



**CFR 47 FCC PART 15 SUBPART E
ISED RSS-247 ISSUE 3**

CERTIFICATION TEST REPORT

Wired Security Camera

MODEL NUMBER: P320

PROJECT NUMBER: 4791415692.4

REPORT NUMBER: 4791415692.4-3

FCC ID: 2BHGF-0235C8GK

IC: 32743-0235C8GK

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Prepared for

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Revision History

Rev.	Issue Date	Revisions	Revised By
V0	10/26/2024	Initial Issue	

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS	4
2. TEST METHODOLOGY	6
3. FACILITIES AND ACCREDITATIO.....	6
4. CALIBRATION AND UNCERTAINTY	7
4.1. MEASURING INSTRUMENT CALIBRATION	7
4.2. MEASUREMENT UNCERTAINTY	7
5. EQUIPMENT UNDER TEST	8
5.1. DESCRIPTION OF EUT	8
5.2. MAXIMUM OUTPUT POWER	9
5.3. CHANNEL LIST.....	10
5.4. TEST CHANNEL CONFIGURATION.....	11
5.5. POWER GRADE	12
5.6. DESCRIPTION OF AVAILABLE ANTENNAS.....	16
5.7. THE WORSE CASE POWER SETTING PARAMETER.....	17
5.8. DESCRIPTION OF TEST SETUP	20
5.9. MEASURING INSTRUMENT AND SOFTWARE USED	21
6. ANTENNA PORT TEST RESULTS	22
6.1. ON TIME AND DUTY CYCLE.....	22
6.2. 6/26 dB EMISSION BANDWIDTH AND 99% OCCUPIED BANDWIDTH.....	26
6.3. MAXIMUM CONDUCTED AVERAGE OUTPUT POWER.....	100
6.4. POWER SPECTRAL DENSITY.....	137
7. RADIATED TEST RESULTS	175
7.1. RESTRICTED BANDEDGE.....	181
7.2. HARMONICS AND SPURIOUS EMISSIONS.....	243
8. FREQUENCY STABILITY.....	494
9. DYNAMIC FREQUENCY SELECTION	498
10. AC POWER LINE CONDUCTED EMISSIONS	505
11. ANTENNA REQUIREMENTS.....	509

1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name: KeyLife International Technology Limited
Address: 27th Floor, Alexandra House, 18 Chater Road, Central, Hong Kong

Manufacturer Information

Company Name: KeyLife International Technology Limited
Address: 27th Floor, Alexandra House, 18 Chater Road, Central, Hong Kong

EUT Description

Product Name: Wired Security Camera
Model Number: P320
Series Model Number: /
Model Difference: /
Sample Number: 7435776
Data of Receipt Sample: Jul. 25, 2024
Test Date: Jul. 25, 2024~ Oct. 21, 2024

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 FCC PART 15 SUBPART E	PASS
ISED RSS-247 Issue 3	
ISED RSS-GEN Issue 5	

Summary of Test Results			
Clause	Test Items	FCC Rules	Test Results
1	6dB/26dB Bandwidth	FCC 15.407 (a)&(e) RSS-247 Clause 6.2	PASS
	99% Occupied Bandwidth	RSS-Gen Clause 6.7	PASS
2	Conducted Output Power	FCC 15.407 (a) RSS-247 Clause 6.2	PASS
3	Power Spectral Density	FCC 15.407 (a) RSS-247 Clause 6.2	PASS
4	Radiated Bandedge and Spurious Emission	FCC 15.407 (b) FCC 15.209 FCC 15.205 RSS-247 Clause 6.2 RSS-GEN Clause 8.9	PASS
5	Conducted Emission Test for AC Power Port	FCC 15.207 RSS-GEN Clause 8.8	PASS
6	Frequency Stability	FCC 15.407 (g) RSS-Gen Clause 6.11	PASS
7	Dynamic Frequency Selection	FCC 15.407 (h) RSS-247 Clause 6.3	PASS
8	Antenna Requirement	FCC 15.203 RSS-GEN Clause 6.8	PASS
Note: 1. The measurement result for the sample received is < Pass > according to < ANSI C63.10-2013, FCC CFR 47 Part 2, FCC CFR 47 Part 15 E, RSS-GEN, RSS-247 > when < Simple Acceptance > decision rule is applied. 2. It is a slave device without radar detection.			

Prepared By:



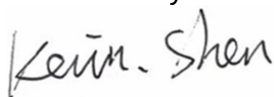
Tom Tang

Reviewed By:



Emily Wang

Authorized By:



Kevin Shen

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.10-2013, CFR 47 FCC Part 2, CFR 47 FCC Part 15, KDB 789033 D02 v02r01, RSS-GEN Issue 5, RSS-247 Issue 3, KDB414788 D01 Radiated Test Site v01r01, KDB 905462 D02 UNII DFS Compliance Procedures New Rules v02, KDB 905462 D03 UNII clients without radar detection New Rules v01r02, KDB 905462 D04 Operational Modes for DFS Testing New Rules v01 and KDB 905462 D06 802.11 Channel Plans New Rules v02.

3. FACILITIES AND ACCREDITATION

Accreditation Certificate	A2LA (Certificate No.: 4829.01) UL-CCIC COMPANY LIMITED has been assessed and proved to be in compliance with A2LA. FCC (FCC Designation No.: CN1247) UL-CCIC COMPANY LIMITED has been recognized to perform compliance testing on equipment subject to the Commission's Declaration of Conformity (DoC) and Certification rules. IC (IC Designation No.: 25056; CAB No.: CN0073) UL-CCIC COMPANY LIMITED has been recognized to perform compliance testing on equipment subject to the Commission's Declaration of Conformity (DoC) and Certification rules.
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Remark 1: All tests measurement facilities use to collect the measurement data are located at No. 2, Chengwan Road, Suzhou Industrial Park, Suzhou 215122, People's Republic of China

Remark 2: For below 30MHz, lab had performed measurements at test anechoic chamber and comparing to measurements obtained on an open field site. These measurements below 30MHz had been correlated to measurements performed on an OFS based on KDB 414788.

Remark 3: The test anechoic chamber in UL-CCIC COMPANY LIMITED had been calibrated and compared to the open field sites and the test anechoic chamber is shown to be equivalent to or worst case from the open field site.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations and is traceable to recognize national standards.

4.2. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

Test Item	Uncertainty
Conduction emission	3.1dB
Radiation Emission test (include Fundamental emission) (9kHz-30MHz)	3.3dB
Radiation Emission test (include Fundamental emission) (30MHz-1GHz)	3.3dB
Radiation Emission test (1GHz to 26GHz) (include Fundamental emission)	3.9dB (1GHz-18GHz)
	4.2dB (18GHz-26.5GHz)
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

Product Name:	Wired Security Camera
Model No.:	P320
Operating Frequency:	IEEE 802.11a/n/ac/ax 20MHz: 5180MHz to 5240MHz, 5260MHz to 5320MHz, 5500MHz to 5720MHz (ISED not include 5600MHz to 5640MHz), 5745MHz to 5825MHz IEEE 802.11n/ac/ax 40MHz: 5190MHz to 5230MHz, 5270MHz to 5310MHz, 5510MHz to 5710MHz (ISED not include 5590MHz to 5630MHz), 5755MHz-5795MHz This report just including 5G WIFI part.
Type of Modulation:	IEEE for 802.11a: BPSK, QPSK, 16QAM, 64QAM IEEE for 802.11n HT20/HT40: BPSK, QPSK, 16QAM, 64QAM IEEE for 802.11ac VHT20/VHT40: BPSK, QPSK, 16QAM, 64QAM, 256QAM IEEE for 802.11ax: BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM
Channels Step:	Channels with 5MHz step
Test Software of EUT:	SecureCRT (manufacturer declare)
Antenna Type:	Patch Antenna
Antenna Gain:	3.40 dBi Note: This data is provided by customer and our lab isn't responsible for this data.

5.2. MAXIMUM OUTPUT POWER

UNII-1 BAND

IEEE Std. 802.11	Frequency (MHz)	Maximum Average Conducted Power
		[dBm]
a	5150 ~ 5250	10.66
ac VHT20		10.59
ac VHT40		10.34
ax HE20		10.85
ax HE40		10.89

UNII-2A BAND

IEEE Std. 802.11	Frequency (MHz)	Maximum Average Conducted Power
		[dBm]
a	5250 ~ 5350	11.46
ac VHT20		11.20
ac VHT40		11.43
ax HE20		11.62
ax HE40		11.51

UNII-2C BAND

IEEE Std. 802.11	Frequency (MHz)	Max Power
		[dBm]
a	5470 ~ 5725	12.95
ac VHT20		13.16
ac VHT40		13.00
ax HE20		13.29
ax HE40		12.85

UNII-3 BAND

IEEE Std. 802.11	Frequency (MHz)	Max Power
		[dBm]
a	5725 ~ 5850	12.26
ac VHT20		12.39
ac VHT40		12.36
ax HE20		12.39
ax HE40		12.18

Note: Since 802.11ac VHT20/VHT40 modes are different from 802.11n HT20/HT40 only in control messages, so all the tests are performed on the worst case (802.11ac VHT20/802.11ac VHT40) mode between these 4 modes and only the worst data was recorded in this report.

5.3. CHANNEL LIST

UNII-1 (For Bandwidth = 20 MHz)		UNII-1 (For Bandwidth = 40 MHz)		UNII-1 (For Bandwidth = 80 MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	38	5190	/	/
40	5200	46	5230		
44	5220				
48	5240				

UNII-2A (For Bandwidth = 20 MHz)		UNII-2A (For Bandwidth = 40 MHz)		UNII-2A (For Bandwidth = 80 MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
52	5260	54	5270	/	/
56	5280	62	5310		
60	5300				
64	5320				

UNII-2C (For Bandwidth = 20 MHz)		UNII-2C (For Bandwidth = 40 MHz)		UNII-2C (For Bandwidth = 80 MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
100	5500	102	5510	/	/
104	5520	110	5550	/	/
108	5540	118	5590	/	/
112	5560	126	5630		
116	5580	134	5670		
120	5600	142	5710		
124	5620				
128	5640				
132	5660				
136	5680				
140	5700				
144	5720				

Note: The frequency band 5600MHz-5650MHz is not allow use in ISFD.

UNII-3 (For Bandwidth = 20 MHz)		UNII-3 (For Bandwidth = 40 MHz)		UNII-3 (For Bandwidth = 80 MHz)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	151	5755	/	/
153	5765	159	5795		
157	5785				
161	5805				
165	5825				

5.4. TEST CHANNEL CONFIGURATION

UNII-1 Test Channel Configuration		
IEEE Std.	Test Channel Number	Frequency
802.11a	CH 36, CH 40, CH 48	5180 MHz, 5200 MHz, 5240 MHz
802.11n HT20	CH 36, CH 40, CH 48	5180 MHz, 5200 MHz, 5240 MHz
802.11n HT40	CH 38, CH 46	5190 MHz, 5230 MHz
802.11ac VHT20	CH 36, CH 40, CH 48	5180 MHz, 5200 MHz, 5240 MHz
802.11ac VHT40	CH 38, CH 46	5190 MHz, 5230 MHz
802.11ax HE20	CH 36, CH 40, CH 48	5180 MHz, 5200 MHz, 5240 MHz
802.11ax HE40	CH 38, CH 46	5190 MHz, 5230 MHz

UNII-2A Test Channel Configuration		
IEEE Std.	Test Channel Number	Frequency
802.11a	CH 52, CH 56, CH 64	5260 MHz, 5280 MHz, 5320 MHz
802.11n HT20	CH 52, CH 56, CH 64	5260 MHz, 5280 MHz, 5320 MHz
802.11n HT40	CH 54, CH 62	5270 MHz, 5310 MHz
802.11ac VHT20	CH 52, CH 56, CH 64	5260 MHz, 5280 MHz, 5320 MHz
802.11ac VHT40	CH 54, CH 62	5270 MHz, 5310 MHz
802.11ax HE20	CH 52, CH 56, CH 64	5260 MHz, 5280 MHz, 5320 MHz
802.11ax HE40	CH 54, CH 62	5270 MHz, 5310 MHz

UNII-2C Test Channel Configuration		
IEEE Std.	Test Channel Number	Frequency
802.11a	CH 100, CH120, CH 140, CH 144	5500 MHz, 5580 MHz, 5700 MHz, 5720 MHz
802.11n HT20	CH 100, CH120, CH 140, CH 144	5500 MHz, 5580 MHz, 5700 MHz, 5720 MHz
802.11n HT40	CH 102, CH 118, CH 134, CH 142	5510 MHz, 5550 MHz, 5670 MHz, 5710 MHz
802.11ac VHT20	CH 100, CH120, CH 140, CH 144	5500 MHz, 5580 MHz, 5700 MHz, 5720 MHz
802.11ac VHT40	CH 102, CH 118, CH 134, CH 142	5510 MHz, 5550 MHz, 5670 MHz, 5710 MHz
802.11ax HE20	CH 100, CH120, CH 140, CH 144	5500 MHz, 5580 MHz, 5700 MHz, 5720 MHz
802.11ax HE40	CH 102, CH 118, CH 134, CH 142	5510 MHz, 5550 MHz, 5670 MHz, 5710 MHz

UNII-3 Test Channel Configuration		
IEEE Std.	Test Channel Number	Frequency
802.11a	CH 149, CH 157, CH165	5745 MHz, 5785 MHz, 5825 MHz
802.11n HT20	CH 149, CH 157, CH165	5745 MHz, 5785 MHz, 5825 MHz
802.11n HT40	CH 151, CH 159	5755 MHz, 5795 MHz
802.11ac VHT20	CH 149, CH 157, CH165	5745 MHz, 5785 MHz, 5825 MHz
802.11ac VHT40	CH 151, CH 159	5755 MHz, 5795 MHz
802.11ac HE20	CH 149, CH 157, CH165	5745 MHz, 5785 MHz, 5825 MHz
802.11ac HE40	CH 151, CH 159	5755 MHz, 5795 MHz

5.5. POWER GRADE

UNII-1

IEEE Std. 802.11	Channel	Power Grade
a	36	default
	40	default
	44	default
	48	default
n HT20	36	default
	40	default
	44	default
	48	default
n HT40	38	default
	46	default
ac VHT20	36	default
	40	default
	44	default
	48	default
ac VHT40	38	default
	46	default
ax HE20	36	default
	40	default
	44	default
	48	default
ax HE40	38	default
	46	default

UNII-2A

IEEE Std. 802.11	Channel	Power Grade
a	52	default
	56	default
	60	default
	64	default
n HT20	52	default
	56	default
	60	default
	64	default
n HT40	54	default
	62	default
ac VHT20	52	default
	56	default
	60	default
	64	default
ac VHT40	54	default
	62	default
ax HE20	52	default
	56	default
	60	default
	64	default
ax HE40	54	default
	62	default

UNII-2C

IEEE Std. 802.11	Channel	Power Grade
a	100	default
	104	default
	108	default
	112	default
	116	default
	120	default
	124	default
	128	default
	132	default
	136	default
	140	default
	144	default
n HT20	100	default
	104	default
	108	default
	112	default
	116	default
	120	default
	124	default
	128	default
	132	default
	136	default
	140	default
	144	default
n HT40	102	default
	110	default
	118	default
	126	default
	134	default
	142	default

ac VHT20	100	default
	104	default
	108	default
	112	default
	116	default
	120	default
	124	default
	128	default
	132	default
	136	default
	140	default
	144	default
ac VHT40	102	default
	110	default
	118	default
	126	default
	134	default
	142	default
ax HE20	100	default
	104	default
	108	default
	112	default
	116	default
	120	default
	124	default
	128	default
	132	default
	136	default
	140	default
	144	default
ax HE40	102	default
	110	default
	118	default
	126	default
	134	default
	142	default

UNII-3

IEEE Std. 802.11	Channel	Power Grade
a	149	default
	153	default
	157	default
	161	default
	165	default
n HT20	149	default
	153	default
	157	default
	161	default
	165	default
n HT40	151	default
	159	default
ac VHT20	149	default
	153	default
	157	default
	161	default
	165	default
ac VHT40	151	default
	159	default
ax HE20	149	default
	153	default
	157	default
	161	default
	165	default
ax HE40	151	default
	159	default

5.6. DESCRIPTION OF AVAILABLE ANTENNAS

Antenna	Frequency Band	Maximum Antenna Gain [dBi]
1	UNII-1	3.40
1	UNII-2A	3.40
1	UNII-2C	3.40
1	UNII-3	3.40

IEEE Std. 802.11	Transmit and Receive Mode	Description
a	☒ 1TX, 1RX	ANT 1 can be used as transmitting/receiving antenna.
n HT20	☒ 1TX, 1RX	ANT 1 can be used as transmitting/receiving antenna.
n HT40	☒ 1TX, 1RX	ANT 1 can be used as transmitting/receiving antenna.
ac VHT20	☒ 1TX, 1RX	ANT 1 can be used as transmitting/receiving antenna.
ac VHT40	☒ 1TX, 1RX	ANT 1 can be used as transmitting/receiving antenna.
ax HE20	☒ 1TX, 1RX	ANT 1 can be used as transmitting/receiving antenna.
Axhe40	☒ 1TX, 1RX	ANT 1 can be used as transmitting/receiving antenna.
Note: BLE & WLAN 2.4G & WLAN 5G can't transmit simultaneously. (Declared by client)		

5.7. THE WORSE CASE POWER SETTING PARAMETER

The Worse Case Power Setting Parameter	
Test Software	SecureCRT

UNII-1

IEEE Std. 802.11	Rate	Channel	Test Software Setting Value
a	6M	36	default
		40	default
		48	default
ac VHT20	MCS0	36	default
		40	default
		48	default
ac VHT40	MCS0	38	default
		46	default
ax HE20	MCS0	36	default
		40	default
		48	default
ax HE40	MCS0	38	default
		46	default

UNII-2A

IEEE Std. 802.11	Rate	Channel	Test Software Setting Value
a	6M	52	default
		56	default
		64	default
ac VHT20	MCS0	52	default
		56	default
		64	default
ac VHT40	MCS0	54	default
		62	default
ax HE20	MCS0	52	default
		56	default
		64	default
ax HE40	MCS0	54	default
		62	default

UNII-2C

IEEE Std. 802.11	Rate	Channel	Test Software Setting Value
a	6M	100	default
		120	default
		136	default
		140	default
		144	default
ac VHT20	MCS0	100	default
		104	default
		120	default
		136	default
		140	default
ac VHT40	MCS0	144	default
		102	default
		110	default
		118	default
		126	default
ax HE20	MCS0	134	default
		142	default
		100	default
		104	default
		120	default
ax HE40	MCS0	136	default
		140	default
		144	default
		102	default
		110	default
		118	default
		126	default
		134	default
		142	default
			default

UNII-3

IEEE Std. 802.11	Rate	Channel	Test Software Setting Value
a	6M	149	default
		157	default
		165	default
ac VHT20	MCS0	149	default
		157	default
		165	default
ac VHT40	MCS0	151	default
		159	default
ax HE20	MCS0	149	default
		157	default
		165	default
ax HE40	MCS0	151	default
		159	default

Note: Since 802.11ac VHT20/VHT40 modes are different from 802.11n HT20/HT40 only in control messages, so all the tests are performed on the worst case (802.11ac VHT20/802.11ac VHT40) mode between these 4 modes and only the worst data was recorded in this report.

5.8. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Item	Equipment	Brand Name	Model Name	Description
1	Laptop	ThinkPad	E590	/

I/O PORT

Cable No	Port	Connector Type	Cable Type	Cable Length(m)	Remarks
1	USB	USB-TTL	USB	100cm Length	/

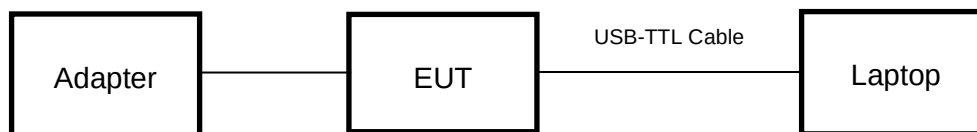
ACCESSORY

Item	Accessory	Brand Name	Model Name	Description
1	AC/DC ADAPTOR	Dachuan	DCT24W120150US-A3	Input: 100-240V~, 50/60Hz 0.7A max Output: 12.0V=1.5A

TEST SETUP

The EUT can work in an engineer mode with a software through a laptop.

SETUP DIAGRAM FOR TESTS



5.9. MEASURING INSTRUMENT AND SOFTWARE USED

Conducted Emissions Test (Instrument)							
Used	Equipment	Manufacturer	Model No.	Serial No.	Upper Last Cal.	Last Cal.	Next Cal.
☒	EMI Test Receiver	R&S	ESR3	126700	2022-11-26	2023-11-25	2024-11-24
☒	Two-Line V-Network	R&S	ENV216	126701	2022-11-26	2023-11-25	2024-11-24
Conducted Emissions Test (Software)							
Used	Description		Manufacturer		Name	Version	
☒	Software for Conducted Emissions Test		R&S		EMC32	9.25.00	
Radiated Emissions Test (Instrument)							
Used	Equipment	Manufacturer	Model No.	Serial No.	Upper Last Cal.	Last Cal.	Next Cal.
☒	EMI test receiver	R&S	ESR7	222993	2023-04-08	2024-03-23	2025-03-22
☒	EMI test receiver	R&S	ESR26	126703	2022-11-26	2023-11-25	2024-11-24
☒	Spectrum Analyzer	R&S	FSV3044	222992	2023-04-08	2024-03-23	2025-03-22
☒	Receiver Antenna (9kHz-30MHz)	Schwarzbeck	FMZB 1513	155456	2021-06-03	2024-05-27	2027-05-26
☒	Receiver Antenna (30MHz-1GHz)	Schwarzbeck	VULB 9168	171952	2021-07-05	2024-07-04	2027-07-03
☒	Receiver Antenna (1GHz-18GHz)	R&S	HF907	126705	2019-01-27	2022-02-28	2025-02-27
☒	Receiver Antenna (18GHz-26.5GHz)	Schwarzbeck	BBHA9170	126706	2019-02-29	2022-02-28	2025-02-27
☒	Pre-amplification (To 18GHz)	Tonscned	TAP01018050	224539	2023-10-10	2024-10-10	2025-10-09
☒	Pre-amplification (To 18GHz)	R&S	SCU-18D	134667	2022-11-26	2023-11-25	2024-11-24
☒	Pre-amplification (To 26.5GHz)	R&S	SCU-26D	135391	2022-11-26	2023-11-25	2024-11-24
☒	Band Reject Filter	Wainwright	WRCGV12-2375-2400-2485-2510-40SS	1	2022-12-19	2023-12-18	2024-12-17
☒	High Pass Filter	COM-MW	ZBF13-3-18G-01	2	2022-12-19	2023-12-18	2024-12-17
Radiated Emissions Test (Software)							
Used	Description		Manufacturer		Name	Version	
☒	Software for Radiated Emissions Test		Tonscend		JS32-RE	5.0.0.2	
Antenna Port Test (Instrument)							
Used	Equipment	Manufacturer	Model No.	Serial No.	Upper Last Cal.	Last Cal.	Next Cal.
☒	Spectrum Analyzer	Keysight	N9010B	155368	2023-04-08	2024-03-23	2025-03-22
☒	Power Meter	MWT	MW100-RFCB	221694	2023-04-08	2024-03-23	2025-03-22
☒	Attenuator	PASTERNAK	PE7087-6	1624	2023-04-08	2024-03-23	2025-03-22
Antenna Port Test (Software)							
Used	Description		Manufacturer		Name	Version	
☒	Software for Antenna Port Test		Tonscend		JS1120-3 Test System	V3.2.22	

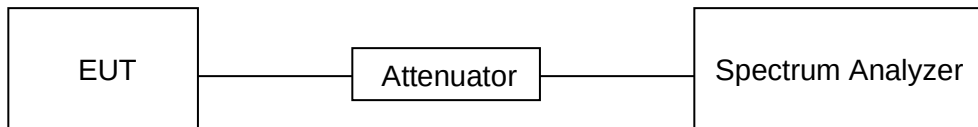
6. ANTENNA PORT TEST RESULTS

6.1. ON TIME AND DUTY CYCLE

LIMITS

None; for reporting purposes only.

TEST SETUP



TEST ENVIRONMENT

Environment Parameter	Selected Values During Tests
Relative Humidity	60%
Atmospheric Pressure:	101kPa
Temperature	22.2°C
Test Voltage	AC 120V
Test Date	08/18/2024 - 09/08/2024

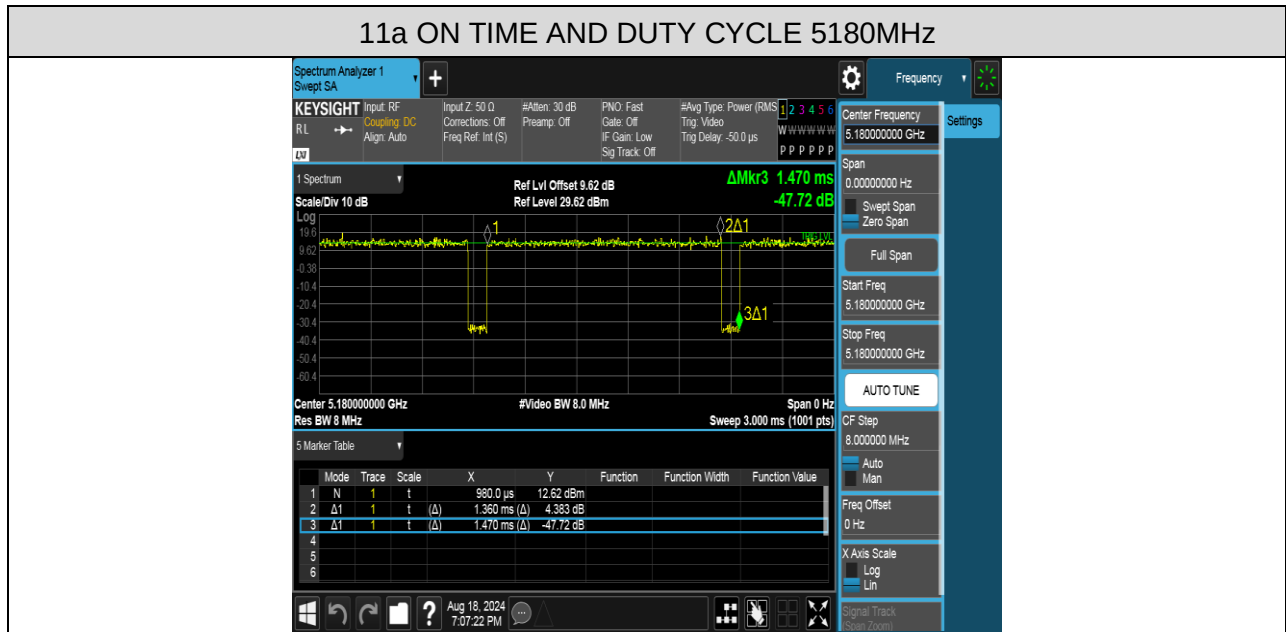
RESULTS

Mode	On Time (msec)	Period (msec)	Duty Cycle x (Linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/T Minimum VBW (kHz)	Final setting For VBW (kHz)
11a	1.36	1.47	0.9252	92.52	0.34	0.74	1
11ac VHT20	1.28	1.35	0.9481	94.81	0.23	0.78	1
11ac VHT40	0.64	0.71	0.9014	90.14	0.45	1.56	2
11ax HE20	1.00	1.07	0.9346	93.46	0.29	1.00	2
11ax HE40	0.53	0.60	0.8833	88.33	0.54	1.89	2

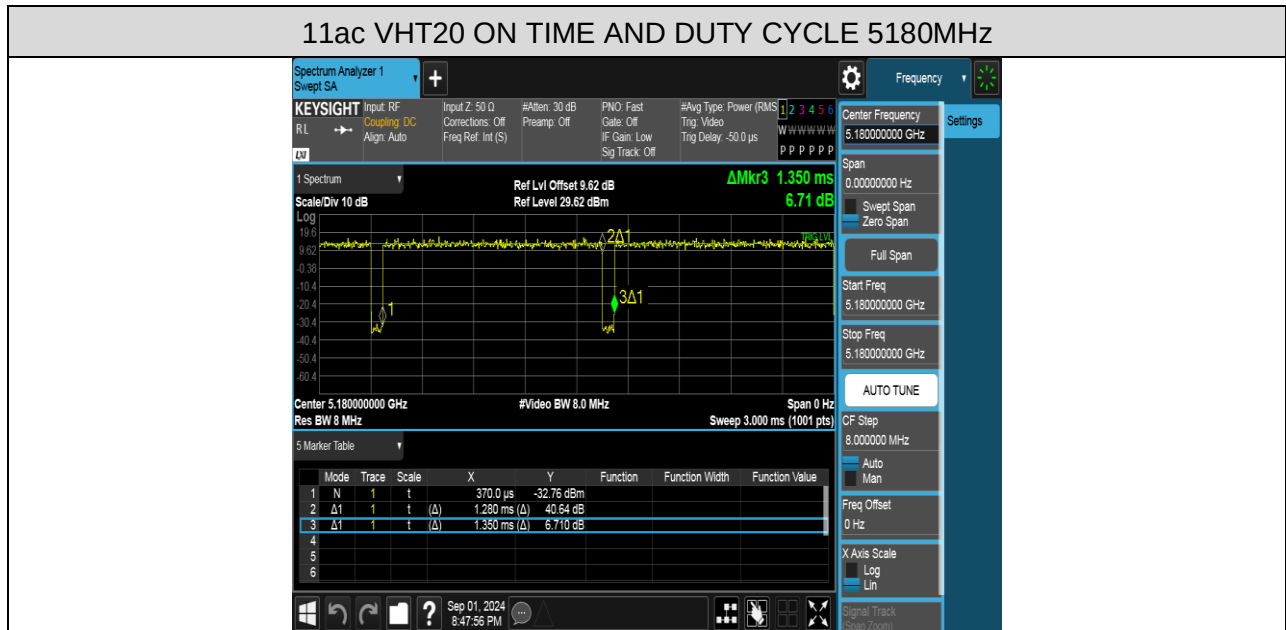
Remark:

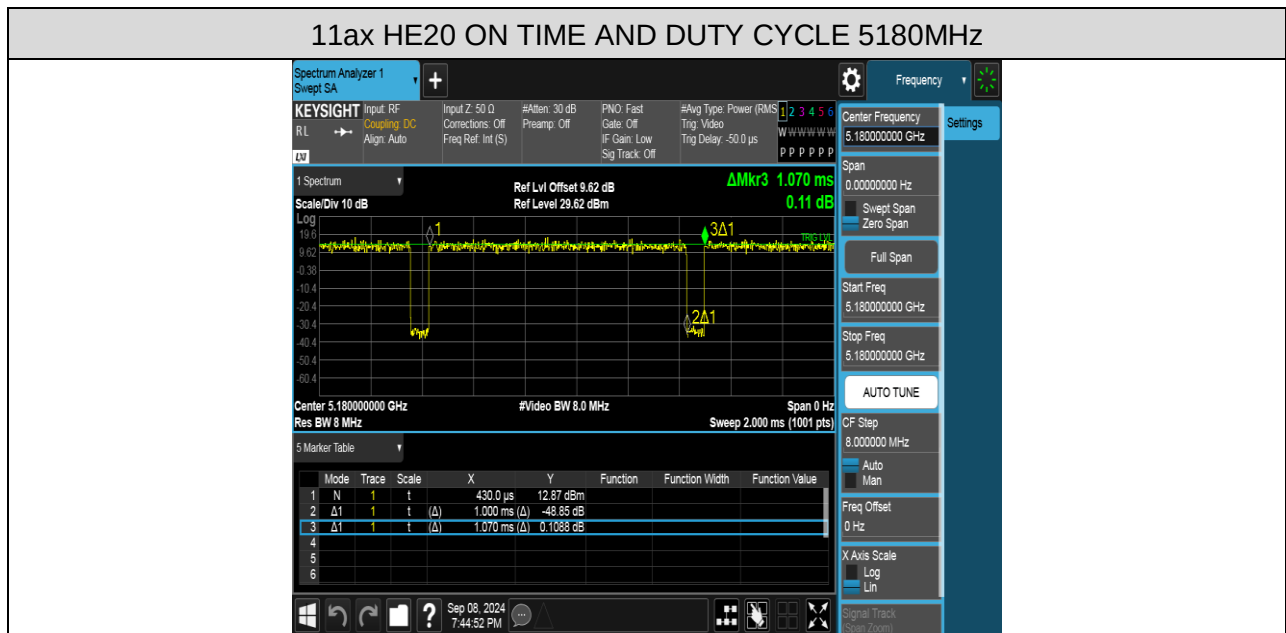
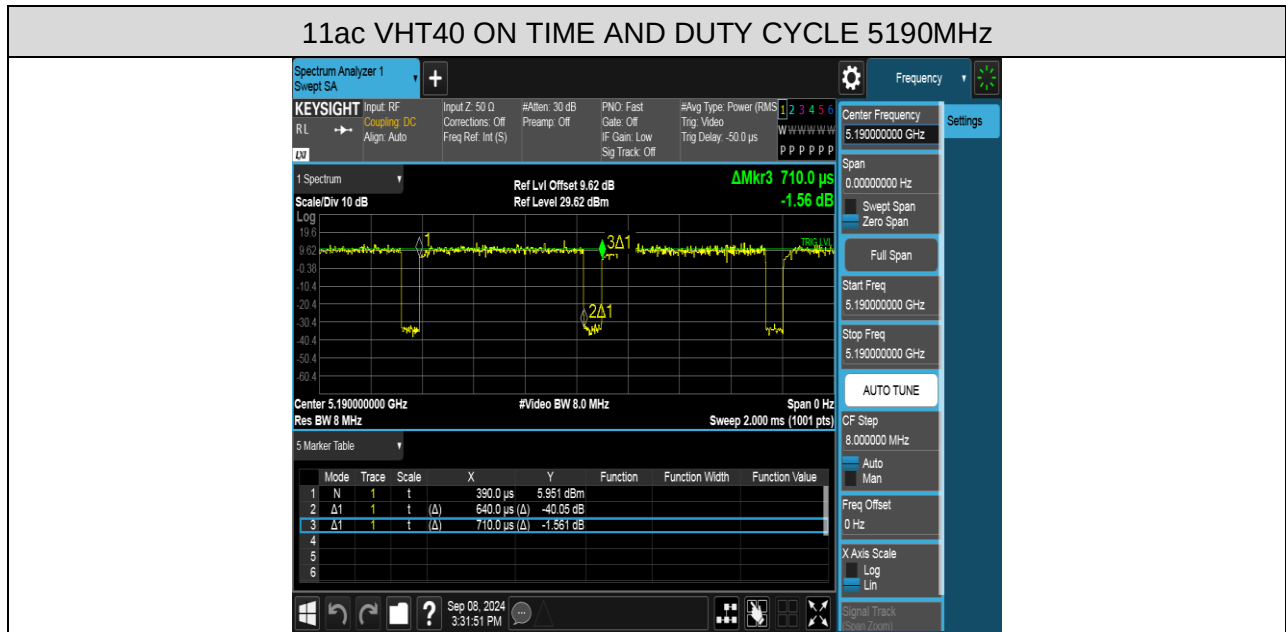
1. Duty Cycle Correction Factor=10log (1/x).
2. Where: x is Duty Cycle (Linear)
3. Where: T is On Time
4. If that calculated VBW is not available on the analyzer then the next higher value should be used.
5. If the duty cycle is above 98%, the Final VBW is 10Hz.

11a ON TIME AND DUTY CYCLE 5180MHz

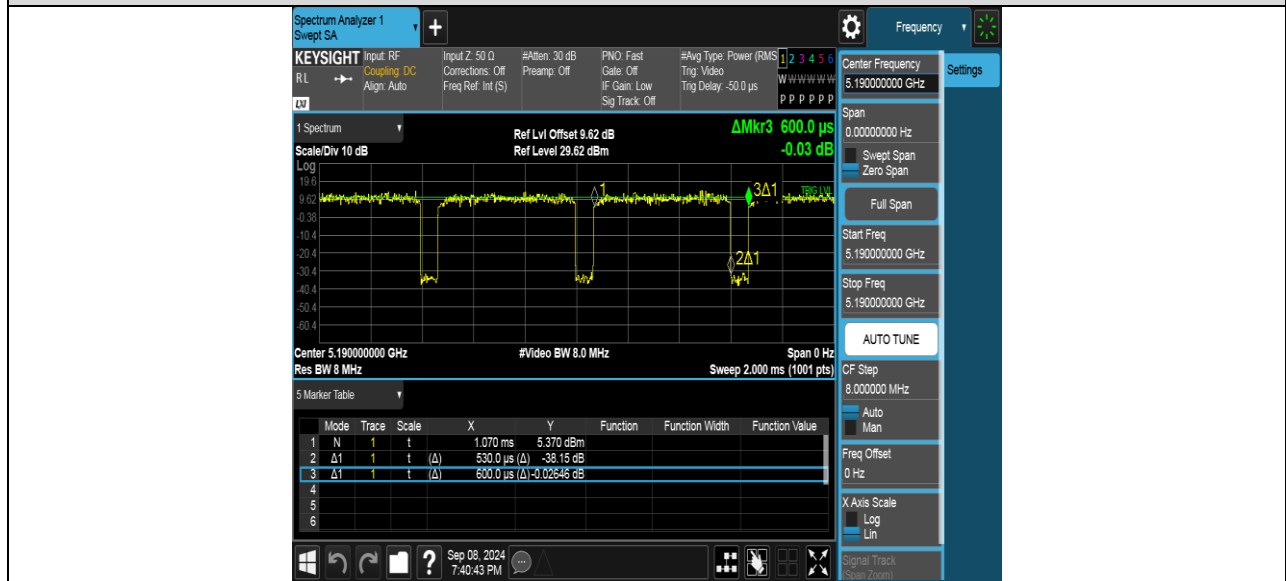


11ac VHT20 ON TIME AND DUTY CYCLE 5180MHz





11ax HE40 ON TIME AND DUTY CYCLE 5190MHz (WORSE CASE)



6.2. 6/26 dB EMISSION BANDWIDTH AND 99% OCCUPIED BANDWIDTH

LIMITS

CFR 47 FCC Part15, Subpart E RSS-247 Clause 6.2 RSS-Gen Clause 6.7		
Test Item	Limit	Frequency Range (MHz)
26 dB Emission Bandwidth	For reporting purposes only.	5150 ~ 5250
26 dB Emission Bandwidth	For reporting purposes only.	5250 ~ 5350
26 dB Emission Bandwidth	For reporting purposes only.	5470 ~ 5725
6 dB Emission Bandwidth	The minimum 6 dB emission bandwidth shall be 500 kHz.	5725 ~ 5850
99 % Occupied Bandwidth	For reporting purposes only.	5150 ~ 5825

TEST PROCEDURE

Refer to KDB 789033 D02 General U-NII Test Procedures New Rules v02r01 section II.C1. for 26 dB Emission Bandwidth; section II.C2. for 6 dB Emission Bandwidth; section II.D. for 99 % Occupied Bandwidth.

Connect the EUT to the spectrum analyser and use the following settings:

Center Frequency	The center frequency of the channel under test
Detector	Peak
RBW	For 6 dB Emission Bandwidth: RBW=100 kHz For 26 dB Emission bandwidth: approximately 1 % of the EBW. For 99 % Occupied Bandwidth: approximately 1 % ~ 5 % of the OBW.
VBW	For 6 dB Bandwidth: $\geq 3 \times \text{RBW}$ For 26 dB Bandwidth: $> \text{RBW}$ For 99 % Bandwidth: $> 3 \times \text{RBW}$
Trace	Max hold
Sweep	Auto couple

a) Use the 99 % power bandwidth function of the instrument, allow the trace to stabilize and report the measured bandwidth.

b) Allow the trace to stabilize and 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 6/26 dB relative to the maximum level measured in the fundamental emission.

Calculation for 26 dB Bandwidth of UNII-2C and UNII-3 Straddle Channel:

For Example: Fundamental Frequency: 5720 MHz

FL: 5710.60 MHz

FH: 5728.33 MHz

Turning Frequency: 5725 MHz

UNII-2C Band Portion = $5725 - 5710.60 = 14.40$ MHz

UNII-3 Band Portion = $5728.33 - 5725 = 3.30$ MHz

Calculation for 6dB Bandwidth of UNII-3 Straddle Channel:

For Example: Fundamental frequency: 5720 MHz

6 dB BW: 16.44 MHz

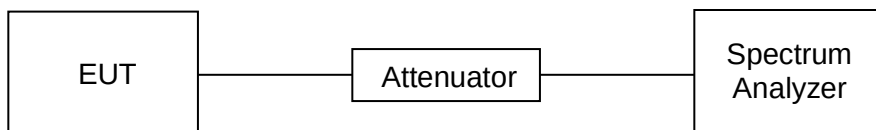
FL: 5711.76 MHz

FH: 5728.2 MHz

Turning Frequency: 5725 MHz

6 dB Bandwidth of UNII-3 band Portion = $5728.2 - 5725 = 3.2$ MHz

TEST SETUP



TEST ENVIRONMENT

Environment Parameter	Selected Values During Tests
Relative Humidity	60%
Atmospheric Pressure:	101kPa
Temperature	22.2°C
Test Voltage	AC 120V
Test Date	08/18/2024 - 09/08/2024

RESULTS TABLE

1) 26 dB Emission Bandwidth Part:

Test Mode	Channel	26dB EBW [MHz]	FL [MHz]	FH [MHz]	Verdict
11a	5180	24.992	5167.617	5192.609	PASS
	5200	24.505	5187.595	5212.100	PASS
	5240	24.451	5227.525	5251.976	PASS
	5260	23.760	5247.876	5271.636	PASS
	5280	24.515	5267.523	5292.037	PASS
	5320	24.075	5307.905	5331.980	PASS
	5500	25.485	5486.813	5512.299	PASS
	5580	24.549	5567.493	5592.043	PASS
	5700	24.792	5687.332	5712.124	PASS
	5720	25.928	5706.700	5732.628	PASS
	5720 UNII-2C	18.3	5706.700	5725	PASS
	5720 UNII-3	7.628	5725	5732.628	PASS
	5745	24.815	5732.577	5757.392	PASS
	5785	25.185	5772.099	5797.284	PASS
	5825	25.635	5811.632	5837.267	PASS

Test Mode	Channel	26dB EBW [MHz]	FL [MHz]	FH [MHz]	Verdict
11ac HT20	5180	24.701	5167.849	5192.551	PASS
	5200	25.187	5187.777	5212.964	PASS
	5240	25.527	5227.291	5252.817	PASS
	5260	24.577	5247.839	5272.416	PASS
	5280	25.159	5267.368	5292.527	PASS
	5320	25.405	5307.343	5332.748	PASS
	5500	26.141	5487.188	5513.329	PASS
	5580	27.148	5566.360	5593.508	PASS
	5700	26.357	5687.128	5713.485	PASS
	5720	25.899	5707.088	5732.987	PASS
	5720 UNII-2C	17.912	5707.088	5725	PASS
	5720 UNII-3	7.987	5725	5732.987	PASS
	5745	25.688	5732.256	5757.944	PASS
	5785	25.449	5772.265	5797.715	PASS
	5825	26.753	5811.024	5837.777	PASS

Test Mode	Channel	26dB EBW [MHz]	FL [MHz]	FH [MHz]	Verdict
11ac HT40	5190	45.213	5167.352	5212.565	PASS
	5230	45.171	5207.211	5252.381	PASS
	5270	44.859	5248.189	5293.048	PASS
	5310	44.419	5287.771	5332.189	PASS
	5510	45.773	5486.981	5532.755	PASS
	5550	45.925	5527.299	5573.224	PASS
	5670	45.981	5647.195	5693.176	PASS
	5710	45.819	5686.824	5732.643	PASS
	5710_UNII-2C	38.176	5686.824	5725	PASS
	5710_UNII-3	7.643	5725	5732.643	PASS
	5755	48.499	5729.456	5777.955	PASS
	5795	45.352	5772.179	5817.531	PASS

Test Mode	Channel	26dB EBW [MHz]	FL [MHz]	FH [MHz]	Verdict
11ax HE20	5180	25.413	5167.312	5192.725	PASS
	5200	25.631	5187.141	5212.772	PASS
	5240	25.365	5227.453	5252.819	PASS
	5260	24.901	5247.895	5272.796	PASS
	5280	25.005	5267.501	5292.507	PASS
	5320	24.932	5307.165	5332.097	PASS
	5500	26.529	5486.655	5513.184	PASS
	5580	27.943	5566.265	5594.208	PASS
	5700	25.176	5687.249	5712.425	PASS
	5720	25.077	5707.469	5732.547	PASS
	5720_UNII-2C	17.531	5707.469	5725	PASS
	5720_UNII-3	7.547	5725	5732.547	PASS
	5745	26.115	5731.959	5758.073	PASS
	5785	26.279	5772.084	5798.363	PASS
	5825	25.407	5812.291	5837.697	PASS

Test Mode	Channel	26dB EBW [MHz]	FL [MHz]	FH [MHz]	Verdict
11ax HE40	5190	44.163	5168.253	5212.416	PASS
	5230	45.005	5207.691	5252.696	PASS
	5270	43.376	5248.331	5291.707	PASS
	5310	44.709	5288.179	5332.888	PASS
	5510	44.949	5487.576	5532.525	PASS
	5550	47.080	5526.317	5573.397	PASS
	5670	45.467	5647.965	5693.432	PASS
	5710	45.280	5687.392	5732.672	PASS
	5710_UNII-2C	37.608	5687.392	5725	PASS
	5710_UNII-3	7.672	5725	5732.672	PASS
	5755	45.323	5731.928	5777.251	PASS
	5795	46.331	5771.424	5817.755	PASS

2) 99% Occupied Channel Bandwidth Part:

Test Mode	Channel	OCW [MHz]	FL [MHz]	FH [MHz]	Verdict
11a	5180	17.355	5171.3207	5188.6757	PASS
	5200	17.384	5191.2814	5208.6654	PASS
	5240	17.454	5231.2194	5248.6734	PASS
	5260	17.357	5251.3443	5268.7013	PASS
	5280	17.365	5271.2935	5288.6585	PASS
	5320	17.312	5311.3334	5328.6454	PASS
	5500	17.581	5491.1358	5508.7168	PASS
	5580	17.608	5571.1380	5588.7460	PASS
	5700	17.486	5691.2224	5708.7084	PASS
	5720	17.560	5711.2036	5728.7636	PASS
	5720 UNII-2C	13.796	5711.2036	5725	PASS
	5720 UNII-3	3.764	5725	5728.7636	PASS
	5745	17.605	5736.1329	5753.7379	PASS
	5785	17.555	5776.1839	5793.7389	PASS
	5825	17.600	5816.1719	5833.7719	PASS

Test Mode	Channel	OCW [MHz]	FL [MHz]	FH [MHz]	Verdict
11ac HT20	5180	18.475	5170.7890	5189.2640	PASS
	5200	18.466	5190.7767	5209.2427	PASS
	5240	18.506	5230.7623	5249.2683	PASS
	5260	18.464	5250.7951	5269.2591	PASS
	5280	18.447	5270.7942	5289.2412	PASS
	5320	18.502	5310.7423	5329.2443	PASS
	5500	18.726	5490.6426	5509.3686	PASS
	5580	18.612	5570.7045	5589.3165	PASS
	5700	18.685	5690.6845	5709.3695	PASS
	5720	18.692	5710.6613	5729.3533	PASS
	5720 UNII-2C	14.339	5710.6613	5725	PASS
	5720 UNII-3	4.353	5725	5729.3533	PASS
	5745	18.641	5735.6678	5754.3088	PASS
	5785	18.716	5775.6472	5794.3632	PASS
	5825	18.662	5815.6301	5834.2921	PASS

Test Mode	Channel	OCW [MHz]	FL [MHz]	FH [MHz]	Verdict
11ac HT40	5190	36.749	5171.6680	5208.4170	PASS
	5230	36.724	5211.6597	5248.3837	PASS
	5270	36.728	5251.6767	5288.4047	PASS
	5310	36.761	5291.6318	5328.3928	PASS
	5510	37.006	5491.5658	5528.5718	PASS
	5550	37.076	5531.5462	5568.6222	PASS
	5670	36.982	5651.5769	5688.5589	PASS
	5710	36.989	5691.5579	5728.5469	PASS
	5710_UNII-2C	33.442	5691.5579	5725	PASS
	5710_UNII-3	3.547	5725	5728.5469	PASS
	5755	36.919	5736.5642	5773.4832	PASS
	5795	37.035	5776.4873	5813.5223	PASS

Test Mode	Channel	OCW [MHz]	FL [MHz]	FH [MHz]	Verdict
11ax HE20	5180	19.357	5170.3335	5189.6905	PASS
	5200	19.372	5190.2981	5209.6701	PASS
	5240	19.378	5230.3223	5249.7003	PASS
	5260	19.359	5250.4026	5269.7616	PASS
	5280	19.360	5270.3483	5289.7083	PASS
	5320	19.331	5310.3273	5329.6583	PASS
	5500	19.431	5490.2814	5509.7124	PASS
	5580	19.493	5570.2577	5589.7507	PASS
	5700	19.390	5690.3241	5709.7141	PASS
	5720	19.388	5710.3181	5729.7061	PASS
	5720_UNII-2C	14.682	5710.3181	5725	PASS
	5720_UNII-3	4.706	5725	5729.7061	PASS
	5745	19.496	5735.2672	5754.7632	PASS
	5785	19.474	5775.2763	5794.7503	PASS
	5825	19.368	5815.3422	5834.7102	PASS

Test Mode	Channel	OCW [MHz]	FL [MHz]	FH [MHz]	Verdict
11ax HE40	5190	38.120	5170.9314	5209.0514	PASS
	5230	37.998	5210.9728	5248.9708	PASS
	5270	38.062	5251.0059	5289.0679	PASS
	5310	38.062	5290.9944	5329.0564	PASS
	5510	38.273	5490.9019	5529.1749	PASS
	5550	38.251	5530.9114	5569.1624	PASS
	5670	38.188	5650.9467	5689.1347	PASS
	5710	38.260	5690.8929	5729.1529	PASS
	5710_UNII-2C	34.107	5690.8929	5725	PASS
	5710_UNII-3	4.153	5725	5729.1529	PASS
	5755	38.219	5735.9015	5774.1205	PASS
	5795	38.242	5775.9134	5814.1554	PASS

3) 6dB Minimum Emission Bandwidth

Test Mode	Channel	6db EBW [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
11a	5745	16.401	5736.793	5753.195	0.5	PASS
	5785	16.361	5776.809	5793.171	0.5	PASS
	5825	16.332	5816.833	5833.165	0.5	PASS
11ac VHT20	5745	17.597	5736.209	5753.807	0.5	PASS
	5785	17.655	5776.160	5793.815	0.5	PASS
	5825	17.624	5816.191	5833.815	0.5	PASS
11ac VHT40	5755	36.325	5736.835	5773.160	0.5	PASS
	5795	36.325	5776.832	5813.157	0.5	PASS
11ax HE20	5745	18.908	5735.584	5754.492	0.5	PASS
	5785	18.953	5775.531	5794.484	0.5	PASS
	5825	18.864	5815.531	5834.395	0.5	PASS
11ax HE40	5755	37.883	5736.019	5773.901	0.5	PASS
	5795	37.864	5776.011	5813.875	0.5	PASS

TEST GRAPHS

For 26 dB Emission Bandwidth Part:

