

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			

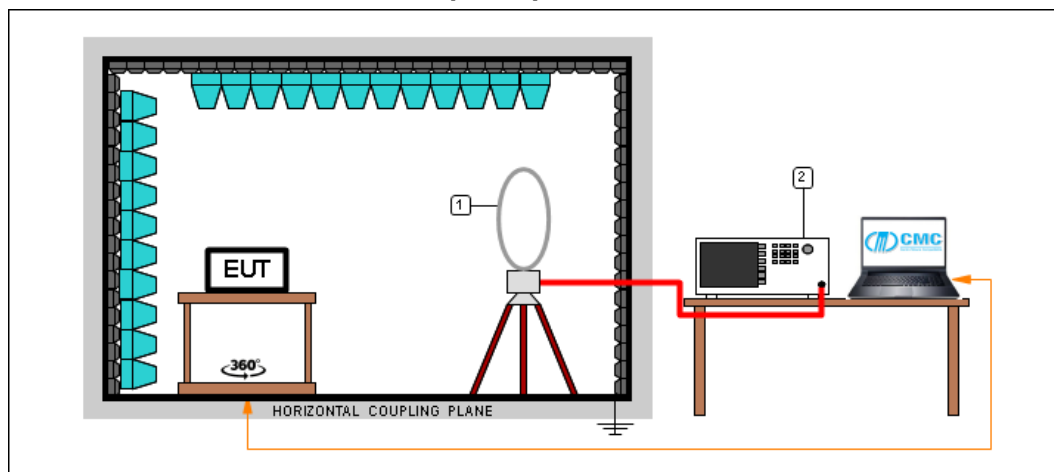
Acceptance limits for emissions in non-restricted frequency bands

Field strength of harmonics: 500 $\mu\text{V/m}$ (54 dB($\mu\text{V/m}$)).

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.

Test setup

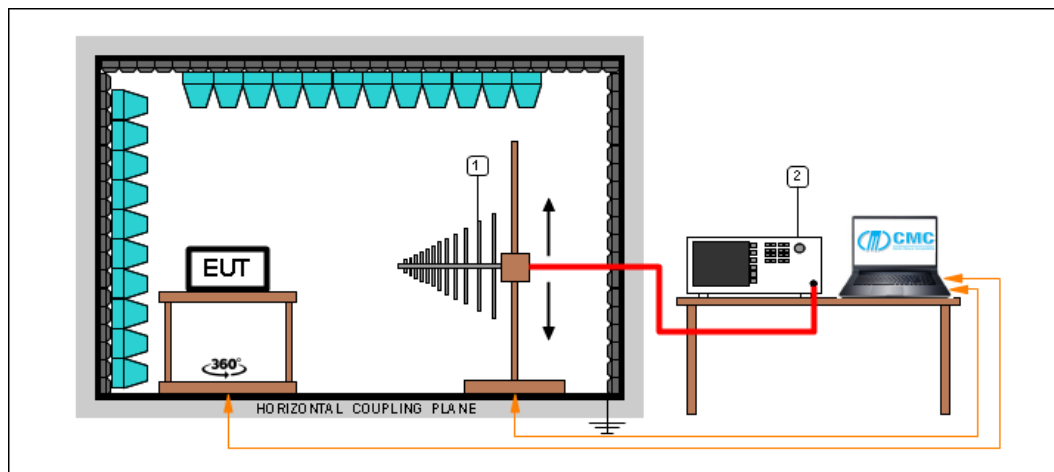
Frequency ≤ 30 MHz



Test setup PE004_01

Nr.	Id. Number	Manufacturer	Model	Description
2	CMC S353	Rohde & Schwarz	ESW26	EMI Test Receiver 1 Hz - 26.5 GHz
1	CMC S127	Schaffner	HLA6120	Loop Antenna 9kHz - 30MHz

Frequency ≤ 1 GHz

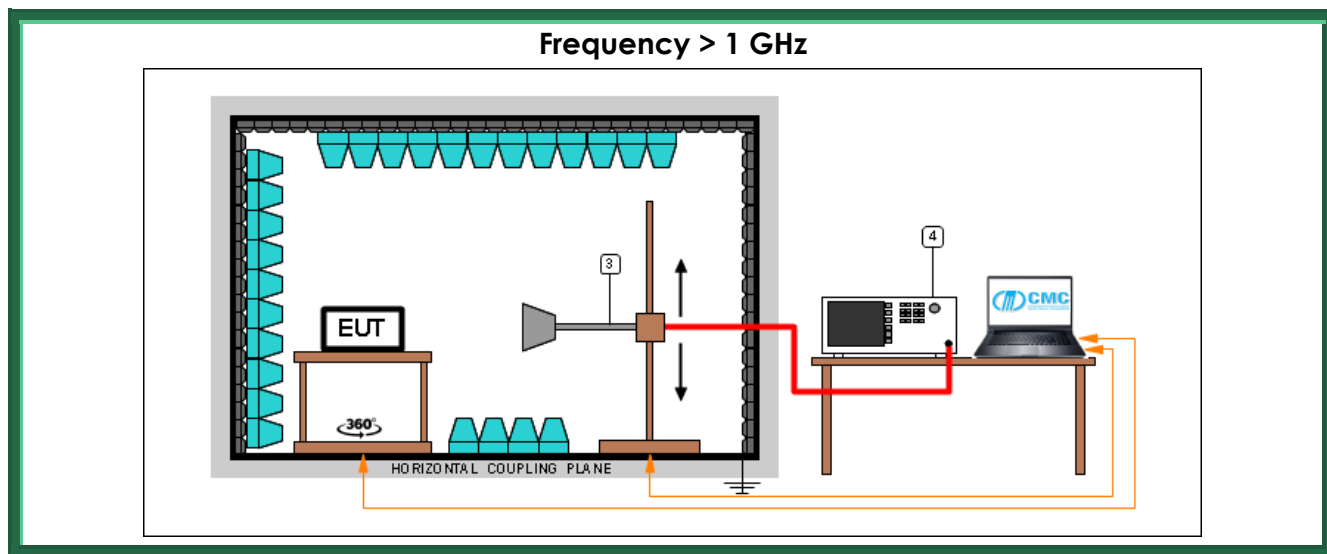


Test setup PE004_02

Nr.	Id. Number	Manufacturer	Model	Description
2	CMC S353	Rohde & Schwarz	ESW26	EMI Test Receiver 1 Hz - 26.5 GHz
1	CMC S271	Schwarzbeck	BBA 9106 + VHBB 9124	Broadband Antenna

Test setup PE004_03

Nr.	Id. Number	Manufacturer	Model	Description
2	CMC S353	Rohde & Schwarz	ESW26	EMI Test Receiver 1 Hz - 26.5 GHz
1	CMC S287	Schwarzbeck	VUSLP 9111B	Broadband Antenna



Test setup PE004_04

Nr.	Id. Number	Manufacturer	Model	Description
4	CMC S353	Rohde & Schwarz	ESW26	EMI Test Receiver 1 Hz - 26.5 GHz
3	CMC S108	Emco	3115	Waveguide antenna

Test setup PE004_05

Nr.	Id. Number	Manufacturer	Model	Description
4	CMC S353	Rohde & Schwarz	ESW26	EMI Test Receiver 1 Hz - 26.5 GHz
3	CMC S290	Schwarzbeck	BBHA 9170	Horn Antenna (15-40 GHz)

Result

Antenna	Transmission channel (MHz)	Polarization	Frequency Range (MHz)	Graphs	Result
1/4 λ whip antenna	925,963	V	300 – 1000	G22174313	P
1/4 λ whip antenna	925,963	H	300 – 1000	G22174314	P
1/4 λ whip antenna	912,271	H	300 – 1000	G22174315	P
1/4 λ whip antenna	912,271	V	300 – 1000	G22174316	P
1/4 λ whip antenna	902,791	V	300 – 1000	G22174317	P
1/4 λ whip antenna	902,791	H	300 – 1000	G22174318	P
1/4 λ whip antenna	Worst case	H	30 – 300	G22174319	P
1/4 λ whip antenna	Worst case	V	30 – 300	G22174320	P
1/4 λ whip antenna	Worst case	Loop	0,009 – 30	G22174321	P
1/4 λ whip antenna	902,791	V	1000 – 10000	G22174322	P
1/4 λ whip antenna	902,791	H	1000 – 10000	G22174323	P
1/4 λ whip antenna	912,271	H	1000 – 10000	G22174324	P
1/4 λ whip antenna	912,271	V	1000 – 10000	G22174325	P
1/4 λ whip antenna	925,963	V	1000 – 10000	G22174326	P
1/4 λ whip antenna	925,963	H	1000 – 10000	G22174327	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

Antenna	Transmission channel (MHz)	Polarization	Frequency Range (MHz)	Graphs	Result
Vertical stilus antenna	925,963	V	300 – 1000	G22174339	P
Vertical stilus antenna	925,963	H	300 – 1000	G22174340	P
Vertical stilus antenna	912,271	H	300 – 1000	G22174341	P
Vertical stilus antenna	912,271	V	300 – 1000	G22174342	P
Vertical stilus antenna	902,791	V	300 – 1000	G22174343	P
Vertical stilus antenna	902,791	H	300 – 1000	G22174344	P
Vertical stilus antenna	Worst case	H	30 – 300	G22174345	P
Vertical stilus antenna	Worst case	V	30 – 300	G22174346	P
Vertical stilus antenna	Worst case	Loop	0,009 – 30	G22174347	P
Vertical stilus antenna	902,791	V	1000 – 10000	G22174374	P
Vertical stilus antenna	902,791	H	1000 – 10000	G22174375	P
Vertical stilus antenna	912,271	H	1000 – 10000	G22174376	P
Vertical stilus antenna	912,271	V	1000 – 10000	G22174377	P
Vertical stilus antenna	925,963	V	1000 – 10000	G22174378	P
Vertical stilus antenna	925,963	H	1000 – 10000	G22174379	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

Antenna	Transmission channel (MHz)	Polarization	Frequency Range (MHz)	Graphs	Result
Quarter wave ground plane antenna	Worst case	Loop	0,009 – 30	G22174348	P
Quarter wave ground plane antenna	Worst case	V	30 – 300	G22174349	P
Quarter wave ground plane antenna	Worst case	H	30 – 300	G22174350	P
Quarter wave ground plane antenna	925,963	H	300 – 1000	G22174362	P
Quarter wave ground plane antenna	925,963	V	300 – 1000	G22174363	P
Quarter wave ground plane antenna	912,271	V	300 – 1000	G22174364	P
Quarter wave ground plane antenna	912,271	H	300 – 1000	G22174365	P
Quarter wave ground plane antenna	902,791	H	300 – 1000	G22174366	P
Quarter wave ground plane antenna	902,791	V	300 – 1000	G22174367	P
Quarter wave ground plane antenna	902,791	V	1000 – 10000	G22174368	P
Quarter wave ground plane antenna	902,791	H	1000 – 10000	G22174369	P
Quarter wave ground plane antenna	912,271	H	1000 – 10000	G22174370	P
Quarter wave ground plane antenna	912,271	V	1000 – 10000	G22174371	P

Antenna	Transmission channel (MHz)	Polarization	Frequency Range (MHz)	Graphs	Result
Quarter wave ground plane antenna	925,963	V	1000 – 10000	G22174372	P
Quarter wave ground plane antenna	925,963	H	1000 – 10000	G22174373	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

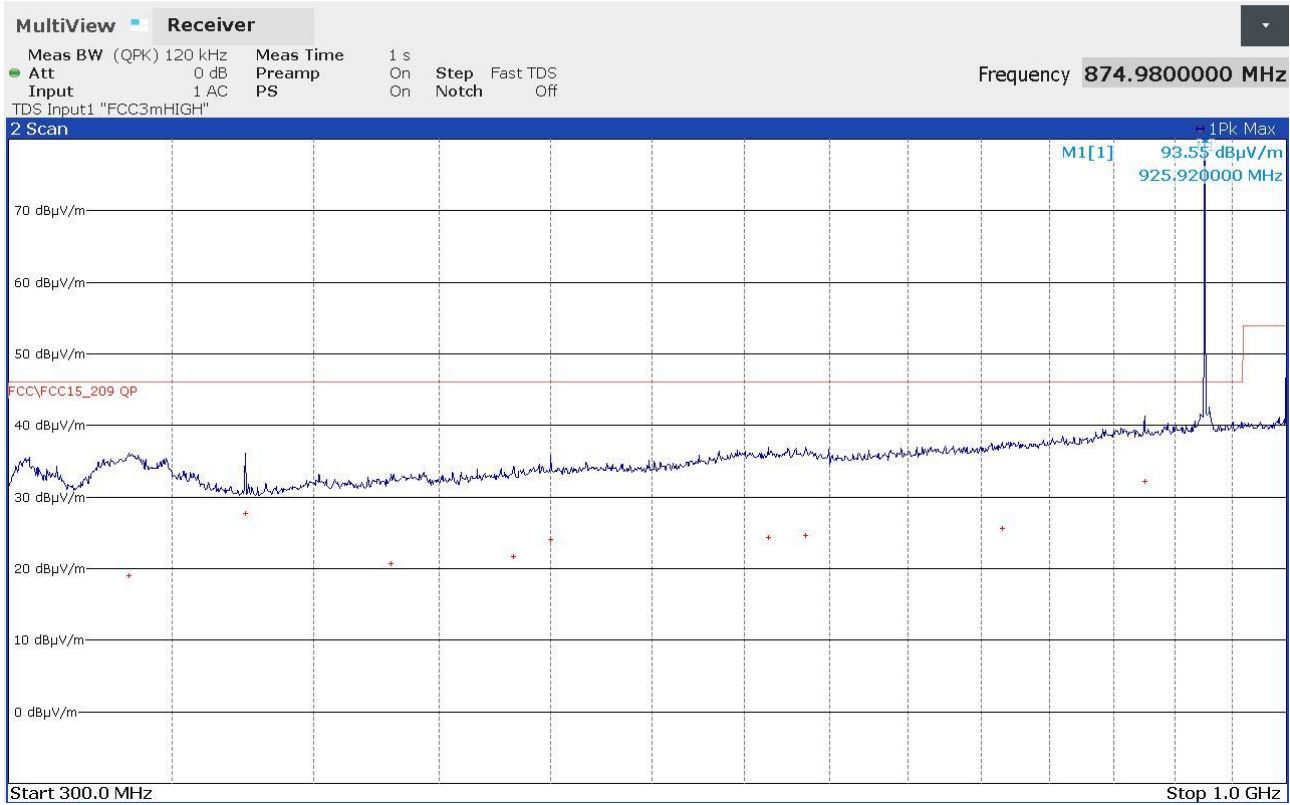
Graphs Legend

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 22174313



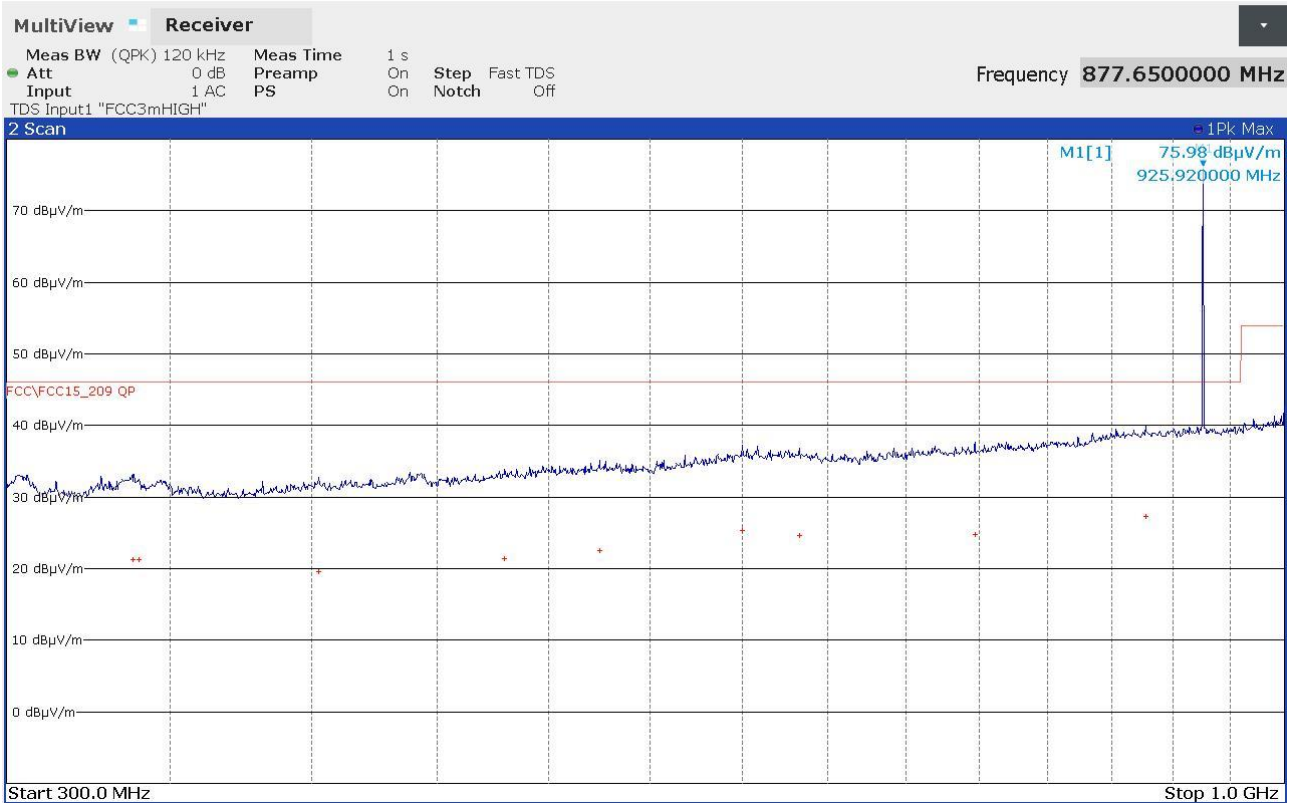
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
336060000	+19,08	-26,94
375000000	+27,75	-18,27
430110000	+20,64	-25,38
482970000	+21,72	-24,30
499980000	+24,07	-21,95
614010000	+24,33	-21,69
635700000	+24,56	-21,46
765060000	+25,61	-20,41
874980000	+32,15	-13,87

22174313_2

Panozzo 22174314



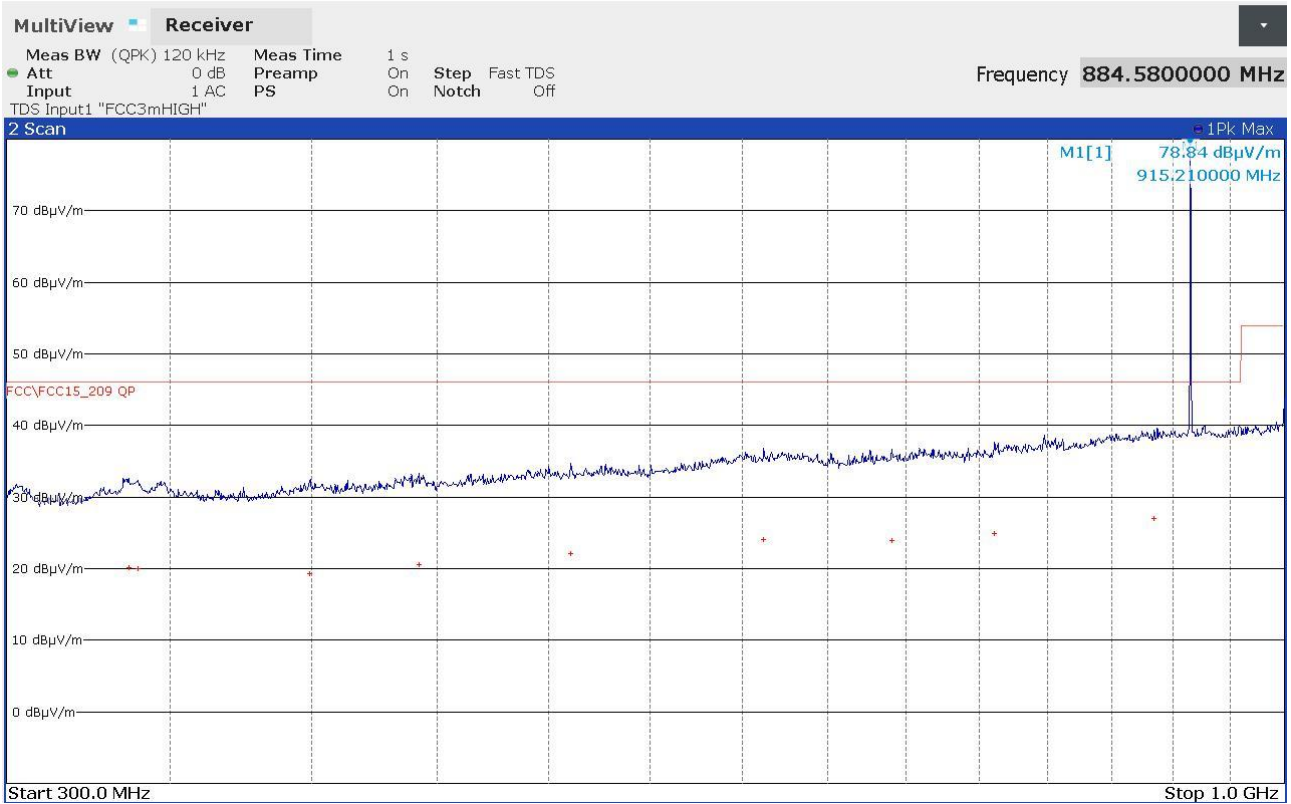
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
337860000	+21,26	-24,76
339840000	+21,32	-24,70
402630000	+19,56	-26,46
479580000	+21,40	-24,62
524670000	+22,54	-23,48
600030000	+25,38	-20,64
633150000	+24,65	-21,37
747030000	+24,74	-21,28
877650000	+27,24	-18,78

22174314_2

Panozzo 22174315



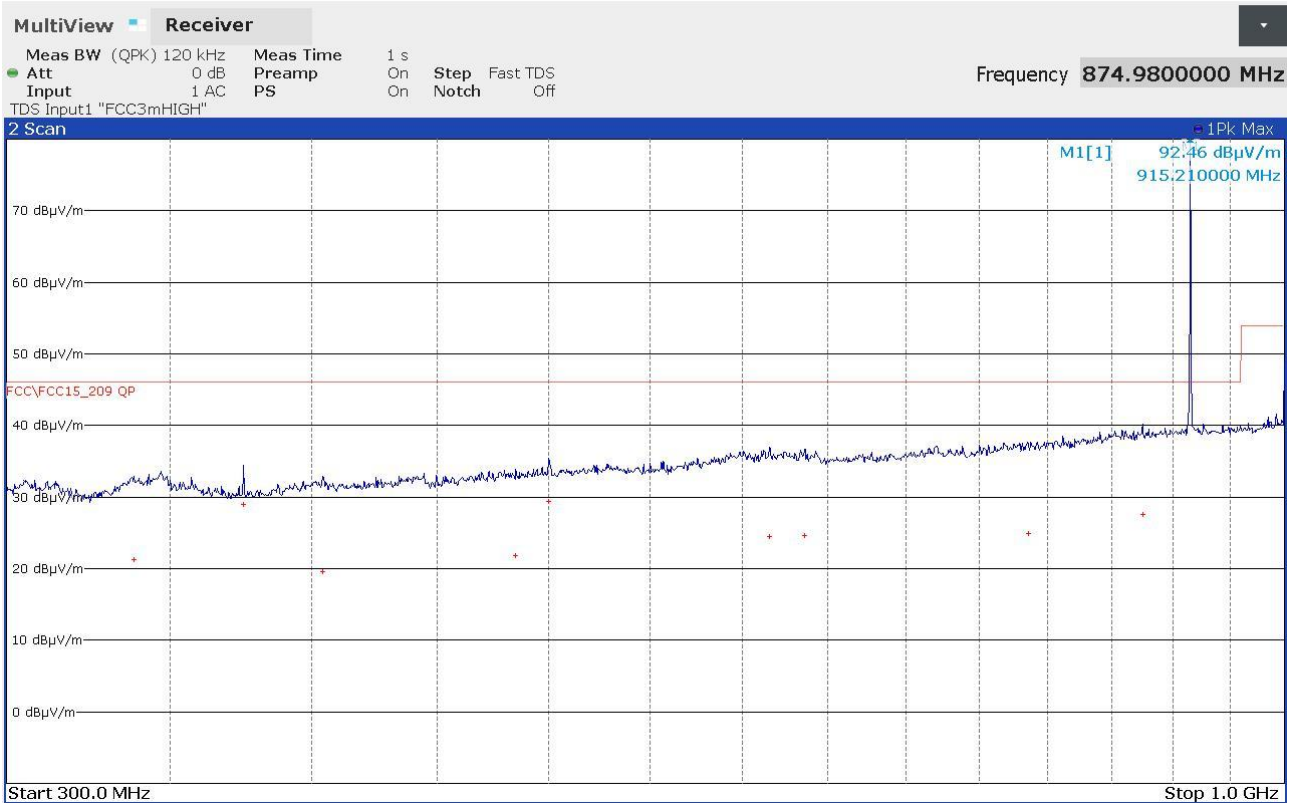
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
336540000	+20,10	-25,92
339570000	+20,01	-26,01
399360000	+19,34	-26,68
442620000	+20,55	-25,47
510450000	+22,12	-23,90
612270000	+24,12	-21,90
690810000	+23,98	-22,04
761100000	+24,89	-21,13
884580000	+27,01	-19,01

22174315_2

Panozzo 22174316



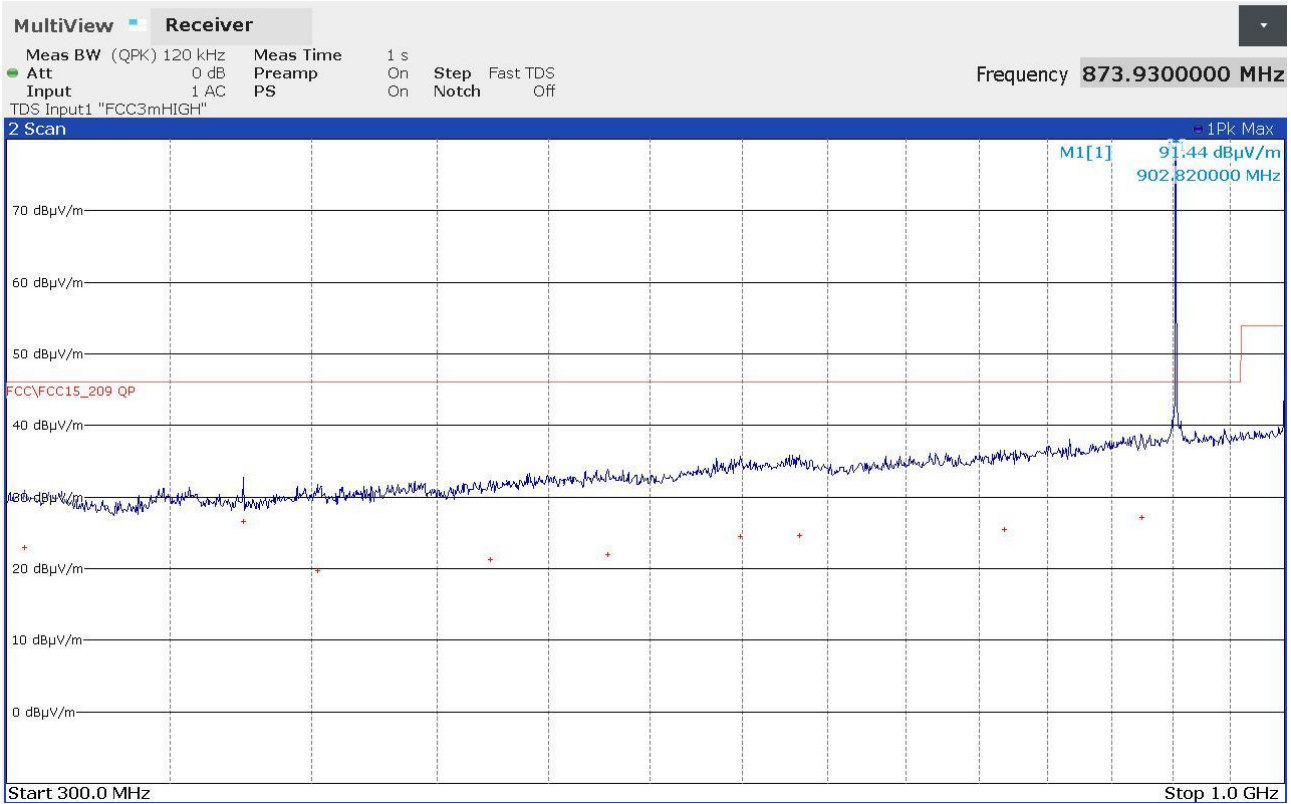
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
338250000	+21,24	-24,78
375000000	+28,96	-17,06
404220000	+19,56	-26,46
484710000	+21,77	-24,25
500010000	+29,35	-16,67
615870000	+24,44	-21,58
636570000	+24,59	-21,43
785340000	+24,90	-21,12
874980000	+27,56	-18,46

22174316_2

Panozzo 22174317



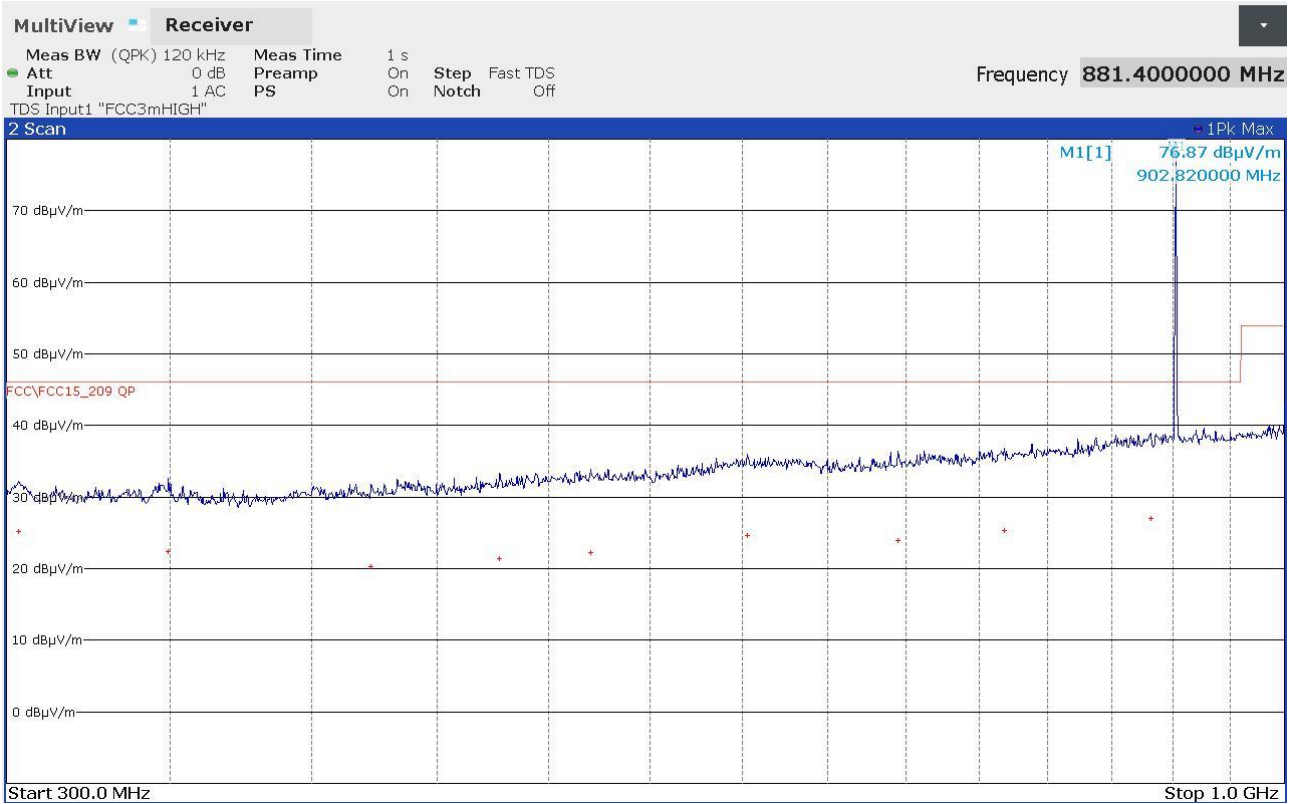
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
305130000	+22,96	-23,06
374970000	+26,54	-19,48
402300000	+19,66	-26,36
473250000	+21,26	-24,76
528600000	+21,96	-24,06
598890000	+24,55	-21,47
633150000	+24,61	-21,41
767940000	+25,50	-20,52
873930000	+27,19	-18,83

22174317_2

Panozzo 22174318



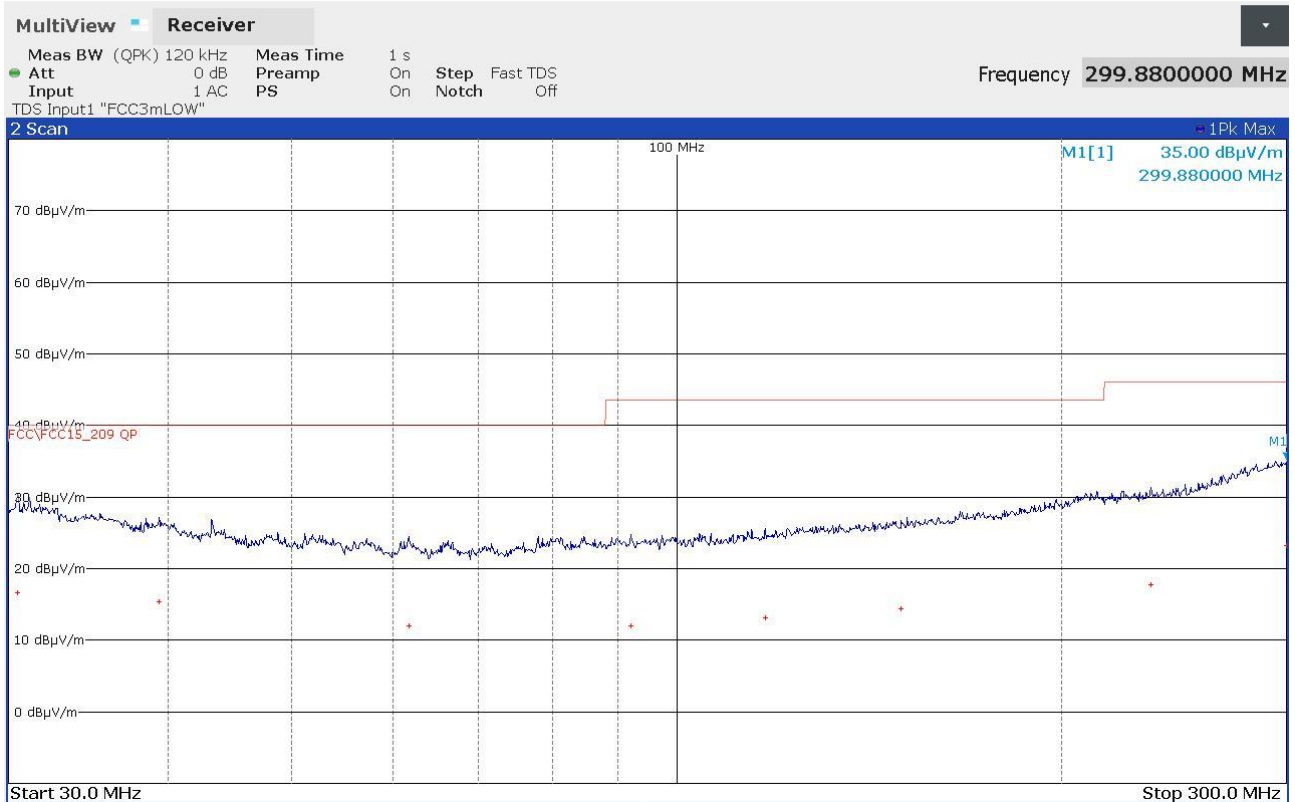
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
303420000	+25,18	-20,84
349350000	+22,36	-23,66
422910000	+20,24	-25,78
477510000	+21,35	-24,67
520230000	+22,26	-23,76
602850000	+24,69	-21,33
694860000	+23,98	-22,04
768180000	+25,39	-20,63
881400000	+27,03	-18,99

22174318_2

Panozzo 22174319 Worst Case



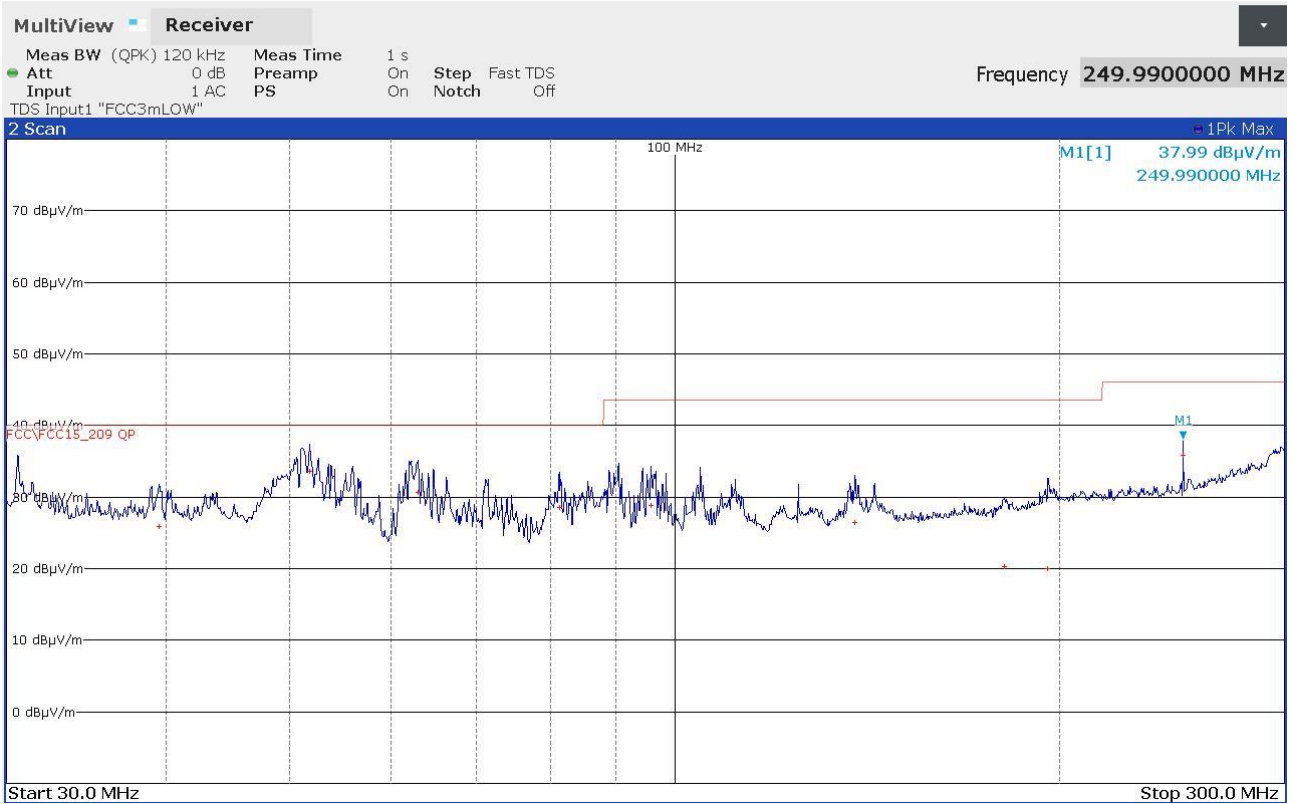
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
30510000	+16,70	-23,30
39360000	+15,32	-24,68
61710000	+12,02	-27,98
92070000	+12,07	-31,45
117240000	+13,08	-30,44
149850000	+14,41	-29,11
234930000	+17,75	-28,27
299880000	+23,25	-22,77

22174319_2

Panozzo 22174320 Worst Case



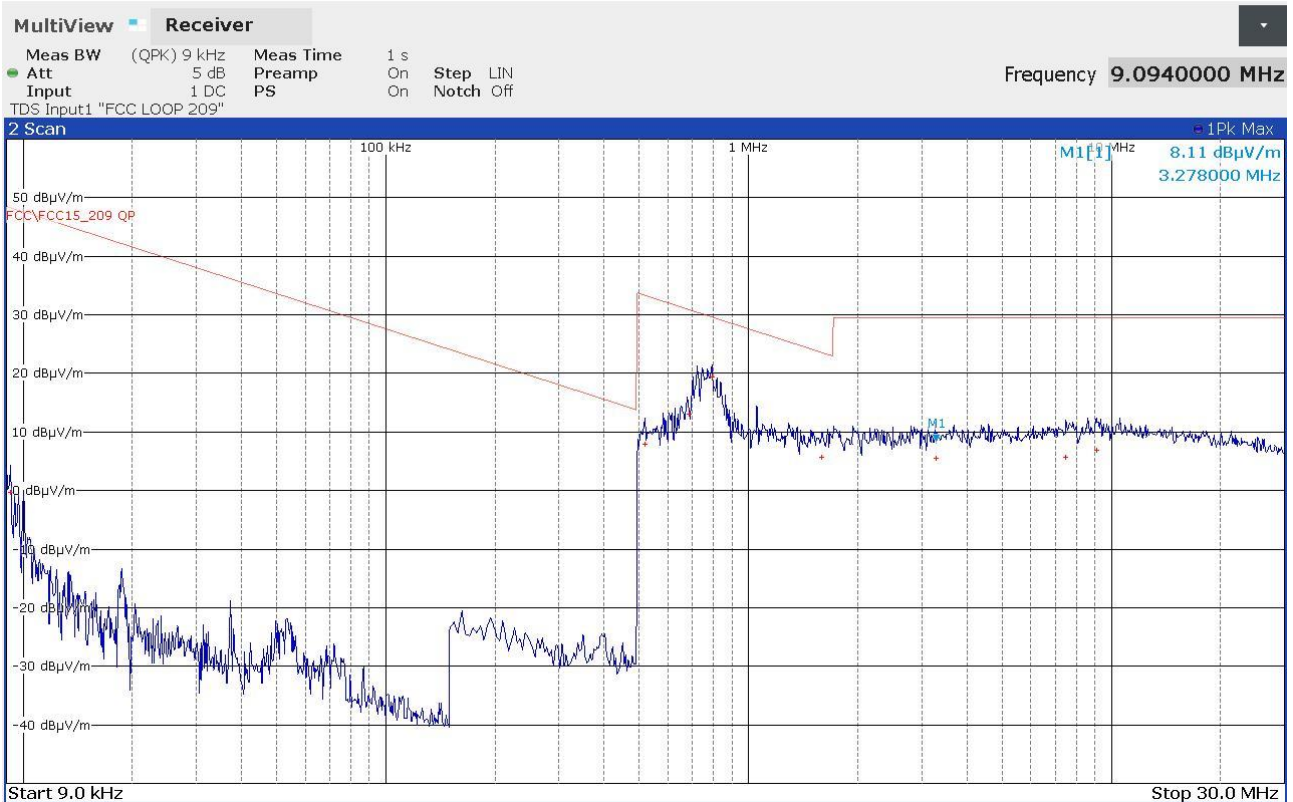
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
30630000	+30,12	-9,88
39510000	+25,83	-14,17
51810000	+33,55	-6,45
62970000	+30,66	-9,34
81210000	+28,51	-11,49
95790000	+28,82	-14,70
138390000	+26,42	-17,10
181050000	+20,23	-23,29
195930000	+19,95	-23,57
249990000	+35,82	-10,20

22174320_2

Panozzo 22174321 Worst Case



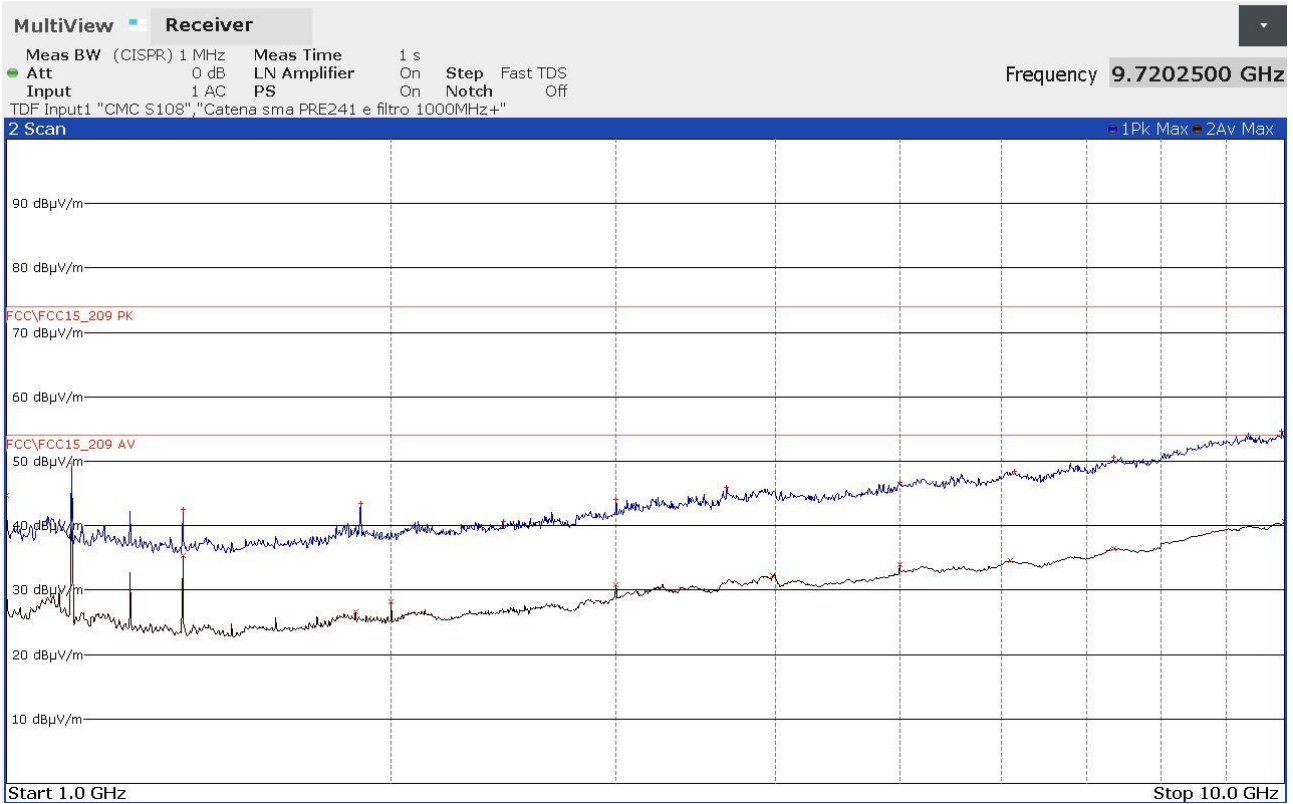
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
9240	-0,34	-48,63
518000	+7,92	-25,40
686000	+13,07	-17,81
794000	+19,32	-10,29
1586000	+5,64	-17,96
3278000	+5,44	-24,10
7486000	+5,73	-23,81
9094000	+6,81	-22,73

22174321_2

Panozzo 22174322

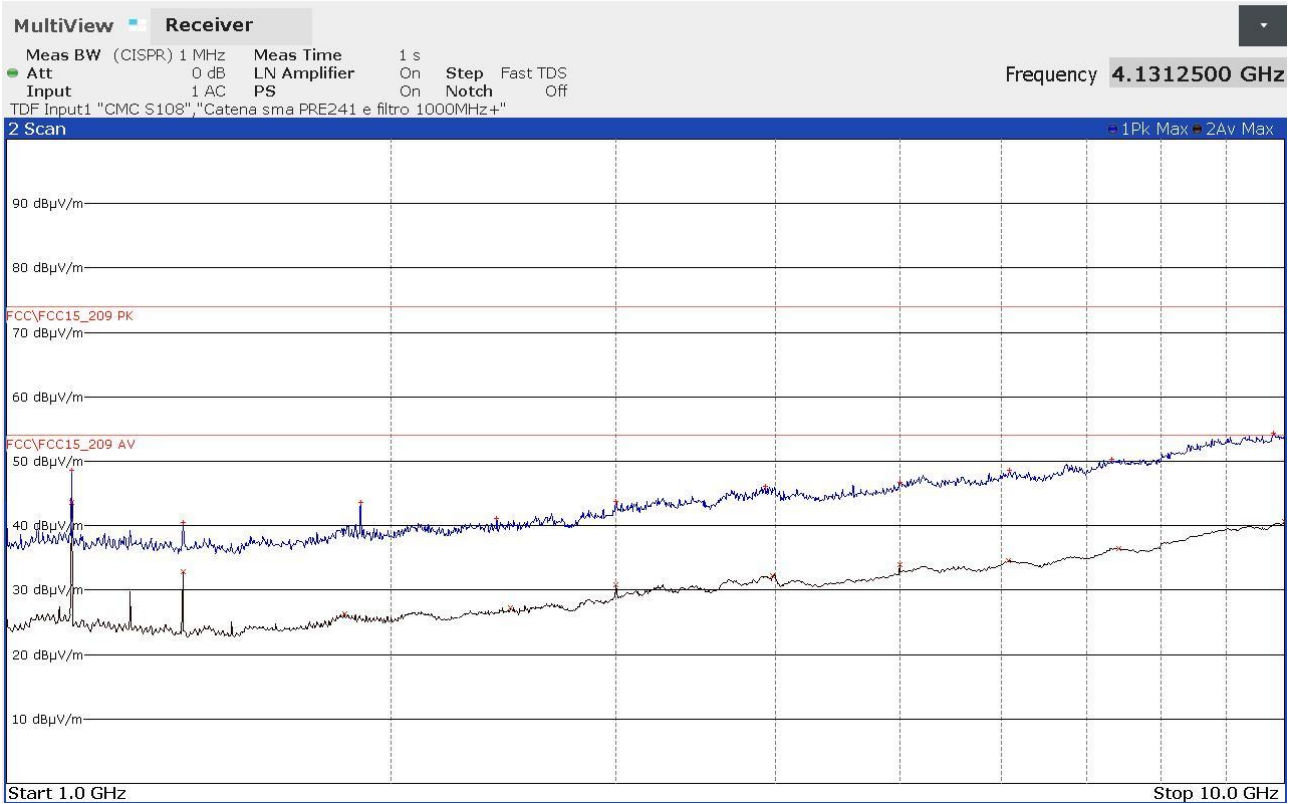


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
1125000000	+49,65	-24,33	1000000000	+44,72	-9,26
1375000000	+42,45	-31,53	1375000000	+35,37	-18,61
1892500000	+43,45	-30,53	1875000000	+26,63	-27,35
2446500000	+40,73	-33,25	2000000000	+28,27	-25,71
2999750000	+44,02	-29,96	2998250000	+30,84	-23,14
3661000000	+45,90	-28,08	3977500000	+32,31	-21,67
4999500000	+46,80	-27,18	4999500000	+33,93	-20,05
6148500000	+48,43	-25,55	6100000000	+34,58	-19,40
7354500000	+50,59	-23,39	7350500000	+36,48	-17,50
9954500000	+54,65	-19,33	9999500000	+40,62	-13,36

22174322_2

Panozzo 22174323

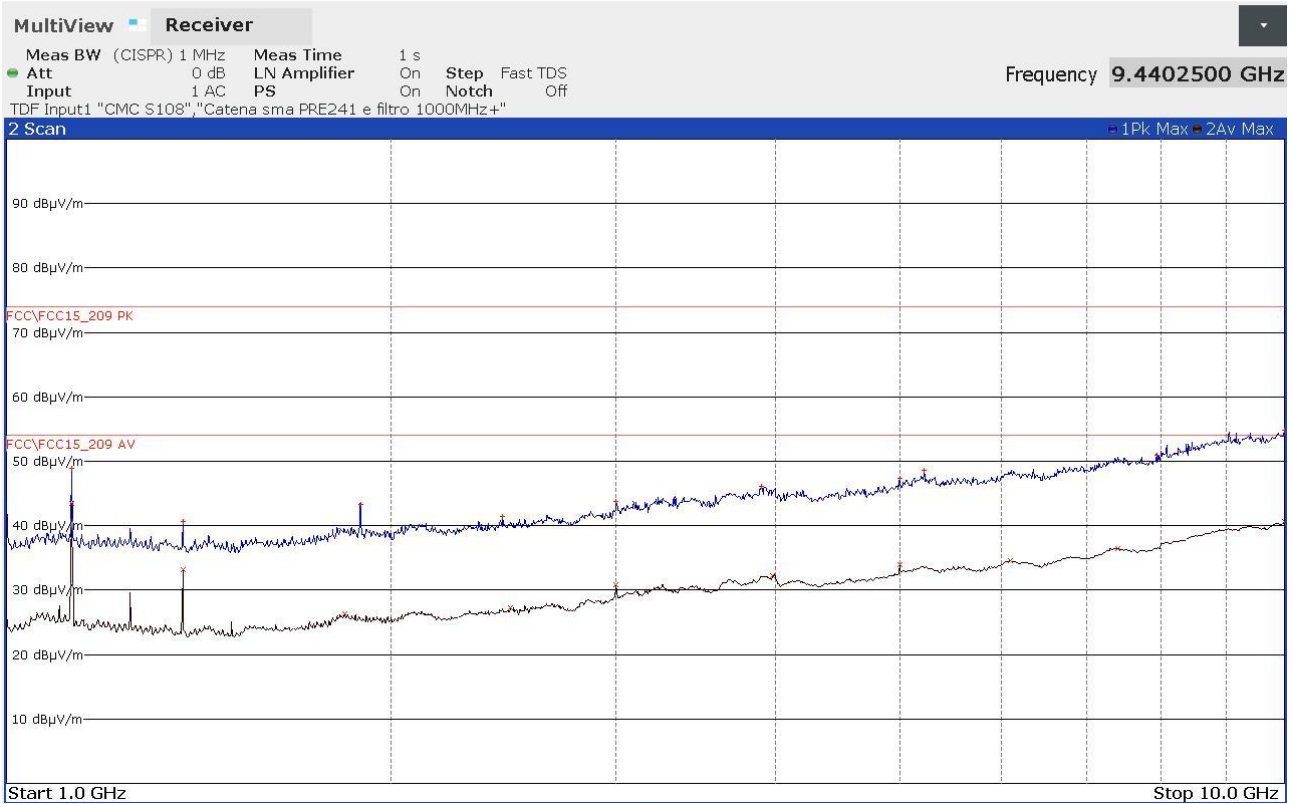


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
1125000000	+48,66	-25,32	1125000000	+43,62	-10,36
1375000000	+40,55	-33,43	1375000000	+32,81	-21,17
1892250000	+43,67	-30,31	1838000000	+26,32	-27,66
2419000000	+41,05	-32,93	2481250000	+27,22	-26,76
2999500000	+43,81	-30,17	2998250000	+30,86	-23,12
3925500000	+46,05	-27,93	3978750000	+32,31	-21,67
4998750000	+46,80	-27,18	4999500000	+33,96	-20,02
6094250000	+48,53	-25,45	6085250000	+34,60	-19,38
7325250000	+50,36	-23,62	7413500000	+36,51	-17,47
9798250000	+54,37	-19,61	9999750000	+40,61	-13,37

22174323_2

Panozzo 22174324

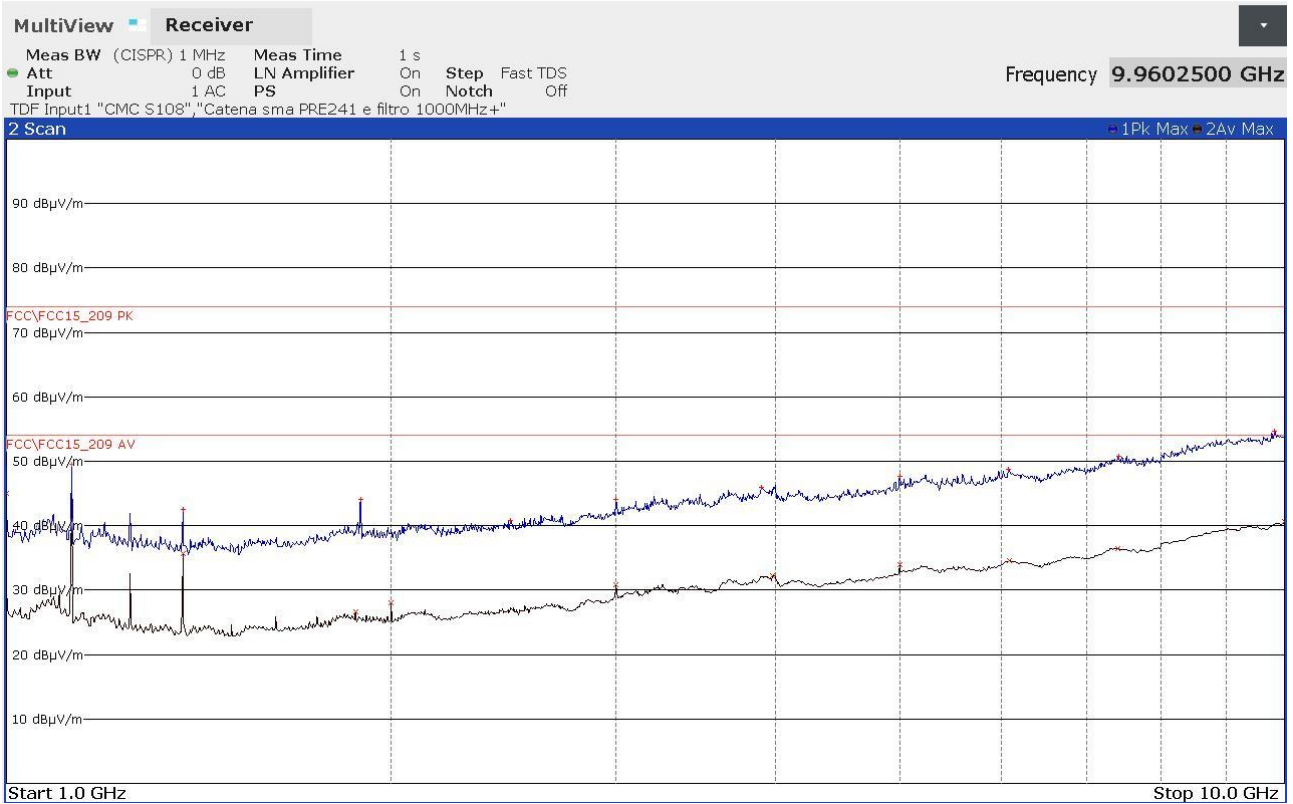


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
1125000000	+48,90	-25,08	1125000000	+43,45	-10,53
1375000000	+40,73	-33,25	1375000000	+33,17	-20,81
1892000000	+43,28	-30,70	1838750000	+26,32	-27,66
2445000000	+41,36	-32,62	2481250000	+27,21	-26,77
2998500000	+43,71	-30,27	2998250000	+30,88	-23,10
3898250000	+46,08	-27,90	3977000000	+32,31	-21,67
4998750000	+47,36	-26,62	4999500000	+33,95	-20,03
5225250000	+48,58	-25,40	6100000000	+34,63	-19,35
7941500000	+50,86	-23,12	7404500000	+36,50	-17,48
9997750000	+54,82	-19,16	9999250000	+40,64	-13,34

22174324_2

Panozzo 22174325

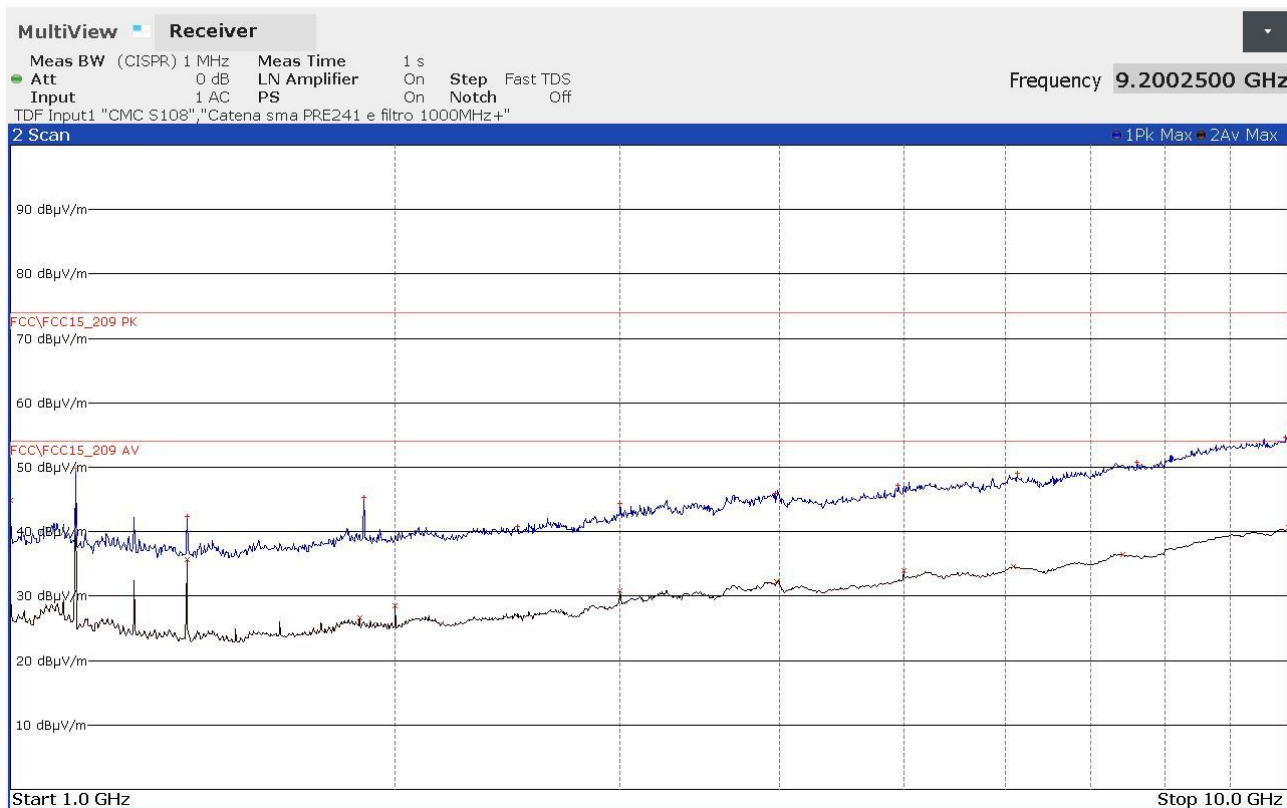


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
1125000000	+49,54	-24,44	1000000000	+44,94	-9,04
1375000000	+42,48	-31,50	1375000000	+35,74	-18,24
1892250000	+44,02	-29,96	1875000000	+26,65	-27,33
2479250000	+40,75	-33,23	2000000000	+28,09	-25,89
2998750000	+44,08	-29,90	2998250000	+30,84	-23,14
3899500000	+45,92	-28,06	3977250000	+32,32	-21,66
4998250000	+47,69	-26,29	4999750000	+33,96	-20,02
6085750000	+48,73	-25,25	6088000000	+34,61	-19,37
7413000000	+50,73	-23,25	7404500000	+36,49	-17,49
9829250000	+54,67	-19,31	9999000000	+40,63	-13,35

22174325_2

Panozzo 22174326

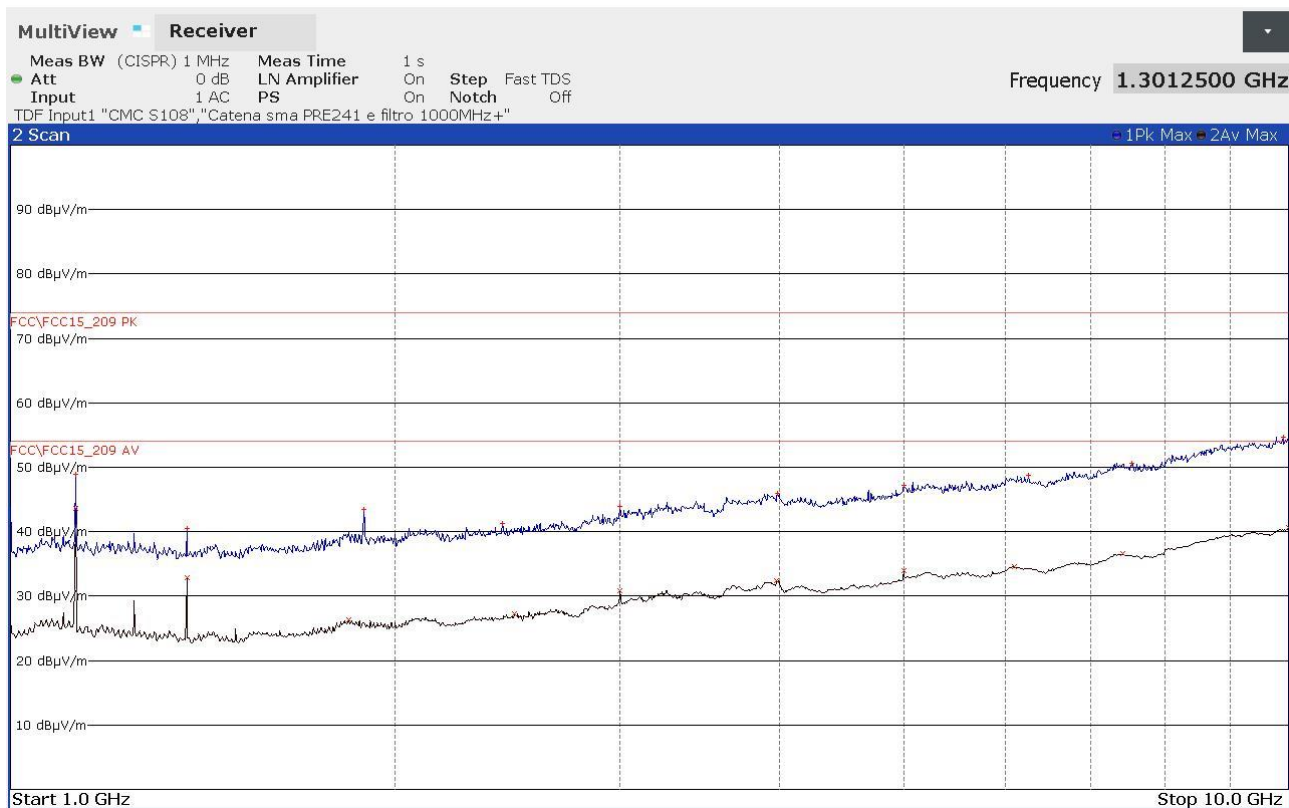


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
1125000000	+49,84	-24,14	1000000000	+44,85	-9,13
1375000000	+42,40	-31,58	1375000000	+35,60	-18,38
1890250000	+45,36	-28,62	1875000000	+26,65	-27,33
2494500000	+40,76	-33,22	2000000000	+28,54	-25,44
2998250000	+44,44	-29,54	2998250000	+30,87	-23,11
3965000000	+46,01	-27,97	3977000000	+32,31	-21,67
4950500000	+47,14	-26,84	4999750000	+33,97	-20,01
6135000000	+49,10	-24,88	6086750000	+34,63	-19,35
7614000000	+50,73	-23,25	7413000000	+36,51	-17,47
9951250000	+54,60	-19,38	9999250000	+40,65	-13,33

22174326_2

Panozzo 22174327

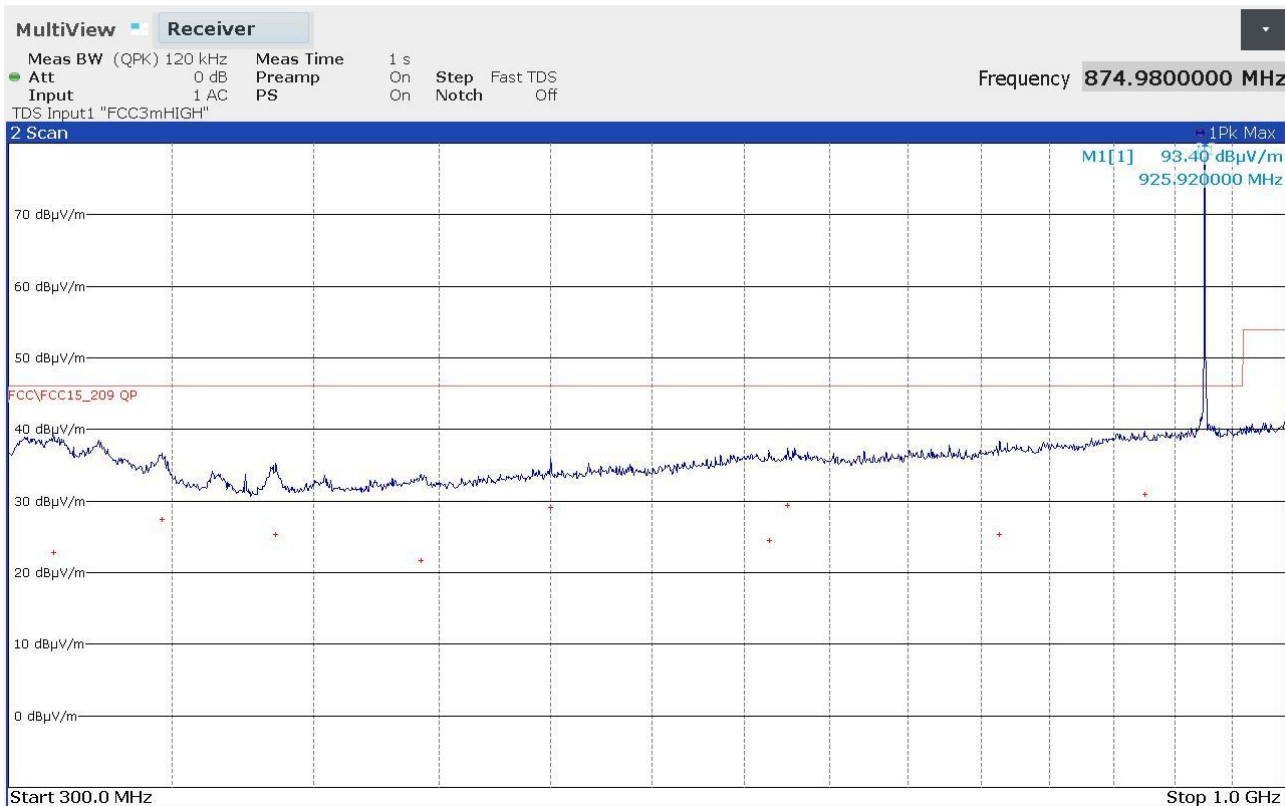


FINAL RESULT TABLE

MAX PEAK			AVERAGE		
Freq Hz	Lev dBuV/m	Margin dB	Freq Hz	Lev dBuV/m	Margin dB
1125000000	+48,85	-25,13	1125000000	+43,64	-10,34
1375000000	+40,43	-33,55	1375000000	+32,83	-21,15
1890750000	+43,39	-30,59	1838250000	+26,34	-27,64
2426500000	+41,25	-32,73	2480750000	+27,23	-26,75
2998500000	+43,90	-30,08	2998250000	+30,87	-23,11
3980500000	+46,02	-27,96	3977250000	+32,33	-21,65
4998500000	+47,19	-26,79	4999750000	+33,99	-19,99
6259500000	+48,76	-25,22	6101000000	+34,62	-19,36
7543500000	+50,70	-23,28	7414000000	+36,53	-17,45
9906500000	+54,72	-19,26	9999750000	+40,66	-13,32

22174327_2

Panozzo 22174339



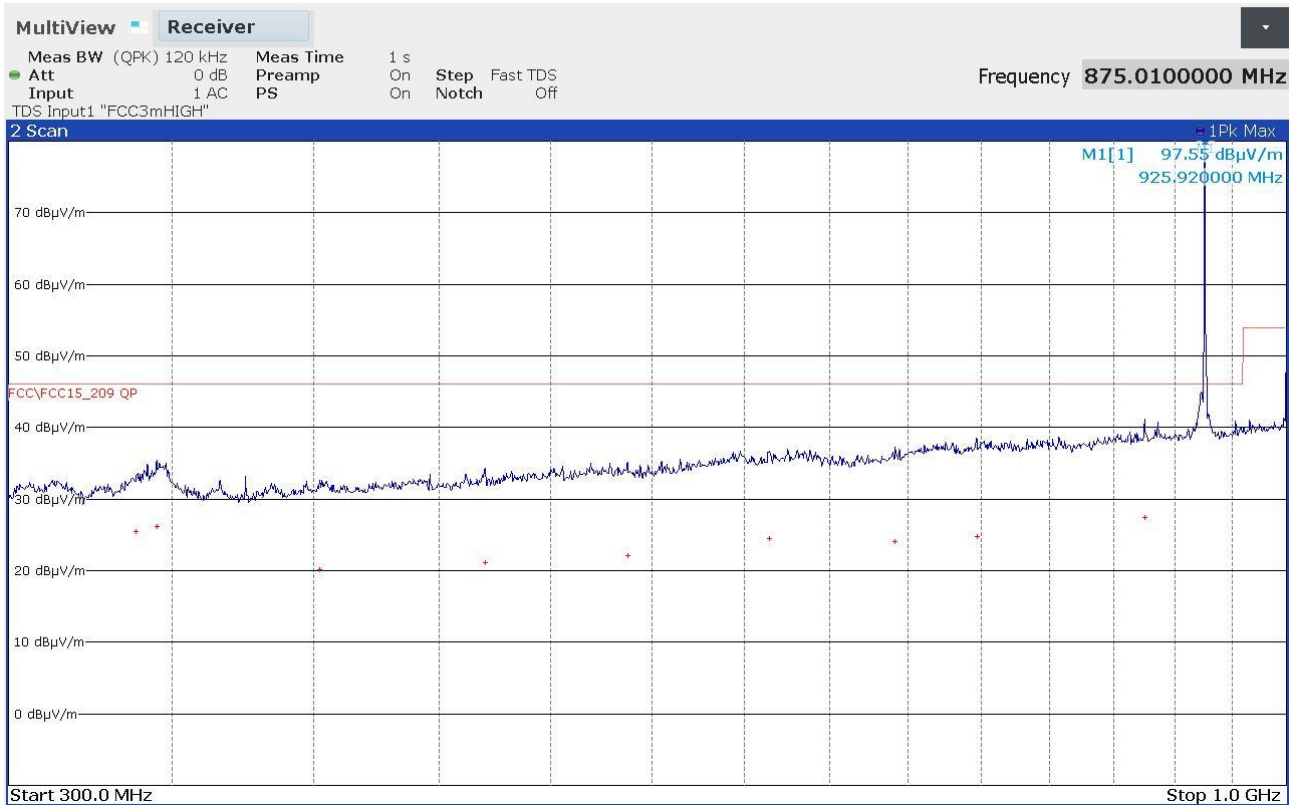
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
313140000	+22,75	-23,27
346590000	+27,43	-18,59
385950000	+25,30	-20,72
442380000	+21,70	-24,32
500010000	+29,05	-16,97
614160000	+24,48	-21,54
625020000	+29,41	-16,61
763320000	+25,30	-20,72
874980000	+30,88	-15,14

22174339_2

Panozzo 22174340



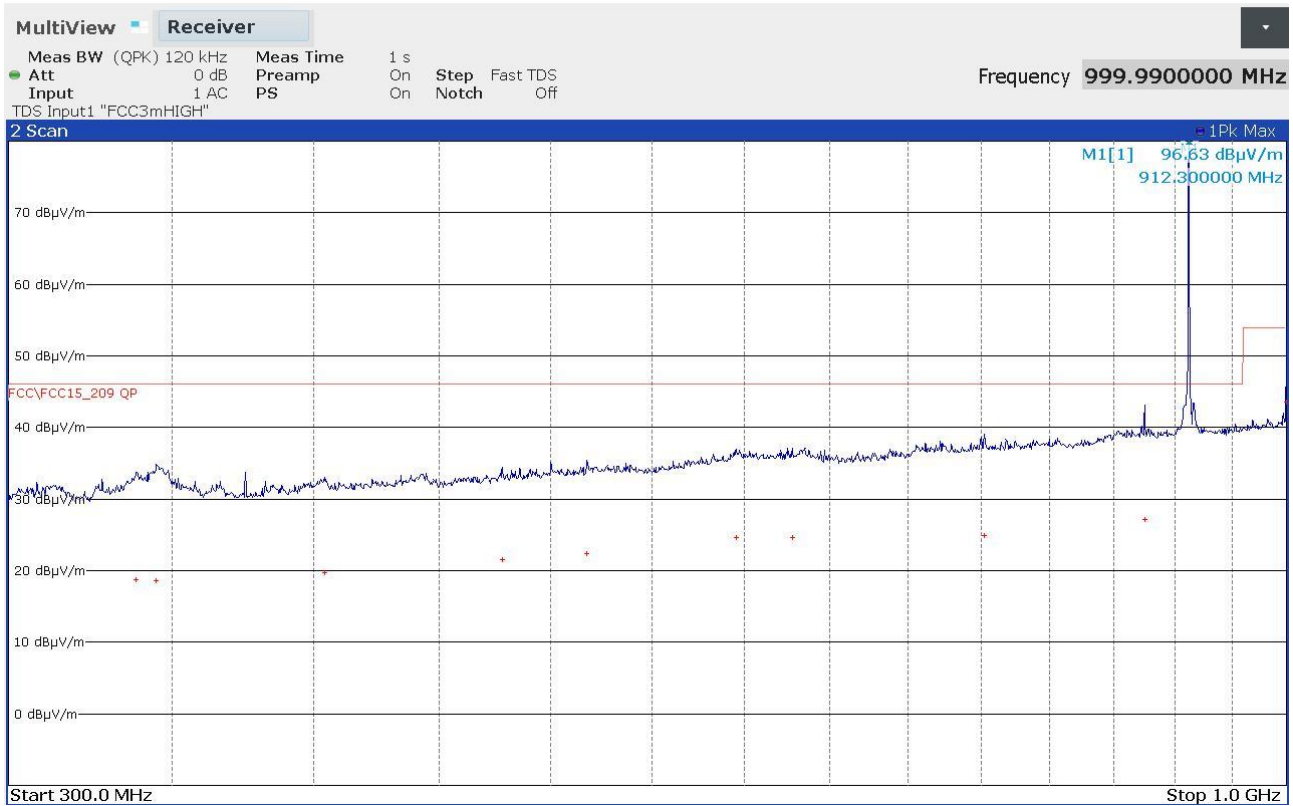
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
338310000	+25,40	-20,62
344940000	+26,16	-19,86
402240000	+20,14	-25,88
469950000	+21,11	-24,91
537480000	+22,05	-23,97
614580000	+24,53	-21,49
691560000	+24,10	-21,92
746940000	+24,79	-21,23
875010000	+27,42	-18,60

22174340_2

Panozzo 22174341



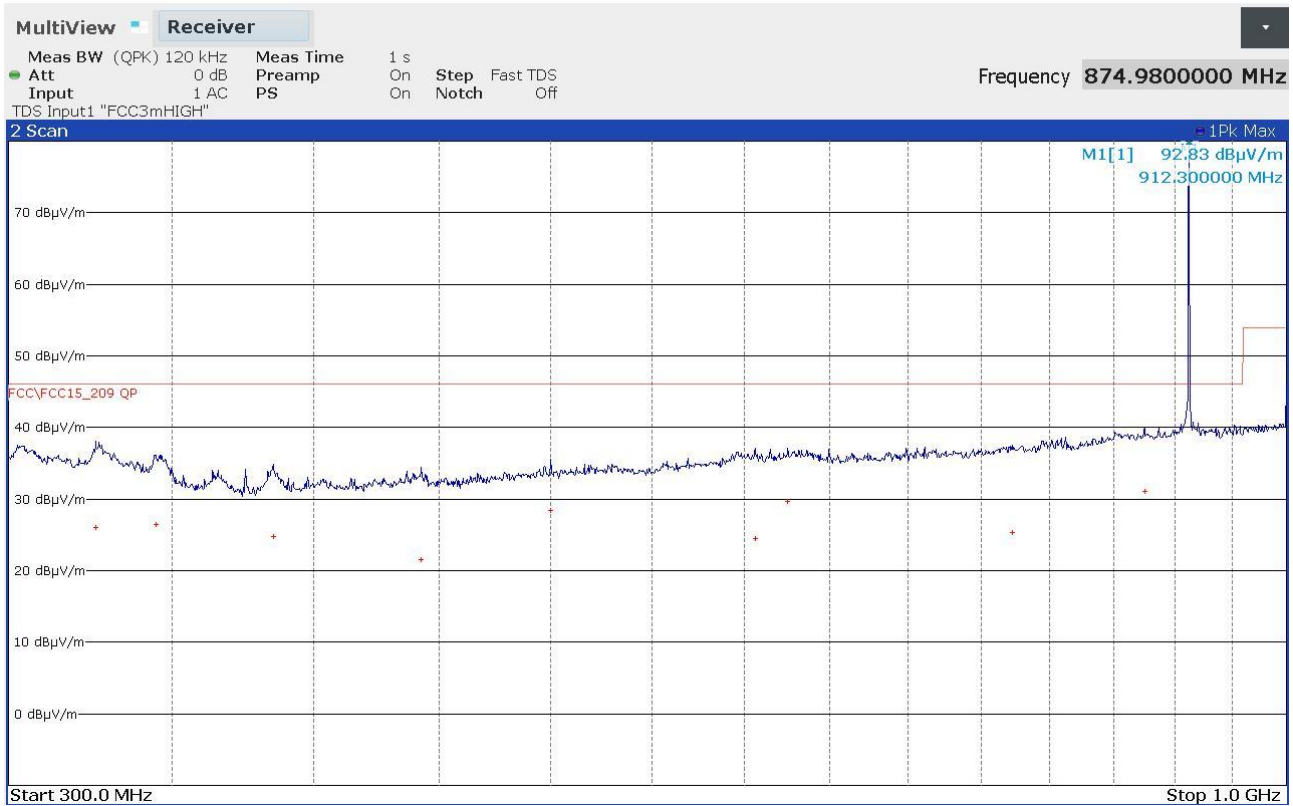
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
338340000	+18,80	-27,22
344730000	+18,54	-27,48
403980000	+19,70	-26,32
477570000	+21,48	-24,54
517440000	+22,38	-23,64
595260000	+24,63	-21,39
627930000	+24,67	-21,35
752250000	+24,95	-21,07
874980000	+27,17	-18,85
999990000	+43,60	-10,38

22174341_2

Panozzo 22174342



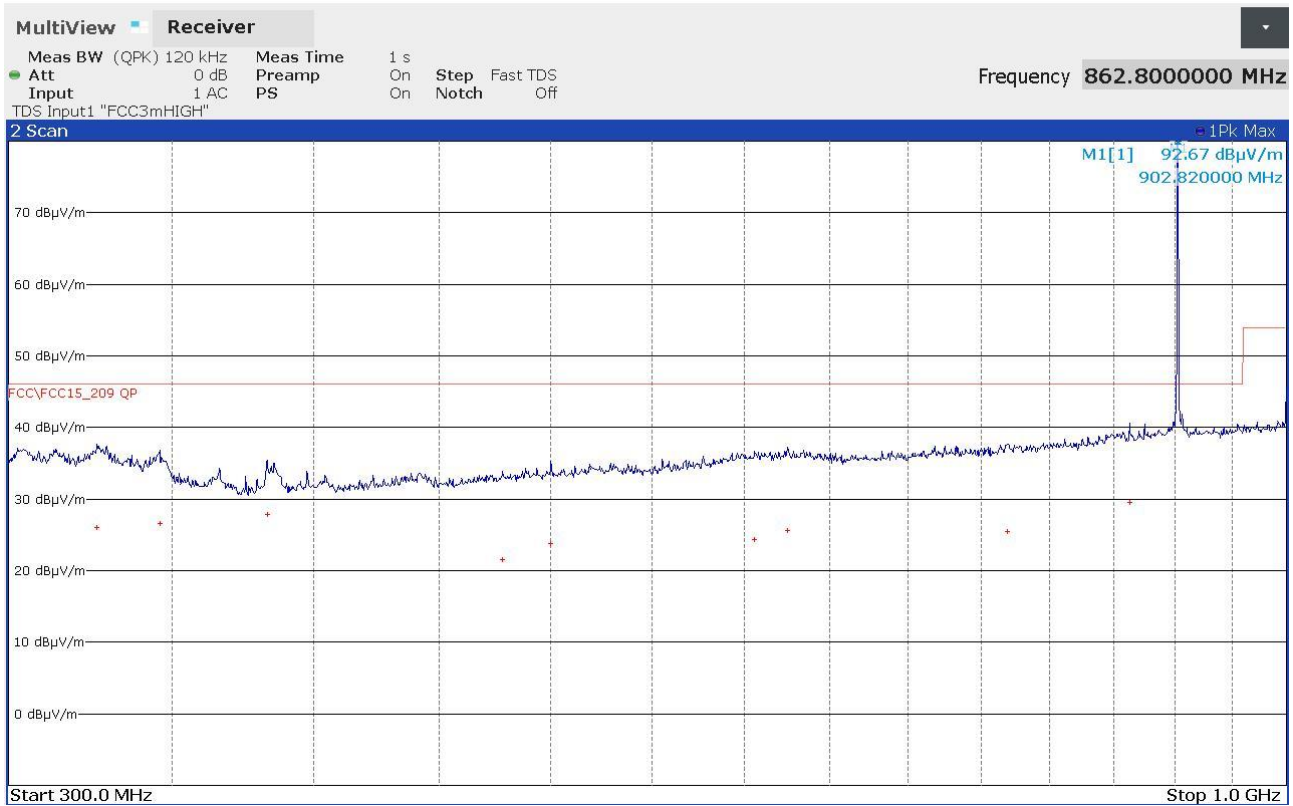
FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
325800000	+26,07	-19,95
344610000	+26,40	-19,62
384990000	+24,76	-21,26
442560000	+21,61	-24,41
499980000	+28,44	-17,58
606180000	+24,48	-21,54
624990000	+29,65	-16,37
772380000	+25,39	-20,63
874980000	+31,07	-14,95

22174342_2

Panozzo 22174343



FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV/m	Margin dB
326070000	+26,02	-20,00
346020000	+26,52	-19,50
382740000	+27,79	-18,23
477750000	+21,54	-24,48
500040000	+23,77	-22,25
605850000	+24,29	-21,73
625020000	+25,57	-20,45
768690000	+25,53	-20,49
862800000	+29,47	-16,55

22174343_2