

FCC Test Report

**Test Report
On Behalf of
Fujian Centerm Information Co.,Ltd.
For
Chromebook**

**Model No.: Centerm Chromebook M311A, Centerm Enterprise
Chromebook M311A, Chromebook M311A, M311A Plus,
M****, M31****, M***** (“*” may be alphanumeric characters,
blank or other characters)**

FCC ID: 2AN9R-M311A

Prepared For: Fujian Centerm Information Co.,Ltd.
#21-#22 Buildings,No.618,Jinshan Road,Jinshan Industrial Park,Cangshan
District,Fuzhou City, Fujian Province,China

Prepared By: Shenzhen HUAKE Testing Technology Co., Ltd.
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Date of Test: Apr. 10, 2026 ~ Apr. 29, 2026

Date of Report: May 22, 2026

Report Number: HK2604100402-6E

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Test Result Certification

Applicant's Name: Fujian Centerm Information Co.,Ltd.
Address: #21-#22 Buildings, No.618, Jinshan Road, Jinshan Industrial Park, Cangshan District, Fuzhou City, Fujian Province, China
Manufacturer's Name: Fujian Centerm Information Co.,Ltd.
Address: #21-#22 Buildings, No.618, Jinshan Road, Jinshan Industrial Park, Cangshan District, Fuzhou City, Fujian Province, China

Product Description

Trade Mark: Centerm
Product Name: Chromebook
Model and/or Type Reference: Centerm Chromebook M311A, Centerm Enterprise Chromebook M311A, Chromebook M311A, M311A, M311A Plus, M****, M31****, M***** ("*" may be alphanumeric characters, blank or other characters)
Standards: FCC Rules and Regulations Part 15 Subpart E Section 15.407
ANSI C63.10: 2020

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Date of Test:
Date (s) of Performance of Tests: **Apr. 10, 2026 ~ Apr. 29, 2026**
Date of Issue: **May 22, 2026**
Test Result: **Pass**

Testing Engineer

Len Liao

Len Liao

Technical Manager

Sliver Wan

Sliver Wan

Authorized Signatory

Jason Zhou

Jason Zhou



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**** Issued History ****

Revision	Description	Issued Date	Remark
Revision 1.0	Initial Test Report Release	Apr. 29, 2026	Jason Zhou
Revision 2.0	Add FCC ID. All test data were obtained from: HK2604100515-E	May 22, 2026	Jason Zhou

1. Summary

1.1 Test Procedures and Results

Requirement	CFR 47 Section	Result
Antenna Requirement	§15.203	PASS
AC Power Line Conducted Emission	§15.207	PASS
Maximum Conducted Output Power	§15.407(a)	PASS
6dB Emission Bandwidth	§15.407(e)	PASS
26dB Emission Bandwidth& 99% Occupied Bandwidth	§15.407(a)	N/A
Power Spectral Density	§15.407(a)	PASS
Band Edge	§15.407(b)/15.209/15.205	PASS
Radiated Emission	§15.407(b)/15.209/15.205	PASS
Frequency Stability	§15.407(g)	PASS

Note:

1. PASS: Test item meets the requirement.
2. Fail: Test item does not meet the requirement.
3. N/A: Test case does not apply to the test object.
4. The test result judgment is decided by the limit of test standard.

1.2 Information of the Test Laboratory

Shenzhen HUAKE Testing Technology Co., Ltd.

Add.: 1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China



1.3 Measurement Uncertainty

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

No.	Item	MU
1	Conducted Emission 0.15~30MHz	$\pm 2.71\text{dB}$
2	All Emissions, Radiated(<1G)	$\pm 3.90\text{dB}$
3	All Emissions, Radiated(>1G)	$\pm 4.28\text{dB}$
4	Transmitter Power Conducted	$\pm 0.37\text{dB}$
5	Conducted Spurious Emission	$\pm 2.20\text{dB}$
6	Occupied Bandwidth	$\pm 1.5\%$
7	Temperature	$\pm 0.1^{\circ}\text{C}$
8	Humidity	$\pm 1.0\%$



2. EUT Description

2.1 General Description of EUT

Equipment	Chromebook
Model Name	Centerm Chromebook M311A
Series Model(s)	Centerm Enterprise Chromebook M311A, Chromebook M311A, M311A, M311A Plus, M****, M31****, M***** (“*” may be alphanumeric characters, blank or other characters)
Model Difference	All model's the function, software and electric circuit are the same, only with product model named different. Test sample model: Centerm Chromebook M311A.
Trade Mark	Centerm
FCC ID	2AN9R-M311A
Operation Frequency	IEEE 802.11a/n/ac(HT20)/ax(HE20) 5.745GHz-5.825GHz IEEE 802.11n/ac(HT40)/ax(HE40) 5.755GHz-5.795GHz IEEE 802.11ac(HT80)/ax(HE80) 5.775GHz
Modulation Technology	IEEE 802.11a/n/ac/ax
Modulation Type	64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode only 1024QAM for OFDMA in 11ax mode only
Antenna Type	FPC Antenna
Antenna Gain	Antenna 1: 1.35dBi Antenna 2: 1.71dBi MIMO: 4.54dBi
Power Source	DC15V From Adapter with AC100-240V, 50/60Hz or DC11.1V From Battery
Power Supply	DC15V From Adapter with AC100-240V, 50/60Hz or DC11.1V From Battery
Hardware Version	V1.0
Software Version	V1.0
Note: 1. The EUT incorporates a MIMO function. Physically, it provides two completed transmitters and receivers (2T2R), two transmit signals are completely correlated, then, Direction gain= GANT + Array Gain (Array Gain=10 log(2) dB for power spectral density; Array Gain=0 for power measurement). 2. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual. 3. Antenna gain Refer to the antenna specifications. 4. The cable loss data is obtained from the supplier. 5. The test results in the report only apply to the tested sample.	

2.2 Operation Frequency Each of Channel

802.11a/802.11n(HT20) 802.11ac(HT20) 802.11ax(HE20)		802.11n(HT40)/ 802.11ac(HT40) 802.11ax(HE40)		802.11ac(HT80) 802.11ax(HE80)	
Channel	Frequency	Channel	Frequency	Channel	Frequency
149	5745	151	5755	155	5775
153	5765	159	5795		
157	5785				
161	5805				
165	5825				

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

2.3 Operation of EUT during Testing

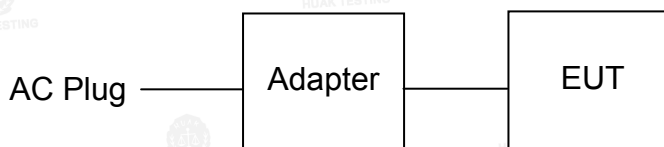
Band IV (5725 - 5850 MHz)		
For 802.11a/n(HT20)/ac(HT20)/ax(HE20)		
Channel Number	Channel	Frequency (MHz)
149	Low	5745
157	Mid	5785
165	High	5825

For 802.11n(HT40)/ac(HT40)/ax(HE40)		
Channel Number	Channel	Frequency (MHz)
151	Low	5755
159	High	5795

For 802.11ac(HT80)/ax(HE80)		
Channel Number	Channel	Frequency (MHz)
155	/	5775

2.4 Description of Test Setup

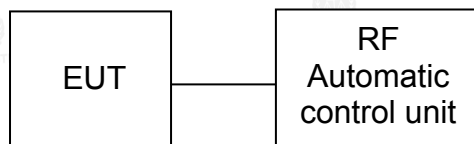
Operation of EUT during AC Conducted testing and below 1GHz Radiation testing:



Operation of EUT during above 1GHz Radiation testing:



Operation of EUT during RF Conducted testing:



The sample was placed (0.8m below 1GHz, 1.5m above 1GHz) above the ground plane of 3m chamber. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The report only reflects the worst emission test results. The worst case is X position.



2.5 Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Trade Mark	Model/Type No.	Specification	Remark
1	Chromebook	Centerm	Centerm Chromebook M311A	N/A	EUT
2	Adapter	N/A	TEKA-PC1A45WUS	Input: AC100-240V, 50/60Hz, 1.2A MAX Output: DC5V/3A 15W, DC9V/3A 27W, DC12V/3A 36W, DC15V/3A 45W, DC20V/2.25A 45W	

Note:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.
3. For conducted measurements (Output Power, 6dB Emission Bandwidth, Power Spectral Density, Spurious Emissions), the antenna of EUT is connected to the test equipment via temporary antenna connector, the antenna connector is soldered on the antenna port of EUT, and the temporary antenna connector is listed in the Test Instruments.



3. General Information

3.1 Test Environment and Mode

Operating Environment:	
Temperature:	25.0 °C
Humidity:	56 % RH
Atmospheric Pressure:	1010 mbar
Test Mode:	
Engineering Mode:	Keep the EUT in continuous transmitting by select channel and modulations
We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows:	
Per-scan all kind of data rate in lowest channel, and found the follow list which it was worst case.	
Mode	Data rate
802.11a	6 Mbps
802.11n(HT20)	MCS0
802.11n(HT40)	MCS0
802.11ac(HT20)/ac(HT40)/ac(HT80)	MCS0
802.11ax(HE20)/ax(HE40)/ax(HE80)	MCS0
Final Test Mode:	
Operation mode:	Keep the EUT in continuous transmitting with modulation

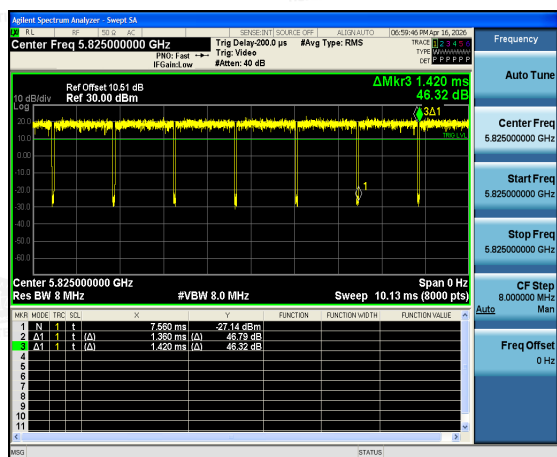
3. Mode Test Duty Cycle

ANT.1:

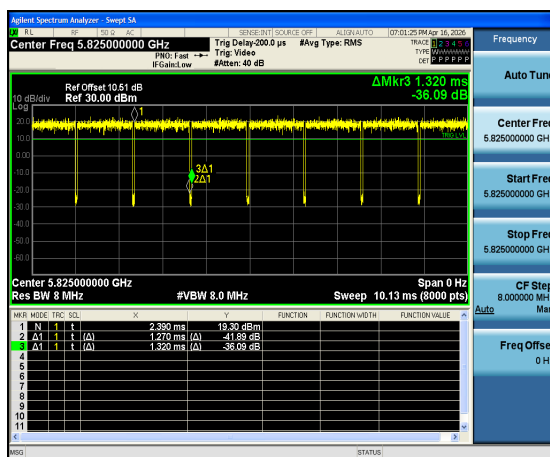
Mode	Duty Cycle
802.11a	0.9577
802.11n(HT20)	0.9621
802.11n(HT40)	0.9275
802.11ac(HT20)	0.9624
802.11ac(HT40)	0.9275
802.11ac(HT80)	0.8649
802.11ax(HE20)	0.9549
802.11ax(HE40)	0.9275
802.11ax(HE80)	0.9621

Test plots as follows:

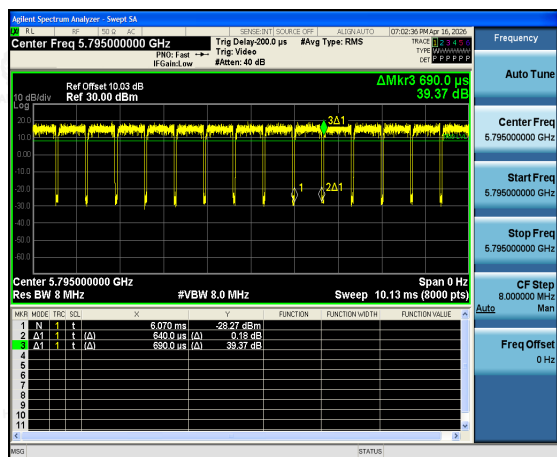
802.11a



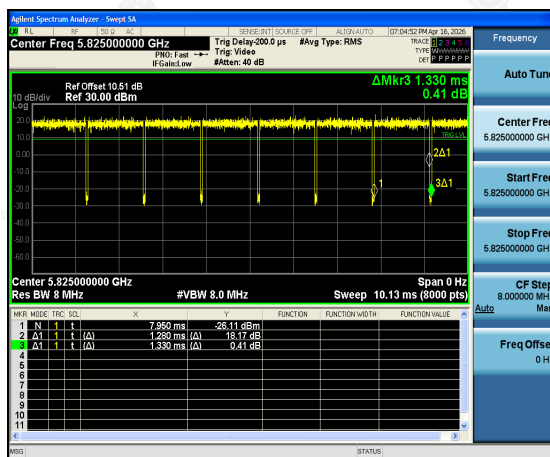
802.11n(HT20)



802.11n(HT40)



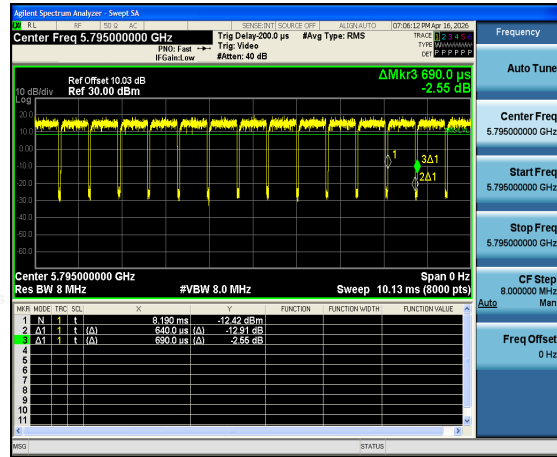
802.11ac(HT20)



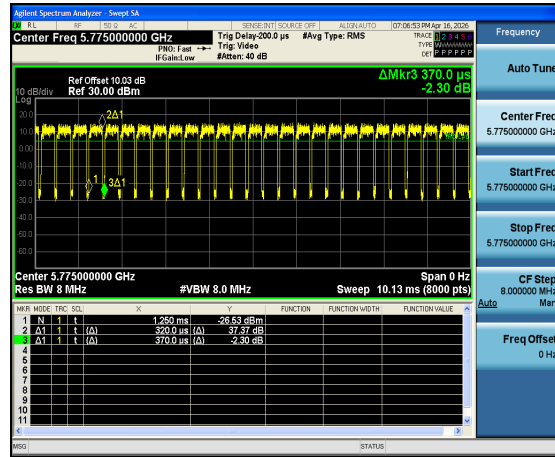
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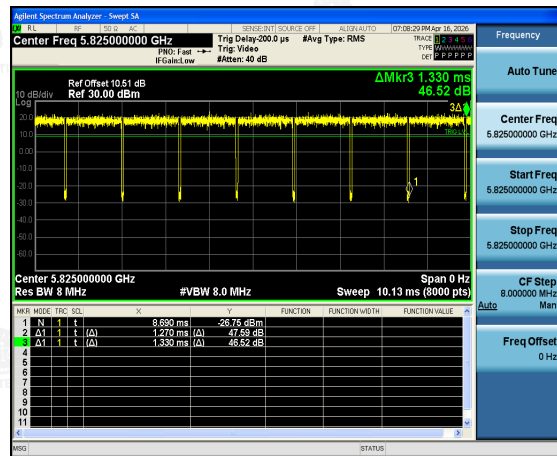
802.11ac(HT40)



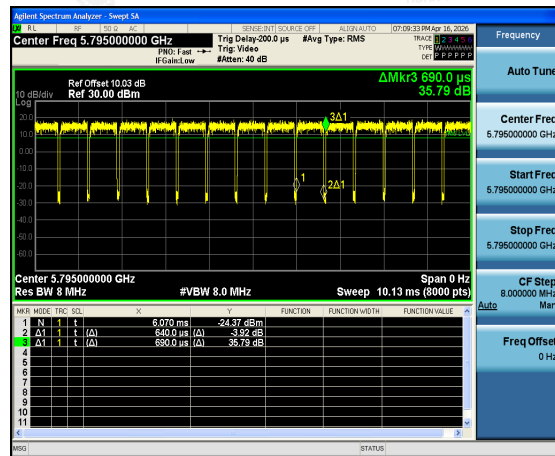
802.11ac(HT80)



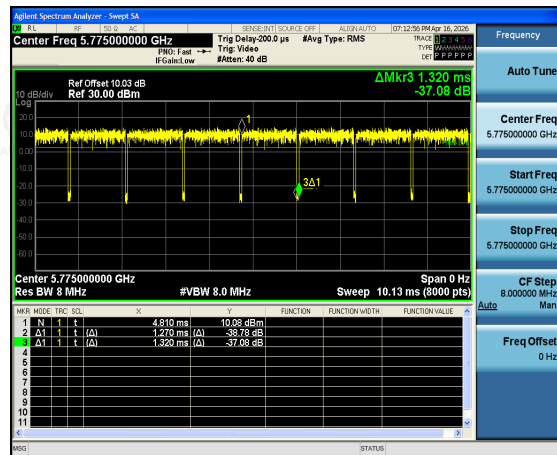
802.11ax(HE20)



802.11ax(HE40)



802.11ax(HE80)

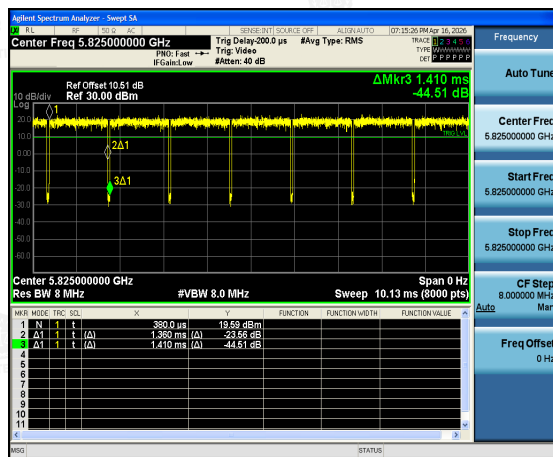


ANT.2:

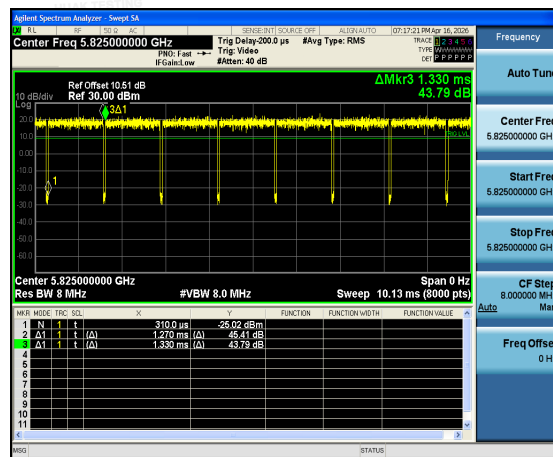
Mode	Duty Cycle
802.11a	0.9645
802.11n(HT20)	0.9549
802.11n(HT40)	0.9130
802.11ac(HT20)	0.9549
802.11ac(HT40)	0.9275
802.11ac(HT80)	0.9549
802.11ax(HE20)	0.9549
802.11ax(HE40)	0.9265
802.11ax(HE80)	0.9549

Test plots as follows:

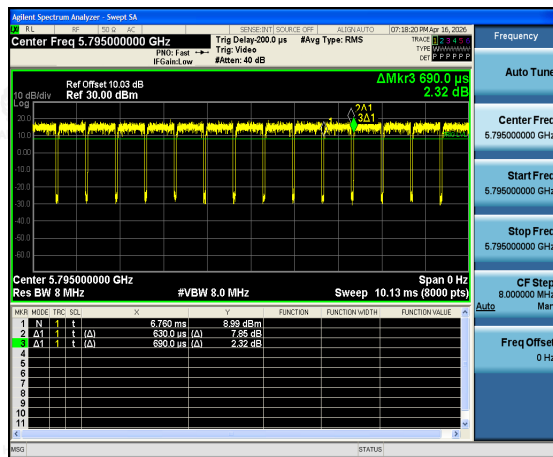
802.11a



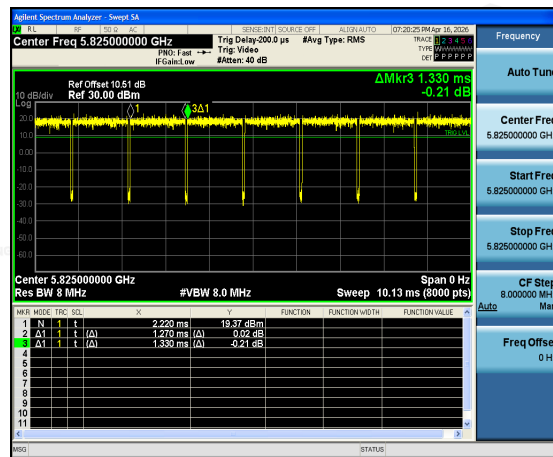
802.11n(HT20)



802.11n(HT40)

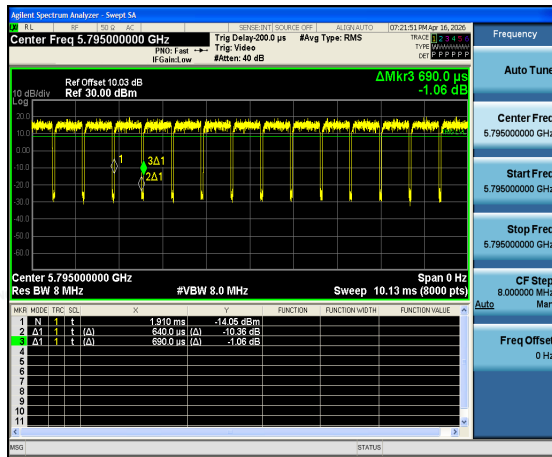


802.11ac(HT20)

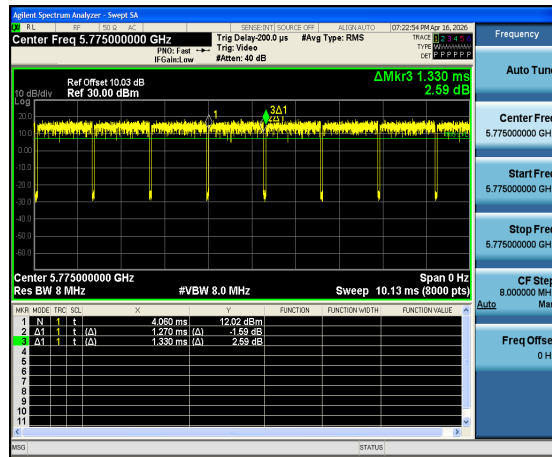


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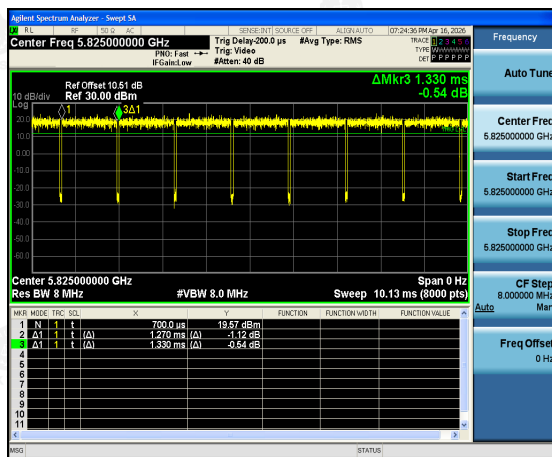
802.11ac(HT40)



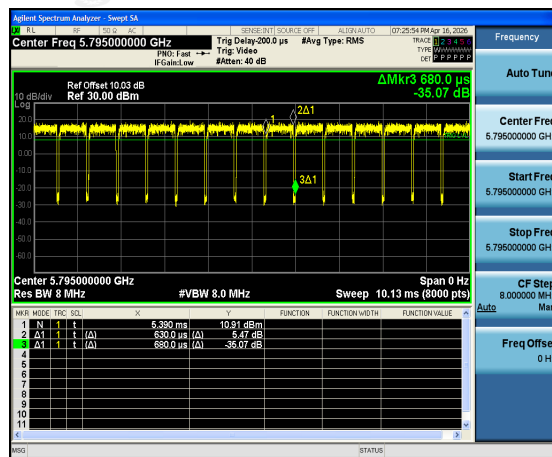
802.11ac(HT80)



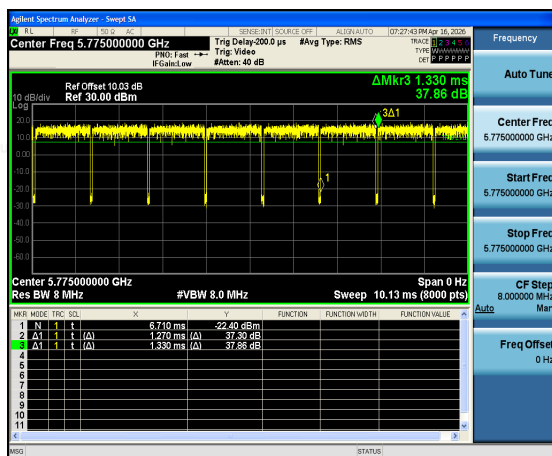
802.11ax(HE20)



802.11ax(HE40)



802.11ax(HE80)





4. Test Results and Measurement Data

4.1 AC Conducted Emission

4.1.1 Test Specification

Test Requirement:	FCC Part15 C Section 15.207														
Test Method:	ANSI C63.10: 2020														
Frequency Range:	150 kHz to 30 MHz														
Receiver setup:	RBW=9 kHz, VBW=30 kHz, Sweep time=auto														
Limits:	<table><tr><th rowspan="2">Frequency range (MHz)</th><th colspan="2">Limit (dBuV)</th></tr><tr><th>Quasi-peak</th><th>Average</th></tr><tr><td>0.15-0.5</td><td>66 to 56*</td><td>56 to 46*</td></tr><tr><td>0.5-5</td><td>56</td><td>46</td></tr><tr><td>5-30</td><td>60</td><td>50</td></tr></table>	Frequency range (MHz)	Limit (dBuV)		Quasi-peak	Average	0.15-0.5	66 to 56*	56 to 46*	0.5-5	56	46	5-30	60	50
Frequency range (MHz)	Limit (dBuV)														
	Quasi-peak	Average													
0.15-0.5	66 to 56*	56 to 46*													
0.5-5	56	46													
5-30	60	50													
Test Setup:	Reference Plane 40cm E.U.T AC power 80cm LISN Filter EMI Receiver AC power Test table/Insulation plane Remark E.U.T: Equipment Under Test LISN: Line Impedance Stabilization Network Test table height=0.8m														
Test Mode:	Tx Mode														
Test Procedure:	1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment. 2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs). 3. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10: 2020 on conducted measurement.														
Test Result:	Pass														

4.1.2 Test Instruments

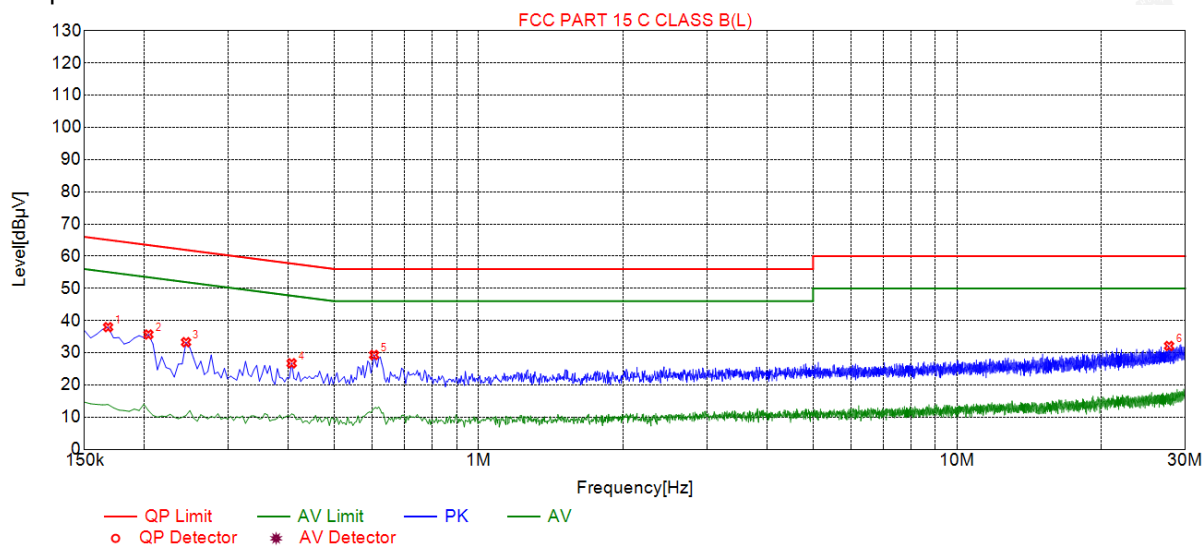
Conducted Emission Shielding Room Test Site (843)					
Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Receiver	R&S	ESR-7	HKE-005	Feb. 06, 2026	Feb. 05, 2027
LISN	R&S	ENV216	HKE-002	Feb. 11, 2026	Feb. 10, 2027
LISN	R&S	ENV216	HKE-059	Feb. 04, 2026	Feb. 03, 2027
Coax cable (9KHz-30MHz)	Times	381806-002	N/A	Feb. 04, 2026	Feb. 03, 2027
EMI Test Software	Tonscend	JS32-CE 2.5.0.6	HKE-081	/	/
10dB Attenuator	Schwarzbeck	VTSD9561F	HKE-153	Feb. 04, 2026	Feb. 03, 2027

Note: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).

4.1.3 Test Data

All modes have been tested, only the worst result was reported as below:

Test Specification: Line



Suspected List

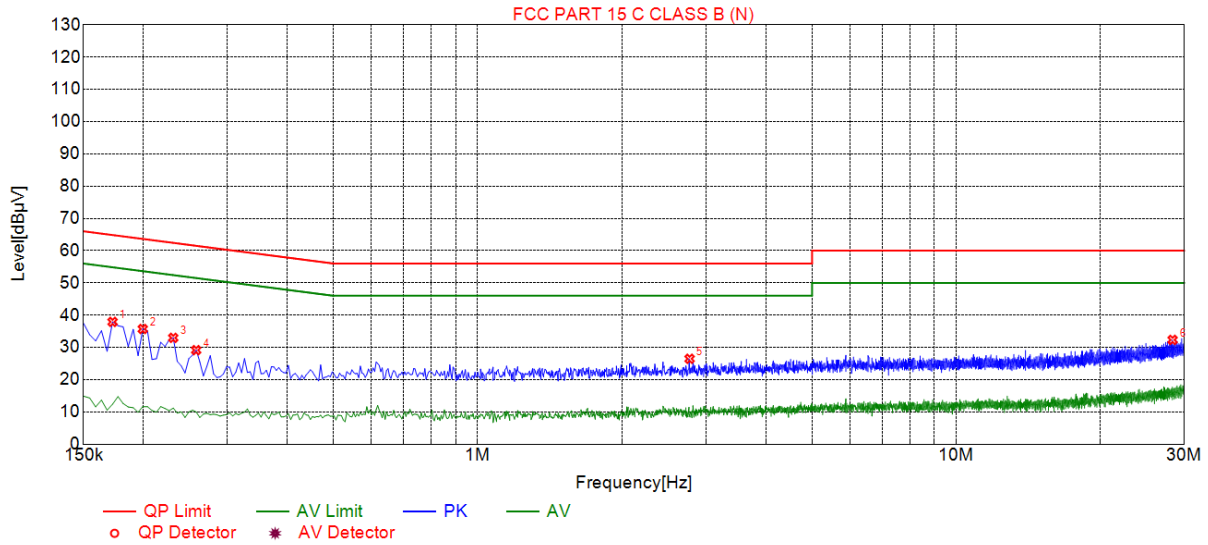
NO.	Freq. [MHz]	Level [dBμV]	Factor [dB]	Limit [dBμV]	Margin [dB]	Reading [dBμV]	Detector	Type
1	0.1680	37.96	19.81	65.06	27.10	18.15	PK	L
2	0.2040	35.67	19.75	63.45	27.78	15.92	PK	L
3	0.2445	33.28	19.76	61.94	28.66	13.52	PK	L
4	0.4065	26.73	19.82	57.72	30.99	6.91	PK	L
5	0.6045	29.31	19.90	56.00	26.69	9.41	PK	L
6	27.7485	32.12	24.94	60.00	27.88	7.18	PK	L

Remark: Margin = Limit – Level

Correction factor = Cable lose + LISN insertion loss

Level=Test receiver reading + correction factor

Test Specification: Neutral



Suspected List

NO.	Freq. [MHz]	Level [dBμV]	Factor [dB]	Limit [dBμV]	Margin [dB]	Reading [dBμV]	Detector	Type
1	0.1725	37.91	19.86	64.84	26.93	18.05	PK	N
2	0.1995	35.71	19.75	63.63	27.92	15.96	PK	N
3	0.2310	32.96	19.77	62.41	29.45	13.19	PK	N
4	0.2580	29.15	19.79	61.50	32.35	9.36	PK	N
5	2.7735	26.47	20.18	56.00	29.53	6.29	PK	N
6	28.3560	32.33	24.92	60.00	27.67	7.41	PK	N

Remark: Margin = Limit – Level

Correction factor = Cable lose + LISN insertion loss

Level=Test receiver reading + correction factor



4.2 Maximum Conducted Output Power

4.2.1 Test Specification

Test Requirement:	FCC Part15 E Section 15.407(a)	
Test Method:	KDB789033 D02 General UNII Test Procedures New Rules v02.r01 Section E	
Limit:	Frequency Band (MHz)	Limit
	5725-5850	1 W
Test Setup:	 RF automatic control unit EUT	
Test Mode:	Transmitting mode with modulation	
Test Procedure:	1. The testing follows the Measurement Procedure of KDB789033 D02 General UNII Test Procedures New Rules v02r01 Section E, 3, a 2. The RF output of EUT was connected to the RF automatic control unit by RF cable. The path loss was compensated to the results for each measurement. 3. Set to the maximum power setting and enable the EUT transmit continuously. 4. Measure the conducted output power and record the results in the test report.	
Test Result:	PASS	
Remark:	Conducted output power= measurement power +10log(1/x) X is duty cycle=1, so 10log(1/1)=0 Conducted output power= measurement power	

4.2.2 Test Instruments

RF Test Room					
Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Spectrum analyzer	Agilent	N9020A	HKE-025	Feb. 06, 2026	Feb. 05, 2027
Spectrum analyzer	KEYSIGHT	N9020A	HKE-117	Feb. 06, 2026	Feb. 05, 2027
Power meter	KEYSIGHT	E4419B	HKE-144	Feb. 06, 2026	Feb. 05, 2027
Power Sensor	Aglient	E9304A H18	HKE-165	Feb. 06, 2026	Feb. 05, 2027
RF cable	Times	1-40G	N/A	Feb. 06, 2026	Feb. 05, 2027
RF automatic control unit	Tonscend	JS0806-2	HKE-060	Feb. 06, 2026	Feb. 05, 2027
RF Test Software	Tonscend	JS1120-3 Version 3.5.39	HKE-083	/	/

Note: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).



4.2.3 Test Data

Configuration Band IV (5725 - 5850 MHz)					
Mode	Test Channel	Maximum Conducted Output Power (dBm)		Limit (dBm)	Result
		Antenna port 1	Antenna port 2		
802.11a	CH149	6.08	6.02	30	PASS
802.11a	CH157	5.37	5.19	30	PASS
802.11a	CH165	6.16	5.75	30	PASS
802.11n(HT20)	CH149	6.49	6.42	30	PASS
802.11n(HT20)	CH157	5.63	5.42	30	PASS
802.11n(HT20)	CH165	5.81	5.60	30	PASS
802.11n(HT40)	CH151	6.32	6.94	30	PASS
802.11n(HT40)	CH159	5.25	5.79	30	PASS
802.11ac(HT20)	CH149	6.24	6.42	30	PASS
802.11ac(HT20)	CH157	5.77	5.72	30	PASS
802.11ac(HT20)	CH165	5.16	5.59	30	PASS
802.11ac(HT40)	CH151	6.31	6.15	30	PASS
802.11ac(HT40)	CH159	5.31	5.78	30	PASS
802.11ac(HT80)	CH155	5.86	6.28	30	PASS
802.11ax(HE20)	CH149	7.08	6.94	30	PASS
802.11ax(HE20)	CH157	6.58	5.86	30	PASS
802.11ax(HE20)	CH165	5.10	5.40	30	PASS
802.11ax(HE40)	CH151	5.80	5.93	30	PASS
802.11ax(HE40)	CH159	6.27	6.52	30	PASS
802.11ax(HE80)	CH155	5.49	5.00	30	PASS
Note: 1. The test results including the cable lose. 2. Limit=30dBm					



Configuration Band IV (5725 - 5850 MHz)						
Mode	Test Channel	Maximum Conducted Output Power (dBm)		MIMO	Limit (dBm)	Result
		Antenna port 1	Antenna port 2			
802.11n(HT20)	CH149	6.49	6.42	9.47	30	PASS
802.11n(HT20)	CH157	5.63	5.42	8.54	30	PASS
802.11n(HT20)	CH165	5.81	5.60	8.72	30	PASS
802.11n(HT40)	CH151	6.32	6.94	9.65	30	PASS
802.11n(HT40)	CH159	5.25	5.79	8.54	30	PASS
802.11ac(HT20)	CH149	6.24	6.42	9.34	30	PASS
802.11ac(HT20)	CH157	5.77	5.72	8.76	30	PASS
802.11ac(HT20)	CH165	5.16	5.59	8.39	30	PASS
802.11ac(HT40)	CH151	6.31	6.15	9.24	30	PASS
802.11ac(HT40)	CH159	5.31	5.78	8.56	30	PASS
802.11ac(HT80)	CH155	5.86	6.28	9.09	30	PASS
802.11ax(HE20)	CH149	7.08	6.94	10.02	30	PASS
802.11ax(HE20)	CH157	6.58	5.86	9.25	30	PASS
802.11ax(HE20)	CH165	5.10	5.40	8.26	30	PASS
802.11ax(HE40)	CH151	5.80	5.93	8.88	30	PASS
802.11ax(HE40)	CH159	6.27	6.52	9.41	30	PASS
802.11ax(HE80)	CH155	5.49	5.00	8.26	30	PASS

Note: 1. The test results including the cable loss.
2. This product supports antenna 1 and antenna 2 launch, but only support 802.11 n/ac/ax for MIMO mode, not support 802.11a for MIMO mode.
3. Limit=30dBm



4.3 6dB Emission Bandwidth

4.3.1 Test Specification

Test Requirement:	FCC CFR47 Part 15 Section 15.407(e)
Test Method:	KDB789033 D02 General UNII Test Procedures New Rules v01r04 Section C
Limit:	≥500kHz
Test Setup:	 Spectrum Analyzer EUT
Test Mode:	Transmitting mode with modulation
Test Procedure:	1. KDB789033 D02 General UNII Test Procedures New Rules v02r01 Section C 2. Set to the maximum power setting and enable the EUT transmit continuously. 3. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. Set the Video bandwidth (VBW) = 300 kHz. In order to make an accurate measurement. The 6dB bandwidth must be at least 500 kHz. 4. Measure and record the results in the test report.
Test Result:	PASS

4.3.2 Test Instruments

RF Test Room					
Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Spectrum analyzer	Agilent	N9020A	HKE-025	Feb. 06, 2026	Feb. 05, 2027
Spectrum analyzer	KEYSIGHT	N9020A	HKE-117	Feb. 06, 2026	Feb. 05, 2027
RF cable	Times	1-40G	N/A	Feb. 06, 2026	Feb. 05, 2027
RF automatic control unit	Tonscend	JS0806-2	HKE-060	Feb. 06, 2026	Feb. 05, 2027
RF Test Software	Tonscend	JS1120-3 Version 3.5.39	HKE-083	/	/

Note: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).

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4.3.3 Test Data

ANT. 1

Band IV (5725 - 5850MHz)					
Mode	Test channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Result
802.11a	CH149	5745	16.320	0.5	PASS
802.11a	CH157	5785	15.560	0.5	PASS
802.11a	CH165	5825	16.280	0.5	PASS
802.11n(HT20)	CH149	5745	17.560	0.5	PASS
802.11n(HT20)	CH157	5785	16.920	0.5	PASS
802.11n(HT20)	CH165	5825	15.400	0.5	PASS
802.11n(HT40)	CH151	5755	33.840	0.5	PASS
802.11n(HT40)	CH159	5795	33.760	0.5	PASS
802.11ac(HT20)	CH149	5745	16.360	0.5	PASS
802.11ac(HT20)	CH157	5785	17.320	0.5	PASS
802.11ac(HT20)	CH165	5825	17.280	0.5	PASS
802.11ac(HT40)	CH151	5755	35.040	0.5	PASS
802.11ac(HT40)	CH159	5795	33.760	0.5	PASS
802.11ac(HT80)	CH155	5775	75.040	0.5	PASS
802.11ax(HE20)	CH149	5745	18.520	0.5	PASS
802.11ax(HE20)	CH157	5785	18.800	0.5	PASS
802.11ax(HE20)	CH165	5825	17.960	0.5	PASS
802.11ax(HE40)	CH151	5755	35.120	0.5	PASS
802.11ax(HE40)	CH159	5795	35.120	0.5	PASS
802.11ax(HE80)	CH155	5775	75.040	0.5	PASS

Test plots as follows:



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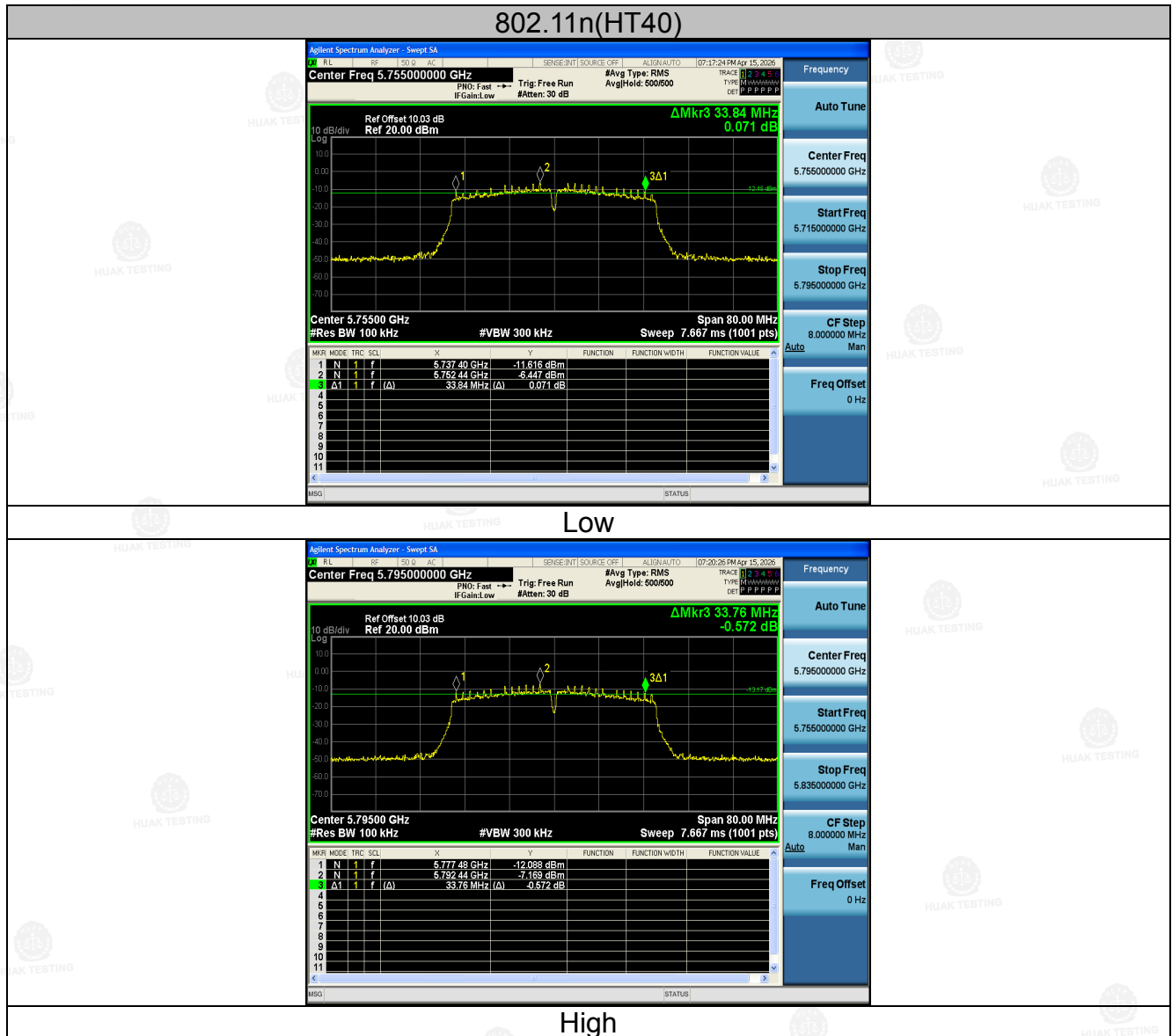
Band IV (5725 – 5850MHz)



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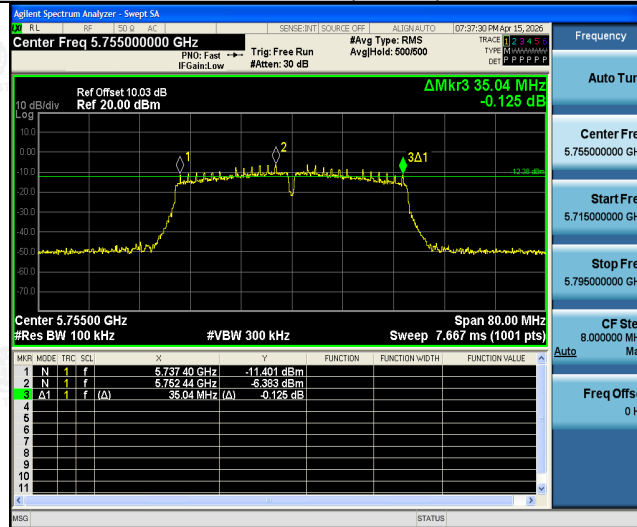
The results shown in this test report refer only to the sample(s) tested unless otherwise stated and the sample(s) are retained for 15 days only. The document is issued by Shenzhen HUAK Testing Technology Co., Ltd., this document cannot be reproduced except in full with our prior written permission.



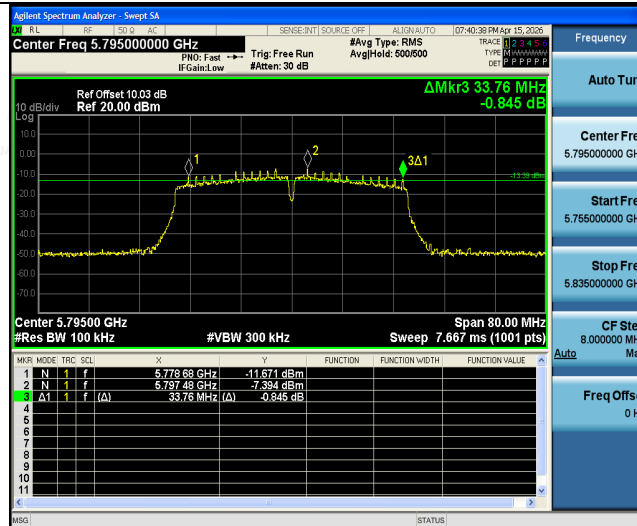


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802.11ac(HT40)

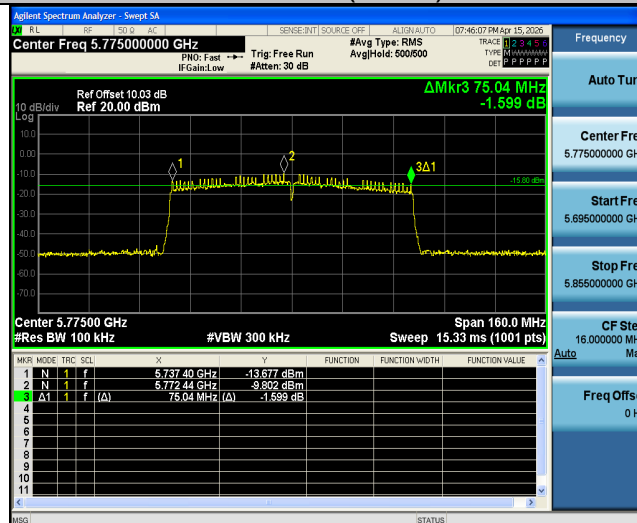


Low



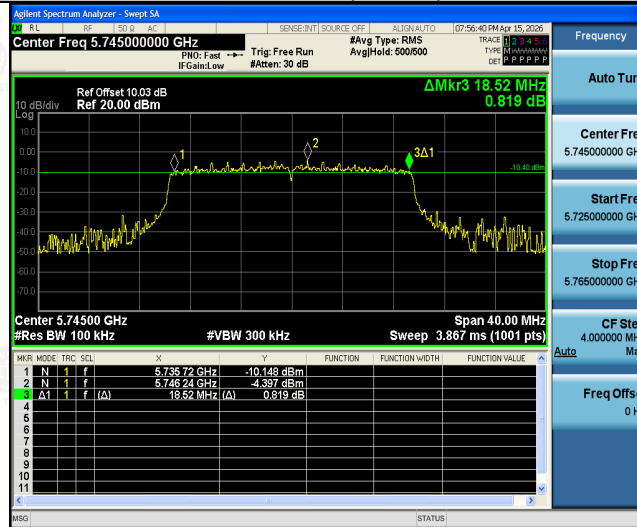
High

802.11ac(HT80)

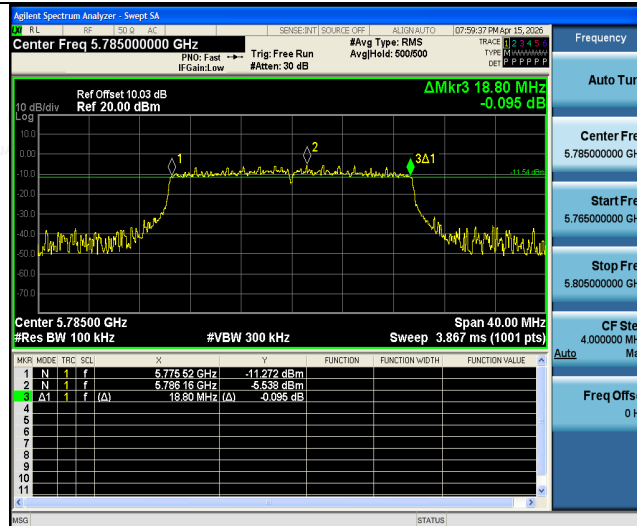


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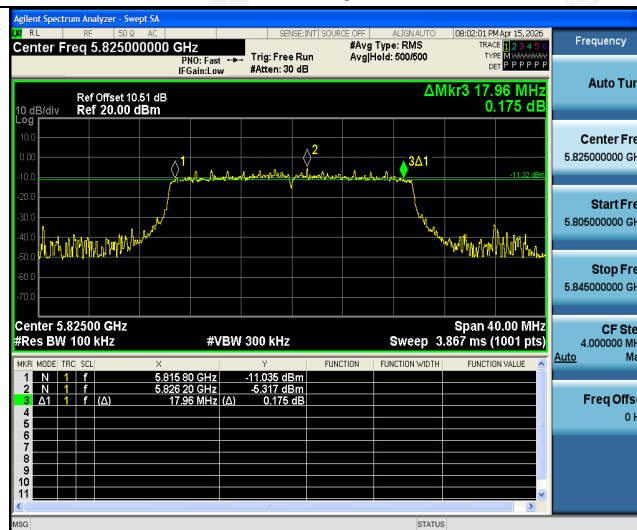
802.11ax(HE20)



Low

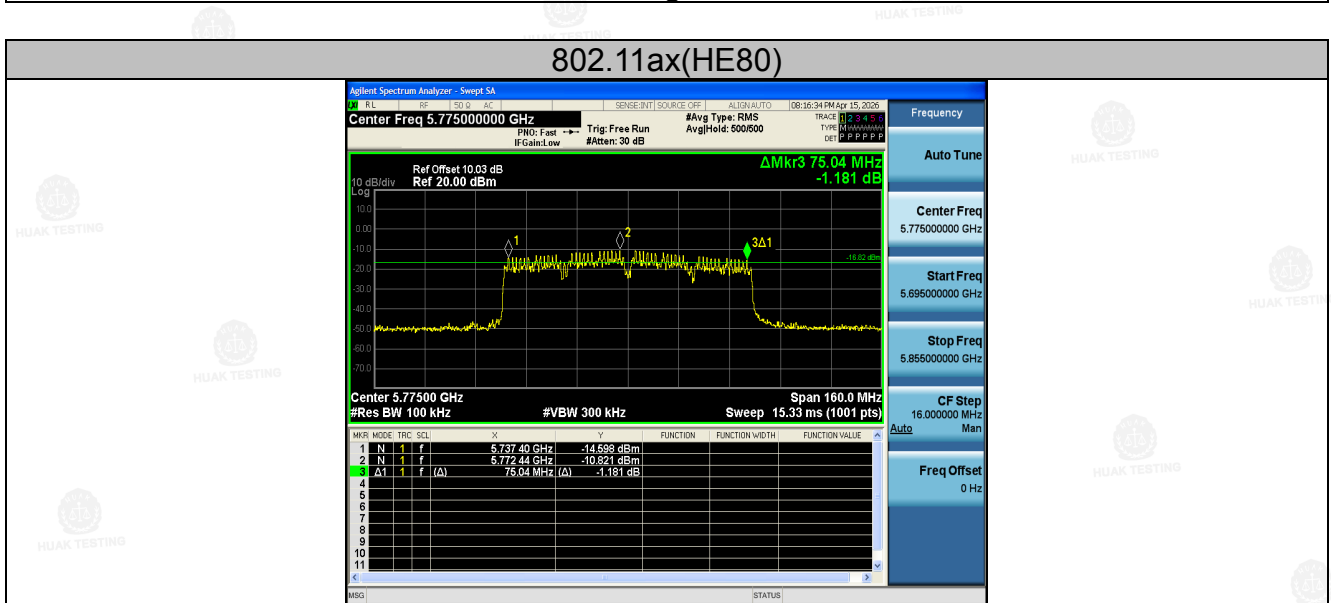
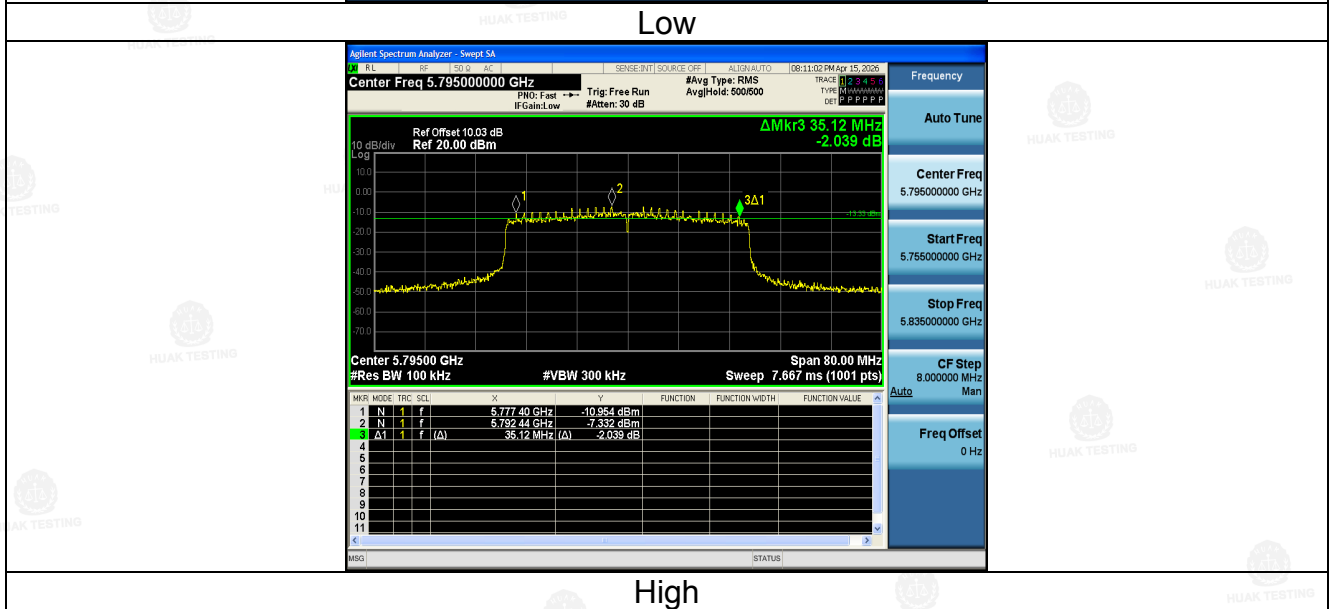
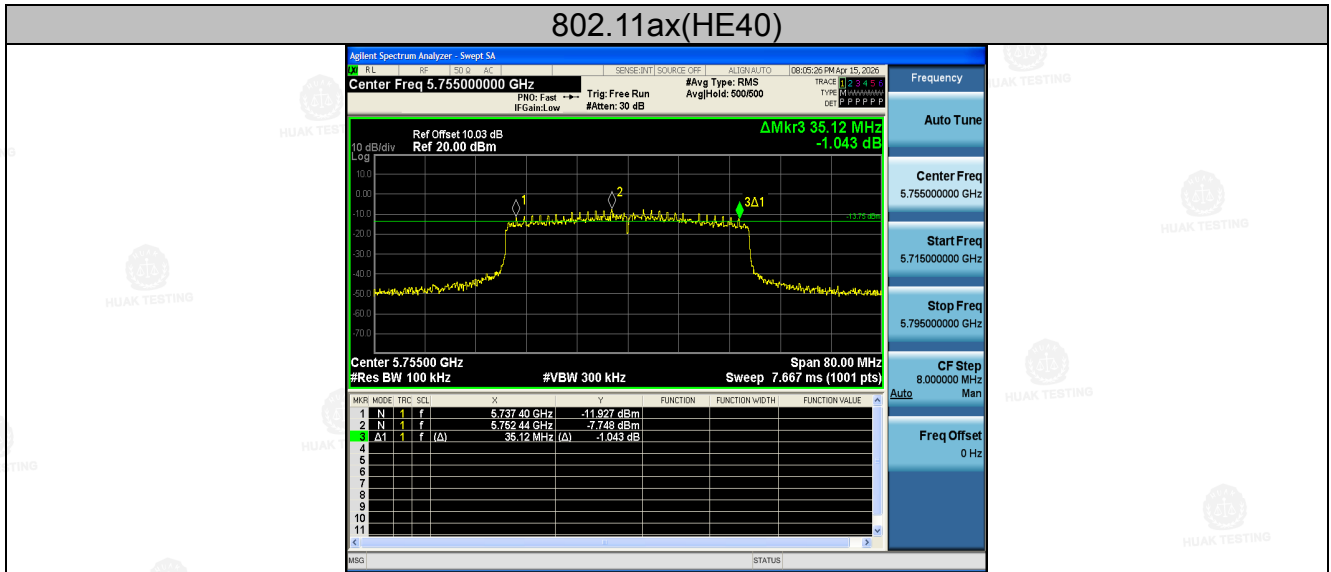


Mid



High

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ANT. 2

Band IV (5725 - 5850 MHz)					
Mode	Test channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)	Result
802.11a	CH149	5745	16.080	0.5	PASS
802.11a	CH157	5785	16.000	0.5	PASS
802.11a	CH165	5825	16.320	0.5	PASS
802.11n(HT20)	CH149	5745	16.080	0.5	PASS
802.11n(HT20)	CH157	5785	16.080	0.5	PASS
802.11n(HT20)	CH165	5825	17.240	0.5	PASS
802.11n(HT40)	CH151	5755	35.040	0.5	PASS
802.11n(HT40)	CH159	5795	35.040	0.5	PASS
802.11ac(HT20)	CH149	5745	16.320	0.5	PASS
802.11ac(HT20)	CH157	5785	17.280	0.5	PASS
802.11ac(HT20)	CH165	5825	17.280	0.5	PASS
802.11ac(HT40)	CH151	5755	35.040	0.5	PASS
802.11ac(HT40)	CH159	5795	34.960	0.5	PASS
802.11ac(HT80)	CH155	5775	75.040	0.5	PASS
802.11ax(HE20)	CH149	5745	18.720	0.5	PASS
802.11ax(HE20)	CH157	5785	18.400	0.5	PASS
802.11ax(HE20)	CH165	5825	18.720	0.5	PASS
802.11ax(HE40)	CH151	5755	35.120	0.5	PASS
802.11ax(HE40)	CH159	5795	35.120	0.5	PASS
802.11ax(HE80)	CH155	5775	75.040	0.5	PASS

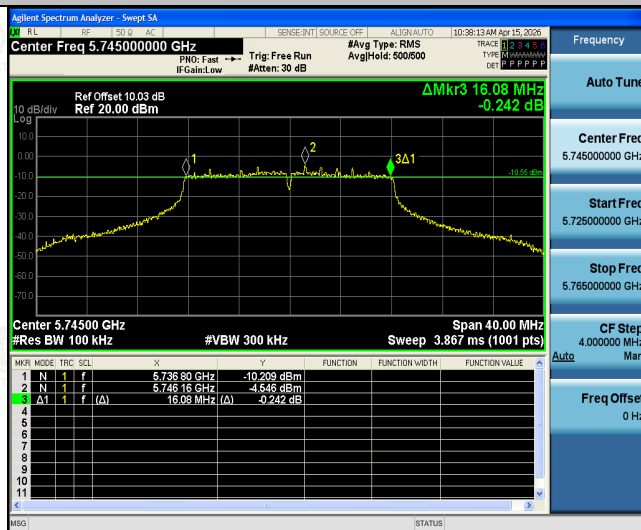
Test plots as follows:



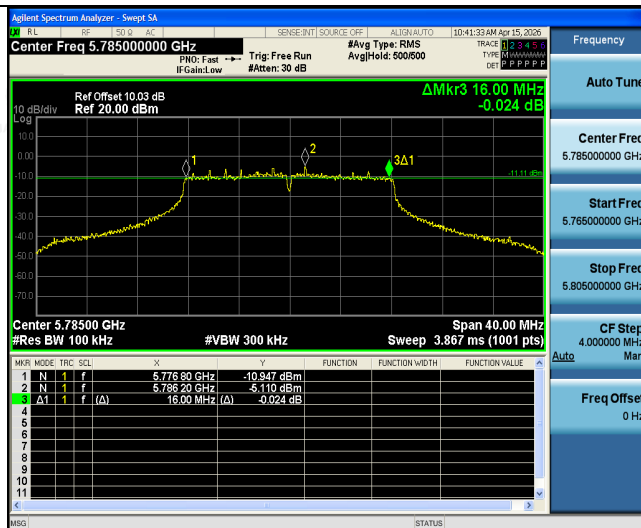
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Band IV (5725 – 5850MHz)

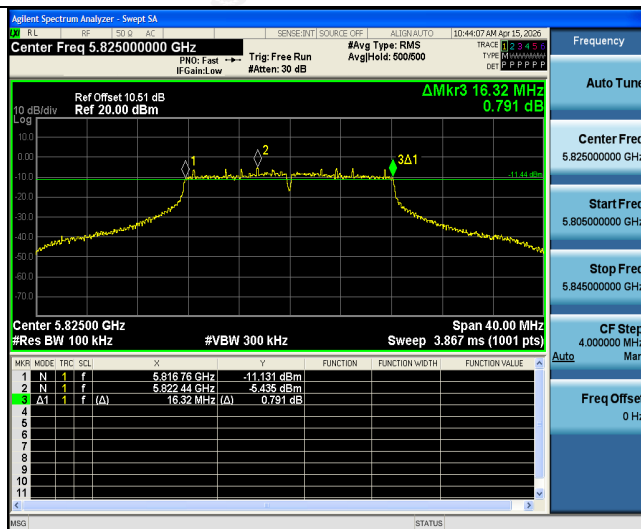
802.11a



Low



Mid

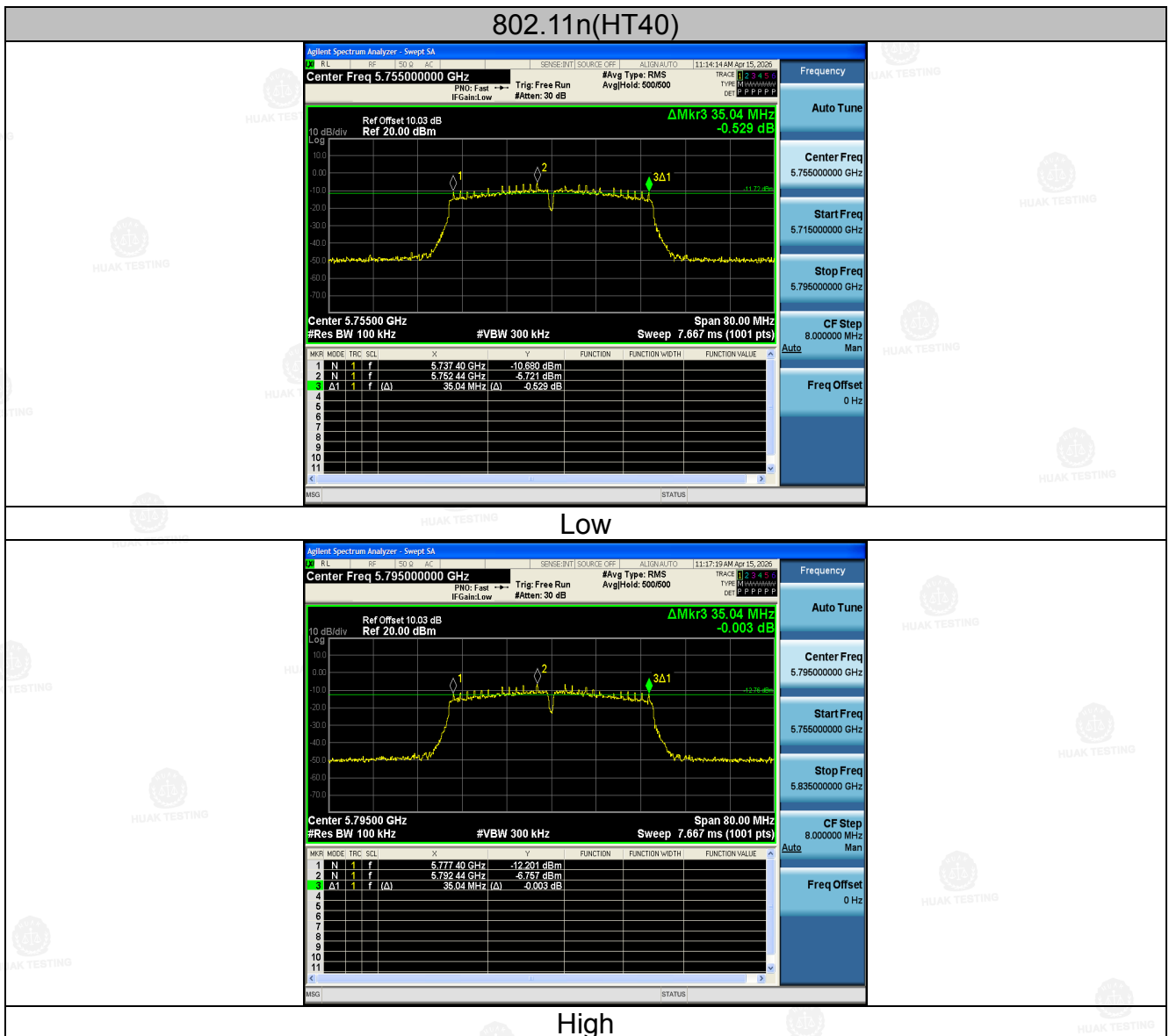


High

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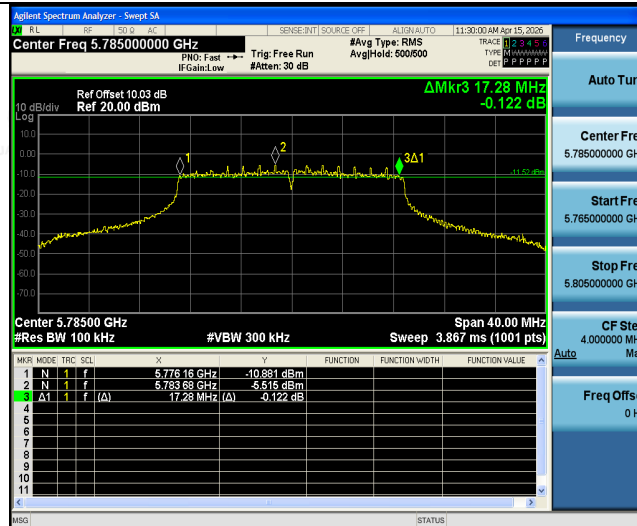


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802.11ac(HT20)



Low

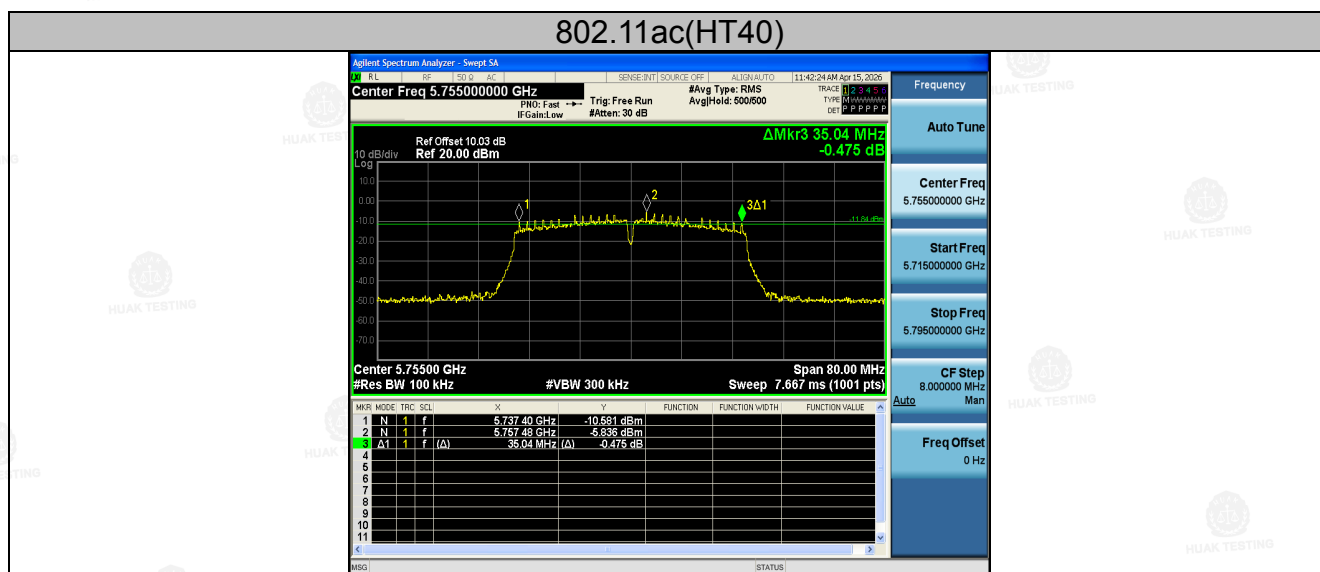


Mid

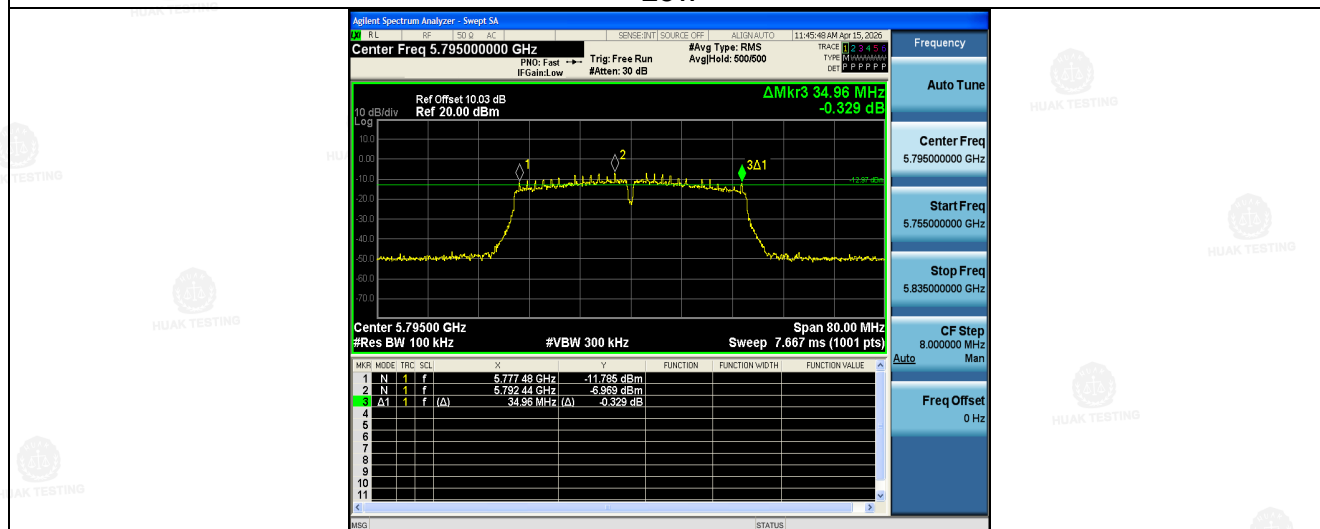


High

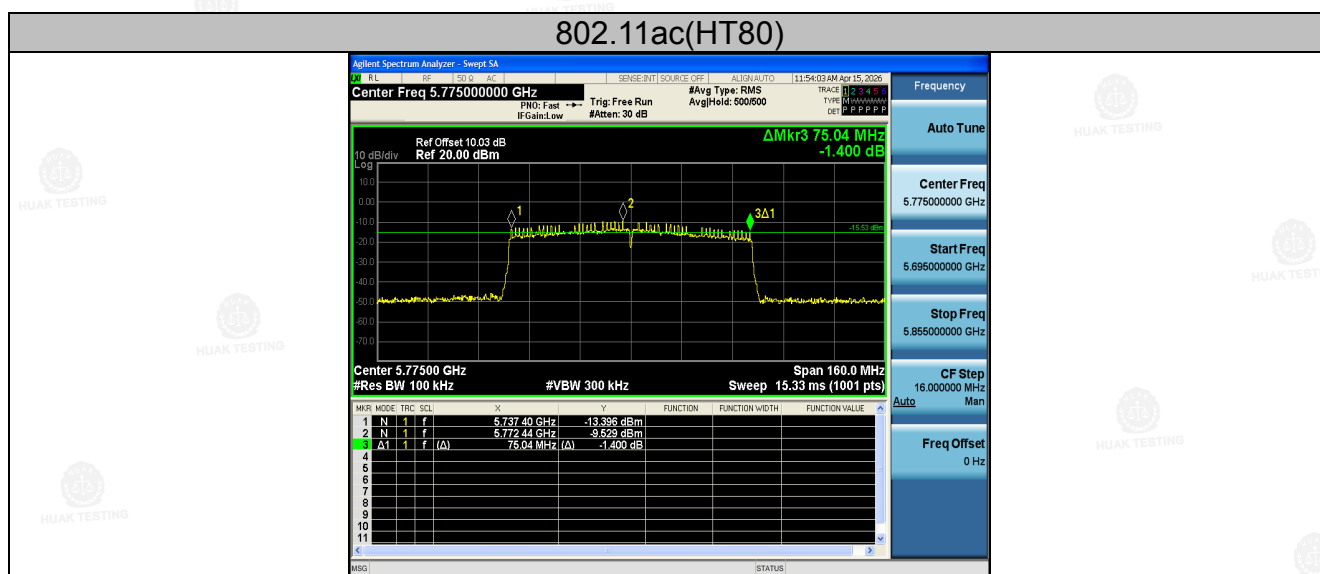
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Low



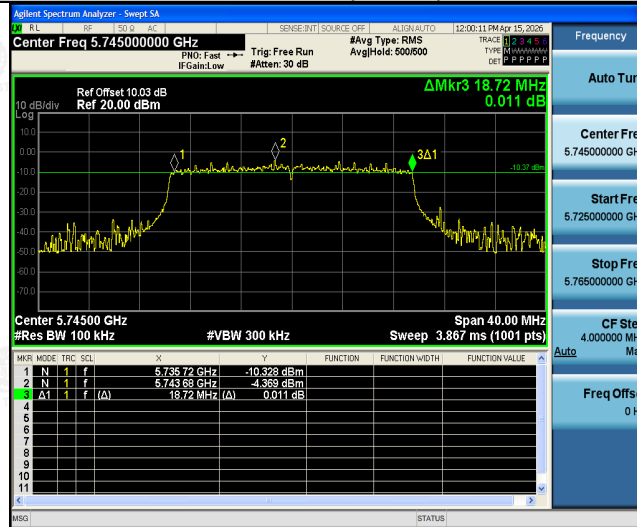
High



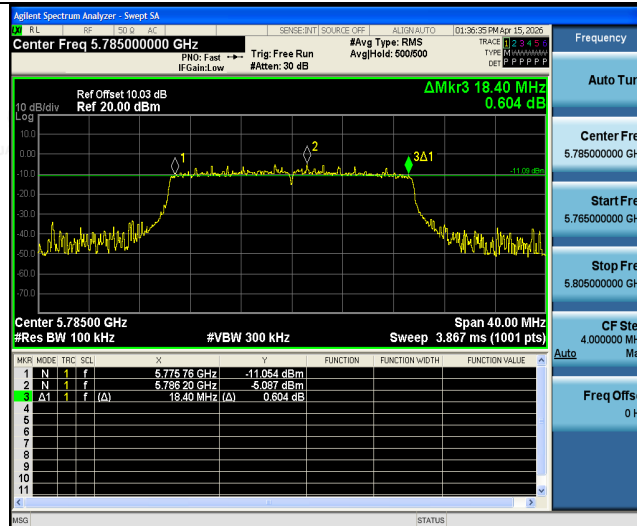
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Add.: 1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

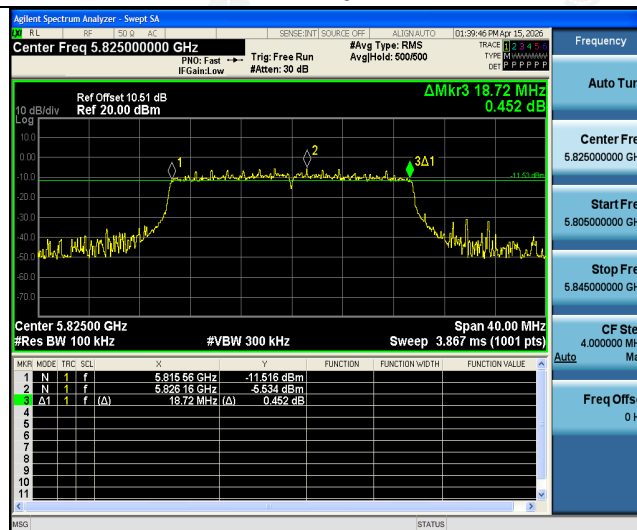
802.11ax(HE20)



Low



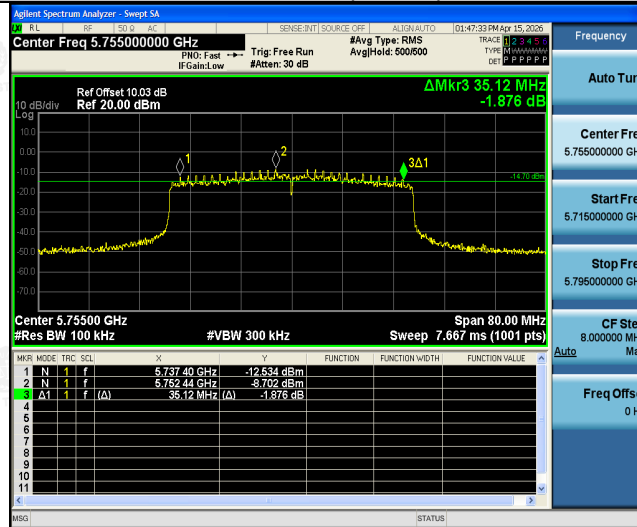
Mid



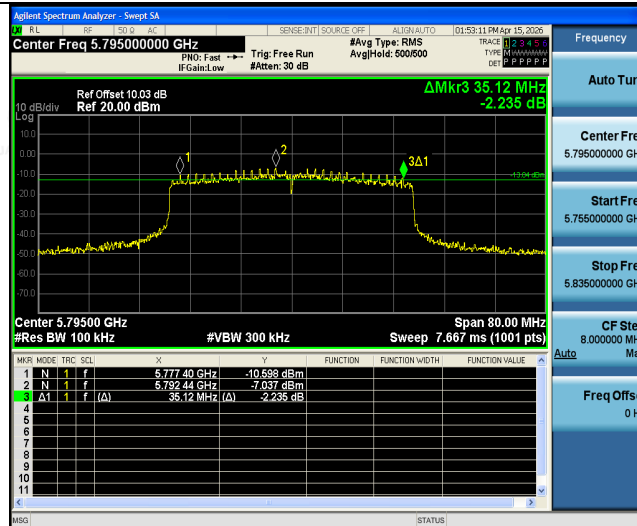
High

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802.11ax(HE40)

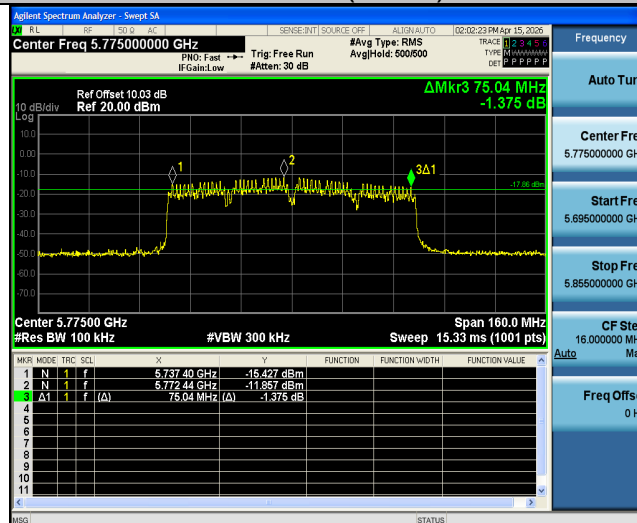


Low



High

802.11ax(HE80)



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4.4 26dB Bandwidth and 99% Occupied Bandwidth

4.4.1 Test Specification

Test Requirement:	47 CFR Part 15C Section 15.407 (a)
Test Method:	KDB789033 D02 General UNII Test Procedures New Rules v02r01 Section C
Limit:	No restriction limits
Test Setup:	 Spectrum Analyzer EUT
Test Mode:	Transmitting mode with modulation
Test Procedure:	1. KDB789033 D02 General UNII Test Procedures New Rules v02r01 Section C 2. Set to the maximum power setting and enable the EUT transmit continuously. 3. Make the measurement with the spectrum analyzer's resolution bandwidth $RBW = 1\% \text{ EBW}$, $VBW \geq 3RBW$, In order to make an accurate measurement. 4. Measure and record the results in the test report.
Test Result:	N/A

4.4.2 Test Instruments

RF Test Room					
Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Spectrum analyzer	Agilent	N9020A	HKE-025	Feb. 06, 2026	Feb. 05, 2027
Spectrum analyzer	KEYSIGHT	N9020A	HKE-117	Feb. 06, 2026	Feb. 05, 2027
RF cable	Times	1-40G	N/A	Feb. 06, 2026	Feb. 05, 2027
RF automatic control unit	Tonscend	JS0806-2	HKE-060	Feb. 06, 2026	Feb. 05, 2027
RF Test Software	Tonscend	JS1120-3 Version 3.5.39	HKE-083	/	/

Note: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).

4.4.3 Test Result

N/A

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4.5 Power Spectral Density

4.5.1 Test Specification

Test Requirement:	FCC Part15 E Section 15.407 (a)
Test Method:	KDB789033 D02 General UNII Test Procedures New Rules v02r01 Section F
Limit:	≤30.00dBm/500KHz for Band IV 5725MHz-5850MHz
Test Setup:	 Spectrum Analyzer EUT
Test Mode:	Transmitting mode with modulation
Test Procedure:	1. Set the spectrum analyzer or EMI receiver span to view the entire emission bandwidth. 2. Set RBW = 510 kHz/1 MHz, VBW ≥ 3*RBW, Sweep time = Auto, Detector = RMS. 3. Allow the sweeps to continue until the trace stabilizes. 4. Use the peak marker function to determine the maximum amplitude level. 5. The E.I.R.P spectral density used radiated test method. At a test site that has been validated using the procedures of ANSI C63.4 or the latest CISPR 16-1-4 for measurements above 1 GHz, so as to simulate a near free-space environment.
Test Result:	PASS

4.5.2 Test Instruments

RF Test Room					
Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due
Spectrum analyzer	Agilent	N9020A	HKE-025	Feb. 06, 2026	Feb. 05, 2027
Spectrum analyzer	KEYSIGHT	N9020A	HKE-117	Feb. 06, 2026	Feb. 05, 2027
RF cable	Times	1-40G	N/A	Feb. 06, 2026	Feb. 05, 2027
RF automatic control unit	Tonscend	JS0806-2	HKE-060	Feb. 06, 2026	Feb. 05, 2027
RF Test Software	Tonscend	JS1120-3 Version 3.5.39	HKE-083	/	/

Note: The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).

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4.5.3 Test Data

ANT. 1

Configuration Band IV (5725 - 5850 MHz)						
Mode	Test channel	Level [dBm/510kHz]	10log(500/510)	Power Spectral Density	Limit (dBm/500kHz)	Result
802.11a	CH149	0.48	-0.086	0.394	30	PASS
802.11a	CH157	-1.28	-0.086	-1.366	30	PASS
802.11a	CH165	-0.56	-0.086	-0.646	30	PASS
802.11n(HT20)	CH149	-0.40	-0.086	-0.486	30	PASS
802.11n(HT20)	CH157	-0.77	-0.086	-0.856	30	PASS
802.11n(HT20)	CH165	-0.56	-0.086	-0.646	30	PASS
802.11n(HT40)	CH151	-1.77	-0.086	-1.856	30	PASS
802.11n(HT40)	CH159	-2.80	-0.086	-2.886	30	PASS
802.11ac(HT20)	CH149	-0.03	-0.086	-0.116	30	PASS
802.11ac(HT20)	CH157	-0.65	-0.086	-0.736	30	PASS
802.11ac(HT20)	CH165	-1.19	-0.086	-1.276	30	PASS
802.11ac(HT40)	CH151	-1.51	-0.086	-1.596	30	PASS
802.11ac(HT40)	CH159	-3.18	-0.086	-3.266	30	PASS
802.11ac(HT80)	CH155	-4.49	-0.086	-4.576	30	PASS
802.11ax(HE20)	CH149	3.90	-0.086	3.814	30	PASS
802.11ax(HE20)	CH157	2.00	-0.086	1.914	30	PASS
802.11ax(HE20)	CH165	1.41	-0.086	1.324	30	PASS
802.11ax(HE40)	CH151	-1.55	-0.086	-1.636	30	PASS
802.11ax(HE40)	CH159	-1.05	-0.086	-1.136	30	PASS
802.11ax(HE80)	CH155	-5.68	-0.086	-5.766	30	PASS

Note:

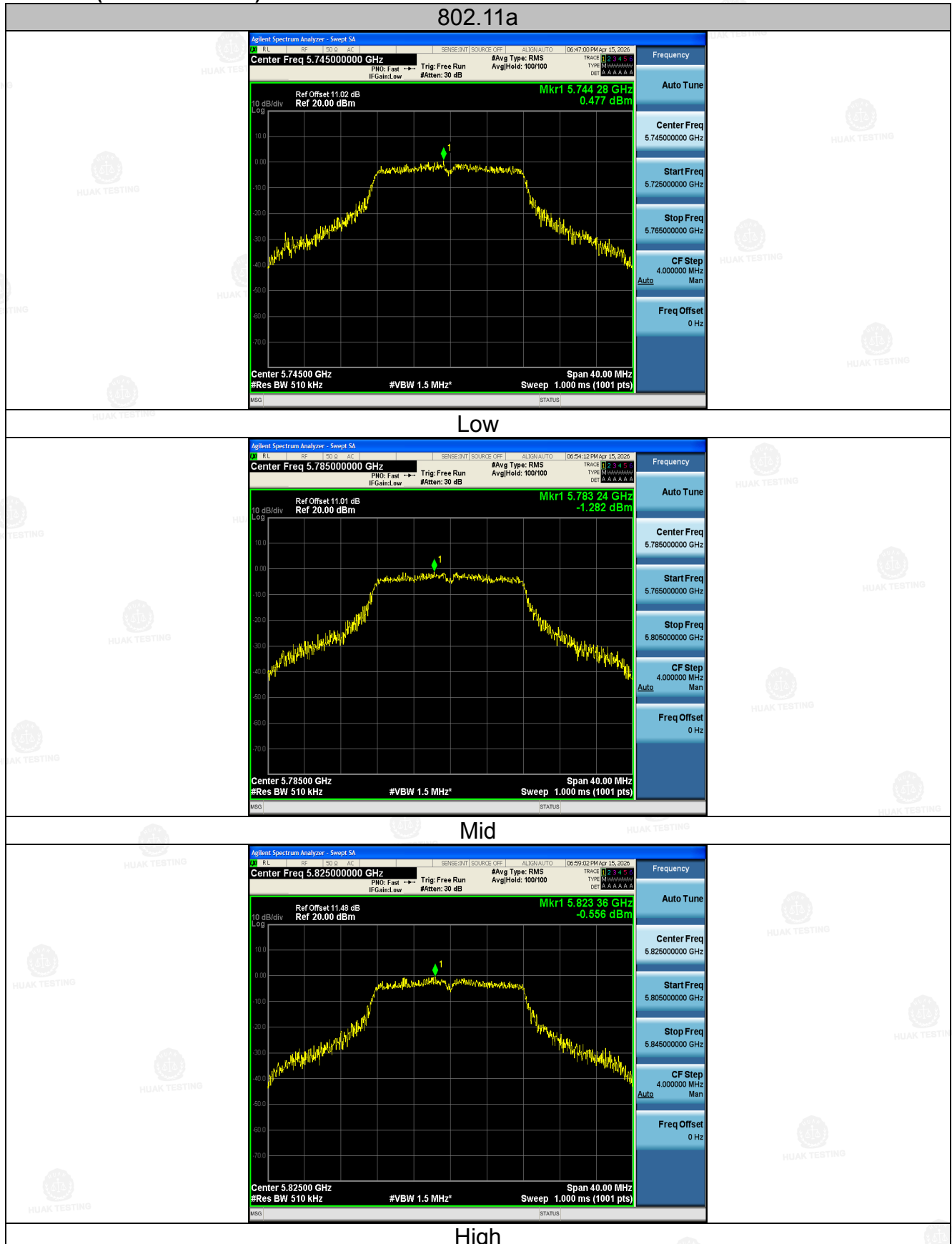
1. Power Spectral Density= Level [dBm/510kHz] + (10log (Limit RBW/Test RBW))
2. Instrument attenuation and cable loss See test diagram
3. Limit: 30dBm/500KHz

Test plots as follows:

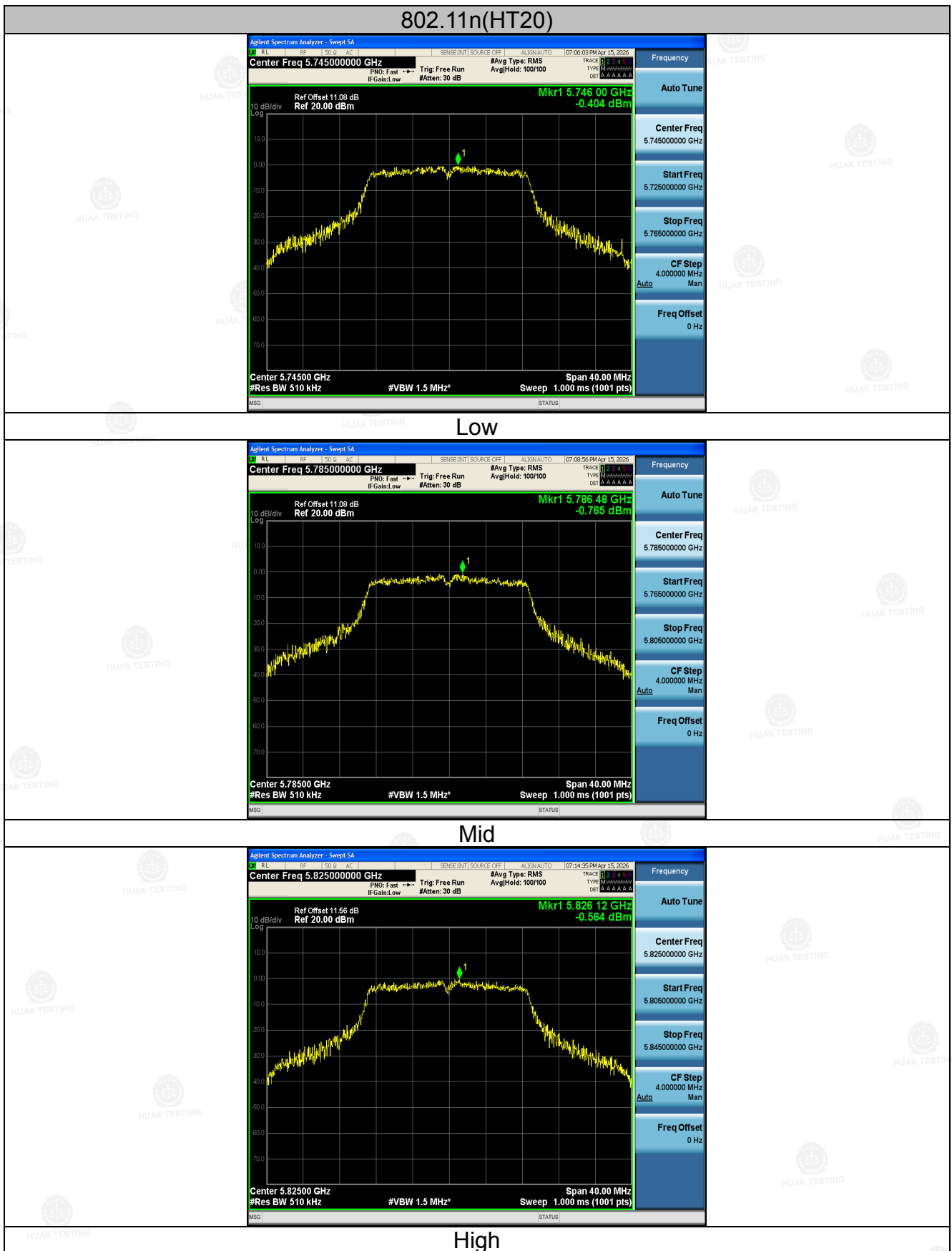


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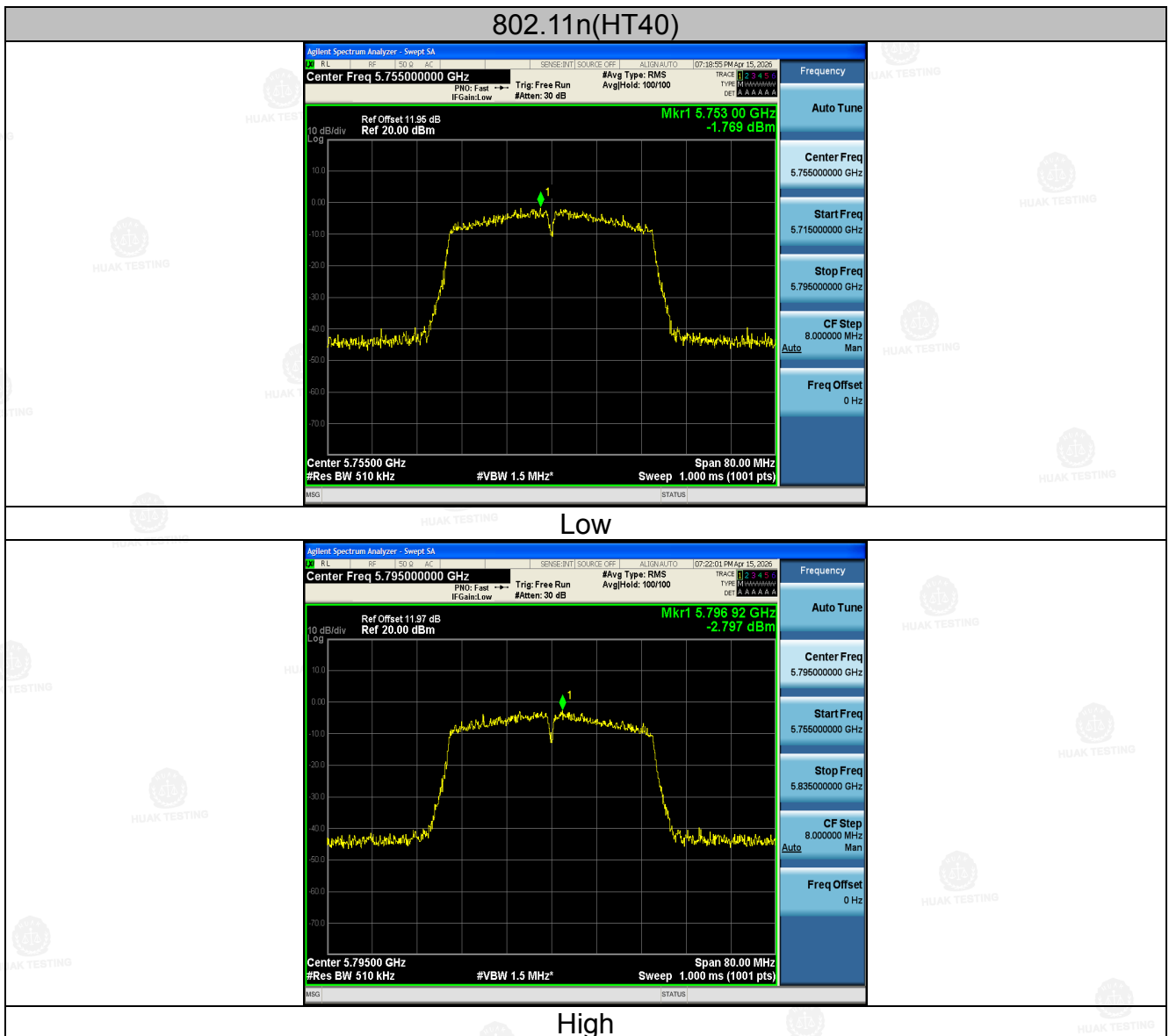
Band IV (5725 – 5850MHz)



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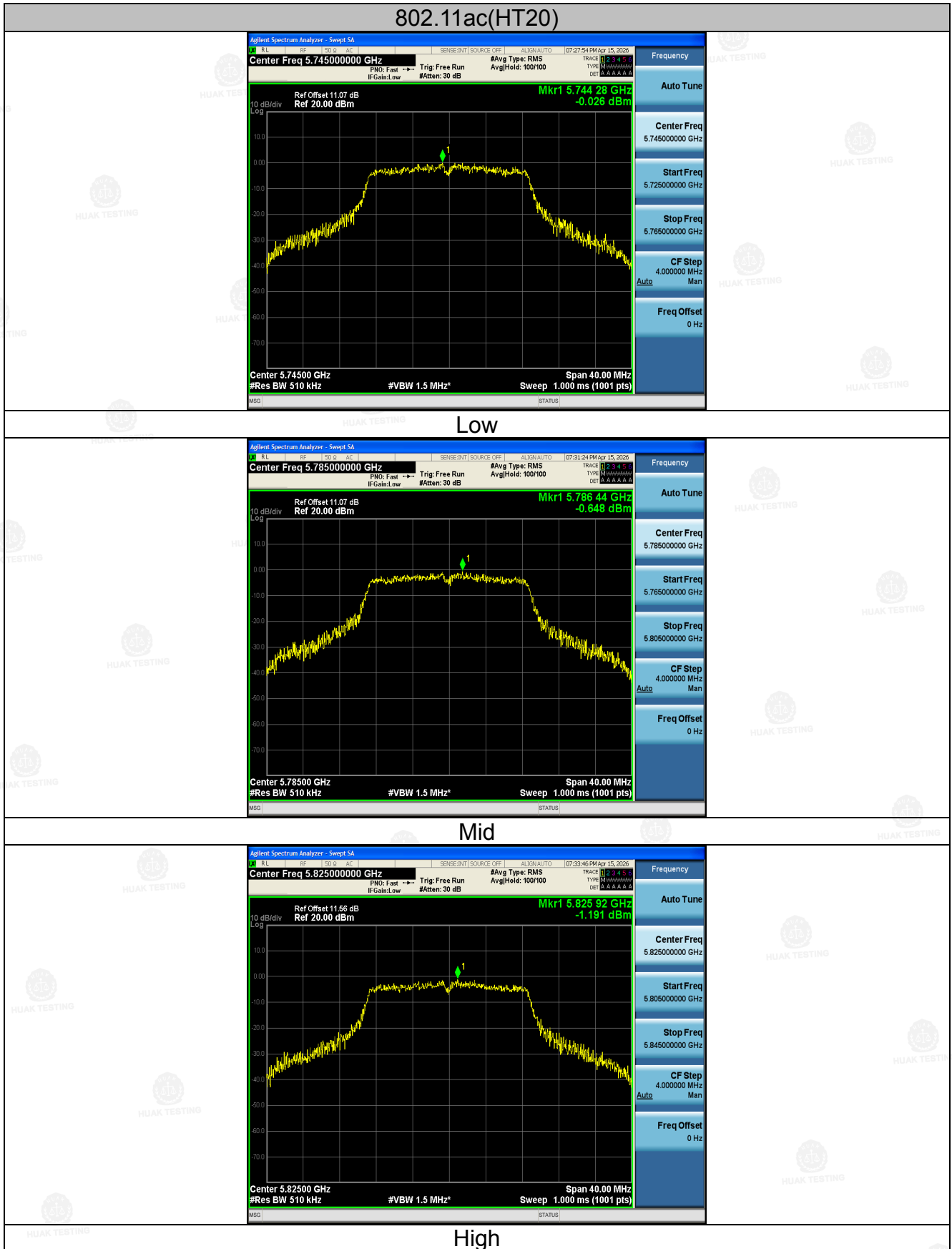


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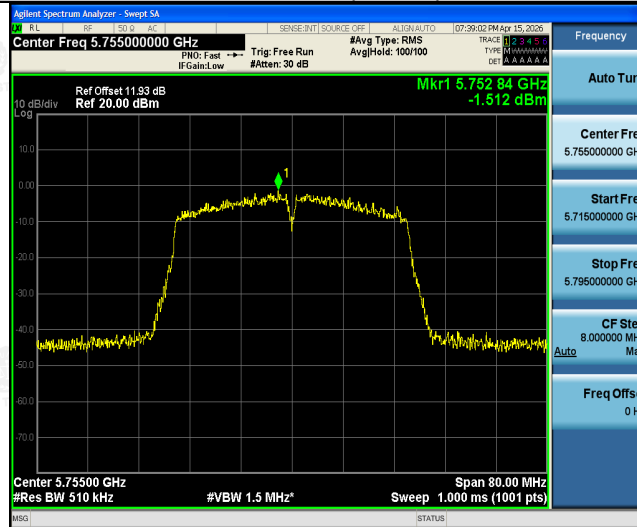
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802.11ac(HT40)



Low



High

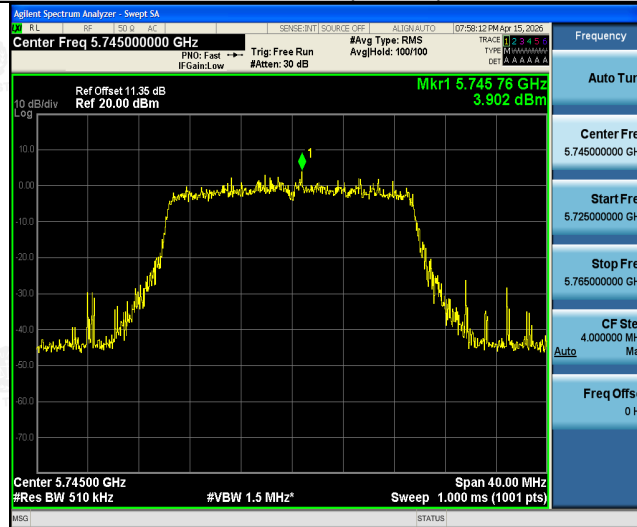
802.11ac(HT80)



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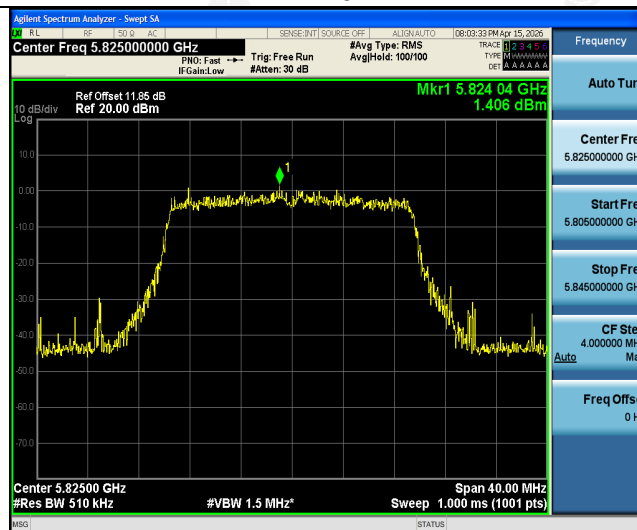
802.11ax(HE20)



Low



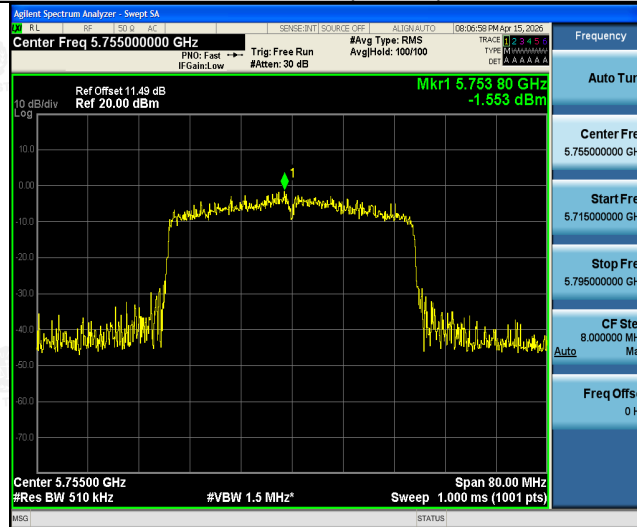
Mid



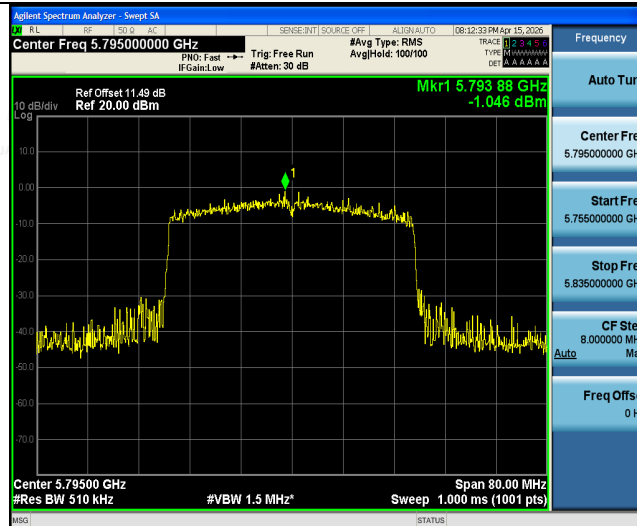
High

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802.11ax(HE40)



Low



802.11ax(HE80)



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ANT. 2

Configuration Band IV (5725 - 5850 MHz)						
Mode	Test channel	Level [dBm/510kHz]	10log(500/510)	Power Spectral Density	Limit (dBm/500kHz)	Result
802.11a	CH149	-0.06	-0.086	-0.146	30	PASS
802.11a	CH157	-1.30	-0.086	-1.386	30	PASS
802.11a	CH161	-0.13	-0.086	-0.216	30	PASS
802.11n(HT20)	CH149	0.33	-0.086	0.244	30	PASS
802.11n(HT20)	CH157	-0.73	-0.086	-0.816	30	PASS
802.11n(HT20)	CH161	-0.99	-0.086	-1.076	30	PASS
802.11n(HT40)	CH151	-1.33	-0.086	-1.416	30	PASS
802.11n(HT40)	CH159	-2.24	-0.086	-2.326	30	PASS
802.11ac(HT20)	CH149	0.15	-0.086	0.064	30	PASS
802.11ac(HT20)	CH157	-0.45	-0.086	-0.536	30	PASS
802.11ac(HT20)	CH161	-1.15	-0.086	-1.236	30	PASS
802.11ac(HT40)	CH151	-0.67	-0.086	-0.756	30	PASS
802.11ac(HT40)	CH159	-2.35	-0.086	-2.436	30	PASS
802.11ac(HT80)	CH155	-4.13	-0.086	-4.216	30	PASS
802.11ax(HE20)	CH149	4.62	-0.086	4.534	30	PASS
802.11ax(HE20)	CH157	2.35	-0.086	2.264	30	PASS
802.11ax(HE20)	CH161	1.99	-0.086	1.904	30	PASS
802.11ax(HE40)	CH151	-1.84	-0.086	-1.926	30	PASS
802.11ax(HE40)	CH159	-0.48	-0.086	-0.566	30	PASS
802.11ax(HE80)	CH155	-6.36	-0.086	-6.446	30	PASS

Note:

1. Power Spectral Density= Level [dBm/510kHz] + (10log (Limit RBW/Test RBW))
2. Instrument attenuation and cable loss See test diagram
3. Limit: 30dBm/500KHz

Test plots as follows:



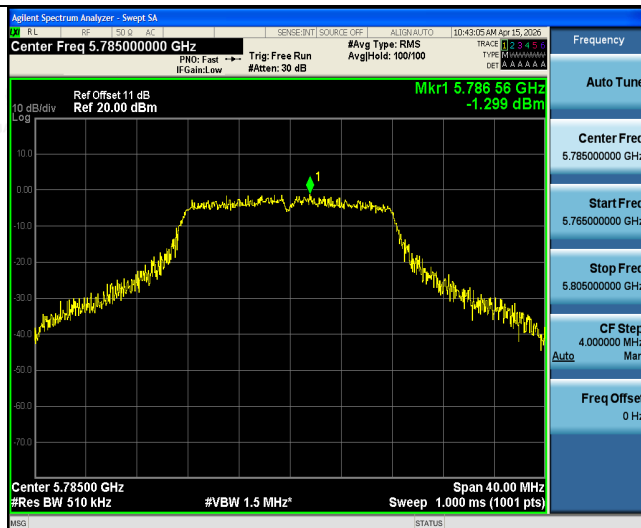
HUAKE TESTING

Band IV (5725 – 5850MHz)

802.11a



Low

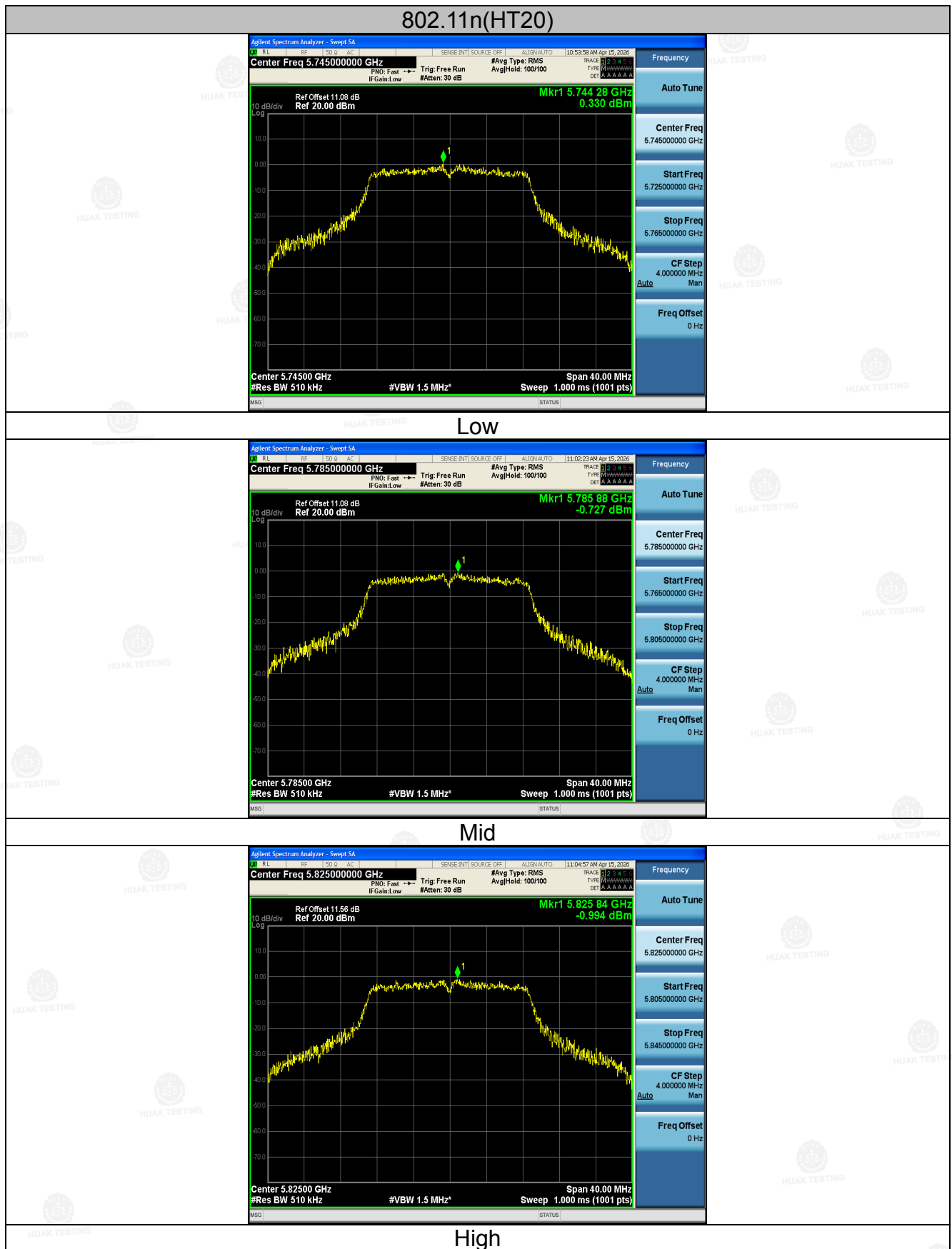


Mid



High

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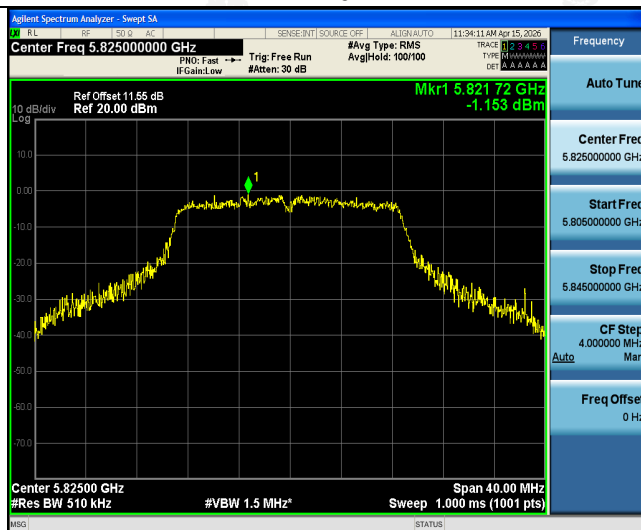
802.11ac(HT20)



Low



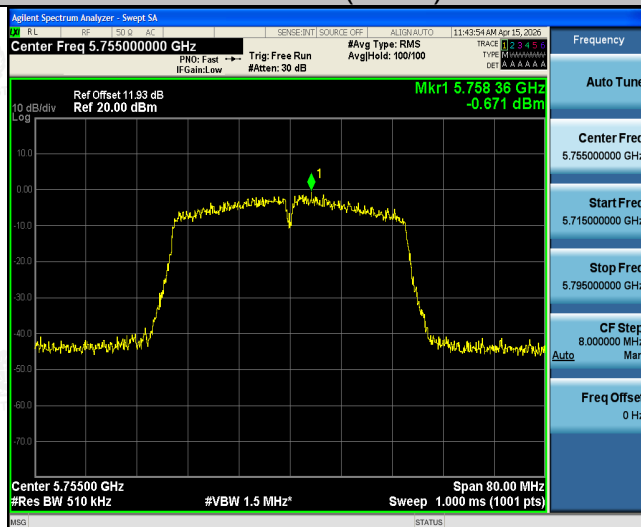
Mid



High

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802.11ac(HT40)



Low



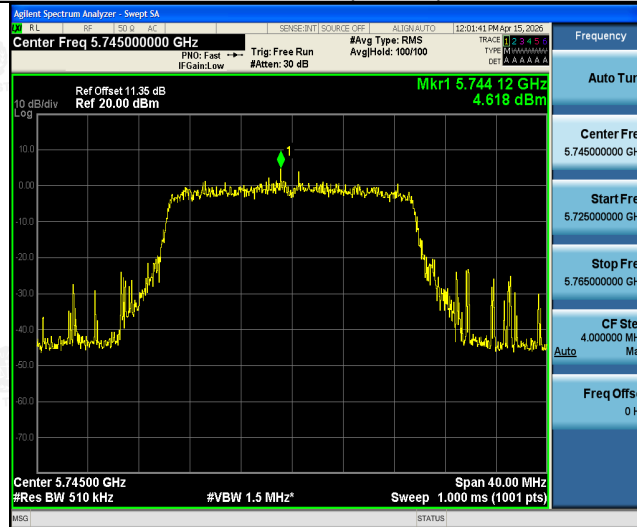
High

802.11ac(T80)



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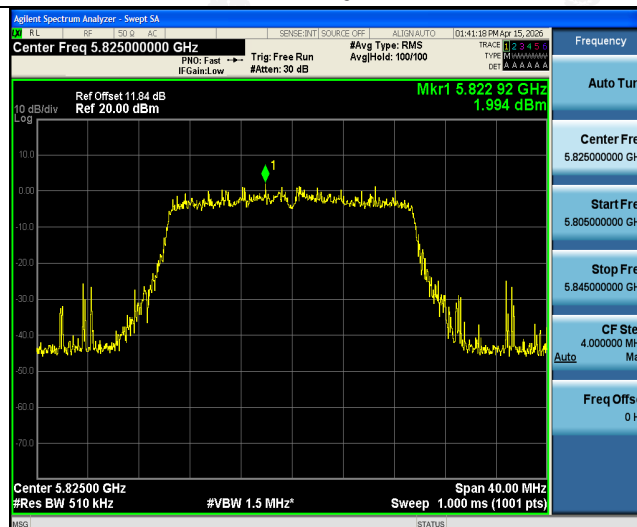
802.11ax(HE20)



Low

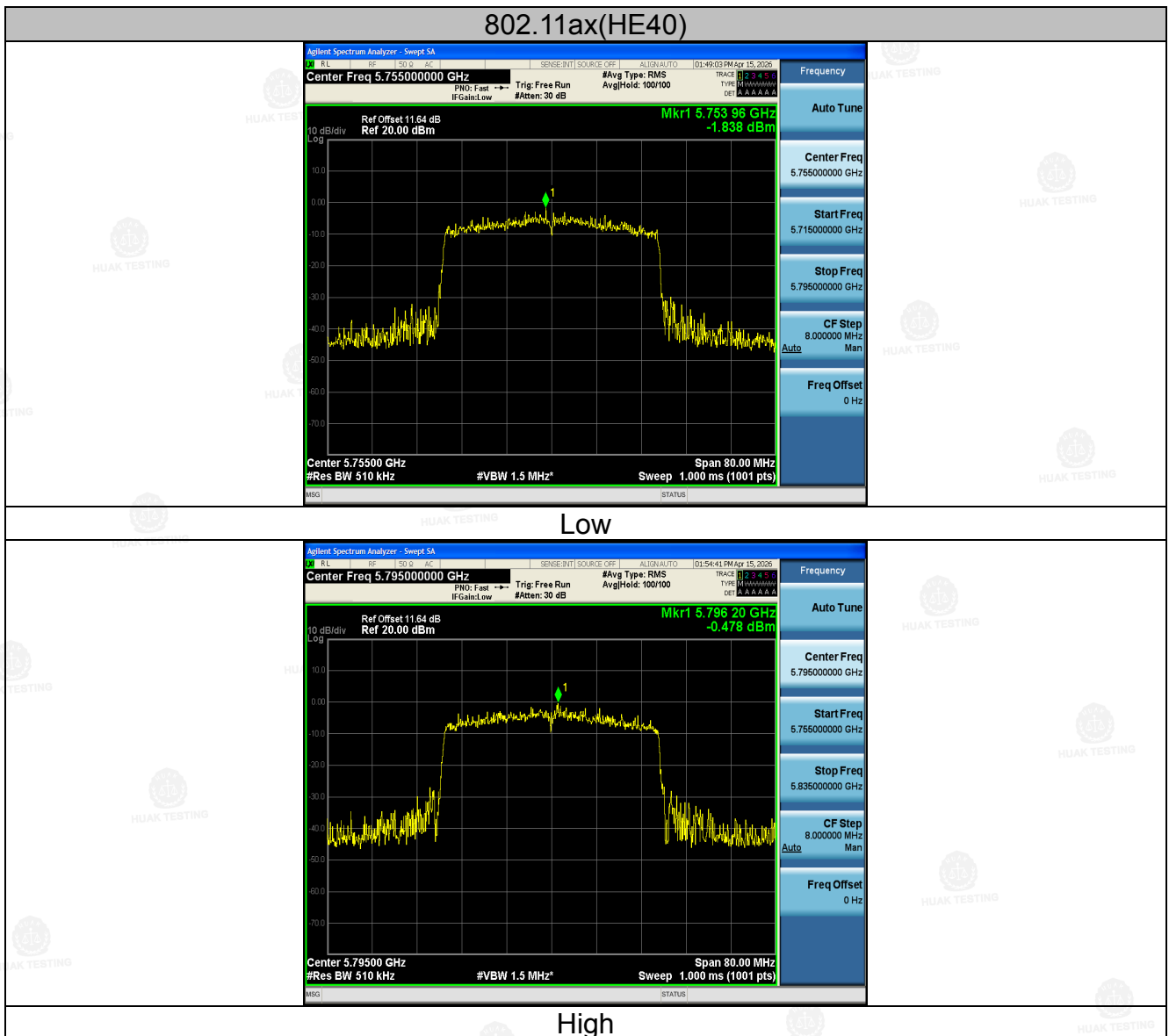


Mid



High

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For MIMO antenna port 1+antenna port 2

Configuration Band IV (5725 - 5850 MHz)

Mode	Test Channel	Power Density (dBm/500KHz)	Limit (dBm/500KHz)	Result
802.11n(HT20)	CH149	2.90	30	PASS
802.11n(HT20)	CH157	2.17	30	PASS
802.11n(HT20)	CH161	2.15	30	PASS
802.11n(HT40)	CH151	1.38	30	PASS
802.11n(HT40)	CH159	0.41	30	PASS
802.11ac(HT20)	CH149	2.99	30	PASS
802.11ac(HT20)	CH157	2.38	30	PASS
802.11ac(HT20)	CH161	1.75	30	PASS
802.11ac(HT40)	CH151	1.85	30	PASS
802.11ac(HT40)	CH159	0.18	30	PASS
802.11ac(HT80)	CH155	-1.38	30	PASS
802.11ax(HE20)	CH149	7.20	30	PASS
802.11ax(HE20)	CH157	5.10	30	PASS
802.11ax(HE20)	CH161	4.63	30	PASS
802.11ax(HE40)	CH151	1.23	30	PASS
802.11ax(HE40)	CH159	2.17	30	PASS
802.11ax(HE80)	CH155	-3.08	30	PASS

Note:

1. According to KDB 662911, Result power = $10\log(10^{(\text{ant1}/10)} + 10^{(\text{ant2}/10)})$.
2. Result unit: W, The end result is converted to units of dBm.
Limit=30dBm/500KHz
3. This product supports antenna 1 and antenna 2 launch, but only support 802.11 n/ac/ax for MIMO mode, not support 802.11 a for MIMO mode.