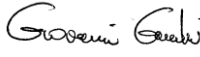





TEST REPORT nr. R15179401	
Federal Communication Commission (FCC)	
Test item	
Description.....:	TRANSCEIVER UNIT
Trademark.....:	AUTEC
Model/Type.....:	Model LKN Type DA2FM
FCC ID.....:	OQA-LKNDA2FM
Test Specification	
Standard.....:	FCC Rules & Regulations, Title 47:2014 Part 15 paragraph(s): 203, 204, 207, 209 and 249
Client's name:	AUTEC S.r.l.
Address.....:	Via Pomaroli, 65 – 36030 Caldogno (VI) – ITALY
Manufacturer's name :	Same as client
Address.....:	--
Report	
Tested by.....:	G. Gandini – <i>Technician</i> 
Approved by.....:	R. Beghetto – <i>Laboratory Manager</i> 
Date of issue.....:	23.12.15
Contents.....:	47 pages

This test 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 item tested.

CMC Centro Misure Compatibilità S.r.l.



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1. Summary

Standard:
 FCC Rules & Regulations, Title 47:2014
 Part 15 paragraph(s): 203, 204, 207, 209 and 249

Test specifications	Environmental Phenomena	Tests sequence	Result
Part 15.203	Antenna requirements	1	Complies
Part 15.207	Conducted emissions	--	N.A. (+)
Part 15.209	Radiated emissions	2	Complies
Part 15.209 and 15.249	Peak Output Power	3	Complies
Part 15.249 (d)	Band edge	4	Complies
Part 15.209	Spurious emission	5	Complies

(+) Devices which only employ battery power. See FCC Part 15.207 (c)

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 : 3,7 Vdc from battery
 Serial Number : --
 Type of equipment : Transmitter Unit
 : Receiver Unit
 Type of station : Fixed station
 : Portable station
 : Mobile station
 Nominal frequency : F_L: 915,05 MHz F_M: 921,00 MHz F_H: 927,75 MHz

2.1 Test Site

Company : CMC Centro Misure Compatibilità S.r.l.
 Address : Via dell'Elettronica, 12/C
 : 36016 Thiene (VI) – ITALY
 Test site facility's FCC registration number : 271947

3. Testing and sampling

Date of receipt of test item : 21.09.15
 Testing start date : 22.09.15
 Testing end date : 24.09.15
 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
 P151016

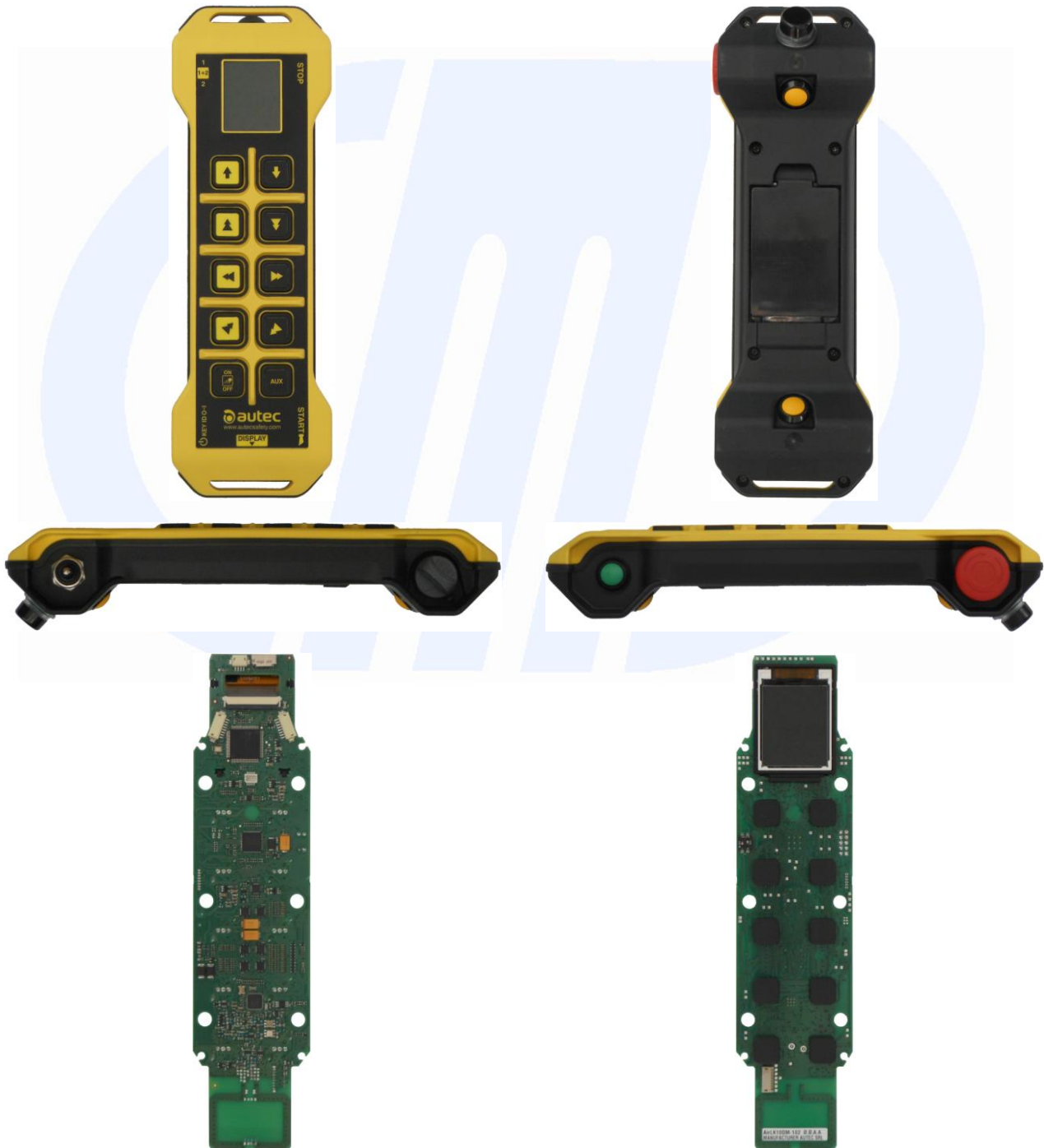
4. Operative conditions

EUT exercising : EUT in continuous transmission at maximum power



5. Photograph(s) of EUT

5.1 Photograph(s) of EUT





6. Equipment 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 '15	January '16
CMC S108	EMCO	3115	Horn Antenna	9811-5622	May '13	May '16
CMC S127	Schaffner	HLA6120	Loop Antenna	1191	January '13	January '16
CMC S136	Schwarzbeck	VULB 9163	Broadband Antenna	9136-205	May '13	May '16
CMC S164	Rohde & Schwarz	ESU26	EMC interference receiver	100052	January '15	January '16
CMC S200	Schwarzbeck	NSLK 8128	V-LISN	8128-273	January '15	January '16
CMC S227	Rohde & Schwarz	ESR7	EMI Test Receiver 7GHz	101121	January '15	January '16



7. Measurement uncertainty

Test	Expanded Uncertainty	note
Conducted Emission		
(50Ω/50μH AMN) - (9 kHz – 150 kHz)	±3.6 dB	1
(50Ω/50μH AMN) - (150 kHz – 30 MHz)	±3.0 dB	1
(Voltage probe) - (150 kHz – 30 MHz)	±2.8 dB	1
(50Ω/5μH AMN) - (150 kHz – 108 MHz)	±2.6 dB	1
Discontinuous Conducted Emission		
Conducted Emission (50Ω/50μH AMN) - (150 kHz – 30 MHz)	±3.0 dB	1
Disturbance Power (30 MHz – 300 MHz)		
	±3.7 dB	1
Radiated Emission		
(0,150 MHz – 30 MHz)	±4.0 dB	1
(30 MHz – 1000 MHz)	±4.3 dB	1
(1 GHz – 6 GHz)	±4.5 dB	1
Electromagnetic field EMF		
	±10.5 %	1
Harmonic current emissions test		
	±1.8 %	1
Voltage fluctuation and flicker test		
	±2.6 %	1
Insertion loss test		
	±2.0 dB	1
Radiated electromagnetic disturbance test (loop antenna)		
	±2.1 dB	1
Radiated electromagnetic field immunity test		
	0.81 V/m at 3V/m	1
Pulse modulated radiated electromagnetic field immunity test		
	0.81 V/m at 3V/m	1
Injected currents immunity test		
	0.45 V at 3V	1
Bulk current		
	3.7 mA at 60 mA	1
Power frequency magnetic field immunity test		
	0.1 A/m at 10 A/m	1
Effective radiated power (F < 1GHz)		
	±4.3 dB	1
Effective radiated power (F > 1GHz)		
	±3.7 dB	1
Frequency error		
	< 1x10 ⁻⁷	1
Modulation bandwidth		
	< 1x10 ⁻⁷	1
Conducted RF power and spurious emission		
	±0.7 dB	1
Adjacent channel power		
	±1.2 dB	1
Blocking		
	±1.2 dB	1
Electrostatic discharge immunity test		
		2
Electrical fast transients / burst immunity test		
		2
Surge immunity test		
		2
Pulse magnetic field immunity test		
		2
Damped oscillatory magnetic field immunity test		
		2
Short interruption immunity test		
		2
Voltage transient emission test		
	±2.2 %	1
Transient immunity test		
		2

Note 1:

The expanded uncertainty reported according to EN55016-4-2:2011 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 15:2014	--
ANSI C63.4:2009	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. 2.0 (Quality Manual)	Measure Procedure
Internal procedure INC_M rev. 8.2 (Quality Manual)	Measurement uncertainty calculation

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9. Deviation from test specification

In agreement with the client, emission tests were performed with peak detector.

At the frequencies where the measures exceed the limit or within 6 dB from it, the test was repeated with quasi-peak detector and/or average detector.

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.

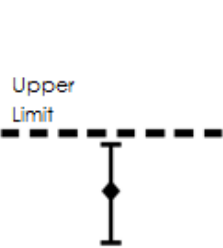
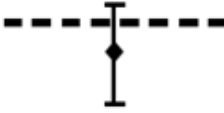
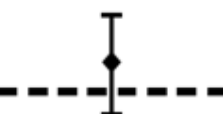



11. Results

In this clause tests results are reported.

Measurement uncertainty is in accordance with document CMC INC_M rev. 8.2.

Judgement of compliance:

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

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

Environmental conditions

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

Result

Antenna Type	External R.F. power amplifier	Gain	Remarks	Results
Integral antenna	Not Present	--	--	Complies

Result: The requirements are met



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

Test specification

Port: Enclosure
Frequency range: 0,009 MHz – 1000 MHz
Antenna polarization: Horizontal (H) – Vertical (V)
EUT – Antenna distance: 3 m

Environmental conditions

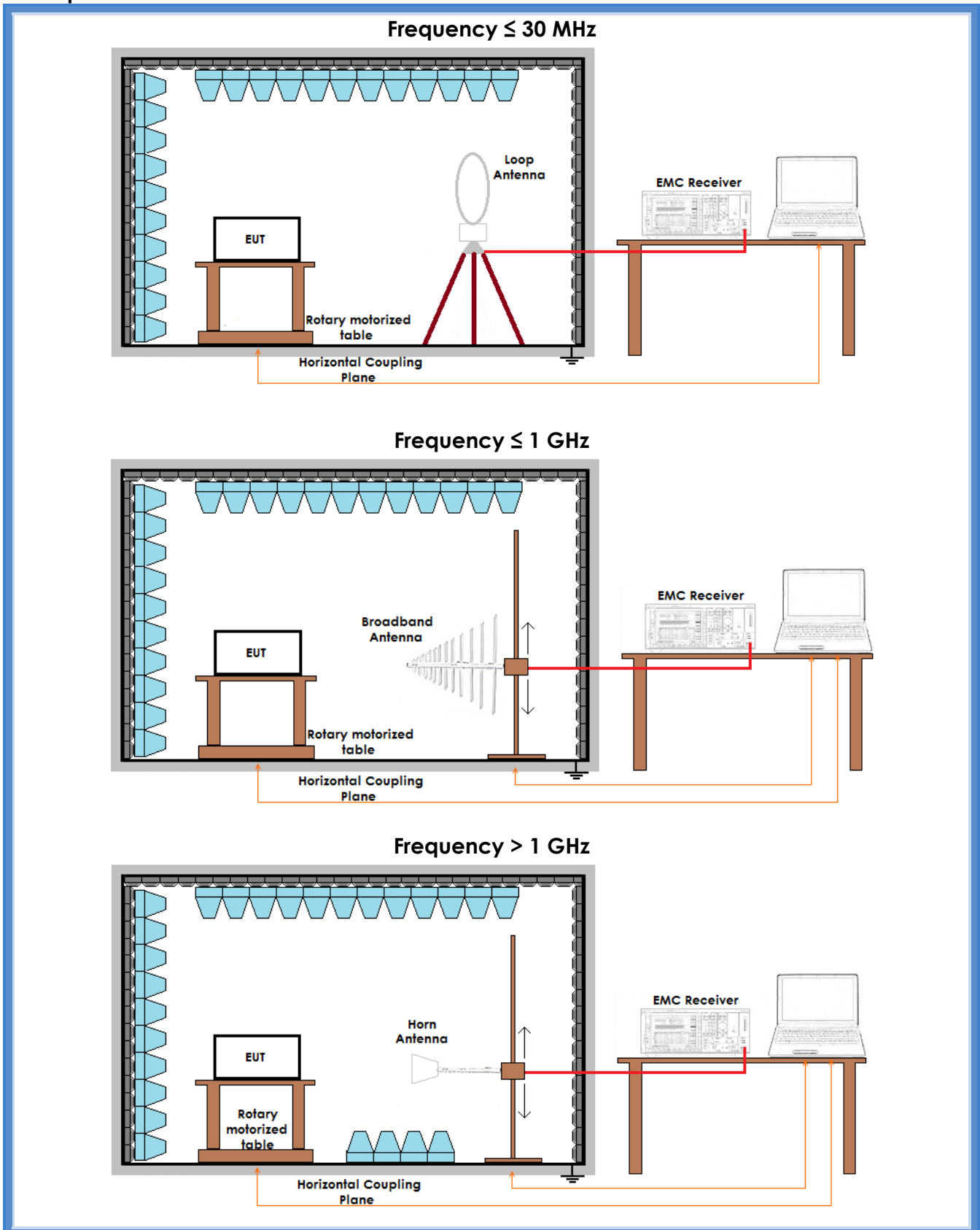
Temperature (°C)	Atmospheric pressure (kPa)	Relative humidity (%)
24	100	55

Acceptance limits

Frequency range (MHz)	Limits [dB(μV/m)]
0,009 to 0,490	128,51 to 93,80
0,490 to 1,705	73,80 to 62,97
1,705 to 30	69,54
30 to 88	40
88 to 216	43,52
216 to 960	46,02
Above 960	53,98

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.

Setup





Result

Polarization	Frequency Range (MHz)	Graphs	Remarks	Result
Loop	0,009 – 30	G15179415	Worst case	Complies
V	30 – 1000	G15179413	Lowest channel	Complies
H	30 – 1000	G15179414	Lowest channel	Complies
V	30 – 1000	G15179412	Medium channel	Complies
H	30 – 1000	G15179411	Medium channel	Complies
V	30 – 1000	G15179409	Highest channel	Complies
H	30 – 1000	G15179410	Highest channel	Complies
V	1000 – 10000	G15179408	Worst case	Complies
H	1000 – 10000	G15179407	Worst case	Complies

Remarks: --

Graphs Legend

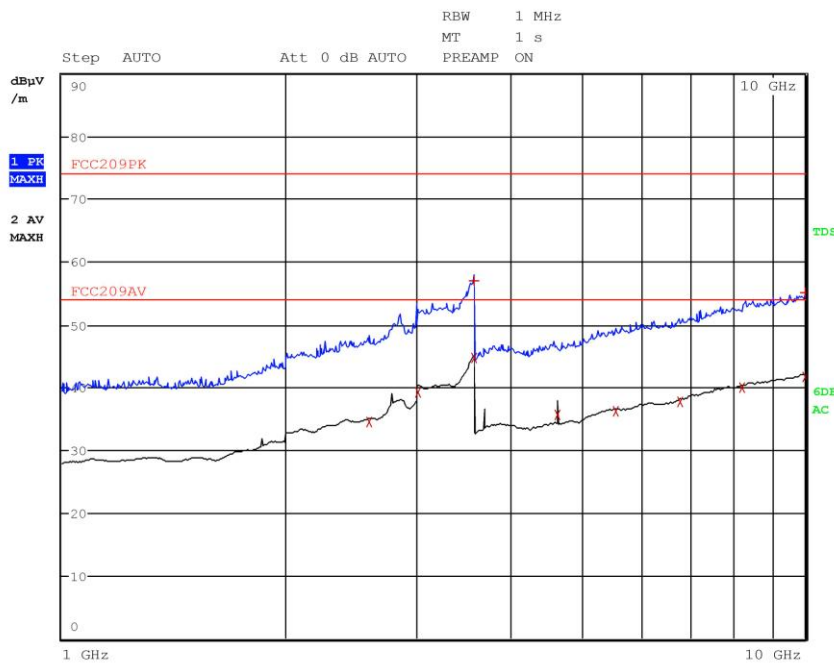
PK: Peak; QP [1s] (quasi-peak at 1 second) values are marked with a +
 AV: Average; AV [1s] (average at 1 second) values are marked with a x



Graphs

G15179407

Meas Type Emission
Equipment under Test
Manufacturer
OP Condition Tx-Rx
Operator Gandini 15179407
Test Spec
Horiz



Final Measurement

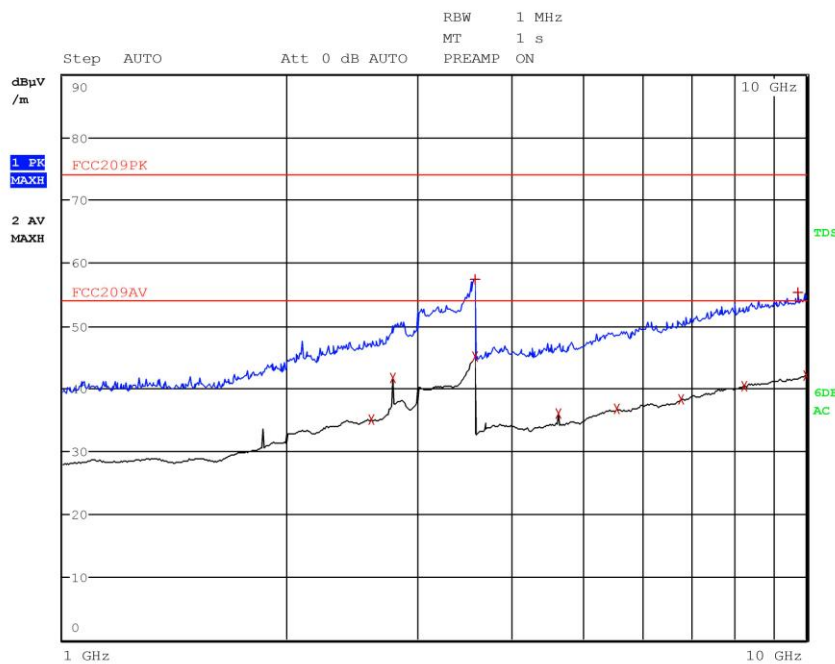
Meas Time: 1 s
Margin: 20 dB
Subranges: 10

Trace	Frequency	Level (dBµV/m)	Detector	Delta Limit/dB
2	2.594800000 GHz	34.47	Average	-19.53
2	3.013200000 GHz	39.29	Average	-14.71
1	3.583200000 GHz	57.04	Max Peak	-16.96
2	3.596400000 GHz	44.80	Average	-9.20
2	4.638800000 GHz	35.55	Average	-18.45
2	5.556800000 GHz	36.15	Average	-17.85
2	6.796000000 GHz	37.75	Average	-16.25
2	8.218800000 GHz	39.93	Average	-14.07
1	9.985200000 GHz	55.03	Max Peak	-18.97
2	9.997200000 GHz	41.62	Average	-12.38



G15179408

Meas Type Emission
Equipment under Test
Manufacturer
OP Condition Tx-Rx
Operator Gandini 15179408
Test Spec
Vert



Final Measurement

Meas Time: 1 s
Margin: 20 dB
Subranges: 10

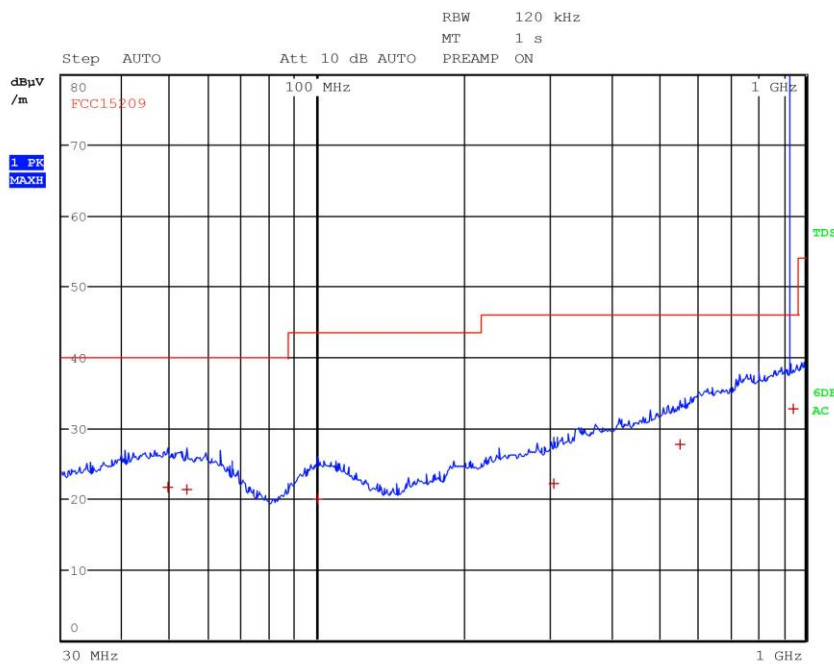
Trace	Frequency	Level (dBµV/m)	Detector	Delta Limit/dB
2	2.604800000 GHz	34.99	Average	-19.01
2	2.783200000 GHz	41.61	Average	-12.39
1	3.588000000 GHz	57.33	Max Peak	-16.67
2	3.594000000 GHz	45.08	Average	-8.92
2	4.638800000 GHz	36.01	Average	-17.99
2	5.566400000 GHz	36.78	Average	-17.22
2	6.795200000 GHz	38.21	Average	-15.79
2	8.240800000 GHz	40.36	Average	-13.64
1	9.748800000 GHz	55.34	Max Peak	-18.66
2	9.985600000 GHz	42.00	Average	-12.00

CMC Centro Misure Compatibilità S.r.l.



G15179409

Meas Type Emission
Equipment under Test
Manufacturer
OP Condition Tx - Fmax
Operator Gandini 15179409
Test Spec
 Vert



Final Measurement

Meas Time: 1 s
 Margin: 20 dB
 Subranges: 6

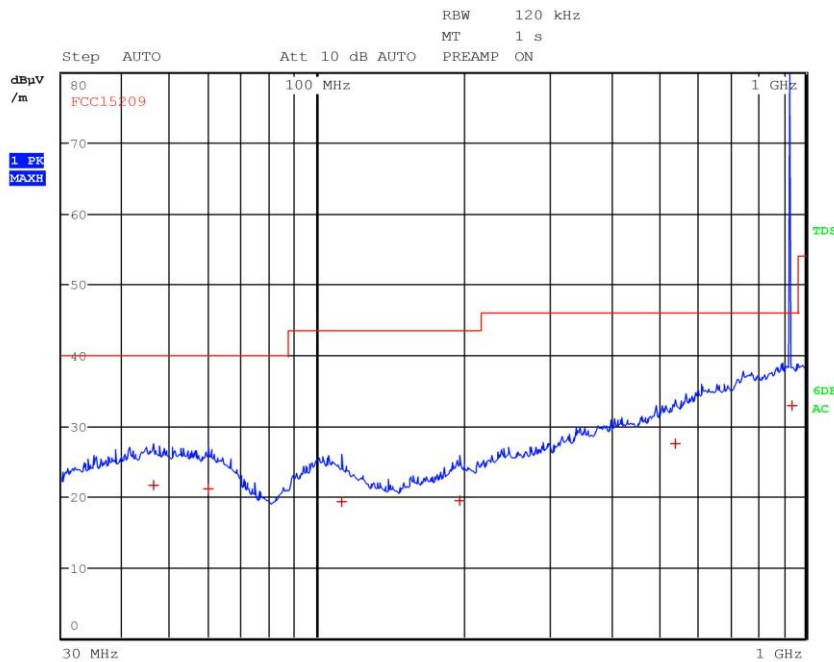
Trace	Frequency	Level (dBµV/m)	Detector	Delta Limit/dB
1	49.520000000 MHz	21.52	Quasi Peak	-18.48
1	54.160000000 MHz	21.21	Quasi Peak	-18.79
1	100.120000000 MHz	20.00	Quasi Peak	-23.52
1	305.000000000 MHz	22.04	Quasi Peak	-23.98
1	554.440000000 MHz	27.66	Quasi Peak	-18.36
1	944.560000000 MHz	32.73	Quasi Peak	-13.29

CMC Centro Misure Compatibilità S.r.l.



G15179410

Meas Type Emission
Equipment under Test
Manufacturer
OP Condition Tx - Fmax
Operator Gandini 15179410
Test Spec
 Horiz



Final Measurement

Meas Time: 1 s
 Margin: 20 dB
 Subranges: 6

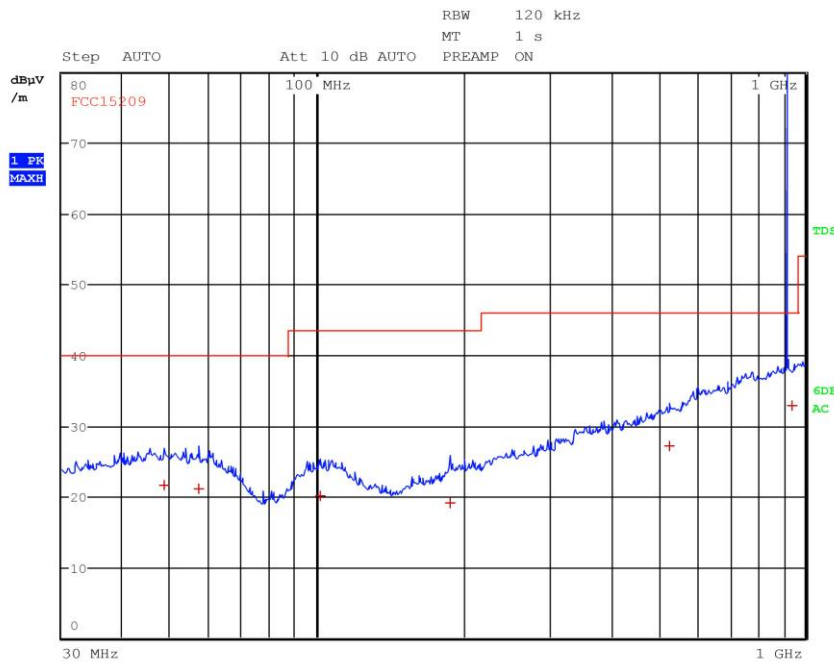
Trace	Frequency	Level (dBµV/m)	Detector	Delta Limit/dB
1	46.280000000 MHz	21.64	Quasi Peak	-18.36
1	59.680000000 MHz	21.16	Quasi Peak	-18.84
1	112.360000000 MHz	19.26	Quasi Peak	-24.26
1	196.120000000 MHz	19.45	Quasi Peak	-24.07
1	543.280000000 MHz	27.41	Quasi Peak	-18.61
1	941.560000000 MHz	32.84	Quasi Peak	-13.18

CMC Centro Misure Compatibilità S.r.l.



G15179411

Meas Type Emission
Equipment under Test
Manufacturer
OP Condition Tx - Fmid
Operator Gandini 15179411
Test Spec
 Horiz



Final Measurement

Meas Time: 1 s
 Margin: 20 dB
 Subranges: 6

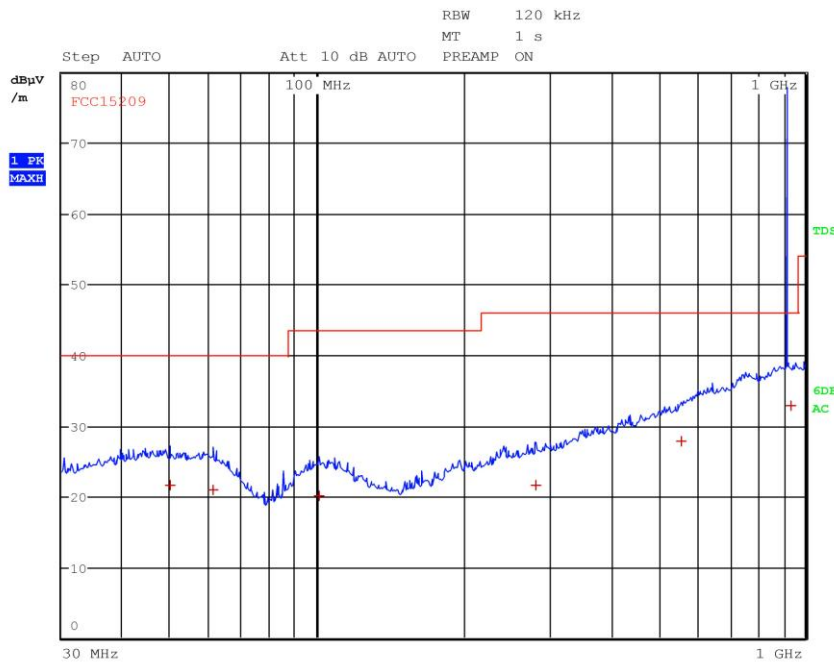
Trace	Frequency	Level (dBµV/m)	Detector	Delta Limit/dB
1	48.720000000 MHz	21.62	Quasi Peak	-18.38
1	57.320000000 MHz	21.14	Quasi Peak	-18.86
1	101.560000000 MHz	20.07	Quasi Peak	-23.45
1	187.000000000 MHz	19.13	Quasi Peak	-24.39
1	526.320000000 MHz	27.12	Quasi Peak	-18.90
1	937.760000000 MHz	32.86	Quasi Peak	-13.16

CMC Centro Misure Compatibilità S.r.l.



G15179412

Meas Type Emission
Equipment under Test
Manufacturer
OP Condition Tx - Fmid
Operator Gandini 15179412
Test Spec
 Vert



Final Measurement

Meas Time: 1 s
 Margin: 20 dB
 Subranges: 6

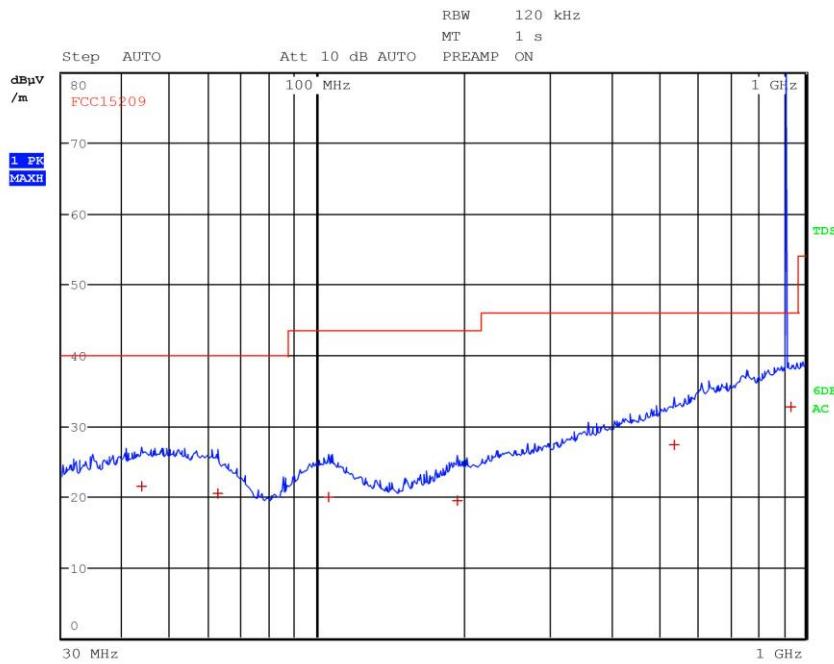
Trace	Frequency	Level (dBµV/m)	Detector	Delta Limit/dB
1	49.920000000 MHz	21.58	Quasi Peak	-18.42
1	61.120000000 MHz	20.93	Quasi Peak	-19.07
1	101.160000000 MHz	20.03	Quasi Peak	-23.49
1	281.040000000 MHz	21.56	Quasi Peak	-24.46
1	556.520000000 MHz	27.82	Quasi Peak	-18.20
1	933.840000000 MHz	32.79	Quasi Peak	-13.23

CMC Centro Misure Compatibilità S.r.l.



G15179413

Meas Type Emission
Equipment under Test
Manufacturer
OP Condition Tx - Fmin
Operator Gandini 15179413
Test Spec
 Vert



Final Measurement

Meas Time: 1 s
 Margin: 20 dB
 Subranges: 6

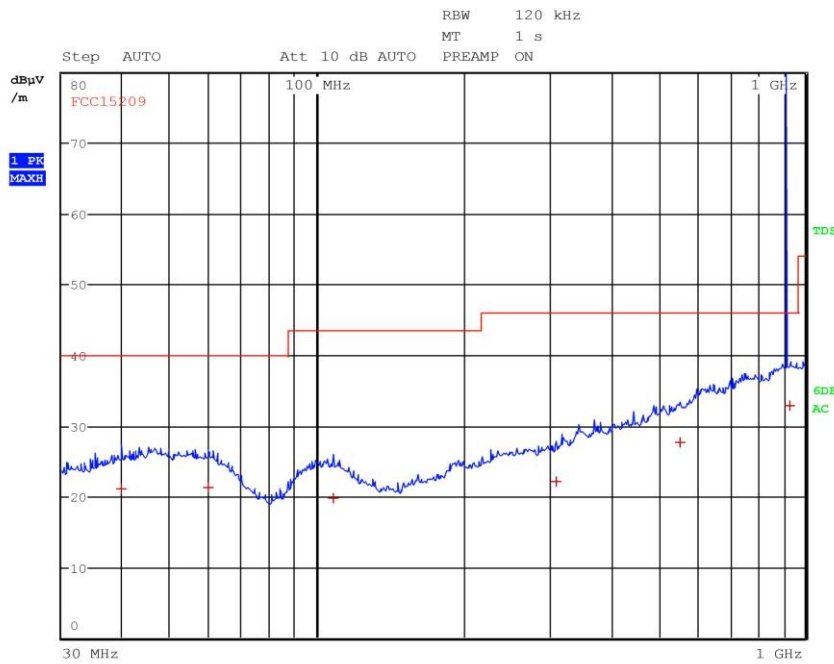
Trace	Frequency	Level (dBµV/m)	Detector	Delta Limit/dB
1	43.680000000 MHz	21.51	Quasi Peak	-18.49
1	62.560000000 MHz	20.44	Quasi Peak	-19.56
1	105.640000000 MHz	19.95	Quasi Peak	-23.57
1	193.680000000 MHz	19.43	Quasi Peak	-24.09
1	539.520000000 MHz	27.36	Quasi Peak	-18.66
1	935.120000000 MHz	32.76	Quasi Peak	-13.26

CMC Centro Misure Compatibilità S.r.l.



G15179414

Meas Type Emission
Equipment under Test
Manufacturer
OP Condition Tx - Fmin
Operator Gandini 15179414
Test Spec
 Horiz



Final Measurement

Meas Time: 1 s
 Margin: 20 dB
 Subranges: 6

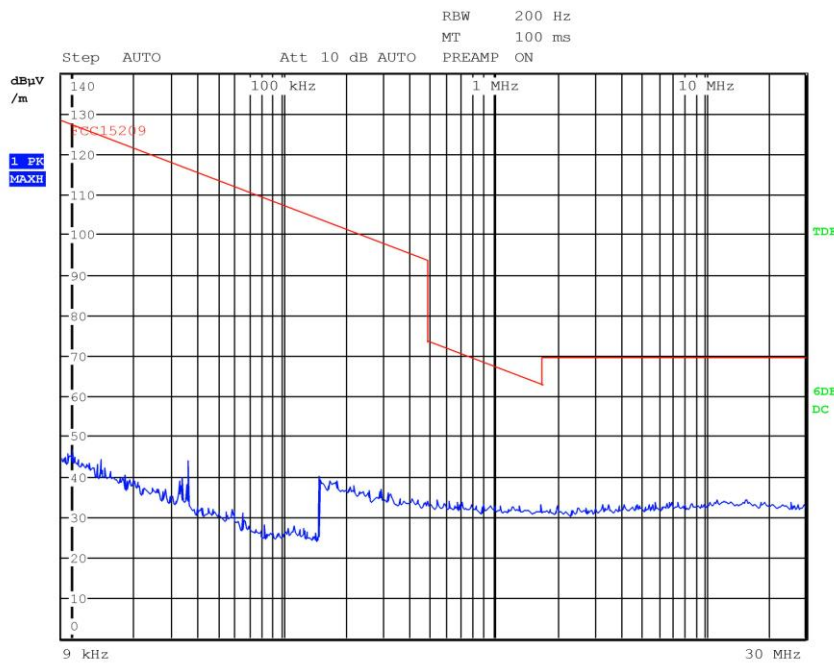
Trace	Frequency	Level (dBµV/m)	Detector	Delta Limit/dB
1	39.680000000 MHz	21.03	Quasi Peak	-18.97
1	59.760000000 MHz	21.20	Quasi Peak	-18.80
1	107.960000000 MHz	19.77	Quasi Peak	-23.75
1	308.160000000 MHz	22.06	Quasi Peak	-23.96
1	553.280000000 MHz	27.62	Quasi Peak	-18.40
1	930.920000000 MHz	32.81	Quasi Peak	-13.21

CMC Centro Misure Compatibilità S.r.l.



G15179415

Meas Type Emission
Equipment under Test
Manufacturer
OP Condition Tx-Rx
Operator Gandini 15179415
Test Spec
 Loop



Final Measurement

Meas Time: 1 s
 Margin: 20 dB
 Subranges: 0

Result: The requirements are met

CMC Centro Misure Compatibilità S.r.l.



11.3 Peak Output Power

Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part 15.209 and Part 15.249
- 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 S136, CMC S164
Measurement uncertainty: See clause 7 of this test report

Test specification

Port: Enclosure
Antenna polarization: Horizontal (H) – Vertical (V)
EUT – Antenna distance: 3 m

Environmental conditions

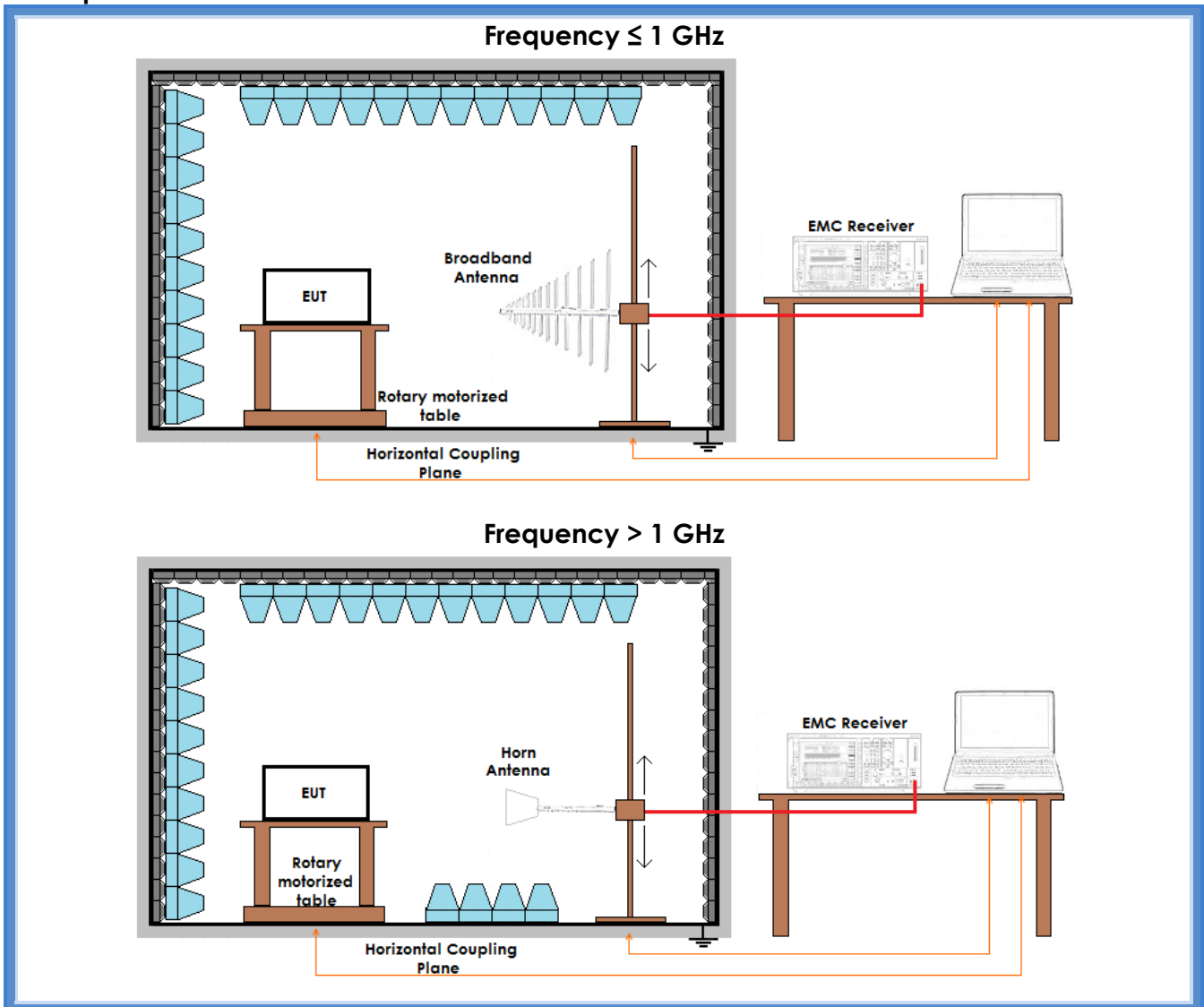
Temperature (°C)	Atmospheric pressure (kPa)	Relative humidity (%)
22	100	45

Acceptance limits

Frequency range (MHz)	RF Power Output dB(μV/m)
902 – 928	94

Frequency range (MHz)	RF Power Output dB(μV/m)
2400 – 2483,5	94

Setup



Result

Frequency (MHz)	Polarization	Graphs	Measured QP level (dB μ V/m)	Peak Output Power (mW)	Remarks
915,048077	Horizontal	G15179426	93,77	0,715	--
915,053846	Vertical	G15179431	84,43	0,083	--
920,998718	Horizontal	G15179416	93,57	0,683	--
921,003846	Vertical	G15179419	84,88	0,092	--
927,752564	Horizontal	G15179421	93,87	0,731	--
927,747436	Vertical	G15179420	85,90	0,117	--



Remarks

$$P = (E \times d)^2 / (30 \times G)$$

Where:

E = the measured maximum fundamental field strength in V/m

G = the numeric gain of the transmitting antenna: 1 (0 dBi)

d = the distance in meters from which the field strength was measured (3 m)

P = the power in watts

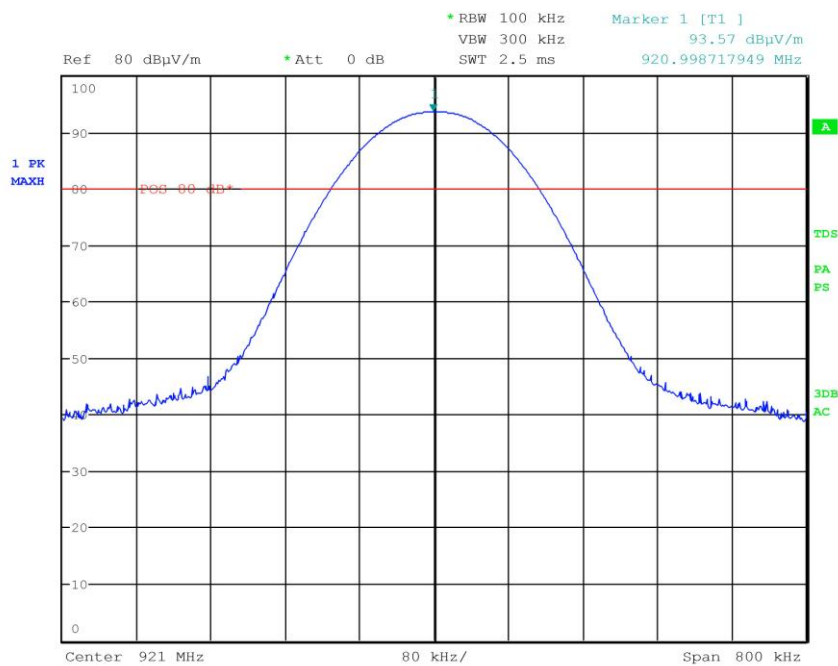




Graphs

G15179416

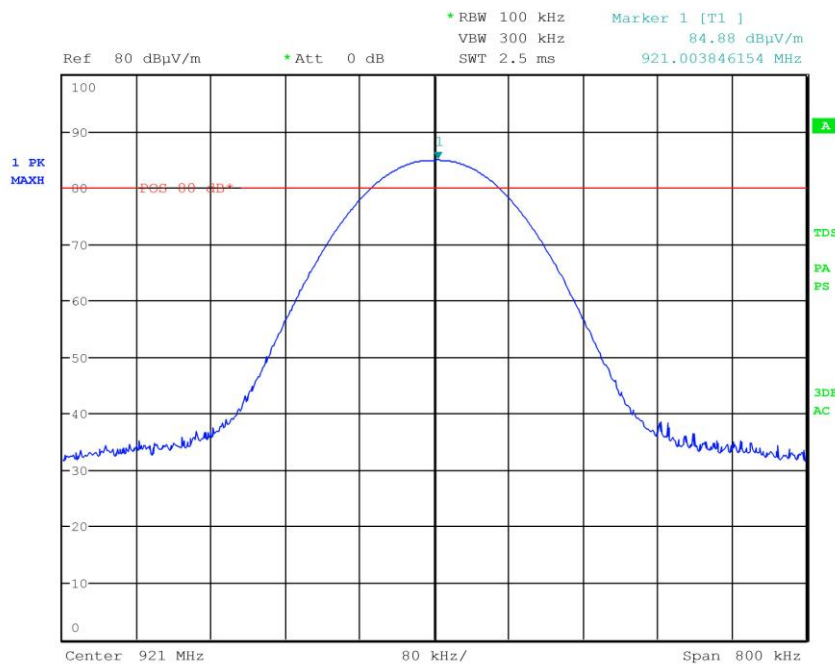
Meas Type Emission
Equipment under Test
Manufacturer
OP Condition Tx - Fmid
Operator Gandini 15179416
Test Spec
Horiz





G15179419

Meas Type Emission
Equipment under Test
Manufacturer
OP Condition Tx - Fmid
Operator Gandini 15179419
Test Spec
 Vert

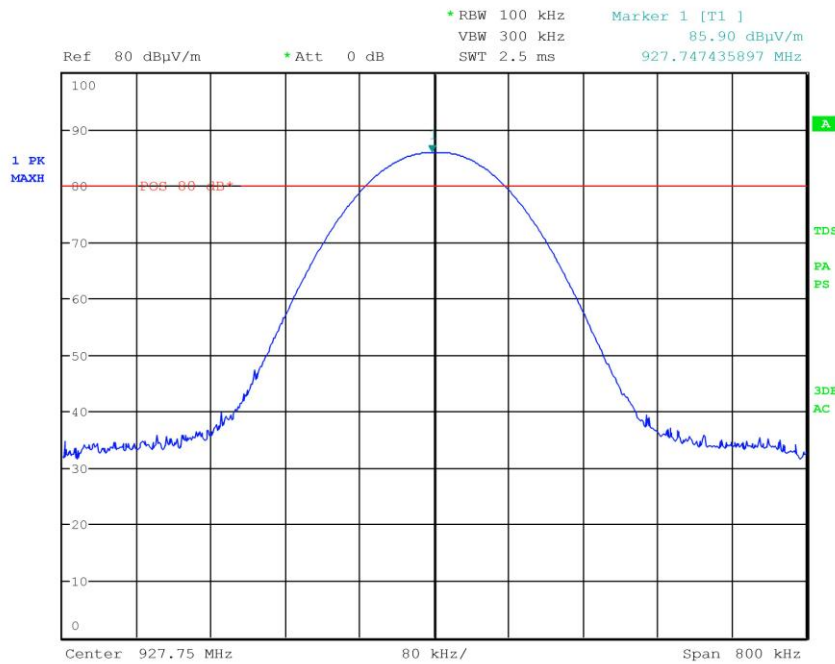


CMC Centro Misure Compatibilità S.r.l.



G15179420

Meas Type Emission
Equipment under Test
Manufacturer
OP Condition Tx - Fmax
Operator Gandini 15179420
Test Spec
 Vert

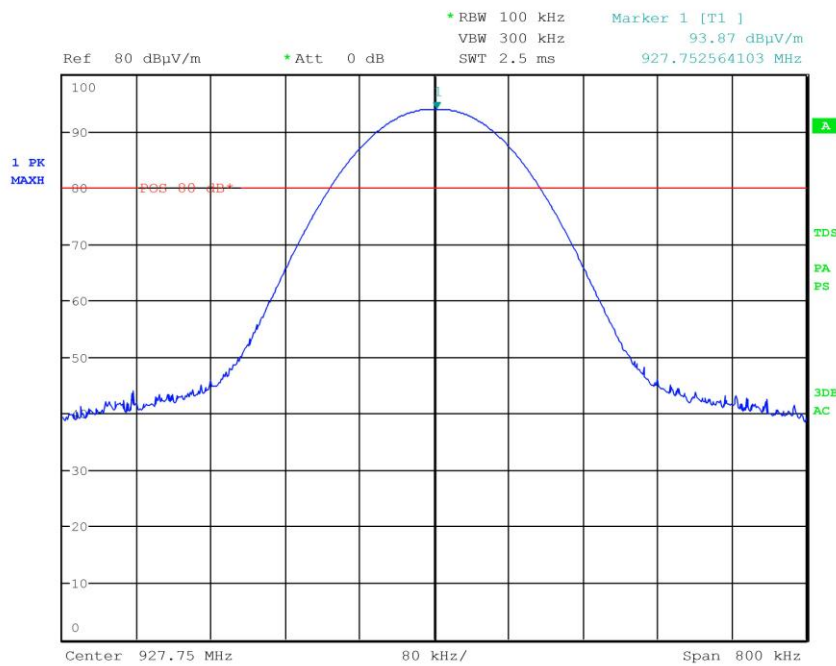


CMC Centro Misure Compatibilità S.r.l.



G15179421

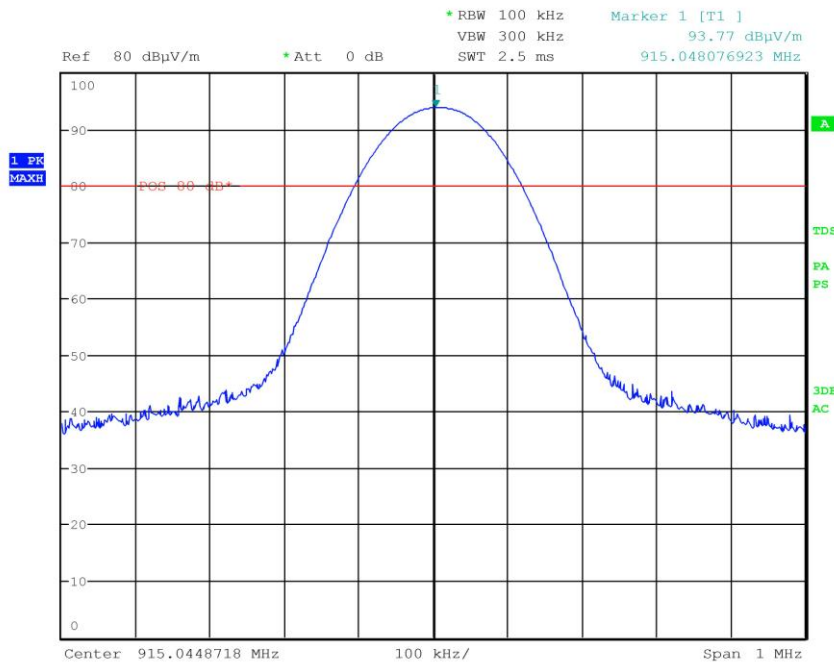
Meas Type Emission
Equipment under Test
Manufacturer
OP Condition Tx - Fmax
Operator Gandini 15179421
Test Spec
Horiz





G15179426

Meas Type Emission
Equipment under Test
Manufacturer
OP Condition Tx - Fmin
Operator Gandini 15179426
Test Spec
 Horiz

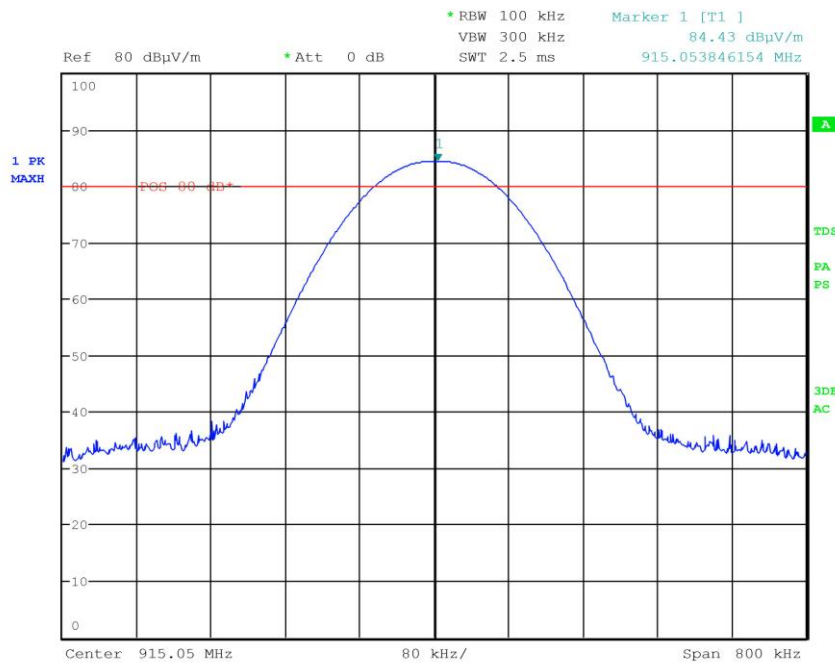


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G15179431

Meas Type Emission
Equipment under Test
Manufacturer
OP Condition Tx - Fmin
Operator Gandini 15179431
Test Spec
 Horiz



Result: The requirements are met

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11.4 Band edge

Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part 15.249 (d)
- 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

CMC S108, CMC S136, CMC S164
 Measurement uncertainty: See clause 7 of this test report

Test specification

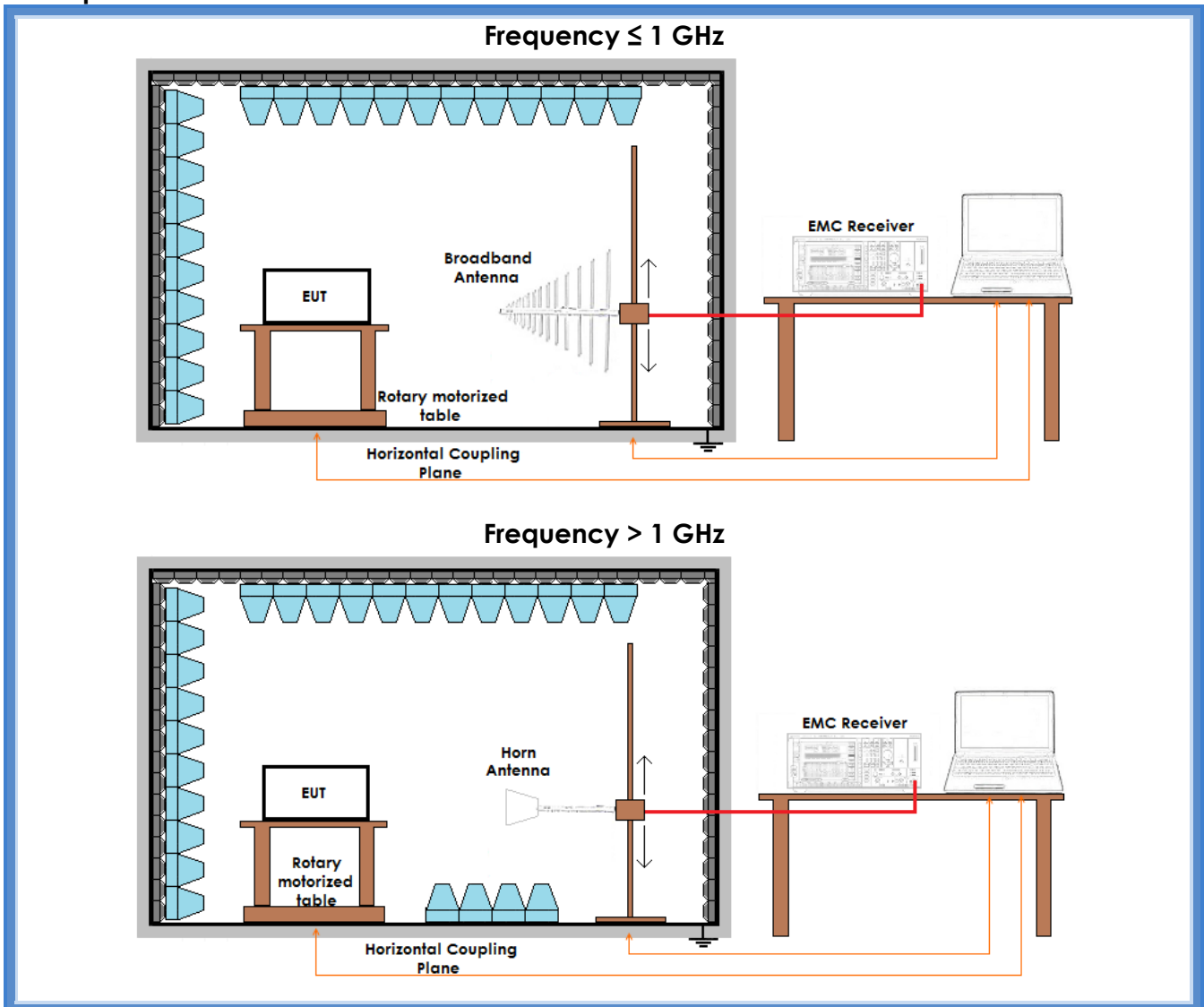
Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in § 15.209, whichever is the lesser attenuation

Environmental conditions

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

Acceptance limits: operation within the band 902 – 928 MHz

Setup



Result

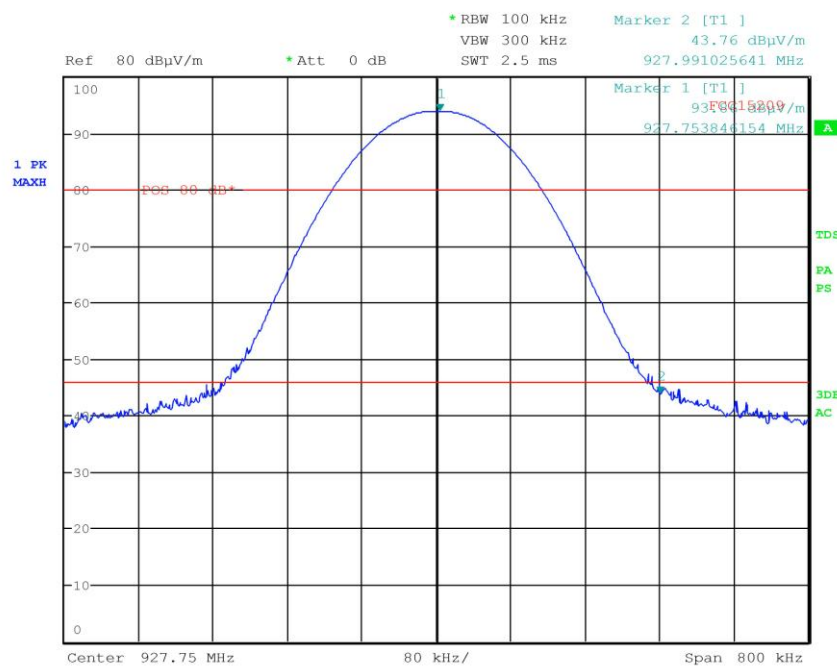
Frequency (MHz)	Graph(s)	Results	
915,050	G15179427	F _L : 914,798076 MHz	Complies
	G15179430		
927,750	G15179422	F _H : 927,991025 MHz	Complies
	G15179425		



Graphs

G15179422

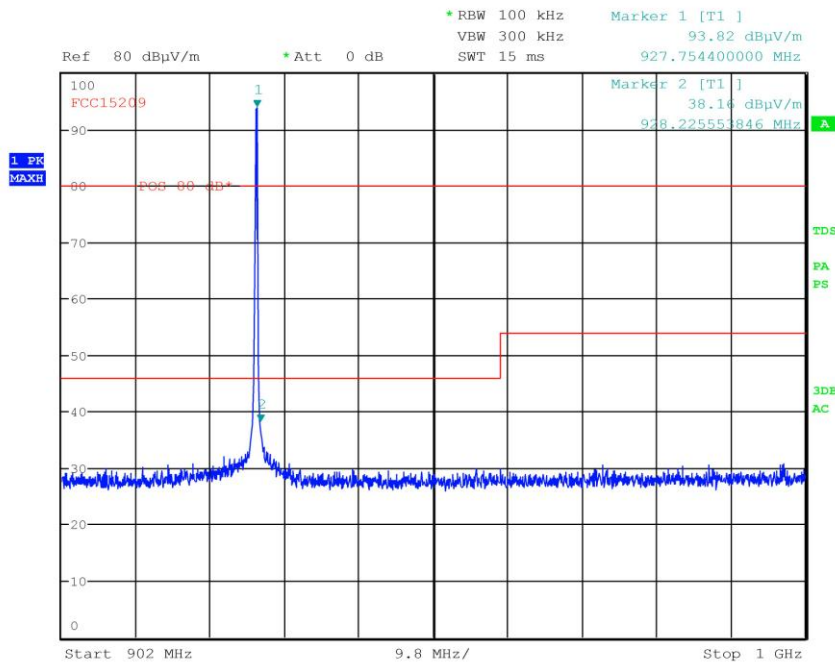
Meas Type Emission
Equipment under Test
Manufacturer
OP Condition Tx - Fmax
Operator Gandini 15179422
Test Spec
 Horiz





G15179425

Meas Type Emission
Equipment under Test
Manufacturer
OP Condition Tx - Fmax
Operator Gandini 15179425
Test Spec
Horiz

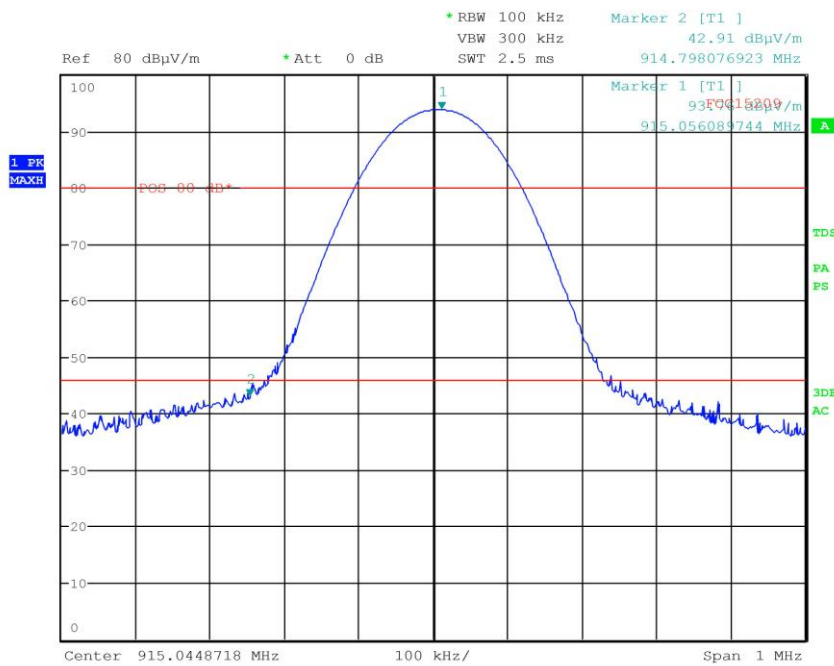


CMC Centro Misure Compatibilità S.r.l.



G15179427

Meas Type Emission
Equipment under Test
Manufacturer
OP Condition Tx - Fmin
Operator Gandini 15179427
Test Spec
 Horiz

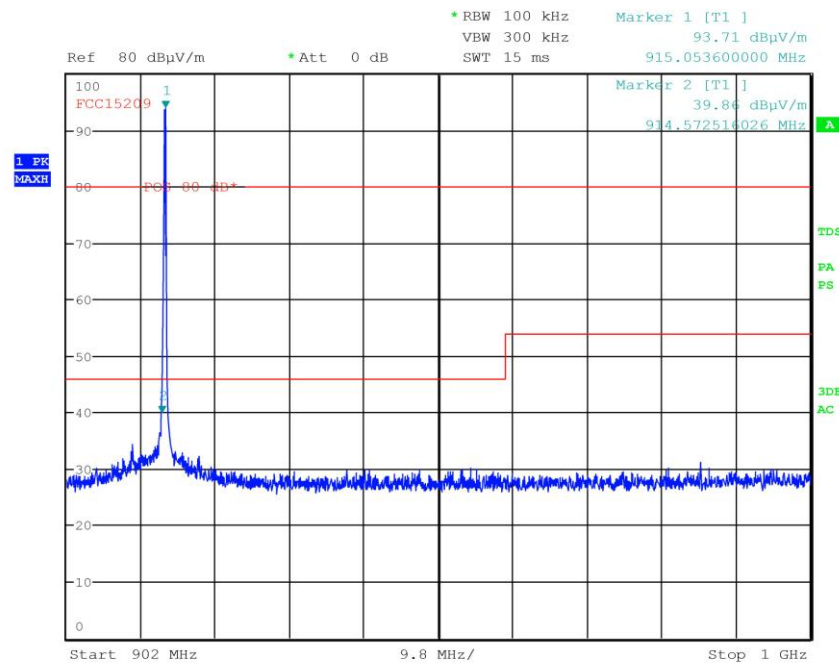


CMC Centro Misure Compatibilità S.r.l.



G15179430

Meas Type Emission
Equipment under Test
Manufacturer
OP Condition Tx - Fmin
Operator Gandini 15179430
Test Spec
 Horiz



Result: The requirements are met



11.5 Spurious Emission

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

Test specification

Port: Enclosure
 Antenna polarization: Horizontal (H) – Vertical (V)
 EUT – Antenna distance: 3 m
 Detector AV + Peak

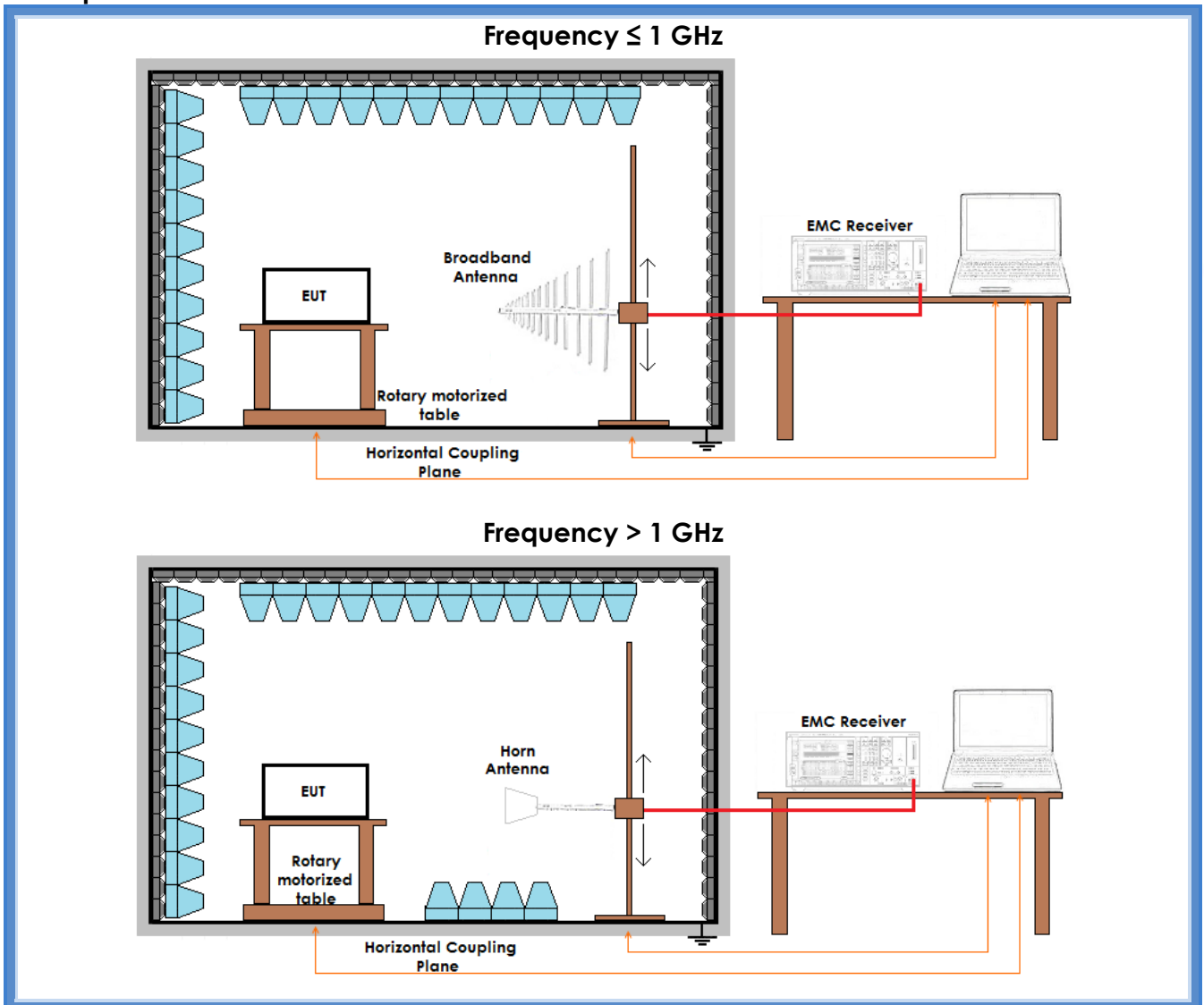
Environmental conditions

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

Acceptance limits

Frequency (MHz)	AV limits [dB(µV/m)]	Peak limits [dB(µV/m)]
> 1000	54	74

Setup



Graphs:

G15179401, G15179402, G15179403, G15179404,
G15179405, G15179406



Result – AV detector

Harmonic	Limits (dB μ V/m)	Level (dB μ V/m)			Results
		915,050 MHz	921,000 MHz	927,750 MHz	
II	54	38,96	40,72	33,02	Complies
III	54	43,24	37,95	41,68	Complies
IV	54	More than 20 dB below limit	More than 20 dB below limit	More than 20 dB below limit	Complies
V	54	40,99	39,60	41,00	Complies
VI	54	More than 20 dB below limit	More than 20 dB below limit	More than 20 dB below limit	Complies
VII	54	More than 20 dB below limit	More than 20 dB below limit	More than 20 dB below limit	Complies
VIII	54	More than 20 dB below limit	More than 20 dB below limit	More than 20 dB below limit	Complies
IX	54	More than 20 dB below limit	More than 20 dB below limit	More than 20 dB below limit	Complies
X	54	More than 20 dB below limit	More than 20 dB below limit	More than 20 dB below limit	Complies

Remarks: EUT was tested in 3 orthogonal planes. The results in this table show the highest values

Result – Peak detector

Harmonic	Limits (dB μ V/m)	Level (dB μ V/m)			Results
		915,050 MHz	921,000 MHz	927,750 MHz	
II	74	More than 20 dB below limit	More than 20 dB below limit	More than 20 dB below limit	Complies
III	74	46,55	45,86	44,97	Complies
IV	74	More than 20 dB below limit	More than 20 dB below limit	More than 20 dB below limit	Complies
V	74	More than 20 dB below limit	More than 20 dB below limit	More than 20 dB below limit	Complies
VI	74	More than 20 dB below limit	More than 20 dB below limit	More than 20 dB below limit	Complies
VII	74	More than 20 dB below limit	More than 20 dB below limit	More than 20 dB below limit	Complies
VIII	74	More than 20 dB below limit	More than 20 dB below limit	More than 20 dB below limit	Complies
IX	74	More than 20 dB below limit	More than 20 dB below limit	More than 20 dB below limit	Complies
X	74	More than 20 dB below limit	More than 20 dB below limit	More than 20 dB below limit	Complies

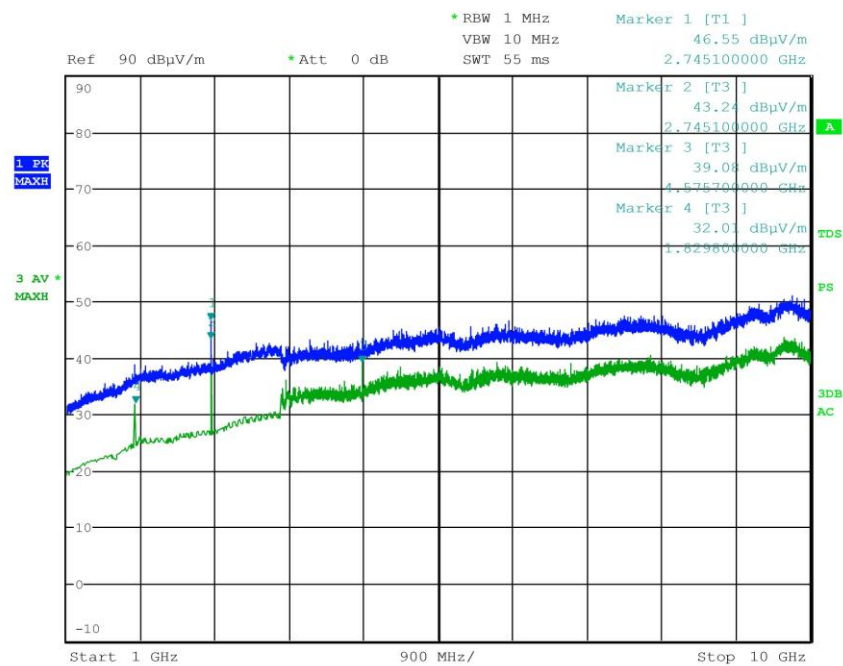
Remarks: EUT was tested in 3 orthogonal planes. The results in this table show the highest values



Graphs

G15179401

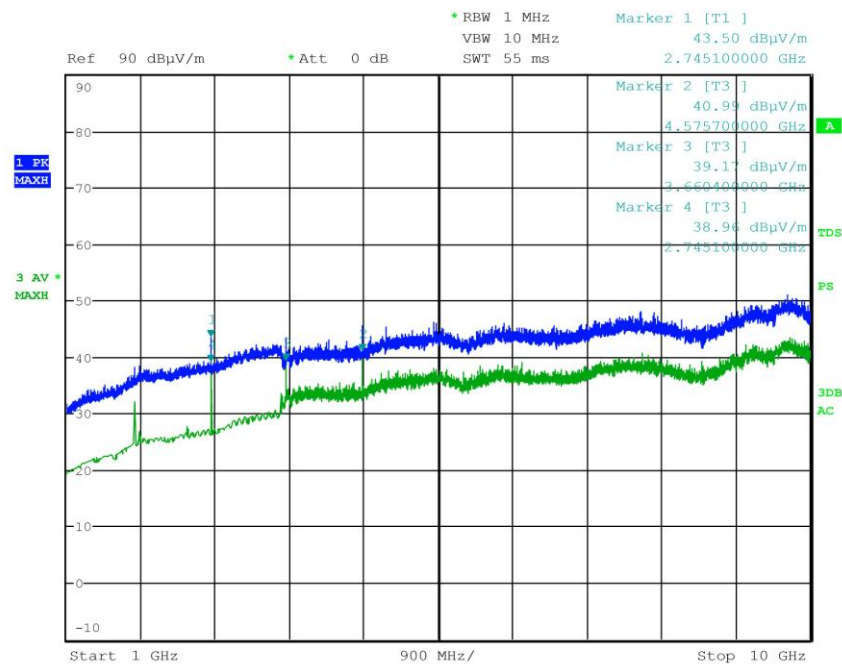
Meas Type Emission
Equipment under Test
Manufacturer
OP Condition Tx - Fmin
Operator Gandini 15179401
Test Spec
Vert - EUT Horiz





G15179402

Meas Type Emission
Equipment under Test
Manufacturer
OP Condition Tx - Fmin
Operator Gandini 15179402
Test Spec
 Horiz - EUT Horiz

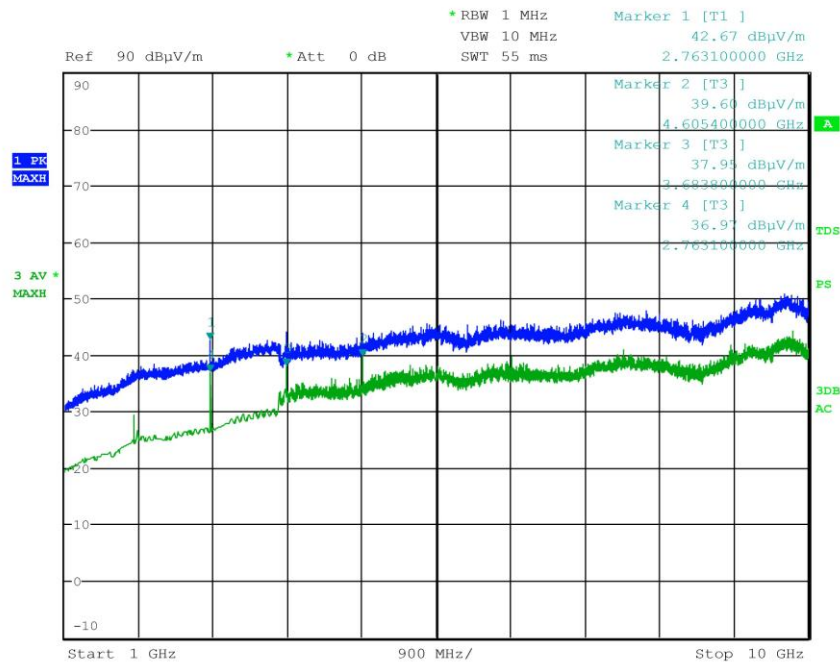


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G15179403

Meas Type Emission
Equipment under Test
Manufacturer
OP Condition Tx - Fmid
Operator Gandini 15179403
Test Spec
 Horiz - EUT Horiz

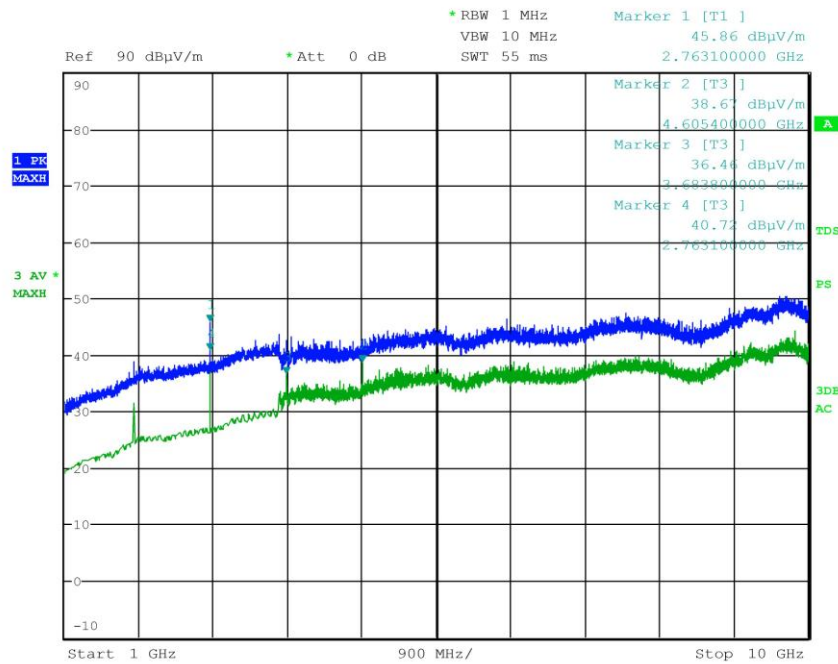


CMC Centro Misure Compatibilità S.r.l.



G15179404

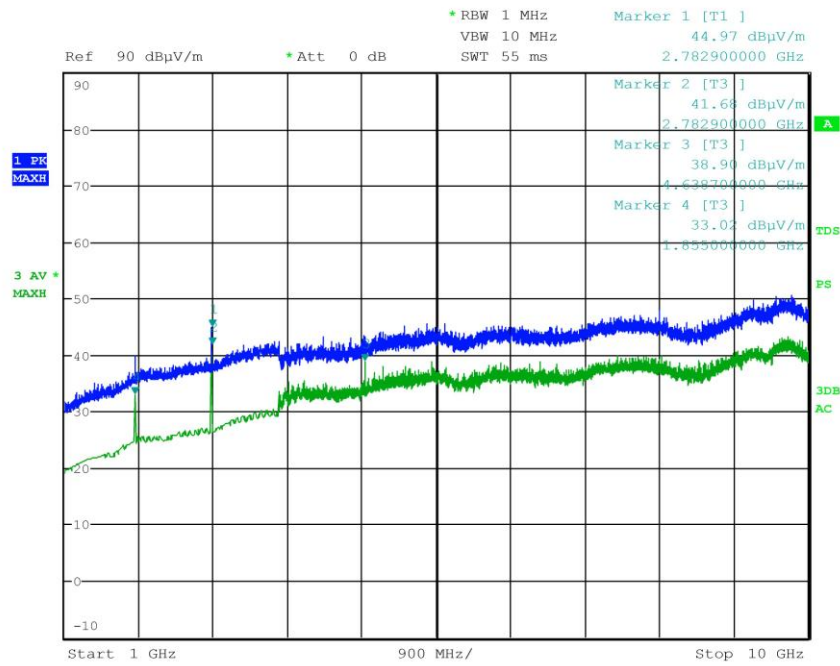
Meas Type Emission
Equipment under Test
Manufacturer
OP Condition Tx - Fmid
Operator Gandini 15179404
Test Spec
Vert - EUT Horiz





G15179405

Meas Type Emission
Equipment under Test
Manufacturer
OP Condition Tx - Fmax
Operator Gandini 15179405
Test Spec
 Vert - EUT Horiz

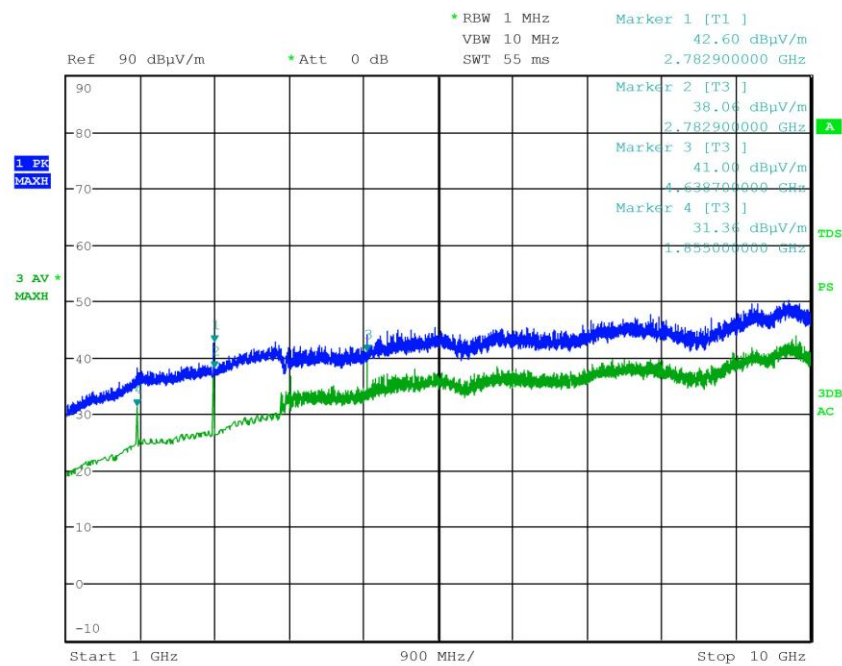


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G15179406

Meas Type Emission
Equipment under Test
Manufacturer
OP Condition Tx - Fmax
Operator Gandini 15179406
Test Spec
 Horiz - EUT Horiz



Result: The requirements are met

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