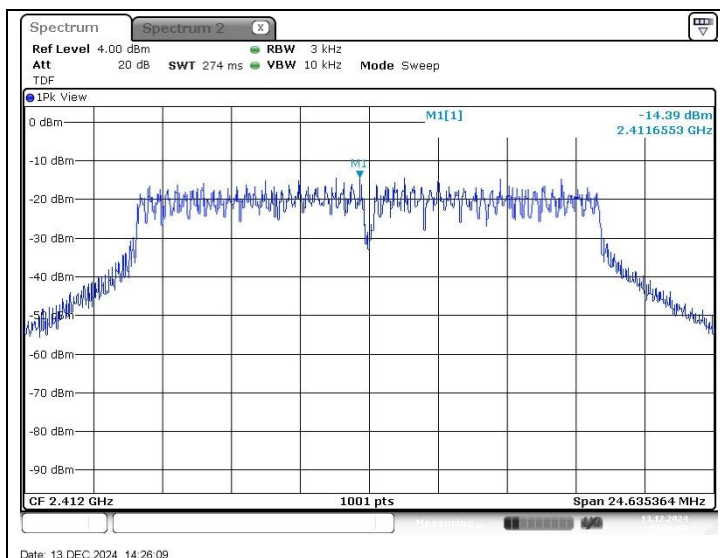
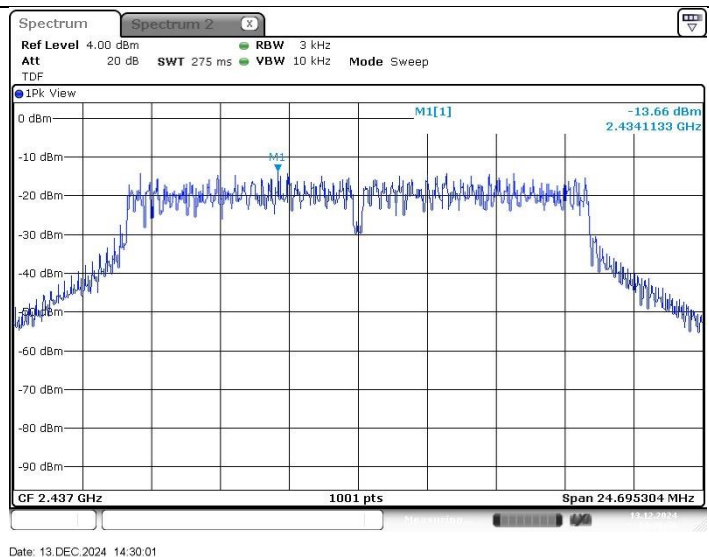


11g

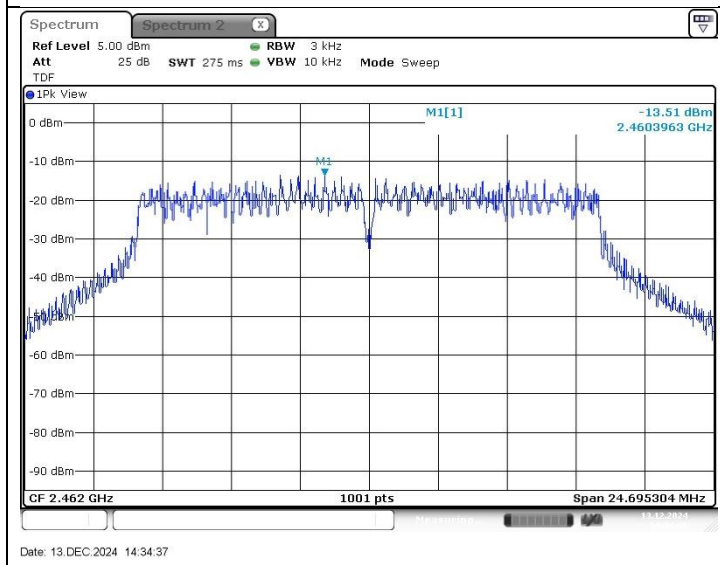
Low Channel



Middle Channel

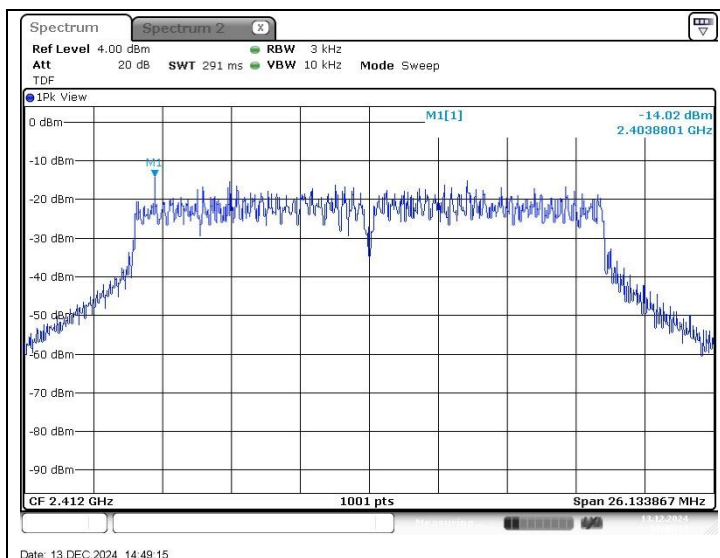


High Channel

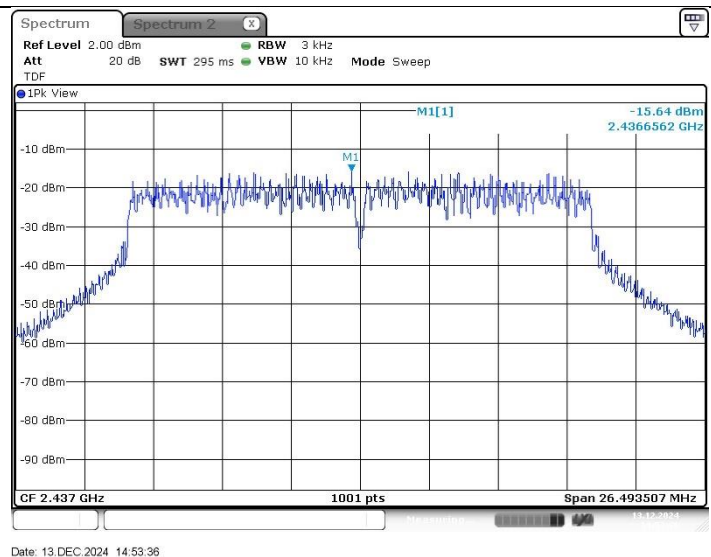


11n_HT20

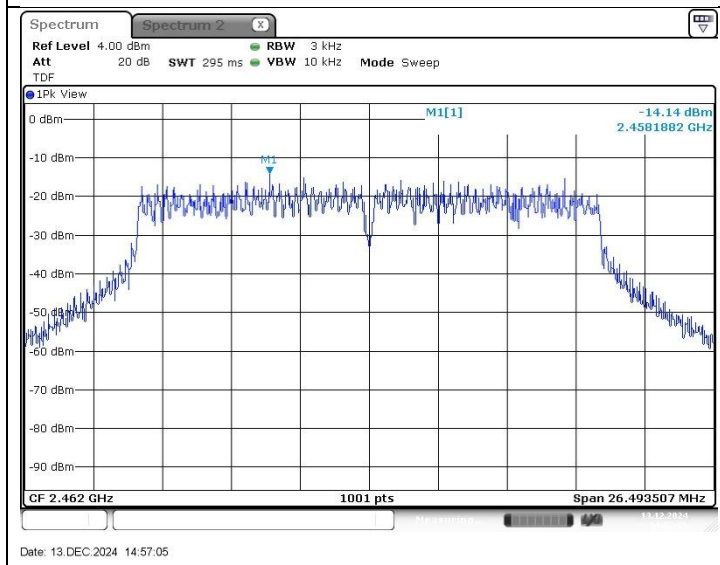
Low Channel



Middle Channel

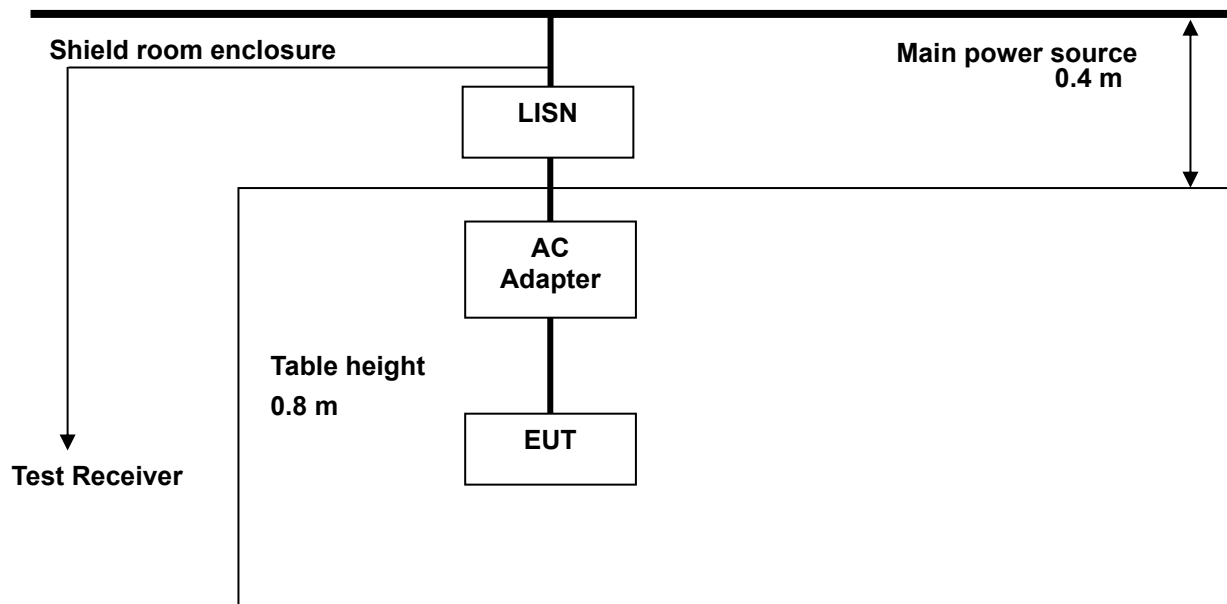


High Channel



6. AC Power Line Conducted Emission

6.1. Test Setup



6.2. 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 provision 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)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

6.3. Test Procedures

AC conducted emissions from the EUT were measured according to the dictates of ANSI C63.10-2013.

1. The test procedure is performed in a 6.5 m × 3.5 m × 3.5 m (L × W × H) shielded room. The EUT along with its peripherals were placed on a 1.0 m (W) × 1.5 m (L) and 0.8 m in height wooden table and the EUT was adjusted to maintain a 0.4 meter space from a vertical reference plane.
2. The EUT was connected to power mains through a line impedance stabilization network (LISN) which provides 50 ohm coupling impedance for measuring instrument and the chassis ground was bounded to the horizontal ground plane of shielded room.
3. All peripherals were connected to the second LISN and the chassis ground also bounded to the horizontal ground plane of shielded room.
4. The excess power cable between the EUT and the LISN was bundled. The power cables of peripherals were unbundled. All connecting cables of EUT and peripherals were moved to find the maximum emission.

6.4. Test Results

The following table shows the highest levels of conducted emissions on both phase of Hot and Neutral line.

Ambient temperature : (23 ± 1) °C
Relative humidity : 47 % R.H.

Frequency range : 0.15 MHz - 30 MHz
Measured Bandwidth : 9 kHz

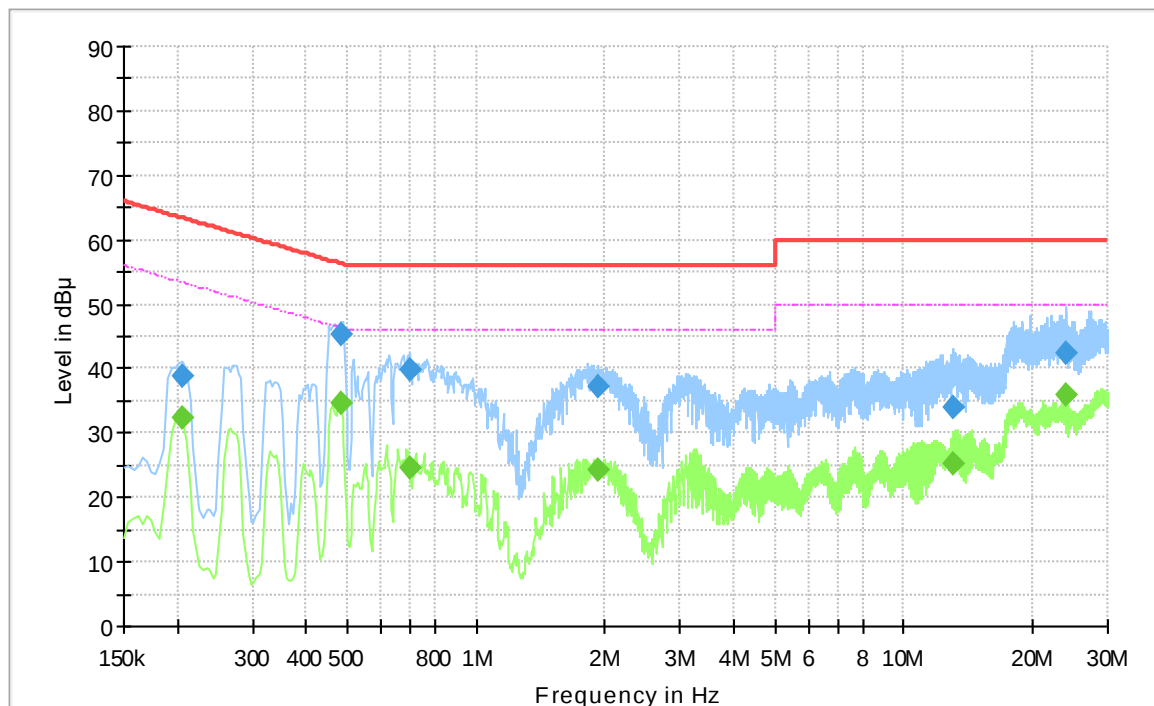
Freq. (MHz)	Reading (dBμV)		Correction Factor (dB)	Result (dBμV)		Line	Limit (dBμV)		Margin (dB)	
	Quasi-peak	Average		Quasi-peak	Average		Quasi-peak	Average	Quasi-peak	Average
0.21	29.18	22.51	9.83	39.01	32.34	N	63.37	53.37	24.36	21.03
0.48	35.45	24.64	9.91	45.36	34.55	N	56.30	46.30	10.94	11.75
0.70	29.98	14.67	9.97	39.95	24.64	N	56.00	46.00	16.05	21.36
1.92	27.04	14.35	10.09	37.13	24.44	N	56.00	46.00	18.87	21.56
13.10	23.35	14.47	10.77	34.12	25.24	N	60.00	50.00	25.88	24.76
23.84	31.40	24.83	11.04	42.44	35.87	N	60.00	50.00	17.56	14.13
0.20	28.46	21.75	9.73	38.19	31.48	H	63.69	53.69	25.50	22.21
0.47	34.89	23.57	9.91	44.80	33.48	H	56.51	46.51	11.71	13.03
0.62	31.10	19.28	9.93	41.03	29.21	H	56.00	46.00	14.97	16.79
1.79	26.44	15.04	10.08	36.52	25.12	H	56.00	46.00	19.48	20.88
13.79	26.46	19.74	10.55	37.01	30.29	H	60.00	50.00	22.99	19.71
22.92	29.18	21.62	10.96	40.14	32.58	H	60.00	50.00	19.86	17.42

Remark;

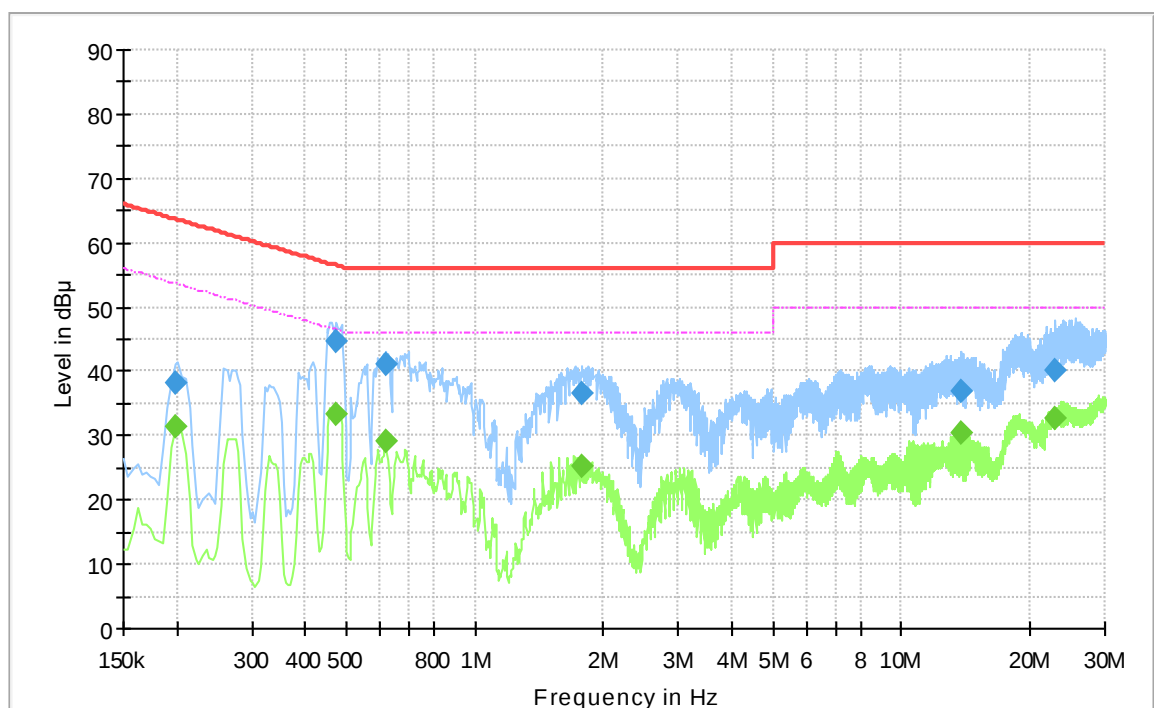
- Line (H): Hot, Line (N): Neutral.
- All channels were investigated and the worst-case emissions were reported using **11g / 54 Mbps / Middle channel.**
- The limit for Class B device(s) from 150 kHz to 30 MHz are specified in Section of the Title 47 CFR.
- Test from 150 kHz to 30 MHz was performed using the software of EMC32(V10.60.20) from R&S.
- Traces shown in plot were made by using a Quasi-peak detector and average detector.
- Deviations to the Specifications: None.
- This product supports two power sources, but since both provide the same power to the device, only one test was performed.
- Result (dBμV) = Reading (dBμV) + Correction Factor(dB)
- Correction Factor(dB) = LISN factor (dB) + Cable loss (dB)

- Test plot(s)

Test mode: (Neutral)



Test mode: (Hot)



7. Antenna Requirement

7.1. Standard Applicable

For intentional device, according to FCC 47 CFR Section §15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. And according to FCC 47 CFR Section §15.247(b) if transmitting antennas of directional gain greater than 6 dB i are used, the conducted output power shall be reduced appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dB i.

7.2. Antenna Connected Construction

Antenna used in this product is PCB Pattern Antenna with gain of 1.75 dB i.

- End of the Test Report -