

Test report nr. R25198501

Federal Communication Commission (FCC)

Customer	AUTEC S.r.l. Via Pomaroli, 65, 36030 Caldogno (VI) - Italy	
(#) FCC ID	OQA-FSAACT01A	
(#) Description of item tested	Radio module	
(#) Trademark	AUTEC	
(#) Model and/or type reference	FSAACT01A	
(#) Manufacturer	AUTEC S.r.l. Via Pomaroli, 65, 36030 Caldogno (VI) - Italy	
(#) Rating(s)	7,4 Vdc	
Test method requested, standard(s)	FCC Rules & Regulations, Title 47:2024 Part 15 paragraph(s): 203, 204, 205, 207, 209, 215 and 247	
Tested by (name / position & signature)	S, Zanivan <i>Technician</i>	
Approved by (name / position & signature)	F. Marenda <i>Laboratory manager</i>	
Date of issue	19.11.2025	
General disclaimer	The test results presented in this report relate only to the item tested. This report shall not be reproduced, except in full, without the written approval of DEKRA Testing and Certification S.r.l.	
Report template No	15-247_Hopping_DEKRA	

(#) information provided by the customer

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Competences and guarantees

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Data provided by the customer

Information relating to the description of the sample, components list, and software/hardware version (if reported) are provided by the customer/manufacturer. DEKRA Testing and Certification S.r.l. cannot be considered responsible for this information, for any other document provided by the customer/manufacturer and for any difference between the software/hardware release present in the tested sample and that present in the object intended for final sale.

In some cases, the software in the tested sample is in a version dedicated exclusively to the test, and therefore does not represent the software installed in the final version of the product.

Reference standards

Standard(s)	Description
FCC Rules and Regulation Title 47 part 15:2024	--
KDB 558074 D01 15.247 Meas Guidance 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 Measuring of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz – 40 GHz
ANSI C63.10:2020 + COR1:2023	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices

Usage of samples

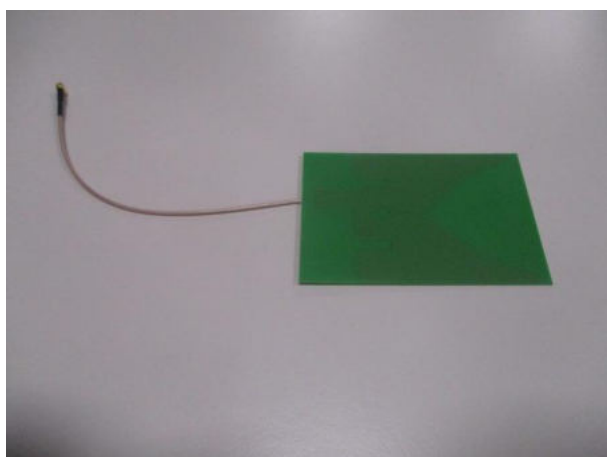
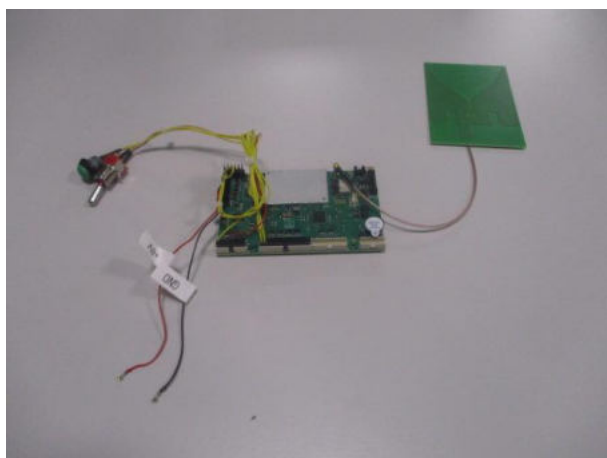
Sample(s) used for testing chosen by the customer; DEKRA Testing and Certification S.r.l. cannot be considered responsible for the selection of the sample(s).

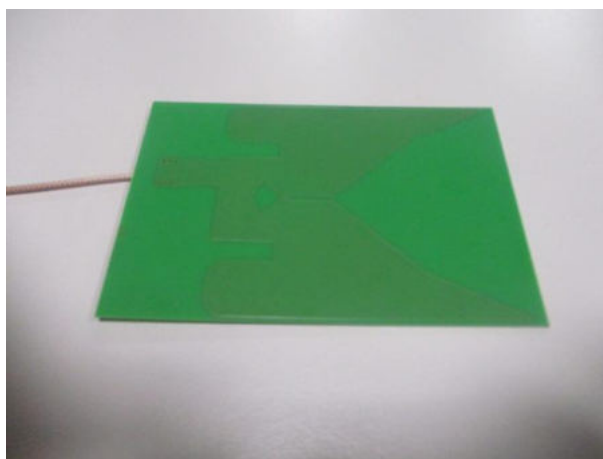
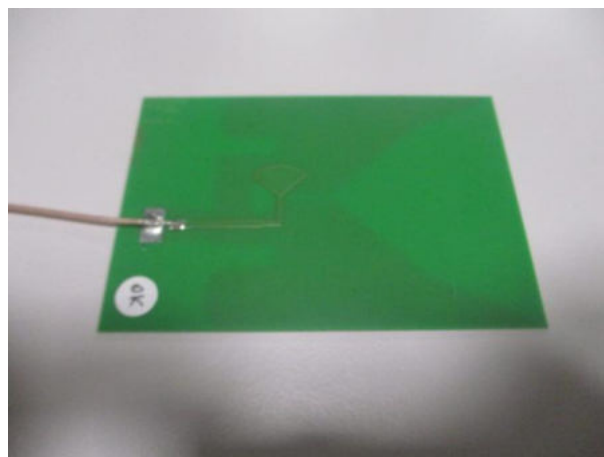
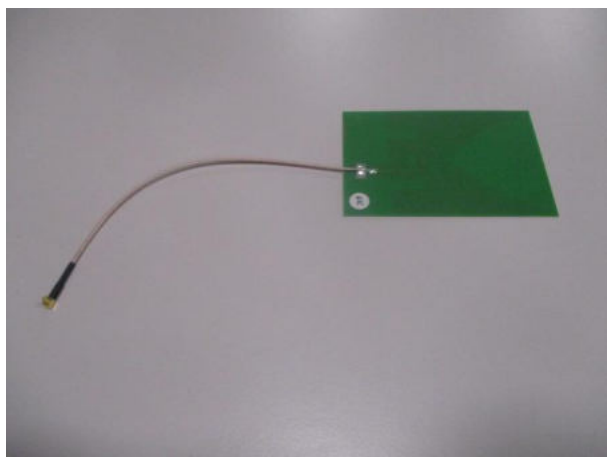
Internal identification	Serial number/Customer Id	Date of reception	Notes
P251092	--	15.10.2025	--

Test sample description

Test power supply	Voltage and Frequency		Reference poles				
			L1	L2	L3	N	PE
	☐	AC:	☐	☐	☐	☐	☐
	☐	AC:	☐	☐	☐	☐	☐
	☒	DC: 7,4 V					
Frequency band(s)	902,00 – 928,00 MHz						
Low Nominal frequencies (Flow)	915,075 MHz						
Medium Nominal frequencies (Fmid)	921,425 MHz						
High Nominal frequencies (Fhigh)	927,825 MHz						
Pseudo randomly ordered list of hopping frequencies	See document fsaact01a_operational_description-rev.00						
Type of equipment	☒	Transmitter unit					
	☒	Receiver unit					
Type of station	☒	Portable station					
	☐	Mobile station					
Mounting position	☐	Table top equipment					
	☐	Wall/Ceiling mounted equipment					
	☐	Floor standing equipment					
	☒	Hand-held equipment					
	☐	Other, for example rack mounted, body worn, etc.					
Operating modes	N.	Operating mode of test item					
	1	EUT in continuous transmission at maximum power.					
General product information	--						
Accessories (not part of the test item)	Description		Type		Manufacturer		
	--		--		--		
Filtering and construction devices	--						

Photos of the test item





Testing period and place

Test Location	DEKRA Testing and Certification S.r.l.
FCC Registration Number	182474
Date (start)	28.10.2025
Date (finish)	12.11.2025

Document history

Report number	Date	Description
R25198501	19.11.2025	First release

List of attachments

Name	Description
Attachment 1	Measurement uncertainty, judgement of compliance and quality manual references

Environmental conditions

The climatic conditions during the tests are within the limits specified by the manufacturer for the operation of the EUT and the test equipment.

The climatic conditions during the tests were within the following limits:

Temperature	Humidity	Atmospheric pressure
15 °C – 35 °C	30 % - 60 %	800 hPa – 1060 hPa

If explicitly required in the basic standard or applied product standard the climatic values are recorded and documented separately in this test report.

Environmental conditions have been monitored with the following instruments:

Id. number	Manufacturer	Model	Serial number	Description	Last calibration date	Calibration expiration
CMC S302	Testo	175H1	40370182 610	Data Logger	May 2025	May 2026

Remarks and comments

Throughout this report a comma is used as the decimal separator.

Tests reported in this test report marked by wording: "Test not accredited by ACCREDIA" are not part of the ACCREDIA accreditation of this laboratory.

Deviations from test specification

None.

Testing verdicts

N/A (Not Applicable)	Test case does not apply to the test object
P (Pass)	Test object meets the requirement
F (Fail)	Test object does not meet the requirement
N/E (Not Executed)	Test object was not evaluated for the requirement

Verdict summary

FCC Rules & Regulations, Title 47:2024 Part 15 paragraph(s): 203, 204, 205, 207, 209, 215 and 247			
Clause	Requirement – Test case	Basic standard	Verdict
Part 15.247 (a) (1)	Pseudo randomly ordered list of hopping frequencies	--	P
Part 15.203	Antenna requirements	ANSI C63.10	P
Part 15.207	Conducted emissions	ANSI C63.10	P
Part 15.209	Radiated emissions and spurious emissions	ANSI C63.10	P
Part 15.247	20 dB Bandwidth	ANSI C63.10	P
Part 15.247	Channel Separation	ANSI C63.10	P
Part 15.247	Number of Hopping Channel	ANSI C63.10	P
Part 15.247	Time of occupancy	ANSI C63.10	P
Part 15.247	Band edge	ANSI C63.10	P
Part 15.209 and 15.247	Peak Output Power	ANSI C63.10	P

Test results

Antenna requirements

Tested by	S. Zanivan	
Test date	28.10.2025	
Basic standard(s)	FCC Rules and Regulation; Titles 47 Part. 15.203 and 15.204	
Test specification	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 so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §§ 15.211, 15.213, 15.217, 15.219, 15.221, or § 15.236. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with § 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded	
Antenna type	☒	Integral antenna
	☐	External antenna
Antenna gain	0,1 dBi	
External R.F. power amplifier	Not Present	

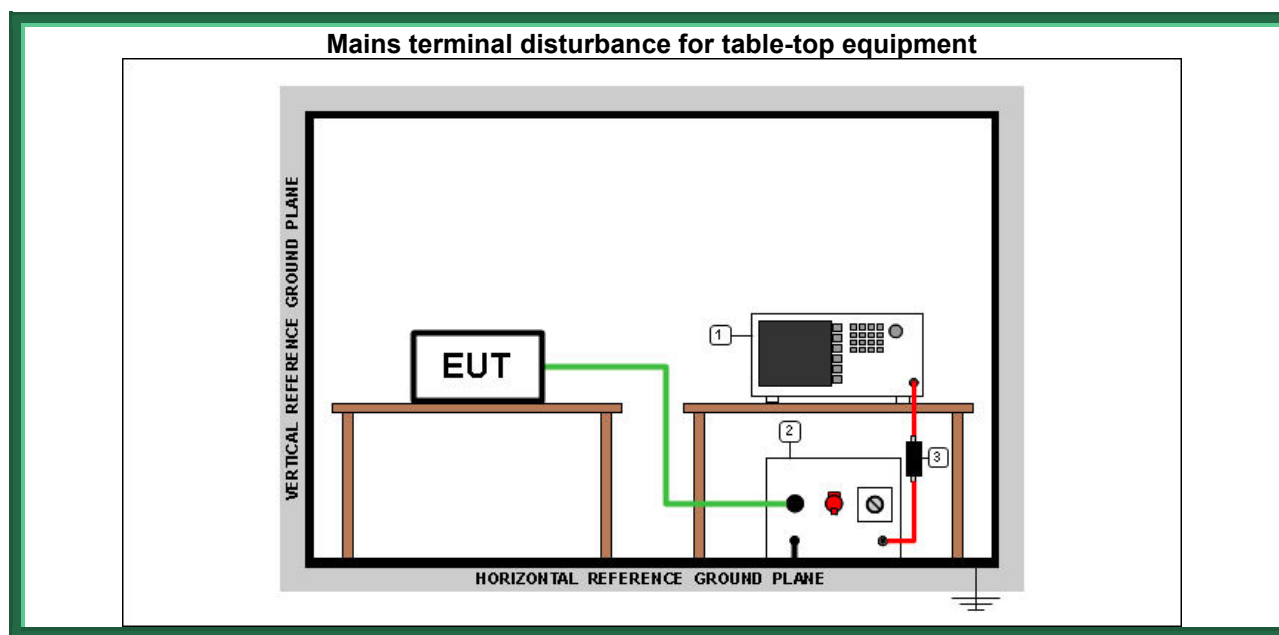
Conducted emission

Tested by	S. Zanivan	
Test date	28.10.2025	
Test location (stand).....	Shielded chamber (CMC A001)	
Basic standard(s)	ANSI C63.10 cl. 6.2	
Product standard(s).....	FCC Rules and Regulation; Titles 47 Part. 15.207	
Test set-up description	☒	Table top equipment set-up (80 cm above the reference ground plane)
	☐	Floor standing equipment set-up (insulating material up to 12 mm thick)
	☐	False floor installation equipment set-up (insulating material up to 34 cm above the reference ground plane)
Supplementary Test set-up description	--	
Test method applied.....	☒	Artificial mains network, 50 μ H/50 Ω LISN
	☐	Other:

Acceptance limits

Frequency range (MHz)	$dB(\mu V)$ Quasi-peak	$dB(\mu V)$ Average
0,15 to 0,50	66 to 56	56 to 46
0,5 to 5	56	46
5 to 30	60	50

Test setup



Test setup PE001_01

Nr.	Id. Number	Manufacturer	Model	Serial number	Description	Last calibration date	Calibration expiration
3	CMC S419	Rohde & Schwarz	ESH3-Z2	--	Pulse limiter	September 2025	September 2026
2	CMC S200	Schwarzbeck	NSLK 8128	8128-273	V-LISN	January 2025	January 2026
1	CMC S206	Rohde & Schwarz	ESCI 7	100781	EMC Receiver 9KHz-7GHz	December 2024	December 2025

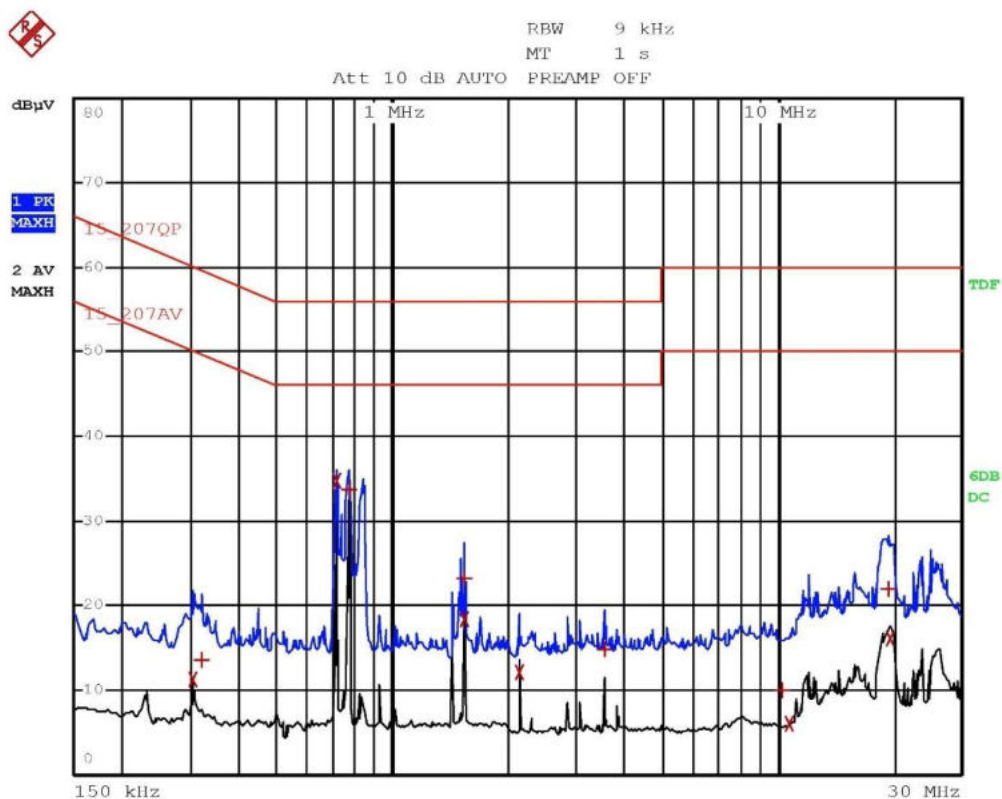
Result

Line	Frequency Range (MHz)	Graphs	Remarks	Verdict
-7,4 V	0,15 – 30	25198501	--	P
+7,4 V	0,15 – 30	25198502	--	P

Graphs Legend

PK: Peak; QP [1s] (quasi-peak at 1 second) values are marked with a +
AV: Average; AV [1s] (average at 1 second) values are marked with a X

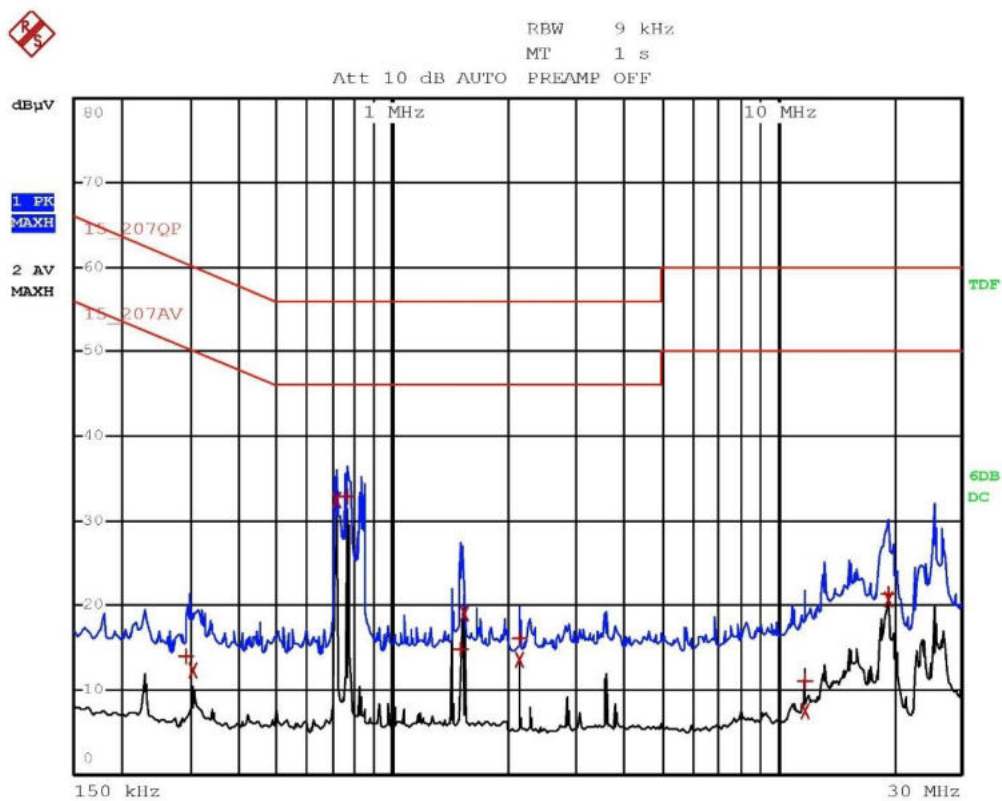
Graphs



Zanivan 25198501-Line (-) -TX RX

EDIT PEAK LIST (Final Measurement Results)			
Trace1:	15_207QP		
Trace2:	15_207AV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμV	DELTA LIMIT dB
2 Average	302 kHz	11.21	-38.97
1 Quasi Peak	318 kHz	13.44	-46.31
2 Average	714 kHz	34.83	-11.16
1 Quasi Peak	770 kHz	33.72	-22.27
1 Quasi Peak	1.534 MHz	23.25	-32.75
2 Average	1.546 MHz	18.36	-27.63
2 Average	2.142 MHz	12.01	-33.98
1 Quasi Peak	3.578 MHz	14.71	-41.28
1 Quasi Peak	10.28 MHz	9.92	-50.07
2 Average	10.7 MHz	5.93	-44.06
1 Quasi Peak	19.434 MHz	22.01	-37.99
2 Average	19.69 MHz	16.15	-33.85

Zanivan 25198501-Line (-) -TX RX



Zanivan 25198502-Line (+) -TX RX

EDIT PEAK LIST (Final Measurement Results)			
Trace1:	15_207QP		
Trace2:	15_207AV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμV	DELTA LIMIT dB
1 Quasi Peak	294 kHz	13.93	-46.48
2 Average	302 kHz	12.24	-37.94
2 Average	718 kHz	32.43	-13.56
1 Quasi Peak	762 kHz	32.79	-23.20
1 Quasi Peak	1.51 MHz	14.86	-41.13
2 Average	1.538 MHz	18.98	-27.01
1 Quasi Peak	2.146 MHz	16.15	-39.84
2 Average	2.146 MHz	13.53	-32.46
2 Average	11.838 MHz	7.38	-42.61
1 Quasi Peak	11.842 MHz	11.00	-48.99
1 Quasi Peak	19.518 MHz	21.25	-38.74
2 Average	19.518 MHz	20.73	-29.26

Zanivan 25198502-Line (+) -TX RX

Emissions in restricted frequency bands and in unrestricted frequency bands

Tested by	S. Zanivan	
Test date	30.10.2025	
Test location (stand)	Semi-anechoic chamber (CMC A070)	
Basic standard(s)	ANSI C63.10 cl. 6.3, 6.4, 6.5 and 6.6	
Product standard(s)	FCC Rules and Regulation; Titles 47 Part. 15.209	
Test set-up description.....	☒	Table top equipment set-up (80 cm above the reference ground plane)
	☐	Floor standing equipment set-up (insulating material up to 12 mm thick)
	☐	False floor installation equipment set-up (insulating material up to 34 cm above the reference ground plane)
Supplementary test set-up description.....	--	
Test method applied	OATS or SAC with measurement distance [m]: 10 m for frequencies below 1 GHz 3 m for frequencies above 1 GHz	
Supplementary information	--	

Acceptance limits

Acceptance limits for emissions in restricted frequency bands ($f < 1000$ MHz)		
Frequency range (MHz)	Test distance (m)	Limits [dB(μ V/m)]
0,009 to 0,490	300	$20\log(2400/F(\text{kHz}))$
0,490 to 1,705	30	$20\log(24000/F(\text{kHz}))$
1,705 to 30	30	$20\log(30)$
30 to 88	3	$20\log(100)^{**}$
88 to 216	3	$20\log(150)^{**}$
216 to 960	3	$20\log(200)^{**}$
Above 960	3	$20\log(500)$

****:** except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54 – 72 MHz, 76 – 88 MHz, 174 – 216 MHz or 470 – 806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g., §§ 15.231 and 15.241.

Perimeter protection systems may operate in the 54 – 72 MHz and 76 – 88 MHz bands under the provisions of this section. The use of such perimeter protection systems is limited to industrial, business and commercial applications.

Remarks: the emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9 – 90 kHz and 110 – 490 kHz. Radiated emission limits in these two bands are based on measurements employing an average detector. The Verdict have been extrapolated to the specified distance using an extrapolation factor.

Acceptance limits for emissions in restricted frequency bands ($f \geq 1000$ MHz)			
Frequency (MHz)	Test distance (m)	AV limits [dB(μ V/m)]	Peak limits [dB(μ V/m)]
> 1000	3	54	74

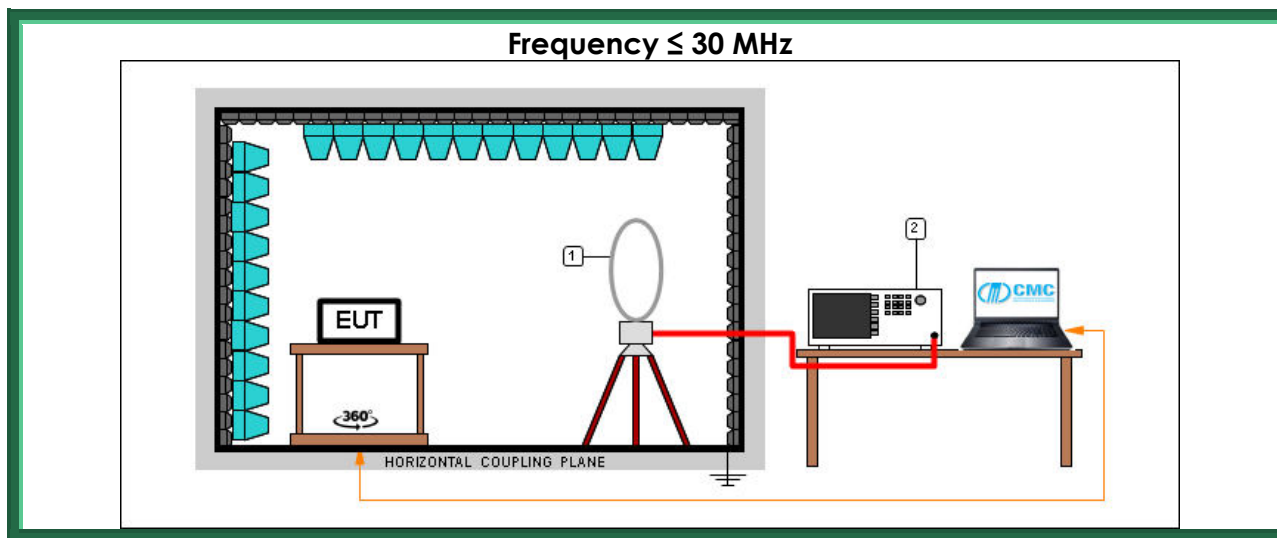
The restricted frequency bands are listed in the following table:

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
13,36 – 13,41			

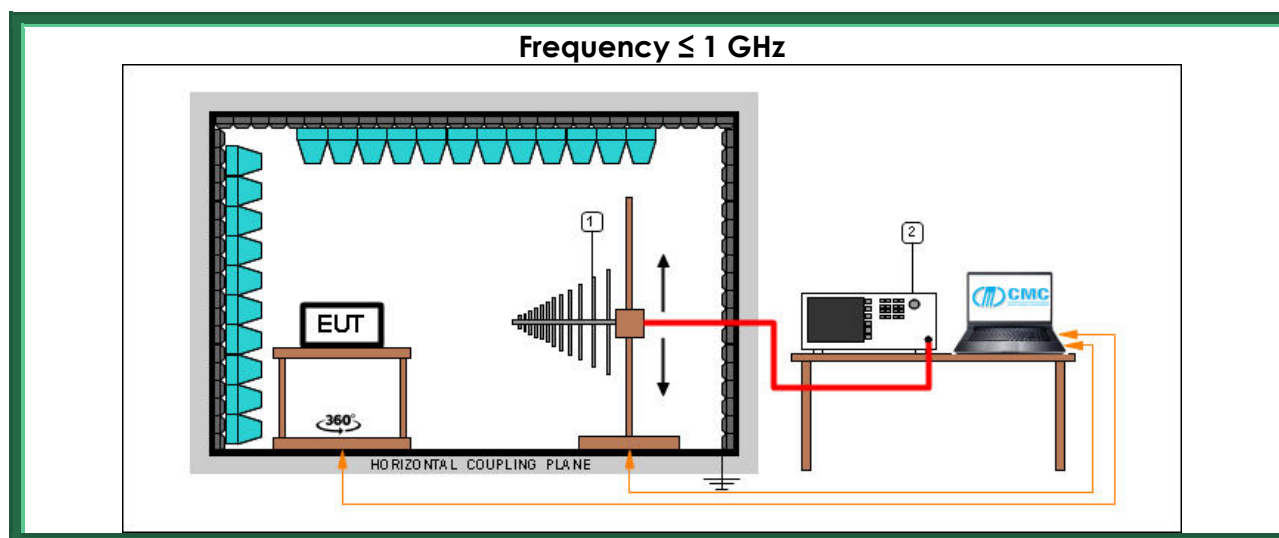
Acceptance limits for emissions in non-restricted frequency bands

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.

Test setup



Test setup PE004_21							
Nr.	Id. Number	Manufacturer	Model	Serial number	Description	Last calibration date	Calibration expiration
2	CMC S402	Rohde & Schwarz	ESW44	103433	Emi Test Receiver	December 2024	December 2025
1	CMC S127	Schaffner	HLA6120	1191	Loop Antenna 9kHz - 30MHz	July 2024	July 2027
--	CMC A105	Frankonia	FC06	FC06.1-2017-073	Turntable & Antenna mast controller (Software V02.05.013)	No calibration required	No calibration required

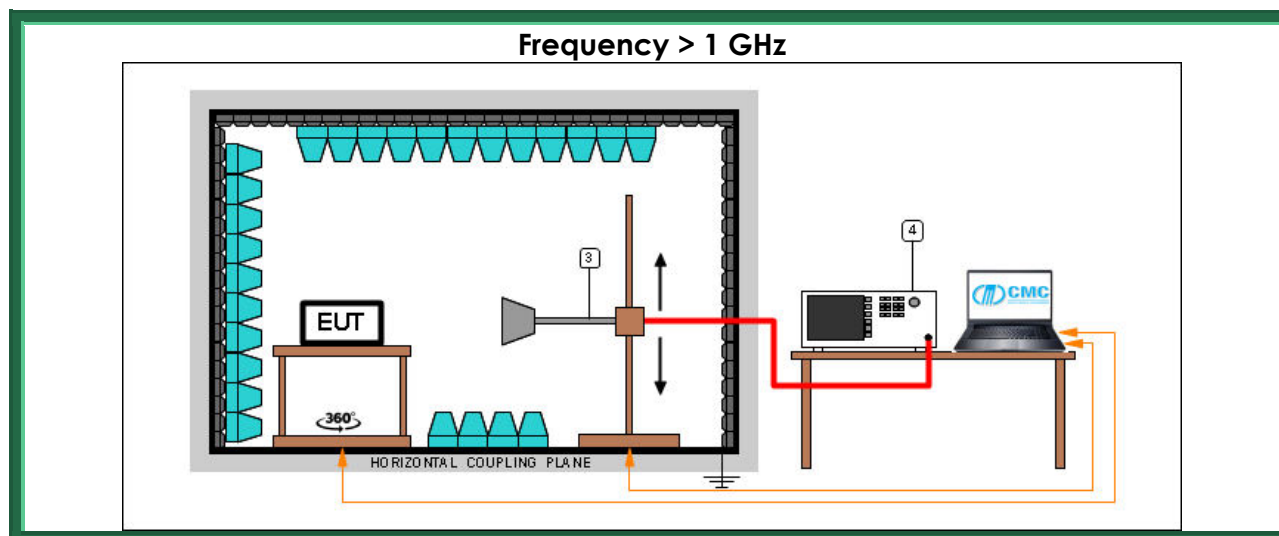


Test setup PE004_22

Nr.	Id. Number	Manufacturer	Model	Serial number	Description	Last calibration date	Calibration expiration
2	CMC S402	Rohde & Schwarz	ESW44	103433	Emi Test Receiver	December 2024	December 2025
1	CMC S271	Schwarzbeck	BBA 9106 + VHBB 9124	831	Broadband Antenna	August 2025	August 2028
--	CMC A105	Frankonia	FC06	FC06.1-2017-073	Turntable & Antenna mast controller (Software V02.05.013)	No calibration required	No calibration required

Test setup PE004_23

Nr.	Id. Number	Manufacturer	Model	Serial number	Description	Last calibration date	Calibration expiration
2	CMC S402	Rohde & Schwarz	ESW44	103433	Emi Test Receiver	December 2024	December 2025
1	CMC S287	Schwarzbeck	VUSLP 9111B	9111B-203	Broadband Antenna	August 2025	August 2028
--	CMC A105	Frankonia	FC06	FC06.1-2017-073	Turntable & Antenna mast controller (Software V02.05.013)	No calibration required	No calibration required



Test setup PE004_24

Nr.	Id. Number	Manufacturer	Model	Serial number	Description	Last calibration date	Calibration expiration
4	CMC S402	Rohde & Schwarz	ESW44	103433	Emi Test Receiver	December 2024	December 2025
3	CMC S108	Emco	3115	9811-5622	Waveguide antenna	August 2025	August 2028
--	CMC A105	Frankonia	FC06	FC06.1-2017-073	Turntable & Antenna mast controller (Software V02.05.013)	No calibration required	No calibration required

Test setup PE004_25

Nr.	Id. Number	Manufacturer	Model	Serial number	Description	Last calibration date	Calibration expiration
4	CMC S402	Rohde & Schwarz	ESW44	103433	Emi Test Receiver	December 2024	December 2025
3	CMC S290	Schwarzbeck	BBHA 9170	733	Horn Antenna	October 2021	October 2026
--	CMC A105	Frankonia	FC06	FC06.1-2017-073	Turntable & Antenna mast controller (Software V02.05.013)	No calibration required	No calibration required

Result

Transmission frequency (MHz)	Polarization	Frequency Range (MHz)	Graphs	Remarks	Verdict
927,825	H	1000 – 10000	25198524	--	P
927,825	V	1000 – 10000	25198525	--	P
921,425	V	1000 – 10000	25198526	--	P
921,425	H	1000 – 10000	25198527	--	P
915,075	H	1000 – 10000	25198528	--	P
915,075	V	1000 – 10000	25198529	--	P
Worst case	Loop	0,009 – 30	25198530	--	P
Worst case	H	30 – 300	25198531	--	P
Worst case	V	30 – 300	25198532	--	P
915,075	V	300 – 1000	25198533	--	P
915,075	H	300 – 1000	25198534	--	P
921,425	H	300 – 1000	25198535	--	P
921,425	V	300 – 1000	25198536	--	P
927,825	V	300 – 1000	25198537	--	P
927,825	H	300 – 1000	25198538	--	P

Remarks: EUT was tested in 3 orthogonal planes, graphs are related to the highest detected levels.

Measurements at frequencies lower than 30 MHz have been performed with an EUT – antenna distance of 10 m. Measured values have been corrected with conversion factor $40\log(\text{test distance}/10)$ based on the measuring distance provided by the standard.

Measurements at frequencies higher than 30 MHz and lower than 1000 MHz have been performed with an EUT – antenna distance of 10 m. Measured values have been corrected with conversion factor $20\log(\text{test distance}/10)$ based on the measuring distance provided by the standard.

Peaks above the limits are caused by the nominal transmitting frequencies.

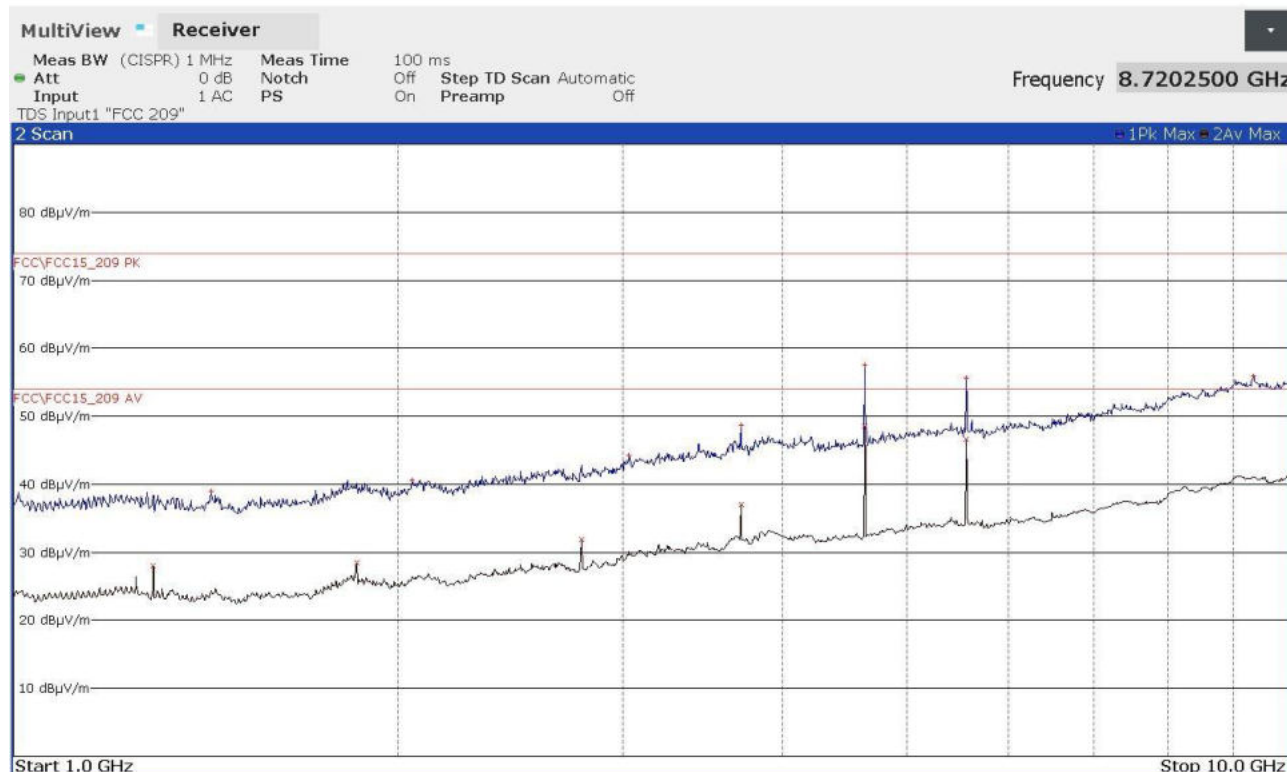
Graphs Legend

PK: Peak; QP [1s] (quasi-peak at 1 second) values are marked with a +

AV: Average; AV [1s] (average at 1 second) values are marked with a X

Graphs

zanivan 25198524

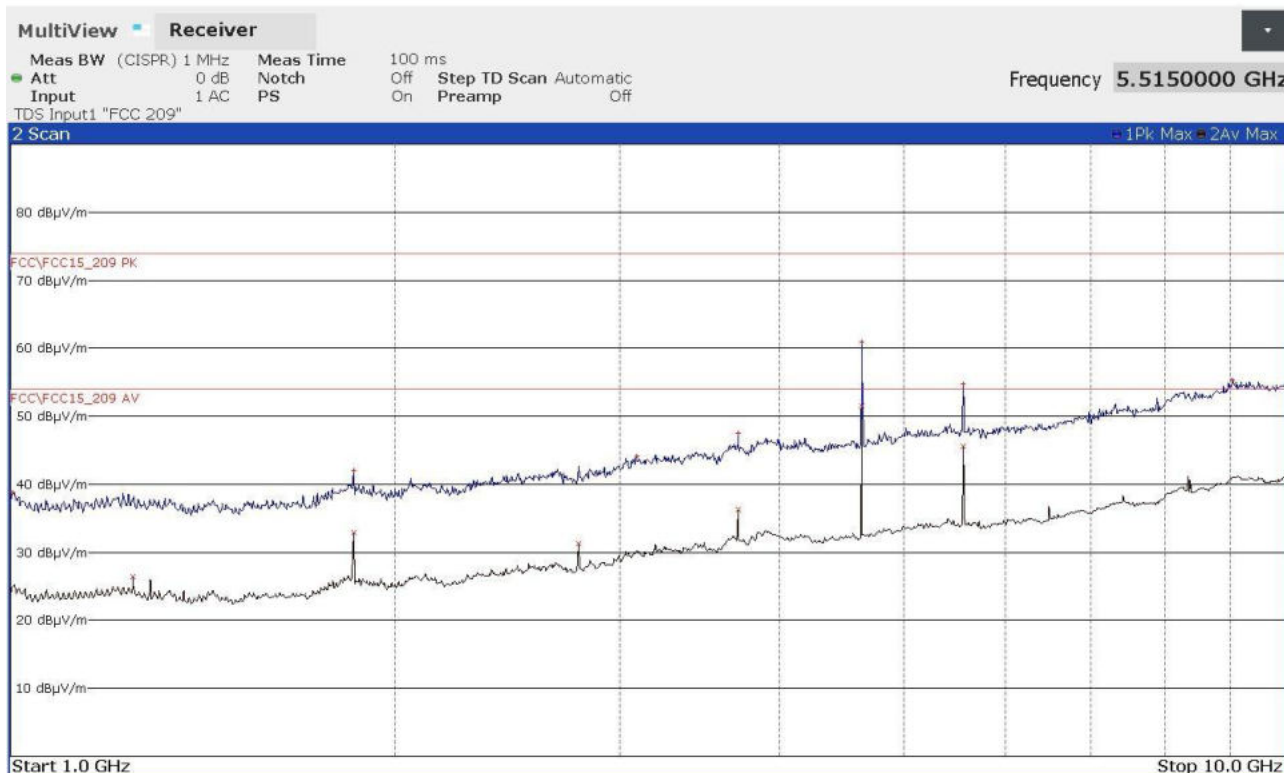


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
1427500000	+39.02	-34.96	1287000000	+28.08	-25.90
2051000000	+40.59	-33.39	1855750000	+28.51	-25.47
3032500000	+44.20	-29.78	2783500000	+31.85	-22.13
3711250000	+48.76	-25.22	3711250000	+36.98	-17.00
4639000000	+57.54	-16.44	4639250000	+48.47	-5.51
5567000000	+55.69	-18.29	5567000000	+46.64	-7.34
9342500000	+55.86	-18.12	9997500000	+41.41	-12.57

25198524_2

Zanivan 25198525

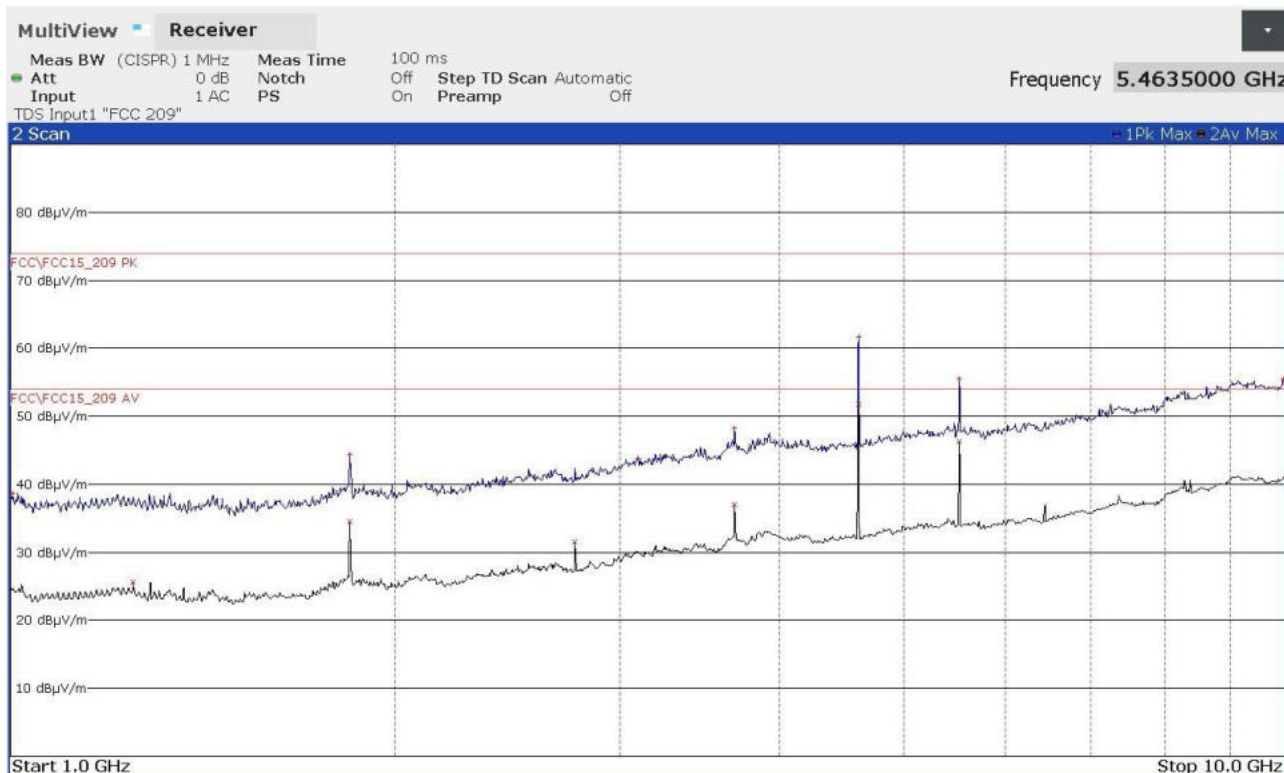


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
1004000000	+38.73	-35.25	1247500000	+26.34	-27.64
1855500000	+42.07	-31.91	1855750000	+32.84	-21.14
3091000000	+44.11	-29.87	2783500000	+31.22	-22.76
3711250000	+47.55	-26.43	3711250000	+36.28	-17.70
4639000000	+60.93	-13.05	4639250000	+51.52	-2.46
5567000000	+54.79	-19.19	5567000000	+45.56	-8.42
9037500000	+55.35	-18.63	9996000000	+41.30	-12.68

25198525_2

Zanivan 25198526

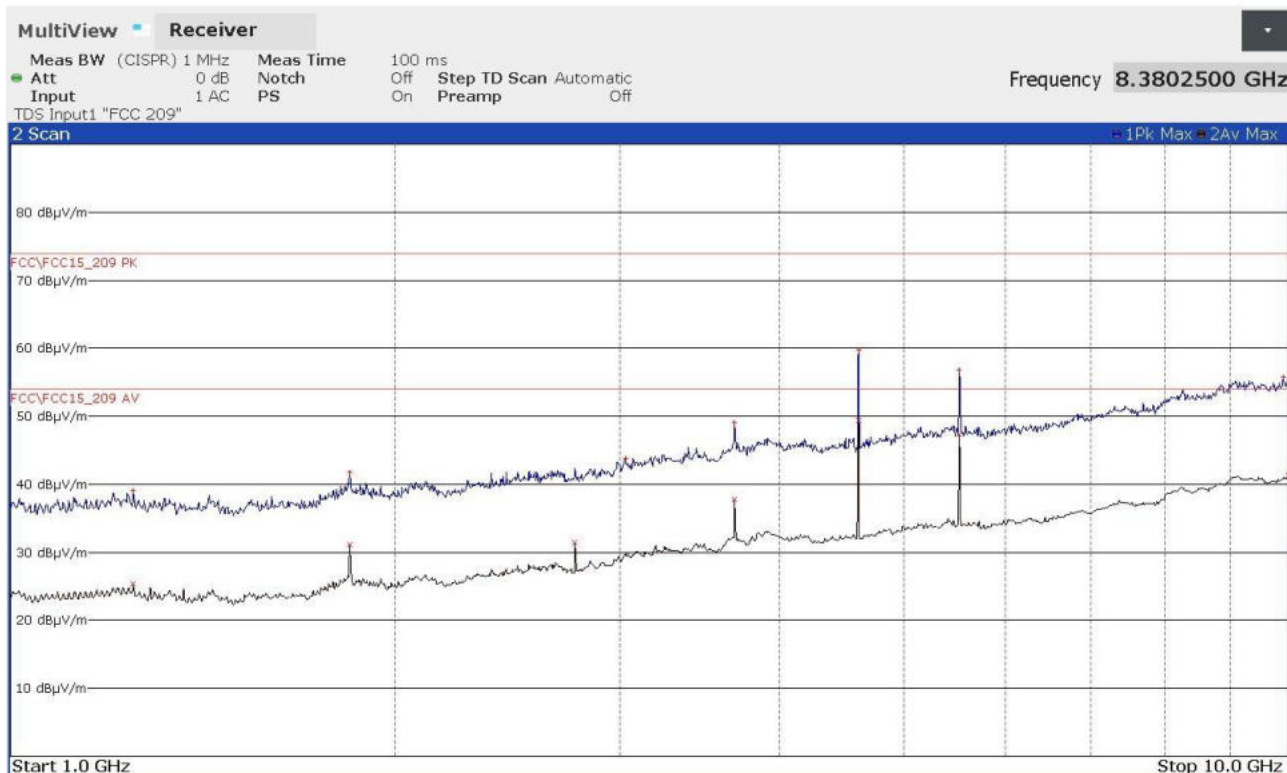


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
1003500000	+38.70	-35.28	1247500000	+25.61	-28.37
1842750000	+44.48	-29.50	1842750000	+34.50	-19.48
3097250000	+43.85	-30.13	2764250000	+31.52	-22.46
3685750000	+48.24	-25.74	3685750000	+37.02	-16.96
4607250000	+61.62	-12.36	4607250000	+51.75	-2.23
5528500000	+55.45	-18.53	5528500000	+46.26	-7.72
9901500000	+55.44	-18.54	9997000000	+41.27	-12.71

25198526_2

zanivan 25198527

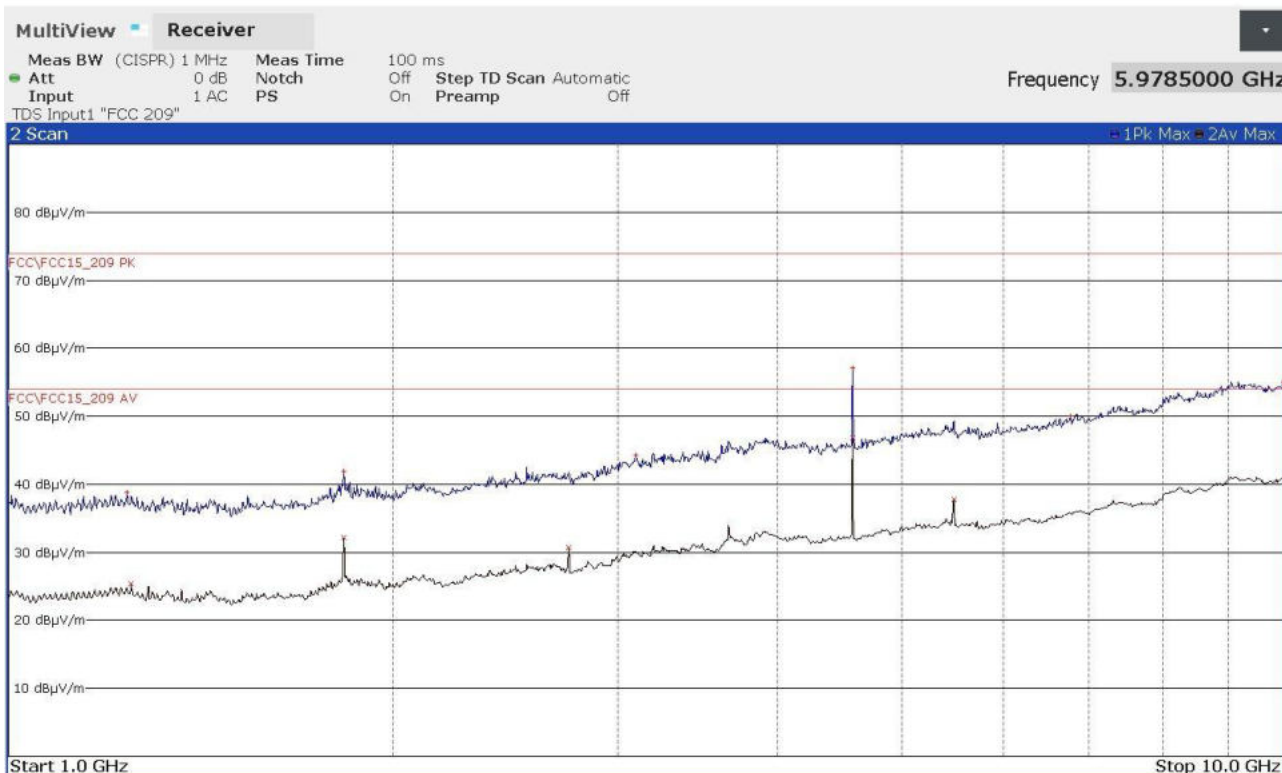


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
1247500000	+39.12	-34.86	1247500000	+25.44	-28.54
1843000000	+41.82	-32.16	1842750000	+31.06	-22.92
3029000000	+43.86	-30.12	2764250000	+31.37	-22.61
3685750000	+49.10	-24.88	3685750000	+37.77	-16.21
4607000000	+59.80	-14.18	4607250000	+49.36	-4.62
5528500000	+56.75	-17.23	5528500000	+47.43	-6.55
9906000000	+55.84	-18.14	9996000000	+41.27	-12.71

25198527_2

Zanivan 25198528

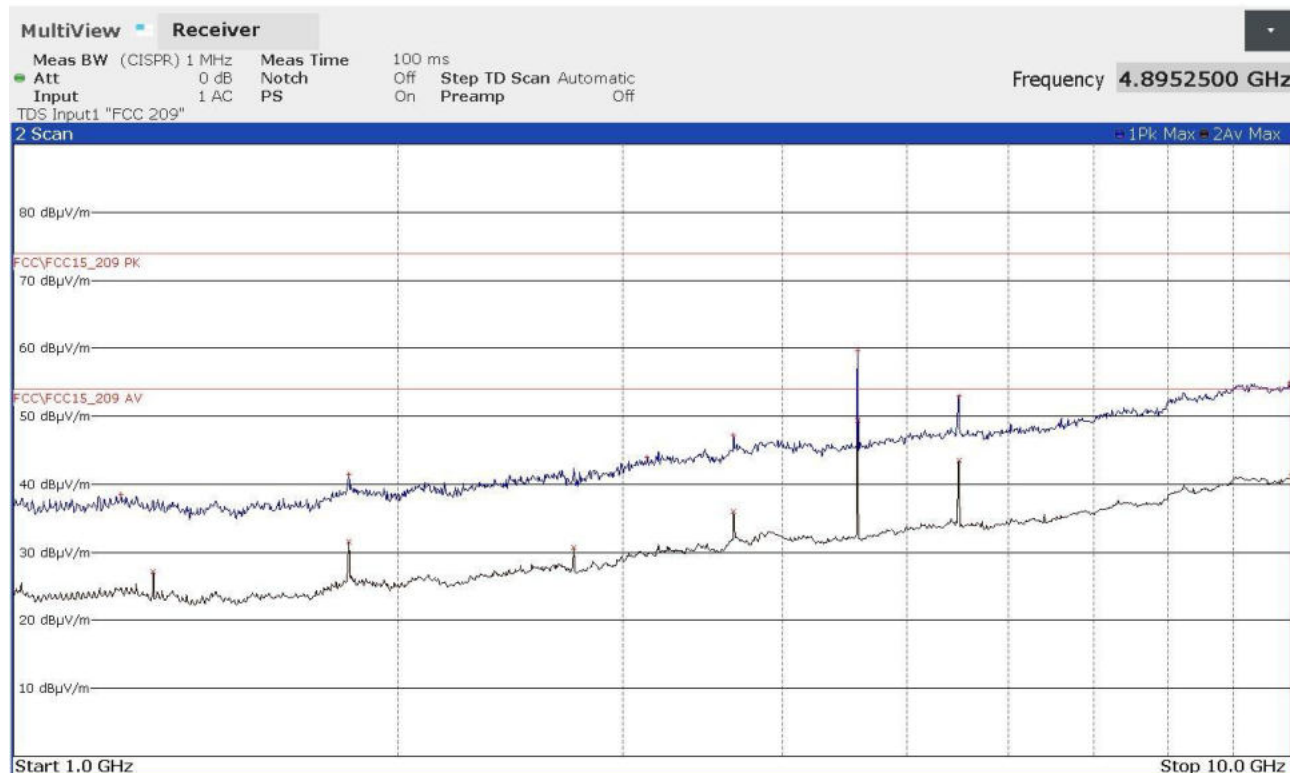


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
1238250000	+38.74	-35.24	1247500000	+25.39	-28.59
1830000000	+41.95	-32.03	1830250000	+32.23	-21.75
3095000000	+44.19	-29.79	2745250000	+30.73	-23.25
4575500000	+57.11	-16.87	4575500000	+46.76	-7.22
6779500000	+50.01	-23.97	5490500000	+37.78	-16.20
9954500000	+55.06	-18.92	9996750000	+41.21	-12.77

25198528_2

Zanivan 25198529

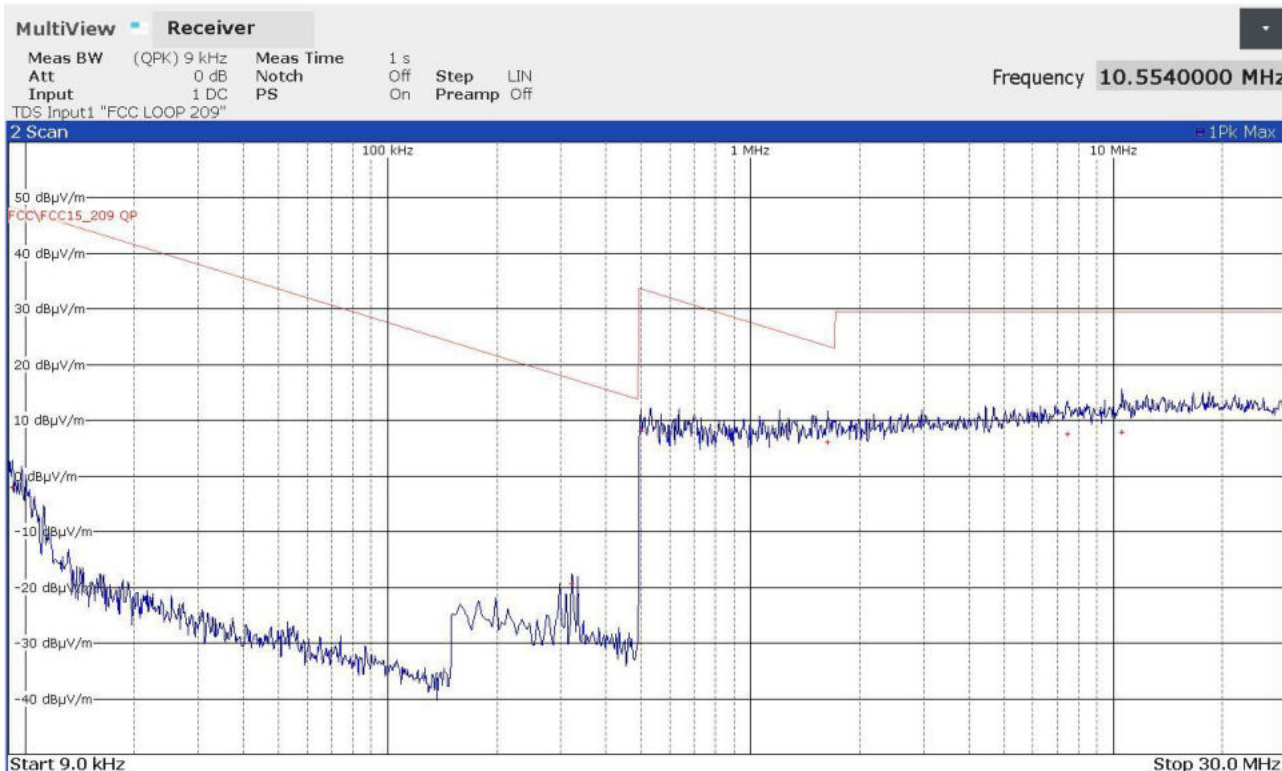


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
1214000000	+38.54	-35.44	1287000000	+27.11	-26.87
1830000000	+41.51	-32.47	1830250000	+31.64	-22.34
3132750000	+44.02	-29.96	2745250000	+30.68	-23.30
3660250000	+47.28	-26.70	3660250000	+36.02	-17.96
4575250000	+59.67	-14.31	4575250000	+49.41	-4.57
5490500000	+52.97	-21.01	5490500000	+43.46	-10.52
9957250000	+54.85	-19.13	9995750000	+41.23	-12.75

25198529_2

Zanivan 25198530



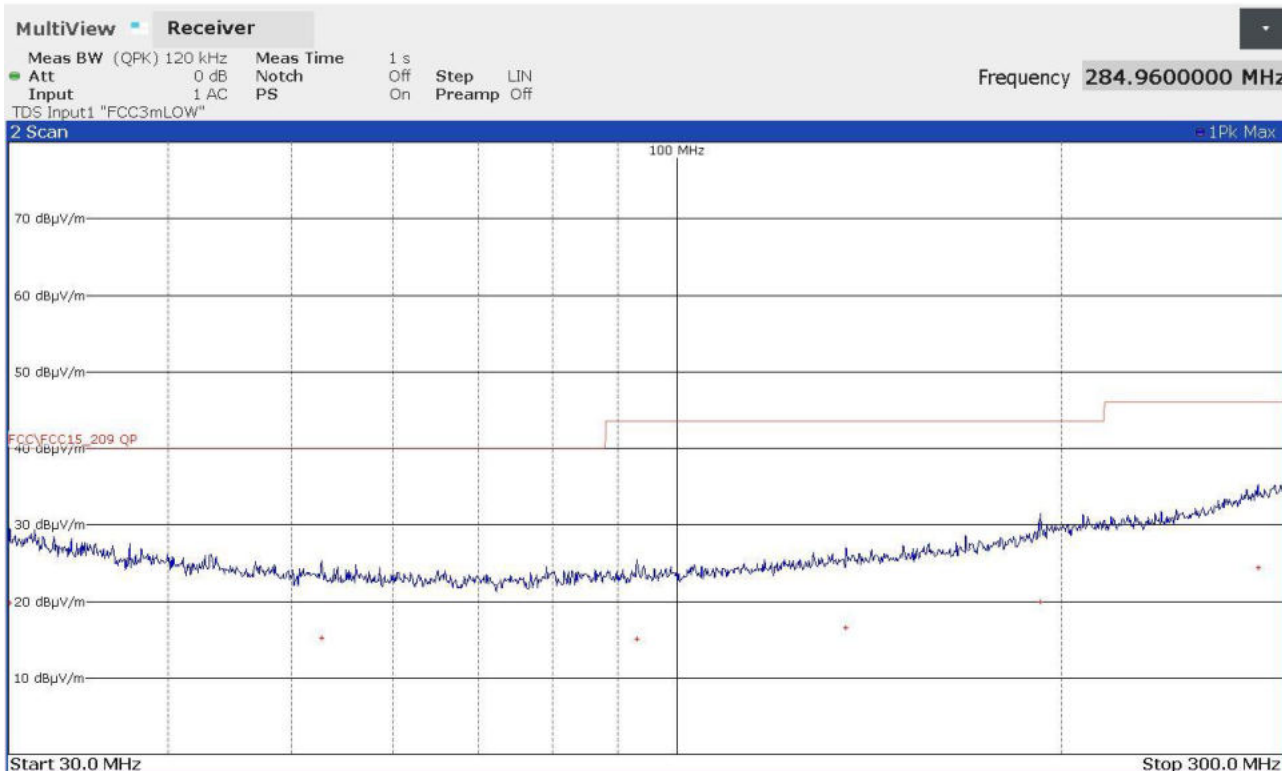
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
9240	-1.99	-50.28
322000	-19.26	-36.71
498000	+8.09	-25.57
1630000	+6.04	-17.32
7458000	+7.47	-22.07
10554000	+7.92	-21.62

25198530_2

Zanivan 25198531



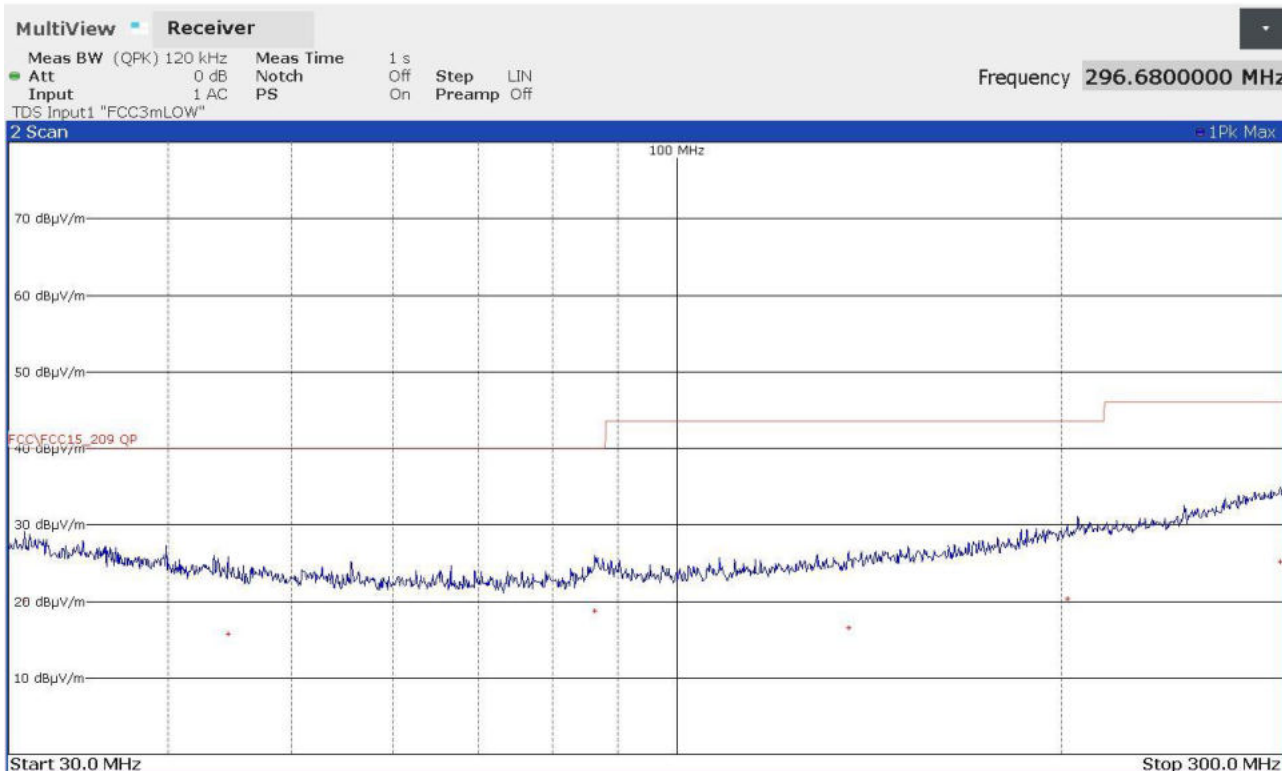
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
30080000	+19.82	-20.18
52720000	+15.15	-24.85
93040000	+15.13	-28.39
135720000	+16.52	-27.00
192480000	+19.87	-23.65
284960000	+24.45	-21.57

25198531_2

Zanivan 25198532



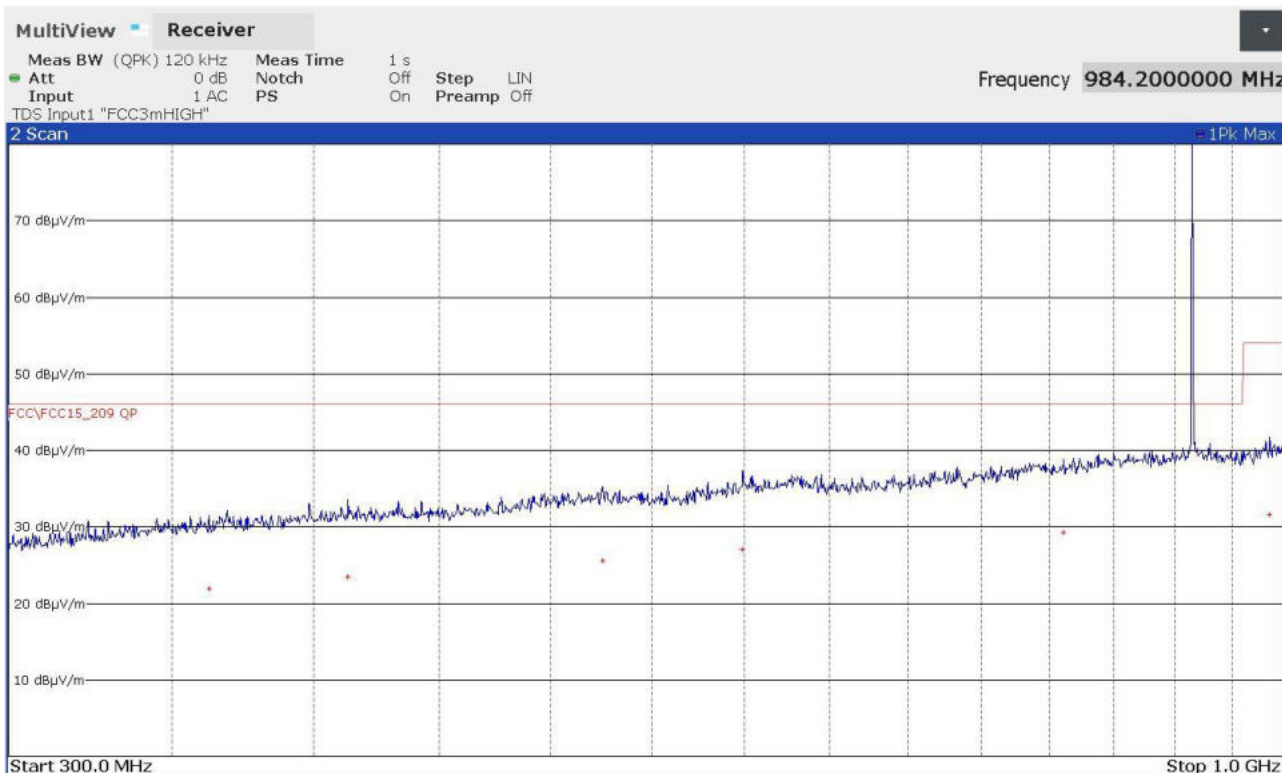
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
30880000	+20.06	-19.94
44560000	+15.80	-24.20
86320000	+18.70	-21.30
136280000	+16.50	-27.02
202200000	+20.28	-23.24
296680000	+25.12	-20.90

25198532_2

Zanivan 25198533



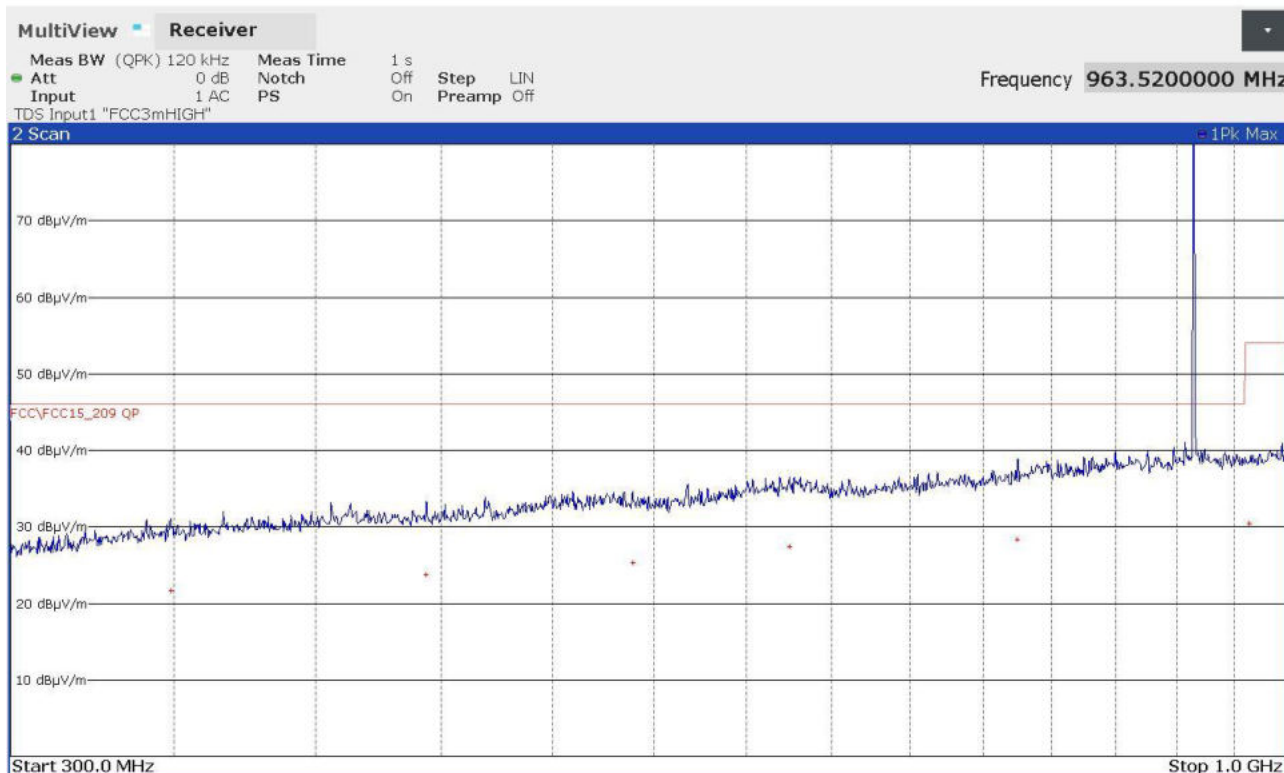
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
362360000	+21.95	-24.07
412920000	+23.50	-22.52
524960000	+25.60	-20.42
599080000	+27.00	-19.02
810560000	+29.31	-16.71
984200000	+31.58	-22.40

25198533_2

Zanivan 25198534



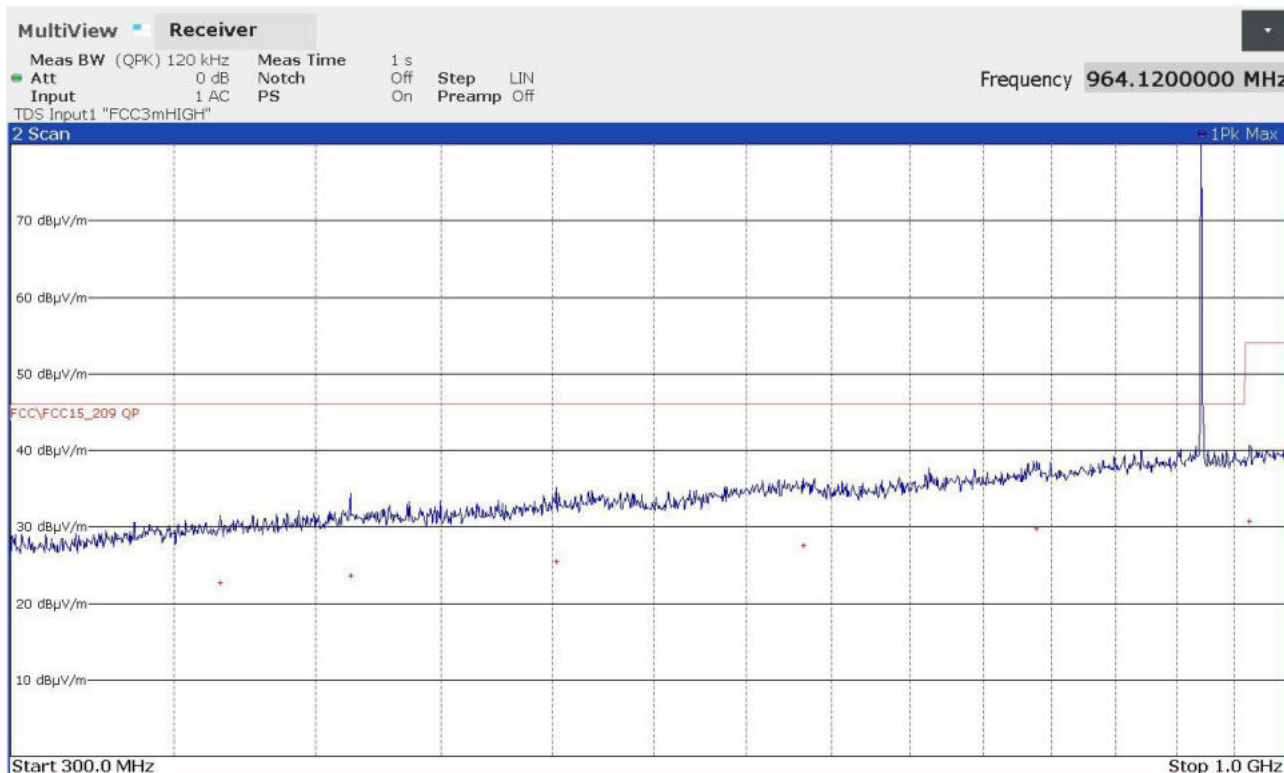
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
348880000	+21.70	-24.32
443960000	+23.68	-22.34
539040000	+25.26	-20.76
624920000	+27.43	-18.59
775000000	+28.27	-17.75
963520000	+30.47	-23.51

25198534_2

Zanivan 25198535



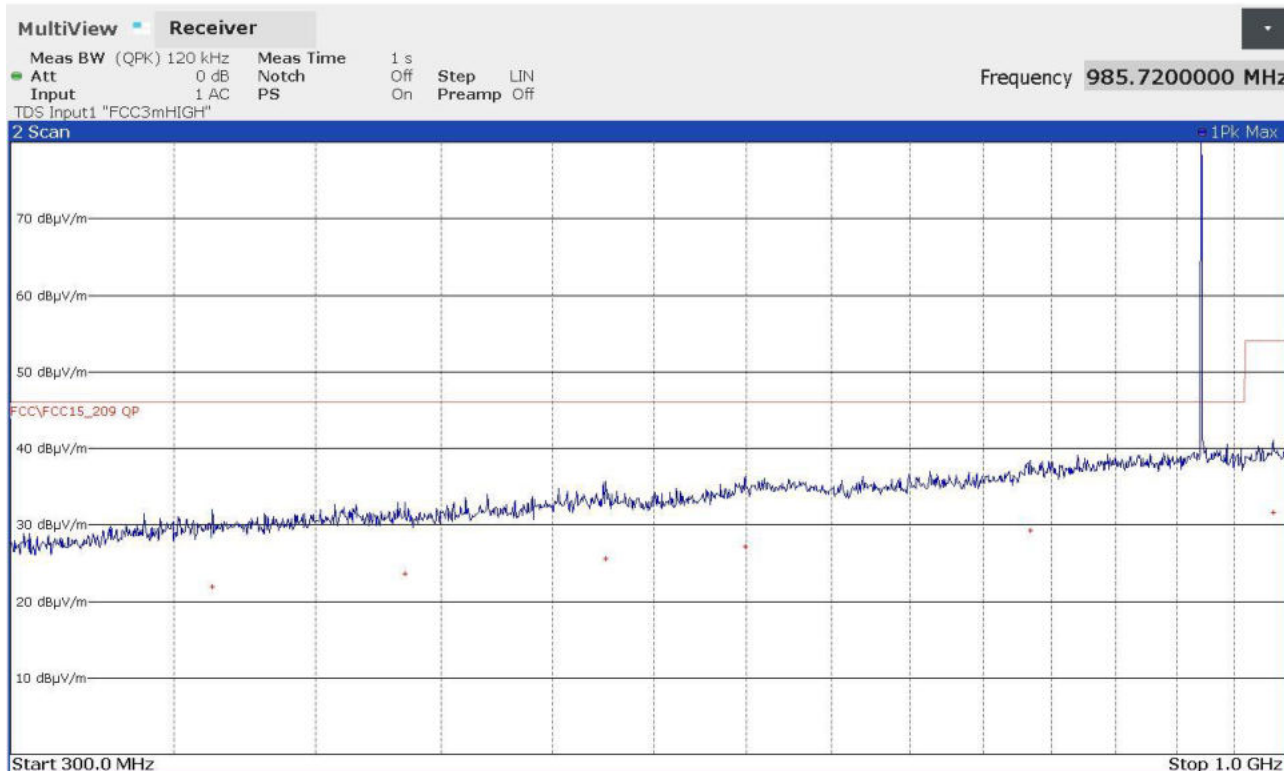
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
365560000	+22.73	-23.29
413320000	+23.64	-22.38
501720000	+25.47	-20.55
633120000	+27.51	-18.51
788760000	+29.73	-16.29
964120000	+30.65	-23.33

25198535_2

Zanivan 25198536



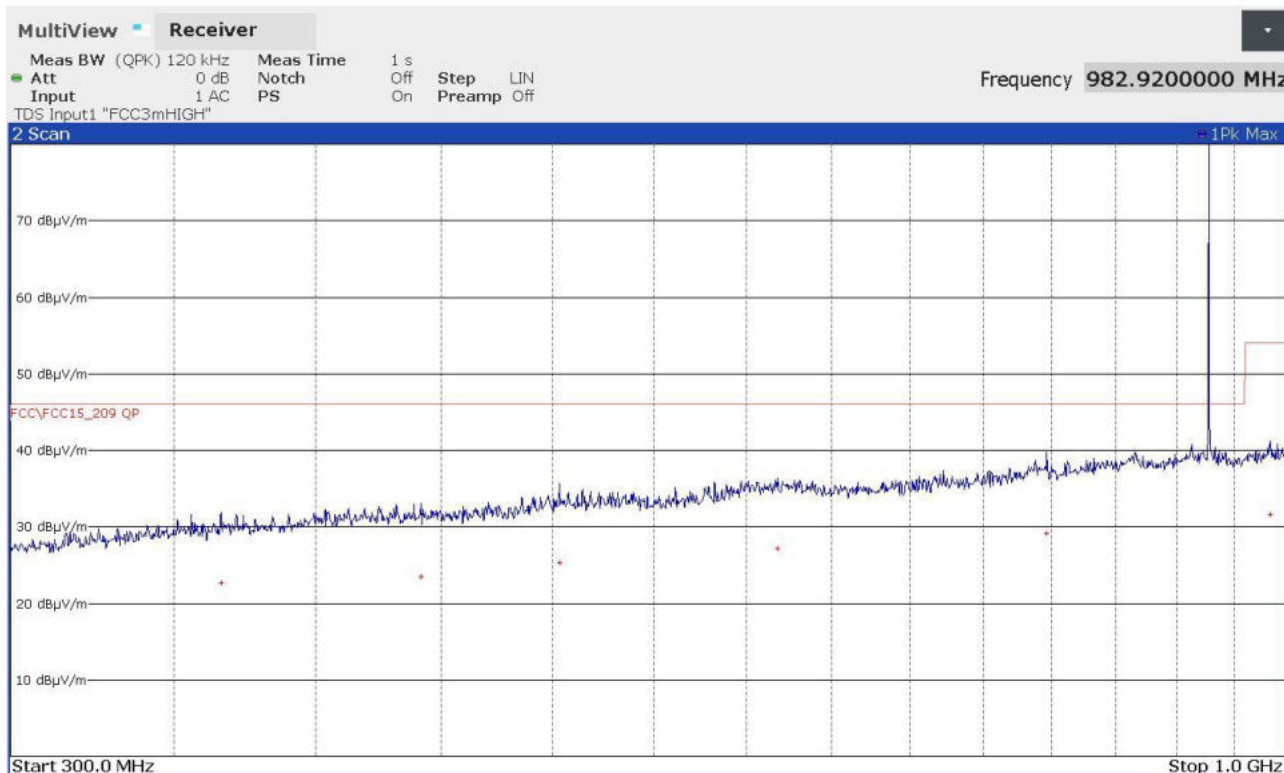
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
362920000	+21.93	-24.09
435040000	+23.64	-22.38
525600000	+25.61	-20.41
599240000	+27.13	-18.89
784320000	+29.24	-16.78
985720000	+31.64	-22.34

25198536_2

zanivan 25198537

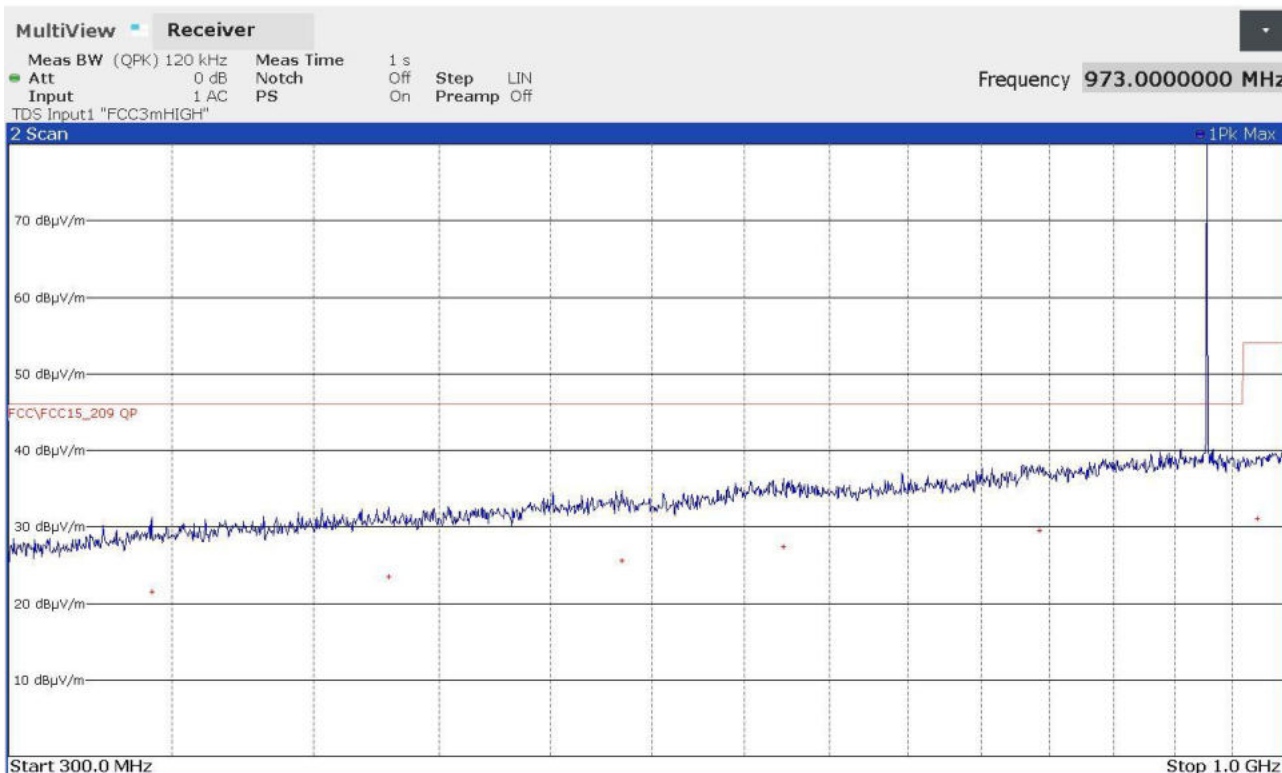


FINAL RESULT TABLE

QUASI PEAK		
Freq Hz	Lev dBuV/m	Margin dB
365760000	+22.75	-23.27
441720000	+23.49	-22.53
503200000	+25.30	-20.72
618000000	+27.15	-18.87
796240000	+29.14	-16.88
982920000	+31.55	-22.43

25198537_2

Zanivan 25198538



FINAL RESULT TABLE

QUASI PEAK

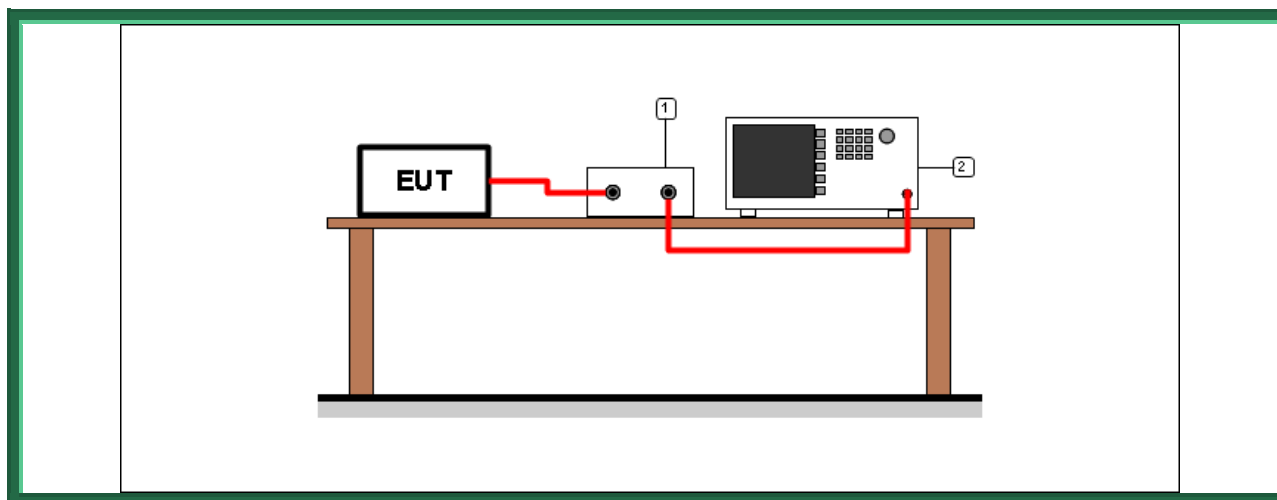
Freq Hz	Lev dBuV/m	Margin dB
343320000	+21.47	-24.55
429240000	+23.47	-22.55
534640000	+25.53	-20.49
622560000	+27.42	-18.60
792400000	+29.54	-16.48
973000000	+31.13	-22.85

25198538_2

20 dB bandwidth

Tested by	S. Zanivan
Test date	28.10.2025
Test location (stand)	Laboratory
Basic standard(s)	ANSI C63.10 cl. 7.8.7
Product standard(s)	FCC Rules and Regulation; Titles 47 Part. 15.215 (c)
Supplementary test set-up description	--
Supplementary information	--

Test setup



Test setup PR002_01

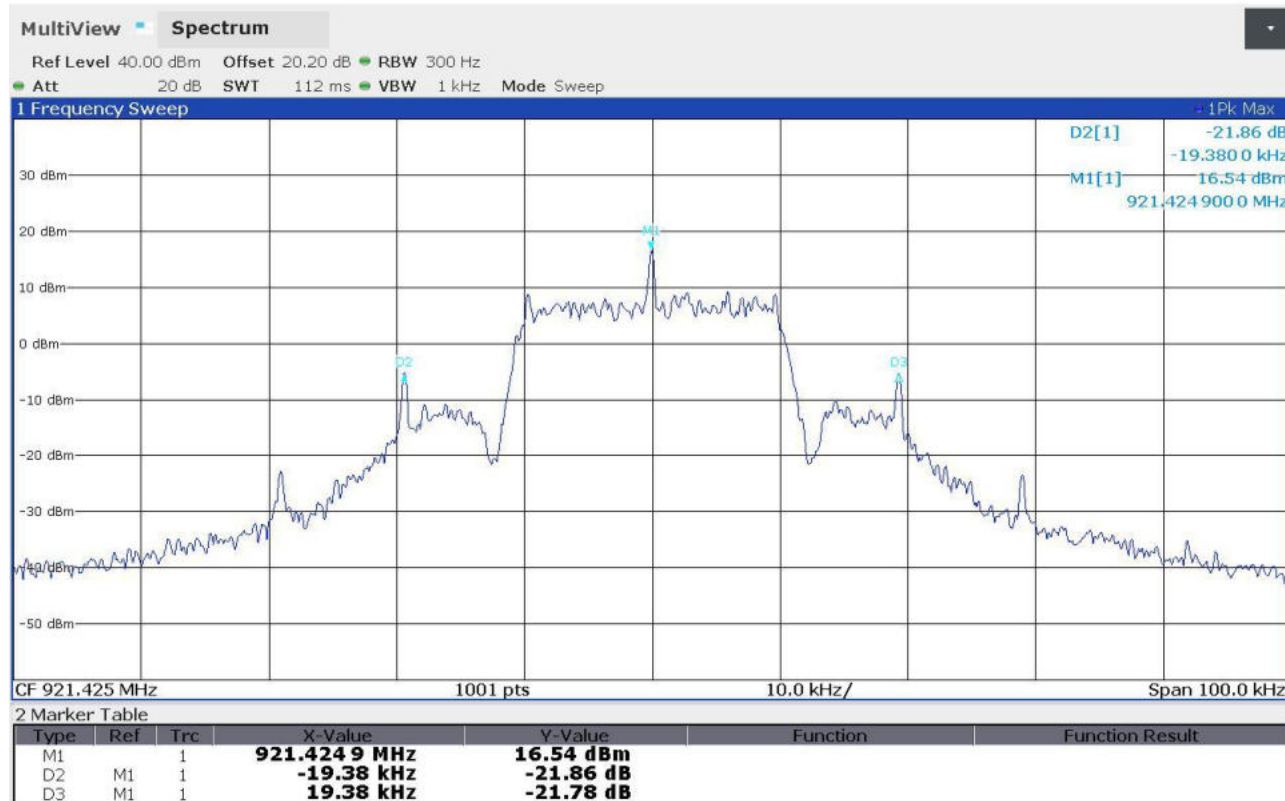
Nr.	Id. Number	Manufacturer	Model	Serial number	Description	Last calibration date	Calibration expiration
2	CMC S295	Rohde & Schwarz	FSW43	104059	Spectrum Analyzer 43GHz	January 2023	January 2026
1	--	--	--	--	Cable + attenuator	Calibrated before the test	Calibrated before the test

Result

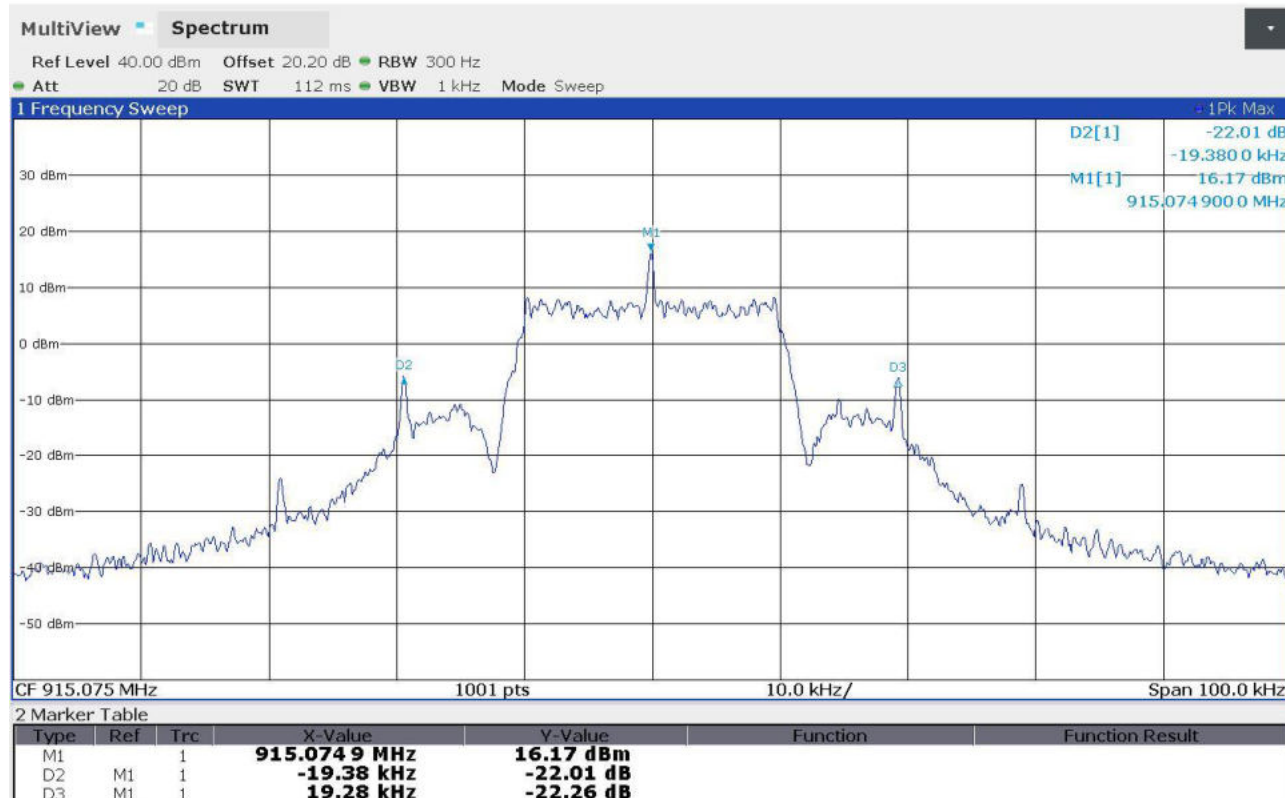
Transmission frequency (MHz)	Graphs	20 dB bandwidth (kHz)
921,425	25198504	38,76
915,075	25198507	38,66
927,825	25198512	38,66

Graphs

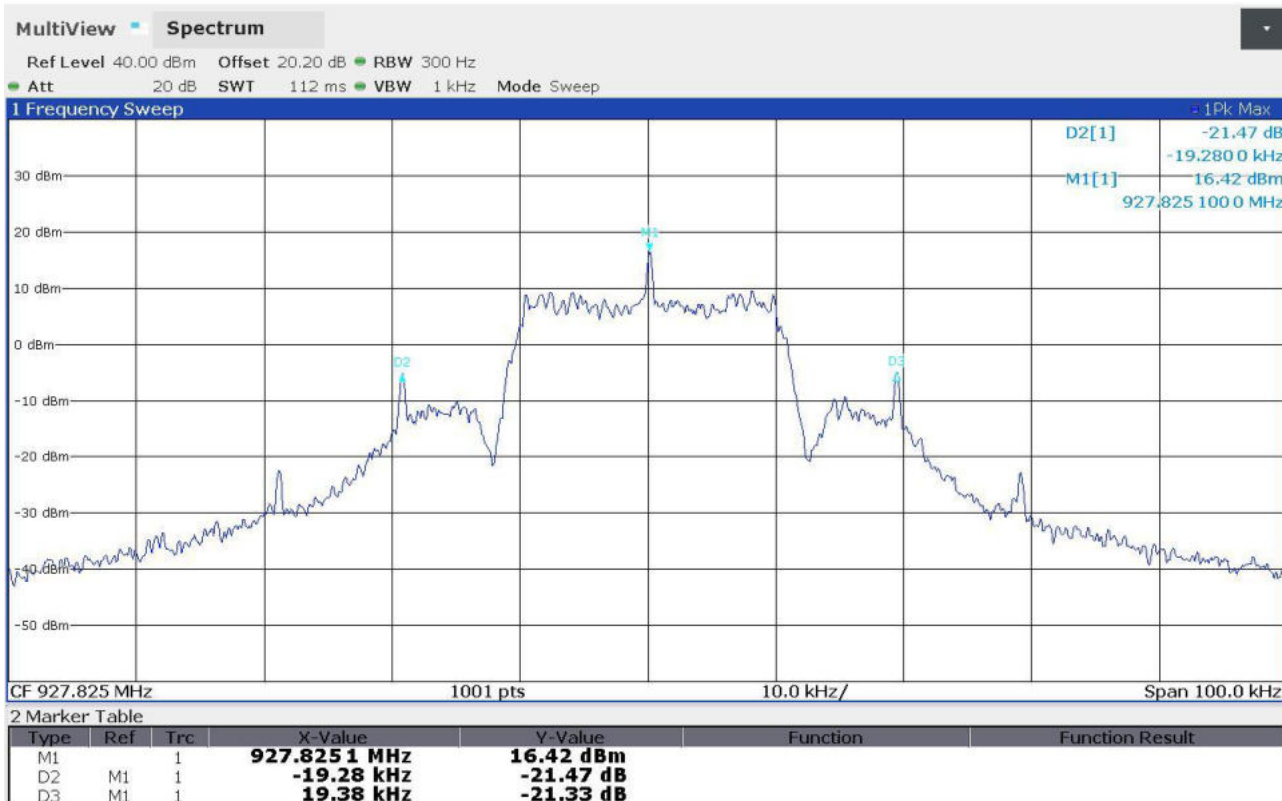
Zanivan 25198504



Zanivan 25198507



Zanivan 25198512



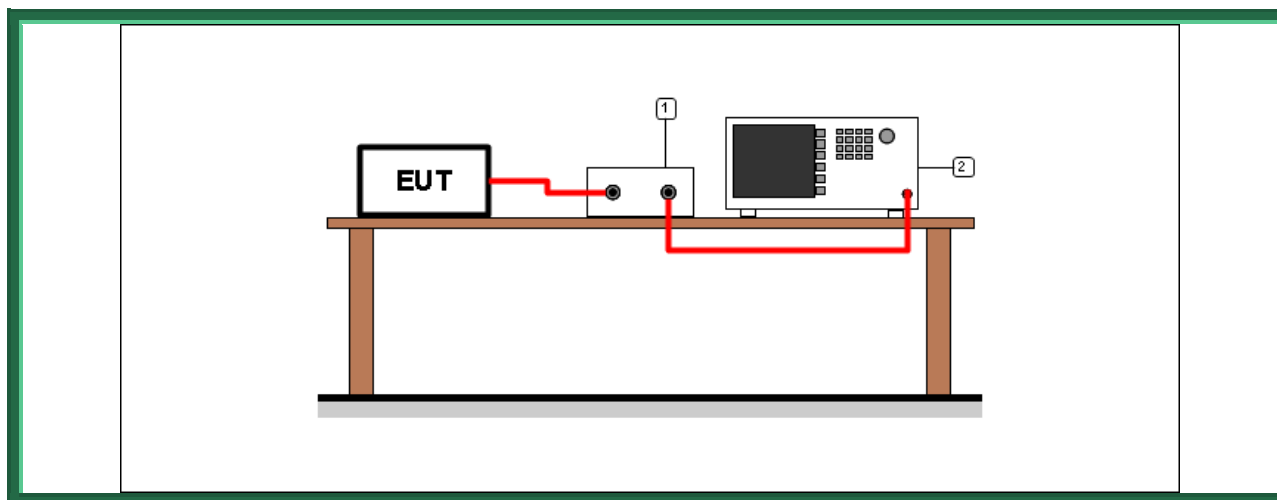
Channel separation

Tested by	S. Zanivan
Test date	28.10.2025
Test location (stand)	Laboratory
Basic standard(s)	KDB 558074 D01 15.247 Meas Guidance v05r02 cl. 9 b) ANSI C63.10 cl. 7.8.2
Product standard(s)	FCC Rules and Regulation; Titles 47 Part. 15.247
Supplementary test set-up description	--
Supplementary information	--

Acceptance limits

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400–2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW. The system shall hop to channel frequencies that are selected at the system hopping rate from a pseudo randomly ordered list of hopping frequencies. Each frequency must be used equally on the average by each transmitter. The system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with the transmitted signals.

Test setup



Test setup PR002_01

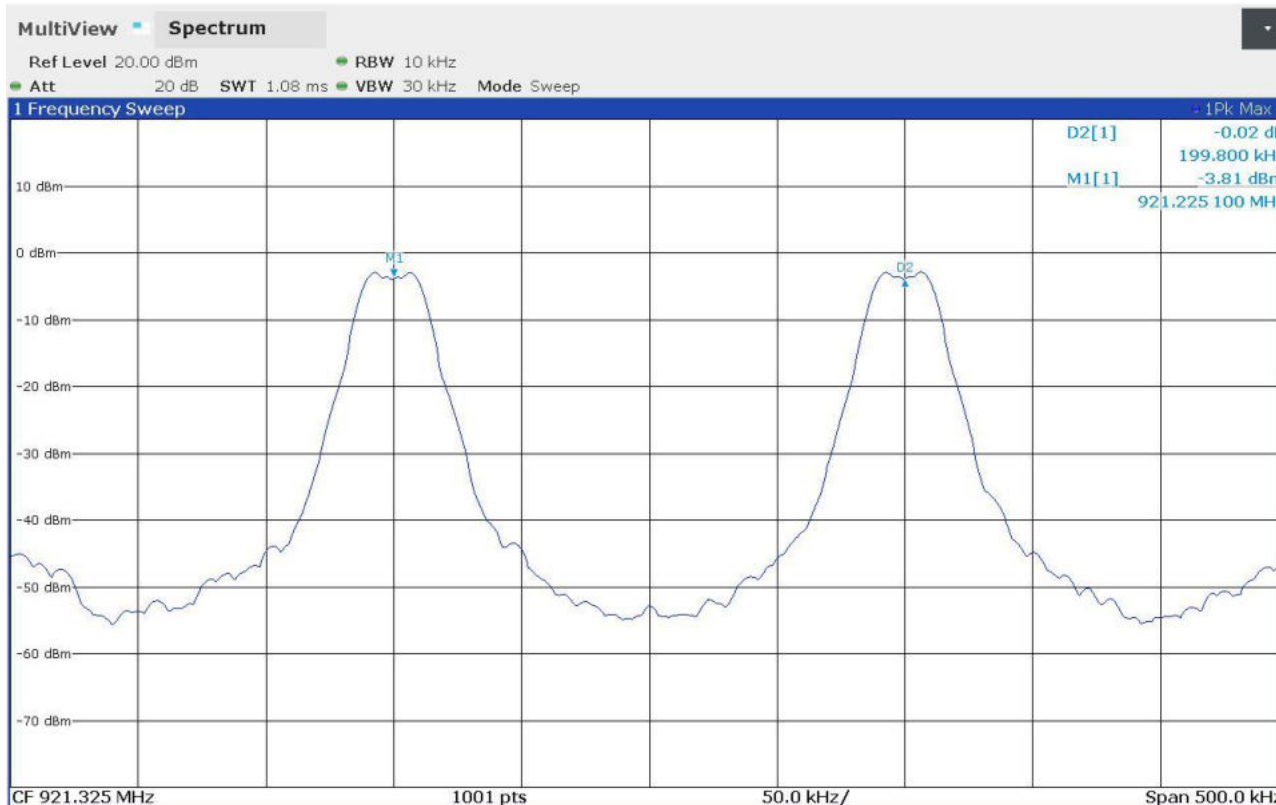
Nr.	Id. Number	Manufacturer	Model	Serial number	Description	Last calibration date	Calibration expiration
2	CMC S295	Rohde & Schwarz	FSW43	104059	Spectrum Analyzer 43GHz	January 2023	January 2026
1	--	--	--	--	Cable + attenuator	Calibrated before the test	Calibrated before the test

Result

Frequency band (MHz)	Graphs	Channel separation (kHz)	Minimum channel separation required (kHz)	Verdict
902,00 – 928,00	25198514	199,80	38,76	P

Graphs

Zanivan 25198514



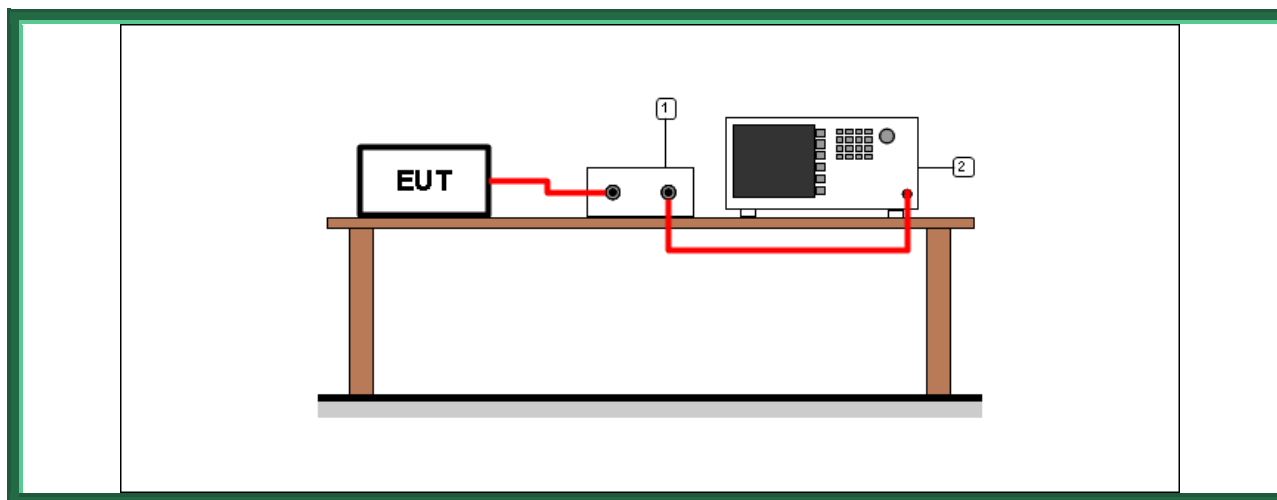
Number of hopping channels

Tested by	S. Zanivan
Test date	28.10.2025
Test location (stand)	Laboratory
Basic standard(s)	KDB 558074 D01 15.247 Meas Guidance v05r02 cl. 9 b) ANSI C63.10 cl. 7.8.3
Product standard(s)	FCC Rules and Regulation; Titles 47 Part. 15.247
Supplementary test set-up description	--
Supplementary information	--

Acceptance limits

For frequency hopping systems operating in the 902 – 928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0,4 seconds within a 20 second period; if the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0,4 seconds within a 10 second period. The maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.

Test setup



Test setup PR002_01

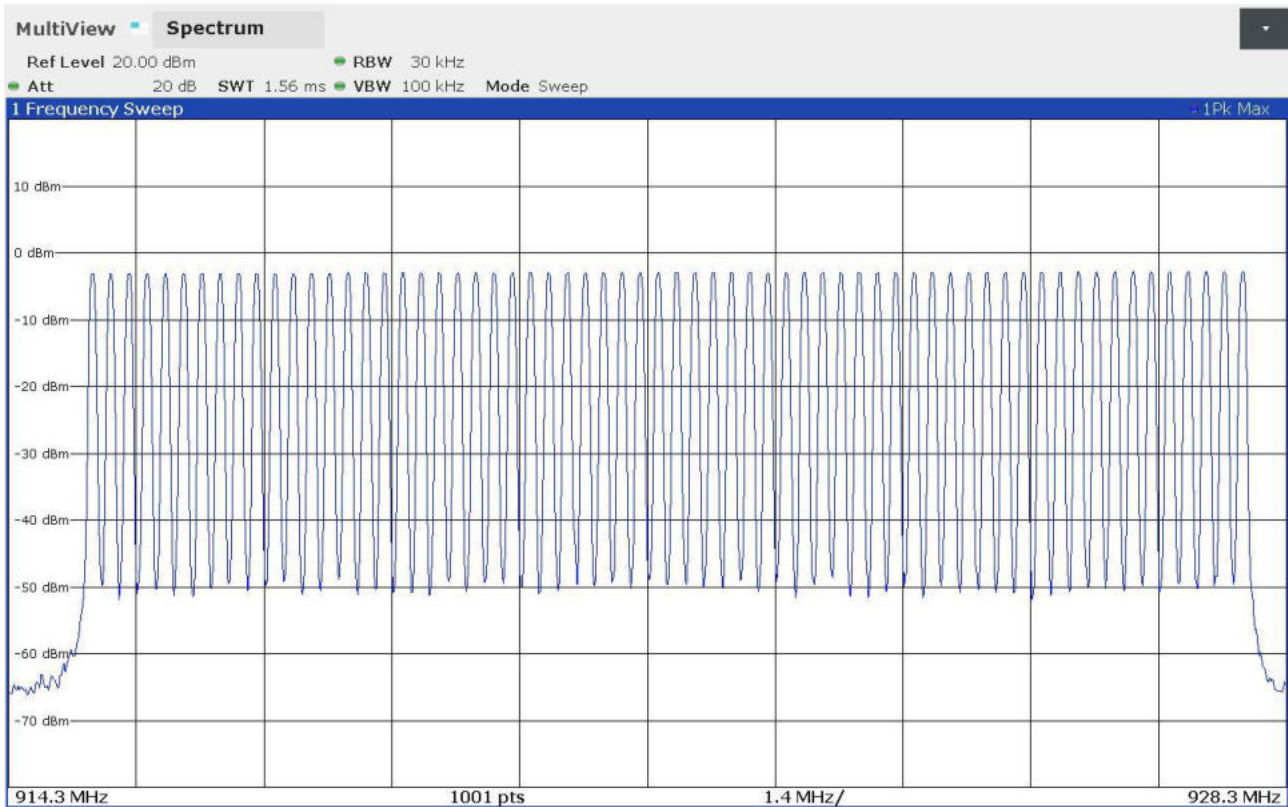
Nr.	Id. Number	Manufacturer	Model	Serial number	Description	Last calibration date	Calibration expiration
2	CMC S295	Rohde & Schwarz	FSW43	104059	Spectrum Analyzer 43GHz	January 2023	January 2026
1	--	--	--	--	Cable + attenuator	Calibrated before the test	Calibrated before the test

Result

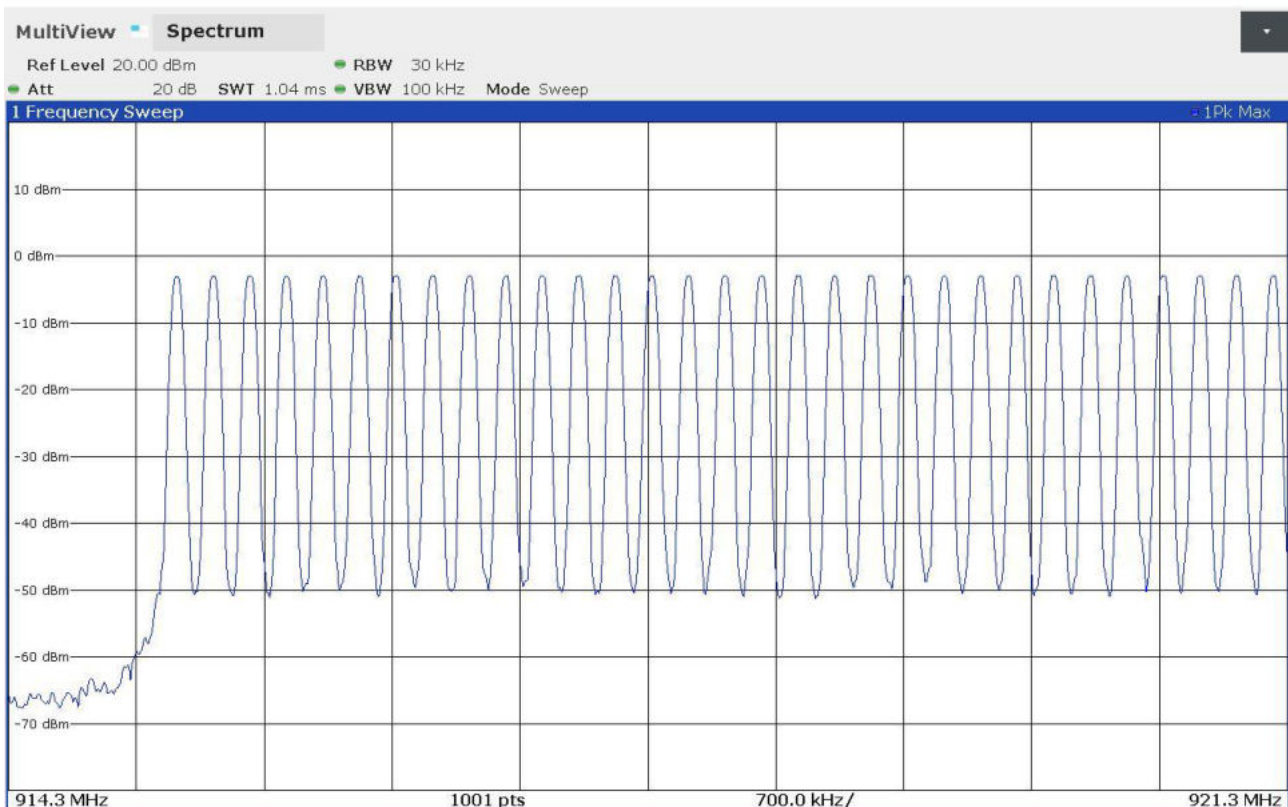
Frequency band (MHz)	Graphs	Number of hopping channels	Minimum number of hopping channels required	Verdict
902,00 – 928,00	25198515 25198516 25198517	64	50	P

Graphs

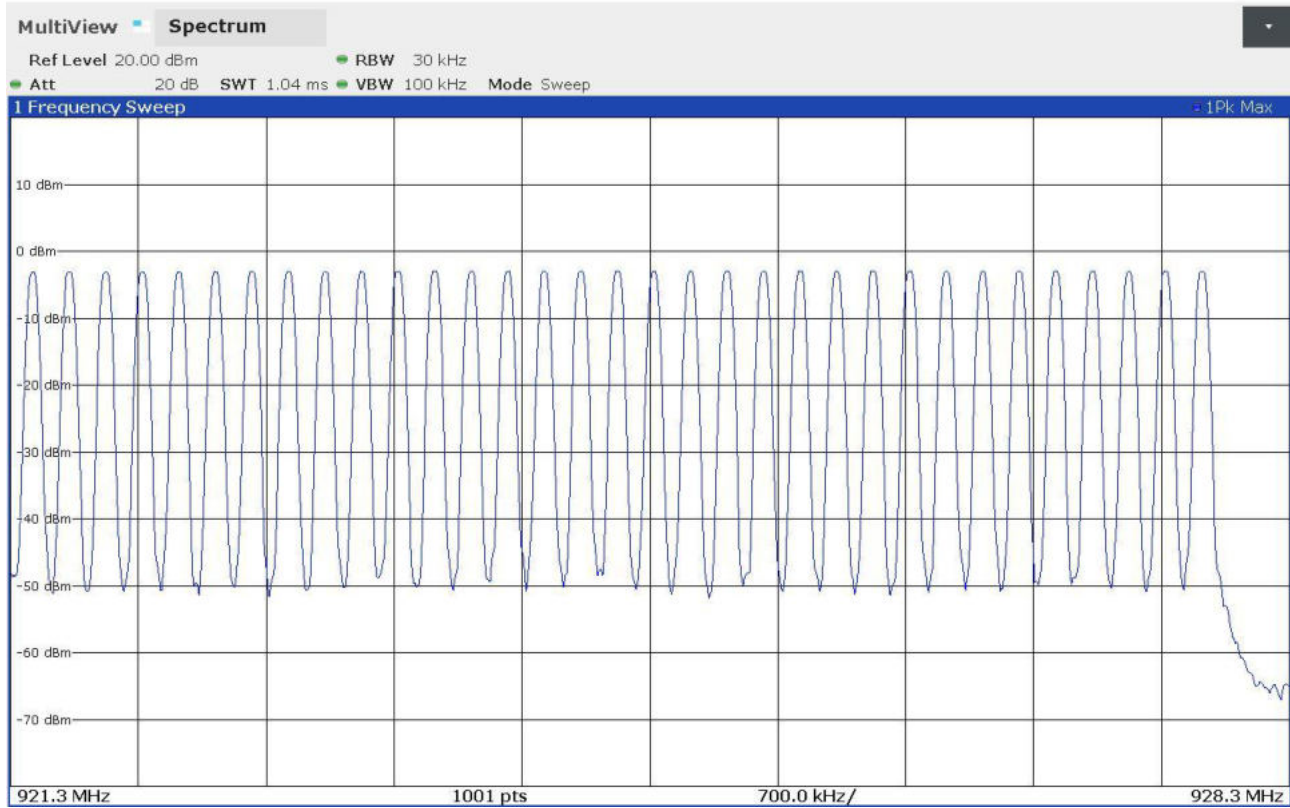
Zanivan 25198515



Zanivan 25198516



Zanivan 25198517



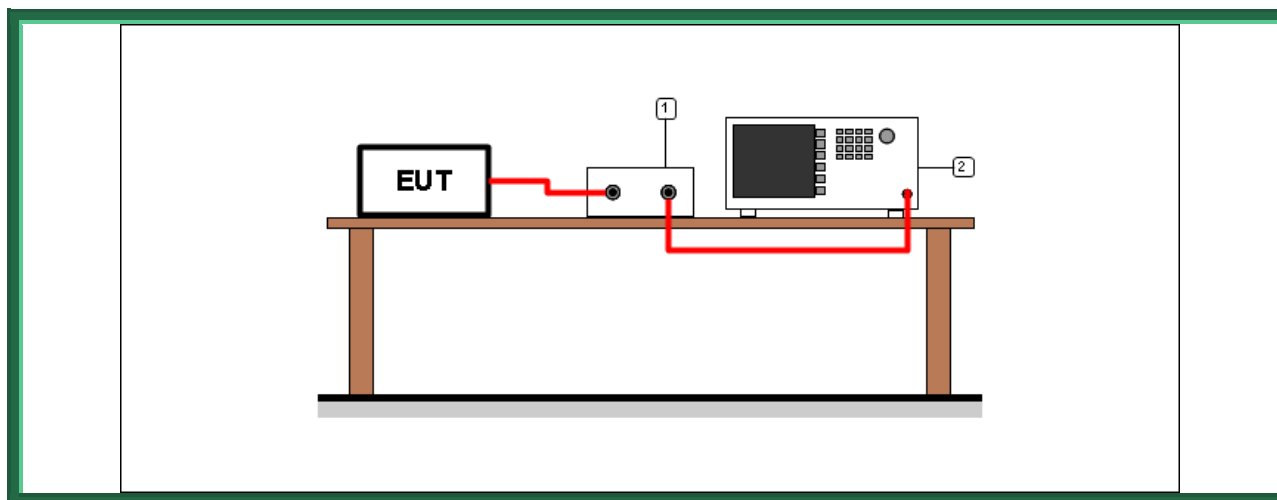
Time of occupancy

Tested by	S. Zanivan
Test date	28.10.2025
Test location (stand)	Laboratory
Basic standard(s)	KDB 558074 D01 15.247 Meas Guidance v05r02 cl. 9 b) ANSI C63.10 cl. 7.8.4
Product standard(s)	FCC Rules and Regulation; Titles 47 Part. 15.247
Supplementary test set-up description	--
Supplementary information	--

Acceptance limits

For frequency hopping systems operating in the 902 – 928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0,4 seconds within a 20 second period; if the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0,4 seconds within a 10 second period. The maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.

Test setup



Test setup PR002_01

Nr.	Id. Number	Manufacturer	Model	Serial number	Description	Last calibration date	Calibration expiration
2	CMC S295	Rohde & Schwarz	FSW43	104059	Spectrum Analyzer 43GHz	January 2023	January 2026
1	--	--	--	--	Cable + attenuator	Calibrated before the test	Calibrated before the test

Result

Transmission frequency (MHz)	Graphs	Dwell time (ms)
921,425	25198518	21,200

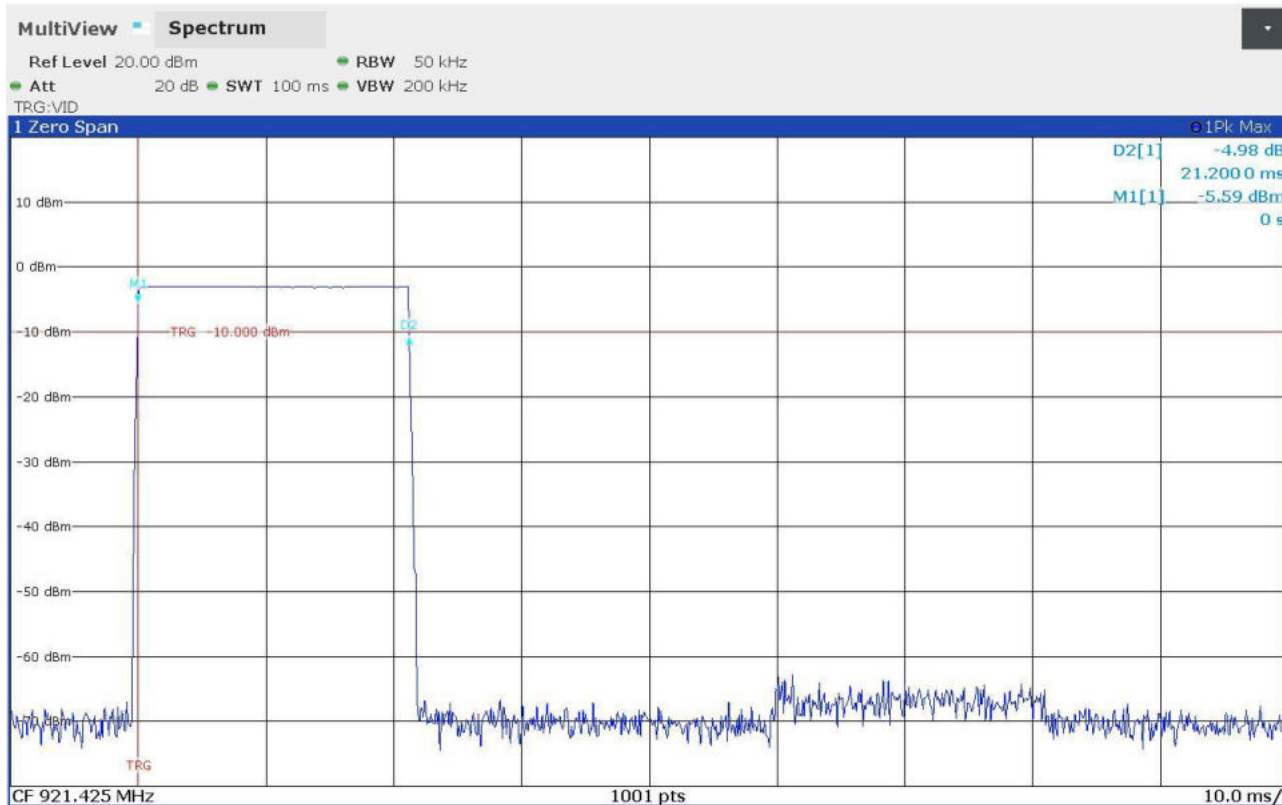
Transmission frequency (MHz)	Graphs	Number of transmissions	Period
921,425	25198519	7	20 s

Remarks: only the highest peaks have been considered. The lowest peaks are due to the auxiliary receiver unit

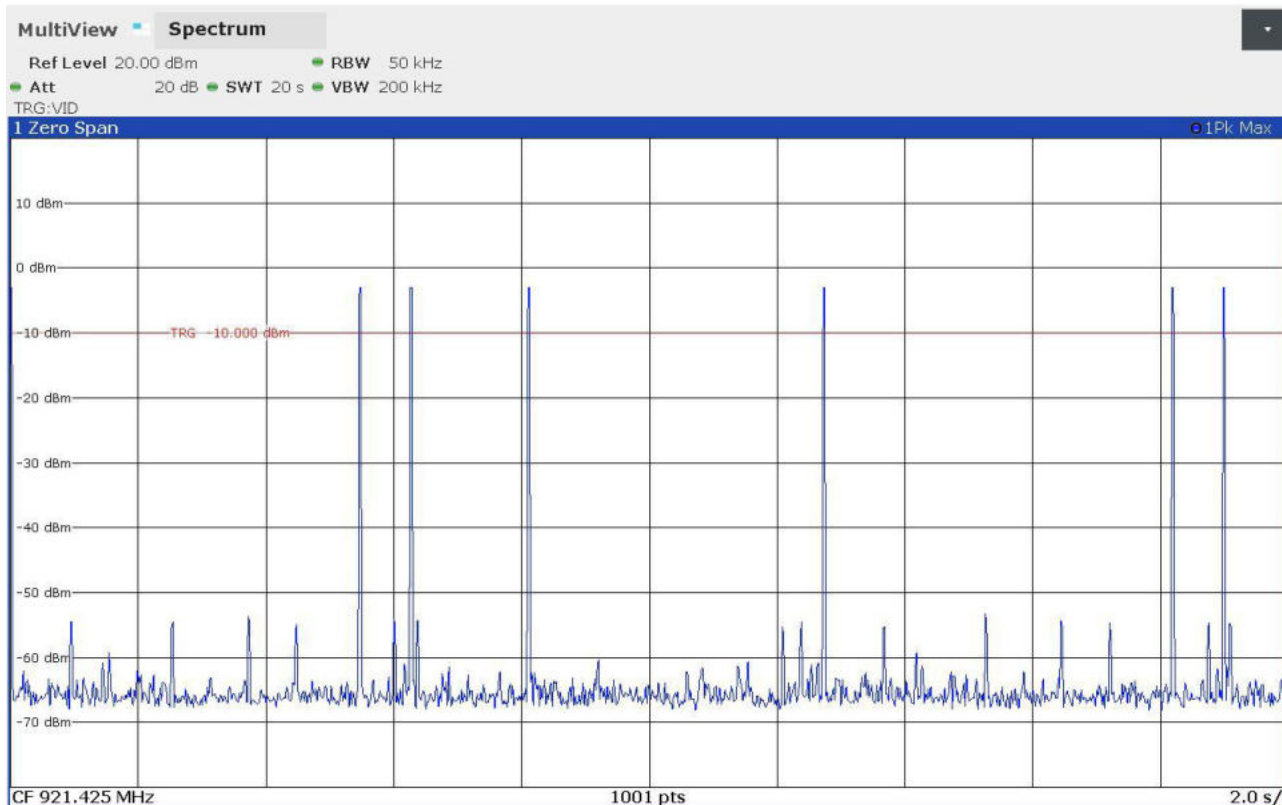
Time of occupancy (Dwell time x Nr. transmissions)	Maximum allowed time of occupancy	Verdict
148,4 ms	400 ms	P

Graphs

Zanivan 25198518



Zanivan 25198519



Band edge

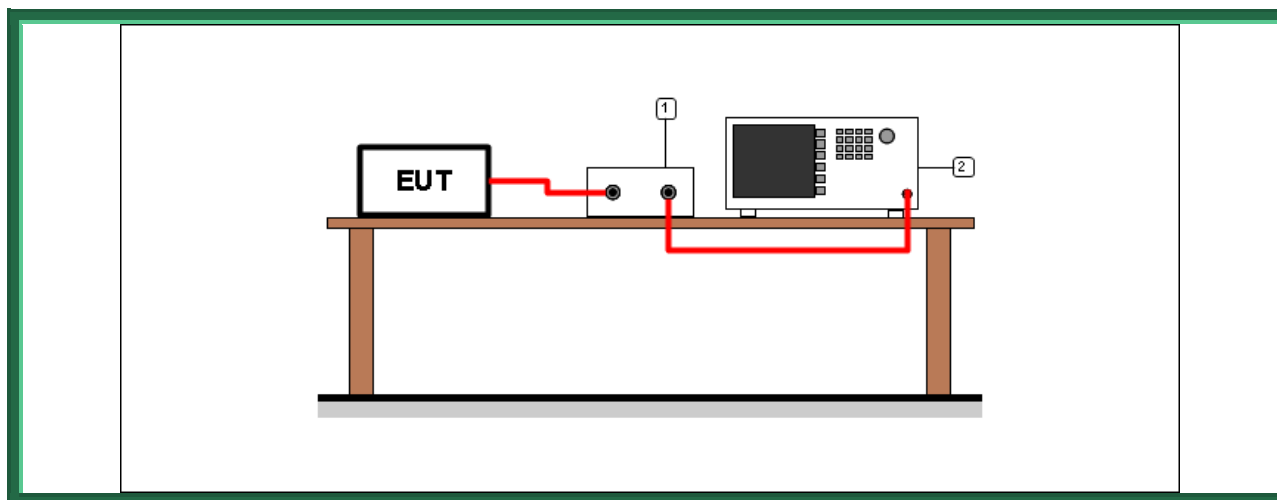
Tested by	S. Zanivan
Test date	28.10.2025
Test location (stand)	Laboratory
Basic standard(s)	ANSI C63.10 cl. 7.8.6
Product standard(s)	FCC Rules and Regulation; Titles 47 Part. 15.247
Supplementary test set-up description	--
Supplementary information	--

Acceptance limits

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. If the transmitter P with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in § 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)).

Operation within the band 902 – 928 MHz $\pm$ RBW/2

Test setup



Test setup PR002_01

Nr.	Id. Number	Manufacturer	Model	Serial number	Description	Last calibration date	Calibration expiration
2	CMC S295	Rohde & Schwarz	FSW43	104059	Spectrum Analyzer 43GHz	January 2023	January 2026
1	--	--	--	--	Cable + attenuator	Calibrated before the test	Calibrated before the test

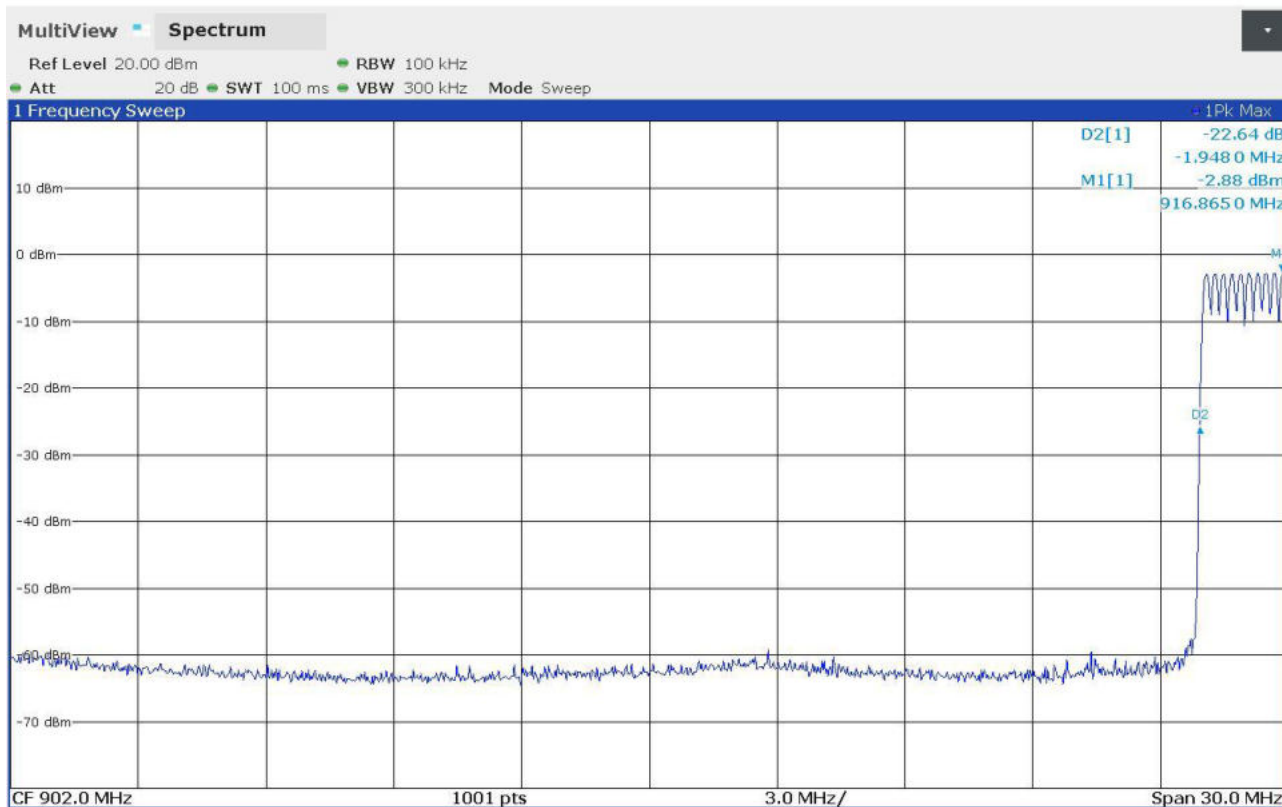
Result

Transmission frequency (MHz)	Bandwidth	Graph(s) – Hopping	Absolute power (dBm)	Power limit (dBm)	Frequency	Verdict
915,075	100 kHz	25198522	-25,52	-22,88	F _L : 914,917 MHz	P
927,825	100 kHz	25198521	-24,32	-23,01	F _H : 927,967 MHz	P

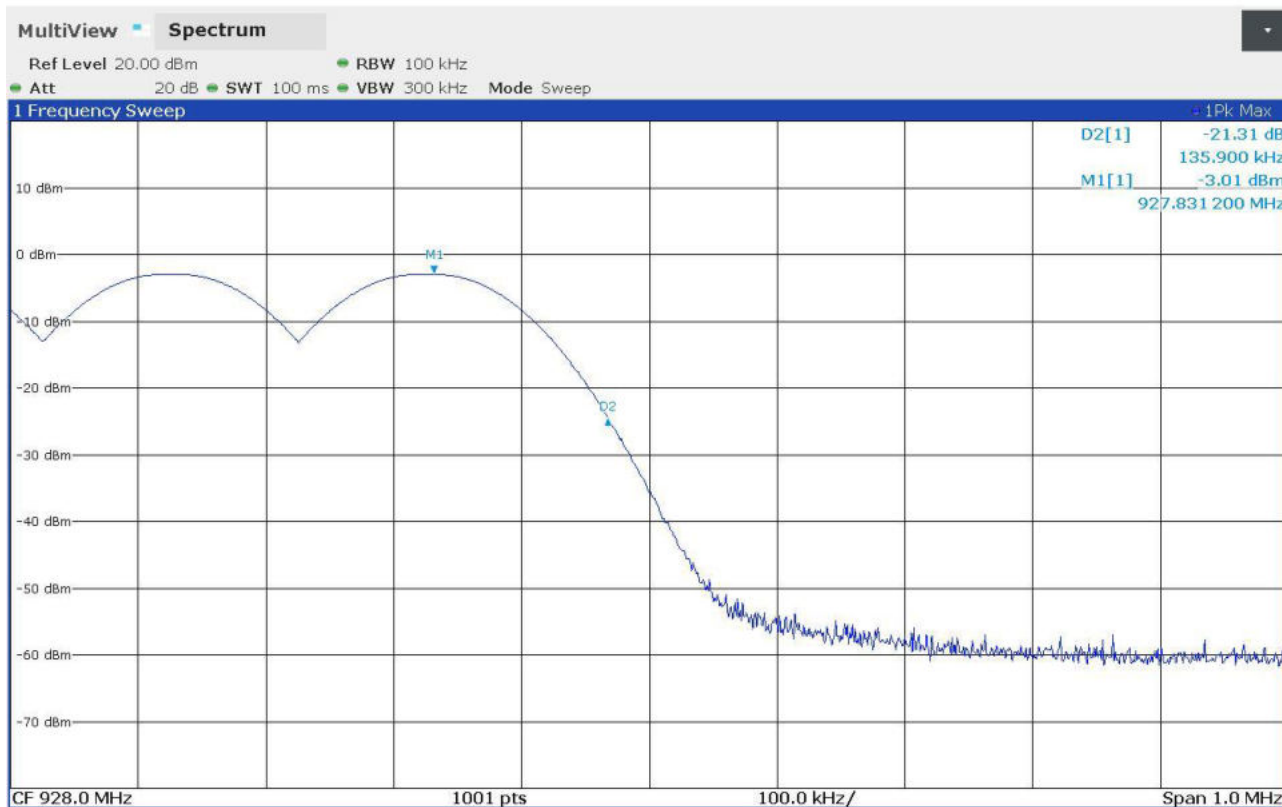
Transmission frequency (MHz)	Bandwidth	Graph(s) – No hopping	Absolute power (dBm)	Power limit (dBm)	Frequency	Verdict
915,075	100 kHz	25198508	-24,73	-22,90	F _L : 914,917 MHz	P
927,825	100 kHz	25198511	-24,28	-23,01	F _H : 927,967 MHz	P

Graphs

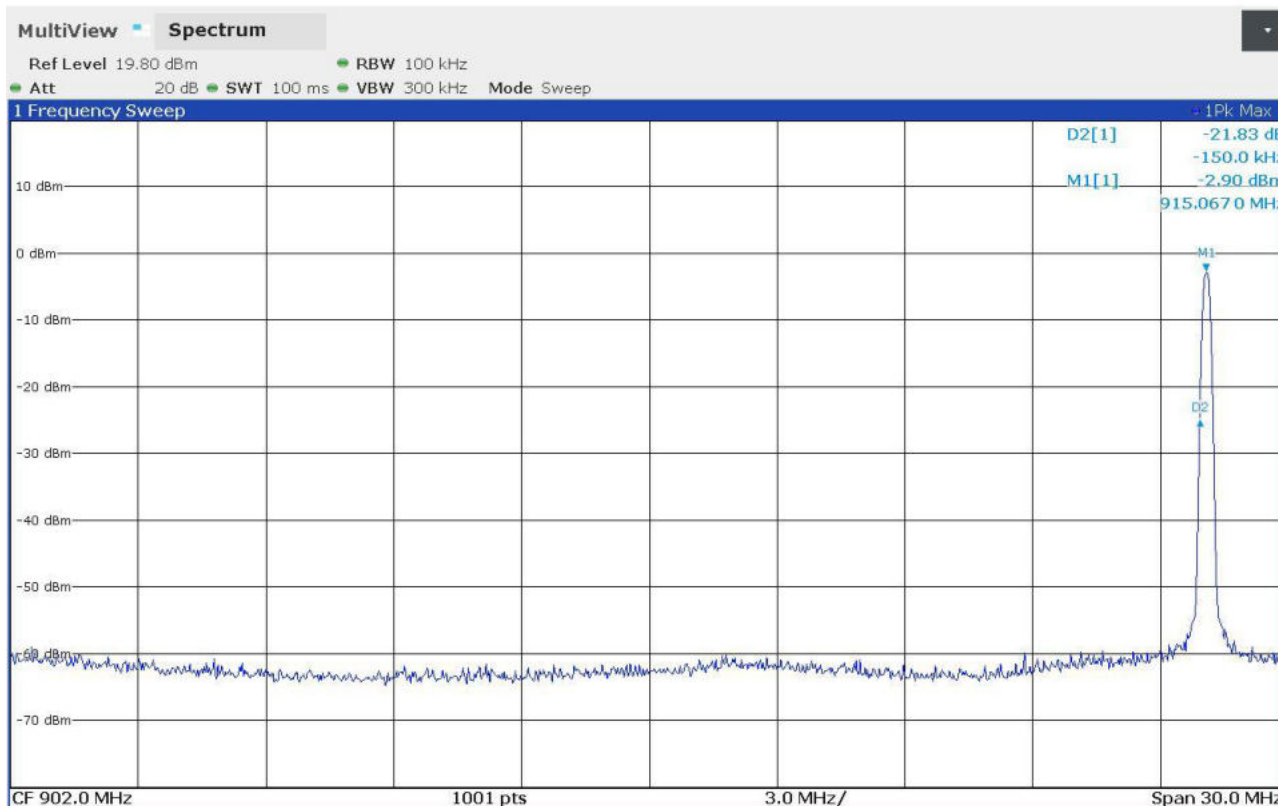
Zanivan 25198522



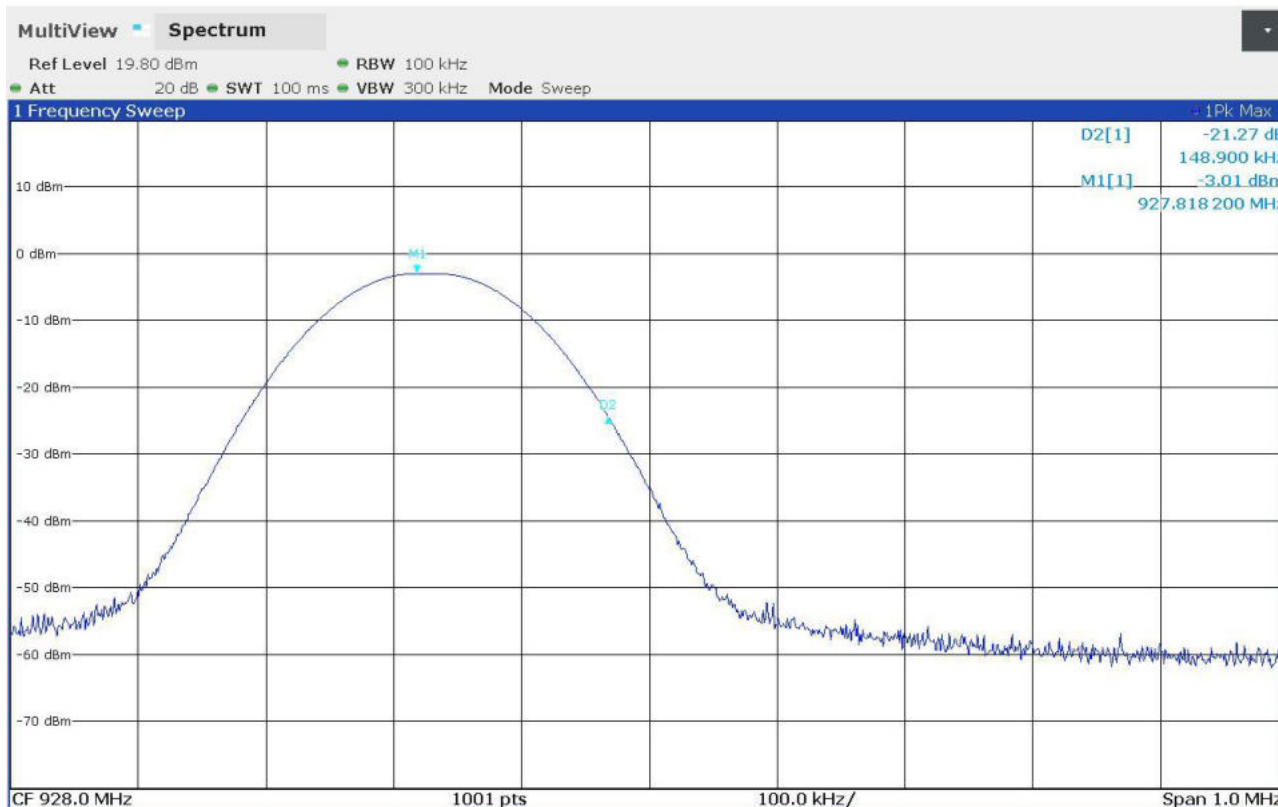
Zanivan 25198521



Zanivan 25198508



Zanivan 25198511



Peak Output Power

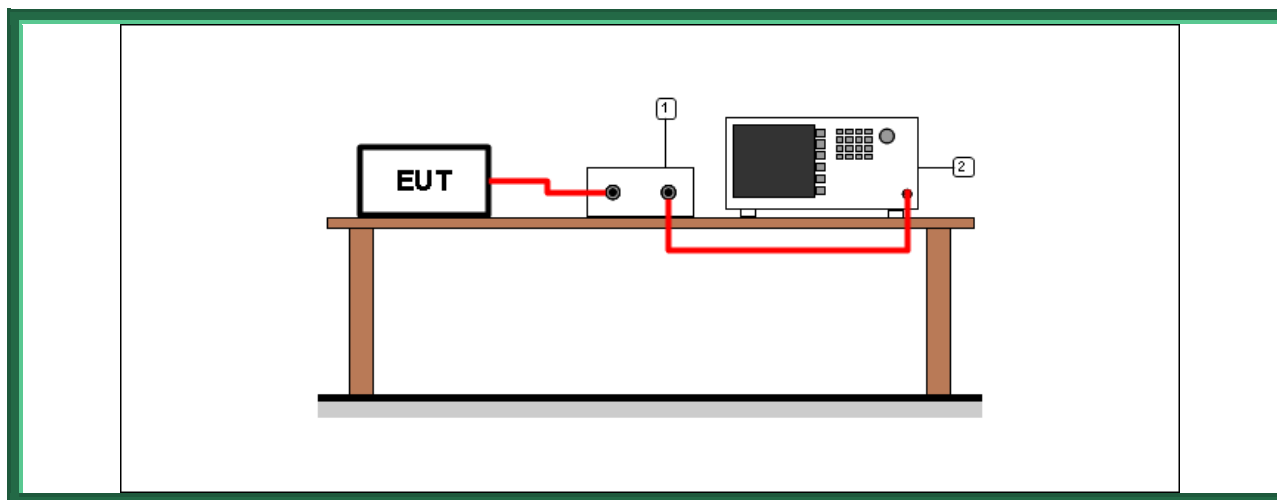
Tested by	S. Zanivan
Test date	28.10.2025
Test location (stand)	Laboratory
Basic standard(s)	KDB 558074 D01 15.247 Meas Guidance v05r02 cl. 2.2 ANSI C63.10 cl. 7.8.5
Product standard(s)	FCC Rules and Regulation; Titles 47 Part. 15.247
Supplementary test set-up description	--
Supplementary information	--

Acceptance limits

For frequency hopping systems operating in the 2400–2483,5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725–5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400–2483,5 MHz band: 0,125 watts.

For frequency hopping systems operating in the 902–928 MHz band: 1 watt for systems employing at least 50 hopping channels; and 0,25 watts for systems employing less than 50 hopping channels, but at least 25 hopping channels.

Test setup



Test setup PR002_01

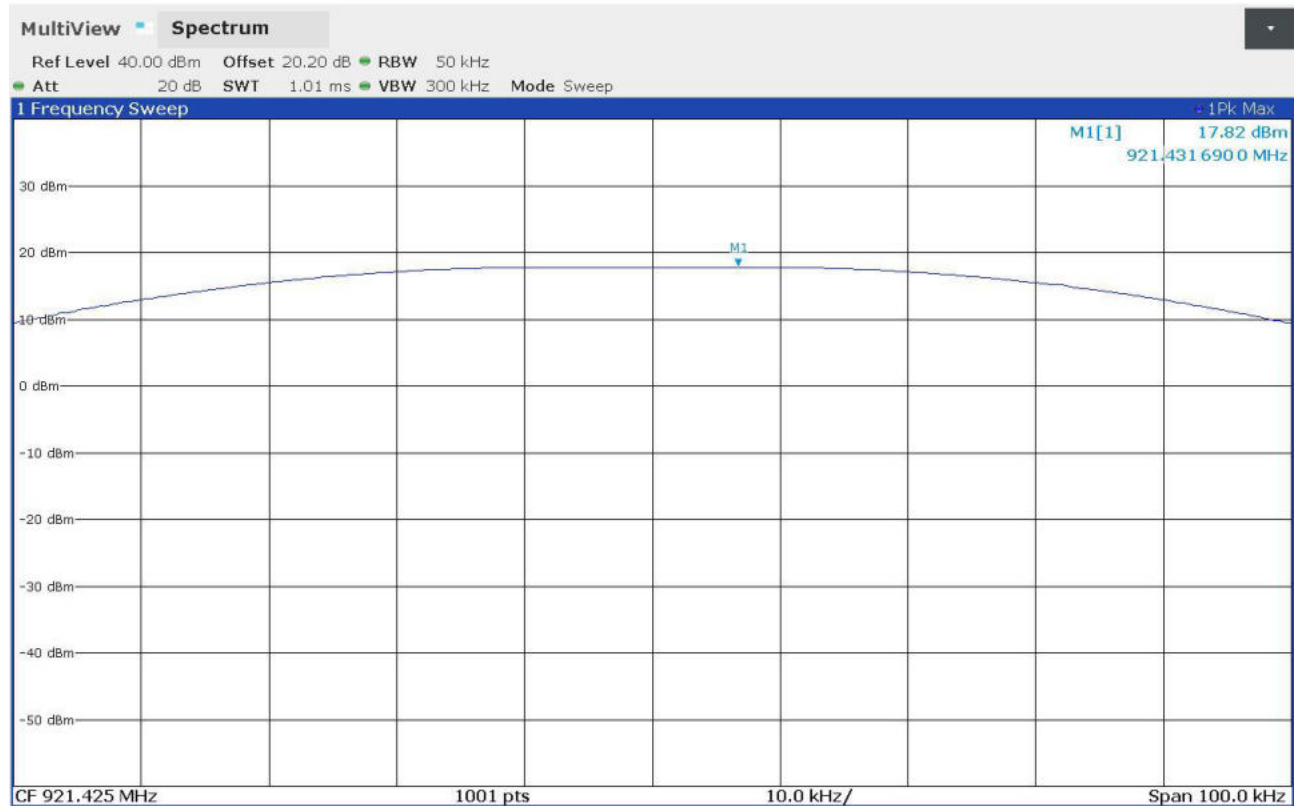
Nr.	Id. Number	Manufacturer	Model	Serial number	Description	Last calibration date	Calibration expiration
2	CMC S295	Rohde & Schwarz	FSW43	104059	Spectrum Analyzer 43GHz	January 2023	January 2026
1	--	--	--	--	Cable + attenuator	Calibrated before the test	Calibrated before the test

Result

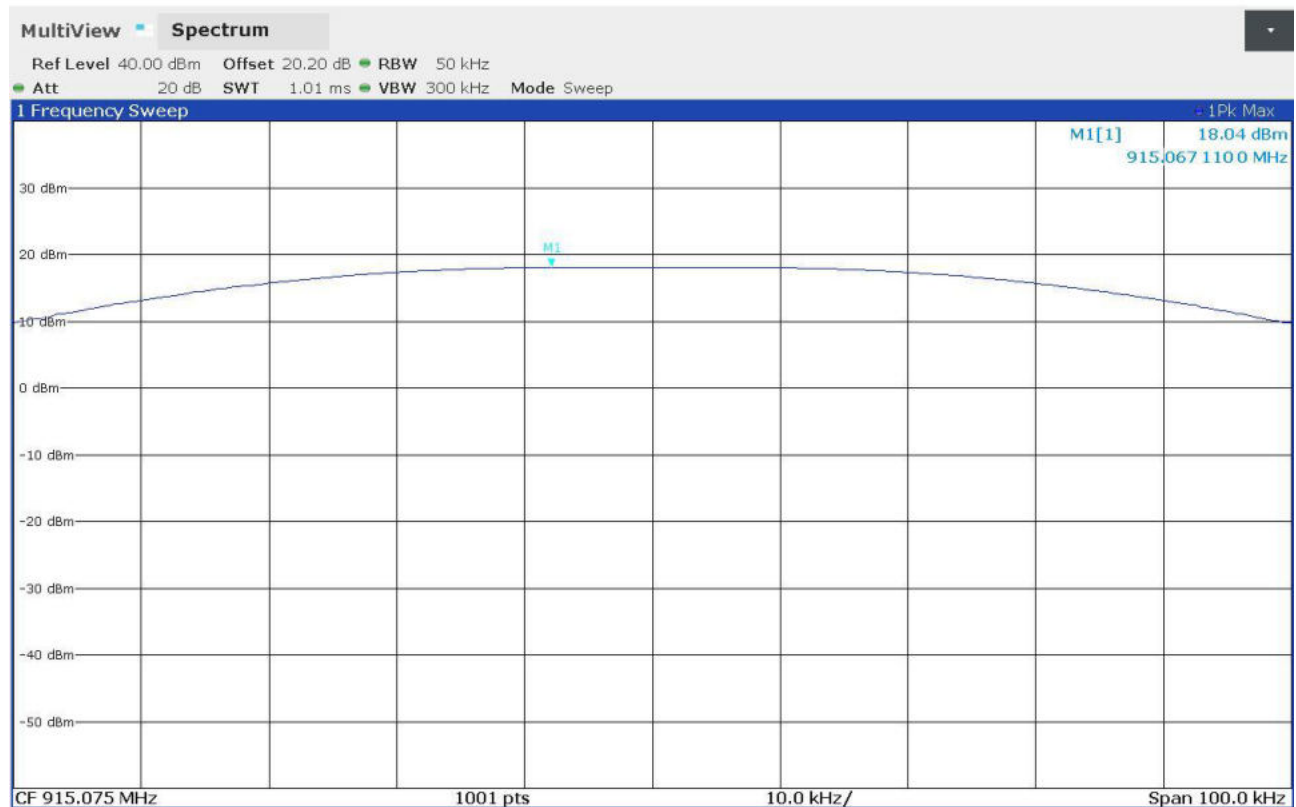
Transmission frequency (MHz)	Graphs	Peak Output Power (dBm)	Peak Output Power (mW)	Limit (mW)	Verdict
915,075	25198509	18,04	63,7	1000	P
921,425	25198503	17,82	60,6	1000	P
927,825	25198510	17,88	61,5	1000	P

Graphs

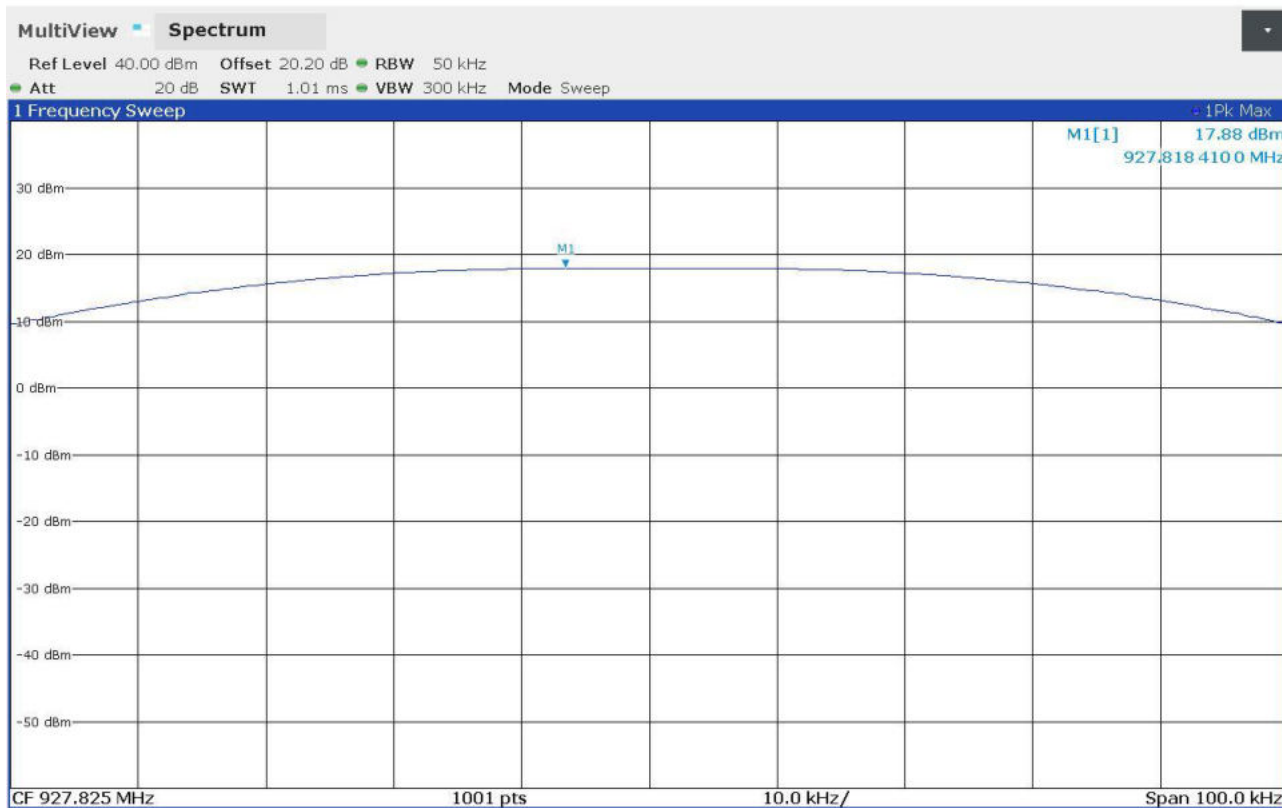
Zanivan 25198503



Zanivan 25198509



Zanivan 25198510



Attachment 1

Measurement uncertainty

Test	Test Setup	Expanded uncertainty	Note
Conducted emission CISPR 16 LISN 50uH 0,009-0,0150 MHz	PE001_01	3,5 dB	1
Conducted emission CISPR 16 LISN 50uH 0,150-30,0 MHz	PE001_01	2,9 dB	1
Conducted emission CISPR 16 Voltage Probe 0,15-30 MHz	PE001_02	2,2 dB	1
Conducted emission CISPR 16 Current Probe 0,15-30 MHz	PE001_03	2,5 dB	1
Conducted emission CISPR 16 ISN 0,15-30 MHz	PE001_04	4,7 dB	1
Clic CISPR 16 LISN 50uH 0,150-30,0 MHz	PE001_05	2,9 dB	1
Radiated Emission CDNE 30-300 MHz	PE001_06	3,3 dB	1
Disturbance Power 30-300 MHz	PE002_X1	3,8 dB	1
Radiated Emission LAS 0,15-30 MHz	PE003_01	2,0 dB	1
Radiated Emission CISPR 16 Loop Ant. 0,15-30 MHz	PE004_X1	4,1 dB	1
Radiated Emission CISPR 16 Bicon. Ant. 30-300 MHz	PE004_X2	4,7 dB	1
Radiated Emission CISPR 16 LogP. Ant. 300-1000 MHz	PE004_X3	4,6 dB	1
Radiated Emission CISPR 16 Horn Ant. 1-18 GHz	PE004_X4	4,7 dB	1
Human Exposure to electromagnetic fields	PE005_01	16,2 %	1
Harmonics	PE006_01	10 mA + 2,9 %	1
Flicker	PE007_01	3,40 %	1
Radiated Immunity 80 MHz - 6 GHz	PE102_XX	2,43 dB 0,97 V/m a 3V/m	1
Conducted Immunity 0,15 - 230 MHz	PE105_XX	1,26 dB 0,47 V a 3V	1
AC Magnetic field	PE106_01	1,55 % 0,15 A/m a 10A/m	1
Pulse Magnetic field	PE107_01	6,21 % 18,6 A/m a 300A/m	1
Dumped Magnetic field	PE108_01	6,21 % 1,86 A/m a 30A/m	1
Common mode conducted immunity	PE112_01	2,11 % 0,21 V a 10V	1

Test	Test Setup	Expanded uncertainty	Note
Power/Spurious 9kHz-30MHz	PR001_X1	4,1 dB	1
Power/Spurious ERP 30-1000MHz d=10m/3m	PR001_X2+X3	4,8 dB	1
Misura della potenza EIRP 1-18GHz d=3m	PR001_X4+X5	4,7 dB	1
Misura della potenza EIRP 18-40GHz d=3m	PR001_X6	5,1 dB	1
Frequency error	PR002_01+02	< 1x10 ⁻⁷	1
Timing zero span (1001pts.)	PR002_01+02	0,2 % SWT	1
Modulation bandwidth	PR002_01+02	< 1x10 ⁻⁷	1
Conducted RF power and spurious emission	PR002_01+02	1,1 dB	1
Adjacent channel power	PR002_01+02	1,1 dB	1
Blocking	PR002_01+02	1,1 dB	1

Test	Test Setup	Expanded uncertainty	Note
Electrostatic discharge immunity test	PE101_0X		2
Electrical fast transients / burst immunity test	PE103_0X		2
Surge immunity test	PE104_0X		2
Short interruption immunity test	PE109_01		2
Ring Wave immunity test	PE110_01		2
Low frequency immunity test	PE111_01		2
Dumped Oscillatory immunity test	PE113_01		2

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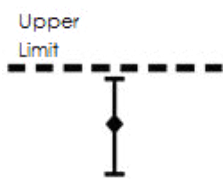
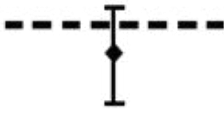
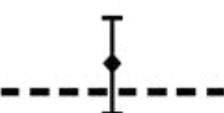
Note 1:

The expanded uncertainty reported according to the document EA-4-02 is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of p = 95%

Note 2:

It has been demonstrated that the used test equipment meets the specified requirements in the standard with at least a 95% confidence, covering factor k=2

Judgement of compliance

Case 1	Case 2	Case 3	Case 4
 The sample complies with the requirements. The measurement results is within the specification limit when the measurement uncertainty is taken into account.	 The sample complies with the requirements. It is not possible to state compliance using a 95% coverage probability for the expanded uncertainty although the measurement result is below the limit.	 The sample does not comply with the requirements. It is not possible to state compliance using a 95% coverage probability for the expanded uncertainty also the measurement result is upper the limit.	 The sample does not comply with the requirements. The measurement results is outside the specification limit when the measurement uncertainty is taken into account.

In agreement with ILAC-G8:09/2019 cl.4.2.1 Guidelines on Decision Rules and Statements of Conformity

Quality manual references – Internal procedure

Internal Procedure PM001 rev. 4.1 (Quality Manual)	Measure procedure
Internal Procedure INC_M rev. 10.1 (Quality Manual)	Measurement uncertainty calculation