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LAB N° 0168

Independent Testing Laboratory
Accredited by ACCREDIA according to UNI CEI EN ISO/IEC 17025 cert. nr. 0168

TEST REPORT nr. R19036501

Federal Communication Commission (FCC)

Test item

Description .....: R4320C – HADRON – 4-PORT EMBEDDED UHF RFID READER
Trademark .....: CAEN RFID
Model/Type .....: WR4320CXAAAA
FCC ID .....: UVECAENRFID027

Test Specification

Standard.....: FCC Rules & Regulations, Title 47:2017
Part 15 paragraph(s): 203, 204, 205, 207, 209 and 247

Client's name .....: CAEN RFID S.r.l.
Address .....: Via Vetraia, 11 – 55049 Viareggio (LU) – ITALY

Manufacturer's name : Same as client
Address .....: --

Report

Tested by .....: A. Bertezzolo
Approved by .....: R. Beghetto – *Laboratory Manager*
Date of issue .....: 03.07.19
Contents.....: 138 pages

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1. Summary

Standard:

FCC Rules & Regulations, Title 47:2017
Part 15 paragraph(s): 203, 204, 205, 207, 209 and 247

Test specifications	*Environmental Phenomena*	*Tests sequence*	*Result*
Part 15.247 (a) (1)	Pseudo randomly ordered list of hopping frequencies	1	Complies
Part 15.203	Antenna requirements	2	Complies
Part 15.207	Conducted emissions	3	Complies
Part 15.209	Radiated emissions	4	Complies
Part 15.247	20 dB Bandwidth	5	Complies
Part 15.247	Channel Separation	6	Complies
Part 15.247	Number of Hopping Channel	7	Complies
Part 15.247	Time of occupancy	8	Complies
Part 15.247	Band edge	9	Complies
Part 15.209 and 15.247	Peak Output Power	10	Complies
Part 15.209	Spurious emission	11	Complies

The Test Report was given to the Client representatives for necessary documentation of ratification of the tested equipment and it is valid for the FCC certification

2. Description of Equipment under test (EUT)

Power supply	:	5 Vdc from 120 AC / 5 V DC power unit
Serial Number	:	0969001818290032
Type of equipment	:	☑ Transmitter Unit
		❑ Receiver Unit
Type of station	:	❑ Fixed station
		❑ Portable station
		☑ Mobile station
Frequency band	:	902 – 928 MHz
Nominal frequencies	:	F_L: 902,75 MHz F_M: 914,75 MHz F_H: 927,25 MHz
Pseudo randomly ordered list of hopping frequencies	:	See document R4320C_Operational Description

2.1 Test Site

Company	:	CMC Centro Misure Compatibilità S.r.l.
Address	:	Via della Fisica, 20
		36016 Thiene (VI) – ITALY
Test site facility's FCC registration number	:	182474

3. Testing and sampling

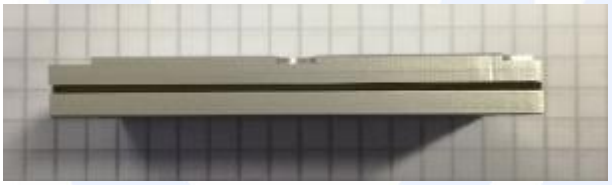
Date of receipt of test item	:	12.02.19
Testing start date	:	04.03.19
Testing end date	:	03.05.19
Samples tested nr.	:	1
Sampling procedure.	:	Equipment used for testing was picked up by the manufacturer, at the end of the production process with random criterion
Internal identification	:	adhesive label with the product number P190163

4. Operative conditions

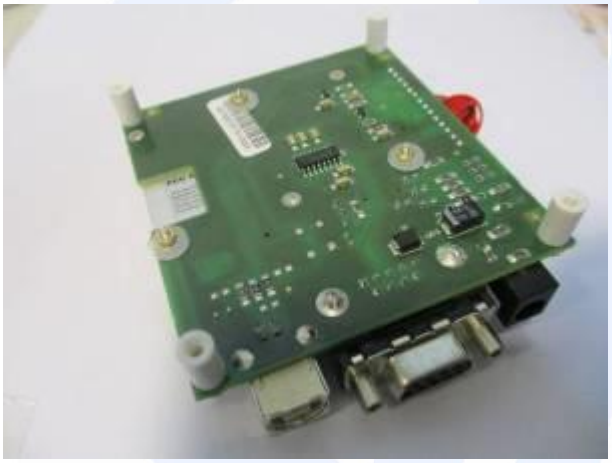
EUT exercising ..... :	Transmission at power level obtained with the following software parameters provided by the manufacturer (antenna gain 3,114, cable loss 1, power level 1000) and set with the application provided by the manufacturer.
	All conducted measurements have been performed considering also the total attenuation value, due to the 20 dB attenuator and the cable provided by the manufacturer calibrated before the test. The measured values have been obtained by considering the attenuation value directly during the scan
Auxiliary equipment ..... :	PC with software provided by the manufacturer, power unit provided by the manufacturer

5. Photograph(s) of EUT

5.1 Photograph(s) of EUT



EUT with test jig



6. Equipment list

Id. number	Manufacturer	Model	Description	Serial number	Last calibration	Due date calibration
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 S127	Schaffner	HLA6120	Loop Antenna	1191	November '18	November '23
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 S227	Rohde & Schwarz	ESR7	EMI Test Receiver 7GHz	101121	January '19	January '20
CMC S260	CMC	Wfr_N	Shielded Cable	Wfr_ant10-1	November '18	November '19
CMC S261	CMC	Wfr_N	Shielded Cable	Wfr_ant20-1	November '18	November '19
CMC S262	CMC	Wfr_N_fix	Shielded Cable	Wfr_fix32-1	November '18	November '19
CMC S263	CMC	Wfr_N_fix	Shielded Cable	Wfr_fix31-1	November '18	November '19
CMC S264	CMC	Wfr_N	Shielded Cable	Wfr_ext03-1	November '18	November '19
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
CMC S288	CMC	W_sma_white	Joint Shielded Cable	W_001	November '18	November '19

7. 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

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

8. Reference documents

Reference no.	*Description*
FCC Rules and Regulation Title 47 part 15:2017	--
KDB 558074 D01 15.247 Meas Guidance v05	Guidance for compliance measurements on Digital Transmission System, Frequency Hopping Spread Spectrum System, and Hybrid System Devices operating under section 15.247 of the FCC rules
ANSI C63.4:2014	American National Standard for Methods of Measuring of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz – 40 GHz
ANSI C63.10:2013	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
Internal Procedure PM001 rev. 3.0 (Quality Manual)	Measure Procedure
Internal procedure INC_M rev. 9.1 (Quality Manual)	Measurement uncertainty calculation

9. Deviation from test specification

None

10. Test case verdicts

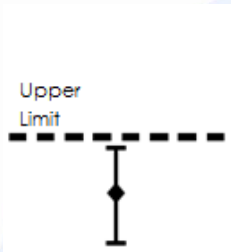
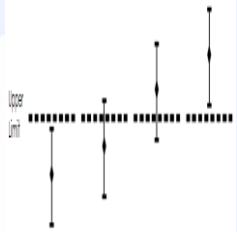
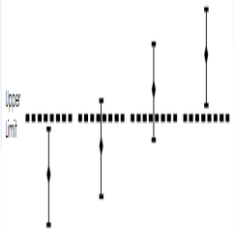
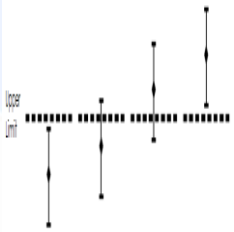
Test case does not apply to the test object	:	N.A.
Test item does meet the requirement	:	Complies
Test item does not meet the requirement	:	Does not comply
Test not performed	:	N.E.

11. Results

In this clause tests results are reported.

Measurement uncertainty is in accordance with document CMC INC_M rev. 9.1.

Judgement of compliance:

Case 1	Case 2	Case 3	Case 4
			
The sample complies with the requirement.	The sample complies with the requirement.	The sample does not comply with the requirement.	The sample does not comply with the requirement.
The measurement results is within the specification limit when the measurement uncertainty is taken into account.	It is not possible to state compliance using a 95% coverage probability for the expanded uncertainty although the measurement result is below the limit.	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 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.

11.1 Antenna requirements

Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part 15.203 and 15.204
- Internal procedure PM001
- See clause 4 of this test report

Test configuration and test method

Test site:
Laboratory

Auxiliary equipment:
See clause 4 of this test report

EUT exercising

See clause 4 of this test report

Test equipment used

--
Measurement uncertainty: See clause 7 of this test report

Test specification

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.
The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.
The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, § 15.213, § 15.217, § 15.219, or § 15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with § 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

Result

Antenna Type	*External R.F. power amplifier*	*Gain*	*Remarks*	*Results*
WANTENNAX020 external antenna	Not Present	5,5 dBi	--	Complies
WANT021XMMCX external antenna	Not Present	0,7 dBi	--	Complies

Result: The requirements are met

11.2 Conducted emissions

Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part 15.207
- Internal procedure PM001
- See clause 4 of this test report

Test configuration and test method

Test site:
Shielded chamber

Auxiliary equipment:
See clause 4 of this test report

EUT exercising

See clause 4 of this test report

Test equipment used

CMC S010, CMC S200, CMC S227
Measurement uncertainty: See clause 7 of this test report

Test specification

Port: Main port
Frequency range: 150 kHz – 30 MHz

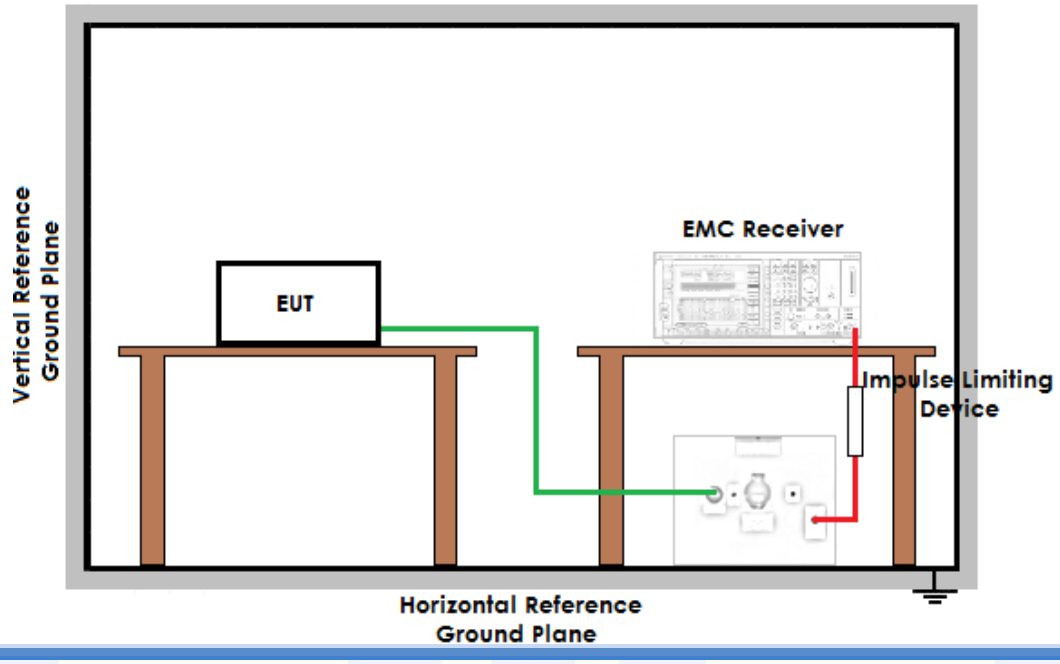
Environmental conditions

Temperature (°C)	*Atmospheric pressure (kPa)*	*Relative humidity (%)*
21	98	46

Acceptance limits

Frequency range (MHz)	*dB(µV) Quasi-peak*	*dB(µV) Average*
0,15 to 0,50	66 to 56	56 to 46
0,50 to 5	56	46
5 to 30	60	50

Setup

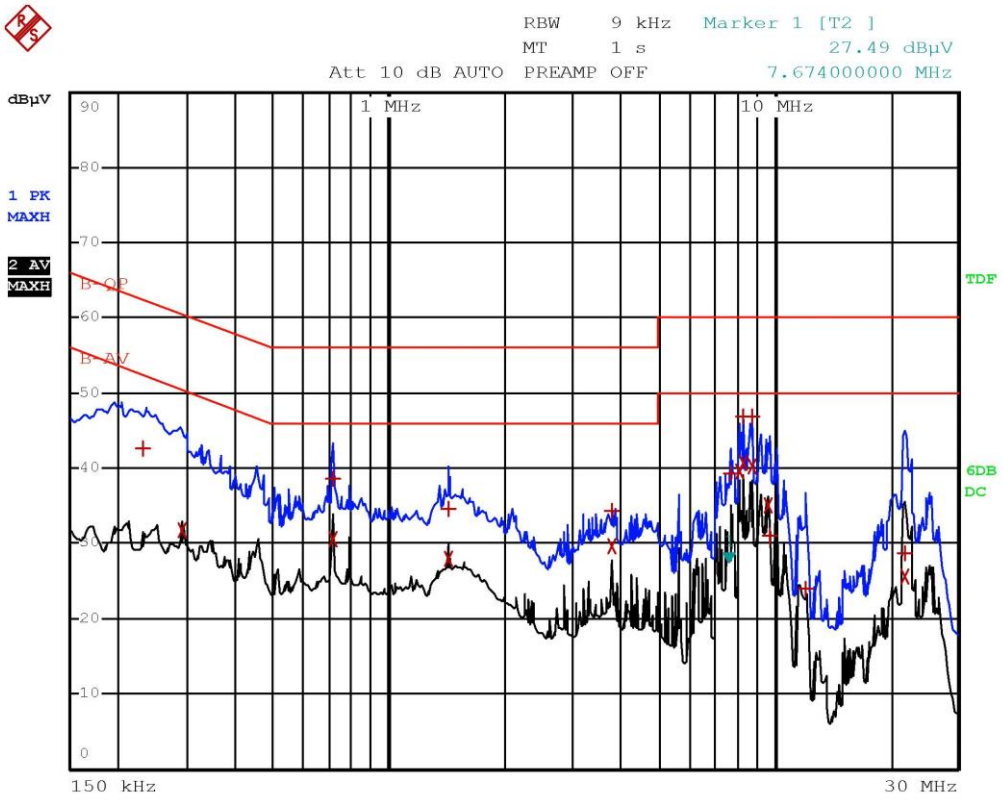


Result

Line	*Graphs*	*Remarks*	*Result*
N	G190365019	--	Complies
L1	G190365020	--	Complies
Remarks:	WANTENNAX020 external antenna as worst case. Tests performed on 120 Vac side of power unit		

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



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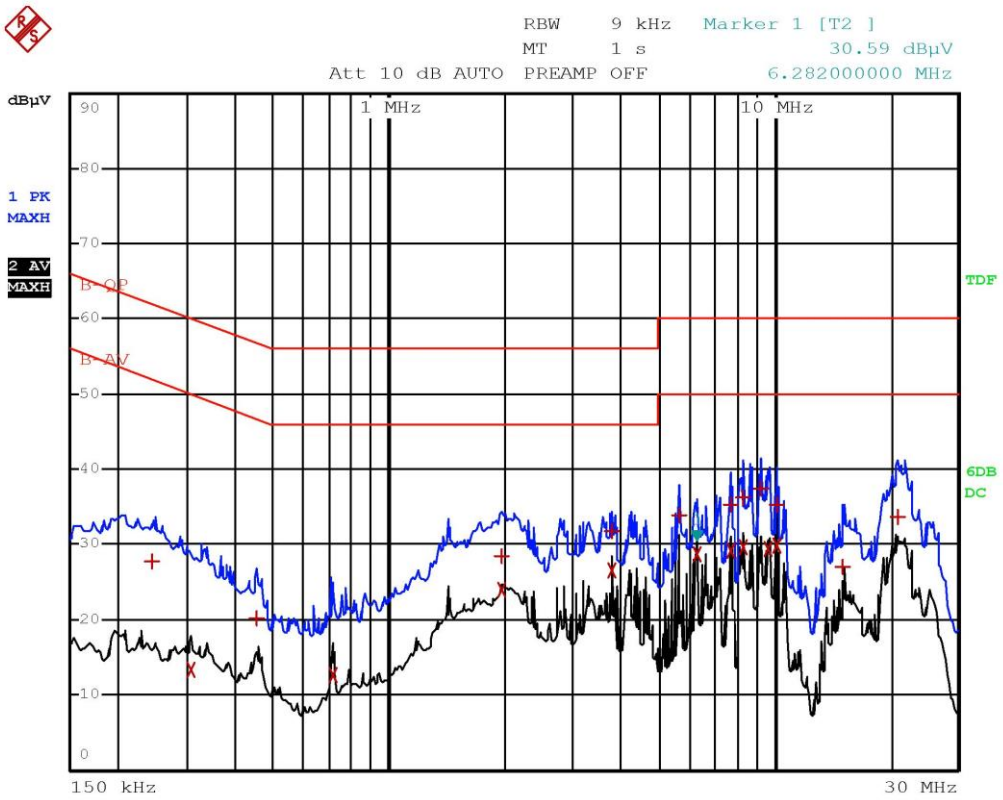

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EDIT PEAK LIST (Final Measurement Results)			
Trace1:	B-QP		
Trace2:	B-AV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
1 Quasi Peak	246 kHz	27.65	-34.23
2 Average	306 kHz	13.28	-36.79
1 Quasi Peak	454 kHz	20.17	-36.62
2 Average	718 kHz	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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Result: The requirements are met

11.3 Radiated emissions

Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part. 15.209
- Internal procedure PM001
- See clause 4 of this test report

Test configuration and test method

Test site:
Semi-anechoic chamber

Auxiliary equipment:
See clause 4 of this test report

EUT exercising

See clause 4 of this test report

Test equipment used

CMC S108, CMC S127, CMC S164, CMC S271, CMC S287
Measurement uncertainty: See clause 7 of this test report

Test specification

Port: Enclosure
Frequency range: 0,009 MHz – 10000 MHz
Antenna polarization: Horizontal (H) – Vertical (V)
10 m for frequencies ≤ 30 MHz
3 m for frequencies > 30 MHz

Environmental conditions

Temperature (°C)	*Atmospheric pressure (kPa)*	*Relative humidity (%)*
22	100	45

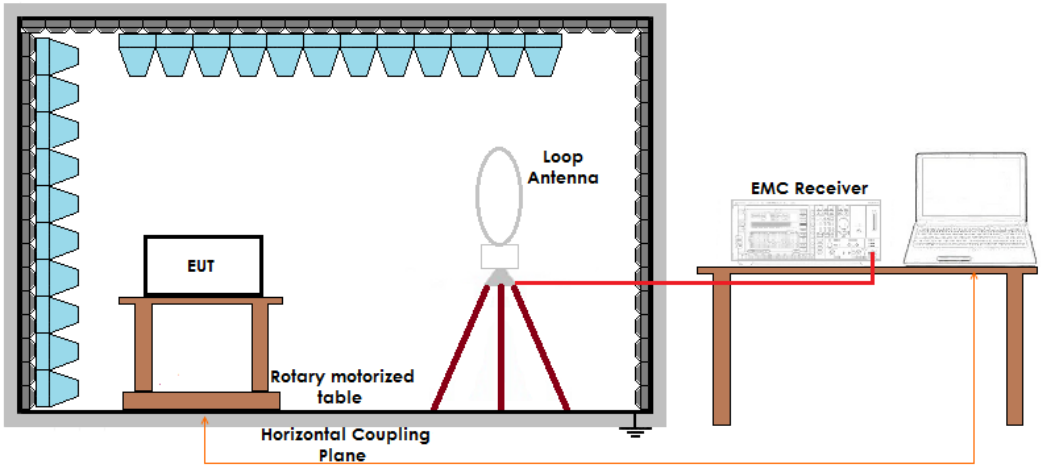
Acceptance limits

Frequency range (MHz)	*Test distance (m)*	*Limits [dB(µV/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	
Above 960	3	53,9	
	Test distance (m)	*Linear average detector [dB(µV/m)]*	*Peak detector [dB(µV/m)]*
Above 1000	3	53,9	73,9

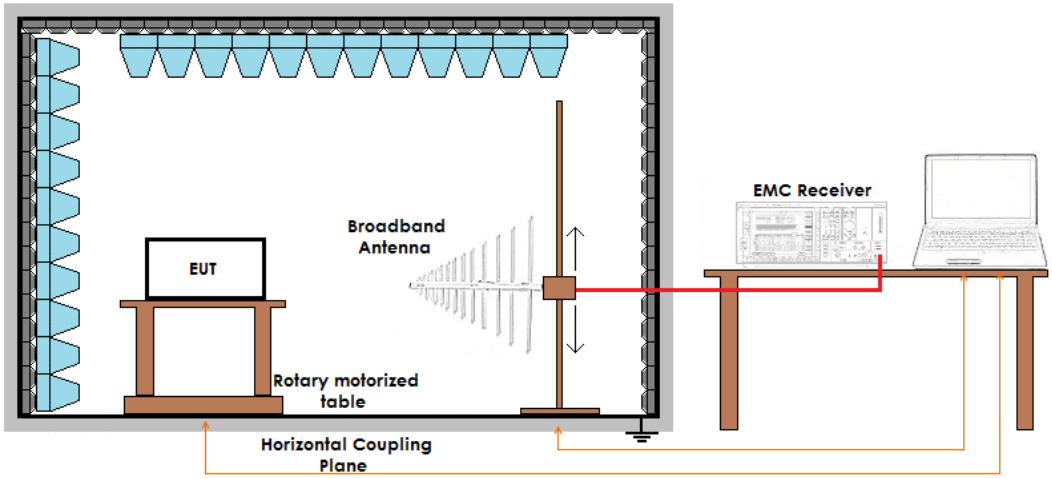
Remarks: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector. The results have been extrapolated to the specified distance using an extrapolation factor

Setup

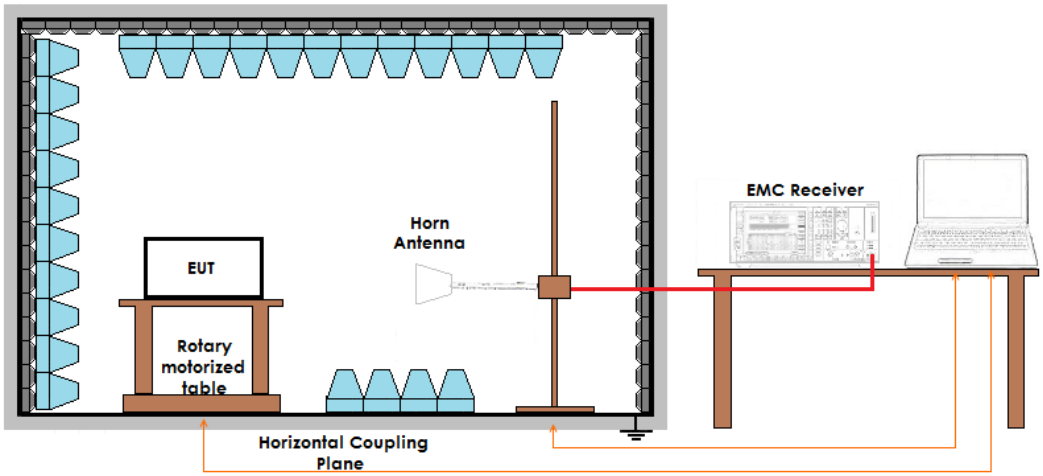
Frequency ≤ 30 MHz



Frequency ≤ 1 GHz



Frequency > 1 GHz



Result

Polarization	*Frequency Range (MHz)*	*Graphs*	*Remarks*	*Result*
V	1000 – 4000	G190365040	Lowest channel	Complies
H	1000 – 4000	G190365041	Lowest channel	Complies
H	1000 – 4000	G190365042	Medium channel	Complies
V	1000 – 4000	G190365043	Medium channel	Complies
V	1000 – 4000	G190365044	Highest channel	Complies
H	1000 – 4000	G190365045	Highest channel	Complies
V	4000 – 10000	G190365046	Lowest channel	Complies
H	4000 – 10000	G190365047	Lowest channel	Complies
H	4000 – 10000	G190365048	Medium channel	Complies
V	4000 – 10000	G190365049	Medium channel	Complies
V	4000 – 10000	G190365050	Highest channel	Complies
H	4000 – 10000	G190365051	Highest channel	Complies
V	30 – 300	G190365054	Worst case	Complies
H	30 – 300	G190365055	Worst case	Complies
V	300 – 1000	G190365056	Medium channel	Complies
H	300 – 1000	G190365057	Medium channel	Complies
H	300 – 1000	G190365058	Lowest channel	Complies
V	300 – 1000	G190365059	Lowest channel	Complies
V	300 – 1000	G190365060	Highest channel	Complies
H	300 – 1000	G190365061	Highest channel	Complies
Loop	0,009 – 30	G190365064	Worst case	Complies

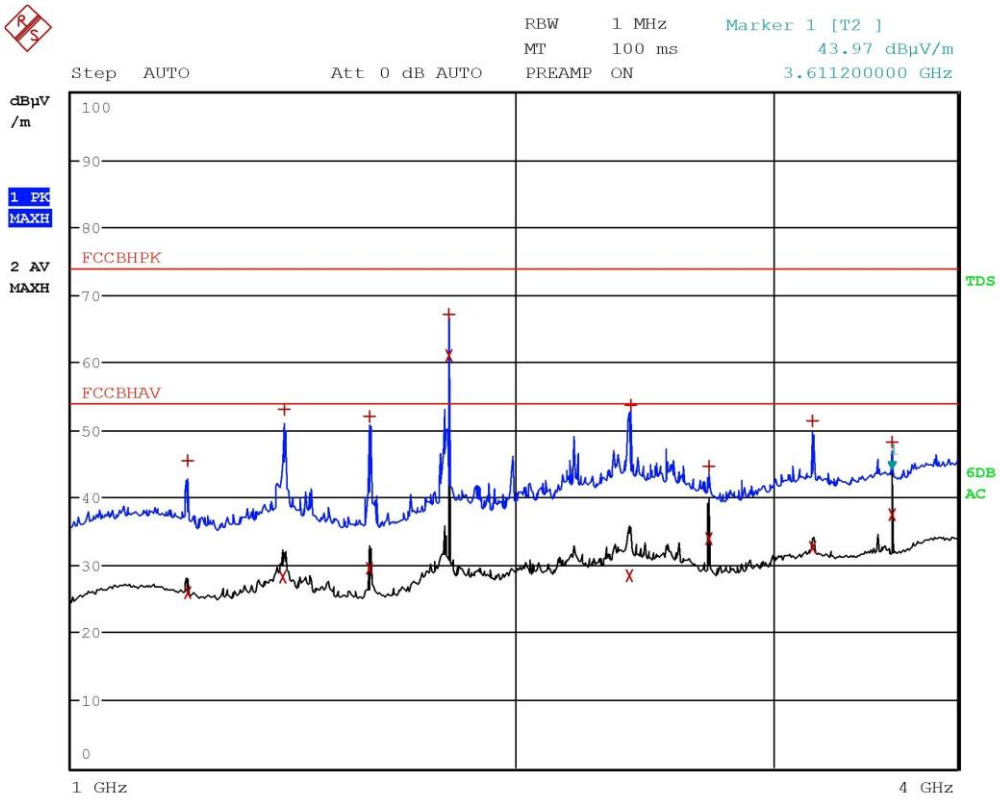
Remarks: WANTENNAX020 external antenna.
Measurements at frequencies lower than 1000 MHz have been performed with an EUT – antenna distance of 10 m. Measured values have been corrected with different conversion factors, based on the measuring distance provided by the standard.
Peaks above the limits are caused by the nominal transmitting frequencies, the final measurements out of limits fall into non-restricted frequency bands, for these frequency bands the limit is 20 dB below the highest ERP power level at 3 m. For the assessment of conformity of these latter peaks, see cl. 10.10 of this Test Report

Polarization	*Frequency Range (MHz)*	*Graphs*	*Remarks*	*Result*
V	1000 – 4000	G190365140	Lowest channel	Complies
H	1000 – 4000	G190365141	Lowest channel	Complies
H	1000 – 4000	G190365142	Medium channel	Complies
V	1000 – 4000	G190365143	Medium channel	Complies
V	1000 – 4000	G190365144	Highest channel	Complies
H	1000 – 4000	G190365145	Highest channel	Complies
H	4000 – 10000	G190365146	Highest channel	Complies
V	4000 – 10000	G190365147	Highest channel	Complies
V	4000 – 10000	G190365148	Medium channel	Complies
H	4000 – 10000	G190365149	Medium channel	Complies
H	4000 – 10000	G190365150	Lowest channel	Complies
V	4000 – 10000	G190365151	Lowest channel	Complies
V	30 – 300	G190365154	Worst case	Complies
H	30 – 300	G190365155	Worst case	Complies
V	300 – 1000	G190365156	Medium channel	Complies
H	300 – 1000	G190365157	Medium channel	Complies
H	300 – 1000	G190365158	Lowest channel	Complies
V	300 – 1000	G190365159	Lowest channel	Complies
V	300 – 1000	G190365160	Highest channel	Complies
H	300 – 1000	G190365161	Highest channel	Complies
Loop	0,009 – 30	G190365164	Worst case	Complies

Remarks: WANT021XMMCX external antenna.
Measurements at frequencies lower than 1000 MHz have been performed with an EUT – antenna distance of 10 m. Measured values have been corrected with different conversion factors, based on the measuring distance provided by the standard.
Peaks above the limits are caused by the nominal transmitting frequencies, the final measurements out of limits fall into non-restricted frequency bands, for these frequency bands the limit is 20 dB below the highest ERP power level at 3 m. For the assessment of conformity of these latter peaks, see cl. 10.10 of this Test Report

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



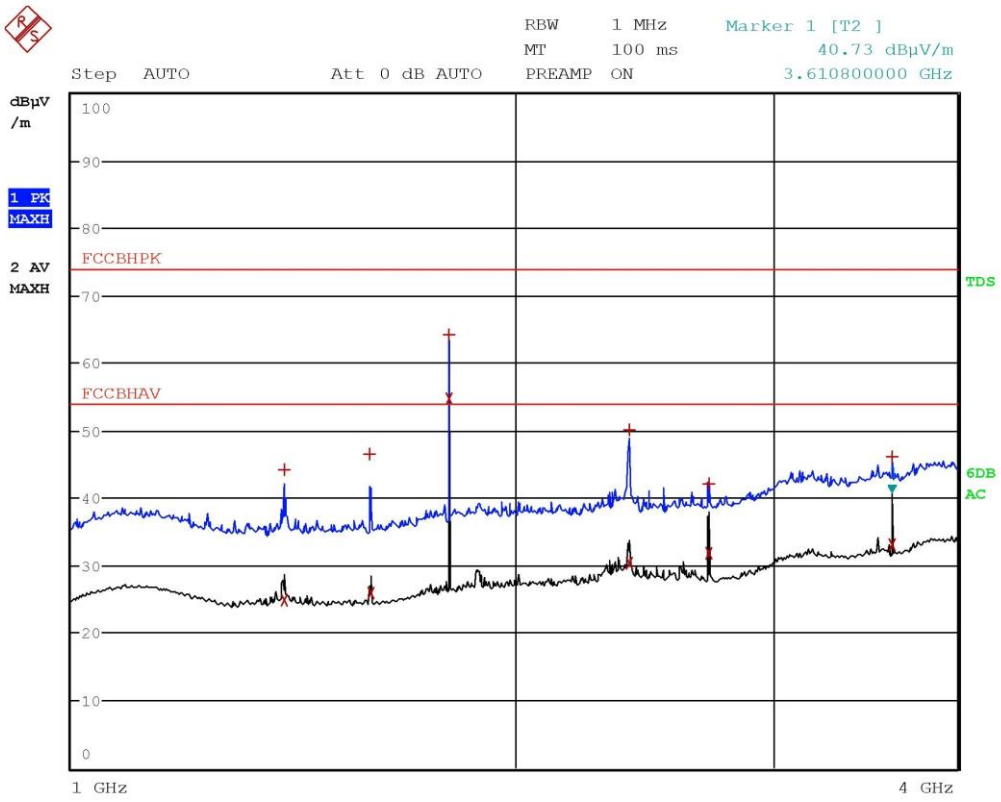
Bertezzolo 190365040

EDIT PEAK LIST (Final Measurement Results)

Trace1:	FCCBHPK
Trace2:	FCCBHAV
Trace3:	---

TRACE	FREQUENCY	LEVEL dBµV/m	DELTA LIMIT dB
1 Max Peak	1.1984 GHz	45.57	-28.40
2 Average	1.1992 GHz	25.93	-28.04
2 Average	1.392 GHz	28.20	-25.77
1 Max Peak	1.394 GHz	53.02	-20.95
1 Max Peak	1.594 GHz	52.09	-21.88
2 Average	1.5948 GHz	29.41	-24.56
2 Average	1.8056 GHz	61.02	7.04
1 Max Peak	1.8056 GHz	67.03	-6.94
2 Average	2.3932 GHz	28.46	-25.51
1 Max Peak	2.3968 GHz	53.61	-20.36
1 Max Peak	2.7084 GHz	44.67	-29.30
2 Average	2.7084 GHz	33.83	-20.14
2 Average	3.1896 GHz	32.70	-21.28
1 Max Peak	3.1912 GHz	51.26	-22.71
1 Max Peak	3.6112 GHz	48.17	-25.81
2 Average	3.6112 GHz	37.42	-16.55

Bertezzolo 190365040



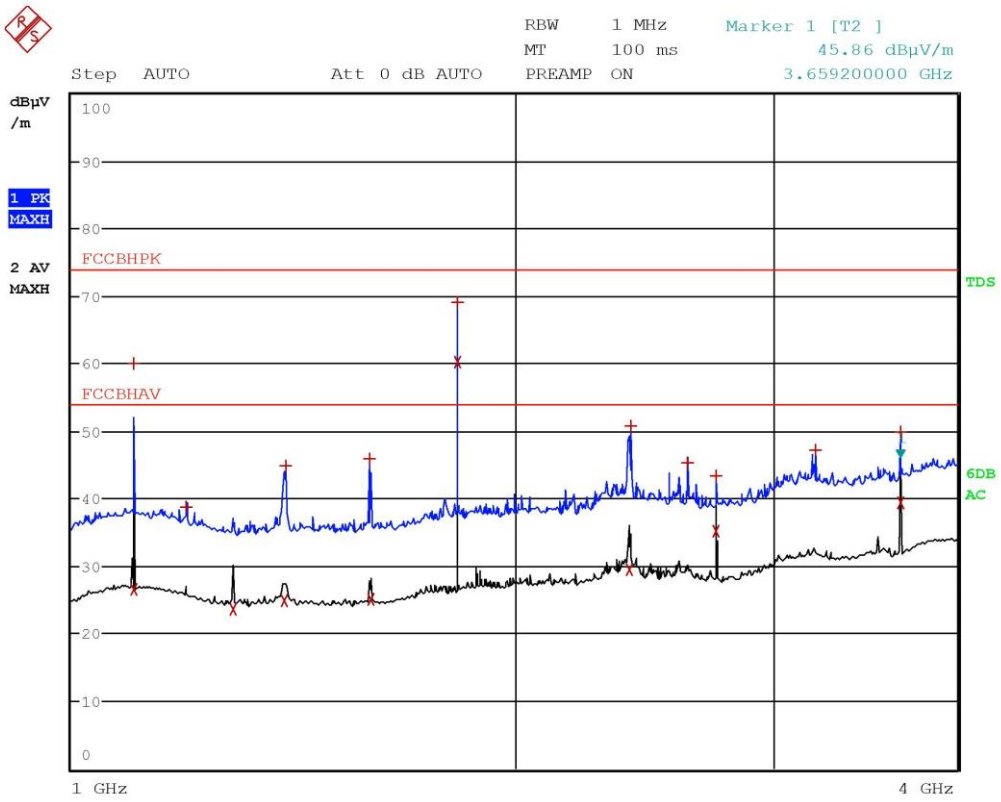
Bertezzolo 190365041

EDIT PEAK LIST (Final Measurement Results)

Trace1:	FCCBHPK
Trace2:	FCCBHAV
Trace3:	---

TRACE	FREQUENCY	LEVEL dBµV/m	DELTA LIMIT dB
2 Average	1.3936 GHz	24.91	-29.06
1 Max Peak	1.3952 GHz	44.24	-29.73
1 Max Peak	1.5948 GHz	46.49	-27.48
2 Average	1.598 GHz	25.88	-28.09
1 Max Peak	1.8056 GHz	64.23	-9.74
2 Average	1.8056 GHz	54.80	0.82
1 Max Peak	2.3948 GHz	50.18	-23.79
2 Average	2.3948 GHz	30.28	-23.69
1 Max Peak	2.7084 GHz	42.18	-31.79
2 Average	2.7084 GHz	31.90	-22.07
1 Max Peak	3.6108 GHz	46.15	-27.82
2 Average	3.6108 GHz	33.14	-20.83

Bertezzolo 190365041



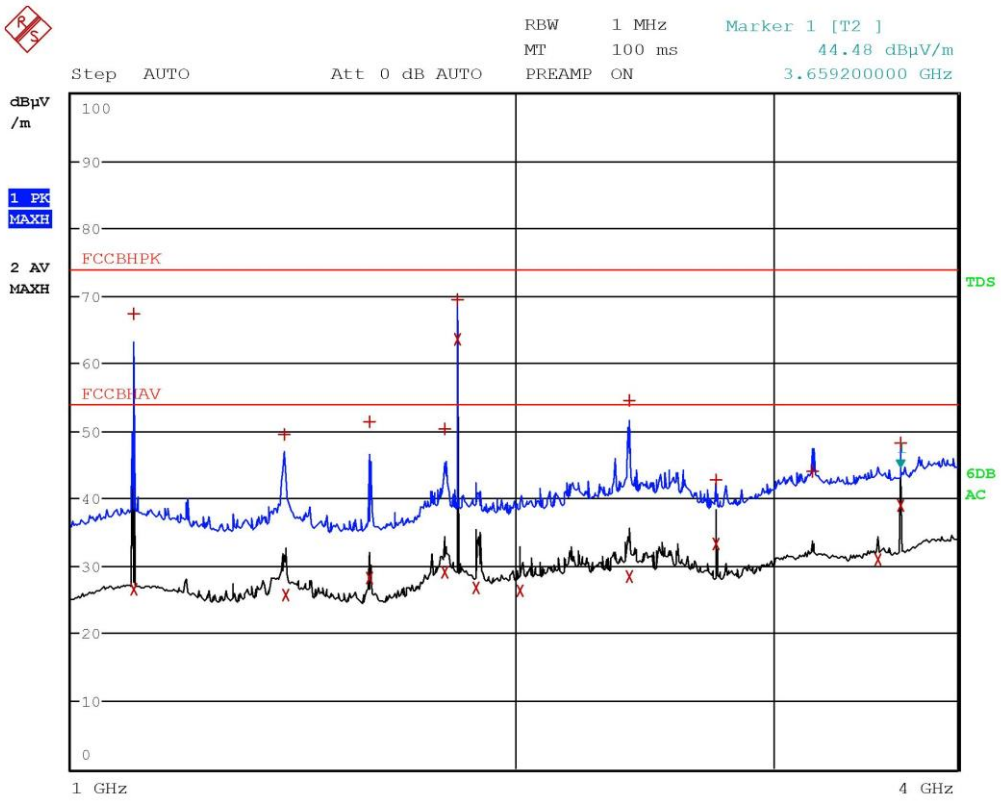
Bertezzolo 190365042

EDIT PEAK LIST (Final Measurement Results)

Trace1:	FCCBHPK
Trace2:	FCCBHAV
Trace3:	---

	TRACE	FREQUENCY	LEVEL dBµV/m	DELTA LIMIT dB
1	Max Peak	1.1012 GHz	60.04	-13.93
2	Average	1.1012 GHz	26.57	-27.40
1	Max Peak	1.198 GHz	38.75	-35.23
2	Average	1.2884 GHz	23.57	-30.40
2	Average	1.3948 GHz	24.86	-29.11
1	Max Peak	1.3996 GHz	44.78	-29.19
1	Max Peak	1.5928 GHz	45.81	-28.16
2	Average	1.5968 GHz	25.13	-28.84
1	Max Peak	1.8296 GHz	68.92	-5.05
2	Average	1.8296 GHz	60.26	6.27
2	Average	2.3928 GHz	29.49	-24.48
1	Max Peak	2.3976 GHz	50.70	-23.27
1	Max Peak	2.6228 GHz	45.29	-28.68
1	Max Peak	2.7444 GHz	43.39	-30.58
2	Average	2.7444 GHz	35.20	-18.77
1	Max Peak	3.1996 GHz	47.24	-26.73
1	Max Peak	3.6592 GHz	49.91	-24.06
2	Average	3.6592 GHz	39.34	-14.63

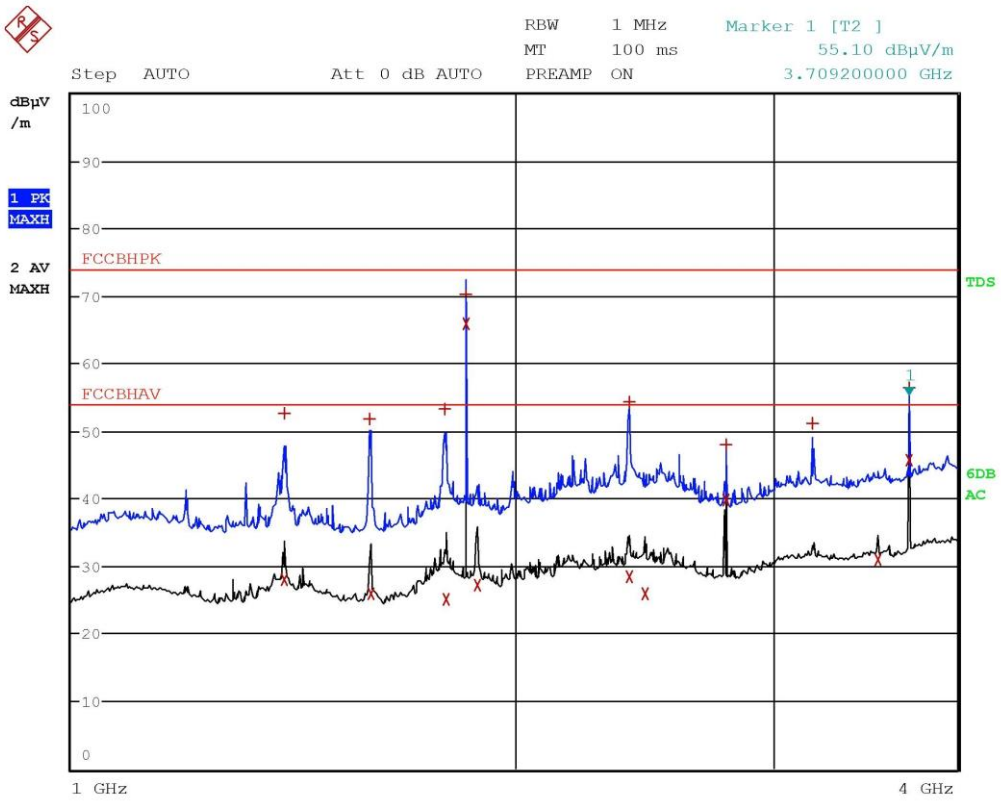
Bertezzolo 190365042



Bertezzolo 190365043

EDIT PEAK LIST (Final Measurement Results)			
Trace1:	FCCBHPK		
Trace2:	FCCBHAV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBµV/m	DELTA LIMIT dB
1 Max Peak	1.1016 GHz	67.26	-6.71
2 Average	1.102 GHz	26.63	-27.34
1 Max Peak	1.3936 GHz	49.39	-24.59
2 Average	1.398 GHz	25.72	-28.25
2 Average	1.5936 GHz	28.34	-25.64
1 Max Peak	1.5944 GHz	51.32	-22.66
1 Max Peak	1.7948 GHz	50.31	-23.66
2 Average	1.7948 GHz	29.03	-24.94
1 Max Peak	1.8296 GHz	69.35	-4.62
2 Average	1.8296 GHz	63.48	9.50
2 Average	1.8816 GHz	26.73	-27.25
2 Average	2.016 GHz	26.40	-27.57
1 Max Peak	2.3952 GHz	54.42	-19.55
2 Average	2.3952 GHz	28.38	-25.59
1 Max Peak	2.744 GHz	42.65	-31.32
2 Average	2.7444 GHz	33.35	-20.62
1 Max Peak	3.192 GHz	44.07	-29.90
2 Average	3.5316 GHz	31.02	-22.95
1 Max Peak	3.6592 GHz	48.30	-25.67
2 Average	3.6592 GHz	38.92	-15.05

Bertezzolo 190365043



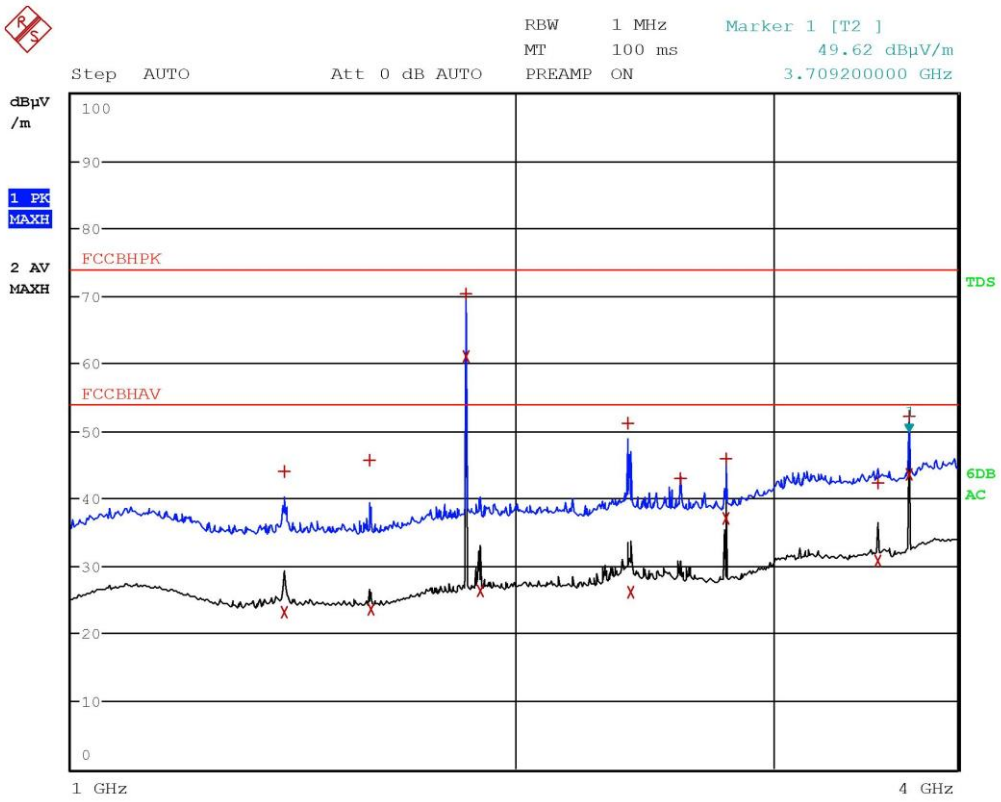
Bertezzolo 190365044

EDIT PEAK LIST (Final Measurement Results)

Trace1:	FCCBHPK
Trace2:	FCCBHAV
Trace3:	---

TRACE	FREQUENCY	LEVEL dBµV/m	DELTA LIMIT dB
1 Max Peak	1.394 GHz	52.60	-21.37
2 Average	1.396 GHz	28.03	-25.94
1 Max Peak	1.5952 GHz	51.72	-22.25
2 Average	1.5992 GHz	26.02	-27.96
1 Max Peak	1.794 GHz	53.32	-20.65
2 Average	1.7964 GHz	25.20	-28.77
2 Average	1.8544 GHz	65.85	11.87
1 Max Peak	1.8544 GHz	70.43	-3.57
2 Average	1.8872 GHz	27.25	-26.72
2 Average	2.3936 GHz	28.43	-25.54
1 Max Peak	2.3952 GHz	54.35	-19.62
2 Average	2.454 GHz	25.87	-28.10
1 Max Peak	2.7816 GHz	48.00	-25.97
2 Average	2.7816 GHz	39.74	-14.23
1 Max Peak	3.1856 GHz	51.12	-22.85
2 Average	3.5316 GHz	30.95	-23.02
1 Max Peak	3.7088 GHz	56.39	-17.58
2 Average	3.7092 GHz	45.76	-8.21

Bertezzolo 190365044



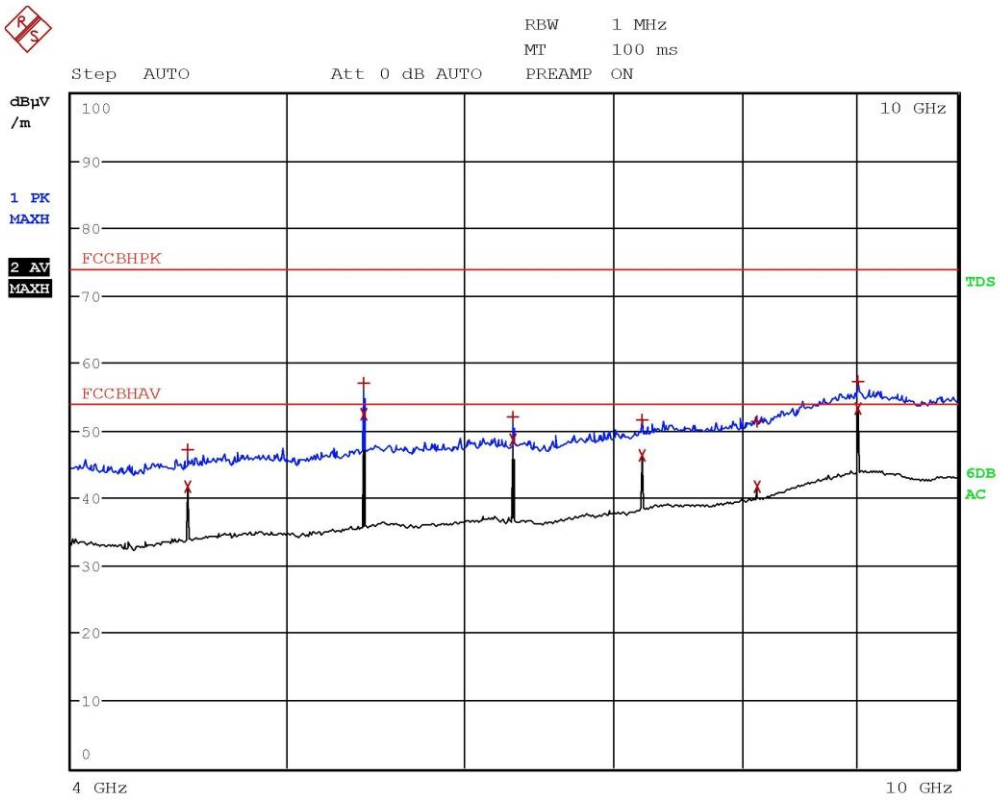
Bertezzolo 190365045

EDIT PEAK LIST (Final Measurement Results)

Trace1:	FCCBHPK
Trace2:	FCCBHAV
Trace3:	---

TRACE	FREQUENCY	LEVEL dBµV/m	DELTA LIMIT dB
1 Max Peak	1.3944 GHz	43.99	-29.98
2 Average	1.3944 GHz	23.27	-30.70
1 Max Peak	1.5944 GHz	45.77	-28.20
2 Average	1.5976 GHz	23.71	-30.26
1 Max Peak	1.8544 GHz	70.33	-3.64
2 Average	1.8544 GHz	61.06	7.08
2 Average	1.8956 GHz	26.29	-27.68
1 Max Peak	2.3896 GHz	51.24	-22.74
2 Average	2.3972 GHz	26.15	-27.82
1 Max Peak	2.5904 GHz	42.95	-31.02
1 Max Peak	2.7816 GHz	45.91	-28.06
2 Average	2.7816 GHz	37.08	-16.89
1 Max Peak	3.5316 GHz	42.40	-31.57
2 Average	3.5316 GHz	30.74	-23.24
1 Max Peak	3.7088 GHz	52.17	-21.80
2 Average	3.7092 GHz	43.68	-10.29

Bertezzolo 190365045



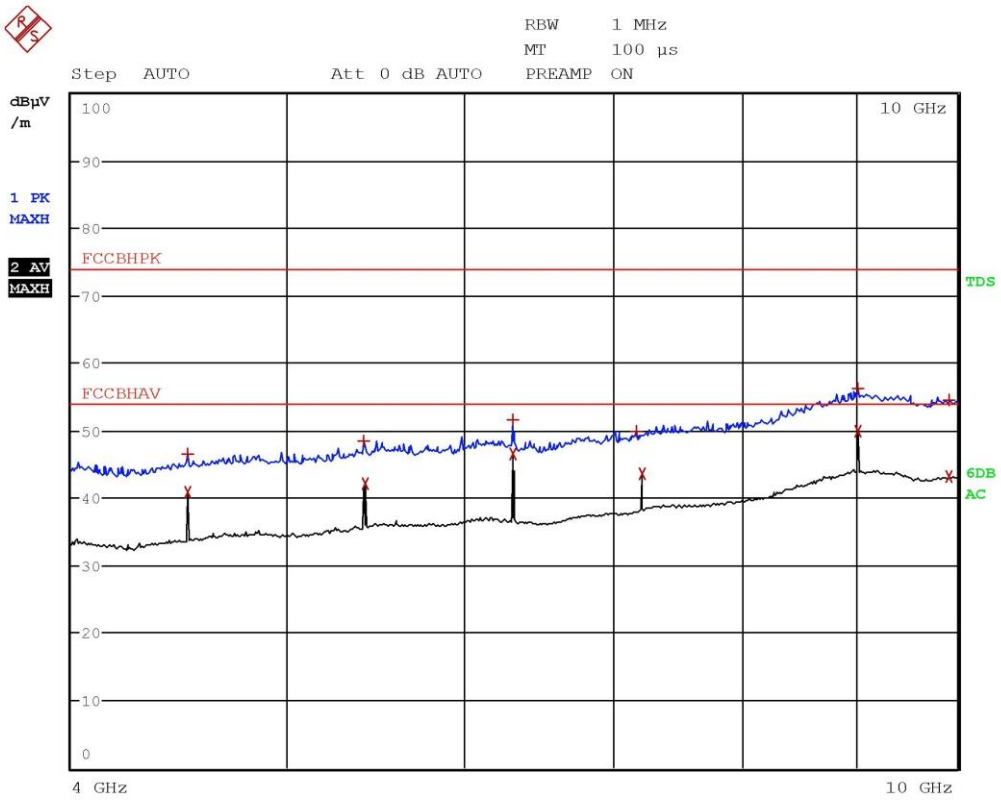
Gandini 190365046

EDIT PEAK LIST (Prescan Results)

Trace1:	FCCBHPK
Trace2:	FCCBHAV
Trace3:	---

TRACE	FREQUENCY	LEVEL dBµV/m	DELTA LIMIT dB
2 Average	4.5136 GHz	41.59	-12.38
1 Max Peak	4.5136 GHz	47.21	-26.76
1 Max Peak	5.4164 GHz	57.02	-16.95
2 Average	5.4164 GHz	52.35	-1.63
2 Average	6.3192 GHz	48.67	-5.30
1 Max Peak	6.3192 GHz	51.89	-22.08
1 Max Peak	7.222 GHz	51.52	-22.46
2 Average	7.222 GHz	46.35	-7.62
2 Average	8.1248 GHz	41.68	-12.29
1 Max Peak	8.1344 GHz	51.32	-22.65
1 Max Peak	9.0276 GHz	57.30	-16.67
2 Average	9.0276 GHz	53.24	-0.73

Gandini 190365046



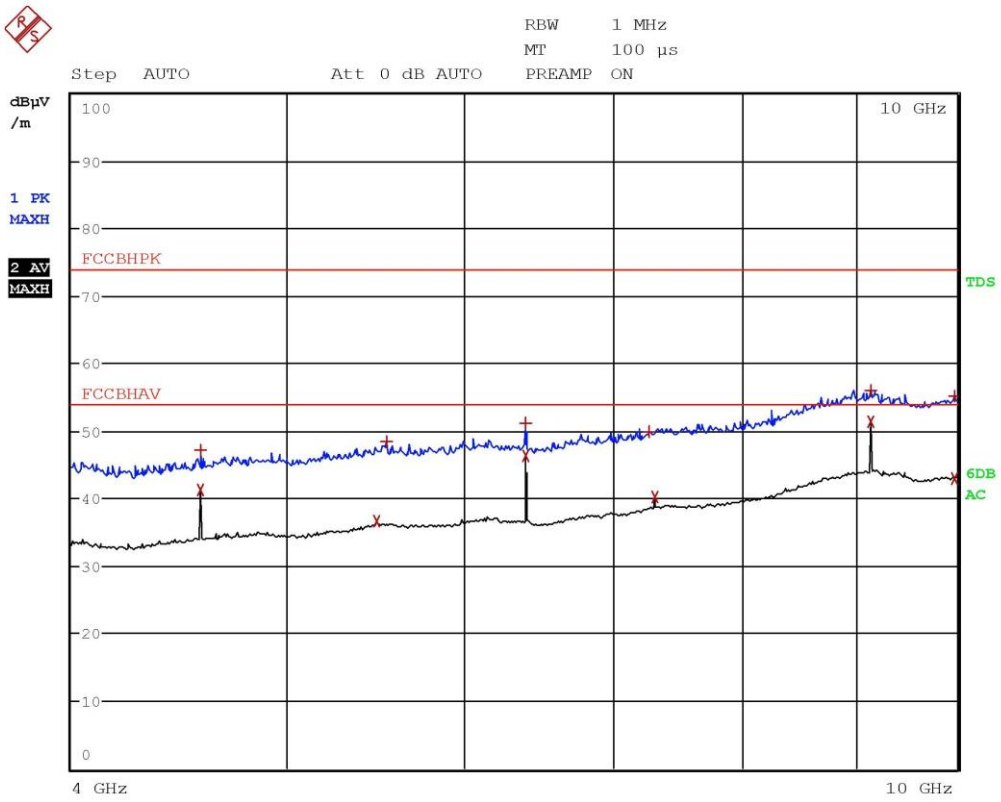
Gandini 190365047

EDIT PEAK LIST (Prescan Results)

Trace1:	FCCBHPK
Trace2:	FCCBHAV
Trace3:	---

TRACE		FREQUENCY	LEVEL dBµV/m	DELTA LIMIT dB
1	Max Peak	4.5136 GHz	46.58	-27.39
2	Average	4.514 GHz	40.88	-13.09
1	Max Peak	5.4164 GHz	48.49	-25.48
2	Average	5.4168 GHz	42.08	-11.89
1	Max Peak	6.3192 GHz	51.63	-22.34
2	Average	6.3192 GHz	46.62	-7.35
1	Max Peak	7.1784 GHz	49.82	-24.15
2	Average	7.222 GHz	43.63	-10.34
1	Max Peak	9.0276 GHz	56.16	-17.81
2	Average	9.0276 GHz	49.93	-4.04
1	Max Peak	9.9128 GHz	54.57	-19.40
2	Average	9.916 GHz	43.26	-10.71

Gandini 190365047



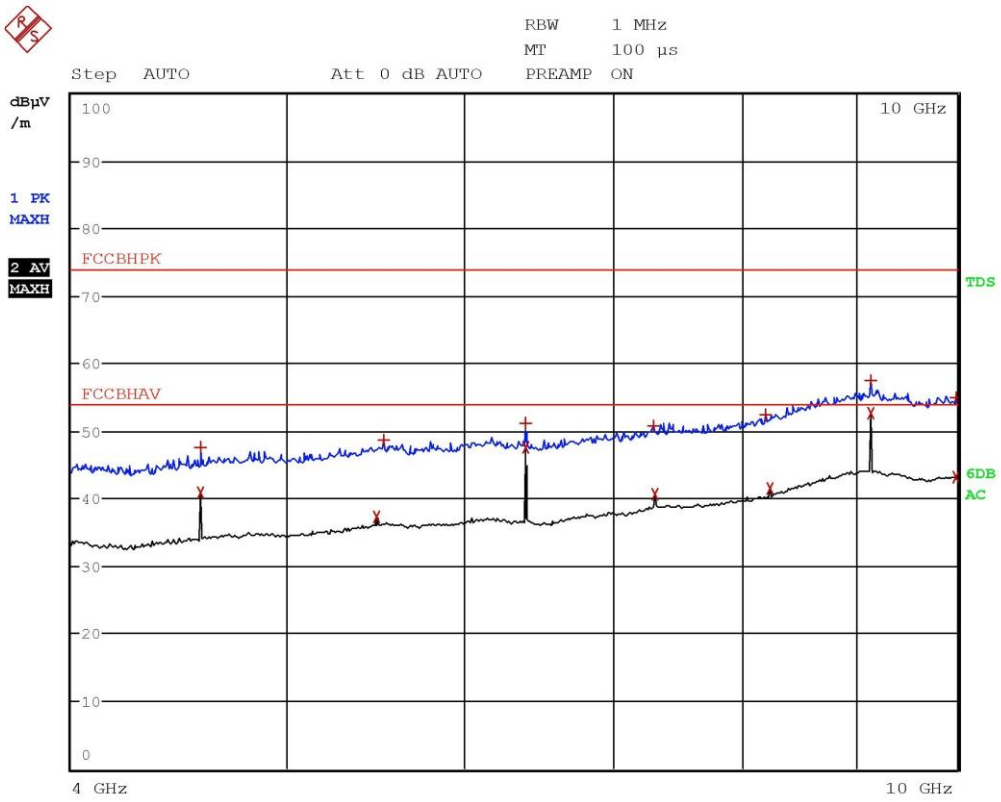
Gandini 190365048

EDIT PEAK LIST (Prescan Results)

Trace1:	FCCBHPK
Trace2:	FCCBHAV
Trace3:	---

TRACE		FREQUENCY	LEVEL dBµV/m	DELTA LIMIT dB
1	Max Peak	4.5736 GHz	47.18	-26.79
2	Average	4.5736 GHz	41.23	-12.74
2	Average	5.4884 GHz	36.57	-17.40
1	Max Peak	5.542 GHz	48.32	-25.65
1	Max Peak	6.4032 GHz	51.25	-22.72
2	Average	6.4032 GHz	46.34	-7.63
1	Max Peak	7.2728 GHz	49.80	-24.17
2	Average	7.318 GHz	40.19	-13.78
1	Max Peak	9.1476 GHz	55.98	-17.99
2	Average	9.1476 GHz	51.32	-2.65
1	Max Peak	9.9664 GHz	55.13	-18.84
2	Average	9.9728 GHz	43.00	-10.97

Gandini 190365048



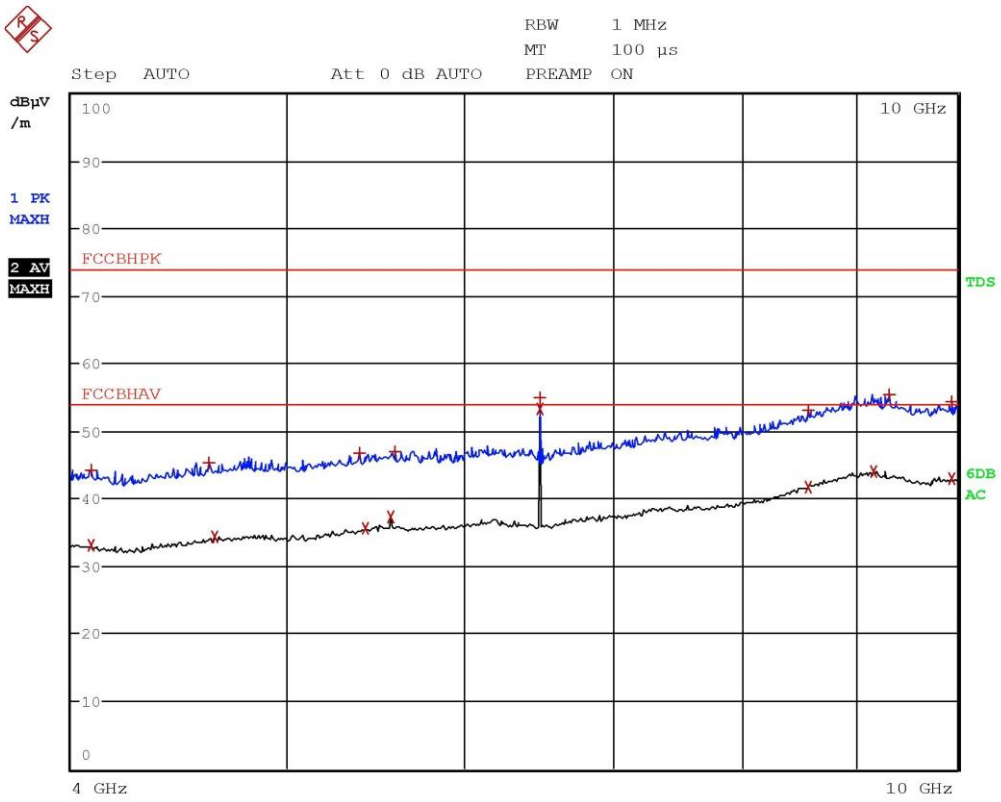
Gandini 190365049

EDIT PEAK LIST (Prescan Results)

Trace1:	FCCBHPK
Trace2:	FCCBHAV
Trace3:	---

TRACE	FREQUENCY	LEVEL dBµV/m	DELTA LIMIT dB
1 Max Peak	4.5736 GHz	47.53	-26.44
2 Average	4.5736 GHz	40.77	-13.21
2 Average	5.4884 GHz	37.19	-16.78
1 Max Peak	5.5268 GHz	48.63	-25.34
1 Max Peak	6.4032 GHz	51.21	-22.76
2 Average	6.4032 GHz	47.59	-6.38
1 Max Peak	7.3036 GHz	50.72	-23.25
2 Average	7.318 GHz	40.66	-13.31
1 Max Peak	8.196 GHz	52.48	-21.49
2 Average	8.2328 GHz	41.47	-12.50
1 Max Peak	9.1476 GHz	57.35	-16.62
2 Average	9.1476 GHz	52.57	-1.40
1 Max Peak	9.9808 GHz	54.84	-19.13
2 Average	9.992 GHz	43.20	-10.77

Gandini 190365049



Gandini 190365050

EDIT PEAK LIST (Prescan Results)			
Trace1:	FCCBHPK		
Trace2:	FCCBHAV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBµV/m	DELTA LIMIT dB
1 Max Peak	4.0812 GHz	44.12	-29.85
2 Average	4.0828 GHz	33.10	-20.87
1 Max Peak	4.6108 GHz	45.28	-28.69
2 Average	4.6364 GHz	34.29	-19.68
1 Max Peak	5.3848 GHz	46.65	-27.33
2 Average	5.4188 GHz	35.58	-18.39
2 Average	5.5636 GHz	37.28	-16.69
1 Max Peak	5.5884 GHz	46.89	-27.08
1 Max Peak	6.4908 GHz	54.99	-18.98
2 Average	6.4908 GHz	53.16	-0.81
2 Average	8.5648 GHz	41.70	-12.27
1 Max Peak	8.5652 GHz	53.00	-20.97
2 Average	9.1676 GHz	43.97	-10.00
1 Max Peak	9.318 GHz	55.40	-18.57
1 Max Peak	9.9416 GHz	54.24	-19.74
2 Average	9.9452 GHz	42.90	-11.07

Gandini 190365050