

Prüfbericht-Nr.: Test report no.:	CN25DR99 001	Auftrags-Nr.: Order no.:	326093524	Seite 1 von 36 Page 1 of 36
Kunden-Referenz-Nr.: Client reference no.:	P01810375	Auftragsdatum: Order date:	2025-01-23	
Auftraggeber: Client:	Beijing Roborock Technology Co., Ltd. Room 1001, Floor 10, Building 3, Yard 17, Anju Road, Changping District, Beijing, P.R. China			
Prüfgegenstand: Test item:	Robotic Vacuum Cleaner			
Bezeichnung / Typ-Nr.: Identification / Type no.:	S91COP			
Auftrags-Inhalt: Order content:	Test Report			
Prüfgrundlage: Test specification:	FCC CFR47 Part 15, Subpart C Section 15.247 RSS-Gen Issue 5, Amendment 2, February 2021 RSS-247 Issue 3, August 2023 ANSI C63.10: 2013			
Wareneingangsdatum: Date of sample receipt:	2025-02-19	Refer to photo document.		
Prüfmuster-Nr.: Test sample no:	A003927758-001, 002			
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:	☒ <u>Yanli Fan</u> Signed by: Yanli Fan		genehmigt von: authorized by:	☒ <u>Hongfei Wu</u> Signed by: Hongfei Wu
Datum: Date:	2025-04-01		Datum: Date:	2025-04-01
Stellung / Position:	Sachverständige(r)/Expert		Stellung / Position:	Sachverständige(r)/Expert
Sonstiges / Other:	FCC ID: 2AN2O-S91COP02 IC: 23317-S91COP02 HVIN: S91COP-BLM8 This report is for Class II permission change application due to modify to robotic vacuum cleaner's main board and adding alternative motors, So, only the RF power & radiated emission were performed and recorded in the report.			
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>				

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Anmerkungen Remarks

1	Alle eingesetzten Prüfmittel waren zum angegebenen Prüfzeitraum gemäß eines festgelegten Kalibrierungsprogramms unseres Prüfhauses kalibriert. Sie entsprechen den in den Prüfprogrammen hinterlegten Anforderungen. Die Rückverfolgbarkeit der eingesetzten Prüfmittel ist durch die Einhaltung der Regelungen unseres Managementsystems gegeben. Detaillierte Informationen bezüglich Prüfkonditionen, Prüfequipment und Messunsicherheiten sind im Prüflabor vorhanden und können auf Wunsch bereitgestellt werden. <i>The equipment used during the specified testing period was calibrated according to our test laboratory calibration program. The equipment fulfils the requirements included in the relevant standards. The traceability of the test equipment used is ensured by compliance with the regulations of our management system. Detailed information regarding test conditions, equipment and measurement uncertainty is available in the test laboratory and could be provided on request.</i>
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3	Prüfklausel mit der Note * wurden an qualifizierte Unterauftragnehmer vergeben und sind unter der jeweiligen Prüfklausel des Berichts beschrieben. Abweichungen von Prüfspezifikation(en) oder Kundenanforderungen sind in der jeweiligen Prüfklausel im Bericht aufgeführt. <i>Test clauses with remark of * are subcontracted to qualified subcontractors and described under the respective test clause in the report.</i> <i>Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report.</i>
4	Die Entscheidungsregel für Konformitätserklärungen basierend auf numerischen Messergebnissen in diesem Prüfbericht basiert auf der "Null-Grenzwert-Regel" und der "Einfachen Akzeptanz" gemäß ILAC G8:2019 und IEC Guide 115:2021, es sei denn, in der auf Seite 1 dieses Berichts genannten angewandten Norm ist etwas anderes festgelegt oder vom Kunden gewünscht. Dies bedeutet, dass die Messunsicherheit nicht berücksichtigt wird und daher auch nicht im Prüfbericht angegeben wird. Zu weiteren Informationen bezueglich des Risikos durch diese Entscheidungsregel siehe ILAC G8:2019. <i>The decision rule for statements of conformity, based on numerical measurement results, in this test report is based on the "Zero Guard Band Rule" and "Simple Acceptance" in accordance with ILAC G8:2019 and IEC Guide 115:2021, unless otherwise specified in the applied standard mentioned on Page 1 of this report or requested by the customer. This means that measurement uncertainty is not taken in account and hence also not declared in the test report. For additional information to the resulting risk based of this decision rule please refer to ILAC G8:2019.</i>

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TEST SUMMARY

5.1.1 ANTENNA REQUIREMENT

RESULT: Pass

5.1.2 PEAK OUTPUT POWER

RESULT: Pass

5.2.1 RADIATED BAND-EDGE

RESULT: Pass

5.2.2 RADIATED SPURIOUS EMISSION

RESULT: Pass

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1. General Remarks

1.1 Complementary Materials

Null.

2. Test Sites

2.1 Test Facilities

TÜV Rheinland (Shanghai) Co., Ltd.

Workshop14, North Half of Workshop 10 and Workshop 16, Pingqian (Taicang) Modern Industrial Park, No.525, Yuewang Lingang South Road, Shaxi, Taicang, Jiangsu, 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 930979.

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 33038.

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Equip.	Description	Model	Manufacturer	Due Date
EMC-S-036	RF measurement software	WMS32-WB (11.40.00)	Rohde & Schwarz	N/A
EMC-C-317	Thermohygrometer	608-H1	testo	2025-06-28
EMC-C-304	OSP	OSP-B157W8	Rohde & Schwarz	2025-12-10
EMC-S-032	EMI measurement software	EMC32-MEB (10.60.20)	Rohde & Schwarz	N/A
EMC-C-175	Preamplifier	EMC051845SE	EMCI Taiwan	2025-07-24
EMC-C-176	Preamplifier	EMC051845SE	EMCI Taiwan	2025-07-24
EMC-C-161	Spectrum analyser	FSV40	Rohde & Schwarz	2025-07-15
EMC-C-155	BiLog antenna	CBL 6112D	Teseq	2026-04-20
EMC-C-121	Thermohygrometer	608-H1	testo	2025-06-25
EMC-C-068	Broadband horn antenna	BBHA 9170	Schwarzbeck	2028-06-18
EMC-C-066	EMI test receiver	ESCI	Rohde & Schwarz	2025-10-17
EMC-C-018	Double ridged horn antenna	BBHA 9120 D	Schwarzbeck	2026-03-24
EMC-C-001	3 m semi-anechoic chamber	SAC3	Frankonia	2026-12-03

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 Robotic Vacuum Cleaner which supports 2.4GHz Wi-Fi.

3.2 Ratings and System Details

Table 3: Technical Specification of EUT

General Description of EUT	
Product Name:	Robotic Vacuum Cleaner
Model No.:	S91COP
Rated Voltage:	DC 20V@2.5A input via Docking Station DC 14.4V@6400mAh(TYP) input via Lithium-ion battery
Test Voltage:	DC 14.4V
Technical Specification of W-LAN (Wireless module: BL-M8189FS6)	
Frequency Range:	2412 to 2472MHz for 802.11b/g/n-HT20 2422 to 2462MHz for 802.11n-HT40
Modulation Type:	DSSS (CCK, DQPSK, DBPSK) OFDM (QPSK/BPSK/16QAM/64QAM)
Antenna Type:	PCB Antenna
Antenna Gain:	2.22dBi

Table 4: RF Channel List

Wi-Fi 802.11 b/g/n-HT20/n-HT40

RF Channel	Frequency [MHz]	RF Channel	Frequency [MHz]	RF Channel	Frequency [MHz]
1	2412	5	2432	9	2452
2	2417	6	2437	10	2457
3	2422	7	2442	11	2462
4	2427	8	2447	-	-

3.3 Independent Operation Modes

Test frequencies are lowest channel: 2412 MHz/2422 MHz, middle channel: 2437 MHz, highest channel: 2462 MHz/2452 MHz.

A. On, Wi-Fi mode

3.4 Noise Generating and Noise Suppressing Parts

Refer to the Circuit Diagram.

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.

Software: adb.exe

Table 5: Power parameter value

Operating Mode	Channel Frequency [MHz]	Power Parameter Value	Operating Mode	Channel Frequency [MHz]	Power Parameter Value
802.11b	2412	27	802.11n-HT20	2412	39
	2437	28		2437	40
	2462	30		2462	40
802.11g	2412	42	802.11n-HT40	2422	38
	2437	40		2437	40
	2462	27		2452	40

4.3 Special Accessories and Auxiliary Equipment

Table 6: Auxiliary Equipment

Product Name	Model Name	Manufactory
Laptop	TP00135A	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 2.22 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	

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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:	2.22 dBi

Verdict: PASS

5.1.2 Peak Output Power

RESULT:**Pass**

Date of testing	:	2025-02-27
Ambient temperature	:	20.3°C
Relative humidity	:	57.4%
Atmospheric pressure	:	101kPa
Test requirement	:	FCC Part 15.247(b)(3) RSS-247 Issue 3, August 2023, Clause 5.4(d)
Test procedure	:	ANSI C63.10: 2013
Test voltage	:	DC 14.4V
Test modes applied	:	A

Table 8: Original Peak Output Power

Test Mode	Data rate/ MCS	CH.	Freq. [MHz]	Peak Conducted Output Power [dBm]	Peak Conducted Output Power Limit [dBm]	Maximum EIRP [dBm]	EIRP Limit [dBm]
b	1Mbps	1	2412	19.71	30	21.93	36
	1Mbps	6	2437	19.69	30	21.91	36
	1Mbps	11	2462	19.74	30	21.96	36
g	6Mbps	1	2412	25.41	30	27.63	36
	6Mbps	6	2437	25.34	30	27.56	36
	6Mbps	11	2462	25.47	30	27.69	36
n- HT20	MCS0	1	2412	24.74	30	26.96	36
	MCS0	6	2437	24.59	30	26.81	36
	MCS0	11	2462	24.84	30	27.06	36
n- HT40	MCS0	3	2422	24.72	30	26.94	36
	MCS0	6	2437	24.67	30	26.89	36
	MCS0	9	2452	24.81	30	27.03	36

Note:

Peak Output Power: Refer to CN241CIS 001 issued by TUV Rheinland Taiwan Ltd.

Table 9: Peak Output Power

Test Mode	Data rate/ MCS	CH.	Freq. [MHz]	Peak Conducted Output Power [dBm]	Peak Conducted Output Power Limit [dBm]	Maximum EIRP [dBm]	EIRP Limit [dBm]
b	1Mbps	1	2412	18.67	30	20.89	36
	1Mbps	6	2437	19.52	30	21.74	36
	1Mbps	11	2462	18.59	30	20.81	36
g	6Mbps	1	2412	25.26	30	27.48	36
	6Mbps	6	2437	24.70	30	26.92	36
	6Mbps	11	2462	22.05	30	24.27	36
n- HT20	MCS0	1	2412	24.12	30	26.34	36
	MCS0	6	2437	24.09	30	26.31	36
	MCS0	11	2462	21.32	30	23.54	36
n- HT40	MCS0	3	2422	24.27	30	26.49	36
	MCS0	6	2437	24.02	30	26.24	36
	MCS0	9	2452	20.79	30	23.01	36

Note:

1. The cable loss=0.5dB was provided by the client, and was factored in the result Conducted Output Power
2. EIRP=Conducted Output Power + Antenna Gain (2.22 dBi)

5.2 Emission in the Frequency Range above 30MHz

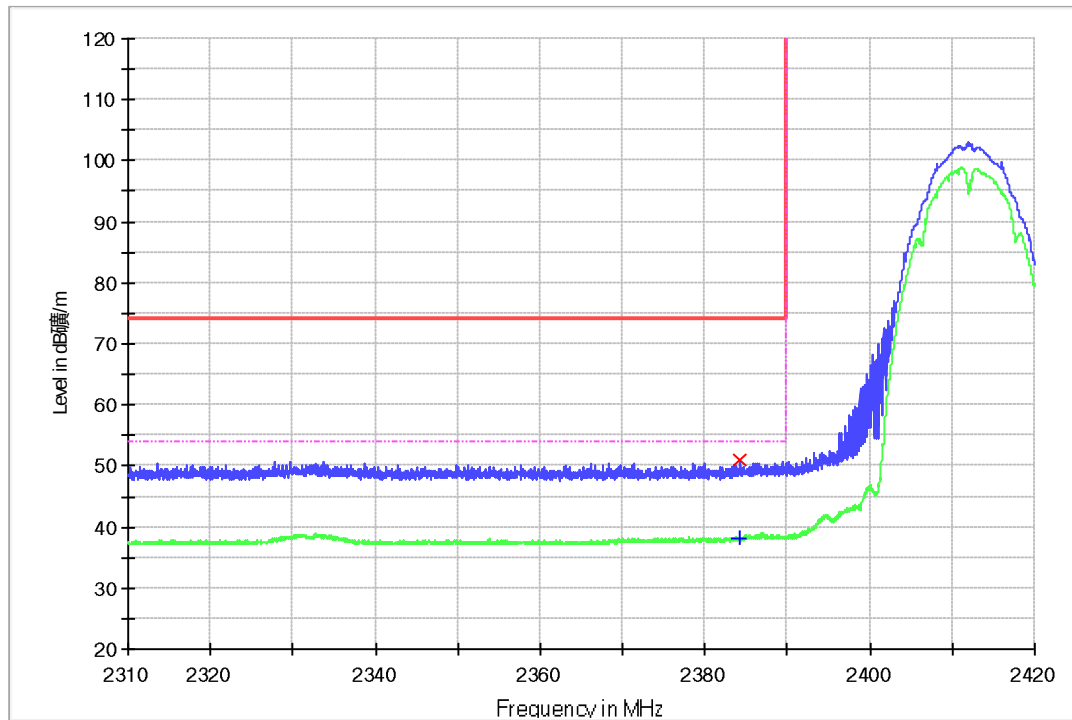
5.2.1 Radiated Band-Edge

RESULT:**Pass**

Date of testing	:	2025-03-11
Ambient temperature	:	21.9°C
Relative humidity	:	56.2%
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 3, August 2023, Clause 5.5
Test procedure	:	ANSI C63.10: 2013
Test voltage	:	DC 14.4V
Test modes applied	:	A

Figure 1: Radiated Band-Edge, b-2412MHz, H

2310~ 2410 BE 1-18GHz_HL050_FSV40_Pre


PK

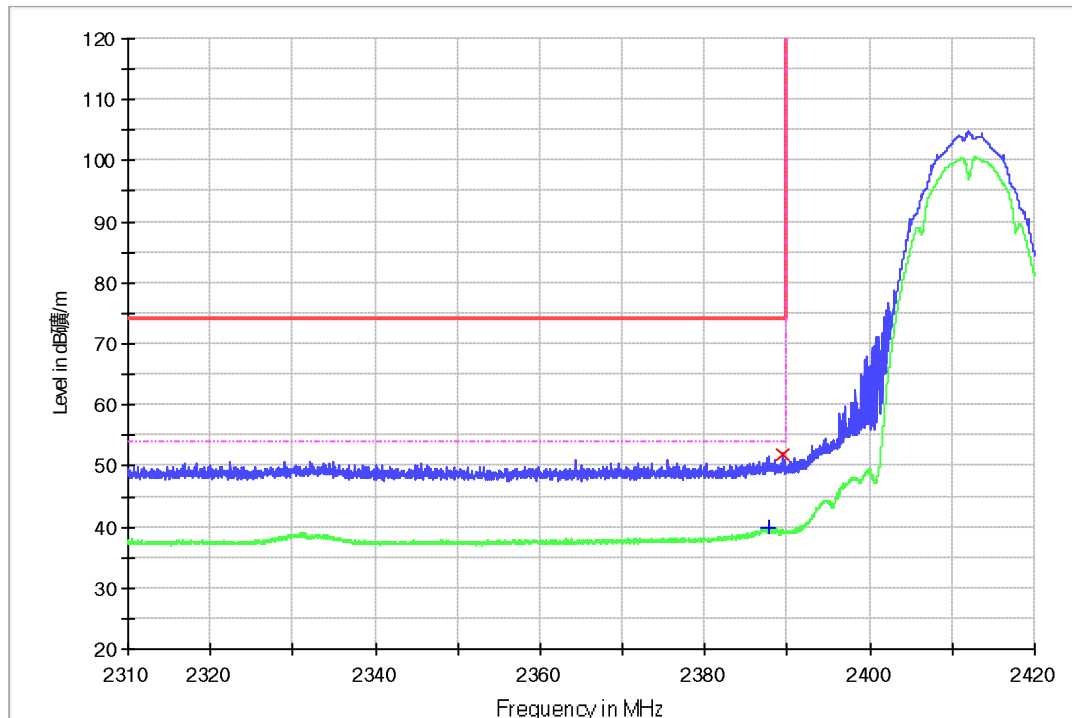
Frequency (MHz)	MaxPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)
2384.305000	50.9	H	-6.1	23.1	74.0

AV

Frequency (MHz)	Average (dBµV/m)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBµV/m)
2384.305000	38.0	H	-6.1	16.0	54.0

Figure 2: Radiated Band-Edge, b-2412MHz, V

2310 2410 BE 1-18GHz_HL050_FSV40_Pre


PK

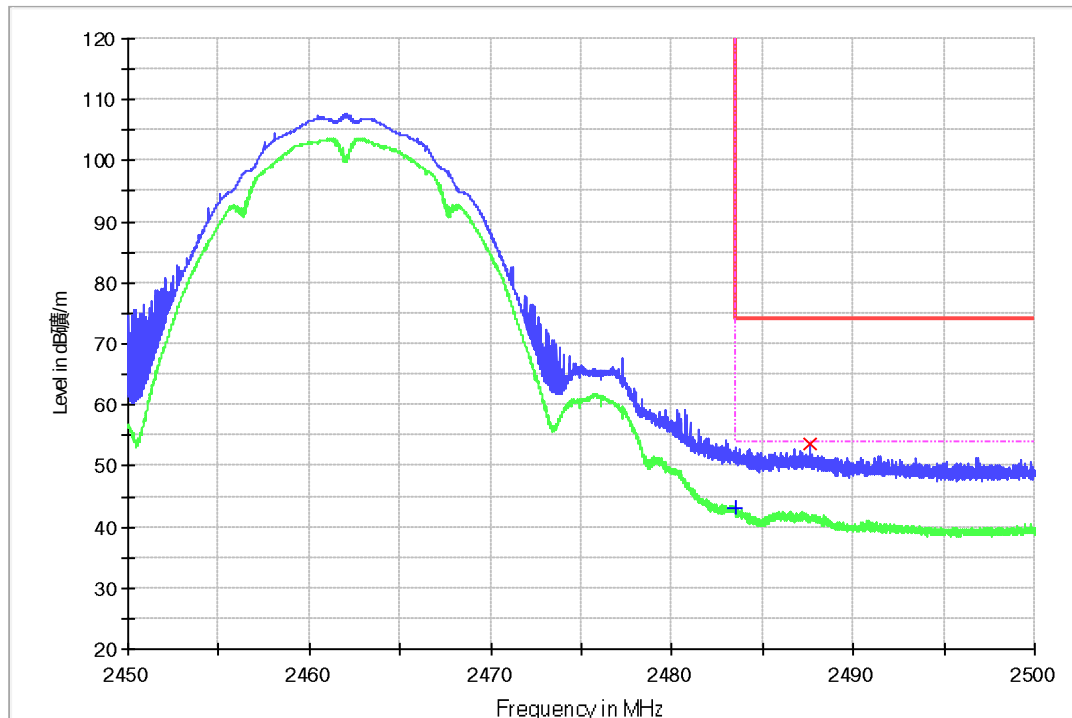
Frequency (MHz)	MaxPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)
2389.420000	52.0	v	-6.0	22.0	74.0

AV

Frequency (MHz)	Average (dBµV/m)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBµV/m)
2387.825000	39.8	v	-6.1	14.2	54.0

Figure 3: Radiated Band-Edge, b-2462MHz, H

2470° 2500 BE_1-18GHz_HL050_FSV40_Pre


PK

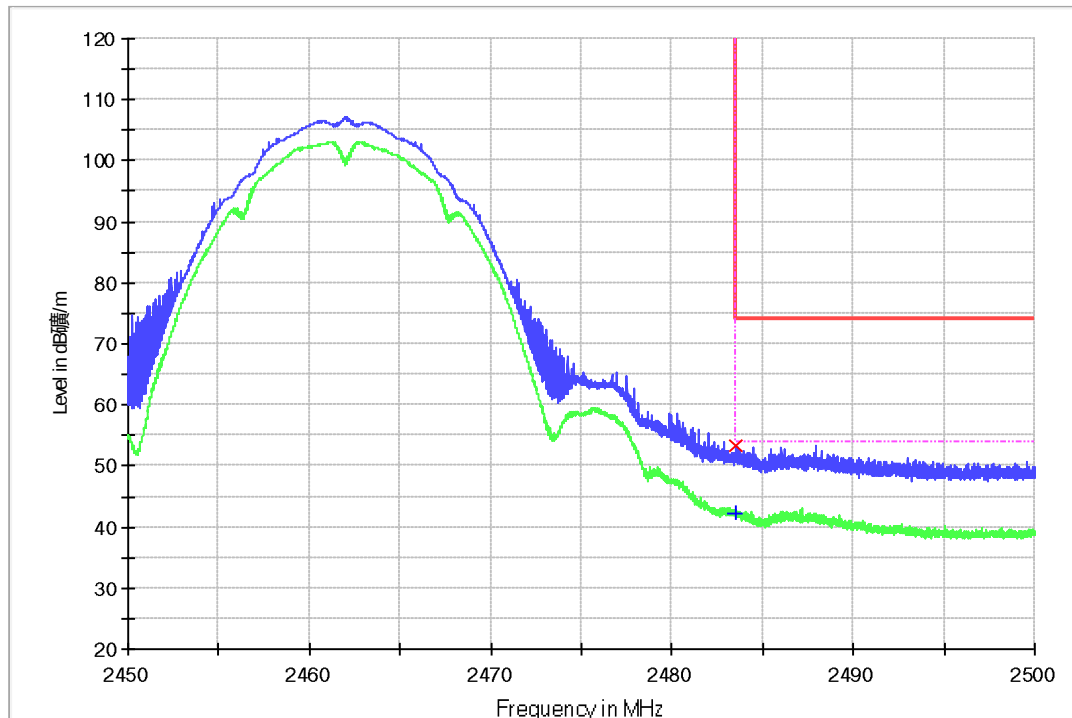
Frequency (MHz)	MaxPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)
2487.568750	53.7	H	-6.2	20.3	74.0

AV

Frequency (MHz)	Average (dBµV/m)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBµV/m)
2483.525000	43.0	H	-6.2	11.0	54.0

Figure 4: Radiated Band-Edge, b-2462MHz, V

2470° 2500 BE_1-18GHz_HL050_FSV40_Pre


PK

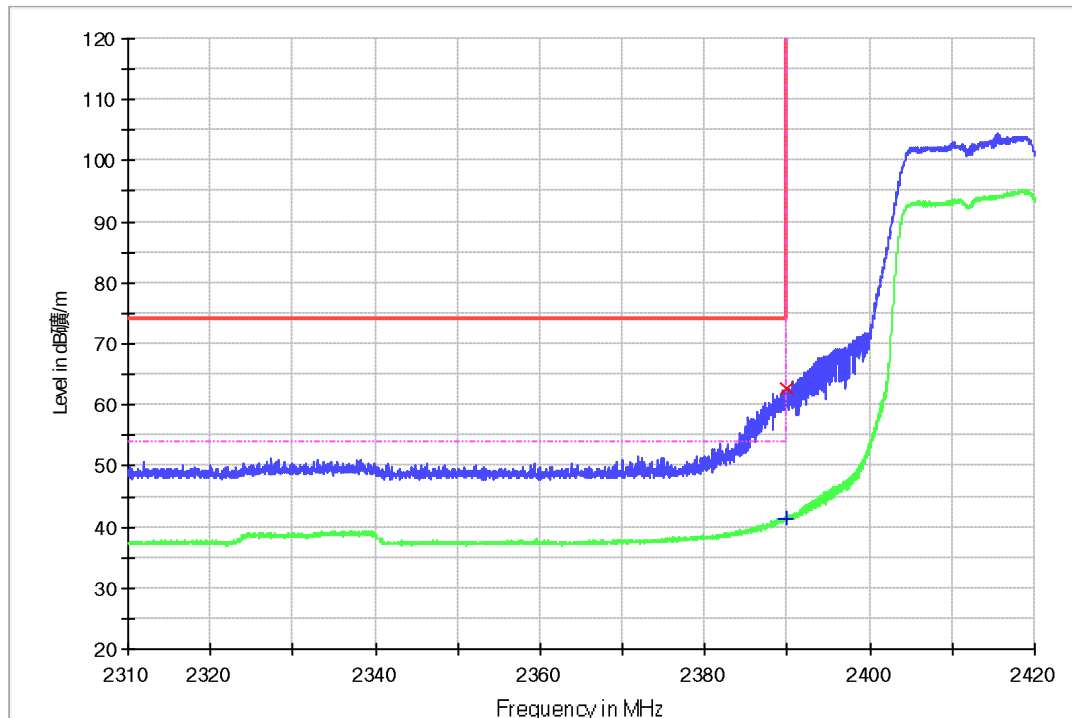
Frequency (MHz)	MaxPeak (dBμV/m)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBμV/m)
2483.562500	53.3	v	-6.2	20.7	74.0

AV

Frequency (MHz)	Average (dBμV/m)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBμV/m)
2483.562500	42.3	v	-6.2	11.7	54.0

Figure 5: Radiated Band-Edge, g-2412MHz, H

2310~ 2410 BE 1-18GHz_HL050_FSV40_Pre


PK

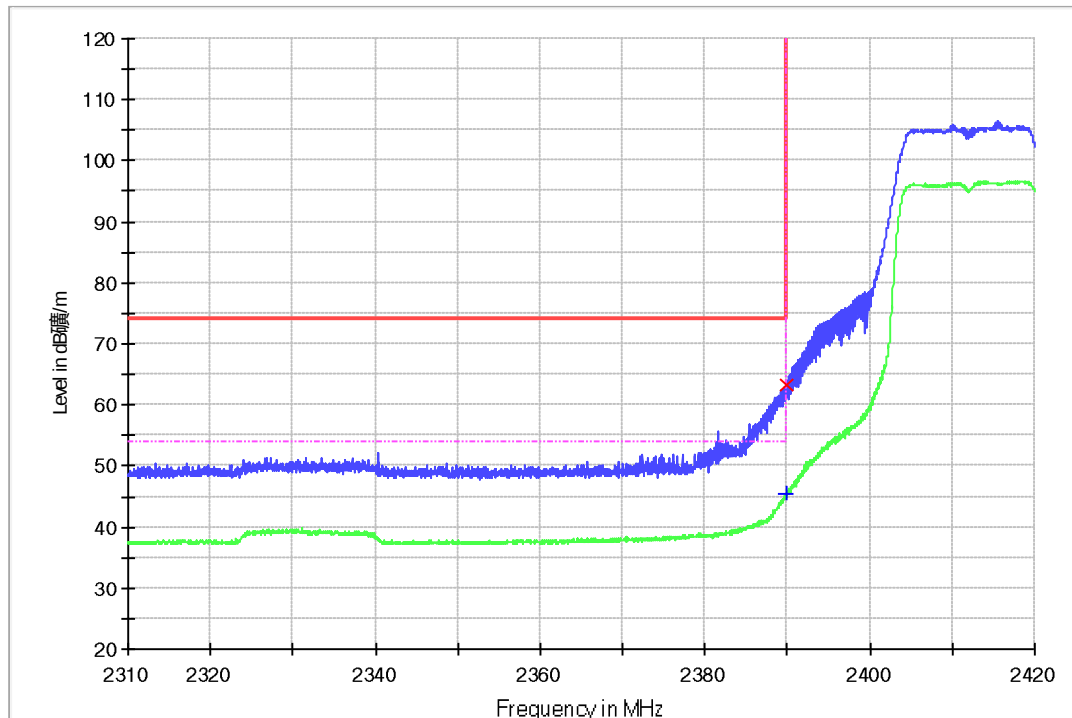
Frequency (MHz)	MaxPeak (dBμV/m)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBμV/m)
2389.942500	62.8	H	-6.0	11.2	74.0

AV

Frequency (MHz)	Average (dBμV/m)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBμV/m)
2389.942500	41.4	H	-6.0	12.6	54.0

Figure 6: Radiated Band-Edge, g-2412MHz, V

2310~ 2410 BE 1-18GHz_HL050_FSV40_Pre


PK

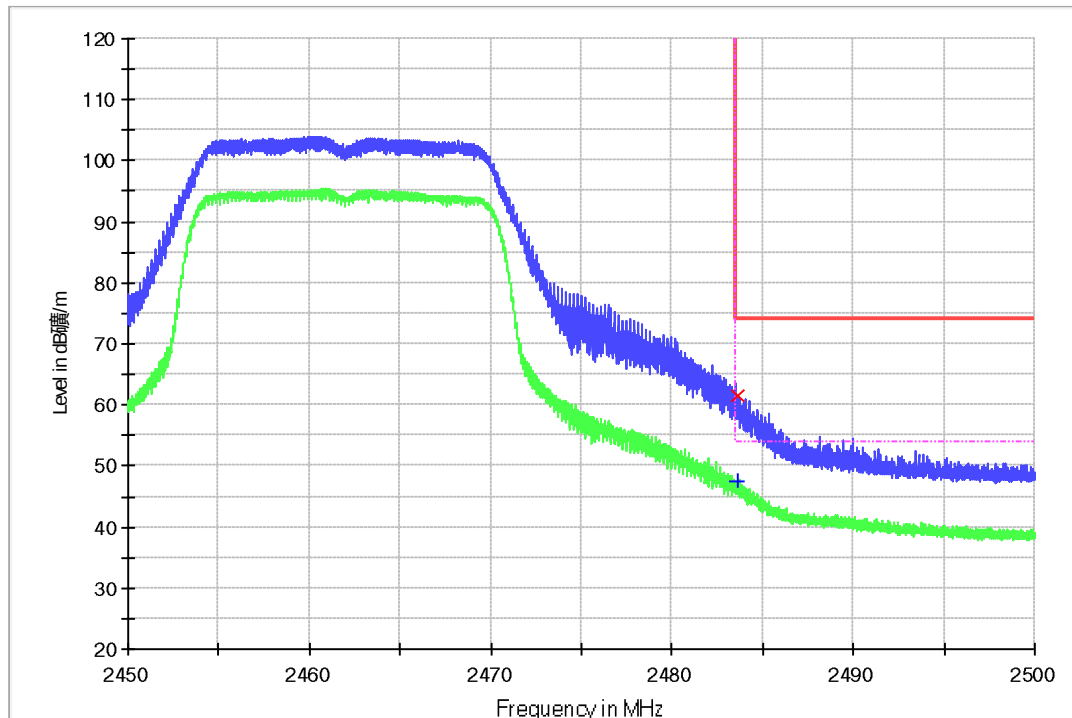
Frequency (MHz)	MaxPeak (dBμV/m)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBμV/m)
2389.942500	63.3	v	-6.0	10.7	74.0

AV

Frequency (MHz)	Average (dBμV/m)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBμV/m)
2389.942500	45.5	v	-6.0	8.5	54.0

Figure 7: Radiated Band-Edge, g-2462MHz, H

2470° 2500 BE_1-18GHz_HL050_FSV40_Pre


PK

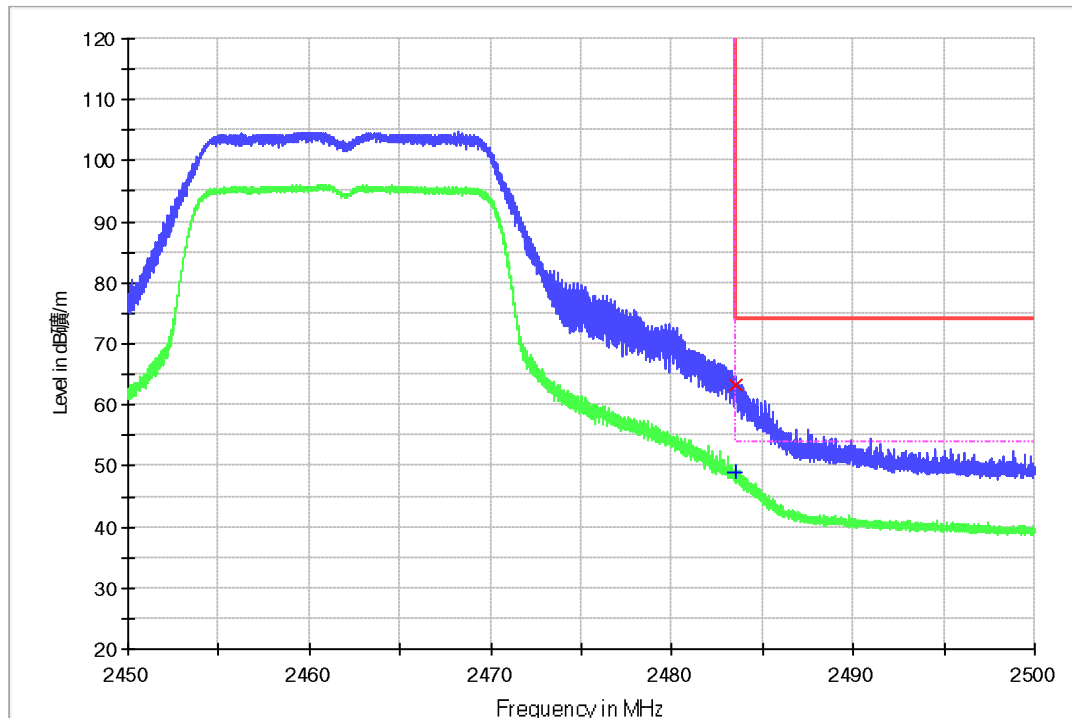
Frequency (MHz)	MaxPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)
2483.668750	61.5	H	-6.2	12.5	74.0

AV

Frequency (MHz)	Average (dBµV/m)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBµV/m)
2483.668750	47.6	H	-6.2	6.4	54.0

Figure 8: Radiated Band-Edge, g-2462MHz, V

2470° 2500 BE_1-18GHz_HL050_FSV40_Pre


PK

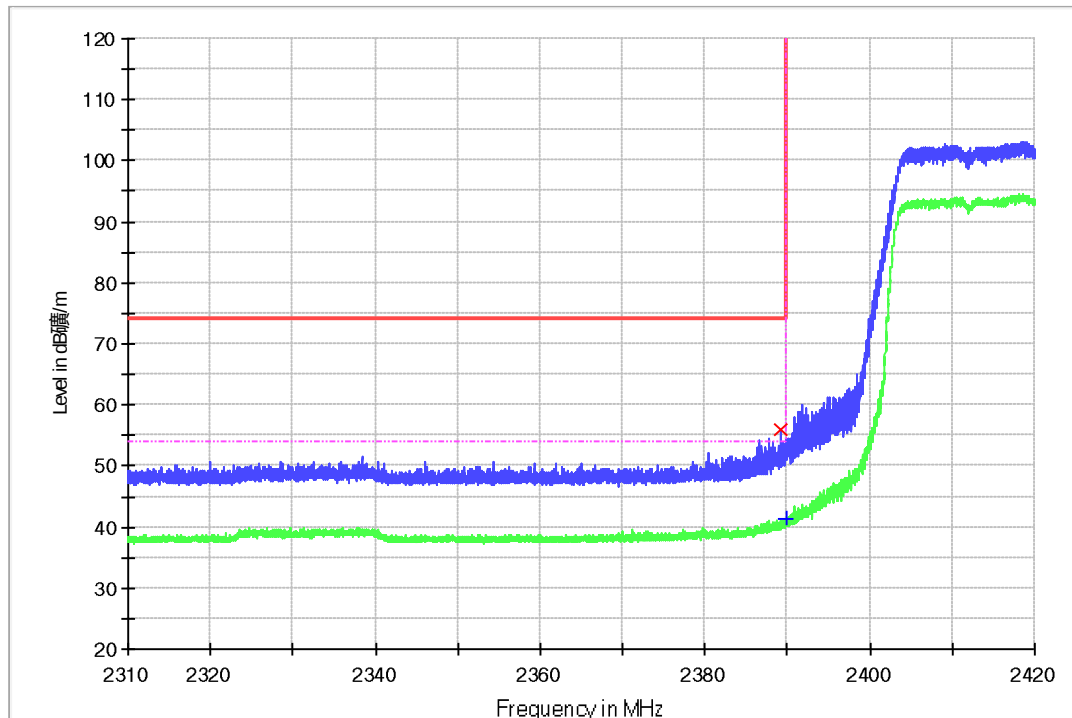
Frequency (MHz)	MaxPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)
2483.518750	63.4	v	-6.2	10.6	74.0

AV

Frequency (MHz)	Average (dBµV/m)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBµV/m)
2483.518750	48.9	v	-6.2	5.1	54.0

Figure 9: Radiated Band-Edge, n-HT20-2412MHz, H

2310~ 2410 BE 1-18GHz_HL050_FSV40_Pre


PK

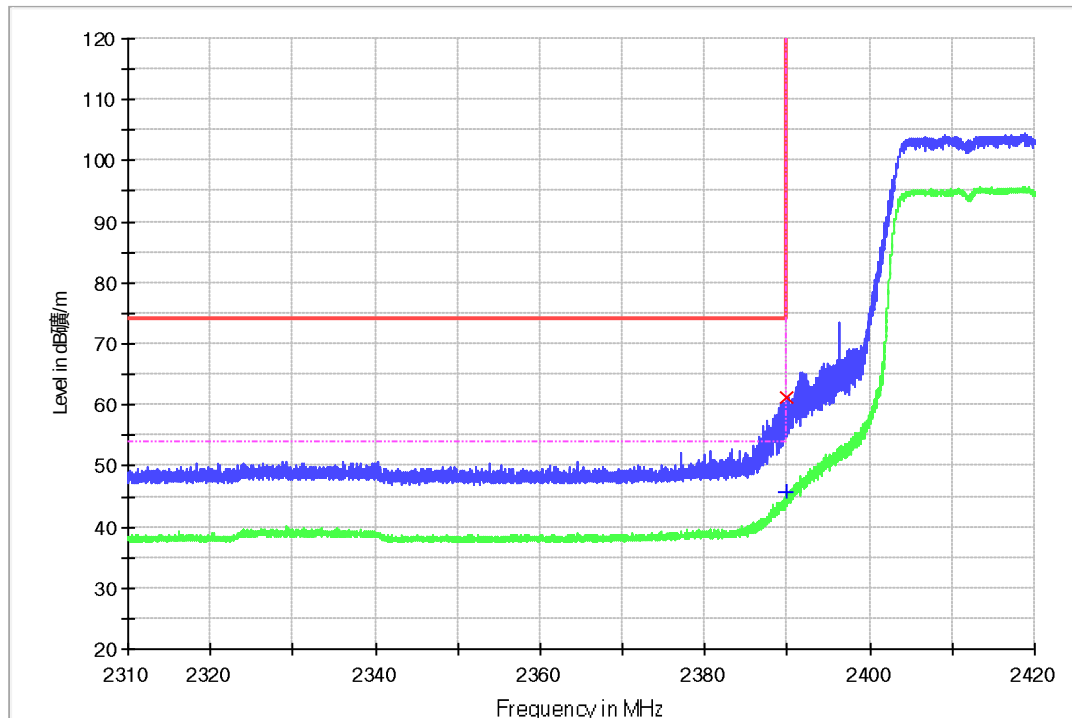
Frequency (MHz)	MaxPeak (dBμV/m)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBμV/m)
2389.112000	56.0	H	-6.0	18.0	74.0

AV

Frequency (MHz)	Average (dBμV/m)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBμV/m)
2389.959000	41.2	H	-6.0	12.8	54.0

Figure 10: Radiated Band-Edge, n-HT20-2412MHz, V

2310~ 2410 BE 1-18GHz_HL050_FSV40_Pre


PK

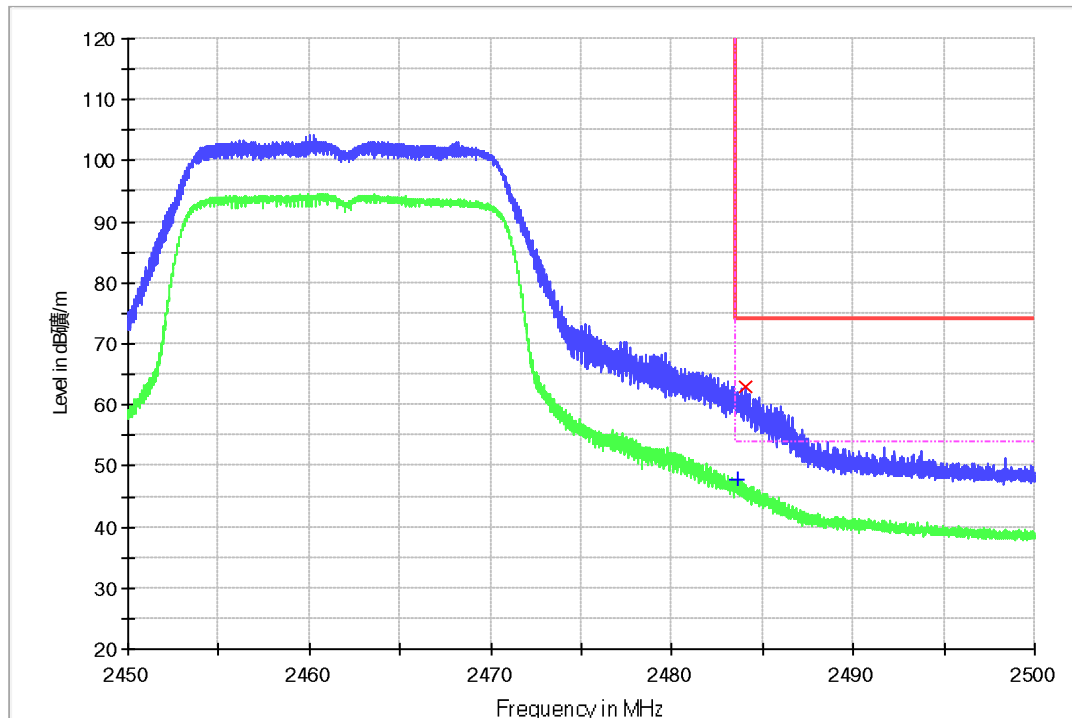
Frequency (MHz)	MaxPeak (dBμV/m)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBμV/m)
2389.948000	61.2	v	-6.0	12.8	74.0

AV

Frequency (MHz)	Average (dBμV/m)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBμV/m)
2389.948000	45.6	v	-6.0	8.4	54.0

Figure 11: Radiated Band-Edge, n-HT20-2462MHz, H

2470° 2500 BE_1-18GHz_HL050_FSV40_Pre


PK

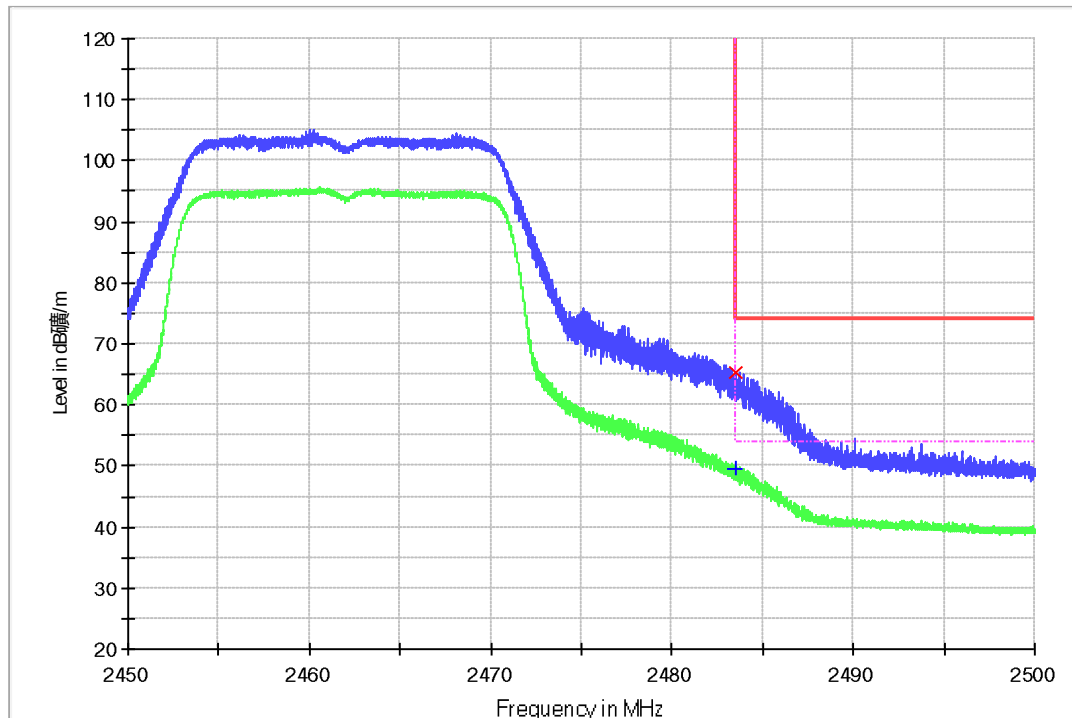
Frequency (MHz)	MaxPeak (dBμV/m)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBμV/m)
2484.012500	63.1	H	-6.2	10.9	74.0

AV

Frequency (MHz)	Average (dBμV/m)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBμV/m)
2483.581250	47.8	H	-6.2	6.2	54.0

Figure 12: Radiated Band-Edge, n-HT20-2462MHz, V

2470° 2500 BE_1-18GHz_HL050_FSV40_Pre


PK

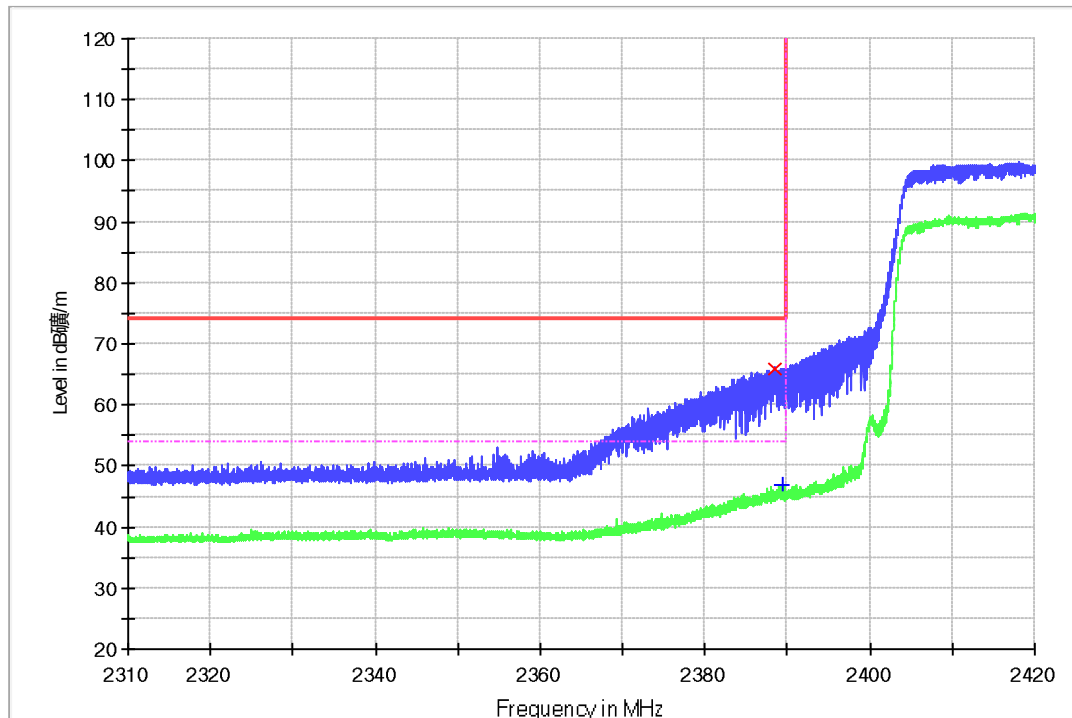
Frequency (MHz)	MaxPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)
2483.537500	65.3	v	-6.2	8.7	74.0

AV

Frequency (MHz)	Average (dBµV/m)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBµV/m)
2483.537500	49.6	v	-6.2	4.4	54.0

Figure 13: Radiated Band-Edge, n-HT40-2422MHz, H

2310~ 2410 BE 1-18GHz_HL050_FSV40_Pre


PK

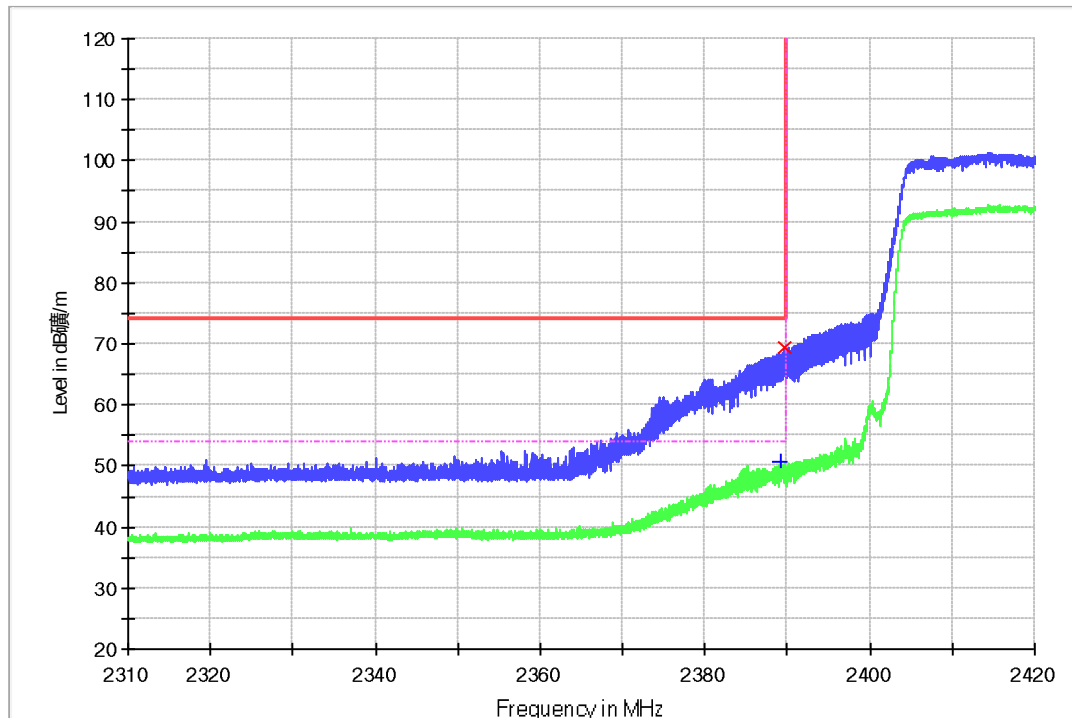
Frequency (MHz)	MaxPeak (dBμV/m)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBμV/m)
2388.386000	66.0	H	-6.0	8.0	74.0

AV

Frequency (MHz)	Average (dBμV/m)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBμV/m)
2389.442000	47.0	H	-6.0	7.0	54.0

Figure 14: Radiated Band-Edge, n-HT40-2422MHz, V

2310 2410 BE 1-18GHz_HL050_FSV40_Pre


PK

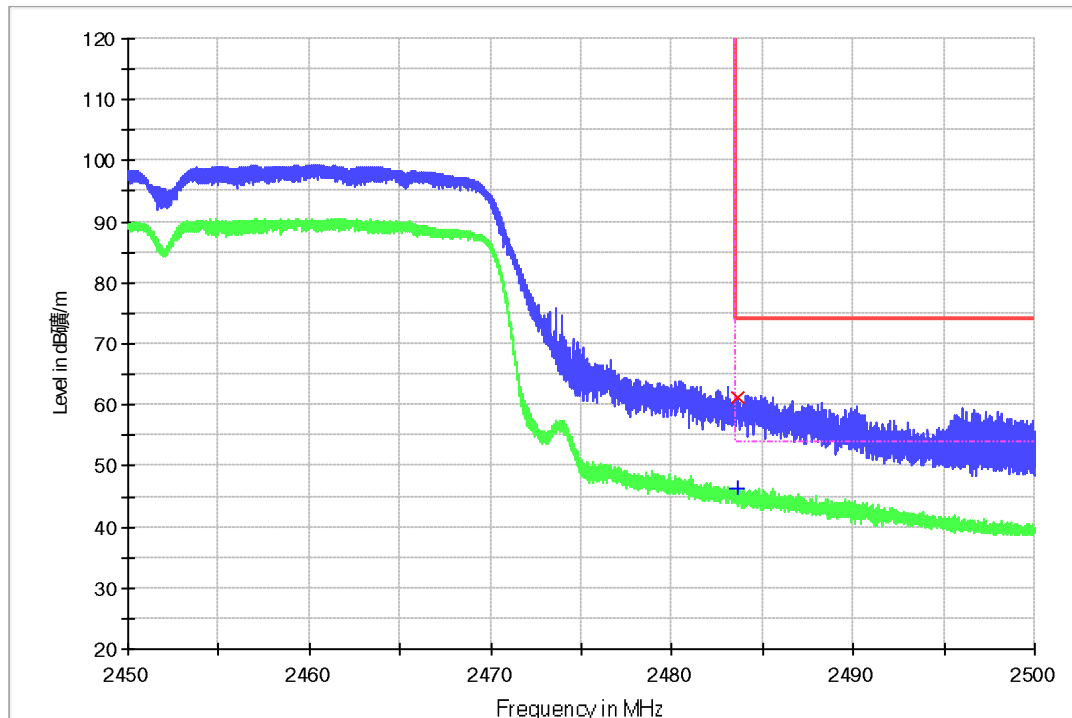
Frequency (MHz)	MaxPeak (dBμV/m)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBμV/m)
2389.541000	69.3	v	-6.0	4.7	74.0

AV

Frequency (MHz)	Average (dBμV/m)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBμV/m)
2389.266000	50.8	v	-6.0	3.2	54.0

Figure 15: Radiated Band-Edge, n-HT40-2452MHz, H

2470° 2500 BE_1-18GHz_HL050_FSV40_Pre


PK

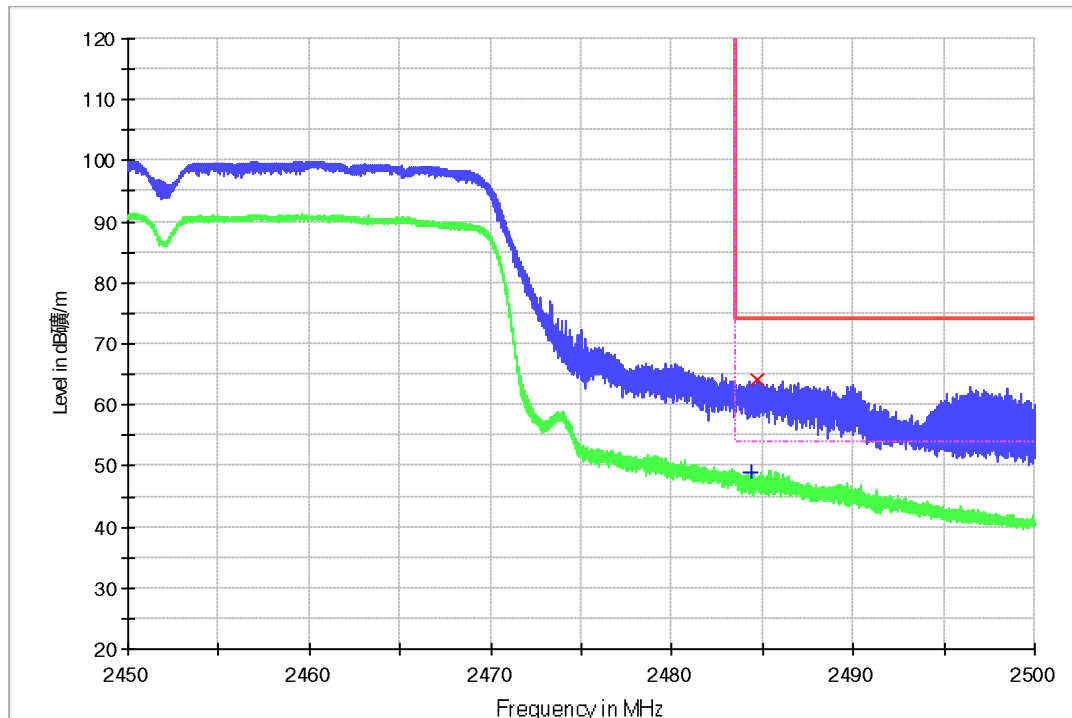
Frequency (MHz)	MaxPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)
2483.568750	61.1	H	-6.2	12.9	74.0

AV

Frequency (MHz)	Average (dBµV/m)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBµV/m)
2483.568750	46.3	H	-6.2	7.7	54.0

Figure 16: Radiated Band-Edge, n-HT40-2452MHz, V

2470° 2500 BE_1-18GHz_HL050_FSV40_Pre


PK

Frequency (MHz)	MaxPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)
2484.656250	64.2	v	-6.2	9.8	74.0

AV

Frequency (MHz)	Average (dBµV/m)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBµV/m)
2484.400000	49.0	v	-6.2	5.0	54.0

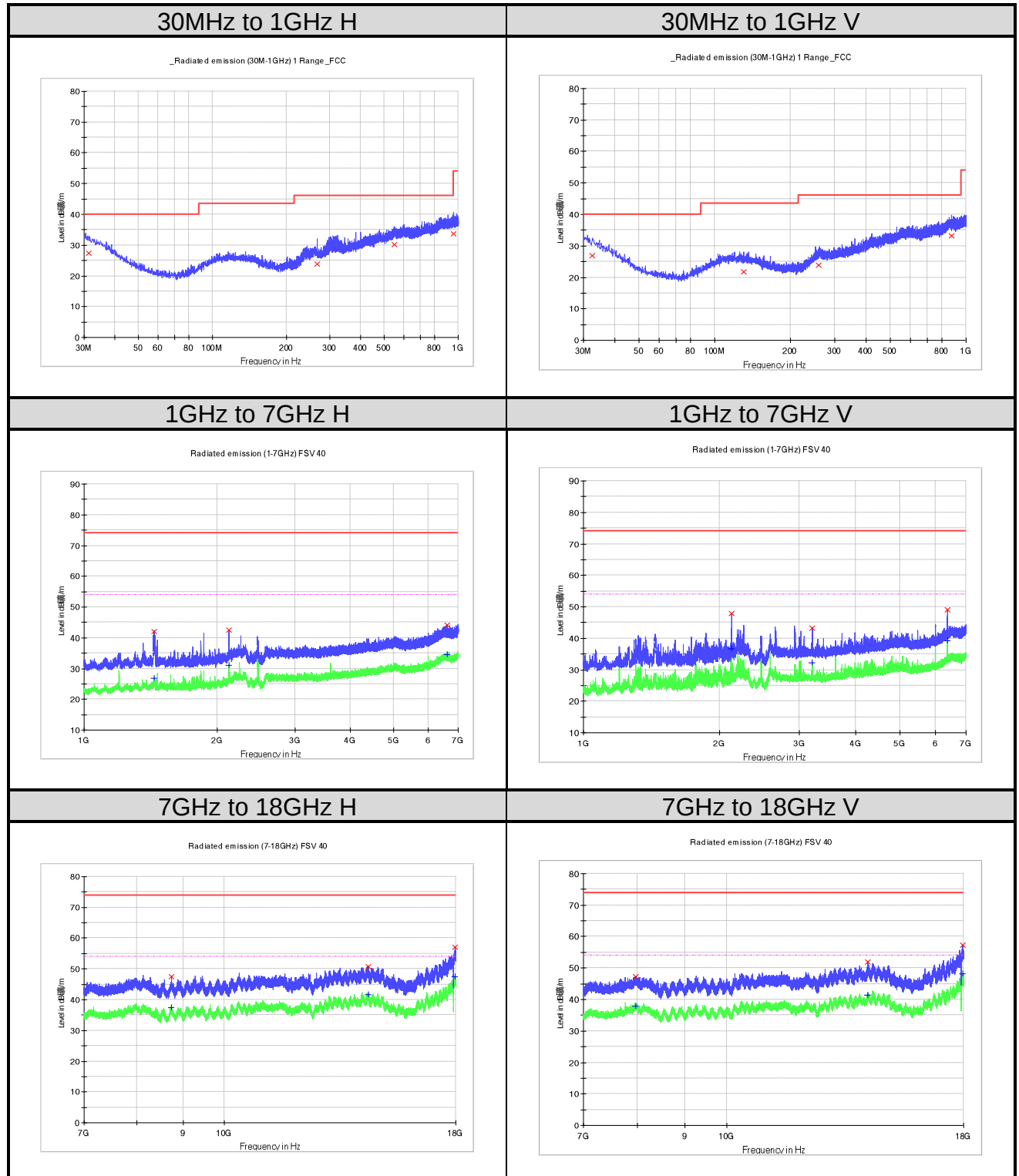
5.2.2 Radiated Spurious Emission

RESULT:**Pass**

Date of testing : 2025-03-11
Ambient temperature : 21.9°C
Relative humidity : 56.2%
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 3, August 2023, Clause 5.5
Test procedure : ANSI C63.10: 2013
Test voltage : DC 14.4V
Test modes applied : A

Note:

1. All the test modes were applied, only the worst case were shown in this report.
2. For the frequency range from 18GHz to 25GHz, no emission was found.

Figure 17: Radiated Spurious Emission, b-2462MHz


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Limit and Margin
QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
31.333750	27.5	H	24.2	12.5	40.0
266.316250	23.8	H	20.6	22.2	46.0
550.405000	30.1	H	26.7	15.9	46.0
960.108750	33.6	H	29.5	20.4	54.0
32.546250	26.9	V	23.6	13.1	40.0
130.395000	21.8	V	18.7	21.7	43.5
258.556250	23.8	V	20.6	22.2	46.0
874.870000	33.3	V	28.6	12.7	46.0

PK

Frequency (MHz)	MaxPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)
1440.181818	42.1	H	-18.6	31.9	74.0
2129.090909	42.4	H	-16.6	31.6	74.0
6598.000000	44.1	H	-7.7	29.9	74.0
8733.187500	47.5	H	-5.0	26.5	74.0
14401.968750	50.7	H	2.4	23.3	74.0
17981.437500	57.1	H	12.1	16.9	74.0
2124.181818	47.9	V	-16.6	26.1	74.0
3195.454546	43.2	V	-14.7	30.8	74.0
6376.818182	49.0	V	-8.5	25.0	74.0
7968.000000	47.3	V	-3.6	26.7	74.0
14189.187500	51.8	V	1.4	22.2	74.0
17952.562500	57.4	V	11.5	16.6	74.0

AV

Frequency (MHz)	Average (dBµV/m)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBµV/m)
1440.181818	26.9	H	-18.6	27.1	54.0
2129.090909	31.1	H	-16.6	22.9	54.0
6598.000000	34.5	H	-7.7	19.5	54.0
8733.187500	37.5	H	-5.0	16.5	54.0
14401.968750	41.7	H	2.4	12.3	54.0
17981.437500	47.5	H	12.1	6.5	54.0
2124.181818	36.6	V	-16.6	17.4	54.0
3195.454546	32.3	V	-14.7	21.7	54.0
6376.818182	39.2	V	-8.5	14.8	54.0
7968.000000	37.9	V	-3.6	16.1	54.0
14189.187500	41.5	V	1.4	12.5	54.0
17952.562500	48.2	V	11.5	5.8	54.0

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