

# FCC Test Report

Report No.: AGC15705250412FR02

**FCC ID** : 2AJ551865D03  
**APPLICATION PURPOSE** : Original Equipment  
**PRODUCT DESIGNATION** : RC quadcopter  
**BRAND NAME** : N/A  
**MODEL NAME** : HS600, HS600D, HS600-RID, HS600D-RID, HS920, HS600Pro, HS600Plus, HS600G, HS600S, HS600L  
**APPLICANT** : Xiamen Huoshiquan Import & Export CO., LTD  
**DATE OF ISSUE** : Jul. 24, 2025  
**STANDARD(S)** : FCC Part 15 Subpart E §15.407  
**REPORT VERSION** : V1.0

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**Report Revise Record**

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Jul. 24, 2025	Valid	Initial Release

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## 1. General Information

Applicant	Xiamen Huoshiquan Import & Export CO., LTD
Address	Unit 1, Room 501, Hongxiang Building, No.258 Hubin Nan Road, Siming District, XIAMEN, China
Manufacturer	Xiamen Huoshiquan Import & Export CO., LTD
Address	Unit 1, Room 501, Hongxiang Building, No.258 Hubin Nan Road, Siming District, XIAMEN, China
Factory	Xiamen Huoshiquan Import & Export CO., LTD
Address	Unit 1, Room 501, Hongxiang Building, No.258 Hubin Nan Road, Siming District, XIAMEN, China
Product Designation	RC quadcopter
Brand Name	N/A
Test Model	HS600
Series Model(s)	HS600D, HS600-RID, HS600D-RID, HS920, HS600Pro, HS600Plus, HS600G, HS600S, HS600L
Difference Description	All the same except for the model name and appearance color.
Date of receipt of test item	Apr. 09, 2025
Date of Test	Apr. 09, 2025~Jul. 24, 2025
Deviation from Standard	No any deviation from the test method
Condition of Test Sample	Normal
Test Result	Pass
Test Report Form No	AGCER-FCC-5G WLAN-V1

Note: The test results of this report relate only to the tested sample identified in this report.

Prepared By

Thea Huang

Thea Huang  
(Project Engineer)

Jul. 24, 2025

Reviewed By

Jack Gui

Jack Gui  
(Reviewer)

Jul. 24, 2025

Approved By

Angela Li

Angela Li  
(Authorized Officer)

Jul. 24, 2025

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## 2. Product Information

### 2.1 Product Technical Description

Equipment Type	<input type="checkbox"/> Outdoor access points <input type="checkbox"/> Fixed P2P access points	<input type="checkbox"/> Indoor access points <input checked="" type="checkbox"/> Client devices
Operation Frequency	<input checked="" type="checkbox"/> U-NII 1:5150MHz~5250MHz <input type="checkbox"/> U-NII 2C:5470MHz~5725MHz	<input type="checkbox"/> U-NII 2A: 5250MHz~5350MHz <input checked="" type="checkbox"/> U-NII 3: 5725MHz~5850MHz
DFS Design Type	<input type="checkbox"/> Master <input type="checkbox"/> Slave with radar detection	<input checked="" type="checkbox"/> Slave without radar detection
TPC Function	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Hardware Version	V1.0	
Software Version	V1.0	
Test Frequency Range	For 802.11a: 5180~5240MHz/5745~5825MHz	
RF Output Power	802.11a: 12.91dBm,	
Modulation	802.11a:(64-QAM, 16-QAM, QPSK, BPSK) OFDM	
Data Rate	802.11a:6/9/12/18/24/36/48/54Mbps;	
Number of channels	4 channels of U-NII-1 Band, 5 channels of U-NII 3 Band	
Antenna Designation	Monopole Antenna	
Antenna Gain	2.16dBi	
Power Supply	DC 11.1V 3500mAh by battery	

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## 2.2 Table of Carrier Frequency

For 5180~5240MHz:

4 channels are provided for 802.11a:

Channel	Frequency	Channel	Frequency
36	5180 MHz	44	5220 MHz
40	5200 MHz	48	5240 MHz

For 5745~5825MHz:

5 channels are provided for 802.11a:

Channel	Frequency	Channel	Frequency
149	5745 MHz	161	5805 MHz
153	5765 MHz	165	5825 MHz
157	5785 MHz	--	--

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## 2.3 Related Submittal(S) / Grant (S)

This submittal(s) (test report) is intended for **FCC ID: 2AJ551865D03** filing to comply with the FCC Part 15 requirements.

## 2.4 Test Methodology

No.	Identity	Document Title
1	FCC 47 CFR Part 2	Frequency allocations and radio treaty matters; general rules and regulations
2	FCC 47 CFR Part 15	Radio Frequency Devices
3	ANSI C63.10-2013	American National Standard for Testing Unlicensed Wireless Devices
4	KDB 662911	662911 D01 Multiple Transmitter Output v02r01
5	KDB 789033	789033 D02 General U-NII Test Procedures New Rules v02r01

## 2.5 Special Accessories

Refer to section 4.4.

## 2.6 Equipment Modifications

Not available for this EUT intended for grant.

## 2.7 Antenna Requirement

Standard Requirement
<b>15.203 requirement:</b> An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.
<b>EUT Antenna:</b> The non-detachable antenna inside the device cannot be replaced by the user at will. The gain of the antenna is 2.16dBi

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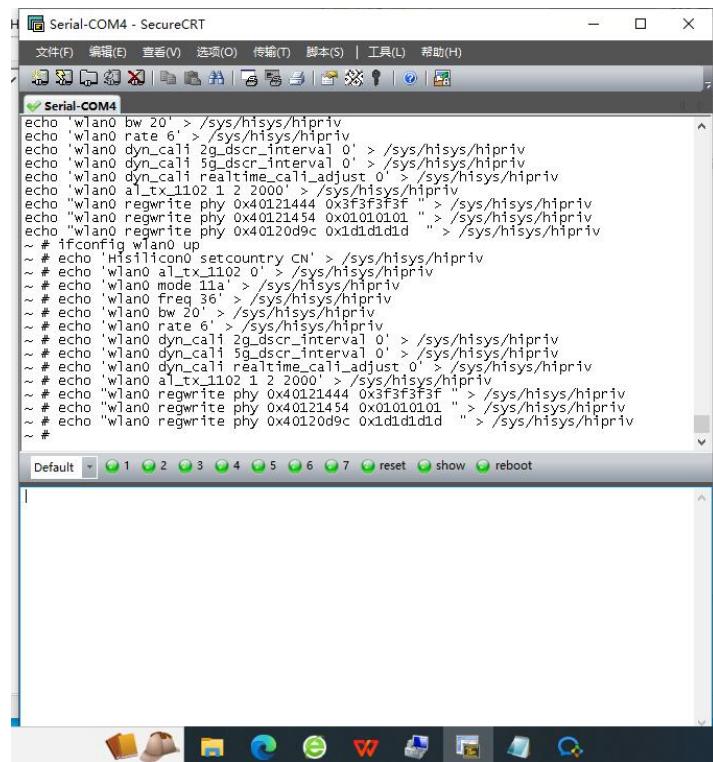
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## 2.8 Description of Test Software

### For IEEE 802.11 mode:

The test utility software used during testing was “SecureCRT”.

Software Setting Diagram



```

Serial-COM4 - SecureCRT
文件(F) 编辑(E) 查看(V) 选项(O) 传输(T) 脚本(S) | 工具(L) 帮助(H)
Serial-COM4
echo 'wlan0 bw 20' > /sys/hisys/hipriv
echo 'wlan0 rate 6' > /sys/hisys/hipriv
echo 'wlan0 dyn_call 2g_dscr_interval 0' > /sys/hisys/hipriv
echo 'wlan0 dyn_call 5g_dscr_interval 0' > /sys/hisys/hipriv
echo 'wlan0 dyn_call realtime_call_adjust 0' > /sys/hisys/hipriv
echo 'wlan0 a1_tx_1102 1 2 2000' > /sys/hisys/hipriv
echo "wlan0 rewrite phy 0x40121444 0x3f3f3f3f" > /sys/hisys/hipriv
echo "wlan0 rewrite phy 0x40121454 0x01010101" > /sys/hisys/hipriv
echo "wlan0 rewrite phy 0x40120d9c 0x1d1d1d1d" > /sys/hisys/hipriv
~ # ifconfig wlan0 up
~ # echo 'Hslllcon0 setcountry CN' > /sys/hisys/hipriv
~ # echo 'wlan0 a1_tx_1102 0' > /sys/hisys/hipriv
~ # echo 'wlan0 mode 11a' > /sys/hisys/hipriv
~ # echo 'wlan0 freq 36' > /sys/hisys/hipriv
~ # echo 'wlan0 bw 20' > /sys/hisys/hipriv
~ # echo 'wlan0 rate 6' > /sys/hisys/hipriv
~ # echo 'wlan0 dyn_call 2g_dscr_interval 0' > /sys/hisys/hipriv
~ # echo 'wlan0 dyn_call 5g_dscr_interval 0' > /sys/hisys/hipriv
~ # echo 'wlan0 dyn_call realtime_call_adjust 0' > /sys/hisys/hipriv
~ # echo 'wlan0 a1_tx_1102 1 2 2000' > /sys/hisys/hipriv
~ # echo "wlan0 rewrite phy 0x40121444 0x3f3f3f3f" > /sys/hisys/hipriv
~ # echo "wlan0 rewrite phy 0x40121454 0x01010101" > /sys/hisys/hipriv
~ # echo "wlan0 rewrite phy 0x40120d9c 0x1d1d1d1d" > /sys/hisys/hipriv
~ #
Default 1 2 3 4 5 6 7 reset show reboot

```

Test Mode 5150MHz~5250MHz	Channel	Power Index
802.11a	L/M/H	1d1d1d1d
Test Mode 5725MHz~5850MHz	Channel	Power Index
802.11a	L/M/H	3a3a3a3a

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### 3. Test Environment

#### 3.1 Address of The Test Laboratory

Laboratory: Attestation of Global Compliance (Shenzhen) Co., Ltd.

Address: 1-2/F, Building 19, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

#### 3.2 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

##### **CNAS-Lab Code: L5488**

Attestation of Global Compliance (Shenzhen) Co., Ltd. has been assessed and proved to follow CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories.)

##### **A2LA-Lab Cert. No.: 5054.02**

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to follow ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

##### **FCC-Registration No.: 975832**

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files with Registration 975832.

##### **IC-Registration No.: 24842 (CAB identifier: CN0063)**

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the Certification and Engineering Bureau of Industry Canada. The acceptance letter from the IC is maintained in our files with Registration 24842.

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### 3.3 Environmental Conditions

	Normal Conditions
Temperature range (°C)	15 - 35
Relative humidity range	20% - 75%
Pressure range (kPa)	86 - 106
Power supply	DC 11.1V 3500mAh by battery

### 3.4 Measurement Uncertainty

The reported uncertainty of measurement  $y \pm U$ , where expended uncertainty  $U$  is based on a standard uncertainty multiplied by a coverage factor of  $k=2$ , providing a level of confidence of approximately 95%.

Item	Measurement Uncertainty
Uncertainty of Conducted Emission for AC Port	$U_c = \pm 2.9$ dB
Uncertainty of Radiated Emission below 1GHz	$U_c = \pm 3.9$ dB
Uncertainty of Radiated Emission above 1GHz	$U_c = \pm 4.9$ dB
Uncertainty of total RF power, conducted	$U_c = \pm 0.8$ dB
Uncertainty of RF power density, conducted	$U_c = \pm 2.6$ dB
Uncertainty of spurious emissions, conducted	$U_c = \pm 2$ %
Uncertainty of Occupied Channel Bandwidth	$U_c = \pm 2.7$ %

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### 3.5 List of Equipment Used

● RF Conducted Test System							
Used	Equipment No.	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
<input checked="" type="checkbox"/>	AGC-ER-E036	Spectrum Analyzer	Agilent	N9020A	MY49100060	2024-05-24	2025-05-23
<input checked="" type="checkbox"/>	AGC-ER-E036	Spectrum Analyzer	Agilent	N9020A	MY49100060	2025-05-08	2026-05-07
<input checked="" type="checkbox"/>	AGC-ER-A007	6dB Fixed Attenuator	Mini circuits	BW-S6-2W263A+	N/A	2025-01-30	2026-01-29
<input checked="" type="checkbox"/>	AGC-ER-E083	Signal Generator	Agilent	E4421B	US39340815	2023-06-01	2024-05-31
<input checked="" type="checkbox"/>	AGC-ER-E083	Signal Generator	Agilent	E4421B	US39340815	2025-05-21	2026-05-20
<input checked="" type="checkbox"/>	N/A	RF Connection Cable	N/A	1#	N/A	Each time	N/A
<input checked="" type="checkbox"/>	N/A	RF Connection Cable	N/A	2#	N/A	Each time	N/A

● Radiated Spurious Emission							
Used	Equipment No.	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
<input checked="" type="checkbox"/>	AGC-EM-E046	EMI Test Receiver	R&S	ESCI	10096	2025-01-14	2026-01-13
<input checked="" type="checkbox"/>	AGC-EM-E061	Spectrum Analyzer	Agilent	N9010A	MY53470504	2023-06-01	2024-05-31
<input checked="" type="checkbox"/>	AGC-EM-E061	Spectrum Analyzer	Agilent	N9010A	MY53470504	2025-05-08	2026-05-07
<input checked="" type="checkbox"/>	AGC-EM-E086	Loop Antenna	ZHINAN	ZN30900C	18051	2024-03-05	2026-03-04
<input checked="" type="checkbox"/>	AGC-EM-E001	Wideband Antenna	SCHWARZBECK	VULB9168	D69250	2025-03-14	2027-03-13
<input checked="" type="checkbox"/>	AGC-EM-E029	Broadband Ridged Horn Antenna	ETS	3117	00034609	2025-03-27	2026-03-26
<input checked="" type="checkbox"/>	AGC-EM-E082	Horn Antenna	SCHWARZBECK	BBHA 9170	#768	2023-09-24	2025-09-23
<input checked="" type="checkbox"/>	AGC-EM-E146	Pre-amplifier	ETS	3117-PA	00246148	2024-07-24	2026-07-23
<input checked="" type="checkbox"/>	AGC-EM-A118	5G Filter	SongYi	BRM50716	N/A	2024-05-23	2025-05-22
<input checked="" type="checkbox"/>	AGC-EM-A118	5G Filter	SongYi	BRM50716	N/A	2025-05-16	2026-05-15
<input checked="" type="checkbox"/>	AGC-EM-A138	6dB Attenuator	Eatsheep	LM-XX-6-5W	N/A	2023-06-09	2024-06-08
<input checked="" type="checkbox"/>	AGC-EM-A138	6dB Attenuator	Eatsheep	LM-XX-6-5W	N/A	2025-05-16	2027-05-15

● Test Software					
Used	Equipment No.	Test Equipment	Manufacturer	Model No.	Version Information
<input checked="" type="checkbox"/>	AGC-EM-S003	RE Test System	FARA	EZ-EMC	VRA-03A
<input checked="" type="checkbox"/>	AGC-ER-S012	BT/WIFI Test System	Tonscend	JS1120-2	2.6
<input checked="" type="checkbox"/>	AGC-EM-S011	RSE Test System	Tonscend	TS+-Ver2.1(JS36-RSE)	4.0.0.0

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## 4. System Test Configuration

### 4.1 EUT Configuration

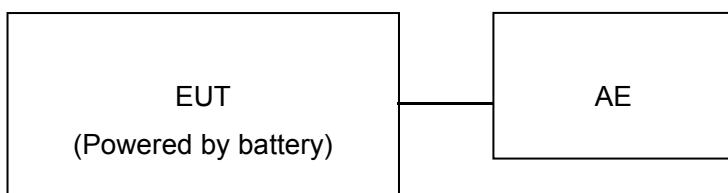
The EUT configuration for testing is installed on RF field strength measurement to meet the Commission's requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

### 4.2 EUT Exercise

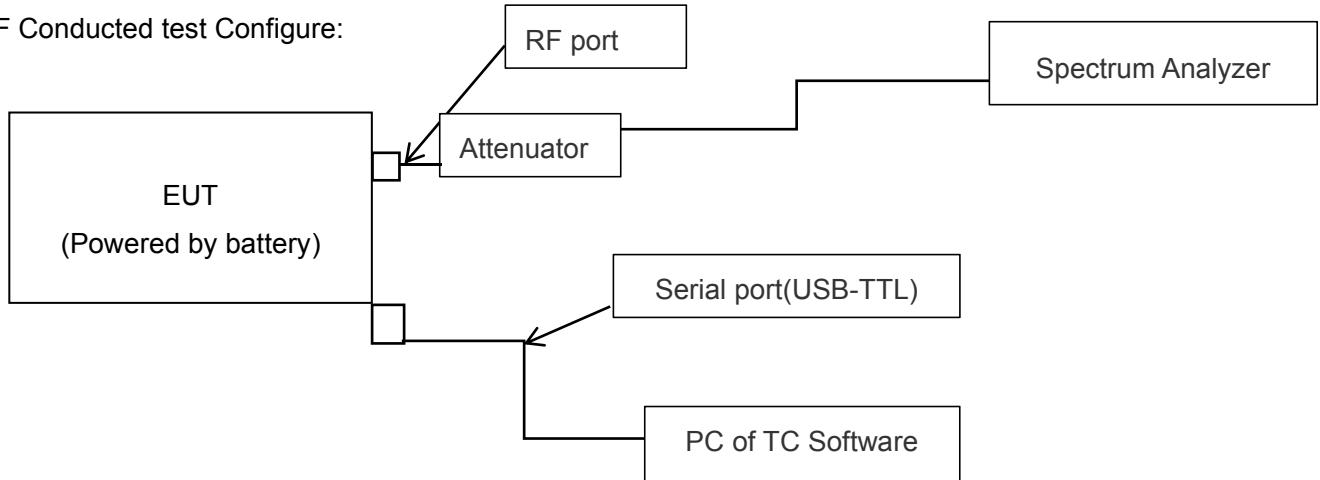
The Transmitter was operated in the normal operating mode. The TX frequency was fixed which was for the purpose of the measurements.

### 4.3 Configuration of Tested System

Radiated Emission Configure:



RF Conducted test Configure:



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#### 4.4 Equipment Used in Tested System

The following peripheral devices and interface cables were connected during the measurement:

Test Accessories Come From The Laboratory

No.	Equipment	Manufacturer	Model No.	Specification Information	Cable
1	Control Box	USB-TTL	--	--	--
2	PC	Redmi	XMA2002-AB		

Test Accessories Come From The Manufacturer

No.	Equipment	Manufacturer	Model No.	Specification Information	Cable
1	Battery	--	DS 7544128-3S	DC 11.1V 3500mAh	--

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#### 4.5 Summary of Test Results

Item	FCC Rules	Description of Test	Result
1	§15.203	Antenna Equipment	Pass
2	§15.407(a/1/3)	RF Output Power	Pass
3	§15.407(e)	6dB Bandwidth Measurement	Pass
4	§15.403(a)	26dB bandwidth Measurement	Pass
5	§15.407(a/1/3)	Power Spectral Density	Pass
6	§15.407(g)	Frequency Stability	Pass (See Note 1)
7	§15.407(c)	Transmission Discontinuation Requirement	Pass (See Note 2)
8	§15.407(b)(1/4)	Conducted Band Edge and Out-of-Band Emissions	Pass
9	§15.209,§15.407(b)(1/4)	Radiated Spurious Emission	Pass
10	§15.207	AC Power Line Conducted Emission	Not applicable

**Note:**

1. Refer to the manufacturer's declaration in the user manual.
2. The device operates without the transmission of information.
3. This device is powered by a built-in lithium battery and is not suitable for AC power supply disturbance testing.

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## 5. Description of Test Modes

EUT Configure Mode	Applicable To				Description		
	RE > 1G	RE < 1G	PLC	APCM			
A	--	--	--	--	Powered by Adapter with WIFI(5G) Link		
B	☒	☒	☐	☒	Powered by Battery with WIFI(5G) Link		
C	--	--	--	--	Powered by USB with WIFI(5G) Link		
Measurement Annotation							
Where	RE > 1G: Radiated Emission above 1GHz			PLC: Power Line Conducted Emission			
	RE < 1G: Radiated Emission below 1GHz			APCM: Antenna Port Conducted Measurement			
Note							
1.	Positioning in three axes was pre-tested, with the worst case being positioning in the X-plane.						
2.	The radiation part tests the dual-antenna MIMO as the worst combination.						
3.	"--" means no effect.						

### ● Power Line Conducted Emission Test

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations be Meen available modulations, data rates and antenna ports (If EUT with antenna diversity architecture).
- The device under test has multiple antennas. The mode that supports MIMO technology records the worst data, and the mode that does not support MIMO technology records antenna 1 as the worst data.

#### Select Channel Parameter Configuration Test List

EUT Configure Mode	Mode	Freq. Band (MHz)	Available Channel	Tested Channel	Modulation	Data Rate (Mbps)
/	/	/	/	/	/	/

### ● Radiated Emission Test (Below 1GHz)

- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations be Meen available modulations, data rates and antenna ports (If EUT with antenna diversity architecture).
- The device under test has multiple antennas. The mode that supports MIMO technology records the worst data, and the mode that does not support MIMO technology records antenna 1 as the worst data.

#### Select Channel Parameter Configuration Test List

EUT Configure Mode	Mode	Freq. Band (MHz)	Available Channel	Tested Channel	Modulation	Data Rate (Mbps)
B	802.11a(20MHz)	5180-5240	36 to 48	36	OFDM	MCS0

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● Radiated Emission Test (Above 1GHz)						
<input checked="" type="checkbox"/>	Pre-Scan has been conducted to determine the worst-case mode from all possible combinations be Meen available modulations, data rates and antenna ports (If EUT with antenna diversity architecture).					
<input type="checkbox"/>	Support 802.11ax, device debugging is tested in Full RU state.					
<input type="checkbox"/>	The device under test has multiple antennas. The mode that supports MIMO technology records the worst data, and the mode that does not support MIMO technology records antenna 1 as the worst data.					

## Select Channel Parameter Configuration Test List

EUT Configure Mode	Mode	Freq. Band (MHz)	Available Channel	Tested Channel	Modulation	Data Rate (Mbps)
B	802.11a	5180-5240	36 to 48	36, 40, 48	OFDM	6.0
B	802.11a	5745-5825	149 to 165	149, 157, 165	OFDM	6.0

● Band edge Measurement						
<input checked="" type="checkbox"/>	Pre-Scan has been conducted to determine the worst-case mode from all possible combinations be Meen available modulations, data rates and antenna ports (If EUT with antenna diversity architecture).					
<input type="checkbox"/>	The device supports multiple antenna transmission, allowing MIMO technology mode to be recorded as the worst.					
<input type="checkbox"/>	MIMO technology is not supported, and the 802.11a mode only records the worst antenna (ANT 1) as the worst					
<input type="checkbox"/>	Support 802.11ax, device debugging is tested in Full RU state.					
<input checked="" type="checkbox"/>	The device antenna gain and cable loss are added to the spectrum compensation coefficient or offset through software.					

## Select Channel Parameter Configuration Test List

EUT Configure Mode	Mode	Freq. Band (MHz)	Available Channel	Tested Channel	Modulation	Data Rate (Mbps)
B	802.11a	5180-5240	36 to 48	36	OFDM	6.0
B	802.11a	5745-5825	149 to 165	149, 165	OFDM	6.0

● Antenna Conducted Measurement						
<input checked="" type="checkbox"/>	Pre-Scan has been conducted to determine the worst-case mode from all possible combinations be Meen available modulations, data rates and antenna ports (If EUT with antenna diversity architecture).					
<input type="checkbox"/>	The device supports multiple antenna transmission, allowing MIMO technology mode to be recorded as the worst.					
<input type="checkbox"/>	MIMO technology is not supported, and the 802.11a mode only records the worst antenna (ANT 1) as the worst					
<input type="checkbox"/>	Support 802.11ax, device debugging is tested in Full RU state.					
<input checked="" type="checkbox"/>	The device antenna gain and cable loss are added to the spectrum compensation coefficient or offset through software.					

## Select Channel Parameter Configuration Test List

EUT Configure Mode	Mode	Freq. Band (MHz)	Available Channel	Tested Channel	Modulation	Data Rate (Mbps)
B	802.11a	5180-5240	36 to 48	36, 48	OFDM	6.0
B	802.11a	5745-5825	149 to 165	149, 165	OFDM	6.0

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## 6. Duty Cycle Measurement

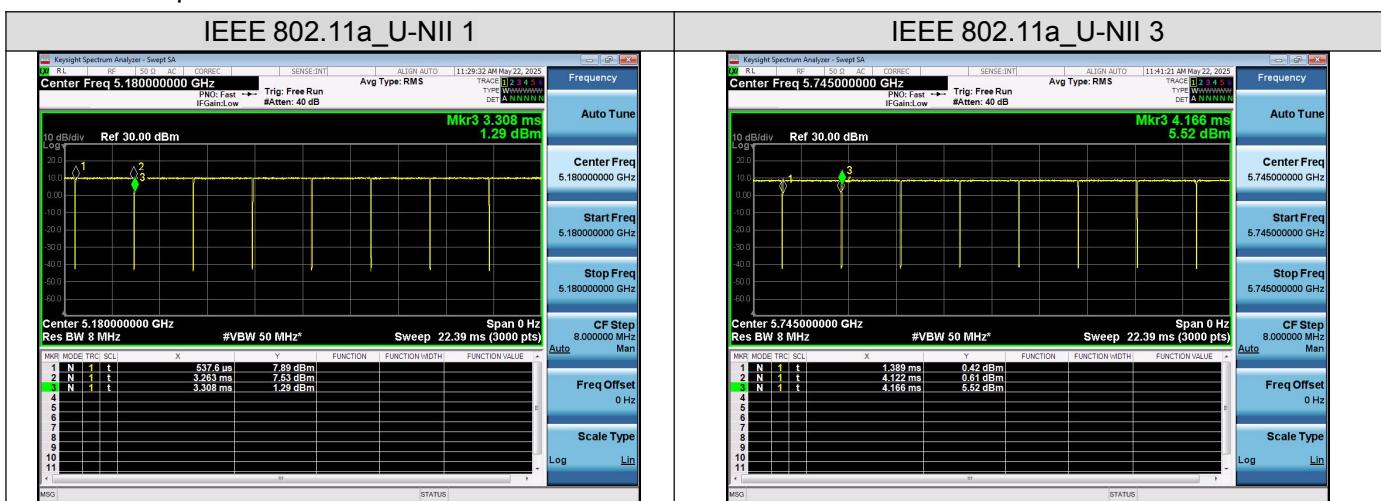
5GHz WLAN (NII) operation is possible in 20MHz channel bandwidths. The maximum achievable duty cycles for all modes were determined based on measurements performed on a spectrum analyzer in zero-span mode with RBW = 8MHz, VBW = 50MHz, and detector = Average. The RBW and VBW were both greater than 50/T, where T is the minimum transmission duration, and the number of sweep points across T was greater than 100. The duty cycles are as follows:

Operating mode	Data rates (Mbps)	Duty Cycle (%)	Duty Cycle Factor (dB)
Band U-NII1:5150MHz-5250MHz			
802.11a	6	98	0.09
Band U-NII 3:5250MHz-5350MHz			
802.11a	6	98	0.09

Remark:

1. Duty Cycle factor =  $10 * \log (1 / \text{Duty cycle})$
2. The duty cycle of each frequency band mode reflects the determination requirements of the low channel measurement value.
3. Involving the test items of duty cycle compensation coefficient, the final results have been added and calculated by the software and presented.

- The test plots as follows:



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## 7. RF Output Power Measurement

### 7.1 Provisions Applicable

Operation Band	EUT Category		LIMIT
U-NII-1	<input type="checkbox"/>	Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p < 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
	<input type="checkbox"/>	Fixed point-to-point Access Point	1 Watt (30 dBm)
	<input type="checkbox"/>	Indoor Access Point	1 Watt (30 dBm)
	<input checked="" type="checkbox"/>	Client devices	250mW (23.98 dBm)
U-NII-2A	/		250mW (23.98 dBm) or 11 dBm+10 log B*
U-NII-2C	/		250mW (23.98 dBm) or 11 dBm+10 log B*
U-NII-3	/		1 Watt (30 dBm)

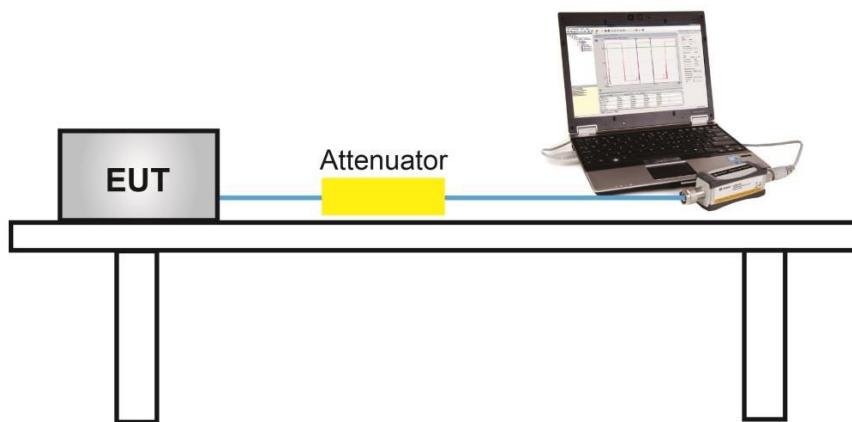
Note: Where B is the 26dB emission bandwidth in MHz.

### 7.2 Measurement Procedure

Method PM is Measurement using an RF average power meter. The procedure for this method is as follows:

1. The testing follows the ANSI C63.10 Section 12.3.3.1
2. Measurements may be performed using a wideband RF power meter with a thermocouple detector or equivalent if all of the following conditions are satisfied:
  3. The EUT is configured to transmit continuously, or to transmit with a constant duty cycle.
  4. At all times when the EUT is transmitting, it shall be transmitting at its maximum power control level.
  5. The integration period of the power meter exceeds the repetition period of the transmitted signal by at least a factor of five.
  6. Determine according to the duty cycle of the equipment: when it is less than 98%, follow the steps below.
  7. Measure the average power of the transmitter. This measurement is an average over both the ON and OFF periods of the transmitter.
  8. Adjust the measurement in dBm by adding [10 log (1 / D)], where D is the duty cycle {e.g., [10 log (1 / 0.25)], if the duty cycle is 25%}.
  9. The final test results have been increased by the duty cycle factor and recorded in the report.

### 7.3 Measurement Setup (Block Diagram of Configuration)



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## 7.4 Measurement Result

Test Data of Conducted Output Power for band 5.15-5.25 GHz				
Test Mode	Test Frequency (MHz)	Average Power (dBm)	Limits (dBm)	Result
802.11a	5180	12.91	23.98	Pass
	5200	11.11	23.98	Pass
	5240	10.92	23.98	Pass

Test Data of Conducted Output Power for band 5.725-5.850 GHz				
Test Mode	Test Frequency (MHz)	Average Power (dBm)	Limits (dBm)	Result
802.11a	5745	11.59	30	Pass
	5785	10.72	30	Pass
	5825	10.27	30	Pass

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## 8. DTS Bandwidth & EBW Bandwidth Measurement

### 8.1 Provisions Applicable

The minimum 6dB bandwidth shall be at least 500 kHz.

### 8.2 Measurement Procedure

#### ◆ -6dB bandwidth (DTS bandwidth) Test setting:

1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2. Set the EUT Work on operation frequency individually.
3. Set RBW = 100kHz.
4. Set the VBW  $\geq 3 \times$  RBW. Detector = Peak. Trace mode = max hold.
5. Measure the maximum width of the emission that is 6 dB down from the peak of the emission.

#### ◆ 99% occupied bandwidth Test setting:

1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
3. Set Span = approximately 1.5 to 5 times the OBW, centered on a nominal channel

The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW and video bandwidth (VBW) shall be approximately three times RBW; Sweep = auto; Detector function = peak

4. Set SPA Trace 1 Max hold, then View.

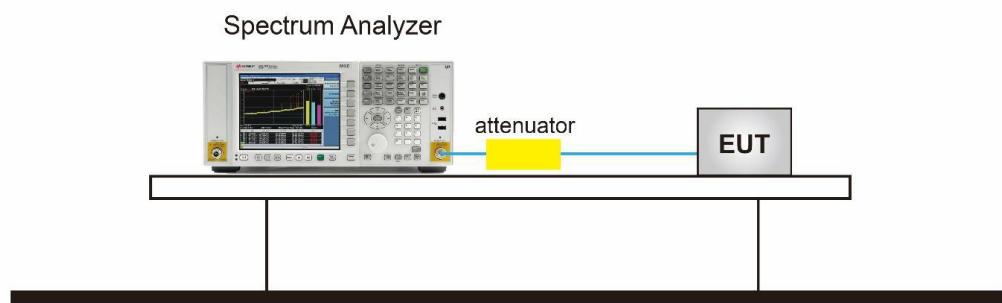
#### ◆ -26dB Bandwidth (EBW Bandwidth) Test setting:

1. Set RBW = approximately 1% of the emission bandwidth.
2. Set the VBW > RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Measure the maximum width of the emission that is 26 dB down from the maximum of the emission.

Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

**Note:** The EUT was tested according to KDB 789033 for compliance to FCC 47CFR 15.407 requirements.

### 8.3 Measurement Setup (Block Diagram of Configuration)



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#### 8.4 Measurement Results

Test Data of Occupied Bandwidth and -26dB Bandwidth for band 5.15-5.25 GHz					
Test Mode	Test Frequency (MHz)	99% Bandwidth (MHz)	-26dB Bandwidth (MHz)	Limits (MHz)	Result
802.11a	5180	16.506	19.164	N/A	Pass
	5200	16.491	19.452	N/A	Pass
	5240	16.517	19.083	N/A	Pass

Test Data of Occupied Bandwidth and DTS Bandwidth for band 5.725-5.85 GHz					
Test Mode	Test Frequency (MHz)	99% Bandwidth (MHz)	DTS Bandwidth (MHz)	Limits (MHz)	Result
802.11a	5745	16.516	16.436	0.5	Pass
	5785	16.515	16.434	0.5	Pass
	5825	16.523	16.432	0.5	Pass

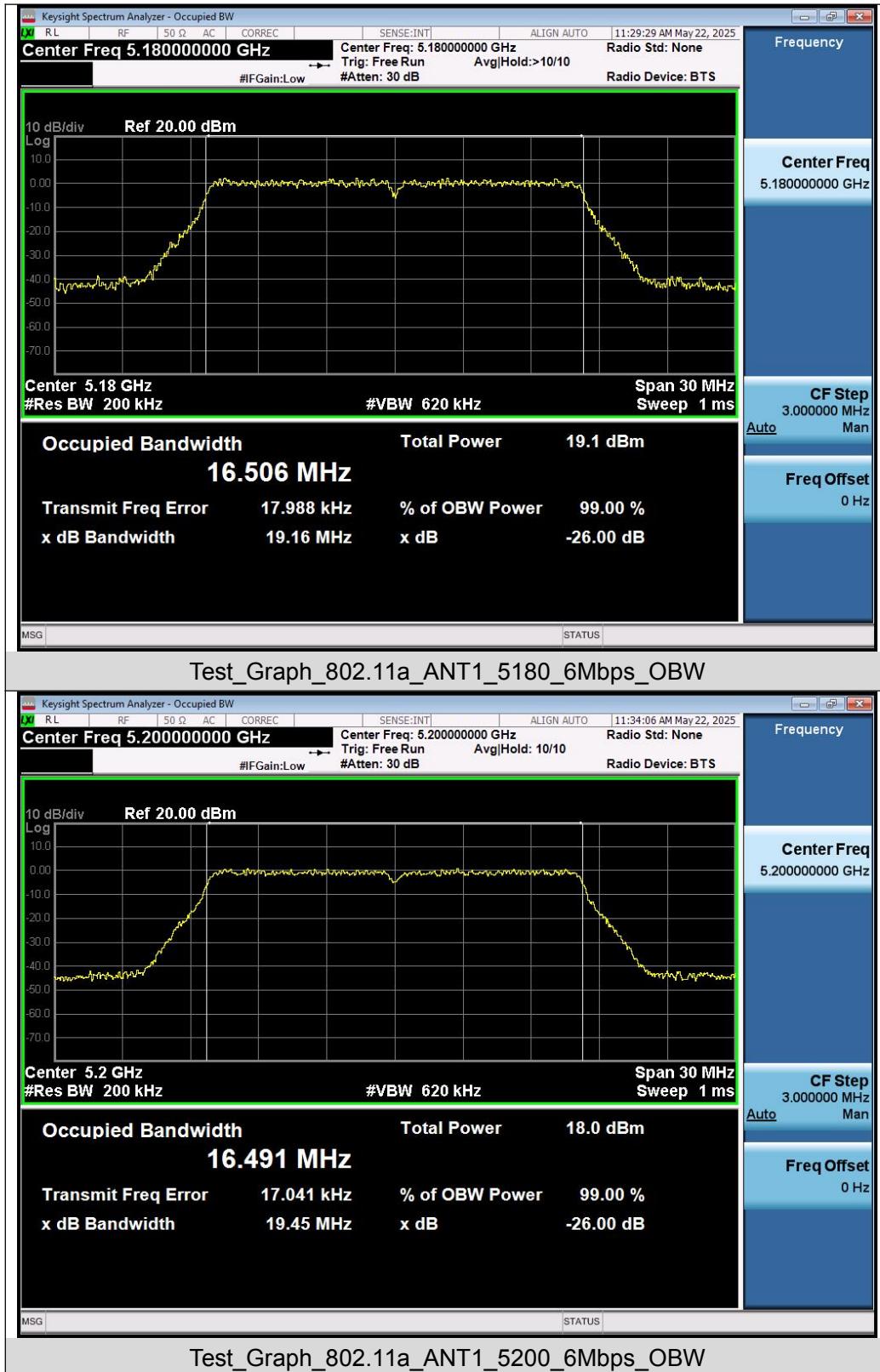
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## Test Graphs of Occupied Bandwidth and -26dB Bandwidth for band 5.15-5.25 GHz

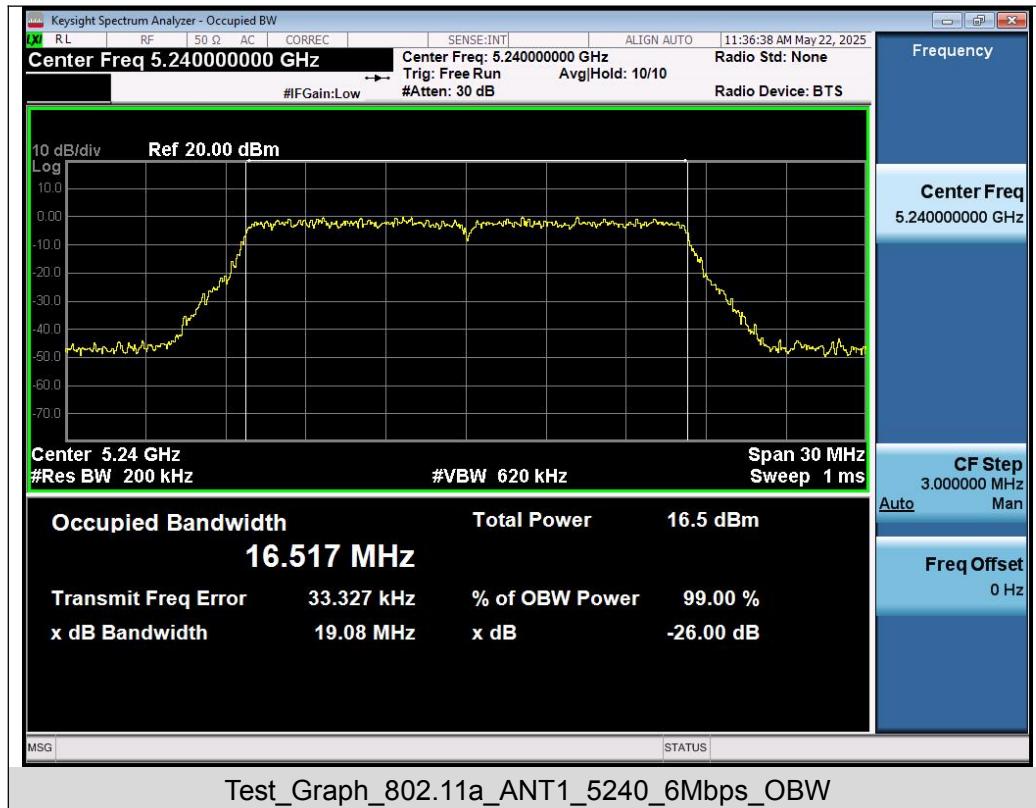


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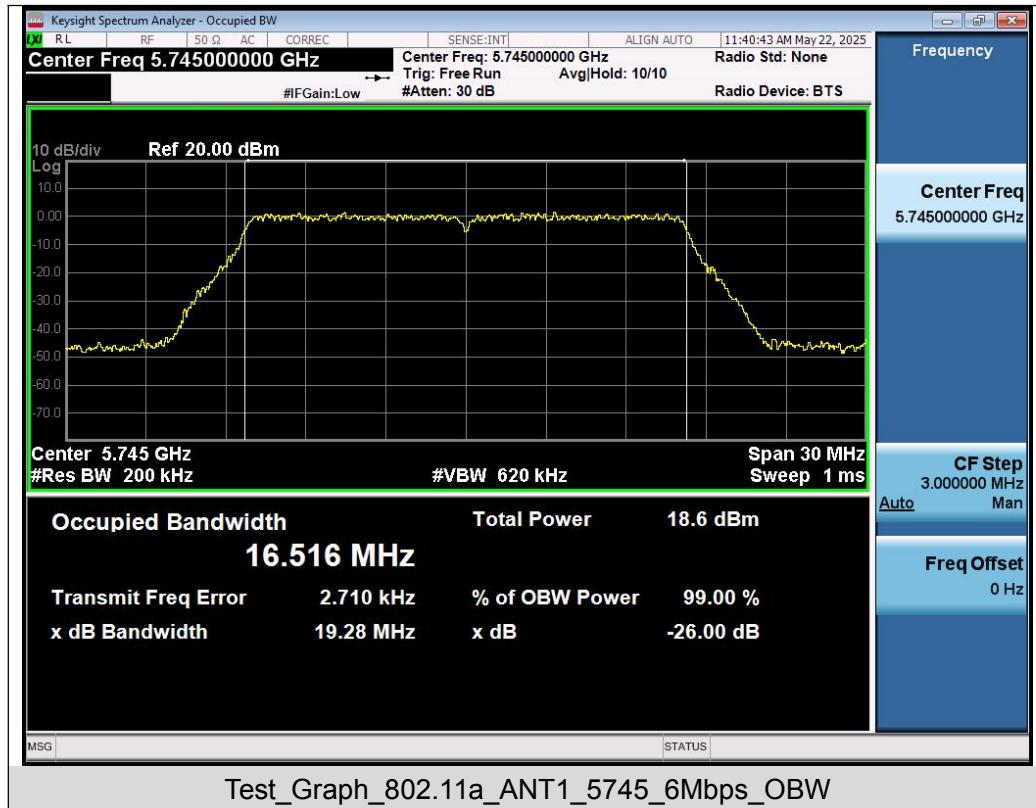
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### Test Graphs of Occupied Bandwidth for band 5.725-5.85 GHz

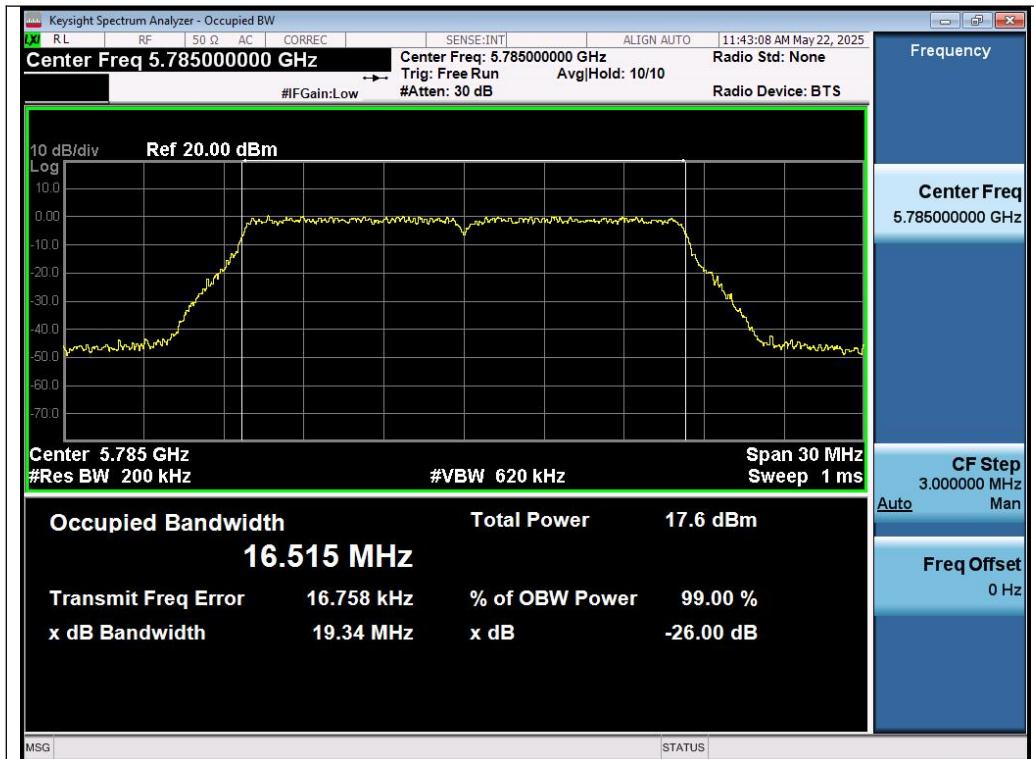


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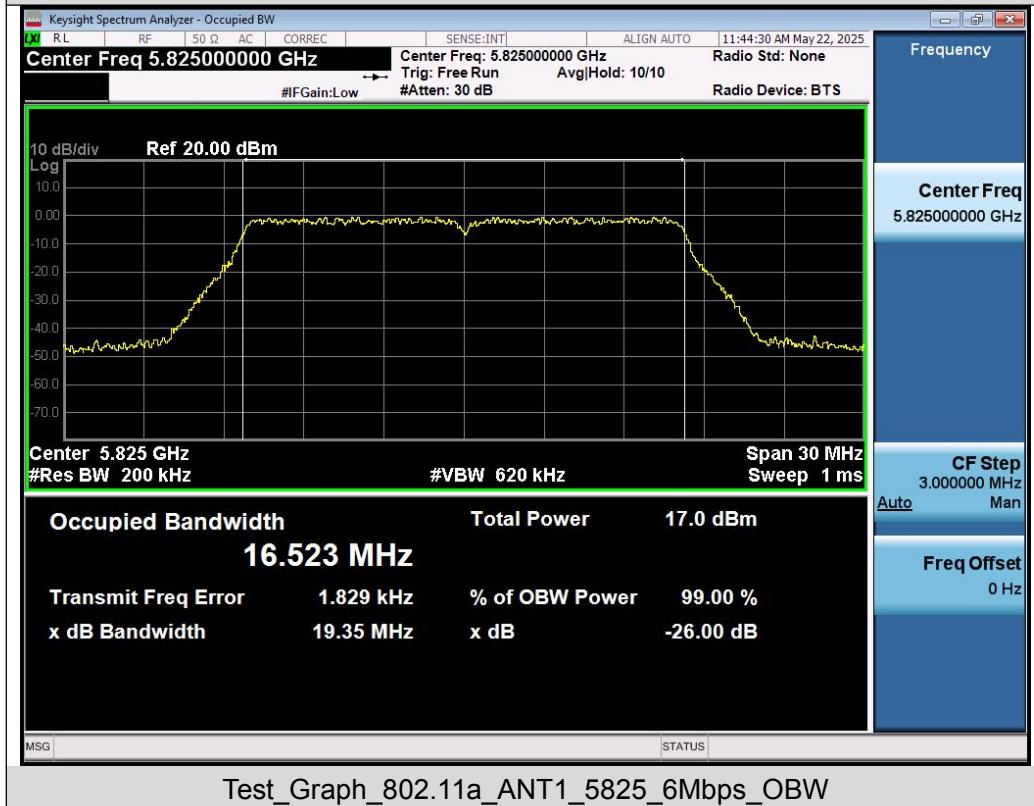
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Test\_Graph\_802.11a\_ANT1\_5785\_6Mbps\_OBW



Test\_Graph\_802.11a\_ANT1\_5825\_6Mbps\_OBW

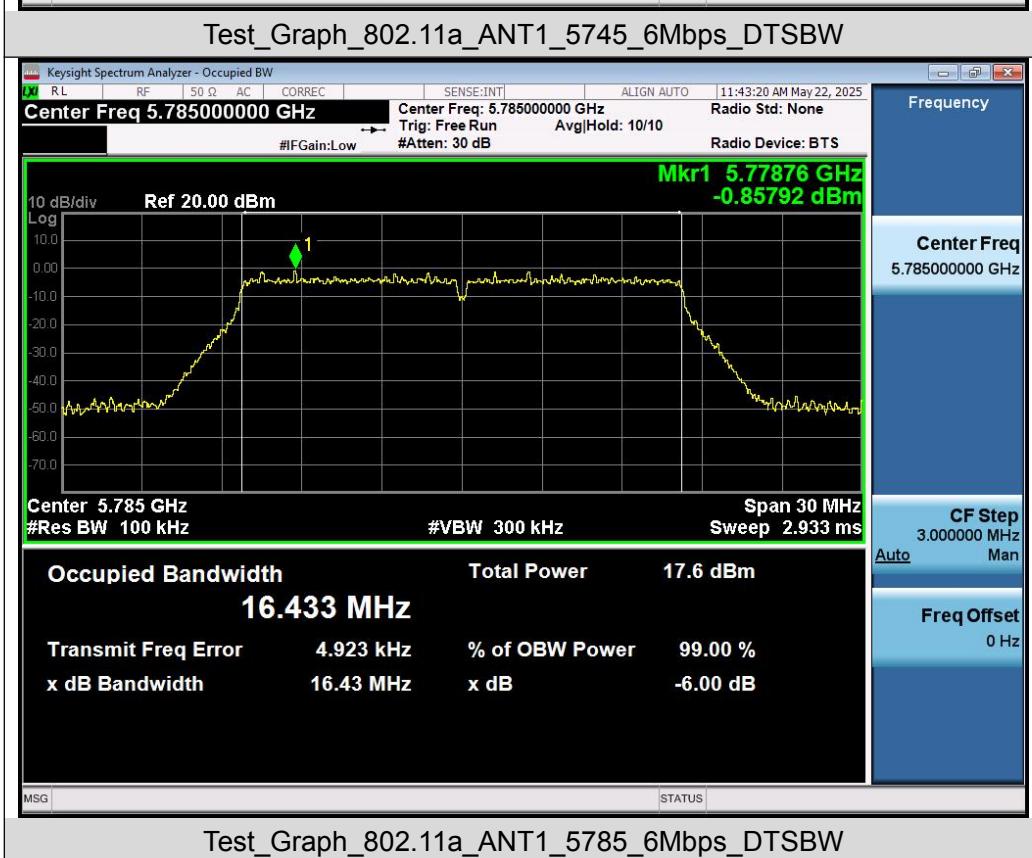
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## Test Graphs of DTS Bandwidth for band 5.725-5.85 GHz

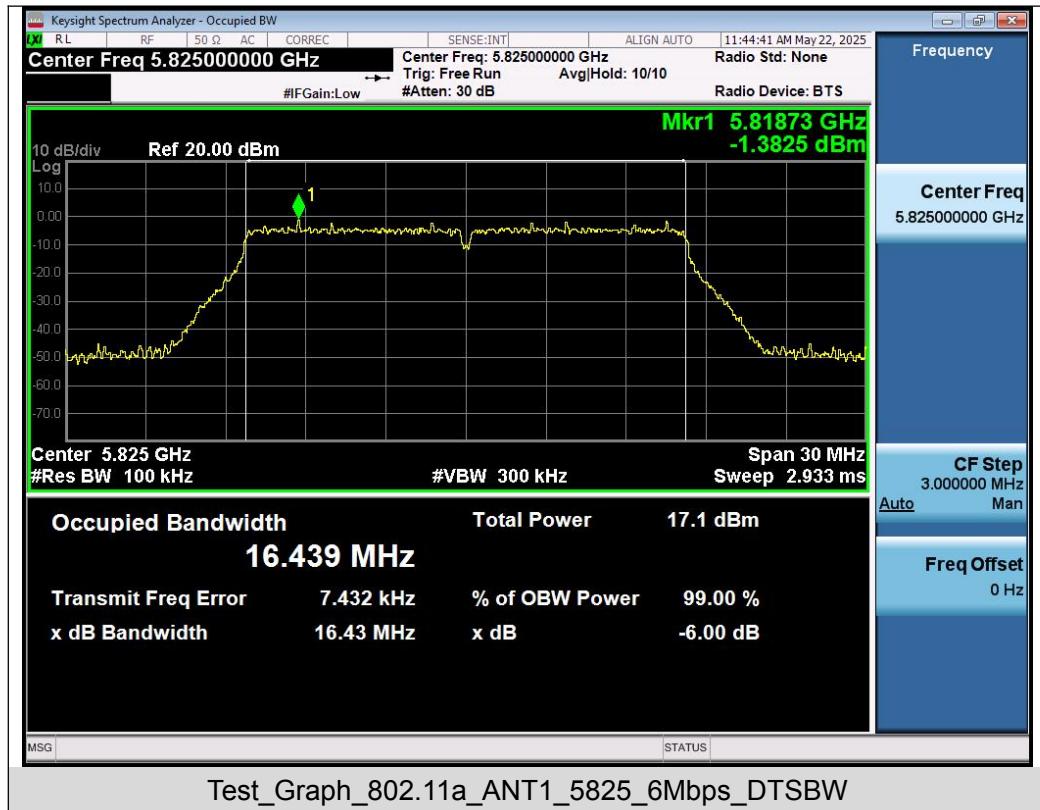


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## 9. Power Spectral Density Measurement

### 9.1 Provisions Applicable

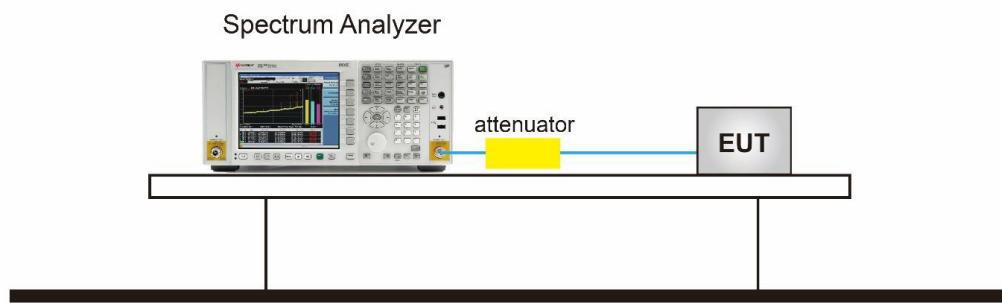
Operation Band	EUT Category		LIMIT
U-NII-1	<input type="checkbox"/>	Outdoor Access Point	17dBm/ MHz
	<input type="checkbox"/>	Fixed point-to-point Access Point	17dBm/ MHz
	<input type="checkbox"/>	Indoor Access Point	17dBm/ MHz
	<input checked="" type="checkbox"/>	Client devices	11dBm/ MHz
U-NII-2A	/		11dBm/ MHz
U-NII-2C	/		11dBm/ MHz
U-NII-3	/		30 dBm/500kHz

### 9.2 Measurement Procedure

For Average power spectral density test:

1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator.
2. Span was set to encompass the entire 26dB EBW of the signal.
3. RBW = 1MHz.
4. If measurement bandwidth of Maximum PSD is specified in 500 kHz, RBW = 100KHz
5. Set VBW $\geq$ [3xRBW].
6. Sweep Time=Auto couple.
7. Detector function=RMS (i.e., power averaging).
8. Trace average at least 100 traces in power averaging (rms) mode.
9. When the measurement bandwidth of Maximum PSD is specified in 100 kHz, add a constant factor  $10\log(500\text{kHz}/100\text{kHz}) = 6.99$  dB to the measured result.
10. Determine according to the duty cycle of the equipment: when it is less than 98%, follow the steps below.
11. Add  $[10 \log (1/D)]$ , where D is the duty cycle, to the measured power to compute the average power during the actual transmission times (because the measurement represents an average over both the ON and OFF times of the transmission). For example, add  $[10 \log (1/0.25)] = 6$  dB if the duty cycle is 25%.
12. The final test results have been increased by the duty cycle factor and recorded in the report

### 9.3 Measurement Setup (Block Diagram of Configuration)



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#### 9.4 Measurement Result

Test Data of Conducted Output Power Density for band 5.15-5.25 GHz				
Test Mode	Test Channel (MHz)	Average Power Density (dBm/MHz)	Limits (dBm/MHz)	Result
802.11a	5180	1.503	11	Pass
	5200	-0.130	11	Pass
	5240	-0.306	11	Pass

Test Data of Conducted Output Power Density for band 5.725-5.85 GHz					
Test Mode	Test Channel (MHz)	Average Power Density (dBm/100kHz)	Average Power Density (dBm/500kHz)	Limits (dBm/500kHz)	Pass or Fail
802.11a	5745	-8.655	-1.665	30	Pass
	5785	-9.640	-2.650	30	Pass
	5825	-10.075	-3.085	30	Pass

Note:

1. Power density(dBm/500kHz) = Power density(dBm/100kHz)+10\*log(500/100).

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## Test Graphs of Conducted Output Power Spectral Density for band 5.15-5.25 GHz



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### Test Graphs of Conducted Output Power Spectral Density for band 5.725-5.85 GHz

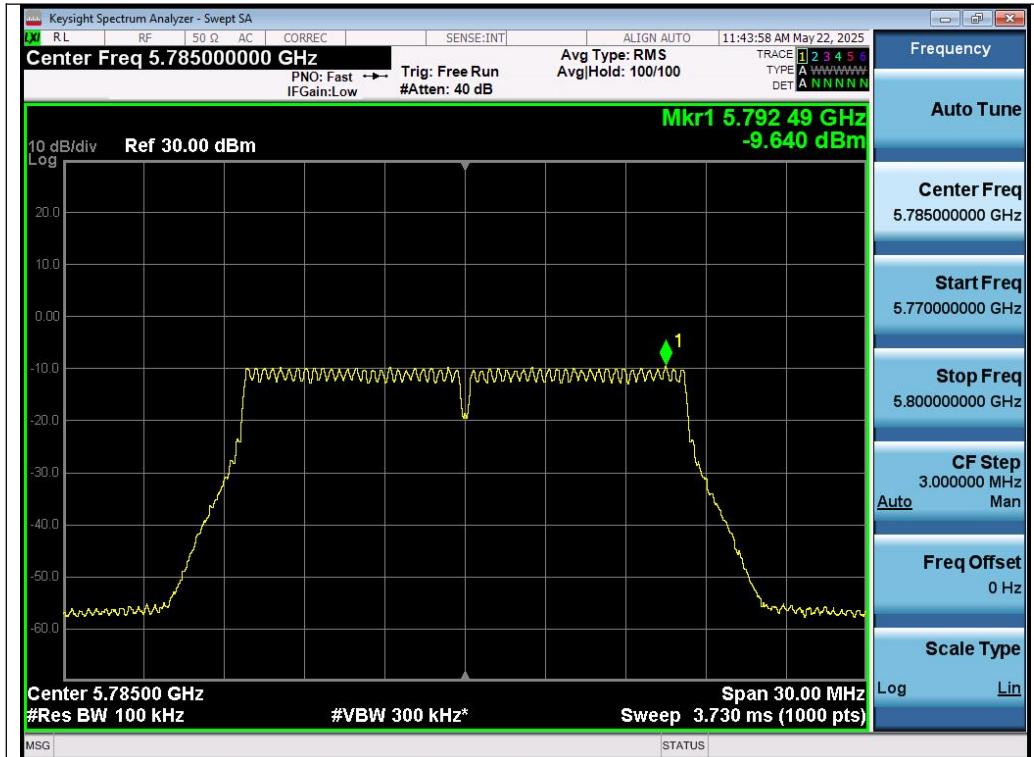


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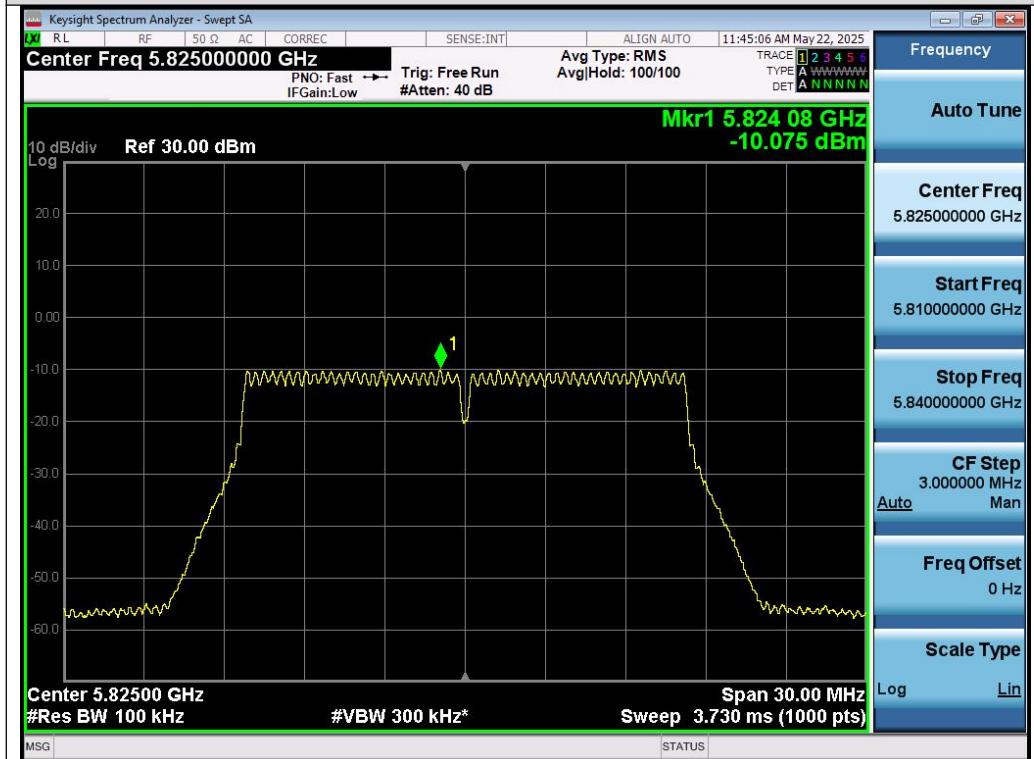
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Test\_Graph\_802.11a\_ANT1\_5785\_6Mbps\_PSD



Test\_Graph\_802.11a\_ANT1\_5825\_6Mbps\_PSD

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## 10. Conducted Band Edge and Out-of-Band Emissions

### 10.1 Provisions Applicable

	Applicable to	Limit	
		Field strength at 3m (dBuV/m)	
Restricted bands	789033 D02 General UNII Test Procedures New Rules v02r01	PK: 74	AV: 54
Out of the restricted bands	Applicable to	EIRP Limit (dBm/MHz)	
	FCC 15.407(b)(1)	PK: -27	PK: 68.2
	15.407(b)(2)		
	15.407(b)(3)		
	15.407(b)(4)	See Note 2	

Note 1: The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength:

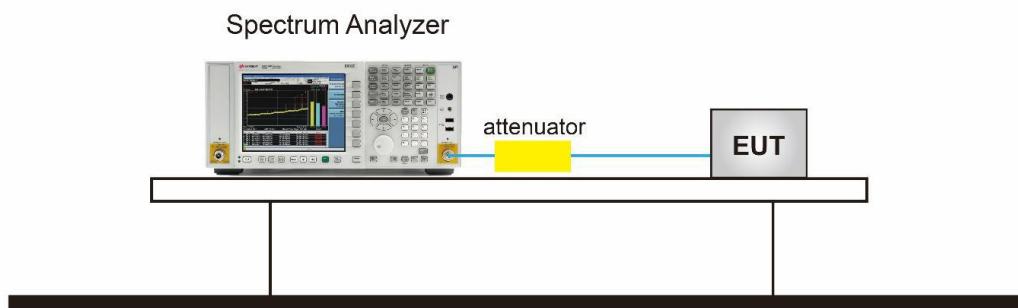
$$E = \frac{1000000 \sqrt{30 P}}{3} \mu\text{V/m}, \text{ where } P \text{ is the eirp (Watts).}$$

Note 2: 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.

### 10.2 Measurement Procedure

1. Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator
2. Set the Span = wide enough to capture the peak level of the in-band emission and all spurious emissions from the lowest frequency generated in the EUT up through the 10th harmonic.
3. RBW = 1MHz; VBW= 3MHz; Sweep = auto; Detector function = Peak. (Test frequency below 1GHz)
4. RBW = 1 MHz; VBW= 3 MHz; Sweep = auto; Detector function = Peak. (Test frequency Above 1GHz)
5. Set SPA Trace 1 Max hold, then View.
6. Antenna gain and path loss have been compensated to the Correction factor.
7. Mark the maximum useless stray point and compare it with the limit value to record the result.

### 10.3 Measurement Setup (Block Diagram of Configuration)



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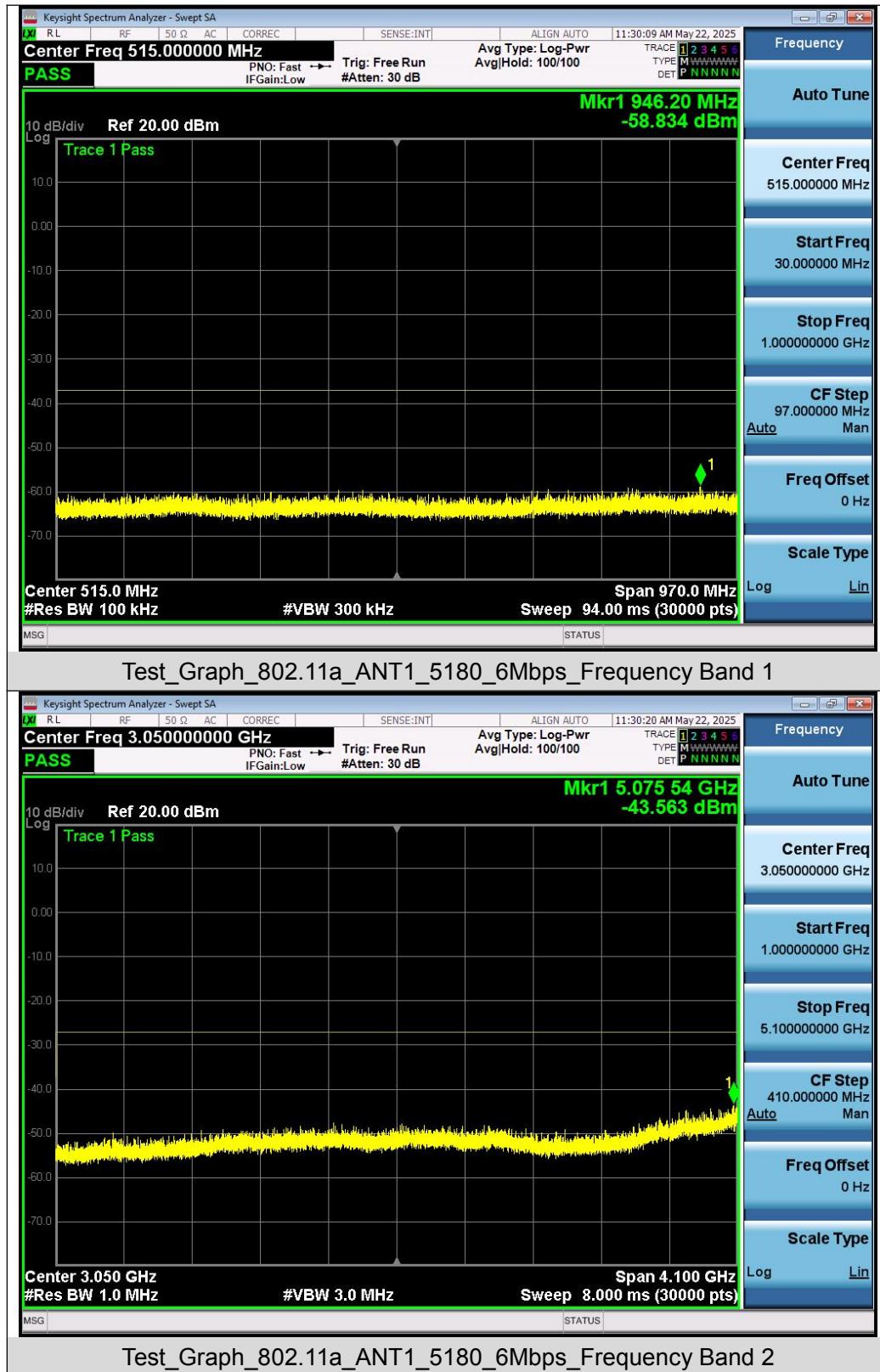
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## 10.4 Measurement Results

### Test Graphs of Spurious Emissions outside of the 5.15-5.25 GHz band

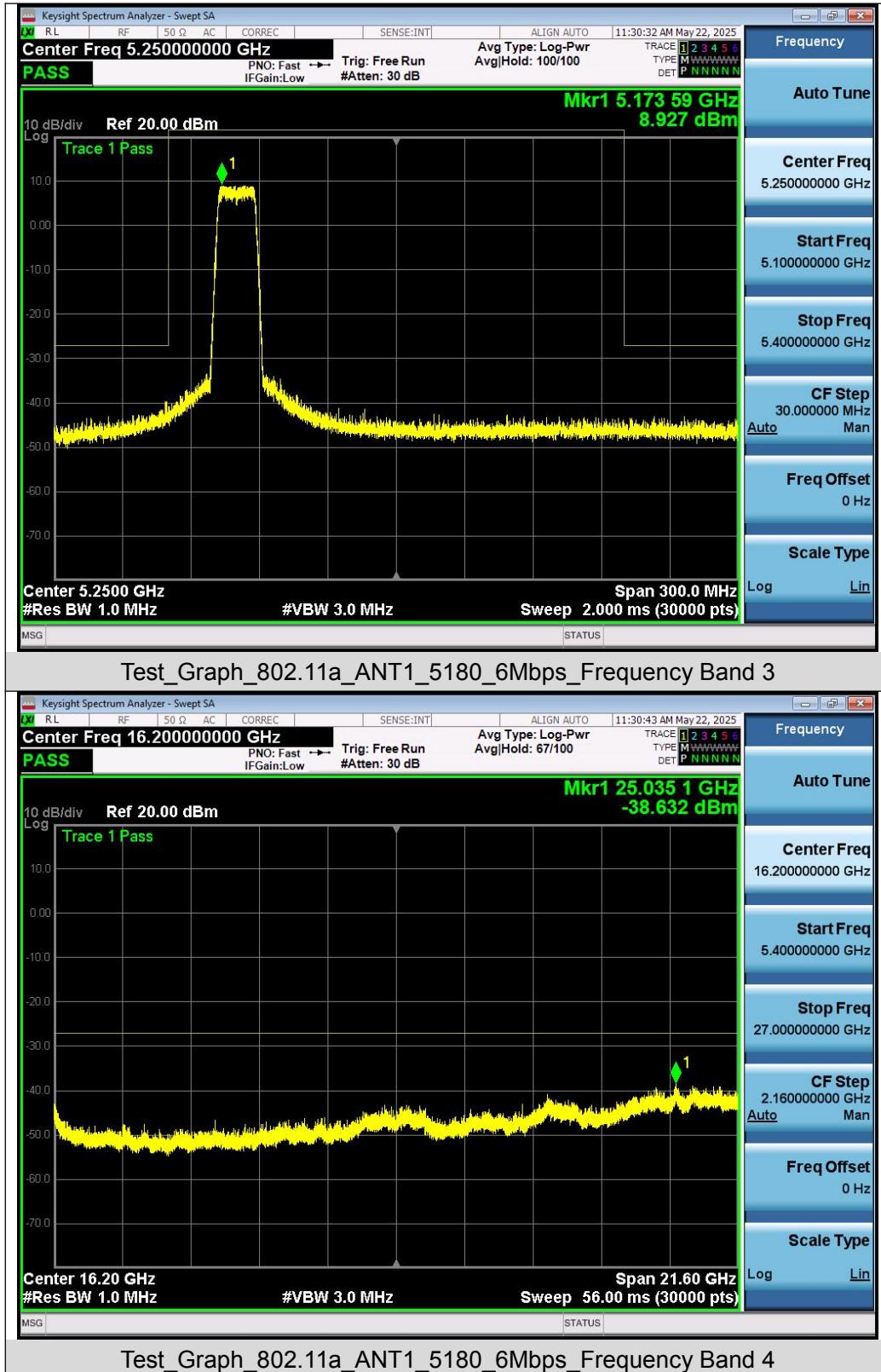


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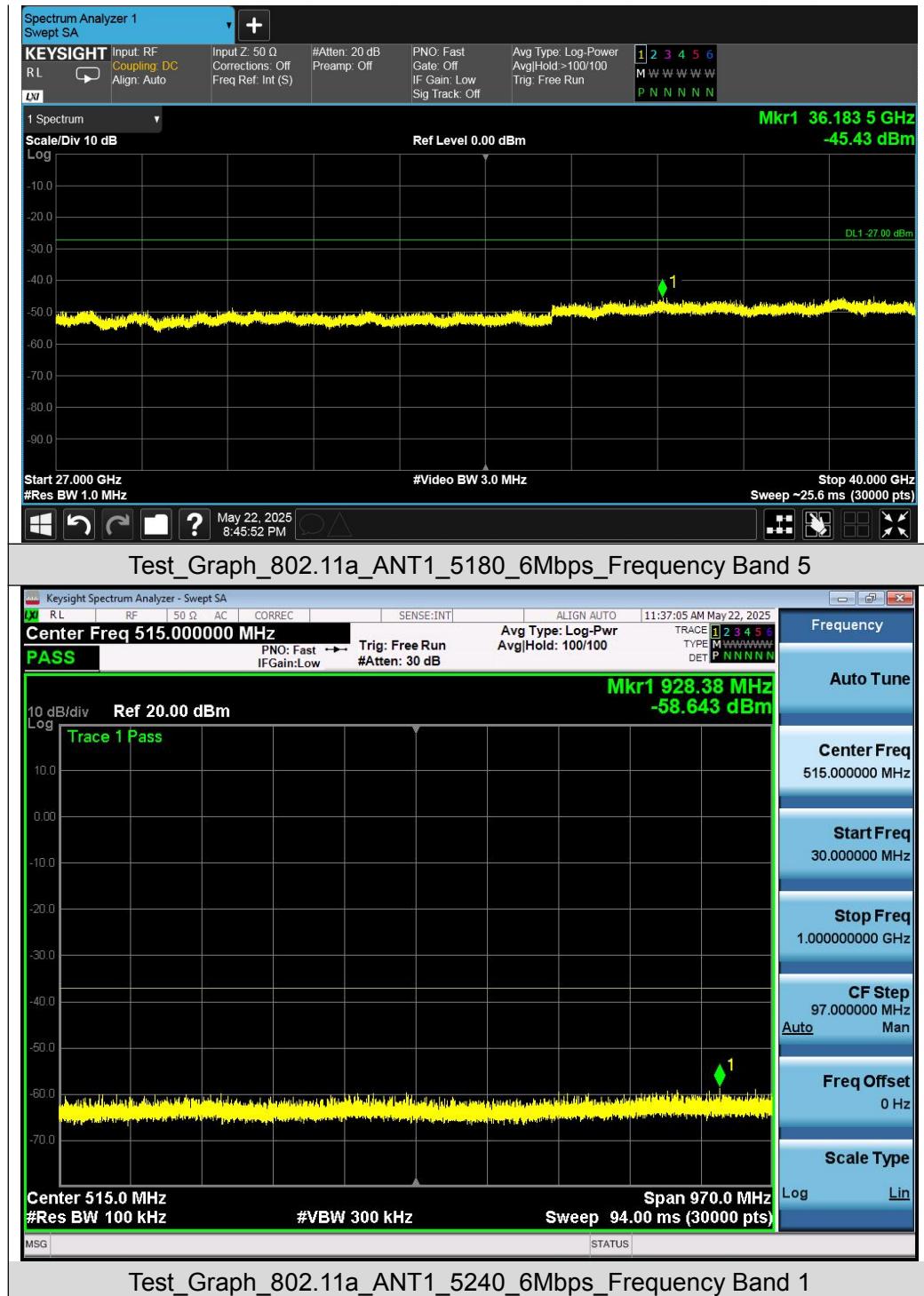


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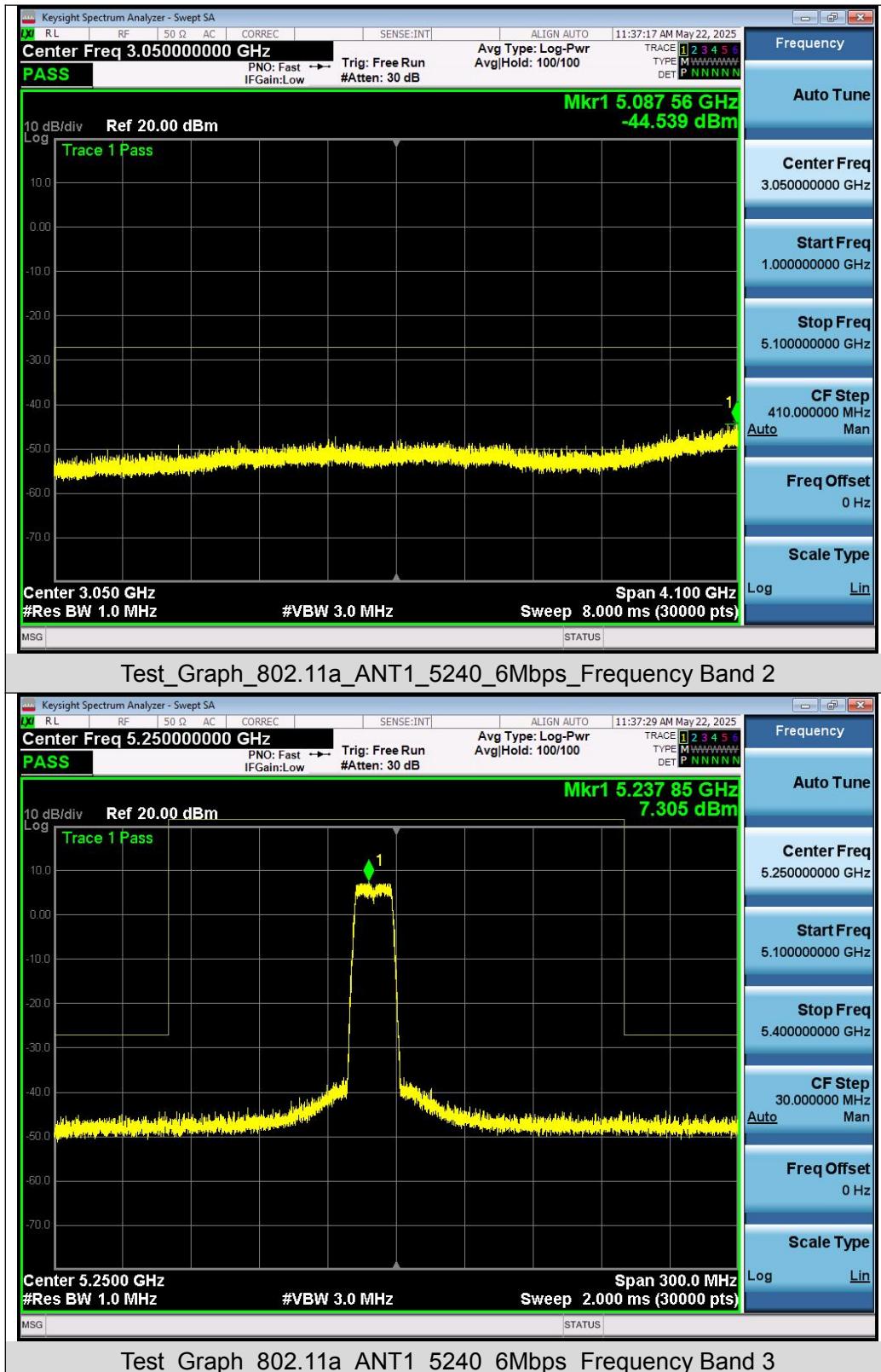


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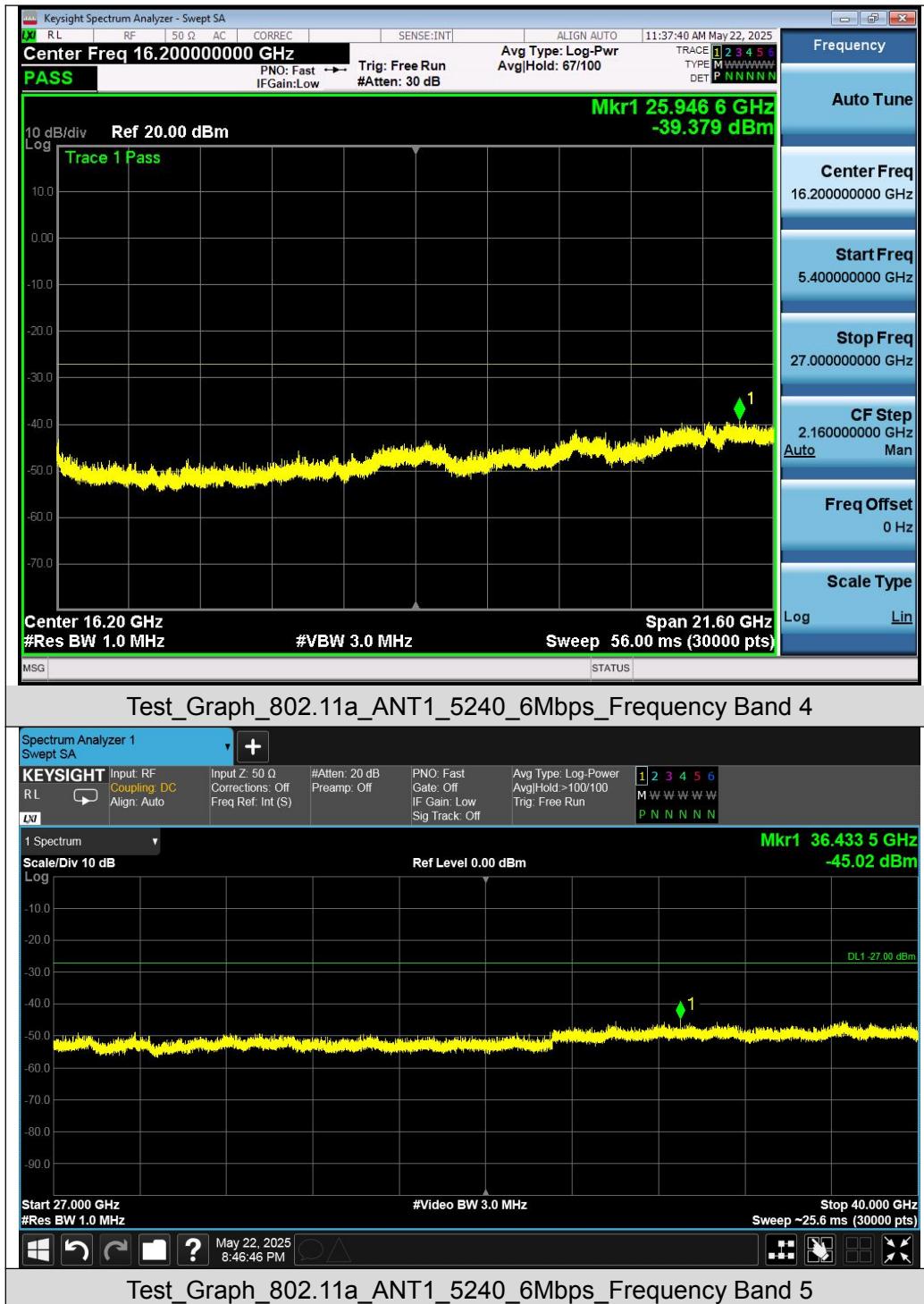


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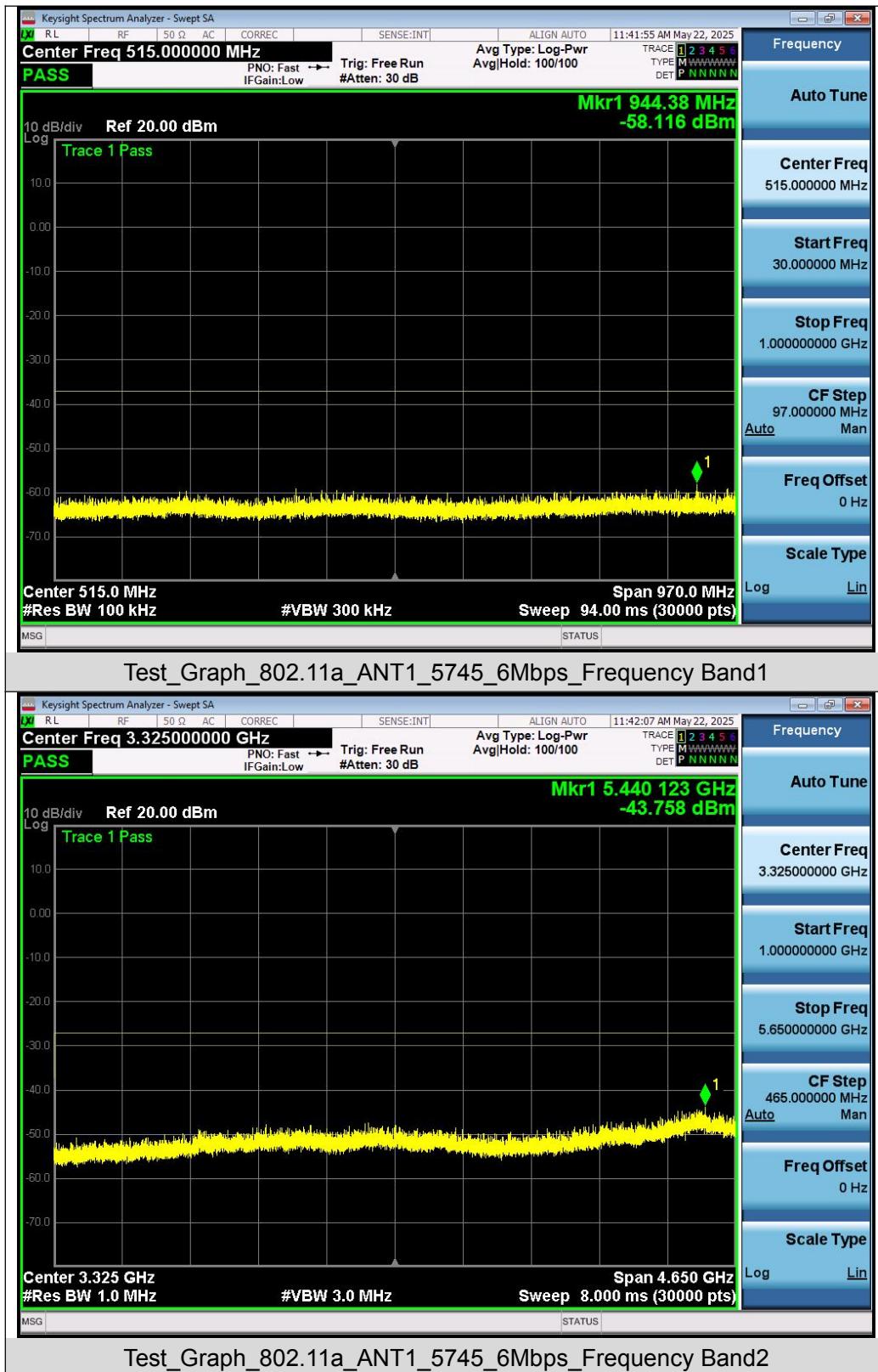
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## Test Graphs of Spurious Emissions outside of the 5.725-5.85 GHz band

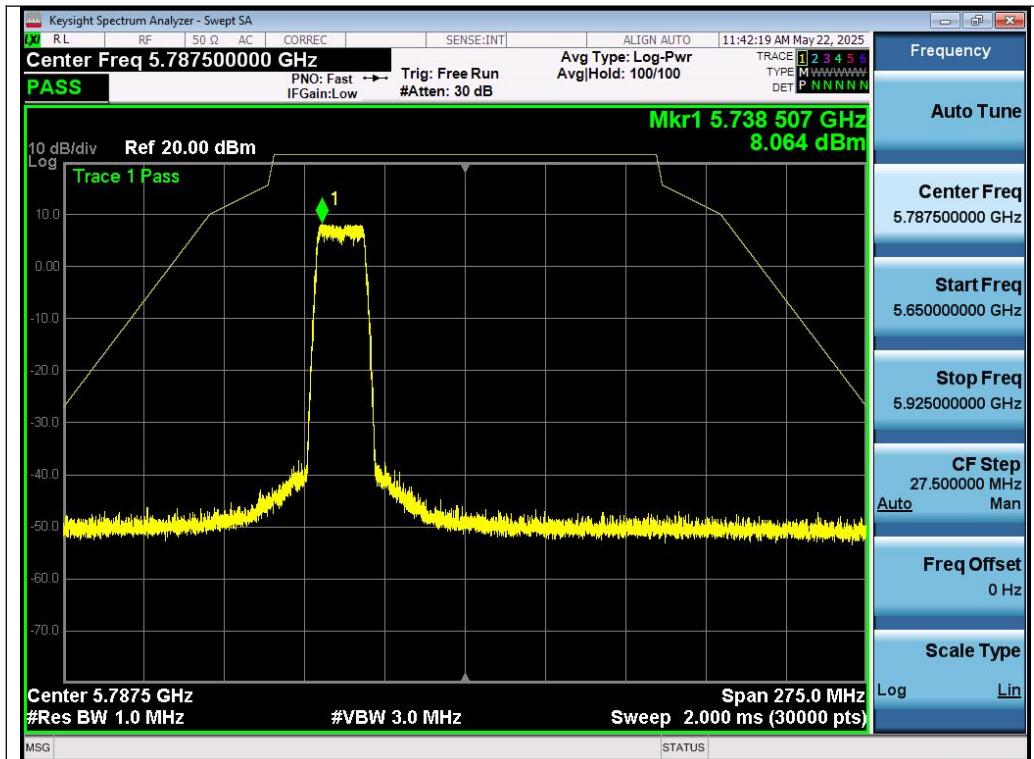


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Test\_Graph\_802.11a\_ANT1\_5745\_6Mbps\_Frequency Band3



Test\_Graph\_802.11a\_ANT1\_5745\_6Mbps\_Frequency Band4

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