

**47 CFR PART 15 SUBPART E TEST REPORT**

**for**

**4x4 Dual Band 802.11ac wave2 Wireless Module**

**Model No.: WMX6402-AS**

**FCC ID: W23-WMXWAVE2AS**

**of**

Applicant: JJPlus Corporation

Address: 15F-7, No. 2, Jianba Road, Zhonghe Dist., New Taipei City 235,  
Taiwan

**Tested and Prepared**

**by**

**Worldwide Testing Services (Taiwan) Co., Ltd.**

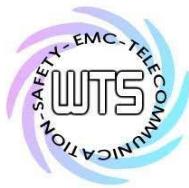
**FCC Registration No.: TW1477, TW1072**

**Industry Canada filed test laboratory Reg. No. 20037**



**Report No.: W6R22110-21274-C-54**

6F, NO. 58, LANE 188, RUEY-KUANG RD., NEIHU TAIPEI 114, TAIWAN, R.O.C.  
TEL: 886-2-66068877      FAX: 886-2-66068879      E-mail: [wts@wts-lab.com](mailto:wts@wts-lab.com)

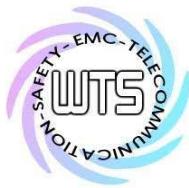


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

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## 1 General Information

### 1.1 Notes

The purpose of conformity testing is to increase the probability of adherence to the essential requirements or conformity specifications, as appropriate.

The complexity of the technical specifications, however, means that full and thorough testing is impractical for both technical and economic reasons.

Furthermore, there is no guarantee that a test sample which has passed all the relevant tests conforms to a specification.

Neither is there any guarantee that such a test sample will interwork with other genuinely open systems. The existence of the tests nevertheless provides the confidence that the test sample possesses the qualities as maintained and that its performance generally conforms to representative cases of communications equipment.

The test results of this test report relate exclusively to the item tested as specified in 1.5.

The test report may only be reproduced or published in full.

Reproduction or publication of extracts from the report requires the prior written approval of the Worldwide Testing Services(Taiwan) Co., Ltd.

#### Specific Conditions:

Usage of the hereunder tested device in combination with other integrated or external antennas requires at least additional output power measurements, spurious emission measurements, conducted emission measurements (AC supply lines) and radio frequency exposure evaluations for each individual configuration performed, for certification by FCC.

#### Tester:

November 18, 2021

Kent Lin

Date

WTS-Lab.

Name

Signature

#### Technical responsibility for area of testing:

November 18, 2021

Kevin Wang

Date

WTS

Name

Signature



# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
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## **1.2 Testing laboratory**

### **1.2.1 Location**

OATS

No.5-1, Lishui, Shuang Sing Village, Wanli Dist., New Taipei City 207, Taiwan (R.O.C.)  
3 meter semi-anechoic chamber

No.35, Aly. 21, Ln. 228, Ankang Rd., Neihu Dist., Taipei City 114, Taiwan (R.O.C.)  
TEL:886-2-6613-0228  
FAX:886-2-2791-5046

Company

Worldwide Testing Services(Taiwan) Co., Ltd.  
6F, NO. 58, LANE 188, RUEY-KUANG RD.  
NEIHU, TAIPEI 114, TAIWAN R.O.C.  
Tel : 886-2-66068877  
Fax : 886-2-66068879

### **1.2.2 Details of accreditation status**

Accredited testing laboratory

FCC filed test laboratory Reg. No. TW1477, TW1072

Industry Canada filed test laboratory Reg. No. 20037

**Test location, where different from Worldwide Testing Services (Taiwan) Co., Ltd. :**

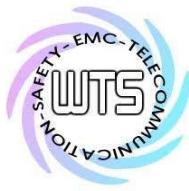
Name: ./  
Accredited number: ./  
Street: ./  
Town: ./  
Country: ./  
Telephone: ./  
Fax: ./

## **1.3 Details of approval holder**

Name: JJPlus Corporation  
Street: 13F.-3, No.120, Qiaohe Rd., Zhonghe Dist.,  
Town: New Taipei City 235,  
Country: Taiwan  
Telephone: 02-2248-5700  
Fax: 02-2248-5977

## **1.4 Application details**

Date of receipt of test item(1<sup>st</sup>): August 23, 2019  
Date of test(1<sup>st</sup>): from August 26, 2019 to October 22, 2019  
Date of receipt of test item(2<sup>nd</sup>): February 20, 2020  
Date of test(2<sup>nd</sup>): from February 21, 2020 to May 04, 2020  
Date of receipt of test item(3<sup>rd</sup>): October 28, 2021  
Date of test(3<sup>rd</sup>): from October 29, 2021 to November 17, 2021



# Worldwide Testing Services(Taiwan) Co., Ltd.

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## 1.5 General information of Test item

Type of test item:	4x4 Dual Band 802.11ac wave2 Wireless Module
Model Number:	WMX6402-AS
Brand Name:	jjPlus CORP.
Multi-listing model number:	WMX6302-AS, WMX5402-AS, WMX2402-AS, WMX6401-AS, WMX6301-AS, WMX5401-AS, WMX2401-AS, WMX6402, WMX6401, WMX6302, WMX6301, WMX5402, WMX5401, WMX2402, WMX2401
Photos:	./.

## Technical data

Frequency band:  
Band 1: 5.150 GHz-5.250 GHz, Band 2: 5.250 GHz-5.350 GHz  
Band 3: 5.470 GHz-5.725 GHz, Band 4: 5.725 GHz-5.850 GHz

### Band 1

802.11a:  
Low Channel (CH36): 5180 MHz  
Middle Channel (CH44): 5220 MHz  
High Channel (CH48): 5240 MHz

802.11n 20MHz:  
Low Channel (CH36): 5180 MHz  
Middle Channel (CH44): 5220 MHz  
High Channel (CH48): 5240 MHz

802.11n 40MHz:  
Low Channel (CH38): 5190 MHz  
High Channel (CH46): 5230 MHz

802.11ac 80MHz:  
CH42: 5210 MHz

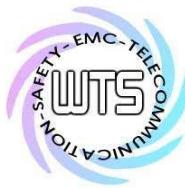
### Band 2

802.11a:  
Low Channel (CH52): 5260 MHz  
Middle Channel (CH60): 5300 MHz  
High Channel (CH64): 5320 MHz

802.11n 20MHz:  
Low Channel (CH52): 5260 MHz  
Middle Channel (CH60): 5300 MHz  
High Channel (CH64): 5320 MHz

802.11n 40MHz:  
Low Channel (CH54): 5270 MHz  
High Channel (CH62): 5310 MHz

802.11ac 80MHz:  
CH58: 5290 MHz



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Band 3

802.11a:	Low Channel (CH100): 5500MHz Middle Channel (CH116): 5580 MHz High Channel (CH140): 5700 MHz
802.11n 20MHz:	Low Channel (CH100): 5500 MHz Middle Channel (CH116): 5580 MHz High Channel (CH140): 5700 MHz
802.11n 40MHz:	Low Channel (CH102): 5510 MHz Middle Channel (CH110): 5550 MHz High Channel (CH134): 5670 MHz
802.11ac 80MHz	Low Channel (CH106): 5530 MHz
<b>Band 4</b>	
802.11a:	Low Channel (CH149): 5745 MHz Middle Channel (CH157): 5785 MHz High Channel (CH165): 5825 MHz
802.11n 20MHz:	Low Channel (CH149): 5745 MHz Middle Channel (CH157): 5785 MHz High Channel (CH165): 5825 MHz
802.11n 40MHz:	Low Channel (CH151): 5755 MHz High Channel (CH159): 5795 MHz
802.11ac 80MHz	CH155: 5775 MHz



# Worldwide Testing Services(Taiwan) Co., Ltd.

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## **Band 1**

Numbers of channel: 802.11a: 4 channels  
802.11n 20 MHz: 4 channels  
802.11n 40 MHz: 2 channels  
802.11ac 80 MHz: 1 channel

## **Band 2**

Numbers of channel: 802.11a: 4 channels  
802.11n 20 MHz: 4 channels  
802.11n 40 MHz: 2 channels  
802.11ac 80 MHz: 1 channel

## **Band 3**

Numbers of channel: 802.11a: 11 channels  
802.11n 20 MHz: 11 channels  
802.11n 40 MHz: 5 channels  
802.11ac 80 MHz: 1 channel

## **Band 4**

Numbers of channel: 802.11a: 5 channels  
802.11n 20 MHz: 5 channels  
802.11n 40 MHz: 2 channels  
802.11ac 80 MHz: 1 channel

Operating modes: Duplex

Type of modulation: OFDM

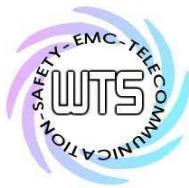
Fixed point to point operation: No

Antenna: Dipole antenna

Antenna gain: 3 dBi (for model no: AOA160-221020-000000)  
2 dBi (for model no : A8-A003-A9001)  
(Band 1~ Band 4) (Testing laboratory assumes no responsibility  
for affecting any validity of the result while the information which  
is provided by clients.)

Directional gain: 9.02 dBi

Power supply: 3.3Vd.c.



# Worldwide Testing Services(Taiwan) Co., Ltd.

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## **ANT1**

### **Band 1**

Emission designator: 802.11a: 16M63D1D  
802.11n 20 MHz: 18M17D1D  
802.11n 40 MHz: 36M54D1D  
802.11ac 80 MHz: 76M28D1D

### **Band 2**

Emission designator: 802.11a: 16M73D1D  
802.11n 20 MHz: 18M08D1D  
802.11n 40 MHz: 36M73D1D  
802.11ac 80 MHz: 76M28D1D

### **Band 3**

Emission designator: 802.11a: 19M13D1D  
802.11n 20 MHz: 18M56D1D  
802.11n 40 MHz: 37M50D1D  
802.11ac 80 MHz: 77M56D1D

### **Band 4**

Emission designator: 802.11a: 16M44D1D  
802.11n 20 MHz: 18M37D1D  
802.11n 40 MHz: 36M54D1D  
802.11ac 80 MHz: 75M96D1D

## **ANT2**

### **Band 1**

Emission designator: 802.11a: 16M83D1D  
802.11n 20 MHz: 18M08D1D  
802.11n 40 MHz: 36M73D1D  
802.11ac 80 MHz: 76M28D1D

### **Band 2**

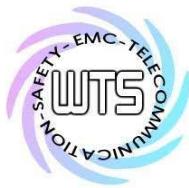
Emission designator: 802.11a: 16M63D1D  
802.11n 20 MHz: 18M08D1D  
802.11n 40 MHz: 36M73D1D  
802.11ac 80 MHz: 76M60D1D

### **Band 3**

Emission designator: 802.11a: 16M54D1D  
802.11n 20 MHz: 18M08D1D  
802.11n 40 MHz: 36M73D1D  
802.11ac 80 MHz: 76M28D1D

### **Band 4**

Emission designator: 802.11a: 16M44D1D  
802.11n 20 MHz: 17M79D1D  
802.11n 40 MHz: 36M35D1D  
802.11ac 80 MHz: 75M96D1D



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## **ANT3**

### **Band 1**

Emission designator: 802.11a: 16M63D1D  
802.11n 20 MHz: 18M27D1D  
802.11n 40 MHz: 36M54D1D  
802.11ac 80 MHz: 75M96D1D

### **Band 2**

Emission designator: 802.11a: 16M73D1D  
802.11n 20 MHz: 18M37D1D  
802.11n 40 MHz: 36M73D1D  
802.11ac 80 MHz: 75M96D1D

### **Band 3**

Emission designator: 802.11a: 16M54D1D  
802.11n 20 MHz: 18M94D1D  
802.11n 40 MHz: 36M73D1D  
802.11ac 80 MHz: 76M28D1D

### **Band 4**

Emission designator: 802.11a: 16M44D1D  
802.11n 20 MHz: 26M83D1D  
802.11n 40 MHz: 36M54D1D  
802.11ac 80 MHz: 75M64D1D

## **ANT4**

### **Band 1**

Emission designator: 802.11a: 16M63D1D  
802.11n 20 MHz: 18M27D1D  
802.11n 40 MHz: 36M73D1D  
802.11ac 80 MHz: 75M96D1D

### **Band 2**

Emission designator: 802.11a: 16M73D1D  
802.11n 20 MHz: 18M37D1D  
802.11n 40 MHz: 36M73D1D  
802.11ac 80 MHz: 76M28D1D

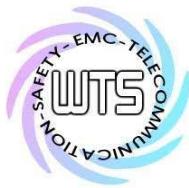
### **Band 3**

Emission designator: 802.11a: 16M54D1D  
802.11n 20 MHz: 18M27D1D  
802.11n 40 MHz: 36M73D1D  
802.11ac 80 MHz: 76M28D1D

### **Band 4**

Emission designator: 802.11a: 16M44D1D  
802.11n 20 MHz: 34M81D1D  
802.11n 40 MHz: 36M35D1D  
802.11ac 80 MHz: 75M64D1D

Note: Tests were performed under worst case mode 802.11a 6 Mbps, 802.11n 20MHz(MCS0), 802.11n 40MHz(MCS0) and 802.11ac 80MHz(MCS0).



# Worldwide Testing Services(Taiwan) Co., Ltd.

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Classification:

Fixed Device	<input type="checkbox"/>
Mobile Device (Human Body distance > 20cm)	<input type="checkbox"/>
Portable Device (Human Body distance < 20cm)	<input type="checkbox"/>
Modular Radio Device	<input checked="" type="checkbox"/>

Note: This device was functioned as a  Master  Slave device during the DFS

Manufacturer: (if applicable)

Name: EMWICON Corporation  
Street: 7F.-5, No. 258, Liancheng Rd., Zhonghe Dist.,  
Town: New Taipei City 235,  
Country: Taiwan (R.O.C.)

		ANT 1	ANT 2	ANT 3	ANT 4
5.15 GHz~5.25GHz	IEEE 802.11 a	Mode A	Mode A	Mode A	Mode A
	IEEE 802.11 n(20M)	Mode B	Mode B	Mode B	Mode B
	IEEE 802.11 n(40M)	Mode C	Mode C	Mode C	Mode C
	IEEE 802.11 ac(80M)	Mode D	Mode D	Mode D	Mode D
5.25 GHz~5.35GHz	IEEE 802.11 a	Mode E	Mode E	Mode E	Mode E
	IEEE 802.11 n(20M)	Mode F	Mode F	Mode F	Mode F
	IEEE 802.11 n(40M)	Mode G	Mode G	Mode G	Mode G
	IEEE 802.11 ac(80M)	Mode H	Mode H	Mode H	Mode H
5.47 GHz~5.725GHz	IEEE 802.11 a	Mode I	Mode I	Mode I	Mode I
	IEEE 802.11 n(20M)	Mode J	Mode J	Mode J	Mode J
	IEEE 802.11 n(40M)	Mode K	Mode K	Mode K	Mode K
	IEEE 802.11 ac(80M)	Mode L	Mode L	Mode L	Mode L
5.725 GHz~5.85GHz	IEEE 802.11 a	Mode M	Mode M	Mode M	Mode M
	IEEE 802.11 n(20M)	Mode N	Mode N	Mode N	Mode N
	IEEE 802.11 n(40M)	Mode O	Mode O	Mode O	Mode O
	IEEE 802.11 ac(80M)	Mode P	Mode P	Mode P	Mode P

## Transmitter

### Antenna 1

#### Band 1

##### **Mode A (OFDM)**

Power ( ch 36 or A): Conducted: 19.51 dBm  
Power ( ch 44 or B): Conducted: 19.80 dBm  
Power ( ch 48 or C): Conducted: 19.64 dBm

##### **Mode B (OFDM)**

Power ( ch 36 or A): Conducted: 16.27 dBm  
Power ( ch 44 or B): Conducted: 16.41 dBm  
Power ( ch 48 or C): Conducted: 15.68 dBm

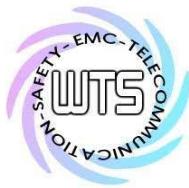
##### **Mode C (OFDM)**

Power ( ch 38 or A): Conducted: 13.41 dBm  
Power ( ch 46 or B): Conducted: 15.44 dBm

##### **Mode D (OFDM)**

Power ( ch 42 or A): Conducted: 14.05 dBm

## Unom



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## **Band 2**

### **Mode E (OFDM)**

Power ( ch 52 or A):	Conducted: 19.18 dBm
Power ( ch 60 or B):	Conducted: 19.17 dBm
Power ( ch 64 or C):	Conducted: 18.76 dBm

### **Mode F (OFDM)**

Power ( ch 52 or A):	Conducted: 12.97 dBm
Power ( ch 60 or B):	Conducted: 12.93 dBm
Power ( ch 64 or C):	Conducted: 11.37 dBm

### **Mode G (OFDM)**

Power ( ch 54 or A):	Conducted: 11.47 dBm
Power ( ch 62 or B):	Conducted: 12.54 dBm

### **Mode H (OFDM)**

Power ( ch 58 or A):	Conducted: 11.70 dBm
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## **Band 3**

### **Mode I (OFDM)**

Power ( ch 100 or A):	Conducted: 16.86 dBm
Power ( ch 116 or B):	Conducted: 16.72 dBm
Power ( ch 140 or C):	Conducted: 17.31 dBm

### **Mode J (OFDM)**

Power ( ch 100 or A):	Conducted: 12.11 dBm
Power ( ch 116 or B):	Conducted: 12.18 dBm
Power ( ch 140 or C):	Conducted: 9.45 dBm

### **Mode K (OFDM)**

Power ( ch 102 or A):	Conducted: 11.99 dBm
Power ( ch 110 or B):	Conducted: 11.64 dBm
Power ( ch 134 or C):	Conducted: 9.83 dBm

### **Mode L (OFDM)**

Power ( ch 106 or A):	Conducted: 11.48 dBm
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## **Band 4**

### **Mode M (OFDM)**

Power ( ch 149 or A):	Conducted: 16.24 dBm
Power ( ch 157 or B):	Conducted: 16.25 dBm
Power ( ch 165 or C):	Conducted: 16.21 dBm

### **Mode N (OFDM)**

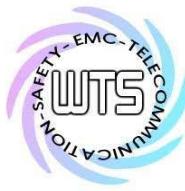
Power ( ch 149 or A):	Conducted: 16.40 dBm
Power ( ch 157 or B):	Conducted: 16.50 dBm
Power ( ch 165 or C):	Conducted: 15.93 dBm

### **Mode O (OFDM)**

Power ( ch 151 or A):	Conducted: 15.07 dBm
Power ( ch 159 or B):	Conducted: 15.11 dBm

### **Mode P (OFDM)**

Power ( ch 155 or A):	Conducted: 14.35 dBm
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# Worldwide Testing Services(Taiwan) Co., Ltd.

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## **Antenna 2**

### **Band 1**

#### **Mode A (OFDM)**

Power ( ch 36 or A):	Conducted: 19.64 dBm
Power ( ch 44 or B):	Conducted: 19.39 dBm
Power ( ch 48 or C):	Conducted: 19.32 dBm

#### **Mode B (OFDM)**

Power ( ch 36 or A):	Conducted: 13.10 dBm
Power ( ch 44 or B):	Conducted: 12.46 dBm
Power ( ch 48 or C):	Conducted: 13.44 dBm

#### **Mode C (OFDM)**

Power ( ch 38 or A):	Conducted: 12.46 dBm
Power ( ch 46 or B):	Conducted: 13.45 dBm

#### **Mode D (OFDM)**

Power ( ch 42 or A):	Conducted: 12.35 dBm
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### **Band 2**

#### **Mode E (OFDM)**

Power ( ch 52 or A):	Conducted: 18.90 dBm
Power ( ch 60 or B):	Conducted: 18.56 dBm
Power ( ch 64 or C):	Conducted: 18.20 dBm

#### **Mode F (OFDM)**

Power ( ch 52 or A):	Conducted: 10.88 dBm
Power ( ch 60 or B):	Conducted: 11.00 dBm
Power ( ch 64 or C):	Conducted: 10.27 dBm

#### **Mode G (OFDM)**

Power ( ch 54 or A):	Conducted: 10.50 dBm
Power ( ch 62 or B):	Conducted: 12.17 dBm

#### **Mode H (OFDM)**

Power ( ch 58 or A):	Conducted: 12.34 dBm
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### **Band 3**

#### **Mode I (OFDM)**

Power ( ch 100 or A):	Conducted: 17.06 dBm
Power ( ch 116 or B):	Conducted: 17.44 dBm
Power ( ch 140 or C):	Conducted: 17.69 dBm

#### **Mode J (OFDM)**

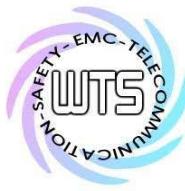
Power ( ch 100 or A):	Conducted: 11.54 dBm
Power ( ch 116 or B):	Conducted: 10.69 dBm
Power ( ch 140 or C):	Conducted: 10.51 dBm

#### **Mode K (OFDM)**

Power ( ch 102 or A):	Conducted: 12.23 dBm
Power ( ch 110 or B):	Conducted: 11.21 dBm
Power ( ch 134 or C):	Conducted: 11.03 dBm

#### **Mode L (OFDM)**

Power ( ch 106 or A):	Conducted: 11.91 dBm
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## **Band 4**

### **Mode M (OFDM)**

Power ( ch 149 or A): Conducted: 15.09 dBm  
Power ( ch 157 or B): Conducted: 15.61 dBm  
Power ( ch 165 or C): Conducted: 15.61 dBm

### **Mode N (OFDM)**

Power ( ch 149 or A): Conducted: 13.37 dBm  
Power ( ch 157 or B): Conducted: 13.83 dBm  
Power ( ch 165 or C): Conducted: 13.59 dBm

### **Mode O (OFDM)**

Power ( ch 151 or A): Conducted: 13.76 dBm  
Power ( ch 159 or B): Conducted: 14.07 dBm

### **Mode P (OFDM)**

Power ( ch 155 or A): Conducted: 12.93 dBm

## **Antenna 3**

### **Band 1**

#### **Mode A (OFDM)**

Power ( ch 36 or A): Conducted: 18.47 dBm  
Power ( ch 44 or B): Conducted: 19.05 dBm  
Power ( ch 48 or C): Conducted: 19.22 dBm

#### **Mode B (OFDM)**

Power ( ch 36 or A): Conducted: 14.46 dBm  
Power ( ch 44 or B): Conducted: 15.01 dBm  
Power ( ch 48 or C): Conducted: 14.28 dBm

#### **Mode C (OFDM)**

Power ( ch 38 or A): Conducted: 12.14 dBm  
Power ( ch 46 or B): Conducted: 14.12 dBm

#### **Mode D (OFDM)**

Power ( ch 42 or A): Conducted: 12.08 dBm

## **Band 2**

#### **Mode E (OFDM)**

Power ( ch 52 or A): Conducted: 18.76 dBm  
Power ( ch 60 or B): Conducted: 18.48 dBm  
Power ( ch 64 or C): Conducted: 18.22 dBm

#### **Mode F (OFDM)**

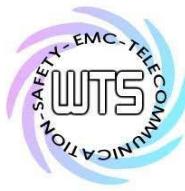
Power ( ch 52 or A): Conducted: 11.65 dBm  
Power ( ch 60 or B): Conducted: 11.14 dBm  
Power ( ch 64 or C): Conducted: 12.49 dBm

#### **Mode G (OFDM)**

Power ( ch 54 or A): Conducted: 11.87 dBm  
Power ( ch 62 or B): Conducted: 10.50 dBm

#### **Mode H (OFDM)**

Power ( ch 58 or A): Conducted: 10.57 dBm



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## **Band 3**

### **Mode I (OFDM)**

Power ( ch 100 or A): Conducted: 16.49 dBm  
Power ( ch 116 or B): Conducted: 17.51 dBm  
Power ( ch 140 or C): Conducted: 18.06 dBm

### **Mode J (OFDM)**

Power ( ch 100 or A): Conducted: 11.89 dBm  
Power ( ch 116 or B): Conducted: 11.13 dBm  
Power ( ch 140 or C): Conducted: 13.24 dBm

### **Mode K (OFDM)**

Power ( ch 102 or A): Conducted: 11.23 dBm  
Power ( ch 110 or B): Conducted: 12.00 dBm  
Power ( ch 134 or C): Conducted: 12.60 dBm

### **Mode L (OFDM)**

Power ( ch 106 or A): Conducted: 11.40 dBm

## **Band 4**

### **Mode M (OFDM)**

Power ( ch 149 or A): Conducted: 15.35 dBm  
Power ( ch 157 or B): Conducted: 15.39 dBm  
Power ( ch 165 or C): Conducted: 15.37 dBm

### **Mode N (OFDM)**

Power ( ch 149 or A): Conducted: 15.00 dBm  
Power ( ch 157 or B): Conducted: 14.86 dBm  
Power ( ch 165 or C): Conducted: 14.84 dBm

### **Mode O (OFDM)**

Power ( ch 151 or A): Conducted: 13.67 dBm  
Power ( ch 159 or B): Conducted: 13.71 dBm

### **Mode P (OFDM)**

Power ( ch 155 or A): Conducted: 12.90 dBm

## **Antenna 4**

### **Band 1**

#### **Mode A (OFDM)**

Power ( ch 36 or A): Conducted: 18.52 dBm  
Power ( ch 44 or B): Conducted: 18.66 dBm  
Power ( ch 48 or C): Conducted: 18.76 dBm

#### **Mode B (OFDM)**

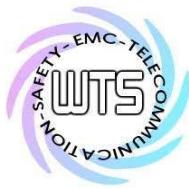
Power ( ch 36 or A): Conducted: 14.89 dBm  
Power ( ch 44 or B): Conducted: 14.89 dBm  
Power ( ch 48 or C): Conducted: 14.49 dBm

#### **Mode C (OFDM)**

Power ( ch 38 or A): Conducted: 13.92 dBm  
Power ( ch 46 or B): Conducted: 14.06 dBm

#### **Mode D (OFDM)**

Power ( ch 42 or A): Conducted: 12.46 dBm



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## **Band 2**

### **Mode E (OFDM)**

Power ( ch 52 or A): Conducted: 18.69 dBm  
Power ( ch 60 or B): Conducted: 18.49 dBm  
Power ( ch 64 or C): Conducted: 18.47 dBm

### **Mode F (OFDM)**

Power ( ch 52 or A): Conducted: 11.50 dBm  
Power ( ch 60 or B): Conducted: 11.62 dBm  
Power ( ch 64 or C): Conducted: 12.37 dBm

### **Mode G (OFDM)**

Power ( ch 54 or A): Conducted: 12.97 dBm  
Power ( ch 62 or B): Conducted: 12.05 dBm

### **Mode H (OFDM)**

Power ( ch 58 or A): Conducted: 12.39 dBm

## **Band 3**

### **Mode I (OFDM)**

Power ( ch 100 or A): Conducted: 16.09 dBm  
Power ( ch 116 or B): Conducted: 17.05 dBm  
Power ( ch 140 or C): Conducted: 17.41 dBm

### **Mode J (OFDM)**

Power ( ch 100 or A): Conducted: 10.94 dBm  
Power ( ch 116 or B): Conducted: 10.36 dBm  
Power ( ch 140 or C): Conducted: 12.75 dBm

### **Mode K (OFDM)**

Power ( ch 102 or A): Conducted: 11.18 dBm  
Power ( ch 110 or B): Conducted: 12.26 dBm  
Power ( ch 134 or C): Conducted: 12.97 dBm

### **Mode L (OFDM)**

Power ( ch 106 or A): Conducted: 11.69 dBm

## **Band 4**

### **Mode M (OFDM)**

Power ( ch 149 or A): Conducted: 16.06 dBm  
Power ( ch 157 or B): Conducted: 16.01 dBm  
Power ( ch 165 or C): Conducted: 15.24 dBm

### **Mode N (OFDM)**

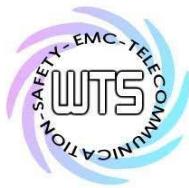
Power ( ch 149 or A): Conducted: 16.34 dBm  
Power ( ch 157 or B): Conducted: 16.08 dBm  
Power ( ch 165 or C): Conducted: 15.21 dBm

### **Mode O (OFDM)**

Power ( ch 151 or A): Conducted: 15.12 dBm  
Power ( ch 159 or B): Conducted: 14.95 dBm

### **Mode P (OFDM)**

Power ( ch 155 or A): Conducted: 14.27 dBm



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5.15GHz~5.25GHz

Combine	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	121.54	123.90	113.97	20.85	20.93	20.57
802.11n 40MHz	80.58	--	108.41	19.06	--	20.35
802.11ac	76.35	--	--	18.83	--	--

5.25GHz~5.35GHz

Combine	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	60.82	59.74	59.35	17.84	17.76	17.73
802.11n 40MHz	60.45	--	61.68	17.81	--	17.90
802.11ac	60.67	--	--	17.83	--	--

5.47GHz~5.725GHz

Combine	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	58.39	52.07	59.99	17.66	17.17	17.78
802.11n 40MHz	58.91	60.48	60.32	17.70	17.82	17.80
802.11ac	58.14	--	--	17.65	--	--

5.725GHz~5.85GHz

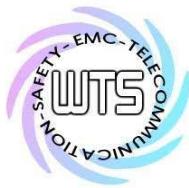
Combine	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	140.05	139.99	125.70	21.46	21.46	20.99
802.11n 40MHz	111.70	--	112.72	20.48	--	20.52
802.11ac	93.09	--	--	19.69	--	--

## 1.6 Test standards

Technical standard : 47 CFR PART 15 SUBPART E § 15.407 (2020-10)

### Special statement:

1. This test report is based on the original test report no.: W6R22002-19655-C-54.
2. The relevant Circuitry, PCB Layout, Inner element and Function is exactly the same as the one in original test report. The differences are appearance, manufacturer, address of applicant, add the heat sink, add multi-listing model number, re-testing test item of radiated emission and dynamic frequency selection (DFS) and the version of standard. Therefore the other test result is also based on the original test report no. W6R22002-19655-C-54 without re-testing.



# Worldwide Testing Services(Taiwan) Co., Ltd.

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## 2      Technical test

### **2.1    Summary of test results**

No deviations from the technical specification(s) were ascertained in the course of the tests performed.

or

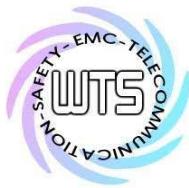
The deviations were ascertained in the course of the tests performed.

### **2.2    Test environment**

Relative humidity content:                20 ... 75 %

Air pressure:                                86 ... 103 kPa

Details of power supply:                 3.3Vd.c.

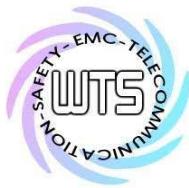


# Worldwide Testing Services(Taiwan) Co., Ltd.

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Test item Name	Uncertainty
Estimation Result of Uncertainty of Conducted Emission (Power Line Conducted Emission)	Expanded Uncertainty : AMN : 1.05 dB Voltage probe : 1.05 dB
Estimation Result of Uncertainty of Radiated Emission(3M) (Undesirable emission limits, Radiated Emissions from Receiver Part)	Expanded Uncertainty : 0.009-30 MHz : 2.13 dB 30-1000 MHz : 3.53 dB 1-18 GHz : 4.19 dB 18-40 GHz : 4.09 dB
Estimation Result of Uncertainty of Bandwidth Measurement (26dB emission bandwidth, 99% Occupied Bandwidth, 6dB emission bandwidth, 99% Occupied Bandwidth)	Expanded Uncertainty : 0.41 kHz
Estimation Result of Uncertainty of Conducted Output Power Measurement (Peak Transmit Power)	Expanded Uncertainty : 1.61 dB
Estimation Result of Uncertainty of Power Density Measurement (Peak Power Spectral Density)	Expanded Uncertainty : 1.68 dB
Estimation Result of Uncertainty of EIRP Measurement (Equivalent Isotropic Radiated Power (EIRP), Radiated Emissions from Receiver Part)	Expanded Uncertainty : 30-200MHz : 2.14dB 200-1000MHz : 2.4 dB 1-18GHz : 4.84 dB 18-40GHz : 4.31 dB
Estimation Result of Uncertainty of DFS Timing (Dynamic Frequency Selection (DFS), Channel Move Time, Channel Closing Transmission Time, UNII Detection Bandwidth, Statistical Performance Check)	Expanded Uncertainty : 0.6 ms
Estimation Result of Uncertainty of DFS Threshold (Dynamic Frequency Selection (DFS), Channel Move Time, Channel Closing Transmission Time, UNII Detection Bandwidth, Statistical Performance Check)	Expanded Uncertainty : 1.29 dB

The decision rule is: Measurement uncertainty is not included in the calculation of test results.

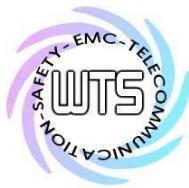


# Worldwide Testing Services(Taiwan) Co., Ltd.

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## 2.3 Test Equipment List

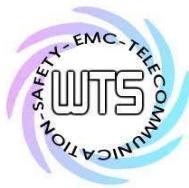
No.	Test equipment	Type	Serial No.	Manufacturer	Cal. Date	Next Cal. Date
ETSTW-CE 001	EMI TEST RECEIVER	ESHS10	842121/013	R&S	2021/6/17	2022/6/16
ETSTW-CE 003	AC POWER SOURCE	APS-9102	D161137	GW	Function Test	
ETSTW-CE 004	ZWEILEITER-V-NETZNACHBILDUNG TWO-LINE V-NETWORK	ESH3-Z5	840731/011	R&S	2021/11/5	2022/11/4
ETSTW-CE 006	IMPULSBEGRENZER PULSE LIMITER	ESH3-Z2	100226	R&S	2021/9/22	2022/9/21
ETSTW-CE 008	HF-EICHLEITUNG RF STEP ATTENUATOR 139dB DPSP	334.6010.02	844581/024	R&S	Function Test	
ETSTW-CE 009	TEMP.&HUMIDITY CHAMBER	GTH-225-40-1P-U	MAA0305-009	GIANT FORCE	2021/7/29	2022/7/28
ETSTW-CE 016	TWO-LINE V-NETWORK	ENV216	100050	R&S	2021/10/25	2022/10/24
ETSTW-CE 028	MXE EMI Receiver	N9038A	MY53220110	Agilent	2021/7/28	2022/7/27
ETSTW-RE 003	EMI TEST RECEIVER	ESI 26	831438/001	R&S	2021/6/17	2022/6/16
ETSTW-RE 004	EMI TEST RECEIVER	ESI 40	832427/004	R&S	2021/9/28	2022/9/27
ETSTW-RE 012	TUNABLE BANDREJECT FILTER	D.C 0309	146	K&L	Function Test	
ETSTW-RE 013	TUNABLE BANDREJECT FILTER	D.C 0336	397	K&L	Function Test	
ETSTW-RE 018	MICROWAVE HORN ANTENNA	AT4560	27212	AR	2021/8/4	2022/8/3
ETSTW-RE 019	MICROWAVE HORN ANTENNA	22240-25	121074	FM	2021/5/31	2022/5/30
ETSTW-RE 027	Passive Loop Antenna	6512	00034563	ETS-Lindgren	2021/6/16	2022/6/15
ETSTW-RE 030	Double-Ridged Guide Horn Antenna	3117	00035224	ETS-Lindgren	2021/5/5	2022/5/4
ETSTW-RE 042	Biconical Antenna	HK116	100172	R&S	2021/3/18	2022/3/17
ETSTW-RE 043	Log-Periodic Dipole Antenna	HL223	100166	R&S	2021/5/21	2022/5/20
ETSTW-RE 044	Log-Periodic Antenna	HL050	100094	R&S	2021/7/14	2022/7/13
ETSTW-RE 045	ESA-E SERIES SPECTRUM ANALYZER	E4404B	MY45111242	Agilent	Pre-test Use	
ETSTW-RE 050	Attenuator 10dB	50HF-010-1	None	JFW	2021/2/19	2022/2/18
ETSTW-RE 051	Attenuator 6dB	50HF-006-1	None	JFW	2021/2/19	2022/2/18
ETSTW-RE 053	Attenuator 3dB	50HF-003-1	None	JFW	2021/2/19	2022/2/18
ETSTW-RE 055	SPECTRUM ANALYZER	FSU 26	200074	R&S	2021/3/16	2022/3/15
ETSTW-RE 060	Attenuator 30dB	5015-30	F651012z-01	ATM	2021/2/19	2022/2/18
ETSTW-RE 062	Amplifier Module	CHC 2	None	KMIC	2021/5/14	2022/5/13
ETSTW-RE 064	Bluetooth Test Set	MT8852B-042	6K00005709	Anritsu	Function Test	
ETSTW-RE 069	Double-Ridged Guide Horn Antenna	3117	00069377	ETS-Lindgren	Function Test	
ETSTW-RE 072	CELL SITE TEST SET	8921A	3339A00375	HP	2021/10/27	2022/10/26
ETSTW-RE 088	SOLID STATE AMPLIFIER	KMA180265A01	99057	KMIC	2021/9/17	2022/9/16
ETSTW-RE 091	Match Pad	MDCS1500	None	WOKEN	2021/5/27	2022/5/26
ETSTW-RE 099	DC Block	50DB-007-1	None	JFW	2021/2/19	2022/2/18
ETSTW-RE 112	AC POWER SOURCE	TFC-1005	T-0A023536	T-Power	Function test	



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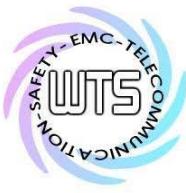
ETSTW-RE 115	2.4GHz Notch Filter	N0124411	473874	MICROWAVE CIRCUITS	2021/1/6	2022/1/5
ETSTW-RE 120	RF Player	MP9200	MP9210-111022	ADIVIC	2021/10/29	2022/10/28
ETSTW-RE 122	SIGNAL GENERATOR	SMF100A	102149	R&S	2021/6/8	2022/6/7
ETSTW-RE 125	5GHz Notch filter	5NSL11-5200/E221.3-O/O	1	K&L Microwave	2021/8/6	2022/8/5
ETSTW-RE 126	5GHz Notch filter	5NSL12-5800/E221.3-O/O	1	K&L Microwave	2021/8/6	2022/8/5
ETSTW-RE 127	RF Switch Box	RFS-01	None	WTS	2021/2/19	2022/2/18
ETSTW-RE 128	5.3GHz Notch filter	N0153001	SN487233	Microwave Circuits	2021/8/6	2022/8/5
ETSTW-RE 129	5.5GHz Notch filter	N0555984	SN487234	Microwave Circuits	2021/8/6	2022/8/5
ETSTW-RE 130	Handheld RF Spectrum Analyzer	N9340A	CN0147000204	Agilent	Pre-test Use	
ETSTW-RE 142	Amplifier	8447D	2805A03378	Agilent	2021/5/14	2022/5/13
ETSTW-RE 146	Preamplifier	JPA-10M1G	15090004	JPT	2021/6/4	2022/6/3
ETSTW-RE 148	Bi-log Hybrid Antenna	MCTD 2786B	BLB16M04006	ETC	2021/7/2	2022/7/1
ETSTW-RE 152	Bi-log Hybrid Antenna	MCTD 2786B	BLB20J04029	ETC	2021/10/5	2022/10/4
ETSTW-RE 153	Signal Analyzer	FSV40	101929	R&S	2021/10/6	2022/10/5
ETSTW-RF 002	Electromagnetic field probe	LF-30	K-0007	STT	2021/7/19	2022/7/18
ETSTW-EMI 011	USB Compact Modulator	SFC-U	101689	R&S	2021/6/2	2022/6/1
ETSTW-GSM 002	Universal Radio Communication Tester	CMU 200	109439	R&S	2021/3/16	2022/3/15
ETSTW-GSM 003	Radio Communication Analyzer	MT8820C	6201342073	Anritsu	2021/4/27	2022/4/26
ETSTW-GSM 004	Wideband Radio Communication Tester	CMW500	128092	R&S	2021/10/29	2022/10/28
ETSTW-GSM 019	Band Reject Filter	WRCTF824/849-822/851-40 /12+9SS	3	WI	2021/1/6	2022/1/5
ETSTW-GSM 020	Band Reject Filter	WRCD1747/1748-1743/1752-32/5SS	1	WI	2021/1/6	2022/1/5
ETSTW-GSM 021	Band Reject Filter	WRCD1879.5/1880.5 -1875.5/1884.5-32/5SS	3	WI	2021/1/6	2022/1/5
ETSTW-GSM 022	Band Reject Filter	WRCT901.9/903.1-904.25-50/8SS	1	WI	2021/1/6	2022/1/5
ETSTW-GSM 023	Power Divider	4901.19.A	None	SUHNER	2021/9/7	2022/9/6
ETSTW-GSM 024	Radio Communication Analyzer	MT8821C	None	Anritsu	2021/4/1	2022/3/31
ETSTW-GSM 025	Band Reject Filter	BRM19835	001	Micro-Tronics	2021/8/6	2022/8/5
ETSTW-Cable 011	SMA to N type Cable	RGU-400	None	THERMAX	Pre-test Use NCR	
ETSTW-Cable 016	BNC Cable	Switch Box	B Cable 1	Schwarz beck	2021/2/19	2022/2/18
ETSTW-Cable 017	BNC Cable	X Cable	B Cable 2	Schwarz beck	2021/2/19	2022/2/18
ETSTW-Cable 018	BNC Cable	Y Cable	B Cable 3	Schwarz beck	2021/2/19	2022/2/18
ETSTW-Cable 019	BNC Cable	Z Cable	B Cable 4	Schwarz beck	2021/2/19	2022/2/18
ETSTW-Cable 020	N TYPE Cable	OATS Cable 1	N30N30-L335-15M	JYE BAO CO.,LTD.	2021/7/1	2022/6/30
ETSTW-Cable 027	Microwave Cable	SUCOFLEX 104	279083	HUBER+SUHNER	2021/5/7	2022/5/6
ETSTW-Cable 028	Microwave Cable	FA147A0015M2020	30064-2	UTIFLEX	2021/9/17	2022/9/16
ETSTW-Cable 029	Microwave Cable	FA147A0015M2020	30064-3	UTIFLEX	2021/9/17	2022/9/16
ETSTW-Cable 030	Microwave Cable	SUCOFLEX 104 (S Cable 9)	279067	HUBER+SUHNER	2021/2/19	2022/2/18



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ETSTW-Cable 043	Microwave Cable	SUCOFLEX 104	317576	HUBER+SUHNER	2021/5/14	2022/5/13
ETSTW-Cable 047	Microwave Cable	SUCOFLEX 104	325518	HUBER+SUHNER	2021/7/2	2022/7/1
ETSTW-Cable 058	Microwave Cable	SUCOFLEX 104	none	HUBER+SUHNER	2021/6/4	2022/6/3
ETSTW-Cable 064	Microwave Cable	SUCOFLEX 104	MY28891	HUBER+SUHNER	2021/5/14	2022/5/13
ETSTW-Cable 071	N TYPE CABLE	EMCCFD400-NM-NM-25000	170239	EMCI	2021/6/4	2022/6/3
ETSTW-Cable 072	SMA type cable (8m)	SUCOFLEX 104	805800/4	HUBER+SUHNER	2021/5/14	2022/5/13
ETSTW-Cable 074	SMA type cable (2m)	SUCOFLEX 104	802563/4	HUBER+SUHNER	2021/5/14	2022/5/13
WTSTW-SW 002	EMI TEST SOFTWARE	EZ_EMC	None	Farad	Version ETS-03A1 Version EMEC-3A1+	
WTSTW-SW 006	EMI TEST SOFTWARE	e3	None	AUDIX	Version 9.161014	
WTSTW-SW 008	Signal studio	Agilent	None	AUDIX	Version 2.0.0.1	
ETSTW-TH 002	Thermohygrometer	608-H1	45204317	Testo	2021/10/18	2022/10/17
ETSTW-TH 003	Wireless weather station	GAIA	N/A	TFA	2021/10/18	2022/10/17



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## **2.4 Test Procedure**

The test procedures are performed following the test stands ANSI STANDARD C63.10 and FCC 789033 D02 General UNII Test Procedures New Rules v01r04.

### ■ Minimum Emission Bandwidth for the band 5.150-5.250 GHz, 5.725-5.850 GHz

Section 15.407(e) specifies the minimum 6 dB emission bandwidth of at least 500 KHz for the band 5.715-5.85 GHz. The following procedure shall be used for measuring this bandwidth:

- a) Set RBW = 100 kHz.
- b) Set the video bandwidth (VBW)  $\geq 3 \times$  RBW.
- c) Detector = Peak.
- d) Trace mode = max hold.
- e) Sweep = auto couple.
- f) Allow the trace to stabilize.
- g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

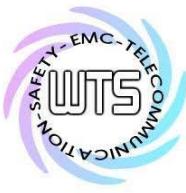
Note: The automatic bandwidth measurement capability of a spectrum analyzer or EMI receiver may be employed if it implements the functionality described above.

### ■ 99 Percent Occupied Bandwidth

The 99-percent occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5 % of the total mean power of the given emission. Measurement of the 99-percent occupied bandwidth is required only as a condition for using the optional band-edge measurement techniques described in section H3)d). Measurements of 99-percent occupied bandwidth may also optionally be used in lieu of the 6-dB emission bandwidth to define the minimum frequency range over which the spectrum is integrated when measuring maximum conducted output power as described in section E). However, the 6-dB bandwidth must be measured to determine bandwidth dependent limits on maximum conducted output power in accordance with 15.407(a).

The following procedure shall be used for measuring (99 %) power bandwidth.

1. Set center frequency to the nominal EUT channel center frequency.
2. Set span = 1.5 times to 5.0 times the OBW.
3. Set RBW = 1 % to 5 % of the OBW
4. Set VBW  $\geq 3 \cdot$  RBW
5. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
6. Use the 99 % power bandwidth function of the instrument (if available).
7. If the instrument does not have a 99 % power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.



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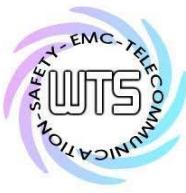
## ■ Maximum conducted output power

- (i) Set span to encompass the entire emission bandwidth (EBW) (or, alternatively, the entire 99% occupied bandwidth) of the signal.
- (ii) Set RBW = 1 MHz.
- (iii) Set VBW  $\geq$  3 MHz.
- (iv) Number of points in sweep  $\geq$  2 Span / RBW. (This ensures that bin-to-bin spacing is  $\leq$  RBW/2, so that narrowband signals are not lost between frequency bins.)
- (v) Sweep time = auto.
- (vi) Detector = RMS (i.e., power averaging), if available. Otherwise, use sample detector mode.
- (vii) If transmit duty cycle  $<$  98 percent, use a video trigger with the trigger level set to enable triggering only on full power pulses. Transmitter must operate at maximum power control level for the entire duration of every sweep. If the EUT transmits continuously (i.e., with no off intervals) or at duty cycle  $\geq$  98 percent, and if each transmission is entirely at the maximum power control level, then the trigger shall be set to “free run”.
- (viii) Trace average at least 100 traces in power averaging (i.e., RMS) mode.
- (ix) Compute power by integrating the spectrum across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal using the instrument’s band power measurement function with band limits set equal to the EBW (or occupied bandwidth) band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at 1 MHz intervals extending across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the spectrum.

## ■ Power Density

The rules requires “maximum power spectral density” measurements where the intent is to measure the maximum value of the time average of the power spectral density measured during a period of continuous transmission.

1. Create an average power spectrum for the EUT operating mode being tested by following the instructions in section II.E.2. for measuring maximum conducted output power using a spectrum analyzer or EMI receiver: select the appropriate test method (SA-1, SA-2, SA-3, or alternatives to each) and apply it up to, but not including, the step labeled, “Compute power...”. (This procedure is required even if the maximum conducted output power measurement was performed using a power meter, method PM.)
2. Use the peak search function on the instrument to find the peak of the spectrum and record its value.
3. Make the following adjustments to the peak value of the spectrum, if applicable:
  - a) If Method SA-2 or SA-2 Alternative was used, add  $10 \log(1/x)$ , where x is the duty cycle, to the peak of the spectrum.
  - b) If Method SA-3 Alternative was used and the linear mode was used in step II.E.2.g)(viii), add 1 dB to the final result to compensate for the difference between linear averaging and power averaging.
4. The result is the Maximum PSD over 1 MHz reference bandwidth.
5. For devices operating in the bands 5.15-5.25 GHz, 5.25-5.35 GHz, and 5.47-5.725 GHz, the above procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in § 15.407(a)(5). For devices operating in the band 5.725-5.85 GHz, the rules specify a measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus



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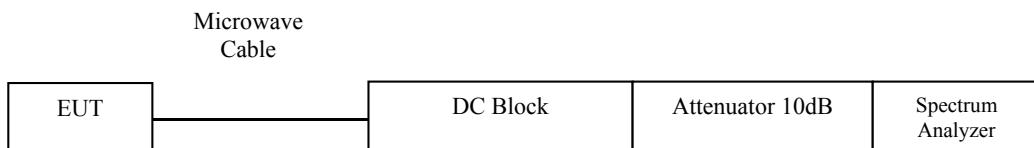
FCC ID: W23-WMXWAVE2AS

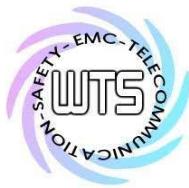
a narrower RBW may need to be used. The rules permit the use of a RBWs less than 1 MHz, or 500 kHz, "provided that the measured power is integrated over the full reference bandwidth" to show the total power over the specified measurement bandwidth (i.e., 1 MHz, or 500 kHz). If measurements are performed using a reduced resolution bandwidth (< 1 MHz, or < 500 kHz) and integrated over 1 MHz, or 500 KHz bandwidth, the following adjustments to the procedures apply:

- a) Set RBW  $\geq 1/T$ , where T is defined in section II.B.1.a).
- b) Set VBW  $\geq 3$  RBW.
- c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add  $10\log(500\text{kHz}/\text{RBW})$  to the measured result, whereas RBW (< 500 kHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.
- d) If measurement bandwidth of Maximum PSD is specified in 1 MHz, add  $10\log(1\text{MHz}/\text{RBW})$  to the measured result, whereas RBW (< 1 MHz) is the reduced resolution bandwidth of spectrum analyzer set during measurement.
- e) Care must be taken to ensure that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.

Note: As a practical matter, it is recommended to use reduced RBW of 100 kHz for the sections 5.c) and 5.d) above, since RBW=100 kHz is available on nearly all spectrum analyzers.

## Conducted measurement test setup





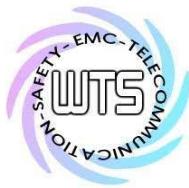
# Worldwide Testing Services(Taiwan) Co., Ltd.

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FCC ID: W23-WMXWAVE2AS

## **3 Test results (enclosure)**

Test case	Para. Number	Required	Test passed	Test failed
Peak Transmit Power	15.407(a)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6-dB emission bandwidth	15.407(a)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
26-dB emission bandwidth	15.407(a)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
99 % Occupied Bandwidth	789033 D02 General U-NII Test Procedures New Rules v02r01	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Peak Power Spectral Density	15.407(a)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Undesirable emission limits	15.407(b)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Radio Frequency Exposure	15.407(f)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Transmit Power Control	15.407(h)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dynamic Frequency Selection (DFS)	15.407(h)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Channel Move Time, Channel Closing Transmission Time	15.407(i)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Radiated Emission from Receiver Part	15.109	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AC Conducted Emissions	15.207	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The following is intentionally left blank.



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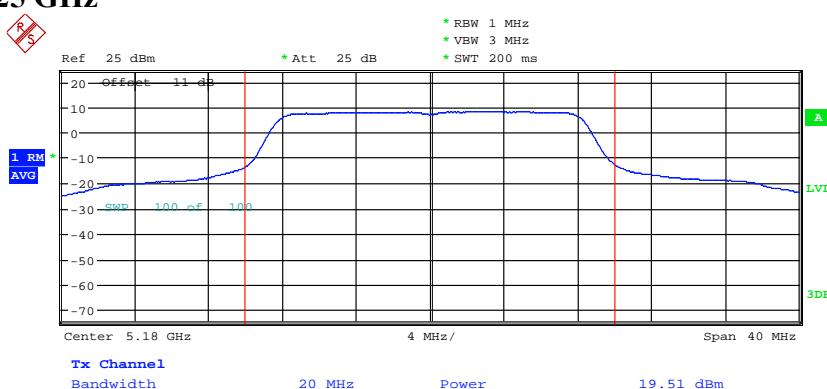
## 3.1 Peak Transmit Power, FCC 15.407 (a)

According to §15.407(a)

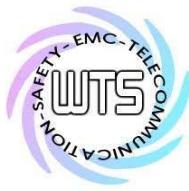
1. For the band 5.15-5.25 GHz, the maximum conducted power over the frequency of operation shall not exceed the lesser of 30 dBm (1 W) for master device and 24 dBm (250 mW) for mobile/portable client device.
2. For the band 5.25-5.35 GHz and 5.47-5.725 GHz, the maximum conducted power over the frequency of operation shall not exceed the lesser of 24 dBm (250 mW) or  $11\text{dBm} + 10 \log B$ , whichever is lower ( $B= 26\text{-dB emission BW}$ ).
3. For the band 5.725-5.850 GHz, the maximum conducted power over the frequency of operation shall not exceed the lesser of 30 dBm (1 W).

### ANT1

#### 5.15 GHz ~ 5.25 GHz

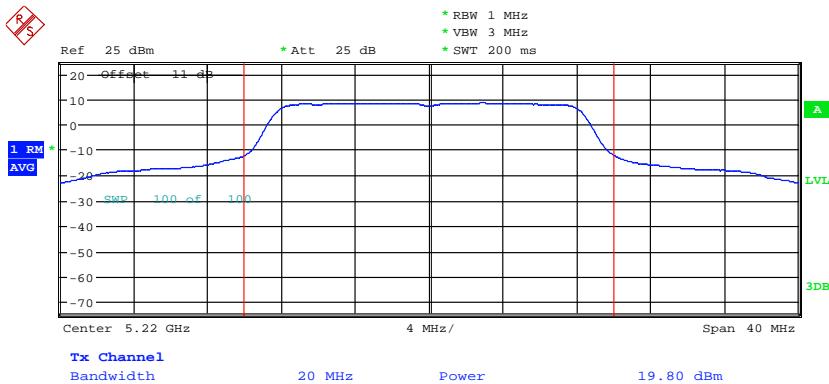


MAXIMUM CONDUCTED POWER ANT1\_11aCH36  
Date: 17.MAR.2020 16:16:46



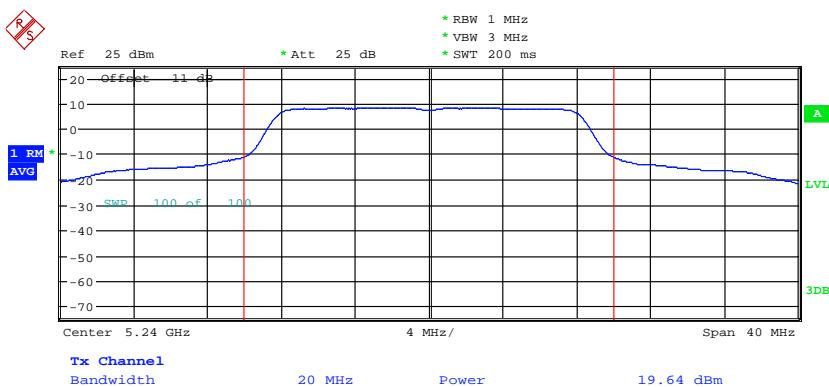
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



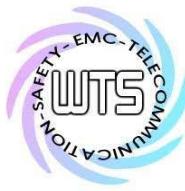
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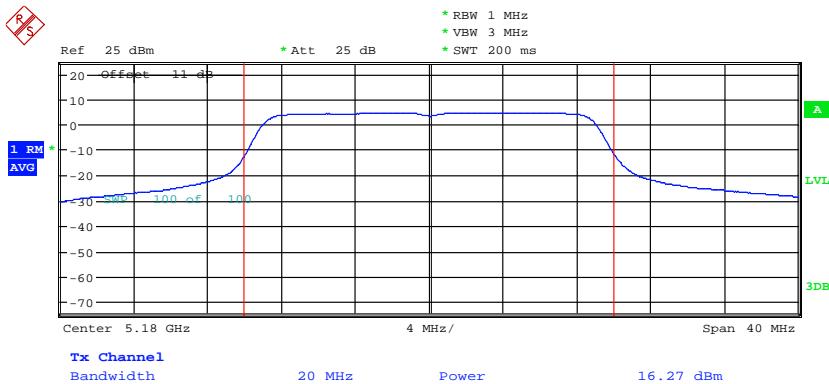
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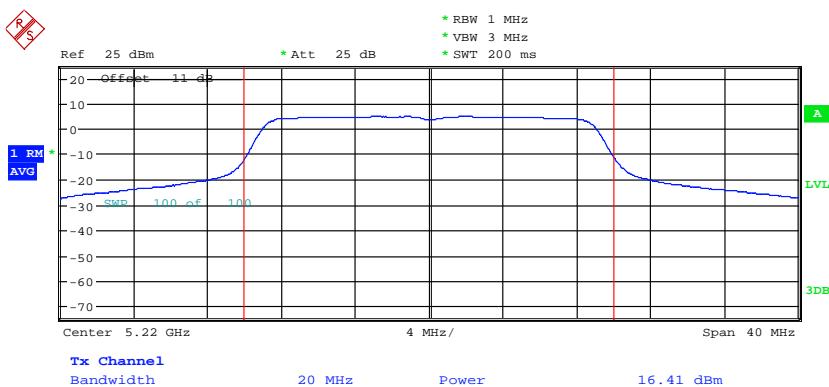
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
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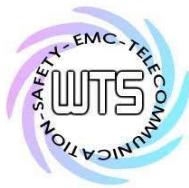
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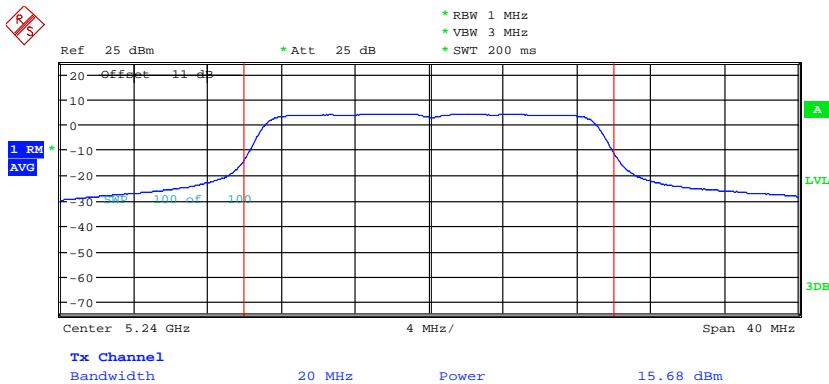
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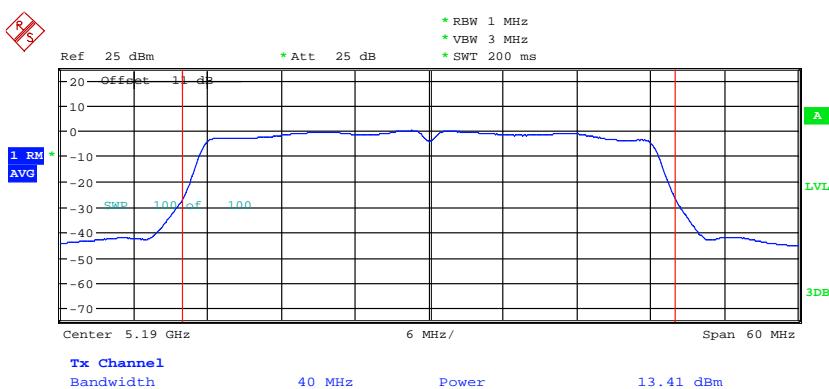


# Worldwide Testing Services(Taiwan) Co., Ltd.

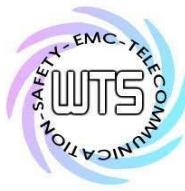
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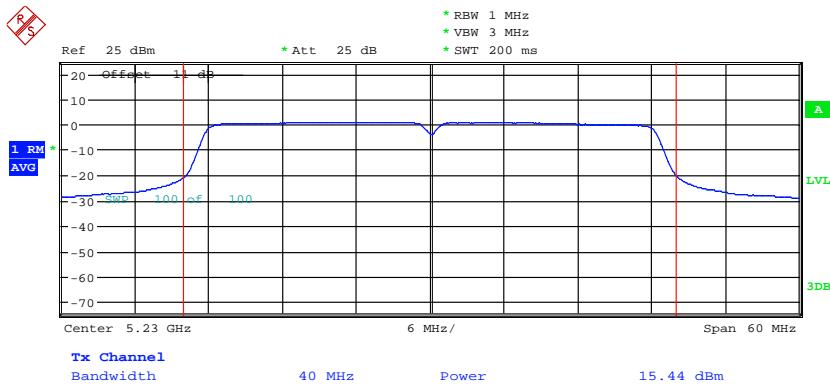


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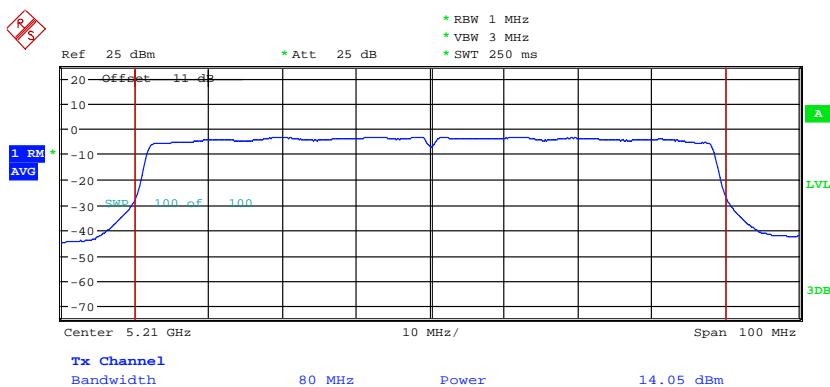
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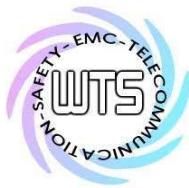
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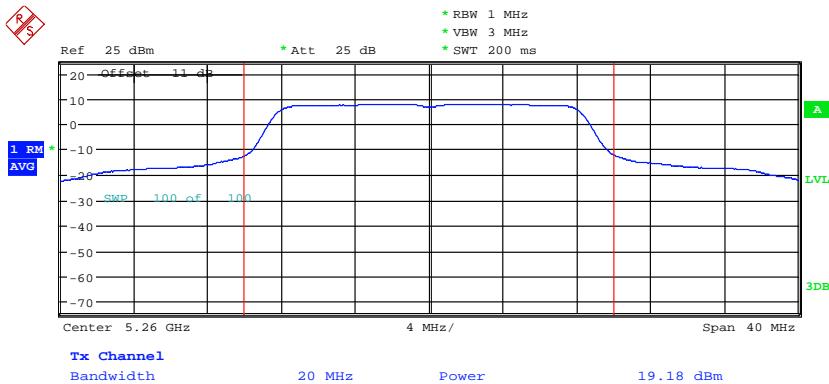
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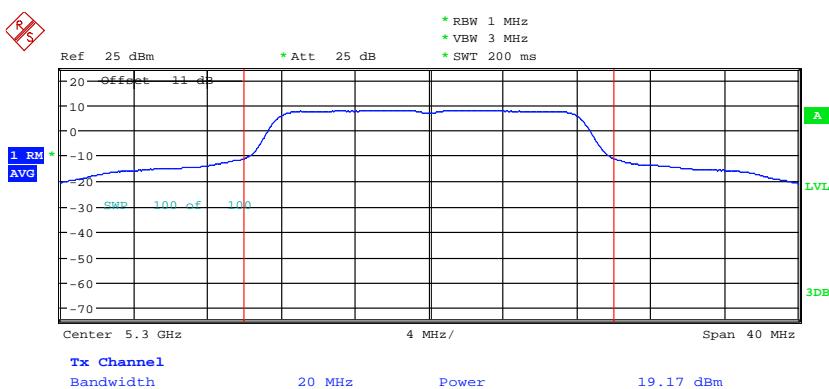
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

## 5.25 GHz ~ 5.35 GHz

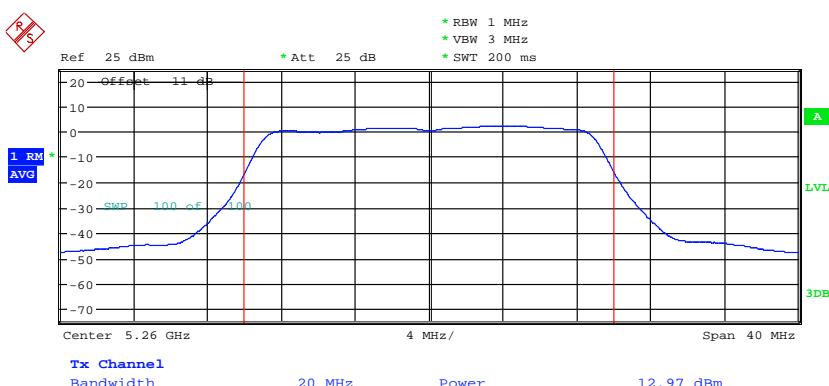
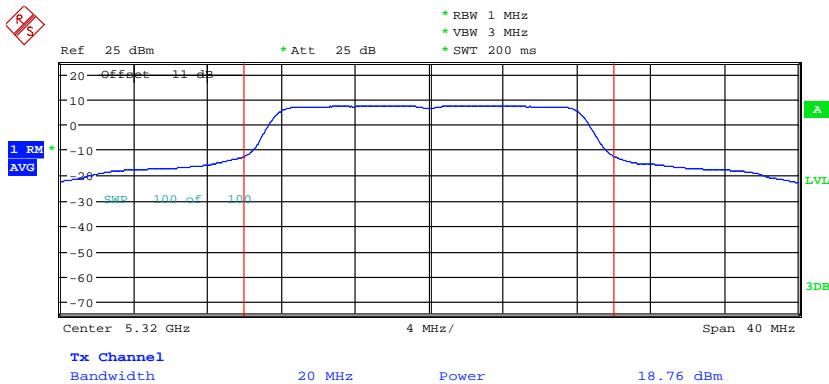


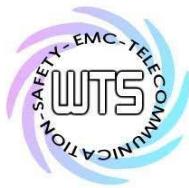
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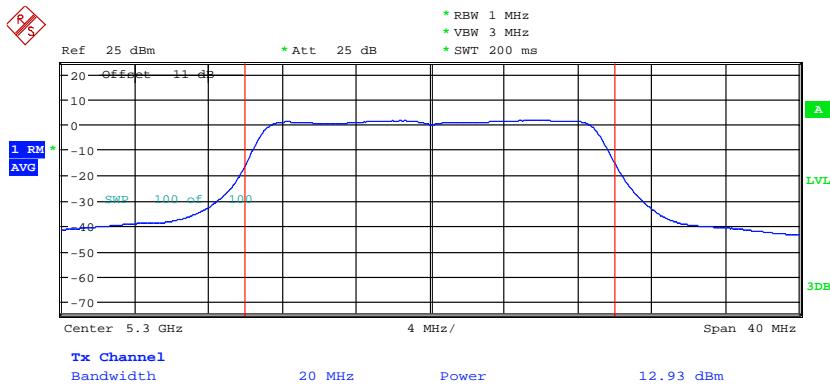
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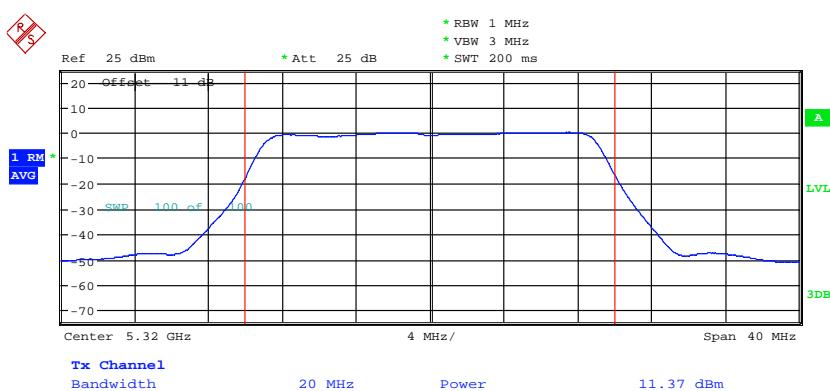


# Worldwide Testing Services(Taiwan) Co., Ltd.

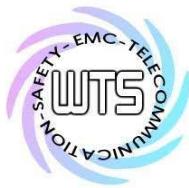
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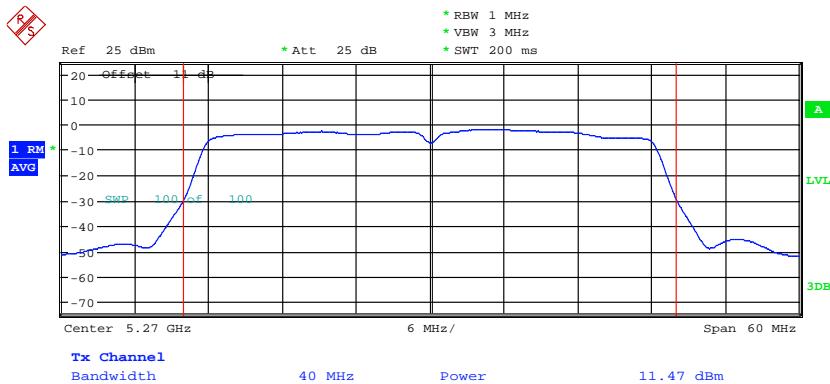


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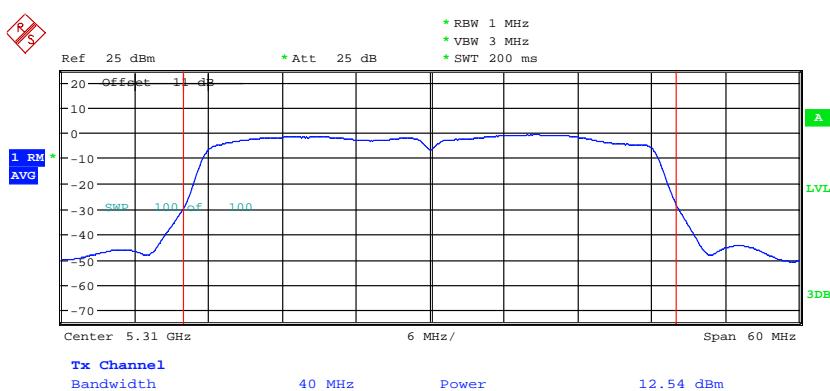


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

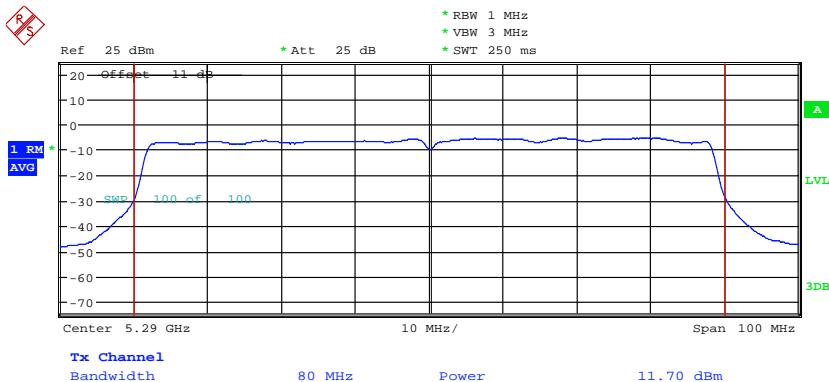


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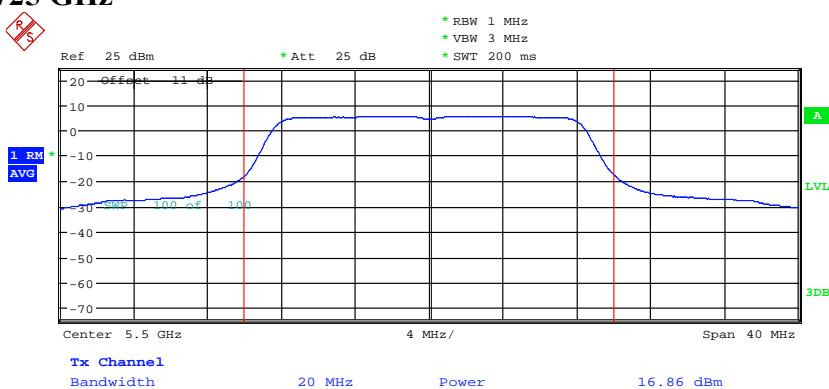
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Registration number: W6R22110-21274-C-54  
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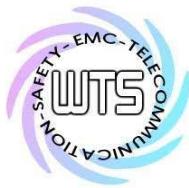


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### 5.47 GHz ~ 5.725 GHz

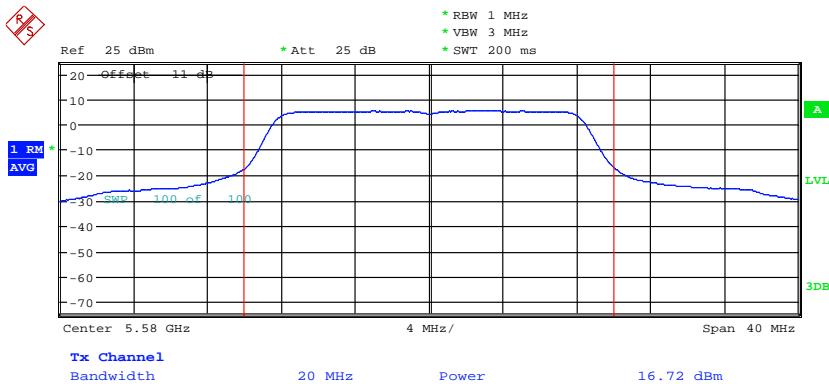


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# Worldwide Testing Services(Taiwan) Co., Ltd.

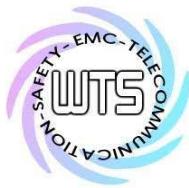
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



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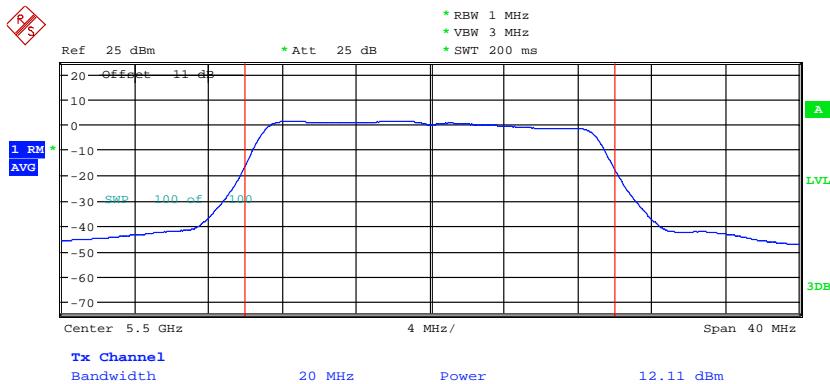


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# Worldwide Testing Services(Taiwan) Co., Ltd.

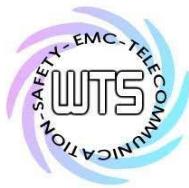
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FCC ID: W23-WMXWAVE2AS



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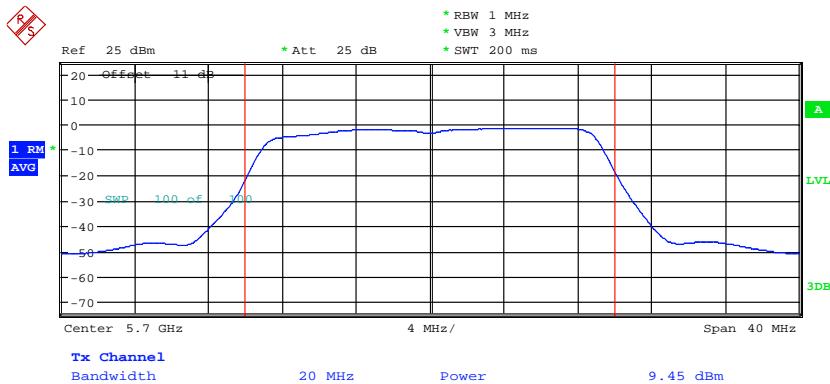


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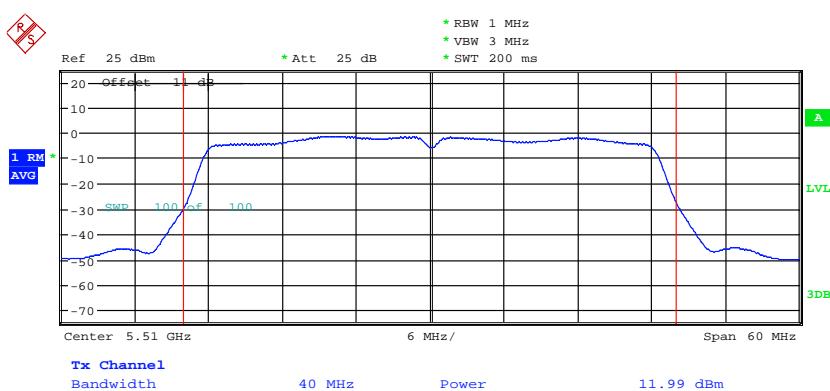


# Worldwide Testing Services(Taiwan) Co., Ltd.

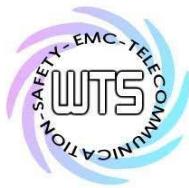
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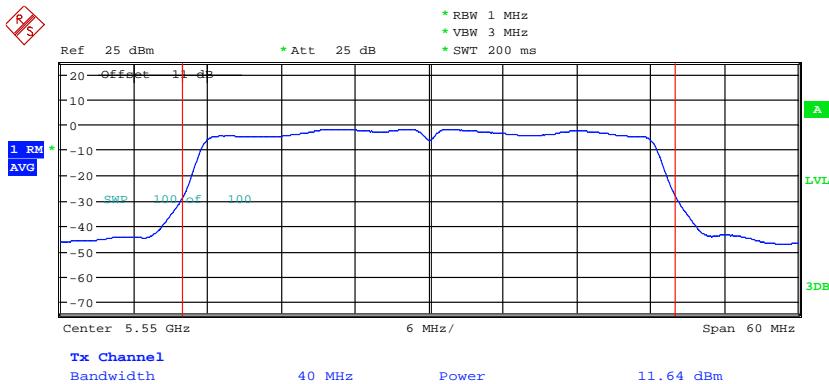


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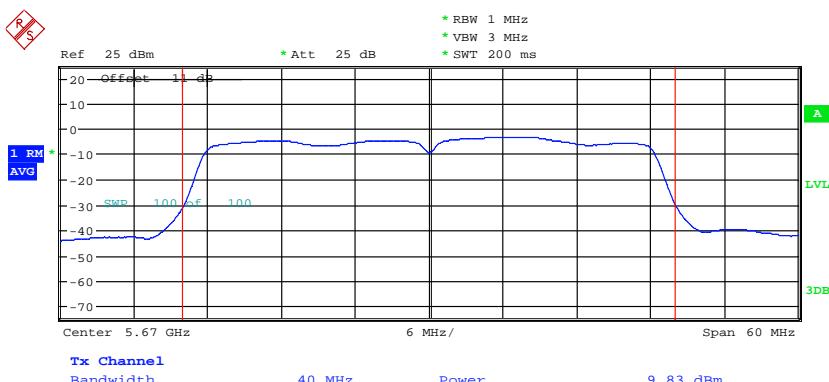
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
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MAXIMUM CONDUCTED POWER ANT1\_11n40CH110

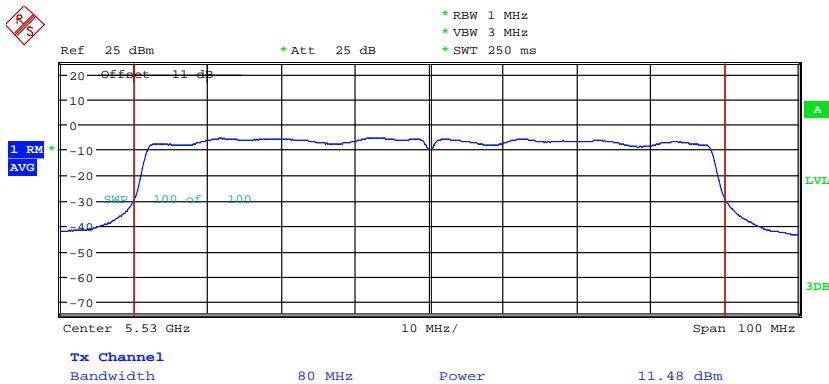
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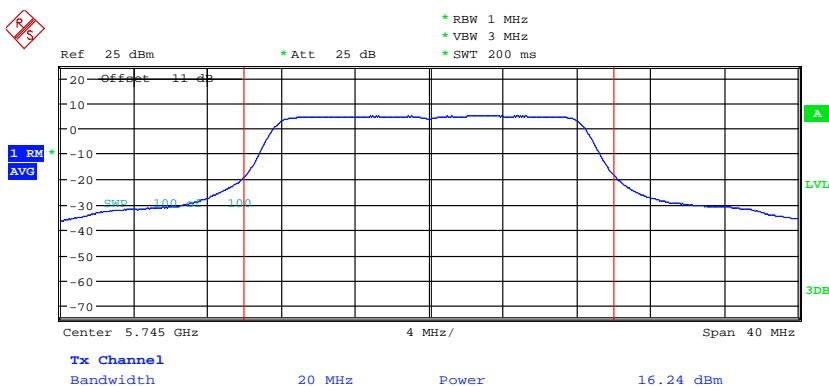
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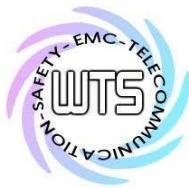


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## 5.725 GHz ~ 5.85 GHz

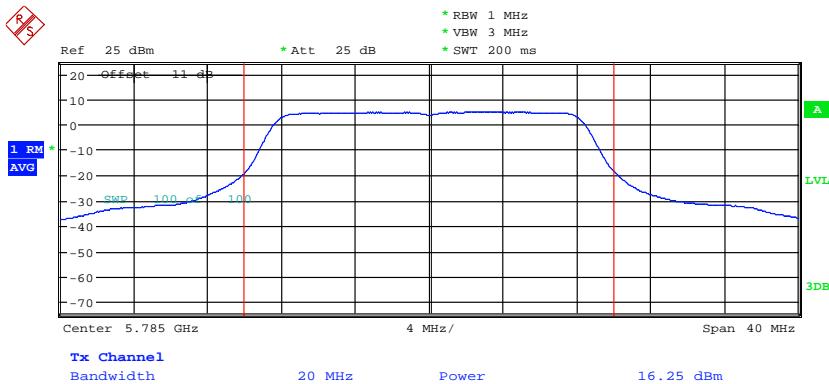


MAXIMUM CONDUCTED POWER ANT1\_11aCH149  
Date: 20.MAR.2020 17:32:25

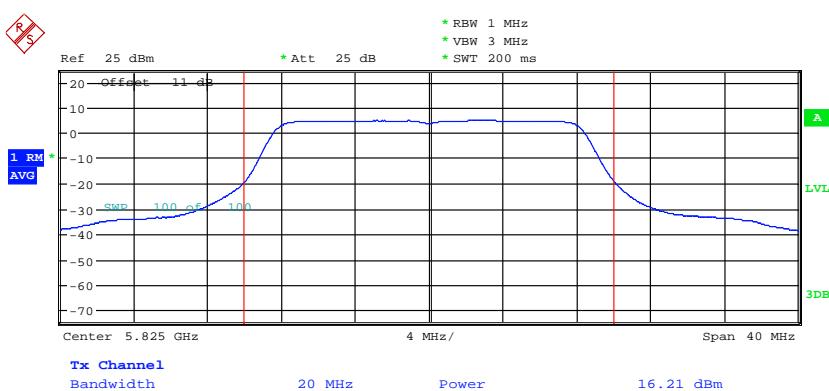


# Worldwide Testing Services(Taiwan) Co., Ltd.

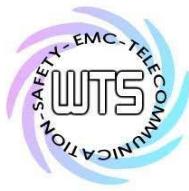
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



MAXIMUM CONDUCTED POWER ANT1\_11aCH157  
Date: 20.MAR.2020 17:33:15

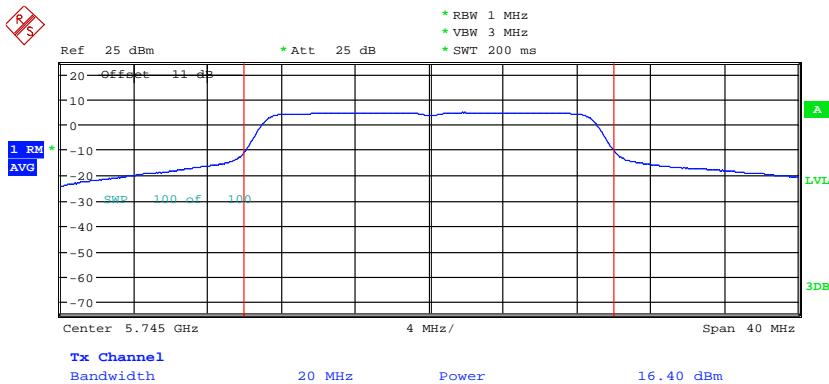


MAXIMUM CONDUCTED POWER ANT1\_11aCH165  
Date: 20.MAR.2020 17:34:35



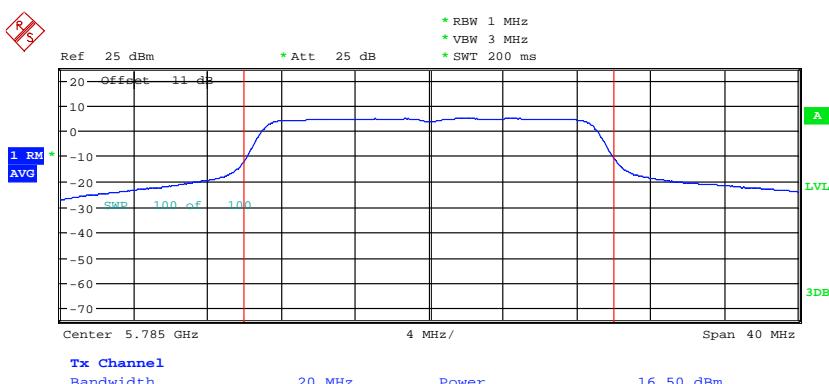
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



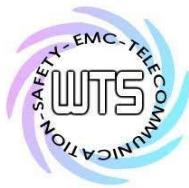
MAXIMUM CONDUCTED POWER ANT1\_11n20CH149

Date: 20.MAR.2020 17:36:15



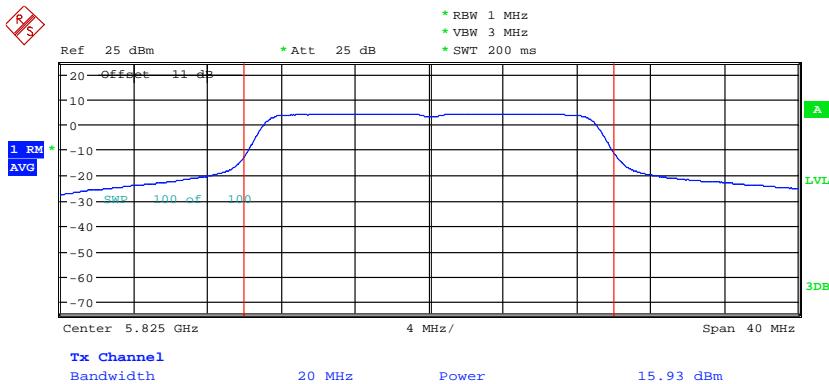
MAXIMUM CONDUCTED POWER ANT1\_11n20CH157

Date: 20.MAR.2020 17:37:15

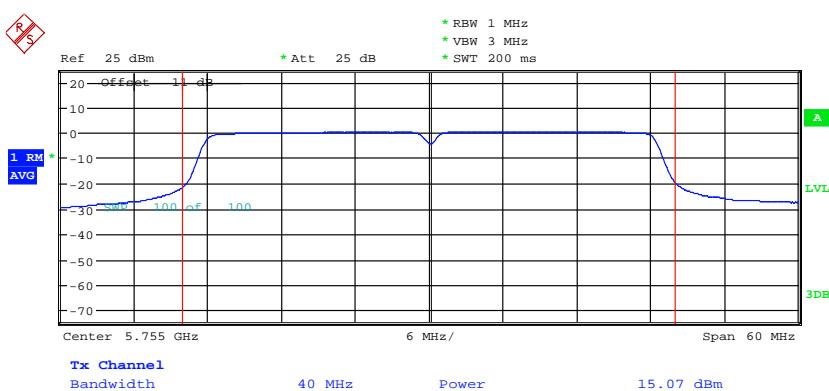


# Worldwide Testing Services(Taiwan) Co., Ltd.

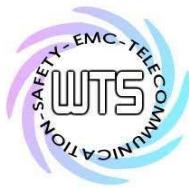
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



MAXIMUM CONDUCTED POWER ANT1\_11n20CH165  
Date: 20.MAR.2020 17:38:15

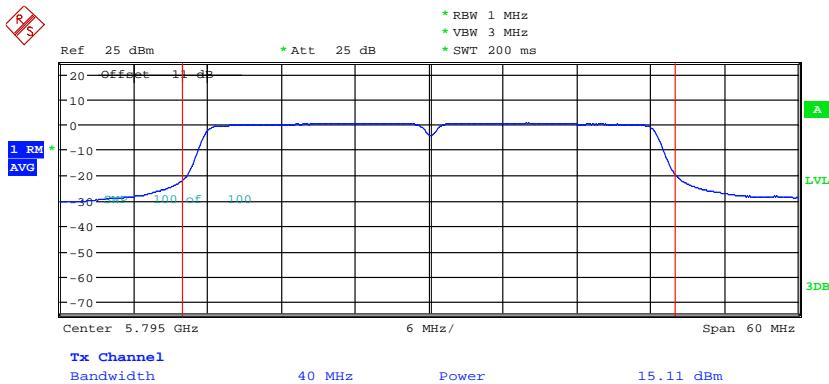


MAXIMUM CONDUCTED POWER ANT1\_11n40CH151  
Date: 20.MAR.2020 17:41:35

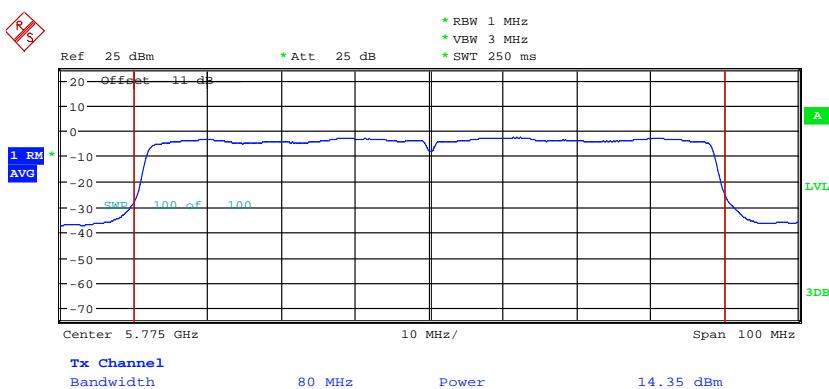


# Worldwide Testing Services(Taiwan) Co., Ltd.

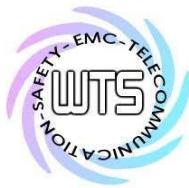
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



MAXIMUM CONDUCTED POWER ANT1\_11n40CH159  
Date: 20.MAR.2020 17:42:25



MAXIMUM CONDUCTED POWER ANT1\_11ac80CH155  
Date: 20.MAR.2020 17:44:11

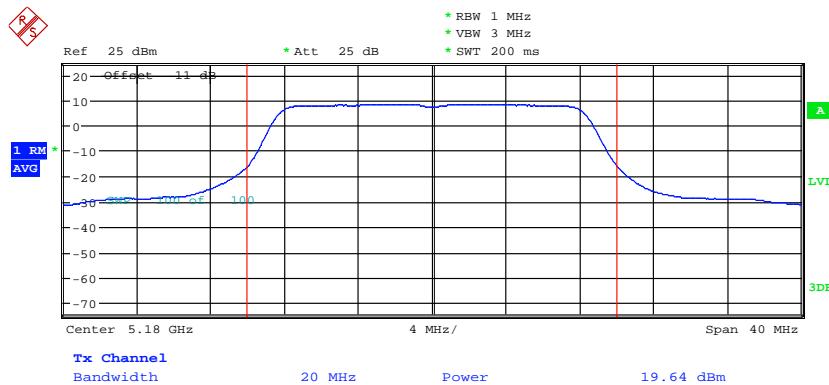


# Worldwide Testing Services(Taiwan) Co., Ltd.

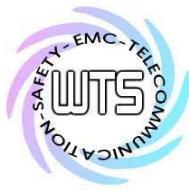
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

## ANT2

### 5.15 GHz ~ 5.25 GHz

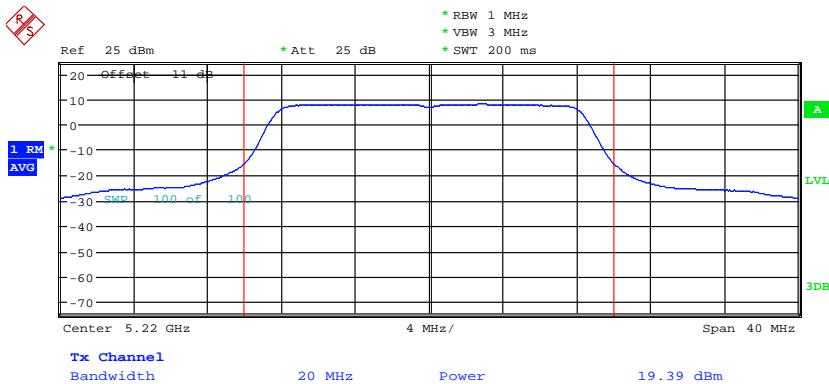


MAXIMUM CONDUCTED POWER ANT2\_11aCH36  
Date: 17.MAR.2020 16:36:16

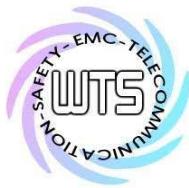


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

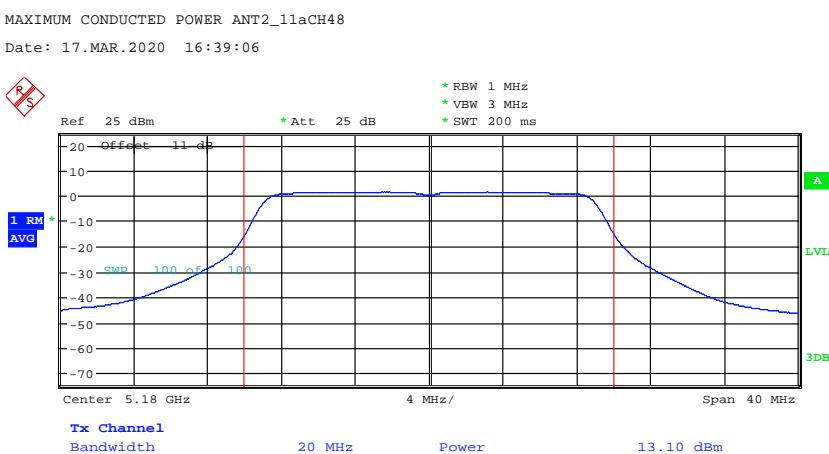
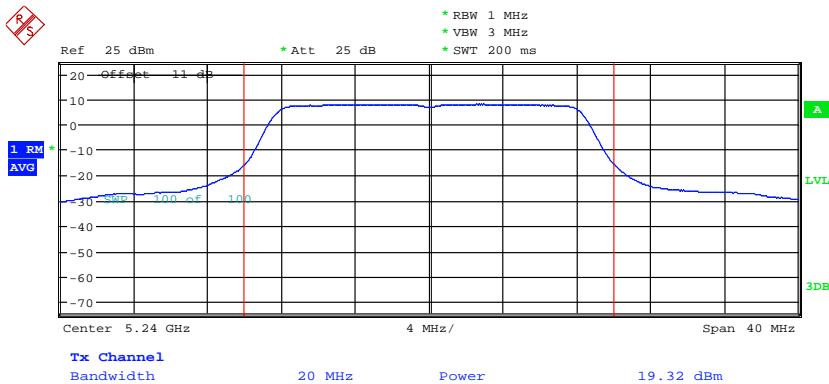


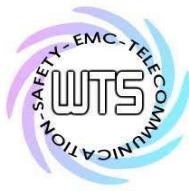
MAXIMUM CONDUCTED POWER ANT2\_11aCH44  
Date: 17.MAR.2020 16:37:46



# Worldwide Testing Services(Taiwan) Co., Ltd.

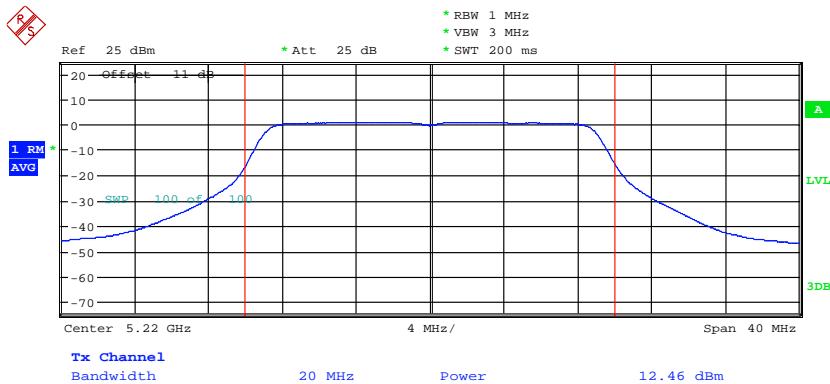
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS





# Worldwide Testing Services(Taiwan) Co., Ltd.

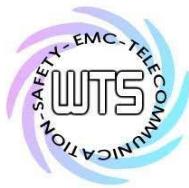
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



MAXIMUM CONDUCTED POWER ANT2\_11n20CH44  
Date: 17.MAR.2020 16:41:56

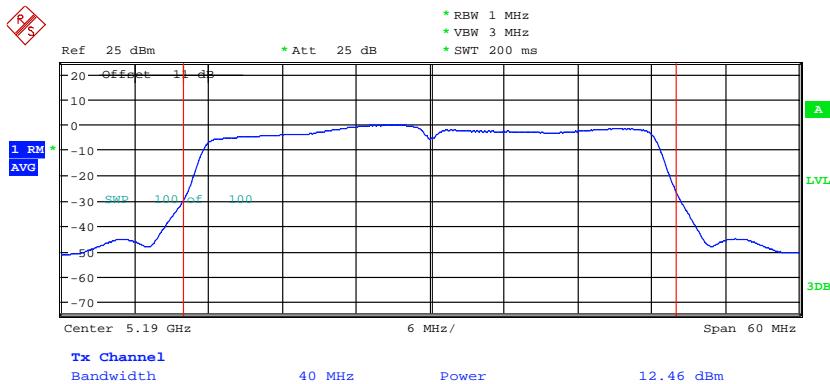


MAXIMUM CONDUCTED POWER ANT2\_11n20CH48  
Date: 20.MAR.2020 20:28:16

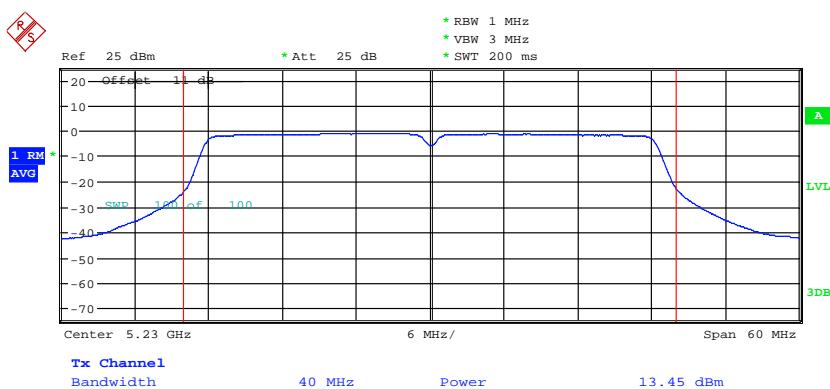


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
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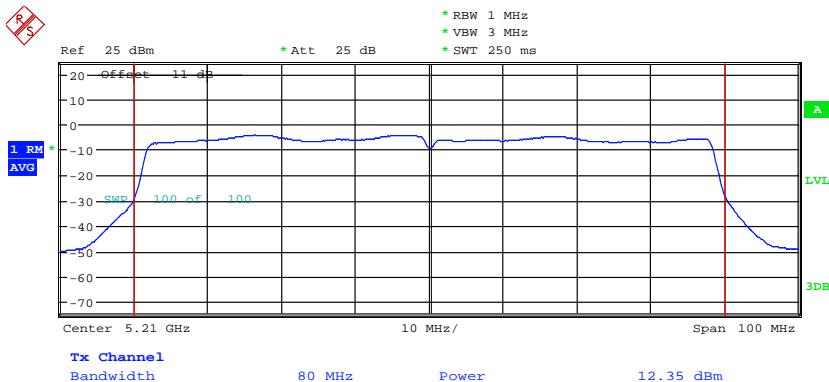


MAXIMUM CONDUCTED POWER ANT2\_11n40CH38  
Date: 30.APR.2020 16:46:23



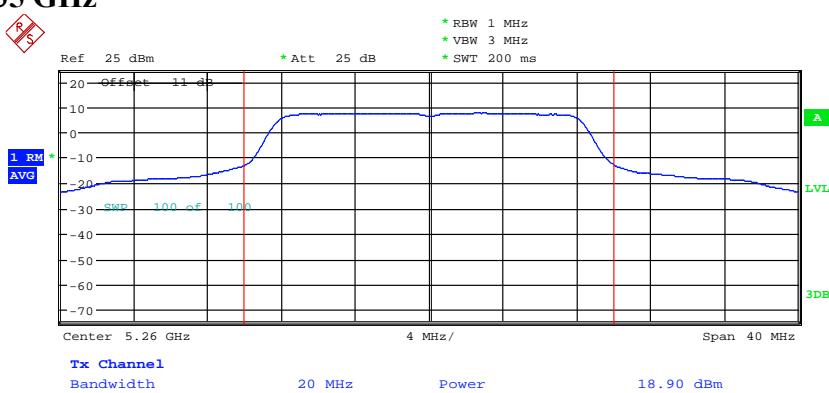
MAXIMUM CONDUCTED POWER ANT2\_11n40CH46  
Date: 17.MAR.2020 16:45:16

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

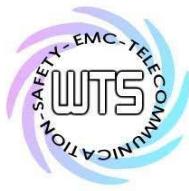


MAXIMUM CONDUCTED POWER ANT2\_11ac80CH42  
Date: 17.MAR.2020 16:46:36

## 5.25 GHz ~ 5.35 GHz

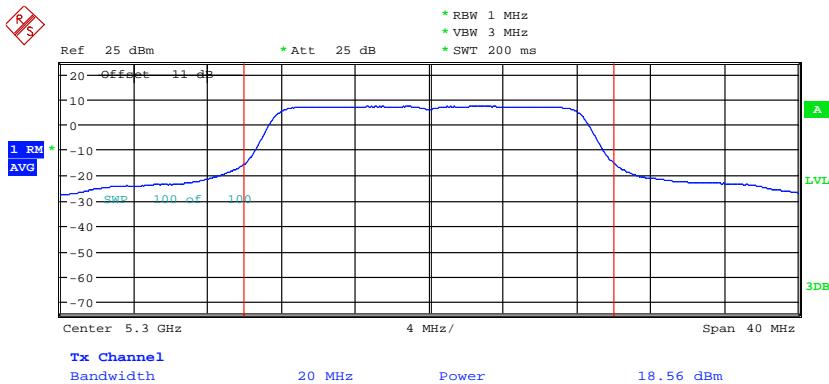


MAXIMUM CONDUCTED POWER ANT2\_11aCH52  
Date: 20.MAR.2020 14:26:35

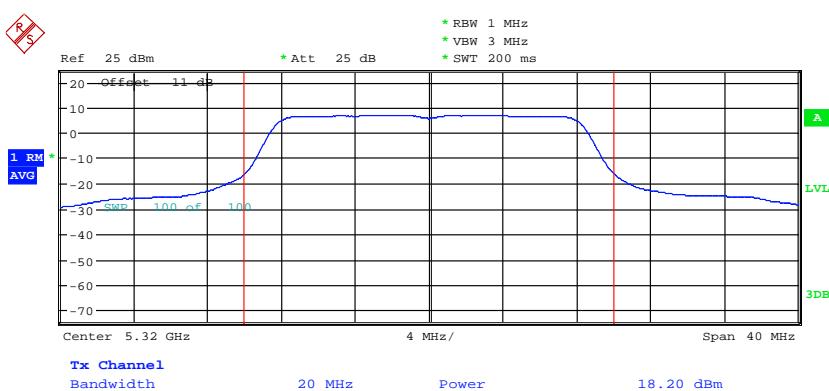


# Worldwide Testing Services(Taiwan) Co., Ltd.

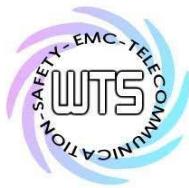
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



MAXIMUM CONDUCTED POWER ANT2\_11aCH60  
Date: 20.MAR.2020 14:33:35

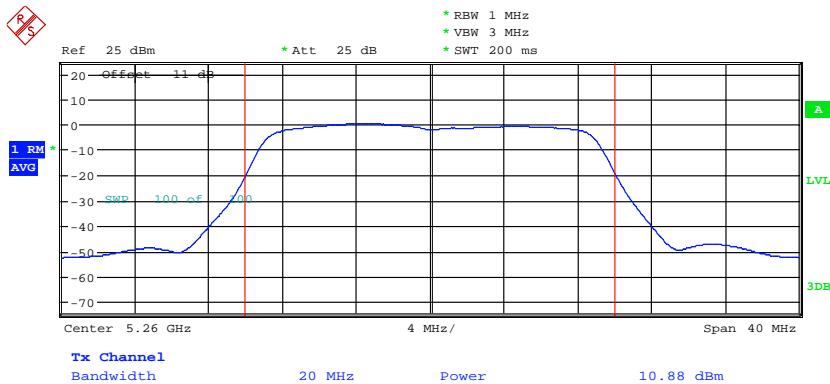


MAXIMUM CONDUCTED POWER ANT2\_11aCH64  
Date: 20.MAR.2020 14:34:35



# Worldwide Testing Services(Taiwan) Co., Ltd.

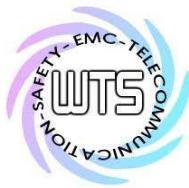
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



MAXIMUM CONDUCTED POWER ANT2\_11n20CH52  
Date: 30.APR.2020 15:02:43

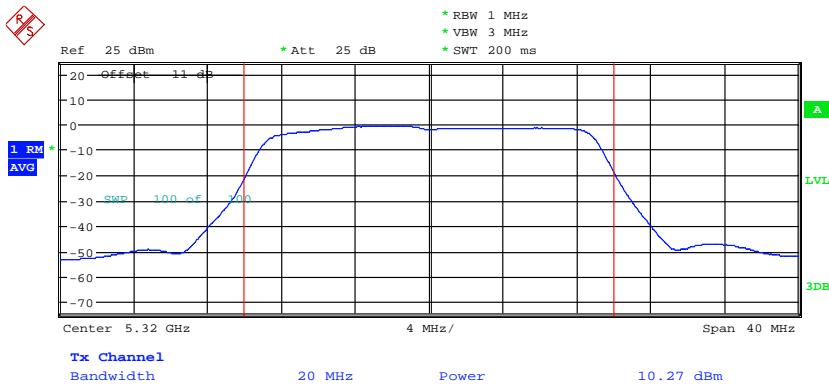


MAXIMUM CONDUCTED POWER ANT2\_11n20CH60  
Date: 30.APR.2020 14:59:44



# Worldwide Testing Services(Taiwan) Co., Ltd.

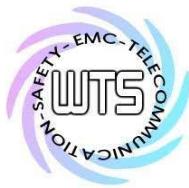
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



MAXIMUM CONDUCTED POWER ANT2\_11n20CH64  
Date: 30.APR.2020 14:58:10

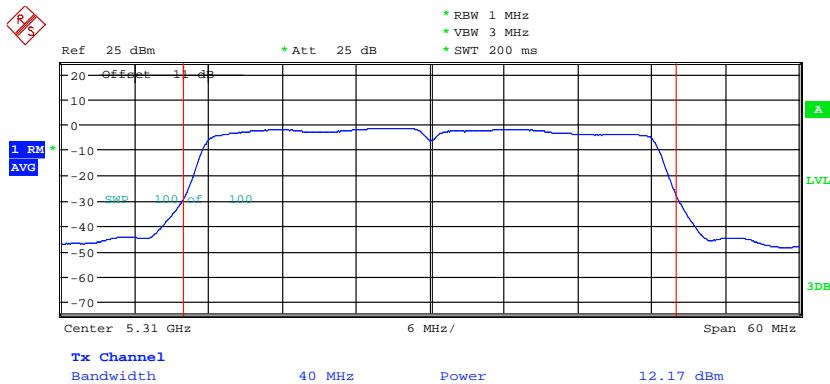


MAXIMUM CONDUCTED POWER ANT2\_11n40CH54  
Date: 30.APR.2020 16:47:36



# Worldwide Testing Services(Taiwan) Co., Ltd.

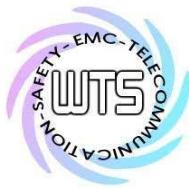
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



MAXIMUM CONDUCTED POWER ANT2\_11n40CH62  
Date: 30.APR.2020 16:58:17



MAXIMUM CONDUCTED POWER ANT2\_11ac80CH58  
Date: 30.APR.2020 17:36:59

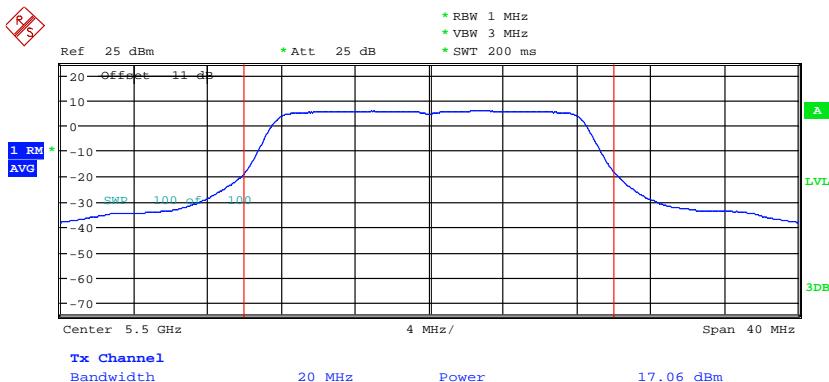


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54

FCC ID: W23-WMXWAVE2AS

**5.47 GHz ~ 5.725 GHz**



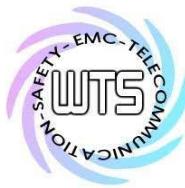
MAXIMUM CONDUCTED POWER ANT2\_11aCH100

Date: 20.MAR.2020 15:55:05



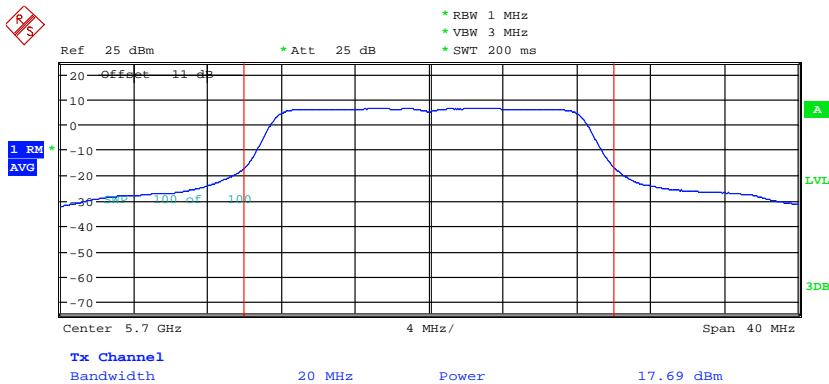
MAXIMUM CONDUCTED POWER ANT2\_11aCH116

Date: 20.MAR.2020 15:56:25



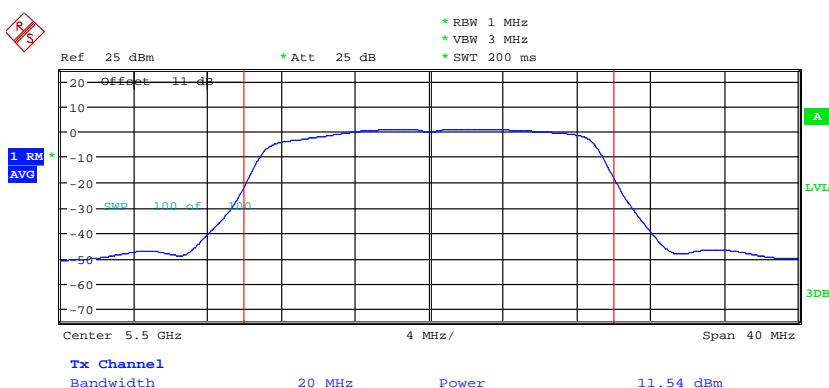
*Worldwide Testing Services(Taiwan) Co., Ltd.*

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



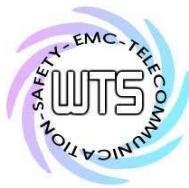
MAXIMUM CONDUCTED POWER ANT2 11aCH140

Date: 20 MAR 2020 15:57:25



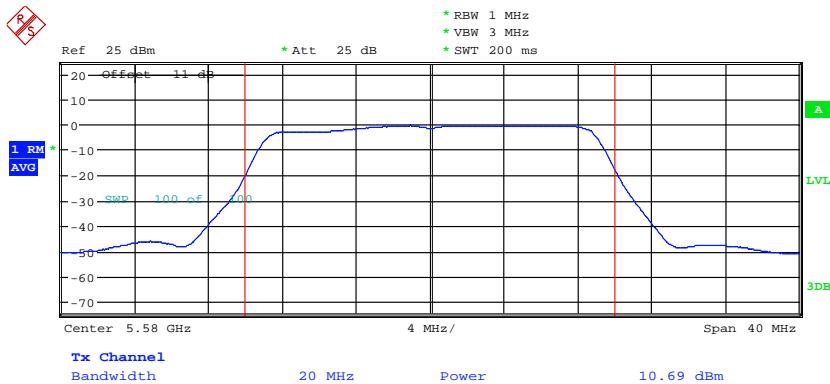
MAXIMUM CONDUCTED POWER ANT2 11n20CH100

Date: 30-APR-2020 14:47:45



# Worldwide Testing Services(Taiwan) Co., Ltd.

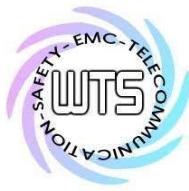
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



MAXIMUM CONDUCTED POWER ANT2\_11n20CH116  
Date: 30.APR.2020 14:46:18

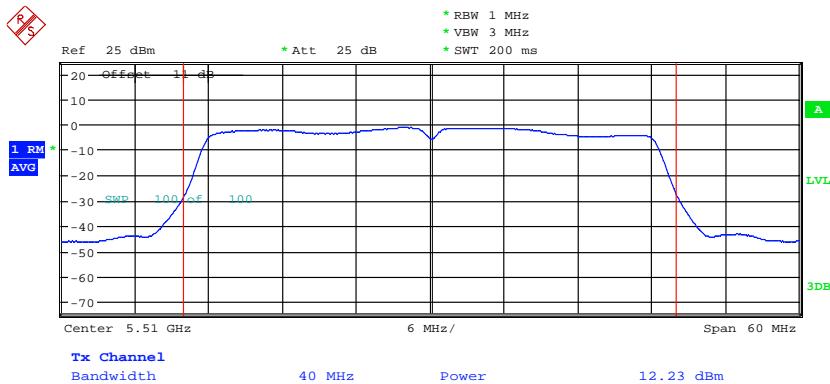


MAXIMUM CONDUCTED POWER ANT2\_11n20CH140  
Date: 30.APR.2020 14:44:58



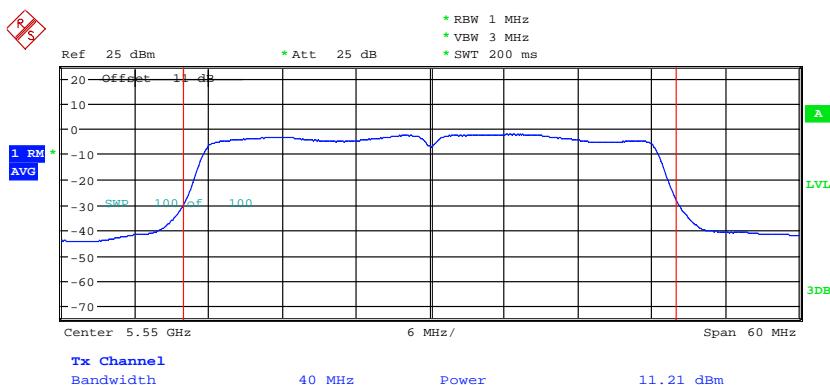
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



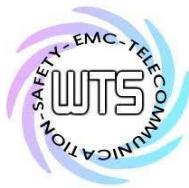
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Date: 30.APR.2020 17:06:14



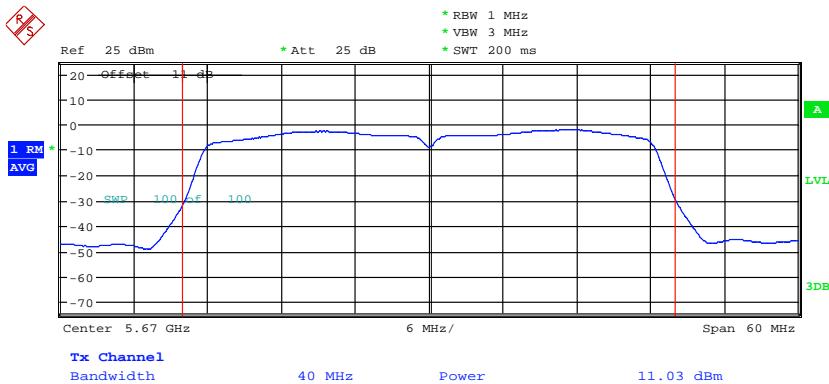
MAXIMUM CONDUCTED POWER ANT2\_11n40CH110

Date: 30.APR.2020 17:21:03



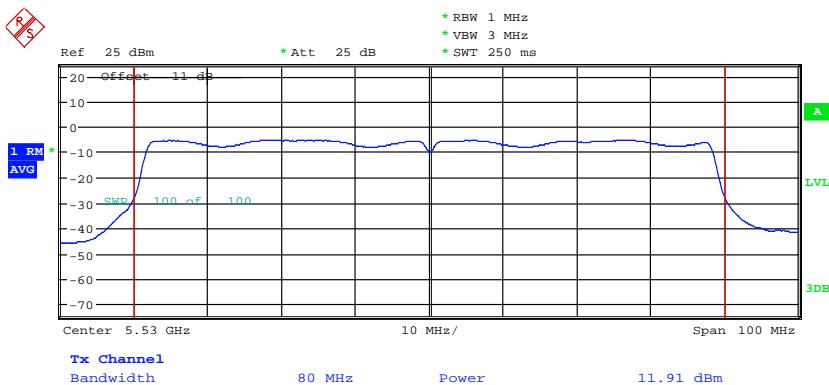
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



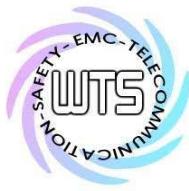
MAXIMUM CONDUCTED POWER ANT2\_11n40CH134

Date: 30.APR.2020 16:51:08



MAXIMUM CONDUCTED POWER ANT2\_11ac80CH106

Date: 30.APR.2020 17:42:49



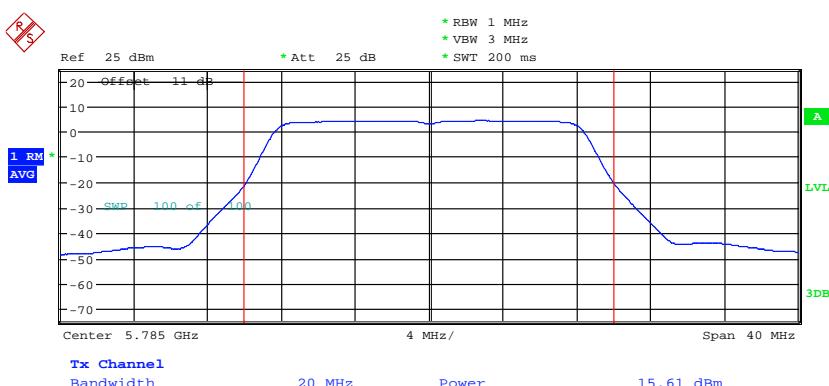
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

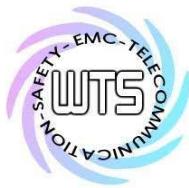
## 5.725 GHz ~ 5.85 GHz



MAXIMUM CONDUCTED POWER ANT2\_11aCH149  
Date: 20.MAR.2020 17:50:05

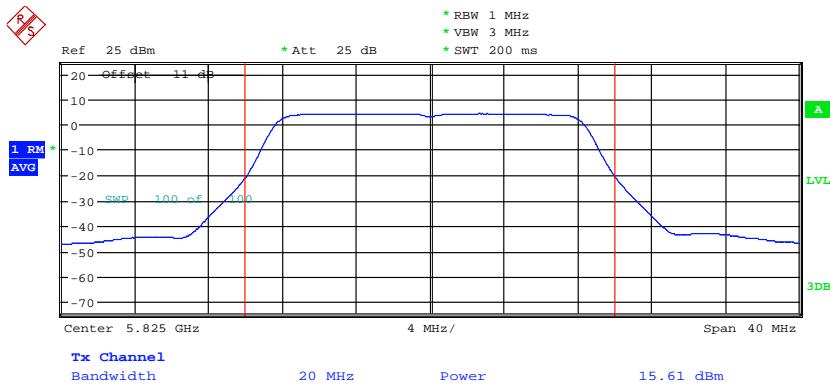


MAXIMUM CONDUCTED POWER ANT2\_11aCH157  
Date: 20.MAR.2020 17:51:15

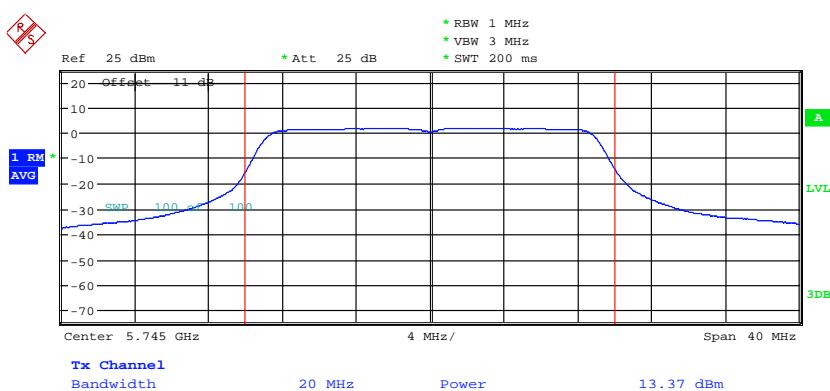


# Worldwide Testing Services(Taiwan) Co., Ltd.

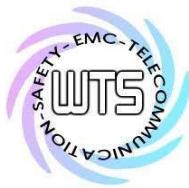
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



MAXIMUM CONDUCTED POWER ANT2\_11aCH165  
Date: 20.MAR.2020 17:52:15

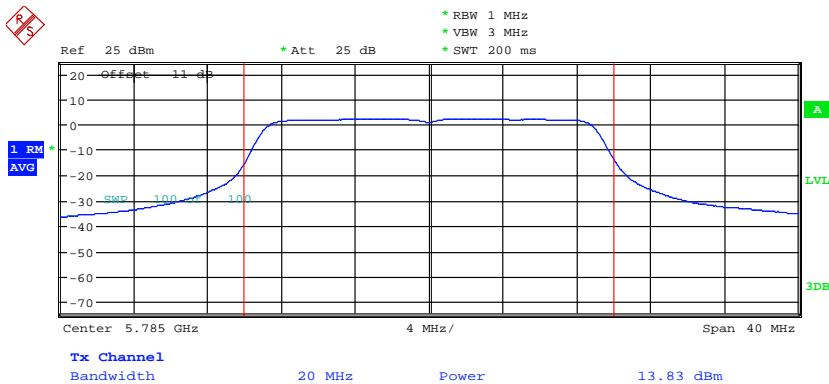


MAXIMUM CONDUCTED POWER ANT2\_11n20CH149  
Date: 20.MAR.2020 18:05:06

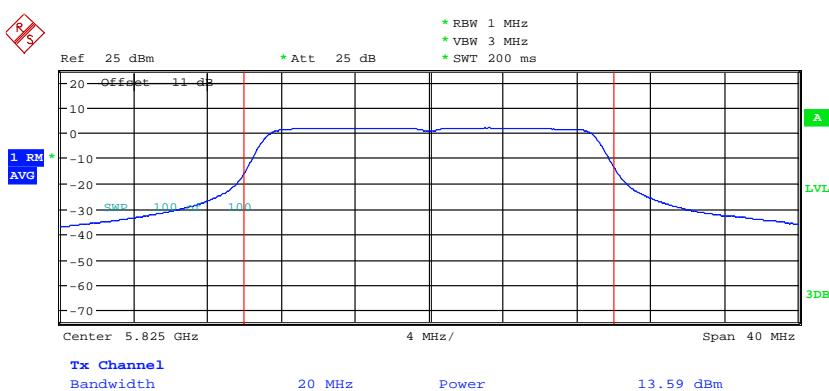


# Worldwide Testing Services(Taiwan) Co., Ltd.

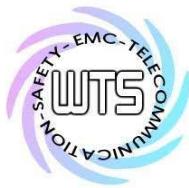
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



MAXIMUM CONDUCTED POWER ANT2\_11n20CH157  
Date: 20.MAR.2020 17:55:56

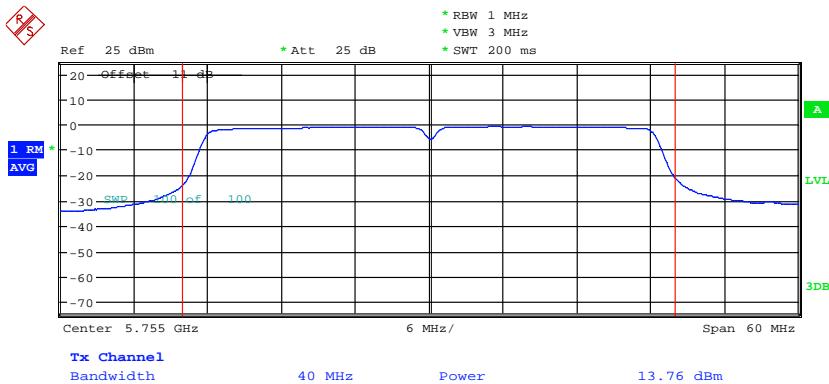


MAXIMUM CONDUCTED POWER ANT2\_11n20CH165  
Date: 20.MAR.2020 17:57:06



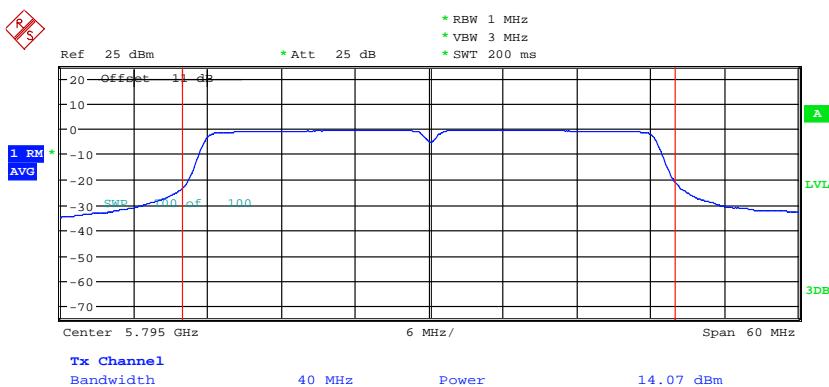
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



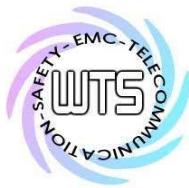
MAXIMUM CONDUCTED POWER ANT2\_11n40CH151

Date: 20.MAR.2020 17:58:57



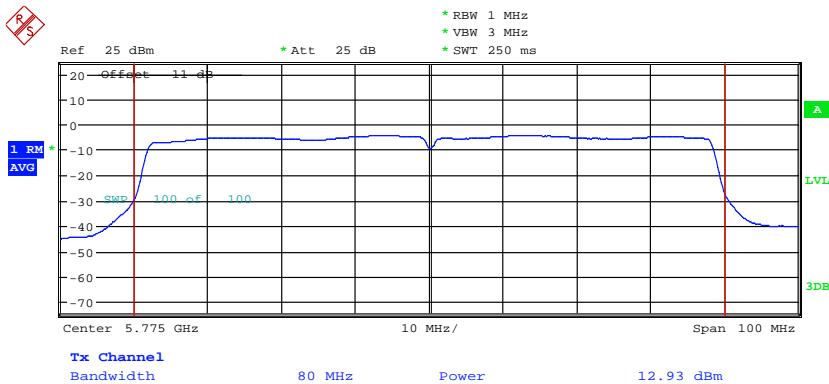
MAXIMUM CONDUCTED POWER ANT2\_11n40CH159

Date: 20.MAR.2020 17:59:56



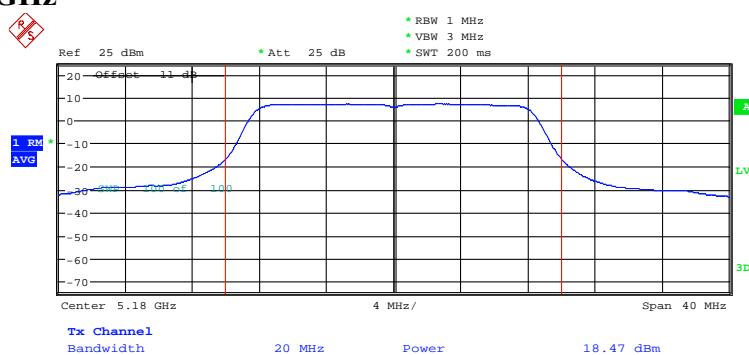
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

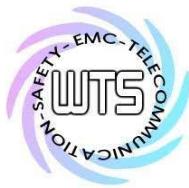


MAXIMUM CONDUCTED POWER ANT2\_11ac80CH155  
Date: 20.MAR.2020 18:02:13

## ANT3 5.15 GHz ~ 5.25 GHz

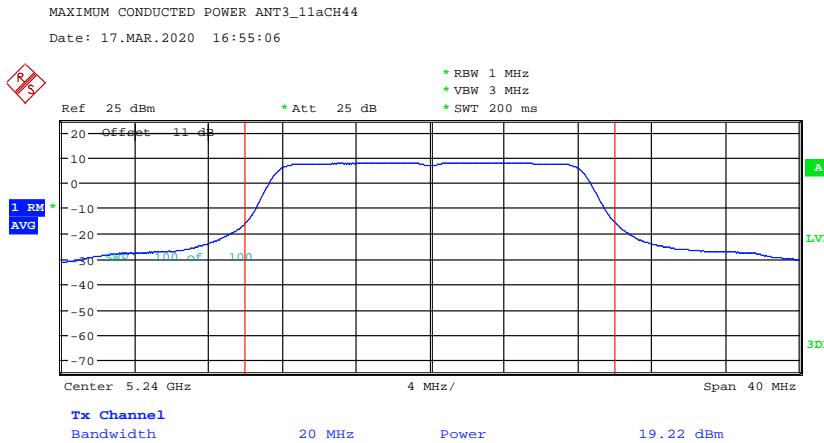
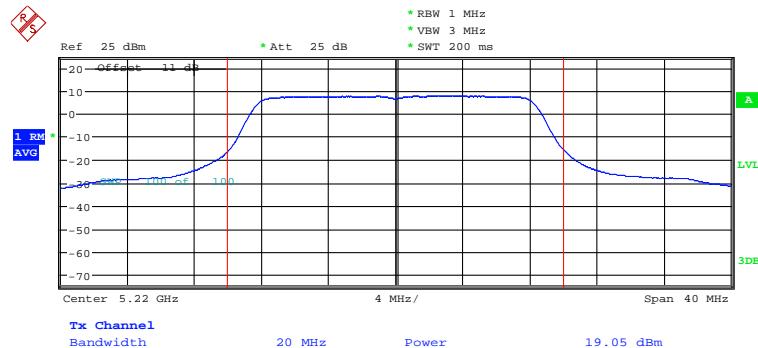


MAXIMUM CONDUCTED POWER ANT3\_11aCH36  
Date: 17.MAR.2020 16:54:06



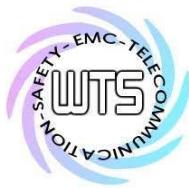
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



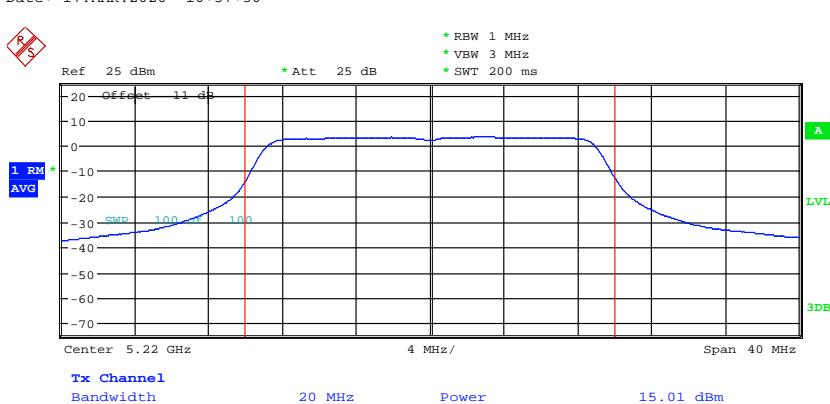
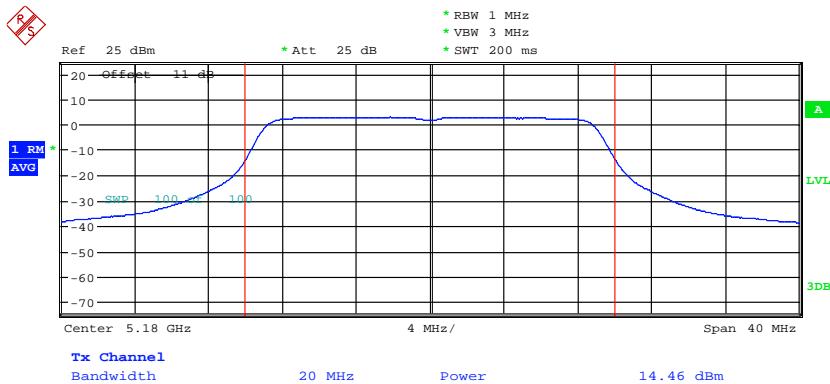
MAXIMUM CONDUCTED POWER ANT3\_11aCH48

Date: 17.MAR.2020 16:56:06



# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

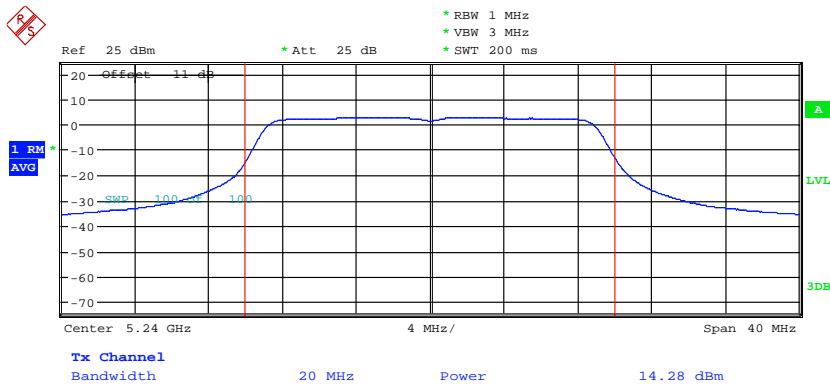


MAXIMUM CONDUCTED POWER ANT3\_11n20CH44  
Date: 17.MAR.2020 16:58:36

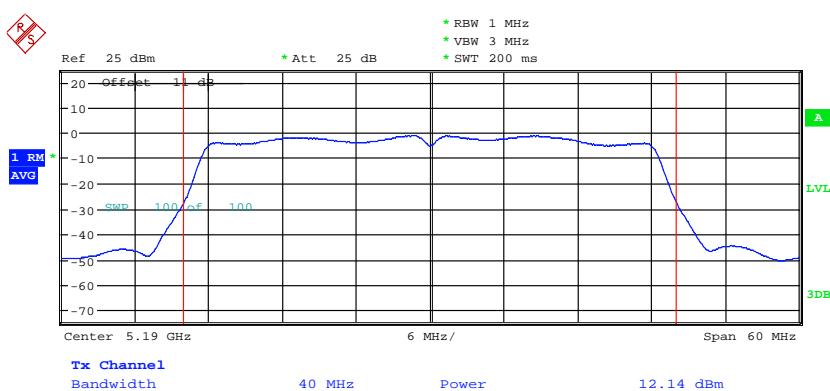


# Worldwide Testing Services(Taiwan) Co., Ltd.

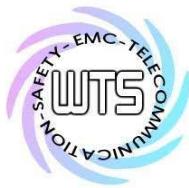
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



MAXIMUM CONDUCTED POWER ANT3\_11n20CH48  
Date: 20.MAR.2020 20:27:06

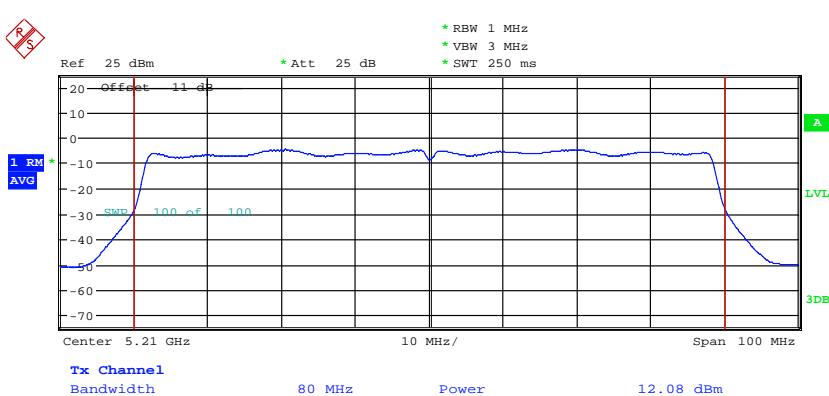
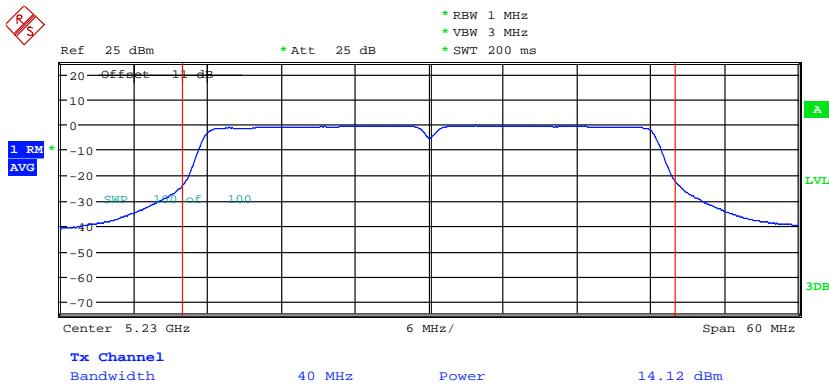


MAXIMUM CONDUCTED POWER ANT3\_11n40CH38  
Date: 30.APR.2020 16:30:54



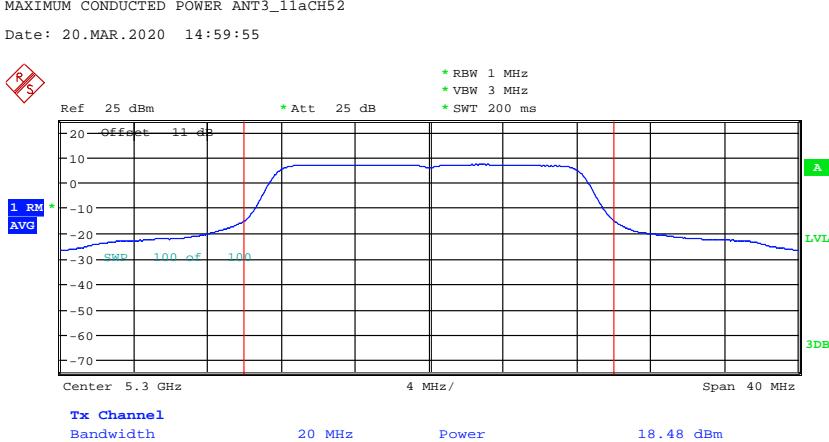
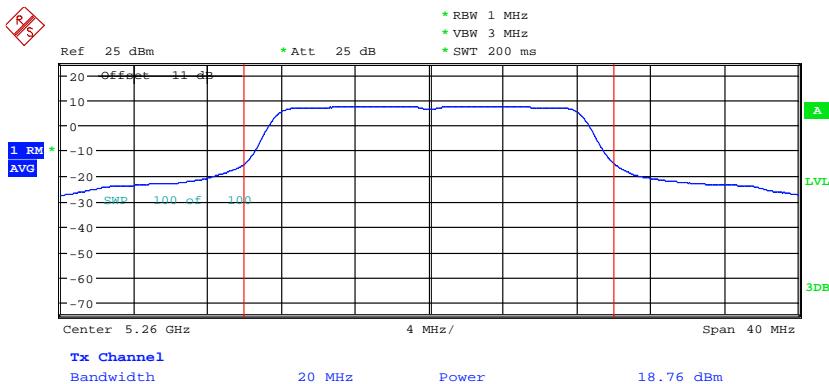
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

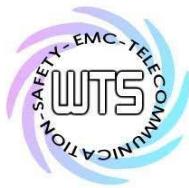


Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

## 5.25 GHz ~ 5.35 GHz

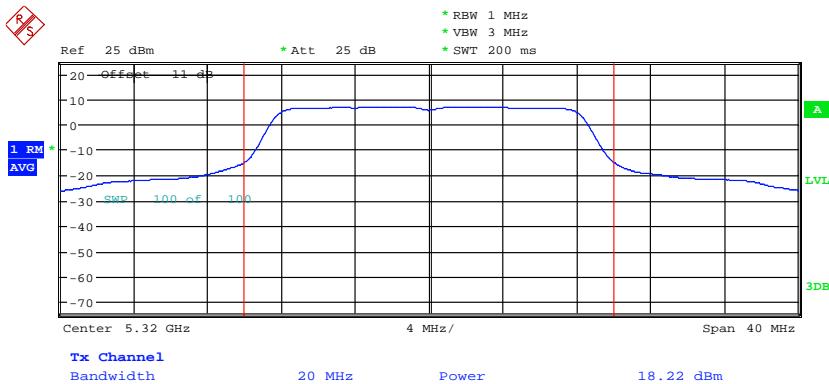


MAXIMUM CONDUCTED POWER ANT3\_11aCH60  
Date: 20.MAR.2020 15:01:16

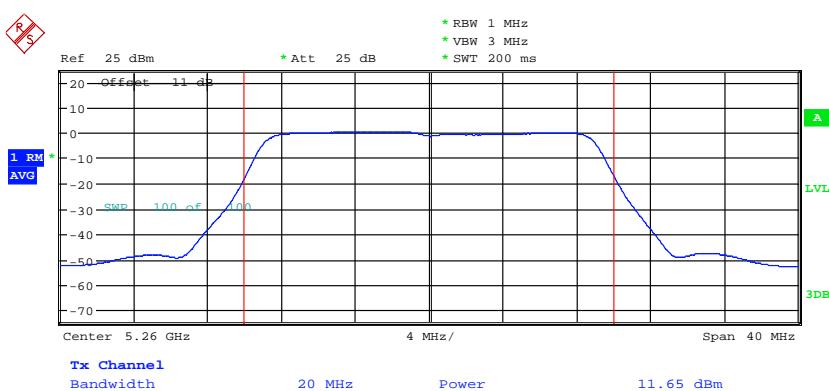


# Worldwide Testing Services(Taiwan) Co., Ltd.

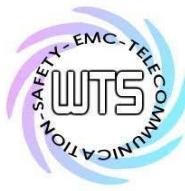
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



MAXIMUM CONDUCTED POWER ANT3\_11aCH64  
Date: 20.MAR.2020 15:02:05

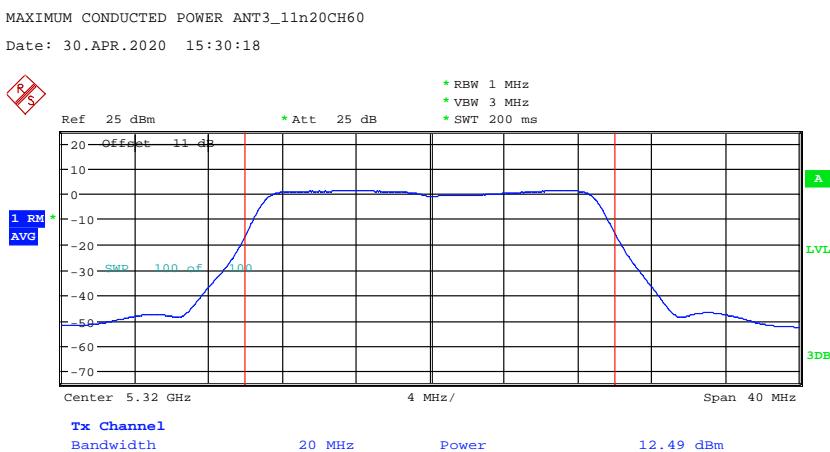
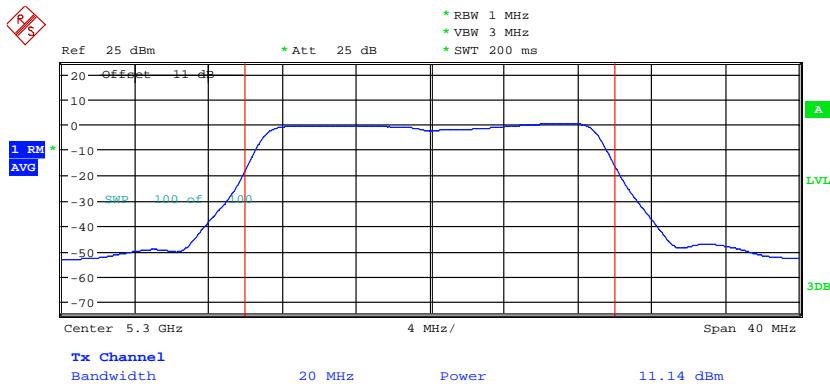


MAXIMUM CONDUCTED POWER ANT3\_11n20CH52  
Date: 30.APR.2020 15:31:33



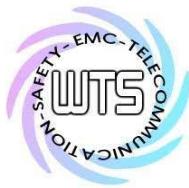
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



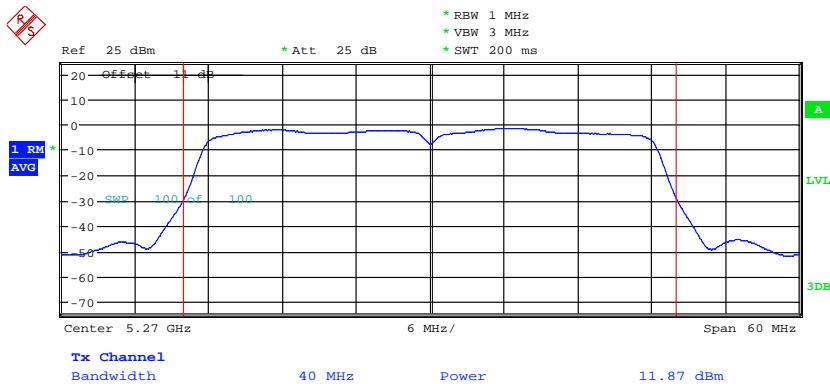
MAXIMUM CONDUCTED POWER ANT3\_11n20CH64

Date: 30.APR.2020 15:28:35



# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

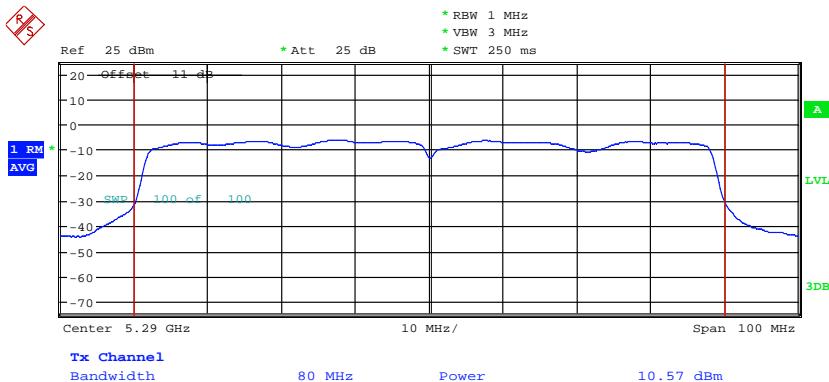


MAXIMUM CONDUCTED POWER ANT3\_11n40CH54  
Date: 30.APR.2020 16:32:54



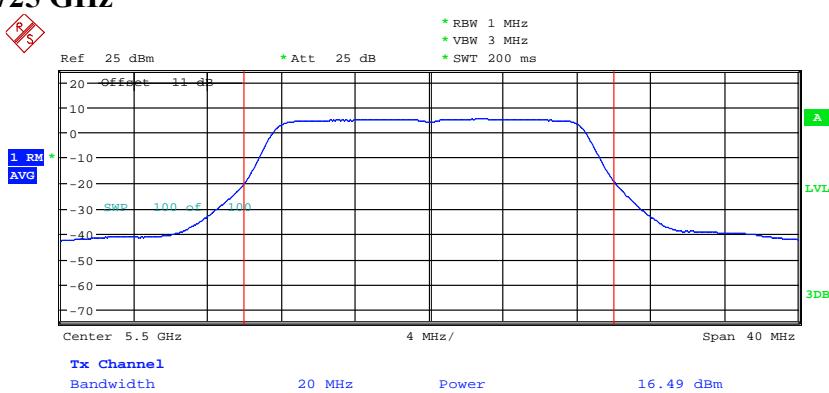
MAXIMUM CONDUCTED POWER ANT3\_11n40CH62  
Date: 30.APR.2020 16:59:08

Registration number: W6R22110-21274-C-54  
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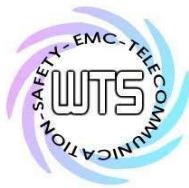


MAXIMUM CONDUCTED POWER ANT3\_11ac80CH58  
Date: 30.APR.2020 17:35:14

## 5.47 GHz ~ 5.725 GHz

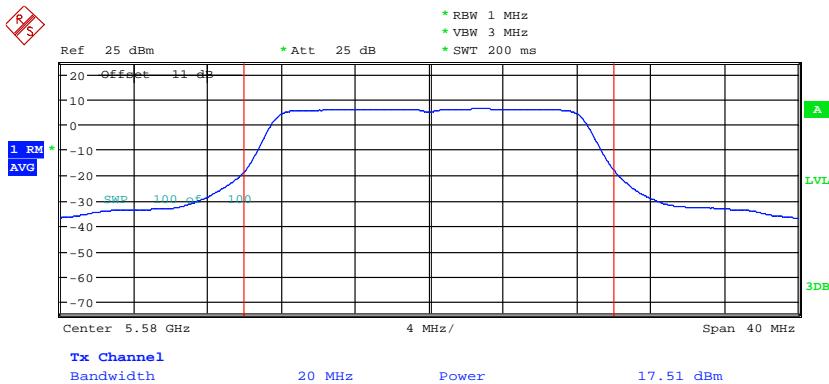


MAXIMUM CONDUCTED POWER ANT3\_11aCH100  
Date: 20.MAR.2020 16:39:45



# Worldwide Testing Services(Taiwan) Co., Ltd.

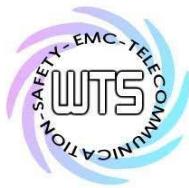
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



MAXIMUM CONDUCTED POWER ANT3\_11aCH116  
Date: 20.MAR.2020 16:41:05

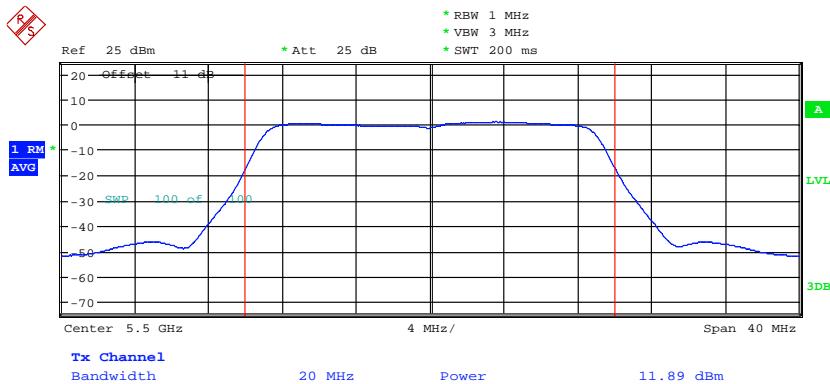


MAXIMUM CONDUCTED POWER ANT3\_11aCH140  
Date: 20.MAR.2020 16:42:05

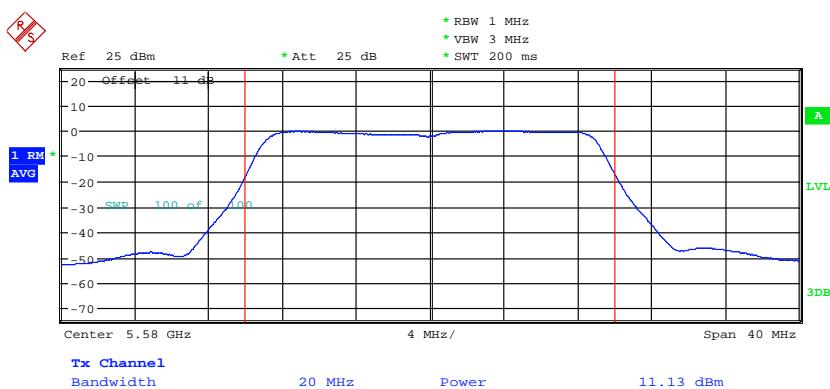


# Worldwide Testing Services(Taiwan) Co., Ltd.

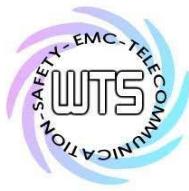
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



MAXIMUM CONDUCTED POWER ANT3\_11n20CH100  
Date: 30.APR.2020 15:27:14

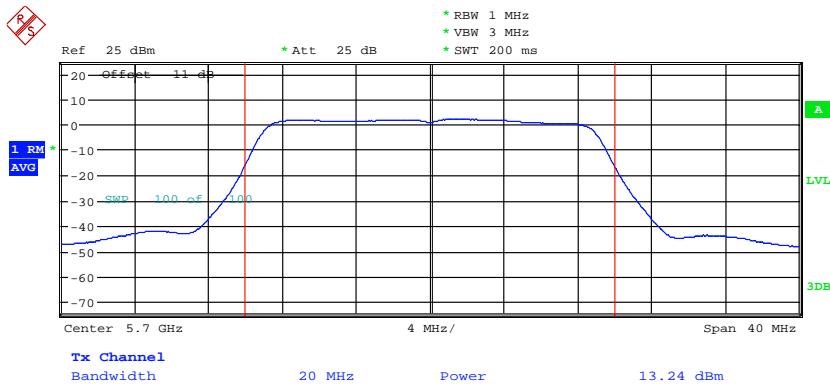


MAXIMUM CONDUCTED POWER ANT3\_11n20CH116  
Date: 30.APR.2020 15:24:43



# Worldwide Testing Services(Taiwan) Co., Ltd.

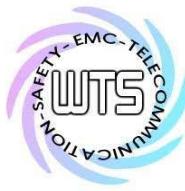
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



MAXIMUM CONDUCTED POWER ANT3\_11n20CH140  
Date: 30.APR.2020 15:23:10

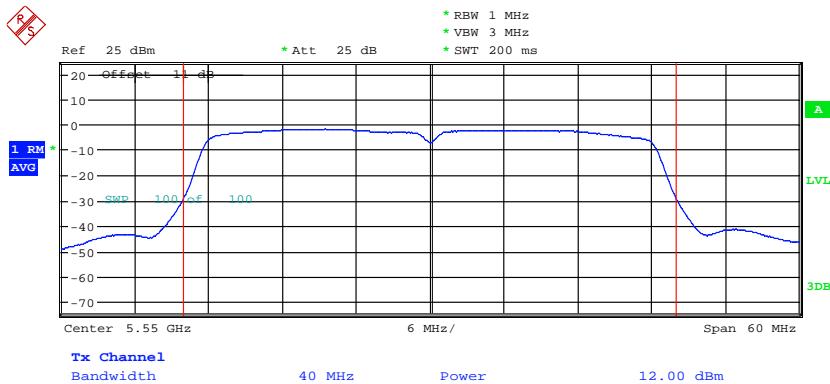


MAXIMUM CONDUCTED POWER ANT3\_11n40CH102  
Date: 30.APR.2020 17:06:55



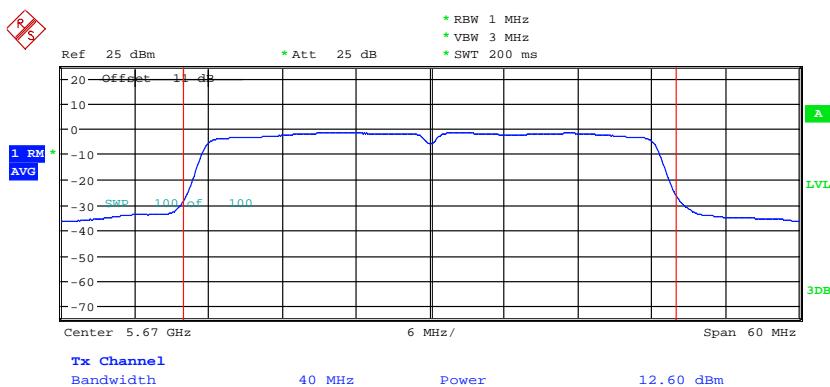
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



MAXIMUM CONDUCTED POWER ANT3\_11n40CH110

Date: 30.APR.2020 17:17:17



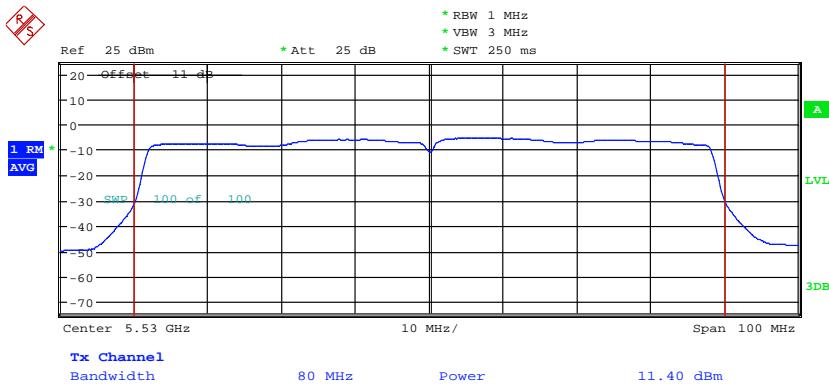
MAXIMUM CONDUCTED POWER ANT3\_11n40CH134

Date: 30.APR.2020 16:51:50



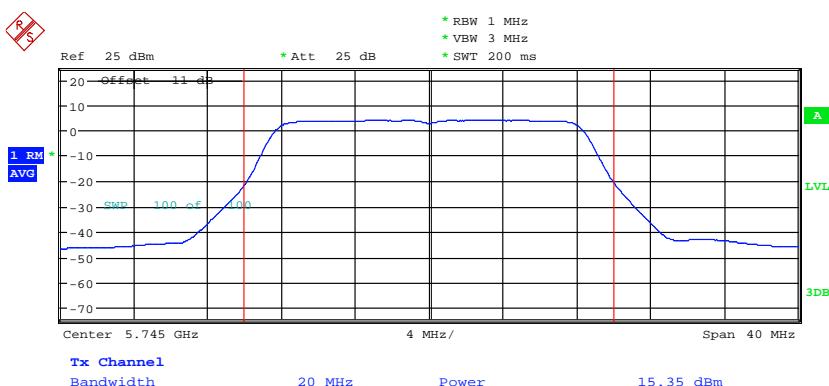
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

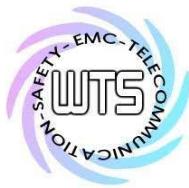


MAXIMUM CONDUCTED POWER ANT3\_11ac80CH106  
Date: 30.APR.2020 17:44:35

## 5.725 GHz ~ 5.85 GHz

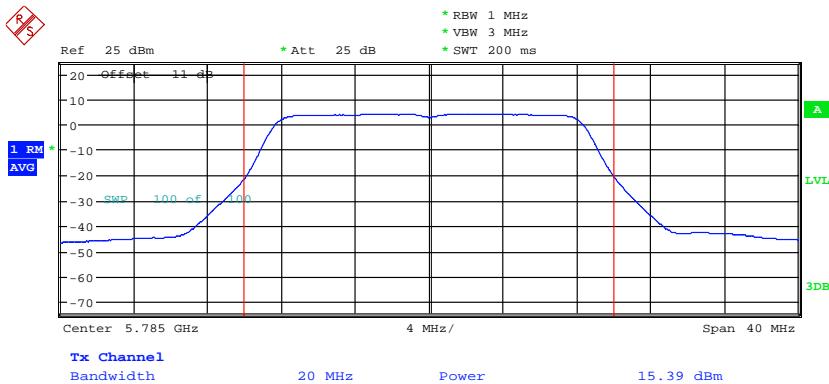


MAXIMUM CONDUCTED POWER ANT3\_11aCH149  
Date: 20.MAR.2020 19:40:46



# Worldwide Testing Services(Taiwan) Co., Ltd.

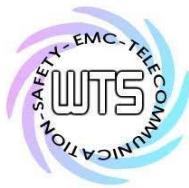
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



MAXIMUM CONDUCTED POWER ANT3\_11aCH157  
Date: 20.MAR.2020 19:41:36

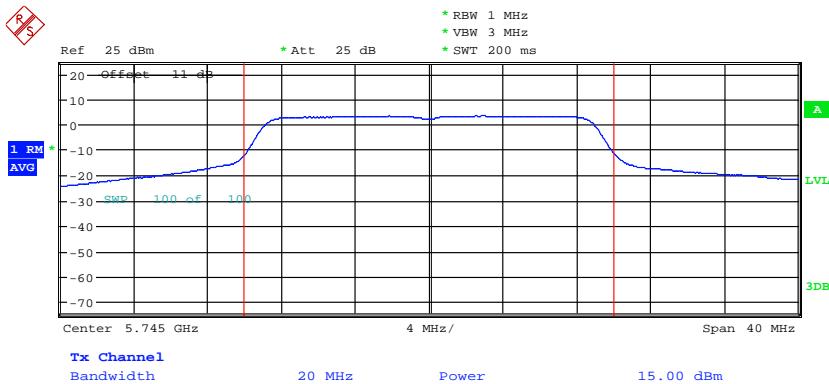


MAXIMUM CONDUCTED POWER ANT3\_11aCH165  
Date: 20.MAR.2020 19:43:05



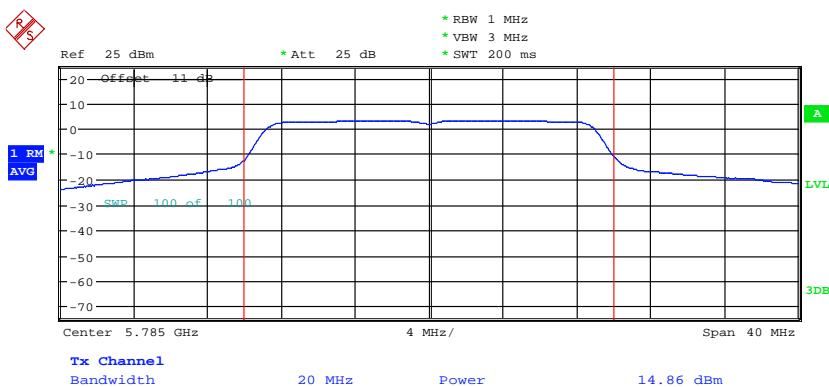
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



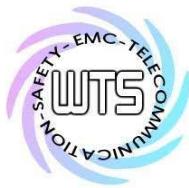
MAXIMUM CONDUCTED POWER ANT3\_11n20CH149

Date: 20.MAR.2020 19:44:16



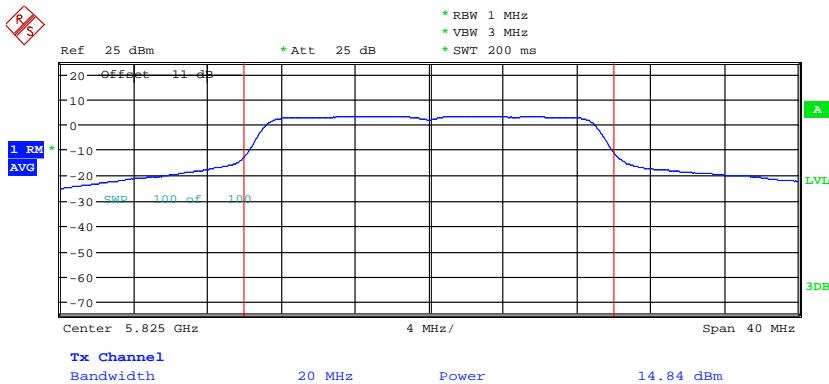
MAXIMUM CONDUCTED POWER ANT3\_11n20CH157

Date: 20.MAR.2020 19:45:46

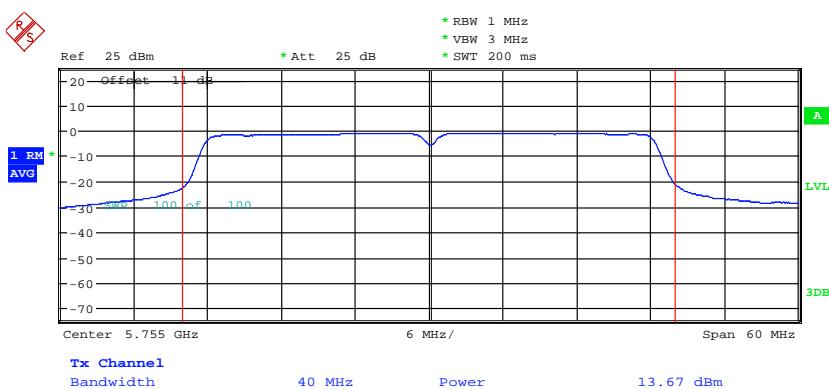


# Worldwide Testing Services(Taiwan) Co., Ltd.

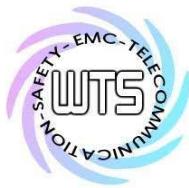
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



MAXIMUM CONDUCTED POWER ANT3\_11n20CH165  
Date: 20.MAR.2020 19:46:46

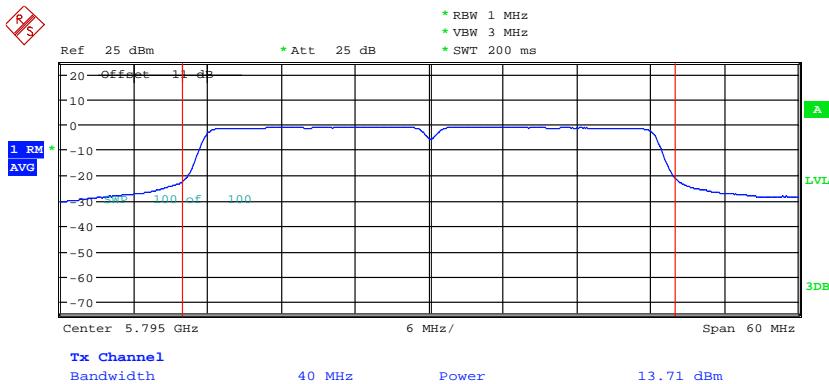


MAXIMUM CONDUCTED POWER ANT3\_11n40CH151  
Date: 20.MAR.2020 19:48:16

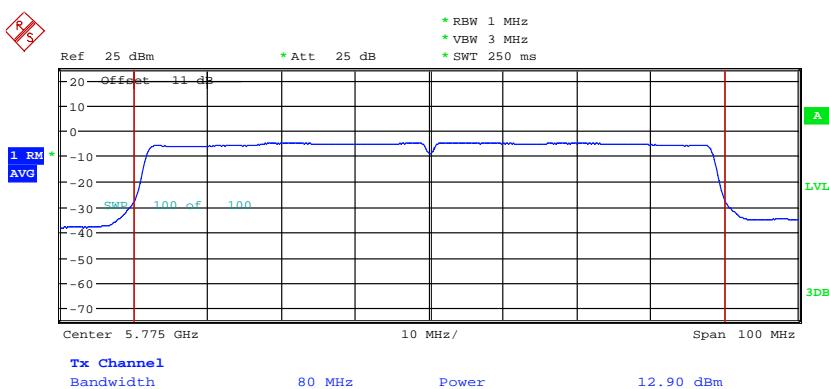


# Worldwide Testing Services(Taiwan) Co., Ltd.

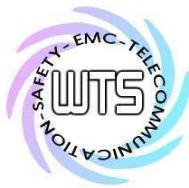
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



MAXIMUM CONDUCTED POWER ANT3\_11n40CH159  
Date: 20.MAR.2020 19:49:06



MAXIMUM CONDUCTED POWER ANT3\_11ac80CH155  
Date: 20.MAR.2020 19:50:26

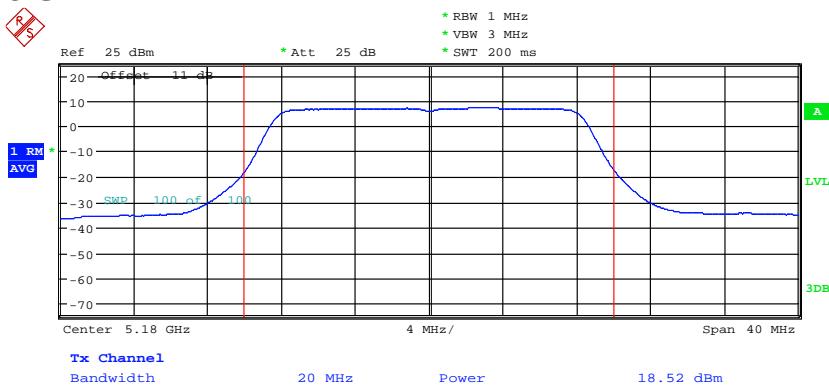


# Worldwide Testing Services(Taiwan) Co., Ltd.

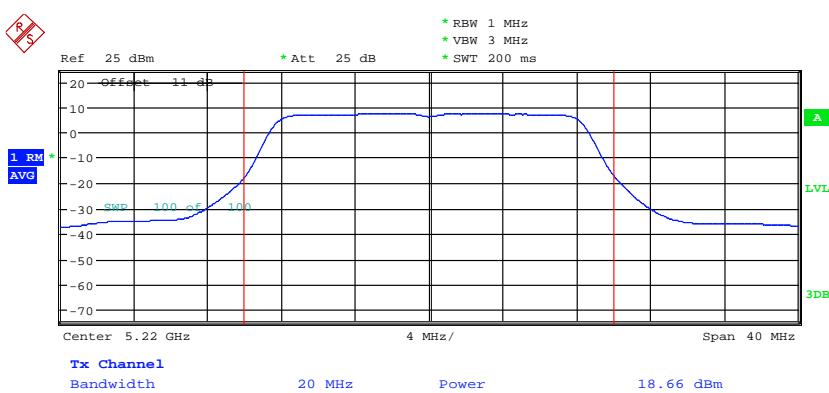
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

## ANT4

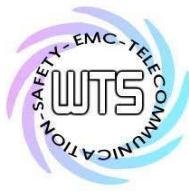
### 5.15 GHz ~ 5.25 GHz



MAXIMUM CONDUCTED POWER ANT4\_11aCH36  
Date: 17.MAR.2020 17:11:16

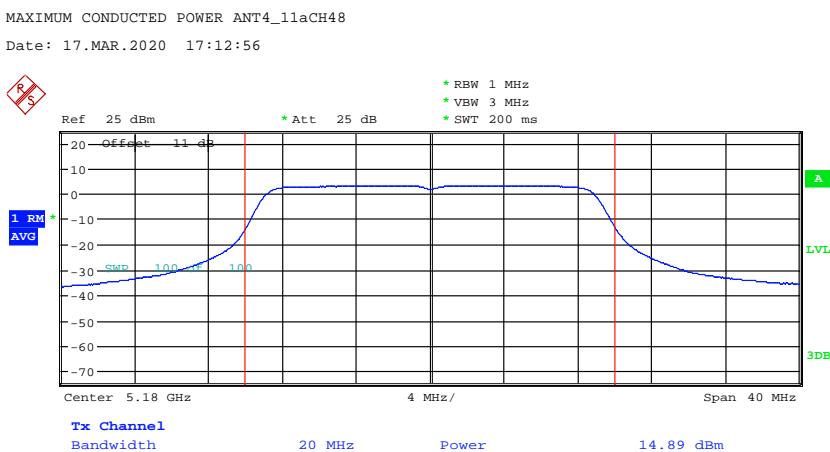
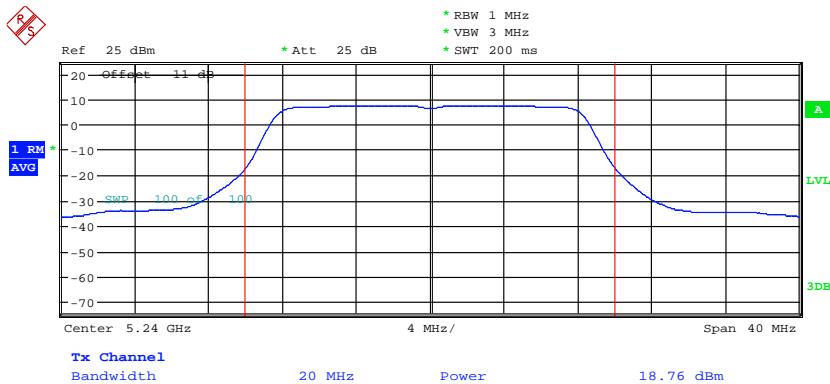


MAXIMUM CONDUCTED POWER ANT4\_11aCH44  
Date: 17.MAR.2020 17:12:06

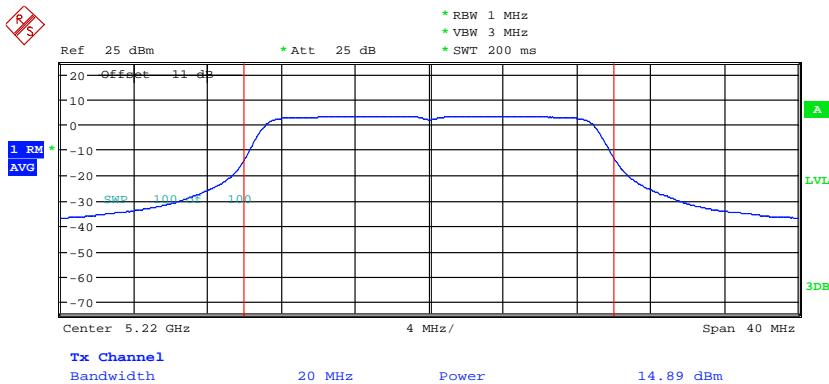


# Worldwide Testing Services(Taiwan) Co., Ltd.

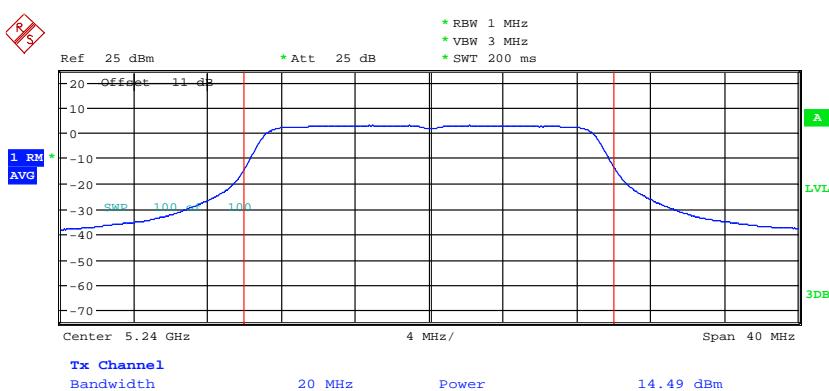
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



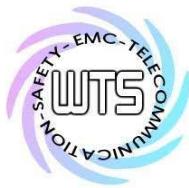
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



MAXIMUM CONDUCTED POWER ANT4\_11n20CH44  
Date: 17.MAR.2020 17:15:16

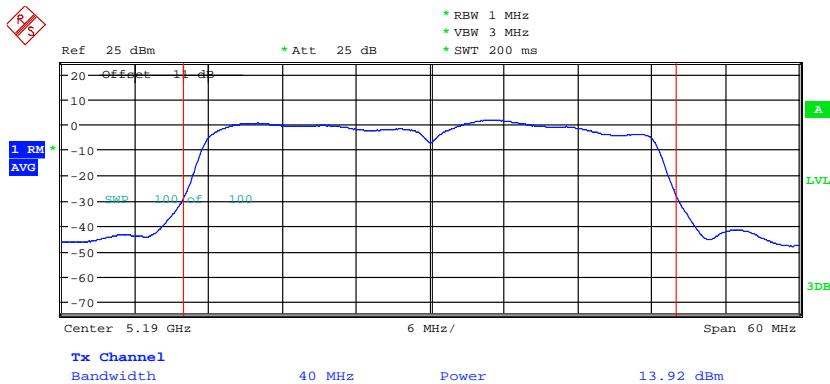


MAXIMUM CONDUCTED POWER ANT4\_11n20CH48  
Date: 20.MAR.2020 20:25:56

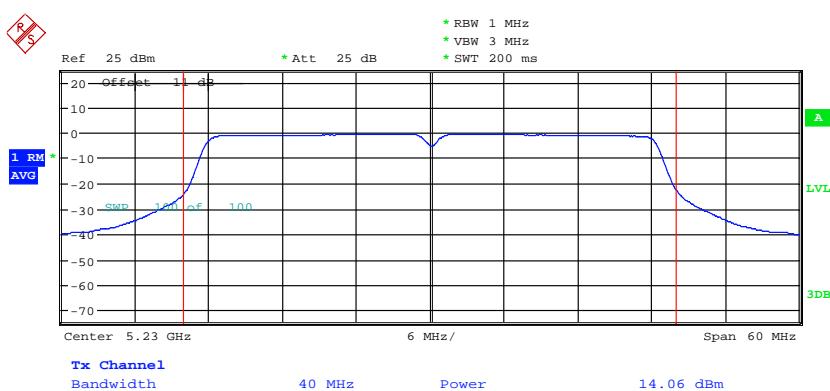


# Worldwide Testing Services(Taiwan) Co., Ltd.

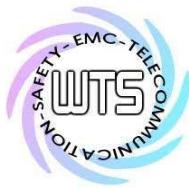
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



MAXIMUM CONDUCTED POWER ANT4\_11n40CH38  
Date: 30.APR.2020 16:27:31

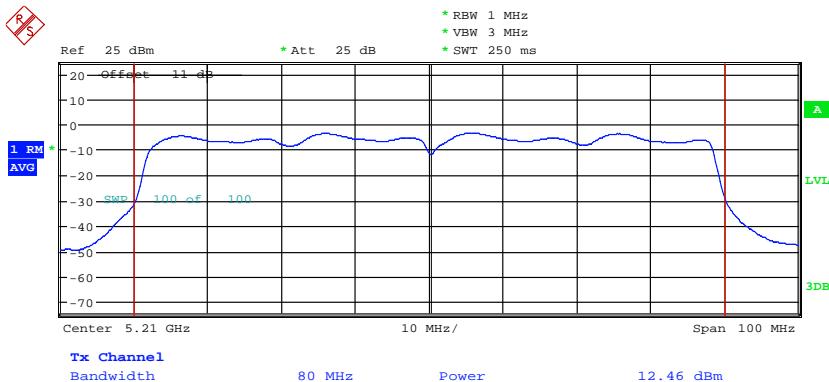


MAXIMUM CONDUCTED POWER ANT4\_11n40CH46  
Date: 17.MAR.2020 17:20:26



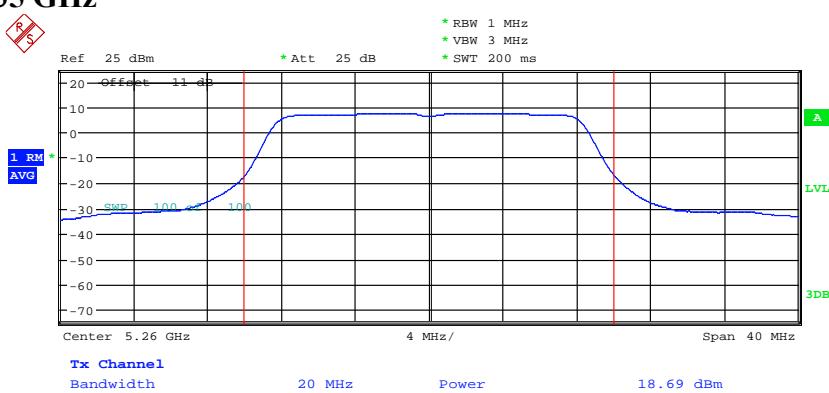
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

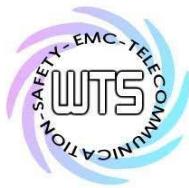


MAXIMUM CONDUCTED POWER ANT4\_11ac80CH42  
Date: 17.MAR.2020 17:22:17

## 5.25 GHz ~ 5.35 GHz

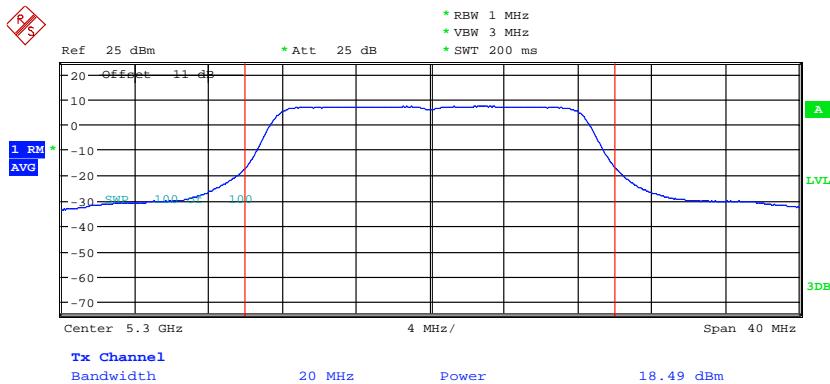


MAXIMUM CONDUCTED POWER ANT4\_11aCH52  
Date: 20.MAR.2020 15:16:14



# Worldwide Testing Services(Taiwan) Co., Ltd.

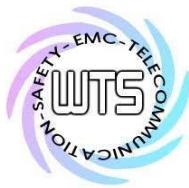
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



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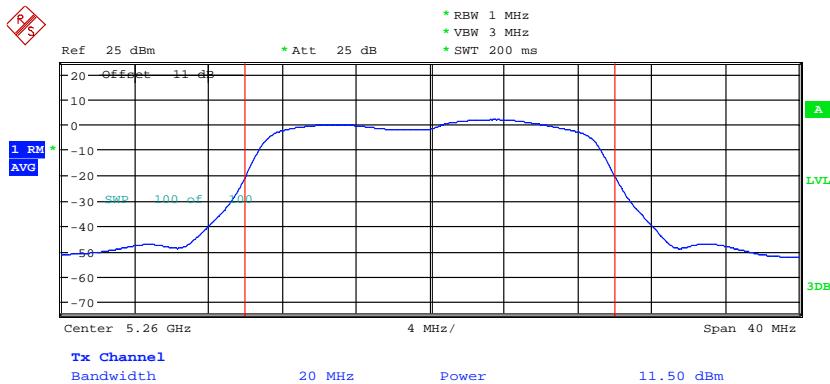


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Date: 20.MAR.2020 15:18:35



# Worldwide Testing Services(Taiwan) Co., Ltd.

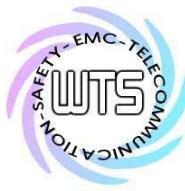
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



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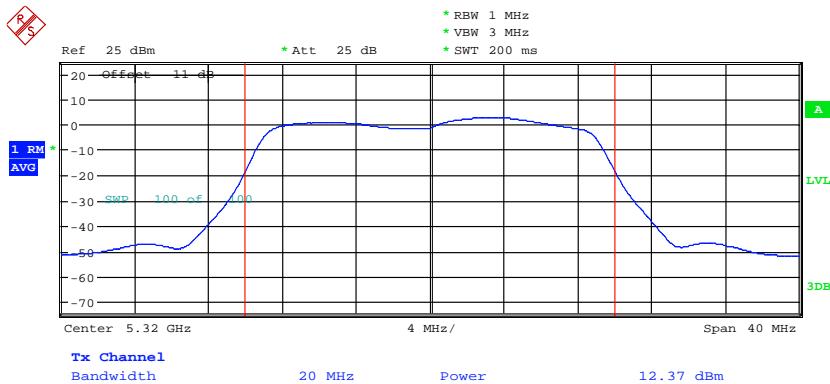


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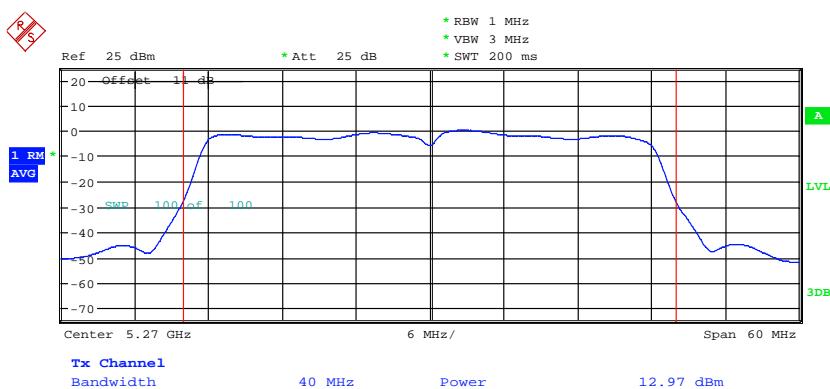


# Worldwide Testing Services(Taiwan) Co., Ltd.

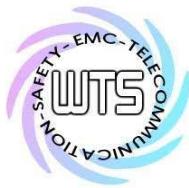
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FCC ID: W23-WMXWAVE2AS



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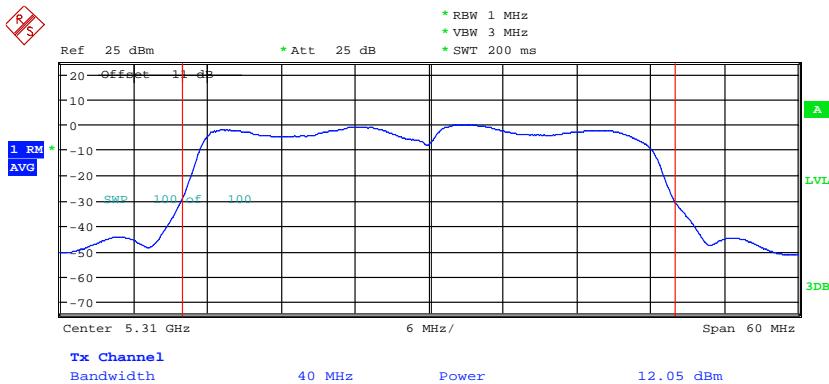


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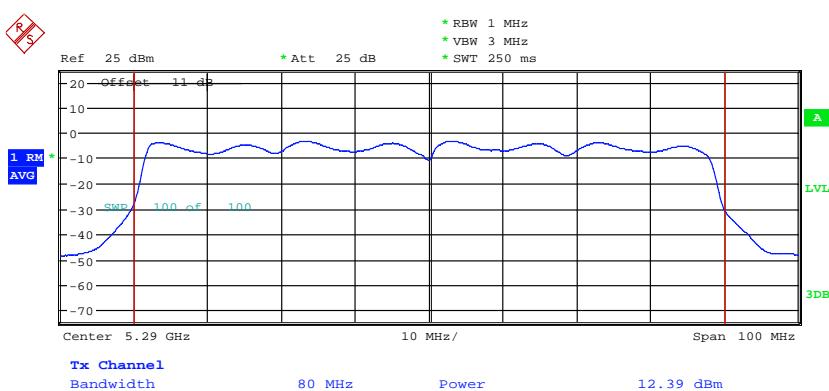


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



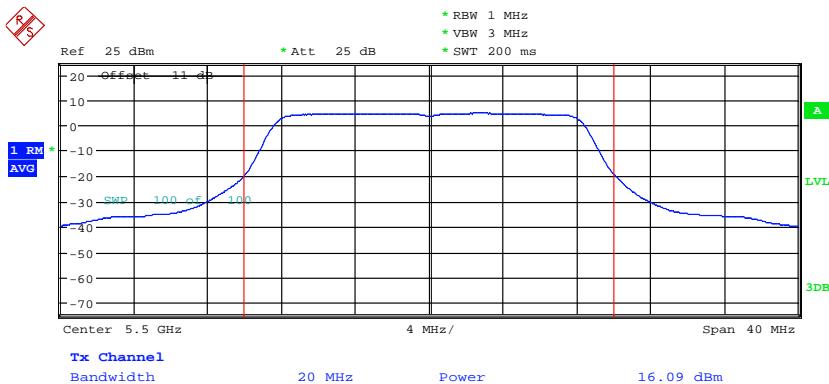
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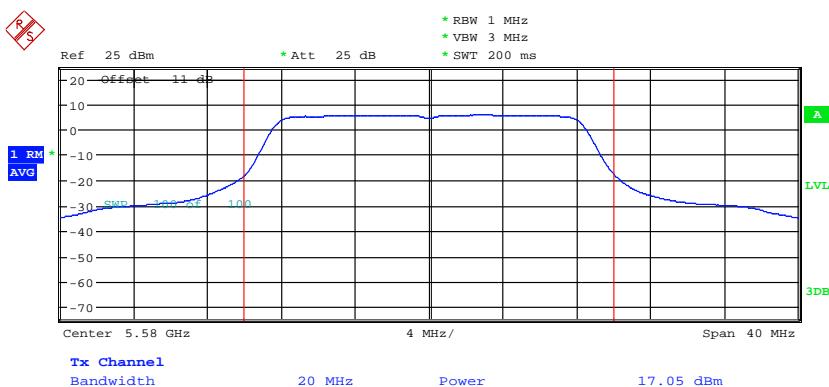
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Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

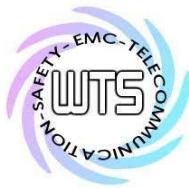
## 5.47 GHz ~ 5.725 GHz



MAXIMUM CONDUCTED POWER ANT4\_11aCH100  
Date: 20.MAR.2020 17:00:35

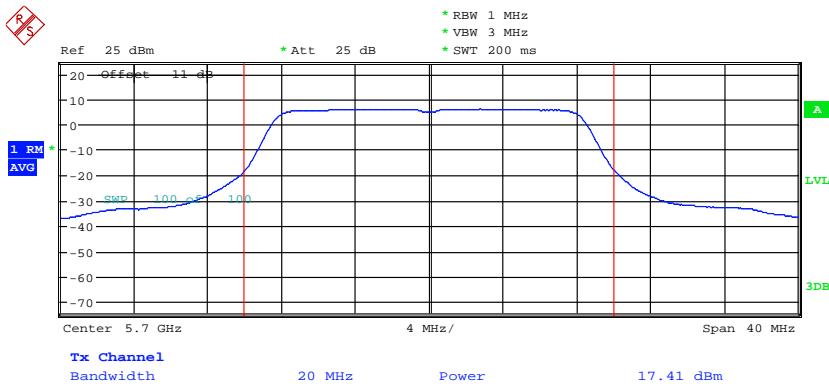


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Date: 20.MAR.2020 17:01:45

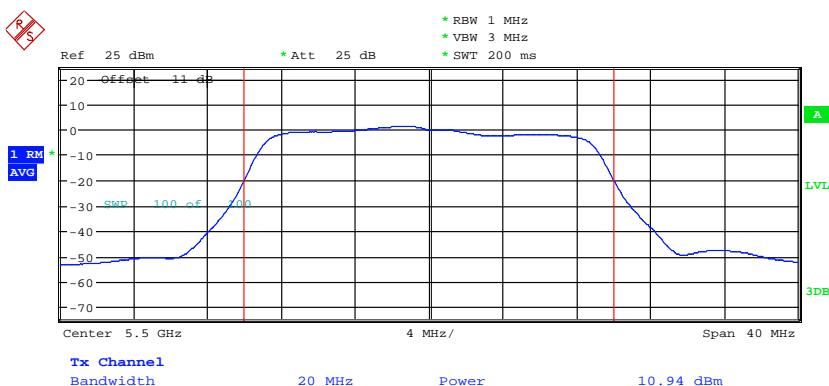


# Worldwide Testing Services(Taiwan) Co., Ltd.

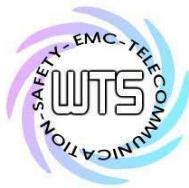
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



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Date: 20.MAR.2020 17:02:45

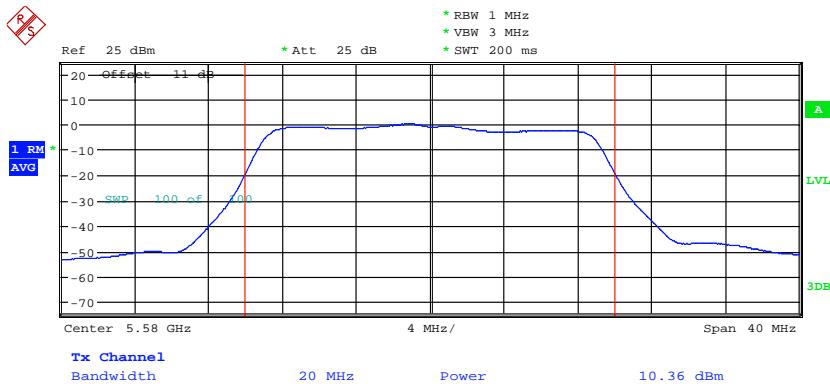


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Date: 30.APR.2020 15:49:49

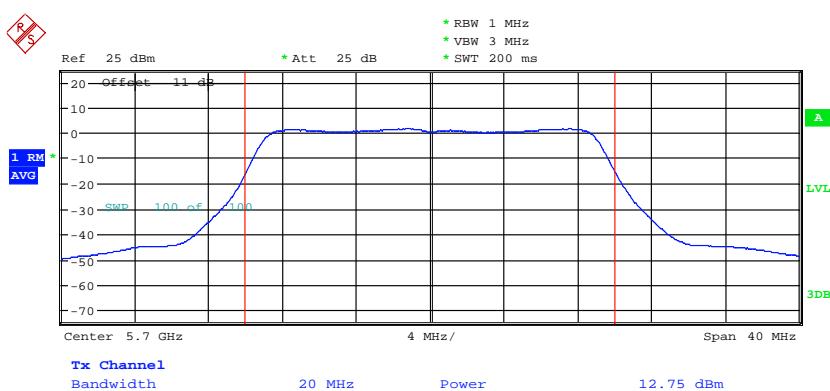


# Worldwide Testing Services(Taiwan) Co., Ltd.

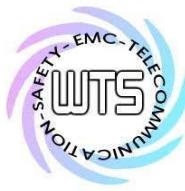
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



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Date: 30.APR.2020 15:51:04

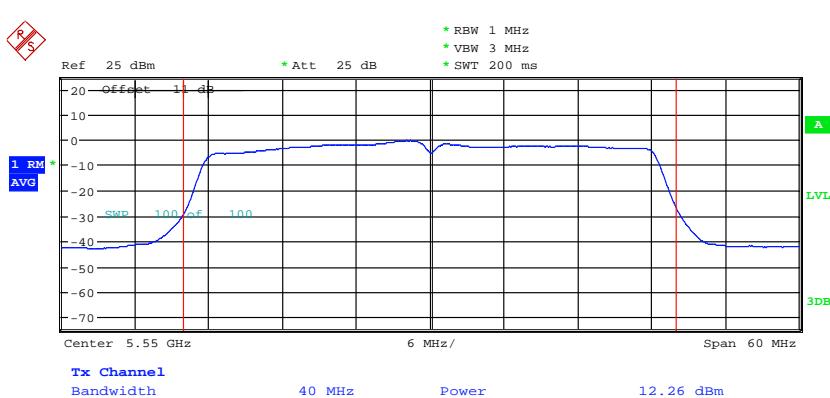
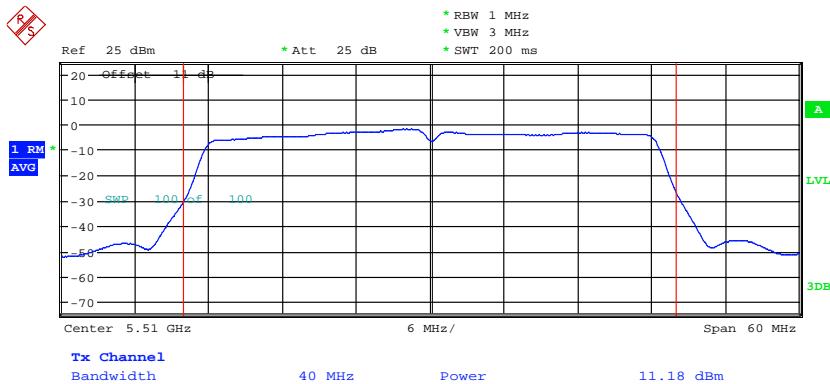


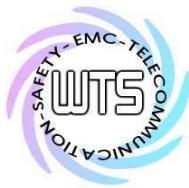
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Date: 30.APR.2020 15:57:59



# Worldwide Testing Services(Taiwan) Co., Ltd.

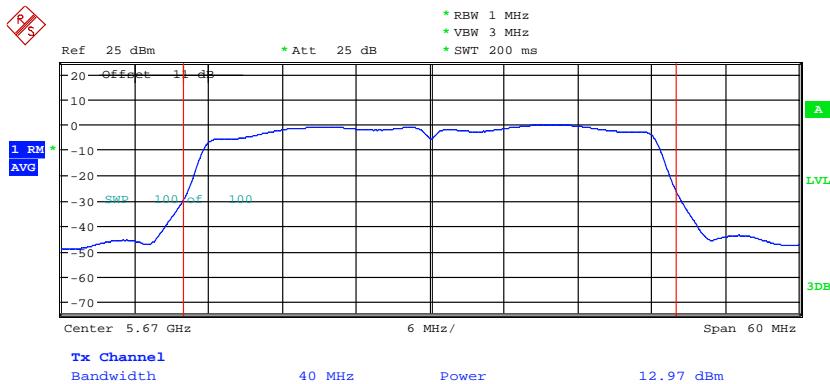
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FCC ID: W23-WMXWAVE2AS



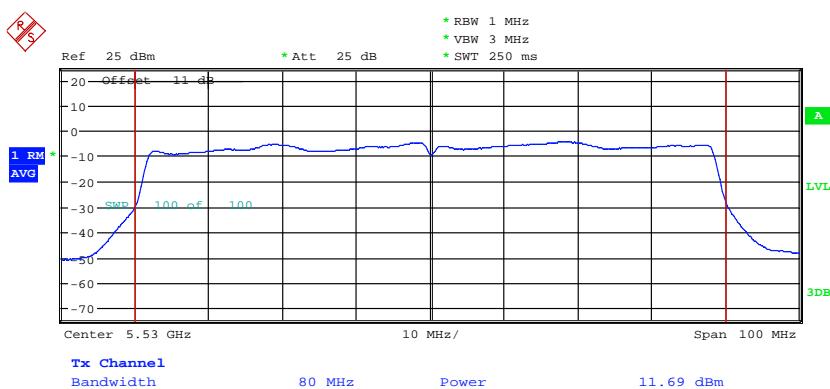


# Worldwide Testing Services(Taiwan) Co., Ltd.

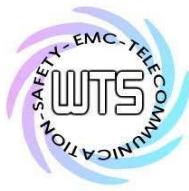
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FCC ID: W23-WMXWAVE2AS



MAXIMUM CONDUCTED POWER ANT4\_11n40CH134  
Date: 30.APR.2020 16:22:31



MAXIMUM CONDUCTED POWER ANT4\_11ac80CH106  
Date: 30.APR.2020 17:45:31



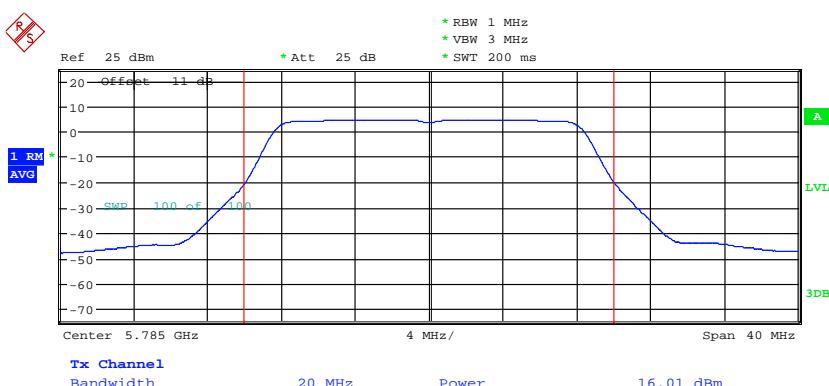
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

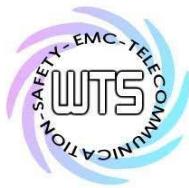
## 5.725 GHz ~ 5.85 GHz



MAXIMUM CONDUCTED POWER ANT4\_11aCH149  
Date: 20.MAR.2020 19:55:16

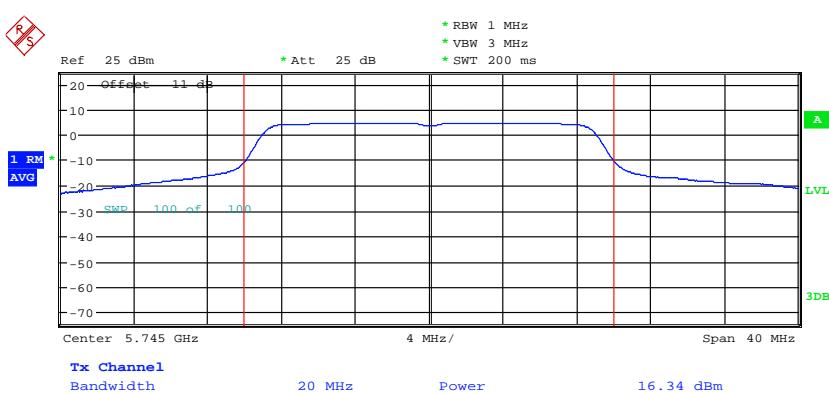
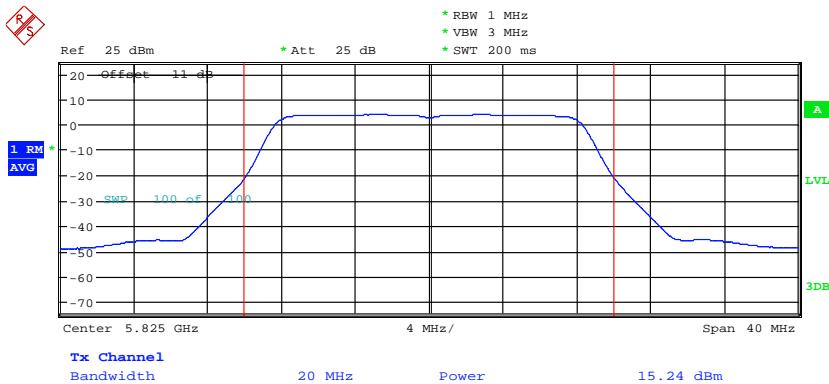


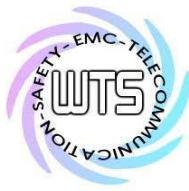
MAXIMUM CONDUCTED POWER ANT4\_11aCH157  
Date: 20.MAR.2020 19:56:06



# Worldwide Testing Services(Taiwan) Co., Ltd.

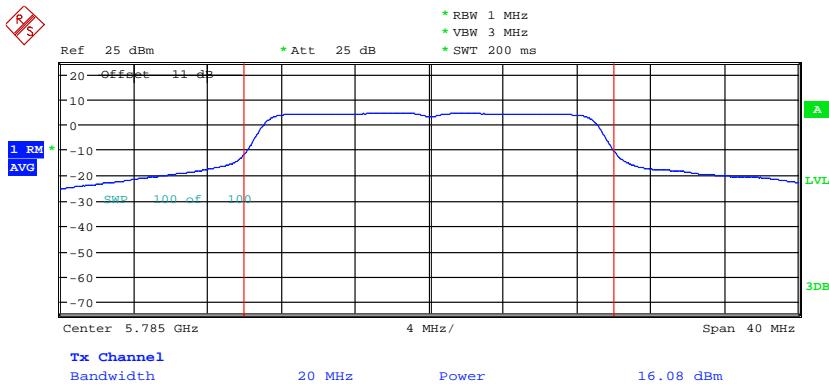
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



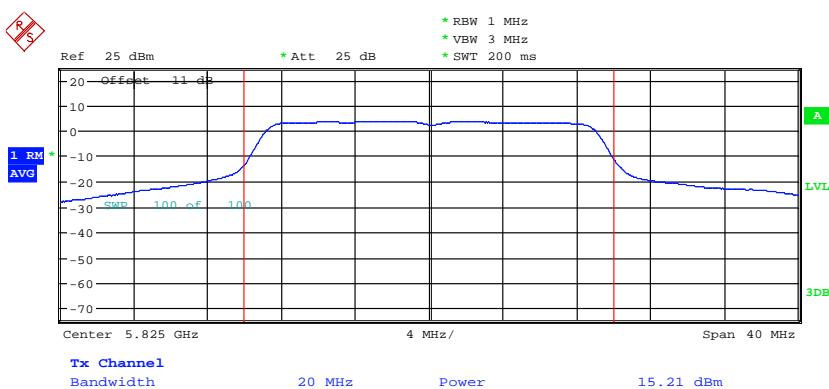


# Worldwide Testing Services(Taiwan) Co., Ltd.

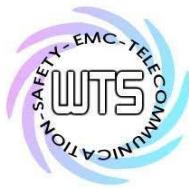
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



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Date: 20.MAR.2020 19:59:26

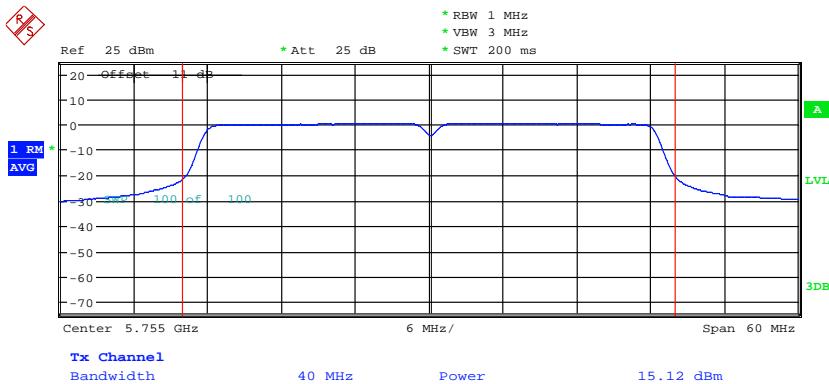


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Date: 20.MAR.2020 20:00:50

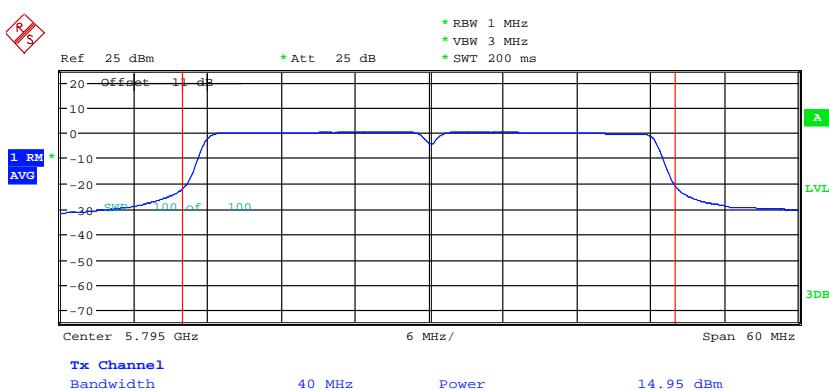


# Worldwide Testing Services(Taiwan) Co., Ltd.

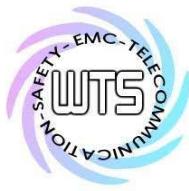
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



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Date: 20.MAR.2020 20:02:06

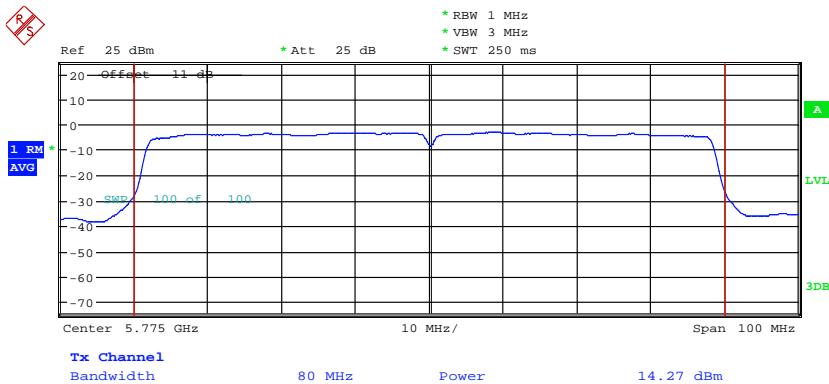


MAXIMUM CONDUCTED POWER ANT4\_11n40CH159  
Date: 20.MAR.2020 20:02:56

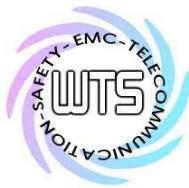


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



MAXIMUM CONDUCTED POWER ANT4\_11ac80CH155  
Date: 20.MAR.2020 20:04:40



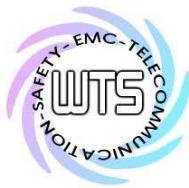
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

4\*4 Antenna

5.15GHz~5.25GHz

Antenna 1	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	42.36	43.75	36.98	16.27	16.41	15.68
802.11n 40MHz	21.93	--	34.99	13.41	--	15.44
802.11ac	25.41	--	--	14.05	--	--
Antenna 2	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	20.42	17.62	22.08	13.10	12.46	13.44
802.11n 40MHz	17.62	--	22.13	12.46	--	13.45
802.11ac	17.18	--	--	12.35	--	--
Antenna 3	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	27.93	31.70	26.79	14.46	15.01	14.28
802.11n 40MHz	16.37	--	25.82	12.14	--	14.12
802.11ac	16.14	--	--	12.08	--	--
Antenna 4	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	30.83	30.83	28.12	14.89	14.89	14.49
802.11n 40MHz	24.66	--	25.47	13.92	--	14.06
802.11ac	17.62	--	--	12.46	--	--
Combine	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	121.54	123.90	113.97	20.85	20.93	20.57
802.11n 40MHz	80.58	--	108.41	19.06	--	20.35
802.11ac	76.35	--	--	18.83	--	--



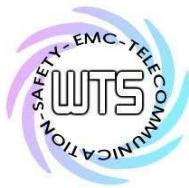
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54

FCC ID: W23-WMXWAVE2AS

5.25GHz~5.35GHz

Antenna 1	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	19.82	19.63	13.71	12.97	12.93	11.37
802.11n 40MHz	14.03	--	17.95	11.47	--	12.54
802.11ac	14.79	--	--	11.70	--	--
Antenna 2	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	12.25	12.59	10.64	10.88	11.00	10.27
802.11n 40MHz	11.22	--	16.48	10.50	--	12.17
802.11ac	17.14	--	--	12.34	--	--
Antenna 3	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	14.62	13.00	17.74	11.65	11.14	12.49
802.11n 40MHz	15.38	--	11.22	11.87	--	10.50
802.11ac	11.40	--	--	10.57	--	--
Antenna 4	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	14.13	14.52	17.26	11.50	11.62	12.37
802.11n 40MHz	19.82	--	16.03	12.97	--	12.05
802.11ac	17.34	--	--	12.39	--	--
Combine	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	60.82	59.74	59.35	17.84	17.76	17.73
802.11n 40MHz	60.45	--	61.68	17.81	--	17.90
802.11ac	60.67	--	--	17.83	--	--



# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

5.47GHz~5.725GHz

Antenna 1	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	16.26	16.52	8.81	12.11	12.18	9.45
802.11n 40MHz	15.81	14.59	9.62	11.99	11.64	9.83
802.11ac	14.06	--	--	11.48	--	--
Antenna 2	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	14.26	11.72	11.25	11.54	10.69	10.51
802.11n 40MHz	16.71	13.21	12.68	12.23	11.21	11.03
802.11ac	15.52	--	--	11.91	--	--
Antenna 3	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	15.45	12.97	21.09	11.89	11.13	13.24
802.11n 40MHz	13.27	15.85	18.20	11.23	12.00	12.60
802.11ac	13.80	--	--	11.40	--	--
Antenna 4	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	12.42	10.86	18.84	10.94	10.36	12.75
802.11n 40MHz	13.12	16.83	19.82	11.18	12.26	12.97
802.11ac	14.76	--	--	11.69	--	--
Combine	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	58.39	52.07	59.99	17.66	17.17	17.78
802.11n 40MHz	58.91	60.48	60.32	17.70	17.82	17.80
802.11ac	58.14	--	--	17.65	--	--



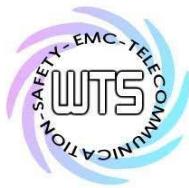
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54

FCC ID: W23-WMXWAVE2AS

5.725GHz~5.85GHz

Antenna 1	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	43.65	44.67	39.17	16.40	16.50	15.93
802.11n 40MHz	32.14	--	32.43	15.07	--	15.11
802.11ac	27.23	--	--	14.35	--	--
Antenna 2	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	21.73	24.15	22.86	13.37	13.83	13.59
802.11n 40MHz	23.77	--	25.53	13.76	--	14.07
802.11ac	19.63	--	--	12.93	--	--
Antenna 3	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	31.62	30.62	30.48	15.00	14.86	14.84
802.11n 40MHz	23.28	--	23.50	13.67	--	13.71
802.11ac	19.50	--	--	12.90	--	--
Antenna 4	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	43.05	40.55	33.19	16.34	16.08	15.21
802.11n 40MHz	32.51	--	31.26	15.12	--	14.95
802.11ac	26.73	--	--	14.27	--	--
Combine	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	140.05	139.99	125.70	21.46	21.46	20.99
802.11n 40MHz	111.70	--	112.72	20.48	--	20.52
802.11ac	93.09	--	--	19.69	--	--

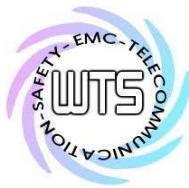


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

3\*3 Antenna  
5.15GHz~5.25GHz

Antenna 1	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	42.36	43.75	36.98	16.27	16.41	15.68
802.11n 40MHz	21.93	--	34.99	13.41	--	15.44
802.11ac	25.41	--	--	14.05	--	--
Antenna 2	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	20.42	17.62	22.08	13.10	12.46	13.44
802.11n 40MHz	17.62	--	22.13	12.46	--	13.45
802.11ac	17.18	--	--	12.35	--	--
Antenna 3	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	27.93	31.70	26.79	14.46	15.01	14.28
802.11n 40MHz	16.37	--	25.82	12.14	--	14.12
802.11ac	16.14	--	--	12.08	--	--
Combine	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	90.71	93.07	85.85	19.58	19.69	19.34
802.11n 40MHz	55.92	--	82.94	17.48	--	19.19
802.11ac	58.73	--	--	17.69	--	--

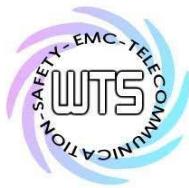


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

5.25GHz~5.35GHz

Antenna 1	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	19.82	19.63	13.71	12.97	12.93	11.37
802.11n 40MHz	14.03	--	17.95	11.47	--	12.54
802.11ac	14.79	--	--	11.70	--	--
Antenna 2	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	12.25	12.59	10.64	10.88	11.00	10.27
802.11n 40MHz	11.22	--	16.48	10.50	--	12.17
802.11ac	17.14	--	--	12.34	--	--
Antenna 3	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	14.62	13.00	17.74	11.65	11.14	12.49
802.11n 40MHz	15.38	--	11.22	11.87	--	10.50
802.11ac	11.40	--	--	10.57	--	--
Combine	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	46.69	45.22	42.09	16.69	16.55	16.24
802.11n 40MHz	40.63	--	45.65	16.09	--	16.59
802.11ac	43.33	--	--	16.37	--	--

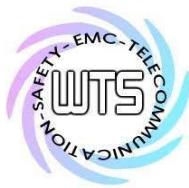


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

5.47GHz~5.725GHz

Antenna 1	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	16.26	16.52	8.81	12.11	12.18	9.45
802.11n 40MHz	15.81	14.59	9.62	11.99	11.64	9.83
802.11ac	14.06	--	--	11.48	--	--
Antenna 2	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	14.26	11.72	11.25	11.54	10.69	10.51
802.11n 40MHz	16.71	13.21	12.68	12.23	11.21	11.03
802.11ac	15.52	--	--	11.91	--	--
Antenna 3	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	15.45	12.97	21.09	11.89	11.13	13.24
802.11n 40MHz	13.27	15.85	18.20	11.23	12.00	12.60
802.11ac	13.80	--	--	11.40	--	--
Combine	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	45.97	41.21	41.15	16.62	16.15	16.14
802.11n 40MHz	45.79	43.65	40.50	16.61	16.40	16.07
802.11ac	43.38	--	--	16.37	--	--



# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

5.725GHz~5.85GHz

Antenna 1	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	43.65	44.67	39.17	16.40	16.50	15.93
802.11n 40MHz	32.14	--	32.43	15.07	--	15.11
802.11ac	27.23	--	--	14.35	--	--
Antenna 2	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	21.73	24.15	22.86	13.37	13.83	13.59
802.11n 40MHz	23.77	--	25.53	13.76	--	14.07
802.11ac	19.63	--	--	12.93	--	--
Antenna 3	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	31.62	30.62	30.48	15.00	14.86	14.84
802.11n 40MHz	23.28	--	23.50	13.67	--	13.71
802.11ac	19.50	--	--	12.90	--	--
Combine	mW			dBm		
	Ch Low	Ch Mid	Ch High	Ch Low	Ch Mid	Ch High
802.11n 20MHz	97.00	99.44	92.51	19.87	19.98	19.66
802.11n 40MHz	79.19	--	81.46	18.99	--	19.11
802.11ac	66.36	--	--	18.22	--	--

Test equipment used: ETSTW-RE 055, ETSTW-RE 050

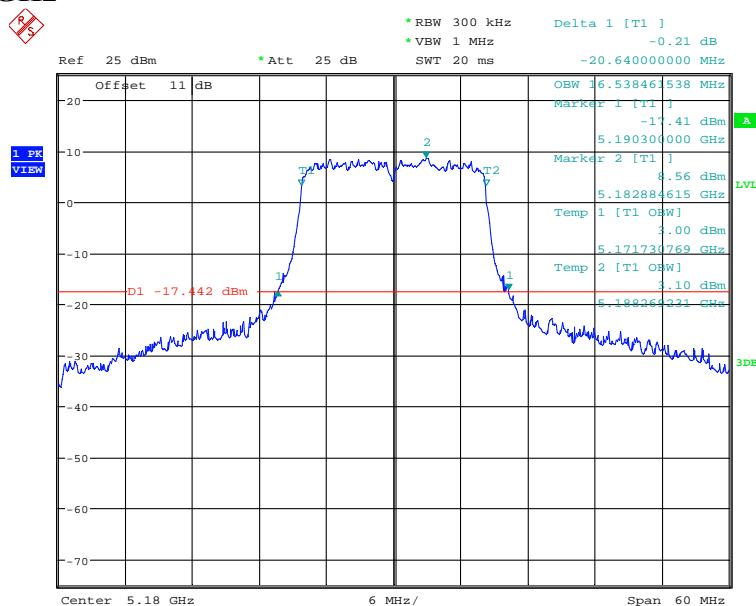
Registration number: W6R22110-21274-C-54  
 FCC ID: W23-WMXWAVE2AS

## 3.2 26dB emission bandwidth, 99% Occupied Bandwidth, FCC 15.407 (a)

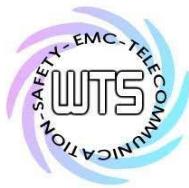
According to §15.407(a). No Limit required.

Result:

### ANT1 5.15 GHz ~ 5.25 GHz

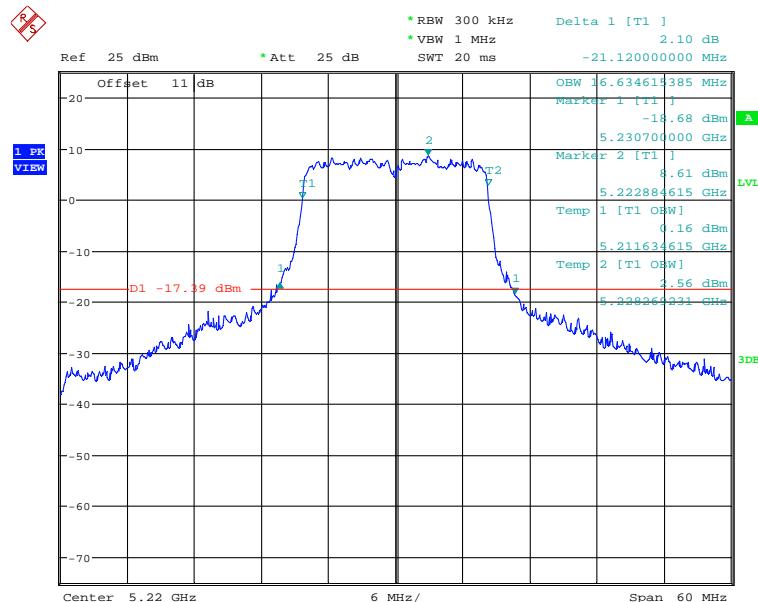


99% OBW & 26DB BANDWIDTH ANT1\_11a\_CH36  
 Date: 15.OCT.2019 21:00:40

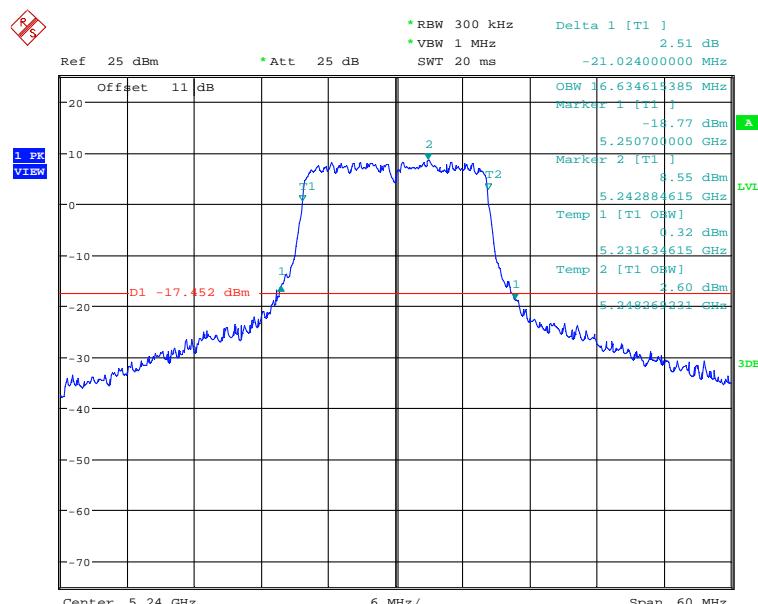


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

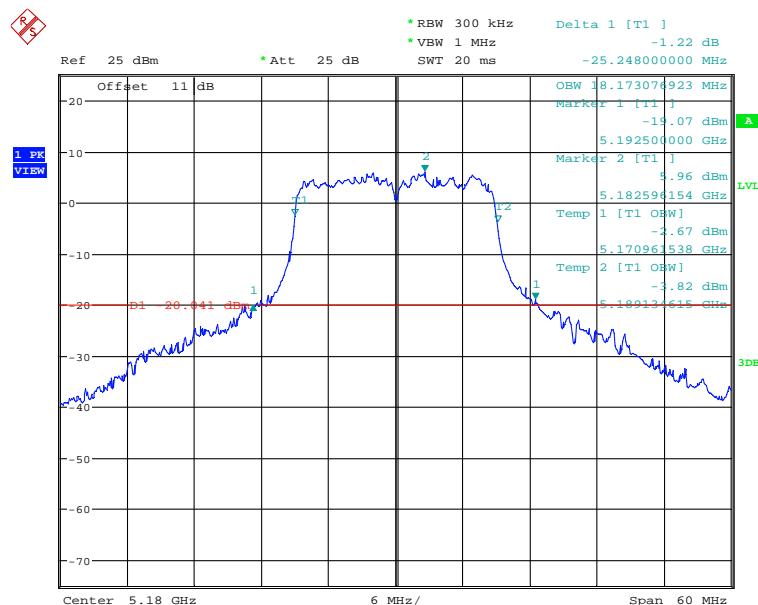


99% OBW & 26DB BANDWIDTH ANT1\_11a\_CH44  
Date: 15.OCT.2019 21:07:44

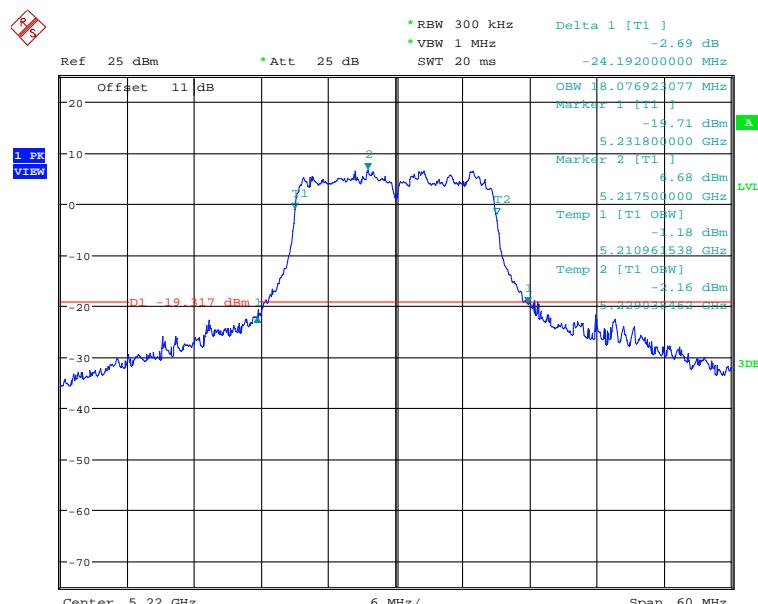


99% OBW & 26DB BANDWIDTH ANT1\_11a\_CH48  
Date: 15.OCT.2019 21:14:09

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



99% OBW & 26DB BANDWIDTH ANT1\_1ln20\_CH36  
Date: 16.OCT.2019 14:10:15

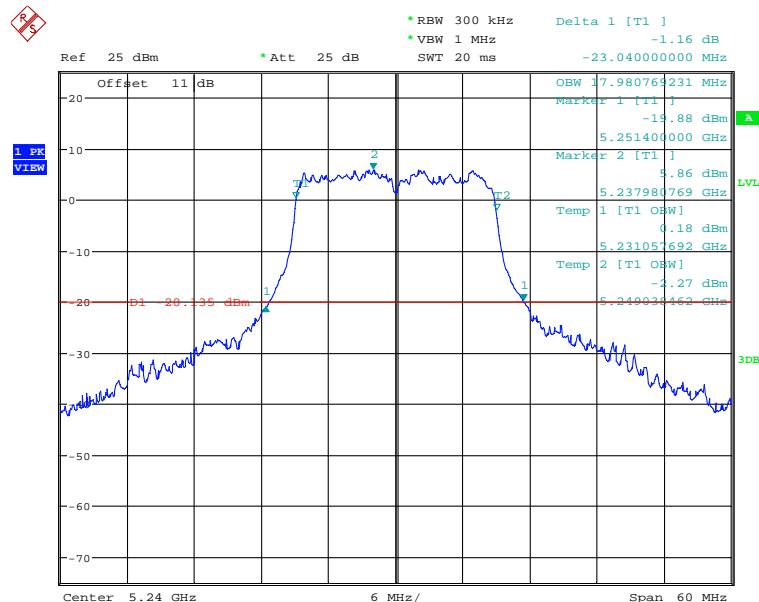


99% OBW & 26DB BANDWIDTH ANT1\_1ln20\_CH44  
Date: 16.OCT.2019 14:23:44

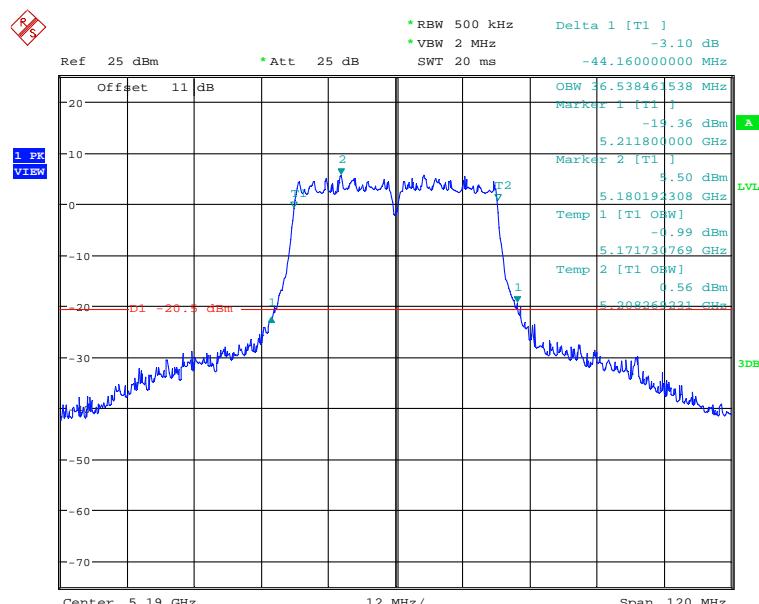


# Worldwide Testing Services(Taiwan) Co., Ltd.

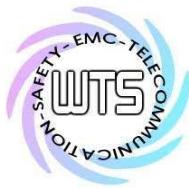
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



99% OBW & 26DB BANDWIDTH ANT1\_1ln20\_CH48  
Date: 16.OCT.2019 14:29:25

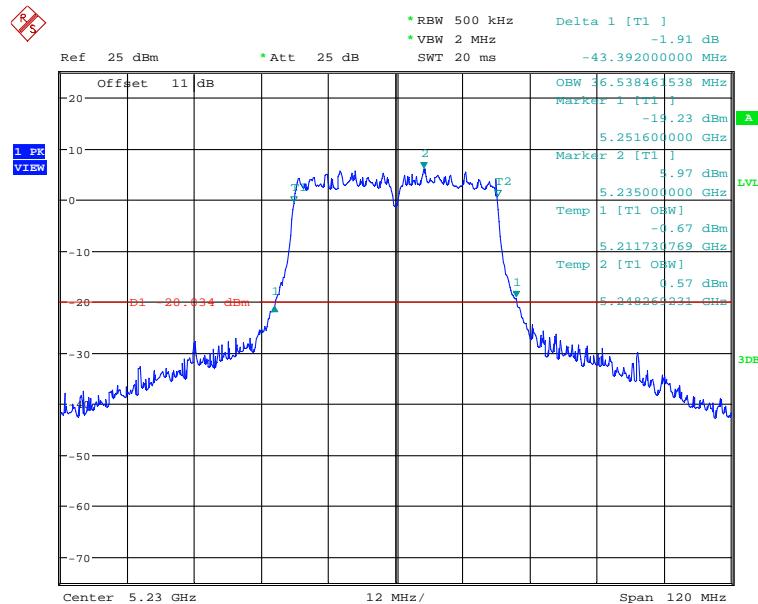


99% OBW & 26DB BANDWIDTH ANT1\_1ln40\_CH38  
Date: 16.OCT.2019 14:51:58



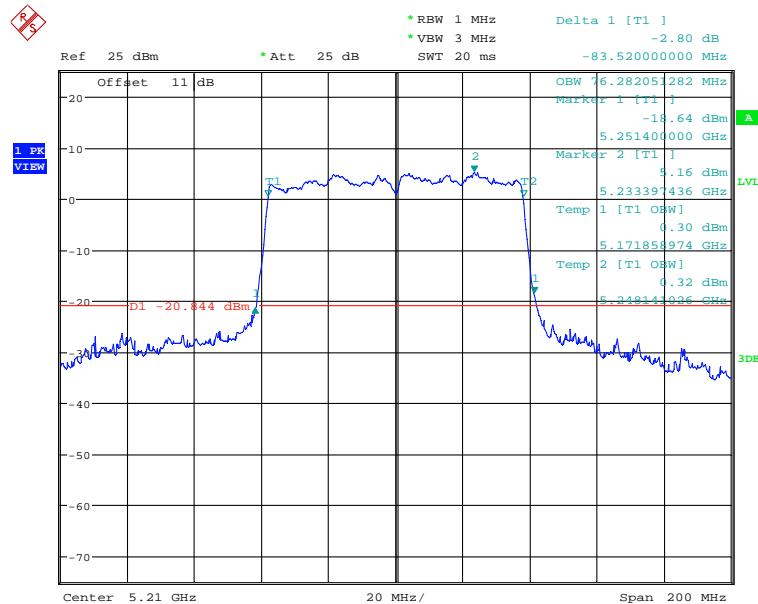
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



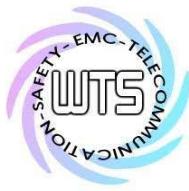
99% OBW & 26DB BANDWIDTH ANT1\_1ln40\_CH46

Date: 16.OCT.2019 14:58:06



99% OBW & 26DB BANDWIDTH ANT1\_1lac80\_CH42

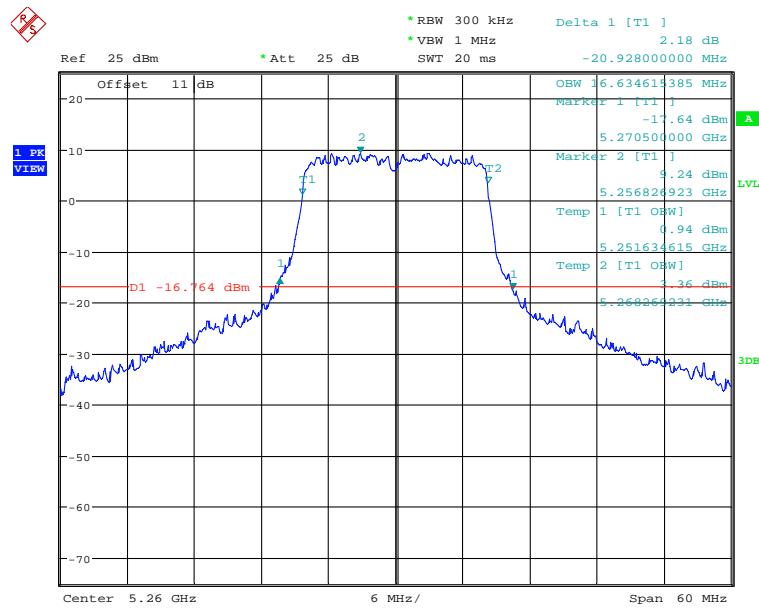
Date: 16.OCT.2019 15:08:06



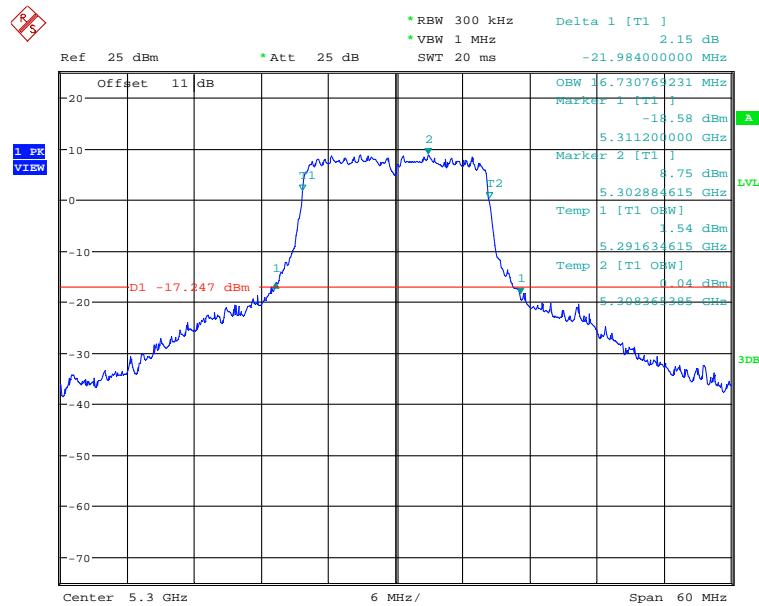
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

## 5.25 GHz ~ 5.35 GHz



99% OBW & 26DB BANDWIDTH ANT1\_11a\_CH52  
Date: 16.OCT.2019 15:27:26

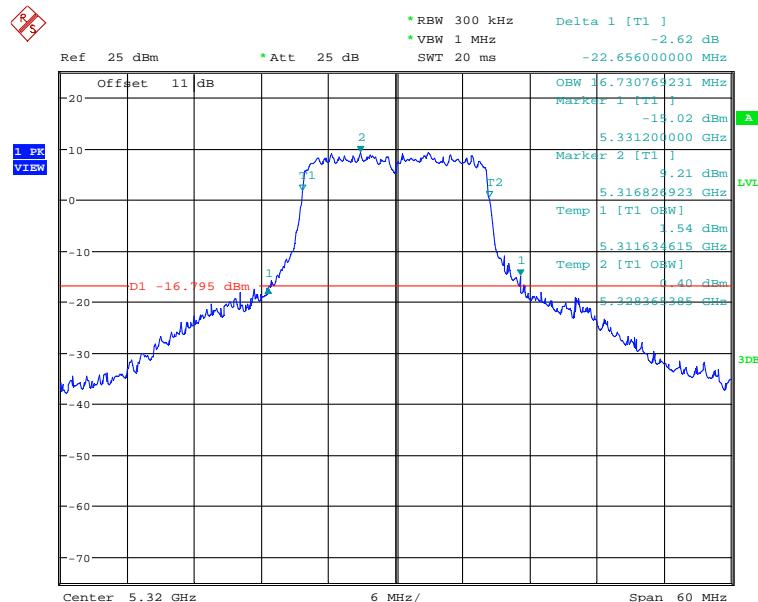


99% OBW & 26DB BANDWIDTH ANT1\_11a\_CH60  
Date: 16.OCT.2019 15:33:51

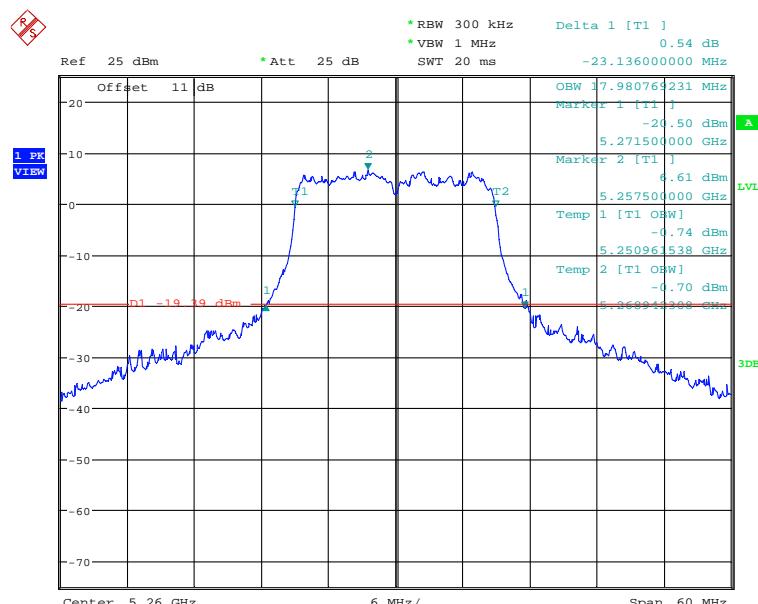


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



99% OBW & 26DB BANDWIDTH ANT1\_11a\_CH64  
Date: 16.OCT.2019 15:40:22

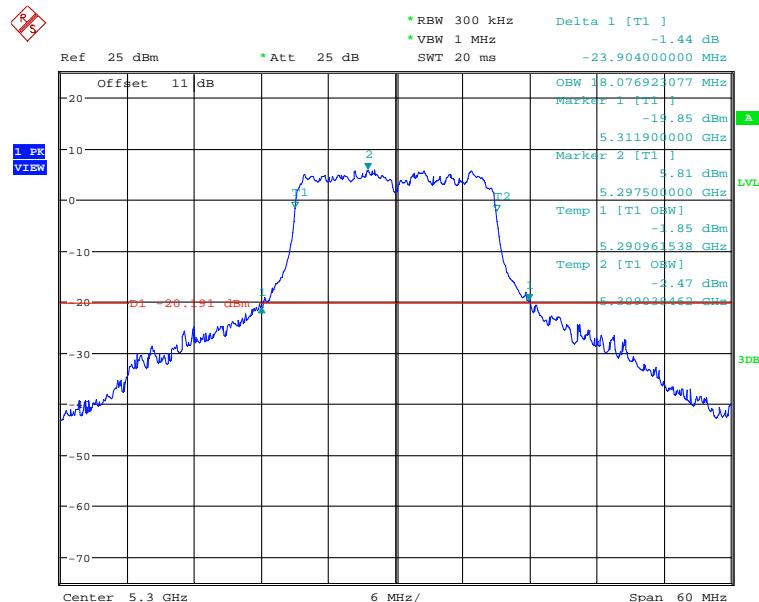


99% OBW & 26DB BANDWIDTH ANT1\_11n20\_CH52  
Date: 16.OCT.2019 16:01:16

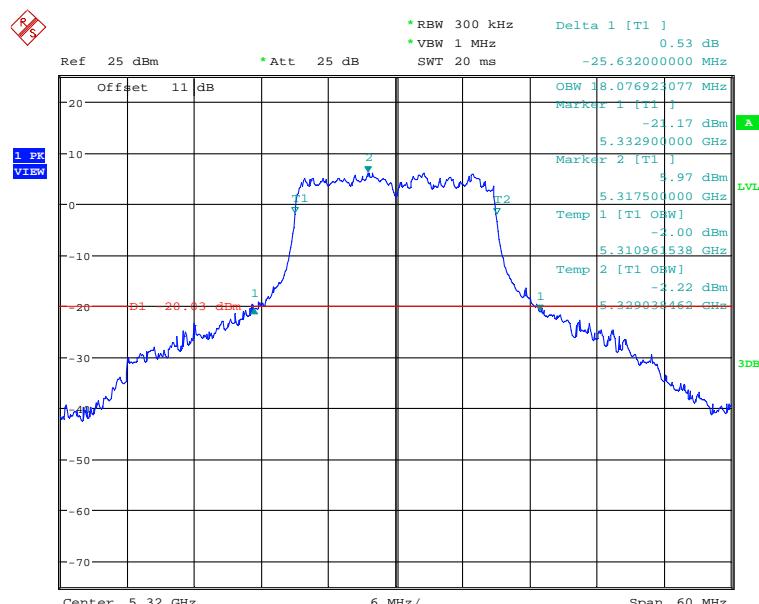


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



99% OBW & 26DB BANDWIDTH ANT1\_1ln20\_CH60  
Date: 16.OCT.2019 16:07:19

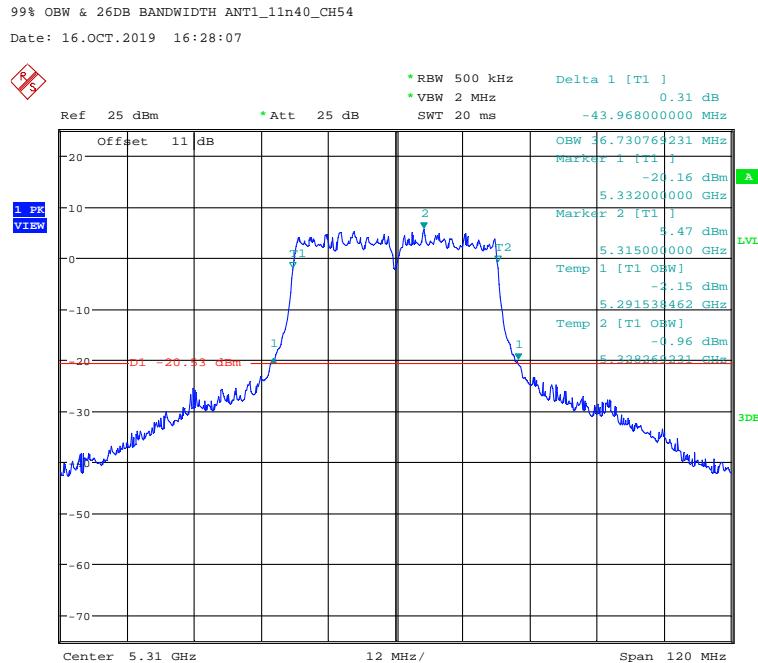
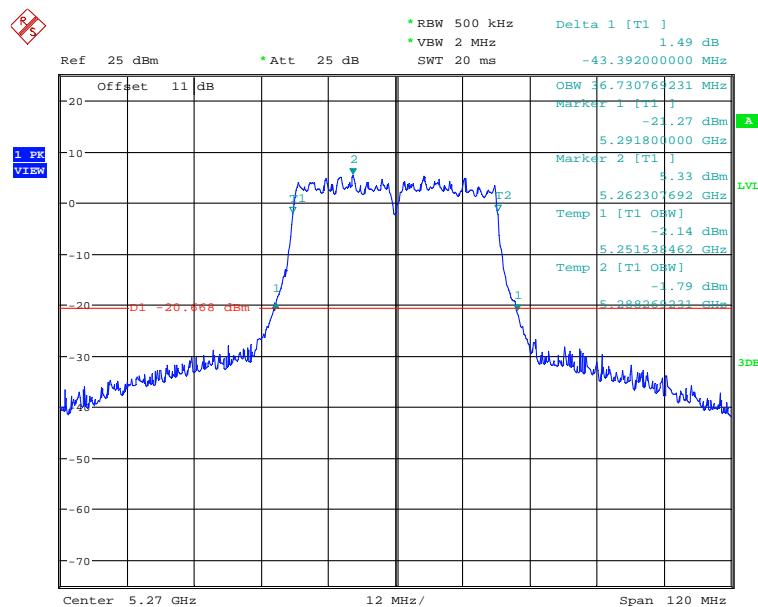


99% OBW & 26DB BANDWIDTH ANT1\_1ln20\_CH64  
Date: 16.OCT.2019 16:13:16

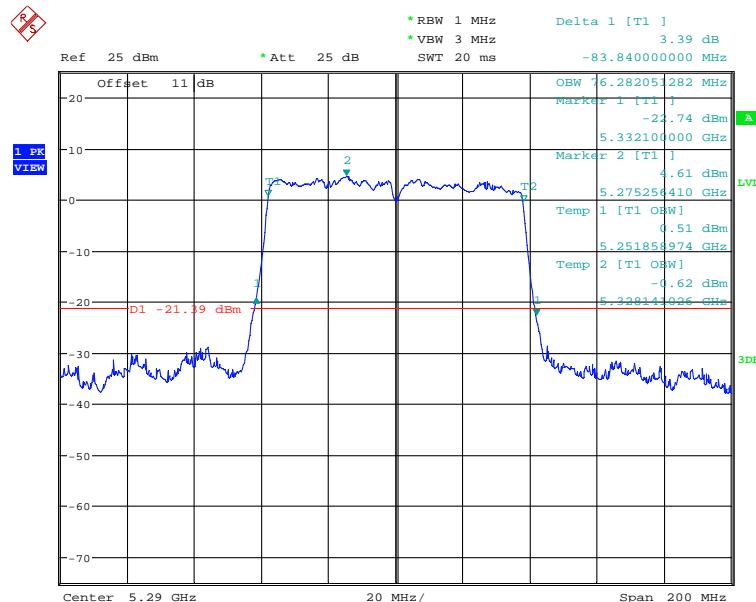


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

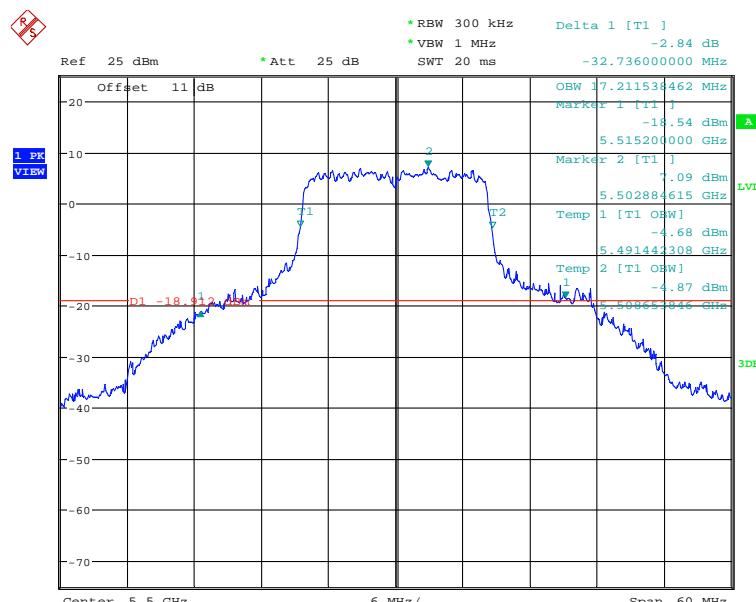


Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

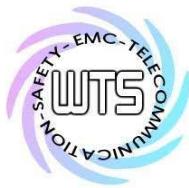


99% OBW & 26DB BANDWIDTH ANTI\_11ac80\_CH58  
Date: 16.OCT.2019 16:46:16

## 5.47 GHz ~ 5.725 GHz

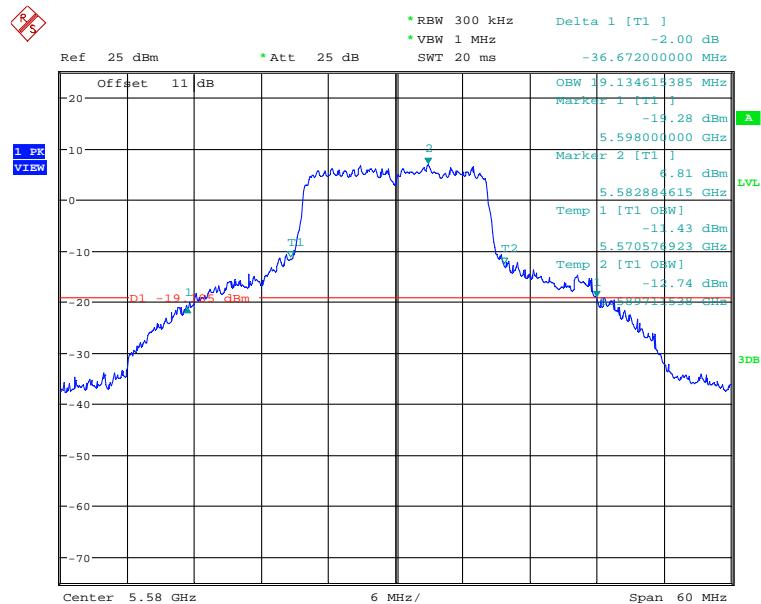


99% OBW & 26DB BANDWIDTH ANTI\_11a\_CH100  
Date: 16.OCT.2019 17:16:20

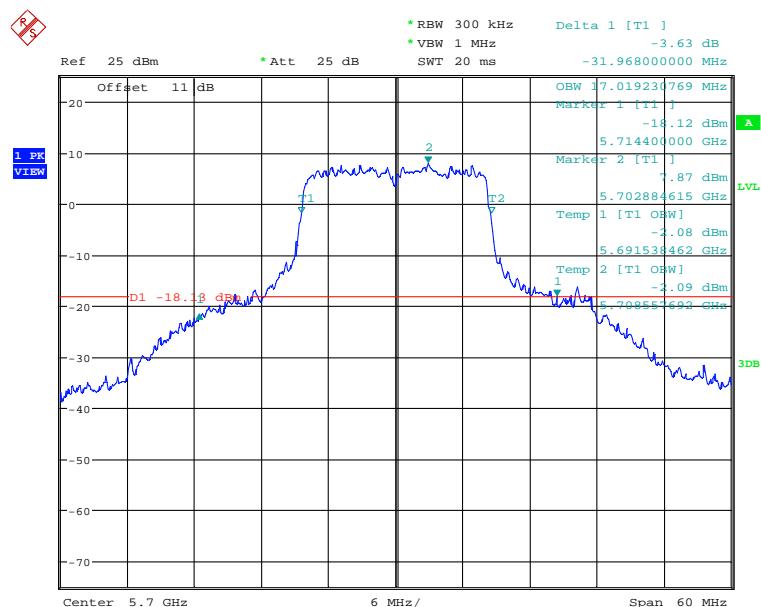


# Worldwide Testing Services(Taiwan) Co., Ltd.

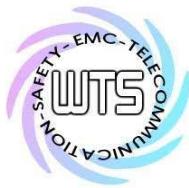
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



99% OBW & 26DB BANDWIDTH ANT1\_11a\_CH116  
Date: 16.OCT.2019 17:22:51

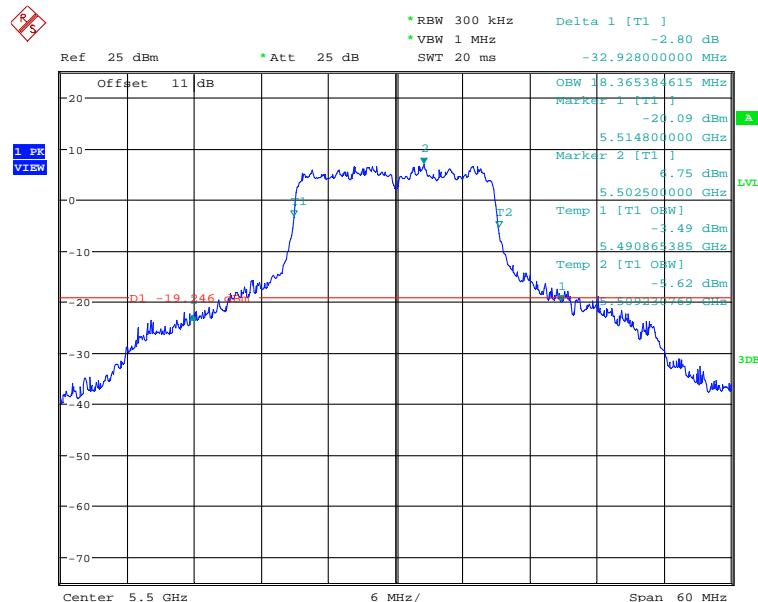


99% OBW & 26DB BANDWIDTH ANT1\_11a\_CH140  
Date: 16.OCT.2019 19:23:12

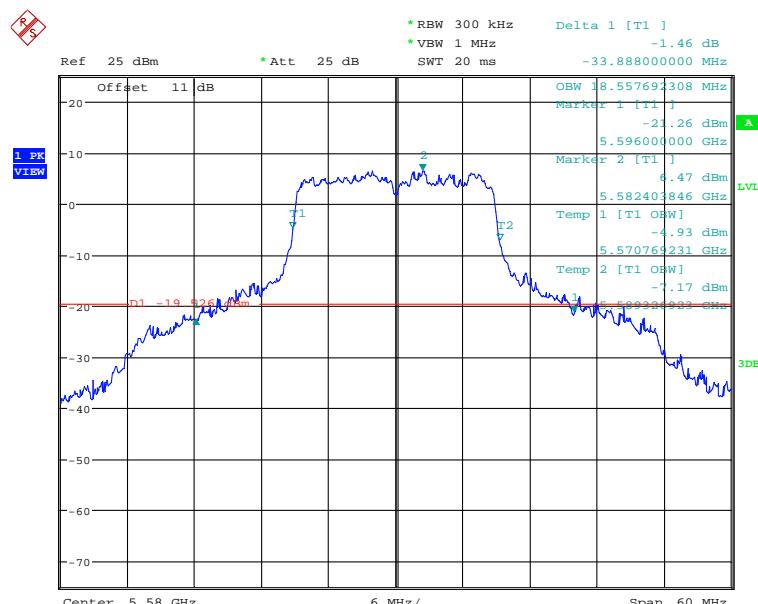


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



99% OBW & 26DB BANDWIDTH ANT1\_1ln20\_CH100  
Date: 16.OCT.2019 19:49:09

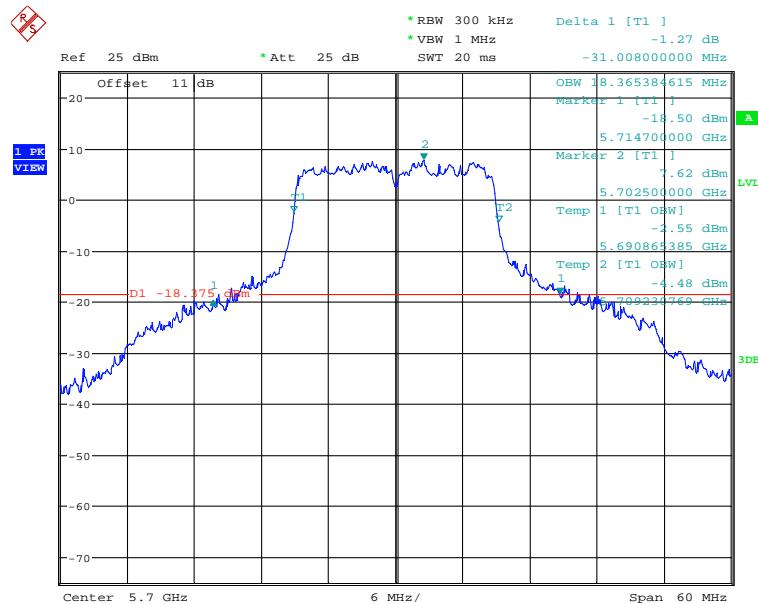


99% OBW & 26DB BANDWIDTH ANT1\_1ln20\_CH116  
Date: 16.OCT.2019 19:55:39

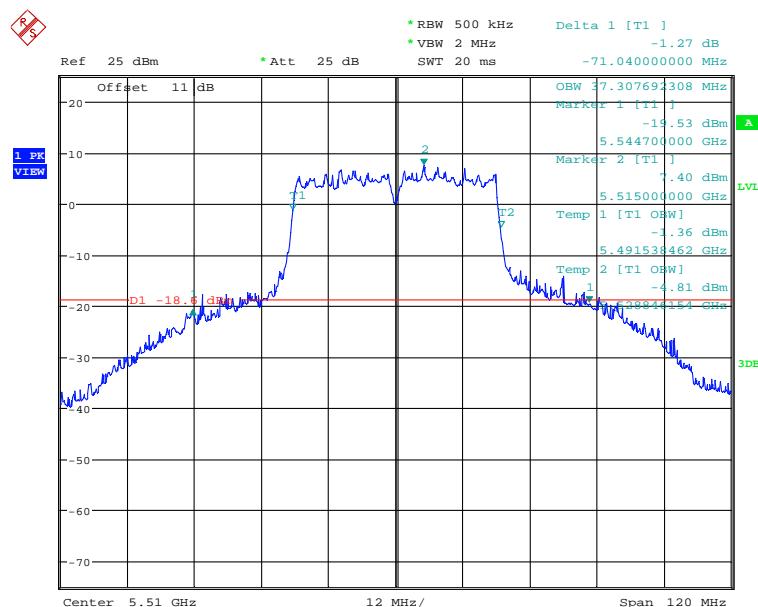


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

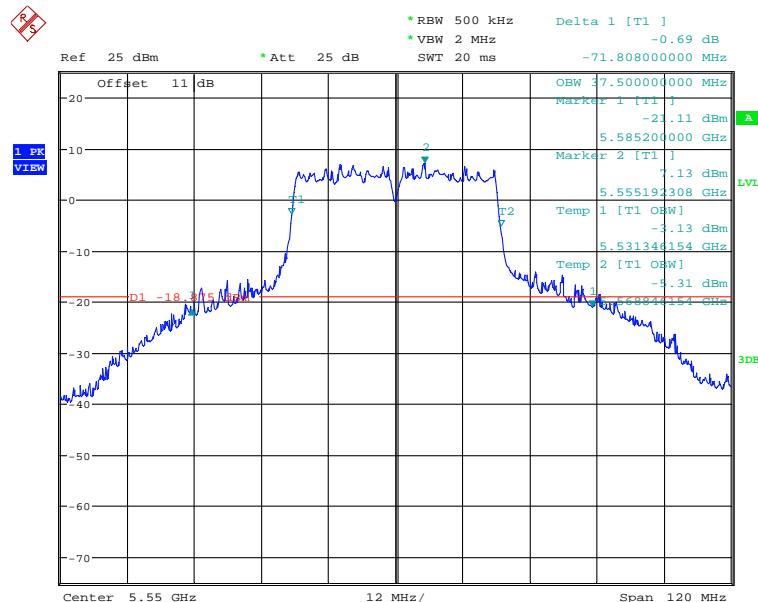


99% OBW & 26DB BANDWIDTH ANT1\_1ln20\_CH140  
Date: 16.OCT.2019 20:01:26

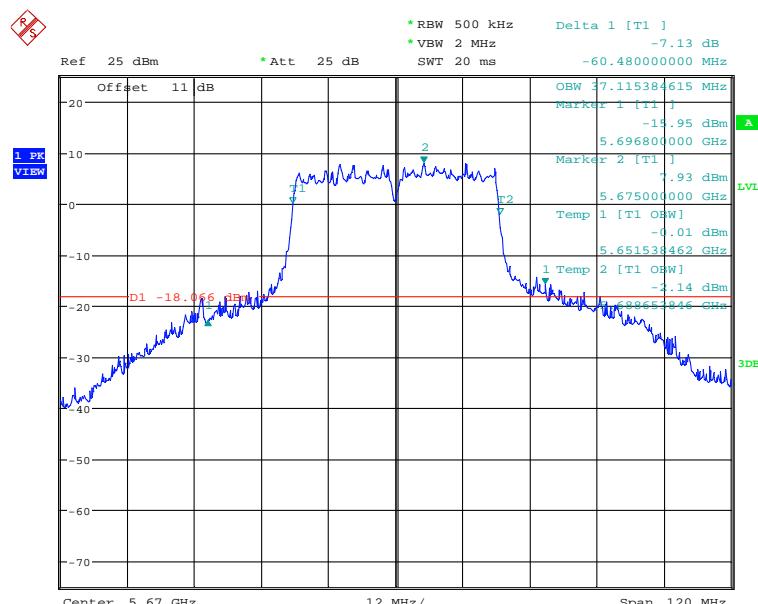


99% OBW & 26DB BANDWIDTH ANT1\_1ln40\_CH102  
Date: 16.OCT.2019 20:19:46

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

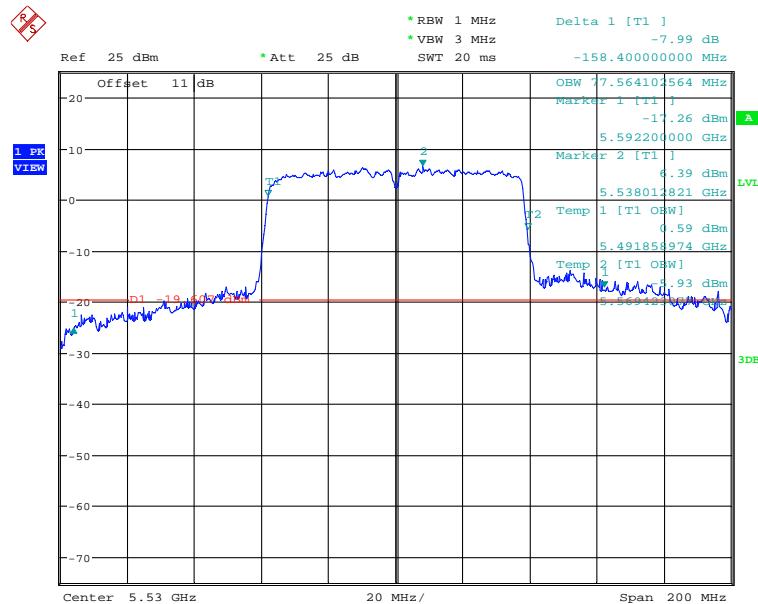


99% OBW & 26DB BANDWIDTH ANT1\_1ln40\_CH110  
Date: 16.OCT.2019 20:26:22



99% OBW & 26DB BANDWIDTH ANT1\_1ln40\_CH134  
Date: 16.OCT.2019 20:32:36

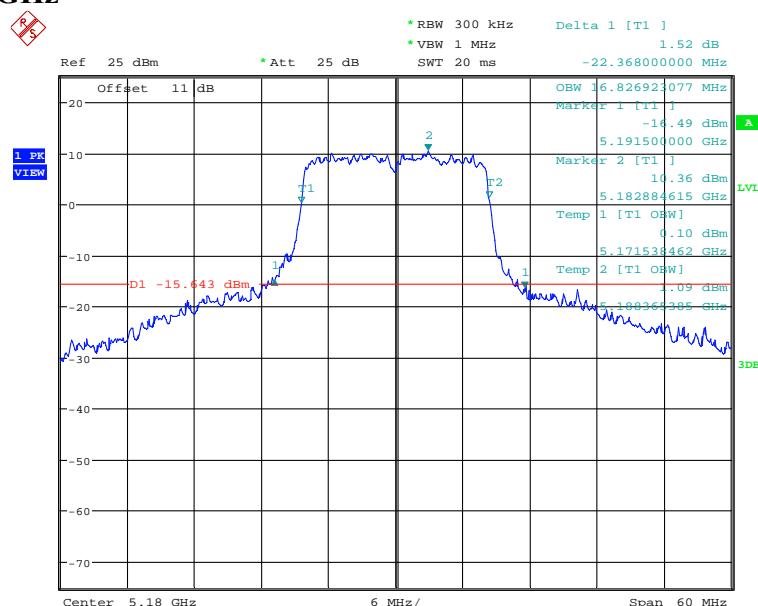
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



99% OBW & 26DB BANDWIDTH ANT1\_11ac80\_CH106

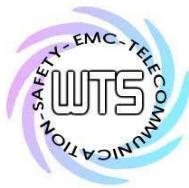
Date: 16.OCT.2019 20:44:20

## ANT2 5.15 GHz ~ 5.25 GHz



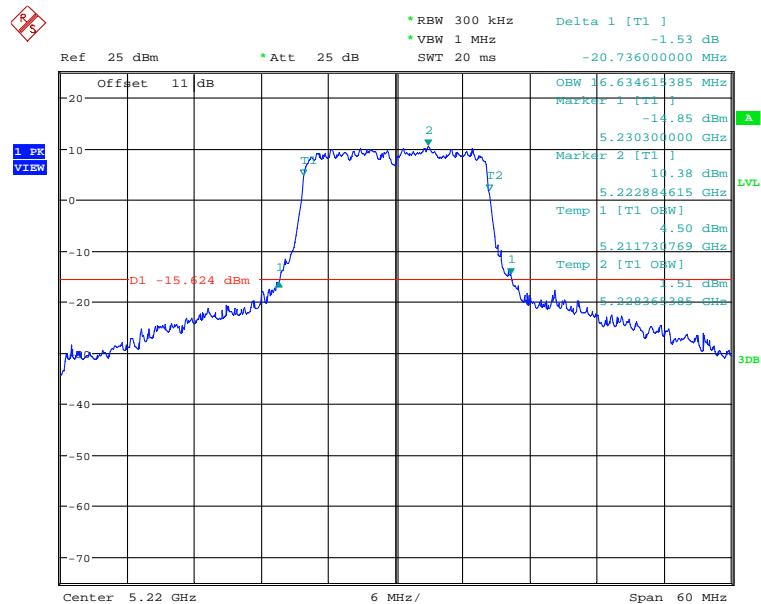
99% OBW & 26DB BANDWIDTH ANT2\_11a\_CH36

Date: 15.OCT.2019 21:02:14

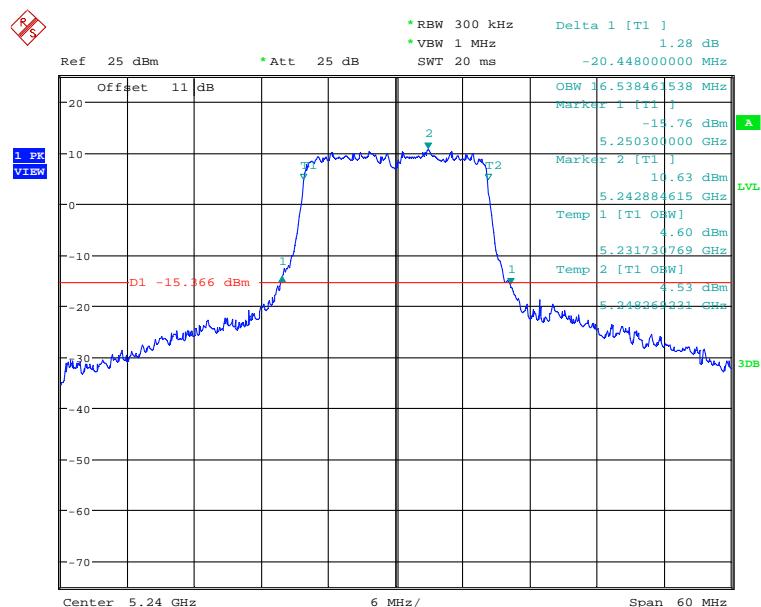


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



99% OBW & 26DB BANDWIDTH ANT2\_11a\_CH44  
Date: 15.OCT.2019 21:09:12

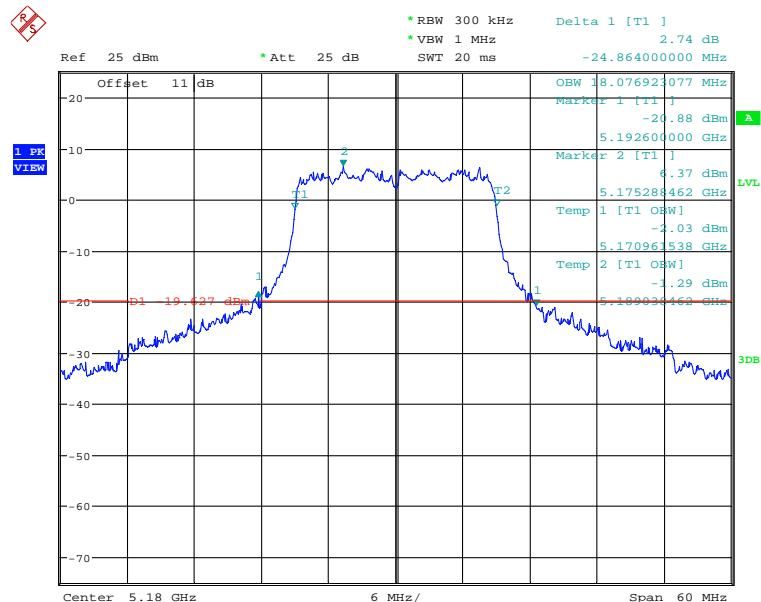


99% OBW & 26DB BANDWIDTH ANT2\_11a\_CH48  
Date: 15.OCT.2019 21:15:37

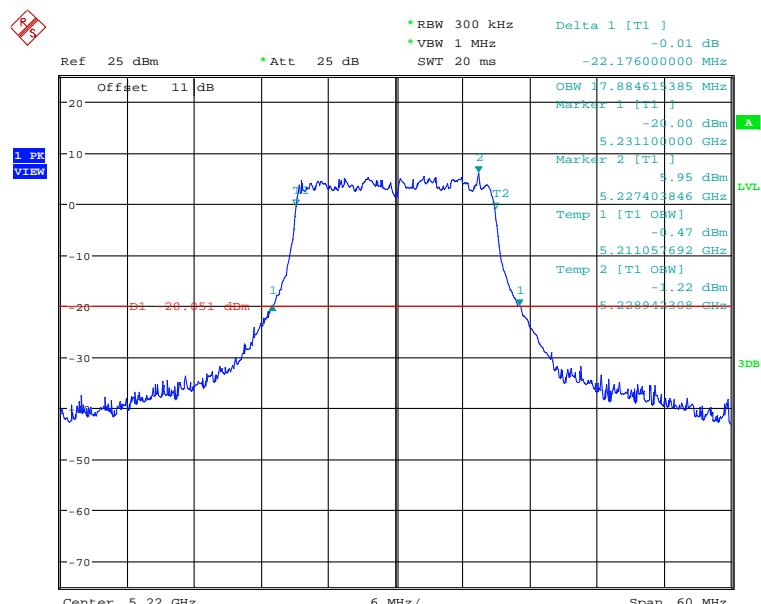


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

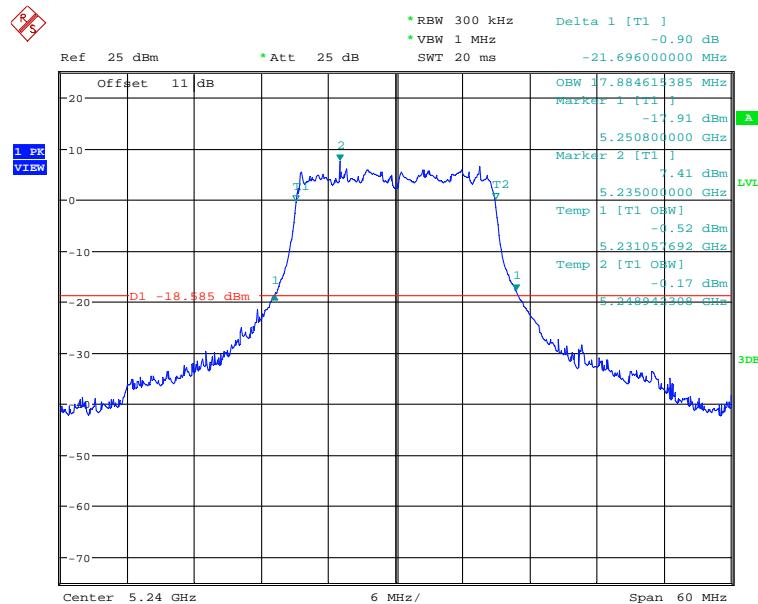


99% OBW & 26DB BANDWIDTH ANT2\_1ln20\_CH36  
Date: 16.OCT.2019 14:11:32

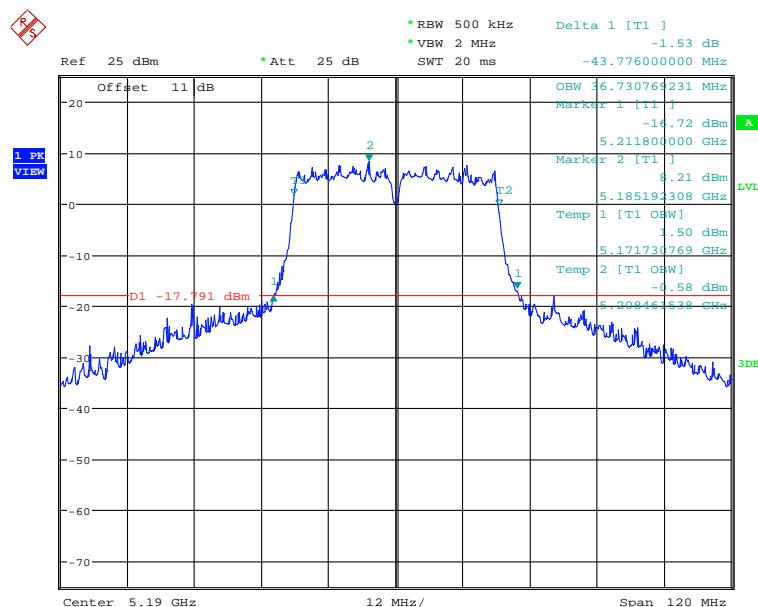


99% OBW & 26DB BANDWIDTH ANT2\_1ln20\_CH44  
Date: 16.OCT.2019 14:24:55

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



99% OBW & 26DB BANDWIDTH ANT2\_1ln20\_CH48  
Date: 16.OCT.2019 14:30:42

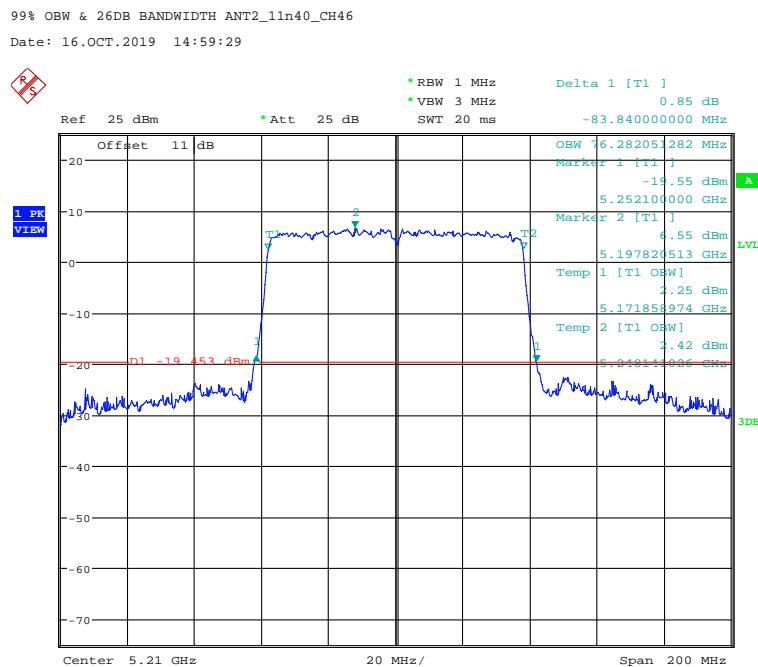
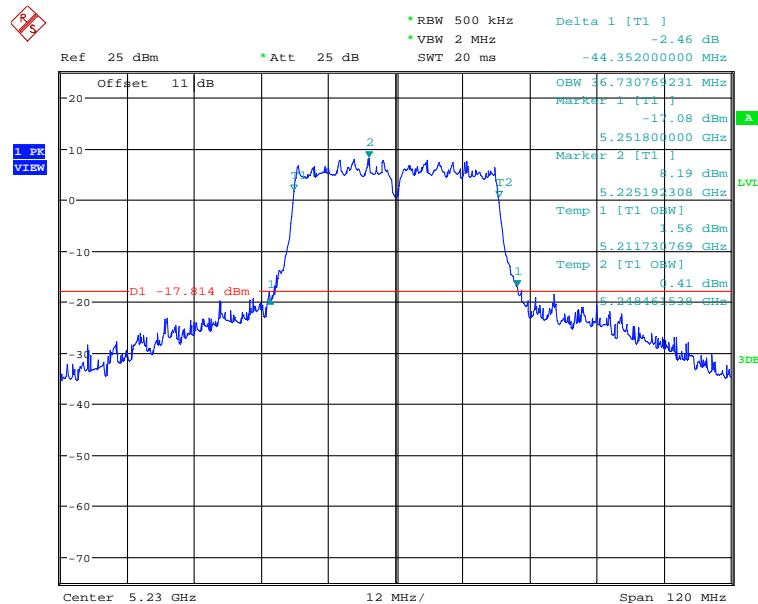


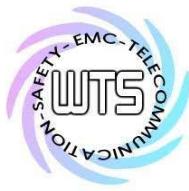
99% OBW & 26DB BANDWIDTH ANT2\_1ln40\_CH38  
Date: 16.OCT.2019 14:53:20



# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

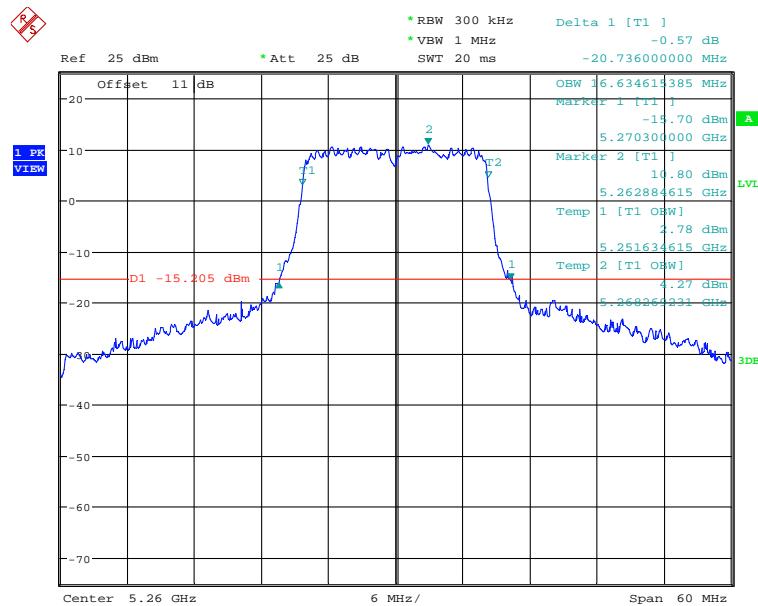




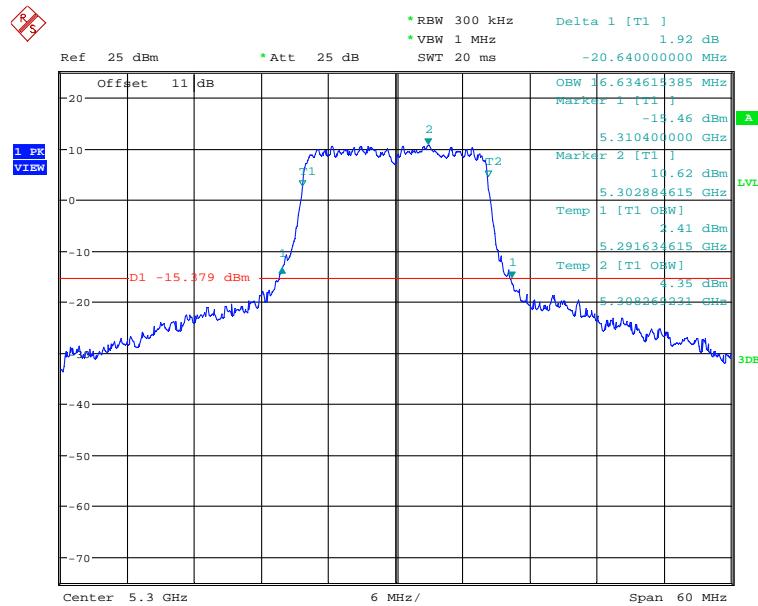
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

## 5.25 GHz ~ 5.35 GHz



99% OBW & 26DB BANDWIDTH ANT2\_11a\_CH52  
Date: 16.OCT.2019 15:28:54

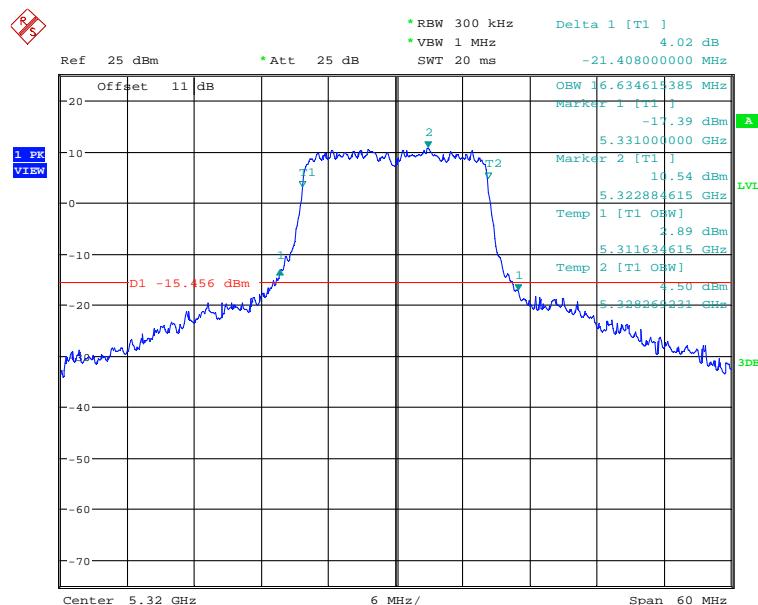


99% OBW & 26DB BANDWIDTH ANT2\_11a\_CH60  
Date: 16.OCT.2019 15:35:19

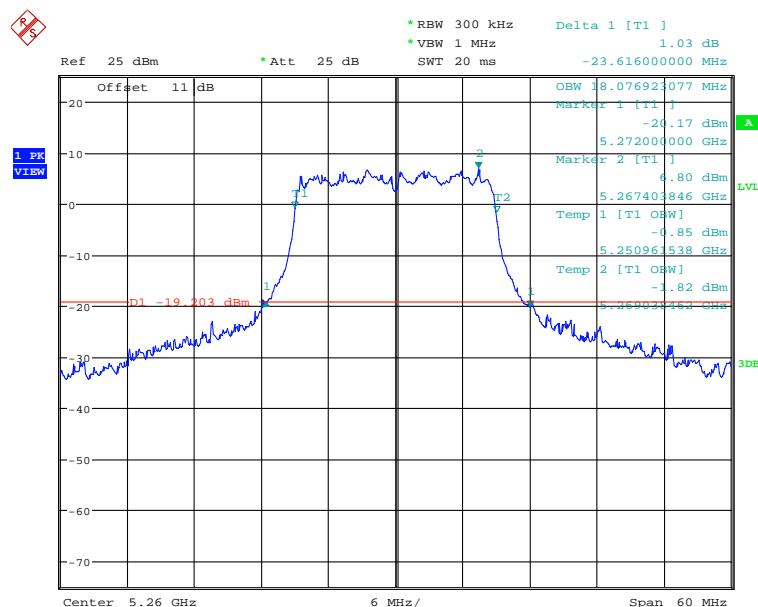


# Worldwide Testing Services(Taiwan) Co., Ltd.

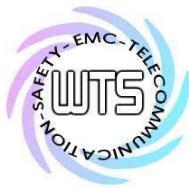
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



99% OBW & 26DB BANDWIDTH ANT2\_11a\_CH64  
Date: 16.OCT.2019 15:41:44

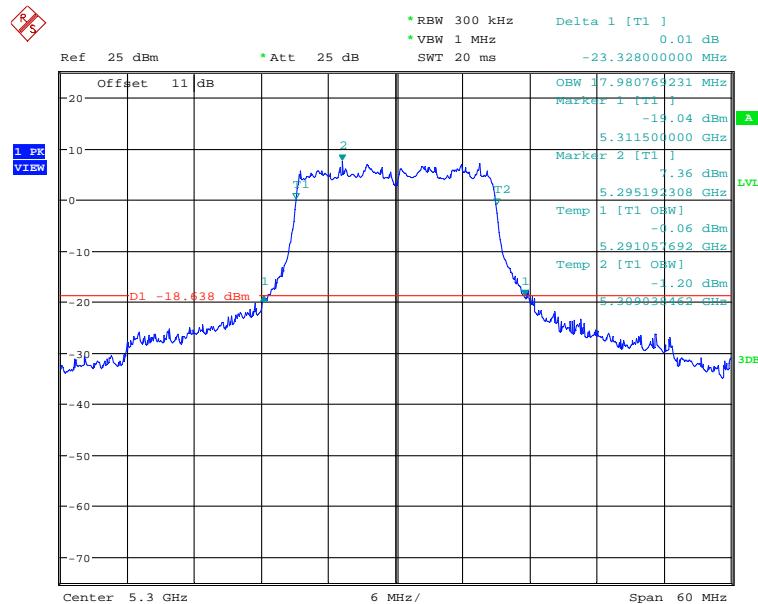


99% OBW & 26DB BANDWIDTH ANT2\_11n20\_CH52  
Date: 16.OCT.2019 16:02:38

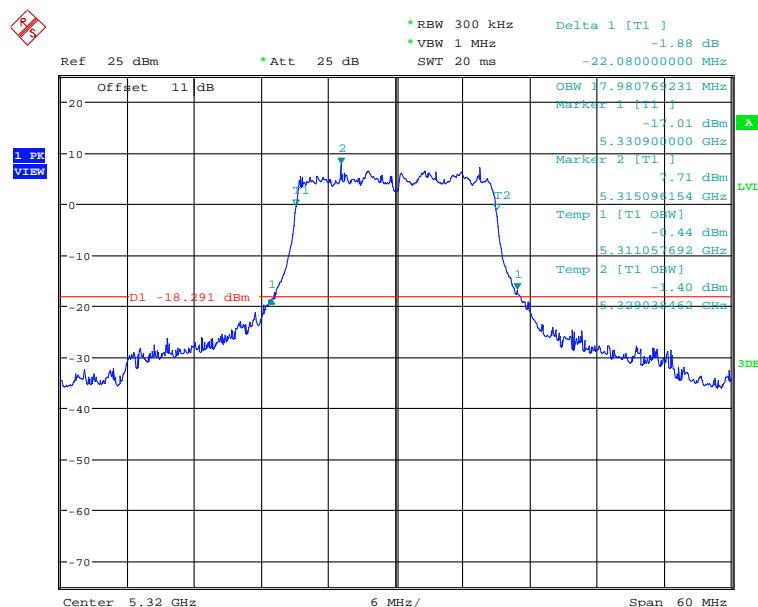


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

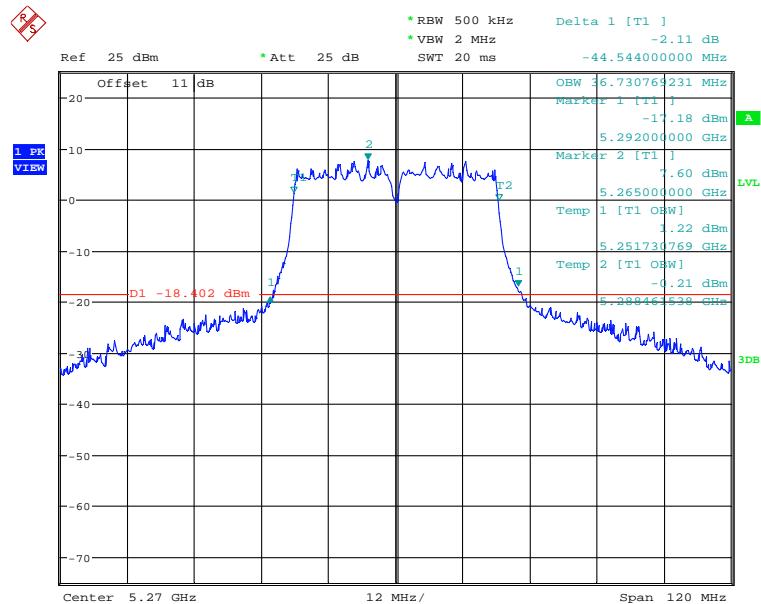


99% OBW & 26DB BANDWIDTH ANT2\_1ln20\_CH60  
Date: 16.OCT.2019 16:08:30

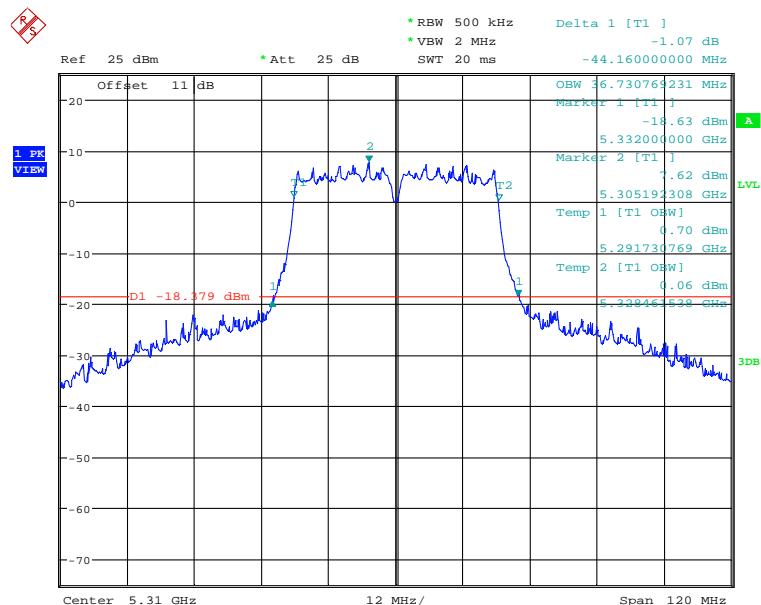


99% OBW & 26DB BANDWIDTH ANT2\_1ln20\_CH64  
Date: 16.OCT.2019 16:14:39

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

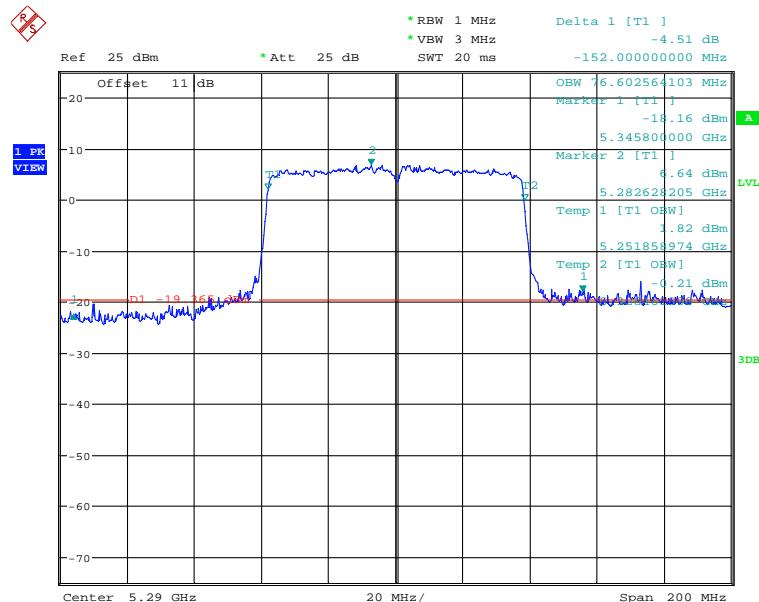


99% OBW & 26DB BANDWIDTH ANT2\_1ln40\_CH54  
Date: 16.OCT.2019 16:29:24



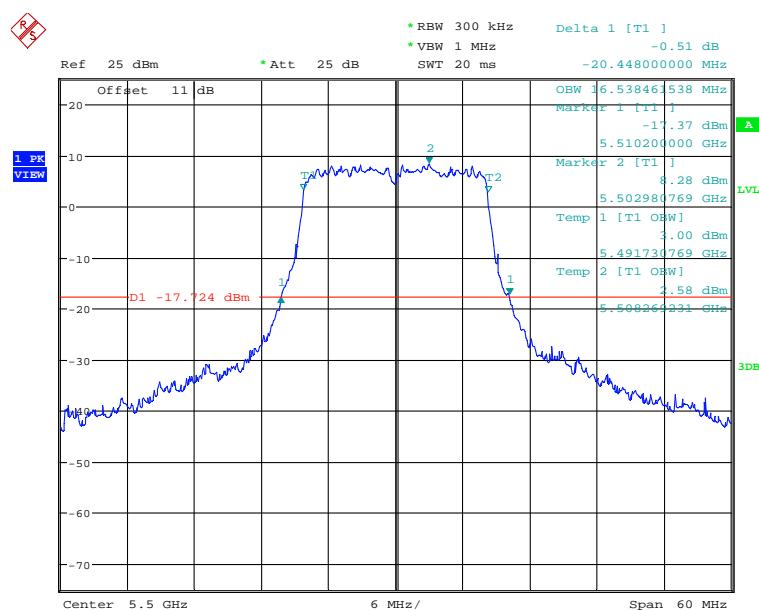
99% OBW & 26DB BANDWIDTH ANT2\_1ln40\_CH62  
Date: 16.OCT.2019 16:37:23

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

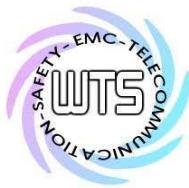


99% OBW & 26DB BANDWIDTH ANT2\_11ac80\_CH58  
Date: 16.OCT.2019 16:50:07

## 5.47 GHz ~ 5.725 GHz

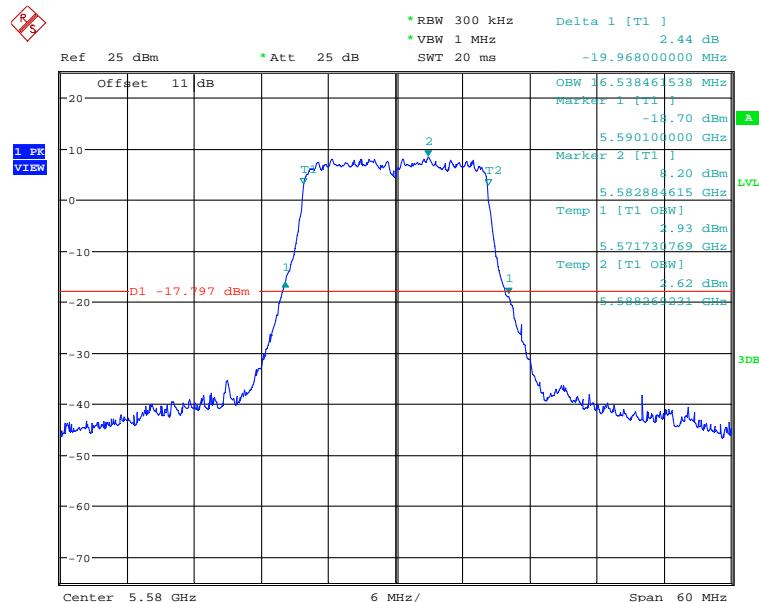


99% OBW & 26DB BANDWIDTH ANT2\_11a\_CH100  
Date: 16.OCT.2019 17:17:48

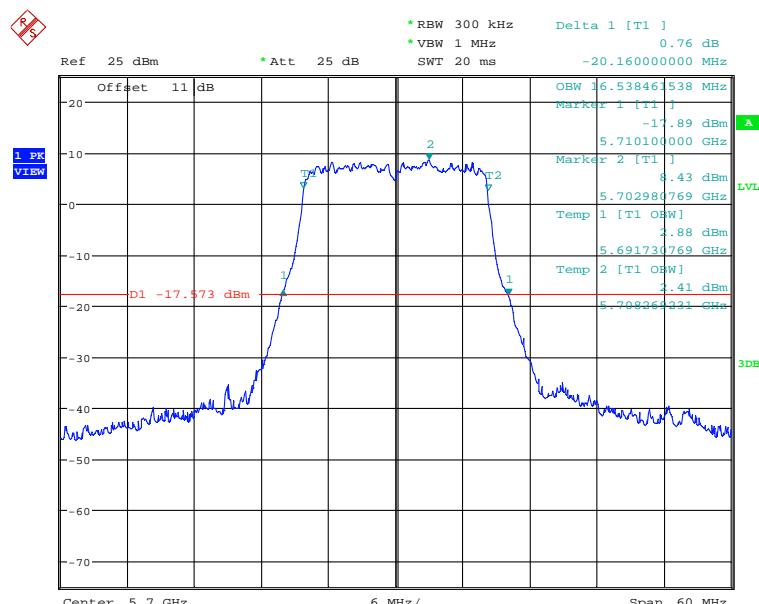


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



99% OBW & 26DB BANDWIDTH ANT2\_11a\_CH116  
Date: 16.OCT.2019 19:17:48

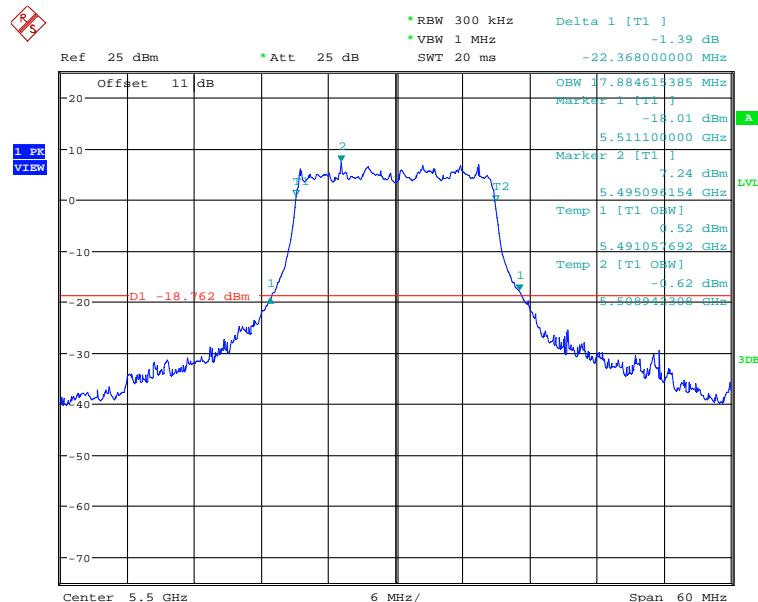


99% OBW & 26DB BANDWIDTH ANT2\_11a\_CH140  
Date: 16.OCT.2019 19:24:40

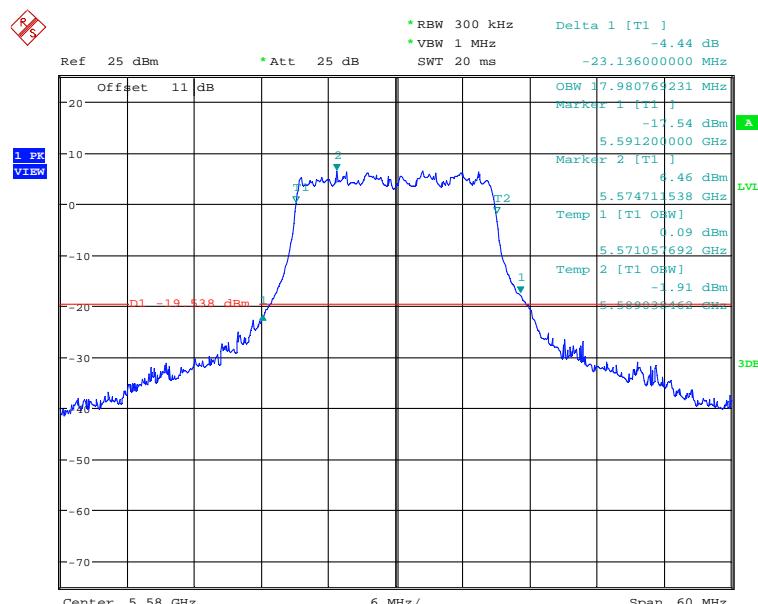


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



99% OBW & 26DB BANDWIDTH ANT2\_1ln20\_CH100  
Date: 16.OCT.2019 19:50:31

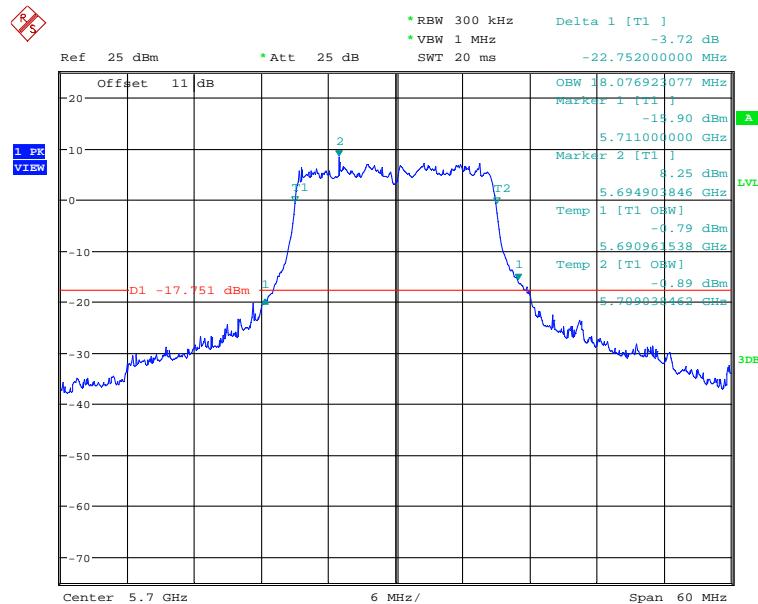


99% OBW & 26DB BANDWIDTH ANT2\_1ln20\_CH116  
Date: 16.OCT.2019 19:57:07



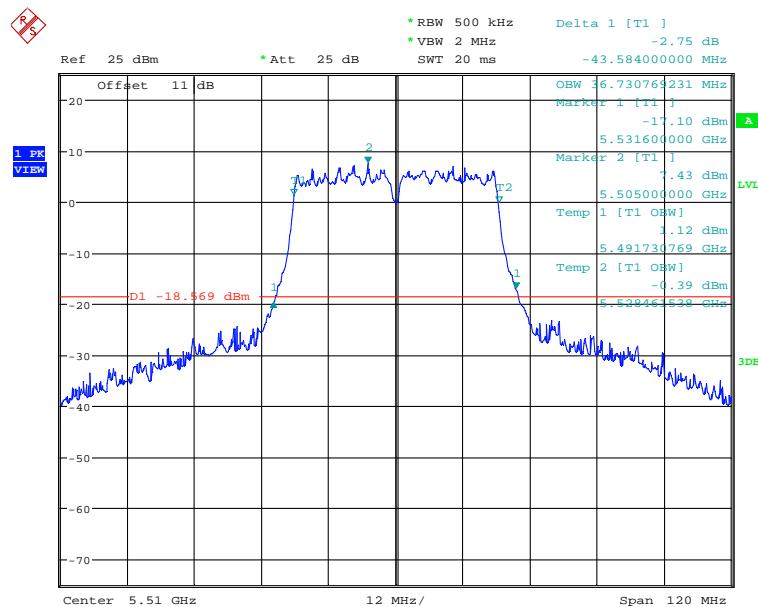
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



99% OBW & 26DB BANDWIDTH ANT2\_1ln20\_CH140

Date: 16.OCT.2019 20:02:37



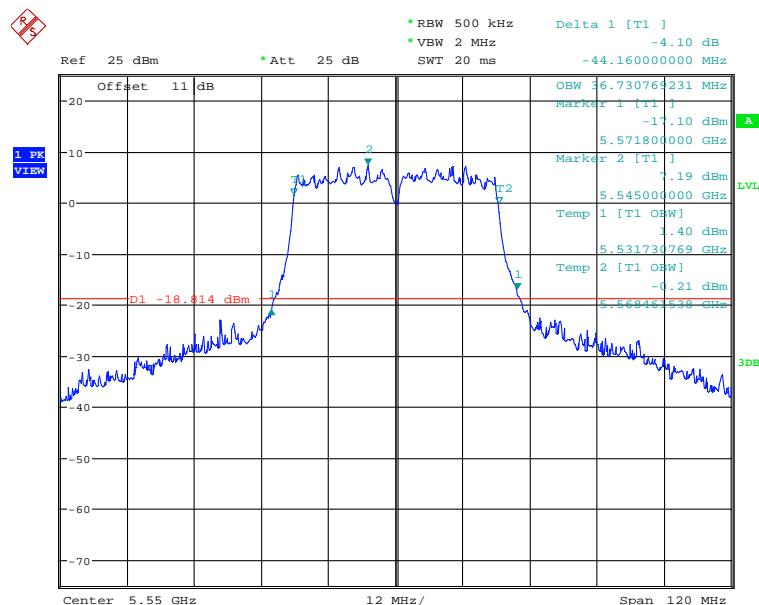
99% OBW & 26DB BANDWIDTH ANT2\_1ln40\_CH102

Date: 16.OCT.2019 20:20:57

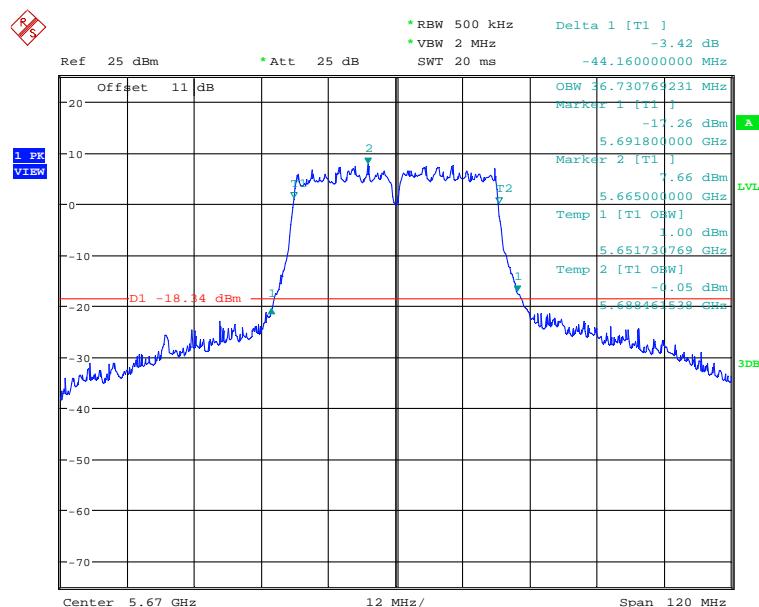


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

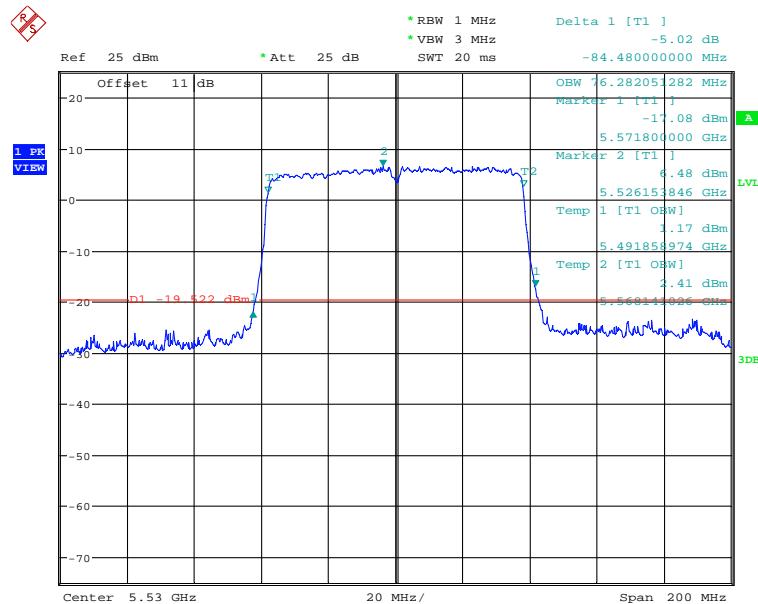


99% OBW & 26DB BANDWIDTH ANT2\_1ln40\_CH110  
Date: 16.OCT.2019 20:27:44



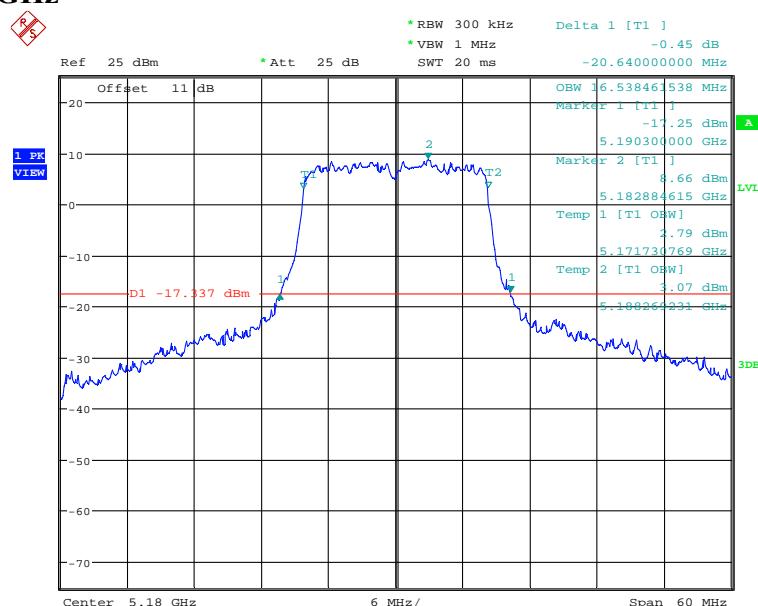
99% OBW & 26DB BANDWIDTH ANT2\_1ln40\_CH134  
Date: 16.OCT.2019 20:35:43

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



99% OBW & 26DB BANDWIDTH ANT2\_1lac80\_CH106  
Date: 16.OCT.2019 20:46:43

## ANT3 5.15 GHz ~ 5.25 GHz

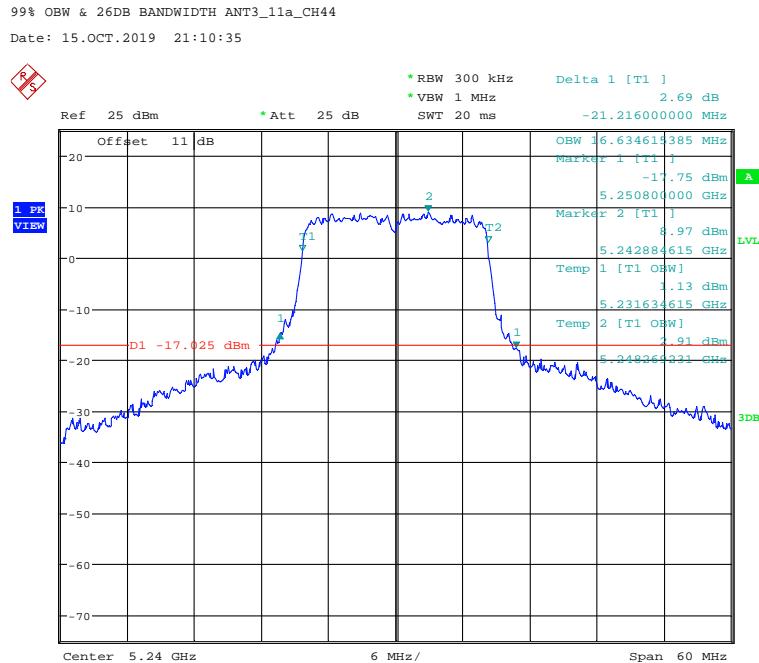
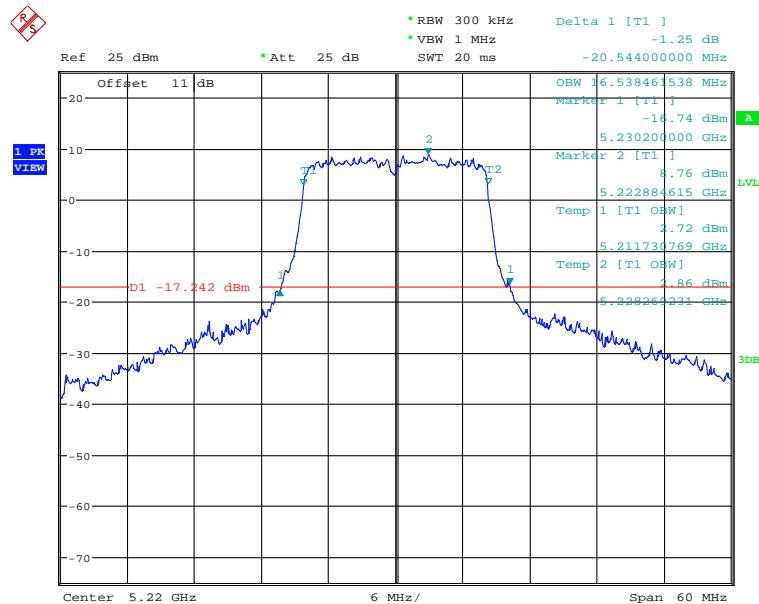


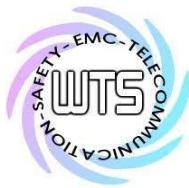
99% OBW & 26DB BANDWIDTH ANT3\_11a\_CH36  
Date: 15.OCT.2019 21:03:42



# Worldwide Testing Services(Taiwan) Co., Ltd.

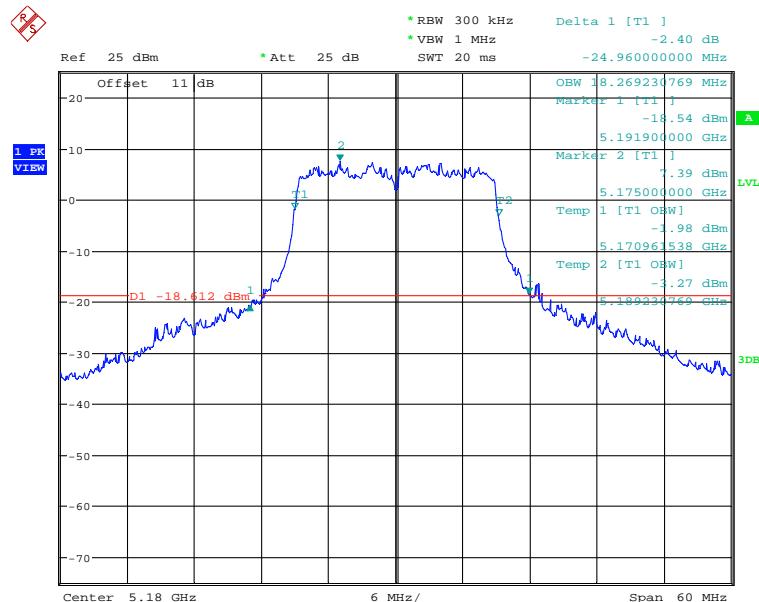
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS





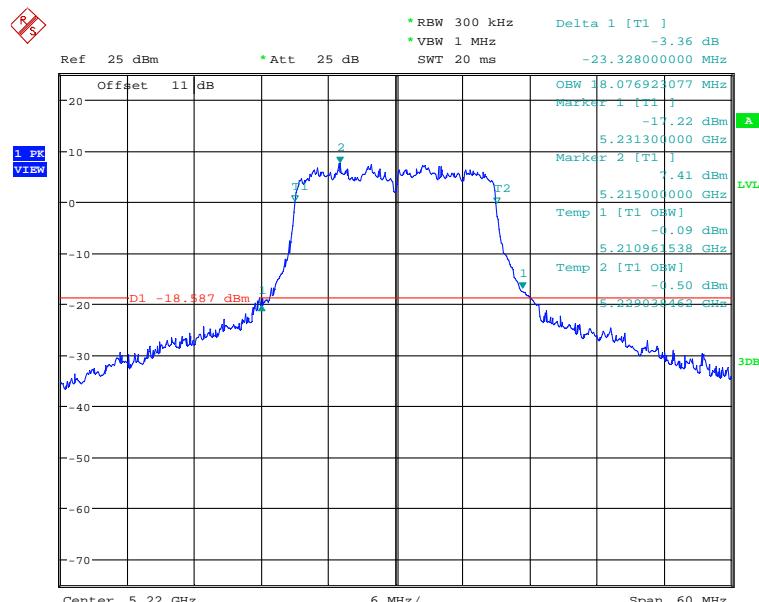
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



99% OBW & 26DB BANDWIDTH ANT3\_1ln20\_CH36

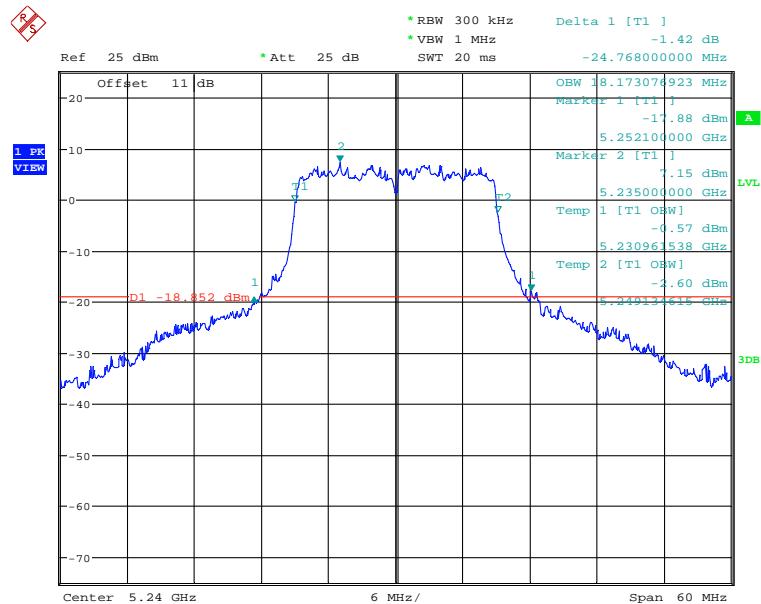
Date: 16.OCT.2019 14:12:49



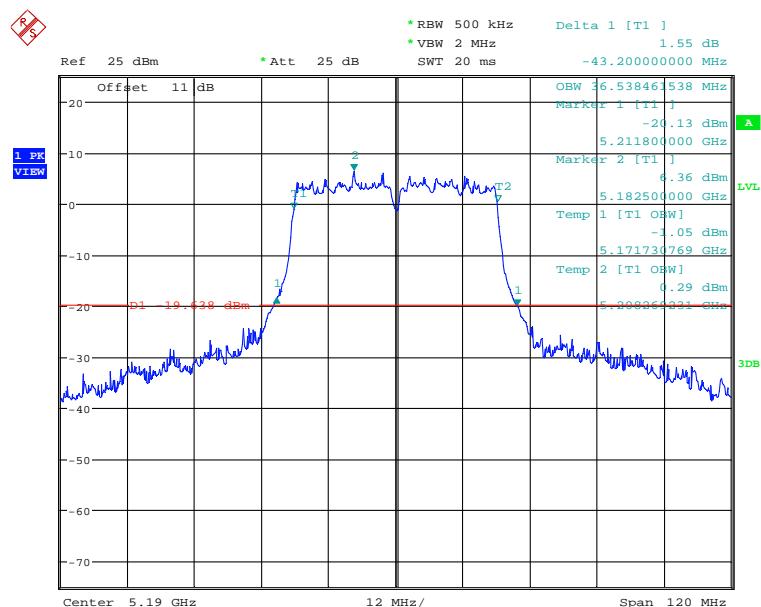
99% OBW & 26DB BANDWIDTH ANT3\_1ln20\_CH44

Date: 16.OCT.2019 14:43:43

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



99% OBW & 26DB BANDWIDTH ANT3\_1ln20\_CH48  
Date: 16.OCT.2019 14:31:53

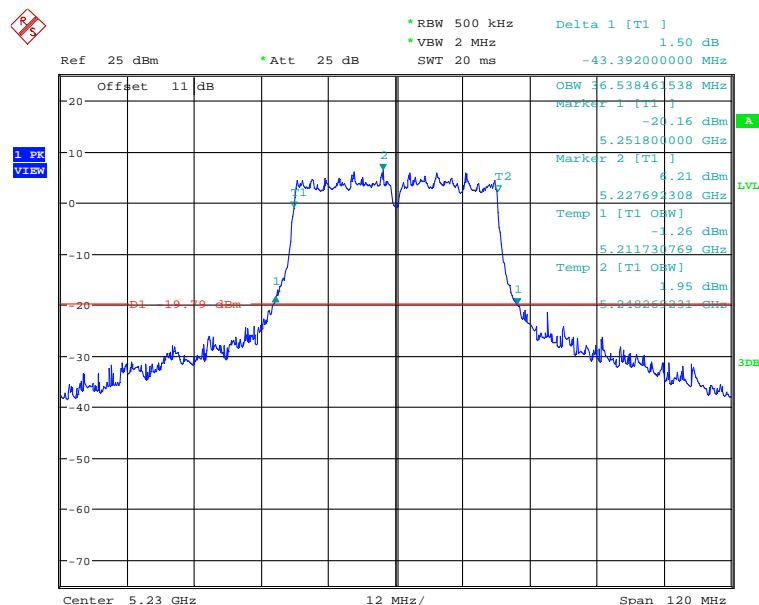


99% OBW & 26DB BANDWIDTH ANT3\_1ln40\_CH38  
Date: 16.OCT.2019 14:54:37

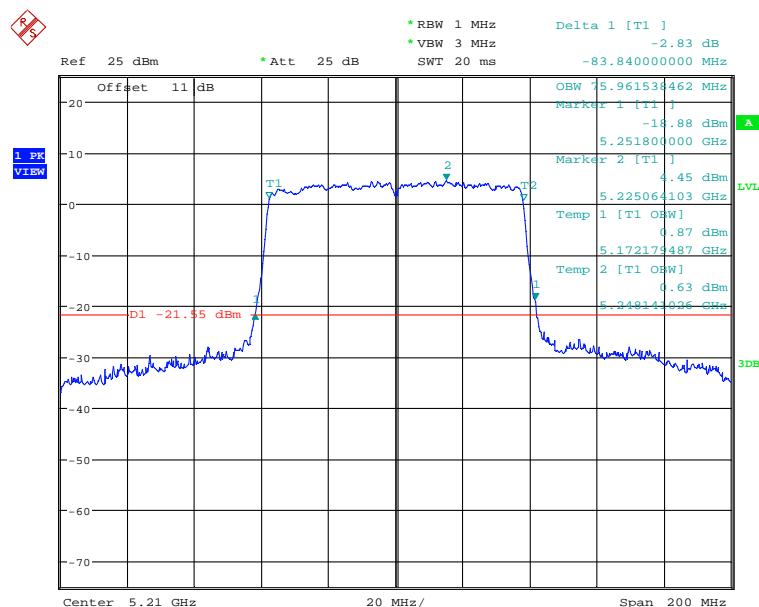


# Worldwide Testing Services(Taiwan) Co., Ltd.

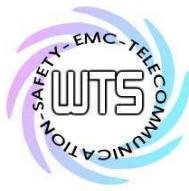
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



99% OBW & 26DB BANDWIDTH ANT3\_1ln40\_CH46  
Date: 16.OCT.2019 15:00:51



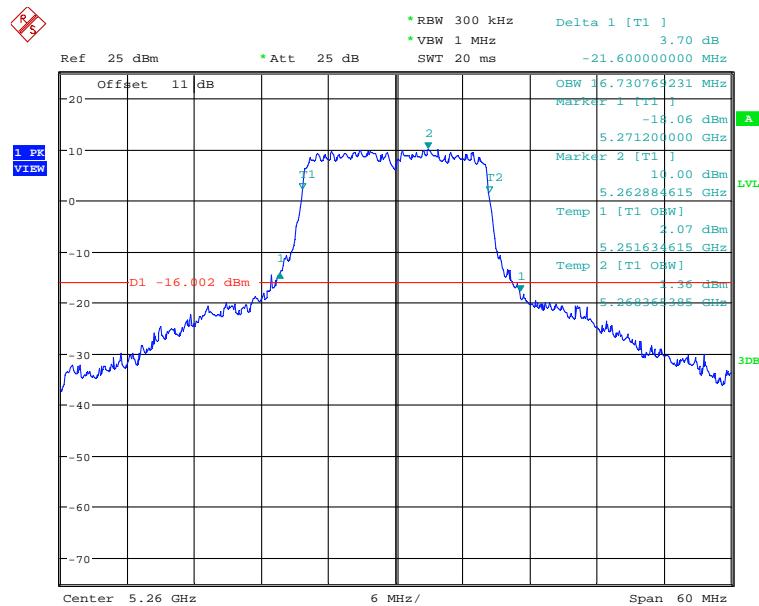
99% OBW & 26DB BANDWIDTH ANT3\_1lac80\_CH42  
Date: 16.OCT.2019 15:12:13



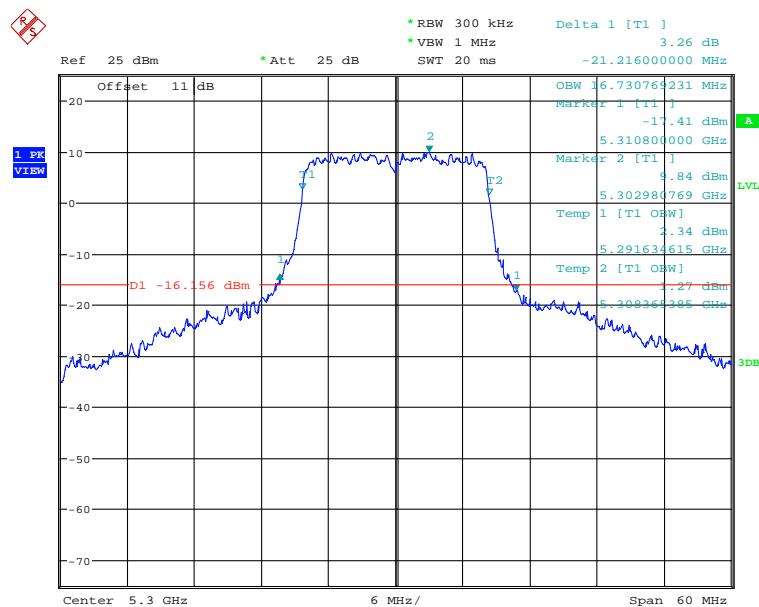
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

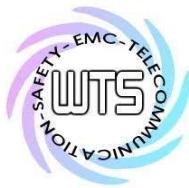
## 5.25 GHz ~ 5.35 GHz



99% OBW & 26DB BANDWIDTH ANT3\_11a\_CH52  
Date: 16.OCT.2019 15:30:17

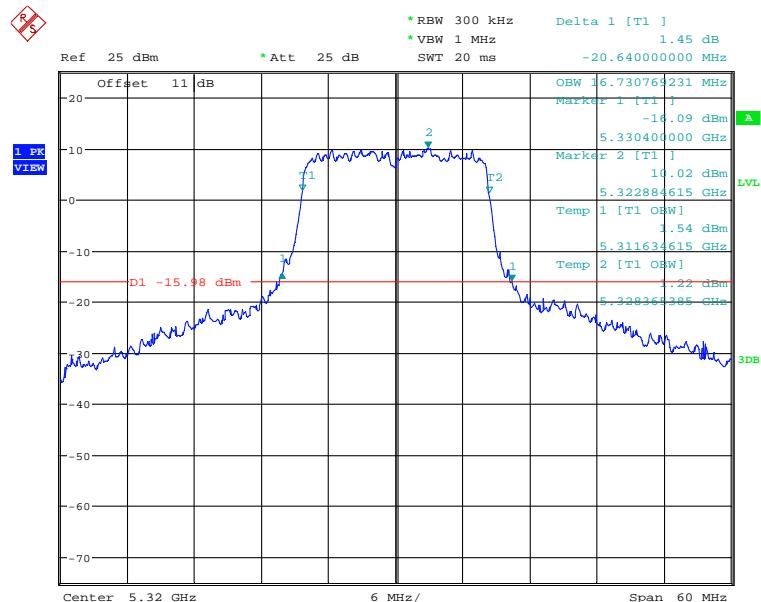


99% OBW & 26DB BANDWIDTH ANT3\_11a\_CH60  
Date: 16.OCT.2019 15:36:47

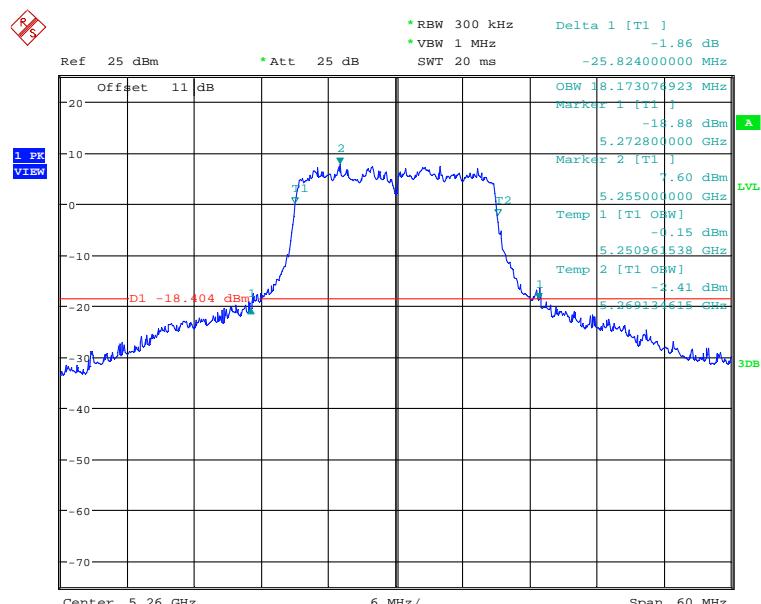


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



99% OBW & 26DB BANDWIDTH ANT3\_11a\_CH64  
Date: 16.OCT.2019 15:43:01

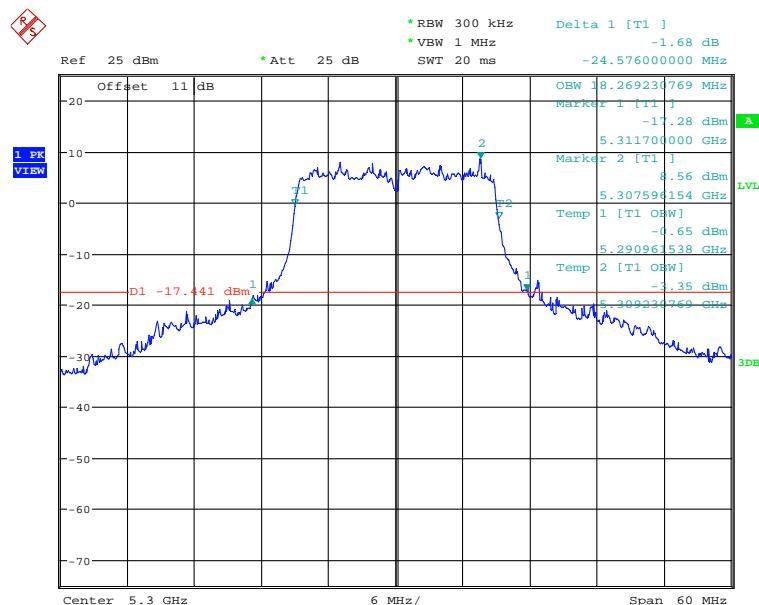


99% OBW & 26DB BANDWIDTH ANT3\_11n20\_CH52  
Date: 16.OCT.2019 16:03:55

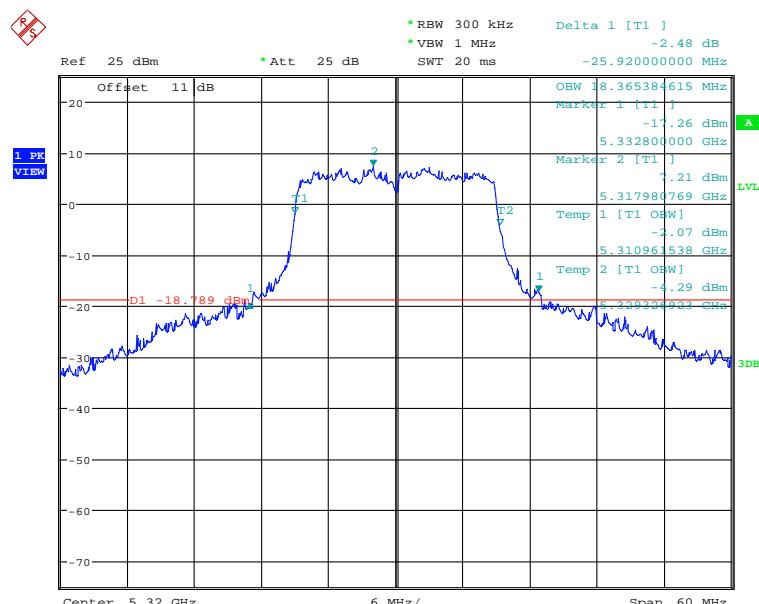


# Worldwide Testing Services(Taiwan) Co., Ltd.

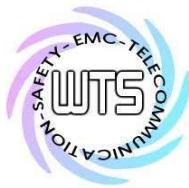
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



99% OBW & 26DB BANDWIDTH ANT3\_1ln20\_CH60  
Date: 16.OCT.2019 16:09:47

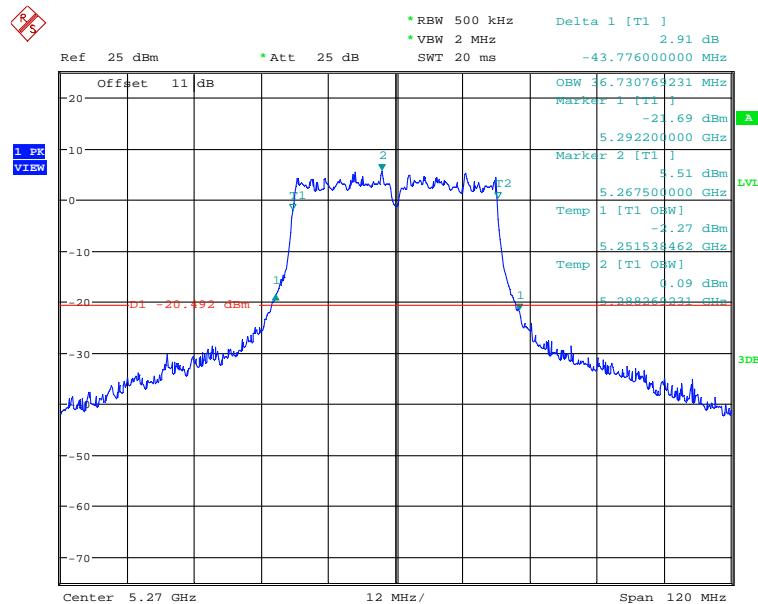


99% OBW & 26DB BANDWIDTH ANT3\_1ln20\_CH64  
Date: 16.OCT.2019 16:15:50

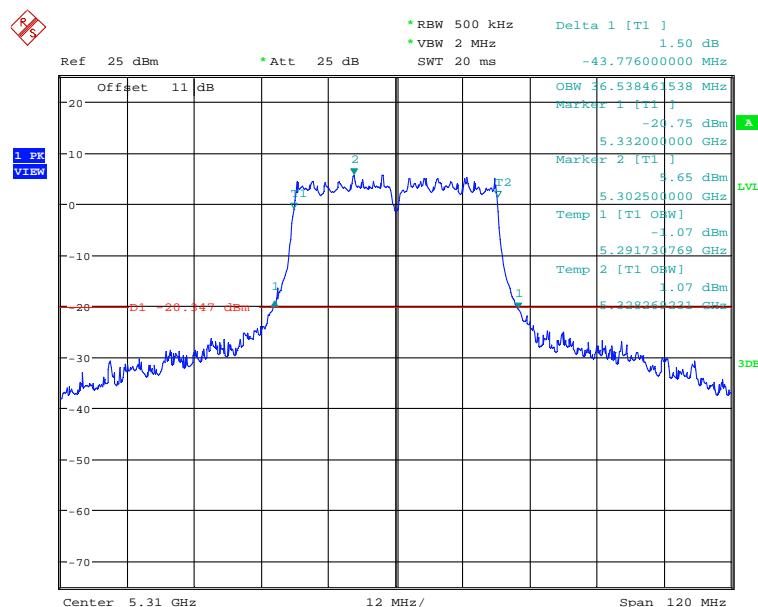


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

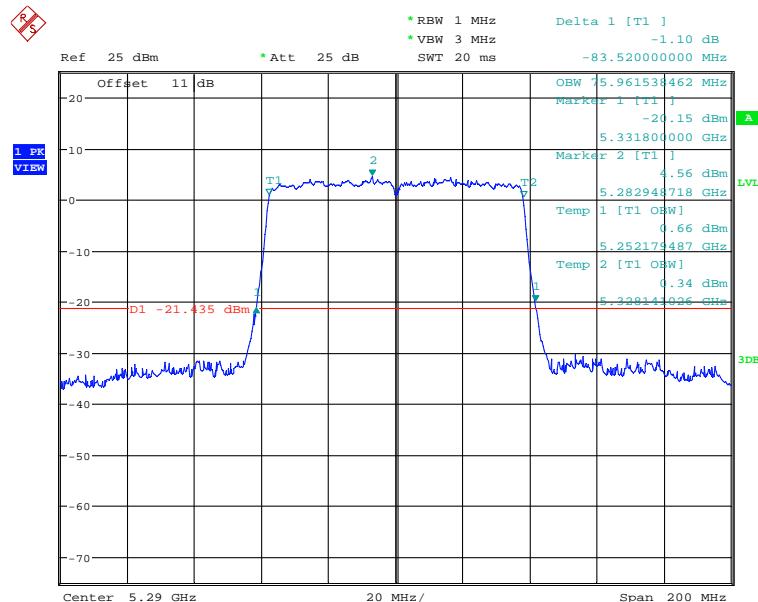


99% OBW & 26DB BANDWIDTH ANT3\_1ln40\_CH54  
Date: 16.OCT.2019 16:31:09



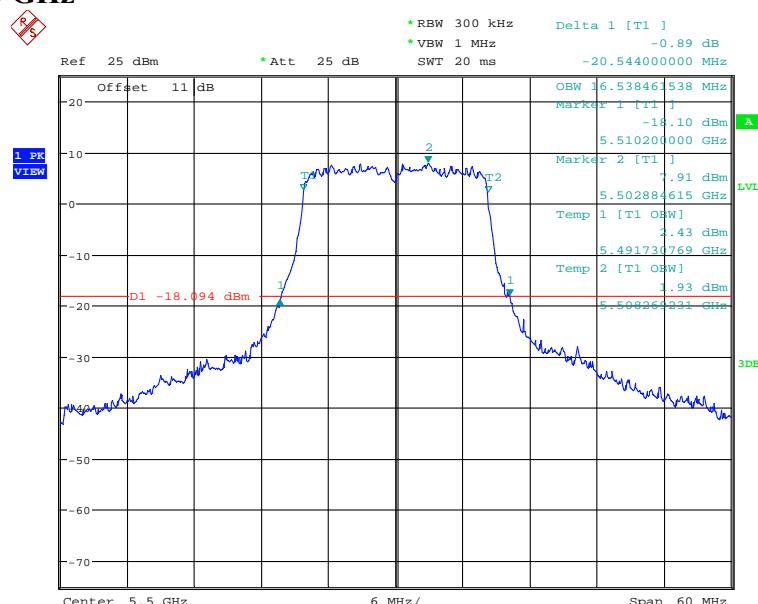
99% OBW & 26DB BANDWIDTH ANT3\_1ln40\_CH62  
Date: 16.OCT.2019 16:38:40

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

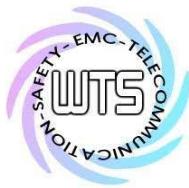


99% OBW & 26DB BANDWIDTH ANT3\_11ac80\_CH58  
Date: 16.OCT.2019 16:52:25

## 5.47 GHz ~ 5.725 GHz

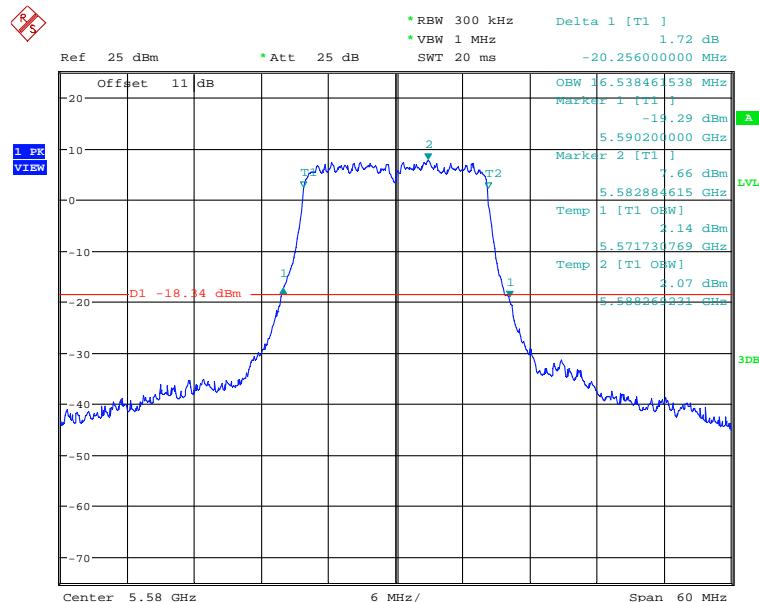


99% OBW & 26DB BANDWIDTH ANT3\_11a\_CH100  
Date: 16.OCT.2019 17:19:16

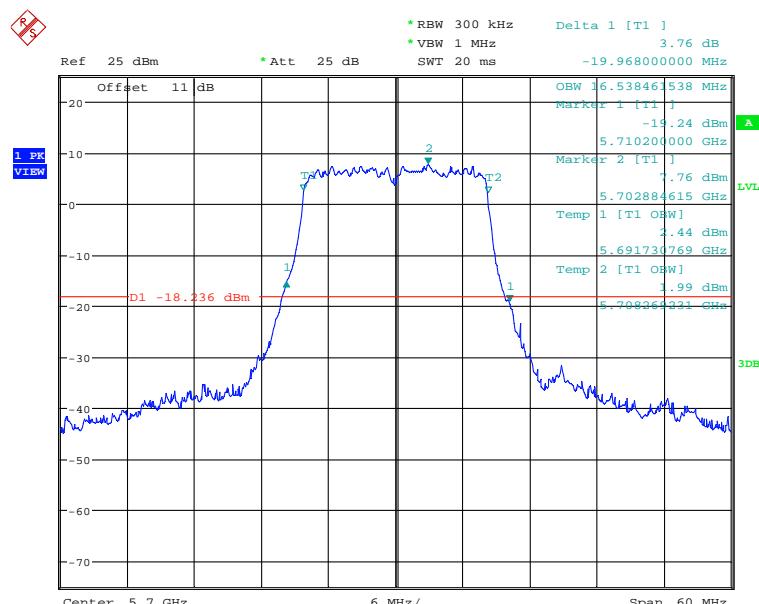


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



99% OBW & 26DB BANDWIDTH ANT3\_11a\_CH116  
Date: 16.OCT.2019 19:19:21

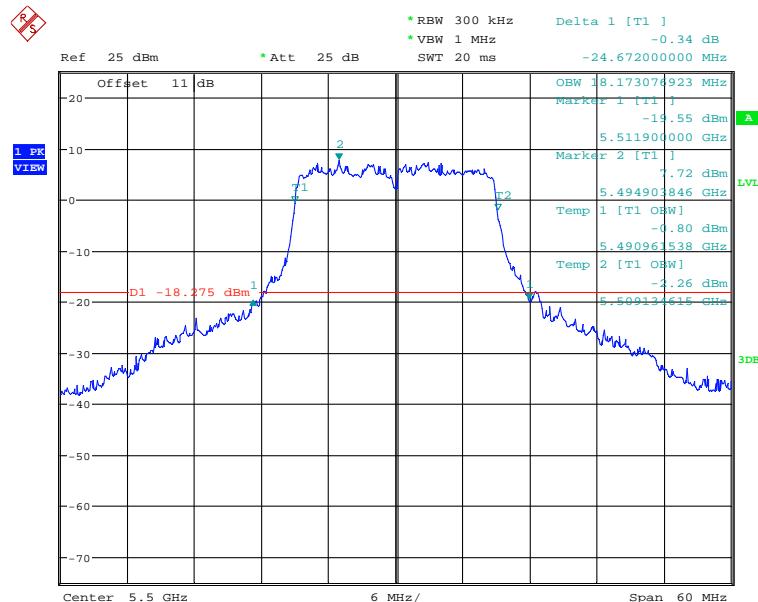


99% OBW & 26DB BANDWIDTH ANT3\_11a\_CH140  
Date: 16.OCT.2019 19:26:03

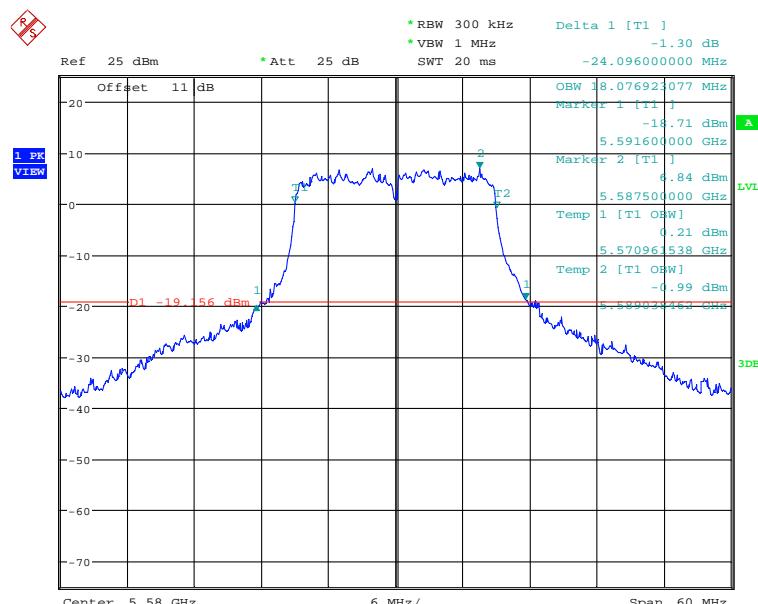


# Worldwide Testing Services(Taiwan) Co., Ltd.

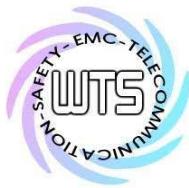
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



99% OBW & 26DB BANDWIDTH ANT3\_1ln20\_CH100  
Date: 16.OCT.2019 19:51:54

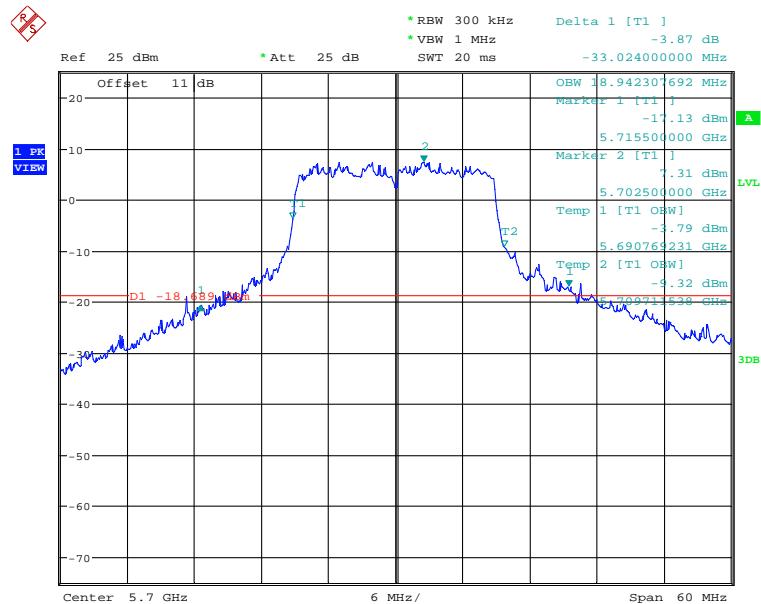


99% OBW & 26DB BANDWIDTH ANT3\_1ln20\_CH116  
Date: 16.OCT.2019 19:58:24

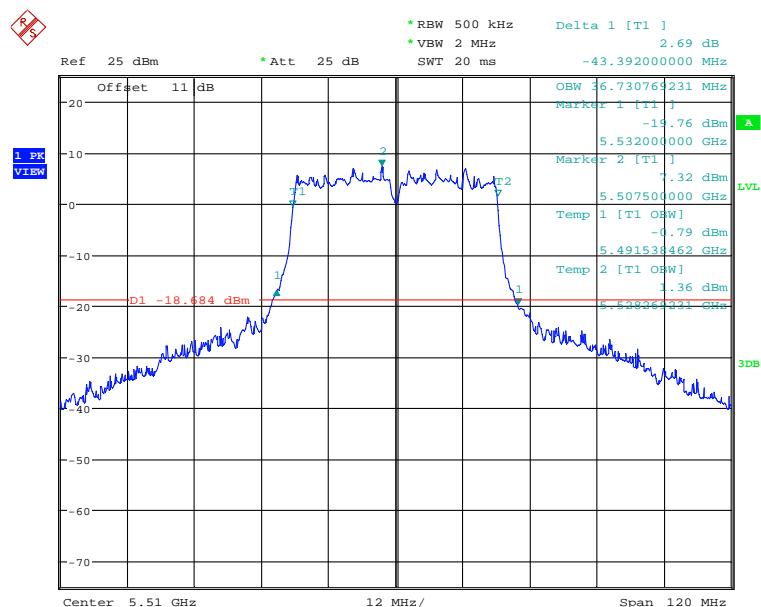


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



99% OBW & 26DB BANDWIDTH ANT3\_1ln20\_CH140  
Date: 16.OCT.2019 20:03:54

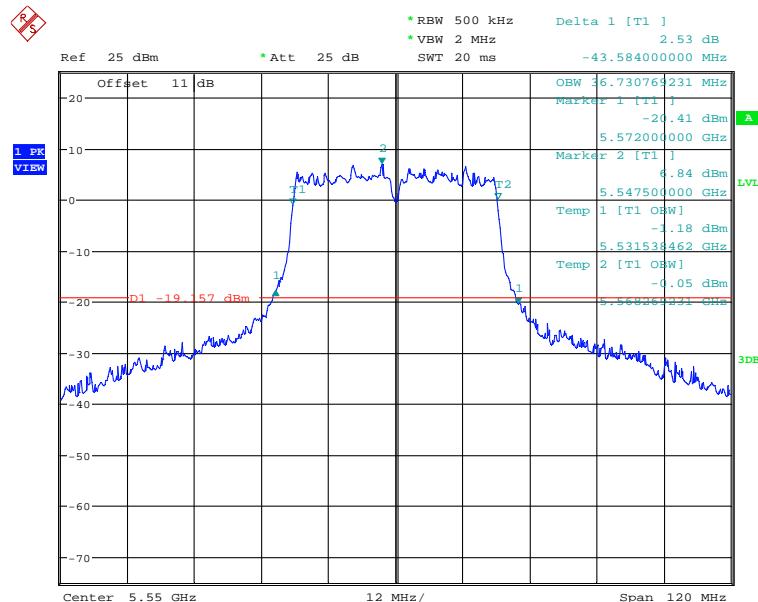


99% OBW & 26DB BANDWIDTH ANT3\_1ln40\_CH102  
Date: 16.OCT.2019 20:22:14

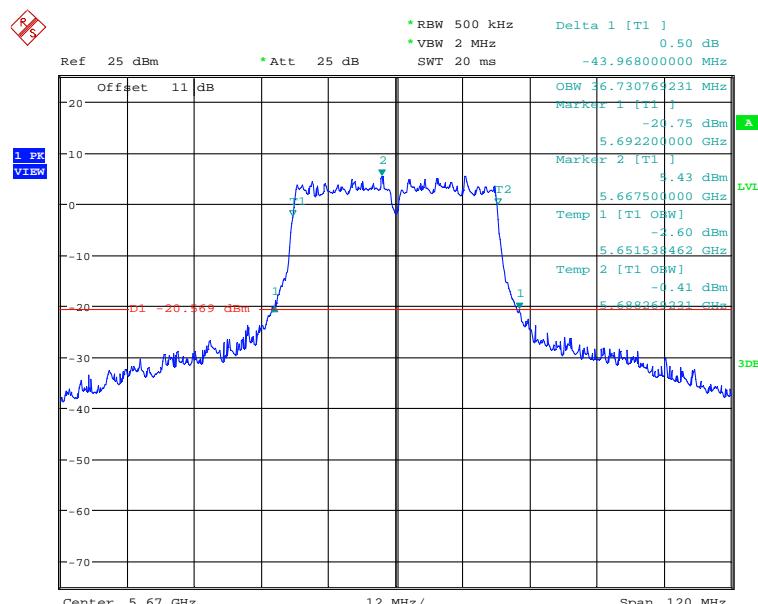


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

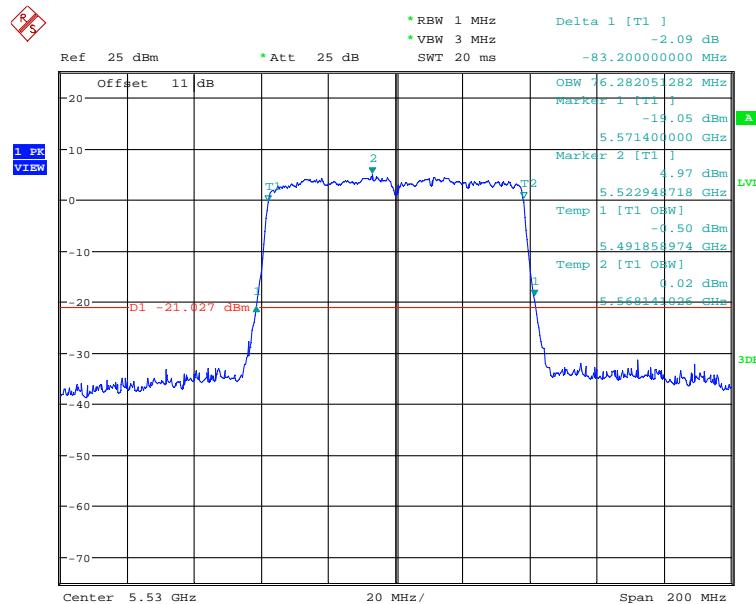


99% OBW & 26DB BANDWIDTH ANT3\_1ln40\_CH110  
Date: 16.OCT.2019 20:29:01



99% OBW & 26DB BANDWIDTH ANT3\_1ln40\_CH134  
Date: 16.OCT.2019 20:37:00

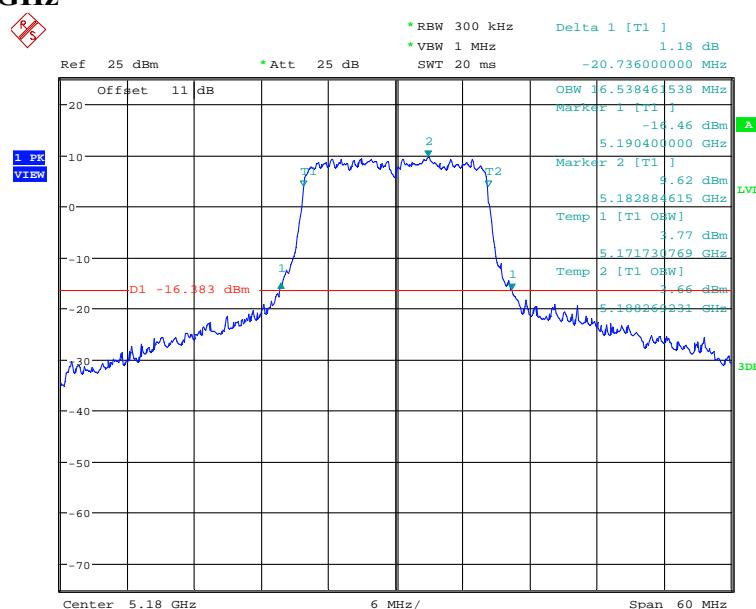
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



99% OBW & 26DB BANDWIDTH ANT3\_11ac80\_CH106

Date: 16.OCT.2019 20:49:22

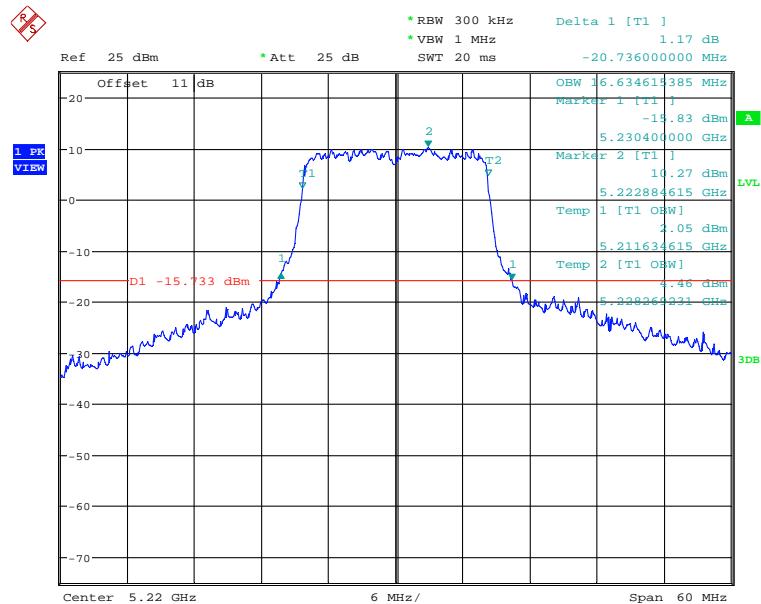
## ANT4 5.15 GHz ~ 5.25 GHz



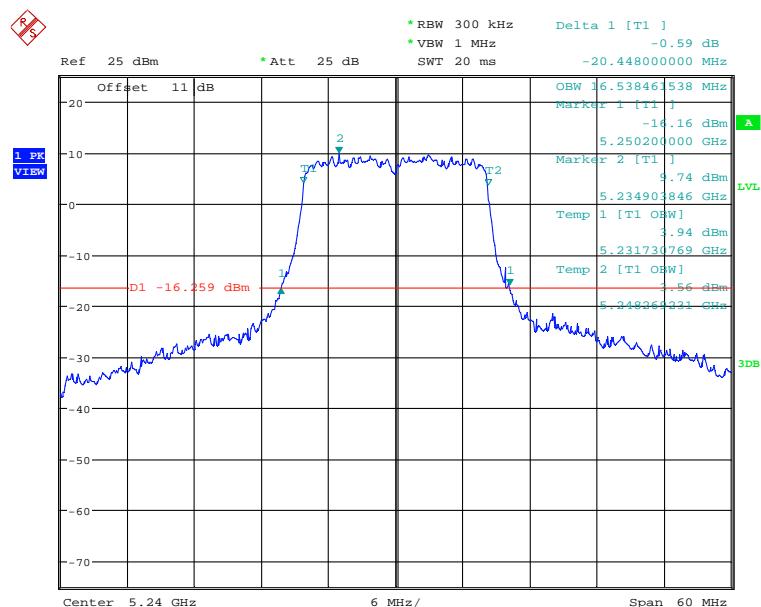
99% OBW & 26DB BANDWIDTH ANT4\_11a\_CH36

Date: 15.OCT.2019 21:05:38

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



99% OBW & 26DB BANDWIDTH ANT4\_11a\_CH44  
Date: 15.OCT.2019 21:11:52

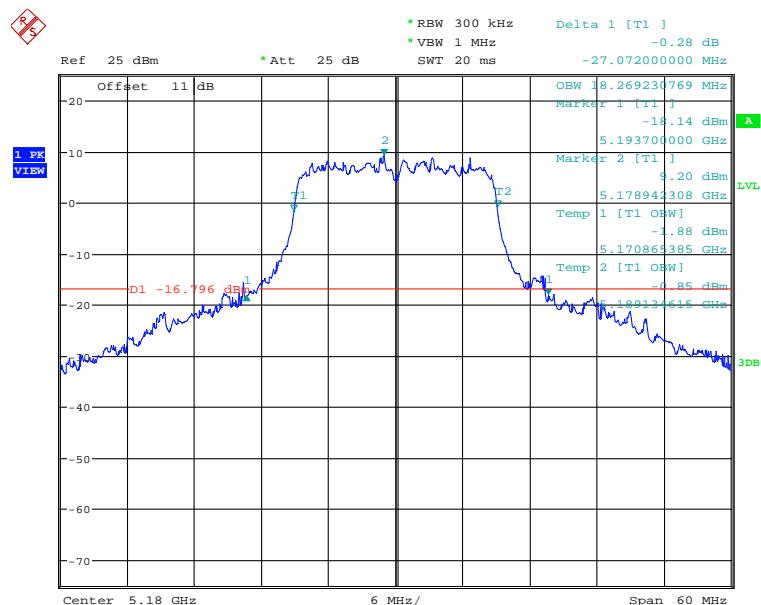


99% OBW & 26DB BANDWIDTH ANT4\_11a\_CH48  
Date: 15.OCT.2019 21:18:22

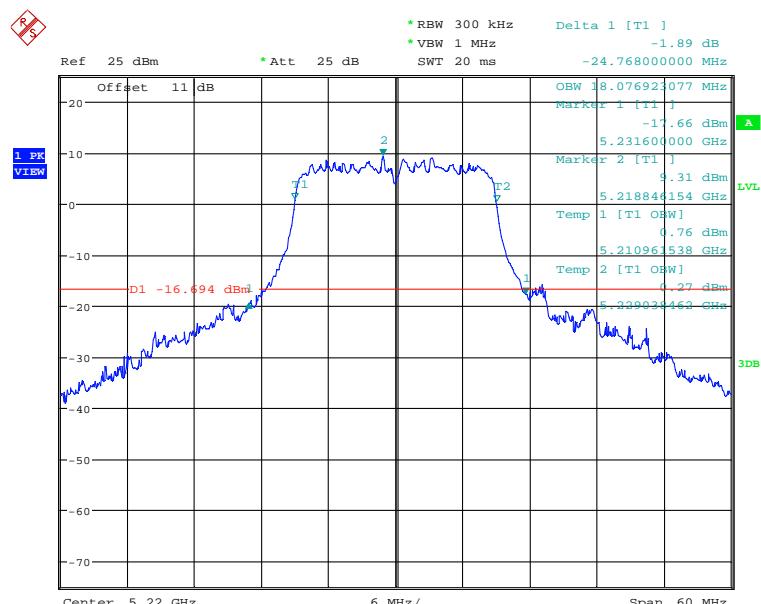


# Worldwide Testing Services(Taiwan) Co., Ltd.

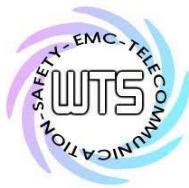
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



99% OBW & 26DB BANDWIDTH ANT4\_1ln20\_CH36  
Date: 16.OCT.2019 14:14:06

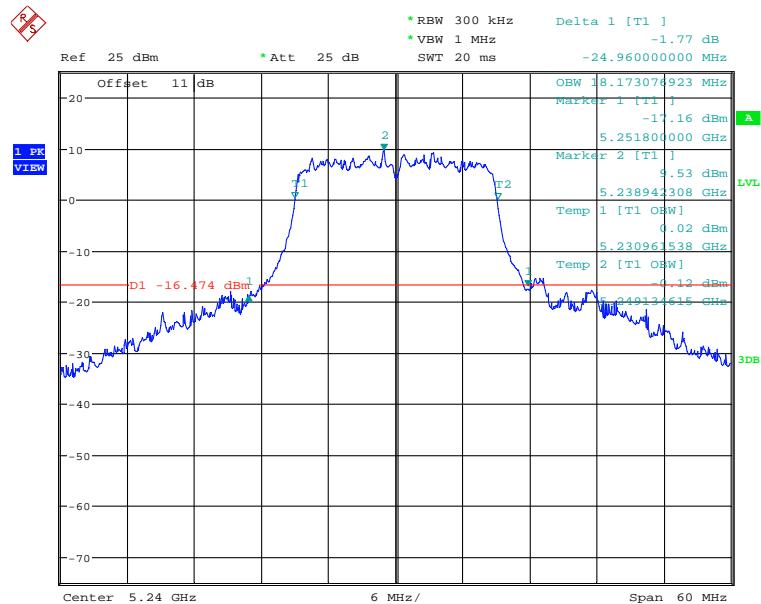


99% OBW & 26DB BANDWIDTH ANT4\_1ln20\_CH44  
Date: 16.OCT.2019 14:39:46

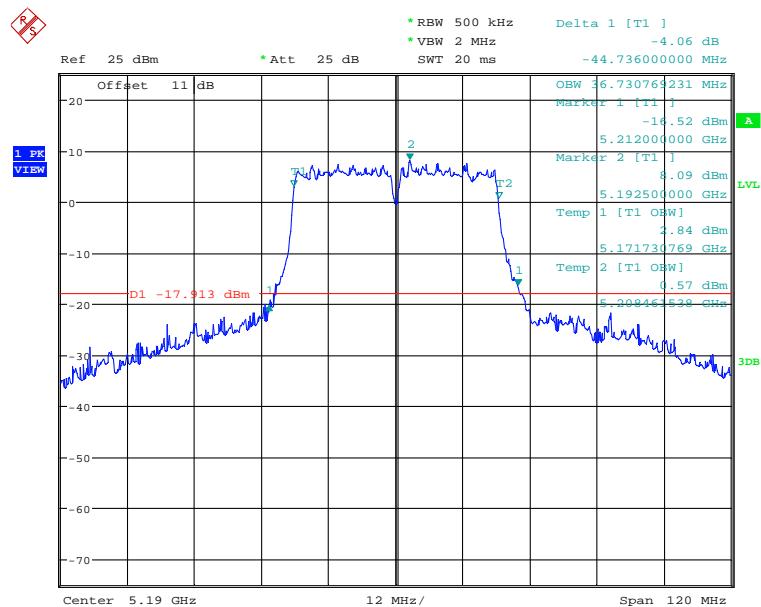


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



99% OBW & 26DB BANDWIDTH ANT4\_1ln20\_CH48  
Date: 16.OCT.2019 14:33:16

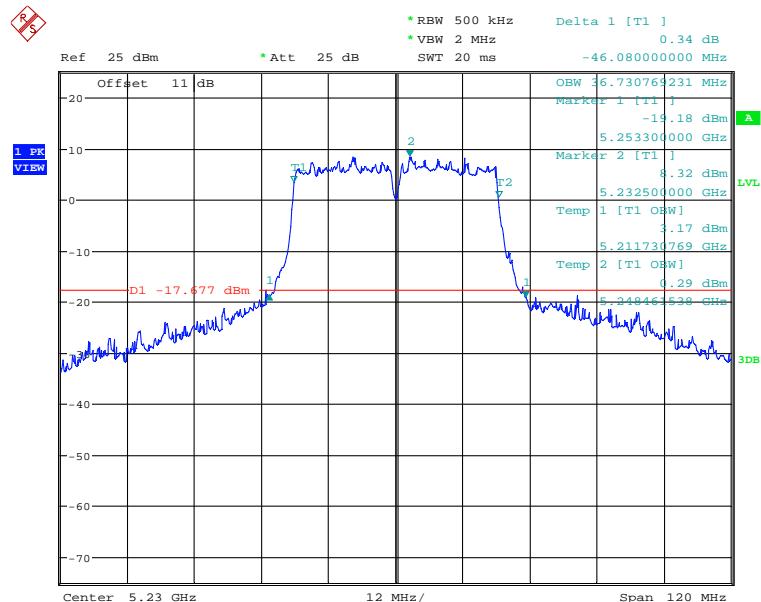


99% OBW & 26DB BANDWIDTH ANT4\_1ln40\_CH38  
Date: 16.OCT.2019 14:56:05

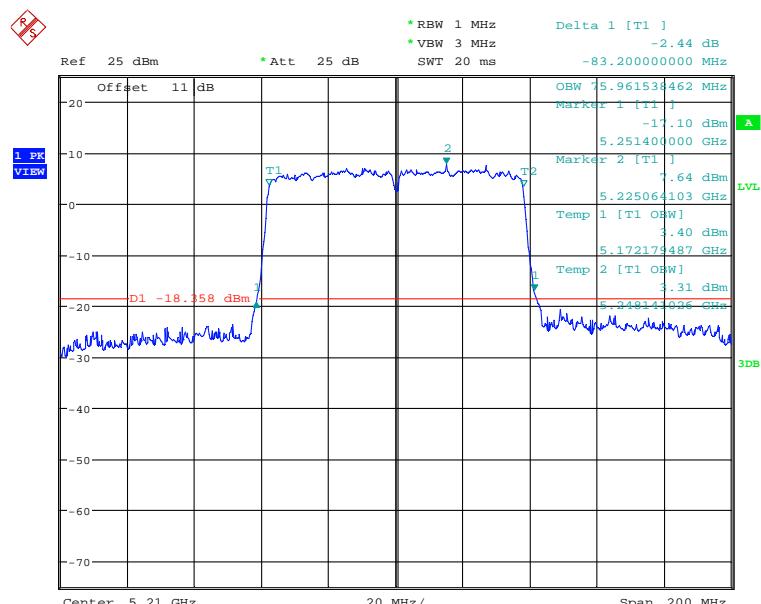


# Worldwide Testing Services(Taiwan) Co., Ltd.

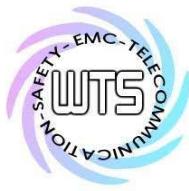
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



99% OBW & 26DB BANDWIDTH ANT4\_1ln40\_CH46  
Date: 16.OCT.2019 15:02:08



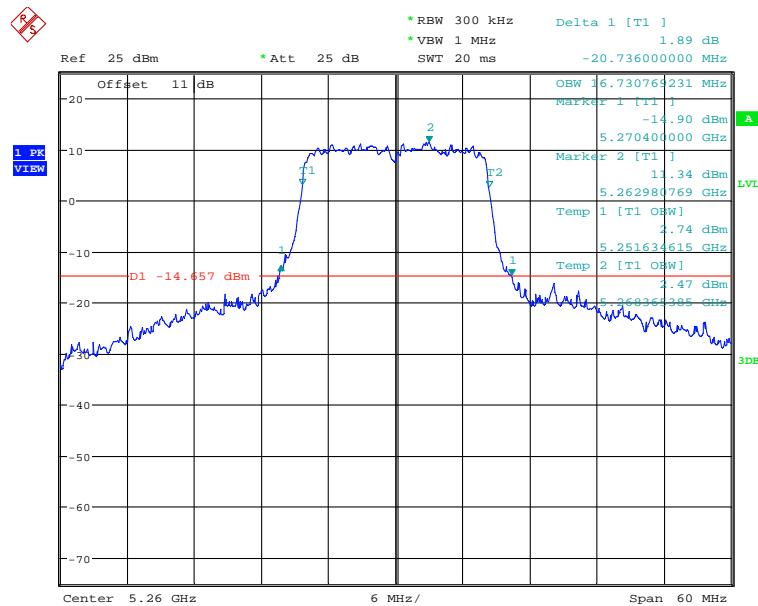
99% OBW & 26DB BANDWIDTH ANT4\_1lac80\_CH42  
Date: 16.OCT.2019 15:14:20



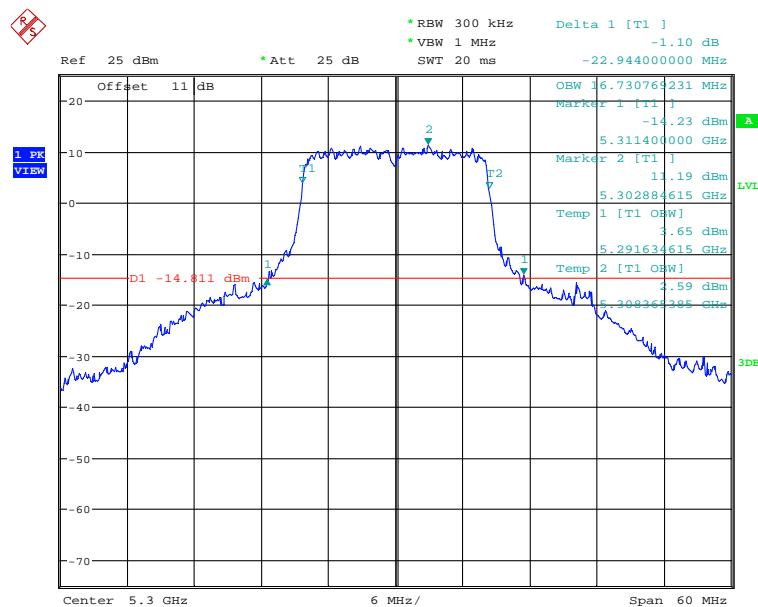
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

## 5.25 GHz ~ 5.35 GHz



99% OBW & 26DB BANDWIDTH ANT4\_11a\_CH52  
Date: 16.OCT.2019 15:31:39

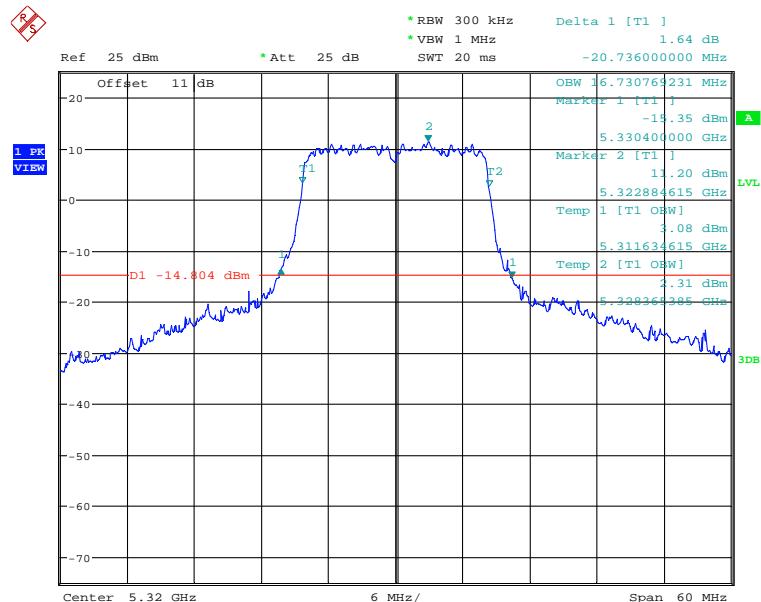


99% OBW & 26DB BANDWIDTH ANT4\_11a\_CH60  
Date: 16.OCT.2019 15:38:10

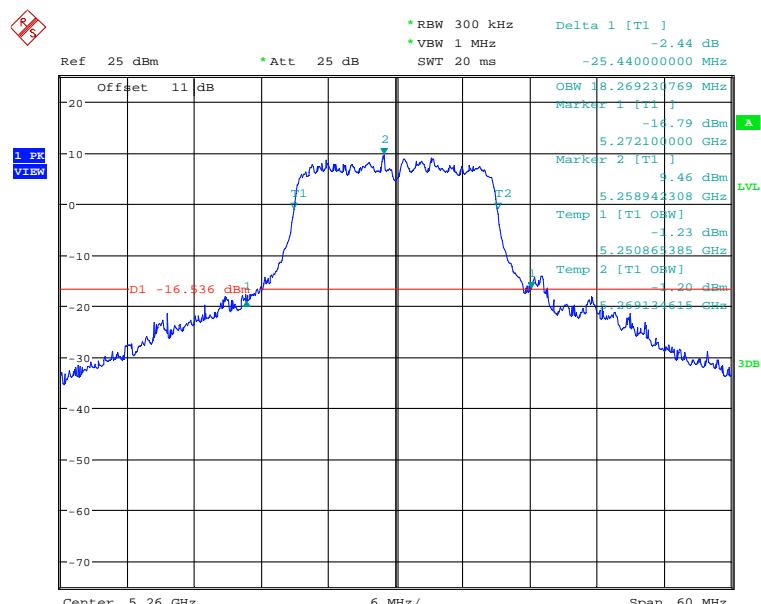


# Worldwide Testing Services(Taiwan) Co., Ltd.

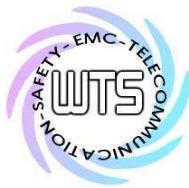
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



99% OBW & 26DB BANDWIDTH ANT4\_11a\_CH64  
Date: 16.OCT.2019 15:44:24

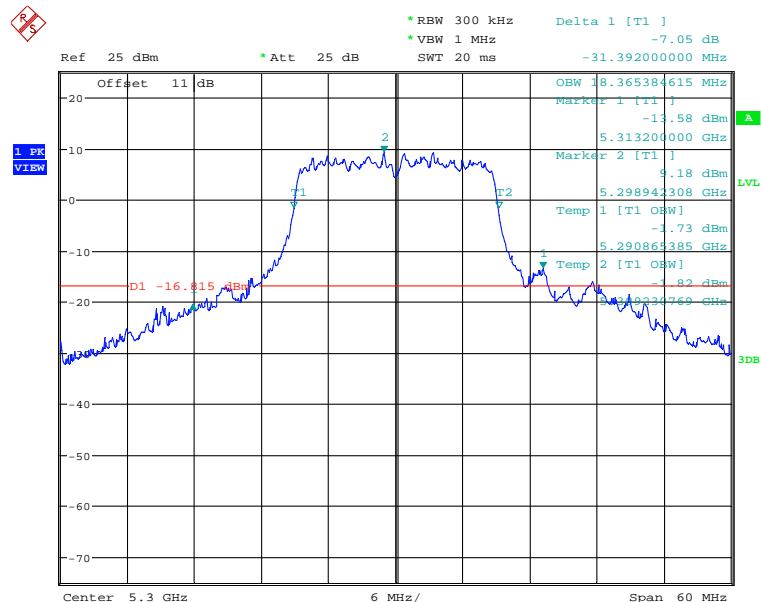


99% OBW & 26DB BANDWIDTH ANT4\_11n20\_CH52  
Date: 16.OCT.2019 16:05:07



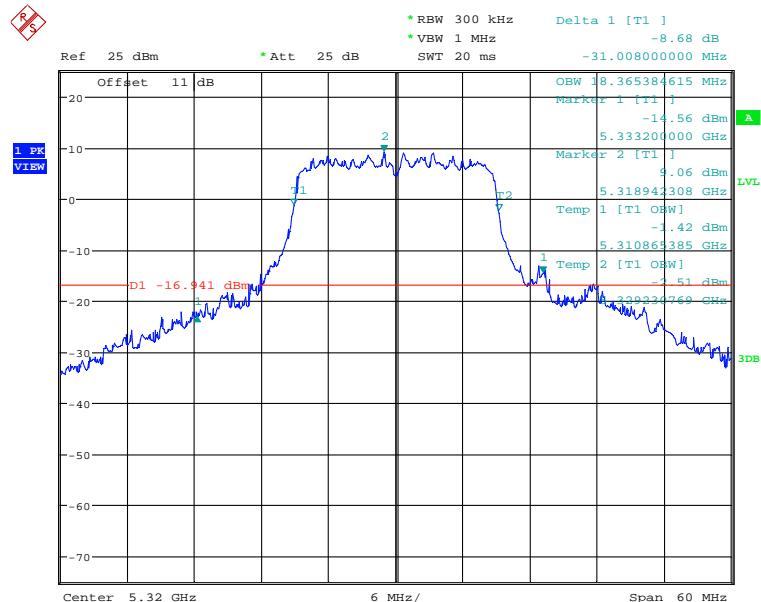
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



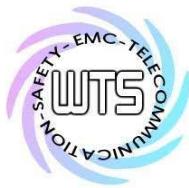
99% OBW & 26DB BANDWIDTH ANT4\_1ln20\_CH60

Date: 16.OCT.2019 16:11:21



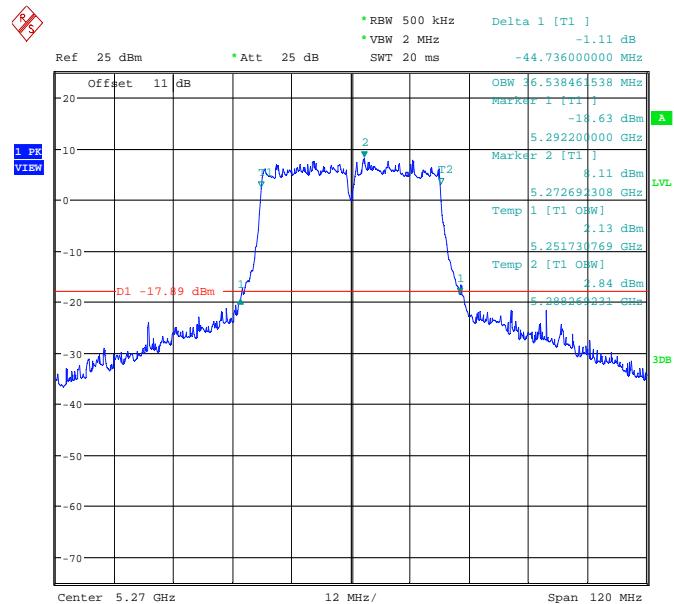
99% OBW & 26DB BANDWIDTH ANT4\_1ln20\_CH64

Date: 16.OCT.2019 16:17:02



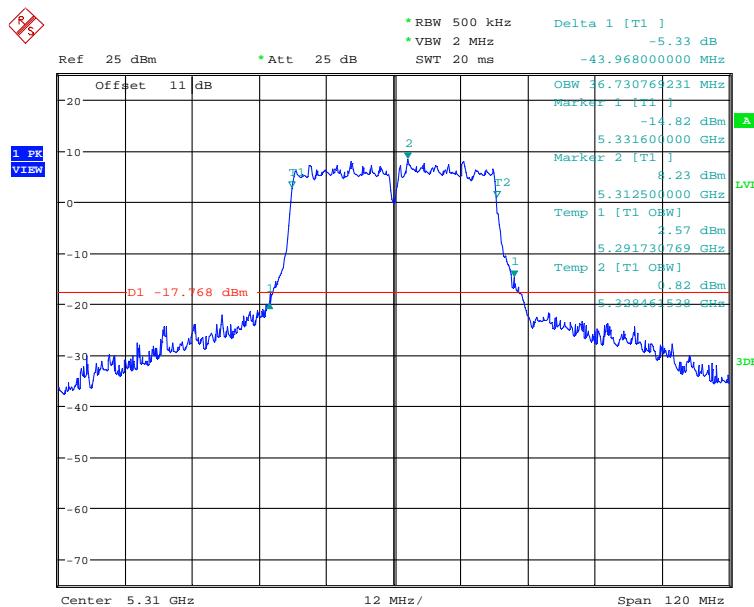
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



99% OBW & 26DB BANDWIDTH ANT4\_11n40\_CH54

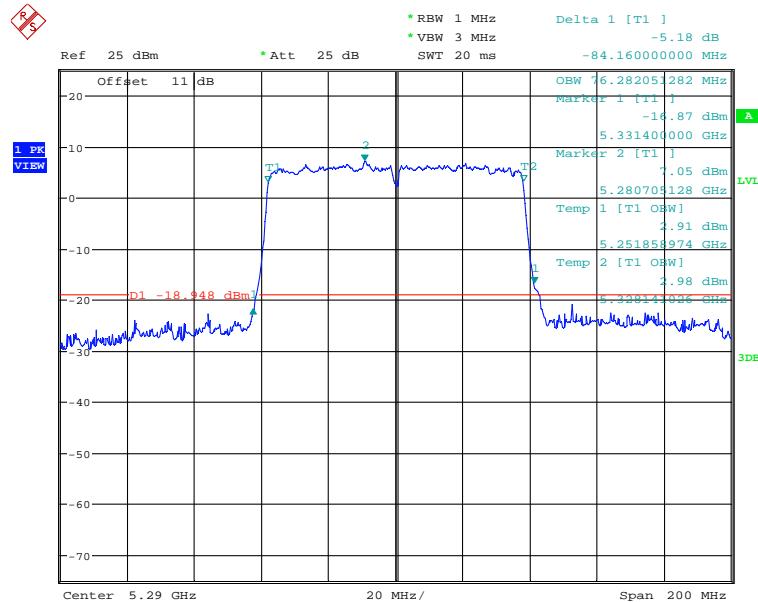
Date: 16.OCT.2019 16:32:59



99% OBW & 26DB BANDWIDTH ANT4\_11n40\_CH62

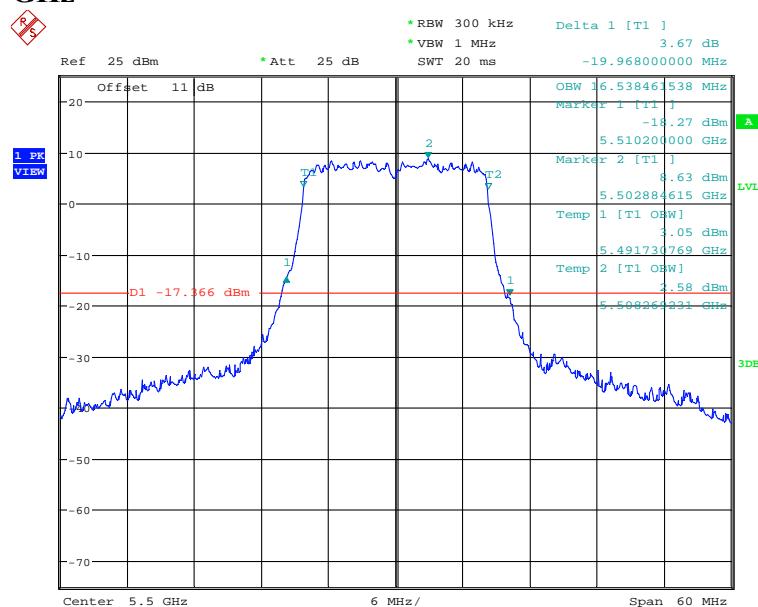
Date: 16.OCT.2019 16:39:57

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

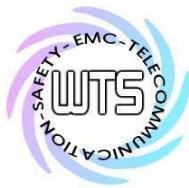


99% OBW & 26DB BANDWIDTH ANT4\_11ac80\_CH58  
Date: 16.OCT.2019 16:54:31

## 5.47 GHz ~ 5.725 GHz

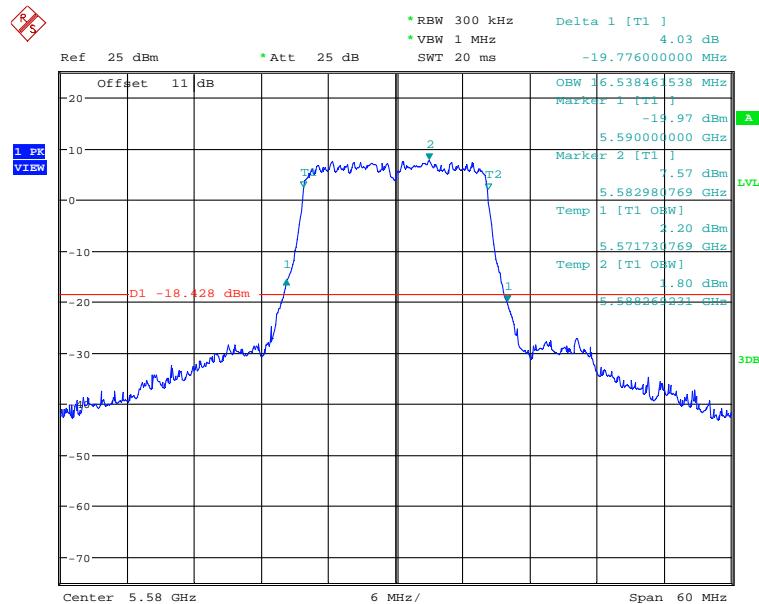


99% OBW & 26DB BANDWIDTH ANT4\_11a\_CH100  
Date: 16.OCT.2019 17:20:39

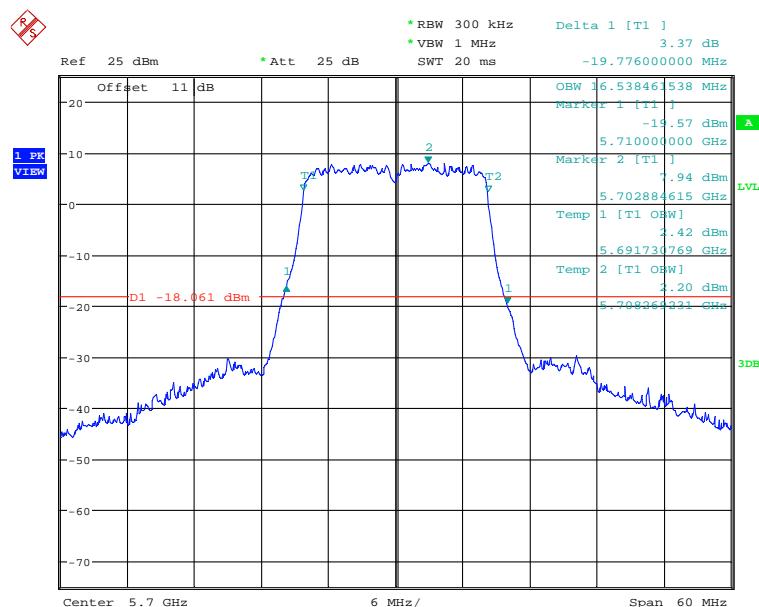


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



99% OBW & 26DB BANDWIDTH ANT4\_11a\_CH116  
Date: 16.OCT.2019 19:20:49

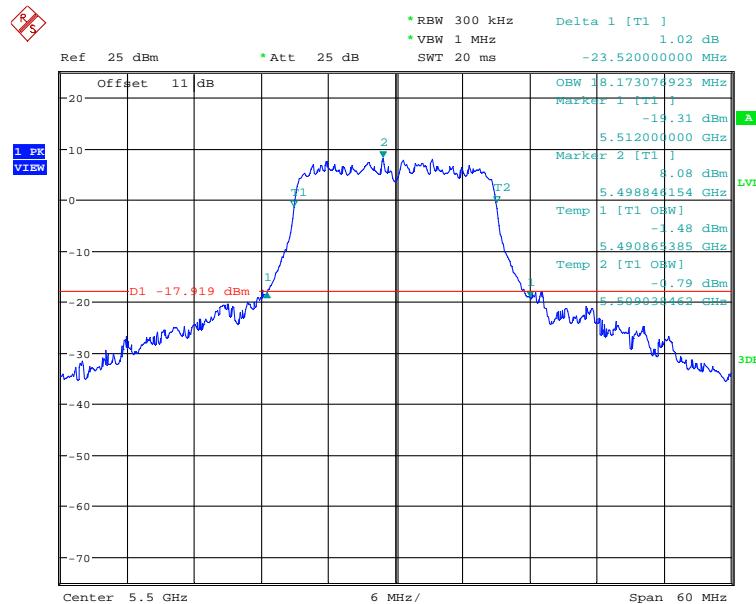


99% OBW & 26DB BANDWIDTH ANT4\_11a\_CH140  
Date: 16.OCT.2019 19:27:25



# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

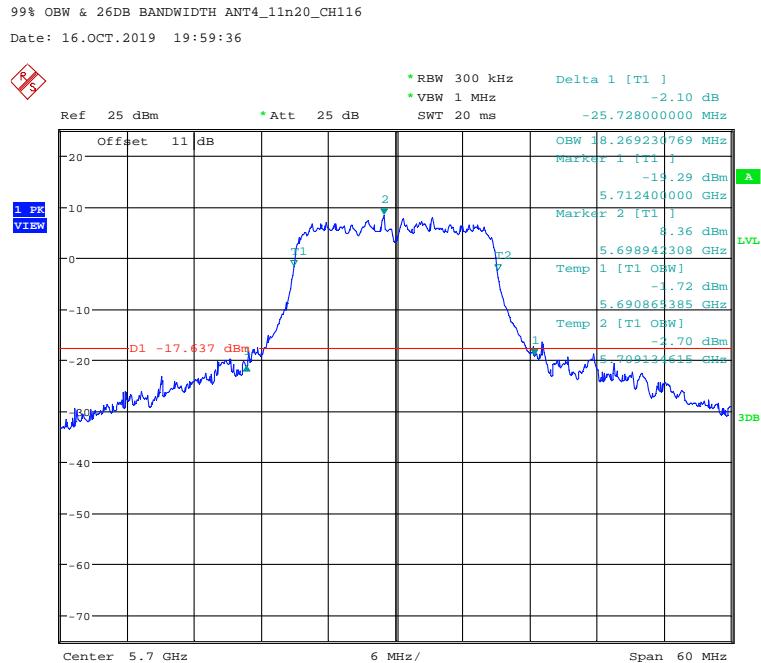
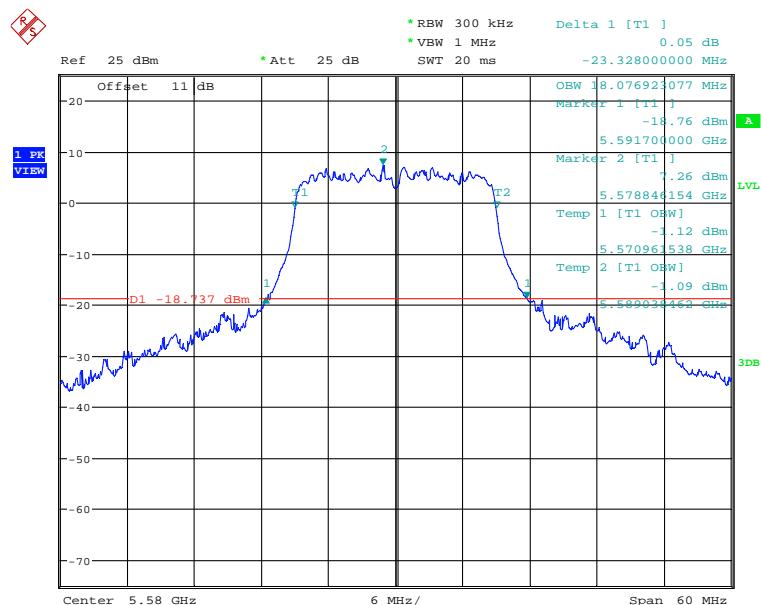


99% OBW & 26DB BANDWIDTH ANT4\_1ln20\_CH100  
Date: 16.OCT.2019 19:53:11



# Worldwide Testing Services(Taiwan) Co., Ltd.

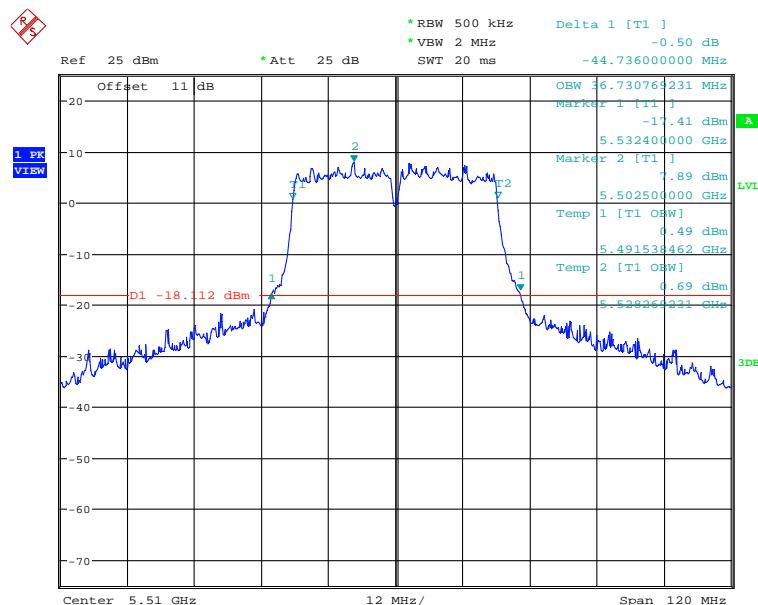
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS





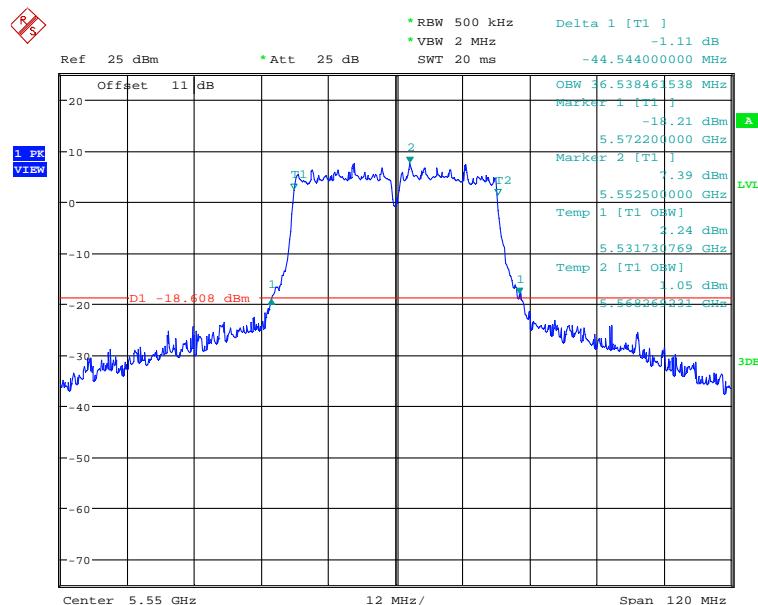
# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



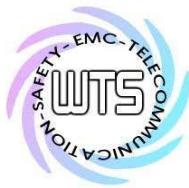
99% OBW & 26DB BANDWIDTH ANT4\_1ln40\_CH102

Date: 16.OCT.2019 20:23:31



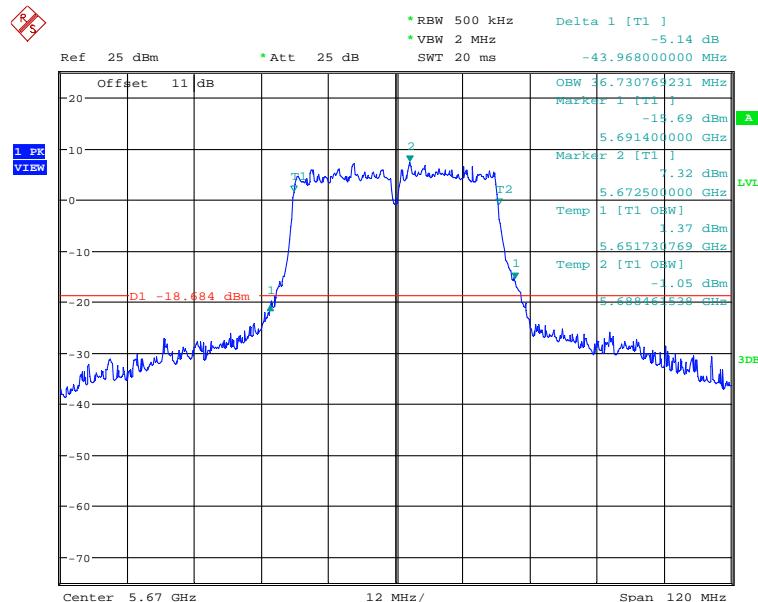
99% OBW & 26DB BANDWIDTH ANT4\_1ln40\_CH110

Date: 16.OCT.2019 20:30:13

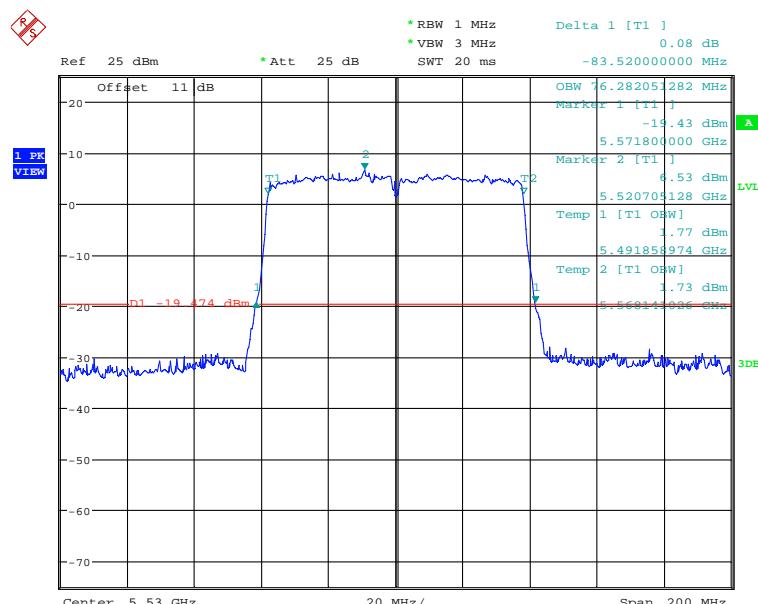


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



99% OBW & 26DB BANDWIDTH ANT4\_1ln40\_CH134  
Date: 16.OCT.2019 20:38:06



99% OBW & 26DB BANDWIDTH ANT4\_1lac80\_CH106  
Date: 16.OCT.2019 20:51:23

Test equipment used: ETSTW-RE 055, ETSTW-RE 050

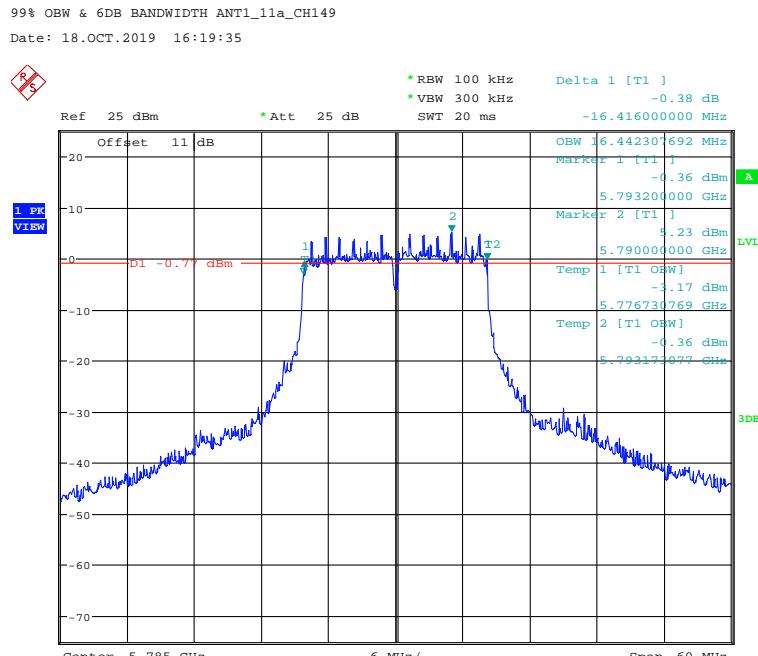
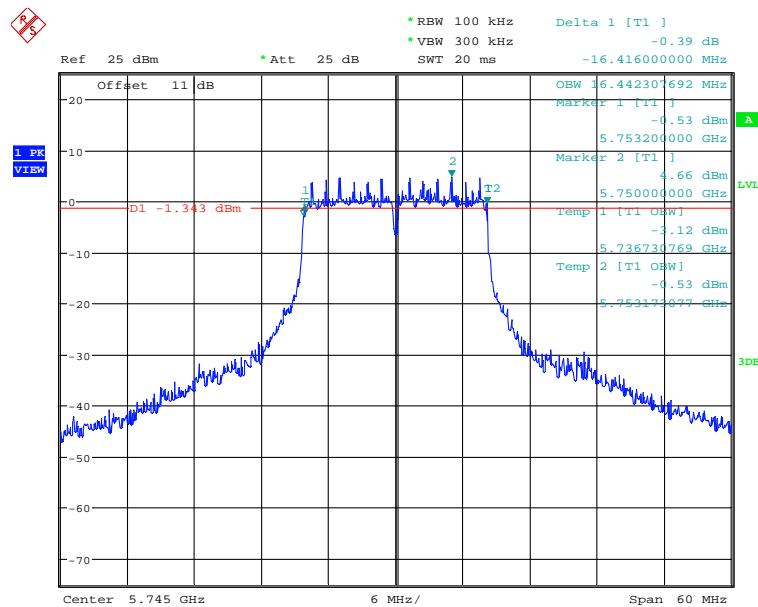
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

### 3.3 6dB emission bandwidth, 99% Occupied Bandwidth, FCC 15.407 (a)

According to §15.407(a). No Limit required.

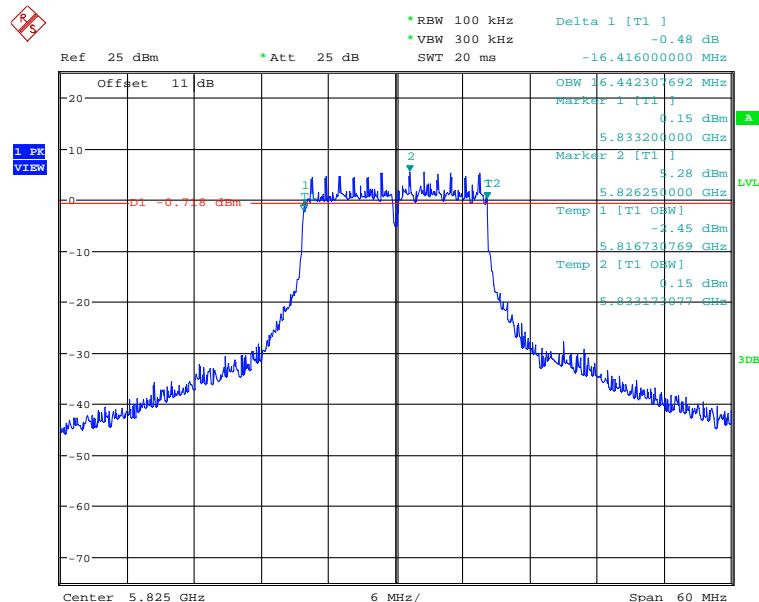
Result:

**ANT1**

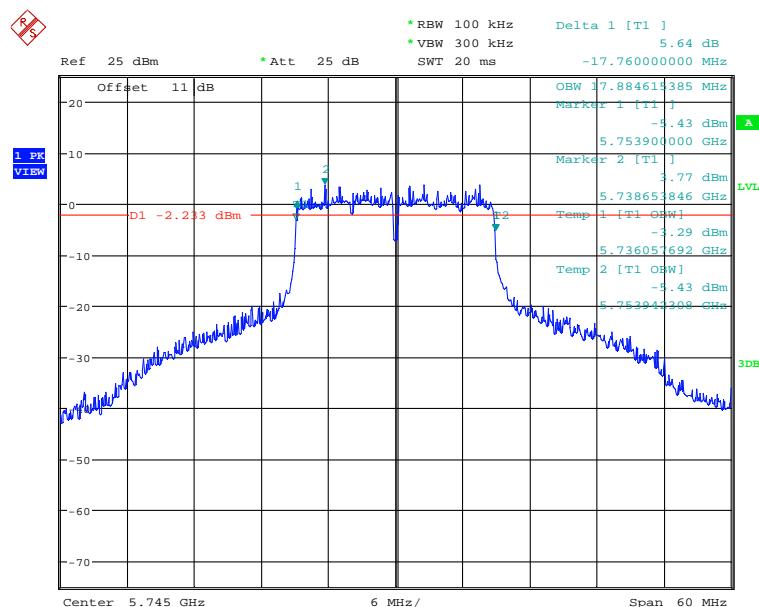


99% OBW & 6DB BANDWIDTH ANT1\_11a\_CH157  
Date: 18.OCT.2019 16:26:27

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

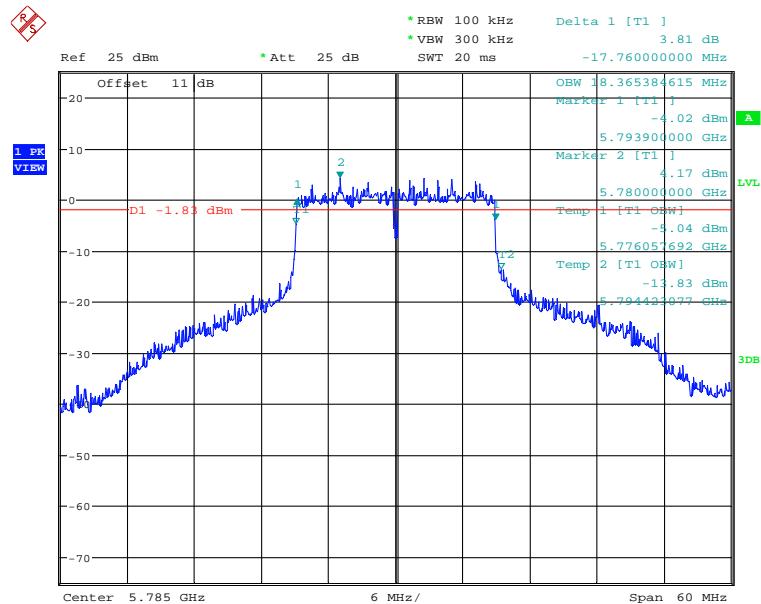


99% OBW & 6DB BANDWIDTH ANT1\_11a\_CH165  
Date: 18.OCT.2019 16:37:44



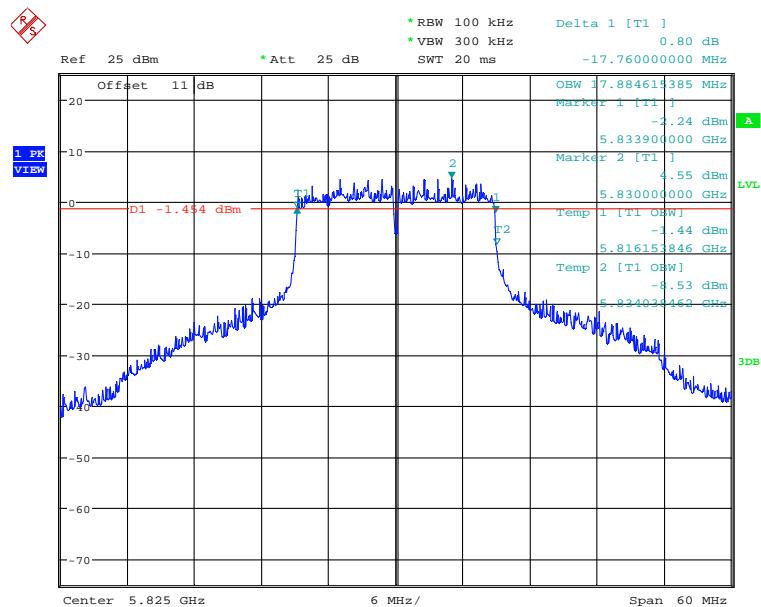
99% OBW & 6DB BANDWIDTH ANT1\_11n20\_CH149  
Date: 18.OCT.2019 17:05:41

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



99% OBW & 6DB BANDWIDTH ANT1\_1ln20\_CH157

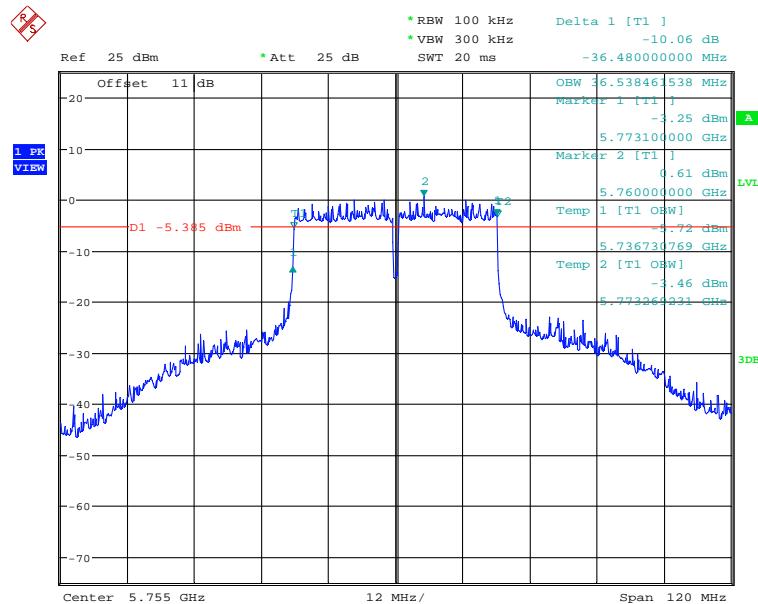
Date: 18.OCT.2019 17:11:22



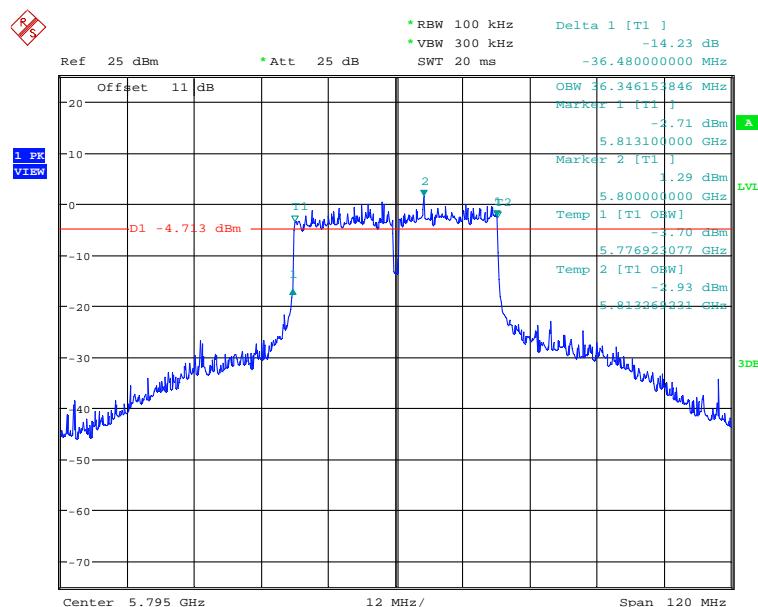
99% OBW & 6DB BANDWIDTH ANT1\_1ln20\_CH165

Date: 18.OCT.2019 17:17:20

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

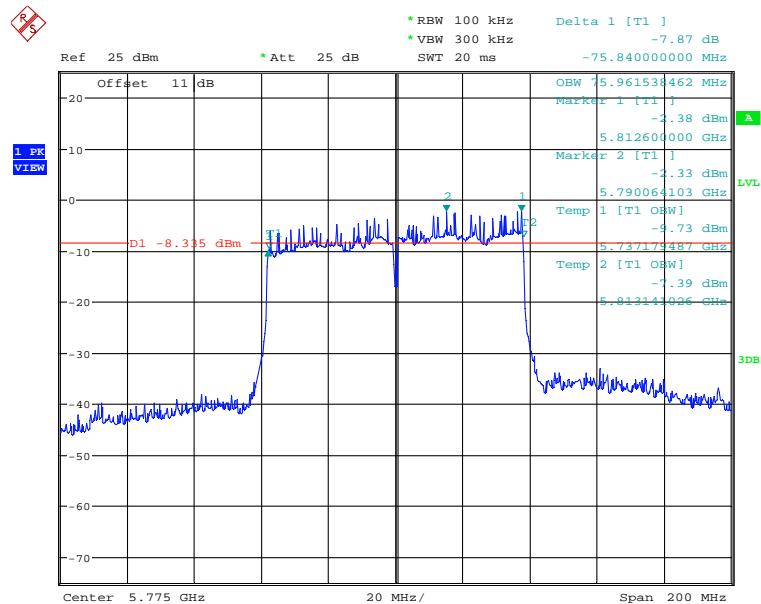


99% OBW & 6DB BANDWIDTH ANT1\_1ln40\_CH151  
Date: 18.OCT.2019 17:33:33



99% OBW & 6DB BANDWIDTH ANT1\_1ln40\_CH159  
Date: 18.OCT.2019 17:41:15

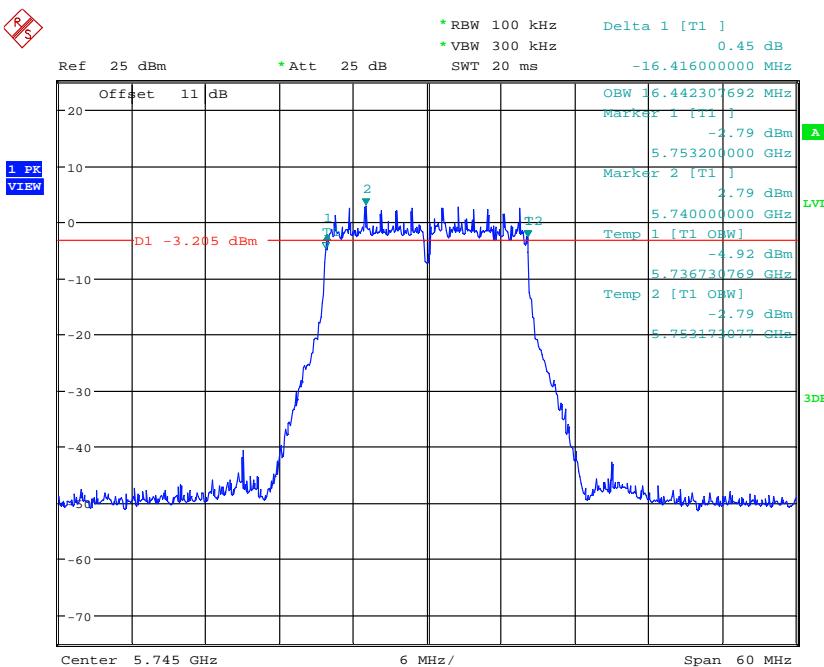
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



99% OBW & 6DB BANDWIDTH ANT1\_11ac80\_CH155

Date: 18.OCT.2019 17:50:36

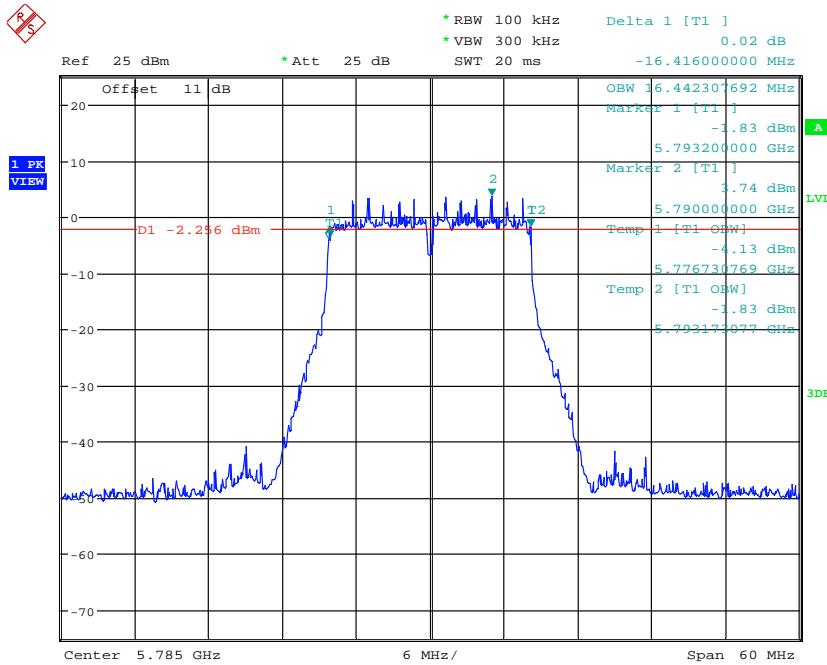
## ANT2



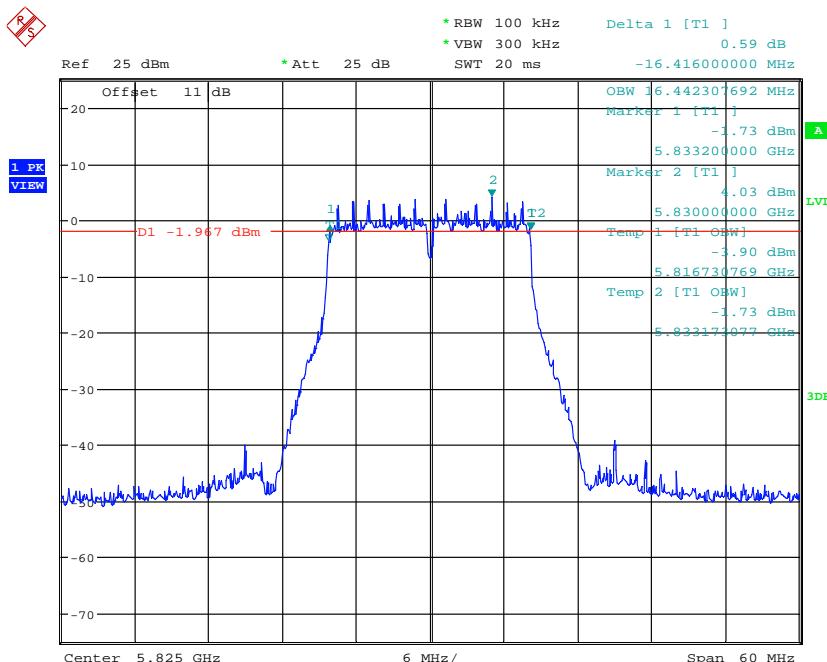
99% OBW & 6DB BANDWIDTH ANT2\_11a\_CH149

Date: 18.OCT.2019 16:21:19

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

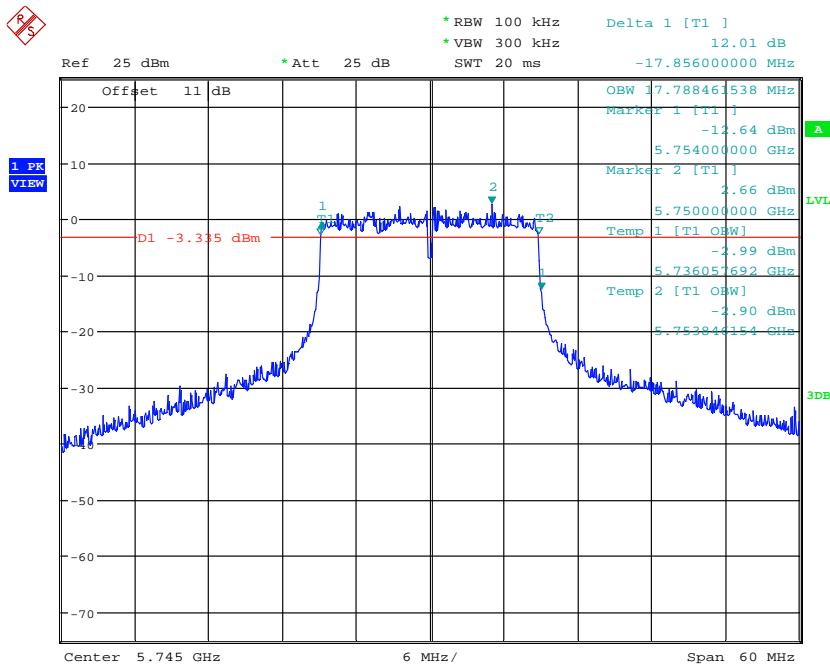


99% OBW & 6DB BANDWIDTH ANT2\_11a\_CH157  
Date: 18.OCT.2019 16:27:50

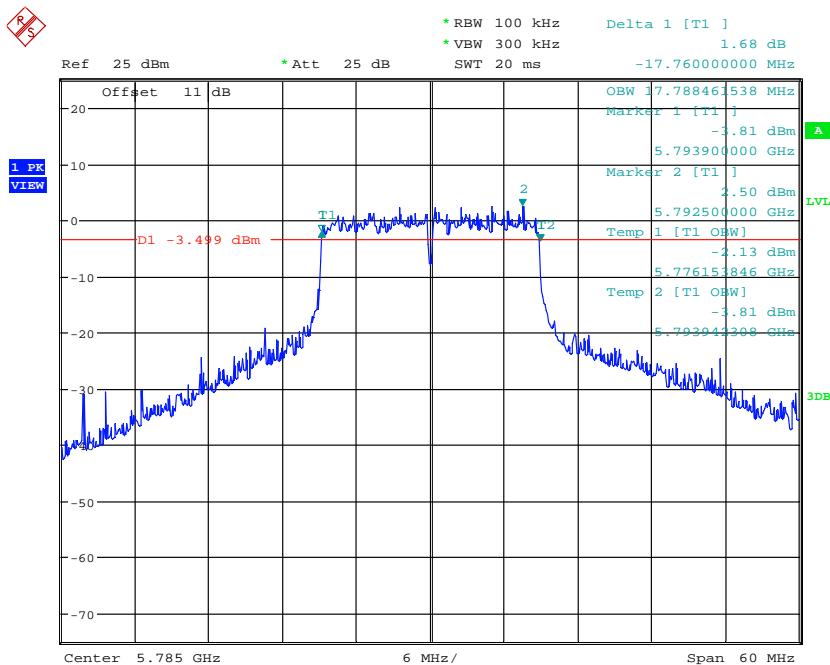


99% OBW & 6DB BANDWIDTH ANT2\_11a\_CH165  
Date: 18.OCT.2019 16:39:06

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

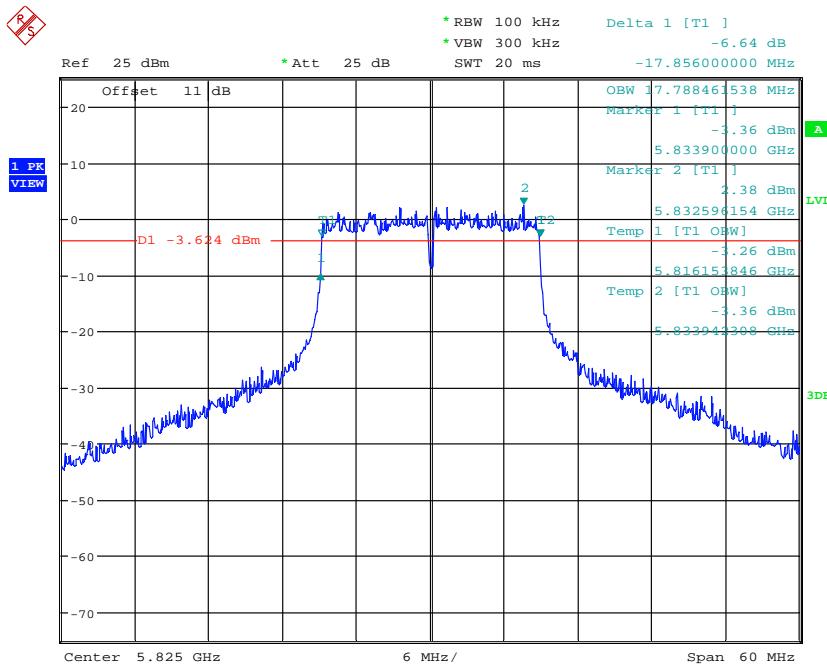


99% OBW & 6DB BANDWIDTH ANT2\_11n20\_CH149  
Date: 18.OCT.2019 17:06:58

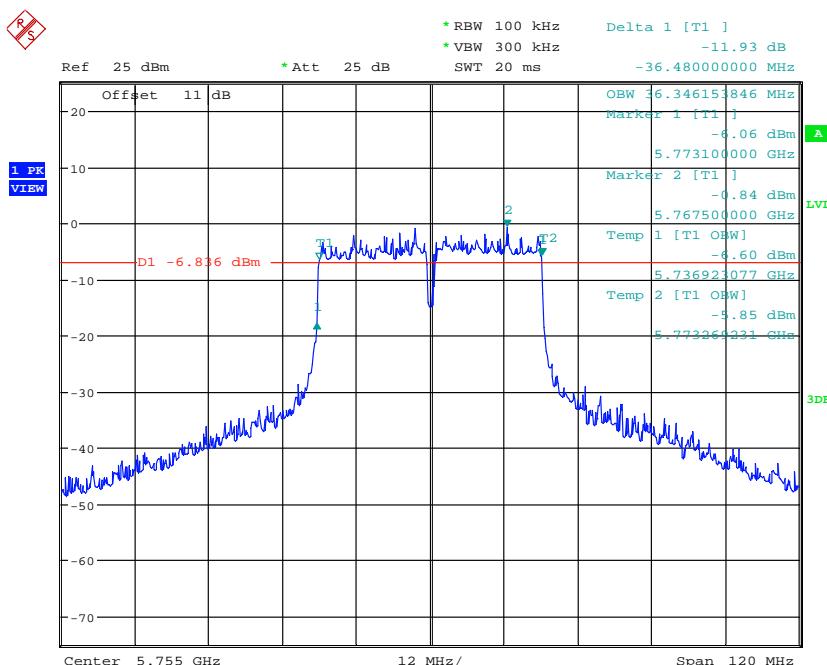


99% OBW & 6DB BANDWIDTH ANT2\_11n20\_CH157  
Date: 18.OCT.2019 17:12:50

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

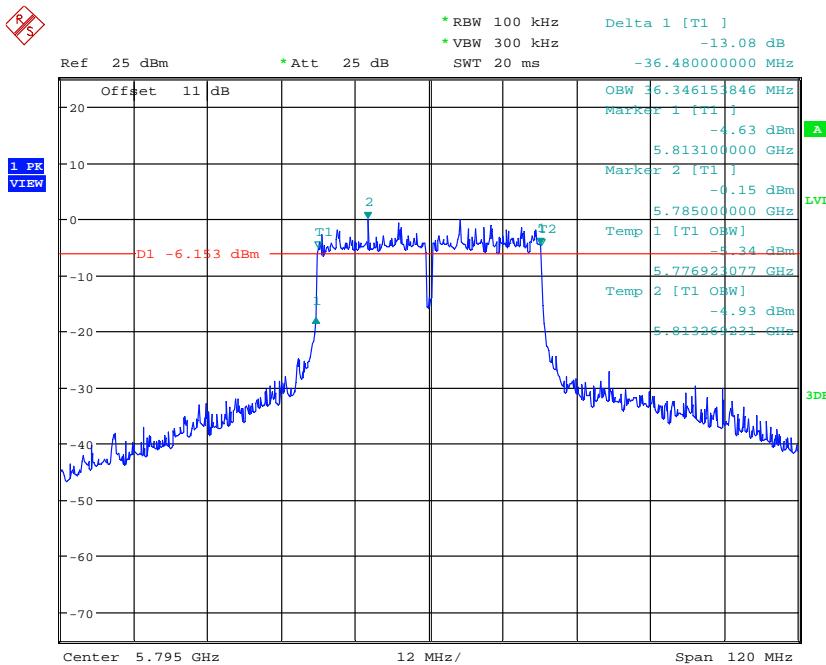


99% OBW & 6DB BANDWIDTH ANT2\_11n20\_CH165  
Date: 18.OCT.2019 17:18:31

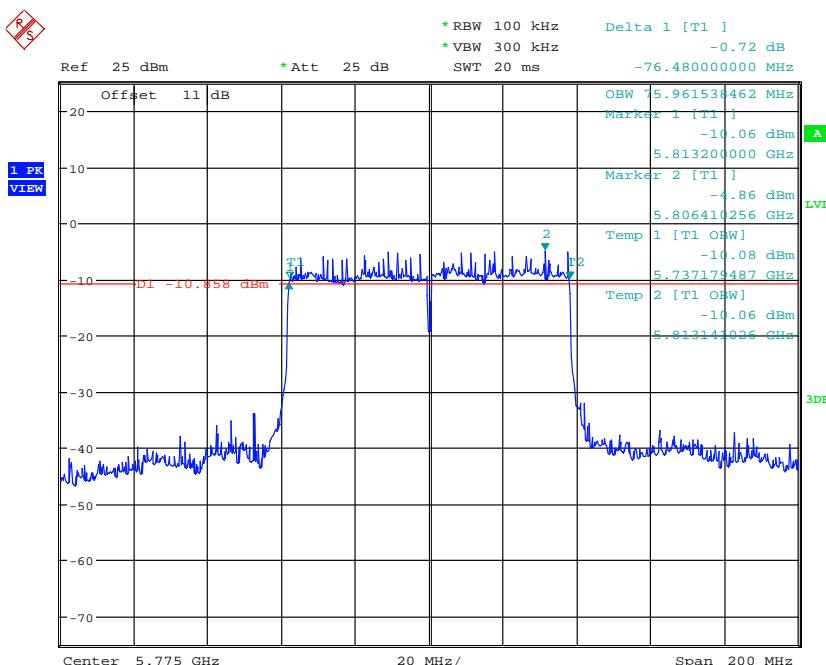


99% OBW & 6DB BANDWIDTH ANT2\_11n40\_CH151  
Date: 18.OCT.2019 17:35:56

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



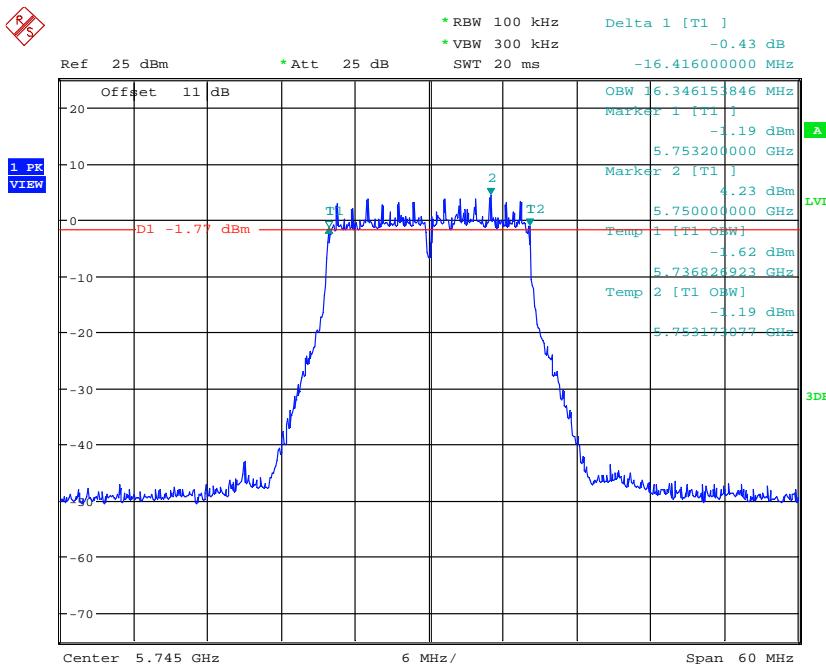
99% OBW & 6DB BANDWIDTH ANT2\_11n40\_CH159  
Date: 18.OCT.2019 17:42:32



99% OBW & 6DB BANDWIDTH ANT2\_11ac80\_CH155  
Date: 18.OCT.2019 17:54:22

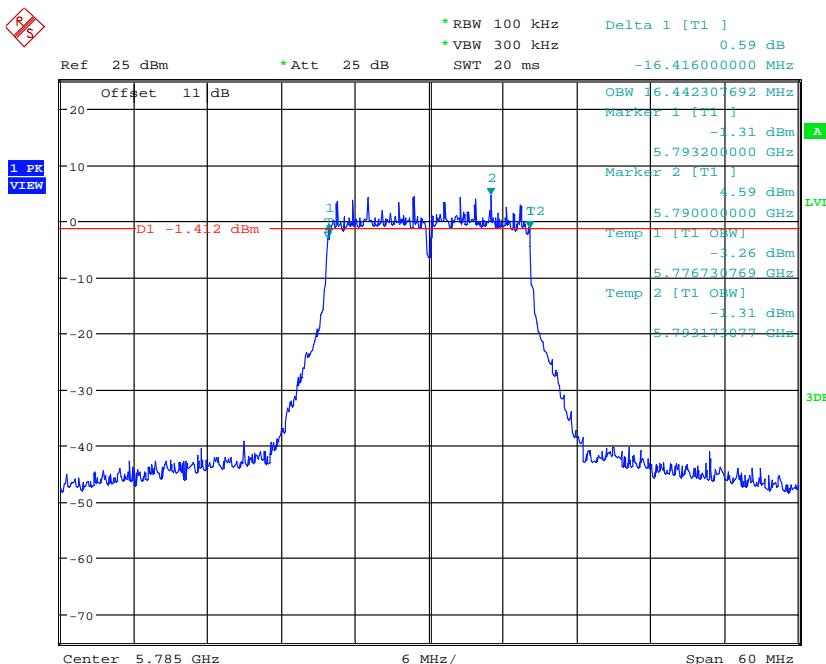
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

## ANT3



99% OBW & 6DB BANDWIDTH ANT3\_11a\_CH149

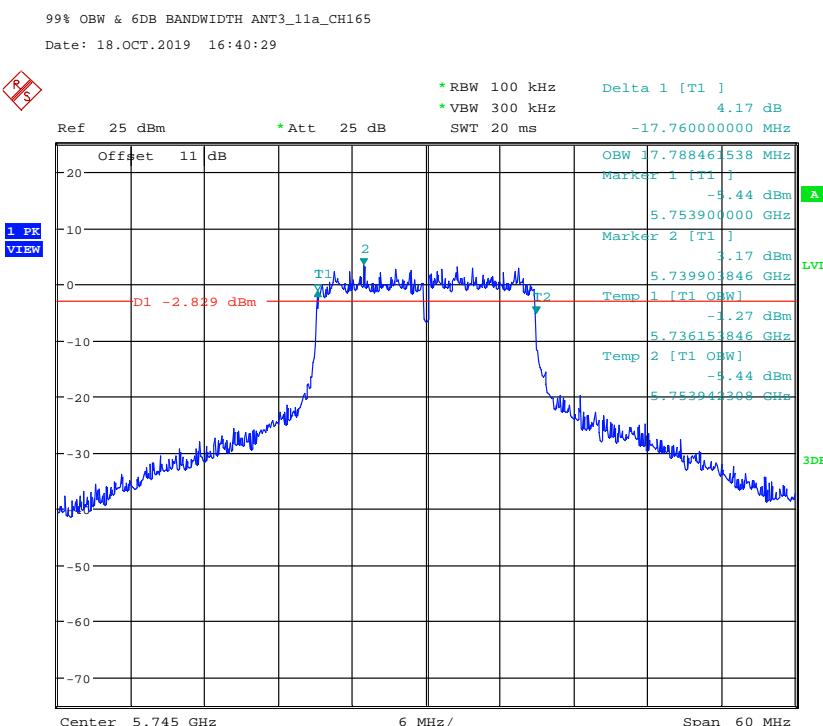
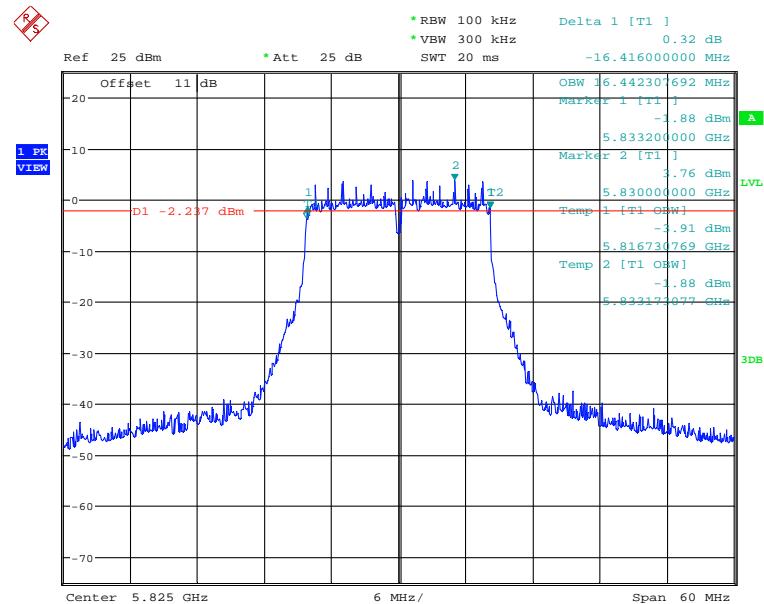
Date: 18.OCT.2019 16:22:47



99% OBW & 6DB BANDWIDTH ANT3\_11a\_CH157

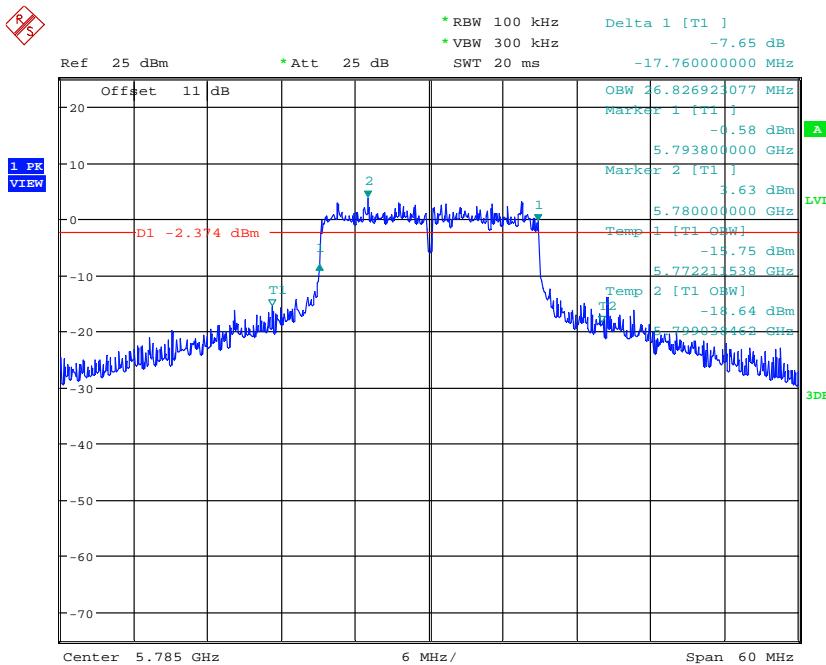
Date: 18.OCT.2019 16:29:12

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



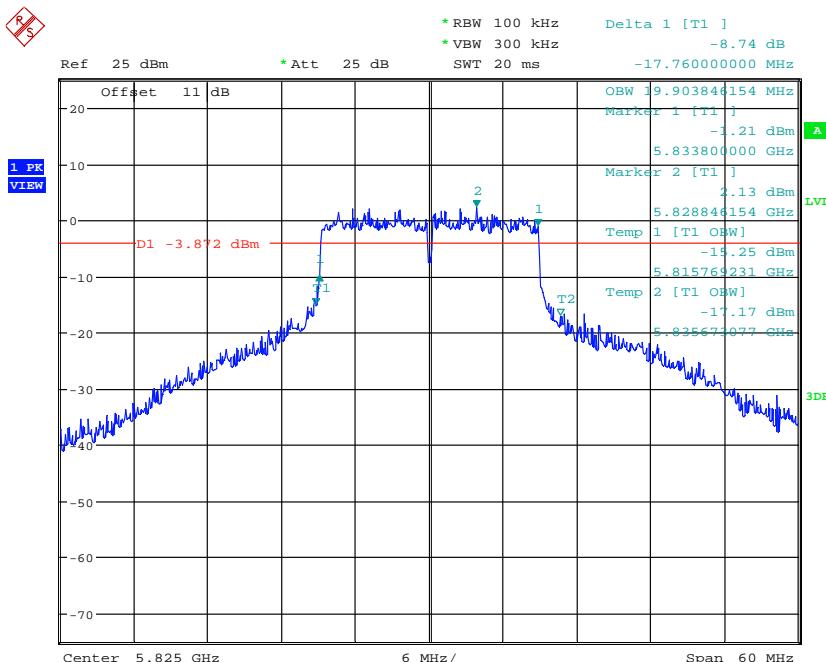
99% OBW & 6DB BANDWIDTH ANT3\_11n20\_CH149  
Date: 18.OCT.2019 17:08:15

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



99% OBW & 6DB BANDWIDTH ANT3\_11n20\_CH157

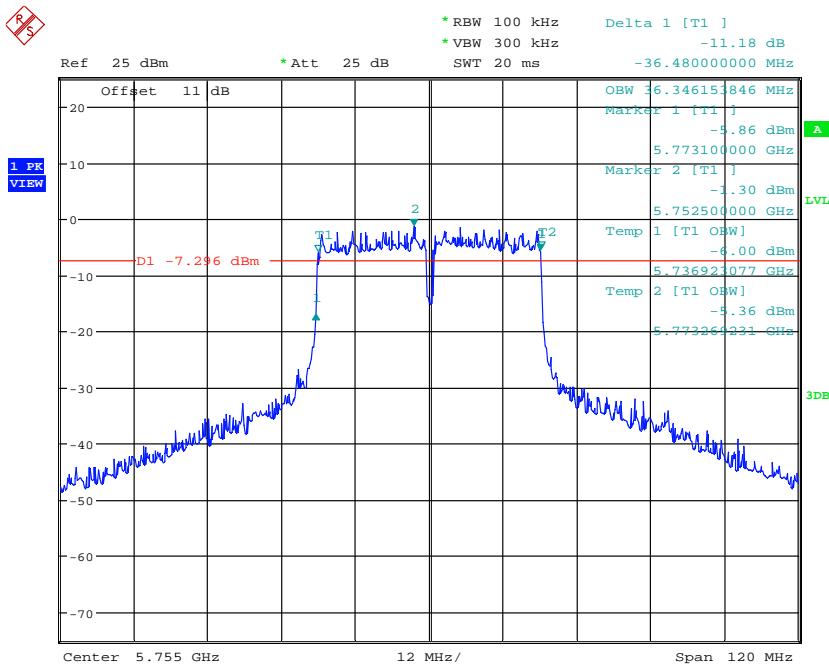
Date: 18.OCT.2019 17:14:07



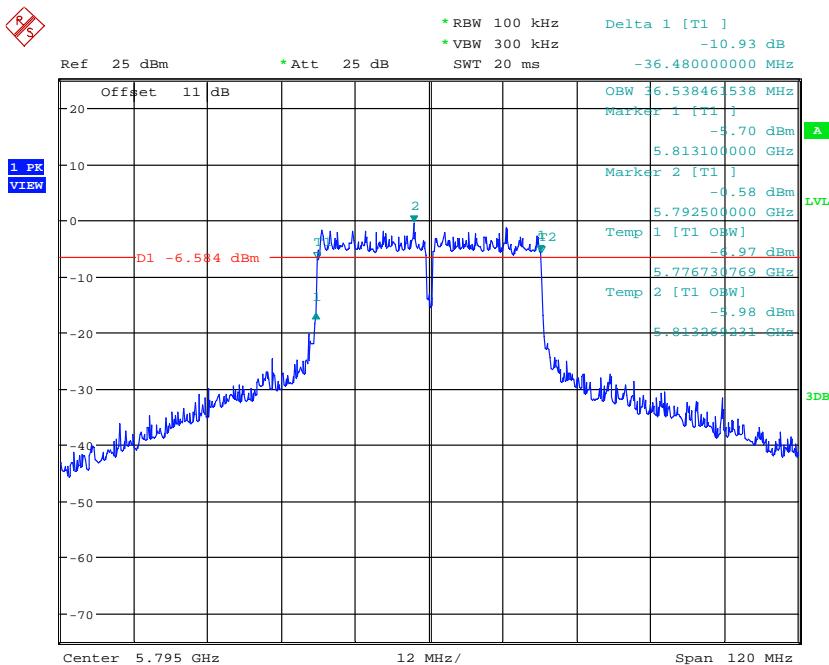
99% OBW & 6DB BANDWIDTH ANT3\_11n20\_CH165

Date: 18.OCT.2019 17:19:48

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

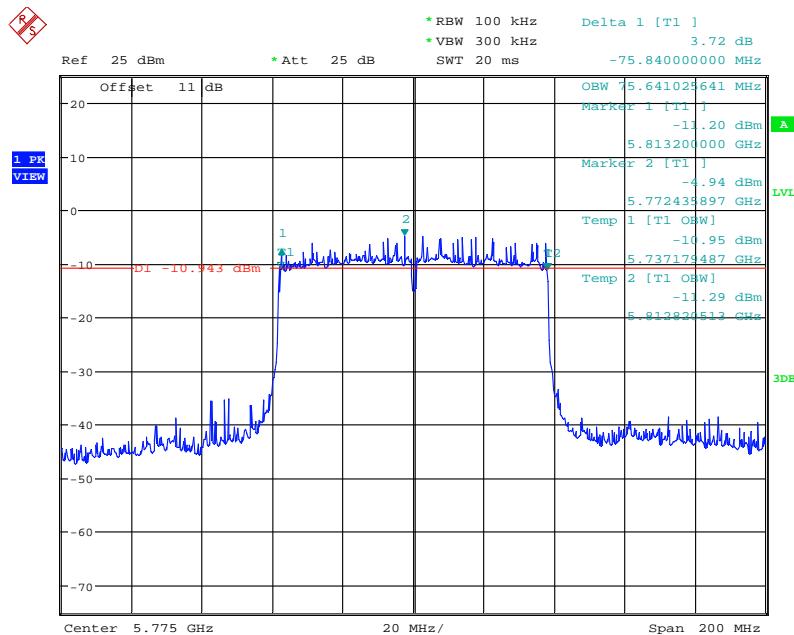


99% OBW & 6DB BANDWIDTH ANT3\_11n40\_CH151  
Date: 18.OCT.2019 17:37:19



99% OBW & 6DB BANDWIDTH ANT3\_11n40\_CH159  
Date: 18.OCT.2019 17:43:49

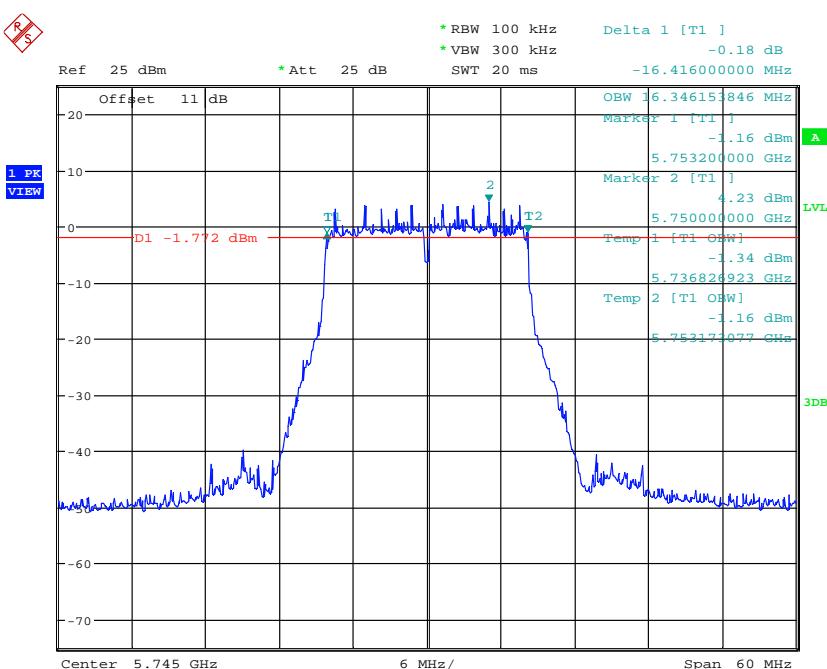
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



99% OBW & 6DB BANDWIDTH ANT3\_1lac80\_CH155

Date: 18.OCT.2019 17:56:12

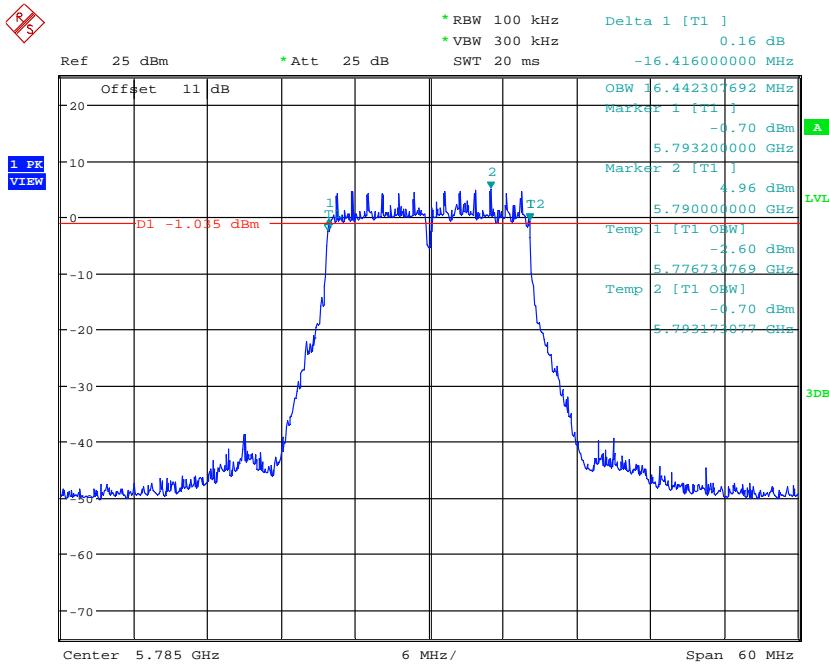
## ANT4



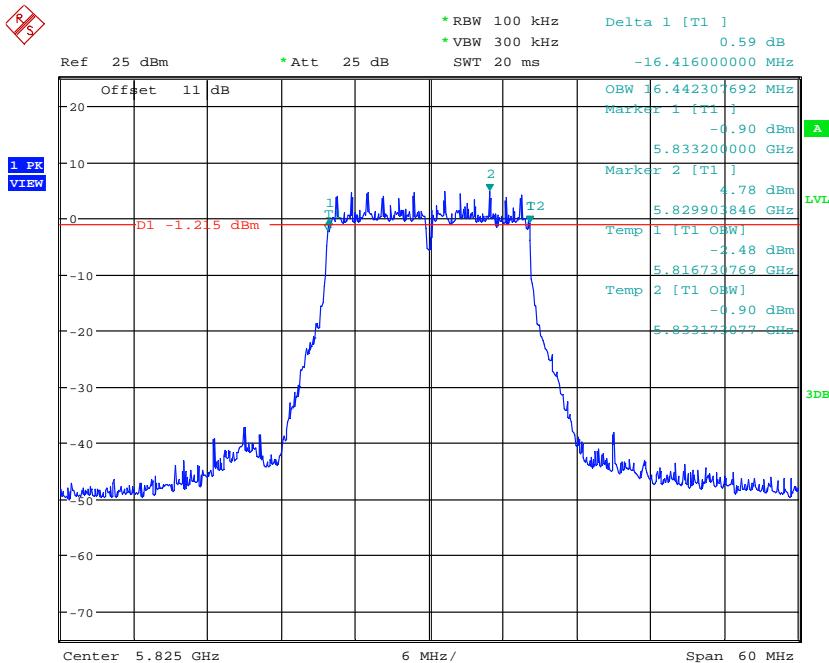
99% OBW & 6DB BANDWIDTH ANT4\_11a\_CH149

Date: 18.OCT.2019 16:24:10

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

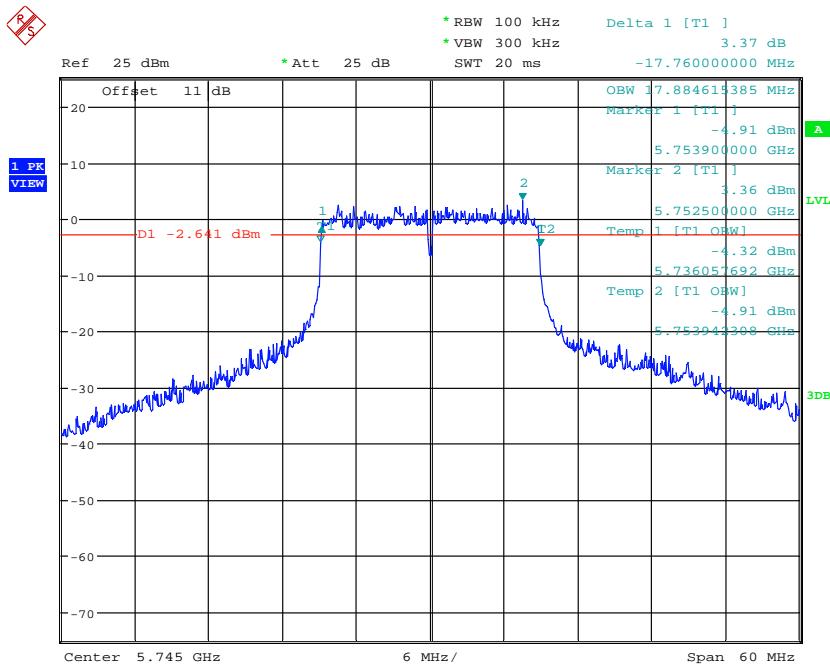


99% OBW & 6DB BANDWIDTH ANT4\_11a\_CH157  
Date: 18.OCT.2019 16:30:35



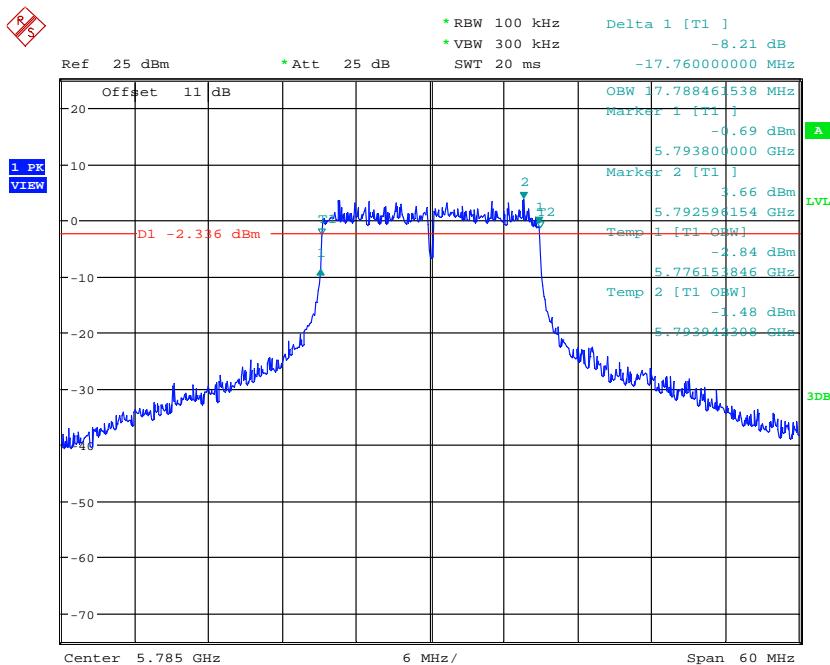
99% OBW & 6DB BANDWIDTH ANT4\_11a\_CH165  
Date: 18.OCT.2019 16:41:57

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



99% OBW & 6DB BANDWIDTH ANT4\_11n20\_CH149

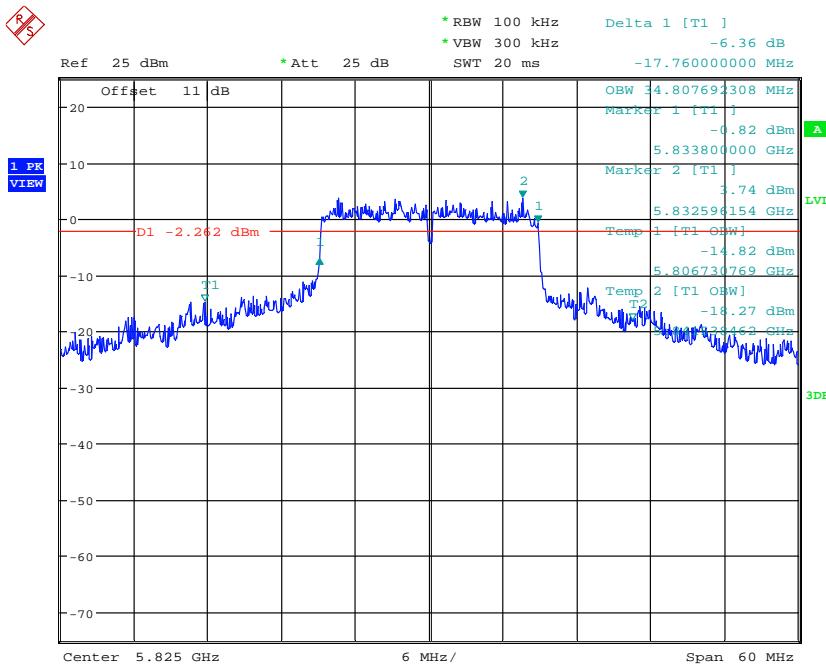
Date: 18.OCT.2019 17:09:27



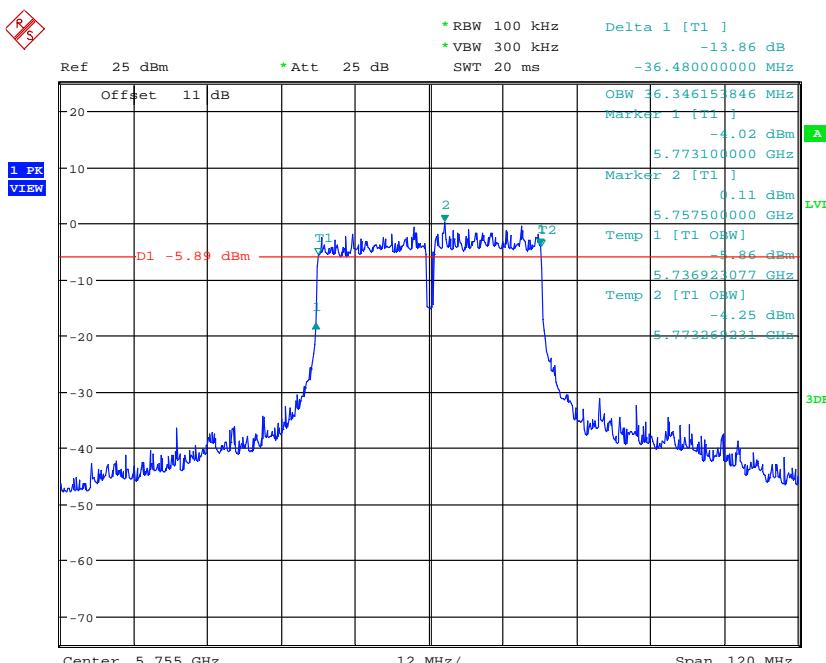
99% OBW & 6DB BANDWIDTH ANT4\_11n20\_CH157

Date: 18.OCT.2019 17:15:24

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

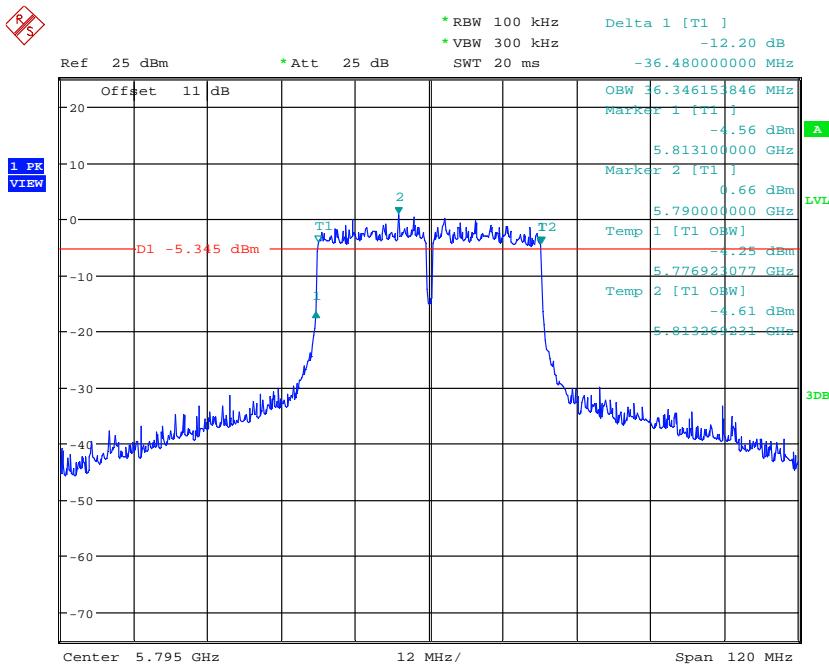


99% OBW & 6DB BANDWIDTH ANT4\_11n20\_CH165  
Date: 18.OCT.2019 17:21:11

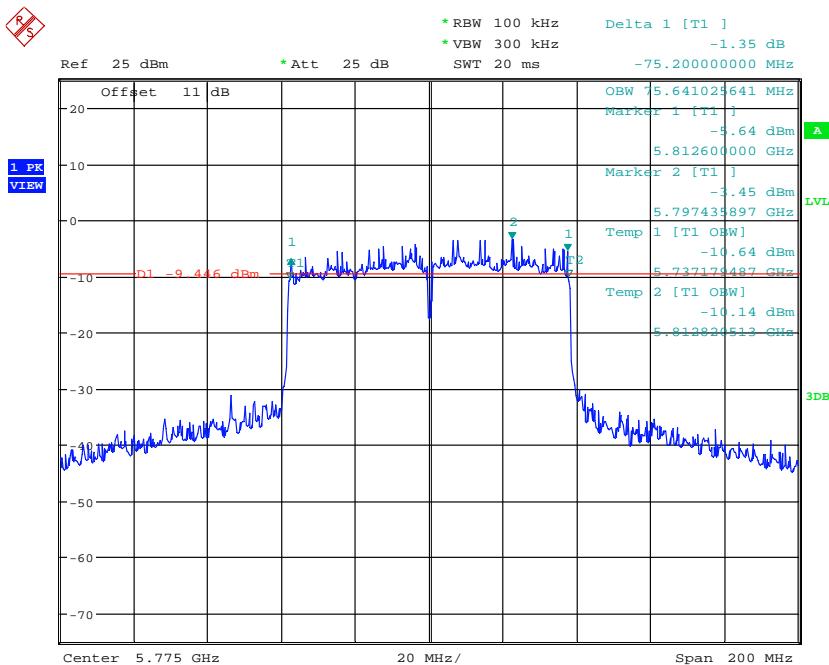


99% OBW & 6DB BANDWIDTH ANT4\_11n40\_CH151  
Date: 18.OCT.2019 17:39:14

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



99% OBW & 6DB BANDWIDTH ANT4\_11n40\_CH159  
Date: 18.OCT.2019 17:45:01



99% OBW & 6DB BANDWIDTH ANT4\_11ac80\_CH155  
Date: 18.OCT.2019 17:58:02

Registration number: W6R22110-21274-C-54  
 FCC ID: W23-WMXWAVE2AS

### 3.4 Peak Power Spectral Density, FCC 15.407 (a)

According to §15.407(a)

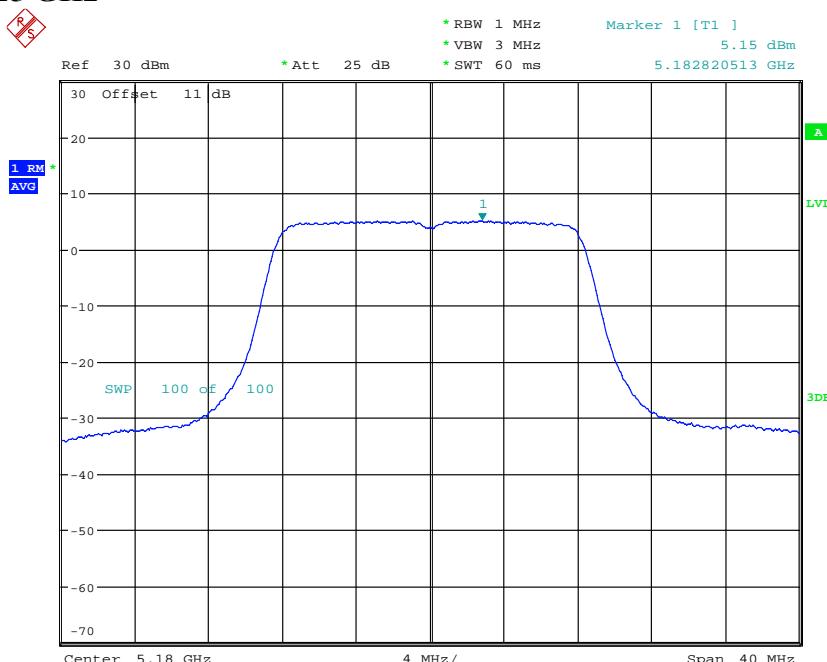
For the band 5.15-5.25 GHz, the peak power spectral density shall not exceed 17 dBm/MHz for master device and 11 dBm/MHz for mobile/portable client device.

For the band 5.25-5.35 GHz and 5.47-5.725 GHz, the peak power spectral density shall not exceed 11 dBm/MHz.

For the band 5.725-5.850 GHz, the peak power spectral density shall not exceed 30 dBm/500kHz.

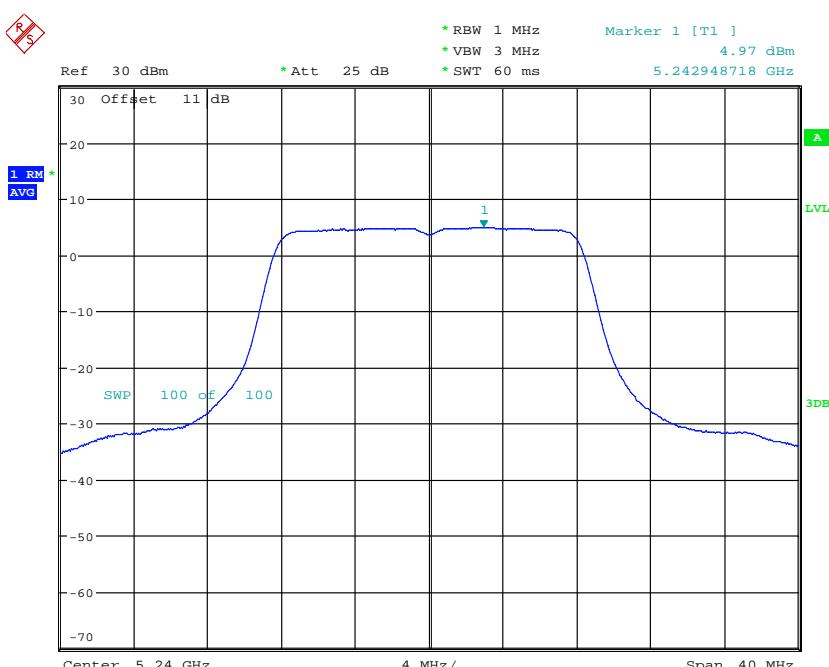
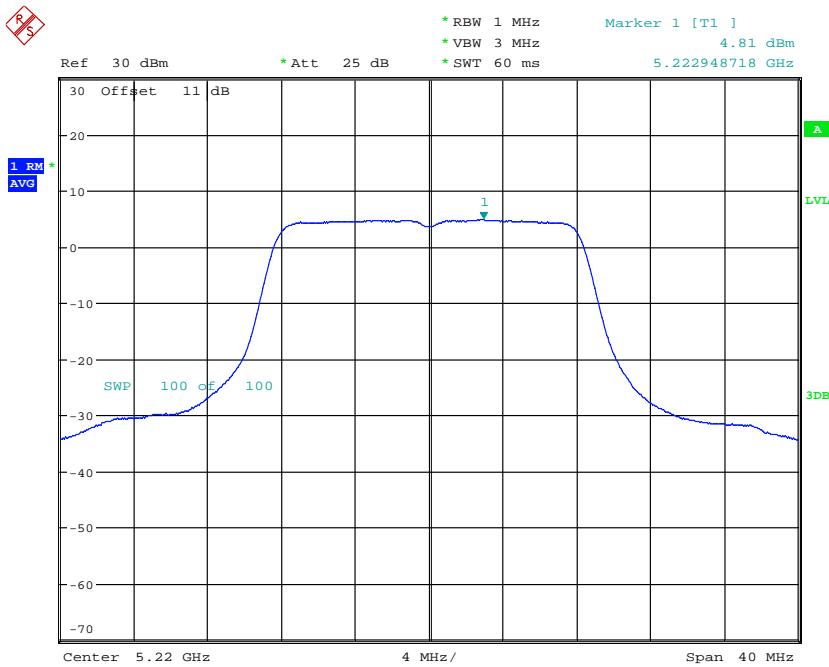
#### ANT1

#### 5.15 GHz ~ 5.25 GHz



POWER DENSITY AV ANT111aCH36  
 Date: 15.OCT.2019 21:00:27

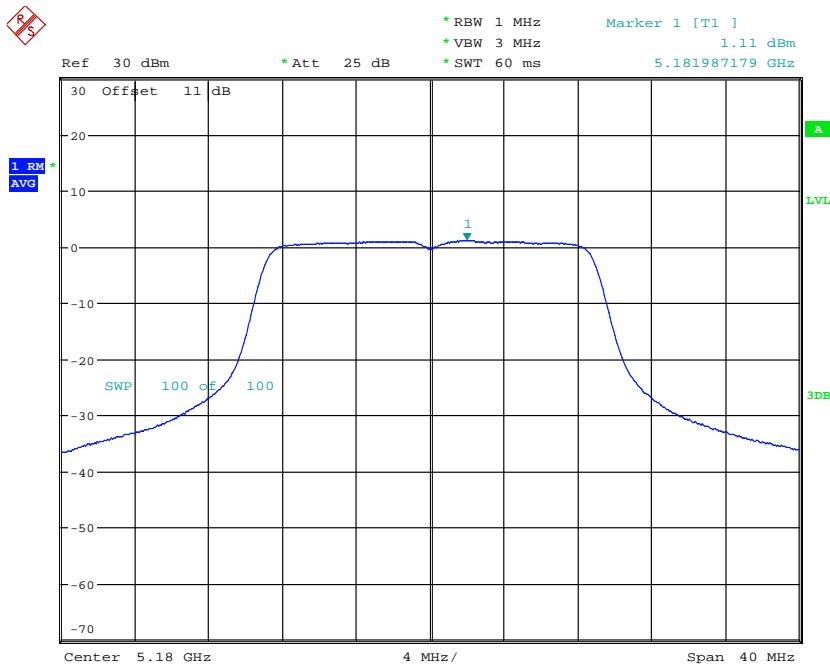
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



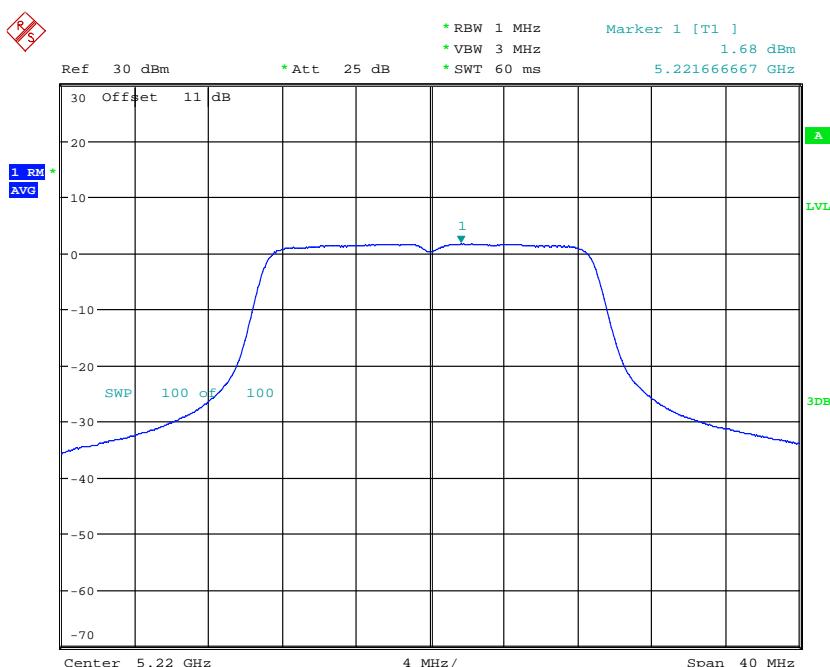
POWER DENSITY AV ANT111aCH48

Date: 15.OCT.2019 21:13:54

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

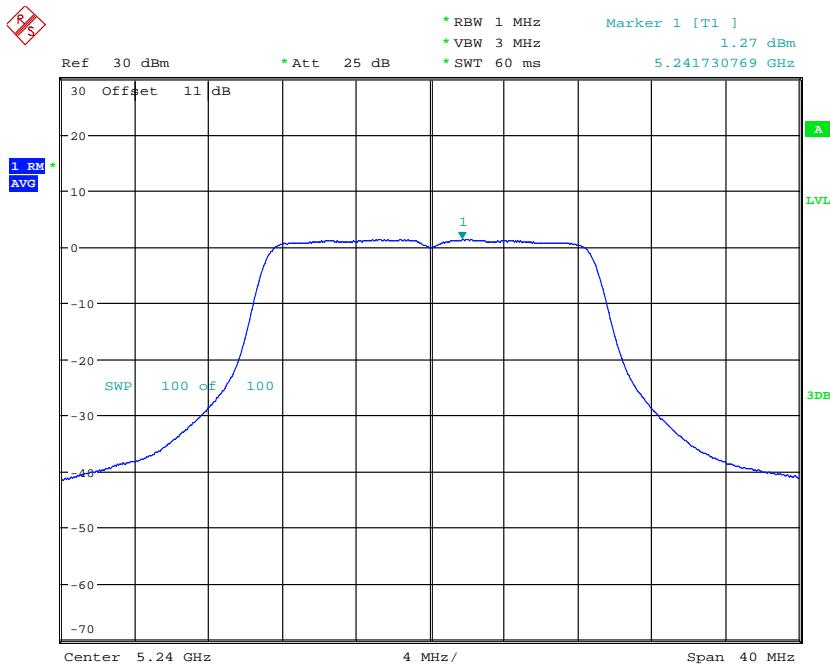


POWER DENSITY AV ANT111n20CH36  
Date: 16.OCT.2019 14:09:57

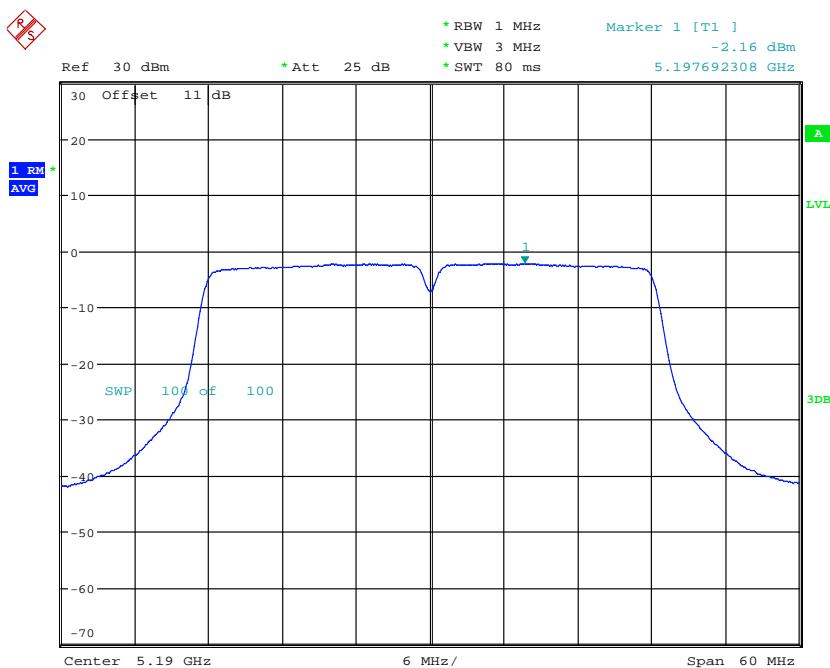


POWER DENSITY AV ANT111n20CH44  
Date: 16.OCT.2019 14:23:29

Registration number: W6R22110-21274-C-54  
 FCC ID: W23-WMXWAVE2AS

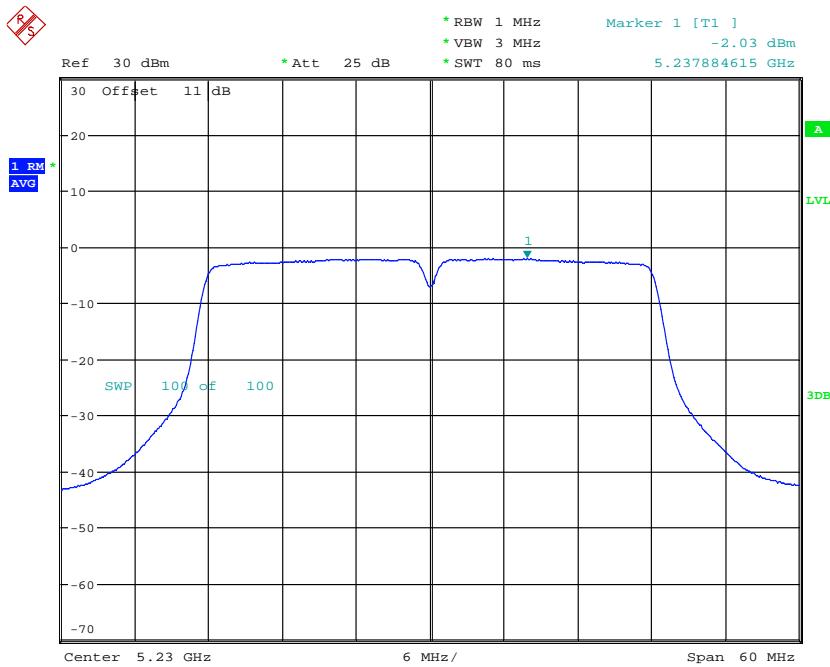


POWER DENSITY AV ANT111n20CH48  
 Date: 16.OCT.2019 14:29:07

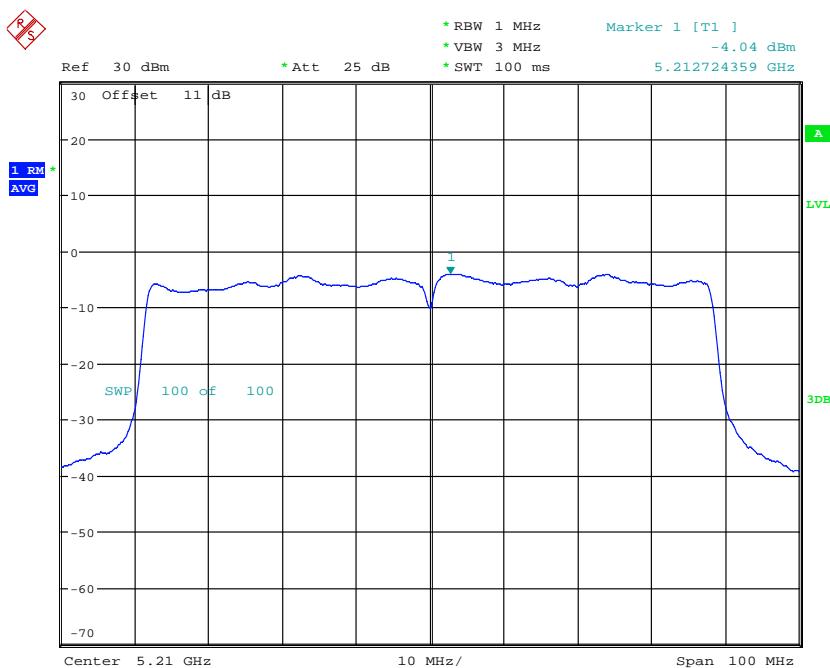


POWER DENSITY AV ANT111n40CH38  
 Date: 16.OCT.2019 14:51:44

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



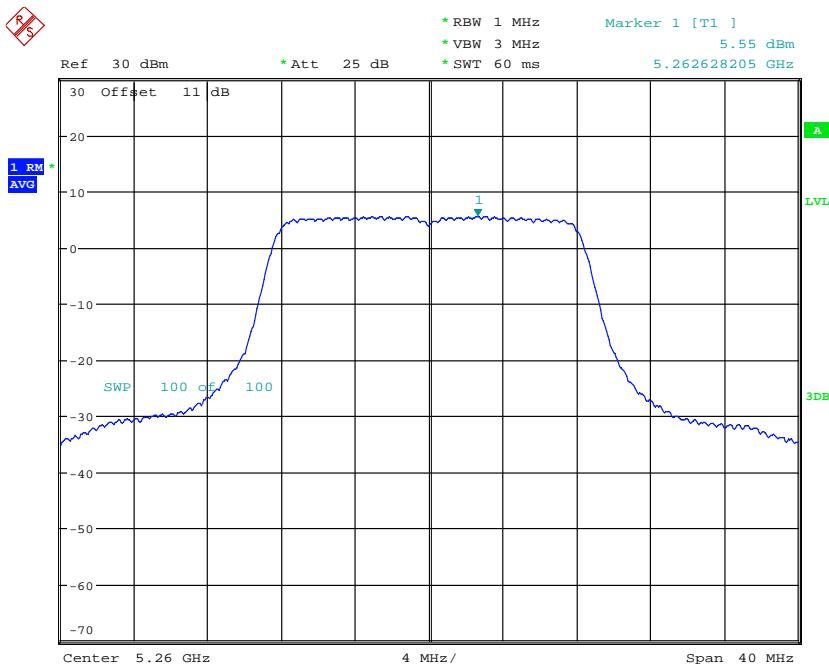
POWER DENSITY AV ANT111n40CH46  
Date: 16.OCT.2019 14:57:51



POWER DENSITY AV ANT111ac80CH42  
Date: 16.OCT.2019 15:07:52

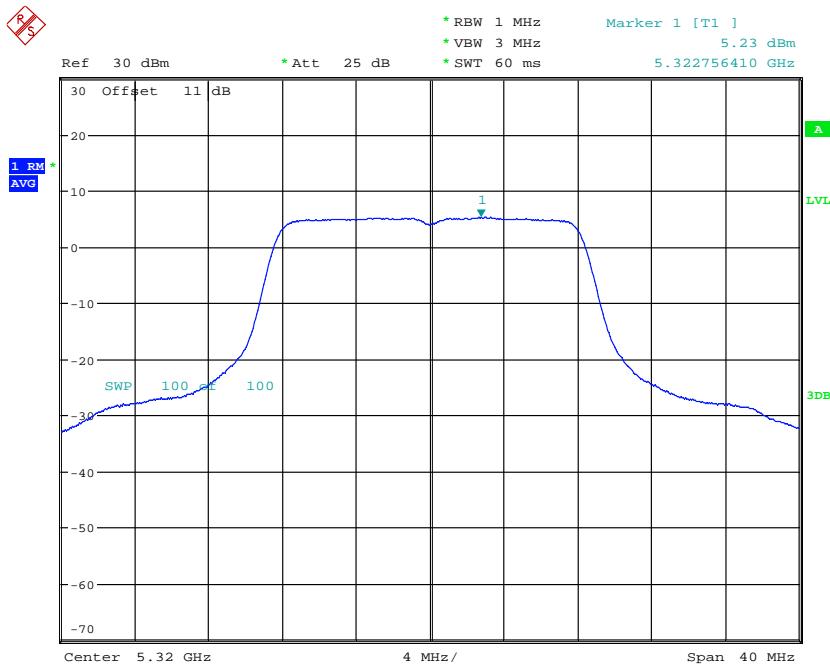
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

## 5.25 GHz ~ 5.35 GHz



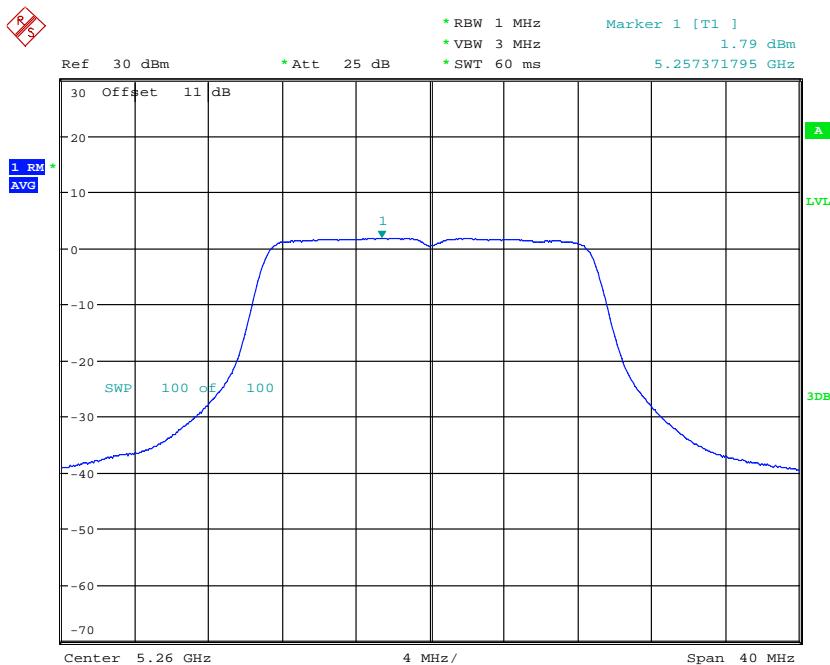
POWER DENSITY AV ANT111aCH60  
Date: 16.OCT.2019 15:33:35

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



#### POWER DENSITY AV ANT111aCH64

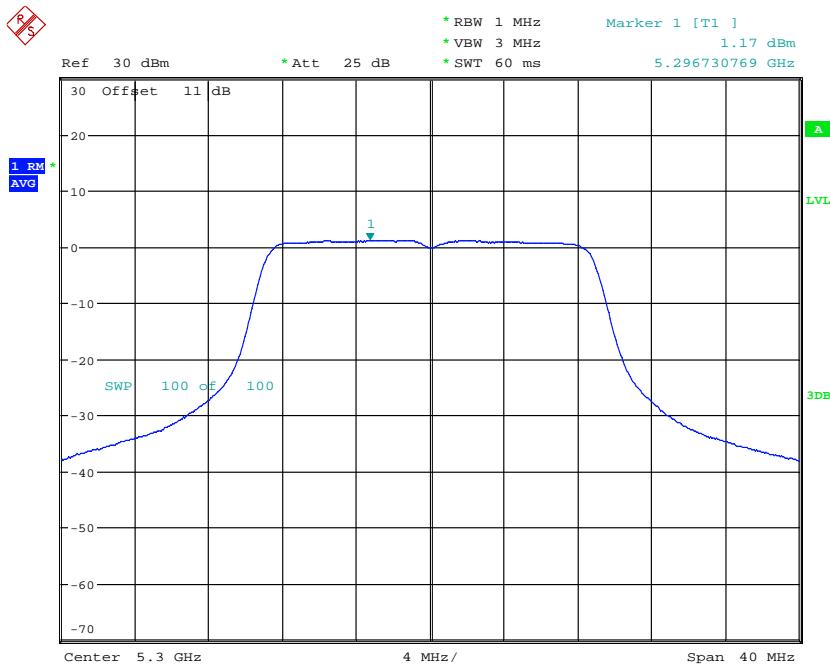
Date: 16.OCT.2019 15:40:05



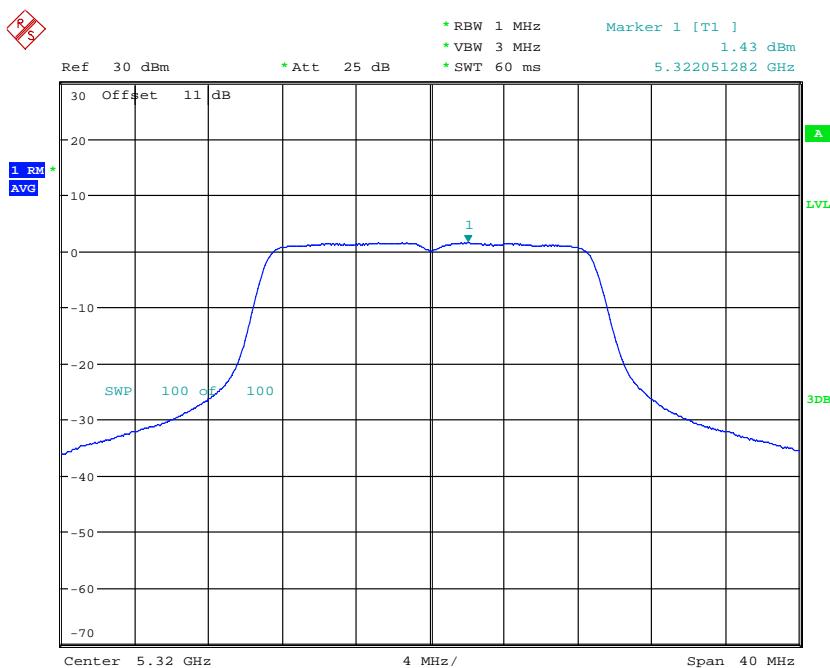
#### POWER DENSITY AV ANT111n20CH52

Date: 16.OCT.2019 16:00:59

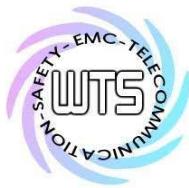
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



POWER DENSITY AV ANT111n20CH60  
Date: 16.OCT.2019 16:07:03

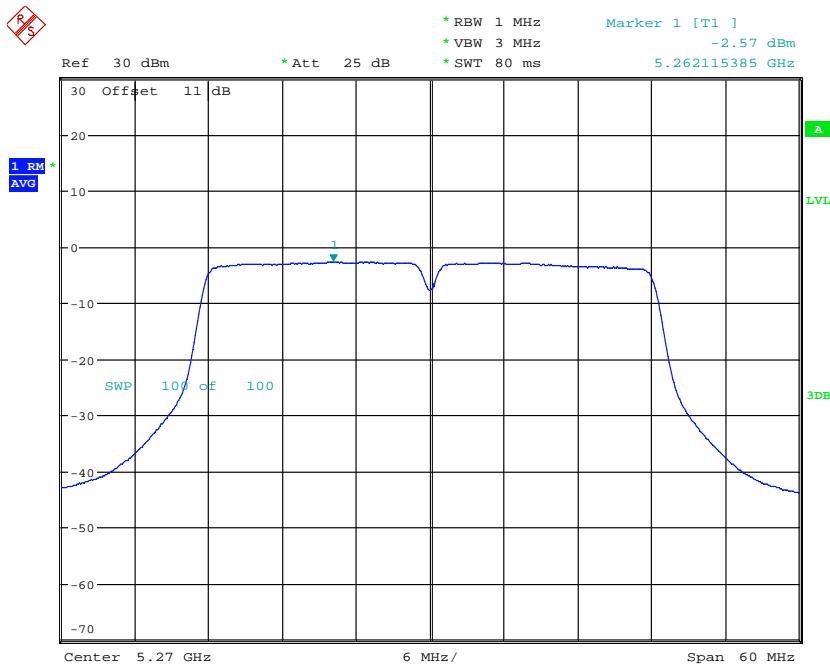


POWER DENSITY AV ANT111n20CH64  
Date: 16.OCT.2019 16:13:01

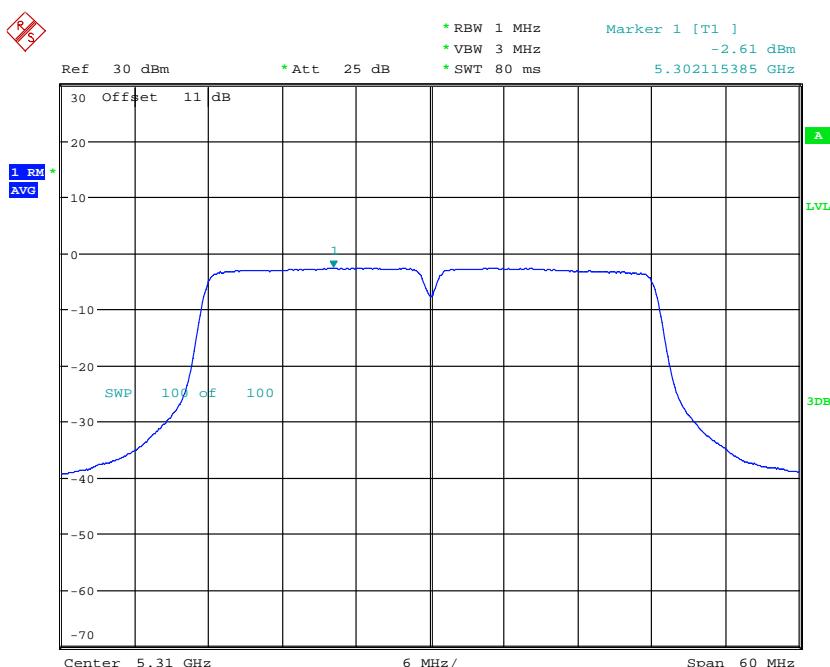


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

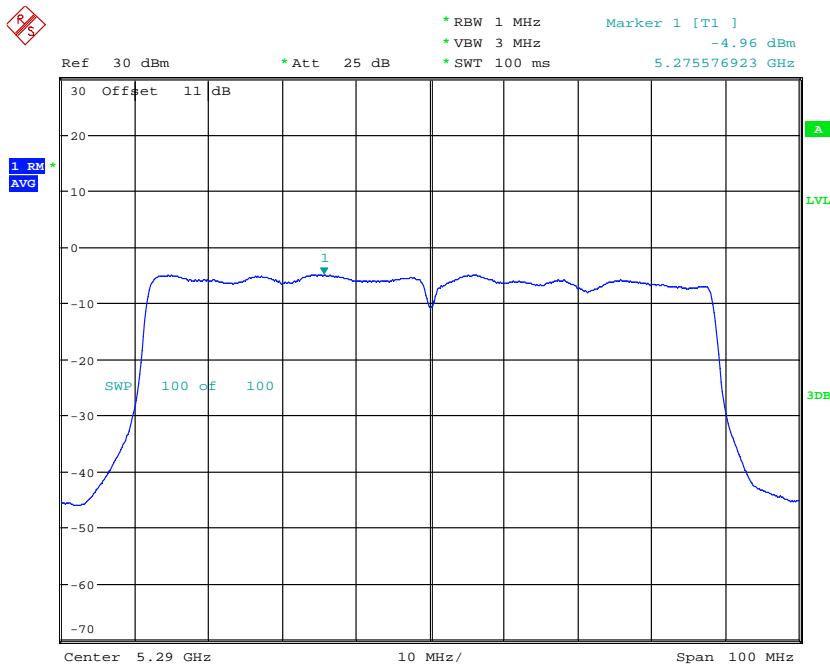


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Date: 16.OCT.2019 16:27:51



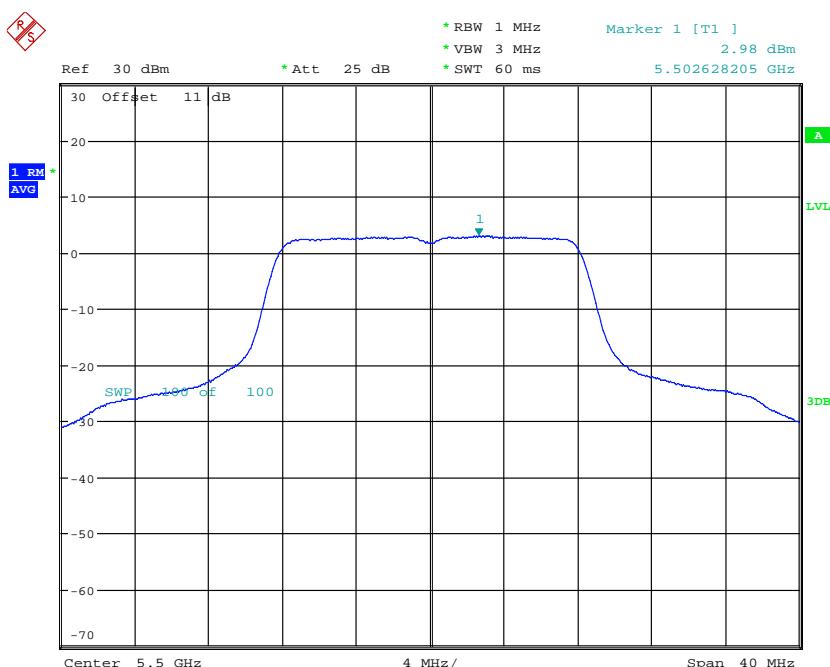
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Date: 16.OCT.2019 16:35:36

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



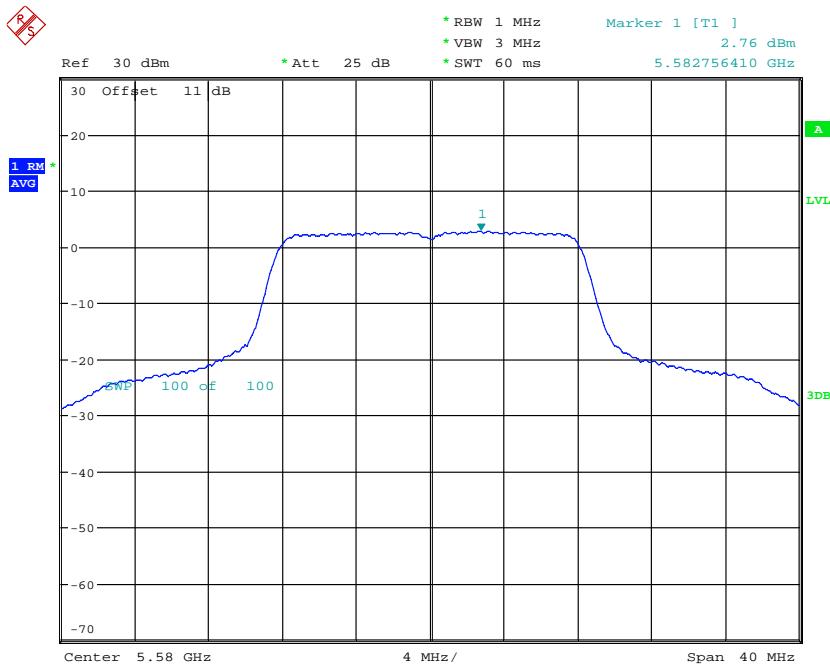
POWER DENSITY AV ANT111ac80CH58  
Date: 16.OCT.2019 16:46:03

## 5.47 GHz ~ 5.725 GHz

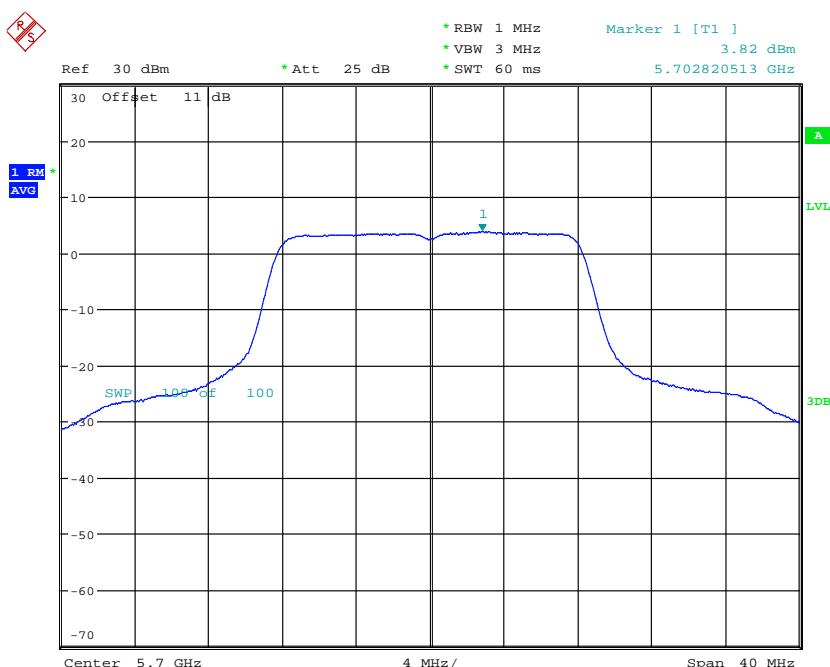


POWER DENSITY AV ANT111aCH100  
Date: 16.OCT.2019 17:16:04

Registration number: W6R22110-21274-C-54  
 FCC ID: W23-WMXWAVE2AS

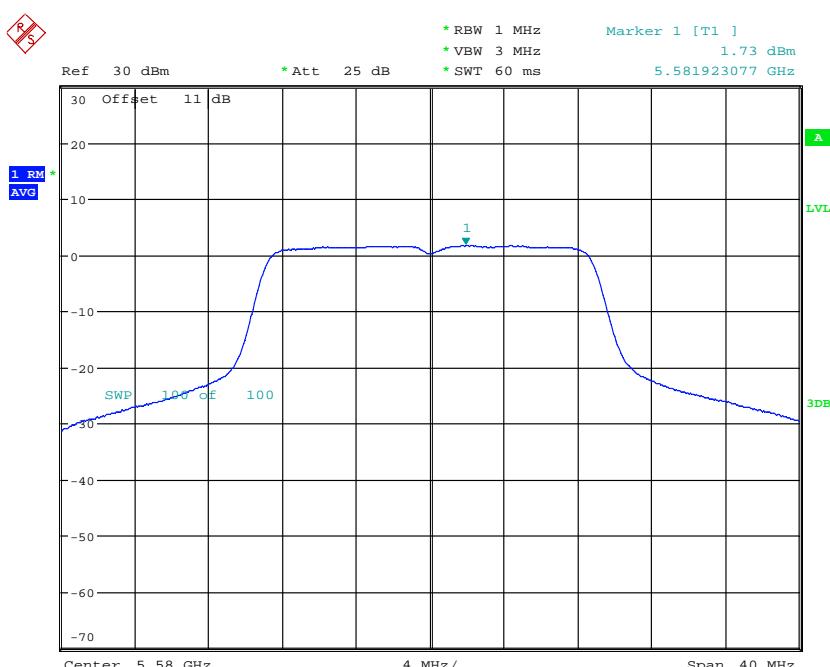
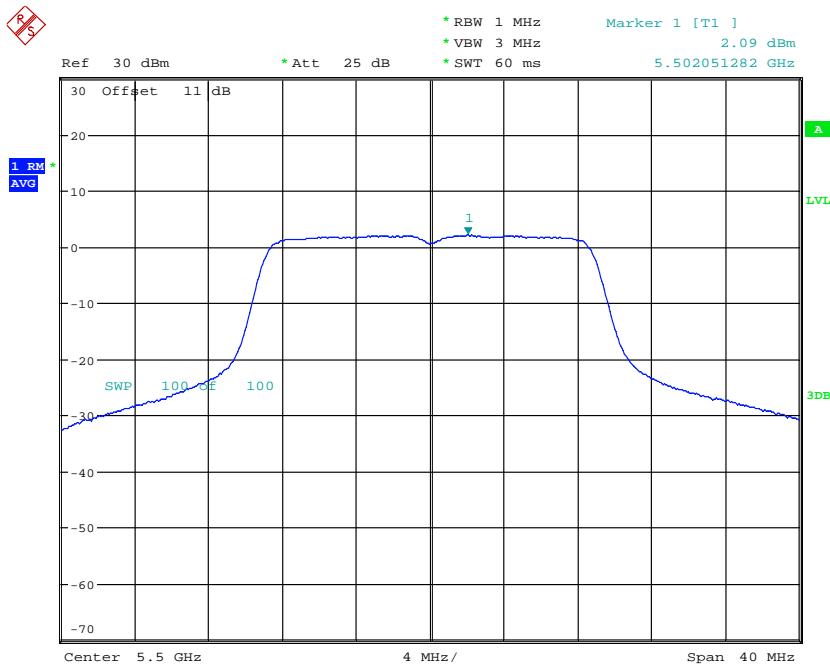


POWER DENSITY AV ANT111aCH116  
 Date: 16.OCT.2019 17:22:34

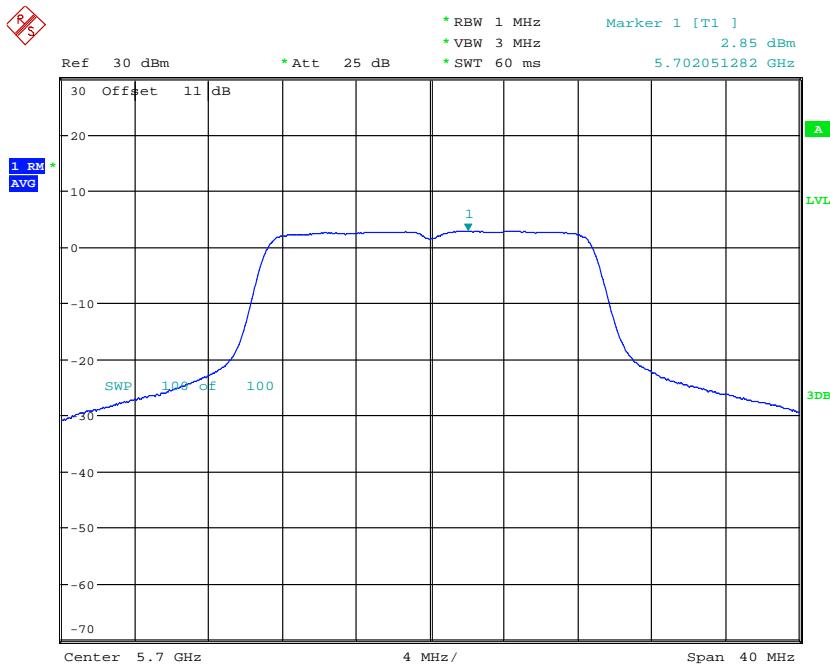


POWER DENSITY AV ANT111aCH140  
 Date: 16.OCT.2019 19:22:55

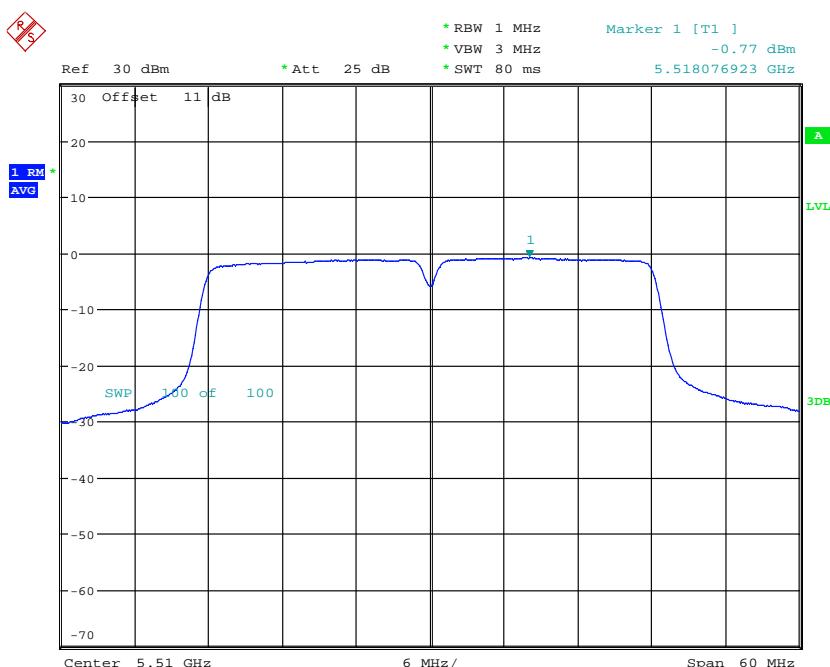
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



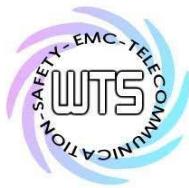
Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



POWER DENSITY AV ANT111n20CH140  
Date: 16.OCT.2019 20:01:10

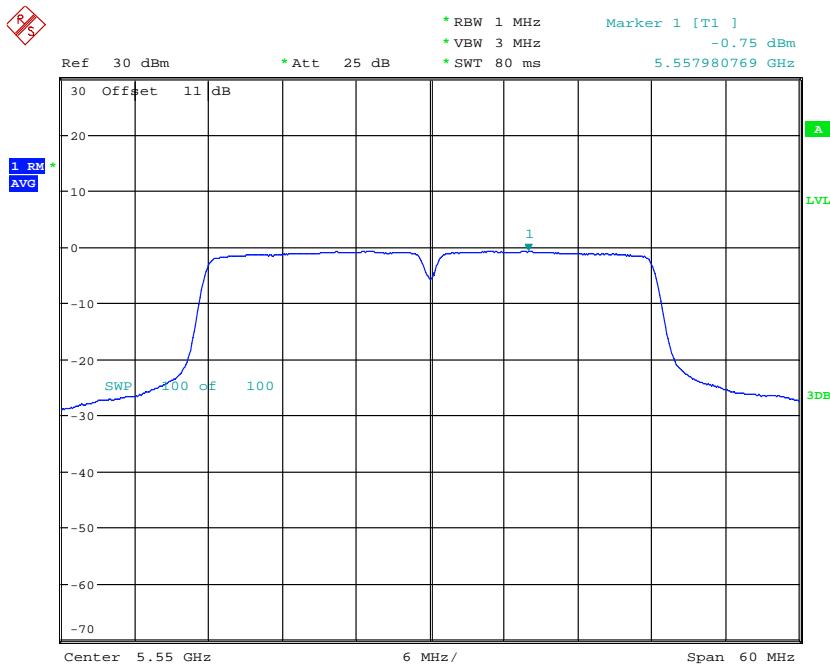


POWER DENSITY AV ANT111n40CH102  
Date: 16.OCT.2019 20:19:29

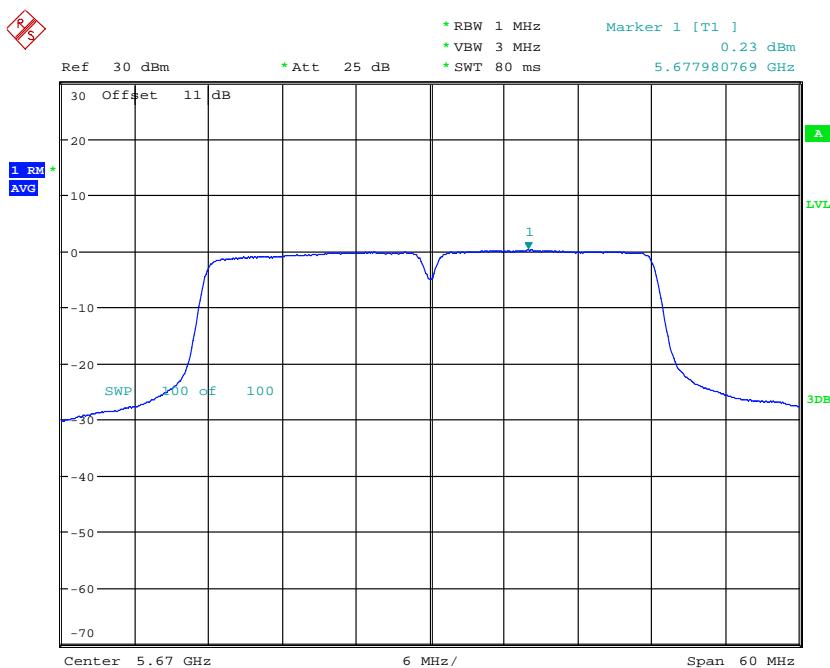


# Worldwide Testing Services(Taiwan) Co., Ltd.

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

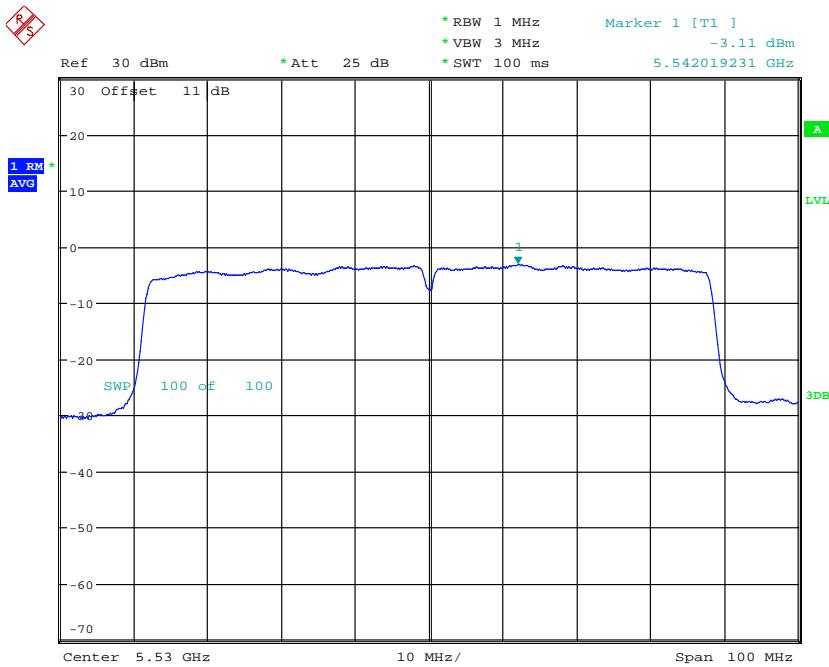


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Date: 16.OCT.2019 20:26:06

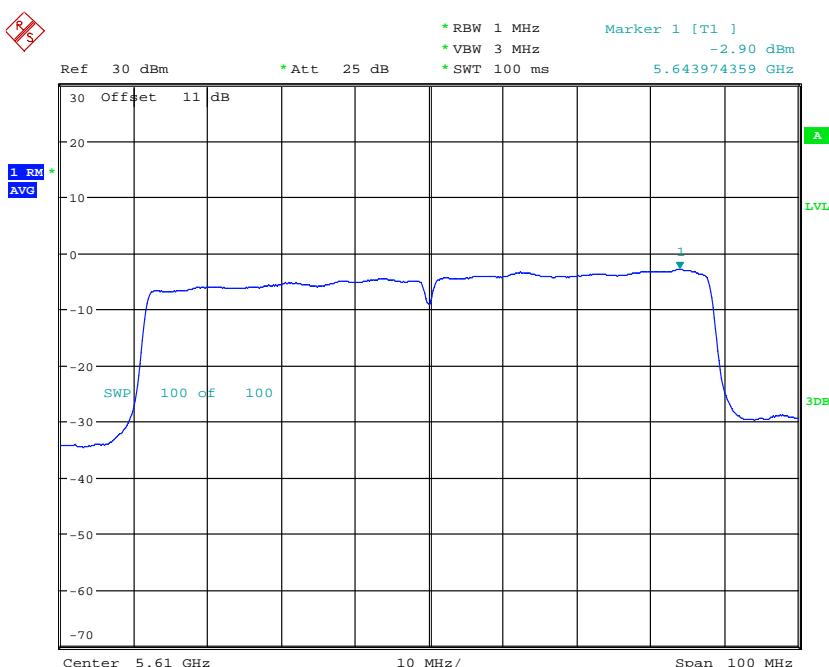


POWER DENSITY AV ANT111n40CH134  
Date: 16.OCT.2019 20:32:21

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS



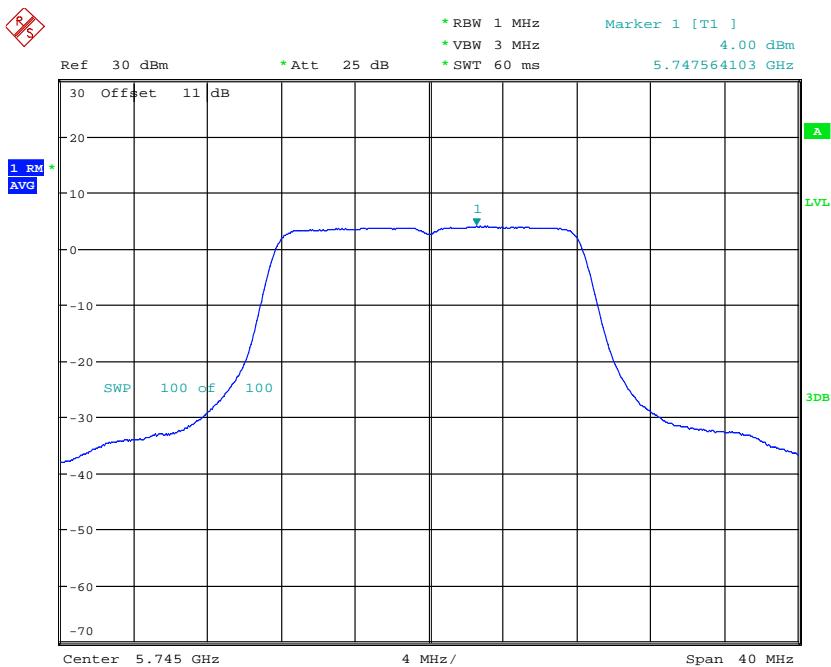
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Date: 16.OCT.2019 20:44:03



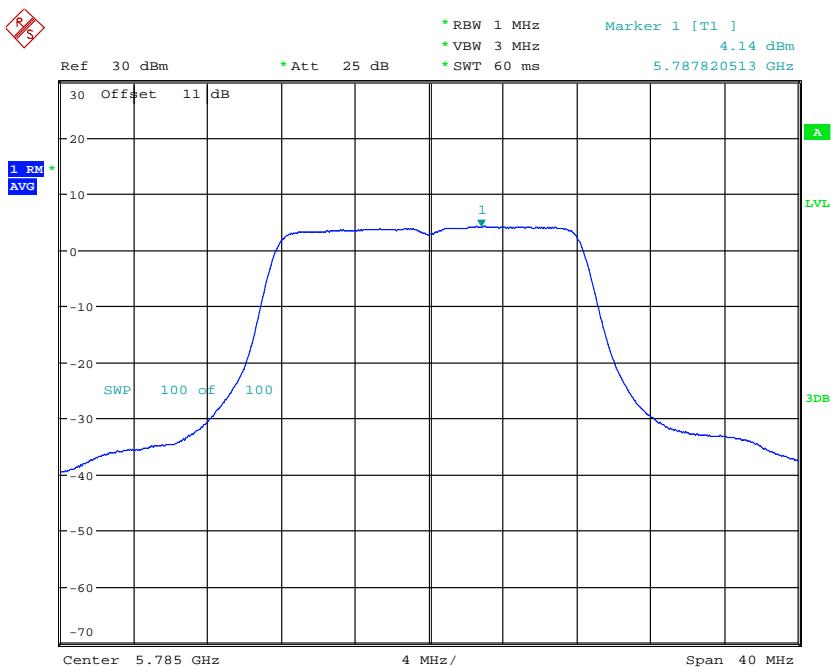
POWER DENSITY AV ANT111ac80CH122  
Date: 16.OCT.2019 20:53:58

Registration number: W6R22110-21274-C-54  
FCC ID: W23-WMXWAVE2AS

## 5.725 GHz ~ 5.85 GHz



POWER DENSITY AV ANT111aCH149  
Date: 18.OCT.2019 16:19:20



POWER DENSITY AV ANT111aCH157  
Date: 18.OCT.2019 16:26:10