Independent Testing Laboratory
CMC Centro Misure Compatibilità S.r.l.
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Accredited by Ministry of Communications – Notified Body EMC Directive 2004/108/EC n° NB 2044

TEST REPORT nr. R13122601

Federal Communication Commission (FCC)

Test item

Description.....: Wideband bodypack transmitter
Trademark.....: WISYCOM
Model/Type.....: MTP 41

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. Bertezzolo - *Technician*

Approved by.....: R. Beghetto – *Laboratory Manager*
Date of issue.....: 22.10.13
Contents .....: 58 pages

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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..... :	1,5 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 of ANT 507: 1 dBi (used for frequency 470,075 MHz)
	Gain of ANT 590: 1 dBi (used for frequency 607,925 MHz, 614,075 MHz and 638,000 MHz)
	Gain of ANT 646: 1 dBi (used for frequency 668,000 and 697,925 MHz)
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 ≤ 50mm
	[(max power of channel, including tolerance, mW) / (min test separation distance, mm)]x[$\sqrt{f_{(GHz)}}$] ≤ 3,0 for 1-g and 7,5 for 10-g SAR
	max power of channel, including tolerance = 55,5mW
	min distance: 25mm
	Fmax: 0,698 GHz
	55,5/25x$\sqrt{0,698}$ = 1,85
	1,85 ≤ 3,0 for 1-g and 7,5 for 10-g SAR
FCC ID ..... :	POUMTP41

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	:	24.06.13
Testing start date	:	09.07.13
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 P1230646

4. Operative conditions

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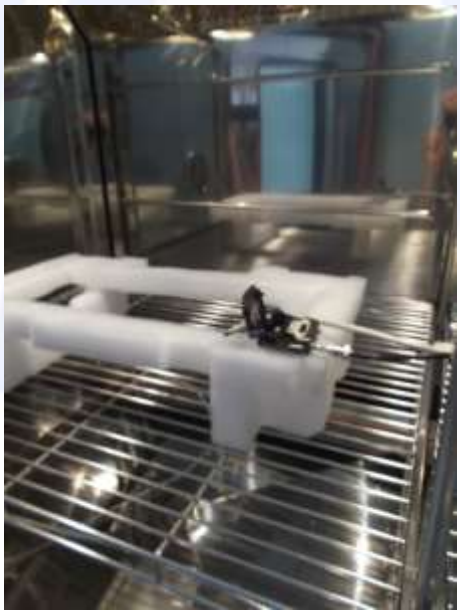
5. Photograph(s) of EUT



6. Equipment list

Id. number	*Manufacturer*	*Model*	*Description*	*Serial number*	*Last calibration*	*Due date calibration*
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 '12	June '15
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
DiscontinuousConducted 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 demostrated 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	ºC	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)	Mod. Antenna	Graphs	Measured Peak Output Power (dBm)	Attenuation cable (dB)	Total Peak Output Power (dBm)	Peak Output Power (mW)	Remark
470,075	ANT 507	G13122615	16,06	0,1	16,16	41,3	--
607,925	ANT 590	G13122616	16,30	0,1	16,40	43,6	--
614,075	ANT 590	G13122617	16,24	0,2	16,44	44,0	--
638,000	ANT 590	G13122618	16,09	0,3	16,39	43,5	--
668,000	ANT 646	G13122619	15,70	0,3	16,00	39,8	--
697,925	ANT 646	G13122620	15,69	0,3	15,99	39,7	--
Measurement uncertainty: ±1dBm							

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: Laboratory
Auxiliary equipment: See clause 4 of this test report

Environmental conditions

Temperature 21 ºC Atmospheric pressure 98 kPa Relative humidity 50 %

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)	*Mod. Antenna*	*Voltage (V)*	*Frequency Error (Hz)*	*Frequency Error (%)*	*Frequency Error (ppm)*
470,075	ANT 507	1,8	290	0,000062	0,62
470,075	ANT 507	1,7	290	0,000062	0,62
470,075	ANT 507	1,6	270	0,000057	0,57
470,075	ANT 507	1,5	270	0,000057	0,57
470,075	ANT 507	1,4	270	0,000057	0,57
470,075	ANT 507	1,3	280	0,000060	0,60
470,075	ANT 507	1,2	280	0,000060	0,60
470,075	ANT 507	1,1	*	*	*
470,075	ANT 507	1,0	*	*	*

* Switching off of the EUT

Frequency (MHz)	*Mod. Antenna*	*Voltage (V)*	*Frequency Error (Hz)*	*Frequency Error (%)*	*Frequency Error (ppm)*
607,925	ANT 590	1,8	380	0,000063	0,63
607,925	ANT 590	1,7	390	0,000064	0,64
607,925	ANT 590	1,6	390	0,000064	0,64
607,925	ANT 590	1,5	380	0,000063	0,63
607,925	ANT 590	1,4	380	0,000063	0,63
607,925	ANT 590	1,3	370	0,000061	0,61
607,925	ANT 590	1,2	350	0,000058	0,58
607,925	ANT 590	1,1	*	*	*
607,925	ANT 590	1,0	*	*	*

* Switching off of the EUT

Frequency (MHz)	*Mod. Antenna*	*Voltage (V)*	*Frequency Error (Hz)*	*Frequency Error (%)*	*Frequency Error (ppm)*
614,075	ANT 590	1,8	390	0,000063	0,63
614,075	ANT 590	1,7	390	0,000063	0,63
614,075	ANT 590	1,6	390	0,000063	0,63
614,075	ANT 590	1,5	380	0,000062	0,62
614,075	ANT 590	1,4	390	0,000063	0,63
614,075	ANT 590	1,3	380	0,000062	0,62
614,075	ANT 590	1,2	390	0,000063	0,63
614,075	ANT 590	1,1	*	*	*
614,075	ANT 590	1,0	*	*	*

* Switching off of the EUT

Frequency (MHz)	*Mod. Antenna*	*Voltage (V)*	*Frequency Error (Hz)*	*Frequency Error (%)*	*Frequency Error (ppm)*
638,000	ANT 590	1,8	390	0,000061	0,61
638,000	ANT 590	1,7	390	0,000061	0,61
638,000	ANT 590	1,6	400	0,000063	0,63
638,000	ANT 590	1,5	410	0,000064	0,64
638,000	ANT 590	1,4	410	0,000064	0,64
638,000	ANT 590	1,3	400	0,000063	0,63
638,000	ANT 590	1,2	380	0,000060	0,60
638,000	ANT 590	1,1	*	*	*
638,000	ANT 590	1,0	*	*	*

* Switching off of the EUT

Frequency (MHz)	*Mod. Antenna*	*Voltage (V)*	*Frequency Error (Hz)*	*Frequency Error (%)*	*Frequency Error (ppm)*
668,000	ANT 646	1,8	460	0,000069	0,69
668,000	ANT 646	1,7	460	0,000069	0,69
668,000	ANT 646	1,6	460	0,000069	0,69
668,000	ANT 646	1,5	460	0,000069	0,69
668,000	ANT 646	1,4	460	0,000069	0,69
668,000	ANT 646	1,3	460	0,000069	0,69
668,000	ANT 646	1,2	460	0,000069	0,69
668,000	ANT 646	1,1	*	*	*
668,000	ANT 646	1,0	*	*	*

* Switching off of the EUT

Frequency (MHz)	*Mod. Antenna*	*Voltage (V)*	*Frequency Error (Hz)*	*Frequency Error (%)*	*Frequency Error (ppm)*
697,925	ANT 646	1,8	470	0,000067	0,67
697,925	ANT 646	1,7	480	0,000069	0,69
697,925	ANT 646	1,6	500	0,000072	0,72
697,925	ANT 646	1,5	480	0,000069	0,69
697,925	ANT 646	1,4	480	0,000069	0,69
697,925	ANT 646	1,3	500	0,000072	0,72
697,925	ANT 646	1,2	510	0,000073	0,73
697,925	ANT 646	1,1	*	*	*
697,925	ANT 646	1,0	*	*	*

* 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: Laboratory
Auxiliary equipment: See clause 4 of this test report

Environmental conditions

Temperature 20 ºC Atmospheric pressure 97 kPa Relative humidity 47 %

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)	*Mod. Antenna*	*Temperature (°C)*	*Frequency Error (Hz)*	*Frequency Error (%)*	*Frequency Error (ppm)*
470,075	ANT 507	-30	270	0,000057	0,57
470,075	ANT 507	-20	270	0,000057	0,57
470,075	ANT 507	-10	270	0,000057	0,57
470,075	ANT 507	0	270	0,000057	0,57
470,075	ANT 507	+10	290	0,000062	0,62
470,075	ANT 507	+20	290	0,000062	0,62
470,075	ANT 507	+30	280	0,000060	0,60
470,075	ANT 507	+40	280	0,000060	0,60
470,075	ANT 507	+50	280	0,000060	0,60
470,075	ANT 507	+55	280	0,000060	0,60

Frequency (MHz)	*Mod. Antenna*	*Temperature (°C)*	*Frequency Error (Hz)*	*Frequency Error (%)*	*Frequency Error (ppm)*
607,925	ANT 590	-30	380	0,000063	0,63
607,925	ANT 590	-20	390	0,000064	0,64
607,925	ANT 590	-10	380	0,000063	0,63
607,925	ANT 590	0	380	0,000063	0,63
607,925	ANT 590	+10	380	0,000063	0,63
607,925	ANT 590	+20	380	0,000063	0,63
607,925	ANT 590	+30	380	0,000063	0,63
607,925	ANT 590	+40	390	0,000064	0,64
607,925	ANT 590	+50	390	0,000064	0,64
607,925	ANT 590	+55	390	0,000064	0,64

Frequency (MHz)	*Mod. Antenna*	*Temperature (°C)*	*Frequency Error (Hz)*	*Frequency Error (%)*	*Frequency Error (ppm)*
614,075	ANT 590	-30	370	0,000060	0,60
614,075	ANT 590	-20	380	0,000062	0,62
614,075	ANT 590	-10	370	0,000060	0,60
614,075	ANT 590	0	370	0,000060	0,60
614,075	ANT 590	+10	380	0,000062	0,62
614,075	ANT 590	+20	390	0,000063	0,63
614,075	ANT 590	+30	380	0,000062	0,62
614,075	ANT 590	+40	380	0,000062	0,62
614,075	ANT 590	+50	370	0,000060	0,60
614,075	ANT 590	+55	380	0,000062	0,62

Frequency (MHz)	*Mod. Antenna*	*Temperature (°C)*	*Frequency Error (Hz)*	*Frequency Error (%)*	*Frequency Error (ppm)*
638,000	ANT 590	-30	270	0,000042	0,42
638,000	ANT 590	-20	370	0,000058	0,58
638,000	ANT 590	-10	270	0,000042	0,42
638,000	ANT 590	0	370	0,000058	0,58
638,000	ANT 590	+10	380	0,000060	0,60
638,000	ANT 590	+20	390	0,000061	0,61
638,000	ANT 590	+30	410	0,000064	0,64
638,000	ANT 590	+40	410	0,000064	0,64
638,000	ANT 590	+50	400	0,000063	0,63
638,000	ANT 590	+55	400	0,000063	0,63

Frequency (MHz)	*Mod. Antenna*	*Temperature (°C)*	*Frequency Error (Hz)*	*Frequency Error (%)*	*Frequency Error (ppm)*
668,000	ANT 646	-30	450	0,000067	0,67
668,000	ANT 646	-20	450	0,000067	0,67
668,000	ANT 646	-10	450	0,000067	0,67
668,000	ANT 646	0	450	0,000067	0,67
668,000	ANT 646	+10	450	0,000067	0,67
668,000	ANT 646	+20	450	0,000067	0,67
668,000	ANT 646	+30	450	0,000067	0,67
668,000	ANT 646	+40	440	0,000066	0,66
668,000	ANT 646	+50	450	0,000067	0,67
668,000	ANT 646	+55	450	0,000067	0,67

Frequency (MHz)	*Mod. Antenna*	*Temperature (°C)*	*Frequency Error (Hz)*	*Frequency Error (%)*	*Frequency Error (ppm)*
697,925	ANT 646	-30	470	0,000067	0,67
697,925	ANT 646	-20	470	0,000067	0,67
697,925	ANT 646	-10	470	0,000067	0,67
697,925	ANT 646	0	470	0,000067	0,67
697,925	ANT 646	+10	470	0,000067	0,67
697,925	ANT 646	+20	470	0,000067	0,67
697,925	ANT 646	+30	470	0,000067	0,67
697,925	ANT 646	+40	480	0,000069	0,69
697,925	ANT 646	+50	500	0,000072	0,72
697,925	ANT 646	+55	550	0,000079	0,79

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	21	ºC	Atmospheric pressure	97	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 ±75kHz

Result

Sweep	Trace	Color	Line Style	Thick	Data	Axis	Comment
1	1	Cyan	Solid	5	Anlr.Level A	Left	300 Hz
2	1	Green	Solid	5	Anlr.Level A	Left	1 KHz
3	1	Red	Solid	5	Anlr.Level A	Left	2.5 KHz
4	1	Blue	Solid	5	Anlr.Level A	Left	3 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 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 ºC 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)	*Mod. Antenna*	Graph(s)	Bandwidth	Remark
470,075	ANT 507	G13122626	149,4 kHz	--
607,925	ANT 590	G13122625	151,4 kHz	--
614,075	ANT 590	G13122624	149,4 kHz	--
638,000	ANT 590	G13122623	150,6 kHz	--
668,000	ANT 646	G13122622	151,4 kHz	--
697,925	ANT 646	G13122621	151,4 kHz	--
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 ºC 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 ± 100kHz to f ± 200 kHz	f ± 200kHz to f ± 500 kHz	f ± 500 kHz
25 dBc	35dBc	-43 + 10log$_{10}$ (mean output power in watts) dB below the mean ouput power

Result

Frequency (MHz)	*Mod. Antenna*	Graph(s)	Remark
470,075	ANT 507	G13122627	--
607,925	ANT 590	G13122628	--
614,075	ANT 590	G13122629	--
638,000	ANT 590	G13122630	--
668,000	ANT 646	G13122631	--
697,925	ANT 646	G13122632	--
Measurement uncertainty: ±1 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 21 ºC Atmospheric pressure 98 kPa Relative humidity 49 %

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 ± 100kHz to f ± 200 kHz	f ± 200kHz to f ± 500 kHz	f ± 500 kHz
25 dBc	35dBc	-43 + 10log$_{10}$ (mean output power in watts) dB below the mean ouput power

Result

Antenna	Frequency Range (MHz)	Graph(s)	Remarks	Result
Loop Antenna	9kHz – 30MHz	G13122601	--	Complies

Frequency (MHz)	*Polarization*	Frequency Range (MHz)	Graph(s)	Limits (dBm)	Result
470,075	Worst case, Vertical	25 – 1000	G13122614	-13,0	Complies
607,925	Worst case, Vertical	25 – 1000	G13122613	-13,0	Complies
614,075	Worst case, Vertical	25 – 1000	G13122612	-13,0	Complies
638,000	Worst case, Vertical	25 – 1000	G13122611	-13,0	Complies
668,000	Worst case, Vertical	25 – 1000	G13122610	-13,0	Complies
697,925	Worst case, Vertical	25 – 1000	G13122608	-13,0	Complies

Frequency (MHz)	*Polarization*	Frequency Range (GHz)	Graph(s)	Limits (dBm)	Result
470,075	Worst case, Vertical	1 – 12,5	G13122602	-13,0	Complies
607,925	Worst case, Vertical	1 – 12,5	G13122603	-13,0	Complies
614,075	Worst case, Vertical	1 – 12,5	G13122604	-13,0	Complies
638,000	Worst case, Vertical	1 – 12,5	G13122605	-13,0	Complies
668,000	Worst case, Vertical	1 – 12,5	G13122606	-13,0	Complies
697,925	Worst case, Vertical	1 – 12,5	G13122607	-13,0	Complies

Nr. *Harmonics*	*AV level (dBµV/m)*						*Remark*
	470,0750 MHz		*607,9250 MHz*		*614,0750 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*
	638,0000 MHz		*668,0000 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	--

Nr. *Harmonics*	*PK level (dBµV/m)*						*Remark*
	470,0750 MHz		*607,9250 MHz*		*614,0750 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*	*PK level (dBµV/m)*						*Remark*
	638,0000 MHz		*668,0000 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	--

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

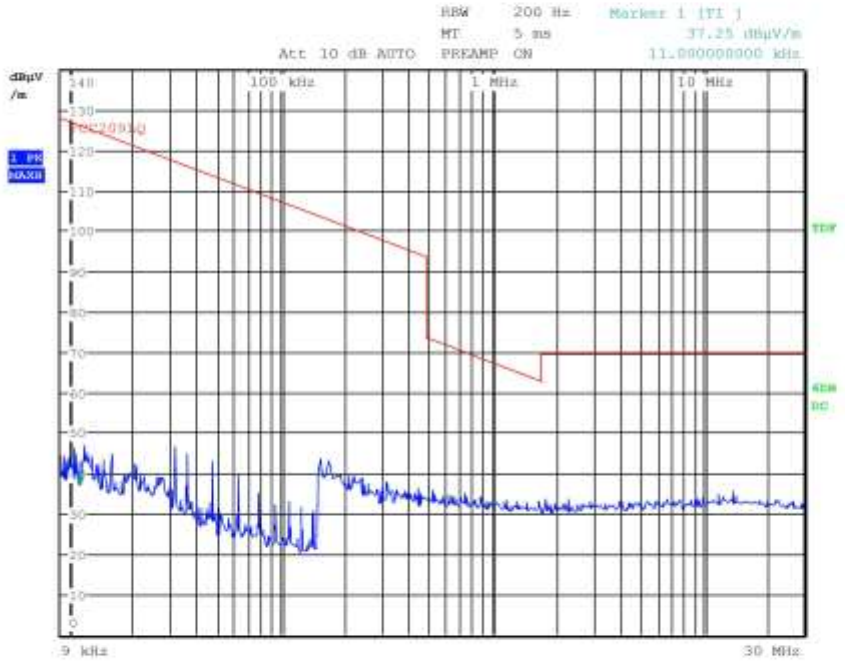
Test equipment used (Id number – see clause 6 of this test report)
CMC S108, CMC S124, CMC S127, CMC S136, CMC S164
Measurement uncertainty: See clause 7 of this test report

Result
The requirements are met

12. Graphs and Tables

G13122601

Meas Type
Equipment under Test
Manufacturer
OP Condition
Operator Bertezzolo 13122601
Test Spec
Loop

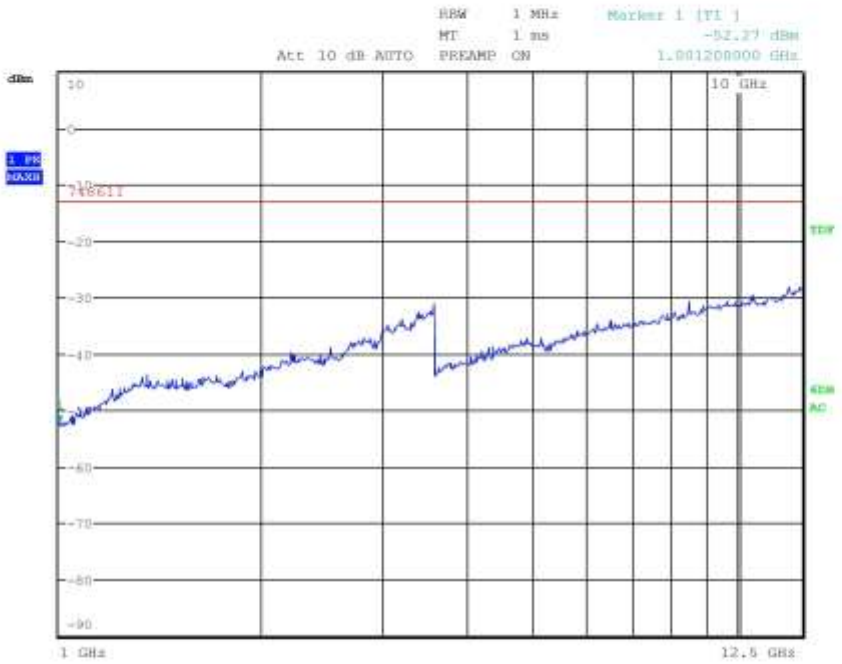


Final Measurement

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

G13122602

Meas Type
Equipment under Test
Manufacturer
OP Condition 470.075MHz
Operator Bertezzolo 13122602
Test Spec
V

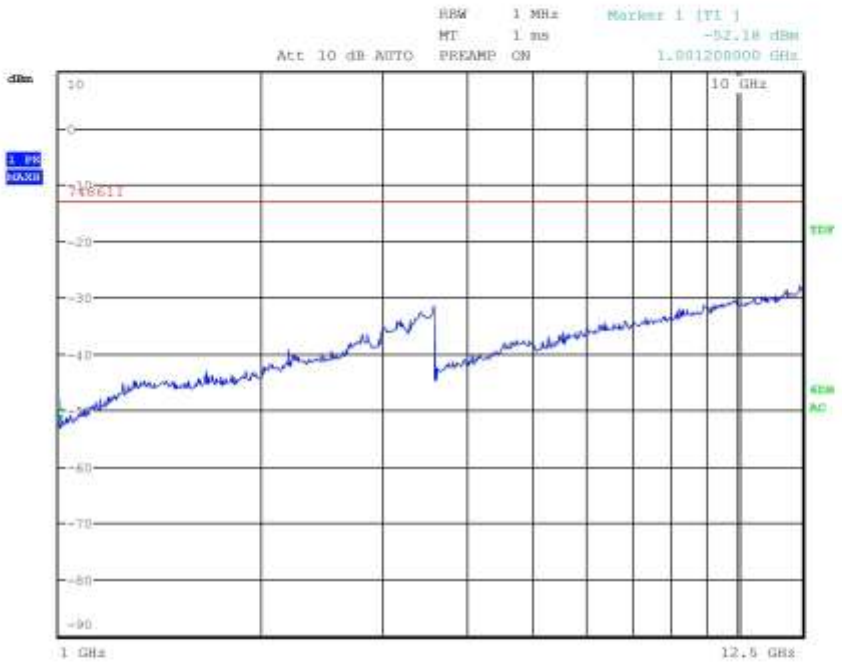


Final Measurement

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

G13122603

Meas Type
Equipment under Test
Manufacturer
OP Condition 607.925MHz
Operator Bertezzolo 13122603
Test Spec
V

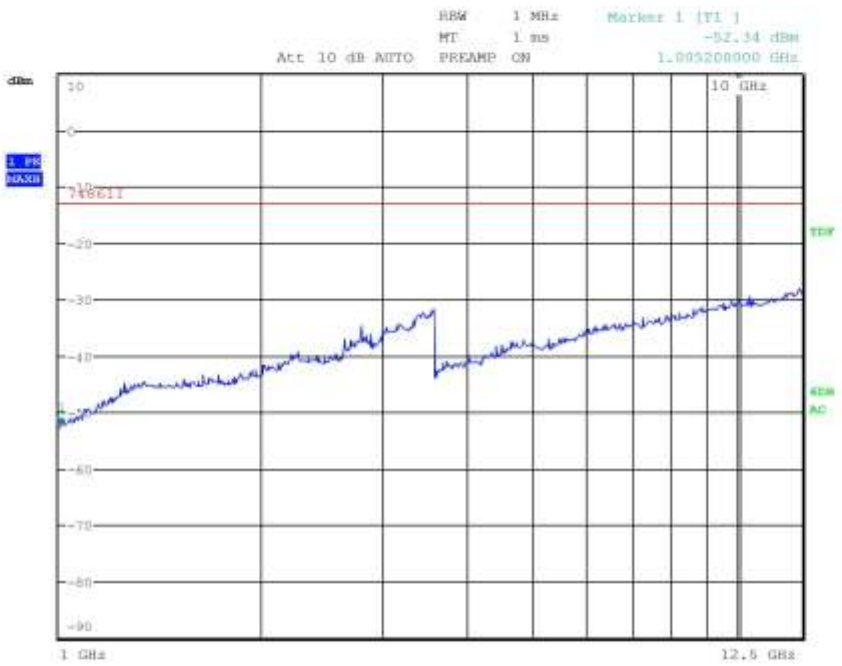


Final Measurement

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

G13122604

Meas Type
Equipment under Test
Manufacturer
OP Condition 614.075MHz
Operator Bertezzolo 13122604
Test Spec
V

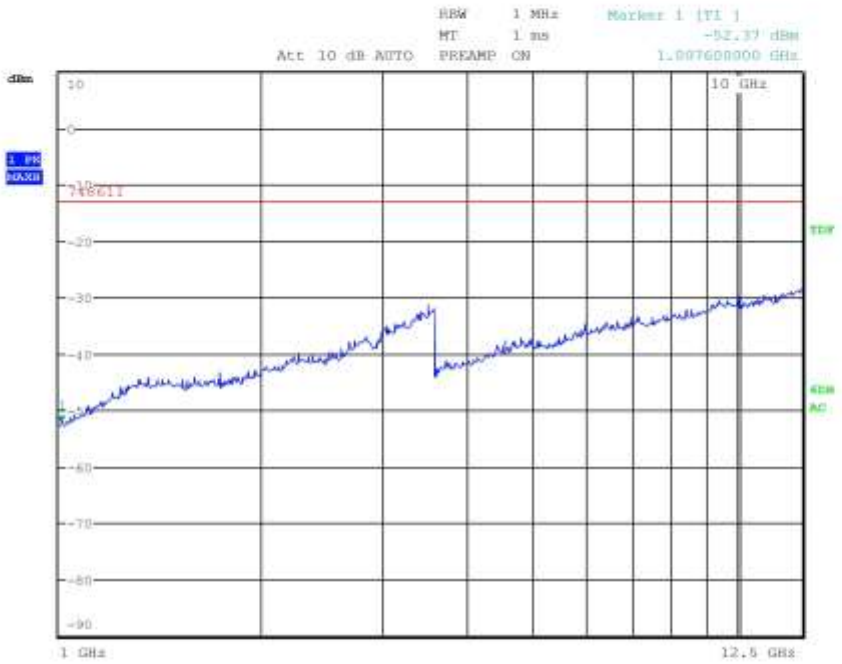


Final Measurement

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

G13122605

Meas Type
Equipment under Test
Manufacturer
OP Condition 638.00MHz
Operator Bertezzolo 13122605
Test Spec
V

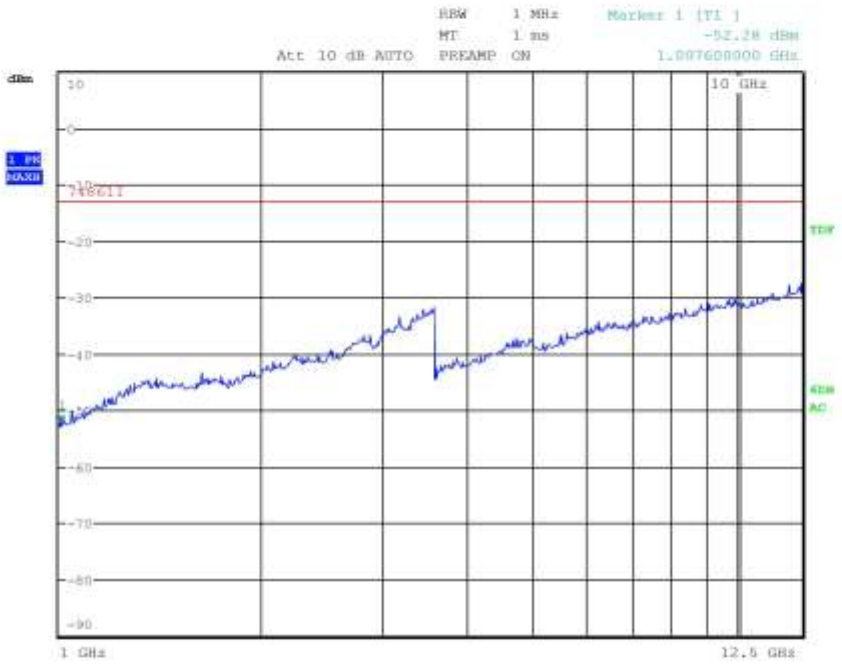


Final Measurement

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

G13122606

Meas Type
Equipment under Test
Manufacturer
OP Condition 668.00MHz
Operator Bertezzolo 13122606
Test Spec
V

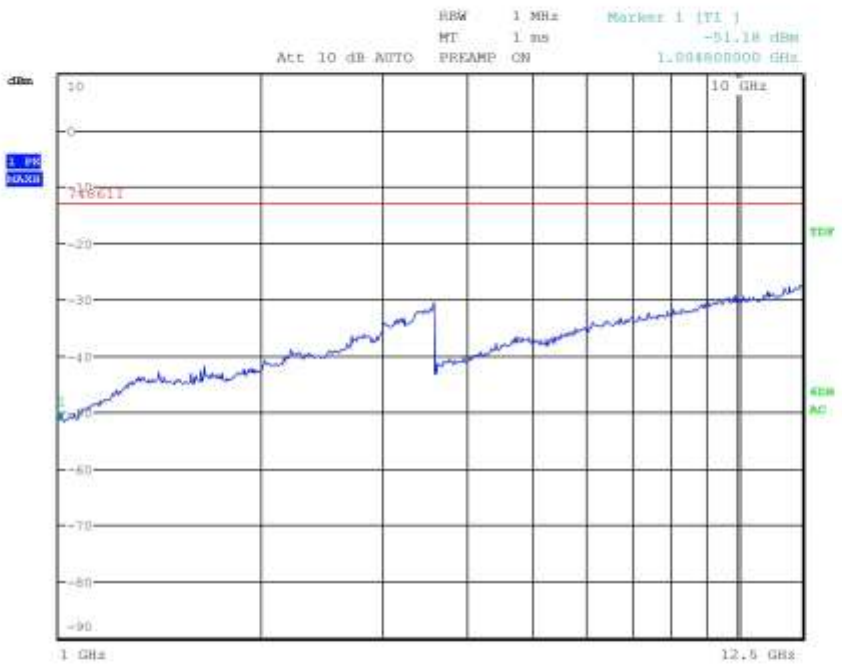


Final Measurement

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

G13122607

Meas Type
Equipment under Test
Manufacturer
OP Condition 697.925MHz
Operator Bertezzolo 13122607
Test Spec
V

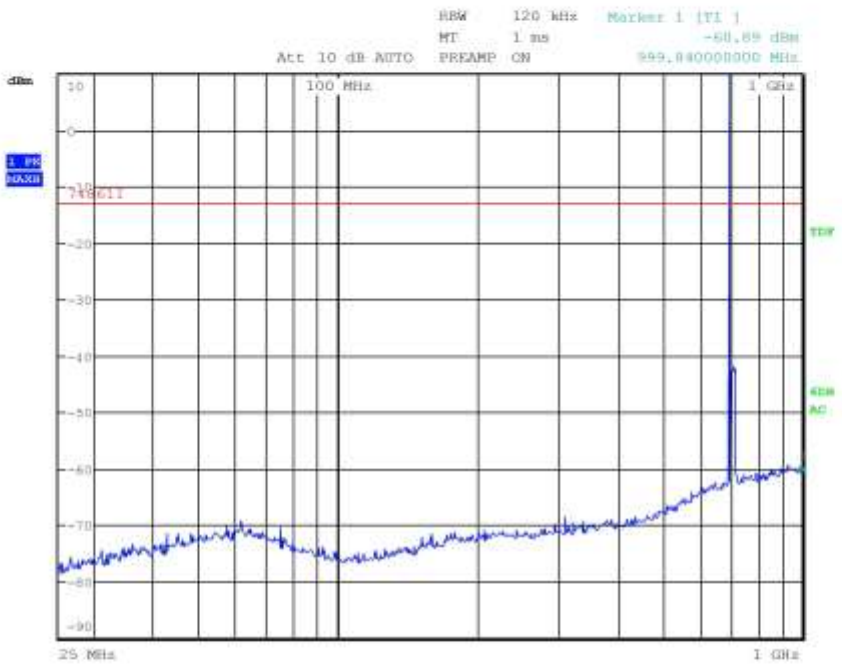


Final Measurement

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

G13122608

Meas Type
Equipment under Test
Manufacturer
OP Condition 697.925MHz
Operator Bertezzolo 13122608
Test Spec
V

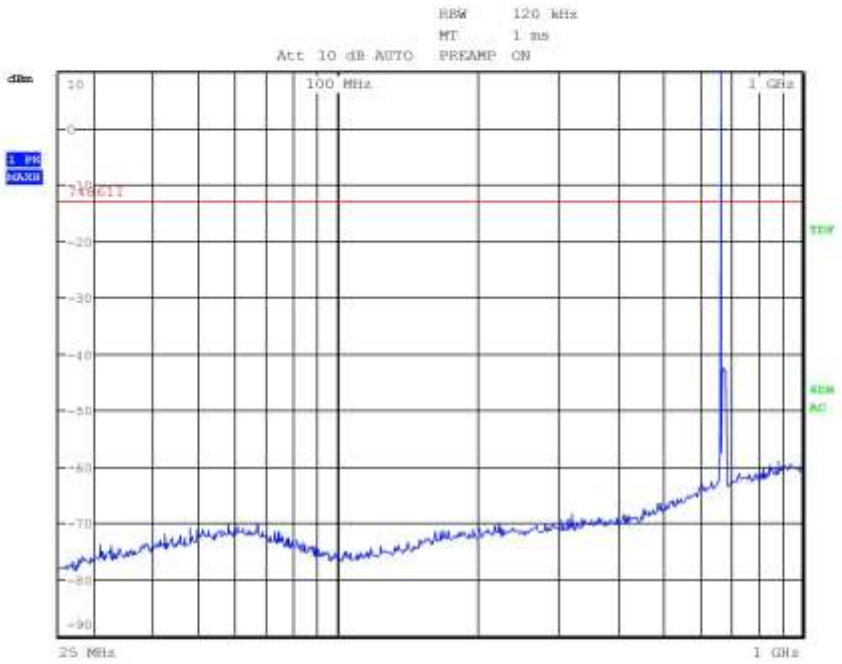


Final Measurement

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

G13122610

Meas Type
Equipment under Test
Manufacturer
OP Condition 668.00MHz
Operator Bertezzolo 13122610
Test Spec
V

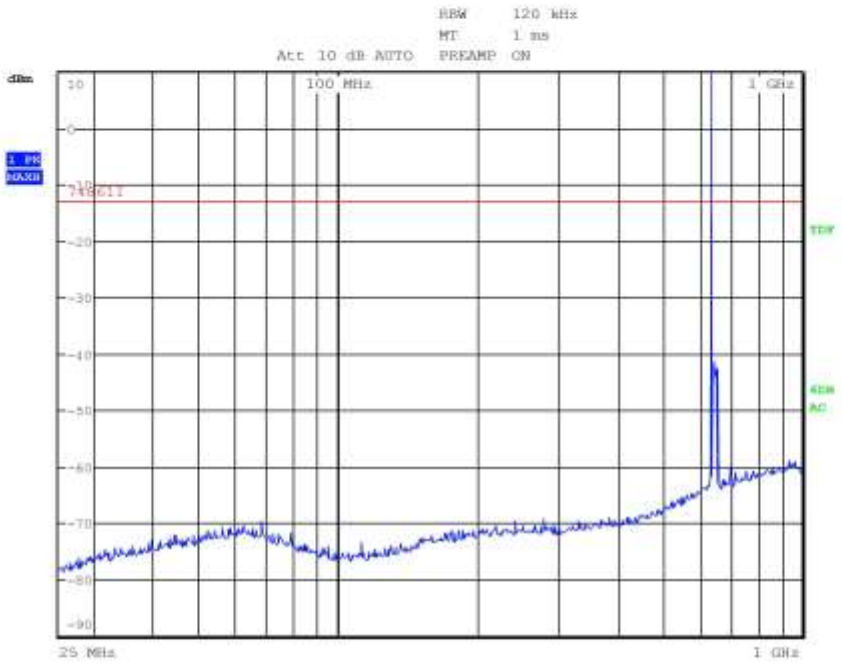


Final Measurement

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

G13122611

Meas Type
Equipment under Test
Manufacturer
OP Condition 638.00MHz
Operator Bertezzolo 13122611
Test Spec
V

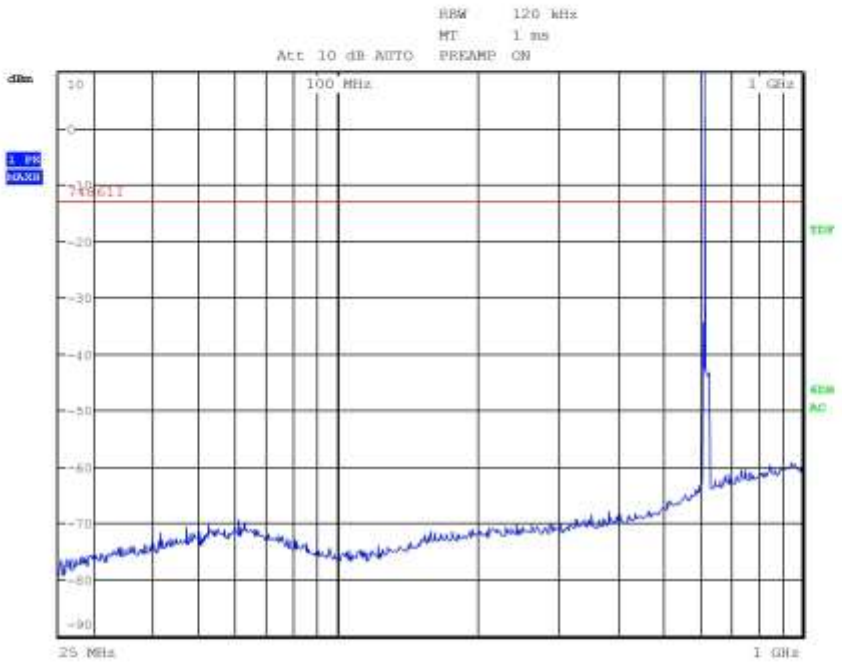


Final Measurement

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

G13122612

Meas Type
Equipment under Test
Manufacturer
OP Condition 614.075MHz
Operator Bertezzolo 13122612
Test Spec
V

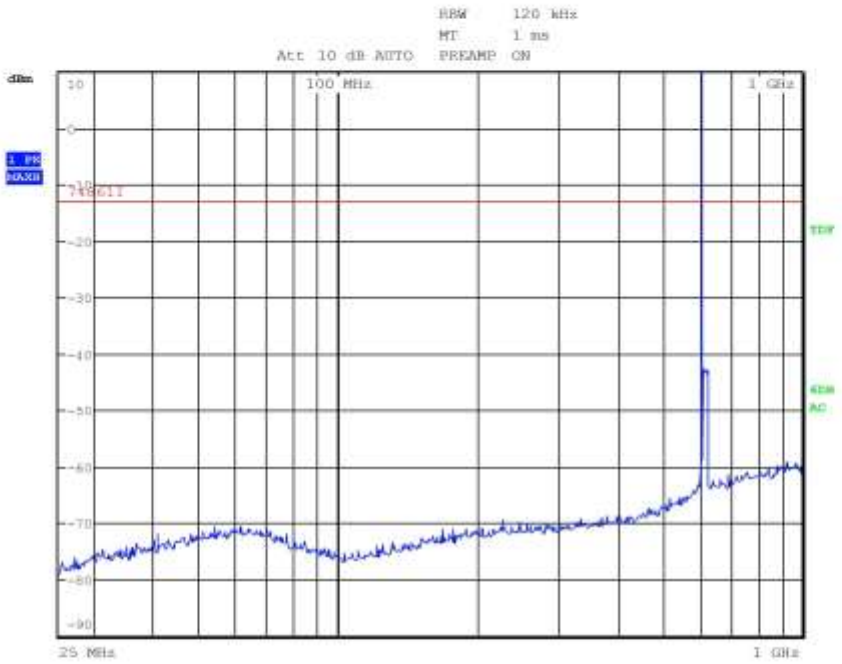


Final Measurement

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

G13122613

Meas Type
Equipment under Test
Manufacturer
OP Condition 607.925MHz
Operator Bertezzolo 13122613
Test Spec
V

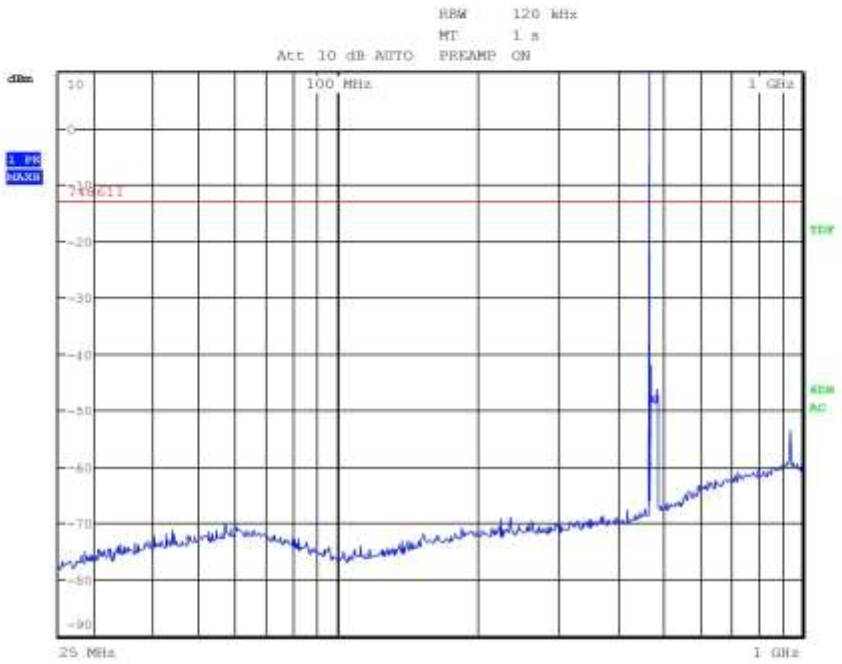


Final Measurement

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

G13122614

Meas Type
Equipment under Test
Manufacturer
OP Condition 470.075MHz
Operator Bertezzolo 13122614
Test Spec
V

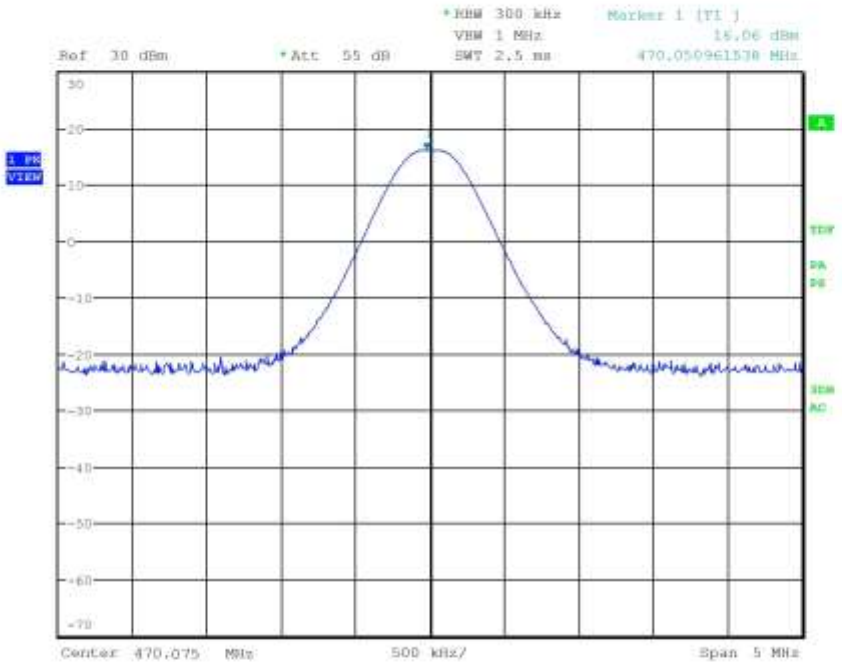


Final Measurement

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

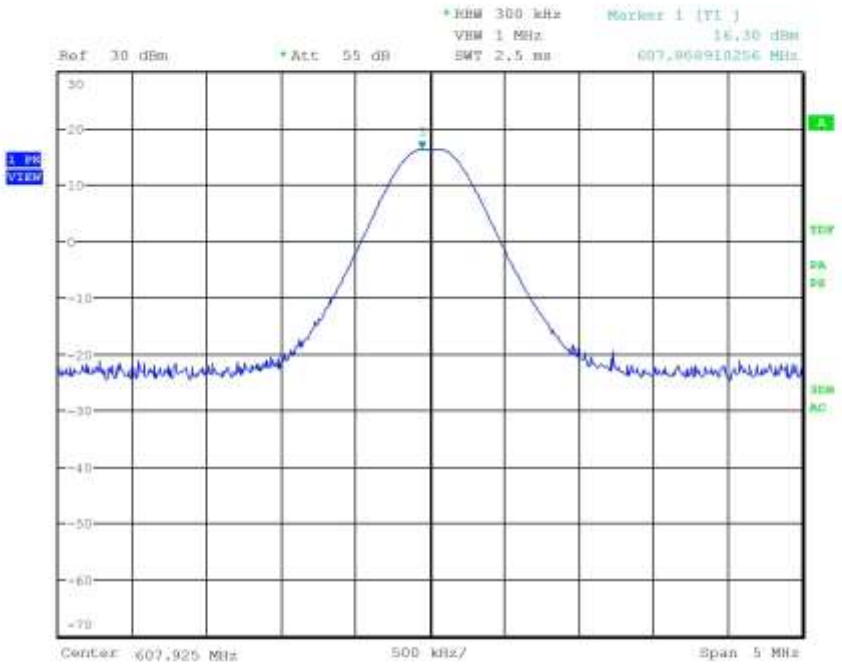
G13122615

Meas Type
Equipment under Test
Manufacturer
OP Condition 470.075MHz
Operator Bertezzolo 13122615
Test Spec



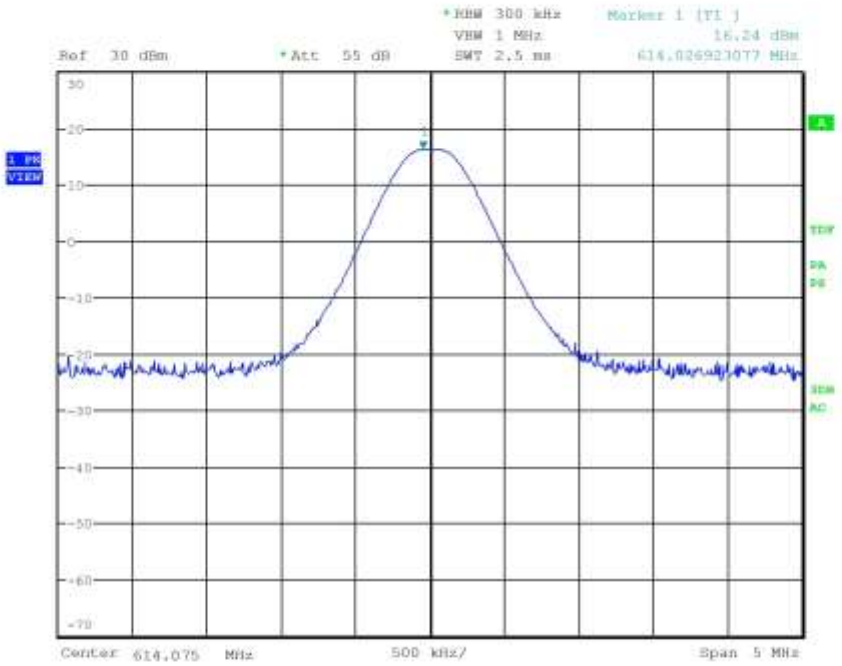
G13122616

Meas Type
Equipment under Test
Manufacturer
OP Condition 607.925MHz
Operator Bertezzolo 13122616
Test Spec



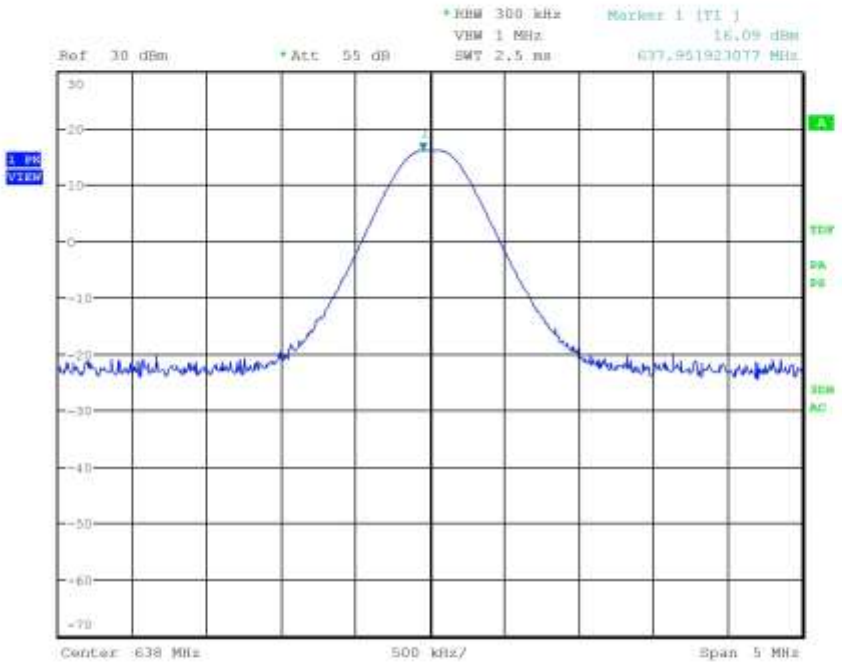
G13122617

Meas Type	
Equipment under Test	
Manufacturer	
OP Condition	614.075MHz
Operator	Bertezzolo 13122617
Test Spec	



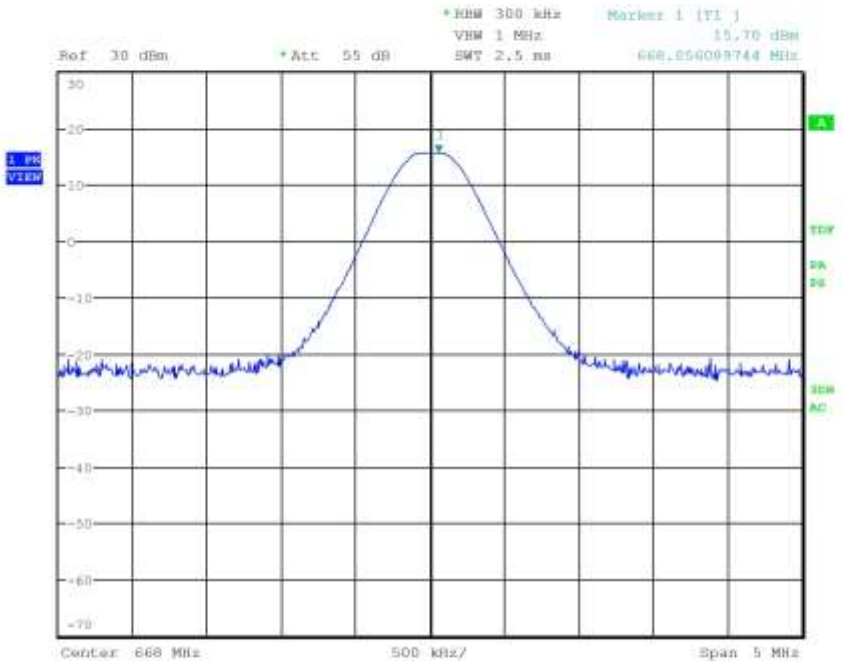
G13122618

Meas Type
Equipment under Test
Manufacturer
OP Condition 638.00MHz
Operator Bertezzolo 13122618
Test Spec



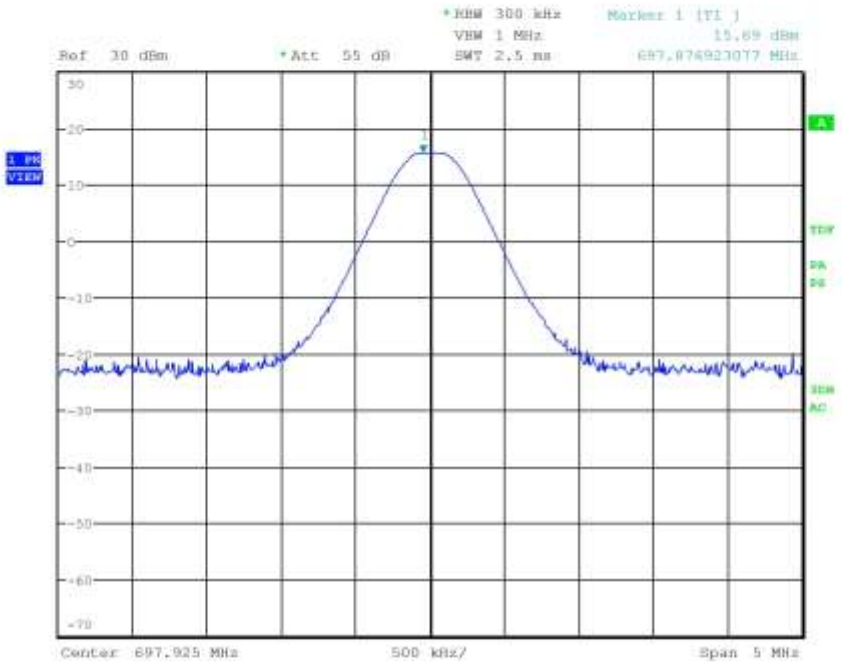
G13122619

Meas Type
Equipment under Test
Manufacturer
OP Condition 668.00MHz
Operator Bertezzolo 13122619
Test Spec



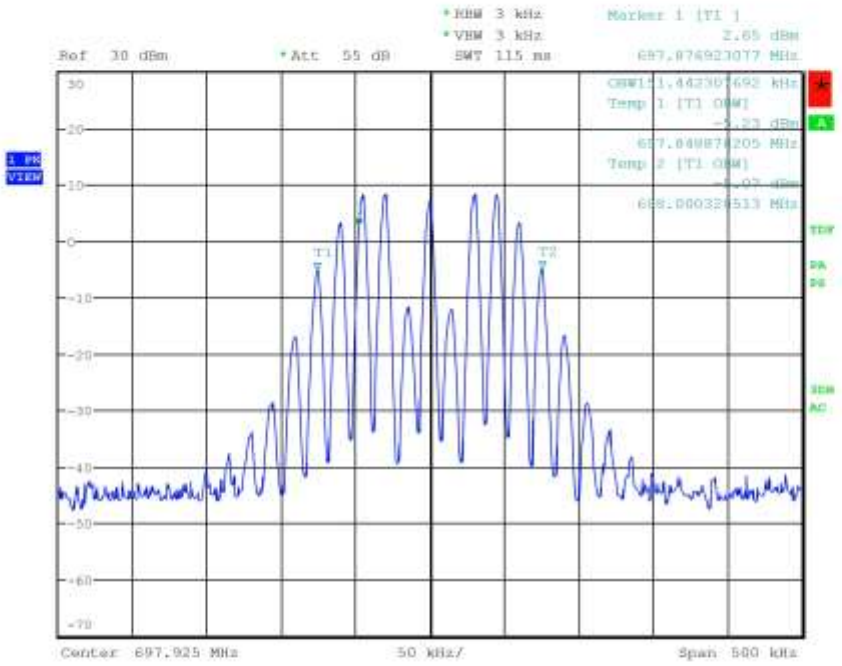
G13122620

Meas Type
Equipment under Test
Manufacturer
OP Condition 697.925MHz
Operator Bertezzolo 13122620
Test Spec



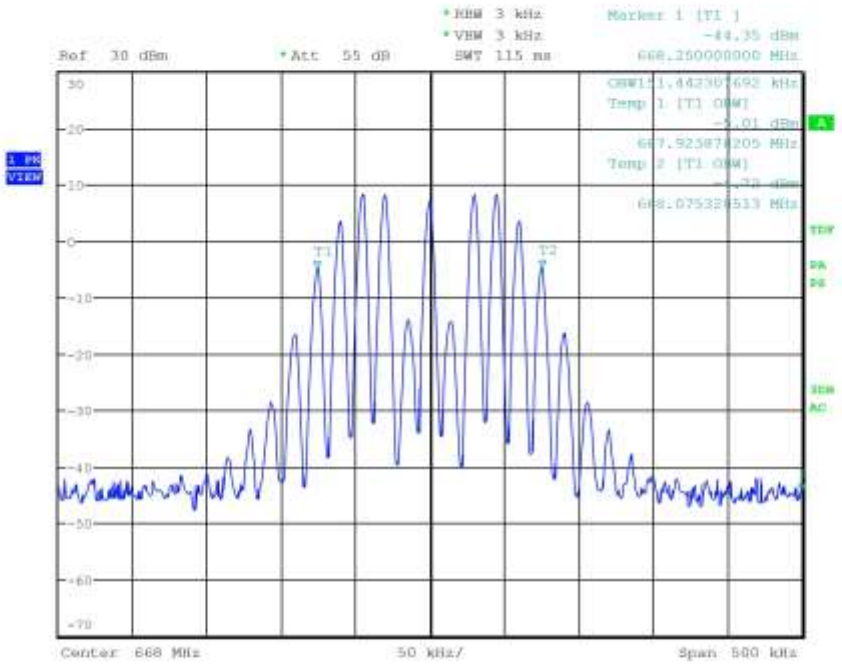
G13122621

Meas Type
Equipment under Test
Manufacturer
OP Condition 697.925MHz
Operator Bertezzolo 13122621
Test Spec



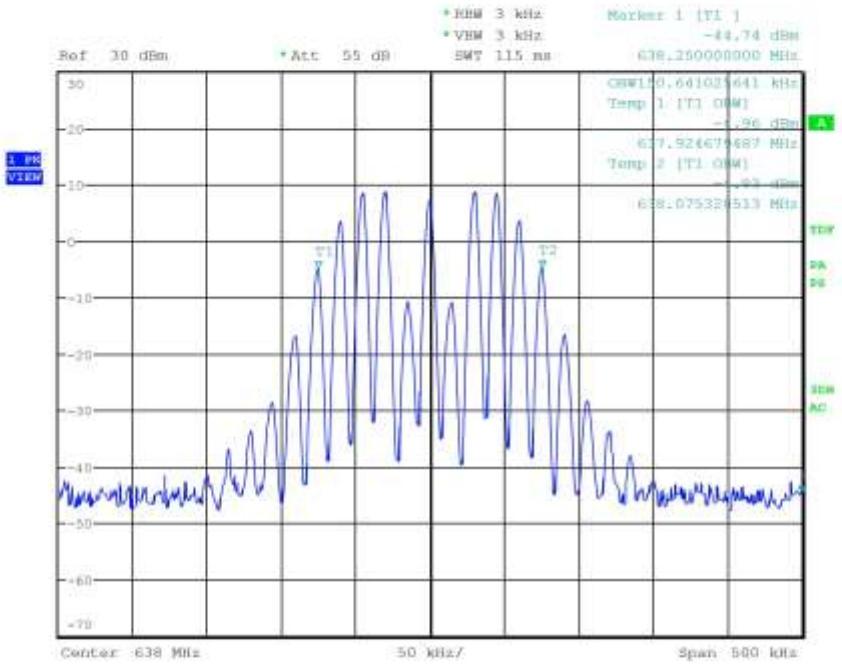
G13122622

Meas Type
Equipment under Test
Manufacturer
OP Condition 668.00MHz
Operator Bertezzolo 13122622
Test Spec



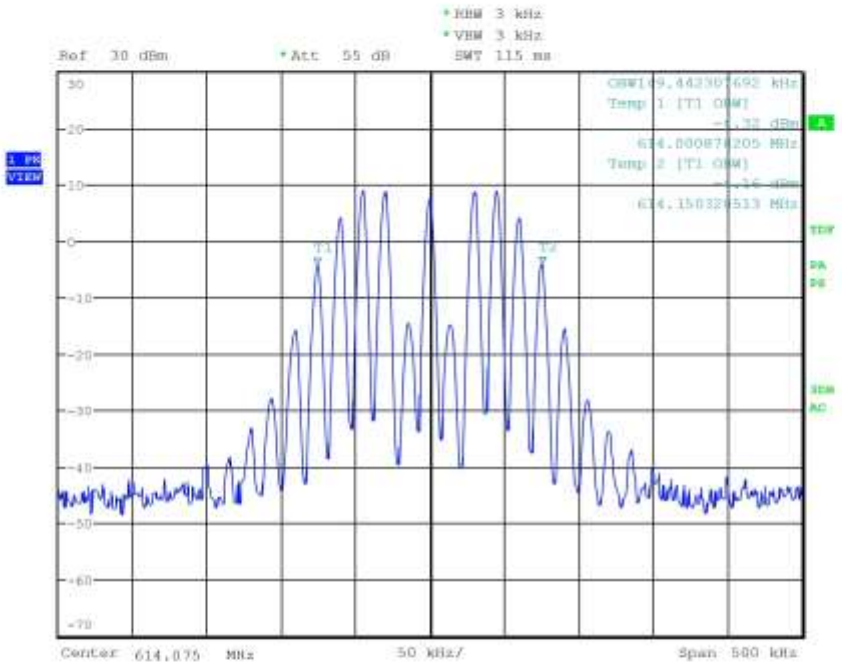
G13122623

Meas Type
Equipment under Test
Manufacturer
OP Condition 638.00MHz
Operator Bertezzolo 13122623
Test Spec



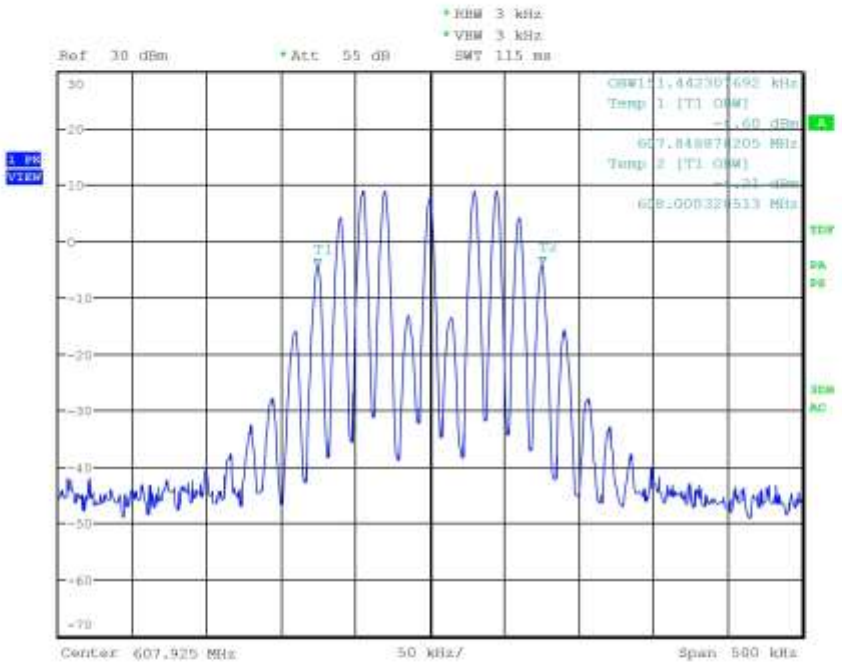
G13122624

Meas Type
Equipment under Test
Manufacturer
OP Condition 614.075MHz
Operator Bertezzolo 13122624
Test Spec



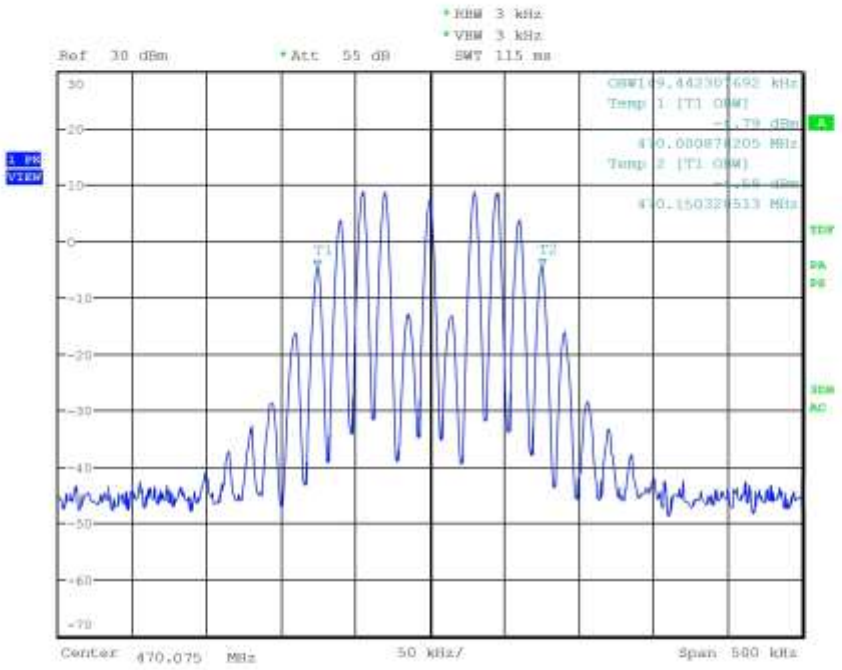
G13122625

Meas Type	
Equipment under Test	
Manufacturer	
OP Condition	607.925MHz
Operator	Bertezzolo 13122625
Test Spec	



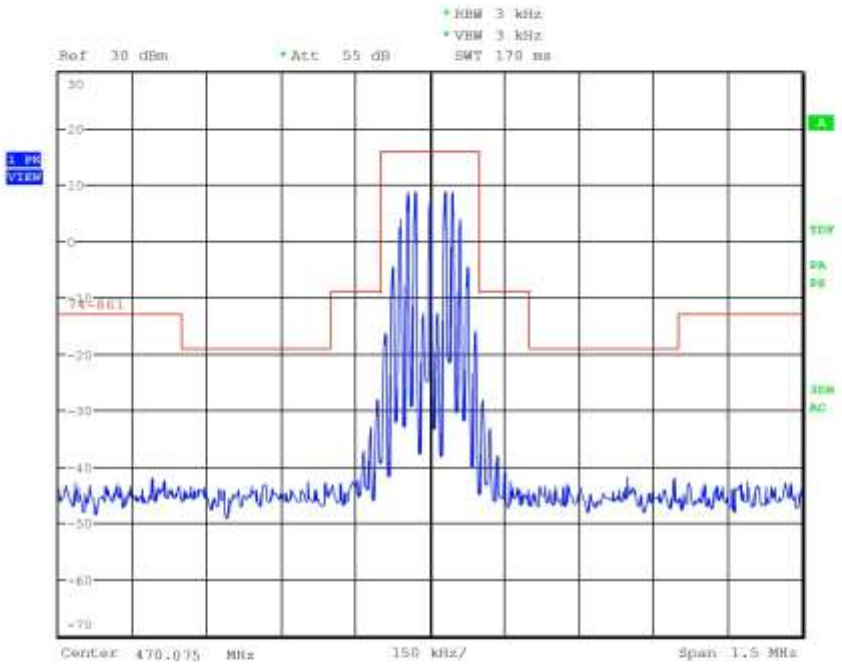
G13122626

Meas Type	
Equipment under Test	
Manufacturer	
OP Condition	470.075MHz
Operator	Bertezzolo 13122626
Test Spec	



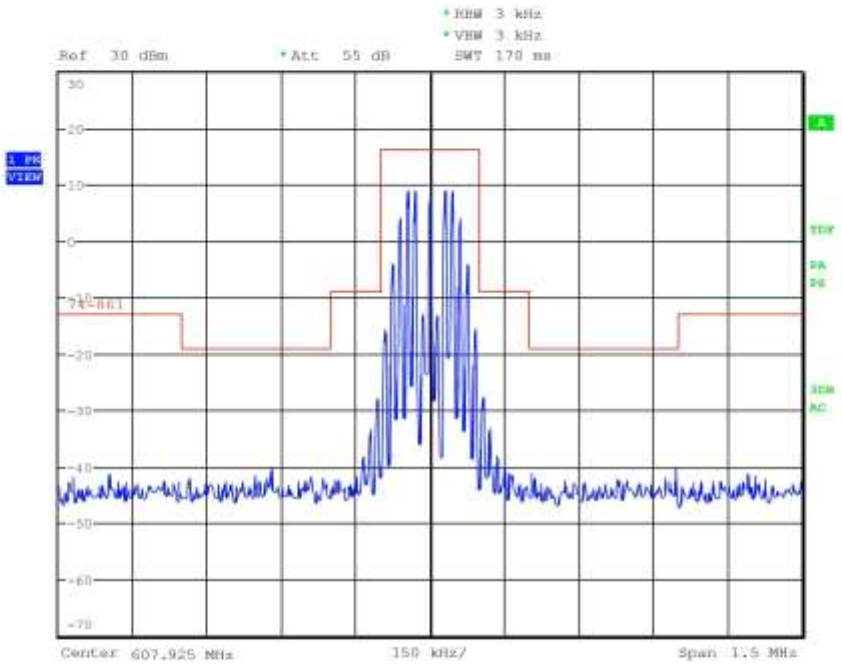
G13122627

Meas Type
Equipment under Test
Manufacturer
OP Condition 470.075MHz
Operator Bertezzolo 13122627
Test Spec



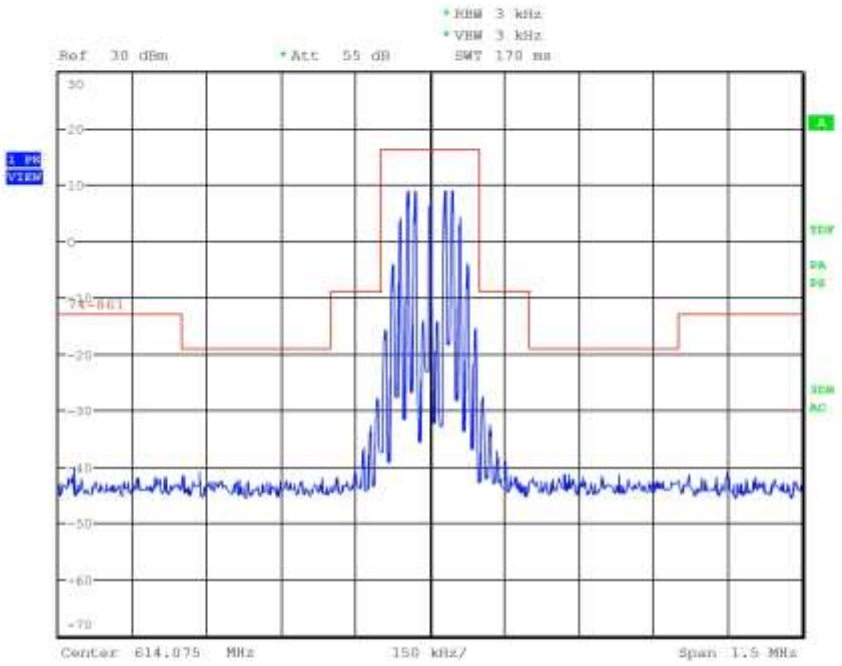
G13122628

Meas Type
Equipment under Test
Manufacturer
OP Condition 607.925MHz
Operator Bertezzolo 13122628
Test Spec



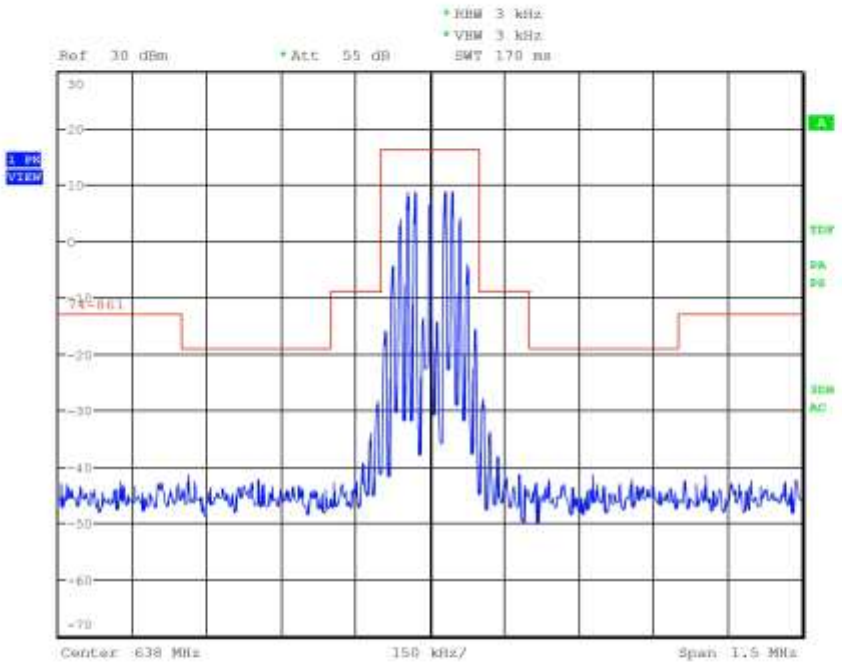
G13122629

Meas Type
Equipment under Test
Manufacturer
OP Condition 614.075MHz
Operator Bertezzolo 13122629
Test Spec



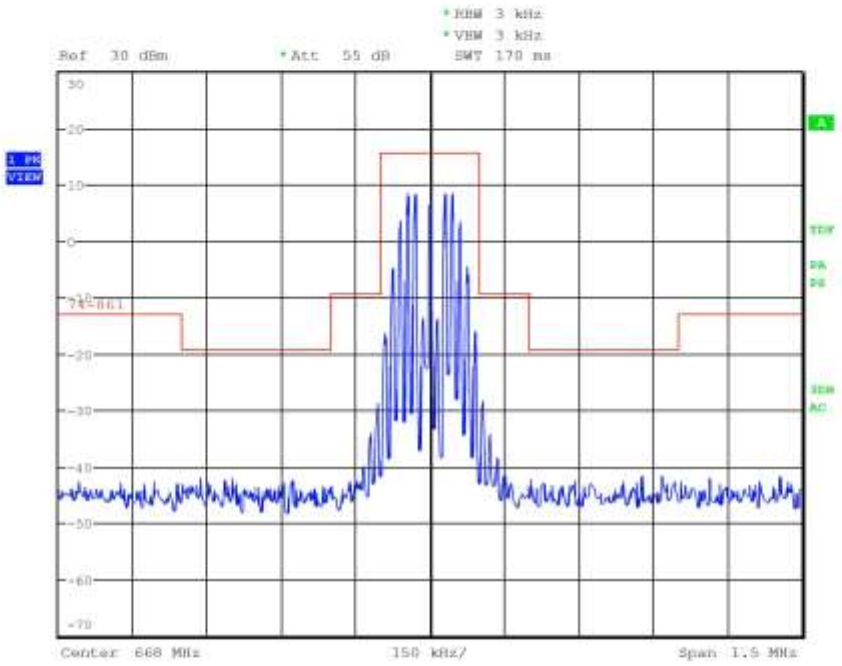
G13122630

Meas Type
Equipment under Test
Manufacturer
OP Condition 638.00MHz
Operator Bertezzolo 13122630
Test Spec



G13122631

Meas Type
Equipment under Test
Manufacturer
OP Condition 668.00MHz
Operator Bertezzolo 13122631
Test Spec



G13122632

Meas Type
Equipment under Test
Manufacturer
OP Condition 697.925MHz
Operator Bertezzolo 13122632
Test Spec