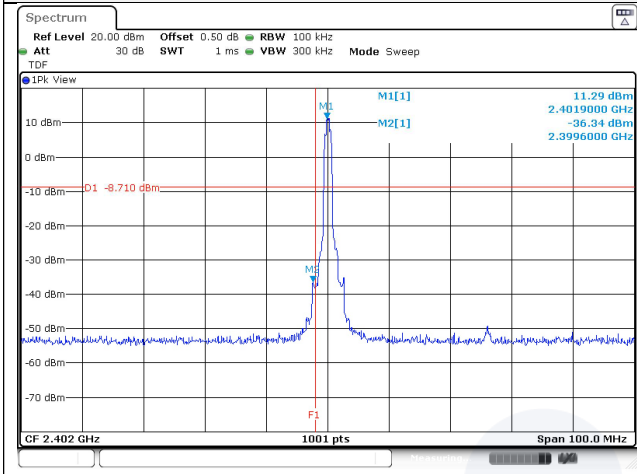
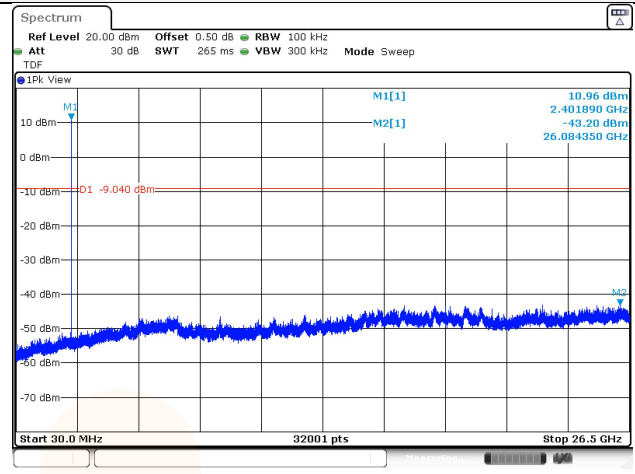


**8DPSK**

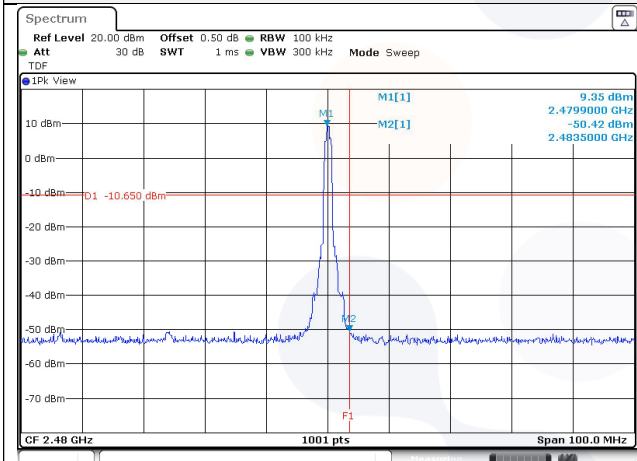
**Conducted band-edge / Low ch.**



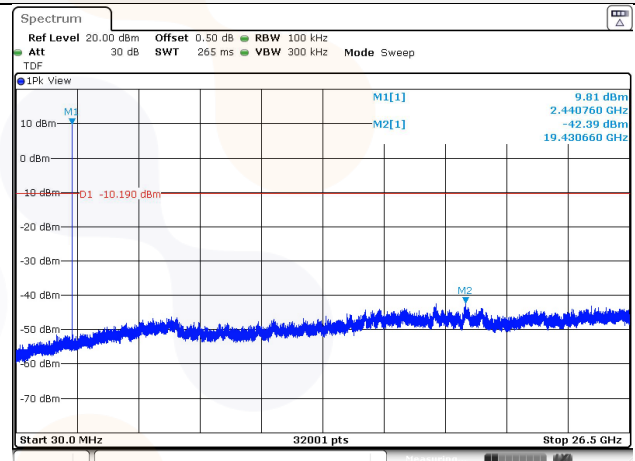
**Conducted spurious / Low ch.**



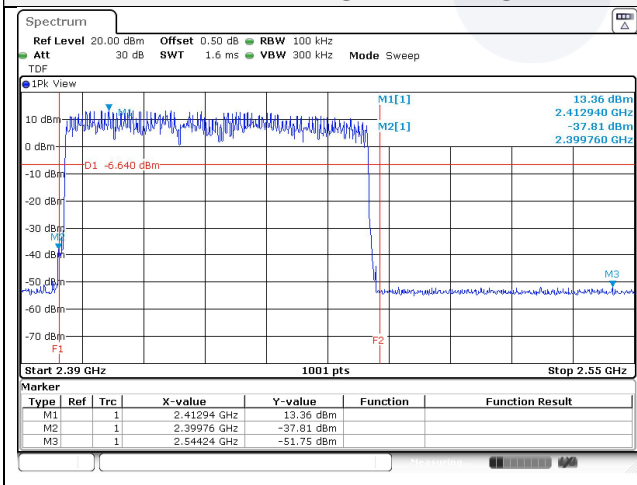
**Conducted band-edge / High ch.**



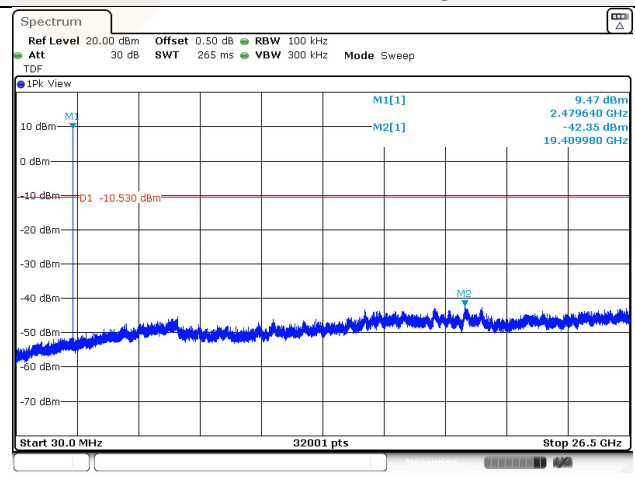
**Conducted spurious / Mid ch.**



**Conducted band-edge / Hopping ch.**

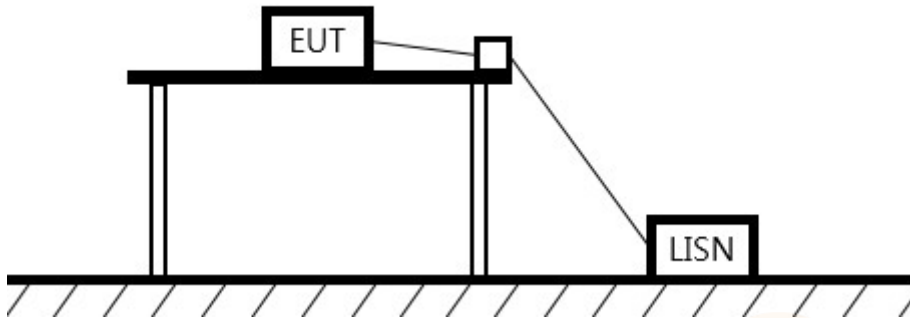


**Conducted spurious / High ch.**



## 7.8. 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 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.

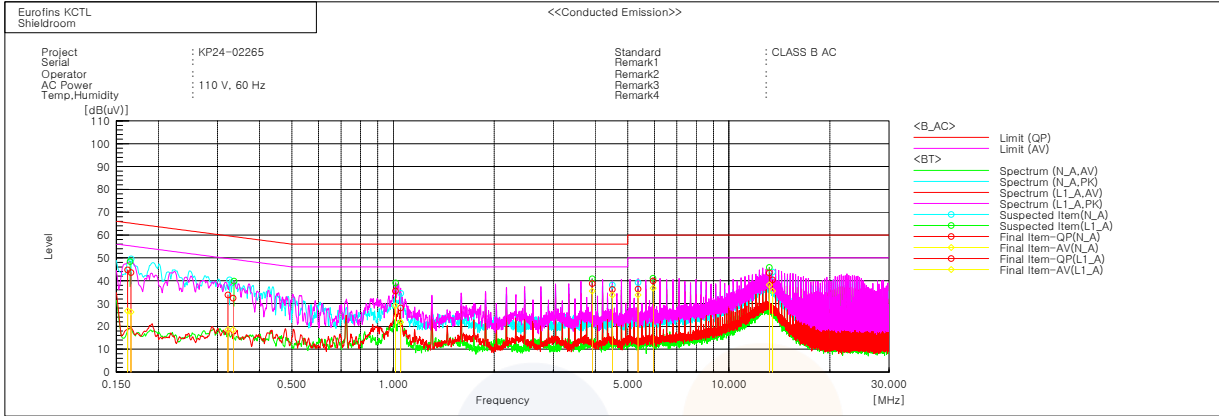
Frequency of Emission (MHz)	Conducted limit (dB $\mu$ V/m)	
	Quasi-peak	Average
0.15 – 0.50	66 - 56*	56 - 46*
0.50 – 5.00	56	46
5.00 – 30.0	60	50

### 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 $\Omega$ /50 $\mu$ 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 is 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: GFSK 2 480 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	0.16196	34.4	16.4	10.3	44.7	26.7	65.4	55.4	20.7	28.7
2	0.32214	23.7	8.5	10.1	33.8	18.6	59.7	49.7	25.9	31.1
3	1.05305	18.1	11.7	10.0	28.1	21.7	56.0	46.0	27.9	24.3
4	4.49667	26.2	23.7	10.0	36.2	33.7	56.0	46.0	19.8	12.3
5	5.3665	26.3	23.8	10.0	36.3	33.8	60.0	50.0	23.7	16.2
6	13.49384	29.5	24.7	10.8	40.3	35.5	60.0	50.0	19.7	14.5

--- 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	0.16581	33.1	15.9	10.4	43.5	26.3	65.2	55.2	21.7	28.9
2	0.33389	22.2	8.4	10.1	32.3	18.5	59.4	49.4	27.1	30.9
3	1.01695	25.5	19.0	10.0	35.5	29.0	56.0	46.0	20.5	17.0
4	3.91811	28.9	25.6	9.9	38.8	35.5	56.0	46.0	17.2	10.5
5	5.9489	29.8	26.6	10.1	39.9	36.7	60.0	50.0	20.1	13.3
6	13.2023	32.6	27.4	10.8	43.4	38.2	60.0	50.0	16.6	11.8

## 8. Measurement equipment

Equipment Name	Manufacturer	Model No.	Serial No.	Next Cal. Date
Bluetooth Tester	TESCOM	TC-3000B	3000B640056	25.01.19
Spectrum Analyzer	R&S	FSV40-N	101462	24.10.12
Signal Generator	R&S	SMB100A	176206	25.01.18
DC Power Supply	AGILENT	E3632A	MY40007371	24.04.27
Divider	Marki Microwave, Inc.	PD-0040	D0006	24.07.04
Power Sensor	R&S	NRP-Z81	1137.9009.02-106224-tg	24.09.12
Spectrum Analyzer	R&S	FSV40	100988	24.07.03
PSA Spectrum Analyzer	Agilent	E4440A	MY44303500	24.07.04
EMI TEST RECEIVER	R&S	ESC13	101408	24.08.18
TWO-LINE V - NETWORK	R&S	ENV216	101358	24.09.27
Bluetooth Tester	TESCOM	TC-3000C	3000C000270	24.07.04
Broadband PreAmplifier	SCHWARZBECK	BBV9718D	53	25.01.19
Low Noise Amplifier	TESTEK	TK-PA18H	220123-L	24.10.12
Low Noise Amplifier	TESTEK	TK-PA1840H	220234-L	24.10.17
Amplifier	SONOMA INSTRUMENT	310N	421910	24.10.12
Bilog Antenna	Teseq GmbH	CBL 6112D	61521	24.11.17
Loop Antenna	R&S	HFH2-Z2	100355	24.08.10
Horn Antenna	SCHWARZBECK	BBHA9120D	2764	24.10.18
Horn Antenna	SCHWARZBECK	BBHA9170	1266	24.10.16
High Pass Filter	Wainwright Instruments GmbH	WHKX12-2805-3000-18000-40SS	SN59	24.10.16
High Pass Filter	Qotana TECHNOLOGIES	DBHF058004000A	23041800061	24.07.10

**End of test report**