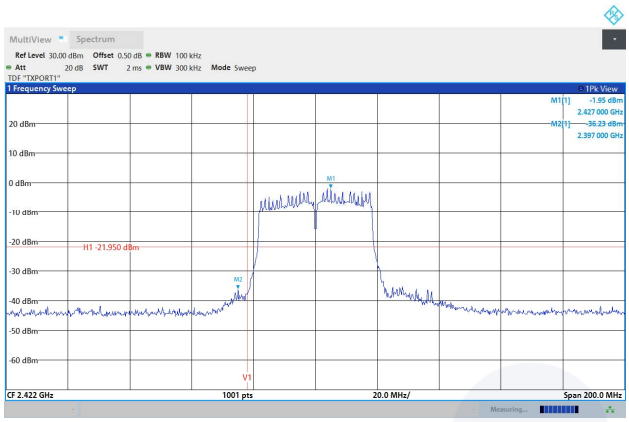
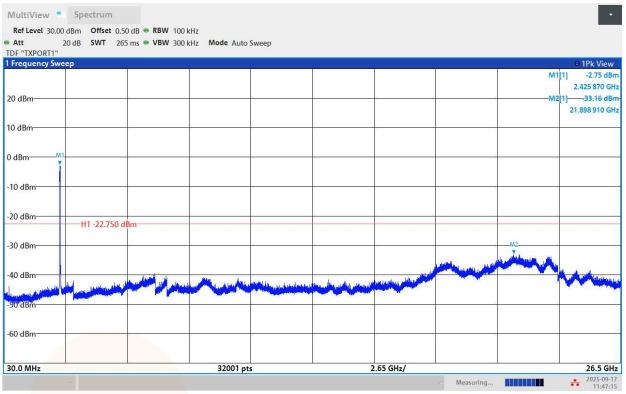
802.11n HT40

Conducted band-edge / 2 422 ㎒



Conducted spurious / 2 422 ㎒

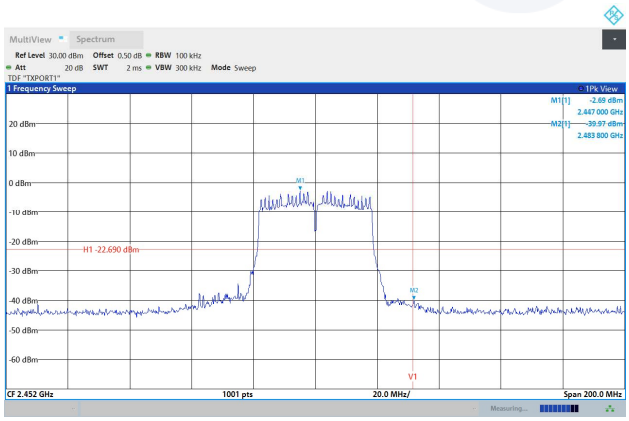


Conducted band-edge / 2 437 ㎒

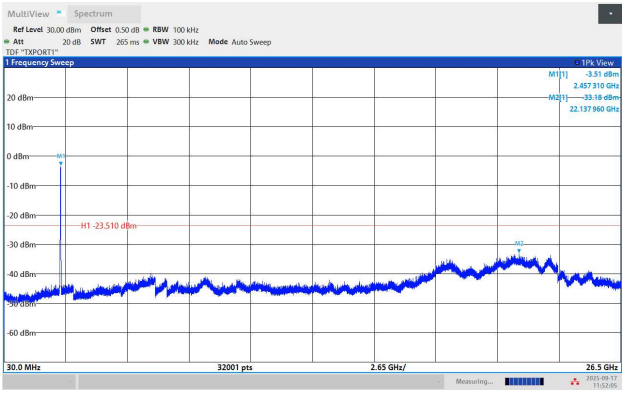
Blank

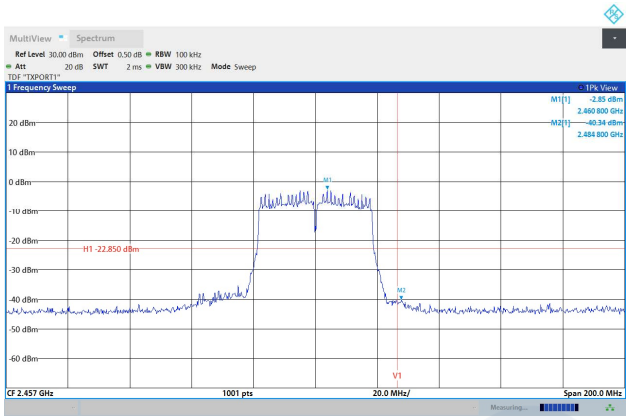
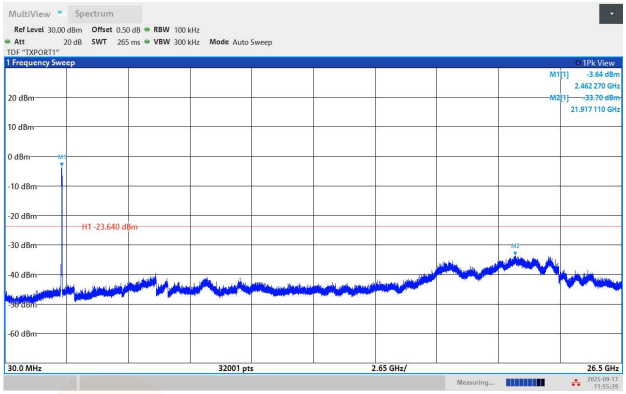
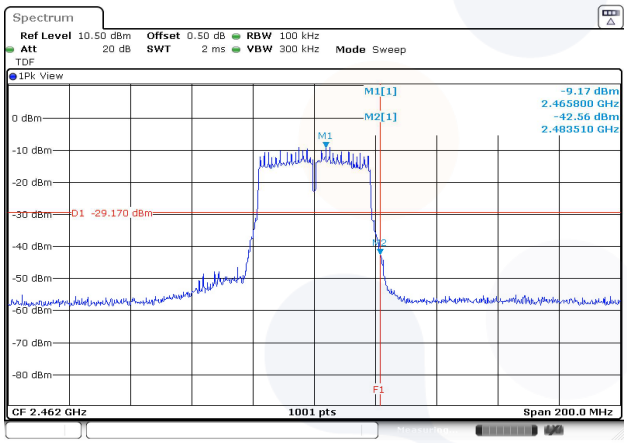
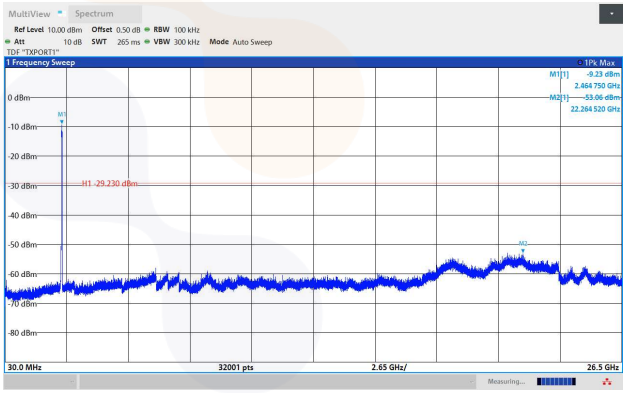
Conducted spurious / 2 437 ㎒

Conducted band-edge / 2 452 ㎒



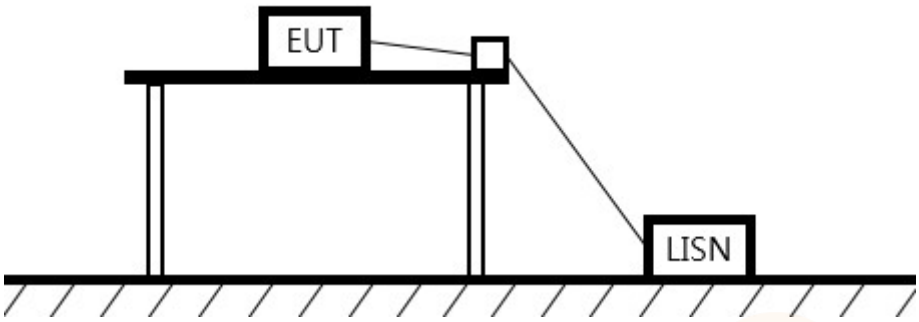
Conducted spurious / 2 452 ㎒



Conducted band-edge / 2 457 ㎒	Conducted spurious / 2 457 ㎒
	
Conducted band-edge / 2 462 ㎒	**Conducted spurious / 2 462 ㎒**
	

7.6. AC Conducted emission

Test setup



Limit

According to 15.207(a),

For an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 ㎑ to 30 ㎒, shall not exceed the limits in the following table, as measured using a 50 μH/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

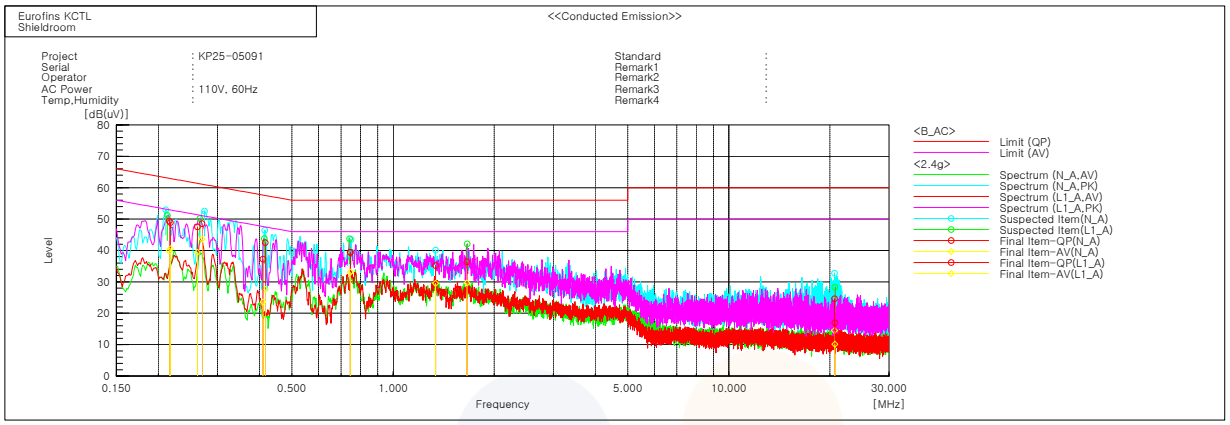
Frequency of Emission (㎒)	Conducted limit (dBμV/m)	
	Quasi-peak	Average
0.15 – 0.50	66 - 56*	56 - 46*
0.50 – 5.00	56	46
5.00 – 30.0	60	50

Measurement procedure

1. The EUT was placed on a wooden table of size, 1 m by 1.5 m, raised 80 ㎝ in which is located 40 ㎝ away from the vertical wall and 1.5m away from the side wall of the shielded room.
2. Each current-carrying conductor of the EUT power cord was individually connected through a 50Ω/50μH LISN, which is an input transducer to a spectrum analyzer or an EMI/Field Intensity Meter, to the input power source.
3. Exploratory measurements were made to identify the frequency of the emission that had the highest amplitude relative to the limit by operating the EUT in a range of typical modes of operation, cable position, and with a typical system equipment configuration and arrangement. Based on the exploratory tests of the EUT, the one EUT cable configuration and arrangement and mode of operation that had produced the emission with the highest amplitude relative to the limit was selected for the final measurement.
4. The final test on all current-carrying conductors of all of the power cords to the equipment that comprises the EUT (but not the cords associated with other non-EUT equipment is the system) was then performed over the frequency range of 0.15 ㎒ to 30 ㎒.
5. The measurements were made with the detector set to peak amplitude within a bandwidth of 10 ㎑ or to quasi-peak and average within a bandwidth of 9 ㎑. The EUT was in transmitting mode during the measurements.

Test results

Worst case: 802.11n HT40_2 462 ㎒



Final Result

--- N_A Phase ---

No.	Frequency [MHz]	Reading QP [dB(uV)]	Reading CAV [dB(uV)]	c.f [dB]	Result QP [dB(uV)]	Result CAV [dB(uV)]	Limit QP [dB(uV)]	Limit AV [dB(uV)]	Margin QP [dB]	Margin CAV [dB]
1	0.21533	39.5	29.9	9.9	49.4	39.8	63.0	53.0	13.6	13.2
2	0.26985	38.7	33.8	9.8	48.5	43.6	61.1	51.1	12.6	7.5
3	0.41623	32.5	17.6	10.0	42.5	27.6	57.5	47.5	15.0	19.9
4	0.74594	29.4	23.1	10.0	39.4	33.1	56.0	46.0	16.6	12.9
5	1.3391	25.3	19.7	9.9	35.2	29.6	56.0	46.0	20.8	16.4
6	20.64092	13.6	3.5	11.0	24.6	14.5	60.0	50.0	35.4	35.5

--- L1_A Phase ---

No.	Frequency [MHz]	Reading QP [dB(uV)]	Reading CAV [dB(uV)]	c.f [dB]	Result QP [dB(uV)]	Result CAV [dB(uV)]	Limit QP [dB(uV)]	Limit AV [dB(uV)]	Margin QP [dB]	Margin CAV [dB]
1	0.21709	39.0	30.7	9.9	48.9	40.6	62.9	52.9	14.0	12.3
2	0.26141	37.7	29.6	9.8	47.5	39.4	61.4	51.4	13.9	12.0
3	0.40988	27.2	13.6	10.0	37.2	23.6	57.7	47.7	20.5	24.1
4	0.74496	29.4	23.0	10.0	39.4	33.0	56.0	46.0	16.6	13.0
5	1.66152	26.5	19.7	9.9	36.4	29.6	56.0	46.0	19.6	16.4
6	20.68491	6.0	-0.9	11.0	17.0	10.1	60.0	50.0	43.0	39.9

8. Measurement equipment

Equipment Name	Manufacturer	Model No.	Serial No.	Next Cal. Date
Spectrum Analyzer	R&S	FSV3030	1330.5000K30-101710-Wt	26.06.30
Spectrum Analyzer	R&S	FSV30	101437	26.01.16
Spectrum Analyzer	R&S	FSV40	100988	26.04.24
EMI TEST RECEIVER	R&S	ESCI3	101408	26.08.11
Vector Signal Generator	R&S	SMBV100A	257566	26.07.01
Signal Generator	R&S	SMB100A	176206	26.01.17
Power Sensor	R&S	NRP-Z81	1137.9009.02-106224-tg	26.07.01
Attenuator	R&S	DNF Dämpfungsglied 10 dB in N-50 Ohm	0004	26.04.23
Attenuator	HUBER+SUHNER	6610_SK-50-1 /199_NE	ATT10	26.03.17
DC Power Supply	TOYOTECH	TL305TP	21040051	26.06.30
Bi-log Antenna	Teseq GmbH	CBL 6112D	61521	26.12.11
Loop Antenna	R&S	HFH2-Z2	100355	26.06.25
Amplifier	SONOMA INSTRUMENT	310N	421910	26.07.01
Broadband Pre-Amplifier	SCHWARZBECK	BBV9718D	53	26.07.01
Low Noise Amplifier	TESTEK	TK-PA18H	220123-L	26.07.01
Low Noise Amplifier	TESTEK	TK-PA1840H	220234-L	26.06.30
Horn Antenna	SCHWARZBECK	BBHA9120D	2764	26.06.30
Horn Antenna	SCHWARZBECK	BBHA9170	1266	26.06.29
High Pass Filter	Wainwright Instruments GmbH	WHKX12-2805-3000-18000-40SS	SN59	26.06.27
High Pass Filter	Qotana	DBHF058004000A	23041800061	26.04.28
TWO-LINE V - NETWORK	R&S	ENV216	101358	26.04.22
Controller	INNCO SYSTEMS	CO3000	1442/54370322/P	-
Antenna Mast	INNCO SYSTEMS	MA4640-XP-ET	AM002	-
Turn Device	INNCO SYSTEMS	DS1200-S-1t	0001	-

End of test report