



## TEST REPORT nr. R10144101

### Federal Communication Commission (FCC)

#### Test item

Description.....: Quark - Low Power OEM UHF Compact RFID Reader

Trademark.....: CAEN RFID

Model/Type.....: R1230CB

#### Test Specification

Standard .....: FCC Rules & Regulations, Title 47 (2009) - Part 15 paragraph(s) : 247(a), 247(b), 247(c), 209 and 207

**Client's name**.....: CAEN RFID

Address .....: Via Vetraia, 11 - 55049 Viareggio (LU) – ITALY

**Manufacturer's name**.: Same ad client

Address .....:

#### Report

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

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

Date of issue.....: 17.01.11

Contents .....: 56 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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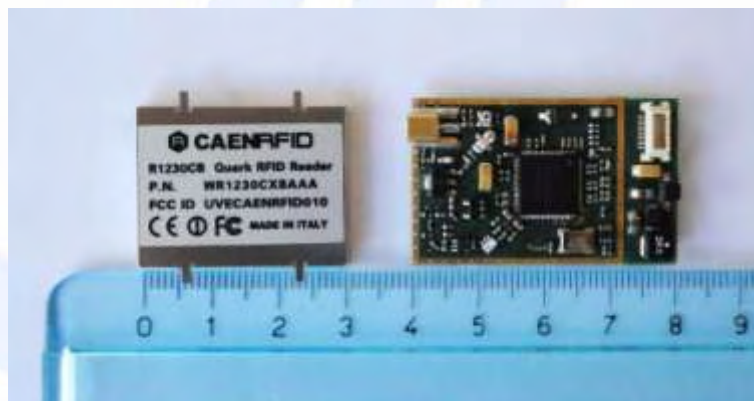
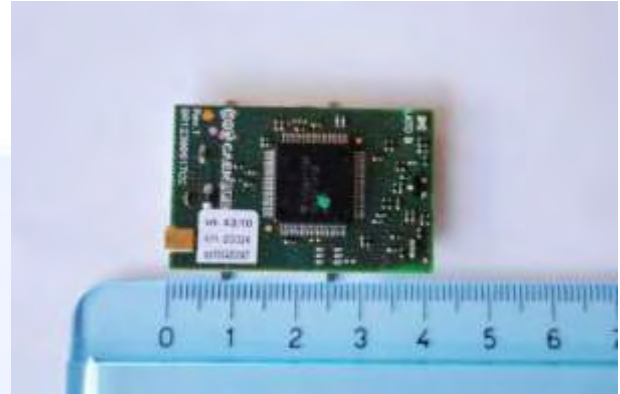
<b>1. Summary</b>			
Standard: FCC Rules & Regulations, Title 47			
Test specifications	Environmental Phenomena	Tests sequence	Result
Part 15.247(a)	Bandwidth	1	Complies
Part 15.247(a)	Channel Separation	2	Complies
Part 15.247(a)	Time of Occupancy	3	Complies
Part 15.247(a)	Number of Hopping Frequency	4	Complies
Part 15.247(b)	Peak Output Power conducted	5	Complies
Part 15.247(c)	Band Edge	6	Complies
Part 15.247(c) Part 15.209	Radiated Spurious	7	Complies
Part 15.247(c) Part 15.209	Conducted Spurious	8	Complies

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





**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 S001	Rohde & Schwarz	ESHS30	EMC interference receiver	862024/003	January '10	January '11
CMC S108	Emco	3115	Horn antenna	9811-5622	April '10	April '13
CMC S124	Spin	AMTP42-20	Horn Antenna 18-26GHz	103	May '10	May '13
CMC S127	SCHAFFNER	HLA6120	Loop Antenna	1191	January '10	January '13
CMC S129	Rohde & Schwarz	ESPI7	Receiver	836.914/004	January '10	January '11
CMC S136	Schwarzbeck	VULB 9163	Broadband Antenna	9136-205	May '10	May '13
CMC S164	Rohde & Schwarz	ESU26	EMC interference receiver	100052	January '10	January '11



## 7. Measurement uncertainty

Test	Expanded Uncertainty	note
<b>Conducted Emission</b>		
(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
<b>Discontinuous Conducted Emission</b>		
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
<b>Disturbance Power (30 MHz – 300 MHz)</b>		
	±3.2 dB	1
<b>Radiated Emission</b>		
(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
<b>Electromagnetic field EMF</b>		
	±18.8 dB	1
<b>Harmonic current emissions test</b>		
	±2.4 %	1
<b>Voltage fluctuation and flicker test</b>		
	±6.0 %	1
<b>Insertion loss test</b>		
	±2.6 %	1
<b>Radiated electromagnetic disturbance test (loop antenna)</b>		
	±2.5 %	1
<b>Radiated electromagnetic field immunity test</b>		
	0.9 V/m at 3V/m	1
<b>Pulse modulated radiated electromagnetic field immunity test</b>		
	0.9 V/m at 3V/m	1
<b>Injected currents immunity test</b>		
	0.6 V at 3V	1
<b>Bulk current</b>		
	9 mA at 60 mA	1
<b>Power frequency magnetic field immunity test</b>		
	0.3 A/m at 3 A/m	1
<b>Electrostatic discharge immunity test</b>		
		2
<b>Electrical fast transients / burst immunity test</b>		
		2
<b>Surge immunity test</b>		
		2
<b>Short interruption immunity test</b>		
		2
<b>Voltage transient emission test</b>		
	±5 %	1
<b>Transient immunity test</b>		
		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

<i>Reference no.</i>	<i>Description</i>
FCC Rules and Regulation Title 47 part 15 (2009)	–
ANSI C63.4	American National Standard for Methods of Measuring of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9kHz – 40GHz
Internal Procedure PM001 rev. 2.0 (Quality Manual)	Measure Procedure
Internal procedure INC_M rev. 8.0 (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.  
All measurements are done in accordance with the Filling and Measurement Guidelines for Frequency Hopping Spread Spectrum Systems DA-705  
Measurement uncertainty is in accordance with document CMC INC\_M rev. 8.0.



## 11.1 Antenna Requirements

### Test configuration and test method

Test site Laboratory  
 Auxiliary equipment See clause 4 of this test report

### Environmental conditions

Temperature 22 °C Atmospheric pressure 100 kPa Relative humidity 49 %

### 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 Requirements

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 unique coupling to the intentional radiator shall be considered sufficient 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 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.

### Test specification

Port: Antenna.

### EUT exercising

See clause 4 of this test report

### Result

<i>Antenna Type</i>	<i>Gain</i>	<i>Remarks</i>	<i>Results</i>
Embedded	1,3 dBi	--	Complies

### Remarks

//////////

### Reference documents

See clause 8 of this test report

### Result

The requirements are met



## 11.2 Bandwidth

### Test configuration and test method

Test site Laboratory  
 Auxiliary equipment See clause 4 of this test report

### Environmental conditions

Temperature 20 °C Atmospheric pressure 99 kPa Relative humidity 48 %

### Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part 15.247
- DA 00-705, march 30, 2000
- Internal Procedure PM001
- See clause 4 of this test report

### Test specification

Port: Antenna;

### EUT exercising

See clause 4 of this test report

### Result

Frequency (MHz)	Graph(s)	Bandwidth	Remark
902,75	G10144180	87,0 kHz	--
914,75	G10144104	88,2 kHz	--
927,25	G10144181	87,6 kHz	--
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 S129

### Result

The requirements are met



### 11.3 Channel Separation

#### Test configuration and test method

Test site \_\_\_\_\_ Laboratory \_\_\_\_\_  
 Auxiliary equipment \_\_\_\_\_ See clause 4 of this test report

#### Environmental conditions

Temperature 20 °C Atmospheric pressure 99 kPa Relative humidity 48 %

#### Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part 15.247
- DA 00-705, march 30, 2000
- 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

Limit: Minimum 25kHz or the 20dB Bandwidth of the hopping system

#### Result

Frequency (MHz)	Graph(s)	Channel Separation	Remark
902,75	G10144182	500 kHz	--
914,75	G10144102	500 kHz	--
927,25	G10144183	500 kHz	--
Measurement uncertainty: ±1kHz			

Remarks ////////////////

Reference documents See clause 8 of this test report

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

CMC S129

Result The requirements are met



### 11.4 Average Time of Occupancy

#### Test configuration and test method

Test site Laboratory  
 Auxiliary equipment See clause 4 of this test report

#### Environmental conditions

Temperature 21 °C Atmospheric pressure 99 kPa Relative humidity 49 %

#### Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part 15.247
- DA 00-705, march 30, 2000
- 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

0.4 s within 20 s period

#### Result

Frequency (MHz)	Graph(s)	Dwell time	Remark
902,75	G10144186	--	Nr. 6 transmissions in 20s
902,75	G10144187	29,0	--
914,75	G10144188	--	Nr. 6 transmissions in 20s
914,75	G10144189	29,0	--
927,25	G10144184	--	Nr. 6 transmissions in 20s
927,25	G10144185	29,2	--

Frequency (MHz)	Time of Occupancy	Remarks
902,75	6 x 29,0 = 174,0 ms	--
914,75	6 x 29,0 = 174,0 ms	--
927,25	6 x 29,2 = 175,2 ms	--

Remarks //////////////

Reference documents See clause 8 of this test report

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

CMC S129

Result The requirements are met



### 11.5 Number of Hopping Channels

#### Test configuration and test method

Test site Laboratory  
 Auxiliary equipment See clause 4 of this test report

#### Environmental conditions

Temperature 22 °C Atmospheric pressure 99 kPa Relative humidity 46 %

#### Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part 15.247
- DA 00-705, march 30, 2000
- Internal Procedure PM001
- See clause 4 of this test report

#### Test specification

Port: Antenna;

#### EUT exercising

See clause 4 of this test report

#### Result

Port	Graph(s)	Number of Hopping Frequency	Remark
Enclosure	G10144101	50	--

#### Remarks

//////////

#### Reference documents

See clause 8 of this test report

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

CMC S129

#### Result

The requirements are met



## 11.6 Peak Output Power

### Test configuration and test method

Test site Laboratory  
Auxiliary equipment None

### Environmental conditions

Temperature 22 °C Atmospheric pressure 99 kPa Relative humidity 46 %

### Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part 15.247
- DA 00-705, march 30, 2000
- 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
902 – 928 MHz	1,0 W / 30dBm

### Result

Frequency (MHz)	Graphs	Results (dBm)	Remark
902,75	G10144116	22,86	--
914,75	G10144117	22,62	--
927,25	G10144118	22,40	--

### Remarks

Used +20dBm of attenuation during the test.

### Reference documents

See clause 8 of this test report

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

CMC S164

### Result

The requirements are met



## 11.7 Band Edge

### Test configuration and test method

Test site Laboratory  
 Auxiliary equipment See clause 4 of this test report

### Environmental conditions

Temperature 20 °C Atmospheric pressure 99 kPa Relative humidity 46 %

### Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part 15.247
- DA 00-705, march 30, 2000
- 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

In any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in section 15.209(a) is not required. In addition, radiated emission which fall in the restricted bands, as defined in section 15.205(a), must also comply with the radiated emission limits specified in section 15.209(a) (see section 15.205(c)).

### Result

Frequency (MHz)	Graph(s)	Attenuation Band Edge	Remark
902,75	G10144106	> 20dBc	Hopping disable
927,25	G10144107	> 20dBc	Hopping disable
927,25	G10144108	> 20dBc	Hopping enable
902,75	G10144109	> 20dBc	Hopping enable
Measurement uncertainty: ±1dB			

Remarks //////////////

### Reference documents

See clause 8 of this test report

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

CMC S129

**Result** The requirements are met





## 11.8 Conducted Spurious

### Test configuration and test method

Test site Semi-anechoic chamber  
 Auxiliary equipment None

### Environmental conditions

Temperature 19 °C Atmospheric pressure 100 kPa Relative humidity 42 %

### Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part 15.247 and Part 15.209
- DA 00-705, march 30, 2000
- 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

In any 100kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or radiated measurement. Attenuation below the general limits specified in cl. 15.209(a) is not required. In addition, radiated which fall in the restricted bands, as defined in cl. 15.205(a), must also comply with the radiated emission limits specified in cl. 15.209(a).

### Result

Frequency (MHz)	Graph(s)	Remarks	Result
902,75	G10144113	--	Complies
914,75	G10144114	--	Complies
927,25	G10144115	--	Complies

### Remarks

//////////

### Reference documents

See clause 8 of this test report

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

CMC S164

Measurement uncertainty: See clause 7 of this test report

### Result

The requirements are met



## 11.9 Radiated Spurious

### Test configuration and test method

Test site Semi-anechoic chamber  
 Auxiliary equipment None

### Environmental conditions

Temperature 19 °C Atmospheric pressure 100 kPa Relative humidity 42 %

### Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part 15.247 and Part 15.209
- DA 00-705, march 30, 2000
- Internal Procedure PM001
- See clause 4 of this test report

### Test specification

Port: Antenna;  
 For measurements below 1GHz the resolution bandwidth is set to 100kHz.  
 For measurements above 1GHz the resolution bandwidth is set to 1MHz.

### EUT exercising

See clause 4 of this test report

### Acceptance limits

In any 100kHz bandwidth outside the frequency band at least 20dB below the highest level of the desired power. In addition, radiated emissions which fall in the restricted bands, as defined in cl. 15.205(a), must also comply with the radiated emission limits specified in cl. 15.209(a) (see cl.15.205(c)).

### Result

Channel	Polarization	Frequency Range (MHz)	Graph(s) (peak measurements)	Remarks	Result
902,75	Vertical	30 – 1000	G10144120	--	Complies
902,75	Horizontal	30 – 1000	G10144121	--	Complies
914,75	Horizontal	30 – 1000	G10144122	--	Complies
914,75	Vertical	30 – 1000	G10144123	--	Complies
927,25	Vertical	30 – 1000	G10144124	--	Complies
927,25	Horizontal	30 – 1000	G10144125	--	Complies
927,25	Horizontal	1000 – 10000	G10144126	--	Complies
927,25	Vertical	1000 – 10000	G10144127	--	Complies
914,75	Vertical	1000 – 10000	G10144128	--	Complies
914,75	Horizontal	1000 – 10000	G10144129	--	Complies
902,75	Horizontal	1000 – 10000	G10144130	--	Complies
902,75	Vertical	1000 – 10000	G10144131	--	Complies



Nr. Harmonics	AV level (dB $\mu$ V/m)						AV Limits (dB $\mu$ V/m)	Remark
	902,75 MHz		914,75MHz		927,25 MHz			
	Frequency	(dB $\mu$ V/m)	Frequency	(dB $\mu$ V/m)	Frequency	(dB $\mu$ V/m)		
II Harmonic	1830,29	42,0	1830,46	42,0	1854,50	43,3	54,00	--
III Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	54,00	--
IV Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	54,00	--
V Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	54,00	--
VI Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	54,00	--
VII Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	54,00	--
VIII Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	54,00	--
IX Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	54,00	--
X Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	54,00	--

Measurement Uncertainty:  $\pm 4$ dB

Nr. Harmonics	PK level (dB $\mu$ V/m)						PK Limits (dB $\mu$ V/m)	Remark
	902,75 MHz		914,75MHz		927,25 MHz			
	Frequency	(dB $\mu$ V/m)	Frequency	(dB $\mu$ V/m)	Frequency	(dB $\mu$ V/m)		
II Harmonic	1830,29	43,5	1830,46	44,0	1854,50	45,0	74,00	--
III Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	74,00	--
IV Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	74,00	--
V Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	74,00	--
VI Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	74,00	--
VII Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	74,00	--
VIII Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	74,00	--
IX Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	74,00	--
X Harmonic	--	More than 15dB below limit	--	More than 15dB below limit	--	More than 15dB below limit	74,00	--

Measurement Uncertainty:  $\pm 4$ dB



### Remarks

During the test, the EUT was connected with antenna mod. WANTENNAX012.  
EUT was tested in 3 orthogonal planes. In results table are reported the worst case.

### Reference documents

See clause 8 of this test report

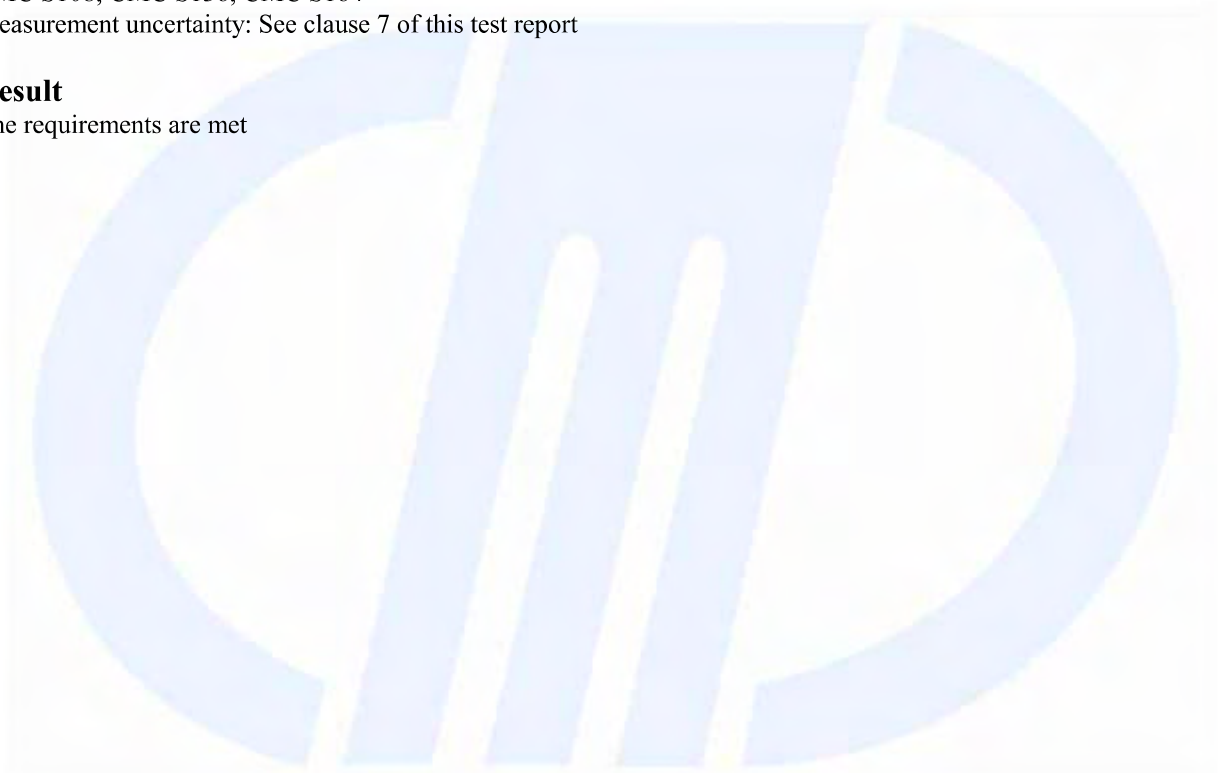
### Test equipment used (Id number – see clause 6 of this test report)

CMC S108, CMC S136, CMC S164

Measurement uncertainty: See clause 7 of this test report

### Result

The requirements are met





## 11.10 Maximum permissible Exposure

### Test configuration and test method

Test site Laboratory  
 Auxiliary equipment See clause 4 of this test report

### Environmental conditions

Temperature 21 °C Atmospheric pressure 100 kPa Relative humidity 45 %

### Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part 1.1310
- DA 00-705, march 30, 2000
- 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

$902/1500 \text{ mW/cm}^2 = 0,60 \text{ mW/cm}^2$  max at 20cm of distance

### Result

Power Density Limit (mW/cm <sup>2</sup> )	Output Power (mW)	Antenna Gain (G)	Power Density at 20cm (mW/cm <sup>2</sup> )	Remarks
0,60	190	1,3	0,049	Measured
0,60	200	1,3	0,052	Declared

### Remarks

Power Density =  $(P \times G) / (4\pi R^2)$

### Reference documents

See clause 8 of this test report

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

CMC S129

Measurement uncertainty: See clause 7 of this test report

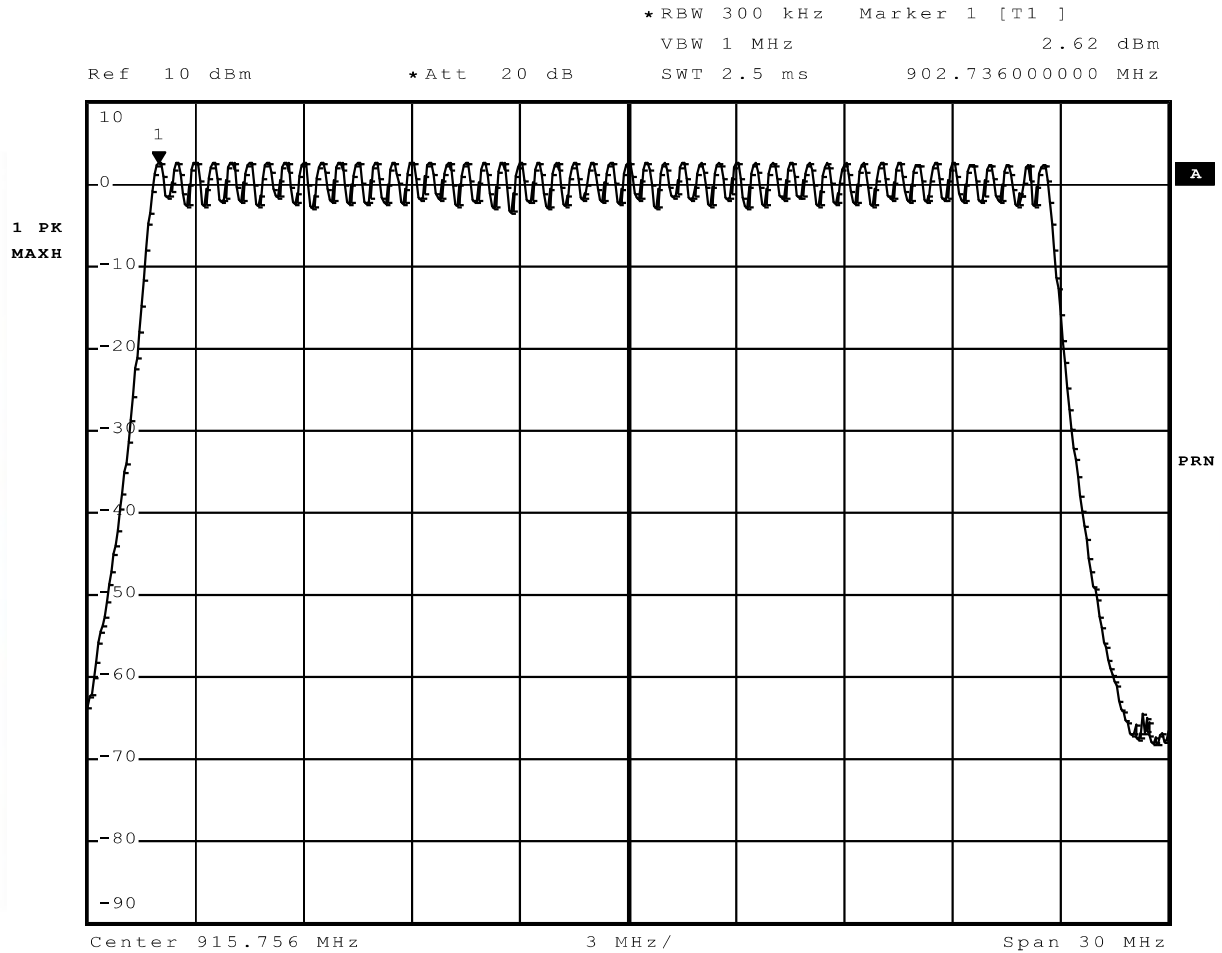
### Result

The requirements are met



## 12. Graphs and Tables

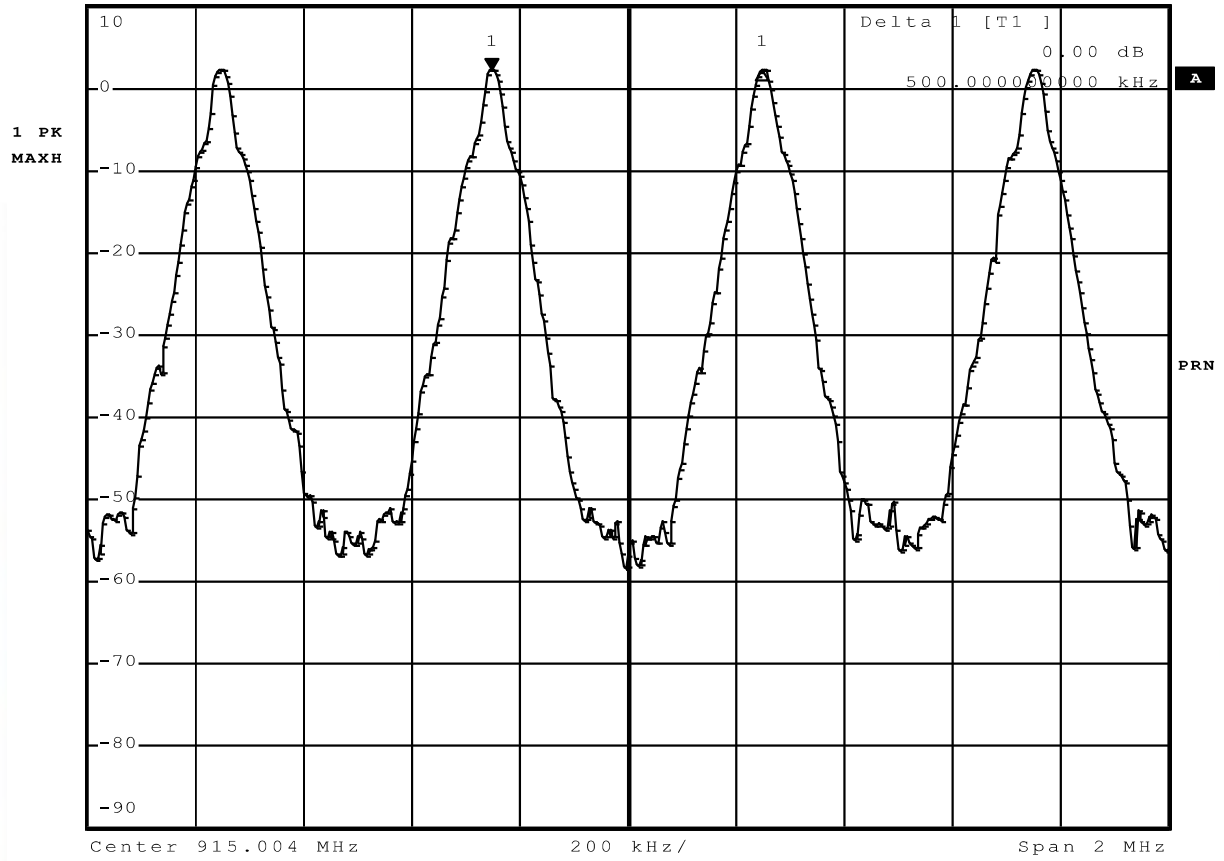
G10144101





### G10144102

\*RBW 30 kHz    Marker 1 [T1 ]  
VBW 100 kHz    2.29 dBm  
Ref 10 dBm    \*Att 20 dB    SWT 2.5 ms    914.752000000 MHz

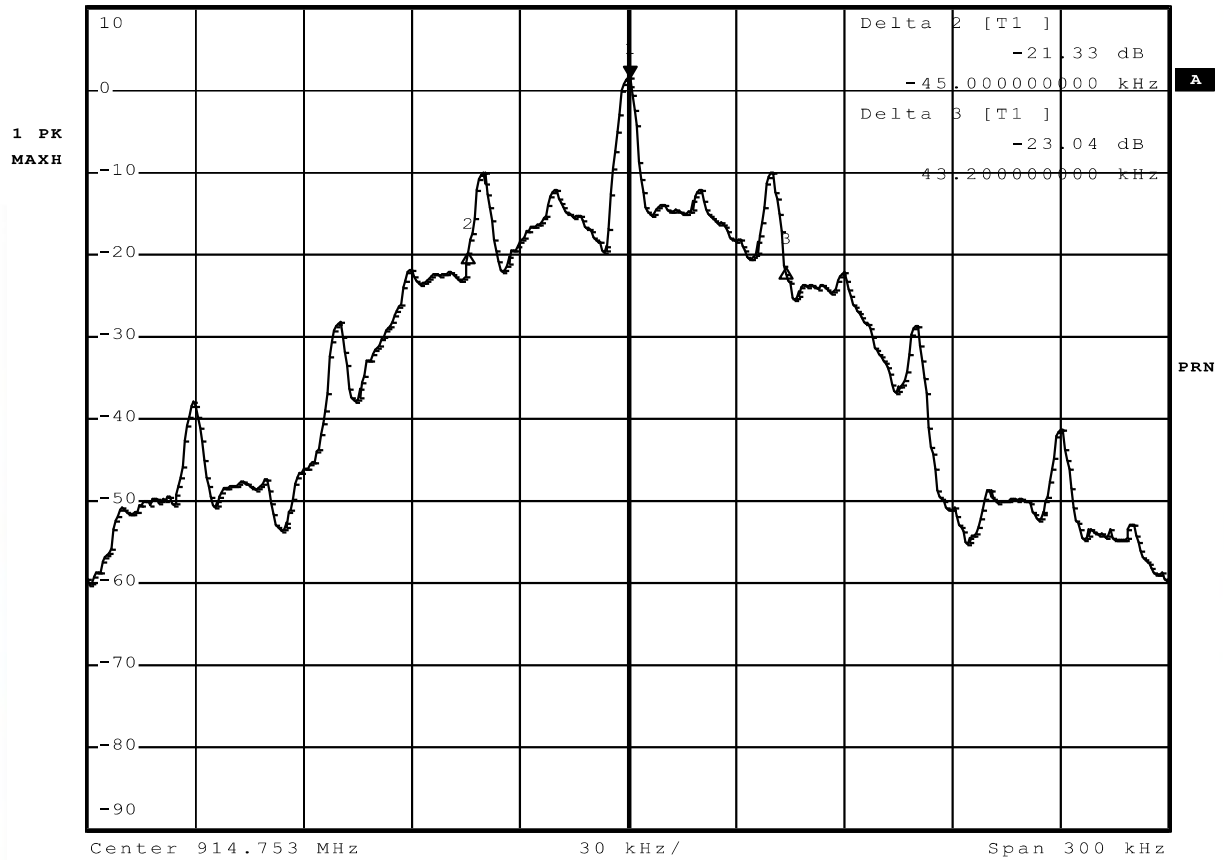


CMC Centro Misure Compatibilità S.r.l.



### G10144104

\*RBW 3 kHz      Marker 1 [T1 ]  
VBW 10 kHz      1.44 dBm  
Ref 10 dBm      \*Att 20 dB      SWT 35 ms      914.753600000 MHz



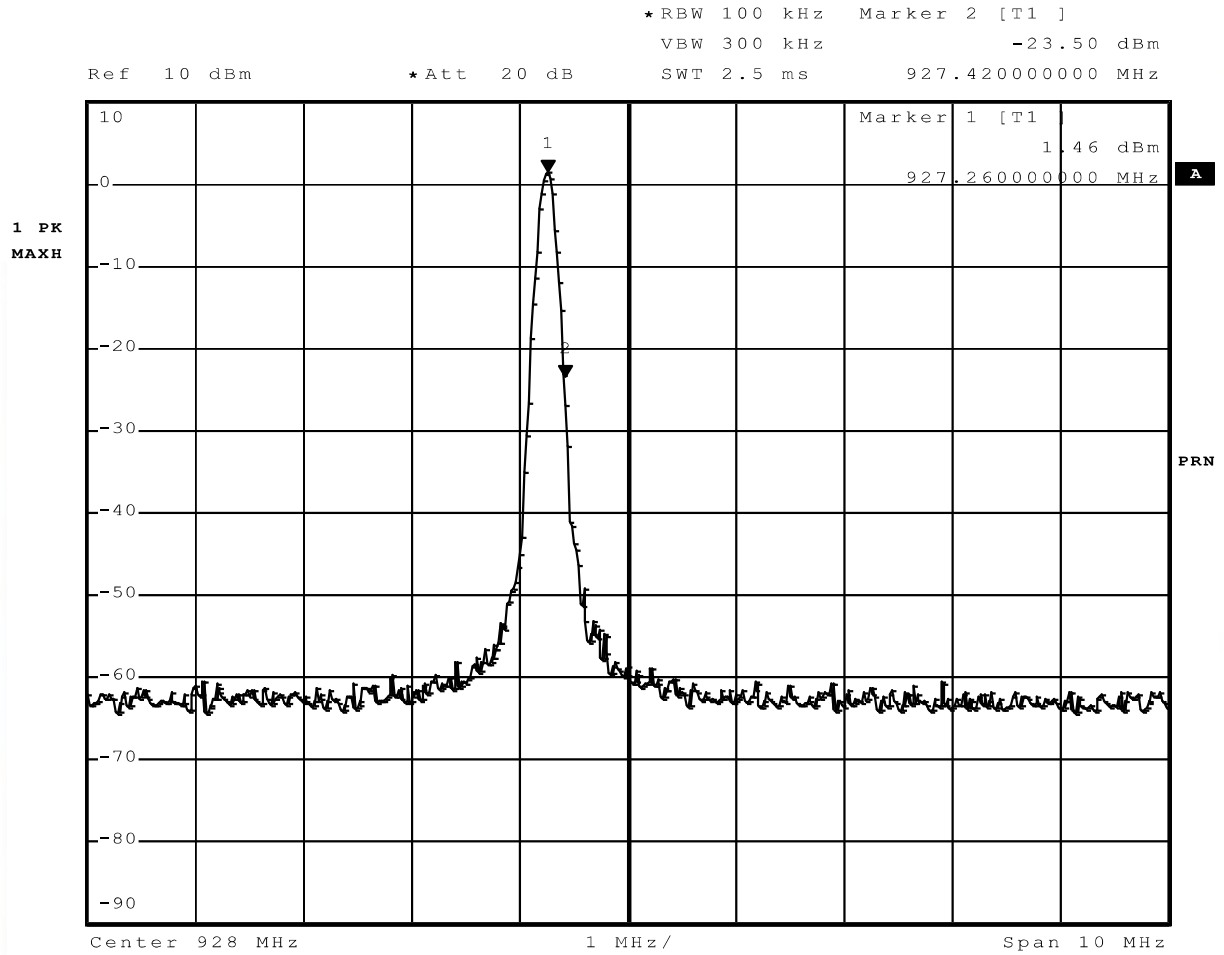
CMC Centro Misure Compatibilità S.r.l.







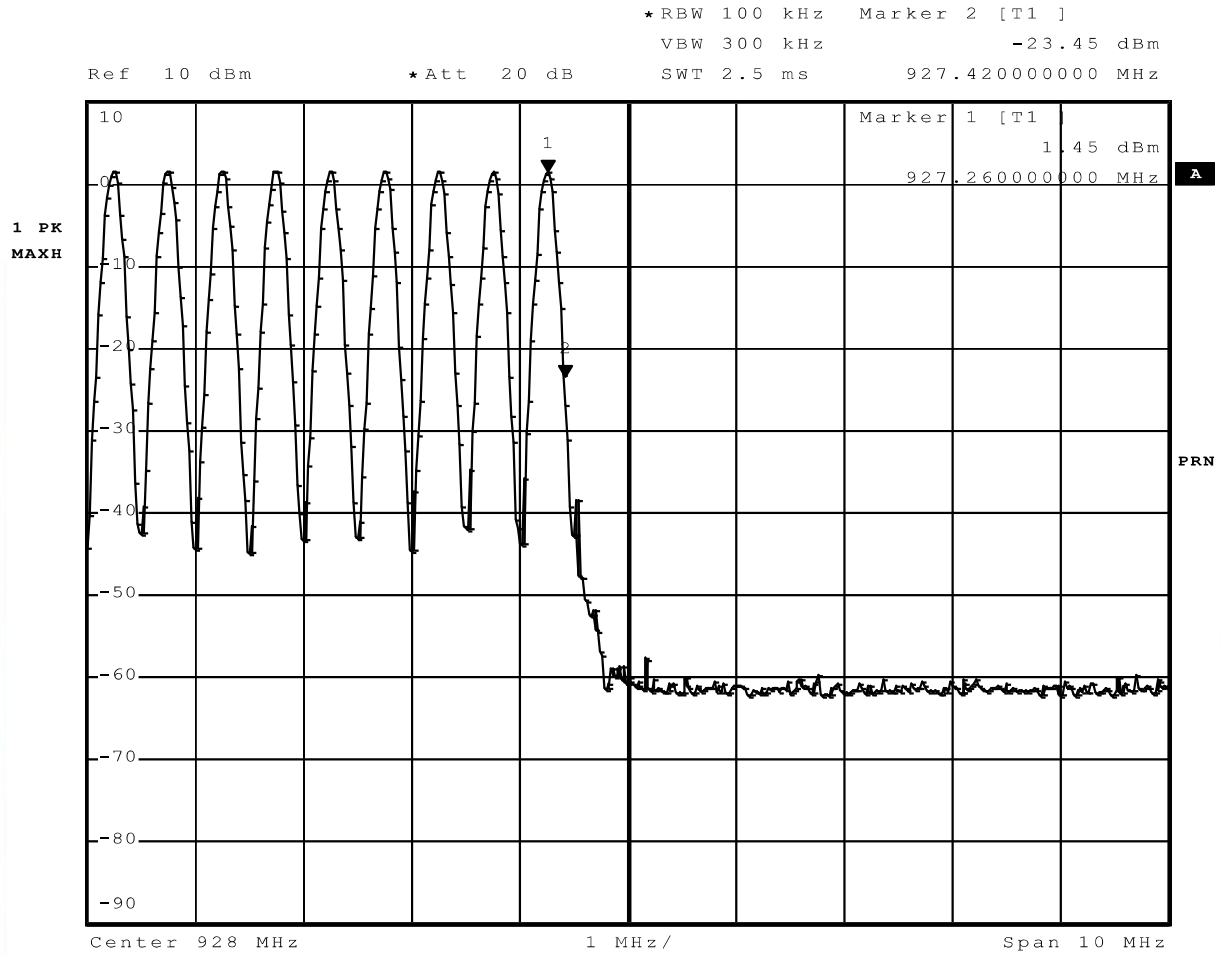
### G10144107



CMC Centro Misure Compatibilità S.r.l.



### G10144108



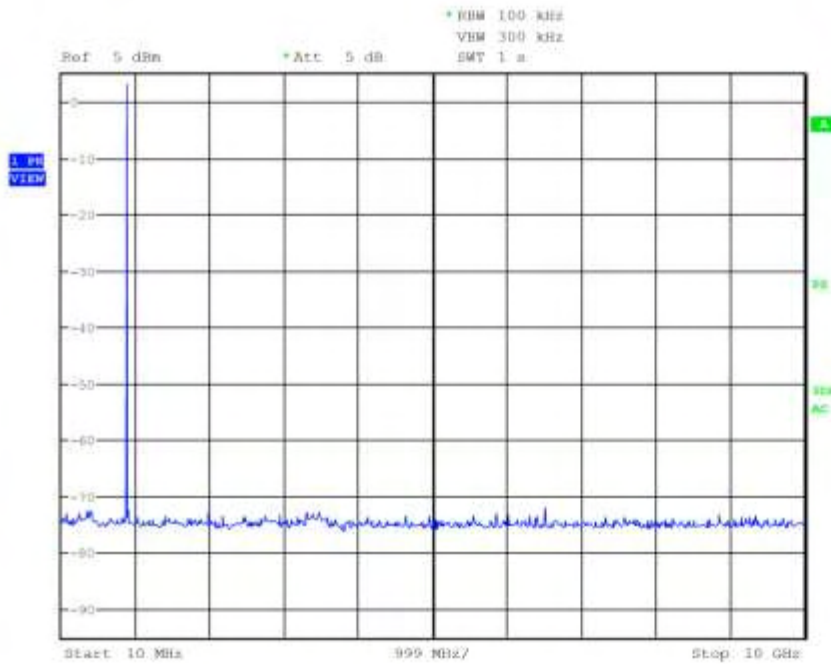
CMC Centro Misure Compatibilità S.r.l.





G10144113

Meas Type Emission 10-10000MHz  
Equipment under Test  
Manufacturer  
OP Condition Fmin  
Operator Bertezolo 10144113  
Test Spec

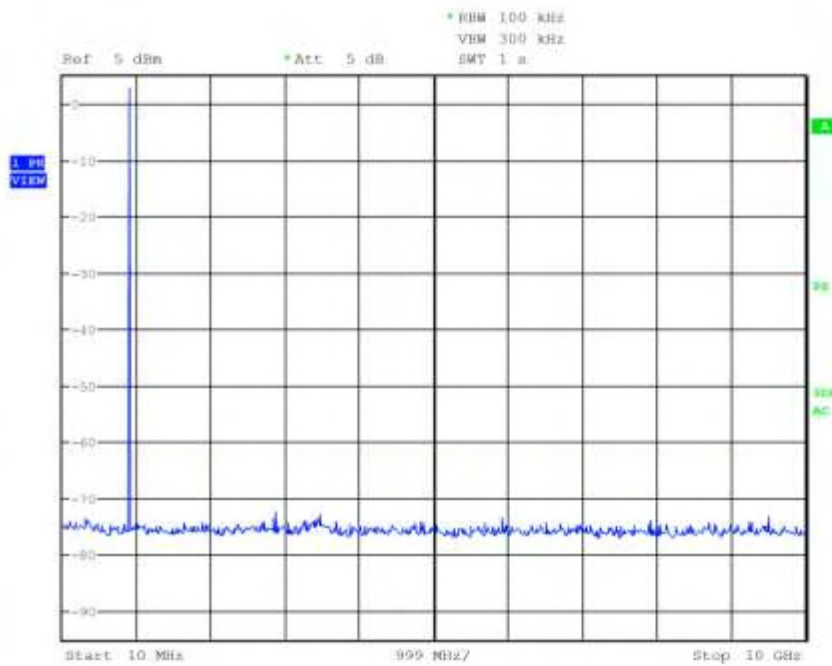


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G10144114

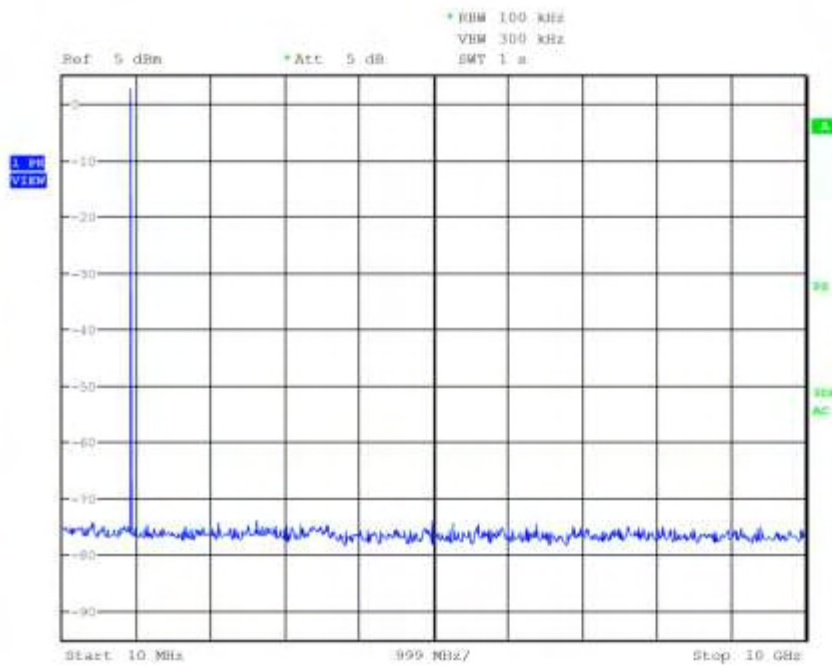
**Meas Type** Emission 10-10000MHz  
**Equipment under Test**  
**Manufacturer**  
**OP Condition** Fmed  
**Operator** Bertezolo 10144114  
**Test Spec**





G10144115

**Meas Type** Emission 10-10000MHz  
**Equipment under Test**  
**Manufacturer**  
**OP Condition** Fmax  
**Operator** Bertezolo 10144115  
**Test Spec**

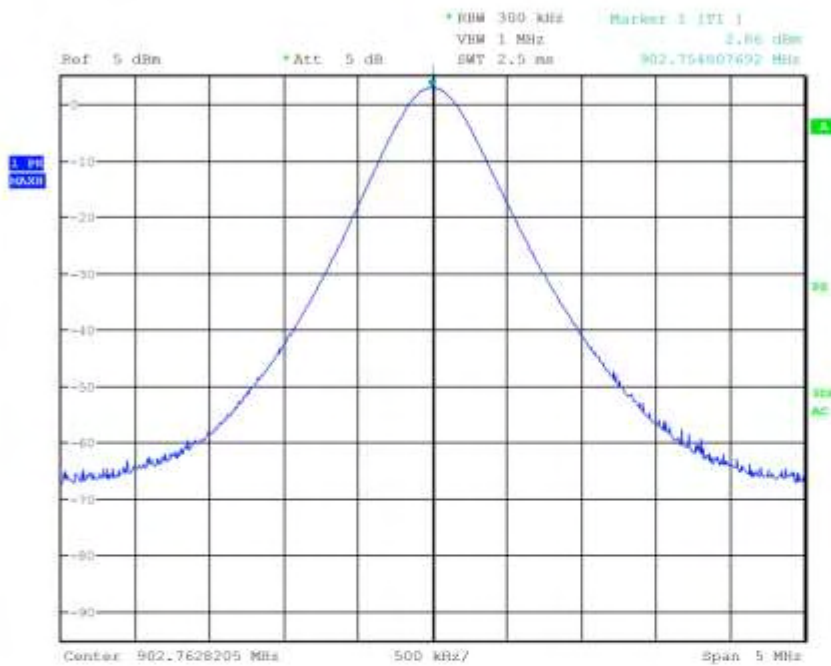


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G10144116

**Meas Type**  
**Equipment under Test**  
**Manufacturer**  
**OP Condition** Fmin  
**Operator** Bertezolo 10144116  
**Test Spec**



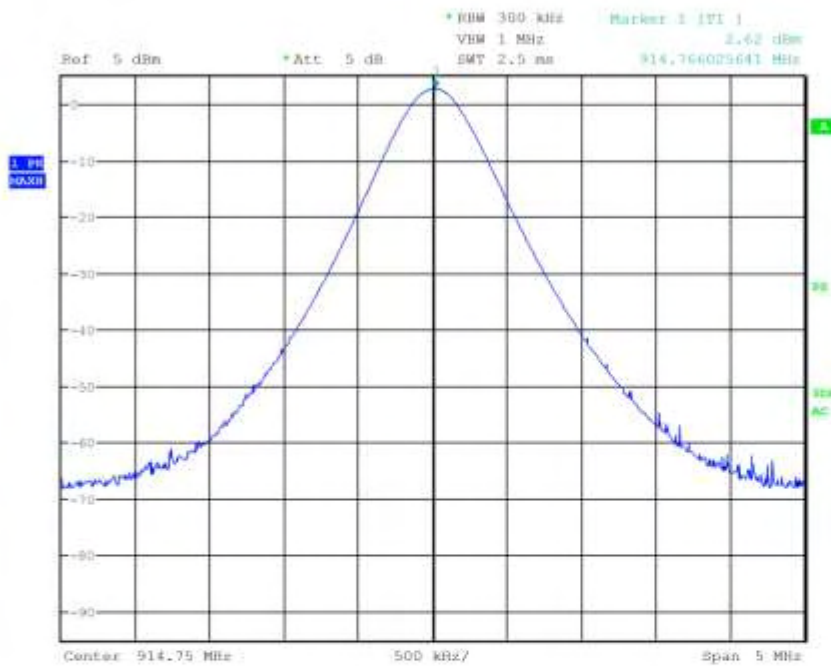
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G10144117

**Meas Type**  
**Equipment under Test**  
**Manufacturer**  
**OP Condition** Fmed  
**Operator** Bertezolo 10144117  
**Test Spec**

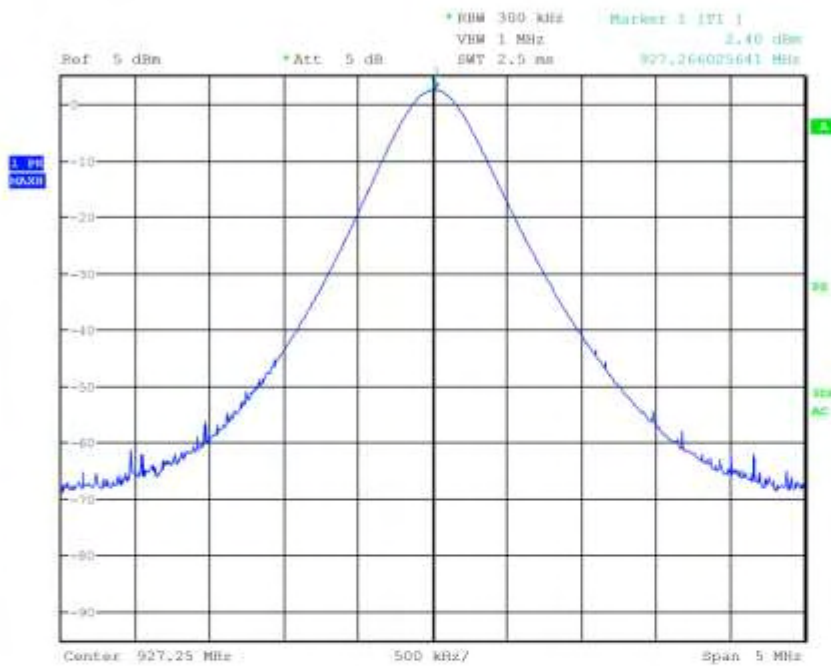


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G10144118

**Meas Type**  
**Equipment under Test**  
**Manufacturer**  
**OP Condition** Fmax  
**Operator** Bertezolo 10144118  
**Test Spec**



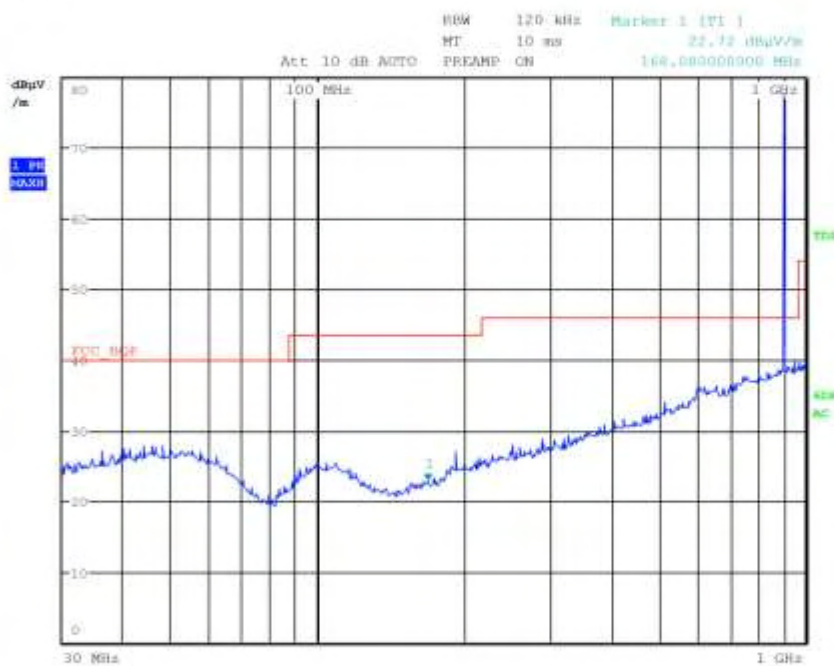
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G10144121

**Meas Type** Emission 30-1000MHz  
**Equipment under Test**  
**Manufacturer**  
**OP Condition** In TX-Ch 0  
**Operator** Gandini 10144121  
**Test Spec**  
Horiz



**Final Measurement**

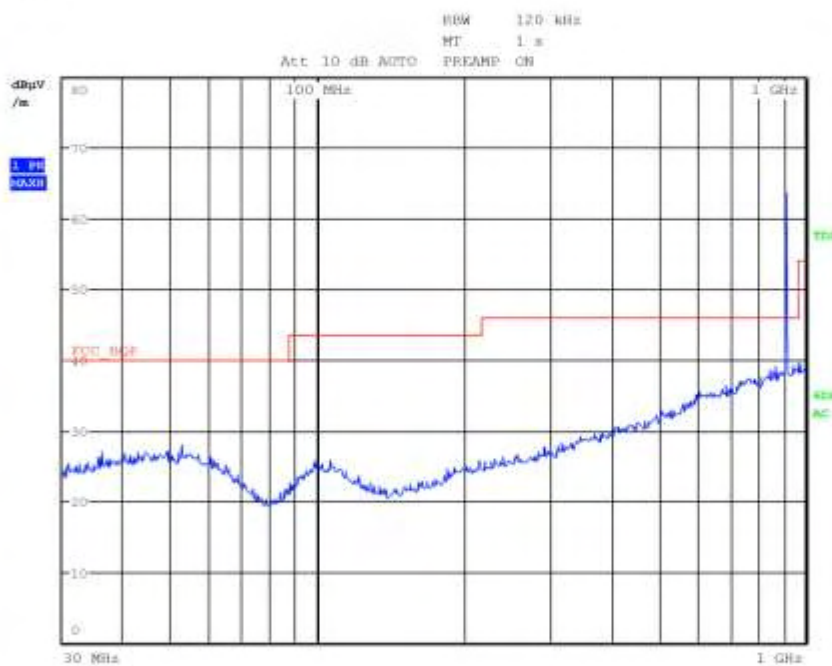
Meas Time: 1 s  
Margin: 6 dB  
Subranges: 1

CMC Centro Misure Compatibilità S.r.l.



G10144122

**Meas Type** Emission 30-1000MHz  
**Equipment under Test**  
**Manufacturer**  
**OP Condition** In TX-Ch 25  
**Operator** Gandini 10144122  
**Test Spec**  
Horiz



### Final Measurement

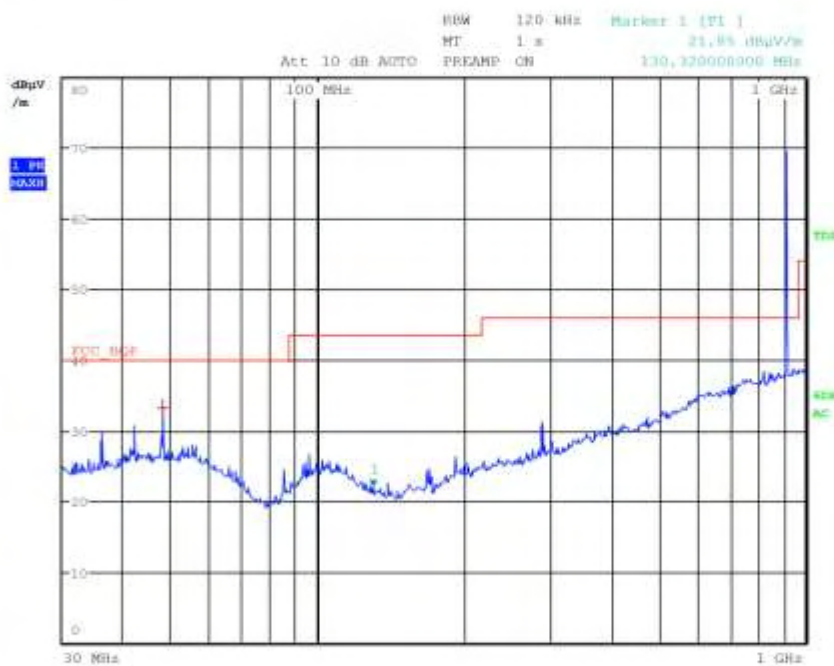
Meas Time: 1 s  
Margin: 6 dB  
Subranges: 1

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G10144123

**Meas Type** Emission 30-1000MHz  
**Equipment under Test**  
**Manufacturer**  
**OP Condition** In TX-Ch 25  
**Operator** Gandini 10144123  
**Test Spec**  
Vert



**Final Measurement**

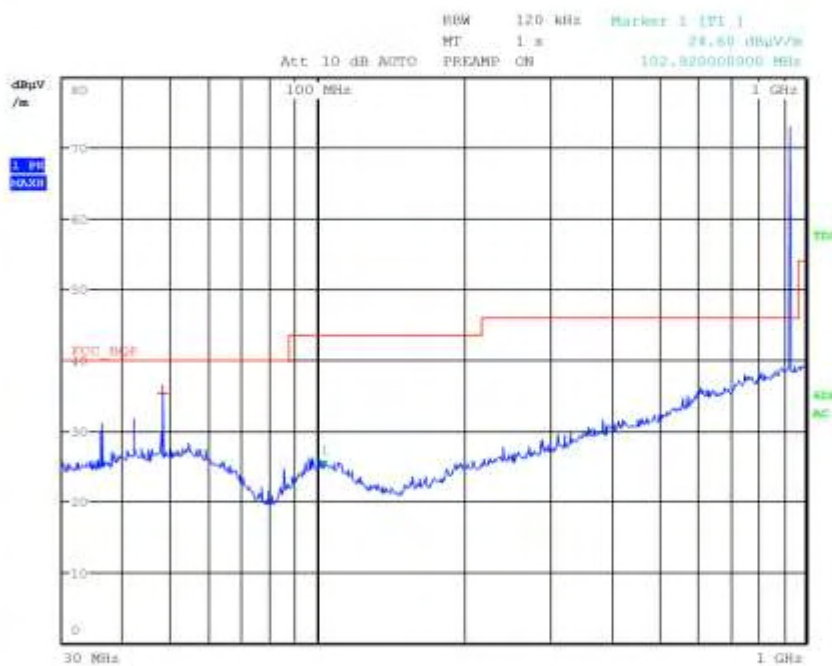
Meas Time: 1 s  
Margin: 6 dB  
Subranges: 1

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G10144124

**Meas Type** Emission 30-1000MHz  
**Equipment under Test**  
**Manufacturer**  
**OP Condition** In TX-Ch 49  
**Operator** Gandini 10144124  
**Test Spec**  
Vert



**Final Measurement**

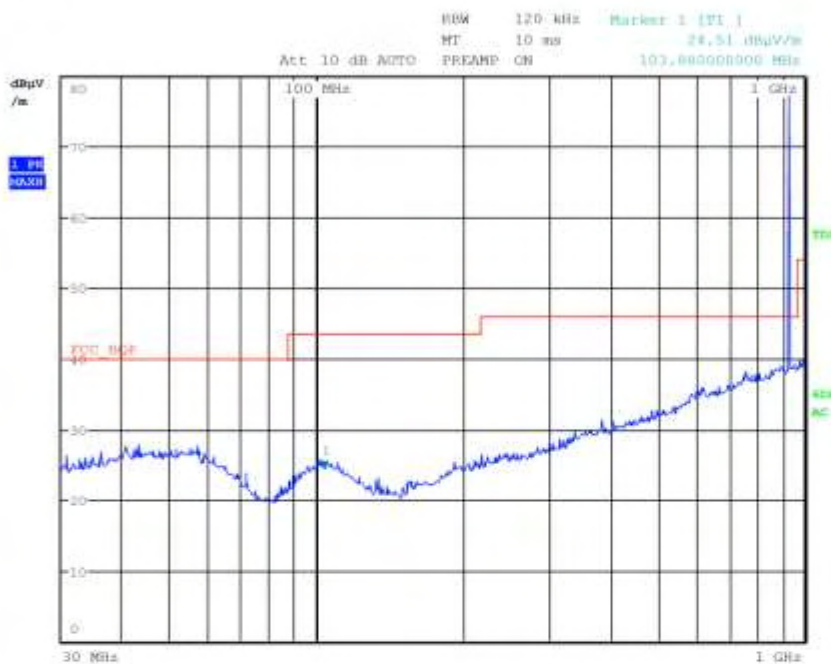
Meas Time: 1 s  
Margin: 6 dB  
Subranges: 1

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G10144125

**Meas Type** Emission 30-1000MHz  
**Equipment under Test**  
**Manufacturer**  
**OP Condition** In TX-Ch 49  
**Operator** Gandini 10144125  
**Test Spec**  
**Horiz**



### Final Measurement

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

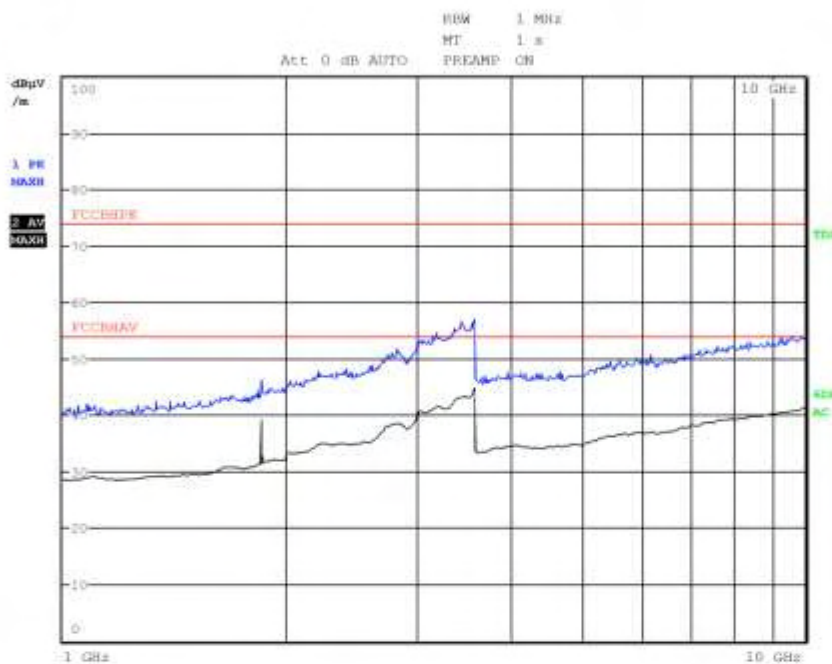
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G10144126

**Meas Type** Emission 1000-10000MHz  
**Equipment under Test**  
**Manufacturer**  
**OP Condition** In TX-Ch 49  
**Operator** Gandini 10144126  
**Test Spec**  
Horiz



### Final Measurement

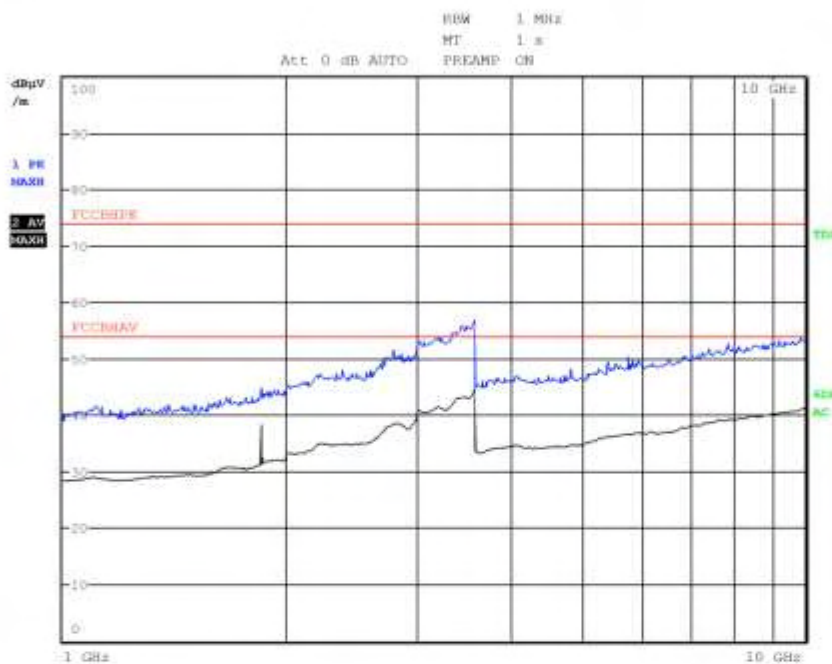
Meas Time: 1 s  
Margin: 6 dB  
Subranges: 0

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G10144127

**Meas Type** Emission 1000-10000MHz  
**Equipment under Test**  
**Manufacturer**  
**OP Condition** In TX-Ch 49  
**Operator** Gandini 10144127  
**Test Spec**  
Vert



### Final Measurement

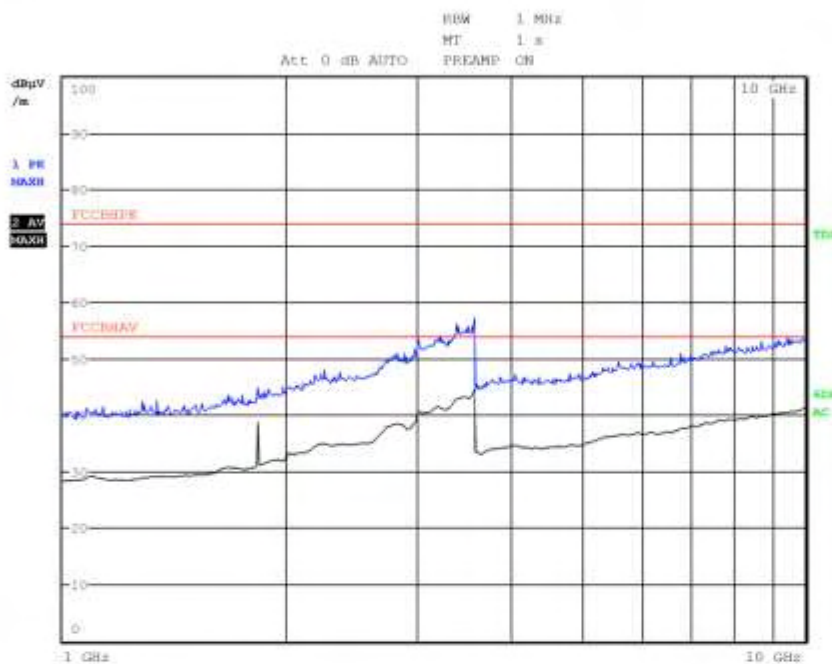
Meas Time: 1 s  
Margin: 6 dB  
Subranges: 0

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G10144128

**Meas Type** Emission 1000-10000MHz  
**Equipment under Test**  
**Manufacturer**  
**OP Condition** In TX-Ch 25  
**Operator** Gandini 10144128  
**Test Spec**  
Vert



**Final Measurement**

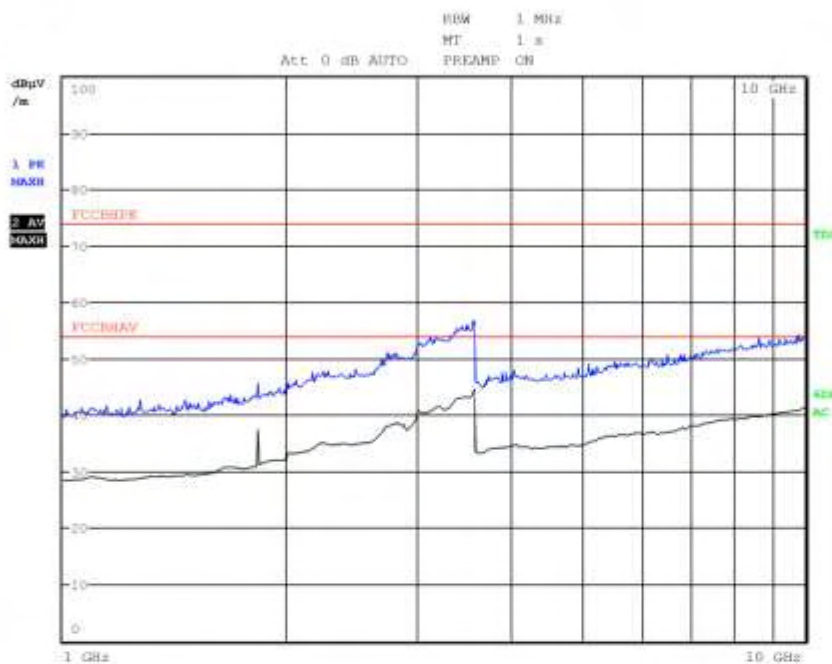
Meas Time: 1 s  
Margin: 6 dB  
Subranges: 0

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G10144129

**Meas Type** Emission 1000-10000MHz  
**Equipment under Test**  
**Manufacturer**  
**OP Condition** In TX-Ch 25  
**Operator** Gandini 10144129  
**Test Spec**  
Horiz



**Final Measurement**

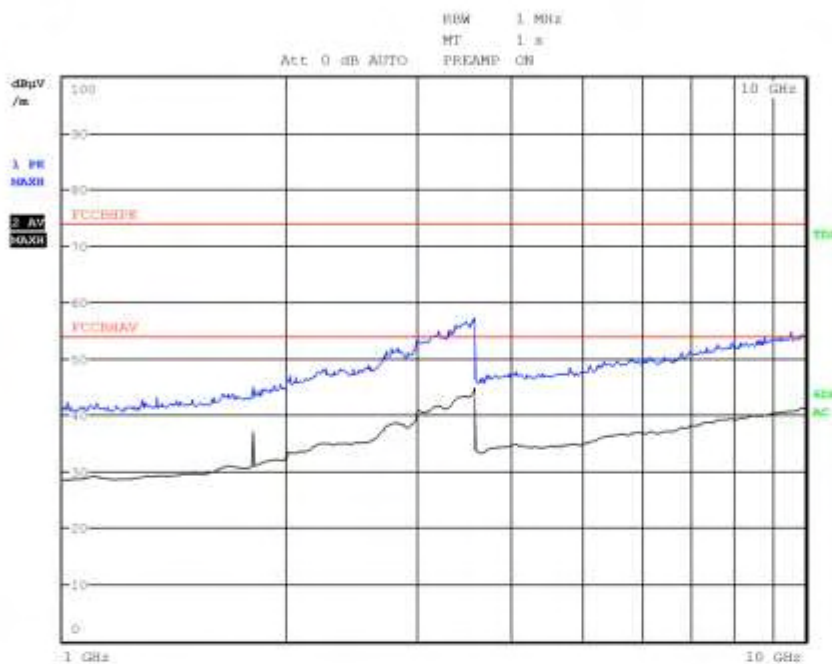
Meas Time: 1 s  
Margin: 6 dB  
Subranges: 0

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G10144130

**Meas Type** Emission 1000-10000MHz  
**Equipment under Test**  
**Manufacturer**  
**OP Condition** In TX-Ch 0  
**Operator** Gandini 10144130  
**Test Spec**  
Horiz



### Final Measurement

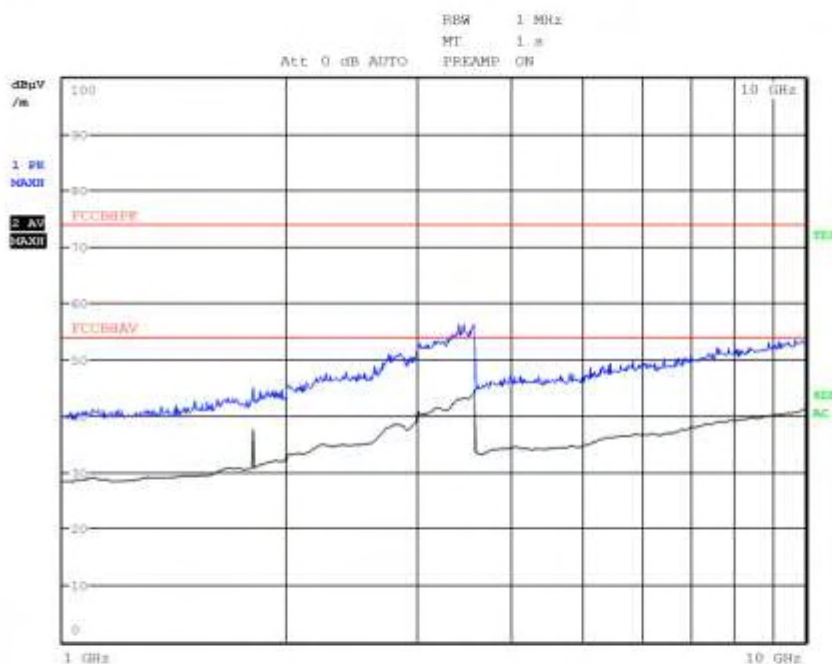
Meas Time: 1 s  
Margin: 6 dB  
Subranges: 0

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G10144131

**Meas Type** Emission 1000-10000MHz  
**Equipment under Test**  
**Manufacturer**  
**OP Condition** In TX-Ch 0  
**Operator** Gandini 10144131  
**Test Spec**  
Vert



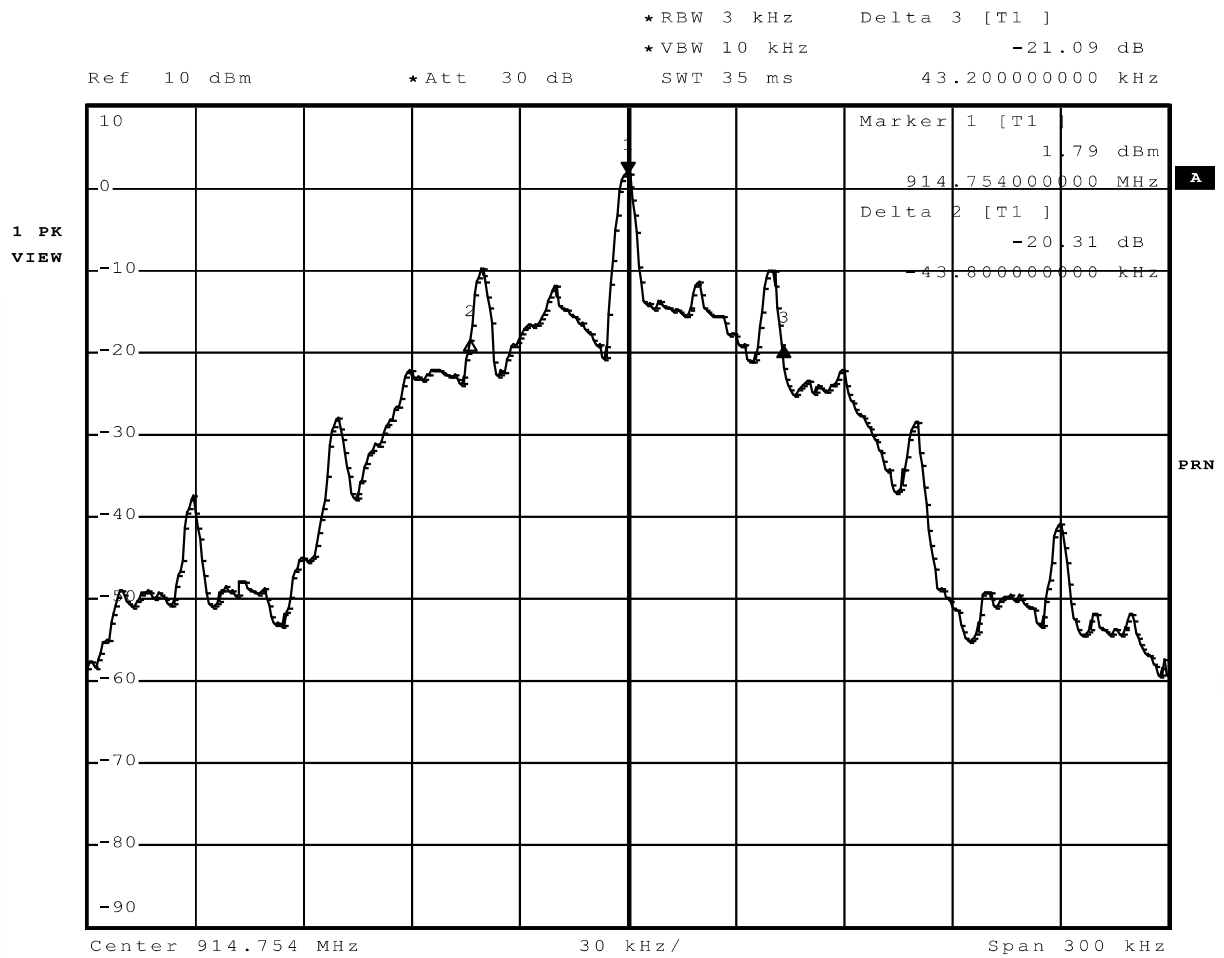
**Final Measurement**

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

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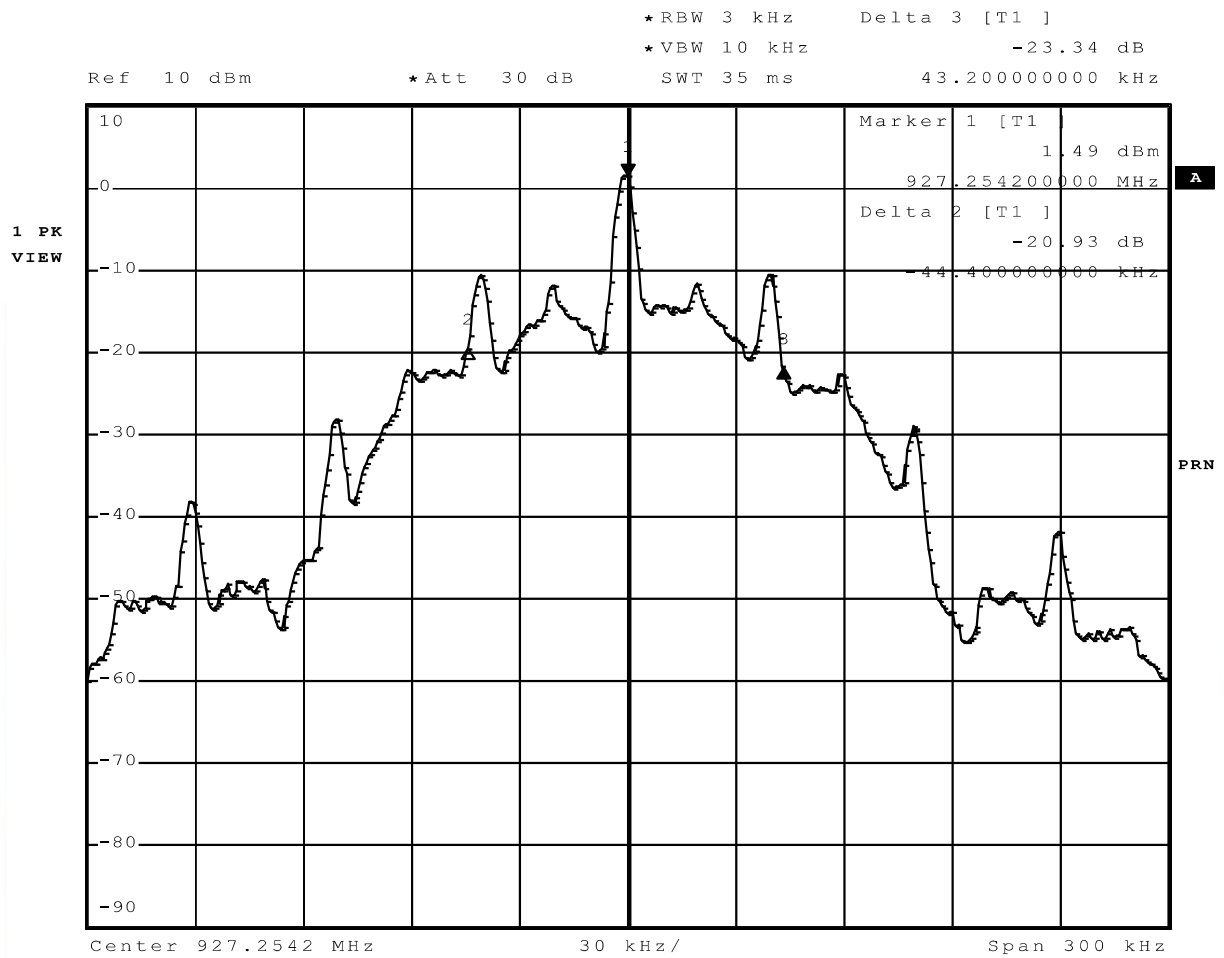
### G10144180



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### G10144181



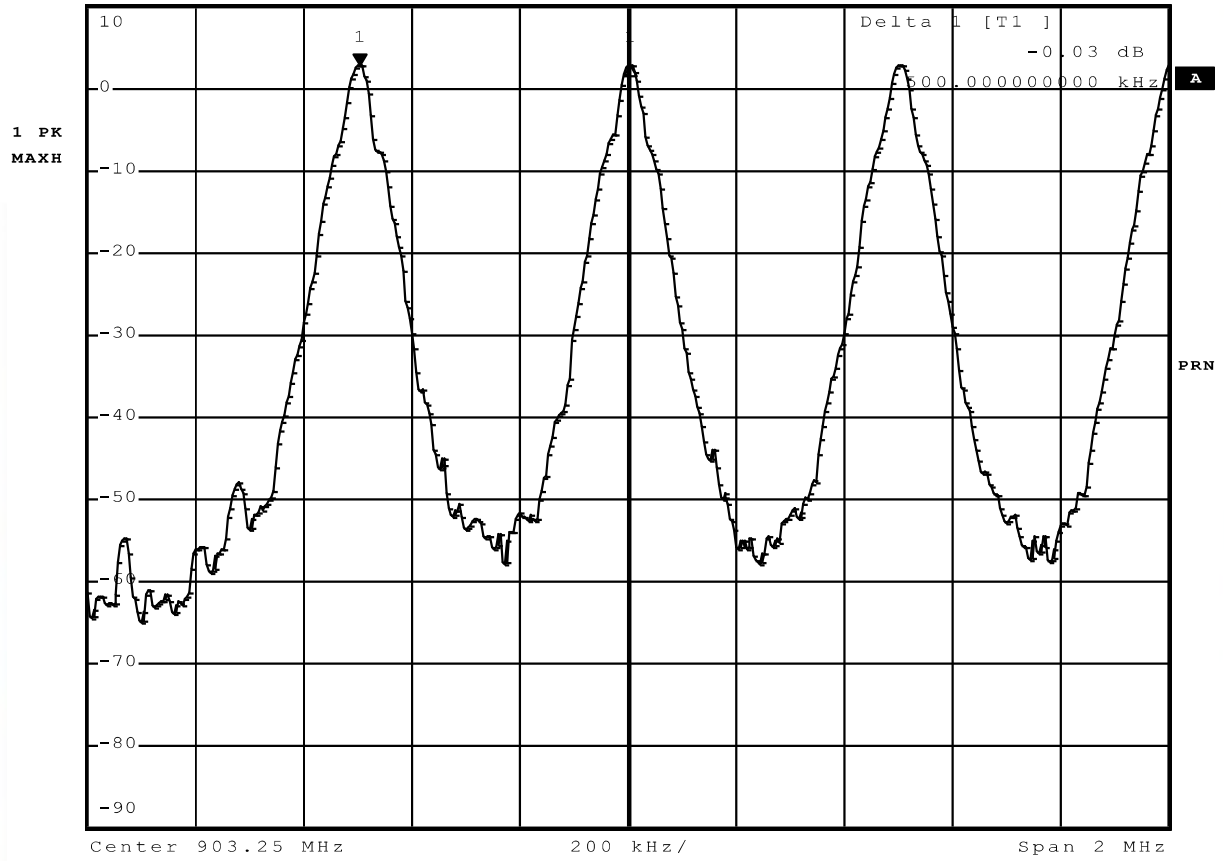
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### G10144182

\*RBW 30 kHz      Marker 1 [T1 ]  
\*VBW 100 kHz      2.89 dBm  
Ref 10 dBm      \*Att 30 dB      SWT 2.5 ms      902.754000000 MHz



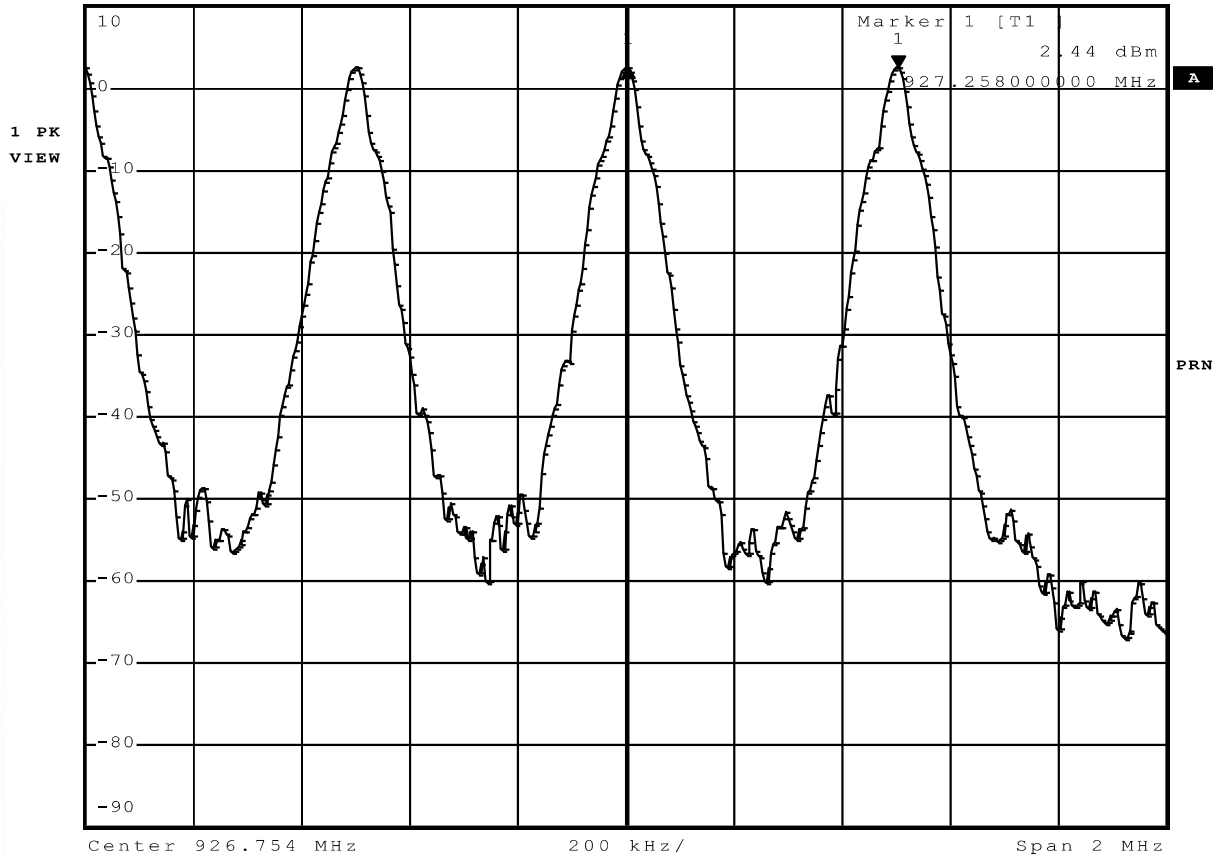
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### G10144183

\*RBW 30 kHz    Delta 1 [T1 ]  
\*VBW 100 kHz    0.07 dB

Ref 10 dBm    \*Att 30 dB    SWT 2.5 ms    -500.000000000 kHz



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### G10144184

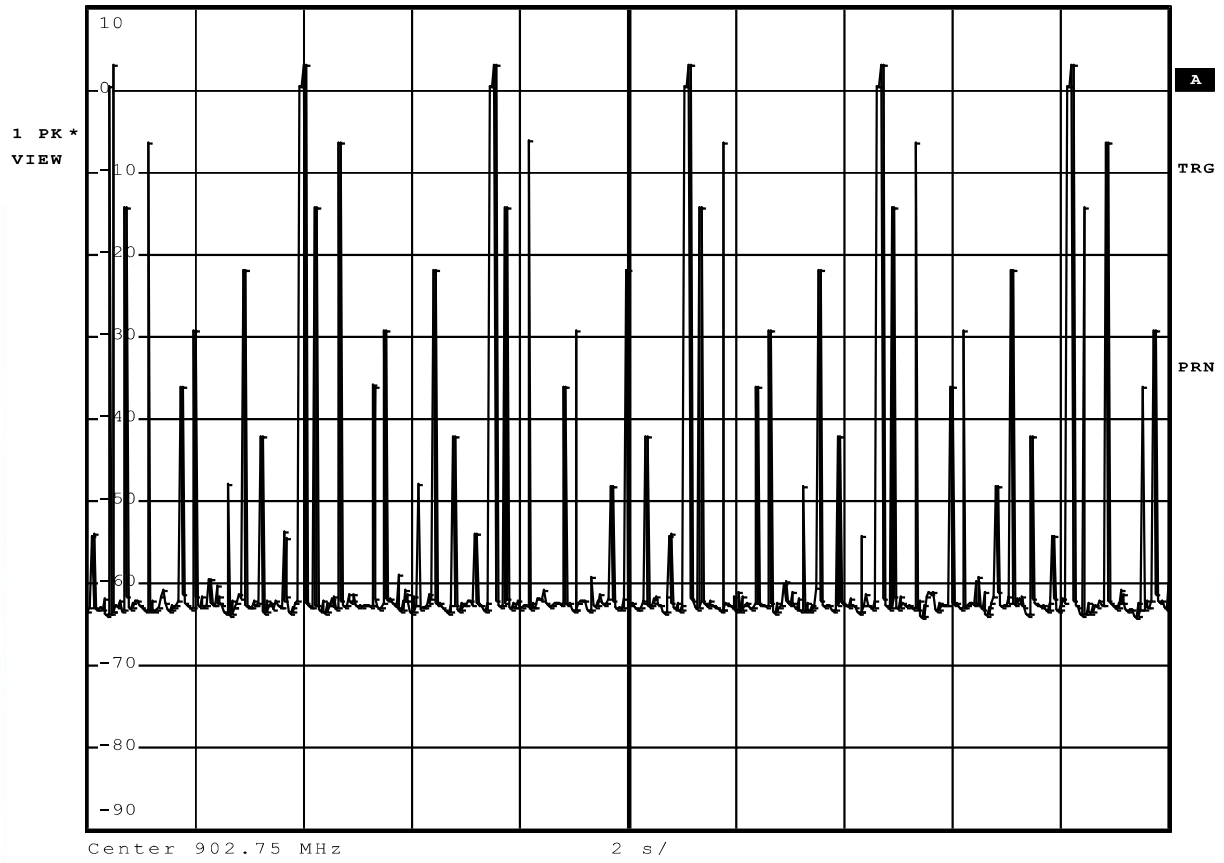
RBW 1 MHz

\* VBW 3 MHz

Ref 10 dBm

\* Att 20 dB

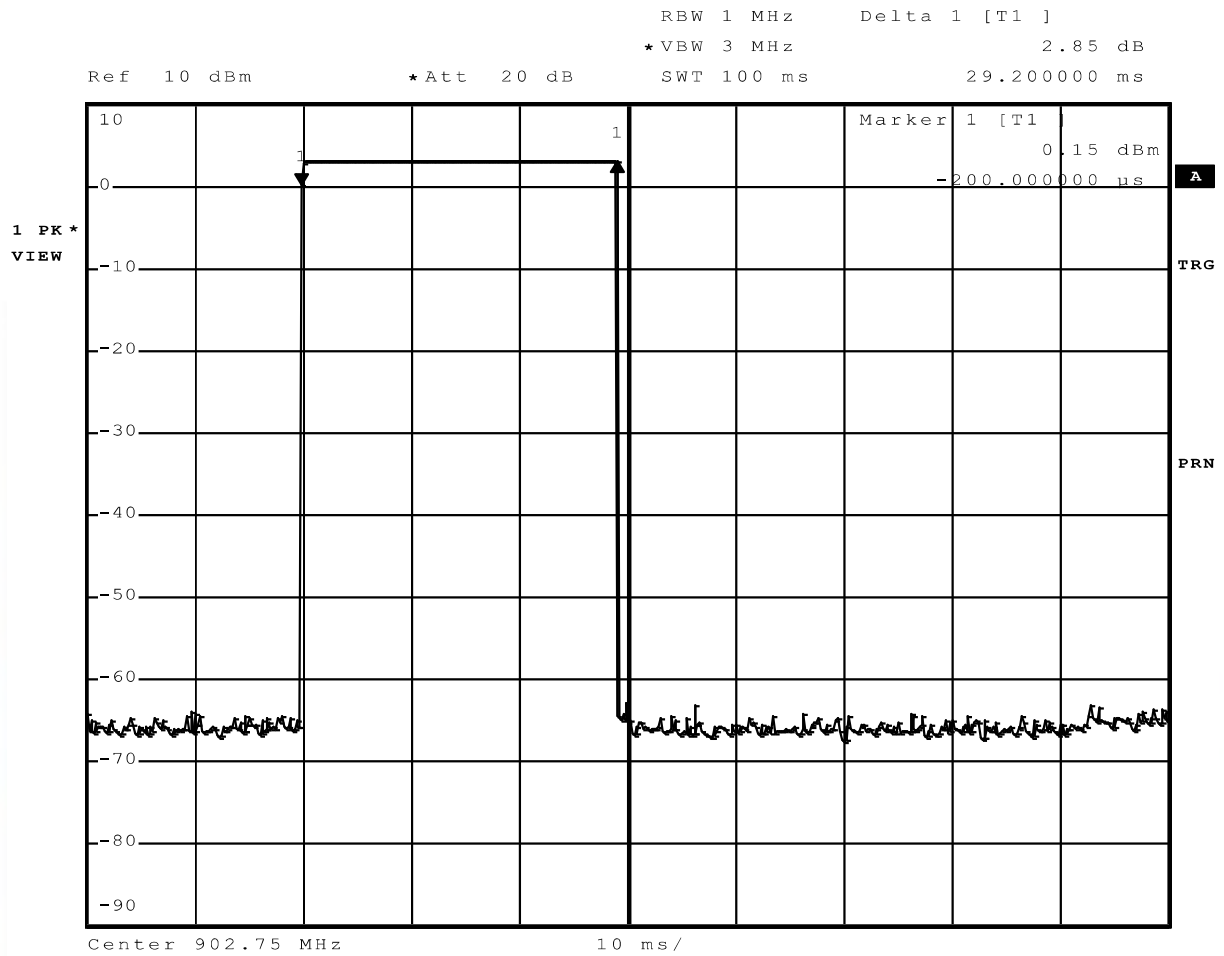
SWT 20 s



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### G10144185



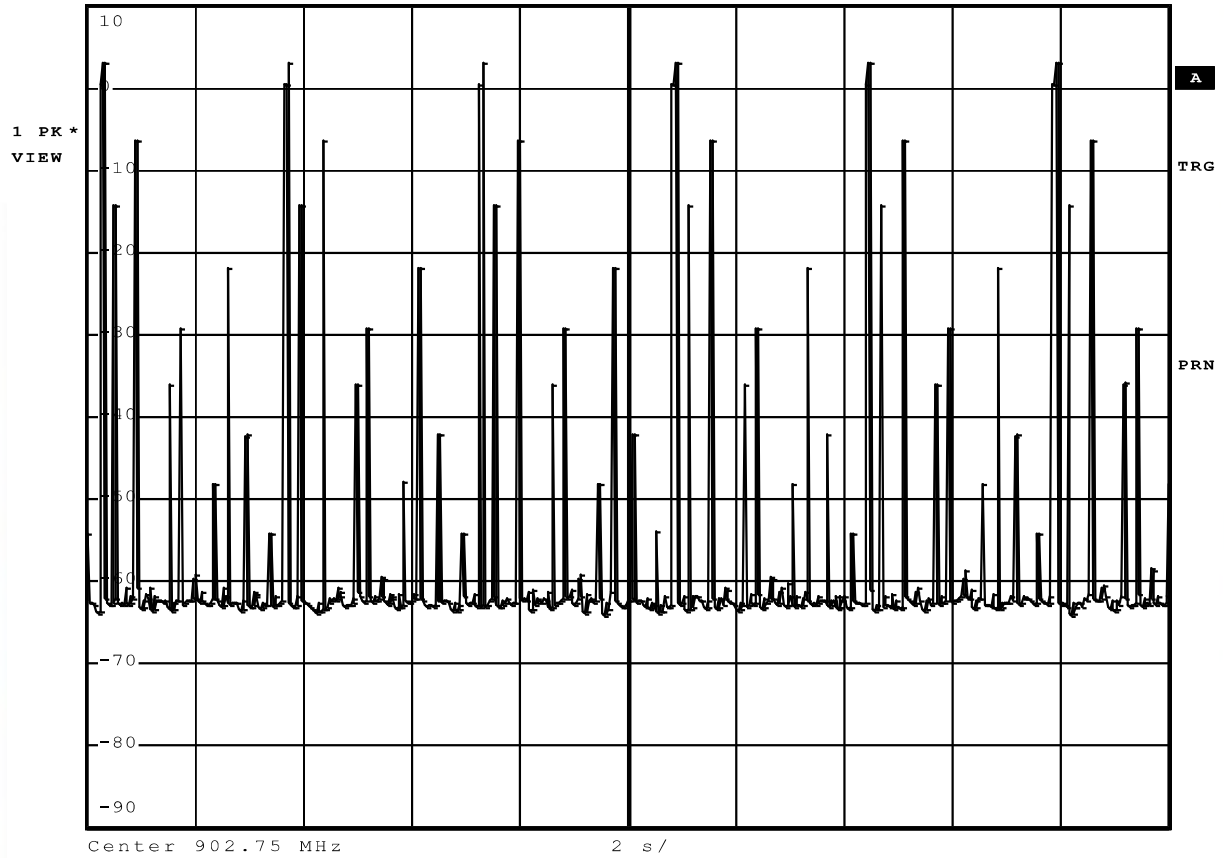
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### G10144186

RBW 1 MHz  
\* VBW 3 MHz

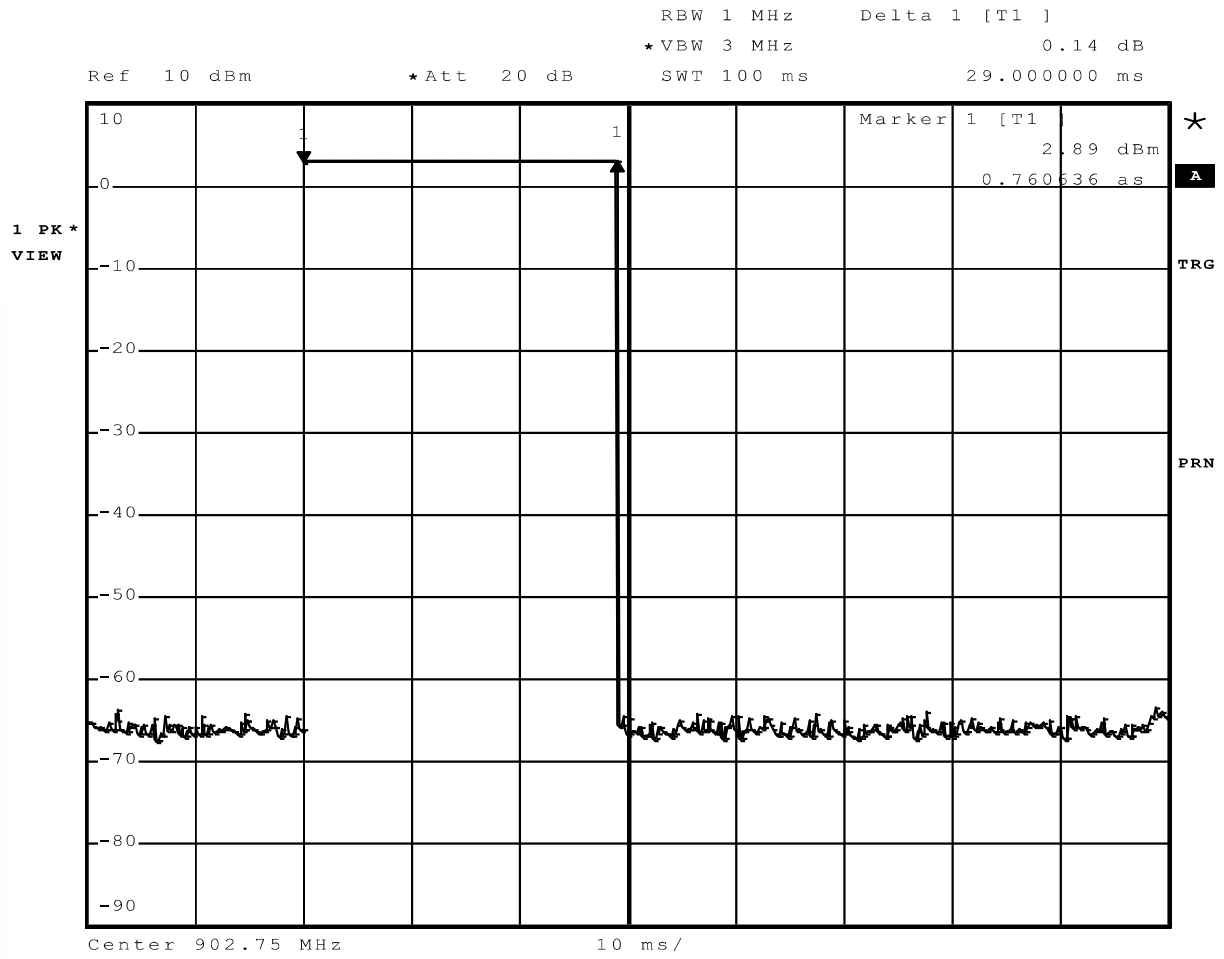
Ref 10 dBm      \* Att 20 dB      SWT 20 s



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### G10144187



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### G10144188

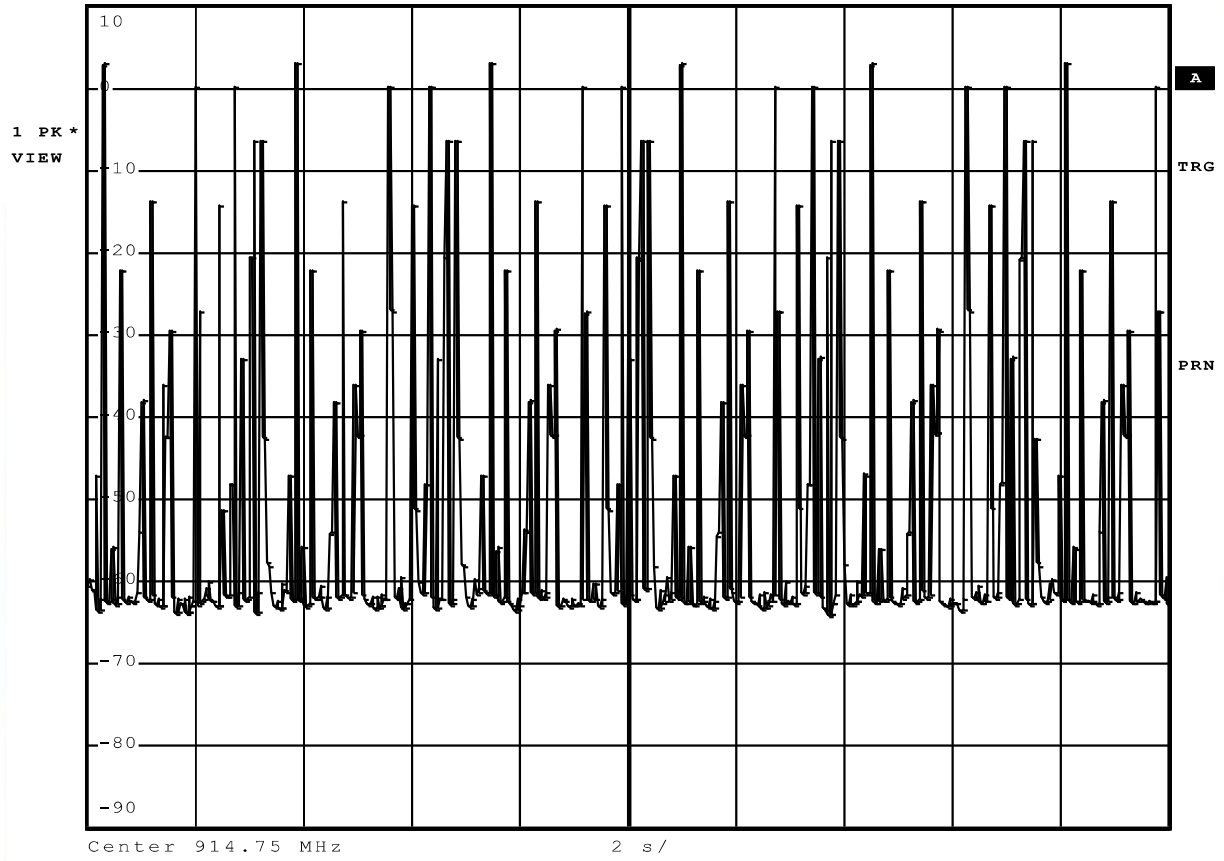
RBW 1 MHz

\* VBW 3 MHz

Ref 10 dBm

\* Att 20 dB

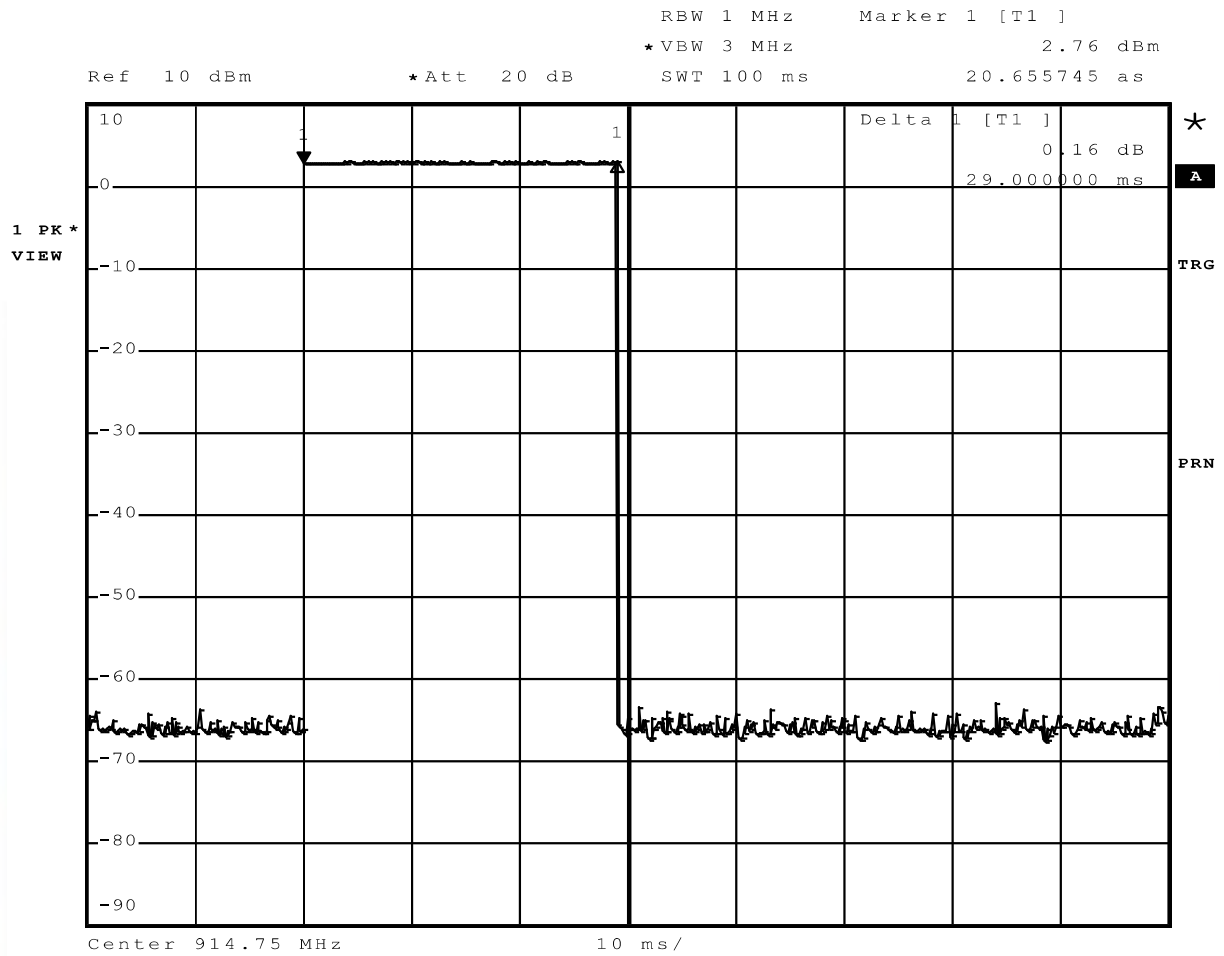
SWT 20 s



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### G10144189



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