



TEST REPORT nr. R13021801

Federal Communication Commission (FCC)

Test item

Description.....: Radio microphone

Trademark.....: WISYCOM

Model/Type.....: MTH400

Test Specification

Standard: FCC Rules & Regulations, Title 47 - Part 74.861 (2011)

Client's name.....: WISYCOM SRL

Address: Via Spin,156 – 36060 Romano d'Ezzelino (VI) - Italy

Manufacturer's name.: Same ad client

Address

Report

Tested by.....: A. Bertezolo - *Technician*

Approved by.....: R. Beghetto – *Laboratory Manager*

Date of issue.....: 22.10.13

Contents: 58 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.



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1. Summary			
Standard: FCC Rules & Regulations, Title 47 part 74			
Test specifications	Environmental Phenomena	Tests sequence	Result
FCC – Title 47 Part 74.861	Peak Output Power	1	Complies
FCC – Title 47 Part 74.861	Frequency Error vs. Voltage	2	Complies
FCC – Title 47 Part 74.861	Frequency Error vs. Temperature	3	Complies
FCC – Title 47 Part 74.861	Characteristic of the Audio Modulation	4	Complies
FCC – Title 47 Part 74.861	Occupied Bandwidth	5	Complies
FCC – Title 47 Part 74.861	Attenuation Power	6	Complies
FCC – Title 47 Part 74.861	Radiated Spurious	7	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 : 3 Vdc from battery

Type of equipment : ☒ Transmitter Unit ☐ Receiver Unit
☐ Fixed station ☒ Portable station ☐ Mobile station

Alignment range : 470 - 608 MHz
614 - 698 MHz

Switching frequency : 470 - 608 MHz
614 - 698 MHz

Modulation : Wide band FM with pre-emphasis

Information on antenna : ☐ Integrated
☐ Extern
☒ Other: Dedicated

Gain: 1 dBi

SAR evaluation : For standalone transmission, 1-g and 10-g SAR test
exclusions may be applied in conjunction with the
published RF exposure KDB 447498

- 100 MHz – 6 GHz and test separation distance $\leq 50\text{mm}$

$[(\text{max power of channel, including tolerance, mW}) / (\text{min test separation distance, mm})] \times [\sqrt{f(\text{GHz})}] \leq 3,0$ for 1-g and 7,5 for 10-g SAR

max power of channel, including tolerance = 61,2mW

min distance: 25mm

Fmax: 0,698 GHz

$61,2/25 \times \sqrt{0,698} = 2,05$

$2,05 \leq 3,0$ for 1-g and 7,5 for 10-g SAR

FCC ID : POUMTH400

2.1 Test Site

Company : CMC Centro Misure Compatibilità S.r.l.

Address : Via dell'Elettronica, 12/C – 36016 Thiene (VI) – ITALY



3. Testing and sampling

Date of receipt of test item : 06.02.13

Testing start date : 06.02.13

Testing end date : 18.07.13

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 P130122

4. Operative conditions

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CMC
Centro Misure Compatibilità S.r.l.
Via dell'Elettronica, 12/C
36016 Thiene (VI)

5. 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 S108	Emco	3115	Horn antenna	9811-5622	April '13	April '16
CMC S124	Spin	AMTP42-20	Horn Antenna 18-26GHz	103	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	ESU 26	EMC interference receiver	100052	January '13	January '14
CMC S206	Rohde & Schwarz	ESCI 7	EMC interference receiver	100781	March '13	March '14
CMC B026	Angelantoni	UY 245 IU	Climatic chamber	1059.78	June '13	June '14
CMC A201	Audio Precision System	Two 272	Audio analyzer	SYS2-32408	June '13	June '14
CMC A202	Rhode&Schwarz	FMAB	Modulation Analyzer	0856.4750.52	June '12	June '15



7. Measurement uncertainty

Test	Expanded Uncertainty	note
Conducted Emission		
(50Ω/50μH AMN) - (9 kHz – 150 kHz)	±3.8 dB	1
(50Ω/50μH AMN) - (150 kHz – 30 MHz)	±3.4 dB	1
(Voltage probe) - (150 kHz – 30 MHz)	±3.0 dB	1
(50Ω/5μH AMN) - (150 kHz – 108 MHz)	±3.2 dB	1
Discontinuous Conducted Emission		
Conducted Emission (50Ω/50μH AMN) - (9 kHz – 150 kHz)	±3.8 dB	1
Conducted Emission (50Ω/50μH AMN) - (150 kHz – 30 MHz)	±3.4 dB	1
Disturbance Power (30 MHz – 300 MHz)		
	±3.2 dB	1
Radiated Emission		
(0,150 MHz – 30 MHz)	±4.5 dB	1
(30 MHz – 1000 MHz)	±4.8 dB	1
(1 GHz – 6 GHz)	±4.4 dB	1
Electromagnetic field EMF		
	±18.8 dB	1
Harmonic current emissions test		
	±2.4 %	1
Voltage fluctuation and flicker test		
	±6.0 %	1
Insertion loss test		
	±2.6 %	1
Radiated electromagnetic disturbance test (loop antenna)		
	±2.5 %	1
Radiated electromagnetic field immunity test		
	0.9 V/m at 3V/m	1
Pulse modulated radiated electromagnetic field immunity test		
	0.9 V/m at 3V/m	1
Injected currents immunity test		
	0.6 V at 3V	1
Bulk current		
	9 mA at 60 mA	1
Power frequency magnetic field immunity test		
	0.3 A/m at 3 A/m	1
Electrostatic discharge immunity test		
		2
Electrical fast transients / burst immunity test		
		2
Surge immunity test		
		2
Short interruption immunity test		
		2
Voltage transient emission test		
	±5 %	1
Transient immunity test		
		2

Notes

Note 1:

The expanded uncertainty reported according to EN55016-4-2(2004-10) 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 74 (2011)	--
Internal Procedure PM001 rev. 2.0 (Quality Manual)	Measure Procedure
Internal procedure INC_M rev. 8.1 (Quality Manual)	Measurement uncertainty calculation





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 6dB 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 / N.A.

Test item does meet the requirement..... : P / Pass / Complies

Test item does not meet the requirement..... : F / Fail / Does not comply

Test not performed : NE / Not Executed

11. Results

In this clause tests results are reported.

Measurement uncertainty is in accordance with document CMC INC_M rev. 8.1.



11.1 Peak Output Power (Conducted)

Test configuration and test method

Test site

Laboratory

Auxiliary equipment

See clause 4 of this test report

Environmental conditions

Temperature 20 °C Atmospheric pressure 98 kPa Relative humidity 49 %

Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part 74.861 (e)(1)(ii)
- Internal Procedure PM001
- See clause 4 of this test report

Test specification

Port: Antenna;

EUT exercising

See clause 4 of this test report

Acceptance limits

Frequency range	RF power output
470 - 608 MHz 614 – 698 MHz	250 mW



Result

Frequency (MHz)	Graphs	Measured Peak Output Power (dBm)	Attenuation cable (dB)	Total Peak Output Power (dBm)	Peak Output Power (mW)	Remark
470,075	G13021851	15,67	1,2	16,87	48,6	--
607,925	G13021850	15,43	1,3	16,73	47,1	--
614,075	G13021849	15,36	1,3	16,66	46,3	--
638,000	G13021848	15,34	1,4	16,74	47,2	--
668,000	G13021847	14,81	1,5	16,31	42,8	--
697,925	G13021846	14,86	1,5	16,36	43,2	--
Measurement uncertainty: ± 1 dBm						

Remarks

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Reference documents

See clause 8 of this test report

Test equipment used (Id number – see clause 6 of this test report)

CMC S206

Result

The requirements are met



11.2 Frequency Error vs. Voltage

Test configuration and test method

Test site

Auxiliary equipment

Laboratory

See clause 4 of this test report

Environmental conditions

Temperature 19 °C

Atmospheric pressure 98 kPa

Relative humidity 48 %

Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part 74.861 (e)(4)
- Internal Procedure PM001
- See clause 4 of this test report

Test specification

Port: Antenna;

EUT exercising

See clause 4 of this test report

Acceptance limits

The frequency tolerance of the transmitter shall be 0,005 percent

Result

Frequency (MHz)	Voltage (V)	Frequency Error (Hz)	Frequency Error (%)	Frequency Error (ppm)
470,075	1,8	*	*	*
470,075	2,0	*	*	*
470,075	2,2	*	*	*
470,075	2,4	260	0,000055	0,55
470,075	2,6	340	0,000072	0,72
470,075	2,8	300	0,000064	0,64
470,075	3,0	380	0,000081	0,81
470,075	3,1	280	0,000060	0,60
470,075	3,3	280	0,000060	0,60
470,075	3,5	260	0,000055	0,55

* Switching off of the EUT



Frequency (MHz)	Voltage (V)	Frequency Error (Hz)	Frequency Error (%)	Frequency Error (ppm)
607,925	1,8	*	*	*
607,925	2,0	*	*	*
607,925	2,2	*	*	*
607,925	2,4	310	0,000051	0,51
607,925	2,6	300	0,000049	0,49
607,925	2,8	300	0,000049	0,49
607,925	3,0	380	0,000062	0,62
607,925	3,1	340	0,000059	0,59
607,925	3,3	380	0,000062	0,62
607,925	3,5	380	0,000062	0,62

* Switching off of the EUT

Frequency (MHz)	Voltage (V)	Frequency Error (Hz)	Frequency Error (%)	Frequency Error (ppm)
614,075	1,8	*	*	*
614,075	2,0	*	*	*
614,075	2,2	*	*	*
614,075	2,4	380	0,000062	0,62
614,075	2,6	300	0,000049	0,49
614,075	2,8	340	0,000055	0,55
614,075	3,0	380	0,000062	0,62
614,075	3,1	340	0,000055	0,55
614,075	3,3	300	0,000049	0,49
614,075	3,5	380	0,000062	0,62

* Switching off of the EUT

Frequency (MHz)	Voltage (V)	Frequency Error (Hz)	Frequency Error (%)	Frequency Error (ppm)
638,000	1,8	*	*	*
638,000	2,0	*	*	*
638,000	2,2	*	*	*
638,000	2,4	380	0,000059	0,59
638,000	2,6	400	0,000063	0,63
638,000	2,8	380	0,000095	0,95
638,000	3,0	400	0,000063	0,63
638,000	3,1	300	0,000047	0,47
638,000	3,3	500	0,000078	0,78
638,000	3,5	320	0,000050	0,50

* Switching off of the EUT



Frequency (MHz)	Voltage (V)	Frequency Error (Hz)	Frequency Error (%)	Frequency Error (ppm)
668,000	1,8	*	*	*
668,000	2,0	*	*	*
668,000	2,2	*	*	*
668,000	2,4	*	*	*
668,000	2,6	350	0,000052	0,52
668,000	2,8	330	0,000049	0,49
668,000	3,0	320	0,000048	0,48
668,000	3,1	300	0,000049	0,49
668,000	3,3	320	0,000048	0,48
668,000	3,5	320	0,000048	0,48

* Switching off of the EUT

Frequency (MHz)	Voltage (V)	Frequency Error (Hz)	Frequency Error (%)	Frequency Error (ppm)
697,925	1,8	*	*	*
697,925	2,0	*	*	*
697,925	2,2	*	*	*
697,925	2,4	*	*	*
697,925	2,6	350	0,000050	0,50
697,925	2,8	350	0,000050	0,50
697,925	3,0	290	0,000041	0,41
697,925	3,1	320	0,000046	0,46
697,925	3,3	340	0,000049	0,49
697,925	3,5	340	0,000049	0,49

* Switching off of the EUT

Remarks

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Reference documents

See clause 8 of this test report

Test equipment used (Id number – see clause 6 of this test report)

CMC S206

Result

The requirements are met



11.3 Frequency Error vs. Temperature

Test configuration and test method

Test site

Auxiliary equipment

Laboratory

See clause 4 of this test report

Environmental conditions

Temperature 19 °C Atmospheric pressure 98 kPa Relative humidity 48 %

Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part 74.861 (e)(4)
- Internal Procedure PM001
- See clause 4 of this test report

Test specification

Port: Antenna;

EUT exercising

See clause 4 of this test report

Acceptance limits

The frequency tolerance of the transmitter shall be 0,005 percent

Result

Frequency (MHz)	Temperature (°C)	Frequency Error (Hz)	Frequency Error (%)	Frequency Error (ppm)
470,075	-30	190	0,000040	0,40
470,075	-20	190	0,000040	0,40
470,075	-10	190	0,000040	0,40
470,075	0	200	0,000043	0,43
470,075	+10	240	0,000051	0,51
470,075	+20	260	0,000055	0,55
470,075	+30	300	0,000064	0,64
470,075	+40	29	0,000006	0,06
470,075	+50	29	0,000006	0,06
470,075	+55	290	0,000062	0,62



Frequency (MHz)	Temperature (°C)	Frequency Error (Hz)	Frequency Error (%)	Frequency Error (ppm)
607,925	-30	300	0,000049	0,49
607,925	-20	320	0,000053	0,53
607,925	-10	300	0,000049	0,49
607,925	0	300	0,000049	0,49
607,925	+10	320	0,000053	0,53
607,925	+20	320	0,000053	0,53
607,925	+30	300	0,000049	0,49
607,925	+40	300	0,000049	0,49
607,925	+50	320	0,000053	0,53
607,925	+55	320	0,000053	0,53

Frequency (MHz)	Temperature (°C)	Frequency Error (Hz)	Frequency Error (%)	Frequency Error (ppm)
614,075	-30	340	0,000055	0,55
614,075	-20	350	0,000057	0,57
614,075	-10	350	0,000057	0,57
614,075	0	350	0,000057	0,57
614,075	+10	340	0,000055	0,55
614,075	+20	370	0,000060	0,60
614,075	+30	340	0,000055	0,55
614,075	+40	350	0,000057	0,57
614,075	+50	340	0,000055	0,55
614,075	+55	340	0,000055	0,55

Frequency (MHz)	Temperature (°C)	Frequency Error (Hz)	Frequency Error (%)	Frequency Error (ppm)
638,000	-30	330	0,000052	0,52
638,000	-20	330	0,000052	0,52
638,000	-10	330	0,000052	0,52
638,000	0	350	0,000055	0,55
638,000	+10	360	0,000056	0,56
638,000	+20	270	0,000042	0,42
638,000	+30	360	0,000056	0,56
638,000	+40	420	0,000066	0,66
638,000	+50	40	0,000006	0,06
638,000	+55	420	0,000066	0,66



<i>Frequency (MHz)</i>	<i>Temperature (°C)</i>	<i>Frequency Error (Hz)</i>	<i>Frequency Error (%)</i>	<i>Frequency Error (ppm)</i>
668,000	-30	300	0,000045	0,45
668,000	-20	310	0,000046	0,46
668,000	-10	310	0,000046	0,46
668,000	0	310	0,000046	0,46
668,000	+10	330	0,000049	0,49
668,000	+20	300	0,000045	0,45
668,000	+30	310	0,000046	0,46
668,000	+40	320	0,000048	0,48
668,000	+50	330	0,000049	0,49
668,000	+55	320	0,000048	0,48

<i>Frequency (MHz)</i>	<i>Temperature (°C)</i>	<i>Frequency Error (Hz)</i>	<i>Frequency Error (%)</i>	<i>Frequency Error (ppm)</i>
697,925	-30	240	0,000034	0,34
697,925	-20	240	0,000034	0,34
697,925	-10	240	0,000034	0,34
697,925	0	280	0,000040	0,40
697,925	+10	280	0,000040	0,40
697,925	+20	280	0,000040	0,40
697,925	+30	330	0,000047	0,47
697,925	+40	290	0,000042	0,42
697,925	+50	320	0,000046	0,46
697,925	+55	450	0,000064	0,64

Remarks

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Reference documents

See clause 8 of this test report

Test equipment used (Id number – see clause 6 of this test report)

CMC S206, CMC B026

Result

The requirements are met



11.4 Characteristic of the Audio Modulation Circuitry

Test configuration and test method

Test site

Laboratory

Auxiliary equipment

See clause 4 of this test report

Environmental conditions

Temperature 19 °C Atmospheric pressure 98 kPa Relative humidity 48 %

Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part 74.861 (e3)
- Internal Procedure PM001
- See clause 4 of this test report

Test specification

Port: Antenna;

EUT exercising

See clause 4 of this test report

Acceptance limits

Max deviation $\pm 75\text{kHz}$



Result



Remarks

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Reference documents

See clause 8 of this test report

Test equipment used (Id number – see clause 6 of this test report)

CMC A201

Result

The requirements are met



11.5 Occupied Bandwidth

Test configuration and test method

Test site Semi-Anechoic chamber
Auxiliary equipment See clause 4 of this test report

Environmental conditions

Temperature 20 °C Atmospheric pressure 98 kPa Relative humidity 46 %

Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part 74.861 (e)(5)
- Internal Procedure PM001
- See clause 4 of this test report

Test specification

Port: Antenna;

EUT exercising

See clause 4 of this test report

Acceptance limits

The operating bandwidth shall not exceed 200kHz

Result

Frequency (MHz)	Graph(s)	Bandwidth (kHz)	Remark
470,075	G13021840	150,2	--
607,925	G13021841	149,6	--
614,075	G13021842	149,6	--
638,000	G13021843	149,0	--
668,000	G13021844	151,4	--
697,925	G13021845	151,4	--

Measurement uncertainty: ± 1 kHz

Remarks

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Reference documents

See clause 8 of this test report

Test equipment used (Id number – see clause 6 of this test report)

CMC S206

Result

The requirements are met



11.6 Attenuation Power

Test configuration and test method

Test site

Semi-Anechoic chamber

Auxiliary equipment

See clause 4 of this test report

Environmental conditions

Temperature 20 °C

Atmospheric pressure 98 kPa

Relative humidity 46 %

Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part 74.861 (e)(6)
- Internal Procedure PM001
- See clause 4 of this test report

Test specification

Port: Antenna;

EUT exercising

See clause 4 of this test report

Acceptance limits

$f \pm 100\text{kHz}$ to $f \pm 200\text{ kHz}$	$f \pm 200\text{kHz}$ to $f \pm 500\text{ kHz}$	$f \pm 500\text{ kHz}$
25 dBc	35dBc	$-43 + 10\log_{10}$ (mean output power in watts) dB below the mean output power

Result

Frequency (MHz)	Graph(s)	Remark
470,075	G13021852	--
607,925	G13021853	--
614,075	G13021854	--
638,000	G13021855	--
668,000	G13021856	--
697,925	G13021857	--
Measurement uncertainty: $\pm 1\text{ kHz}$		

Remarks //

Reference documents

See clause 8 of this test report

Test equipment used (Id number – see clause 6 of this test report)

CMC S206

Result

The requirements are met



11.7 Radiated Spurious (Transmitter)

Test configuration and test method

Test site

Semi-anechoic chamber

Auxiliary equipment

See clause 4 of this test report

Environmental conditions

Temperature 22 °C Atmospheric pressure 99 kPa Relative humidity 48 %

Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part 74.861 (e)(6)
- Internal Procedure PM001
- See clause 4 of this test report

Test specification

Port: Antenna;

EUT exercising

See clause 4 of this test report

Acceptance limits

$f \pm 100\text{kHz}$ to $f \pm 200\text{ kHz}$	$f \pm 200\text{kHz}$ to $f \pm 500\text{ kHz}$	$f \pm 500\text{ kHz}$
25 dBc	35dBc	$-43 + 10\log_{10}$ (mean output power in watts) dB below the mean output power

Result

Antenna	Frequency Range (MHz)	Graph(s)	Remarks	Result
Loop Antenna	9kHz – 30MHz	G13021871	--	Complies

Frequency (MHz)	Polarization	Frequency Range (MHz)	Graph(s)	Limits (dBm)	Result
470,075	Worst case, Horizontal	25 – 1000	G13021864	-13,0	Complies
607,925	Worst case, Horizontal	25 – 1000	G13021863	-13,0	Complies
614,075	Worst case, Horizontal	25 – 1000	G13021862	-13,0	Complies
638,000	Worst case, Horizontal	25 – 1000	G13021861	-13,0	Complies
668,000	Worst case, Horizontal	25 – 1000	G13021860	-13,0	Complies
697,925	Worst case, Horizontal	25 – 1000	G13021858	-13,0	Complies

Frequency (MHz)	Polarization	Frequency Range (GHz)	Graph(s)	Limits (dBm)	Result
470,075	Worst case, Horizontal	1 – 12,5	G13021865	-13,0	Complies
607,925	Worst case, Horizontal	1 – 12,5	G13021866	-13,0	Complies
614,075	Worst case, Horizontal	1 – 12,5	G13021867	-13,0	Complies
638,000	Worst case, Horizontal	1 – 12,5	G13021868	-13,0	Complies
668,000	Worst case, Horizontal	1 – 12,5	G13021869	-13,0	Complies
697,925	Worst case, Horizontal	1 – 12,5	G13021870	-13,0	Complies



Nr.	AV level (dBμV/m)						Remark
Harmonics	470,075 MHz		607,925 MHz		614,075 MHz		
	Frequency	(dBμV/m)	Frequency	(dBμV/m)	Frequency	(dBμV/m)	
II Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	--
III Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	--
IV Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	--
V Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	--
VI Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	--
VII Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	--
VIII Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	--
IX Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	--
X Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	--

Nr. Harmonics	AV level (dBμV/m)						Remark
	638,000 MHz		668,000 MHz		697,925 MHz		
	Frequency	(dBμV/m)	Frequency	(dBμV/m)	Frequency	(dBμV/m)	
II Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	--
III Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	--
IV Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	--
V Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	--
VI Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	--
VII Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	--
VIII Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	--
IX Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	--
X Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	--



<i>Nr.</i>	<i>PK level (dBμV/m)</i>						<i>Remark</i>
<i>Harmonics</i>	<i>470,075 MHz</i>		<i>607,925 MHz</i>		<i>614,075 MHz</i>		
	<i>Frequency</i>	<i>(dBμV/m)</i>	<i>Frequency</i>	<i>(dBμV/m)</i>	<i>Frequency</i>	<i>(dBμV/m)</i>	
II Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	--
III Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	--
IV Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	--
V Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	--
VI Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	--
VII Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	--
VIII Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	--
IX Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	--
X Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	--

Nr. Harmonics	PK level (dBμV/m)						Remark
	638,000 MHz		668,000 MHz		697,925 MHz		
	Frequency	(dBμV/m)	Frequency	(dBμV/m)	Frequency	(dBμV/m)	
II Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	--
III Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	--
IV Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	--
V Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	--
VI Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	--
VII Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	--
VIII Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	--
IX Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	--
X Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	--



CMC
Centro Misure Compatibilità S.r.l.
Via dell'Elettronica, 12/C
36016 Thiene (VI)

Remarks

EUT was tested in 3 orthogonal planes. In results table are reported the worst case.

Reference documents

See clause 8 of this test report

Test equipment used (Id number – see clause 6 of this test report)

CMC S108, CMC S124, CMC S127, CMC S136, CMC S164

Measurement uncertainty: See clause 7 of this test report

Result

The requirements are met



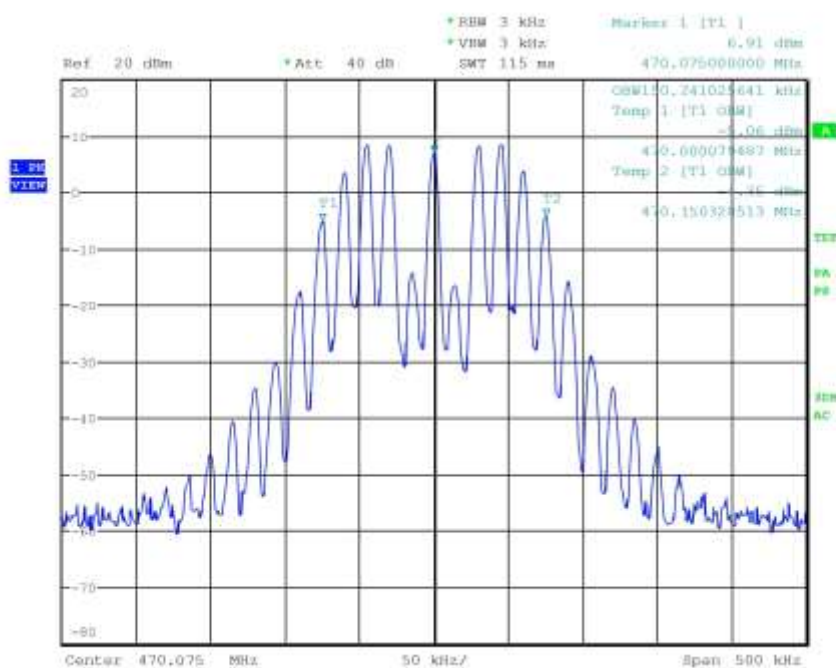
CMC Centro Misure Compatibilità S.r.l.



12. Graphs and Tables

G13021840

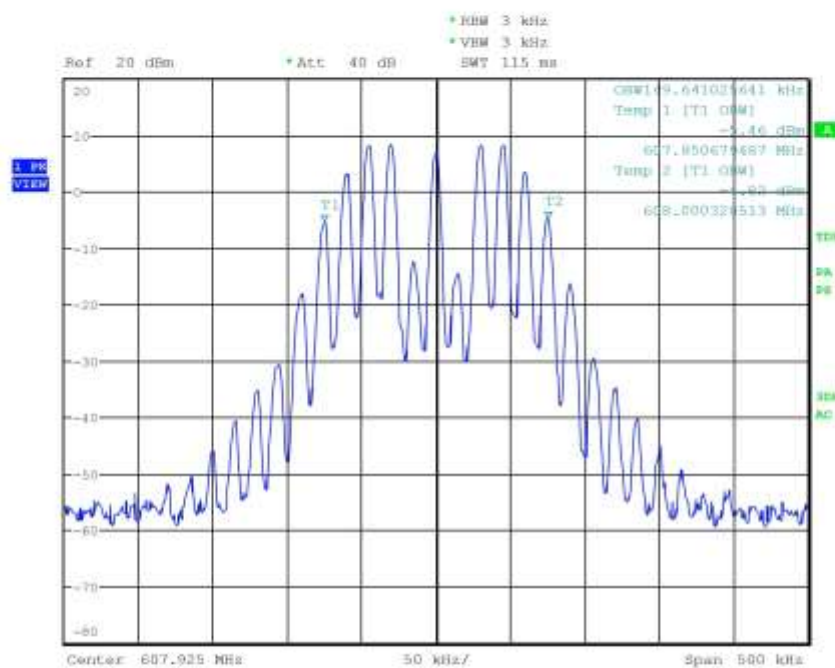
Meas Type
Equipment under Test
Manufacturer
OP Condition 470.075MHz
Operator Bertezzo 13021840
Test Spec





G13021841

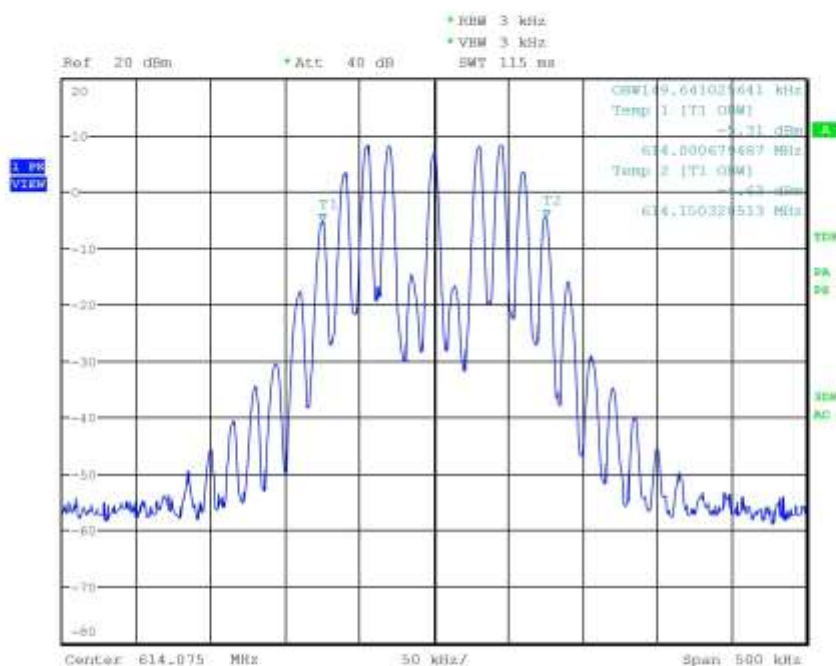
Meas Type
Equipment under Test
Manufacturer
OP Condition 607.925MHz
Operator Bertezolo 13021841
Test Spec





G13021842

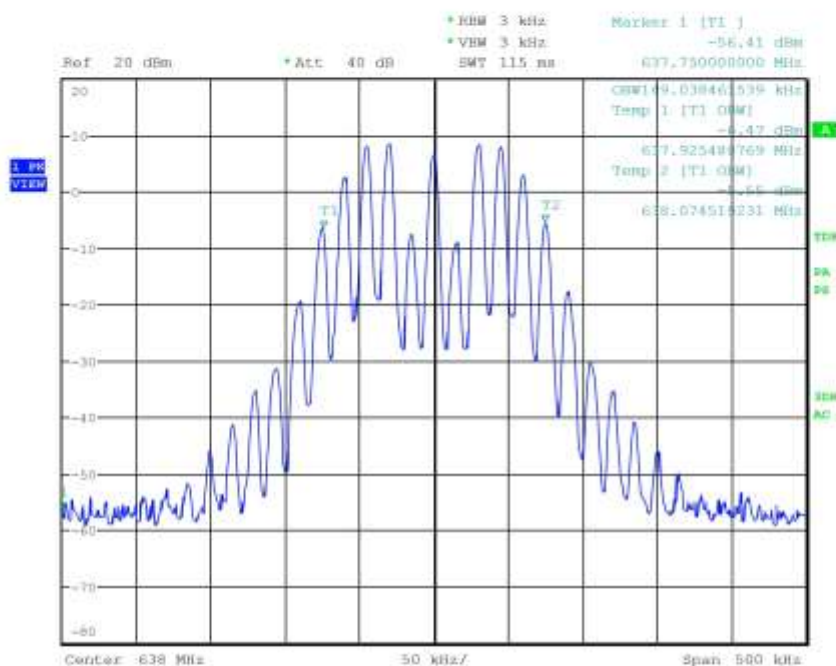
Meas Type
Equipment under Test
Manufacturer
OP Condition 614.075MHz
Operator Bertezolo 13021842
Test Spec





G13021843

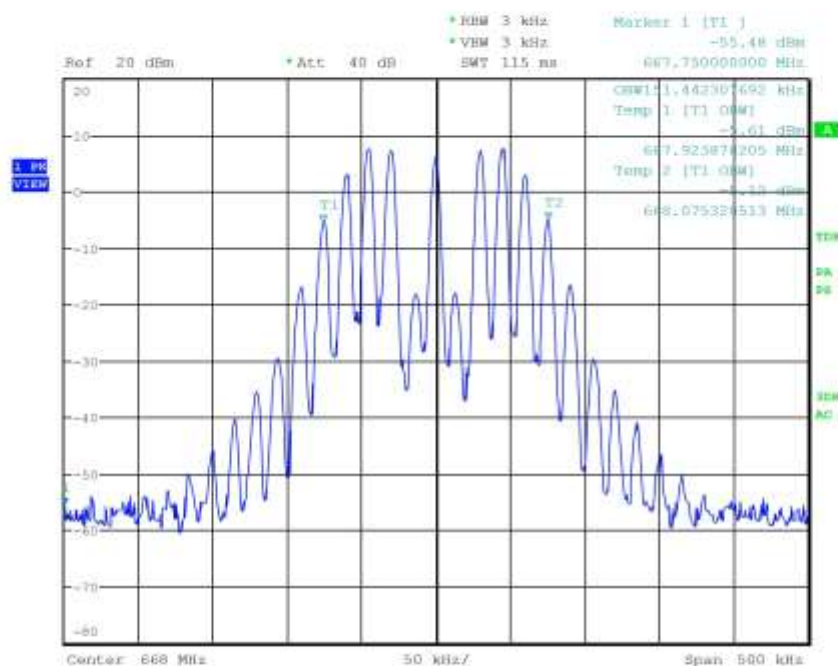
Meas Type
Equipment under Test
Manufacturer
OP Condition 638.00MHz
Operator Bertezolo 13021843
Test Spec





G13021844

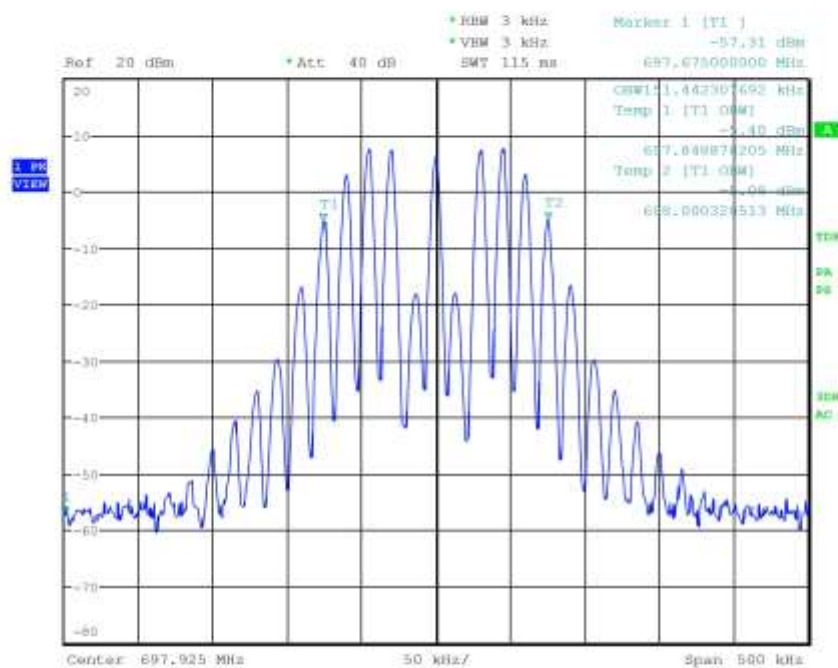
Meas Type
Equipment under Test
Manufacturer
OP Condition 668.00MHz
Operator Bertezolo 13021844
Test Spec





G13021845

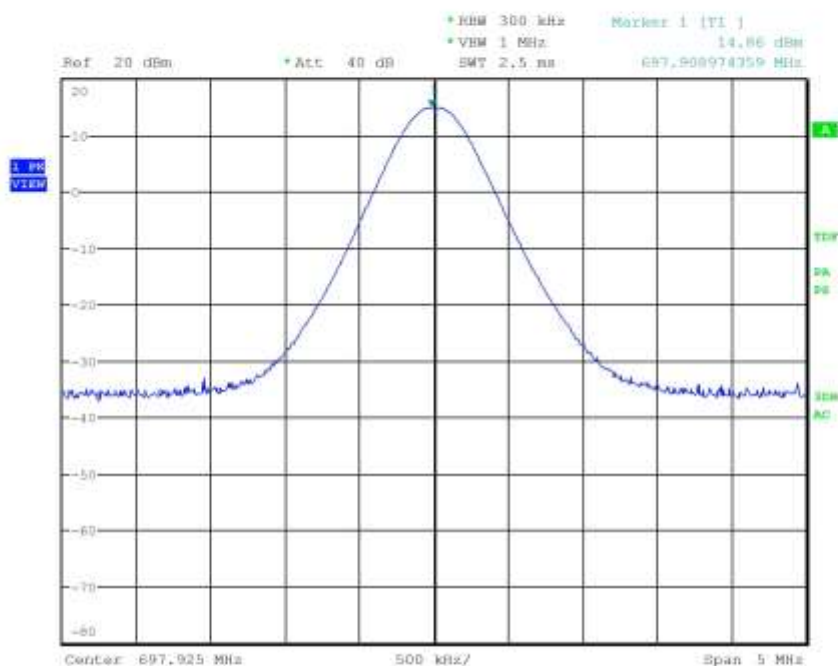
Meas Type
Equipment under Test
Manufacturer
OP Condition 697.925MHz
Operator Bertezolo 13021845
Test Spec





G13021846

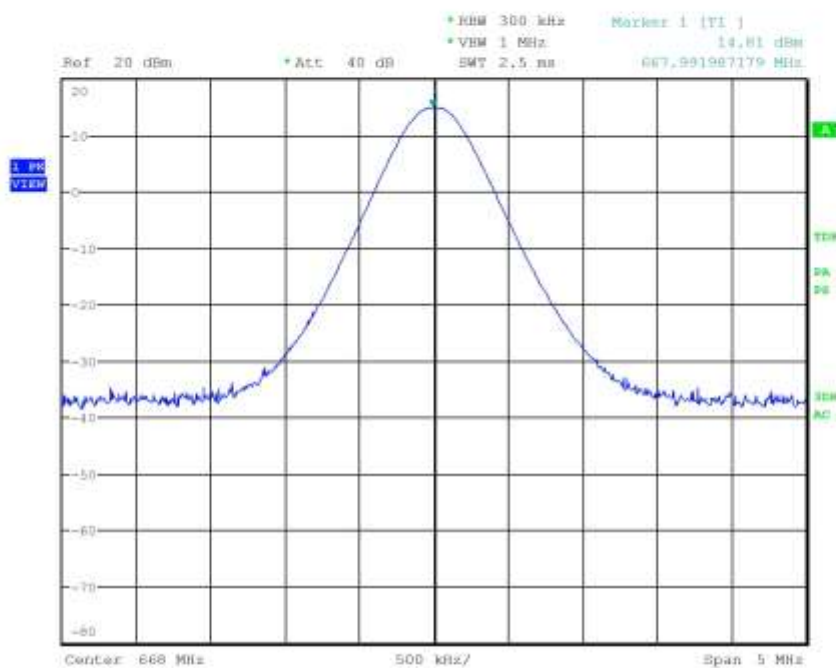
Meas Type
Equipment under Test
Manufacturer
OP Condition 697.925MHz
Operator Bertezolo 13021846
Test Spec





G13021847

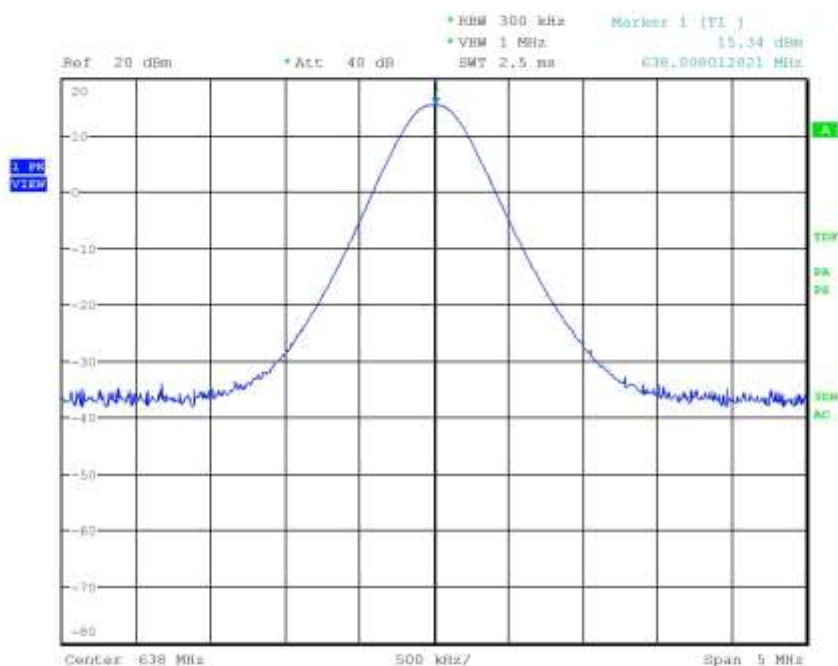
Meas Type
Equipment under Test
Manufacturer
OP Condition 668.00MHz
Operator Bertezolo 13021847
Test Spec

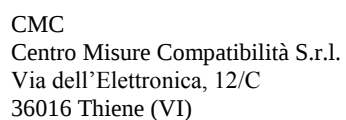




G13021848

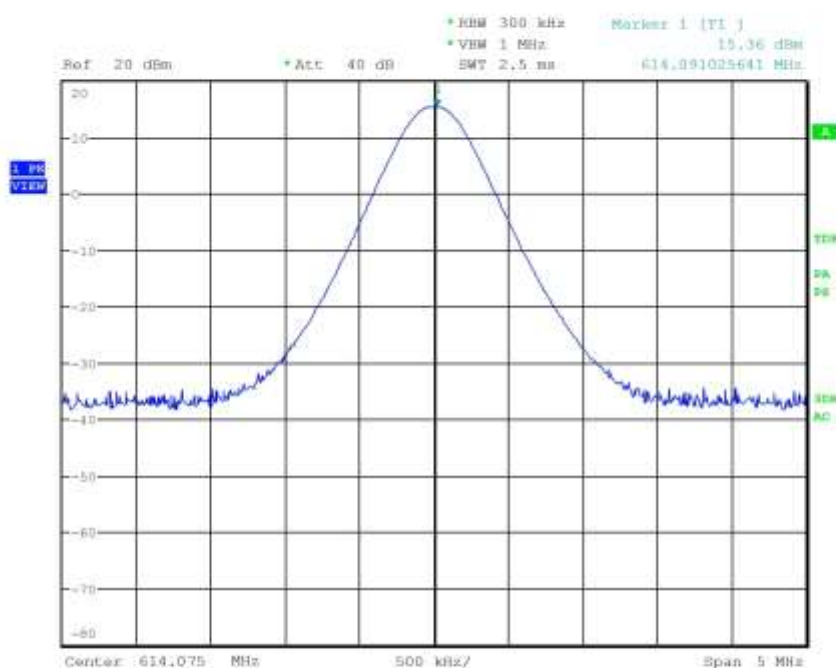
Meas Type
Equipment under Test
Manufacturer
OP Condition 638.00MHz
Operator Bertezolo 13021848
Test Spec





G13021849

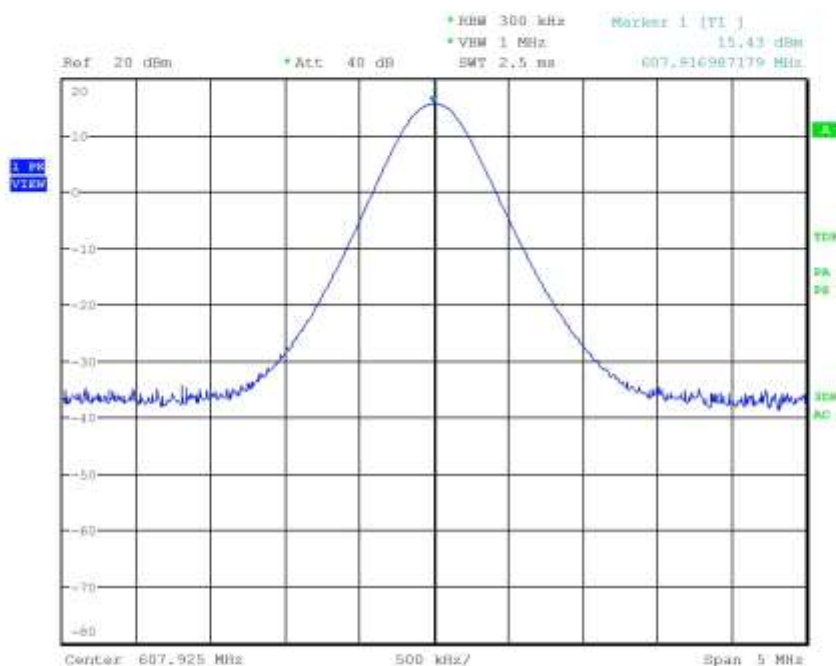
Meas Type	
Equipment under Test	
Manufacturer	
OP Condition	614.075MHz
Operator	Bertezzo 13021849
Test Spec	





G13021850

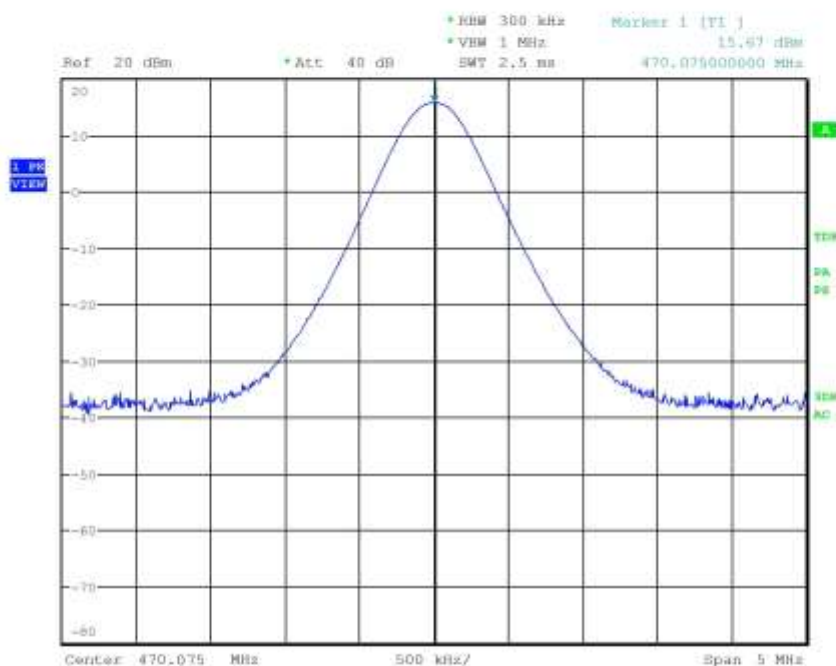
Meas Type
Equipment under Test
Manufacturer
OP Condition 607.925MHz
Operator Bertezolo 13021850
Test Spec





G13021851

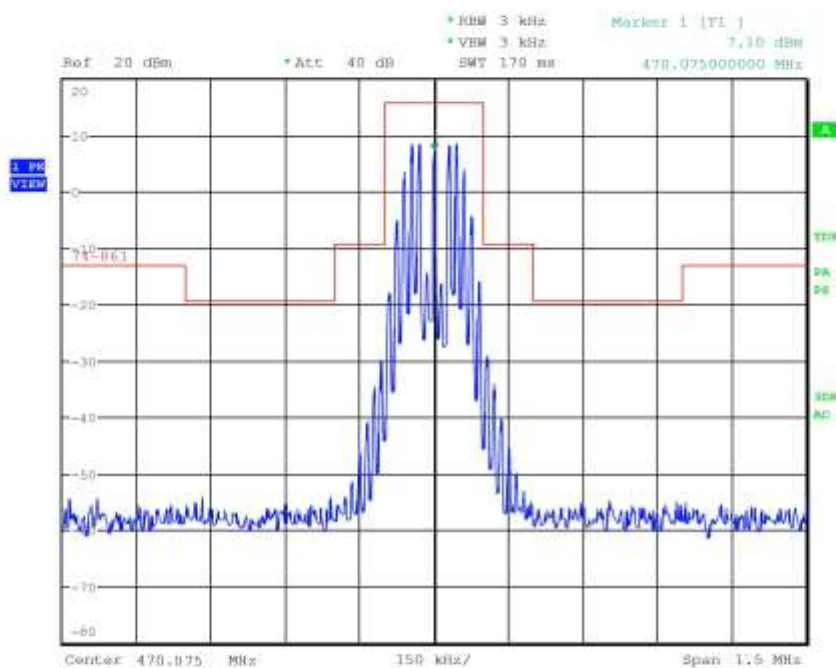
Meas Type
Equipment under Test
Manufacturer
OP Condition 470.075MHz
Operator Bertezolo 13021851
Test Spec





G13021852

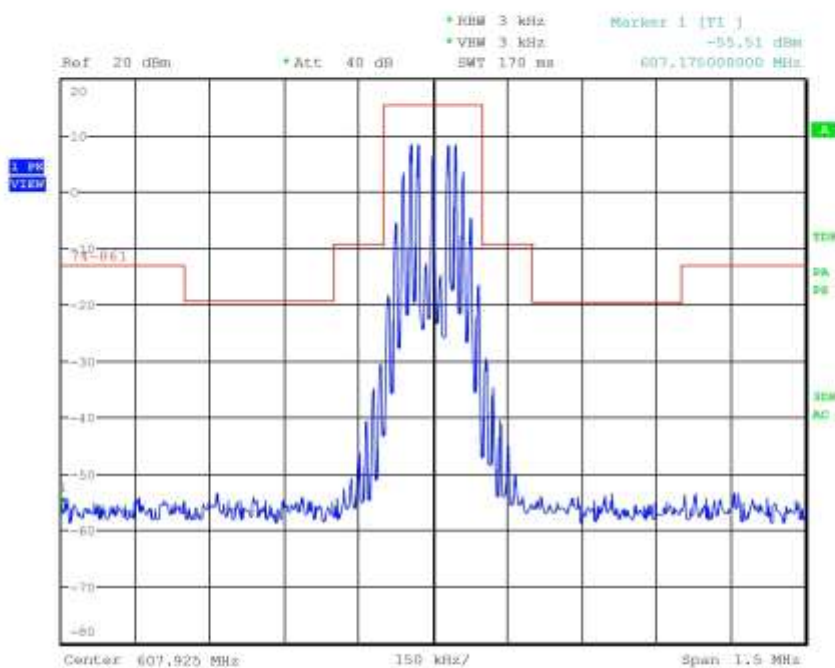
Meas Type
Equipment under Test
Manufacturer
OP Condition 470.075MHz
Operator Bertezolo 13021852
Test Spec





G13021853

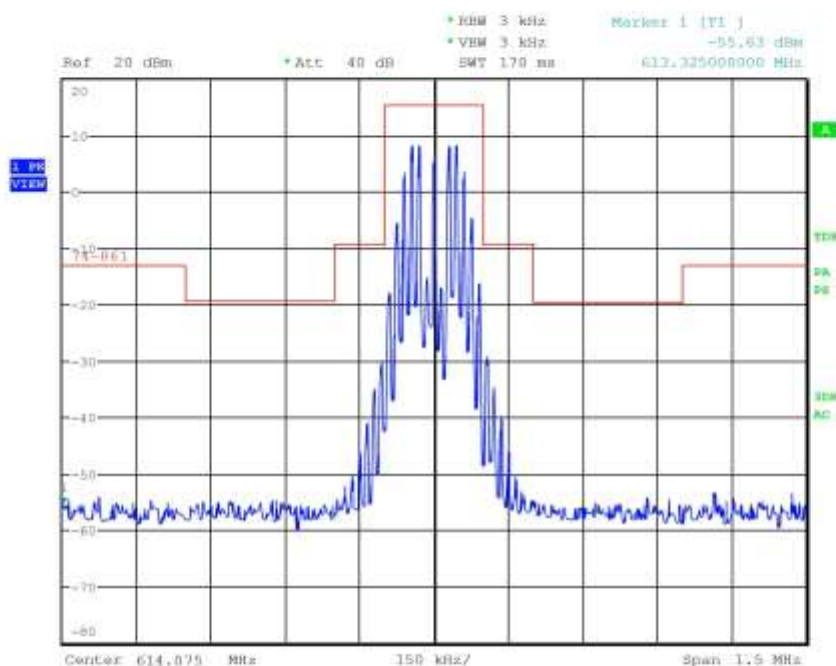
Meas Type
Equipment under Test
Manufacturer
OP Condition 607.925MHz
Operator Bertezolo 13021853
Test Spec





G13021854

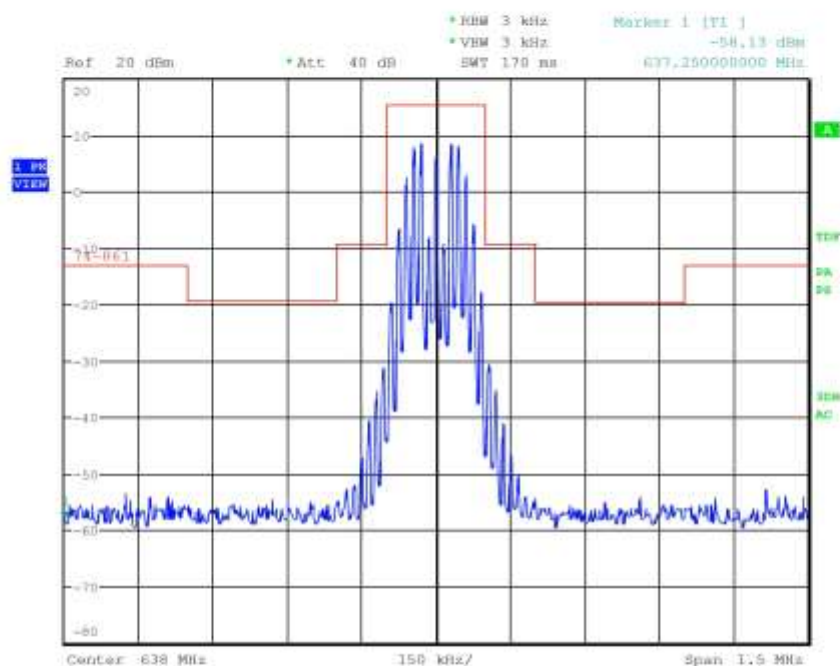
Meas Type
Equipment under Test
Manufacturer
OP Condition 614.075MHz
Operator Bertezolo 13021854
Test Spec





G13021855

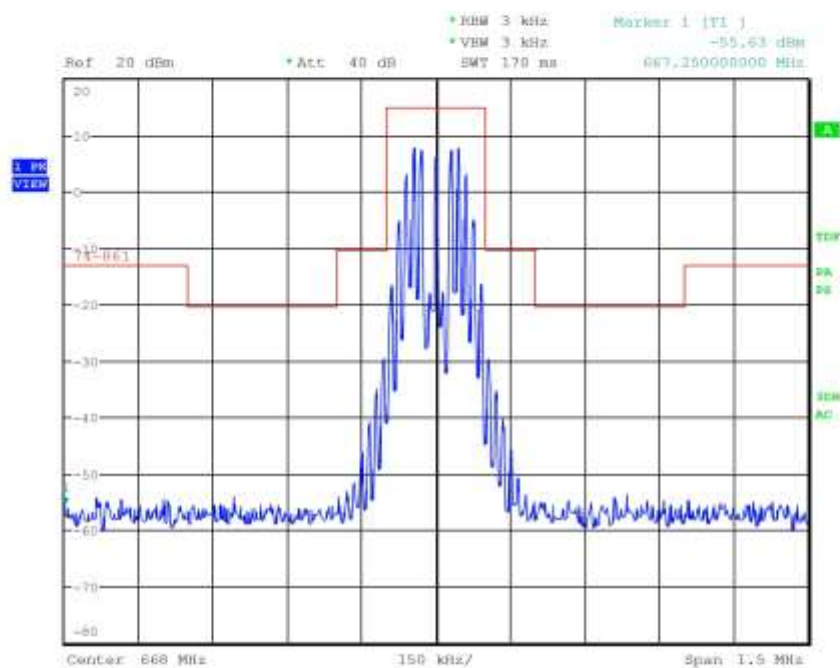
Meas Type
Equipment under Test
Manufacturer
OP Condition 638.00MHz
Operator Bertezolo 13021855
Test Spec





G13021856

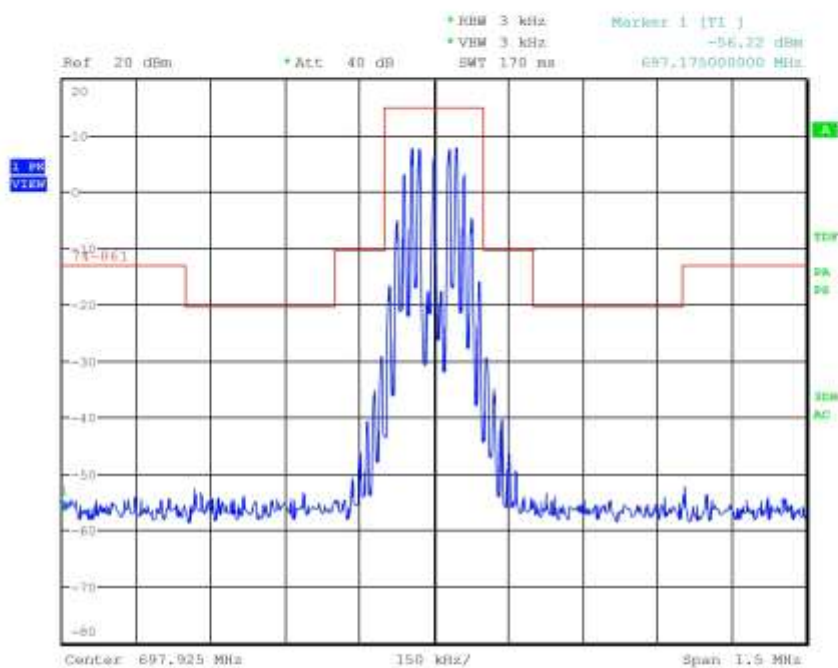
Meas Type
Equipment under Test
Manufacturer
OP Condition 668.00MHz
Operator Bertezolo 13021856
Test Spec





G13021857

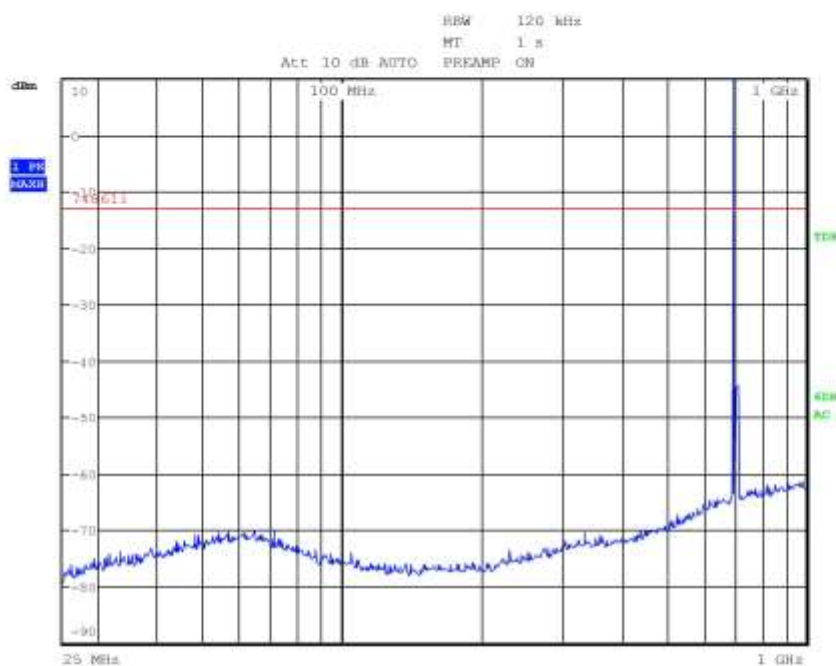
Meas Type
Equipment under Test
Manufacturer
OP Condition 697.925MHz
Operator Bertezolo 13021857
Test Spec





G13021858

Meas Type
Equipment under Test
Manufacturer
OP Condition 697.925MHz
Operator Bertezolo 13021858
Test Spec
H



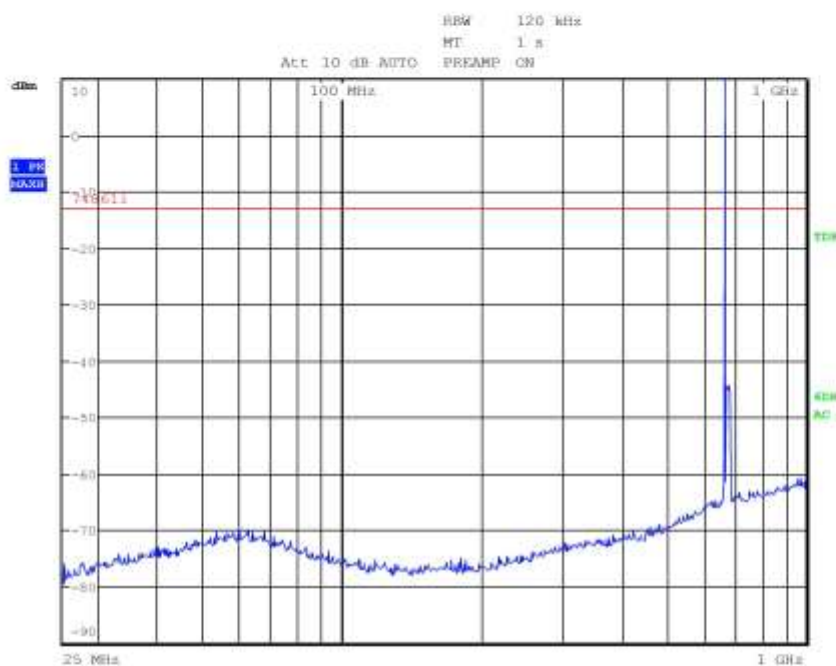
Final Measurement

Meas Time: 1 s
Margin: 6 dB
Subranges: 0



G13021860

Meas Type
Equipment under Test
Manufacturer
OP Condition 668.00MHz
Operator Bertezolo 13021860
Test Spec
H



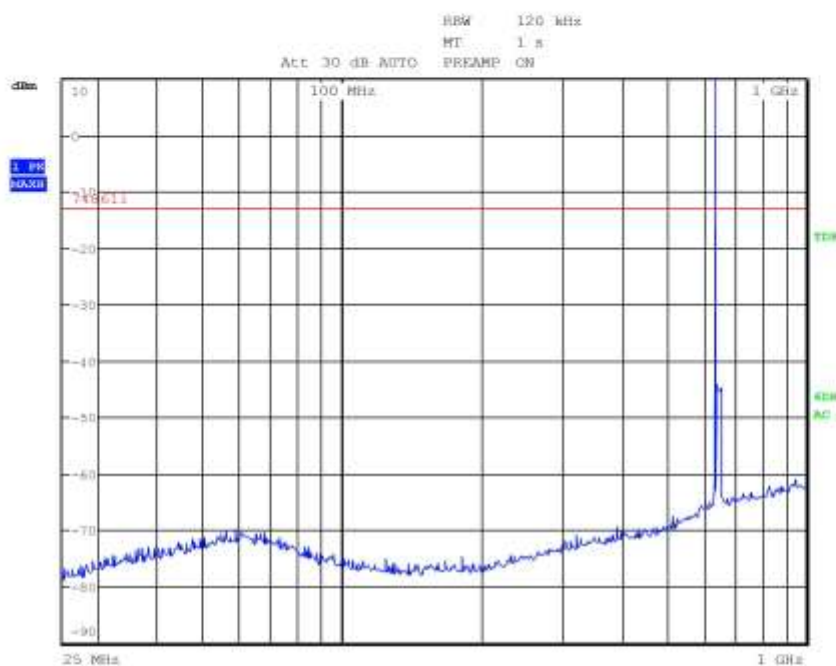
Final Measurement

Meas Time: 1 s
Margin: 6 dB
Subranges: 0



G13021861

Meas Type
Equipment under Test
Manufacturer
OP Condition 638.00MHz
Operator Bertezolo 13021861
Test Spec
H



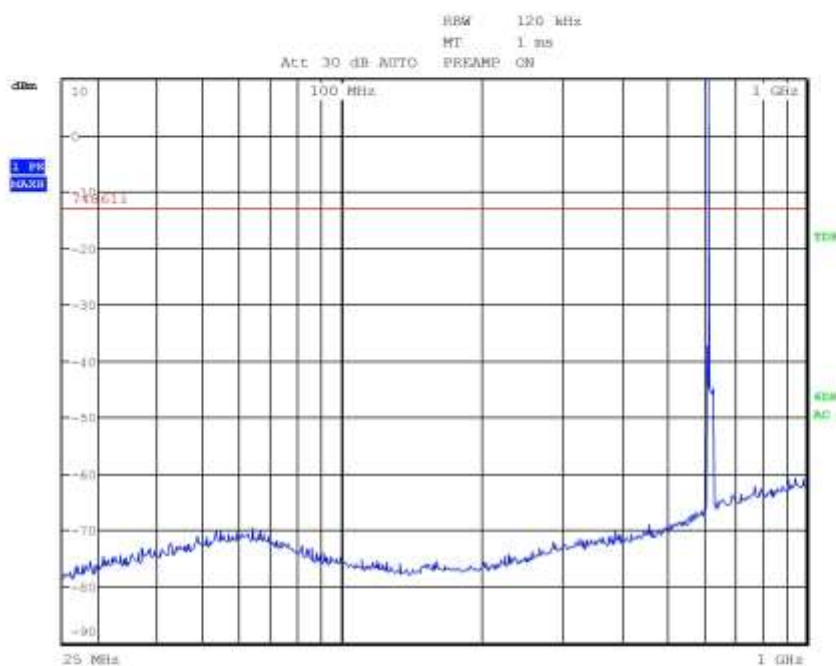
Final Measurement

Meas Time: 1 s
Margin: 6 dB
Subranges: 0



G13021862

Meas Type
Equipment under Test
Manufacturer
OP Condition 614.075MHz
Operator Bertezolo 13021862
Test Spec
H



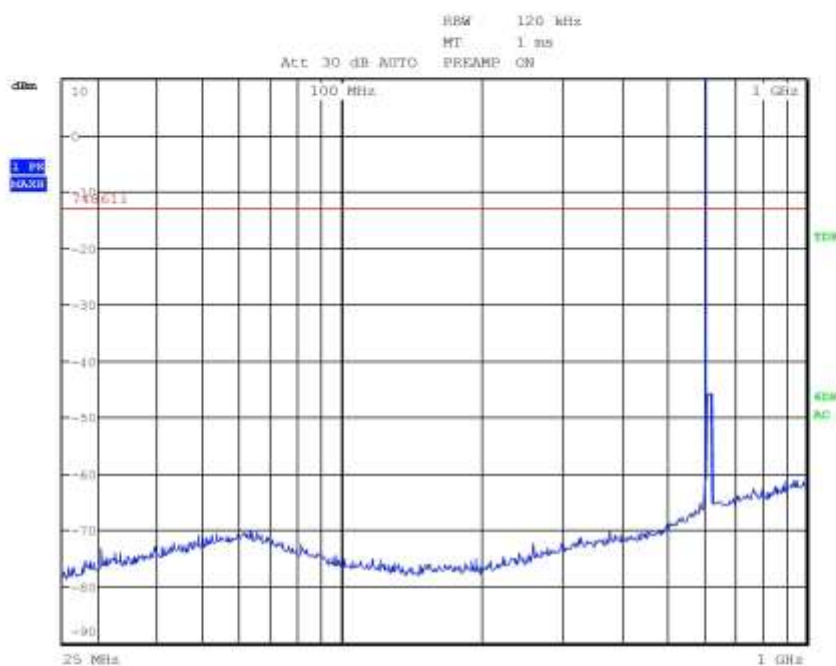
Final Measurement

Meas Time: 1 s
Margin: 6 dB
Subranges: 0



G13021863

Meas Type
Equipment under Test
Manufacturer
OP Condition 607.925MHz
Operator Bertezzolo 13021863
Test Spec
H



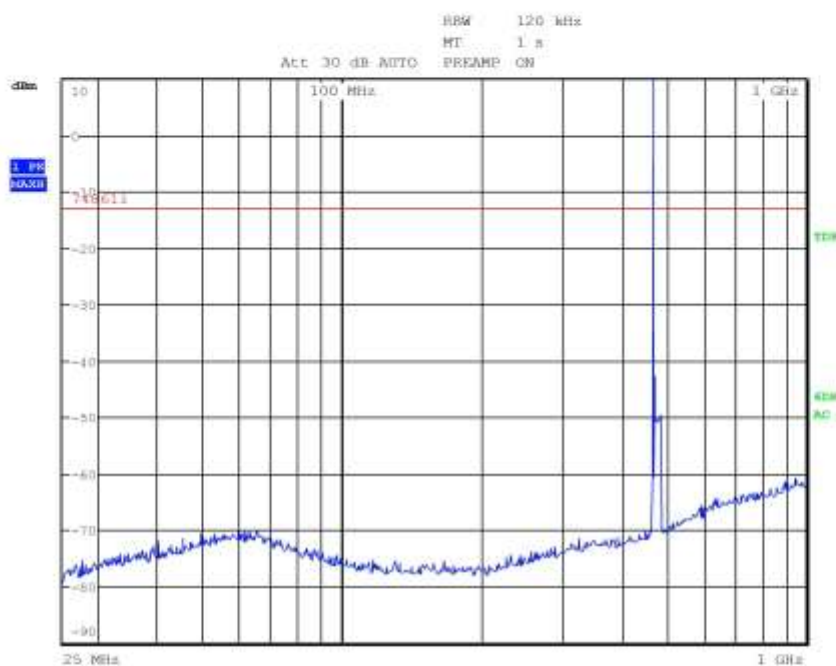
Final Measurement

Meas Time: 1 s
Margin: 6 dB
Subranges: 0



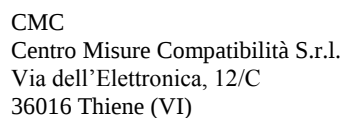
G13021864

Meas Type
Equipment under Test
Manufacturer
OP Condition 470.075MHz
Operator Bertezolo 13021864
Test Spec
H



Final Measurement

Meas Time: 1 s
Margin: 6 dB
Subranges: 0



BW 1 MHz
 RT 1 ms
 REAMP ON

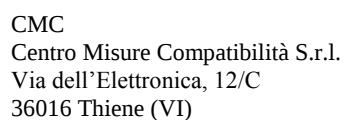
10 GHz

TDR

AC

12.5 GHz

Meas Time: 1 s
Margin: 6 dB
Subranges: 0



BW 1 MHz
 RT 1 ms
 REAMP ON

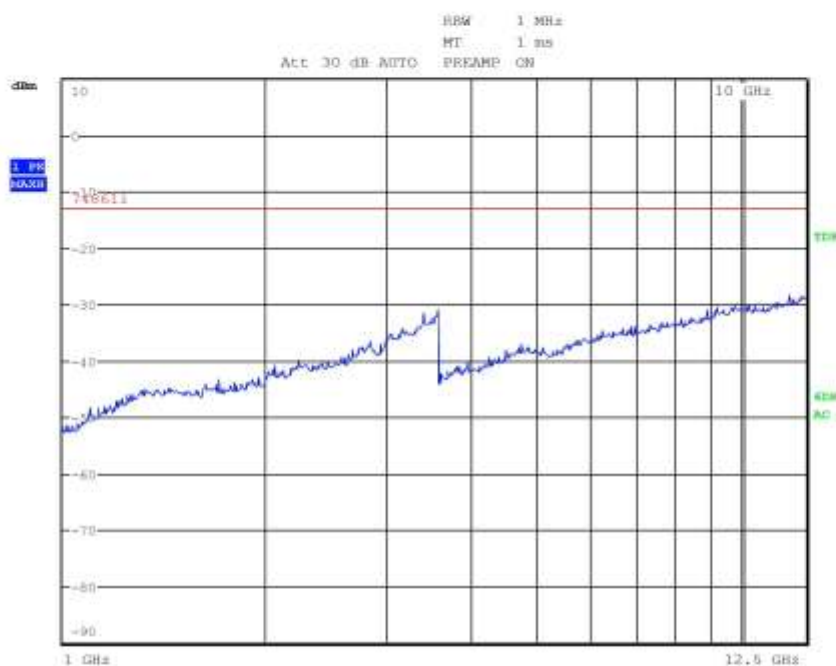
10 GHz
 TDR
 40dB
 AC
 12.5 GHz

Meas Time: 1 s
Margin: 6 dB
Subranges: 0



G13021867

Meas Type
Equipment under Test
Manufacturer
OP Condition 614.075MHz
Operator Bertezolo 13021867
Test Spec
H



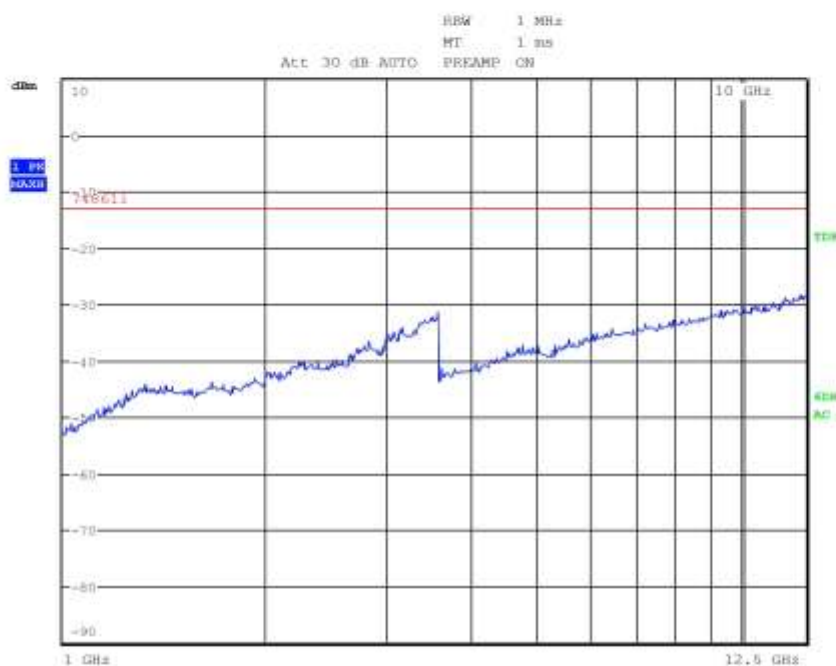
Final Measurement

Meas Time: 1 s
Margin: 6 dB
Subranges: 0



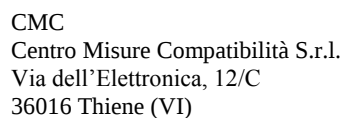
G13021868

Meas Type
Equipment under Test
Manufacturer
OP Condition 638.00MHz
Operator Bertezolo 13021868
Test Spec
H



Final Measurement

Meas Time: 1 s
Margin: 6 dB
Subranges: 0



BW 1 MHz
 RT 1 ns
 REFAMP ON

10 GHz

40dB
AC

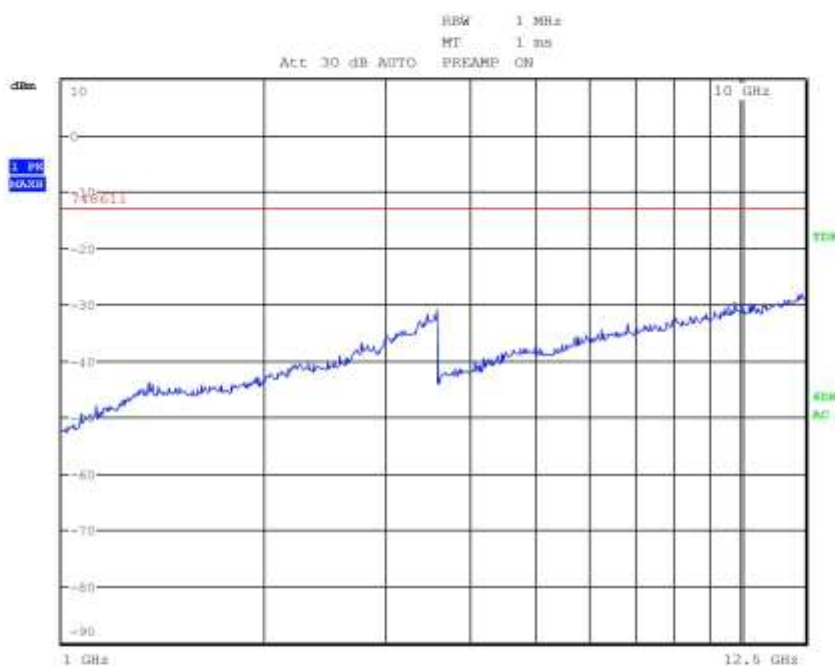
12.5 GHz

Meas Time: 1 s
Margin: 6 dB
Subranges: 0



G13021870

Meas Type
Equipment under Test
Manufacturer
OP Condition 697.925MHz
Operator Bertezzolo 13021870
Test Spec
H



Final Measurement

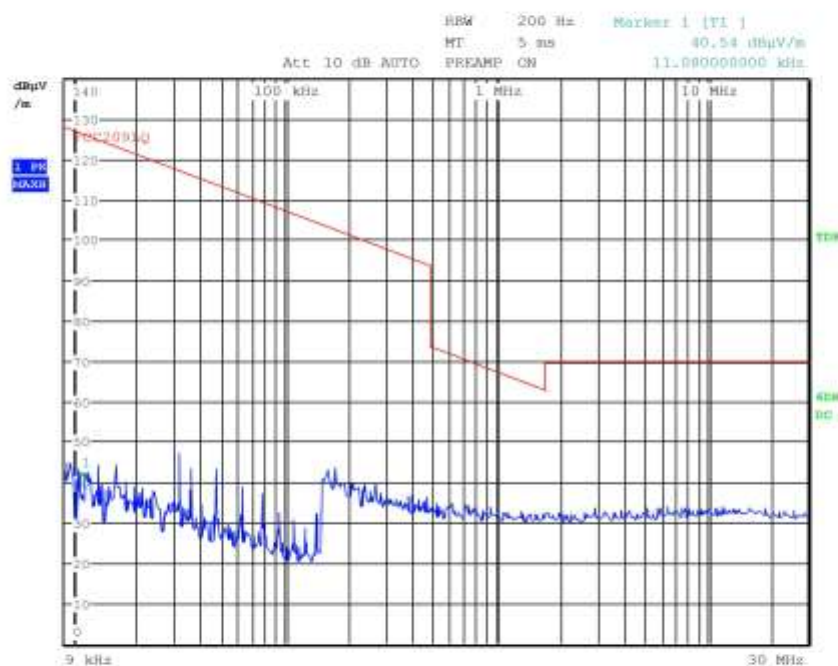
Meas Time: 1 s
Margin: 6 dB
Subranges: 0



G13021871

Meas Type
Equipment under Test
Manufacturer
OP Condition
Operator
Test Spec
Loop

Bertezzo 13021871



Final Measurement

Meas Time: 1 s
Margin: 6 dB
Subranges: 0