



TEST REPORT Nr. R20230601

Federal Communication Commission (FCC)

Report Reference No.	R20230601
Date of issue:	14.12.2020
Total number pages:	35
Applicant's name	D-Air Lab S.r.l.
Address	Via dell'Economia, 64/C – 36100 Vicenza (VI) – Italy
Test specification:	
Standards	FCC Rules & Regulations, Title 47:2019 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	2020-09
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	Equipment with integrated technology that activates the inflation of the Air-Bag Devices
Trademark	DAirLab
Manufacturer	D-Air Lab S.r.l.
Model / Type reference	002_W
FCC ID	2AWM3-002W
Rating(s)	3,7 Vdc from battery 5 Vdc from USB
Report	
Tested by (name + signature)	F. De Rosso
Approved by (name + signature)	R. Beghetto



1	Summary	
1	Summary.....	2
2	Reference standard	3
3	List of attachments.....	3
4	Deviation(s) from test specification.....	3
5	Testing location.....	3
6	General description of test item(s).....	5
6.1	Photos of the test item	7
7	Verdict summary section	10
8	Test conditions	12
8.1	General	12
9	Emission	13
9.1	Conducted emission	13
9.2	Radiated emission	17



2 Reference standard	
FCC Rules and Regulation Title 47 part 15:2019	--
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	

Revision index	Date	Change history
1.0	14.12.2020	--



Testing and sampling:	
Date of receipt of test item	25.11.2020
Testing start date	26.11.2020
Testing end date	10.12.2020
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 P201243
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. 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.	



6 General description of test item(s)

Description	Equipment with integrated technology that activates the inflation of the Air-Bag Devices						
Model Number	002_W						
FCC ID	2AWM3-002W						
Serial Number	--						
Brand name	DAirlab						
Type of device	TV Broadcast Receiver						☐
	FM Broadcast Receiver						☐
	CB Receiver						☐
	Superregenerative Receiver						☐
	Scanning Receiver						☐
	Radar Detector						☐
	All other receivers subject to Part 15						☐
	TV Interface Device						☐
	Cable System Terminal Device						☐
	Stand-alone Cable input selector switch						☐
	Class B personal computers and peripherals						☐
	CPU boards and internal power supplies used with Class B personal computers						☐
	Class B personal computers assembled using authorized CPU boards or power supplies						☐
	Class B external switching power supplies						☐
	Other Class B digital devices & peripherals						☒
	Class A digital devices, peripherals & external switching power supplies						☐
	Access Broadband over Power Line (Access BPL)						☐
	All other devices						☐
Rated power supply		Voltage and Frequency	Reference poles				
			N	L1	L2	L3	PE
	☐	AC:	☐	☐	☐	☐	☐
	☐	AC:	☐	☐	☐	☐	☐
	☒	DC: 5 V from USB					☐
Emission class	Class B						
Software version	1.0						
Hardware version	2.0						

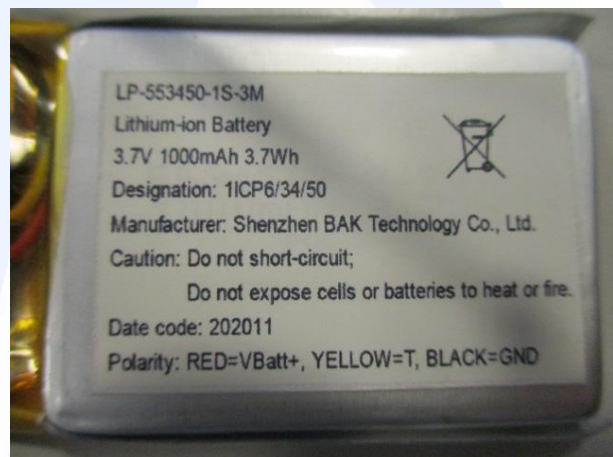


Mounting position..... :	☐	Table top equipment	
	☐	Wall/Ceiling mounted equipment	
	☐	Floor standing equipment	
	☐	Hand-held equipment	
	☒	Other: wearable device	
Operating modes :	No.	Operating mode of test item	
	1	USB test with auxiliary PC	
Accessories (not part of the test item) :	Accessory	Type	Manufacturer
	PC	U32U	Asus
	USB charger	PSM03E-050Q-3	Phihong Technology C.o.
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): 107 and 109				
Clause	Requirement – Test case	Basic standard	Test sequence	Verdict
Part 15.107	Conducted emission	ANSI C63.4	1	P
Part 15.109	Radiated emission	ANSI C63.4	2	P





Normative references	
Reference no.	Description
FCC Rules and Regulation Title 47 part 15:2019	--
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





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 Emission

9.1 Conducted emission

Tested by	F. De Rosso	
Test date	26.11.2020	
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	☒	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	☒	Artificial mains network, 50 μ H/50 Ω LISN
	☐	Other:

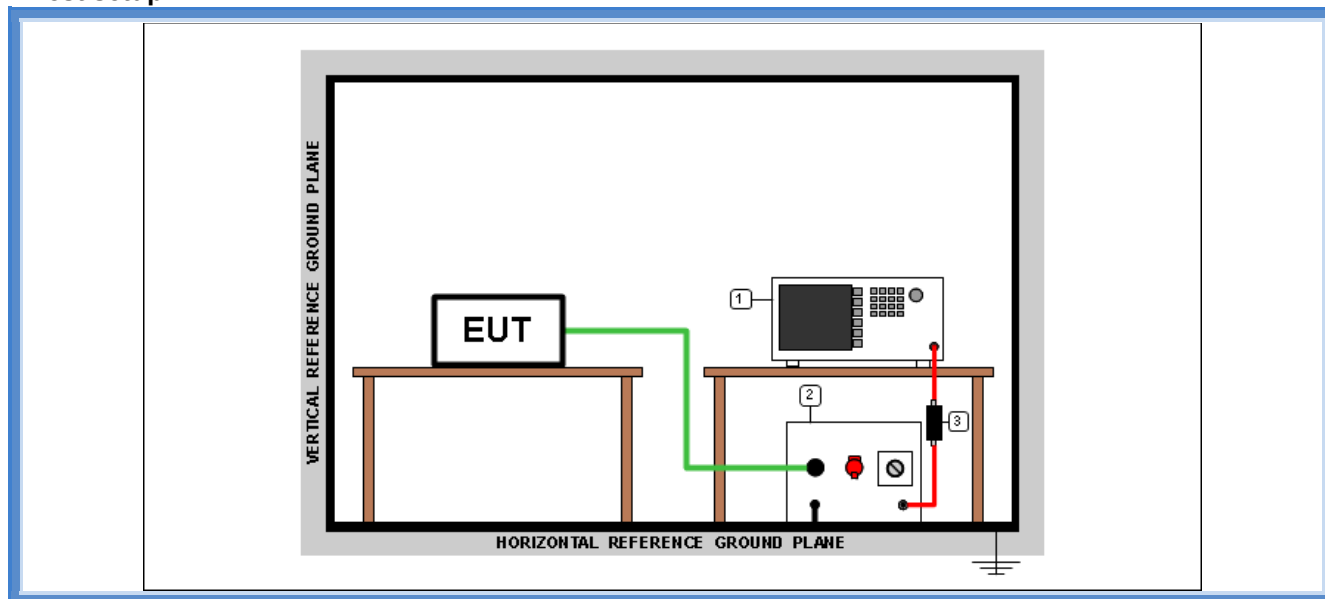
Acceptance limits

Limits for class A equipment		
Frequency range (MHz)	$\text{dB}(\mu\text{V})$ Quasi-peak	$\text{dB}(\mu\text{V})$ 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)	$\text{dB}(\mu\text{V})$ Quasi-peak	$\text{dB}(\mu\text{V})$ 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



Test setup PE001_01

Nr.	Id. Number	Manufacturer	Model	Description
3	CMC S010	Rohde & Schwarz	ESH3-Z2	Pulse limiter
2	CMC S200	Schwarzbeck	NSLK 8128	V-LISN
1	CMC S353	Rohde & Schwarz	ESW26	EMI Test Receiver 1 Hz - 26.5 GHz

Result

Line	Frequency Range (MHz)	Graphs	Remarks	Result
N	0,15 – 30	G20230601	--	P
L1	0,15 – 30	G20230602	--	P

Remarks: tests performed on 120 Vac side of USB charger

Graphs Legend

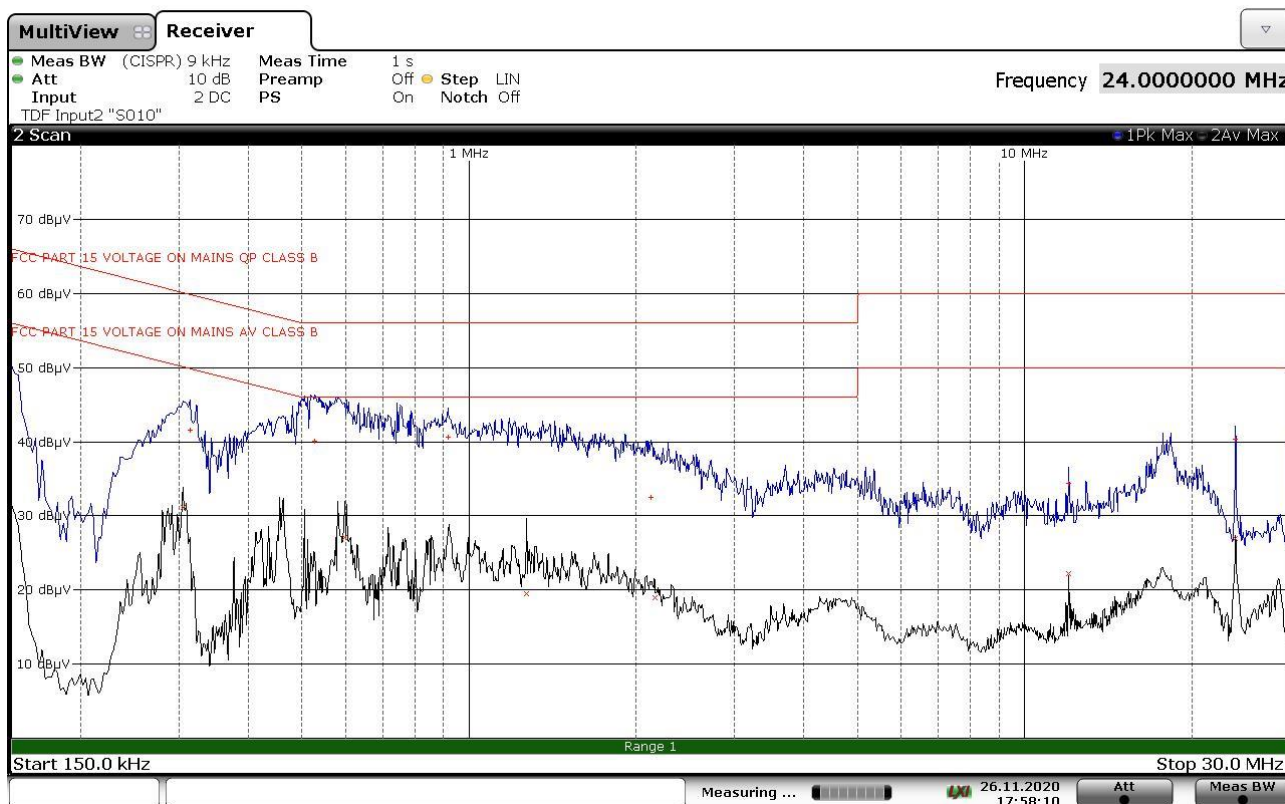
PK: Peak; QP [1s] (quasi-peak at 1 second) values are marked with a +

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



Graphs

De Rosso 20230601 Line N usb test



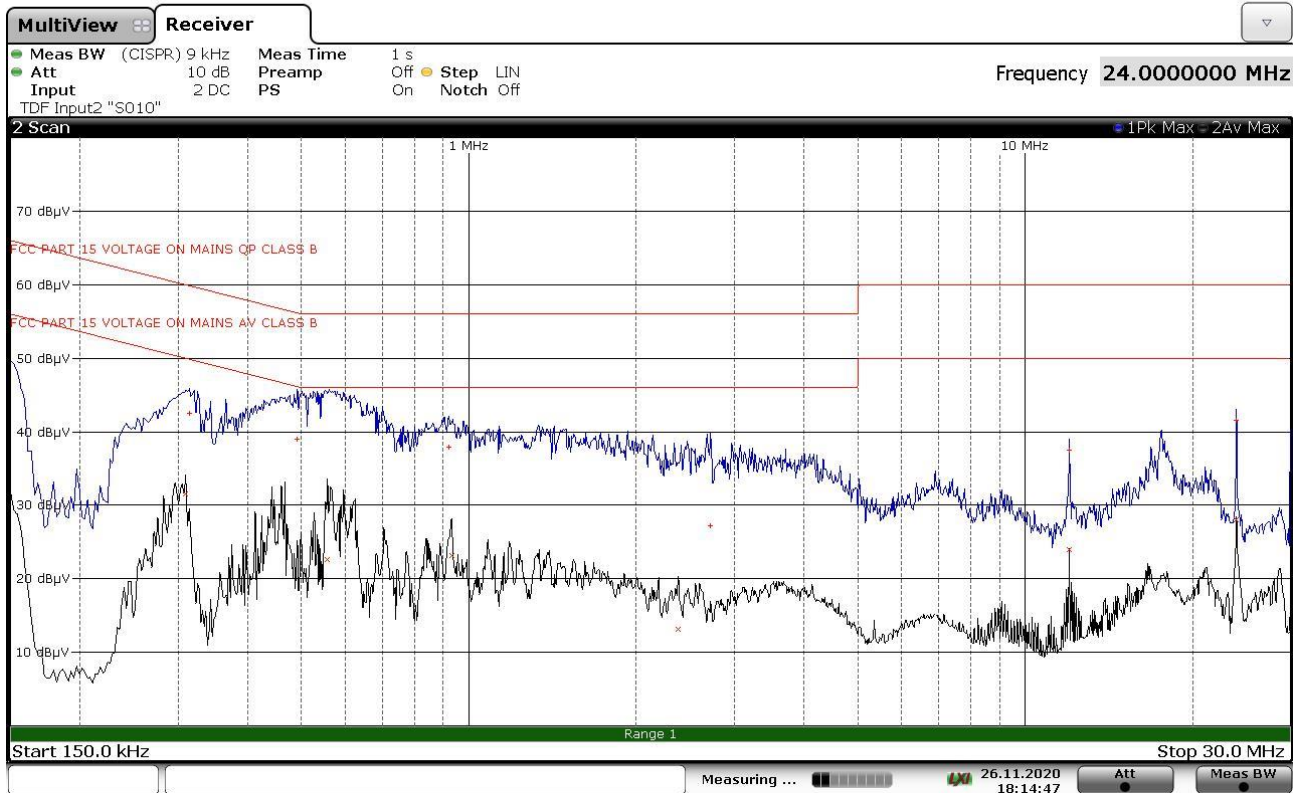
FINAL RESULT TABLE

QUASI PEAK			AVERAGE		
Freq Hz	Lev dBuV	Margin dB	Freq Hz	Lev dBuV	Margin dB
314250	+41.56	-18.30	305250	+31.14	-18.96
528000	+40.10	-15.90	597750	+27.10	-18.90
917250	+40.64	-15.36	1270500	+19.55	-26.45
2127750	+32.44	-23.56	2157000	+18.92	-27.08
11998500	+34.42	-25.58	12000750	+22.14	-27.86
24000000	+40.33	-19.67	24000000	+26.94	-23.06

20230601_2



De Rosso 20230602 Line L usb test



FINAL RESULT TABLE

QUASI PEAK

Freq Hz	Lev dBuV	Margin dB
314250	+42.47	-17.39
492000	+39.05	-17.08
919500	+37.95	-18.05
2719500	+27.20	-28.80
12000750	+37.52	-22.48
24000000	+41.55	-18.45

AVERAGE

Freq Hz	Lev dBuV	Margin dB
309750	+31.58	-18.40
557250	+22.57	-23.43
930750	+23.21	-22.79
2382000	+13.18	-32.82
12000750	+24.01	-25.99
24000000	+27.97	-22.03

20230602_2



9.2 Radiated emission

Tested by	F. De Rosso	
Test date	10.12.2020	
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	☒	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	--	

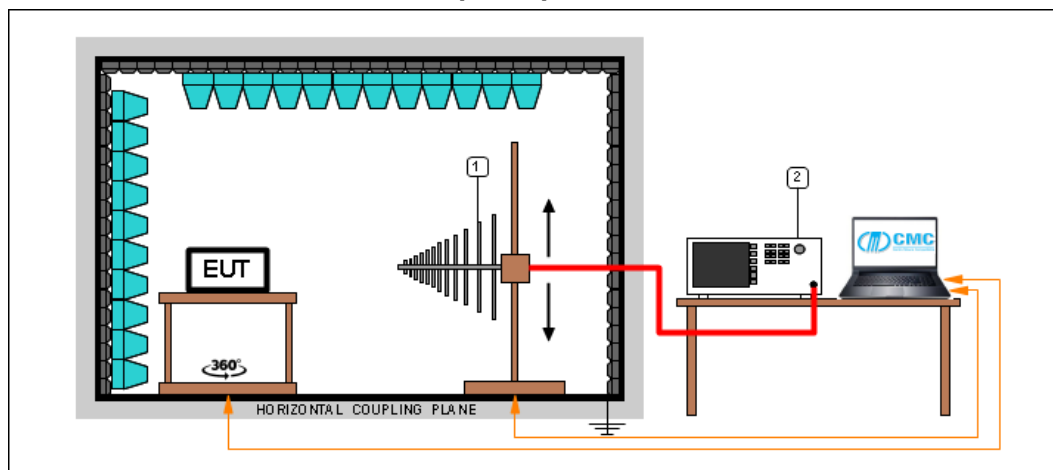
Acceptance limits

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 ≤ 1 GHz



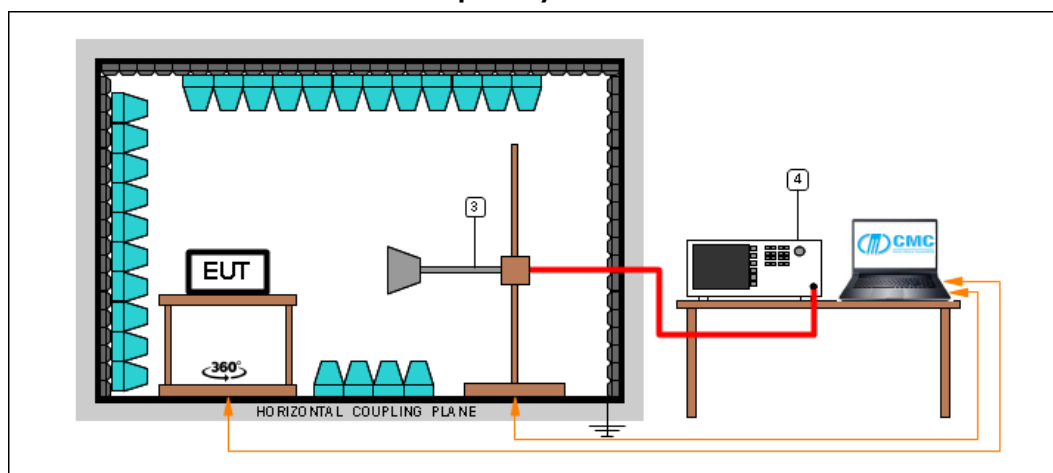
Test setup PE004_02

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



Result

Polarization	Frequency Range (MHz)	Graphs	Remarks	Result
V	30 – 300	G20230603	--	P
H	30 – 300	G20230604	--	P
V	300 – 1000	G20230605	--	P
H	300 – 1000	G20230606	--	P
V	1000 – 6000	G20230607	--	P
H	1000 – 6000	G20230608	--	P

Remarks: measurements at frequencies 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, using the transducer factor of the test receiver

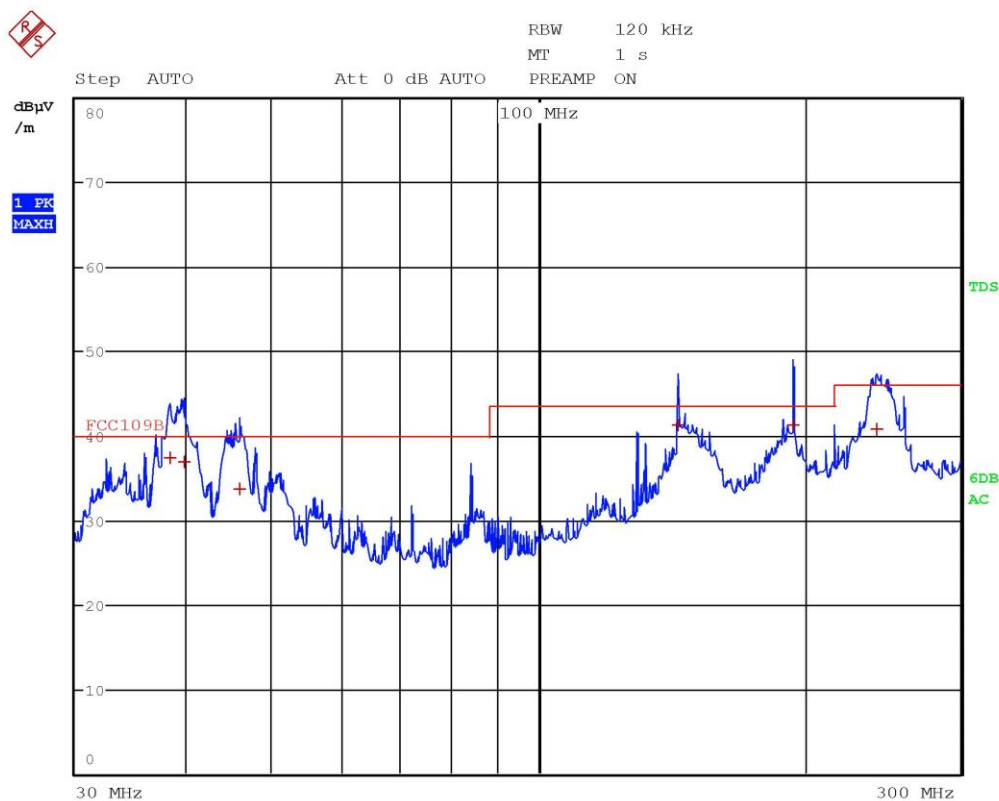
Graphs Legend

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

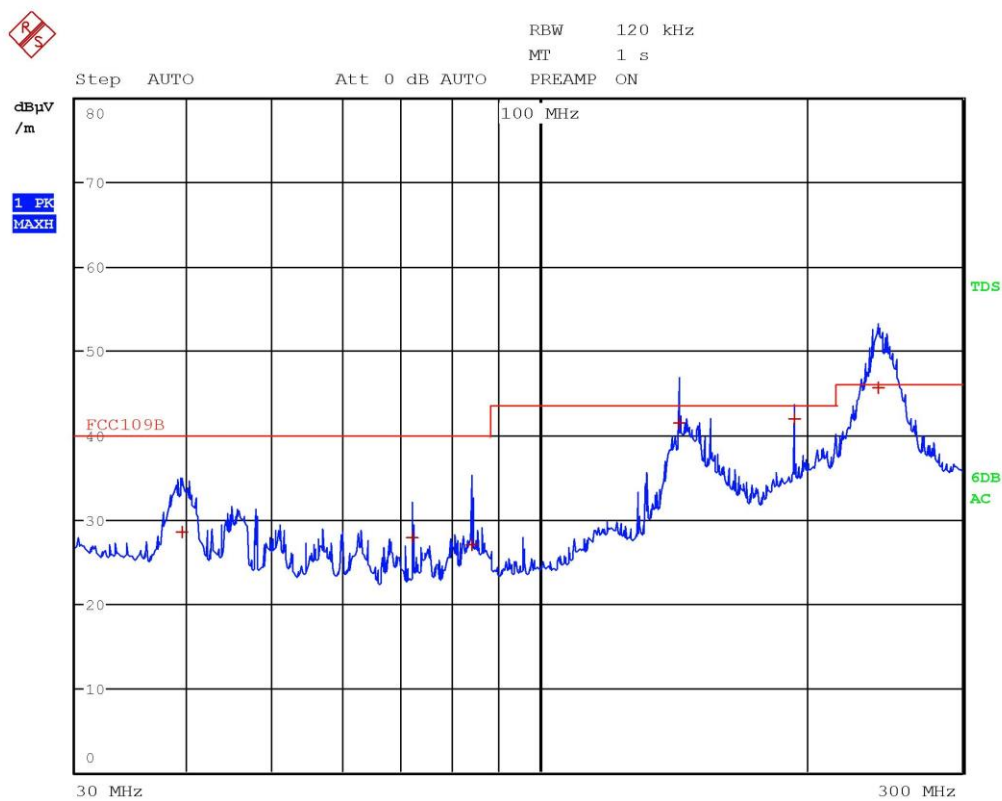


De Rosso 20230603 vert 3m usb test pc Asus U32U



EDIT PEAK LIST (Final Measurement Results)			
Trace1:	FCC109B		
Trace2:	---		
Trace3:	---		
TRACE	FREQUENCY	LEVEL, dBμV/m	DELTA LIMIT dB
1 Quasi Peak	38.32 MHz	37.43	-2.56
1 Quasi Peak	39.8 MHz	36.86	-3.13
1 Quasi Peak	46 MHz	33.71	-6.28
1 Quasi Peak	143.96 MHz	41.28	-2.23
1 Quasi Peak	194.4 MHz	41.33	-2.18
1 Quasi Peak	241.52 MHz	40.80	-5.21

De Rosso 20230603 vert 3m usb test pc Asus U32U

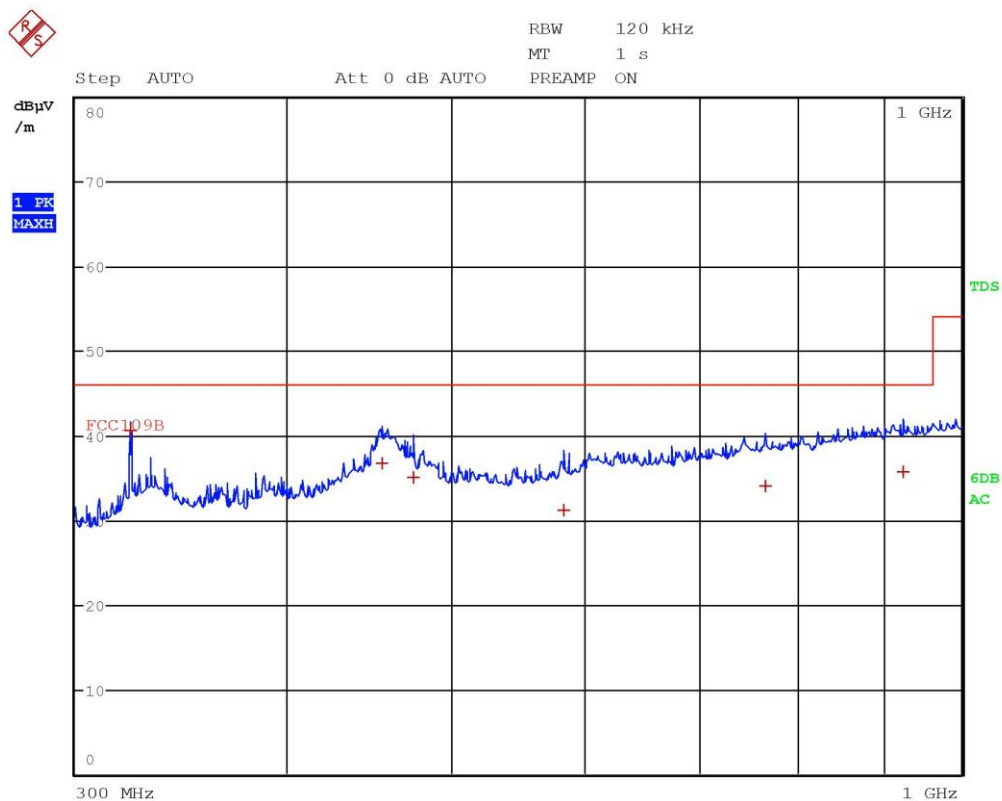


De Rosso 20230604 horiz 3m usb test pc Asus U32U



EDIT PEAK LIST (Final Measurement Results)			
Trace1:	FCC109B		
Trace2:	---		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμV/m	DELTA LIMIT dB
1 Quasi Peak	39.52 MHz	28.44	-11.55
1 Quasi Peak	72 MHz	27.82	-12.17
1 Quasi Peak	84 MHz	27.01	-12.98
1 Quasi Peak	143.92 MHz	41.47	-2.04
1 Quasi Peak	193.96 MHz	41.86	-1.66
1 Quasi Peak	241.36 MHz	45.66	-0.35

De Rosso 20230604 horiz 3m usb test pc Asus U32U

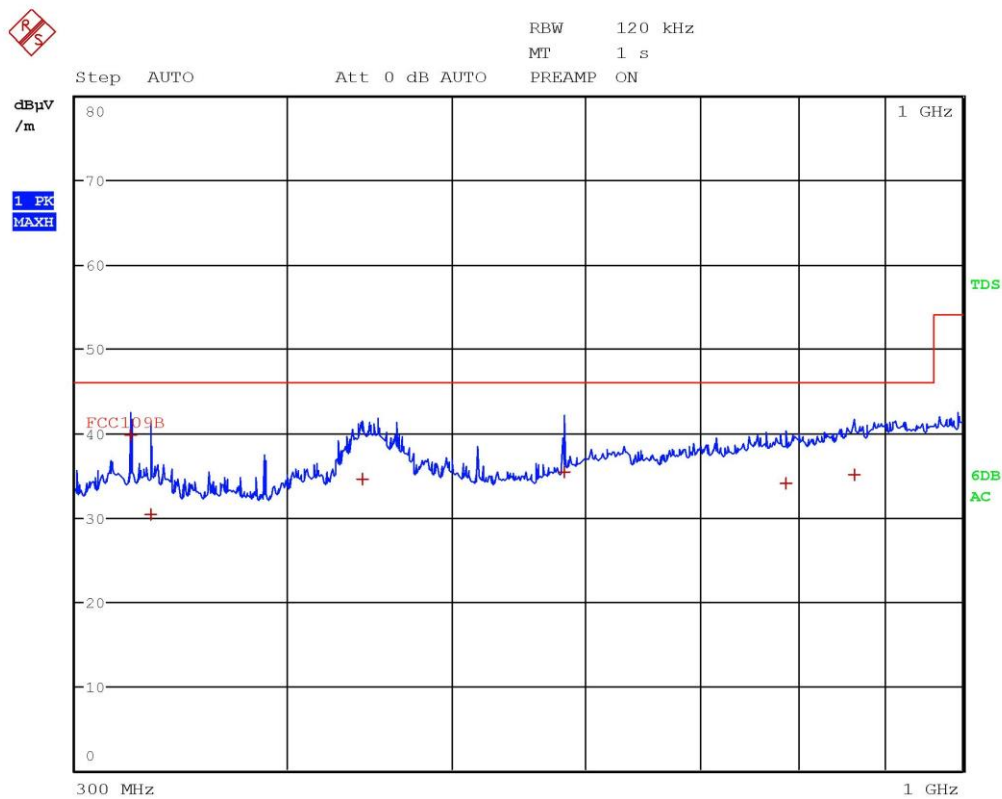


De Rosso 20230605 vert 3m usb test pc Asus U32U



EDIT PEAK LIST (Final Measurement Results)			
Trace1:	FCC109B		
Trace2:	---		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμV/m	DELTA LIMIT dB
1 Quasi Peak	323.48 MHz	40.54	-5.47
1 Quasi Peak	455.48 MHz	36.67	-9.34
1 Quasi Peak	475.04 MHz	35.07	-10.94
1 Quasi Peak	582.44 MHz	31.23	-14.78
1 Quasi Peak	766.88 MHz	33.96	-12.05
1 Quasi Peak	923.64 MHz	35.71	-10.30

De Rosso 20230605 vert 3m usb test pc Asus U32U

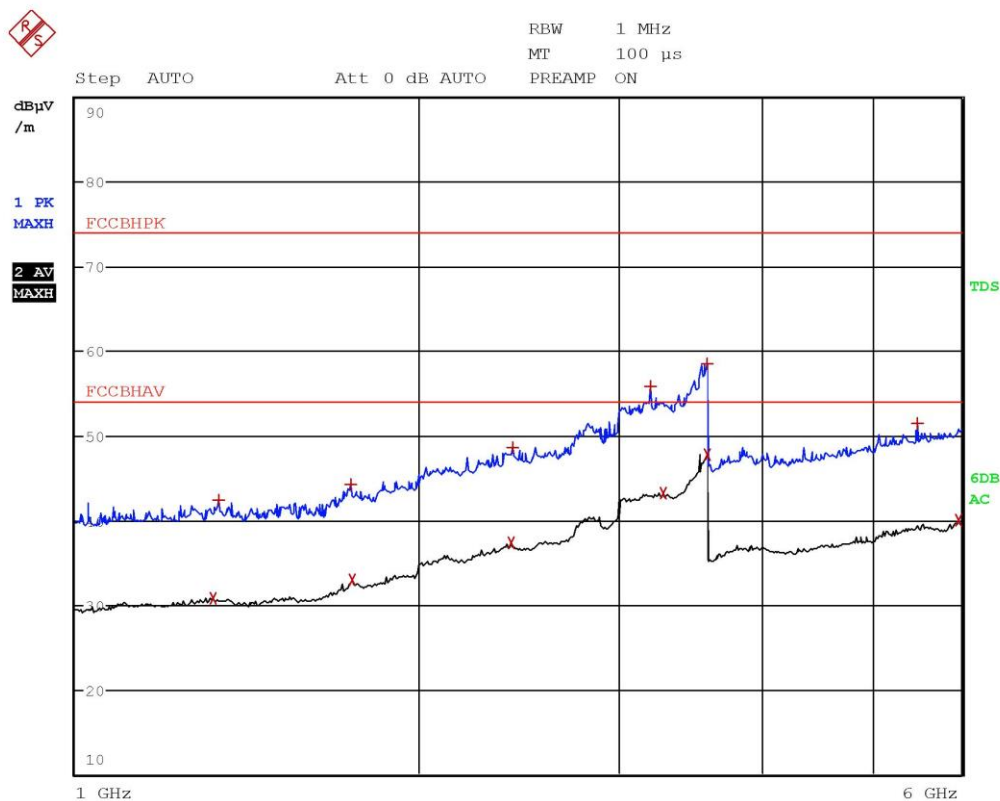


De Rosso 20230606 horiz 3m usb test pc Asus U32U



EDIT PEAK LIST (Final Measurement Results)			
Trace1:	FCC109B		
Trace2:	---		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμV/m	DELTA LIMIT dB
1 Quasi Peak	323.52 MHz	39.81	-6.20
1 Quasi Peak	332.28 MHz	30.36	-15.65
1 Quasi Peak	443.24 MHz	34.47	-11.54
1 Quasi Peak	582.52 MHz	35.45	-10.56
1 Quasi Peak	787.72 MHz	34.04	-11.97
1 Quasi Peak	863.48 MHz	35.08	-10.93

De Rosso 20230606 horiz 3m usb test pc Asus U32U

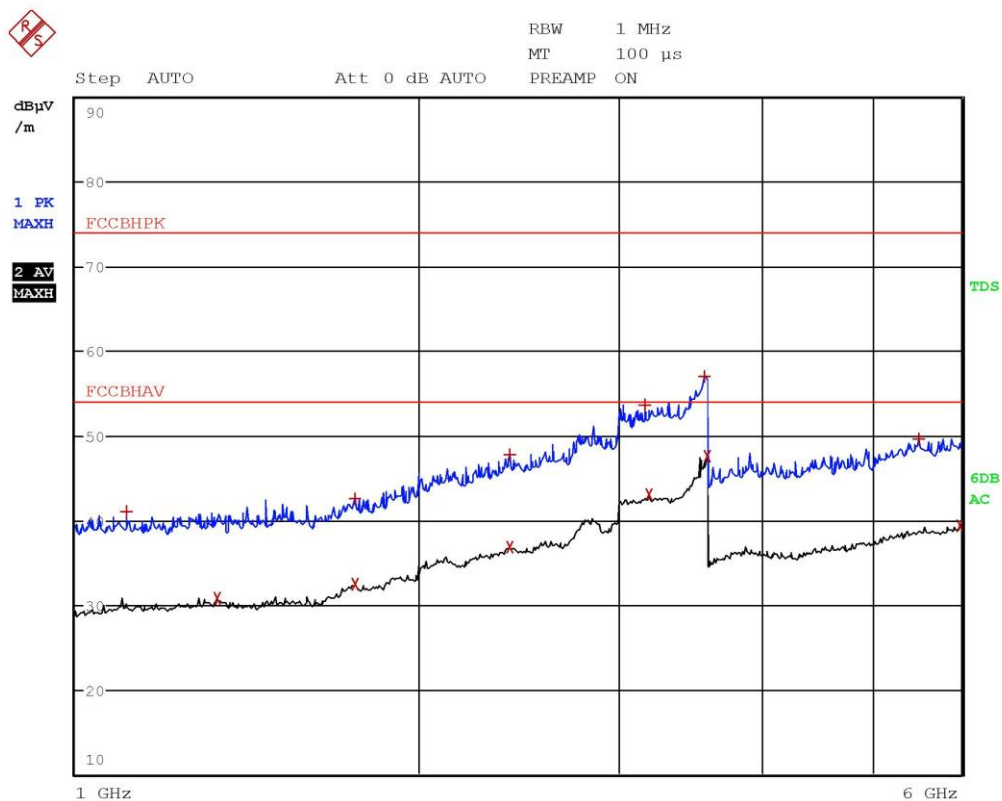


De Rosso 20230607 vert 3m usb test pc Asus U32U



EDIT PEAK LIST (Prescan Results)			
Trace1:	FCCBHPK		
Trace2:	FCCBHAV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμV/m	DELTA LIMIT dB
2 Average	1.322 GHz	30.82	-23.15
1 Max Peak	1.3364 GHz	42.31	-31.66
1 Max Peak	1.7464 GHz	44.25	-29.73
2 Average	1.7504 GHz	32.89	-21.08
2 Average	2.4168 GHz	37.33	-16.64
1 Max Peak	2.42 GHz	48.56	-25.41
1 Max Peak	3.1944 GHz	55.78	-18.19
2 Average	3.2848 GHz	43.21	-10.76
1 Max Peak	3.5912 GHz	58.50	-15.47
2 Average	3.5944 GHz	47.78	-6.19
1 Max Peak	5.4888 GHz	51.49	-22.48
2 Average	5.9628 GHz	40.07	-13.90

De Rosso 20230607 vert 3m usb test pc Asus U32U



De Rosso 20230608 horiz 3m usb test pc Asus U32U



EDIT PEAK LIST (Prescan Results)			
Trace1:	FCCBHPK		
Trace2:	FCCBHAV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμV/m	DELTA LIMIT dB
1 Max Peak	1.1072 GHz	40.93	-33.04
2 Average	1.3304 GHz	30.83	-23.15
1 Max Peak	1.7596 GHz	42.48	-31.49
2 Average	1.7608 GHz	32.39	-21.58
2 Average	2.4084 GHz	36.80	-17.17
1 Max Peak	2.4096 GHz	47.78	-26.19
1 Max Peak	3.1664 GHz	53.65	-20.32
2 Average	3.186 GHz	42.95	-11.02
1 Max Peak	3.566 GHz	57.04	-16.93
2 Average	3.5964 GHz	47.50	-6.47
1 Max Peak	5.5052 GHz	49.65	-24.32
2 Average	5.9812 GHz	39.30	-14.67

De Rosso 20230608 horiz 3m usb test pc Asus U32U



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 '20	January '21
CMC S108	EMCO	3115	Horn Antenna	9811-5622	June '19	June '22
CMC S127	Schaffner	HLA6120	Loop Antenna	1191	November '18	November '23
CMC S164	Rohde & Schwarz	ESU26	EMC interference receiver	100052	January '20	January '21
CMC S200	Schwarzbeck	NSLK 8128	V-LISN	8128-273	January '20	January '21
CMC S206	Rohde & Schwarz	ESCI 7	EMC Receiver 9KHz-7GHz	100781	January '20	January '21
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 S295	Rohde & Schwarz	FSW43	Spectrum Analyzer 43GHz	104059	November '19	November '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 $p = 95\%$

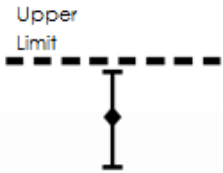
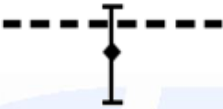
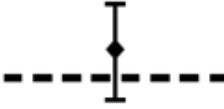
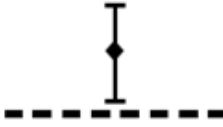
Note 2:

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