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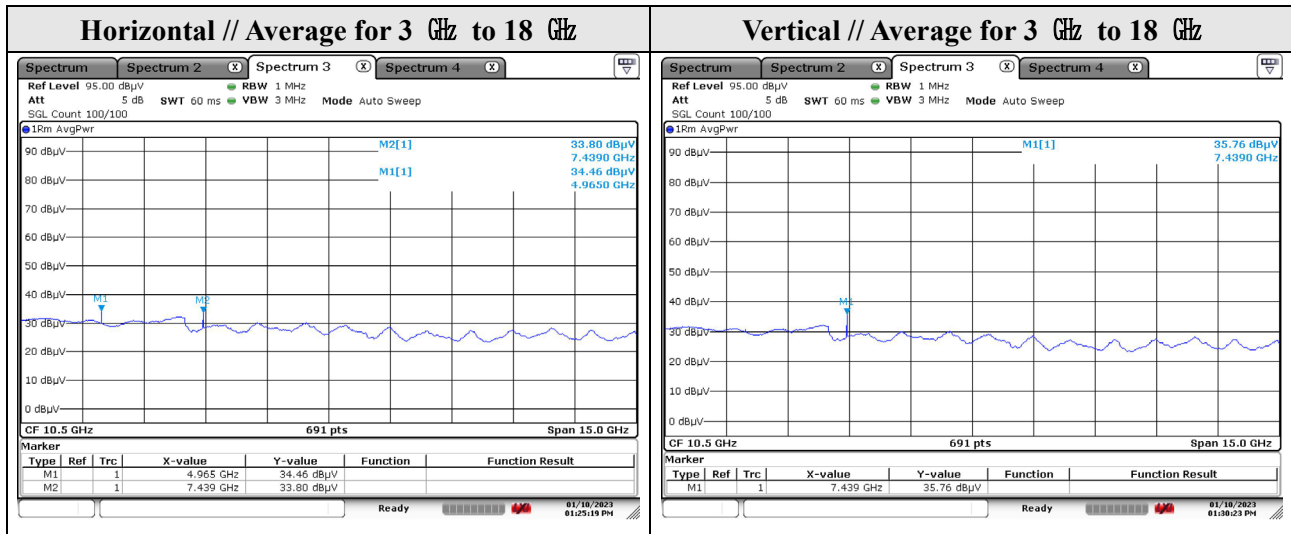
KES Co., Ltd.

3701, 40, Simin-daero 365beon-gil,
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Note.

1. Average test would be performed if the peak result were greater than the average limit.

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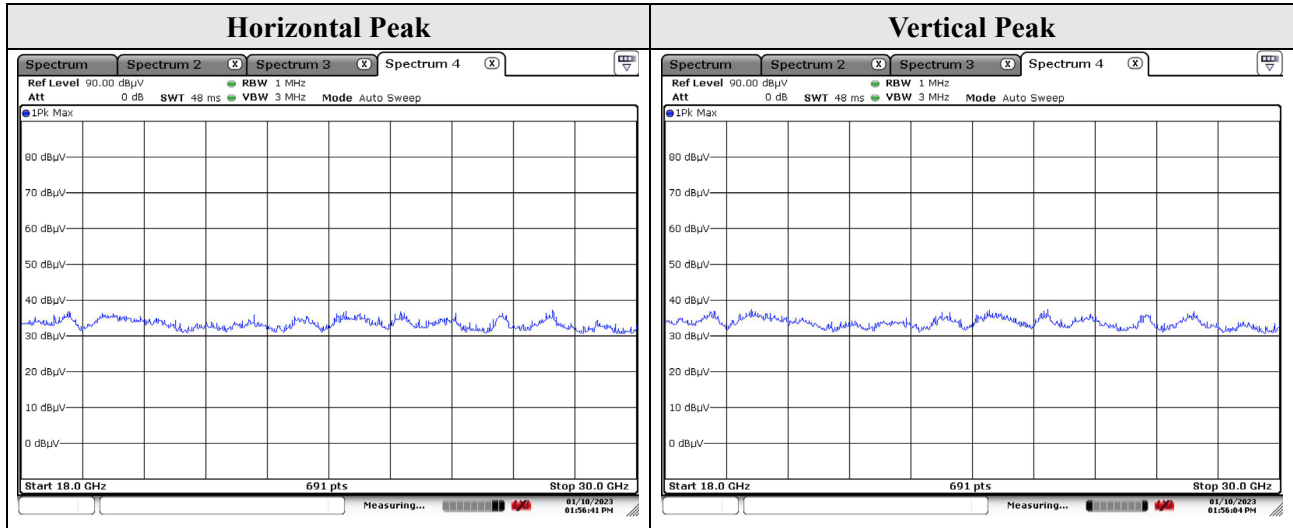
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Test results (18 GHz to 30 GHz) – Worst case

Mode: LE 1 Mbps
Distance of measurement: 3 meter
Channel: 39_worst case



Note.

No spurious emission were detected above 18 GHz.

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Mode: ZigBee
Distance of measurement: 3 meter
Channel: 26

- Spurious

Frequency (MHz)	Level (dB μ V)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
2486.30	57.57	Peak	H	-1.67	-	55.90	74.00	18.10
2486.30	45.91	Average	H	-1.67	-	44.24	54.00	9.76
4965.00	47.99	Peak	H	5.94	-	53.93	74.00	20.07
7439.00	48.67	Peak	H	14.46	-	63.13	74.00	10.87
4965.00	34.48	Average	H	5.94	-	40.42	54.00	13.58
7439.00	34.68	Average	H	14.46	-	49.14	54.00	4.86
2127.40	45.50	Peak	V	-1.98	-	43.52	74.00	30.48
2486.30	52.51	Peak	V	-1.67	-	50.84	74.00	23.16
7439.00	49.95	Peak	V	14.46	-	64.41	74.00	9.59
7439.00	36.44	Average	V	14.46	-	50.90	54.00	3.10

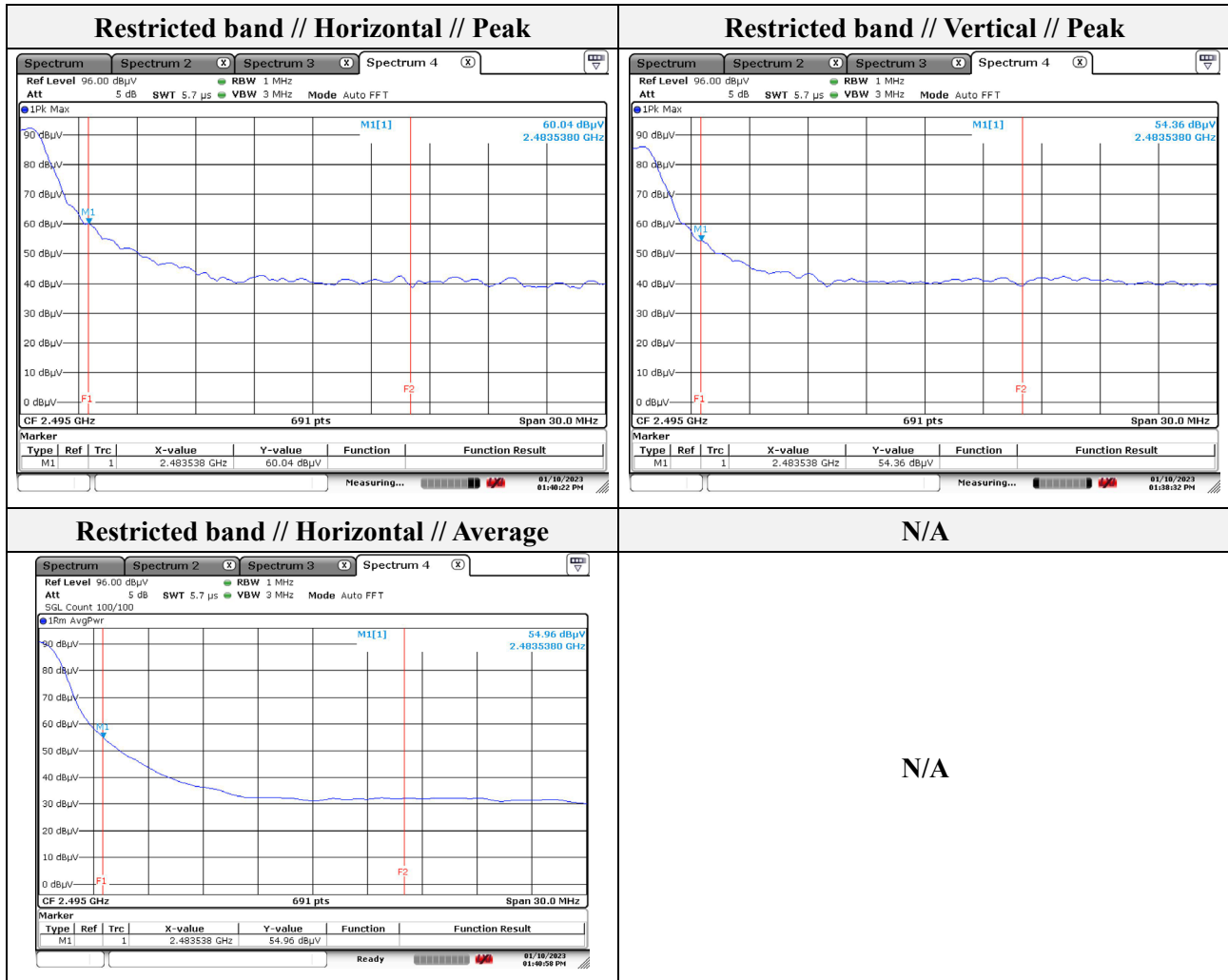
- Band edge

Frequency (MHz)	Level (dB μ V)	Detect mode	Ant. Pol. (H/V)	CF (dB)	DCF (dB)	Field strength (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)
2483.54	60.04	Peak	H	-1.67	-	58.37	74.00	15.63
2483.54	54.96	Average	H	-1.67	-	53.29	54.00	0.71
2483.54	54.36	Peak	V	-1.67	-	52.69	74.00	21.31

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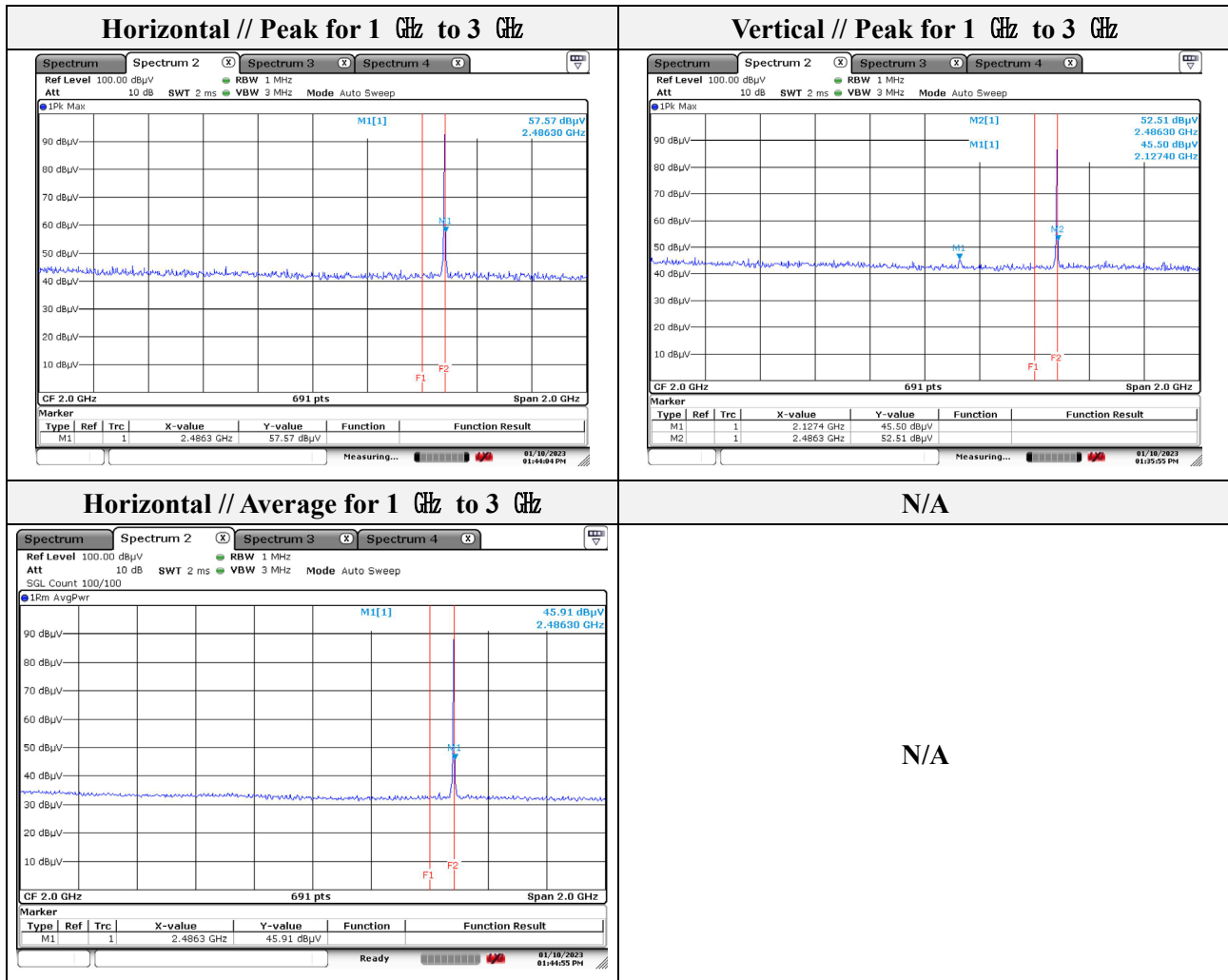
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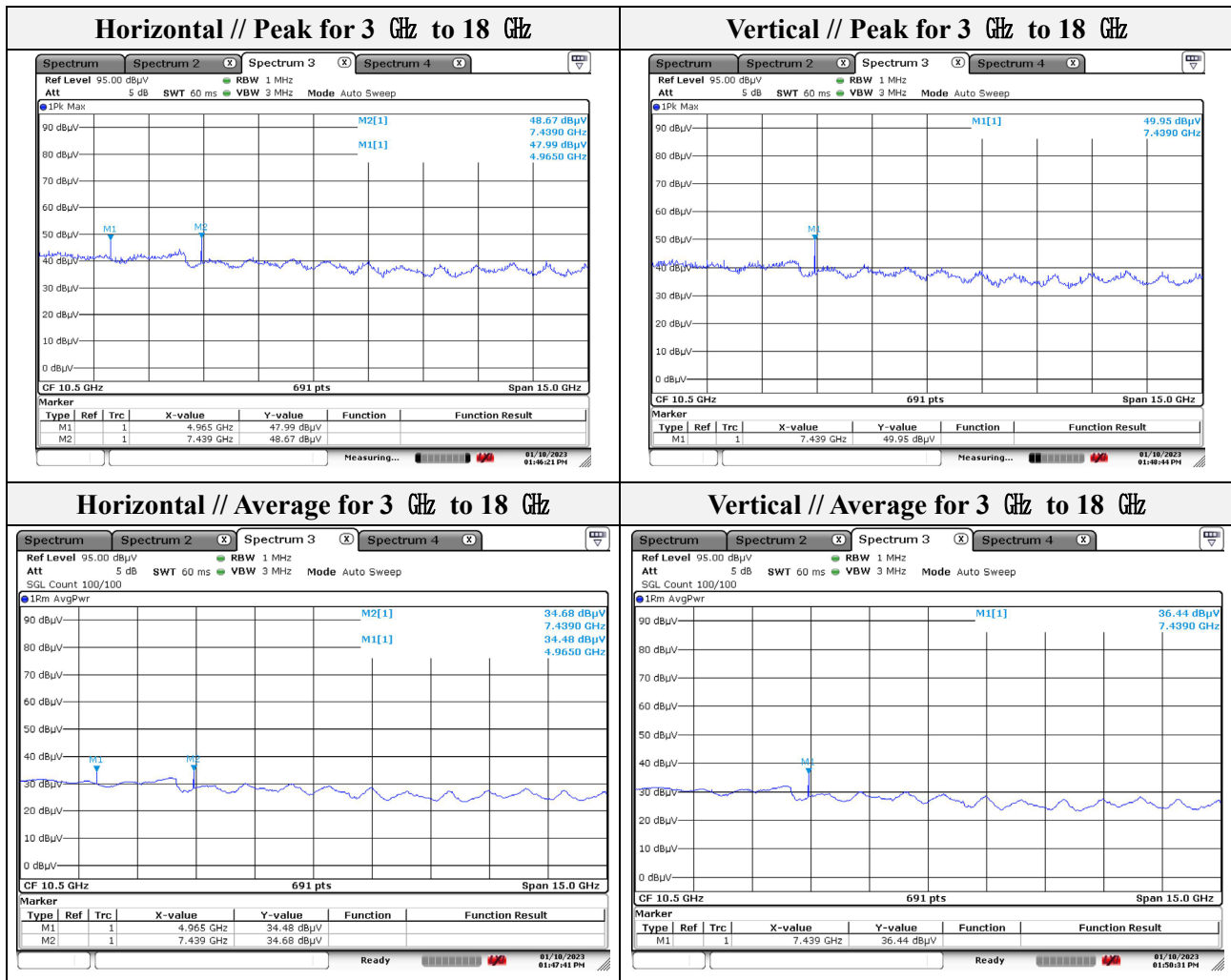
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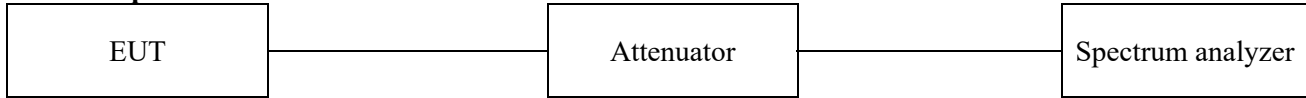


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Note.

1. Average test would be performed if the peak result were greater than the average limit.

3.5. Conducted spurious emissions & band edge**Test setup****Test procedure****Band edge**

ANSI C63.10-2013 - Section 11.11

1. Start and stop frequency were set such that the band edge would be placed in the center of the plot
2. Span was set large enough so as to capture all out of band emissions near the band edge
3. Set the RBW = 100 kHz
4. Set the VBW = $[3 \times \text{RBW}]$.
5. Detector = Peak
6. Sweep time = auto
7. Trace mode = max hold
8. Allow trace to fully stabilize.

Out of band emissions

ANSI C63.10-2013 - Section 11.11

1. Start frequency was set to 30 MHz and stop frequency was set to 25 GHz for 2.4 GHz frequencies and 40 GHz for 5 GHz frequencies
2. Set the RBW = 100 kHz
3. Set the VBW = $[3 \times \text{RBW}]$.
4. Detector = Peak
5. Sweep time = auto
6. Trace mode = max hold
7. Allow trace to fully stabilize.

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 operating, 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 limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph(b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in section 15.209(a) is not required. In addition, radiated emission which in the restricted band, as define in section 15.205(a), must also comply the radiated emission limits specified in section 15.209(a) (see section 15.205(c))



Test results



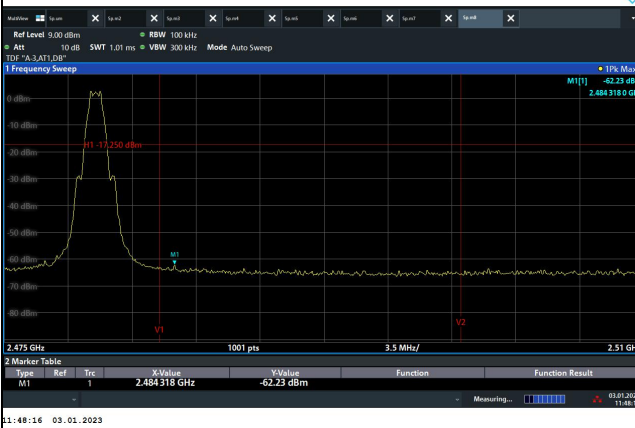
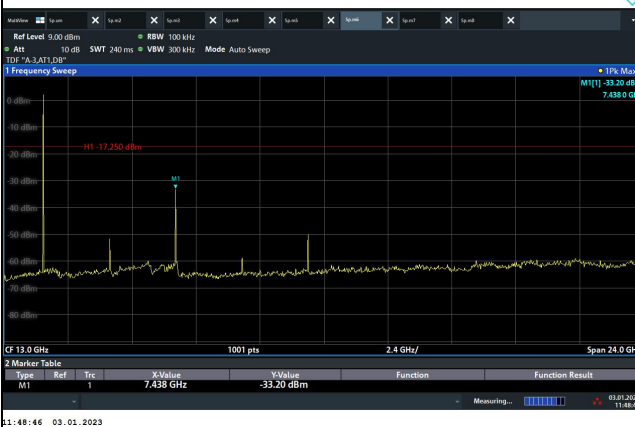
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LE 1M															
2480 MHz	-														
 <table><tr><th>Type</th><th>Ref</th><th>Trc</th><th>X-Value</th><th>Y-Value</th><th>Function</th><th>Function Result</th></tr><tr><td>M1</td><td></td><td>1</td><td>2.484318 GHz</td><td>-62.23 dBm</td><td></td><td></td></tr></table>	Type	Ref	Trc	X-Value	Y-Value	Function	Function Result	M1		1	2.484318 GHz	-62.23 dBm			N/A
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Type	Ref	Trc	X-Value	Y-Value	Function	Function Result									
M1		1	7.438 GHz	-33.20 dBm											

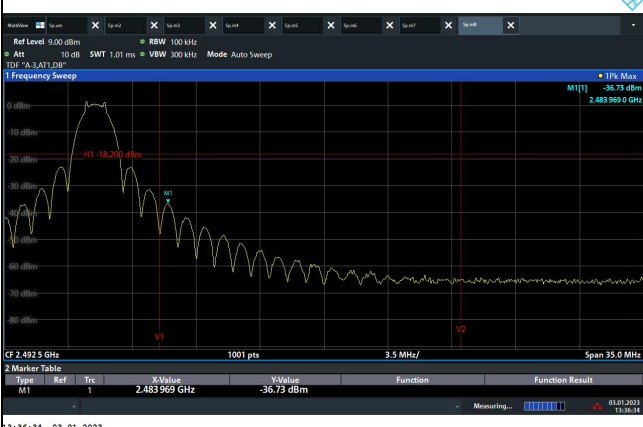
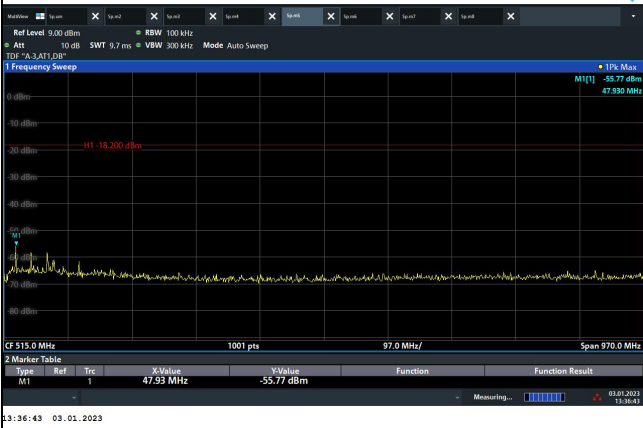

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ZigBee															
2 480 MHz															
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Appendix A. Measurement equipment

Equipment	Manufacturer	Model	Serial No.	Calibration interval	Calibration due.
Spectrum Analyzer	R&S	FSV40	101725	1 year	2023.06.16
Spectrum Analyzer	R&S	FSV3030	101800	1 year	2023.04.04
ATTENUATOR	Mini-Circuits	BW-S10-2W263+	1	1 year	2024.01.13
Power Meter	Anritsu	ML2495A	1438001	1 year	2024.01.13
Pulse Power Sensor	Anritsu	MA2411B	1339205	1 year	2024.01.13
SIGNAL GENERATOR	KEYSIGHT	N5182B	MY59100115	1 year	2023.04.27
SIGNAL GENERATOR	Anritsu	68369B	002118	1 year	2023.05.13
BAND REJECT FILTER	MICRO-TRONICS	BRM50702	G272	1 year	2024.01.12
Attenuator	HUBER+SUHNER	6806.17.A	-	1 year	2023.04.01
Loop Antenna	Schwarzbeck	FMZB1513	225	2 years	2023.03.18
Horn Antenna	A.H	SAS-571	414	1 year	2024.01.16
Horn Antenna	SCHWARZBECK	BBHA9170	BBHA 9170550	1 year	2024.01.16
TRILOG- BROADBAND ANTENNA	VULB9163	Schwarzbeck	714	2 years	2024.04.19
Amplifier	SONOMA INSTRUMENT	310N	401123	1 year	2023.06.02
PREAMPLIFIER	HP	8449B	3008A00538	1 year	2023.06.02
BROADBAND AMPLIFIER	SCHWARZBECK	BBV9721	PS9721-003	1 year	2024.01.16
DC POWER SUPPLY	AGILENT	6632B	MY43004114	1 year	2023.06.17
EMI Test Receiver	R&S	ESU26	100552	1 year	2023.03.31

Peripheral devices

Device	Manufacturer	Model No.	Serial No.
Notebook computer	LG Electronics Inc.,	15ND530-GX50K	311QCFT567147

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