

Prüfbericht-Nr.: Test report no.:	CN22DP2H 001	Auftrags-Nr.: Order no.:	244412844	Seite 1 von 56 Page 1 of 56
Kunden-Referenz-Nr.: Client reference no.:	P00621277	Auftragsdatum: Order date:	2022-03-11	
Auftraggeber: Client:	FCC: Decathlon America LLC 1160 Battery Street, Suite 100, San Francisco, CA 94111, United States IC: DECATHLON SE 4 Boulevard de Mons, VILLENEUVE D'ASCQ, 59650, France			
Prüfgegenstand: Test item:	DOMYOS Fitness Treadmill			
Bezeichnung / Typ-Nr.: Identification / Type no.:	RUN100E 110V US CA FCC ID: 2A8UORUN100E IC: 24468-RUN100E			
Auftrags-Inhalt: Order content:	Complete test			
Prüfgrundlage: Test specification:	FCC CFR47 Part 15, Subpart C Section 15.247 RSS-Gen Issue 5, Amendment 2, February 2021 RSS-247 Issue 2, February 2017 ANSI C63.10: 2013			
Wareneingangsdatum: Date of sample receipt:	2022-03-09			
Prüfmuster-Nr.: Test sample no.:	A003224036-001			
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 Yanli Fan		genehmigt von: authorized by:	X Hongfei Wu
Datum: Date:	2022-10-10	Ausstellungsdatum: Issue date:		2022-10-10
Signed by: Yanli Fan		Signed by: Hongfei Wu		
Stellung / Position:	PE/Yanli Fan	Stellung / Position:	Reviewer/Hongfei Wu	
Sonstiges / Other:	HVIN: RUN100E 110V US CA Supplier name: Zhejiang Arcana Power Sports Supplier code: 46559 Model code: N/A Conception code: 329423 Test request no.: L074-03-2201-0010			
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. <i>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.</i>				

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>12</i>
5.1.3	<i>Peak Output Power</i>	<i>15</i>
5.1.4	<i>Power Spectral Density</i>	<i>17</i>
5.1.5	<i>Conducted Band Edge and out-of Band Emissions</i>	<i>19</i>
5.2	EMISSION IN THE FREQUENCY RANGE UP TO 30MHZ	22
5.2.1	<i>Conducted Emission.....</i>	<i>22</i>
5.3	EMISSION IN THE FREQUENCY RANGE ABOVE 30MHZ.....	25
5.3.1	<i>Radiated Band-Edge</i>	<i>25</i>
5.3.2	<i>Radiated Spurious Emission.....</i>	<i>30</i>
6.	LIST OF TABLES	55
7.	LIST OF FIGURES	55

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	2022-06-27
Bilog antenna	Teseq	CBL 6112D	G1811425	2023-03-10
EMI test receiver	Rohde & Schwarz	ESCI	G1811402	2022-09-17
Spectrum analyser	Rohde & Schwarz	FSV40	G1822702	2023-03-10
Preamplifier	Taiwan EMCI	EMC184045SE	G1825372	2023-03-06
Log periodic antenna	Rohde & Schwarz	HL050	G1811417	2023-03-10
Broadband Horn Antenna	Schwarzbeck	BBHA 9170	9170-305	2022-07-08
Preamplifier	Taiwan EMCI	EMC051845SE	G1825371	2023-03-06
Spectrum Analyzer	Keysight	N9020A	MY54500180	2022-09-07
Thermohygrometer	Testo	608-H1	1241320614	2023-10-12
EMI test receiver	R&S	ESIB26	G1811380	2023-03-06
Artificial main network	R&S	ENV432	G1830003	2022-11-01
Spectrum Analyzer	Keysight	N9020A	MY54500180	2022-09-07
EMC measurement software	R&S	EMC32 (Ver 10.20.01)	G1824845	N/A

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 a Treadmill which supports Bluetooth Low Energy. The aim of this report is to evaluate the RF characteristic of the Bluetooth Low Energy of this EUT.

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:	DOMYOS Fitness Treadmill
Model No.:	RUN100E 110V US CA
Test Voltage:	DC 3.3V for RF Conducted and Radiated Test AC 120V/60Hz for Conducted Emission Test
Technical Specification of Bluetooth Low Energy	
Frequency Range:	2402 to 2480MHz
Modulation Type:	GFSK
Data Rate:	1Mbps
Antenna Type:	PCB Antenna
Antenna Gain:	-6.5dBi (Provided by the Client)

3.3 Independent Operation Modes

Table 4: Independent Operation Modes

Test Mode	Operating Mode	Channel Number	Channel Frequency [MHz]
TM1	1Mb/s	00	2402
TM2	1Mb/s	19	2440
TM3	1Mb/s	39	2480
TM4	Normal Operating 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.

Table 5: Power parameter value

Channel Frequency [MHz]	Power Parameter Value
2402	15
2440	15
2480	15

4.3 Special Accessories and Auxiliary Equipment

Table 6: Auxiliary Equipment

Product Name	Model Name	Manufactory
Laptop	TP00001A	Lenovo

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 -6.5 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	

RSS-Gen 6.4 – External Control		
Requirement:	The device shall not have any external controls accessible to the user that enable it to be adjusted, selected or programmed to operate in violation of the regulatory requirements, including RSS-Gen and the applicable RSSs	
Results:	The device does not have any transmitter external controls accessible to the user that can be adjusted and operated in violation of the limits of this standard.	
Verdict:	PASS	

RSS-Gen 6.8 – Antenna Requirement

Requirement: When measurements at the antenna port are used to determine the RF output power, the effective gain of the device's antenna shall be stated, based on a measurement or on data from the antenna's manufacturer.

Results:

a) Antenna Type:	PCB Antenna
b) Manufacture:	N/A
c) Model No.:	N/A
d) Gain with reference to an isotropic radiator:	-6.5dBi

Verdict: PASS

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

Date of testing : 2022-06-07
Ambient temperature : 20.2°C
Relative humidity : 51.6%
Atmospheric pressure : 101kPa
Test requirement : FCC Part 15.247(a)(1)
RSS-247 Issue 2, February 2017, Clause 5.1(a)
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	687.7	≥500	1.0913
TM2	19	2440	681.3	≥500	1.0946
TM3	39	2480	683.0	≥500	1.1157

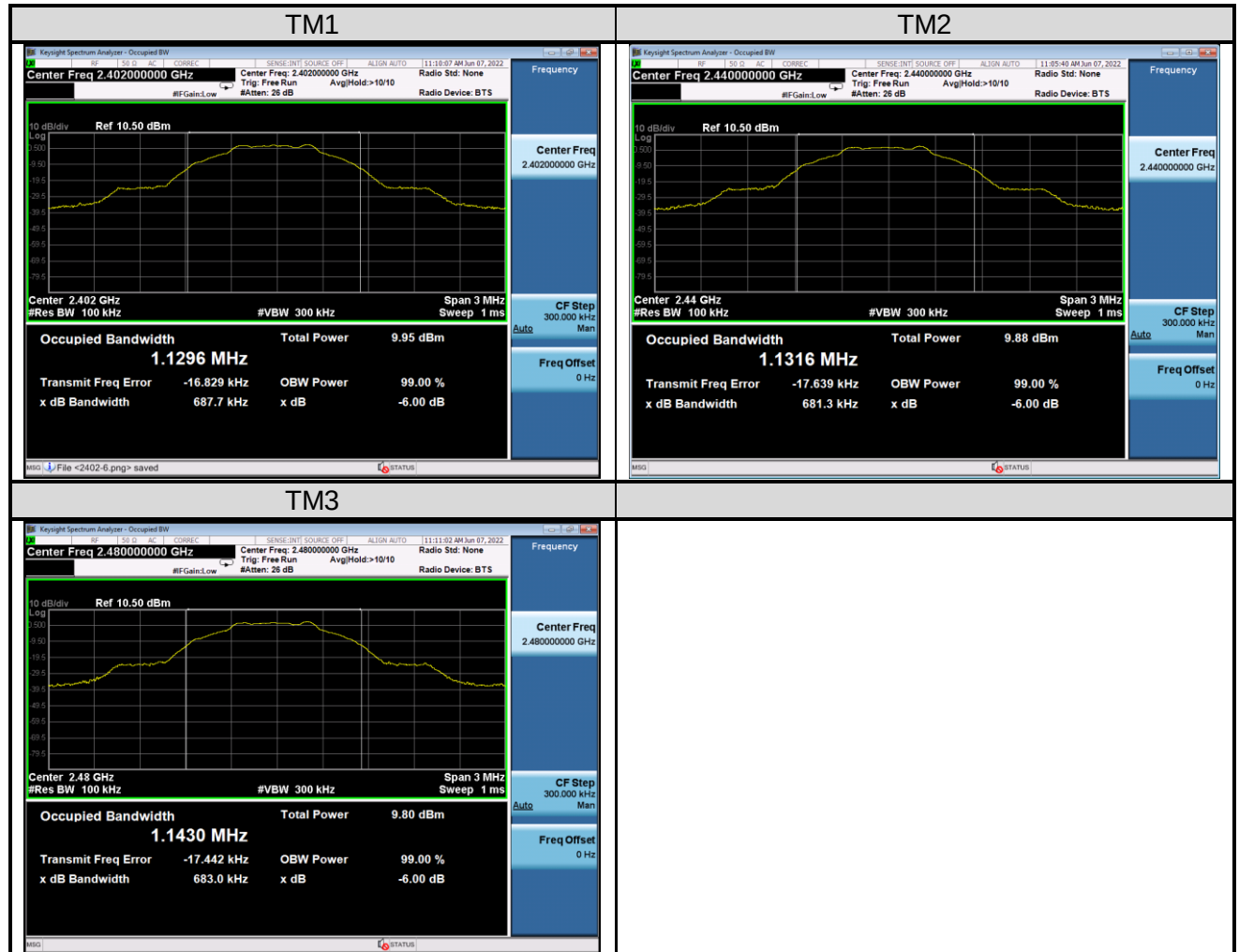
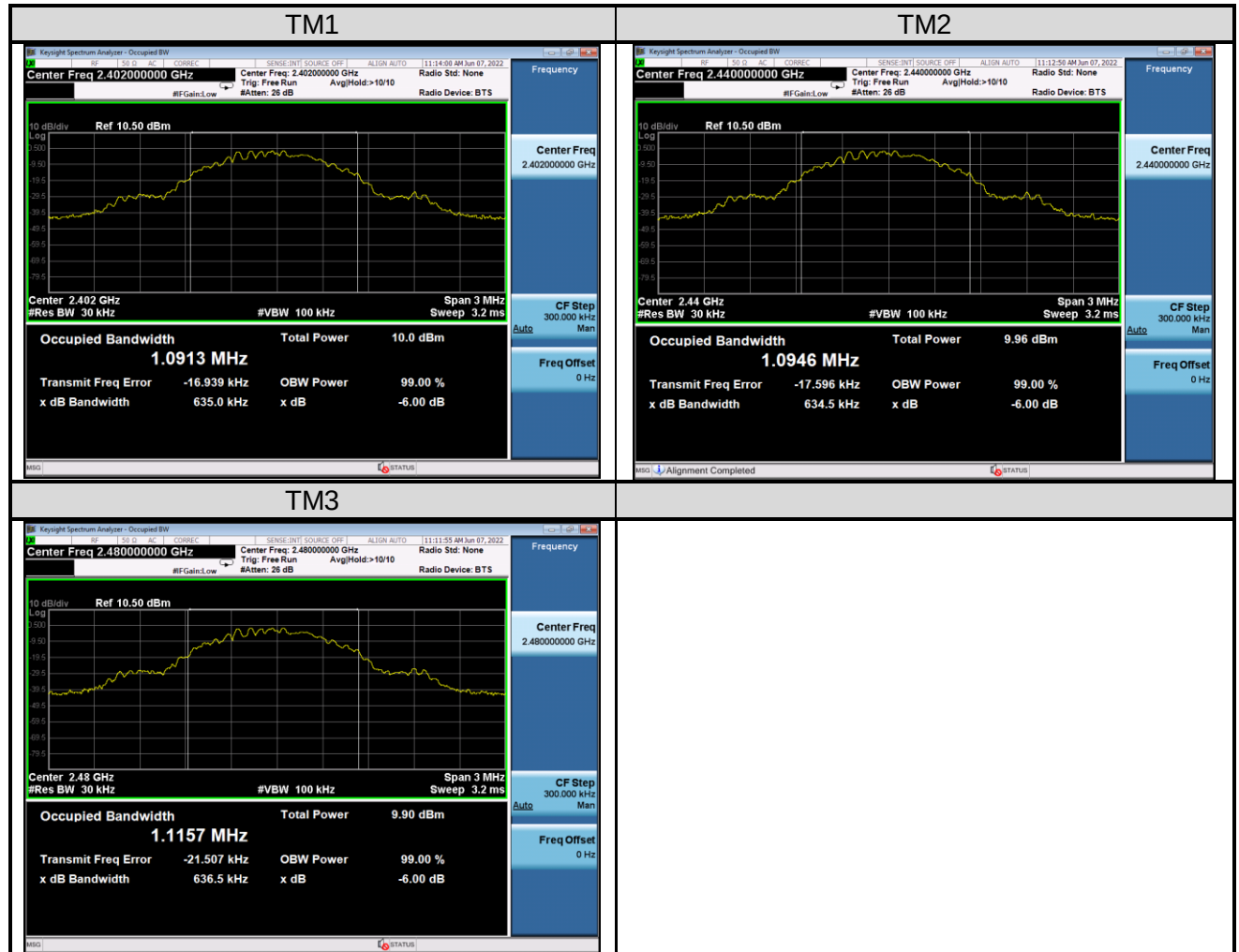
Figure 1: 6dB Bandwidth


Figure 2: 99% Bandwidth


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

Figure 3: Peak Output Power, TM1 to TM3

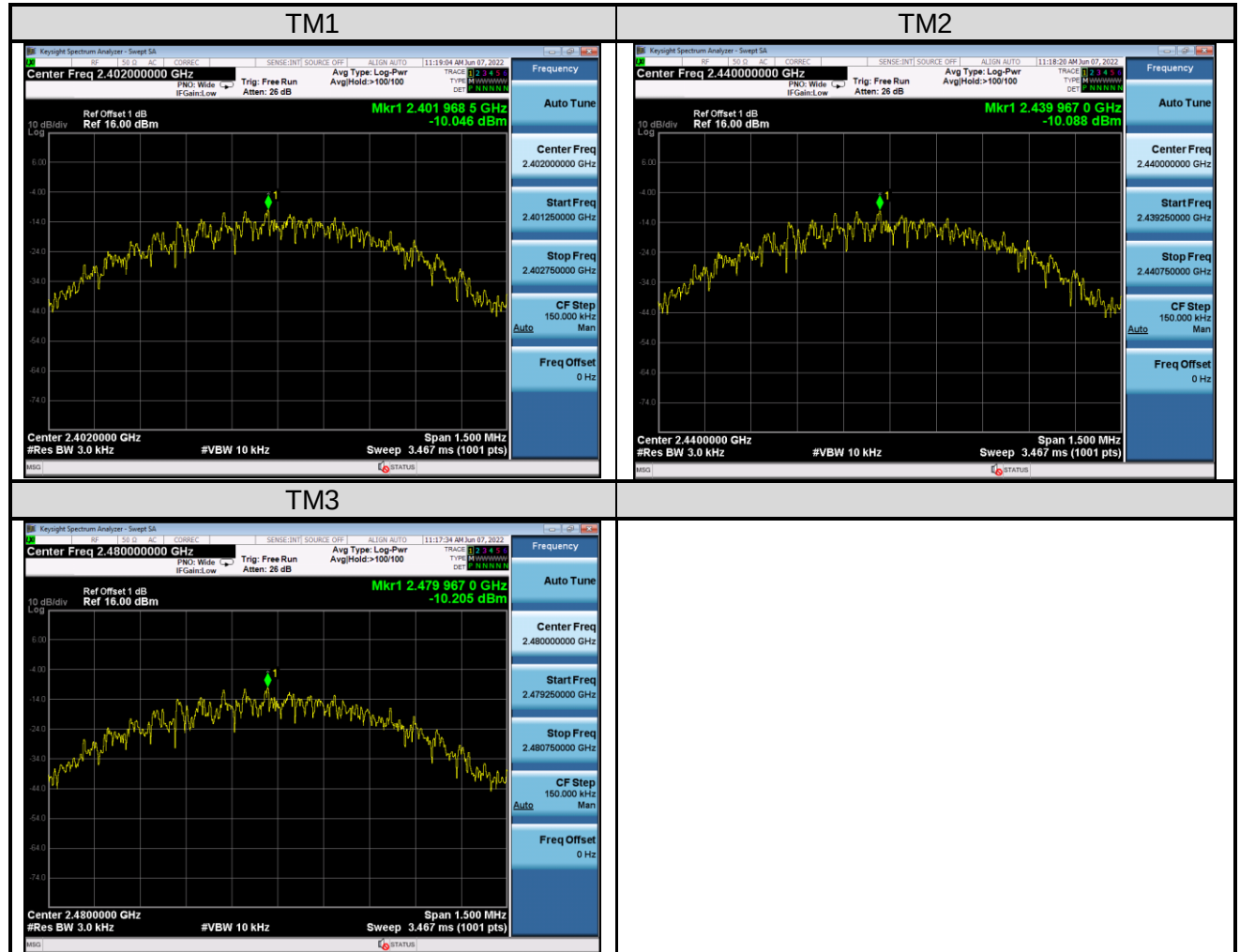

5.1.4 Power Spectral Density

RESULT:**Pass**

Date of testing : 2022-06-07
Ambient temperature : 20.2°C
Relative humidity : 51.6%
Atmospheric pressure : 101kPa
Test requirement : FCC Part 15.247(e)
RSS-247 Issue 2, February 2017, Clause 5.2(b)
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	-10.046	8
TM2	19	2440	-10.088	8
TM3	39	2480	-10.205	8

Figure 4: Power Spectral Density


5.1.5 Conducted Band Edge and out-of Band Emissions

RESULT:**Pass**

Date of testing	:	2022-06-07
Ambient temperature	:	20.2°C
Relative humidity	:	51.6%
Atmospheric pressure	:	101kPa
Test requirement	:	FCC Part 15.247(d) RSS-247 Issue 2, February 2017, Clause 5.5
Test procedure	:	ANSI C63.10: 2013
Test voltage	:	DC 3.3V
Test modes applied	:	TM1 to TM3

Figure 5: Reference level

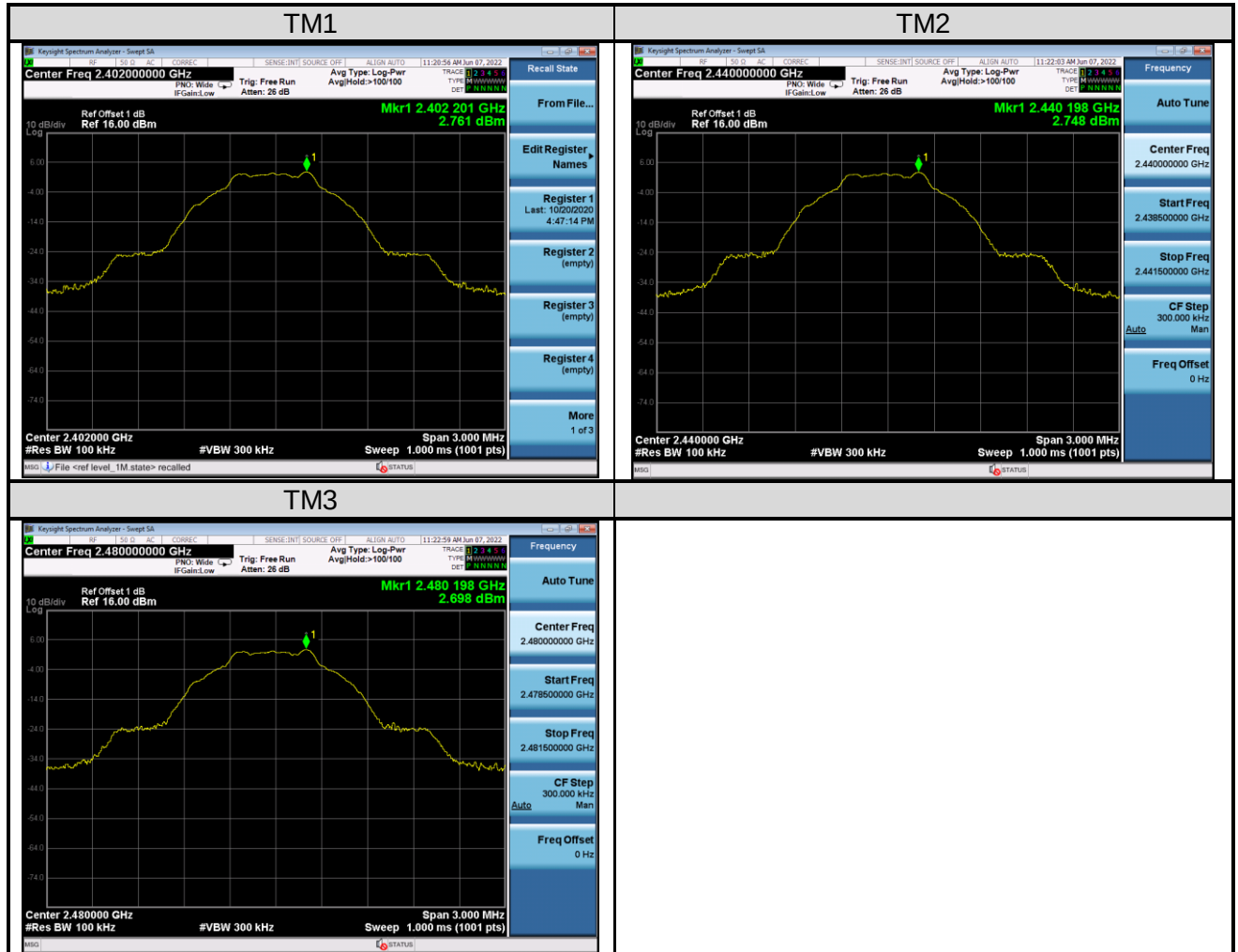
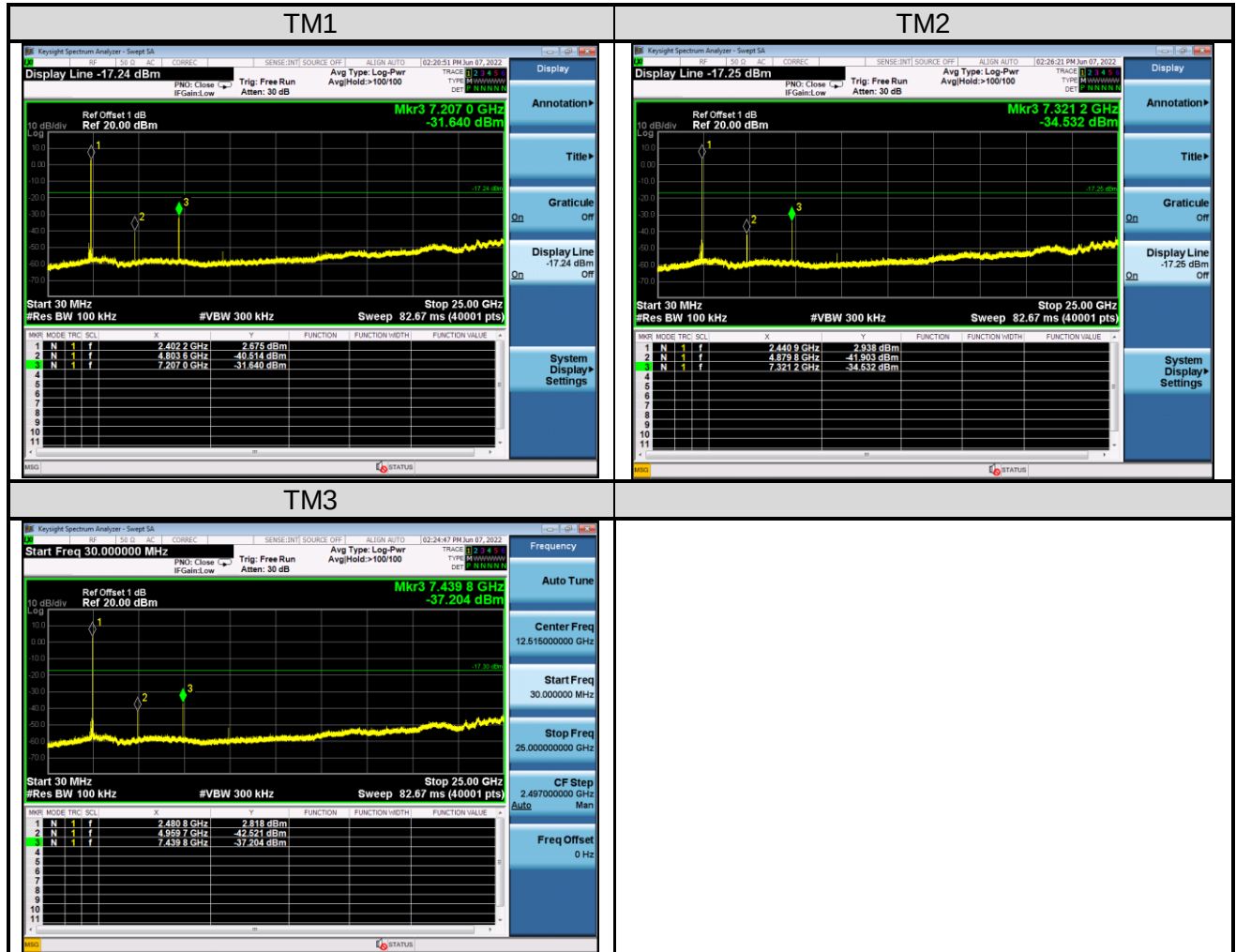
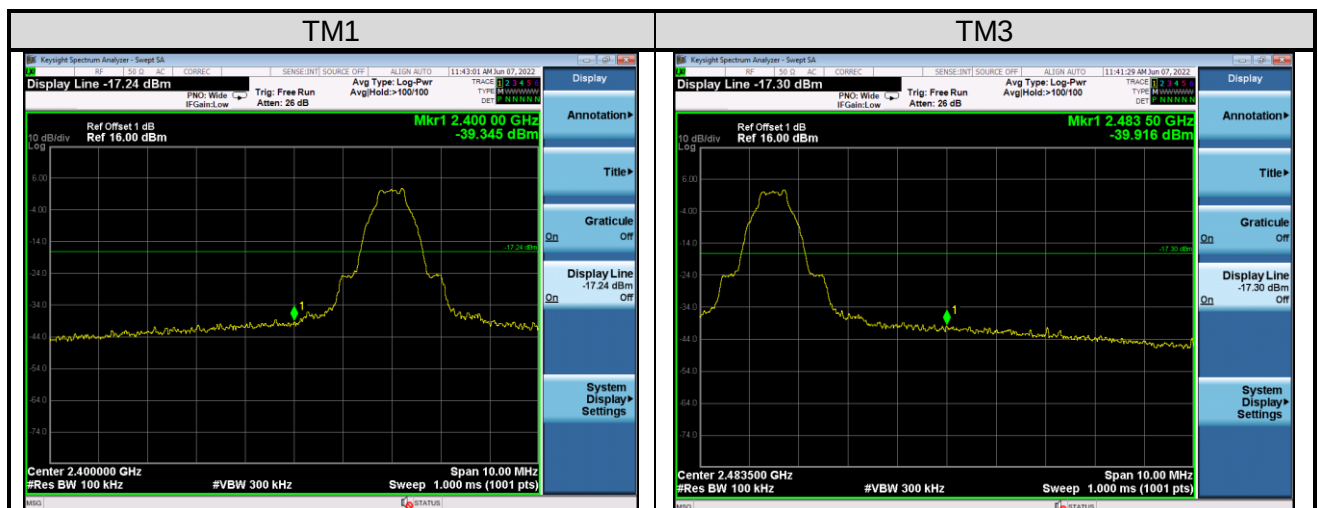


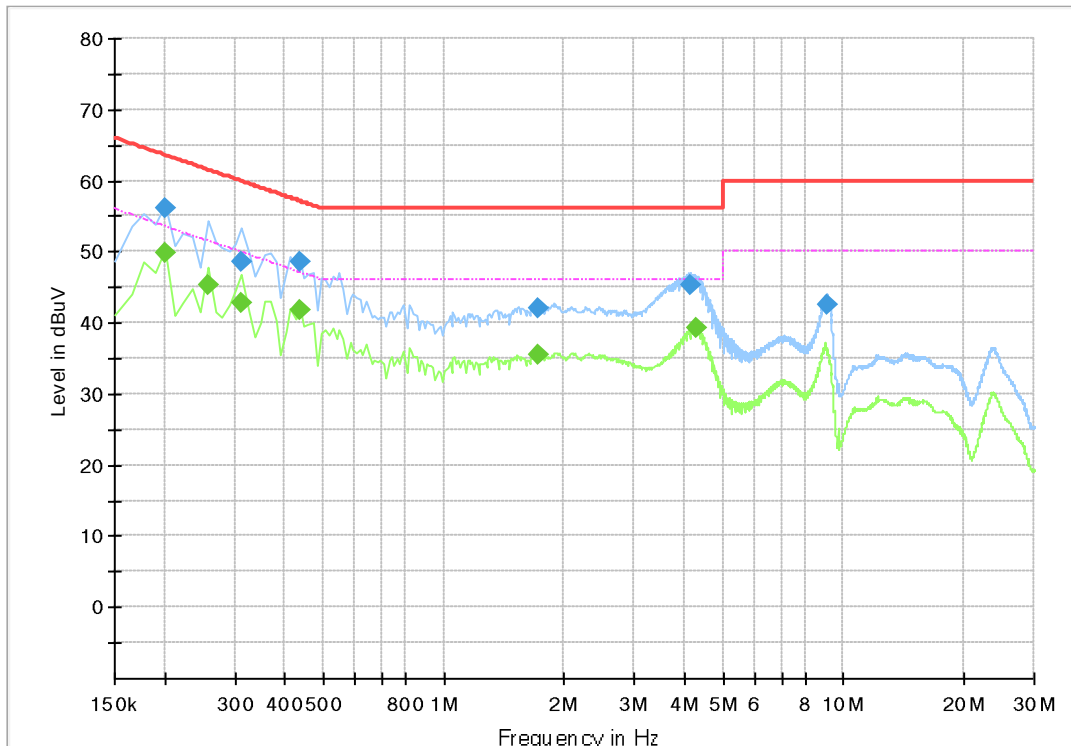
Figure 6: Conducted Spurious Emission

Figure 7: Conducted Band Edge


5.2 Emission in the Frequency Range up to 30MHz

5.2.1 Conducted Emission

RESULT:**Pass**

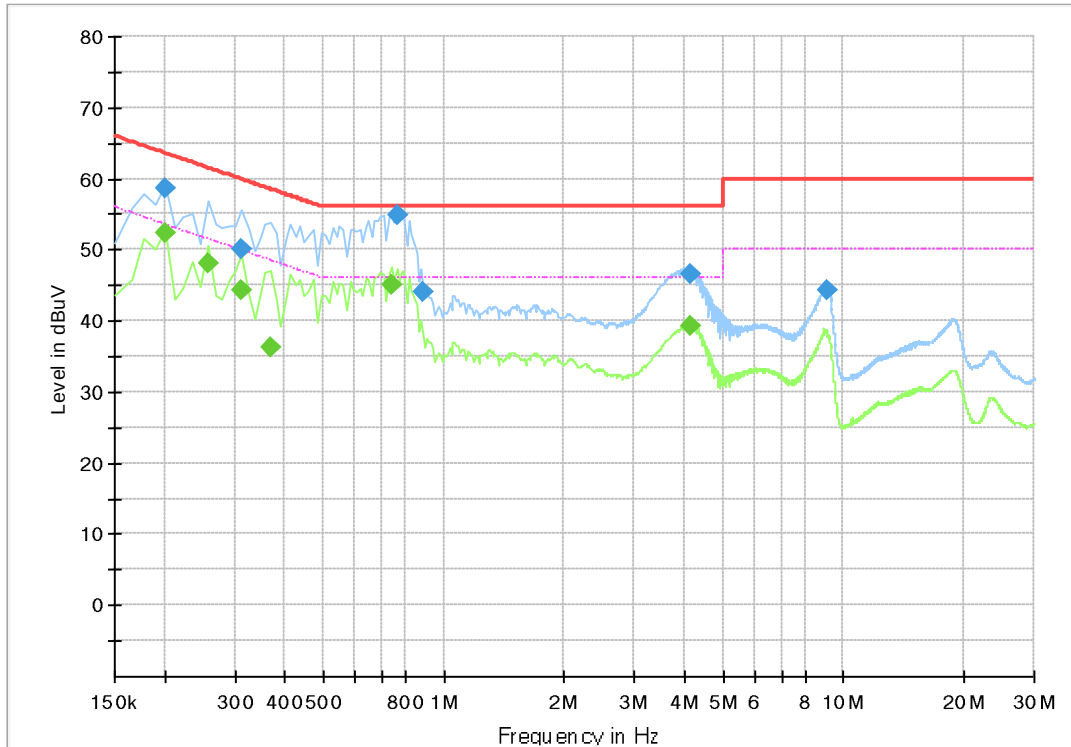
Date of testing	:	2022-07-05
Ambient temperature	:	22.4°C
Relative humidity	:	50.6%
Atmospheric pressure	:	101kPa
Test requirement	:	FCC Part 15.207 (a) RSS-Gen Issue 5, Amendment 2, February 2021, Clause 8.8
Test procedure	:	ANSI C63.10: 2013
Test voltage	:	AC 120V/60Hz
Test modes applied	:	TM4

Figure 8: Conducted Emission, L

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBμV)	Limit (dBμV)	Margin (dB)	Line
0.200625	56.24	63.59	7.34	L
0.313125	48.49	59.89	11.40	L
0.436875	48.54	57.12	8.58	L
1.719375	42.10	56.00	13.90	L
4.149375	45.40	56.00	10.60	L
9.110625	42.59	60.00	17.41	L

Final_Result_CAV

Frequency (MHz)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Line
0.200625	49.73	53.59	3.86	L
0.256875	45.28	51.53	6.25	L
0.313125	42.86	49.89	7.03	L
0.436875	41.67	47.12	5.45	L
1.719375	35.51	46.00	10.49	L
4.261875	39.23	46.00	6.77	L

Figure 9: Conducted Emission, N

Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBμV)	Limit (dBμV)	Margin (dB)	Line
0.200625	58.65	63.59	4.94	N
0.313125	50.20	59.89	9.69	N
0.763125	54.85	56.00	1.15	N
0.886875	43.94	56.00	12.06	N
4.138125	46.60	56.00	9.40	N
9.054375	44.32	60.00	15.68	N

Final_Result_CAV

Frequency (MHz)	CAverage (dBμV)	Limit (dBμV)	Margin (dB)	Line
0.200625	52.37	53.59	1.22	N
0.256875	47.99	51.53	3.54	N
0.313125	44.25	49.89	5.64	N
0.369375	36.37	48.52	12.14	N
0.740625	44.94	46.00	1.06	N
4.138125	39.39	46.00	6.61	N

5.3 Emission in the Frequency Range above 30MHz

5.3.1 Radiated Band-Edge

RESULT:**Pass**

Date of testing	:	2022-03-22
Ambient temperature	:	23.6°C
Relative humidity	:	52.4%
Atmospheric pressure	:	101kPa
Test requirement	:	FCC Part 15.247(d) FCC Part 15.205(a) FCC Part 15.209(a) RSS-Gen Issue 5, Amendment 2, February 2021, Clause 8.9 RSS-Gen Issue 5, Amendment 2, February 2021, Clause 8.10 RSS-247 Issue 2, February 2017, Clause 5.5
Test procedure	:	ANSI C63.10: 2013
Test voltage	:	DC 3.3V
Test modes applied	:	TM1, TM3

Figure 10: Radiated Band-Edge, TM1, H

2310 ~ 2410 BE 1-18GHz_HL050_FSV40_Pre

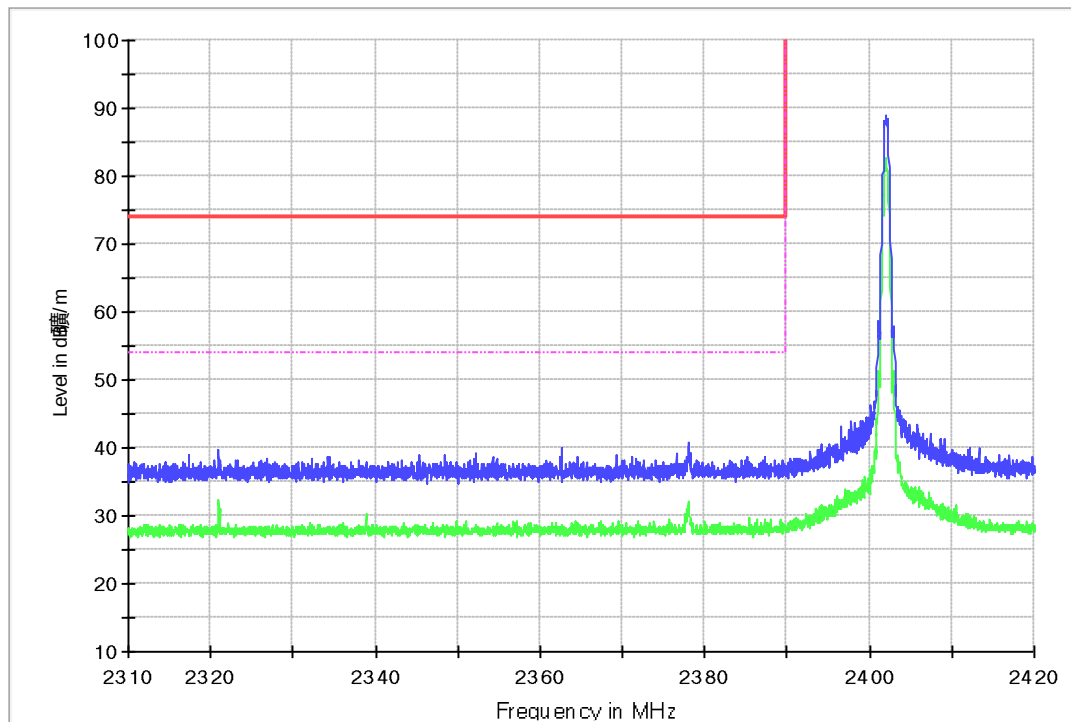


Figure 11: Radiated Band-Edge, TM1, V

2310 ~ 2410 BE 1-18GHz_HL050_FSV40_Pre

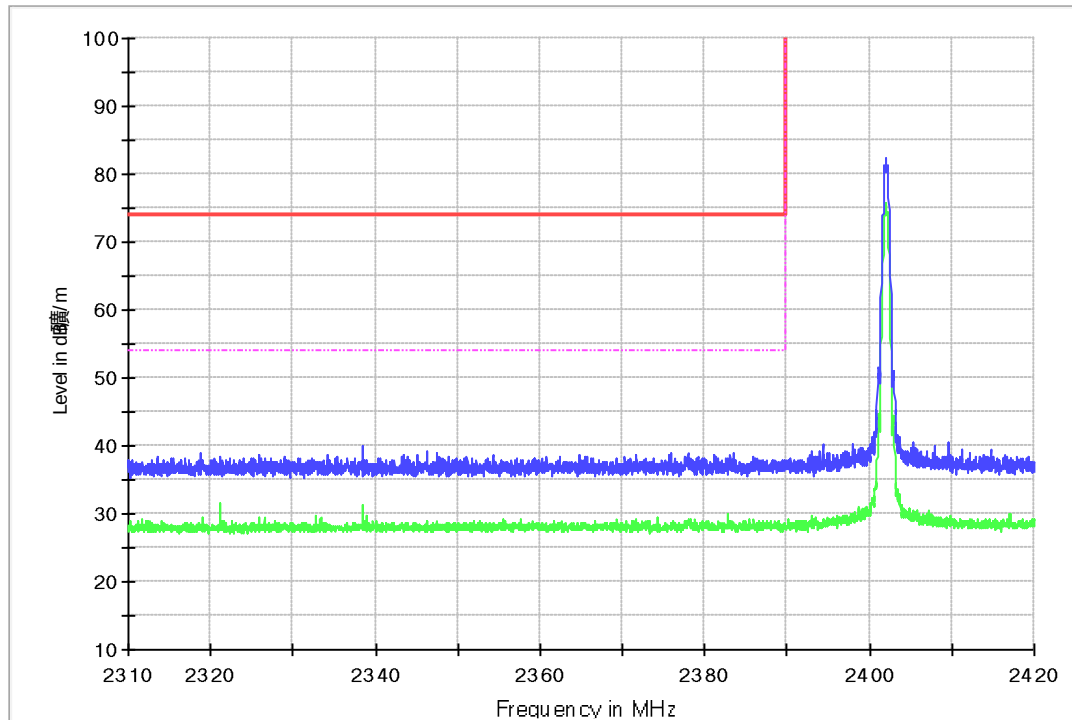


Figure 12: Radiated Band-Edge, TM3, H

2470~2500 BE_1-18GHz_HL050_FSV40_Pre

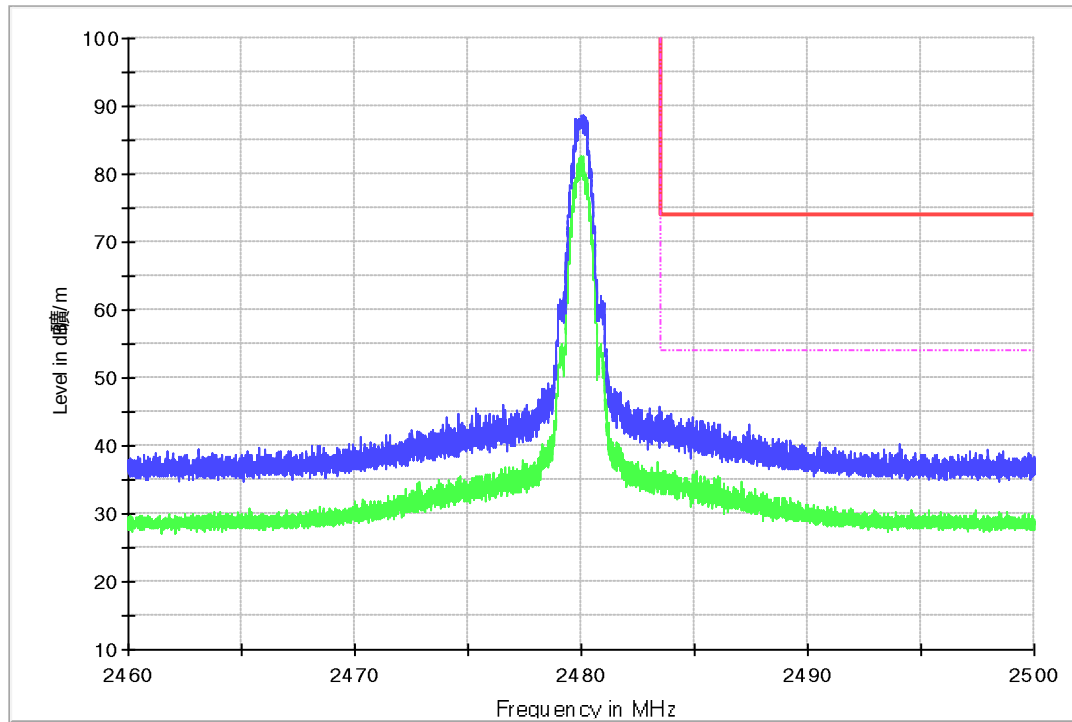
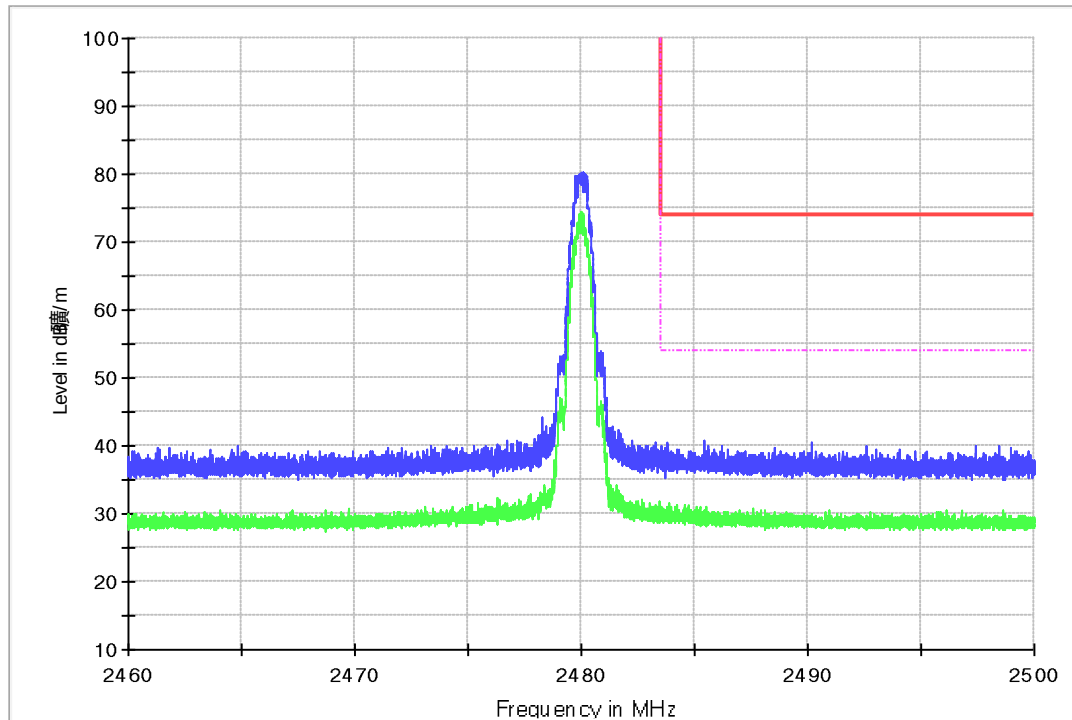


Figure 13: Radiated Band-Edge, TM3, V

2470~2500 BE_1-18GHz_HL050_FSV40_Pre



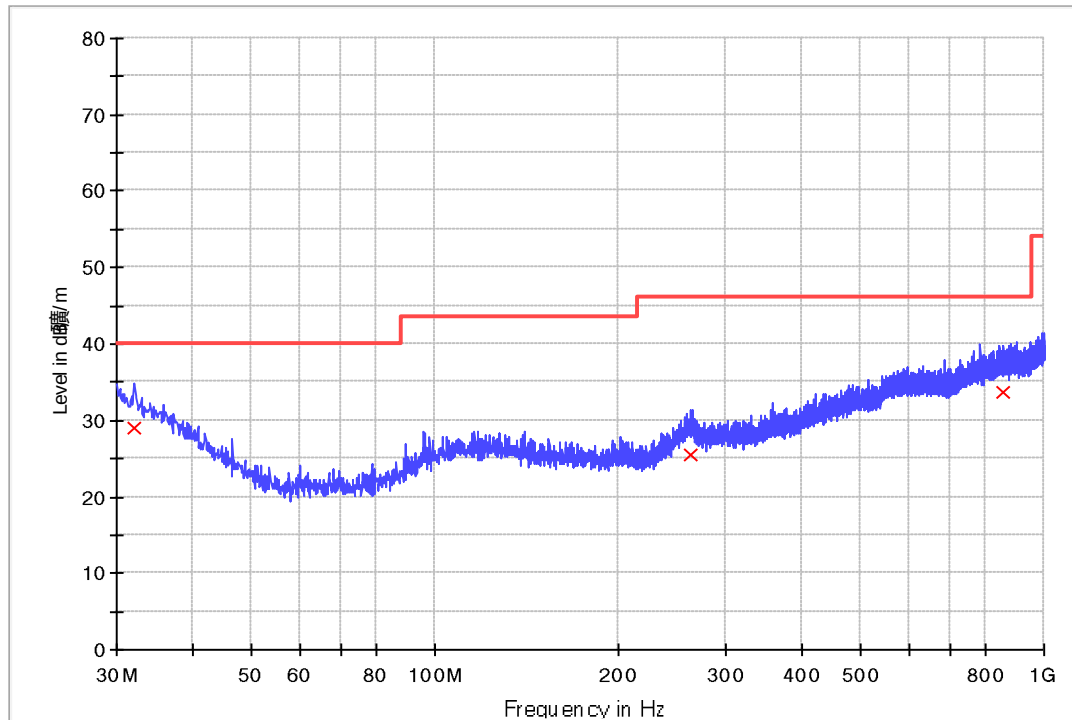
5.3.2 Radiated Spurious Emission

RESULT:**Pass**

Date of testing	:	2022-03-22~2022-03-24
Ambient temperature	:	23.2°C
Relative humidity	:	52.1%
Atmospheric pressure	:	101kPa
Test requirement	:	FCC Part 15.247(d) FCC Part 15.209(a) RSS-Gen Issue 5, Amendment 2, February 2021, Clause 8.9 RSS-247 Issue 2, February 2017, Clause 5.5
Test procedure	:	ANSI C63.10: 2013
Test voltage	:	DC 3.3V
Test modes applied	:	TM1 to TM3

Figure 14: Radiated Spurious Emission, TM1, 30MHz to 1GHz, H

_Radiated emission (30M-1GHz) 1 Range_FCC

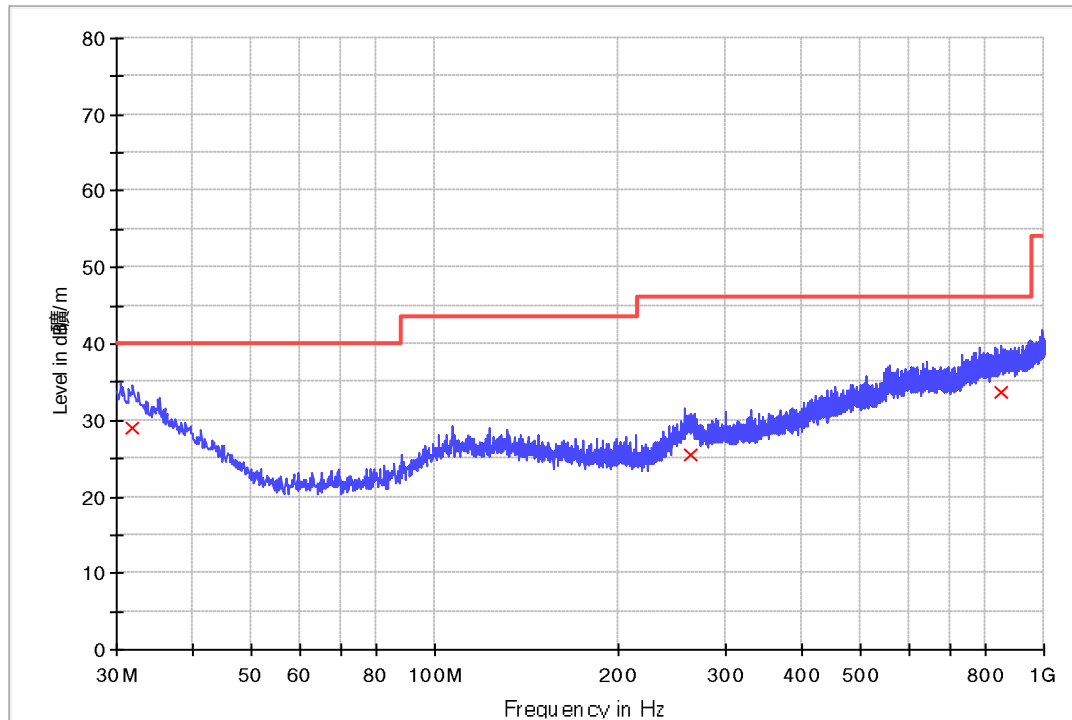


Limit and Margin

Frequency (MHz)	QuasiPeak (dBµV/m)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
32.061250	28.9	H	24.5	11.1	40.0
262.800000	25.4	H	20.7	20.6	46.0
855.106250	33.7	H	27.9	12.3	46.0

Figure 15: Radiated Spurious Emission, TM1, 30MHz to 1GHz, V

_Radiated emission (30M-1GHz) 1 Range_FCC

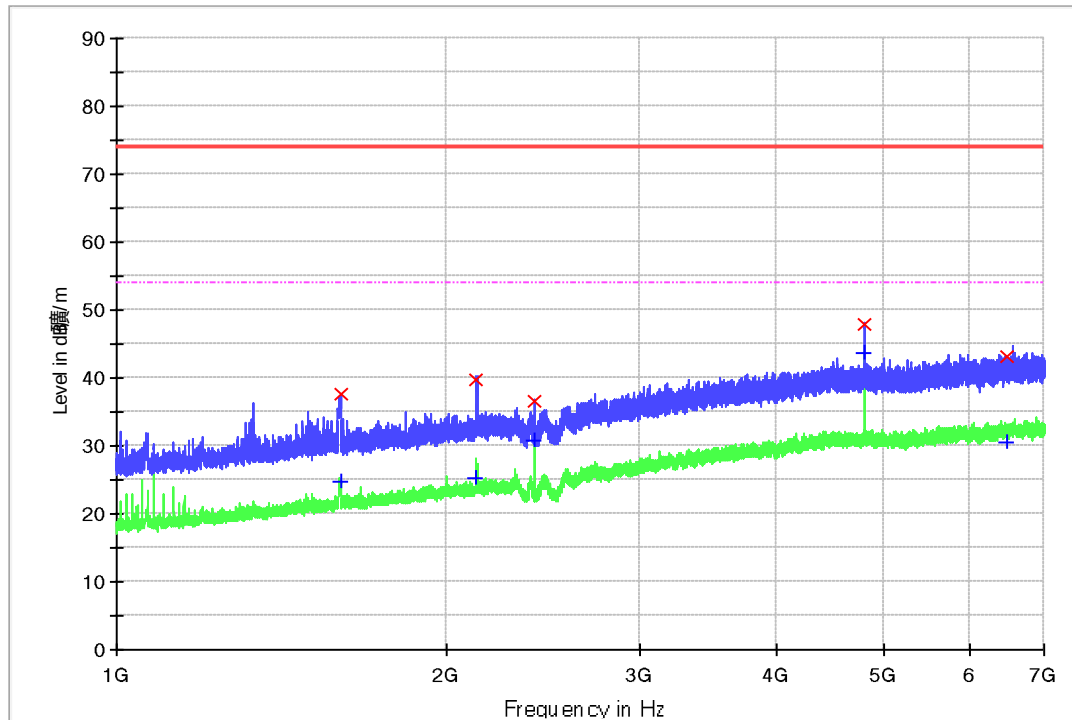


Limit and Margin

Frequency (MHz)	QuasiPeak (dBμV/m)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBμV/m)
31.940000	29.0	V	24.5	11.0	40.0
263.163750	25.4	V	20.7	20.6	46.0
847.103750	33.7	V	27.8	12.3	46.0

Figure 16: Radiated Spurious Emission, TM1, 1GHz to 7GHz, H

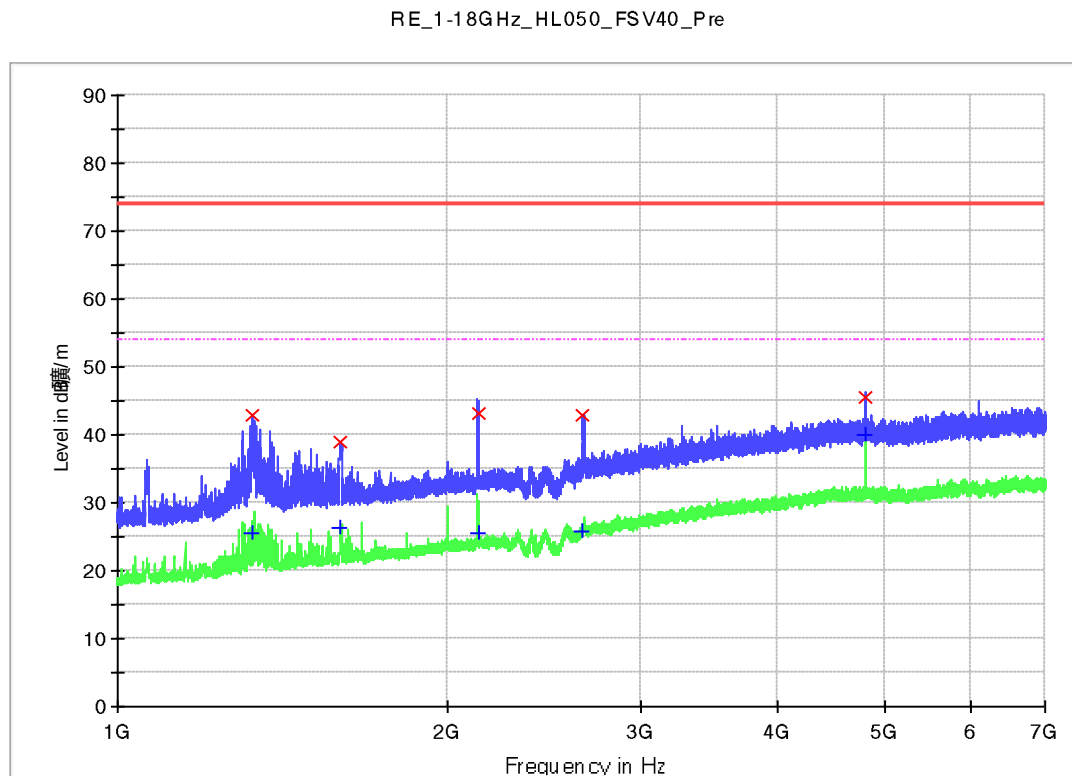
RE_1-18GHz_HL050_FSV40_Pre


Limit and Margin PK

Frequency (MHz)	MaxPeak (dBμV/m)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBμV/m)
1599.437500	37.6	H	-18.3	36.4	74.0
2125.937500	39.7	H	-15.8	34.3	74.0
2401.937500	36.7	H	-14.5	37.3	74.0
4804.562500	48.0	H	-6.5	26.0	74.0
6483.812500	43.3	H	-4.6	30.7	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBμV/m)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBμV/m)
1599.437500	24.8	H	-18.3	29.2	54.0
2125.937500	25.2	H	-15.8	28.8	54.0
2401.937500	30.9	H	-14.5	23.1	54.0
4804.562500	43.8	H	-6.5	10.2	54.0
6483.812500	30.6	H	-4.6	23.4	54.0

Figure 17: Radiated Spurious Emission, TM1, 1GHz to 7GHz, V

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBμV/m)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBμV/m)
1328.312500	43.0	V	-20.2	31.0	74.0
1593.062500	39.0	V	-18.4	35.0	74.0
2132.687500	43.1	V	-15.7	30.9	74.0
2655.062500	42.9	V	-13.3	31.1	74.0
4804.375000	45.4	V	-6.5	28.6	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBμV/m)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBμV/m)
1328.312500	25.5	V	-20.2	28.5	54.0
1593.062500	26.3	V	-18.4	27.7	54.0
2132.687500	25.6	V	-15.7	28.4	54.0
2655.062500	25.8	V	-13.3	28.2	54.0
4804.375000	40.0	V	-6.5	14.0	54.0

Figure 18: Radiated Spurious Emission, TM1, 7GHz to 18GHz, H

RE_1-18GHz_HL050_FSV40_Pre

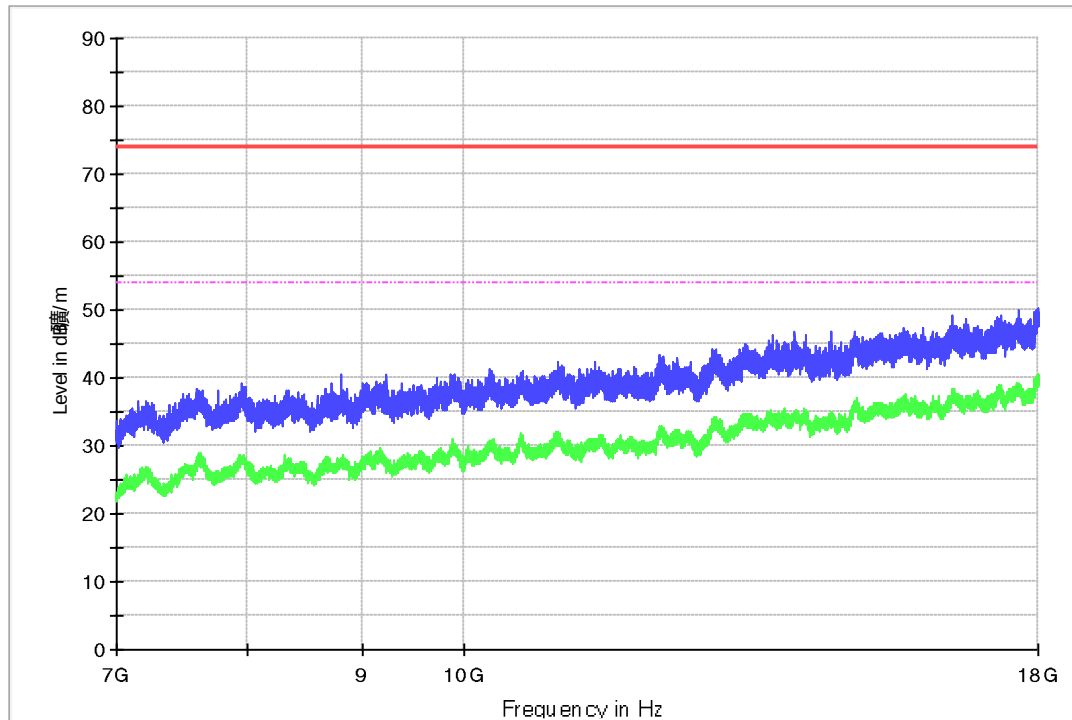


Figure 19: Radiated Spurious Emission, TM1, 7GHz to 18GHz, V

RE_1-18GHz_HL050_FSV40_Pre

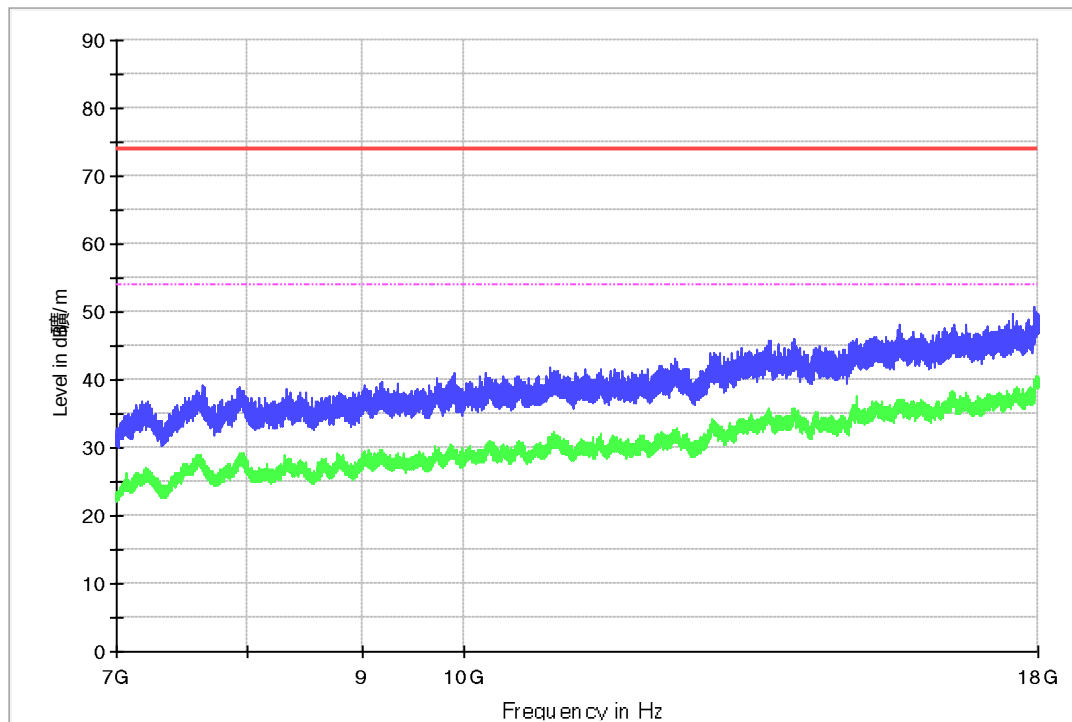


Figure 20: Radiated Spurious Emission, TM1, 18GHz to 25GHz, H

RE_18-40GHz_9170_FSV40_Pre

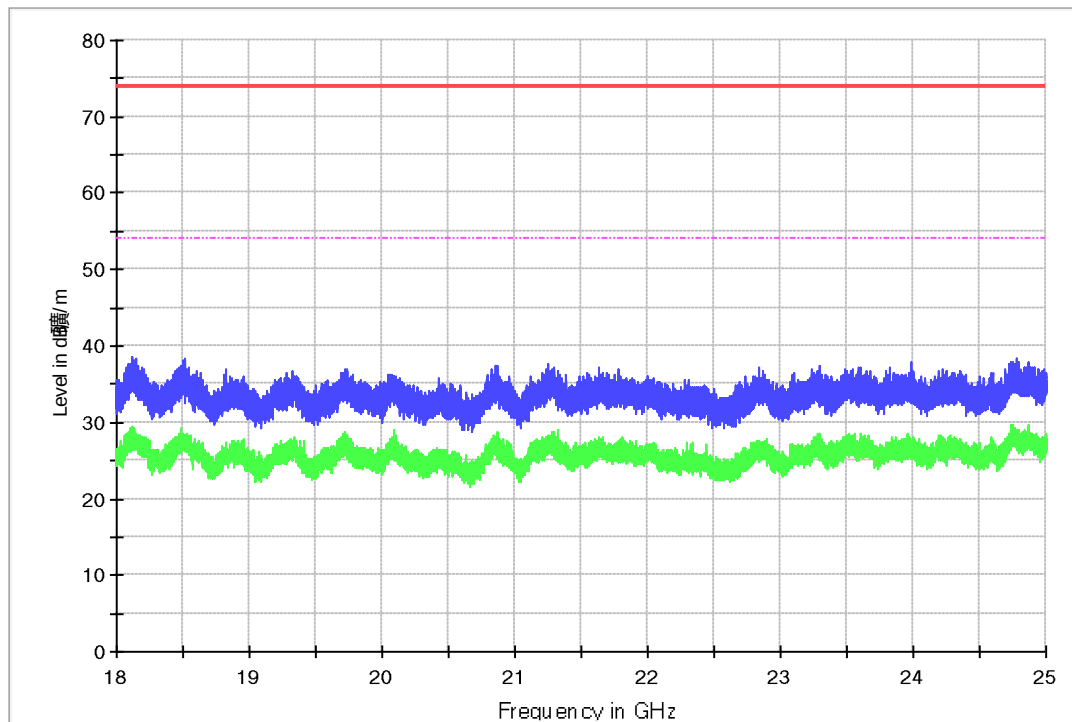


Figure 21: Radiated Spurious Emission, TM1, 18GHz to 25GHz, V

RE_18-40GHz_9170_FSV40_Pre

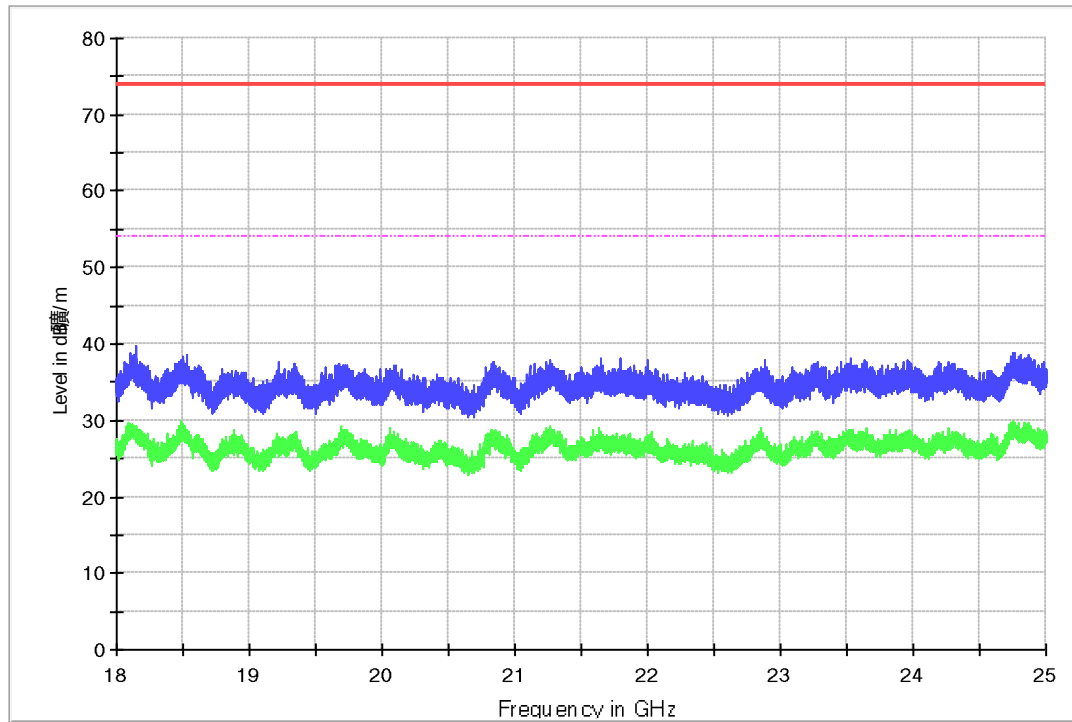
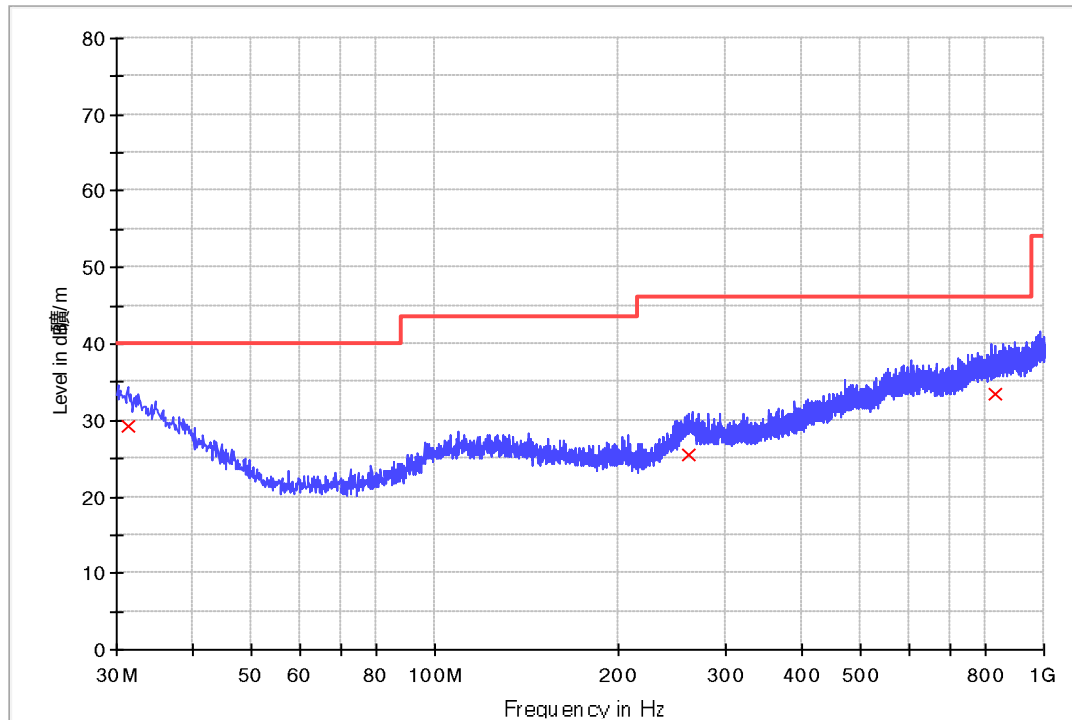


Figure 22: Radiated Spurious Emission, TM2, 30MHz to 1GHz, H

_Radiated emission (30M-1GHz) 1 Range_FCC

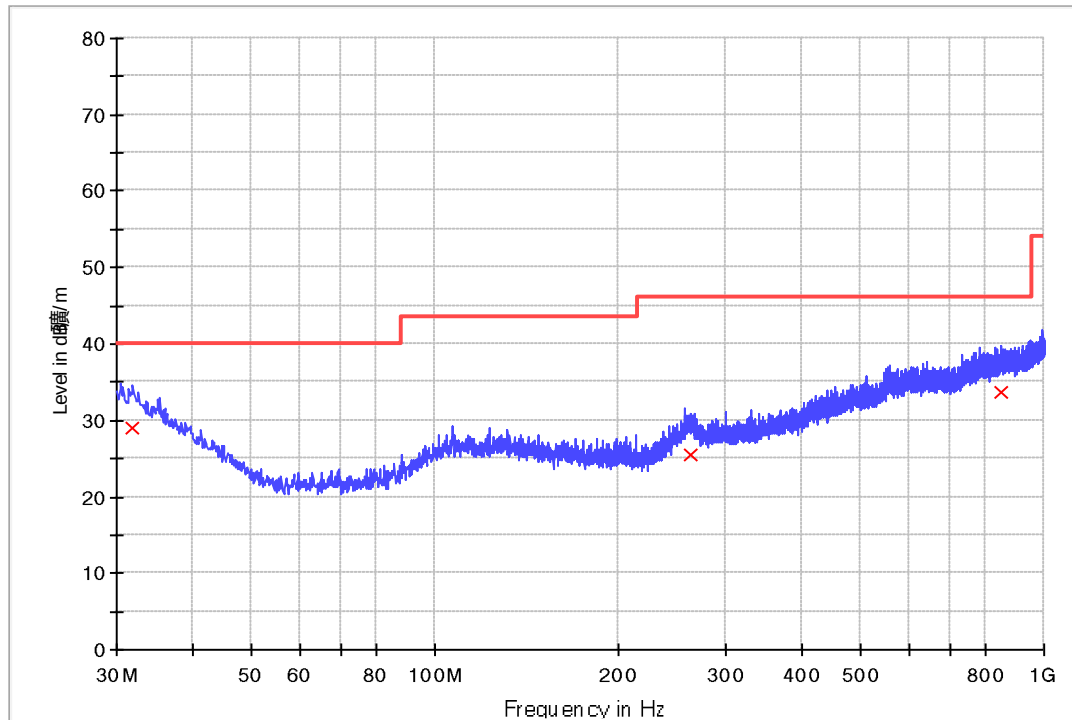


Limit and Margin

Frequency (MHz)	QuasiPeak (dBμV/m)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBμV/m)
31.333750	29.2	H	24.8	10.8	40.0
260.981250	25.5	H	20.7	20.5	46.0
831.462500	33.4	H	27.5	12.6	46.0

Figure 23: Radiated Spurious Emission, TM2, 30MHz to 1GHz, V

_Radiated emission (30M-1GHz) 1 Range_FCC

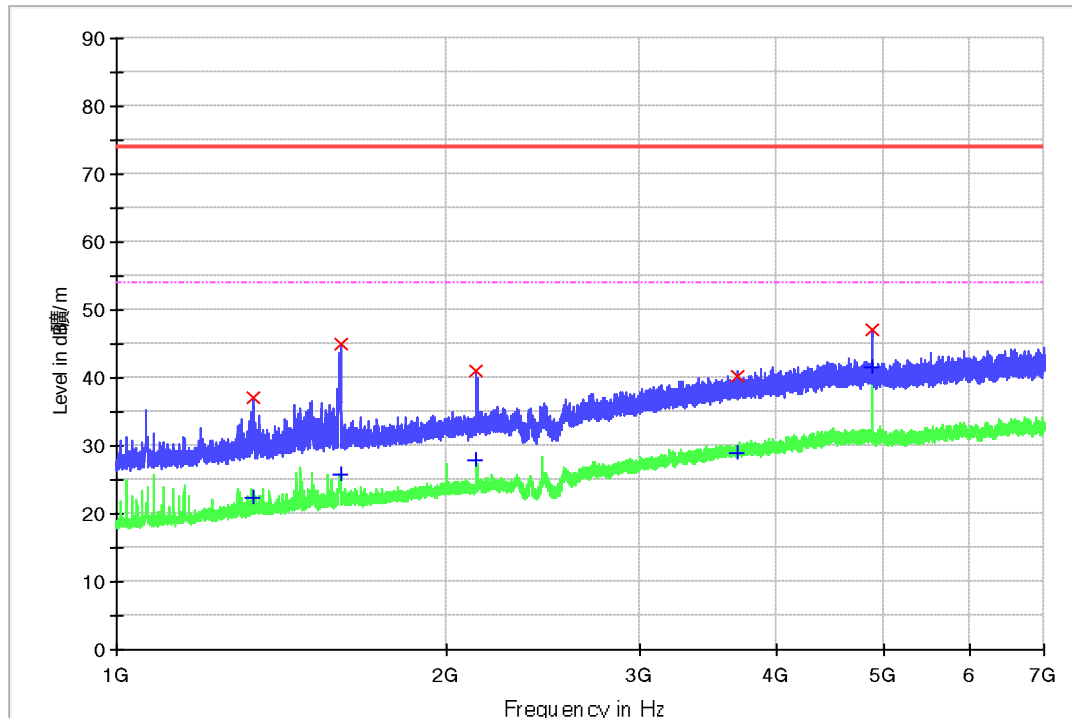


Limit and Margin

Frequency (MHz)	QuasiPeak (dBμV/m)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBμV/m)
31.940000	29.0	V	24.5	11.0	40.0
263.163750	25.4	V	20.7	20.6	46.0
847.103750	33.7	V	27.8	12.3	46.0

Figure 24: Radiated Spurious Emission, TM2, 1GHz to 7GHz, H

RE_1-18GHz_HL050_FSV40_Pre


Limit and Margin PK

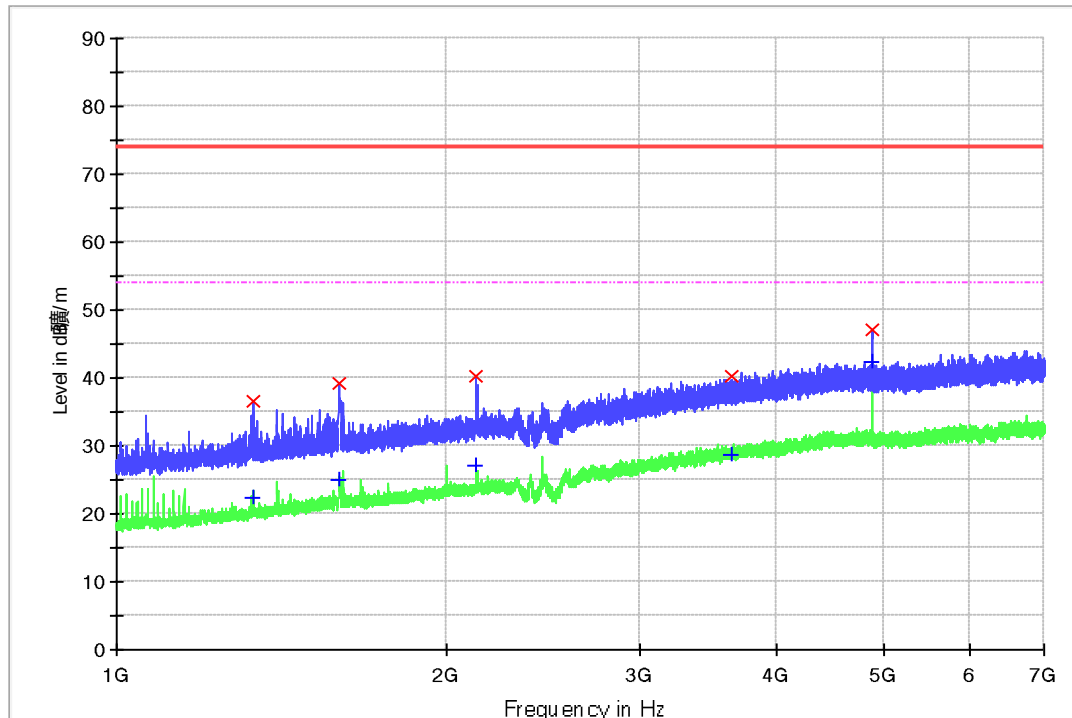
Frequency (MHz)	MaxPeak (dBμV/m)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBμV/m)
1332.625000	37.0	H	-20.2	37.0	74.0
1599.062500	45.0	H	-18.3	29.0	74.0
2123.312500	41.0	H	-15.8	33.0	74.0
3675.437500	40.3	H	-9.0	33.7	74.0
4879.562500	47.0	H	-6.5	27.0	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBμV/m)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBμV/m)
1332.625000	22.3	H	-20.2	31.7	54.0
1599.062500	25.8	H	-18.3	28.2	54.0
2123.312500	27.8	H	-15.8	26.2	54.0
3675.437500	28.9	H	-9.0	25.1	54.0
4879.562500	41.5	H	-6.5	12.5	54.0

Figure 25: Radiated Spurious Emission, TM2, 1GHz to 7GHz, V

RE_1-18GHz_HL050_FSV40_Pre


Limit and Margin PK

Frequency (MHz)	MaxPeak (dBμV/m)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBμV/m)
1331.312500	36.5	V	-20.2	37.5	74.0
1594.000000	39.1	V	-18.4	34.9	74.0
2123.125000	40.3	V	-15.8	33.7	74.0
3640.750000	40.1	V	-9.1	33.9	74.0
4880.500000	47.1	V	-6.5	26.9	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBμV/m)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBμV/m)
1331.312500	22.4	V	-20.2	31.6	54.0
1594.000000	25.1	V	-18.4	28.9	54.0
2123.125000	27.2	V	-15.8	26.8	54.0
3640.750000	28.6	V	-9.1	25.4	54.0
4880.500000	42.3	V	-6.5	11.7	54.0

Figure 26: Radiated Spurious Emission, TM2, 7GHz to 18GHz, H

RE_1-18GHz_HL050_FSV40_Pre

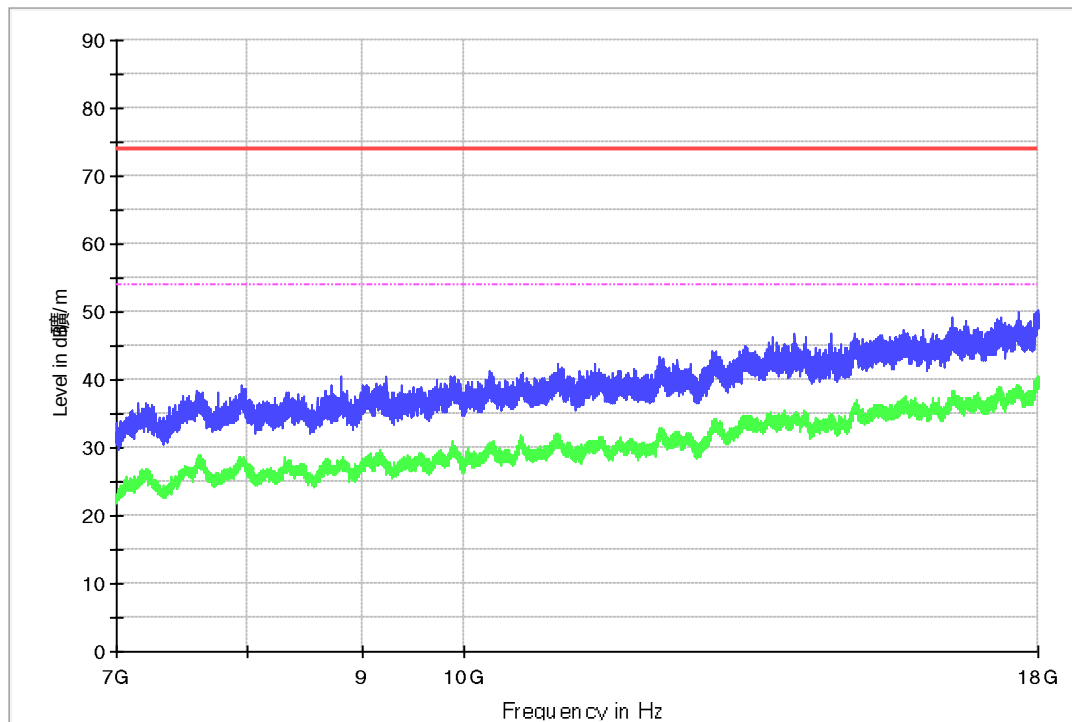


Figure 27: Radiated Spurious Emission, TM2, 7GHz to 18GHz, V

RE_1-18GHz_HL050_FSV40_Pre

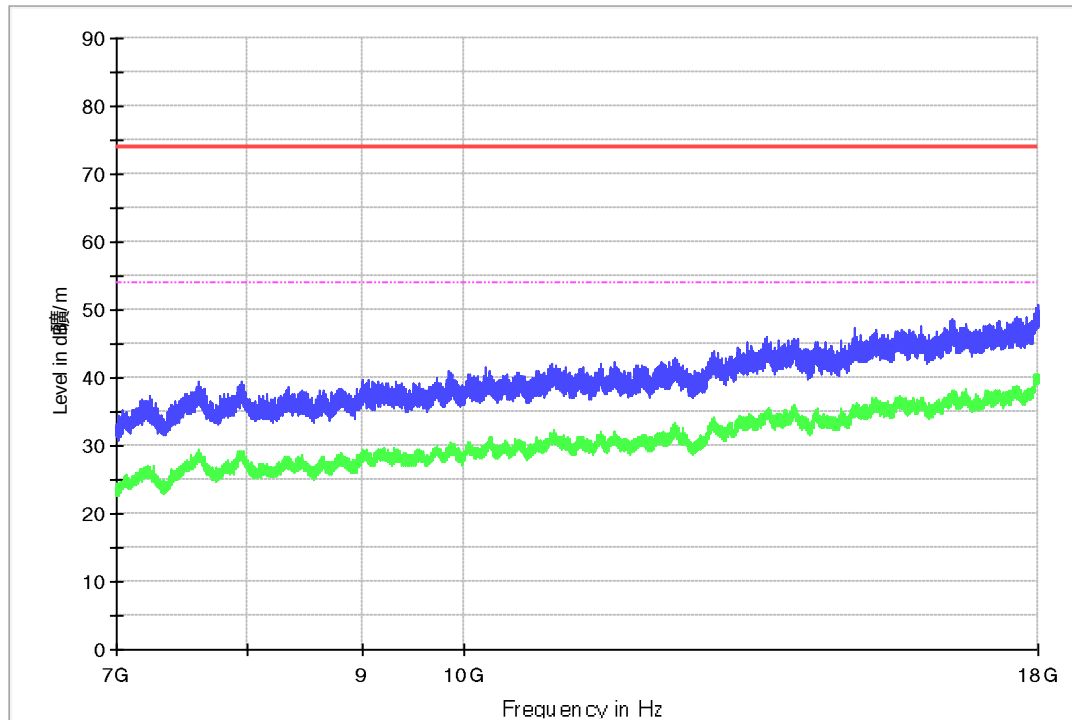


Figure 28: Radiated Spurious Emission, TM2, 18GHz to 25GHz, H

RE_18-40GHz_9170_FSV40_Pre

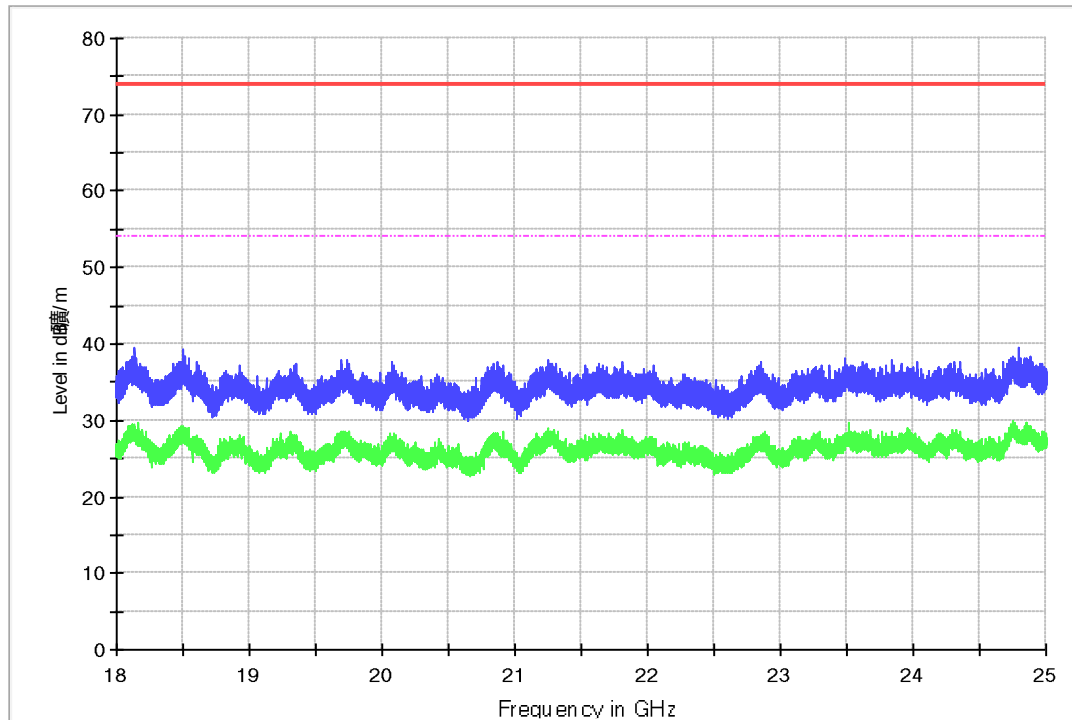


Figure 29: Radiated Spurious Emission, TM2, 18GHz to 25GHz, V

RE_18-40GHz_9170_FSV40_Pre

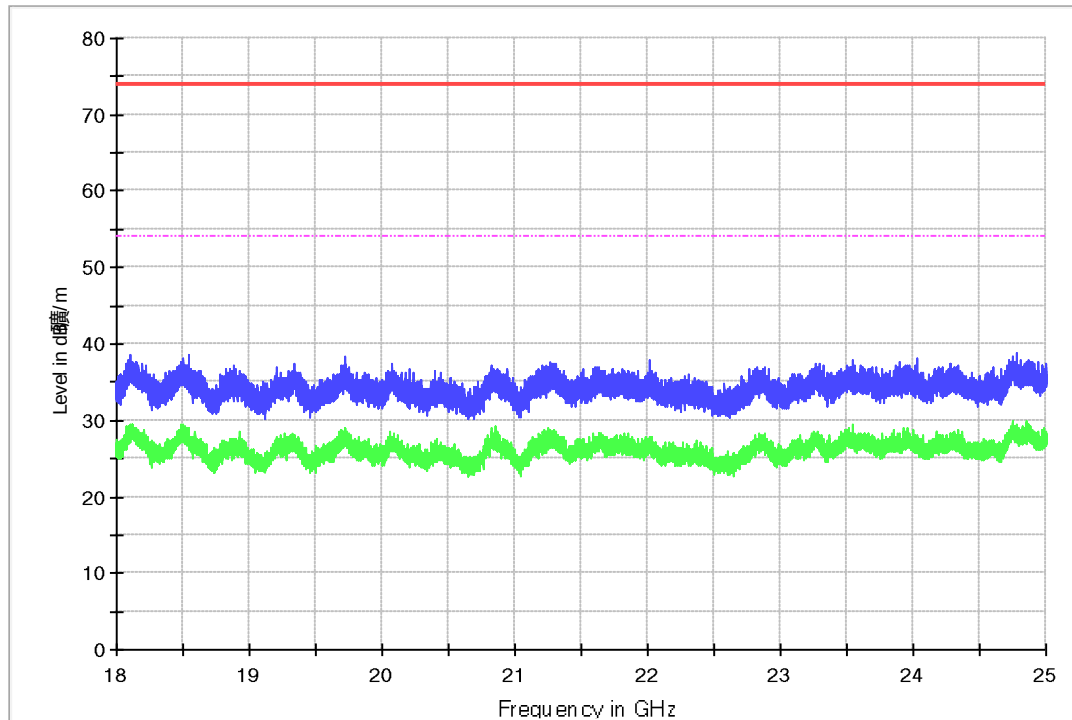
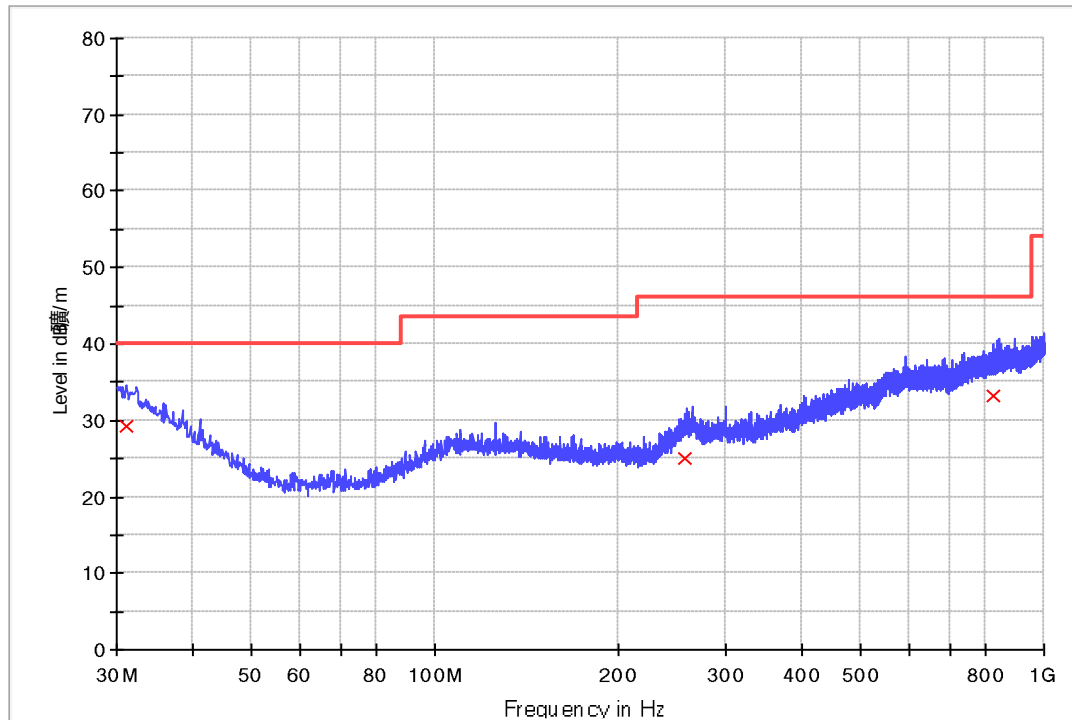


Figure 30: Radiated Spurious Emission, TM3, 30MHz to 1GHz, H

_Radiated emission (30M-1GHz) 1 Range_FCC

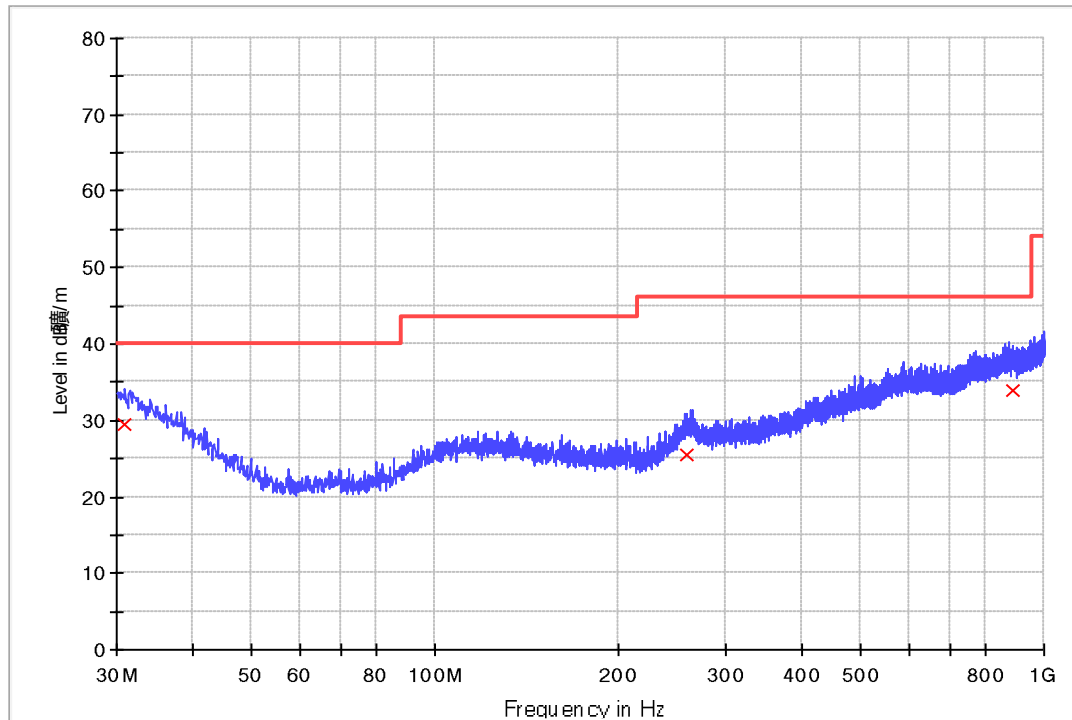


Limit and Margin

Frequency (MHz)	QuasiPeak (dBμV/m)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBμV/m)
31.212500	29.3	H	24.8	10.7	40.0
256.373750	25.0	H	20.2	21.0	46.0
824.066250	33.3	H	27.5	12.7	46.0

Figure 31: Radiated Spurious Emission, TM3, 30MHz to 1GHz, V

_Radiated emission (30M-1GHz) 1 Range_FCC

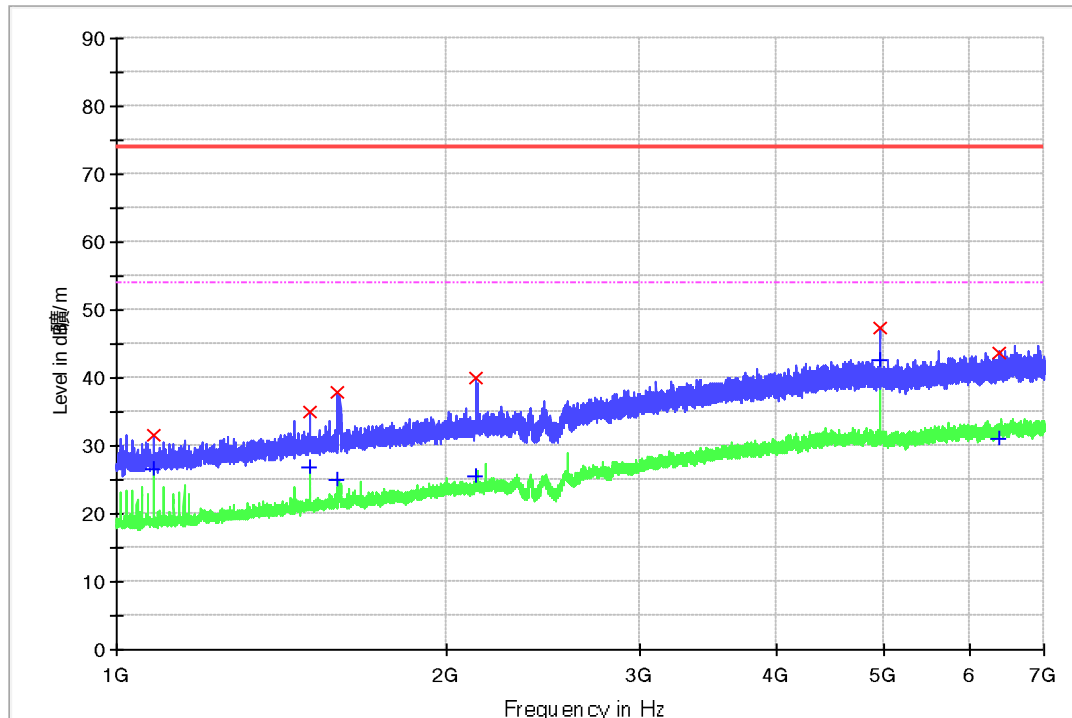


Limit and Margin

Frequency (MHz)	QuasiPeak (dBμV/m)	Pol	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBμV/m)
30.970000	29.4	V	24.9	10.6	40.0
258.920000	25.5	V	20.5	20.5	46.0
888.935000	33.9	V	28.0	12.1	46.0

Figure 32: Radiated Spurious Emission, TM3, 1GHz to 7GHz, H

RE_1-18GHz_HL050_FSV40_Pre


Limit and Margin PK

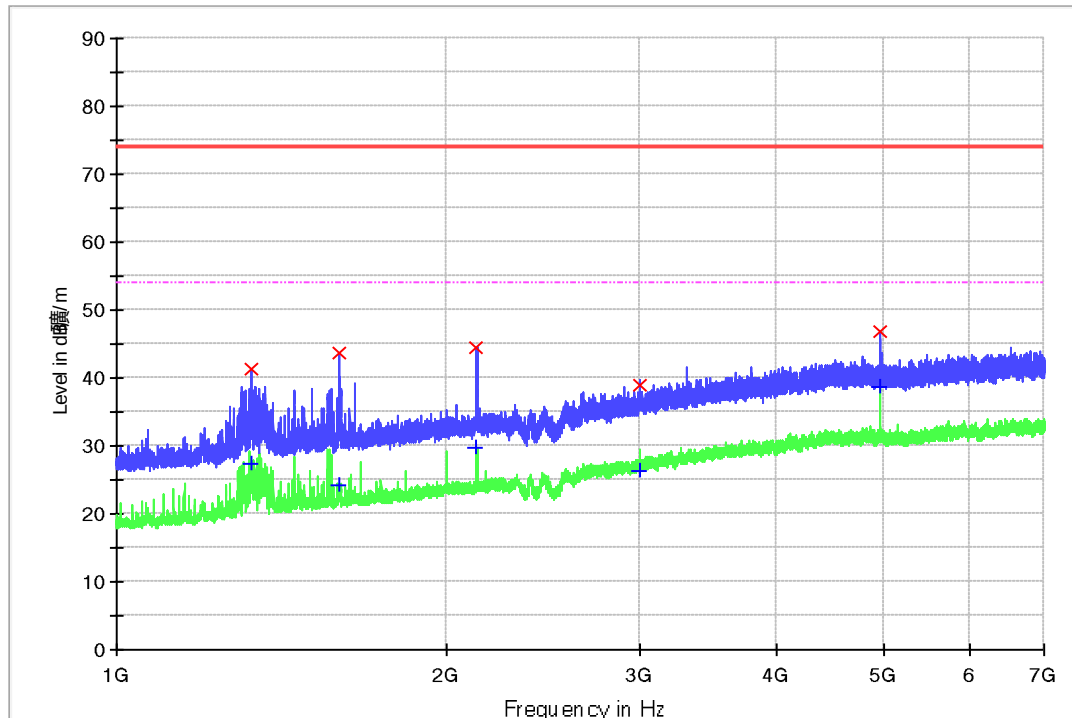
Frequency (MHz)	MaxPeak (dBμV/m)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBμV/m)
1080.062500	31.5	H	-22.0	42.5	74.0
1502.312500	34.9	H	-18.9	39.1	74.0
1591.375000	37.8	H	-18.4	36.2	74.0
2125.187500	39.9	H	-15.8	34.1	74.0
4959.625000	47.4	H	-6.6	26.6	74.0
6373.000000	43.7	H	-4.9	30.3	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBμV/m)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBμV/m)
1080.062500	26.6	H	-22.0	27.4	54.0
1502.312500	26.9	H	-18.9	27.1	54.0
1591.375000	25.1	H	-18.4	28.9	54.0
2125.187500	25.6	H	-15.8	28.4	54.0
4959.625000	42.7	H	-6.6	11.3	54.0
6373.000000	30.9	H	-4.9	23.1	54.0

Figure 33: Radiated Spurious Emission, TM3, 1GHz to 7GHz, V

RE_1-18GHz_HL050_FSV40_Pre


Limit and Margin PK

Frequency (MHz)	MaxPeak (dBμV/m)	Pol	Corr. (dB)	Margin - PK+ (dB)	Limit - PK+ (dBμV/m)
1328.312500	41.3	V	-20.2	32.7	74.0
1594.937500	43.8	V	-18.4	30.2	74.0
2127.437500	44.5	V	-15.8	29.5	74.0
2993.125000	39.0	V	-11.8	35.0	74.0
4959.437500	46.9	V	-6.6	27.1	74.0

Limit and Margin AV

Frequency (MHz)	Average (dBμV/m)	Pol	Corr. (dB)	Margin - AVG (dB)	Limit - AVG (dBμV/m)
1328.312500	27.3	V	-20.2	26.7	54.0
1594.937500	24.3	V	-18.4	29.7	54.0
2127.437500	29.7	V	-15.8	24.3	54.0
2993.125000	26.2	V	-11.8	27.8	54.0
4959.437500	38.8	V	-6.6	15.2	54.0

Figure 34: Radiated Spurious Emission, TM3, 7GHz to 18GHz, H

RE_1-18GHz_HL050_FSV40_Pre

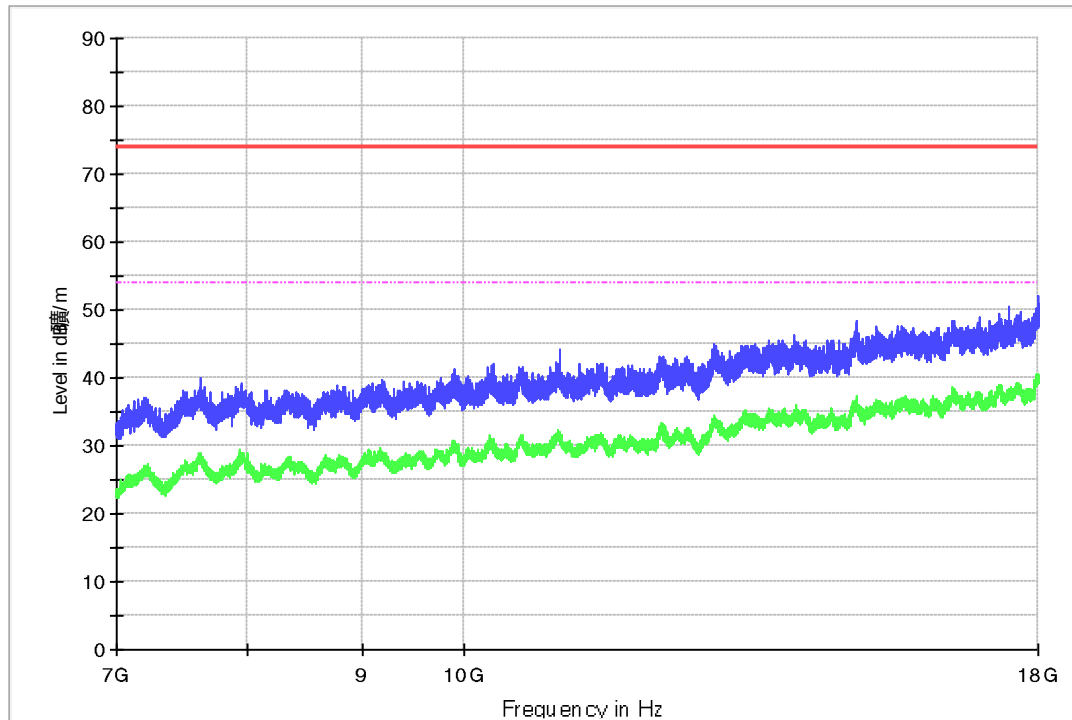


Figure 35: Radiated Spurious Emission, TM3, 7GHz to 18GHz, V

RE_1-18GHz_HL050_FSV40_Pre

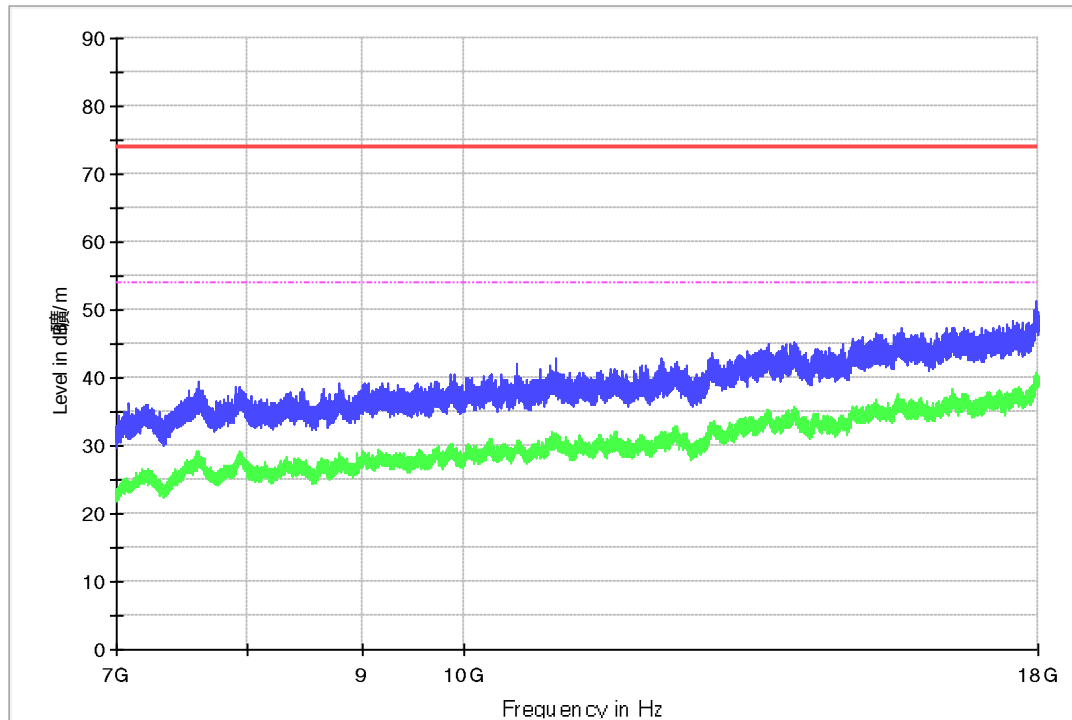


Figure 36: Radiated Spurious Emission, TM3, 18GHz to 25GHz, H

RE_18-40GHz_9170_FSV40_Pre

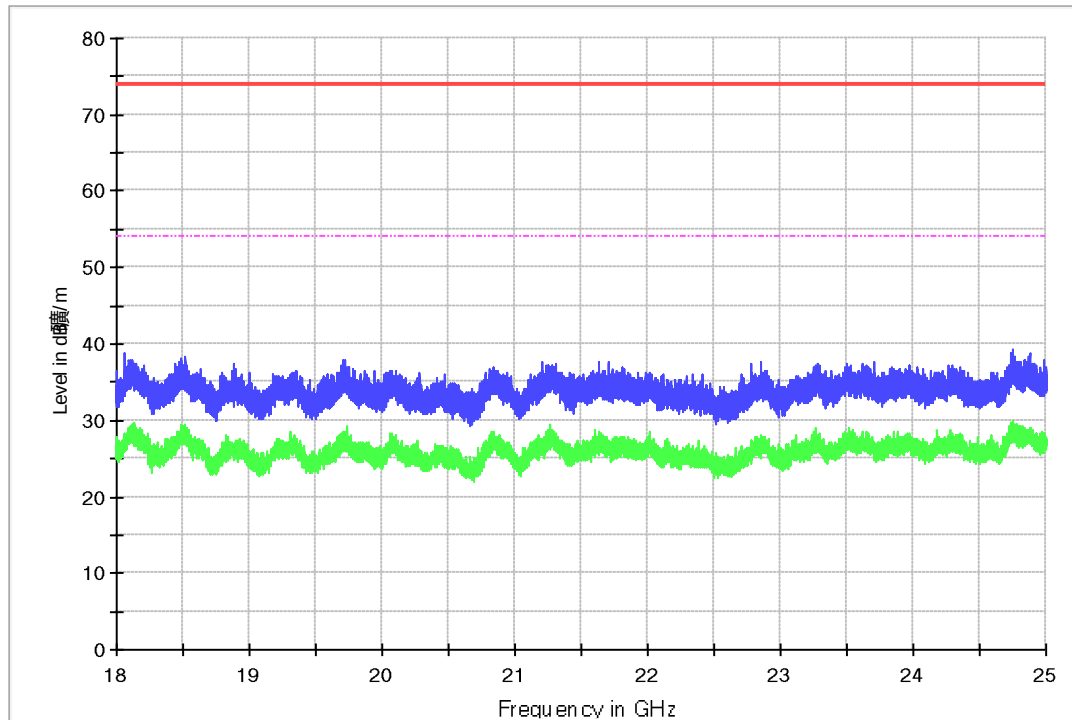
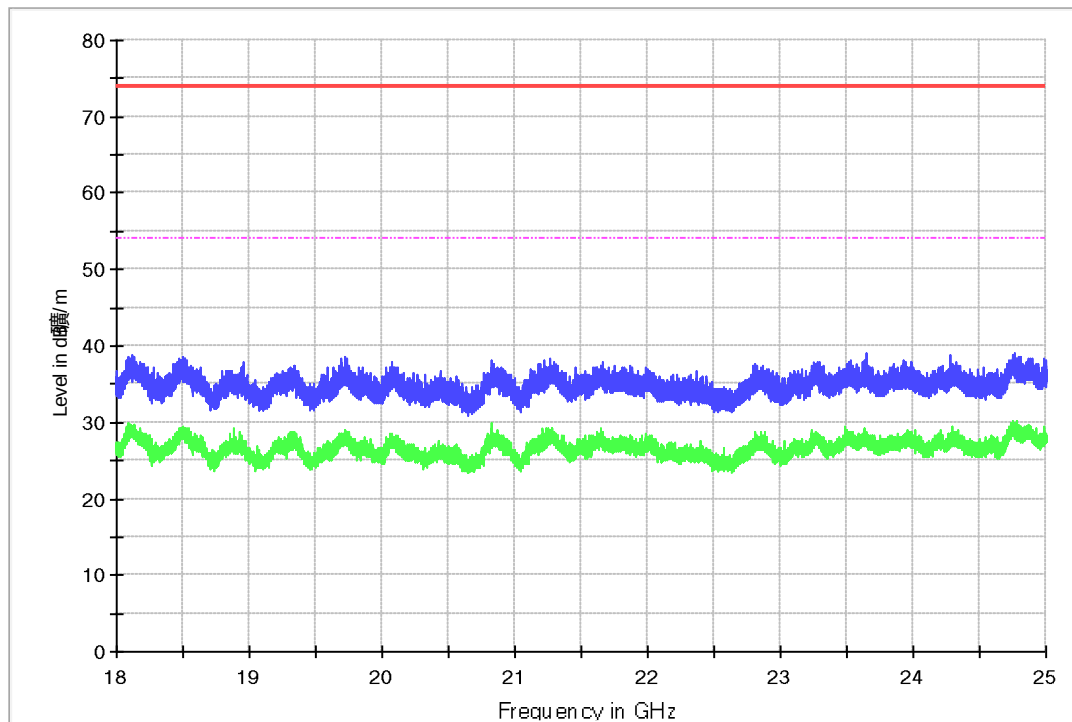


Figure 37: Radiated Spurious Emission, TM3, 18GHz to 25GHz, V

RE_18-40GHz_9170_FSV40_Pre



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	12
Table 9: Peak Output Power	15
Table 10: Power Spectral Density.....	17

7. List of Figures

Figure 1: 6dB Bandwidth	13
Figure 2: 99% Bandwidth	14
Figure 3: Peak Output Power, TM1 to TM3.....	16
Figure 4: Power Spectral Density	18
Figure 5: Reference level	20
Figure 6: Conducted Spurious Emission	21
Figure 7: Conducted Band Edge	21
Figure 8: Conducted Emission, L.....	23
Figure 9: Conducted Emission, N	24
Figure 10: Radiated Band-Edge, TM1, H.....	26
Figure 11: Radiated Band-Edge, TM1, V	27
Figure 12: Radiated Band-Edge, TM3, H.....	28
Figure 13: Radiated Band-Edge, TM3, V	29
Figure 14: Radiated Spurious Emission, TM1, 30MHz to 1GHz, H.....	31
Figure 15: Radiated Spurious Emission, TM1, 30MHz to 1GHz, V	32
Figure 16: Radiated Spurious Emission, TM1, 1GHz to 7GHz, H.....	33
Figure 17: Radiated Spurious Emission, TM1, 1GHz to 7GHz, V	34
Figure 18: Radiated Spurious Emission, TM1, 7GHz to 18GHz, H	35
Figure 19: Radiated Spurious Emission, TM1, 7GHz to 18GHz, V	36
Figure 20: Radiated Spurious Emission, TM1, 18GHz to 25GHz, H	37
Figure 21: Radiated Spurious Emission, TM1, 18GHz to 25GHz, V	38
Figure 22: Radiated Spurious Emission, TM2, 30MHz to 1GHz, H.....	39
Figure 23: Radiated Spurious Emission, TM2, 30MHz to 1GHz, V	40
Figure 24: Radiated Spurious Emission, TM2, 1GHz to 7GHz, H	41
Figure 25: Radiated Spurious Emission, TM2, 1GHz to 7GHz, V	42
Figure 26: Radiated Spurious Emission, TM2, 7GHz to 18GHz, H	43
Figure 27: Radiated Spurious Emission, TM2, 7GHz to 18GHz, V	44
Figure 28: Radiated Spurious Emission, TM2, 18GHz to 25GHz, H	45
Figure 29: Radiated Spurious Emission, TM2, 18GHz to 25GHz, V	46
Figure 30: Radiated Spurious Emission, TM3, 30MHz to 1GHz, H.....	47
Figure 31: Radiated Spurious Emission, TM3, 30MHz to 1GHz, V	48
Figure 32: Radiated Spurious Emission, TM3, 1GHz to 7GHz, H	49
Figure 33: Radiated Spurious Emission, TM3, 1GHz to 7GHz, V	50
Figure 34: Radiated Spurious Emission, TM3, 7GHz to 18GHz, H	51
Figure 35: Radiated Spurious Emission, TM3, 7GHz to 18GHz, V	52
Figure 36: Radiated Spurious Emission, TM3, 18GHz to 25GHz, H	53
Figure 37: Radiated Spurious Emission, TM3, 18GHz to 25GHz, V	54