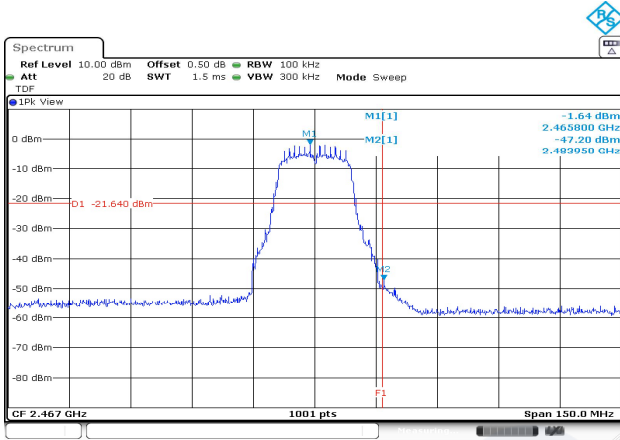
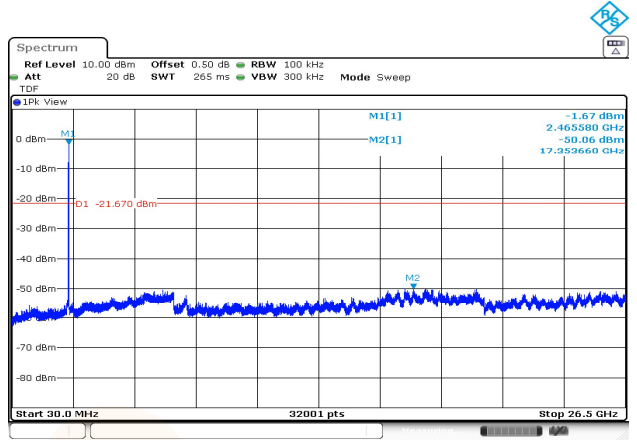


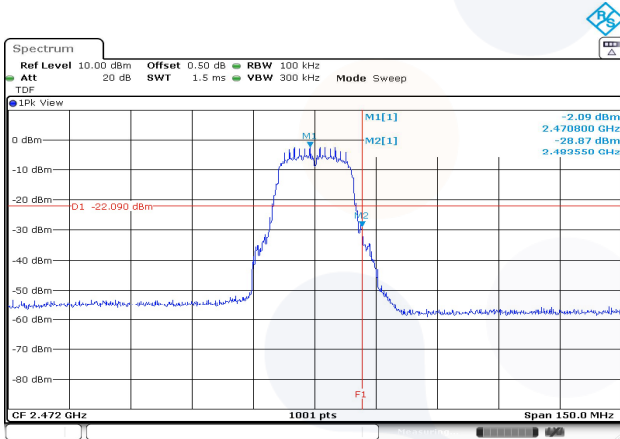
Conducted band-edge / 2 467 MHz



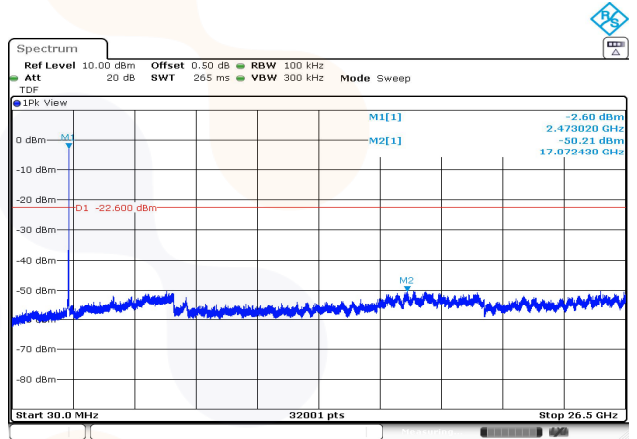
Conducted spurious / 2 467 MHz



Conducted band-edge / 2 472 MHz

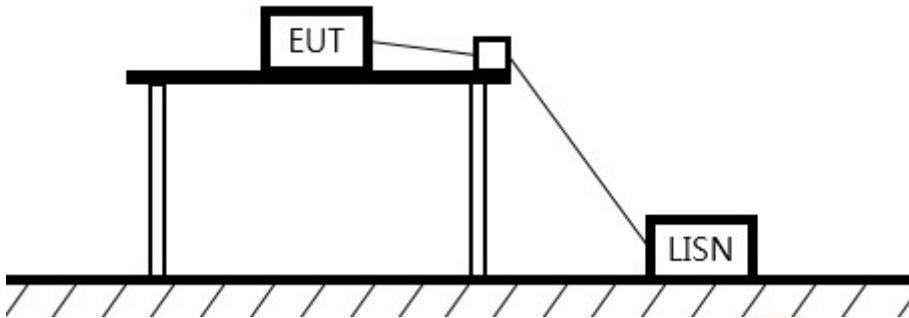


Conducted spurious / 2 472 MHz



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 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 μ H / 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.

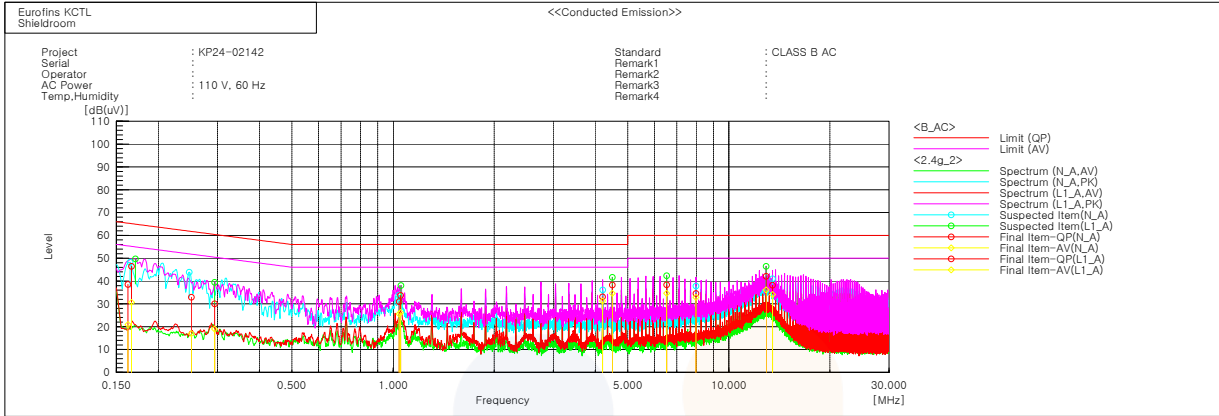
Frequency of Emission (MHz)	Conducted limit (dB μ V/m)	
	Quasi-peak	Average
0.15 – 0.50	66 - 56*	56 - 46*
0.50 – 5.00	56	46
5.00 – 30.0	60	50

Measurement procedure

1. The EUT was placed on a wooden table of size, 1 m by 1.5 m, raised 80 cm in which is located 40 cm 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 50 Ω /50 μ H 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 in the system) was then performed over the frequency range of 0.15 MHz to 30 MHz.
5. The measurements were made with the detector set to peak amplitude within a bandwidth of 10 kHz or to quasi-peak and average within a bandwidth of 9 kHz. The EUT was in transmitting mode during the measurements.

Test results

Worst case: 802.11n HT20 / 2 412 MHz



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	0.16231	28.2	10.6	10.3	38.5	20.9	65.3	55.3	26.8	34.4
2	4.20558	23.1	21.3	10.0	33.1	31.3	56.0	46.0	22.9	14.7
3	13.4923	27.4	23.3	10.8	38.2	34.1	60.0	50.0	21.8	15.9
4	1.04244	21.0	15.6	10.0	31.0	25.6	56.0	46.0	25.0	20.4
5	0.25069	22.9	7.0	10.0	32.9	17.0	61.7	51.7	28.8	34.7
6	7.98053	24.1	22.4	10.4	34.5	32.8	60.0	50.0	25.5	17.2

--- L_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	0.16635	36.1	20.3	10.4	46.5	30.7	65.1	55.1	18.6	24.4
2	4.49744	28.3	24.6	10.0	38.3	34.6	56.0	46.0	17.7	11.4
3	12.91251	31.3	25.3	10.8	42.1	36.1	60.0	50.0	17.9	13.9
4	1.05267	23.7	16.2	10.0	33.7	26.2	56.0	46.0	22.3	19.8
5	0.29412	20.0	9.0	10.0	30.0	19.0	60.4	50.4	30.4	31.4
6	6.53069	28.2	24.5	10.2	38.4	34.7	60.0	50.0	21.6	15.3

8. Measurement equipment

Equipment Name	Manufacturer	Model No.	Serial No.	Next Cal. Date
Spectrum Analyzer	R&S	FSV30	100806	24.07.03
Spectrum Analyzer	R&S	FSV40	100988	24.07.03
Spectrum Analyzer	R&S	FSVA40	101575	25.04.24*
PSA Spectrum Analyzer	Agilent	E4440A	MY44303500	24.07.04
EMI TEST RECEIVER	R&S	ESC13	101428	24.08.18
Signal Generator	R&S	SMB100A	176206	25.01.18
DC Power Supply	AGILENT	E3632A	MY40016393	24.07.03
Power Sensor	R&S	NRP-Z81	1137.9009.02-106224-tg	24.09.12
Attenuator	API Inmet	40AH2W-10	16	25.04.30*
Attenuator	R&S	DNF Dämpfungsglied 10 dB in N-50 Ohm	31209	25.04.24*
Bi-log Antenna	Teseq GmbH	CBL 6112D	61521	24.11.17
Loop Antenna	R&S	HFH2-Z2	100355	24.08.10
Horn Antenna	SCHWARZBECK	BBHA9120D	2763	24.10.18
Horn Antenna	SCHWARZBECK	BBHA9170	1267	24.10.16
Amplifier	SONOMA INSTRUMENT	310N	421910	24.10.12
Broadband Pre-Amplifier	SCHWARZBECK	BBV9718D	57	25.01.19
Low Noise Amplifier	TESTEK	TK-PA18H	220124-L	24.10.12
Low Noise Amplifier	TESTEK	TK-PA1840H	220133-L	24.10.17
High Pass Filter	Wainwright Instruments GmbH	WHKX12-2805-3000- 18000-40SS	SN58	24.10.16
TWO-LINE V - NETWORK	R&S	ENV216	101358	24.09.27

*This equipment was calibrated during the test period, and was used after calibration.

End of test report