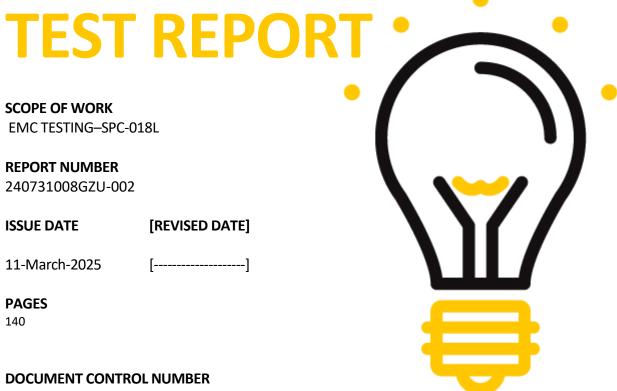


SUNWAY PRODUCTS (HONG KONG) COMPANY LIMITED



FCC WIFI 5G_ALL band © 2017 INTERTEK



Room101/301/401/102/202/302/ 402/502/602/702/802, No. 7-2, Caipin Road, Huangpu District, Guangzhou, Guangdong, China Telephone: +86 20 8213 9688 Facsimile: +86 20 3205 7538 www.intertek.com.cn

Applicant Name &	:	SUNWAY PRODUCTS (HONG KONG) COMPANY LIMITED
Address		ROOM 1013, NEW COMMERCE CENTRE, NO.19 ON SUM STREET,
		SHATIN, NT, HONG KONG, China
Manufacturing Site	:	Same as applicant
Intertek Report No:		240731008GZU-002
FCC ID:		2ATAD-SPC-018L

Test standards

47 CFR PART 15 Subpart E: 2023 section 15.407

Sample Description

Product	:	Pressure Cooker
Model No.	:	SPC-018L
Electrical Rating	:	120VAC 50/60Hz 1200W
Serial No.	:	Not Labeled
Date Received	:	31 July 2024
Date Test	:	04 September 2024-14 September 2024
Conducted		

Prepared and Checked By

leì ena

Elena Lei Project Engineer Approved By:

Dean Liu Sr. Project Engineer

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Intertek Testing Services Shenzhen Ltd. Guangzhou Branch

Room101/301/401/102/202/302/402/502/602/702/802, No. 7-2, Caipin Road, Huangpu District, Guangzhou, Guangdong, ChinaVersion: 12 September 2024Page 2 of 140FCC WIFI 5G



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5.0	TEST EQUIPMENT LIST



1.0 TEST RESULT SUMMARY

Test Item	Test Requirement	Test Method	Result
Antenna Requirement	FCC PART 15 C clause 15.203	FCC PART 15 C clause 15.247 (c) and clause 15.203	PASS
26 dB Bandwidth / 99% Occupied Bandwidth	FCC PART 15 E clause 15.407(a)	FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01,Clause C&D	PASS
6 dB Bandwidth	FCC PART 15 E clause 15.407(e) Only for band IV	FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01,Clause C	PASS
Maximum Conducted Output Power	FCC PART 15 E clause 15.407(a)	FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01,Clause E	PASS
Maximum Peak Power Spectral Density	FCC PART 15 E clause 15.407(a)	FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01,Clause F	PASS
Radiated spurious emission	FCC PART 15 E clause 15.407(b)	FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01,Clause G	PASS
Band Edge	FCC PART 15 E clause 15.407(b)	FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01,Clause G	PASS
Frequency Stability	FCC PART 15 E clause 15.407(g)	ANSI C63.10: clause 6.8	PASS
Conducted Emissions at Mains Terminals	FCC PART 15 E section 15.207	ANSI C63.10: Clause 6.2	PASS

Remark:

N/A: not applicable. Refer to the relative section for the details.

EUT: In this whole report EUT means Equipment Under Test.

Tx: In this whole report Tx (or tx) means Transmitter.

Rx: In this whole report Rx (or rx) means Receiver.

RF: In this whole report RF means Radio Frequency.

ANSI C63.10: the detail version is ANSI C63.10:2013 in the whole report.

Pretest on all channel for each mode (a, n20, n40, ac20, ac40, ac80) of the brand I, brand II, brand III and brand IV, Pretest on all rates, and only the data of the smallest rates of modes a, n20, n40, ac80 are retained in the report. The Bluetooth function of the wireless module is disabled. The USB port at the bottom of the prototype is only used for setting by the factory and is not open to the user.



2.0 General Description

2.1 Product Description

Operating Frequency:	Band I 5150 MHz to 5250 MHz Band I 5250 MHz to 5350 MHz Band I 5470 MHz to 5725 MHz Band IV 5725 MHz to 5850MHz for 802.11a/n-HT20(20MHz), 802.11n-HT40(40MHz), 802.11ac(20/40/80MHz)
Type of Modulation:	802.11ac(20/40/80MH2) 802.11a: MIMO OFDM (BPSK/QPSK/16QAM/64QAM) 802.11an: MIMO OFDM (BPSK/QPSK/16QAM/64QAM) 802.11ac: MIMO OFDM (BPSK/QPSK/16QAM/64QAM/256QAM)
Transmit Data Rate:	802.11a: 6/9/12/18/24/36/48/54 Mbps 802.11a: 6/9/12/18/24/36/48/54 Mbps 802.11an(HT20): MCS0: 7.2Mbps, MCS1:14.2Mbps, MCS2:21.7Mbps, MCS3:28.9Mbps, MCS4:43.3Mbps, MCS5:57.8Mbps, MCS6:65.0Mbps, MCS7:72.2Mbps 802.11an(HT40): MCS0:15Mbps, MCS1:30Mbps, MCS2:45Mbps, MCS3:60Mbps, MCS4:90Mbps, MCS5:120Mbps, MCS6:135Mbps, MCS7:150Mbps
	802.11ac(HT20): MCS0: 7.2Mbps, MCS1:14.2Mbps, MCS2:21.7Mbps, MCS3:28.9Mbps, MCS4:43.3Mbps, MCS5:57.8Mbps, MCS6:65.0Mbps, MCS7:72.2Mbps, MCS8: 86.7Mbps
	802.11ac(HT40): MCS0:15Mbps, MCS1:30Mbps, MCS2:45Mbps, MCS3:60Mbps, MCS4:90Mbps, MCS5:120Mbps,MCS6:135Mbps,MCS7:150Mbps,MCS8:180Mbps, MCS9:200Mbps
	802.11ac(HT80): MCS0:32.5Mbps, MCS1:65Mbps, MCS2:97.5Mbps, MCS3:130Mbps, MCS4:195Mbps, MCS5:260Mbps, MCS6:292.5Mbps, MCS7:325Mbps, MCS8:390Mbps, MCS9:433.3Mbps
Number of Channels	4 channels for 5180 MHz ~ 5240 MHz (802.11 a/n20/ac-HT20); 2 channels for 5190 MHz ~ 5230 MHz (802.11 n40/ac-HT40); 1 channels for 5210 MHz (802.11ac-HT80); 4 channels for 5260 MHz ~ 5320 MHz (802.11 a/n20/ac-HT20); 2 channels for 5270 MHz ~ 5310 MHz (802.11 n40/ac-HT40); 1 channels for 5290 MHz (802.11ac-HT80); 8 channels for 5500 MHz ~ 5580 & 5660MHz ~ 5700 MHz
	(802.11a/n20/ac-HT20); 3 channels for 5510 MHz ~ 5550MHz & 5670 MHz (802.11n40/ac- HT40); 1 channels for 5530 MHz (802.11ac-HT80);



Antenna Type Antenna gain: Function:

EUT Power Supply: Power cord:

5 channels for 5745 MHz ~ 5825 MHz (802.11a/n20/ac-HT2	:0);
2 channels for 5755 MHz ~ 5795 MHz (802.11n40/ac-HT40)	;
1 channels for 5775 MHz (802.11ac-HT80);	
FPC Antenna	
ANT 1: 4.36 dBi , ANT 2: 4.17 dBi	
Pressure Cooker with 5 GHz WIFI	
AC 120V 60 Hz	
AC supply cable	

channels and frequencies list:

Band I 5150 MHz to 5250 MHz

For 802.11a/an (HT20)/ac (HT20): test frequencies are lowest channel 36: 5180 MHz, middle channel 40: 5200 MHz and highest channel 48: 5240.

For 802.11an(HT40)/ac(HT40): test frequencies are lowest channel 38: 5190 MHz and highest channel 46: 5230 MHz

For 802.11ac(HT80): test frequencies is channel 42: 5210 MHz

Band II 5250MHz-5350MHz

For 802.11a/an (HT20)/ac (HT20): test frequencies are lowest channel 52: 5260 MHz, middle channel 60: 5300 MHz and highest channel 64: 5320.

For 802.11an(HT40)/ac(HT40): test frequencies are lowest channel 54: 5270 MHz and highest channel 62: 5310 MHz

For 802.11ac(HT80): test frequencies is channel 58: 5290 MHz

Band III 5470MHz-5725MHz

For 802.11a/an (HT20)/ac (HT20): test frequencies are lowest channel 100: 5500 MHz, middle channel 116: 5580 MHz and highest channel 140: 5700.

For 802.11an(HT40)/ac(HT40): test frequencies are lowest channel 102: 5510 MHz, middle channel 110: 5550 MHz and highest channel 134: 5670.

For 802.11ac(HT80): test frequencies is channel 106: 5530 MHz

Band I 5725 MHz to 5850 MHz

For 802.11a/an (HT20)/ac (HT20): test frequencies are lowest channel 149: 5745 MHz, middle channel 157: 5785 MHz and highest channel 165: 5825 MHz

For 802.11an(HT40)/ac(HT40): test frequencies are lowest channel 151: 5755 MHz and highest channel 159: 5795 MHz

For 802.11ac(HT80): test frequencies is channel 155: 5775 MHz



TEST REPORT

For WIFI a/WIFI an (HT 20)/WIFI ac(HT20):

Band I(5150MHz-5250MHz)		Band II (5250MHz-5350MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	52	5260
40	5200	56	5280
44	5220	60	5300
48	5240	64	5320

Band III (5470MHz-5725MHz)		Band IV(5725MHz-5850MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
100	5500	149	5745
104	5520	153	5765
108	5540	157	5785
112	5560	161	5805
116	5580	165	5825
132	5660		
136	5680		
140	5700		

For WIFI an (HT 40)/WIFI ac(HT40):

Band I(5150MHz-5250MHz)		Band II (5250MHz-5350MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
38	5190	54	5270
46	5230	62	5310

Band III (5470MHz-5725MHz)		Band IV(5725MHz-5850MHz)		
Channel	Frequency (MHz)	Channel	Frequency (MHz)	
102	5510	151	5755	
110	5550	159	5795	
134	5670			



For WIFI ac(HT 80):

Band I(5150MHz-5250MHz)		Band II (5250MHz-5350MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
42	5210	58	5290

Band III (5470MHz-5725MHz)		Band IV(5725MHz-5850MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
106	5530	155	5775

2.2 Related Submittal(s) Grants

This is an application for certification of:

NII - Unlicensed National Information Infrastructure TX.

DTS- Digital Transmission Systems (WIFI transmitter portion).

Remaining portions are subject to the following procedures:

1. Receiver portion of WIFI: exempt from technical requirement of this Part.

2.3 Test Methodology

The EUT was performed according to the procedures in FCC Part 15 E, Section15.203, 15.207, 15.209, 15.407 and ANSI C63.4:2014, method of measurement: reference to FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

Both AC mains line-conducted and radiated emission measurements were performed according to the procedures in ANSI C63.10:2013. Radiated emission measurement was performed in semi-anechoic chamber and conducted emission measurement was performed in shield room. For radiated emission measurement, preliminary scans and final tests were performed in the semi-anechoic chamber to determine the worst case modes. All radiated tests were performed at an antenna to EUT distance of 3 meters, unless stated otherwise.



TEST REPORT

2.4 Test Facility

All tests were performed at: Intertek Testing Services Shenzhen Ltd. Guangzhou Branch Room102/104, No 203, KeZhu Road, Science City, GETDD Guangzhou, China Except Conducted Emissions was performed at: Room101/301/401/102/202/302/402/502/602/702/802, No. 7-2, Caipin Road, Huangpu District, Guangzhou, Guangdong, China

A2LA Certificate Number 0078.10

Intertek Testing Services Shenzhen Ltd. Guangzhou Branch is accredited by A2LA and Listed in FCC website. FCC accredited test labs may perform both Certification testing under Parts 15 and 18 and Declaration of Conformity testing.

3.0 System Test Configuration

3.1 Justification

For emissions testing, the equipment under test (EUT) setup to transmit continuously to simplify the measurement methodology. Care was taken to ensure proper power supply voltages during testing. During testing, AC power line was manipulated to produce worst case emissions. It was powered by AC 120V/60Hz supply.

The signal is maximized through rotation and placement in the three orthogonal axes. The antenna height and polarization are varied during the search for maximum signal level. The antenna height is varied from 1 to 4 meters. Radiated emissions are taken at three meters unless the signal level is too low for measurement at that distance. If necessary, a pre-amplifier is used and/or the test is conducted at a closer distance.

All readings are extrapolated back to the equivalent three meter reading using inverse scaling with distance. The spurious emissions more than 20 dB below the permissible value are not reported.

For an intentional radiator, the spectrum shall be investigated from the lowest radio frequency signal generated in the device, without going below 9 kHz, up to at least the frequency shown in the following table:

Lowest frequency generated in the device	Upper frequency range of measurement
9 kHz to below 10 GHz	10th harmonic of highest fundamental frequency or to 40 GHz, whichever is lower
At or above 10 GHz to below 30 GHz	5th harmonic of highest fundamental frequency or to 100 GHz, whichever is lower
At or above 30 GHz	5th harmonic of highest fundamental frequency or to 200 GHz, whichever is lower, unless otherwise specified

Frequency range of radiated emission measurements



Number of fundamental frequencies to be tested in EUT transmit band

Frequency range in which device	Number of	Location in frequency
operates	frequencies	range of operation
1 MHz or less	1	Middle
1 MHz to 10 MHz	2	1 near top and 1 near bottom
More than 10 MHz	3	1 near top, 1 near middle and 1 near bottom

3.2 EUT Exercising Software

Description	Manufacturer	Model No.	SN/Version	Supplied by
For fixing frequency CMD command	МТК	MT7668	Version:1.6	Sunway

3.3 Special Accessories

No special accessories used.

3.4 Measurement Uncertainty

No.	Item	Measurement Uncertainty
	20 dB Bandwidth	
1	6dB Bandwidth	2.3%
	99% Bandwidth	
2	Carrier Frequencies Separated	2.3%
3	Dwell Time	1.2%
4	Maximum Peak Conducted Output Power	1.5dB
5	Peak Power Spectral Density	1.5dB
7	Band edges measurement	1.5dB
		3.6 dB (9KHz-30MHz)
	Radiated Emissions	4.3 dB (30 MHz-1 GHz)
8		5.0 dB (1 GHz-18 GHz)
		5.2dB (18GZH-40GHz)
9	Conducted Emissions at Mains Terminals	2.58dB
10	Temperature	0.5 °C
11	Humidity	0.4 %
12	Time	1.2%



TEST REPORT

The measurement uncertainty describes the overall uncertainty of the given measured value during the operation of the EUT.

Measurement uncertainty is calculated in accordance with ETSI TR 100 028-2001. The measurement uncertainty is given with a confidence of 95%, k=2.

When determining of the test conclusion, the Measurement Uncertainty of test has been considered.

Uncertainty and Compliance – Unless the standard specifically states that measured values are to be extended by the measurement uncertainty in determining compliance, all compliance determinations are based on the actual measured value

3.5 Equipment Modification

Any modifications installed previous to testing by SUNWAY PRODUCTS (HONG KONG) COMPANY LIMITED Limited will be incorporated in each production model sold / leased in the United States.

No modifications were installed by Intertek Testing Services Shenzhen Ltd. Guangzhou Branch.

3.6 Support Equipment List and Description

This product was tested with corresponding support equipment as below:

Support Equipment

Description	iption Manufacturer		SN/Version	Supplied by	
NoteBook	НР	Compaq 6710b	SN:CNU8240LF9	Intertek	

Cable

Description Model No.		Connector type	Cable length/type	Supplied by	
Antenna cable	RF-01	SMA	0.2 m(shielded)	Intertek	
USB cable	001	USB	1.5 m(unshielded)	Applicant	

Remark:

After the frequency was fixed, Notebook and Fix board were removed out of the Chamber before test.



TEST REPORT

4.0 Measurement Results

4.1 Antenna Requirement

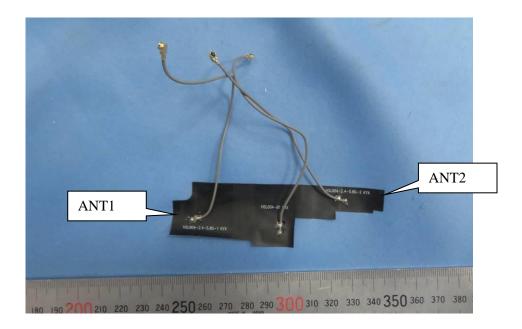
Standard requirement:

15.203 requirement:

For intentional device. According to 15.203 an intentional radiator shall be designed to Ensure that no antenna other than that furnished by the responsible party shall be used with the device.

EUT Antenna

The antenna is an integral antenna and no consideration of replacement. The best case gain of the antenna is 4.36 dBi and antenna2 is 4.17 dBi. Total antenna is 7.28 dBi





TEST REPORT

4.2 Duty Cycle

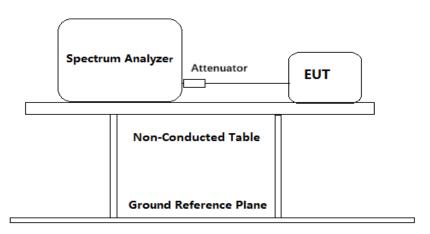
Test Requirement:

Test Method:

FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01,Clause B FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01,Clause B

Test Status: Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed below.

Test Configuration:



Test Procedure:

- 1. Remove the antenna from the EUT and then connect a low attention attenuation RF cable (cable loss =1 dB, with 10dB attenuator) from the antenna port to the spectrum.
- 2. Set the spectrum analyser:
 - a) Set RBW \geq 1MHz
 - b) Set the VBW \geq [3 x RBW]
 - c) Detector =peak
 - d) Span = Zero span
 - e) Sweep time = 100ms
 - f) Trace mode = Free run
- 3. Repeat until all the test status is investigated.
- 4. Report the worst case.

Used Test Equipment List

Spectrum Analyzer. Refer to Clause 5 Test Equipment List for details.



TEST REPORT

Test result: Band I (5150MHz-5250MHz)

Channel No.	Frequency (MHz)	Mode	On time (ms)	Period (ms)	Duty Cycle (%)
36	5180	802.11a	100	100	100
36	5180	802.11n(HT20)	100	100	100
38	5190	802.11n(HT40)	100	100	100
42	5210	802.11ac(HT80)	100	100	100

Band II (5250MHz-5350MHz)

Channel No.	Frequency (MHz)	Mode	On time (ms)	Period (ms)	Duty Cycle (%)
52	5260	802.11a	100	100	100
52	5260	802.11n(HT20)	100	100	100
54	5270	802.11n(HT40)	100	100	100
58	5290	802.11ac(HT80)	100	100	100

Band III (5470MHz-5725MHz)

Channel No.	Frequency (MHz)	Mode	On time (ms)	Period (ms)	Duty Cycle (%)
100	5500	802.11a	100	100	100
100	5500	802.11n(HT20)	100	100	100
102	5510	802.11n(HT40)	100	100	100
106	5530	802.11ac(HT80)	100	100	100

Band IV (5725MHz-5850MHz)

Channel No.	Frequency (MHz)	Mode	On time (ms)	Period (ms)	Duty Cycle (%)
149	5745	802.11a	100	100	100
149	5745	802.11n(HT20)	100	100	100
151	5755	802.11n(HT40)	100	100	100
155	5775	802.11ac(HT80)	100	100	100



TEST REPORT

Result plot as follows (ANT1):

802.11a

Channel 36: 5180 MHz:

Spectrun	n Sp	ectrum 2	x Sp	ectrum 3	xs	pectrum	4 X		
		Offset							
e Att	30 dB	e swt	100 ms 👄	VBW 10 M	1Hz				
SGL									
Controlled b	у ЕМС32 😑:	1Pk Max							
20 dBm									
warman	munu	mountour	Junearuhan	Julimprahas	muhawa	wyadayoung	munudry	ununun	Hillymania
10 dBm									
0 dBm									
-10 dBm									
-20 dBm									
-30 dBm									
-40 dBm									
-50 dBm									
-60 dBm									
oc ubiii									
05 5 10 01					l .				10.0 /
CF 5.18 GH	ΗZ			691	pts				10.0 ms/

802.11an(HT 20) Channel 36: 5180 MHz:

Spectrum	Spectrum 2	X Sp	ectrum 3	x s	pectrum ·	4 🗶		
Ref Level 31.0	00 dBm Offset	11.00 dB 😑	RBW 10 M	IHz				
🔵 Att	30 dB 😑 SWT	100 ms 👄	VBW 10 M	IHz				
SGL								
Controlled by EM	C32 🔵 1Pk Max							
20 dBm								
Murchelin worked	www.www.wyhhu	mound	no-	Mayrelement	monautritude	wanna	munder	have been
10 dBm				•	· ·			
0 dBm								
-10 dBm								
-20 dBm								
-30 dBm								
-40 dBm								
-50 dBm								
-60 dBm								
-00 0011								
				L <u>. </u>				
CF 5.18 GHz			691	pts				10.0 ms/



TEST REPORT

802.11an(HT 40)

Channel 38: 5190 MHz:

Spectrum		ectrum 2		ectrum 3		pectrum -	4 🗶		
Ref Level Att SGL	31.00 dBm 30 dB	Offset e SWT	11.00 dB 👄 100 ms 👄	RBW 10 M VBW 10 M					
Controlled by	y EMC32 🔵 1	lPk Max							
20 dBm		www.undwe	Internation	runanin	ahronoutenter	nuluuunuu	www.ww	ununu	between the
0 dBm									
-10 dBm									
-30 dBm									
-40 dBm									
-60 dBm									
CF 5.19 GH	Iz			691	pts				10.0 ms/

802.11ac(HT 80)

Channel 42: 5210 MHz:

Spectrun		ectrum 2		pectrum 3		pectrum ·	4 🗙		
Ref Leve Att	l 31.00 dBm	Offset	11.00 dB	RBW 10 M					
SGL	30 UE	9 9 9 9 9 1	100 ms 🖷	VDW IUN					
Controlled b	y EMC32 😑	1Pk Max							
	-								
20 dBm									
10 dBm									
o dBm—	Mariana	www.white	muhannanan	an hard and a second	america hallinger	and an address of the second	our popular	munun	anna amh-dheagann
-10 dBm									
-20 dBm									
-30 dBm—									
-40 dBm									
-50 dBm									
CF 5.21 GH	1Z			691	pts				10.0 ms/



TEST REPORT

802.11a

Channel 52: 5260 MHz:

Spectrum		ctrum 2	<u> </u>	ectrum		Spectrum ·	4 🕱		
Ref Level 31 Att		Offset SWT	11.00 dB 👄 100 ms 👄						
SGL									
Controlled by EN	4C32 🔵 1 F	9k Max							
20 dBm									
unalteration	Hundham	amahan	ponurunul	humunu	Whenthern	- HABLAN ABULAN AB	hermonit	www.wardown	Munduest
10 dBm									
0 dBm									
-10 dBm									
-20 dBm									
-30 dBm									
-40 dBm									
10 dbm									
-50 dBm									
-60 dBm									
CF 5.26 GHz				69	1 pts				10.0 ms/

802.11an(HT 20)

Channel 52: 5260 MHz:

Spectrum		ectrum 2		pectrum 3		pectrum -	4 🗶		
Ref Level Att	31.00 dBm	Offset		RBW 10 M					
SGL	30 GB	5 🔲 5 W I	100 ms 🖷	ARM TO M	IHZ				
Controlled b	y EMC32 😑	1Pk Max							
20 dBm									
տարասիրություն 10 dBm——	nunun	minum	yhahamakkara	ybourbourborker	mohennerter	nuhahnyuknyu	ndmanhardert	hubratena	Muhimunan
0 dBm									
-10 dBm									
-20 dBm									
-30 dBm									
-40 dBm									
-50 dBm									
-60 dBm									
CF 5.26 GH	l Iz	1		691	pts				10.0 ms/



TEST REPORT

802.11an(HT 40)

Channel 54:5270 MHz:

Spectrum		ectrum 2	<u> </u>	ectrum 3		pectrum -	4 🗶		
Ref Level Att SGL	31.00 dBm 30 dB	Offset SWT	11.00 dB 👄 100 ms 👄	RBW 10 M VBW 10 M					
Controlled by	y EMC32 😑 1	lPk Max			1	1			
20 dBm	un sharadaand	wednesser	www.	ware	gunnalasseurs	nutrationale	numbudaw	mundere	Julium
0 dBm									
-10 dBm									
-20 dBm									
-30 dBm									
-40 dBm									
-50 dBm									
-60 dBm									
CF 5.27 GH	Iz			691	pts			1	10.0 ms/

802.11ac(HT 80)

Channel 58: 5290 MHz:

Spectrum	-	ectrum 2	<u> </u>	ectrum 3		pectrum -	4 🗶		
🖷 Att			11.00 dB 👄 100 ms 👄						
SGL Controlled by	y EMC32 🔵 1	LPk Max							
20 dBm									
10 dBm									
0 dBm	ntonon	www.www.yr	and married	nongranno	challenadoren	yurur-kulanyhaith	. Martin Martines and Andrews	nluununhu	processing the
-10 dBm									
-20 dBm									
-30 dBm									
-40 dBm									
-50 dBm									
-60 dBm									
CF 5.29 GF	łz			691	pts				10.0 ms/



TEST REPORT

802.11a

Channel 100: 5500 MHz:

Spectrum	Spectrum 2	<u> </u>	trum 3	X Spec	trum 4 🛛 🕱		
👄 Att	00 dBm Offset 30 dB 👄 SWT						
SGL Controlled by EM	C32 A1Pk Max						
20 dBm							
ահանհենուստեսիստությունը 10 dBm————————————————————————————————————	uhaya ana ana ana ana ana ana ana ana ana	and a property of the	wowellow	ullanutration	-jd-altanover-love	lun walanda	pulment
0 dBm							
-10 dBm							
-20 dBm							
-30 dBm							
-40 dBm							
-50 dBm							
-60 dBm							
CF 5.5 GHz			691 pts				10.0 ms/

802.11an(HT 20) Channel 100: 5500 MHz:

Spectrum	Spectrum 2	X Spe		🗴 SI	pectrum 4	t (X)		
RefLevel 31.00 Att 3		11.00 dB 👄 R 100 ms 👄 V						
SGL								
Controlled by EMC3:	2 9 1PK Max							
20 dBm	whipplantan	whender	unhuhdula	internet	www.and	ulternegu	Nulliulundus	who we wanted and
0 dBm								
-10 dBm								
-20 dBm								
-30 dBm								
-40 dBm								
-60 dBm								
CF 5.5 GHz			691 pts					10.0 ms/



TEST REPORT

802.11an(HT 40)

Channel 102: 5510 MHz:

Spectrum	Spectrum 2		ectrum 3		pectrum 4	4 🗶		
Ref Level 31.00 Att SGL) dBm Offset 30 dB 🖷 SWT	11.00 dB 👄 100 ms 👄						
Controlled by EMC:	32 😑 1 Pk Max						I	
20 dBm								
werden warmen me	un manufacture	where the and the second		bounder	how were	hundred		moundary
0 dBm								
-10 dBm								
-20 dBm								
-30 dBm								
-40 dBm								
-50 dBm								
-60 dBm								
CF 5.51 GHz	I		691	pts			1	10.0 ms/

^{802.11}ac(HT 80)

Channel 106: 5530 MHz:

Spectrum	-	ectrum 2		ectrum 4					
Ref Level			11.00 dB 😑						
e Att	30 dB	🔵 SWT	100 ms	VBW 10 M	1Hz				
SGL									
Controlled b	y EMC32 🔵 1	LPk Clrw							
20 dBm									
10 dBm									
North March	مللالمساسمين العليه	malutertant	maran Mbhail	whowwww	markama	hunnun	rhandlower	abermenter	aughted and the second
-10 dBm									
-20 dBm									
-30 dBm									
-40 dBm									
-50 dBm									
-60 dBm									
CF 5.53 GH	lz			691	pts				10.0 ms/



TEST REPORT

802.11a

Channel 149: 5745 MHz:

Spectrum	n Sp	ectrum 2		pectrum 4		pectrum (3 X		
Ref Level Att SGL	31.00 dBm 30 dB	n Offset 3 e SWT	11.00 dB 🖷 100 ms	RBW 10 M VBW 10 M					
Controlled by	y EMC32 🔵	1Pk Clrw							
	ruhuuruum	marther	muner	autoritie	phonogenerations	manne	Muhamadamb	nununum	nuturturated
10 dBm									
-10 dBm									
-20 dBm									
-40 dBm									
-50 dBm									
-60 dBm									
CF 5.745 G	Hz			691	pts				10.0 ms/

802.11an(HT 20)

Channel 149: 5745 MHz:

Spectrum Spectrum 2 (8) Spectrum 4 (8) Spectrum 3 (8)
Ref Level 31.00 dBm Offset 11.00 dB RBW 10 MHz Att 30 dB SWT 100 ms YBW 10 MHz
SGL
Controlled by EMC32 1Pk Clrw
20 dBm
manager and and and an and a second and
10 dBm-
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
CF 5.745 GHz 691 pts 10.0 ms/



TEST REPORT

802.11an(HT 40)

Channel 151:5755 MHz:

Spectrum	-	ectrum 2		bectrum 4		pectrum	3 X		
Ref Level Att SGL		Offset SWT	11.00 dB 👄 100 ms	RBW 10 M VBW 10 M					
Controlled by	EMC32 🔵 1	LPk Clrw							
20 dBm									
~10/d8#wow	مهاده والمعادم	بالاختا فمحسم بالم	ويت محمد المحمد الم	فالتقامات ويسام فيشاك	كمعاقد بالبريزيل بالبراك	ل من سرافان تعريق الم مان ^{ير} با مان	طسهاباليه طامته وساره	ليحصمح محموديه	مسطنه اسليمي هديو
0 dBm									
-10 dBm									
-20 dBm									
-30 dBm									
-40 dBm									
-50 dBm									
-60 dBm									
CF 5.755 GH	Ηz			691	pts	1		1	10.0 ms/

802.11ac(HT 80)

Channel 155: 5775 MHz:

Spectrun	-	ectrum 2		pectrum 4					
	l 31.00 dBm								
e Att	30 dB	e swt	100 ms	VBW 10 M	1Hz				
SGL									
Controlled b	y EMC32 😑	1Pk Cirw							
20 dBm									
10 dBm									
Humana	www.	maringul	proposition	mohuman	A AN LINGHAMMAN A	When Mary Mary Mary	human	moundance	meren marchale
0 dBm	• •								
-10 dBm									
-10 0011									
-20 dBm									
-30 dBm									
-40 dBm									
-50 dBm									
-60 dBm									
-00 0011									
CF 5.775 (GHz			691	pts				10.0 ms/

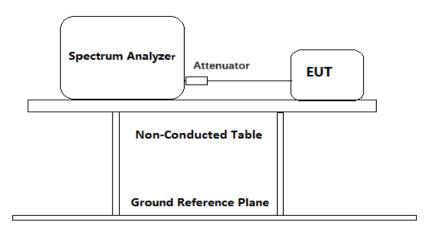


TEST REPORT

4.3 26 dB Bandwidth

Test Requirement: Test Method:	FCC PART 15 E clause 15.407(a) FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01,Clause C&D
Test Status:	Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed below.
Tost Configuration:	

Test Configuration:



Test Procedure:

- 1. Remove the antenna from the EUT and then connect a low attention attenuation RF cable (cable loss =1 dB, with 10dB attenuator) from the antenna port to the spectrum.
- 2. Set the spectrum analyzer:
 - a) Set the RBW = approximately 1% of the emission bandwidth.
 - b) Set the VBW \geq [3 × RBW].
 - c) Detector = peak.
 - d) Trace mode = max hold.
 - e) Sweep = auto couple.
 - f) Allow trace to fully 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 26 dB relative to the maximum level measured in the fundamental emission.

- 3. Repeat until all the test status is investigated.
- 4. Report the worst case.

Used Test Equipment List

Spectrum Analyzer. Refer to Clause 5 Test Equipment List for details.



Band I (5150MHz - 5250MHz)

Channel No.	Frequency (MHz)	Mode	Data Rate	Result
36	5180		6 Mbps	19.624
40	5200	802.11a	6 Mbps	19.754
48	5240		6 Mbps	19.667
36	5180	802.11an	7.2 Mbps	20.275
40	5200	(HT20)	7.2 Mbps	20.145
48	5240	(0)	7.2 Mbps	20.101
38	5190	802.11an	15 Mbps	40.724
46	5230	(HT40)	15 Mbps	40.724
42	5210	802.11ac (HT80)	32.5 Mbps	81.450

Band II (5250MHz-5350MHz)

Channel No.	Frequency (MHz)	Mode	Data Rate	Result
52	5260		6 Mbps	19.971
60	5300	802.11a	6 Mbps	19.797
64	5320		6 Mbps	19.797
52	5260	802.11an	7.2 Mbps	20.029
60	5300	(HT20)	7.2 Mbps	19.971
64	5320	(7.2 Mbps	20.087
54	5270	802.11an	15 Mbps	40.870
62	5310	(HT40)	15 Mbps	40.750
58	5290	802.11ac (HT80)	32.5 Mbps	81.620



Band III (5470MHz-5725MHz)

Channel No.	Frequency (MHz)	Mode	Data Rate	Result
100	5500		6 Mbps	19.682
116	5580	802.11a	6 Mbps	19.682
140	5700		6 Mbps	20.087
100	5500	802.11an	7.2 Mbps	20.029
116	5580	(HT20)	7.2 Mbps	20.029
140	5700	(11120)	7.2 Mbps	20.260
102	5510	802.11an	15 Mbps	40.640
110	5550	(HT40)	15 Mbps	40.897
134	5670		15 Mbps	40.810
106	5530	802.11ac (HT80)	32.5 Mbps	81.62

Band IV (5725MHz – 5850MHz)

Danu IV (5725141112	3030141112)			
Channel No.	Frequency (MHz)	Mode	Data Rate	Result
149	5745		6 Mbps	19.624
157	5785	802.11a	6 Mbps	19.797
165	5825		6 Mbps	19.971
149	5745	802.11an	7.2 Mbps	20.203
157	5785	(HT20)	7.2 Mbps	20.087
165	5825	(11120)	7.2 Mbps	19.971
151	5755	802.11an	15 Mbps	40.640
159	5795	(HT40)	15 Mbps	40.640
155	5775	802.11ac (HT80)	32.5 Mbps	81.620

Test result: The unit does meet the FCC requirements.



Result plot as follows (ANT1):

Band I 5150 MHz to 5250 MHz

802.11a Channel 36: 5180 MHz:

Spectrur	n S	pectrum 2	🗴 Spec	trum 3	X Spectr	um 4 🛛 🗴		
Ref Leve	l 21.00 dB	m Offset 11.	.00 dB 🔵 RB	W 300 kHz				
🖷 Att	20 c	ib SWT 25	5.2 µs 👄 🛛 🛛	W 1 MHz	Mode Auto	FFT		
Controlled b	ру ЕМСЗ2 🄇	1Pk Max						
					M1[1]			0.08 dBm
							5.17	68740 GHz
10 dBm					ndB			26.00 dB
			ML		Bw		19.6240	00000 MHz
0 dBm			$\sim\sim\sim$	m	Q factor	- m	1	263.8
40.10				Υ		my		
-10 dBm—								
-20 dBm							1	
-20 aBm—	T1						V ²	
-30 dBm	Ĭ Ž						N N	
-30 ubiii								
-40 dBm—								
-40 0811								
~50 d8ffi								\sim
-60 dBm								
-70 dBm-								
CF 5.18 G	H7			691 pt:	s – – – – – – – – – – – – – – – – – – –		Snan	30.0 MHz
Marker				551 pt.	-		opan	001011112
	ef Trc	X-value	Y	-value	Function	Eun	ction Result	· 1
M1	1	5.176874		0.08 dBm	ndB down	7 414		9.624 MHz
T1	1	5.170188		25.98 dBm	ndB			26.00 dB
T2	1	5.189812	GHz -	25.71 dBm	Q factor			263.8

Channel 40: 5200 MHz:

Spectrum	Spe	ectrum 2	🗴 Spe	ctrum 3	xs	pectru	um 4 🛛 🕱		
Ref Level	21.00 dBm	Offset 11.0	o dB 🥃 RE	W 300 kHz					
🗕 Att	20 dB	SWT 25.	2 µs 👄 🛛 🛛	3W 1 MHz	Mode	Auto Fl	FT		
Controlled by	/ EMC32 🔵1	.Pk Max							
					M	1[1]		E 00	-0.02 dBm 009120 GHz
10 dBm					n	IB.		3.20	26.00 dB
					M1 B			19.7540	000000 MHz
0 dBm				~~~ ~	X-Q	factor			263.3
		\sim	~~~~	Ϋ́			$\sim \sim 1^{m}$		
-10 dBm									
								V	
-20 dBm	IJ							<u>V</u> 2	
-30 dBm	y j							X	
-30 ubiii									
-40 dBm								\rightarrow	
~50-dBm~~	<u>2</u>							h	man
-60 dBm									
-70 dBm									
CF 5.2 GHz				691 pt	5			Spar	1 30.0 MHz
Marker									
Type Ref		X-value		'-value	Func		Fi	unction Result	
M1	1	5.200912 G		-0.02 dBm	ndB	down		1	19.754 MHz
T1 T2	1	5.190014 G		-26.16 dBm -25.88 dBm	0.	ndB factor			26.00 dB 263.3
12	1 1	5.209708 6	12	-23.08 UBM	L Q	actor			203.3



TEST REPORT

Channel 48: 5240 MHz:

Spect	rum	Sp	ectrum 2	×	Spectr	um 3	×s	pectru	um 4	X		
	evel	21.00 dBn										
Att		20 di		38 µs	VBW	1 MHz	Mode	Auto F	FT			
Controlle	ed by	ЕМСЗ2 😑	1Pk Max									
							M	1[1]				-2.37 dBm
10 dBm·											5.24	19970 GHz
TO UBIII							n				10.0070	26.00 dB
0 dBm—							M1 B	// factor			19.0070	00000 MHz 266.5
o abiii					mm	m	mm	h	ا ا	1		200.5
-10 dBm			An	V VIII		<u> </u>			- when the second	\sim		
-20 dBm	η <u> </u>											
			1								T2	
-30 dBm	∩	Y									<u> </u>	
											$\langle \rangle$	
-40 dBm	ι 										<u> </u>	
											- <u>\</u> .	
~5Q_d&p	3 200 94	90°°										mon som
-60 dBm	ד_י											
-70 dBm												
-70 UBI												
CF 5.24	+ GHZ	<u>'</u>				691 pt	5				span	30.0 MHz
Marker		1 m 1								-		
Type	Ref		X-value 5.24199		Y-V-	alue 37 dBm	Func	tion down		Func	tion Result	9.667 MHz
M1 T1		1	5.24199			.37 dBm .47 dBm	TICE	aown ndB			1	26.00 dB
T2		1	5.2301			.12 dBm	0	factor				266.5

802.11an(HT 20) Channel 36: 5180 MHz:

Spectrum		Spectrum 2	X Spectr	um 3	× Spectru	um 4 🛛 🗶		
Ref Level	21.00 d	Bm Offset 11.	.00 dB 🥃 RBW	300 kHz				
Att	20		5.2 µs 👄 VBW	1 MHz	Mode Auto F	FT		
Controlled by	EMC32	🔵 1Pk Max						
					M1[1]			-2.12 dBm
							5.17	70040 GHz
10 dBm					ndB			26.00 dB
			M1		Bw		20.2750	00000 MHz
0 dBm			a than	~ ~	Q factor			255.3
		mon		· V		mm		
-10 dBm						`		
							Ν	
-20 dBm	T 1/						70	
	√						V2	
-30 dBm	- /						+	
							$ \rangle$	
-40 dBm								
	J							
~58/dBm-^-	~							~~~~~~~~
-60 dBm								
-70 dBm								
CF 5.18 GHz	z	· · ·		691 pts			Span	30.0 MHz
Marker								
Type Ref	Trc	X-value	Y-Vi	alue	Function	Fun	ction Result	1
M1	1	5.177004		.12 dBm	ndB down			0.275 MHz
T1	1	5.169884	GHz -28	.39 dBm	ndB			26.00 dB
T2	1	5.190159	GHz -28	.12 dBm	Q factor			255.3



TEST REPORT

Channel 40: 5200 MHz:

Spectrur	n Sp	ectrum 2 🛛 🛛	Spectrum 3	🗴 Spectr	um 4 🛛 🗴	
	l 21.00 dBm		iB 👄 RBW 300 kH			
e Att	20 dB		us 👄 VBW 🛛 1 MH	z Mode Auto P	FT	
Controlled b	y EMC32 😑 1	LPk Max				
				M1[1]		-0.80 dBm
10 dBm						5.1991320 GHz
TO UBIII-				ndB		26.00 dB
0 dBm			M1	Bw		20.145000000 MHz
			man .		m. hr.	258.1
-10 dBm—		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	۲ ۲		- mon	
-10 abiii						
-20 dBm—						
20 0011						12
-30 dBm—	Ϋ́					X
oo abiii						
-40 dBm—						
ie abiii						
~50-dBm-~	~~					
-60 dBm						
-70 dBm						
CF 5.2 GH	z		691 p	ots		Span 30.0 MHz
Marker						
Type Re	f Trc	X-value	Y-value	Function	Fun	ction Result
M1	1	5.199132 GH				20.145 MHz
T1	1	5.189928 GH	-26.67 dBn	n ndB		26.00 dB
T2	1	5.210072 GH:	-26.93 dBn	n Q factor		258.1

Channel 48: 5240 MHz:

Spect	rum	Sp	ectrum 2	×	Spectr	um 3	XE	pectri	um 4	X		
Ref L	evel	21.00 dBn	Offset 1	1.00 dB	🔵 RBW	300 kHz						
🛛 Att		20 di		25.2 µs	👄 VBW	1 MHz	Mode	Auto F	FT			
Controlle	ed by	ЕМСЗ2 😑	1Pk Max									
							M	1[1]				-1.59 dBm
											5.23	879590 GHz
10 dBm								1B				26.00 dE
a 15					M1		В				20.1010	00000 MHz
0 dBm—					mont	mn	~~~~	factor				260.6
			m	\sim	· [~	- ¥			m	\sim		
-10 dBm) <u> </u>		/								X	
00 40-		/									Ν	
-20 dBrr		T1									12	
-30 dBm		7									V V	
-30 uBn												
-40 dBrr												
-40 UBN												
-StoraBri	nh	\mathcal{N}										m
-30 060												
-60 dBm												
-00 001	'											
-70 dBm												
70 abii												
05 F 0											L	
CF 5.2	+ GHZ	<u>.</u>				691 pts	`				span	30.0 MHz
Marker		1 - - 1		1			-			-		
Type M1	Ref		X-value 5.23795		<u>Y-va</u>	lue .59 dBm	Func	tion down		Fun	ction Result	: 20.101 MHz
 T1		1	5.23795			.59 dBm .74 dBm	riaB	aown ndB			2	26.00 dB
T2		1	5.22992			.61 dBm	0	factor				26.00 ub 260.6
12		1 1	5,25002		21	or abili	Q	100.01				200.0



TEST REPORT

802.11an(HT 40)

Channel 38: 5190 MHz:

Spectru	im (Spectrum 2	× s	pectrum 3	X	Spectr	um 4	X		
	el 21.00 d			RBW 500 kł						
Att		db SWT	1 ms 😑	VBW 2 Mł	Hz Mode	a Auto S	Sweep			
Controlled	by EMC32	●1Pk Max								
					P	11[1]				1.18 dBm
10 dBm—									5.19	13020 GHz
10 aBm—						dB				26.00 dB
0 dBm					_	SW .			40.7240	00000 MHz
0 asm		manum	www.	and a group of	Junctores	itactor	munn	mon		127.5
-10 dBm-		Λ			r					
-10 UBIII-		1							7	
-20 dBm-		/							<u> </u>	
-20 ubm	T1								¥∉	
-30 dBm-									<u> </u>	
-30 abiii										
-40 dBm-									<u> </u>	
monuna	ment								hun	munul
-50 dBm-										
50 abiii										
-60 dBm-										
-70 dBm-										
CF 5.19	GHz			691	nts	1			Snan	60.0 MHz
Marker									opun	
	Ref Trc	X-value		Y-value	- Eun	ction		Func	tion Result	
M1		5.1913		1.18 dB		3 down		Tunc		0.724 MHz
T1	1	5.1696		-25.67 dB		ndB				26.00 dB
T2	1	5.2104	D5 GHz	-24.62 dB	m Ç	factor				127.5

Channel 46: 5230 MHz:

Spectrum		Spectrum 2	X Spectro	um 3	× Spect	rum 4 🛛 🗶)	
Ref Level) dB 🥌 RBW					
Att			ms 👄 VBW	2 MHz	Mode Auto	Sweep		
Controlled by	EMC32	😑 1Pk Max						
					M1[1]			1.42 dBm
10 dBm							5.23	46890 GHz
10 0800					ndB Masw		10 70 10	26.00 dB
0 dBm			La Roy	وقبر مساهر				00000 MHz 128.5
0 abiii		morumation		$^{\circ}$ V		malling	any	128.5
-10 dBm								
							1	
-20 dBm	<u>−−</u> ⊤∳	,					72	
	y'						Υ .	
-30 dBm							+	
	1						1 ไ	
-40 dBm								
nerounation	.V40						ww	www.wh
-50 dBm								
60 ID								
-60 dBm								
-70 dBm								
-70 übili								
CF 5.23 GHz				(01				60.0 MU-
	<u>.</u>			691 pts			span	60.0 MHz
Marker	L True L	X-value	Y-va		Function	1	Inction Result	
Type Ref M1	Trc 1	5.234689 G		.42 dBm	ndB down	Fu Fu		0.724 MHz
T1	1	5.209682 G		.76 dBm	ndB down			26.00 dB
T2	1	5.250405 G		.32 dBm	Q factor			128.5



TEST REPORT

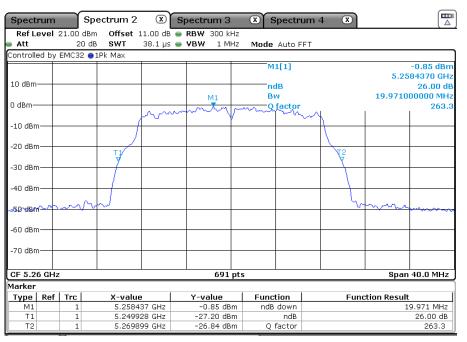
802.11ac(HT 80)

Channel 42: 5210 MHz:

Spectrum	Spe	ectrum 2 (x Sp	ectrum 3	XS	pectru	ım 4	X		
Ref Level 3 Att	21.00 dBm 20 dB	Offset 11.00 SWT 1		RBW 1 MHz VBW 3 MHz		uto Sw	еер			
Controlled by	EMC32 🔵 1	Pk Max								
					M	1[1]				-3.64 dBm
									5.1	.84650 GHz
10 dBm						1B				26.00 dB
0 dBm		M1			B				81.4500	00000 MHz
U dBm		The second se	A	N	Q.	factor				63.7
-10 dBm	<u> </u>	- and a second second	manne	amound the second	premierand	nutur	min	when	5	
-10 UBIII	Л									
-20 dBm										
-20 00111									12	
-30 dBm	4								¥	
00 00.00	1								- L	
-40 dBm										
ulturnound	w l								Where .	hunnum
-50 dBm										
-60 dBm										
-70 dBm										
CF 5.21 GHz				691	pts				Span :	120.0 MHz
Marker										
Type Ref	Trc	X-value	1	Y-value	Func	tion		Func	tion Result	: 1
M1	1	5.18465 G	Ηz	-3.64 dB	m ndB	down				81.45 MHz
T1	1	5.16936 G		-29.83 dB		ndB				26.00 dB
T2	1	5.25081 G	-lz	-29.56 dB	m Q	factor				63.7

Band II 5250 MHz to 5350 MHz

802.11a Channel 52: 5260 MHz:





TEST REPORT

Channel 60: 5300 MHz:

-10 dBm -20 dBm -20 dBm -30 dBm -40 dBm -40 dBm -40 dBm -40 dBm -40 dBm -70	Spectru	m	Spectrum 2	×	Spectrum 3	x 5	pectru	um 4 🛛 🗶		
Controlled by EMC32 • 1Pk Max M1[1] -1.44 dBm 10 dBm										
M1[1] -1.44 dBm 10 dBm ndB 26.00 dH 0 dBm 0 factor 267.6 -10 dBm -1.14 dBm 267.6 -20 dBm -1.1 -1.2 -30 dBm -1.1 -1.2 -30 dBm -1.1 -1.2 -20 dBm -1.1 -1.2 -30 dBm -1.1 -1.2 -30 dBm -1.1 -1.2 -20 dBm -1.1 -1.2 -30 dBm -1.1 -1.2 -30 dBm -1.1 -1.1 -20 dBm -1.1 -1.1 -30 dBm -1.1 -1.1 -20 dBm -1.1 -1.1 -20 dBm -1.1 -1.1 -30 dBm -1.1 -1.1 -1.1				38.1 µs (VBW 1 MH	z Mode	Auto F	FT		
10 dBm	Controlled	ву Емсз	2 0 1Pk Max	1						
10 dBm ndB 26.00 dE 0 dBm 9.797000000 MHz 26.7.6 -10 dBm 9 factor 26.7.6 -10 dBm 7 7 -20 dBm 11 7 -20 dBm 7 7 -30 dBm 7 7 -40 dBm 7 7 -56 dBm 7 7 -70 dBm 691 pts Span 40.0 MHz Marker Type Ref Trc X-value Y-value Function Function Result M1 1 5.301331 GHz -1.44 dBm ndB down						M	1[1]			
D dBm M1 Bw 19.797000000 MHz -10 dBm -10 dBm -267.6 267.6 -20 dBm -11 -27 -27 -30 dBm -11 -27 -27 -30 dBm -11 -27 -20 -40 dBm -11 -27 -27 -60 dBm -11 -11 -11 -70 dBm -11 -11 -11 -70 dBm -11 -11 -11 -11 -11 -11 -11 -11 -11 -11	10 dBm—						10		5.30	
0 dBm 11 0 factor 267.6 -10 dBm -10 dBm -10 dBm -10 dBm -10 dBm -20 dBm T1 -10 dBm -10 dBm -10 dBm -30 dBm T1 -10 dBm -10 dBm -10 dBm -40 dBm -10 dBm -10 dBm -10 dBm -10 dBm -60 dBm -10 dBm -10 dBm -10 dBm -10 dBm -70 dBm -10 dBm -10 dBm -10 dBm -10 dBm -70 dBm -10 dBm -10 dBm -10 dBm -10 dBm -70 dBm -10 dBm -10 dBm -10 dBm -10 dBm -70 dBm -10 dBm -10 dBm -10 dBm -10 dBm -70 dBm -10 dBm -10 dBm -10 dBm -10 dBm -70 dBm -10 dBm -10 dBm -10 dBm -10 dBm -11 1 5.301331 GHz -1.44 dBm -10 dB down 19.797 MHz									19.7970	
-10 dBm	0 dBm				-	IVI I			1011010	267.8
-20 dBm				ham	mund	mun	mm	int		
-30 dBm -40 dBm -40 dBm -60 dBm -70	-10 dBm—			<u> </u>				<u>* N</u>		
-30 dBm -40 dBm -40 dBm -60 dBm -70			- - /							
-30 dBm -40 dBm -40 dBm -60 dBm -70	-20 dBm—									
-40 dBm -40 dBm <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>¥ Z</td><td></td><td></td></t<>								¥ Z		
56 dBm 756 dBm 756 dBm -60 dBm -60 dBm -70 dBm -70 dBm -70 dBm -70 dBm CF 5.3 GHz 691 pts Span 40.0 MHz Marker Type Ref Trc X-value Y-value Function Function Result M1 1 5.301331 GHz -1.44 dBm ndB down 19.797 MHz	-30 dBm—									
56 dBm 756 dBm 756 dBm -60 dBm -60 dBm -70 dBm -70 dBm -70 dBm -70 dBm CF 5.3 GHz 691 pts Span 40.0 MHz Marker Type Ref Trc X-value Y-value Function Function Result M1 1 5.301331 GHz -1.44 dBm ndB down 19.797 MHz										
CF 5.3 GHz 691 pts Span 40.0 MHz -70 dBm -70 dBm CF 5.3 GHz 691 pts Span 40.0 MHz Marker Type Ref Trc X-value Y-value Function Function Result M1 1 5.301331 GHz -1.44 dBm ndB down 19.797 MHz	-40 dBm—									
-60 dBm -60 dBm -70 dBm <t< td=""><td>- A</td><td>In</td><td>\mathcal{M}</td><td></td><td></td><td></td><td></td><td>- W</td><td>mm</td><td></td></t<>	- A	In	\mathcal{M}					- W	mm	
-70 dBm 691 pts Span 40.0 MHz GF 5.3 GHz 691 pts Span 40.0 MHz Marker Type Ref Trc X-value Y-value Function Function Result M1 1 5.301331 GHz -1.44 dBm ndB down 19.797 MHz	/~ 5 8 α 8 m~									
-70 dBm 691 pts Span 40.0 MHz GF 5.3 GHz 691 pts Span 40.0 MHz Marker Type Ref Trc X-value Y-value Function Function Result M1 1 5.301331 GHz -1.44 dBm ndB down 19.797 MHz	60 d8m									
CF 5.3 GHz 691 pts Span 40.0 MHz Marker Type Ref Trc X-value Y-value Function Function Result M1 1 5.301331 GHz -1.44 dBm ndB down 19.797 MHz	-00 ubiii-									
CF 5.3 GHz 691 pts Span 40.0 MHz Marker Type Ref Trc X-value Y-value Function Function Result M1 1 5.301331 GHz -1.44 dBm ndB down 19.797 MHz	-70 dBm-									
Type Ref Trc X-value Y-value Function Function Result M1 1 5.301331 GHz -1.44 dBm ndB down 19.797 MHz	-70 abm									
Type Ref Trc X-value Y-value Function Function Result M1 1 5.301331 GHz -1.44 dBm ndB down 19.797 MHz									0	40.0 MU
Type Ref Trc X-value Y-value Function Function Result M1 1 5.301331 GHz -1.44 dBm ndB down 19.797 MHz		72			091	115			əpan	40.0 MHZ
M1 1 5.301331 GHz -1.44 dBm ndB down 19.797 MHz		of	V_U!	, 1	V-ualue	1 Euro	tion 1	E	tion Bocult	
								Funi		
T1 1 5.290217 GHz -27.39 dBm ndB 26.00 dB	T1	1			-27.39 dBi		ndB			26.00 dB
T2 1 5.310014 GHz -27.35 dBm Q factor 267.8										

Channel 64: 5320 MHz:

Spectrum	s	pectrum 2	×s	pectrum 3	: (x s	pectru	um 4	×		
Ref Level				RBW 300 k							
Att	20 c		18.1 µs 👄	VBW 1 M	Hz	Mode	Auto Fl	FT			
Controlled by	EMC32 🤇)1Pk Max									
						M:	L[1]				-0.03 dBm
10 dBm							_			5.32	09840 GHz
10 0811						nd				40 7070	26.00 dB
0 dBm					M1	Bv				19.7970	00000 MHz
U UBIII			m	mon	سكر	$\overline{\ }$	factor	I		I.	268.8
-10 dBm			0.0	1	¥ –			r al			
-10 aBm											
-20 dBm											
-20 ubiii		TJ/							<u>V</u> 2		
-30 dBm		Y							Υ		
-30 aBm											
10 10-											
-40 dBm											
	and a	m							~	marin	0
⊊59 [°] d&m^⊷∽⊂	0000	1 1								- VC X	
50 ID											
-60 dBm											
-70 dBm											
CF 5.32 GHz				691	pts					Span	40.0 MHz
Marker											
Type Ref	Trc	X-value		Y-value		Funct	ion		Func	tion Result	
M1	1	5.320984		-0.03 dE		ndB	down			1	9.797 MHz
T1	1	5.310043		-25.87 dE			ndB				26.00 dB
T2	1	5.329841	L GHz	-25.79 dE	3m	Qf	actor				268.8

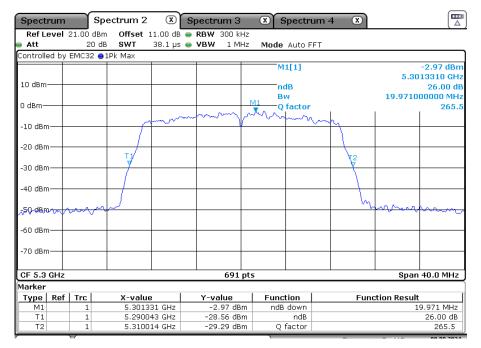


TEST REPORT

802.11an(HT 20) Channel 52: 5260 MHz:

Spectrum	ı Sp	ectrum 2	× :	Spectru	um 3	XS	pectru	um 4	X		
Ref Leve	21.00 dBm	Offset 11	00 dB 🥃	RBW	300 kHz						
🖷 Att	20 dB	SWT 3	38.1 µs 🧉	VBW	1 MHz	Mode	Auto F	FT			
Controlled b	у ЕМСЗ2 😑	1Pk Max									
						M	1[1]				-1.68 dBm
10 dBm										5.25	587260 GHz
10 aBm						n					26.00 dB
0 dBm					M1	B				20.0290	00000 MHz
U UBIII					<u>~</u>	$\sim \sim ^{\circ}$	factor	1		1	262.6
-10 dBm		~	m and a second		Ψ.		- v~	my			
-10 0.011		/							\		
-20 dBm									1		
20 0.0		/							<u></u> ζ2		
-30 dBm		y y							<u> </u>		
-40 dBm				_					-+		
									1		
-50 dBm	بمهمممهم	and the second s							~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	have an	m
-60 dBm				+							
-70 dBm				-							I
CF 5.26 GH	-lz				691 pt:	s				Span	140.0 MHz
Marker											
Type Re	f Trc	X-value		Y-va	lue	Func	tion		Fund	ction Result	t
M1	1	5.258726			68 dBm	ndB	down			2	20.029 MHz
T1	1	5.249986			41 dBm		ndB				26.00 dB
T2	1	5.270014	4 GHz	-27.	46 dBm	Q	factor				262.6

Channel 60: 5300 MHz:





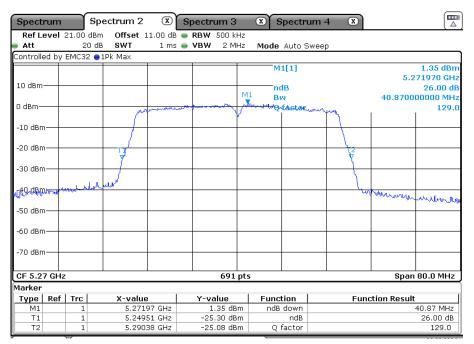
TEST REPORT

Channel 64: 5320 MHz:

Spectru	ım	Sp	ectrum 2	×	Spectr	um 3	×s	pectri	um 4	X		
Ref Lev	/el 21			1.00 dB 🍕	RBW	300 kHz						
🗕 Att		20 dB		38.1 µs 🌘	VBW	1 MHz	Mode	Auto F	FT			
Controlled	by EM	1C32 😑	LPk Max									
							M	1[1]				-2.17 dBm
10 10											5.31	.62950 GHz
10 dBm—							no					26.00 dB
0.40					М1		B				20.0870	00000 MHz
0 dBm—					alm	m	Anna Q	factor			I	264.7
-10 dBm-			~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	/v] - ~	`¥_		m	m			
-10 asm-												
-20 dBm-												
-20 ubm-			т₁∕							V2		
-30 dBm-			7							7		
-30 0011												
-40 dBm-												
-+0 ubm												
A50_dBmA		A. D~	m							~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	massa	
C Strathull	~ ~											· · · · · · · · · · · · · · · · · · ·
-60 dBm-												
-70 dBm-												
CF 5.32	GHz					691 pt	5				 Snan	40.0 MHz
Marker	u 2					p	2				opan	
	Ref T	re l	X-value	1	Y-va	مىلىم	Func	tion		Eupe	tion Result	. 1
M1		1	5.31629			.17 dBm		down		runt		0.087 MHz
T1		1	5.30992			.83 dBm	- Inde	ndB				26.00 dB
T2		1	5.33001			.31 dBm	Q	factor				264.7
	- 27											

802.11an(HT 40)

Channel 54: 5270 MHz:





TEST REPORT

Channel 62: 5310 MHz:

Spectru	ım	Sp	ectrum 2	×	Spectr	um 3	× 5	pectri	um 4	X		
Ref Lev	el 21											
Att		20 di		1 ms	VBW	2 MHz	Mode	Auto S	weep			
Controlled	by Ef	MC32 😑	1Pk Max									
							M	1[1]				-3.14 dBm
10 dBm—											5.3	08150 GHz
TO OBIII							no				10 7500	26.00 dB
0 dBm						M1	Bi	// factor			40.7500	00000 MHz 130.3
o ubili				moun	1 minut	worth pr	minhan	Idetor	. 1			130.3
-10 dBm—			July 1	m		<u> </u>			many			
10 0.0111									$ \rangle$			
-20 dBm-									\rightarrow			
			τψ ¹							12		
-30 dBm—			7							¥.		
										1		
-40 dBm—			L 5		_					\rightarrow		
		و المانية الم	and a								workdung	1
-SO dBm-	www	hann								~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		with market the second
-60 dBm—												
-70 dBm—												
CF 5.31 (GHz					691 pt	s				Span	80.0 MHz
Marker												
Type R	Ref 1	Trc	X-value		Y-va	alue	Func	tion		Func	tion Result	
M1		1		L5 GHz		.14 dBm	ndB	down				40.75 MHz
T1		1	5.2896			.25 dBm		ndB				26.00 dB
T2		1	5.3303	38 GHz	-29	.81 dBm	Q .	factor				130.3

802.11ac(HT 80)

Channel 58: 5290 MHz:

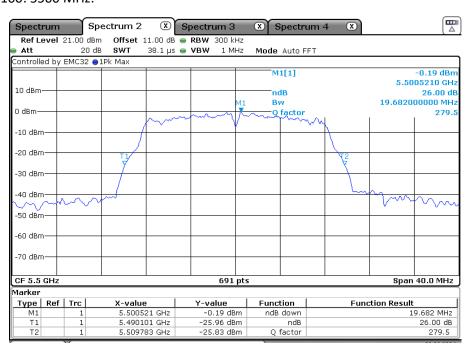
Spectrum	s	pectrum 2 🛛 🕱	Spectrum 3	× Spectru	um 4 🛛 🗶		
Ref Level			B 👄 RBW 1 MHz				
Att	20 c		s 👄 VBW 3 MHz	Mode Auto Sw	еер		
Controlled by	/ EMC32 🤇	1Pk Max					
				M1[1]			-4.04 dBm
10 - 10						5.2	264650 GHz
10 dBm				ndB			26.00 dB
0 10		M1		Bw		81.6200	00000 MHz
0 dBm		· · · · · · · · · · · · · · · · · · ·		Q factor	1	1	64.5
10 40	(undrammen of r	mannena	- manana	- My	
-10 dBm							
-20 dBm						1.1	
-20 ubiii							
-30 dBm	1					12	
-30 dBm						1	
-40 dBm							
-40 UBIII	w./					- Contra	an when when
-50 dBm							and man and a second
-50 UBIII							
-60 dBm							
-00 ubiii							
-70 dBm							
-70 ubiii							
CF 5.29 GH	Z		691 pt	5		Span	120.0 MHz
Marker							
Type Ref		X-value	Y-value	Function	Fur	nction Result	
M1	1	5.26465 GHz	-4.04 dBm	ndB down			81.62 MHz
T1	1	5.24919 GHz	-30.35 dBm	ndB			26.00 dB
T2	1	5.33081 GHz	-30.47 dBm	Q factor			64.5



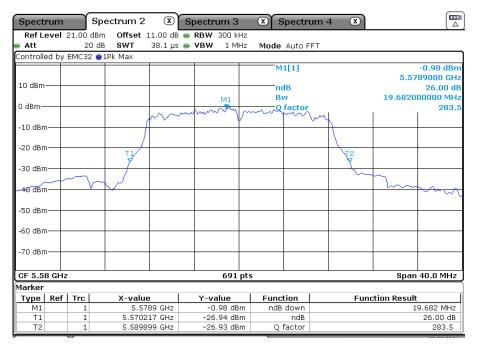
TEST REPORT

Band III 5470 MHz to 5725 MHz

802.11a Channel 100: 5500 MHz:



Channel 116: 5580 MHz:





TEST REPORT

Channel 140: 5700 MHz:

Spectru	ım	Sp	ectrum 2	×	Spec	trum 3	}	× s	pectru	um 4	x x		
	/el 2	1.00 dBm											
Att		20 dB		38.1 µs	e VB	V 1 №	1Hz	Mode	Auto F	FT			
Controlled	l by E	MC32 😑 1	LPk Max										
								M	1[1]				-2.77 dBm
10 dBm—												5.69	91320 GHz
TO UBIII-								nc					26.00 dB
0 dBm						M1		Bi				20.0870	00000 MHz 283.7
U UBIII					0.000	h	~~~	m and	factor	1		1	283.7
-10 dBm-				\sim	~~~~		V –	· • • •	~~~	m			
-10 ubiii-			[[
-20 dBm-											<u> </u>		
-20 ubm			тı								V2		
-30 dBm-			₹								¥.		
-30 ubm-													
-40 dBm-													
-50 dBm-	nh	m	\sim								\sim	MAR	
~50 GBM-													
-60 dBm-													
-60 uBili-													
-70 dBm-													
-70 ubiii-													
CF 5.7 G	Hz					691	pts					Span	40.0 MHz
Marker													
	Ref	Trc	X-value			value		Func			Fund	ction Result	
M1		1	5.6991			-2.77 df		ndB	down			2	0.087 MHz
T1		1	5.6899			29.13 dE			ndB				26.00 dB
T2		1	5.7100	14 GHZ		28.67 dE	sm	Q	factor				283.7

802.11an(HT 20) Channel 100: 5500 MHz:

Spectrum	s	pectrum 2	🗴 Spe	ctrum 3	X Spectr	um 4 🛛 🕱		
Ref Level				3W 300 kHz				`
Att 🗧	20 0		8.1 µs 👄 ۷	3W 1 MHz	Mode Auto P	FT		
Controlled by	ЕМСЗ2 🤇)1Pk Max						
					M1[1]			-2.03 dBm
10 dBm							5.50	12160 GHz
TO UBIII					ndB			26.00 dB
0 dBm				M	BW		20.0290	00000 MHz
U UBIII			0	my	Q factor	1	I.	274.7
-10 dBm		1 ~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Υ	. ~~~	my .		
-IO UDIII								
-20 dBm								
-20 0011		т1/				72		
-30 dBm		7				y l		
oo abiii								
-40 dBm								
io abiii		and I				$ \rangle_{\sim}$	γ	
∽₅σ∂₿₥∽ᢩ≁	$\sim\sim\sim$					· ·	m	m
-60 dBm								
-70 dBm								
CF 5.5 GHz				691 pts	;		Span	40.0 MHz
Marker								
Type Ref	Trc	X-value	1	/-value	Function	Fund	tion Result	
M1	1	5.501216		-2.03 dBm	ndB down			0.029 MHz
T1	1	5.489986	GHz	-27.90 dBm	ndB			26.00 dB
T2	1	5.510014	GHz	-28.00 dBm	Q factor			274.7



TEST REPORT

Channel 116: 5580 MHz:

Spect	rum	Sp	ectrum 2	×	Spectr	um 3	XS	pectru	um 4	X		
Ref Lo Att	evel :	21.00 dBr 20 d			RBWVBW		Mode	Auto F	FT			
Controlle	ed by	ЕМСЗ2 😑	1Pk Max									
								1[1]			5.58	-1.25 dBm 317370 GHz
10 dBm·								lΒ			~~ ~~~	26.00 dB
0 dBm—				m		m	M1 B	w factor ₩∿∿∿∕	J		20.0290	00000 MHz 278.7
-10 dBm			$\vdash \land$			¥			-	1		
-20 dBm			TJ							12		
-30 dBm	<u>ا</u>											
-40 dBm	`	~-~~	\sim								m	
-50 dBm	<u>ו</u>											
-60 dBm												
-70 dBm	1											
CF 5.5	B GHz					691 pt	s				Span	40.0 MHz
Marker						•				_		
Type M1	Ref	Trc 1	X-value 5.58173		<u>Y-Va</u>	alue .25 dBm	Func	tion down		Func	tion Result	t 20.029 MHz
T1		1	5.56998			.25 dBm .30 dBm	Пив	ndB			2	26.00 dB
T2		1	5.59001			.91 dBm	Q	factor				278.7

Channel 140: 5700 MHz:

Spectru	ım	Sp	ectrum 2	x	Spectr	um 3	×s	pectru	um 4	X		
Ref Lev Att	/el 21	.00 dBm 20 dB			● RBW ● VBW	300 kHz 1 MHz	Mode	Auto F	FT			
Controlled	l by EN	4C32 😑 1	.Pk Max									
10 dBm—								1[1]			5.69	-4.95 dBm 969900 GHz
TO UBIII-							no				20.2600	26.00 dB 100000 MHz
0 dBm					- M1			factor			20.2000	281.2
o abiii						m			1		1	201.2
-10 dBm-			~	\sim		<u> </u>	~~ ~~	m	Var has			
-20 dBm—												
-30 dBm-			T1/							<u><u></u>²</u>		
-40 dBm-												
		m m	\sim									
∿28•d8m⇒	_	~ *								~(30	mon	mon
-60 dBm-												
00 00												
-70 dBm-												
CF 5.7 G	Hz					691 pt	5	I			l Spar	1 40.0 MHz
Marker												
Type F	Ref 1	Frc	X-value		Y-Va	alue	Func	tion		Fund	tion Resul	t
M1		1	5.6969	99 GHz		.95 dBm	ndB	down				20.26 MHz
T1		1	5.6898			.33 dBm		ndB				26.00 dB
T2		1	5.710	L3 GHz	-30	.98 dBm	Q	factor				281.2



TEST REPORT

802.11an(HT 40)

Channel 102: 5510 MHz:

Spect	rum	s	pectrum 2	×	Spectr	um 3	× 5	pectri	um 4	X			
	evel	21.00 dB			🖷 RBW								
Att		20 0		1 ms	👄 VBW	2 MHz	Mode	Auto S	weep				
Controlle	ed by	ЕМСЗ2 🤇	1Pk Max										
							M	1[1]				-2.71 dBm	
10 dBm								10			5.5	08490 GHz	
10 0011							ni Bi	1B			40 6400	26.00 dB 00000 MHz	
0 dBm-						M1		fastan			40.0400	135.6	
				meren	ununun	neer	mmi	Munn	. اه س			100.0	
-10 dBrr	-10 dBm												
-20 dBm	-20 dBm												
-30 dBrr	η 		+ `							<u> </u>			
										- <u>\</u>			
-40 dBrr													
moun	with	when	when							L.A.	waterward	والعريقين الاستطاري	
-50 dBr													
co do -													
-60 dBm) 												
-70 dBm													
-70 ubii													
CF 5.5	I GHZ					691 pt	5				span	80.0 MHz	
Marker		- I					1 =			-			
Type M1	Ref	Trc 1	X-value	19 GHz	<u>Y-va</u>	alue .71 dBm	Func	tion down		Func	tion Result	40.64 MHz	
T1		1	5.4896			.71 uBm .78 dBm	пив	ndB				26.00 dB	
T2		1	5.5302			.22 dBm	0	factor				135.6	
								/					

Channel 110: 5550 MHz:

Spectrum	Sp	ectrum 2	X Spe	ectrum 3	×s	pectru	ım 4 🛛 🕱		
Ref Level									
Att	20 dE		1 ms 😑 V	BW 2 MH	z Mode	Auto S	weep		
Controlled by	EMC32 😑	1Pk Max							
					M	1[1]			-0.60 dBm
10 dBm								5.54	73080 GHz
TO UBIII					nc				26.00 dB
0 -10				M1	Bi				00000 MHz
0 dBm		margundaler	munum	monthing	mond	tactor,	mapanet	1	135.6
				<u>الا</u>	r		1 marine	1	
-10 dBm								N.	
00 40								1	
-20 dBm	T1/							τ2	
20 40	Y							V V	
-30 dBm									
we have been	and							1 S	1
ARQ_d&moork									tour al and
-50 dBm									
co do-									
-60 dBm									
70 40									
-70 dBm									
CF 5.55 GHz	2			691	ots			Span	60.0 MHz
Marker									
Type Ref	Trc	X-value		Y-value	Func		Fun	ction Result	
M1	1	5.547308		-0.60 dBr		down		4	0.897 MHz
T1	1	5.529508		-25.89 dBr		ndB			26.00 dB
T2	1	5.570405	GHz	-27.38 dBr	n Q1	factor			135.6



TEST REPORT

Channel 134: 5670 MHz:

Spectrum	Sp	ectrum 2 🛛 🔊	Spectrum 3	X Spectr	um 4 🛛 🗴	
Ref Level			👄 RBW 500 kHz			· · · · ·
Att	20 dB		VBW 2 MHz	Mode Auto S	Sweep	
Controlled by	EMC32 🔵 1	LPk Max				
				M1[1]		-2.21 dBr
10 dBm						5.6746020 GH
IU dBm				ndB		26.00 d
0 dBm				MBW		40.81000000 MH
U dBm		mummun	man montine of	Q factor	when menter	139.
-10 dBm		per martin and	·… · ↓ ↓		monum	
-10 aBm	[
-20 dBm	S					
-20 ubiii	T 1					12
-30 dBm	¥ 1					Y I
-30 dBm						
40 40						N. Salana
watered worked	A.A.a.					N M Marcagh
-50 dBm						
-50 UBIII						
-60 dBm						
-00 0811						
-70 dBm						
-/0 ubiii						
CF 5.67 GH	,		691 pt			Span 60.0 MHz
Marker	£		091 pt	2		3pun 00.0 MHz
Type Ref	Trc	X-value	Y-value	Function	Fund	ction Result
M1 M1	1	5.674602 GHz	-2.21 dBm	ndB down		40.81 MHz
T1	1	5.649508 GHz	-28.36 dBm	ndB		26.00 dB
T2	1	5.690318 GHz	-27.79 dBm	Q factor		139.0
	10					40.00.000

802.11ac(HT 80)

Channel 106: 5530 MHz:

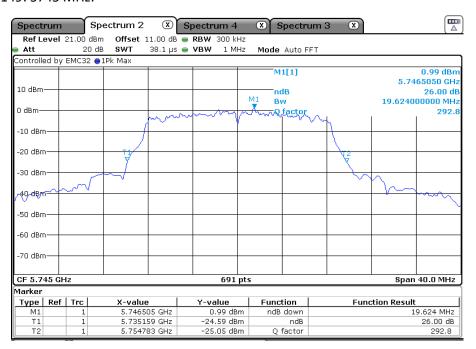
Spectrum	Spe	ectrum 2 🛛 🗷	Spectrum 3	🛛 🗴 s	pectru	m 4 🛛 🗶		
Ref Level	21.00 dBm	Offset 11.00 dB	🖷 RBW 1 MHz					
Att	20 dB	SWT 1 ms	s 👄 VBW 3 MHz	Mode A	uto Swe	ер		
Controlled by	EMC32 🔵 1	Pk Max						
				M:	l[1]			-4.04 dB
							5.3	503780 GH
10 dBm				nd				26.00 d
				Bv			81.6200	00000 MH
0 dBm		M1		Q	factor			67.
	C ¹	mentionable queries	approximiting	pharman	mm	n manun	my	
-10 dBm	- 1							
-20 dBm								
0.0 -10	T Z						12	
-30 dBm								
10 -10							1 1	
-40 dBm	de/						L L	
-50 dBm							en e	moun
-50 dBm								
-60 dBm								
-00 ubiii								
-70 dBm								
-/o ubiii								
CF 5.53 GHz			691	ate			Snan	 120.0 MHz
larker			551				opun	120.0 011
Type Ref	Trc	X-value	Y-value	Funct	ion	FI	unction Resul	ŀ
M1	1	5.50378 GHz	-4.04 dBr		down			- 81.62 MHz
T1	1	5.48919 GHz	-30.02 dBr	n	ndB			26.00 dB
T2	1	5.57081 GHz	-30.17 dBr	n Qf	actor			67.4



TEST REPORT

Band IV 5725 MHz to 5850 MHz

802.11a Channel 149: 5745 MHz:



Channel 157: 5785 MHz:

Spectr	um	Sp	ectrum 2	×	Spectr	um 4	XS	pectri	um 3	X		
	vel 2	21.00 dBm										
e Att		20 dB		38.1 µs	VBW	1 MHz	Mode	Auto F	FT			
Controlle	d by B	ЕМСЗ2 😑	1Pk Max									
							M	1[1]				0.79 dBm
10 dBm-								10			5.78	83000 GHz
10 000							n Mĝ,				10 2020	26.00 dB 00000 MHz
0 dBm—								factor			19.7970	292.4
0.00.00				\sim	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	V N		area	M		1	292.4
-10 dBm-			/						-			
									$ \rangle$			
-20 dBm-			T1		_					12		
			7									
-30 dBm-					-					~~ ~~	m	
	$\Delta \Delta$	inn	\sim								1. N	\sim
-40ldBha4	-¥-	~ ~ ~										
-50 dBm-												
-60 dBm-												
-00 ubiii-												
-70 dBm-												
CF 5.78	5 01	-				691 pt	-				Pnan	40.0 MHz
Marker	σап	۷				- 091 pt:	,				эран	
	Ref	Trc	X-value	1	Y-11	alue	Func	tion		Eupo	ction Result	- 1
M1	Kel	1		33 GHz		.79 dBm		down		run		9.797 MHz
T1		1	5.7752:			.08 dBm		ndB				26.00 dB
T2		1	5.7950:	L4 GHz	-25	.38 dBm	Q	factor				292.4



TEST REPORT

Channel 165: 5825 MHz:

Spect	rum	s	pectrum 2	×	Spectr	um 4	X	Spectri	um 3	X		
Ref L	evel 2	21.00 dB	m Offset 1	1.00 dB	👄 RBW	300 kHz						
👄 Att		20 0	ib SWT	38.1 µs	👄 VBW	1 MHz	Mode	Auto F	FT			
Controlle	ed by I	ЕМСЗ2 🄇	1Pk Max									
							M	11[1]				2.11 dBm
											5.82	55210 GHz
10 dBm						M1	n	dB				26.00 dB
						-		w			19.9710	00000 MHz
0 dBm—				m	~~	- <u>manan</u>	همجحص	facton	m			291.7
						ľ			ŇΝ			
-10 dBrr			+ +									
										\		
-20 dBm			<u> </u>							\12		
										1		
-30 dBm		<u> </u>								~~~~	h_{1}	
~	\sim	$1 \sim 1$									1	m
-40 dBm) 											
-50 dBr			-									
-60 dBrr												
-70 dBm			_									
CF 5.8	25 GH	z	1			691 pts	5	1			Span	40.0 MHz
Marker							_					
Type	Ref	Trc	X-value	. 1	Y-va	مىلە	Fund	tion		Eup	ction Result	
M1	Kel	1	5.8255			.11 dBm		down		Full		9.971 MHz
T1		1	5.8151			.96 dBm	nac	ndB				26.00 dB
T2		1	5.8350			.68 dBm	0	factor				291.7
	_	-										

802.11an(HT 20) Channel 149: 5745 MHz:

Spect	um	s	pectrum 2	×	Spectr	um 4	XS	pectru	um 3	X		
	evel	21.00 dB										
Att 🗧		20 (db SWT 34	8.1 µs 🧉	VBW	1 MHz	Mode	Auto F	FT			
Controlle	ed by	EMC32 (∋1Pk Max									
							M	1[1]				-0.60 dBm
10 40											5.74	43050 GHz
10 dBm-							n					26.00 dB
0.40						M1	B				20.2030	00000 MHz
0 dBm—				m	m		mun	factor	a		1	284.3
-10 dBm			I m			Υ			m			
-10 000												
-20 dBm												
-20 dBm												
-30 dBm			y l							Y		
-30 UBII												
-40 dBm										1~~		
-40 UBI		~~~~										$\sim \sim \sim$
-50 dBm												່ _ທ
-30 UBII												
-60 dBm												
-00 ubii												
-70 dBm												
-70 0011												
CF 5.745 GHz 691 pts Span 40.0 MHz												
Marker												
Туре	Ref		X-value		Y-Va		Func			Fund	tion Result	
M1		1	5.744305			.60 dBm	ndB	down			2	0.203 MHz
T1 T2		1	5.734986			.75 dBm .62 dBm	0	ndB factor				26.00 dB 284.3
			5.755188	GHZ	-20	.o∠ uBm	<u> </u>	ractor				284.3

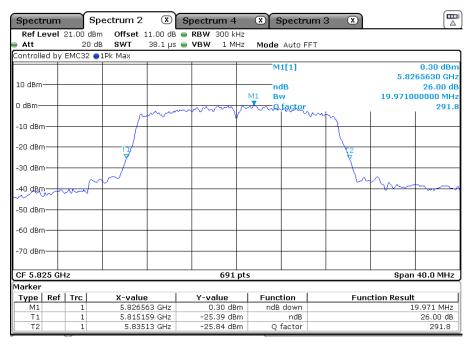


TEST REPORT

Channel 157: 5785 MHz:

Spectrum	Sp	ectrum 2	×	Spectr	um 4	x	Spectri	um 3	×					
Ref Level	21.00 dBm	Offset 1	1.00 dB	RBW	300 kHz									
Att	20 dE	SWT	38.1 µs	VBW	1 MHz	Mode	Auto F	FT						
Controlled by	ЕМСЗ2 😑	1Pk Max												
						M	1[1]				-0.37 dBm			
										5.78	43050 GHz			
10 dBm						n	dB				26.00 dB			
					M1	В	w			20.0870	00000 MHz			
0 dBm			~	a. more	M	<u> </u>	factor				288.0			
		<u>م</u>	m		Υ.		p	wh-						
-10 dBm														
20 dBm														
		₹							Y					
-30 dBm									\rightarrow					
	0.0	hand							~ 1					
-40 dBm	₩£	V.							-	- rem	A a			
James 1											have a			
-50 dBm														
-60 dBm														
-70 dBm														
CF 5.785 GH	17	I			691 pt:	F				Snan	40.0 MHz			
Marker	12				- 551 pt:	2				opan	10.0 0112			
Type Ref M1		X-value 5.7843			.37 dBm		tion down		Func		0.087 MHz			
T1	1	5.7843			.37 dBm .76 dBm	riae	aown ndB			2	26.00 dB			
T2	1	5.7950			.76 dBm	0	factor				288.0			
16		5,7950.		-23	.90 0011	<u> </u>	iaciui				200.0			

Channel 165: 5825 MHz:





TEST REPORT

802.11an(HT 40)

Channel 151: 5755 MHz:

Spect	um	s	pectrum 2	×	Spectr	um 4	XS	Spectri	um 3	X			
	evel	21.00 dB			RBW								
Att		20 (1 ms	VBW	2 MHz	Mode	Auto S	weep				
Controlle	ару	EMC32 (1Pk Max					1[1]				-0.87 dBm	
							IVI	1[1]			5.7	-0.87 dBm 52800 GHz	
10 dBm-					_		n	dB			0.7	26.00 dB	
						M1	B				40.6400	00000 MHz	
0 dBm—	_			mondant	La de part	พ.ศ.พ.	mang	factor				141.6	
			- m			÷Ψ			many				
-10 dBm					-								
00 40										<u>,</u>			
-20 dBm													
-30 dBm			<u> </u>							X			
-30 abii										- <u>}</u>			
-40 dBm		anthe states	July Land							եր		hide as a short	
whereby	linner	.a~la.	1							• •	6+ 01 -01V0	what have a	
-50 dBm													
-60 dBm					_				_				
-70 dBm													
CF 5.7	55 GH	lz				691 pt:	s				Span	80.0 MHz	
Marker]	
Туре	Ref		X-value		Y-Ve		Func			Func	tion Result		
M1 T1		1		28 GHz 74 GHz		.87 dBm .40 dBm	ndB	down ndB				40.64 MHz 26.00 dB	
T2		1		38 GHZ		.40 dBm .44 dBm	0	factor				141.6	
ا ک سے			5,775		20	abm	· · · · ·	100.01				11110	

Channel 159: 5795 MHz:

Spectr	um	Sp	ectrum 2	×	Spectr	um 4	× :	Spectri	um 3	X		
Ref Le	evel 3	21.00 dBr		1.00 dB	🔵 RBW	500 kHz						
Att 🗧		20 d		1 ms	👄 VBW	2 MHz	Mode	Auto S	Sweep			
Controlle	d by I	ЕМСЗ2 😑	1Pk Max									
							M	1[1]				-0.23 dBm
											5.7	93610 GHz
10 dBm-								dB				26.00 dE
. In						M1	В	w			40.6400	00000 MH;
0 dBm—				entropen	unhamm	and p	munk	factor	Londa		1	142.6
4 0. ID			~	0.00		- Υ				1		
-10 dBm										1		
-20 dBm										1		
-20 ubiii										2		
-30 dBm										1		
-30 ubiii										<u> </u>		
40 d 0 to	/	malpellone	mal							- VIKIN	My with	يعتر المرابية
-40 dB40	Journal of the											wa smooth M
-50 dBm												
-50 abin												
-60 dBm												
00 0011												
-70 dBm												
CF 5.79	15 CH	7				691 pt:	c				Snan	80.0 MHz
Marker		-									opan	0010 1112
Type	Ref	Trc	X-value	1	Y-va	alue	Func	tion		Fund	ction Result	
M1		1	5.7936			.23 dBm		down				40.64 MHz
T1		1	5.7747			.93 dBm		ndB				26.00 dB
T2		1	5.8153	38 GHz	-24	.66 dBm	Q	factor				142.6



TEST REPORT

802.11ac(HT 80)

Channel 155: 5775 MHz:

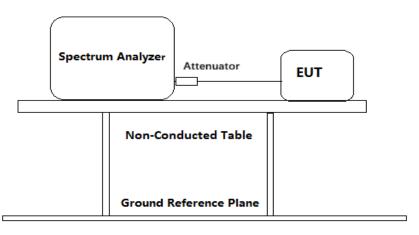
Spect	rum	Sp	ectrum 2	×.	Spectr	um 4	X					
Ref Le	evel :	21.00 dBr	n Offset 1	.1.00 dB 🧃	RBW	1 MHz						
🗕 Att		20 d	B SWT	1 ms 🧉	VBW	3 MHz	Mode /	Auto Sw	еер			
Controlle	ed by	ЕМСЗ2 😑	1Pk Max									
							N	11[1]				-3.26 dBm
10 dBm-											5.7	54860 GHz
TO UBIII-								dB				26.00 dB
0 dBm—				M1				w factor			31.0200	00000 MHz 70.5
o abiii			manumber	mem	enterme	r-m			underserve	meth		70.3
-10 dBm	<u> </u>					Y						
		j j								- \		
-20 dBm		-+			_							
		τź									<u>†</u> 2	
-30 dBm	⊢ ⊢										<u> </u>	
		(1	
-40 dBm	nestator	4.0-2									- Marry	allow the work of the
-50 dBm												
-60 dBm												
-00 ubii	'											
-70 dBm												
CF 5.77	75 GH	z				691 p	nts				Snan	120.0 MHz
Marker												
Type	Ref	Trc	X-value	.	Y-v	alue	Fund	tion		Functio	n Result	. 1
M1		1		36 GHz		3.26 dBn		3 down				81.62 MHz
T1		1		19 GHz).23 dBn		ndB				26.00 dB
T2		1	5.8158	31 GHz	-28	3.90 dBn	n Q	factor				70.5



4.4 6 dB Bandwidth

Test Requirement:	FCC PART 15 E clause 15.407(e)
	Within the 5.725–5.85 GHz band the minimum 6 dB bandwidth of U–NII devices shall be at least 500 kHz.
Test Method:	FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01, Clause C
Test Status:	Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture). Following channel(s) was (were) selected for the final test as listed below.

Test Configuration:



Test Procedure:

- 1. Remove the antenna from the EUT and then connect a low attention attenuation RF cable(cable loss =1 dB, with 10dB attenuator) from the antenna port to the spectrum analyzer.
- 2. Set the spectrum analyzer:
 - a) Set RBW = 100 kHz.
 - b) Set VBW ≥[3 × 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.
 - h) Span=2*BW~5*BW.
- 3. Repeat until all the test status is investigated.
- 4. Report the worst case.



TEST REPORT

Used Test Equipment List

Spectrum Analyzer. Refer to Clause 5 Test Equipment List for details.

Test result:

Channel No.	Frequency (MHz)	Mode	Data Rate	6dB bandwidth	Limit	Result
	()			(MHz)		
149	5745		6 Mbps	16.556		Pass
157	5785	802.11a	6 Mbps	16.556		Pass
165	5825		6 Mbps	16.556		Pass
149	5745	802.11an	7.2 Mbps	17.771		Pass
157	5785	(HT20)	7.2 Mbps	17.771	≥500kHz	Pass
165	5825	(7.2 Mbps	17.771		Pass
151	5755	802.11an	15 Mbps	36.700		Pass
159	5795	(HT40)	15 Mbps	36.700		Pass
155	5775	802.11ac (HT80)	32.5 Mbps	76.760		Pass

Test result: The unit does meet the FCC requirements

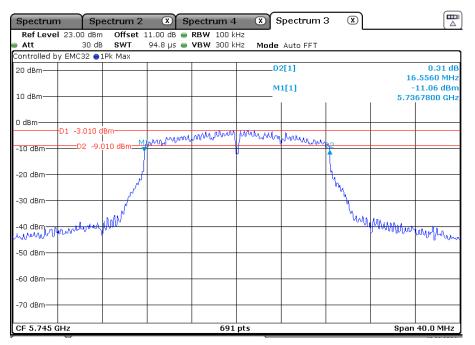


Result plot as follows (ANT1):

Band IV 5725 MHz to 5850 MHz

802.11a

Channel 149: 5745 MHz:



Channel 157: 5785 MHz:

Spectrum	Spee	trum 2	× SI	bectrum 4	× 5	Spectrum 3	3 X		
RefLevel 23 Att	3.00 dBm 30 dB			RBW 100 k VBW 300 k		Auto FFT			
Controlled by E			94.0 µ3 🖶	1011 300 K	inz inioue	AULOFFI			
20 dBm						2[1]			-0.66 dB
10 dBm					M	1[1]	l		10.90 dBm 67800 GHz
0 dBm-D1	-3.020 dBi	m		hun add bib	Adhaal . Int				
-10 dBm	D2 -9.02	0 dBm	pManna			Munur Marine	<u>¢</u>		
-20 dBm		ل گر							
-30 dBm		-							
-40 dBm	Monthan	Mr					ખાષ	purner	www.ww
-50 dBm									
-60 dBm									
-70 dBm									
CF 5.785 GHz	:			691	pts			Span	40.0 MHz



TEST REPORT

Channel 165: 5825 MHz:

Spectrun	n Sp	ectrum 2	× S	bectrum 4	× 5	pectrum :	з 🕱		
Ref Leve Att	l 23.00 dBm 30 dB			RBW 100 ki VBW 300 ki		Auto FFT			
	y EMC32 🔵 1		5 no ps 🖕	TBN 000 K	ine moue	Autorin			
20 dBm					D:	2[1]		16	-1.66 dB 5560 MHz
10 dBm					M	1[1]	I	5.81	-8.66 dBm 67800 GHz
0 dBm	D1 -1.580 d	Bm 	J	Land adaMA	Www.ach				
-10 dBm	——D2 -7.5	580 dBm 🕂	munning	www.www	p + ++++++++++++++++++++++++++++++++++	www.uw	12		
-20 dBm									
-30 dBm		_/							
MAD ARWING	Month	mbon					MM	pMAM	Mangaraph
-50 dBm									
-60 dBm									
-70 dBm									
CF 5.825 C	2H2			691	nts			Span	40.0 MHz
0.0200	1112			091	pes			зрин	10.0 0112

802.11an(HT 20) Channel 149: 5745 MHz:

Spectrun	n Spe	ectrum 2	x s	pectrum 4	× 8	Spectrum	3 🕱		
Ref Leve Att	23.00 dBm 30 dB			RBW 100 k VBW 300 k					
	зо ив у ЕМСЗ2 🔵 1		94.8 µs 🖷	VBW 300 K	HZ MOGE	Auto FFT			
		LPK MIdA		1	D	2[1]			0.86 dB
20 dBm					U	2[1]		17	0.80 UB
					M	1[1]			13.06 dBm
10 dBm								5.73	61430 GHz
0 dBm									
	D1 -4.720 d	Bm		. en . e. de Adda	6006 na losta				
-10 dBm			MMMMM	Mand and and	1	muun	400		
	02 -10	.720 นิยาม					4		
-20 dBm		l J							
-20 UBIII		1							
		ļ į					1		
-30 dBm									
		1							
-40 dBm	www.	MN					UN.	Nellen	
mundborr	- University	h i					- ~~	LOUN AND	Muran
-50 dBm									
-60 dBm									
-70 dBm									
-70 ubiii									
CF 5.745 (2Hz			691	nts			Snan	40.0 MHz
01 0.740 0				091	PC3			əpun	-10.0 MI 12



TEST REPORT

Channel 157: 5785 MHz:

Spectrum	Spe	ectrum 2	×s	pectrum 4	× 5	Spectrum	з 🕱		
	23.00 dBm			RBW 100 k			_		
Att Controlled by	30 dB		94.8 µs 🖮	VBW 300 k	Hz Mode	Auto FFT			
Í		PK Max			D	2[1]			1.06 dB
20 dBm					0	2[1]		17	7.7710 MHz
					м	1[1]			12.44 dBm
10 dBm								5.77	61430 GHz
0 dBm									
	01 -3.350 d	Bm	1	mony	mayna	Albart			
-10 dBm	D2 -9.3	350 dBm	MMPhoon	0		Hanner M	¹⁰ 672		
		L I			/		1		
-20 dBm									
		J.					<u></u> μ.		
-30 dBm							L L		
-30 0011		1					1		
40 -0		. S					hour		
-40 dBm	Munny	photo						man	Moundary
-50 dBm									
-60 dBm									
-70 dBm									
CF 5.785 G	Hz			691	pts			Span	40.0 MHz

Channel 165: 5825 MHz:

Spectrum	Spectrum 2 🛛 🗵	Spectrum 4	Spectrum 3	×		
RefLevel 23.00 Att 3		B 👄 RBW 100 kHz s 👄 VBW 300 kHz		_		
Controlled by EMC3		5 - VBVV 300 KH2	MOUE AUTO FFT			
20 dBm			D2[1]			1.42 dB .7710 MHz
10 dBm			M1[1]			11.74 dBm 61430 GHz
0 dBm	90 dBm	LONG MORE MUTTER	My my why have			
-10 dBmD2	90 dBm -8.590 dBm	Vanado and Carl		<u>92</u>		
-20 dBm				- <u>\</u>		
-30 dBm				1		
-40 dBm	they when				paranto and	un manife
-50 dBm						
-60 dBm						
-70 dBm						
CF 5.825 GHz		691 pt	5		Span	40.0 MHz



TEST REPORT

802.11an(HT 40)

Channel 151: 5755 MHz:

Spectrum	Spectrum 2	🗶 Sp	ectrum 4	🗴 Spe	ectrum 3	×		
Ref Level 23.00 Att) dBm Offset 30 dB SWT		RBW 100 kHz VBW 300 kHz			_		
Controlled by EMC:		1.1 ms 🖶 🕻	YBW 300 KH2	MODE AU	uto Sweep			
20 dBm				D2[1]		3	-0.41 dE 6.700 MH:
10 dBm				M1[1	1 			19.14 dBn 36710 GH:
0 dBm								
-10 gBm	180 dBm	www.www.	alle destaurantersterile		all and and the second	400		
-20 dBm			V			D2		
-30 dBm						+		
-40 dBm								
-40 dBm	and more that the					m	mmythe	munuh
-50 dBm								
-60 dBm								
-70 dBm								
CF 5.755 GHz	I		691 pt	s			Span	80.0 MHz

Channel 159: 5795 MHz:

Spectrum	Spectrum 2	Spectru	ım 4 🛛 🕅	Spectrum 3	×		
RefLevel 23.00 Att 3	dBm Offset 1 O dB SWT	1.00 dB 👄 RBW 1.1 ms 👄 VBW		Auto Sweep	_		
Controlled by EMC3	2 😑 1Pk Max						
20 dBm				11[1]			19.46 dBm 76710 GHz
10 dBm			D	2[1]		3	0.80 dE 6.700 MHz
0 dBm							
-10 dBmD17.6	-13.610 dBm	nangengenergingenere	and the second	and the second second	uy		
-20 dBm	MI		V		D 2		
-30 dBm	+-/-				-		
-40 dBm					<u> </u>		
-40 aBm Maun Month Manufacture -50 dBm	- Wedder				երինու	when	whither our diseased
-60 dBm							
-70 dBm							
CF 5.795 GHz	I		691 pts			Span	80.0 MHz



TEST REPORT

802.11ac(HT 80)

Channel 155: 5775 MHz:

Spectrum	Sp	ectrum 2	2 🕱 S	pectru	ım 4	× 5	Spectrum	з 🗴		
	23.00 dBm		11.00 dB 👄					•		
Att Controlled by	30 dB		265.5 µs 👄	ARM	300 kHz	Mode	Auto FFT			
20 dBm	/ EMIC32 😈.	TEK Max				D	2[1]			3.81 dB 76.760 MHz
10 dBm						M	11[1]	I		-24.92 dBm /36620 GHz
0 dBm										
-10 dBm	D1 -13.920	dBm	Ministrupted	duam healt	ant a the debut	A man and the	a standing of the bar	1. a.m. 1. 01. 1	Le ott	
-20 dBm		.920 dBm -	1. hollow will con-	1	ware from	Les and Les a	Threedoor and a	action and		
-30 dBm										
-40 dBm									\rightarrow	
mounterly	mul								hours	hydrodian
-50 dBm										
-60 dBm										
-70 dBm										
CF 5.775 G	Hz	1	1	1	691 pts		1	1	Span	120.0 MHz

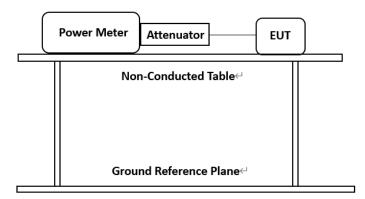


TEST REPORT

4.5 Maximum Conducted Output Power

Test Requirement:	FCC Part 15 E clause 15.407(a)
Test Method:	FCC KDB 789033 D02 General UNII Test Procedures New Rules
	v02r01,Clause E
Test Status:	Pre-Scan has been conducted to determine the worst-case mode from
	all possible combinations between available modulations, data rates
	and antenna ports (if EUT with antenna diversity architecture).
	Following channel(s) was (were) selected for the final test as listed
	below.

Test Configuration:



Test Procedure:

- 1. Remove the antenna from the EUT and then connect a low attention attenuation RF cable (cable loss =1 dB, with a 10dB attenuator) from the antenna port to the power meter.
- 2. The EUT is configured to transmit continuously or to transmit with a constant duty cycle.
- 3. If the EUT is transmitting at all times, it must be transmitting at its maximum power control level.
- 4. If the EUT does not transmit continuously, measure the duty cycle and adjust the measurement in dBm by adding 10log(1/x) where x is the duty cycle of transmitter output signal. This measurement is an average over both the ON and OFF periods of the transmitter.
- 5. Report the worst case.

Used Test Equipment List

Spectrum Analyzer. Refer to Clause 5 Test Equipment List for details.

Test result:



TEST REPORT

Maximum Conducted Output Power Band I (5150MHz-5250MHz)

Channel No.	Frequency (MHz)	Mode	Data Rate	ANT1 (dBm)	ANT2 (dBm)	Maximum Conducted output power (dBm)Total	Limit dBm	Result
36	5180		6 Mbps	7.6	9.2	11.5		Pass
40	5200	802.11a	6 Mbps	6.5	8.9	10.9		Pass
48	5240		6 Mbps	6.8	9.2	11.2		Pass
36	5180	802.11an	7.2 Mbps	6.2	8.4	10.4		Pass
40	5200	(HT20)	7.2 Mbps	7.9	9.9	12.0	22.72	Pass
48	5240	(0)	7.2 Mbps	6.1	8.2	10.3		Pass
38	5190	802.11an	15 Mbps	11.5	13.1	15.4		Pass
46	5230	(HT40)	15 Mbps	11.3	13.1	15.3		Pass
42	5210	802.11ac (HT80)	32.5 Mbps	5.7	8.2	10.1		Pass

Remark: The directional gain= 10*LOG((10^(ANT1/20)+10^(ANT2/20))^2/2)=7.28dBi>6dBi, so the power limit shall be reduced to 24-(7.28-6)=22.72dBm

Band II (5250MHz-5350MHz)

Channel No.	Frequency (MHz)	Mode	Data Rate	ANT1 (dBm)	ANT2 (dBm)	Maximum Conducted output power (dBm)Total	Limit dBm	Result
52	5260		6 Mbps	8.5	10	12.3		Pass
60	5300	802.11a	6 Mbps	8.0	9.2	11.7		Pass
64	5320		6 Mbps	8.4	9.6	12.1		Pass
52	5260	802.11an	7.2 Mbps	7.4	9.7	11.7		Pass
60	5300	(HT20)	7.2 Mbps	7.2	9.6	11.6	22.72	Pass
64	5320	(0)	7.2 Mbps	7.2	9.7	11.6		Pass
54	5270	802.11an	15 Mbps	11.4	12.7	15.1		Pass
62	5310	(HT40)	15 Mbps	6.3	8.4	10.5		Pass
58	5290	802.11ac (HT80)	32.5 Mbps	5.4	7.7	9.7		Pass

Remark: The directional gain= 10*LOG((10^(ANT1/20)+10^(ANT2/20))^2/2)=7.28dBi>6dBi, so the power limit shall be reduced to 24-(7.28-6)=22.72dBm



Band III (5470MHz-5725MHz)

Channel No.	Frequency (MHz)	Mode	Data Rate	ANT1 (dBm)	ANT2 (dBm)	Maximum Conducted output power (dBm)Total	Limit dBm	Result
100	5500		6 Mbps	8.0	8.9	11.5		Pass
116	5580	802.11a	6 Mbps	8.0	8.8	11.4		Pass
140	5700		6 Mbps	6.0	7.6	9.9		Pass
100	5500	802.11an	7.2 Mbps	7.1	9.4	11.4		Pass
116	5580	(HT20)	7.2 Mbps	7.1	9.0	11.2		Pass
140	5700	(0)	7.2 Mbps	5.1	6.6	8.9	22.72	Pass
102	5510	802.11an	15 Mbps	6.1	8.3	10.3		Pass
110	5550	(HT40)	15 Mbps	10.2	12.9	14.8		Pass
134	5670	(15 Mbps	6.4	8.4	10.5		
134	5670	802.11ac (HT80)	32.5 Mbps	5.0	7.6	9.5		Pass

Remark: The directional gain= 10*LOG((10^(ANT1/20)+10^(ANT2/20))^2/2)=7.28dBi>6dBi, so the power limit shall be reduced to 24-(7.28-6)=22.72dBm

Band IV (5725MHz-5850MH	lz)
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Channel No.	Frequency (MHz)	Mode	Data Rate	ANT1 (dBm)	ANT2 (dBm)	Maximum Conducted output power (dBm)Total	Limit dBm	Result
149	5745		6 Mbps	9.8	10.8	13.3		Pass
157	5785	802.11a	6 Mbps	10.3	11.3	13.8		Pass
165	5825		6 Mbps	10.5	11.9	14.3		Pass
149	5745	802.11an	7.2 Mbps	8.5	9.8	12.2		Pass
157	5785	(HT20)	7.2 Mbps	9	9.9	12.5	28.72	Pass
165	5825	(0)	7.2 Mbps	9.6	10.9	13.3		Pass
151	5755	802.11an	15 Mbps	8.2	9.3	11.8		Pass
159	5795	(HT40)	15 Mbps	8.6	9.6	12.1		Pass
155	5775	802.11ac (HT80)	32.5 Mbps	6.4	7.5	10.0		Pass

Remark: The directional gain= 10*LOG((10^(ANT1/20)+10^(ANT2/20))^2/2)=7.28dBi>6dBi, so the power limit shall be reduced to 30-(7.28-6)=22.72dBm



TEST REPORT

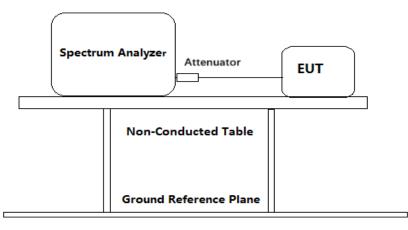
Remark: The measured power in the table has considered the compensation of cable loss, attenuator and duty cycle.

The unit does meet the FCC requirements.

4.6 Maximum Peak Power Spectral Density

Test Requirement:	FCC Part 15 E clause 15.407(a)					
Test Method:	FCC KDB 789033 D02 General UNII Test Procedures New Rules					
	v02r01,Clause F					
Test Status:	Pre-Scan has been conducted to determine the worst-case mode from					
	all possible combinations between available modulations, data rates					
	and antenna ports (if EUT with antenna diversity architecture).					
	Following channel(s) was (were) selected for the final test as listed					
	below.					

Test Configuration:



Test Procedure:

- 1. Remove the antenna from the EUT and then connect a low attention attenuation RF cable (cable loss =1dB, with 10 dB attenuator) from the antenna port to the spectrum analyzer.
- 2. Set the spectrum analyzer:
 - For Band I (5150MHz-5250MHz), Band II (5250MHz-5350MHz),
 - Band III (5470MHz-5725MHz)
 - a) Set the RBW = 1MHz.
 - b) Set the VBW \geq [3 × RBW].
 - c) Set the span \geq 26 dB Bandwidth
 - d) Detector = peak
 - e) Sweep time = auto couple.
 - f) Trace mode = max hold.
 - g) Allow trace to fully stabilize.
 - i) Use the peak marker function to determine the maximum amplitude level within the RBW.

For Band IV (5725MHz-5850MHz)



- a) Set the RBW = 500kHz.
- b) Set the VBW \geq [3 × RBW].
- c) Set the span ≥ 26 dB Bandwidth.
- d) Detector = peak
- e) Sweep time = auto couple.
- f) Trace mode = max hold.
- g) Allow trace to fully stabilize.
- i) Use the peak marker function to determine the maximum amplitude level within the RBW. Measure the Power Spectral Density of the test frequency with special test status.
- 3. Measure the Power Spectral Density of the test frequency with special test status.
- 4. Repeat until all the test status is investigated.
- 5. Report the worst case.

Used Test Equipment List

Spectrum Analyzer. Refer to Clause 5 Test Equipment List for details.

Channel No.	Frequency (MHz)	Mode	Data Rate	ANT1 (dBm)	ANT2 (dBm)	Maximum Conducted output power (dBm/MHz)Total	Limit dBm/ MHz	Result
36	5180	802.11a	6 Mbps	5.40	5.79	8.61		Pass
40	5200		6 Mbps	5.22	5.98	8.63		Pass
48	5240		6 Mbps	6.09	5.70	8.91		Pass
36	5180	802.11an	7.2 Mbps	4.70	4.05	7.40		Pass
40	5200	(HT20)	7.2 Mbps	5.12	6.82	9.06	9.72	Pass
48	5240	(0)	7.2 Mbps	5.44	4.99	8.23	0.7 -	Pass
38	5190	802.11an	15 Mbps	5.12	6.58	8.92		Pass
46	5230	(HT40)	15 Mbps	4.85	7.01	9.07		Pass
42	5210	802.11ac (HT80)	32.5 Mbps	-3.36	-1.61	0.61		Pass

Band I (5150MHz-5250MHz)

Remark: The directional gain= 10*LOG((10^(ANT1/20)+10^(ANT2/20))^2/2)=7.28dBi>6dBi, so the power limit shall be reduced to 11-(7.28-6)=9.7dBm/MHz



Band II (5250MHz-5350MHz)

Channel No.	Frequency (MHz)	Mode	Data Rate	ANT1 (dBm)	ANT2 (dBm)	Maximum Conducted output power (dBm/MHz)Total	Limit dBm/ MHz	Result
52	5260	802.11a	6 Mbps	5.55	6.92	9.30		Pass
60	5300		6 Mbps	5.27	5.71	8.51		Pass
64	5320		6 Mbps	5.54	6.85	9.25		Pass
52	5260	802.11an	7.2 Mbps	4.67	7.03	9.02		Pass
60	5300	(HT20)	7.2 Mbps	3.83	6.97	8.69	9.72	Pass
64	5320	(,	7.2 Mbps	4.66	6.71	8.82		Pass
54	5270	802.11an	15 Mbps	4.81	6.24	8.59		Pass
62	5310	(HT40)	15 Mbps	0.31	2.65	4.65		Pass
58	5290	802.11ac (HT80)	32.5 Mbps	-4.22	-2.31	-0.15		Pass

Remark: The directional gain= 10*LOG((10^(ANT1/20)+10^(ANT2/20))^2/2)=7.3dBi>6dBi, so the power limit shall be reduced to 11-(7.3-6)=9.7dBm/MHz

Band III (5470MHz-5725MHz)

Channel No.	Frequency (MHz)	Mode	Data Rate	ANT1 (dBm)	ANT2 (dBm)	Maximum Conducted output power (dBm/MHz)Total	Limit dBm/ MHz	Result
100	5500	802.11a	6 Mbps	6.24	6.38	9.32		Pass
116	5580	002.110	6 Mbps	6.07	6.88	9.50		Pass
140	5700		6 Mbps	3.30	6.30	8.06		Pass
100	5500	802.11an	7.2 Mbps	5.57	6.76	9.22		Pass
116	5580	(HT20)	7.2 Mbps	5.13	6.54	8.90	9.72	Pass
140	5700	(0)	7.2 Mbps	2.81	4.02	6.47		Pass
102	5510	802.11an	15 Mbps	0.66	2.14	4.47		Pass
110	5550	(HT40)	15 Mbps	3.42	7.16	8.69		Pass
134	5670	(15 Mbps	0.85	3.07	5.11		Pass
106	5530	802.11ac (HT80)	32.5 Mbps	-4.19	-0.86	0.80		Pass



TEST REPORT

Remark: The directional gain= 10*LOG((10^(ANT1/20)+10^(ANT2/20))^2/2)=7.3dBi>6dBi, so the power limit shall be reduced to 11-(7.3-6)=9.7dBm/MHz

Band IV (5725MHz-5850MHz)

Channel No.	Frequency (MHz)	Mode	Data Rate	ANT1 (dBm)	ANT2 (dBm)	Maximum Conducted output power (dBm/500kHz) Total	Limit	Result
149	5745	802.11a	6 Mbps	4.06	6.11	8.22		Pass
157	5785		6 Mbps	3.67	5.49	7.68		Pass
165	5825		6 Mbps	5.37	6.66	9.07		Pass
149	5745	802.11an	7.2 Mbps	2.88	5.27	7.25	28.72d	Pass
157	5785	(HT20)	7.2 Mbps	3.54	5.08	7.39	Bm/50	Pass
165	5825	(0)	7.2 Mbps	4.59	6.17	8.46	0kHz	Pass
151	5755	802.11an	15 Mbps	-0.73	0.39	2.88	•	Pass
159	5795	(HT40)	15 Mbps	-0.42	0.18	2.90		Pass
155	5775	802.11ac (HT80)	32.5 Mbps	-6.60	-3.18	-1.55		Pass

Remark: The directional gain= 10*LOG((10^(ANT1/20)+10^(ANT2/20))^2/2)=7.28dBi>6dBi, so the power limit shall be reduced to 30-(7.28-6)=28.72dBm/500kHz Test result: Level = Read Level + Cable Loss(1dB). The unit does meet the FCC requirements



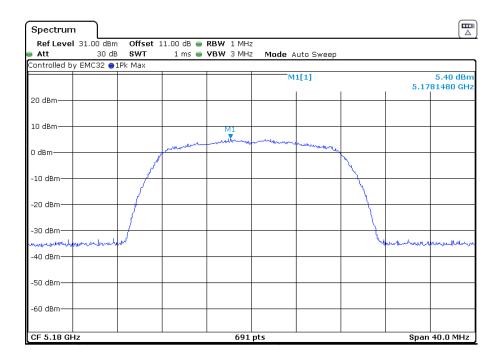
Result plot as follows:

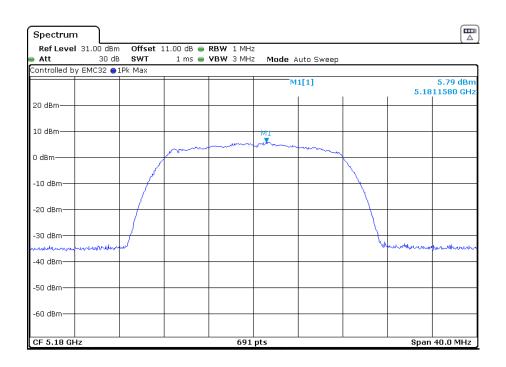
Band I 5150 MHz to 5250 MHz

802.11a

Channel 36: 5180 MHz:

ANT1



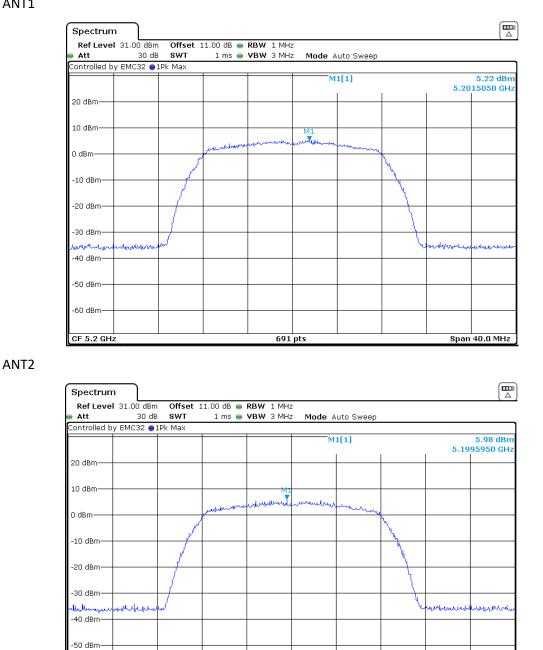




TEST REPORT

Channel 40: 5200 MHz:

ANT1



691 pts

-60 dBm-

CF 5.2 GHz

Span 40.0 MHz



TEST REPORT

Channel 48: 5240 MHz:

ANT1



691 pts

-40 dBm--50 dBm--60 dBm

CF 5.24 GHz

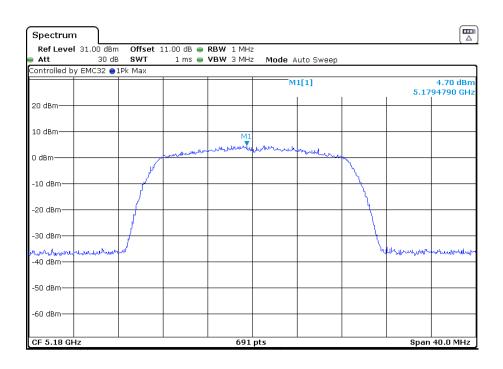
Span 40.0 MHz

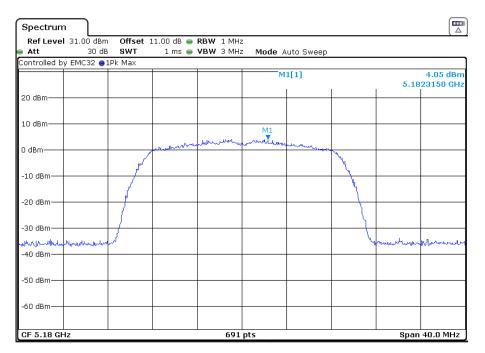


802.11an(HT 20)

Channel 36: 5180 MHz:

ANT1



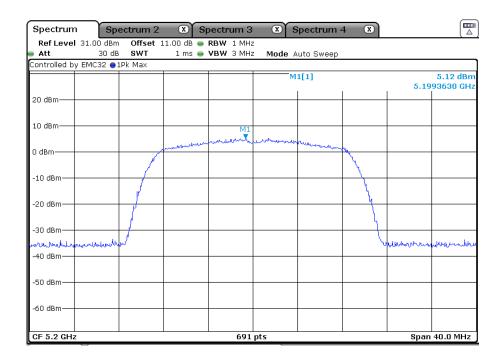


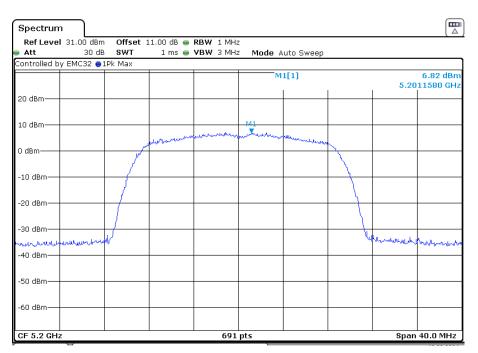


TEST REPORT

Channel 40: 5200 MHz:

ANT1



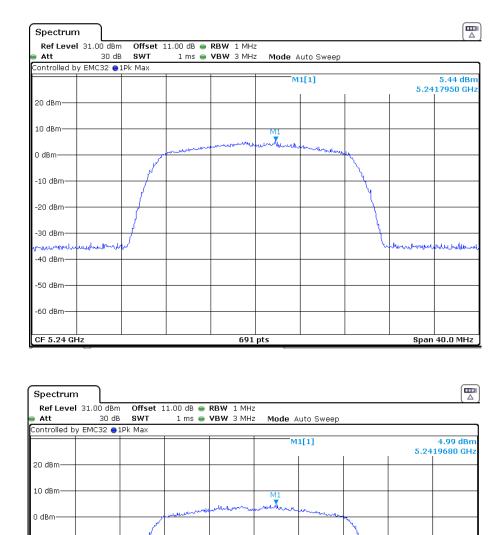




TEST REPORT

Channel 48: 5240 MHz:

ANT1



ANT2

Version: 26 August 2024

-10 dBm— -20 dBm— -30 dBm— പ്രപ്രപ്രംഗം

-40 dBm--50 dBm--60 dBm-

CF 5.24 GHz

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691 pts

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Span 40.0 MHz

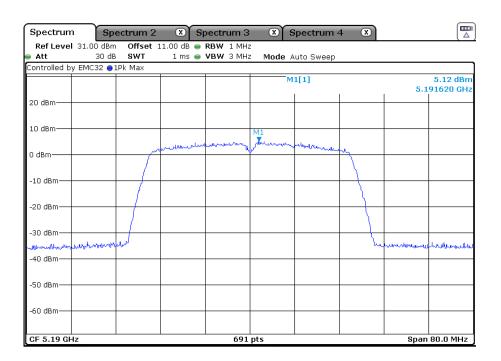


TEST REPORT

802.11an(HT 40)

Channel 38: 5190 MHz:

ANT1



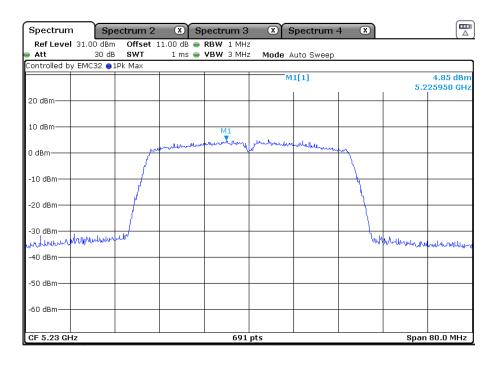


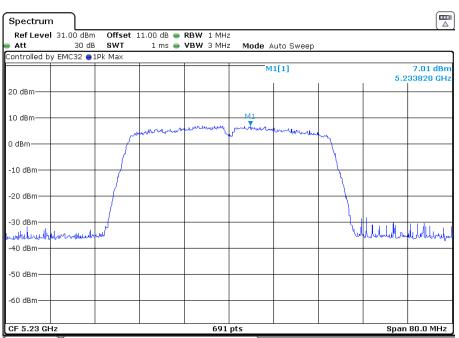


TEST REPORT

Channel 46: 5230 MHz:

ANT1







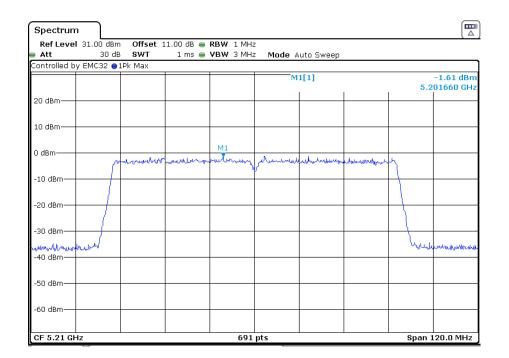
TEST REPORT

802.11ac(HT 80)

Channel 42: 5210 MHz:

ANT1

Spectrum	Spectrum 2	x s	pectrum 3	× 5	Gpectrum 4	+ X)		
Ref Level 31.0		11.00 dB 👄						(=)
	30 dB SWT	1 ms 😑	VBW 3 MHz	Mode A	uto Sweep			
Controlled by EMC	32 • 1PK Max			м	1[1]		5.2	-3.36 dBm 19030 GHz
20 dBm								
10 dBm								
0 dBm	about to be referenced	Junhunder	Making bali	MI	milline	la alab a		
-10 dBm				/*****		and a construction of the second		
-20 dBm	/							
-30 dBm	/						$\left \right $	
40 dBm							Multure and a second se	nonmiltentes
-50 dBm								
-60 dBm								
CF 5.21 GHz			691	pts			Span 1	20.0 MHz

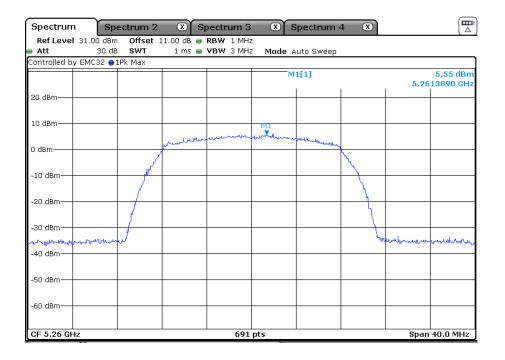


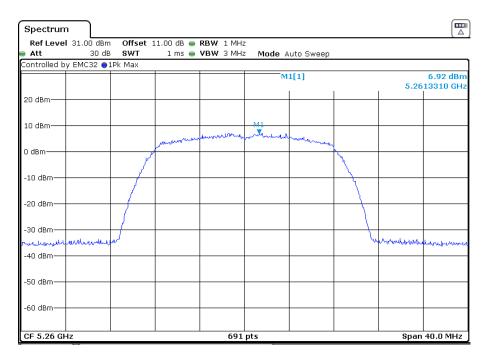


Band II 5250 MHz to 5350 MHz

802.11a Channel 52: 5260 MHz:

ANT1

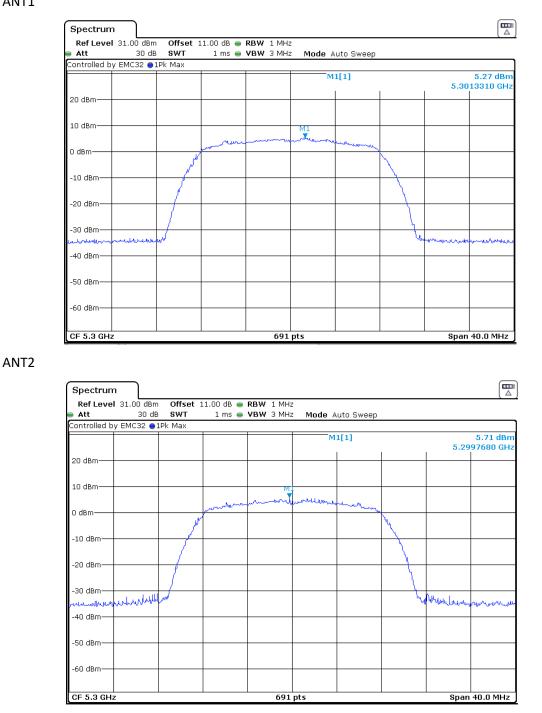






TEST REPORT

Channel 60: 5300 MHz:

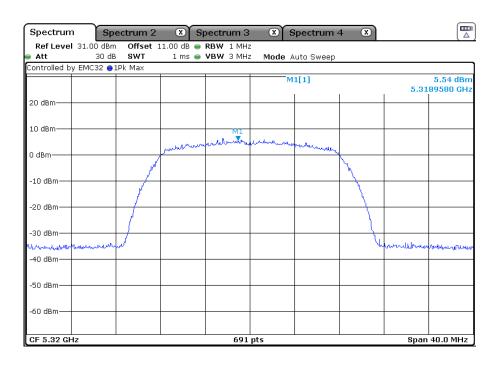


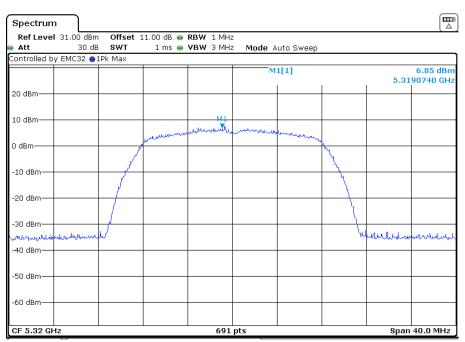


TEST REPORT

Channel 64: 5320 MHz:

ANT1



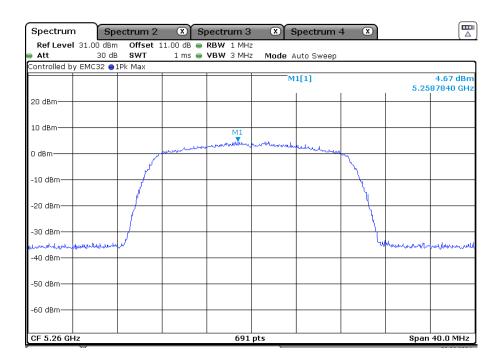




TEST REPORT

802.11an(HT 20) Channel 52: 5260 MHz:

ANT1



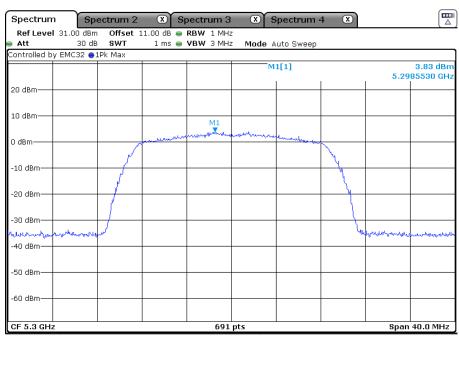


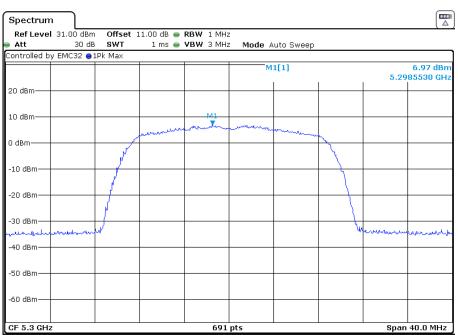


TEST REPORT

Channel 60: 5300 MHz:

ANT1



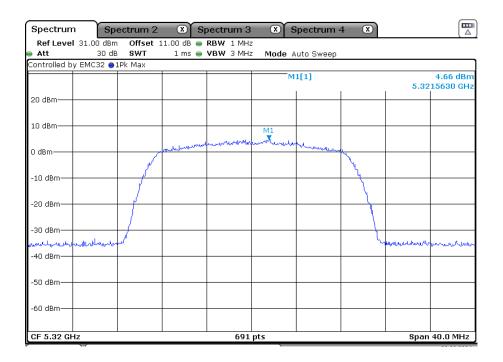


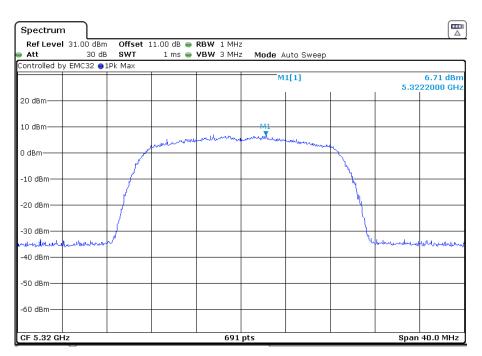


TEST REPORT

Channel 64: 5320 MHz:

ANT1





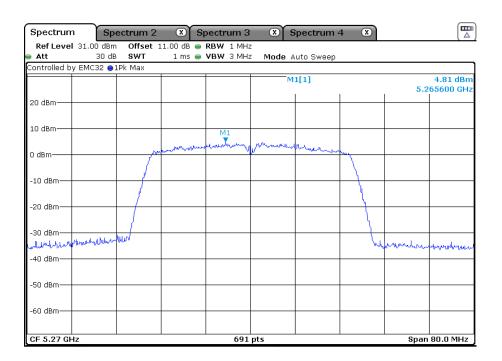


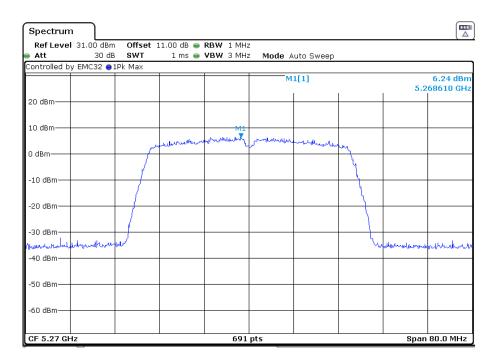
TEST REPORT

802.11an(HT 40)

Channel 54: 5270 MHz:

ANT1



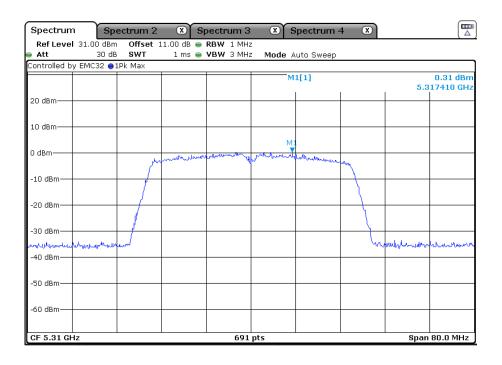


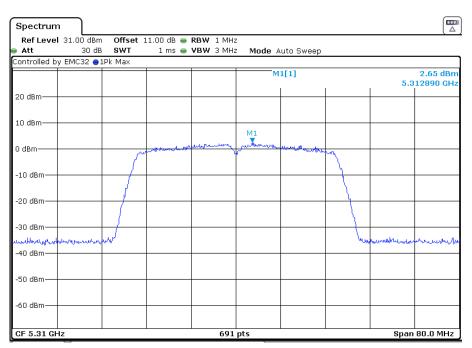


TEST REPORT

Channel 62: 5310 MHz:

ANT1







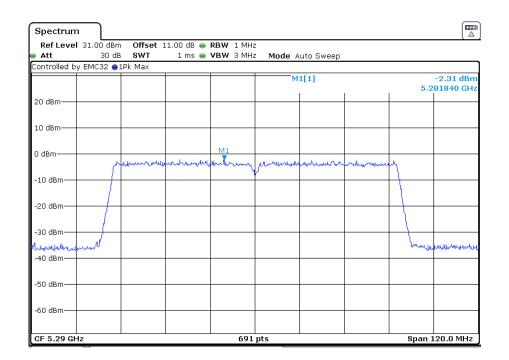
TEST REPORT

802.11ac(HT 80)

Channel 58: 5290 MHz:

ANT1

Spectrum	Spe	ctrum 2	×s	pectrum 3	×	Spectrum 4	1 🗶		
Ref Level 31.00				RBW 1 MHz					· · · ·
	30 dB	SWT	1 ms 😑	VBW 3 MHz	Mode A	luto Sweep			
Controlled by EMC:	32 0 IP	'K Max				4541			-4.22 dBn
					INI.	1[1]		5.2	-4.22 aBr 78710 GH
20 dBm									
20 0011									
10 dBm									
0 dBm									
U UBIII				7.					
-10 dBm	- M	man	Junear	mony	murian	hallowahllow	land and and a second	2	
-10 UBIN									
00.40-									
-20 dBm	1								
00.40-	$(\perp$								
-30 dBm									
witnessman								Mullu	whentheth
-40 dBm									
-50 dBm									
-60 dBm									
CF 5.29 GHz				691	pts			Span 1	20.0 MHz



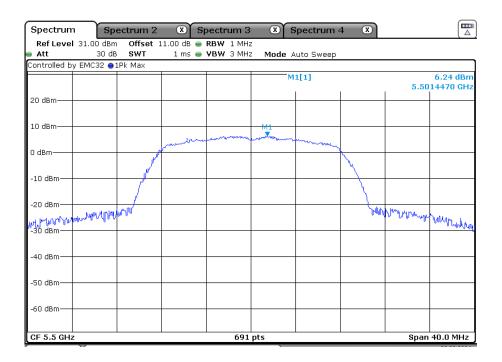


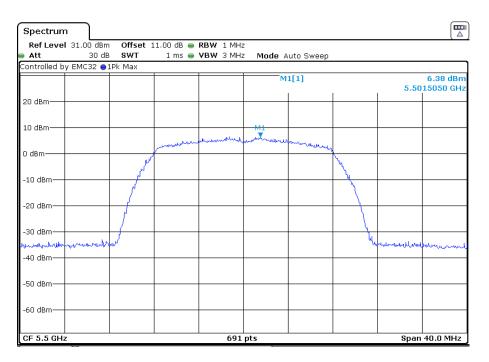
TEST REPORT

Band III 5470 MHz to 5725 MHz

802.11a Channel 100: 5500 MHz:

ANT1

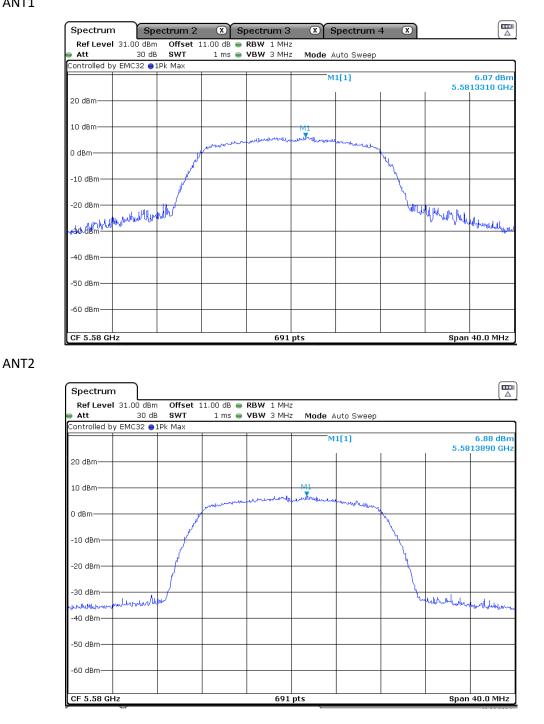






TEST REPORT

Channel 116: 5580 MHz:

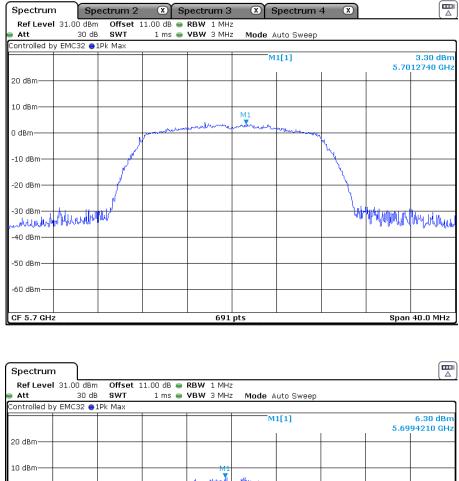


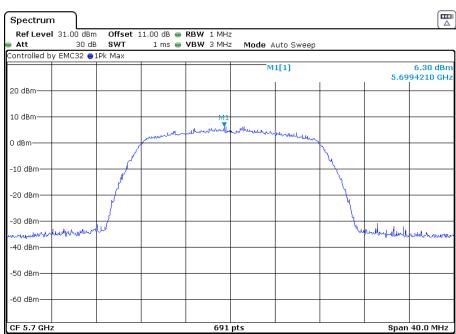


TEST REPORT

Channel 140: 5700 MHz:

ANT1



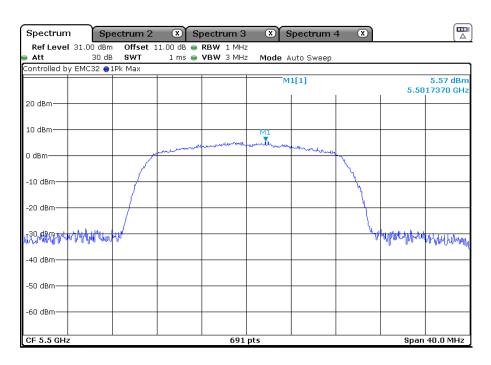


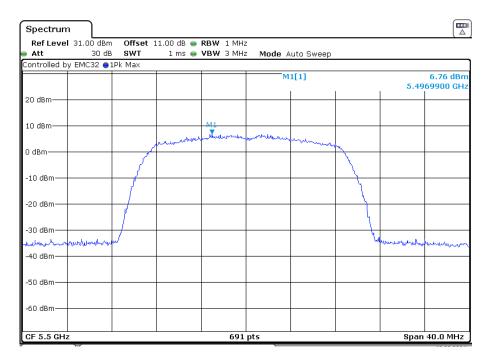


TEST REPORT

802.11an(HT 20) Channel 100: 5500 MHz:

ANT1



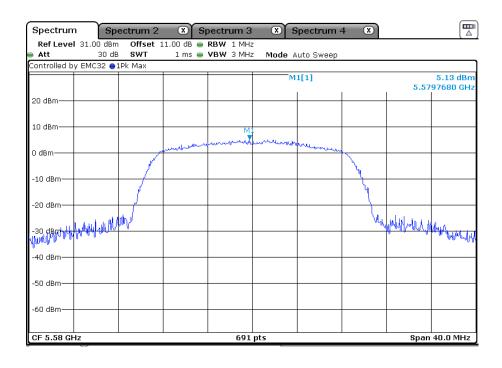


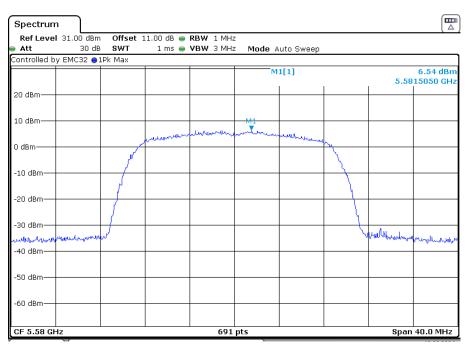


TEST REPORT

Channel 116: 5580 MHz:

ANT1



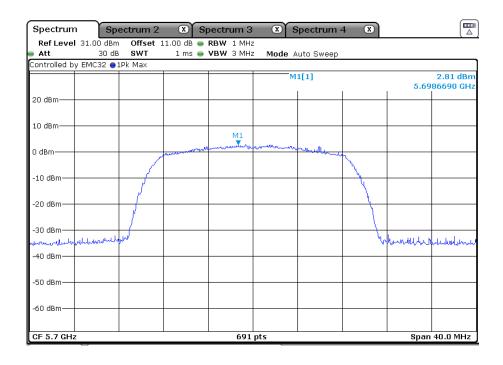


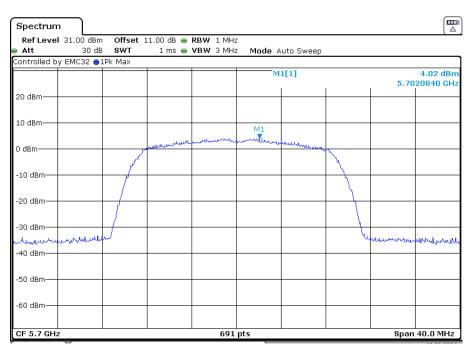


TEST REPORT

Channel 140: 5700 MHz:

ANT1





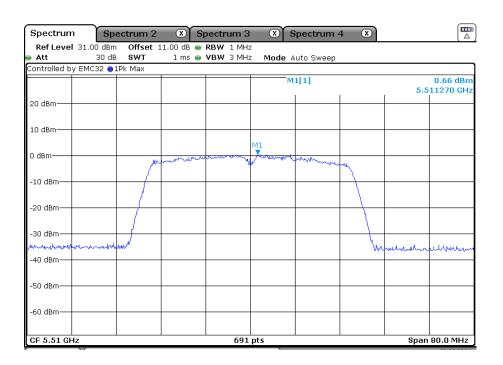


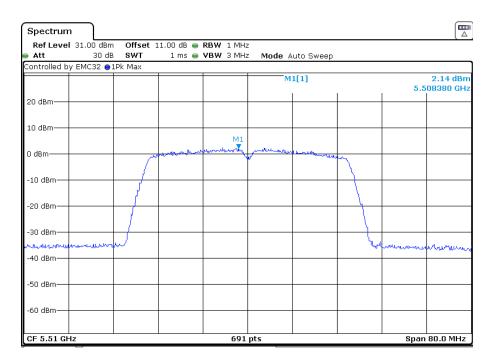
TEST REPORT

802.11an(HT 40)

Channel 102: 5510 MHz:

ANT1



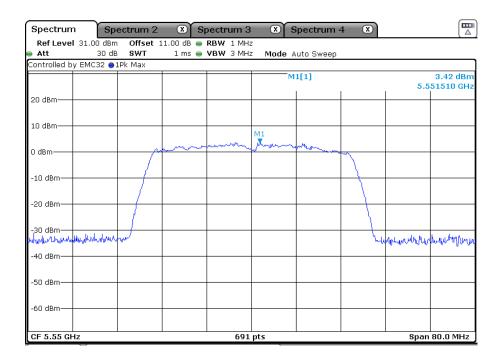


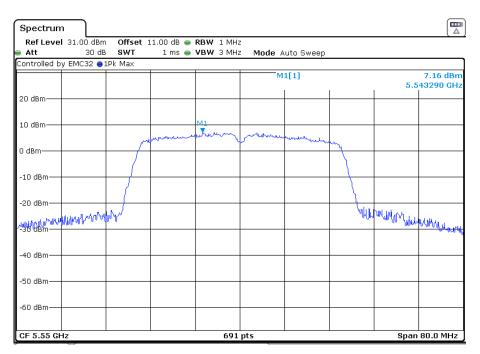


TEST REPORT

Channel 110: 5550 MHz:

ANT1



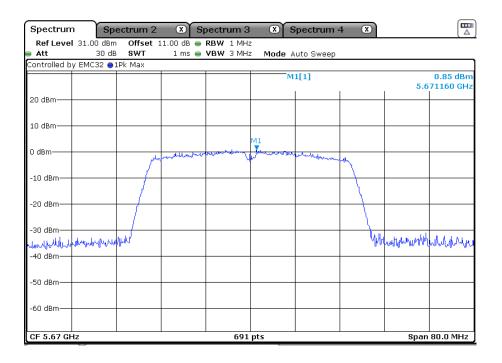


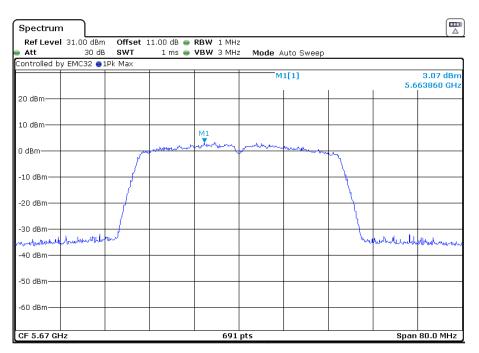


TEST REPORT

Channel 134: 5670 MHz:

ANT1







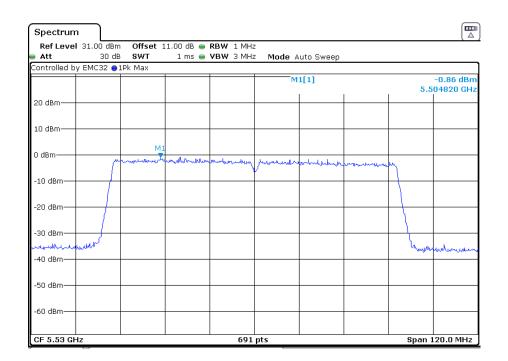
TEST REPORT

802.11ac(HT 80)

Channel 106: 5530 MHz:

ANT1

Ref Level 31.00 dBm Offset 11.00 dB RBW 1 MHz Att 30 dB SWT 1 ms VBW 3 MHz Mode Auto Sweep Controlled by EMC32 IPK Max M1[1] -4.19 dBm 20 dBm	Spectrum	Spect	rum 2	🗶 SI	bectrum 3	× 5	Spectrum 4	4 X		
Controlled by EMC32 • 1Pk Max M1[1] -4.19 dBm 20 dBm .50 dBm										
20 dBm M1[1] -4.19 dBn 10 dBm 5.503600 GH: 0 0 dBm 0 0 -10 dBm 0 0 -20 dBm 0 0 -30 dBm 0 0 -50 dBm 0 0				I ms 🖷	VBW 3 MH2	Mode A	uto Sweep			
10 dBm			inda.			м	1[1]		5.5	
0 dBm	20 dBm									
-10 dBm	10 dBm									
-10 dBm -20 dBm -30 dBm -40 dBm -50 dBm	0 dBm									
-30 dBm 	-10 dBm	p	mmili	white	whether and any	portante	montantanta	Month	m L	
-40 dBm	-20 dBm									
-40 dBm	-30 dBm									
-40 dBm									$ \langle \rangle$	
-60 dBm	-50 dBm									
	-60 dBm									
CF 5.53 GHz 691 pts Span 120.0 MHz										00 0 MU-



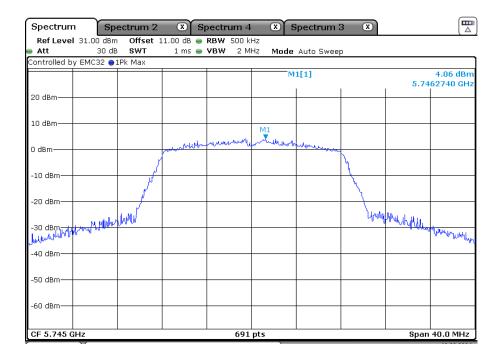


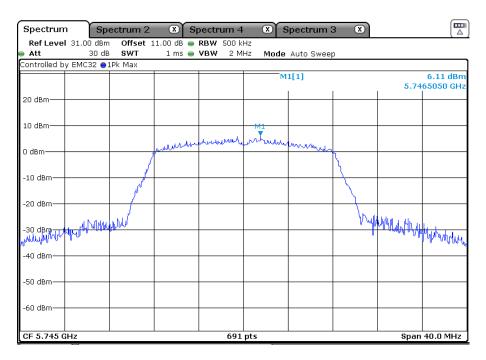
TEST REPORT

Band IV 5725 MHz to 5850 MHz

802.11a Channel 149: 5745 MHz:

ANT1



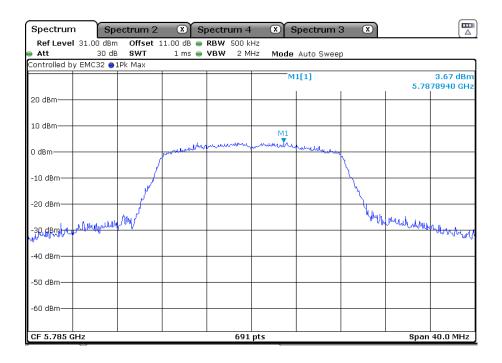


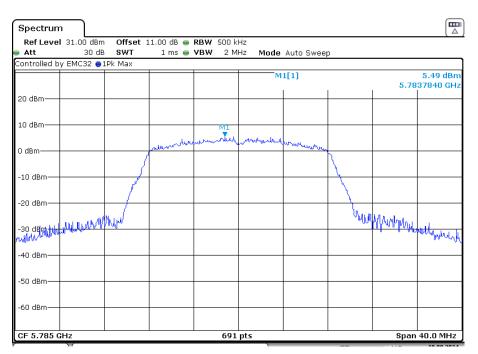


TEST REPORT

Channel 157: 5785 MHz:

ANT1



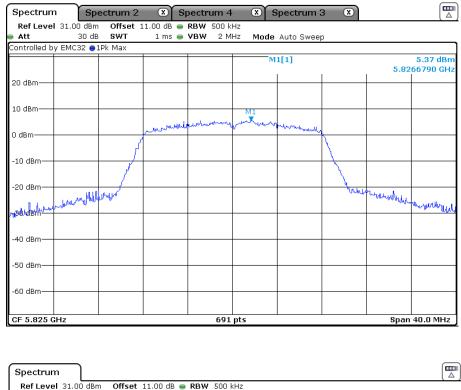


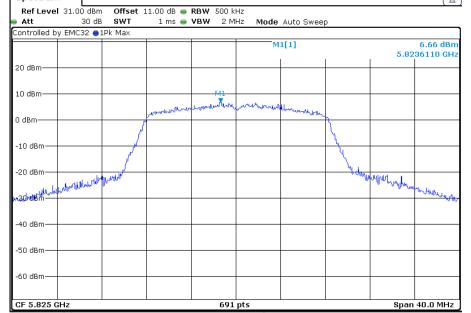


TEST REPORT

Channel 165: 5825 MHz:

ANT1



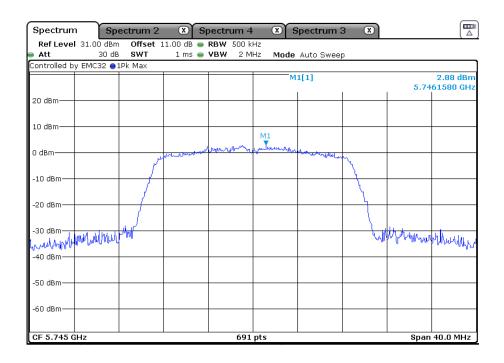


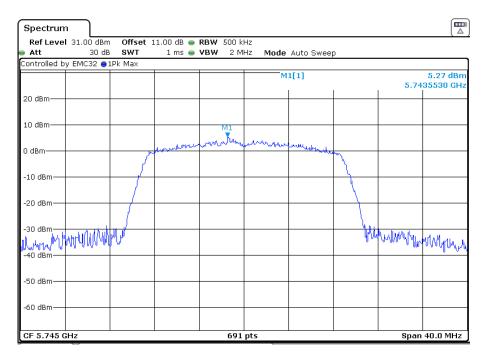


TEST REPORT

802.11an(HT 20) Channel 149: 5745 MHz:

ANT1



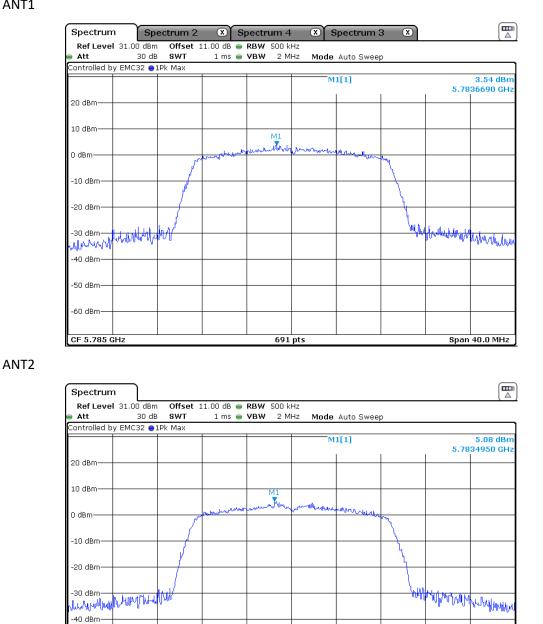




TEST REPORT

Channel 157: 5785 MHz:

ANT1



691 pts

Version: 26 August 2024

-50 dBm--60 dBm-

CF 5.785 GHz

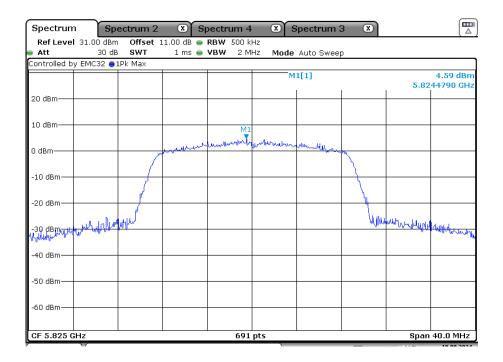
Span 40.0 MHz

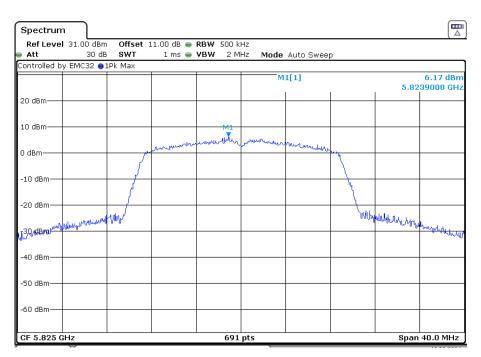


TEST REPORT

Channel 165: 5825 MHz:

ANT1





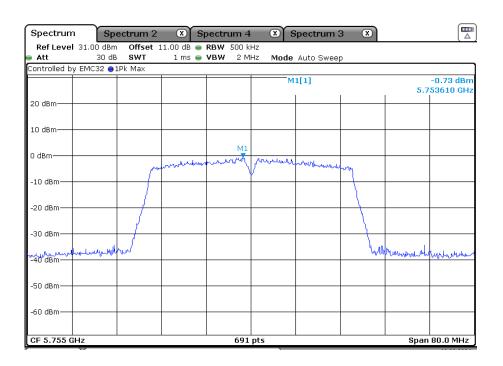


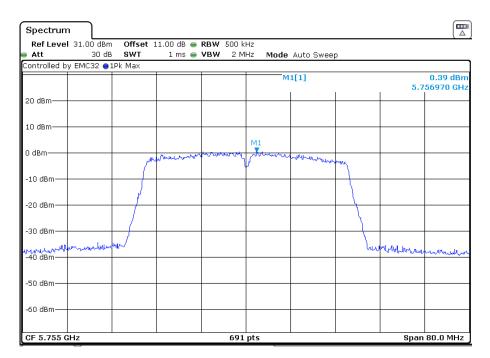
TEST REPORT

802.11an(HT 40)

Channel 151: 5755 MHz:

ANT1



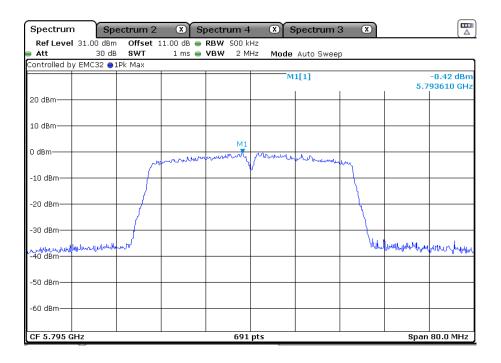


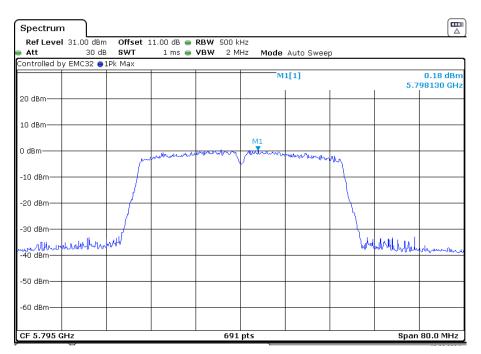


TEST REPORT

Channel 159: 5795 MHz:

ANT1







TEST REPORT

802.11ac(HT 80)

Channel 155: 5775 MHz:

ANT1

