

**TEST REPORT**
Nr. R20238701**Federal Communication Commission (FCC)**

Report Reference No.	R20238701
Date of issue:	11.01.2021
Total number pages:	40
Applicant's name	Caen RFID S.r.l.
Address	Via Vetraia, 11 – 55049 Viareggio (LU) – Italy
Test specification:	
Standards	FCC Rules & Regulations, Title 47:2019 Part 15 paragraph(s): 209
Non-standard test method	N/A
Test Report Form No.	15-247_HoppingCMC
Test Report Form(s) Originator ..	CMC Centro Misure Compatibilità S.r.l.
Master TRF	2020-10
General disclaimer:	
The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of CMC Centro Misure Compatibilità S.r.l.	
Test item description	R1280IU – skid – RAIN RFID Mini Sled Reader FCC
Trademark	Caen RFID
Manufacturer	Caen RFID S.r.l.
Model / Type reference	WR1280IXUSAA
FCC ID	UVECAENRFID032
Rating(s)	3,7 Vdc from battery 5 Vdc from USB
Report	
Tested by (name + signature)	G. Gandini
Approved by (name + signature)	R. Beghetto



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2 Reference standard	
FCC Rules and Regulation Title 47 part 15:2019	Radio frequency devices
3 List of attachments	
Attachment 1: Instruments list, measurement uncertainty, judgement of compliance and quality manual references Attachment 2: Components list	
4 Deviation(s) from test specification	
None	
5 Testing location	
CMC Centro Misure Compatibilità 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	11.01.2021	--



Testing and sampling:	
Date of receipt of test item	13.11.2020
Testing start date	15.12.2020
Testing end date	07.01.2021
Sampling procedure.....	Equipment used for testing was picked up by the manufacturer, at the end of the production process with random criterion. The results relate to the sample as it has been received.
Internal identification	Adhesive label with the product number P201186
General remarks:	
This report shall not be reproduced, except in full, without the written approval of CMC. The test results 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.	
Possible test case verdicts:	
Test case does not apply to the test object:	N/A (Not Applicable)
Test object does meet the requirement:	P (Pass)
Test object does not meet the requirement:	F (Fail)
Test object does not performed:	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 test item(s)

Description	R1280IU – skid – RAIN RFID Mini Sled Reader FCC						
Model Number	WR1280IXUSAA						
FCC ID	UVECAENRFID032						
Serial Number	0001000120400001						
Brand name	Caen RFID						
Frequency band	2400 – 2483,5 MHz						
Ports.....	Port name and description	Cable					
		Specified length [m]	Attached during test	Shielded			
	USB cable	< 3	☒	☒			
Rated power supply	Voltage and Frequency		Reference poles				
			N	L1	L2	L3	PE
	☐	AC:	☐	☐	☐	☐	☐
	☐	AC:	☐	☐	☐	☐	☐
	☒	DC: 3,7 V from battery					☐
Test configuration	☐	Table top equipment					
	☐	Floor standing equipment					
	☒	Hand-held equipment					
Type of equipment	☒	Transmitter unit					
	☒	Receiver unit					
Type of station	☐	Fixed station					
	☒	Portable station					
	☐	Mobile station					
Components list	Attachment 2						
Operating modes	No.	Operating mode of test item					
	1	2 radio enabled, 900 MHz frequency hopping and Bluetooth frequency hopping					
Declination of responsibility	Components list and software/hardware version (if reported) are provided by the manufacturer. CMC Centro Misure Compatibilità S.r.l. cannot be considered responsible for these information, for any other document sent by the manufacturer 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 47:2019 Part 15 paragraph(s): 209			
Clause	Requirement – Test case	Basic standard	Verdict
Part 15.209	Radiated emissions and spurious emission	ANSI C63.10	P





Normative references	
Reference no.	Description
FCC Rules and Regulation Title 47 part 15:2019	--
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 C63.10:2013	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices



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.		
Measurement uncertainties	Attachment 1		



9 Test results

9.1 Emissions in restricted frequency bands and in unrestricted frequency bands

Tested by	G. Gandini	
Test date	15.12.2020	
Test location (stand)	Semi-anechoic chamber (CMC A070)	
Reference standards	FCC Rules and Regulation; Titles 47 Part. 15.209 ANSI C63.10 cl. 6.3, 6.4, 6.5 and 6.6	
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	☒	SAC with measurement distance [m]: 10
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	48,5 to 13,8
0,490 to 1,705	30	33,8 to 22,9
1,705 to 30	30	29,5
30 to 88	3	40
88 to 216	3	43,5
216 to 960	3	46,0
960 to 1000	3	54

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 results have been extrapolated to the specified distance using an extrapolation factor

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



The restricted frequency bands are listed in the following table

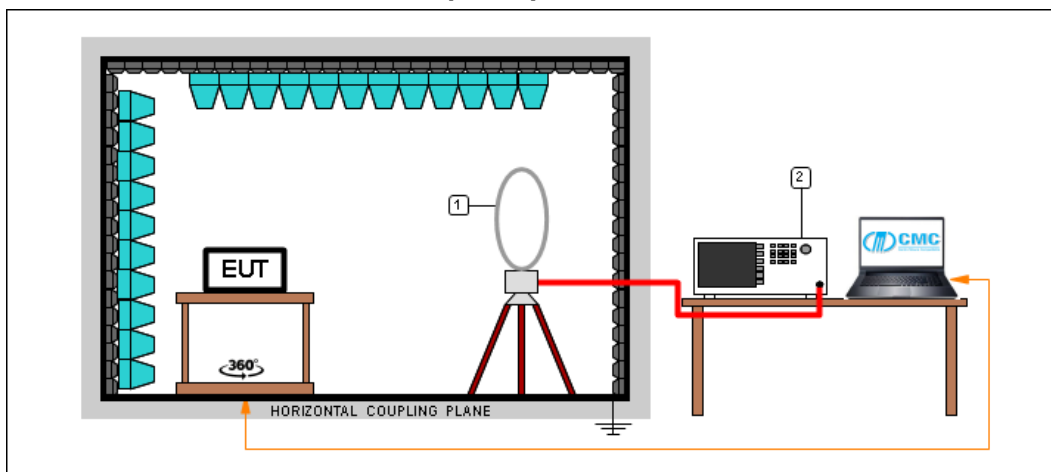
MHz	MHz	MHz	GHz
0,090 – 0,110	16,42 – 16,423	399,9 – 410	4,5 – 5,15
0,495 – 0,505	16,69475 – 16,69525	608 – 614	5,35 – 5,46
2,1735 – 2,1905	16,80425 – 16,80475	960 – 1240	7,25 – 7,75
4,125 – 4,128	25,5 – 25,67	1300 – 1427	8,025 – 8,5
4,17725 – 4,17775	37,5 – 38,25	1435 – 1626,5	9,0 – 9,2
4,20725 – 4,20775	73 – 74,6	1645,5 – 1646,5	9,3 – 9,5
6,215 – 6,218	74,8 – 75,2	1660 – 1710	10,6 – 12,7
6,26775 – 6,26825	108 – 121,94	1718,8 – 1722,2	13,25 – 13,4
6,31175 – 6,31225	123 – 138	2200 – 2300	14,47 – 14,5
8,291 – 8,294	149,9 – 150,05	2310 – 2390	15,35 – 16,2
8,362 – 8,366	156,52475 – 156,52525	2483,5 – 2500	17,7 – 21,4
8,37625 – 8,38675	156,7 – 156,9	2690 – 2900	22,01 – 23,12
8,41425 – 8,41475	162,0125 – 167,17	3260 – 3267	23,6 – 24,0
12,29 – 12,293	167,72 – 173,2	3332 – 3339	31,2 – 31,8
12,51975 – 12,52025	240 – 285	3345,8 – 3358	36,43 – 36,5
12,57675 – 12,57725	322 – 335,4	3600 – 4400	Above 38,6
13,36 – 13,41			

Acceptance limits for emissions in non-restricted frequency bands

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.

Test setup

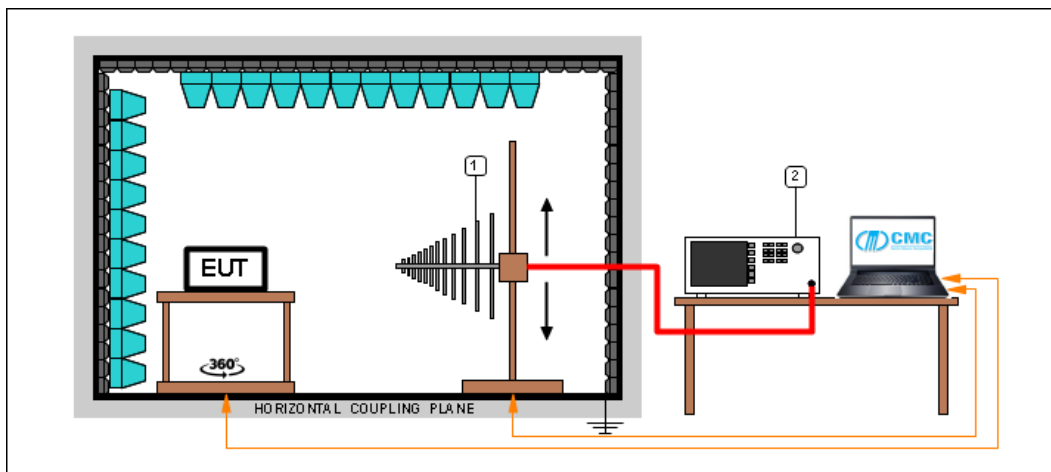
Frequency ≤ 30 MHz



Test setup PE004_01

Nr.	Id. Number	Manufacturer	Model	Description
2	CMC S164	Rohde & Schwarz	ESU26	Receiver 20 Hz - 26.5 GHz
1	CMC S127	Schaffner	HLA6120	Loop Antenna 9kHz - 30MHz

Frequency ≤ 1 GHz



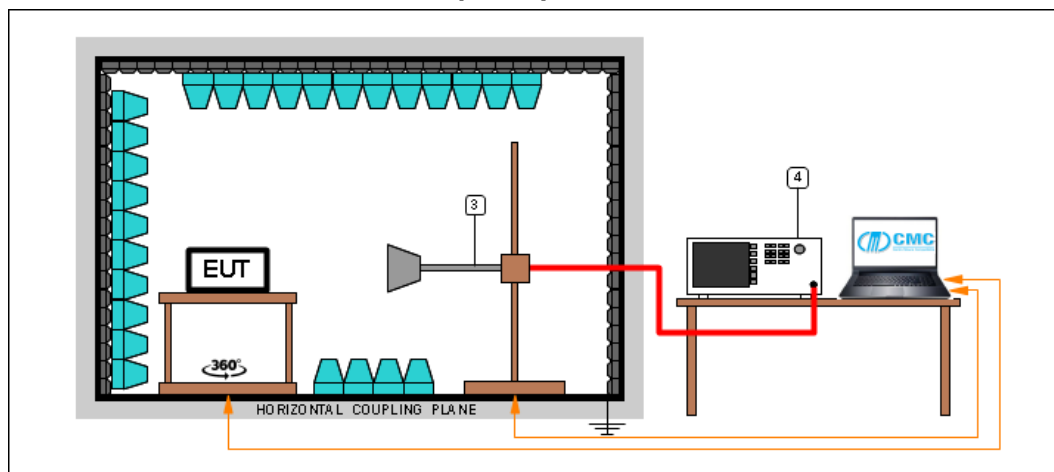
Test setup PE004_02

Nr.	Id. Number	Manufacturer	Model	Description
2	CMC S164	Rohde & Schwarz	ESU26	Receiver 20 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 S164	Rohde & Schwarz	ESU26	Receiver 20 Hz - 26.5 GHz
1	CMC S287	Schwarzbeck	VUSLP 9111B	Broadband Antenna

Frequency > 1 GHz



Test setup PE004_04

Nr.	Id. Number	Manufacturer	Model	Description
4	CMC S164	Rohde & Schwarz	ESU26	Receiver 20 Hz - 26.5 GHz
3	CMC S108	Emco	3115	Waveguide antenna

Test setup PE004_05

Nr.	Id. Number	Manufacturer	Model	Description
4	CMC S164	Rohde & Schwarz	ESU26	Receiver 20 Hz - 26.5 GHz
3	CMC S290	Schwarzbeck	BBHA 9170	Horn Antenna (15-40 GHz)

Result

Polarization	Frequency Range (MHz)	Graphs	Remarks	Result
V	30 – 300	G20222701	--	P
H	30 – 300	G20222702	--	P
H	300 – 1000	G20222703	--	P
V	300 – 1000	G20222704	--	P
Loop	0,009 – 30	G20222705	--	P
H	1000 – 3000	G20238706	--	P
V	1000 – 3000	G20238707	--	P
V	3000 – 18000	G20238708	--	P
H	3000 – 18000	G20238709	--	P
H	18000 – 26000	G20238710	--	P
V	18000 – 26000	G20238711	--	P

Remarks: EUT was tested in 3 orthogonal planes, graphs are related to the highest detected levels. Peaks above the limits are due to the main transmitting frequencies

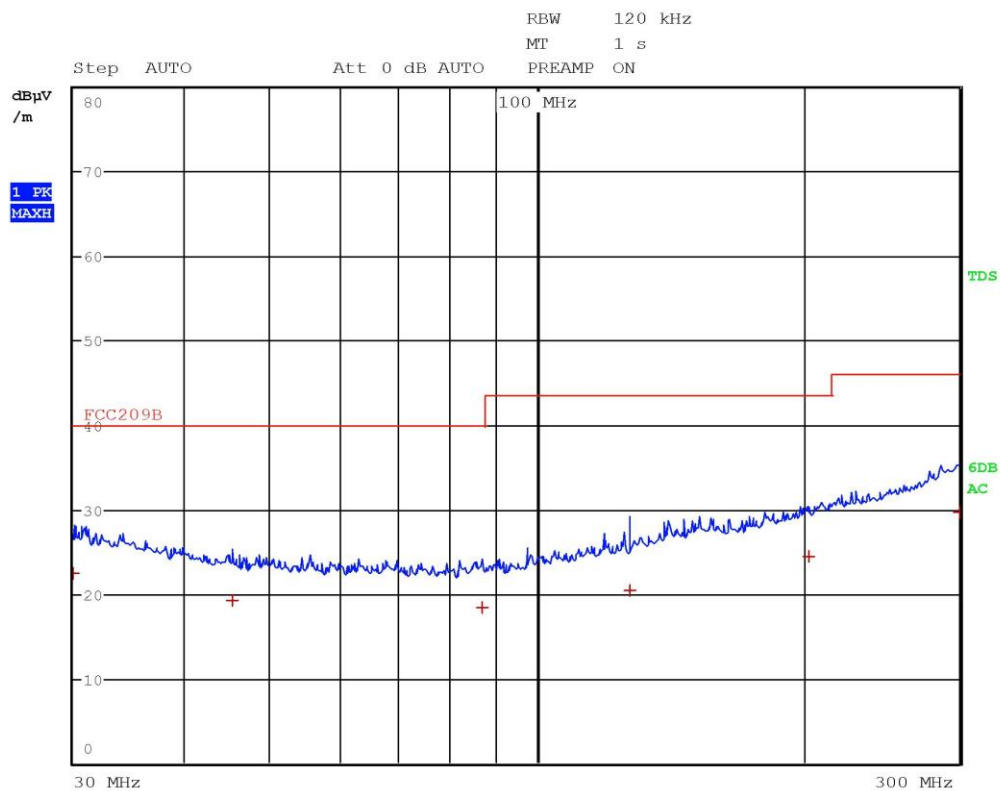
Graphs Legend

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

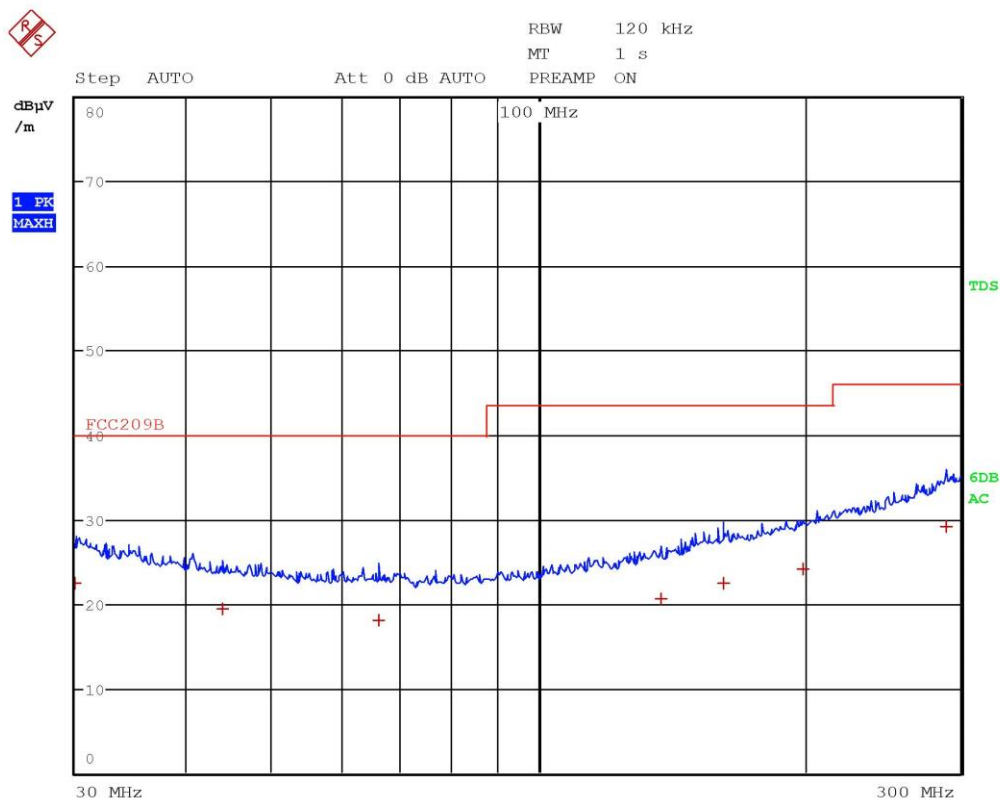


Gandini 20222701



EDIT PEAK LIST (Final Measurement Results)			
Trace1:	FCC209B		
Trace2:	---		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμV/m	DELTA LIMIT dB
1 Quasi Peak	30.04 MHz	22.45	-17.54
1 Quasi Peak	45.32 MHz	19.30	-20.69
1 Quasi Peak	86.64 MHz	18.46	-21.53
1 Quasi Peak	127.24 MHz	20.39	-23.12
1 Quasi Peak	202.48 MHz	24.50	-19.01
1 Quasi Peak	299.6 MHz	29.66	-16.35

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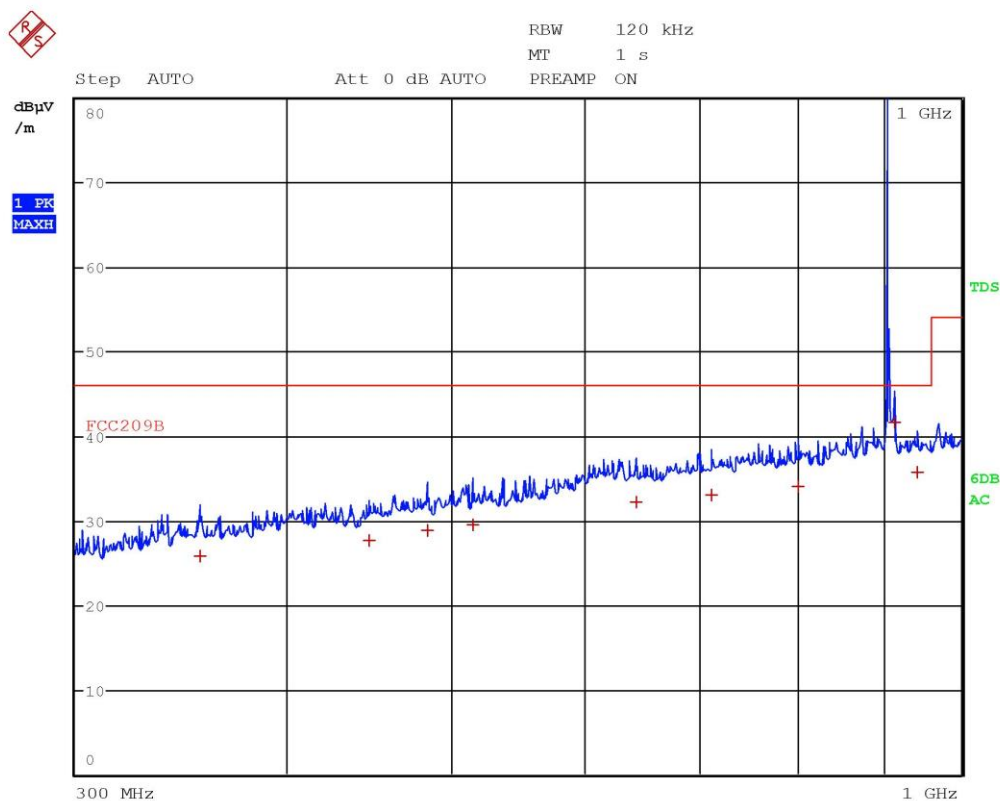


Gandini 20222702



EDIT PEAK LIST (Final Measurement Results)			
Trace1:	FCC209B		
Trace2:	---		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμV/m	DELTA LIMIT dB
1 Quasi Peak	30.04 MHz	22.44	-17.55
1 Quasi Peak	44.04 MHz	19.33	-20.66
1 Quasi Peak	66.08 MHz	18.06	-21.93
1 Quasi Peak	137.6 MHz	20.64	-22.87
1 Quasi Peak	162.04 MHz	22.39	-21.12
1 Quasi Peak	199.2 MHz	24.15	-19.36
1 Quasi Peak	288.96 MHz	29.10	-16.91

Gandini 20222702

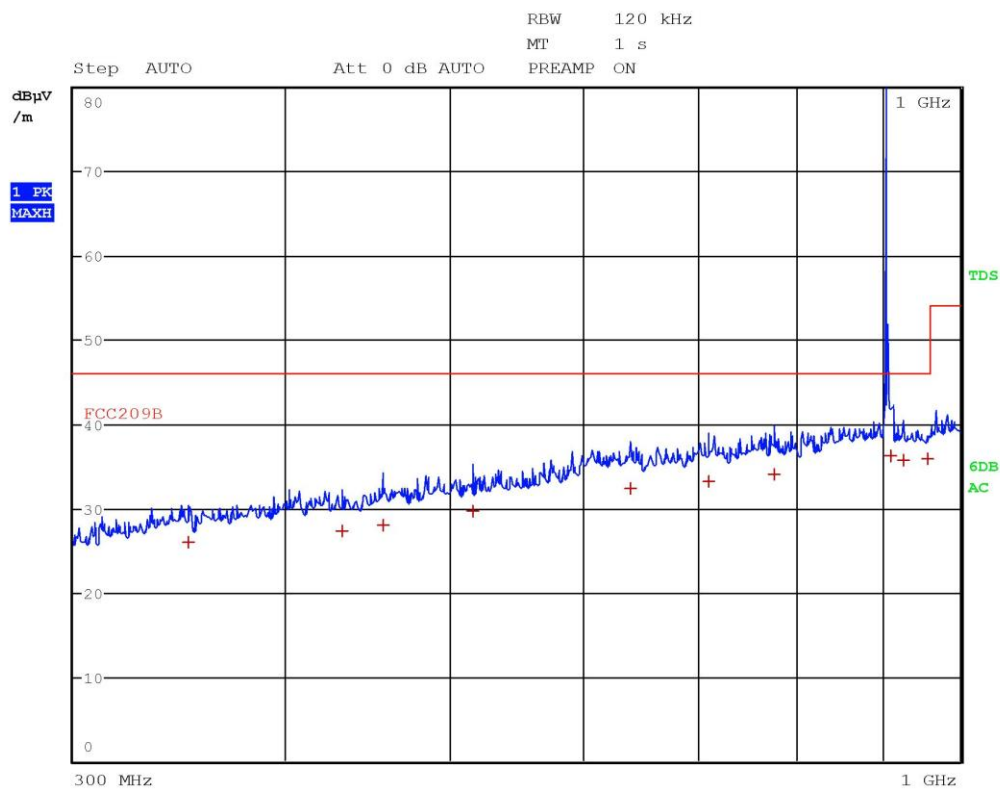


Gandini 20222703



EDIT PEAK LIST (Final Measurement Results)			
Trace1:	FCC209B		
Trace2:	---		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμV/m	DELTA LIMIT dB
1 Quasi Peak	355.2 MHz	25.82	-20.19
1 Quasi Peak	446.92 MHz	27.58	-18.43
1 Quasi Peak	483.96 MHz	28.75	-17.26
1 Quasi Peak	515 MHz	29.53	-16.48
1 Quasi Peak	643.2 MHz	32.18	-13.83
1 Quasi Peak	711.52 MHz	33.10	-12.91
1 Quasi Peak	801.68 MHz	34.04	-11.97
1 Quasi Peak	914.24 MHz	41.53	-4.48
1 Quasi Peak	942.04 MHz	35.66	-10.35

Gandini 20222703

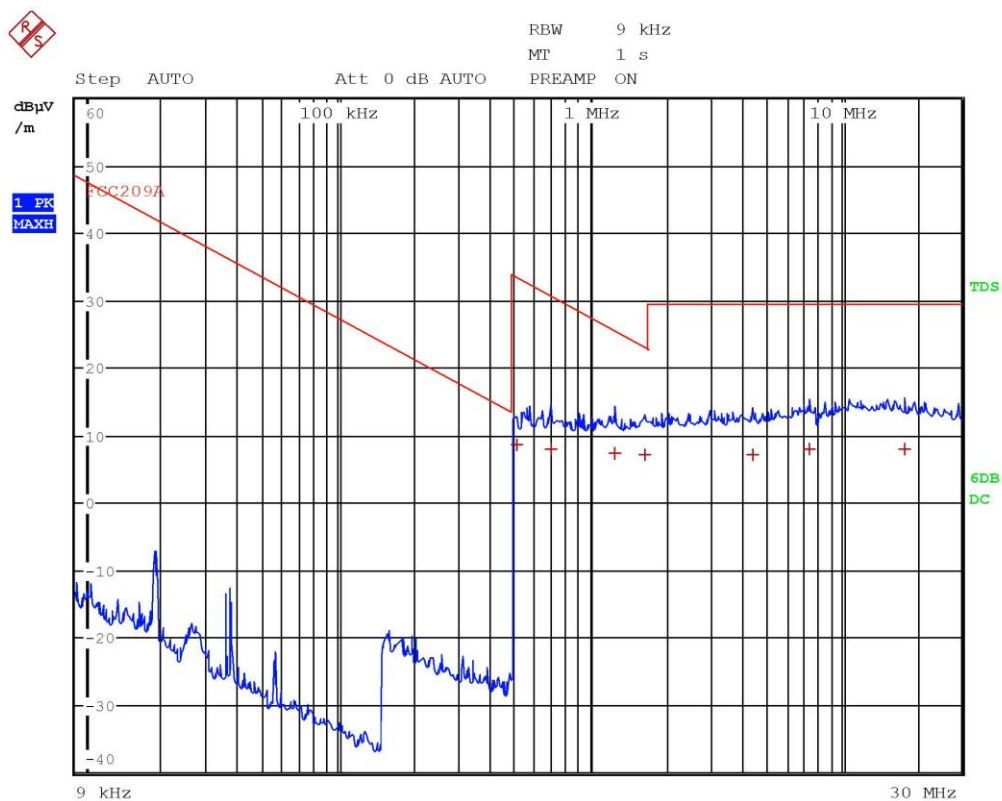


Gandini 20222704



EDIT PEAK LIST (Final Measurement Results)			
Trace1:	FCC209B		
Trace2:	---		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμV/m	DELTA LIMIT dB
1 Quasi Peak	350.64 MHz	25.98	-20.03
1 Quasi Peak	431.84 MHz	27.30	-18.71
1 Quasi Peak	457.12 MHz	28.00	-18.01
1 Quasi Peak	516.12 MHz	29.63	-16.38
1 Quasi Peak	638.6 MHz	32.32	-13.69
1 Quasi Peak	711.2 MHz	33.15	-12.86
1 Quasi Peak	776.76 MHz	33.96	-12.05
1 Quasi Peak	909.04 MHz	36.25	-9.76
1 Quasi Peak	925.68 MHz	35.79	-10.22
1 Quasi Peak	955.64 MHz	35.80	-10.21

Gandini 20222704



Gandini 20222705



EDIT PEAK LIST (Final Measurement Results)			
Trace1:	FCC209A		
Trace2:	---		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμV/m	DELTA LIMIT dB
1 Quasi Peak	506 kHz	8.73	-24.78
1 Quasi Peak	698 kHz	7.90	-22.82
1 Quasi Peak	1.246 MHz	7.38	-18.30
1 Quasi Peak	1.642 MHz	7.25	-16.03
1 Quasi Peak	4.418 MHz	7.18	-22.35
1 Quasi Peak	7.414 MHz	8.00	-21.53
1 Quasi Peak	17.91 MHz	8.02	-21.51

Gandini 20222705

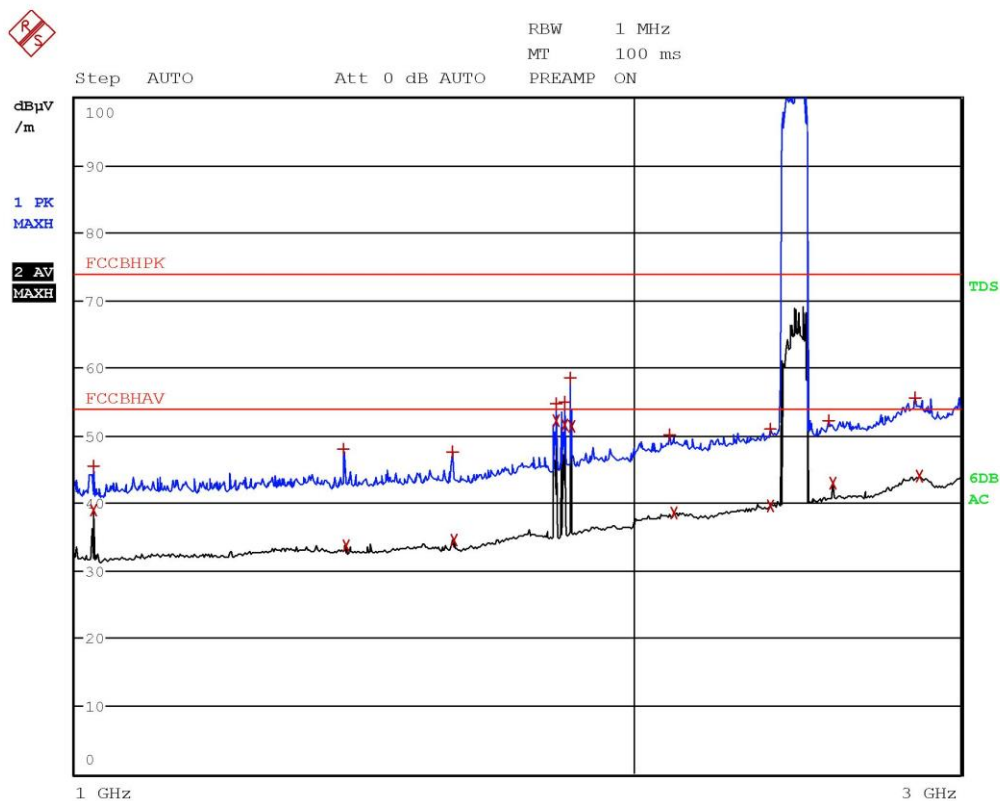


Gandini 20238706



EDIT PEAK LIST (Prescan Results)			
Trace1:	FCCBHPK		
Trace2:	FCCBHAV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμV/m	DELTA LIMIT dB
1 Max Peak	1.022 GHz	44.98	-28.99
2 Average	1.0224 GHz	36.62	-17.36
2 Average	1.4856 GHz	33.80	-20.17
1 Max Peak	1.4876 GHz	44.67	-29.30
1 Max Peak	1.7308 GHz	46.85	-27.12
2 Average	1.732 GHz	35.17	-18.80
2 Average	1.8076 GHz	46.96	-7.01
1 Max Peak	1.8084 GHz	49.89	-24.08
1 Max Peak	1.8396 GHz	49.37	-24.61
2 Average	1.8396 GHz	45.27	-8.70
1 Max Peak	1.8524 GHz	53.22	-20.75
2 Average	1.8524 GHz	50.37	-3.60
2 Average	2.1 GHz	38.75	-15.22
1 Max Peak	2.1112 GHz	49.86	-24.11
2 Average	2.33 GHz	42.26	-11.71
1 Max Peak	2.3544 GHz	51.12	-22.85
2 Average	2.4899 GHz	44.27	-9.70
1 Max Peak	2.4951 GHz	52.53	-21.45
1 Max Peak	2.8127 GHz	55.34	-18.63
2 Average	2.8551 GHz	44.30	-9.67

Gandini 20238706

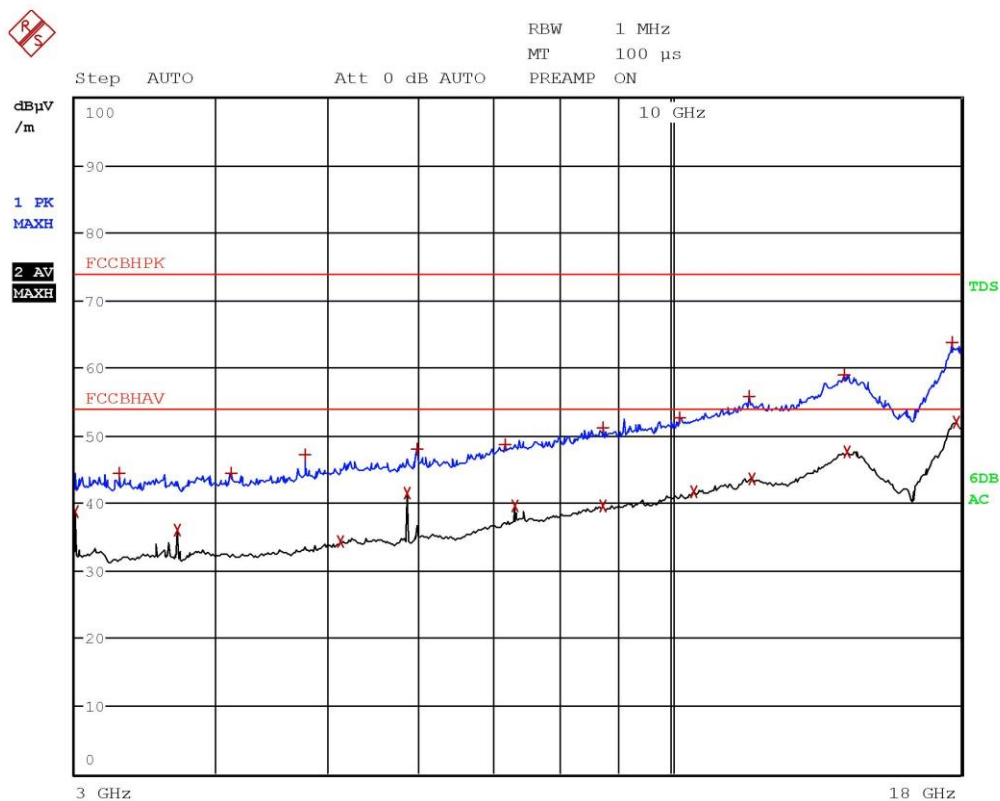


Gandini 20238707



EDIT PEAK LIST (Prescan Results)			
Trace1:	FCCBHPK		
Trace2:	FCCBHAV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL, dBμV/m	DELTA LIMIT dB
1 Max Peak	1.0224 GHz	45.47	-28.50
2 Average	1.0228 GHz	39.02	-14.95
1 Max Peak	1.3952 GHz	47.95	-26.02
2 Average	1.3992 GHz	33.70	-20.27
1 Max Peak	1.598 GHz	47.57	-26.40
2 Average	1.5984 GHz	34.53	-19.44
1 Max Peak	1.8144 GHz	54.78	-19.20
2 Average	1.8144 GHz	52.30	-1.67
1 Max Peak	1.8364 GHz	54.97	-19.00
2 Average	1.8364 GHz	51.57	-2.40
1 Max Peak	1.8496 GHz	58.45	-15.52
2 Average	1.85 GHz	51.40	-2.57
1 Max Peak	2.0924 GHz	50.02	-23.95
2 Average	2.1024 GHz	38.64	-15.33
2 Average	2.37 GHz	39.69	-14.28
1 Max Peak	2.3712 GHz	50.88	-23.09
1 Max Peak	2.5471 GHz	52.22	-21.75
2 Average	2.5591 GHz	42.90	-11.08
1 Max Peak	2.8367 GHz	55.58	-18.39
2 Average	2.8503 GHz	44.00	-9.97

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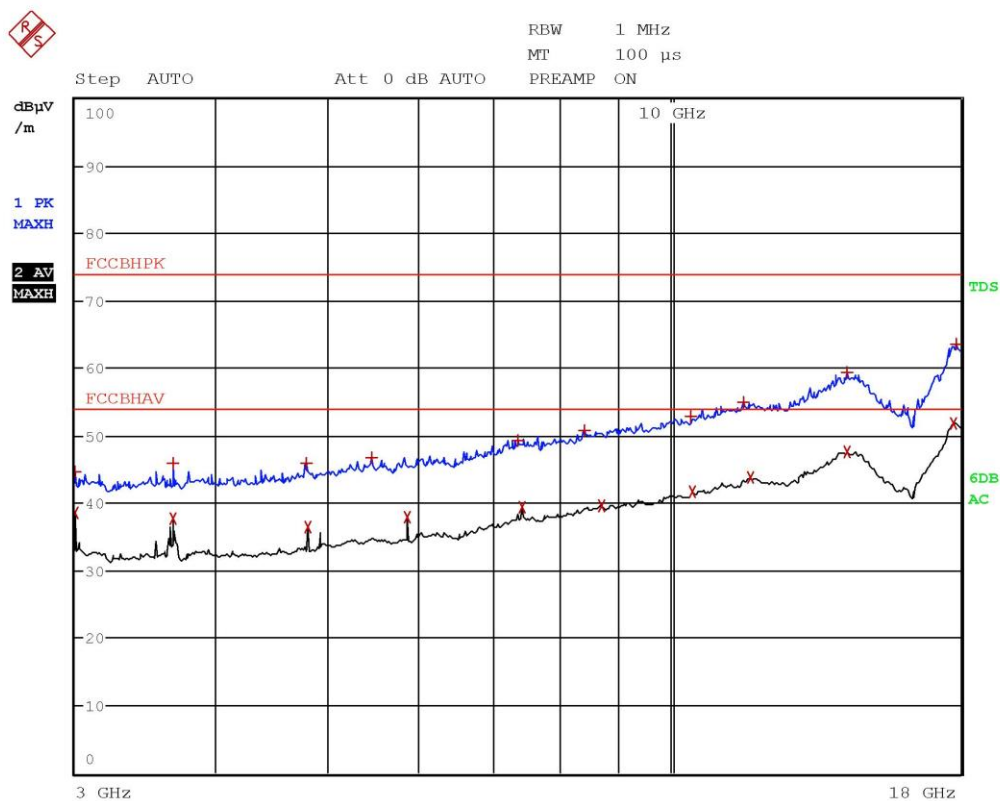


Gandini 20238708



EDIT PEAK LIST (Prescan Results)			
Trace1:	FCCBHPK		
Trace2:	FCCBHAV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL, dBμV/m	DELTA LIMIT dB
2 Average	3 GHz	38.79	-15.18
1 Max Peak	3.276 GHz	44.52	-29.45
2 Average	3.6892 GHz	35.97	-18.00
1 Max Peak	4.1152 GHz	44.43	-29.54
1 Max Peak	4.7812 GHz	47.19	-26.78
2 Average	5.1268 GHz	34.38	-19.60
2 Average	5.866 GHz	41.42	-12.55
1 Max Peak	5.9992 GHz	47.96	-26.01
1 Max Peak	7.1608 GHz	48.65	-25.33
2 Average	7.2964 GHz	39.53	-14.44
1 Max Peak	8.7184 GHz	51.20	-22.77
2 Average	8.7208 GHz	39.54	-14.43
1 Max Peak	10.1932 GHz	52.62	-21.35
2 Average	10.4776 GHz	41.80	-12.17
1 Max Peak	11.734 GHz	55.77	-18.20
2 Average	11.8036 GHz	43.69	-10.28
1 Max Peak	14.2428 GHz	58.92	-15.05
2 Average	14.2892 GHz	47.59	-6.38
1 Max Peak	17.6716 GHz	63.71	-10.26
2 Average	17.8576 GHz	52.00	-1.97

Gandini 20238708

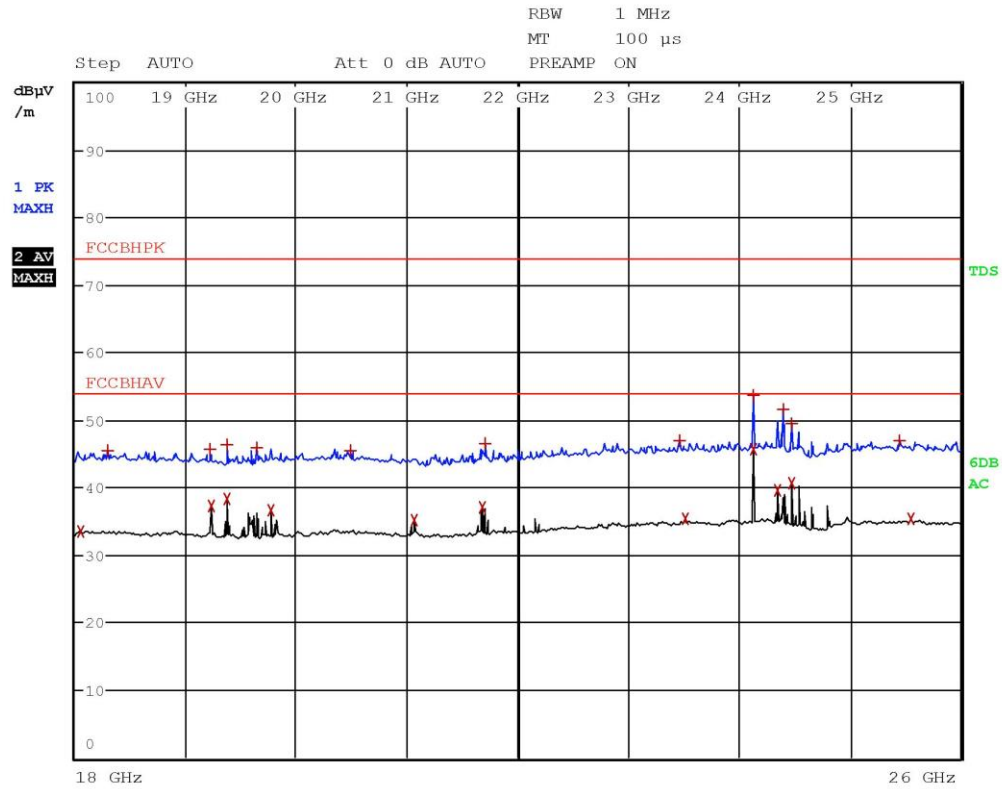


Gandini 20238709



EDIT PEAK LIST (Prescan Results)			
Trace1:	FCCBHPK		
Trace2:	FCCBHAV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL, dBμV/m	DELTA LIMIT dB
2 Average	3 GHz	38.55	-15.42
1 Max Peak	3.0004 GHz	44.65	-29.32
1 Max Peak	3.6528 GHz	45.85	-28.12
2 Average	3.6528 GHz	37.62	-16.35
1 Max Peak	4.7856 GHz	45.95	-28.02
2 Average	4.8104 GHz	36.51	-17.46
1 Max Peak	5.4604 GHz	46.83	-27.14
2 Average	5.8656 GHz	37.91	-16.06
1 Max Peak	7.3576 GHz	49.27	-24.70
2 Average	7.422 GHz	39.30	-14.67
1 Max Peak	8.4108 GHz	50.79	-23.18
2 Average	8.7168 GHz	39.61	-14.36
1 Max Peak	10.426 GHz	52.73	-21.24
2 Average	10.4628 GHz	41.62	-12.35
1 Max Peak	11.6128 GHz	55.03	-18.94
2 Average	11.7828 GHz	43.71	-10.26
1 Max Peak	14.3 GHz	59.40	-14.58
2 Average	14.3044 GHz	47.60	-6.37
2 Average	17.72 GHz	51.87	-2.10
1 Max Peak	17.8508 GHz	63.59	-10.38

Gandini 20238709

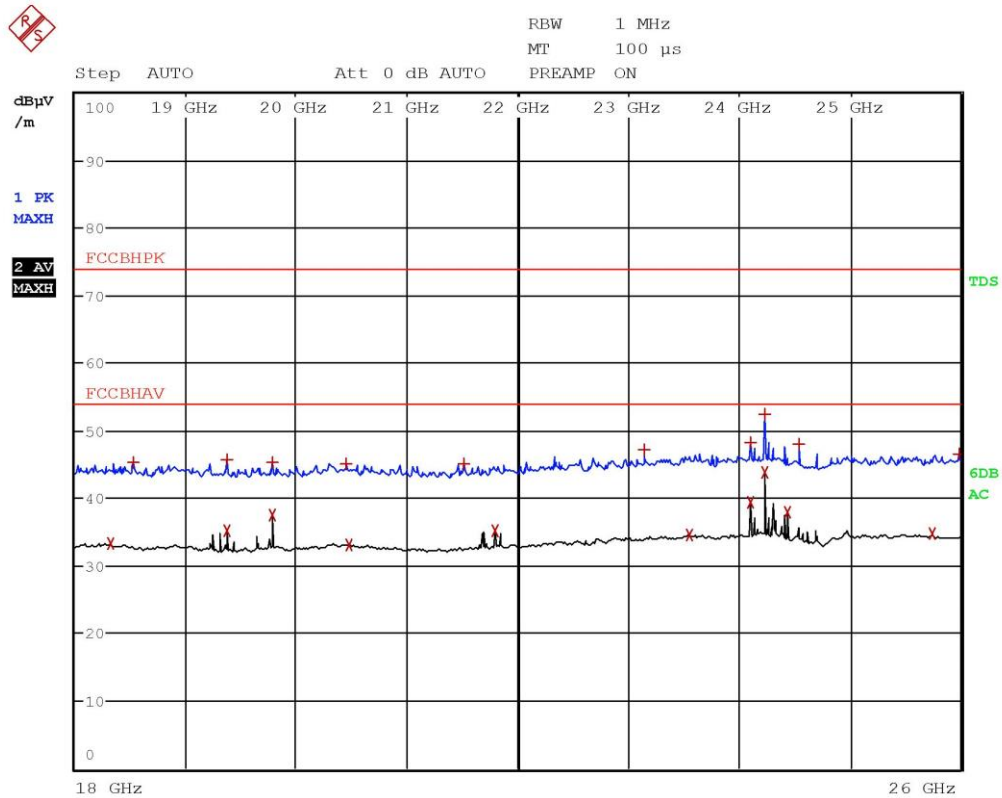


Gandini 20238710



EDIT PEAK LIST (Prescan Results)			
Trace1:	FCCBHPK		
Trace2:	FCCBHAV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμV/m	DELTA LIMIT dB
2 Average	18.0508 GHz	33.57	-20.40
1 Max Peak	18.2884 GHz	45.41	-28.56
1 Max Peak	19.2216 GHz	45.67	-28.30
2 Average	19.2252 GHz	37.18	-16.79
1 Max Peak	19.3692 GHz	46.38	-27.59
2 Average	19.3692 GHz	38.40	-15.57
1 Max Peak	19.6468 GHz	45.88	-28.09
2 Average	19.7688 GHz	36.75	-17.22
1 Max Peak	20.4876 GHz	45.50	-28.47
2 Average	21.0612 GHz	35.10	-18.88
2 Average	21.6796 GHz	37.02	-16.96
1 Max Peak	21.7092 GHz	46.53	-27.44
1 Max Peak	23.4576 GHz	47.00	-26.97
2 Average	23.5116 GHz	35.38	-18.59
1 Max Peak	24.1316 GHz	53.61	-20.36
2 Average	24.1316 GHz	45.59	-8.38
2 Average	24.348 GHz	39.51	-14.46
1 Max Peak	24.4016 GHz	51.50	-22.47
1 Max Peak	24.4792 GHz	49.55	-24.42
2 Average	24.4792 GHz	40.58	-13.39

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EDIT PEAK LIST (Prescan Results)			
Trace1:	FCCBHPK		
Trace2:	FCCBHAV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμV/m	DELTA LIMIT dB
2 Average	18.3168 GHz	33.28	-20.69
1 Max Peak	18.5192 GHz	45.32	-28.65
1 Max Peak	19.3776 GHz	45.74	-28.23
2 Average	19.3776 GHz	35.23	-18.74
1 Max Peak	19.7828 GHz	45.29	-28.68
2 Average	19.7828 GHz	37.44	-16.53
1 Max Peak	20.454 GHz	45.00	-28.97
2 Average	20.4708 GHz	33.15	-20.82
1 Max Peak	21.5096 GHz	45.13	-28.84
2 Average	21.7964 GHz	35.20	-18.77
1 Max Peak	23.1404 GHz	47.21	-26.76
2 Average	23.5552 GHz	34.62	-19.35
2 Average	24.098 GHz	39.49	-14.48
1 Max Peak	24.098 GHz	48.31	-25.66
1 Max Peak	24.228 GHz	52.38	-21.59
2 Average	24.228 GHz	43.70	-10.27
2 Average	24.4384 GHz	37.82	-16.15
1 Max Peak	24.54 GHz	47.94	-26.04
2 Average	25.7468 GHz	34.68	-19.29
1 Max Peak	25.988 GHz	46.43	-27.54

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Attachment 1

Instruments list

<i>Id. number</i>	<i>Manufacturer</i>	<i>Model</i>	<i>Description</i>	<i>Serial number</i>	<i>Last calibration</i>	<i>Due date calibration</i>
CMC S010	Rohde & Schwarz	ESH3-Z2	Impulses Limiting Device	- - -	January '21	January '22
CMC S164	Rohde & Schwarz	ESU26	EMC interference receiver	100052	January '21	January '22
CMC S200	Schwarzbeck	NSLK 8128	V-LISN	8128-273	January '21	January '22
CMC S260	CMC	Wfr_N	Shielded Cable	Wfr_ant10-1	November '20	November '21
CMC S261	CMC	Wfr_N	Shielded Cable	Wfr_ant20-1	November '20	November '21
CMC S262	CMC	Wfr_N_fix	Shielded Cable	Wfr_fix32-1	November '20	November '21
CMC S263	CMC	Wfr_N_fix	Shielded Cable	Wfr_fix31-1	November '20	November '21
CMC S264	CMC	Wfr_N	Shielded Cable	Wfr_ext03-1	November '20	November '21
CMC S271	Schwarzbeck	BBA 9106 + VHBB 9124	Biconical Antenna (30-300MHz)	831	June '19	June '22
CMC S287	Schwarzbeck	VUSLP 9111B	Log-periodic Antenna (200 MHz-3Ghz)	9111B-203	June '19	June '22
CMC S288	CMC	W_sma_white	Joint Shielded Cable	W_001	November '20	November '21
CMC S353	Rohde & Schwarz	ESW26	EMI Test Receiver 1 Hz - 26.5 GHz	101492	September '20	September '22



Attachment 1

Measurement uncertainty

Test	Test Setup	Expanded uncertainty	Note
Conducted emission CISPR 16 LISN 50uH 0,009-0,0150 MHz	PE001_01	3,4 dB	1
Conducted emission CISPR 16 LISN 50uH 0,150-30,0 MHz	PE001_01	3,0 dB	1
Conducted emission CISPR 16 Voltage Probe 0,15-30 MHz	PE001_02	2,9 dB	1
Conducted emission CISPR 16 Current Probe 0,15-30 MHz	PE001_03	2,6 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_01	3,6 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_01	4,0 dB	1
Radiated Emission CISPR 16 Bicon. Ant. 30-300 MHz	PE004_02	3,9 dB	1
Radiated Emission CISPR 16 LogP. Ant. 300-1000 MHz	PE004_03	3,8 dB	1
Radiated Emission CISPR 16 Horn Ant. 1-18 GHz	PE004_04	4,2 dB	1
Human Exposure to electromagnetic fields	PE005_01	23,6 %	1
Harmonics	PE006_01	10 mA + 2,6 %	1
Flicker	PE007_01	4,79 %	1
Radiated Immunity 80 MHz - 6 GHz	PE102_XX	1,95 dB 0,75 V/m a 3V/m	1
Conducted Immunity 0,15 - 230 MHz	PE105_XX	1,20 dB 0,44 V a 3V	1
AC Magnetic field	PE106_01	1,55 % 0,15 A/m a 10A/m	1
Pulse Magnetic field	PE107_01	6,25 % 18,7 A/m a 300A/m	1
Dumped Magnetic field	PE108_01	6,25 % 1,87 A/m a 30A/m	1
Common mode conducted immunity	PE112_01	2,21 % 0,22 V a 10V	1



Attachment 1

Test	Test Setup	Expanded uncertainty	Note
Power/Spurious 9kHz-30MHz	PR001_01	4,0 dB	1
Power/Spurious ERP 30-1000MHz d=10m	PR001_02+03	4,7 dB	1
Misura della potenza EIRP 1-18GHz d=3m	PR001_04+05	4,7 dB	1
Misura della potenza EIRP 18-40GHz d=3m	PR001_06	5,4 dB	1
Frequency error	PR002_01+02	$< 1 \times 10^{-7}$	1
Timing zero span (1001pts.)	PR002_01+02	0,2 % SWT	1
Modulation bandwidth	PR002_01+02	$< 1 \times 10^{-7}$	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. 20_02 date 24/02/2020			

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 $p = 95\%$

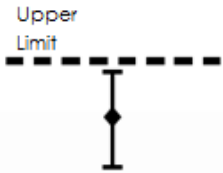
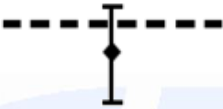
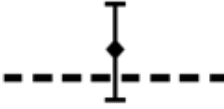
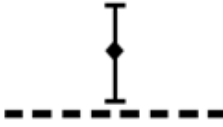
Note 2:

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: 03/2009 Guidelines on the Reporting of Compliance with Specification

Quality manual references – Internal procedure

Internal Procedure PM001 rev. 3.0 (Quality Manual)	Measure procedure
Internal Procedure INC_M rev. 9.1 (Quality Manual)	Measurement uncertainty calculation