Prüfbericht - Produkte
Test Report - Products

TÜVRheinland®

Prüfbericht-Nr.: *Test report no.:*	**CN24ZER1 001**	**Auftrags-Nr.:** *Order no.:*	326030199	Seite 1 von 80 *Page 1 of 80*
Kunden-Referenz-Nr.: *Client reference no.:*	1288983	**Auftragsdatum:** *Order date:*	2024-06-11	
Auftraggeber: *Client:*	**IKEA of Sweden AB** Box 702, Almhult, Sweden			
Prüfgegenstand: *Test item:*	NATTBAD (Bluetooth speaker)			
Bezeichnung / Typ-Nr.: *Identification / Type no.:*	E2405			
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:*	2024-07-08	Refer to photo document.		
Prüfmuster-Nr.: *Test sample no:*	A003763652-001~002			
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:	X Hongfei Wu	**genehmigt von:** authorized by:	X Elliot Zhang	
Datum: *Date:* 2024-11-12	Signed by: Hongfei Wu	**Datum:** *Date:* 2024-11-12	Signed by: Elliot Zhang	
Stellung / *Position:*	Sachverständige(r)/Expert	**Stellung** / *Position:*	Sachverständige(r)/Expert	
Sonstiges / *Other:*	FCC ID: FHO-E2405 IC: 10912A-E2405 HVIN: E2405 PMN: NATTBAD			
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.

Anmerkungen
Remarks

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4	Die Entscheidungsregel für Konformitätserklärungen basierend auf numerischen Messergebnisen 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. *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.*

TEST SUMMARY

5.1.1 ANTENNA REQUIREMENT
RESULT: *Pass*

5.1.2 20DB & 99% BANDWIDTH
RESULT: *Pass*

5.1.3 PEAK OUTPUT POWER
RESULT: *Pass*

5.1.4 FREQUENCY SEPARATION
RESULT: *Pass*

5.1.5 NUMBER OF HOPPING FREQUENCY
RESULT: *Pass*

5.1.6 TIME OF OCCUPANCY
RESULT: *Pass*

5.1.7 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*

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1. General Remarks

1.1 Complementary Materials

Null.

2. Test Sites

2.1 Test Facilities

TÜV Rheinland (Shanghai) Co., Ltd.
No.14 building and north half of No.10 workshop building, No.525, Yuewang Lingang South Road, Pingqian (Taicang) Modern Industrial Park, Shaxi Town, Taicang City, Jiangsu Province, P.R. 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 DD.MM.YYYY
G1811378	3m semi-anechoic chamber	SAC3	Frankonia	03.12.2026
G1811425	Bilog antenna	CBL 6112D	Teseq	20.04.2026
G1825371	Preamplifier	EMC051845SE	Taiwan EMCI	24.07.2025
G1825372	Preamplifier	EMC184045SE	Taiwan EMCI	24.07.2025
9059157	Double ridged broadband horn antenna	BBHA 9120 D	Schwarzbeck	16.03.2029
G1831065	Broadband horn antenna	BBHA 9170	Schwarzbeck	18.06.2028
G1822702	Spectrum analyser	FSV40	Rohde&Schwarz	06.05.2025
G1811391	EMI test receiver	ESCI	Rohde&Schwarz	16.10.2025
9047770	Wireless connectivity tester	CMW270	Rohde & Schwarz	15.12.2024
9061503	Shielded enclosure	10.055x3.605x3.00	Frankonia	08.11.2028
9023229	EMI test receiver	ESR3	Rohde&Schwarz	03.08.2025
G1830003	Artificial mains network	ENV432	Rohde&Schwarz	11.10.2025
G1824248	Dual display multimeter	F45	Fluke	28.06.2025
software				
	EMC measurement software	EMC32 (Ver 10.20.01)	Rohde&Schwarz	NA
	EMC measurement software	EMC32 (Ver 11.40.00)	Rohde&Schwarz	NA
	EMI measurement software	EMC32-E+(10.60.20)	Rohde&Schwarz	NA

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 basics 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 speaker and which support Bluetooth and 2.4GHz proprietary function.
The aim of this report is to evaluate RF character of Bluetooth of the EUT.

3.2 Ratings and System Details

Table 3: Technical Specification of EUT

General Description of EUT	
Product Name:	NATTBAD
Model No.:	E2405
Operation Voltage:	AC 100~240V, 50/60Hz
RF Technical:	1) Bluetooth Classic 2) 2.4 GHz proprietary
Technical Specification of Bluetooth Classic	
Frequency Range:	2402~2480MHz
Modulation Type:	GFSK, π/4 DQPSK, 8DPSK
Antenna Type:	PCB Antenna
Antenna Gain:	1.5 dBi (declared by client)

Table 4: RF Channel List

RF Channel	Frequency [MHz]	RF Channel	Frequency [MHz]	RF Channel	Frequency [MHz]	RF Channel	Frequency [MHz]
00	2402	20	2422	40	2442	60	2462
01	2403	21	2423	41	2443	61	2463
02	2404	22	2424	42	2444	62	2464
03	2405	23	2425	43	2445	63	2465
04	2406	24	2426	44	2446	64	2466
05	2407	25	2427	45	2447	65	2467
06	2408	26	2428	46	2448	66	2468
07	2409	27	2429	47	2449	67	2469
08	2410	28	2430	48	2450	68	2470
09	2411	29	2431	49	2451	69	2471
10	2412	30	2432	50	2452	70	2472
11	2413	31	2433	51	2453	71	2473
12	2414	32	2434	52	2454	72	2474
13	2415	33	2435	53	2455	73	2475
14	2416	34	2436	54	2456	74	2476
15	2417	35	2437	55	2457	75	2477
16	2418	36	2438	56	2458	76	2478
17	2419	37	2439	57	2459	77	2479
18	2420	38	2440	58	2460	78	2480
19	2421	39	2441	59	2461	/	/

3.3 Independent Operation Modes

Test frequencies are lowest channel: 2402 MHz, middle channel: 2441 MHz, highest channel:2480 MHz and hopping mode.

The basic operation modes are:
A. On, Bluetooth Classic transmitting mode
B. Off

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.
Test Software: Telink BDT, V5.7.4

Table 5: Power parameter value

Mode	Power Parameter Setting Value
BR	10.46
EDR	-0.01

4.3 Special Accessories and Auxiliary Equipment

Null.

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 1.5 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 6: 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:	1.5 dBi
Verdict:	PASS	

5.1.2 20dB & 99% Bandwidth

RESULT: **Pass**

Date of testing	:	2024-08-12~2024-10-29
Ambient temperature	:	20.3~22.5°C
Relative humidity	:	48.3~53.9%
Atmospheric pressure	:	101kPa
Test requirement	:	FCC Part 15.247(a)(1) RSS-247 Issue 3, August 2023, Clause 5.1(a)
Test procedure	:	ANSI C63.10: 2013
Test voltage	:	AC 120V, 60Hz
Test modes applied	:	A

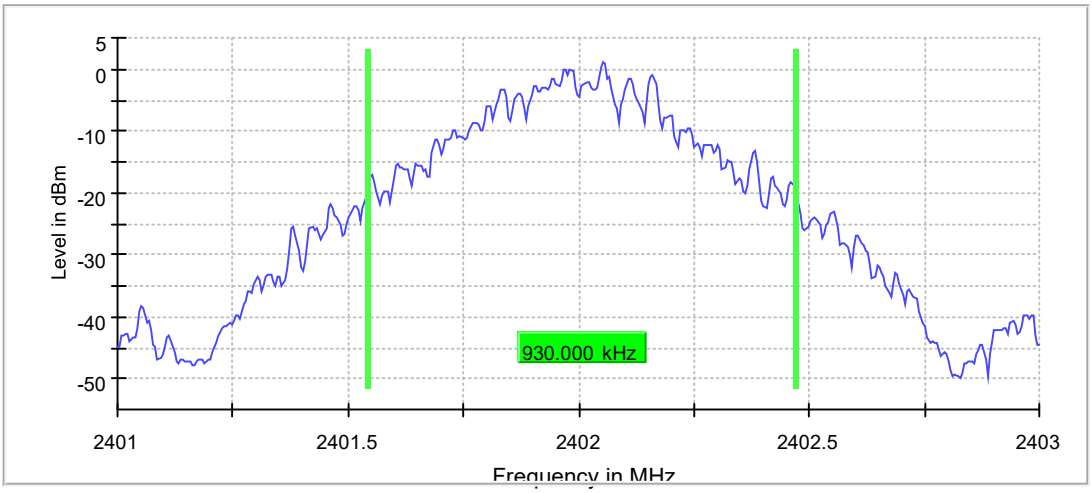
Emission Bandwidth 20 dB (1-DH5, 2402 MHz)

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2402.000000	0.930000	---	---	2401.542500	2402.472500

(continuation of the "20 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2402.000000	1.1	PASS

20 dB Bandwidth



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40100 GHz	2.40100 GHz
Stop Frequency	2.40300 GHz	2.40300 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
Sweeptime	189.648 µs	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	10 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.09 dB	0.50 dB

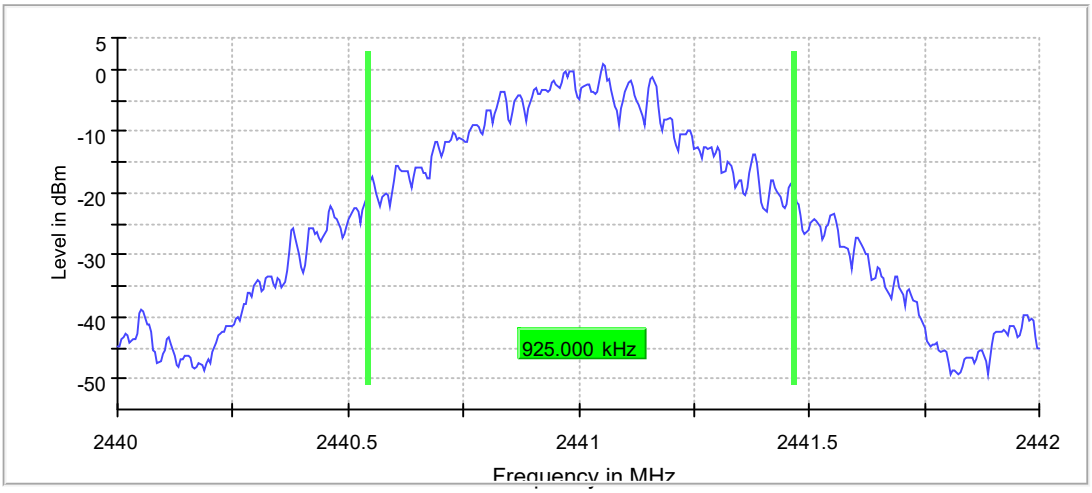
Emission Bandwidth 20 dB (1-DH5, 2441 MHz)

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2441.000000	0.925000	---	---	2440.542500	2441.467500

(continuation of the "20 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2441.000000	0.8	PASS

20 dB Bandwidth



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.44000 GHz	2.44000 GHz
Stop Frequency	2.44200 GHz	2.44200 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
Sweeptime	189.648 µs	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	10 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.10 dB	0.50 dB

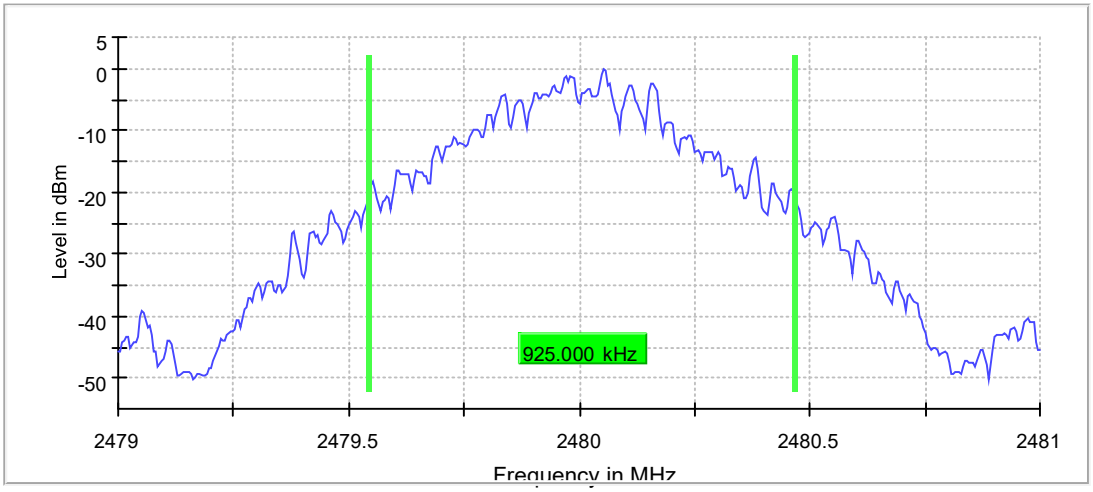
Emission Bandwidth 20 dB (1-DH5, 2480 MHz)

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2480.000000	0.925000	---	---	2479.542500	2480.467500

(continuation of the "20 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2480.000000	-0.1	PASS

20 dB Bandwidth



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.47900 GHz	2.47900 GHz
Stop Frequency	2.48100 GHz	2.48100 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
Sweeptime	189.648 µs	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	9 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.10 dB	0.50 dB

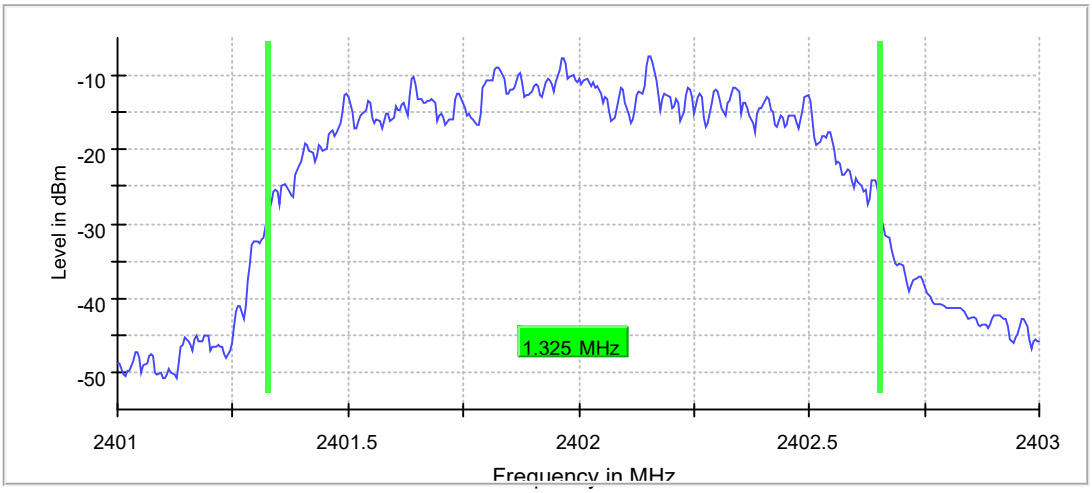
Emission Bandwidth 20 dB (2-DH5, 2402 MHz)

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2402.000000	1.325000	---	---	2401.327500	2402.652500

(continuation of the "20 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2402.000000	-7.5	PASS

20 dB Bandwidth



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40100 GHz	2.40100 GHz
Stop Frequency	2.40300 GHz	2.40300 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
Sweeptime	189.648 µs	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	7 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.12 dB	0.50 dB

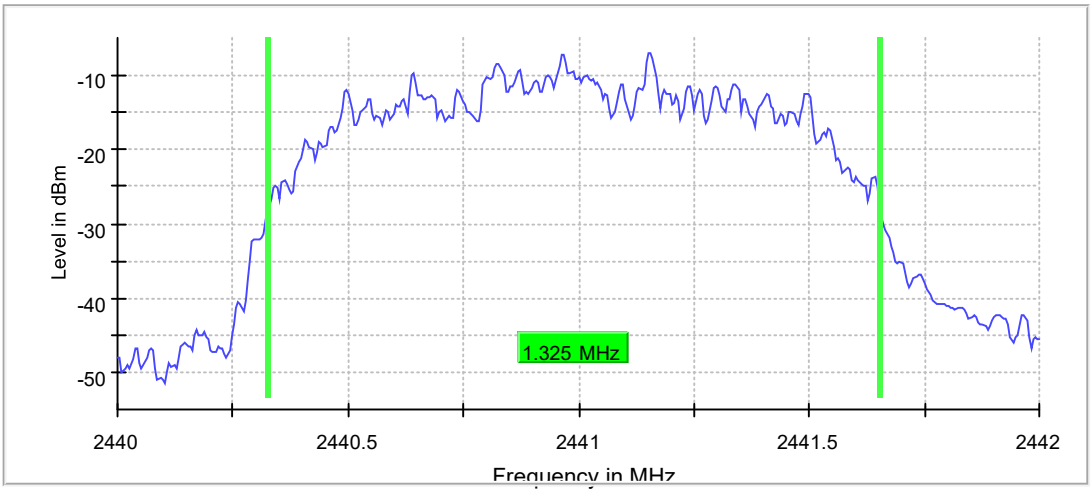
Emission Bandwidth 20 dB (2-DH5, 2441 MHz)

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2441.000000	1.325000	---	---	2440.327500	2441.652500

(continuation of the "20 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2441.000000	-7.0	PASS

20 dB Bandwidth



Measurement

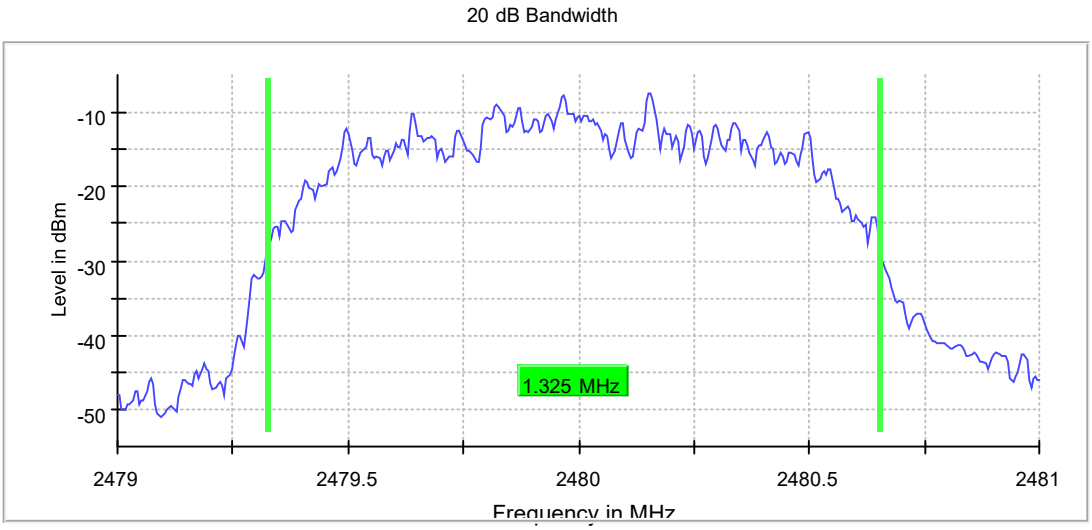
Setting	Instrument Value	Target Value
Start Frequency	2.44000 GHz	2.44000 GHz
Stop Frequency	2.44200 GHz	2.44200 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
Sweeptime	189.648 µs	AUTO
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	9 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.23 dB	0.50 dB

Emission Bandwidth 20 dB (2-DH5, 2480 MHz)

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2480.000000	1.325000	---	---	2479.327500	2480.652500

(continuation of the "20 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2480.000000	-7.5	PASS



Measurement

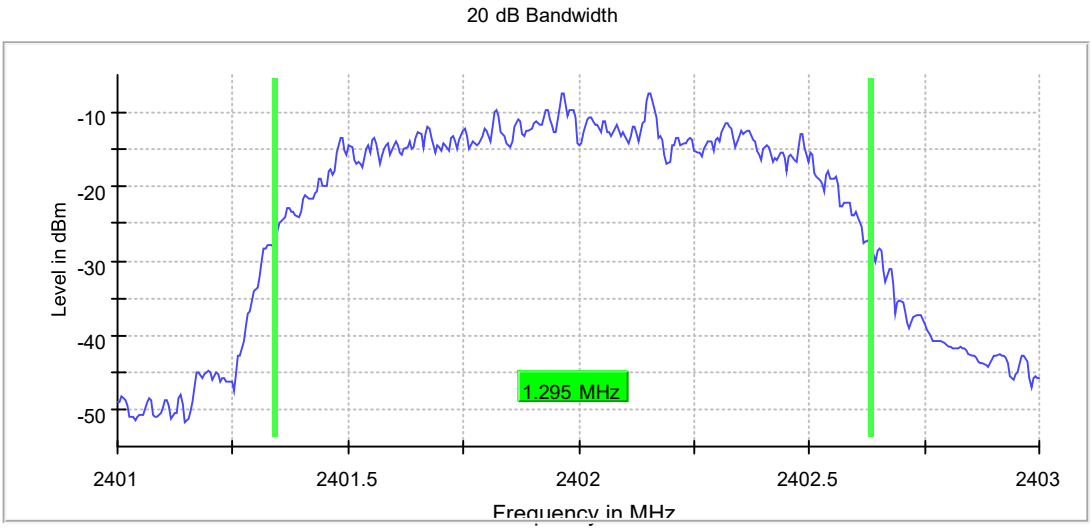
Setting	Instrument Value	Target Value
Start Frequency	2.47900 GHz	2.47900 GHz
Stop Frequency	2.48100 GHz	2.48100 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
Sweeptime	189.648 µs	AUTO
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	8 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.12 dB	0.50 dB

Emission Bandwidth 20 dB (3-DH5, 2402 MHz)

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2402.000000	1.295000	---	---	2401.342500	2402.637500

(continuation of the "20 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2402.000000	-7.4	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40100 GHz	2.40100 GHz
Stop Frequency	2.40300 GHz	2.40300 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
Sweeptime	189.648 µs	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	12 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.10 dB	0.50 dB

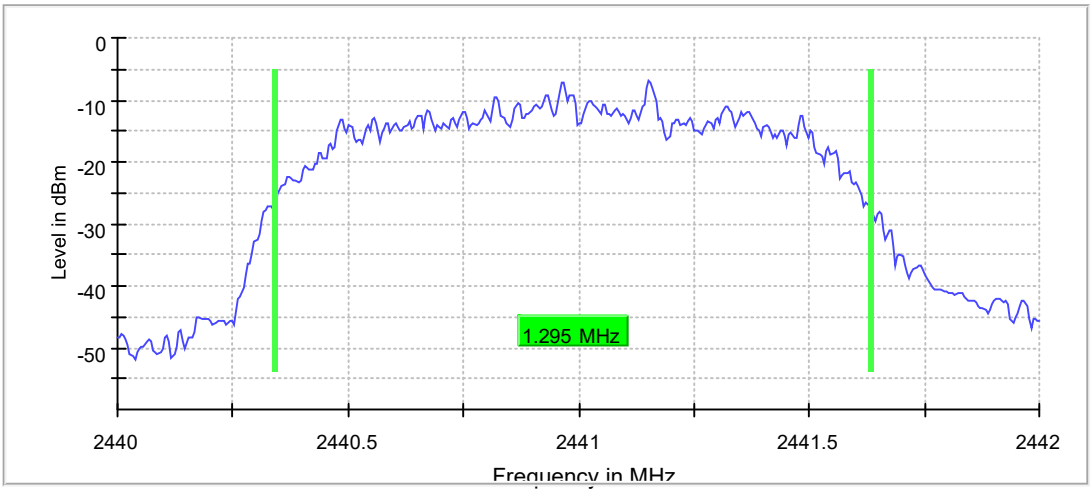
Emission Bandwidth 20 dB (3-DH5, 2441 MHz)

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2441.000000	1.295000	---	---	2440.342500	2441.637500

(continuation of the "20 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2441.000000	-7.0	PASS

20 dB Bandwidth



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.44000 GHz	2.44000 GHz
Stop Frequency	2.44200 GHz	2.44200 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
Sweeptime	189.648 µs	AUTO
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	7 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.13 dB	0.50 dB

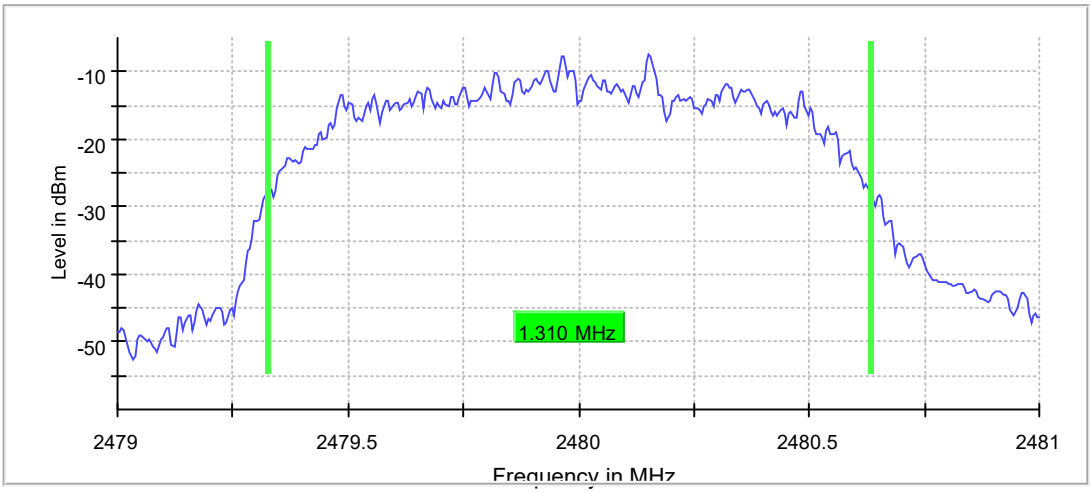
Emission Bandwidth 20 dB (3-DH5, 2480 MHz)

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2480.000000	1.310000	---	---	2479.327500	2480.637500

(continuation of the "20 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
2480.000000	-7.6	PASS

20 dB Bandwidth



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.47900 GHz	2.47900 GHz
Stop Frequency	2.48100 GHz	2.48100 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
Sweeptime	189.648 µs	AUTO
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	8 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.21 dB	0.50 dB

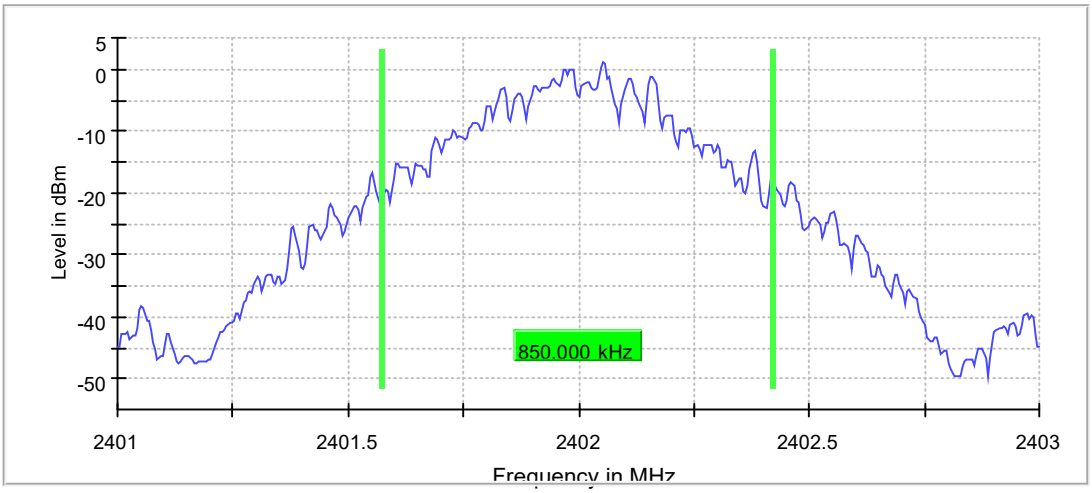
Occupied Channel Bandwidth 99% (1-DH5, 2402 MHz)

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2402.000000	0.850000	---	---	2401.572500	2402.422500

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Result
2402.000000	PASS

99 % Bandwidth



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40100 GHz	2.40100 GHz
Stop Frequency	2.40300 GHz	2.40300 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
Sweeptime	189.648 µs	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	500	500
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	6 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.14 dB	0.30 dB

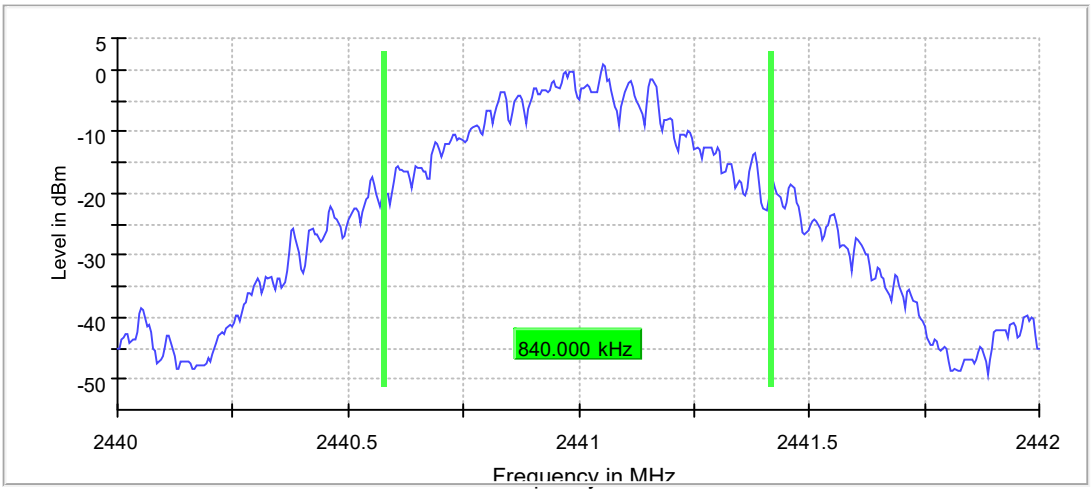
Occupied Channel Bandwidth 99% (1-DH5, 2441 MHz)

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2441.000000	0.840000	---	---	2440.577500	2441.417500

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Result
2441.000000	PASS

99 % Bandwidth



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.44000 GHz	2.44000 GHz
Stop Frequency	2.44200 GHz	2.44200 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
Sweeptime	189.648 µs	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	500	500
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	5 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.15 dB	0.30 dB

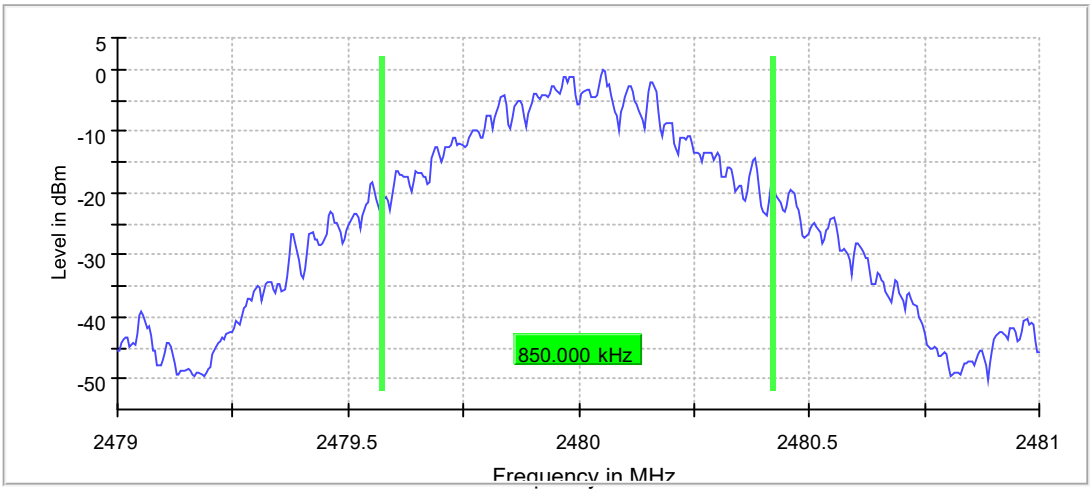
Occupied Channel Bandwidth 99% (1-DH5, 2480 MHz)

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2480.000000	0.850000	---	---	2479.572500	2480.422500

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Result
2480.000000	PASS

99 % Bandwidth



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.47900 GHz	2.47900 GHz
Stop Frequency	2.48100 GHz	2.48100 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
Sweeptime	189.648 µs	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	500	500
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	6 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.10 dB	0.30 dB

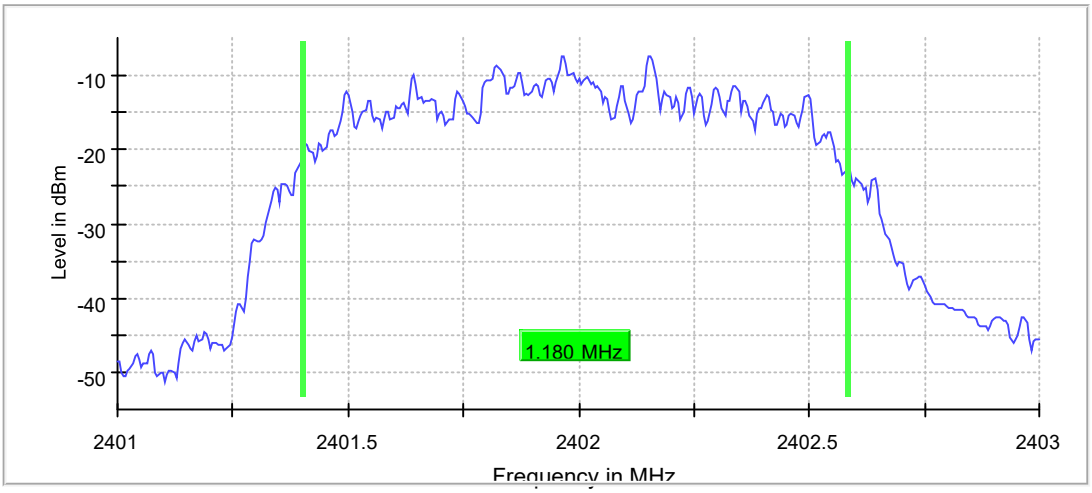
Occupied Channel Bandwidth 99% (2-DH5, 2402 MHz)

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2402.000000	1.180000	---	---	2401.402500	2402.582500

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Result
2402.000000	PASS

99 % Bandwidth



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40100 GHz	2.40100 GHz
Stop Frequency	2.40300 GHz	2.40300 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
Sweeptime	189.648 µs	AUTO
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	500	500
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	6 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.14 dB	0.30 dB

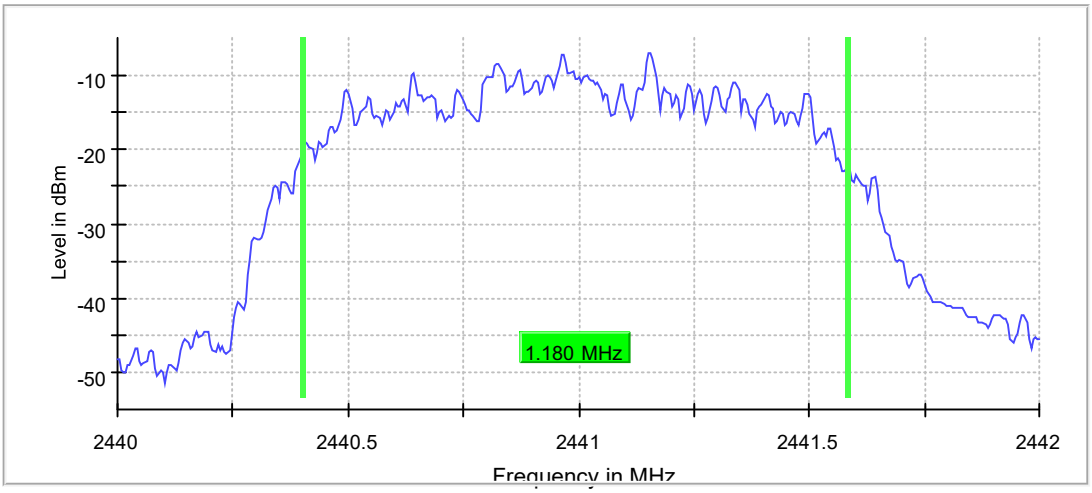
Occupied Channel Bandwidth 99% (2-DH5, 2441 MHz)

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2441.000000	1.180000	---	---	2440.402500	2441.582500

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Result
2441.000000	PASS

99 % Bandwidth



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.44000 GHz	2.44000 GHz
Stop Frequency	2.44200 GHz	2.44200 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
Sweeptime	189.648 µs	AUTO
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	500	500
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	6 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.26 dB	0.30 dB

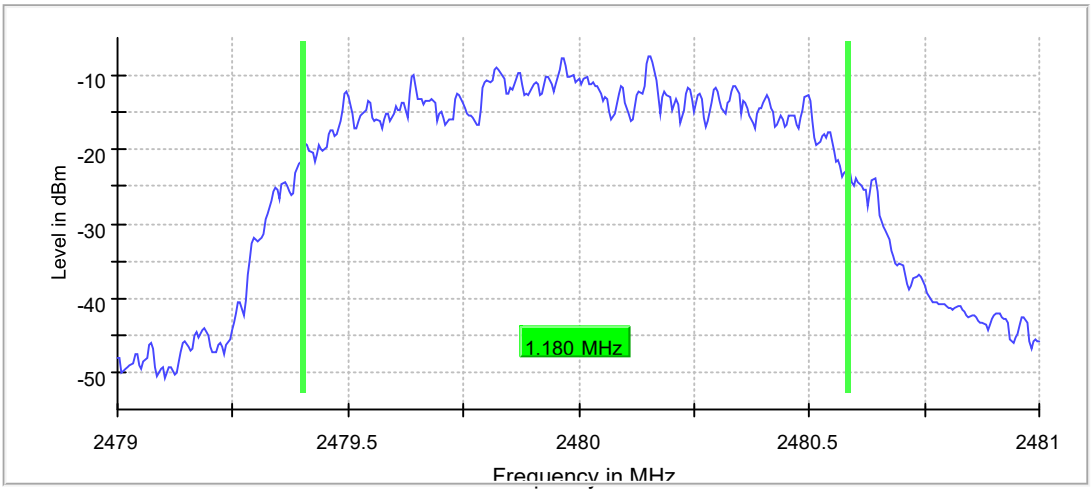
Occupied Channel Bandwidth 99% (2-DH5, 2480 MHz)

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2480.000000	1.180000	---	---	2479.402500	2480.582500

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Result
2480.000000	PASS

99 % Bandwidth



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.47900 GHz	2.47900 GHz
Stop Frequency	2.48100 GHz	2.48100 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
Sweeptime	189.648 µs	AUTO
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	500	500
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	5 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.14 dB	0.30 dB

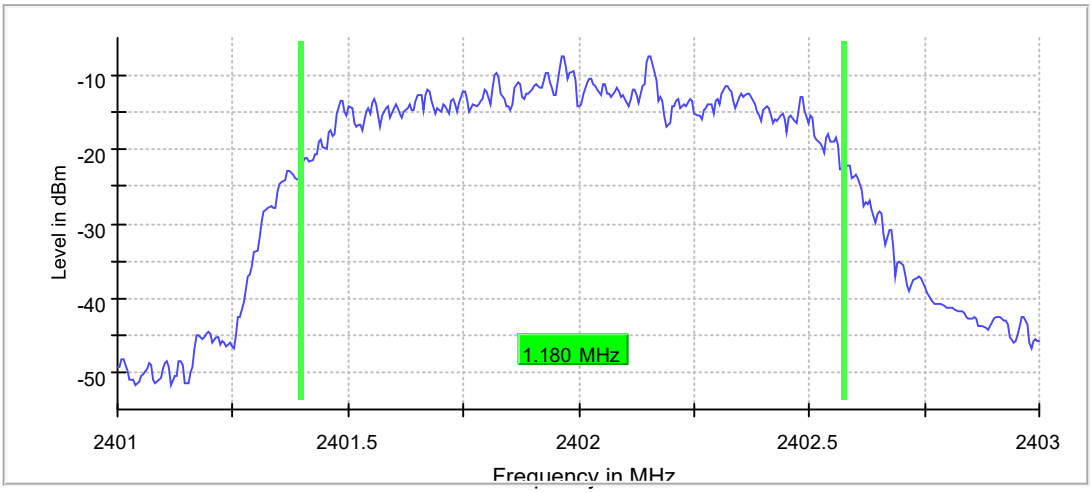
Occupied Channel Bandwidth 99% (3-DH5, 2402 MHz)

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2402.000000	1.180000	---	---	2401.397500	2402.577500

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Result
2402.000000	PASS

99 % Bandwidth



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40100 GHz	2.40100 GHz
Stop Frequency	2.40300 GHz	2.40300 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
Sweeptime	189.648 µs	AUTO
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	500	500
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	6 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.10 dB	0.30 dB

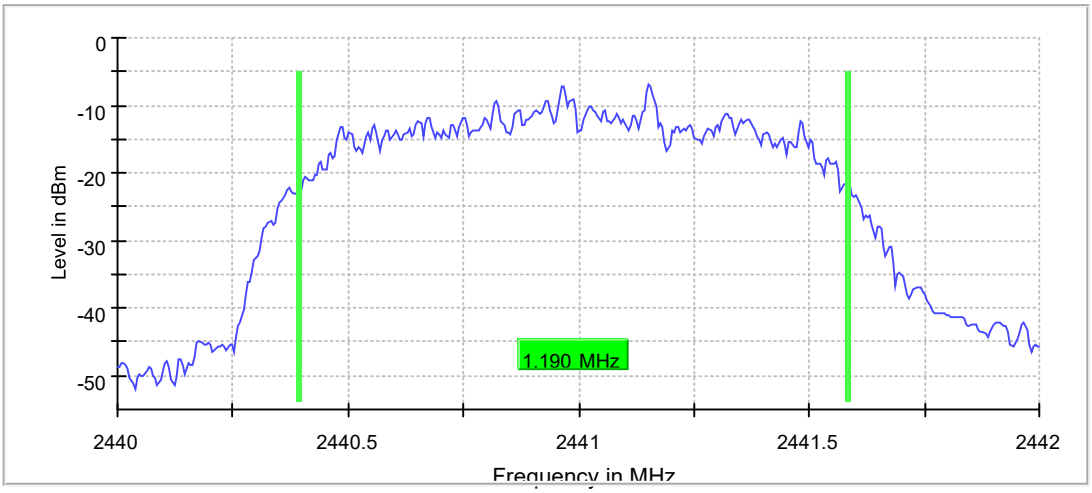
Occupied Channel Bandwidth 99% (3-DH5, 2441 MHz)

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2441.000000	1.190000	---	---	2440.392500	2441.582500

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Result
2441.000000	PASS

99 % Bandwidth



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.44000 GHz	2.44000 GHz
Stop Frequency	2.44200 GHz	2.44200 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
Sweeptime	189.648 µs	AUTO
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	500	500
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	5 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.20 dB	0.30 dB

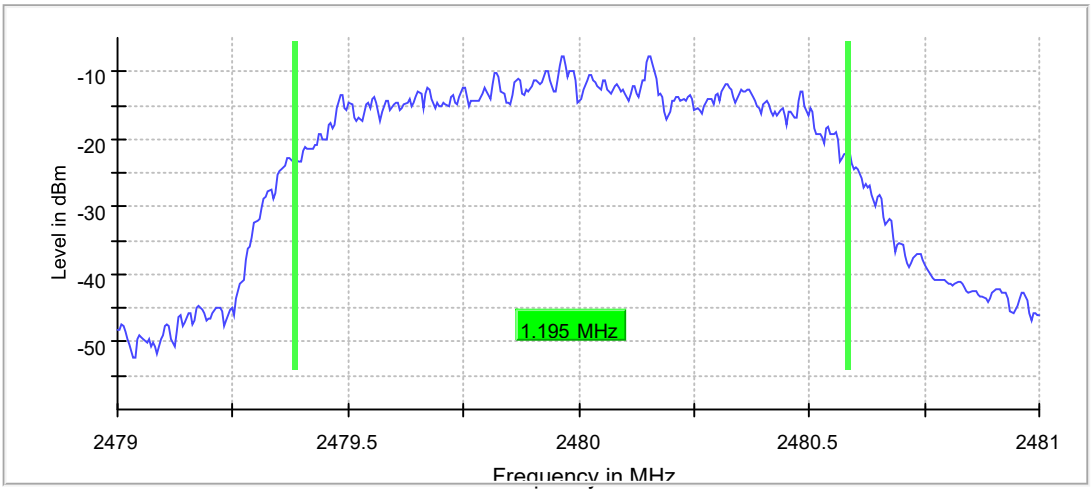
Occupied Channel Bandwidth 99% (3-DH5, 2480 MHz)

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2480.000000	1.195000	---	---	2479.387500	2480.582500

(continuation of the "99 % Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Result
2480.000000	PASS

99 % Bandwidth



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.47900 GHz	2.47900 GHz
Stop Frequency	2.48100 GHz	2.48100 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
Sweeptime	189.648 µs	AUTO
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	500	500
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	5 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.12 dB	0.30 dB

5.1.3 Peak Output Power

RESULT: **Pass**

Date of testing	:	2024-08-12~2024-10-29
Ambient temperature	:	20.3~22.5°C
Relative humidity	:	48.3~53.9%
Atmospheric pressure	:	101kPa
Test requirement	:	FCC Part 15.247(b)(1) RSS-247 Issue 3, August 2023, Clause 5.4(b)
Test procedure	:	ANSI C63.10: 2013
Test voltage	:	AC 120V, 60Hz
Test modes applied	:	A

Table 7: Peak Output Power

Test Mode	Frequency [MHz]	Maximum Peak Conducted Output Power [dBm]	Limit [dBm]
1-DH5	2402	7.7	21
1-DH5	2441	7.6	21
1-DH5	2480	7.2	21
2-DH5	2402	3.1	21
2-DH5	2441	1.9	21
2-DH5	2480	1.0	21
3-DH5	2402	3.5	21
3-DH5	2441	2.3	21
3-DH5	2480	1.4	21

Note:
1. The cable loss is taken into account in results.
2. EIRP=Conducted Output Power + Antenna Gain (1.5dBi), which is far below the 0.5W (27dBm).

5.1.4 Frequency Separation

RESULT: **Pass**

Date of testing	:	2024-08-12~2024-10-29
Ambient temperature	:	20.3~22.5°C
Relative humidity	:	48.3~53.9%
Atmospheric pressure	:	101kPa
Test requirement	:	FCC Part 15.247(a)(1) RSS-247 Issue 3, August 2023, Clause 5.1(b)
Test procedure	:	ANSI C63.10: 2013
Test voltage	:	AC 120V, 60Hz
Test modes applied	:	A

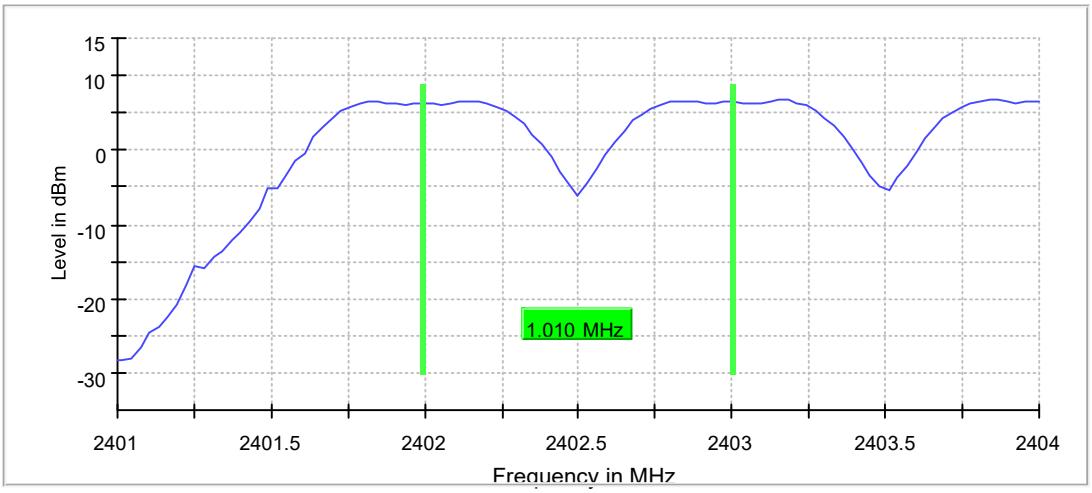
Carrier Frequency Separation (1-DH5, 2402 MHz)

DUT Frequency (MHz)	Frequency Separation (MHz)	Limit Min (MHz)	Limit Max (MHz)	Center Frequency low Channel (MHz)	Center Frequency high Channel (MHz)
2402.000000	1.009900	0.620000	---	2401.995050	2403.004950

(continuation of the "Result" table from column 6 ...)

DUT Frequency (MHz)	Result
2402.000000	PASS

CFS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40100 GHz	2.40100 GHz
Stop Frequency	2.40400 GHz	2.40400 GHz
Span	3.000 MHz	3.000 MHz
RBW	300.000 kHz	<= 300.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	101	~ 10
Sweeptime	1.000 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	17 / max. 150	max. 150
Stable	10 / 10	10
Max Stable Difference	0.42 dB	0.50 dB

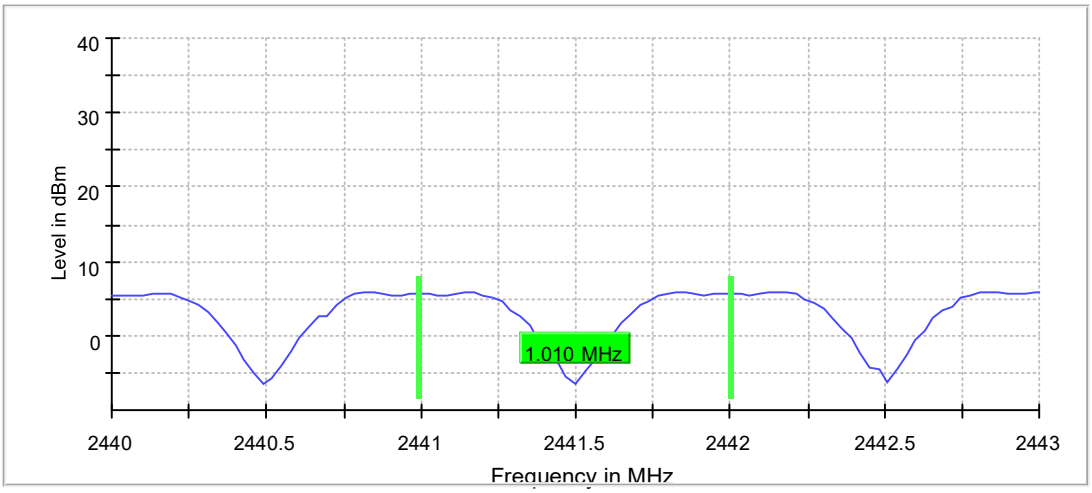
Carrier Frequency Separation (1-DH5, 2441 MHz)

DUT Frequency (MHz)	Frequency Separation (MHz)	Limit Min (MHz)	Limit Max (MHz)	Center Frequency low Channel (MHz)	Center Frequency high Channel (MHz)
2441.000000	1.009900	0.616667	---	2440.995050	2442.004950

(continuation of the "Result" table from column 6 ...)

DUT Frequency (MHz)	Result
2441.000000	PASS

CFS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.44000 GHz	2.44000 GHz
Stop Frequency	2.44300 GHz	2.44300 GHz
Span	3.000 MHz	3.000 MHz
RBW	300.000 kHz	<= 300.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	101	~ 10
Sweeptime	1.000 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	13 / max. 150	max. 150
Stable	10 / 10	10
Max Stable Difference	0.00 dB	0.50 dB

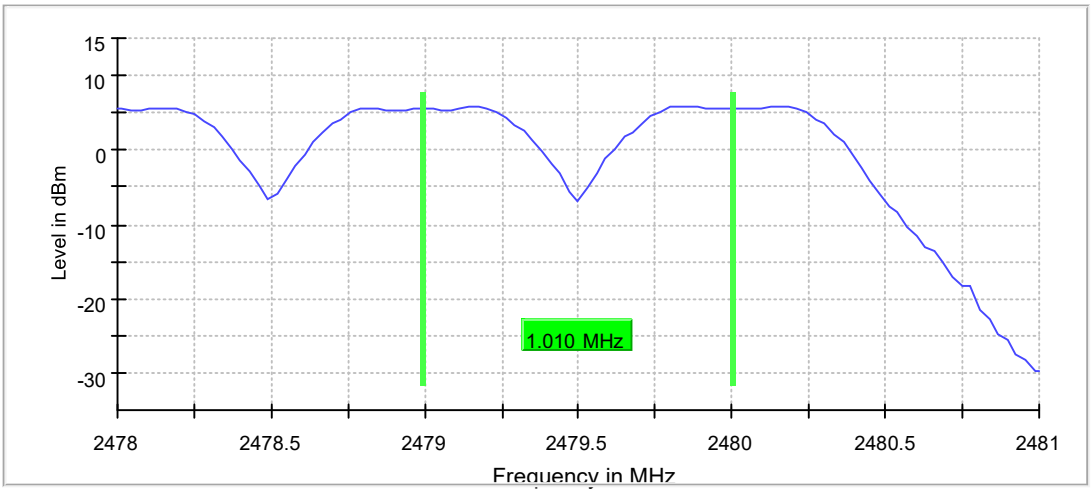
Carrier Frequency Separation (1-DH5, 2480 MHz)

DUT Frequency (MHz)	Frequency Separation (MHz)	Limit Min (MHz)	Limit Max (MHz)	Center Frequency low Channel (MHz)	Center Frequency high Channel (MHz)
2480.000000	1.009900	0.616667	---	2478.995050	2480.004950

(continuation of the "Result" table from column 6 ...)

DUT Frequency (MHz)	Result
2480.000000	PASS

CFS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.47800 GHz	2.47800 GHz
Stop Frequency	2.48100 GHz	2.48100 GHz
Span	3.000 MHz	3.000 MHz
RBW	300.000 kHz	<= 300.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	101	~ 10
Sweeptime	1.000 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	24 / max. 150	max. 150
Stable	10 / 10	10
Max Stable Difference	0.34 dB	0.50 dB

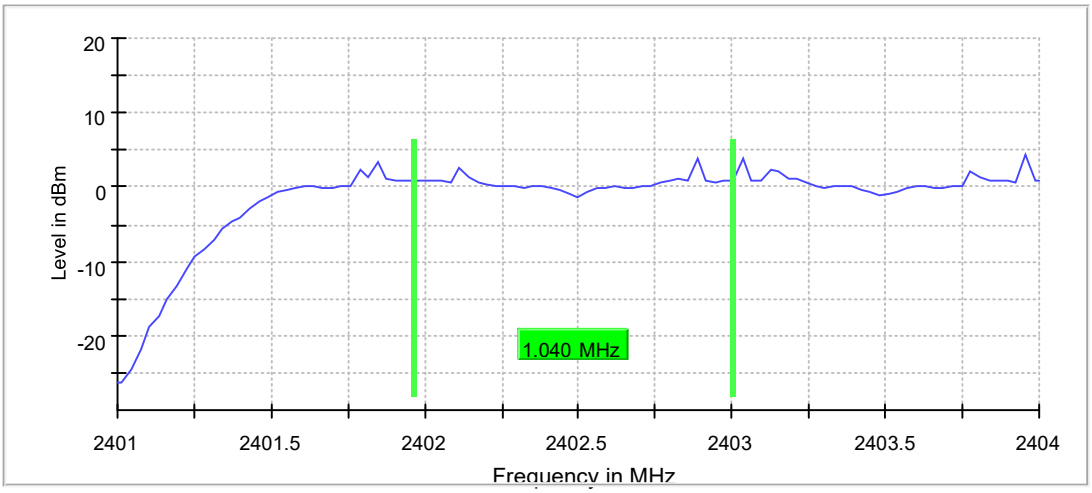
Carrier Frequency Separation (2-DH5, 2402 MHz)

DUT Frequency (MHz)	Frequency Separation (MHz)	Limit Min (MHz)	Limit Max (MHz)	Center Frequency low Channel (MHz)	Center Frequency high Channel (MHz)
2402.000000	1.039603	0.666667	---	2401.965347	2403.004950

(continuation of the "Result" table from column 6 ...)

DUT Frequency (MHz)	Result
2402.000000	PASS

CFS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40100 GHz	2.40100 GHz
Stop Frequency	2.40400 GHz	2.40400 GHz
Span	3.000 MHz	3.000 MHz
RBW	300.000 kHz	<= 300.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	101	~ 10
Sweeptime	1.000 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	45 / max. 150	max. 150
Stable	10 / 10	10
Max Stable Difference	0.13 dB	0.50 dB

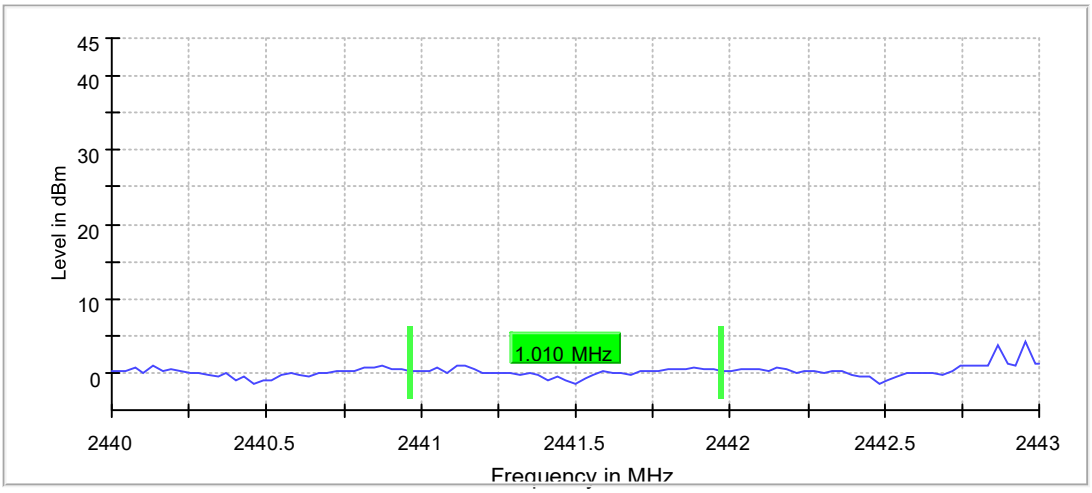
Carrier Frequency Separation (2-DH5, 2441 MHz)

DUT Frequency (MHz)	Frequency Separation (MHz)	Limit Min (MHz)	Limit Max (MHz)	Center Frequency low Channel (MHz)	Center Frequency high Channel (MHz)
2441.000000	1.009901	0.666667	---	2440.965347	2441.975248

(continuation of the "Result" table from column 6 ...)

DUT Frequency (MHz)	Result
2441.000000	PASS

CFS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.44000 GHz	2.44000 GHz
Stop Frequency	2.44300 GHz	2.44300 GHz
Span	3.000 MHz	3.000 MHz
RBW	300.000 kHz	<= 300.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	101	~ 10
Sweeptime	1.000 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	11 / max. 150	max. 150
Stable	10 / 10	10
Max Stable Difference	0.00 dB	0.50 dB

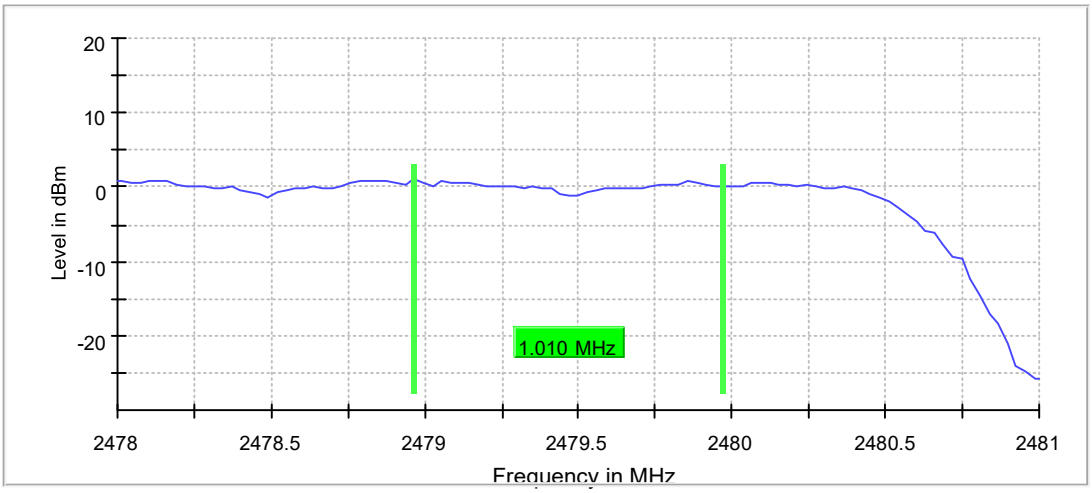
Carrier Frequency Separation (2-DH5, 2480 MHz)

DUT Frequency (MHz)	Frequency Separation (MHz)	Limit Min (MHz)	Limit Max (MHz)	Center Frequency low Channel (MHz)	Center Frequency high Channel (MHz)
2480.000000	1.009901	0.666667	---	2478.965347	2479.975248

(continuation of the "Result" table from column 6 ...)

DUT Frequency (MHz)	Result
2480.000000	PASS

CFS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.47800 GHz	2.47800 GHz
Stop Frequency	2.48100 GHz	2.48100 GHz
Span	3.000 MHz	3.000 MHz
RBW	300.000 kHz	<= 300.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	101	~ 10
Sweeptime	1.000 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	35 / max. 150	max. 150
Stable	10 / 10	10
Max Stable Difference	0.15 dB	0.50 dB

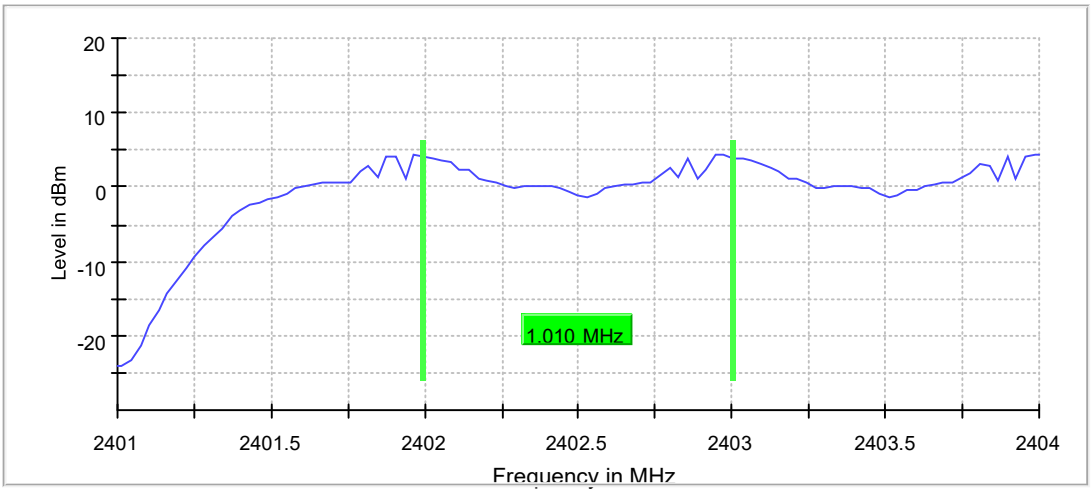
Carrier Frequency Separation (3-DH5, 2402 MHz)

DUT Frequency (MHz)	Frequency Separation (MHz)	Limit Min (MHz)	Limit Max (MHz)	Center Frequency low Channel (MHz)	Center Frequency high Channel (MHz)
2402.000000	1.009900	0.666667	---	2401.995050	2403.004950

(continuation of the "Result" table from column 6 ...)

DUT Frequency (MHz)	Result
2402.000000	PASS

CFS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40100 GHz	2.40100 GHz
Stop Frequency	2.40400 GHz	2.40400 GHz
Span	3.000 MHz	3.000 MHz
RBW	300.000 kHz	<= 300.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	101	~ 10
Sweeptime	1.000 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	150 / max. 150	max. 150
Stable	9 / 10	10
Max Stable Difference	0.00 dB	0.50 dB

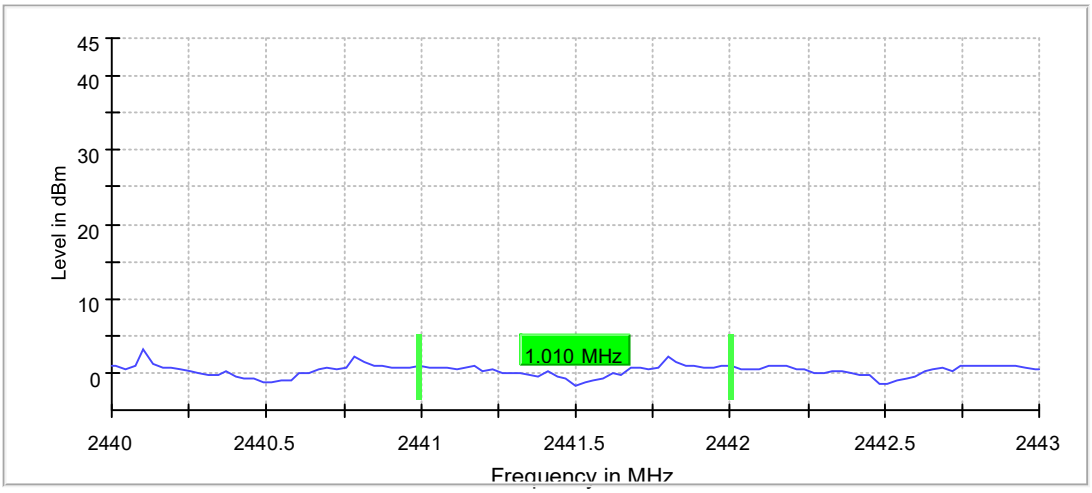
Carrier Frequency Separation (3-DH5, 2441 MHz)

DUT Frequency (MHz)	Frequency Separation (MHz)	Limit Min (MHz)	Limit Max (MHz)	Center Frequency low Channel (MHz)	Center Frequency high Channel (MHz)
2441.000000	1.009900	0.666667	---	2440.995050	2442.004950

(continuation of the "Result" table from column 6 ...)

DUT Frequency (MHz)	Result
2441.000000	PASS

CFS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.44000 GHz	2.44000 GHz
Stop Frequency	2.44300 GHz	2.44300 GHz
Span	3.000 MHz	3.000 MHz
RBW	300.000 kHz	<= 300.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	101	~ 10
Sweeptime	1.000 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	12 / max. 150	max. 150
Stable	10 / 10	10
Max Stable Difference	0.00 dB	0.50 dB

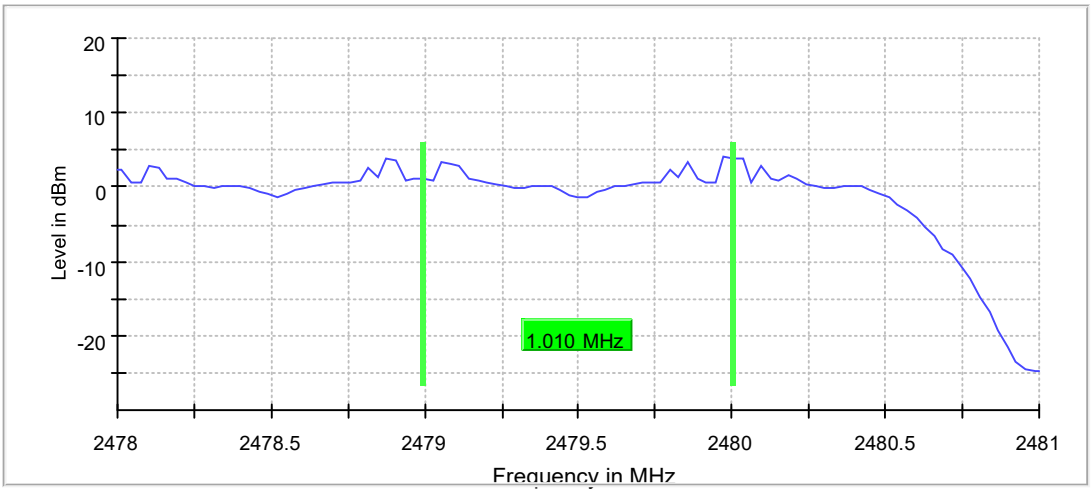
Carrier Frequency Separation (3-DH5, 2480 MHz)

DUT Frequency (MHz)	Frequency Separation (MHz)	Limit Min (MHz)	Limit Max (MHz)	Center Frequency low Channel (MHz)	Center Frequency high Channel (MHz)
2480.000000	1.009900	0.666667	---	2478.995050	2480.004950

(continuation of the "Result" table from column 6 ...)

DUT Frequency (MHz)	Result
2480.000000	PASS

CFS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.47800 GHz	2.47800 GHz
Stop Frequency	2.48100 GHz	2.48100 GHz
Span	3.000 MHz	3.000 MHz
RBW	300.000 kHz	<= 300.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	101	~ 10
Sweeptime	1.000 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	80 / max. 150	max. 150
Stable	10 / 10	10
Max Stable Difference	0.00 dB	0.50 dB

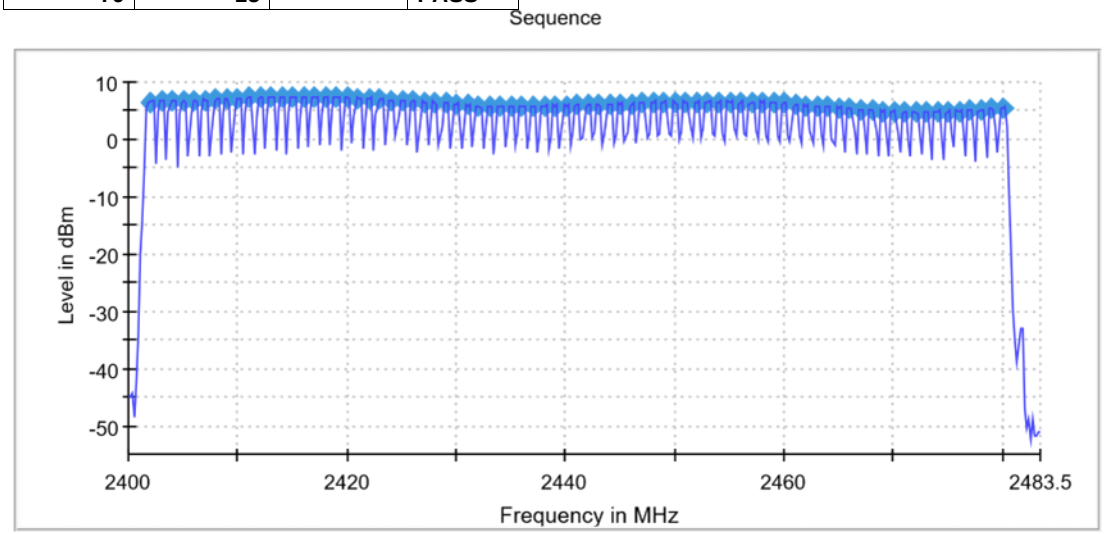
5.1.5 Number of Hopping Frequency

RESULT: **Pass**

Date of testing	:	2024-08-12~2024-10-29
Ambient temperature	:	20.3~22.5°C
Relative humidity	:	48.3~53.9%
Atmospheric pressure	:	101kPa
Test requirement	:	FCC 15.247(a)(1)(iii) RSS-247 Issue 3, August 2023, Clause 5.1(d)
Test procedure	:	ANSI C63.10: 2013
Test voltage	:	AC 120V, 60Hz
Test modes applied	:	A

Hopping Frequencies (1-DH5)

Channels	Limit Min	Limit Max	Result
79	15	---	PASS

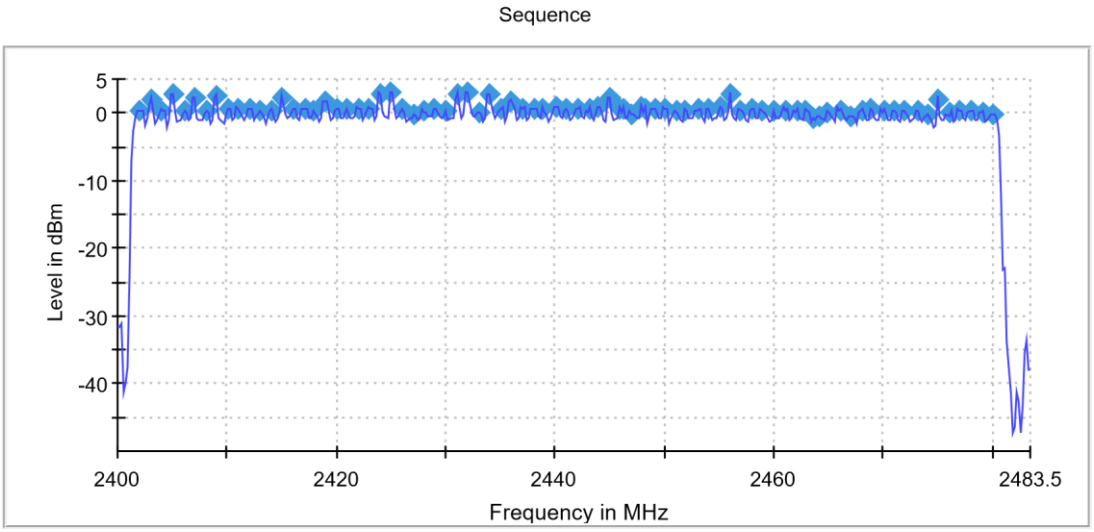


Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40000 GHz	2.40000 GHz
Stop Frequency	2.48350 GHz	2.48350 GHz
Span	83.500 MHz	83.500 MHz
RBW	200.000 kHz	<= 299.000 kHz
VBW	200.000 kHz	>= 200.000 kHz
SweepPoints	418	~ 418
Sweeptime	1.060 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	57 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.37 dB	0.50 dB

Hopping Frequencies (2-DH5)

Channels	Limit Min	Limit Max	Result
79	15	---	PASS

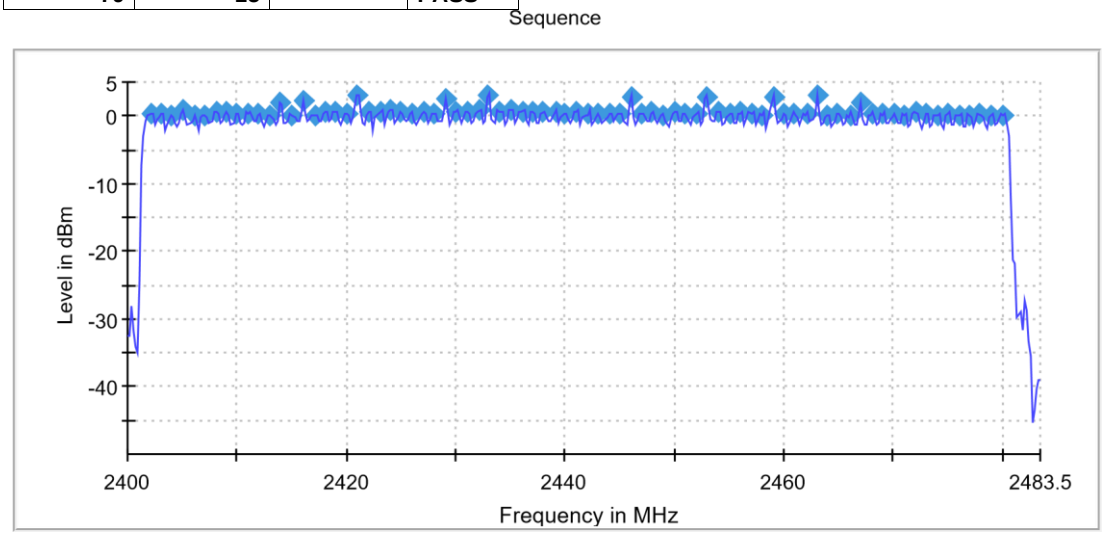


Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40000 GHz	2.40000 GHz
Stop Frequency	2.48350 GHz	2.48350 GHz
Span	83.500 MHz	83.500 MHz
RBW	200.000 kHz	<= 299.000 kHz
VBW	200.000 kHz	>= 200.000 kHz
SweepPoints	418	~ 418
Sweeptime	1.060 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	123 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.00 dB	0.50 dB

Hopping Frequencies (3-DH5)

Channels	Limit Min	Limit Max	Result
79	15	---	PASS



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.40000 GHz	2.40000 GHz
Stop Frequency	2.48350 GHz	2.48350 GHz
Span	83.500 MHz	83.500 MHz
RBW	200.000 kHz	<= 299.000 kHz
VBW	200.000 kHz	>= 200.000 kHz
SweepPoints	418	~ 418
Sweeptime	1.060 ms	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	113 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.06 dB	0.50 dB

5.1.6 Time of Occupancy

RESULT: **Pass**

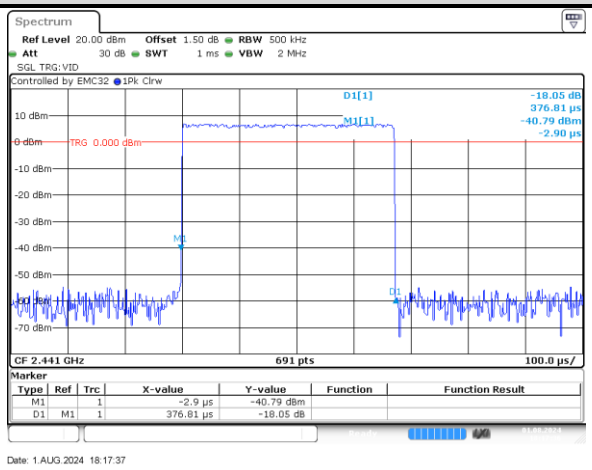
Date of testing	:	2024-08-01~2024-10-29
Ambient temperature	:	22.5~22.6°C
Relative humidity	:	53.7~53.9%
Atmospheric pressure	:	101kPa
Test requirement	:	FCC 15.247(a)(1)(iii) RSS-247 Issue 3, August 2023, Clause 5.1(d)
Test procedure	:	ANSI C63.10: 2013
Test voltage	:	AC 120V, 60Hz
Test modes applied	:	A

Table 8: Time of Occupancy

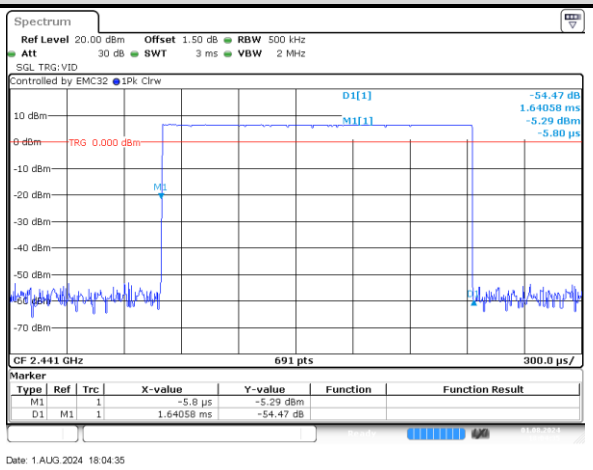
Mode	Frequency [MHz]	Dwell Time [ms]	Number of Hops	Time of Occupancy [ms]	Limit [ms]
1-DH1	2441	0.377	173	65.221	400
1-DH3	2441	1.641	119	195.279	400
1-DH5	2441	1.906	124	236.344	400
2-DH1	2441	0.384	195	74.880	400
2-DH3	2441	1.642	126	206.892	400
2-DH5	2441	2.899	91	263.809	400
3-DH1	2441	0.384	177	67.968	400
3-DH3	2441	1.638	122	199.836	400
3-DH5	2441	2.898	96	278.208	400

Figure 1: Dwell Time

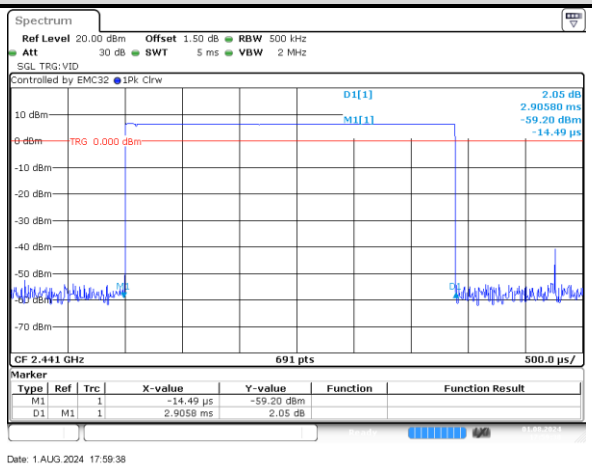
1-DH1



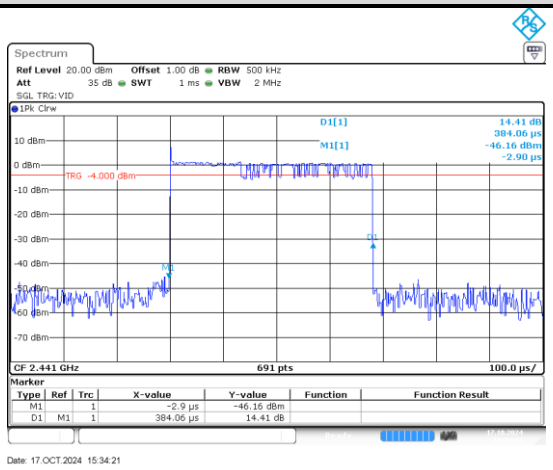
1-DH3



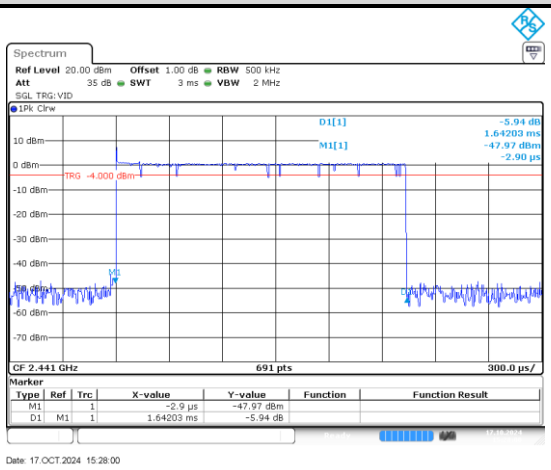
1-DH5



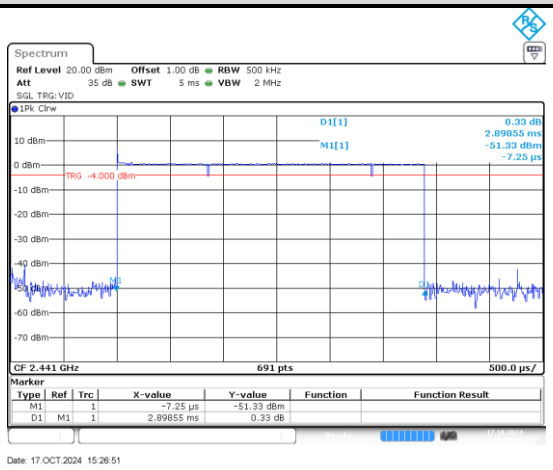
2-DH1



2-DH3



2-DH5



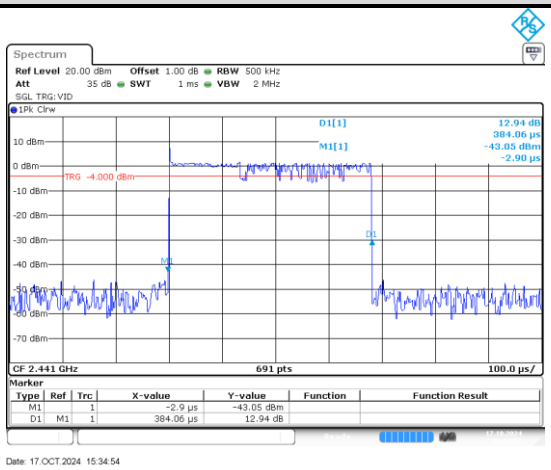
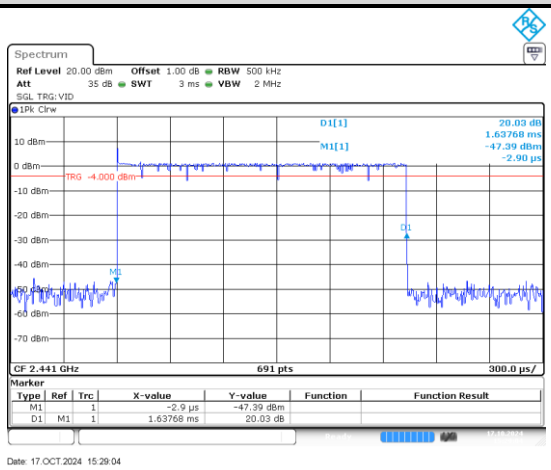
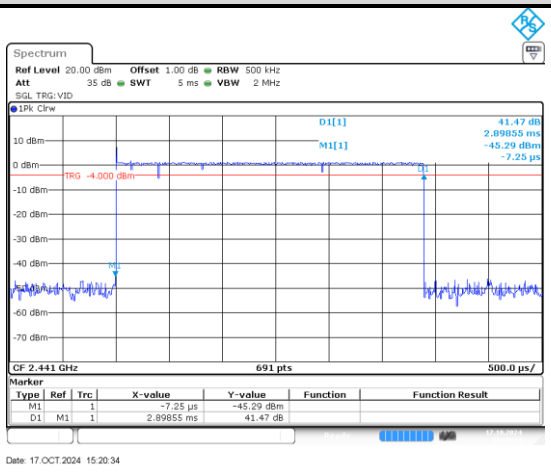
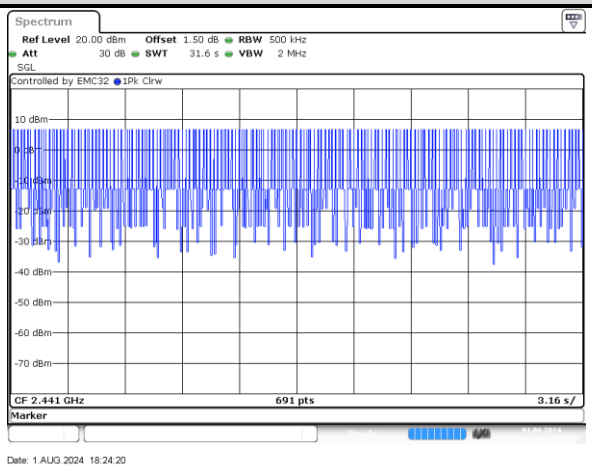
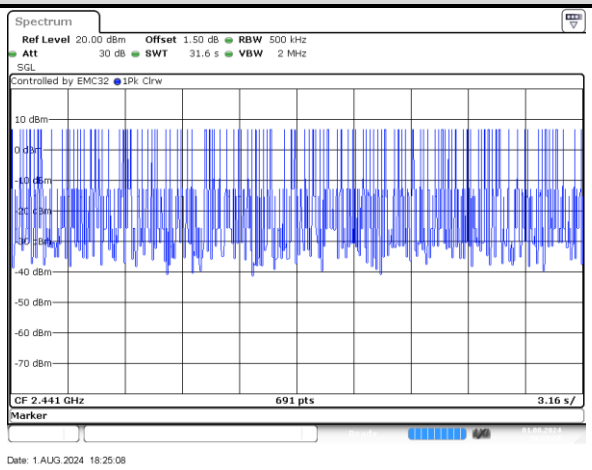
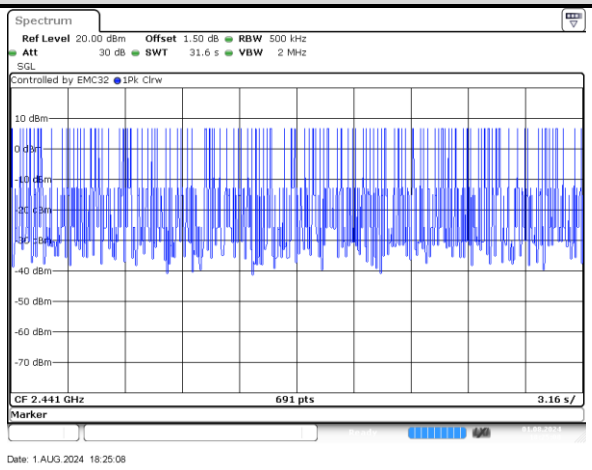
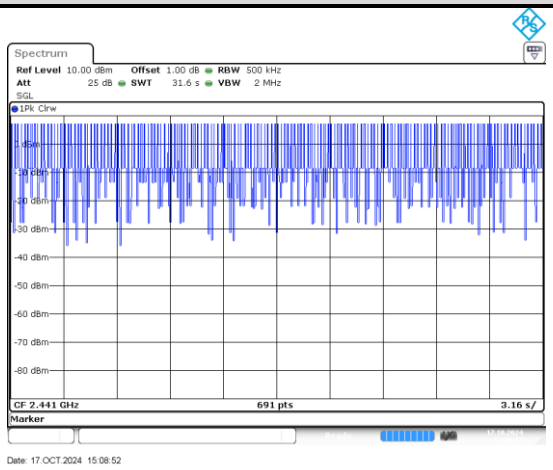
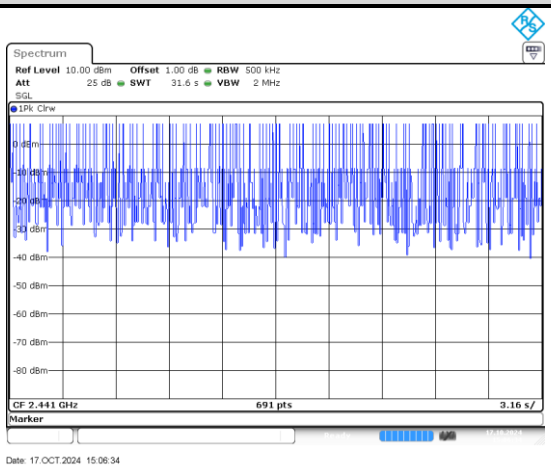
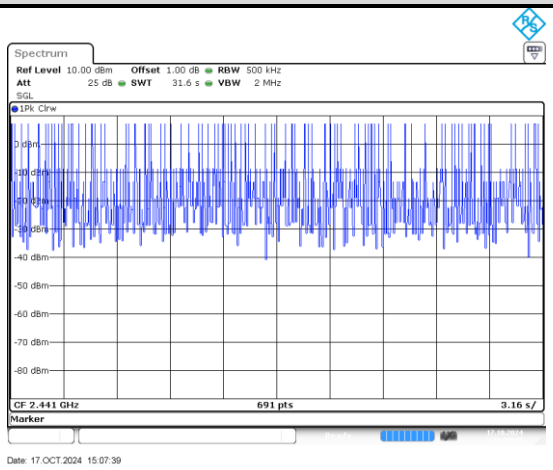
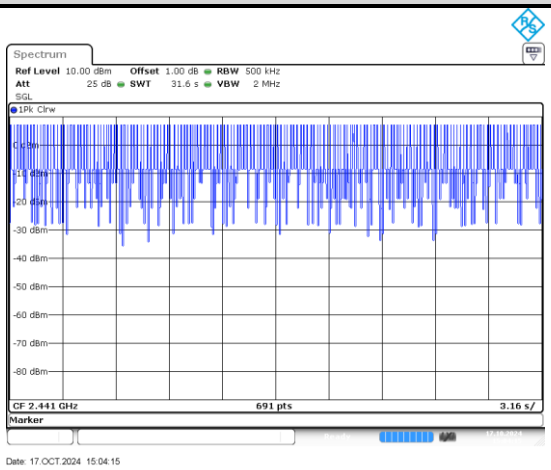
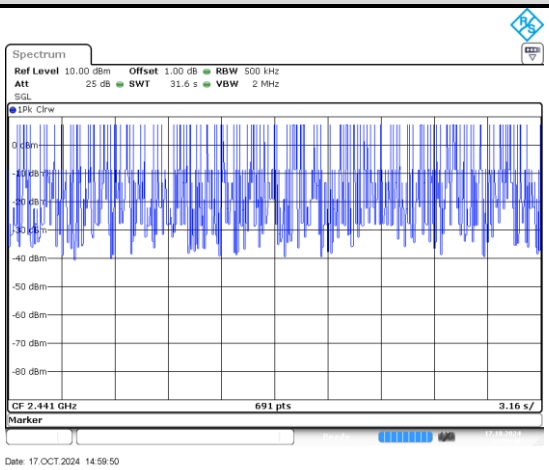
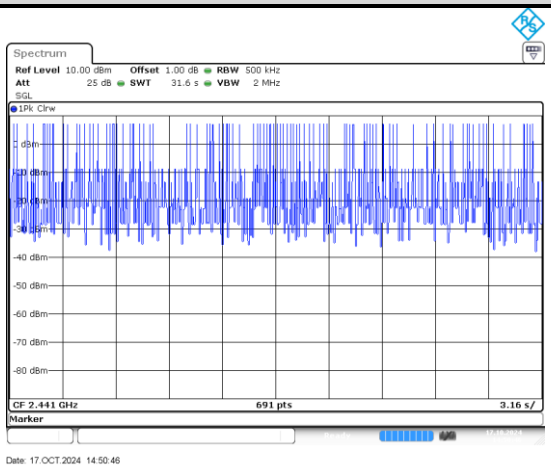
3-DH1	3-DH3
	
3-DH5	
	

Figure 2: Number of Hops

1-DH1	1-DH3
	
1-DH5	**2-DH1**
	
2-DH3	**2-DH5**
	

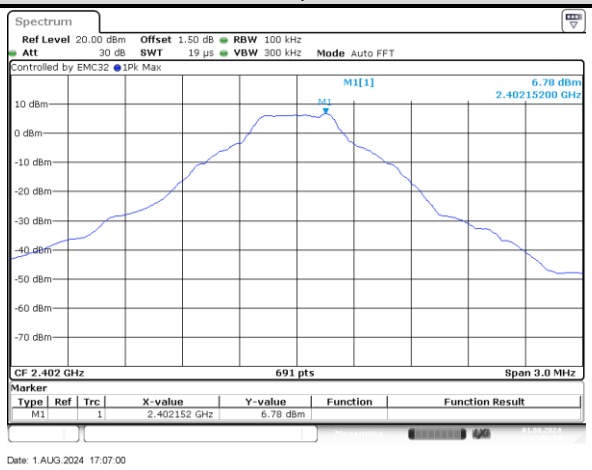
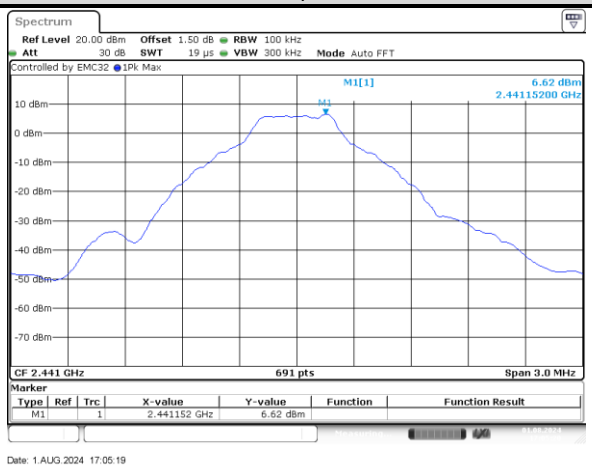
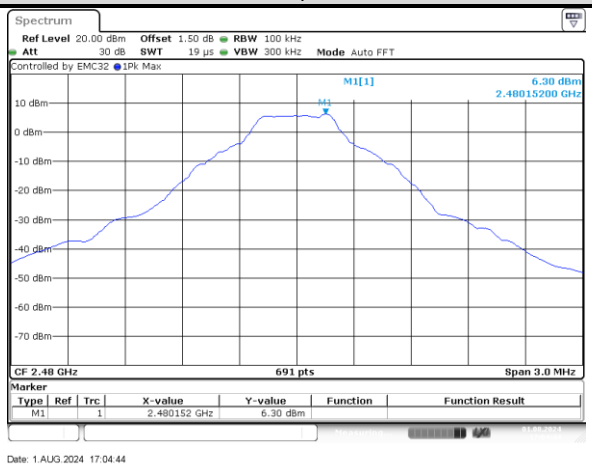
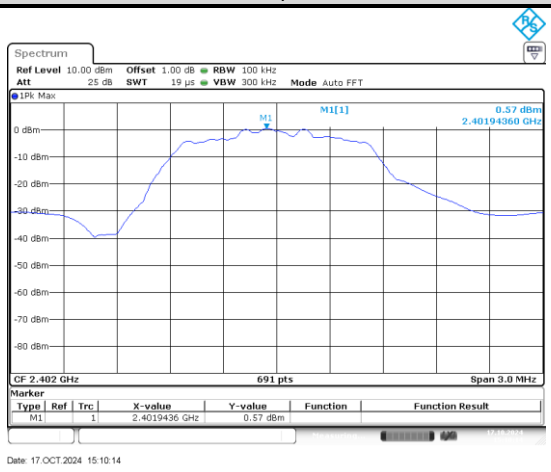
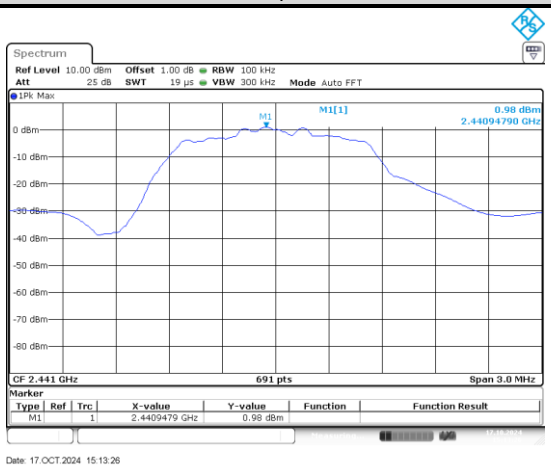
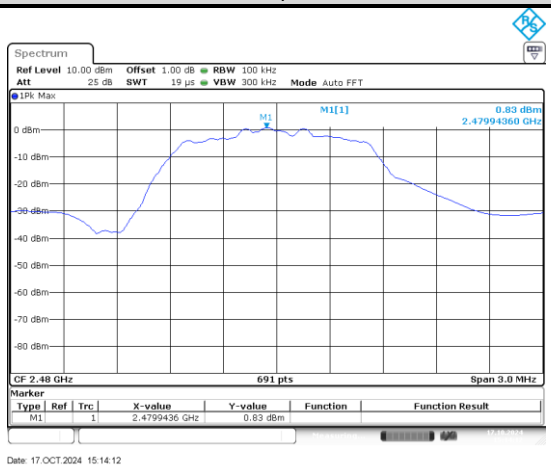
3-DH1	3-DH3
	
3-DH5	
	

5.1.7 Conducted Band Edge and out-of Band Emissions

RESULT: **Pass**

Date of testing	:	2024-08-01~2024-10-29
Ambient temperature	:	20.6~23.5°C
Relative humidity	:	50.7~56.8%
Atmospheric pressure	:	101kPa
Test requirement	:	FCC Part 15.247(d) RSS-247 Issue 3, August 2023, Clause 5.5
Test procedure	:	ANSI C63.10: 2013
Test voltage	:	AC 120V, 60Hz
Test modes applied	:	A

Figure 3: Reference Level

1-DH5, 2402	1-DH5, 2441
	
1-DH5, 2480	**2-DH5, 2402**
	
2-DH5, 2441	**2-DH5, 2480**
	

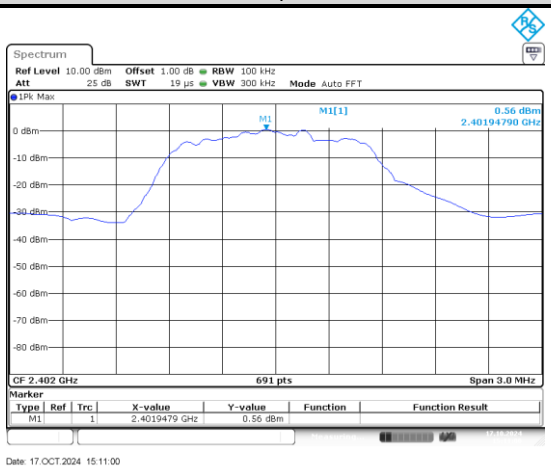
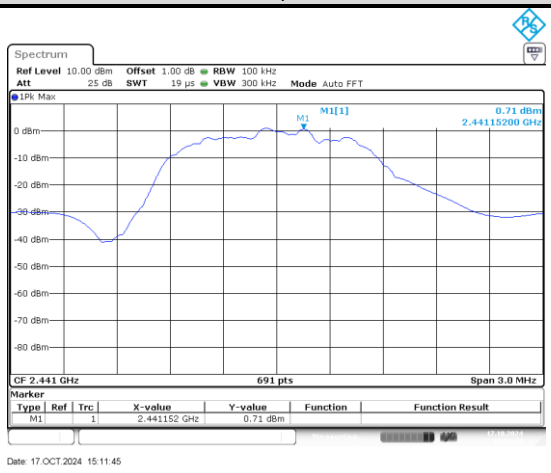
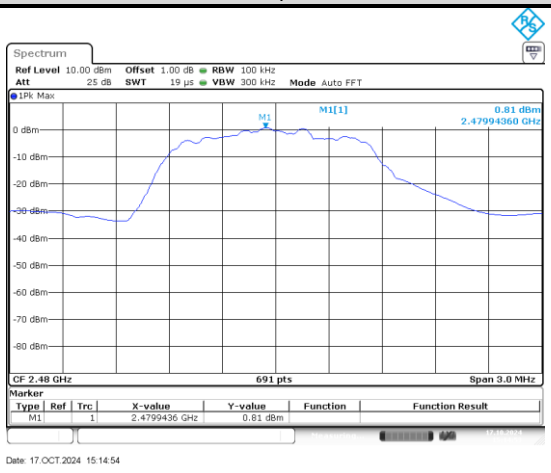
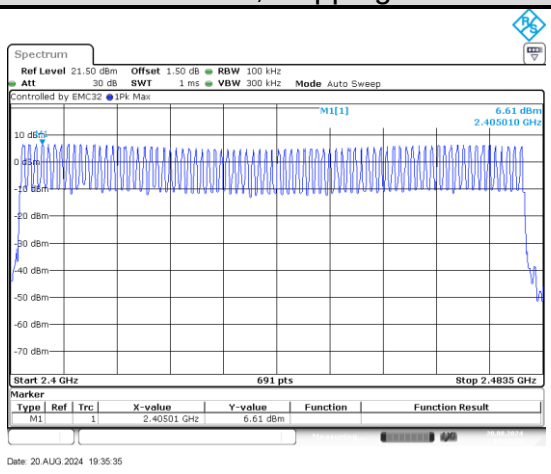
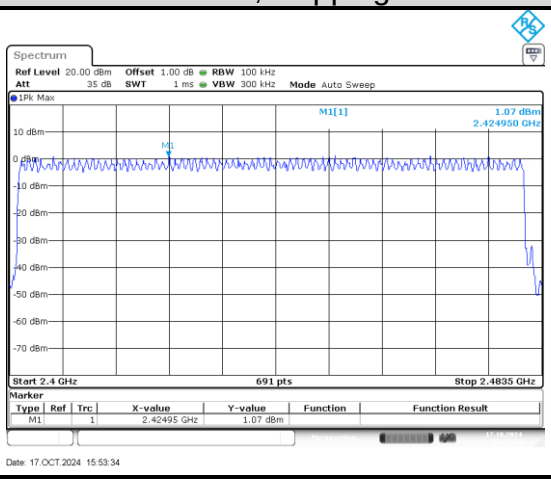
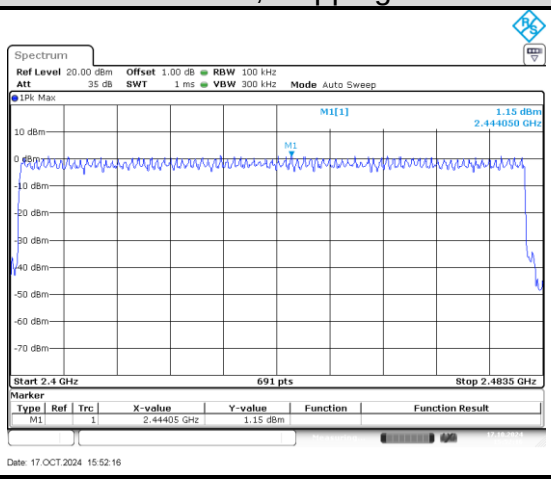
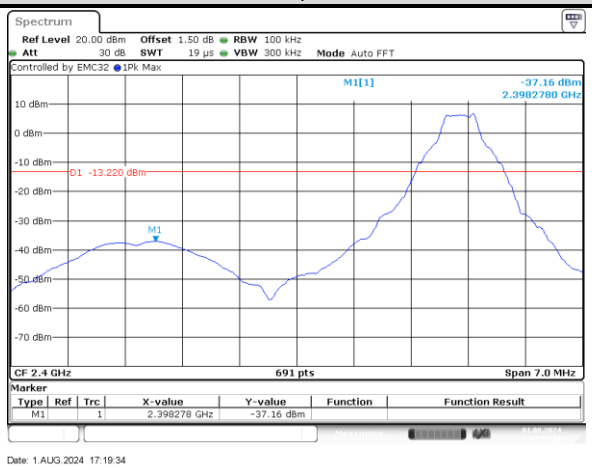
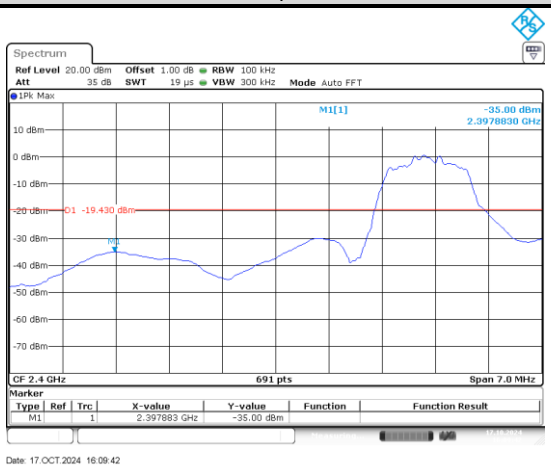
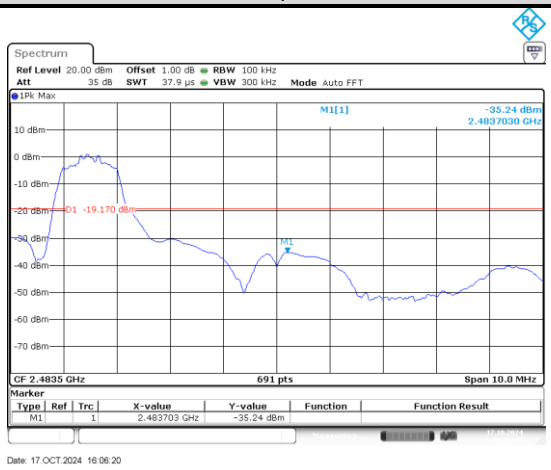
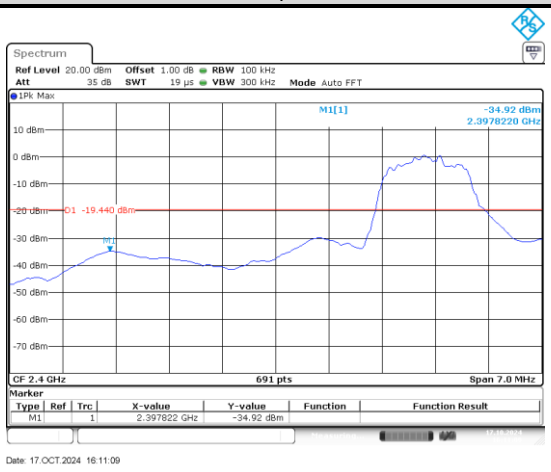
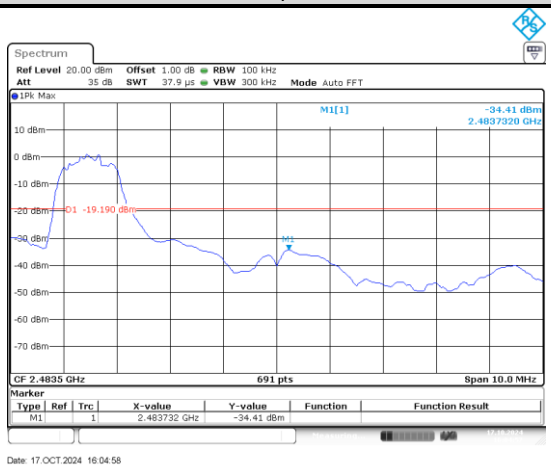
3-DH5, 2402	3-DH5, 2441
	
3-DH5, 2480	1-DH5, Hopping
	
2-DH5, Hopping	3-DH5, Hopping
	

Figure 4: Conducted Band Edge

1-DH5, 2402	1-DH5, 2480
	
2-DH5, 2402	2-DH5, 2480
	
3-DH5, 2402	3-DH5, 2480
	

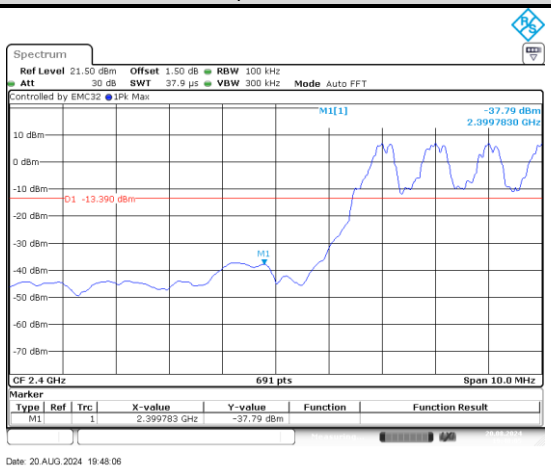
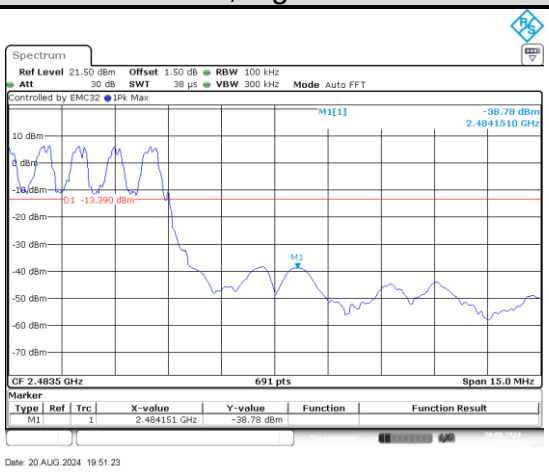
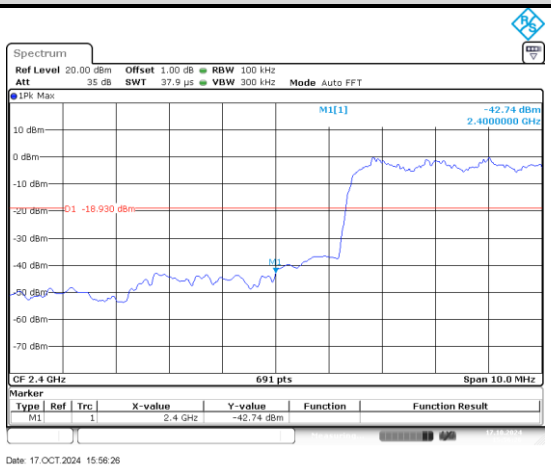
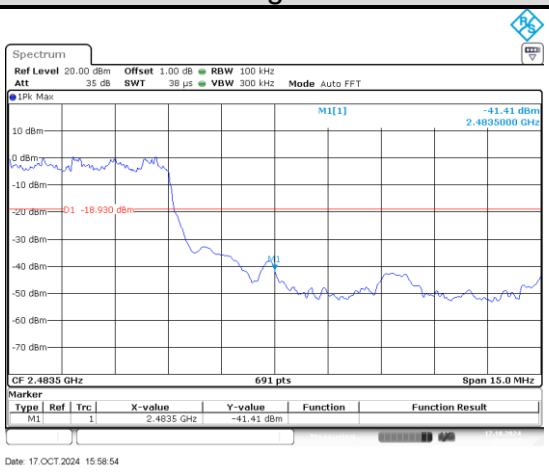
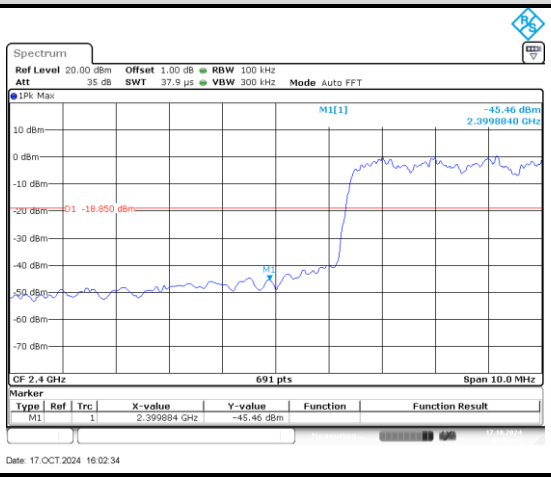
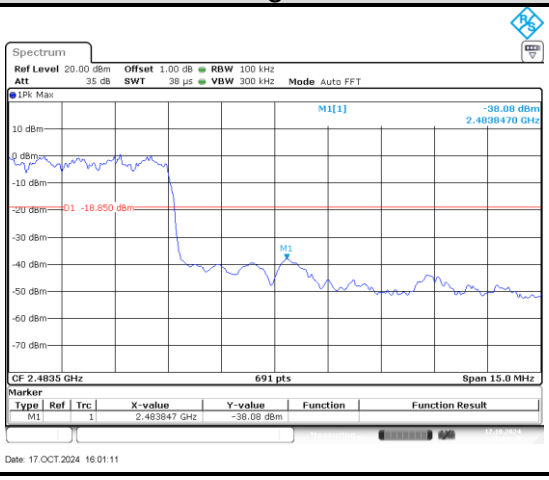
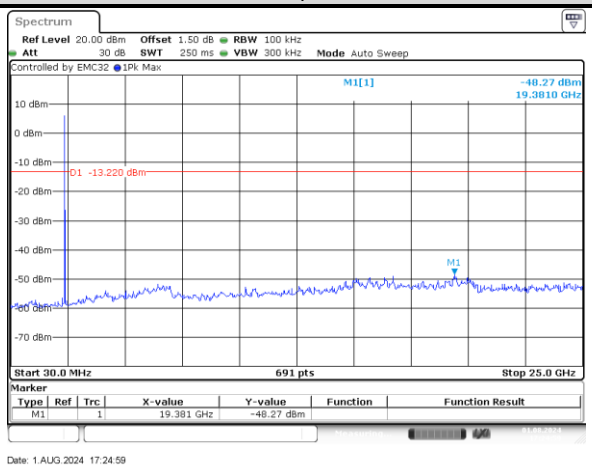
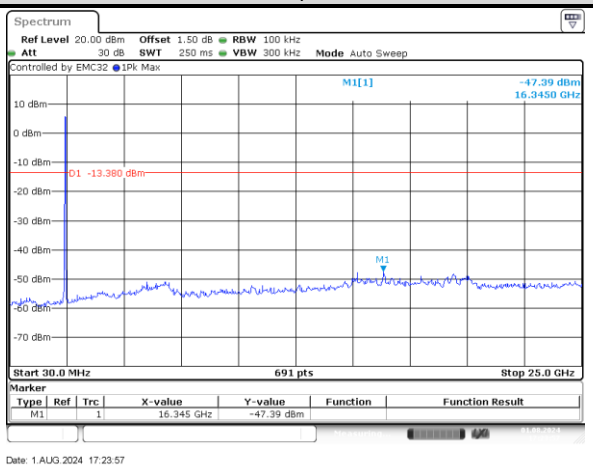
1-DH5, lower band	1-DH5, higher band
	
2-DH5 lower band	**2-DH5 higher band**
	
3-DH5 lower band	**3-DH5 higher band**
	

Figure 5: Conducted Spurious Emission

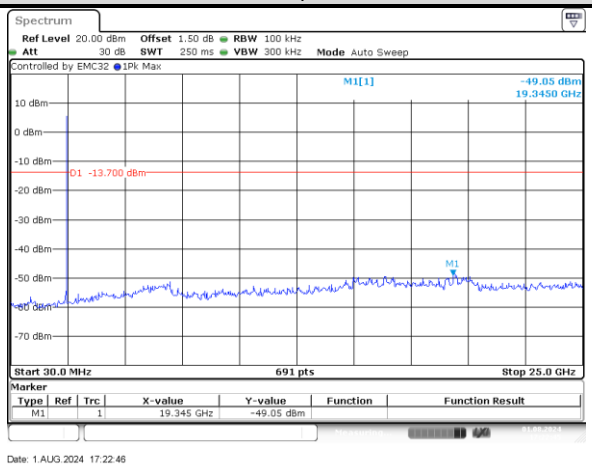
1-DH5, 2402



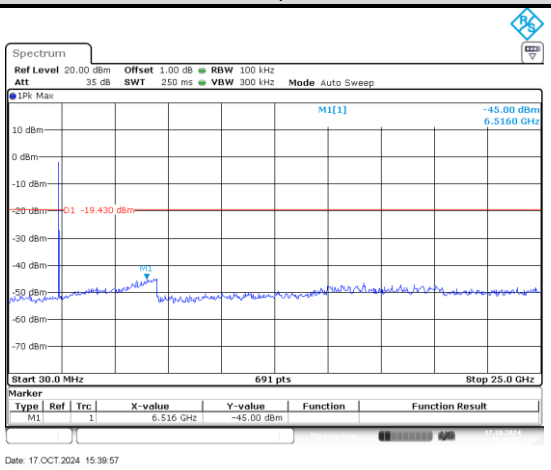
1-DH5, 2441



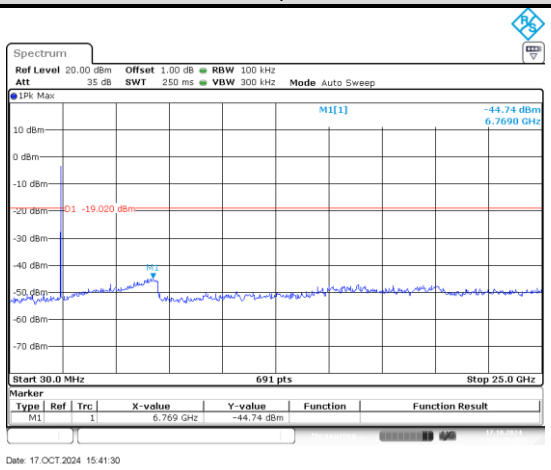
1-DH5, 2480



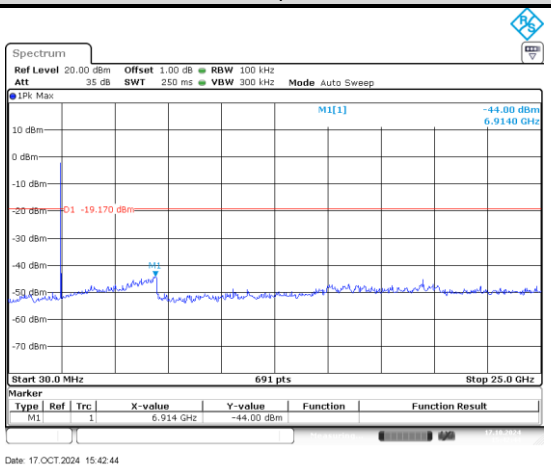
2-DH5, 2402

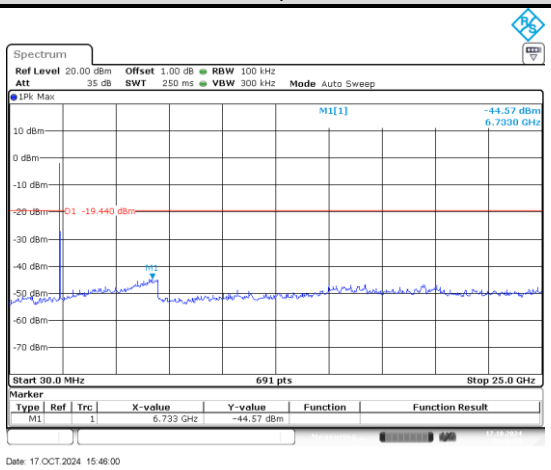
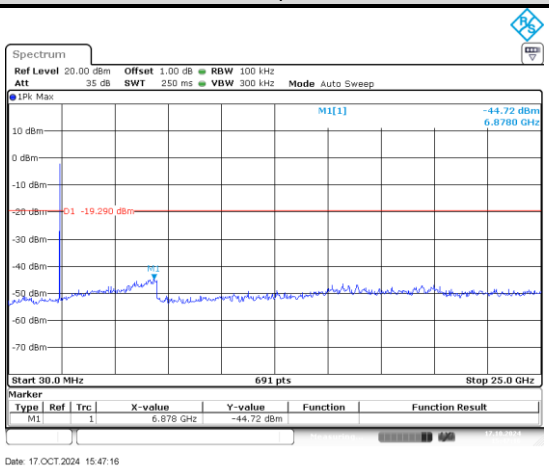
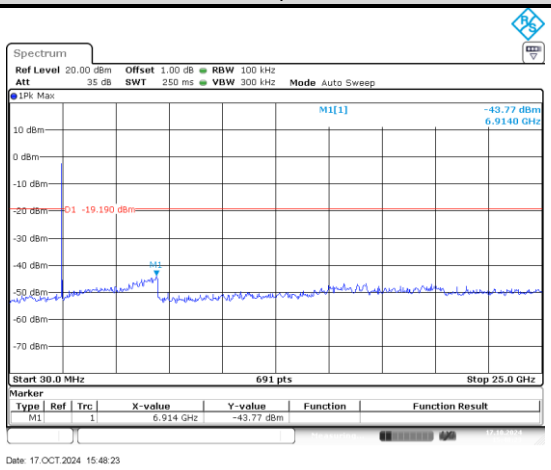


2-DH5, 2441



2-DH5, 2480



3-DH5, 2402	3-DH5, 2441
	
3-DH5, 2480	
	

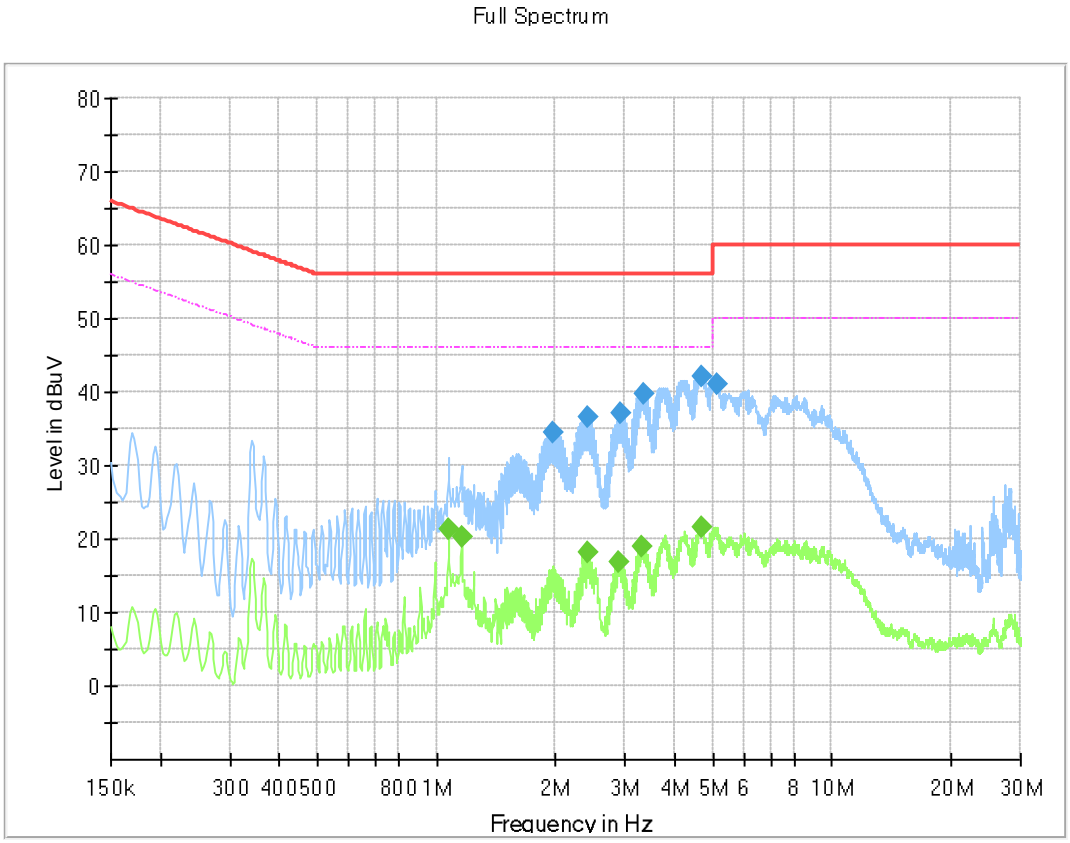
5.2 Emission in the Frequency Range up to 30MHz

5.2.1 Conducted Emission

RESULT: **Pass**

Date of testing	:	2024-08-07
Ambient temperature	:	20.2°C
Relative humidity	:	48.7%
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	:	A

Figure 6: Conducted Emission, L



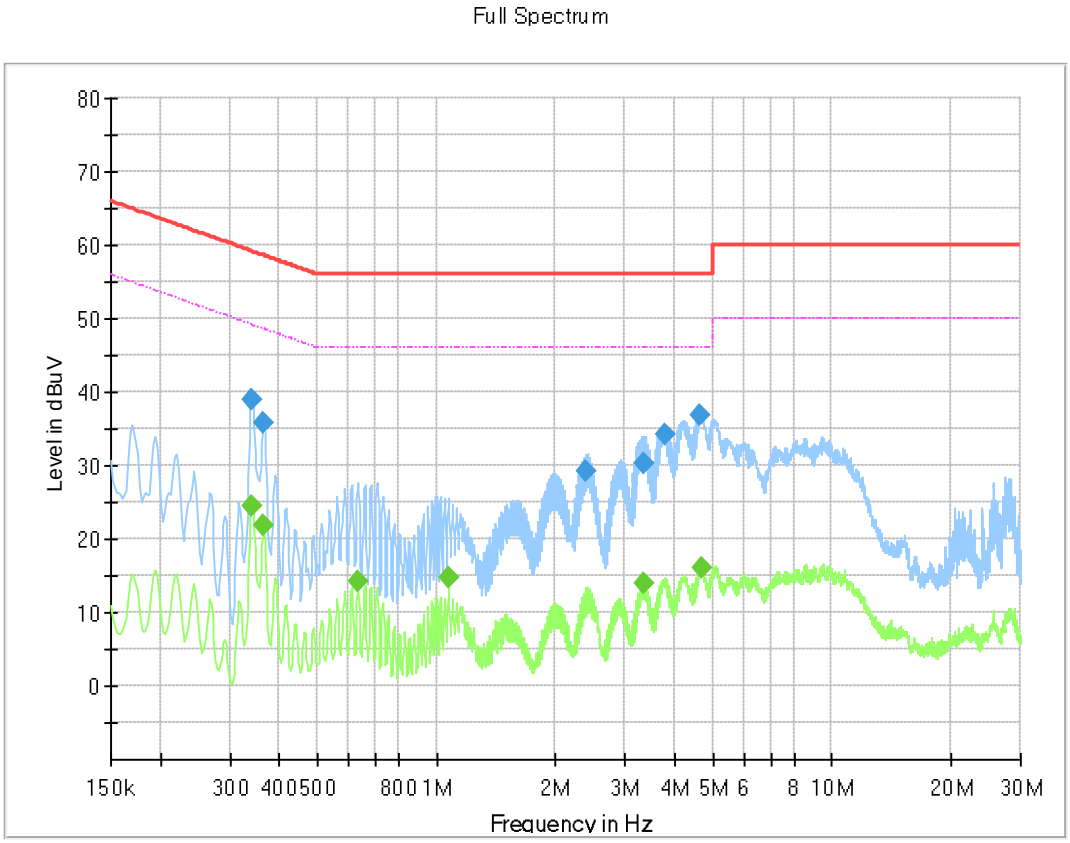
Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBuV)	Limit (dBuV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
1.979250	34.34	56.00	21.66	1000.0	9.000	L1	10.1
2.418000	36.57	56.00	19.43	1000.0	9.000	L1	10.1
2.933250	37.12	56.00	18.88	1000.0	9.000	L1	10.2
3.345000	39.86	56.00	16.14	1000.0	9.000	L1	10.2
4.688250	42.13	56.00	13.87	1000.0	9.000	L1	10.3
5.131500	40.93	60.00	19.07	1000.0	9.000	L1	10.3

Final_Result_CAV

Frequency (MHz)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
1.074750	21.38	46.00	24.62	1000.0	9.000	L1	10.7
1.158000	20.24	46.00	25.76	1000.0	9.000	L1	10.6
2.418000	18.26	46.00	27.74	1000.0	9.000	L1	10.1
2.906250	16.90	46.00	29.10	1000.0	9.000	L1	10.2
3.318000	18.82	46.00	27.18	1000.0	9.000	L1	10.2
4.670250	21.54	46.00	24.46	1000.0	9.000	L1	10.3

Figure 7: Conducted Emission, N



Final_Result_QPK

Frequency (MHz)	QuasiPeak (dBuV)	Limit (dBuV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.341250	38.86	59.17	20.31	1000.0	9.000	N	10.4
0.366000	35.75	58.59	22.84	1000.0	9.000	N	10.4
2.391000	29.21	56.00	26.79	1000.0	9.000	N	10.6
3.347250	30.38	56.00	25.62	1000.0	9.000	N	10.6
3.783750	34.12	56.00	21.88	1000.0	9.000	N	10.7
4.659000	36.71	56.00	19.29	1000.0	9.000	N	10.7

Final_Result_CAV

Frequency (MHz)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.341250	24.60	49.17	24.58	1000.0	9.000	N	10.4
0.366000	21.71	48.59	26.88	1000.0	9.000	N	10.4
0.633750	14.20	46.00	31.80	1000.0	9.000	N	10.3
1.074750	14.65	46.00	31.35	1000.0	9.000	N	10.4
3.342750	13.97	46.00	32.03	1000.0	9.000	N	10.6
4.670250	15.95	46.00	30.05	1000.0	9.000	N	10.7

5.3 Emission in the Frequency Range above 30MHz

5.3.1 Radiated Band-Edge

RESULT: **Pass**

Date of testing	:	2024-08-07~2024-10-29
Ambient temperature	:	20.3~22.6°C
Relative humidity	:	48.8~53.1%
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	:	AC 120V, 60Hz
Test modes applied	:	A

Note:
All the test modes were applied, only the worst case were shown in this report.

Figure 8: Radiated Band-Edge, 1-DH5, 2402, H

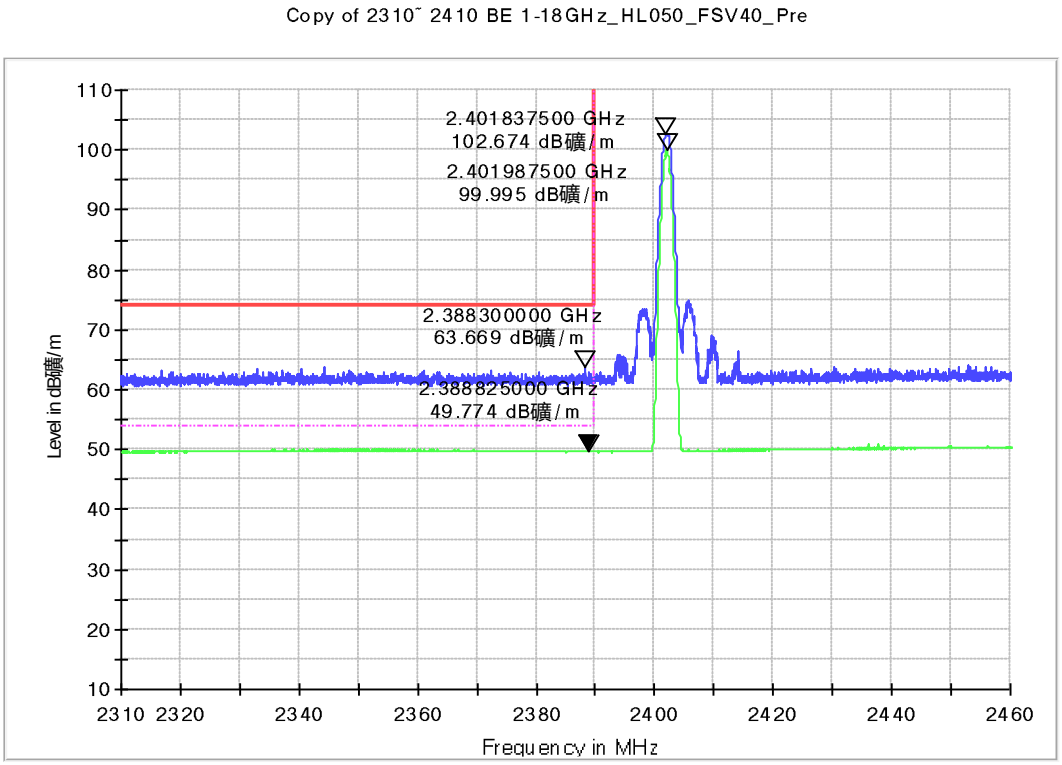


Figure 9: Radiated Band-Edge, 1-DH5, 2402, V

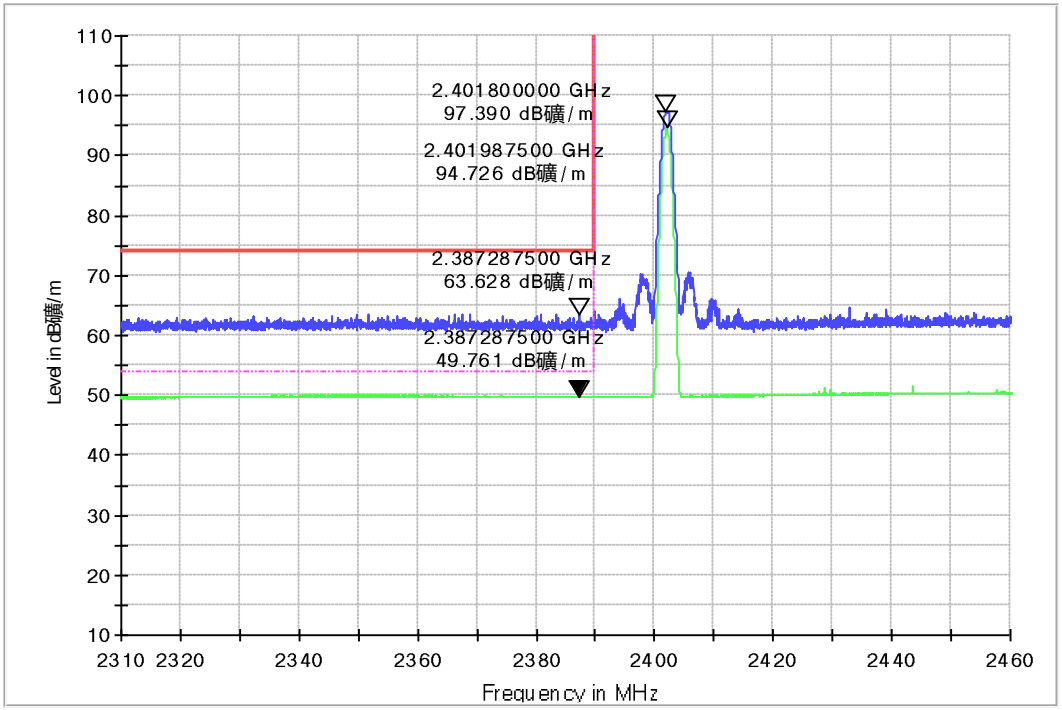


Figure 10: Radiated Band-Edge, 1-DH5, 2480, H

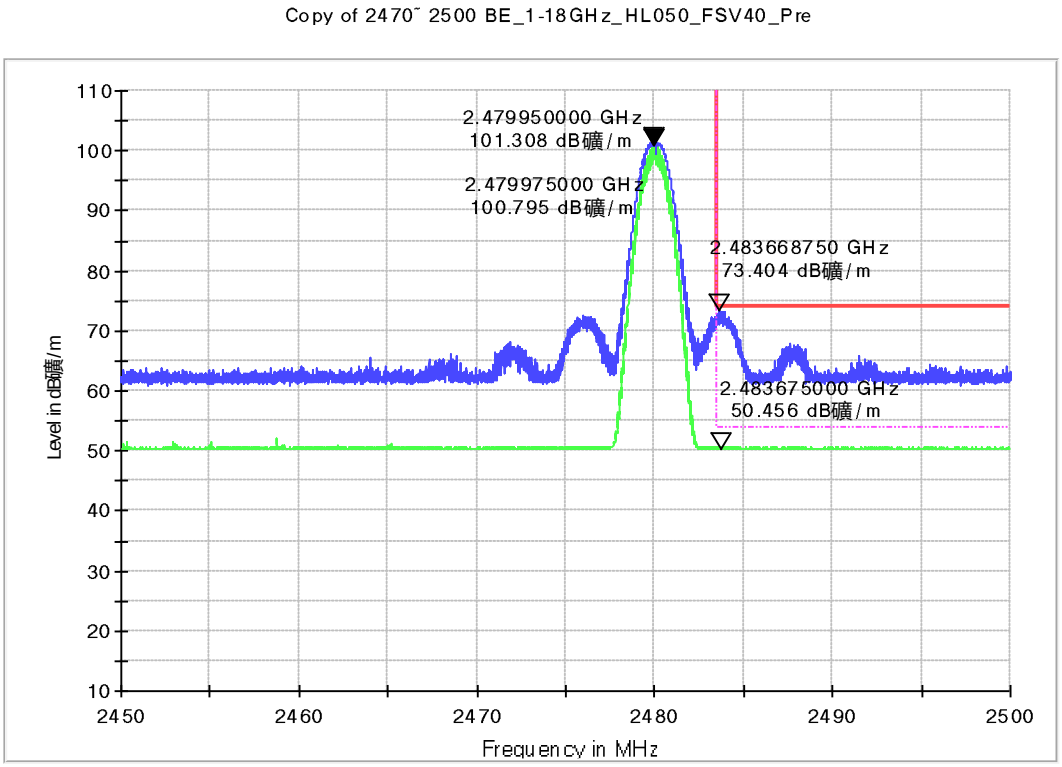


Figure 11: Radiated Band-Edge, 1-DH5, 2480, V

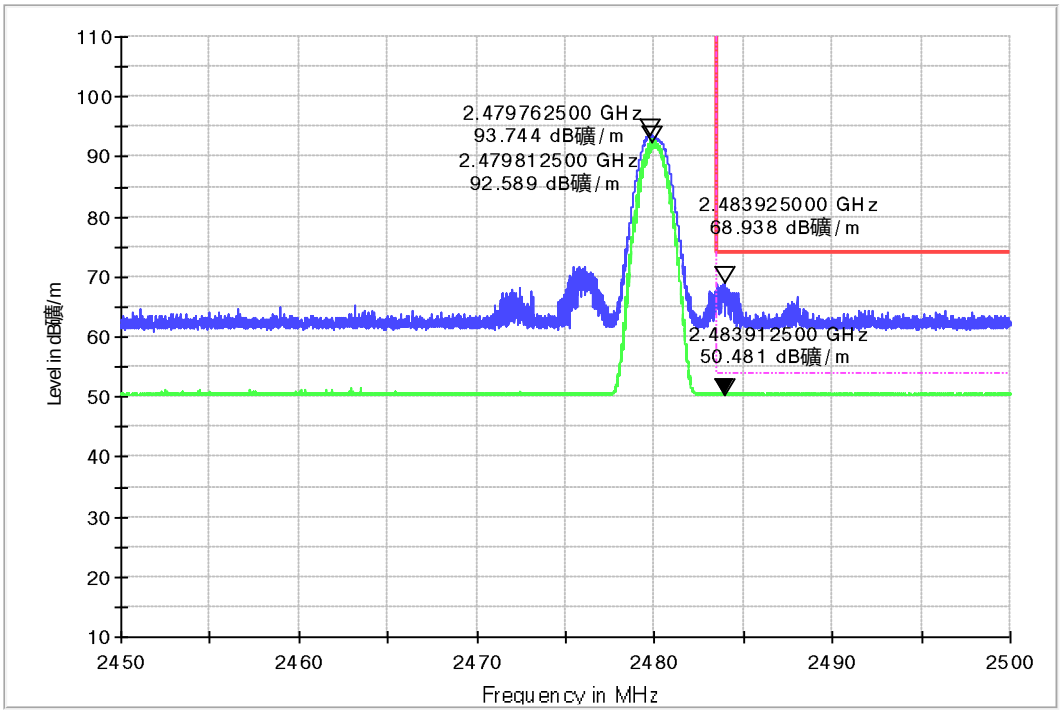


Figure 12: Radiated Band-Edge, 3-DH5, 2402, H

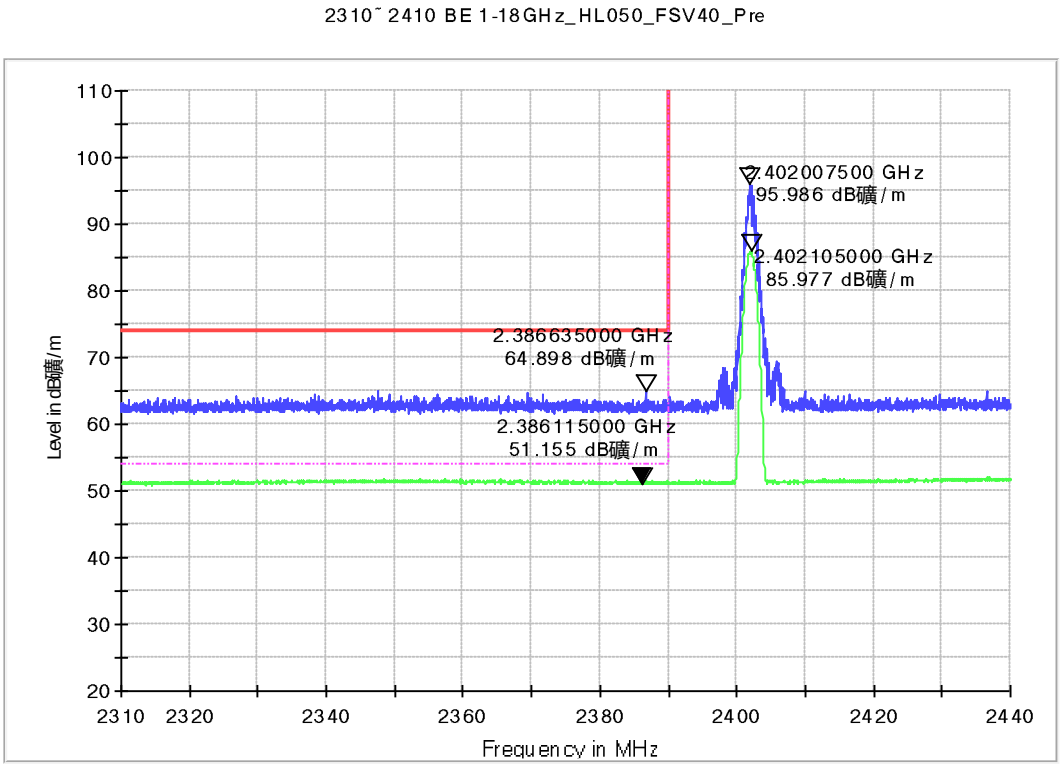


Figure 13: Radiated Band-Edge, 3-DH5, 2402, V

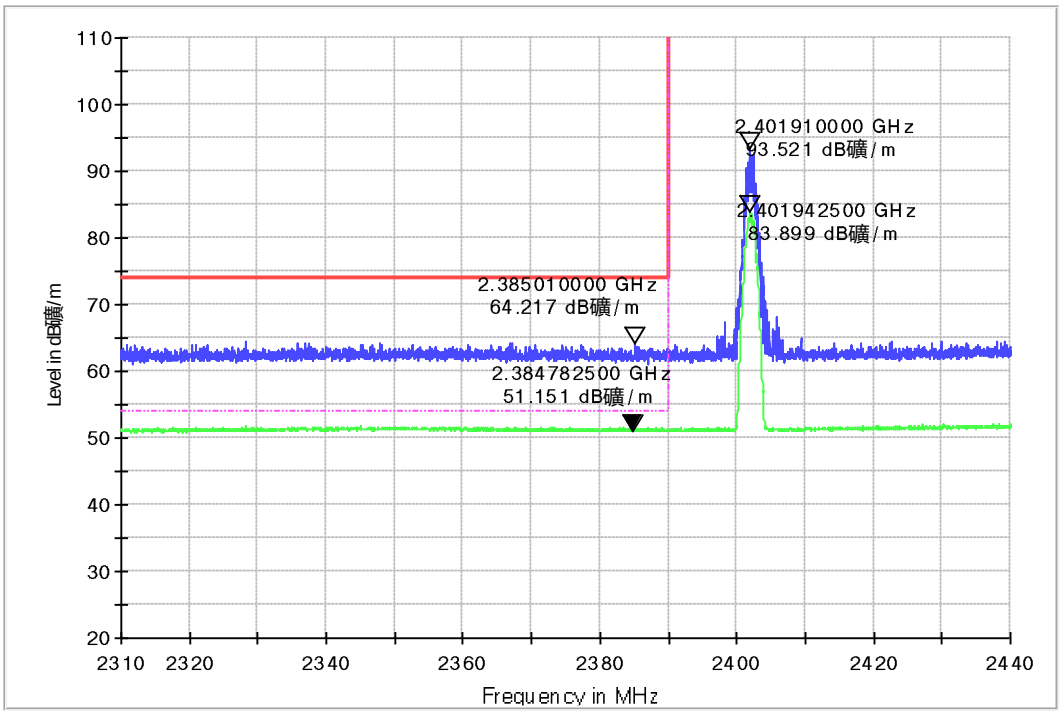


Figure 14: Radiated Band-Edge, 3-DH5, 2480, H

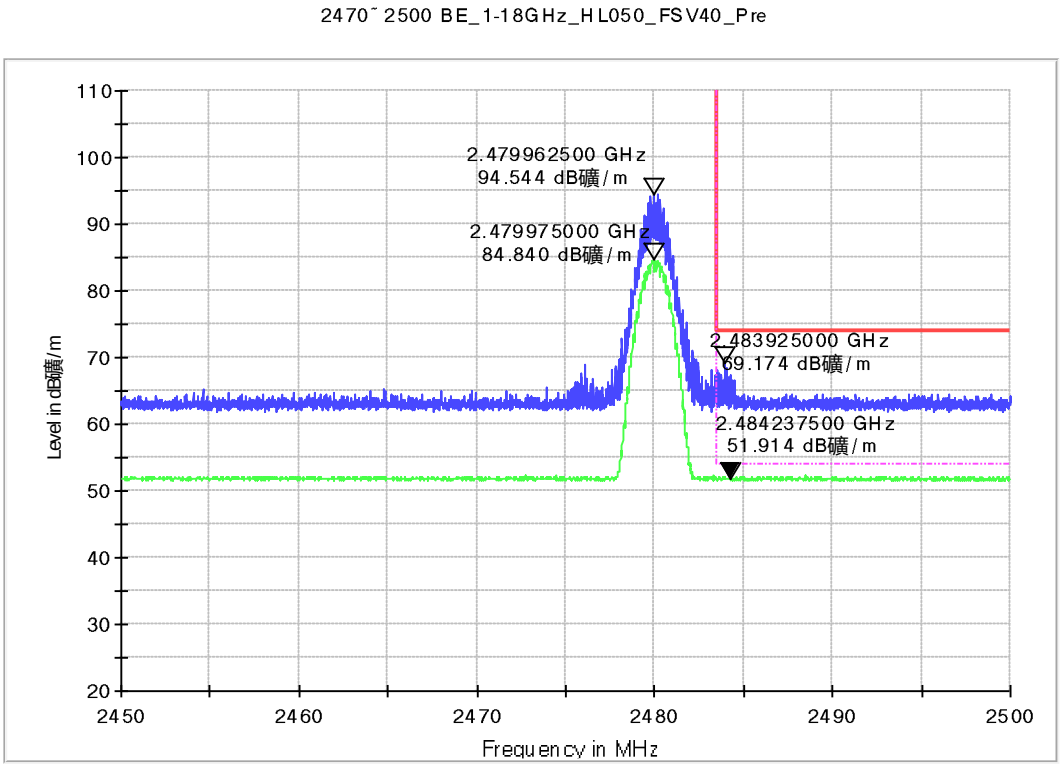
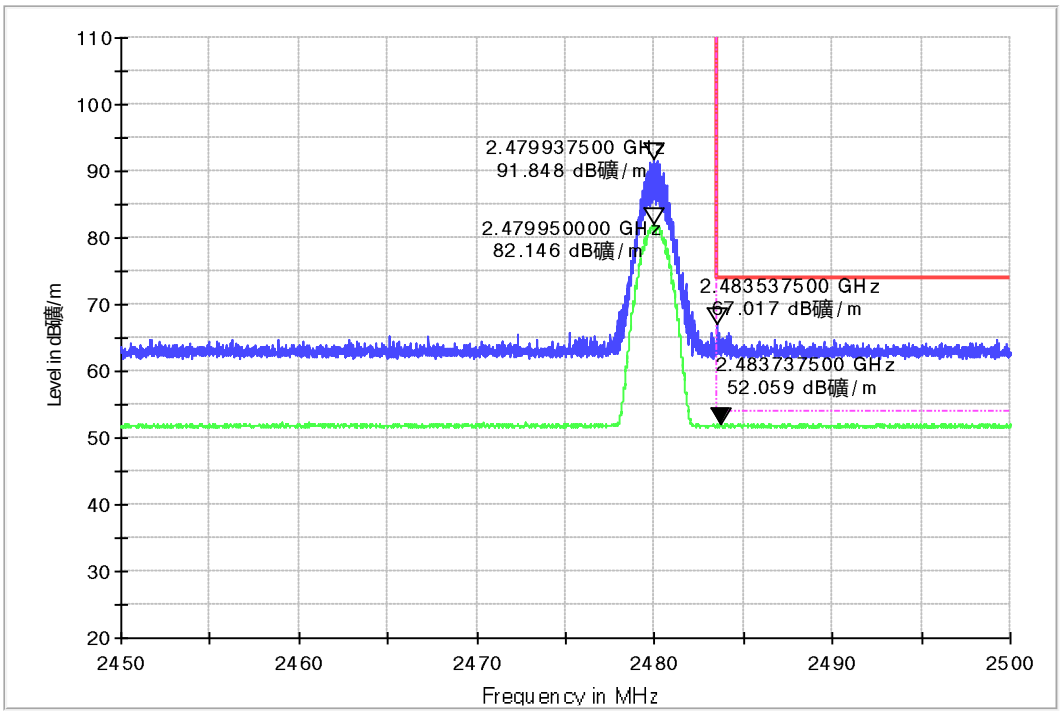


Figure 15: Radiated Band-Edge, 3-DH5, 2480, V



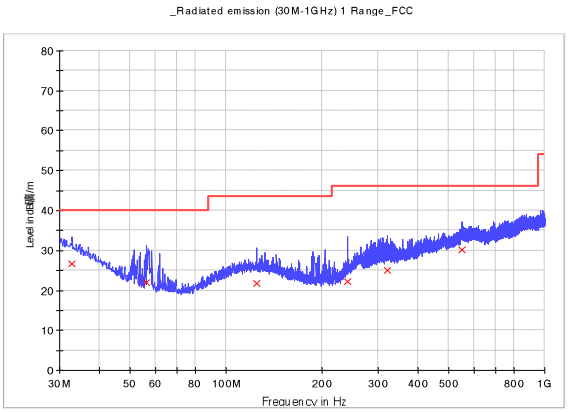
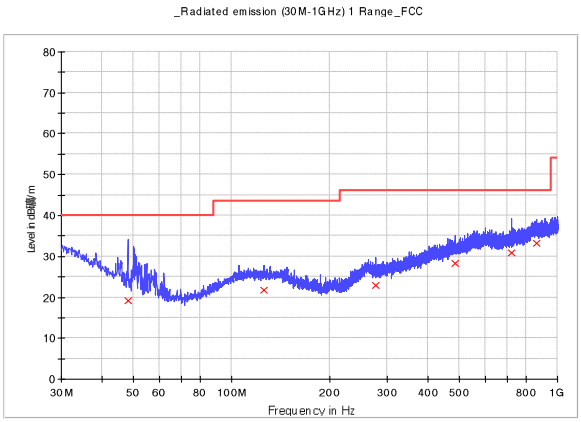
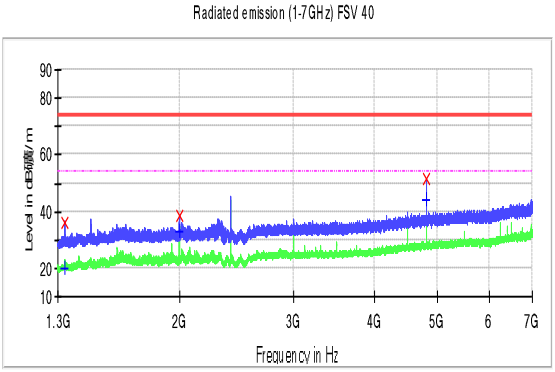
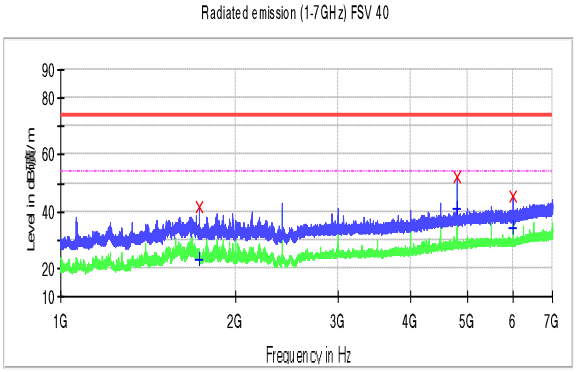
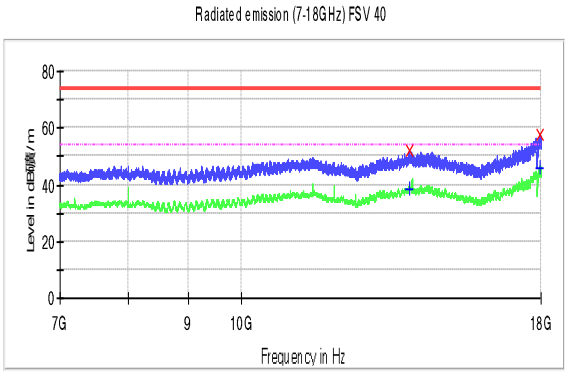
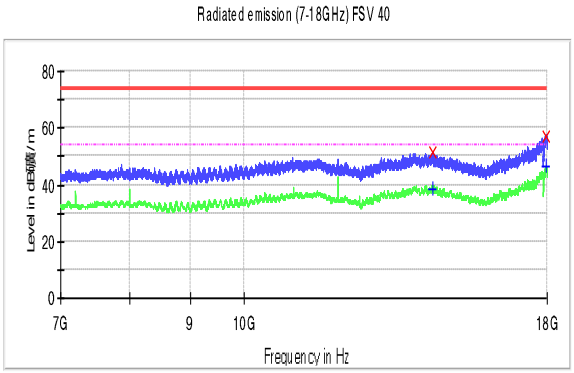
5.3.2 Radiated Spurious Emission

RESULT: **Pass**

Date of testing	:	2024-08-07~2024-10-29
Ambient temperature	:	20.3~22.6°C
Relative humidity	:	48.8~53.1%
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 3, August 2023, Clause 5.5
Test procedure	:	ANSI C63.10: 2013
Test voltage	:	AC 120V, 60Hz
Test modes applied	:	A
Kind of test site		3m Anechoic Chamber

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 16: Radiated Spurious Emission, 1-DH5, 2402MHz

30MHz to 1GHz H	30MHz to 1GHz V
	
1GHz to 7GHz H	**1GHz to 7GHz V**
	
7GHz to 18GHz H	**7GHz to 18GHz V**
	

Limit and Margin

QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
32.788750	26.7	H	23.5	13.3	40.0
56.311250	22.0	H	13.4	18.0	40.0
124.696250	21.7	H	18.7	21.8	43.5
240.005000	22.3	H	18.4	23.7	46.0
321.606250	24.9	H	20.9	21.1	46.0
551.738750	30.2	H	26.7	15.9	46.0
47.945000	19.1	V	15.8	20.9	40.0
125.423750	21.7	V	18.7	21.8	43.5
276.016250	22.9	V	19.9	23.1	46.0
486.263750	28.4	V	25.2	17.6	46.0
724.520000	30.9	V	27.3	15.1	46.0
862.260000	33.2	V	28.8	12.8	46.0

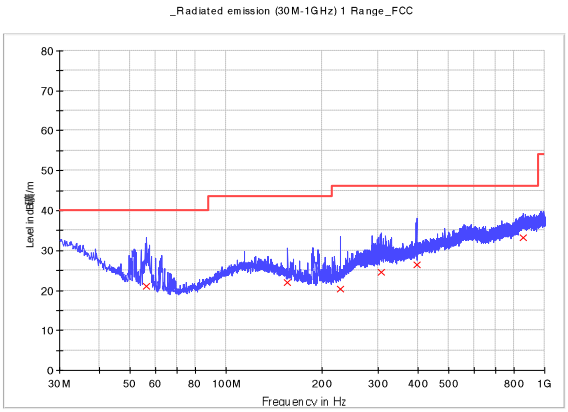
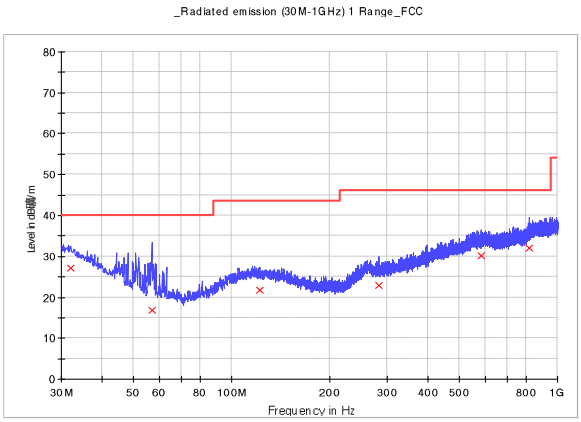
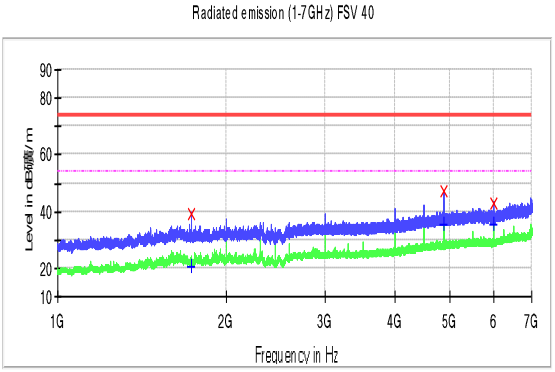
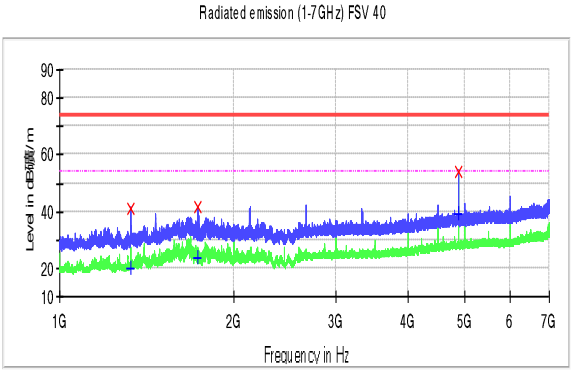
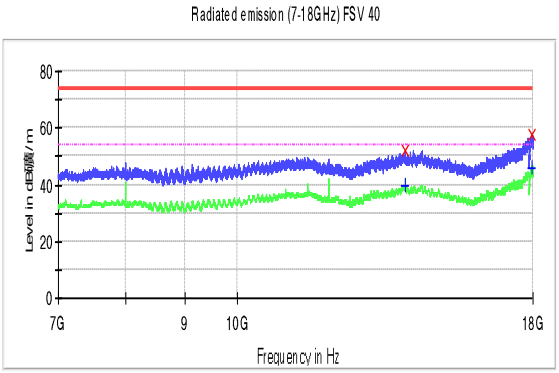
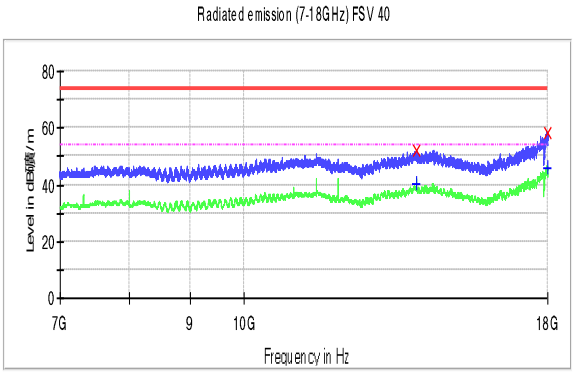
PK

Frequency (MHz)	MaxPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)
1331.875000	36.3	H	-19.6	37.8	74.0
2000.125000	38.2	H	-17.2	35.8	74.0
4804.187500	51.7	H	-10.1	22.3	74.0
13908.000000	51.8	H	2.6	22.2	74.0
17966.450000	57.5	H	13.1	16.5	74.0
1728.250000	41.8	V	-18.0	32.2	74.0
4804.000000	52.2	V	-10.1	21.8	74.0
6000.062500	45.2	V	-9.8	28.8	74.0
14420.050000	51.5	V	3.6	22.5	74.0
17976.900000	57.3	V	13.3	16.7	74.0

AV

Frequency (MHz)	Average (dBµV/m)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBµV/m)
1331.875000	20.0	H	-19.6	34.0	54.0
2000.125000	33.2	H	-17.2	20.8	54.0
4804.187500	43.9	H	-10.1	10.1	54.0
13908.000000	38.3	H	2.6	15.8	54.0
17966.450000	45.8	H	13.1	8.2	54.0
1728.250000	23.0	V	-18.0	31.1	54.0
4804.000000	41.1	V	-10.1	12.9	54.0
6000.062500	33.9	V	-9.8	20.1	54.0
14420.050000	38.6	V	3.6	15.4	54.0
17976.900000	46.2	V	13.3	7.8	54.0

Figure 17: Radiated Spurious Emission, 1-DH5, 2441MHz

30MHz to 1GHz H	30MHz to 1GHz V
	
1GHz to 7GHz H	**1GHz to 7GHz V**
	
7GHz to 18GHz H	**7GHz to 18GHz V**
	

Limit and Margin

QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
56.190000	21.1	H	13.5	18.9	40.0
156.100000	22.1	H	17.1	21.4	43.5
228.122500	20.4	H	16.9	25.7	46.0
307.056250	24.6	H	20.4	21.4	46.0
396.053750	26.3	H	22.9	19.7	46.0
855.955000	33.2	H	28.9	12.8	46.0
32.061250	27.1	V	23.8	13.0	40.0
56.917500	16.8	V	13.3	23.2	40.0
122.271250	21.9	V	18.8	21.7	43.5
282.200000	23.0	V	20.0	23.0	46.0
583.385000	30.2	V	26.6	15.8	46.0
819.095000	31.9	V	28.1	14.1	46.0

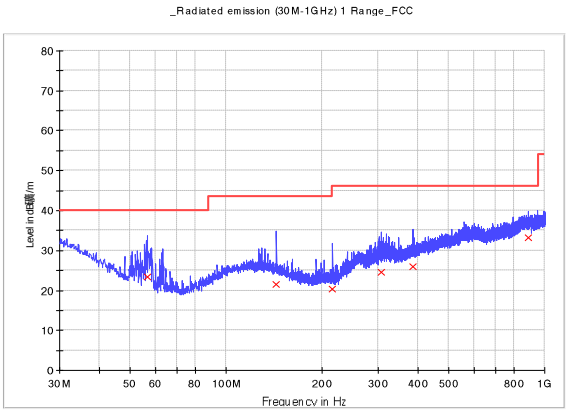
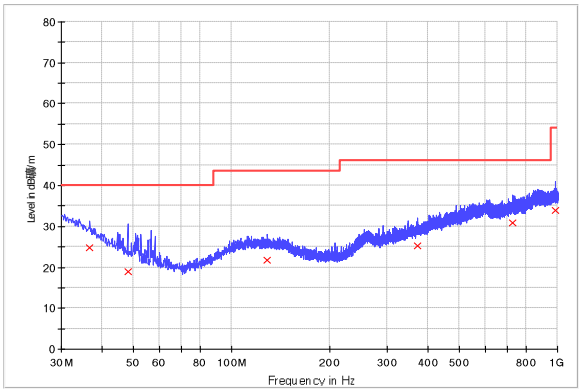
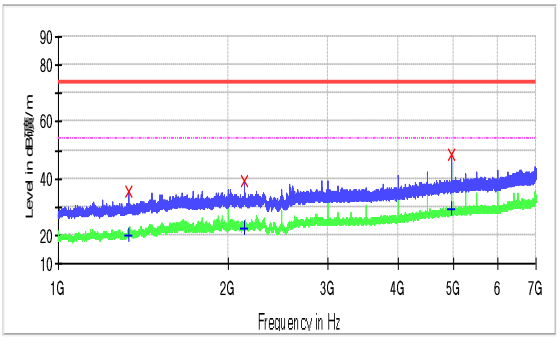
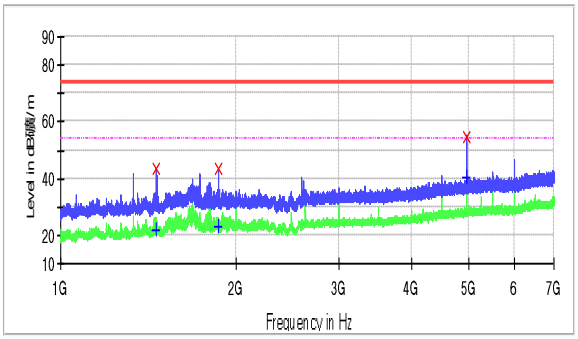
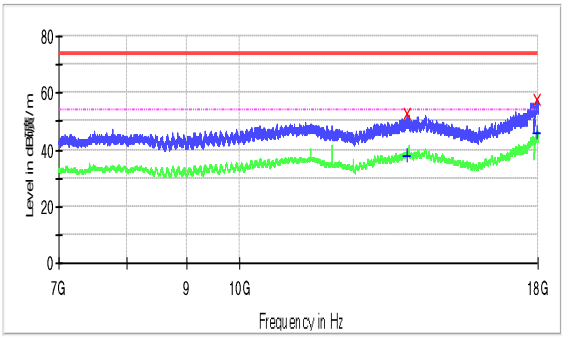
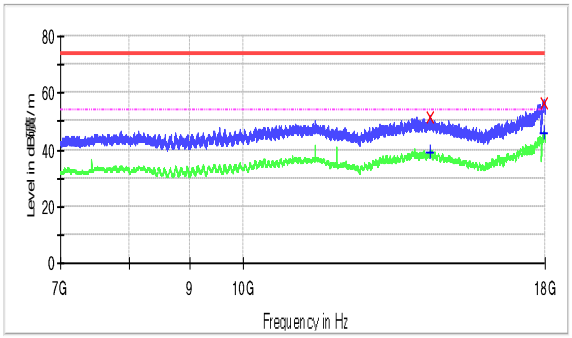
PK

Frequency (MHz)	MaxPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)
1728.437500	39.4	H	-18.0	34.6	74.0
4882.562500	47.0	H	-10.0	27.0	74.0
6000.062500	43.2	H	-9.8	30.8	74.0
13955.300000	52.1	H	2.7	21.9	74.0
17973.050000	57.6	H	13.2	16.4	74.0
1328.500000	41.3	V	-19.6	32.7	74.0
1731.062500	41.8	V	-18.0	32.2	74.0
4881.625000	54.3	V	-10.0	19.8	74.0
13955.300000	52.1	V	2.7	21.9	74.0
17982.400000	58.3	V	13.4	15.7	74.0

AV

Frequency (MHz)	Average (dBµV/m)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBµV/m)
1728.437500	20.6	H	-18.0	33.4	54.0
4882.562500	35.5	H	-10.0	18.5	54.0
6000.062500	35.7	H	-9.8	18.3	54.0
13955.300000	40.0	H	2.7	14.0	54.0
17973.050000	46.0	H	13.2	8.0	54.0
1328.500000	20.2	V	-19.6	33.8	54.0
1731.062500	23.5	V	-18.0	30.5	54.0
4881.625000	38.9	V	-10.0	15.1	54.0
13955.300000	40.3	V	2.7	13.7	54.0
17982.400000	46.1	V	13.4	7.9	54.0

Figure 18: Radiated Spurious Emission, 1-DH5, 2480MHz

30MHz to 1GHz H	30MHz to 1GHz V
	
1GHz to 7GHz H	**1GHz to 7GHz V**
	
7GHz to 18GHz H	**7GHz to 18GHz V**
	

Limit and Margin

QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
56.553750	23.3	H	13.4	16.7	40.0
143.853750	21.5	H	17.9	22.0	43.5
216.118750	20.3	H	16.0	25.7	46.0
307.905000	24.5	H	20.4	21.5	46.0
385.747500	26.0	H	22.6	20.0	46.0
885.661250	33.2	H	28.7	12.8	46.0
36.668750	24.8	V	21.6	15.2	40.0
47.945000	19.1	V	15.8	20.9	40.0
128.818750	21.8	V	18.7	21.7	43.5
371.803750	25.3	V	22.1	20.7	46.0
729.976250	30.9	V	27.4	15.1	46.0
986.056250	34.0	V	29.8	20.1	54.0

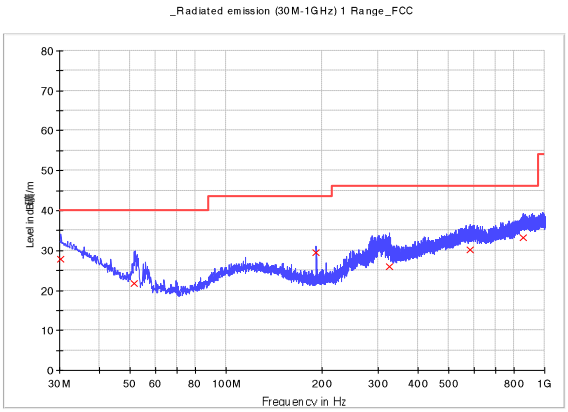
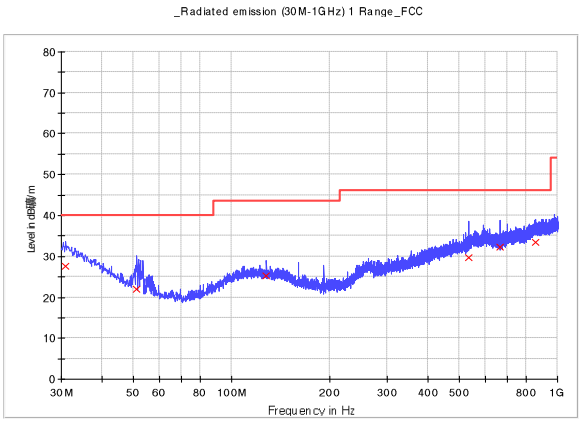
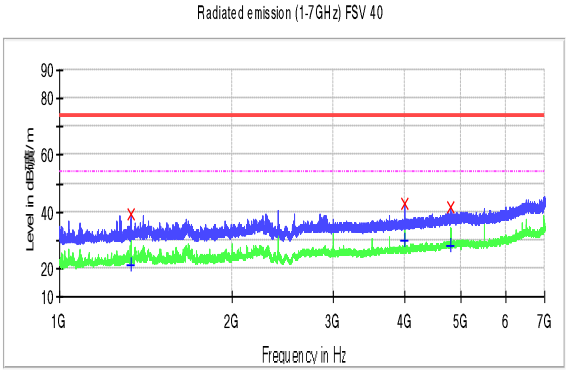
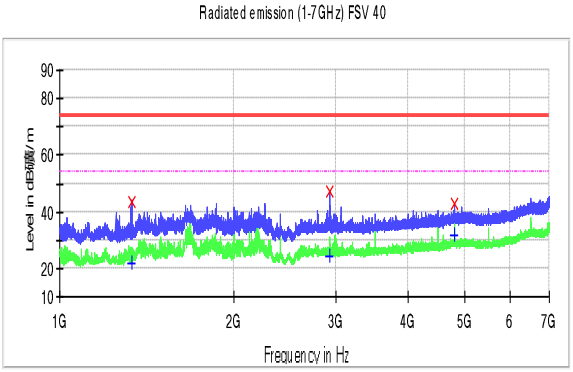
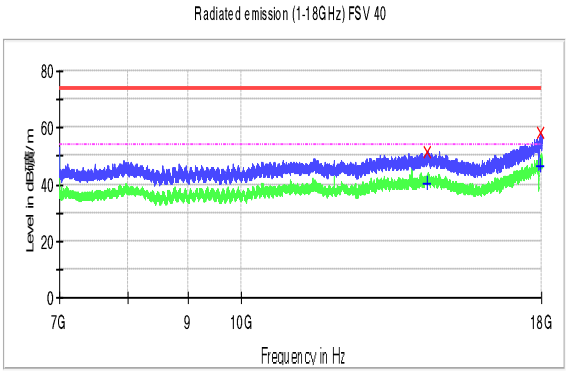
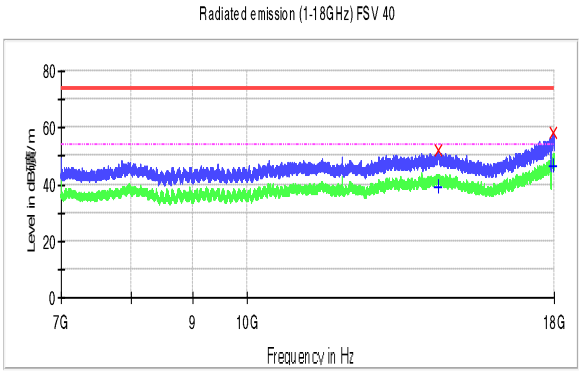
PK

Frequency (MHz)	MaxPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)
1330.187500	35.5	H	-19.6	38.5	74.0
2132.875000	39.2	H	-16.8	34.8	74.0
4959.812500	48.7	H	-9.9	25.4	74.0
13896.450000	52.8	H	2.5	21.2	74.0
17975.800000	57.8	H	13.3	16.2	74.0
1459.562500	43.7	V	-19.0	30.3	74.0
1862.125000	43.5	V	-17.7	30.6	74.0
4959.812500	54.8	V	-9.9	19.2	74.0
14399.700000	51.7	V	3.5	22.3	74.0
17967.550000	56.7	V	13.1	17.3	74.0

AV

Frequency (MHz)	Average (dBµV/m)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBµV/m)
1330.187500	19.6	H	-19.6	34.4	54.0
2132.875000	22.1	H	-16.8	31.9	54.0
4959.812500	29.1	H	-9.9	25.0	54.0
13896.450000	38.1	H	2.5	15.9	54.0
17975.800000	46.2	H	13.3	7.8	54.0
1459.562500	21.6	V	-19.0	32.4	54.0
1862.125000	23.1	V	-17.7	30.9	54.0
4959.812500	40.5	V	-9.9	13.5	54.0
14399.700000	38.8	V	3.5	15.2	54.0
17967.550000	45.7	V	13.1	8.3	54.0

Figure 19: Radiated Spurious Emission, 3-DH5, 2402MHz

30MHz to 1GHz H	30MHz to 1GHz V
	
1GHz to 7GHz H	**1GHz to 7GHz V**
	
7GHz to 18GHz H	**7GHz to 18GHz V**
	

Limit and Margin

QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
30.242500	27.9	H	24.7	12.1	40.0
51.461250	21.7	H	14.6	18.3	40.0
191.990000	29.4	H	15.9	14.1	43.5
325.243750	25.9	H	20.9	20.1	46.0
583.627500	30.2	H	26.6	15.9	46.0
856.197500	33.3	H	28.9	12.8	46.0
30.970000	27.6	V	24.4	12.4	40.0
51.218750	22.1	V	14.7	18.0	40.0
127.970000	25.2	V	18.7	18.3	43.5
532.338750	29.8	V	25.9	16.2	46.0
666.077500	32.3	V	26.4	13.7	46.0
858.986250	33.4	V	28.9	12.6	46.0

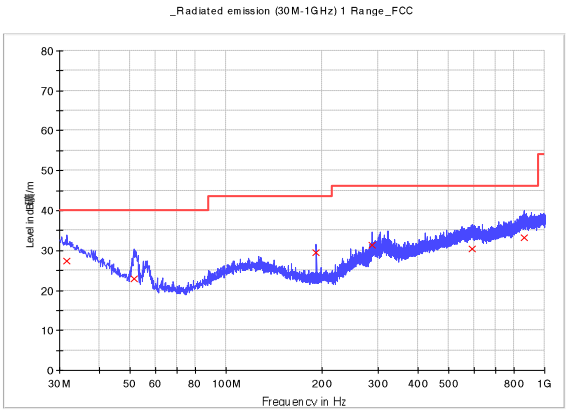
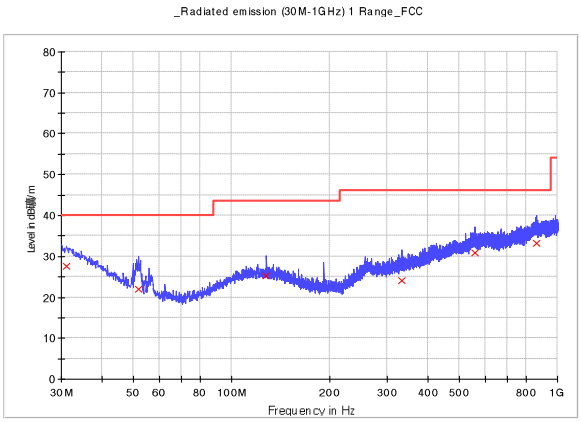
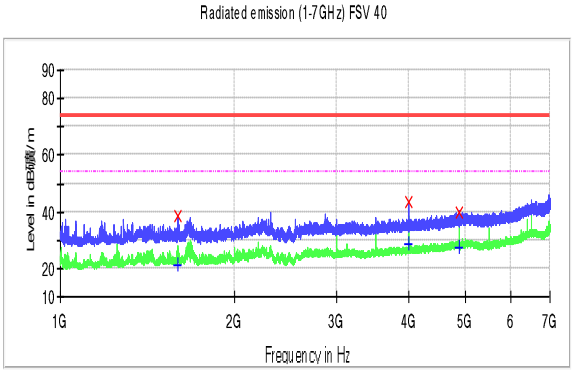
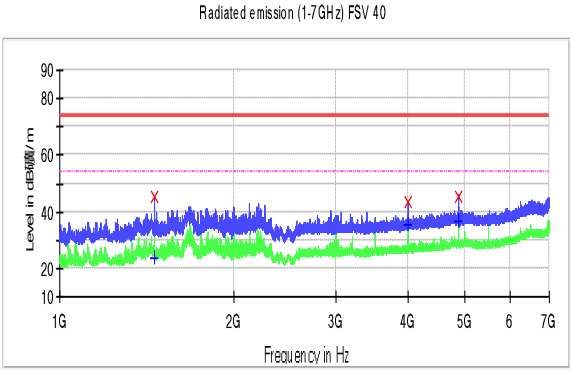
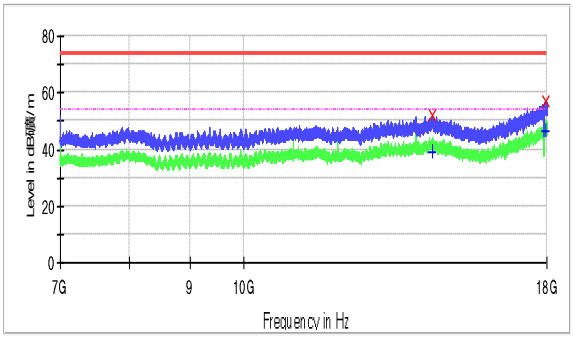
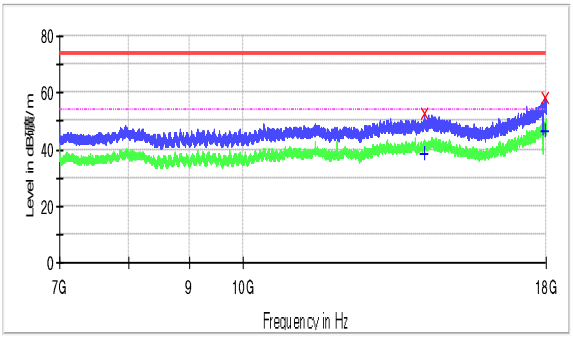
PK

Frequency (MHz)	MaxPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)
1332.100000	38.9	H	-18.5	35.1	74.0
4000.000000	40.6	H	-12.9	33.4	74.0
4803.700000	41.7	H	-10.8	32.3	74.0
14391.656250	51.3	H	3.3	22.7	74.0
17968.718750	58.8	H	12.8	15.2	74.0
1332.700000	43.6	V	-18.5	30.4	74.0
2929.300000	47.2	V	-14.7	26.8	74.0
4803.700000	42.9	V	-10.8	31.1	74.0
14424.312500	51.9	V	3.4	22.1	74.0
17977.656250	58.3	V	13.0	15.7	74.0

AV

Frequency (MHz)	Average (dBµV/m)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBµV/m)
1332.100000	21.4	H	-18.5	32.6	54.0
4000.000000	30.1	H	-12.9	23.9	54.0
4803.700000	28.1	H	-10.8	25.9	54.0
14391.656250	40.5	H	3.3	13.5	54.0
17968.718750	46.4	H	12.8	7.6	54.0
1332.700000	21.6	V	-18.5	32.4	54.0
2929.300000	24.5	V	-14.7	29.5	54.0
4803.700000	31.7	V	-10.8	22.3	54.0
14424.312500	39.0	V	3.4	15.0	54.0
17977.656250	46.7	V	13.0	7.3	54.0

Figure 20: Radiated Spurious Emission, 3-DH5, 2441MHz

30MHz to 1GHz H	30MHz to 1GHz V
	
1GHz to 7GHz H	**1GHz to 7GHz V**
	
7GHz to 18GHz H	**7GHz to 18GHz V**
	

Limit and Margin

QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
31.697500	27.3	H	24.0	12.7	40.0
51.340000	23.0	H	14.6	17.0	40.0
191.990000	29.4	H	15.9	14.1	43.5
288.020000	31.4	H	20.1	14.6	46.0
592.236250	30.5	H	26.8	15.5	46.0
862.260000	33.3	H	28.8	12.8	46.0
31.091250	27.6	V	24.3	12.4	40.0
51.825000	21.9	V	14.5	18.1	40.0
127.970000	25.3	V	18.7	18.2	43.5
332.033750	24.2	V	21.0	21.8	46.0
556.952500	30.8	V	26.7	15.2	46.0
865.412500	33.2	V	28.8	12.8	46.0

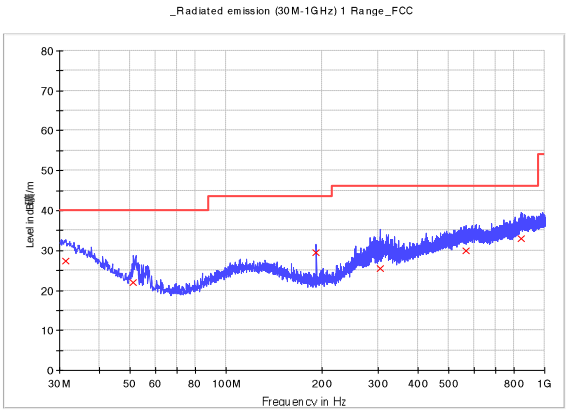
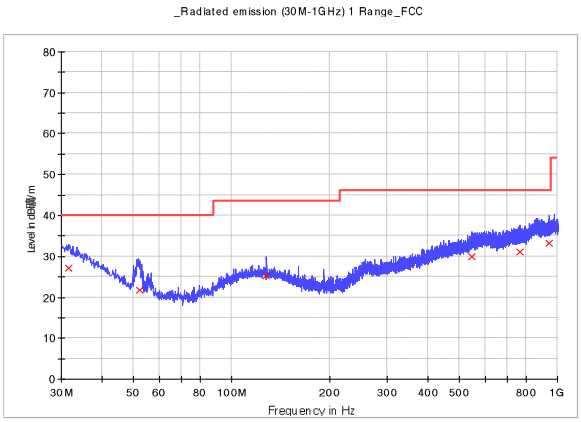
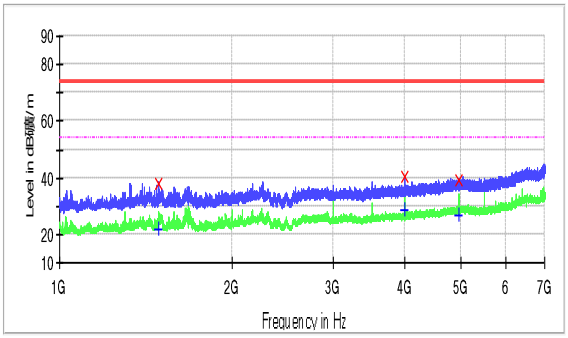
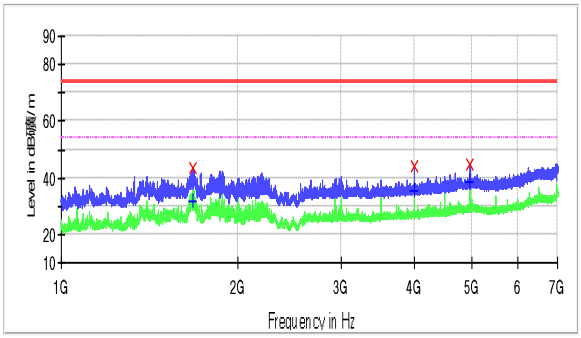
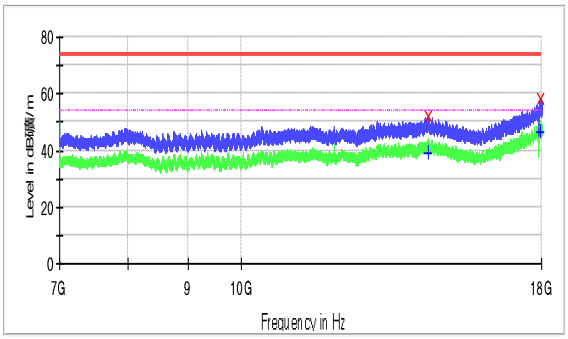
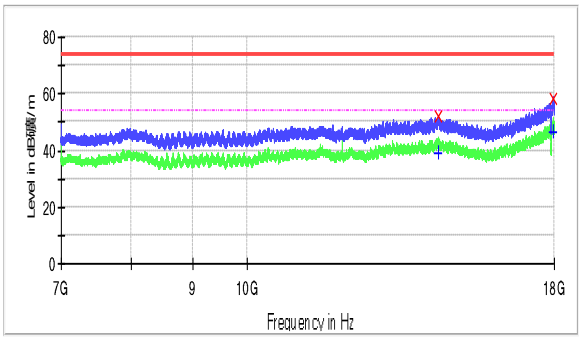
PK

Frequency (MHz)	MaxPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)
1596.700000	38.3	H	-18.6	35.7	74.0
4000.300000	43.2	H	-12.9	30.8	74.0
4881.700000	40.1	H	-10.7	34.0	74.0
14405.406250	52.0	H	3.4	22.0	74.0
17976.281250	57.3	H	13.0	16.7	74.0
1459.900000	45.3	V	-18.4	28.7	74.0
4000.000000	43.3	V	-12.9	30.7	74.0
4882.000000	45.5	V	-10.7	28.5	74.0
14224.937500	52.6	V	2.6	21.5	74.0
17980.406250	58.3	V	13.0	15.7	74.0

AV

Frequency (MHz)	Average (dBµV/m)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBµV/m)
1596.700000	21.0	H	-18.6	33.0	54.0
4000.300000	28.7	H	-12.9	25.3	54.0
4881.700000	27.4	H	-10.7	26.6	54.0
14405.406250	39.0	H	3.4	15.0	54.0
17976.281250	46.7	H	13.0	7.3	54.0
1459.900000	23.7	V	-18.4	30.3	54.0
4000.000000	35.3	V	-12.9	18.7	54.0
4882.000000	36.8	V	-10.7	17.3	54.0
14224.937500	38.6	V	2.6	15.4	54.0
17980.406250	46.7	V	13.0	7.3	54.0

Figure 21: Radiated Spurious Emission, 3-DH5, 2480MHz

30MHz to 1GHz H	30MHz to 1GHz V
	
1GHz to 7GHz H	**1GHz to 7GHz V**
	
7GHz to 18GHz H	**7GHz to 18GHz V**
	

Limit and Margin

QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - QPK (dB)	Limit - QPK (dBµV/m)
31.455000	27.3	H	24.1	12.7	40.0
51.218750	22.0	H	14.7	18.0	40.0
191.990000	29.4	H	15.9	14.1	43.5
305.358750	25.6	H	20.4	20.4	46.0
567.016250	30.0	H	26.5	16.0	46.0
844.678750	33.1	H	28.9	13.0	46.0
31.697500	27.3	V	24.0	12.8	40.0
52.310000	21.7	V	14.3	18.3	40.0
127.970000	25.2	V	18.7	18.3	43.5
545.918750	30.0	V	26.6	16.0	46.0
765.987500	31.2	V	27.7	14.8	46.0
939.496250	33.2	V	29.0	12.8	46.0

PK

Frequency (MHz)	MaxPeak (dBµV/m)	Pol	Corr. (dB/m)	Margin - PK+ (dB)	Limit - PK+ (dBµV/m)
1489.000000	38.1	H	-18.4	35.9	74.0
3999.700000	40.6	H	-12.9	33.4	74.0
4957.600000	39.5	H	-10.6	34.6	74.0
14414.343750	51.8	H	3.4	22.2	74.0
17979.375000	58.4	H	13.0	15.6	74.0
1675.600000	43.5	V	-18.6	30.5	74.0
4000.000000	43.8	V	-12.9	30.2	74.0
4960.000000	44.9	V	-10.6	29.1	74.0
14417.093750	52.0	V	3.4	22.1	74.0
17971.812500	58.4	V	12.9	15.6	74.0

AV

Frequency (MHz)	Average (dBµV/m)	Pol	Corr. (dB/m)	Margin - AVG (dB)	Limit - AVG (dBµV/m)
1489.000000	21.7	H	-18.4	32.3	54.0
3999.700000	28.6	H	-12.9	25.4	54.0
4957.600000	27.0	H	-10.6	27.0	54.0
14414.343750	39.2	H	3.4	14.9	54.0
17979.375000	46.7	H	13.0	7.3	54.0
1675.600000	31.7	V	-18.6	22.3	54.0
4000.000000	35.5	V	-12.9	18.5	54.0
4960.000000	38.8	V	-10.6	15.2	54.0
14417.093750	39.1	V	3.4	14.9	54.0
17971.812500	46.5	V	12.9	7.5	54.0

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