UNIFIED COMPLIANCE LABORATORY

427 West 12800 South
Draper, UT 84020

Test Report

Certification

FCC ID	SWX-U6PLR
ISED ID	6545A-U6PLR
Equipment Under Test	U6+LR
Test Report Serial Number	TR7539_03
Date of Test(s)	September 11 through October 12, 2022
Report Issue Date	October 24, 2022

Test Specification	Applicant
47 CFR FCC Part 15, Subpart E RSS-GEN Issue 5	Ubiquiti Inc. 685 Third Avenue New York, NY 10019 U.S.A.

NVLAP TESTING ilac-MRA

NVLAP LAB CODE 600241-0

Certification of Engineering Report

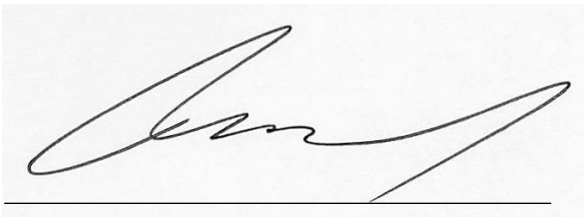
This report has been prepared by Unified Compliance Laboratory (UCL) to document compliance of the device described below with the requirement of Federal Communication Commissions (FCC) Part 15, Subpart E. This report may be reproduced in full. Partial reproduction of this report may only be made with 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+LR
FCC ID	SWX-U6PLR
ISED ID	6545A-U6PLR

On this 17th 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:

Revision History		
Revision	**Description**	**Date**
01	Original Report Release	October 13, 2022
02	Added MRA and beamformer information	October 14, 2022
03	Added more details on beamforming gain	October 24 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	Alex Macon
Title	Compliance Manager

1.2 Manufacturer

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

2 Equipment Under Test (EUT)

2.1 Identification of EUT

Brand Name	UniFi
Model Number	U6+LR
Serial Number	N/A
Dimensions (cm)	17.6 x 17.6 x 0.43

2.2 Description of EUT

The U6+LR is a Wi-Fi 6 access point designed for long range 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+LR uses a sophisticated antenna design with sideways amplification to offer excellent range when mounted horizontally. U6+LR combines its purpose-built antenna with powerful Wi-Fi 6 features like OFDMA, beamforming, and BSS coloring for reliable long-range wireless performance.

The table below show the channels used within the different modulation bandwidths.

Band	WiFi Mode	Modulation Bandwidth	Modulation Type	Frequency (MHz)
UNII-3	a	20 MHz	OFDM	5745, 5755, 5765 5775, 5785, 5795, 5805, 5815 5825
	n	20 MHz	HT	5745, 5755, 5765 5775, 5785, 5795, 5805, 5815 5825
	n	40 MHz	HT	5755, 5775, 5795
	ac	20 MHz	VHT	5745, 5755, 5765 5775, 5785, 5795, 5805, 5815 5825
	ac	40 MHz	VHT	5755, 5775, 5795
	ac	80 MHz	VHT	5775
	ax	20 MHz	HE	5745, 5755, 5765 5775, 5785, 5795, 5805, 5815 5825
	ax	40 MHz	HE	5755, 5775, 5795
	ax	80 MHz	HE	5775

This report covers the circuitry of the device subject to FCC Part 15, Subpart E. 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+LR 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	-
Temperature	22.0-23.0 °C
Humidity	19.9-22.2 %
Barometric Pressure	1009 mBar

2.6 Operating Modes

The U6+LR 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

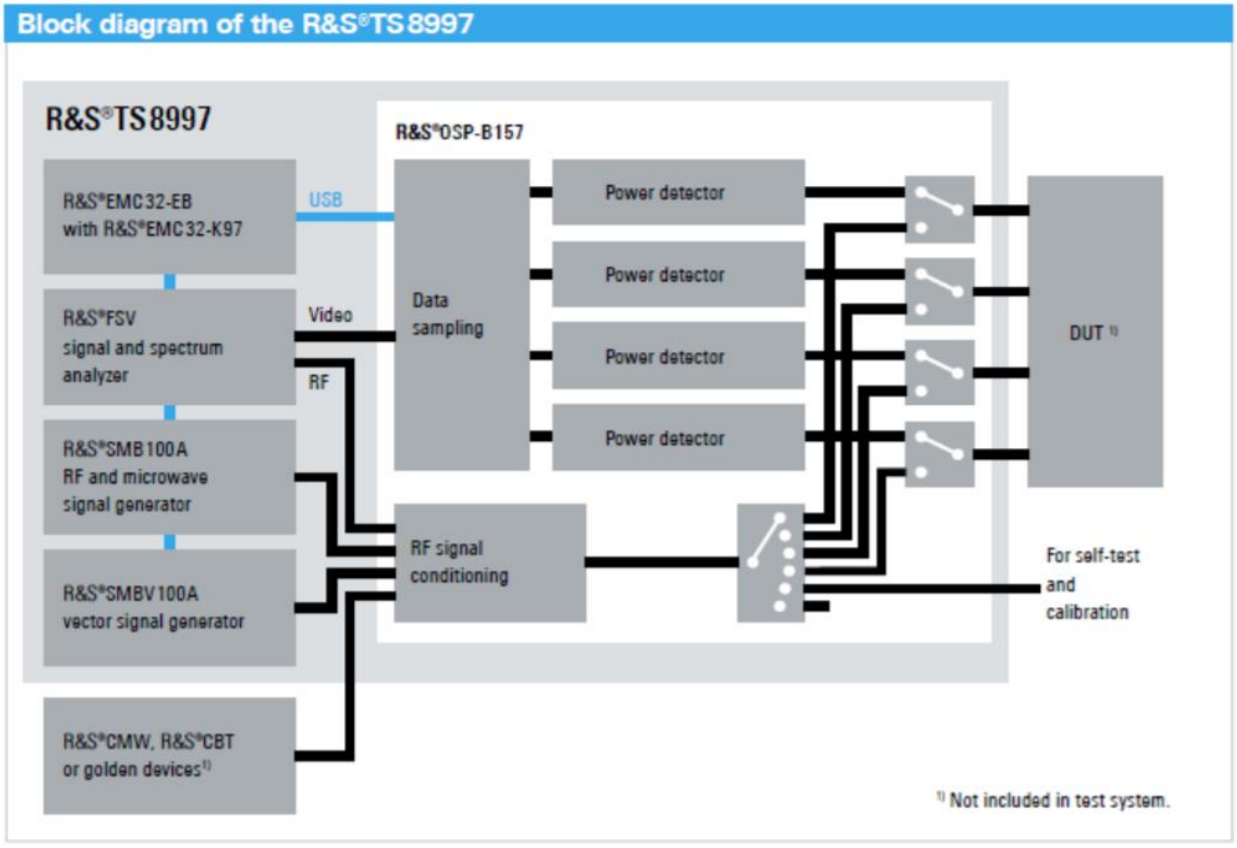


Diagram 1: Test Configuration Block Diagram

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 E, Section 15.407 Limits and methods of measurement of radio interference characteristics of Unlicensed National Information Infrastructure Devices -RSS-Gen, issue 5, General Requirements for Compliance of Radio Apparatus -RSS-247, Issue Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSs) and License-Exempt Local Area Network (LE-LAN) 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 15.407 / RSS-247 Section 5

See test standard for details.

3.3 FCC Part 15, Subpart E / RSS-GEN / RSS-247

3.3.1 Summary of Tests

FCC Section	ISED Section	Environmental Phenomena	Frequency Range (MHZ)	Result
15.407(a)	N/A	Antenna requirements	Structural Requirement	Compliant
15.407(b)	RSS-Gen	Conducted Disturbance at Mains Port	0.15 to 30	N/A
15.407(c)	RSS-247 §6.2.2, §6.2.3	Bandwidth Requirement	5745 to 5825	Compliant
15.407(e)	RSS-247 §6.2.2, §6.2.3	Peak Output Power	5745 to 5825	Compliant
15.407(f)	RSS-247 §6.2.2, §6.2.3	Antenna Conducted Spurious Emissions	0.009 to 40000	N/A
15.407(g)	RSS-247 §6.2.2, §6.2.3	Radiated Spurious Emissions	0.009 to 40000	Compliant
15.407(h)	RSS-247 §6.2.2, §6.2.3	Peak Power Spectral Density	5745 to 5825	Compliant
The testing was performed according to the procedures in ANSI C63.10-2013, KDB 789033 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 2021. This site has also been registered with Innovations, Science and Economic Development (ISED) department as was accepted under Appendix B, Phase 1 procedures of the APEC Tel MRA for Canadian recognition. ISED No.: 25346. Unified Compliance Laboratory has been assigned Conformity Assessment Number US0223 by ISED and has registered MRA Test Site number US5037.

4 Test Equipment

4.1 Direct Connect at the Antenna Port Tests

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

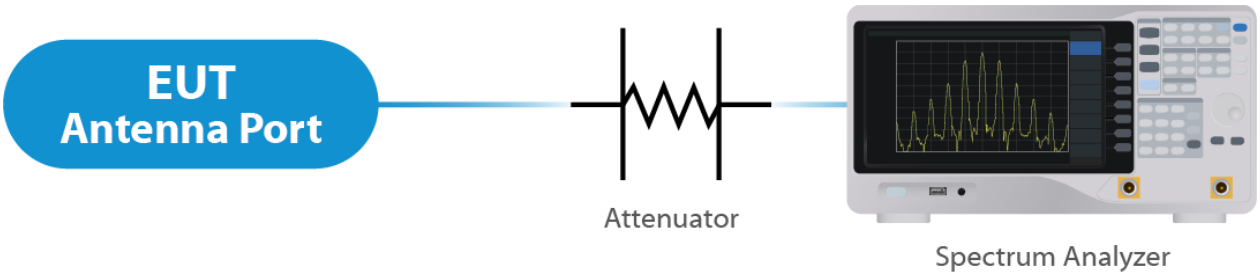


Figure 1: Direct Connect at the Antenna Port Test

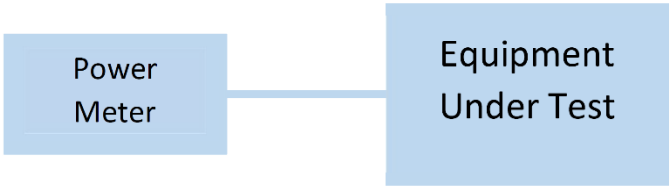


Figure 2: Output Power Measurement

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	11/7/2022
Broadband Antenna	Scwarzbeck	VULB 9163	UCL-3062	9/13/2022	9/13/2024
Broadband Antenna	Scwarzbeck	VULB 9163	UCL-3071	6/08/2022	6/22/2024
Double Ridge Horn Antenna	Scwarzbeck	BBHA 9120D	UCL-3065	9/22/2022	9/22/2024
Log Periodic	Scwarzbeck	STLP 9129	UCL-3068	11/16/2020	11/16/2022
15 - 40 GHz Horn Antenna	Scwarzbeck	BBHA 9170	UCL-2487	6/09/2022	6/09/2024
1 – 18 GHz Amplifier	Com-Power	PAM 118A	UCL-3833	10/7/2021	11/7/2022
Test Software	UCL	Revision 1	UCL-3108	N/A	N/A

Table 2:List of equipment used for Radiated Emissions

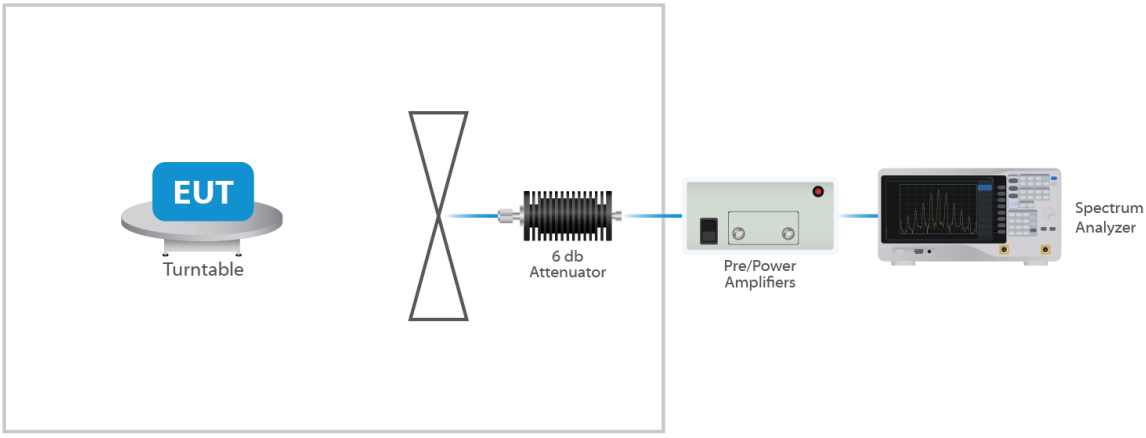


Figure 3: Radiated Emissions Test

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 non-user accessible antenna structure. The maximum gain of the antenna per chain is 10.5 dBi. This is an 802.11 device and utilizes MIMO modes as described in KDB 662911 D01 F) 1).
CFR 47 Part 15.407 limits shall account for beamforming techniques; therefore, for RF Power and PSD measurements Directional Gain shall be 10.5 per the following:

The Directional Gain shall be considered Per KDB 662911 D01 Multiple Transmitter Output v02r01 Section 2 d) (i) and the following equation:

Directional Gain = 10 Log [(10G1/20+10G2/20+10G3/20)²/Nant].
Where:
G1-3 = antenna gain for antenna's 1-3 as reported in antenna datasheet. (G1 = 6.0, G2=6.3, G3=4.8)
Nant = Number of antenna's (Nant =3), or

10Log [10(6.0/20) + 10(6.3/20) + 10(4.8/20) ²]/3

Directional Gain = 10.5

Results

The EUT complied with the specification

5.2 §15.403(i) 26 dB & 99% Emissions Bandwidth

All chains were measured under the guidance of KDB 789033 Section II.C. and KDB 66291 D01. Please see associated annex for details on instrument settings.

Modulation	Nominal BW (MHz)	Frequency (MHz)	99% Bandwidth (MHz)	Emissions 26 dB Bandwidth (MHz)
OFDM	20	5745	17.8	28.1
OFDM	20	5775	17.2	33.5
OFDM	20	5825	18.3	29.4
HT	20	5745	18.9	29.4
HT	20	5775	18.3	33.3
HT	20	5825	19.2	34.4
HT	40	5755	37.5	57.6
HT	40	5775	37.3	62.7
HT	40	5795	37.0	61.5
VHT	20	5745	19.0	31.6
VHT	20	5775	18.3	35.4
VHT	20	5825	18.8	32.1
VHT	40	5755	37.8	58.1
VHT	40	5775	37.3	73.4
VHT	40	5795	37.5	69.9
VHT	80	5775	75.5	105.5
HE	20	5745	19.4	33.5
HE	20	5775	19.5	38.4
HE	20	5825	19.5	34.4
HE	40	5755	38.3	53.6
HE	40	5775	38.3	69.6
HE	40	5795	38.0	69.3
HE	80	5775	77.0	81.5

Result

All chains were tested and the highest bandwidth per chain is reported above.
The 26 dB bandwidths are reported for information purposes. Please see Annex for all bandwidth measurements.

5.3 §15.403(a)(3) Maximum Average Output Power

All chains were measured and summed under the guidance of KDB 789033 Section II. E.2. 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 25.49 dBm or 354 mW. The limit is 25.5 dBm, or 0.355 Watts. If transmitting antennas that have a directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The antenna has a gain of 10.5 dBi therefore the conducted output limit is 355mW or 25.5dBm.

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Conducted Output Power *
OFDM 20	5745	Mcs0	20.5	25.31
OFDM 20	5775	Mcs0	20.5	25.33
OFDM 20	5825	Mcs0	20.5	25.41
HT 20	5745	Mcs0	20.5	25.28
HT 20	5775	Mcs0	20.5	25.27
HT 20	5825	Mcs0	20.5	25.38
HT 40	5755	Mcs0	20	25.16
HT 40	5775	Mcs0	20	25.12
HT 40	5795	Mcs0	20	25.09
VHT 20	5745	Mcs0	20.5	25.31
VHT 20	5775	Mcs0	20.5	25.28
VHT 20	5825	Mcs0	20.5	25.40
VHT 40	5755	Mcs0	20	25.20
VHT 40	5775	Mcs0	20	25.12
VHT 40	5795	Mcs0	20	25.10
VHT 80	5775	Mcs0	18	23.18
HE 20	5745	Mcs0	20.5	25.44
HE 20	5775	Mcs0	20.5	25.39
HE 20	5825	Mcs0	20.5	25.49
HE 40	5755	Mcs0	20	25.30
HE 40	5775	Mcs0	20	25.27
HE 40	5795	Mcs0	19.5	24.78
HE 80	5775	Mcs0	17.5	22.90

Result

In the configuration tested, the maximum summed average RF output power was less than 0.355 watt; therefore, the EUT compiled with the requirements of the specification (see example in attached Annex).
* Gated EIRP shown in the Annex is the conducted measurement

5.4 §15.407(b)(7) Spurious Emissions

5.4.1 Conducted Spurious Emissions

The frequency range from the lowest frequency generated or used in the device to the tenth harmonic of the highest fundamental frequency was investigated to measure any antenna-conducted emissions. The graphs show the measurement data from spurious emissions noted across the frequency range when transmitting at the lowest frequency, middle frequency and upper frequency. Shown within the annex are plots with the EUT turned to the upper and lower channels with the antenna gain of 3 dBi accounted for. These demonstrate compliance with the provisions of this section at the band edges.

All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Result

Conducted spurious emissions were attenuated below the limit; therefore, the EUT complies with the specification. The plots contained at the end of the annex are to show the measurement settings utilized for Tx Spurious Emission throughout the test report. For example: the mask seen on page 9 of 86 in the annex is superimposed on the plot seen on page 59 of 86.

5.4.2 Radiated Spurious Emissions in the Restricted Bands of § 15.205

The EUT uses various power settings based on the channel in use. In order to reduce test time, the radiated spurious emissions at the lowest, middle, and highest channel were measured at the maximum power of TP49.

Correction Factor = Antenna Factor + Cable Loss - Pre-amp 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. See Annex for Conducted Band edge plots.

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Meas. Time (s)	RBW (Hz)	Detector	Correction (dB)
11.653 GHz	55.084	74	-18.916	204	3.307	Vertical	5	1000000	Peak	3.184
11.653 GHz	41.002	54	-12.998	204	3.307	Vertical	5	1000000	Ave.	3.184
11.648 GHz	56.787	74	-17.213	198	3.802	Horizontal	5	1000000	Peak	3
11.648 GHz	42.48	54	-11.52	198	3.802	Horizontal	5	1000000	Ave.	3
11.488 GHz	58.956	74	-15.044	147	3.149	Vertical	5	1000000	Peak	3.354
15.025 GHz	51.542	74	-22.458	81	3.311	Vertical	5	1000000	Peak	8.131
11.488 GHz	44.977	54	-9.023	147	3.149	Vertical	5	1000000	Ave.	3.354
15.025 GHz	38.649	54	-15.351	81	3.311	Vertical	5	1000000	Ave.	8.131
11.483 GHz	57.136	74	-16.864	88	2.329	Horizontal	5	1000000	Peak	3.451
15.018 GHz	50.986	74	-23.014	351	4	Horizontal	5	1000000	Peak	7.845

Frequency	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Azimuth (°)	Height (m)	Pol.	Meas. Time (s)	RBW (Hz)	Detector	Correction (dB)
11.483 GHz	42.75	54	-11.25	88	2.329	Horizontal	5	1000000	Ave.	3.451
15.018 GHz	38.774	54	-15.226	351	4	Horizontal	5	1000000	Ave.	7.845
6.0505 GHz	47.245	74	-26.755	20	3.798	Vertical	5	1000000	Peak	-8.087
11.548 GHz	60.459	74	-13.541	210	3.307	Vertical	5	1000000	Peak	3.085
6.0505 GHz	28.447	54	-25.553	20	3.798	Vertical	5	1000000	Ave.	-8.087
11.548 GHz	46.719	54	-7.281	210	3.307	Vertical	5	1000000	Ave.	3.085
11.552 GHz	55.785	74	-18.215	54	3.307	Horizontal	5	1000000	Peak	3.115
11.552 GHz	42.029	54	-11.971	54	3.307	Horizontal	5	1000000	Ave.	3.115
37.31 GHz	60.969	74	-13.031	246	1.500	Vertical	5	1000000	Peak	10.722
38.846 GHz	59.681	74	-14.319	161	1.500	Vertical	5	1000000	Peak	9.337
37.31 GHz	47.057	54	-6.943	246	1.500	Vertical	5	1000000	Ave.	10.722
38.846 GHz	46.663	54	-7.337	161	1.500	Vertical	5	1000000	Ave.	9.337
37.335 GHz	60.936	74	-13.064	279	1.500	Horizontal	5	1000000	Peak	11.032
38.913 GHz	60.274	74	-13.726	235	1.500	Horizontal	5	1000000	Peak	9.739
37.335 GHz	47.646	54	-6.354	279	1.500	Horizontal	5	1000000	Ave.	11.032
38.913 GHz	46.772	54	-7.228	235	1.500	Horizontal	5	1000000	Ave.	9.739
33.63 GHz	55.948	74	-18.052	292	1.500	Horizontal	5	1000000	Peak	5.717
33.63 GHz	42.308	54	-11.692	292	1.500	Horizontal	5	1000000	Ave.	5.717
17.238 GHz	48.687	74	-25.313	154	1.500	Vertical	5	1000000	Peak	-2.353
28.719 GHz	50.738	74	-23.262	291	1.500	Vertical	5	1000000	Peak	0.644
37.36 GHz	60.847	74	-13.153	25	1.500	Vertical	5	1000000	Peak	11.2
17.238 GHz	35.504	54	-18.496	154	1.500	Vertical	5	1000000	Ave.	-2.353
28.719 GHz	38.1	54	-15.9	291	1.500	Vertical	5	1000000	Ave.	0.644
37.36 GHz	47.625	54	-6.375	25	1.500	Vertical	5	1000000	Ave.	11.2
33.634 GHz	55.376	74	-18.624	231	1.500	Vertical	5	1000000	Peak	5.688
35.266 GHz	57.74	74	-16.26	35	1.500	Vertical	5	1000000	Peak	7.193
37.012 GHz	60.264	74	-13.736	264	1.500	Vertical	5	1000000	Peak	9.97
38.938 GHz	60.053	74	-13.947	224	1.500	Vertical	5	1000000	Peak	9.577
33.634 GHz	42.378	54	-11.622	231	1.500	Vertical	5	1000000	Ave.	5.688
35.266 GHz	43.859	54	-10.141	35	1.500	Vertical	5	1000000	Ave.	7.193
37.012 GHz	46.768	54	-7.232	264	1.500	Vertical	5	1000000	Ave.	9.97
38.938 GHz	46.621	54	-7.379	224	1.500	Vertical	5	1000000	Ave.	9.577
33.651 GHz	54.979	74	-19.021	1	1.500	Horizontal	5	1000000	Peak	5.565
34.97 GHz	56.154	74	-17.846	354	1.500	Horizontal	5	1000000	Peak	6.675
37.344 GHz	60.616	74	-13.384	72	1.500	Horizontal	5	1000000	Peak	11.136
38.83 GHz	59.68	74	-14.32	191	1.500	Horizontal	5	1000000	Peak	8.938
33.651 GHz	42.117	54	-11.883	1	1.500	Horizontal	5	1000000	Ave.	5.565
34.97 GHz	43.193	54	-10.807	354	1.500	Horizontal	5	1000000	Ave.	6.675
37.344 GHz	47.741	54	-6.259	72	1.500	Horizontal	5	1000000	Ave.	11.136
38.83 GHz	46.472	54	-7.528	191	1.500	Horizontal	5	1000000	Ave.	8.938

5.5 §15.407(a) Maximum Power Spectral Density

All chains were measured and summed under the guidance of KDB 789033 Section II. F. 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 30 dBm in any 500 kHz band during any time interval of continuous transmission.
As per KDB 662911, When the EUT is using spatial-multiplexing in HE modes, there is not additional array gain to accommodate. When the EUT uses Nss=1 data rates, the antenna gain is 10.5 dBi therefore the limit is reduced by 4.5 dB.
Results of this testing are summarized.

Modulation (BW)	Frequency (MHz)	Data Rate	TP Setting	Measured PSD
OFDM 20	5745	Mcs0	20.5	8.30
OFDM 20	5775	Mcs0	20.5	8.27
OFDM 20	5825	Mcs0	20.5	8.19
HT 20	5745	Mcs0	20.5	8.17
HT 20	5775	Mcs0	20.5	8.13
HT 20	5825	Mcs0	20.5	7.96
HT 40	5755	Mcs0	20	5.57
HT 40	5775	Mcs0	20	5.35
HT 40	5795	Mcs0	20	5.43
VHT 20	5745	Mcs0	20.5	8.07
VHT 20	5775	Mcs0	20.5	7.98
VHT 20	5825	Mcs0	20.5	8.01
VHT 40	5755	Mcs0	20	5.46
VHT 40	5775	Mcs0	20	5.37
VHT 40	5795	Mcs0	20	5.34
VHT 80	5775	Mcs0	18	0.25
HE 20	5745	Mcs0	20.5	7.94
HE 20	5775	Mcs0	20.5	7.79
HE 20	5825	Mcs0	20.5	7.66
HE 40	5755	Mcs0	20	5.58
HE 40	5775	Mcs0	20	5.39
HE 40	5795	Mcs0	19.5	4.85
HE 80	5775	Mcs0	17.5	0.03

Result

The maximum summed average power spectral density was less than the limit of 25,5 dBm while in Nss1 mode.

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 15.407 2018

DUT Information

Frequencies

WLAN CH 36 (5180 MHz)	WLAN CH 38 (5190 MHz)	WLAN CH 40 (5200 MHz)
WLAN CH 42 (5210 MHz)	WLAN CH 44 (5220 MHz)	WLAN CH 46 (5230 MHz)
WLAN CH 48 (5240 MHz)	WLAN CH 50 (5250 MHz)	WLAN CH 52 (5260 MHz)
WLAN CH 54 (5270 MHz)	WLAN CH 56 (5280 MHz)	WLAN CH 58 (5290 MHz)
WLAN CH 60 (5300 MHz)	WLAN CH 62 (5310 MHz)	WLAN CH 64 (5320 MHz)
WLAN CH 100 (5500 MHz)	WLAN CH 102 (5510 MHz)	WLAN CH 104 (5520 MHz)
WLAN CH 106 (5530 MHz)	WLAN CH 108 (5540 MHz)	WLAN CH 110 (5550 MHz)
WLAN CH 112 (5560 MHz)	WLAN CH 114 (5570 MHz)	WLAN CH 116 (5580 MHz)
WLAN CH 118 (5590 MHz)	WLAN CH 120 (5600 MHz)	WLAN CH 122 (5610 MHz)
WLAN CH 124 (5620 MHz)	WLAN CH 126 (5630 MHz)	WLAN CH 128 (5640 MHz)
WLAN CH 130 (5650 MHz)	WLAN CH 132 (5660 MHz)	WLAN CH 134 (5670 MHz)
WLAN CH 136 (5680 MHz)	WLAN CH 138 (5690 MHz)	WLAN CH 140 (5700 MHz)
WLAN CH 142 (5710 MHz)	WLAN CH 144 (5720 MHz)	WLAN CH 149 (5745 MHz)
WLAN CH 151 (5755 MHz)	WLAN CH 153 (5765 MHz)	WLAN CH 155 (5775 MHz)
WLAN CH 157 (5785 MHz)	WLAN CH 159 (5795 MHz)	WLAN CH 161 (5805 MHz)
WLAN CH 163 (5815 MHz)	WLAN CH 165 (5825 MHz)	

Bandwidths

20 MHz (20 MHz)	40 MHz (40 MHz)	80 MHz (80 MHz)
160 MHz (160 MHz)		

Power

24.000 dBm (24 dBm)

Beamforming Gain

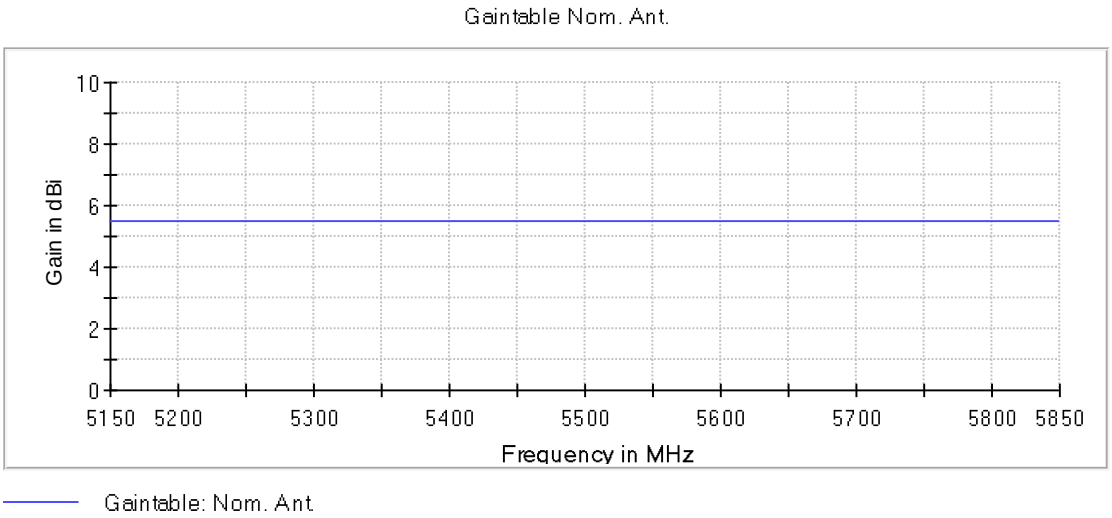
Powerstep name (value)	Beamforming gain table names
24.000 dBm (24 dBm)	---

Gain Tables

Powerstep name (value)	Gain table names
24.000 dBm (24 dBm)	Port 1: Nom. Ant.; Port 2: Nom. Ant.; Port 3: Nom. Ant.;

DUT Settings

No. of transmission chains	3
DFS capability	Yes
DFS Mode	Client with radar detection
Equipment Type	Outdoor AP
TPC	No



Hardware Setup: WMS Measurements\TS8997 Hardware SetupJB

Spectrum Analyzer:	SA FSW 43 (SA FSW 43) @ VISA (ADR TCPIP::192.168.48.119::inst0::instr), SN 1331.5003K43/101245, FW 5.10SP1
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::---.---.---.---::inst0::instr)
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
Emission Bandwidth 26 dB	5745.000	24.0	20.000000	PASS
RF output power	5745.000	24.0	20.000000	PASS
Power Spectral Density	5745.000	24.0	20.000000	PASS
Minimum Emission Bandwidth 6 dB	5745.000	24.0	20.000000	PASS
Occupied Channel Bandwidth 99%	5745.000	24.0	20.000000	PASS
Tx Spurious Emission	5745.000	24.0	20.000000	PASS
Emission Bandwidth 26 dB	5775.000	24.0	20.000000	PASS
Minimum Emission Bandwidth 6 dB	5775.000	24.0	20.000000	PASS
Occupied Channel Bandwidth 99%	5775.000	24.0	20.000000	PASS
Tx Spurious Emission	5775.000	24.0	20.000000	PASS
Emission Bandwidth 26 dB	5825.000	24.0	20.000000	PASS
Minimum Emission Bandwidth 6 dB	5825.000	24.0	20.000000	PASS
Occupied Channel Bandwidth 99%	5825.000	24.0	20.000000	PASS
Tx Spurious Emission	5825.000	24.0	20.000000	PASS
Emission Bandwidth 26 dB	5755.000	24.0	40.000000	PASS
Minimum Emission Bandwidth 6 dB	5755.000	24.0	40.000000	PASS
Occupied Channel Bandwidth 99%	5755.000	24.0	40.000000	PASS
Tx Spurious Emission	5755.000	24.0	40.000000	PASS
Emission Bandwidth 26 dB	5775.000	24.0	40.000000	PASS
Minimum Emission Bandwidth 6 dB	5775.000	24.0	40.000000	PASS
Occupied Channel Bandwidth 99%	5775.000	24.0	40.000000	PASS
Tx Spurious Emission	5775.000	24.0	40.000000	PASS
Emission Bandwidth 26 dB	5795.000	24.0	40.000000	PASS
Minimum Emission Bandwidth 6 dB	5795.000	24.0	40.000000	PASS
Occupied Channel Bandwidth 99%	5795.000	24.0	40.000000	PASS
Tx Spurious Emission	5795.000	24.0	40.000000	PASS
Emission Bandwidth 26 dB	5775.000	24.0	80.000000	PASS
Minimum Emission Bandwidth 6 dB	5775.000	24.0	80.000000	PASS
Occupied Channel Bandwidth 99%	5775.000	24.0	80.000000	PASS
Tx Spurious Emission	5775.000	24.0	80.000000	PASS

Emission Bandwidth 26 dB (5745 MHz; 24.000 dBm; 20 MHz)

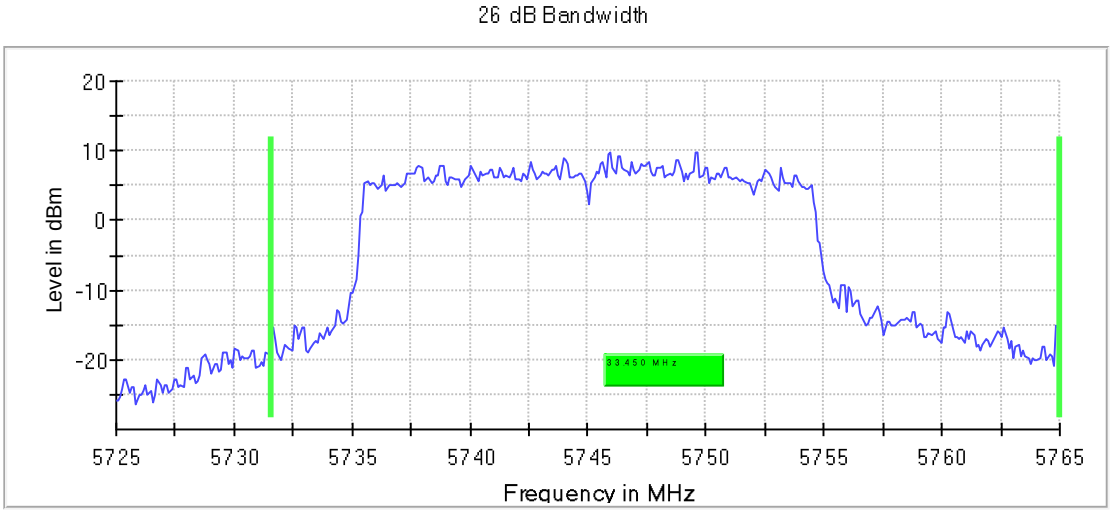
Customized settings.

26 dB Bandwidth

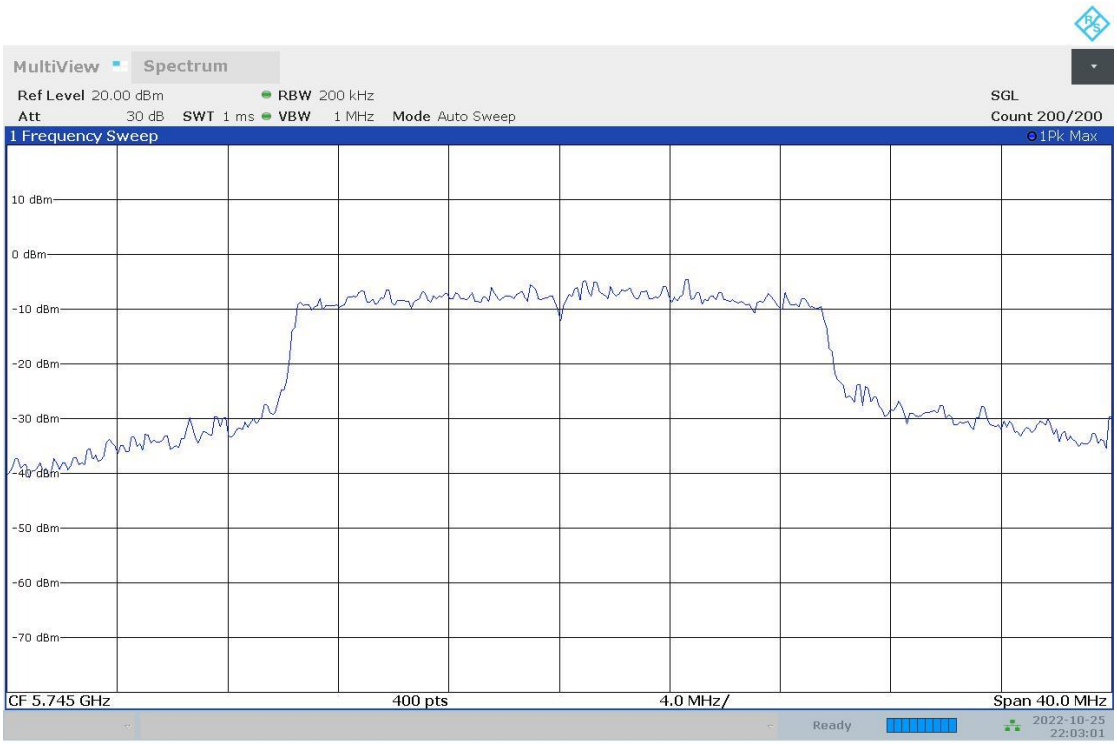
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5745.000000	33.450000	---	---	5731.550000	5765.000000

(continuation of the "26 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
5745.000000	9.9	PASS



Bandwidth



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Measurement

Setting	Instrument Value	Target Value
Start Frequency	5.72500 GHz	5.72500 GHz
Stop Frequency	5.76500 GHz	5.76500 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	1.000 ms	AUTO
Reference Level	20.000 dBm	20.000 dBm
Attenuation	30.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off

RF output power (5745 MHz; 24.000 dBm; 20 MHz)

Customized settings.

Result

DUT Frequency (MHz)	Gated RMS (dBm)	Limit Max (dBm)	Gated EIRP (dBm)	DutyCycle (%)	Result
5745.000000	25.4	30.0	25.4	90.085	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

Power Spectral Density (5745 MHz; 24.000 dBm; 20 MHz)

Customized settings.

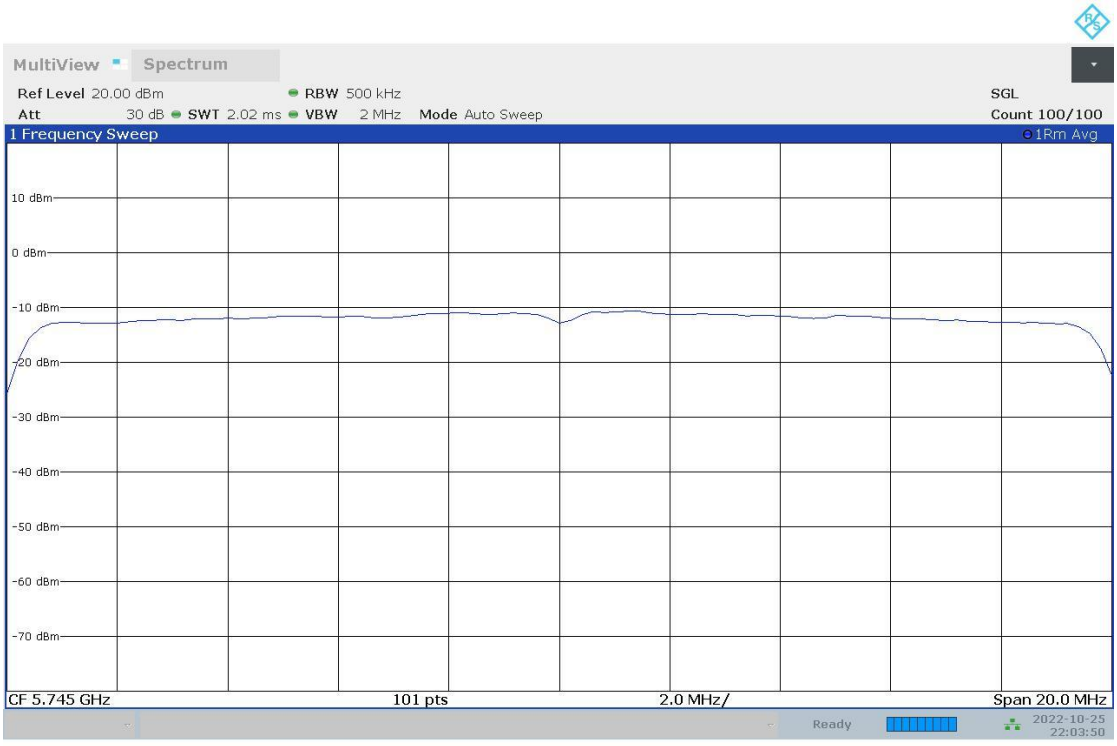
Result

DUT Frequency (MHz)	Frequency (MHz)	PSD (dBm)	Limit Max (dBm)	Result
5745.000000	5746.386139	7.939	30.0	PASS

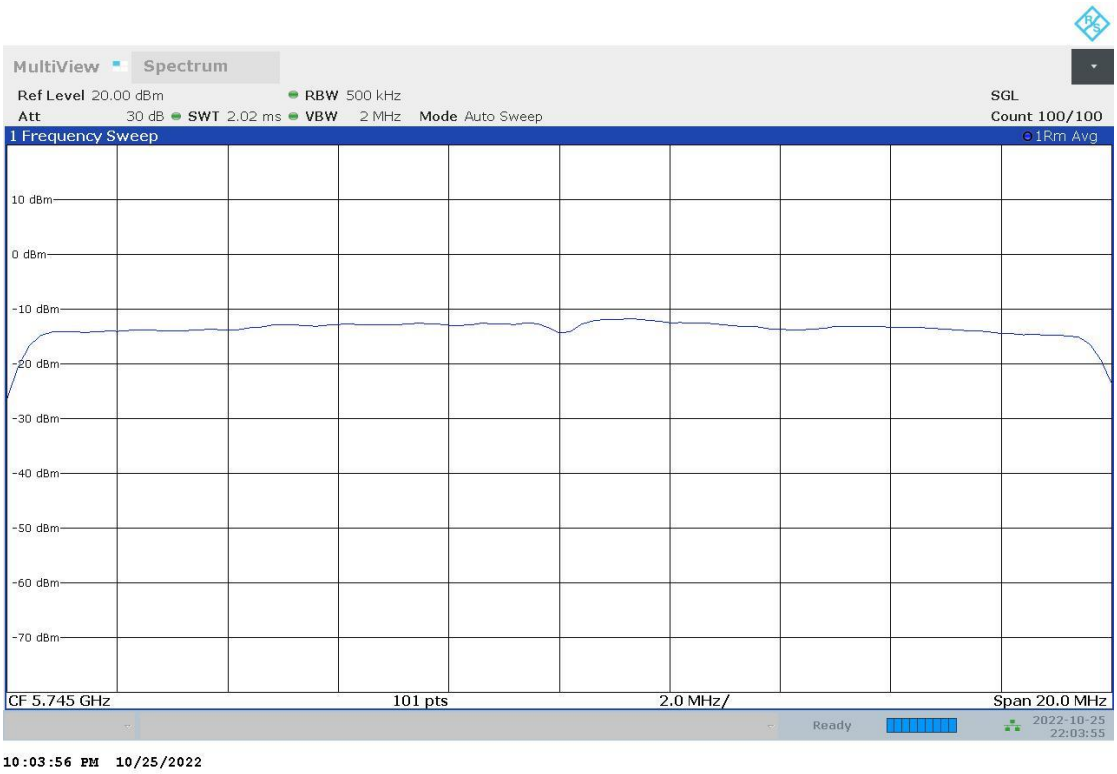
Ports

Port	State
1	used
2	used
3	used

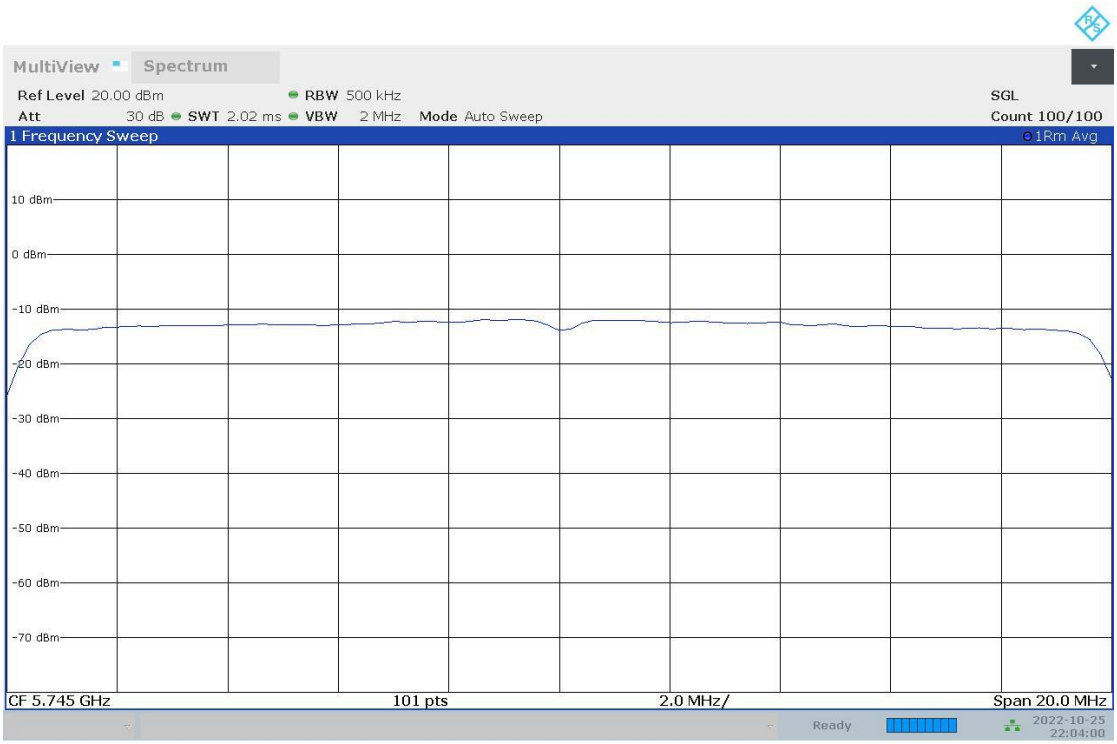
PSD Connector 1



PSD Connector 2



PSD Connector 3



Measurement

Setting	Instrument Value	Target Value
Start Frequency	5.73500 GHz	5.73500 GHz
Stop Frequency	5.75500 GHz	5.75500 GHz
Span	20.000 MHz	20.000 MHz
RBW	500.000 kHz	<= 500.000 kHz
VBW	2.000 MHz	>= 1.500 MHz
SweepPoints	101	~ 80
Sweeptime	2.020 ms	2.020 ms
Reference Level	20.000 dBm	20.000 dBm
Attenuation	30.000 dB	AUTO
Detector	RMS	RMS
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Average Power	Average Power
Sweeptype	Sweep	AUTO
Preamp	off	off

Minimum Emission Bandwidth 6 dB (5745 MHz; 24.000 dBm; 20 MHz)

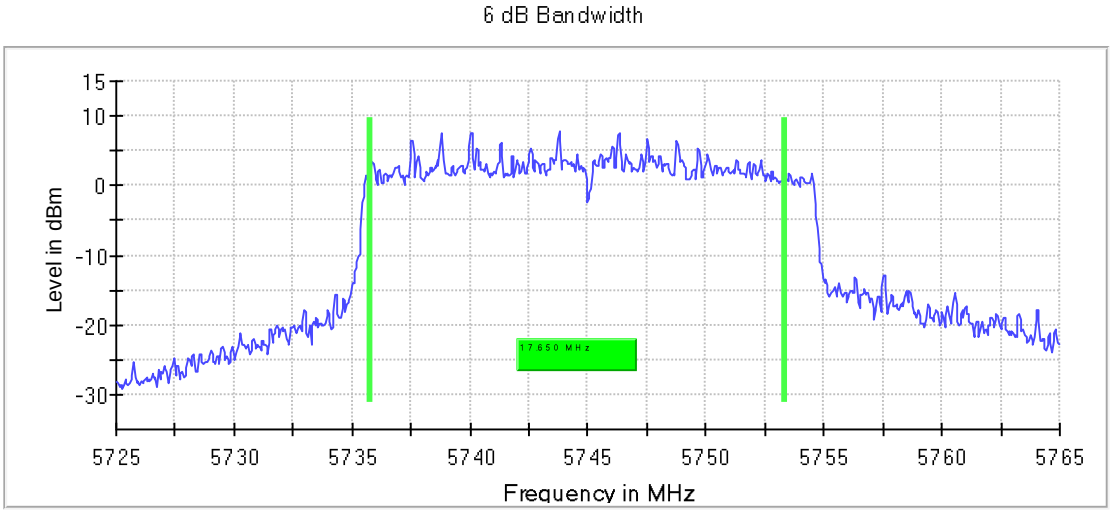
Customized settings.

6 dB Bandwidth

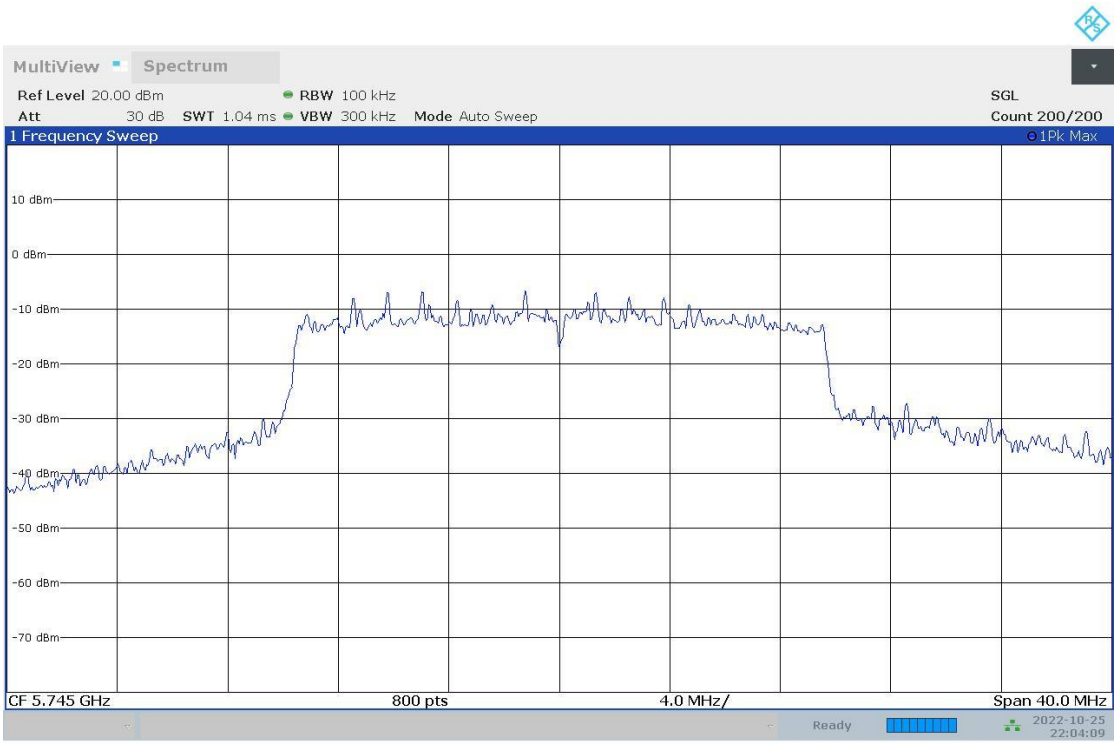
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5745.000000	17.650000	0.500000	---	5735.725000	5753.375000

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

DUT Frequency (MHz)	Max Level (dBm)	Result
5745.000000	7.7	PASS



Bandwidth



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Measurement

Setting	Instrument Value	Target Value
Start Frequency	5.72500 GHz	5.72500 GHz
Stop Frequency	5.76500 GHz	5.76500 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	1.040 ms	AUTO
Reference Level	20.000 dBm	20.000 dBm
Attenuation	30.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off

Occupied Channel Bandwidth 99% (5745 MHz; 24.000 dBm; 20 MHz)

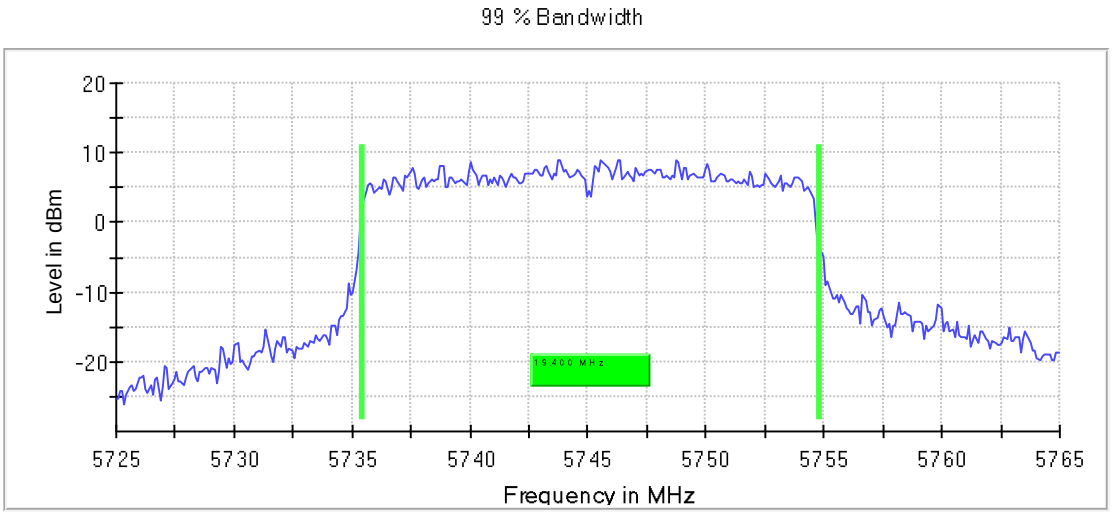
Customized settings.

99 % Bandwidth

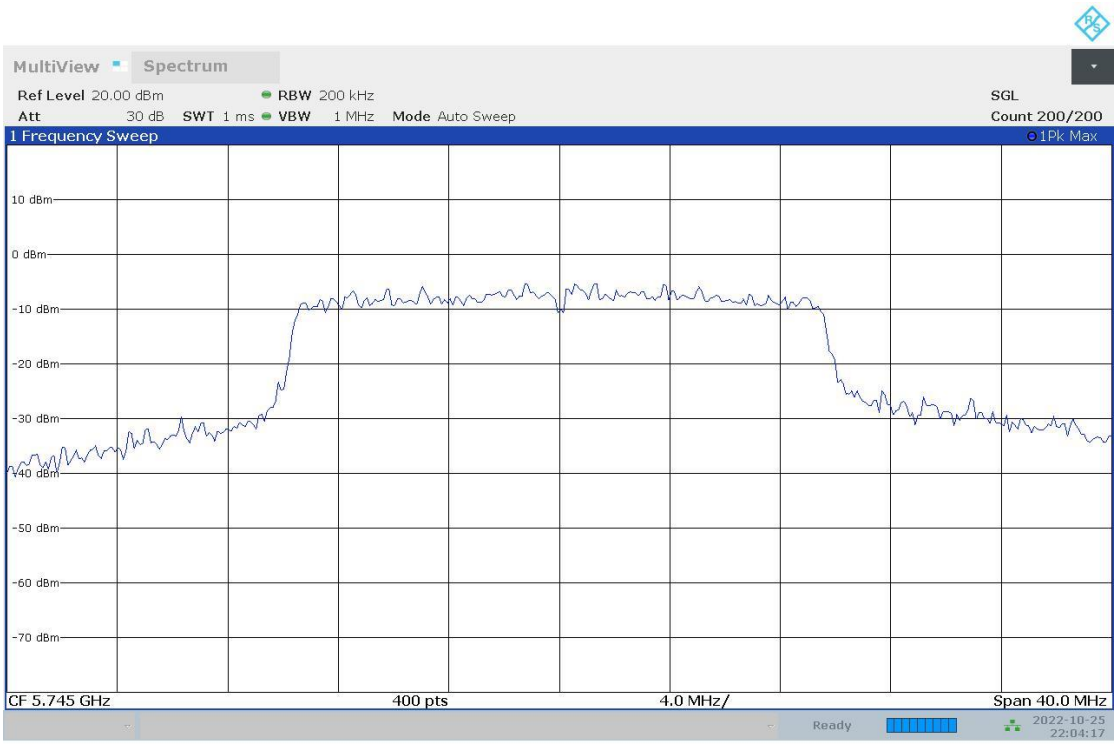
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5745.000000	19.400000	---	---	5735.450000	5754.850000

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

DUT Frequency (MHz)	Result
5745.000000	PASS



Bandwidth



Measurement

Setting	Instrument Value	Target Value
Start Frequency	5.72500 GHz	5.72500 GHz
Stop Frequency	5.76500 GHz	5.76500 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	1.000 ms	AUTO
Reference Level	20.000 dBm	20.000 dBm
Attenuation	30.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	200	200
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off

Tx Spurious Emission (5745 MHz; 24.000 dBm; 20 MHz)

Customized settings.

Result

DUT Frequency (MHz)	Result
5745.000000	PASS

Final measurements

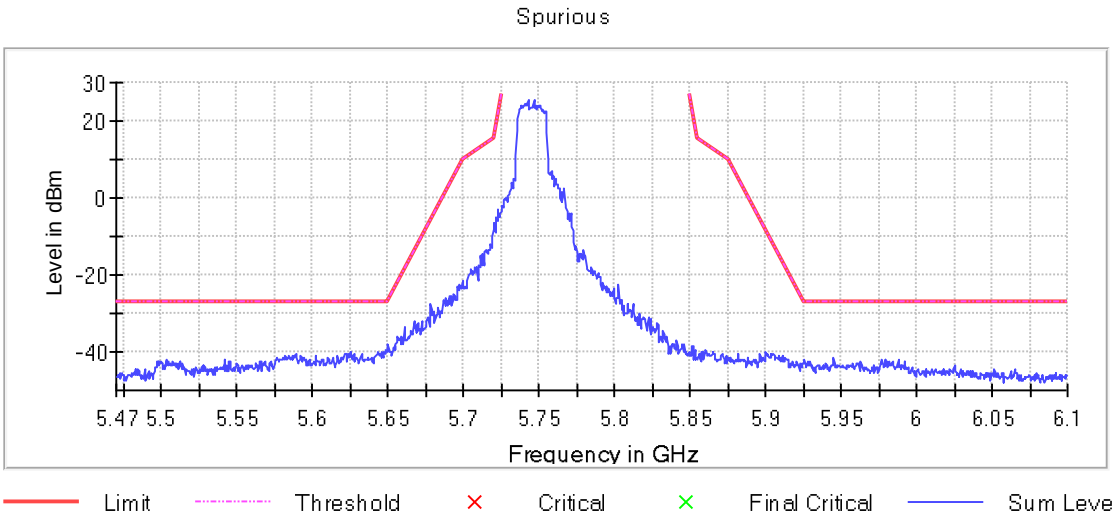
Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
---	---	---	---	---	---

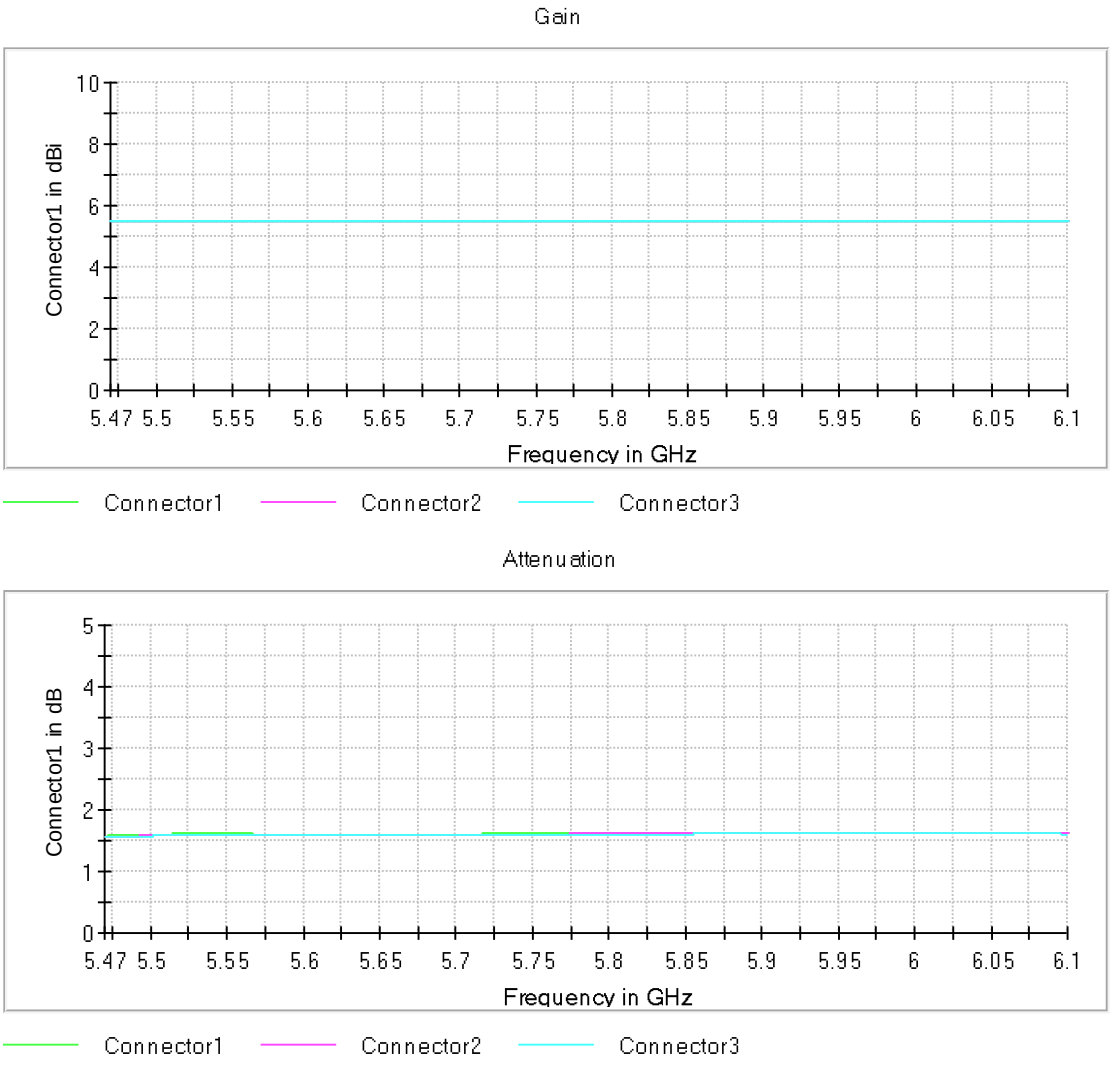
Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
5650.250000	-38.0	11.2	-26.8
5648.250000	-39.4	12.4	-27.0
5648.750000	-39.5	12.5	-27.0
5647.250000	-39.9	12.9	-27.0
5625.250000	-39.9	12.9	-27.0
5646.250000	-40.0	13.0	-27.0
5650.750000	-39.5	13.1	-26.4
5643.750000	-40.1	13.1	-27.0
5649.250000	-40.2	13.2	-27.0
5649.750000	-40.2	13.2	-27.0
5623.750000	-40.3	13.3	-27.0
5647.750000	-40.3	13.3	-27.0
5632.750000	-40.4	13.4	-27.0
5621.250000	-40.4	13.4	-27.0
5627.250000	-40.4	13.4	-27.0

Measurement Settings

Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
5470.000000	6100.000000	2	2


Spurious
30
20
0
-20
-40
Level in dBm
5.47 5.5 5.55 5.6 5.65 5.7 5.75 5.8 5.85 5.9 5.95 6 6.05 6.1
Frequency in GHz
Limit
Threshold
Critical
Final Critical
Sum Level



Pre Measurement 2

Setting	Instrument Value	Target Value
RBW	1.000 MHz	<= 1.000 MHz
VBW	3.000 MHz	>= 3.000 MHz
SweepPoints	1260	~ 1260
Sweeptime	1.260 ms	AUTO
Reference Level	20.000 dBm	-10.000 dBm
Attenuation	20.000 dB	20.000 dB
Detector	MaxPeak	MaxPeak
SweepCount	30	30
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	AUTO
Preamp	off	off

Emission Bandwidth 26 dB (5775 MHz; 24.000 dBm; 20 MHz)

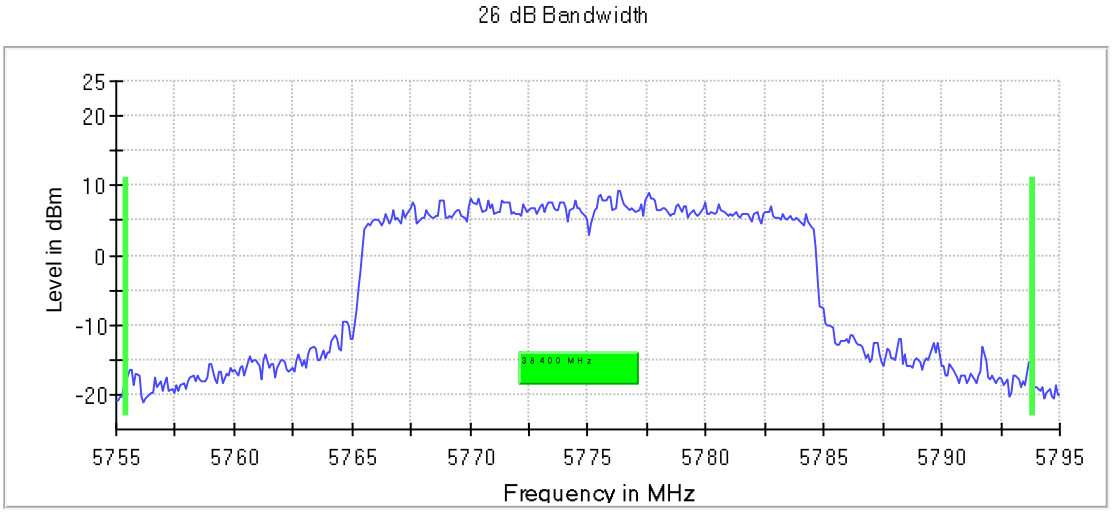
Customized settings.

26 dB Bandwidth

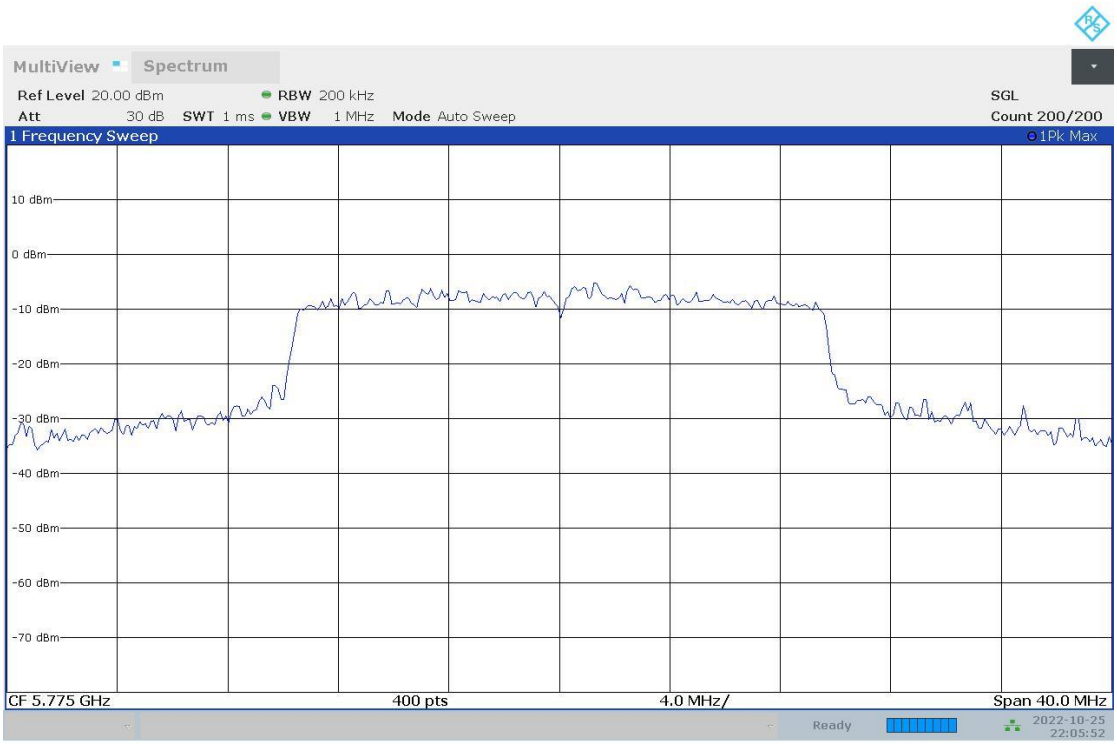
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5775.000000	38.400000	---	---	5755.450000	5793.850000

(continuation of the "26 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
5775.000000	9.3	PASS



Bandwidth



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Minimum Emission Bandwidth 6 dB (5775 MHz; 24.000 dBm; 20 MHz)

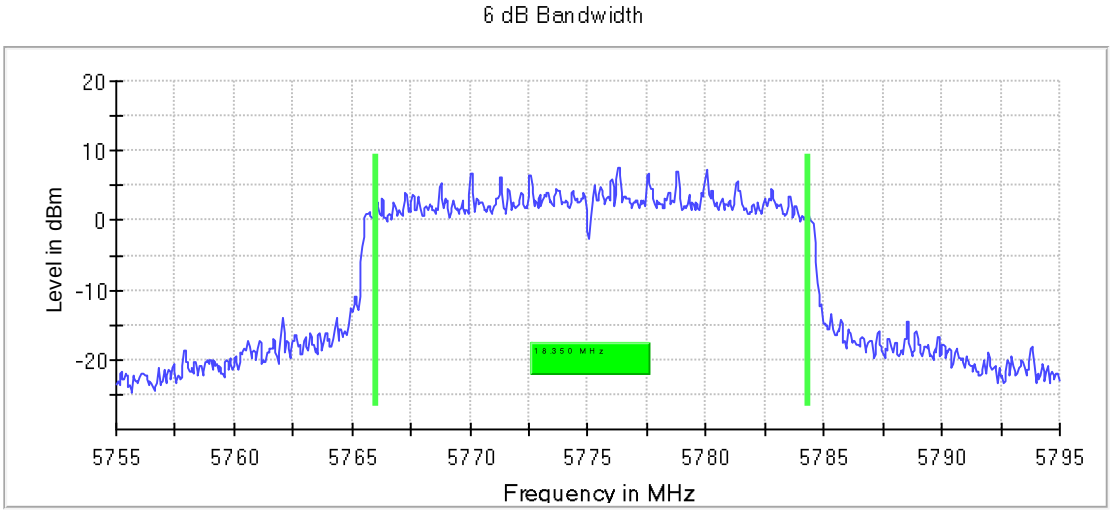
Customized settings.

6 dB Bandwidth

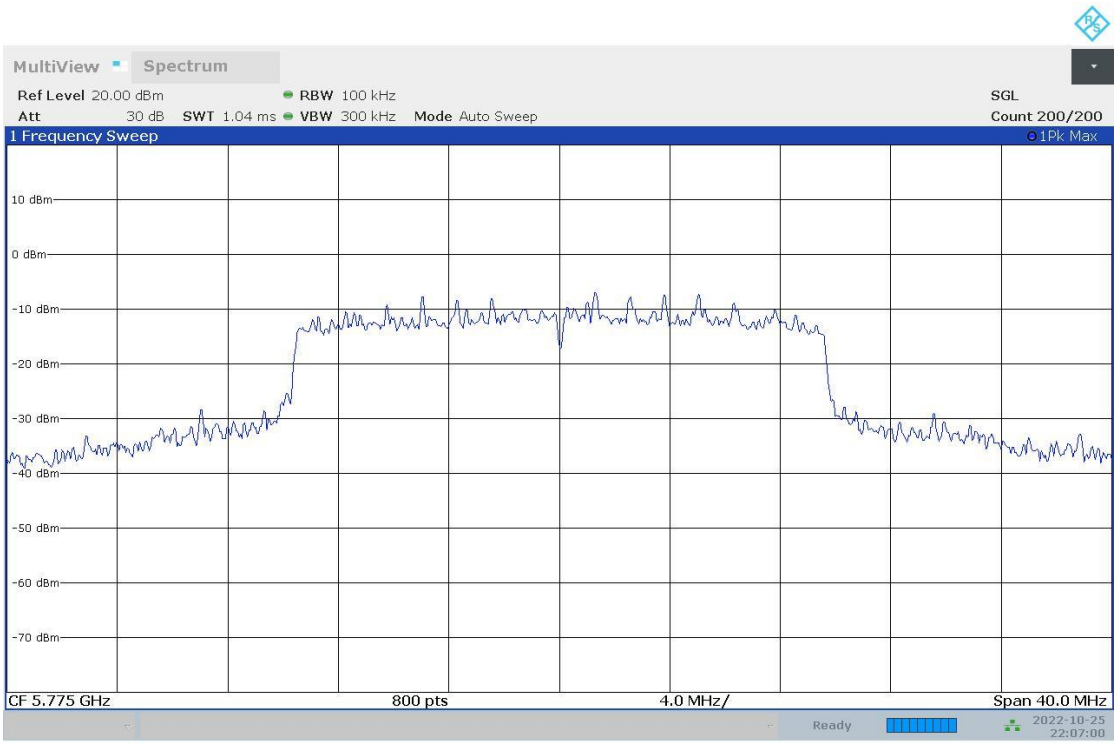
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5775.000000	18.350000	0.500000	---	5765.975000	5784.325000

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

DUT Frequency (MHz)	Max Level (dBm)	Result
5775.000000	7.5	PASS



Bandwidth



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Occupied Channel Bandwidth 99% (5775 MHz; 24.000 dBm; 20 MHz)

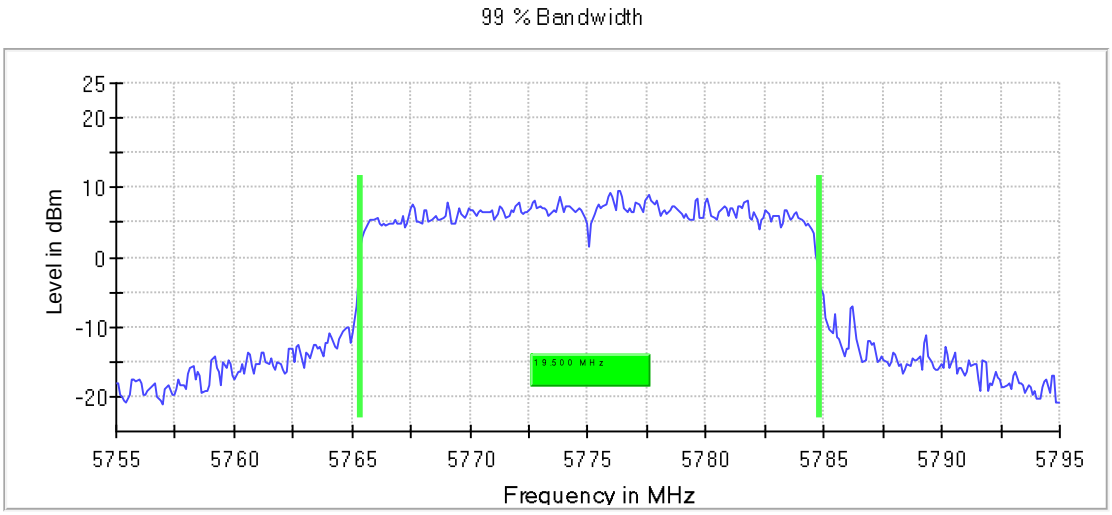
Customized settings.

99 % Bandwidth

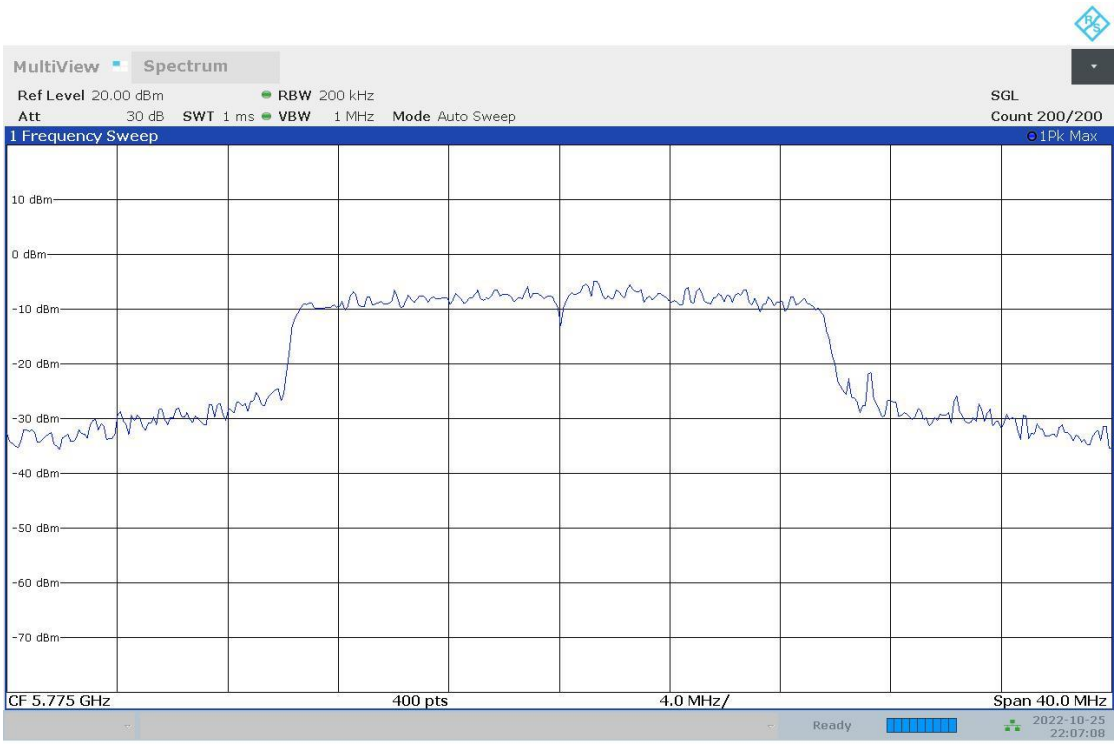
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5775.000000	19.500000	---	---	5765.350000	5784.850000

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

DUT Frequency (MHz)	Result
5775.000000	PASS



Bandwidth



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Tx Spurious Emission (5775 MHz; 24.000 dBm; 20 MHz)

Customized settings.

Result

DUT Frequency (MHz)	Result
5775.000000	PASS

Final measurements

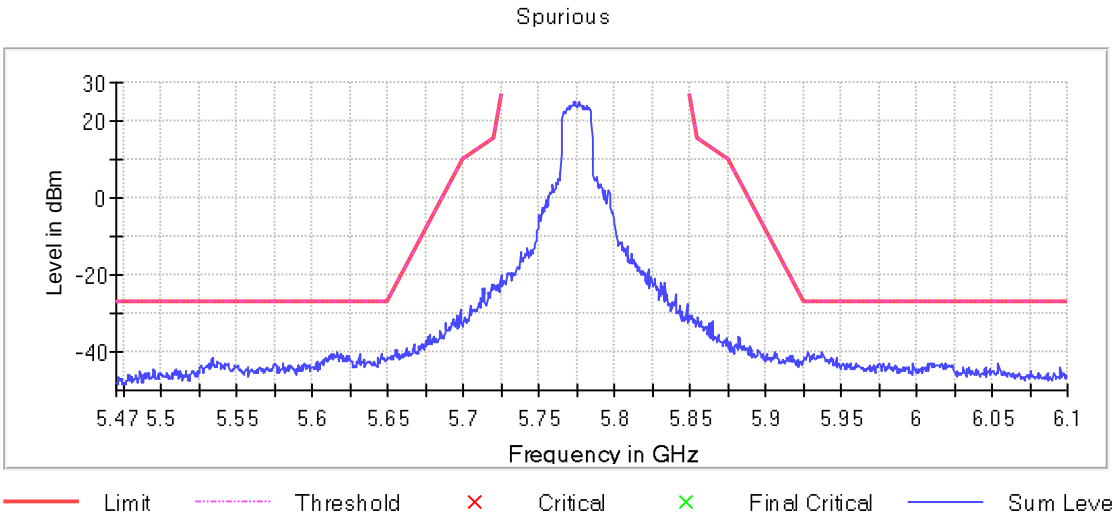
Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
---	---	---	---	---	---

Pre Measurements

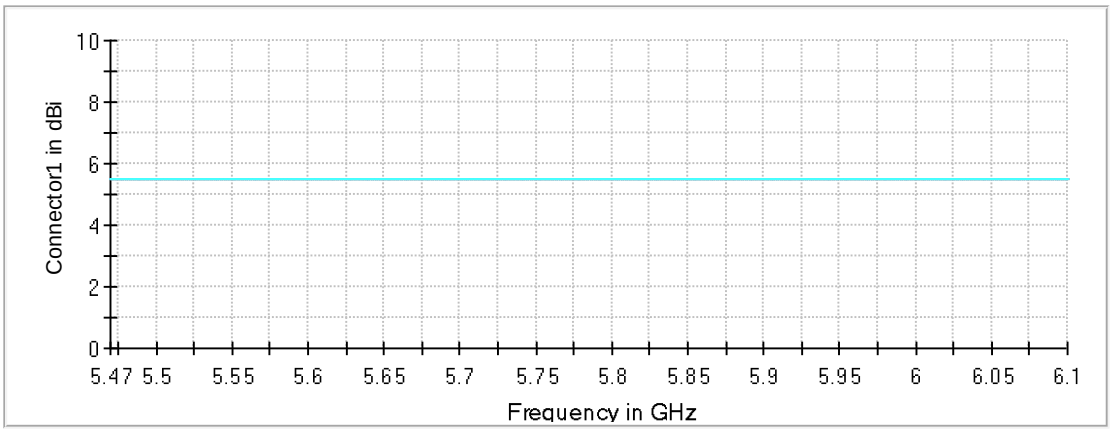
Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
5927.750000	-40.1	13.1	-27.0
5937.250000	-40.2	13.2	-27.0
5616.750000	-40.2	13.2	-27.0
5928.250000	-40.2	13.2	-27.0
5645.750000	-40.3	13.3	-27.0
5619.250000	-40.4	13.4	-27.0
5614.250000	-40.4	13.4	-27.0
5616.250000	-40.5	13.5	-27.0
5612.250000	-40.6	13.6	-27.0
5631.250000	-40.7	13.7	-27.0
5618.250000	-40.7	13.7	-27.0
5931.750000	-40.7	13.7	-27.0
5938.750000	-40.9	13.9	-27.0
5624.250000	-40.9	13.9	-27.0
5614.750000	-40.9	13.9	-27.0

Measurement Settings

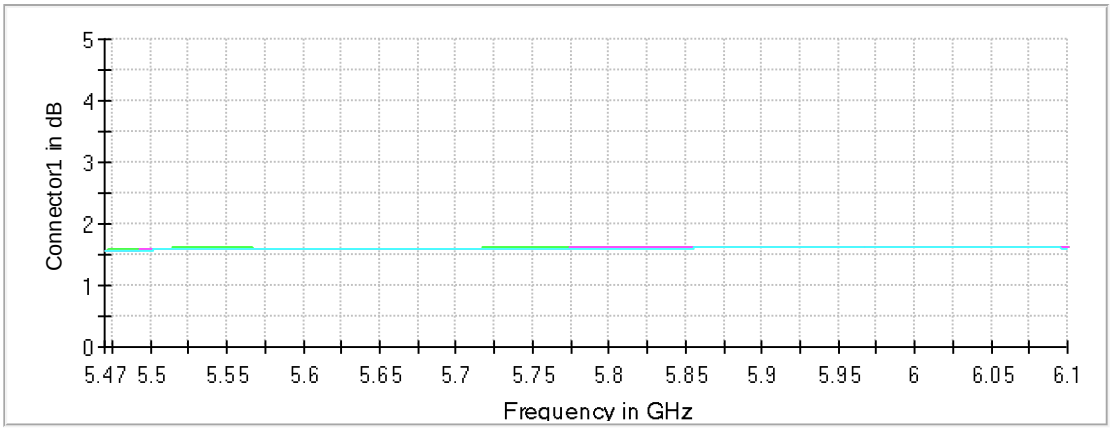
Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
5470.000000	6100.000000	2	2


Spurious
30
20
0
-20
-40
Level in dBm
5.47 5.5
5.55
5.6
5.65
5.7
5.75
5.8
5.85
5.9
5.95
6
6.05
6.1
Frequency in GHz
Limit
Threshold
Critical
Final Critical
Sum Level

Gain



Attenuation



Emission Bandwidth 26 dB (5825 MHz; 24.000 dBm; 20 MHz)

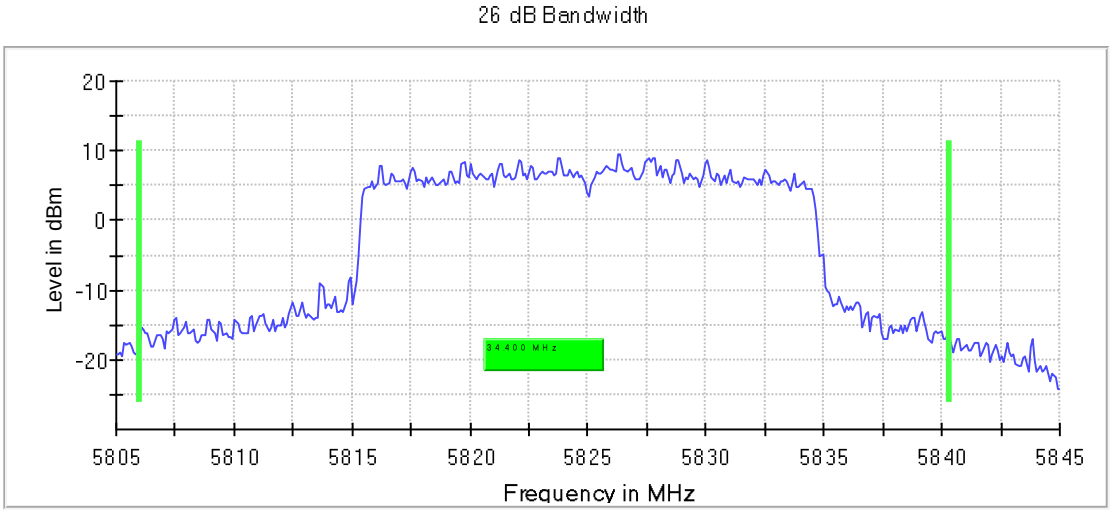
Customized settings.

26 dB Bandwidth

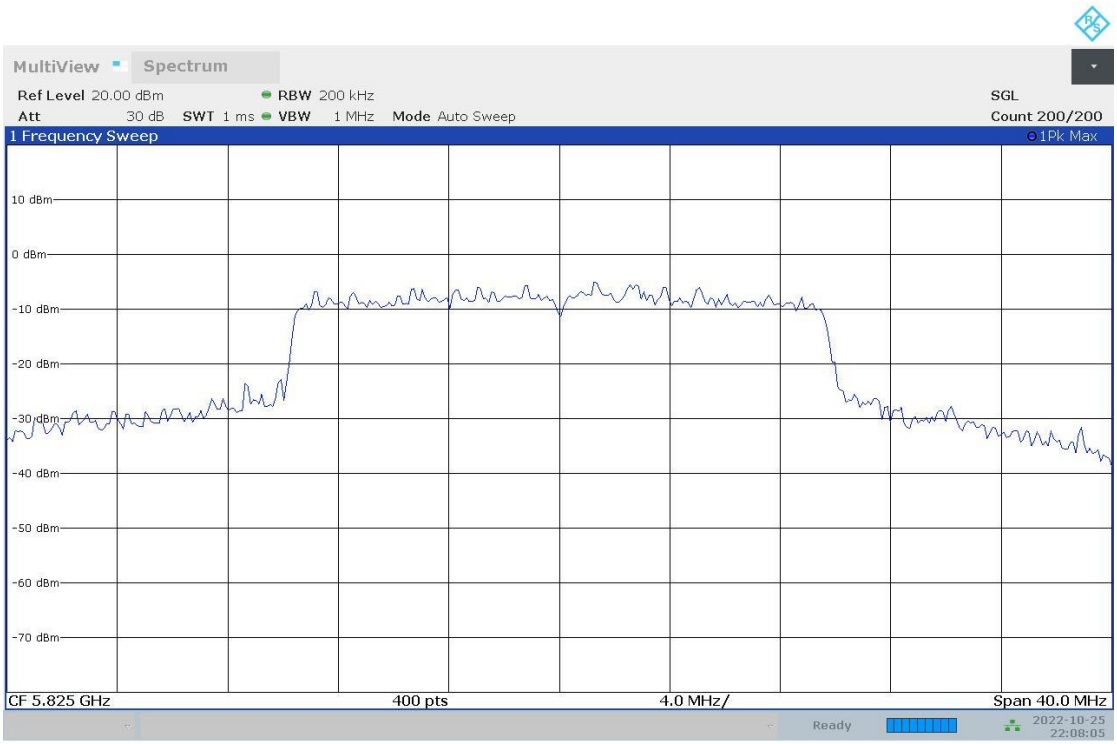
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5825.000000	34.400000	---	---	5805.950000	5840.350000

(continuation of the "26 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
5825.000000	9.5	PASS



Bandwidth



10:08:05 PM 10/25/2022

Minimum Emission Bandwidth 6 dB (5825 MHz; 24.000 dBm; 20 MHz)

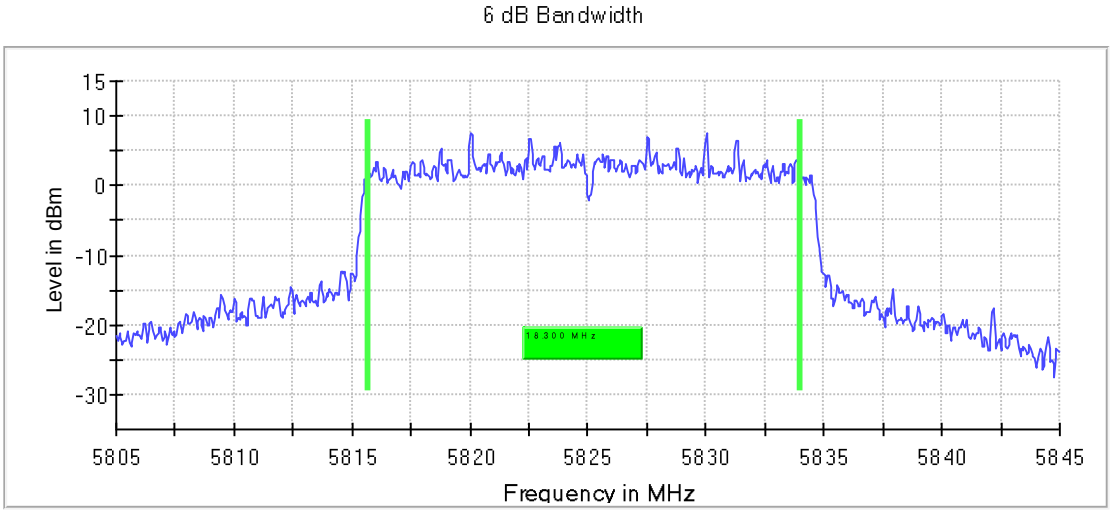
Customized settings.

6 dB Bandwidth

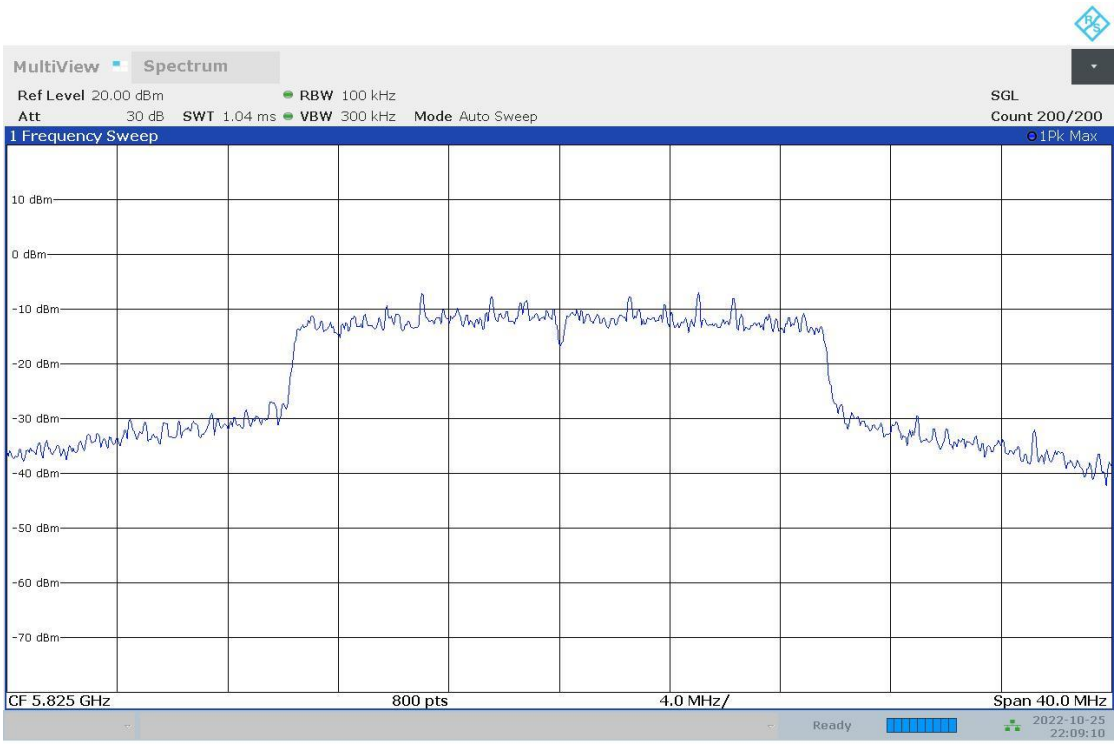
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5825.000000	18.300000	0.500000	---	5815.675000	5833.975000

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

DUT Frequency (MHz)	Max Level (dBm)	Result
5825.000000	7.6	PASS



Bandwidth



10:09:10 PM 10/25/2022

Occupied Channel Bandwidth 99% (5825 MHz; 24.000 dBm; 20 MHz)

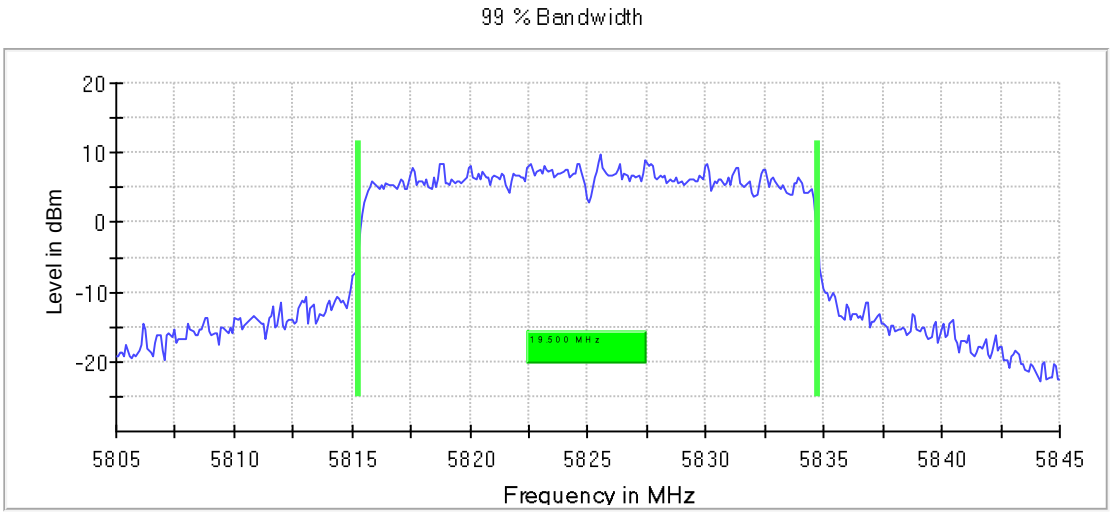
Customized settings.

99 % Bandwidth

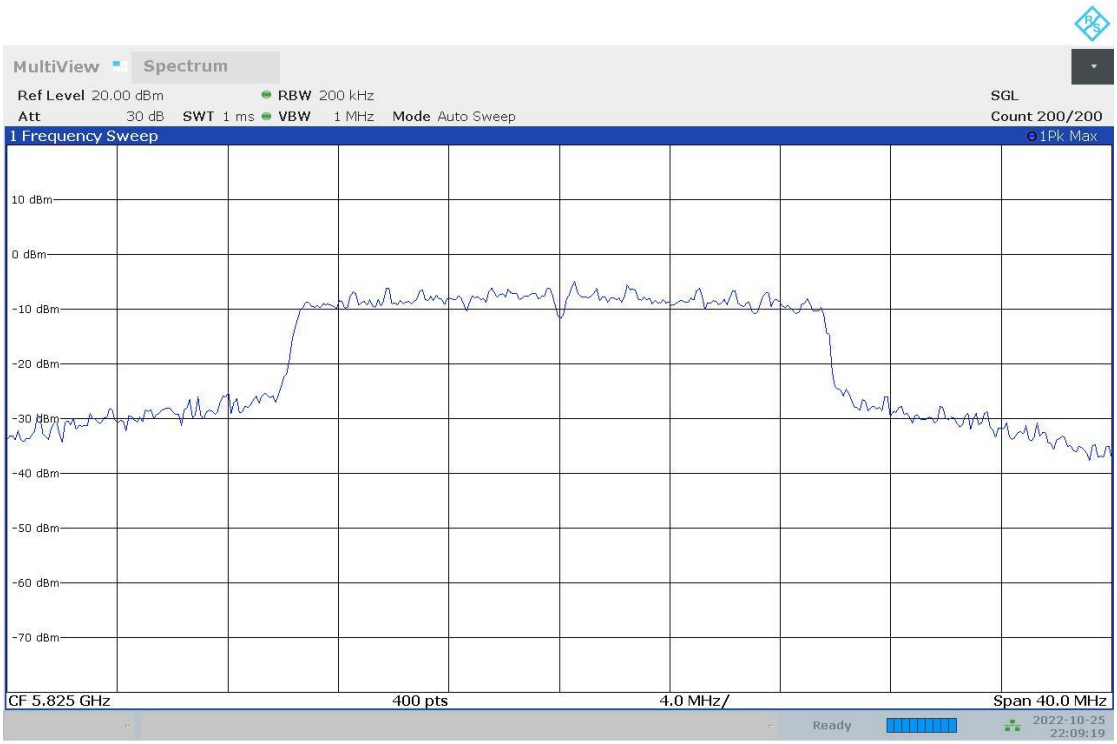
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5825.000000	19.500000	---	---	5815.250000	5834.750000

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

DUT Frequency (MHz)	Result
5825.000000	PASS



Bandwidth



10:09:19 PM 10/25/2022

Tx Spurious Emission (5825 MHz; 24.000 dBm; 20 MHz)

Customized settings.

Result

DUT Frequency (MHz)	Result
5825.000000	PASS

Final measurements

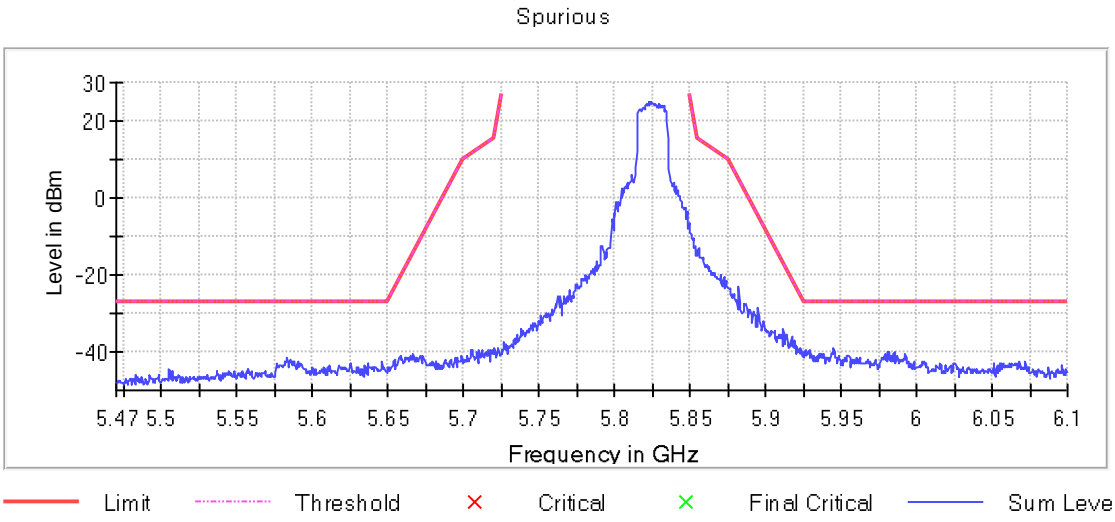
Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
---	---	---	---	---	---

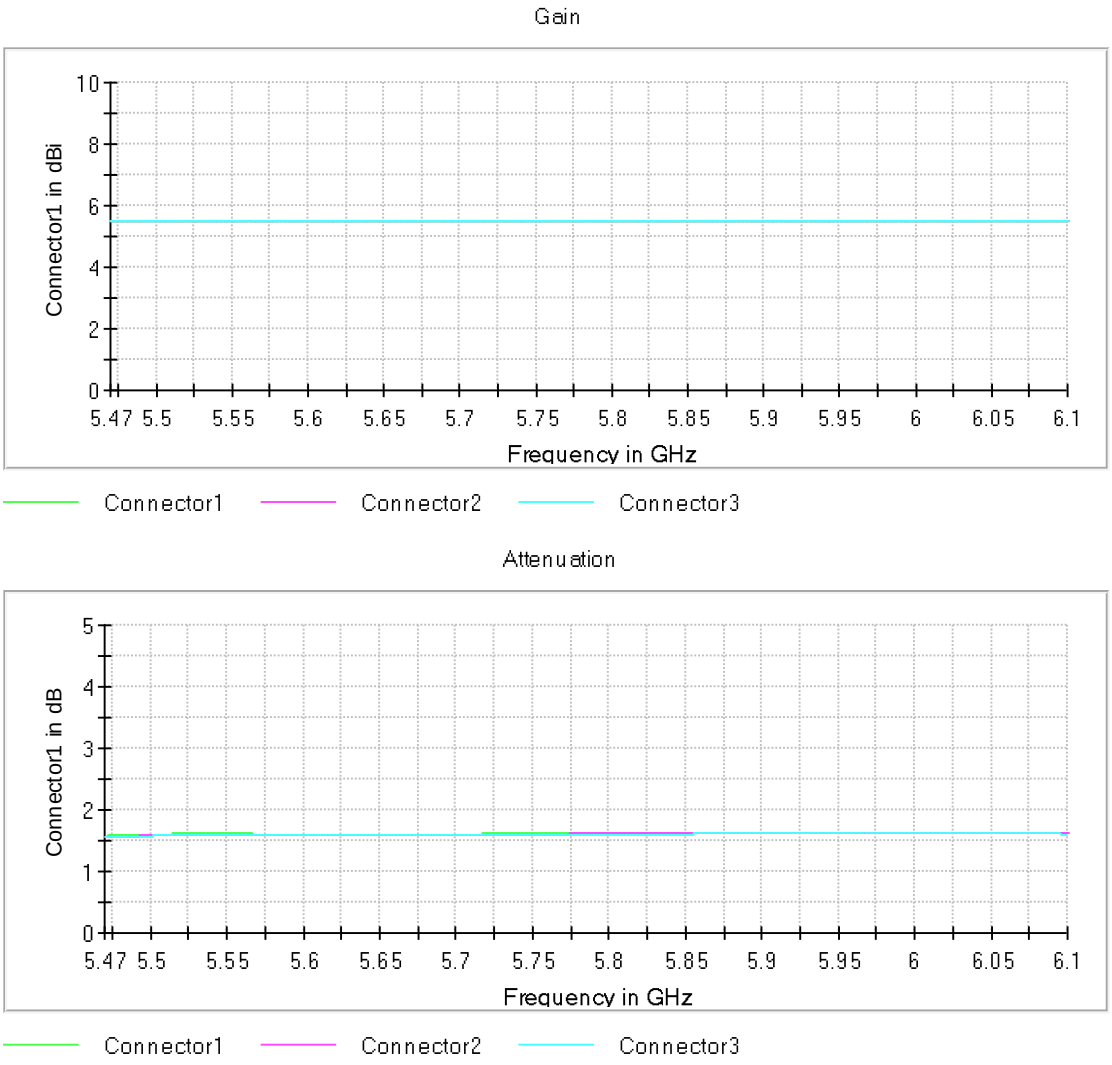
Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
5945.250000	-39.0	12.0	-27.0
5928.750000	-39.7	12.7	-27.0
5926.250000	-39.7	12.7	-27.0
5945.750000	-39.9	12.9	-27.0
5926.750000	-39.9	12.9	-27.0
5981.250000	-39.9	12.9	-27.0
5944.250000	-39.9	12.9	-27.0
5985.250000	-40.0	13.0	-27.0
5981.750000	-40.0	13.0	-27.0
5928.250000	-40.1	13.1	-27.0
5925.750000	-40.1	13.1	-27.0
5929.750000	-40.2	13.2	-27.0
5923.250000	-38.9	13.2	-25.7
5943.750000	-40.3	13.3	-27.0
5944.750000	-40.3	13.3	-27.0

Measurement Settings

Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
5470.000000	6100.000000	2	2


Spurious
30
20
0
-20
-40
Level in dBm
5.47 5.5
5.55
5.6
5.65
5.7
5.75
5.8
5.85
5.9
5.95
6
6.05
6.1
Frequency in GHz
Limit
Threshold
Critical
Final Critical
Sum Level


Gain
Connector1 in dBi
10
8
6
4
2
0
5.47 5.5 5.55 5.6 5.65 5.7 5.75 5.8 5.85 5.9 5.95 6 6.05 6.1
Frequency in GHz
Connector1
Connector2
Connector3

Attenuation
Connector1 in dB
5
4
3
2
1
0
5.47 5.5 5.55 5.6 5.65 5.7 5.75 5.8 5.85 5.9 5.95 6 6.05 6.1
Frequency in GHz
Connector1
Connector2
Connector3

Emission Bandwidth 26 dB (5755 MHz; 24.000 dBm; 40 MHz)

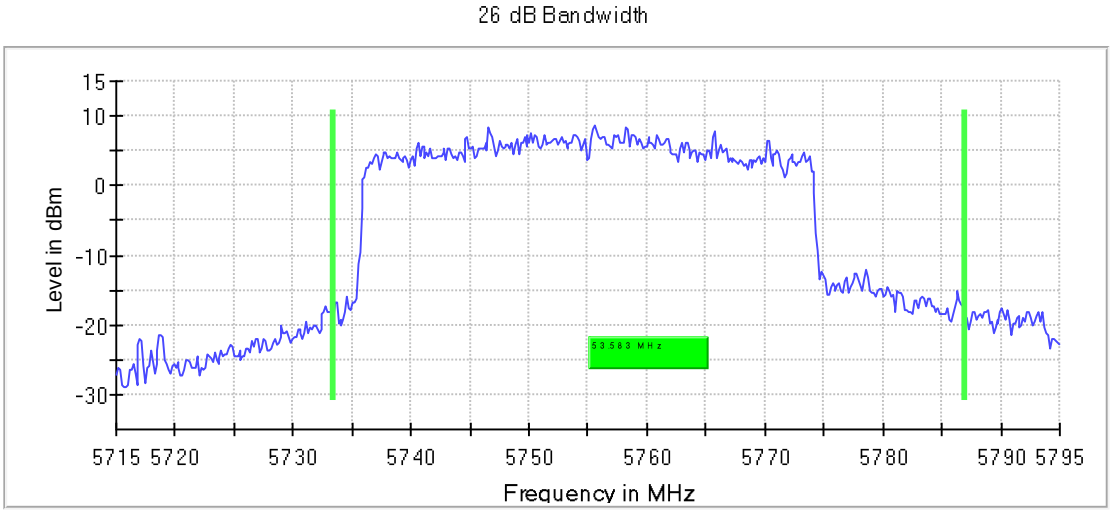
Customized settings.

26 dB Bandwidth

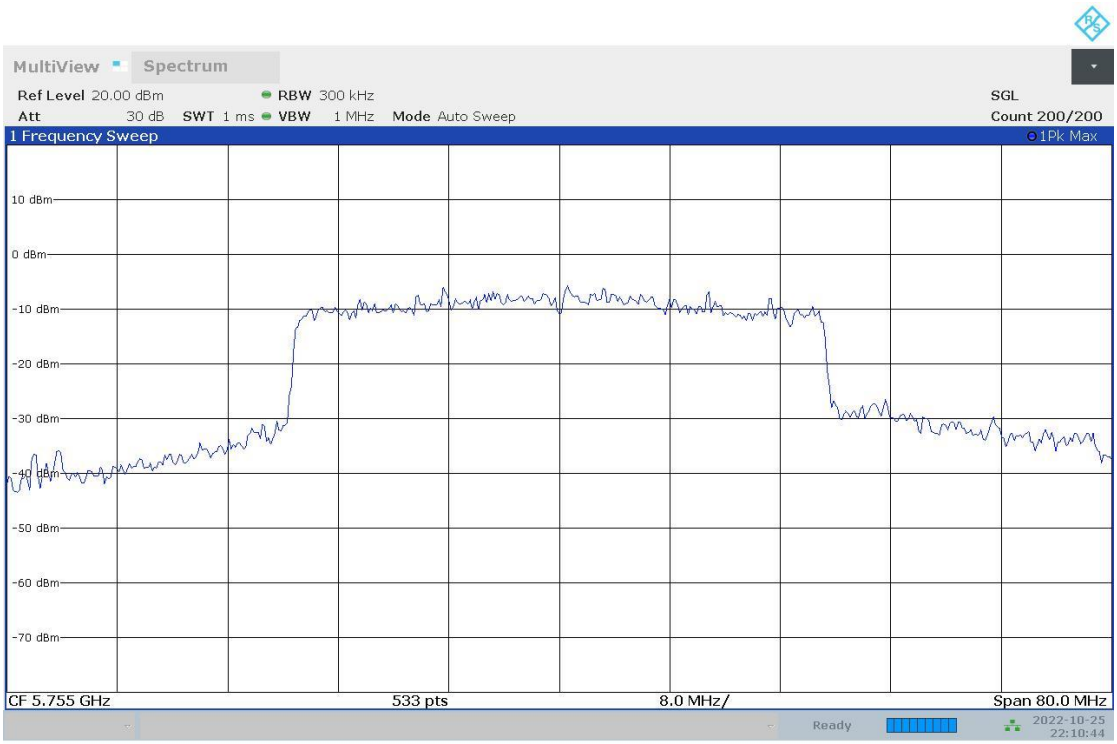
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5755.000000	53.583489	---	---	5733.386492	5786.969981

(continuation of the "26 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
5755.000000	8.7	PASS



Bandwidth



10:10:44 PM 10/25/2022

Minimum Emission Bandwidth 6 dB (5755 MHz; 24.000 dBm; 40 MHz)

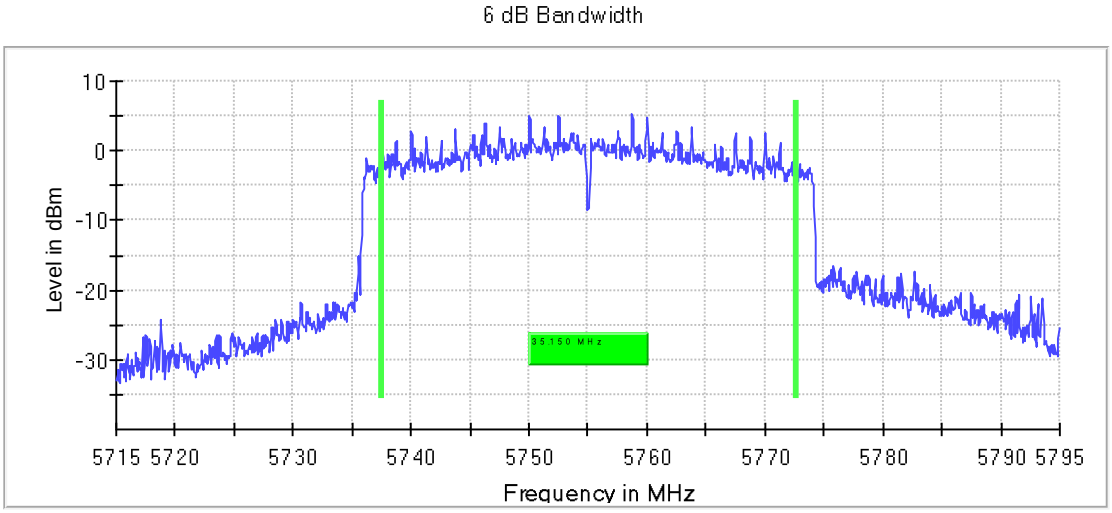
Customized settings.

6 dB Bandwidth

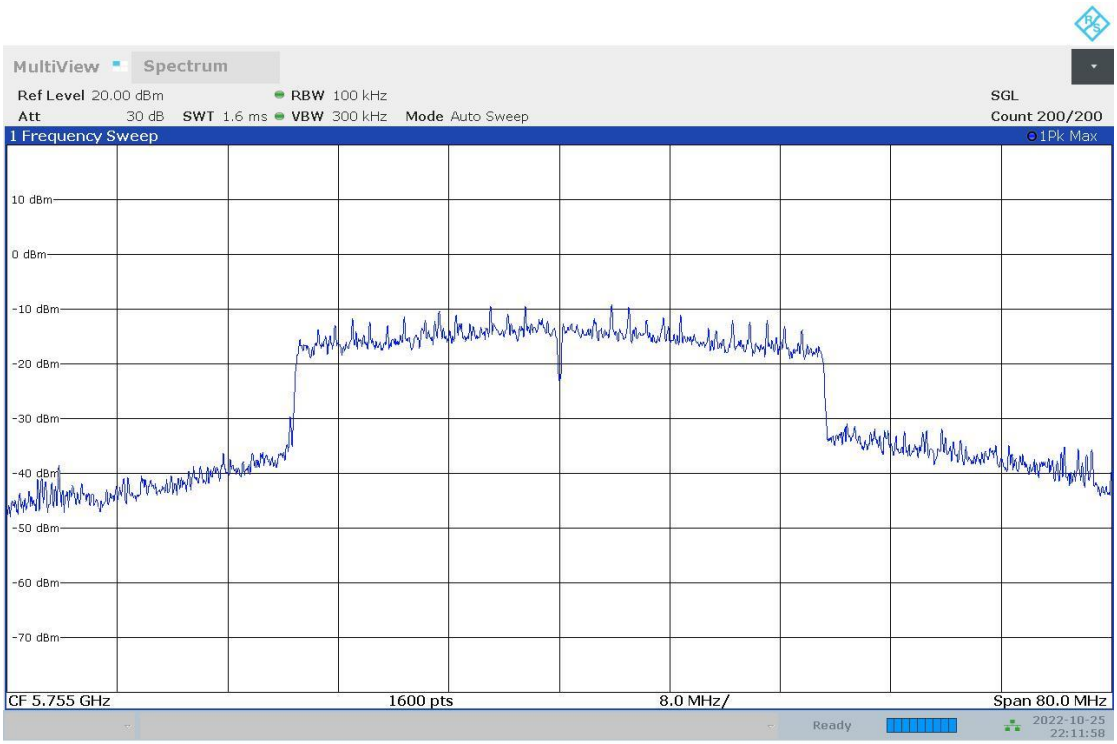
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5755.000000	35.150000	0.500000	---	5737.475000	5772.625000

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

DUT Frequency (MHz)	Max Level (dBm)	Result
5755.000000	5.3	PASS



Bandwidth



10:11:58 PM 10/25/2022

Occupied Channel Bandwidth 99% (5755 MHz; 24.000 dBm; 40 MHz)

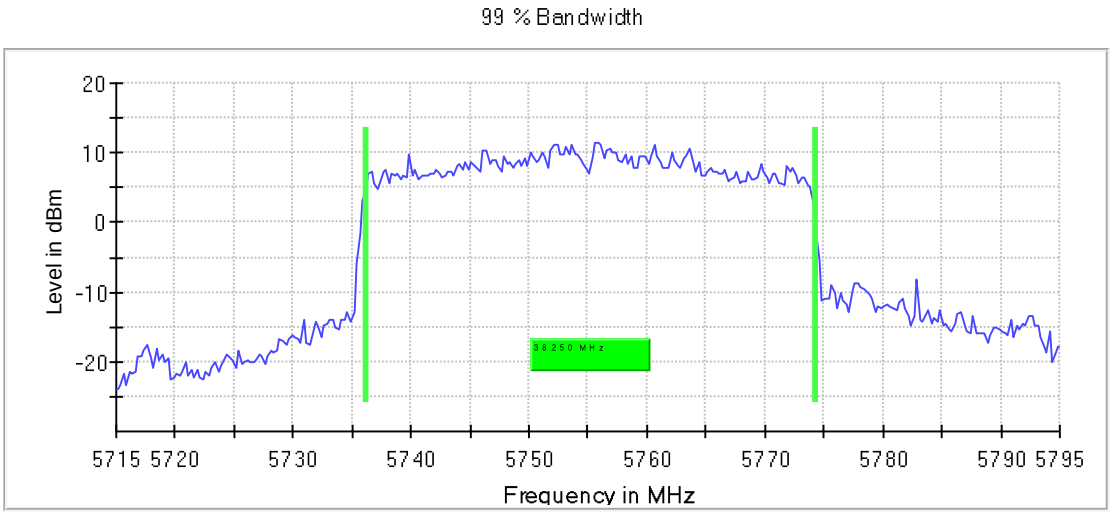
Customized settings.

99 % Bandwidth

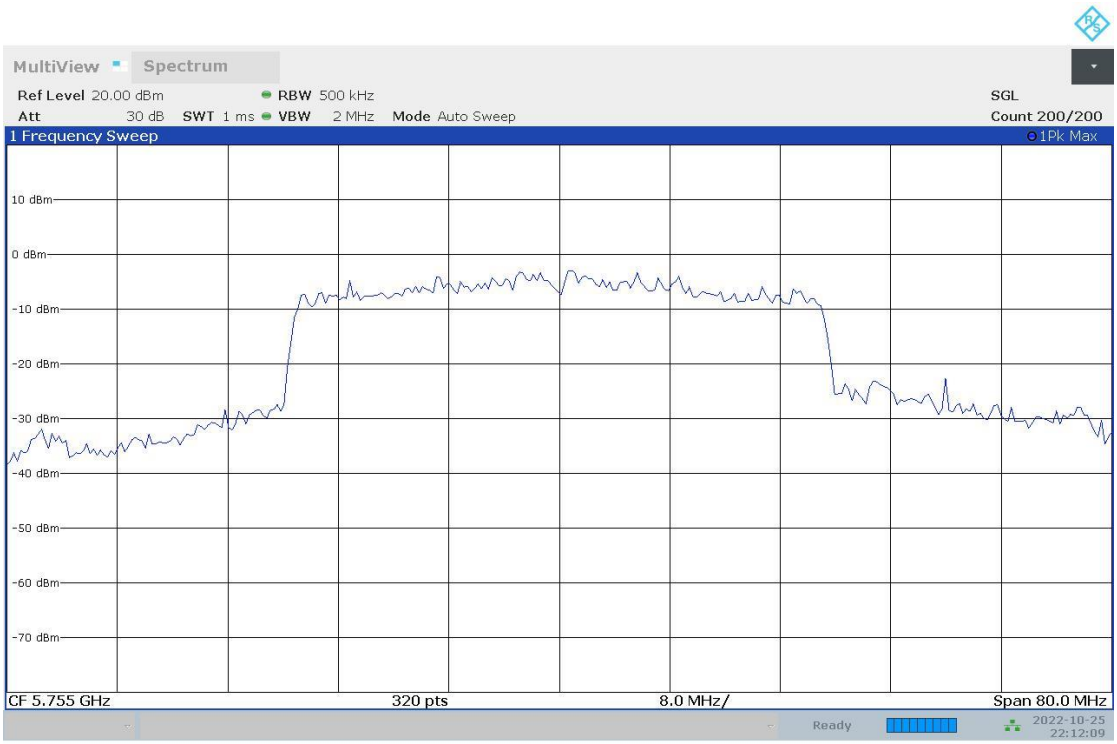
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5755.000000	38.250000	---	---	5736.125000	5774.375000

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

DUT Frequency (MHz)	Result
5755.000000	PASS



Bandwidth



10:12:09 PM 10/25/2022

Tx Spurious Emission (5755 MHz; 24.000 dBm; 40 MHz)

Customized settings.

Result

DUT Frequency (MHz)	Result
5755.000000	PASS

Final measurements

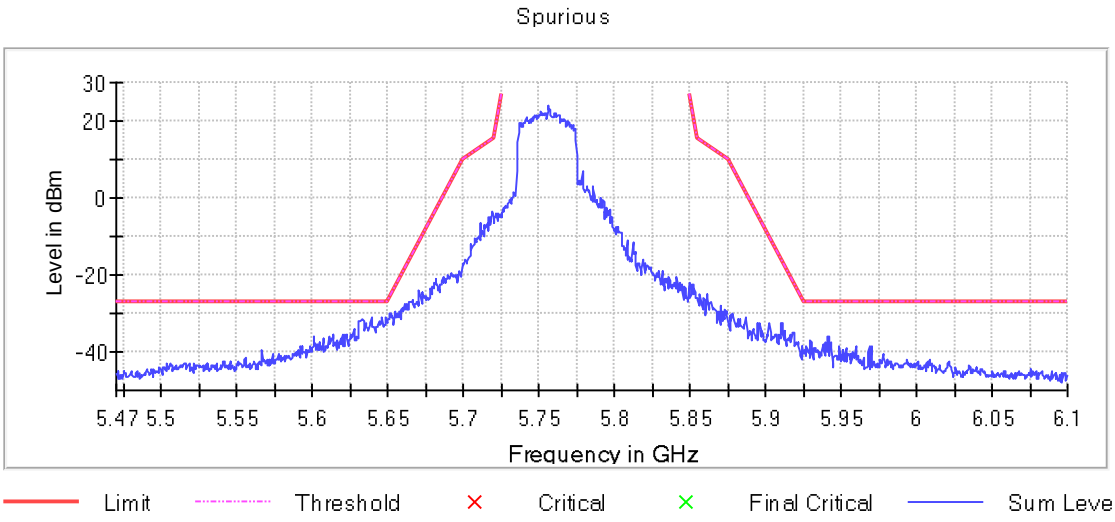
Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
---	---	---	---	---	---

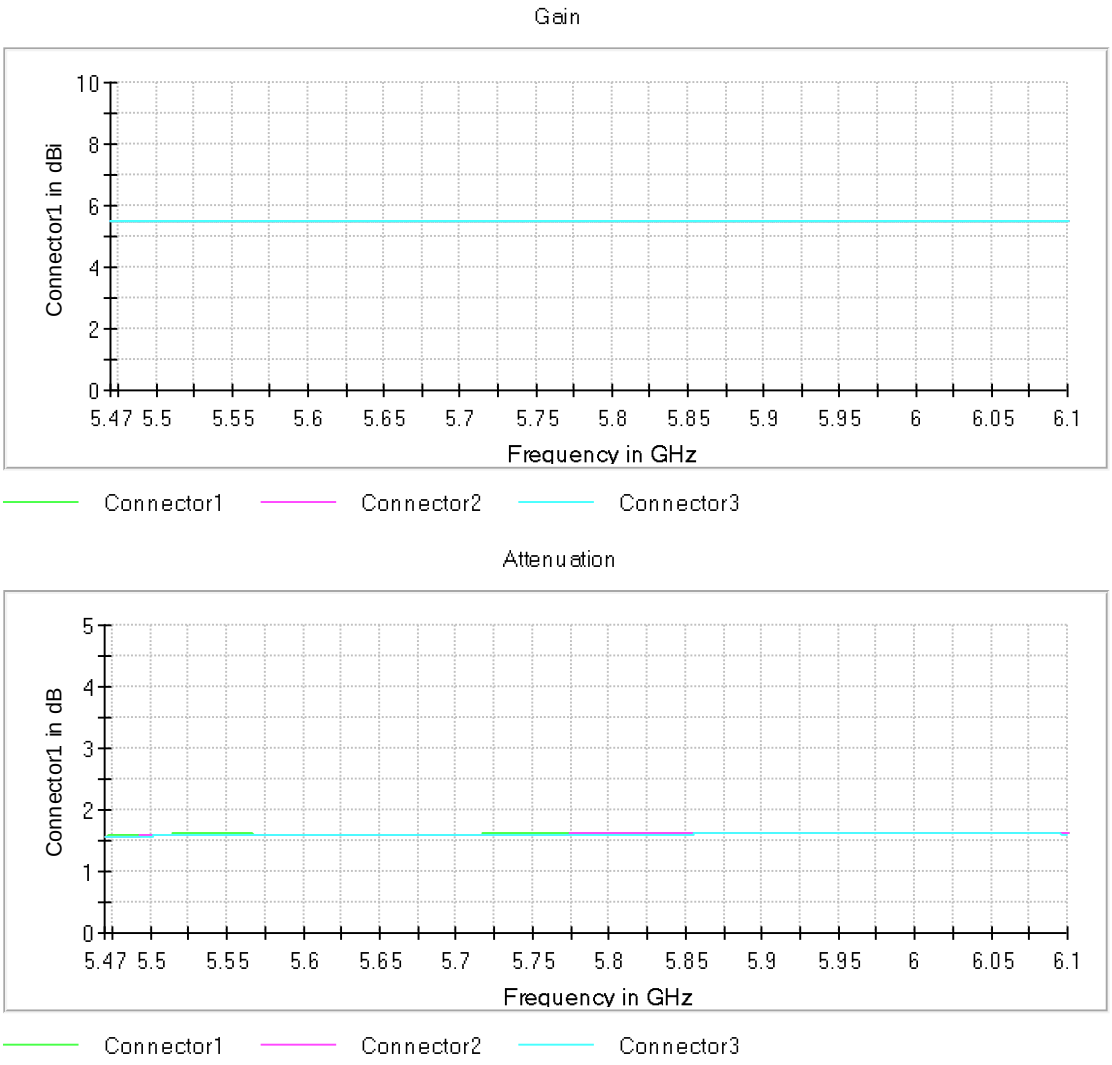
Pre Measurements

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
5648.750000	-30.9	3.9	-27.0
5646.250000	-31.0	4.0	-27.0
5651.250000	-30.2	4.1	-26.1
5651.750000	-29.8	4.1	-25.7
5638.750000	-31.1	4.1	-27.0
5648.250000	-31.3	4.3	-27.0
5639.250000	-31.4	4.4	-27.0
5650.250000	-31.4	4.6	-26.8
5633.250000	-31.7	4.7	-27.0
5632.750000	-31.7	4.7	-27.0
5630.750000	-31.8	4.8	-27.0
5632.250000	-31.8	4.8	-27.0
5645.750000	-31.9	4.9	-27.0
5649.750000	-31.9	4.9	-27.0
5634.250000	-31.9	4.9	-27.0

Measurement Settings

Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
5470.000000	6100.000000	2	2


Spurious
30
20
0
-20
-40
Level in dBm
5.47 5.5
5.55
5.6
5.65
5.7
5.75
5.8
5.85
5.9
5.95
6
6.05
6.1
Frequency in GHz
Limit
Threshold
Critical
Final Critical
Sum Level


Gain
Connector1 in dBi
10
8
6
4
2
0
5.47 5.5 5.55 5.6 5.65 5.7 5.75 5.8 5.85 5.9 5.95 6 6.05 6.1
Frequency in GHz
Connector1
Connector2
Connector3

Attenuation
Connector1 in dB
5
4
3
2
1
0
5.47 5.5 5.55 5.6 5.65 5.7 5.75 5.8 5.85 5.9 5.95 6 6.05 6.1
Frequency in GHz
Connector1
Connector2
Connector3

Emission Bandwidth 26 dB (5775 MHz; 24.000 dBm; 40 MHz)

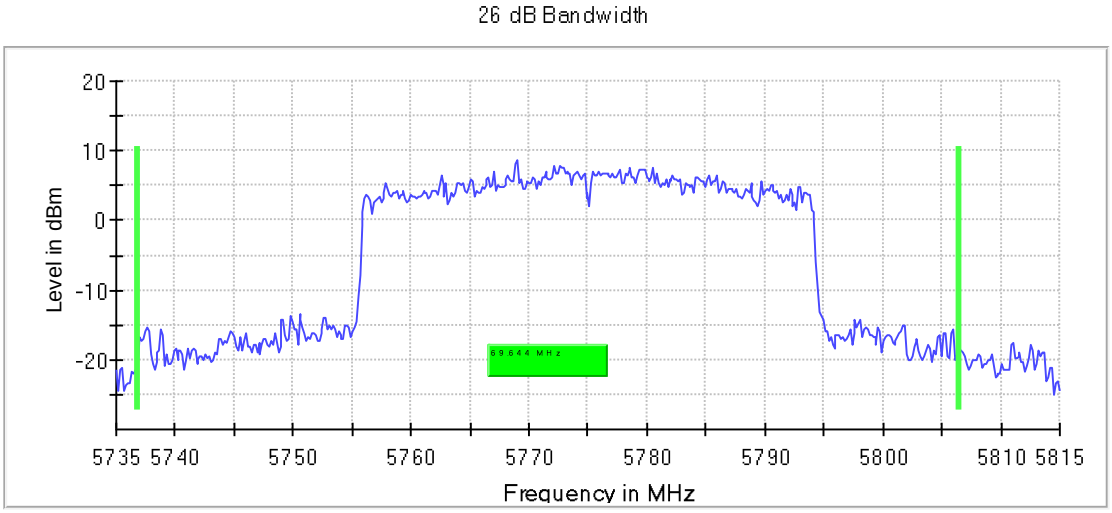
Customized settings.

26 dB Bandwidth

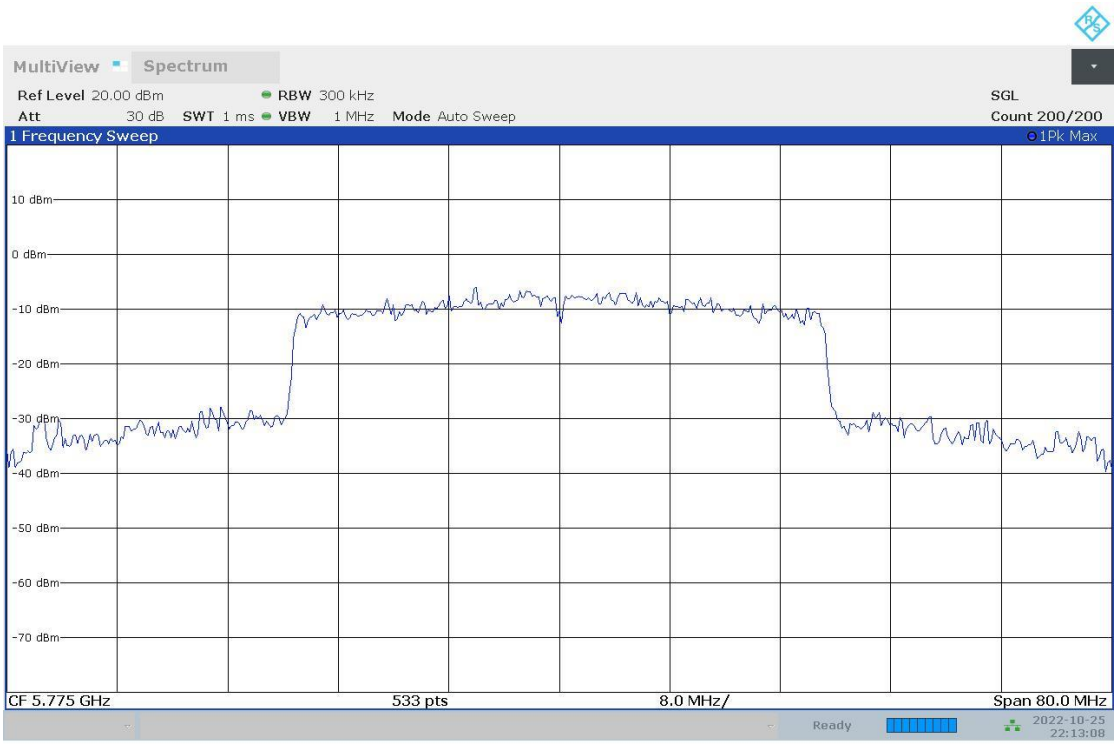
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5775.000000	69.643527	---	---	5736.876173	5806.519700

(continuation of the "26 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
5775.000000	8.6	PASS



Bandwidth



10:13:08 PM 10/25/2022

Minimum Emission Bandwidth 6 dB (5775 MHz; 24.000 dBm; 40 MHz)

Customized settings.

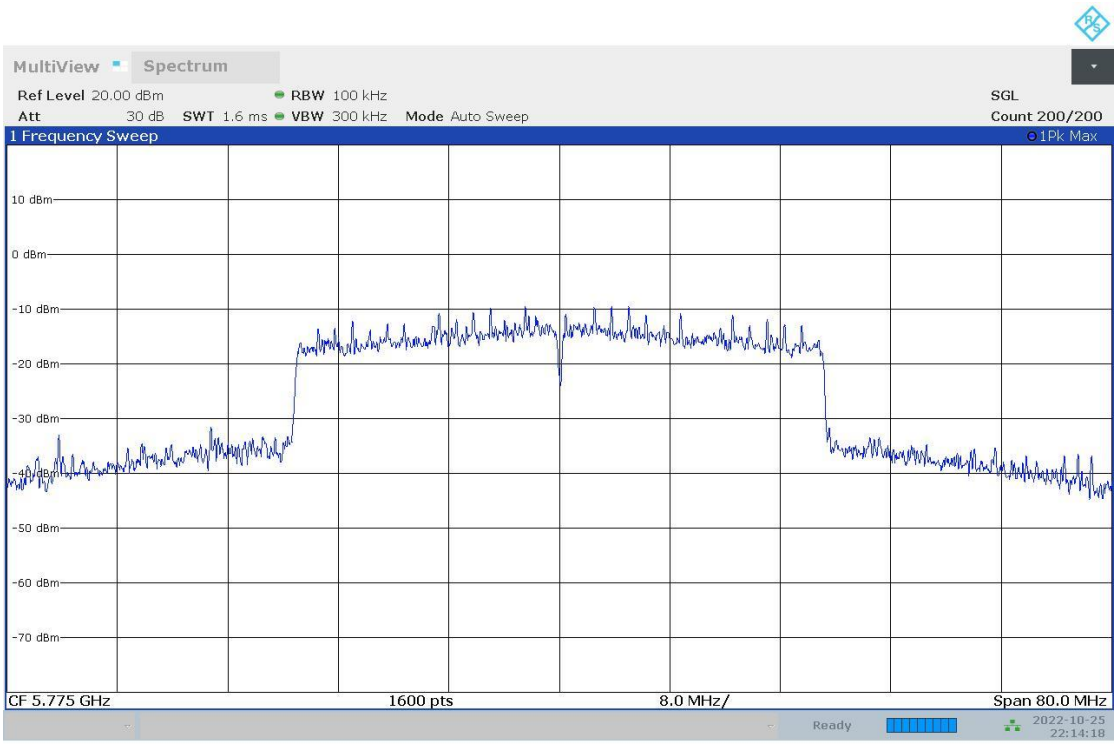
6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5775.000000	35.150000	0.500000	---	5757.475000	5792.625000

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

DUT Frequency (MHz)	Max Level (dBm)	Result
5775.000000	5.0	PASS

Bandwidth



10:14:18 PM 10/25/2022

Occupied Channel Bandwidth 99% (5775 MHz; 24.000 dBm; 40 MHz)

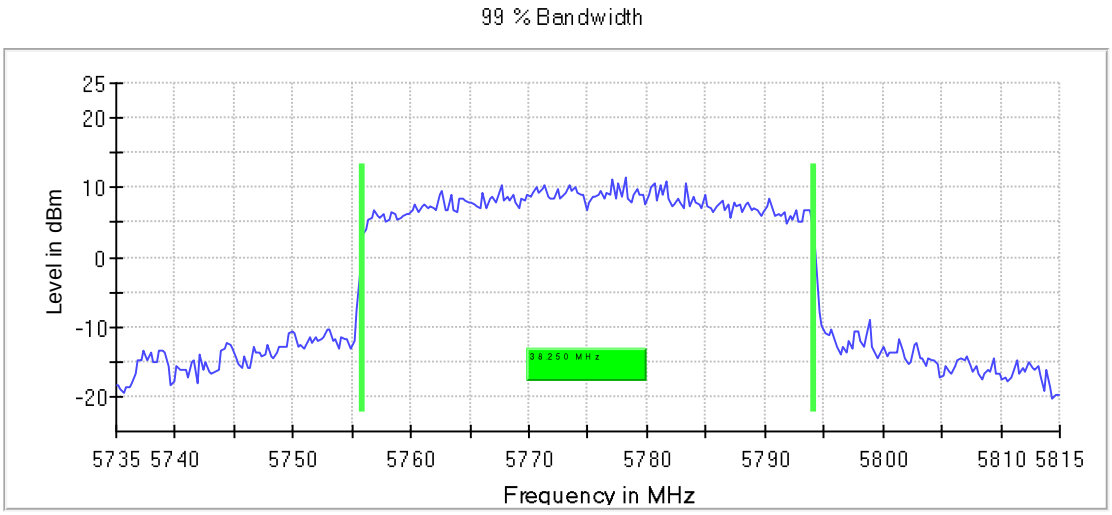
Customized settings.

99 % Bandwidth

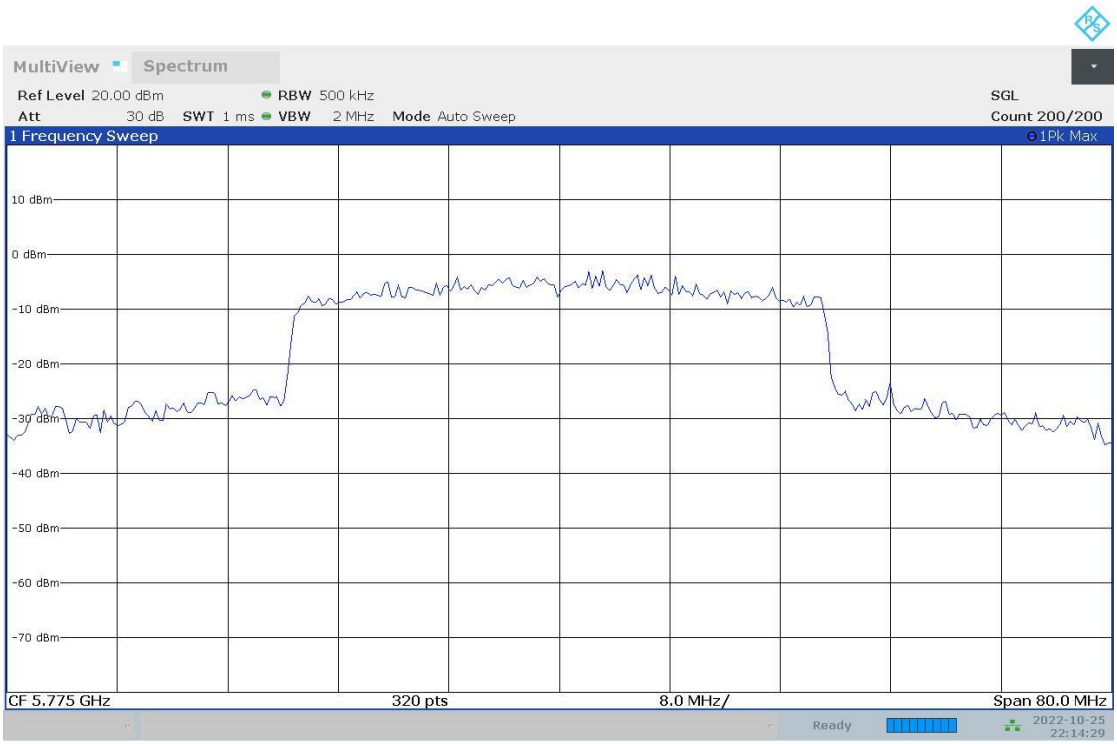
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5775.000000	38.250000	---	---	5755.875000	5794.125000

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

DUT Frequency (MHz)	Result
5775.000000	PASS



Bandwidth



10:14:29 PM 10/25/2022

Tx Spurious Emission (5775 MHz; 24.000 dBm; 40 MHz)

Customized settings.

Result

DUT Frequency (MHz)	Result
5775.000000	PASS

Final measurements

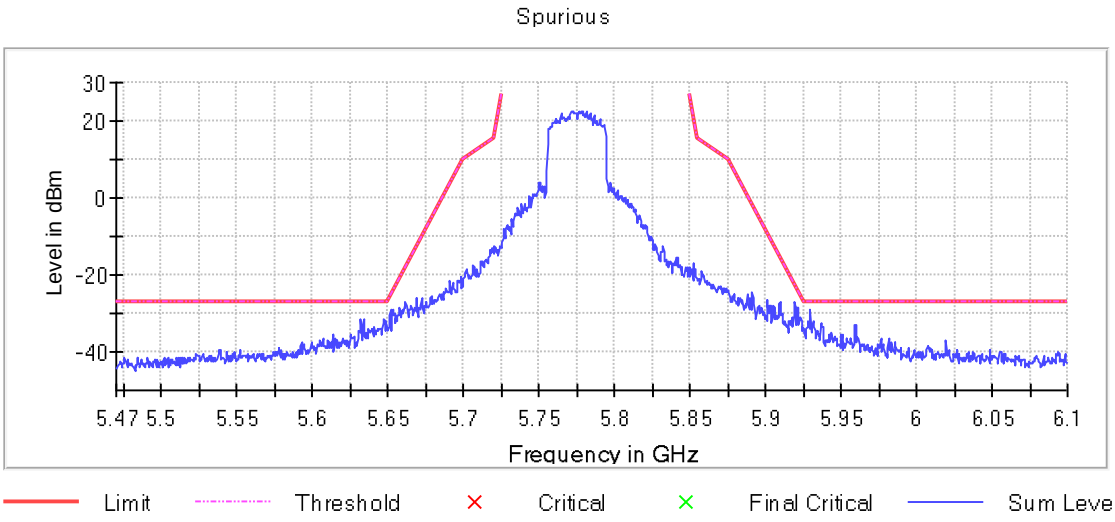
Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
---	---	---	---	---	---

Pre Measurements

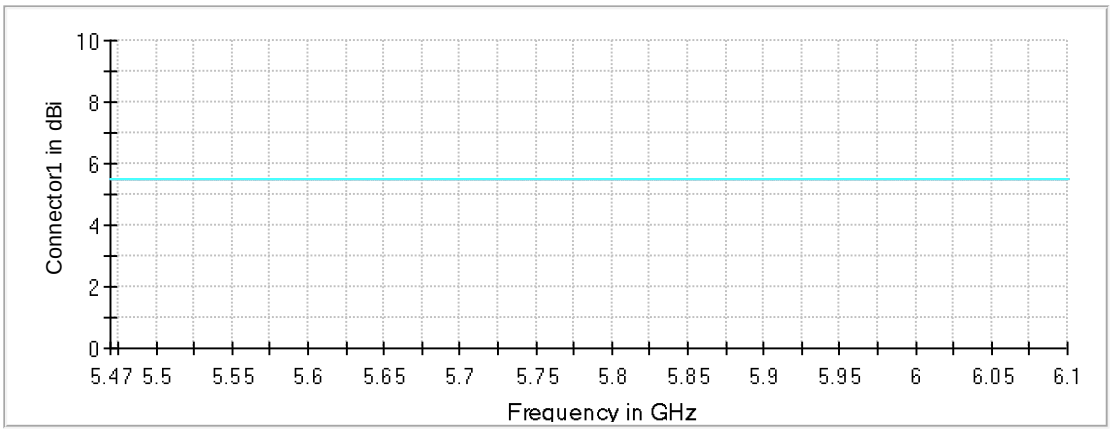
Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
5929.750000	-29.1	2.1	-27.0
5651.750000	-29.0	3.3	-25.7
5653.250000	-28.9	4.3	-24.6
5647.250000	-31.4	4.4	-27.0
5651.250000	-30.4	4.4	-26.1
5921.250000	-28.7	4.4	-24.2
5633.750000	-31.4	4.4	-27.0
5919.250000	-27.2	4.4	-22.7
5632.250000	-31.6	4.6	-27.0
5920.750000	-28.5	4.6	-23.9
5928.250000	-31.8	4.8	-27.0
5931.750000	-31.9	4.9	-27.0
5648.750000	-32.0	5.0	-27.0
5647.750000	-32.1	5.1	-27.0
5923.250000	-31.0	5.3	-25.7

Measurement Settings

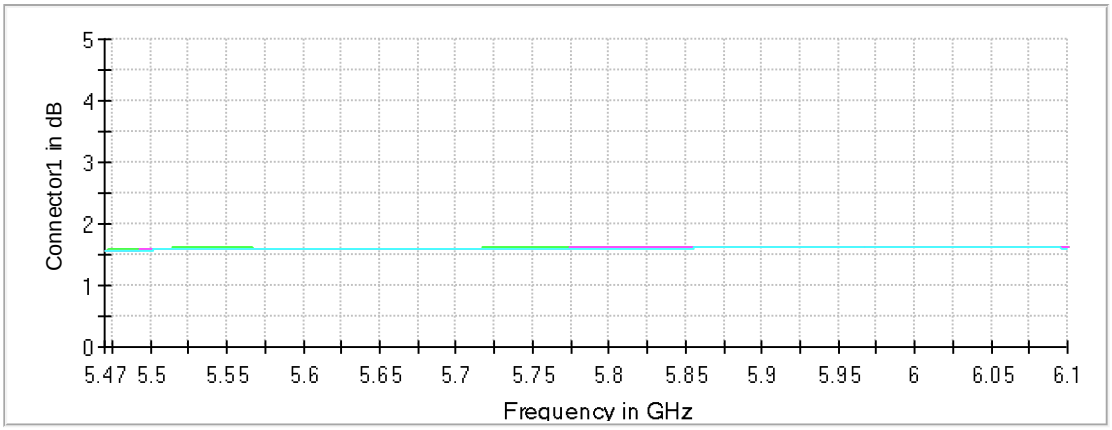
Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
5470.000000	6100.000000	2	2


Spurious
30
20
0
-20
-40
Level in dBm
5.47 5.5
5.55
5.6
5.65
5.7
5.75
5.8
5.85
5.9
5.95
6
6.05
6.1
Frequency in GHz
Limit
Threshold
Critical
Final Critical
Sum Level

Gain



Attenuation



Emission Bandwidth 26 dB (5795 MHz; 24.000 dBm; 40 MHz)

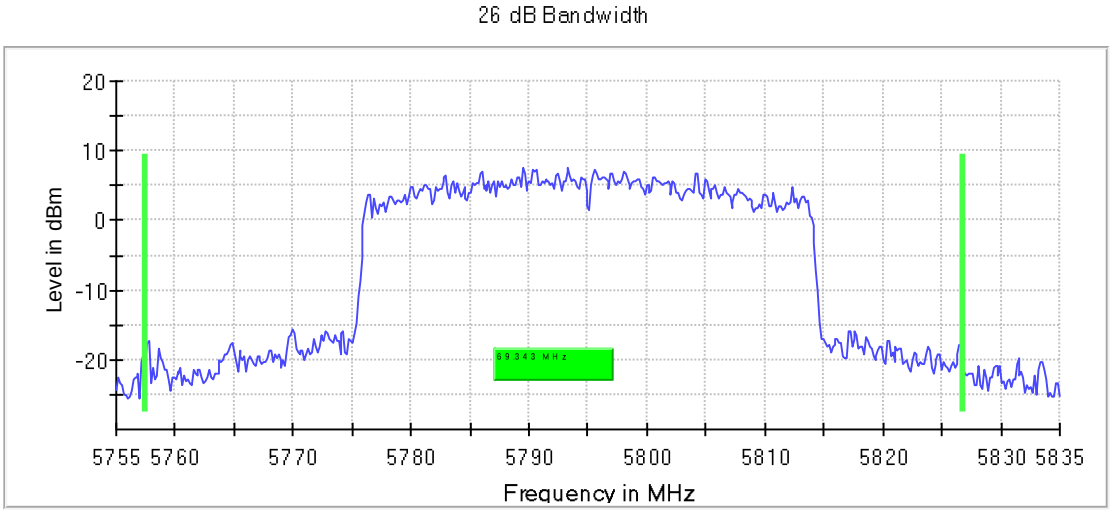
Customized settings.

26 dB Bandwidth

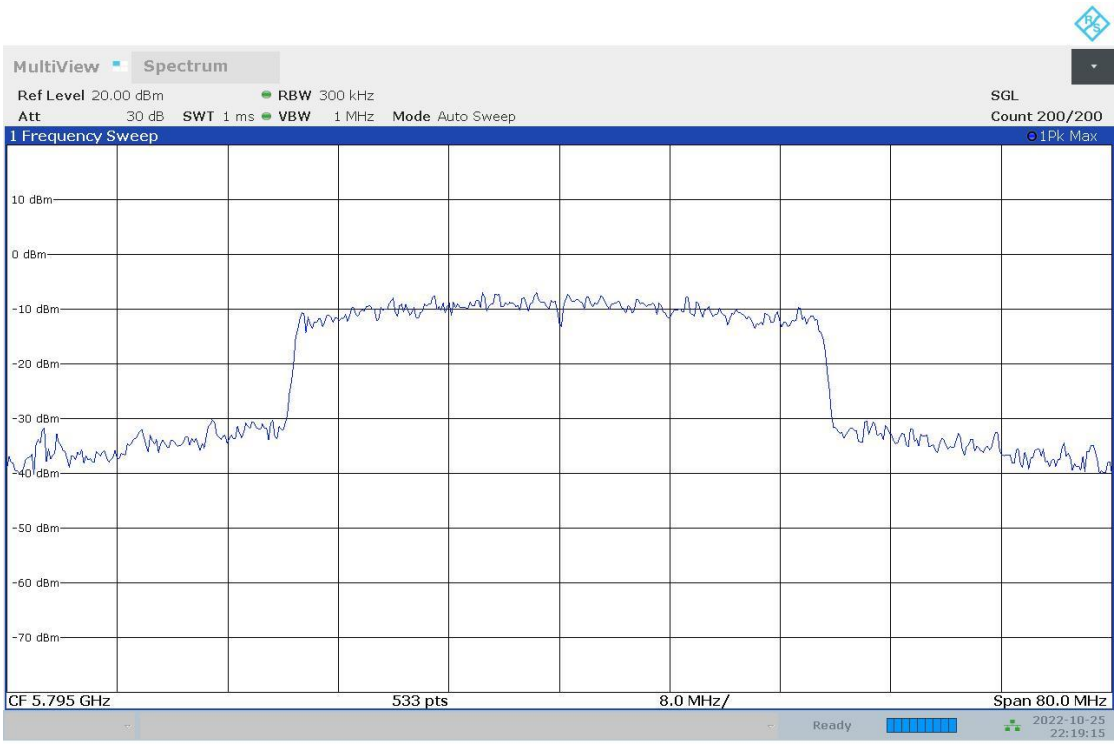
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5795.000000	69.343339	---	---	5757.476548	5826.819887

(continuation of the "26 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
5795.000000	7.6	PASS



Bandwidth



10:19:15 PM 10/25/2022

Minimum Emission Bandwidth 6 dB (5795 MHz; 24.000 dBm; 40 MHz)

Customized settings.

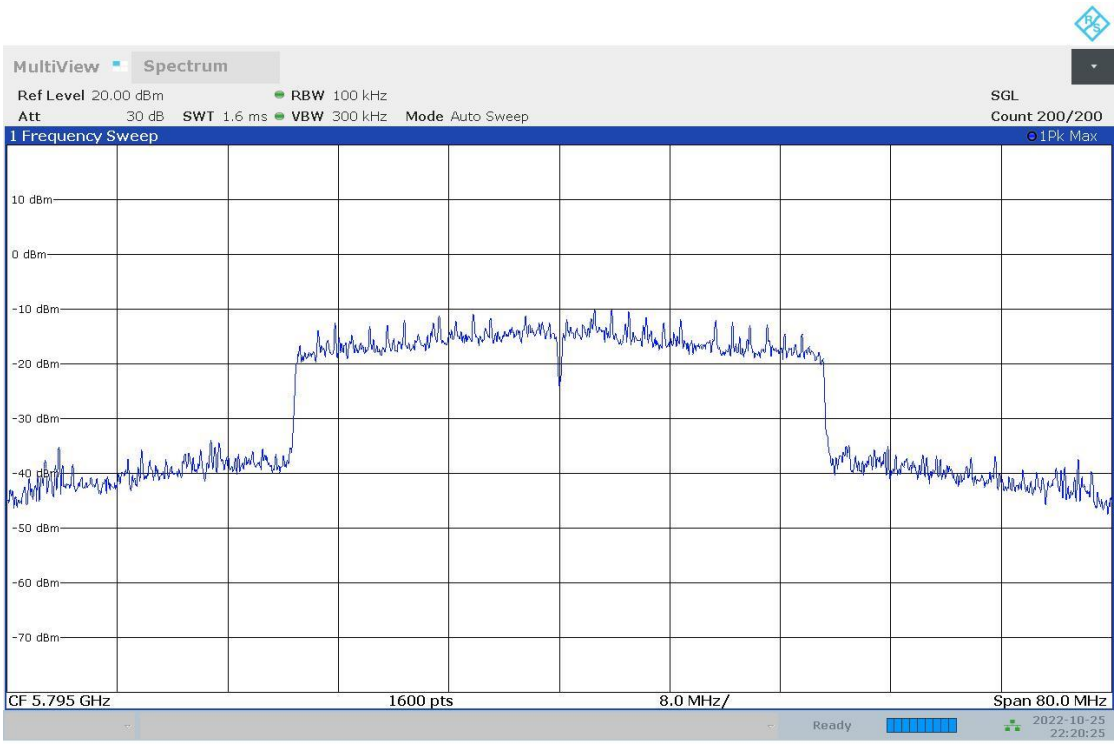
6 dB Bandwidth

DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5795.000000	35.150000	0.500000	---	5777.475000	5812.625000

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

DUT Frequency (MHz)	Max Level (dBm)	Result
5795.000000	4.4	PASS

Bandwidth



10:20:26 PM 10/25/2022

Occupied Channel Bandwidth 99% (5795 MHz; 24.000 dBm; 40 MHz)

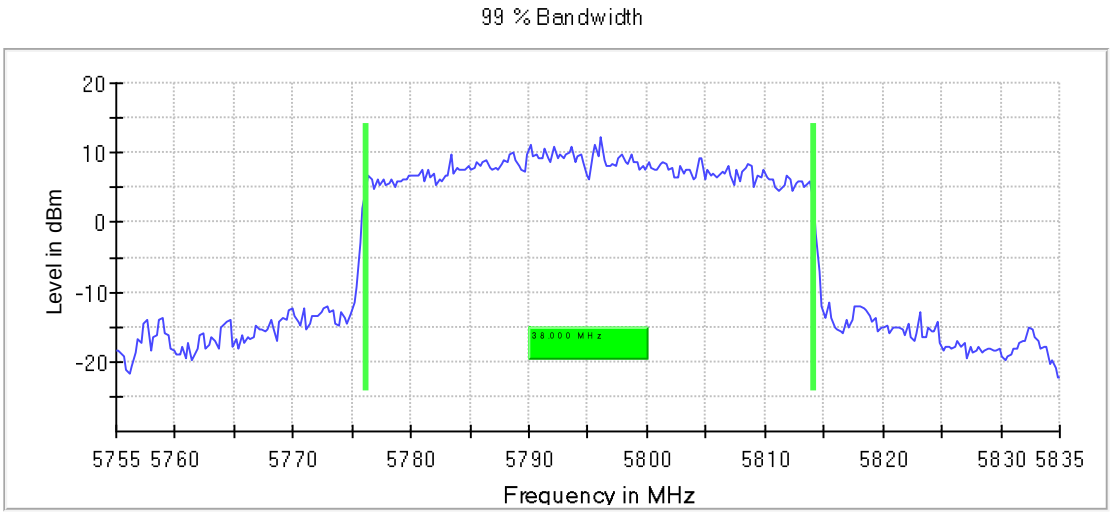
Customized settings.

99 % Bandwidth

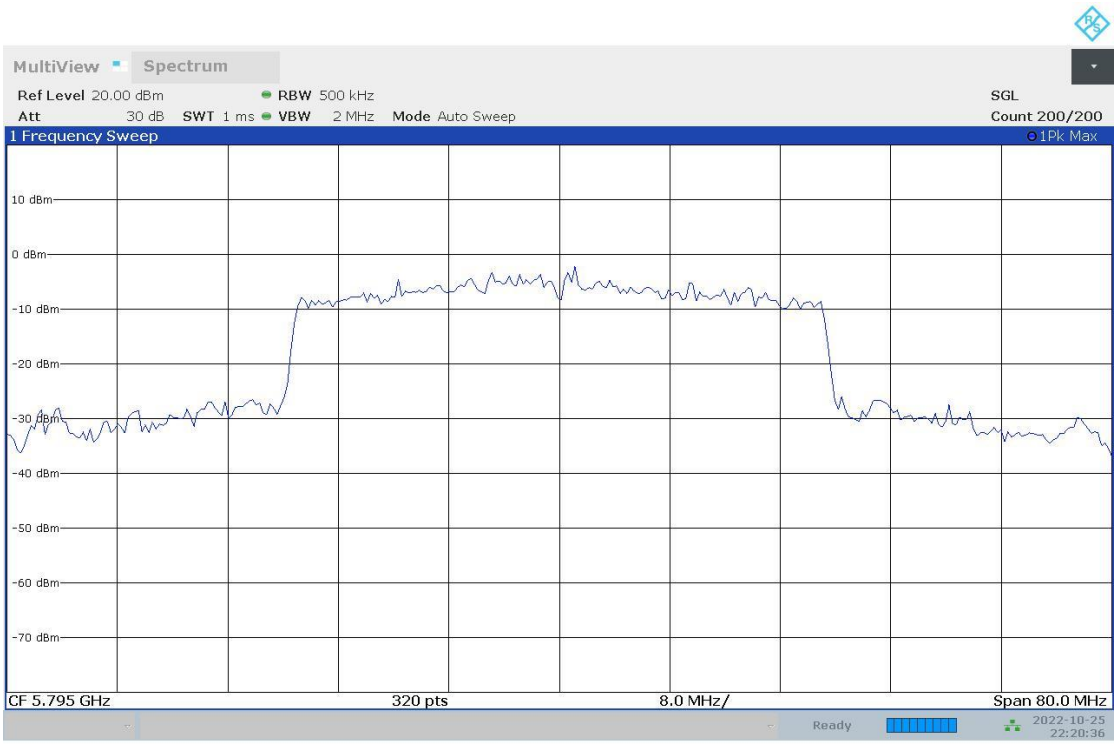
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5795.000000	38.000000	---	---	5776.125000	5814.125000

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

DUT Frequency (MHz)	Result
5795.000000	PASS



Bandwidth



10:20:36 PM 10/25/2022

Tx Spurious Emission (5795 MHz; 24.000 dBm; 40 MHz)

Customized settings.

Result

DUT Frequency (MHz)	Result
5795.000000	PASS

Final measurements

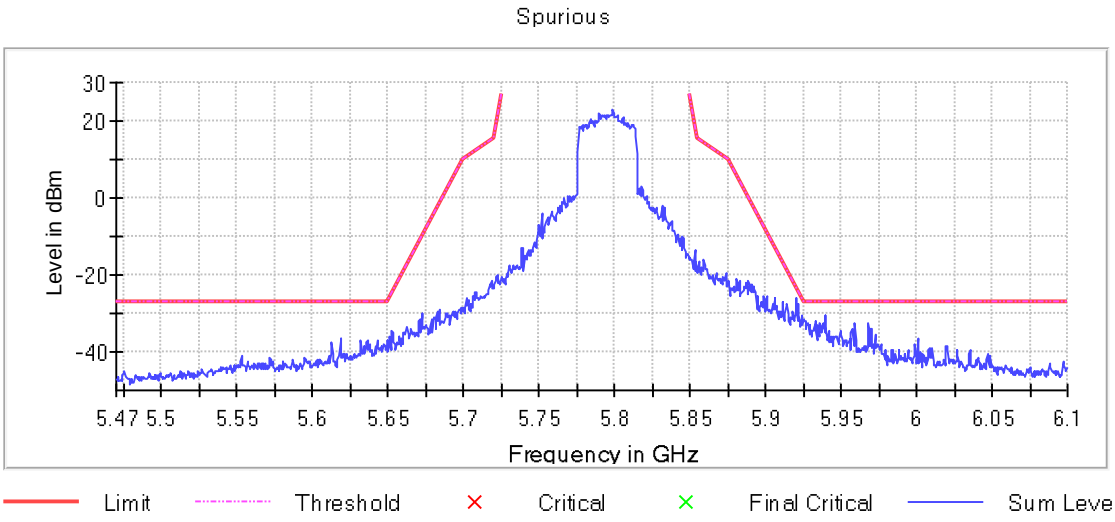
Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
---	---	---	---	---	---

Pre Measurements

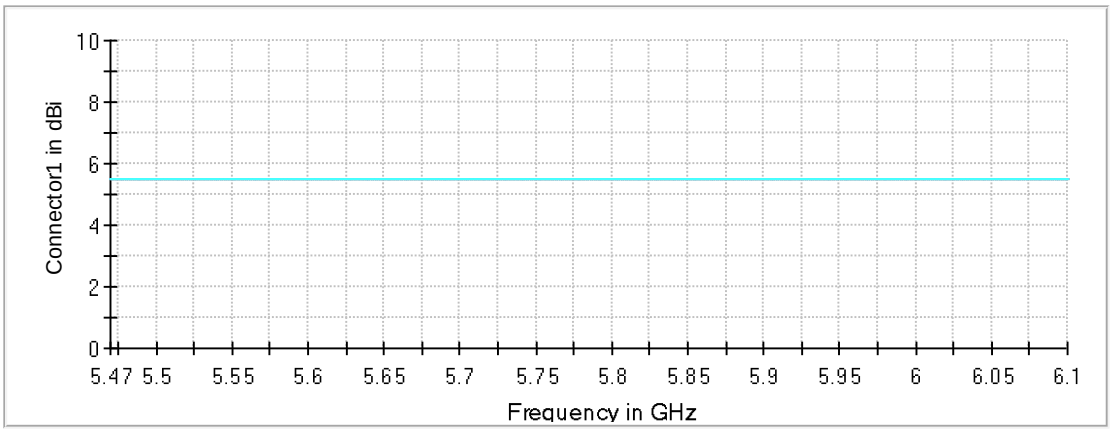
Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
5920.250000	-26.2	2.7	-23.5
5921.750000	-27.4	2.9	-24.6
5939.750000	-30.6	3.6	-27.0
5925.250000	-31.4	4.4	-27.0
5923.750000	-30.7	4.6	-26.1
5925.750000	-31.9	4.9	-27.0
5933.250000	-32.1	5.1	-27.0
5926.250000	-32.2	5.2	-27.0
5938.250000	-32.3	5.3	-27.0
5968.250000	-32.4	5.4	-27.0
5920.750000	-29.4	5.5	-23.9
5928.250000	-32.5	5.5	-27.0
5922.250000	-30.6	5.6	-25.0
5937.750000	-32.6	5.6	-27.0
5959.250000	-32.7	5.7	-27.0

Measurement Settings

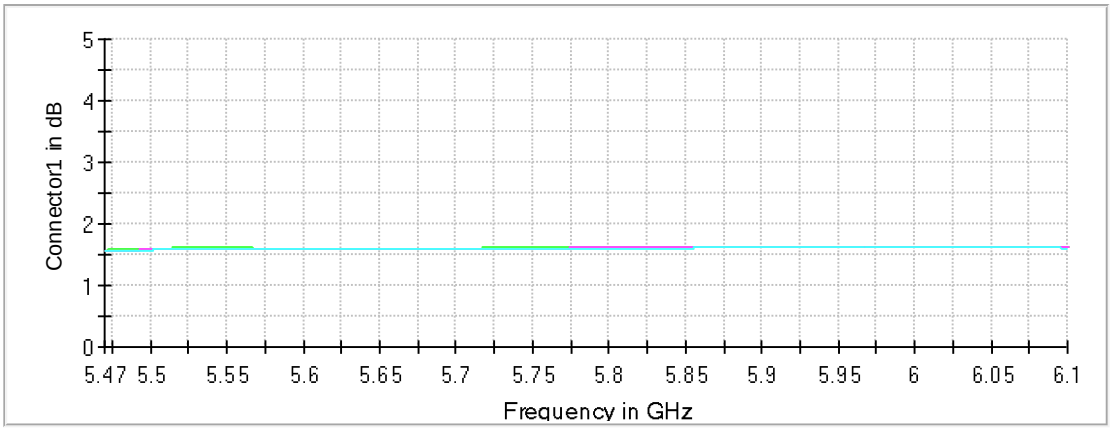
Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
5470.000000	6100.000000	2	2


Spurious
30
20
0
-20
-40
Level in dBm
5.47 5.5
5.55
5.6
5.65
5.7
5.75
5.8
5.85
5.9
5.95
6
6.05
6.1
Frequency in GHz
Limit
Threshold
Critical
Final Critical
Sum Level

Gain



Attenuation



Emission Bandwidth 26 dB (5775 MHz; 24.000 dBm; 80 MHz)

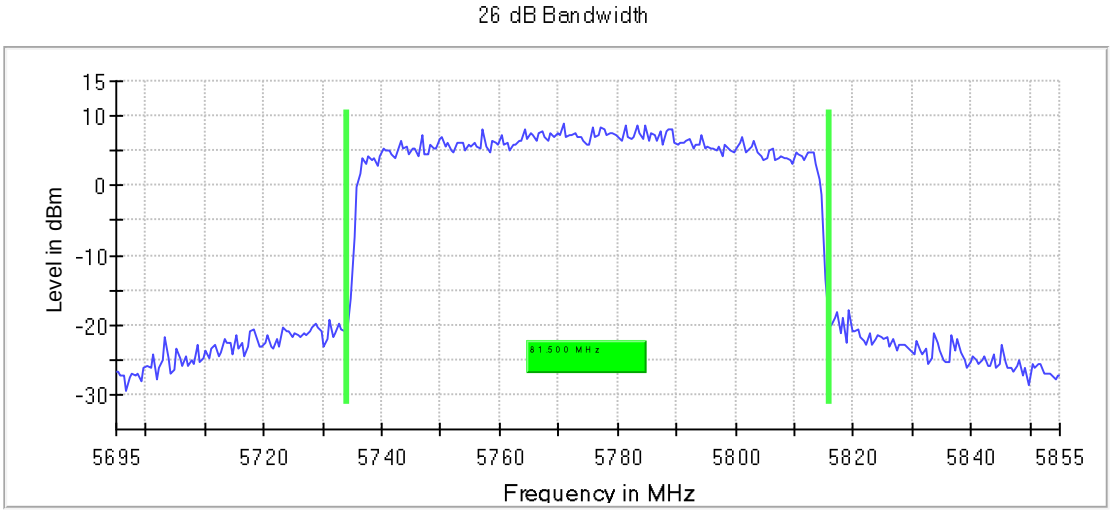
Customized settings.

26 dB Bandwidth

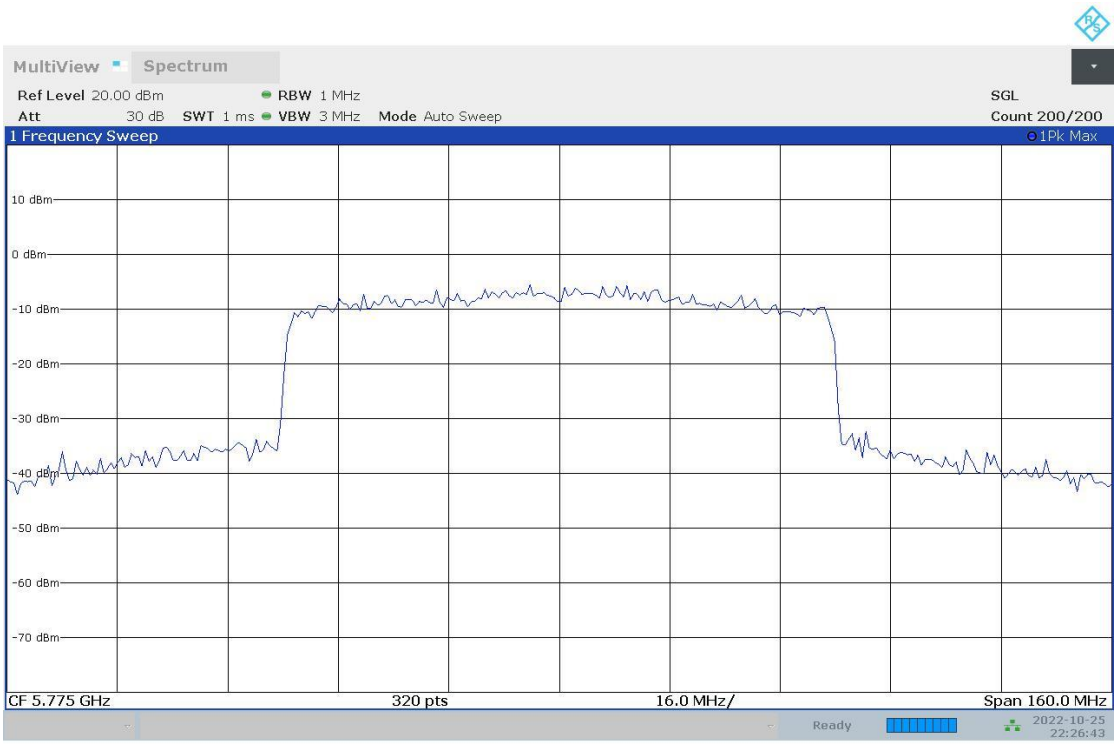
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5775.000000	81.500000	---	---	5734.250000	5815.750000

(continuation of the "26 dB Bandwidth" table from column 6 ...)

DUT Frequency (MHz)	Max Level (dBm)	Result
5775.000000	9.0	PASS



Bandwidth



10:26:44 PM 10/25/2022

Minimum Emission Bandwidth 6 dB (5775 MHz; 24.000 dBm; 80 MHz)

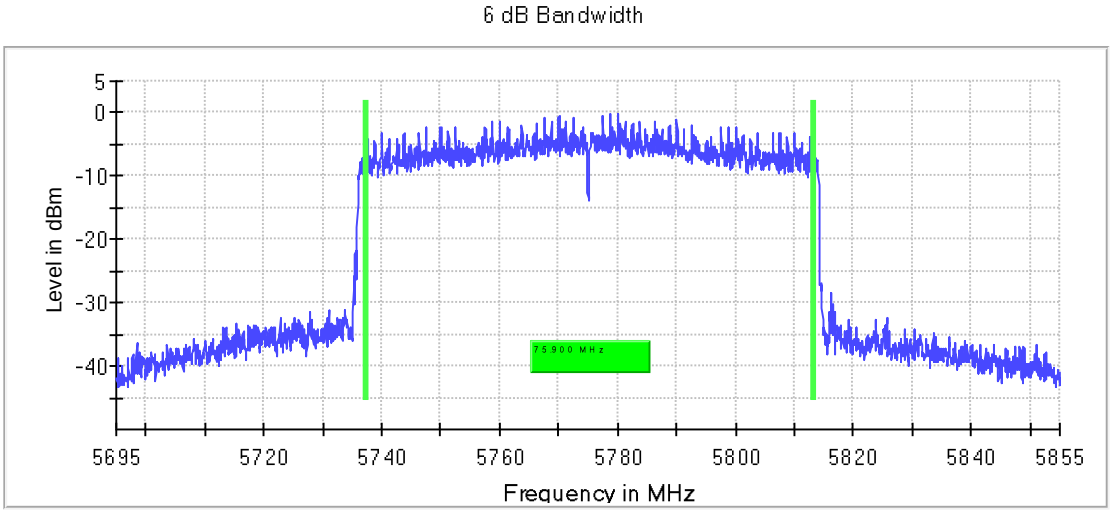
Customized settings.

6 dB Bandwidth

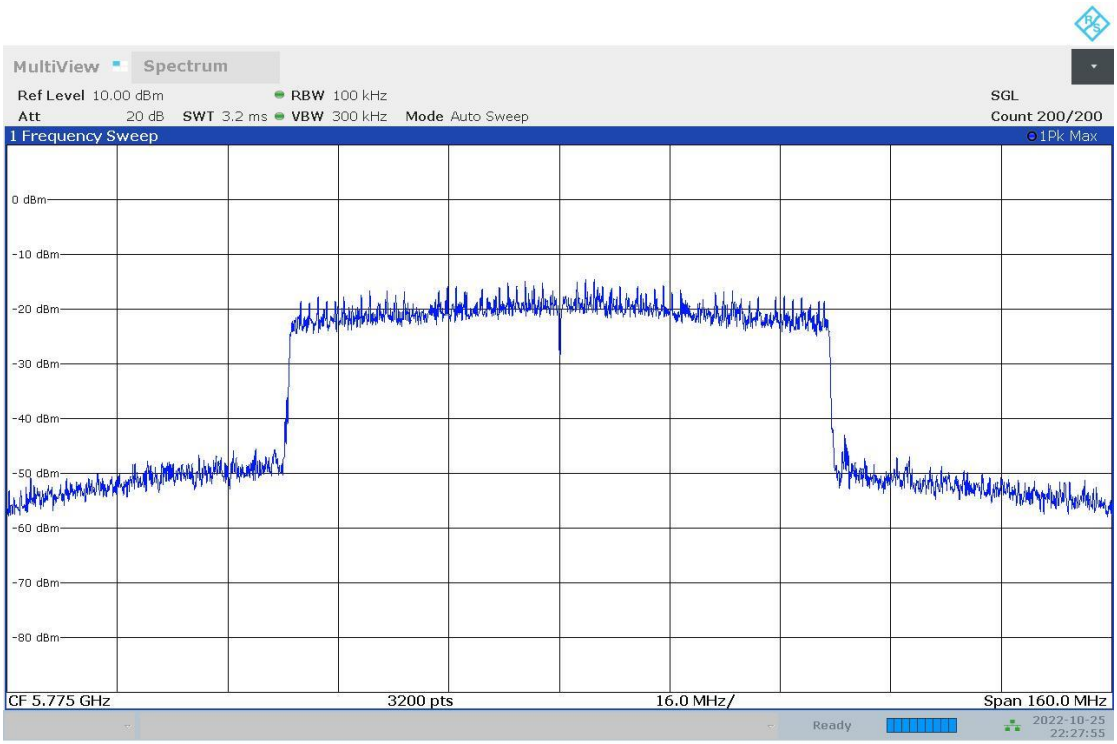
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5775.000000	75.900000	0.500000	---	5737.475000	5813.375000

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

DUT Frequency (MHz)	Max Level (dBm)	Result
5775.000000	-0.1	PASS



Bandwidth



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Occupied Channel Bandwidth 99% (5775 MHz; 24.000 dBm; 80 MHz)

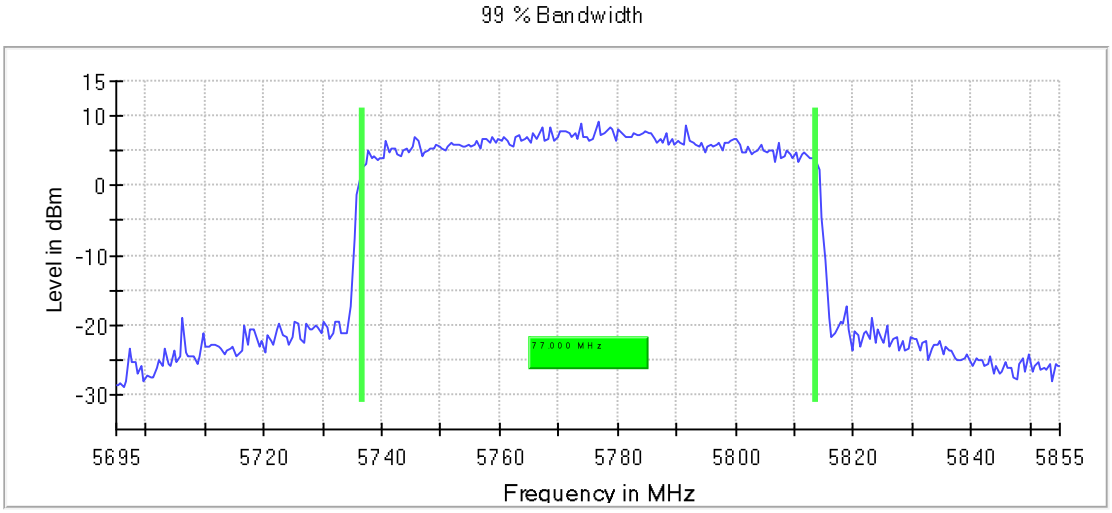
Customized settings.

99 % Bandwidth

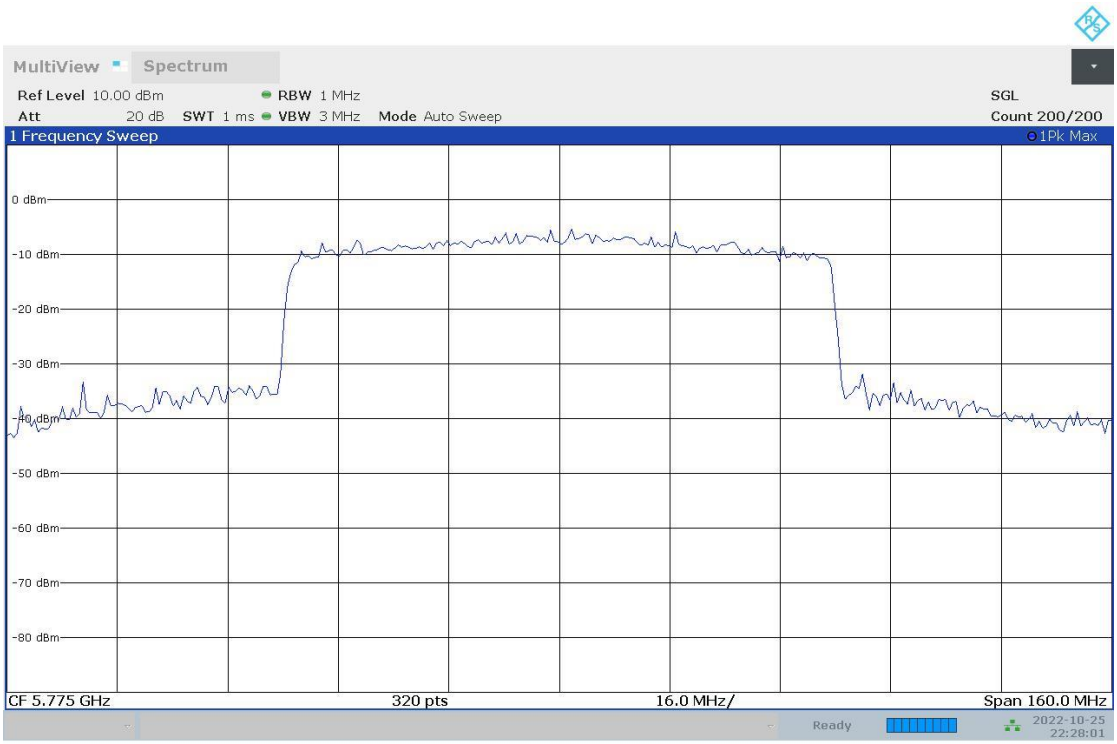
DUT Frequency (MHz)	Bandwidth (MHz)	Limit Min (MHz)	Limit Max (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
5775.000000	77.000000	---	---	5736.750000	5813.750000

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

DUT Frequency (MHz)	Result
5775.000000	PASS



Bandwidth



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Tx Spurious Emission (5775 MHz; 24.000 dBm; 80 MHz)

Customized settings.

Result

DUT Frequency (MHz)	Result
5775.000000	PASS

Final measurements

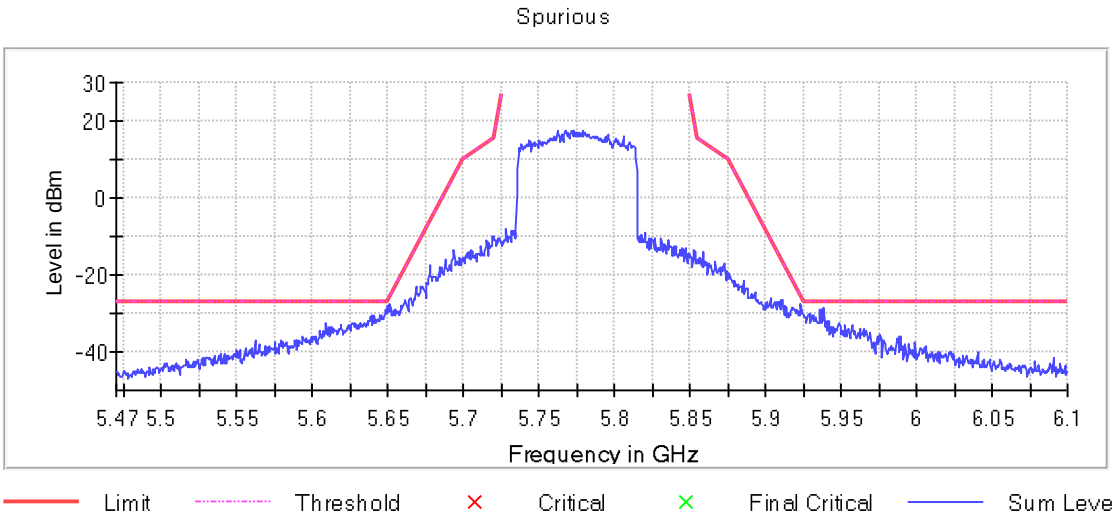
Frequency (MHz)	Level Pre Measurement (dBm)	level (dBm)	Limit (dBm)	Margin (dB)	Result
---	---	---	---	---	---

Pre Measurements

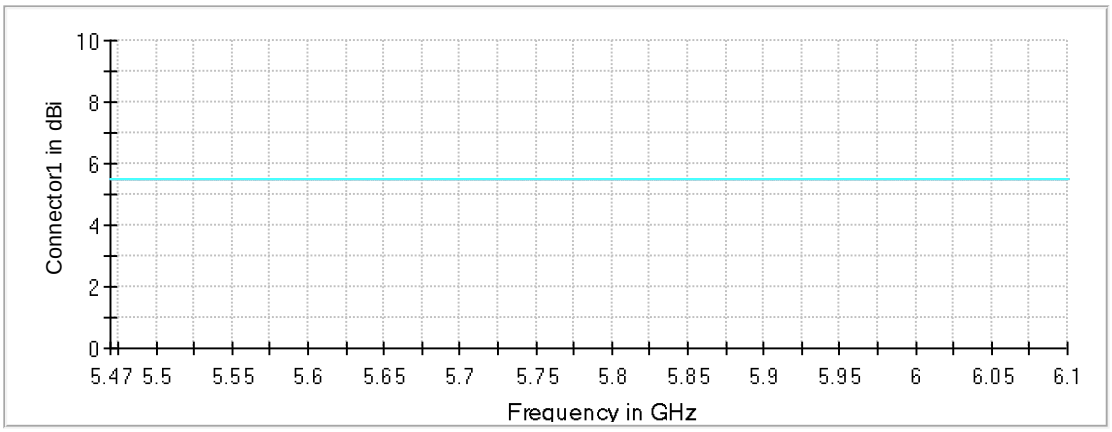
Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
5649.750000	-28.1	1.1	-27.0
5651.250000	-27.4	1.3	-26.1
5923.250000	-27.3	1.6	-25.7
5938.750000	-28.7	1.7	-27.0
5936.750000	-28.8	1.8	-27.0
5936.250000	-29.1	2.1	-27.0
5648.250000	-29.2	2.2	-27.0
5650.250000	-29.5	2.7	-26.8
5648.750000	-29.8	2.8	-27.0
5649.250000	-29.9	2.9	-27.0
5928.750000	-30.0	3.0	-27.0
5647.750000	-30.0	3.0	-27.0
5924.750000	-29.9	3.1	-26.8
5938.250000	-30.2	3.2	-27.0
5650.750000	-29.7	3.2	-26.4

Measurement Settings

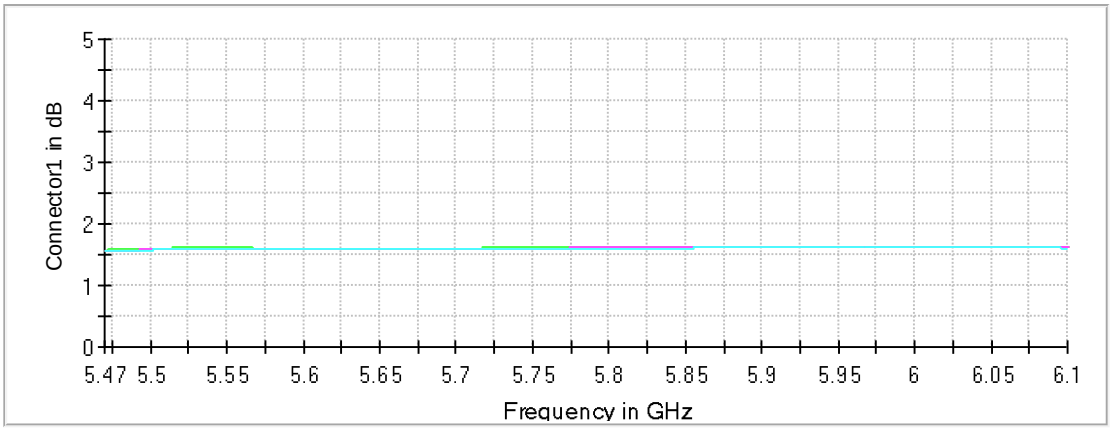
Start Frequency (MHz)	Stop Frequency (MHz)	Pre Measurement	Final Measurement
5470.000000	6100.000000	2	2


Spurious
30
20
0
-20
-40
Level in dBm
5.47 5.5 5.55 5.6 5.65 5.7 5.75 5.8 5.85 5.9 5.95 6 6.05 6.1
Frequency in GHz
Limit
Threshold
Critical
Final Critical
Sum Level

Gain



Attenuation



-- End of Test Report --