

Prüfbericht-Nr.: Test report no.:	CN22NWGM 001	Auftrags-Nr.: Order no.:	244408036	Seite 1 von 34 Page 1 of 34
Kunden-Referenz-Nr.: Client reference no.:	N/A	Auftragsdatum: Order date:	2022-02-18	
Auftraggeber: Client:	Solowii (Beijing) Technology Development Co., Ltd 2002A, Bldg. 1, Yard 2, Ronghua South Rd., Beijing Economic and Technological Development Zone, Beijing, 100176, China			
Prüfgegenstand: Test item:	5TH WHEEL Electric Bicycle			
Bezeichnung / Typ-Nr.: Identification / Type no.:	TDR01Z FCC ID: 2A33ETDR01Z			
Auftrags-Inhalt: Order content:	Complete test			
Prüfgrundlage: Test specification:	FCC CFR47 Part 15, Subpart C Section 15.247 ANSI C63.10: 2013			
Wareneingangsdatum: Date of sample receipt:	2022-02-22			
Prüfmuster-Nr.: Test sample no.:	A003215213-001			
Prüfzeitraum: Testing period:	Refer to test report			
Ort der Prüfung: Place of testing:	TÜV Rheinland (Shanghai) Co., Ltd.			
Prüflaboratorium: Testing laboratory:	TÜV Rheinland (Shanghai) Co., Ltd.			
Prüfergebnis*: Test result*:	Pass			
geprüft von: tested by:	X <u>Weidong Wang</u>	genehmigt von: authorized by:	X <u>Hongfei Wu</u>	
Datum: Date:	2022-07-25	Ausstellungsdatum: Issue date:	2022-07-25	
Stellung / Position:	PE	Stellung / Position:	Reviewer	
Sonstiges / Other:				
Zustand des Prüfgegenstandes bei Anlieferung: Condition of the test item at delivery:				
		Prüfmuster vollständig und unbeschädigt Test item complete and undamaged		
* Legende:	P(ass) = entspricht o.g. Prüfgrundlage(n)	F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet
* Legend:	P(ass) = passed a.m. test specification(s)	F(ail) = failed a.m. test specification(s)	N/A = not applicable	N/T = not tested
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.				

V05

TEST SUMMARY

5.1.1 ANTENNA REQUIREMENT

RESULT: Pass

5.1.2 6dB & 99% BANDWIDTH

RESULT: Pass

5.1.3 PEAK OUTPUT POWER

RESULT: Pass

5.1.4 POWER SPECTRAL DENSITY

RESULT: Pass

5.1.5 CONDUCTED BAND EDGE AND OUT-OF BAND EMISSIONS

RESULT: Pass

5.2.1 CONDUCTED EMISSION

RESULT: Pass

5.3.1 RADIATED BAND-EDGE

RESULT: Pass

5.3.2 RADIATED SPURIOUS EMISSION

RESULT: Pass

Contents

1.	GENERAL REMARKS	4
1.1	COMPLEMENTARY MATERIALS.....	4
2.	TEST SITES	4
2.1	TEST FACILITIES	4
2.2	LIST OF TEST AND MEASUREMENT INSTRUMENTS.....	5
2.3	TRACEABILITY	5
2.4	CALIBRATION	5
2.5	MEASUREMENT UNCERTAINTY	6
3.	GENERAL PRODUCT INFORMATION.....	7
3.1	PRODUCT FUNCTION AND INTENDED USE	7
3.2	RATINGS AND SYSTEM DETAILS.....	7
3.3	INDEPENDENT OPERATION MODES.....	8
3.4	NOISE GENERATING AND NOISE SUPPRESSING PARTS	8
3.5	SUBMITTED DOCUMENTS.....	8
4.	TEST SET-UP AND OPERATION MODES.....	9
4.1	PRINCIPLE OF CONFIGURATION SELECTION	9
4.2	TEST OPERATION AND TEST SOFTWARE.....	9
4.3	SPECIAL ACCESSORIES AND AUXILIARY EQUIPMENT	9
4.4	COUNTERMEASURES TO ACHIEVE EMC COMPLIANCE.....	9
5.	TEST RESULTS	10
5.1	CONDUCTED TESTING AT ANTENNA PORT	10
5.1.1	<i>Antenna Requirement</i>	<i>10</i>
5.1.2	<i>6dB & 99% Bandwidth</i>	<i>11</i>
5.1.3	<i>Peak Output Power</i>	<i>14</i>
5.1.4	<i>Power Spectral Density</i>	<i>16</i>
5.1.5	<i>Conducted Band Edge and out-of Band Emissions.....</i>	<i>18</i>
5.2	EMISSION IN THE FREQUENCY RANGE UP TO 30MHZ.....	20
5.2.1	<i>Conducted Emission</i>	<i>20</i>
5.3	EMISSION IN THE FREQUENCY RANGE ABOVE 30MHZ	23
5.3.1	<i>Radiated Band-Edge.....</i>	<i>23</i>
5.3.2	<i>Radiated Spurious Emission</i>	<i>25</i>
6.	LIST OF TABLES	34
7.	LIST OF FIGURES	34

1. General Remarks

1.1 Complementary Materials

Null.

2. Test Sites

2.1 Test Facilities

TÜV Rheinland (Shanghai) Co., Ltd.

Shanghai TUV Rheinland Building No. 177, 178 Lane 777, West Guangzhong Rd, Jing'an District, Shanghai, China

The used test equipment is in accordance with CISPR 16 for measurement of radio interference.

The Federal Communications Commission has reviewed the technical characteristics of the radiated and conducted emission facility, and has found these test facilities to be in compliance with the requirements of section 2.948 of the FCC rules. The description of the test facility is listed under FCC registration number 958801.

The Innovation, Science and Economic Development Canada has reviewed the technical characteristics of the radiated and conducted emission facility, and has found these test facilities to be in compliance. The description of the test facility is listed under chambers filing number 2932F.

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Instrument	Manufacturer	Type No.	Asset No.	Cali. Due Date
3m modified semi-anechoic chamber	Frankonia	SAC3	G1811378	2023-06-27
Bilog antenna	Teseq	CBL 6112D	G1811425	2023-03-10
EMI test receiver	Rohde & Schwarz	ESCI	G1811402	2022-09-01
Spectrum analyser	Rohde & Schwarz	FSV40	G1822702	2023-11-04
Preamplifier	Taiwan EMCI	EMC184045SE	G1825372	2023-05-14
Log periodic antenna	Rohde & Schwarz	HL050	G1811417	2023-03-10
Broadband Horn Antenna	Schwarzbeck	BBHA 9170	9170-305	2023-07-08
Preamplifier	Taiwan EMCI	EMC051845SE	G1825371	2023-05-14
EMI test receiver	Rohde & Schwarz	ESR3	9023229	2023-03-22
Artificial mains network	Rohde & Schwarz	ENV216	G1811403	2023-04-11
Spectrum Analyzer	Keysight	N9020A	MY54500180	2022-09-08

2.3 Traceability

All measurement equipment calibrations are traceable to NIST or where calibration is performed outside the United States, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

2.5 Measurement Uncertainty

Table 2: Measurement Uncertainty

Measurement Type	Frequency	Uncertainty
Antenna Port Conducted Emission	< 1GHz	±0.39dB
	> 1GHz	±0.68dB
Conducted Emission	150kHz - 30MHz	±3.39dB
Radiated Emission	9kHz – 30MHz	±2.93dB
	30MHz - 1GHz	±5.34dB
	> 1GHz	±5.40dB

3. General Product Information

3.1 Product Function and Intended Use

The EUT (Equipment Under Test) is an Electric Bicycle which supports Bluetooth LE function.

For details refer to the User Manual and Circuit Diagram.

3.2 Ratings and System Details

Table 3: Technical Specification of EUT

General Description of EUT	
Product Name:	5TH WHEEL Electric Bicycle
Model No.:	TDR01Z
Rated Voltage:	DC 36V (Lithium battery)
Test Voltage:	DC 3.3V for Conducted Test and Radiated Spurious Emission test AC120V/60Hz for Conducted Emission test
Technical Specification of BLE	
Frequency Range:	2402MHz~2480MHz
Modulation Type:	GFSK
Data Rate:	1Mbps
Antenna Type:	PCB Antenna
Antenna Gain:	0 dBi (Provided by the Client)
General Description of Adaptor	
Product Name:	Battery Charger
Model No.:	XVE-4200200
Input:	AC 110~240V, 50/60Hz, 2.0A MAX
Output:	DC 42.0V, 2.0A 84.0W

3.3 Independent Operation Modes

Table 4: Independent Operation Modes

Test Mode	Channel	Frequency	Data Rate
TM1	00	2402	1 MB/s
TM2	19	2440	1 MB/s
TM3	39	2480	1 MB/s
TM4	Charging Mode		

3.4 Noise Generating and Noise Suppressing Parts

Refer to the Circuit Diagram.

3.5 Submitted Documents

- Bill of Material
- PCB Layout
- Photo Document
- Circuit Diagram
- Instruction Manual
- Rating Label

4. Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

The equipment under test (EUT) was configured to measure its maximum power level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5. All testing were performed according to the procedures in ANSI C63.10: 2013.

Test Software used: BK32xx RF Test_V1.8.2

Table 5: Power parameter value

Operating Mode	Channel	Power Parameter Value
BLE	00	3
	19	3
	39	3

4.3 Special Accessories and Auxiliary Equipment

Table 6: Auxiliary Equipment

Product Name	Model Name	Manufactory
Laptop	T450	Thinkpad

4.4 Countermeasures to achieve EMC Compliance

Null.

5. Test Results

5.1 Conducted Testing at Antenna Port

5.1.1 Antenna Requirement

RESULT: **Pass**

According to the manufacturer declared, the EUT has one PCB antenna, the directional gain of antenna is 0 dBi and the antenna is designed with permanent attachment and no consideration of replacement. Therefore the EUT is considered sufficient to comply with the provision.

Table 7: Antenna Requirement

FCC 15.203 – Antenna Requirement 1		
Requirement:	No antenna other than that furnished by the responsible party shall be used with the device	
Results:	Antenna type:	PCB Antenna
Verdict:	Pass	

FCC 15.204 – Antenna Requirement 2		
Requirement:	An intentional radiator may be operated only with the antenna with which it is authorized. If an antenna is marketed with the intentional radiator, it shall be of a type which is authorized with the intentional radiator.	
Results:	Only one PCB antenna can be used	
Verdict:	Pass	

5.1.2 6dB & 99% Bandwidth**RESULT:****Pass**

Date of testing : 2022-06-13
Ambient temperature : 21.6°C
Relative humidity : 55.6%
Atmospheric pressure : 101kPa
Test requirement : FCC Part 15.247(a)(2)
Test procedure : ANSI C63.10: 2013
Test voltage : DC 3.3V
Test modes applied : TM1 to TM3

Table 8: 6dB & 99% Bandwidth

Test Mode	CH.	Freq. [MHz]	6dB Bandwidth [KHz]	6dB Bandwidth limit [KHz]	99% Bandwidth [MHz]
TM1	00	2402	782.0	≥500	1.2566
TM2	19	2440	785.1	≥500	1.2208
TM3	39	2480	787.8	≥500	1.1675

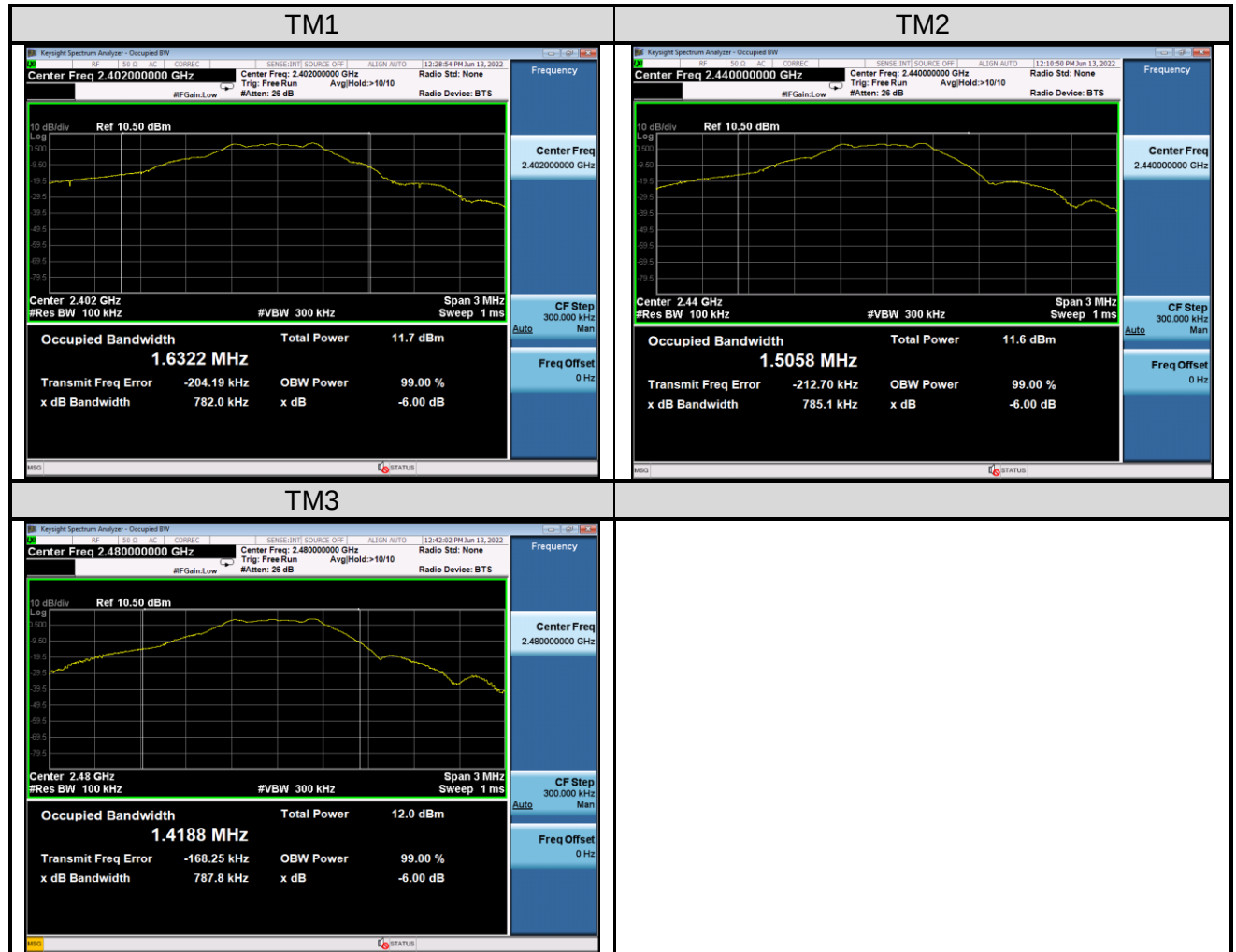
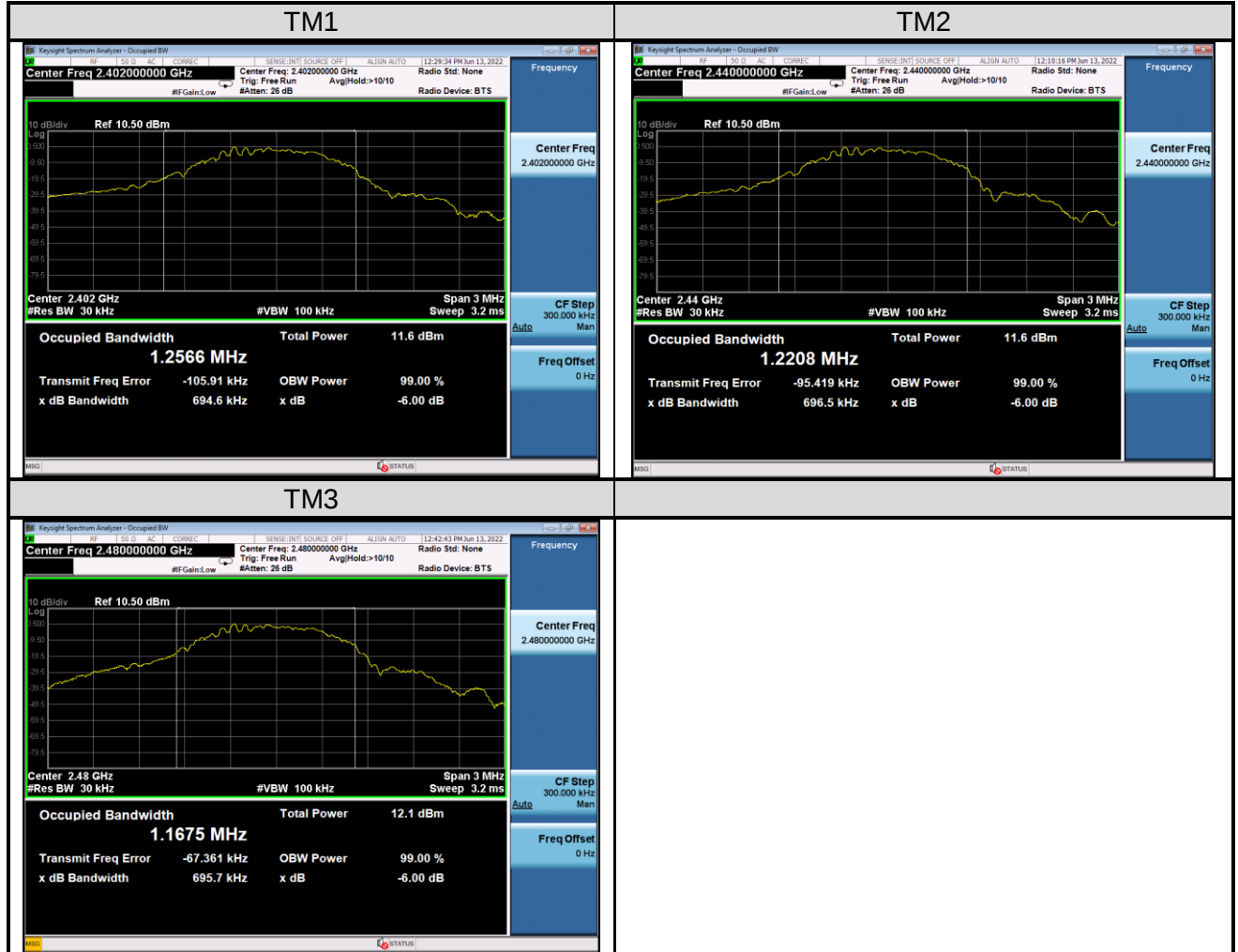
Figure 1: 6dB Bandwidth


Figure 2: 99% Bandwidth


5.1.3 Peak Output Power

RESULT:**Pass**

Date of testing : 2022-06-13
Ambient temperature : 21.6°C
Relative humidity : 55.6%
Atmospheric pressure : 101kPa
Test requirement : FCC Part 15.247(b)(3)
Test procedure : ANSI C63.10: 2013
Test voltage : DC 3.3V
Test modes applied : TM1 to TM3

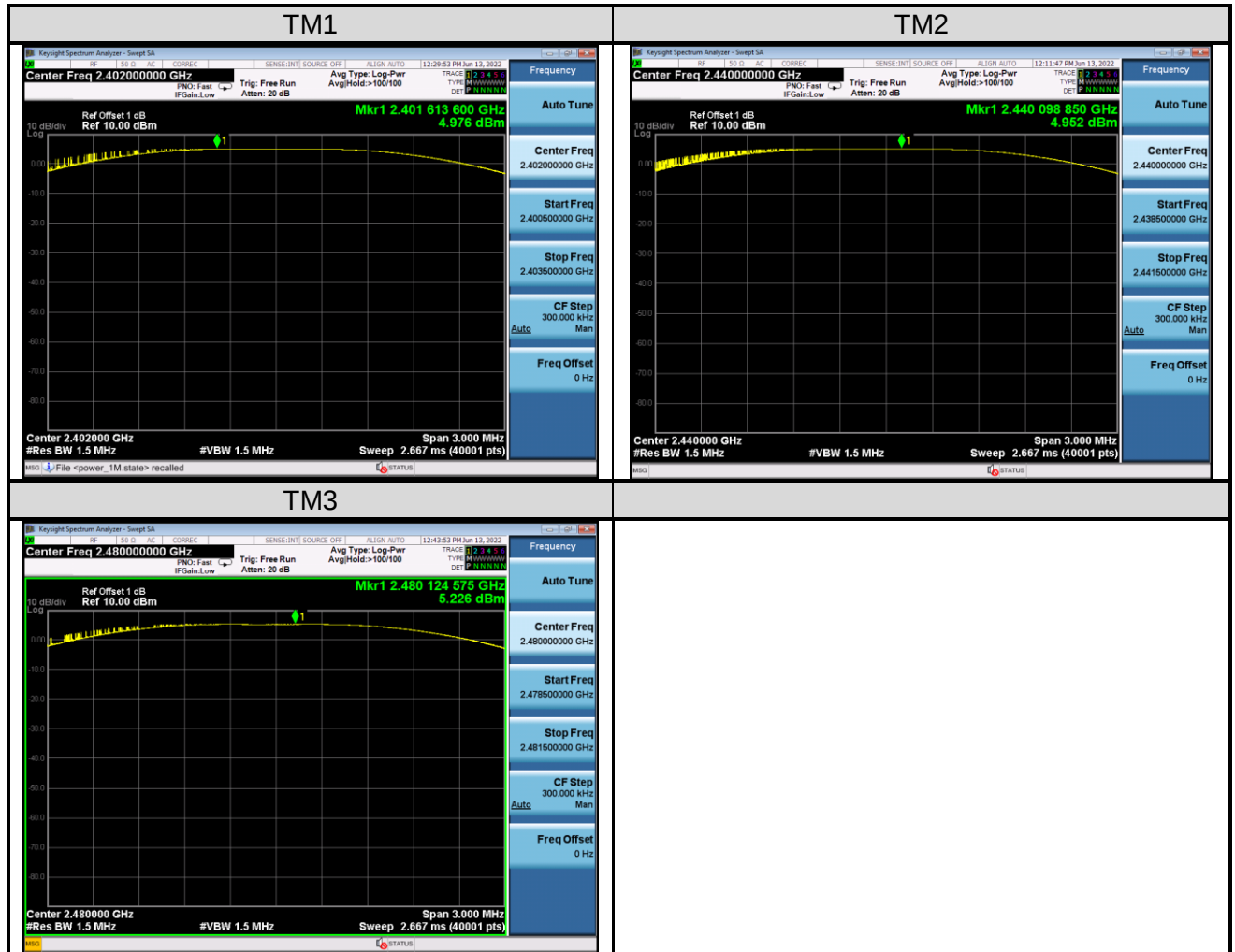
Table 9: Peak Output Power

Mode	Antenna Gain [dBi]	CH.	Freq. [MHz]	Maximum Conducted Output Power [dBm]	Maximum Conducted Output Power Limit [dBm]	Maximum EIRP [dBm]	Maximum EIRP Limit [dBm]
TM1	0	00	2402	4.976	30	4.976	36
TM2		19	2440	4.952	30	4.952	36
TM3		39	2480	5.226	30	5.226	36

Note:

EIRP= Maximum Conducted Output Power + Antenna Gain

The cable loss=1dB was provided by the client, and was factored in the result Maximum Conducted Output Power

Figure 3: Peak Output Power


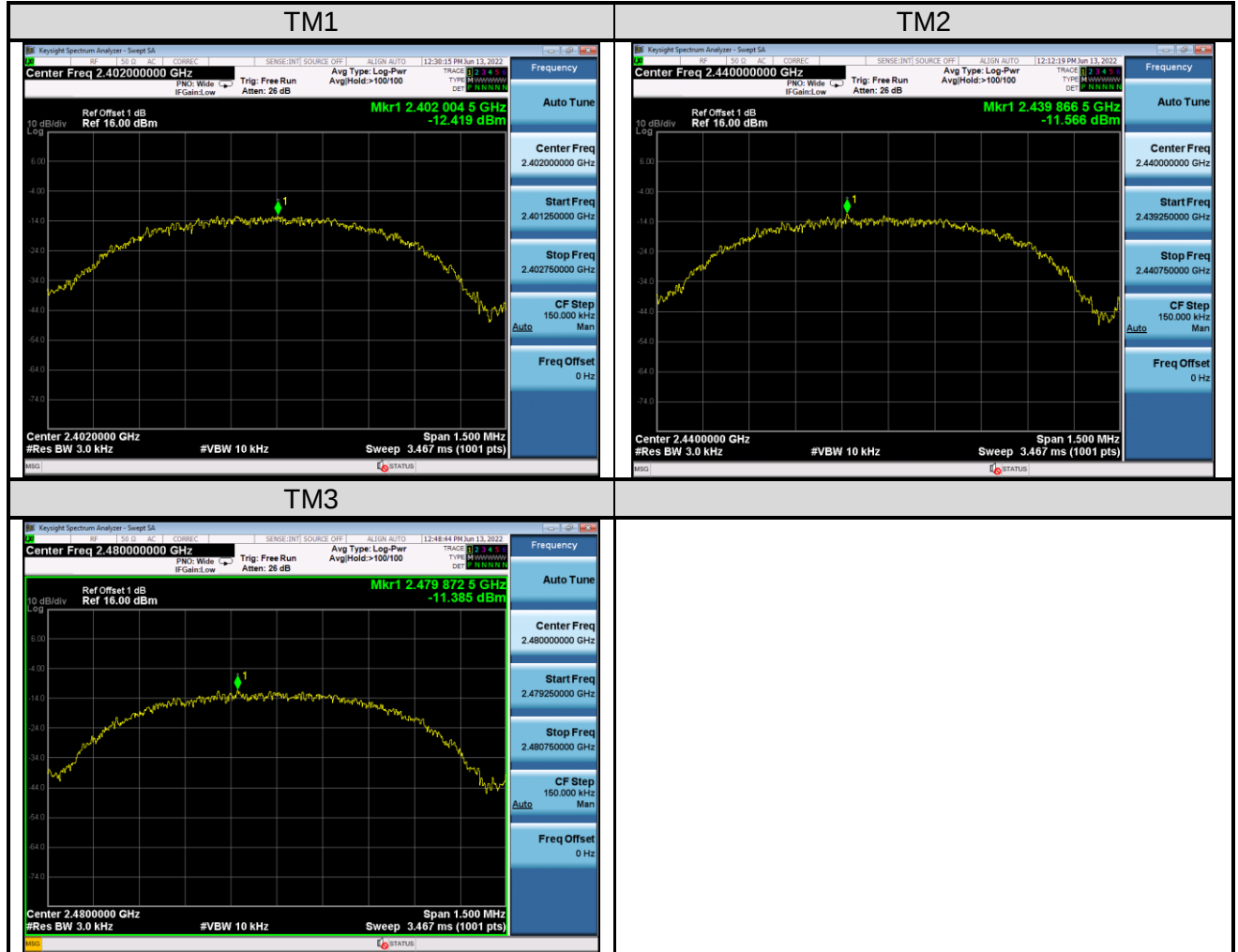
5.1.4 Power Spectral Density

RESULT:**Pass**

Date of testing : 2022-06-13
Ambient temperature : 21.6°C
Relative humidity : 55.6%
Atmospheric pressure : 101kPa
Test requirement : FCC Part 15.247(e)
Test procedure : ANSI C63.10: 2013
Test voltage : DC 3.3V
Test modes applied : TM1 to TM3

Table 10: Power Spectral Density

Mode	CH.	Frequency [MHz]	Result [dBm/3kHz]	Limit [dBm/3kHz]
TM1	00	2402	-12.419	8
TM2	19	2440	-11.566	8
TM3	39	2480	-11.385	8

Figure 4: Power Spectral Density


5.1.5 Conducted Band Edge and out-of Band Emissions

RESULT:

Pass

Date of testing : 2022-06-13
 Ambient temperature : 21.6°C
 Relative humidity : 55.6%
 Atmospheric pressure : 101kPa
 Test requirement : FCC Part 15.247(d)
 Test procedure : ANSI C63.10: 2013
 Test voltage : DC 3.3V
 Test modes applied : TM1 to TM3

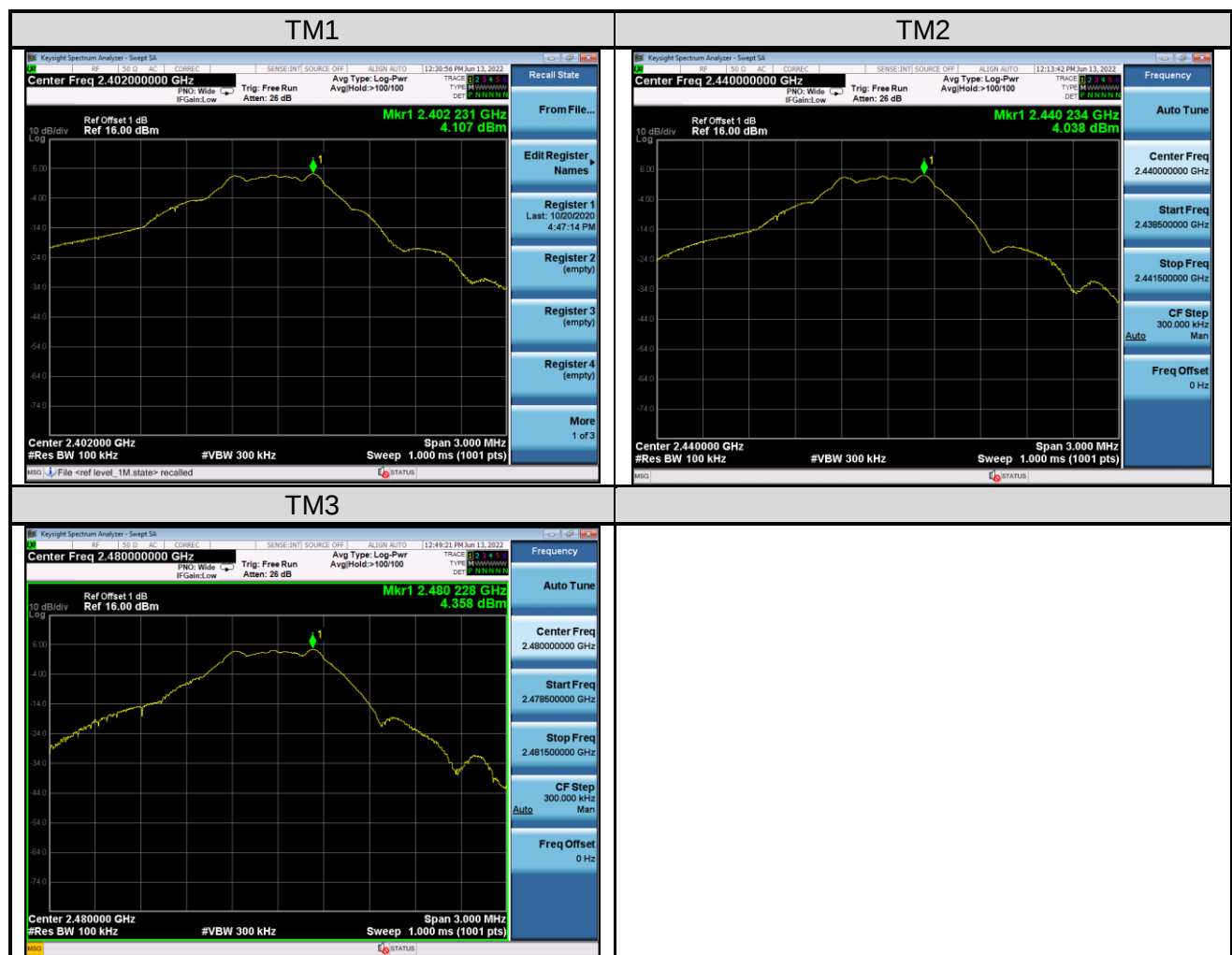
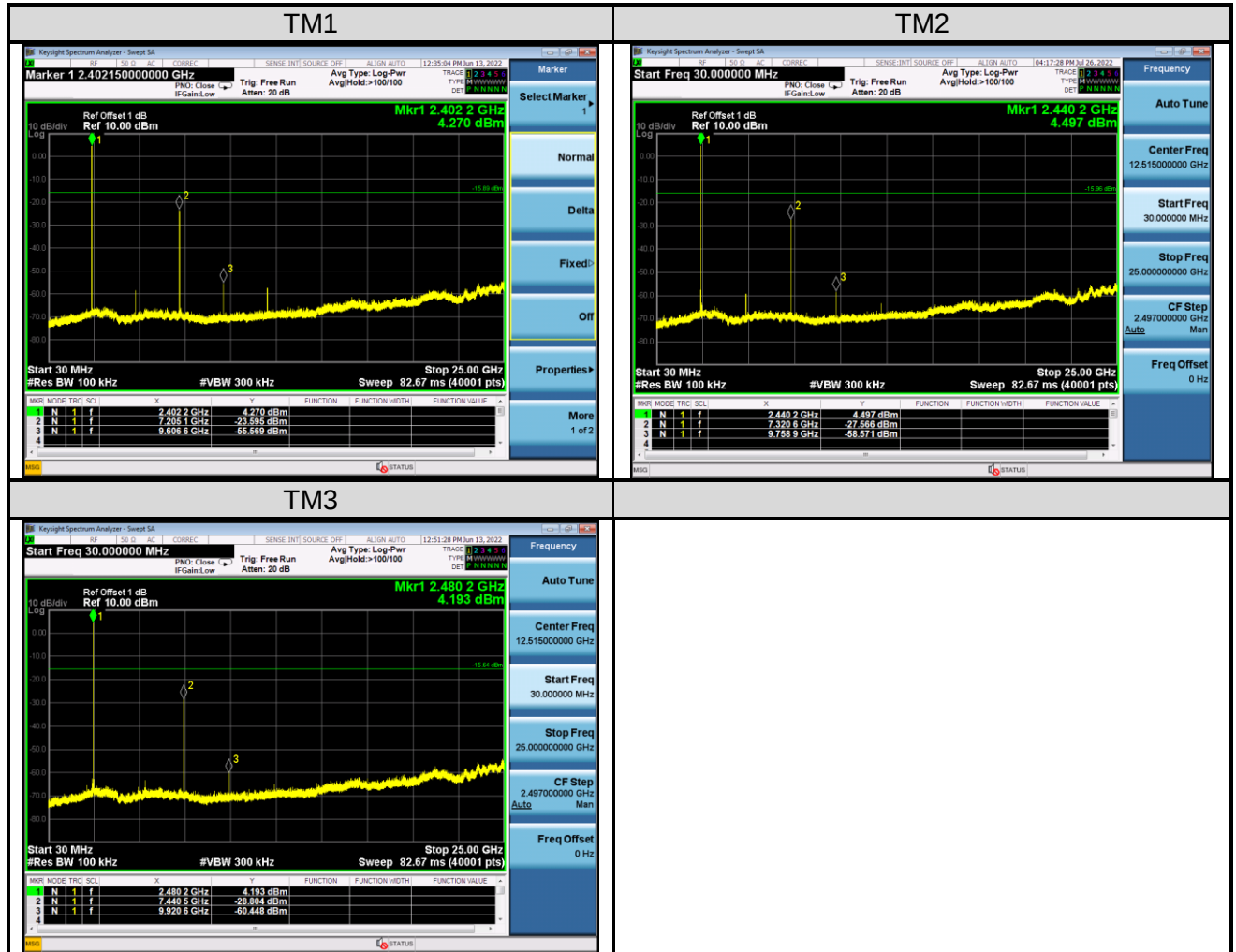
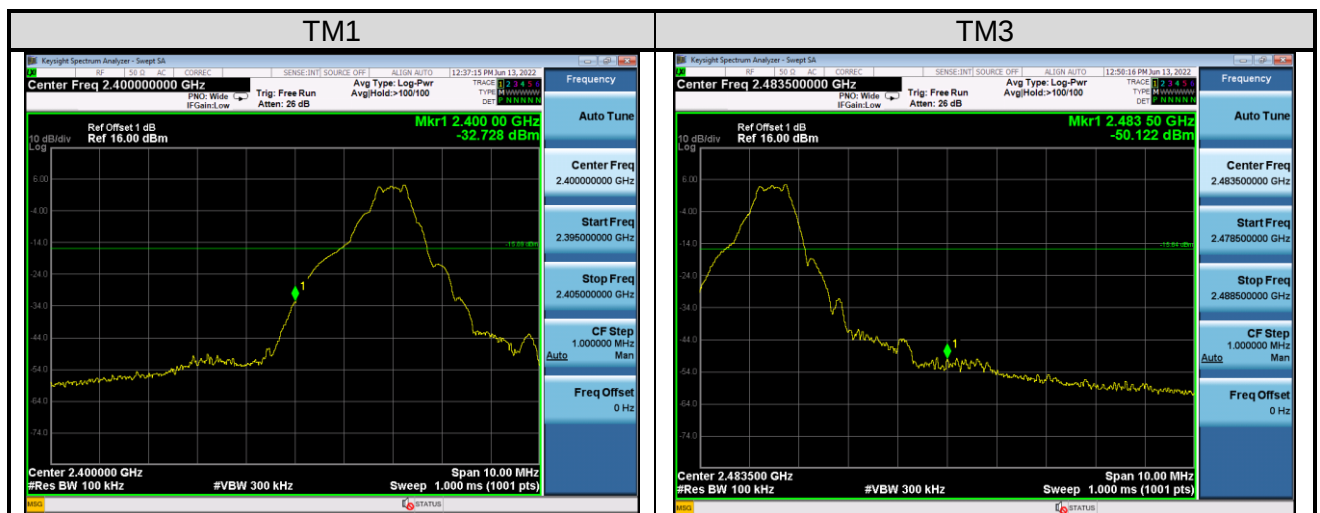
Figure 5: Reference level


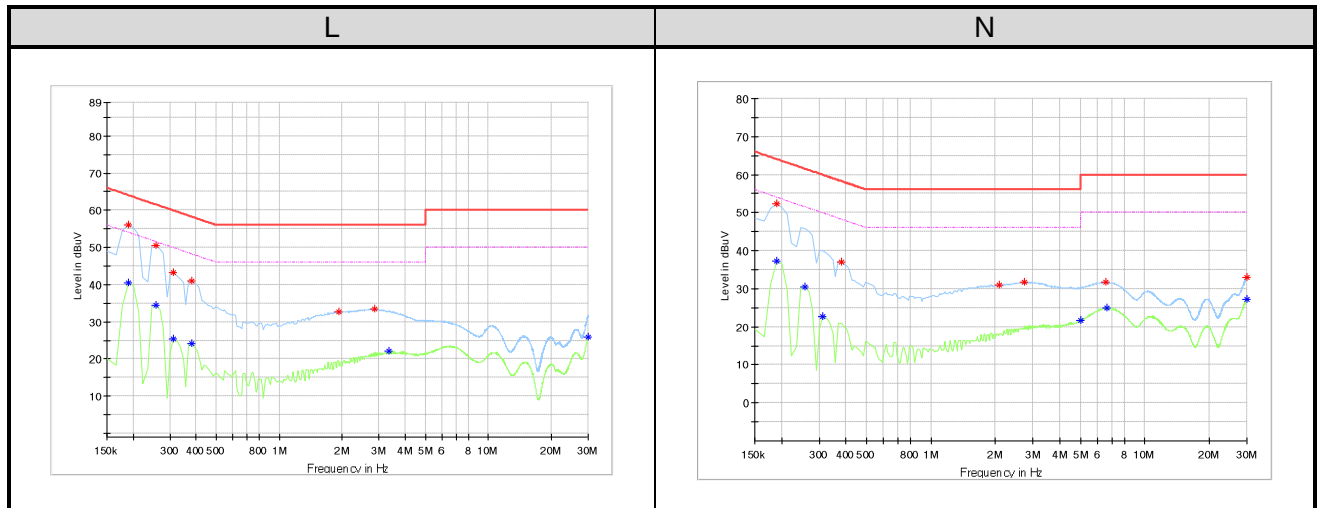
Figure 6: Conducted Spurious Emission

Figure 7: Conducted Band Edge


5.2 Emission in the Frequency Range up to 30MHz

5.2.1 Conducted Emission

RESULT:**Pass**

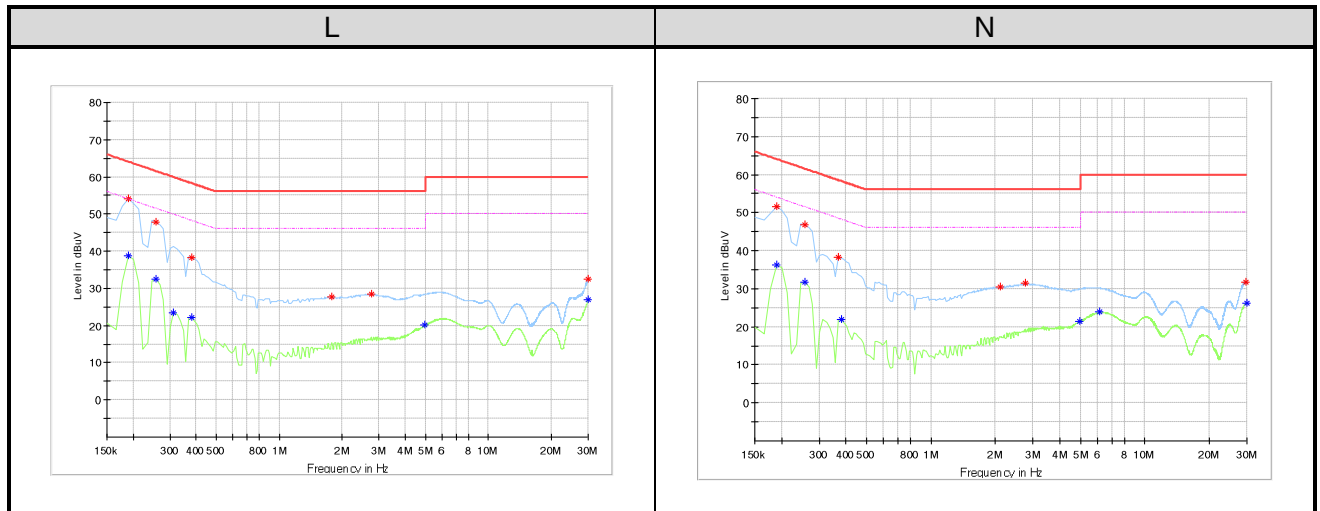
Date of testing	: 2022-03-25 ~ 2022-06-16
Ambient temperature	: 20 ~ 25°C
Relative humidity	: 49 ~ 52%
Atmospheric pressure	: 101kPa
Test requirement	: FCC Part 15.207 (a)
Test procedure	: ANSI C63.10: 2013
Test voltage	: AC120V/60Hz
Test modes applied	: TM4

Figure 8: Conducted Emission, Regular charging port

Final Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line
0.189375	56.15	64.06	7.91	L
0.256875	50.42	61.53	11.12	L
0.313125	43.18	59.89	16.71	L
0.380625	40.95	58.27	17.31	L
1.921875	32.79	56.00	23.21	L
2.866875	33.50	56.00	22.50	L
0.189375	52.43	64.06	11.64	N
0.380625	37.04	58.27	21.23	N
2.079375	30.95	56.00	25.05	N
2.743125	31.78	56.00	24.22	N
6.590625	31.74	60.00	28.26	N
29.990625	33.04	60.00	26.96	N

Final Result_AV

Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line
0.189375	40.51	54.06	13.55	L
0.256875	34.45	51.53	17.08	L
0.313125	25.27	49.89	24.61	L
0.380625	24.20	48.27	24.07	L
3.361875	22.21	46.00	23.79	L
29.990625	25.93	50.00	24.07	L
0.189375	37.15	54.06	16.91	N
0.256875	30.54	51.53	20.99	N
0.313125	22.72	49.89	27.16	N
4.993125	21.67	46.00	24.33	N
6.658125	24.93	50.00	25.07	N
30.000000	27.14	50.00	22.86	N

Figure 9: Conducted Emission, Charging port at folding buckle

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBµV)	Limit (dBµV)	Margin (dB)	Line
0.189375	53.98	64.06	10.08	L
0.256875	47.89	61.53	13.64	L
0.380625	38.38	58.27	19.88	L
1.775625	27.71	56.00	28.29	L
2.754375	28.50	56.00	27.50	L
29.945625	32.41	60.00	27.59	L
0.189375	51.47	64.06	12.59	N
0.256875	46.80	61.53	14.73	N
0.369375	38.32	58.52	20.19	N
2.113125	30.48	56.00	25.52	N
2.754375	31.42	56.00	24.58	N
29.506875	31.80	60.00	28.20	N

Final_Result_AV

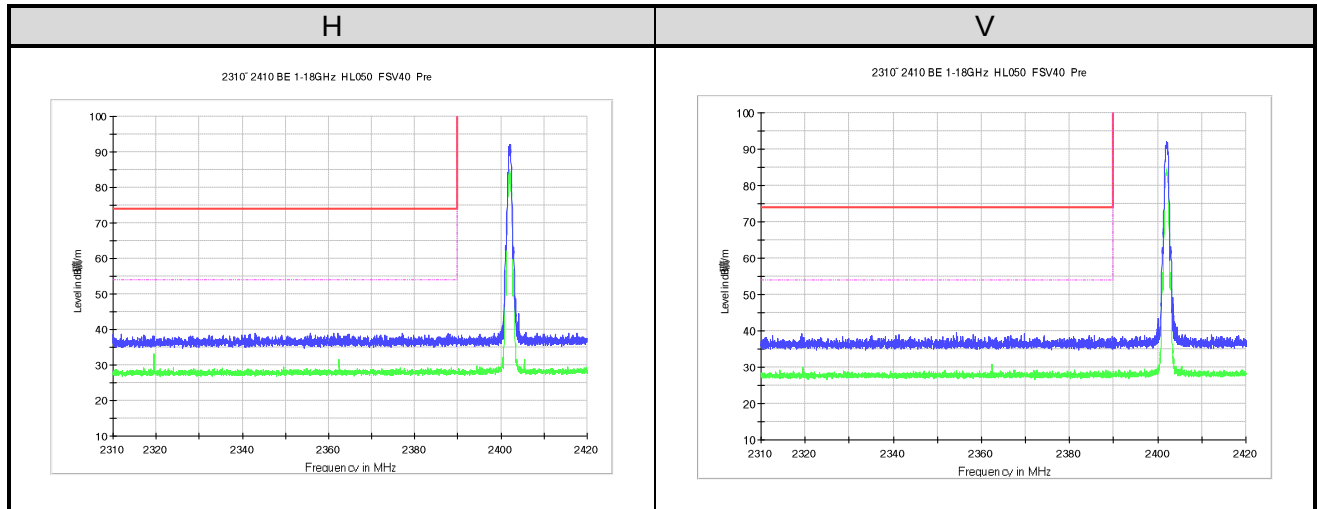
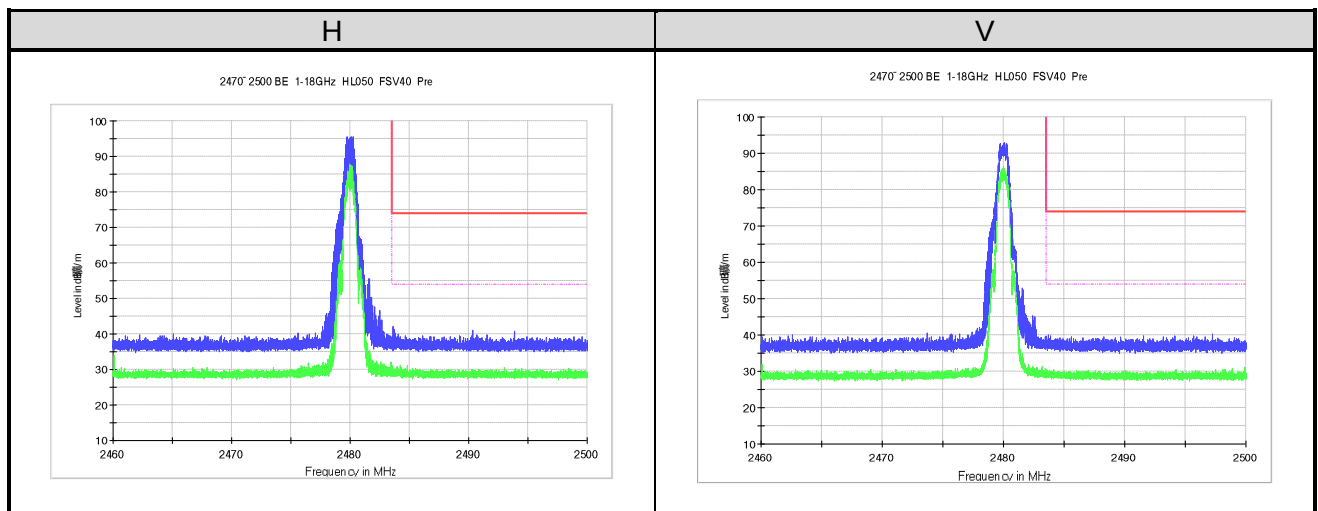
Frequency (MHz)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Line
0.189375	38.66	54.06	15.40	L
0.256875	32.41	51.53	19.12	L
0.313125	23.41	49.89	26.48	L
0.380625	22.17	48.27	26.09	L
4.959375	20.11	46.00	25.89	L
30.000000	26.90	50.00	23.10	L
0.189375	36.35	54.06	17.71	N
0.256875	31.80	51.53	19.73	N
0.380625	21.93	48.27	26.34	N
4.948125	21.51	46.00	24.49	N
6.174375	23.89	50.00	26.11	N
29.911875	26.14	50.00	23.86	N

5.3 Emission in the Frequency Range above 30MHz

5.3.1 Radiated Band-Edge

RESULT:**Pass**

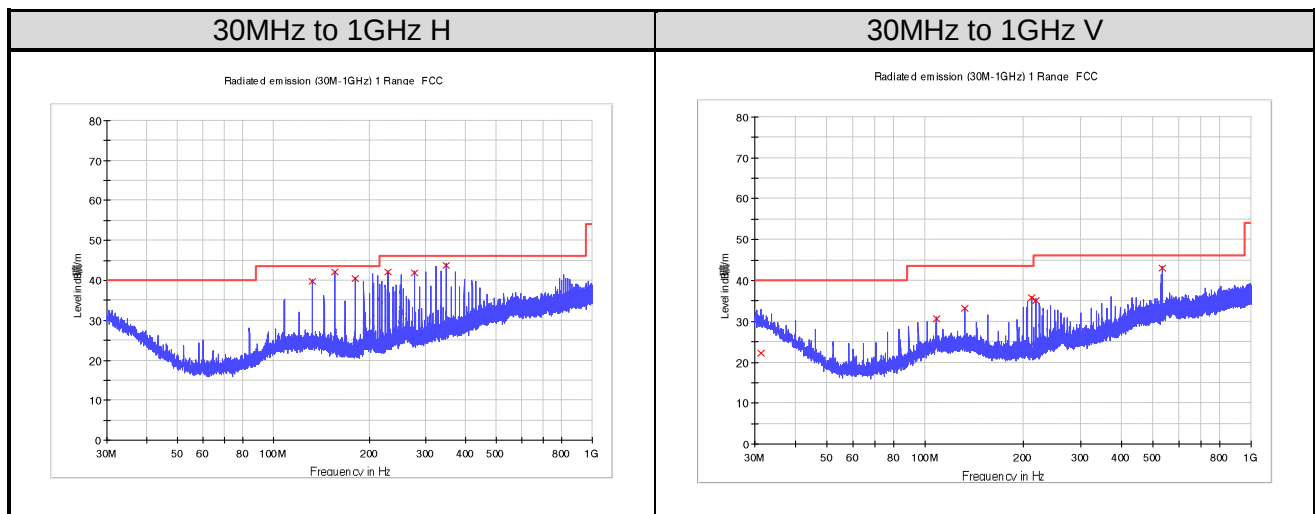
Date of testing	:	2022-06-22
Ambient temperature	:	22°C
Relative humidity	:	52%
Atmospheric pressure	:	101kPa
Test requirement	:	FCC Part 15.247(d) FCC Part 15.205(a) FCC Part 15.209(a)
Test procedure	:	ANSI C63.10: 2013
Test voltage	:	DC 3.3V
Test modes applied	:	TM1, TM3

Figure 10: Radiated Band-Edge, TM1

Figure 11: Radiated Band-Edge, TM3


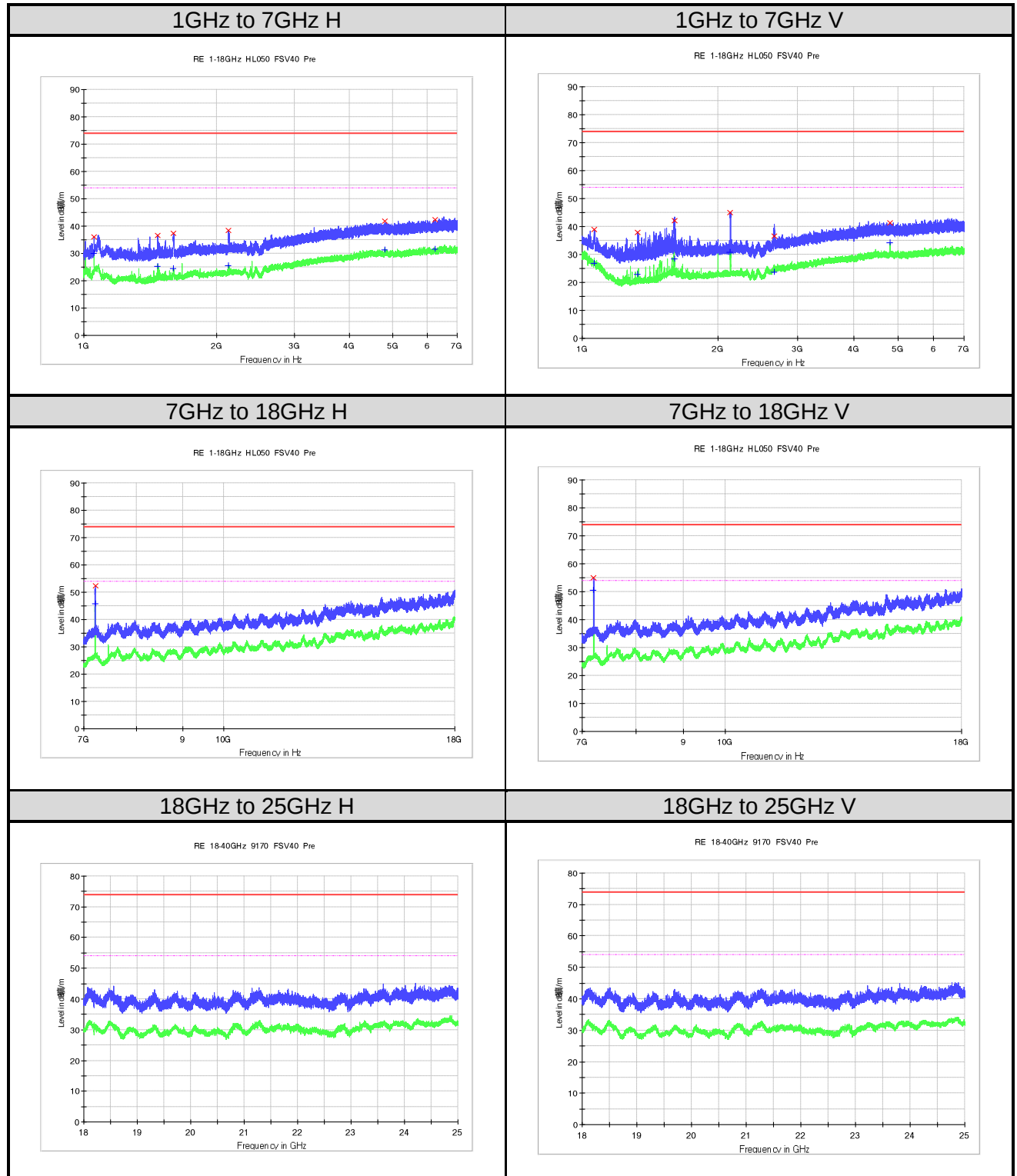
5.3.2 Radiated Spurious Emission

RESULT:
Pass

Date of testing : 2022-06-22 ~ 2022-07-19
 Ambient temperature : 22 ~ 24°C
 Relative humidity : 52 ~ 55 %
 Atmospheric pressure : 101kPa
 Test requirement : FCC Part 15.247(d)
 FCC Part 15.209(a)
 Test procedure : ANSI C63.10: 2013
 Test voltage : DC 3.3V
 Test modes applied : TM1 to TM3

Figure 12: Radiated Spurious Emission, TM1, 30MHz to 1GHz

Limit and Margin

Frequency (MHz)	QuasiPeak (dBμV/m)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBμV/m)
132.011667	39.7	H	18.6	3.8	43.5
156.003000	42.0	H	16.9	1.5	43.5
180.026667	40.4	H	15.9	3.1	43.5
228.009333	42.1	H	16.7	3.9	46.0
276.024333	41.8	H	19.5	4.2	46.0
347.998333	43.7	H	21.0	2.3	46.0
31.261000	22.3	V	24.8	17.7	40.0
107.988000	30.7	V	18.4	12.8	43.5
131.979333	33.1	V	18.6	10.4	43.5
211.972000	35.7	V	15.9	7.8	43.5
218.083000	35.2	V	15.8	10.8	46.0
532.104333	43.1	V	25.0	2.9	46.0

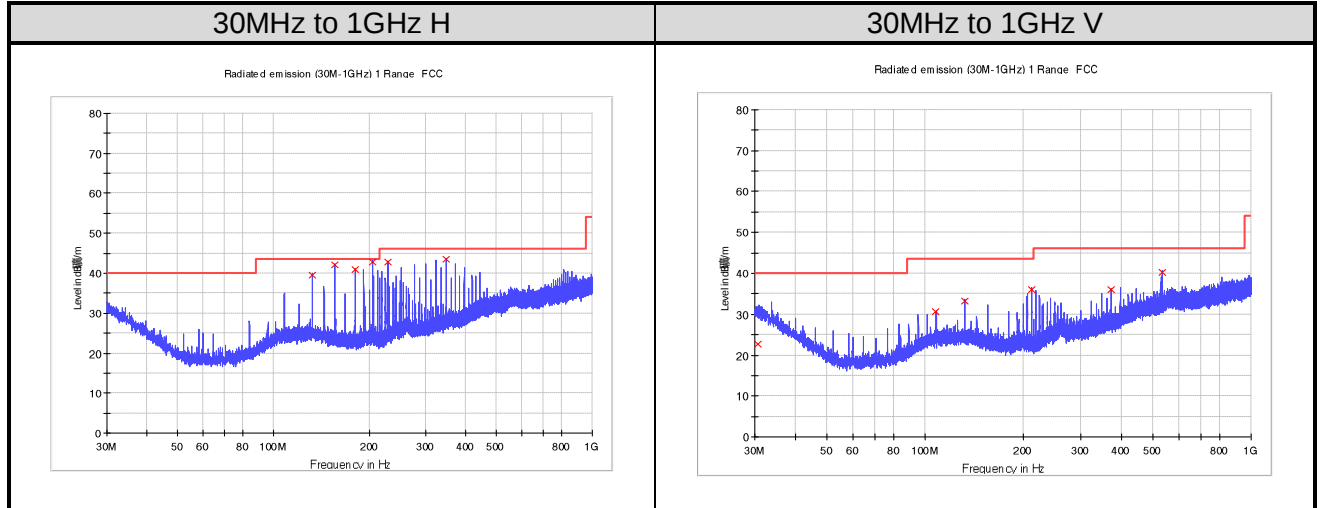
Figure 13: Radiated Spurious Emission, TM1, 1GHz to 25GHz


Limit and Margin
PK

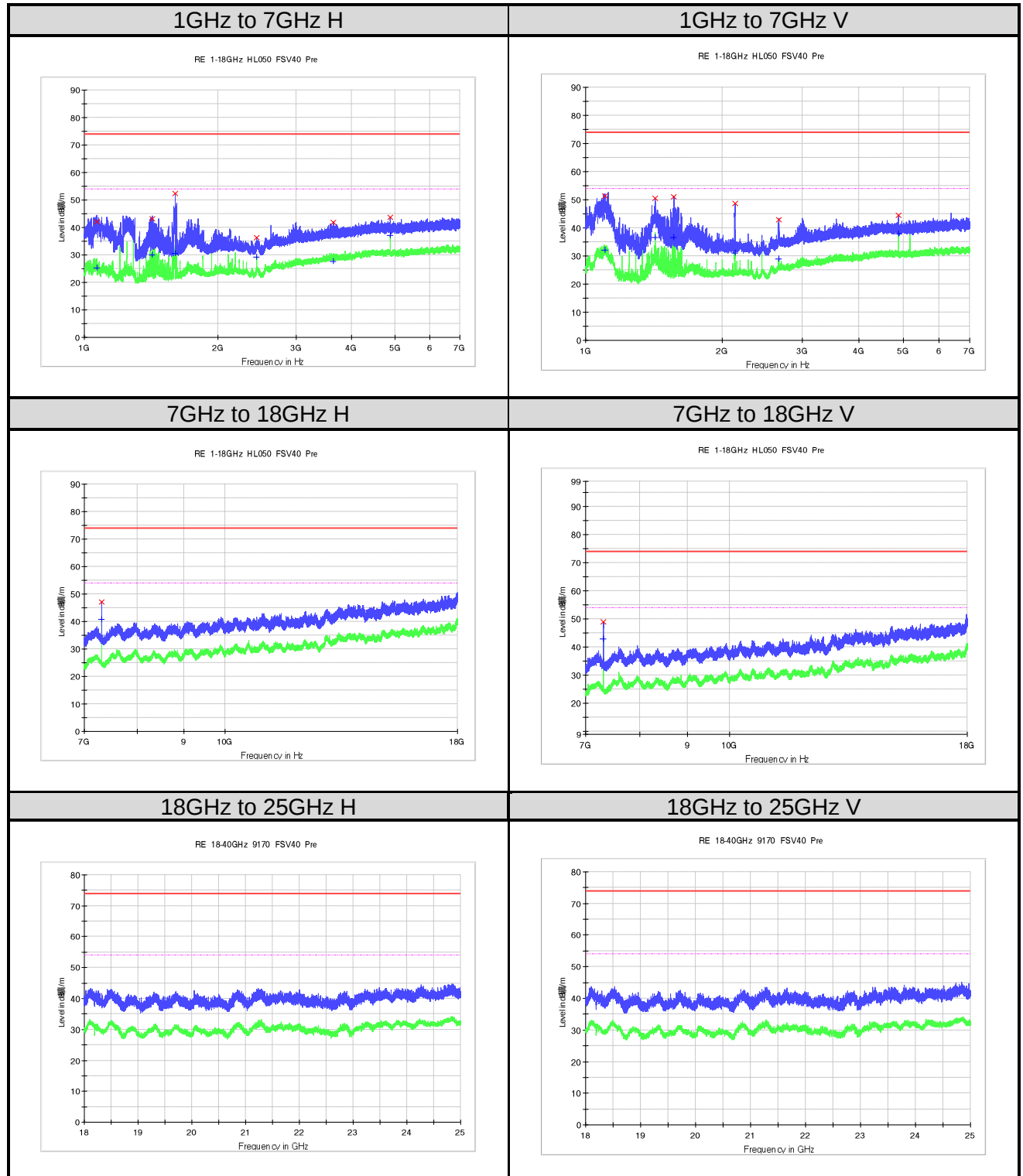
Frequency (MHz)	MaxPeak (dBμV/m)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBμV/m)
1056.250000	36.0	H	-22.1	38.0	74.0
1470.250000	36.7	H	-19.1	37.3	74.0
1597.562500	37.4	H	-18.3	36.6	74.0
2126.312500	38.4	H	-15.8	35.6	74.0
4804.375000	41.9	H	-6.5	32.1	74.0
6242.500000	42.3	H	-5.3	31.7	74.0
7206.937500	52.3	H	-3.9	21.7	74.0
1063.375000	38.9	V	-22.1	35.1	74.0
1327.937500	38.0	V	-20.2	36.0	74.0
1600.750000	42.0	V	-18.3	32.0	74.0
2129.312500	44.9	V	-15.7	29.1	74.0
2661.437500	36.5	V	-13.3	37.6	74.0
4804.000000	41.3	V	-6.5	32.7	74.0
7204.875000	54.9	V	-3.9	19.1	74.0

AV

Frequency (MHz)	Average (dBμV/m)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBμV/m)
1056.250000	30.1	H	-22.1	23.9	54.0
1470.250000	25.3	H	-19.1	28.7	54.0
1597.562500	24.6	H	-18.3	29.4	54.0
2126.312500	25.6	H	-15.8	28.4	54.0
4804.375000	31.3	H	-6.5	22.7	54.0
6242.500000	31.5	H	-5.3	22.5	54.0
7206.937500	45.8	H	-3.9	8.2	54.0
1063.375000	26.9	V	-22.1	27.1	54.0
1327.937500	23.0	V	-20.2	31.0	54.0
1600.750000	28.3	V	-18.3	25.7	54.0
2129.312500	30.7	V	-15.7	23.3	54.0
2661.437500	23.6	V	-13.3	30.4	54.0
4804.000000	34.1	V	-6.5	19.9	54.0
7204.875000	50.6	V	-3.9	3.4	54.0

Figure 14: Radiated Spurious Emission, TM2, 30MHz to 1GHz

Limit and Margin

Frequency (MHz)	QuasiPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
131.979333	39.5	H	18.6	4.0	43.5
156.003000	42.0	H	16.9	1.5	43.5
179.994333	40.8	H	15.9	2.7	43.5
203.985667	42.7	H	16.2	0.8	43.5
228.009333	42.7	H	16.7	3.3	46.0
348.030667	43.4	H	21.0	2.6	46.0
30.614333	22.7	V	25.1	17.3	40.0
107.955667	30.7	V	18.4	12.8	43.5
132.011667	33.2	V	18.6	10.3	43.5
211.939667	36.1	V	15.9	7.4	43.5
372.022000	36.0	V	21.9	10.0	46.0
532.072000	40.2	V	25.0	5.8	46.0

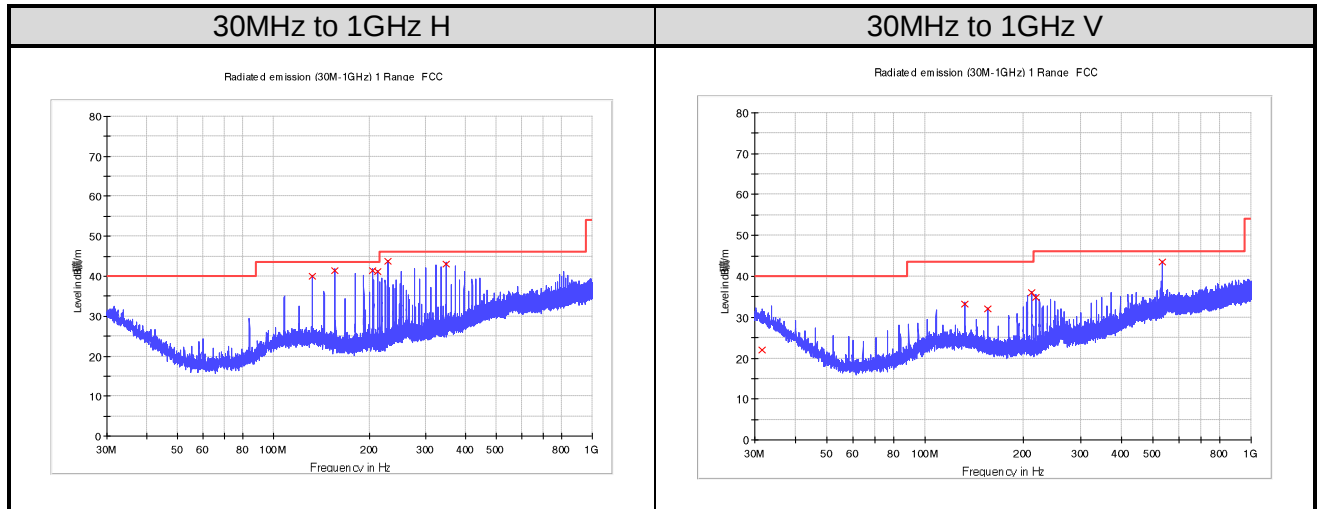
Figure 15: Radiated Spurious Emission, TM2, 1GHz to 25GHz


Limit and Margin
PK

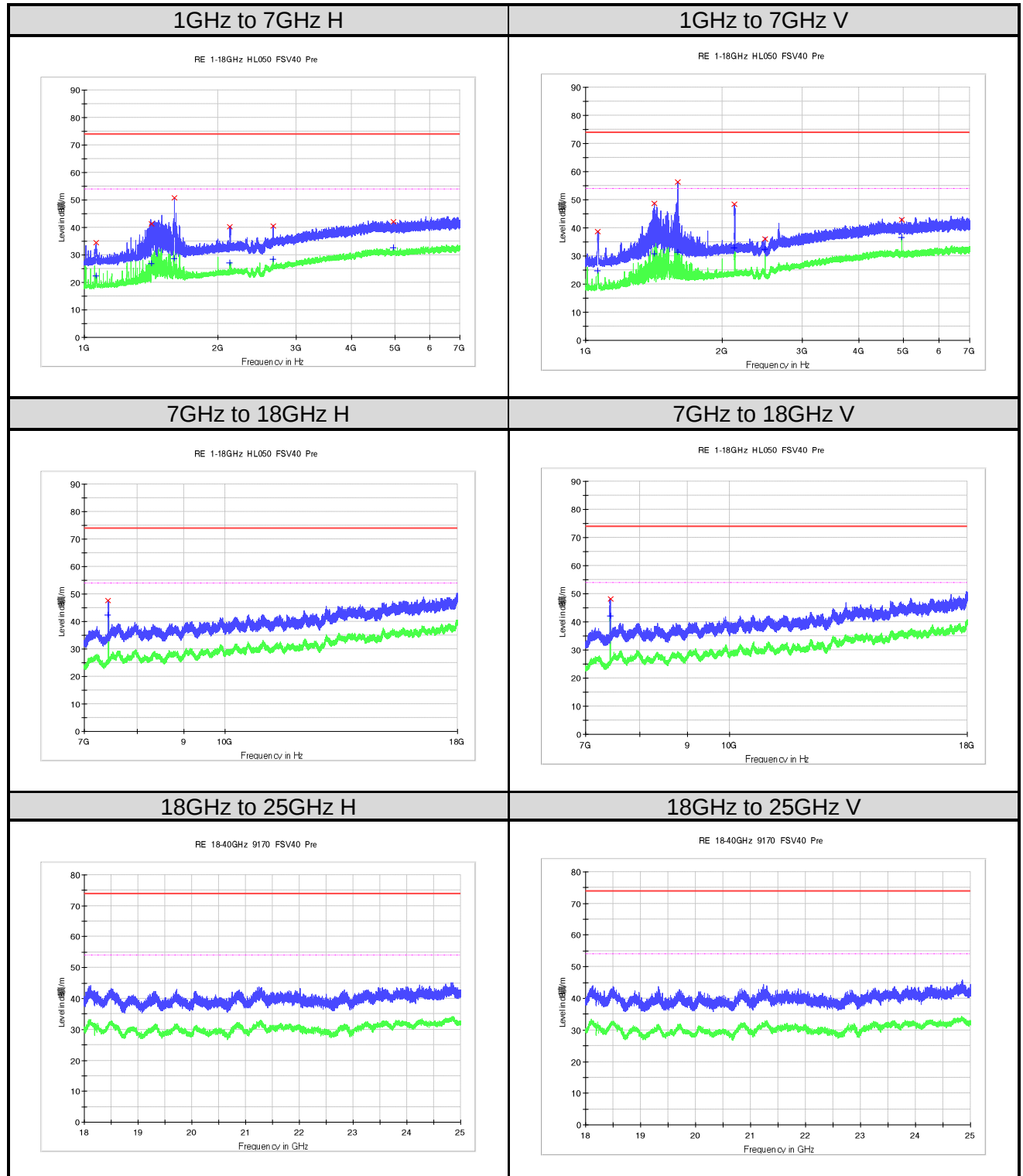
Frequency (MHz)	MaxPeak (dBμV/m)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBμV/m)
1069.187500	42.2	H	-22.0	31.8	74.0
1422.250000	43.2	H	-19.5	30.8	74.0
1599.437500	52.3	H	-18.3	21.7	74.0
2439.812500	36.3	H	-14.3	37.7	74.0
3640.750000	41.7	H	-9.1	32.3	74.0
4880.125000	43.6	H	-6.5	30.4	74.0
7319.000000	47.2	H	-4.0	26.8	74.0
1102.187500	51.3	V	-21.8	22.7	74.0
1420.000000	50.5	V	-19.6	23.5	74.0
1562.125000	51.1	V	-18.5	22.9	74.0
2132.500000	48.8	V	-15.7	25.2	74.0
2661.812500	43.0	V	-13.3	31.0	74.0
4880.500000	44.5	V	-6.5	29.5	74.0
7319.000000	49.0	V	-4.0	25.0	74.0

AV

Frequency (MHz)	Average (dBμV/m)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBμV/m)
1069.187500	25.3	H	-22.0	28.7	54.0
1422.250000	29.9	H	-19.5	24.1	54.0
1599.437500	30.6	H	-18.3	23.4	54.0
2439.812500	29.3	H	-14.3	24.7	54.0
3640.750000	27.7	H	-9.1	26.3	54.0
4880.125000	37.1	H	-6.5	16.9	54.0
7319.000000	40.7	H	-4.0	13.3	54.0
1102.187500	32.1	V	-21.8	21.9	54.0
1420.000000	36.6	V	-19.6	17.4	54.0
1562.125000	36.7	V	-18.5	17.3	54.0
2132.500000	31.1	V	-15.7	22.9	54.0
2661.812500	28.9	V	-13.3	25.1	54.0
4880.500000	37.8	V	-6.5	16.2	54.0
7319.000000	42.9	V	-4.0	11.1	54.0

Figure 16: Radiated Spurious Emission, TM3, 30MHz to 1GHz

Limit and Margin

Frequency (MHz)	QuasiPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
132.011667	40.1	H	18.6	3.4	43.5
156.003000	41.5	H	16.9	2.0	43.5
204.050333	41.3	H	16.2	2.2	43.5
211.972000	41.2	H	15.9	2.3	43.5
228.009333	43.7	H	16.7	2.3	46.0
348.030667	43.1	H	21.0	2.9	46.0
31.681333	22.1	V	24.6	17.9	40.0
132.011667	33.2	V	18.6	10.3	43.5
155.970667	32.1	V	16.9	11.4	43.5
211.939667	36.1	V	15.9	7.4	43.5
218.115333	34.8	V	15.8	11.2	46.0
532.880333	43.4	V	25.0	2.6	46.0

Figure 17: Radiated Spurious Emission, TM3, 1GHz to 25GHz


Limit and Margin
PK

Frequency (MHz)	MaxPeak (dBμV/m)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBμV/m)
1063.937500	34.5	H	-22.1	39.5	74.0
1419.250000	41.3	H	-19.6	32.7	74.0
1594.187500	50.7	H	-18.4	23.3	74.0
2128.187500	40.2	H	-15.7	33.8	74.0
2659.562500	40.6	H	-13.3	33.4	74.0
4959.625000	42.2	H	-6.6	31.8	74.0
7438.968750	47.6	H	-3.1	26.4	74.0
1063.000000	38.7	V	-22.1	35.3	74.0
1414.562500	48.8	V	-19.6	25.2	74.0
1592.687500	56.3	V	-18.4	17.7	74.0
2124.250000	48.3	V	-15.8	25.7	74.0
2479.937500	36.1	V	-14.2	37.9	74.0
4960.375000	43.0	V	-6.6	31.0	74.0
7440.687500	48.2	V	-3.1	25.8	74.0

AV

Frequency (MHz)	Average (dBμV/m)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBμV/m)
1063.937500	22.3	H	-22.1	31.7	54.0
1419.250000	26.9	H	-19.6	27.1	54.0
1594.187500	28.7	H	-18.4	25.3	54.0
2128.187500	27.0	H	-15.7	27.0	54.0
2659.562500	28.5	H	-13.3	25.5	54.0
4959.625000	32.6	H	-6.6	21.4	54.0
7438.968750	42.4	H	-3.1	11.6	54.0
1063.000000	24.7	V	-22.1	29.3	54.0
1414.562500	30.9	V	-19.6	23.1	54.0
1592.687500	31.4	V	-18.4	22.6	54.0
2124.250000	32.9	V	-15.8	21.1	54.0
2479.937500	32.3	V	-14.2	21.7	54.0
4960.375000	36.5	V	-6.6	17.5	54.0
7440.687500	42.0	V	-3.1	12.0	54.0

6. List of Tables

Table 1: List of Test and Measurement Equipment	5
Table 2: Measurement Uncertainty	6
Table 3: Technical Specification of EUT	7
Table 4: Independent Operation Modes	8
Table 5: Power parameter value	9
Table 6: Auxiliary Equipment	9
Table 7: Antenna Requirement	10
Table 8: 6dB & 99% Bandwidth	11
Table 9: Peak Output Power	14
Table 10: Power Spectral Density	16

7. List of Figures

Figure 1: 6dB Bandwidth	12
Figure 2: 99% Bandwidth	13
Figure 3: Peak Output Power	15
Figure 4: Power Spectral Density	17
Figure 5: Reference level	18
Figure 6: Conducted Spurious Emission	19
Figure 7: Conducted Band Edge	19
Figure 8: Conducted Emission, Regular charging port	21
Figure 9: Conducted Emission, Charging port at folding buckle	22
Figure 10: Radiated Band-Edge, TM1	24
Figure 11: Radiated Band-Edge, TM3	24
Figure 12: Radiated Spurious Emission, TM1, 30MHz to 1GHz	25
Figure 13: Radiated Spurious Emission, TM1, 1GHz to 25GHz	26
Figure 14: Radiated Spurious Emission, TM2, 30MHz to 1GHz	28
Figure 15: Radiated Spurious Emission, TM2, 1GHz to 25GHz	29
Figure 16: Radiated Spurious Emission, TM3, 30MHz to 1GHz	31
Figure 17: Radiated Spurious Emission, TM3, 1GHz to 25GHz	32