UNIFIED COMPLIANCE LABORATORY

427 West 12800 South
Draper, UT 84020

Test Report

Certification

FCC ID	SWX-U6P
IC ID	6545A-U6P
Equipment Under Test	U6+
Test Report Serial Number	TR7532_03
Date of Test(s)	August 28 through October 5, 2022
Report Issue Date	October 19, 2022

Test Specification	Applicant
47 CFR FCC Part 15, Subpart C	Ubiquiti Inc. 685 Third Avenue New York, NY 10017 U.S.A.

NVLAP TESTING ilac-MRA

NVLAP LAB CODE 600241-0

Certification of Engineering Report

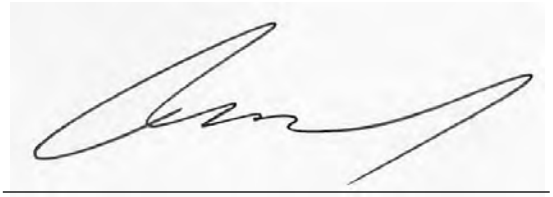
This report has been prepared by Unified Compliance Laboratory (UCL) to document compliance of the device described below with the requirement of Federal Communication Commissions (FCC) Part 15, Subpart C. This report may be reproduced in full. Partial reproduction of this report may only be made with the written consent of the laboratory. The results in this report apply only to the sample tested.

Applicant	Ubiquiti Inc.
Manufacturer	Ubiquiti Inc.
Brand Name	UniFi
Model Number	U6+
FCC ID	SWX-U6P
IC ID	6545A-U6P

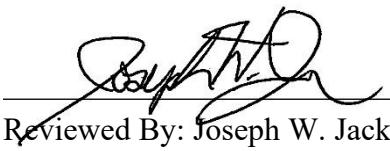
On this 19th day of October 2022, I individually and for Unified Compliance Laboratory certify that the statements made in this engineering report are true, complete, and correct to the best of my knowledge and are made in good faith.

Although NVLAP has accredited the Unified Compliance Laboratory testing facilities, this report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the U.S. federal government.

Unified Compliance Laboratory



Written By: Clay Allred



Reviewed By: Joseph W. Jackson

Revision History		
Revision	**Description**	**Date**
01	Original Report Release	October 7, 2022
02	Added AX mode data to the end of the report.	October 12, 2022

Table of Contents

1 Client Information

1.1 Applicant

Company	Ubiquiti Inc. 685 Third Avenue New York, NY 10017 U.S.A.
Contact Name	Mark Feil
Title	Compliance Manager

1.2 Manufacturer

Company	Ubiquiti Inc. 685 Third Avenue New York, NY 10017 U.S.A.
Contact Name	Mark Feil
Title	Compliance Manager

2 Equipment Under Test (EUT)

2.1 Identification of EUT

Brand Name	UniFi
Model Number	U6+
Serial Number	N/A
Dimensions (cm)	16 x 16 x 0.33

2.2 Description of EUT

The U6+ is a Wi-Fi 6 access point designed for wide-ranging wireless coverage while maintaining overall network capacity. It delivers an aggregate radio rate of up to 1.5 Gbps with 5 GHz (3x3 MU-MIMO and OFDMA) and 2.4 GHz (2x2 MIMO) radios. U6-Pro uses a sophisticated antenna design with sideways amplification to offer excellent range when mounted horizontally. U6+ combines its purpose-built antenna with powerful Wi-Fi 6 features like OFDMA, beamforming, and BSS coloring for reliable long-range wireless performance.

This report covers the circuitry of the device subject to FCC Part 15, Subpart C. The circuitry of the device subject to FCC Part 15 Subpart B was found to be compliant and is covered under a separate Unified Compliance Laboratory test report.

2.3 EUT and Support Equipment

The EUT and support equipment used during the test are listed below.

Brand Name **Model Number** **Serial Number**	**Description**	**Name of Interface Ports / Interface Cables**
BN: UniFi MN: U6+ SN: N/A	Wireless Access Point	See Section 2.4
BN: Ubiquiti, Inc. MN: U-POE-at SN: N/A	PoE Injector Power Supply	Shielded or Un-shielded Cat 5e cable (Note 2)
BN: Dell MN: XPS 13 SN: N/A	Laptop Computer	Shielded or Un-shielded Cat 5e cable (Note 2)

Notes: (1) EUT
(2) Interface port connected to EUT (See Section 2.4)

The support equipment listed above was not modified in order to achieve compliance with this standard.

2.4 Interface Ports on EUT

Name of Ports	No. of Ports Fitted to EUT	Cable Description/Length
PoE	1	Shielded or Un-Shielded Cat 5e Cable/> 3 Meters

2.5 Operating Environment

Power Supply	48 Volts PoE
AC Mains Frequency	60 Hz
Temperature	22.1-22.8 °C
Humidity	19.3-23.9 %
Barometric Pressure	1009 mBar

2.6 Operating Modes

The U6+ was tested using test software in order to enable a constant transmission. The measurements within this report are corrected to reference a 100% duty cycle. All emission modes of 802.11 ax, a, ac and n were investigated.

2.7 EUT Exercise Software

EUT firmware version 1.0 was used to operate the transmitter using a constant transmit mode.

2.8 Block Diagram of Test Configuration

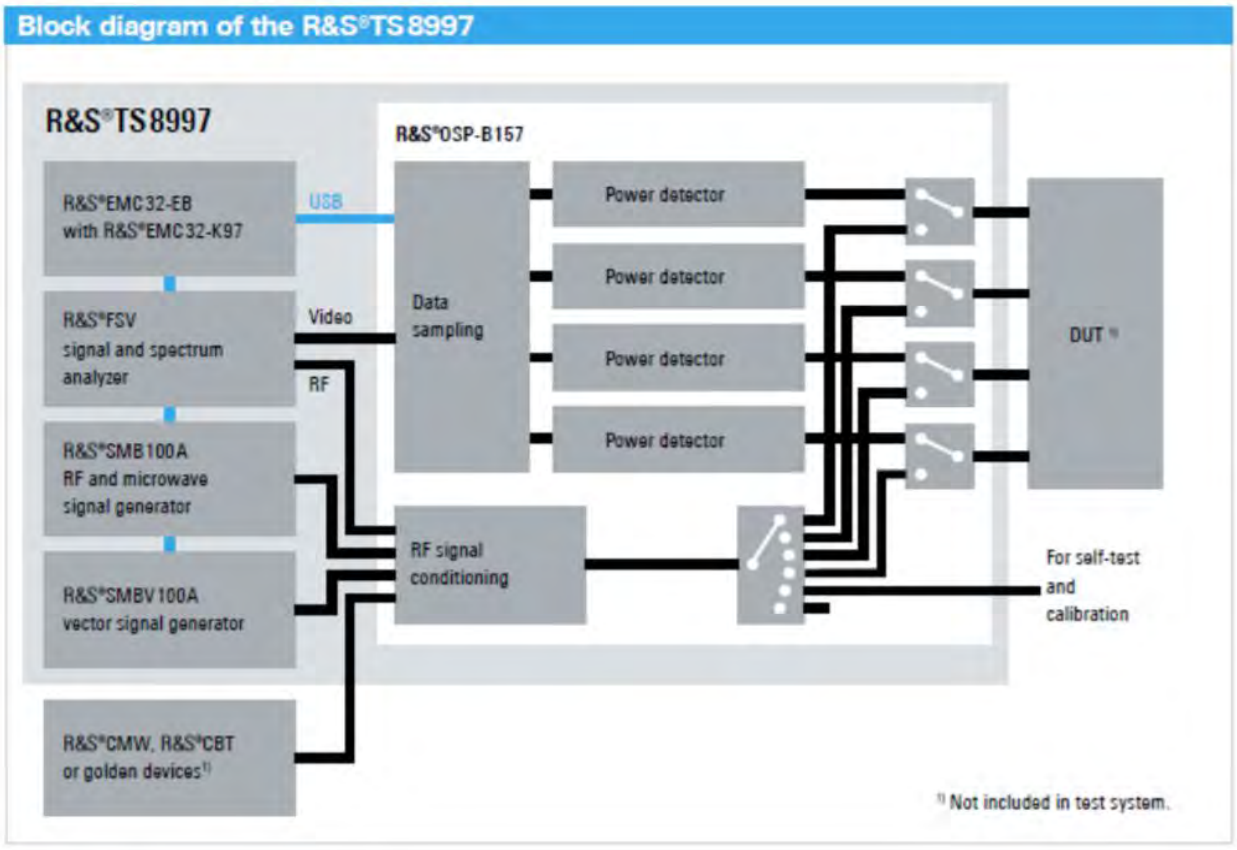


Diagram 1: Test Configuration Block Diagram

2.9 Modification Incorporated/Special Accessories on EUT

There were no modifications made to the EUT during testing to comply with the specification.

2.10 Deviation, Opinions Additional Information or Interpretations from Test Standard

There were no deviations, opinions, additional information or interpretations from the test specification.

3 Test Specification, Method and Procedures

3.1 Test Specification

Title	47 CFR FCC Part 15, Subpart C 15.203, 15.207 and 15.247 Limits and methods of measurement of radio interference characteristics of radio frequency devices.
Purpose of Test	The tests were performed to demonstrate initial compliance

3.2 Methods & Procedures

3.2.1 47 CFR FCC Part 15 Section 15.203

See test standard for details.

3.2.2 47 CFR FCC Part 15 Section 15.207

See test standard for details.

3.2.3 47 CFR FCC Part 15 Section 15.247

See test standard for details.

3.3 FCC Part 15, Subpart C

3.3.1 Summary of Tests

FCC Section	ISED Section	Environmental Phenomena	Frequency Range (MHZ)	Result
15.203	N/A	Antenna requirements	Structural Requirement	Compliant
15.207	RSS-Gen	Conducted Disturbance at Mains Port	0.15 to 30	N/A
15.247(a)	RSS-247 § 5.2	Bandwidth Requirement	2412 to 2462	Compliant
15.247(b)	RSS-247 § 5.4	Peak Output Power	2412 to 2462	Compliant
15.247(d)	RSS-247 § 5.4	Antenna Conducted Spurious Emissions	0.009 to 40000	N/A
15.247(d)	RSS-247 § 5.4	Radiated Spurious Emissions	0.009 to 40000	Compliant
15.247(e)	RSS-247 § 5.2	Peak Power Spectral Density	2412 to 2462	Compliant
The testing was performed according to the procedures in ANSI C63.10-2013, KDB 558074 and 47 CFR Part 15. Where applicable, KDB 662911 was followed to sum required measurements.				

3.4 Results

In the configuration tested, the EUT complied with the requirements of the specification.

3.5 Test Location

Testing was performed at the Unified Compliance Laboratory 3-Meter and 10-Meter chambers located at 427 West 12800 South, Draper, UT 84020. Unified Compliance Laboratory is accredited by National Voluntary Laboratory Accreditation Program (NVLAP); NVLAP Code 600241-0 which is effective until 30 June 2023. This site has also been registered with Innovations, Science and Economic Development (ISED) department and was accepted under Appendix B, Phase 1 procedures of the APEC Tel MRA for Canadian recognition. ISED No.: 25346, effective until 30 June 2023. Unified Compliance Laboratory has been assigned Conformity Assessment Number US0223 by ISED.

4 Test Equipment

4.1 Conducted Emissions at Mains Ports

Type of Equipment	Manufacturer	Model Number	Asset Number	Date of Last Calibration	Due Date of Calibration
Spectrum Analyzer	R&S	FSV40	UCL-2861	1/03/2022	1/03/2023
Signal Generator	R&S	SMB100A	UCL-2864	N/A	N/A
Vector Signal Generator	R&S	SMBV100A	UCL-2873	N/A	N/A
Switch Extension	R&S	OSP-B157WX	UCL-2867	1/03/2022	1/03/2023
Switch Extension	R&S	OSP-150W	UCL-2870	1/03/2022	1/03/2023

Table 1:List of equipment used for Direct Connect at the Antenna Port

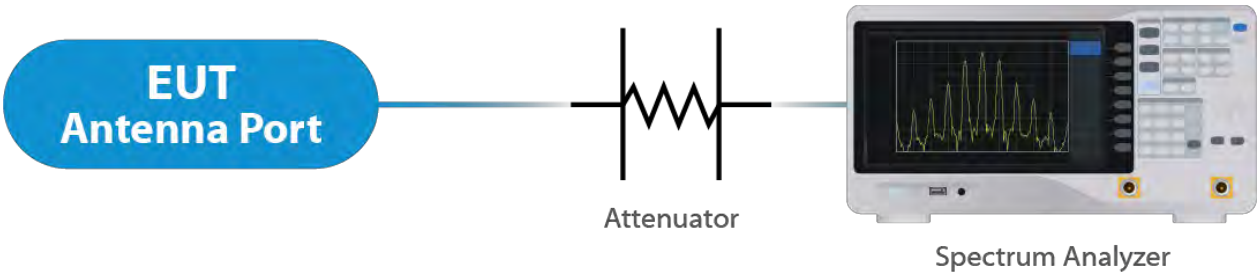


Figure 1: Direct Connect at the Antenna Port Test

Figure 2: Output Power Measurement

4.2 Radiated Emissions

Type of Equipment	Manufacturer	Model Number	Asset Number	Date of Last Calibration	Due Date of Calibration
EMI Receiver	Keysight	N9038A	UCL-2778	1/4/2022	1/4/2023
Pre-Amplifier 9 kHz – 1 GHz	Sonoma Instruments	310N	UCL-2889	10/7/2021	10/7/2022
Broadband Antenna	Scwarzbeck	VULB 9163	UCL-3062	8/28/2020	8/27/2022
Broadband Antenna	Scwarzbeck	VULB 9163	UCL-3071	5/19/2020	5/19/2022
Double Ridge Horn Antenna	Scwarzbeck	BBHA 9120D	UCL-3065	7/8/2021	7/8/2022
Log Periodic	Scwarzbeck	STLP 9129	UCL-3068	11/16/2020	11/16/2022
15 - 40 GHz Horn Antenna	Scwarzbeck	BBHA 9170	UCL-2487	5/21/2020	5/21/2022
1 – 18 GHz Amplifier	Com-Power	PAM 118A	UCL-3833	10/7/2021	10/7/2022
Test Software	UCL	Revision 1	UCL-3108	N/A	N/A

Table 2:List of equipment used for Radiated Emissions

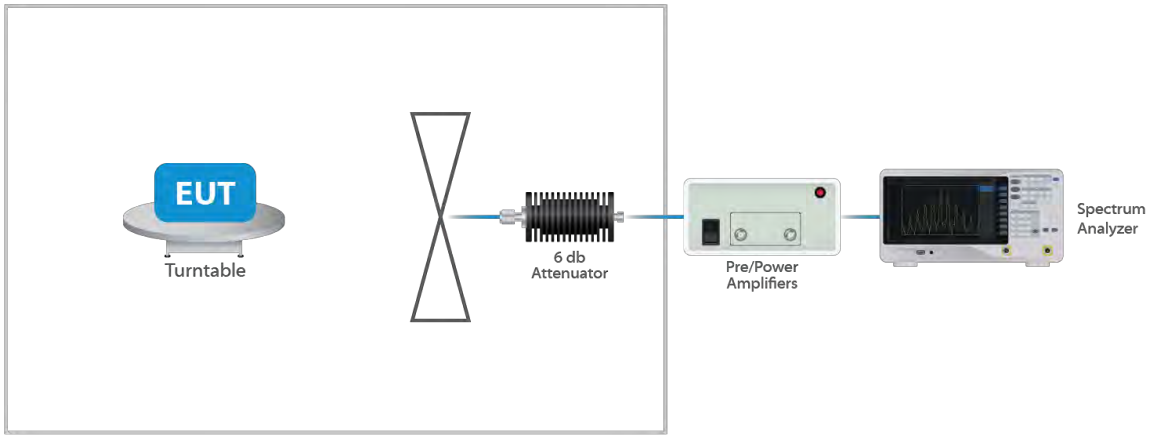


Figure 3: Radiated Emissions Test

4.3 Equipment Calibration

All applicable equipment is calibrated using either an independent calibration laboratory or Unified Compliance Laboratory personnel at intervals defined in ANSI C63.4:2014 following outlined calibration procedures. All measurement instrumentation is traceable to the National Institute of Standards and Technology (NIST). Supporting documentation relative to traceability is on file and is available for examination upon request.

4.4 Measurement Uncertainty

Test	Uncertainty (± dB)	Confidence (%)
Conducted Emissions	1.44	95
Radiated Emissions (9 kHz to 30 MHz)	2.50	95
Radiated Emissions (30 MHz to 1 GHz)	4.38	95
Radiated Emissions (1 GHz to 18 GHz)	4.37	95
Radiated Emissions (18 GHz to 40 GHz)	3.93	95
Direct Connect Tests	**K Factor**	**Value**
Emissions Bandwidth	2	2.0%
Output Power	2	1.0 dB
Peak Power Spectral Density	2	1.3 dB
Band Edge	2	0.8 dB
Transmitter Spurious Emissions	2	1.8 dB

5 Test Results

5.1 §15.203 Antenna Requirements

The EUT uses an integral antenna. The maximum gain of the antenna per chain is 4.0 dBi. This is an 802.11 device and utilizes CDD as described in KDB 662911 D01. The antenna is not user replaceable.

For power measurements on IEEE 802.11 devices, Array Gain = 0 dB for NANT ≤ 4;
For PSD measurements Array Gain = 10 log(NANT/NSS) dB = 3.01dB

Results

The EUT complied with the specification

5.2 §15.247(a)(2) Emissions Bandwidth

All chains were measured under the guidance of KDB 558074 Section 8.2. and KDB 66291 D01. Please see associated annex for details on instrument settings.

Mode	Frequency (MHz)	99% Bandwidth (MHz)	6 dB Bandwidth (MHz)
b	2412	12.6	8.2
	2437	14.7	9.2
	2462	12.6	8.2
a	2412	16.8	16.5
	2437	19.9	16.6
	2462	16.6	16.5
n 20	2412	17.8	17.8
	2437	18.7	17.8
	2462	17.8	17.7
n 40	2422	36.3	35.6
	2437	36.5	36.4
	2452	36.3	35.2
ax 20	2412	18.9	18.2
	2437	19.4	19.1
	2462	19.0	19.0
ax 40	2422	37.8	37.9
	2437	37.8	37.9
	2452	38.0	37.4

Result

All chains were tested and the highest bandwidth per chain is reported above.

In the configuration tested, the 6 dB bandwidth was greater than 500 kHz; therefore, the EUT complied with the requirements of the specification (see spectrum analyzer plot within the Annex).

5.3 §15.247(b)(3) Maximum Average Output Power

All chains were measured and summed under the guidance of KDB 558074 Section 8.3.2.3. and KDB 66291 D01. Please see associated annex for details on instrument settings.

The maximum average RF conducted output power measured for this device was 26.92 dBm or 496.6 mW. The limit is 30 dBm or 1 Watt when using antennas with 6 dBi or less gain. The antenna has a gain of 4.0 dBi.

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Conducted Output Power *	Measured EIRP
b 20	2412	Mcs0	21	25.68	28.68
	2417	Mcs0	21.5	25.62	28.62
	2422	Mcs0	22.5	26.34	29.34
	2427	Mcs0	22.5	26.31	29.31
	2432	Mcs0	23	26.36	29.36
	2437	Mcs0	23.5	26.92	29.92
	2442	Mcs0	23.5	26.96	29.96
	2447	Mcs0	23	26.68	29.68
	2452	Mcs0	22.5	26.37	29.37
	2457	Mcs0	22.5	26.03	29.03
	2462	Mcs0	21.5	25.81	28.81
a 20	2412	Mcs0	17	21.49	24.49
	2417	Mcs0	19	23.33	26.33
	2422	Mcs0	19.5	23.80	26.80
	2427	Mcs0	20	24.14	27.14
	2432	Mcs0	20	24.14	27.14
	2437	Mcs0	21	24.73	27.73
	2442	Mcs0	21	24.74	27.74
	2447	Mcs0	20.5	24.51	27.51
	2452	Mcs0	19.5	23.77	26.77
	2457	Mcs0	19	23.30	26.30
	2462	Mcs0	17.5	21.98	24.98
n 20	2412	Mcs0	17	21.51	24.51
	2417	Mcs0	18.5	22.92	25.92
	2422	Mcs0	19	23.28	26.28
	2427	Mcs0	19.5	23.68	26.68
	2432	Mcs0	20	24.03	27.03

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Conducted Output Power *	Measured EIRP
	2437	Mcs0	20.5	24.39	27.39
	2442	Mcs0	21	24.70	27.70
	2447	Mcs0	20	24.11	27.11
	2452	Mcs0	19.5	23.72	26.72
	2457	Mcs0	18.5	22.73	25.73
	2462	Mcs0	17.5	21.90	24.90
n 40	2422	Mcs0	16	20.25	23.25
	2437	Mcs0	19	22.94	25.94
	2452	Mcs0	18	22.04	25.04
ax 20	2412	Mcs0	16.5	21.22	24.22
	2417	Mcs0	18	22.57	25.57
	2422	Mcs0	19	23.46	26.46
	2427	Mcs0	19.5	23.79	26.79
	2432	Mcs0	20	24.18	27.18
	2437	Mcs0	20.5	24.52	27.52
	2442	Mcs0	21	24.83	27.83
	2447	Mcs0	20	24.24	27.24
	2452	Mcs0	19.5	23.87	26.87
	2457	Mcs0	19	23.38	26.38
	2462	Mcs0	17.5	22.06	25.06
ax 40	2422	Mcs0	16	20.47	23.47
	2437	Mcs0	18.5	22.71	25.71
	2452	Mcs0	18	22.28	25.28

Result

In the configuration tested, the maximum average RF output power was less than 1 watt; therefore, the EUT complied with the requirements of the specification (see spectrum analyzer plot within the Annex).

*** Gated EIRP shown in the Annex is the conducted measurement**

5.4 §15.247(d) Spurious Emissions

5.4.1 Radiated Spurious Emissions in the Restricted Bands of §15.205

The frequency range from the lowest frequency generated or used in the device to the tenth harmonic of the highest fundamental emissions was investigated to measure any radiated emissions in the restricted bands. The following tables show measurements of any emissions that fell into the restricted bands of §15.205. The tables show the worst-case emissions measured from the EUT. For frequencies above 18.0 GHz, a measurement distance of 1 meter was used. The noise floor was a minimum of 6 dB below the limits. The emissions in the restricted bans must meet the limits specified in §15.209. Tabular data for each of the spurious emissions is shown below for each of the units. Plots of the band edges are also shown.

Correction Factor = Antenna Factor + Cable Loss - Pre-Amplifier Gain, and is added to the Receiver reading.

Result

All emissions in the restricted bands of §15.205 met the limits specified in §15.209; therefore, the EUT complies with the specification.

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Meas. Time (s)	RBW (Hz)	Detector	Correction (dB)
4.9182 GHz	51.788	74	-22.212	190	1.834	Vertical	5	1000000	Peak	-10.376
7.3842 GHz	57.641	74	-16.359	230	2.65	Vertical	5	1000000	Peak	-3.627
4.9182 GHz	38.134	54	-15.866	190	1.834	Vertical	5	1000000	Ave	-10.376
7.3842 GHz	43.571	54	-10.429	230	2.65	Vertical	5	1000000	Ave	-3.627
2.2486 GHz	50.226	74	-23.774	272	3.656	Horizontal	5	1000000	Peak	-17.379
7.3872 GHz	63.158	74	-10.842	274	2.142	Horizontal	5	1000000	Peak	-3.564
2.2486 GHz	29.269	54	-24.731	272	3.656	Horizontal	5	1000000	Ave	-17.379
7.3872 GHz	49.347	54	-4.653	274	2.142	Horizontal	5	1000000	Ave	-3.564
2.2579 GHz	58.367	74	-15.633	253	3.307	Vertical	5	1000000	Peak	-17.457
7.2382 GHz	56.06	74	-17.94	254	3.802	Vertical	5	1000000	Peak	-4.489
2.2579 GHz	36.673	54	-17.327	253	3.307	Vertical	5	1000000	Ave	-17.457
7.2382 GHz	42.061	54	-11.939	254	3.802	Vertical	5	1000000	Ave	-4.489
2.2389 GHz	58.53	74	-15.47	186	3.802	Horizontal	5	1000000	Peak	-17.314
2.2656 GHz	59.444	74	-14.556	167	2.325	Horizontal	5	1000000	Peak	-17.166
7.2326 GHz	63.658	74	-10.342	255	2.146	Horizontal	5	1000000	Peak	-4.229
2.2389 GHz	35.162	54	-18.838	186	3.802	Horizontal	5	1000000	Ave	-17.314
2.2656 GHz	35.457	54	-18.543	167	2.325	Horizontal	5	1000000	Ave	-17.166
7.2326 GHz	48.869	54	-5.131	255	2.146	Horizontal	5	1000000	Ave	-4.229
2.256 GHz	57.658	74	-16.342	218	3.311	Vertical	5	1000000	Peak	-17.442
2.4356 GHz	55.541	74	-18.459	225	1.834	Vertical	5	1000000	Peak	-16.675
7.3129 GHz	60.234	74	-13.766	228	2.146	Vertical	5	1000000	Peak	-3.652
2.256 GHz	34.597	54	-19.403	218	3.311	Vertical	5	1000000	Ave	-17.442
2.4356 GHz	43.747	54	-10.253	225	1.834	Vertical	5	1000000	Ave	-16.675
7.3129 GHz	45.746	54	-8.254	228	2.146	Vertical	5	1000000	Ave	-3.652
2.2431 GHz	55.992	74	-18.008	190	1.5	Horizontal	5	1000000	Peak	-17.321

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Meas. Time (s)	RBW (Hz)	Detector	Correction (dB)
4.87 GHz	46.951	74	-27.049	227	1.643	Horizontal	5	1000000	Peak	-10.3
7.3142 GHz	64.399	74	-9.601	250	2.146	Horizontal	5	1000000	Peak	-3.655
2.2431 GHz	32.953	54	-21.047	190	1.5	Horizontal	5	1000000	Ave	-17.321
4.87 GHz	32.797	54	-21.203	227	1.643	Horizontal	5	1000000	Ave	-10.3
7.3142 GHz	50.847	54	-3.153	250	2.146	Horizontal	5	1000000	Ave	-3.655
17.499 GHz	47.892	74	-26.108	207	1.5	Vertical	5	1000000	Peak	-2.591
22.136 GHz	48.033	74	-25.967	349	1.5	Vertical	5	1000000	Peak	-0.585
17.499 GHz	34.482	54	-19.518	207	1.5	Vertical	5	1000000	Ave	-2.591
22.136 GHz	35.016	54	-18.984	349	1.5	Vertical	5	1000000	Ave	-0.585
17.969 GHz	48.089	74	-25.911	106	1.5	Vertical	5	1000000	Peak	-1.869
22.158 GHz	48.426	74	-25.574	106	1.5	Vertical	5	1000000	Peak	-0.601
17.969 GHz	35.11	54	-18.89	106	1.5	Vertical	5	1000000	Ave	-1.869
22.158 GHz	35.089	54	-18.911	106	1.5	Vertical	5	1000000	Ave	-0.601
18.952 GHz	46.601	74	-27.399	5	1.5	Vertical	5	1000000	Peak	-2.533
22.06 GHz	48.277	74	-25.723	95	1.5	Vertical	5	1000000	Peak	-0.458
18.952 GHz	33.835	54	-20.165	5	1.5	Vertical	5	1000000	Ave	-2.533
22.06 GHz	35.125	54	-18.875	95	1.5	Vertical	5	1000000	Ave	-0.458

5.4.2 Band Edge Results

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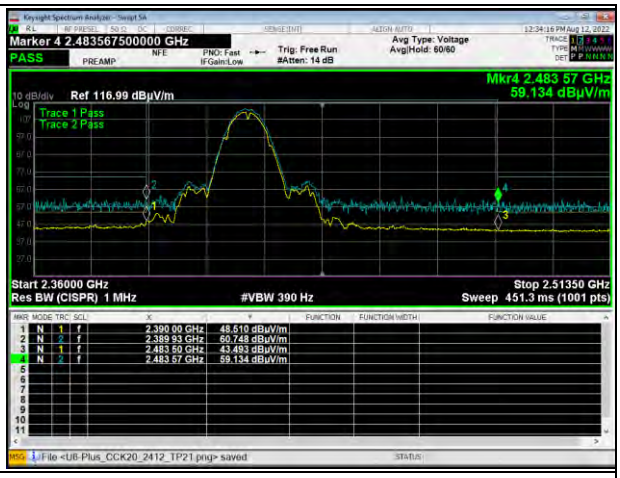

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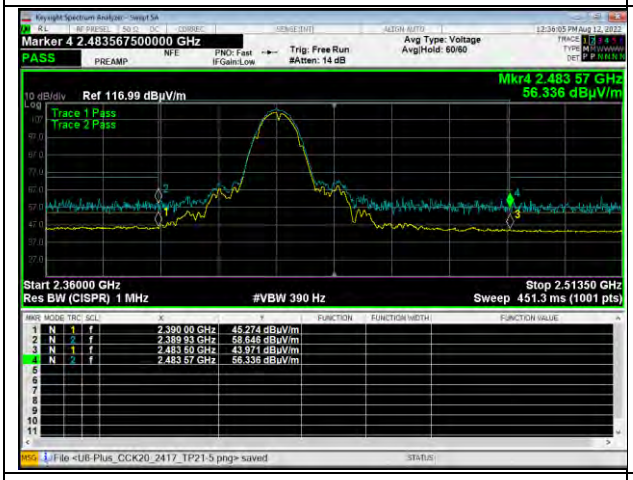

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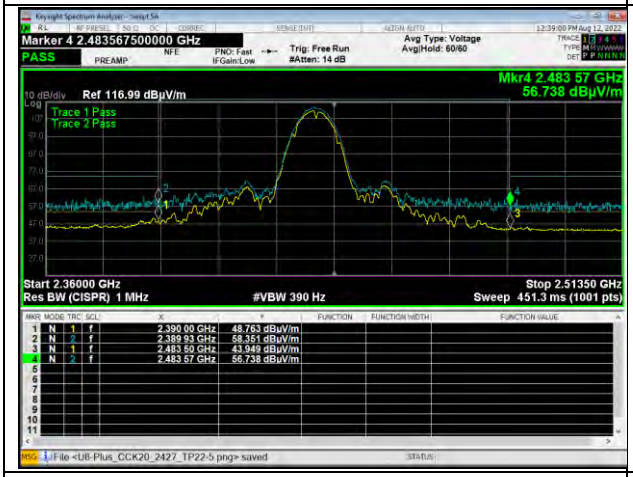	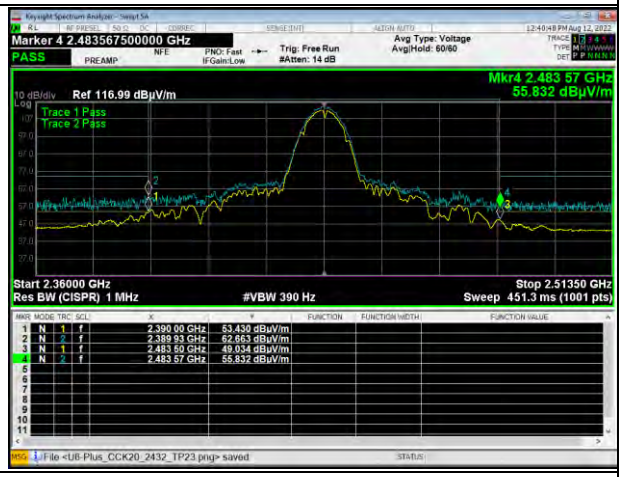
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	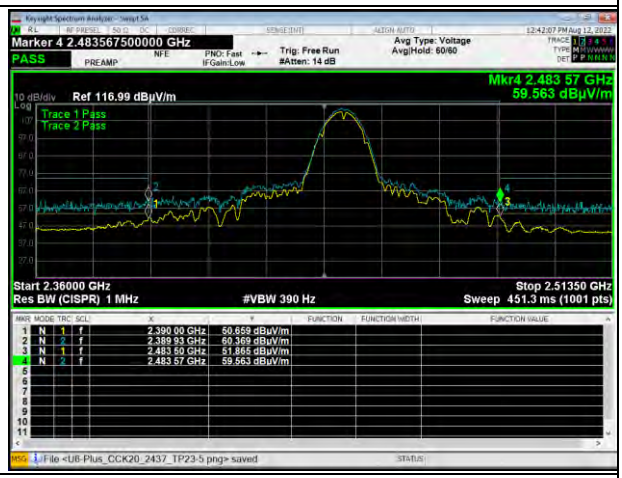
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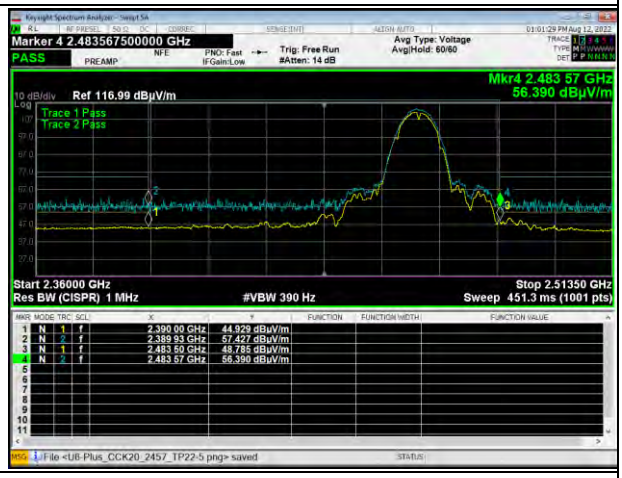
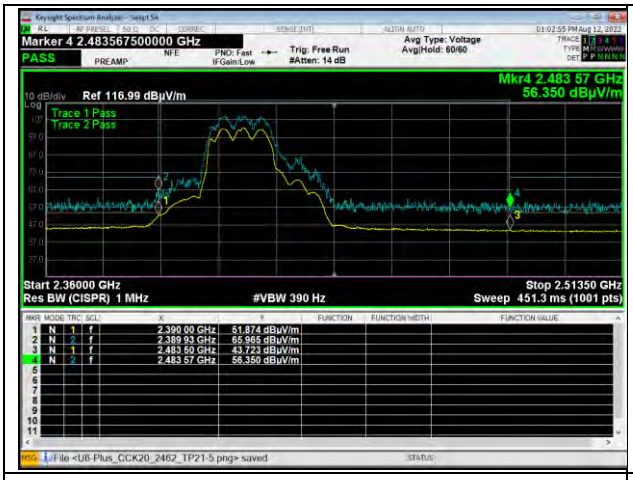
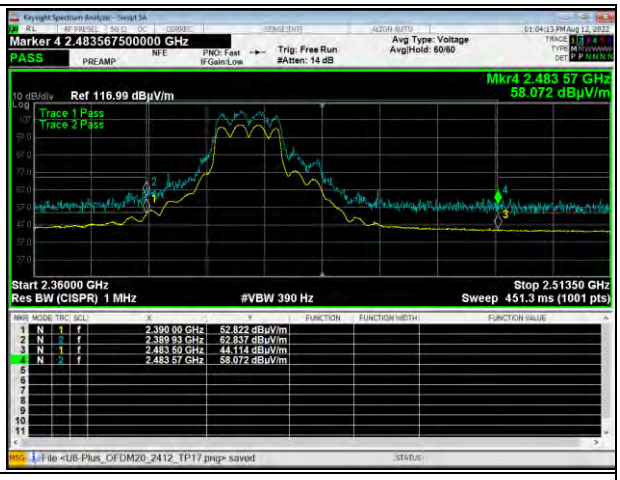
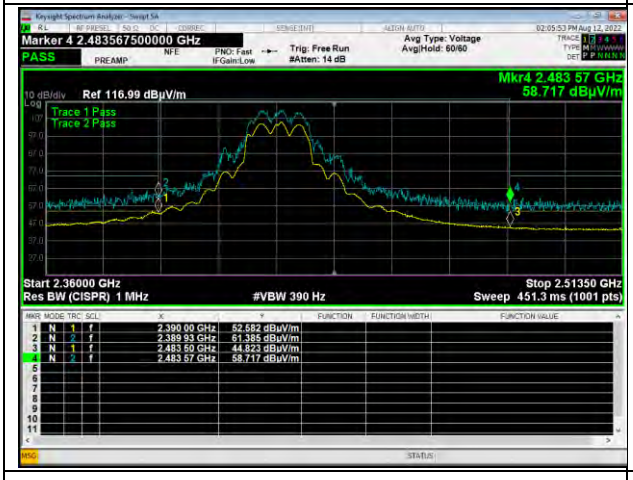
	
CCK 20 2457	CCK 20 2462



OFDM 20 2412



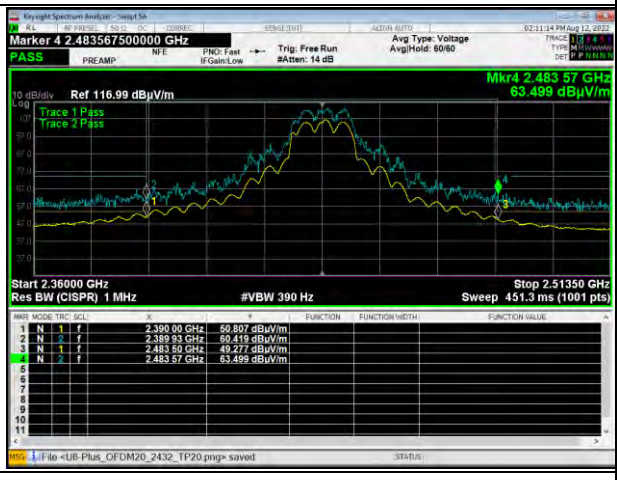
OFDM 20 2417



OFDM 20 2422

OFDM 20 2427

OFDM 20 2432



OFDM 20 2437

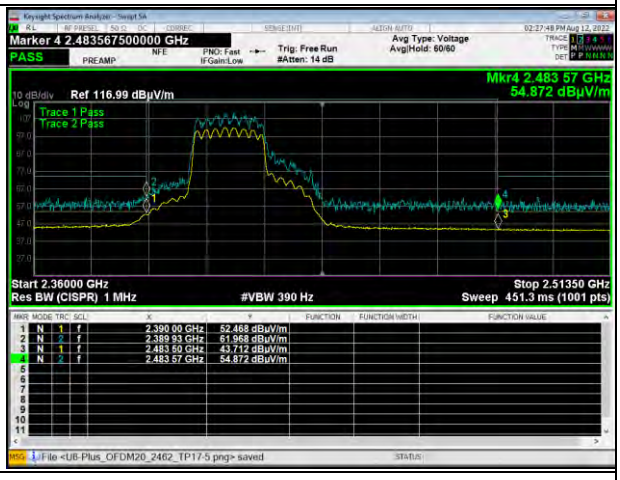
OFDM 20 2442

OFDM 20 2447

OFDM 20 2452

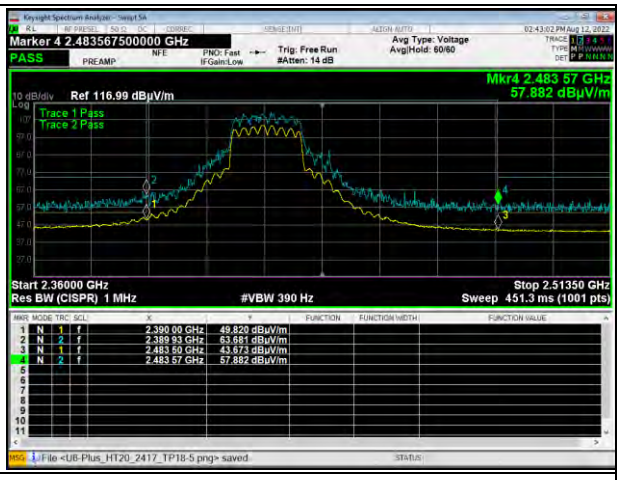
OFDM 20 2457

OFDM 20 2462



HT 20 2412

HT 20 2417



HT 20 2422

HT 20 2427

HT 20 2432

HT 20 2437

HT 20 2442

HT 20 2447

HT 20 2452

HT 20 2462

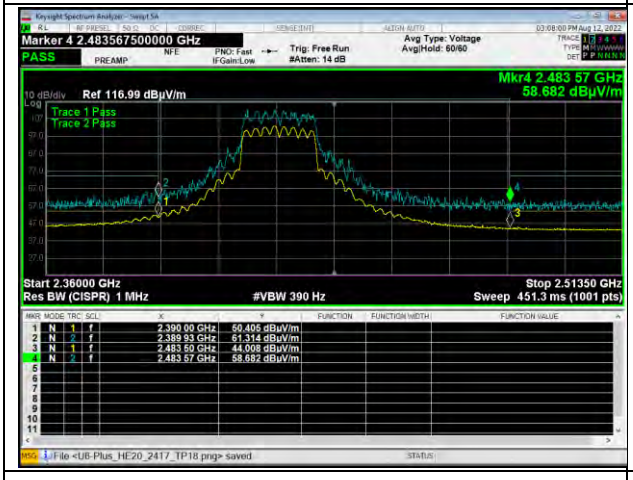
HT 40 2422

HT 40 2437

HT 40 2452

HE 20 2412

HE 20 2417



HE 20 2422

HE 20 2427

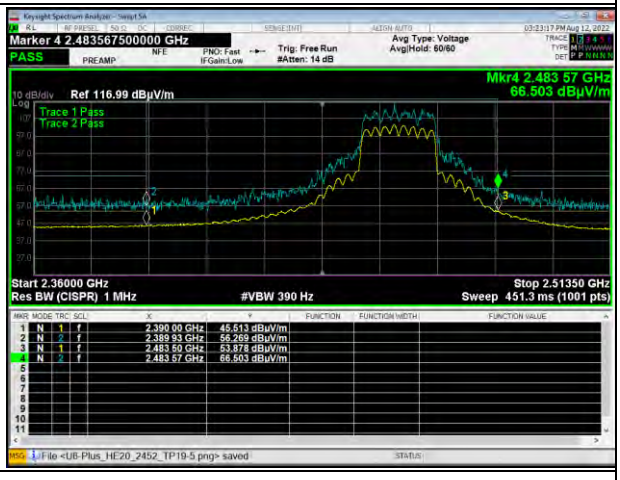
HE 20 2432

HE 20 2437

HE 20 2442

HE 20 2447

HE 20 2452



HE 20 2457

HE 20 2462

HE 40 2422

	
HE 40 2437	HE 40 2452

5.5 §15.247(e) Maximum Average Power Spectral Density

All chains were measured and summed under the guidance of KDB 558074 Section 8.4. and KDB 66291 D01. Please see associated annex for details on instrument settings.

The maximum average power spectral density conducted from the intentional radiator of the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. The antenna gain is 4.0 dBi + Array gain of 3.01 dB which is a total of 7.01 dBi.

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Conducted Output Power *	Measured EIRP
b 20	2412	Mcs0	21	25.68	28.68
	2417	Mcs0	21.5	25.62	28.62
	2422	Mcs0	22.5	26.34	29.34
	2427	Mcs0	22.5	26.31	29.31
	2432	Mcs0	23	26.36	29.36
	2437	Mcs0	23.5	26.92	29.92
	2442	Mcs0	23.5	26.96	29.96
	2447	Mcs0	23	26.68	29.68
	2452	Mcs0	22.5	26.37	29.37
	2457	Mcs0	22.5	26.03	29.03
	2462	Mcs0	21.5	25.81	28.81
a 20	2412	Mcs0	17	21.49	24.49
	2417	Mcs0	19	23.33	26.33
	2422	Mcs0	19.5	23.80	26.80
	2427	Mcs0	20	24.14	27.14
	2432	Mcs0	20	24.14	27.14
	2437	Mcs0	21	24.73	27.73
	2442	Mcs0	21	24.74	27.74
	2447	Mcs0	20.5	24.51	27.51
	2452	Mcs0	19.5	23.77	26.77
	2457	Mcs0	19	23.30	26.30
	2462	Mcs0	17.5	21.98	24.98
n 20	2412	Mcs0	17	21.51	24.51
	2417	Mcs0	18.5	22.92	25.92
	2422	Mcs0	19	23.28	26.28
	2427	Mcs0	19.5	23.68	26.68

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Conducted Output Power *	Measured EIRP
	2432	Mcs0	20	24.03	27.03
	2437	Mcs0	20.5	24.39	27.39
	2442	Mcs0	21	24.70	27.70
	2447	Mcs0	20	24.11	27.11
	2452	Mcs0	19.5	23.72	26.72
	2457	Mcs0	18.5	22.73	25.73
	2462	Mcs0	17.5	21.90	24.90
n 40	2422	Mcs0	16	20.25	23.25
	2437	Mcs0	19	22.94	25.94
	2452	Mcs0	18	22.04	25.04
ax 20	2412	Mcs0	16.5	21.22	24.22
	2417	Mcs0	18	22.57	25.57
	2422	Mcs0	19	23.46	26.46
	2427	Mcs0	19.5	23.79	26.79
	2432	Mcs0	20	24.18	27.18
	2437	Mcs0	20.5	24.52	27.52
	2442	Mcs0	21	24.83	27.83
	2447	Mcs0	20	24.24	27.24
	2452	Mcs0	19.5	23.87	26.87
	2457	Mcs0	19	23.38	26.38
	2462	Mcs0	17.5	22.06	25.06
ax 40	2422	Mcs0	16	20.47	23.47
	2437	Mcs0	18.5	22.71	25.71
	2452	Mcs0	18	22.28	25.28

Result

The maximum average power spectral density was less than the limit of 8 dBm; therefore, the EUT complies with the specification.

Test Results AX mode

(Note AX mode is considered worst case and is displayed here. All other modes were tested but omitted due to report size.)

FCC Part 47 §15.247 2400-2483.5 MHz 2018

Hardware Setup: WMS Measurements\TS8997 Hardware Setup

Spectrum Analyzer:	SA FSV 40 (SA FSV 40) @ VISA (ADR TCPIP::192.168.48.100::inst0::instr), SN 1321.3008K40/101752, FW 3.70
Vector Generator:	VG SMW200A (VG SMW200A) @ VISA (ADR TCPIP0::A-N5182B-301471::inst0::INSTR), SN 101752, FW 3.70
Generator:	SMB100A (SMB100A) @ VISA (ADR TCPIP::192.168.48.110::inst0::INSTR), SN 180599, FW 3.20.390.24 / Drv:Rev 2.21.0, 07/2016, CVI 2015
OSP:	OSP-B157W8PLUS (OSP-B157W8PLUS) @ VISA (ADR TCPIP::192.168.48.157::inst0::instr), SN 1527.1144.06 / 100955, FW 2.00.1.0

Summary

Test	Frequency (MHz)	Nominal Power (dBm)	Nominal Bandwidth (MHz)	Result
RF output power	2412.000	24.0	20.000000	PASS
Minimum Emission Bandwidth 6 dB	2412.000	24.0	20.000000	PASS
Power Spectral Density	2412.000	24.0	20.000000	PASS
Occupied Channel Bandwidth 99%	2412.000	24.0	20.000000	PASS
Tx Spurious Emission	2412.000	24.0	20.000000	PASS
Minimum Emission Bandwidth 6 dB	2437.000	24.0	20.000000	PASS
Occupied Channel Bandwidth 99%	2437.000	24.0	20.000000	PASS
Tx Spurious Emission	2437.000	24.0	20.000000	PASS
Minimum Emission Bandwidth 6 dB	2462.000	24.0	20.000000	PASS
Occupied Channel Bandwidth 99%	2462.000	24.0	20.000000	PASS
Tx Spurious Emission	2462.000	24.0	20.000000	PASS
Minimum Emission Bandwidth 6 dB	2422.000	24.0	40.000000	PASS
Occupied Channel Bandwidth 99%	2422.000	24.0	40.000000	PASS
Tx Spurious Emission	2422.000	24.0	40.000000	PASS
Minimum Emission Bandwidth 6 dB	2437.000	24.0	40.000000	PASS
Occupied Channel Bandwidth 99%	2437.000	24.0	40.000000	PASS
Tx Spurious Emission	2437.000	24.0	40.000000	PASS
Minimum Emission Bandwidth 6 dB	2452.000	24.0	40.000000	PASS
Occupied Channel Bandwidth 99%	2452.000	24.0	40.000000	PASS
Tx Spurious Emission	2452.000	24.0	40.000000	PASS

RF output power (2412 MHz; 24.000 dBm; 20 MHz)

Customized settings.

Result

DUT Frequency (MHz)	Gated RMS (dBm)	Limit Max (dBm)	Gated EIRP (dBm)	DutyCycle (%)	Result
2412.000000	21.2	30.0	21.2	87.482	PASS

OSP PowerMeter settings

Setting	Instrument Value	Target Value
Measurement Time	1.000 s	1.000 s
Points	1000000	1000000
Time resolution	1.000 µs	1.000 µs

Minimum Emission Bandwidth 6 dB (2412 MHz; 24.000 dBm; 20 MHz)

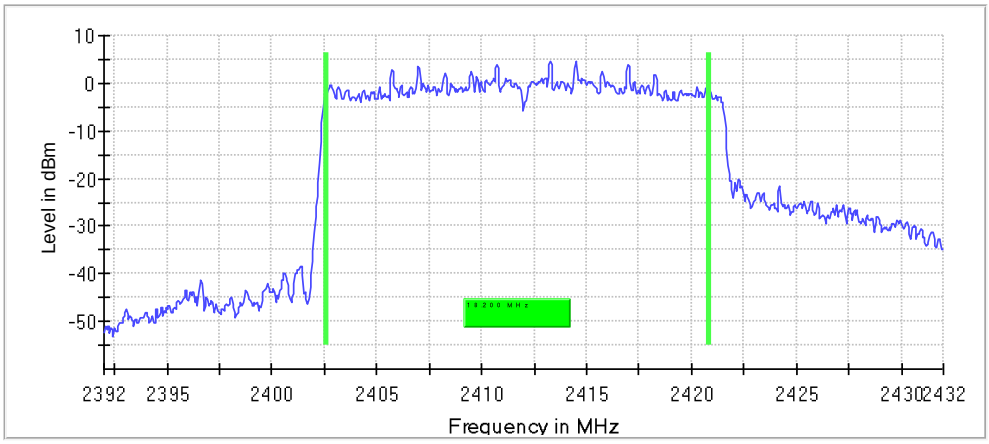
Customized settings.

6 dB Bandwidth

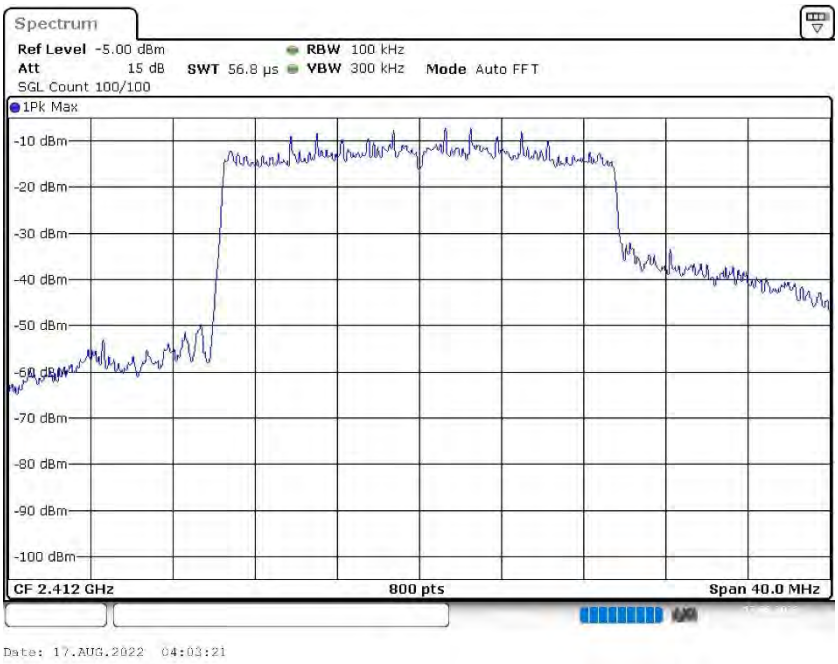
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2412.000000	18.200000	0.500000	---	2402.625000	2420.825000

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

DUT Frequency (MHz)	Max Level (dBm)	Result
2412.000000	4.6	PASS



Bandwidth



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.39200 GHz	2.39200 GHz
Stop Frequency	2.43200 GHz	2.43200 GHz
Span	40.000 MHz	40.000 MHz
RBW	100.000 kHz	~ 100.000 kHz
VBW	300.000 kHz	~ 300.000 kHz
SweepPoints	800	~ 800
Sweeptime	56.836 µs	AUTO
Reference Level	-5.000 dBm	-5.000 dBm
Attenuation	15.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off

Power Spectral Density (2412 MHz; 24.000 dBm; 20 MHz)

Customized settings.

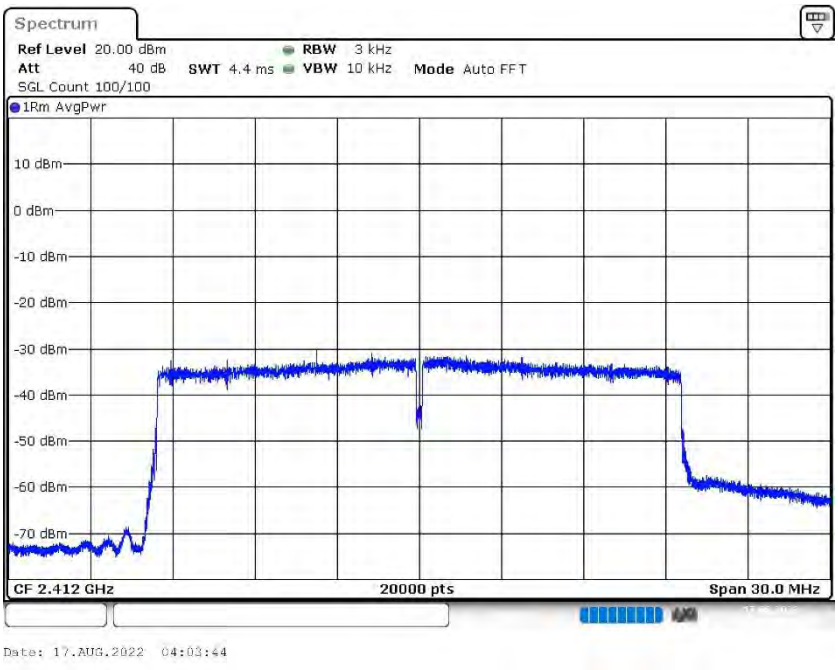
Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
2412.000000	2408.244750	-15.939	8.0	PASS

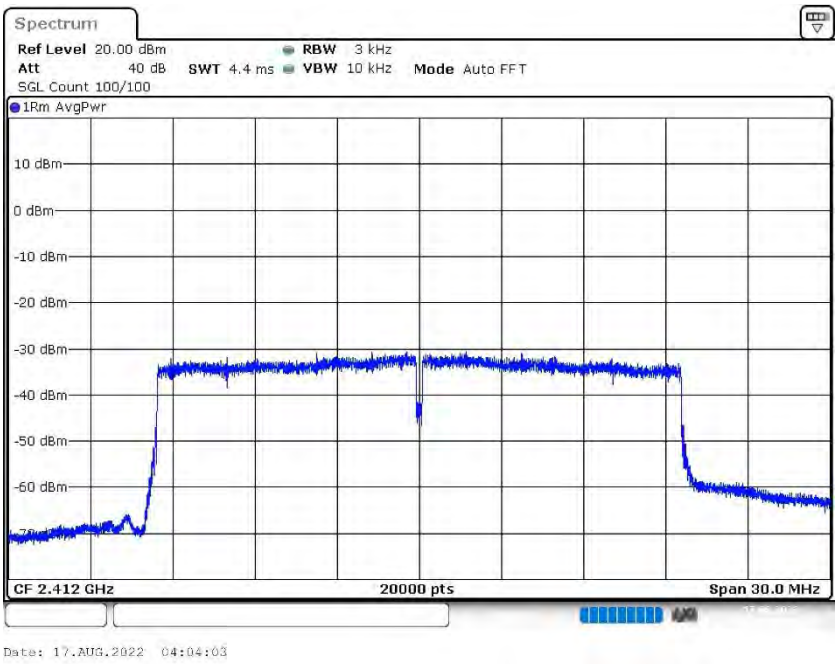
Ports

Port	State
1	used
2	used

PSD Connector 1



PSD Connector 2



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.39700 GHz	2.39700 GHz
Stop Frequency	2.42700 GHz	2.42700 GHz
Span	30.000 MHz	30.000 MHz
RBW	3.000 kHz	<= 3.000 kHz
VBW	10.000 kHz	>= 9.000 kHz
SweepPoints	20000	~ 20000
Sweeptime	4.424 ms	AUTO
Reference Level	20.000 dBm	20.000 dBm
Attenuation	40.000 dB	AUTO
Detector	RMS	RMS
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Average Power	Average Power
Sweeptype	FFT	AUTO
Preamp	off	off

Occupied Channel Bandwidth 99% (2412 MHz; 24.000 dBm; 20 MHz)

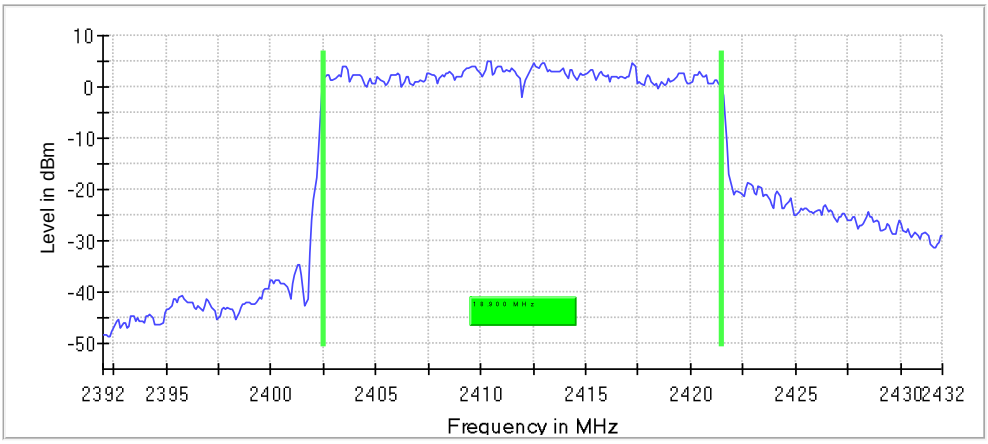
Customized settings.

99 % Bandwidth

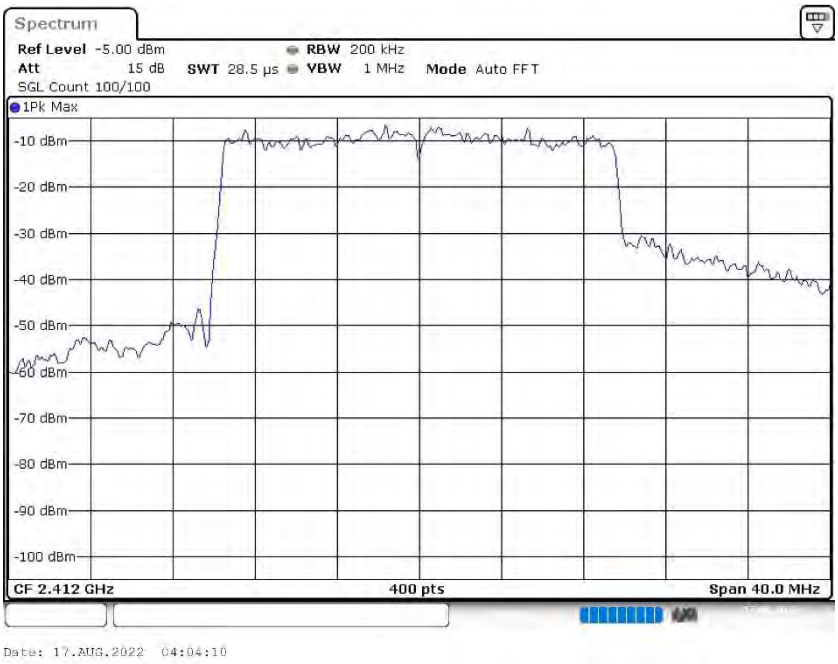
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2412.000000	18.900000	---	---	2402.550000	2421.450000

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

DUT Frequency (MHz)	Result
2412.000000	PASS



Bandwidth



Measurement

Setting	Instrument Value	Target Value
Start Frequency	2.39200 GHz	2.39200 GHz
Stop Frequency	2.43200 GHz	2.43200 GHz
Span	40.000 MHz	40.000 MHz
RBW	200.000 kHz	>= 200.000 kHz
VBW	1.000 MHz	>= 600.000 kHz
SweepPoints	400	~ 400
Sweeptime	28.477 µs	AUTO
Reference Level	-5.000 dBm	-5.000 dBm
Attenuation	15.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off

Tx Spurious Emission (2412 MHz; 24.000 dBm; 20 MHz)

Customized settings.

Result

DUT Frequency (MHz)	Result
2412.000000	PASS

Final measurements

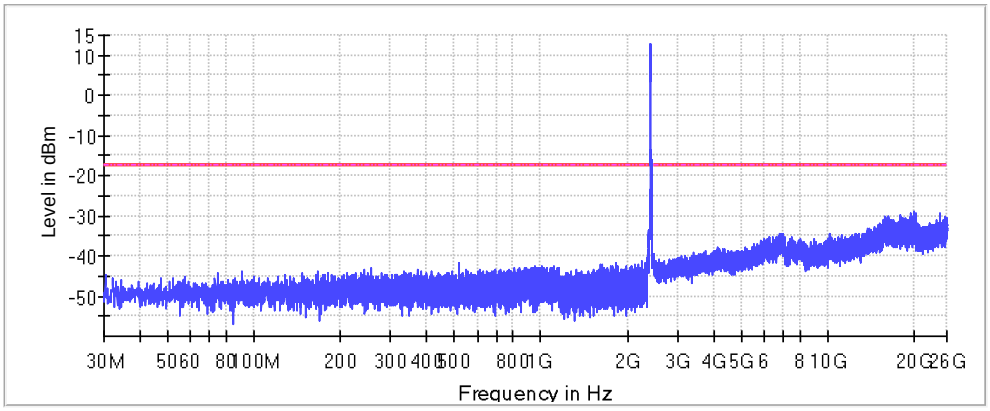
Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
---	---	---	---	---	---

Pre Measurements

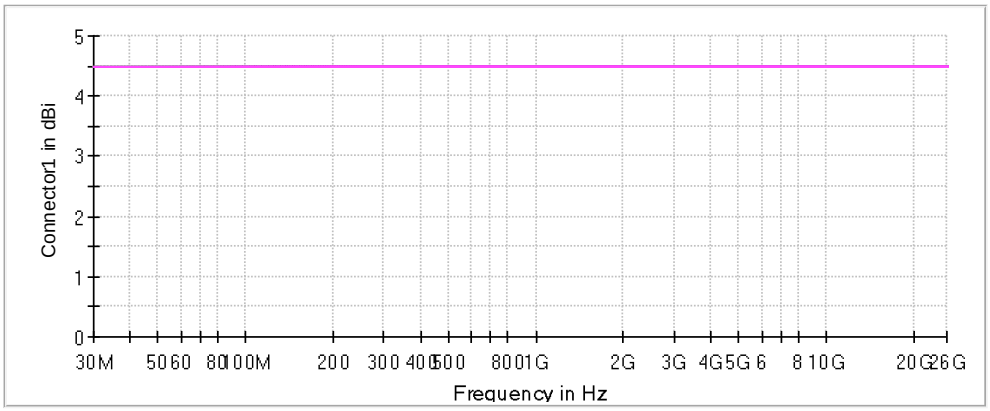
Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2399.875000	-26.7	9.5	-17.2
2399.025000	-26.9	9.7	-17.2
2398.975000	-26.9	9.7	-17.2
2399.825000	-27.3	10.1	-17.2
2399.925000	-27.6	10.4	-17.2
2399.075000	-27.7	10.5	-17.2
2399.375000	-27.8	10.6	-17.2
2399.575000	-27.8	10.6	-17.2
2397.775000	-27.9	10.7	-17.2
2397.725000	-27.9	10.8	-17.2
2398.925000	-28.0	10.8	-17.2
2398.825000	-28.1	10.9	-17.2
2399.625000	-28.1	10.9	-17.2
2399.975000	-28.1	10.9	-17.2
2399.125000	-28.1	10.9	-17.2

Measurement Settings

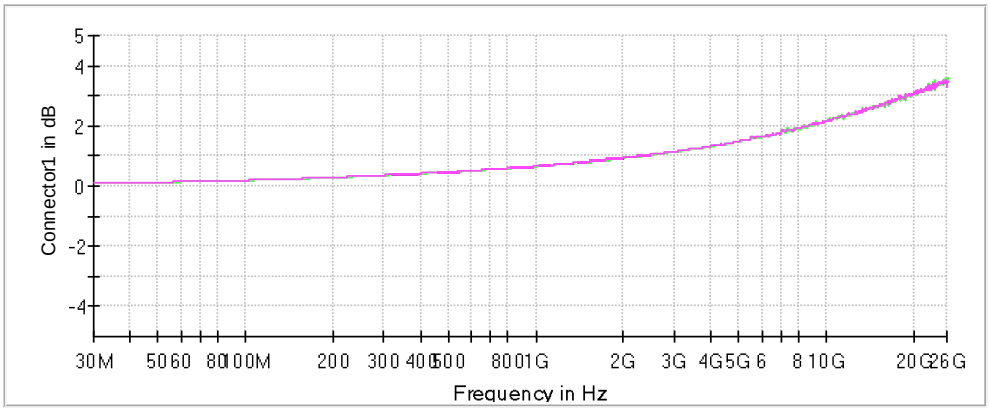
Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	2350.000000	1	1
2350.000000	2483.500000	2	1
2483.500000	26000.000000	1	1



Limit Threshold Sum Level Critical Final Critical



Connector1 Connector2



Connector1 Connector2

Pre Measurement 1

Setting	Instrument Value	Target Value
RBW	100.000 kHz	<= 100.000 kHz

VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	32001	~ 46400
Sweeptime	32.100 ms	AUTO
Reference Level	20.000 dBm	20.000 dBm
Attenuation	40.000 dB	40.000 dB
Detector	MaxPeak	MaxPeak
SweepCount	3	3
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off

Pre Measurement 2

Setting	Instrument Value	Target Value
RBW	100.000 kHz	<= 100.000 kHz
VBW	300.000 kHz	>= 300.000 kHz
SweepPoints	2670	~ 2670
Sweeptime	151.563 µs	AUTO
Reference Level	20.000 dBm	20.000 dBm
Attenuation	40.000 dB	40.000 dB
Detector	MaxPeak	MaxPeak
SweepCount	300	300
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off

Minimum Emission Bandwidth 6 dB (2437 MHz; 24.000 dBm; 20 MHz)

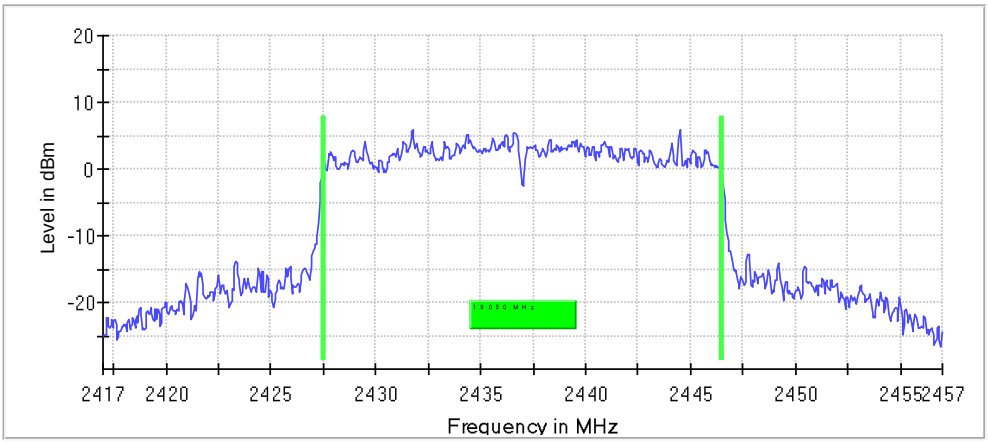
Customized settings.

6 dB Bandwidth

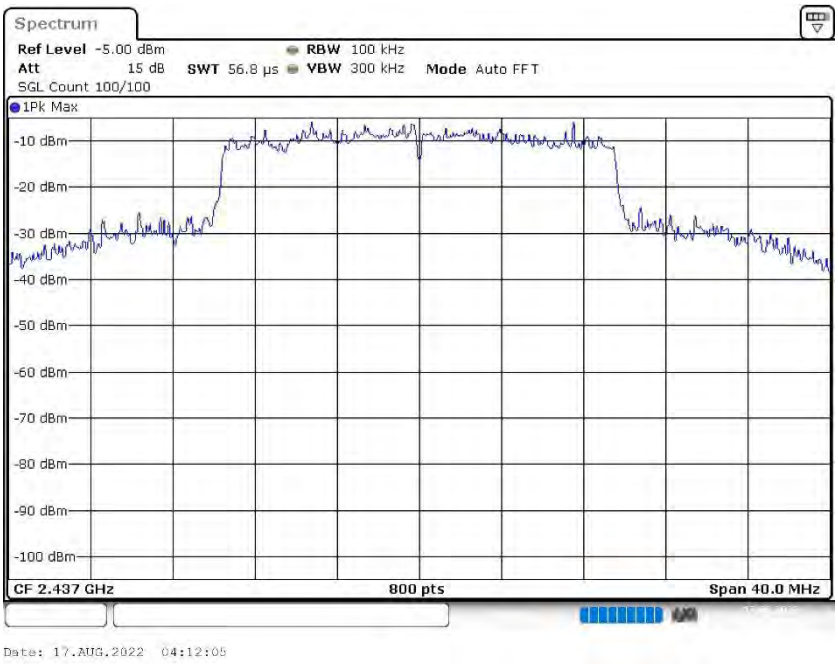
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2437.000000	19.050000	0.500000	---	2427.475000	2446.525000

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

DUT Frequency (MHz)	Max Level (dBm)	Result
2437.000000	5.9	PASS



Bandwidth


Spectrum
Ref Level -5.00 dBm
RBW 100 kHz
Att 15 dB
SWT 56.8 µs
VBW 300 kHz
Mode Auto FFT
SGL Count 100/100
1Pk Max
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
-90 dBm
-100 dBm
CF 2.437 GHz
800 pts
Span 40.0 MHz
Date: 17.AUG.2022 04:12:05

Occupied Channel Bandwidth 99% (2437 MHz; 24.000 dBm; 20 MHz)

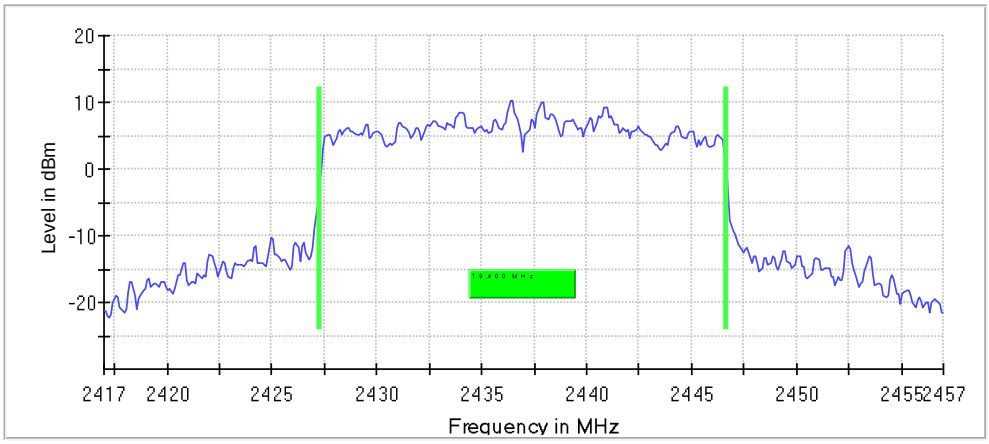
Customized settings.

99 % Bandwidth

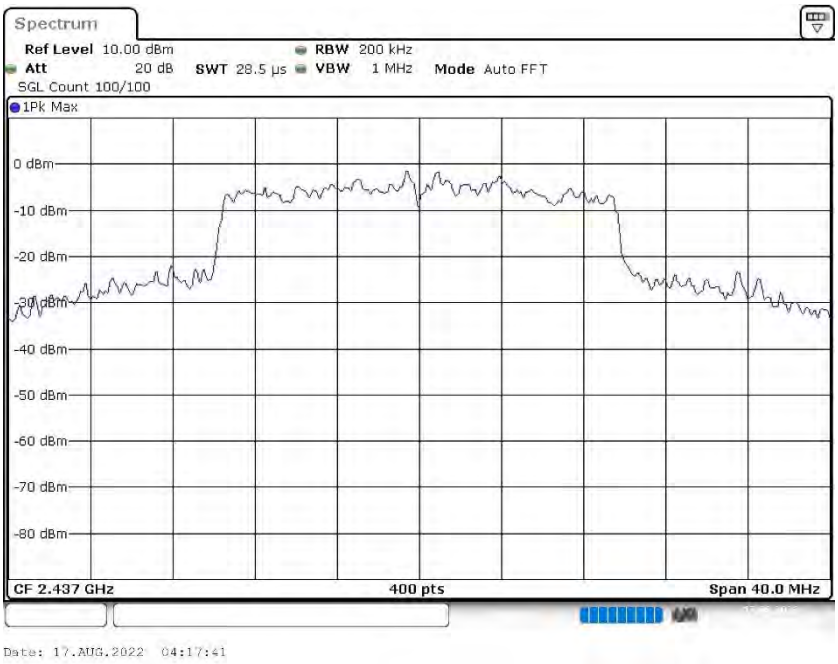
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2437.000000	19.400000	---	---	2427.250000	2446.650000

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

DUT Frequency (MHz)	Result
2437.000000	PASS



Bandwidth


Spectrum
Ref Level 10.00 dBm
RBW 200 kHz
Att 20 dB
SWT 28.5 µs
VBW 1 MHz
Mode Auto FFT
SGL Count 100/100
1Pk Max
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
CF 2.437 GHz
400 pts
Span 40.0 MHz
Date: 17.AUG.2022 04:17:41

Tx Spurious Emission (2437 MHz; 24.000 dBm; 20 MHz)

Customized settings.

Result

DUT Frequency (MHz)	Result
2437.000000	PASS

Final measurements

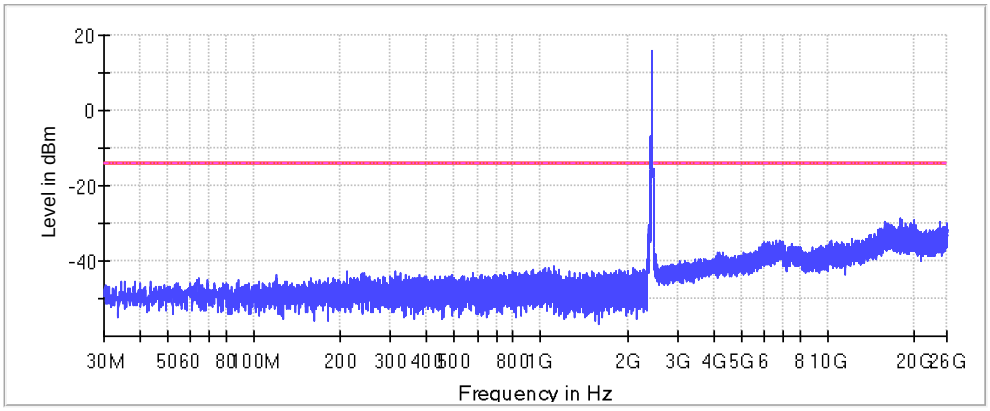
Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
---	---	---	---	---	---

Pre Measurements

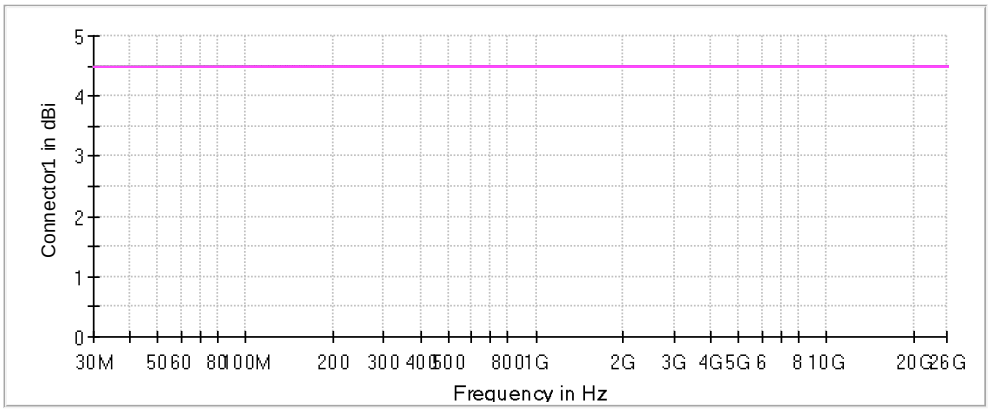
Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
17898.451478	-28.8	14.7	-14.1
2398.875000	-29.1	14.9	-14.1
2399.225000	-29.1	15.0	-14.1
19893.617176	-29.1	15.0	-14.1
2399.175000	-29.1	15.0	-14.1
18222.528116	-29.1	15.0	-14.1
15820.245735	-29.3	15.2	-14.1
2398.825000	-29.4	15.3	-14.1
18263.680705	-29.5	15.4	-14.1
2398.925000	-29.6	15.5	-14.1
15897.406839	-29.6	15.5	-14.1
2398.275000	-29.6	15.5	-14.1
24538.715657	-29.7	15.6	-14.1
15804.078646	-29.8	15.7	-14.1
2399.275000	-29.8	15.7	-14.1

Measurement Settings

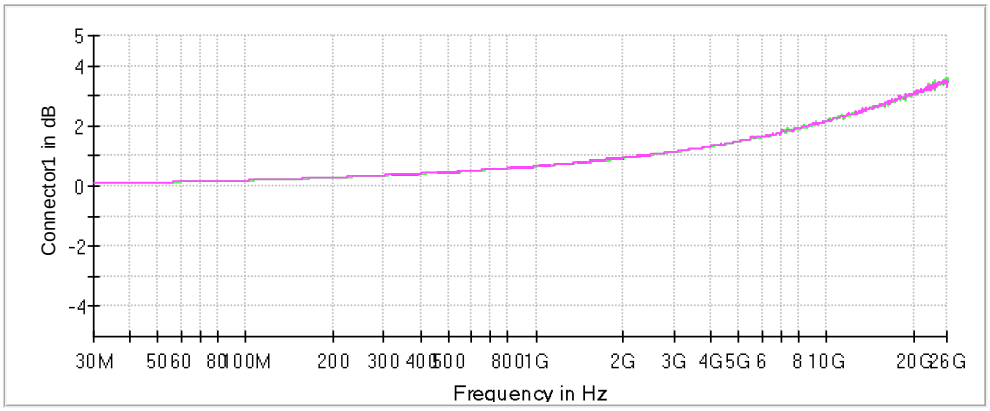
Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	2350.000000	1	1
2350.000000	2483.500000	2	1
2483.500000	26000.000000	1	1



Limit Threshold Sum Level Critical Final Critical



Connector1 Connector2



Connector1 Connector2

Minimum Emission Bandwidth 6 dB (2462 MHz; 24.000 dBm; 20 MHz)

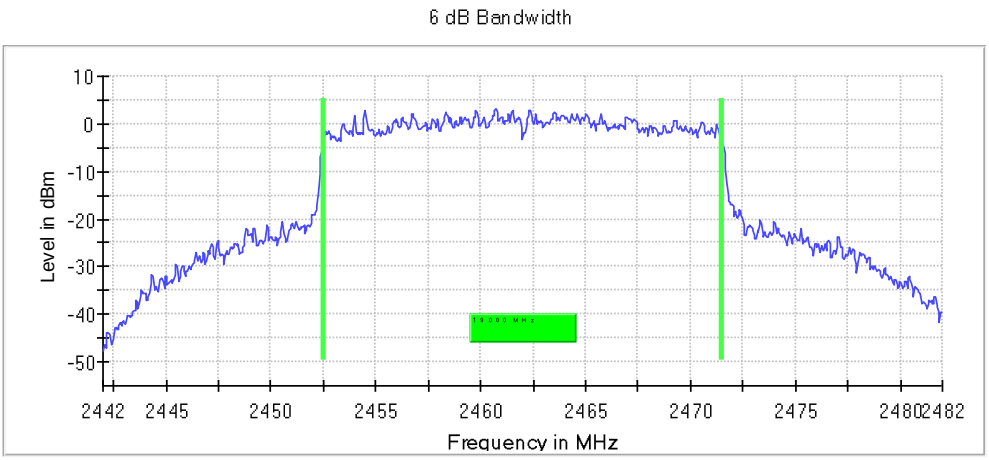
Customized settings.

6 dB Bandwidth

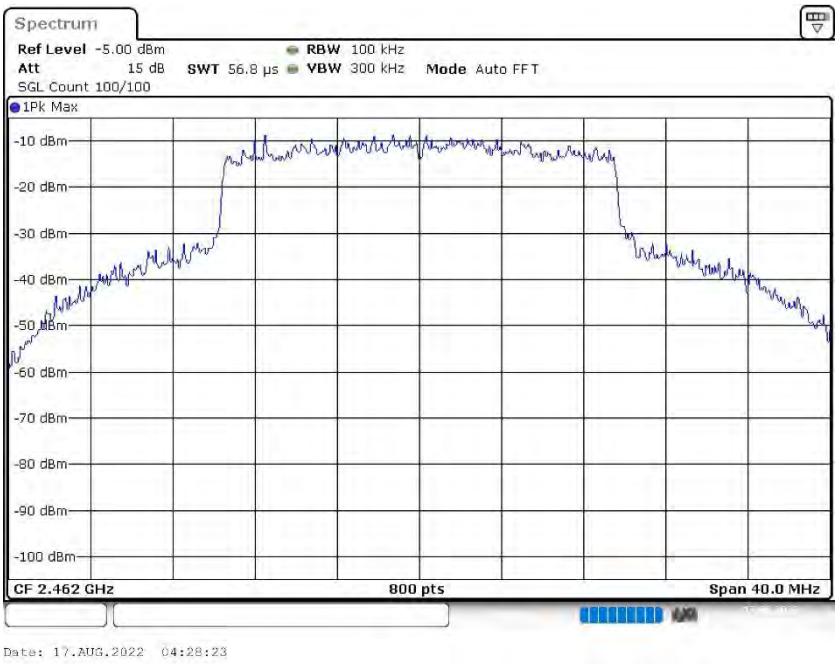
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2462.000000	19.000000	0.500000	---	2452.525000	2471.525000

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

DUT Frequency (MHz)	Max Level (dBm)	Result
2462.000000	3.2	PASS



Bandwidth


Spectrum
Ref Level -5.00 dBm
RBW 100 kHz
Att 15 dB
SWT 56.8 µs
VBW 300 kHz
Mode Auto FFT
SGL Count 100/100
1Pk Max
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
-90 dBm
-100 dBm
CF 2.462 GHz
800 pts
Span 40.0 MHz
Date: 17.AUG.2022 04:28:23

Occupied Channel Bandwidth 99% (2462 MHz; 24.000 dBm; 20 MHz)

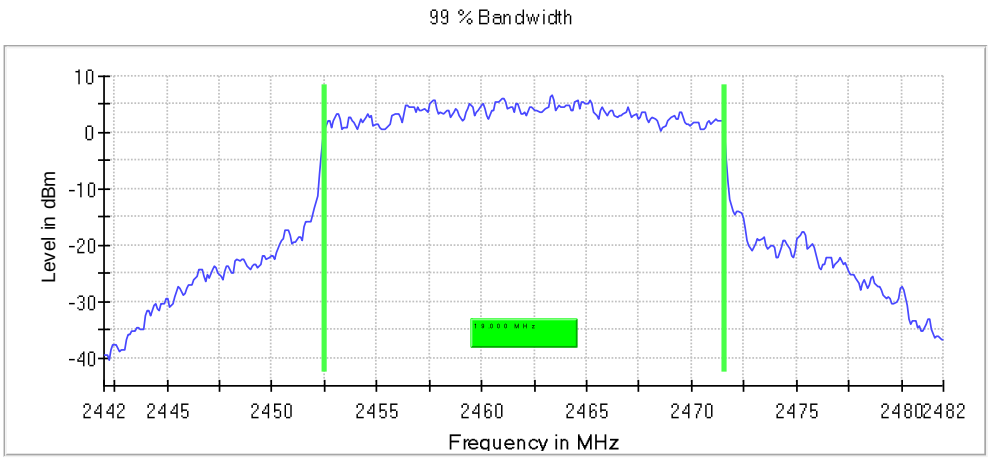
Customized settings.

99 % Bandwidth

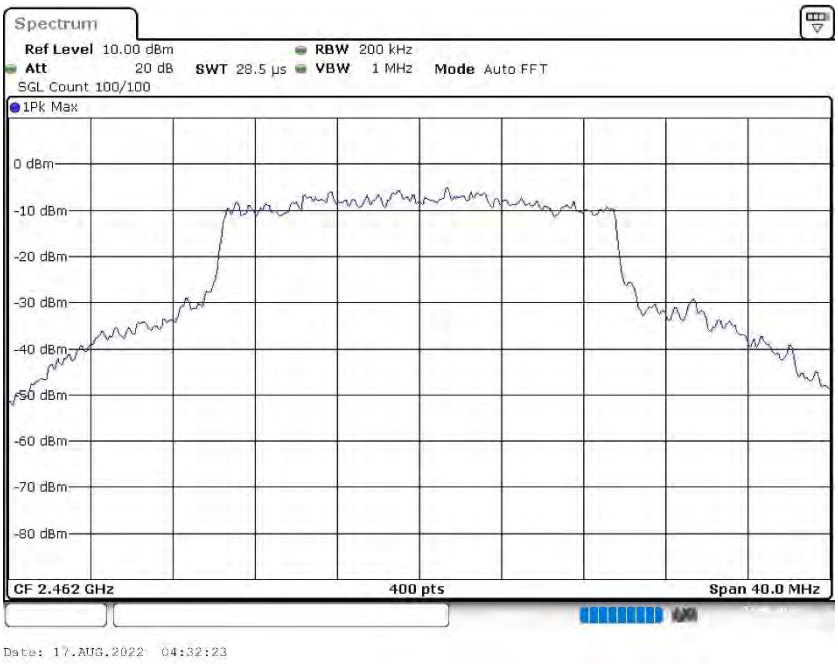
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2462.000000	19.000000	---	---	2452.550000	2471.550000

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

DUT Frequency (MHz)	Result
2462.000000	PASS



Bandwidth


Spectrum
Ref Level 10.00 dBm
RBW 200 kHz
Att 20 dB
SWT 28.5 µs
VBW 1 MHz
Mode Auto FFT
SGL Count 100/100
1Pk Max
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
CF 2.462 GHz
400 pts
Span 40.0 MHz
Date: 17.AUG.2022 04:32:23

Tx Spurious Emission (2462 MHz; 24.000 dBm; 20 MHz)

Customized settings.

Result

DUT Frequency (MHz)	Result
2462.000000	PASS

Final measurements

Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
---	---	---	---	---	---

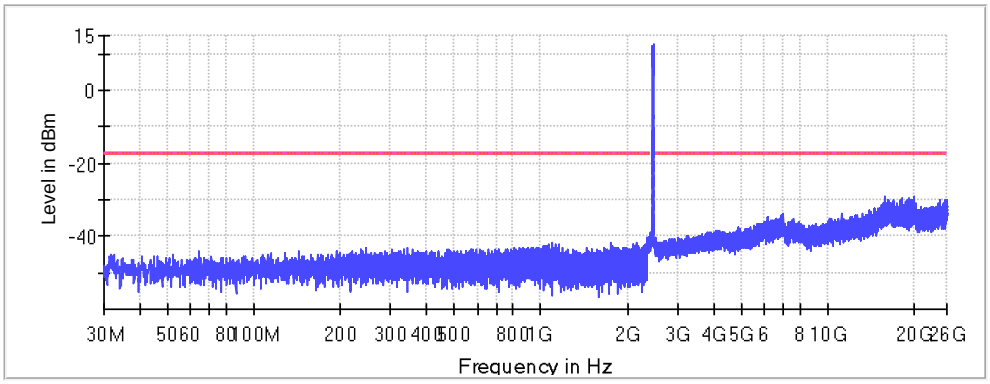
Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
19882.594161	-28.9	11.6	-17.3
15897.406839	-29.2	12.0	-17.3
18199.012351	-29.5	12.2	-17.3
19856.138925	-29.5	12.2	-17.3
19889.942838	-29.5	12.2	-17.3
19196.227766	-29.6	12.3	-17.3
16200.907183	-29.8	12.5	-17.3
15838.617426	-29.8	12.5	-17.3
25794.604489	-29.9	12.6	-17.3
15861.398323	-29.9	12.6	-17.3
19921.542147	-30.1	12.8	-17.3
25948.926698	-30.1	12.8	-17.3
16184.005226	-30.1	12.8	-17.3
17874.935713	-30.1	12.8	-17.3
19510.016257	-30.1	12.8	-17.3

Measurement Settings

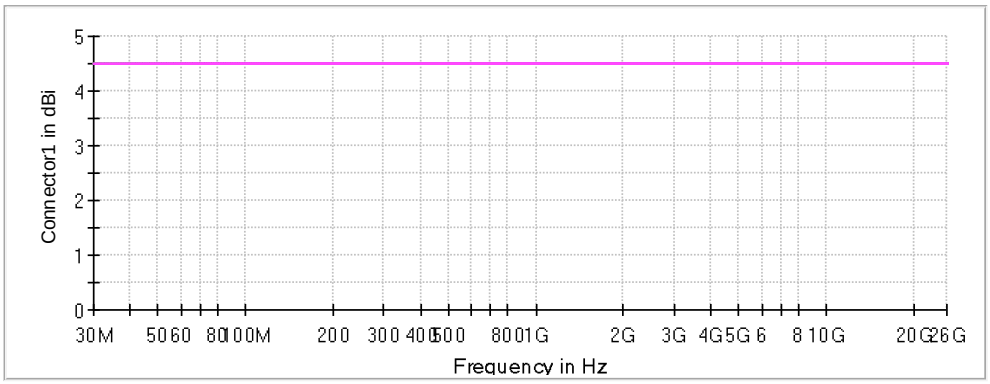
Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	2350.000000	1	1
2350.000000	2483.500000	2	1
2483.500000	26000.000000	1	1

Spurious



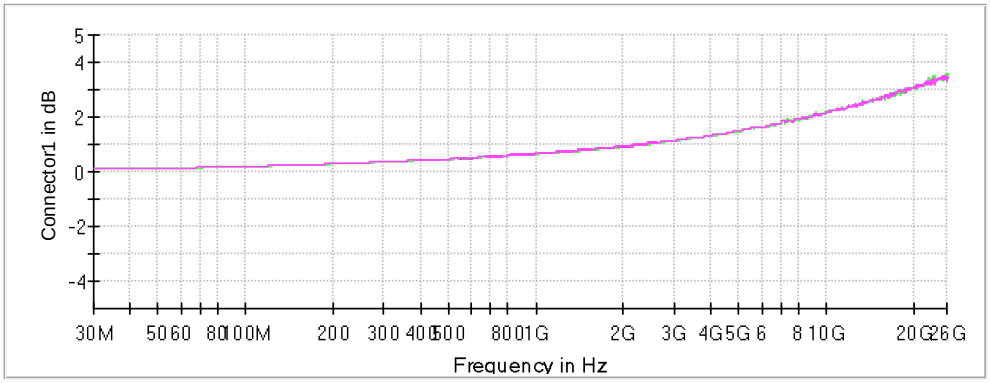
Limit Threshold Sum Level Critical Final Critical

Gain



Connector1 Connector2

Attenuation



Connector1 Connector2

Minimum Emission Bandwidth 6 dB (2422 MHz; 24.000 dBm; 40 MHz)

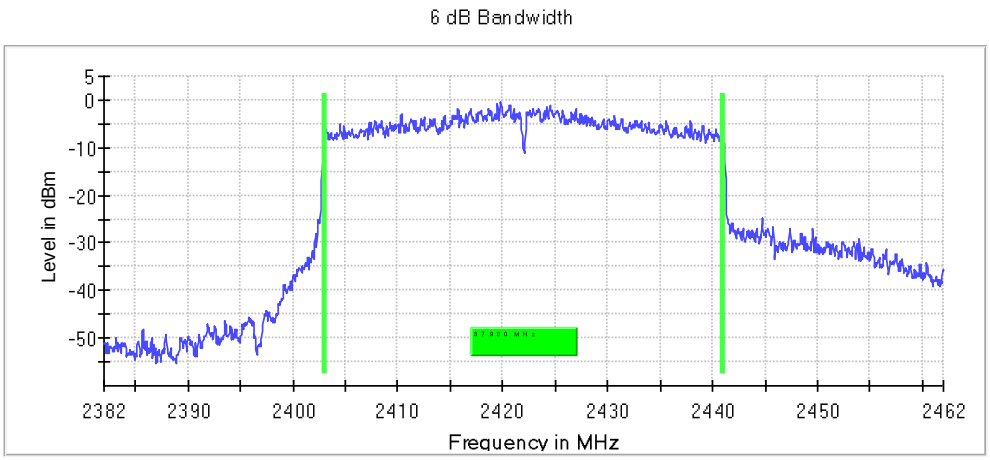
Customized settings.

6 dB Bandwidth

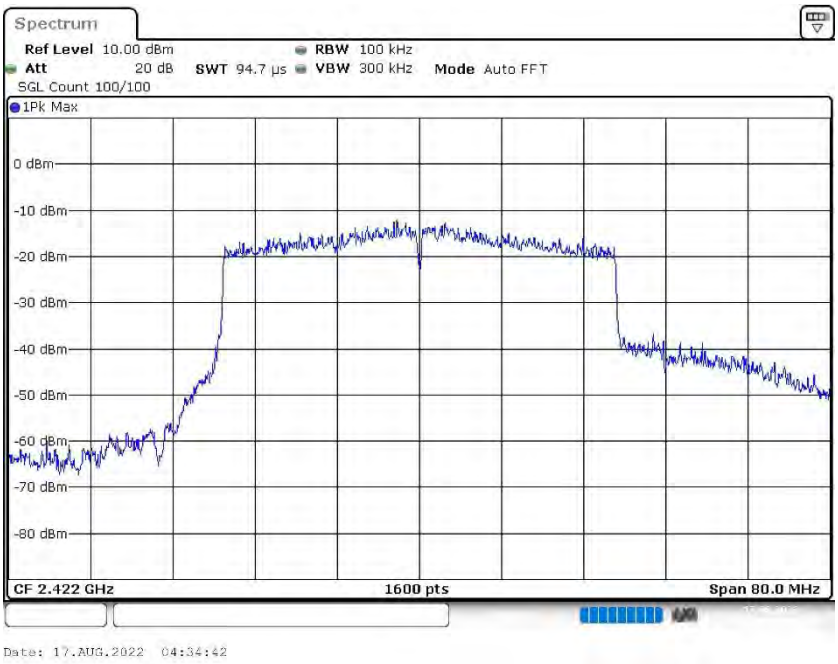
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2422.000000	37.900000	0.500000	---	2403.075000	2440.975000

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

DUT Frequency (MHz)	Max Level (dBm)	Result
2422.000000	-0.4	PASS



Bandwidth


Spectrum
Ref Level 10.00 dBm
RBW 100 kHz
Att 20 dB
SWT 94.7 µs
VBW 300 kHz
Mode Auto FFT
SGL Count 100/100
1Pk Max
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
CF 2.422 GHz
1600 pts
Span 80.0 MHz
Date: 17.AUG.2022 04:34:42

Occupied Channel Bandwidth 99% (2422 MHz; 24.000 dBm; 40 MHz)

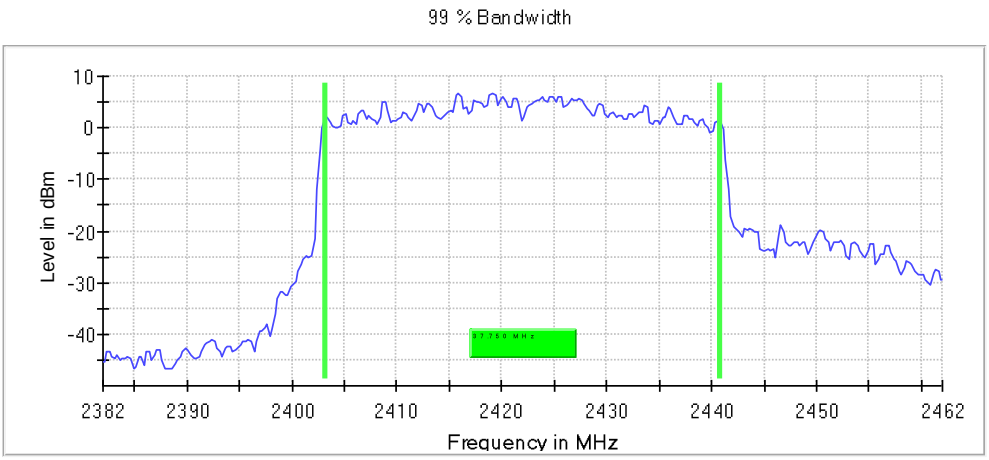
Customized settings.

99 % Bandwidth

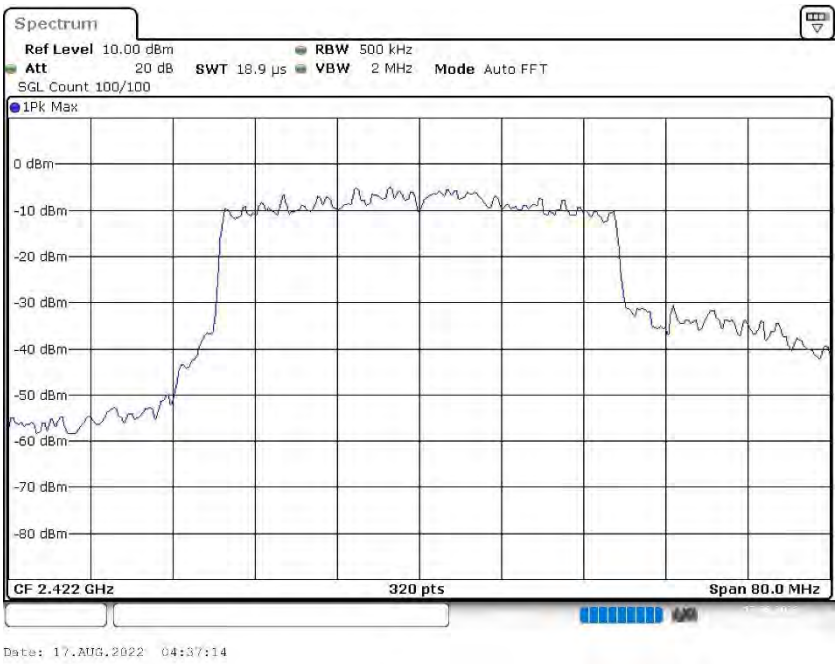
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2422.000000	37.750000	---	---	2403.125000	2440.875000

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

DUT Frequency (MHz)	Result
2422.000000	PASS



Bandwidth


Spectrum
Ref Level 10.00 dBm
RBW 500 kHz
Att 20 dB
SWT 18.9 µs
VBW 2 MHz
Mode Auto FFT
SGL Count 100/100
1Pk Max
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
CF 2.422 GHz
320 pts
Span 80.0 MHz
Date: 17.AUG.2022 04:37:14

Tx Spurious Emission (2422 MHz; 24.000 dBm; 40 MHz)

Customized settings.

Result

DUT Frequency (MHz)	Result
2422.000000	PASS

Final measurements

Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
---	---	---	---	---	---

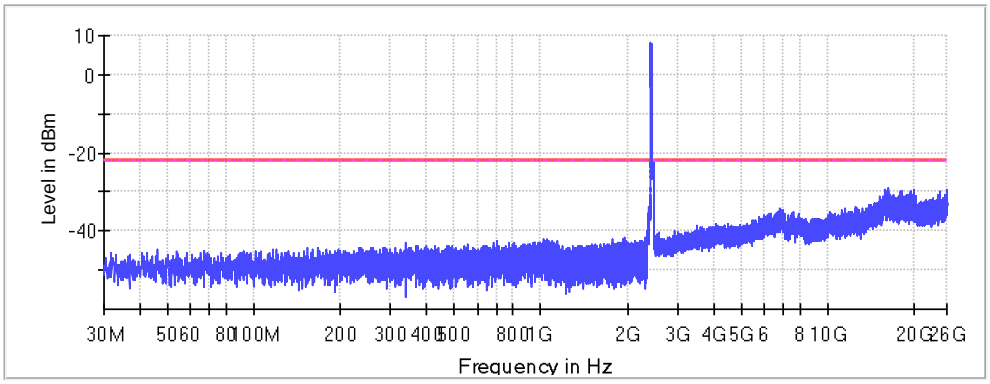
Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
16170.777609	-28.9	7.0	-21.9
2399.375000	-29.0	7.1	-21.9
2399.875000	-29.1	7.2	-21.9
2399.475000	-29.2	7.3	-21.9
2399.525000	-29.2	7.3	-21.9
2399.625000	-29.3	7.4	-21.9
2399.425000	-29.3	7.4	-21.9
25954.070771	-29.3	7.4	-21.9
2399.275000	-29.4	7.5	-21.9
2399.675000	-29.4	7.5	-21.9
2399.225000	-29.4	7.5	-21.9
19918.602676	-29.4	7.5	-21.9
2399.925000	-29.5	7.6	-21.9
16148.731579	-29.5	7.6	-21.9
2399.075000	-29.5	7.6	-21.9

Measurement Settings

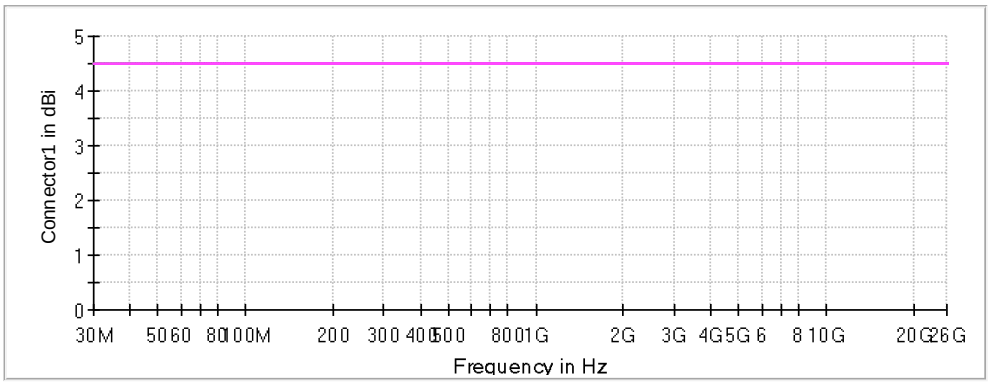
Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	2350.000000	1	1
2350.000000	2483.500000	2	1
2483.500000	26000.000000	1	1

Spurious



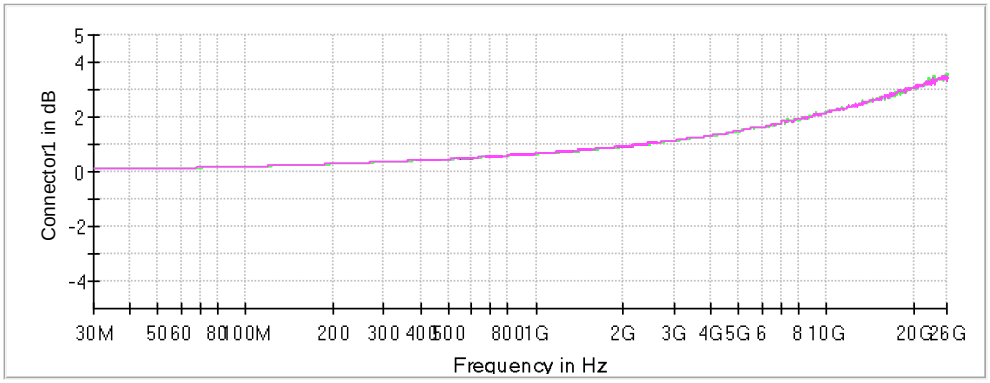
Limit Threshold Sum Level Critical Final Critical

Gain



Connector1 Connector2

Attenuation



Connector1 Connector2

Minimum Emission Bandwidth 6 dB (2437 MHz; 24.000 dBm; 40 MHz)

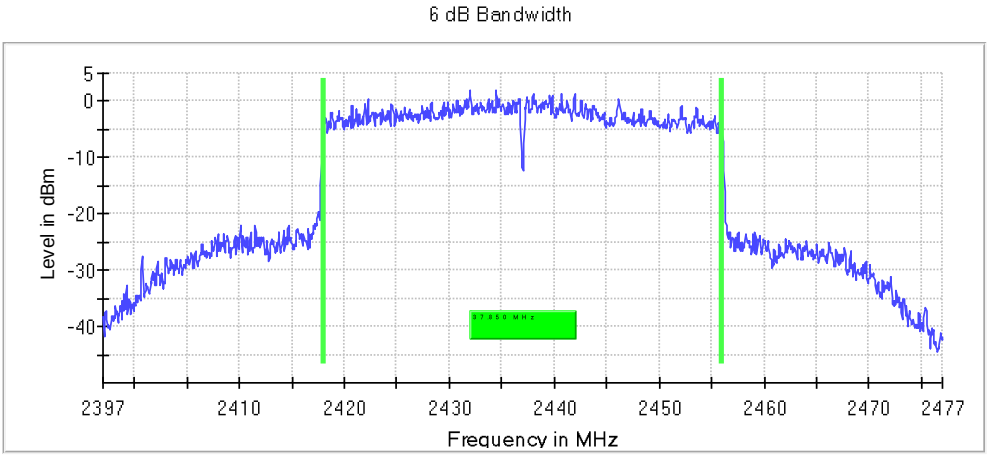
Customized settings.

6 dB Bandwidth

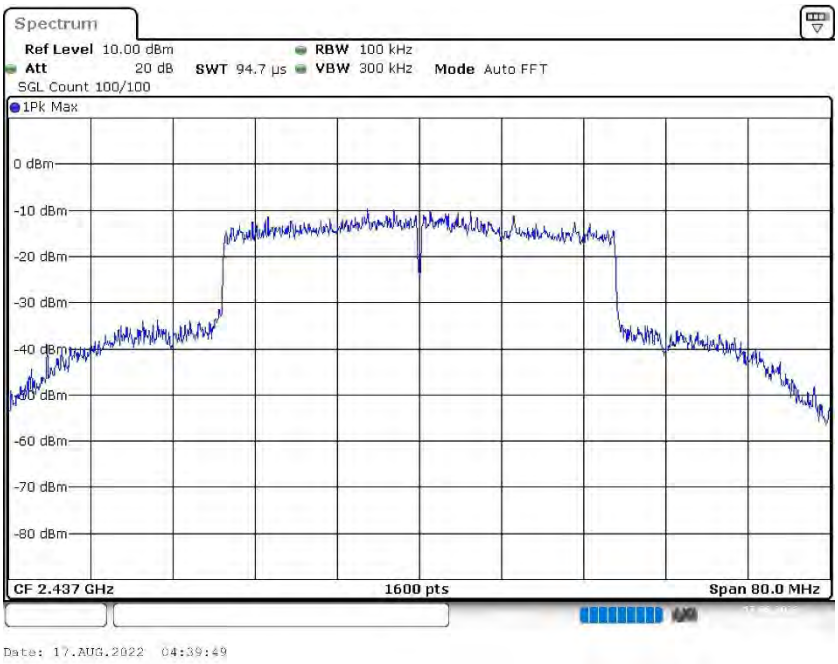
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2437.000000	37.850000	0.500000	---	2418.075000	2455.925000

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

DUT Frequency (MHz)	Max Level (dBm)	Result
2437.000000	2.1	PASS



Bandwidth


Spectrum
Ref Level 10.00 dBm
RBW 100 kHz
Att 20 dB
SWT 94.7 µs
VBW 300 kHz
Mode Auto FFT
SGL Count 100/100
1Pk Max
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
CF 2.437 GHz
1600 pts
Span 80.0 MHz
Date: 17.AUG.2022 04:39:49

Occupied Channel Bandwidth 99% (2437 MHz; 24.000 dBm; 40 MHz)

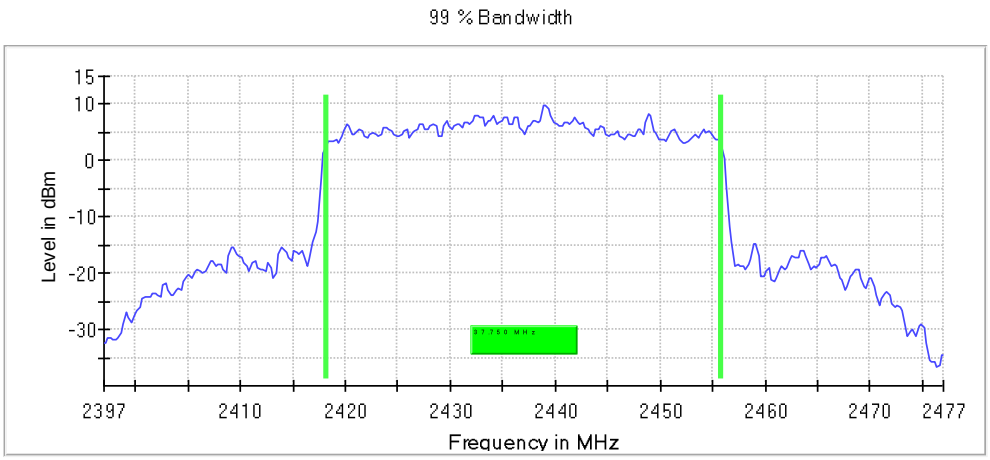
Customized settings.

99 % Bandwidth

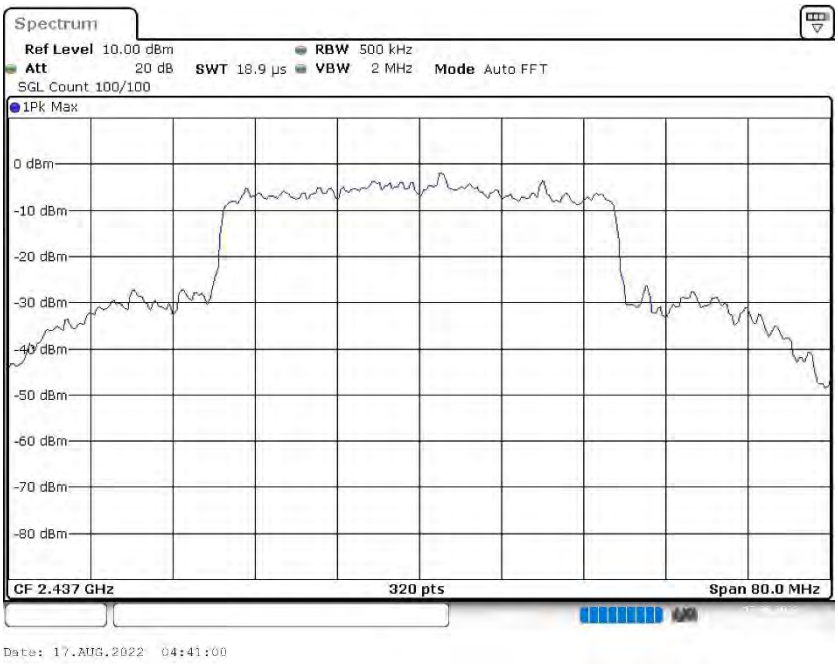
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2437.000000	37.750000	---	---	2418.125000	2455.875000

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

DUT Frequency (MHz)	Result
2437.000000	PASS



Bandwidth


Spectrum
Ref Level 10.00 dBm
RBW 500 kHz
Att 20 dB
SWT 18.9 µs
VBW 2 MHz
Mode Auto FFT
SGL Count 100/100
1Pk Max
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
CF 2.437 GHz
320 pts
Span 80.0 MHz
Date: 17.AUG.2022 04:41:00

Tx Spurious Emission (2437 MHz; 24.000 dBm; 40 MHz)

Customized settings.

Result

DUT Frequency (MHz)	Result
2437.000000	PASS

Final measurements

Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
---	---	---	---	---	---

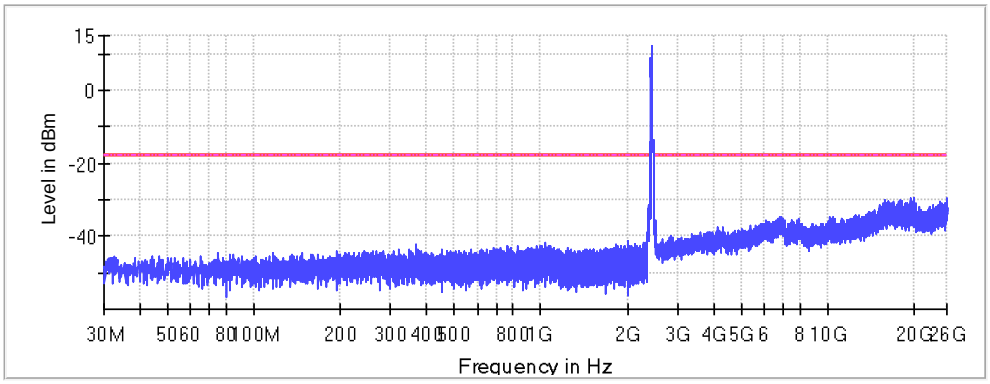
Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2399.225000	-26.0	8.4	-17.7
2399.275000	-26.4	8.8	-17.7
2399.175000	-27.2	9.5	-17.7
2399.625000	-28.1	10.4	-17.7
2398.825000	-28.2	10.5	-17.7
2399.425000	-28.2	10.6	-17.7
2399.575000	-28.3	10.6	-17.7
2399.325000	-28.3	10.6	-17.7
2398.875000	-28.3	10.6	-17.7
2398.725000	-28.5	10.9	-17.7
2399.375000	-28.6	10.9	-17.7
2398.775000	-28.8	11.1	-17.7
2398.675000	-28.8	11.1	-17.7
2399.875000	-29.0	11.4	-17.7
2398.925000	-29.1	11.5	-17.7

Measurement Settings

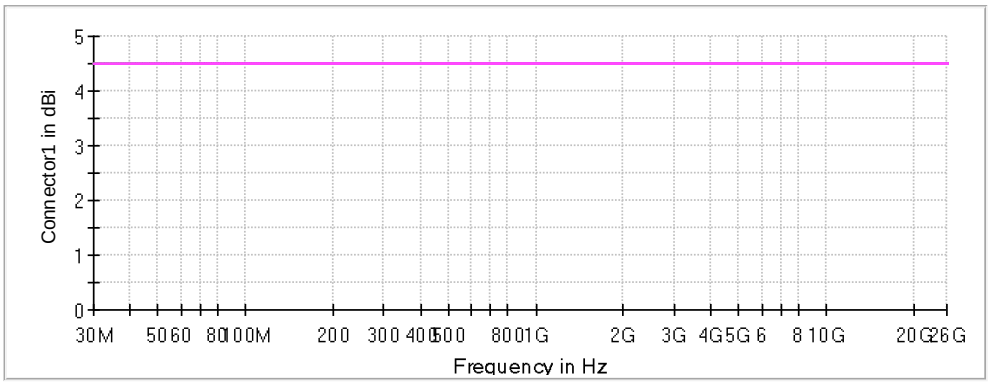
Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	2350.000000	1	1
2350.000000	2483.500000	2	1
2483.500000	26000.000000	1	1

Spurious



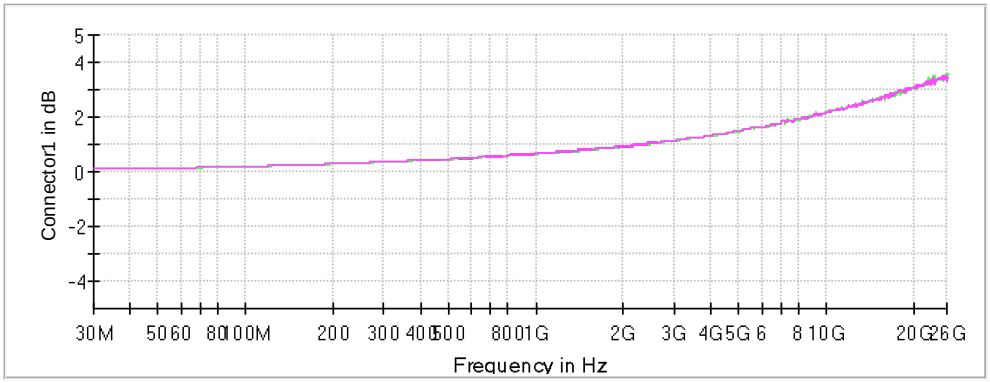
Limit Threshold Sum Level Critical Final Critical

Gain



Connector1 Connector2

Attenuation



Connector1 Connector2

Minimum Emission Bandwidth 6 dB (2452 MHz; 24.000 dBm; 40 MHz)

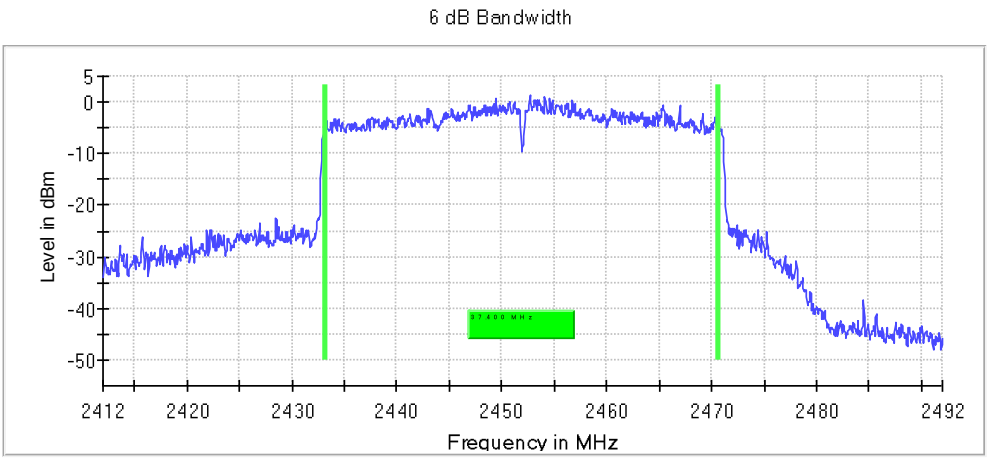
Customized settings.

6 dB Bandwidth

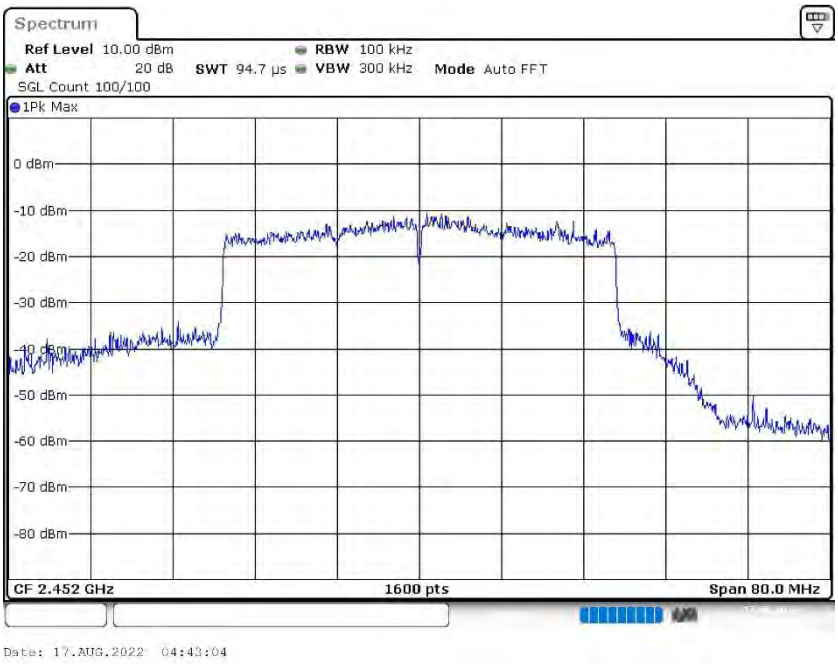
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2452.000000	37.400000	0.500000	---	2433.175000	2470.575000

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

DUT Frequency (MHz)	Max Level (dBm)	Result
2452.000000	1.3	PASS



Bandwidth


Spectrum
Ref Level 10.00 dBm
RBW 100 kHz
Att 20 dB
SWT 94.7 µs
VBW 300 kHz
Mode Auto FFT
SGL Count 100/100
1Pk Max
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
CF 2.452 GHz
1600 pts
Span 80.0 MHz
Date: 17.AUG.2022 04:43:04

Occupied Channel Bandwidth 99% (2452 MHz; 24.000 dBm; 40 MHz)

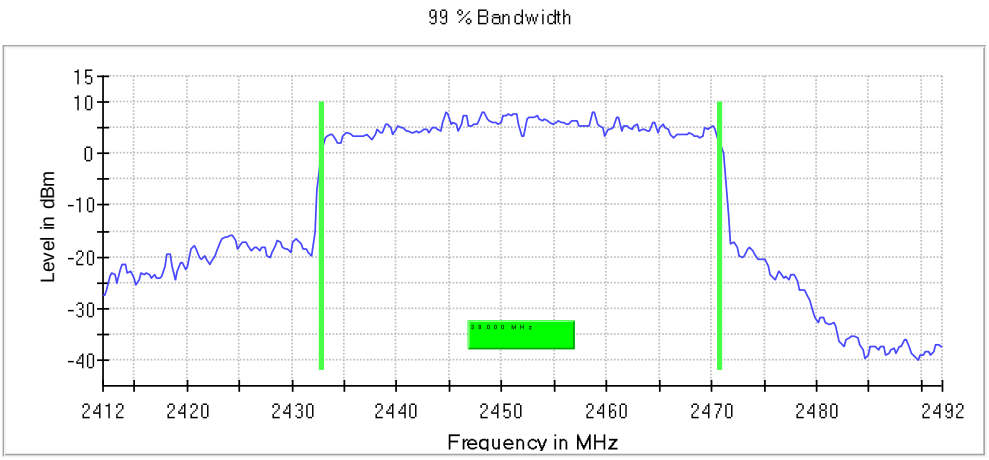
Customized settings.

99 % Bandwidth

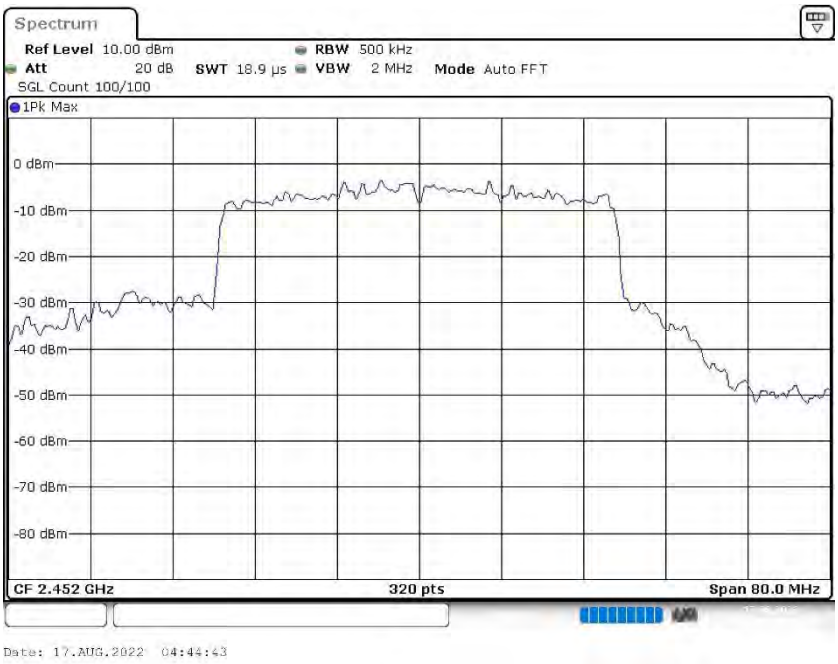
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
2452.000000	38.000000	---	---	2432.875000	2470.875000

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

DUT Frequency (MHz)	Result
2452.000000	PASS



Bandwidth


Spectrum
Ref Level 10.00 dBm
RBW 500 kHz
Att 20 dB
SWT 18.9 µs
VBW 2 MHz
Mode Auto FFT
SGL Count 100/100
1Pk Max
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
-80 dBm
CF 2.452 GHz
320 pts
Span 80.0 MHz
Date: 17.AUG.2022 04:44:43

Tx Spurious Emission (2452 MHz; 24.000 dBm; 40 MHz)

Customized settings.

Result

DUT Frequency (MHz)	Result
2452.000000	PASS

Final measurements

Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
---	---	---	---	---	---

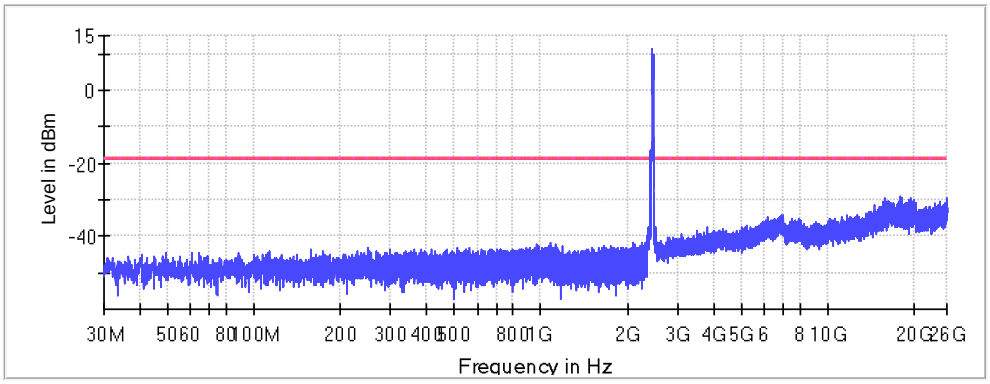
Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
17875.670581	-29.0	10.3	-18.7
19548.229376	-29.5	10.8	-18.7
15897.406839	-29.6	10.9	-18.7
25975.381933	-29.6	10.9	-18.7
18219.588646	-29.6	10.9	-18.7
18212.239969	-29.6	10.9	-18.7
19882.594161	-29.9	11.2	-18.7
15804.078646	-29.9	11.3	-18.7
19228.561943	-30.0	11.3	-18.7
18251.922823	-30.0	11.3	-18.7
19895.086911	-30.0	11.3	-18.7
19873.775749	-30.0	11.4	-18.7
18250.453087	-30.1	11.4	-18.7
19909.049397	-30.2	11.5	-18.7
17894.777140	-30.2	11.5	-18.7

Measurement Settings

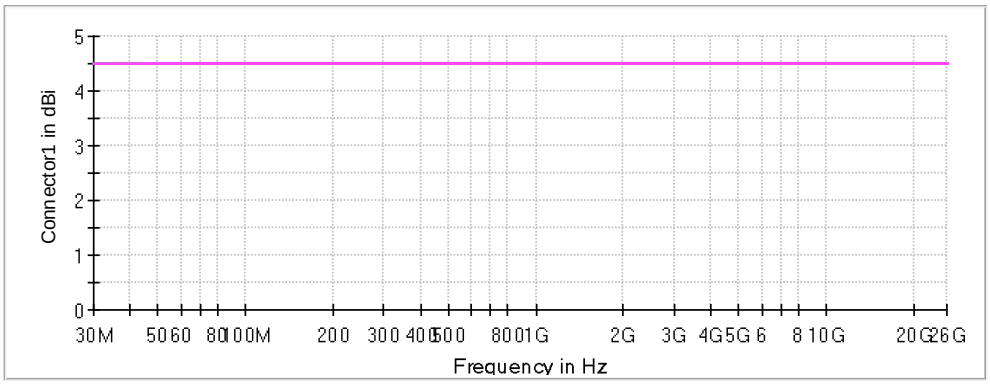
Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
30.000000	2350.000000	1	1
2350.000000	2483.500000	2	1
2483.500000	26000.000000	1	1

Spurious



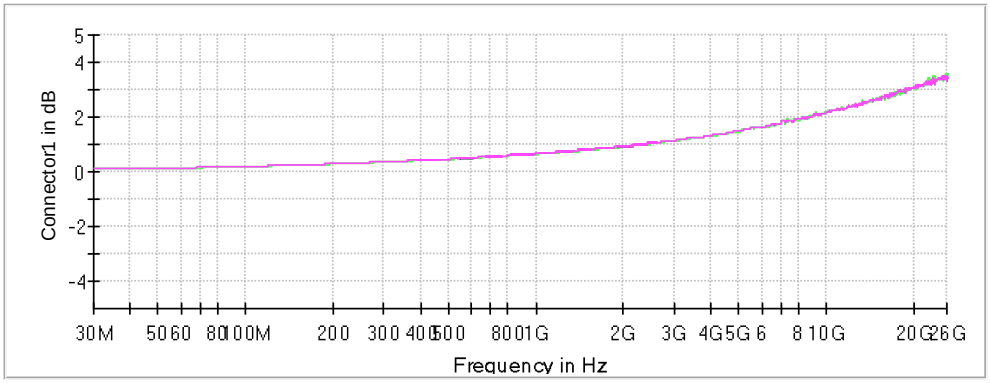
Limit Threshold Sum Level Critical Final Critical

Gain



Connector1 Connector2

Attenuation



Connector1 Connector2

-- End of Test Report --