CMC Centro Misure Compatibilità S.r.l.
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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. R19020101

Federal Communication Commission (FCC)

Test item

Description .....: WIRELESS BASE UNIT
Trademark .....: CARLO GAVAZZI
Model/Type .....: SH2WBU230N
FCC ID .....: SNJWBU

Test Specification

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

Client's name .....: CARLO GAVAZZI CONTROLS S.p.A.
Address .....: Via Safforze, 8 – 32100 Belluno (BL) – ITALY

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

Report

Tested by .....: A. Bertezzolo .....

Approved by .....: R. Beghetto – *Laboratory Manager* .....
Date of issue .....: 18.03.19
Contents.....: 87 pages

Index

1. Summary

Standard:

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

Test specifications	*Environmental Phenomena*	*Tests sequence*	*Result*
Part 15.203	Antenna requirements	1	Complies
Part 15.207	Conducted emissions	2	Complies
Part 15.209	Emissions in restricted frequency bands and in unrestricted frequency bands	3	Complies
Part 15.247 (a) (2)	DTS bandwidth	4	Complies
Part 15.247 (d)	Band edge	5	Complies
Part 15.209 and 15.247	Fundamental emission output power	6	Complies
Part 15.209 and 15.247	Maximum power spectral density level in the fundamental emission	7	Complies
Part 15.209	Spurious emission	8	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)

EUT description	:	Wireless base unit
Power supply	:	24 Vdc
		115-240 V ~ 50/60 Hz single-phase
		All tests have been performed on 120 V ~ 60 Hz power supply as worst case
Software release tested into equipment		FW rev 2.0.4
Type of equipment	:	☑ Transmitter Unit
		☑ Receiver Unit
Type of station	:	☑ Fixed station
		❑ Portable station
		❑ Mobile station
Frequency band	:	F_L: 2405 MHz F_M: 2455 MHz F_H: 2475 MHz
		WiDup protocol based on standard 801.15.4

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	:	29.01.19
Testing start date	:	04.02.19
Testing end date	:	16.03.19
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 P190106

4. Operative conditions

EUT exercising ..... : EUT in continuous transmission at maximum power, duty cycle 100%. The test lab had no ability to change the power setting.

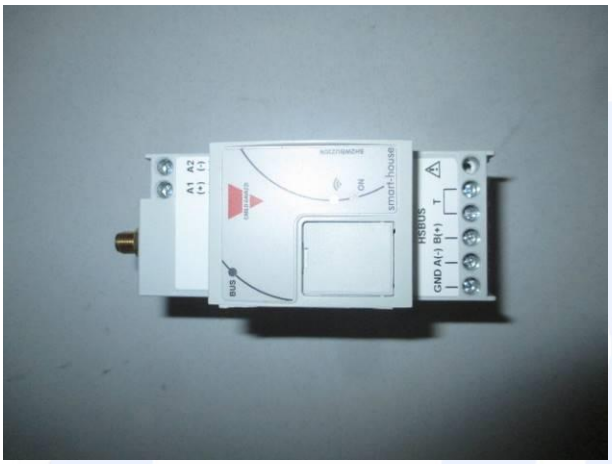
All tests have been performed on 120 V ~ 60 Hz power supply as worst case detected during the pre-scan of all tests, performed on the highest and on the lowest voltage levels, including the tolerance declared by the manufacturer (24 Vdc ±20%, 120 Vac -10%, 240 Vac +10%).

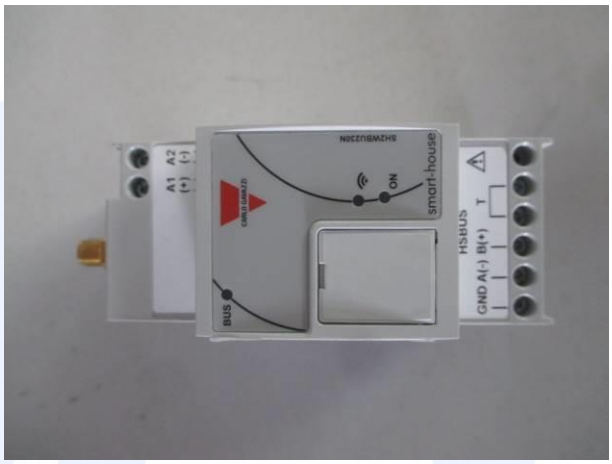
The results reported on this Test Report shown only the highest levels between all detected values.

No modifications have been made on tested samples

5. Photograph(s) of EUT

5.1 Photograph(s) of EUT





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 '21
CMC S136	Schwarzbeck	VULB 9163	Broadband Antenna	9163-205	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	100781	January '19	January '20
CMC S290	Schwarzbeck	BBHA 9170	Horn Antenna (15-40 GHz)	733	July '16	July '19
CMC S295	Rohde & Schwarz	FSW43	Spectrum Analyzer 43GHz	104059	November '16	November '19
20 dB attenuator					Calibrated before the tests	

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_01 date 14/01/2019			

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	--
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
KDB 558074 D01 15.247 Meas Guidance v05r01	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
KDB 174176 D01 Line Conducted FAQ v01r01	AC power-line conducted emissions – Frequently Asked Questions
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

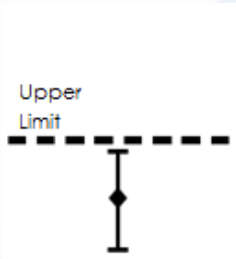
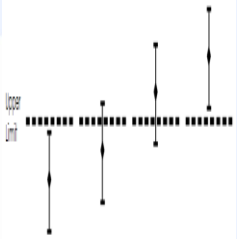
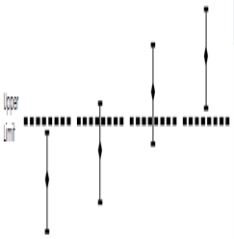
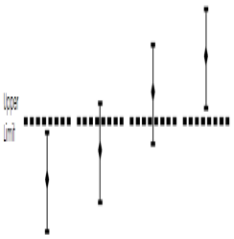
Test case does not apply to the test object	:	N.A.
Test item does meet the requirement	:	Complies
Test item does not meet the requirement	:	Does not comply
Test not performed	:	N.E.

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
- Internal procedure PM001
- See clause 4 of this test report
- Test date: January 29th, 2019
- Technician: A. Bertezzolo

Test configuration

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

Environmental conditions

Temperature (°C)	*Atmospheric pressure (kPa)*	*Relative humidity (%)*
23	100	42

Manufacturer declaration

Antenna Type	*External R.F. power amplifier*	*Gain*	*Remarks*
Integral antenna	Not Present	2,5 dBi	--

Result: The requirements are met

11.2 Conducted emissions

Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part 15.207
- ANSI C63.10 cl. 6.2
- Internal procedure PM001
- See clause 4 of this test report
- Test date: February 5th, 2019
- Technician: A. Bertezzolo

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 S206
Measurement uncertainty: See clause 7 of this test report

Test specification

Port: Main port
Frequency range: 150 kHz – 30 MHz
EUT – LISN distance: 80 cm
EUT – reference ground plane distance: 40 cm

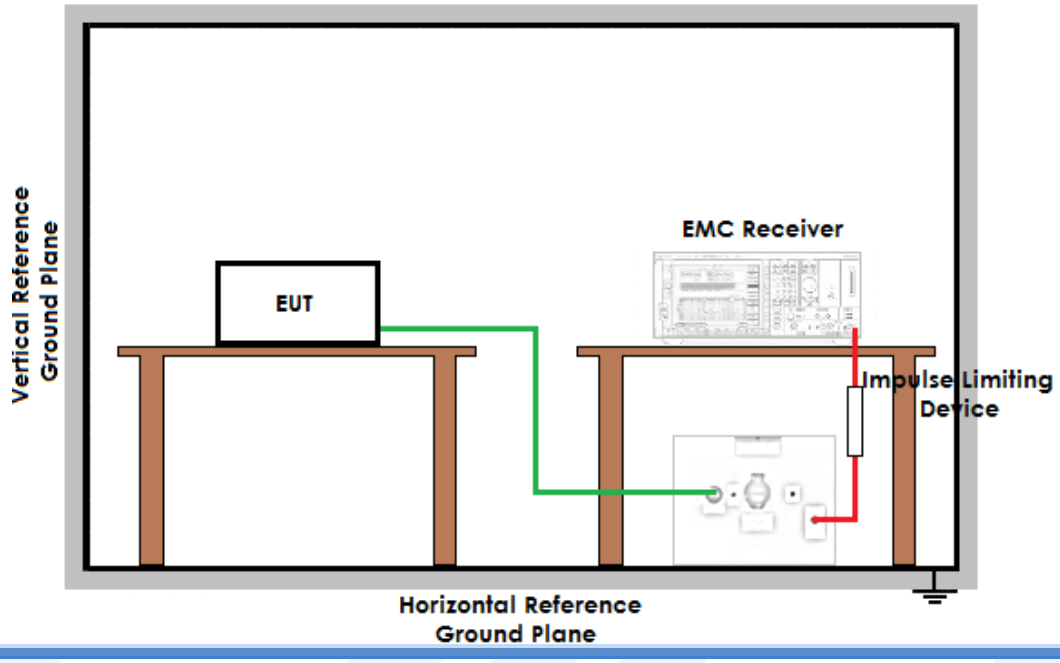
Environmental conditions

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



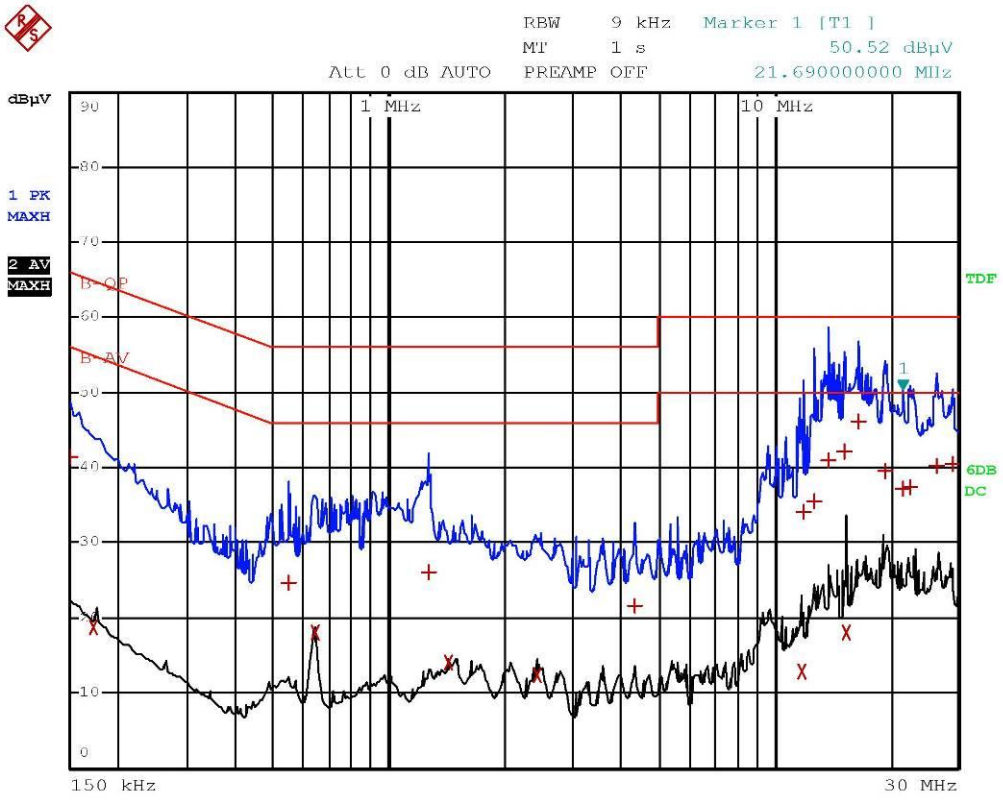
Result

Line	*Graphs*	*Remarks*	*Result*
N	G190201017	--	Complies
L1	G190201018	--	Complies

Remarks: Tests have been performed on 120 V ~ 60 Hz power supply as worst case detected during the pre-scan of all tests, performed on the highest and on the lowest voltage levels, including the tolerance declared by the manufacturer (24 Vdc ±20%, 120 Vac -10%, 240 Vac +10%)

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	150 kHz	41.50	-24.49
2 Average	174 kHz	18.89	-35.87
1 Quasi Peak	550 kHz	24.69	-31.30
2 Average	642 kHz	18.08	-27.91
1 Quasi Peak	1.27 MHz	26.18	-29.81
2 Average	1.434 MHz	14.04	-31.95
2 Average	2.418 MHz	12.35	-33.64
1 Quasi Peak	4.346 MHz	21.70	-34.30
2 Average	11.798 MHz	12.77	-37.22
1 Quasi Peak	11.982 MHz	34.13	-25.86
1 Quasi Peak	12.758 MHz	35.61	-24.38
1 Quasi Peak	13.794 MHz	40.88	-19.11
1 Quasi Peak	15.242 MHz	42.07	-17.92
2 Average	15.318 MHz	18.03	-31.96
1 Quasi Peak	16.598 MHz	46.23	-13.76
1 Quasi Peak	19.414 MHz	39.58	-20.41
1 Quasi Peak	21.69 MHz	37.13	-22.86
1 Quasi Peak	22.49 MHz	37.48	-22.51
1 Quasi Peak	26.394 MHz	40.25	-19.75
1 Quasi Peak	28.954 MHz	40.54	-19.45

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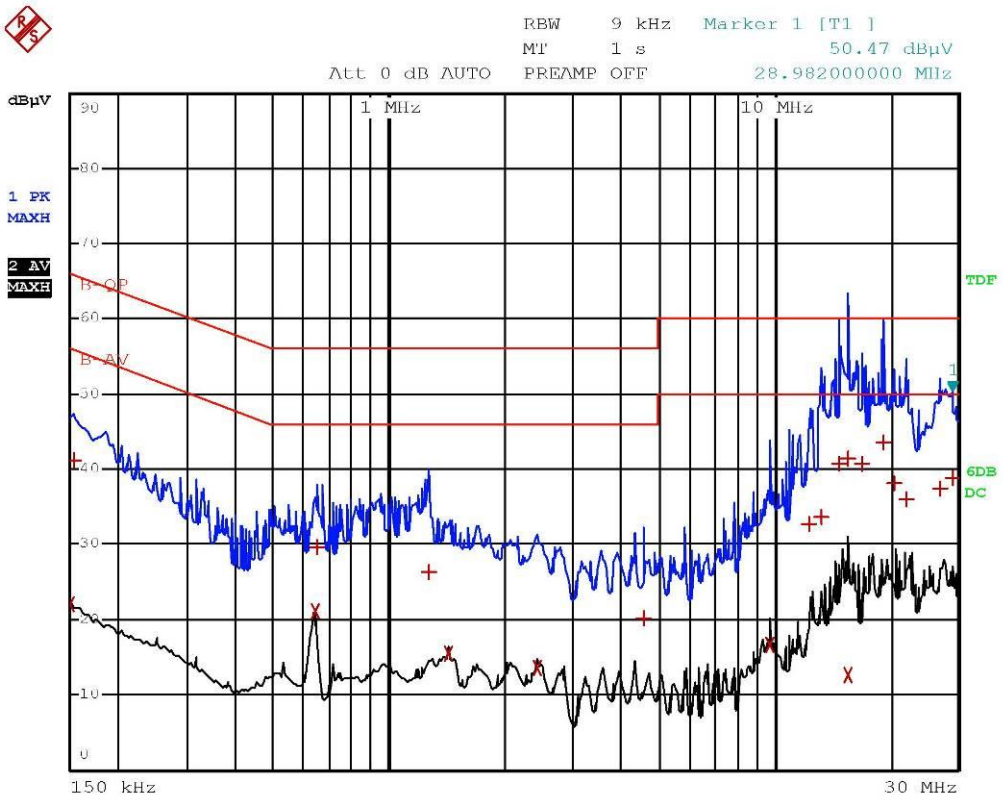

Bertezzolo 190201018

EDIT PEAK LIST (Final Measurement Results)			
Trace1:	B-QP		
Trace2:	B-AV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
2 Average	150 kHz	22.08	-33.91
1 Quasi Peak	154 kHz	41.20	-24.57
2 Average	642 kHz	21.05	-24.94
1 Quasi Peak	650 kHz	29.70	-26.30
1 Quasi Peak	1.278 MHz	26.23	-29.76
2 Average	1.426 MHz	15.56	-30.44
2 Average	2.442 MHz	13.53	-32.46
1 Quasi Peak	4.594 MHz	20.30	-35.69
2 Average	9.706 MHz	16.68	-33.31
1 Quasi Peak	12.27 MHz	32.61	-27.38
1 Quasi Peak	13.29 MHz	33.63	-26.36
1 Quasi Peak	14.818 MHz	40.64	-19.35
1 Quasi Peak	15.582 MHz	41.44	-18.55
2 Average	15.582 MHz	12.64	-37.35
1 Quasi Peak	16.87 MHz	40.68	-19.32
1 Quasi Peak	19.154 MHz	43.60	-16.39
1 Quasi Peak	20.442 MHz	38.20	-21.79
1 Quasi Peak	21.97 MHz	35.91	-24.08
1 Quasi Peak	27.026 MHz	37.52	-22.47
1 Quasi Peak	28.982 MHz	38.76	-21.23

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Result: The requirements are met

11.3 Emissions in restricted frequency bands and in unrestricted frequency bands

Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part. 15.209
- KDB 558074 D01 DTS Meas Guidance v05r01 cl. 8.6
- ANSI C63.10 cl. 11.12.1
- Internal procedure PM001
- See clause 4 of this test report
- Test date: February 16th, 2019
- Technician: A. Bertezzolo

Test configuration

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 127, CMC S136, CMC S164, CMC S290
Measurement uncertainty: See clause 7 of this test report

Test specification

Port: Enclosure
Frequency range: 0,009 MHz – 26000 MHz
Antenna polarization: Horizontal (H) – Vertical (V)
EUT height about the floor:
80 cm for frequencies ≤ 1000 MHz
150 cm for frequencies > 1000 MHz
EUT – Antenna distance:
10 m for frequencies ≤ 1000 MHz
3 m for frequencies > 1000 MHz

Environmental conditions

Temperature (°C)	*Atmospheric pressure (kPa)*	*Relative humidity (%)*
22	100	42

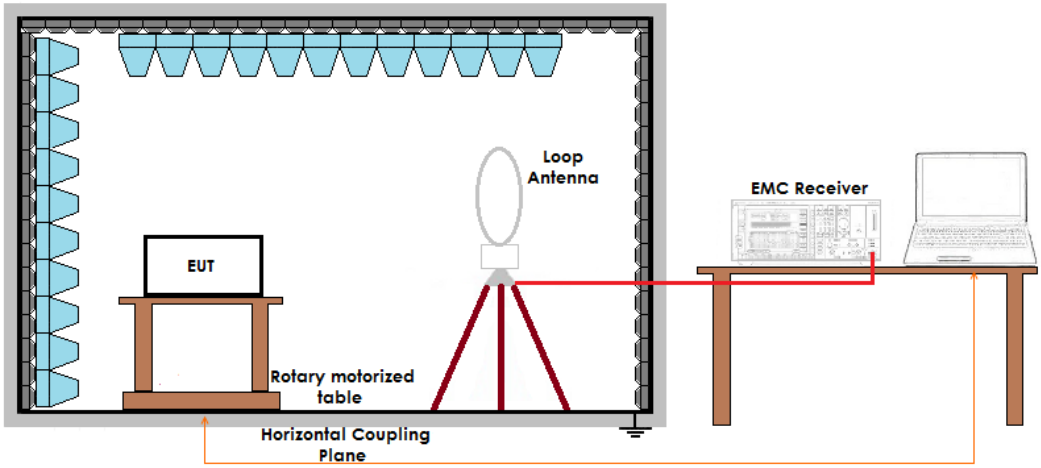
Acceptance limits

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

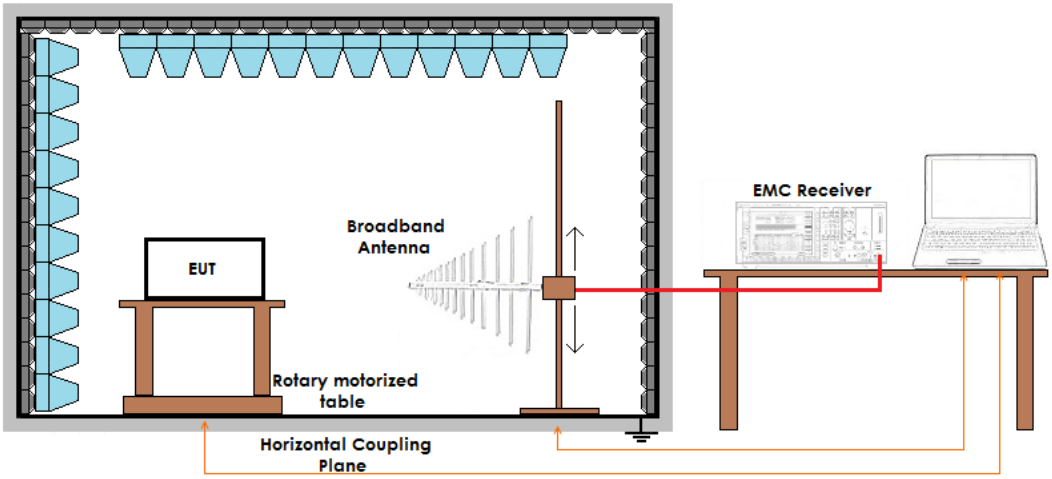
Remarks: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector. The results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

Setup

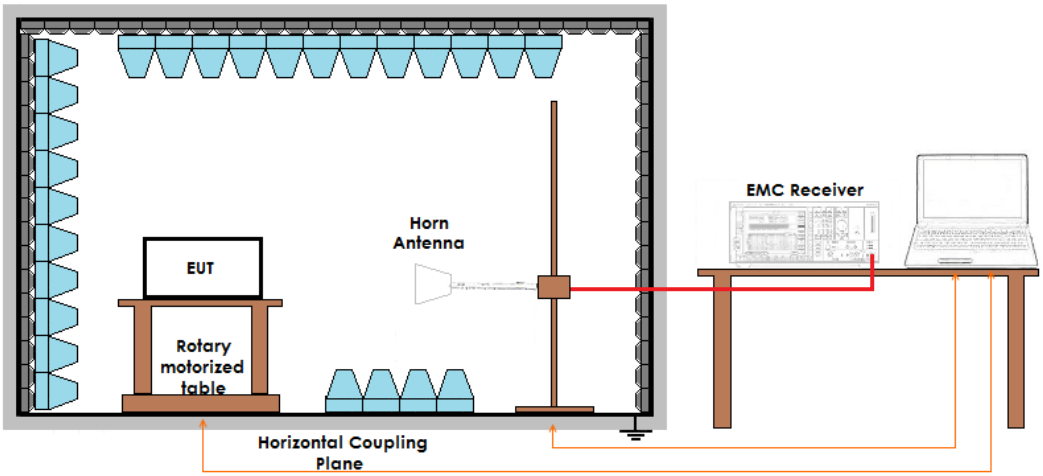
Frequency ≤ 30 MHz



Frequency ≤ 1 GHz



Frequency > 1 GHz



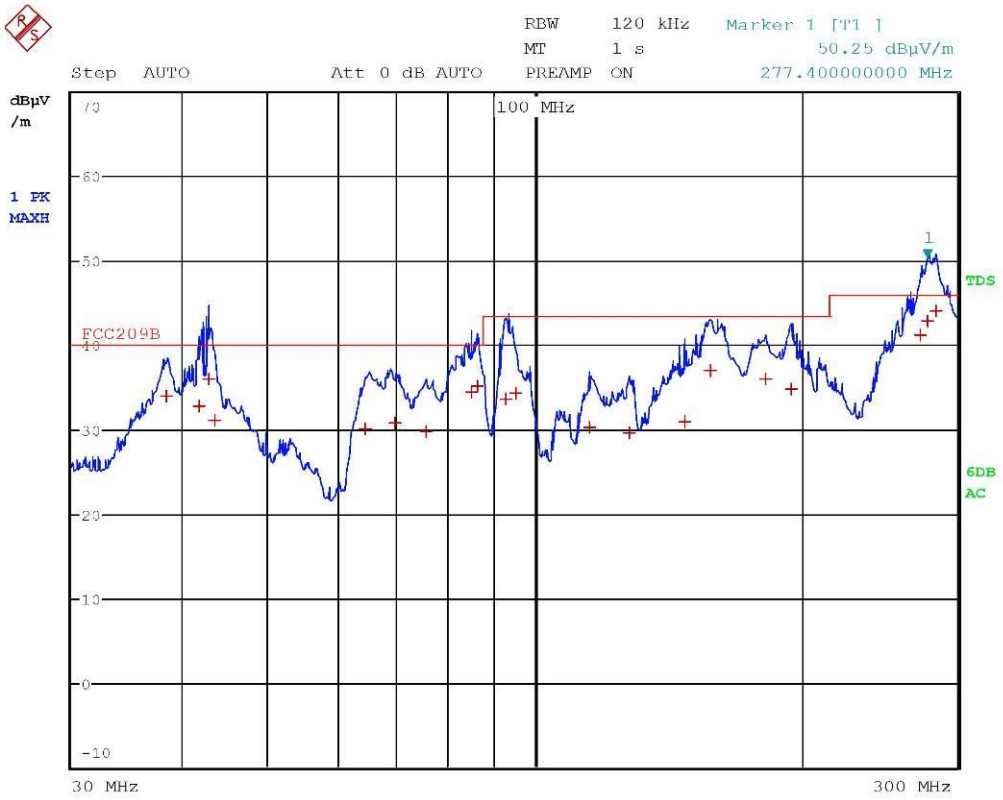
Result

Polarization	*Frequency Range (MHz)*	*Graphs*	*Remarks*	*Result*
V	30 – 300	G190201026	Worst case	Complies
H	30 – 300	G190201027	Worst case	Complies
H	300 – 1000	G190201028	Worst case	Complies
V	300 – 1000	G190201029	Worst case	Complies
Loop	0,009 – 30 *	G190201030	Worst case	Complies
V	1000 – 3000	G190201031	Medium channel	Complies
H	1000 – 3000	G190201032	Medium channel	Complies
H	1000 – 3000	G190201033	Lowest channel	Complies
V	1000 – 3000	G190201034	Lowest channel	Complies
V	1000 – 3000	G190201036	Highest channel	Complies
H	1000 – 3000	G190201037	Highest channel	Complies
V	3000 – 10000	G190201039	Lowest channel	Complies
H	3000 – 10000	G190201040	Lowest channel	Complies
H	3000 – 10000	G190201041	Medium channel	Complies
V	3000 – 10000	G190201042	Medium channel	Complies
V	3000 – 10000	G190201043	Highest channel	Complies
H	3000 – 10000	G190201044	Highest channel	Complies
V	10000 – 18000	G190201045	Worst case	Complies
H	10000 – 18000	G190201046	Worst case	Complies
H	18000 – 26000	G190201047	Worst case	Complies
V	18000 – 26000	G190201048	Worst case	Complies

Remarks: *: these test was performed at a site other than an OATS, adequate comparison measurements have been made against an OATS. The semi-anechoic chamber results are generally slightly higher than OATS. This mean that if the measurement passes in the semi-anechoic chamber, it will pass with a higher margin on an open field test site.
EUT was tested in 3 orthogonal planes, graphs are related to the highest detected levels.
Measurements at frequencies lower than 30 MHz have been performed with an EUT – antenna distance of 10 m. Limits have been corrected with conversion factor Limits + 40log(test distance/10) based on the measuring distance provided by the standard.
Measurements at frequencies higher than 30 MHz and lower than 1000 MHz have been performed with an EUT – antenna distance of 10 m. Limits have been corrected with conversion factor Limits + 20log(3/10) based on the measuring distance provided by the standard.
Peaks above the limits are caused by the nominal transmitting frequencies.

Graphs Legend
PK: Peak; QP [1s] (quasi-peak at 1 second) values are marked with a +
AV: Average; AV [1s] (average at 1 second) values are marked with a x

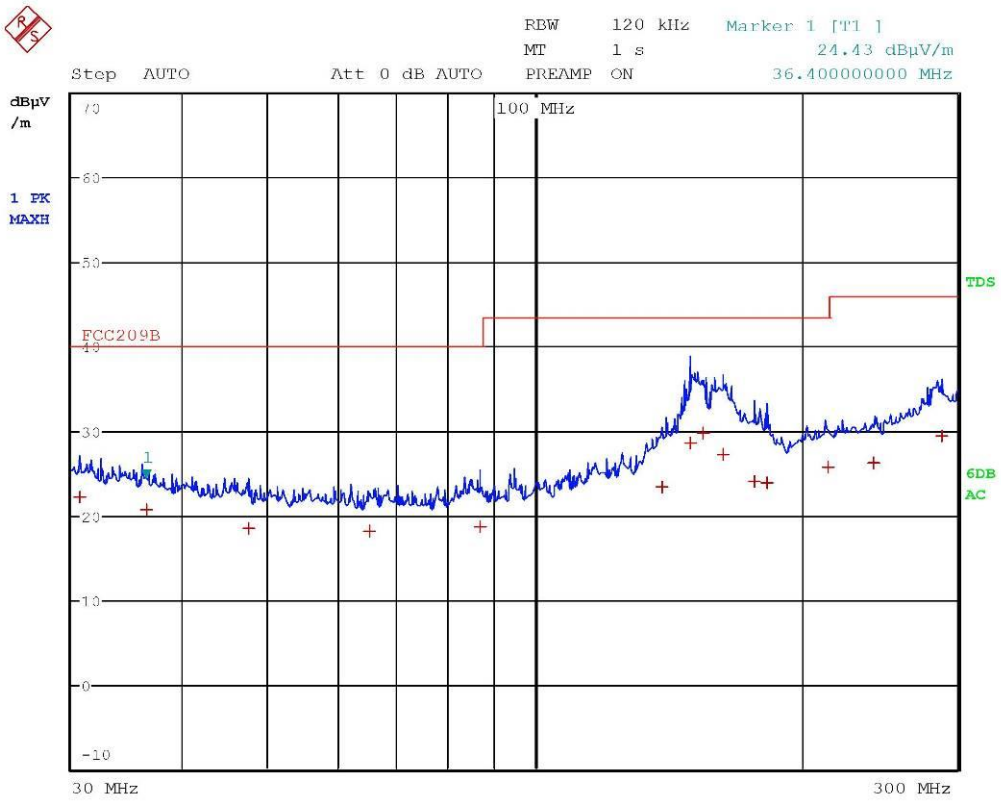
Graphs



Bertezzolo 190201026

EDIT PEAK LIST (Final Measurement Results)			
Trace1:	FCC209B		
Trace2:	---		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBµV/m	DELTA LIMIT dB
1 Quasi Peak	38.32 MHz	34.01	-5.98
1 Quasi Peak	41.84 MHz	32.70	-7.29
1 Quasi Peak	42.84 MHz	35.98	-4.01
1 Quasi Peak	43.48 MHz	31.01	-8.98
1 Quasi Peak	64.28 MHz	30.00	-9.99
1 Quasi Peak	69.48 MHz	30.80	-9.19
1 Quasi Peak	75.56 MHz	29.78	-10.21
1 Quasi Peak	84.96 MHz	34.38	-5.61
1 Quasi Peak	86.16 MHz	35.15	-4.84
1 Quasi Peak	92.84 MHz	33.56	-9.95
1 Quasi Peak	94.92 MHz	34.29	-9.22
1 Quasi Peak	115.4 MHz	30.22	-13.29
1 Quasi Peak	127.72 MHz	29.58	-13.93
1 Quasi Peak	147.72 MHz	30.94	-12.57
1 Quasi Peak	157.96 MHz	36.94	-6.57
1 Quasi Peak	182 MHz	35.93	-7.58
1 Quasi Peak	194.44 MHz	34.76	-8.75
1 Quasi Peak	272.88 MHz	41.11	-4.90
1 Quasi Peak	277.4 MHz	42.91	-3.11
1 Quasi Peak	283.48 MHz	43.96	-2.05

Bertezzolo 190201026



Bertezzolo 190201027

EDIT PEAK LIST (Final Measurement Results)

Trace1:	FCC209B
Trace2:	---
Trace3:	---

TRACE	FREQUENCY	LEVEL dBµV/m	DELTA LIMIT dB
1 Quasi Peak	30.68 MHz	22.10	-17.89
1 Quasi Peak	36.4 MHz	20.62	-19.37
1 Quasi Peak	47.6 MHz	18.42	-21.57
1 Quasi Peak	65.08 MHz	18.12	-21.88
1 Quasi Peak	86.68 MHz	18.61	-21.38
1 Quasi Peak	139.24 MHz	23.41	-20.10
1 Quasi Peak	149.92 MHz	28.56	-14.96
1 Quasi Peak	155.12 MHz	29.76	-13.75
1 Quasi Peak	162.92 MHz	27.15	-16.36
1 Quasi Peak	177.08 MHz	23.95	-19.56
1 Quasi Peak	183 MHz	23.92	-19.59
1 Quasi Peak	214.6 MHz	25.63	-17.88
1 Quasi Peak	241.28 MHz	26.21	-19.80
1 Quasi Peak	287.68 MHz	29.38	-16.63

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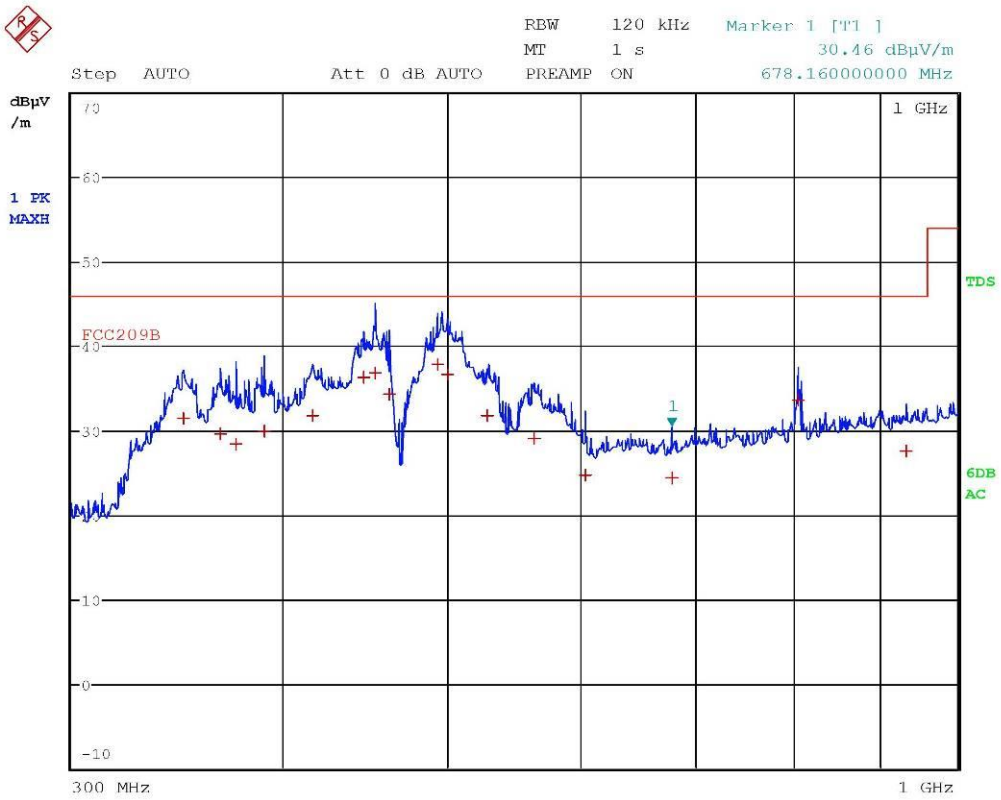

Bertezzolo 190201028

EDIT PEAK LIST (Final Measurement Results)

Trace1:	FCC209B
Trace2:	---
Trace3:	---

TRACE	FREQUENCY	LEVEL dBµV/m	DELTA LIMIT dB
1 Quasi Peak	349.4 MHz	31.48	-14.53
1 Quasi Peak	367.68 MHz	29.52	-16.49
1 Quasi Peak	375 MHz	28.44	-17.57
1 Quasi Peak	389.72 MHz	29.88	-16.13
1 Quasi Peak	416.2 MHz	31.75	-14.26
1 Quasi Peak	446.28 MHz	36.25	-9.76
1 Quasi Peak	452.92 MHz	36.83	-9.18
1 Quasi Peak	461.84 MHz	34.33	-11.68
1 Quasi Peak	493.8 MHz	37.82	-8.19
1 Quasi Peak	500.44 MHz	36.58	-9.43
1 Quasi Peak	528.16 MHz	31.71	-14.30
1 Quasi Peak	562.4 MHz	29.08	-16.93
1 Quasi Peak	603.56 MHz	24.71	-21.30
1 Quasi Peak	678.16 MHz	24.43	-21.58
1 Quasi Peak	805.04 MHz	33.66	-12.36
1 Quasi Peak	933.16 MHz	27.55	-18.46

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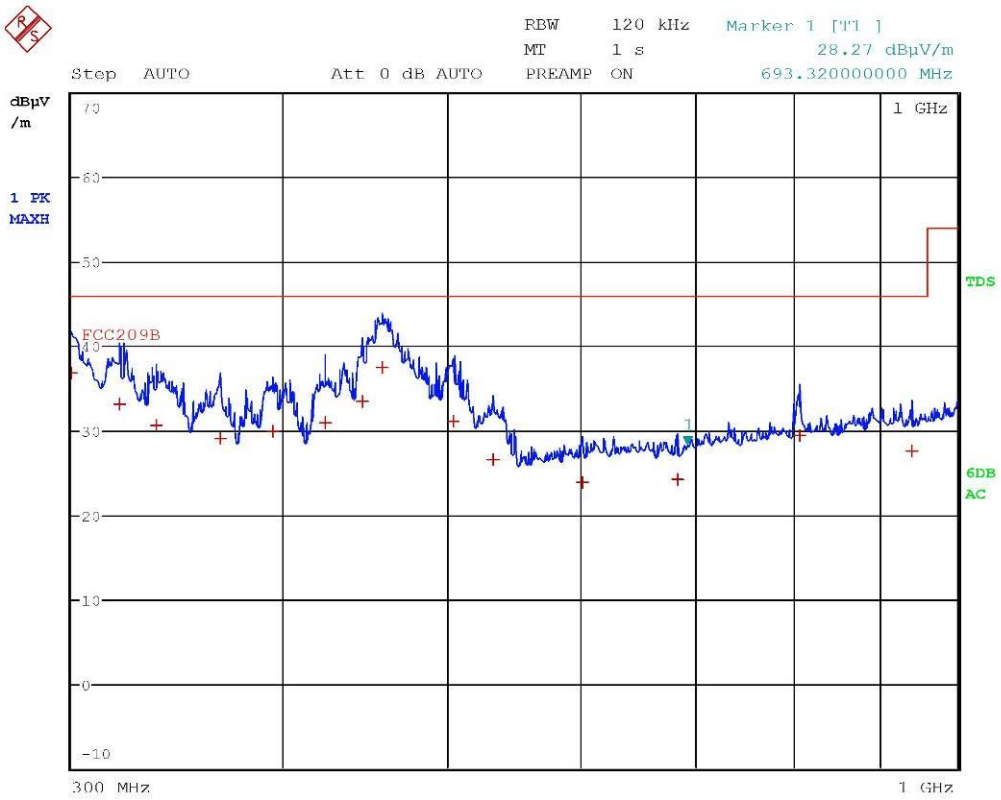


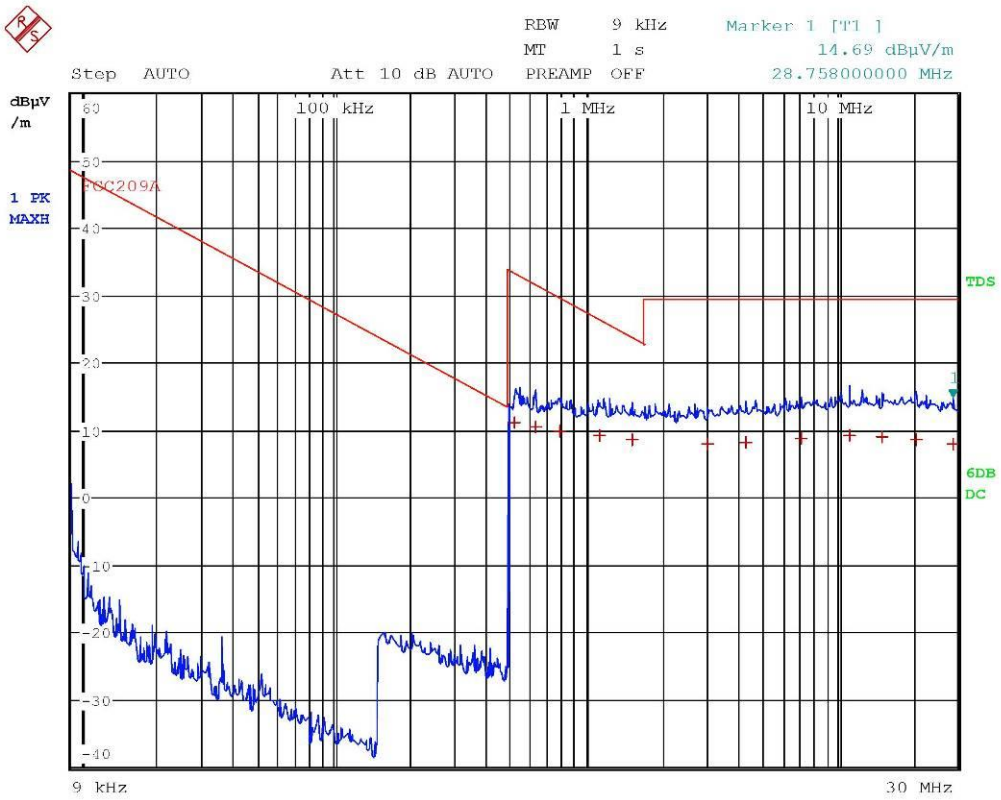
Bertezzolo 190201029

EDIT PEAK LIST (Final Measurement Results)

Trace1:	FCC209B
Trace2:	---
Trace3:	---

TRACE	FREQUENCY	LEVEL dBµV/m	DELTA LIMIT dB
1 Quasi Peak	300.16 MHz	36.77	-9.25
1 Quasi Peak	320.36 MHz	33.18	-12.84
1 Quasi Peak	336.72 MHz	30.57	-15.44
1 Quasi Peak	367.52 MHz	29.14	-16.87
1 Quasi Peak	394.84 MHz	29.98	-16.03
1 Quasi Peak	423.52 MHz	31.00	-15.01
1 Quasi Peak	445.6 MHz	33.51	-12.50
1 Quasi Peak	457.48 MHz	37.44	-8.57
1 Quasi Peak	503.76 MHz	31.11	-14.90
1 Quasi Peak	532.04 MHz	26.55	-19.46
1 Quasi Peak	601 MHz	23.78	-22.23
1 Quasi Peak	683.16 MHz	24.20	-21.81
1 Quasi Peak	807.6 MHz	29.46	-16.55
1 Quasi Peak	939.72 MHz	27.51	-18.50

Bertezzolo 190201029



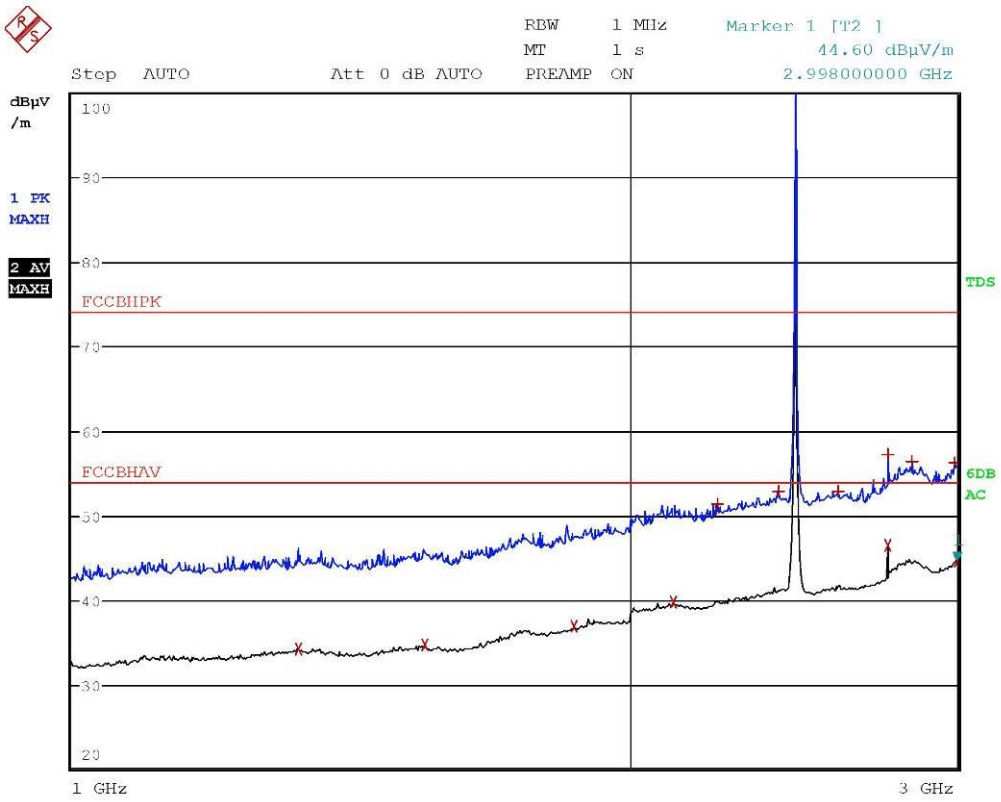
Bertezzolo 190201030

EDIT PEAK LIST (Final Measurement Results)

Trace1:	FCC209A
Trace2:	---
Trace3:	---

TRACE	FREQUENCY	LEVEL dBµV/m	DELTA LIMIT dB
1 Quasi Peak	514 kHz	11.11	-22.27
1 Quasi Peak	626 kHz	10.54	-21.12
1 Quasi Peak	782 kHz	9.96	-19.77
1 Quasi Peak	1.13 MHz	9.20	-17.33
1 Quasi Peak	1.526 MHz	8.67	-15.25
1 Quasi Peak	3.03 MHz	8.02	-21.51
1 Quasi Peak	4.338 MHz	8.21	-21.32
1 Quasi Peak	7.194 MHz	8.78	-20.75
1 Quasi Peak	11.106 MHz	9.27	-20.26
1 Quasi Peak	15.078 MHz	9.12	-20.41
1 Quasi Peak	20.466 MHz	8.56	-20.97
1 Quasi Peak	28.758 MHz	7.96	-21.57

Bertezzolo 190201030



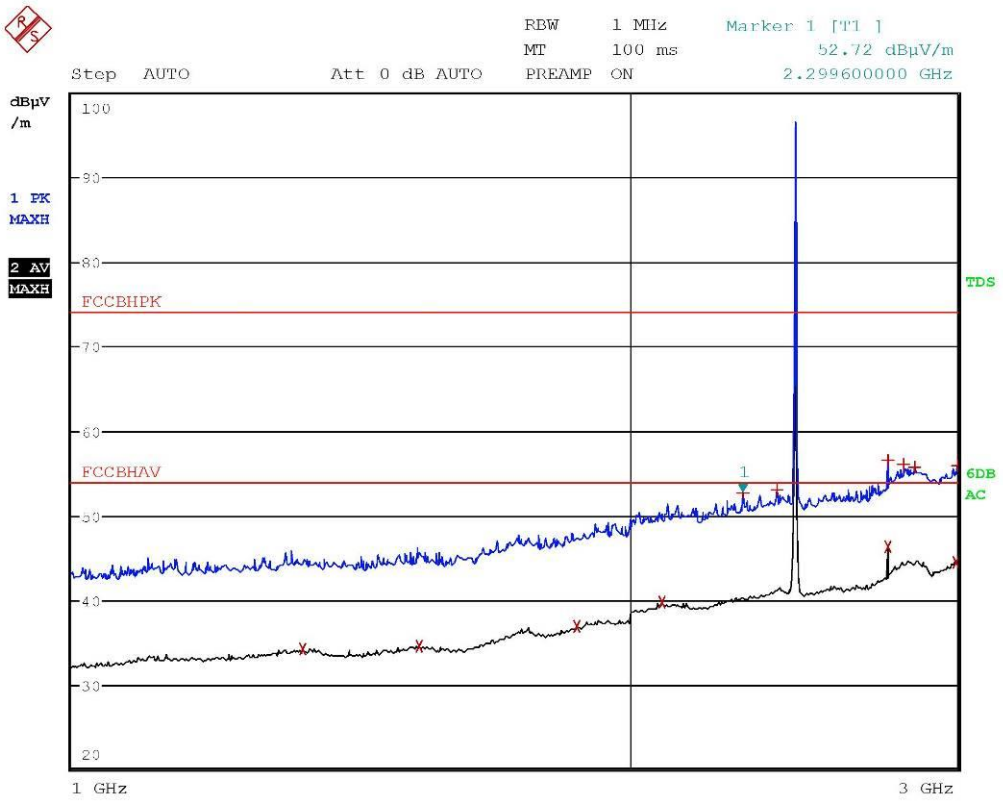
Bertezzolo 190201031

EDIT PEAK LIST (Prescan Results)

Trace1:	FCCBHPK
Trace2:	FCCBHAV
Trace3:	---

TRACE	FREQUENCY	LEVEL dBµV/m	DELTA LIMIT dB
2 Average	1.324 GHz	34.20	-19.77
2 Average	1.55 GHz	34.62	-19.35
2 Average	1.8644 GHz	36.96	-17.01
2 Average	2.1096 GHz	39.66	-14.31
1 Max Peak	2.2256 GHz	51.41	-22.57
1 Max Peak	2.4012 GHz	52.89	-21.08
1 Max Peak	2.586 GHz	52.89	-21.08
1 Max Peak	2.7516 GHz	57.28	-16.69
2 Average	2.7516 GHz	46.52	-7.45
1 Max Peak	2.8344 GHz	56.47	-17.51
1 Max Peak	2.9896 GHz	56.28	-17.69
2 Average	2.998 GHz	44.59	-9.38

Bertezzolo 190201031



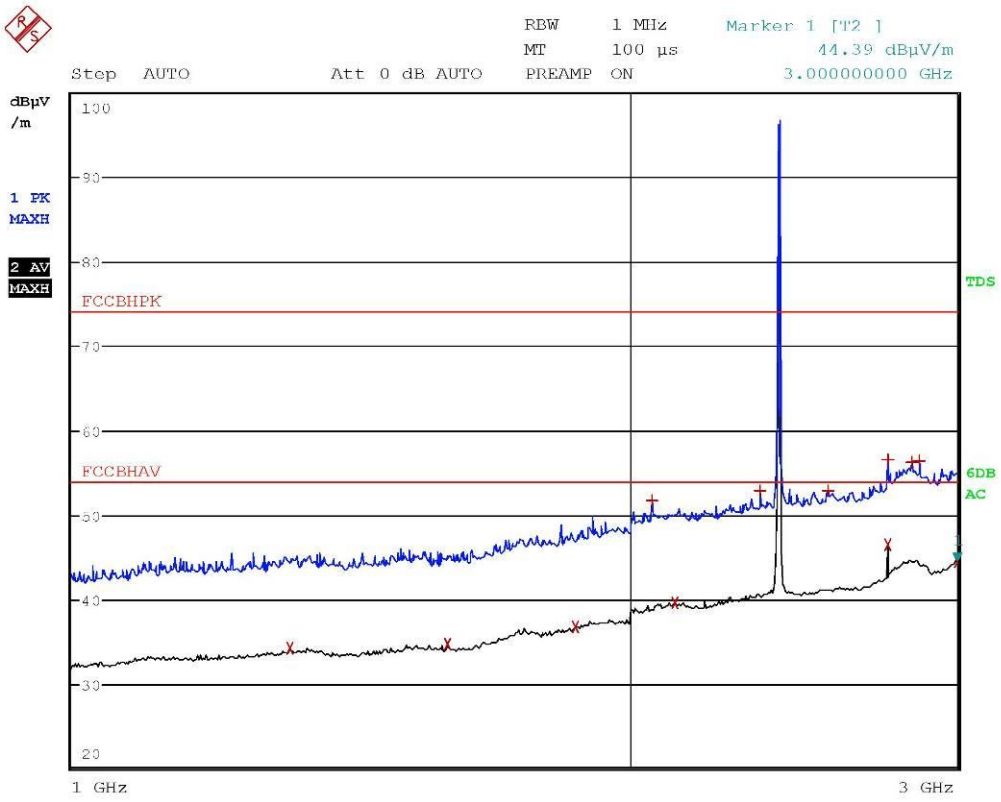
Bertezzolo 190201032

EDIT PEAK LIST (Prescan Results)

Trace1:	FCCBHPK
Trace2:	FCCBHAV
Trace3:	---

TRACE	FREQUENCY	LEVEL dBµV/m	DELTA LIMIT dB
2 Average	1.3328 GHz	34.16	-19.81
2 Average	1.538 GHz	34.59	-19.38
2 Average	1.872 GHz	36.87	-17.10
2 Average	2.0784 GHz	39.73	-14.24
1 Max Peak	2.2996 GHz	52.72	-21.25
1 Max Peak	2.3984 GHz	53.02	-20.95
1 Max Peak	2.7516 GHz	56.53	-17.44
2 Average	2.7516 GHz	46.33	-7.64
1 Max Peak	2.8064 GHz	56.02	-17.95
1 Max Peak	2.8464 GHz	55.73	-18.24
2 Average	2.996 GHz	44.53	-9.44
1 Max Peak	2.9984 GHz	55.89	-18.08

Bertezzolo 190201032



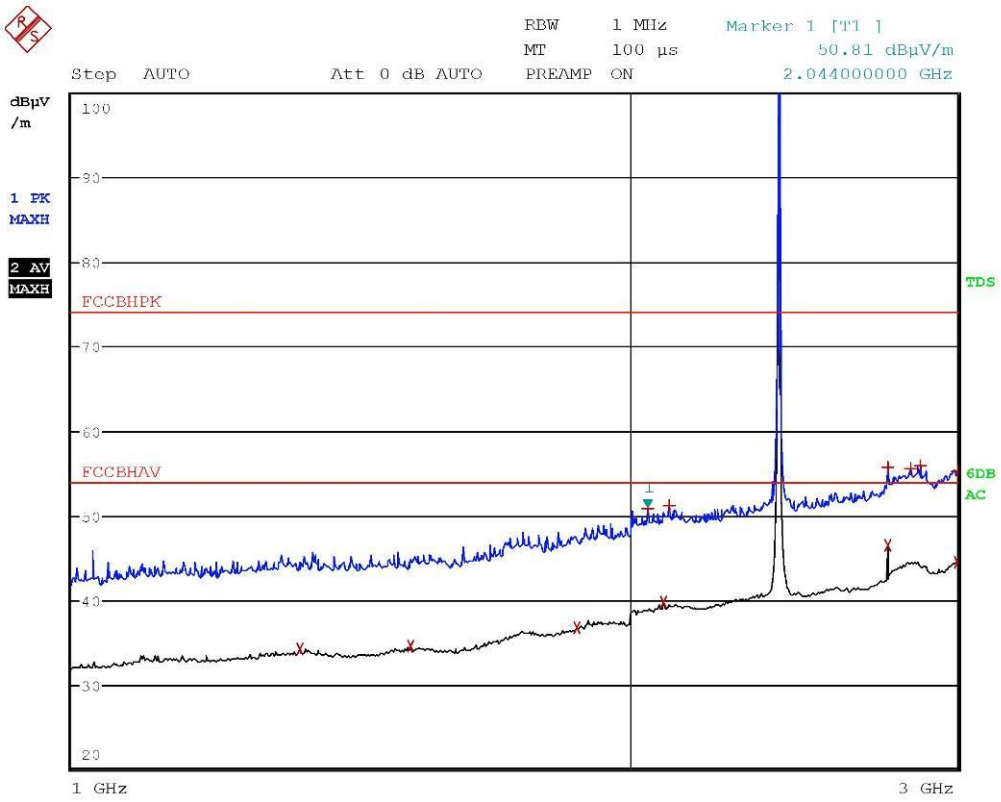
Bertezzolo 190201033

EDIT PEAK LIST (Prescan Results)

Trace1:	FCCBHPK
Trace2:	FCCBHAV
Trace3:	---

TRACE	FREQUENCY	LEVEL dBµV/m	DELTA LIMIT dB
2 Average	1.312 GHz	34.16	-19.81
2 Average	1.5944 GHz	34.68	-19.29
2 Average	1.860 GHz	36.69	-17.28
1 Max Peak	2.0544 GHz	51.75	-22.22
2 Average	2.1132 GHz	39.58	-14.39
1 Max Peak	2.3468 GHz	52.90	-21.07
1 Max Peak	2.5568 GHz	52.78	-21.19
1 Max Peak	2.7516 GHz	56.54	-17.43
2 Average	2.7516 GHz	46.49	-7.48
1 Max Peak	2.8348 GHz	56.25	-17.72
1 Max Peak	2.8612 GHz	56.33	-17.64
2 Average	3 GHz	44.38	-9.59

Bertezzolo 190201033



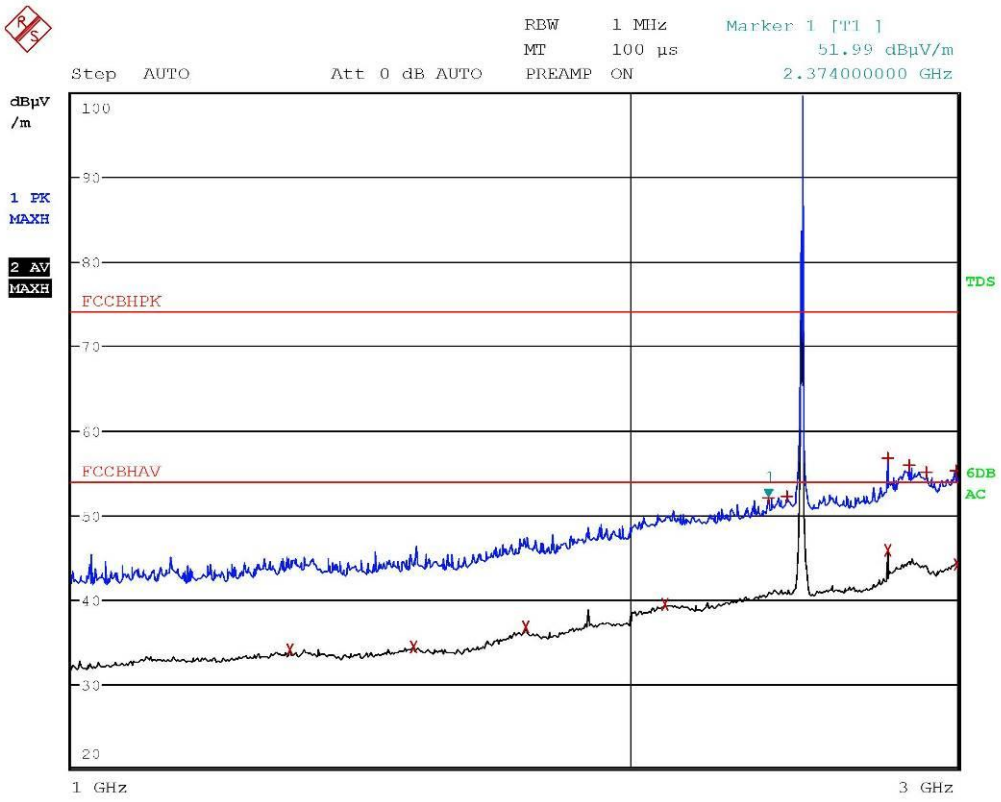
Bertezzolo 190201034

EDIT PEAK LIST (Prescan Results)

Trace1:	FCCBHPK
Trace2:	FCCBHAV
Trace3:	---

TRACE	FREQUENCY	LEVEL dBµV/m	DELTA LIMIT dB
2 Average	1.3268 GHz	34.26	-19.71
2 Average	1.5236 GHz	34.55	-19.43
2 Average	1.8728 GHz	36.78	-17.19
1 Max Peak	2.044 GHz	50.80	-23.17
2 Average	2.0832 GHz	39.74	-14.23
1 Max Peak	2.0992 GHz	51.18	-22.79
1 Max Peak	2.7516 GHz	55.66	-18.31
2 Average	2.7516 GHz	46.41	-7.56
1 Max Peak	2.832 GHz	55.47	-18.50
1 Max Peak	2.864 GHz	55.92	-18.05
2 Average	2.9976 GHz	44.39	-9.58
1 Max Peak	3 GHz	55.16	-18.81

Bertezzolo 190201034



Bertezzolo 190201036

EDIT PEAK LIST (Prescan Results)			
Trace1:	FCCBHPK		
Trace2:	FCCBHAV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBµV/m	DELTA LIMIT dB
2 Average	1.3116 GHz	34.04	-19.93
2 Average	1.5292 GHz	34.31	-19.66
2 Average	1.756 GHz	36.69	-17.28
2 Average	2.0884 GHz	39.33	-14.64
1 Max Peak	2.374 GHz	51.98	-21.99
1 Max Peak	2.4276 GHz	52.25	-21.72
1 Max Peak	2.7516 GHz	56.78	-17.19
2 Average	2.7516 GHz	45.84	-8.13
1 Max Peak	2.8248 GHz	55.92	-18.05
1 Max Peak	2.8876 GHz	55.00	-18.97
1 Max Peak	2.9952 GHz	55.29	-18.68
2 Average	2.9976 GHz	44.16	-9.81

Bertezzolo 190201036