operation.

Number of tested samples: 1
Serial number: 054
Firmware version: deplife_test_full_em_random_ch.s19

2.7 Variants of the EUT

There are no variants.

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

2.8 Operation frequency and channel plan

The operating frequency is 2400 MHz to 2483.5 MHz.

Channel plan WLAN Standard 802.11b

Channel	Frequency (MHz)
1	2412
2	2417
3	2422
4	2427
5	2432
6	2437
7	2442
8	2447
9	2452
10	2457
11	2462

2.9 Transmit operating modes

- 802.11b mode 11 Mbps (Mbps = *megabits per second*)

2.10 Antenna

The following antennas shall be used with the EUT:

Number	Characteristic	Model number	Plug	Frequency range (GHz)	Gain (dBi)
1	Omni	Antenova Mutica SR42W001	None, SMD	2.4 – 2.5	2.0

2.11 Power supply system utilised

Power supply voltage, V_{nom} : 3.7 V DC (battery driven)

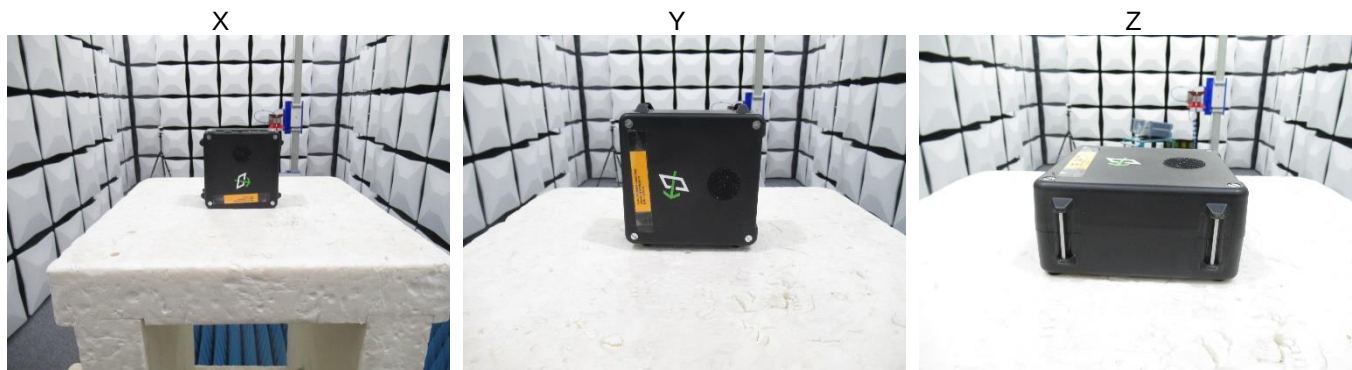
2.12 Peripheral devices and interface cables

The following peripheral devices and interface cables are connected during the measurements:

Model : ---

2.13 Determination of worst-case conditions for final measurement

Preliminary tests in all three orthogonal axes are performed to find the worst case mode from all possible combinations between available modulations and data rates. the settings of the EUT are changed to locate at which position and at what setting of the EUT the maximum of the emissions is generated. For the further measurement the EUT is set in X position. The maximum output power depends on used data rate.



The tests are carried out in the following frequency band:

2400 MHz – 2483.5 MHz

For the final test the following channels and test modes are selected:

WLAN	Available channel	Tested channels	Power setting	Modulation	Modulation type	Data rate
802.11b	1 to 11	1, 6, 11	---	OFDM	BPSK	11 Mbps

2.13.1 Test jig

No test jig is used.

2.13.2 Test software

Special Frimware provided by the applicant is used to set the EUT in a continuous Tx mode.

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3 TEST RESULT SUMMARY

FCC Rule Part	RSS Rule Part	Description	Result
15.207(a)	RSS-Gen, 8.8	AC power line conducted emissions	Not applicable
15.247(a)(2)	RSS-247, 5.2(a)	-6 dB EBW	Passed
15.247(b)(3)	RSS-247, 5.4(d)	Maximum peak conducted output power	Passed
15.247(b)(4)	RSS-247, 5.4(d)	Defacto limit	Passed
15.247(d)	RSS-247, 5.5	Unwanted emission, radiated	Passed
15.247(d)	RSS-Gen, 8.10	Emissions in restricted bands	Passed
15.247(e)	RSS-247, 5.2(b)	PSD	Passed
15.35(c)	RSS-Gen, 6.10	Pulsed operation	Not applicable
15.203	-	Antenna requirement	Passed
	RSS-Gen, 6.11	Transmitter frequency stability	Passed
	RSS-Gen, 6.6	99 % Bandwidth	Passed

The mentioned RSS Rule Parts in the above table are related to:
RSS-Gen, Issue 5 + Amendment 1 + Amendment 2, March 2019
RSS-247, Issue 3, August 2023

3.1 Revision history of test report

Test report No	Rev.	Issue Date	Changes
80219970-00	0	22 January 2025	Initial test report
	1	11 April 2025	General: IC ID added in header Clause 5: RSS limit references added beneath FCC limit references Clause 5.1.4: sweep time corrected to "auto" Clause 5.2.4: spectrum analyzer settings added Clause 5.4.4: sweep time correcte to "auto" Clause 5.5.3.: correction of description

The test report with the highest revision number replaces the previous test reports.

FCC ID: 2BKU8DEPLIFE-1 IC: 33302-DEPLIFE1

3.2 Final assessment

The equipment under test fulfills the requirements cited in clause 1 test standards.

Date of receipt of test sample : acc. to storage records

Testing commenced on : 20 September 2024

Testing concluded on : 29 October 2024

Checked by:

Tested by:

Klaus Gegenfurtner
Teamleader Radio

Franz-Xaver Schrettenbrunner
Radio Team

4 TEST ENVIRONMENT

4.1 Address of the test laboratory

**CSA Group Bayern GmbH
Straubinger Straße 100
94447 PLATTLING
GERMANY**

4.2 Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:	<u>15 - 35 °C</u>
Humidity:	<u>30 - 60 %</u>
Atmospheric pressure:	<u>86 - 106 kPa</u>

4.3 Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. It is noted that the expanded measurement uncertainty corresponds to the measurement results from the standard measurement uncertainty multiplied by the coverage factor $k = 2$. The true value is located in the corresponding interval with a probability of 95 %. The measurement uncertainty was calculated for all measurements listed in this test report on basis of the ETSI Technical Report TR 100 028 Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 1 and Part 2. The results are documented in the quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Measurement Type	Range	Confidence Level	Calculated Uncertainty
AC power line conducted emissions	0.15 MHz to 30 MHz	95%	$\pm 3.29 \text{ dB}$
EBW and OBW	2400 MHz to 3000 MHz	95%	$\pm 2.5 \times 10^{-7}$
Maximum peak conducted output power	2400 MHz to 3000 MHz	95%	$\pm 0.62 \text{ dB}$
Power spectral density	2400 MHz to 3000 MHz	95%	$\pm 0.62 \text{ dB}$
Conducted Spurious Emissions	9 kHz to 10000 MHz	95%	$\pm 2.15 \text{ dB}$
Conducted Spurious Emissions	10000 MHz to 40000 MHz	95%	$\pm 3.47 \text{ dB}$
Radiated Spurious Emissions	9 kHz to 30 MHz	95%	$\pm 3.53 \text{ dB}$
Radiated Spurious Emissions	30 MHz to 1000 MHz	95%	$\pm 3.71 \text{ dB}$
Radiated Spurious Emissions	1000 MHz to 10000 MHz	95%	$\pm 2.34 \text{ dB}$
Field strength of the fundamental	100 kHz to 100 MHz	95%	$\pm 3.53 \text{ dB}$

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4.4 Conformity Decision Rule

The applied conformity decision rule is based on ILAC G8:09/2019 clause 4.2.1 Binary Statement for Simple Acceptance Rule ($w = 0$).

Details can be found in the procedure CSA_B_V50_29.

4.5 Measurement protocol for FCC and ISED

4.5.1 General information

CSA Group Bayern GmbH is recognized as wireless testing laboratory under the CAB identifier:

FCC: DE 0011

ISED: DE0009

4.5.2 General Standard information

The test methods used comply with ANSI C63.10 - "Testing Unlicensed Wireless Devices".

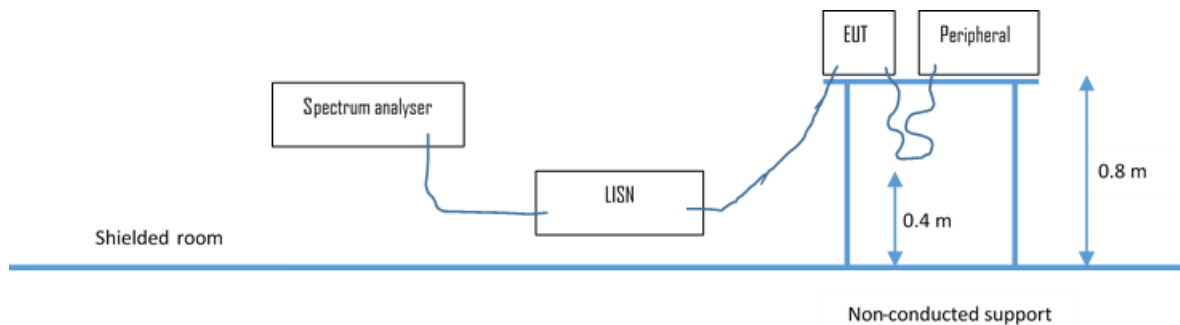
4.5.2.1 Justification

The equipment under test (EUT) is configured in a typical user arrangement in accordance with the manufacturer's instructions.

4.5.3 Details of test procedures

4.5.3.1 Conducted emission

Test setup according ANSI C63.10



The final level, expressed in dB μ V, is arrived at by taking the reading directly from the Spectrum analyser. This level is compared to the limit.

To convert between dB μ V and μ V, the following conversions apply:

$$\text{dB}\mu\text{V} = 20(\log \mu\text{V})$$

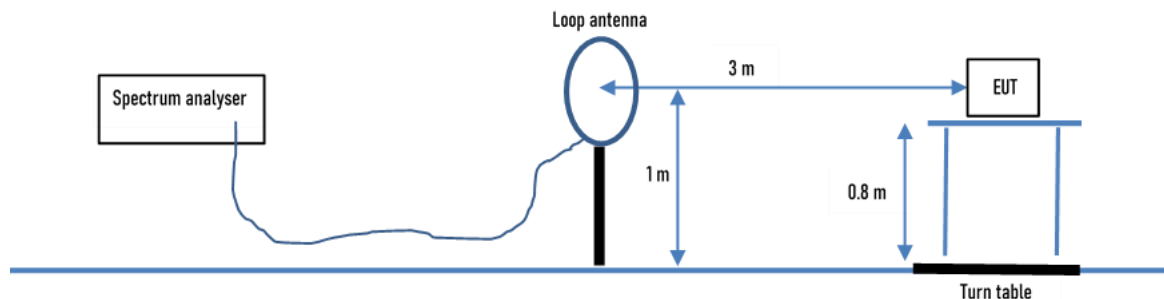
$$\mu\text{V} = \text{Inverse log}(\text{dB}\mu\text{V}/20)$$

Conducted emissions on the 50 Hz and/or 60 Hz power interface of the EUT are measured in the frequency range of 150 kHz to 30 MHz. The measurements are performed using a receiver, which has CISPR characteristic bandwidth and quasi-peak detection and a Line Impedance Stabilization Network (LISN) with 50 Ω / 50 μ H (CISPR 16) characteristics. The receiver is protected by means of an impedance matched pulse limiter connected directly to the RF input. Table top equipment is placed on a non-conducting table 80 centimetres above the floor and is positioned 40 centimetres from the vertical ground plane (wall) of the screen room. If the minimum limit margin appears to be less than 20 dB with a peak mode measurement, the emission is re-measured using a tuned receiver with quasi-peak and average detection and recorded on the data sheets.

4.5.3.2 Radiated emission

4.5.3.2.1 OATS1 test site (9 kHz - 30 MHz):

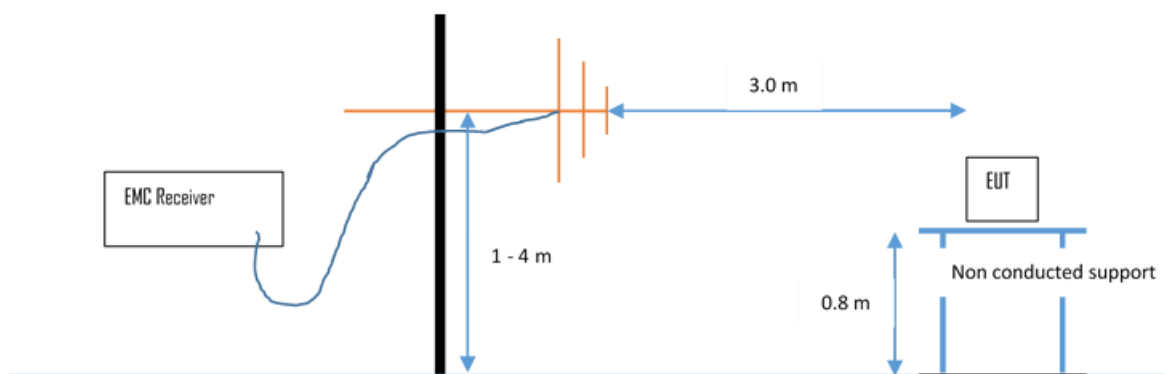
Test setup according ANSI C63.10



Emissions from the EUT are measured in the frequency range of 9 MHz to 30 MHz using a tuned receiver and a calibrated loop antenna. Table top equipment is placed on a 1.0 X 1.5 m non-conducting table 80 centimetres above the ground plane. Cables to simulators/testers (if used in this test) are routed through the center of the table and to a screened room located outside the test area. The antenna is positioned 3, 10 or 30 metres horizontally from the EUT and is repeated vertically. To locate maximum emissions from the test sample the antenna is varied along the site axis and the EUT is rotated 360 degrees.

4.5.3.2.2 OATS1 test site (30 MHz - 1 GHz):

Test setup according ANSI C63.10.



Spurious emissions from the EUT are measured in the frequency range of 30 MHz to 1000 MHz using a tuned receiver and appropriate broadband linearly polarised antennas. Measurements between 30 MHz and 1000 MHz are made with 120 kHz/6 dB bandwidth and quasi-peak detection. Table top equipment is placed on a 1.0 X 1.5 m non-conducting table 80 centimetres above the ground plane. Floor standing equipment is placed directly on the turntable/ground plane. Cables to simulators/testers (if used in this test) are routed through the center of the table and to a screened room located outside the test area. To locate maximum emissions from the test sample the antenna is varied in height from 1 to 4 metres and the EUT is rotated 360 degrees. The final level in dBμV/m is calculated by taking the reading from the EMI receiver (Level dBμV) and adding the correction factors and cable loss factor (dB). The FCC limit is subtracted from this result in order to provide the limit margin listed in the measurement protocol.

The resolution bandwidth setting:

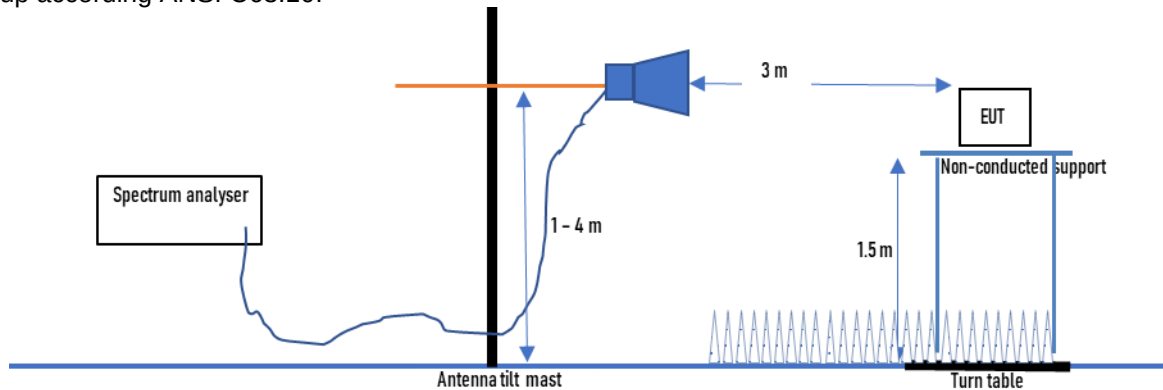
30 MHz – 1000 MHz: RBW: 120 kHz

Example:

Frequency (MHz)	Level (dBμV)	+	Factor (dB)	=	Level (dBμV/m)	-	Limit (dBμV/m)	=	Delta (dB)
719.0	75.0	+	32.6	=	107.6	-	110.0	=	-2.4

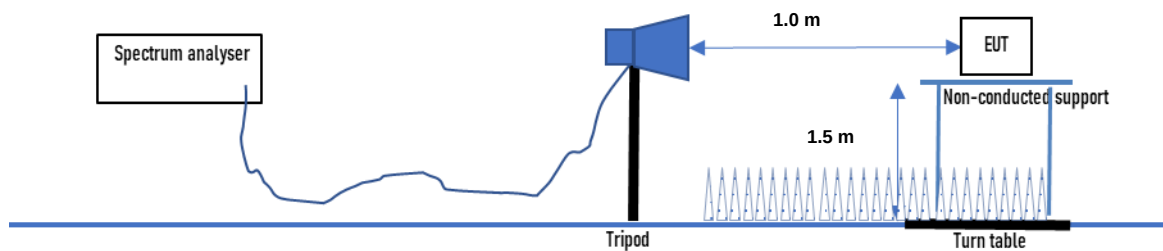
4.5.3.2.3 Anechoic chamber 1 (1000 MHz – 18000 MHz)

Test setup according ANSI C63.10.



Radiated emissions from the EUT are measured in the frequency range 1 GHz up to 18 GHz as specified in 47 CFR Part 15, Subpart A, Section 15.33, using a spectrum analyser and appropriate linearly polarized antennas. Table top equipment is placed on a non-conducting table, 1.5 metre above the ground plane. The turntable is fully covered with the appropriate absorber (Type VHP-12). Any controlling device is positioned such that it does not significantly influence the measurement results. Interconnecting cables that hang closer than 40 cm to the ground plane are folded back and forth in the center, forming a bundle 30 cm to 40 cm long. Measurements are made in three orientations of the EUT and the horizontal and vertical polarization planes of measurement antenna in a fully anechoic room. The measurement antenna is adjusted and the EUT orientated to permit the measurement of the maximum emission from the EUT. The conditions determined as worst-case will then be used for the final measurements.

4.5.3.2.4 Anechoic chamber 1 (18 GHz – 40 GHz)



Emissions from the EUT are measured in the frequency range 18 GHz up to 40 GHz as specified in 47 CFR Part 15, Subpart A, Section 15.33, using a spectrum analyser and appropriate linearly polarized antennas. Table top equipment is placed on a non-conducting table, 1.5 metre above the ground plane. The turntable is fully covered with the appropriate absorber (Type VHP-12). Any controlling device is positioned such that it does not significantly influence the measurement results. Interconnecting cables that hang closer than 40 cm to the ground plane are folded back and forth in the center, forming a bundle 30 cm to 40 cm long. Measurements are made in three orientations of the EUT and the horizontal and vertical polarization planes of measurement antenna in a fully anechoic room. The measurement antenna is adjusted and the EUT orientated to permit the measurement of the maximum emission from the EUT. The conditions determined as worst-case will then be used for the final measurements. Where appropriate, the test distance may be reduced in order to detect emissions under better uncertainty. The limit are adopted.

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5 TEST CONDITIONS AND RESULTS

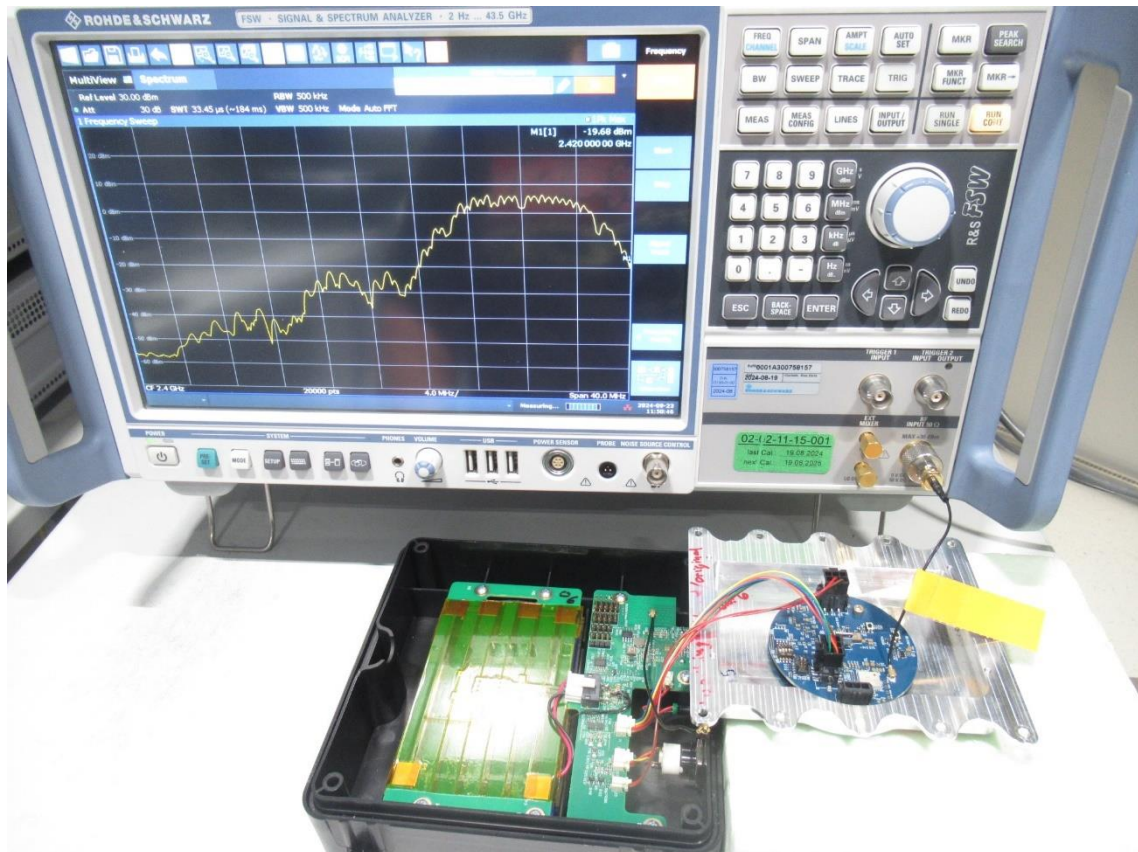
5.1 EBW and OBW

For test instruments and accessories used see section 6 Part MB.

5.1.1 Description of the test location

Test location: Shielded Room SR6

5.1.2 Photo documentation of the test set-up



5.1.3 Applicable standard

According to FCC Part 15, Section 15.247(a)(2):

Systems using digital modulation techniques may operate in the 902 - 928 MHz, 2400 – 2483.5 MHz and 5725 – 5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

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

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5.1.4 Description of Measurement

The bandwidth was measured at an amplitude level reduced from the reference level of a modulated channel by a ratio of -6 dB. The reference level is the level of the highest signal amplitude observed at the transmitter at either the fundamental frequency or the first order modulation products in all typical modes of operation, including the unmodulated carrier, even if atypical. An alternative is to use the bandwidth measurement of the analyser.

Spectrum analyser settings for EBW:

RBW: 100 kHz, VBW: 300 kHz, Detector: Max peak, Sweep time: auto, Span: 2 EBW;

Spectrum analyser settings for OBW:

RBW: 1-5% OBW, VBW: 3 RBW, Detector: Max peak, Sweep time: auto, Span: 2 OBW;

5.1.5 Test result

WLAN Standard 802.11b

Channel	Centre frequency (MHz)	6 dB bandwidth (kHz)	Minimum limit (kHz)	99 % bandwidth (kHz)	result
1	2412	8561	500	12255	passed
6	2437	8085	500	12085	passed
11	2462	10040	500	12379	passed

EBW Limit according to FCC Part 15, Section 15.247(a)(2)
and according to RSS-247, 5.2(a):

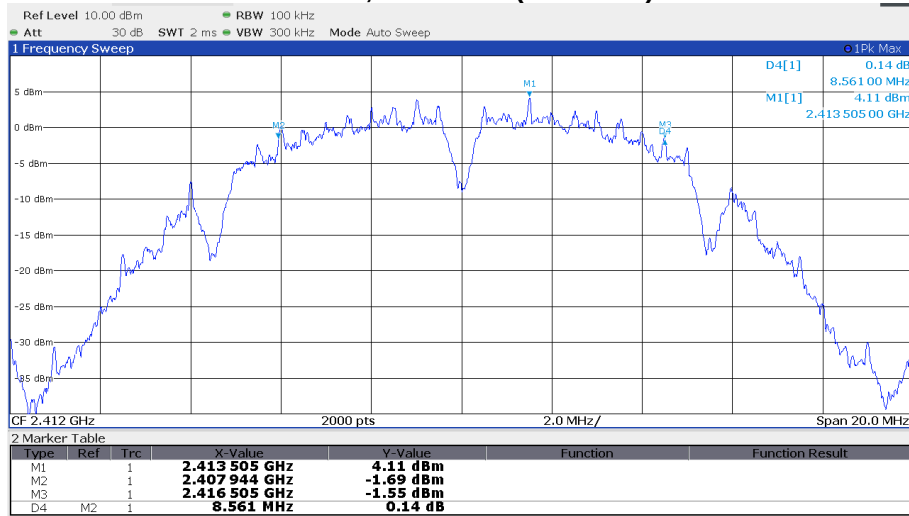
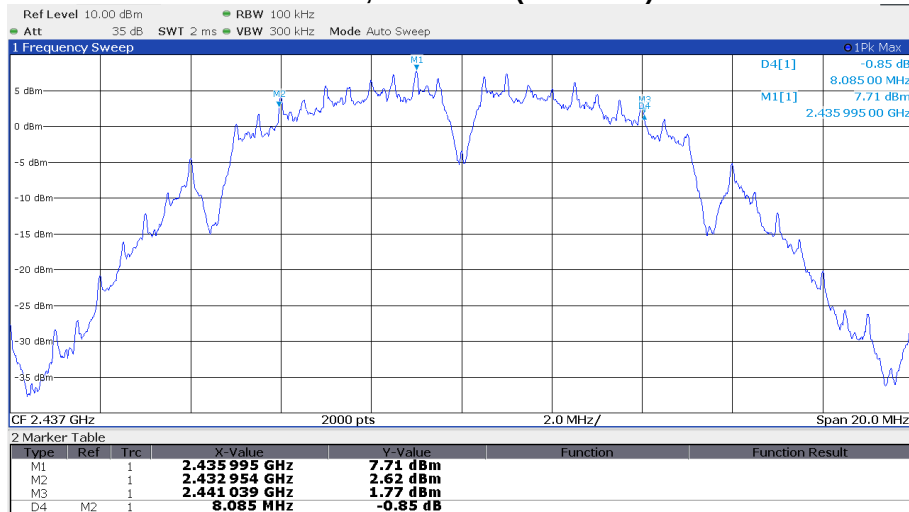
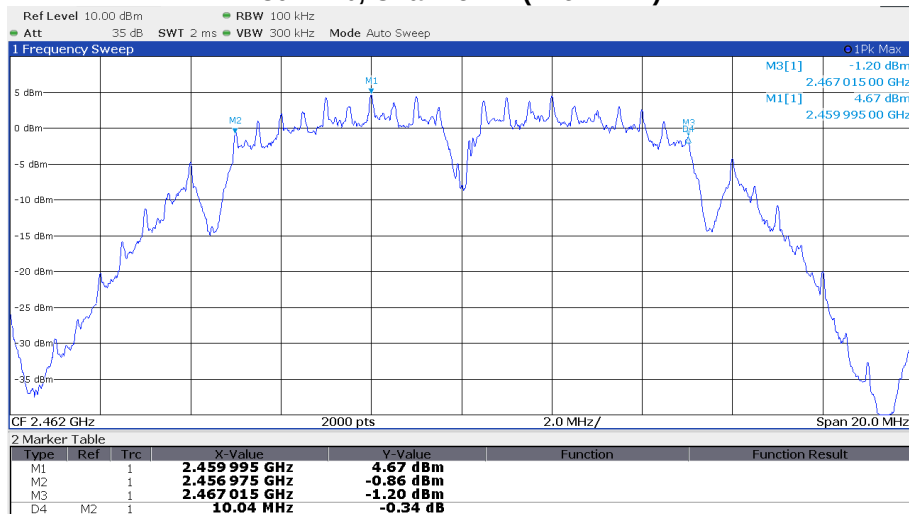
Frequency (MHz)	EBW limit	
	dB down	kHz
902-928	-6	500
2400-2483.5	-6	500
5725-5850	-6	500

The requirements are **FULFILLED**.

Remarks: For detailed test results please refer to following test protocols. The RSS Gen defines no limit for the occupied bandwidth!

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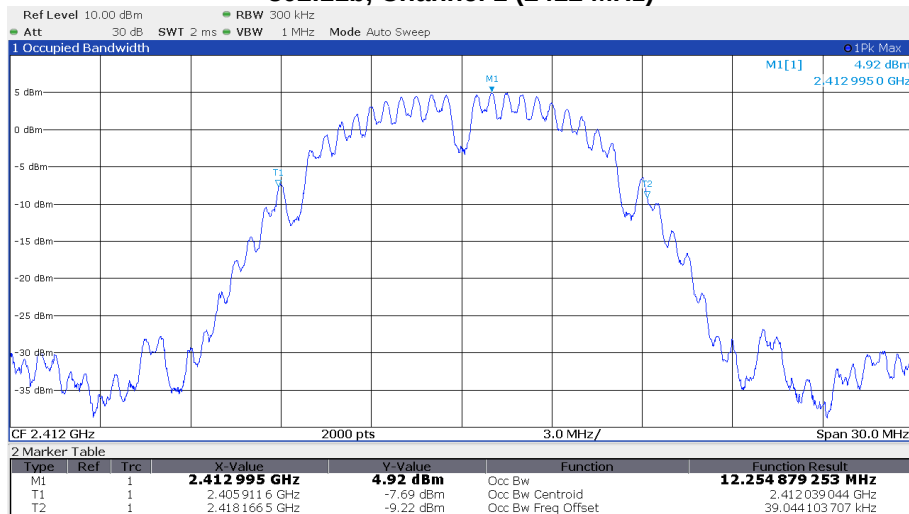
5.1.6 Test protocols EBW

802.11b, Channel 1 (2412 MHz)

802.11b, Channel 6 (2437 MHz)

802.11b, Channel 11 (2462 MHz)


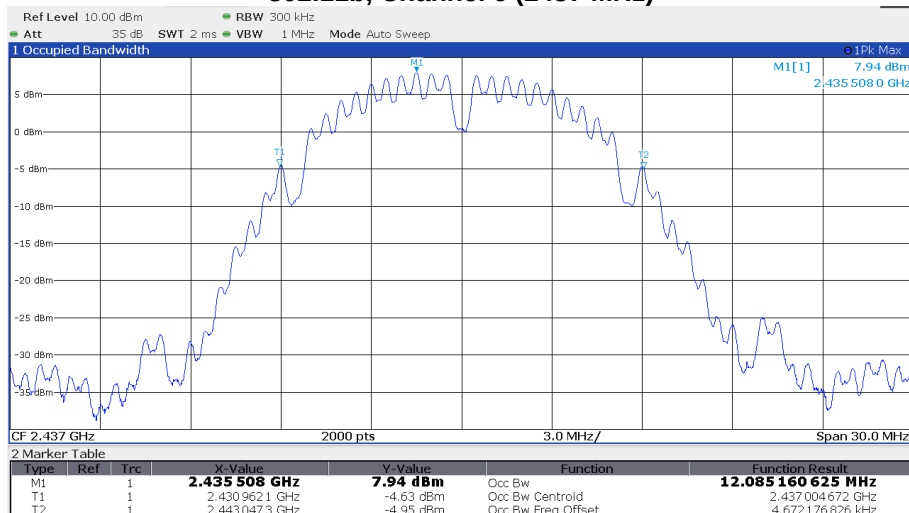
FCC ID: 2BKU8DEPLIFE-1 IC: 33302-DEPLIFE1

5.1.7 Test protocols OBW

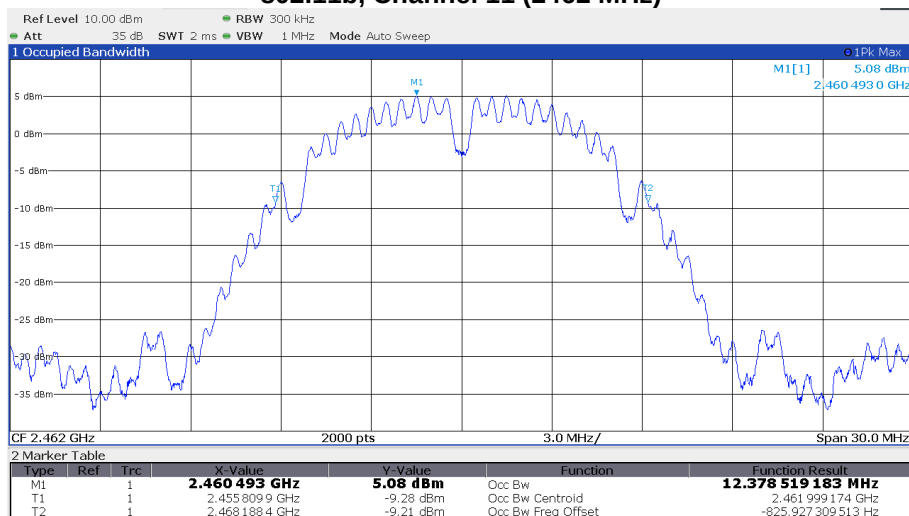
802.11b, Channel 1 (2412 MHz)



802.11b, Channel 6 (2437 MHz)



802.11b, Channel 11 (2462 MHz)



FCC ID: 2BKU8DEPLIFE-1 IC: 33302-DEPLIFE1

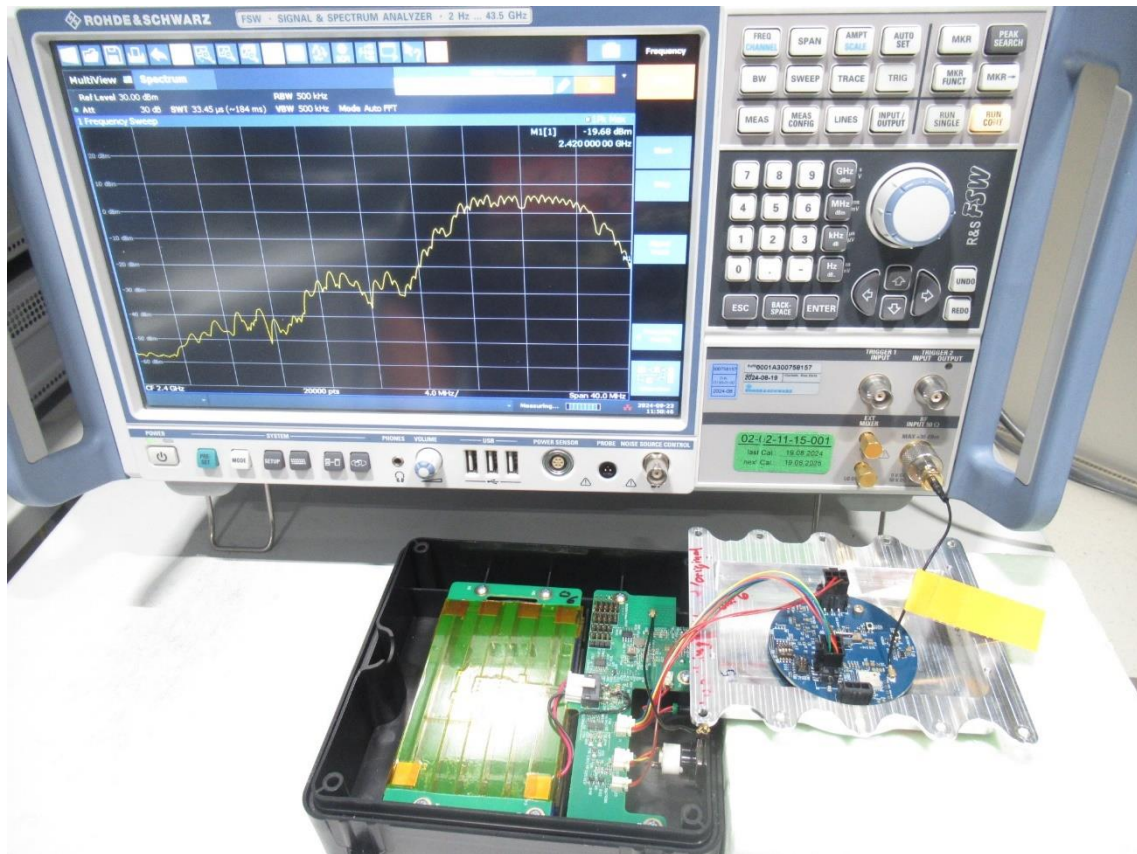
5.2 Maximum peak conducted output power

For test instruments and accessories used see section 6 Part **CPC 3**.

5.2.1 Description of the test location

Test location: Shielded Room SR6

5.2.2 Photo documentation of the test set-up



5.2.3 Applicable standard

According to FCC Part 15, Section 15.247(b)(3):

For systems using digital modulation in the 2400 – 2483.5 MHz the maximum peak output power of the transmitter shall not exceed 1 Watt. The limit is based on transmitting antennas of directional gain that do not exceed 6 dBi.

5.2.4 Description of Measurement

The maximum peak conducted output power is measured using a spectrum analyser following the procedure set out in ANSI C63.10, item 11.9.1.1. The EUT is set in TX continuous mode while measuring.

Spectrum analyser settings:

RBW: 20 MHz, VBW: 50 MHz, Detector: Max peak, Sweep time: auto, Span: 30 MHz;

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5.2.5 Test result

WLAN Standard 802.11b

Channel	P (dBm)	Antenna gain (dBi)	EIRP (dBm)	P limit (dBm)	EIRP limit (dBm)	result
1	16.4	2.0	18.4	30.0	36.0	passed
6	19.0	2.0	21.0	30.0	36.0	passed
11	16.6	2.0	18.6	30.0	36.0	passed

Peak Power Limit according to FCC Part 15, Section 15.247(b)(3) and RSS-247, 5.4(d):

Frequency (MHz)	Peak Power Limit	
	(dBm)	(Watt)
902-928	30	1.0
2400-2483.5	30	1.0
5725-5850	30	1.0

The requirements are **FULFILLED**.

Remarks: None.

FCC ID: 2BKU8DEPLIFE-1 IC: 33302-DEPLIFE1

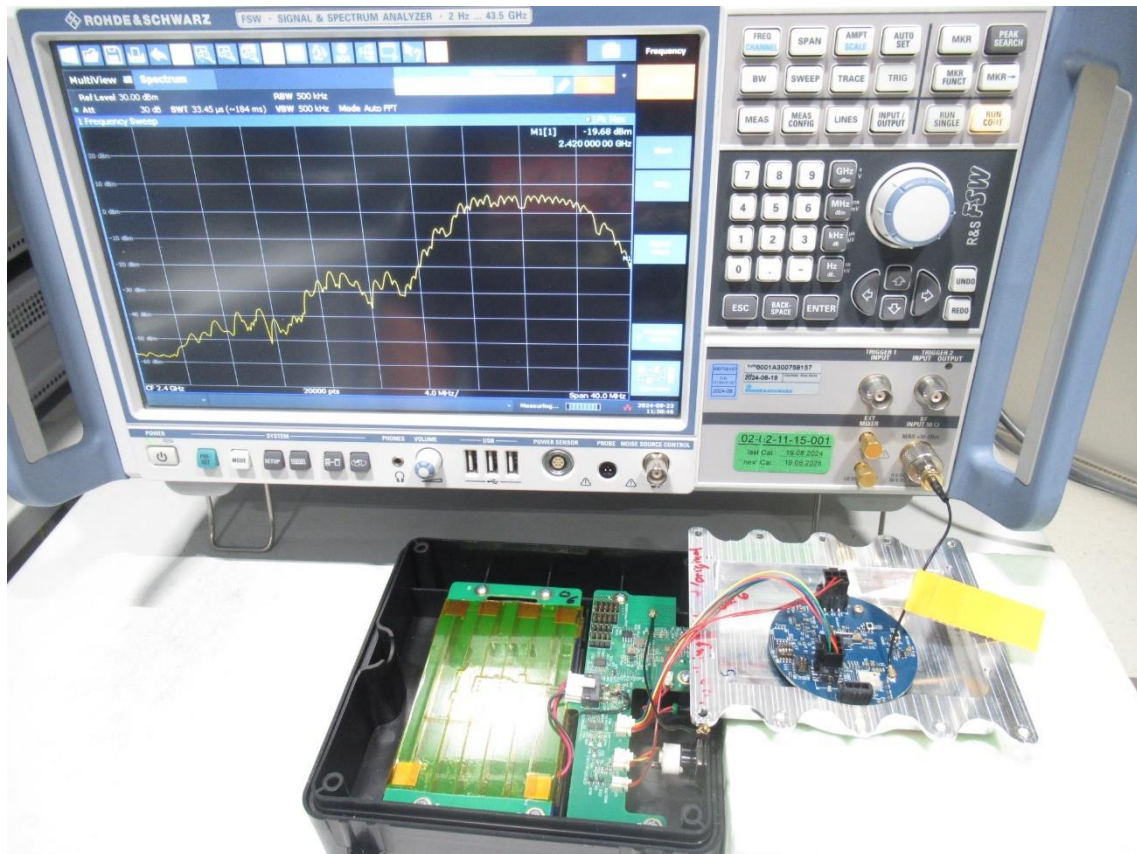
5.3 Power spectral density

For test instruments and accessories used see section 6 Part **CPC 3**.

5.3.1 Description of the test location

Test location: Shielded Room SR6

5.3.2 Photo documentation of the test set-up



5.3.3 Applicable standard

According to FCC Part 15, Section 15.247(e):

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

5.3.4 Description of Measurement

The measurement is performed using the procedure set out in ANSI C63.10, item 11.10.21. The power measurement was done as peak power measurement. Therefore, the PKPSD is measured. The max peak was located and with the spectrum analyser and a marker set to peak.

Spectrum analyser settings:

RBW: 3 kHz, VBW: 10 kHz, Detector: Peak, Sweep time: auto,

FCC ID: 2BKU8DEPLIFE-1 IC: 33302-DEPLIFE1
5.3.5 Test result

WLAN Standard 802.11b

Channel	Centre frequency (MHz)	PSD (dBm/ 3 kHz)	PSD limit (dBm/ 3 kHz)	Margin (dB)	result
1	2412	-10.9	8.0	-18.9	passed
6	2437	-5.7	8.0	-13.7	passed
11	2462	-10.1	8.0	-18.1	passed

Power spectral density limit according to FCC Part 15, Section 15.247(e) and RSS-247, 5.2(b):

Frequency (MHz)	Power spectral density limit
	(dBm/3 kHz)
2400 - 2483.5	8

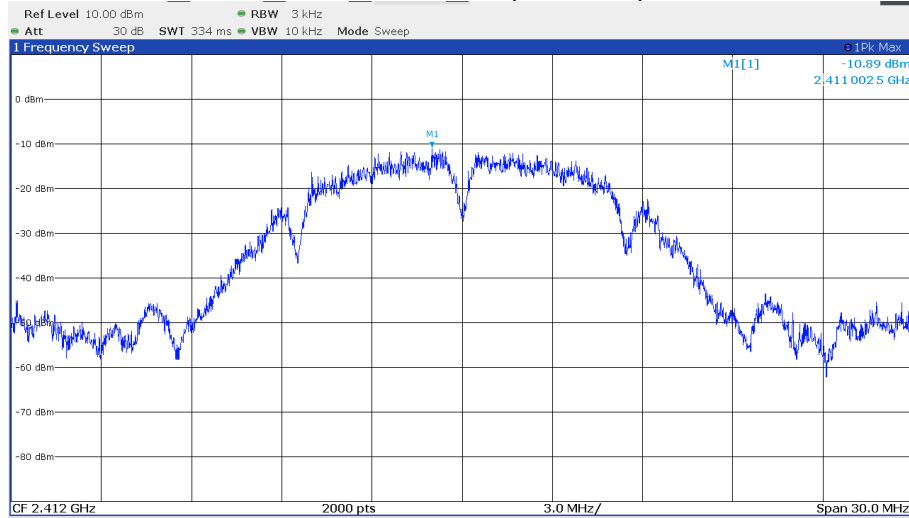
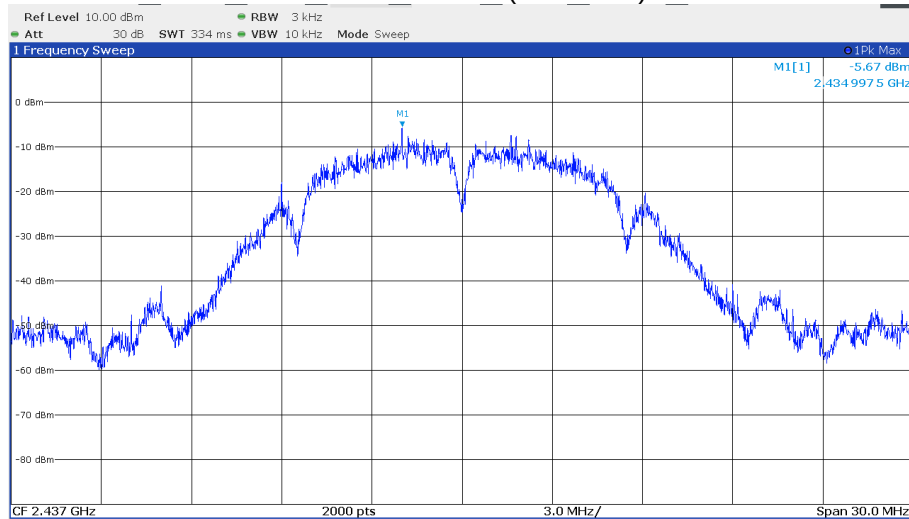
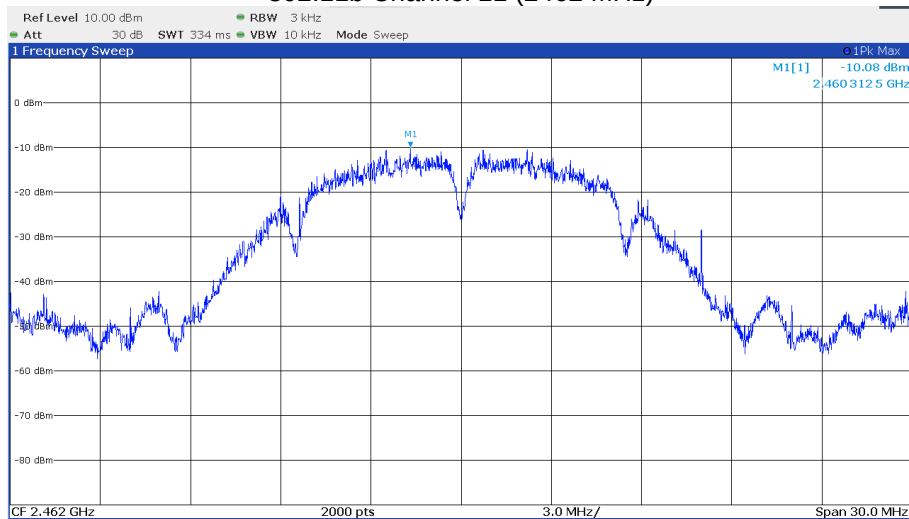
The requirements are **FULFILLED**.

Remarks: For detailed test results please refer to following test protocols.

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

FCC ID: 2BKU8DEPLIFE-1 IC: 33302-DEPLIFE1

5.3.6 Power spectral density plots

802.11b Channel 1 (2412 MHz)

802.11b Channel 6 (2437 MHz)

802.11b Channel 11 (2462 MHz)


FCC ID: 2BKU8DEPLIFE-1 IC: 33302-DEPLIFE1

5.4 Unwanted emissions, conducted

For test instruments and accessories used see section 6 Part SEC 1, SEC 2 and SEC 3.

5.4.1 Description of the test location

Test location: Shielded Room SR6

5.4.2 Photo documentation of the test set-up



5.4.3 Applicable standard

According to FCC Part 15, Section 15.247(d):

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limit specified in Section 15.209(a) (see Section 15.205(c)).

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

FCC ID: 2BKU8DEPLIFE-1 IC: 33302-DEPLIFE1

5.4.4 Description of measurement

The spurious emissions are measured conducted using a spectrum analyser in a test setup following the procedures set out in ANSI C63.10, item 11.10. The measurement is performed at normal test conditions in modulated TX continuous mode.

Spectrum analyser search setting:

RBW: 100 kHz, VBW: 300 kHz, Detector: Max peak, Trace Mode: Max hold, Sweep time: auto

5.4.5 Test result

802.11b

Highest level with RBW 100 kHz:

ch1	3.5 dBm
ch6	7.6 dBm
ch11	3.9 dBm

Limit according to FCC Part 15, Section 15.247(d):

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. Attenuation below the general limits specified in Section 15.209(a) is not required.

Limit according to RSS-247, 5.5

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of root-mean-square averaging over a time interval, as permitted under section 5.4(d), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general field strength limits specified in RSS-Gen is not required.

Frequency (MHz)	Spurious emission limit
Below 960	20 dB below the highest level of the desired power
Above 960	20 dB below the highest level of the desired power

The requirements are **FULFILLED**.

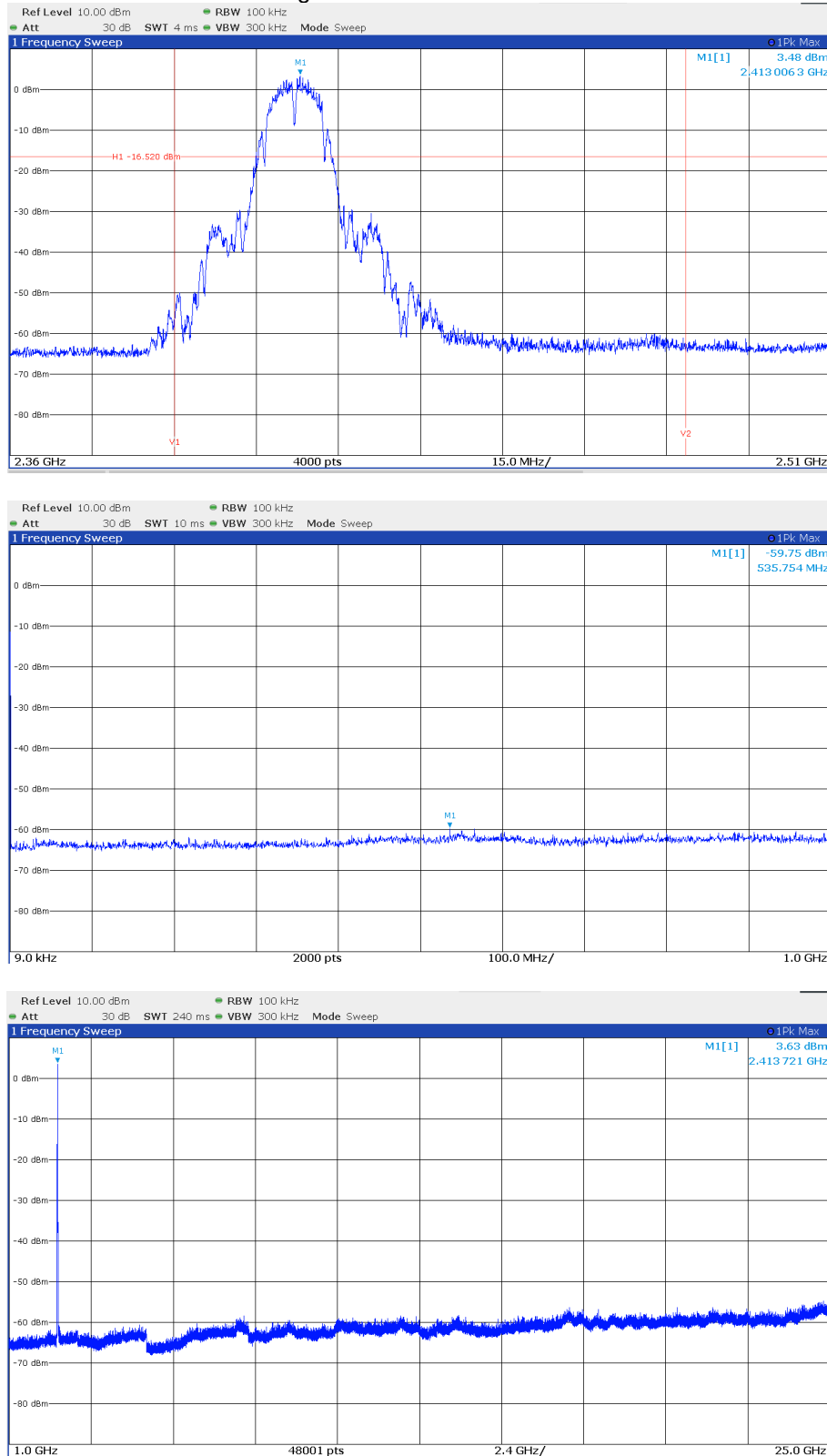
Remarks: For detailed test results please refer to following test protocols.

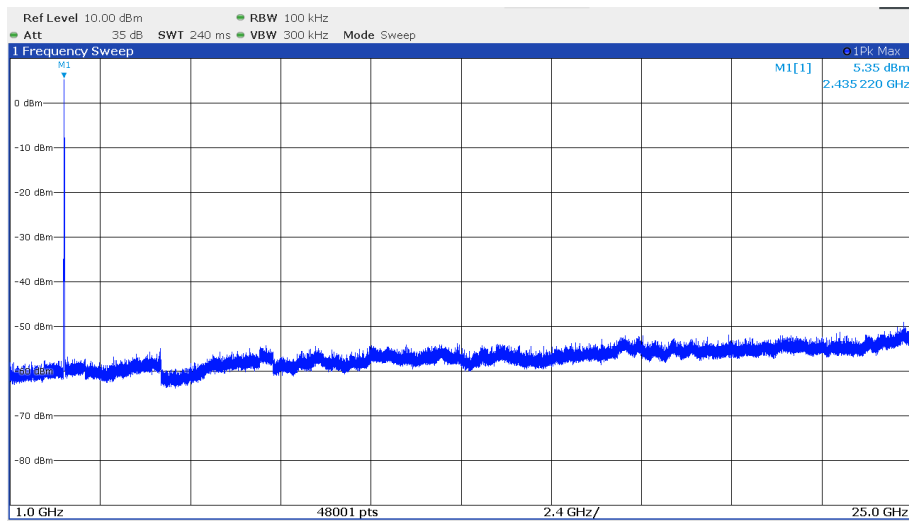
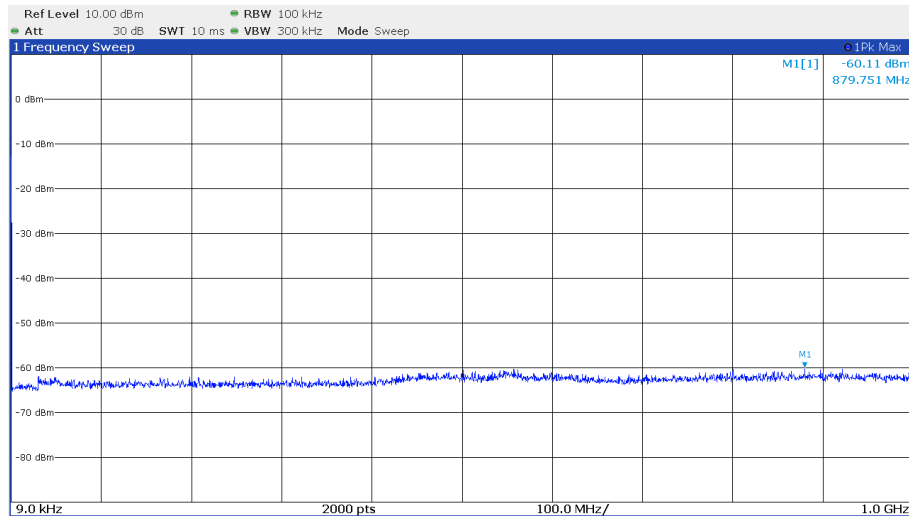
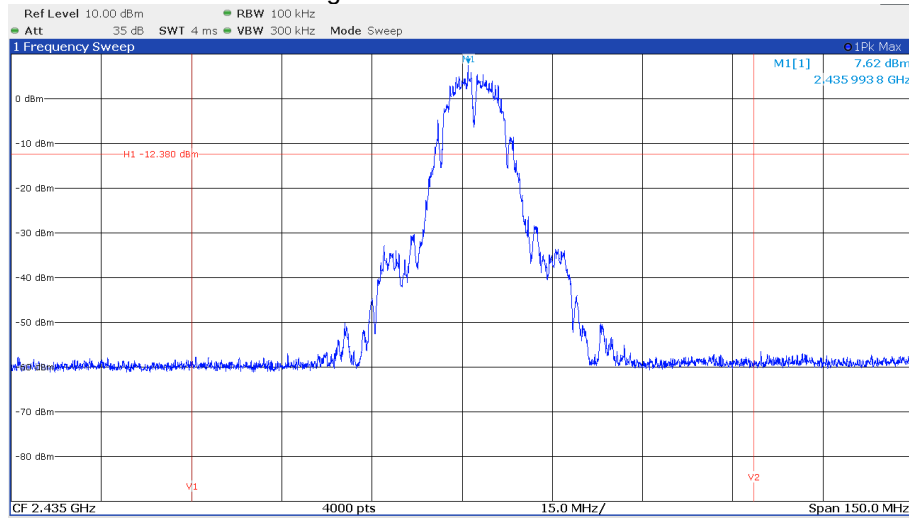
FCC ID: 2BKU8DEPLIFE-1 IC: 33302-DEPLIFE1

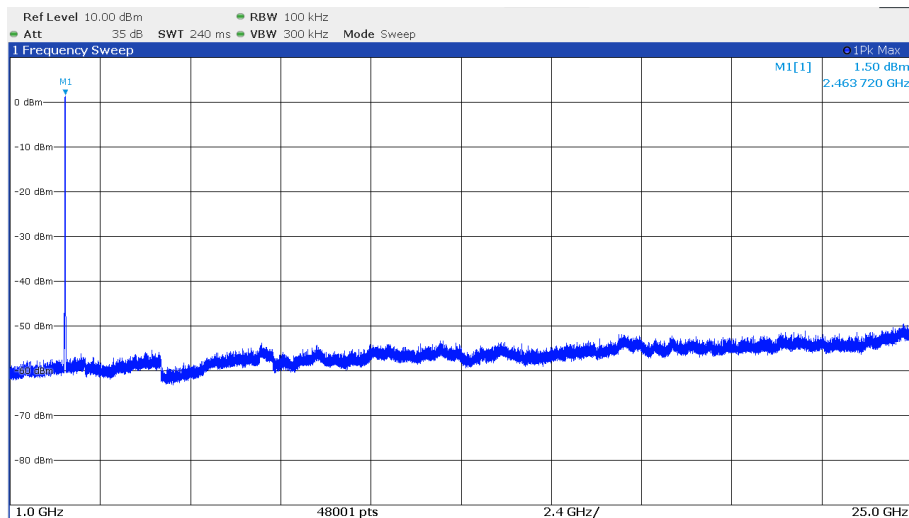
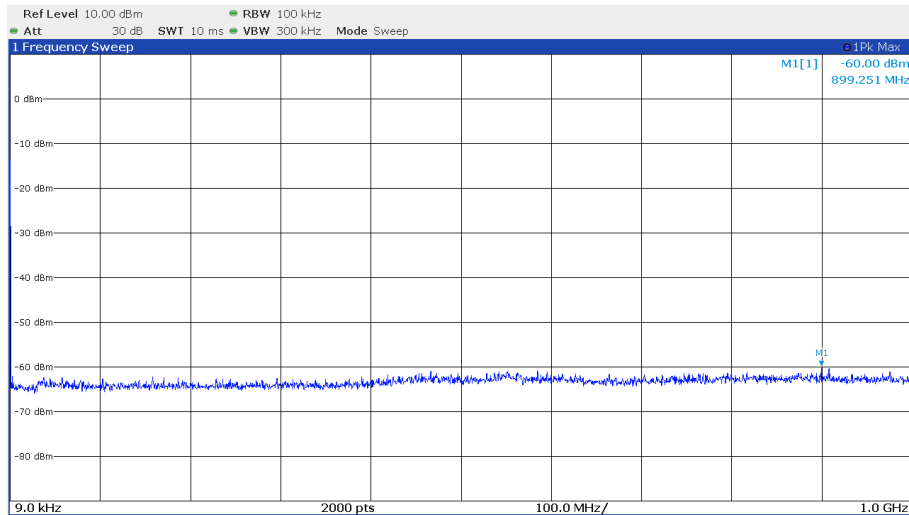
5.4.6 Test protocols

802.11b, ch1

Band edge compliance and determination of highest level



FCC ID: 2BKU8DEPLIFE-1 IC: 33302-DEPLIFE1
802.11b, ch6
Band edge compliance and determination of highest level


FCC ID: 2BKU8DEPLIFE-1 IC: 33302-DEPLIFE1
802.11b, ch11
Band edge compliance and determination of highest level


FCC ID: 2BKU8DEPLIFE-1 IC: 33302-DEPLIFE1

5.5 Unwanted emissions in restricted bands, radiated

For test instruments and accessories used see section 6 Part SER 1, SER 2, SER 3.

5.5.1 Description of the test location

Test location: Semianechoic chamber SAC2

Test location: Full anechoic chamber FAR1

Test distance: 3 m

5.5.2 Photo documentation of the test set-up

SAC2



FCC ID: 2BKU8DEPLIFE-1 IC: 33302-DEPLIFE1

FAR1



According to FCC Part 15, Section 15.205(a):

In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limit specified in Section 15.209(a).

5.5.3 Description of Measurement

The restricted bands are measured radiated. The span of the spectrum analyser is set wide enough to capture the restricted band and measure the peak level of the emission operating on the channel closest to the band edge, as well as any modulation products which fall outside of the authorized band of operation.

Spectrum analyser settings:

9 kHz – 150 kHz RBW: 200 Hz
150 kHz - 30 MHz RBW: 9 kHz
30 MHz – 1000 MHz: RBW: 120 kHz
1000 MHz – 25 GHz: RBW: 1 MHz, VBW: 3 MHz, Sweep: Auto, Detector function: Peak

5.5.4 Test result

5.5.4.1 9 kHz – 30 MHz

f (MHz)	Level AV@3m (dBμV)	Ant. factor (dB/m)	Field strength AV@3m dB(μV/m)	Distance corr. 3m to 30m (dB)	Corrected level AV@30m dB(μV/m)	Limit AV@30m dB(μV/m)	Delta (dB)
0.851	-8.9	20.0	11.1	-40.0	-28.9	29.0	-57.9
1.419	-7.2	20.0	12.8	-40.0	-27.2	24.6	-51.8
1.926	-0.3	20.0	19.7	-40.0	-20.3	29.5	-49.8
2.314	-2.0	20.0	18.0	-40.0	-22.0	29.5	-51.5
7.568	-2.0	20.0	18.0	-40.0	-22.0	29.5	-51.5
28.761	-16.0	20.0	4.0	-40.0	-36.0	29.5	-65.5

f (MHz)	Level AV@3m (dBμV)	Ant. factor (dB/m)	Field strength AV@3m dB(μA/m)	Distance corr. 3m to 30m (dB)	Corrected level AV@30m dB(μA/m)	Limit AV@30m dB(μA/m)	Delta (dB)
0.851	-8.9	20.0	-40.4	-40.0	-80.4	-22.5	-57.9
1.419	-7.2	20.0	-38.7	-40.0	-78.7	-27.0	-51.7
1.926	-0.3	20.0	-31.8	-40.0	-71.8	-21.9	-49.9
2.314	-2.0	20.0	-33.5	-40.0	-73.5	-21.9	-51.6
7.568	-2.0	20.0	-33.5	-40.0	-73.5	-21.9	-51.6
28.761	-16.0	20.0	-47.5	-40.0	-87.5	-21.9	-65.6

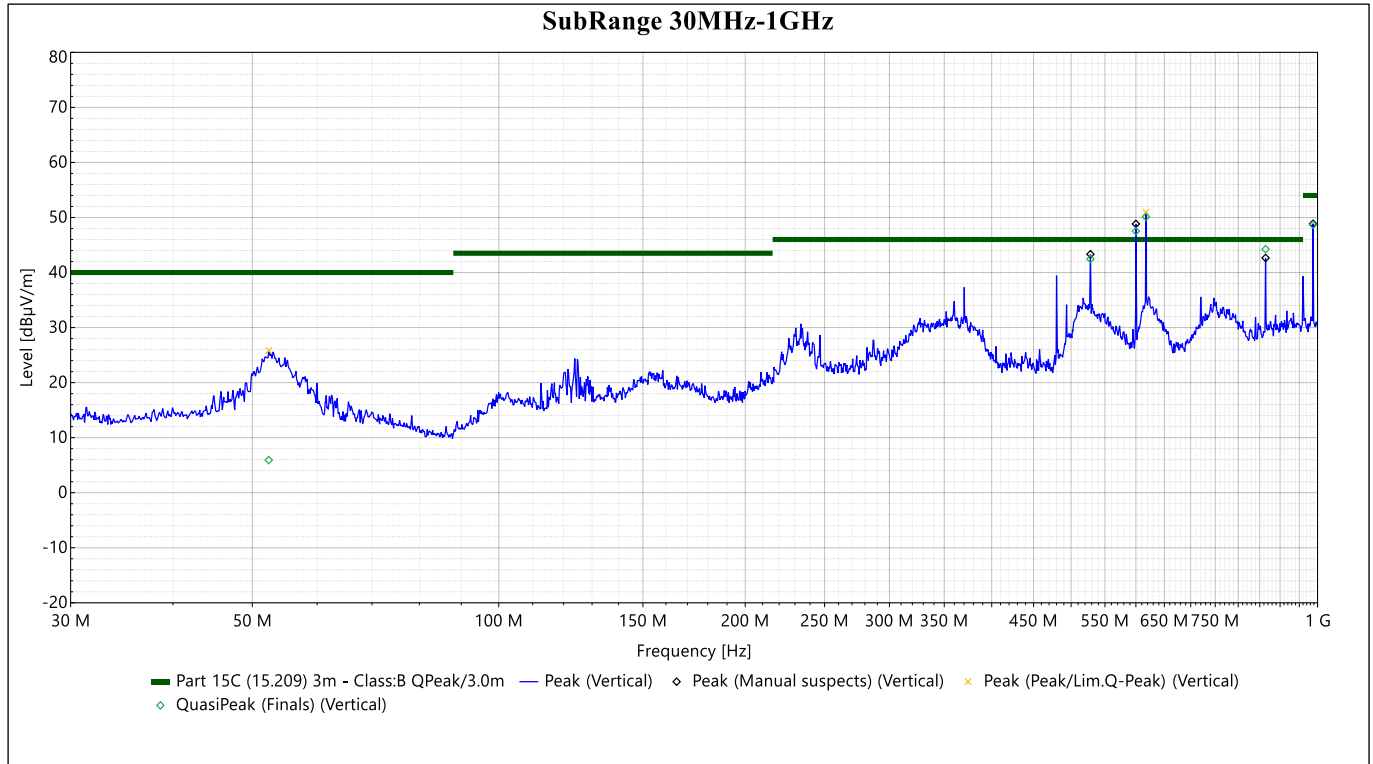
Note: Both UWB and WiFi are active.

FCC ID: 2BKU8DEPLIFE-1 IC: 33302-DEPLIFE1

5.5.4.2 30 MHz – 1000 MHz

vertical

Frequency (Hz)	QuasiPeak (dBμV/m)	QP Margin	QP Limit (dBμV/m)	angle	height	polarization	RBW (Hz)	Meas.Time (s)	Correction (dB)
52.3684307 M	5.918	-34.082	40	20	1.02	Vertical	120000	0.01	-11.034
528.0163323 M	42.448	-3.552	46	331	1	Vertical	120000	0.01	-3.827
600.0092682 M	47.504	1.504	46	321	1	Vertical	120000	0.01	-2.352
617.1605625 M	50.089	4.089	46	321	1	Vertical	120000	0.01	-1.741
864.0200463 M	44.237	-1.763	46	223	1.21	Vertical	120000	0.01	1.828
987.4518886 M	48.684	-5.316	54	162	1.07	Vertical	120000	0.01	3.734



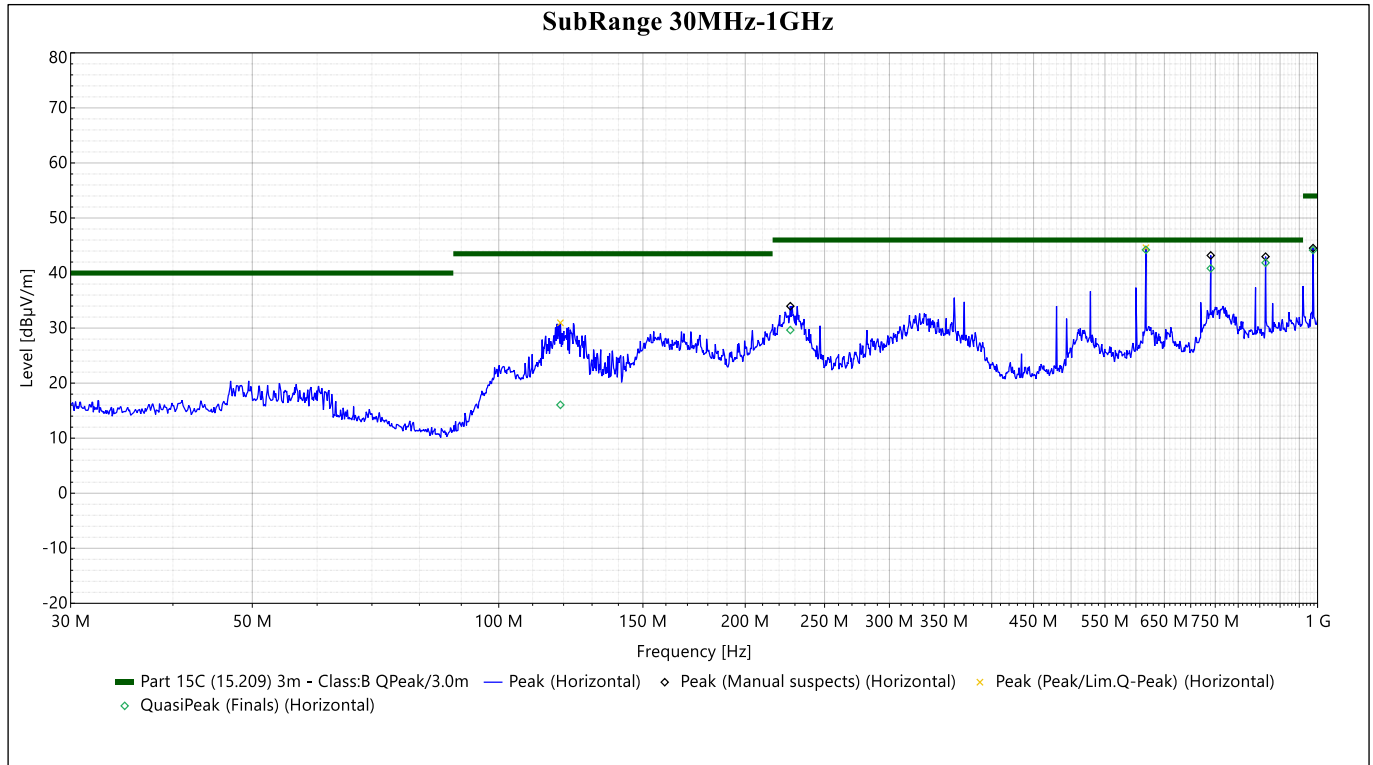
Note: The limit exceedings at 600.01 MHz and 617.16 MHz do not fall into the restricted bands of operation and must be evaluated under spurious emission regulation in 15.247(d):

f (MHz)	Peak with RBW 100 kHz (dBμV/m)	Fundamental peak power, radiated (dBm)	Fundamental peak power, radiated (dBμV/m)	20 dB down limit (dBμV/m)	Result
600.01	48.8	21.0	116.2	96.2	Passed
617.16	51.0	21.0	116.2	96.2	Passed

FCC ID: 2BKU8DEPLIFE-1 IC: 33302-DEPLIFE1

horizontal

Frequency (Hz)	QuasiPeak (dBµV/m)	QP Margin	QP Limit (dBµV/m)	angle	height	polarization	RBW (Hz)	Meas.Time (s)	Correction (dB)
118.9294066 M	16.053	-27.447	43.5	230	2.7	Horizontal	120000	0.01	-12.127
227.0353215 M	29.642	-16.358	46	60	1.4	Horizontal	120000	0.01	-11.902
617.1533746 M	44.222	-1.778	46	241	2.11	Horizontal	120000	0.01	-1.311
740.5682615 M	40.848	-5.152	46	346	1.02	Horizontal	120000	0.01	0.845
864.0148749 M	41.86	-4.14	46	176	1.58	Horizontal	120000	0.01	2.288
987.4567723 M	44.155	-9.845	54	129	1.35	Horizontal	120000	0.01	4.467

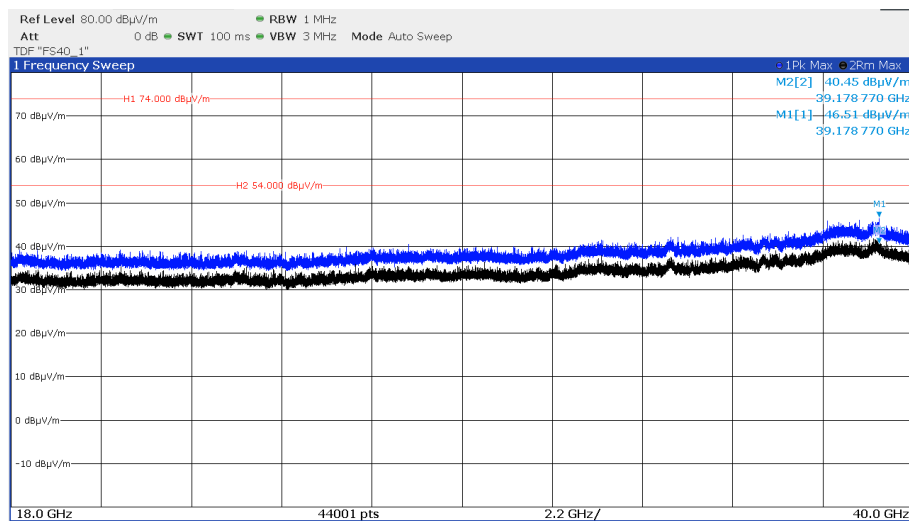
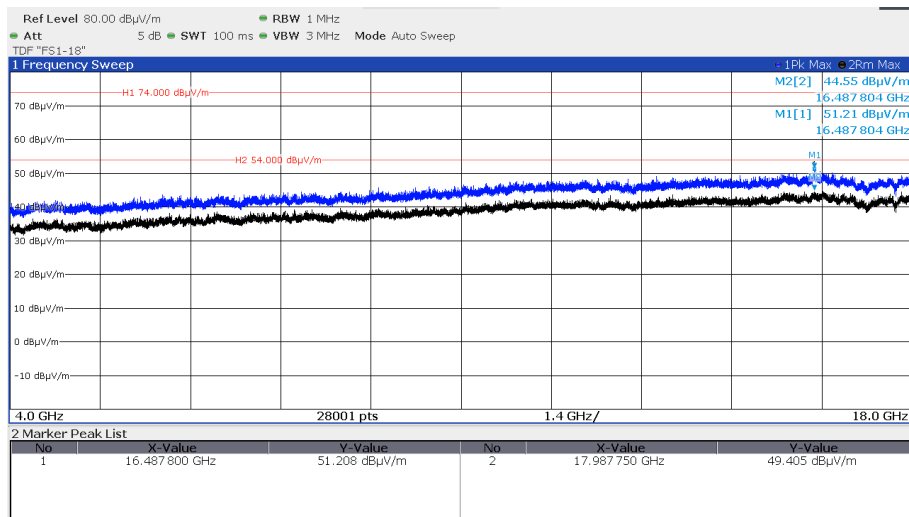
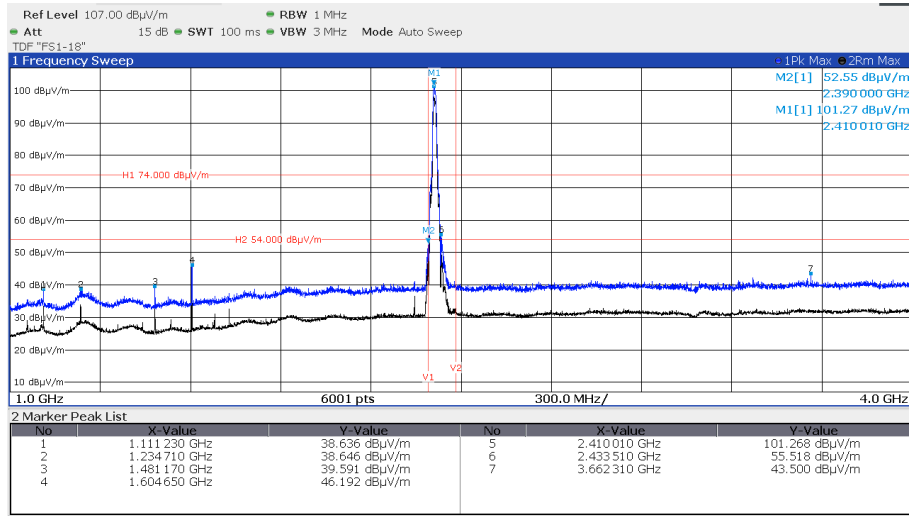


The test report merely corresponds to the test sample. It is not permitted to copy extracts of these test results without the written permission of the test laboratory.

FCC ID: 2BKU8DEPLIFE-1 IC: 33302-DEPLIFE1

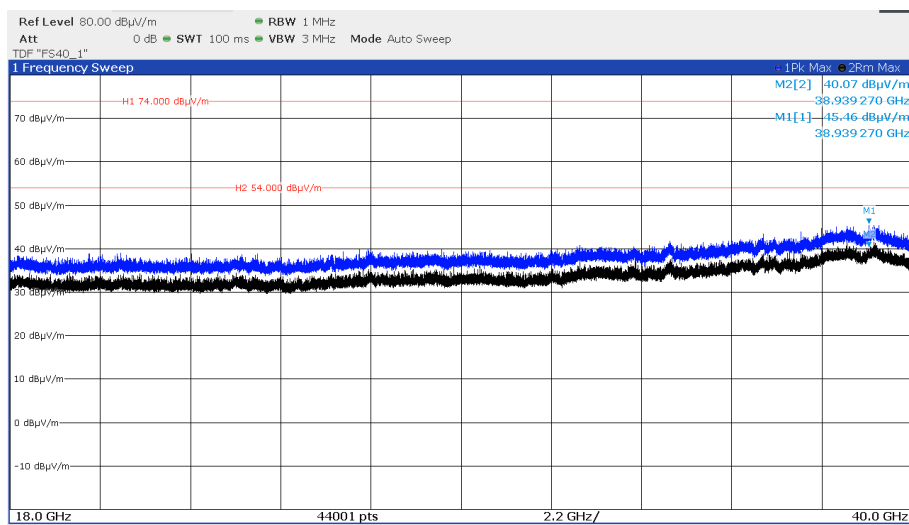
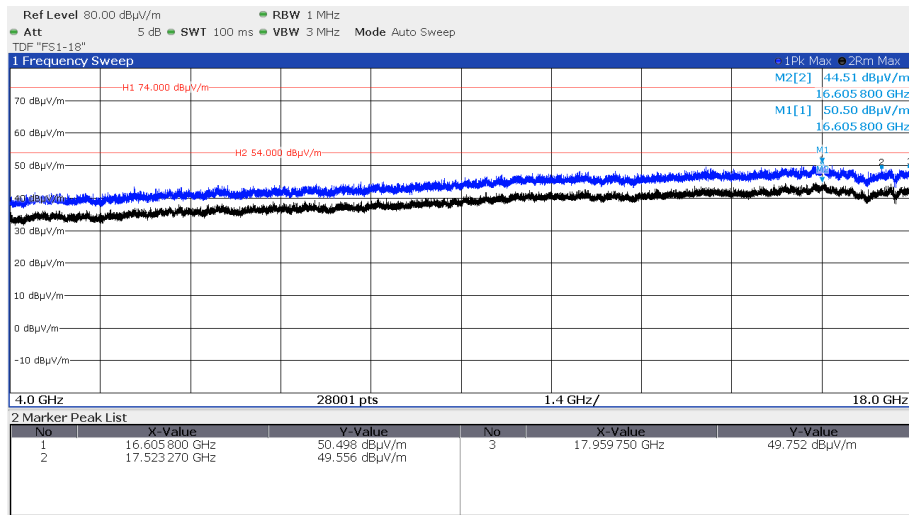
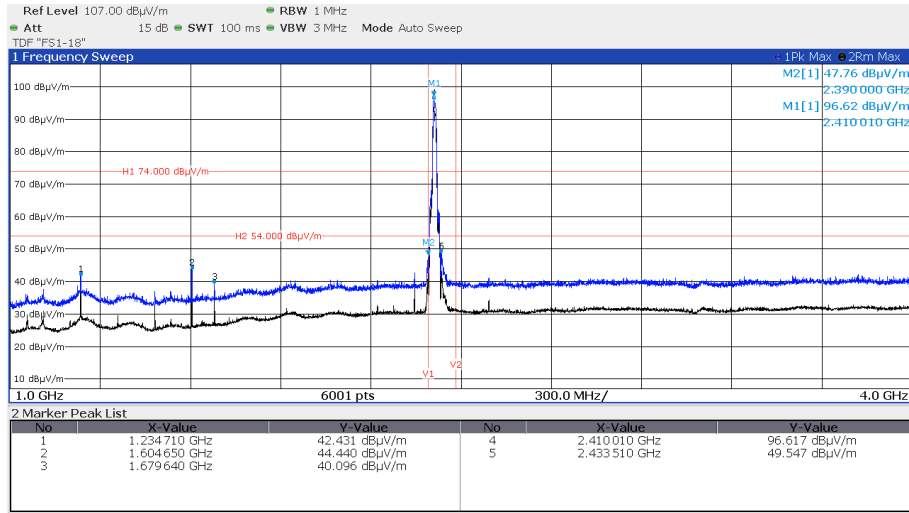
5.5.4.3 1 GHz – 25 GHz

CH1 horizontal



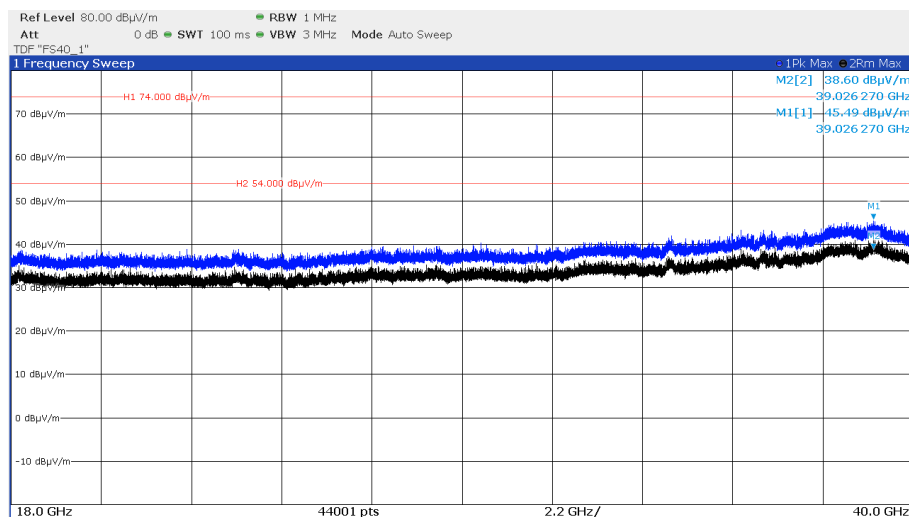
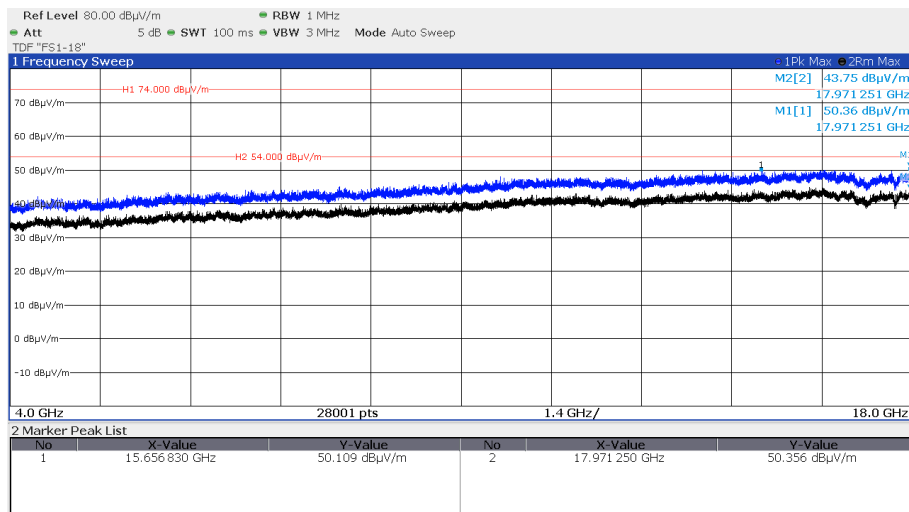
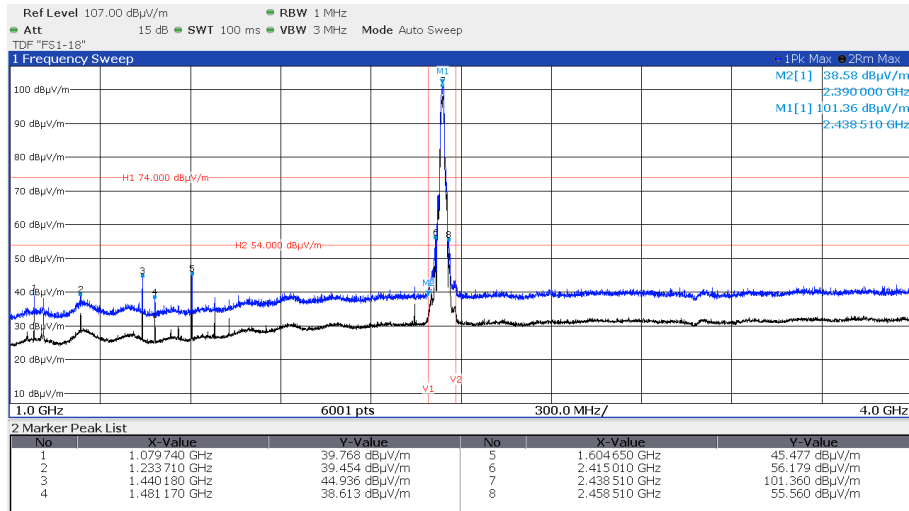
FCC ID: 2BKU8DEPLIFE-1 IC: 33302-DEPLIFE1

CH1 vertical



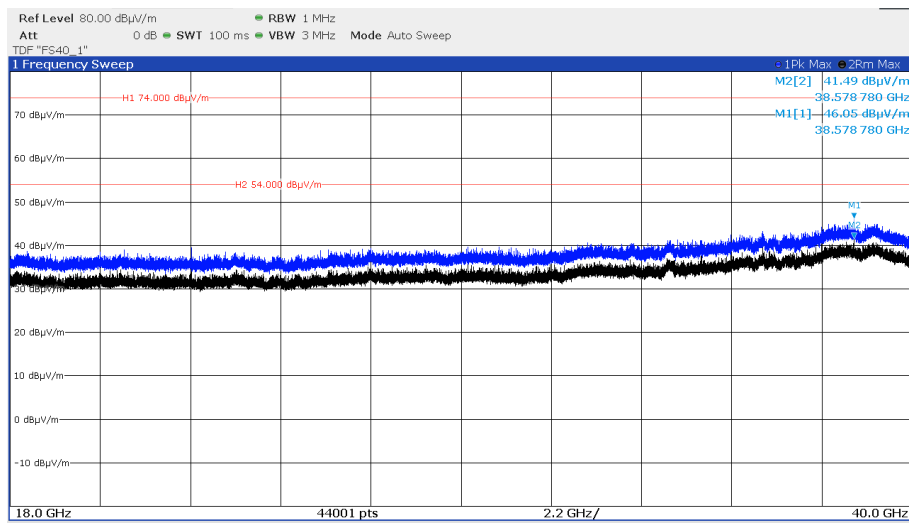
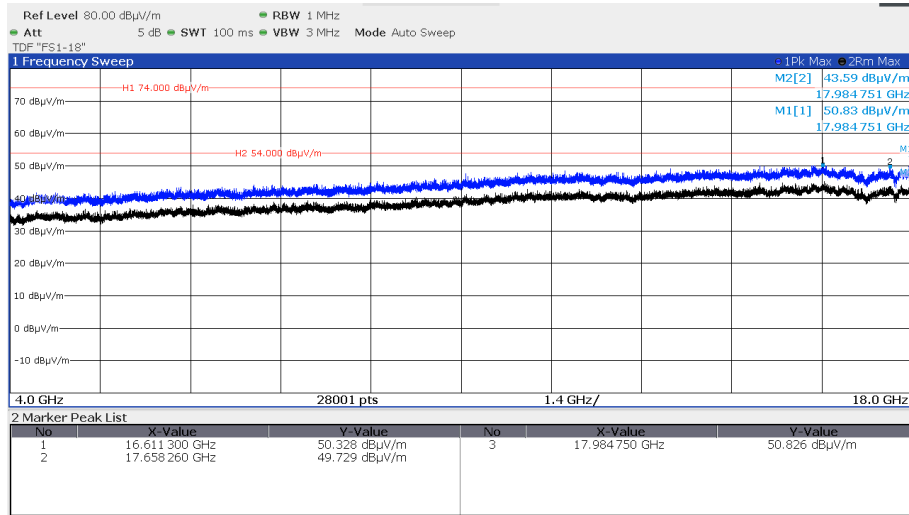
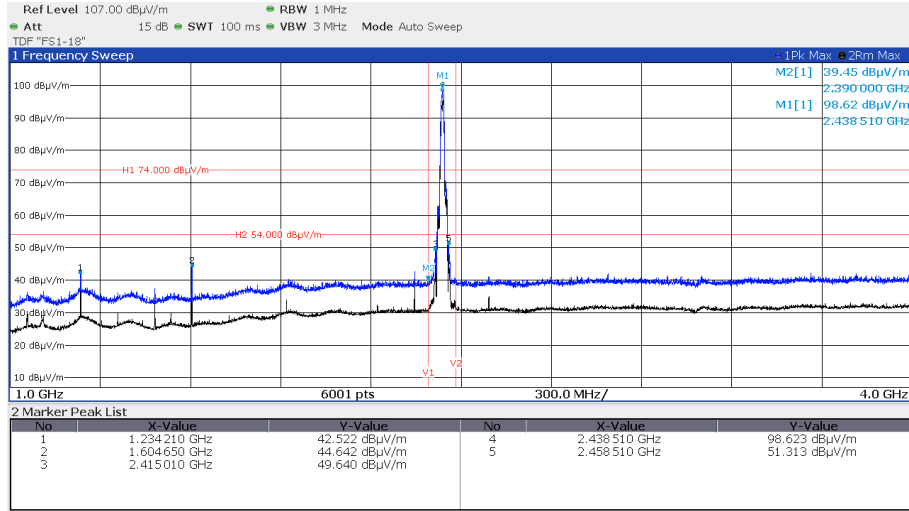
FCC ID: 2BKU8DEPLIFE-1 IC: 33302-DEPLIFE1

CH6 horizontal



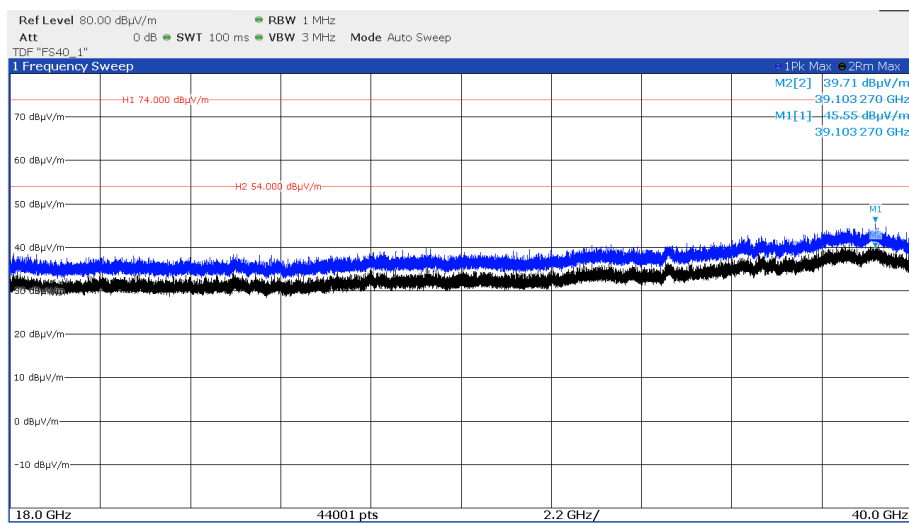
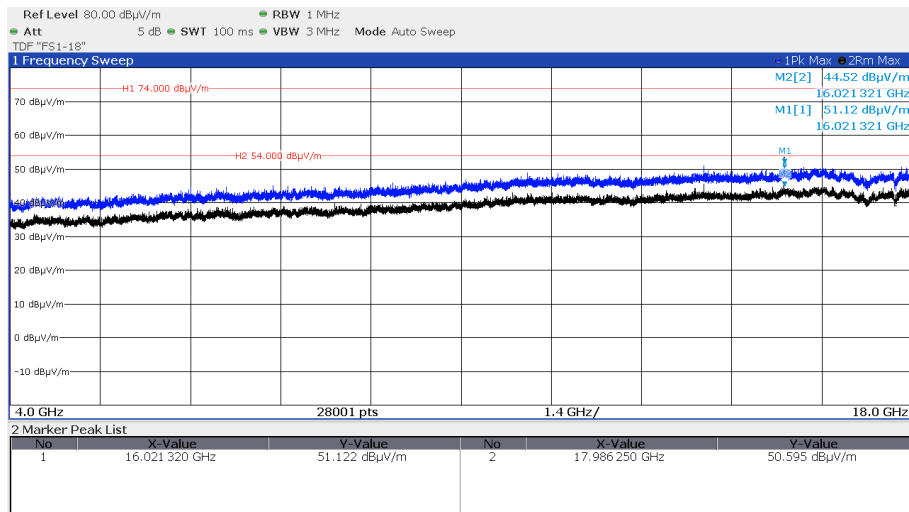
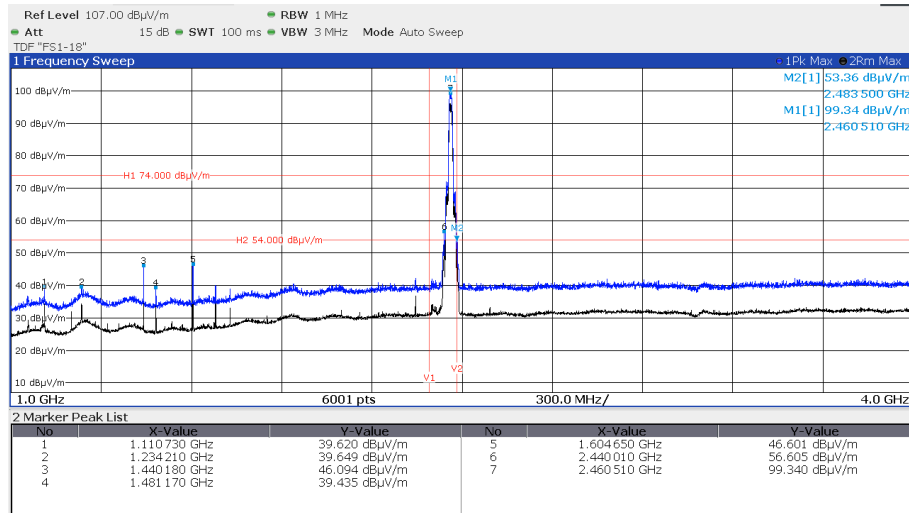
FCC ID: 2BKU8DEPLIFE-1 IC: 33302-DEPLIFE1

CH6 vertical



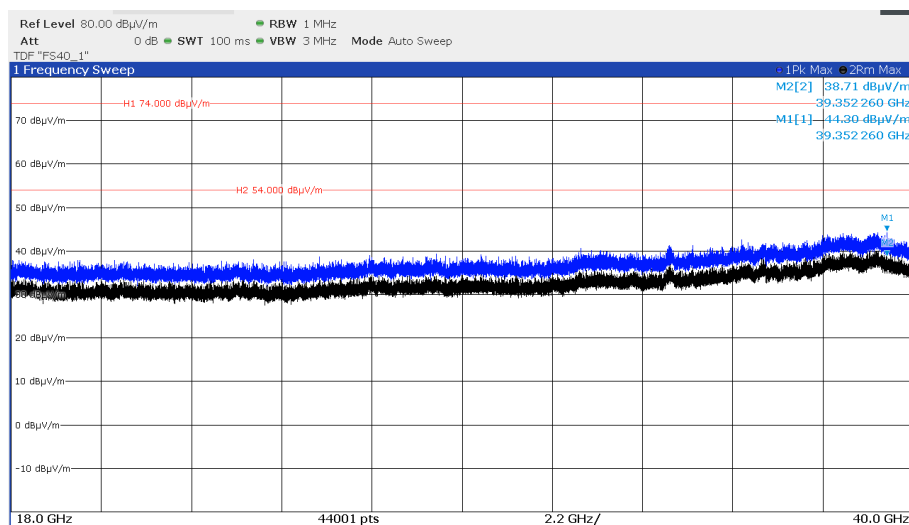
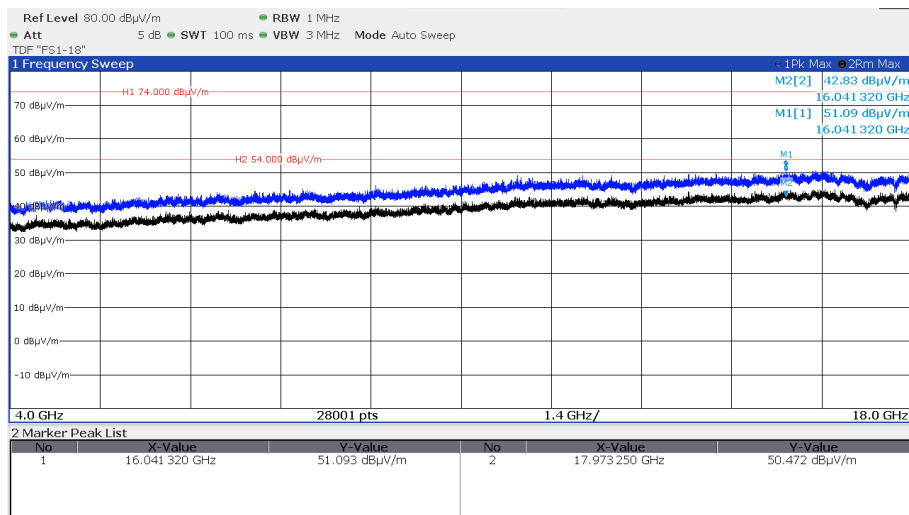
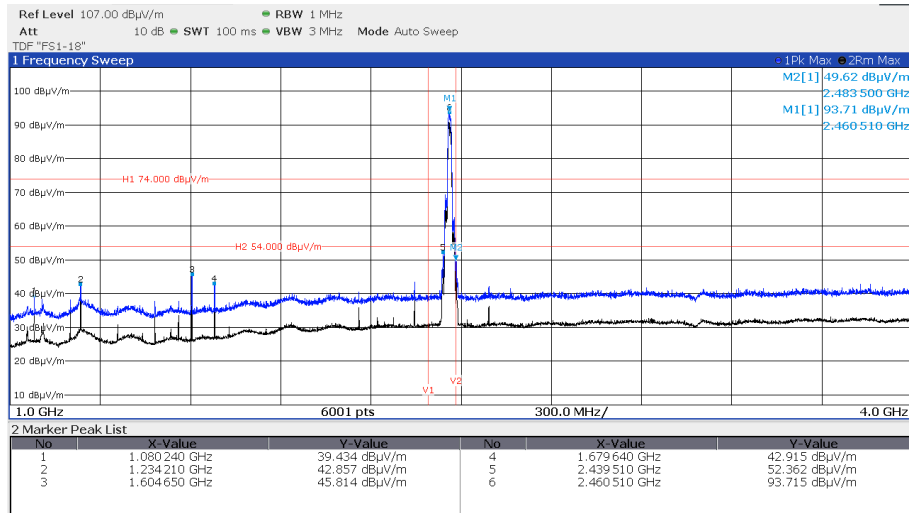
FCC ID: 2BKU8DEPLIFE-1 IC: 33302-DEPLIFE1

CH11 horizontal



FCC ID: 2BKU8DEPLIFE-1 IC: 33302-DEPLIFE1

CH11 vertical



FCC ID: 2BKU8DEPLIFE-1 IC: 33302-DEPLIFE1

Radiated limits according to FCC Part 15 Section 15.209(a) for spurious emissions which fall in restricted bands:

Frequency (MHz)	Field strength of spurious emissions		Measurement distance (metres)
	($\mu\text{V/m}$)	dB($\mu\text{V/m}$)	
0.009-0.490	2400/F (kHz)		300
0.490-1.705	24000/F (kHz)		30
1.705-30	30	29.5	30
30-88	100	40	3
88-216	150	43.5	3
216-960	200	46	3
Above 960	500	54	3

Restricted bands of operation:

The field strength of emissions appearing within these frequency bands shall not exceed the limits shown in Section 15.209

MHz	MHz	MHz	GHz
0.090 – 0.110	16.42 – 16.423	399.9 – 410	4.5 – 5.15
0.495 – 0.505	16.69475 – 16.69525	608 – 614	5.35 – 5.46
2.1735 – 2.1905	16.80425 – 16.80475	960 – 1240	7.25 – 7.75
4.125 – 4.128	25.5 – 25.67	1300 – 1427	8.025 – 8.5
4.17725 – 4.17775	37.5 – 38.25	1435 – 1626.5	9.0 – 9.2
4.20725 – 4.20775	73 – 74.6	1645.5 – 1646.5	9.3 – 9.5
6.215 – 6.218	74.8 – 75.2	1660 – 1710	10.6 – 12.7
6.26775 – 6.26825	108 – 121.94	1718.8 – 1722.2	13.25 – 13.4
6.31175 – 6.31225	123 – 138	2200 – 2300	14.47 – 14.5
8.291 – 8.294	149.9 – 150.05	2310 – 2390	15.35 – 16.2
8.362 – 8.366	156.52475 – 156.52525	2483.5 – 2500	17.7 – 21.4
8.37625 – 8.38675	156.7 – 156.9	2690 – 2900	22.01 – 23.12
8.41425 – 8.41475	162.0125 – 167.17	3260 – 3267	23.6 – 24.0
12.29 – 12.293	167.72 – 173.2	3332 – 3339	31.2 – 31.8
12.51975 – 12.52025	240 – 285	3345.8 – 3358	36.43 – 36.5
12.57675 – 12.57725	322 – 335.4	3600 – 4400	Above 38.6

FCC ID: 2BKU8DEPLIFE-1 IC: 33302-DEPLIFE1

RSS-Gen, Table 6 – Restricted Frequency Bands

MHz	MHz	MHz	GHz
0.090 - 0.110	12.57675 - 12.57725	399.9 - 410	7.250 - 7.750
0.495 - 0.505	13.36 - 13.41	608 - 614	8.025 – 8.500
2.1735 - 2.1905	16.42 - 16.423	960 - 1427	9.0 - 9.2
3.020 - 3.026	16.69475 - 16.69525	1435 - 1626.5	9.3 - 9.5
4.125 - 4.128	16.80425 - 16.80475	1645.5 - 1646.5	10.6 - 12.7
4.17725 - 4.17775	25.5 - 25.67	1660 - 1710	13.25 - 13.4
4.20725 - 4.20775	37.5 - 38.25	1718.8 - 1722.2	14.47 - 14.5
5.677 - 5.683	73 - 74.6	2200 - 2300	15.35 - 16.2
6.215 - 6.218	74.8 - 75.2	2310 - 2390	17.7 - 21.4
6.26775 - 6.26825	108 – 138	2483.5 - 2500	22.01 - 23.12
6.31175 - 6.31225	149.9 - 150.05	2655 - 2900	23.6 - 24.0
8.291 - 8.294	156.52475 - 156.52525	3260 – 3267	31.2 - 31.8
8.362 - 8.366	156.7 - 156.9	3332 - 3339	36.43 - 36.5
8.37625 - 8.38675	162.0125 - 167.17	3345.8 - 3358	Above 38.6
8.41425 - 8.41475	167.72 - 173.2	3500 - 4400	
12.29 - 12.293	240 – 285	4500 - 5150	
12.51975 - 12.52025	322 - 335.4	5350 - 5460	

The requirements are **FULFILLED**.

Remarks: The measurement was performed up to the 10th harmonic.

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

FCC ID: 2BKU8DEPLIFE-1 IC: 33302-DEPLIFE1

5.6 Antenna application

5.6.1 Description of the test location

Test location: NONE

5.6.2 Applicable standard

According to FCC Part 15C, Section 15.203:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit that broken antennas can be replaced by the user, but the use of a standard antenna jack is prohibited.

The EUT has an integrated antenna. No other antenna can be used with the device.

The supplied antenna meets the requirements of part 15.203 and 15.204.

Remarks: None.

FCC ID: 2BKU8DEPLIFE-1 IC: 33302-DEPLIFE1

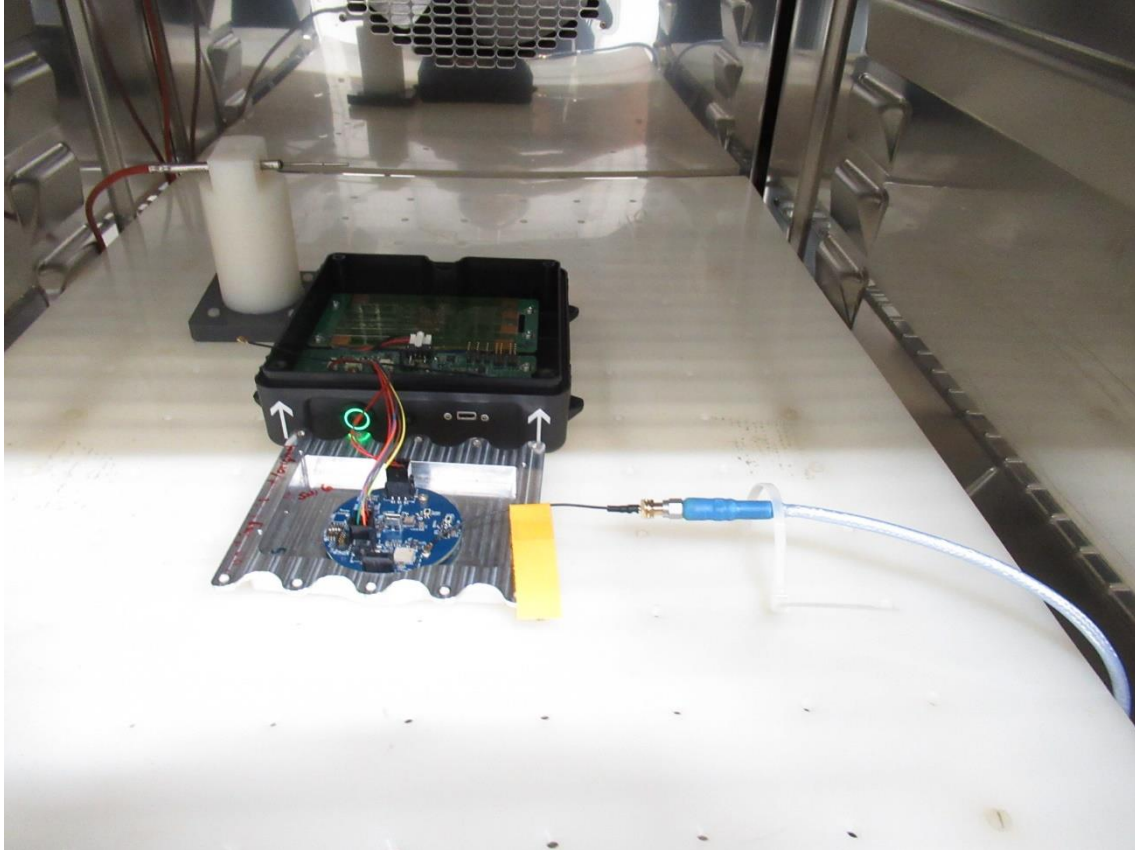
5.7 Transmitter frequency stability

For test instruments and accessories used see section 6 Part FE.

5.7.1 Description of the test location

Test location: AREA4

5.7.2 Photo documentation of the test set-up



5.7.3 Applicable standard

According to RSS-GEN, clause 6.11:

Frequency stability is a measure of frequency drift due to temperature and supply voltage variations, with reference to the frequency measured at an appropriate reference temperature and the rated supply voltage.

5.7.4 Description of Measurement

The OBW is measured with a spectrum analyser in a climatic chamber. The centroid frequency is noted.

Spectrum analyser settings for OBW:

RBW: 1-5% OBW, VBW: 3 RBW, Detector: Max peak, Sweep time: 5 s, Span: 2 OBW;

FCC ID: 2BKU8DEPLIFE-1 IC: 33302-DEPLIFE1
5.7.5 Test result

channel	Temp.	f _{centroid} [MHz]	Deviation [MHz]	Deviation [%]
1	+20 °C	2412.080	0.080	< 0.1
	-20 °C	2412.007	0.007	< 0.1
	+50 °C	2412.119	0.119	< 0.1
6	+20 °C	2437.023	0.023	< 0.1
	-20 °C	2437.117	0.117	< 0.1
	+50 °C	2436.920	0.080	< 0.1
11	+20 °C	2462.012	0.012	< 0.1
	-20 °C	2461.950	0.050	< 0.1
	+50 °C	2462.067	0.067	< 0.1

Limit according to RSS-GEN, clause 8.11:

If the frequency stability of the licence-exempt radio apparatus is not specified in the applicable RSS, the fundamental emissions of the radio apparatus should be kept within at least the central 80% of its permitted operating frequency band in order to minimize the possibility of out-of-band operation. In addition, its occupied bandwidth shall be entirely outside the restricted bands and the prohibited TV bands of 54-72 MHz, 76-88 MHz, 174-216 MHz, and 470-602 MHz, unless otherwise indicated.

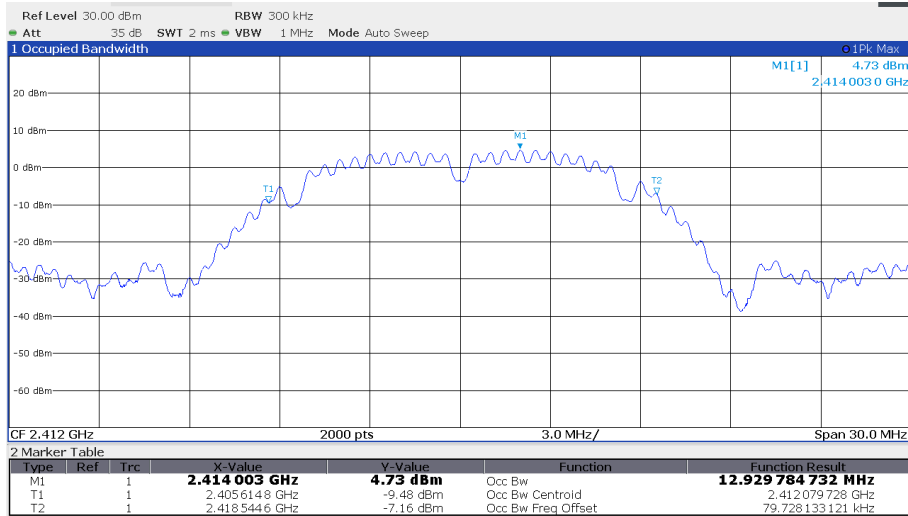
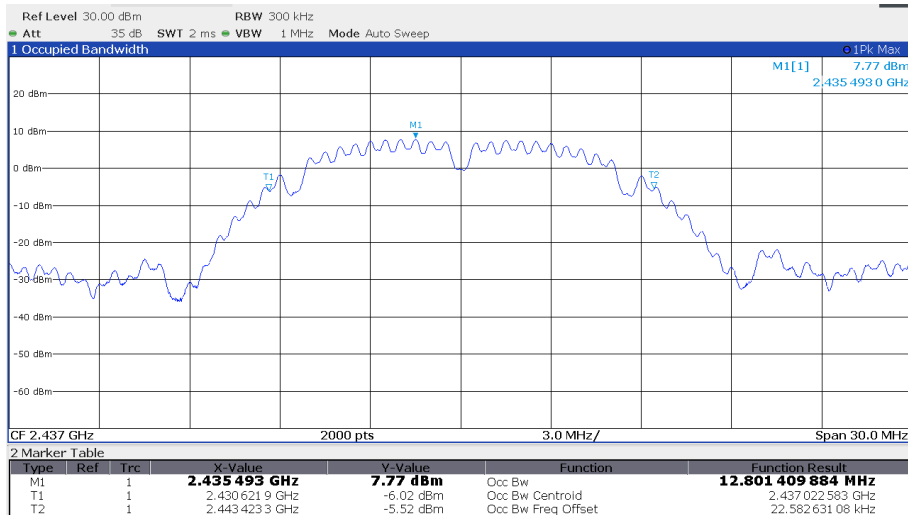
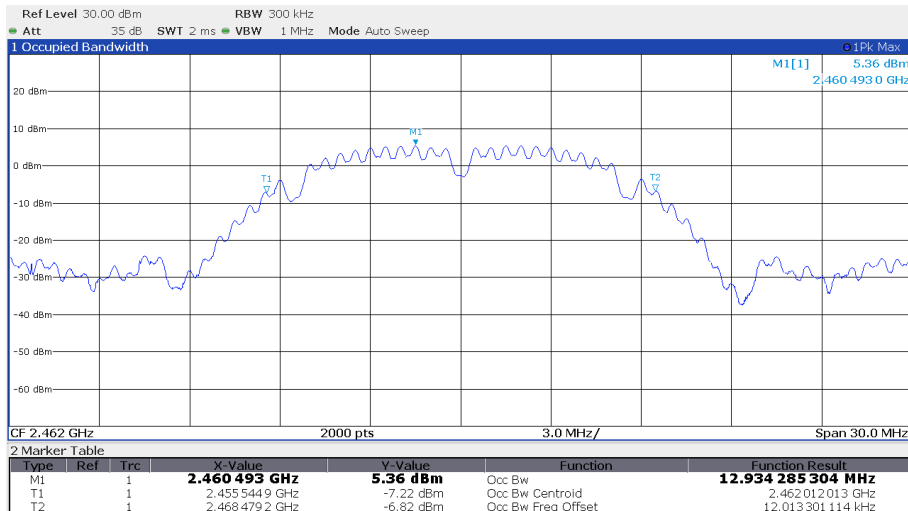
The requirements are **FULFILLED**.

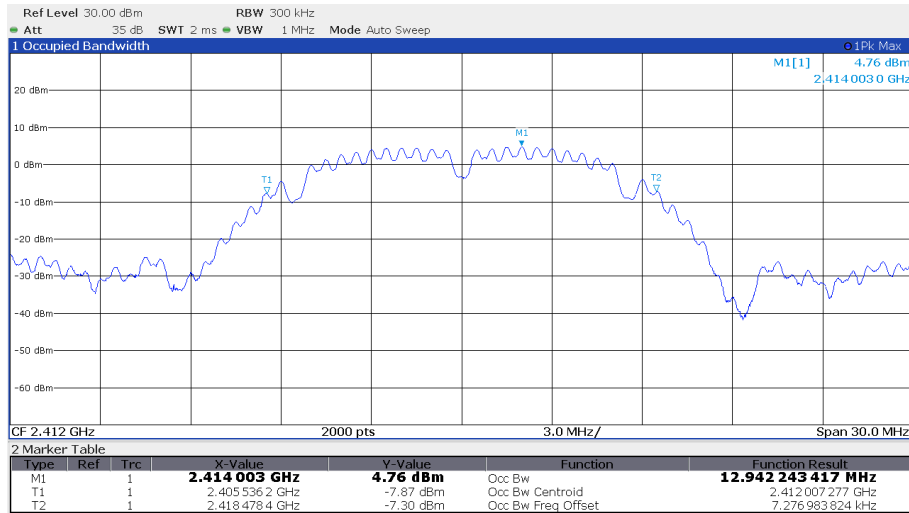
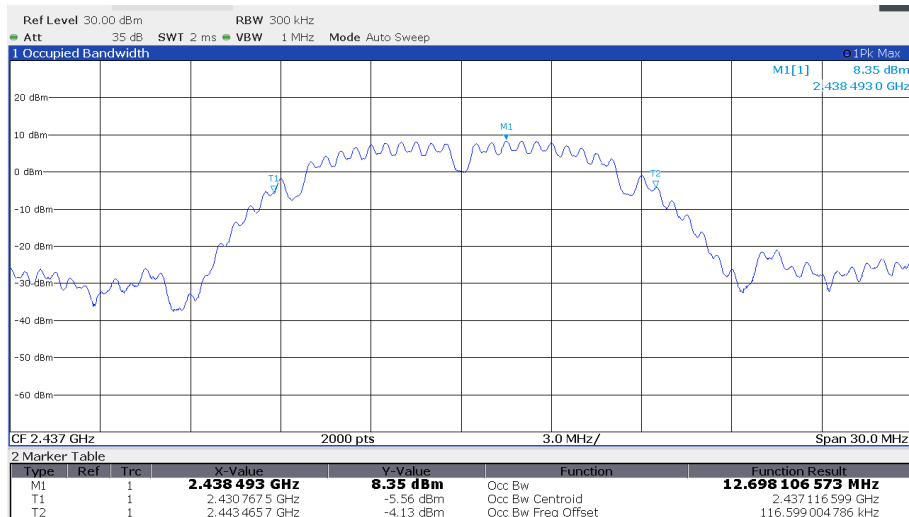
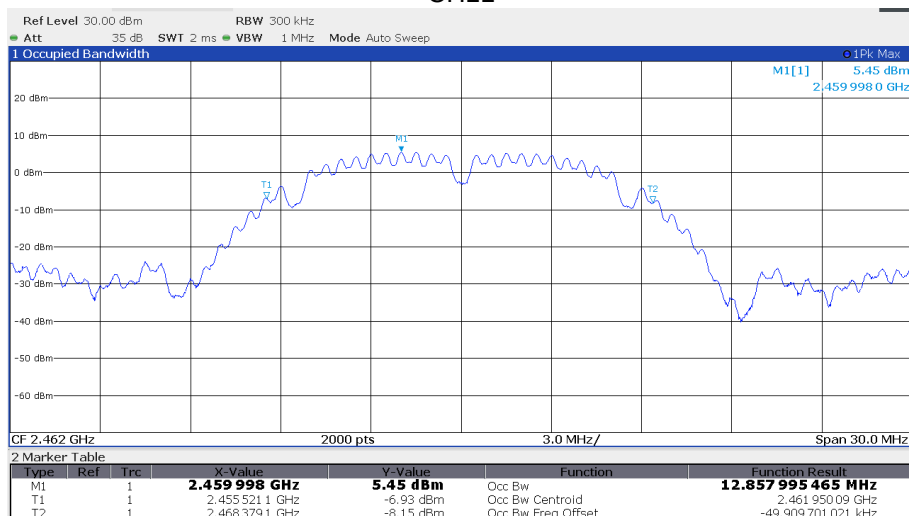
Remarks: For detailed test result please see the following test protocols.

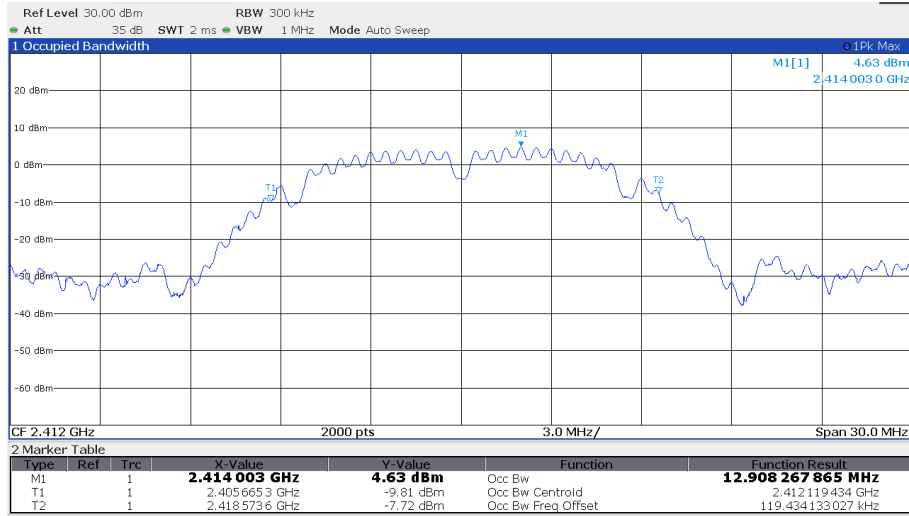
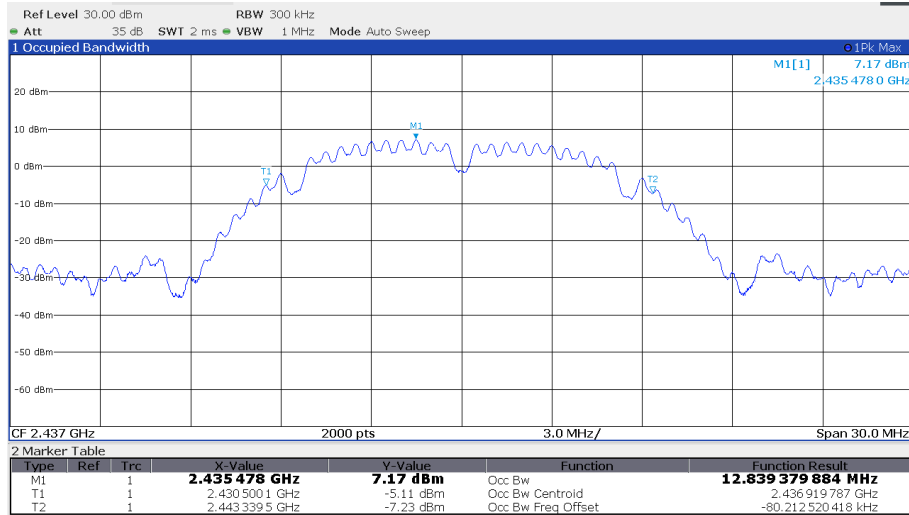
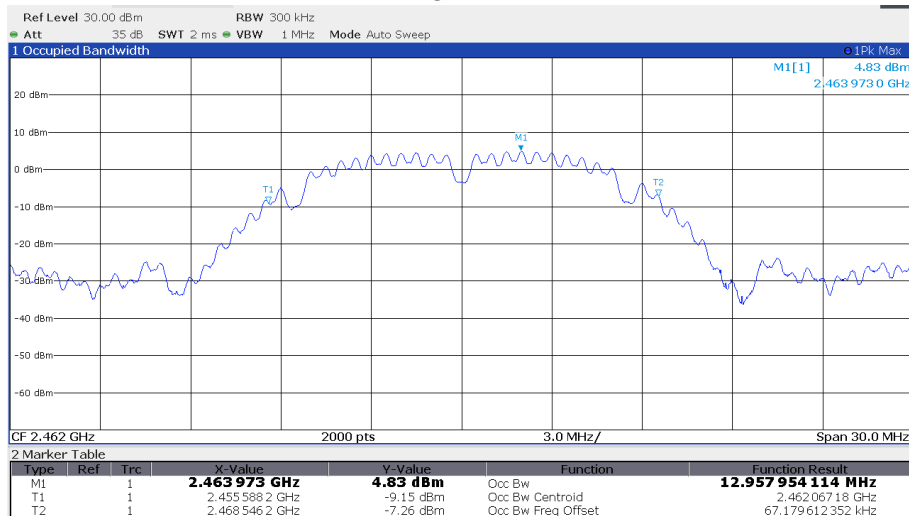
The test report merely corresponds to the test sample. It is not permitted to copy extracts of these test results without the written permission of the test laboratory.

FCC ID: 2BKU8DEPLIFE-1 IC: 33302-DEPLIFE1

5.7.6 Test protocols

T_{nom}
CH1

CH6

CH11


FCC ID: 2BKU8DEPLIFE-1 IC: 33302-DEPLIFE1
T_{min}
CH1

CH6

CH11


FCC ID: 2BKU8DEPLIFE-1 IC: 33302-DEPLIFE1
 $T_{\max}$
CH1

CH6

CH11


FCC ID: 2BKU8DEPLIFE-1 IC: 33302-DEPLIFE1

6 USED TEST EQUIPMENT AND ACCESSORIES

All test instruments used are calibrated and verified regularly. The calibration history is available on request.

Test ID	Model Type	Equipment No.	Next Calib.	Last Calib.	Next Verif.	Last Verif.
CPC 3	FSW43	02-02/11-15-001	19/08/2025	19/08/2024		
FE	FSW43	02-02/11-15-001	19/08/2025	19/08/2024		
	WK-340/40	02-02/45-05-001	17/07/2025	17/07/2024	17/01/2025	17/07/2024
	KK-SF104-11SMA-11N-2M	02-02/50-14-004				
MB	FSW43	02-02/11-15-001	19/08/2025	19/08/2024		
SEC 1-3	FSW43	02-02/11-15-001	19/08/2025	19/08/2024		
SER 1	ESR7	09-02/03-21-004	05/08/2025	05/08/2024		
	HFH2-Z2E	09-02/24-21-001	05/08/2025	05/08/2024		
	KK-7.8F-2XNM_4.0M	09-02/50-21-018				
	KK-7.8F-2XNM-10.0M	09-02/50-21-019				
	KK-7.8F-2XNM_4.5M	09-02/50-21-023				
	KK-7.8F-2XNM_9.5M	09-02/50-21-025				
SER 2	ESR7	09-02/03-21-004	05/08/2025	05/08/2024		
	BBV 9743 B	09-02/17-21-002	19/12/2024	19/12/2023		
	VULB9168	09-02/24-22-003	06/08/2025	06/08/2024	12/08/2025	12/08/2024
	KK-7.8F-2XNM_4.0M	09-02/50-21-018				
	KK-7.8F-2XNM-10.0M	09-02/50-21-019				
	KK-7.8F-2XNM_4.5M	09-02/50-21-023				
	KK-7.8F-2XNM_9.5M	09-02/50-21-025				
	50F-003 N 3dB	09-02/50-22-002				
	CDB-10K-18-50V-NMF-I	09-02/50-22-031	17/07/2025	17/07/2024		
	BAT-EMC 2023.0.8.0	09-02/68-21-002				
SER 3	FSW43	02-02/11-21-001	26/08/2025	26/08/2024		
	AMF-6D-01002000-22-10P	02-02/17-15-004				
	3117	02-02/24-20-007	15/11/2024	15/11/2023		
	WHK 3.0/18G-10EF	02-02/50-05-180				
	BAM 4.5-P	02-02/50-17-024				
	KK-SF106-2X11N-6,5M	02-02/50-18-016				
	0_5 Meter DC-18GHz	09-16/50-23-003				

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