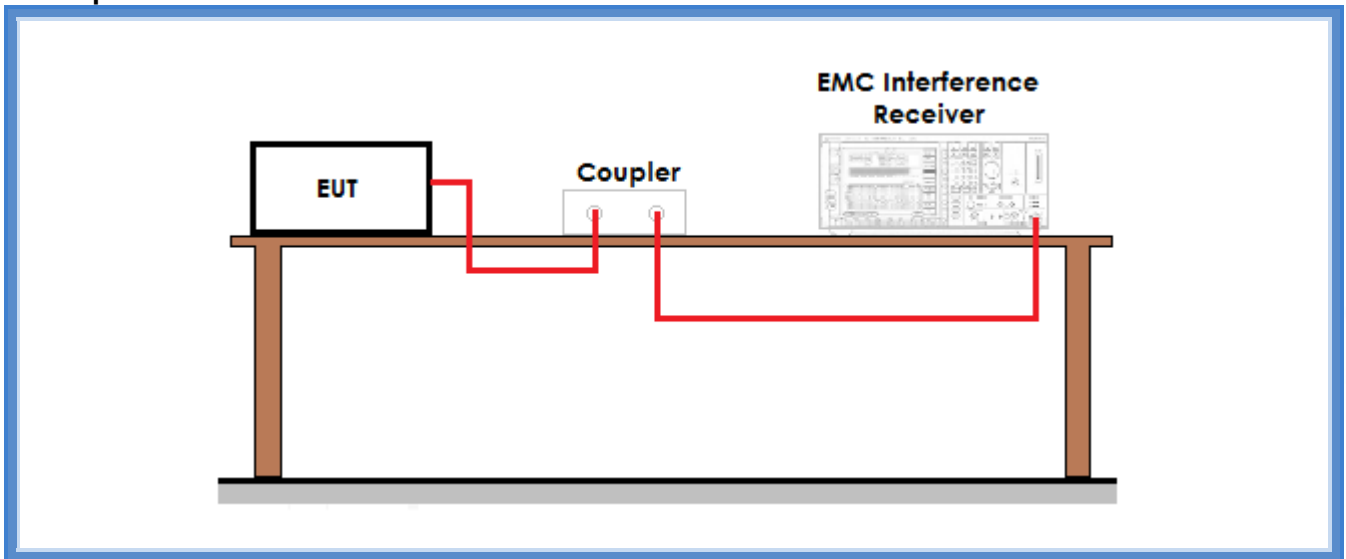




## Setup



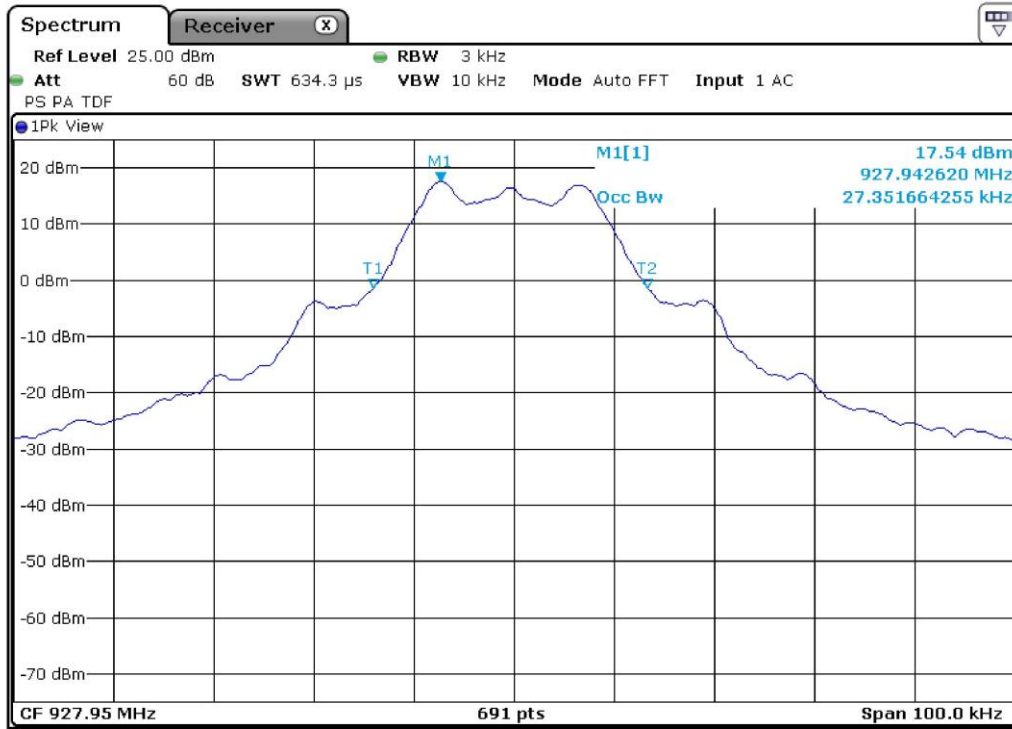
## Result

Frequency (MHz)	Graphs	99% bandwidth (kHz)	Results
915,05	G15007227	26,194	Complies
921,50	G15007230	26,339	Complies
927,95	G15007220	27,352	Complies



## Graphs

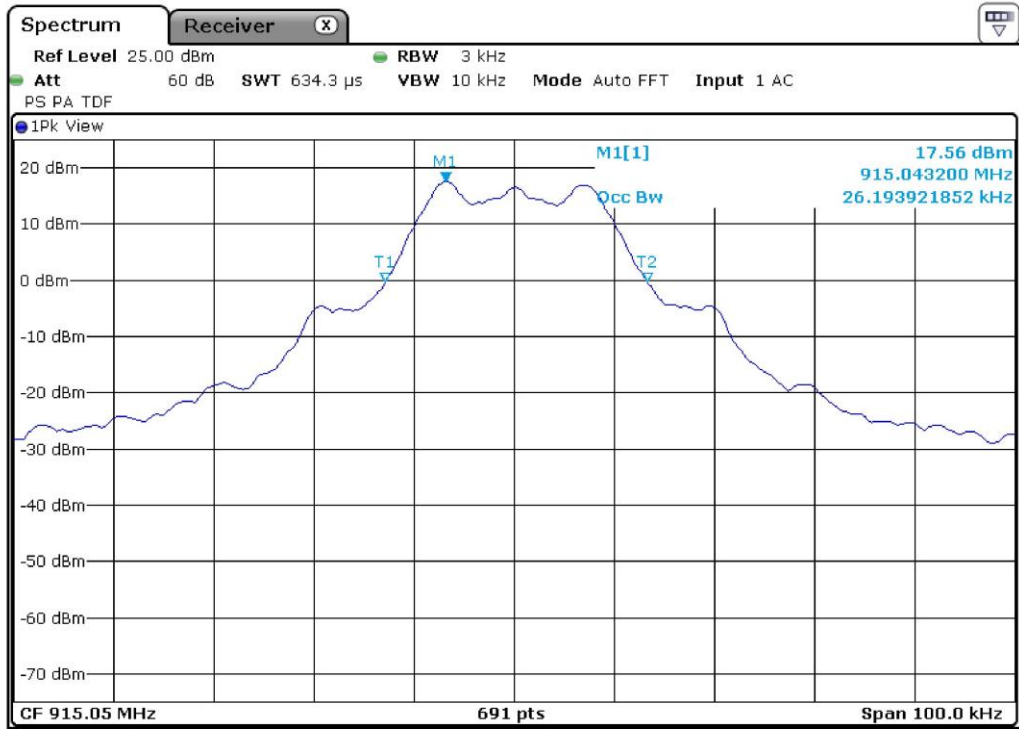
G15007220



Gandini 15007220-F max



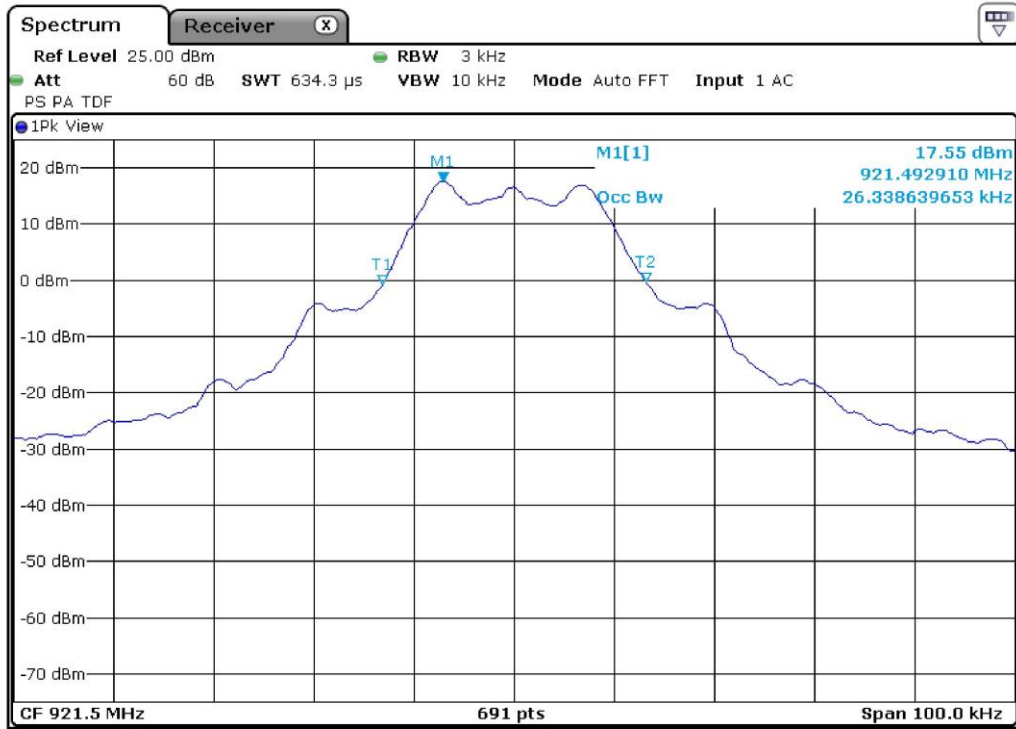
G15007227



Gandini 15007227-F min



G15007230



Gandini 15007230-F mid

**Result:** The requirements are met



## 11.6 Channel separation

### Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part 15.247
- DA 00-705
- RSS 210 Annex 8
- Internal procedure PM001
- See clause 4 of this test report

### Test configuration and test method

*Test site:*  
Laboratory

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

### EUT exercising

See clause 4 of this test report

### Test equipment used

CMC S227  
Measurement uncertainty: See clause 7 of this test report

### Test specification

See FCC Part 15.247

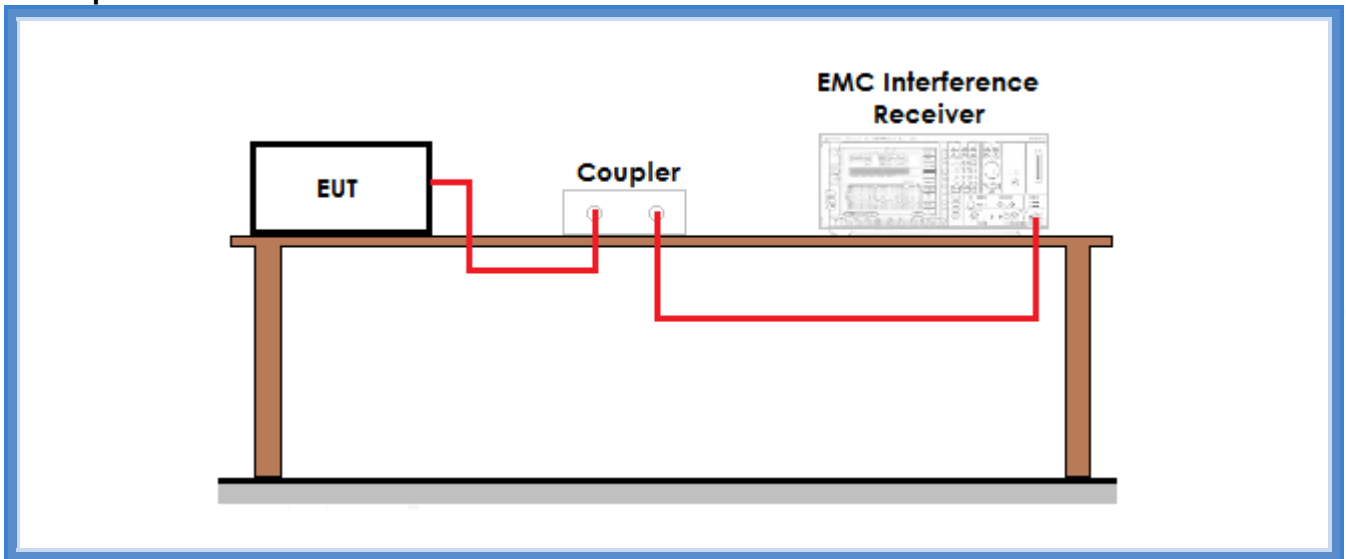
### Environmental conditions

Temperature (°C)	Atmospheric pressure (kPa)	Relative humidity (%)
20	100	42

**Acceptance limits:** Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400–2483,5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW



## Setup



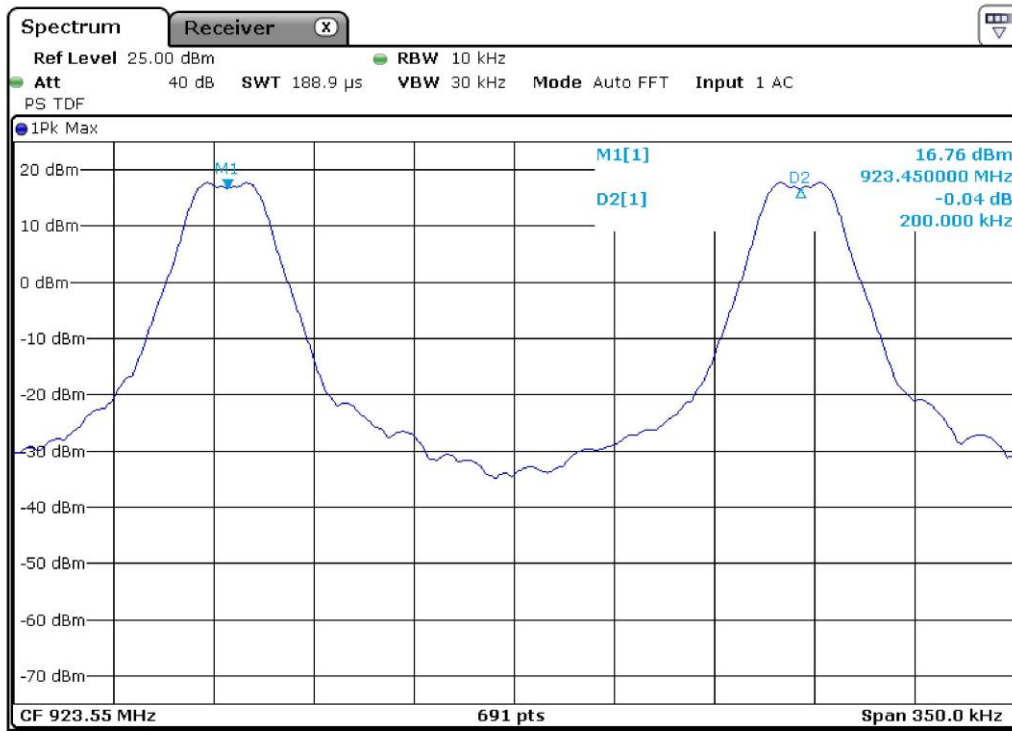
## Result

Frequency band (MHz)	Graphs	Channel separation (kHz)	Results
902 – 928	G15007234	200	Complies



## Graphs

G15007234



Gandini 15007234-F hopping

**Result:** The requirements are met



## 11.7 Number of hopping channels

### Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part 15.247
- DA 00-705
- RSS 210 Annex 8
- Internal procedure PM001
- See clause 4 of this test report

### Test configuration and test method

*Test site:*  
Laboratory

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

### EUT exercising

See clause 4 of this test report

### Test equipment used

CMC S227  
Measurement uncertainty: See clause 7 of this test report

### Test specification

See FCC Part 15.247

### Environmental conditions

Temperature (°C)	Atmospheric pressure (kPa)	Relative humidity (%)
20	101	42

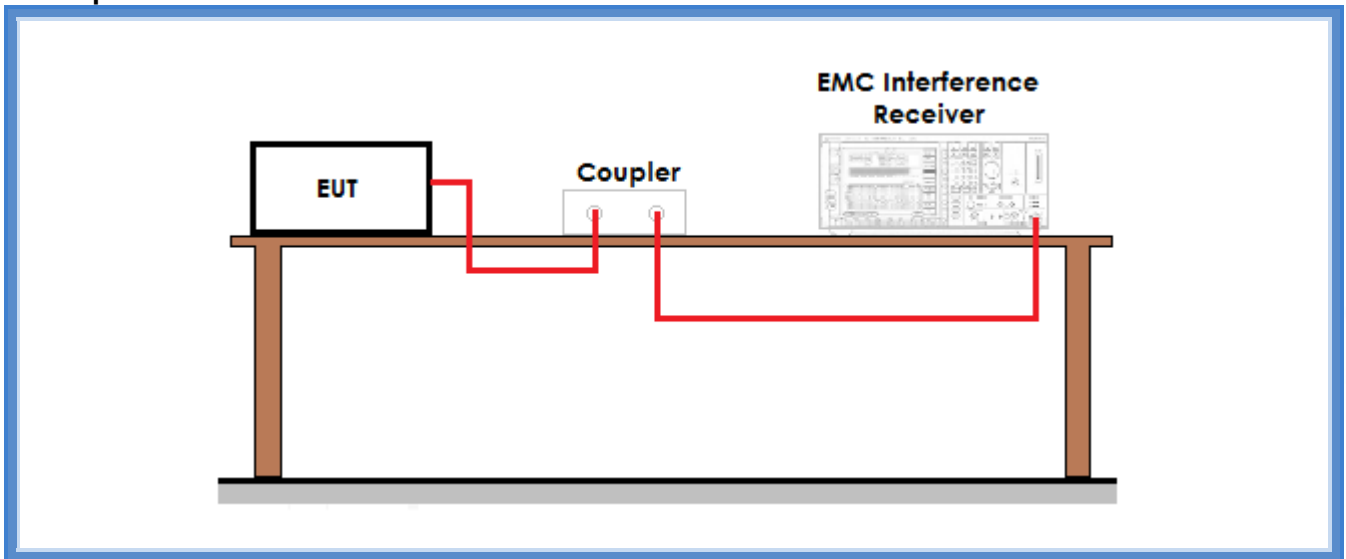
### Acceptance limits:

For frequency hopping systems operating in the 902–928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies. If the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies.





## Setup



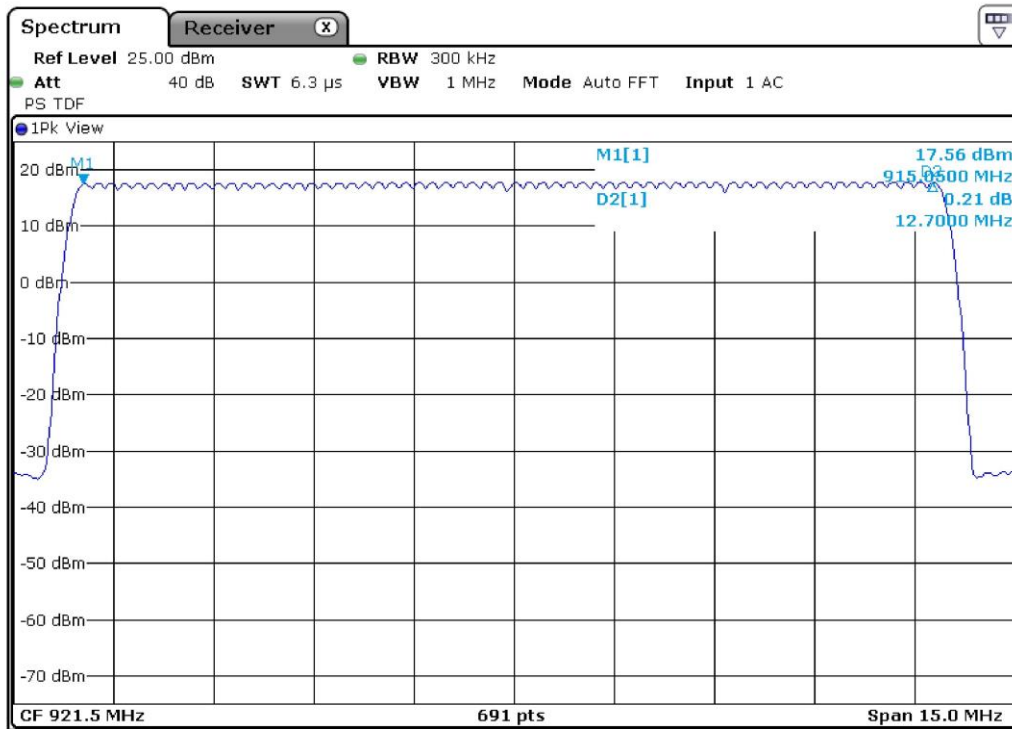
## Result

<i>Graphs</i>	<i>Number of hopping channels</i>	<i>Results</i>
G15007233	64	Complies



## Graphs

G15007233



Gandini 15007233-F hopping

**Result:** The requirements are met



## 11.8 Time of occupancy

### Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part 15.247
- DA 00-705
- RSS 210 Annex 8
- Internal procedure PM001
- See clause 4 of this test report

### Test configuration and test method

*Test site:*  
Laboratory

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

### EUT exercising

See clause 4 of this test report

### Test equipment used

CMC S227  
Measurement uncertainty: See clause 7 of this test report

### Test specification

See FCC Part 15.247

### Environmental conditions

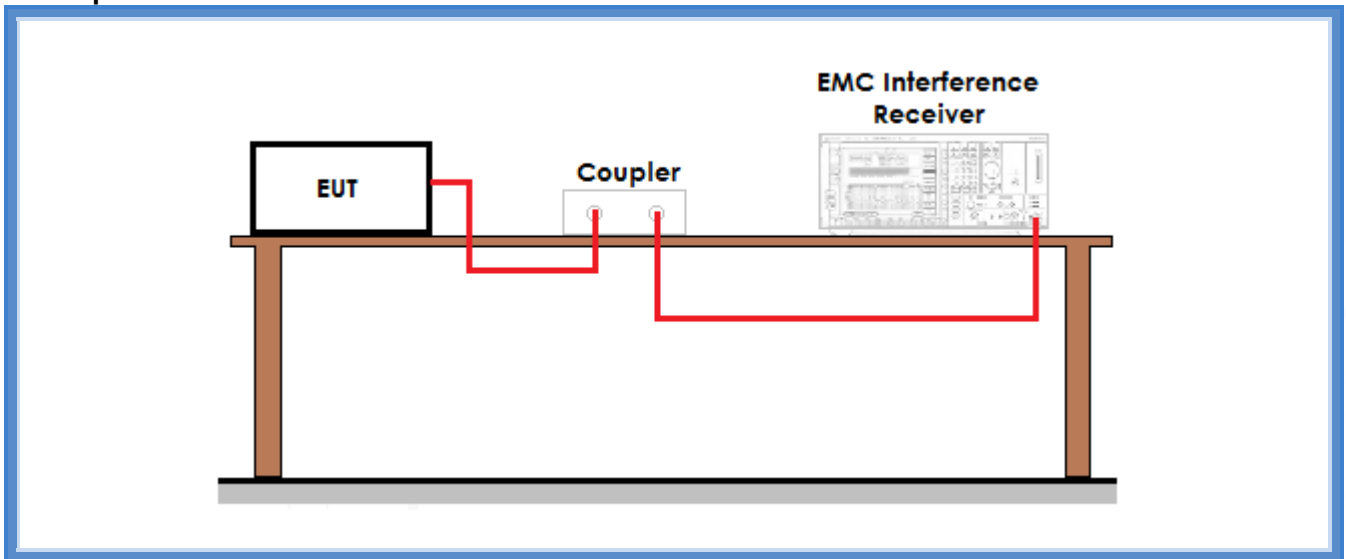
<i>Temperature (°C)</i>	<i>Atmospheric pressure (kPa)</i>	<i>Relative humidity (%)</i>
20	101	42

### Acceptance limits:

For frequency hopping systems operating in the 902–928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period; if the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period



## Setup



## Result

### Dwell time of transmission

Frequency (MHz)	Graphs	Dwell time (ms)
921,45	G15007238	14,38

### Number of transmissions per period

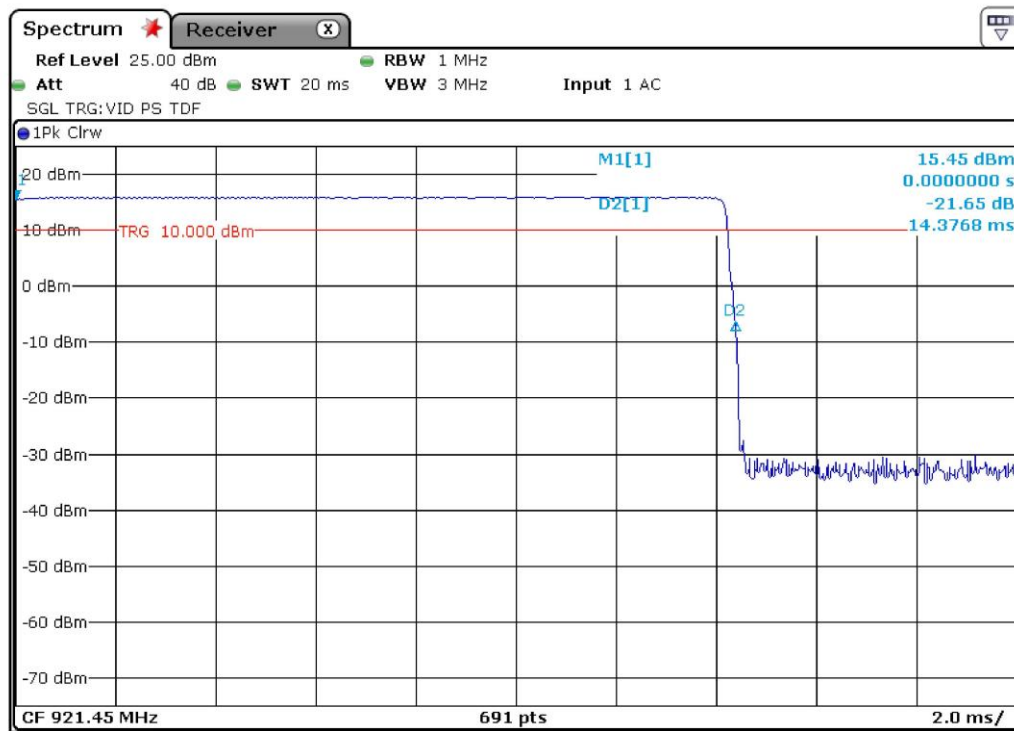
Frequency (MHz)	Time between 2 transmission on different channels	Number of transmissions (20 s / 0,05 s / 64)
921,45	G15007239 50 ms	6,25

<b>Time of occupancy (Dwell time x Number of transmissions)</b>	89,75 ms
---	----------



## Graphs

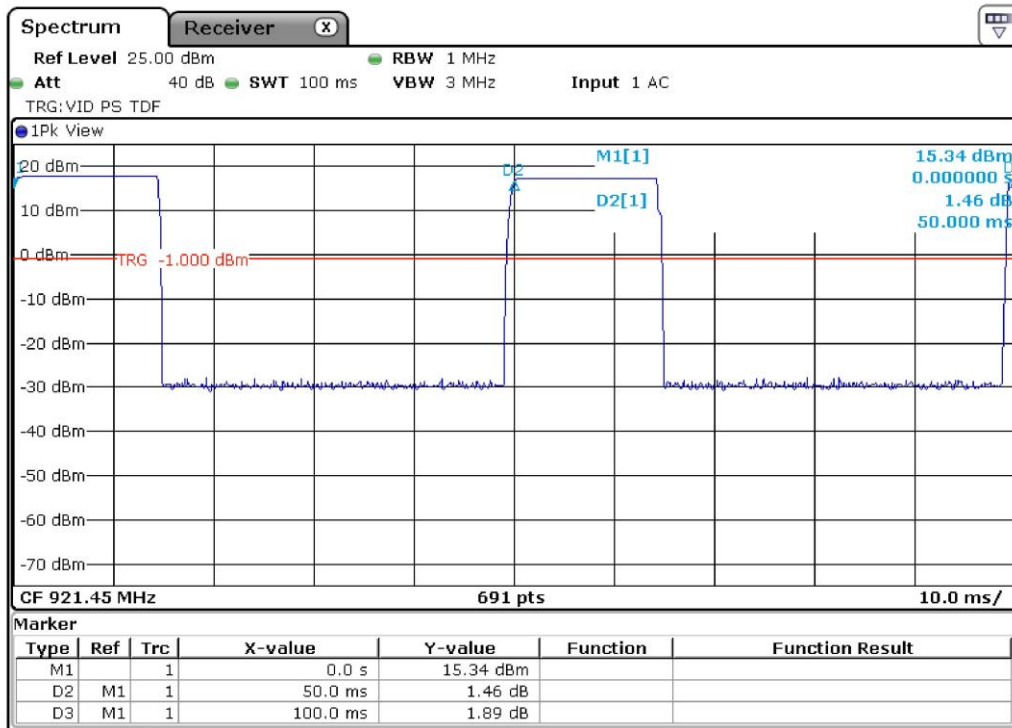
G15007238



Gandini 15007238-F hopping



G15007239



Gandini 15007239-F hopping

**Result:** The requirements are met



## 11.9 Band edge

### Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part 15.247
- DA 00-705
- RSS 210 Annex 8
- Internal procedure PM001
- See clause 4 of this test report

### Test configuration and test method

*Test site:*  
Laboratory

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

### EUT exercising

See clause 4 of this test report

### Test equipment used

CMC S227  
Measurement uncertainty: See clause 7 of this test report

### Test specification

See FCC Part 15.247

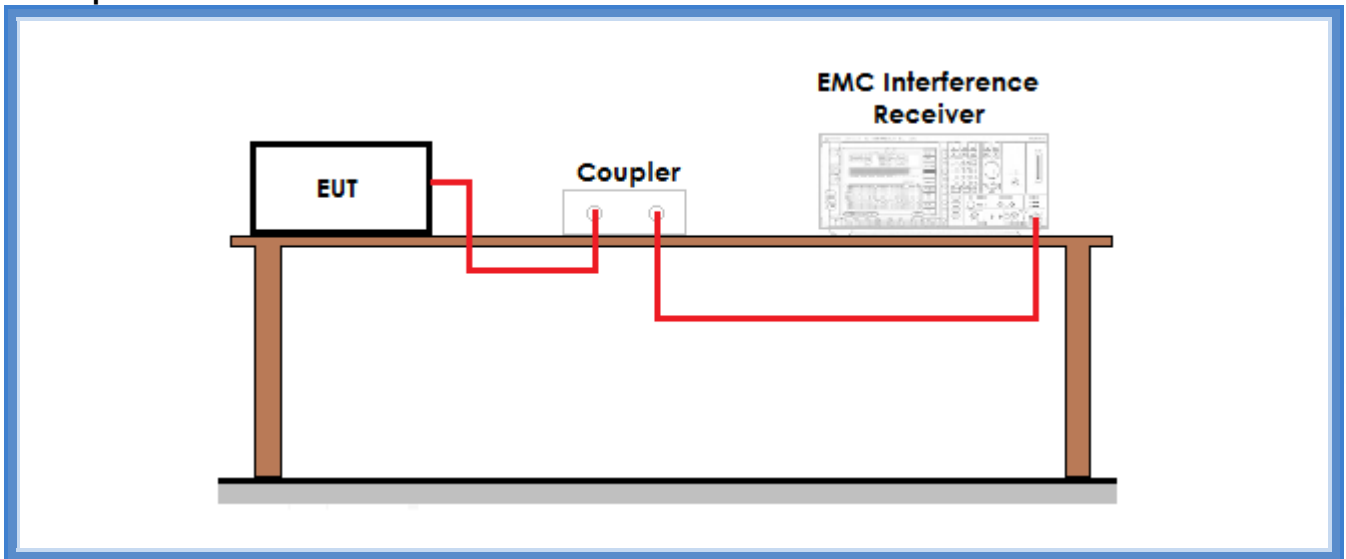
### Environmental conditions

Temperature (°C)	Atmospheric pressure (kPa)	Relative humidity (%)
20	101	40

**Acceptance limits:** operation within the band 902 – 928 MHz



**Setup**



**Result**

Frequency (MHz)	Graph(s) – Hopping	Results	
915,05	G15007240	F <sub>L</sub> : 915,0254 MHz	Complies
	G15007241		
927,95	G15007235	F <sub>H</sub> : 927,9740 MHz	Complies
	G15007236		

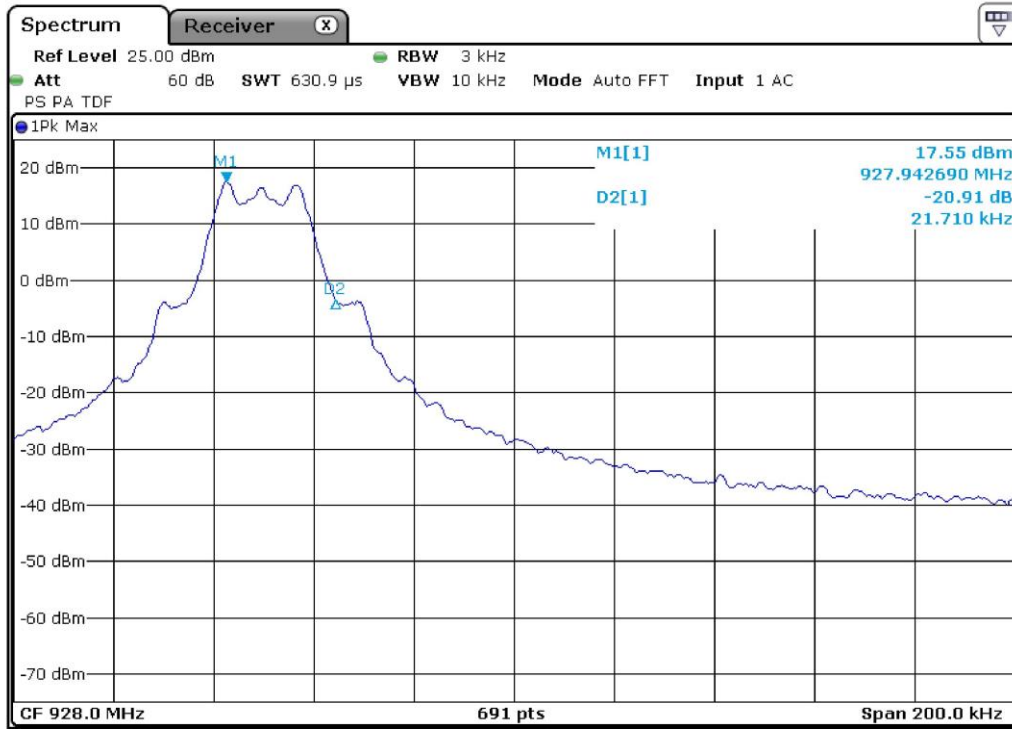
Frequency (MHz)	Graph(s) – No hopping	Results	
915,05	G15007226	F <sub>L</sub> : 915,0356 MHz	Complies
	G15007225		
927,95	G15007223	F <sub>H</sub> : 927,9644 MHz	Complies
	G15007224		





## Graphs

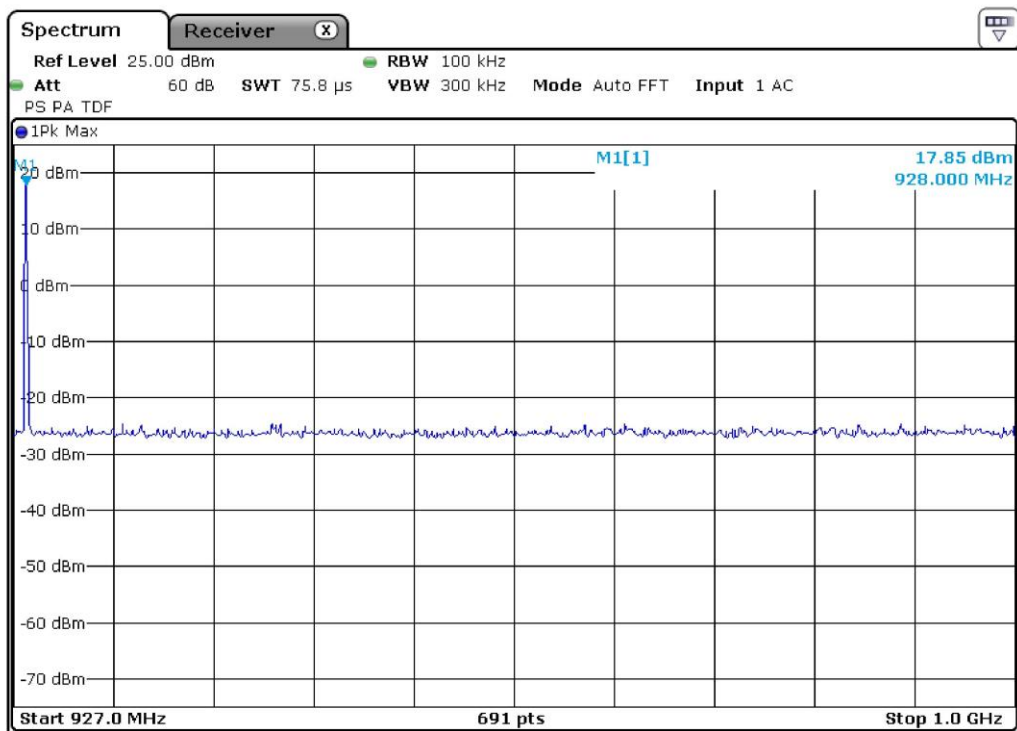
G15007223



Gandini 15007223-F max



G15007224

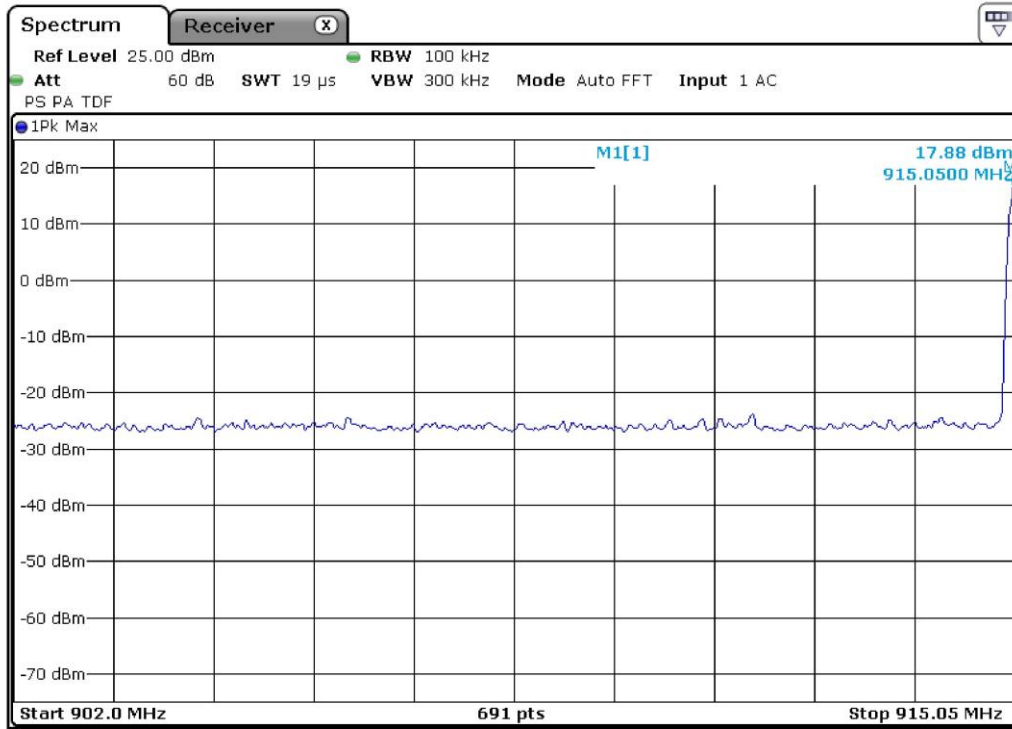


Gandini 15007224-F max

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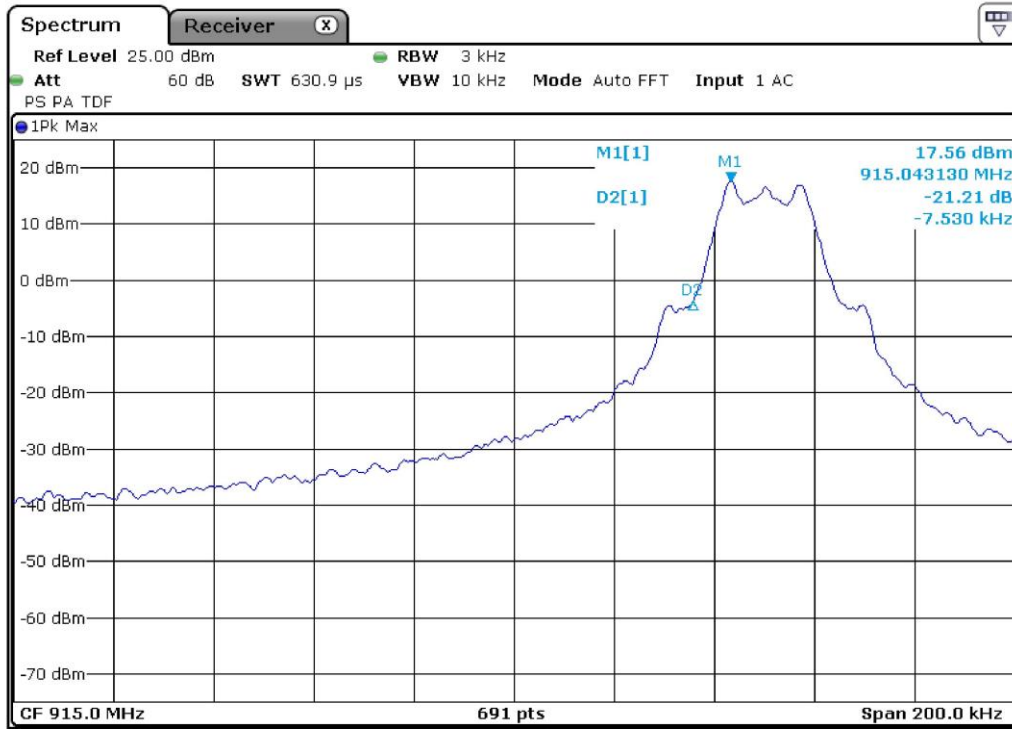
G15007225



Gandini 15007225-F min



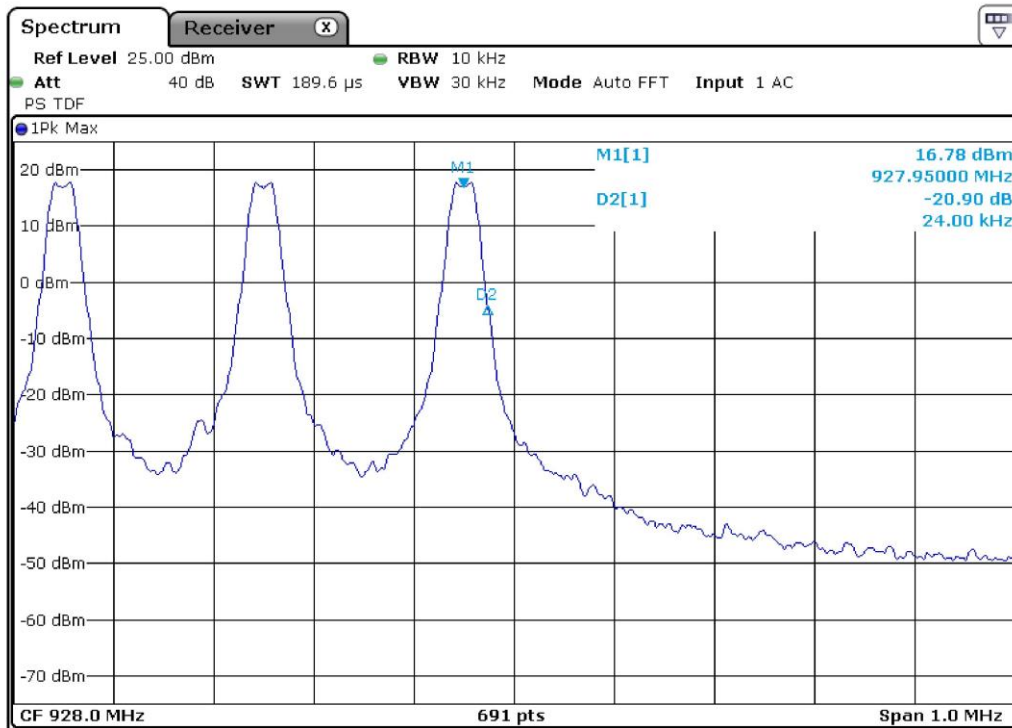
G15007226



Gandini 15007226-F min



G15007235

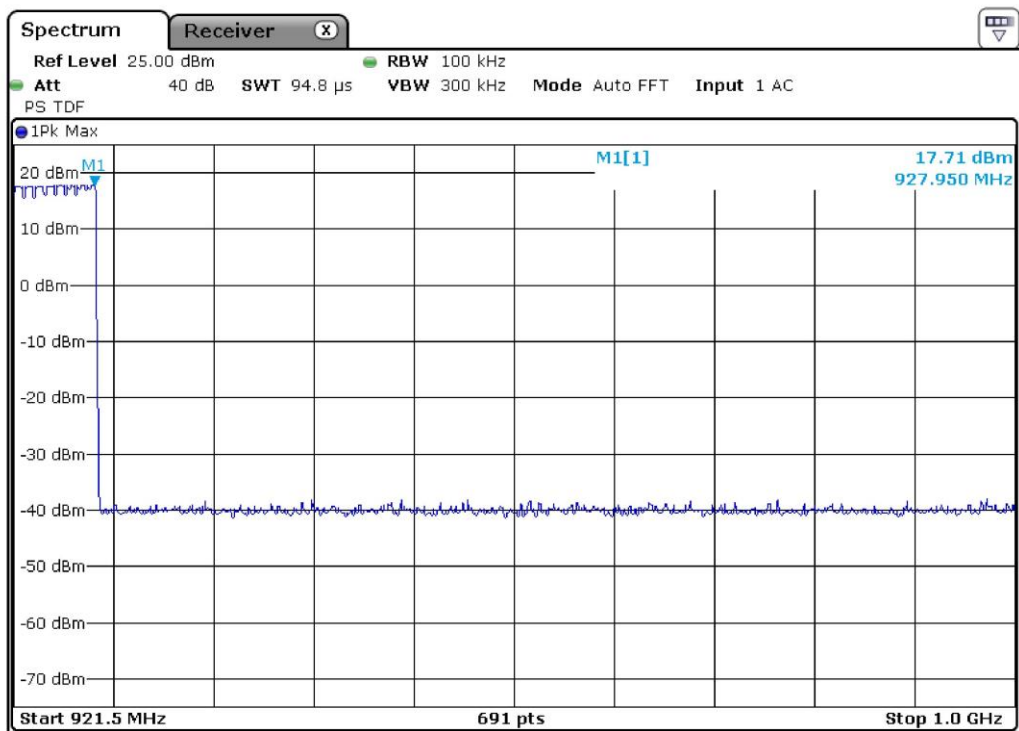


Gandini 15007235-F hopping

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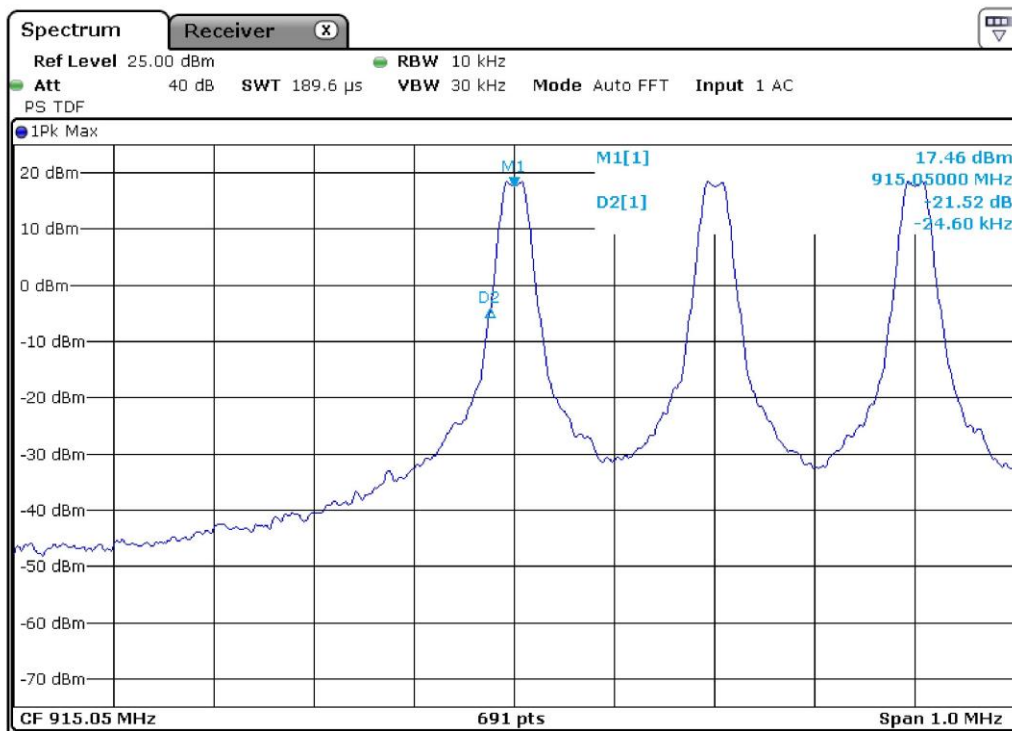
G15007236



Gandini 15007236-F hopping



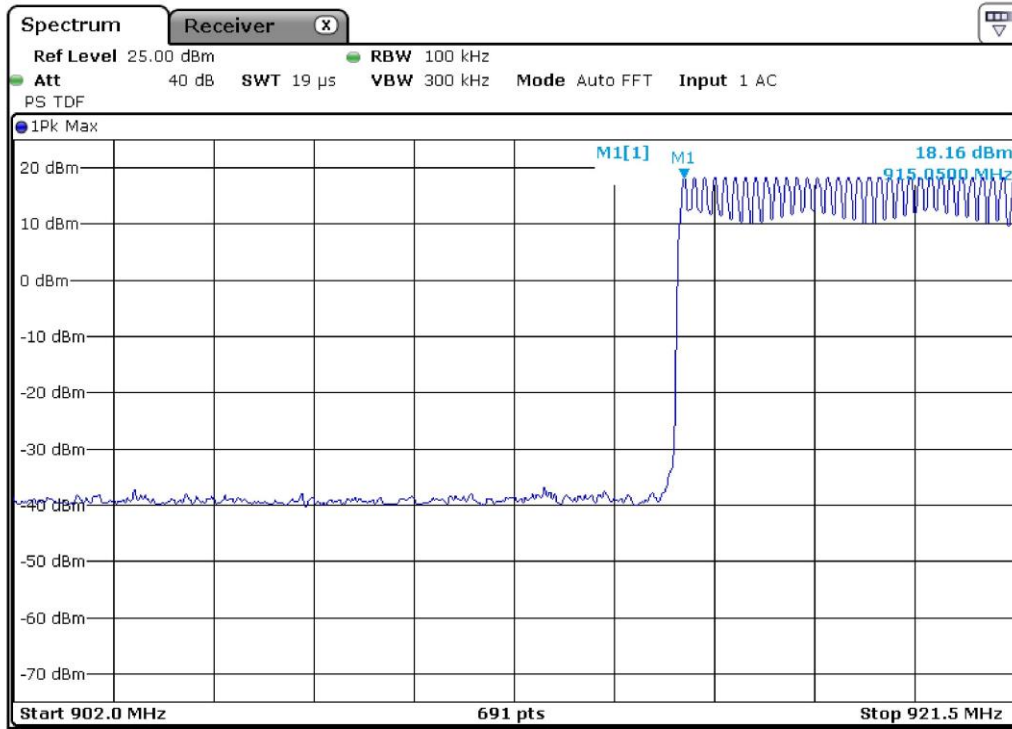
G15007240



Gandini 15007240-F hopping



G15007241



Gandini 15007241-F hopping

**Result:** The requirements are met





## 11.10 Peak Output Power

### Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part 15.247
- DA 00-705
- IC RSS 210 Annex 8
- Internal procedure PM001
- See clause 4 of this test report

### Test configuration and test method

*Test site:*  
Laboratory

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

### EUT exercising

See clause 4 of this test report

### Test equipment used

CMC S227  
Measurement uncertainty: See clause 7 of this test report

### Test specification

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

### Environmental conditions

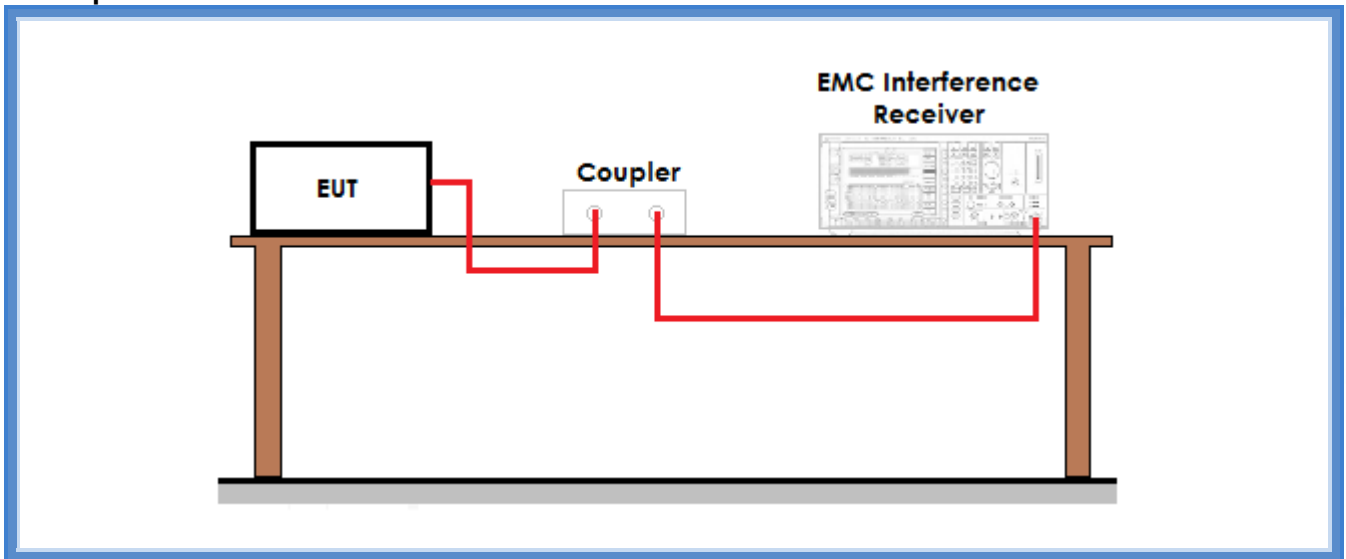
Temperature (°C)	Atmospheric pressure (kPa)	Relative humidity (%)
20	101	40

### Acceptance limits:

For frequency hopping systems operating in the 902–928 MHz band: 1 watt for systems employing at least 50 hopping channels; and, 0,25 watts for systems employing less than 50 hopping channels, but at least 25 hopping channels



## Setup



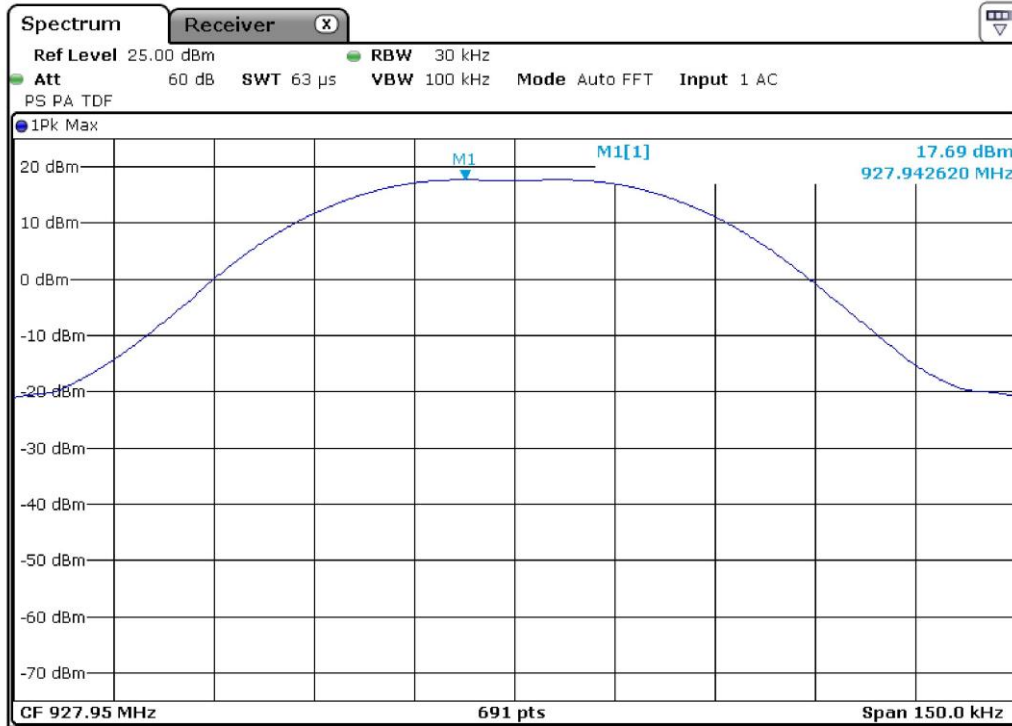
## Result

Frequency (MHz)	Graphs	Measured QP level (dBm)	Peak Output Power (mW)	Remarks
915,04327	G15007229	17,63	57,94	--
921,49291	G15007232	17,72	59,16	--
927,94262	G15007222	17,69	58,75	--



## Graphs

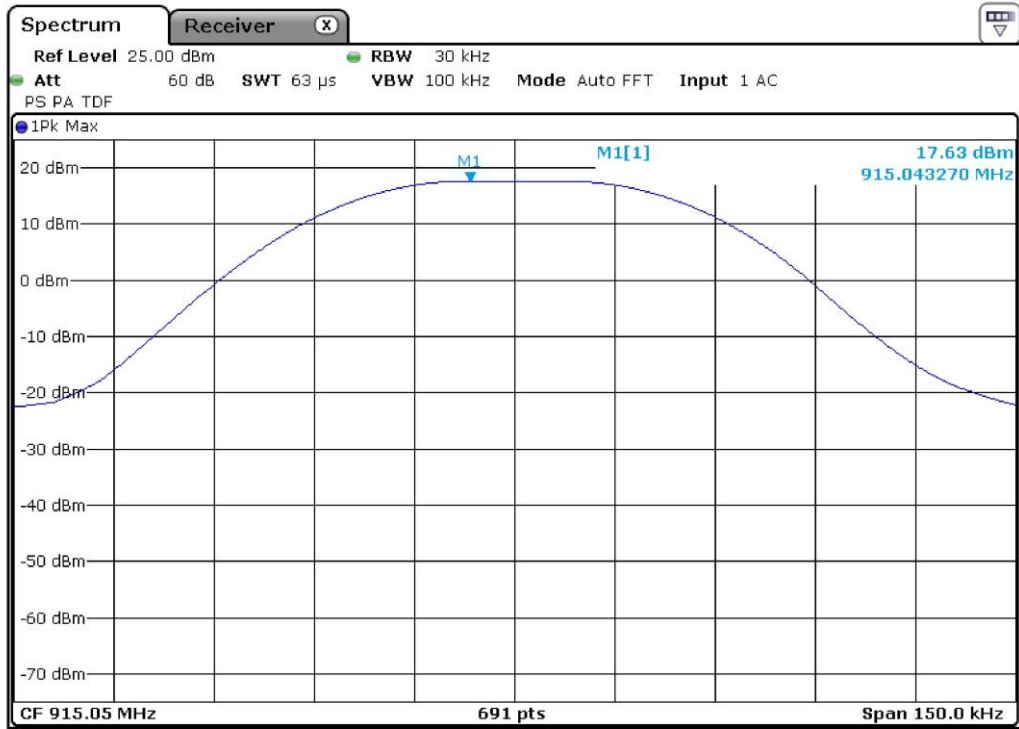
G15007222



Gandini 15007222-F max



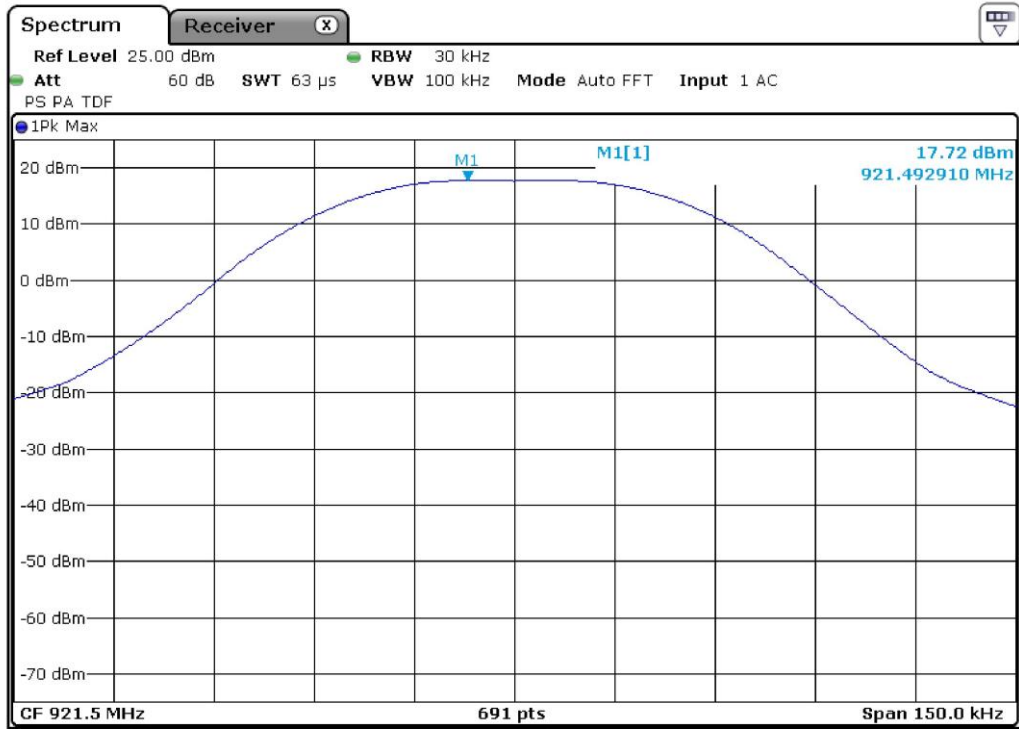
G15007229



Gandini 15007229-F min



G15007232



Gandini 15007232-F mid

**Result:** The requirements are met



## 11.11 Spurious Emission

### Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part 15.209
- DA 00-705
- IC RSS 210 Annex 8
- Internal procedure PM001
- See clause 4 of this test report

### Test configuration and test method

*Test site:*  
Semi-anechoic chamber

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

### EUT exercising

See clause 4 of this test report

### Test equipment used

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

### Test specification

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

### Environmental conditions

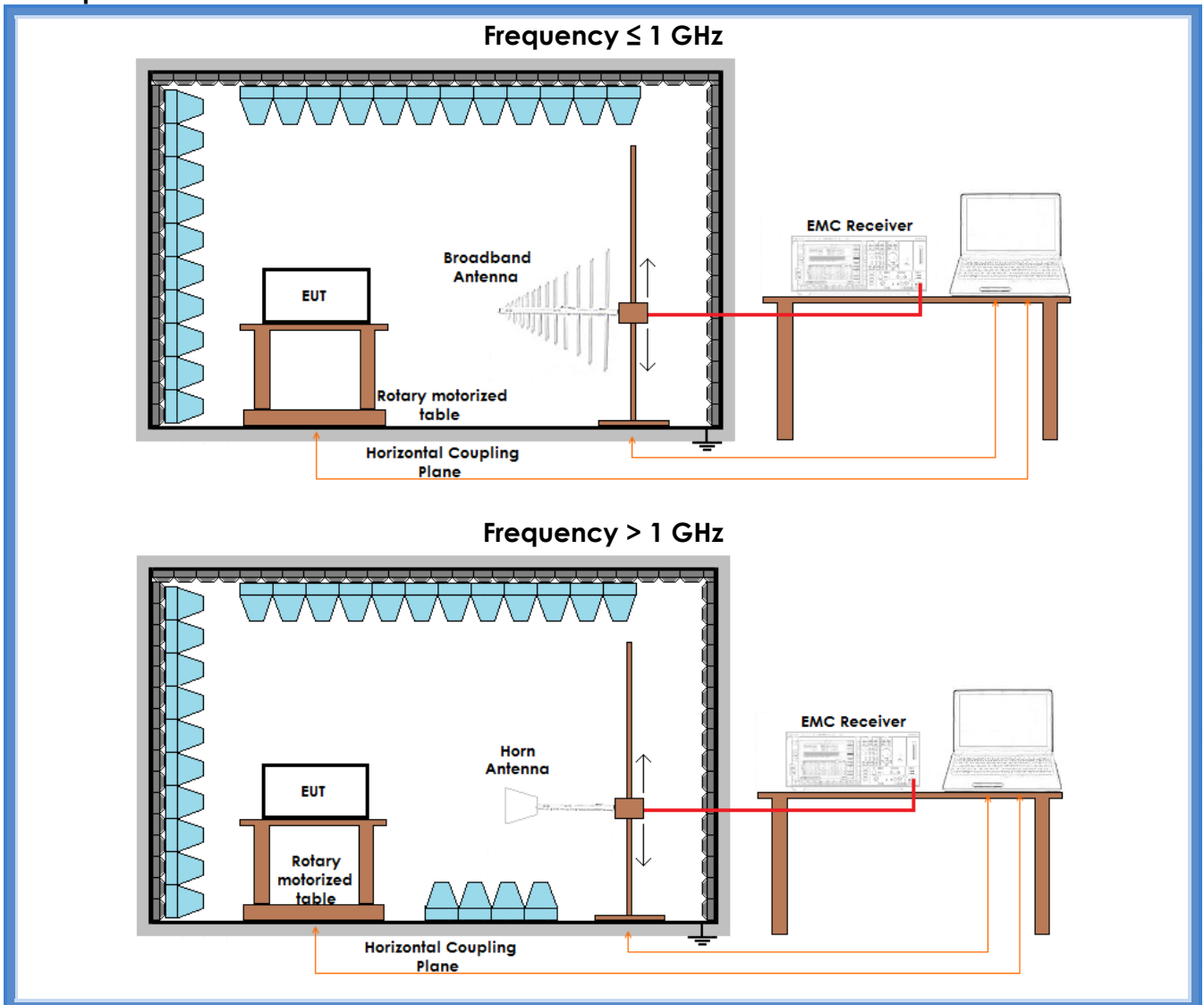
Temperature (°C)	Atmospheric pressure (kPa)	Relative humidity (%)
20	100	42

### Acceptance limits

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



## Setup



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**External antenna with cable of 5 m length**

**Result – AV detector**

Harmonic	Limits (dB $\mu$ V/m)	Level (dB $\mu$ V/m)			Results
		915,05 MHz	921,50 MHz	927,95 MHz	
II	54	42,3	41,2	44,7	Complies
III	54	More than 20 dB below limit	More than 20 dB below limit	More than 20 dB below limit	Complies
IV	54	46,5	41,2	37,6	Complies
V	54	More than 20 dB below limit	More than 20 dB below limit	More than 20 dB below limit	Complies
VI	54	More than 20 dB below limit	More than 20 dB below limit	More than 20 dB below limit	Complies
VII	54	More than 20 dB below limit	More than 20 dB below limit	More than 20 dB below limit	Complies
VIII	54	More than 20 dB below limit	More than 20 dB below limit	More than 20 dB below limit	Complies
IX	54	More than 20 dB below limit	More than 20 dB below limit	More than 20 dB below limit	Complies
X	54	More than 20 dB below limit	More than 20 dB below limit	More than 20 dB below limit	Complies

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

**Result – Peak detector**

Harmonic	Limits (dB $\mu$ V/m)	Level (dB $\mu$ V/m)			Results
		915,05 MHz	921,50 MHz	927,95 MHz	
II	74	46,2	43,8	44,3	Complies
III	74	More than 20 dB below limit	More than 20 dB below limit	More than 20 dB below limit	Complies
IV	74	45,6	46,7	50,2	Complies
V	74	More than 20 dB below limit	More than 20 dB below limit	More than 20 dB below limit	Complies
VI	74	More than 20 dB below limit	More than 20 dB below limit	More than 20 dB below limit	Complies
VII	74	More than 20 dB below limit	More than 20 dB below limit	More than 20 dB below limit	Complies
VIII	74	More than 20 dB below limit	More than 20 dB below limit	More than 20 dB below limit	Complies
IX	74	More than 20 dB below limit	More than 20 dB below limit	More than 20 dB below limit	Complies
X	74	More than 20 dB below limit	More than 20 dB below limit	More than 20 dB below limit	Complies

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





**External antenna with stylus**

**Result – AV detector**

Harmonic	Limits (dBµV/m)	Level (dBµV/m)			Results
		915,05 MHz	921,50 MHz	927,95 MHz	
II	54	45,8	42,6	41,2	Complies
III	54	37,3	40,6	43,8	Complies
IV	54	42,8	40,7	40,6	Complies
V	54	More than 20 dB below limit	More than 20 dB below limit	More than 20 dB below limit	Complies
VI	54	More than 20 dB below limit	More than 20 dB below limit	More than 20 dB below limit	Complies
VII	54	More than 20 dB below limit	More than 20 dB below limit	More than 20 dB below limit	Complies
VIII	54	More than 20 dB below limit	More than 20 dB below limit	More than 20 dB below limit	Complies
IX	54	More than 20 dB below limit	More than 20 dB below limit	More than 20 dB below limit	Complies
X	54	More than 20 dB below limit	More than 20 dB below limit	More than 20 dB below limit	Complies

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

**Result – Peak detector**

Harmonic	Limits (dBµV/m)	Level (dBµV/m)			Results
		915,05 MHz	921,50 MHz	927,95 MHz	
II	74	47,4	45,1	43,3	Complies
III	74	42,2	43,6	45,9	Complies
IV	74	47,8	46,7	45,8	Complies
V	74	More than 20 dB below limit	More than 20 dB below limit	More than 20 dB below limit	Complies
VI	74	More than 20 dB below limit	More than 20 dB below limit	More than 20 dB below limit	Complies
VII	74	More than 20 dB below limit	More than 20 dB below limit	More than 20 dB below limit	Complies
VIII	74	More than 20 dB below limit	More than 20 dB below limit	More than 20 dB below limit	Complies
IX	74	More than 20 dB below limit	More than 20 dB below limit	More than 20 dB below limit	Complies
X	74	More than 20 dB below limit	More than 20 dB below limit	More than 20 dB below limit	Complies

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

**Result:** The requirements are met

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## 11.12 Maximum permissible exposure

### Test set-up and execution

- FCC Rules and Regulation; Titles 47 Part 1.1310
- IC RSS-GEN Issue 4
- Internal procedure PM001
- See clause 4 of this test report

### Test configuration

Test site:  
Laboratory

Auxiliary equipment:  
See clause 4 of this test report

### EUT exercising

See clause 4 of this test report

### Test equipment used

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

### Test specification

Port: Antenna

<b>Acceptance limits</b>	906/1500 mW/cm <sup>2</sup> = 0,60 mW/cm <sup>2</sup> max at 20cm of distance
--------------------------	---

### Result

Power Density Limit (mW/cm <sup>2</sup> )	Output Power (mW)	Antenna Gain (G)	Power Density at 20 cm (mW/cm <sup>2</sup> )	Remarks
0,60	59,16	1,58 (2 dBi)	0,019	Measured
<b>Remarks:</b> Power Density = (P x G) / (4πR <sup>2</sup> )				

**Result:** The requirements are met