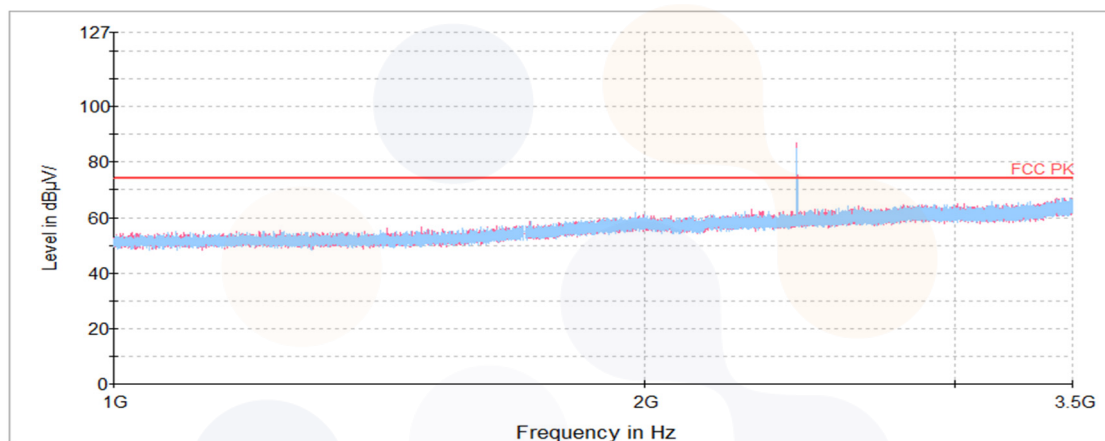


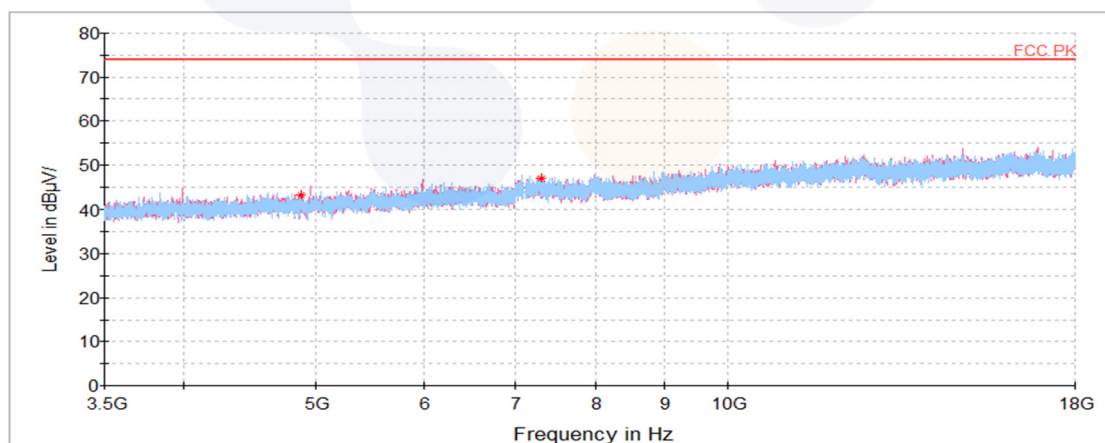
Middle Channel

Frequency	Pol.	Reading	Antenna Factor	Amp. + Cable	DCF	Result	Limit	Margin
[MHz]	[V/H]	[dB(μV)]	[dB]	[dB]	[dB]	[dB(μV/m)]	[dB(μV/m)]	[dB]
Peak data								
4 879.92 ¹⁾	H	54.19	34.03	-45.01	-	43.21	74.00	30.79
7 313.50 ¹⁾	H	54.92	35.66	-43.54	-	47.04	74.00	26.96
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

Horizontal/Vertical for 1 GHz ~ 3.5 GHz



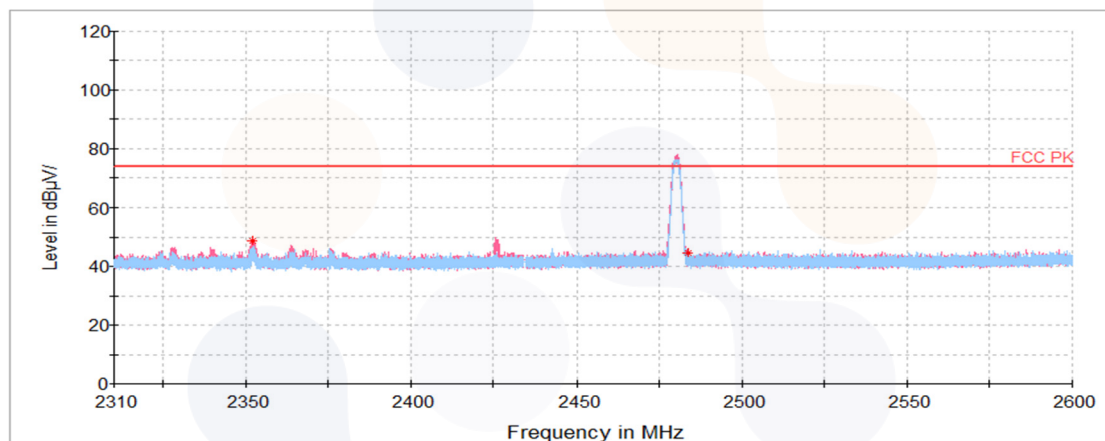
Horizontal/Vertical for 3.5 GHz ~ 18 GHz



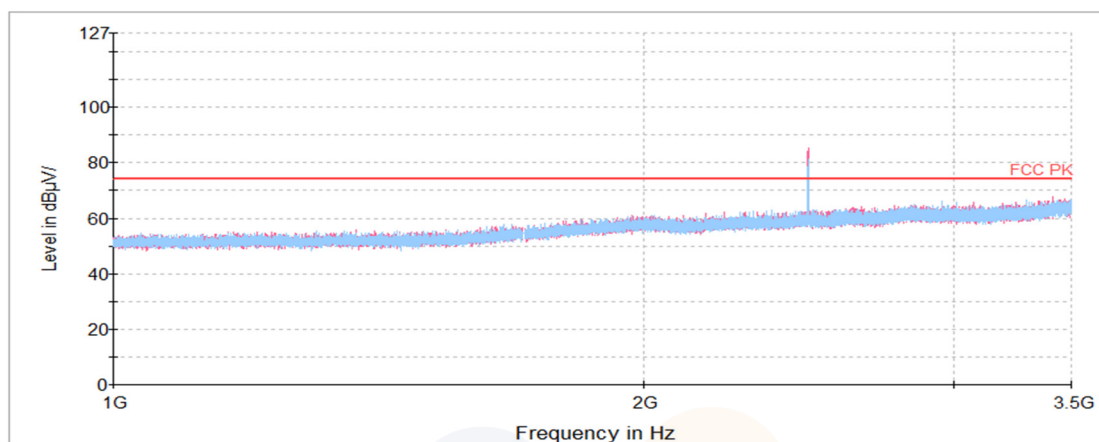
High Channel

Frequency	Pol.	Reading	Antenna Factor	Amp. + Cable	DCF	Result	Limit	Margin
[MHz]	[V/H]	[dB(μV)]	[dB]	[dB]	[dB]	[dB(μV/m)]	[dB(μV/m)]	[dB]
Peak data								
2 352.18 ¹⁾	V	45.21	32.05	-28.61	-	48.65	74.00	25.35
2 483.59 ¹⁾	H	40.62	32.18	-28.08	-	44.72	74.00	29.28
4 960.15 ¹⁾	V	55.96	34.08	-44.94	-	45.10	74.00	28.90
7 429.02 ¹⁾	H	54.50	35.69	-43.47	-	46.72	74.00	27.28
Average Data								
No spurious emissions were detected within 20 dB of the limit.								

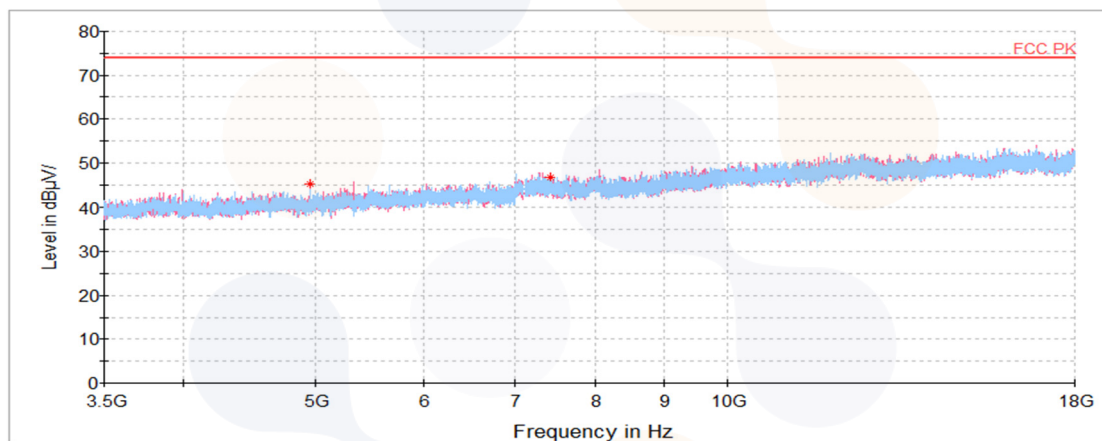
Horizontal/Vertical for Band-edge



Horizontal/Vertical for 1 GHz ~ 3.5 GHz

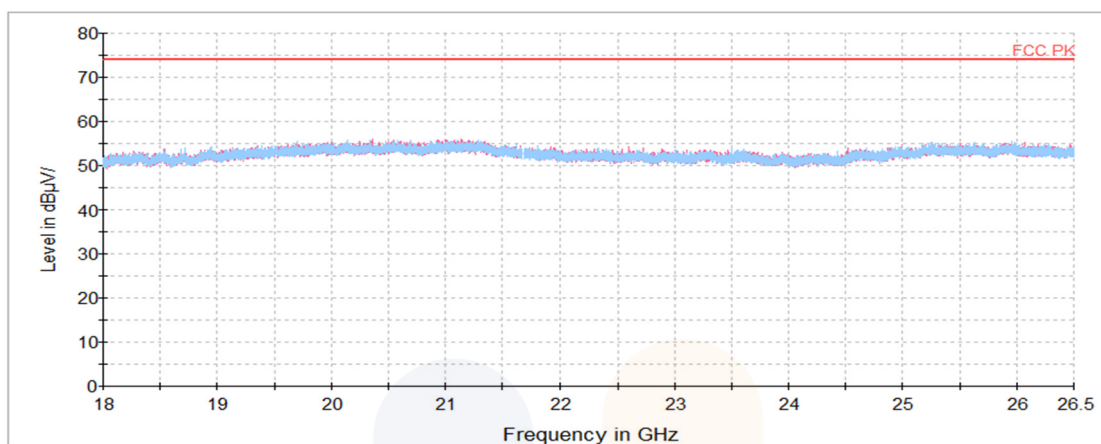


Horizontal/Vertical for 3.5 GHz ~ 18 GHz



Test results (Above 18 GHz) – Worst case: 1 Mbits/s(37 Bytes) 2 480 MHz

Horizontal/Vertical for 18 GHz ~ 26.5 GHz

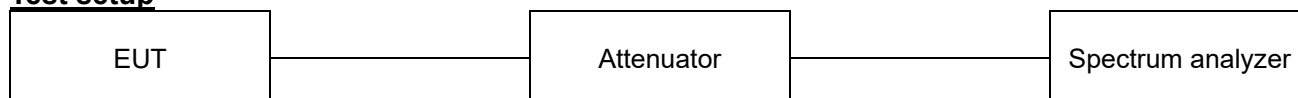


Note:

The Worst case was based on the lowest margin condition considering Harmonic and Spurious Emission

7.5. Conducted Spurious Emission

Test setup



Limit

According to §15.247(d),

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operation, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation specified in §15.209(a) is not required. In addition, radiated emission limits specified in §15.209(a) (see §15.205(c)).

Limit : 20 dBc

Test procedure

ANSI C63.10 - Section 11.11.3

KDB 558074 D01 v05 - Section 8.5

Test settings

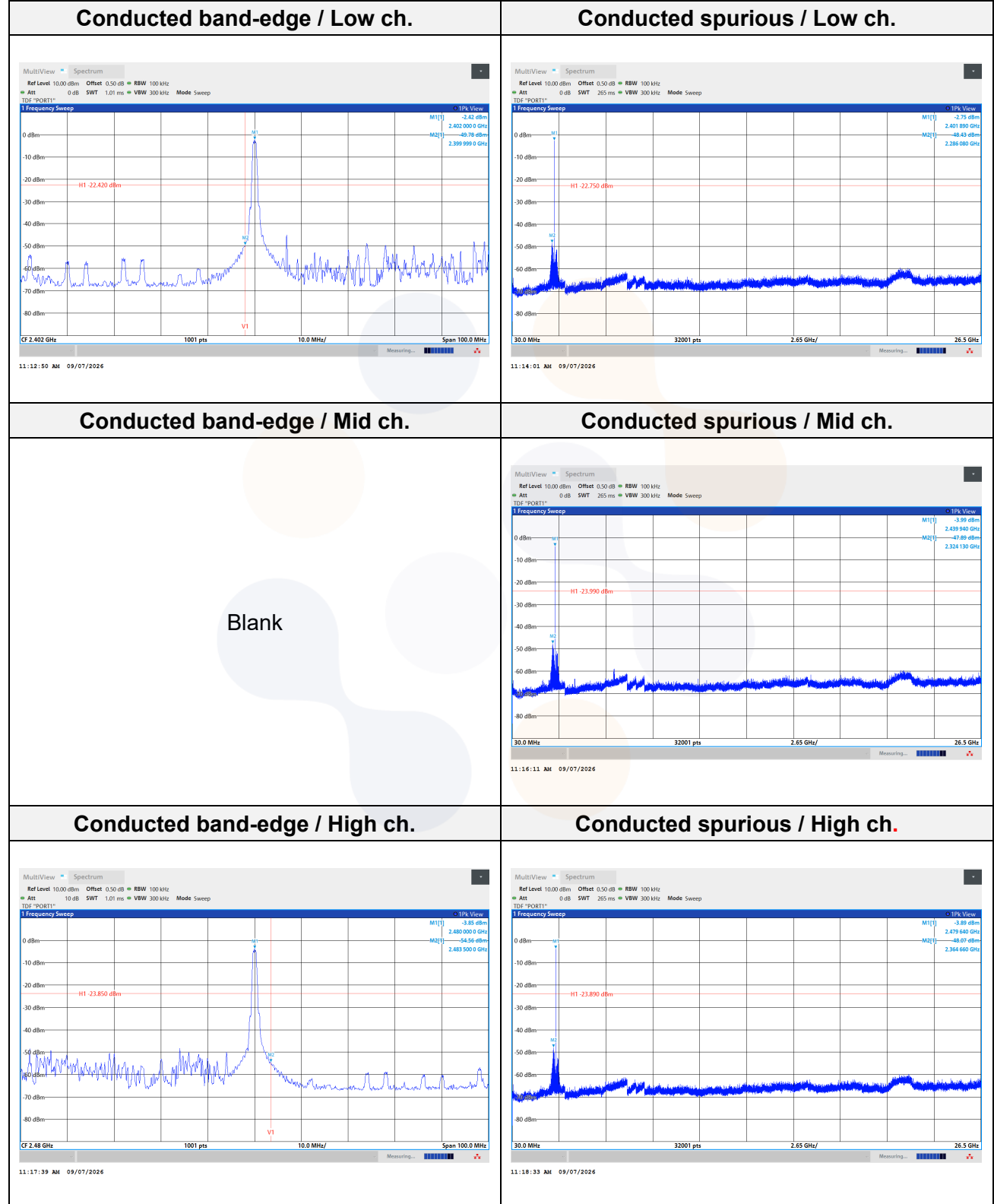
Establish an emission level by using the following procedure:

- Set the center frequency and span to encompass frequency range to be measured.
- Set the RBW = 100 kHz
- Set the VBW $\geq [3 \times \text{RBW}]$
- Detector = peak
- Sweep time = No faster than coupled (auto) time
- Trace mode = max hold
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum amplitude level.

Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) is attenuated by at least the minimum requirements specified in 11.11. Report the three highest emissions relative to the limit.

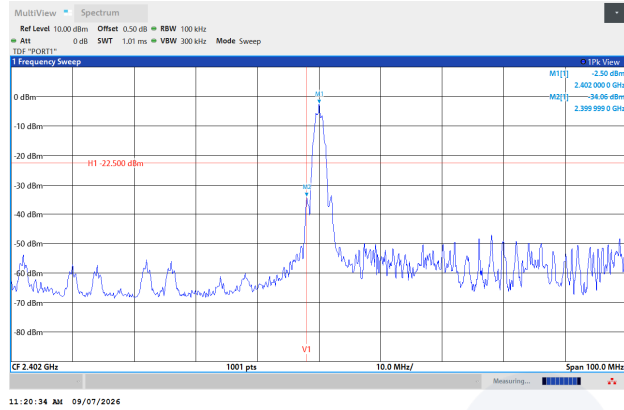
Test results

BLE_1 MBit/s(37 Bytes)

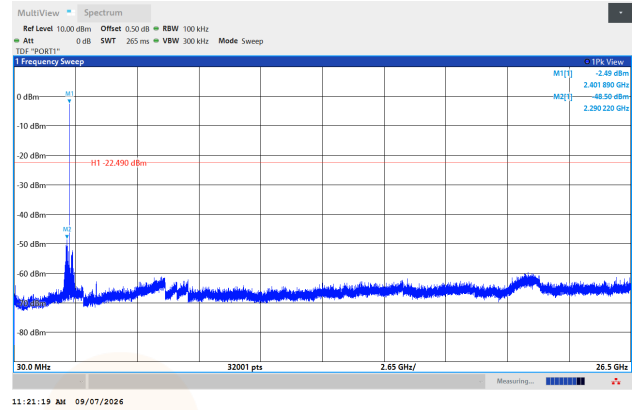


BLE_2 MBit/s(37 Bytes)

Conducted band-edge / Low ch.



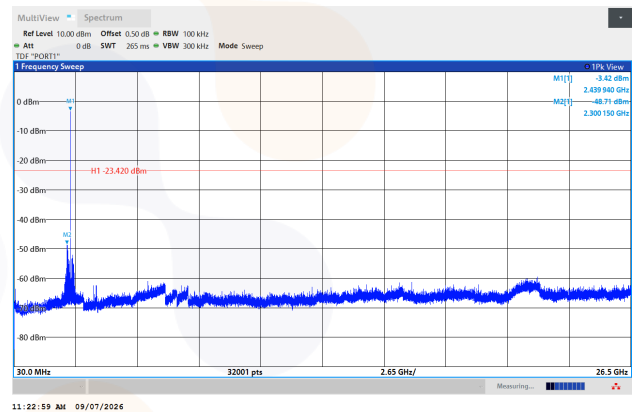
Conducted spurious / Low ch.



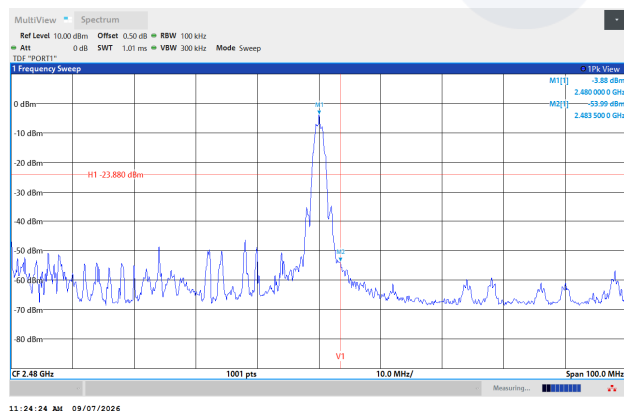
Conducted band-edge / Mid ch.

Blank

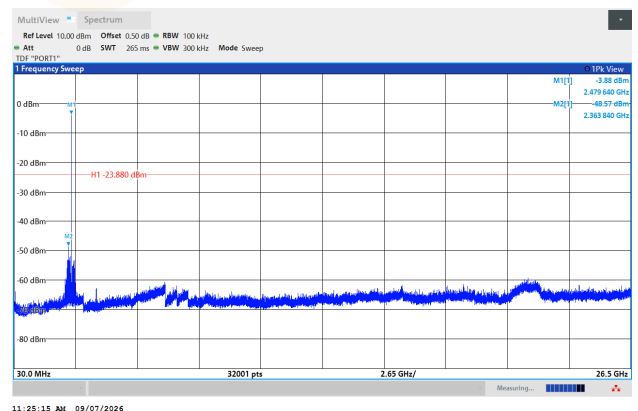
Conducted spurious / Mid ch.



Conducted band-edge / High ch.



Conducted spurious / High ch.



8. Measurement equipment

Equipment Name	Manufacturer	Model No.	Serial No.	Next Cal. Date
Spectrum Analyzer	R&S	FSV3030	102316	27.02.02
DC Power Supply	AGILENT	E3632A	MY40016393	27.04.23
Attenuator	API Inmet	40AH2W-10	11	27.04.27
Vector Signal Generator	R&S	SMBV100A	1407.6004K02	27.07.07
Power Sensor	R&S	NRP-Z81	1137.9009.02-106224-tg	27.08.10
Attenuator	HP	8491A	29738	26.07.06
Horn antenna	ETS.lindgren	3117	251528	27.01.23
Horn antenna	ETS.lindgren	3116	86635	27.01.20
Amplifier	C&K Technologies, Inc.	BZR-0050400-	27736	27.04.27
Amplifier	C&K Technologies, Inc.	BZRT-00504000-	35244-35243	27.06.02
Attenuator	Pasternack	PE7090-10	1928	27.01.12
High pass Filter	WT	WT-A1699-HS	WT160411001	27.04.23
Signal Generator	R&S	SMB100A	176206	27.01.15
Spectrum Analyzer	R&S	FSV40	100988	27.04.06
Amplifier	SONOMA INSTRUMENT	310N	421910	27.07.06
Bi-log Antenna	Teseq GmbH	CBL 6112D	61521	26.12.11
Loop Antenna	R&S	HFH2-Z2	100355	27.06.29
Vector Signal Generator	R&S	SMBV100A	257566	27.07.06
DC Power Supply	POWERCOM	DCP-50100A	20220610-01	27.01.16
Cable Assemblies	HUBER+SUHNER	SUCOFLEX 102	MY3570/2	27.11.26
Cable Assemblies	HUBER+SUHNER	SF102/11SK/ 11SK/10000	804320/2	27.11.26

End of test report