

TEST REPORT

Nr. R25057601

Federal Communication Commission (FCC)

Report Reference N.	R25057601
Date of issue:	19.05.2025
Total number pages:	46
Customer name	ASSA ABLOY Entrance Systems AB
Address	Lodjursgatan, 10 – SE-261 44 Landskrona – Sweden
Test specification:	
Standard(s)	FCC Rules & Regulations, Title 47:2023 Part 15 paragraph(s): 203, 204, 205, 207, 209, 215 and 247 Tests details at page 8
Non-standard test method	N/A
Test Report Form N.	15-247_DTS_DEKRA
Test Report Form(s) Originator ...	DEKRA Testing and Certification S.r.l.
Master TRF	2025-01
General disclaimer:	
The test Verdict presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of DEKRA Testing and Certification S.r.l.	
(*) Test item description	Automatic sectional garage door operator, with Bluetooth and Wi-Fi connectivity
(*) Trademark	Kwikset
(*) Manufacturer	ASSA ABLOY Entrance Systems AB
(*) Model / Type reference	KF1000
(*) FCC ID	2A8JO-FLXGDO1
(*) Rating(s)	120 V ~ 60 Hz single-phase + earth
Report	
Tested by (name + signature)	M. Segalla
Approved by (name + signature)	F. Marenda

(*) information provided by the customer

1 Summary

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2 Reference standard(s)	
FCC Rules and Regulation Title 47 part 15:2023 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
3 List of attachments	
Attachment 1: Measurement uncertainty, judgement of compliance and quality manual references	
4 Deviation(s) from test specification	
None	
5 Testing location	
DEKRA Testing and Certification S.r.l. Via della Fisica, 20 – 36016 Thiene (VI) – Italy Test site facility's FCC registration number: 182474	

Revision index	Date	Change history
1.0	19.05.2025	--

Testing and sampling:	
Date of receipt of test item	21.03.2025
Testing start date	18.04.2025
Testing end date	14.05.2025
Sampling procedure	Sample used for testing chosen by the customer; DEKRA Testing and Certification S.r.l. cannot be considered responsible for the selection of the sample
Internal identification	Adhesive label with the product number P250348
General remarks:	
This report shall not be reproduced, except in full, without the written approval of DEKRA Testing and Certification S.r.l. The test Verdict presented in this report relate only to the object tested. “(see appended table)”: refers to a table appended to the report. 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.	
Possible test case verdicts:	
Test case does not apply to the test object:	N/A (Not Applicable)
Test object meets the requirement:	P (Pass)
Test object does not meet the requirement:	F (Fail)
Test object was not evaluated for the requirement:	N/E (Not Executed)
Definition of symbols used in this test report:	
☒ Indicates that the listed condition, standard or equipment is applicable for this report. ☐ Indicates that the listed condition, standard or equipment is not applicable for this report.	

6 General description of tested item and testing condition(s)

Description	Automatic sectional garage door operator, with Bluetooth and Wi-Fi connectivity							
Model Number	KF1000							
FCC ID	2A8JO-FLXGDO1							
Serial Number	--							
Brand name	Kwikset							
Frequency band	2400 – 2483,5 MHz							
Nominal frequencies	F _L : 2402 MHz		F _M : 2440 MHz		F _H : 2480 MHz			
Test power supply		Voltage and Frequency	Reference poles					
			N	L1	L2	L3	PE	
	☒	AC: 120 V, 60 Hz	☒	☒	☐	☐	☒	
	☐	AC:	☐	☐	☐	☐	☐	
	☐	DC:						☐
Software release	2.0.0 (1LCA60N) 1.0.0 (1RCB50N) 0.4.5 (1RCB201B)							
Type of equipment	☒ Transmitter unit ☒ Receiver unit							
Type of station	☐ Portable station ☒ Mobile station							
Test arrangements of EUT	<i>Intended operational arrangement(s) of EUT</i>			<i>Test arrangement (see basic standard)</i>				
	☐ Table-top only			Table-top				
	☐ Floor-standing only			Floor-standing				
	☐ Can be floor-standing or table-top			Table-top				
	☐ Rack mounted			In rack or table-top				
	☒ Other, for example wall mounted, ceiling mounted, handheld, body worn			Table-top				
Operating modes	No.	Operating mode of test item						
	1	EUT in continuous transmission at maximum power						
Declination of responsibility	Information relating to the description of the sample, components list, and software/hardware version (if reported) are provided by the customer. DEKRA Testing and Certification S.r.l. cannot be considered responsible for this information, for any other document sent by the customer and for any difference between the software version 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.							

6.1 Photos of the test item





7 Verdict summary section

FCC Rules & Regulations, Title 47:2023 Part 15 paragraph(s): 203, 204, 205, 207, 209, 215 and 247			
Clause	Requirement – Test case	Basic standard	Verdict
Part 15.203	Antenna requirements	--	P
Part 15.207	Conducted emissions	ANSI C63.10	N/E
Part 15.209	Emissions in restricted frequency bands and in unrestricted frequency bands	ANSI C63.10	P
Part 15.247 (a) (2)	DTS bandwidth	ANSI C63.10	N/E
Part 15.215 (c)	20 dB bandwidth	ANSI C63.10	N/E
Part 15.247 (d)	Band edge	ANSI C63.10	N/E
Part 15.209 and 15.247	Fundamental emission output power	ANSI C63.10	P
Part 15.209 and 15.247	Maximum power spectral density level in the fundamental emission	ANSI C63.10	N/E

8 Test conditions

8.1 General

Environmental reference 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 instrument.																			
	<table><tr><td><i>Id. Number</i></td><td><i>Manufacturer</i></td><td><i>Model</i></td><td><i>Serial number</i></td><td><i>Description</i></td><td><i>Last calibration date</i></td><td><i>Calibration expiration</i></td></tr><tr><td>CMC S302</td><td>Testo</td><td>175H1</td><td>40370182610</td><td>Data Logger</td><td>May 2024</td><td>May 2025</td></tr></table>							<i>Id. Number</i>	<i>Manufacturer</i>	<i>Model</i>	<i>Serial number</i>	<i>Description</i>	<i>Last calibration date</i>	<i>Calibration expiration</i>	CMC S302	Testo	175H1	40370182610	Data Logger	May 2024
<i>Id. Number</i>	<i>Manufacturer</i>	<i>Model</i>	<i>Serial number</i>	<i>Description</i>	<i>Last calibration date</i>	<i>Calibration expiration</i>														
CMC S302	Testo	175H1	40370182610	Data Logger	May 2024	May 2025														
Measurement uncertainties :	Attachment 1																			

9 Test results

9.1 Antenna requirements

Tested by	M. Segalla	
Test date	18.04.2025	
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	3,10 dBi @ 2402 MHz 1,50 dBi @ 2440 MHz 2,90 dBi @ 2480 MHz	
External R.F. power amplifier	Not Present	

9.2 Emissions in restricted frequency bands and in unrestricted frequency bands

Tested by	M. Segalla	
Test date	18.04.2025	
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:

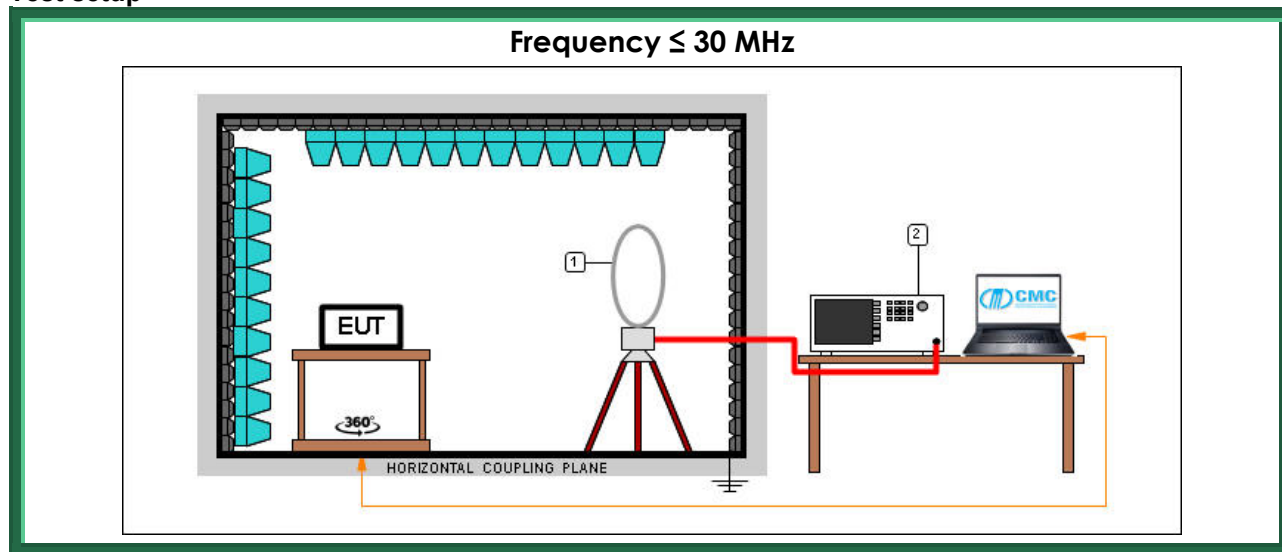
MHz	MHz	MHz	GHz
0,090 – 0,110	16,42 – 16,423	399,9 – 410	4,5 – 5,15
0,495 – 0,505	16,69475 – 16,69525	608 – 614	5,35 – 5,46
2,1735 – 2,1905	16,80425 – 16,80475	960 – 1240	7,25 – 7,75
4,125 – 4,128	25,5 – 25,67	1300 – 1427	8,025 – 8,5
4,17725 – 4,17775	37,5 – 38,25	1435 – 1626,5	9,0 – 9,2
4,20725 – 4,20775	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 (according to ANSI C63.10 cl. 11.11.1)

The DTS rules specify that in any 100 kHz bandwidth outside of the authorized frequency band, the power shall be attenuated according to the following conditions:

- If the maximum peak conducted output power procedure was used to demonstrate compliance as described in 9.1, then the peak output power measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz.
- If maximum conducted (average) output power was used to demonstrate compliance as described in 9.2, then the peak power in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum in-band peak PSD level in 100 kHz.
- In either case, attenuation to levels below the 15.209 general radiated emissions limits is not required

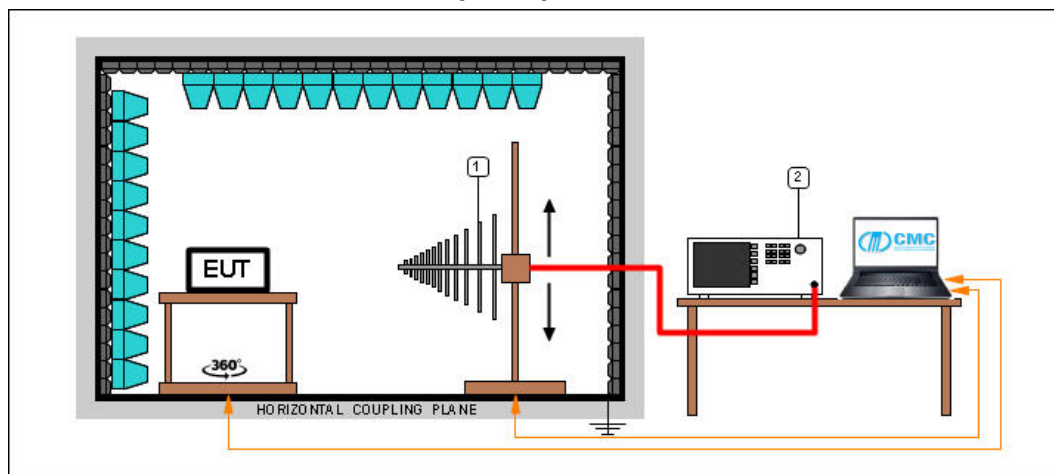
Test setup



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	May 2024	May 2025
--	CMC A105	Frankonia	FC06	FC06.1-2017-073	Turntable & Antenna mast controller (Software V02.05.013)	No calibration required	No calibration required

Frequency ≤ 1 GHz



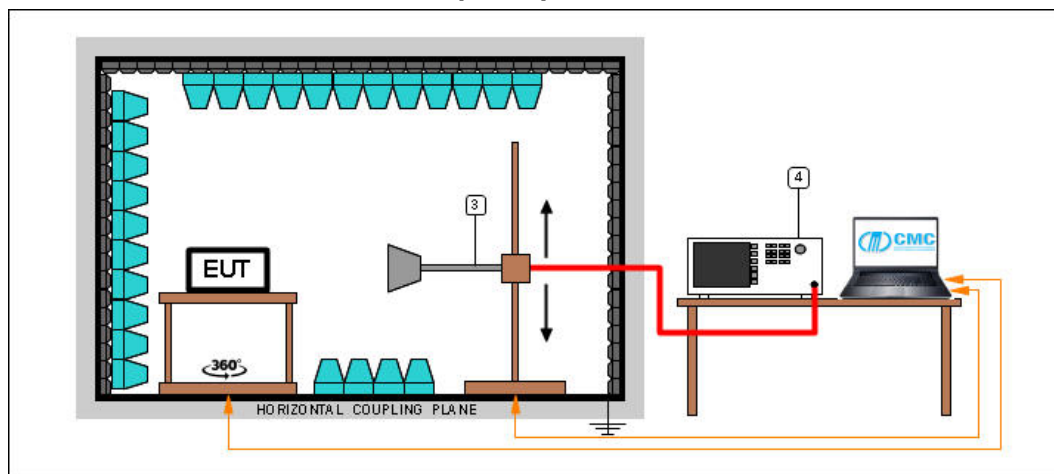
Test setup PE004_22

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 2022	August 2025
--	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 2022	August 2025
--	CMC A105	Frankonia	FC06	FC06.1-2017-073	Turntable & Antenna mast controller (Software V02.05.013)	No calibration required	No calibration required

Frequency > 1 GHz



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 2022	August 2025
--	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	Verdict
2402	H	1000 – 3000	G25057603	P
2402	V	1000 – 3000	G25057604	P
2440	V	1000 – 3000	G25057605	P
2440	H	1000 – 3000	G25057606	P
2480	H	1000 – 3000	G25057607	P
2480	V	1000 – 3000	G25057608	P
2480	H	3000 – 18000	G25057611	P
2480	V	3000 – 18000	G25057612	P
2440	V	3000 – 18000	G25057613	P
2440	H	3000 – 18000	G25057614	P
2402	H	3000 – 18000	G25057615	P
2402	V	3000 – 18000	G25057616	P
2402	V	18000 – 26000	G25057617	P
2402	H	18000 – 26000	G25057618	P
2440	H	18000 – 26000	G25057619	P
2440	V	18000 – 26000	G25057620	P
2480	V	18000 – 26000	G25057621	P
2480	H	18000 – 26000	G25057622	P
Worst case	V	30 – 300	G25057623	P
Worst case	H	30 – 300	G25057624	P
Worst case	H	300 – 1000	G25057625	P
Worst case	V	300 – 1000	G25057626	P
Worst case	Loop	0,009 – 30	G25057627	P

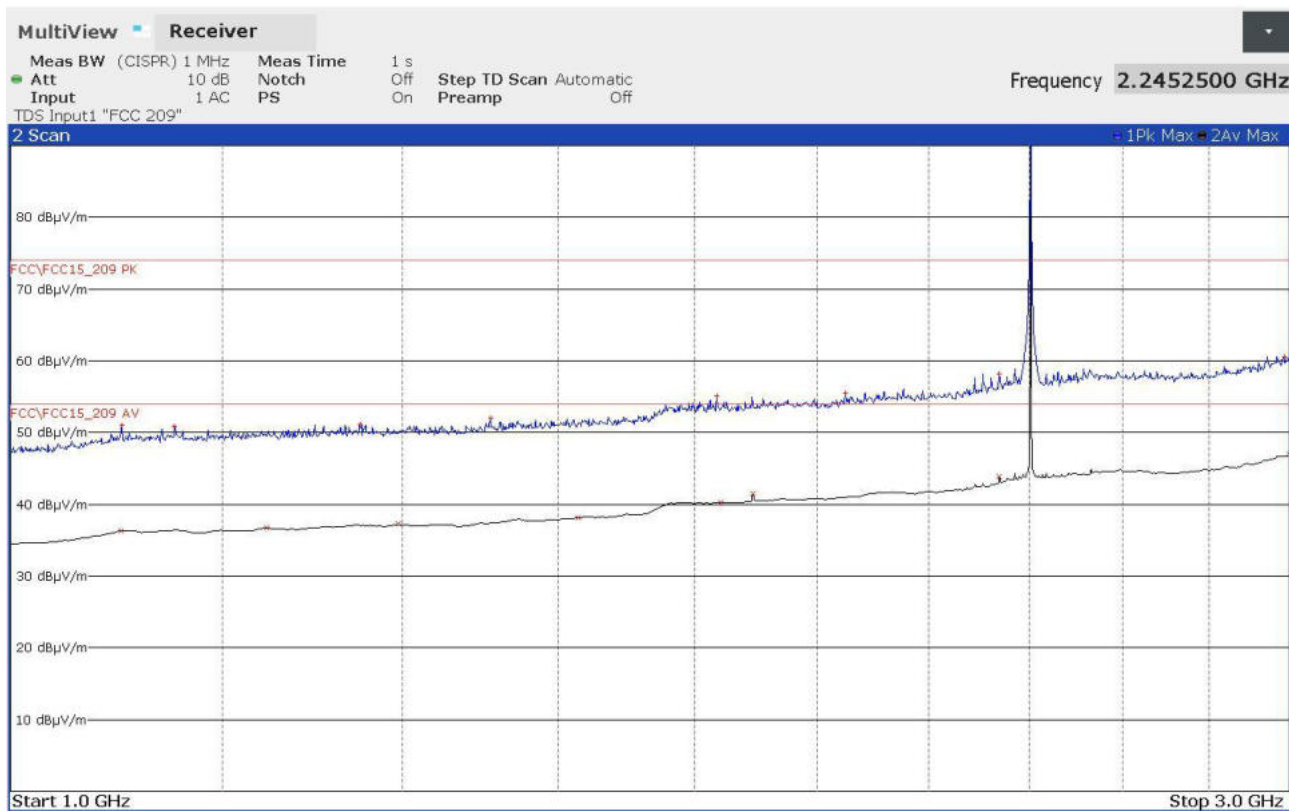
Remarks: EUT was tested in 3 orthogonal planes, graphs are related to the highest detected levels. Measurements at frequencies lower than 30 MHz have been performed with an EUT – antenna distance of 10 m. Measured values have been corrected with conversion factor $40\log(\text{test distance}/10)$ based 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

Segalla 25057603

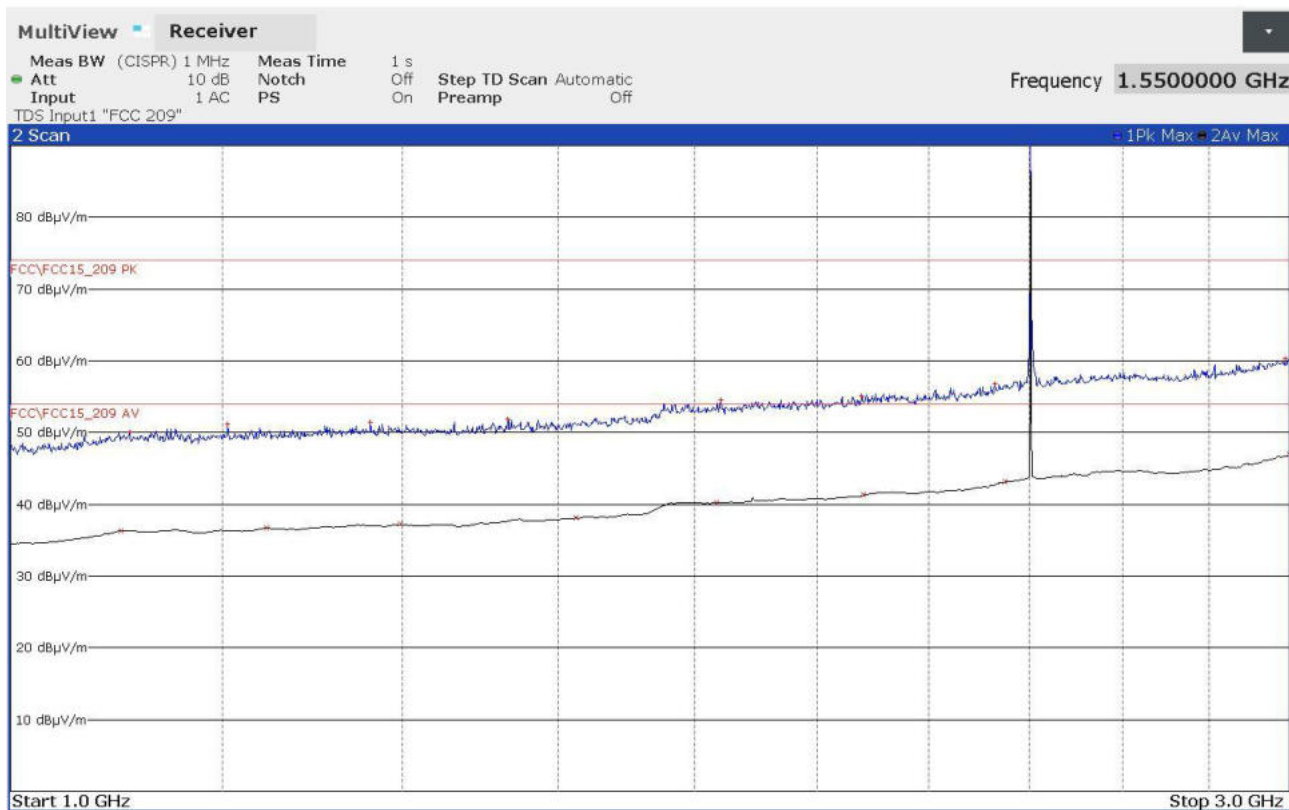


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
1100250000	+51.01	-22.97	1099500000	+36.35	-17.63
1151500000	+50.94	-23.04	1246500000	+36.78	-17.20
1349750000	+51.23	-22.75	1395750000	+37.22	-16.76
1511000000	+52.03	-21.95	1629000000	+38.08	-15.90
1834000000	+55.04	-18.94	1841000000	+40.30	-13.68
2048500000	+55.45	-18.53	1891750000	+41.54	-12.44
2338000000	+58.23	-15.75	2338000000	+43.86	-10.12
2986250000	+60.63	-13.35	2999750000	+46.90	-7.08

25057603_2

Segalla 25057604

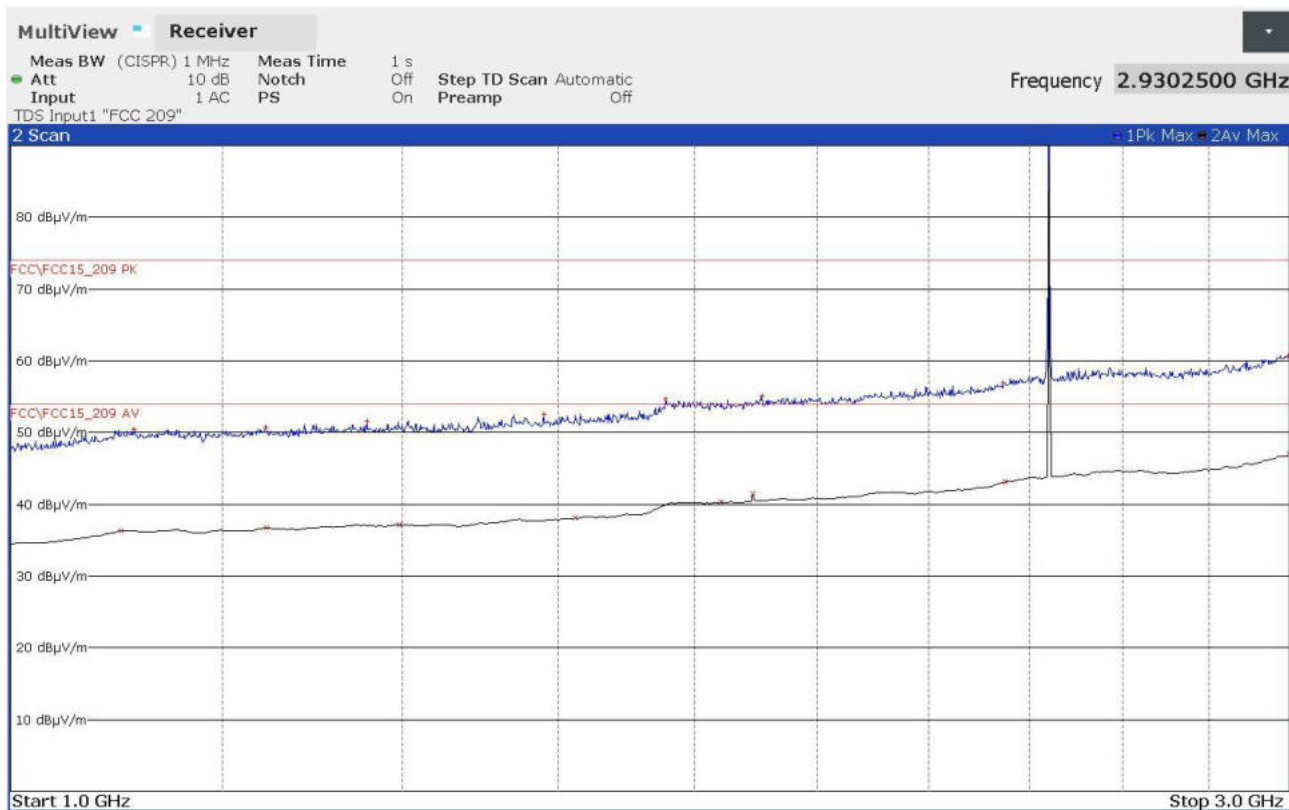


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
1107750000	+50.01	-23.97	1099750000	+36.35	-17.63
1204750000	+51.19	-22.79	1245750000	+36.78	-17.20
1362000000	+51.45	-22.53	1398000000	+37.22	-16.76
1533500000	+51.89	-22.09	1625250000	+38.08	-15.90
1840500000	+54.54	-19.44	1833750000	+40.28	-13.70
2077750000	+55.04	-18.94	2080000000	+41.29	-12.69
2329000000	+56.74	-17.24	2350000000	+43.14	-10.84
2989500000	+60.22	-13.76	2999250000	+46.91	-7.07

25057604_2

Segalla 25057605

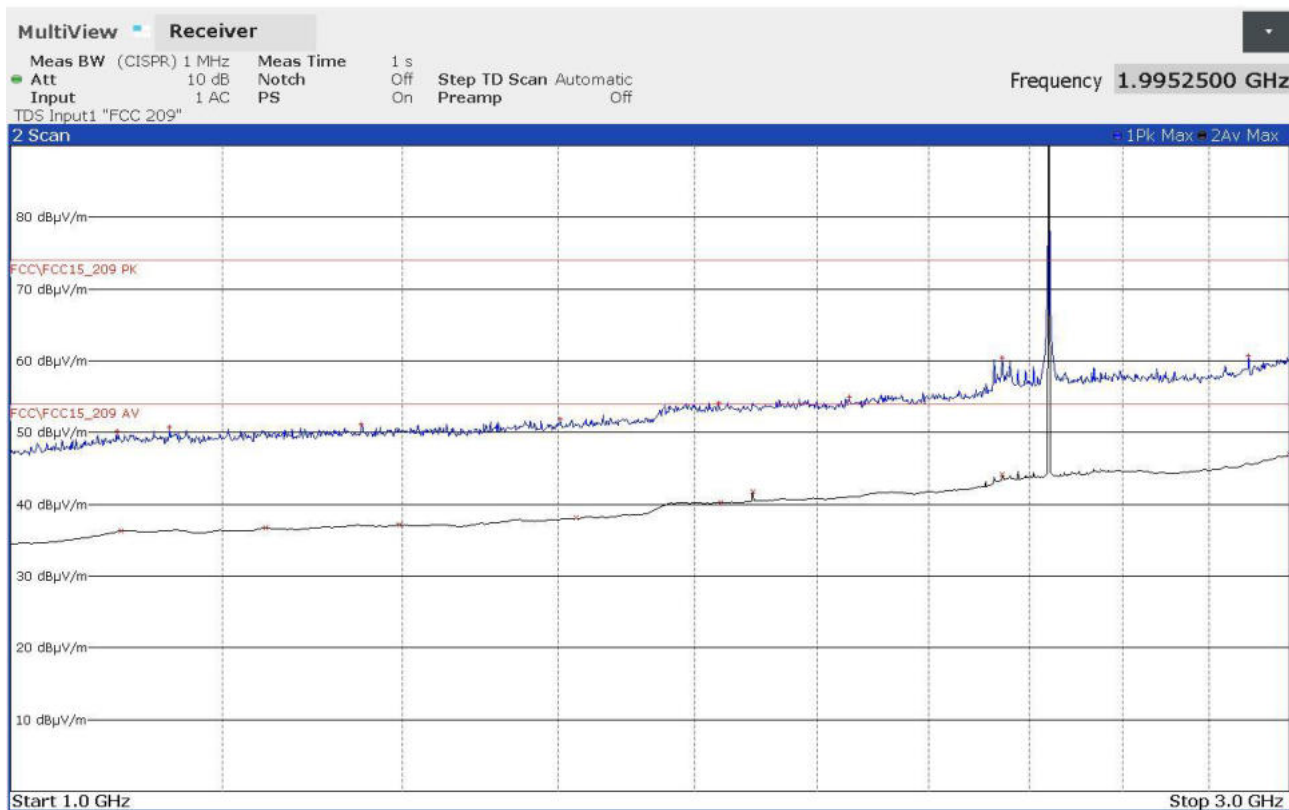


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
1112250000	+50.53	-23.45	1099750000	+36.35	-17.63
1244750000	+50.69	-23.29	1246250000	+36.79	-17.19
1358500000	+51.64	-22.34	1396500000	+37.21	-16.77
1581250000	+52.61	-21.37	1624250000	+38.09	-15.89
1755500000	+54.69	-19.29	1841000000	+40.31	-13.67
1906250000	+55.16	-18.82	1891750000	+41.44	-12.54
2346500000	+56.98	-17.00	2350000000	+43.12	-10.86
2997750000	+60.76	-13.22	2999750000	+46.91	-7.07

25057605_2

Segalla 25057606

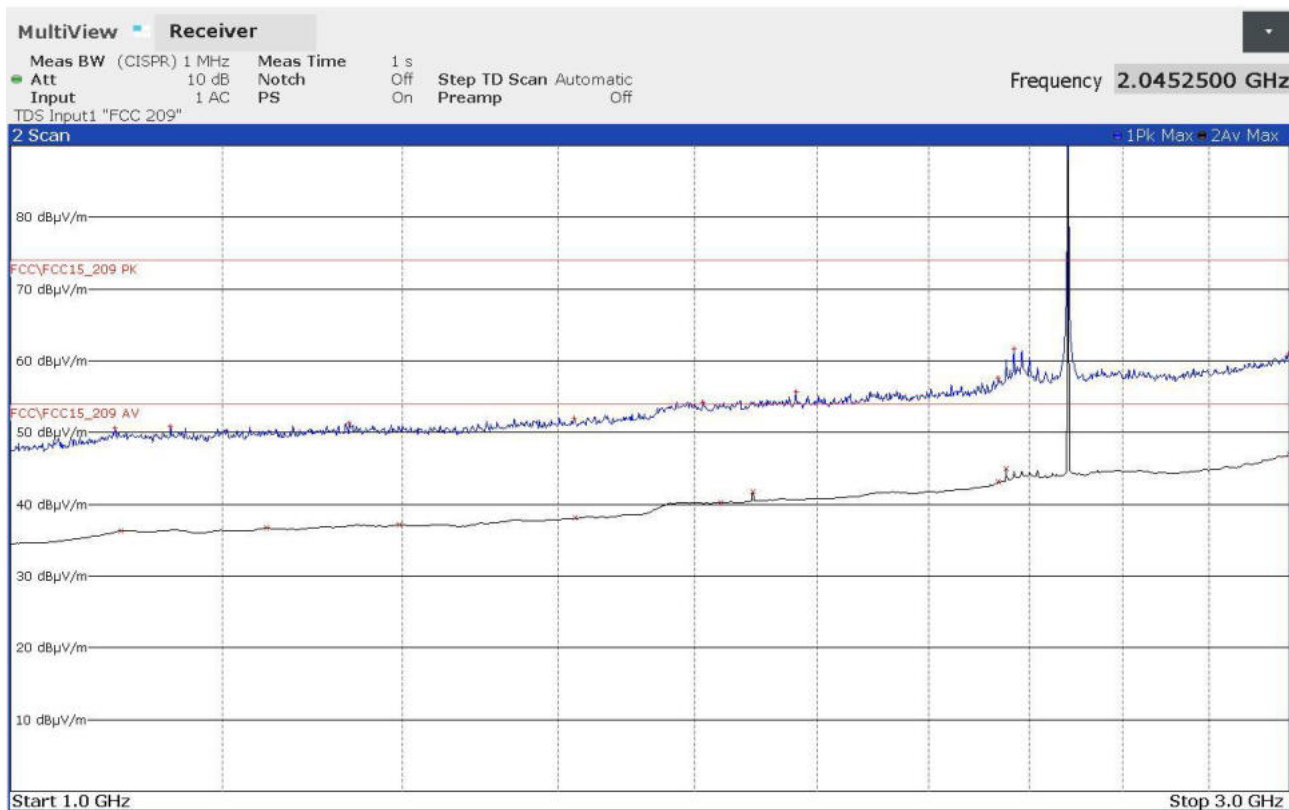


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
1095750000	+50.12	-23.86	1099750000	+36.36	-17.62
1146000000	+50.73	-23.25	1245500000	+36.76	-17.22
1351500000	+51.19	-22.79	1397000000	+37.18	-16.80
1603500000	+51.87	-22.11	1625000000	+38.08	-15.90
1837000000	+54.10	-19.88	1840250000	+40.28	-13.70
2056000000	+54.92	-19.06	1891750000	+41.84	-12.14
2344250000	+60.41	-13.57	2344000000	+44.21	-9.77
2896750000	+60.69	-13.29	2999750000	+46.91	-7.07

25057606_2

Segalla 25057607

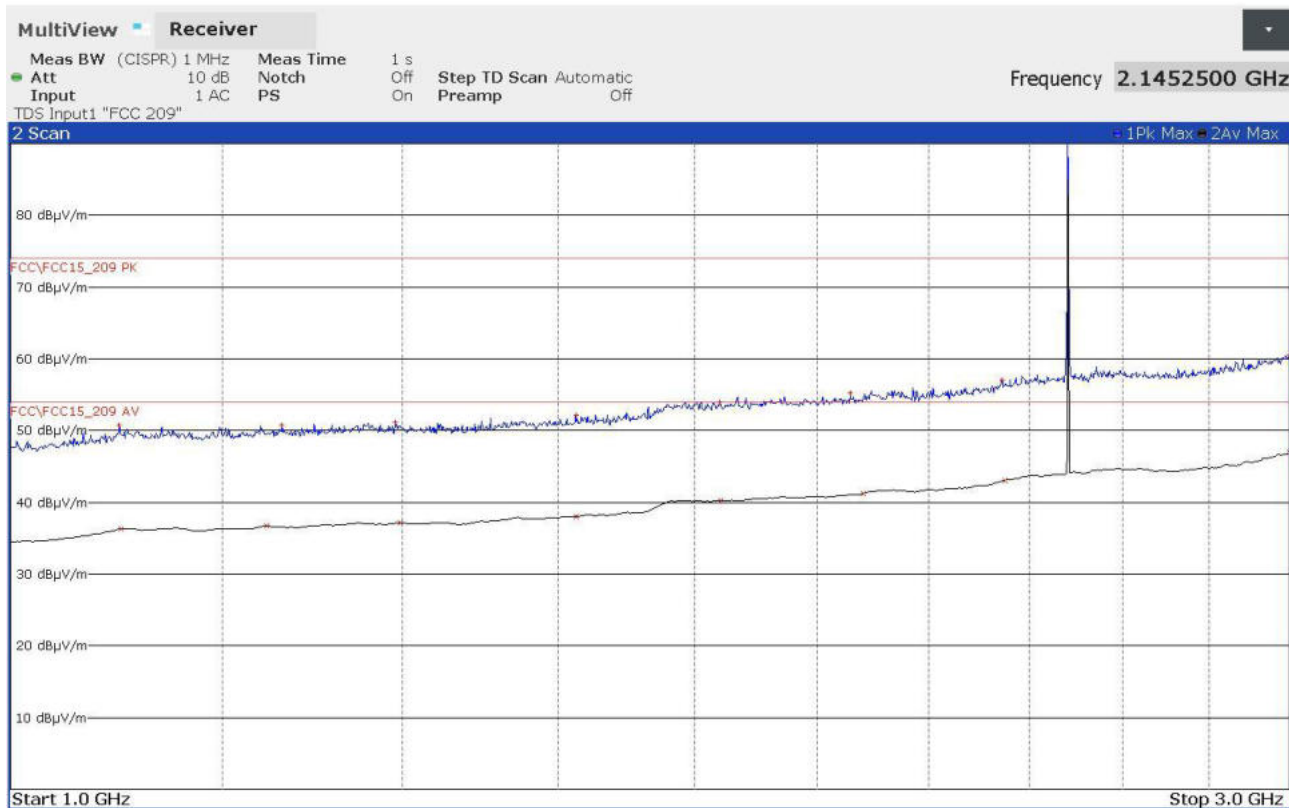


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
1094250000	+50.55	-23.43	1099750000	+36.36	-17.62
1147500000	+50.89	-23.09	1246000000	+36.78	-17.20
1338000000	+51.35	-22.63	1396250000	+37.20	-16.78
1623000000	+52.06	-21.92	1624750000	+38.07	-15.91
1812750000	+54.25	-19.73	1840750000	+40.28	-13.70
1963000000	+55.60	-18.38	1891750000	+41.83	-12.15
2336250000	+57.57	-16.41	2336000000	+43.24	-10.74
2367750000	+61.73	-12.25	2352000000	+45.01	-8.97
2996750000	+61.00	-12.98	2999750000	+46.92	-7.06

25057607_2

Segalla 25057608

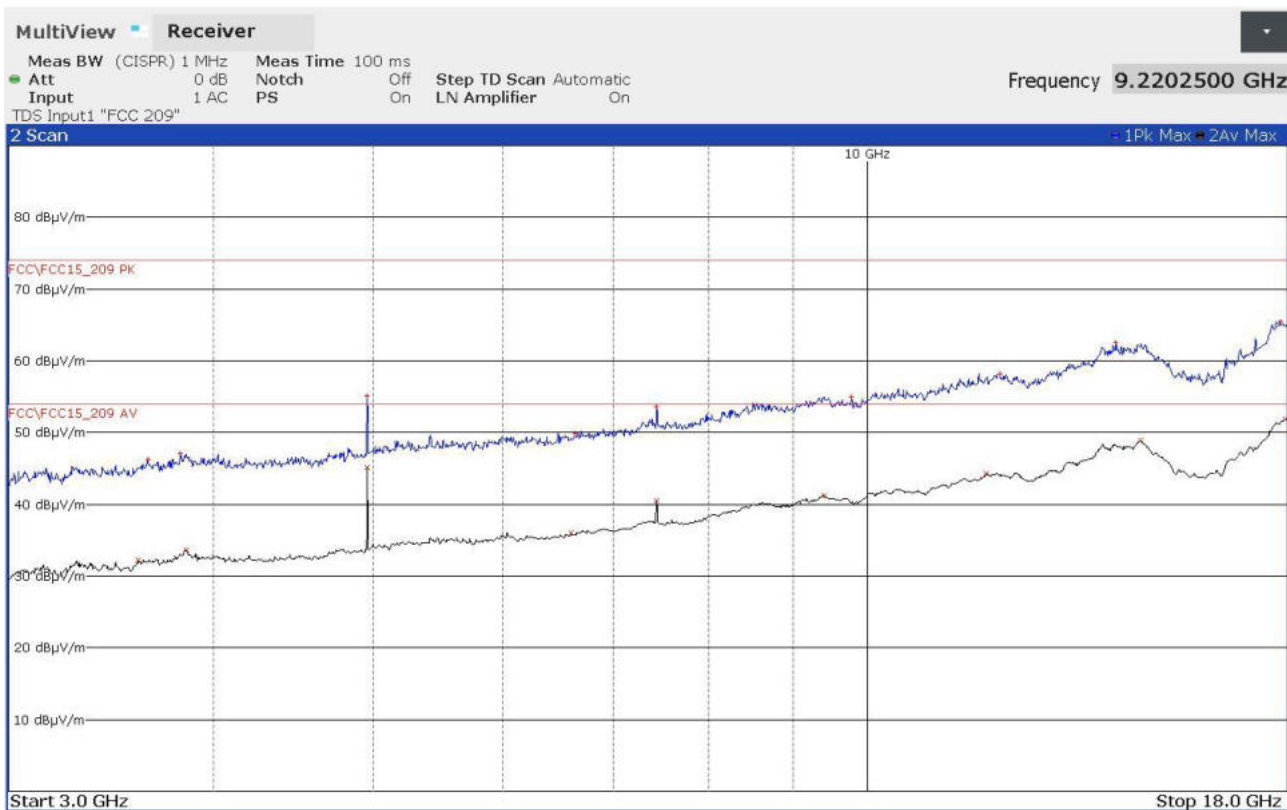


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
1098000000	+50.77	-23.21	1099750000	+36.35	-17.63
1262500000	+50.81	-23.17	1245750000	+36.79	-17.19
1391750000	+51.22	-22.76	1397750000	+37.18	-16.80
1625000000	+52.20	-21.78	1625250000	+38.06	-15.92
1838750000	+54.02	-19.96	1841000000	+40.28	-13.70
2057250000	+55.27	-18.71	2080000000	+41.27	-12.71
2344500000	+57.04	-16.94	2349750000	+43.10	-10.88
2999000000	+60.57	-13.41	2999750000	+46.90	-7.08

25057608_2

Segalla 25057611

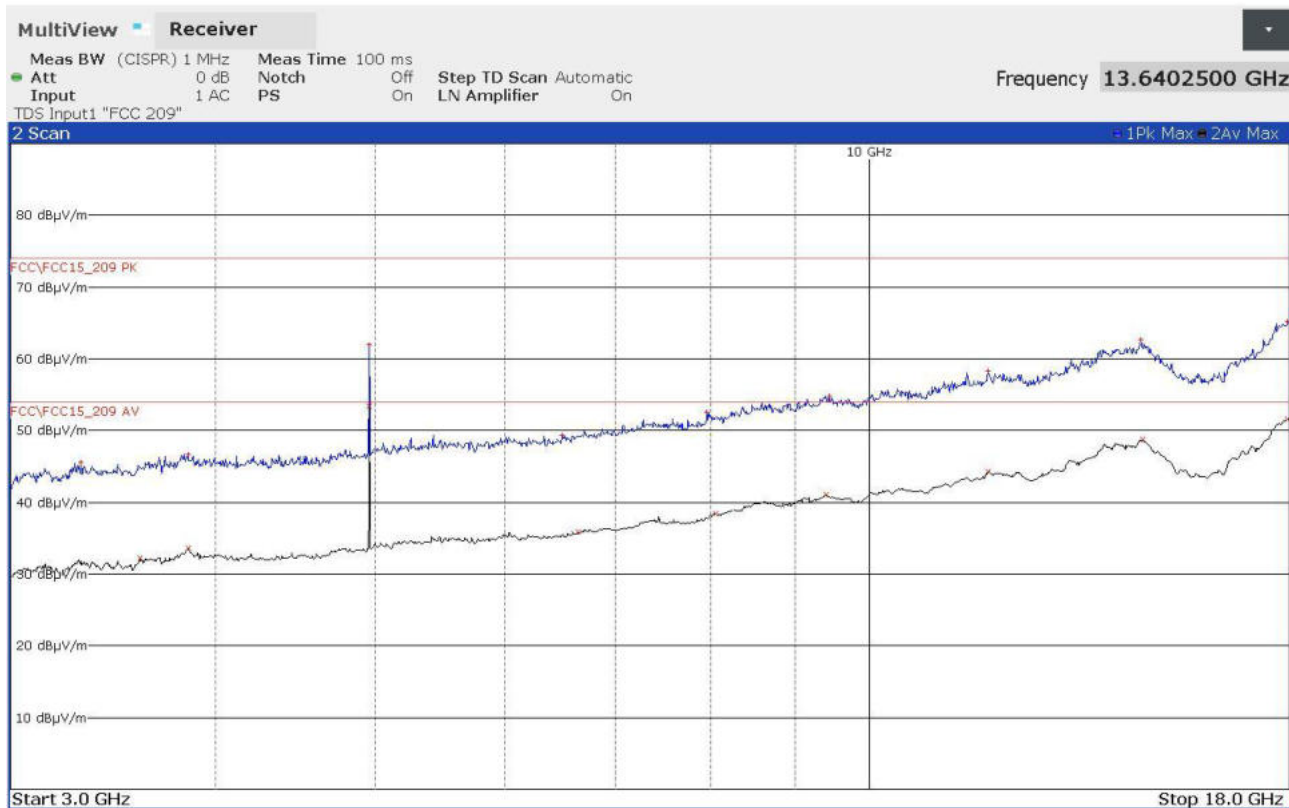


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
3646750000	+46.29	-27.69	3599750000	+32.24	-21.74
3817750000	+47.11	-26.87	3849750000	+33.66	-20.32
4960500000	+55.15	-18.83	4960000000	+45.10	-8.88
6635250000	+49.92	-24.06	6596500000	+35.99	-17.99
7440750000	+53.56	-20.42	7439500000	+40.55	-13.43
9775250000	+54.95	-19.03	9402000000	+41.23	-12.75
12031000000	+58.19	-15.79	11800000000	+44.32	-9.66
14154250000	+62.59	-11.39	14659000000	+48.91	-5.07
17818500000	+65.52	-8.46	17959000000	+51.93	-2.05

25057611_2

Segalla 25057612

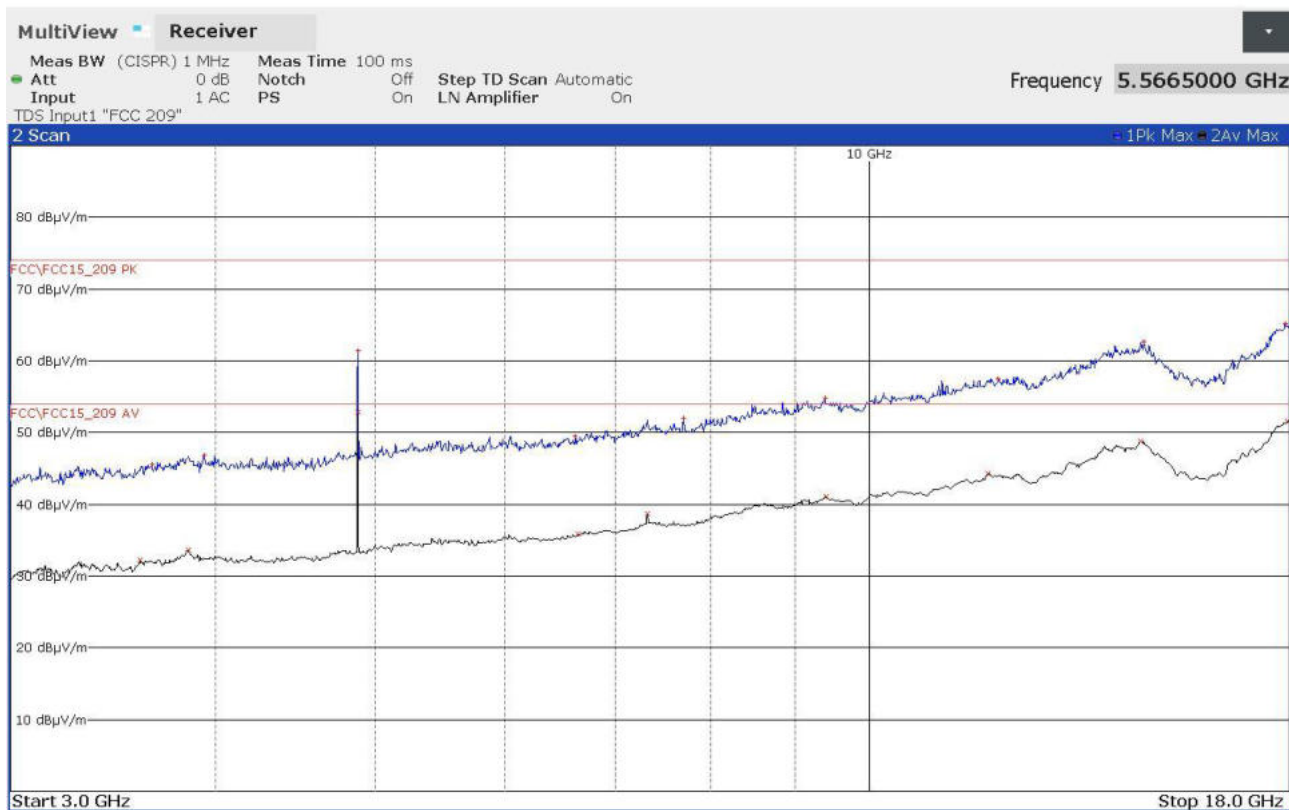


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
3310000000	+45.57	-28.41	3599750000	+32.20	-21.78
3848000000	+46.69	-27.29	3849750000	+33.59	-20.39
4959500000	+61.90	-12.08	4960000000	+53.41	-0.57
6497000000	+49.40	-24.58	6648250000	+35.83	-18.15
7961250000	+52.59	-21.39	8057000000	+38.40	-15.58
9443500000	+54.82	-19.16	9401000000	+41.07	-12.91
11796750000	+58.29	-15.69	11800000000	+44.27	-9.71
14616500000	+62.68	-11.30	14658750000	+48.78	-5.20
17960000000	+65.15	-8.83	17957500000	+51.63	-2.35

25057612_2

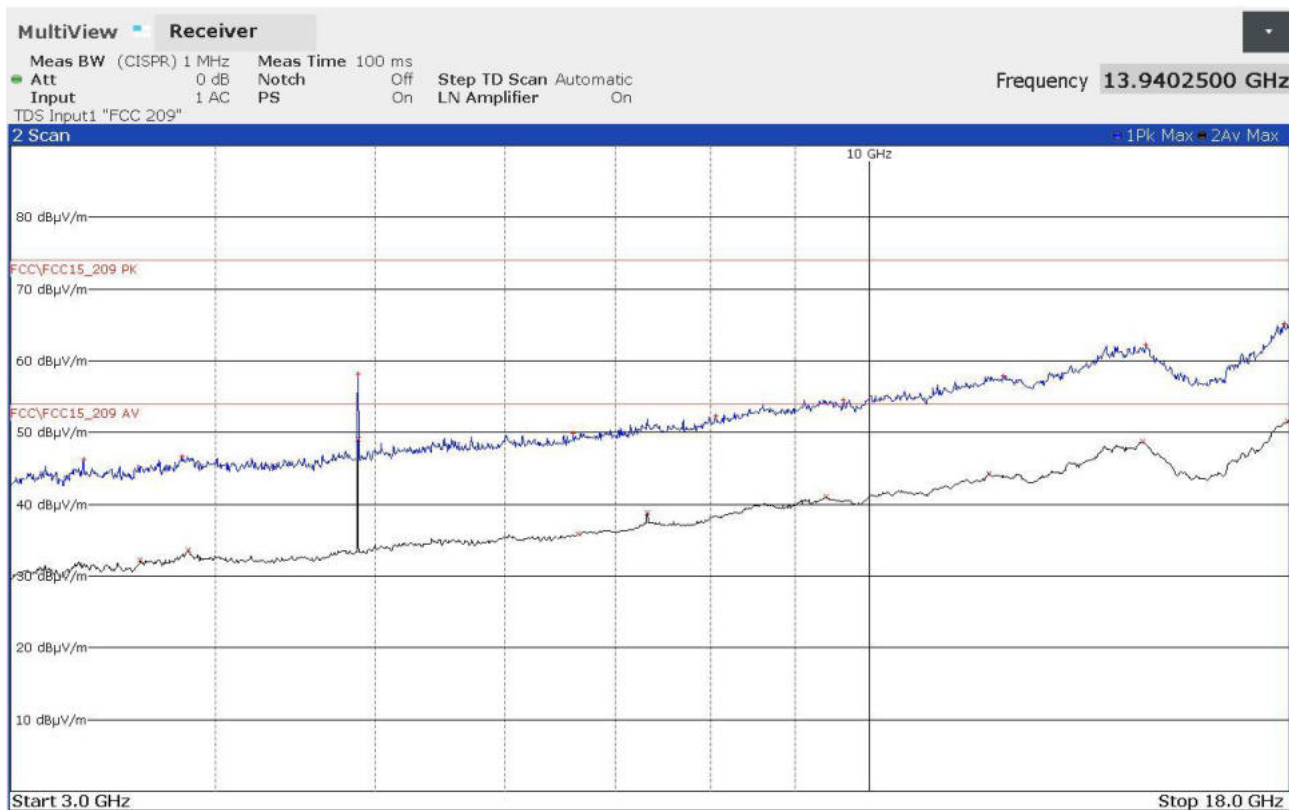
Segalla 25057613


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
3657500000	+45.56	-28.42	3599750000	+32.21	-21.77
3933750000	+46.77	-27.21	3849750000	+33.59	-20.39
4879500000	+61.40	-12.58	4880000000	+52.88	-1.10
6618250000	+49.53	-24.45	6648000000	+35.83	-18.15
7700500000	+52.06	-21.92	7319500000	+38.68	-15.30
9388750000	+54.77	-19.21	9401500000	+41.06	-12.92
11971750000	+57.44	-16.54	11800000000	+44.31	-9.67
14677750000	+62.67	-11.31	14617750000	+48.82	-5.16
17888500000	+65.20	-8.78	17955500000	+51.61	-2.37

25057613_2

Segalla 25057614

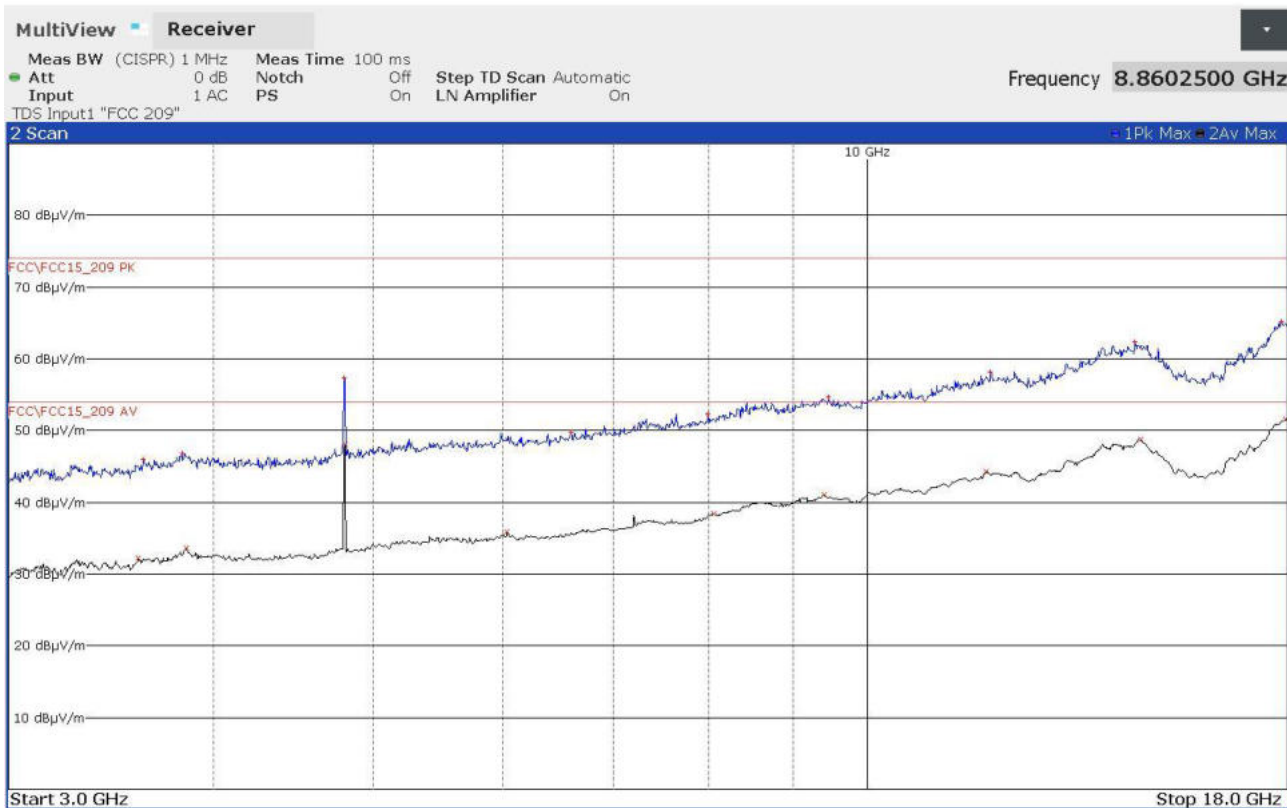


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
3322750000	+46.20	-27.78	3599750000	+32.22	-21.76
3813750000	+46.69	-27.29	3849750000	+33.61	-20.37
4880500000	+58.16	-15.82	4880000000	+49.07	-4.91
6599000000	+49.97	-24.01	6644250000	+35.84	-18.14
8056750000	+52.34	-21.64	7319500000	+38.86	-15.12
9634000000	+54.53	-19.45	9401500000	+41.06	-12.92
12055000000	+57.92	-16.06	11819000000	+44.25	-9.73
14717500000	+62.24	-11.74	14658250000	+48.79	-5.19
17862000000	+65.14	-8.84	17958000000	+51.63	-2.35

25057614_2

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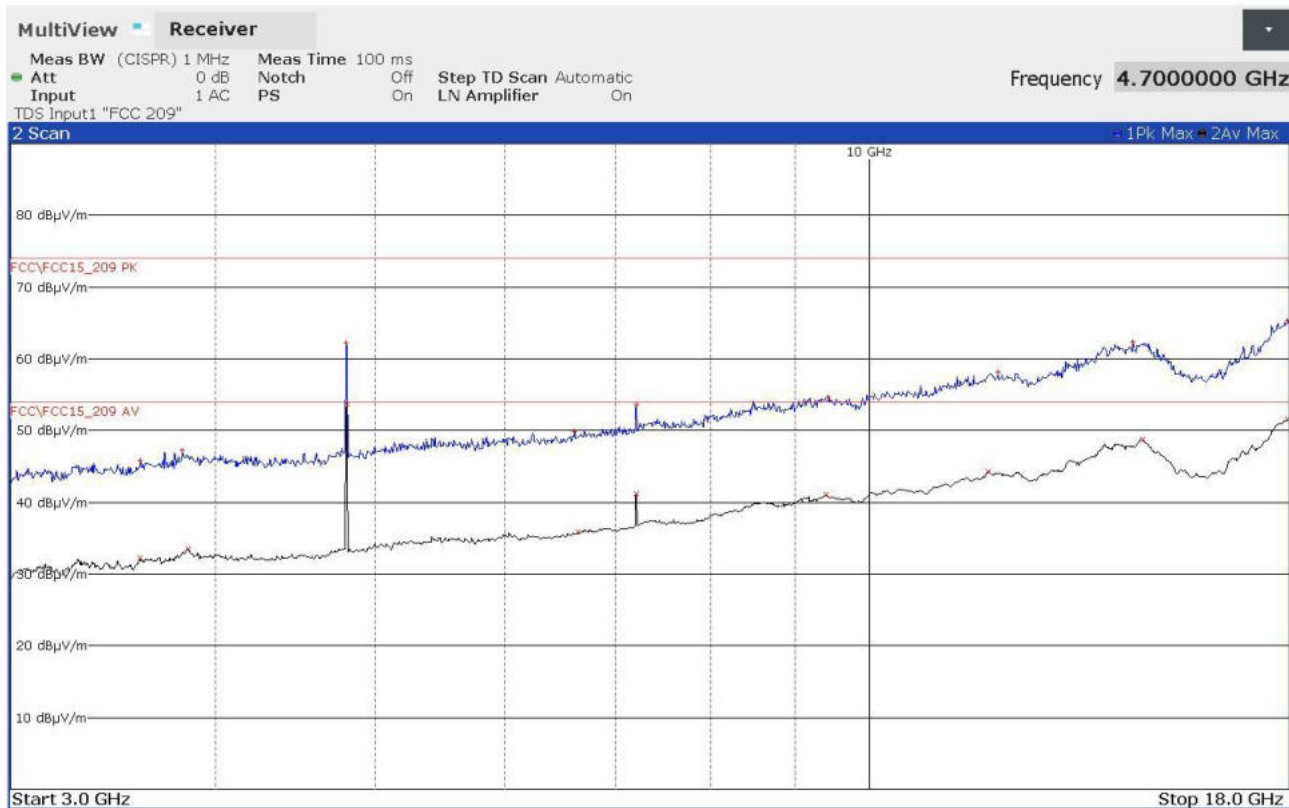


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
3624750000	+45.94	-28.04	3599750000	+32.22	-21.76
3825000000	+46.76	-27.22	3849750000	+33.60	-20.38
4803500000	+57.37	-16.61	4804000000	+48.14	-5.84
6599750000	+49.74	-24.24	6031500000	+35.82	-18.16
7991250000	+52.23	-21.75	8057750000	+38.37	-15.61
9457250000	+54.63	-19.35	9401500000	+41.05	-12.93
11871250000	+58.22	-15.76	11800000000	+44.29	-9.69
14536250000	+62.32	-11.66	14657750000	+48.82	-5.16
17855000000	+65.14	-8.84	17955500000	+51.60	-2.38

25057615_2

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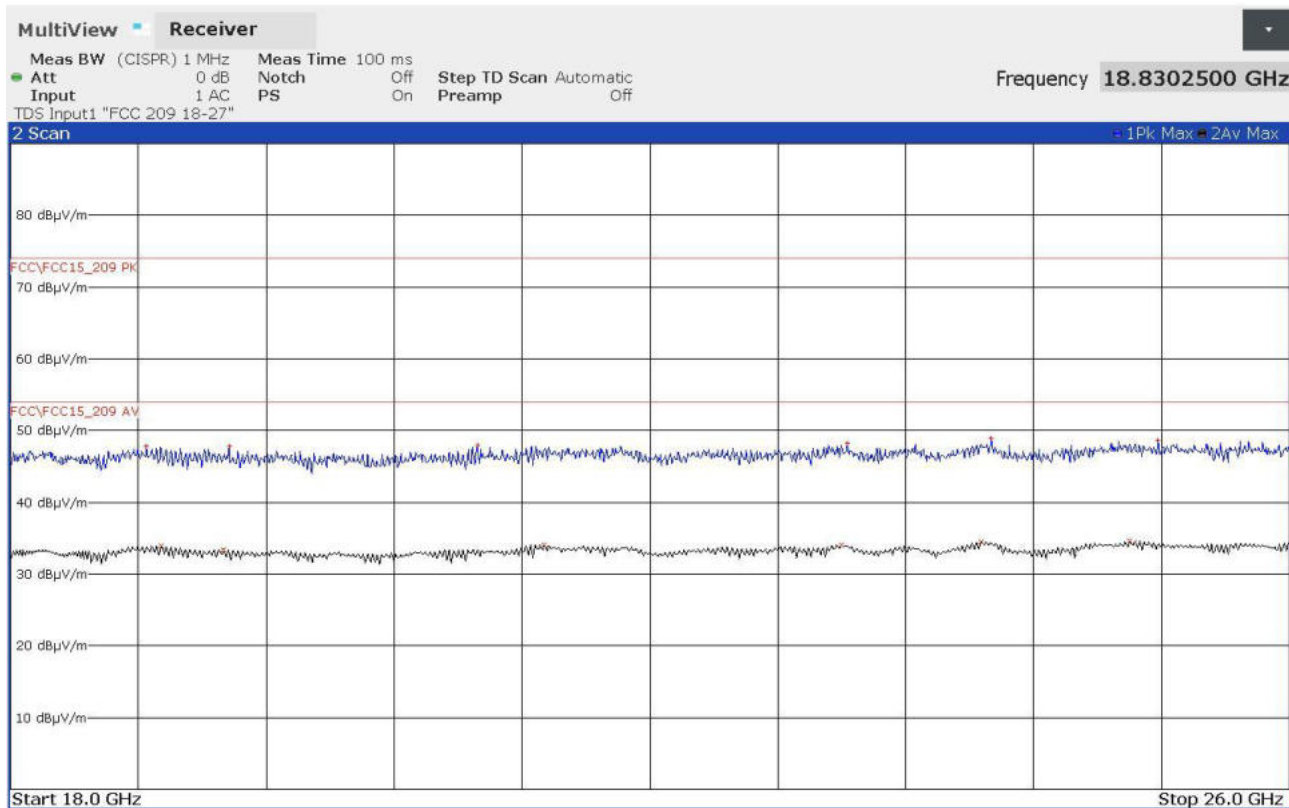


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
3598500000	+45.82	-28.16	3599750000	+32.19	-21.79
3816500000	+47.22	-26.76	3849750000	+33.55	-20.43
4803500000	+62.26	-11.72	4804000000	+53.69	-0.29
6612250000	+49.96	-24.02	6648000000	+35.82	-18.16
7205250000	+53.56	-20.42	7205500000	+41.18	-12.80
9437250000	+54.74	-19.24	9401000000	+41.04	-12.94
11973500000	+58.19	-15.79	11800000000	+44.30	-9.68
14457000000	+62.41	-11.57	14658500000	+48.81	-5.17
17957000000	+65.31	-8.67	17956750000	+51.60	-2.38

25057616_2

Segalla 25057617

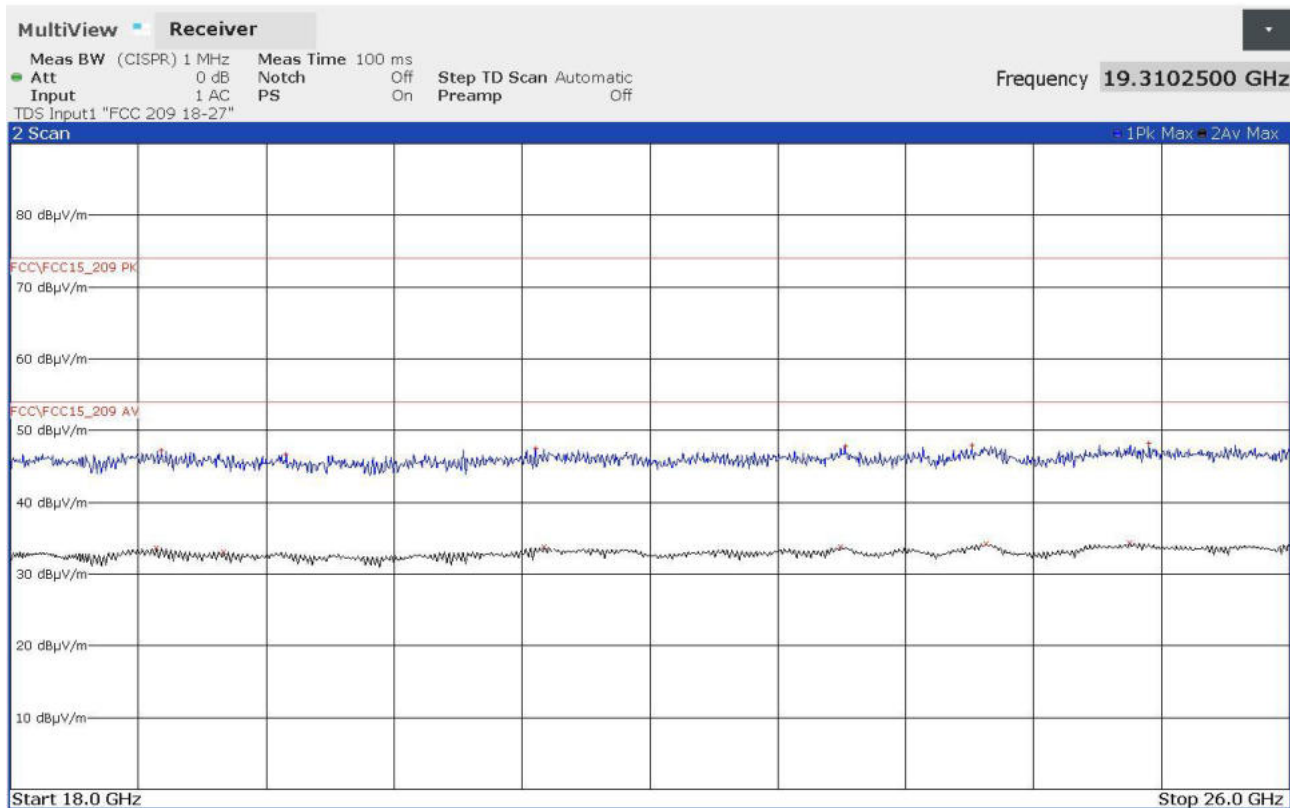


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
18850000000	+47.82	-26.16	18943500000	+33.99	-19.99
19367500000	+47.77	-26.21	19333500000	+33.39	-20.59
20920000000	+47.95	-26.03	21339000000	+34.09	-19.89
23233250000	+48.26	-25.72	23195000000	+34.09	-19.89
24135250000	+48.86	-25.12	24070250000	+34.51	-19.47
25179250000	+48.64	-25.34	25002000000	+34.60	-19.38

25057617_2

Segalla 25057618

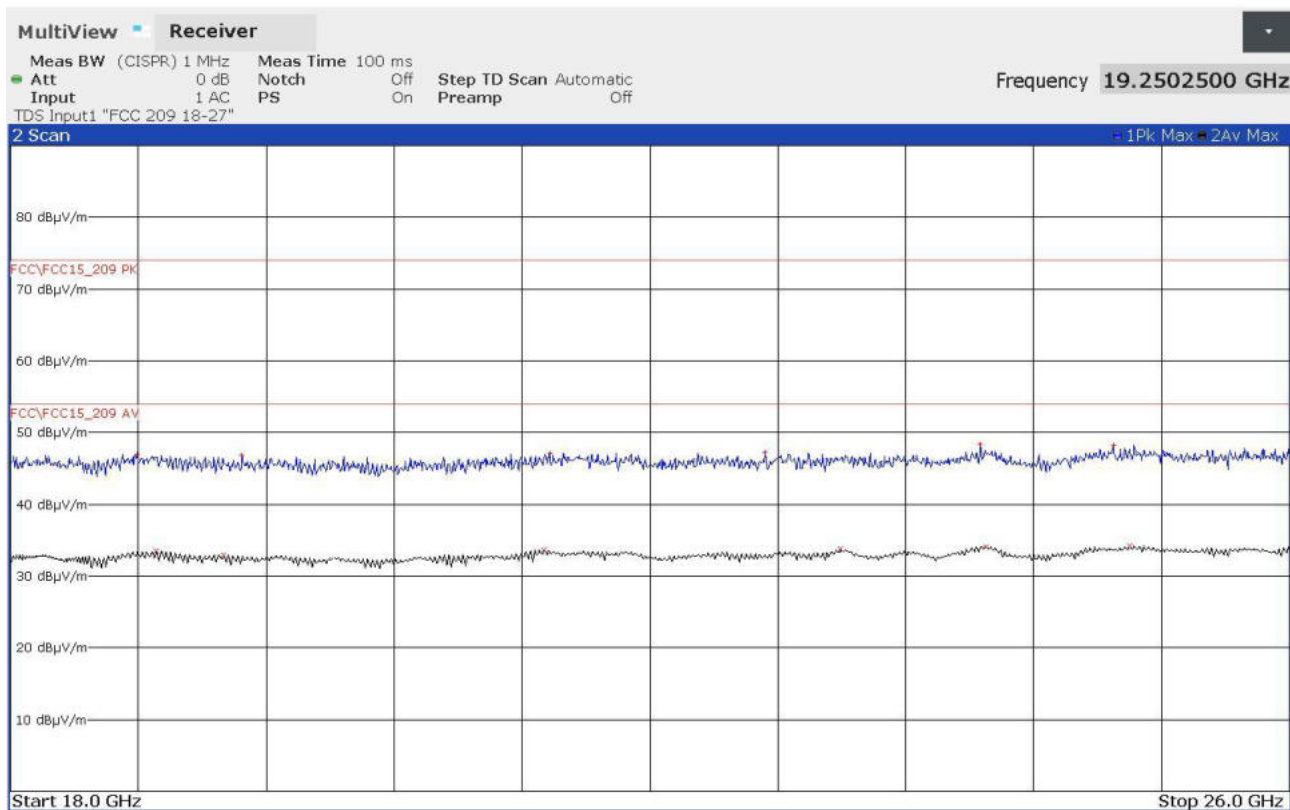


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
18942750000	+47.29	-26.69	18913500000	+33.66	-20.32
19724750000	+46.75	-27.23	19333500000	+33.10	-20.88
21284250000	+47.59	-26.39	21339750000	+33.75	-20.23
23219250000	+47.79	-26.19	23191750000	+33.77	-20.21
24014750000	+47.92	-26.06	24100500000	+34.18	-19.80
25120250000	+48.21	-25.77	25002250000	+34.29	-19.69

25057618_2

Segalla 25057619

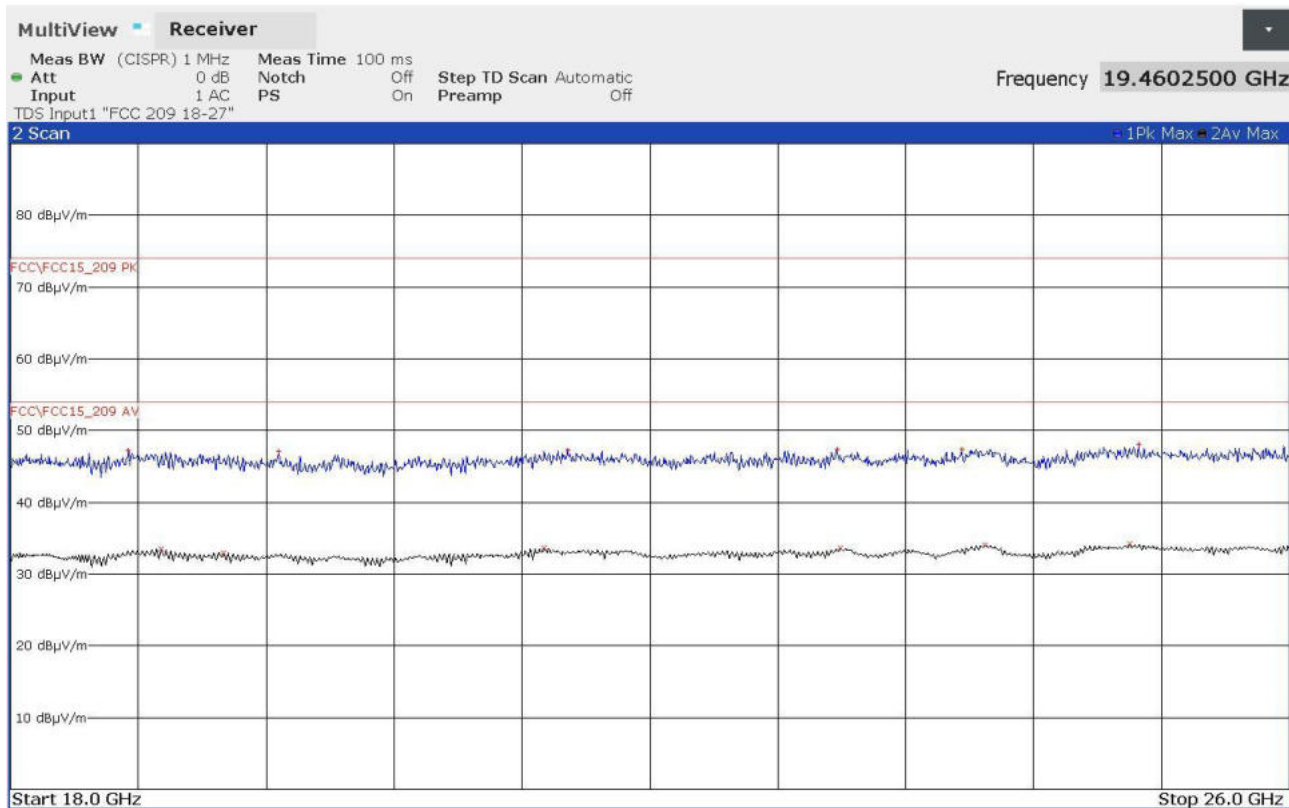


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
18791250000	+47.03	-26.95	18913500000	+33.56	-20.42
19448000000	+46.77	-27.21	19333500000	+32.97	-21.01
21372000000	+47.16	-26.82	21339000000	+33.64	-20.34
22719000000	+47.22	-26.76	23191000000	+33.73	-20.25
24064000000	+48.40	-25.58	24103500000	+34.10	-19.88
24897750000	+48.16	-25.82	25000500000	+34.22	-19.76

25057619_2

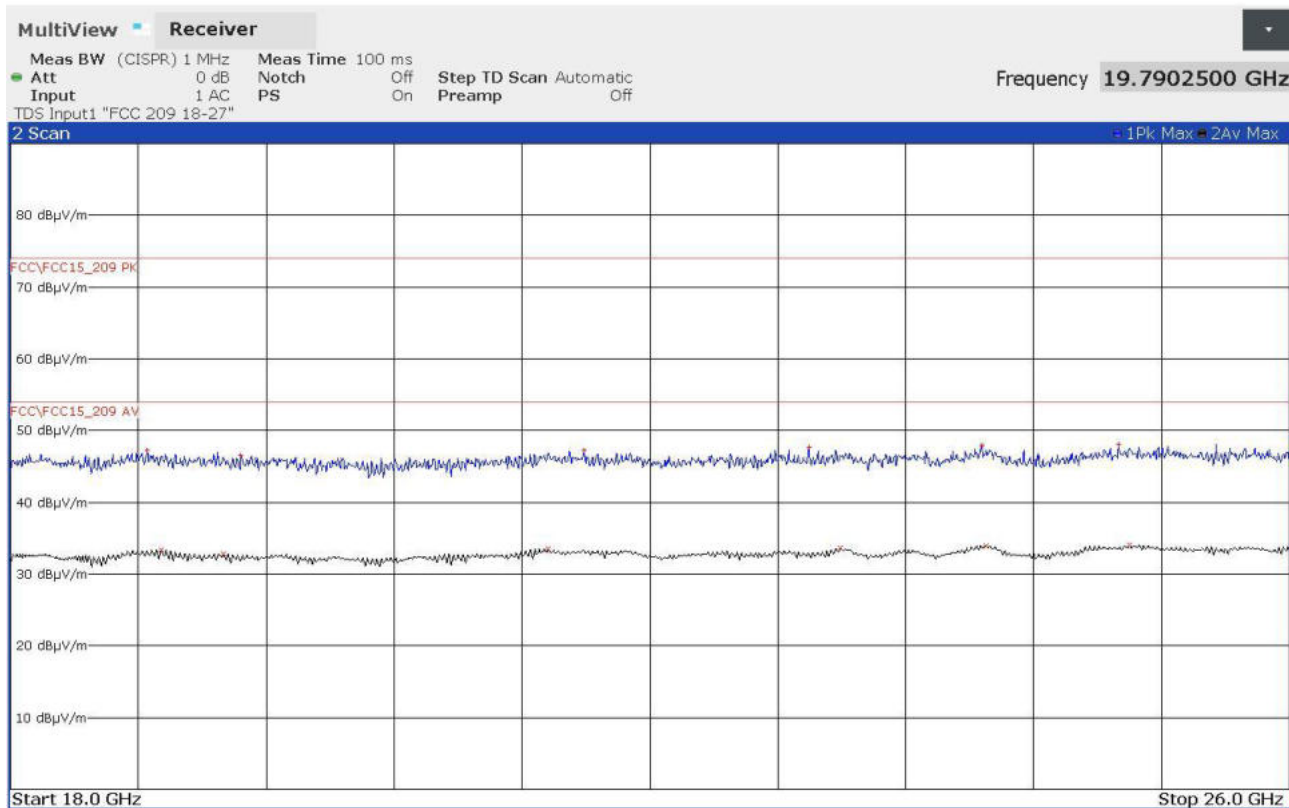
Segalla 25057620


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
18738000000	+47.22	-26.76	18943000000	+33.49	-20.49
19679500000	+47.16	-26.82	19333500000	+32.91	-21.07
21485000000	+47.22	-26.76	21338000000	+33.58	-20.40
23169250000	+47.38	-26.60	23191000000	+33.65	-20.33
23951250000	+47.37	-26.61	24098750000	+34.04	-19.94
25056500000	+48.02	-25.96	25000750000	+34.14	-19.84

25057620_2

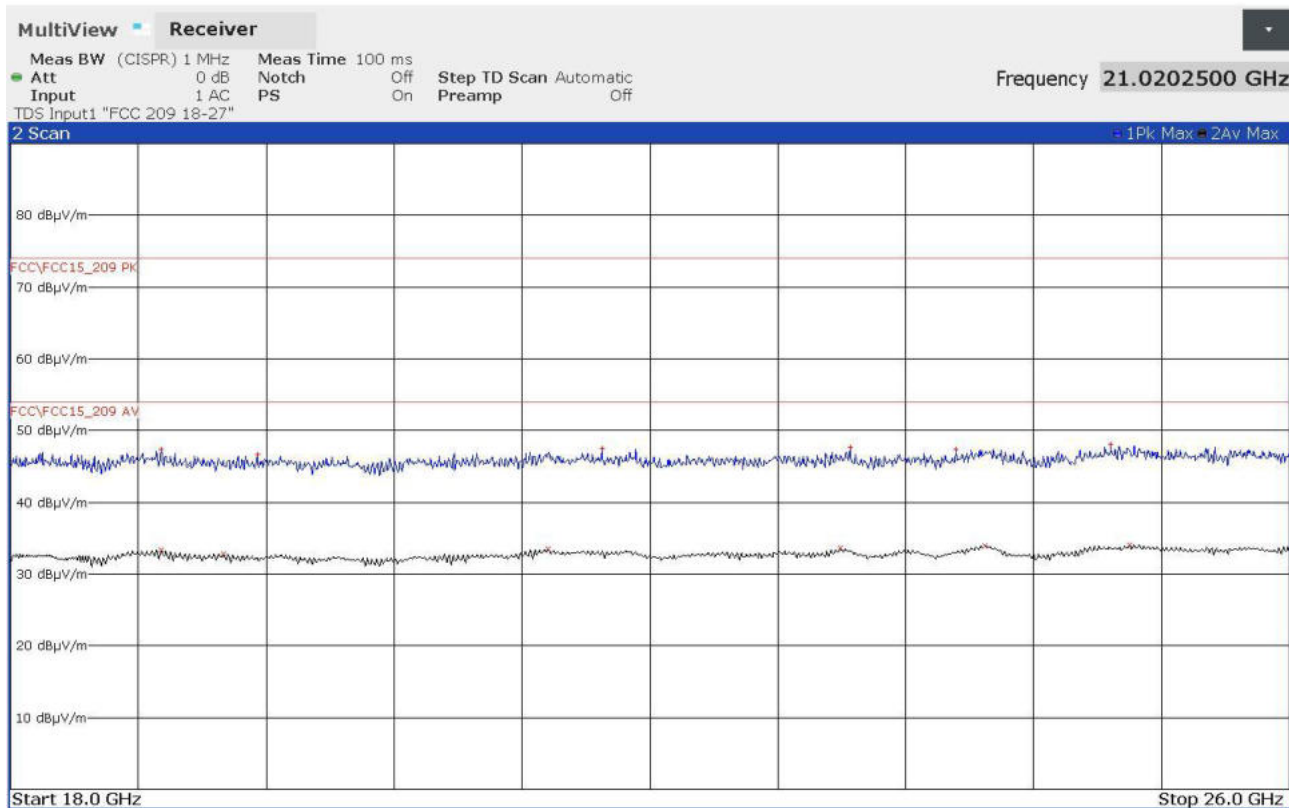
Segalla 25057621


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
18857250000	+47.24	-26.74	18943750000	+33.42	-20.56
19441750000	+46.59	-27.39	19333500000	+32.83	-21.15
21587500000	+47.30	-26.68	21365000000	+33.50	-20.48
22993750000	+47.73	-26.25	23191250000	+33.64	-20.34
24075250000	+48.01	-25.97	24100000000	+33.99	-19.99
24930000000	+48.11	-25.87	24999000000	+34.09	-19.89

25057621_2

Segalla 25057622

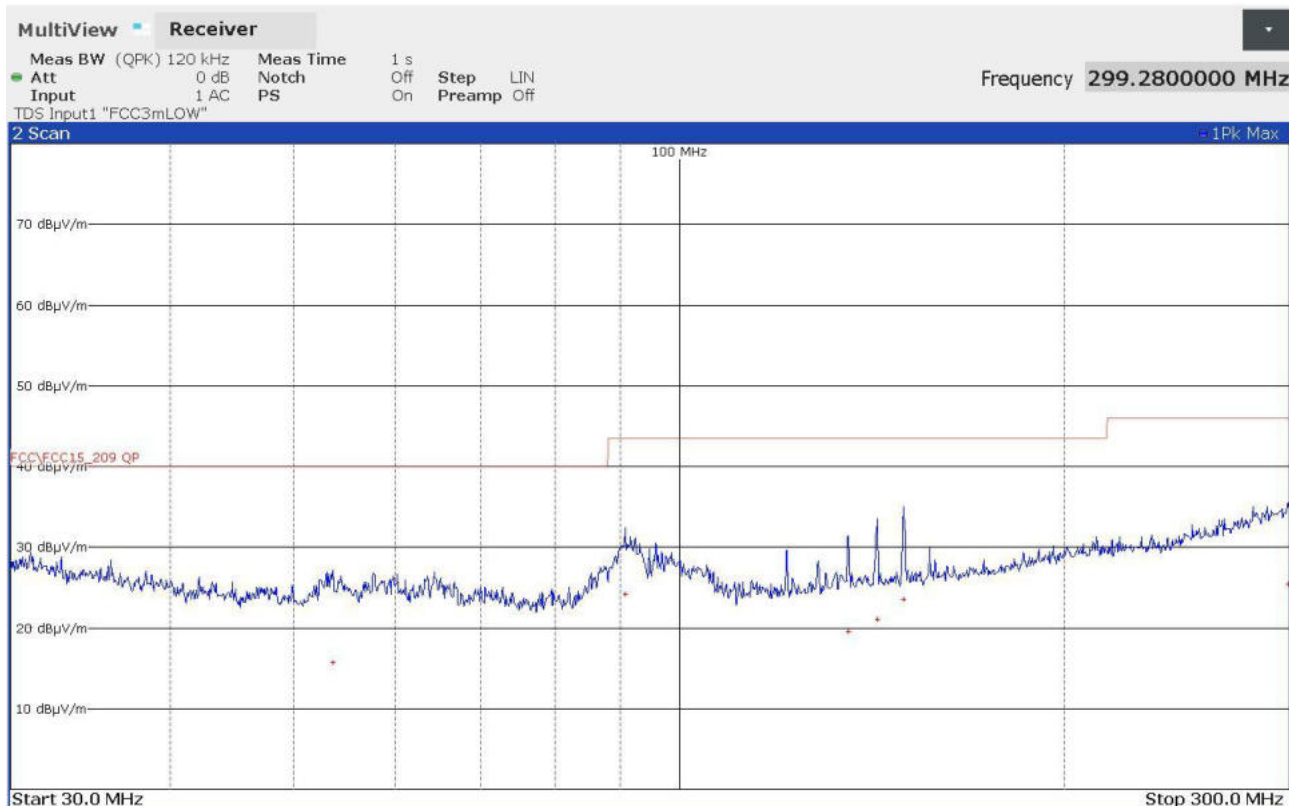


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
18945000000	+47.34	-26.64	18943000000	+33.37	-20.61
19544500000	+46.66	-27.32	19333500000	+32.76	-21.22
21702500000	+47.52	-26.46	21362250000	+33.47	-20.51
23253000000	+47.67	-26.31	23191000000	+33.59	-20.39
23914250000	+47.35	-26.63	24095500000	+33.94	-20.04
24879000000	+48.11	-25.87	24999500000	+34.04	-19.94

25057622_2

Segalla 25057623



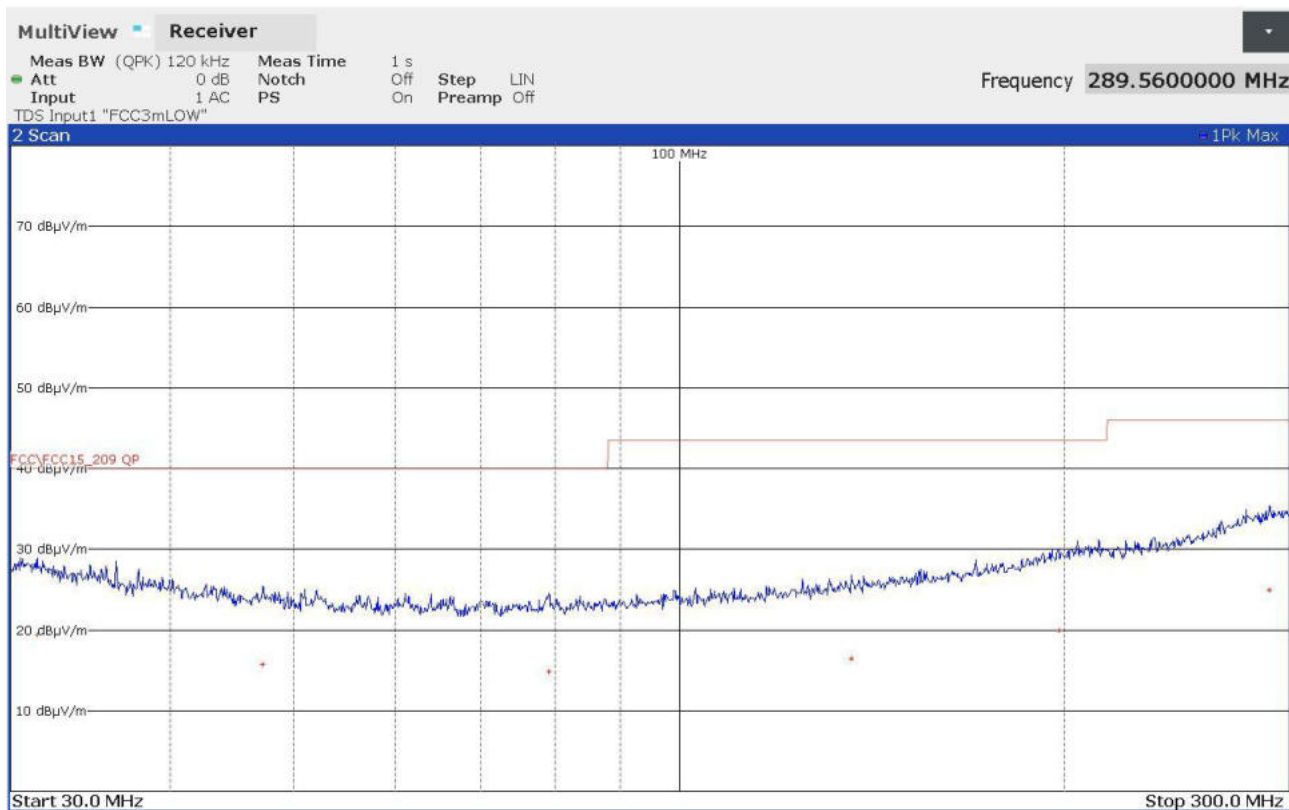
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
31120000	+20.12	-19.88
53600000	+15.66	-24.34
90760000	+24.18	-19.34
135480000	+19.59	-23.93
142880000	+21.10	-22.42
149720000	+23.52	-20.00
299280000	+25.48	-20.54

25057623_2

Segalla 25057624



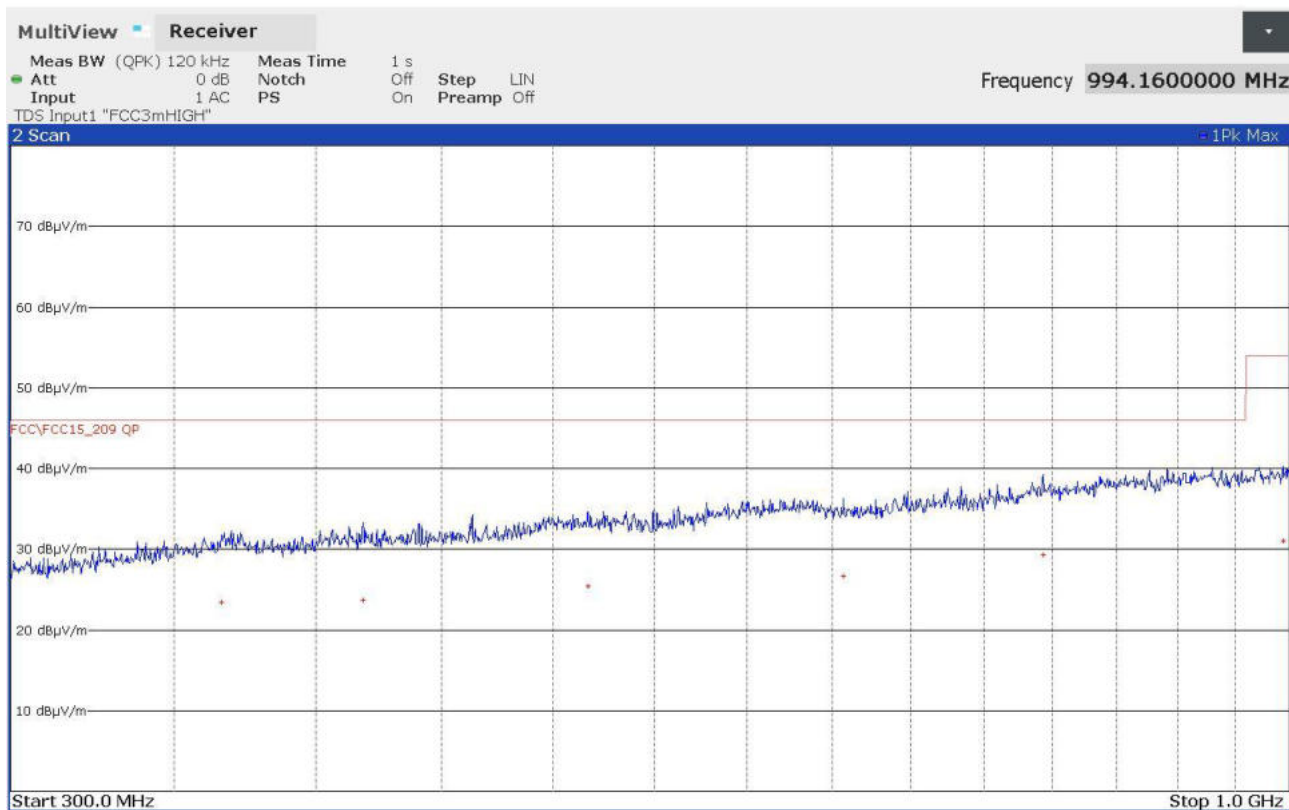
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
31480000	+19.50	-20.50
47280000	+15.71	-24.29
79160000	+14.80	-25.20
136400000	+16.44	-27.08
198240000	+19.88	-23.64
289560000	+24.89	-21.13

25057624_2

Segalla 25057625



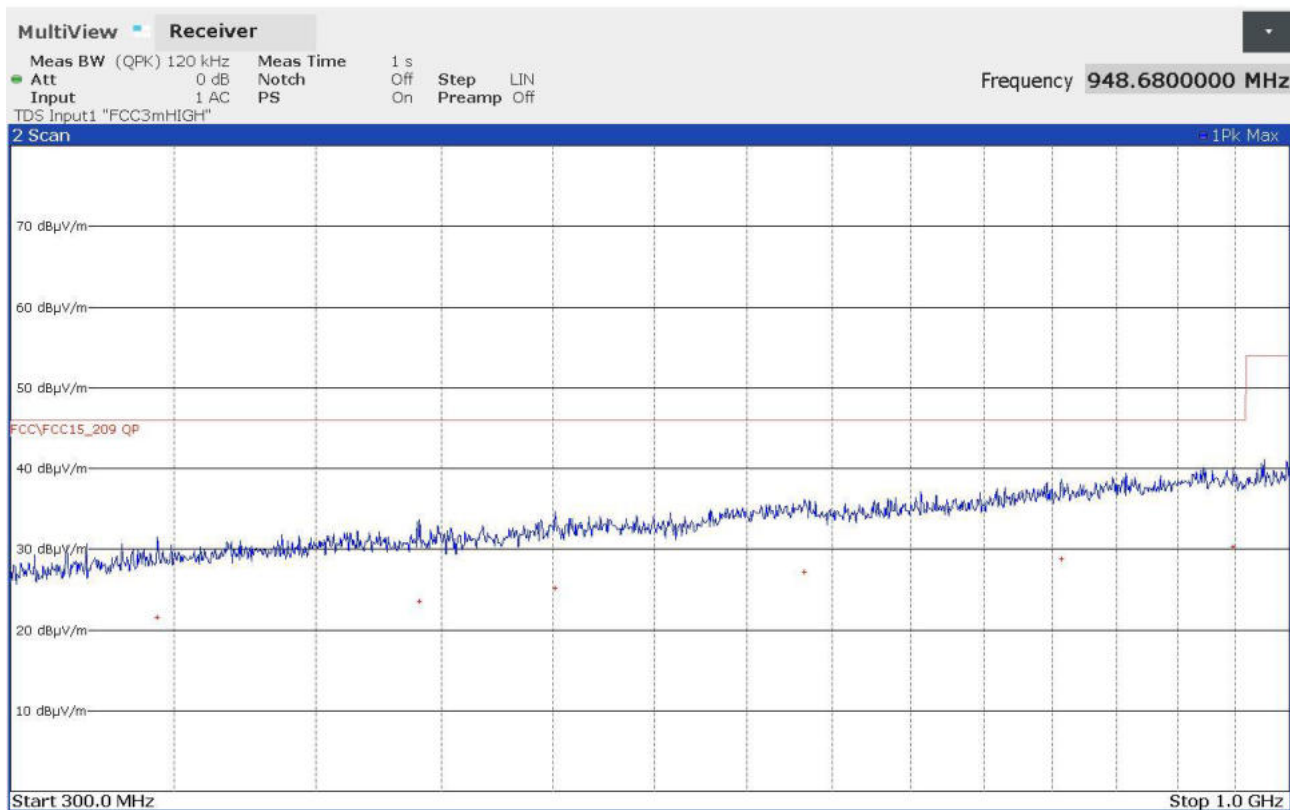
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
366000000	+23.45	-22.57
418000000	+23.62	-22.40
516560000	+25.43	-20.59
657000000	+26.70	-19.32
792880000	+29.24	-16.78
994160000	+31.03	-22.95

25057625_2

Segalla 25057626



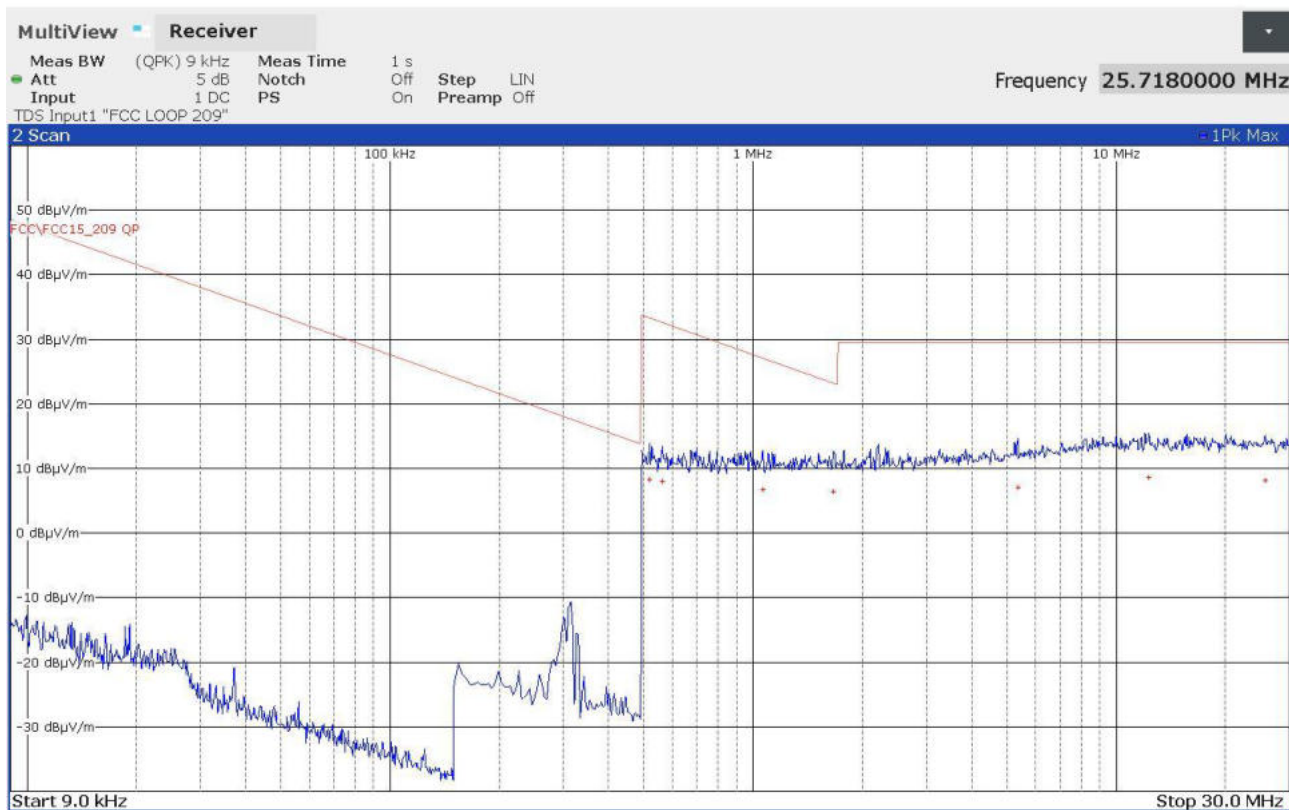
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
344360000	+21.53	-24.49
440960000	+23.50	-22.52
500960000	+25.13	-20.89
633480000	+27.15	-18.87
806480000	+28.75	-17.27
948680000	+30.24	-15.78

25057626_2

Segalla 25057627



FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
518000	+8.28	-25.04
562000	+7.96	-24.65
1062000	+6.72	-20.36
1662000	+6.47	-16.72
5370000	+7.09	-22.45
12314000	+8.63	-20.91
25718000	+8.13	-21.41

25057627_2

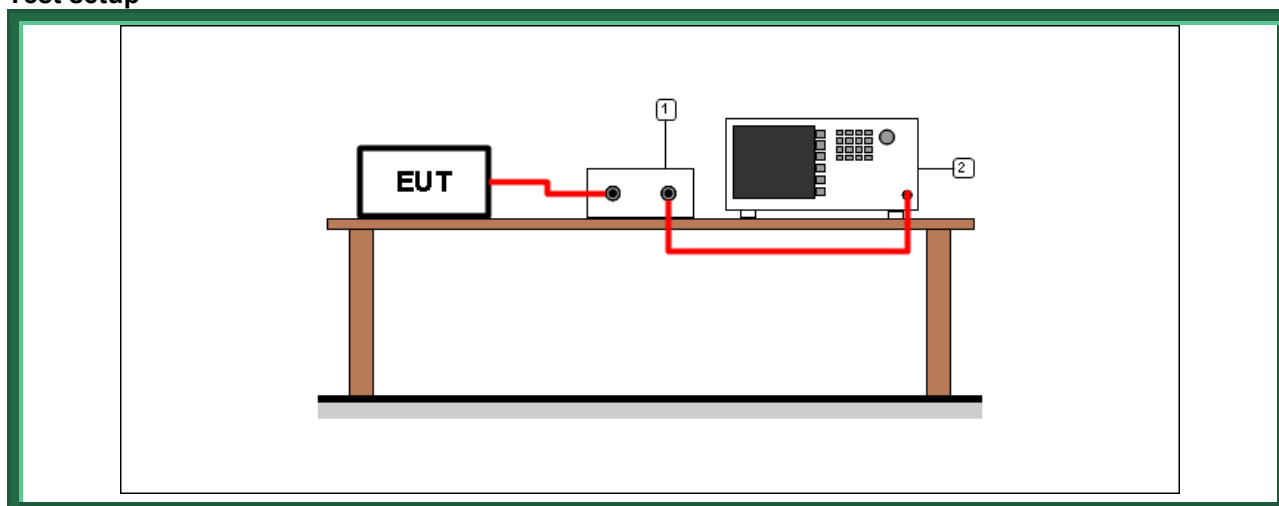
9.3 Fundamental emission output power

Tested by	M. Segalla
Test date	13.05.2025
Test location (stand)	Laboratory
Basic standard(s)	ANSI C63.10 cl. 11.9.1.1 KDB 558074 D01 DTS Meas Guidance v05r02 cl. 8.3.1.1
Product standard(s)	FCC Rules and Regulation; Titles 47 Part 15.247 (b) (3)
Supplementary test set-up description	--
Supplementary information	--

Acceptance limits

For systems using digital modulation in the 902 – 928 MHz, 2400 – 2483,5 MHz, and 5725 – 5850 MHz bands: 1 W.

Test setup



Test setup PR002_01

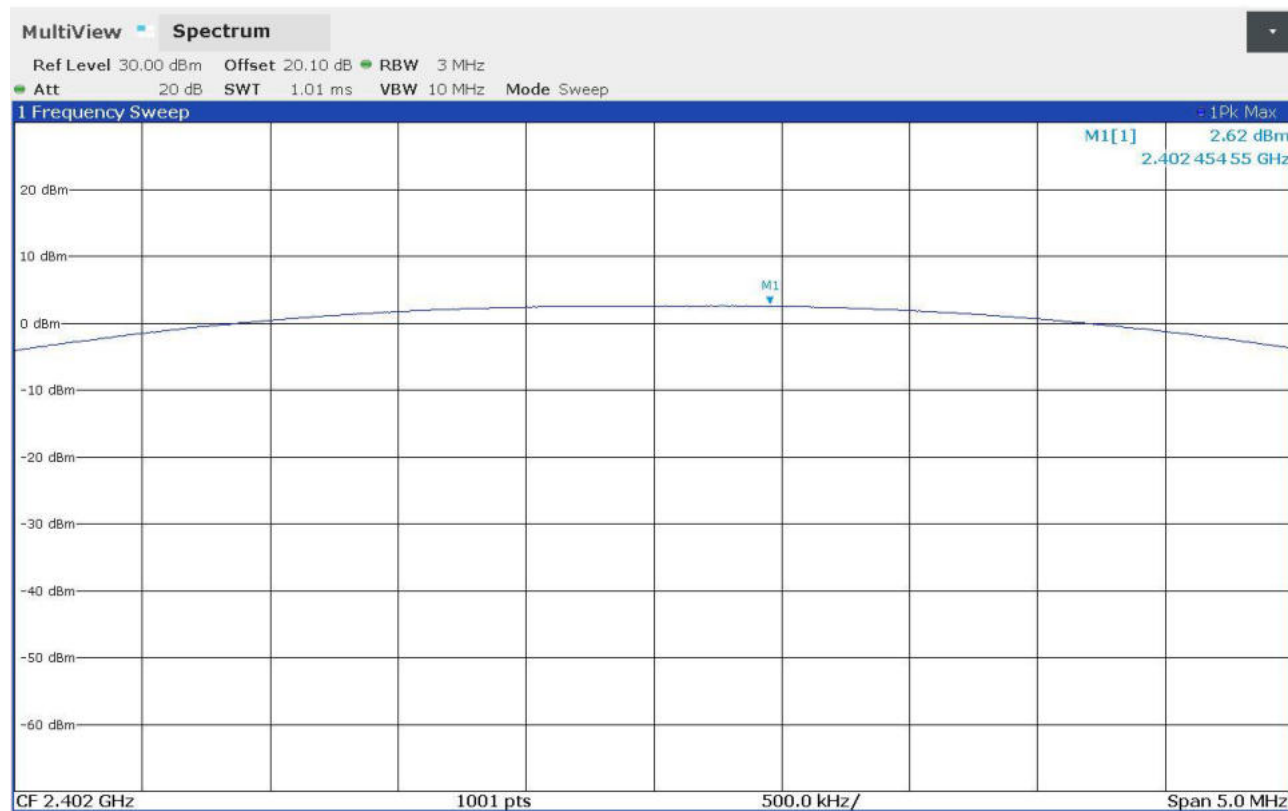
Nr.	Id. Number	Manufacturer	Model	Serial number	Description	Last calibration date	Calibration expiration
2	CMC S295	Rohde & Schwarz	FSW43	104059	Spectrum Analyzer 43GHz	January 2024	January 2026
1	--	--	--	--	Cable + attenuator	Calibrated before the test	Calibrated before the test

Result

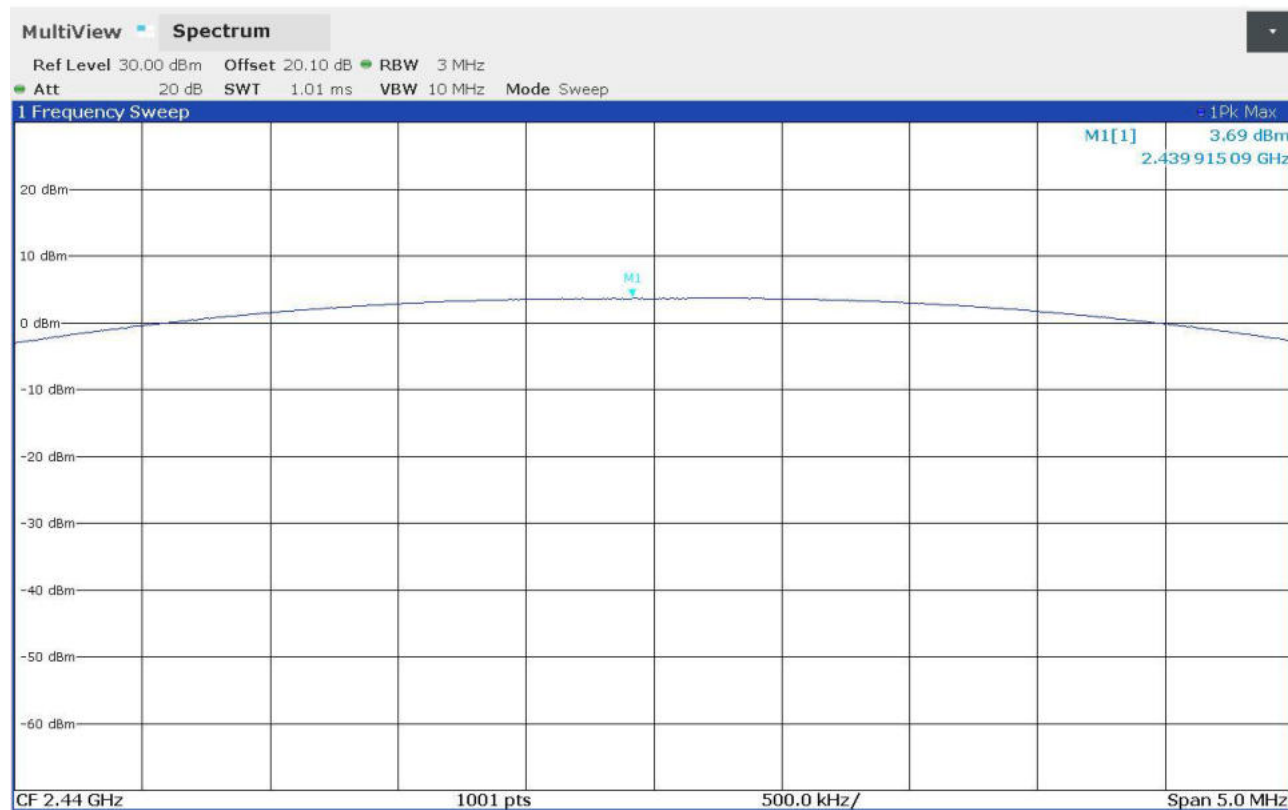
<i>Transmission frequency (MHz)</i>	<i>Graphs</i>	<i>Peak Output Power (dBm)</i>	<i>Peak Output Power (mW)</i>	<i>Limit (mW)</i>	<i>Verdict</i>
2402	G25057628	2,62	1,83	1000	P
2440	G25057629	3,69	2,34	1000	P
2480	G25057630	3,34	2,16	1000	P

Graphs

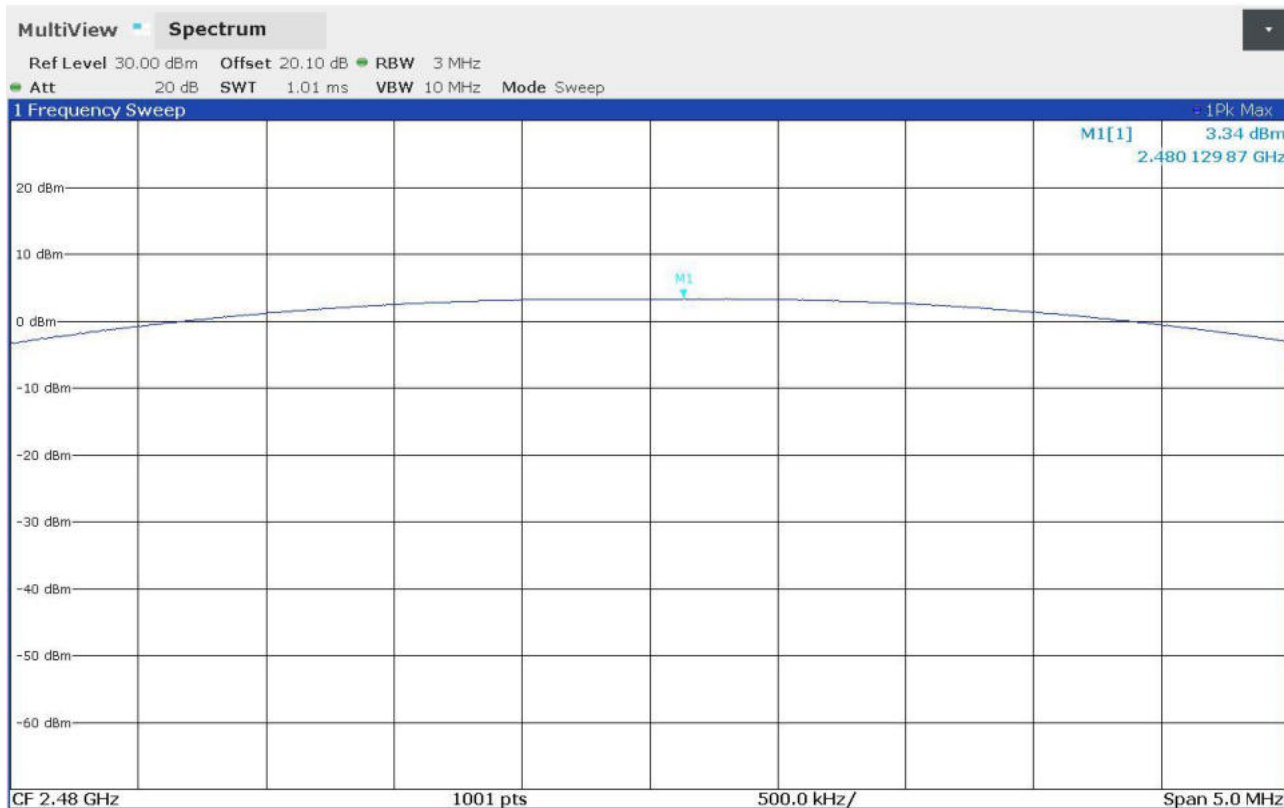
Segalla 25057628



Segalla 25057629



Segalla 25057630



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

Attachment 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

Rev 25_01 date 26/02/2025

Note 1:

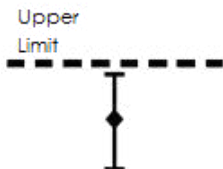
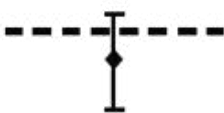
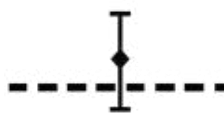
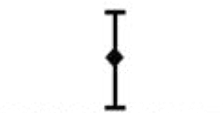
The expanded uncertainty reported according to the document EA-4-02 is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of p = 95%

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

Attachment 1

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