



TEST REPORT

Nr. R19036701

Federal Communication Commission (FCC)

Report Reference No.	R19036701
Date of issue:.....	03.07.19
Total number pages:.....	42
Applicant's name	Caen RFID S.r.l.
Address.....	Via Vetraia, 11 – 55049 Viareggio (LU) – Italy
Test specification:	
Standards	FCC Rules & Regulations, Title 47:2017 Part 15 paragraph(s): 107 and 109
Non-standard test method	N/A
Test Report Form No.	15-107_15-109CMC
Test Report Form(s) Originator ..	CMC Centro Misure Compatibilità S.r.l.
Master TRF	2018-10
General disclaimer:	
The test results presented in this report relate only to the object tested.	
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Test item description	R4320C – Hadron – 4-port Embedded UHF RFID Reader
Trademark	Caen RFID
Manufacturer.....	Caen RFID S.r.l.
Model / Type reference.....	WR4320CXAAAA
FCC ID	UVECAENRFID027
Rating(s)	5 Vdc
Report	
Tested by (name + signature).....	A. Bertezzolo
Approved by (name + signature)	R. Beghetto



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1 Summary

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2 Reference standard	
FCC Rules and Regulation Title 47 part 15:2017	--
3 List of attachments	
Attachment 1: Instruments list, measurement uncertainty, judgement of compliance and quality manual references	
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	



Testing and sampling:

Date of receipt of test item.....	12.02.19
Testing start date	05.03.19
Testing end date	11.05.19

General remarks:

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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.

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 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.



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6 General description of test item(s)

Description	R4320C – Hadron – 4-port Embedded UHF RFID Reader							
Model Number	WR4320CXAAAA							
Serial Number.....	0969001818290032							
Brand name	Caen RFID							
Rated power supply		Voltage and Frequency		Reference poles				
				N	L1	L2	L3	PE
		<input type="checkbox"/> AC:		<input type="checkbox"/>				
		<input type="checkbox"/> AC:		<input type="checkbox"/>				
<input checked="" type="checkbox"/> DC: 5 V from 120 AC / 5 V DC power unit						<input type="checkbox"/>		
Software version	1.2.0							
Mounting position.....	<input type="checkbox"/>	Table top equipment						
	<input type="checkbox"/>	Wall/Ceiling mounted equipment						
	<input type="checkbox"/>	Floor standing equipment						
	<input type="checkbox"/>	Hand-held equipment						
	<input checked="" type="checkbox"/>	Other: tests performed considering the EUT as table top equipment						
Operating modes	No.	Operating mode of test item						
	1	Data transfer, radio OFF, data exchange between PC and EUT via USB with application provided by the manufacturer. Both antennas connected as required by the manufacturer						
Accessories (not part of the test item)	Accessory		Type	Manufacturer				
	PC with software provided by the manufacturer		--	--				
	Power unit		--	--				



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6.1 Photos of the test item





EUT with test jig





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7 Verdict summary section

FCC Rules & Regulations, Title 47:2017 Part 15 paragraph(s): 107 and 109				
Clause	Requirement – Test case	Basic standard	Test sequence	Verdict
Part 15.107 Class B	Conducted emission	ANSI C63.4	1	P
Part 15.109 Class B	Radiated emission	ANSI C63.4	2	P

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Normative references

Reference no.	Description
FCC Rules and Regulation Title 47 part 15:2017	--
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

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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	
Measurement uncertainties	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		



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9 Emission

9.1 Conducted emission

Tested by	A. Bertezzolo	
Test date	05.03.19	
Test location (stand)	Shielded chamber (CMC A001)	
Reference standards	FCC Rules and Regulation; Titles 47 Part. 15.107 ANSI C63.4 cl. 7	
Test set-up description	<input checked="" type="checkbox"/>	Table top equipment set-up (80 cm above the reference ground plane)
	<input type="checkbox"/>	Floor standing equipment set-up (insulating material up to 12 mm thick)
	<input type="checkbox"/>	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	<input checked="" type="checkbox"/>	Artificial mains network, 50 µH/50 Ω LISN
	<input type="checkbox"/>	Other:

Acceptance limits

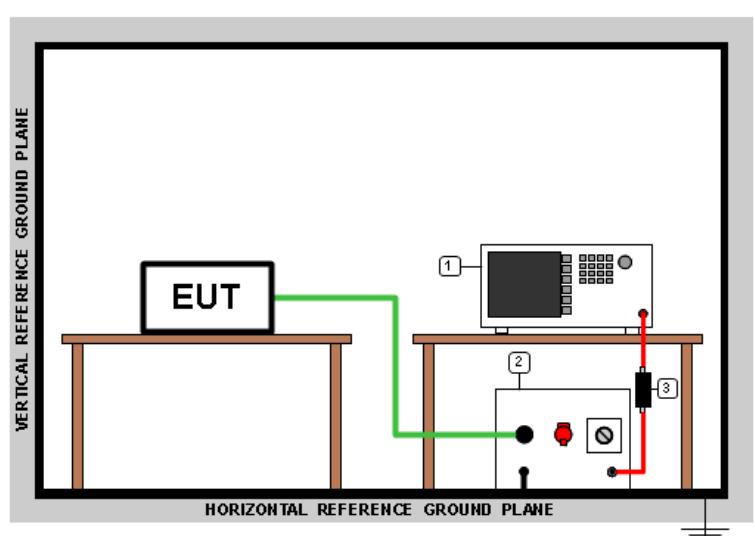
Limits for class A equipment		
Frequency range (MHz)	dB(µV) Quasi-peak	dB(µV) Average
0,15 to 0,50	79	66
0,5 to 5	73	60
5 to 30	73	60

Limits for class B equipment		
Frequency range (MHz)	dB(µV) Quasi-peak	dB(µV) Average
0,15 to 0,50	66 to 56	56 to 46
0,5 to 5	56	46
5 to 30	60	50



Test setup

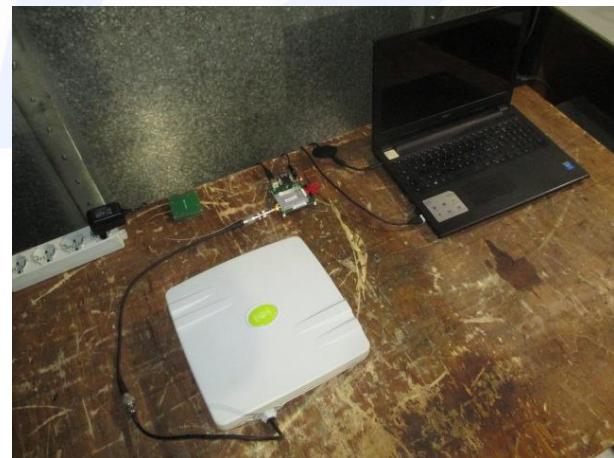
Mains terminal disturbance for table-top equipment

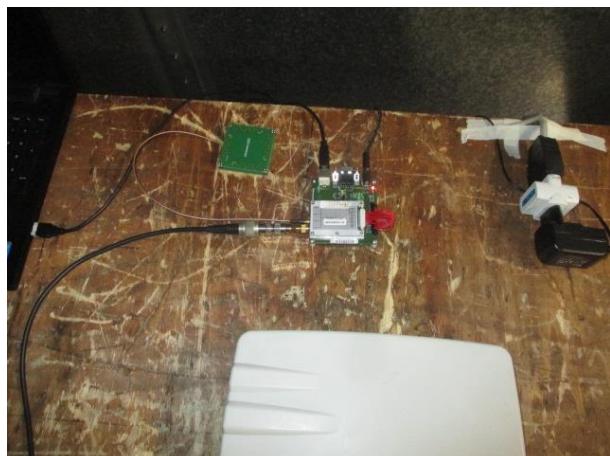


Test setup PE001_01

Nr.	Id. Number	Manufacturer	Model	Description
3	CMC S010	Rohde & Schwarz	ESH3-Z2	Pulse limiter
2	CMC S200	Schwarzbeck	NLSK 8128	V-LISN
1	CMC S206	Rohde & Schwarz	ESCI 7	EMC Receiver 9KHz-7GHz

Photograph(s) of setup







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Result

Line	Frequency Range (MHz)	Graphs	Remarks	Result
N	0,15 – 30	G190367001	PC side	P
L1	0,15 – 30	G190367002	PC side	P
N	0,15 – 30	G190367009	EUT side	P
L1	0,15 – 30	G190367010	EUT side	P

Graphs Legend

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

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



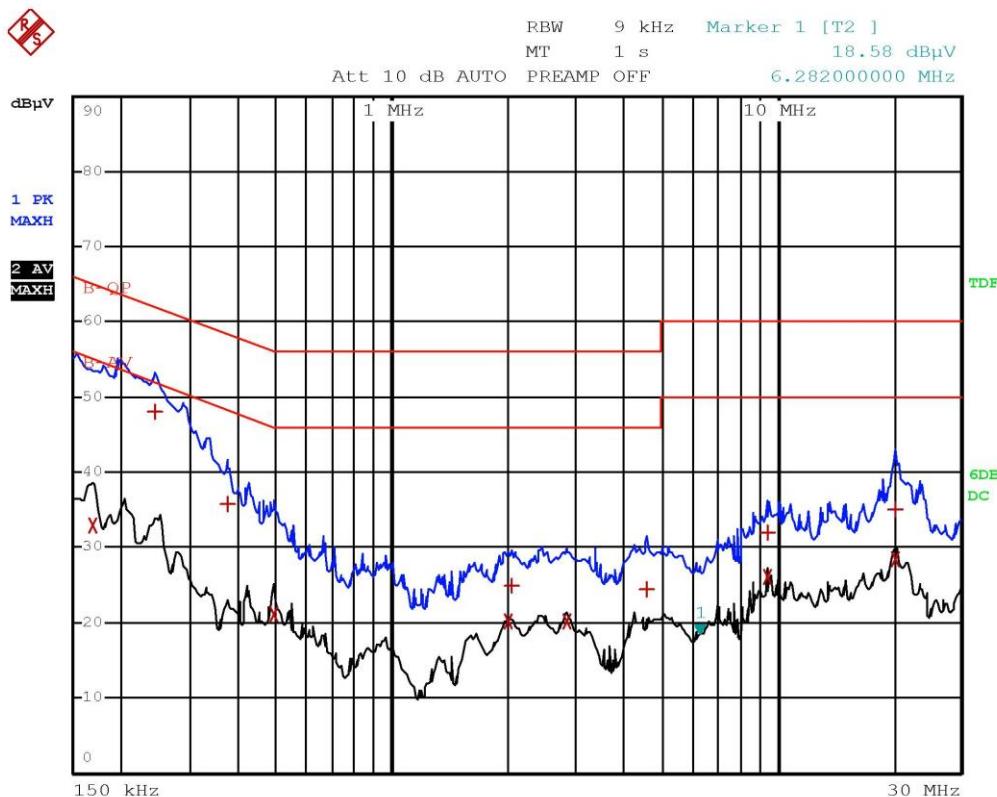
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Graphs



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EDIT PEAK LIST (Final Measurement Results)				
Trace1:	B-QP	LEVEL dB μ V	DELTA LIMIT dB	
Trace2:	B-AV			
Trace3:	---			
TRACE	FREQUENCY	LEVEL dB μ V	DELTA LIMIT dB	
2 Average	170 kHz	32.97	-21.98	
1 Quasi Peak	242 kHz	48.14	-13.88	
1 Quasi Peak	374 kHz	35.69	-22.71	
2 Average	494 kHz	21.15	-24.94	
2 Average	2.014 MHz	20.26	-25.73	
1 Quasi Peak	2.054 MHz	25.02	-30.97	
2 Average	2.846 MHz	20.31	-25.68	
1 Quasi Peak	4.574 MHz	24.44	-31.55	
1 Quasi Peak	9.482 MHz	31.91	-28.09	
2 Average	9.486 MHz	26.10	-23.89	
2 Average	20.218 MHz	28.54	-21.45	
1 Quasi Peak	20.314 MHz	35.02	-24.97	

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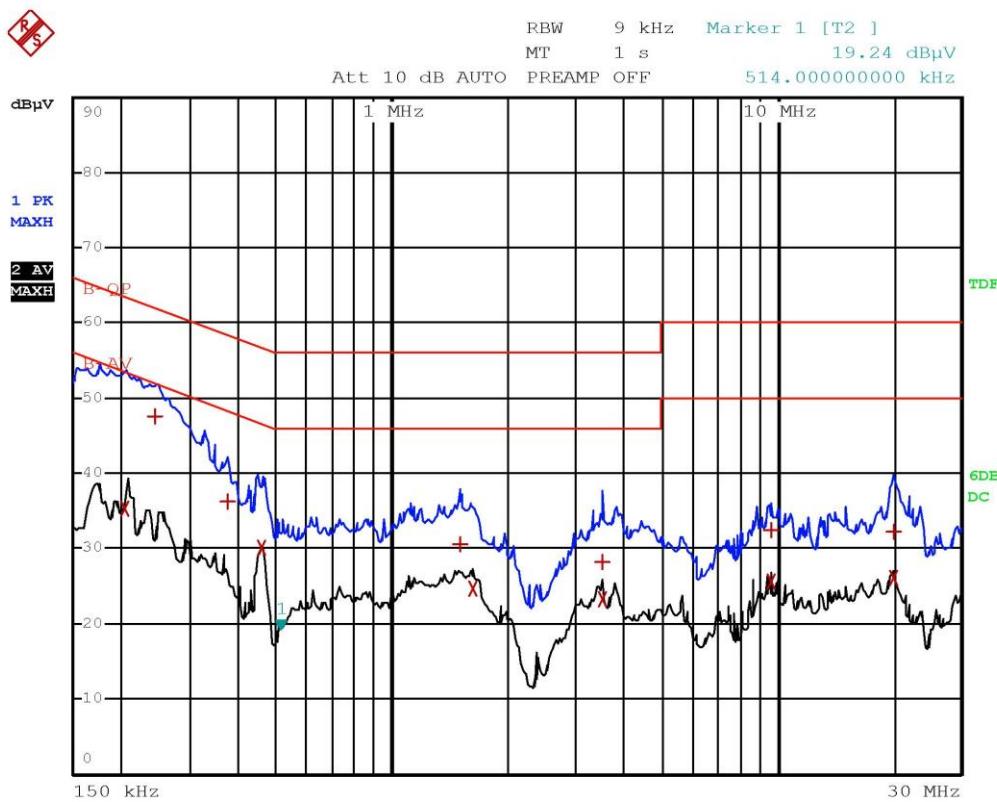


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EDIT PEAK LIST (Final Measurement Results)				
Trace1:	B-QP	LEVEL dB μ V	DELTA LIMIT dB	
Trace2:	B-AV			
Trace3:	---			
TRACE	FREQUENCY	LEVEL dB μ V	DELTA LIMIT dB	
2 Average	206 kHz	35.21	-18.14	
1 Quasi Peak	246 kHz	47.60	-14.28	
1 Quasi Peak	374 kHz	36.33	-22.07	
2 Average	458 kHz	30.04	-16.68	
1 Quasi Peak	1.51 MHz	30.66	-25.34	
2 Average	1.622 MHz	24.62	-21.37	
2 Average	3.526 MHz	23.16	-22.83	
1 Quasi Peak	3.538 MHz	28.15	-27.84	
1 Quasi Peak	9.602 MHz	32.55	-27.45	
2 Average	9.602 MHz	25.68	-24.31	
2 Average	19.966 MHz	26.06	-23.93	
1 Quasi Peak	20.098 MHz	32.19	-27.80	

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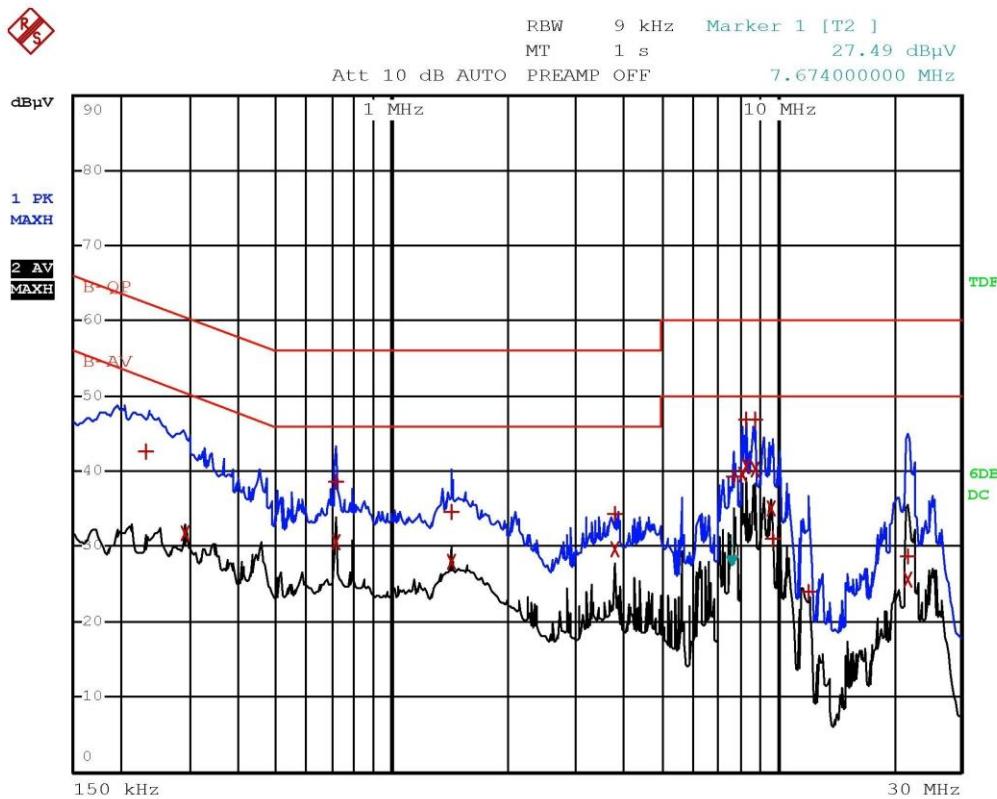


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EDIT PEAK LIST (Final Measurement Results)				
Trace1:	B-QP	Trace2:	B-AV	Trace3:

TRACE	FREQUENCY	LEVEL dB μ V	DELTA	LIMIT dB
1 Quasi Peak	234 kHz	42.61	-19.69	
2 Average	290 kHz	31.86	-18.66	
1 Quasi Peak	718 kHz	38.60	-17.39	
2 Average	718 kHz	30.57	-15.42	
1 Quasi Peak	1.434 MHz	34.55	-21.44	
2 Average	1.434 MHz	27.88	-18.11	
1 Quasi Peak	3.794 MHz	34.42	-21.58	
2 Average	3.794 MHz	29.57	-16.42	
1 Quasi Peak	7.73 MHz	39.22	-20.77	
2 Average	8.182 MHz	39.60	-10.39	
1 Quasi Peak	8.294 MHz	46.82	-13.17	
2 Average	8.294 MHz	40.83	-9.16	
2 Average	8.766 MHz	40.32	-9.67	
1 Quasi Peak	8.766 MHz	46.91	-13.08	
2 Average	9.602 MHz	35.15	-14.84	
1 Quasi Peak	9.718 MHz	30.98	-29.01	
1 Quasi Peak	12.002 MHz	24.06	-35.93	
1 Quasi Peak	21.726 MHz	28.62	-31.37	
2 Average	21.782 MHz	25.59	-24.40	

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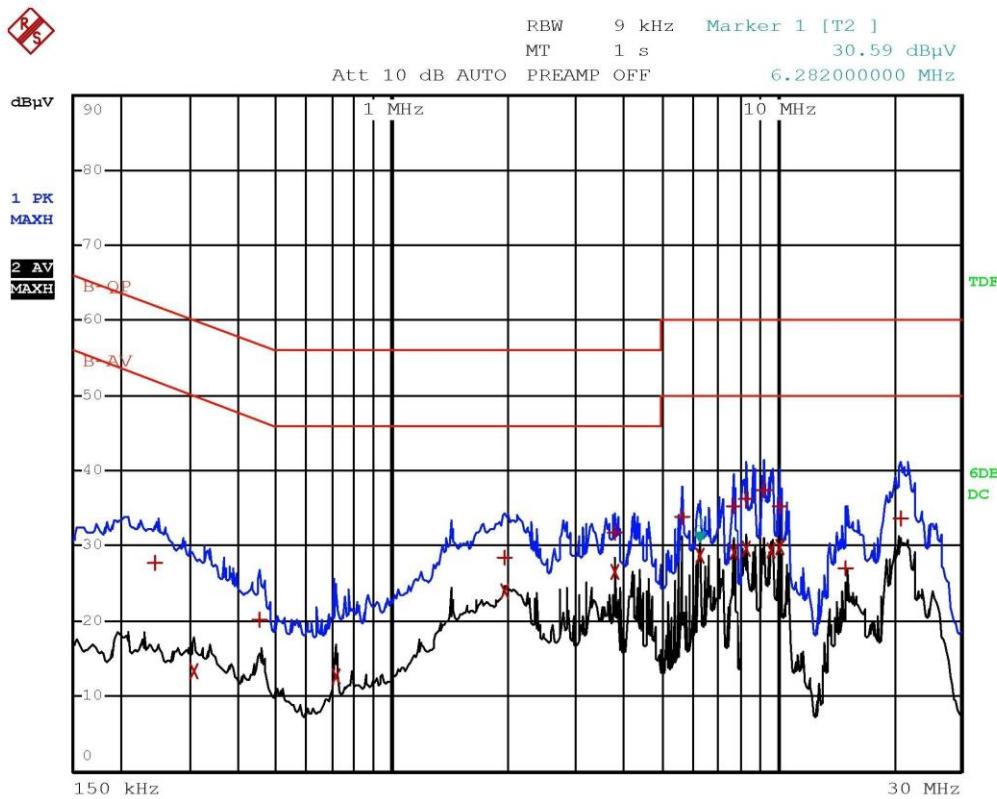


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EDIT PEAK LIST (Final Measurement Results)				
Trace1:	B-QP			
Trace2:	B-AV			
Trace3:	---			
	TRACE	FREQUENCY	LEVEL dB μ V	DELTA LIMIT dB
1	Quasi Peak	246 kHz	27.65	-34.23
2	Average	306 kHz	13.28	-36.79
1	Quasi Peak	454 kHz	20.17	-36.62
2	Average	718 kHz	12.71	-33.29
1	Quasi Peak	1.974 MHz	28.45	-27.54
2	Average	1.974 MHz	23.96	-22.03
1	Quasi Peak	3.794 MHz	31.86	-24.13
2	Average	3.794 MHz	26.50	-19.50
1	Quasi Peak	5.686 MHz	33.98	-26.01
2	Average	6.282 MHz	28.81	-21.18
1	Quasi Peak	7.702 MHz	35.36	-24.63
2	Average	7.706 MHz	29.13	-20.86
1	Quasi Peak	8.294 MHz	36.17	-23.82
2	Average	8.298 MHz	29.75	-20.24
1	Quasi Peak	9.242 MHz	37.49	-22.50
2	Average	9.602 MHz	29.34	-20.65
1	Quasi Peak	10.186 MHz	35.21	-24.78
2	Average	10.194 MHz	29.85	-20.14
1	Quasi Peak	15.106 MHz	27.11	-32.88
1	Quasi Peak	20.842 MHz	33.56	-26.43

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9.2 Radiated emission

Tested by	A. Bertezzolo	
Test date	11.05.19	
Test location (stand)	Semi-anechoic chamber (CMC A070)	
Reference standards	FCC Rules and Regulation; Titles 47 Part. 15.109 ANSI C63.4 cl. 8	
Test set-up description	<input checked="" type="checkbox"/>	Table top equipment set-up (80 cm above the reference ground plane)
	<input type="checkbox"/>	Floor standing equipment set-up (insulating material up to 12 mm thick)
	<input type="checkbox"/>	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	<input checked="" type="checkbox"/>	OATS or SAC with measurement distance [m]: 10
Supplementary information.....	--	

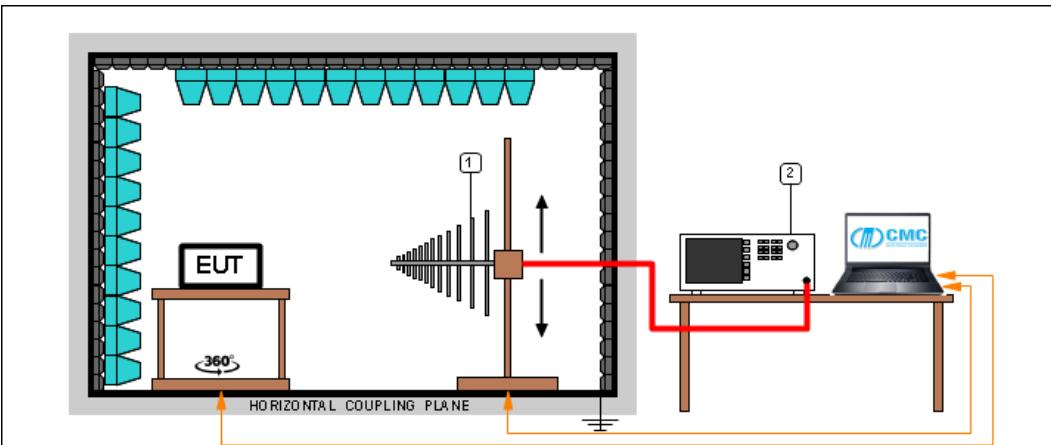
Acceptance limits

Class A radiated limits		
Frequency range (MHz)	Limits [dB(µV/m)]	Measurement distance (m)
30 to 88	39,08	10
88 to 216	43,52	10
216 to 960	46,44	10
Above 960	49,54	10

Class B radiated limits		
Frequency range (MHz)	Limits [dB(µV/m)]	Measurement distance (m)
30 to 88	40	3
88 to 216	43,52	3
216 to 960	46,02	3
Above 960	53,98	3

Test setup

Frequency $\leq 1 \text{ GHz}$



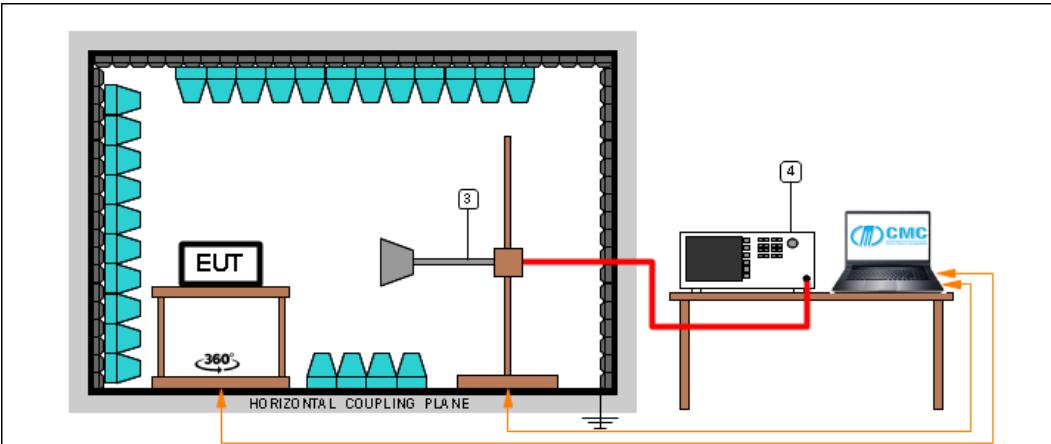
Test setup PE004_02

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 $> 1 \text{ GHz}$



Test setup PE004_04

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



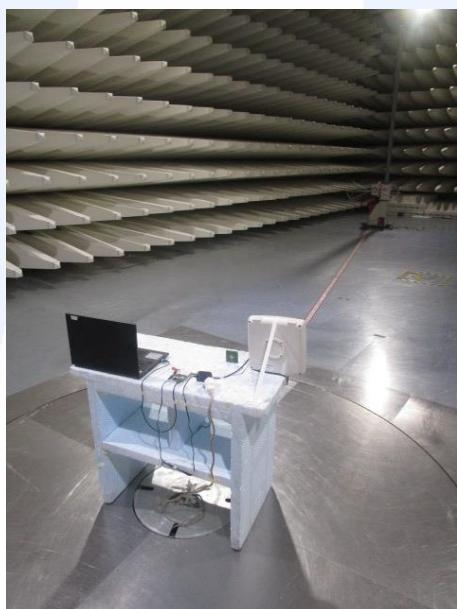
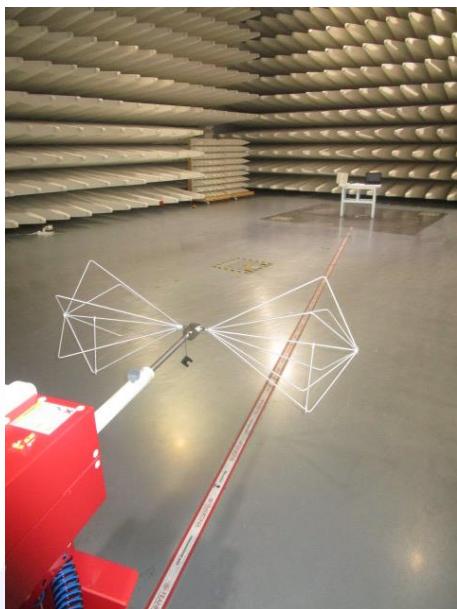
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Photograph(s) of setup





Result

Polarization	Frequency Range (MHz)	Graphs	Remarks	Result
V	30 – 300	G190367003	--	P
H	30 – 300	G190367004	--	P
H	300 – 1000	G190367005	--	P
V	300 – 1000	G190367006	--	P
V	1000 – 6000	G190367007	--	P
H	1000 – 6000	G190367008	--	P

Graphs Legend

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

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



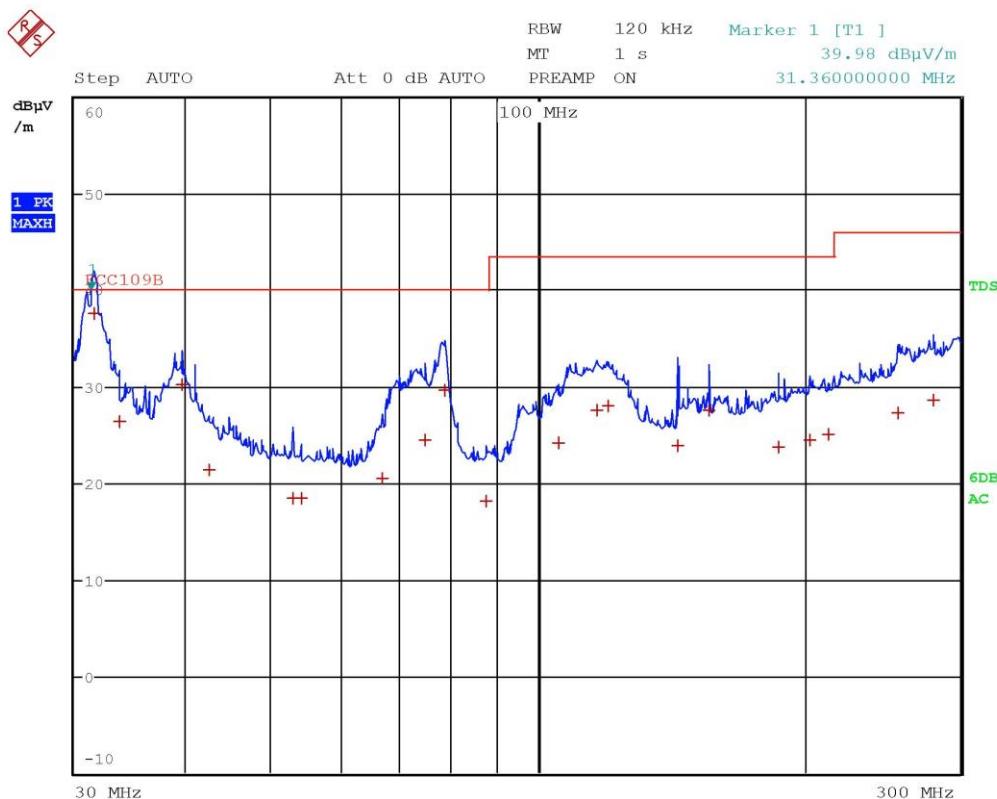
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Graphs



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EDIT PEAK LIST (Final Measurement Results)				
Trace1:	FCC109B			
Trace2:	---			
Trace3:	---			
TRACE	FREQUENCY	LEVEL dB μ V/m	DELTA	LIMIT dB
1	Quasi Peak	31.48 MHz	37.57	-2.43
1	Quasi Peak	33.8 MHz	26.59	-13.41
1	Quasi Peak	39.68 MHz	30.48	-9.52
1	Quasi Peak	42.8 MHz	21.85	-18.15
1	Quasi Peak	52.8 MHz	18.44	-21.56
1	Quasi Peak	54.4 MHz	18.44	-21.56
1	Quasi Peak	67.16 MHz	20.85	-19.15
1	Quasi Peak	74.9 MHz	24.33	-15.67
1	Quasi Peak	78.68 MHz	29.74	-10.26
1	Quasi Peak	87.36 MHz	18.36	-21.64
1	Quasi Peak	105.68 MHz	24.13	-19.39
1	Quasi Peak	117.6 MHz	27.22	-16.30
1	Quasi Peak	121.16 MHz	27.85	-15.67
1	Quasi Peak	150.68 MHz	23.85	-19.67
1	Quasi Peak	161.56 MHz	27.83	-15.69
1	Quasi Peak	186.24 MHz	23.74	-19.78
1	Quasi Peak	202.08 MHz	24.39	-19.13
1	Quasi Peak	213.52 MHz	25.03	-18.49
1	Quasi Peak	255.28 MHz	27.03	-18.99
1	Quasi Peak	279.52 MHz	28.85	-17.17

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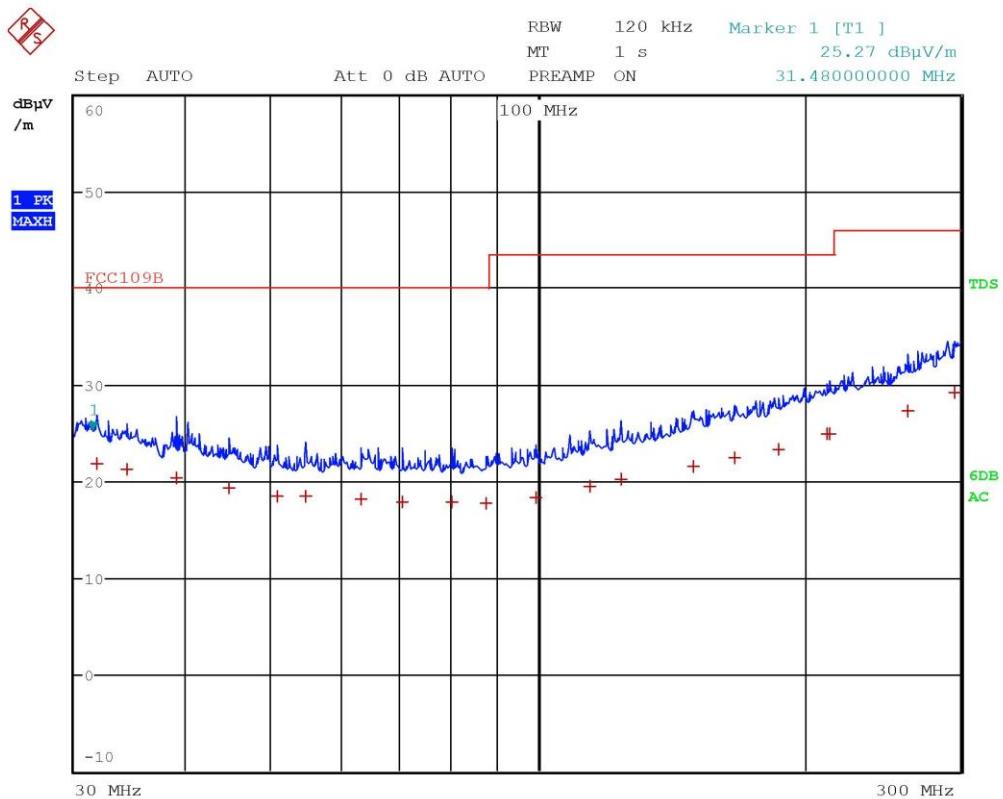


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Trace1:	FCC109B			
Trace2:	---			
Trace3:	---			
TRACE	FREQUENCY	LEVEL dB μ V/m	DELTA	LIMIT dB
1	Quasi Peak 31.8 MHz	21.87	-18.12	
1	Quasi Peak 34.36 MHz	21.19	-18.80	
1	Quasi Peak 39.16 MHz	20.33	-19.66	
1	Quasi Peak 44.8 MHz	19.39	-20.60	
1	Quasi Peak 50.8 MHz	18.44	-21.55	
1	Quasi Peak 54.8 MHz	18.41	-21.58	
1	Quasi Peak 63.16 MHz	18.11	-21.88	
1	Quasi Peak 70.4 MHz	17.92	-22.07	
1	Quasi Peak 80 MHz	17.83	-22.16	
1	Quasi Peak 87.36 MHz	17.74	-22.25	
1	Quasi Peak 99.48 MHz	18.36	-25.15	
1	Quasi Peak 114.6 MHz	19.55	-23.96	
1	Quasi Peak 124.16 MHz	20.16	-23.35	
1	Quasi Peak 149.68 MHz	21.55	-21.96	
1	Quasi Peak 166.56 MHz	22.48	-21.04	
1	Quasi Peak 187.24 MHz	23.33	-20.18	
1	Quasi Peak 212.08 MHz	24.99	-18.52	
1	Quasi Peak 213.52 MHz	24.90	-18.61	
1	Quasi Peak 261.28 MHz	27.22	-18.79	
1	Quasi Peak 295.28 MHz	29.18	-16.83	

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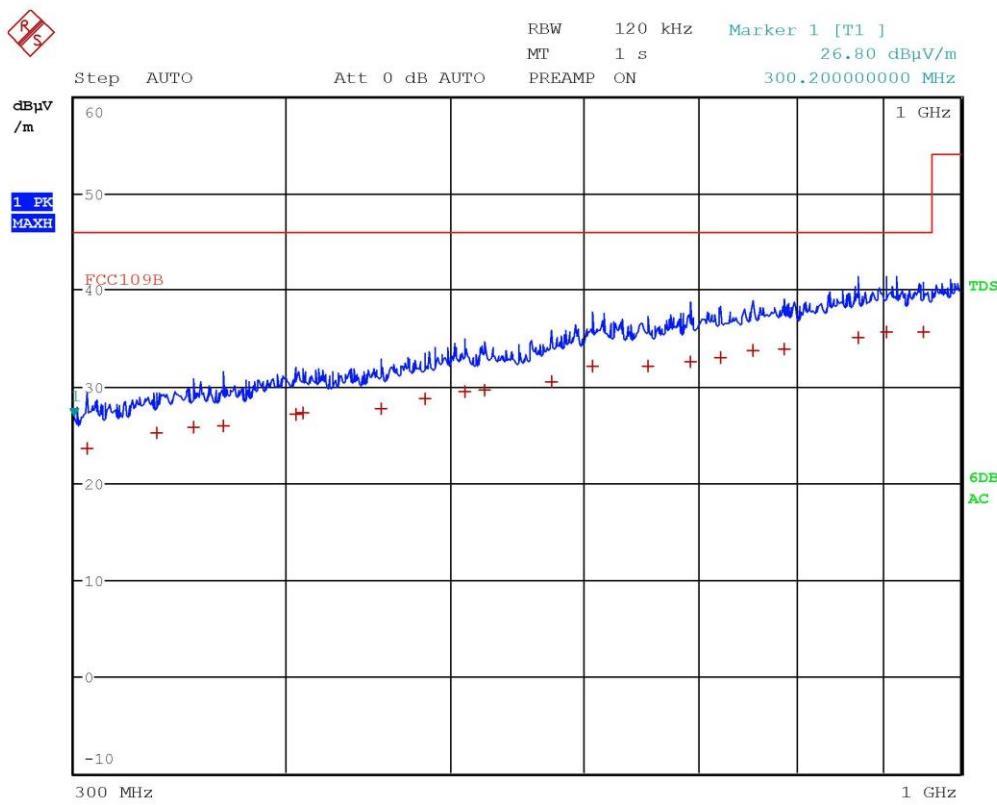


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EDIT PEAK LIST (Final Measurement Results)				
Trace1:	FCC109B			
Trace2:	---			
Trace3:	---			
TRACE	FREQUENCY	LEVEL dB μ V/m	DELTA	LIMIT dB
1	Quasi Peak 305.12 MHz	23.67	-22.35	
1	Quasi Peak 335.4 MHz	25.21	-20.81	
1	Quasi Peak 352.52 MHz	25.76	-20.25	
1	Quasi Peak 367.44 MHz	25.92	-20.09	
1	Quasi Peak 405 MHz	27.11	-18.90	
1	Quasi Peak 409.48 MHz	27.24	-18.77	
1	Quasi Peak 455.24 MHz	27.77	-18.24	
1	Quasi Peak 482.72 MHz	28.70	-17.31	
1	Quasi Peak 510.32 MHz	29.43	-16.58	
1	Quasi Peak 523.88 MHz	29.57	-16.44	
1	Quasi Peak 574.16 MHz	30.51	-15.50	
1	Quasi Peak 606.52 MHz	32.14	-13.87	
1	Quasi Peak 654.24 MHz	32.09	-13.92	
1	Quasi Peak 692.96 MHz	32.61	-13.40	
1	Quasi Peak 722.32 MHz	33.08	-12.93	
1	Quasi Peak 753.88 MHz	33.68	-12.33	
1	Quasi Peak 787.44 MHz	33.89	-12.12	
1	Quasi Peak 869.84 MHz	35.04	-10.97	
1	Quasi Peak 905.16 MHz	35.62	-10.39	
1	Quasi Peak 951 MHz	35.61	-10.41	

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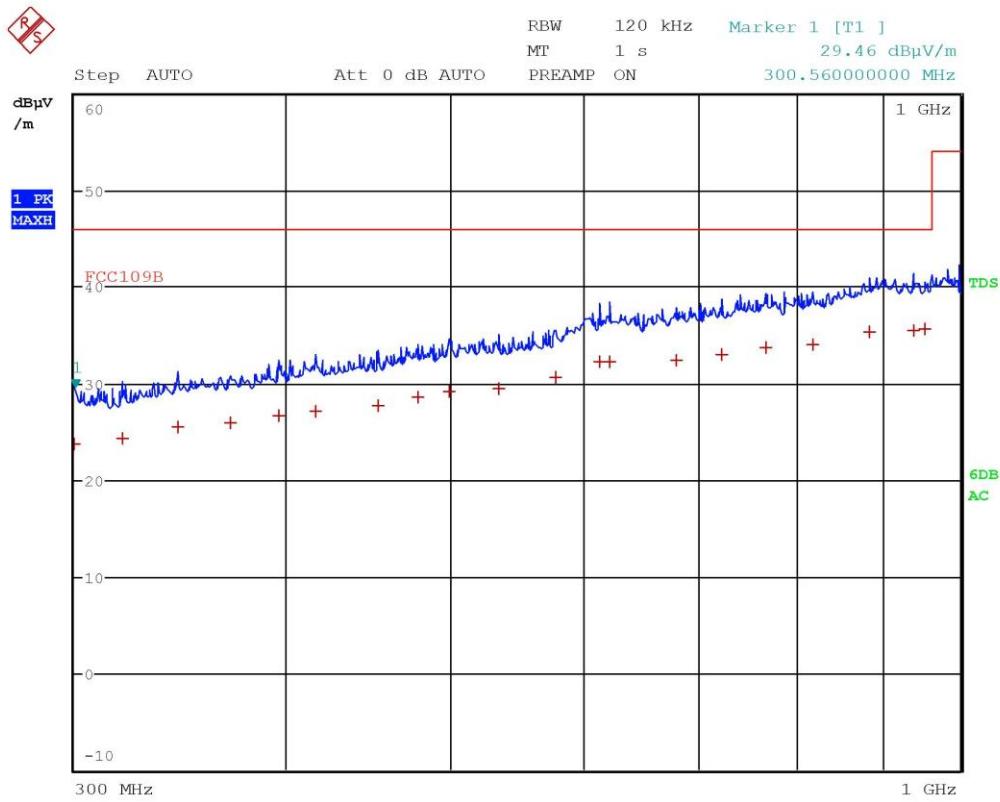


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EDIT PEAK LIST (Final Measurement Results)					
Trace1:	FCC109B				
Trace2:	---				
Trace3:	---				
	TRACE	FREQUENCY	LEVEL dB μ V/m	DELTA	LIMIT dB
1	Quasi Peak	300.08 MHz	23.75	-22.26	
1	Quasi Peak	320.2 MHz	24.36	-21.65	
1	Quasi Peak	345.24 MHz	25.58	-20.43	
1	Quasi Peak	370.56 MHz	25.92	-20.10	
1	Quasi Peak	396.08 MHz	26.69	-19.32	
1	Quasi Peak	416.04 MHz	27.13	-18.88	
1	Quasi Peak	453.48 MHz	27.75	-18.26	
1	Quasi Peak	478.4 MHz	28.59	-17.42	
1	Quasi Peak	499.48 MHz	29.23	-16.78	
1	Quasi Peak	534.56 MHz	29.47	-16.54	
1	Quasi Peak	576.56 MHz	30.65	-15.37	
1	Quasi Peak	612.6 MHz	32.28	-13.73	
1	Quasi Peak	620.84 MHz	32.28	-13.73	
1	Quasi Peak	679.64 MHz	32.37	-13.64	
1	Quasi Peak	722.76 MHz	33.05	-12.96	
1	Quasi Peak	767.32 MHz	33.78	-12.23	
1	Quasi Peak	818.4 MHz	34.00	-12.02	
1	Quasi Peak	884.32 MHz	35.40	-10.61	
1	Quasi Peak	938.72 MHz	35.48	-10.54	
1	Quasi Peak	952.84 MHz	35.68	-10.33	

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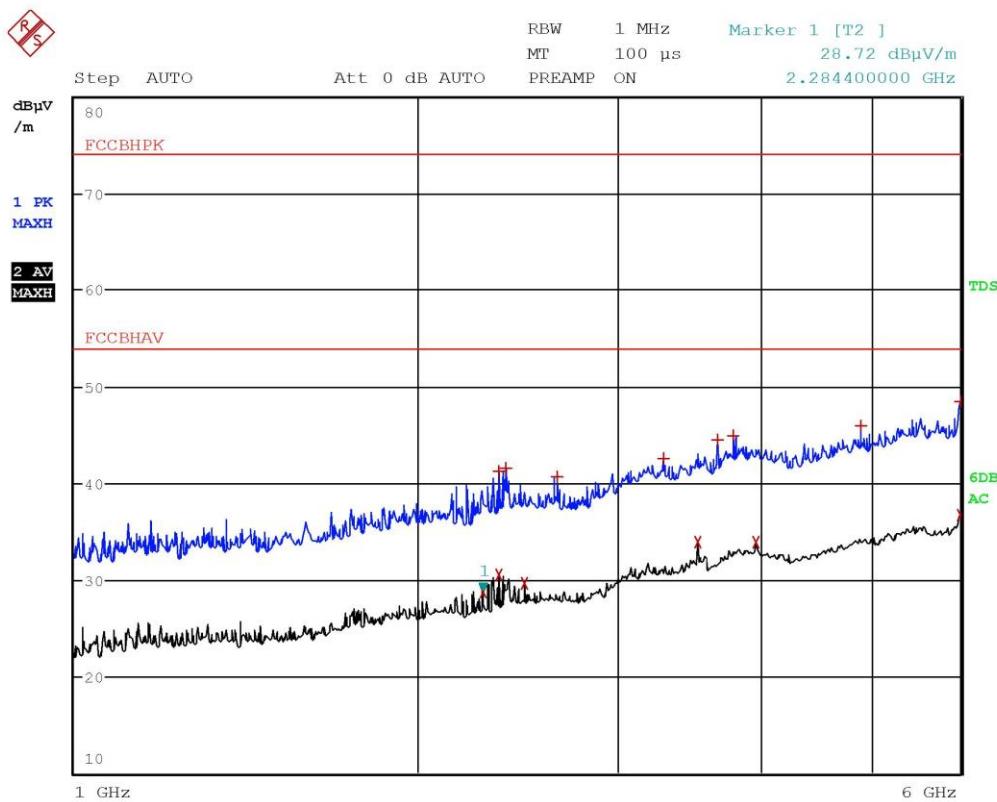


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EDIT PEAK LIST (Prescan Results)				
Trace1:	FCCBHPK	LEVEL dB μ V/m	DELTA	LIMIT dB
Trace2:	FCCBHAV			
Trace3:	---			
	TRACE	FREQUENCY		
2	Average	2.2844 GHz	28.72	-25.25
2	Average	2.3572 GHz	30.46	-23.51
1	Max Peak	2.3616 GHz	41.24	-32.73
1	Max Peak	2.3968 GHz	41.56	-32.41
2	Average	2.4872 GHz	29.65	-24.32
1	Max Peak	2.6548 GHz	40.72	-33.25
1	Max Peak	3.294 GHz	42.51	-31.47
2	Average	3.5316 GHz	33.96	-20.01
1	Max Peak	3.6672 GHz	44.48	-29.49
1	Max Peak	3.7936 GHz	44.93	-29.04
2	Average	3.964 GHz	33.86	-20.11
1	Max Peak	4.908 GHz	45.95	-28.02
2	Average	5.9936 GHz	36.62	-17.35
1	Max Peak	5.9956 GHz	48.39	-25.58

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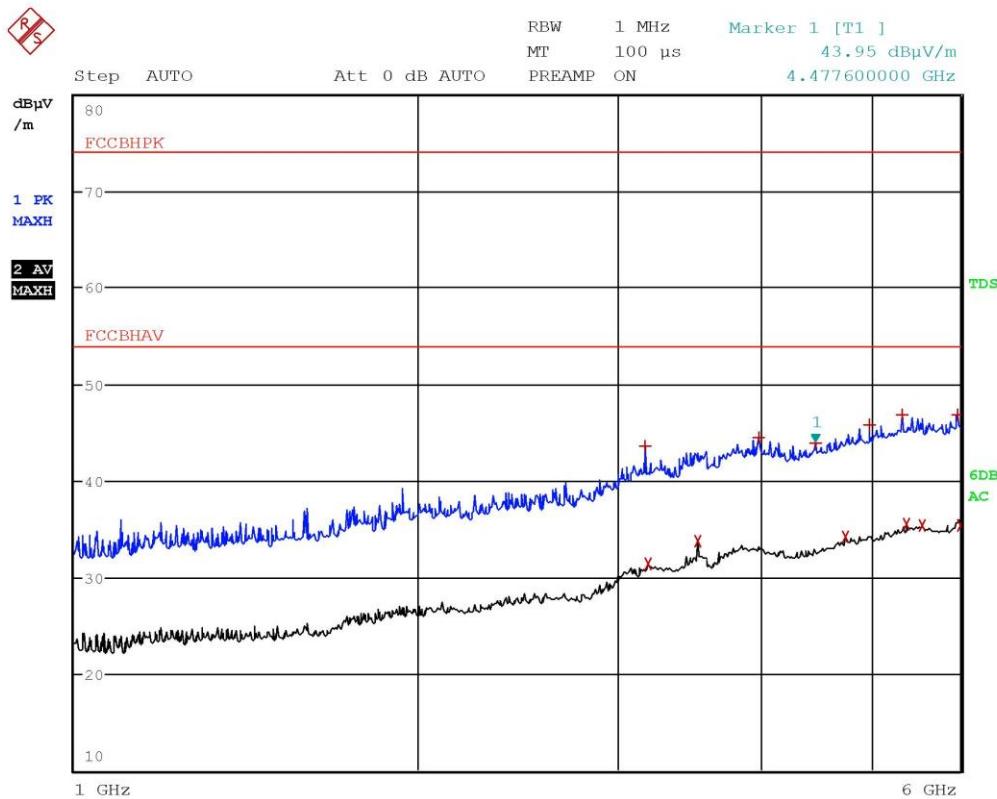


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EDIT PEAK LIST (Prescan Results)				
Trace1:	FCCBHPK			
Trace2:	FCCBHAV			
Trace3:	---			
TRACE	FREQUENCY	LEVEL dB μ V/m	DELTA	LIMIT dB
1 Max Peak	3.174 GHz	43.60	-30.37	
2 Average	3.1856 GHz	31.41	-22.56	
2 Average	3.5316 GHz	33.76	-20.21	
1 Max Peak	3.9916 GHz	44.55	-29.42	
1 Max Peak	4.4776 GHz	43.94	-30.03	
2 Average	4.7592 GHz	34.17	-19.80	
1 Max Peak	4.9916 GHz	45.84	-28.13	
1 Max Peak	5.3364 GHz	46.83	-27.15	
2 Average	5.374 GHz	35.45	-18.52	
2 Average	5.5584 GHz	35.35	-18.62	
1 Max Peak	5.9572 GHz	46.88	-27.09	
2 Average	5.9924 GHz	35.37	-18.60	

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CMC Centro Misure Compatibilità S.r.l.



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 '19	January '20
CMC S108	EMCO	3115	Horn Antenna	9811-5622	June '16	June '19
CMC S164	Rohde & Schwarz	ESU26	EMC interference receiver	100052	January '19	January '20
CMC S200	Schwarzbeck	NSLK 8128	V-LISN	8128-273	January '19	January '20
CMC S206	Rohde & Schwarz	ESCI 7	EMC Receiver 9KHz-7GHz	100781	January '19	January '20
CMC S271	Schwarzbeck	BBA 9106 + VHBB 9124	Biconical Antenna (30-300MHz)	831	June '16	June '19
CMC S287	Schwarzbeck	VUSLP 9111B	Log-periodic Antenna (200 MHz-3Ghz)	9111B-203	June '16	June '19



Attachment 1

Measurement uncertainty

Test	Test Setup	Expanded uncertainty		Note
Conducted emission CISPR 16 LISN 50uH 0,009-0,0150MHz	PE001_01	3,4	dB	1
Conducted emission CISPR 16 LISN 50uH 0,150-30,0MHz	PE001_01	3,0	dB	1
Conducted emission CISPR 16 Voltage Probe 0,15-30MHz	PE001_02	2,9	dB	1
Conducted emission CISPR 16 Current Probe 0,15-30MHz	PE001_03	2,6	dB	1
Conducted emission CISPR 16 ISN 0,15-30MHz	PE001_04	4,7	dB	1
Clic CISPR 16 LISN 50uH 0,150-30,0MHz	PE001_05	3,1	dB	1
Disturbance Power 30-300 MHz	PE002_01	3,6	dB	1
Radiated Emission LAS 0,15-30MHz	PE003_01	2,0	dB	1
Radiated Emission CISPR 16 Loop Ant. 0,15-30MHz	PE004_01	4,0	dB	1
Radiated Emission CISPR 16 Bicon. Ant. 30-300MHz	PE004_02	3,9	dB	1
Radiated Emission CISPR 16 LogP. Ant. 300-1000MHz	PE004_03	3,8	dB	1
Radiated Emission CISPR 16 Horn Ant. 1-18GHz	PE004_04	4,2	dB	1
Human Exposure to electromagnetic fields	PE005_01	23,6	%	1
Harmonic current emissions test	PE006_01	10 mA	+ 2,6 %	1
Voltage fluctuation and flicker test	PE007_01		4,8 %	1
Radiated Immunity 80MHz-6GHz	PE102_XX	2,1	dB 0,82 V/m a 3V/m	1
Conducted Immunity 0,15-230MHz	PE105_XX	1,2	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	4,7 dB	1
Misura della potenza EiRP 18-40GHz d=3m	PR001_05	5,4 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
Rev_19_02 date 27/03/2019			

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