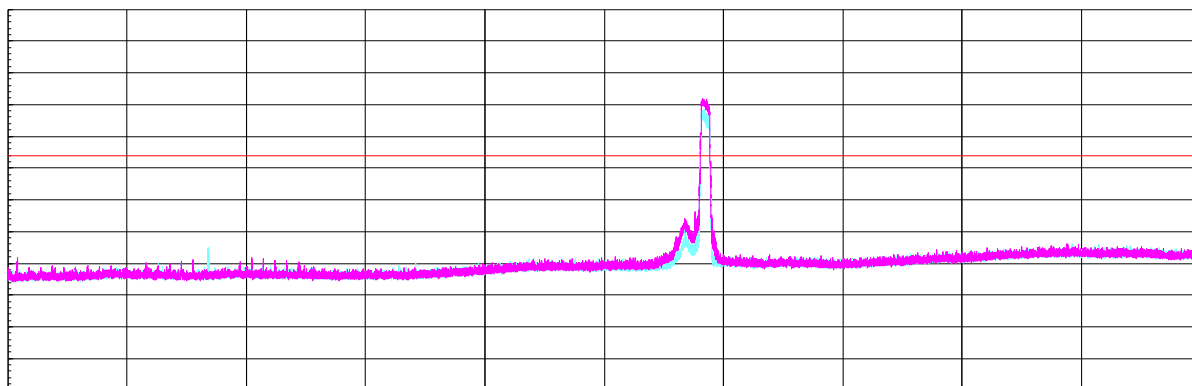
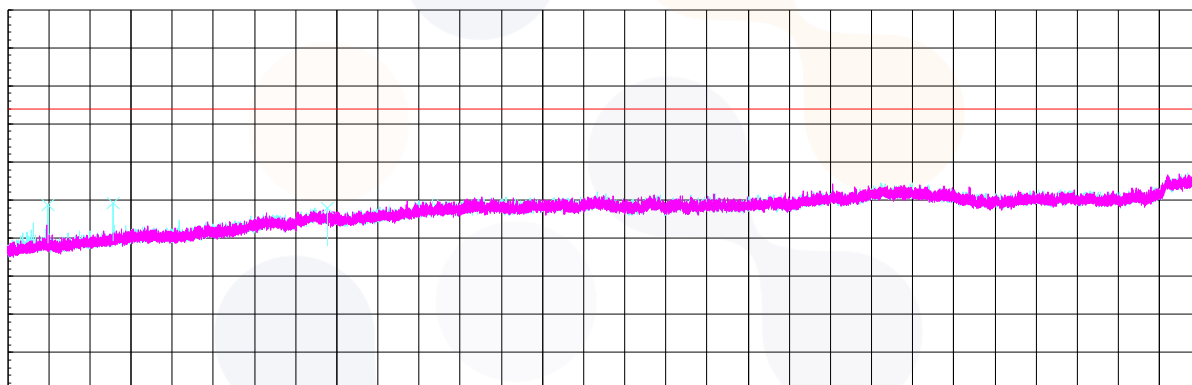


Horizontal/Vertical for 1 GHz ~ 3.5 GHz



Horizontal/Vertical for 3.5 GHz ~ 18 GHz

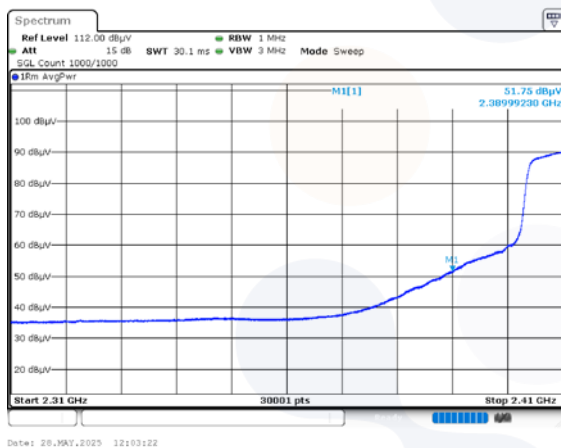


802.11n HT40

2 422 MHz

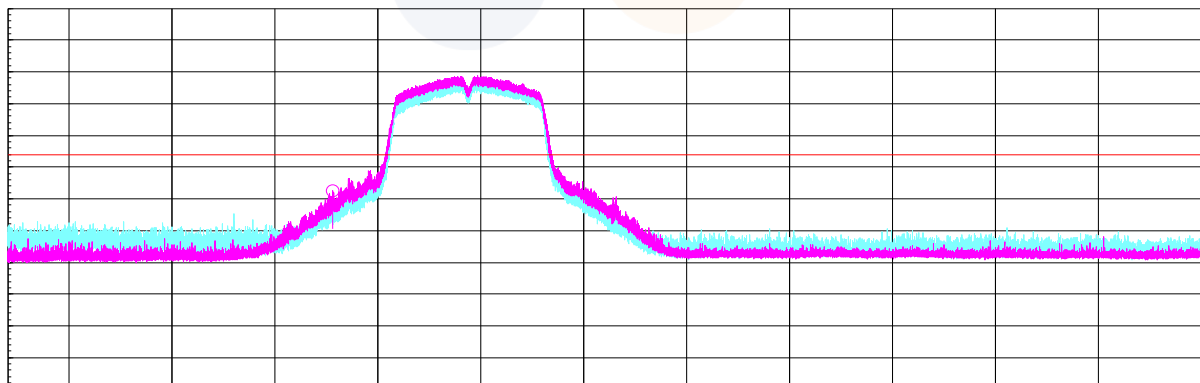
Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μV))	(dB)	(dB)	(dB)	(dB(μV/m))	(dB(μV/m))	(dB)
Peak data								
2 389.99 ¹⁾	H	65.60	27.10	-30.05	-	62.65	74.00	11.35
3 998.32 ¹⁾	V	62.40	30.60	-46.47	-	46.53	74.00	27.47
4 798.72 ¹⁾	V	63.50	31.90	-45.81	-	49.59	74.00	24.41
7 304.80 ¹⁾	H	54.10	36.88	-43.70	-	47.28	74.00	26.72
Average Data								
2 389.99 ¹⁾	H	51.75	27.10	-30.05	0.62	49.42	54.00	4.58

Average Data

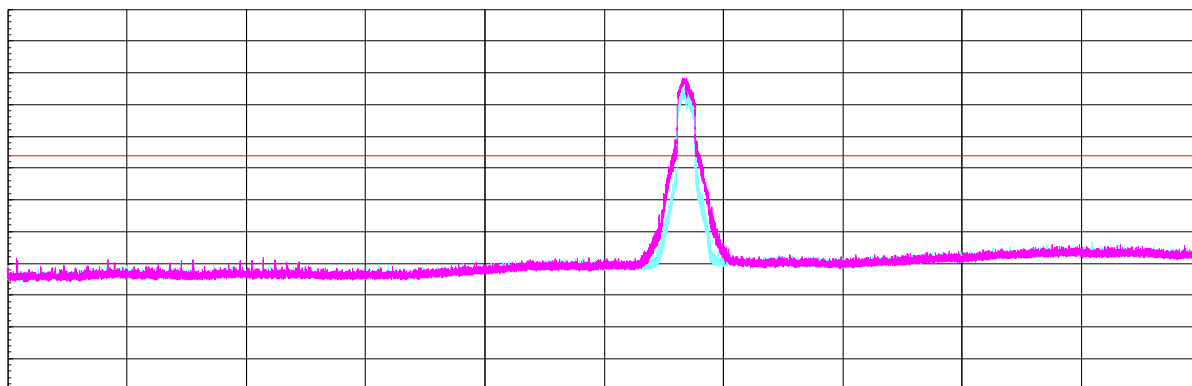


Blank

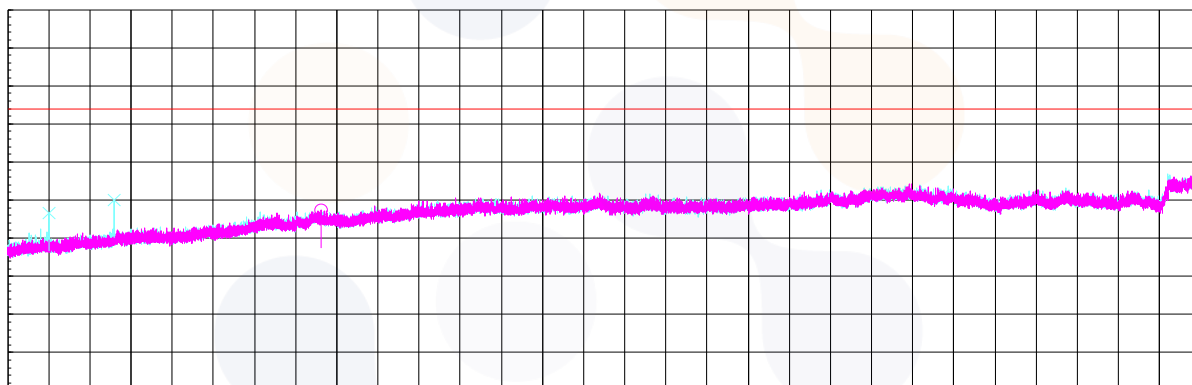
Horizontal/Vertical for Band-edge



Horizontal/Vertical for 1 GHz ~ 3.5 GHz



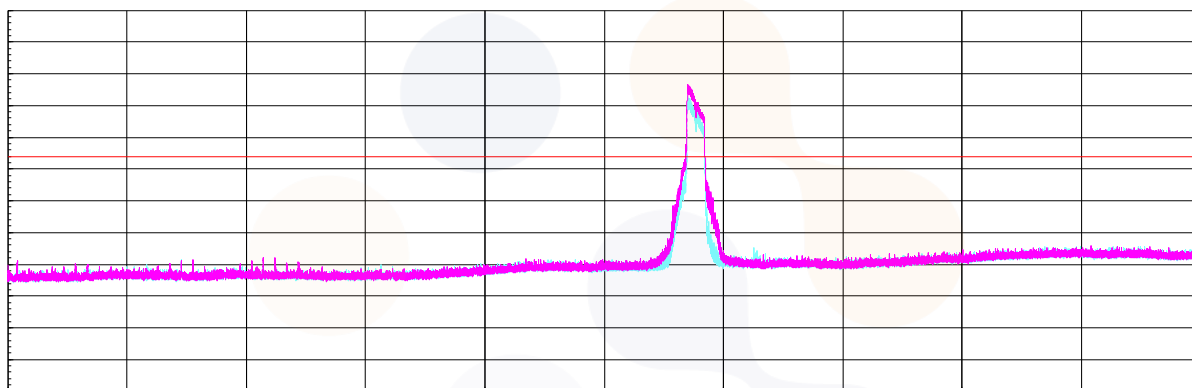
Horizontal/Vertical for 3.5 GHz ~ 18 GHz



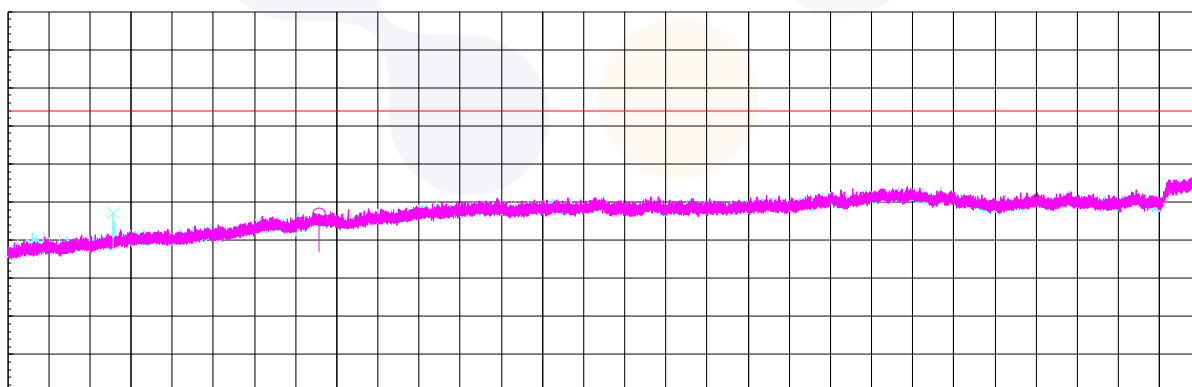
2 437 MHz

Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μ V))	(dB)	(dB)	(dB)	(dB(μ V/m))	(dB(μ V/m))	(dB)
Peak data								
4 780.35 ¹⁾	V	61.00	31.90	-45.90	-	47.00	74.00	27.00
7 288.37 ¹⁾	H	53.70	37.18	-43.73	-	47.15	74.00	26.85
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

Horizontal/Vertical for 1 GHz ~ 3.5 GHz

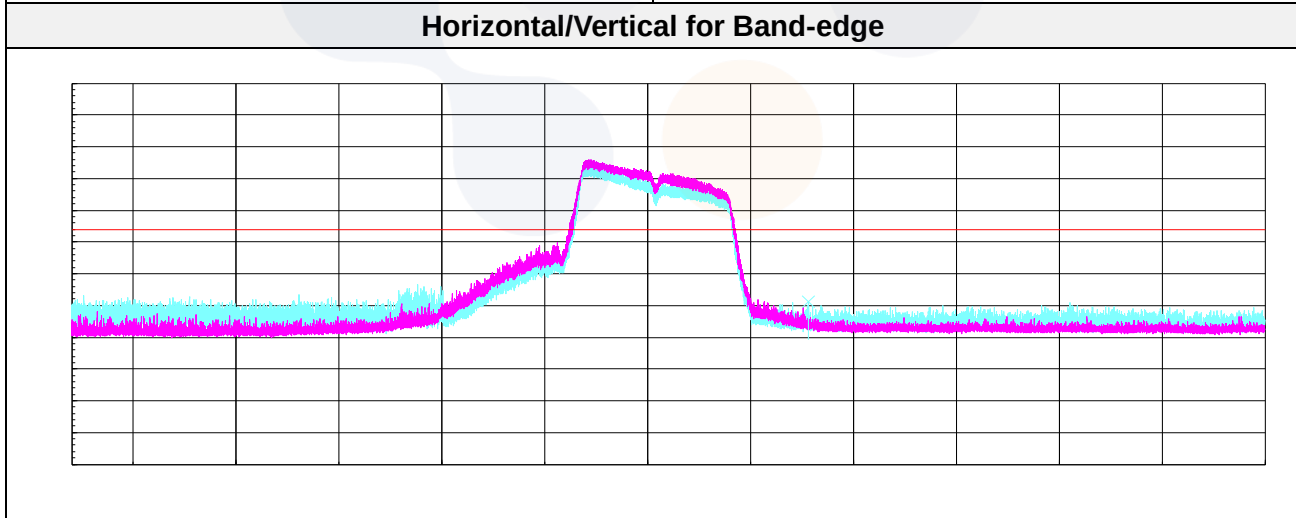
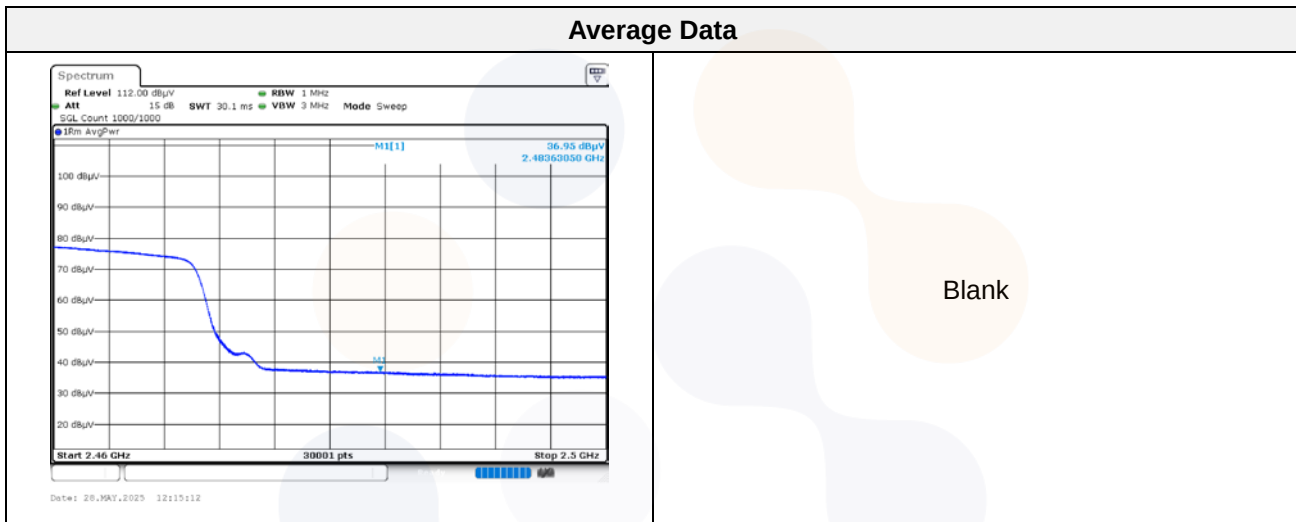


Horizontal/Vertical for 3.5 GHz ~ 18 GHz

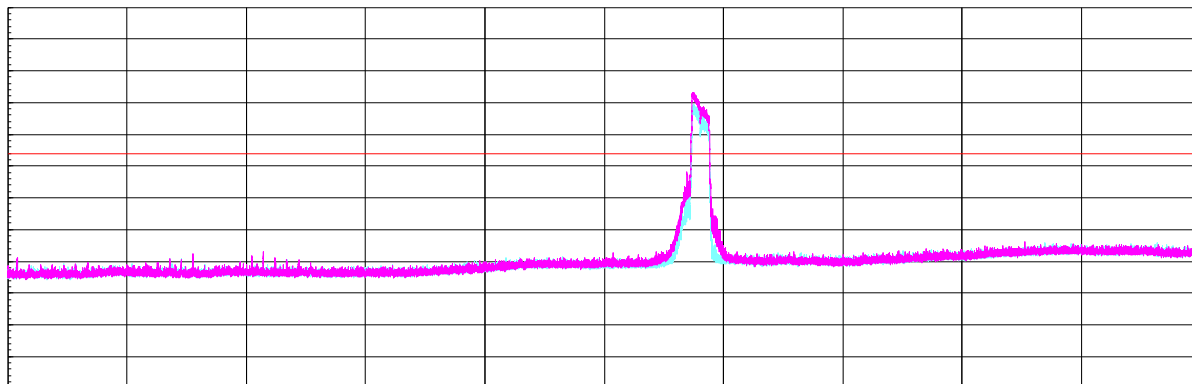


2 452 MHz

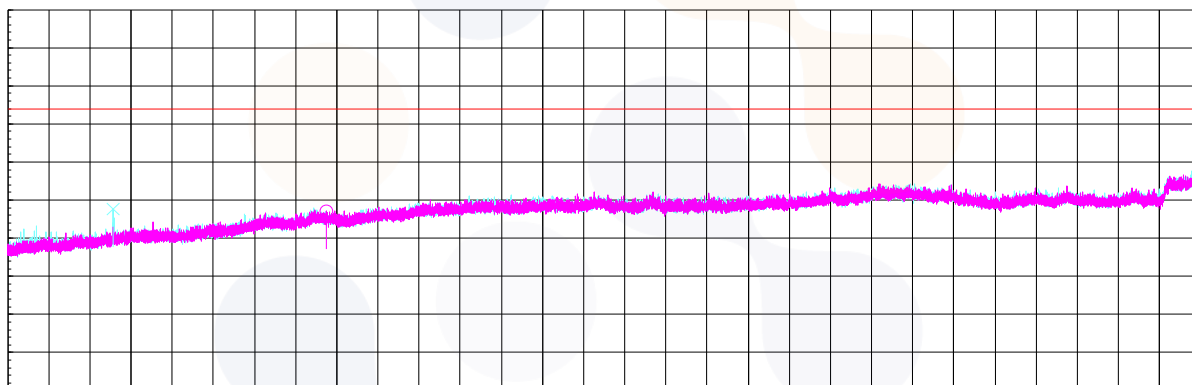
Frequency	Pol.	Reading	Ant. Factor	Amp. + Cable	DCF	Result	Limit	Margin
(MHz)	(V/H)	(dB(μ V))	(dB)	(dB)	(dB)	(dB(μ V/m))	(dB(μ V/m))	(dB)
Peak data								
2 483.63 ¹⁾	V	53.10	27.84	-29.90	-	51.04	74.00	22.96
4 786.63 ¹⁾	V	61.40	31.90	-45.87	-	47.43	74.00	26.57
7 379.23 ¹⁾	H	53.90	36.74	-43.56	-	47.08	74.00	26.92
Average Data								
2 483.63 ¹⁾	V	36.95	27.84	-29.90	0.62	35.51	54.00	18.49



Horizontal/Vertical for 1 GHz ~ 3.5 GHz

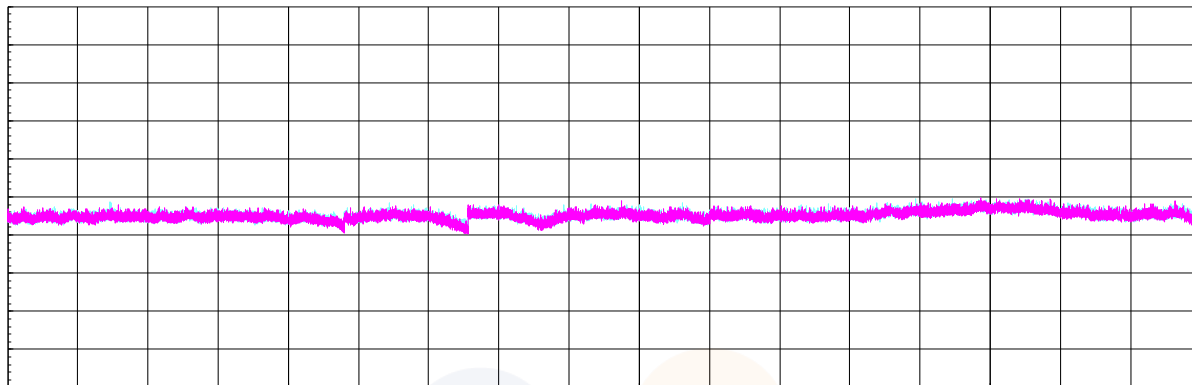


Horizontal/Vertical for 3.5 GHz ~ 18 GHz



Test results (Above 18 GHz) – Worst Case : 802.11n HT40 mode / 2 422 MHz

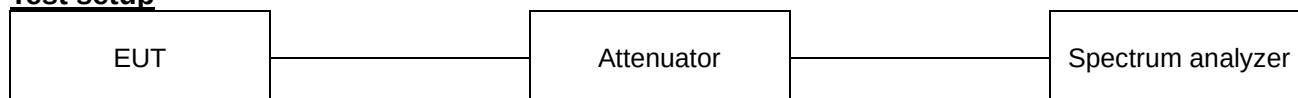
Horizontal/Vertical for 18 GHz ~ 26.5 GHz



Note: The Worst case was based on the lowest margin condition considering Harmonic and Spurious Emission.

7.5. Conducted Spurious Emission

Test setup



Limit

According to §15.247(d), In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operation, 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 averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation specified in §15.209(a) is not required. In addition, radiated emission limits specified in §15.209(a) (see §15.205(c)).

Limit : 20 dBc

Test procedure

ANSI C63.10 - Section 11.11.3, 14.3.3

Test settings

Establish an emission level by using the following procedure:

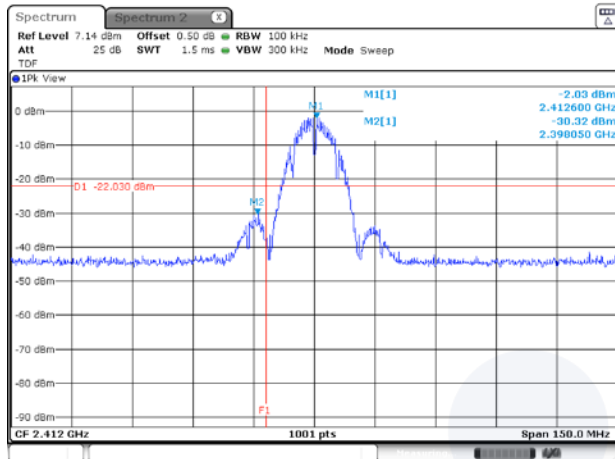
- 1) Set the center frequency and span to encompass frequency range to be measured.
- 2) Set the RBW = 100 kHz
- 3) Set the VBW $\geq [3 \times \text{RBW}]$
- 4) Detector = peak
- 5) Sweep time = auto couple
- 6) Trace mode = max hold
- 7) Allow trace to fully stabilize.
- 8) Use the peak marker function to determine the maximum amplitude level.

Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) is attenuated by at least the minimum requirements specified in 11.11. Report the three highest emissions relative to the limit.

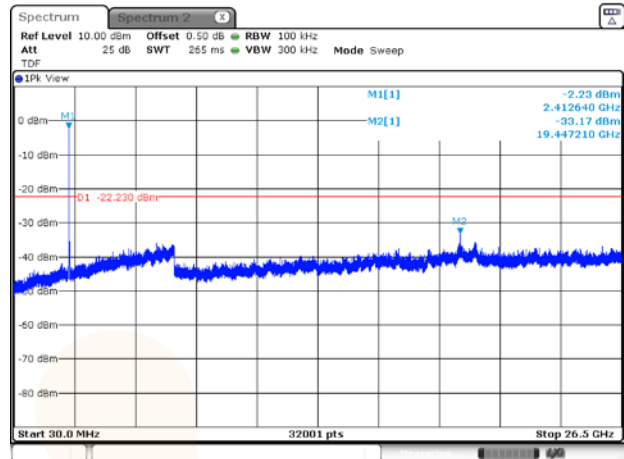
Test results

802.11b

Conducted band-edge / 2 412 MHz



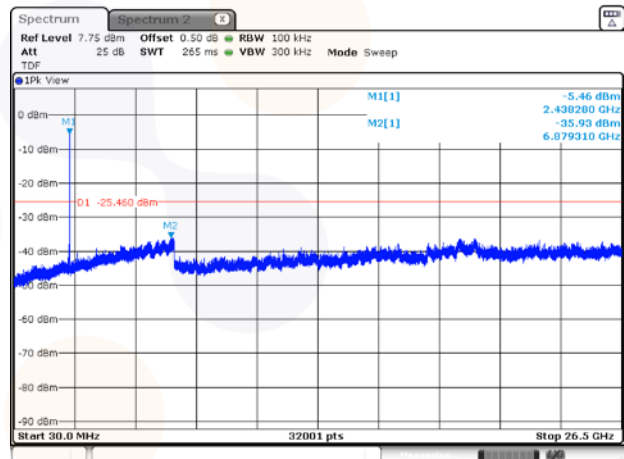
Conducted spurious / 2 412 MHz



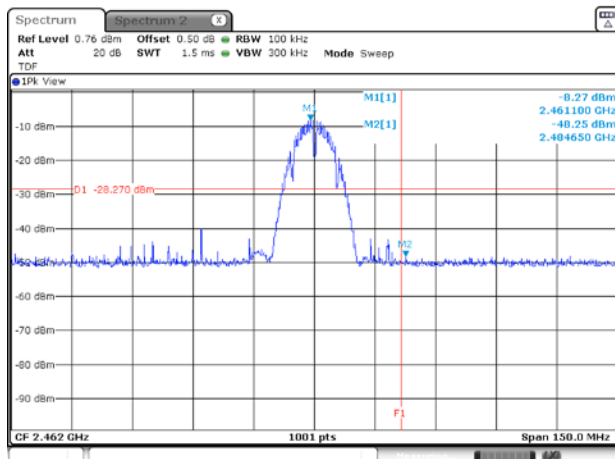
Conducted band-edge / 2 437 MHz

Blank

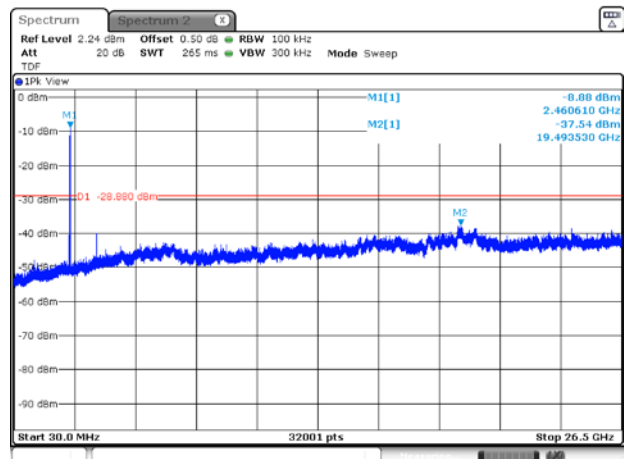
Conducted spurious / 2 437 MHz



Conducted band-edge / 2 462 MHz

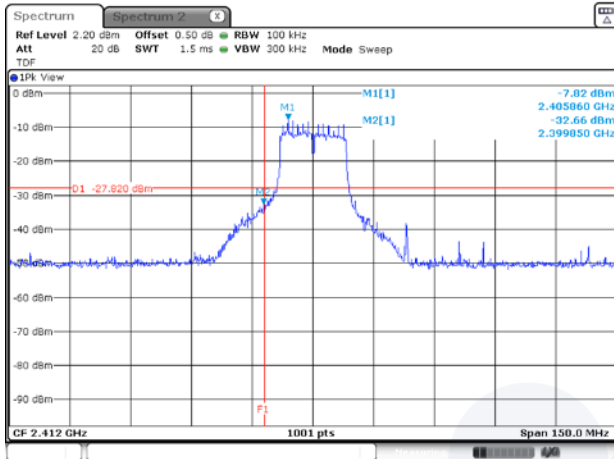


Conducted spurious / 2 462 MHz

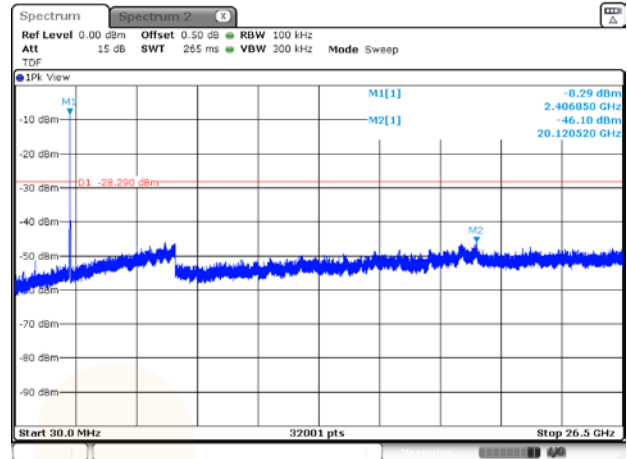


802.11g

Conducted band-edge / 2 412 MHz



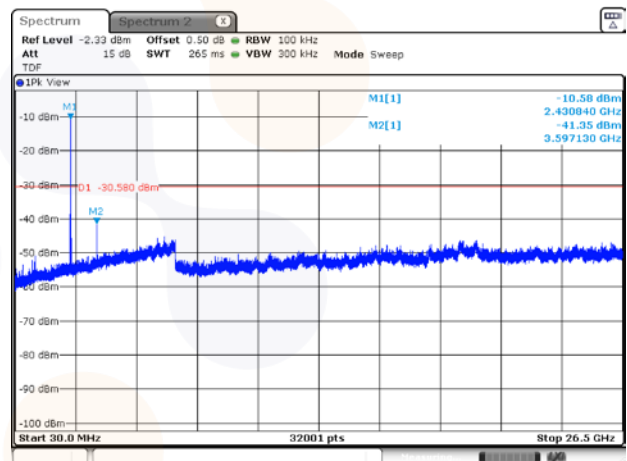
Conducted spurious / 2 412 MHz



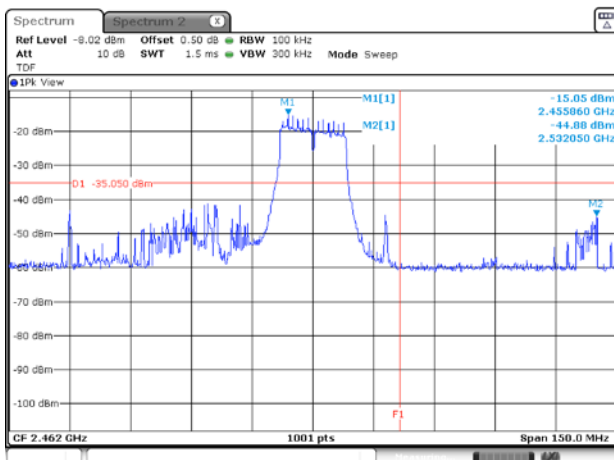
Conducted band-edge / 2 437 MHz

Blank

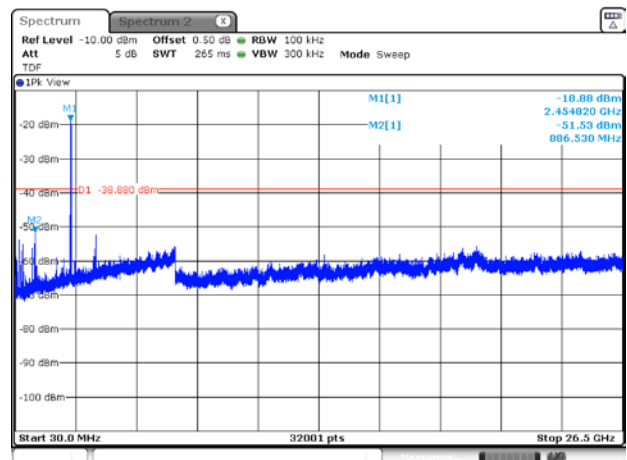
Conducted spurious / 2 437 MHz



Conducted band-edge / 2 462 MHz

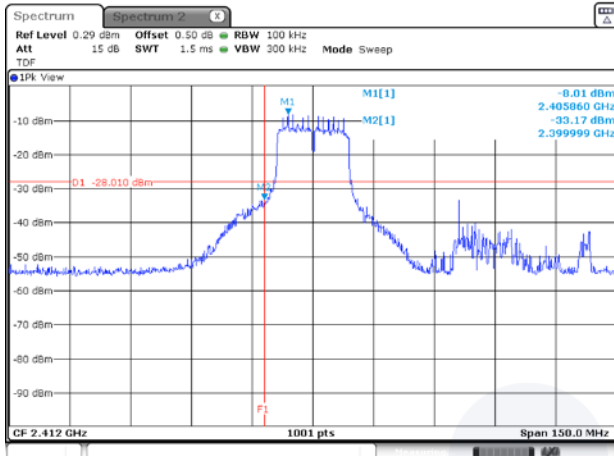


Conducted spurious / 2 462 MHz

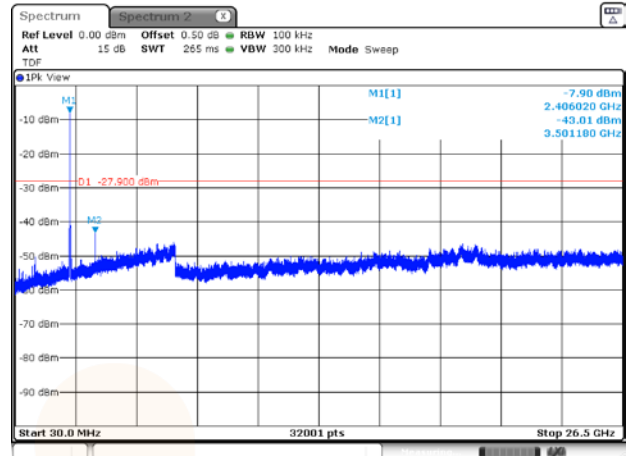


802.11n_HT20

Conducted band-edge / 2 412 MHz



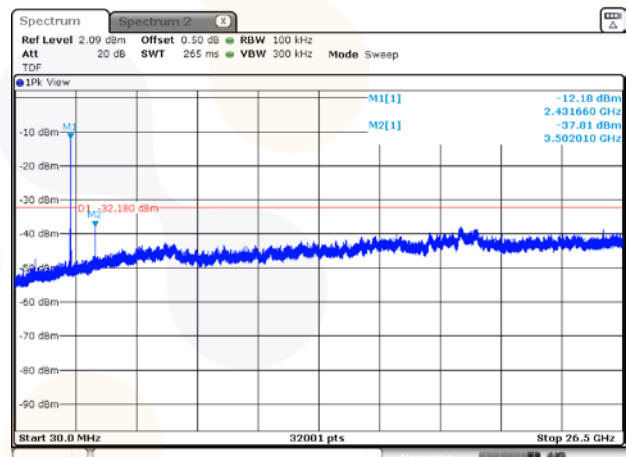
Conducted spurious / 2 412 MHz



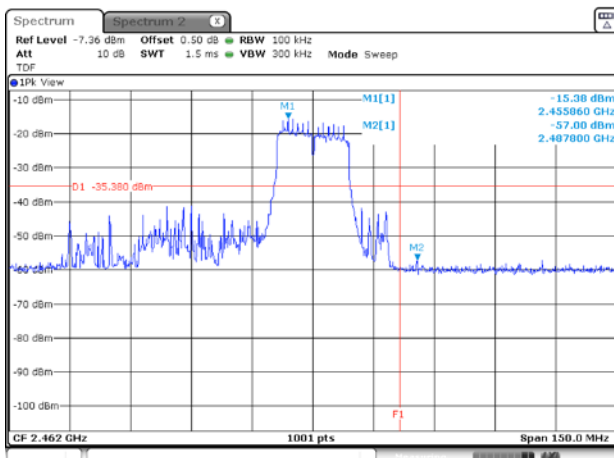
Conducted band-edge / 2 437 MHz

Blank

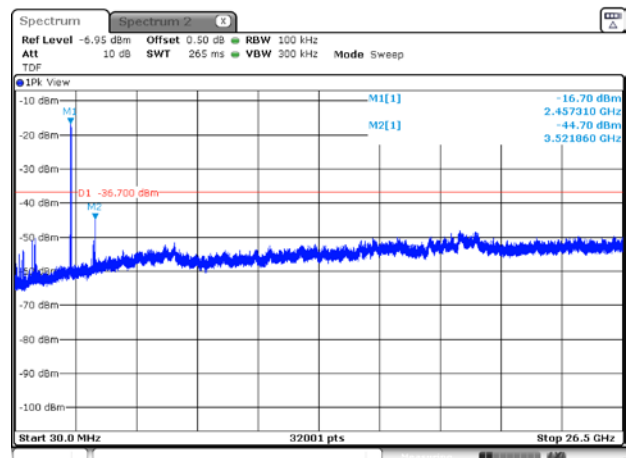
Conducted spurious / 2 437 MHz



Conducted band-edge / 2 462 MHz

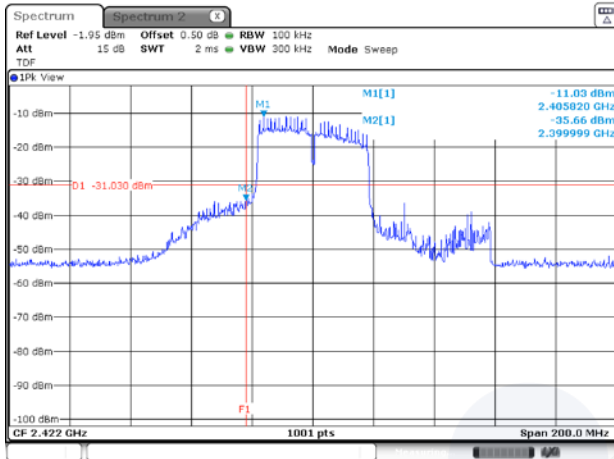


Conducted spurious / 2 462 MHz

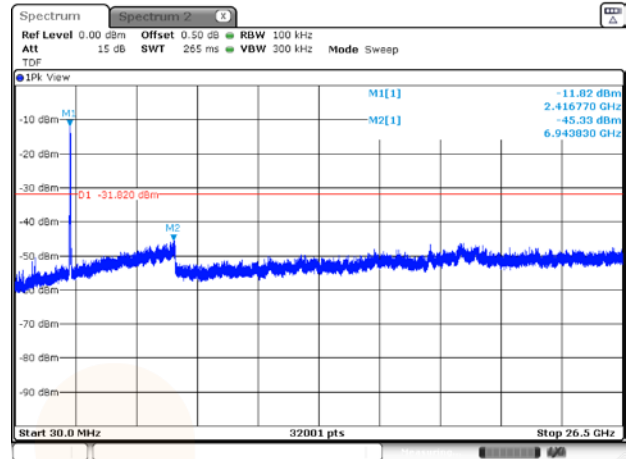


802.11n_HT40

Conducted band-edge / 2 422 MHz



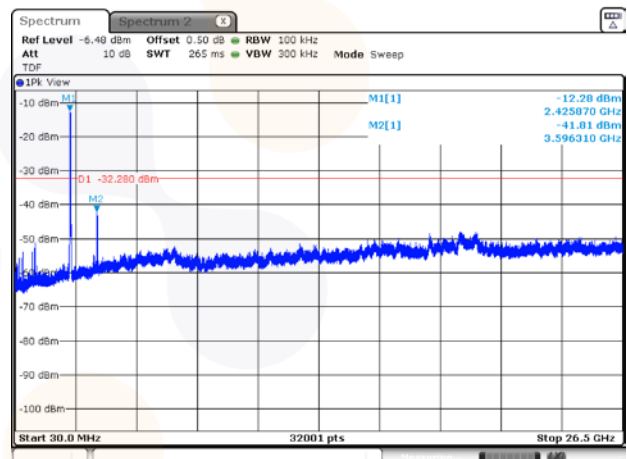
Conducted spurious / 2 422 MHz



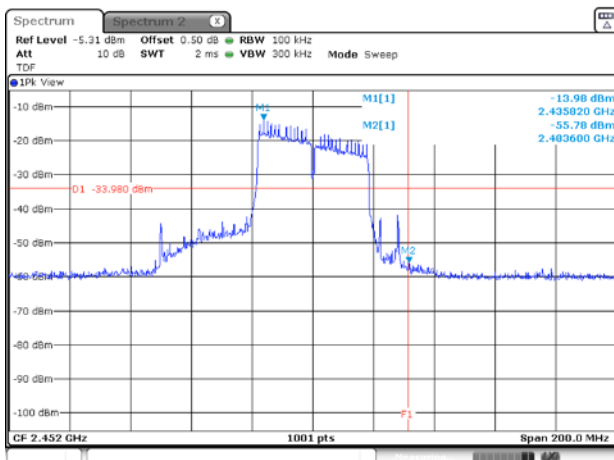
Conducted band-edge / 2 437 MHz

Blank

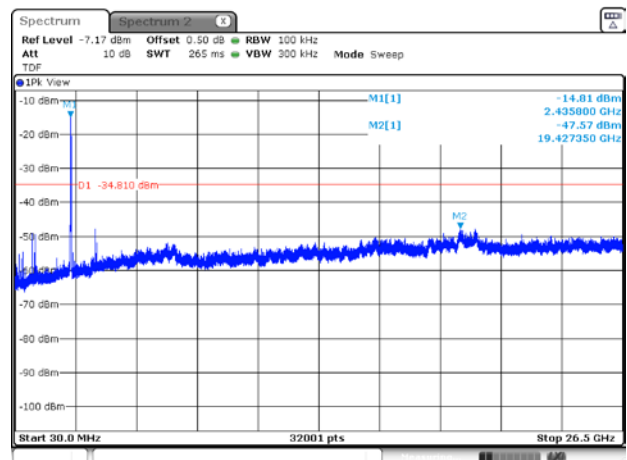
Conducted spurious / 2 437 MHz



Conducted band-edge / 2 452 MHz



Conducted spurious / 2 452 MHz



Eurofins KCTL Co.,Ltd. 65, Sinwon-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Korea TEL: 82-70-4904-0113 FAX: 82-505-299-8311 www.kctl.co.kr	Report No.: KR25-SRF0124 Page (55) of (55)	 
---	---	---

8. Measurement equipment

Equipment Name	Manufacturer	Model No.	Serial No.	Next Cal. Date
Spectrum Analyzer	R&S	FSV40-N	101462	25.10.10
DC Power Supply	AGILENT	E3632A	MY51220373	25.07.01
Signal Generator	R&S	SMB100A	176206	26.01.23
Attenuator	API Inmet	40AH2W-10	15	26.04.28
Spectrum Analyzer	R&S	FSV40	100988	26.04.24
PSA Spectrum Analyzer	Agilent	E4440A	MY44303500	25.07.02
Amplifier	SONOMA INSTRUMENT	310N	421910	25.10.11
Bilog Antenna	Teseq GmbH	CBL 6112D	61521	26.12.11
Loop Antenna	R&S	HFH2-Z2	100355	26.06.25
DC Power Supply	POWERCOM	DCP-50100A	20220610-01	26.01.16
Vector Signal Generator	R&S	SMBV100A	257566	25.07.01
Spectrum Analyzer	R&S	FSVA40	101575	26.04.23
Broadband PreAmplifier	SCHWARZBECK	BBV9718D	57	26.01.16
Low Noise Amplifier	TESTEK	TK-PA18H	220124-L	25.10.11
Low Noise Amplifier	TESTEK	TK-PA1840H	220133-L	25.10.14
Horn Antenna	SCHWARZBECK	BBHA9120D	2763	25.10.24
Horn Antenna	SCHWARZBECK	BBHA9170	1267	25.10.15
High Pass Filter	QOTANA TECHNOLOGIES	DBHF0508004000A	23041800061	25.06.24
Signal Generator	R&S	SMB100A	176206	26.01.17
High Pass Filter	Wainwright Instruments GmbH	WHKX12-2805-3000-18000-40SS	SN58	25.10.15
Controller	INNCO SYSTEMS	CO3000	1441/54370322/P	-
Antenna Mast	INNCO SYSTEMS	MA4640-XP-ET	AM003	-
Turn Device	INNCO SYSTEMS	DS1200-S-1t	3	-

End of test report