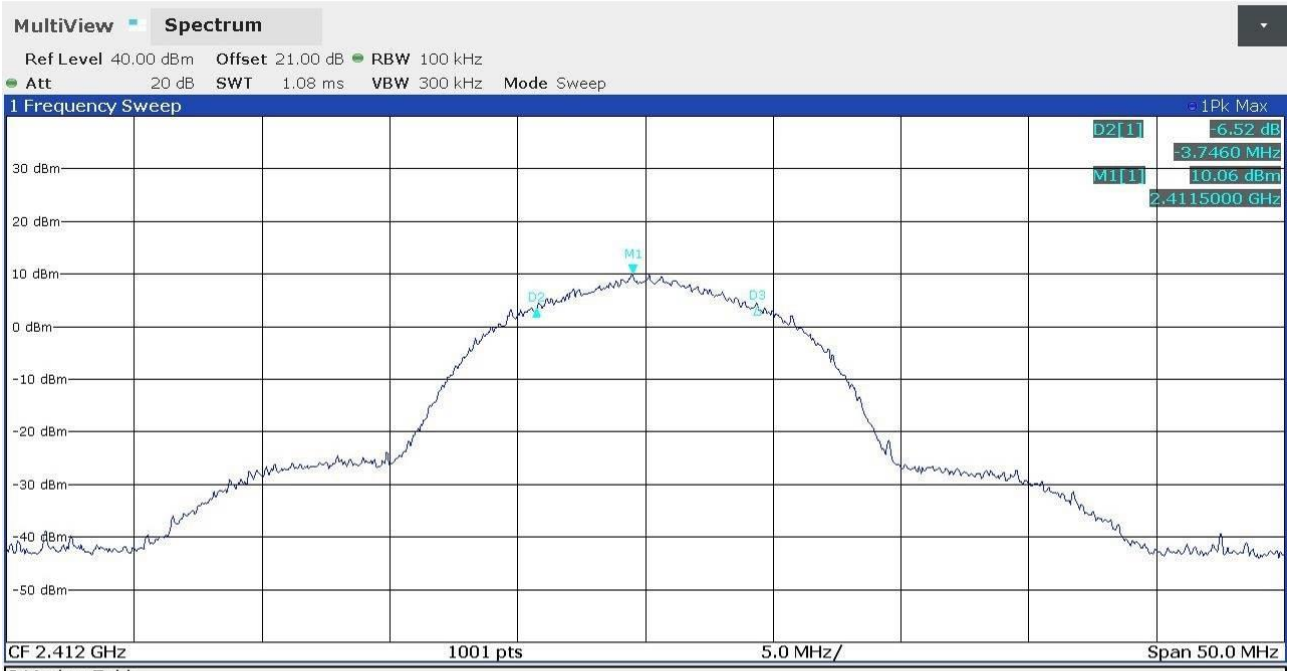
Graphs

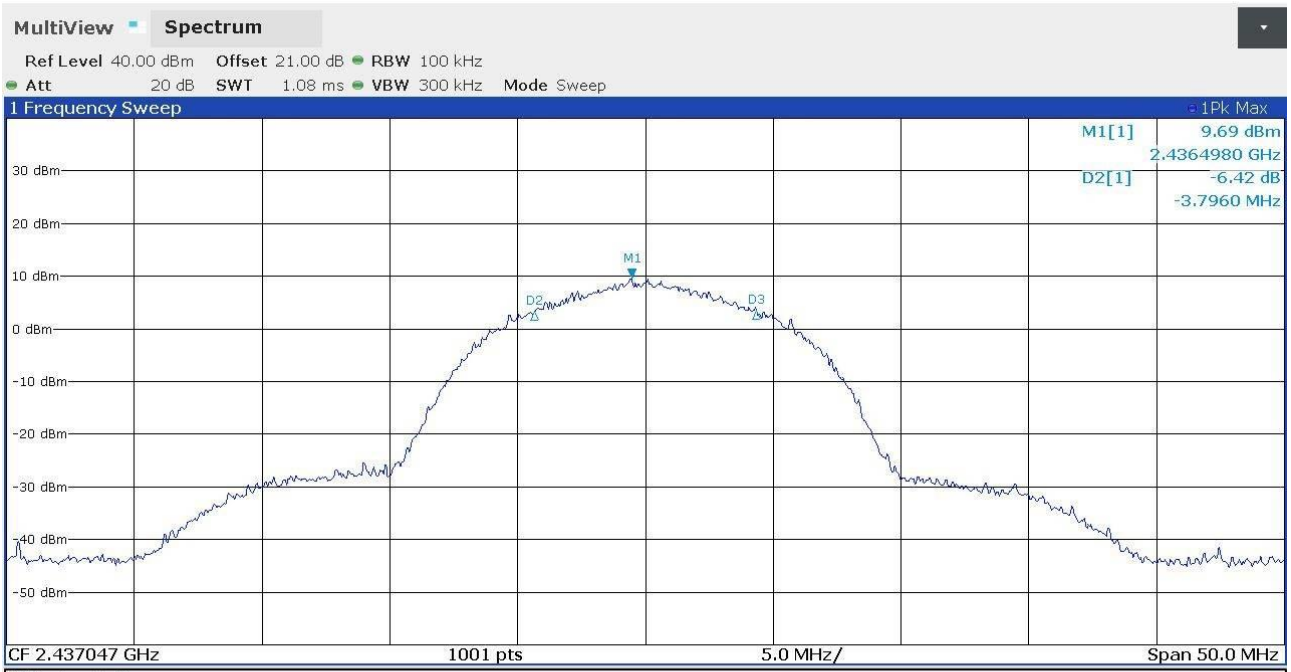
De Rosso 20246238



2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**2.4115 GHz**	**10.06 dBm**		
D2	M1	1	**-3.746 MHz**	**-6.52 dB**		
D3	M1	1	**4.895 MHz**	**-6.12 dB**		

De Rosso 202462345

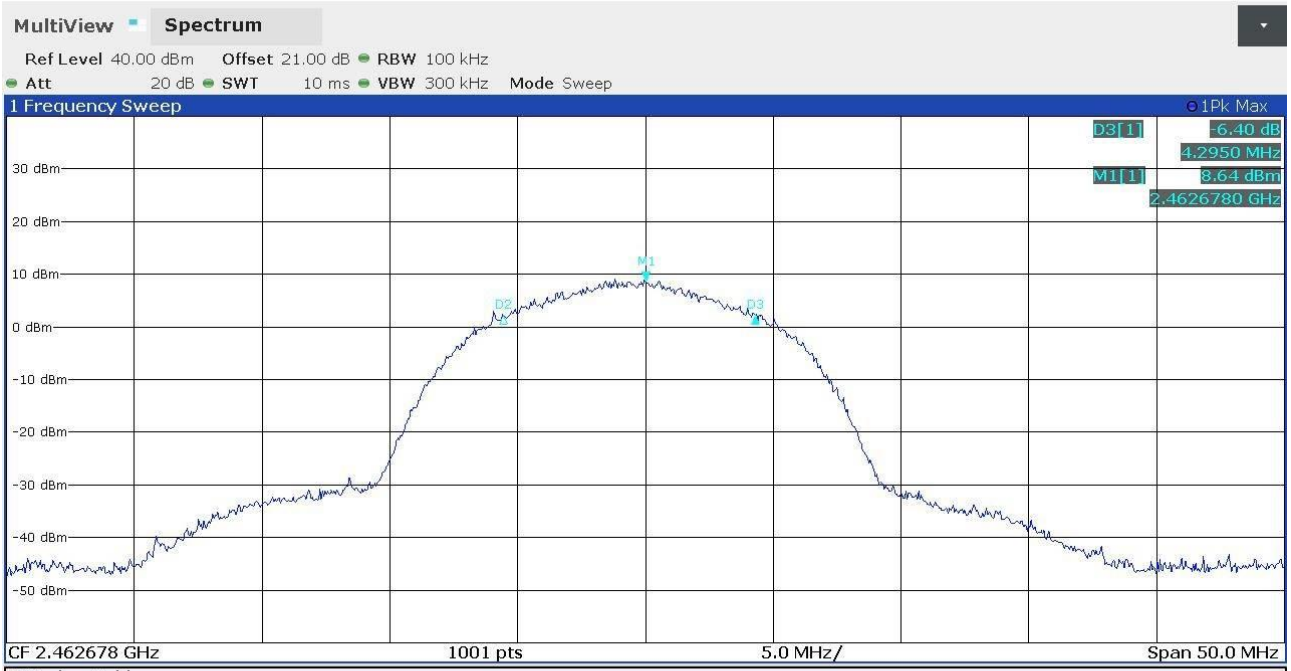


2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**2.436498 GHz**	**9.69 dBm**		
D2	M1	1	**-3.796 MHz**	**-6.42 dB**		
D3	M1	1	**4.895 MHz**	**-6.23 dB**		

CMC Centro Misure Compatibilità S.r.l.

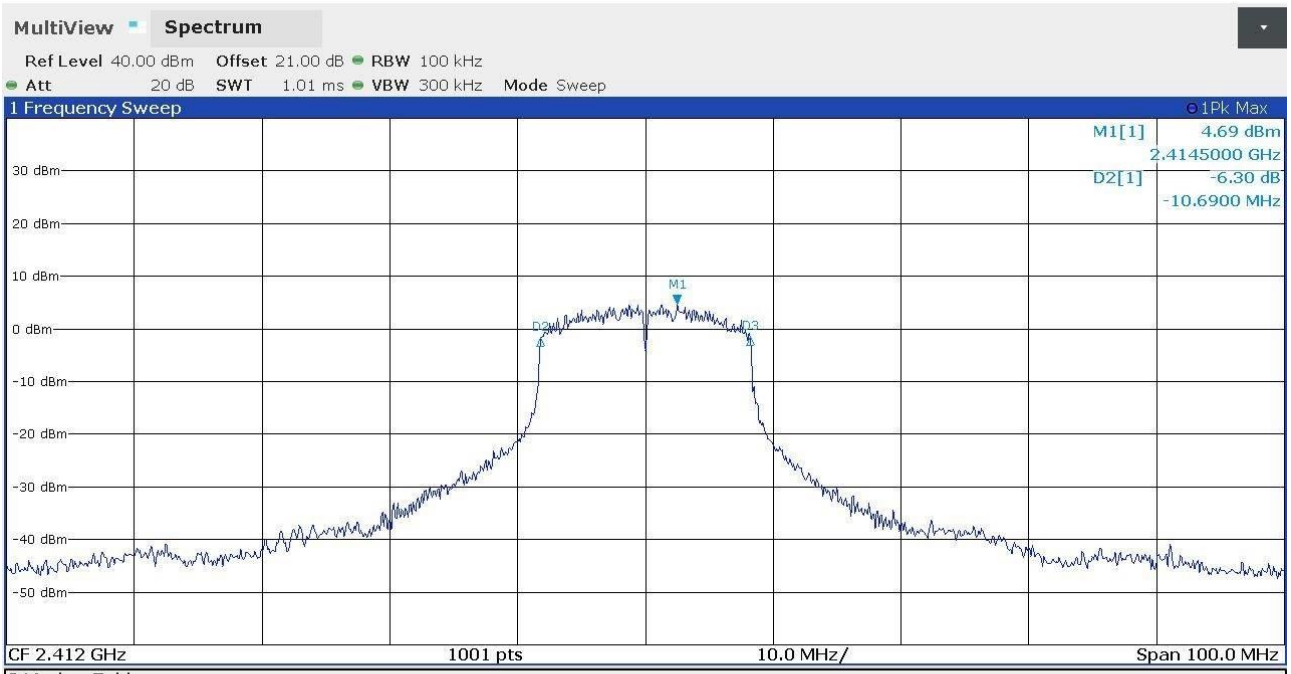
De Rosso 20246252



2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**2.462678 GHz**	**8.64 dBm**		
D2	M1	1	**-5.545 MHz**	**-6.39 dB**		
D3	M1	1	**4.295 MHz**	**-6.40 dB**		

De Rosso 20246259



2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**2.4145 GHz**	**4.69 dBm**		
D2	M1	1	**-10.69 MHz**	**-6.30 dB**		
D3	M1	1	**5.69 MHz**	**-6.18 dB**		

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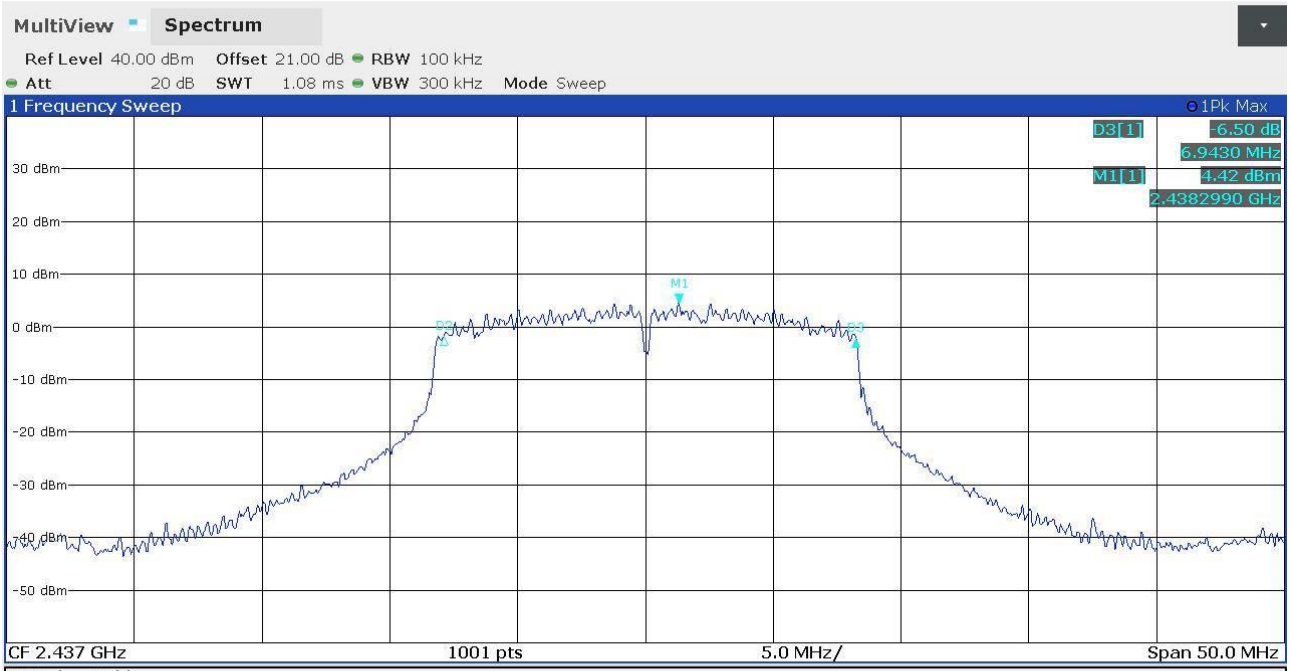
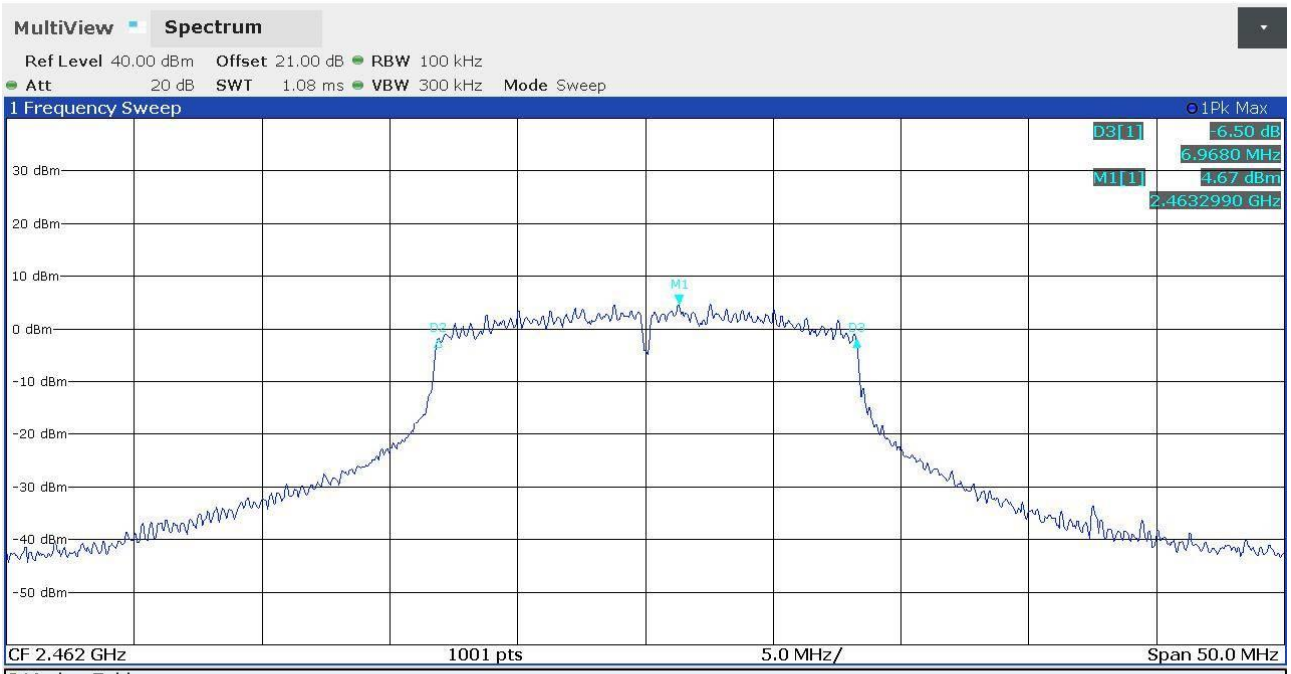
De Rosso 20246265



2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**2.438299 GHz**	**4.42 dBm**		
D2	M1	1	**-9.191 MHz**	**-6.29 dB**		
D3	M1	1	**6.943 MHz**	**-6.50 dB**		

De Rosso 20246271

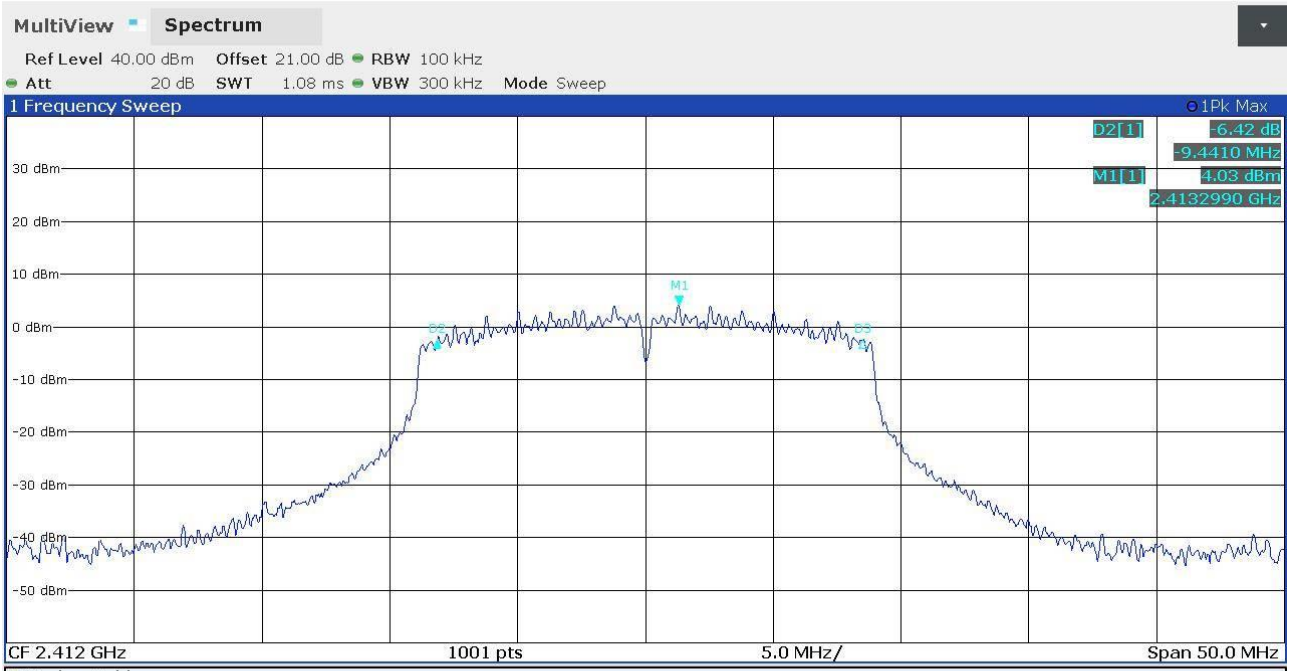


2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**2.463299 GHz**	**4.67 dBm**		
D2	M1	1	**-9.391 MHz**	**-6.38 dB**		
D3	M1	1	**6.968 MHz**	**-6.50 dB**		

CMC Centro Misure Compatibilità S.r.l.

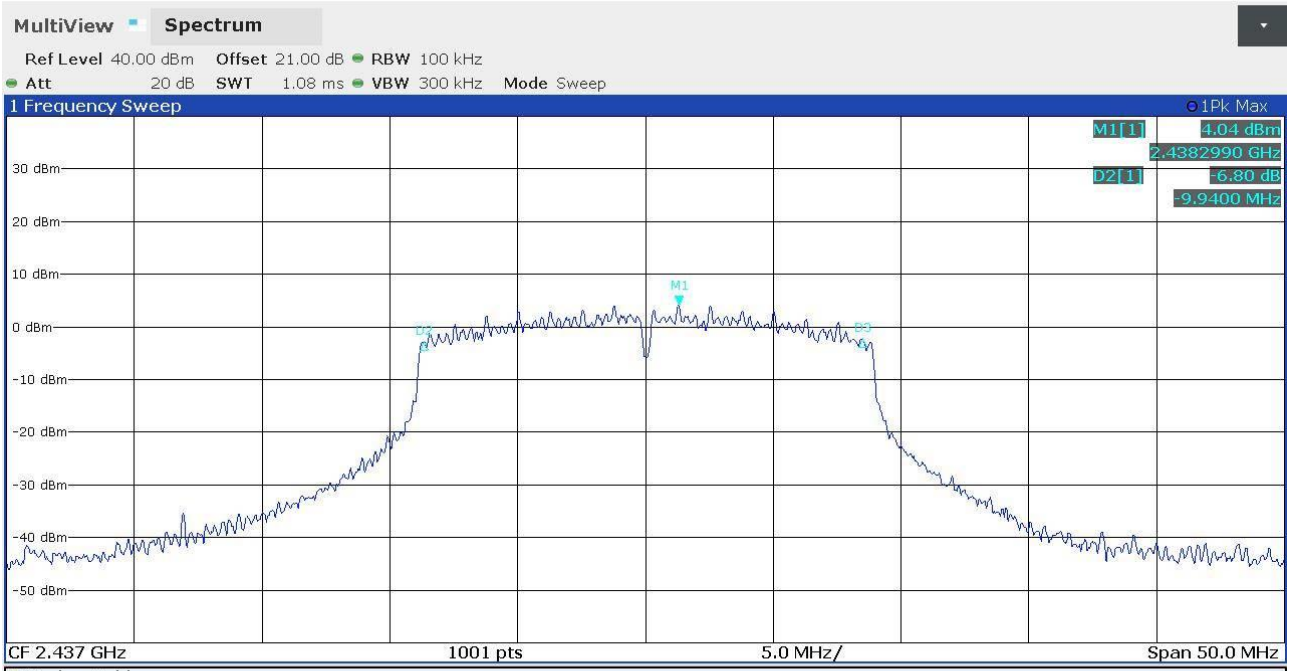
De Rosso 20246277



2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**2.413299 GHz**	**4.03 dBm**		
D2	M1	1	**-9.441 MHz**	**-6.42 dB**		
D3	M1	1	**7.193 MHz**	**-6.30 dB**		

De Rosso 20246283



2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**2.438299 GHz**	**4.04 dBm**		
D2	M1	1	**-9.94 MHz**	**-6.80 dB**		
D3	M1	1	**7.217 MHz**	**-6.31 dB**		

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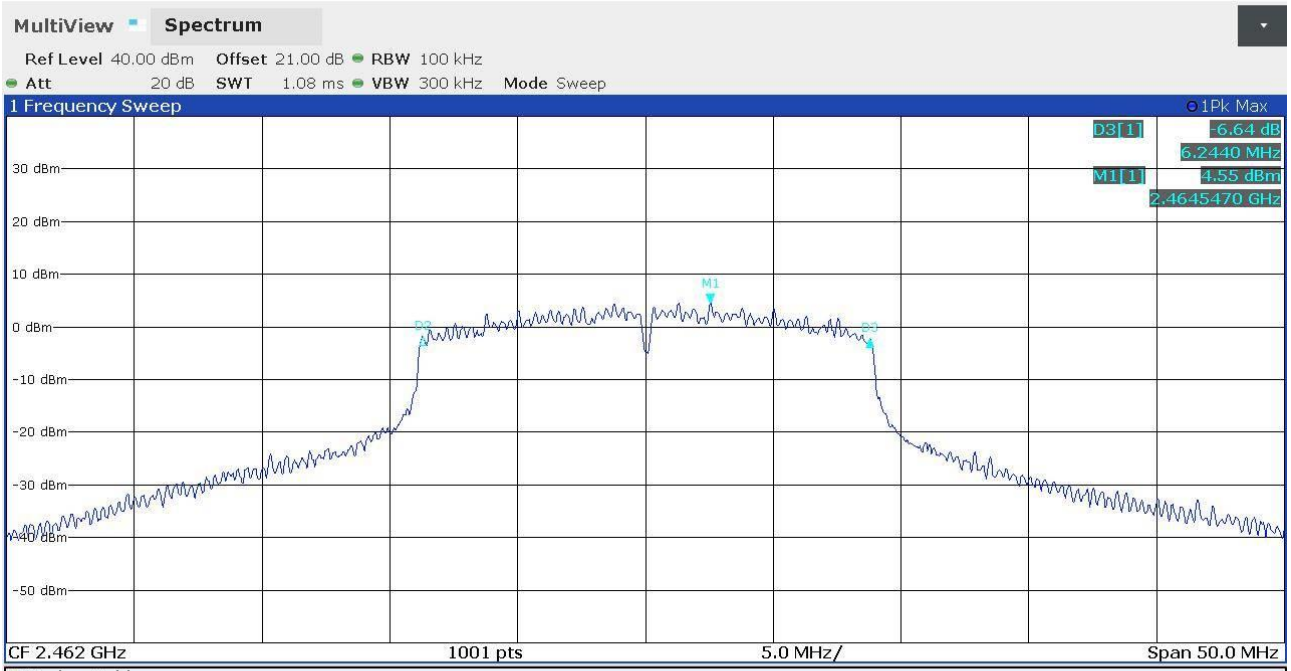
De Rosso 20246289



2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**2.464547 GHz**	**4.55 dBm**		
D2	M1	1	**-11.264 MHz**	**-6.42 dB**		
D3	M1	1	**6.244 MHz**	**-6.64 dB**		

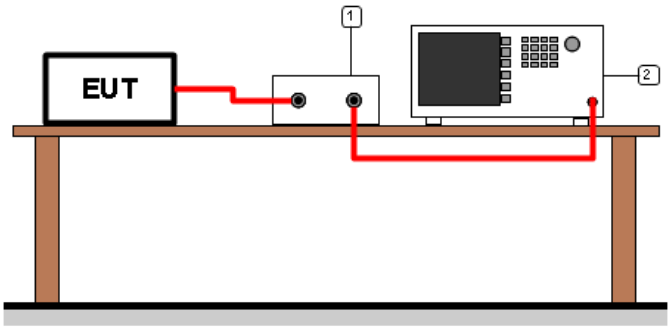
CMC Centro Misure Compatibilità S.r.l.

9.5 20 dB bandwidth

Tested by ..... :	A. Bertezzolo
Test date ..... :	27.01.2021
Test location (stand) ..... :	Laboratory
Reference standards ..... :	FCC Rules and Regulation; Titles 47 Part. 15.215 (c) ANSI C63.10 cl. 7.8.7
Supplementary test set-up description ..... :	--
Supplementary information..... :	--

Acceptance limits
Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated

Test setup



Test setup PR002_01				
Nr.	*Id. Number*	*Manufacturer*	*Model*	*Description*
2	CMC S295	Rohde & Schwarz	FSW43	Spectrum Analyzer 43GHz
1	--	--	--	Cable + attenuator (calibrated before the test)

Result – WiFi mode B

Frequency (MHz)	*Graphs*	*20 dB bandwidth (MHz)*
2412	G20246239	16,083
2437	G20246246	15,884
2462	G20246253	16,084

CMC Centro Misure Compatibilità S.r.l.

Result – WiFi mode G

Frequency (MHz)	*Graphs*	*20 dB bandwidth (MHz)*
2412	G20246260	18,582
2437	G20246266	18,631
2462	G20246272	18,556

Result – WiFi mode N

Frequency (MHz)	*Graphs*	*20 dB bandwidth (MHz)*
2412	G20246278	19,281
2437	G20246284	19,455
2462	G20246290	19,855

CMC Centro Misure Compatibilità S.r.l.

Graphs

De Rosso 20246239

2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**2.4115 GHz**	**12.15 dBm**		
D2	M1	1	**8.541 MHz**	**-20.42 dB**		
D3	M1	1	**-7.542 MHz**	**-20.88 dB**		

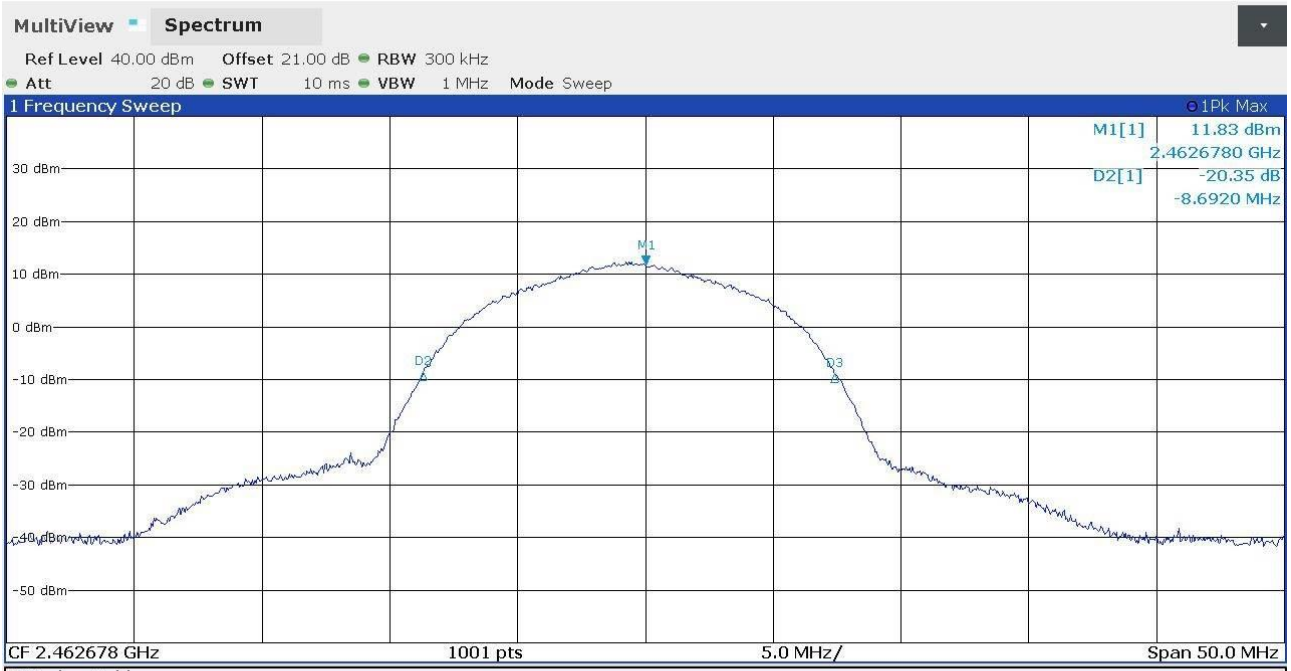
De Rosso 20246246

2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**2.437047 GHz**	**12.70 dBm**		
D2	M1	1	**-7.942 MHz**	**-20.33 dB**		
D3	M1	1	**7.942 MHz**	**-20.72 dB**		

CMC Centro Misure Compatibilità S.r.l.

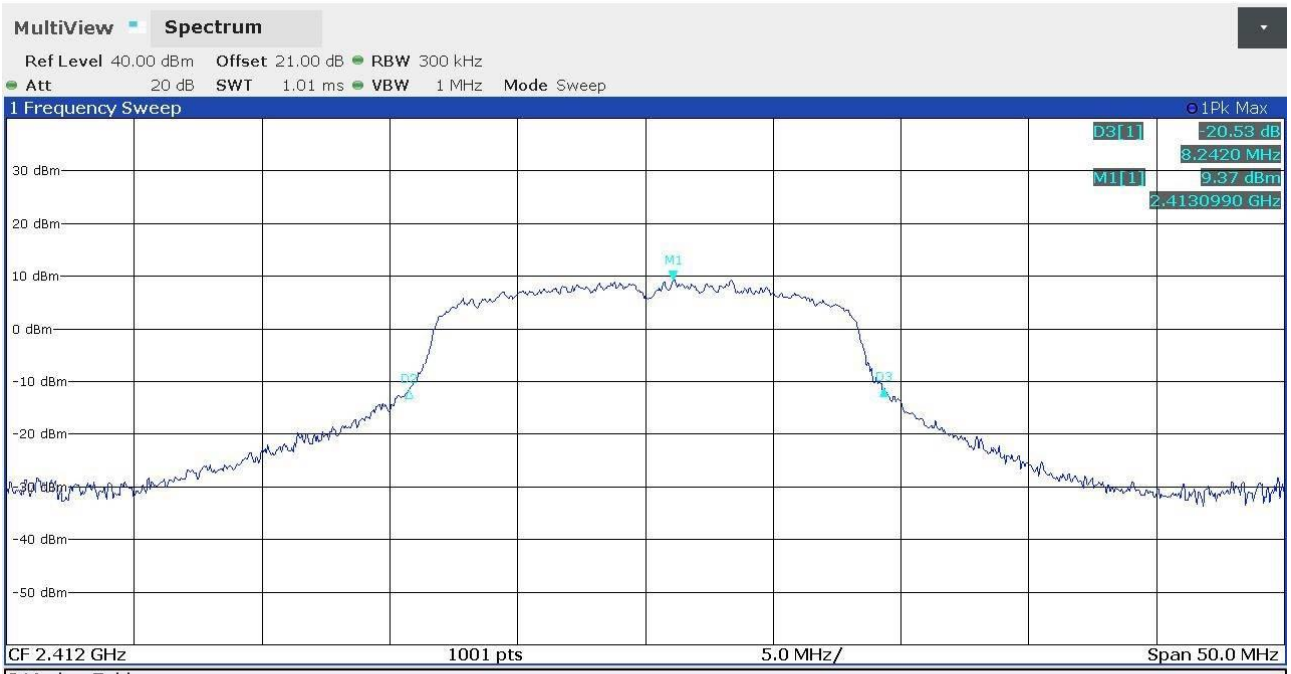
De Rosso 20246253



2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**2.462678 GHz**	**11.83 dBm**		
D2	M1	1	**-8.692 MHz**	**-20.35 dB**		
D3	M1	1	**7.392 MHz**	**-20.68 dB**		

De Rosso 20246260

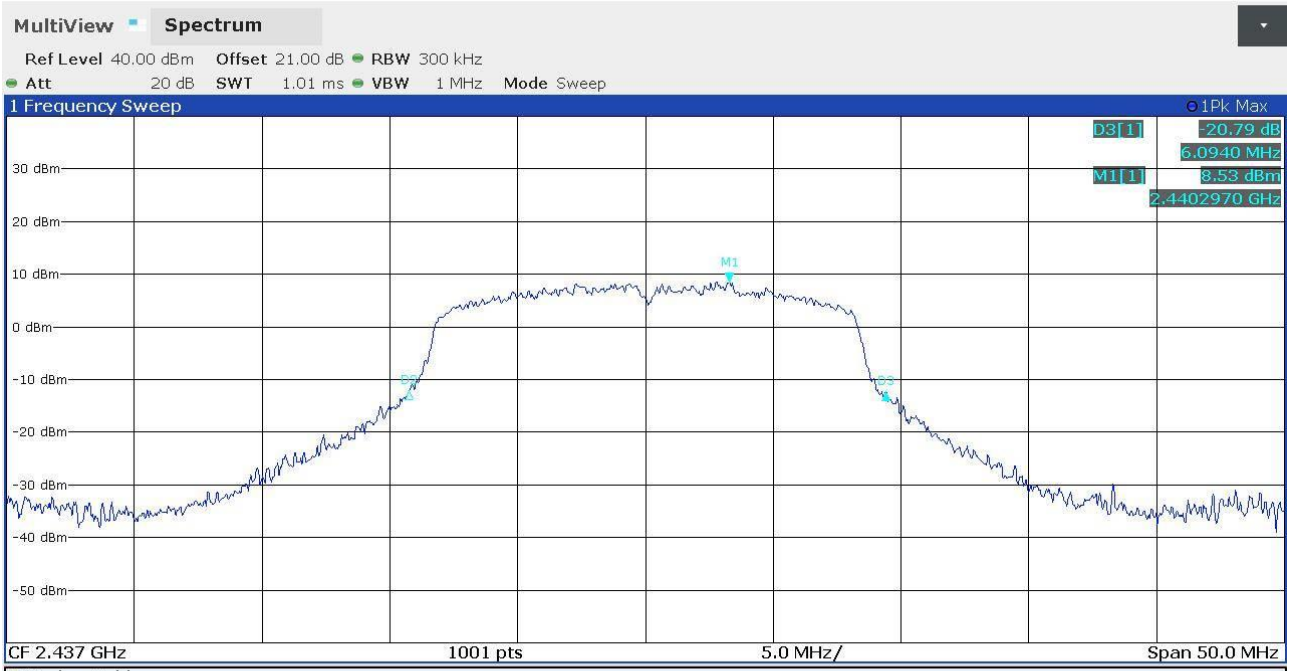


2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**2.413099 GHz**	**9.37 dBm**		
D2	M1	1	**-10.34 MHz**	**-20.88 dB**		
D3	M1	1	**8.242 MHz**	**-20.53 dB**		

CMC Centro Misure Compatibilità S.r.l.

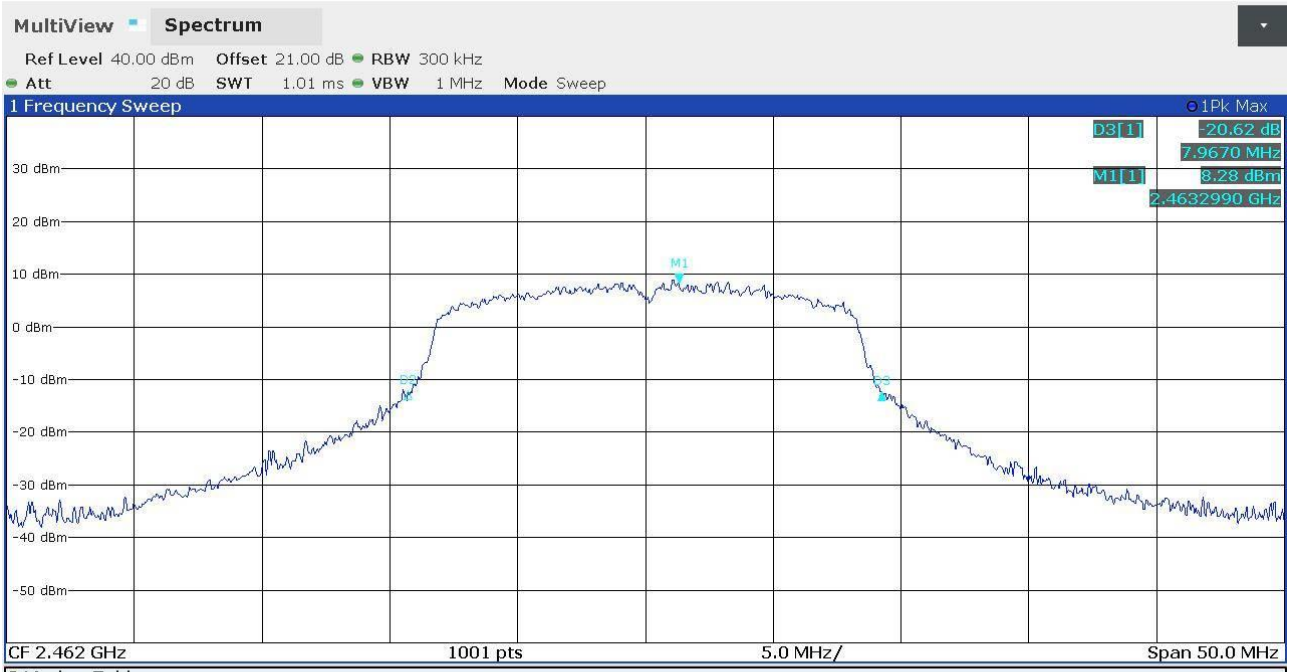
De Rosso 20246266



2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	2.440297 GHz	8.53 dBm		
D2	M1	1	-12.537 MHz	-20.64 dB		
D3	M1	1	6.094 MHz	-20.79 dB		

De Rosso 20246272

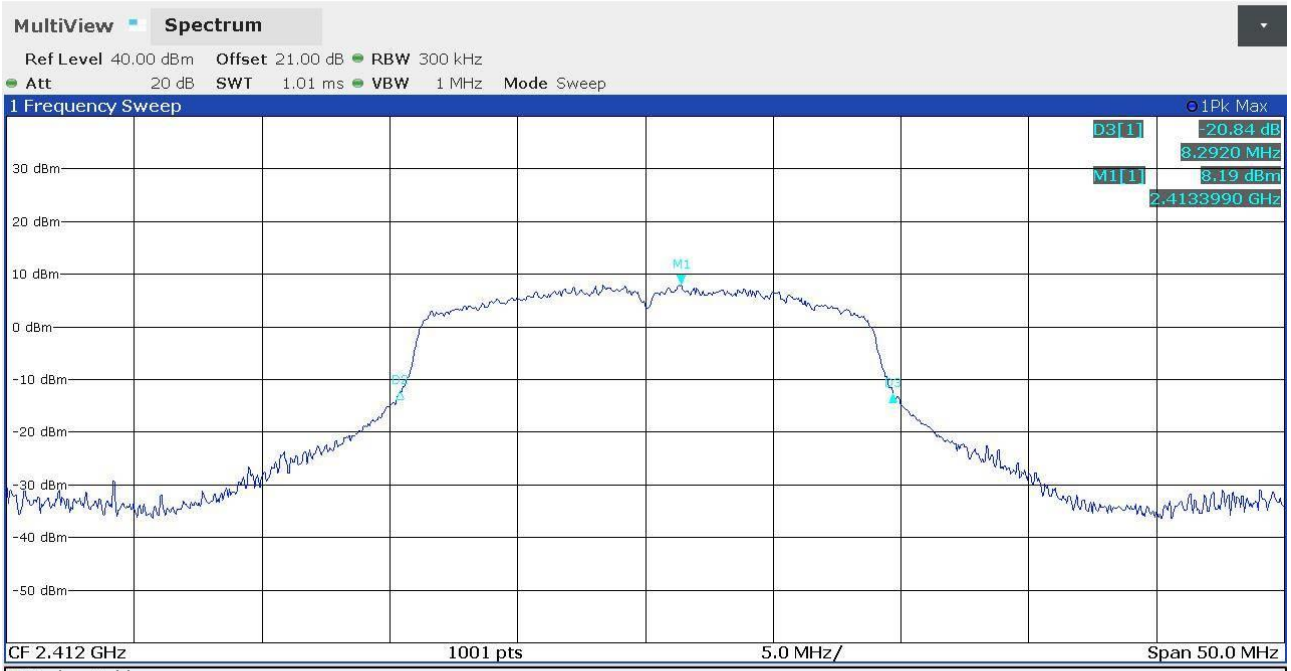


2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	2.463299 GHz	8.28 dBm		
D2	M1	1	-10.589 MHz	-20.45 dB		
D3	M1	1	7.967 MHz	-20.62 dB		

CMC Centro Misure Compatibilità S.r.l.

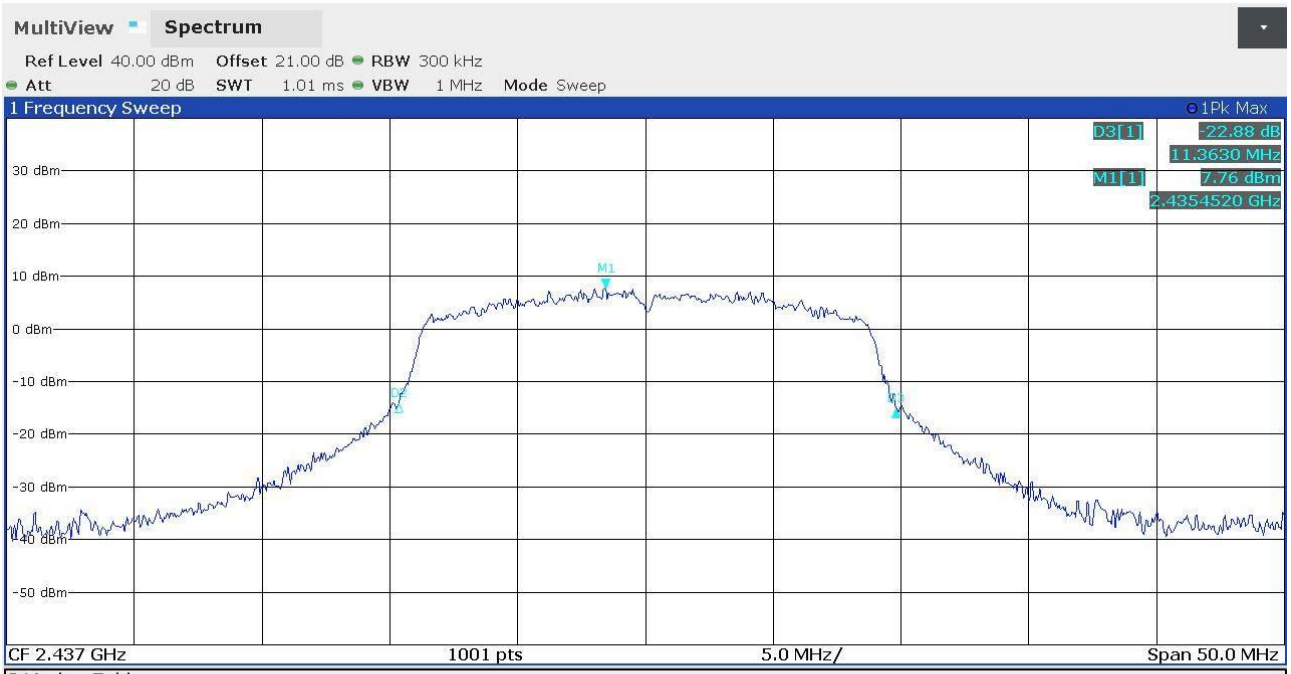
De Rosso 20246278



2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	2.413399 GHz	8.19 dBm		
D2	M1	1	-10.989 MHz	-20.31 dB		
D3	M1	1	8.292 MHz	-20.84 dB		

De Rosso 20246284

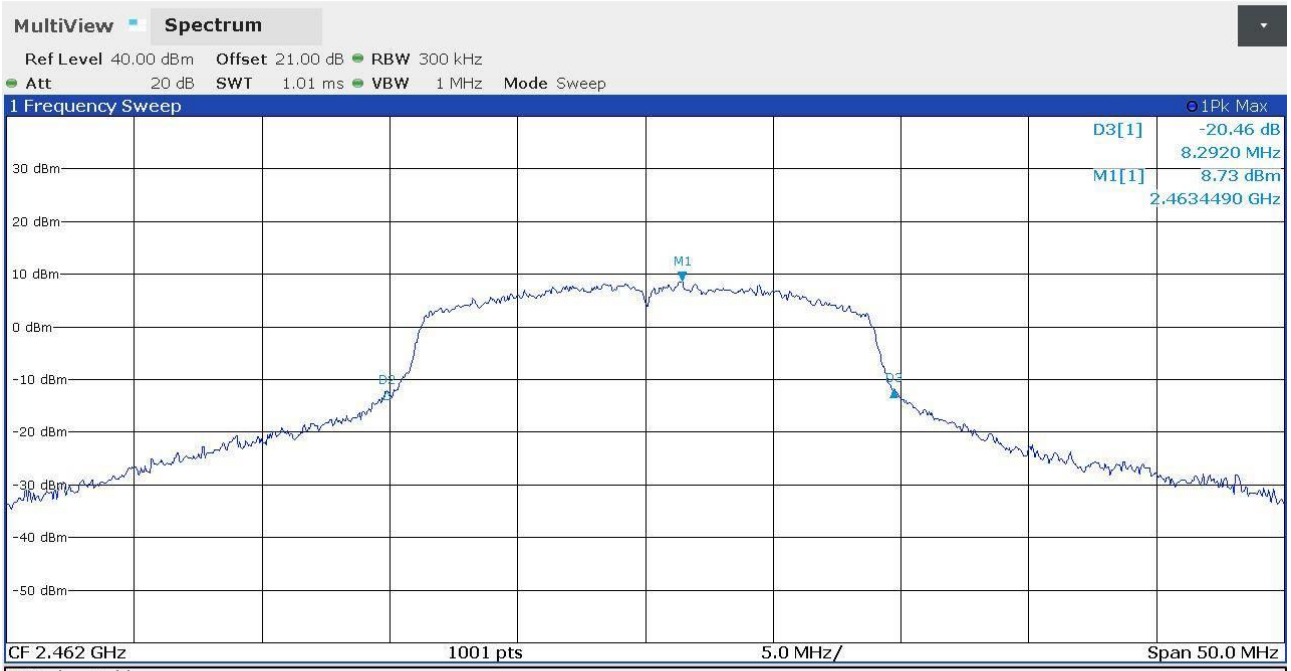


2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	2.435452 GHz	7.76 dBm		
D2	M1	1	-8.092 MHz	-21.86 dB		
D3	M1	1	11.363 MHz	-22.88 dB		

CMC Centro Misure Compatibilità S.r.l.

De Rosso 20246290



2 Marker Table

Type	Ref	Trc	X-Value	Y-Value	Function	Function Result
M1		1	**2.463449 GHz**	**8.73 dBm**		
D2	M1	1	**-11.563 MHz**	**-20.89 dB**		
D3	M1	1	**8.292 MHz**	**-20.46 dB**		

CMC Centro Misure Compatibilità S.r.l.

9.6 Band edge

Tested by ..... :	A. Bertezzolo
Test date ..... :	09.02.2021
Test location (stand) ..... :	Semi-anechoic chamber (CMC A070)
Reference standards ..... :	FCC Rules and Regulation; Titles 47 Part 15.205, 15.209, 15.247 (d) ANSI C63.10 cl. 11.11.1 and 11.12.1 KDB 558074 D01 DTS Meas Guidance v05r02 cl. 8.7
Supplementary test set-up description ..... :	--
Supplementary information..... :	--

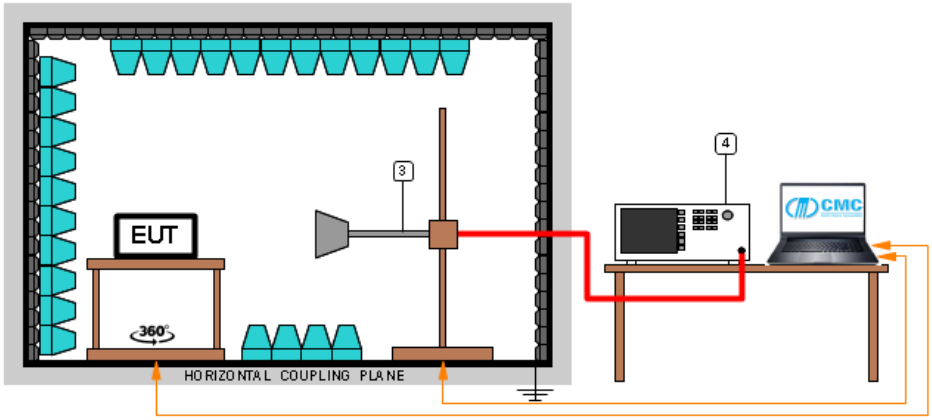
Acceptance limits

In any 100 kHz 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 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in § 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

Operation within the band 2400 – 2483,5 MHz

Test setup

Frequency > 1 GHz



Test setup PE004_04				
Nr.	*Id. Number*	*Manufacturer*	*Model*	*Description*
4	CMC S164	Rohde & Schwarz	ESU26	Receiver 20 Hz - 26.5 GHz
3	CMC S108	Emco	3115	Waveguide antenna

Result – WiFi mode B

Channel	*Bandwidth*	*Graph(s)*	*Results*	
Lowest	1 MHz	G202462123	--	*
Lowest	100 kHz	G202462124	2404,0865 MHz	Complies
Highest	1 MHz	G202462125	2473,9647 MHz	Complies
Highest	1 MHz	G202462126	--	**

*: this graph shows the emissions in 2310 – 2390 MHz restricted band
**: this graph shows the emissions in 2483,5 – 2500 MHz restricted band

Result – WiFi mode G

Channel	*Bandwidth*	*Graph(s)*	*Results*	
Lowest	1 MHz	G202462131	--	*
Lowest	100 kHz	G202462129	2403,3654 MHz	Complies
Highest	1 MHz	G202462128	2476,6891 MHz	Complies
Highest	1 MHz	G202462127	--	**

*: this graph shows the emissions in 2310 – 2390 MHz restricted band
**: this graph shows the emissions in 2483,5 – 2500 MHz restricted band

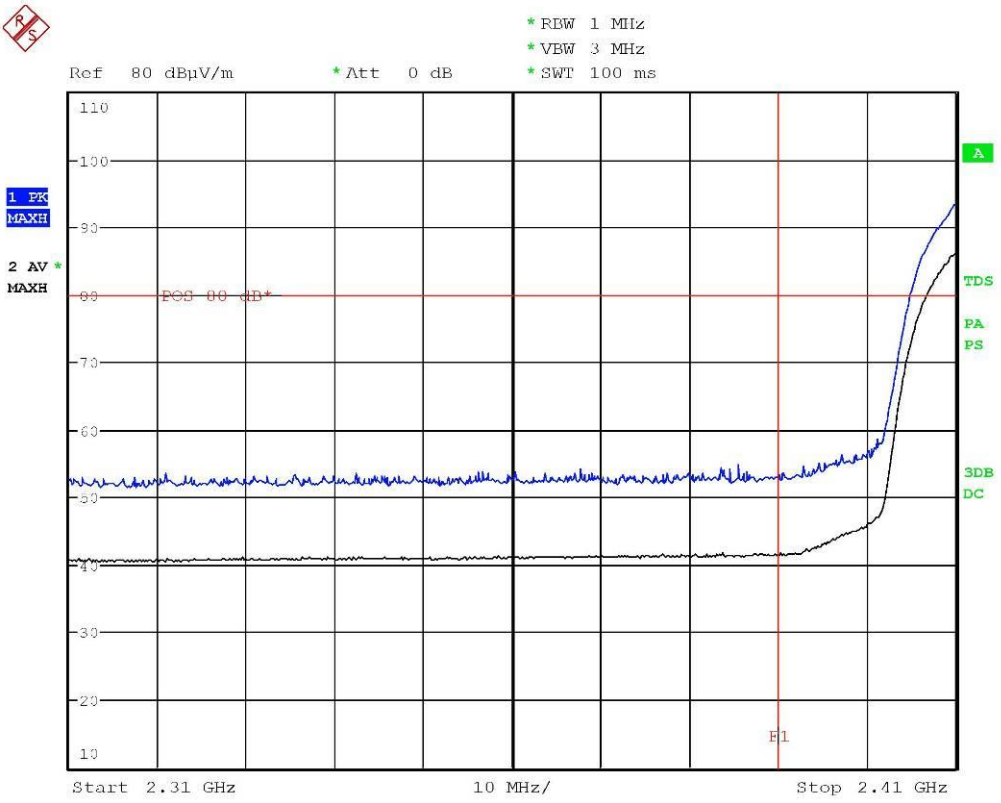
Result – WiFi mode N

Channel	*Bandwidth*	*Graph(s)*	*Results*	
Lowest	1 MHz	G202462132	--	*
Lowest	100 kHz	G202462133	2402,7244 MHz	Complies
Highest	1 MHz	G202462134	2476,2884 MHz	Complies
Highest	1 MHz	G202462135	--	**

*: this graph shows the emissions in 2310 – 2390 MHz restricted band
**: this graph shows the emissions in 2483,5 – 2500 MHz restricted band

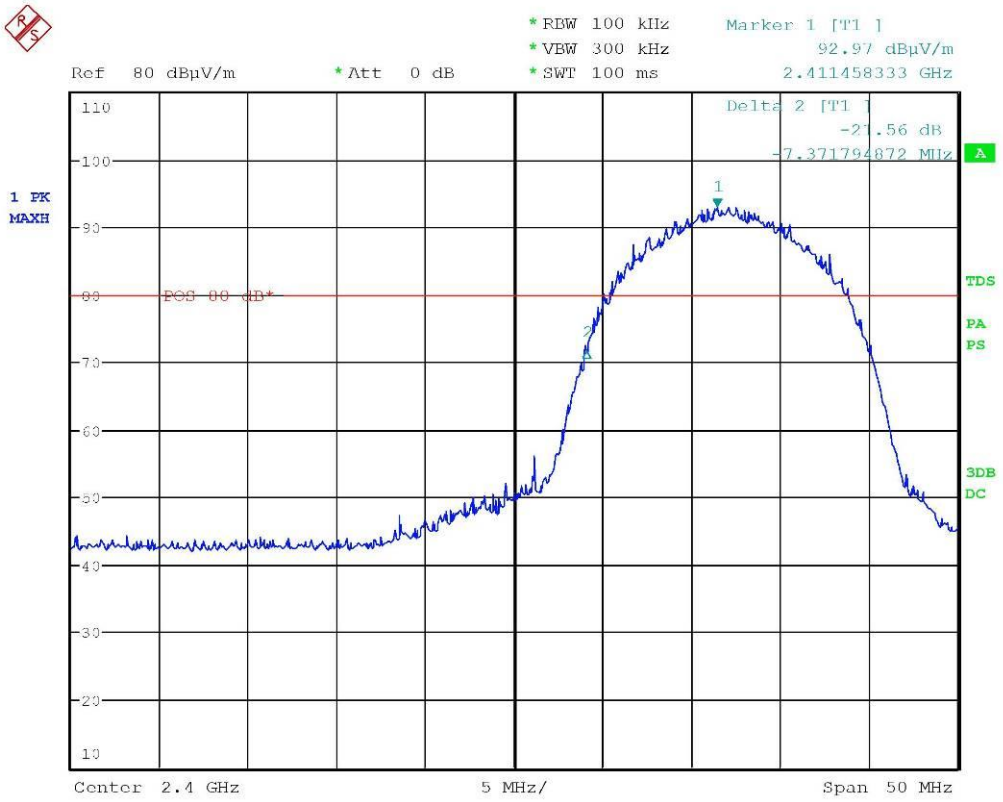
CMC Centro Misure Compatibilità S.r.l.

Graphs



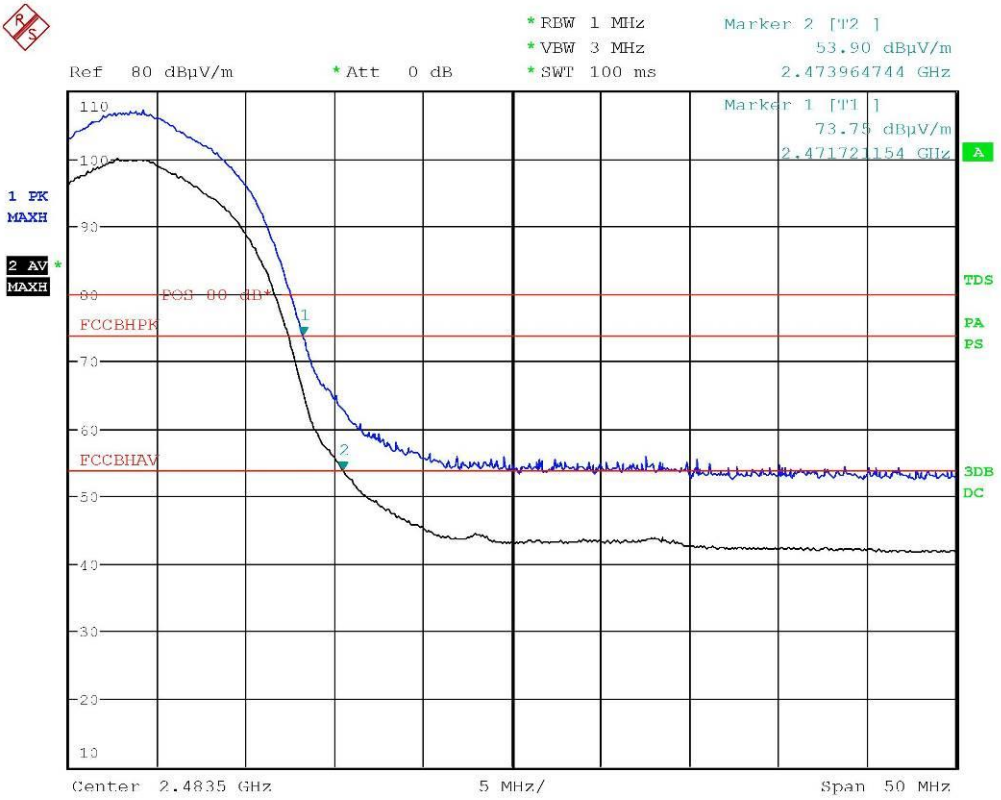
De Rosso 202462123

CMC Centro Misure Compatibilità S.r.l.



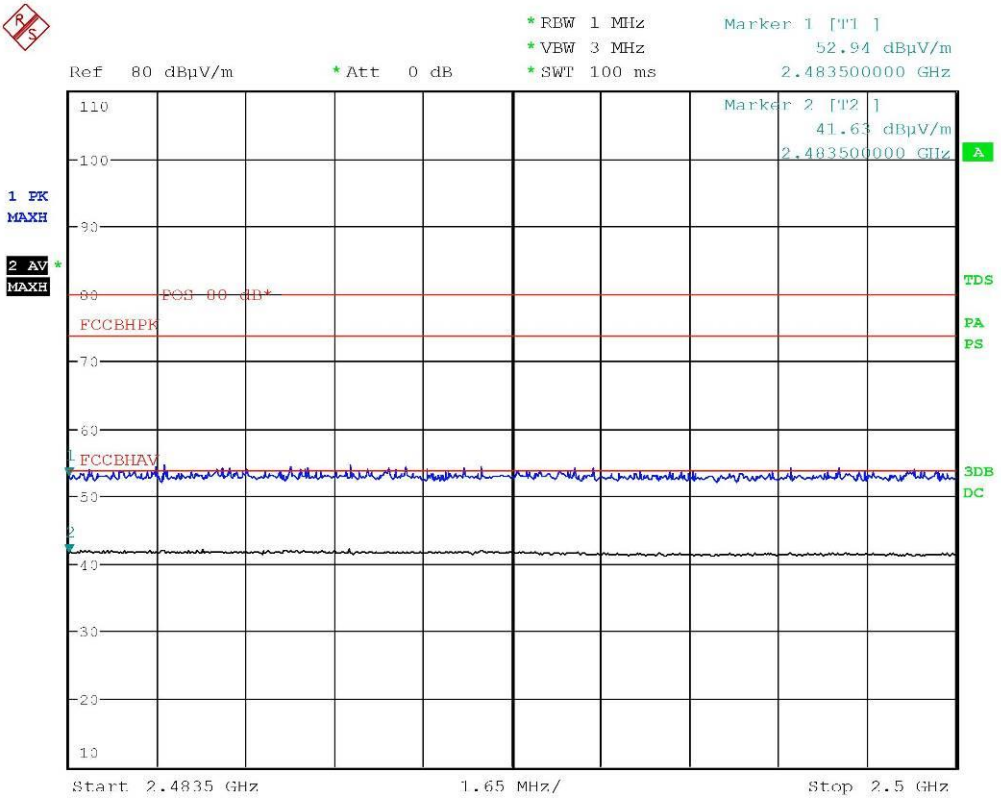
De Rosso 202462124

CMC Centro Misure Compatibilità S.r.l.



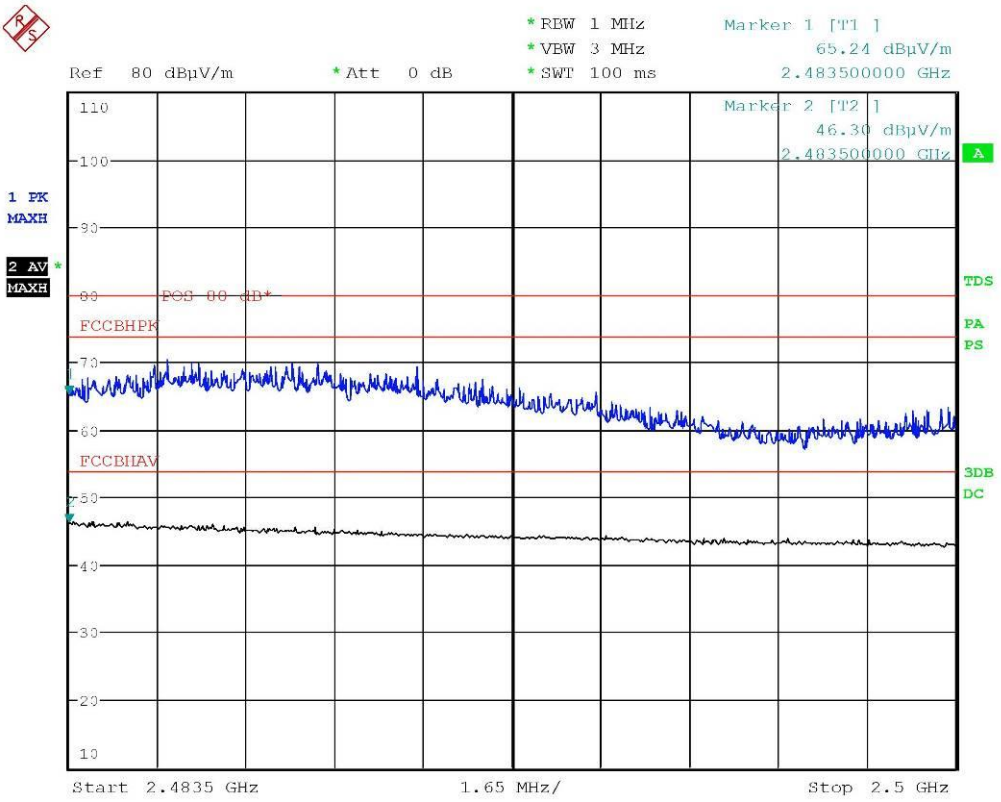
De Rosso 202462125

CMC Centro Misure Compatibilità S.r.l.



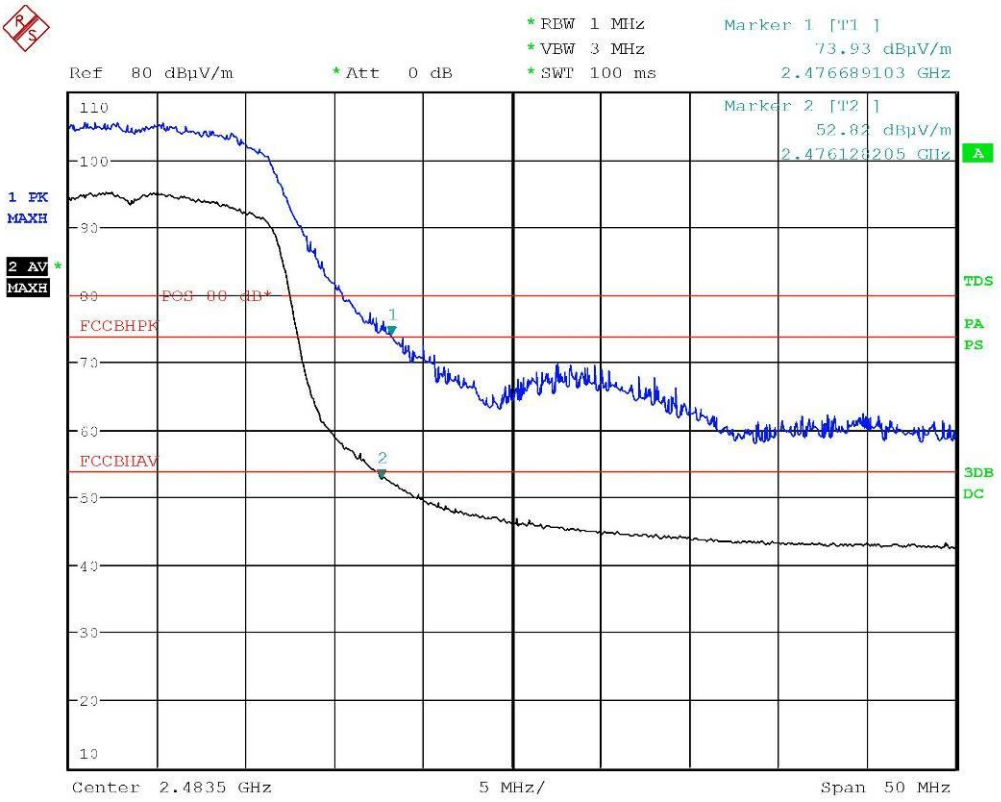
De Rosso 202462126

CMC Centro Misure Compatibilità S.r.l.



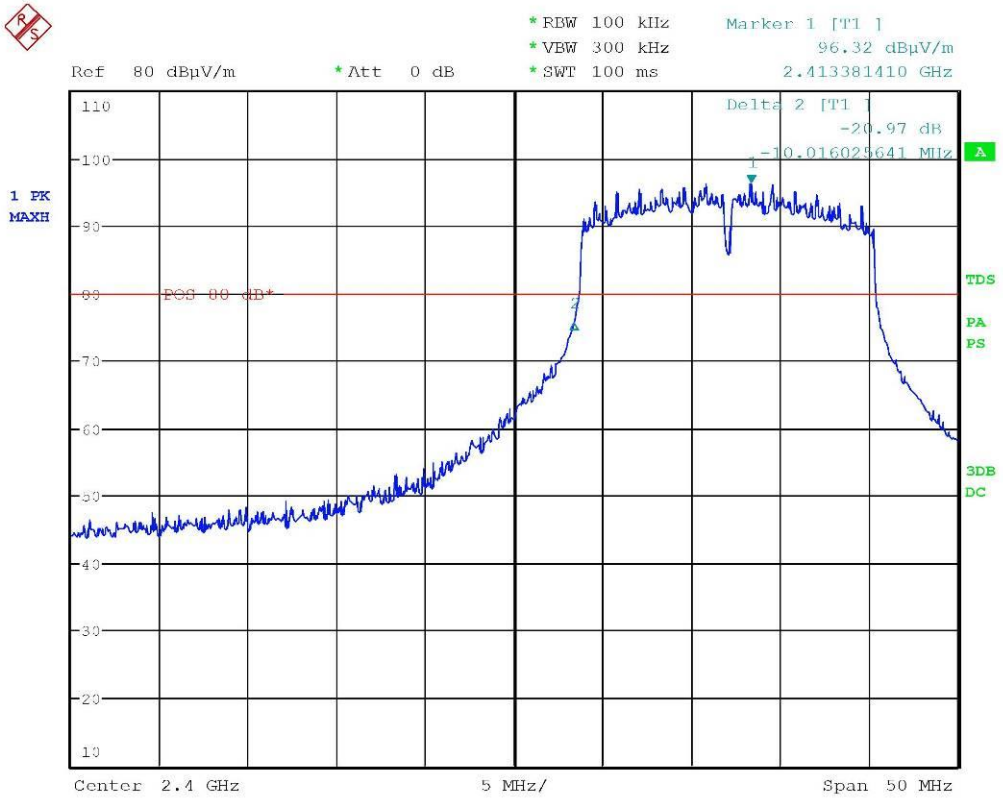
De Rosso 202462127

CMC Centro Misure Compatibilità S.r.l.



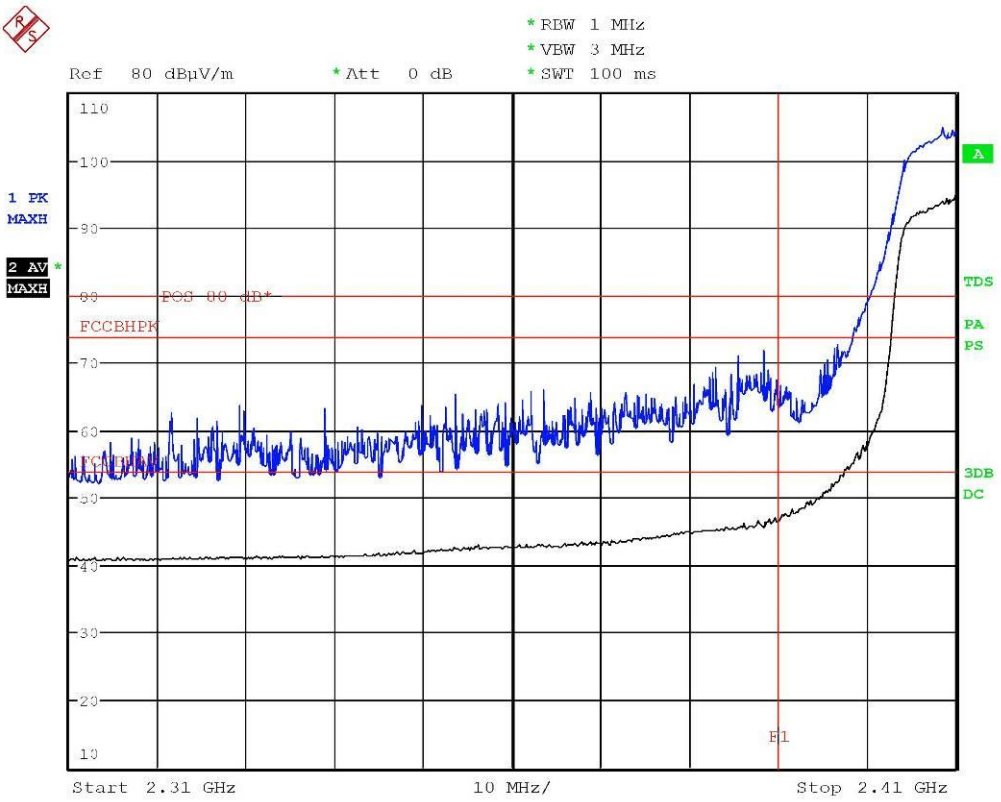
De Rosso 202462128

CMC Centro Misure Compatibilità S.r.l.



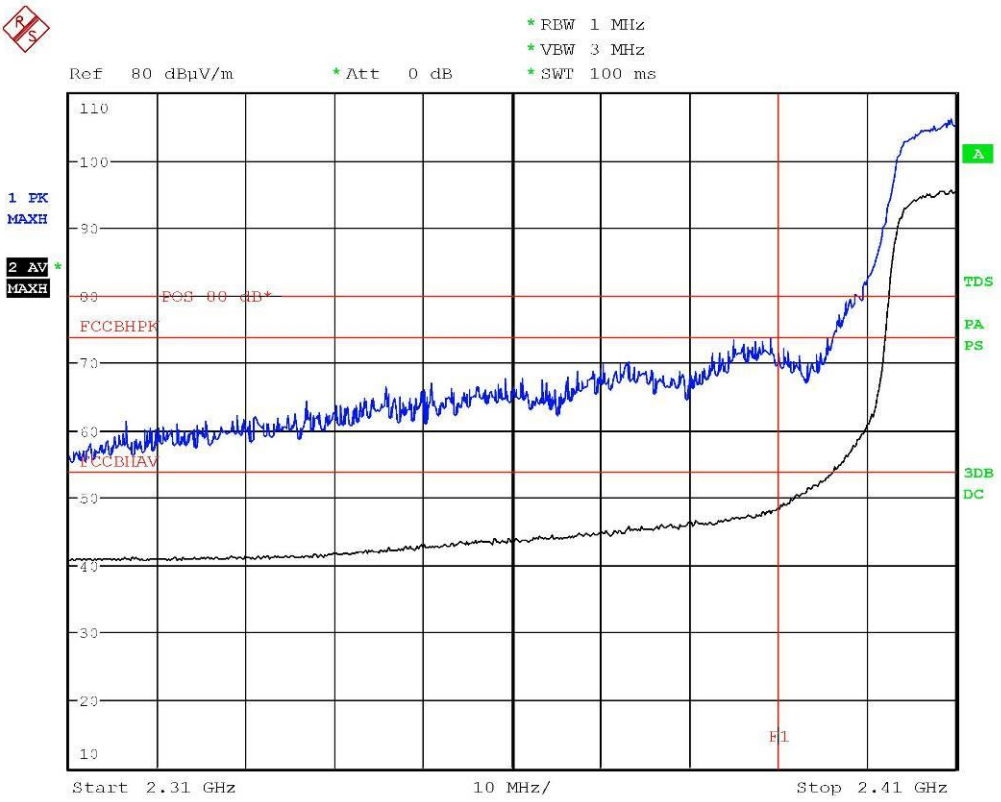
De Rosso 202462129

CMC Centro Misure Compatibilità S.r.l.



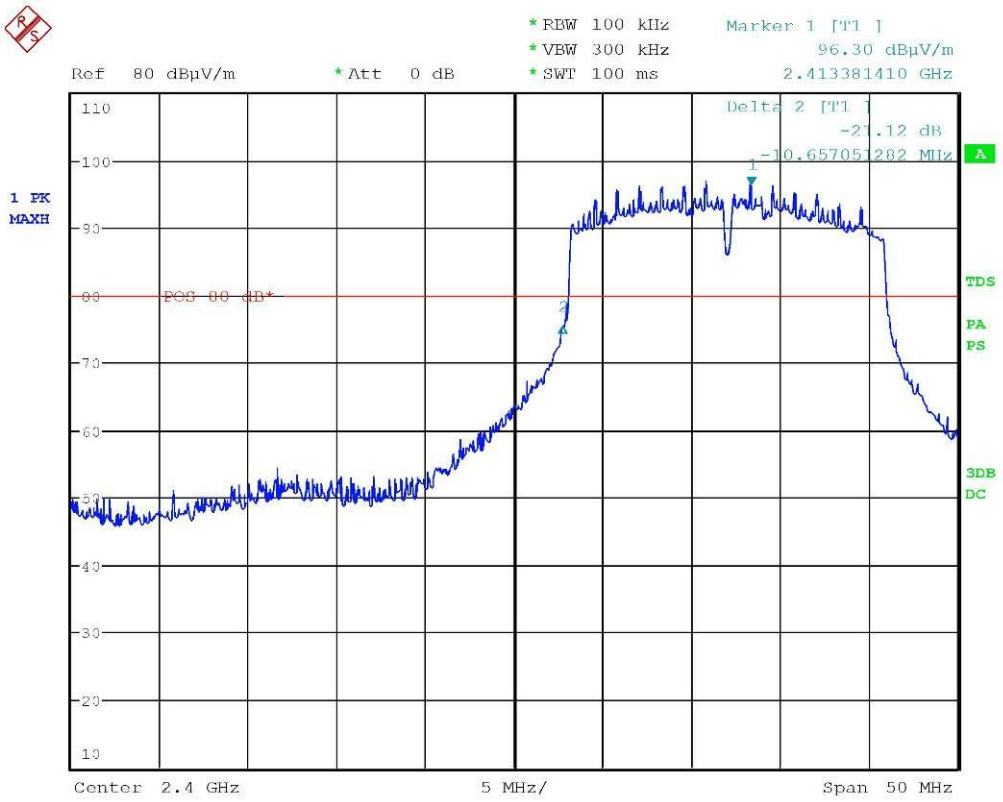
De Rosso 202462131 ok 48 Mbps

CMC Centro Misure Compatibilità S.r.l.



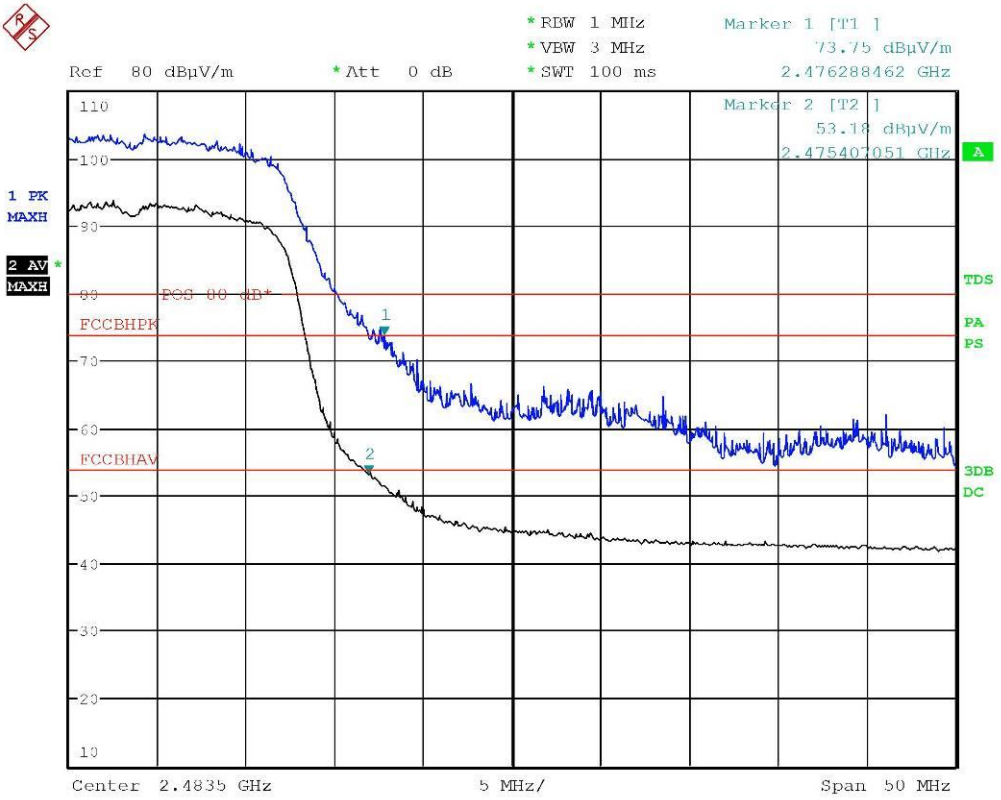
De Rosso 202462132

CMC Centro Misure Compatibilità S.r.l.



De Rosso 202462133

CMC Centro Misure Compatibilità S.r.l.



De Rosso 202462134

CMC Centro Misure Compatibilità S.r.l.