

TEST REPORT

Nr. R24217901

Federal Communication Commission (FCC)

Report Reference N.	R24217901
Date of issue:	06.02.2025
Total number pages:	84
Customer name	Atlas Copco BLM S.r.l.
Address	Via Guglielmo Pepe, 11 – 20037 Paderno Dugnano (MI) – Italy
Test specification:	
Standard(s)	FCC Rules & Regulations, Title 47:2023 Part 15 paragraph(s): 203, 204, 205, 207, 209, 215 and 247
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	Mechatronic wrench
(*) Trademark	Atlas Copco
(*) Manufacturer	Atlas Copco AB Industrial Technique SE-105 23 - Stockholm – Sweden
(*) Model / Type reference	MTRwrench 85
(*) FCC ID	2AIPFMTR
(*) Rating(s)	1,2 Vdc from battery
Report	
Tested by (name + signature)	C. Panozzo
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 C63.10:2013	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	06.02.2025	--

Testing and sampling:	
Date of receipt of test item	19.11.2024
Testing start date	08.01.2025
Testing end date	05.02.2025
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 P241155
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	Mechatronic wrench										
Model Number	MTRwrench 85										
FCC ID	2AIPFMTR										
Serial Number	--										
Brand name	Atlas Copco										
Frequency band	2400 – 2483,5 MHz										
Nominal frequencies	FL: 2405 MHz		FM: 2440 MHz		FH: 2480 MHz						
Test power supply	Voltage and Frequency			Reference poles							
				N	L1	L2	L3	PE			
	☐	AC:		☐	☐	☐	☐	☐			
	☐	AC:		☐	☐	☐	☐	☐			
	☒	DC: 1,2 V from battery						☐			
Software release	01.02.01.19RT10										
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 certification, 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/A (+)
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	P
Part 15.215 (c)	20 dB bandwidth	ANSI C63.10	P
Part 15.247 (d)	Band edge	ANSI C63.10	P
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	P

(+) Devices which only employ battery power. See FCC Part 15.207 (c)

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	C. Panozzo	
Test date	08.01.2025	
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	-3,4 dBi	
External R.F. power amplifier.....	Not Present	

9.2 Emissions in restricted frequency bands and in unrestricted frequency bands

Tested by	C. Panozzo	
Test date	08.01.2025	
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:

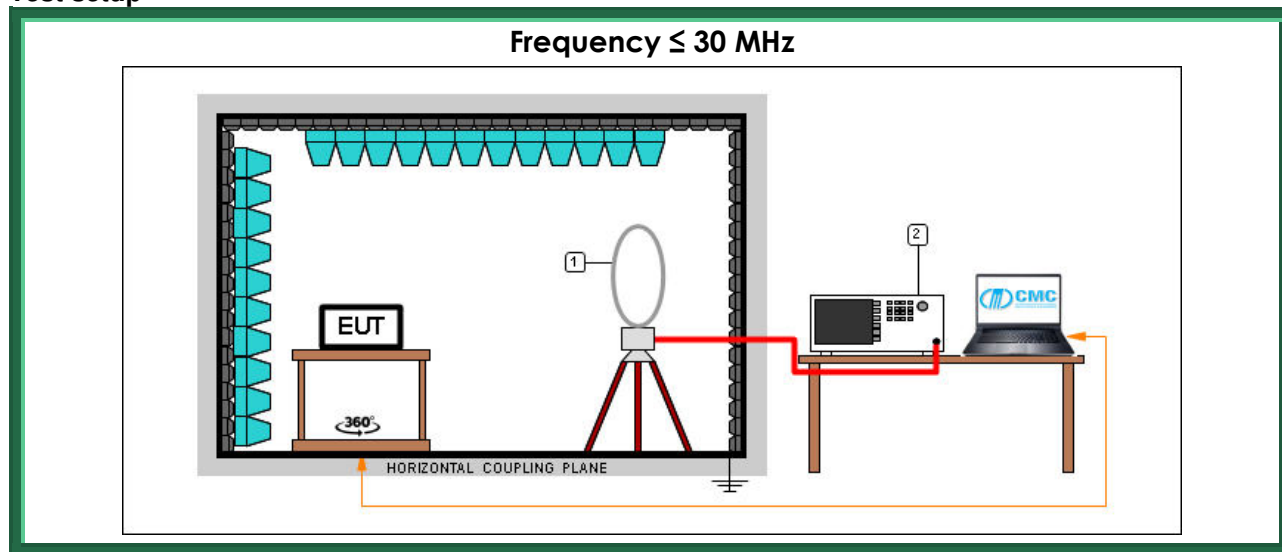
MHz	MHz	MHz	GHz
0,090 – 0,110	16,42 – 16,423	399,9 – 410	4,5 – 5,15
0,495 – 0,505	16,69475 – 16,69525	608 – 614	5,35 – 5,46
2,1735 – 2,1905	16,80425 – 16,80475	960 – 1240	7,25 – 7,75
4,125 – 4,128	25,5 – 25,67	1300 – 1427	8,025 – 8,5
4,17725 – 4,17775	37,5 – 38,25	1435 – 1626,5	9,0 – 9,2
4,20725 – 4,20775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

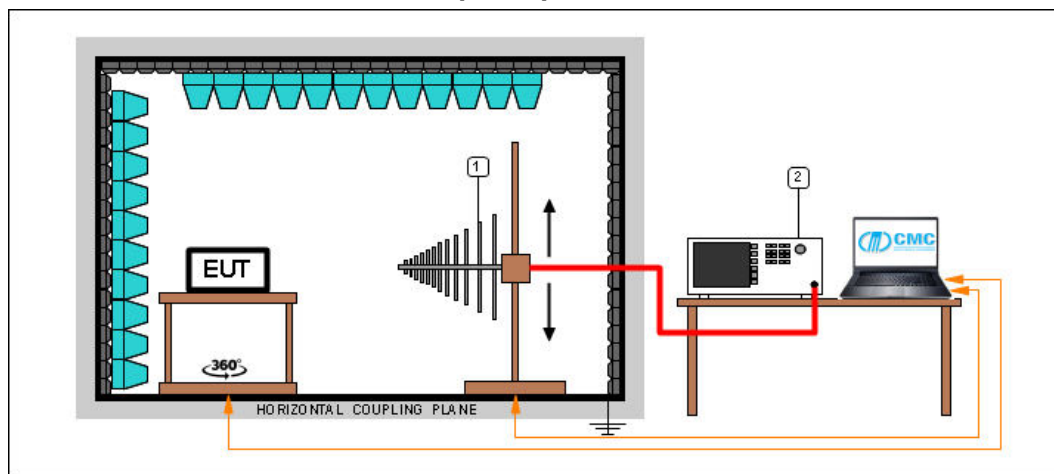
Test setup



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



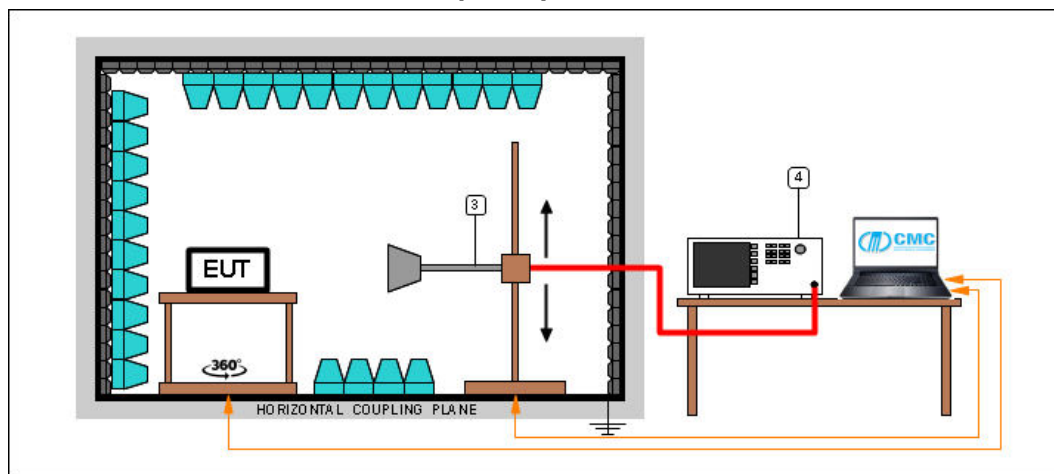
Test setup PE004_22

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)	Antenna polarization	EUT polarization	Frequency Range (MHz)	Graphs	Verdict
2405	H	Worst case	1000 – 3000	G24217901	P
2405	V	Worst case	1000 – 3000	G24217902	P
2440	V	Worst case	1000 – 3000	G24217903	P
2440	H	Worst case	1000 – 3000	G24217904	P
2480	H	Worst case	1000 – 3000	G24217905	P
2480	V	Worst case	1000 – 3000	G24217906	P
2480	V	H	3000 – 18000	G24217907	P
2480	H	H	3000 – 18000	G24217908	P
2480	H	V	3000 – 18000	G24217909	P
2480	V	V	3000 – 18000	G24217910	P
2440	V	V	3000 – 18000	G24217911	P
2440	H	V	3000 – 18000	G24217912	P
2440	H	H	3000 – 18000	G24217913	P
2440	V	H	3000 – 18000	G24217914	P
2405	V	H	3000 – 18000	G24217915	P
2405	H	H	3000 – 18000	G24217916	P
2405	H	V	3000 – 18000	G24217917	P
2405	V	V	3000 – 18000	G24217918	P
2405	V	Worst case	300 – 1000	G24217919	P
2405	H	Worst case	300 – 1000	G24217920	P
2440	H	Worst case	300 – 1000	G24217921	P
2440	V	Worst case	300 – 1000	G24217922	P
2480	V	Worst case	300 – 1000	G24217923	P
2480	H	Worst case	300 – 1000	G24217924	P
2480	H	Worst case	30 – 300	G24217925	P
2480	V	Worst case	30 – 300	G24217926	P
2440	V	Worst case	30 – 300	G24217927	P
2440	H	Worst case	30 – 300	G24217928	P
2405	H	Worst case	30 – 300	G24217929	P
2405	V	Worst case	30 – 300	G24217930	P
2405	Loop	Worst case	0,009 – 30	G24217931	P
2440	Loop	Worst case	0,009 – 30	G24217932	P
2480	Loop	Worst case	0,009 – 30	G24217933	P

Transmission frequency (MHz)	Antenna polarization	EUT polarization	Frequency Range (MHz)	Graphs	Verdict
2405	H	V	18000 – 26000	G24217934	P
2405	V	V	18000 – 26000	G24217935	P
2405	V	H	18000 – 26000	G24217936	P
2405	H	H	18000 – 26000	G24217937	P
2440	H	H	18000 – 26000	G24217938	P
2440	V	H	18000 – 26000	G24217939	P
2440	H	V	18000 – 26000	G24217940	P
2440	V	V	18000 – 26000	G24217941	P
2480	V	V	18000 – 26000	G24217942	P
2480	H	V	18000 – 26000	G24217943	P
2480	H	H	18000 – 26000	G24217944	P
2480	V	H	18000 – 26000	G24217945	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.

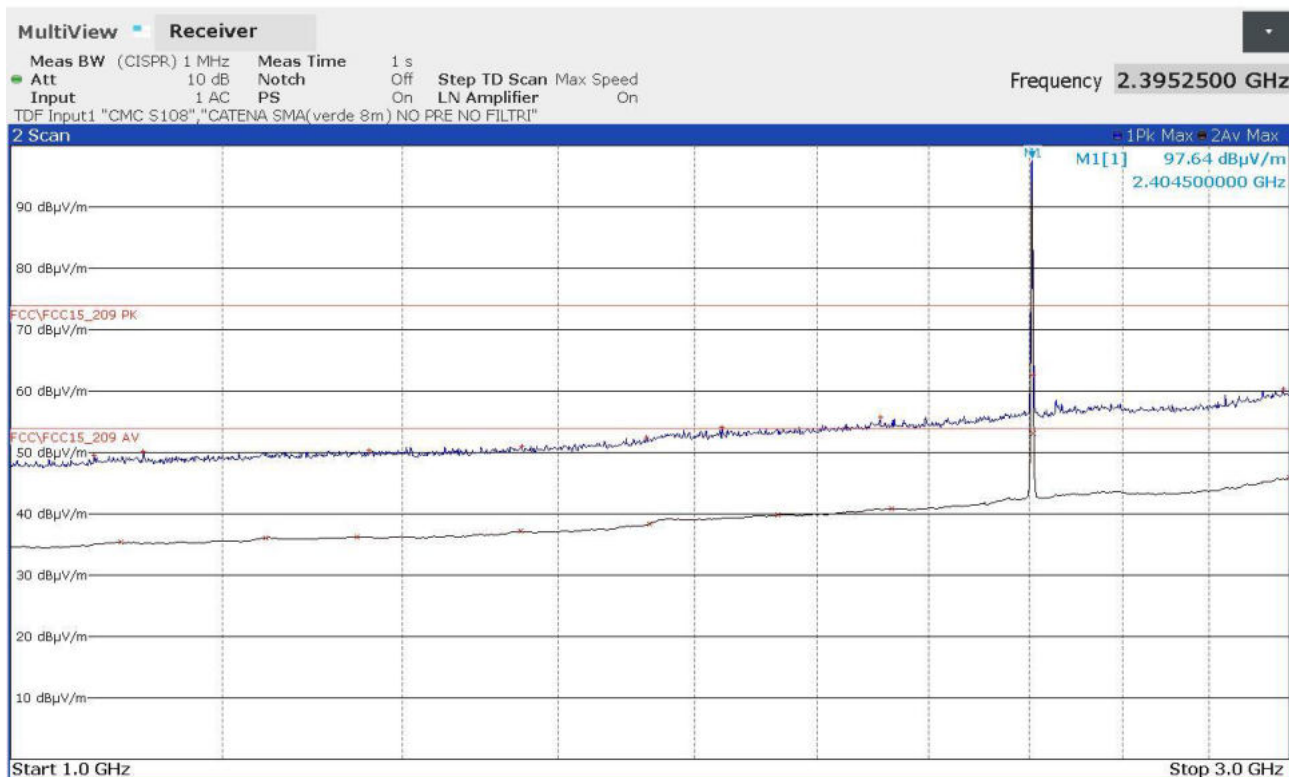
Graphs Legend

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

Panozzo 24217901

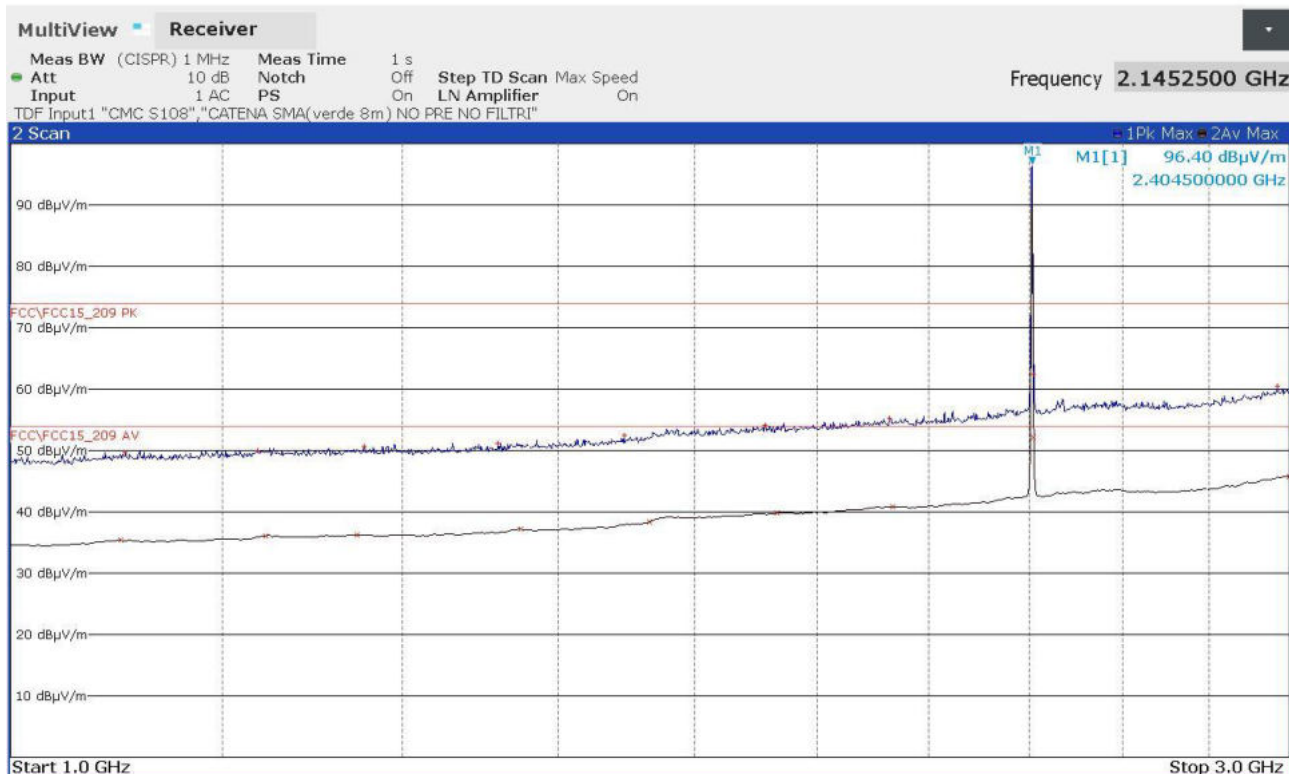


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
1074500000	+49,51	-24,47	1099750000	+35,39	-18,59
1121000000	+50,10	-23,88	1245500000	+36,14	-17,84
1360500000	+50,28	-23,70	1346750000	+36,26	-17,72
1551250000	+50,97	-23,01	1549750000	+37,21	-16,77
1727250000	+52,52	-21,46	1732000000	+38,41	-15,57
1842750000	+54,08	-19,90	1933000000	+39,80	-14,18
2111250000	+55,71	-18,27	2132250000	+40,88	-13,10
2408250000	+62,62	-11,36	2408250000	+53,07	-0,91
2983750000	+60,26	-13,72	2999750000	+45,82	-8,16

24217901_2

Panozzo 24217902

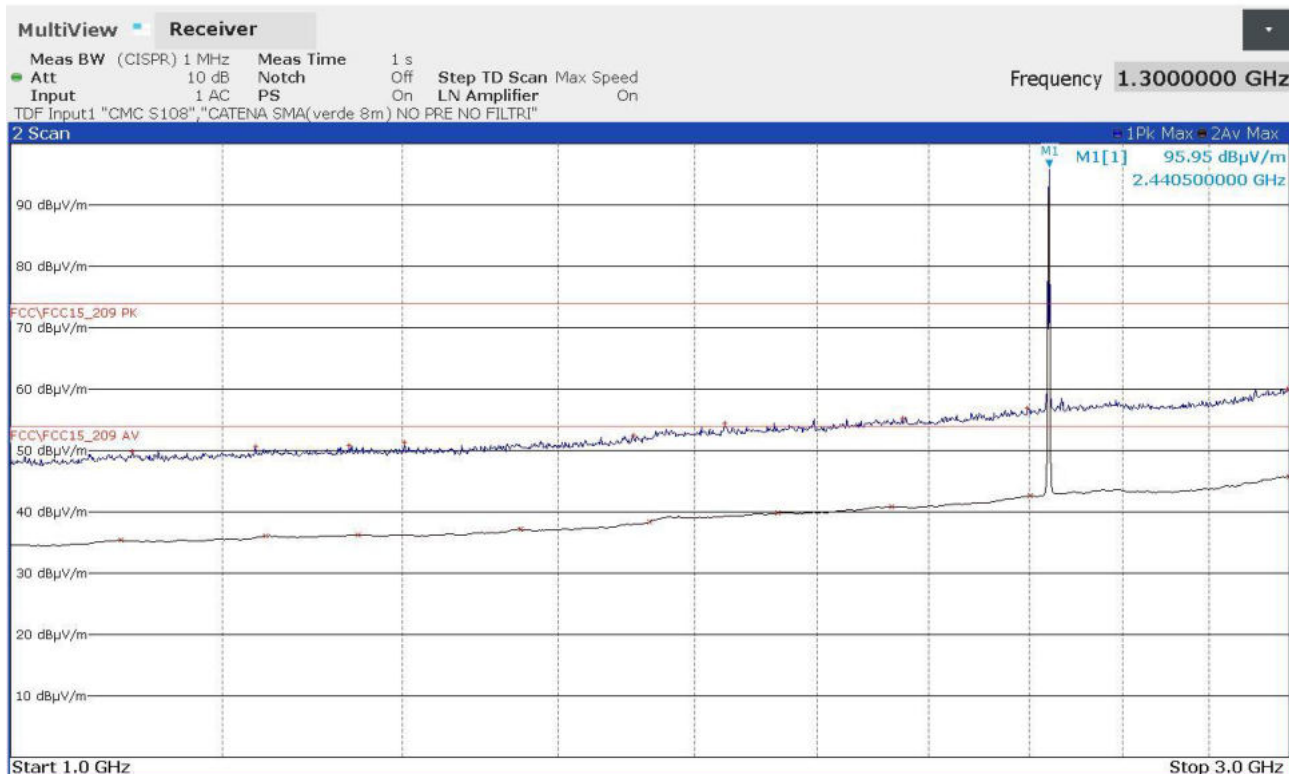


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
1103750000	+49,71	-24,27	1099750000	+35,39	-18,59
1236000000	+50,08	-23,90	1245500000	+36,14	-17,84
1354500000	+50,64	-23,34	1347250000	+36,26	-17,72
1520000000	+51,15	-22,83	1549750000	+37,21	-16,77
1694250000	+52,46	-21,52	1732000000	+38,41	-15,57
1912500000	+54,03	-19,95	1931500000	+39,79	-14,19
2128250000	+55,19	-18,79	2133500000	+40,87	-13,11
2408250000	+62,43	-11,55	2408250000	+52,20	-1,78
2969750000	+60,47	-13,51	2999750000	+45,81	-8,17

24217902_2

Panozzo 24217903

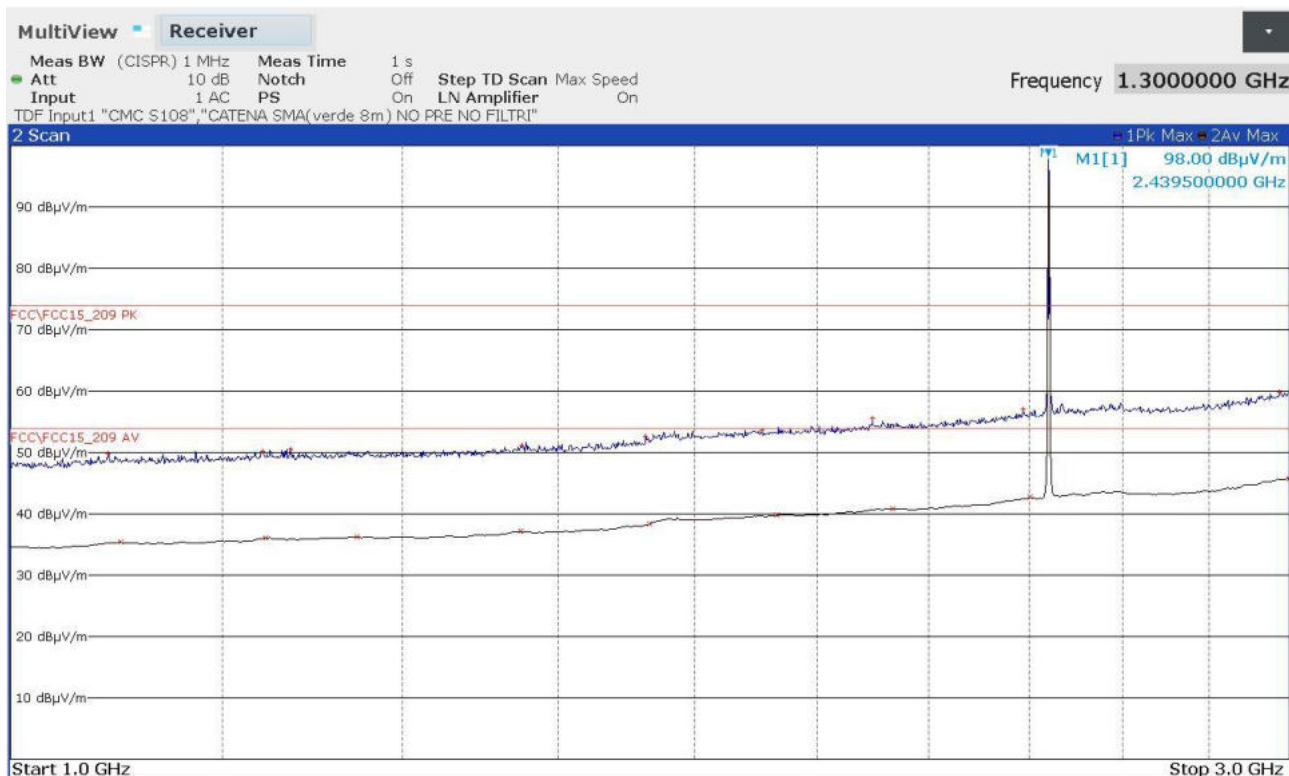


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
1110250000	+49,81	-24,17	1099750000	+35,38	-18,60
1234000000	+50,58	-23,40	1245500000	+36,13	-17,85
1337500000	+50,88	-23,10	1347500000	+36,24	-17,74
1402500000	+51,33	-22,65	1549750000	+37,19	-16,79
1707000000	+52,52	-21,46	1732000000	+38,38	-15,60
1847250000	+54,44	-19,54	1932750000	+39,78	-14,20
2151500000	+55,32	-18,66	2132000000	+40,86	-13,12
2395500000	+56,81	-17,17	2400500000	+42,67	-11,31
2994500000	+60,07	-13,91	2999750000	+45,81	-8,17

24217903_2

Panozzo 24217904

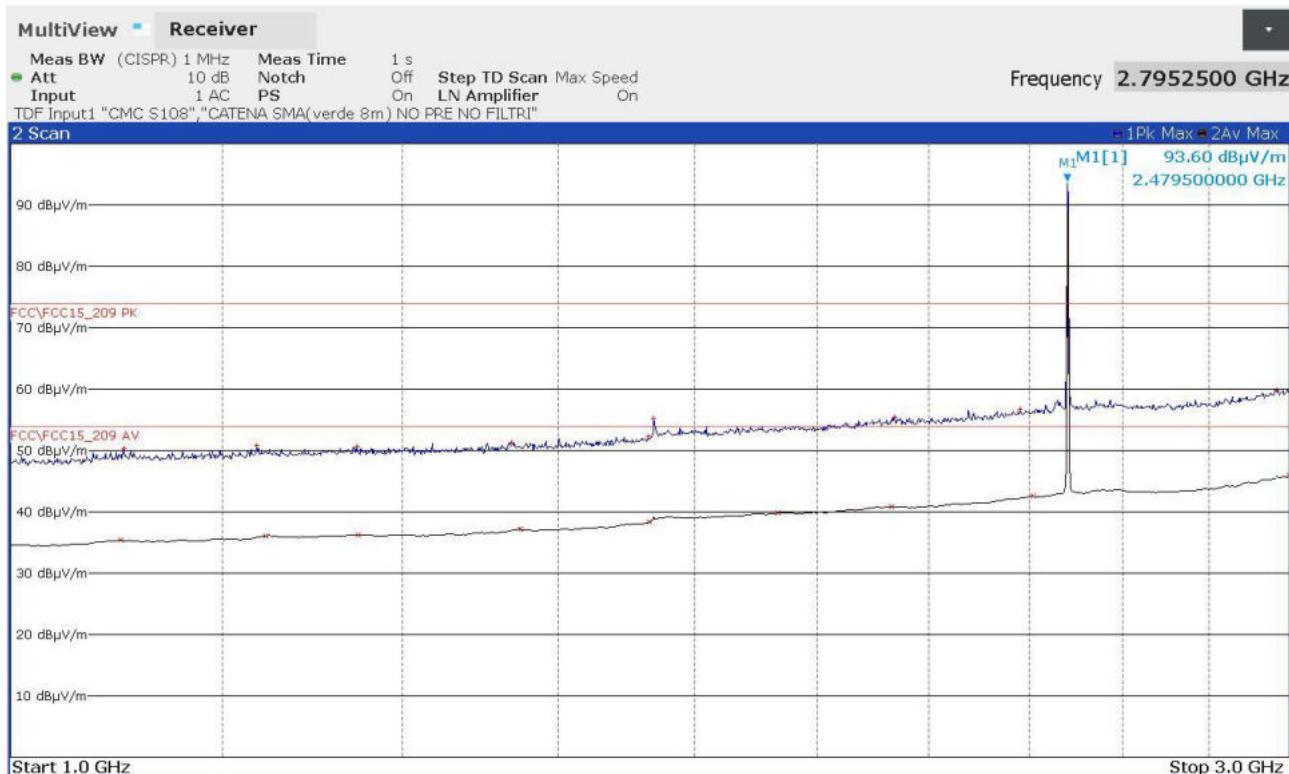


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
1087750000	+49,84	-24,14	1099750000	+35,38	-18,60
1241750000	+50,20	-23,78	1245500000	+36,12	-17,86
1271750000	+50,45	-23,53	1346500000	+36,23	-17,75
1551250000	+51,12	-22,86	1549750000	+37,18	-16,80
1725750000	+52,62	-21,36	1732000000	+38,36	-15,62
1907250000	+53,56	-20,42	1932500000	+39,78	-14,20
2097500000	+55,52	-18,46	2133500000	+40,88	-13,10
2386750000	+57,11	-16,87	2400500000	+42,73	-11,25
2974500000	+59,91	-14,07	2999750000	+45,79	-8,19

24217904_2

Panozzo 24217905

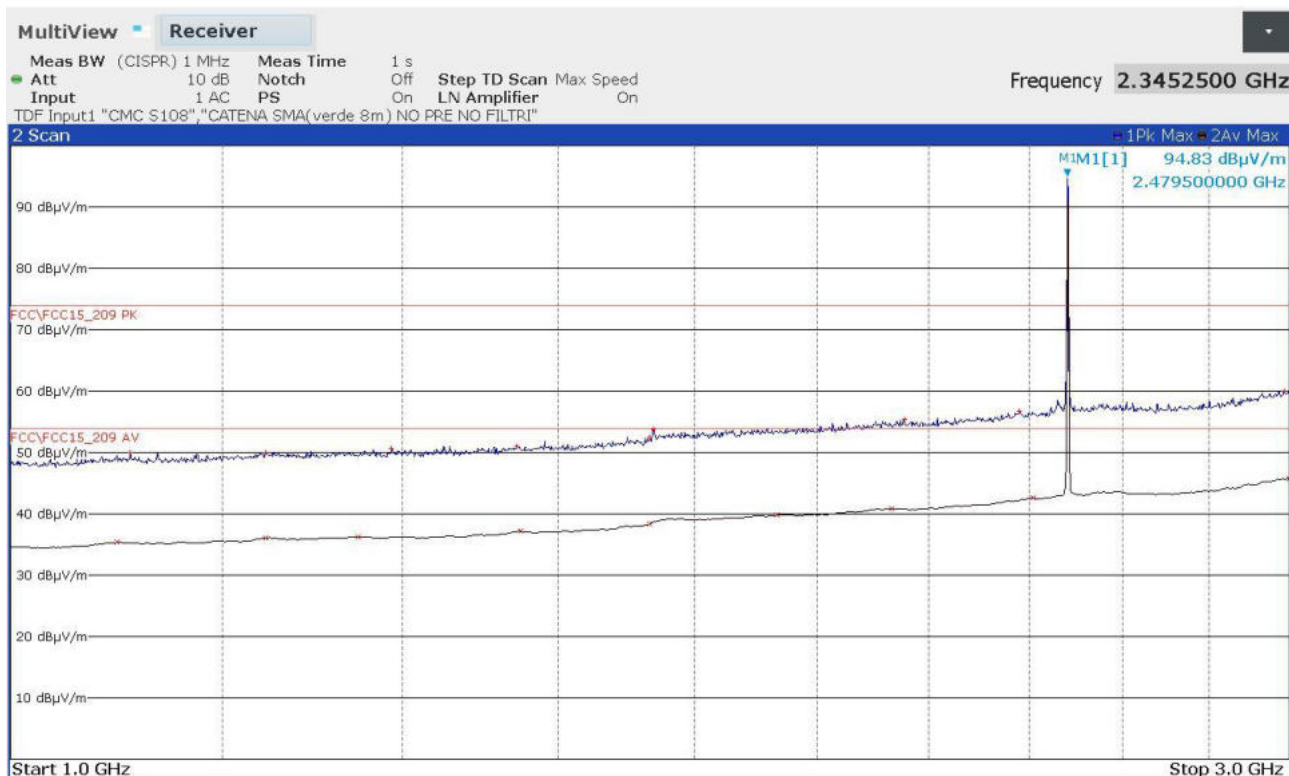


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
1102000000	+50,36	-23,62	1099750000	+35,39	-18,59
1235500000	+50,76	-23,22	1245500000	+36,13	-17,85
1346500000	+50,63	-23,35	1348000000	+36,24	-17,74
1538500000	+51,30	-22,68	1549750000	+37,20	-16,78
1729250000	+52,29	-21,69	1732000000	+38,40	-15,58
1737250000	+55,26	-18,72	1933000000	+39,78	-14,20
2136500000	+55,43	-18,55	2132000000	+40,86	-13,12
2381000000	+56,67	-17,31	2407000000	+42,56	-11,42
2967250000	+59,84	-14,14	2999500000	+45,82	-8,16

24217905_2

Panozzo 24217906

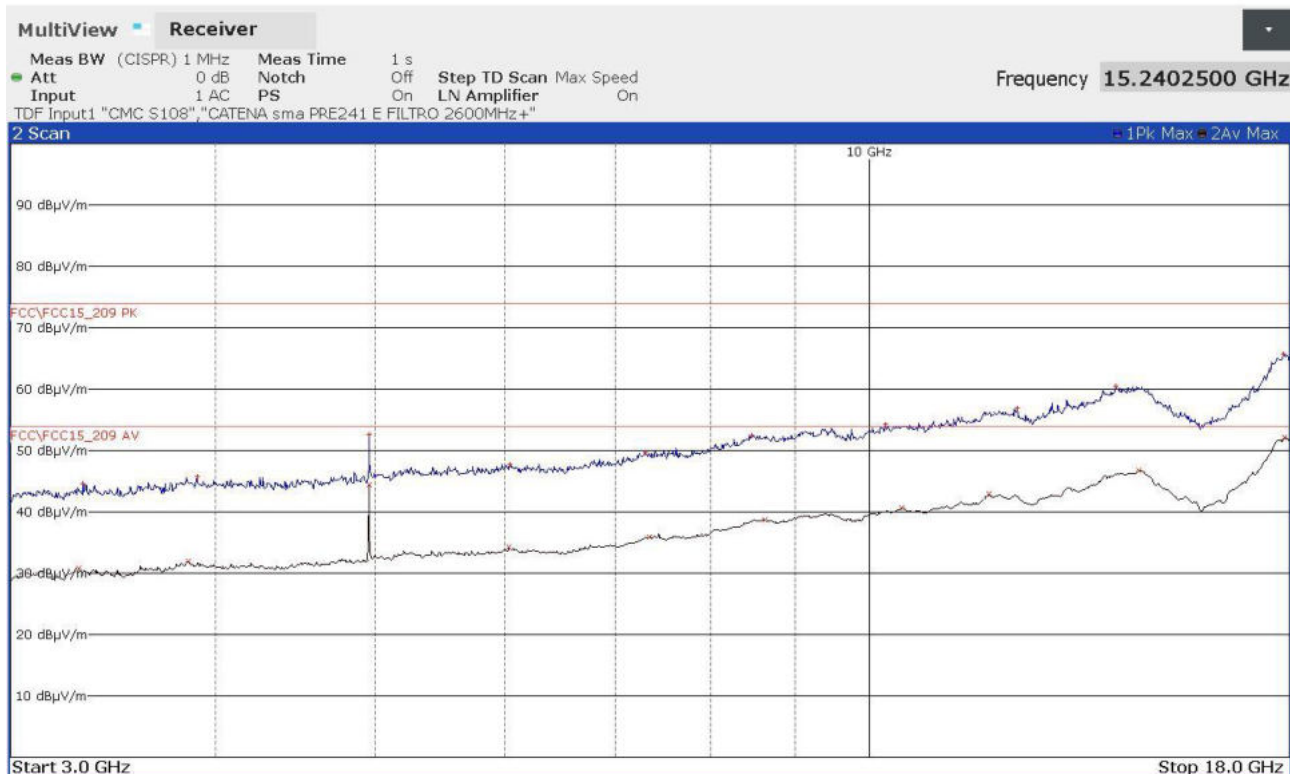


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
1108500000	+49,93	-24,05	1096000000	+35,38	-18,60
1245000000	+50,06	-23,92	1245500000	+36,13	-17,85
1387250000	+50,67	-23,31	1348000000	+36,24	-17,74
1545250000	+50,98	-23,00	1549750000	+37,19	-16,79
1731250000	+52,48	-21,50	1732000000	+38,39	-15,59
1737750000	+53,81	-20,17	1932500000	+39,77	-14,21
2156000000	+55,37	-18,61	2132250000	+40,86	-13,12
2378250000	+56,73	-17,25	2408000000	+42,58	-11,40
2986250000	+60,03	-13,95	2999500000	+45,81	-8,17

24217906_2

Panozzo 24217907

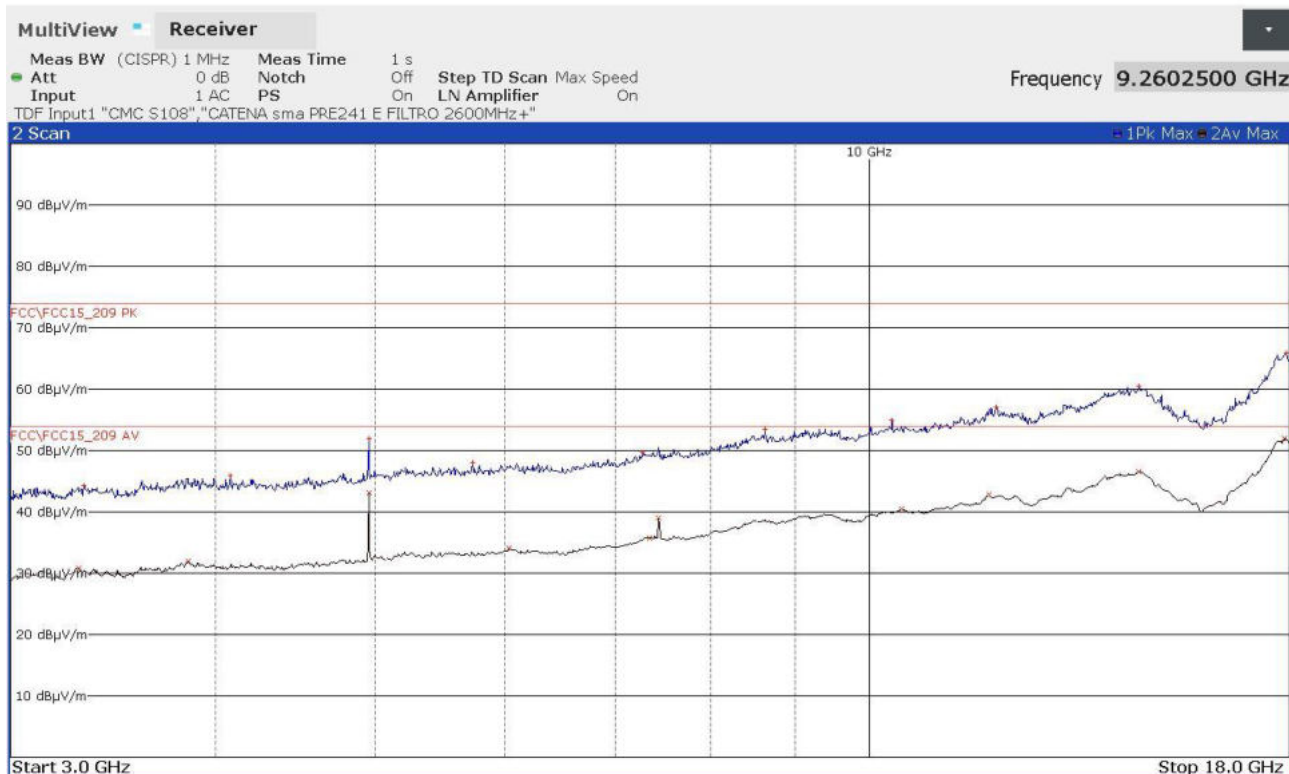


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
3322000000	+44,67	-29,31	3299000000	+30,80	-23,18
3897500000	+45,79	-28,19	3849250000	+32,04	-21,94
4960750000	+52,63	-21,35	4960750000	+44,42	-9,56
6040750000	+47,70	-26,28	6032500000	+34,19	-19,79
7302500000	+49,60	-24,38	7348000000	+35,92	-18,06
8472000000	+52,41	-21,57	8632500000	+38,69	-15,29
10224000000	+54,32	-19,66	10456500000	+40,67	-13,31
12294500000	+56,84	-17,14	11816750000	+42,89	-11,09
14107500000	+60,53	-13,45	14573500000	+46,74	-7,24
17855000000	+65,77	-8,21	17882000000	+52,14	-1,84

24217907_2

Panozzo 24217908

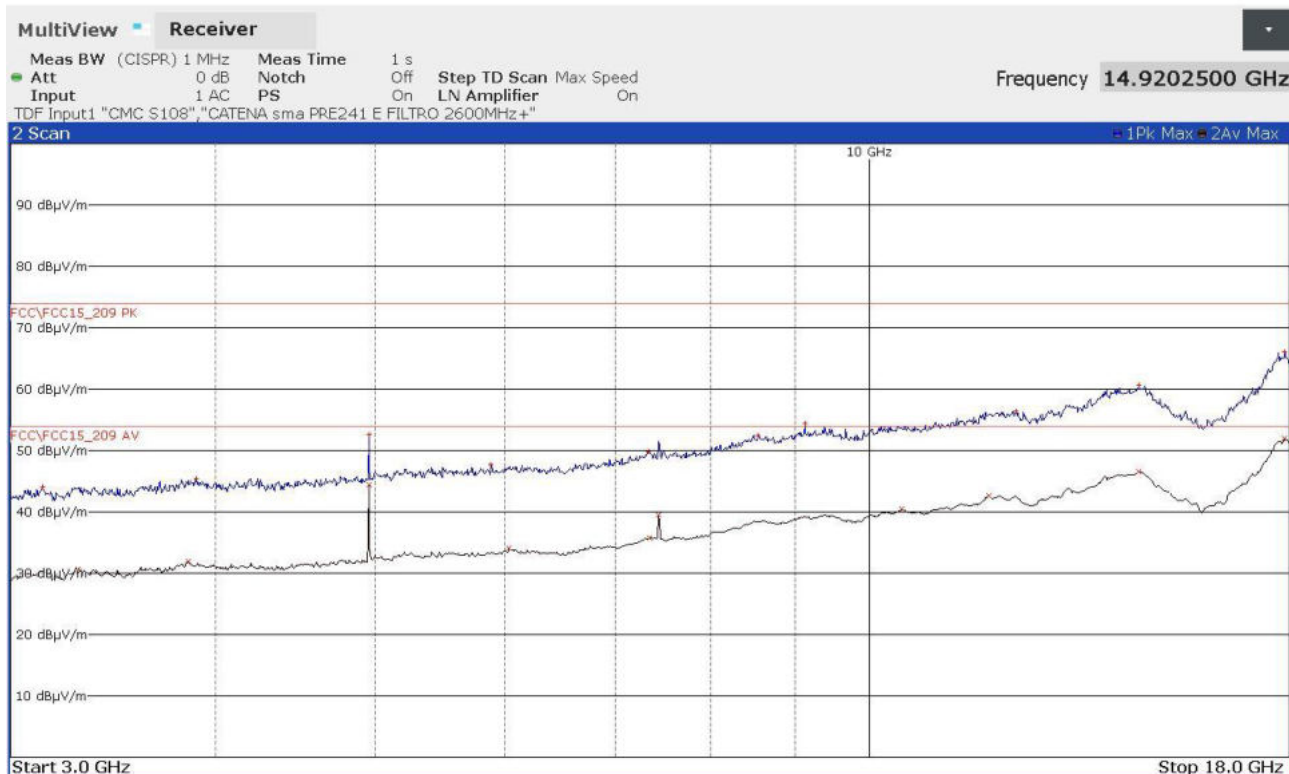


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
3325250000	+44,25	-29,73	3299000000	+30,75	-23,23
4083250000	+45,91	-28,07	3849000000	+32,03	-21,95
4958750000	+51,93	-22,05	4958750000	+43,10	-10,88
5730750000	+47,96	-26,02	6032000000	+34,06	-19,92
7275750000	+49,68	-24,30	7347750000	+35,80	-18,18
8631500000	+53,43	-20,55	7441000000	+38,95	-15,03
10315750000	+54,97	-19,01	10457250000	+40,55	-13,43
11936500000	+57,11	-16,87	11817250000	+42,80	-11,18
14578250000	+60,48	-13,50	14571750000	+46,61	-7,37
17925500000	+65,94	-8,04	17882000000	+51,95	-2,03

24217908_2

Panozzo 24217909

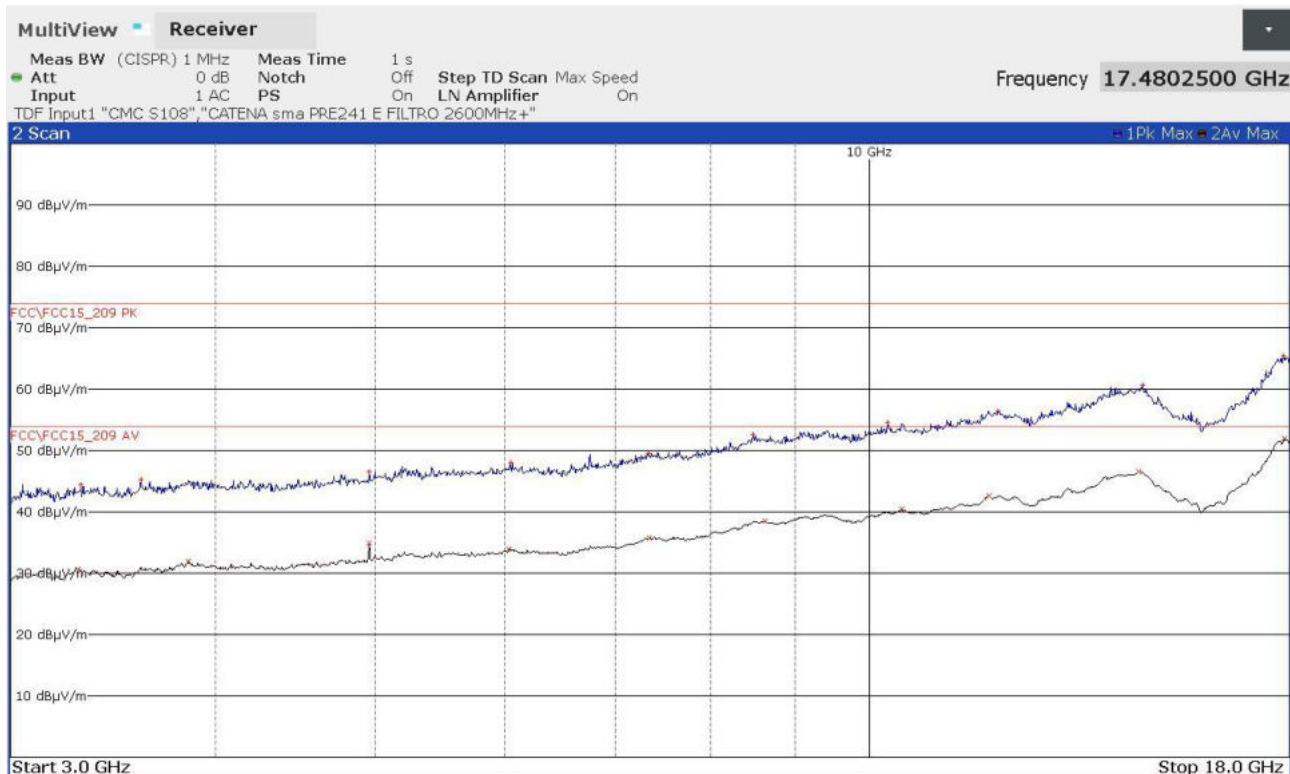


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
3136750000	+44,11	-29,87	3298750000	+30,73	-23,25
3889750000	+45,46	-28,52	3849000000	+32,01	-21,97
4958750000	+52,67	-21,31	4958750000	+44,38	-9,60
5883000000	+47,71	-26,27	6030750000	+34,02	-19,96
7328750000	+49,88	-24,10	7348250000	+35,75	-18,23
8554000000	+52,49	-21,49	7441000000	+39,51	-14,47
9135750000	+54,40	-19,58	10456500000	+40,46	-13,52
12275750000	+56,44	-17,54	11815750000	+42,70	-11,28
14576000000	+60,61	-13,37	14573250000	+46,58	-7,40
17881000000	+66,02	-7,96	17881500000	+51,89	-2,09

24217909_2

Panozzo 24217910

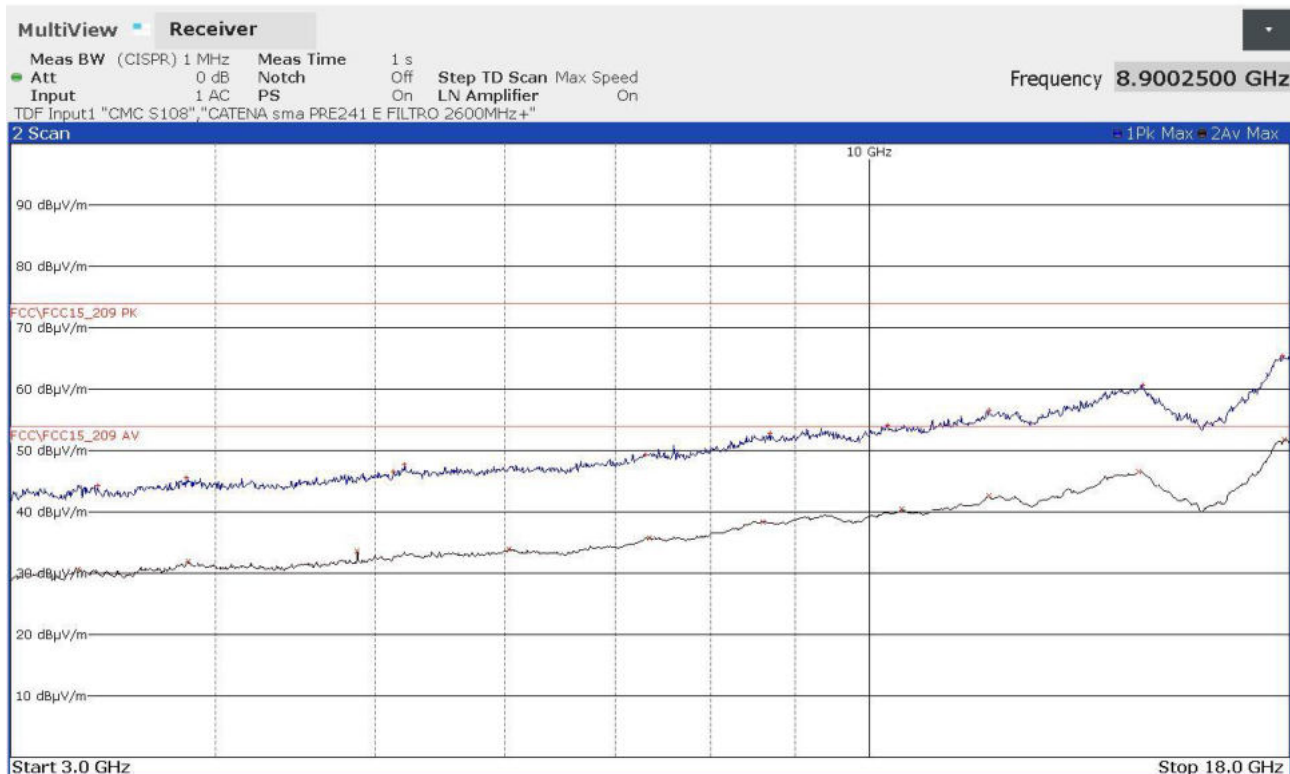


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
3310250000	+44,43	-29,55	3298750000	+30,71	-23,27
3601000000	+45,27	-28,71	3849250000	+31,98	-22,00
4960750000	+46,52	-27,46	4960750000	+34,92	-19,06
6045000000	+48,00	-25,98	6031000000	+33,99	-19,99
7331250000	+49,56	-24,42	7347750000	+35,74	-18,24
8492250000	+52,56	-21,42	8633500000	+38,48	-15,50
10253000000	+54,51	-19,47	10458250000	+40,45	-13,53
11960250000	+56,37	-17,61	11815750000	+42,68	-11,30
14651250000	+60,66	-13,32	14571250000	+46,58	-7,40
17840250000	+65,47	-8,51	17881250000	+51,89	-2,09

24217910_2

Panozzo 24217911

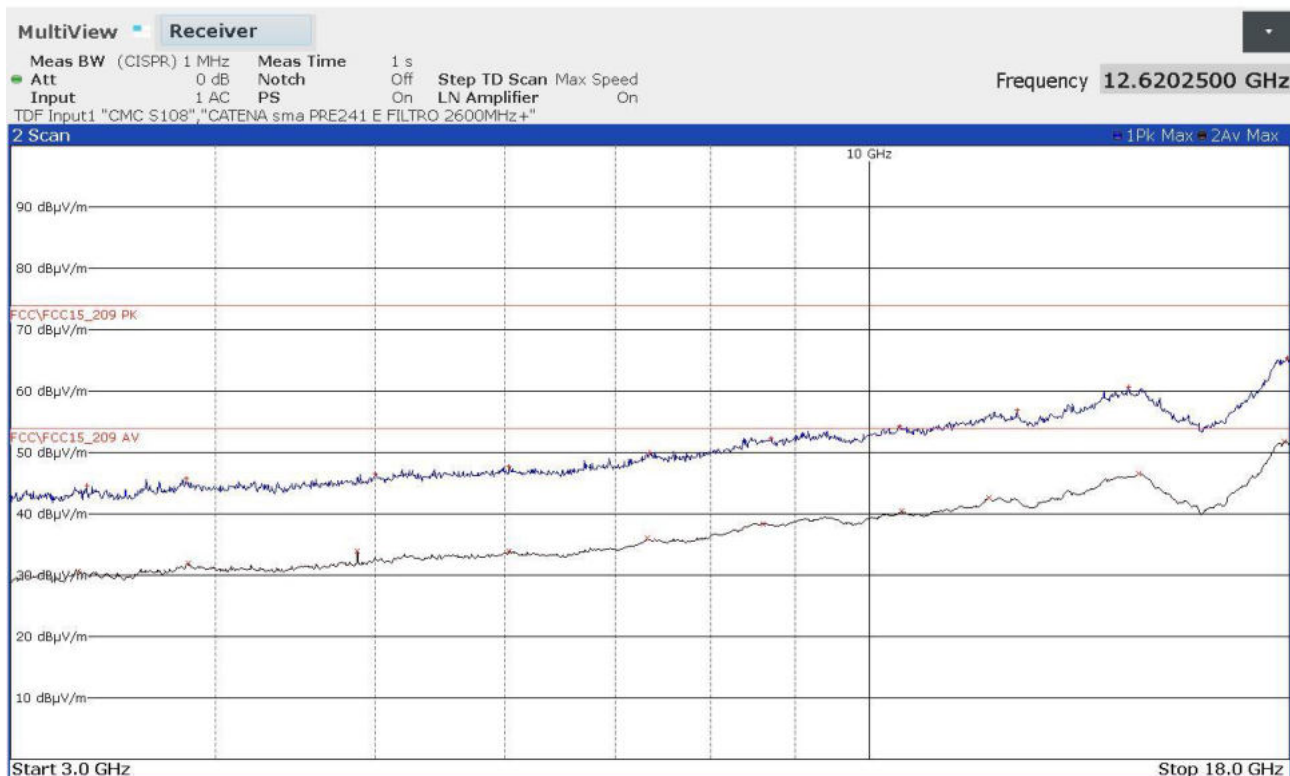


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
3392250000	+44,32	-29,66	3298750000	+30,73	-23,25
3838750000	+45,64	-28,34	3848750000	+31,98	-22,00
5129250000	+46,54	-27,44	4878750000	+33,54	-20,44
5210750000	+47,67	-26,31	6031000000	+33,99	-19,99
7306500000	+49,38	-24,60	7348250000	+35,75	-18,23
8691250000	+52,79	-21,19	8611000000	+38,42	-15,56
10254500000	+54,08	-19,90	10455000000	+40,41	-13,57
11815500000	+56,52	-17,46	11815500000	+42,62	-11,36
14652250000	+60,72	-13,26	14572000000	+46,56	-7,42
17829500000	+65,46	-8,52	17881750000	+51,87	-2,11

24217911_2

Panozzo 24217912

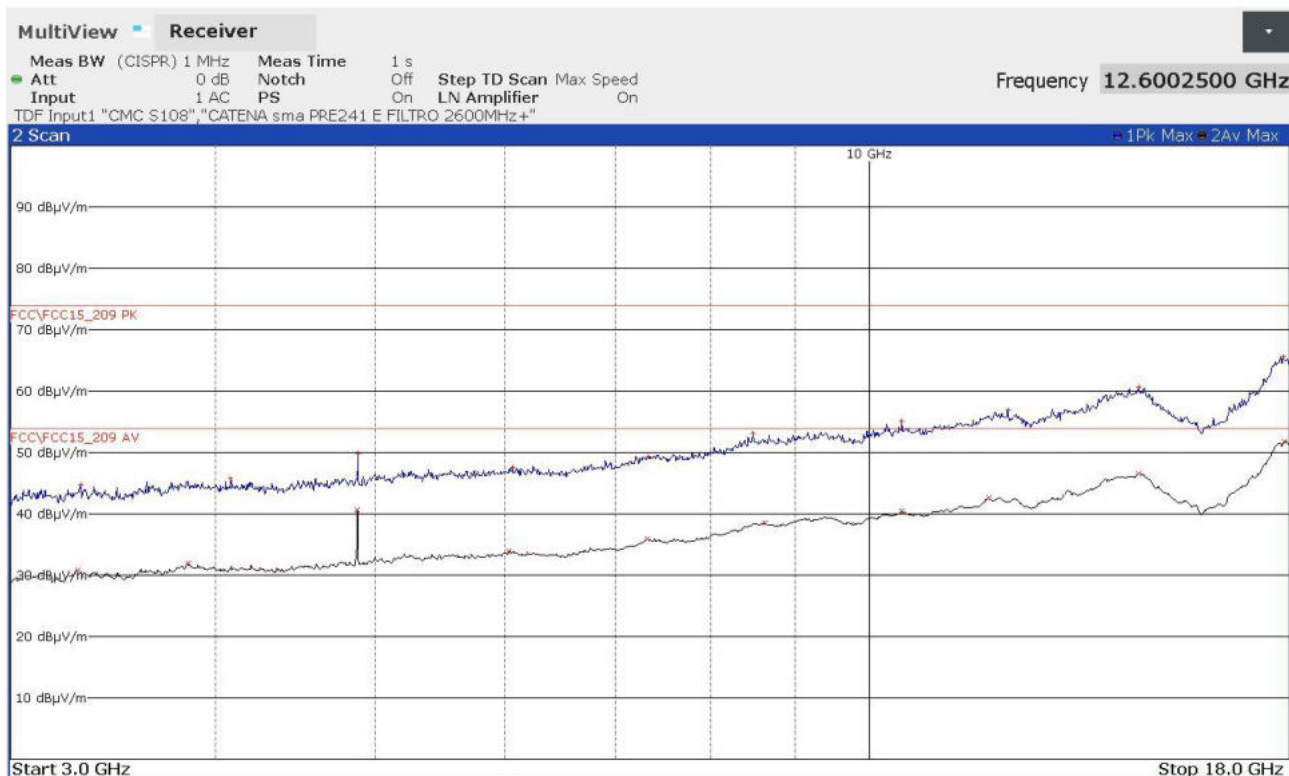


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
3339750000	+44,54	-29,44	3298250000	+30,72	-23,26
3838750000	+45,71	-28,27	3849000000	+31,97	-22,01
5001250000	+46,57	-27,41	4878750000	+33,88	-20,10
6032000000	+47,75	-26,23	6030500000	+33,98	-20,00
7346250000	+50,02	-23,96	7321000000	+36,12	-17,86
8711250000	+52,34	-21,64	8611000000	+38,44	-15,54
10418750000	+54,22	-19,76	10456750000	+40,43	-13,55
12287500000	+56,84	-17,14	11815500000	+42,66	-11,32
14373750000	+60,62	-13,36	14572750000	+46,57	-7,41
17941000000	+65,41	-8,57	17881250000	+51,86	-2,12

24217912_2

Panozzo 24217913

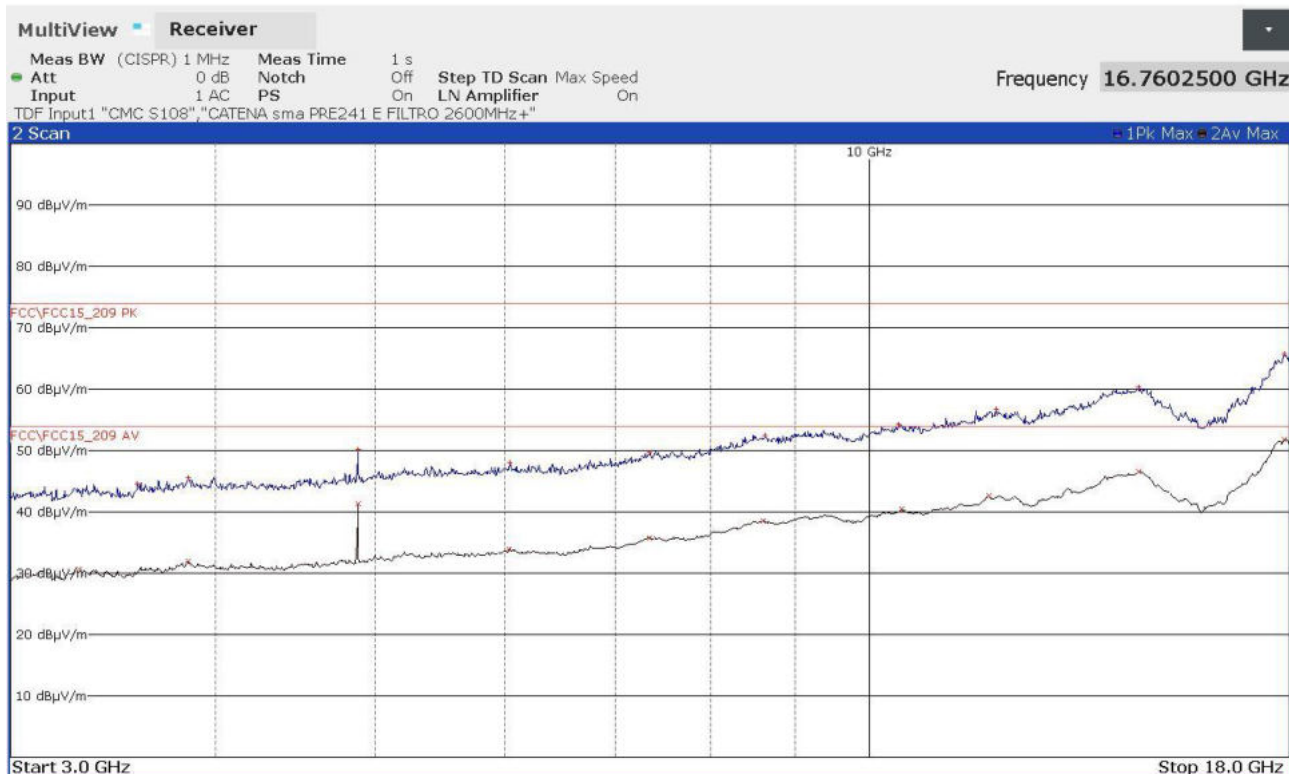


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
3308750000	+44,71	-29,27	3298750000	+30,75	-23,23
4084500000	+45,76	-28,22	3849250000	+31,99	-21,99
4880750000	+49,86	-24,12	4878750000	+40,66	-13,32
6064750000	+47,48	-26,50	6030250000	+34,00	-19,98
7331750000	+49,39	-24,59	7321000000	+35,98	-18,00
8485750000	+53,13	-20,85	8631000000	+38,48	-15,50
10454250000	+55,14	-18,84	10455750000	+40,42	-13,56
12129000000	+56,89	-17,09	11815250000	+42,63	-11,35
14575500000	+60,70	-13,28	14570750000	+46,57	-7,41
17842750000	+65,58	-8,40	17882000000	+51,86	-2,12

24217913_2

Panozzo 24217914

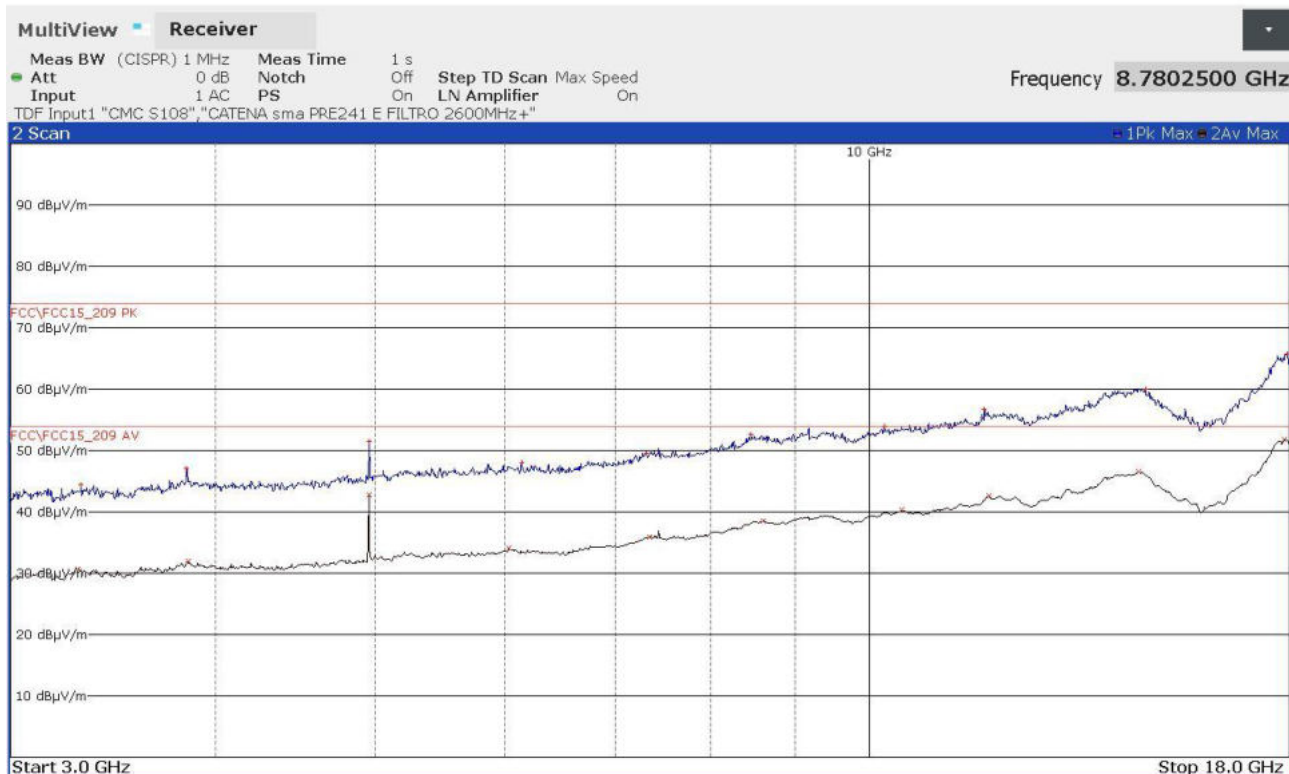


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
3583500000	+44,52	-29,46	3299000000	+30,69	-23,29
3848250000	+45,59	-28,39	3849000000	+31,96	-22,02
4880750000	+50,18	-23,80	4880750000	+41,23	-12,75
6039750000	+48,01	-25,97	6033500000	+33,98	-20,00
7343750000	+49,69	-24,29	7348250000	+35,73	-18,25
8633250000	+52,39	-21,59	8611000000	+38,51	-15,47
10416000000	+54,23	-19,75	10455500000	+40,42	-13,56
11929250000	+56,70	-17,28	11815500000	+42,64	-11,34
14568500000	+60,28	-13,70	14571750000	+46,56	-7,42
17863750000	+65,67	-8,31	17881750000	+51,84	-2,14

24217914_2

Panozzo 24217915

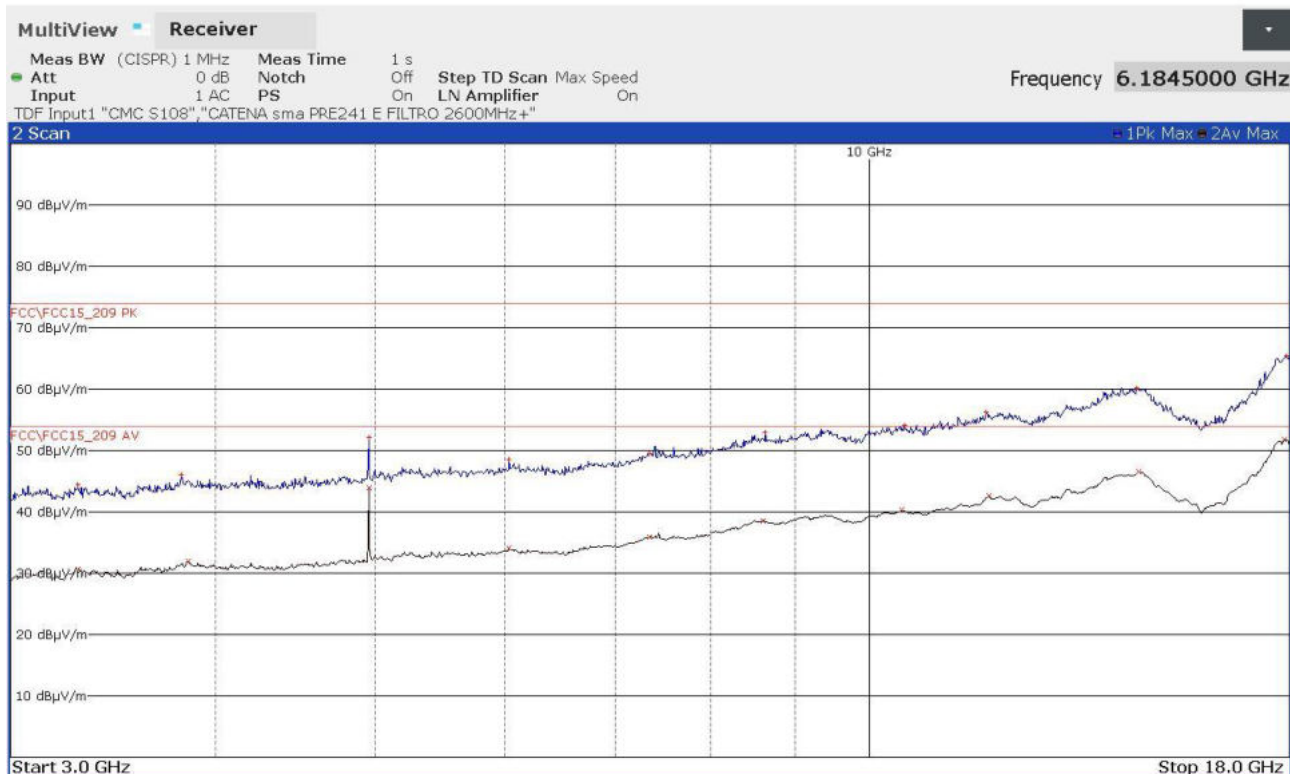


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
3310000000	+44,37	-29,61	3298750000	+30,70	-23,28
3840250000	+47,05	-26,93	3848500000	+31,95	-22,03
4960750000	+51,51	-22,47	4958750000	+42,77	-11,21
6139000000	+48,09	-25,89	6031000000	+34,03	-19,95
7309750000	+49,58	-24,40	7348000000	+35,90	-18,08
8467000000	+52,59	-21,39	8610000000	+38,48	-15,50
10204250000	+53,96	-20,02	10457500000	+40,37	-13,61
11739750000	+56,72	-17,26	11815000000	+42,56	-11,42
14709750000	+60,06	-13,92	14570750000	+46,57	-7,41
17942500000	+65,73	-8,25	17881000000	+51,84	-2,14

24217915_2

Panozzo 24217916

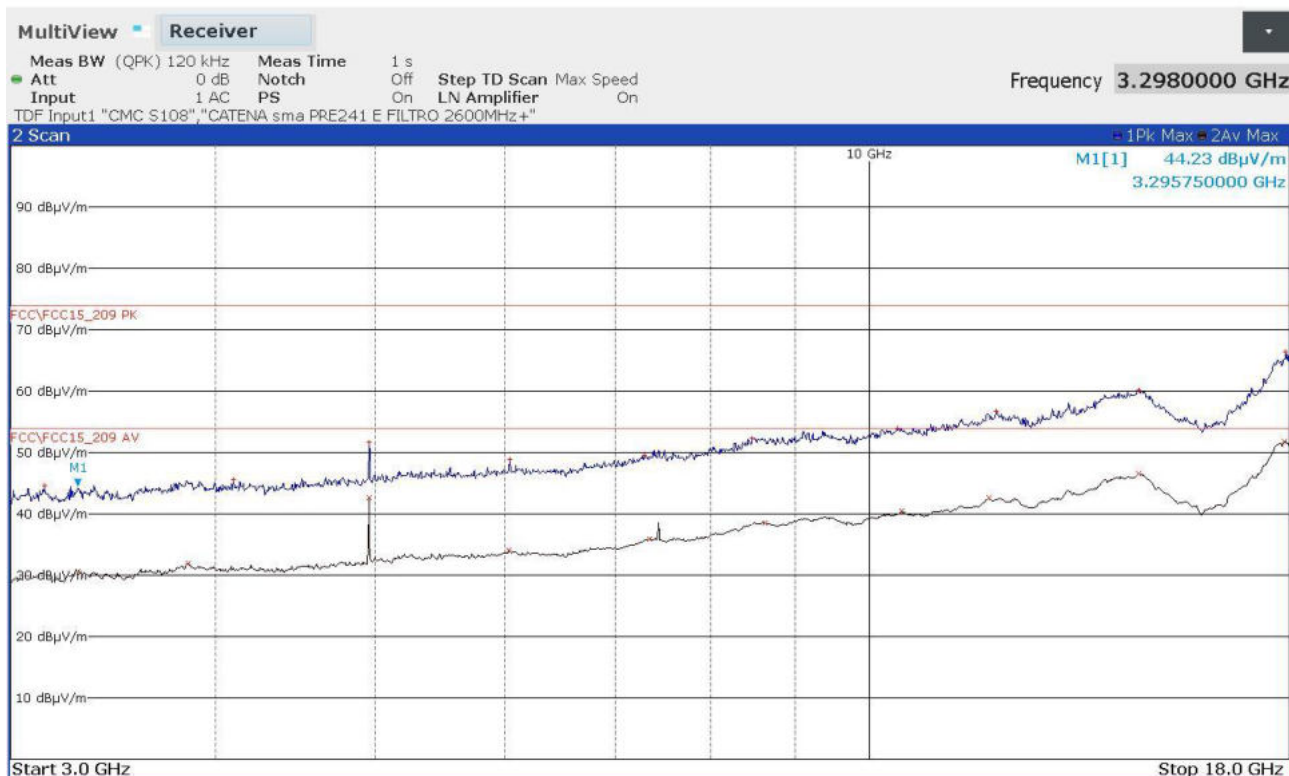


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
3298000000	+44,45	-29,53	3298250000	+30,73	-23,25
3809500000	+46,13	-27,85	3849000000	+31,98	-22,00
4958750000	+52,14	-21,84	4958750000	+43,86	-10,12
6030750000	+48,50	-25,48	6030750000	+34,04	-19,94
7346250000	+49,43	-24,55	7347750000	+35,91	-18,07
8633250000	+52,97	-21,01	8610500000	+38,49	-15,49
10492750000	+54,17	-19,81	10456250000	+40,35	-13,63
11774500000	+56,22	-17,76	11815000000	+42,56	-11,42
14531750000	+60,24	-13,74	14572000000	+46,52	-7,46
17925500000	+65,48	-8,50	17881000000	+51,82	-2,16

24217916_2

Panozzo 24217917

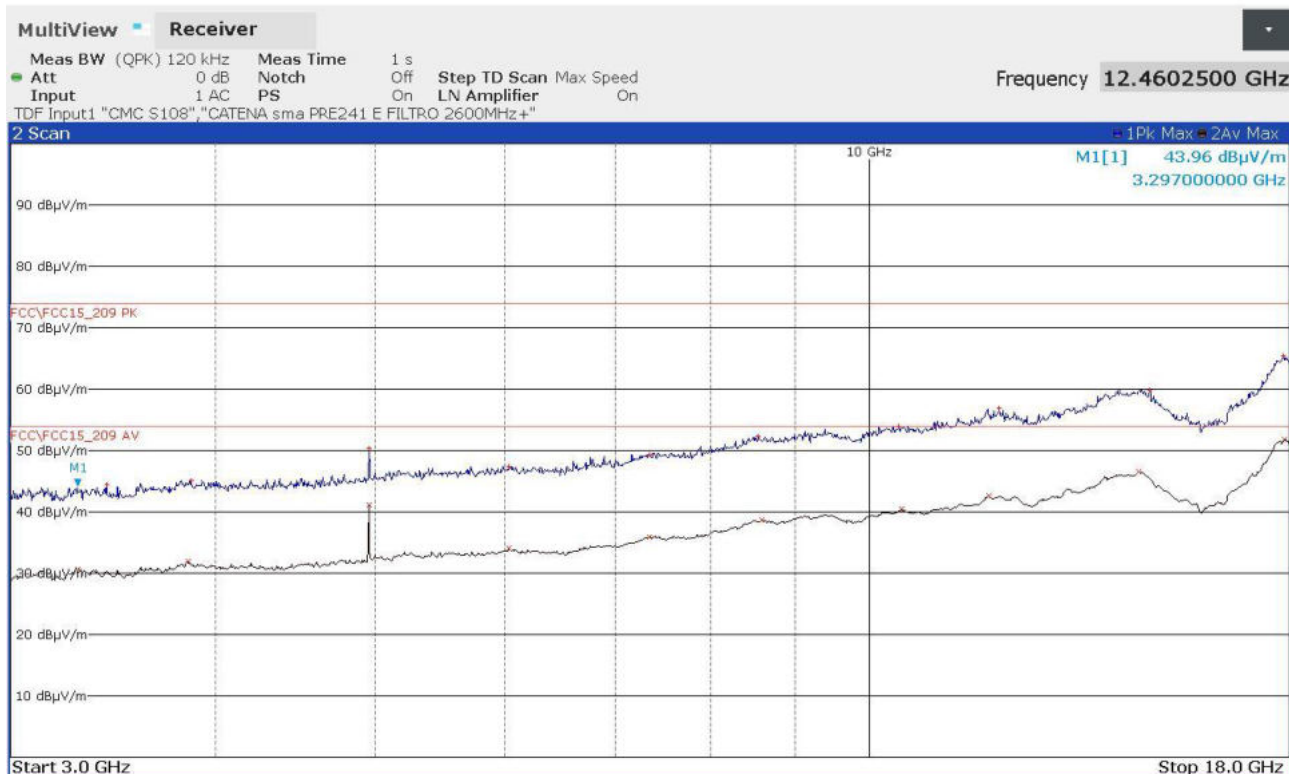


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
3148500000	+44,62	-29,36	3298500000	+30,72	-23,26
4099000000	+45,56	-28,42	3848750000	+31,98	-22,00
4960750000	+51,67	-22,31	4960750000	+42,60	-11,38
6038500000	+48,82	-25,16	6031250000	+34,05	-19,93
7294750000	+49,46	-24,52	7347750000	+35,90	-18,08
8477500000	+52,37	-21,61	8632500000	+38,55	-15,43
10392000000	+53,96	-20,02	10457250000	+40,42	-13,56
11938250000	+56,69	-17,29	11816750000	+42,64	-11,34
14568750000	+60,21	-13,77	14572250000	+46,54	-7,44
17906500000	+66,39	-7,59	17880750000	+51,80	-2,18

24217917_2

Panozzo 24217918

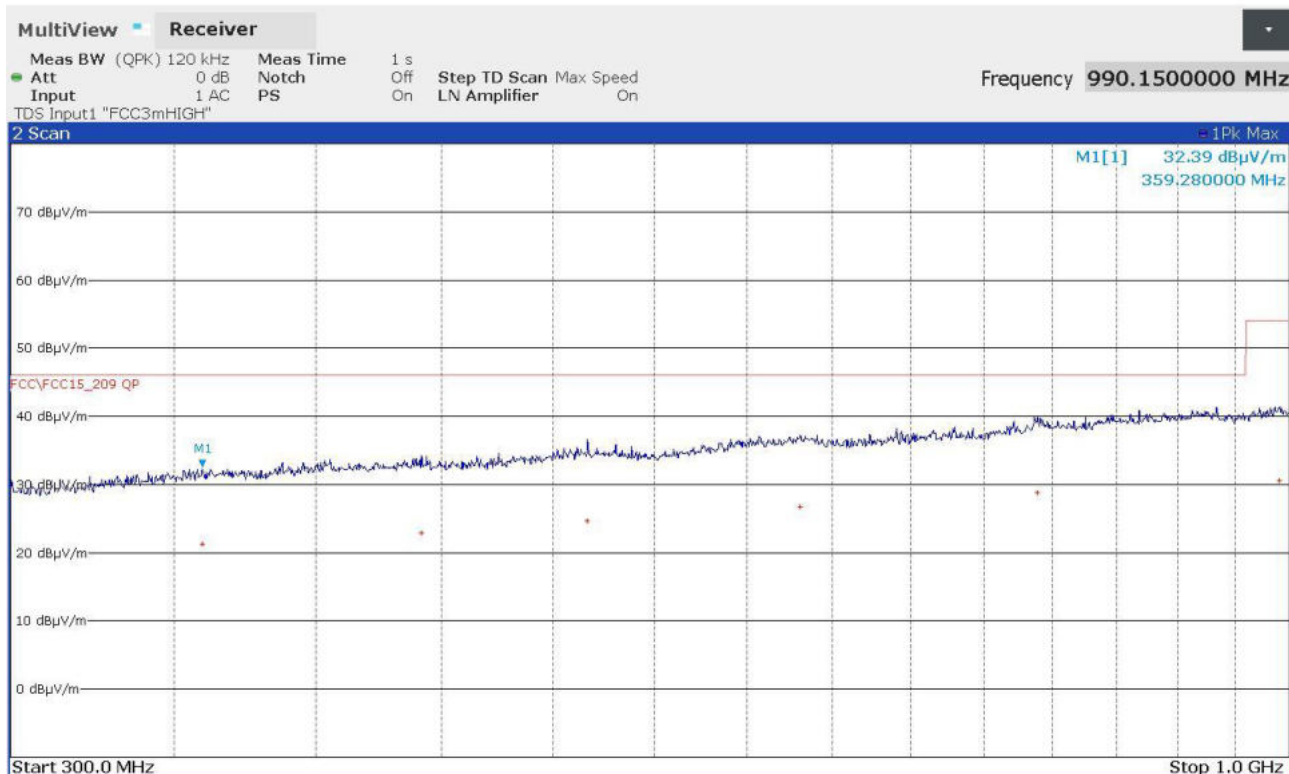


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
3433250000	+44,41	-29,57	3298750000	+30,72	-23,26
3864000000	+45,12	-28,86	3849000000	+31,99	-21,99
4958750000	+50,31	-23,67	4958750000	+41,11	-12,87
6031750000	+47,43	-26,55	6030750000	+34,04	-19,94
7338500000	+49,36	-24,62	7348250000	+35,92	-18,06
8552750000	+52,28	-21,70	8596500000	+38,64	-15,34
10413500000	+53,86	-20,12	10455750000	+40,43	-13,55
11977500000	+56,95	-17,03	11815250000	+42,64	-11,34
14801750000	+59,91	-14,07	14572250000	+46,56	-7,42
17841000000	+65,41	-8,57	17881500000	+51,82	-2,16

24217918_2

Panozzo 24217919



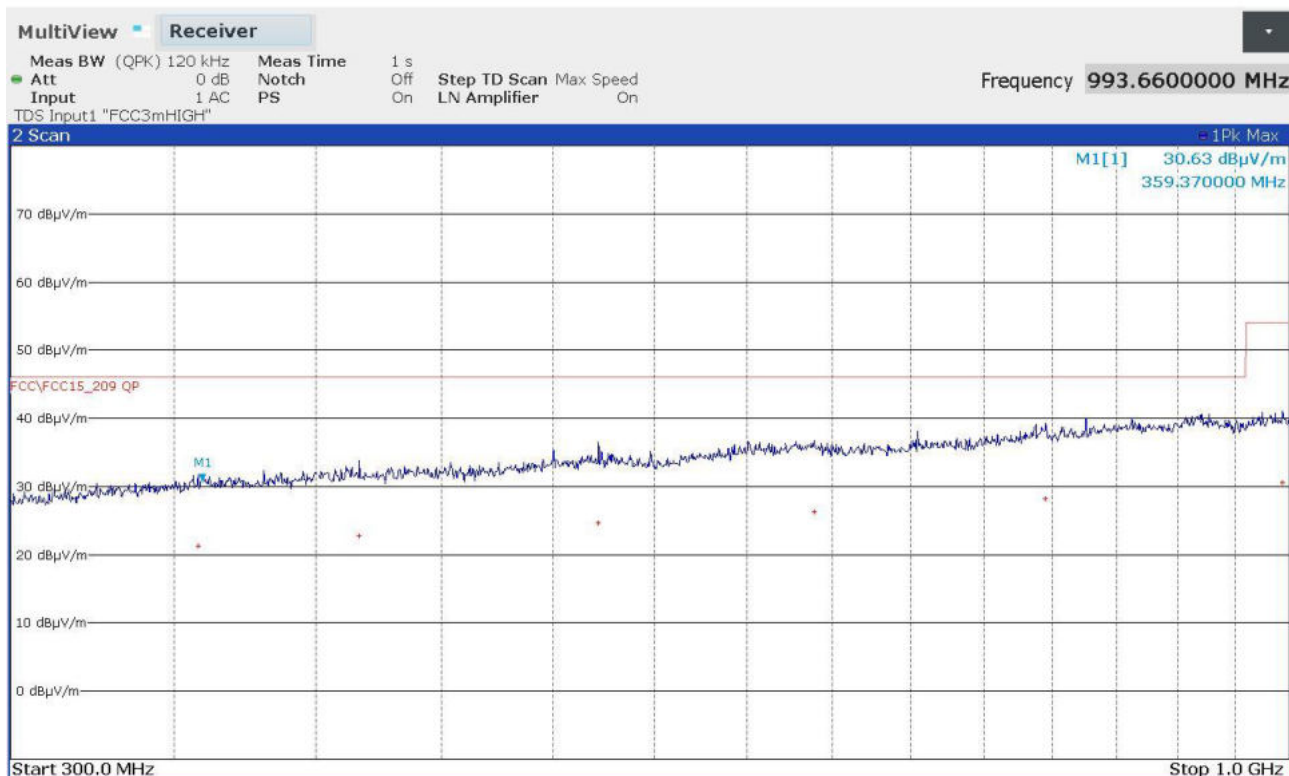
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
359280000	+21,26	-24,76
441840000	+22,83	-23,19
516420000	+24,66	-21,36
631110000	+26,70	-19,32
788940000	+28,84	-17,18
990150000	+30,61	-23,37

24217919_2

Panozzo 24217920



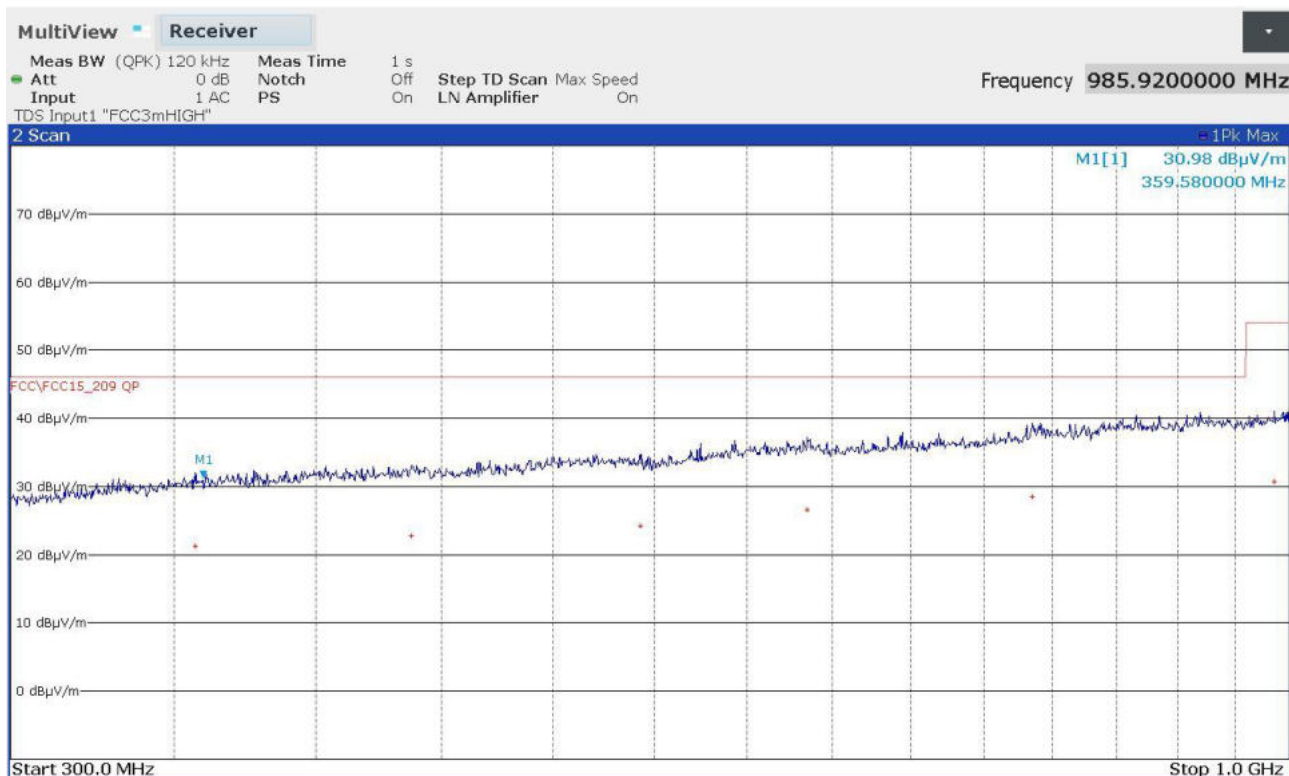
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
357990000	+21,31	-24,71
416580000	+22,75	-23,27
521850000	+24,66	-21,36
639300000	+26,35	-19,67
794850000	+28,28	-17,74
993660000	+30,56	-23,42

24217920_2

Panozzo 24217921



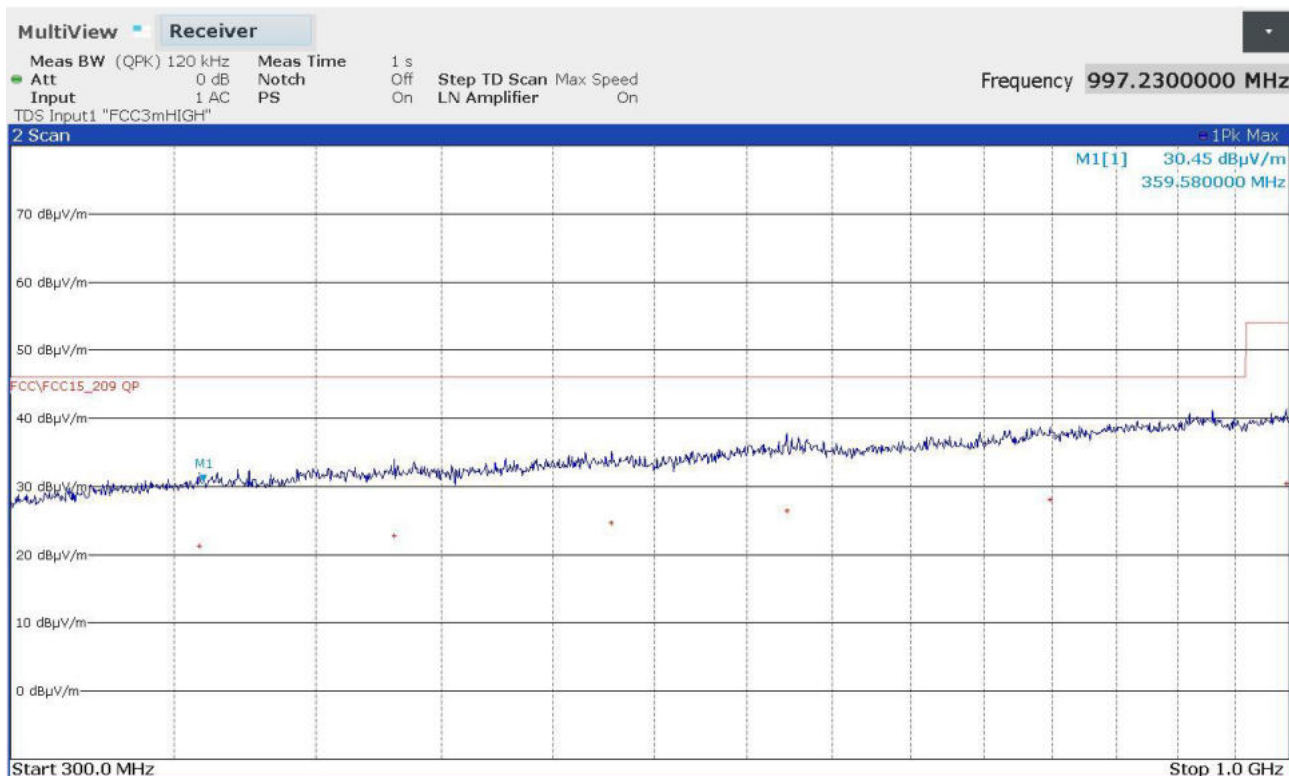
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
357150000	+21,24	-24,78
437640000	+22,80	-23,22
542580000	+24,26	-21,76
635070000	+26,59	-19,43
785130000	+28,48	-17,54
985920000	+30,77	-23,21

24217921_2

Panozzo 24217922



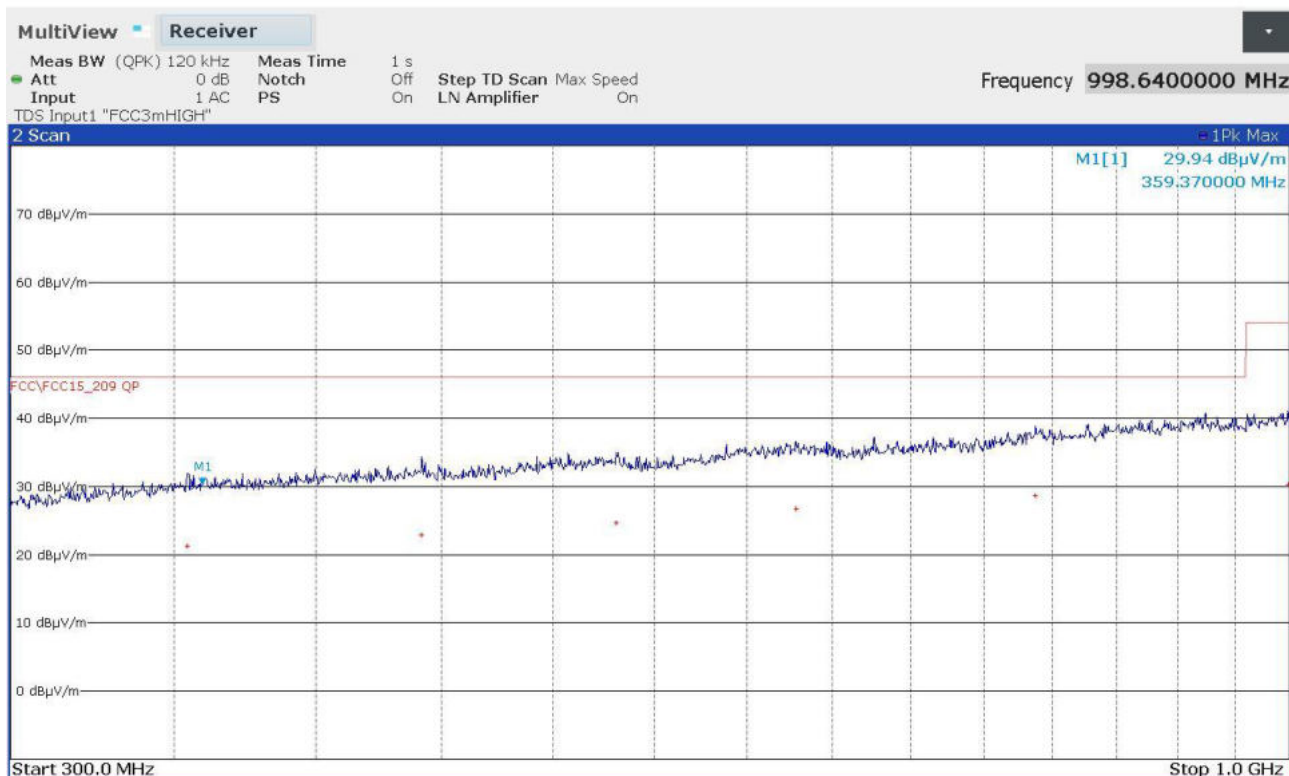
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
358410000	+21,34	-24,68
430560000	+22,76	-23,26
528240000	+24,74	-21,28
622980000	+26,48	-19,54
798330000	+28,09	-17,93
997230000	+30,39	-23,59

24217922_2

Panozzo 24217923



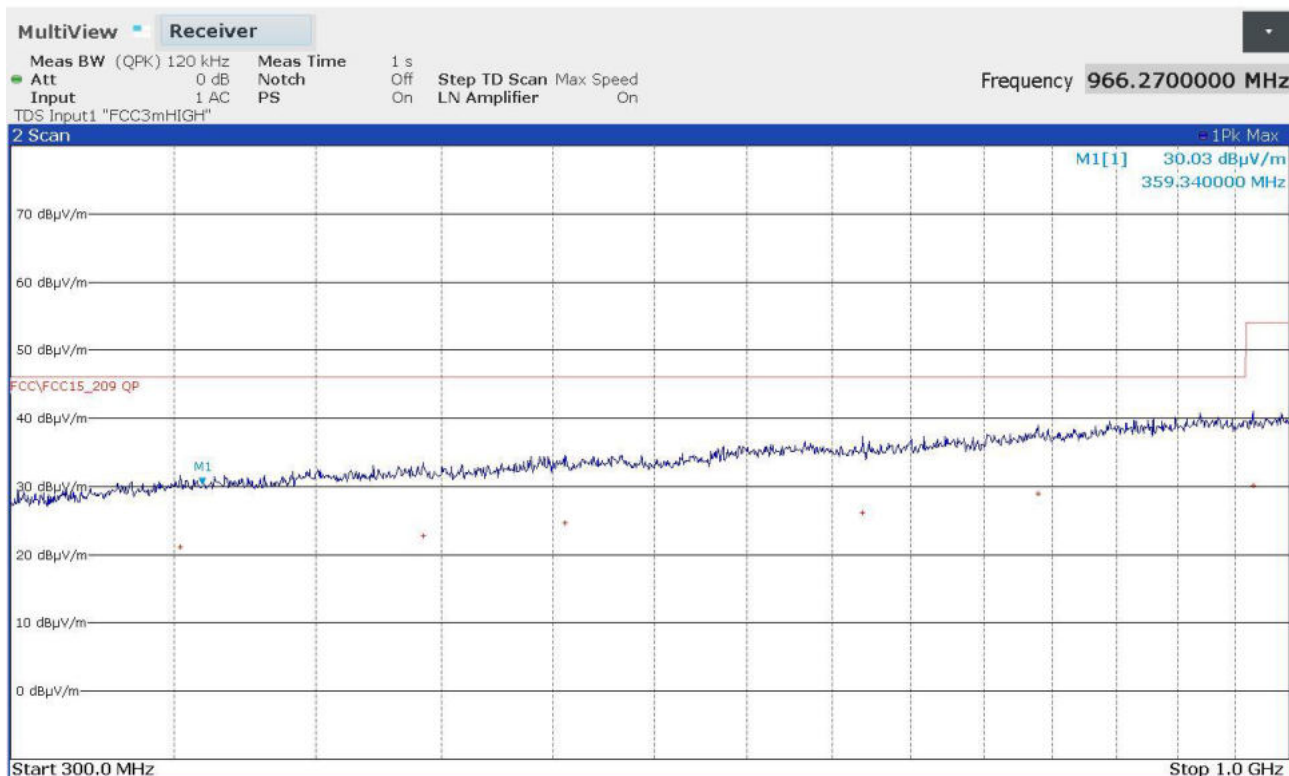
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
354450000	+21,27	-24,75
441780000	+22,83	-23,19
530490000	+24,66	-21,36
628260000	+26,72	-19,30
787470000	+28,70	-17,32
998640000	+30,29	-23,69

24217923_2

Panozzo 24217924



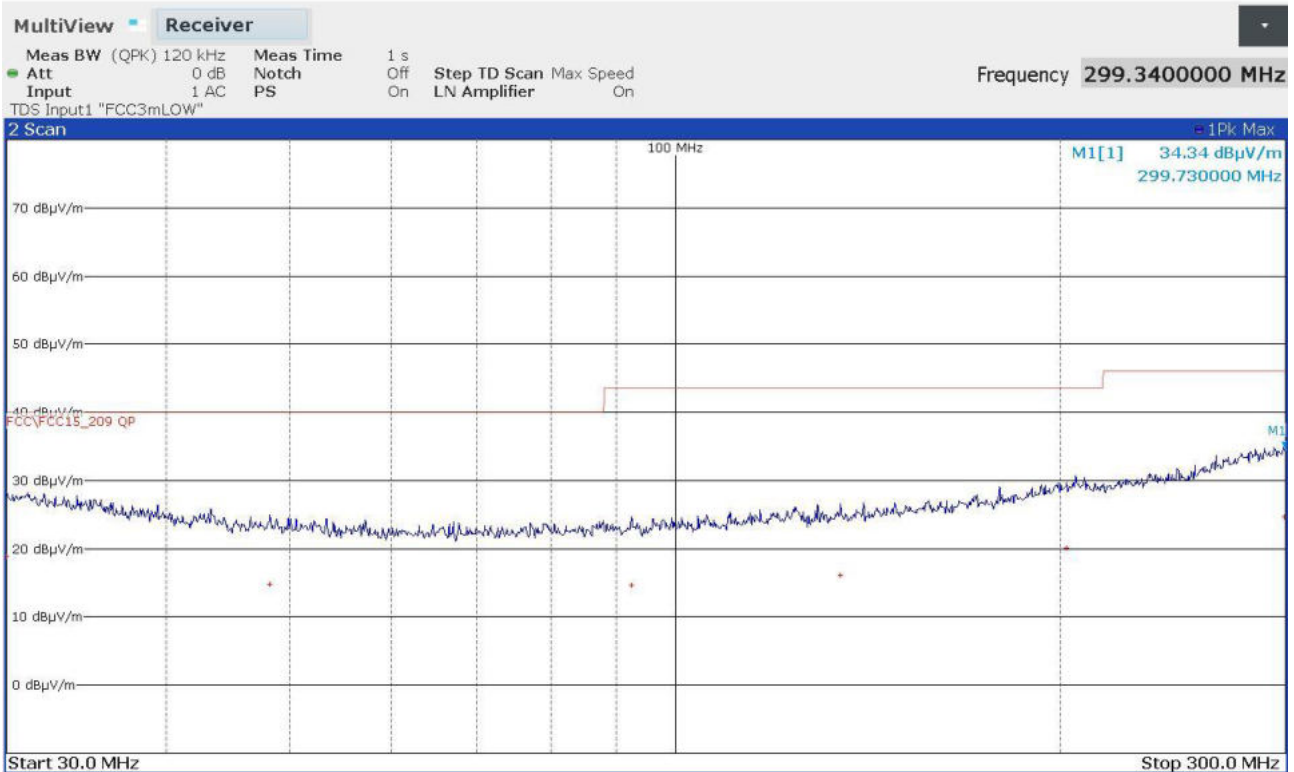
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
352020000	+21,10	-24,92
442650000	+22,81	-23,21
505770000	+24,70	-21,32
669030000	+26,16	-19,86
789420000	+28,88	-17,14
966270000	+30,10	-23,88

24217924_2

Panozzo 24217925



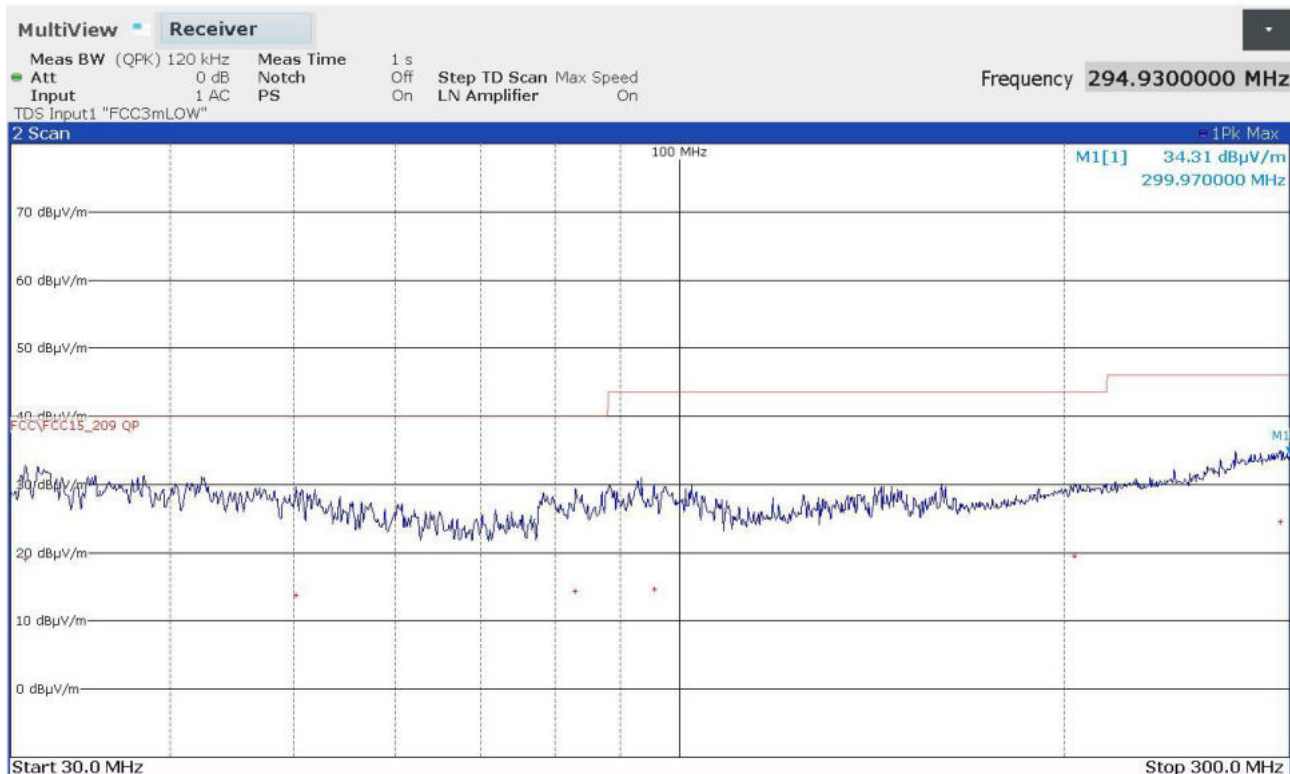
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
30000000	+18,94	-21,06
48210000	+14,78	-25,22
92430000	+14,60	-28,92
134640000	+16,10	-27,42
202320000	+20,16	-23,36
299340000	+24,72	-21,30

24217925_2

Panozzo 24217926



FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
30810000	+19,10	-20,90
50160000	+13,82	-26,18
82950000	+14,39	-25,61
95580000	+14,57	-28,95
203610000	+19,49	-24,03
294930000	+24,46	-21,56

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