



## TEST REPORT

BNetzA-CAB-02/21-102

Test report no.: 1-6608\_23-01-16-TR1

### Testing laboratory

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**Accredited Testing Laboratory:**

The testing laboratory (area of testing) is accredited according to DIN EN ISO/IEC 17025 (2018-03) by the Deutsche Akkreditierungsstelle GmbH (DAkkS).

The accreditation is valid for the scope of testing procedures as stated in the accreditation certificate with the registration number: D-PL-12047-01-00.

ISED Testing Laboratory Recognized Listing Number: DE0001  
FCC designation number: DE0002

### Applicant

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### Manufacturer

**Ingenico**  
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### Test standard/s

FCC - Title 47 CFR Part 15      FCC - Title 47 of the Code of Federal Regulations; Chapter I; Part 15 - Radio frequency devices

RSS - 247 Issue 2                Digital Transmission Systems (DTSS), Frequency Hopping Systems (FHSs) and Licence - Exempt Local Area Network (LE-LAN) Devices

For further applied test standards please refer to section 3 of this test report.

### Test Item

**Kind of test item:**                **Payment Terminal**  
**Model name:**                    **Link/2500 LE**  
**FCC ID:**                            **XKB-L25LECLWIBT**  
**ISED certification number:**   **2586D-L25LECLWIBT**  
**Frequency:**                      2400 MHz to 2483.5 MHz  
**Technology tested:**             Bluetooth® LE  
**Antenna:**                         Integrated antenna  
**Power supply:**                  3.6 DC by Li-ion battery / 230 V AC by mains  
**Temperature range:**            -20°C to +55°C

This test report is electronically signed and valid without handwritten signature. For verification of the electronic signatures, the public keys can be requested at the testing laboratory.

### Test report authorized:

Marco Bertolino  
Supervisor Radio Services  
Radio Labs

### Test performed:

Rene Oelmann  
Lab Manager  
Radio Labs

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## 2 General information

### 2.1 Notes and disclaimer

The test results of this test report relate exclusively to the test item specified in this test report. cetecom advanced GmbH does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens or samples of the type of the equipment represented by the test item.

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In no case this test report can be considered as a Letter of Approval.

This test report is electronically signed and valid without handwritten signature. For verification of the electronic signatures, the public keys can be requested at the testing laboratory.

### 2.2 Application details

Date of receipt of order:	2023-09-05
Date of receipt of test item:	2023-10-16
Start of test:*	2023-10-19
End of test:*	2023-10-25
Person(s) present during the test:	-/-

\*Date of each measurement, if not shown in the plot, can be requested. Dates are stored in the measurement software.

### 2.3 Test laboratories sub-contracted

None

### 3 Test standard/s, references and accreditations

Test standard	Date	Description
FCC - Title 47 CFR Part 15	-/-	FCC - Title 47 of the Code of Federal Regulations; Chapter I; Part 15 - Radio frequency devices
RSS - 247 Issue 2	February 2017	Digital Transmission Systems (DTSS), Frequency Hopping Systems (FHSs) and Licence - Exempt Local Area Network (LE-LAN) Devices
RSS - Gen Issue 5 incl. Amendment 1 & 2	February 2021	Spectrum Management and Telecommunications Radio Standards Specification - General Requirements for Compliance of Radio Apparatus

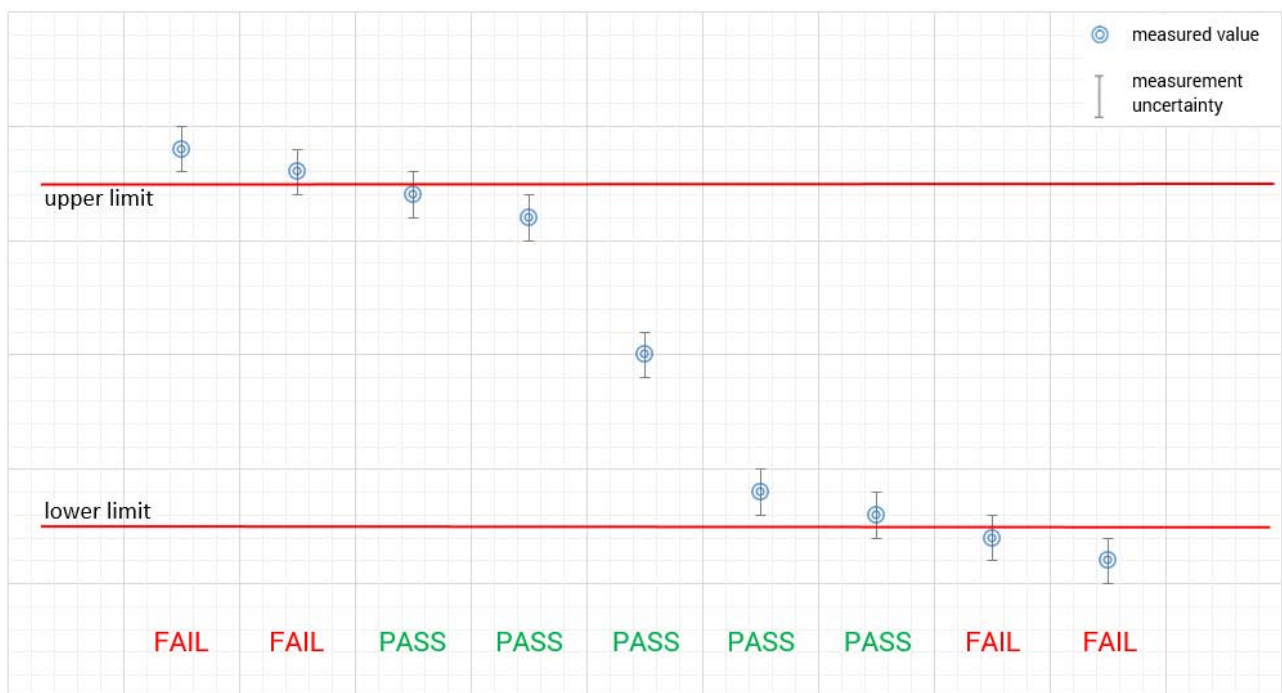
  

Guidance	Version	Description
KDB 558074 D01	v05r02	GUIDANCE FOR COMPLIANCE MEASUREMENTS ON DIGITAL TRANSMISSION SYSTEM, FREQUENCY HOPPING SPREAD SPECTRUM SYSTEM, AND HYBRID SYSTEM DEVICES OPERATING UNDER SECTION 15.247 OF THE FCC RULES
ANSI C63.4-2014	-/-	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz
ANSI C63.10-2013	-/-	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices

#### 4 Reporting statements of conformity – decision rule

Only the measured values related to their corresponding limits will be used to decide whether the equipment under test meets the requirements of the test standards listed in chapter 3. The measurement uncertainty is mentioned in this test report, see chapter 9, but is not taken into account - neither to the limits nor to the measurement results. Measurement results with a smaller margin to the corresponding limits than the measurement uncertainty have a potential risk of more than 5% that the decision might be wrong."

measured value, measurement uncertainty, verdict





## 7 Description of the test setup

Typically, the calibrations of the test apparatus are commissioned to and performed by an accredited calibration laboratory. The calibration intervals are determined in accordance with the DIN EN ISO/IEC 17025. In addition to the external calibrations, the laboratory executes comparison measurements with other calibrated test systems or effective verifications. Weekly chamber inspections and range calibrations are performed. Where possible, RF generating and signaling equipment as well as measuring receivers and analyzers are connected to an external high-precision 10 MHz reference (GPS-based or rubidium frequency standard).

In order to simplify the identification of the equipment used at some special tests, some items of test equipment and ancillaries can be provided with an identifier or number in the equipment list below (Lab/Item).

Each block diagram listed can contain several test setup configurations. All devices belonging to a test setup are identified with the same letter syntax. For example: Column Setup and all devices with an A.

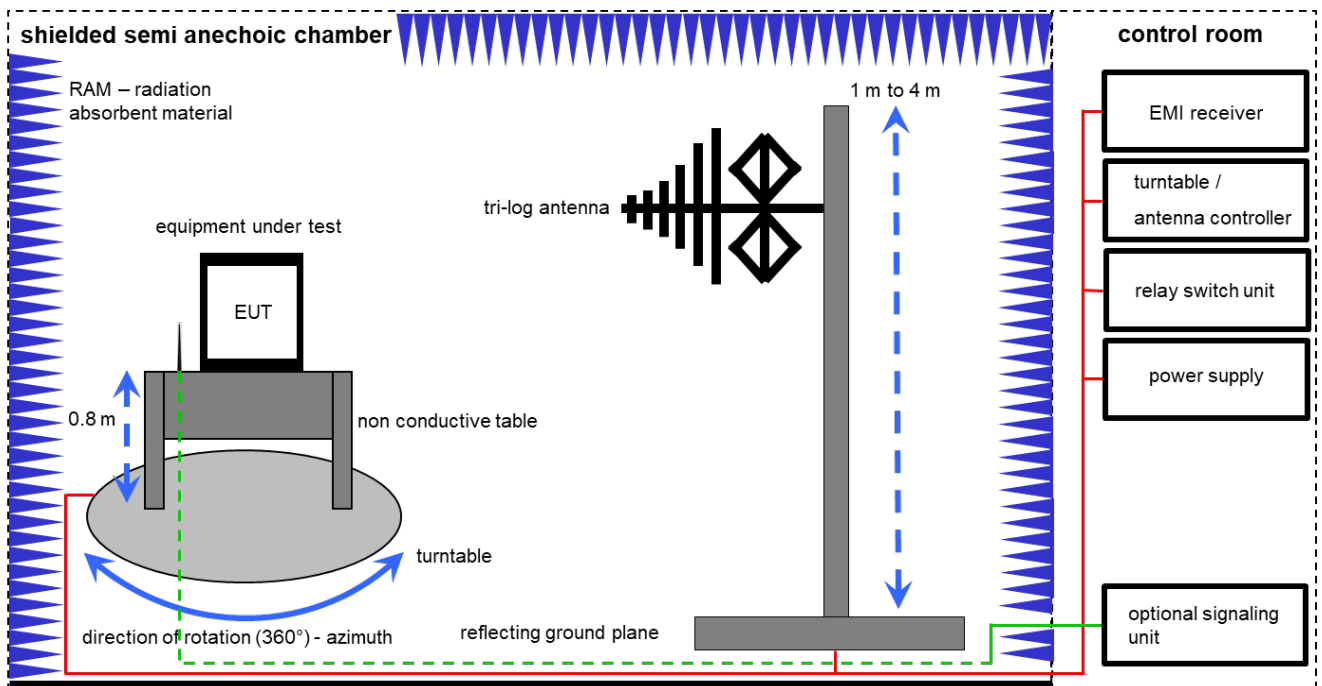
### **Agenda:** Kind of Calibration

k	calibration / calibrated	EK	limited calibration
ne	not required (k, ev, izw, zw not required)	zw	cyclical maintenance (external cyclical maintenance)
ev	periodic self verification	izw	internal cyclical maintenance
Ve	long-term stability recognized	g	blocked for accredited testing
vlk!	Attention: extended calibration interval		
NK!	Attention: not calibrated	*)	next calibration ordered / currently in progress



## 7.1 Shielded semi anechoic chamber

The radiated measurements are performed in vertical and horizontal plane in the frequency range from 30 MHz to 1 GHz in semi-anechoic chambers. The EUT is positioned on a non-conductive support with a height of 0.80 m above a conductive ground plane that covers the whole chamber. The receiving antennas are conform to specifications ANSI C63. These antennas can be moved over the height range between 1.0 m and 4.0 m in order to search for maximum field strength emitted from EUT. The measurement distances between EUT and receiving antennas are indicated in the test setups for the various frequency ranges. For each measurement, the EUT is rotated in all three axes until the maximum field strength is received. The wanted and unwanted emissions are received by spectrum analyzers where the detector modes and resolution bandwidths over various frequency ranges are set according to requirement ANSI C63.



Measurement distance: tri-log antenna 10 meter; EMC32 software version: 10.59.00

$$FS = UR + CL + AF$$

(FS-field strength; UR-voltage at the receiver; CL-loss of the cable; AF-antenna factor)

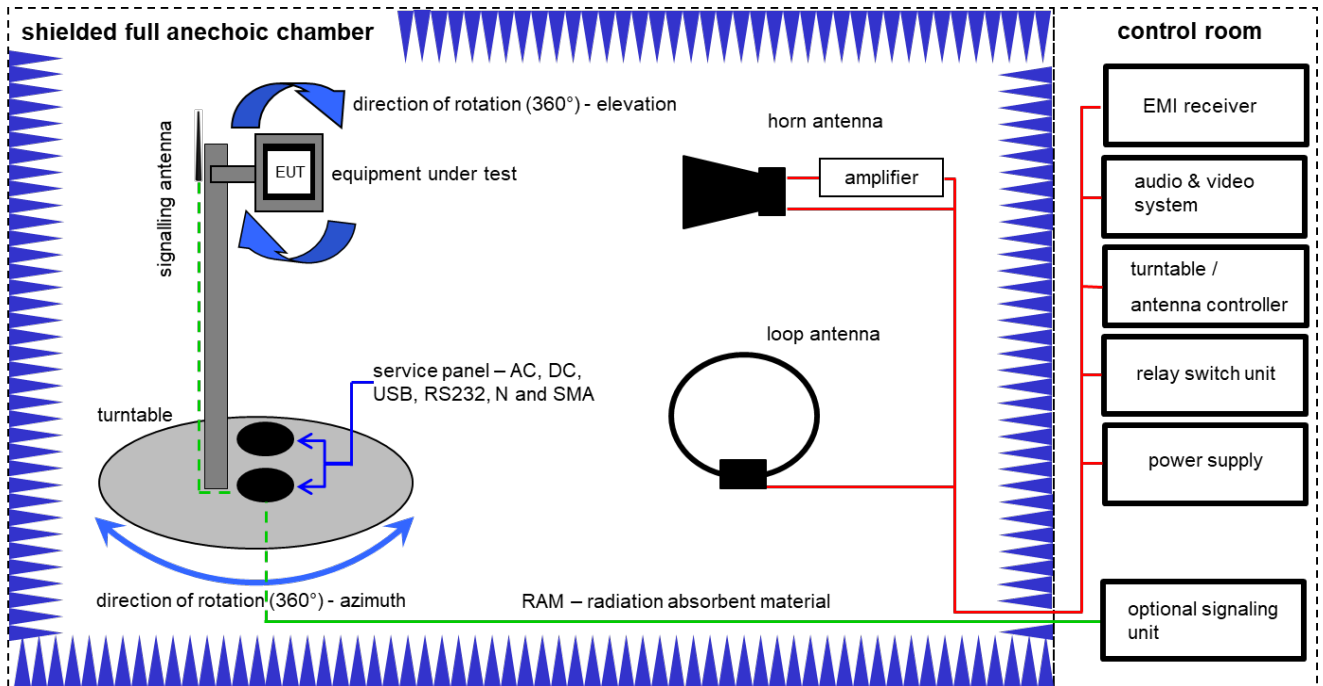
*Example calculation:*

$$FS [dB\mu V/m] = 12.35 [dB\mu V/m] + 1.90 [dB] + 16.80 [dB/m] = 31.05 [dB\mu V/m] (35.69 \mu V/m)$$

### Equipment table:

No.	Setup	Equipment	Type	Manufacturer	Serial No.	INV. No.	Kind of Calibration	Last Calibration	Next Calibration
1	A	Switch-Unit	3488A	HP	2719A14505	300000368	ev	-/-	-/-
2	A	Semi anechoic chamber	3000023	MWB AG	-/-	300000551	ne	-/-	-/-
3	A	Analyzer-Reference-System (Harmonics and Flicker)	ARS 16/1	SPS	A3509 07/0 0205	300003314	vKI!	29.12.2021	31.12.2023
4	A	Antenna Tower	Model 2175	ETS-Lindgren	64762	300003745	izw	-/-	-/-
5	A	Positioning Controller	Model 2090	ETS-Lindgren	64672	300003746	izw	-/-	-/-
6	A	Turntable Interface-Box	Model 105637	ETS-Lindgren	44583	300003747	izw	-/-	-/-
7	A	TRILOG Broadband Test-Antenna 30 MHz - 3 GHz	VULB9163	Schwarzbeck Mess - Elektronik	295	300003787	vKI!	23.05.2023	31.05.2025
8	A	Turntable	2089-4.0	EMCO	-/-	300004394	ne	-/-	-/-
9	A	PC	TecLine	F+W	-/-	300004388	ne	-/-	-/-
10	A	EMI Test Receiver	ESR3	Rohde & Schwarz	102587	300005771	k	09.12.2022	31.12.2023

## 7.2 Shielded fully anechoic chamber



Measurement distance: horn antenna 3 meter; loop antenna 3 meter / 1 meter

$$FS = UR + CA + AF$$

(FS-field strength; UR-voltage at the receiver; CA-loss of the signal path; AF-antenna factor)

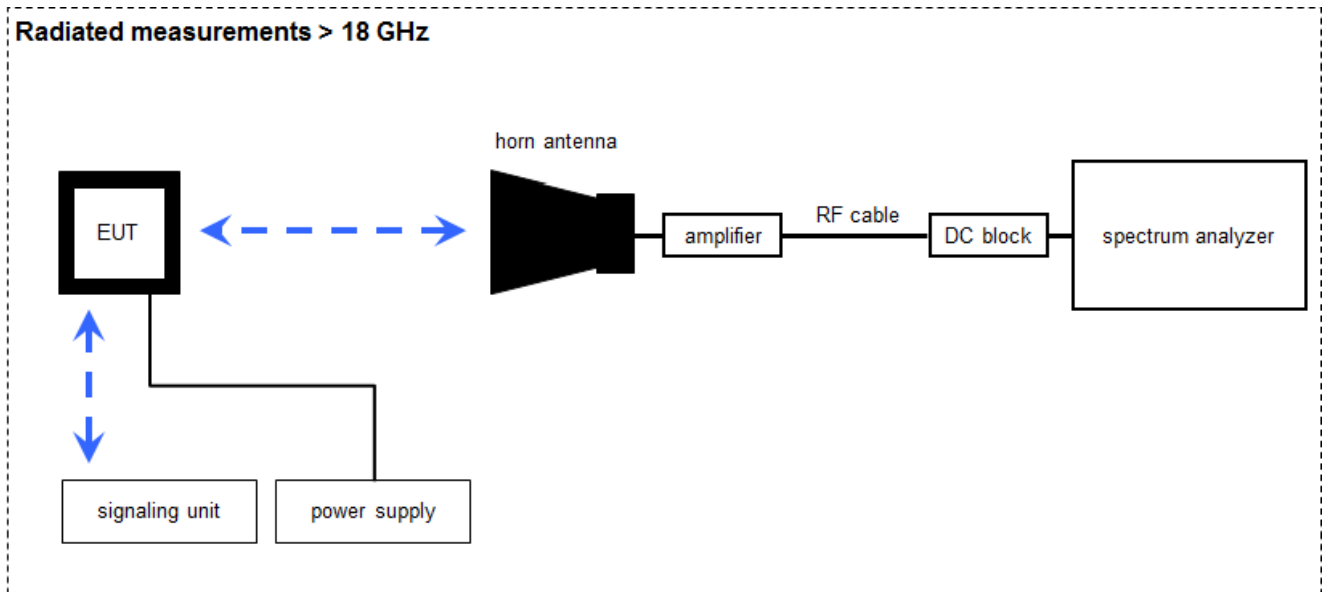
Example calculation:

$$FS [dB\mu V/m] = 40.0 [dB\mu V/m] + (-35.8) [dB] + 32.9 [dB/m] = 37.1 [dB\mu V/m] (71.61 \mu V/m)$$

### Equipment table:

No.	Setup	Equipment	Type	Manufacturer	Serial No.	INV. No.	Kind of Calibration	Last Calibration	Next Calibration
1	C	Active Loop Antenna 9 kHz to 30 MHz	6502	EMCO	2210	300001015	vKI!	02.08.2023	31.08.2025
2	A, B, C	Anechoic chamber	FAC 3/5m	MWB / TDK	87400/02	300000996	ev	-/-	-/-
3	A, B, C	Switch / Control Unit	3488A	HP	*	300000199	ne	-/-	-/-
4	A, B	Double-Ridged Waveguide Horn Antenna 1-18.0GHz	3115	EMCO	8812-3089	300000307	vKI!	11.02.2022	29.02.2024
5	A	Band Reject filter	WRCG2400/2483-2375/2505-50/10SS	Wainwright	11	300003351	ev	-/-	-/-
6	A, B, C	EMI Test Receiver 20Hz- 26,5GHz	ESU26	R&S	100037	300003555	k	07.12.2022	31.12.2023
7	A, B	Highpass Filter	WHK1.1/15G-10SS	Wainwright	3	300003255	ev	-/-	-/-
8	A, B	Highpass Filter	WHKX7.0/18G-8SS	Wainwright	19	300003790	ne	-/-	-/-
9	A, B	High Pass Filter	VHF-3500+	Mini Circuits	-/-	400000193	ne	-/-	-/-
10	A, B	Broadband Amplifier 0.5-18 GHz	CBLU5184540	CERNEX	22049	300004481	ev	-/-	-/-
11	A, B, C	4U RF Switch Platform	L4491A	Agilent Technologies	MY50000037	300004509	ne	-/-	-/-
12	A, B, C	NEXIO EMV-Software	BAT EMC V2022.0.22.0	Nexio	-/-	300004682	ne	-/-	-/-

### 7.3 Radiated measurements > 18 GHz



Measurement distance: horn antenna 50 cm

$$FS = UR + CA + AF$$

(FS-field strength; UR-voltage at the receiver; CA-loss signal path & distance correction; AF-antenna factor)

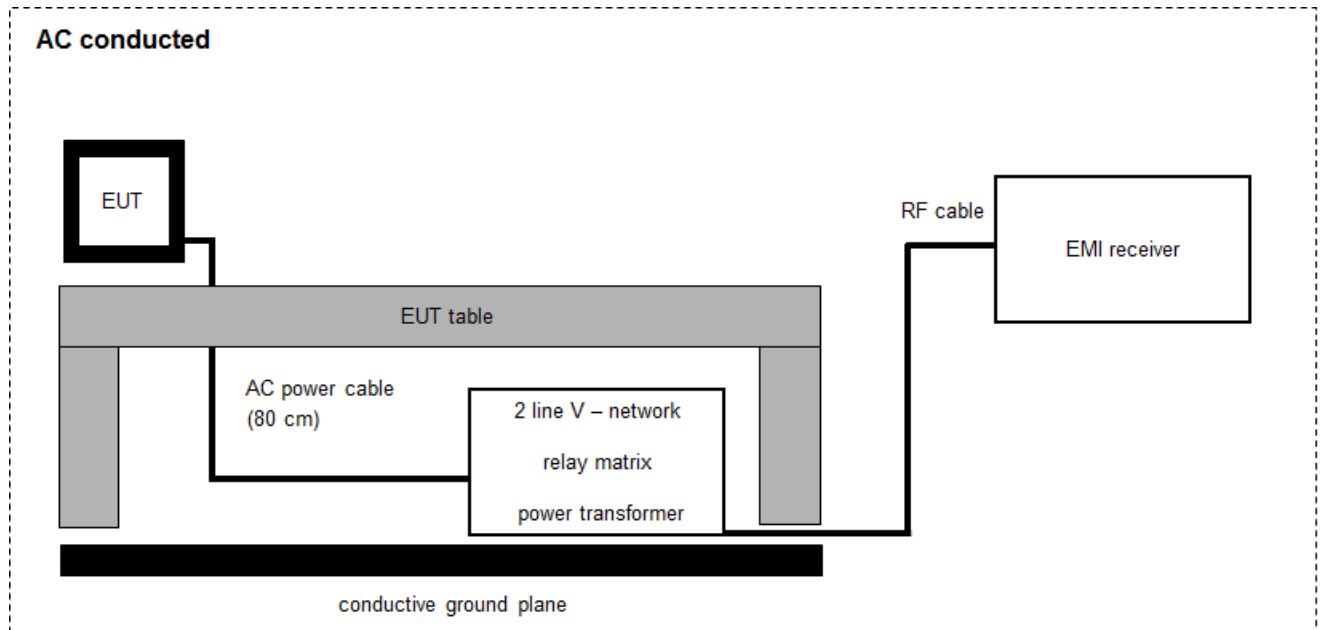
Example calculation:

$$FS [dB\mu V/m] = 40.0 [dB\mu V/m] + (-60.1) [dB] + 36.74 [dB/m] = 16.64 [dB\mu V/m] (6.79 \mu V/m)$$

#### Equipment table:

No.	Setup	Equipment	Type	Manufacturer	Serial No.	INV. No.	Kind of Calibration	Last Calibration	Next Calibration
1	A	Microwave System Amplifier, 0.5-26.5 GHz	83017A	HP	00419	300002268	ev	-/-	-/-
2	A	Std. Gain Horn Antenna 18.0-26.5 GHz	638	Narda	01096	300000486	vKI!	17.01.2022	31.01.2024
3	A	Signal analyzer	FSV40	Rohde&Schwarz	101042	300004517	k	12.12.2022	31.12.2023
4	A	RF-Cable	ST18/SMAm/SMAm /48	Huber & Suhner	Batch no. 600918	400001182	ev	-/-	-/-
5	A	DC-Blocker 0.1-40 GHz	8141A	Inmet	-/-	400001185	ev	-/-	-/-

## 7.4 AC conducted



$$FS = UR + CF + VC$$

(FS-field strength; UR-voltage at the receiver; CR-loss of the cable and filter; VC-correction factor of the ISN)

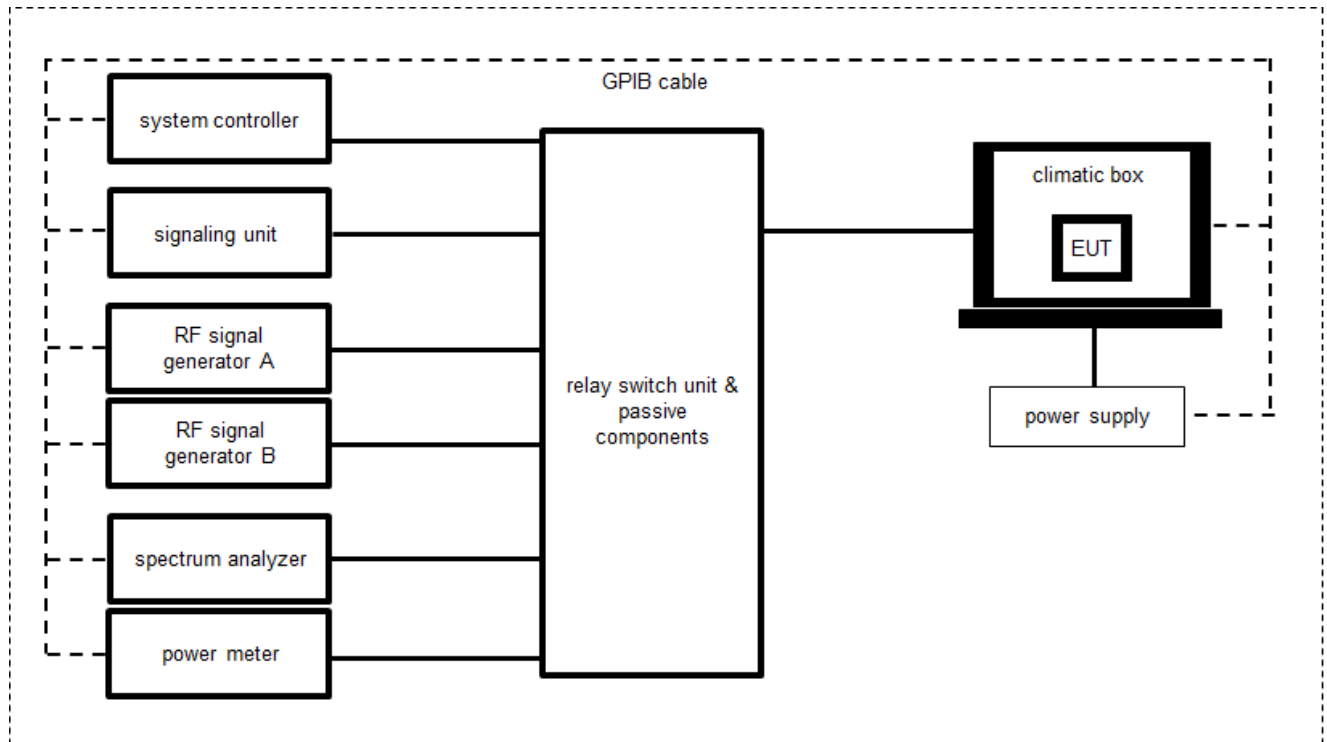
Example calculation:

$$FS [dB\mu V/m] = 37.62 [dB\mu V/m] + 9.90 [dB] + 0.23 [dB] = 47.75 [dB\mu V/m] (244.06 \mu V/m)$$

**Equipment table:**

No.	Setup	Equipment	Type	Manufacturer	Serial No.	INV. No.	Kind of Calibration	Last Calibration	Next Calibration
1	A	Two-line V-Network (LISN) 9 kHz to 30 MHz	ESH3-Z5	Rohde & Schwarz	892475/017	300002209	vIK!	14.12.2021	31.12.2023
2	A	RF-Filter-section	85420E	HP	3427A00162	300002214	NK!	-/-	-/-
3	A	Hochpass 150 kHz	EZ-25	R&S	100010	300003798	ev	-/-	-/-
4	A	PC	TecLine	F+W		300003532	ne	-/-	-/-
5	A	EMI Test Receiver 3.6 GHz	ESR3	Rohde & Schwarz	102981	300006318	k	09.12.2022	31.12.2023

## 7.5 Conducted measurements Bluetooth system



OP = AV + CA  
 (OP-output power; AV-analyzer value; CA-loss signal path)

Example calculation:

OP [dBm] = 6.0 [dBm] + 11.7 [dB] = 17.7 [dBm] (58.88 mW)

**Equipment table:**

No.	Setup	Equipment	Type	Manufacturer	Serial No.	INV. No.	Kind of Calibration	Last Calibration	Next Calibration
1	A	Switch / Control Unit (including DC-Block, Splitter)	3488A	HP	-/-	300000929	ne	-/-	-/-
2	A	Step Attenuator - 2.7GHz	RSP	Rohde & Schwarz	834500/010	300002681	EK	07.12.2022	31.12.2024
3	A	Bluetooth tester	CBT	Rohde&Schwarz	100185	300003416	vIKI!	19.12.2022	18.12.2024
4	A	PC Laboratory 19"	Exone i3	Fröhlich + Walter	35230157A0370	300004646	ne	-/-	-/-
5	A	Signal analyzer	FSV30	Rohde&Schwarz	1321.3008K30/103170	300004855	vIKI!	09.12.2022	31.12.2024
6	A	USB-GPIB-Interface	82357B	Agilent Technologies	MY54323070	300004852	ne	-/-	-/-
7	A	Peak And Average Power Sensor	U2042XA	Keysight	MY58020014	300005547	k	07.12.2022	31.12.2023
8	A	Tester Software C.BER	Version 5.0	CTC advanced GmbH	0001	400001379	ne	-/-	-/-
9	A	Switch matrix	RSM 1.1	cetecom advanced GmbH	31534892	400001456	ev	20.09.2023	19.09.2024

## 8 Sequence of testing

### 8.1 Sequence of testing radiated spurious 9 kHz to 30 MHz

#### Setup

- The equipment is set up to simulate normal operation mode as described in the user manual or defined by the manufacturer.
- If the EUT is a tabletop system, it is placed on a table with 0.8 m height.
- If the EUT is a floor standing device, it is placed directly on the turn table.
- Auxiliary equipment and cables are positioned to simulate normal operation conditions as described in ANSI C 63.4.
- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.
- Measurement distance is 3 m (see ANSI C 63.4) – see test details.
- EUT is set into operation.

#### Premeasurement\*

- The turntable rotates from 0° to 315° using 45° steps.
- The antenna height is 1 m.
- At each turntable position the analyzer sweeps with positive-peak detector to find the maximum of all emissions.

#### Final measurement

- Identified emissions during the pre-measurement are maximized by the software by rotating the turntable from 0° to 360°.
- Loop antenna is rotated about its vertical axis for maximum response at each azimuth about the EUT. (For certain applications, the loop antenna plane may also need to be positioned horizontally at the specified distance from the EUT)
- The final measurement is done in the position (turntable and elevation) causing the highest emissions with quasi-peak (as described in ANSI C 63.4).
- Final levels, frequency, measuring time, bandwidth, turntable position, correction factor, margin to the limit and limit will be recorded. A plot with the graph of the premeasurement and the limit is stored.

\*Note: The sequence will be repeated three times with different EUT orientations.

## 8.2 Sequence of testing radiated spurious 30 MHz to 1 GHz

### Setup

- The equipment is set up to simulate normal operation mode as described in the user manual or defined by the manufacturer.
- If the EUT is a tabletop system, a table with 0.8 m height is used, which is placed on the ground plane.
- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.
- Auxiliary equipment and cables are positioned to simulate normal operation conditions as described in ANSI C 63.4.
- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.
- Measurement distance is 10 m or 3 m (see ANSI C 63.4) – see test details.
- EUT is set into operation.

### Premeasurement

- The turntable rotates from 0° to 315° using 45° steps.
- The antenna is polarized vertical and horizontal.
- The antenna height changes from 1 m to 3 m.
- At each turntable position, antenna polarization and height the analyzer sweeps three times in peak to find the maximum of all emissions.

### Final measurement

- The final measurement is performed for at least six highest peaks according to the requirements of the ANSI C63.4.
- Based on antenna and turntable positions at which the peak values are measured the software maximize the peaks by changing turntable position  $\pm 45^\circ$  and antenna height between 1 and 4 m.
- The final measurement is done with quasi-peak detector (as described in ANSI C 63.4).
- Final levels, frequency, measuring time, bandwidth, antenna height, antenna polarization, turntable angle, correction factor, margin to the limit and limit are recorded. A plot with the graph of the premeasurement with marked maximum final results and the limit is stored.

### 8.3 Sequence of testing radiated spurious 1 GHz to 18 GHz

#### Setup

- The equipment is set up to simulate normal operation mode as described in the user manual or defined by the manufacturer.
- If the EUT is a tabletop system, a 2-axis positioner with 1.5 m height is used.
- If the EUT is a floor standing device, it is placed directly on the turn table.
- Auxiliary equipment and cables are positioned to simulate normal operation conditions as described in ANSI C 63.4.
- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.
- Measurement distance is 3 m (see ANSI C 63.4) – see test details.
- EUT is set into operation.

#### Premeasurement

- The turntable rotates from 0° to 315° using 45° steps.
- The antenna is polarized vertical and horizontal.
- The antenna height is 1.5 m.
- At each turntable position and antenna polarization the analyzer sweeps with positive peak detector to find the maximum of all emissions.

#### Final measurement

- The final measurement is performed for at least six highest peaks according to the requirements of the ANSI C63.4.
- Based on antenna and turntable positions at which the peak values are measured the software maximizes the peaks by rotating the turntable from 0° to 360°. This measurement is repeated for different EUT-table positions (0° to 150° in 30°-steps) and for both antenna polarizations.
- The final measurement is done in the position (turntable, EUT-table and antenna polarization) causing the highest emissions with Peak and RMS detector (as described in ANSI C 63.4).
- Final levels, frequency, measuring time, bandwidth, turntable position, EUT-table position, antenna polarization, correction factor, margin to the limit and limit are recorded. A plot with the graph of the premeasurement with marked maximum final results and the limit is stored.



## 8.4 Sequence of testing radiated spurious above 18 GHz

### Setup

- The equipment is set up to simulate normal operation mode as described in the user manual or defined by the manufacturer.
- Auxiliary equipment and cables are positioned to simulate normal operation conditions as described in ANSI C 63.4.
- The AC power port of the EUT (if available) is connected to a power outlet.
- The measurement distance is as appropriate (e.g. 0.5 m).
- The EUT is set into operation.

### Premeasurement

- The test antenna is handheld and moved carefully over the EUT to cover the EUT's whole sphere and different polarizations of the antenna.

### Final measurement

- The final measurement is performed at the position and antenna orientation causing the highest emissions with Peak and RMS detector (as described in ANSI C 63.4).
- Final levels, frequency, measuring time, bandwidth, correction factor, margin to the limit and limit are recorded. A plot with the graph of the premeasurement and the limit is stored.

## 9 Measurement uncertainty

Measurement uncertainty	
Test case	Uncertainty
Antenna gain	± 3 dB
Carrier frequency separation	± 21.5 kHz
Number of hopping channels	-/-
Time of occupancy	According BT Core specification
Spectrum bandwidth	± 21.5 kHz absolute; ± 15.0 kHz relative
Maximum output power	± 1 dB
Detailed conducted spurious emissions @ the band edge	± 1 dB
Band edge compliance radiated	± 3 dB
Spurious emissions conducted	± 3 dB
Spurious emissions radiated below 30 MHz	± 3 dB
Spurious emissions radiated 30 MHz to 1 GHz	± 3 dB
Spurious emissions radiated 1 GHz to 12.75 GHz	± 3.7 dB
Spurious emissions radiated above 12.75 GHz	± 4.5 dB
Spurious emissions conducted below 30 MHz (AC conducted)	± 2.6 dB

## 10 Summary of measurement results

<input checked="" type="checkbox"/>	No deviations from the technical specifications were ascertained
<input type="checkbox"/>	There were deviations from the technical specifications ascertained
<input type="checkbox"/>	This test report is only a partial test report. The content and verdict of the performed test cases are listed below.

TC Identifier	Description	Verdict	Date	Remark
RF-Testing	CFR Part 15 RSS - 247, Issue 2	See table!	2023-11-10	-/-

Test specification clause	Test case	Guideline	Temperature conditions	Power source voltages	Mode	C	NC	NA	NP	Remark
§15.247(b)(4) RSS - 247 / 5.4 (4)	System gain	-/-	Nominal	Nominal	1 Msps	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-/-
§15.247(e) RSS - 247 / 5.2 (b)	Power spectral density	KDB 558074 DTS clause: 8.4	Nominal	Nominal	1 Msps 2 Msps	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-/-
§15.247(a)(2) RSS - 247 / 5.2 (a)	DTS bandwidth – 6 dB bandwidth	KDB 558074 DTS clause: 8.2	Nominal	Nominal	1 Msps 2 Msps	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-/-
RSS Gen clause 4.6.1	Occupied bandwidth	-/-	Nominal	Nominal	1 Msps 2 Msps	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-/-
§15.247(b)(3) RSS - 247 / 5.4 (4)	Maximum output power	KDB 558074 DTS clause: 8.3.1.1	Nominal	Nominal	1 Msps 2 Msps	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-/-
§15.205 RSS - 247 / 5.5 RSS - Gen	Band edge compliance cond. & rad.	KDB 558074 DTS clause: 8.7.2 or 8.7.3	Nominal	Nominal	1 Msps 2 Msps	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-/-
§15.247(d) RSS - 247 / 5.5	TX spurious emissions conducted	KDB 558074 DTS clause: 8.5	Nominal	Nominal	1 Msps 2 Msps	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-/-
§15.209(a) RSS - Gen	Spurious emissions radiated below 30 MHz	-/-	Nominal	Nominal	1 Msps 2 Msps	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-/-
§15.247(d) RSS - 247 / 5.5 §15.109 RSS - Gen	Spurious emissions radiated 30 MHz to 1 GHz	-/-	Nominal	Nominal	1 Msps 2 Msps	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-/-
§15.247(d) RSS - 247 / 5.5 §15.109 RSS - Gen	Spurious emissions radiated above 1 GHz	-/-	Nominal	Nominal	1 Msps 2 Msps	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-/-
§15.107(a) §15.207	Conducted emissions below 30 MHz (AC conducted)	-/-	Nominal	Nominal	1 Msps	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-/-

**Note:** C = Compliant; NC = Not compliant; NA = Not applicable; NP = Not performed

## 11 Additional comments

The Bluetooth® word mark and logos are owned by the Bluetooth SIG Inc. and any use of such marks by CTC advanced GmbH is under license.

Reference documents: 1-6608\_23-01-16\_TR1-A201 (conducted results)  
 1-6608\_23-01-17\_TR1 (Bluetooth Classic – gain results)  
 1-6608\_23-01-17\_TR1-A201

Special test descriptions: None

Configuration descriptions:

Bluetooth Low Energy	
Longest Supported payload (37 – 255 Byte)	Tx: 255, RX: 255
LE 1M PHY supported	Yes
LE 2M PHY supported	Yes
Stable Modulation Index supported (SMI)	No
LE Coded PHY supported (S=2)	Yes
LE Coded PHY supported (S=8)	Yes

- EUT selection:
- Only one device available
  - Devices selected by the customer
  - Devices selected by the laboratory (Randomly)

- Test mode:
- Bluetooth Test mode enabled (EUT is controlled over CBT/CMU/CMW)
  - Special software is used. EUT is transmitting pseudo random data by itself

- Antennas and transmit operating modes:
- Operating mode 1 (single antenna)
    - Equipment with 1 antenna,
    - Equipment with 2 diversity antennas operating in switched diversity mode by which at any moment in time only 1 antenna is used,
    - Smart antenna system with 2 or more transmit/receive chains, but operating in a mode where only 1 transmit/receive chain is used)

## 12 Measurement results

### 12.1 System gain

**Limits:**

FCC	ISED
6 dBi / > 6 dBi output power and power density reduction required	

**Results:** Added from 1-6608\_23-01-17\_TR1

	Low channel (2402 MHz)	Mid channel (2440 MHz)	High channel (2480 MHz)
Gain [dBi] Added from 1-6608_23-01-17_TR1	-3.9	-4.3	-4.0

## 12.2 Power spectral density

### Description:

Measurement of the power spectral density of a digital modulated system.

Measurement parameters	
External result file	1-6608_23-01-16_TR1-A201 FCC Part 15.247 Peak Power Spectral Density DTS
Test setup	See sub clause 7.5 setup A
Measurement uncertainty	See sub clause 9

### Limits:

FCC	ISED
Power spectral density	
For digitally modulated systems the transmitter power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission or over 1.0 second if the transmission exceeds 1.0-second duration.	

### Results:

	Frequency		
	2402 MHz (2404 MHz for 2 Mpsps)	2440 MHz	2480 MHz (2478 MHz for 2 Mpsps)
Power spectral density [dBm / 3kHz] 1 Mpsps	-12.19	-11.97	-12.04
Power spectral density [dBm / 3kHz] 2 Mpsps	-14.55	-14.51	-14.23
Power spectral density [dBm / 3kHz] coded S2	-4.80	-4.65	-4.64
Power spectral density [dBm / 3kHz] coded S8	-4.54	-4.35	-4.36

## 12.3 DTS bandwidth – 6 dB bandwidth

### Description:

Measurement of the 6 dB bandwidth of the modulated signal.

Measurement parameters	
External result file	1-6608_23-01-16_TR1-A201 FCC Part 15.247 Bandwidth 6dB DTS
Test setup	See sub clause 7.5 setup A
Measurement uncertainty	See sub clause 9

### Limits:

FCC	ISED
DTS bandwidth – 6 dB bandwidth	
Systems using digital modulation techniques may operate in the 2400–2483.5 MHz band. The minimum 6 dB bandwidth shall be at least 500 kHz.	

### Results:

	Frequency		
	2402 MHz (2404 MHz for 2 Mpsps)	2440 MHz	2480 MHz (2478 MHz for 2 Mpsps)
<b>6 dB bandwidth [kHz] 1 Mpsps</b>	674	672	673
<b>6 dB bandwidth [kHz] 2 Mpsps</b>	1176	1173	1176
<b>6 dB bandwidth [kHz] coded S2</b>	665	663	664
<b>6 dB bandwidth [kHz] coded S8</b>	618	617	617

## 12.4 Occupied bandwidth – 99% emission bandwidth

**Description:**

Measurement of the 99% bandwidth of the modulated signal acc. RSS-GEN.

Measurement parameters	
External result file	1-6608_23-01-16_TR1-A201 FCC Part 15.247 Bandwidth 99PCT-20dB
Test setup	See sub clause 7.5 setup A
Measurement uncertainty	See sub clause 9

**Usage:**

-/-	ISED
Occupied bandwidth – 99% emission bandwidth	
OBW is necessary for emission designator	

**Results:**

	Frequency		
	2402 MHz (2404 MHz for 2 MspS)	2440 MHz	2480 MHz (2478 MHz for 2 MspS)
<b>99% bandwidth [kHz] 1 MspS</b>	1027	1028	1028
<b>99% bandwidth [kHz] 2 MspS</b>	2051	2054	2054
<b>99% bandwidth [kHz] coded S2</b>	1016	1017	1017
<b>99% bandwidth [kHz] coded S8</b>	1056	1053	1116



## 12.5 Maximum output power

### Description:

Measurement of the maximum output power conducted. EUT in single channel mode.

Measurement parameters	
External result file	1-6608_23-01-16_TR1-A201 FCC Part 15.247 Maximum Peak Conducted Output Power DTS
Test setup	See sub clause 7.5 setup A
Measurement uncertainty	See sub clause 9

### Limits:

FCC	ISED
Maximum output power	
Conducted: 1.0 W – antenna gain max. 6 dBi	

### Results:

	Frequency		
	2402 MHz (2404 MHz for 2 MSPS)	2440 MHz	2480 MHz (2478 MHz for 2 MSPS)
Maximum output power conducted [dBm] 1 MSPS	2.46	2.65	2.60
Maximum output power conducted [dBm] 2 MSPS	1.87	2.05	2.04
Maximum output power conducted [dBm] coded S2	1.69	1.86	1.82
Maximum output power conducted [dBm] coded S8	1.70	1.88	1.84

## 12.6 Band edge compliance radiated

### Description:

Measurement of the radiated band edge compliance. The EUT is turned in the position that results in the maximum level at the band edge. Then a sweep over the corresponding restricted band is performed. The EUT is set to single channel mode and the transmit frequency 2402 MHz for the lower restricted band and 2480 MHz for the upper restricted band. Measurement distance is 3m.

Measurement parameters	
Detector	Peak / RMS
Sweep time	Auto
Resolution bandwidth	1 MHz
Video bandwidth	3 MHz
Span	Lower Band: 2300 – 2400 MHz higher Band: 2480 – 2500 MHz
Trace mode	Max hold
Test setup	See sub clause 7.2 setup B
Measurement uncertainty	See sub clause 9

### Limits:

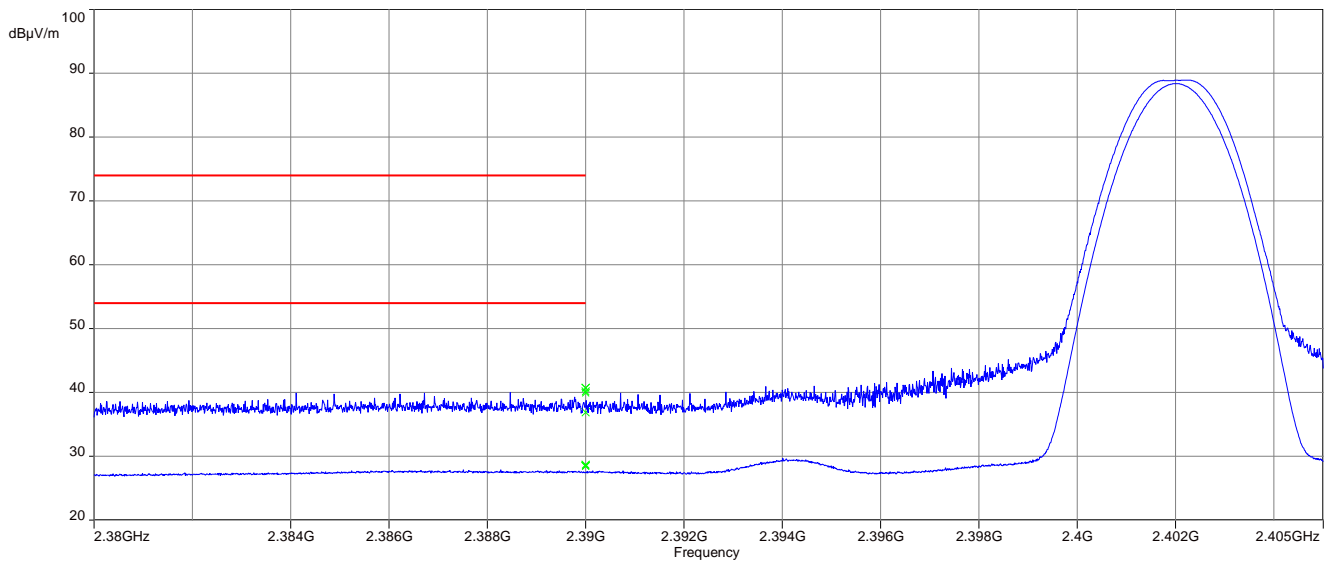
FCC	ISED
Band edge compliance radiated	
<p>In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. 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 limits specified in Section 15.209(a) (see Section 5.205(c)).</p>	
54 dB $\mu$ V/m AVG 74 dB $\mu$ V/m Peak	

**Result:**

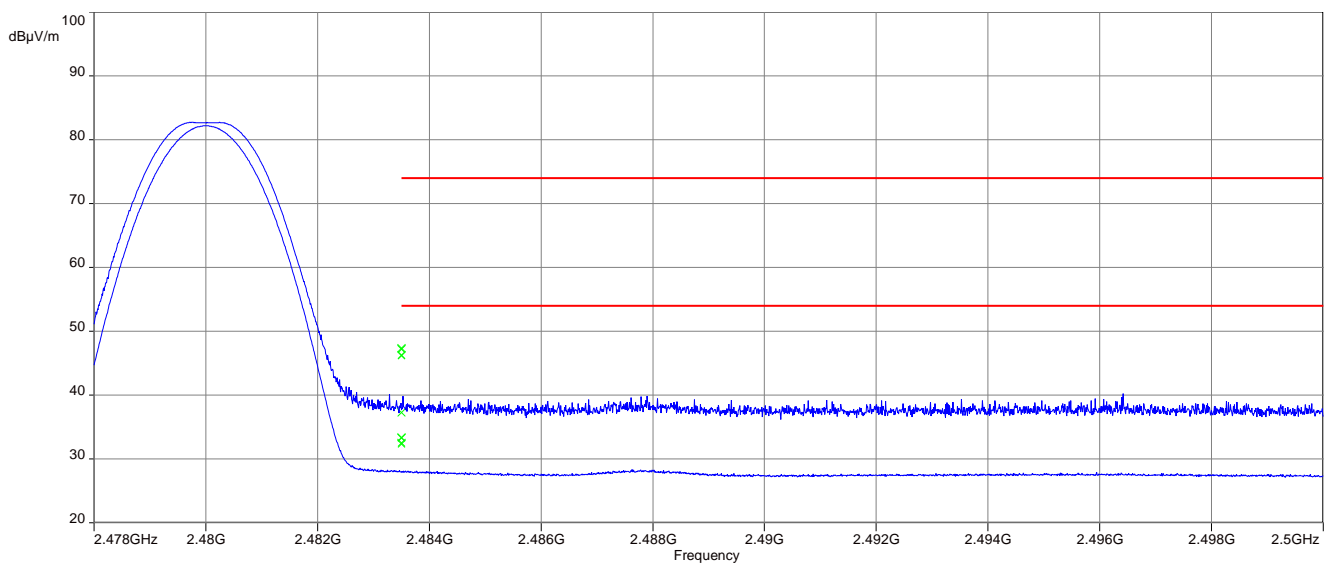
Scenario	Band edge compliance radiated [dB $\mu$ V/m]
Data rate	1 Msps
Lower restricted band	28.7 dB $\mu$ V/m AVG 40.7 dB $\mu$ V/m Peak
Upper restricted band	33.3 dB $\mu$ V/m AVG 47.4 dB $\mu$ V/m Peak
Data rate	2 Msps
Lower restricted band	32.5 dB $\mu$ V/m AVG 43.5 dB $\mu$ V/m Peak
Upper restricted band	34.7 dB $\mu$ V/m AVG 45.2 dB $\mu$ V/m Peak

**Plots:**

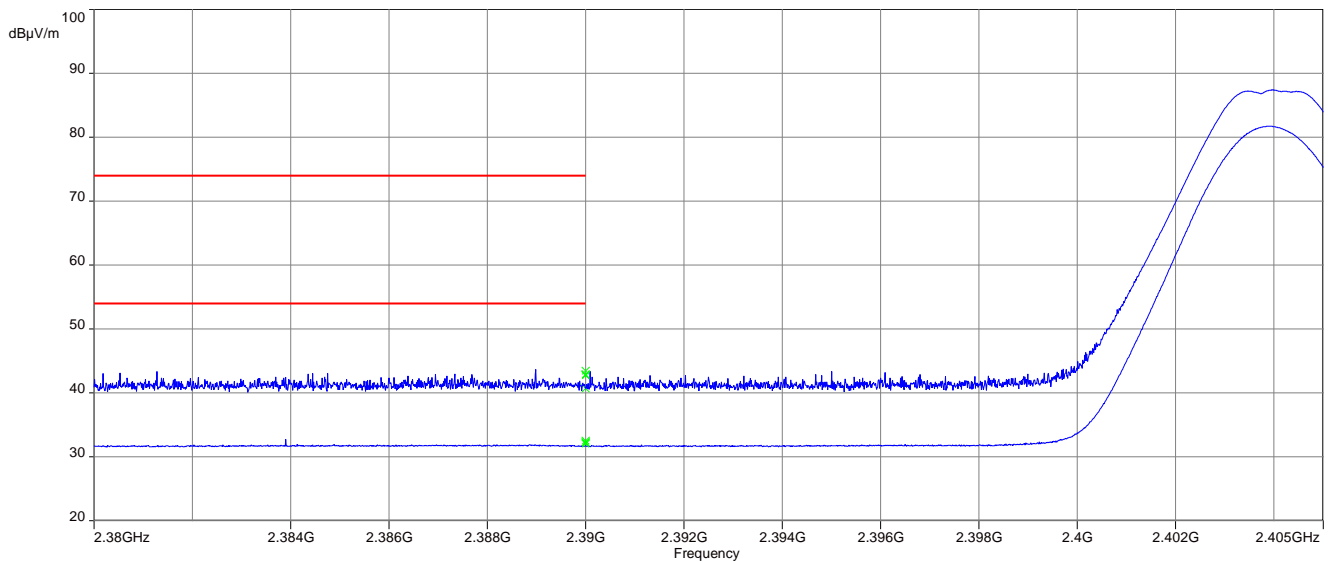
**Plot 1: Lower restricted band, 1 Msps**



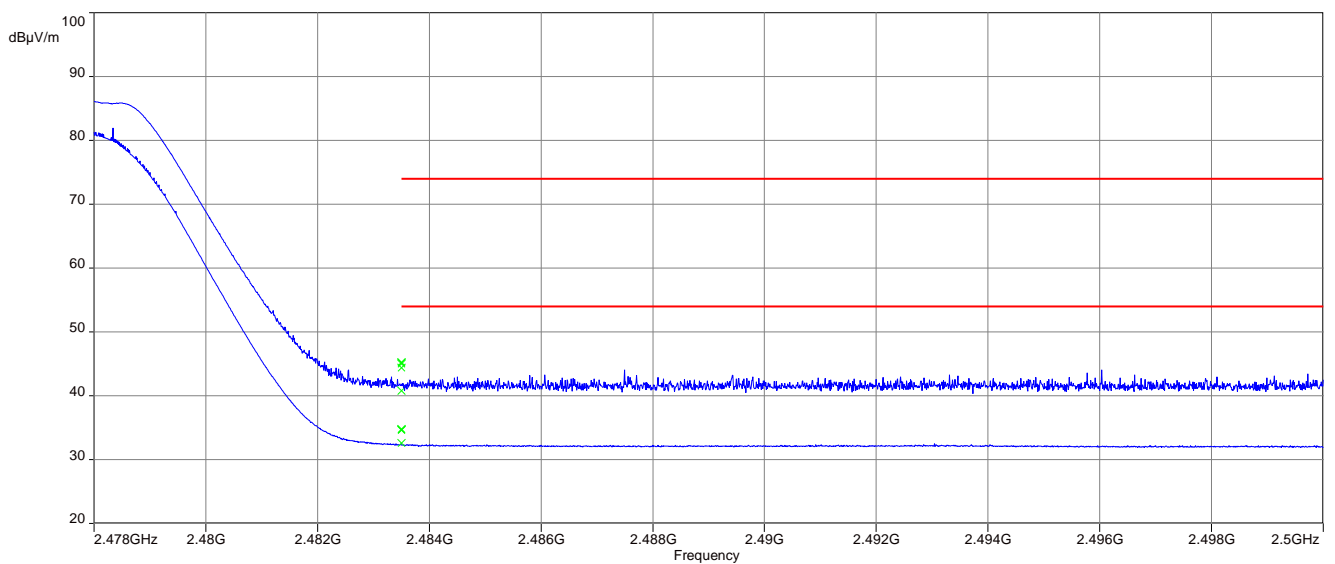
**Plot 2: Upper restricted band, 1 Msps**



**Plot 3: Lower restricted band, 2 Msps**



**Plot 4: Upper restricted band, 2 Msps**



## 12.7 TX spurious emissions conducted

**Description:**

Measurement of the conducted spurious emissions in transmit mode. The EUT is set to single channel mode and the transmit frequencies are 2402 MHz, 2440 MHz and 2480 MHz.

Measurement parameters	
External result file	1-6608_23-01-16_TR1-A201 FCC Part 15.247 TX Spurious Conducted
Test setup	See sub clause 7.5 setup A
Measurement uncertainty	See sub clause 9

**Limits:**

FCC	ISED
TX spurious emissions conducted	
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. Attenuation below the general limits specified in Section 15.209(a) is not required	

**Results:** Compliant (see external result file)

## 12.8 Spurious emissions radiated below 30 MHz

### Description:

Measurement of the radiated spurious emissions in transmit mode below 30 MHz. The EUT is set to single channel mode and the transmit frequencies are 2402 MHz, 2440 MHz and 2480 MHz. The limits are recalculated to a measurement distance of 3 m according the ANSI C63.10.

Measurement parameters	
Detector	Peak / Quasi peak
Sweep time	Auto
Resolution bandwidth	F < 150 kHz: 200 Hz F > 150 kHz: 9 kHz
Video bandwidth	F < 150 kHz: 1 kHz F > 150 kHz: 30 kHz
Span	9 kHz to 30 MHz
Trace mode	Max hold
Test setup	See sub clause 7.2 setup C
Measurement uncertainty	See sub clause 9

### Limits:

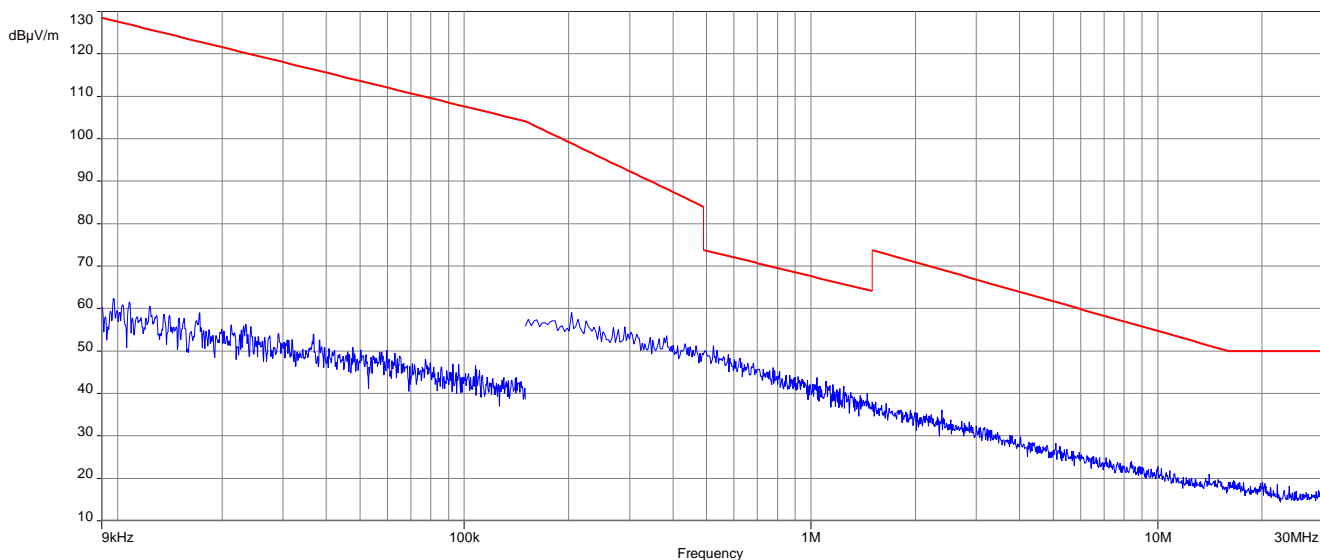
FCC		ISED
TX spurious emissions radiated below 30 MHz		
Frequency (MHz)	Field strength (dB $\mu$ V/m)	Measurement distance
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30

### Results:

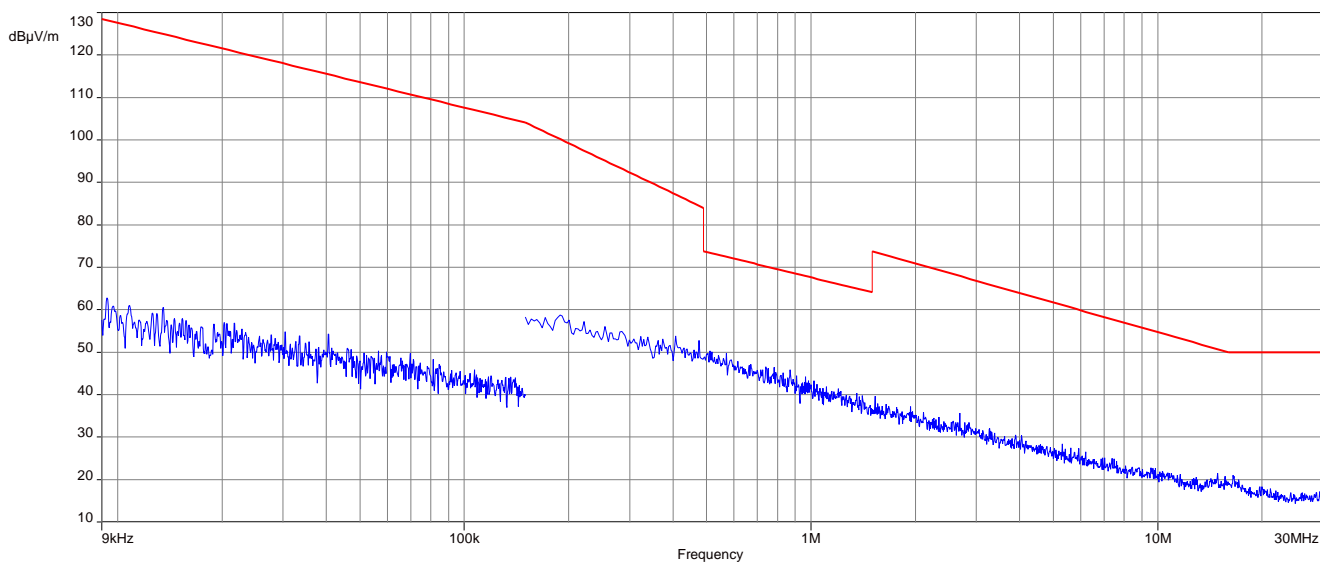
TX spurious emissions radiated below 30 MHz [dB $\mu$ V/m]		
F [MHz]	Detector	Level [dB $\mu$ V/m]
All detected emissions are more than 20 dB below the limit.		

**Plots:**

**Plot 1: 9 kHz to 30 MHz, 2402 MHz, transmit mode, 1 Msps**

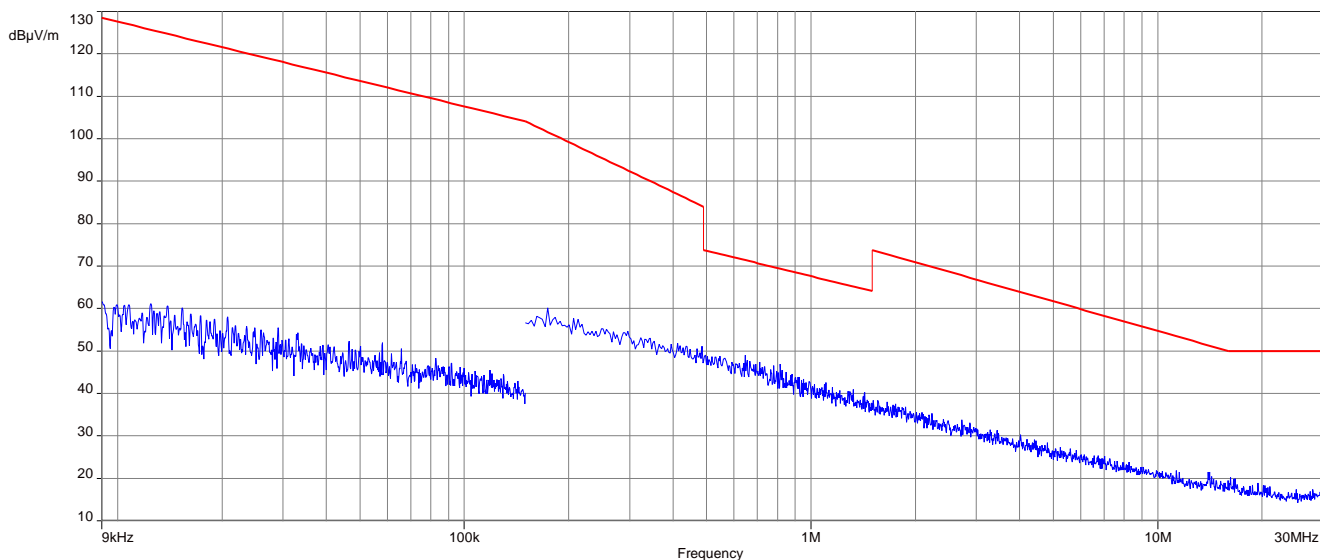


**Plot 2: 9 kHz to 30 MHz, 2440 MHz, transmit mode, 1 Msps**

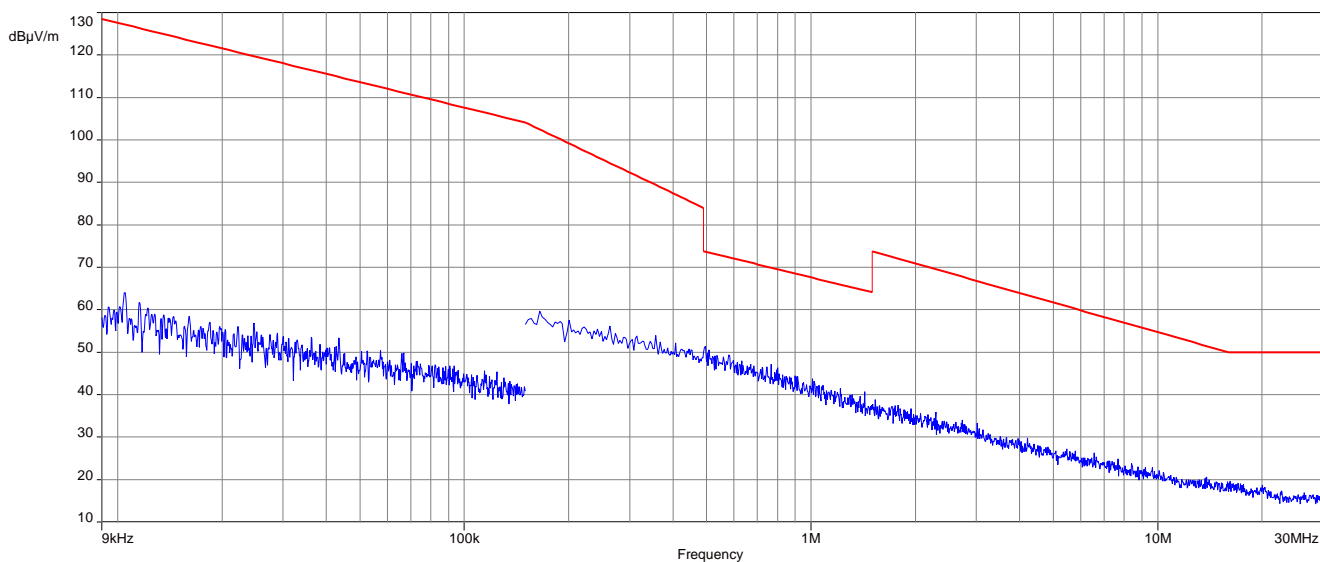




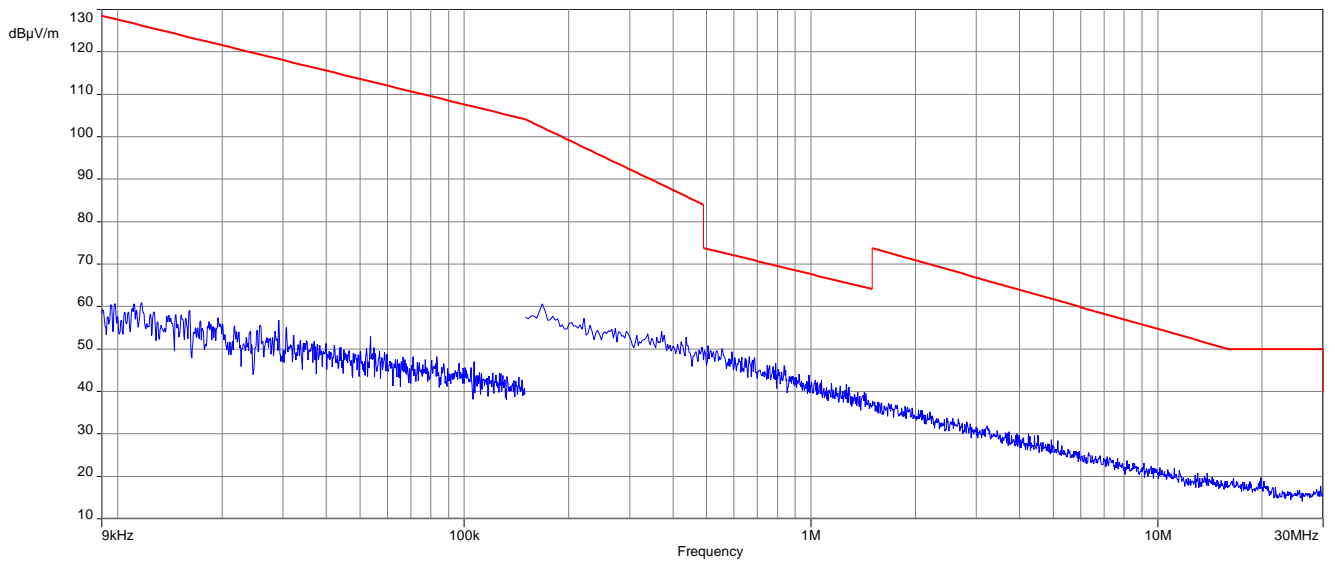
**Plot 3:** 9 kHz to 30 MHz, 2480 MHz, transmit mode, 1 Msps



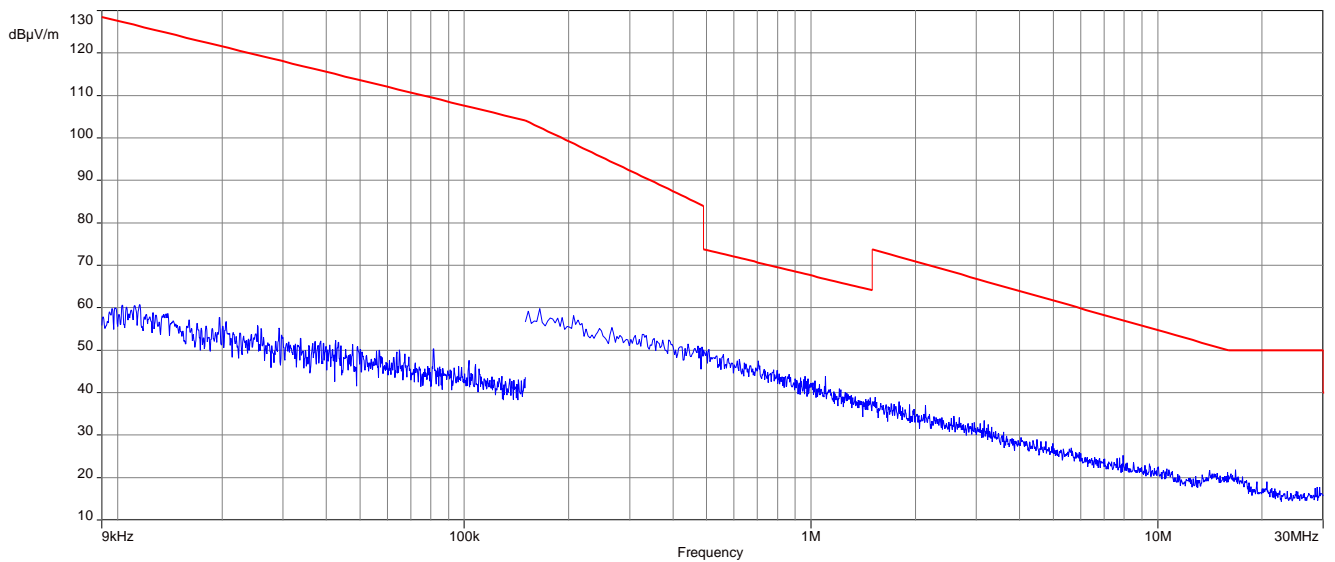
**Plot 4:** 9 kHz to 30 MHz, 2404 MHz, transmit mode, 2 Msps



**Plot 5:** 9 kHz to 30 MHz, 2440 MHz, transmit mode, 2 Msps



**Plot 6:** 9 kHz to 30 MHz, 2478 MHz, transmit mode, 2 Msps



## 12.9 Spurious emissions radiated 30 MHz to 1 GHz

### Description:

Measurement of the radiated spurious emissions in transmit mode. The EUT is set to single channel mode and the transmit frequencies are 2402 MHz, 2440 MHz and 2480 MHz.

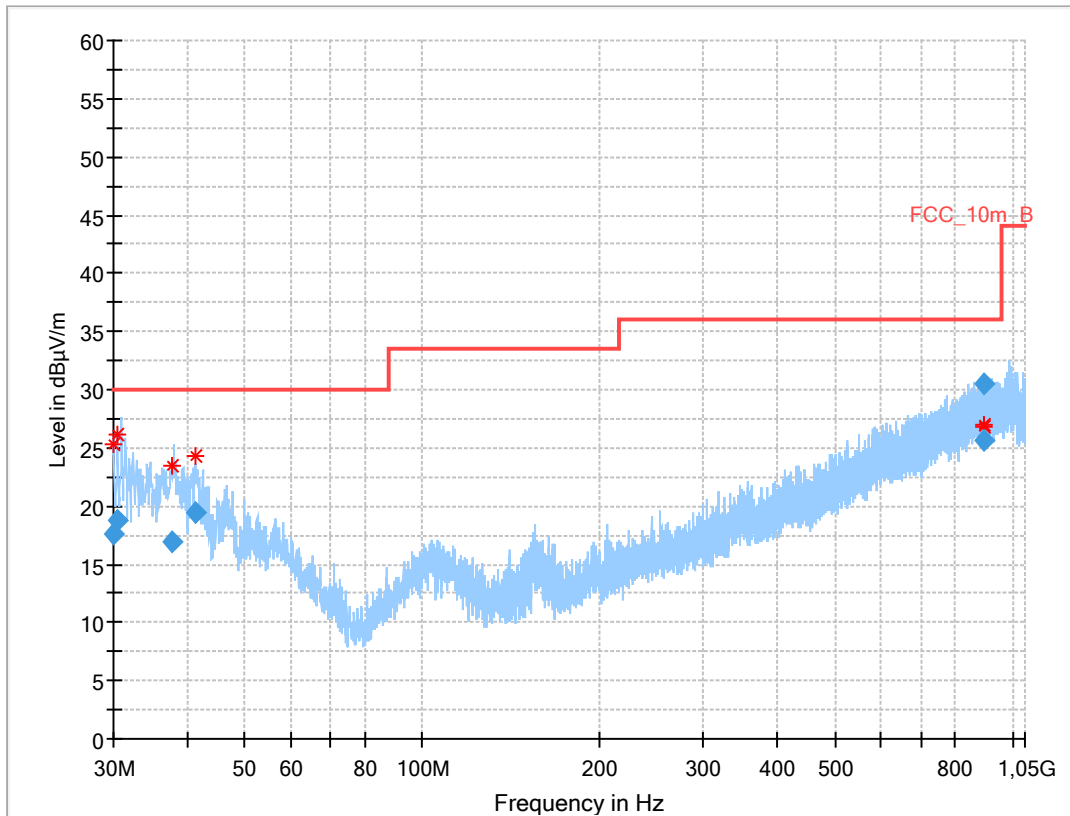
Measurement parameters	
Detector	Peak / Quasi Peak
Sweep time	Auto
Resolution bandwidth	120 kHz
Video bandwidth	3 x RBW
Span	30 MHz to 1 GHz
Trace mode	Max hold
Measured modulation	GFSK
Test setup	See sub clause 7.1 setup A
Measurement uncertainty	See sub clause 9

### Limits:

FCC	ISED	
TX spurious emissions radiated		
<p>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. 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 §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).</p>		
§15.209		
Frequency (MHz)	Field strength (dB $\mu$ V/m)	Measurement distance
30 - 88	30.0	10
88 - 216	33.5	10
216 - 960	36.0	10
Above 960	54.0	3

**Plots:** Transmit mode

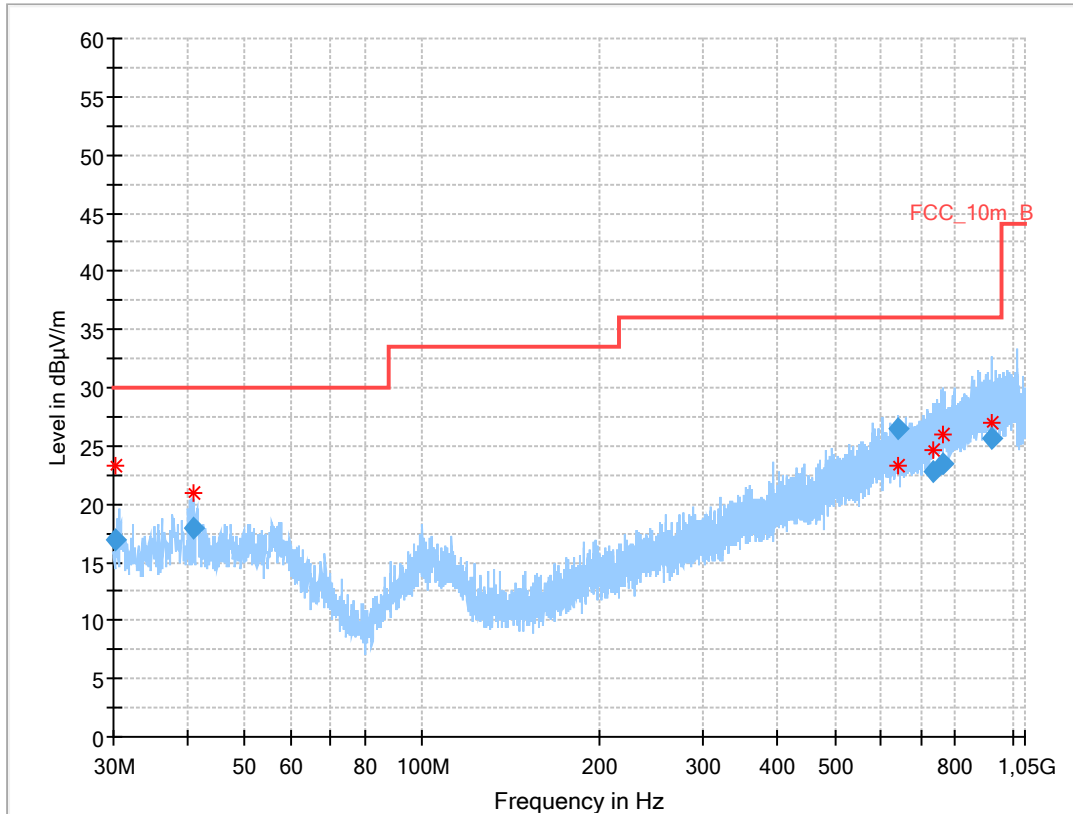
**Plot 1:** 30 MHz to 1 GHz, TX mode, vertical & horizontal polarization, 1 Msps, valid for all channels



**Final results:**

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
30.044	17.68	30.0	12.3	1000	120.0	98.0	V	62	13
30.358	18.73	30.0	11.3	1000	120.0	98.0	V	-28	13
37.566	16.85	30.0	13.2	1000	120.0	107.0	V	-4	14
41.311	19.50	30.0	10.5	1000	120.0	114.0	V	23	14
892.049	30.54	36.0	5.5	1000	120.0	195.0	V	-37	25
893.863	25.64	36.0	10.4	1000	120.0	132.0	H	267	25

**Plot 2:** 30 MHz to 1 GHz, TX mode, vertical & horizontal polarization, 2 Msps, valid for all channels



**Final results:**

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
30.244	16.90	30.0	13.1	1000	120.0	154.0	V	9	13
40.995	17.91	30.0	12.1	1000	120.0	195.0	V	241	14
640.313	26.56	36.0	9.4	1000	120.0	98.0	V	232	22
735.614	22.72	36.0	13.3	1000	120.0	195.0	H	54	23
760.363	23.41	36.0	12.6	1000	120.0	195.0	V	307	24
924.725	25.66	36.0	10.3	1000	120.0	101.0	V	-34	26

## 12.10 Spurious emissions radiated above 1 GHz

### Description:

Measurement of the radiated spurious emissions in transmit mode. The EUT is set to single channel mode and the transmit frequencies are 2402 MHz, 2440 MHz and 2480 MHz.

Measurement parameters	
Detector	Peak / RMS
Sweep time	Auto
Resolution bandwidth	1 MHz
Video bandwidth	3 x RBW
Span	1 GHz to 26 GHz
Trace mode	Max hold
Measured modulation	GFSK
Test setup	See sub clause 7.2 setup A (1 GHz - 18 GHz) See sub clause 7.3 setup A (18 GHz - 26 GHz)
Measurement uncertainty	See sub clause 9

### Limits:

FCC		ISED	
TX spurious emissions radiated			
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. 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 §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).			
§15.209			
Frequency (MHz)	Field strength (dBµV/m)	Measurement distance	
Above 960	54.0 (Average)	3	
Above 960	74.0 (Peak)	3	

**Results:** Transmitter mode, 1 Msps

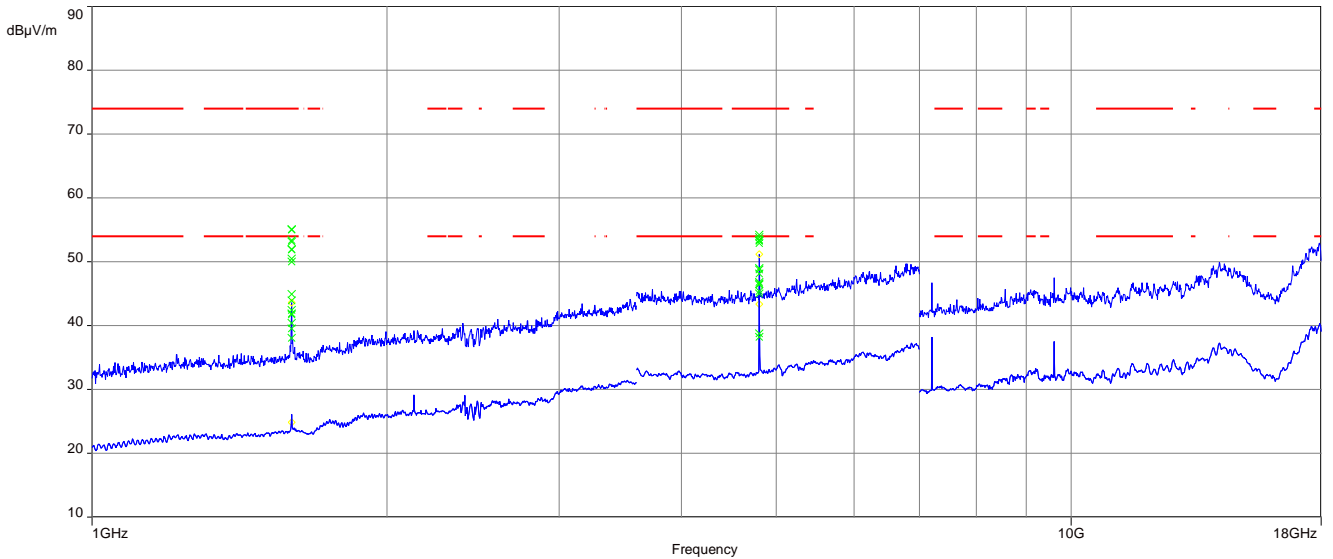
TX spurious emissions radiated [dB $\mu$ V/m]								
2402 MHz			2440 MHz			2480 MHz		
F [MHz]	Detector	Level [dB $\mu$ V/m]	F [MHz]	Detector	Level [dB $\mu$ V/m]	F [MHz]	Detector	Level [dB $\mu$ V/m]
1599	Peak	55.1	4880	Peak	54.1	4960	Peak	52.4
	AVG	44.9		AVG	47.0		AVG	44.4
4804	Peak	54.2	7320	Peak	52.8	7440	Peak	52.3
	AVG	48.1		AVG	45.5		AVG	45.0

**Results:** Transmitter mode, 2 Msps

TX spurious emissions radiated [dB $\mu$ V/m]								
2404 MHz			2440 MHz			2478 MHz		
F [MHz]	Detector	Level [dB $\mu$ V/m]	F [MHz]	Detector	Level [dB $\mu$ V/m]	F [MHz]	Detector	Level [dB $\mu$ V/m]
4808	Peak	53.8	4880	Peak	52.4	4956	Peak	51.5
	AVG	43.2		AVG	42.3		AVG	40.0
-/-	Peak	-/-	7320	Peak	52.1	7434	Peak	54.1
	AVG	-/-		AVG	41.7		AVG	44.7

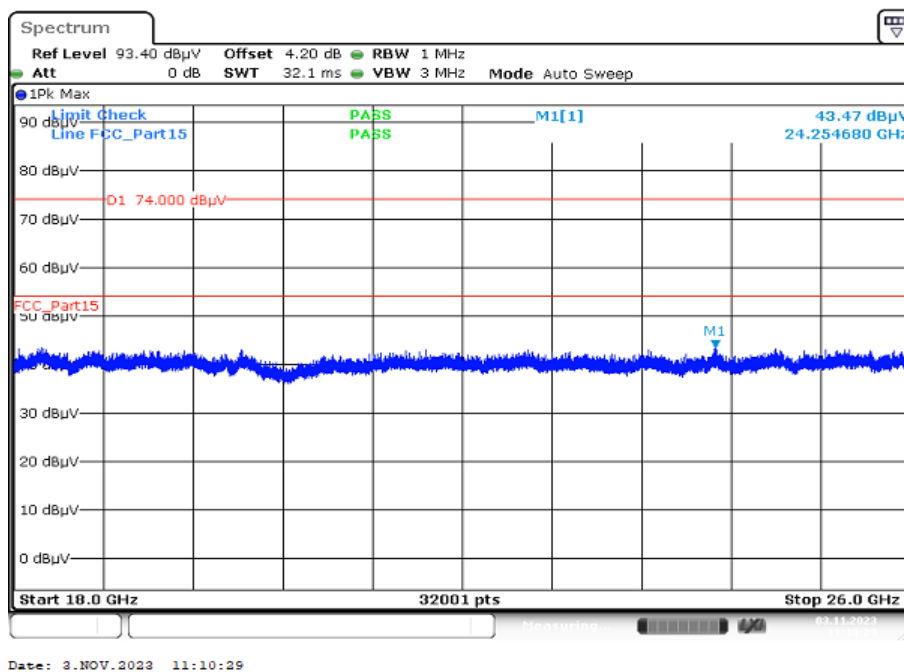
**Plots:** Transmitter mode

**Plot 1:** 1 GHz to 18 GHz, TX mode, 2402 MHz, vertical & horizontal polarization, 1 Msps



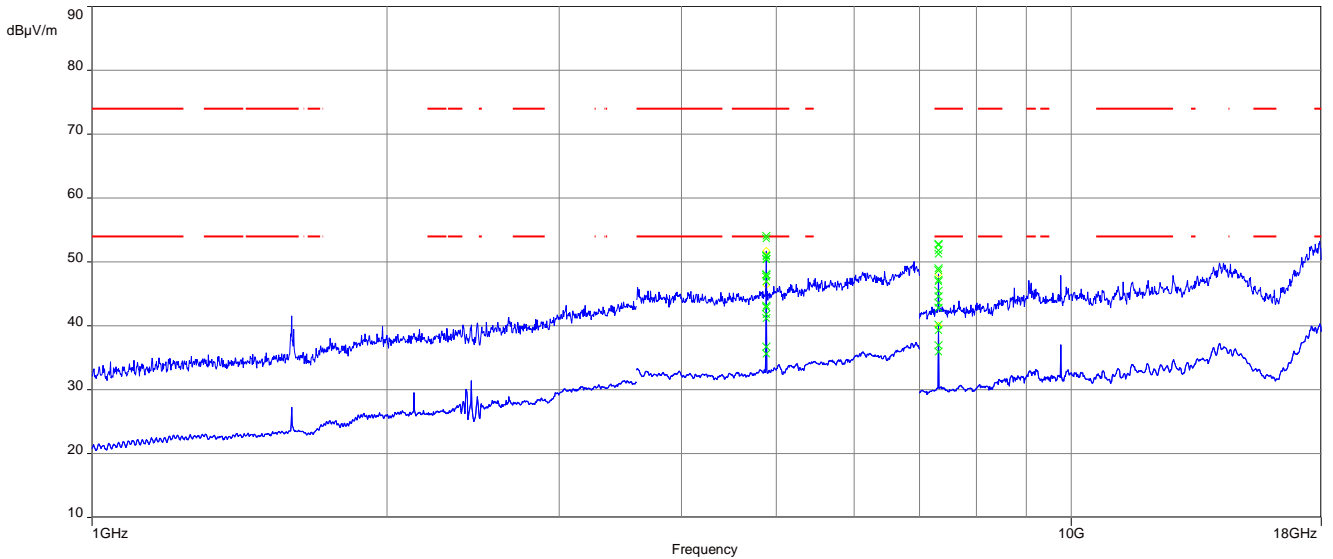
The carrier signal is notched with a 2.4 GHz band rejection filter.

**Plot 2:** 18 GHz to 26 GHz, TX mode, 2402 MHz, vertical & horizontal polarization, 1 Msps



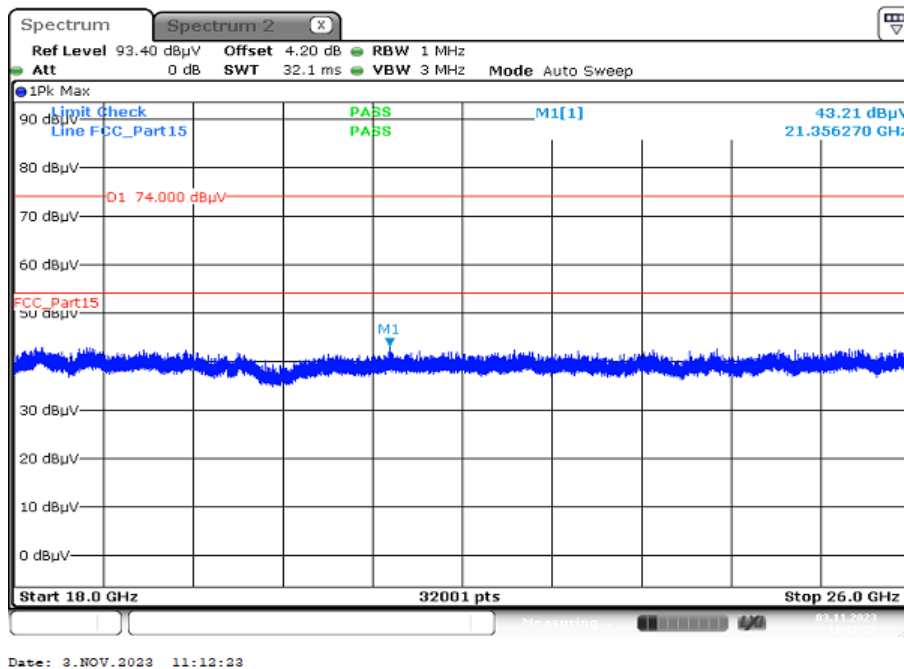


**Plot 3:** 1 GHz to 18 GHz, TX mode, 2440 MHz, vertical & horizontal polarization, 1 Msps

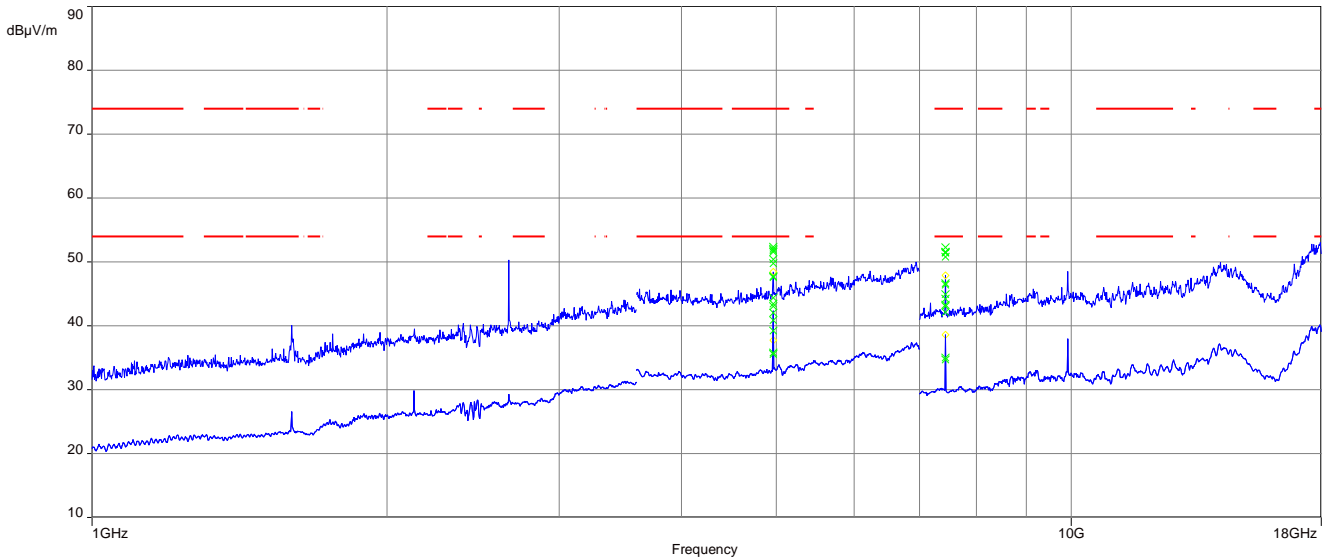


The carrier signal is notched with a 2.4 GHz band rejection filter.

**Plot 4:** 18 GHz to 26 GHz, TX mode, 2440 MHz, vertical & horizontal polarization, 1 Msps

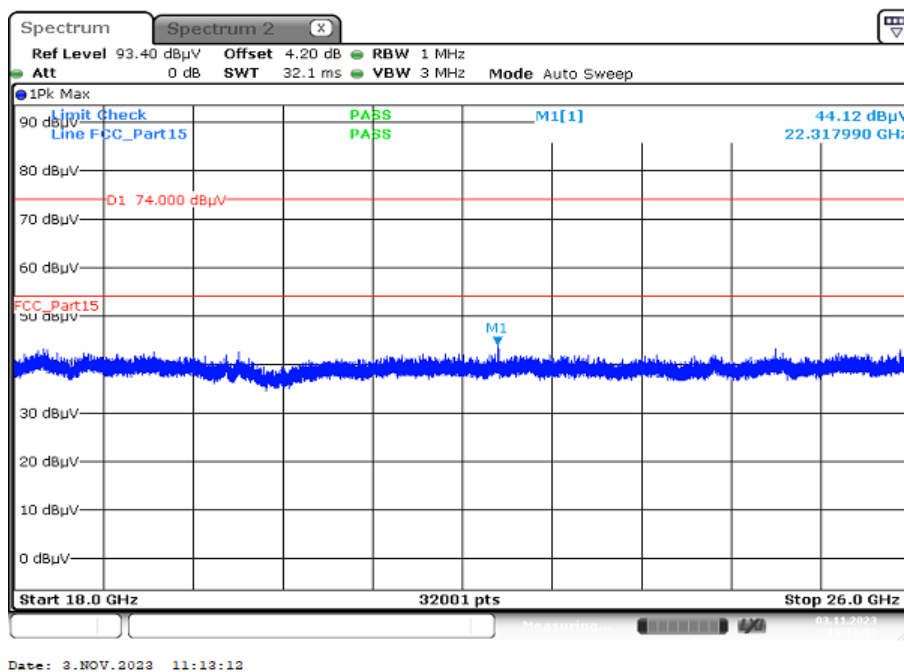


**Plot 5:** 1 GHz to 18 GHz, TX mode, 2480 MHz, vertical & horizontal polarization, 1 Msps

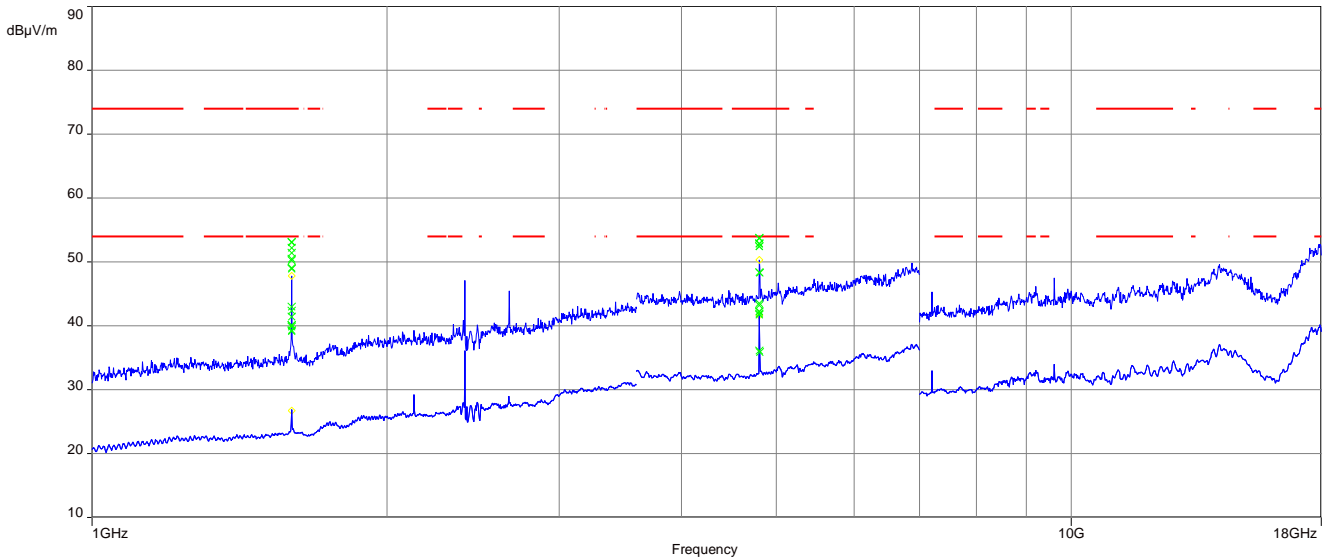


The carrier signal is notched with a 2.4 GHz band rejection filter.

**Plot 6:** 18 GHz to 26 GHz, TX mode, 2480 MHz, vertical & horizontal polarization, 1 Msps

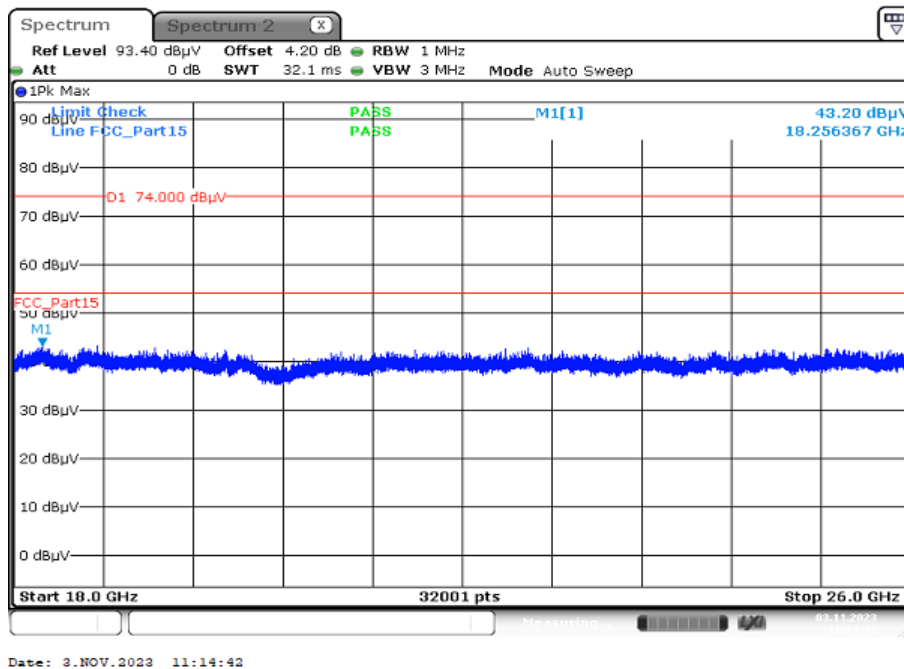


**Plot 7:** 1 GHz to 18 GHz, TX mode, 2404 MHz, vertical & horizontal polarization, 2 Msps

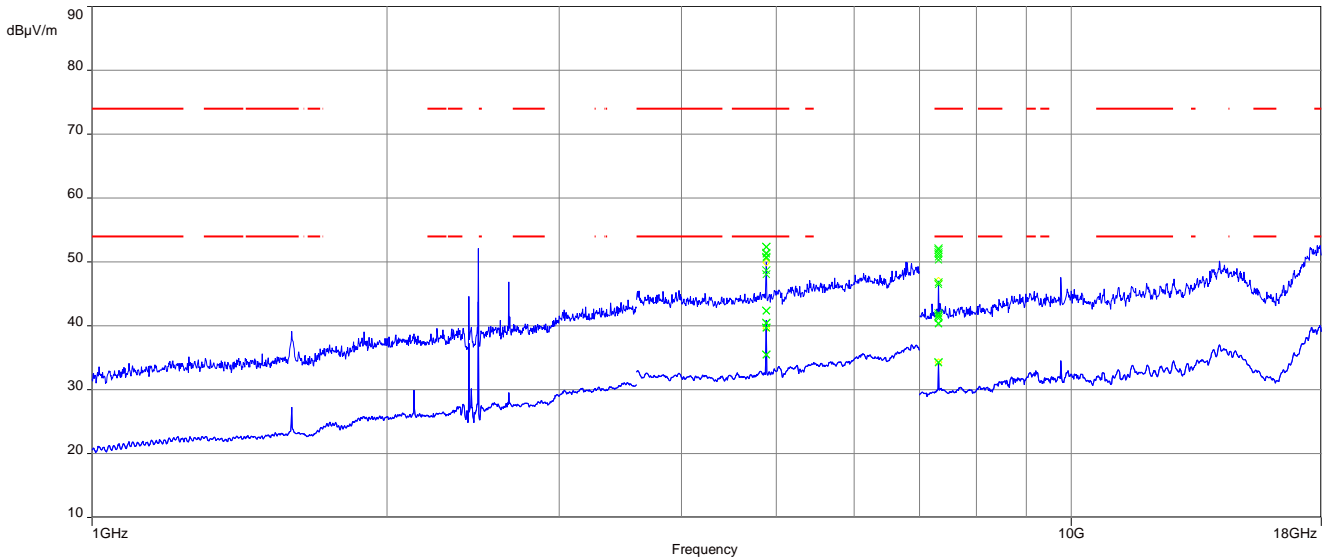


The carrier signal is notched with a 2.4 GHz band rejection filter.

**Plot 8:** 18 GHz to 26 GHz, TX mode, 2404 MHz, vertical & horizontal polarization, 2 Msps

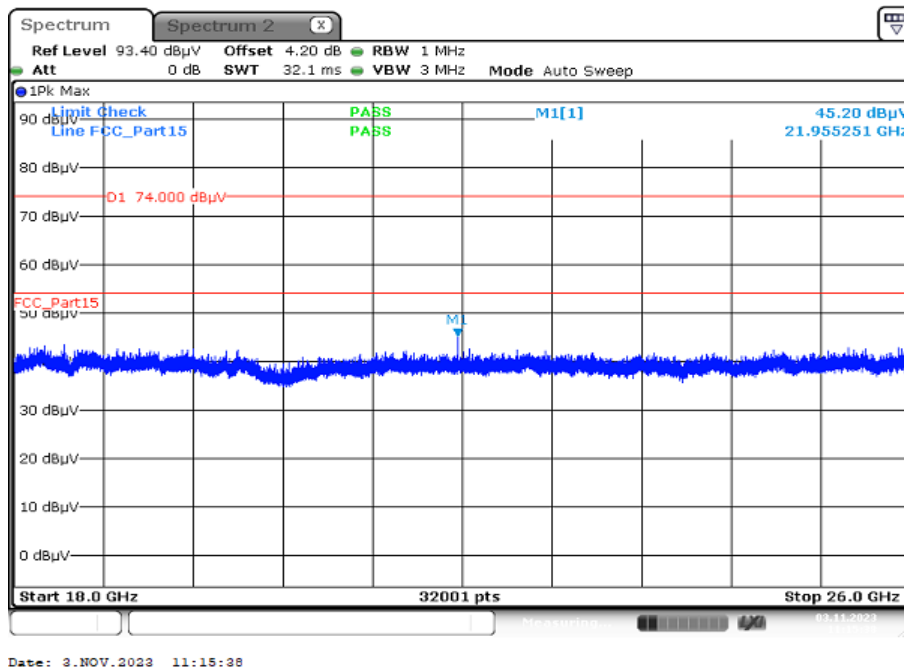


**Plot 9:** 1 GHz to 18 GHz, TX mode, 2440 MHz, vertical & horizontal polarization, 2 Msps

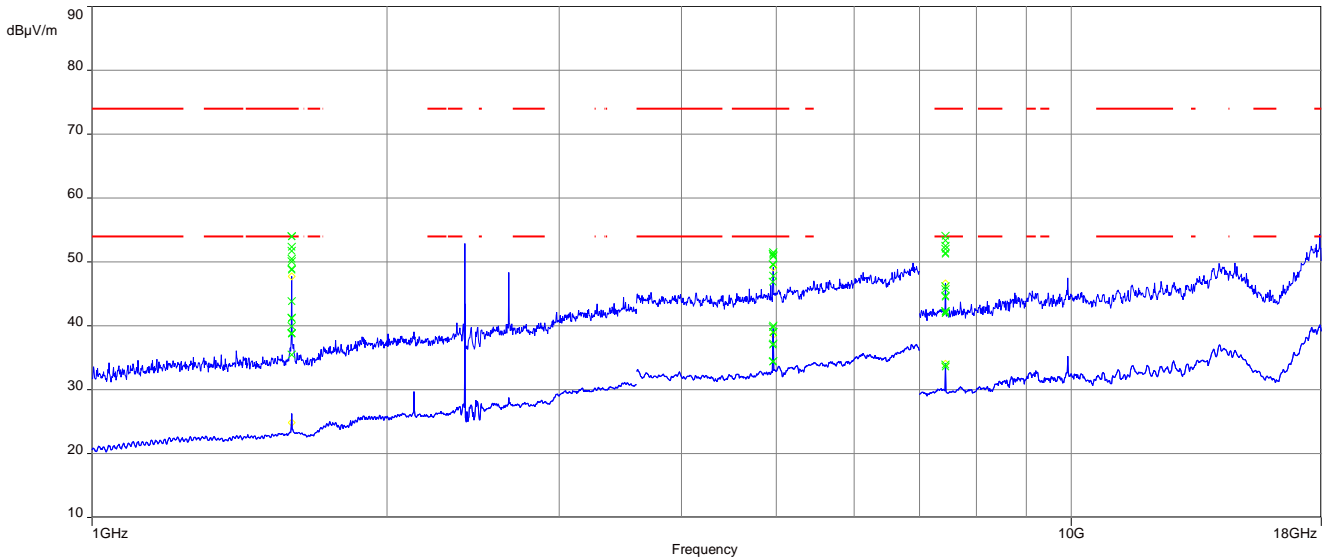


The carrier signal is notched with a 2.4 GHz band rejection filter.

**Plot 10:** 18 GHz to 26 GHz, TX mode, 2440 MHz, vertical & horizontal polarization, 2 Msps

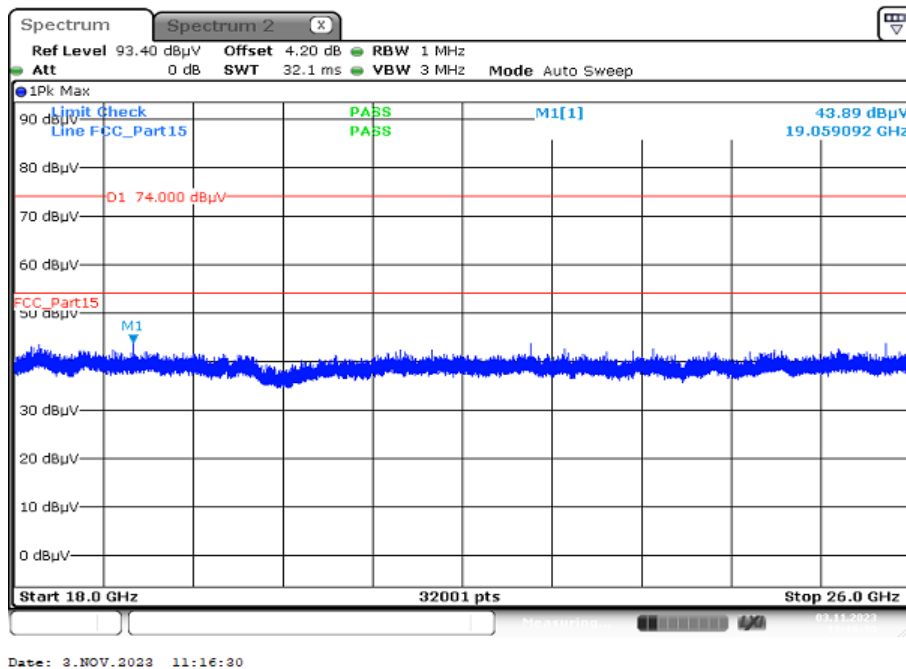


**Plot 11:** 1 GHz to 18 GHz, TX mode, 2478 MHz, vertical & horizontal polarization, 2 Msps



The carrier signal is notched with a 2.4 GHz band rejection filter.

**Plot 12:** 18 GHz to 26 GHz, TX mode, 2478 MHz, vertical & horizontal polarization, 2 Msps



## 12.11 Spurious emissions conducted below 30 MHz (AC conducted)

### Description:

Measurement of the conducted spurious emissions in transmit mode below 30 MHz. The EUT is set to single channel mode and the transmit frequency is 2440 MHz. This measurement is representative for all channels and modes. If critical peaks are found frequency 2402 MHz and 2480 MHz will be measured too. The measurement is performed in the mode with the highest output power. Both power lines, phase and neutral line, are measured. Found peaks are remeasured with average and quasi peak detection to show compliance to the limits.

Measurement parameters	
Detector	Peak - Quasi peak / average
Sweep time	Auto
Resolution bandwidth	F < 150 kHz: 200 Hz F > 150 kHz: 9 kHz
Video bandwidth	F < 150 kHz: 1 kHz F > 150 kHz: 100 kHz
Span:	9 kHz to 30 MHz
Trace mode:	Max hold
Test setup	See sub clause 7.4 setup A
Measurement uncertainty	See sub clause 9

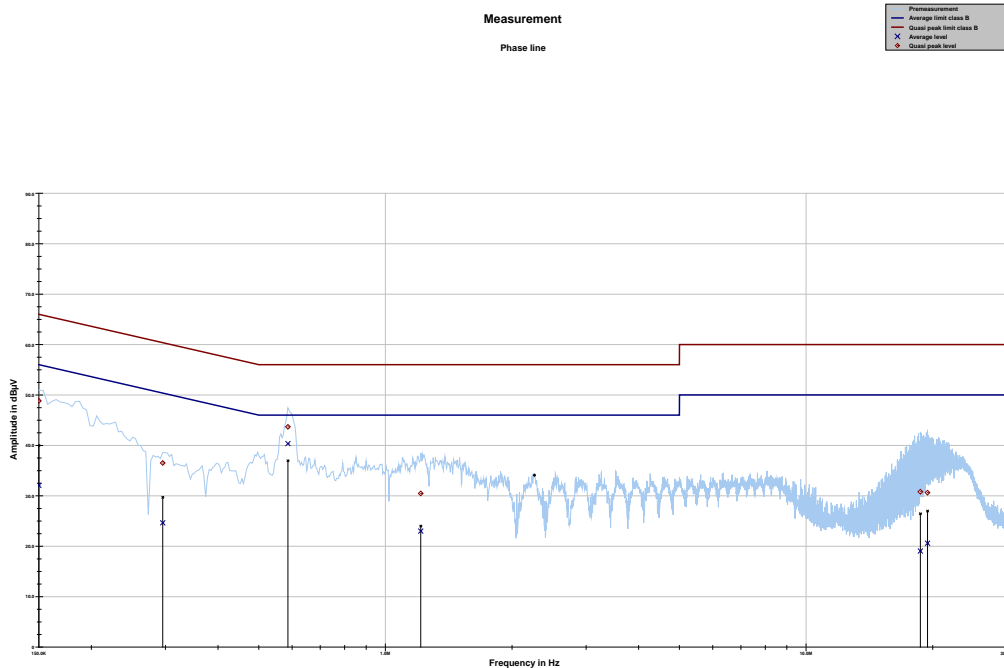
### Limits:

FCC		ISED	
TX spurious emissions conducted < 30 MHz			
Frequency (MHz)	Quasi-peak (dB $\mu$ V/m)	Average (dB $\mu$ V/m)	
0.15 – 0.5	66 to 56*	56 to 46*	
0.5 – 5	56	46	
5 – 30.0	60	50	

\*Decreases with the logarithm of the frequency

**Plots:**

**Plot 1:** 150 kHz to 30 MHz, phase line

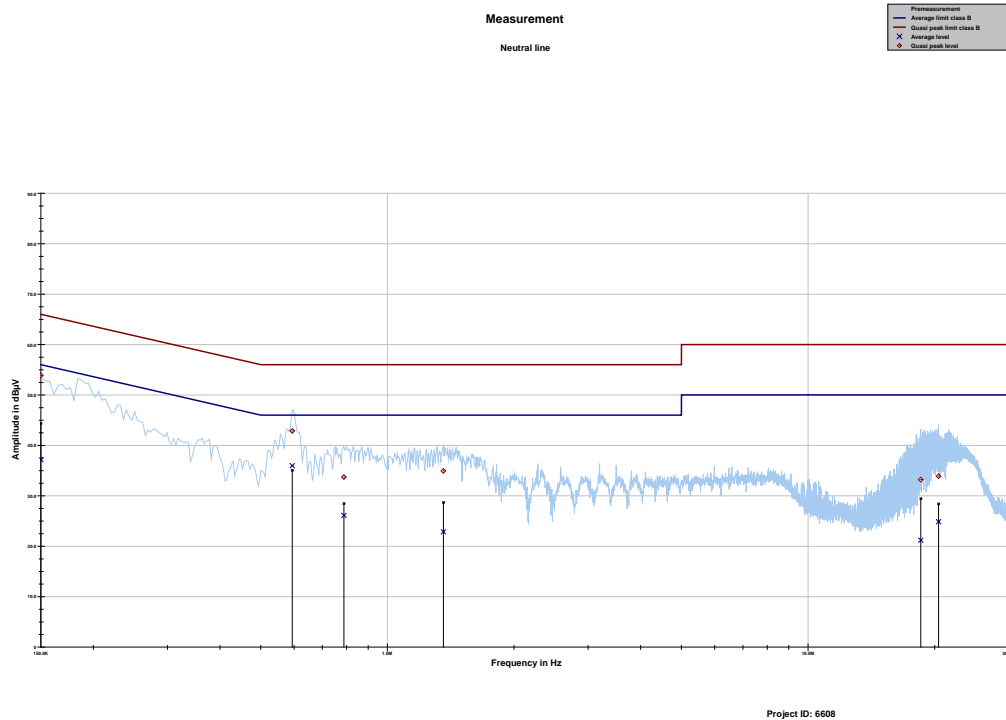


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**Final results:**

Frequency MHz	Quasi peak level dBµV	Margin quasi peak dB	Limit QP dBµV	Average level dBµV	Margin average dB	Limit AV dBµV
0.150000	48.82	17.18	66.000	32.06	23.94	56.000
0.295519	36.51	23.86	60.368	24.64	27.20	51.842
0.586556	43.67	12.33	56.000	40.34	5.66	46.000
1.213406	30.47	25.53	56.000	23.00	23.00	46.000
18.694312	30.80	29.20	60.000	19.05	30.95	50.000
19.436831	30.62	29.38	60.000	20.59	29.41	50.000

Plot 2: 150 kHz to 30 MHz, neutral line



Final results:

Frequency MHz	Quasi peak level dBµV	Margin quasi peak dB	Limit QP dBµV	Average level dBµV	Margin average dB	Limit AV dBµV
0.150000	53.89	12.11	66.000	37.17	18.83	56.000
0.594019	42.85	13.15	56.000	35.96	10.04	46.000
0.788044	33.70	22.30	56.000	26.09	19.91	46.000
1.358925	34.94	21.06	56.000	22.85	23.15	46.000
18.533869	33.22	26.78	60.000	21.18	28.82	50.000
20.429344	33.88	26.12	60.000	24.85	25.15	50.000

### 13 Observations

No observations except those reported with the single test cases have been made.



## 14 Glossary

<b>AVG</b>	Average
<b>C</b>	Compliant
<b>C/N<sub>0</sub></b>	Carrier to noise-density ratio, expressed in dB-Hz
<b>CAC</b>	Channel availability check
<b>CW</b>	Clean wave
<b>DC</b>	Duty cycle
<b>DFS</b>	Dynamic frequency selection
<b>DSSS</b>	Dynamic sequence spread spectrum
<b>DUT</b>	Device under test
<b>EN</b>	European Standard
<b>ETSI</b>	European Telecommunications Standards Institute
<b>EMC</b>	Electromagnetic Compatibility
<b>EUT</b>	Equipment under test
<b>FCC</b>	Federal Communications Commission
<b>FCC ID</b>	Company Identifier at FCC
<b>FHSS</b>	Frequency hopping spread spectrum
<b>FVIN</b>	Firmware version identification number
<b>GNSS</b>	Global Navigation Satellite System
<b>GUE</b>	GNSS User Equipment
<b>HMN</b>	Host marketing name
<b>HVIN</b>	Hardware version identification number
<b>HW</b>	Hardware
<b>IC</b>	Industry Canada
<b>Inv. No.</b>	Inventory number
<b>MC</b>	Modulated carrier
<b>NA</b>	Not applicable
<b>NC</b>	Not compliant
<b>NOP</b>	Non occupancy period
<b>NP</b>	Not performed
<b>OBW</b>	Occupied bandwidth
<b>OC</b>	Operating channel
<b>OCW</b>	Operating channel bandwidth
<b>OFDM</b>	Orthogonal frequency division multiplexing
<b>OOB</b>	Out of band
<b>OP</b>	Occupancy period
<b>PER</b>	Packet error rate
<b>PMN</b>	Product marketing name
<b>PP</b>	Positive peak
<b>QP</b>	Quasi peak
<b>RLAN</b>	Radio local area network
<b>S/N or SN</b>	Serial number
<b>SW</b>	Software
<b>UUT</b>	Unit under test
<b>WLAN</b>	Wireless local area network

## 15 Document history

Version	Applied changes	Date of release
-/-	Initial release	2023-11-10

##### END OF TEST REPORT #####