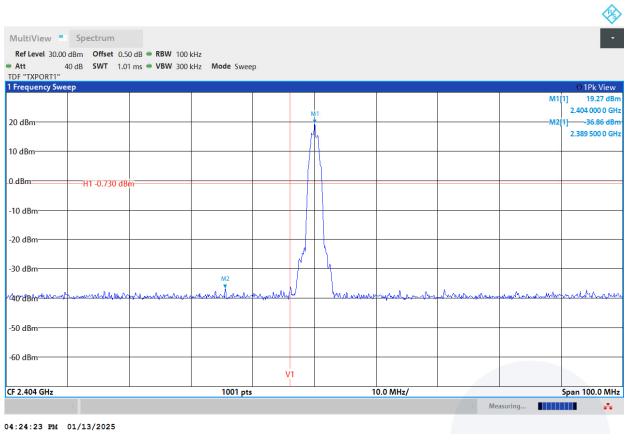
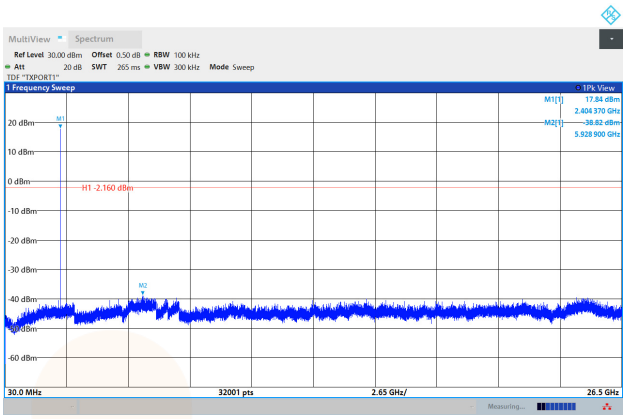
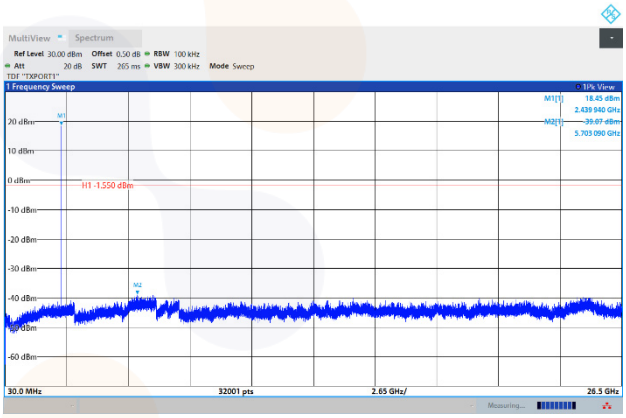
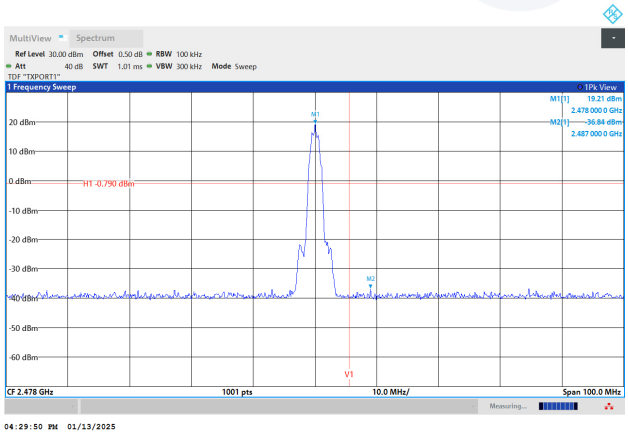
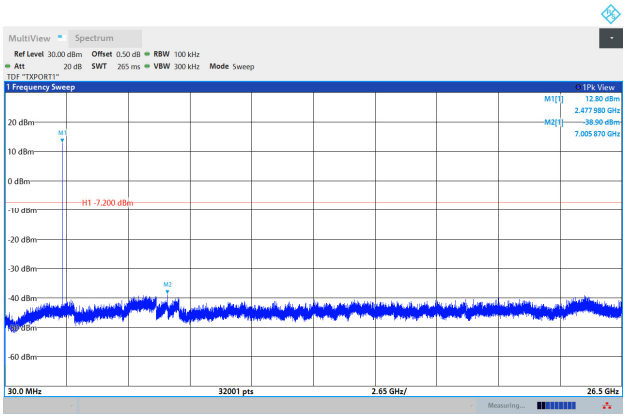
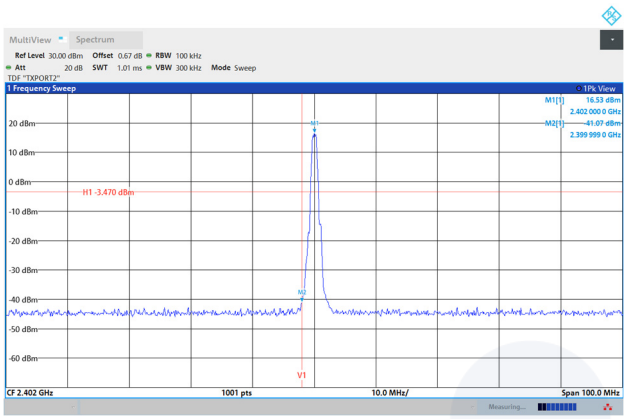
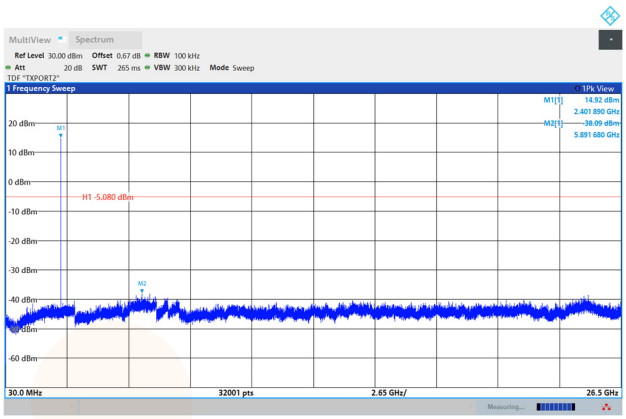
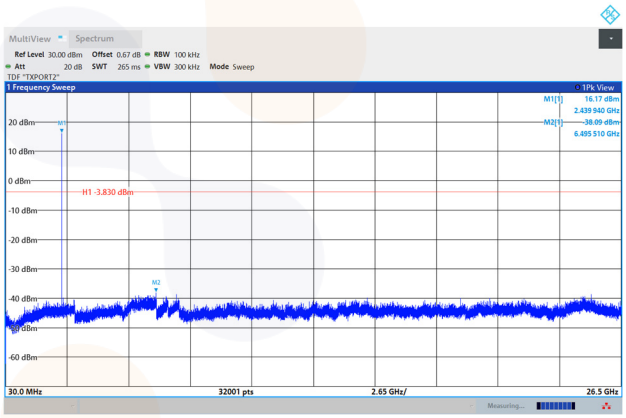
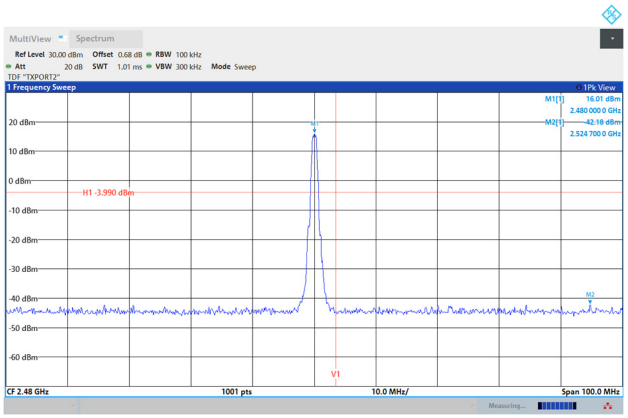
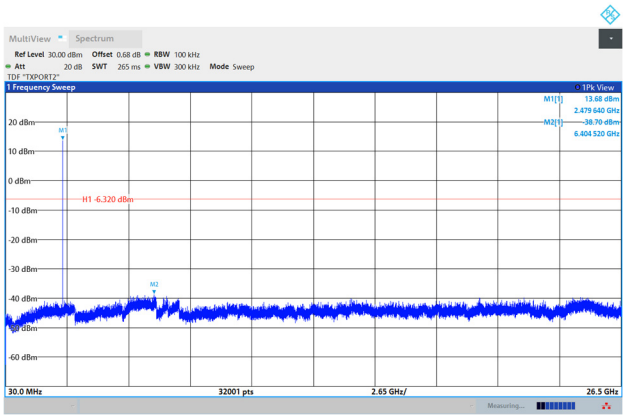
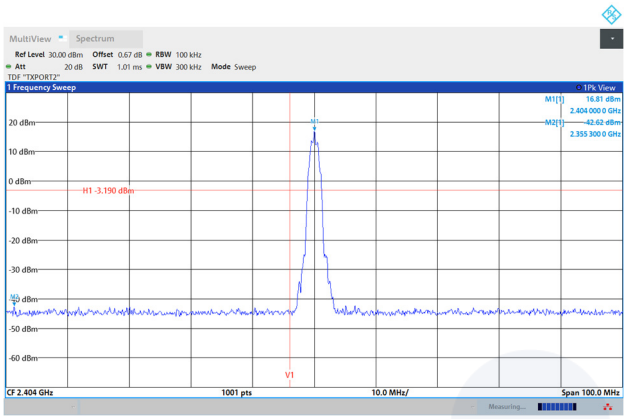
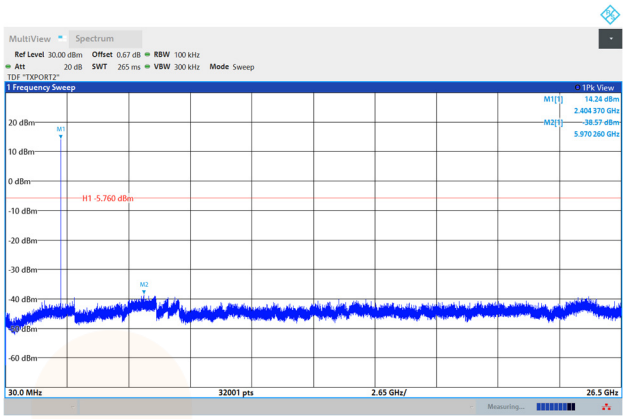
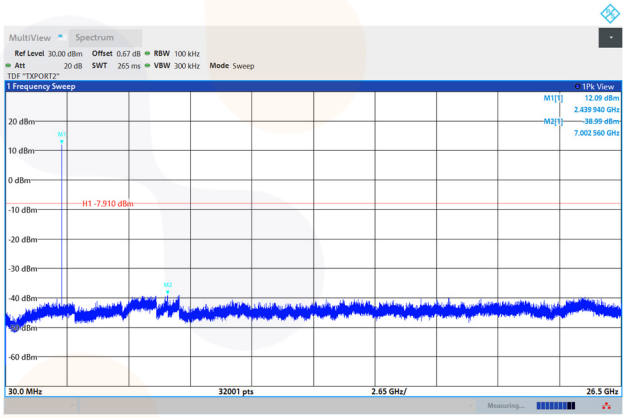
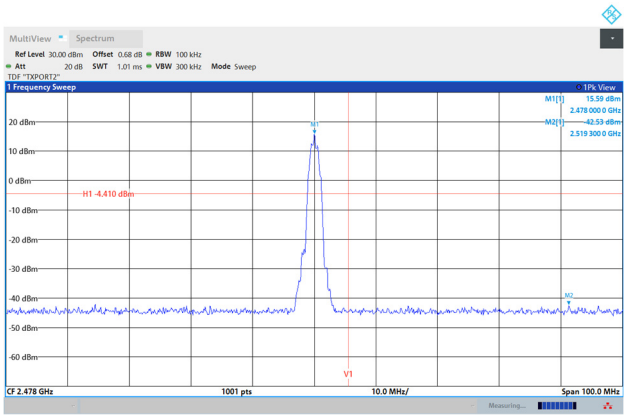
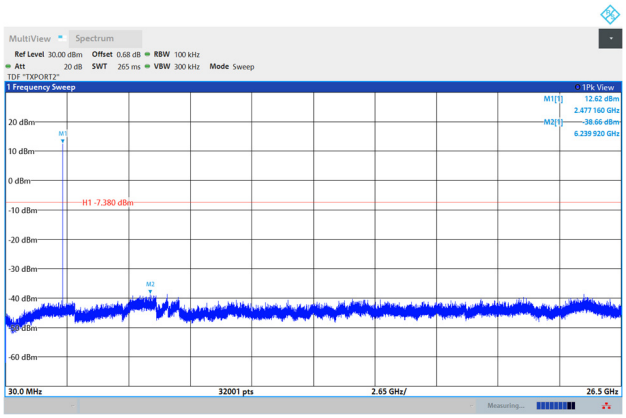
BLE_2 MBit/s(37 Bytes)

Conducted band-edge / Low ch.	Conducted spurious / Low ch.
	
Conducted band-edge / Mid ch.	**Conducted spurious / Mid ch.**
Blank	
Conducted band-edge / High ch.	**Conducted spurious / High ch.**
	

ANT2
BLE_1 MBit/s(37 Bytes)

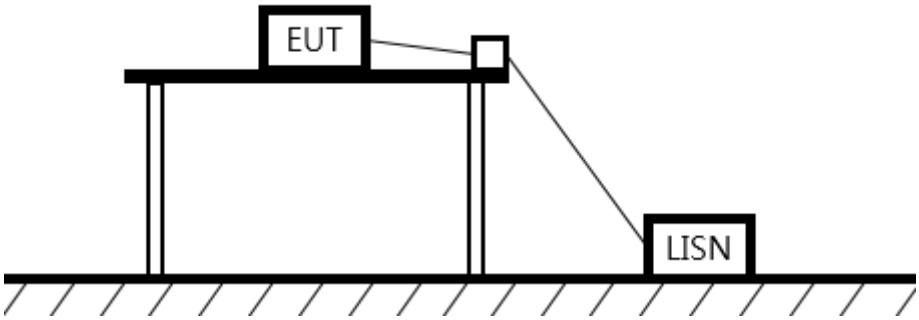
Conducted band-edge / Low ch.	Conducted spurious / Low ch.
	
Conducted band-edge / Mid ch.	**Conducted spurious / Mid ch.**
Blank	
Conducted band-edge / High ch.	**Conducted spurious / High ch.**
	

BLE_2 MBit/s(37 Bytes)

Conducted band-edge / Low ch.	Conducted spurious / Low ch.
	
Conducted band-edge / Mid ch.	**Conducted spurious / Mid ch.**
Blank	
Conducted band-edge / High ch.	**Conducted spurious / High ch.**
	

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 50uH/50 ohm line impedance stabilization network (LISN). Compliance with the provision of this paragraph shall on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower applies at the boundary between the frequencies ranges.

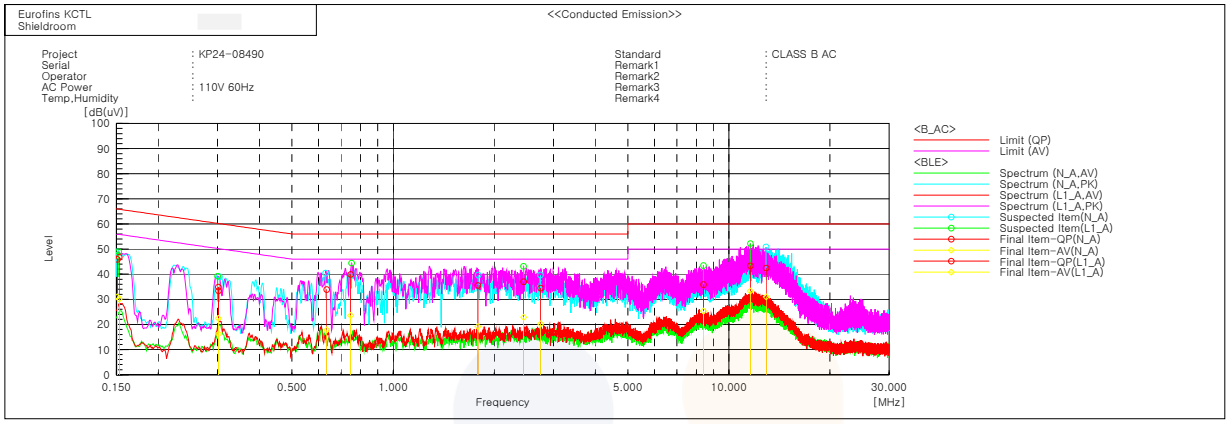
Frequency of Emission (㎒)	Conducted limit (dB㎶/m)	
	Quasi-peak	Average
0.15 – 0.50	66 - 56*	56 - 46*
0.50 – 5.00	56	46
5.00 – 30.0	60	50

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: ANT1_2 MBits/s(37 Bytes) 2 440 ㎒



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	0.15292	36.7	20.0	10.1	46.8	30.1	65.8	55.8	19.0	25.7
2	0.30205	23.5	6.3	9.9	33.4	16.2	60.2	50.2	26.8	34.0
3	0.63448	23.9	7.8	10.0	33.9	17.8	56.0	46.0	22.1	28.2
4	1.7891	25.5	9.2	10.0	35.5	19.2	56.0	46.0	20.5	26.8
5	2.74833	24.3	10.1	10.1	34.4	20.2	56.0	46.0	21.6	25.8
6	12.9075	32.0	20.4	10.5	42.5	30.9	60.0	50.0	17.5	19.1

--- 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	0.15105	35.9	21.0	10.0	45.9	31.0	65.9	55.9	20.0	24.9
2	0.3018	24.9	12.5	9.9	34.8	22.4	60.2	50.2	25.4	27.8
3	0.74749	29.9	13.6	10.0	39.9	23.6	56.0	46.0	16.1	22.4
4	2.44916	26.9	12.7	10.1	37.0	22.8	56.0	46.0	19.0	23.2
5	8.39779	25.5	15.0	10.3	35.8	25.3	60.0	50.0	24.2	24.7
6	11.5878	32.9	22.9	10.4	43.3	33.3	60.0	50.0	16.7	16.7

8. Measurement equipment

Equipment Name	Manufacturer	Model No.	Serial No.	Next Cal. Date
Controller	INNCO SYSTEMS	CO3000	1441/54370322/P	-
Antenna Mast	INNCO SYSTEMS	MA4640-XP-ET	AM003	-
Turn Device	INNCO SYSTEMS	DS1200-S-1t	0003	-
Antenna Mast	Innco Systems	MA4640-XP-ET	MA4000/396/3081 0213/L	-
Controller	Innco Systems	CO3000	1175/45850319/P	-
Spectrum Analyzer	R&S	FSV40	100988	25.05.27
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
Vector Signal Generator	R&S	SMBV100A	257566	25.07.01
Spectrum Analyzer	R&S	FSVA40	101575	25.04.24
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
High Pass Filter	Wainwright Instruments GmbH	WHKX12-2805-3000-18000-40SS	SN58	25.10.15
TWO-LINE V - NETWORK	R&S	ENV216	101358	25.10.13
EMI TEST RECEIVER	R&S	ESCI3	101428	25.08.12
Spectrum Analyzer	R&S	FSV40	100989	25.10.10
Horn antenna	ETS.lindgren	3117	00251528	26.01.21
AMPLIFIER	B&Z Technologies	BZR-0050400-551028-252525	27736	25.06.24
Attenuator	API Inmet	40AH2W-10	12	25.04.30
Signal Generator	R&S	SMB100A	176206	26.01.17
Signal & Spectrum Analyzer	R&S	FSV3030	1330.5000K30-101710-Wt	25.07.02
Attenuator	API Inmet	40AH2W-10	14	25.04.30
DC Power Supply	AGILENT	E3632A	KR94907664	25.04.24
Power Sensor	R&S	NRP-Z81	1137.9009.02-106225-JM	25.04.24
Attenuator	HP	8491A	18591	26.01.17

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

End of test report