

FCC Radio Test Report

FCC ID: 2BCGWGXE75

Report No. : BTL-FCCP-4-2402G042
Equipment : AXE5400 Tri-Band Wi-Fi 6E Gaming Router
Model Name : Archer GXE75
Brand Name : tp-link
Applicant : TP-LINK CORPORATION PTE. LTD.
Address : 7 Temasek Boulevard #29-03 Suntec Tower One, Singapore 038987

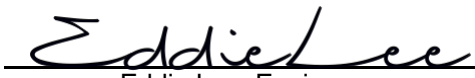
Equipment Class : 6ID - 15E 6 GHz Low Power Indoor Access Point

Radio Function : U-NII 6 GHz (U-NII 5, U-NII 6, U-NII 7, U-NII 8)

FCC Rule Part(s) : FCC CFR Title 47, Part 15, Subpart E (15.407)
Measurement Procedure(s) : ANSI C63.10-2013

Date of Receipt : 2024/2/21
Date of Test : 2024/5/7 ~ 2024/5/30
Issued Date : 2024/7/23

The above equipment has been tested and found in compliance with the requirement of the above standards by BTL Inc.

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Declaration

BTL represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with standards traceable to international standard(s) and/or national standard(s).

BTL's reports apply only to the specific samples tested under conditions. It is manufacture's responsibility to ensure that additional production units of this model are manufactured with the identical electrical and mechanical components. **BTL** assumes no responsibility for the data provided by the Customer, any statements, inferences or generalizations drawn by the customer or others from the reports issued by **BTL**.

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BTL's laboratory quality assurance procedures are in compliance with the **ISO/IEC 17025** requirements, and accredited by the conformity assessment authorities listed in this test report.

BTL is not responsible for the sampling stage, so the results only apply to the sample as received.

The information, data and test plan are provided by manufacturer which may affect the validity of results, so it is manufacturer's responsibility to ensure that the apparatus meets the essential requirements of applied standards and in all the possible configurations as representative of its intended use.

Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

Please note that the measurement uncertainty is provided for informational purpose only and are not use in determining the Pass/Fail results.

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REVISION HISTORY

Report No.	Version	Description	Issued Date	Note
BTL-FCCP-4-2402G042	R00	Original Report.	2024/7/23	Invalid
BTL-FCCP-4-2402G042	R01	Revised Typo.	2024/7/23	Valid

1 SUMMARY OF TEST RESULTS

Test procedures according to the technical standards.

Standard(s) Section	Description	Test Result	Judgement	Remark
15.407(a)	Maximum e.i.r.p.	APPENDIX A	Pass	-----
15.203 15.407(a)	Antenna requirement	-----	Pass	-----
15.407(a)	Maximum transmitter channel bandwidth	APPENDIX B	Pass	-----
15.407(a)	Maximum power spectral density	APPENDIX C	Pass	-----
15.407(b) 15.209 15.407(b) 15.205	Undesirable emissions and Restricted bands of operation	APPENDIX D APPENDIX E APPENDIX F	Pass	-----
15.407(b)	In-band emission (Mask)	APPENDIX G	Pass	-----
15.407(b)	AC power line conducted emissions	APPENDIX H	Pass	-----
15.407(d)	Contention-based protocol	APPENDIX I	Pass	NOTE (2)

NOTE:

- (1) "N/A" denotes test is not applicable in this Test Report.
- (2) Contention-Based Protocol Uses conducted method for testing.
- (3) The report format version is TP.1.1.1.

1.1 TEST FACILITY

The test locations stated below are under the TAF Accreditation Number 0659.

The test location(s) used to collect the test data in this report are:

No. 68-1, Ln. 169, Sec. 2, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan
(FCC DN: TW0659)

☐ C05 ☐ CB08 ☐ CB11 ☒ SR10 ☒ SR11

No. 68-2, Ln. 169, Sec. 2, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan
(FCC DN: TW0659)

☐ CB12 ☒ SR05

No. 72, Ln. 169, Sec. 2, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan
(FCC DN: TW0659)

☐ C06 ☒ CB21 ☐ CB22

1.2 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 %**.

The measurement instrumentation uncertainty considerations contained in CISPR 16-4-2. The BTL measurement uncertainty is less than the CISPR 16-4-2 U_{CISPR} requirement.

A. Conducted test:

Test Item	U (dB)
Maximum e.i.r.p.	0.3669
Maximum transmitter channel bandwidth	0.5332
Maximum power spectral density	0.6590
In-band emission (Mask)	-
Contention-based protocol	-

B. Undesirable emissions test:

Test Site	Measurement Frequency Range	U (dB)
CB21	0.03 GHz ~ 0.2 GHz	4.17
	0.2 GHz ~ 1 GHz	4.72
	1 GHz ~ 6 GHz	5.21
	6 GHz ~ 18 GHz	5.51
	18 GHz ~ 26 GHz	3.69
	26 GHz ~ 40 GHz	4.23

C. AC power line conducted emissions test:

Test Site	Method	Measurement Frequency Range	U (dB)
SR05	CISPR	150 kHz ~ 30MHz	3.44

NOTE:

Unless specifically mentioned, the uncertainty of measurement has not been taken into account to declare the compliance or non-compliance to the specification.

1.3 TEST ENVIRONMENT CONDITIONS

Test Item	Environment Condition	Test Voltage	Tested by
Maximum e.i.r.p.	24 °C, 57 %	AC 120V	Easton Tsai
Maximum transmitter channel bandwidth	24 °C, 57 %	AC 120V	Easton Tsai
Maximum power spectral density	24 °C, 57 %	AC 120V	Easton Tsai
Undesirable emissions below 1 GHz	Refer to data	AC 120V	Sean Huang
Undesirable emissions above 1 GHz	Refer to data	AC 120V	Sean Huang
In-band emission (Mask)	24 °C, 57 %	AC 120V	Easton Tsai
AC power line conducted emissions	25 °C, 49 %	AC 120V	Easton Tsai
Contention-based protocol	23.1 °C, 52 %	AC 120V	Cora Lin

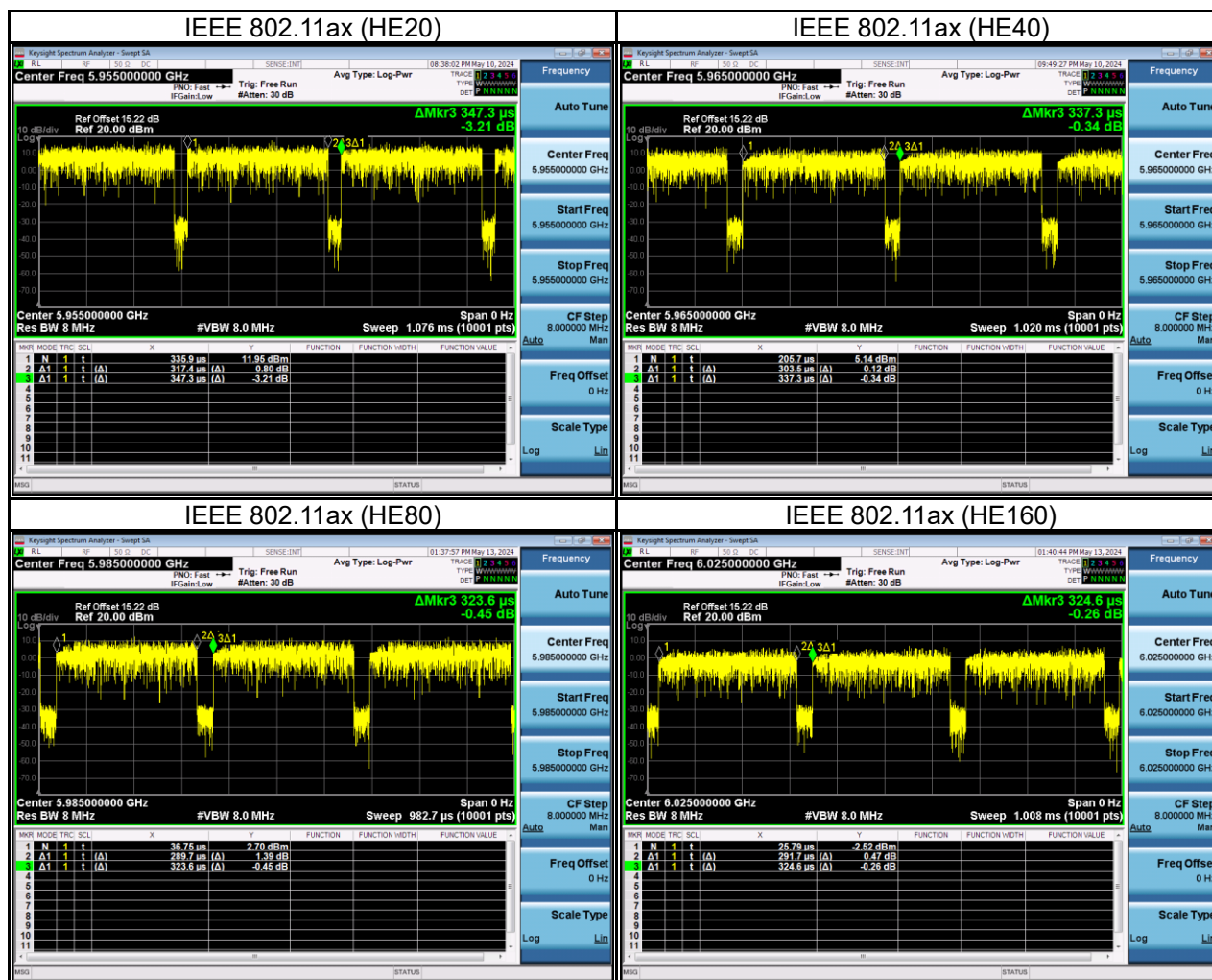
1.4 DUTY CYCLE

If duty cycle is $\geq 98\%$, duty factor is not required.

If duty cycle is $< 98\%$, duty factor shall be considered.

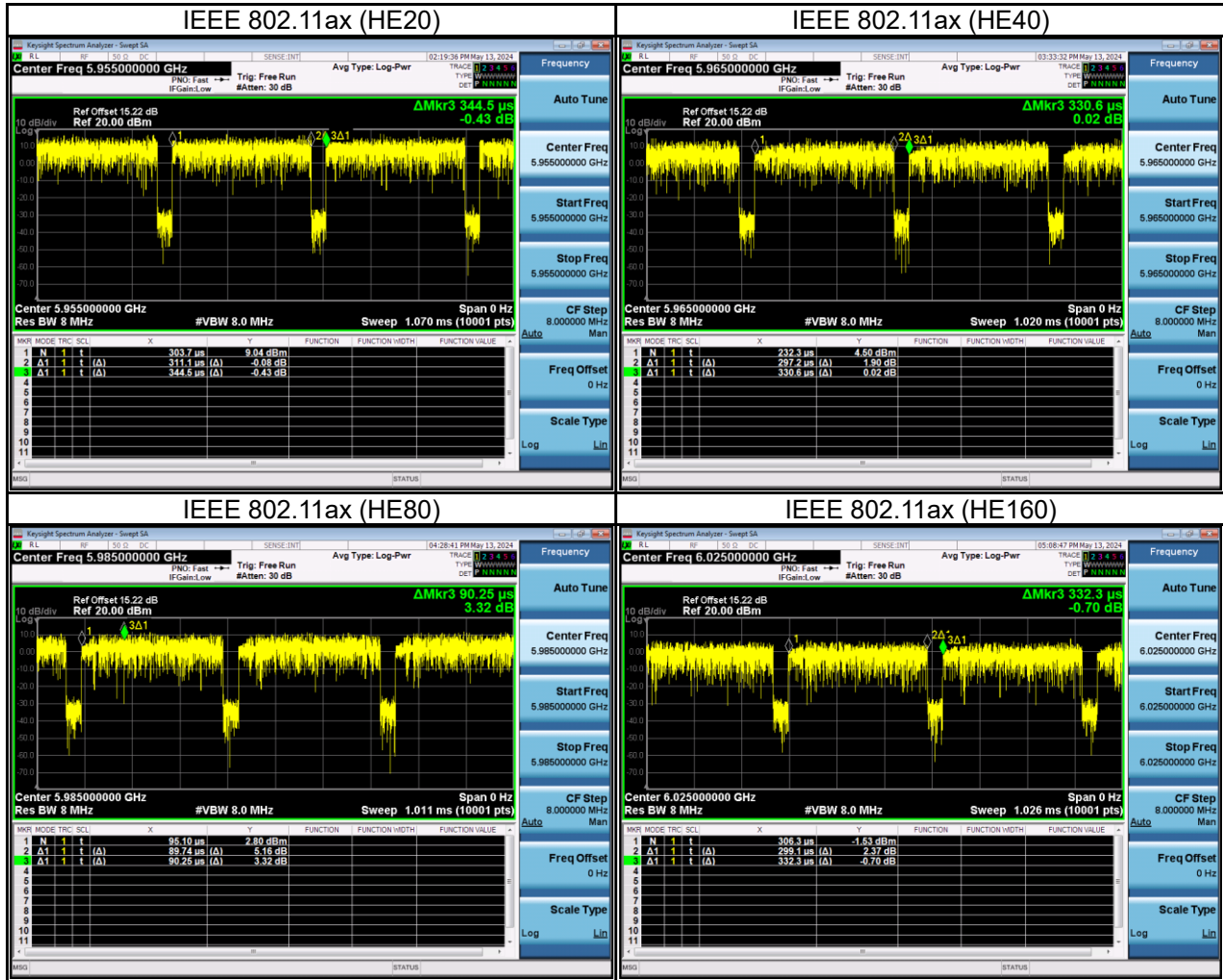
For NSS1:

Remark	Delta 1			Delta 2	On Time/Period	10 log(1/Duty Cycle)
Mode	ON (ms)	Numbers (ON)	On Time (B) (ms)	Period (ON+OFF) (ms)	Duty Cycle (%)	Duty Factor (dB)
IEEE 802.11ax (HE20)	0.317	1	0.317	0.347	91.39%	0.39
IEEE 802.11ax (HE40)	0.304	1	0.304	0.337	89.98%	0.46
IEEE 802.11ax (HE80)	0.290	1	0.290	0.324	89.52%	0.48
IEEE 802.11ax (HE160)	0.292	1	0.292	0.325	89.86%	0.46



For NSS2:

Remark	Delta 1			Delta 2	On Time/Period	10 log(1/Duty Cycle)
Mode	ON (ms)	Numbers (ON)	On Time (B) (ms)	Period (ON+OFF) (ms)	Duty Cycle (%)	Duty Factor (dB)
IEEE 802.11ax (HE20)	0.311	1	0.311	0.345	90.30%	0.44
IEEE 802.11ax (HE40)	0.297	1	0.297	0.331	89.90%	0.46
IEEE 802.11ax (HE80)	0.090	1	0.090	0.090	99.43%	0.02
IEEE 802.11ax (HE160)	0.299	1	0.299	0.332	90.01%	0.46



2 GENERAL INFORMATION

2.1 EUT INFORMATION

Equipment	AXE5400 Tri-Band Wi-Fi 6E Gaming Router
Model Name	Archer GXE75
Brand Name	tp-link
Model Difference	N/A
Power Source	DC voltage supplied from AC Adapter.
Power Rating	I/P: 100-240V~, 50/60Hz, 0.8A O/P: 12.0V --- 2.5A
Products Covered	1 * Adapter: MASS POWER / NBS30D120250VU 1 * LAN Cable
Frequency Range	U-NII 5: 5925 MHz ~ 6425 MHz U-NII 6: 6425 MHz ~ 6525 MHz U-NII 7: 6525 MHz ~ 6875 MHz U-NII 8: 6875 MHz ~ 7125 MHz
Operation Frequency	UNII-5: 5955 MHz ~ 6435 MHz UNII-6: 6435 MHz ~ 6515 MHz UNII-7: 6525 MHz ~ 6865 MHz UNII-8: 6875 MHz ~ 7095 MHz
Modulation Technology	OFDMA
Transfer Rate	IEEE 802.11ax: up to 2402 Mbps
Maximum E.I.R.P. for UNII-5 - Non-Beamforming mode	NSS1: IEEE 802.11ax (HE20): 16.92 dBm (0.0492 W) IEEE 802.11ax (HE40): 19.88 dBm (0.0972 W) IEEE 802.11ax (HE80): 22.92 dBm (0.1960 W) IEEE 802.11ax (HE160): 25.91 dBm (0.3903 W) NSS2: IEEE 802.11ax (HE20): 17.97 dBm (0.0627 W) IEEE 802.11ax (HE40): 21.29 dBm (0.1346 W) IEEE 802.11ax (HE80): 24.29 dBm (0.2686 W) IEEE 802.11ax (HE160): 27.12 dBm (0.5152 W)
Maximum E.I.R.P. for UNII-6 - Non-Beamforming mode	NSS1: IEEE 802.11ax (HE20): 16.76 dBm (0.0474 W) IEEE 802.11ax (HE40): 19.88 dBm (0.0972 W) IEEE 802.11ax (HE80): 23.05 dBm (0.2021 W) IEEE 802.11ax (HE160): 25.60 dBm (0.3629 W) NSS2: IEEE 802.11ax (HE20): 18.24 dBm (0.0667 W) IEEE 802.11ax (HE40): 21.11 dBm (0.1292 W) IEEE 802.11ax (HE80): 23.90 dBm (0.2455 W) IEEE 802.11ax (HE160): 27.12 dBm (0.5158 W)
Maximum E.I.R.P. for UNII-7 - Non-Beamforming mode	NSS1: IEEE 802.11ax (HE20): 16.56 dBm (0.0452 W) IEEE 802.11ax (HE40): 19.84 dBm (0.0965 W) IEEE 802.11ax (HE80): 23.07 dBm (0.2027 W) IEEE 802.11ax (HE160): 25.72 dBm (0.3729 W) NSS2: IEEE 802.11ax (HE20): 18.04 dBm (0.0637 W) IEEE 802.11ax (HE40): 21.30 dBm (0.1350 W) IEEE 802.11ax (HE80): 24.30 dBm (0.2693 W) IEEE 802.11ax (HE160): 26.94 dBm (0.4946 W)

Maximum E.I.R.P. for UNII-8 - Non-Beamforming mode	NSS1: IEEE 802.11ax (HE20): 17.01 dBm (0.0502 W) IEEE 802.11ax (HE40): 19.90 dBm (0.0977 W) IEEE 802.11ax (HE80): 23.16 dBm (0.2072 W) IEEE 802.11ax (HE160): 25.95 dBm (0.3932 W) NSS2: IEEE 802.11ax (HE20): 18.25 dBm (0.0669 W) IEEE 802.11ax (HE40): 21.38 dBm (0.1374 W) IEEE 802.11ax (HE80): 24.38 dBm (0.2742 W) IEEE 802.11ax (HE160): 27.09 dBm (0.5112 W)
Maximum E.I.R.P. for UNII-5 - Beamforming mode	NSS1: IEEE 802.11ax (HE20): 16.46 dBm (0.0443 W) IEEE 802.11ax (HE40): 19.48 dBm (0.0887 W) IEEE 802.11ax (HE80): 22.52 dBm (0.1788 W) IEEE 802.11ax (HE160): 25.51 dBm (0.3559 W) NSS2: IEEE 802.11ax (HE20): 17.57 dBm (0.0572 W) IEEE 802.11ax (HE40): 20.89 dBm (0.1228 W) IEEE 802.11ax (HE80): 23.89 dBm (0.2450 W) IEEE 802.11ax (HE160): 26.72 dBm (0.4699 W)
Maximum E.I.R.P. for UNII-6 - Beamforming mode	NSS1: IEEE 802.11ax (HE20): 16.31 dBm (0.0427 W) IEEE 802.11ax (HE40): 19.48 dBm (0.0886 W) IEEE 802.11ax (HE80): 22.65 dBm (0.1843 W) IEEE 802.11ax (HE160): 25.20 dBm (0.3309 W) NSS2: IEEE 802.11ax (HE20): 17.84 dBm (0.0608 W) IEEE 802.11ax (HE40): 20.71 dBm (0.1178 W) IEEE 802.11ax (HE80): 23.50 dBm (0.2239 W) IEEE 802.11ax (HE160): 26.72 dBm (0.4704 W)
Maximum E.I.R.P. for UNII-7 - Beamforming mode	NSS1: IEEE 802.11ax (HE20): 16.14 dBm (0.0411 W) IEEE 802.11ax (HE40): 19.44 dBm (0.0880 W) IEEE 802.11ax (HE80): 22.67 dBm (0.1849 W) IEEE 802.11ax (HE160): 25.32 dBm (0.3401 W) NSS2: IEEE 802.11ax (HE20): 17.64 dBm (0.0581 W) IEEE 802.11ax (HE40): 20.90 dBm (0.1231 W) IEEE 802.11ax (HE80): 23.90 dBm (0.2456 W) IEEE 802.11ax (HE160): 26.54 dBm (0.4511 W)
Maximum E.I.R.P. for UNII-8 - Beamforming mode	NSS1: IEEE 802.11ax (HE20): 16.64 dBm (0.0461 W) IEEE 802.11ax (HE40): 19.50 dBm (0.0891 W) IEEE 802.11ax (HE80): 22.76 dBm (0.1890 W) IEEE 802.11ax (HE160): 25.55 dBm (0.3586 W) NSS2: IEEE 802.11ax (HE20): 17.85 dBm (0.0610 W) IEEE 802.11ax (HE40): 20.98 dBm (0.1253 W) IEEE 802.11ax (HE80): 23.98 dBm (0.2501 W) IEEE 802.11ax (HE160): 26.69 dBm (0.4662 W)
Test Software Version	Access Manual Tool 3.2.1.2
Test Model	Archer GXE75
Sample Status	Engineering Sample
EUT Modification(s)	N/A

NOTE:

(1) The above EUT information is declared by manufacturer and for more detailed features description, please refers to the manufacturer's specifications or user's manual.

(2) Channel List:

UNII-5							
IEEE 802.11ax (HE20)		IEEE 802.11ax (HE40)		IEEE 802.11ax (HE80)		IEEE 802.11ax (HE160)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	5955	3	5965	7	5985	15	6025
5	5975	11	6005	23	6065	47	6185
9	5995	19	6045	39	6145	79	6345
13	6015	27	6085	55	6225		
17	6035	35	6125	71	6305		
21	6055	43	6165	87	6385		
25	6075	51	6205				
29	6095	59	6245				
33	6115	67	6285				
37	6135	75	6325				
41	6155	83	6365				
45	6175	91	6405				
49	6195						
53	6215						
57	6235						
61	6255						
65	6275						
69	6295						
73	6315						
77	6335						
81	6355						
85	6375						
89	6395						
93	6415						

UNII-6							
IEEE 802.11ax (HE20)		IEEE 802.11ax (HE40)		IEEE 802.11ax (HE80)		IEEE 802.11ax (HE160)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
97	6435	99	6445	103	6465	111	6505
101	6455	107	6485				
105	6475						
109	6495						
113	6515						

UNII-7							
IEEE 802.11ax (HE20)		IEEE 802.11ax (HE40)		IEEE 802.11ax (HE80)		IEEE 802.11ax (HE160)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
117	6535	115	6525*	119	6545*	143	6665
121	6555	123	6565	135	6625	175	6825
125	6575	131	6605	151	6705		
129	6595	139	6645	167	6785		
133	6615	147	6685	183	6865*		
137	6635	155	6725				
141	6655	163	6765				
145	6675	171	6805				
149	6695	179	6845				
153	6715						
157	6735						
161	6755						
165	6775						
169	6795						
173	6815						
177	6835						
181	6855						

UNII-8							
IEEE 802.11ax (HE20)		IEEE 802.11ax (HE40)		IEEE 802.11ax (HE80)		IEEE 802.11ax (HE160)	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
185	6875*	187	6885*	199	6945	207	6985
189	6895	195	6925	215	7025		
193	6915	203	6965				
197	6935	211	7005				
201	6955	219	7045				
205	6975	227	7085				
209	6995						
213	7015						
217	7035						
221	7055						
225	7075						
229	7095						

NOTE: * means this is a straddle channel.

(3) Table for Filed Antenna:

Ant	Manufacturer	Product Model	Antenna Type	Connector	Frequency (MHz)	Gain (dBi)
1	TP-LINK CORPORATION PTE. LTD.	Archer GXE75	Franklin antenna	I-PEX	5925-6425	2.20
					6425-6525	2.45
					6525-6875	2.45
					6875-7125	2.39
2	TP-LINK CORPORATION PTE. LTD.	Archer GXE75	Franklin antenna	I-PEX	5925-6425	2.10
					6425-6525	2.35
					6525-6875	2.28
					6875-7125	2.39

NOTE:

- (a) Antenna gain higher is used for testing.
- (b) The EUT incorporates a CDD function. Physically, the EUT provides two completed transmitters and receivers (2T2R).
- (c) For Power Spectral Density:
 $\text{Directional Gain} = 10 \log [(10^{G1/20} + 10^{G2/20} + \dots + 10^{Gn/20})^2 / N_{\text{ANT}}] = 5.43 \text{ dBi} < 6 \text{ dBi}$.
The Direction gain is less than 6 dBi, so power spectral density limits will not be reduced.
- (d) For Output Power:
For $N_{\text{ANT}} = 2 < 5$,
 $\text{Direction gain} = G_{\text{ANT}} + 0 = 2.45 + 0 = 2.45 \text{ dBi}$.
The Direction gain is less than 6 dBi, so output power limits will not be reduced.
- (e) For Beamforming mode:
Beamforming gain is 3. Then the Directional gain = $3 + 2.45 = 5.45 < 6 \text{ dBi}$.
The Direction gain is less than 6 dBi, so output power limits will not be reduced.

- (4) The above Antenna information are derived from the antenna data sheet provided by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

(5) Operating Mode and Antenna Configuration

TX Mode \ Operating Mode	2TX
IEEE 802.11ax (HE20)	V (Ant 1+Ant 2)
IEEE 802.11ax (HE40)	V (Ant 1+Ant 2)
IEEE 802.11ax (HE80)	V (Ant 1+Ant 2)
IEEE 802.11ax (HE160)	V (Ant 1+Ant 2)

2.2 TEST MODES

Test Items	Test mode	Channel	Note
AC power line conducted emissions	Normal/Idle	-	-
Undesirable emissions (below 1GHz)	IEEE 802.11ax (HE160)	143	-
Undesirable emissions (above 1GHz)	IEEE 802.11ax (HE20)	1/93, 97/113 117/181, 185/229	Bandedge
	IEEE 802.11ax (HE40)	3/91, 99/107 115/179, 187/227	
	IEEE 802.11ax (HE80)	7/87, 103 119/135/167/183, 215	
	IEEE 802.11ax (HE160)	15/79, 111 143/175, 207	
	IEEE 802.11ax (HE20)	1/45/93 97/105/113 117/149/181 185/209/229	Harmonic
	IEEE 802.11ax (HE40)	3/43/91, 99/107 115/147/179 187/227	
	IEEE 802.11ax (HE80)	7/39/87, 103 119/135/167/183 199/215	
	IEEE 802.11ax (HE160)	15/79, 111 143/175, 207	
	IEEE 802.11ax (HE160)	143	-
	IEEE 802.11ax (HE20)	1/45/93 97/105/113 117/149/181 185/209/229	-
Maximum e.i.r.p. & Maximum transmitter channel bandwidth & Maximum power spectral density & In-band emission (Mask)	IEEE 802.11ax (HE40)	3/43/91, 99/107 115/147/179 187/227	
	IEEE 802.11ax (HE80)	7/39/87, 103 119/135/167/183 199/215	
	IEEE 802.11ax (HE160)	15/79, 111 143/175, 207	
Contention-based protocol	IEEE 802.11ax (HE20)	45, 105 149, 209	-
	IEEE 802.11ax (HE160)	15, 111 143, 207	
Maximum e.i.r.p.	IEEE 802.11ax (HE20)	1/45/93 97/105/113 117/149/181 185/209/229	Beamforming mode
	IEEE 802.11ax (HE40)	3/43/91, 99/107 115/147/179 187/227	
	IEEE 802.11ax (HE80)	7/39/87, 103 119/135/167/183 199/215	
	IEEE 802.11ax (HE160)	15/79, 111 143/175, 207	

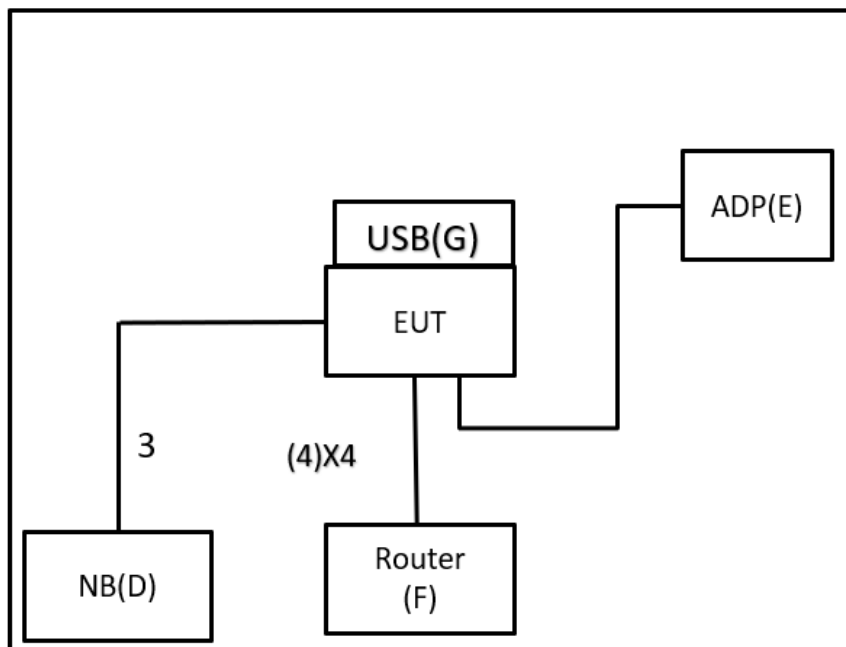
NOTE:

- (1) For radiated emission band edge test, both Vertical and Horizontal are evaluated, but only the worst case (Vertical) is recorded.
- (2) All X, Y and Z axes are evaluated, but only the worst case (X axis) is recorded.
- (3) For IEEE 802.11ax modes, refer to TCB Workshop presentations on October 3, 2018, after evaluated, all testing are performed under fully loaded conditions (Full RU). In the test data, only the partially loaded conditions data are marked with tones.

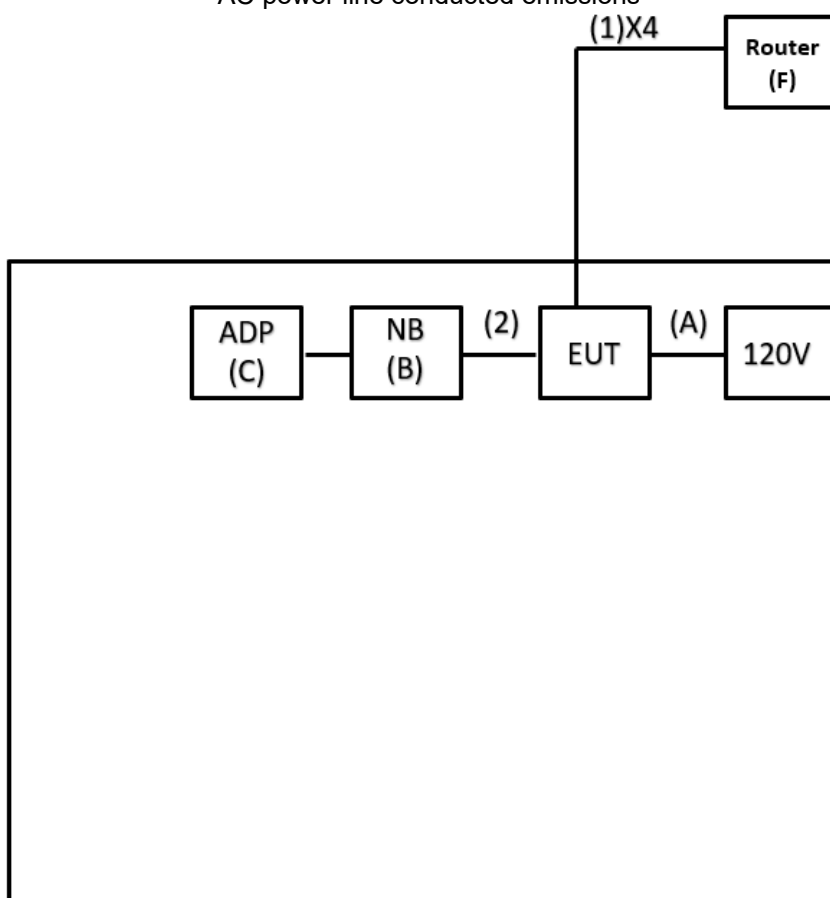
2.3 TESTED CONFIGURATION DIAGRAM

Equipment letters and Cable numbers refer to item numbers described in the tables of clause 2.4.

Undesirable emissions



AC power line conducted emissions



2.4 SUPPORT UNITS

Item	Equipment	Brand	Model No.	Series No.	Remarks
A	ADP	MASS POWER	NBS30D120250VU	N/A	Supplied by test requester
B	NB	HP	N/A	N/A	Furnished by test lab.
C	ADP	HP	N/A	N/A	Furnished by test lab.
D	NB	HP	TPN-I119	N/A	Furnished by test lab.
E	ADP	MASS POWER	NBS30D120250VU	N/A	Supplied by test requester
F	Router	tp-link	Archer C64	N/A	Furnished by test lab.
G	USB	ADATA	UV150	N/A	Furnished by test lab.

Item	Shielded	Ferrite Core	Length	Cable Type	Remarks
1	No	No	5m	LAN CABLE	Furnished by test lab.
2	No	No	1.2m	LAN CABLE	Furnished by test lab.
3	No	No	1.2m	LAN CABLE	Supplied by test requester
4	No	No	1m	LAN CABLE	Furnished by test lab.

3 MAXIMUM E.I.R.P. TEST

3.1 LIMITS

According to 15.407(a)(4)(5)(6)(7)(8) the limits are as follows:

Equipment Category	Band	Maximum e.i.r.p. Limit
Standard power access point* Fixed client*	U-NII 5 (5.925-6.425 GHz)	36 dBm
	U-NII 7 (6.525-6.875 GHz)	
Indoor access point Subordinate device	U-NII 5 (5.925-6.425 GHz)	30 dBm
	U-NII 6 (6.425-6.525 GHz)	
	U-NII 7 (6.525-6.875 GHz)	
	U-NII 8 (6.875-7.125 GHz)	
Standard power access point client devices	U-NII 5 (5.925-6.425 GHz)	30 dBm and the device must limit its power to no more than 6 dB below its associated standard power access point's authorized transmit power
	U-NII 6 (6.425-6.525 GHz)	
	U-NII 7 (6.525-6.875 GHz)	
	U-NII 8 (6.875-7.125 GHz)	
Indoor access point client devices	U-NII 5 (5.925-6.425 GHz)	24 dBm
	U-NII 6 (6.425-6.525 GHz)	
	U-NII 7 (6.525-6.875 GHz)	
	U-NII 8 (6.875-7.125 GHz)	

* For outdoor devices, the maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

According to 15.407(a)(11):

The maximum conducted output power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage.

3.2 TEST PROCEDURE

Referring to FCC KDB 987594 D02, clause E. and FCC KDB 789033 D02, clause E. 3 Measurement using a Power Meter (PM):

- a. The maximum peak conducted output power was performed in accordance with method of clause E. 3. a) Method PM (Measurement using an RF average power meter):
 - (i) Measurements may be performed using a wideband RF power meter with a thermocouple detector or equivalent if all of the following conditions are satisfied:
 - The EUT is configured to transmit continuously or to transmit with a constant duty cycle.
 - At all times when the EUT is transmitting, it must be transmitting at its maximum power control level.
 - The integration period of the power meter exceeds the repetition period of the transmitted signal by at least a factor of five.
 - (ii) If the transmitter does not transmit continuously, measure the duty cycle, x, of the transmitter output signal.
 - (iii) Measure the average power of the transmitter. This measurement is an average over both the on and off periods of the transmitter.
 - (iv) Adjust the measurement in dBm by adding $10 \log (1/x)$ where x is the duty cycle (e.g., $10 \log (1/0.25)$ if the duty cycle is 25%).
- b. The maximum peak conducted output power was performed in accordance with method of clause E. 3. b) Method PM-G (Measurement using a gated RF average power meter):

Measurements may be performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

Referring to FCC KDB 987594 D02, clause H. Measurement of emission at elevation angles higher than 30° from horizon:

Note: Elevation angle is defined as 0° is horizontal and 90° is straight-up.

For fixed infrastructure, not electrically or mechanically steerable beam antenna

- a. If elevation plane radiation pattern is available:
 - (i) Determine the device intended mounting elevation angle and define 0° reference angle on the elevation plane radiation pattern.
 - (ii) Indicate any radiation pattern between 30° and 90° which has the highest gain.
 - (iii) Calculate the EIRP based on this highest gain and conducted output power.
 - (iv) Compare to the 125 mW limit to establish compliance.
 - (v) Include the elevation pattern data in the application filing with the test report to show how the calculations are made.

Note: For MIMO devices, take the maximum gain of each antenna and apply the guidance in KDB Publication 662911 for calculating the overall gain including directional gain for the maximum EIRP calculation.

- b. If the elevation plane radiation pattern is not available, but the antenna type (such as dipole omnidirectional, Yagi, parabolic, or sector antenna) has a symmetrical elevation plane pattern referenced at the main beam and all lobes on the main beam elevation plane have highest gains, then the following measurement method is acceptable to determine compliance:
 - (i) Determine the device's intended mounting elevation angle referenced to the horizon.
 - (ii) Rotate the EUT antenna by 90° around the main beam axis in a horizontal position to transform the measurement in elevation angle into an azimuth angle and define a 0° reference angle based on the device's intended mounting elevation angle.
 - (iii) Move the test antenna along the horizontal arc, or rotate the turntable with the EUT antenna placed at the center, between 30° and 90° relative to the 0° reference angle, and then continuing down from 90° to 30° on the other side of the pattern, while maintaining the test antenna pointing with constant distance to the EUT antenna. Search for the spot which has the highest measured emission. Both horizontal and vertical polarization shall be investigated to determine the maximum radiated emission level.

Note: Moving the test antenna along the horizontal arc, or rotating the turntable, shall be performed in an angular step size as small as possible, but not larger than 3°.

- (iv) Calculate the EIRP based on the highest measured emission. Compare to the limit of 125 mW to determine compliance.
- (v) The antenna pattern measurements must be included in the filing.

For All Other Antenna Types

For all other antenna types (such as patch antennas, array antennas, antennas with irregular radiator shapes, etc.) which have any combination of following characteristics:

- Asymmetrical, complex radiation patterns
- 2-D or 3-D steerable beam
- Portable/mobile, not fixed infrastructure device

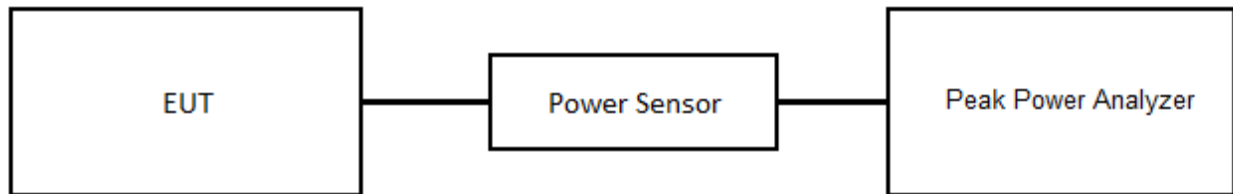
Provide the following information in the report:

- a. Describe what type of antenna is used.
- b. Determine by calculation, measurement or simulation, all radiation lobes/beams, which have EIRP higher than 125 mW within a 3-dB elevation beamwidth.
- c. Provide an explanation of how these antenna beams are controlled to be kept below the 30° elevation angle. The explanation should include device installation instructions, mechanical control, electro-mechanical control or software algorithms, if the beams are electrically controlled by software.

3.3 DEVIATION FROM TEST STANDARD

No deviation.

3.4 TEST SETUP



3.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

3.6 TEST RESULT

Please refer to the APPENDIX A.

4 MAXIMUM TRANSMITTER CHANNEL BANDWIDTH TEST

4.1 LIMITS

According to 15.407(a)(10):

The maximum transmitter channel bandwidth for U-NII devices in the 5.925-7.125 GHz band is 320 megahertz.

4.2 TEST PROCEDURE

For Emission Bandwidth (EBW):

Referring to FCC KDB 987594 D02, clause C. and FCC KDB 789033 D02, clause C. 1. Emission Bandwidth (EBW):

- a) Set RBW = approximately 1% of the emission bandwidth.
- b) Set the VBW > RBW.
- c) Detector = Peak.
- d) Trace mode = max hold.
- e) Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

For 99% Occupied Bandwidth:

Referring to FCC KDB 987594 D02, clause D. and FCC KDB 789033 D02, clause D. 99% Occupied Bandwidth:

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

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

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

4.3 DEVIATION FROM TEST STANDARD

No deviation.

4.4 TEST SETUP**4.5 EUT OPERATING CONDITIONS**

The EUT was programmed to be in continuously transmitting mode.

4.6 TEST RESULT

Please refer to the APPENDIX B.

5 MAXIMUM POWER SPECTRAL DENSITY TEST

5.1 LIMITS

According to 15.407(a)(4)(5)(6)(7)(8) the limits are as follows:

Equipment Category	Band	Maximum Power Spectral Density (e.i.r.p.) Limit
Standard power access point Fixed client	U-NII 5 (5.925-6.425 GHz)	23 dBm/MHz
	U-NII 7 (6.525-6.875 GHz)	
Indoor access point Subordinate device	U-NII 5 (5.925-6.425 GHz)	5 dBm/MHz
	U-NII 6 (6.425-6.525 GHz)	
	U-NII 7 (6.525-6.875 GHz)	
	U-NII 8 (6.875-7.125 GHz)	
Standard power access point client devices	U-NII 5 (5.925-6.425 GHz)	17 dBm/MHz
	U-NII 6 (6.425-6.525 GHz)	
	U-NII 7 (6.525-6.875 GHz)	
	U-NII 8 (6.875-7.125 GHz)	
Indoor access point client devices	U-NII 5 (5.925-6.425 GHz)	-1 dBm/MHz
	U-NII 6 (6.425-6.525 GHz)	
	U-NII 7 (6.525-6.875 GHz)	
	U-NII 8 (6.875-7.125 GHz)	

5.2 TEST PROCEDURE

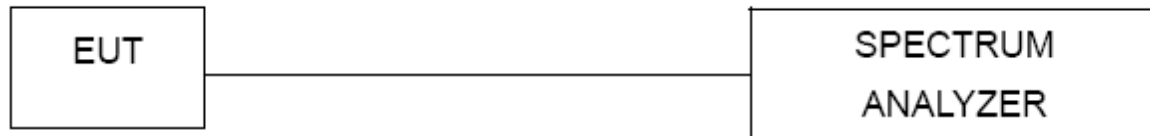
Referring to FCC KDB 987594 D02, clause F. and FCC KDB 789033 D02, clause F. Maximum Power Spectral Density (PSD):

Method SA-1 is used.

- Set Attenuation = auto.
- Span Frequency = Encompass the entire emissions bandwidth (EBW) of the signal.
- Set RBW = 1 MHz.
- Set VBW > 3 MHz.
- Detector = RMS.
- Trace mode = max hold.
- Sweep time = auto.
- Record the maximum value.
- Record the maximum value and add 10 log (1/ duty cycle).
- Record the maximum value and add 1 dB.

5.3 DEVIATION FROM TEST STANDARD

No deviation.

5.4 TEST SETUP**5.5 EUT OPERATING CONDITIONS**

The EUT was programmed to be in continuously transmitting mode.

5.6 TEST RESULT

Please refer to the APPENDIX C.

6 UNDESIRABLE EMISSIONS TEST

6.1 LIMITS

According to 15.407(b)(6) the limits are as follows:

For transmitters operating within the 5.925-7.125 GHz band: Any emissions outside of the 5.925-7.125 GHz band must not exceed an e.i.r.p. of -27 dBm/MHz.

According to FCC KDB 987594 D02, clause G. Unwanted Emission Measurement:

Use guidance in KDB 789033 for measurements below 1000 MHz and above 1000 MHz. Unwanted emissions outside of restricted bands are measured with a RMS detector. In addition, 15.35(b) applies where the peak emissions must be limited to no more than 20 dB above the average limit

Item	Maximum e.i.r.p. Limit	Maximum field strength Limit @ 3m
Any emissions outside of the 5.925-7.125 GHz band	Peak: -7 dBm/MHz	88.2 dBuV/m
	Average: -27 dBm/MHz	68.2 dBuV/m

Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in § 15.209.

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(kHz)	300
0.490~1.705	24000/F(kHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
960~1000	500	3

According to 15.407(b)(9) the limits are as follows:

Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in § 15.209.

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(kHz)	300
0.490~1.705	24000/F(kHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
960~1000	500	3

NOTE:

- (1) e.i.r.p. Limit (dBuV/m at 3m) = Power Limit(dBm) + 95.2. (Referring to FCC KDB 987594 D02, clause G.2.d)(iii))
- (2) Emission level (dBuV/m) = 20log Emission level (uV/m).
3 m Emission level = 10 m Emission level + 20log(10 m/3 m).

(3) The test result calculated as following:

Measurement Value = Reading Level + Correct Factor

Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain (if use)

Margin Level = Measurement Value - Limit Value

Calculation example:

Reading Level (dBμV)		Correct Factor (dB/m)		Measurement Value (dBμV/m)
19.11	+	2.11	=	21.22

Measurement Value (dBμV/m)		Limit Value (dBμV/m)		Margin Level (dB)
21.22	-	68.2	=	-46.98

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RBW / VBW (Emission in restricted band)	1MHz / 3MHz for Peak, 1MHz / 1/T for Average

Spectrum Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9KHz~90KHz for PK/AVG detector
Start ~ Stop Frequency	90KHz~110KHz for QP detector
Start ~ Stop Frequency	110KHz~490KHz for PK/AVG detector
Start ~ Stop Frequency	490KHz~30MHz for QP detector
Start ~ Stop Frequency	30MHz~1000MHz for QP detector

6.2 TEST PROCEDURE

Referring to FCC KDB 987594 D02, clause G. and FCC KDB 789033 D02, clause G. Unwanted Emission Measurement:

For measurements below 30 MHz:

- The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 1 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
- For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

For measurements 30 MHz to 40 GHz:

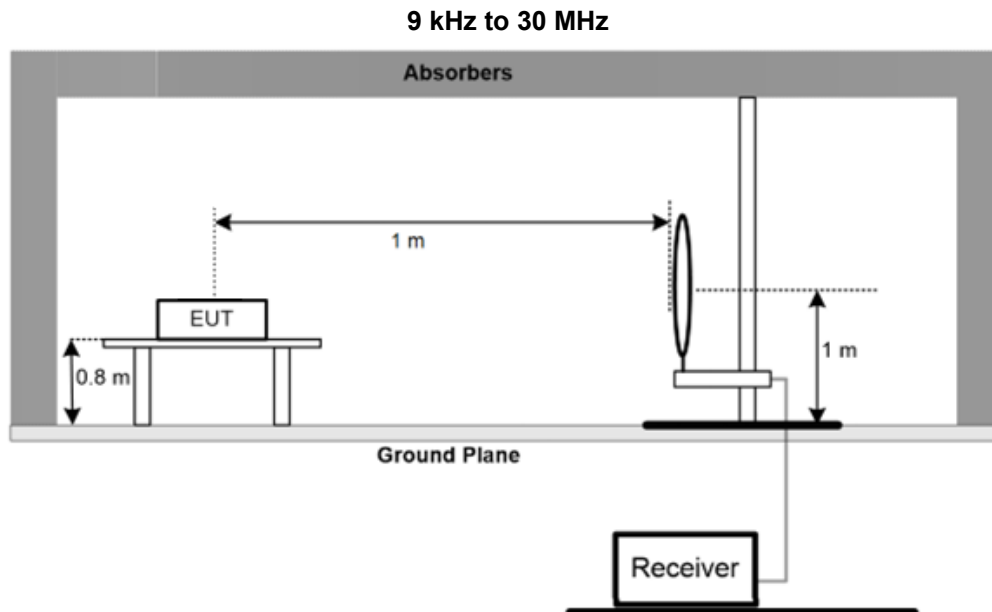
- The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. (between 30 MHz to 1 GHz)
- The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 1.5 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. (between 1 GHz to 40 GHz)
- The height of the equipment or of the substitution antenna shall be 0.8 m or 1.5 m, the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights find the maximum reading (used Bore sight function).

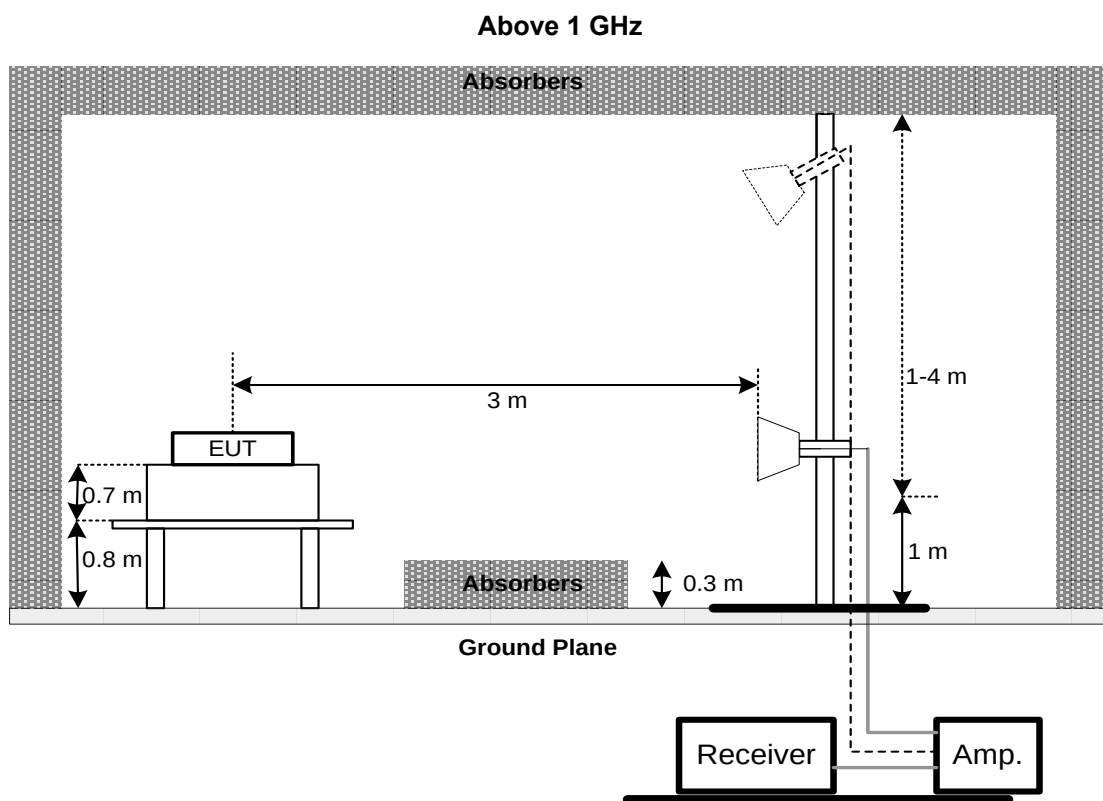
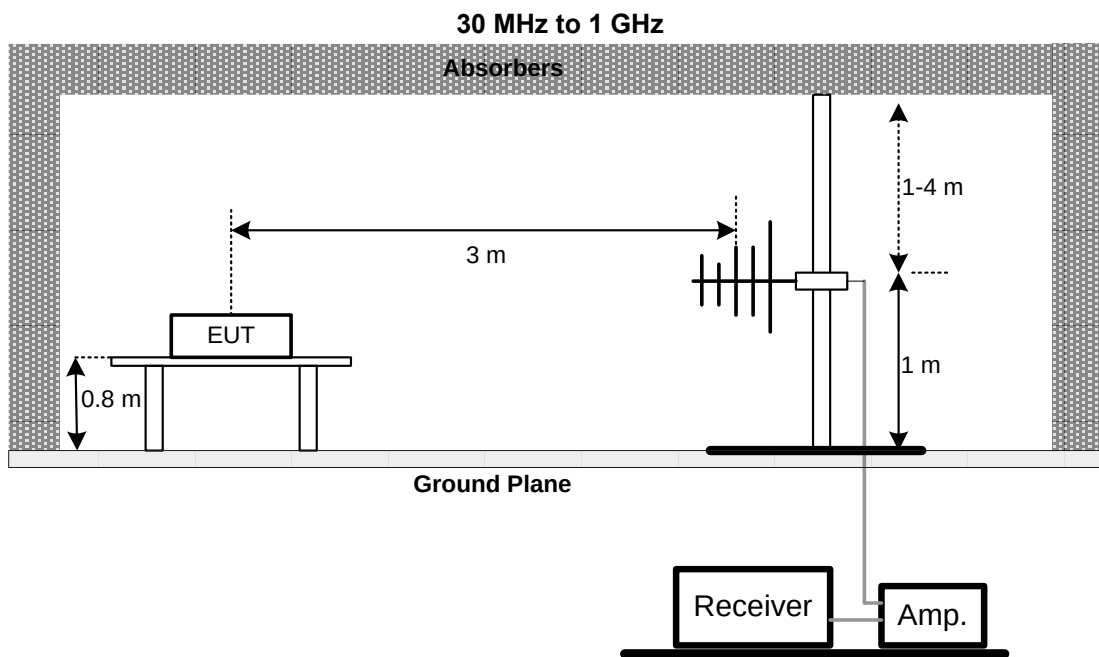
- e. The receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1GHz.
- f. The initial step in collecting radiated emission data is a receiver peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- g. All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform. (between 30 MHz to 1 GHz)
- h. All readings are Peak Mode value unless otherwise stated AVG in column of Note. If the Peak Mode Measured value compliance with the Peak Limits and lower than AVG Limits, the EUT shall be deemed to meet both Peak & AVG Limits and then only Peak Mode was measured, but AVG Mode didn't perform. (between 30 MHz to 1 GHz)

6.3 DEVIATION FROM TEST STANDARD

No deviation.

6.4 TEST SETUP





6.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

NOTE:

- (1) Distance extrapolation factor = $40 \log (\text{specific distance} / \text{test distance})$ (dB).
- (2) Limit line = specific limits (dBuV) + distance extrapolation factor.

6.6 TEST RESULT – 9 KHZ TO 30 MHZ

Please refer to the APPENDIX D.

6.7 TEST RESULT – 30 MHZ TO 1 GHZ

Please refer to the APPENDIX E.

6.8 TEST RESULT – ABOVE 1 GHZ

Please refer to the APPENDIX F.

7 IN-BAND EMISSION (MASK) TEST

7.1 LIMITS

According to 15.407(b)(7) the limits are as follows:

Item	Test Frequency Range	Power spectral density suppressed Limit
In-Band Emissions (Mask)	at 1 MHz outside of channel edge	20 dB
	at one channel bandwidth from the channel center	28 dB
	at one- and one-half times the channel bandwidth away from channel center	40 dB
	Emissions removed from the channel center by more than one- and one-half times the channel bandwidth	40 dB

At frequencies between one megahertz outside an unlicensed device's channel edge and one channel bandwidth from the center of the channel, the limits must be linearly interpolated between 20 dB and 28 dB suppression, and at frequencies between one and one- and one-half times an unlicensed device's channel bandwidth, the limits must be linearly interpolated between 28 dB and 40 dB suppression.

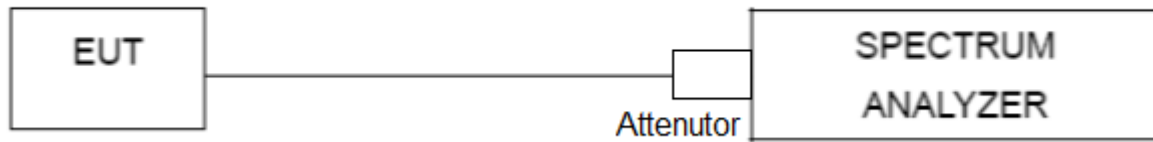
7.2 TEST PROCEDURE

Referring to FCC KDB 987594 D02, clause J. In-Band Emissions:

- Connect output of the antenna port to a spectrum analyzer or EMI receiver, with appropriate attenuation, as to not damage the instrumentation.
- Set the reference level of the measuring equipment in accordance with procedure 4.1.5.2 of ANSI C63.10-2013.
- Measure the 26 dB EBW using the test procedure 12.4.1 of ANSI C63.10-2013. (This will be used to determine the channel edge.)
- Measure the power spectral density (which will be used for emissions mask reference) using the following procedure:
 - Set the span to encompass the entire 26 dB EBW of the signal.
 - Set RBW = same RBW used for 26 dB EBW measurement.
 - Set VBW $\geq 3 \times$ RBW
 - Number of points in sweep $\geq [2 \times \text{span} / \text{RBW}]$.
 - Sweep time = auto.
 - Detector = RMS (i.e., power averaging)
 - Trace average at least 100 traces in power averaging (rms) mode.
 - Use the peak search function on the instrument to find the peak of the spectrum.
- For the purposes of developing the emission mask, the channel bandwidth is defined as the 26 dB EBW.
- Using the measuring equipment limit line function, develop the emissions mask based on the following requirements. The emissions power spectral density must be reduced below the peak power spectral density (in dB) as follows:
 - Suppressed by 20 dB at 1 MHz outside of the channel edge. (The channel edge is defined as the 26-dB point on either side of the carrier center frequency.)
 - Suppressed by 28 dB at one channel bandwidth from the channel center.
 - Suppressed by 40 dB at one- and one-half times the channel bandwidth from the channel center.
- Adjust the span to encompass the entire mask as necessary.
- Clear trace.
- Trace average at least 100 traces in power averaging (rms) mode.
- Adjust the reference level as necessary so that the crest of the channel touches the top of the emission mask.

7.3 DEVIATION FROM TEST STANDARD

No deviation.

7.4 TEST SETUP**7.5 EUT OPERATING CONDITIONS**

The EUT was programmed to be in continuously transmitting mode.

7.6 TEST RESULT

Please refer to the APPENDIX G.

8 AC POWER LINE CONDUCTED EMISSIONS TEST

8.1 LIMITS

According to 15.407(b)(9) the limits are as follows:

Frequency (MHz)	Limit (dBμV)	
	Quasi-peak	Average
0.15 - 0.5	66 - 56 *	56 - 46 *
0.50 - 5.0	56	46
5.0 - 30.0	60	50

NOTE:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.
- (3) The test result calculated as following:

Measurement Value = Reading Level + Correct Factor

Correct Factor = Insertion Loss + Cable Loss + Attenuator Factor (if use)

Margin Level = Measurement Value – Limit Value

Calculation example:

Reading Level (dBμV)		Correct Factor (dB)		Measurement Value (dBμV)
38.22	+	3.45	=	41.67

Measurement Value (dBμV)		Limit Value (dBμV)		Margin Level (dB)
41.67	-	60	=	-18.33

The following table is the setting of the receiver.

Receiver Parameter	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 KHz

8.2 TEST PROCEDURE

- a. The EUT was placed 0.8 m above the horizontal ground plane with the EUT being connected to the power mains through a line impedance stabilization network (LISN).
All other support equipment were powered from an additional LISN(s).
The LISN provides 50 Ohm/50uH of impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle to keep the cable above 40 cm.
- c. Excess I/O cables that are not connected to a peripheral shall be bundled in the center.
The end of the cable will be terminated, using the correct terminating impedance.
The overall length shall not exceed 1 m.
- d. The LISN is spaced at least 80 cm from the nearest part of the EUT chassis.
- e. For the actual test configuration, please refer to the related Item – EUT TEST PHOTOS.

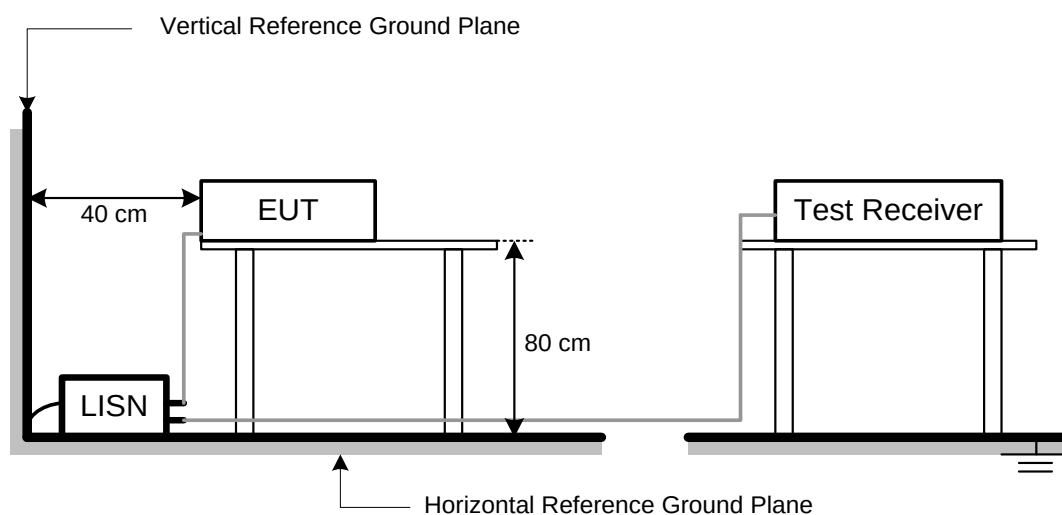
NOTE:

- (1) In the results, each reading is marked as Peak, QP or AVG per the detector used.
BW=9 kHz (6 dB Bandwidth)
- (2) All readings are Peak unless otherwise stated QP or AVG in column of Note. Both the QP and the AVG readings must be less than the limit for compliance.

8.3 DEVIATION FROM TEST STANDARD

No deviation.

8.4 TEST SETUP



8.5 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

The EUT was programmed to be in continuously transmitting/TX mode.

8.6 TEST RESULT

Please refer to the APPENDIX H.

9 CONTENTION-BASED PROTOCOL TEST

9.1 LIMITS

According to 15.407(d)(6) the limits are as follows:

Indoor access points, subordinate devices and client devices operating in the 5.925-7.125 GHz band must employ a contention-based protocol.

According to FCC KDB 987594 D02, clause I. Contention Based Protocol:

Indoor access points, subordinate devices and client devices operating in the 5.925-7.125 GHz band (herein referred to as unlicensed devices) are required to use technologies that include a contention-based protocol to avoid co-channel interference with incumbent devices sharing the band. To ensure incumbent co-channel operations are detected in a technology-agnostic manner, unlicensed devices are required to detect co-channel radio frequency energy (energy detect) and avoid simultaneous transmission.

Unlicensed low-power indoor devices must detect co-channel radio frequency power that is at least -62 dBm or lower. Upon detection of energy in the band, unlicensed low power indoor devices must vacate the channel (in which incumbent signal is transmitted) and stay off the incumbent channel as long as detected radio frequency power is equal to or greater than the threshold (-62 dBm)¹. The -62 dBm (or lower) threshold is referenced to a 0 dBi antenna gain.

To ensure incumbent operations are reliably detected in the band, low power indoor devices must detect RF energy throughout their intended operating channel. For example, an 802.11 device that plans to transmit a 40 MHz- wide signal (on a primary 20 MHz channel and a secondary 20 MHz channel) must detect energy throughout the entire 40 MHz channel. Additionally, low-power indoor devices must detect co-channel energy with 90% or greater certainty.

9.2 TEST PROCEDURE

Referring to FCC KDB 987594 D02, clause I. Contention Based Protocol:

Table 1. Criteria to determine number of times detection threshold test may be performed

If	Number of Tests	Placement of Incumbent Transmission
$BW_{EUT} \leq BW_{Inc}$	Once	Tune incumbent and EUT transmissions ($f_{c1} = f_{c2}$)
$BW_{Inc} < BW_{EUT} \leq 2BW_{Inc}$	Once	Incumbent transmission is contained within BW_{EUT}
$2BW_{Inc} < BW_{EUT} \leq 4BW_{Inc}$	Twice. Incumbent transmission is contained within BW_{EUT}	Incumbent transmission is located as closely as possible to the lower edge and upper edge, respectively, of the EUT channel
$BW_{EUT} > 4BW_{Inc}$	Three times	Incumbent transmission is located as closely as possible to the lower edge of the EUT channel, in the middle of EUT channel, and as closely as possible to the upper edge of the EUT channel

For Conducted measurement:

- a. Configure the EUT to transmit with a constant duty cycle.
- b. Set the operating parameters of the EUT including power level, operating frequency, modulation and bandwidth.
- c. Set the signal analyzer center frequency to the nominal EUT channel center frequency. The span range of the signal analyzer shall be between two times and five times the OBW of the EUT. Connect the output port of the EUT to the signal analyzer 2. Ensure that the attenuator 2 provides enough attenuation to not overload the signal analyzer 2 receiver.
- d. Monitoring the signal analyzer 2, verify the EUT is operating and transmitting with the parameters set at step b.
- e. Using an AWGN signal source, generate (but do not transmit, i.e., RF OFF) a 10 MHz-wide AWGN signal. Use Table 1 to determine the center frequency of the 10 MHz AWGN signal relative to the EUT's channel bandwidth and center frequency.
- f. Set the AWGN signal power to an extremely low level (more than 20 dB below the -62 dBm threshold). Connect the AWGN signal source, via a 3-dB splitter, to the signal analyzer 1 and the EUT.
- g. Transmit the AWGN signal (RF ON) and verify its characteristics on the signal analyzer 1.
- h. Monitor the signal analyzer 2 to verify if the AWGN signal has been detected and the EUT has ceased transmission. If the EUT continues to transmit, then incrementally increase the AWGN signal power level until the EUT stops transmitting.
- i. (Including all losses in the RF paths) Determine and record the AWGN signal power level (at the EUT's antenna port) at which the EUT ceased transmission. Repeat the procedure at least 10 times to verify the EUT can detect an AWGN signal with 90% (or better) level of certainty.
- j. Refer to Table 1 to determine number of times the detection threshold testing needs to be repeated. If testing is required more than once, then go back to step e, choose a different center frequency for the AWGN signal and repeat the process.

For Radiated measurement:

- a. Using the AWGN signal source, generate (but do not transmit, i.e., RF OFF) a 10 MHz-wide AWGN signal. Use Table 1 to determine the center frequency of the 10 MHz AWGN signal relative to the EUT's channel bandwidth and center frequency.
- b. Connect the AWGN signal source to antenna 1 and transmit the signal (RF ON).
- c. Using signal analyzer 1 and antenna 2, measure the AWGN signal power level. Align antenna 2 and antenna 1 to maximize emission.
- d. Using equation $P_2 = P_{\text{meas}} + L - G_2$, correct the measured power P_{meas} by the gain of antenna 2, G_2 and all cable losses and attenuations L to obtain the AWGN signal power level at antenna 2, P_2 .
- e. Set the corrected power P_2 to an extremely low level (more than 20 dB below the -62 dBm threshold).
- f. Place the EUT exactly where antenna 2 was. Configure the EUT to transmit a constant duty cycle.
- g. Set the operating parameters of the EUT including power level, operating frequency, modulation and bandwidth.
- h. Set the signal analyzer 1 center frequency to the nominal EUT channel center frequency. The span range of the signal analyzer shall be between two times and five times the OBW of EUT.
- i. Monitor the signal analyzer 1 to verify if AWGN signal has been detected and EUT has ceased transmission. If the EUT continues to transmit, then incrementally increase the AWGN signal power level until the EUT stops transmitting.
- j. Determine and record the AWGN signal power level at which the EUT ceased transmission. Repeat the procedure at least 10 times to verify the EUT can detect the AWGN signal with 90% (or better) level of certainty.
- k. Refer to Table 1 to determine number of times the detection threshold testing needs to be repeated. If testing is required more than once, then go back to step a, choose a different center frequency for the AWGN signal and repeat the process.

9.3 DEVIATION FROM TEST STANDARD

No deviation.

9.4 TEST SETUP

For Conducted measurement:

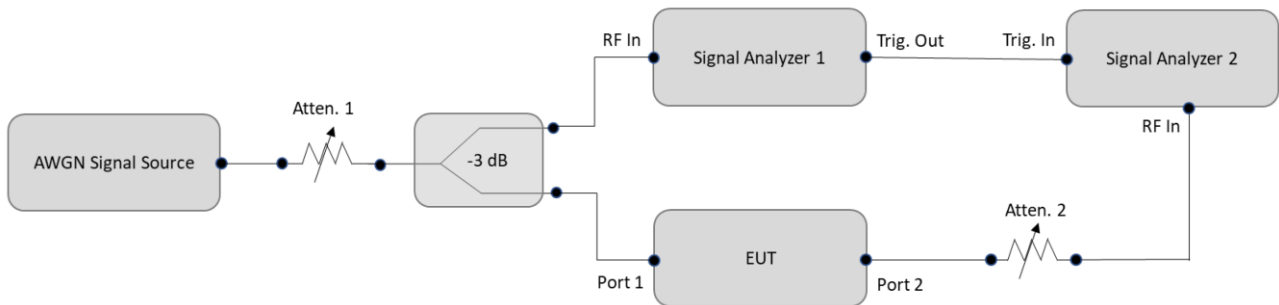


Figure 2. Contention-based protocol test setup, conducted method Step-by-Step Procedure, Conducted Setup

For Radiated measurement:

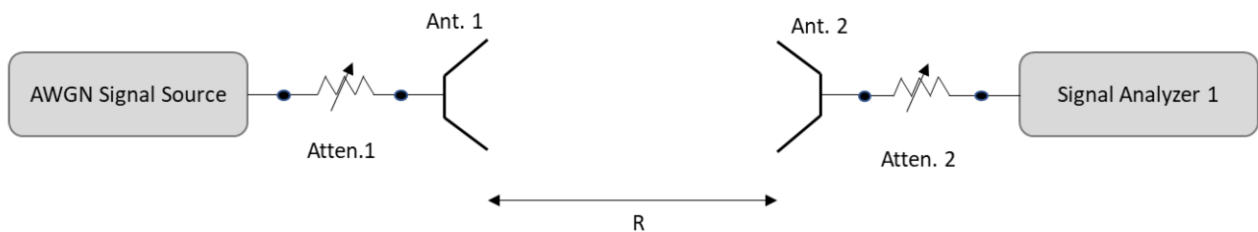


Figure 3. Contention-based protocol test setup, radiated method, power measurement

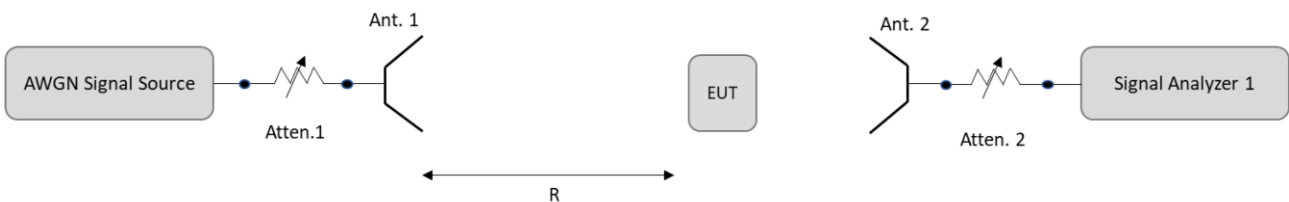


Figure 4. Contention-based protocol test setup, radiated method, detection threshold measurement

9.5 EUT OPERATING CONDITIONS

The EUT was Configured to be in normally transmitting mode with a constant duty cycle.

9.6 TEST RESULT

Please refer to the APPENDIX I.

10 LIST OF MEASURING EQUIPMENTS

Maximum e.i.r.p.						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	Peak Power Analyzer	Keysight	8990B	MY51000517	2024/3/12	2025/3/11
2	Power Sensor	Keysight	N1923A	MY58310005	2024/3/12	2025/3/11

Maximum transmitter channel bandwidth & Maximum power spectral density & In-band emission (Mask)						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	Spectrum Analyzer	Keysight	N9010A	MY56480489	2023/10/31	2024/10/30

Undesirable Emissions						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	Preamplifier	EMCI	EMC330N	980850	2023/9/6	2024/9/5
2	Preamplifier	EMCI	EMC118A45SE	980819	2024/3/6	2025/3/5
3	Pre-Amplifier	EMCI	EMC184045SE	980907	2023/9/21	2024/9/20
4	Preamplifier	EMCI	EMC001340	980579	2023/9/6	2024/9/5
5	Test Cable	EMCI	EMC104-SM-1000	180809	2024/3/8	2025/3/7
6	Test Cable	EMCI	EMC104-SM-SM-3000	220322	2024/3/8	2025/3/7
7	Test Cable	EMCI	EMC104-SM-SM-7000	220324	2024/3/8	2025/3/7
8	EXA Signal Analyzer	keysight	N9020B	MY57120120	2024/2/23	2025/2/22
9	Loop Ant	Electro-Metrics	EMCI-LPA600	291	2023/9/12	2024/9/11
10	Horn Antenna	RFSPIN	DRH18-E	211202A18EN	2024/5/9	2025/5/8
11	Horn Ant	Schwarzbeck	BBHA 9170	1136	2023/6/28	2024/6/27
12	LOG Broadband Antenna	Schwarzbeck	VULB9168	352	2023/8/8	2024/8/7
13	5dB Attenuator	EMCI	EMCI-N-6-05	AT-N0625	2023/8/8	2024/8/7
14	Test Cable	EMCI	EMC101G-KM-KM-3000	220329	2024/3/13	2025/3/12
15	Test Cable	EMCI	EMC102-KM-KM-1000	220327	2024/3/13	2025/3/12
16	Horn Antenna	RFSPIN	DRH18-E	211202A18EN	2024/5/9	2025/5/8

AC Power Line Conducted Emissions						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	TWO-LINE V-NETWORK	R&S	ENV216	101497	2023/5/18	2024/5/17
2	Test Cable	EMCI	EMC400-BM-BM-5000	170501	2023/8/1	2024/7/31
3	EMI Test Receiver	R&S	ESR3	102950	2024/4/12	2025/4/11
4	Measurement Software	EZ	EZ EMC (Version NB-03A1-01)	N/A	N/A	N/A

Contention Based Protocol						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated Date	Calibrated Until
1	MXG Vector Signal Generator	Agilent	N5182B	MY51350711	2024/2/21	2025/2/20
2	Frequency Extender	Keysight	N5182BX07	MY59360246	2024/2/21	2025/2/20
3	Spectrum Analyzer	Keysight	N9020B	MY59050134	2023/10/31	2024/10/30

11 EUT TEST PHOTOS

Please refer to document Appendix No.: TP-2402G042-FCCP-1 (APPENDIX-TEST PHOTOS).

12 EUT PHOTOS

Please refer to document Appendix No.: EP-2402G042-1 (APPENDIX-EUT PHOTOS).

APPENDIX A MAXIMUM E.I.R.P.

Operation Mode	Non-Beamforming mode
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For NSS1:

Test Mode	IEEE 802.11ax (HE20)_ Ant 1	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
5955	11.22	0.0132	13.67	0.0233	30.0000	1.0000	Pass
6175	11.67	0.0147	14.12	0.0258	30.0000	1.0000	Pass
6415	11.79	0.0151	14.24	0.0265	30.0000	1.0000	Pass
6435	11.69	0.0148	14.14	0.0259	30.0000	1.0000	Pass
6475	11.80	0.0151	14.25	0.0266	30.0000	1.0000	Pass
6515	11.86	0.0153	14.31	0.0270	30.0000	1.0000	Pass
6535	11.83	0.0152	14.28	0.0268	30.0000	1.0000	Pass
6695	11.73	0.0149	14.18	0.0262	30.0000	1.0000	Pass
6855	11.69	0.0148	14.14	0.0259	30.0000	1.0000	Pass
6875	11.71	0.0148	14.16	0.0261	30.0000	1.0000	Pass
6995	11.84	0.0153	14.29	0.0269	30.0000	1.0000	Pass
7095	11.99	0.0158	14.44	0.0278	30.0000	1.0000	Pass

Test Mode	IEEE 802.11ax (HE20)_ Ant 2	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
5955	11.69	0.0148	14.14	0.0259	30.0000	1.0000	Pass
6175	10.47	0.0111	12.92	0.0196	30.0000	1.0000	Pass
6415	10.54	0.0113	12.99	0.0199	30.0000	1.0000	Pass
6435	10.86	0.0122	13.31	0.0214	30.0000	1.0000	Pass
6475	10.12	0.0103	12.57	0.0181	30.0000	1.0000	Pass
6515	10.35	0.0108	12.80	0.0191	30.0000	1.0000	Pass
6535	10.21	0.0105	12.66	0.0185	30.0000	1.0000	Pass
6695	10.24	0.0106	12.69	0.0186	30.0000	1.0000	Pass
6855	10.22	0.0105	12.67	0.0185	30.0000	1.0000	Pass
6875	10.32	0.0108	12.77	0.0189	30.0000	1.0000	Pass
6995	10.39	0.0109	12.84	0.0192	30.0000	1.0000	Pass
7095	11.06	0.0128	13.51	0.0224	30.0000	1.0000	Pass

Test Mode	IEEE 802.11ax (HE20)_ Total	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
5955	14.47	0.0280	16.92	0.0492	30.0000	1.0000	Pass
6175	14.12	0.0258	16.57	0.0454	30.0000	1.0000	Pass
6415	14.22	0.0264	16.67	0.0465	30.0000	1.0000	Pass
6435	14.31	0.0269	16.76	0.0474	30.0000	1.0000	Pass
6475	14.05	0.0254	16.50	0.0447	30.0000	1.0000	Pass
6515	14.18	0.0262	16.63	0.0460	30.0000	1.0000	Pass
6535	14.11	0.0257	16.56	0.0452	30.0000	1.0000	Pass
6695	14.06	0.0255	16.51	0.0448	30.0000	1.0000	Pass
6855	14.03	0.0253	16.48	0.0444	30.0000	1.0000	Pass
6875	14.08	0.0256	16.53	0.0450	30.0000	1.0000	Pass
6995	14.19	0.0262	16.64	0.0461	30.0000	1.0000	Pass
7095	14.56	0.0286	17.01	0.0502	30.0000	1.0000	Pass

Test Mode	IEEE 802.11ax (HE40)_ Ant 1	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
5965	14.82	0.0303	17.27	0.0533	30.0000	1.0000	Pass
6165	14.83	0.0304	17.28	0.0535	30.0000	1.0000	Pass
6405	14.87	0.0307	17.32	0.0540	30.0000	1.0000	Pass
6445	14.82	0.0303	17.27	0.0533	30.0000	1.0000	Pass
6485	14.87	0.0307	17.32	0.0540	30.0000	1.0000	Pass
6525	14.82	0.0303	17.27	0.0533	30.0000	1.0000	Pass
6685	14.80	0.0302	17.25	0.0531	30.0000	1.0000	Pass
6845	14.73	0.0297	17.18	0.0522	30.0000	1.0000	Pass
6885	14.78	0.0301	17.23	0.0528	30.0000	1.0000	Pass
7085	14.84	0.0305	17.29	0.0536	30.0000	1.0000	Pass

Test Mode	IEEE 802.11ax (HE40)_ Ant 2	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
5965	13.96	0.0249	16.41	0.0438	30.0000	1.0000	Pass
6165	13.96	0.0249	16.41	0.0438	30.0000	1.0000	Pass
6405	13.73	0.0236	16.18	0.0415	30.0000	1.0000	Pass
6445	13.36	0.0217	15.81	0.0381	30.0000	1.0000	Pass
6485	13.91	0.0246	16.36	0.0433	30.0000	1.0000	Pass
6525	13.90	0.0245	16.35	0.0432	30.0000	1.0000	Pass
6685	13.54	0.0226	15.99	0.0397	30.0000	1.0000	Pass
6845	13.59	0.0229	16.04	0.0402	30.0000	1.0000	Pass
6885	13.49	0.0223	15.94	0.0393	30.0000	1.0000	Pass
7085	14.00	0.0251	16.45	0.0442	30.0000	1.0000	Pass

Test Mode	IEEE 802.11ax (HE40)_ Total	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
5965	17.42	0.0552	19.87	0.0971	30.0000	1.0000	Pass
6165	17.43	0.0553	19.88	0.0972	30.0000	1.0000	Pass
6405	17.35	0.0543	19.80	0.0954	30.0000	1.0000	Pass
6445	17.16	0.0520	19.61	0.0914	30.0000	1.0000	Pass
6485	17.43	0.0553	19.88	0.0972	30.0000	1.0000	Pass
6525	17.39	0.0549	19.84	0.0965	30.0000	1.0000	Pass
6685	17.23	0.0528	19.68	0.0928	30.0000	1.0000	Pass
6845	17.21	0.0526	19.66	0.0924	30.0000	1.0000	Pass
6885	17.19	0.0524	19.64	0.0921	30.0000	1.0000	Pass
7085	17.45	0.0556	19.90	0.0977	30.0000	1.0000	Pass

Test Mode	IEEE 802.11ax (HE80)_ Ant 1	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
5985	17.84	0.0608	20.29	0.1069	30.0000	1.0000	Pass
6145	17.93	0.0621	20.38	0.1091	30.0000	1.0000	Pass
6385	17.88	0.0614	20.33	0.1079	30.0000	1.0000	Pass
6465	17.87	0.0612	20.32	0.1076	30.0000	1.0000	Pass
6545	17.89	0.0615	20.34	0.1081	30.0000	1.0000	Pass
6625	17.95	0.0624	20.40	0.1096	30.0000	1.0000	Pass
6785	17.83	0.0607	20.28	0.1067	30.0000	1.0000	Pass
6865	17.99	0.0630	20.44	0.1107	30.0000	1.0000	Pass
6945	17.94	0.0622	20.39	0.1094	30.0000	1.0000	Pass
7025	17.90	0.0617	20.35	0.1084	30.0000	1.0000	Pass

Test Mode	IEEE 802.11ax (HE80)_ Ant 2	Tested Date	2023/9/4
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
5985	17.05	0.0507	19.50	0.0891	30.0000	1.0000	Pass
6145	16.87	0.0486	19.32	0.0855	30.0000	1.0000	Pass
6385	16.60	0.0457	19.05	0.0804	30.0000	1.0000	Pass
6465	17.30	0.0537	19.75	0.0944	30.0000	1.0000	Pass
6545	17.28	0.0535	19.73	0.0940	30.0000	1.0000	Pass
6625	16.54	0.0451	18.99	0.0793	30.0000	1.0000	Pass
6785	17.20	0.0525	19.65	0.0923	30.0000	1.0000	Pass
6865	17.19	0.0524	19.64	0.0920	30.0000	1.0000	Pass
6945	17.13	0.0516	19.58	0.0908	30.0000	1.0000	Pass
7025	17.50	0.0562	19.95	0.0989	30.0000	1.0000	Pass

Test Mode	IEEE 802.11ax (HE80)_ Total	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
5985	20.47	0.1115	22.92	0.1960	30.0000	1.0000	Pass
6145	20.44	0.1107	22.89	0.1947	30.0000	1.0000	Pass
6385	20.30	0.1071	22.75	0.1882	30.0000	1.0000	Pass
6465	20.60	0.1149	23.05	0.2021	30.0000	1.0000	Pass
6545	20.61	0.1150	23.06	0.2021	30.0000	1.0000	Pass
6625	20.31	0.1075	22.76	0.1889	30.0000	1.0000	Pass
6785	20.54	0.1132	22.99	0.1989	30.0000	1.0000	Pass
6865	20.62	0.1153	23.07	0.2027	30.0000	1.0000	Pass
6945	20.56	0.1139	23.01	0.2002	30.0000	1.0000	Pass
7025	20.71	0.1179	23.16	0.2072	30.0000	1.0000	Pass

Test Mode	IEEE 802.11ax (HE160)_ Ant 1	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
6025	20.92	0.1236	23.37	0.2173	30.0000	1.0000	Pass
6345	20.82	0.1208	23.27	0.2123	30.0000	1.0000	Pass
6505	20.76	0.1191	23.21	0.2094	30.0000	1.0000	Pass
6665	20.86	0.1219	23.31	0.2143	30.0000	1.0000	Pass
6825	20.95	0.1245	23.40	0.2188	30.0000	1.0000	Pass
6985	20.97	0.1250	23.42	0.2198	30.0000	1.0000	Pass

Test Mode	IEEE 802.11ax (HE160)_ Ant 2	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
6025	19.93	0.0984	22.38	0.1730	30.0000	1.0000	Pass
6345	19.86	0.0968	22.31	0.1702	30.0000	1.0000	Pass
6505	19.41	0.0873	21.86	0.1535	30.0000	1.0000	Pass
6665	19.23	0.0838	21.68	0.1472	30.0000	1.0000	Pass
6825	19.43	0.0877	21.88	0.1542	30.0000	1.0000	Pass
6985	19.94	0.0986	22.39	0.1734	30.0000	1.0000	Pass

Test Mode	IEEE 802.11ax (HE160)_ Total	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
6025	23.46	0.2220	25.91	0.3903	30.0000	1.0000	Pass
6345	23.38	0.2176	25.83	0.3825	30.0000	1.0000	Pass
6505	23.15	0.2064	25.60	0.3629	30.0000	1.0000	Pass
6665	23.13	0.2057	25.58	0.3615	30.0000	1.0000	Pass
6825	23.27	0.2122	25.72	0.3729	30.0000	1.0000	Pass
6985	23.50	0.2237	25.95	0.3932	30.0000	1.0000	Pass

For NSS2:

Test Mode	IEEE 802.11ax (HE20)_ Ant 1	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
5955	11.86	0.0153	14.31	0.0270	30.0000	1.0000	Pass
6175	12.90	0.0195	15.35	0.0343	30.0000	1.0000	Pass
6415	12.12	0.0163	14.57	0.0286	30.0000	1.0000	Pass
6435	12.67	0.0185	15.12	0.0325	30.0000	1.0000	Pass
6475	12.92	0.0196	15.37	0.0344	30.0000	1.0000	Pass
6515	12.99	0.0199	15.44	0.0350	30.0000	1.0000	Pass
6535	12.92	0.0196	15.37	0.0344	30.0000	1.0000	Pass
6695	12.82	0.0191	15.27	0.0337	30.0000	1.0000	Pass
6855	12.91	0.0195	15.36	0.0344	30.0000	1.0000	Pass
6875	12.95	0.0197	15.40	0.0347	30.0000	1.0000	Pass
6995	12.59	0.0182	15.04	0.0319	30.0000	1.0000	Pass
7095	12.52	0.0179	14.97	0.0314	30.0000	1.0000	Pass

Test Mode	IEEE 802.11ax (HE20)_ Ant 2	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
5955	12.94	0.0197	15.39	0.0346	30.0000	1.0000	Pass
6175	12.08	0.0161	14.53	0.0284	30.0000	1.0000	Pass
6415	12.87	0.0194	15.32	0.0340	30.0000	1.0000	Pass
6435	12.89	0.0195	15.34	0.0342	30.0000	1.0000	Pass
6475	11.98	0.0158	14.43	0.0277	30.0000	1.0000	Pass
6515	11.83	0.0152	14.28	0.0268	30.0000	1.0000	Pass
6535	11.89	0.0155	14.34	0.0272	30.0000	1.0000	Pass
6695	11.82	0.0152	14.27	0.0267	30.0000	1.0000	Pass
6855	12.22	0.0167	14.67	0.0293	30.0000	1.0000	Pass
6875	12.52	0.0179	14.97	0.0314	30.0000	1.0000	Pass
6995	12.99	0.0199	15.44	0.0350	30.0000	1.0000	Pass
7095	12.90	0.0195	15.35	0.0343	30.0000	1.0000	Pass

Test Mode	IEEE 802.11ax (HE20)_ Total	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
5955	15.44	0.0350	17.89	0.0616	30.0000	1.0000	Pass
6175	15.52	0.0356	17.97	0.0627	30.0000	1.0000	Pass
6415	15.52	0.0357	17.97	0.0627	30.0000	1.0000	Pass
6435	15.79	0.0379	18.24	0.0667	30.0000	1.0000	Pass
6475	15.49	0.0354	17.94	0.0622	30.0000	1.0000	Pass
6515	15.46	0.0351	17.91	0.0618	30.0000	1.0000	Pass
6535	15.45	0.0350	17.90	0.0616	30.0000	1.0000	Pass
6695	15.36	0.0343	17.81	0.0604	30.0000	1.0000	Pass
6855	15.59	0.0362	18.04	0.0637	30.0000	1.0000	Pass
6875	15.75	0.0376	18.20	0.0661	30.0000	1.0000	Pass
6995	15.80	0.0381	18.25	0.0669	30.0000	1.0000	Pass
7095	15.72	0.0374	18.17	0.0657	30.0000	1.0000	Pass

Test Mode	IEEE 802.11ax (HE40)_ Ant 1	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
5965	15.92	0.0391	18.37	0.0687	30.0000	1.0000	Pass
6165	15.82	0.0382	18.27	0.0671	30.0000	1.0000	Pass
6405	15.22	0.0333	17.67	0.0585	30.0000	1.0000	Pass
6445	15.32	0.0340	17.77	0.0598	30.0000	1.0000	Pass
6485	15.89	0.0388	18.34	0.0682	30.0000	1.0000	Pass
6525	15.96	0.0394	18.41	0.0693	30.0000	1.0000	Pass
6685	15.91	0.0390	18.36	0.0685	30.0000	1.0000	Pass
6845	15.98	0.0396	18.43	0.0697	30.0000	1.0000	Pass
6885	15.93	0.0392	18.38	0.0689	30.0000	1.0000	Pass
7085	15.42	0.0348	17.87	0.0612	30.0000	1.0000	Pass

Test Mode	IEEE 802.11ax (HE40)_ Ant 2	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
5965	15.74	0.0375	18.19	0.0659	30.0000	1.0000	Pass
6165	15.01	0.0317	17.46	0.0557	30.0000	1.0000	Pass
6405	15.94	0.0393	18.39	0.0690	30.0000	1.0000	Pass
6445	15.94	0.0393	18.39	0.0690	30.0000	1.0000	Pass
6485	15.40	0.0347	17.85	0.0610	30.0000	1.0000	Pass
6525	15.44	0.0350	17.89	0.0615	30.0000	1.0000	Pass
6685	15.56	0.0360	18.01	0.0632	30.0000	1.0000	Pass
6845	15.70	0.0372	18.15	0.0653	30.0000	1.0000	Pass
6885	15.91	0.0390	18.36	0.0685	30.0000	1.0000	Pass
7085	15.96	0.0394	18.41	0.0693	30.0000	1.0000	Pass

Test Mode	IEEE 802.11ax (HE40)_ Total	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
5965	18.84	0.0766	21.29	0.1346	30.0000	1.0000	Pass
6165	18.44	0.0699	20.89	0.1229	30.0000	1.0000	Pass
6405	18.61	0.0725	21.06	0.1275	30.0000	1.0000	Pass
6445	18.65	0.0733	21.10	0.1289	30.0000	1.0000	Pass
6485	18.66	0.0735	21.11	0.1292	30.0000	1.0000	Pass
6525	18.72	0.0744	21.17	0.1309	30.0000	1.0000	Pass
6685	18.75	0.0750	21.20	0.1318	30.0000	1.0000	Pass
6845	18.85	0.0768	21.30	0.1350	30.0000	1.0000	Pass
6885	18.93	0.0782	21.38	0.1374	30.0000	1.0000	Pass
7085	18.71	0.0743	21.16	0.1306	30.0000	1.0000	Pass

Test Mode	IEEE 802.11ax (HE80)_ Ant 1	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
5985	18.92	0.0780	21.37	0.1371	30.0000	1.0000	Pass
6145	18.82	0.0762	21.27	0.1340	30.0000	1.0000	Pass
6385	18.22	0.0664	20.67	0.1167	30.0000	1.0000	Pass
6465	18.12	0.0649	20.57	0.1140	30.0000	1.0000	Pass
6545	18.69	0.0740	21.14	0.1300	30.0000	1.0000	Pass
6625	18.96	0.0787	21.41	0.1384	30.0000	1.0000	Pass
6785	18.91	0.0778	21.36	0.1368	30.0000	1.0000	Pass
6865	18.98	0.0791	21.43	0.1390	30.0000	1.0000	Pass
6945	18.93	0.0782	21.38	0.1374	30.0000	1.0000	Pass
7025	18.42	0.0695	20.87	0.1222	30.0000	1.0000	Pass

Test Mode	IEEE 802.11ax (HE80)_ Ant 2	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
5985	18.74	0.0748	21.19	0.1315	30.0000	1.0000	Pass
6145	18.01	0.0632	20.46	0.1112	30.0000	1.0000	Pass
6385	18.94	0.0783	21.39	0.1377	30.0000	1.0000	Pass
6465	18.74	0.0748	21.19	0.1315	30.0000	1.0000	Pass
6545	18.20	0.0661	20.65	0.1161	30.0000	1.0000	Pass
6625	18.44	0.0698	20.89	0.1227	30.0000	1.0000	Pass
6785	18.56	0.0718	21.01	0.1262	30.0000	1.0000	Pass
6865	18.70	0.0741	21.15	0.1303	30.0000	1.0000	Pass
6945	18.91	0.0778	21.36	0.1368	30.0000	1.0000	Pass
7025	18.96	0.0787	21.41	0.1384	30.0000	1.0000	Pass

Test Mode	IEEE 802.11ax (HE80)_ Total	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
5985	21.84	0.1528	24.29	0.2686	30.0000	1.0000	Pass
6145	21.44	0.1394	23.89	0.2451	30.0000	1.0000	Pass
6385	21.61	0.1447	24.06	0.2544	30.0000	1.0000	Pass
6465	21.45	0.1397	23.90	0.2455	30.0000	1.0000	Pass
6545	21.46	0.1400	23.91	0.2462	30.0000	1.0000	Pass
6625	21.72	0.1485	24.17	0.2611	30.0000	1.0000	Pass
6785	21.75	0.1496	24.20	0.2630	30.0000	1.0000	Pass
6865	21.85	0.1532	24.30	0.2693	30.0000	1.0000	Pass
6945	21.93	0.1560	24.38	0.2742	30.0000	1.0000	Pass
7025	21.71	0.1482	24.16	0.2605	30.0000	1.0000	Pass

Test Mode	IEEE 802.11ax (HE160)_ Ant 1	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
6025	21.94	0.1563	24.39	0.2748	30.0000	1.0000	Pass
6345	21.03	0.1268	23.48	0.2228	30.0000	1.0000	Pass
6505	21.94	0.1563	24.39	0.2748	30.0000	1.0000	Pass
6665	21.98	0.1578	24.43	0.2773	30.0000	1.0000	Pass
6825	21.81	0.1517	24.26	0.2667	30.0000	1.0000	Pass
6985	21.31	0.1352	23.76	0.2377	30.0000	1.0000	Pass

Test Mode	IEEE 802.11ax (HE160)_ Ant 2	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
6025	21.36	0.1368	23.81	0.2404	30.0000	1.0000	Pass
6345	21.93	0.1560	24.38	0.2742	30.0000	1.0000	Pass
6505	21.37	0.1371	23.82	0.2410	30.0000	1.0000	Pass
6665	20.92	0.1236	23.37	0.2173	30.0000	1.0000	Pass
6825	21.04	0.1271	23.49	0.2234	30.0000	1.0000	Pass
6985	21.92	0.1556	24.37	0.2735	30.0000	1.0000	Pass

Test Mode	IEEE 802.11ax (HE160)_ Total	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
6025	24.67	0.2931	27.12	0.5152	30.0000	1.0000	Pass
6345	24.51	0.2827	26.96	0.4970	30.0000	1.0000	Pass
6505	24.67	0.2934	27.12	0.5158	30.0000	1.0000	Pass
6665	24.49	0.2814	26.94	0.4946	30.0000	1.0000	Pass
6825	24.45	0.2788	26.90	0.4900	30.0000	1.0000	Pass
6985	24.64	0.2908	27.09	0.5112	30.0000	1.0000	Pass

Operation Mode	Beamforming mode
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For NSS1:

Test Mode	IEEE 802.11ax (HE20)_ Ant 1	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
5955	10.73	0.0118	13.18	0.0208	30.0000	1.0000	Pass
6175	11.32	0.0136	13.77	0.0238	30.0000	1.0000	Pass
6415	11.34	0.0136	13.79	0.0239	30.0000	1.0000	Pass
6435	11.27	0.0134	13.72	0.0236	30.0000	1.0000	Pass
6475	11.36	0.0137	13.81	0.0240	30.0000	1.0000	Pass
6515	11.47	0.0140	13.92	0.0247	30.0000	1.0000	Pass
6535	11.39	0.0138	13.84	0.0242	30.0000	1.0000	Pass
6695	11.32	0.0136	13.77	0.0238	30.0000	1.0000	Pass
6855	11.27	0.0134	13.72	0.0236	30.0000	1.0000	Pass
6875	11.26	0.0134	13.71	0.0235	30.0000	1.0000	Pass
6995	11.41	0.0138	13.86	0.0243	30.0000	1.0000	Pass
7095	11.58	0.0144	14.03	0.0253	30.0000	1.0000	Pass

Test Mode	IEEE 802.11ax (HE20)_ Ant 2	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
5955	11.26	0.0134	13.71	0.0235	30.0000	1.0000	Pass
6175	10.29	0.0107	12.74	0.0188	30.0000	1.0000	Pass
6415	10.19	0.0104	12.64	0.0184	30.0000	1.0000	Pass
6435	10.38	0.0109	12.83	0.0192	30.0000	1.0000	Pass
6475	9.73	0.0094	12.18	0.0165	30.0000	1.0000	Pass
6515	10.03	0.0101	12.48	0.0177	30.0000	1.0000	Pass
6535	9.83	0.0096	12.28	0.0169	30.0000	1.0000	Pass
6695	9.87	0.0097	12.32	0.0171	30.0000	1.0000	Pass
6855	9.84	0.0096	12.29	0.0169	30.0000	1.0000	Pass
6875	9.96	0.0099	12.41	0.0174	30.0000	1.0000	Pass
6995	10.04	0.0101	12.49	0.0177	30.0000	1.0000	Pass
7095	10.73	0.0118	13.18	0.0208	30.0000	1.0000	Pass

Test Mode	IEEE 802.11ax (HE20)_ Total	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
5955	14.01	0.0252	16.46	0.0443	30.0000	1.0000	Pass
6175	13.85	0.0242	16.30	0.0426	30.0000	1.0000	Pass
6415	13.81	0.0241	16.26	0.0423	30.0000	1.0000	Pass
6435	13.86	0.0243	16.31	0.0427	30.0000	1.0000	Pass
6475	13.63	0.0231	16.08	0.0406	30.0000	1.0000	Pass
6515	13.82	0.0241	16.27	0.0424	30.0000	1.0000	Pass
6535	13.69	0.0234	16.14	0.0411	30.0000	1.0000	Pass
6695	13.67	0.0233	16.12	0.0409	30.0000	1.0000	Pass
6855	13.62	0.0230	16.07	0.0405	30.0000	1.0000	Pass
6875	13.67	0.0233	16.12	0.0409	30.0000	1.0000	Pass
6995	13.79	0.0239	16.24	0.0421	30.0000	1.0000	Pass
7095	14.19	0.0262	16.64	0.0461	30.0000	1.0000	Pass

Test Mode	IEEE 802.11ax (HE40)_ Ant 1	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
5965	14.42	0.0277	16.87	0.0486	30.0000	1.0000	Pass
6165	14.43	0.0277	16.88	0.0488	30.0000	1.0000	Pass
6405	14.47	0.0280	16.92	0.0492	30.0000	1.0000	Pass
6445	14.42	0.0277	16.87	0.0486	30.0000	1.0000	Pass
6485	14.47	0.0280	16.92	0.0492	30.0000	1.0000	Pass
6525	14.42	0.0277	16.87	0.0486	30.0000	1.0000	Pass
6685	14.40	0.0275	16.85	0.0484	30.0000	1.0000	Pass
6845	14.33	0.0271	16.78	0.0476	30.0000	1.0000	Pass
6885	14.38	0.0274	16.83	0.0482	30.0000	1.0000	Pass
7085	14.44	0.0278	16.89	0.0489	30.0000	1.0000	Pass

Test Mode	IEEE 802.11ax (HE40)_ Ant 2	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
5965	13.56	0.0227	16.01	0.0399	30.0000	1.0000	Pass
6165	13.56	0.0227	16.01	0.0399	30.0000	1.0000	Pass
6405	13.33	0.0215	15.78	0.0378	30.0000	1.0000	Pass
6445	12.96	0.0198	15.41	0.0348	30.0000	1.0000	Pass
6485	13.51	0.0224	15.96	0.0394	30.0000	1.0000	Pass
6525	13.50	0.0224	15.95	0.0394	30.0000	1.0000	Pass
6685	13.14	0.0206	15.59	0.0362	30.0000	1.0000	Pass
6845	13.19	0.0208	15.64	0.0366	30.0000	1.0000	Pass
6885	13.09	0.0204	15.54	0.0358	30.0000	1.0000	Pass
7085	13.60	0.0229	16.05	0.0403	30.0000	1.0000	Pass

Test Mode	IEEE 802.11ax (HE40)_ Total	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
5965	17.02	0.0504	19.47	0.0885	30.0000	1.0000	Pass
6165	17.03	0.0504	19.48	0.0887	30.0000	1.0000	Pass
6405	16.95	0.0495	19.40	0.0870	30.0000	1.0000	Pass
6445	16.76	0.0474	19.21	0.0834	30.0000	1.0000	Pass
6485	17.03	0.0504	19.48	0.0886	30.0000	1.0000	Pass
6525	16.99	0.0501	19.44	0.0880	30.0000	1.0000	Pass
6685	16.83	0.0481	19.28	0.0846	30.0000	1.0000	Pass
6845	16.81	0.0479	19.26	0.0843	30.0000	1.0000	Pass
6885	16.79	0.0478	19.24	0.0840	30.0000	1.0000	Pass
7085	17.05	0.0507	19.50	0.0891	30.0000	1.0000	Pass

Test Mode	IEEE 802.11ax (HE80)_ Ant 1	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
5985	17.44	0.0555	19.89	0.0975	30.0000	1.0000	Pass
6145	17.53	0.0566	19.98	0.0995	30.0000	1.0000	Pass
6385	17.48	0.0560	19.93	0.0984	30.0000	1.0000	Pass
6465	17.47	0.0558	19.92	0.0982	30.0000	1.0000	Pass
6545	17.49	0.0561	19.94	0.0986	30.0000	1.0000	Pass
6625	17.55	0.0569	20.00	0.1000	30.0000	1.0000	Pass
6785	17.43	0.0553	19.88	0.0973	30.0000	1.0000	Pass
6865	17.59	0.0574	20.04	0.1009	30.0000	1.0000	Pass
6945	17.54	0.0568	19.99	0.0998	30.0000	1.0000	Pass
7025	17.50	0.0562	19.95	0.0989	30.0000	1.0000	Pass

Test Mode	IEEE 802.11ax (HE80)_ Ant 2	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
5985	16.65	0.0462	19.10	0.0813	30.0000	1.0000	Pass
6145	16.47	0.0444	18.92	0.0780	30.0000	1.0000	Pass
6385	16.20	0.0417	18.65	0.0733	30.0000	1.0000	Pass
6465	16.90	0.0490	19.35	0.0861	30.0000	1.0000	Pass
6545	16.88	0.0488	19.33	0.0857	30.0000	1.0000	Pass
6625	16.14	0.0411	18.59	0.0723	30.0000	1.0000	Pass
6785	16.80	0.0479	19.25	0.0841	30.0000	1.0000	Pass
6865	16.79	0.0478	19.24	0.0839	30.0000	1.0000	Pass
6945	16.73	0.0471	19.18	0.0828	30.0000	1.0000	Pass
7025	17.10	0.0513	19.55	0.0902	30.0000	1.0000	Pass

Test Mode	IEEE 802.11ax (HE80)_ Total	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
5985	20.07	0.1017	22.52	0.1788	30.0000	1.0000	Pass
6145	20.04	0.1010	22.49	0.1775	30.0000	1.0000	Pass
6385	19.90	0.0977	22.35	0.1717	30.0000	1.0000	Pass
6465	20.20	0.1048	22.65	0.1843	30.0000	1.0000	Pass
6545	20.21	0.1049	22.66	0.1843	30.0000	1.0000	Pass
6625	19.91	0.0980	22.36	0.1723	30.0000	1.0000	Pass
6785	20.14	0.1032	22.59	0.1814	30.0000	1.0000	Pass
6865	20.22	0.1052	22.67	0.1849	30.0000	1.0000	Pass
6945	20.16	0.1039	22.61	0.1826	30.0000	1.0000	Pass
7025	20.31	0.1075	22.76	0.1890	30.0000	1.0000	Pass

Test Mode	IEEE 802.11ax (HE160)_ Ant 1	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
6025	20.52	0.1127	22.97	0.1982	30.0000	1.0000	Pass
6345	20.42	0.1102	22.87	0.1936	30.0000	1.0000	Pass
6505	20.36	0.1086	22.81	0.1910	30.0000	1.0000	Pass
6665	20.46	0.1112	22.91	0.1954	30.0000	1.0000	Pass
6825	20.55	0.1135	23.00	0.1995	30.0000	1.0000	Pass
6985	20.57	0.1140	23.02	0.2004	30.0000	1.0000	Pass

Test Mode	IEEE 802.11ax (HE160)_ Ant 2	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
6025	19.53	0.0897	21.98	0.1578	30.0000	1.0000	Pass
6345	19.46	0.0883	21.91	0.1552	30.0000	1.0000	Pass
6505	19.01	0.0796	21.46	0.1400	30.0000	1.0000	Pass
6665	18.83	0.0764	21.28	0.1343	30.0000	1.0000	Pass
6825	19.03	0.0800	21.48	0.1406	30.0000	1.0000	Pass
6985	19.54	0.0899	21.99	0.1581	30.0000	1.0000	Pass

Test Mode	IEEE 802.11ax (HE160)_ Total	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
6025	23.06	0.2025	25.51	0.3559	30.0000	1.0000	Pass
6345	22.98	0.1985	25.43	0.3489	30.0000	1.0000	Pass
6505	22.75	0.1883	25.20	0.3309	30.0000	1.0000	Pass
6665	22.73	0.1876	25.18	0.3297	30.0000	1.0000	Pass
6825	22.87	0.1935	25.32	0.3401	30.0000	1.0000	Pass
6985	23.10	0.2040	25.55	0.3586	30.0000	1.0000	Pass

For NSS2:

Test Mode	IEEE 802.11ax (HE20)_ Ant 1	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
5955	11.46	0.0140	13.91	0.0246	30.0000	1.0000	Pass
6175	12.50	0.0178	14.95	0.0313	30.0000	1.0000	Pass
6415	11.72	0.0149	14.17	0.0261	30.0000	1.0000	Pass
6435	12.27	0.0169	14.72	0.0296	30.0000	1.0000	Pass
6475	12.52	0.0179	14.97	0.0314	30.0000	1.0000	Pass
6515	12.59	0.0182	15.04	0.0319	30.0000	1.0000	Pass
6535	12.52	0.0179	14.97	0.0314	30.0000	1.0000	Pass
6695	12.42	0.0175	14.87	0.0307	30.0000	1.0000	Pass
6855	12.51	0.0178	14.96	0.0313	30.0000	1.0000	Pass
6875	12.55	0.0180	15.00	0.0316	30.0000	1.0000	Pass
6995	12.19	0.0166	14.64	0.0291	30.0000	1.0000	Pass
7095	12.12	0.0163	14.57	0.0286	30.0000	1.0000	Pass

Test Mode	IEEE 802.11ax (HE20)_ Ant 2	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
5955	12.54	0.0179	14.99	0.0316	30.0000	1.0000	Pass
6175	11.68	0.0147	14.13	0.0259	30.0000	1.0000	Pass
6415	12.47	0.0177	14.92	0.0310	30.0000	1.0000	Pass
6435	12.49	0.0177	14.94	0.0312	30.0000	1.0000	Pass
6475	11.58	0.0144	14.03	0.0253	30.0000	1.0000	Pass
6515	11.43	0.0139	13.88	0.0244	30.0000	1.0000	Pass
6535	11.49	0.0141	13.94	0.0248	30.0000	1.0000	Pass
6695	11.42	0.0139	13.87	0.0244	30.0000	1.0000	Pass
6855	11.82	0.0152	14.27	0.0267	30.0000	1.0000	Pass
6875	12.12	0.0163	14.57	0.0286	30.0000	1.0000	Pass
6995	12.59	0.0182	15.04	0.0319	30.0000	1.0000	Pass
7095	12.50	0.0178	14.95	0.0313	30.0000	1.0000	Pass

Test Mode	IEEE 802.11ax (HE20)_ Total	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
5955	15.04	0.0319	17.49	0.0562	30.0000	1.0000	Pass
6175	15.12	0.0325	17.57	0.0571	30.0000	1.0000	Pass
6415	15.12	0.0325	17.57	0.0572	30.0000	1.0000	Pass
6435	15.39	0.0346	17.84	0.0608	30.0000	1.0000	Pass
6475	15.09	0.0323	17.54	0.0567	30.0000	1.0000	Pass
6515	15.06	0.0321	17.51	0.0563	30.0000	1.0000	Pass
6535	15.05	0.0320	17.50	0.0562	30.0000	1.0000	Pass
6695	14.96	0.0313	17.41	0.0551	30.0000	1.0000	Pass
6855	15.19	0.0330	17.64	0.0581	30.0000	1.0000	Pass
6875	15.35	0.0343	17.80	0.0603	30.0000	1.0000	Pass
6995	15.40	0.0347	17.85	0.0610	30.0000	1.0000	Pass
7095	15.32	0.0341	17.77	0.0599	30.0000	1.0000	Pass

Test Mode	IEEE 802.11ax (HE40)_ Ant 1	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
5965	15.52	0.0356	17.97	0.0627	30.0000	1.0000	Pass
6165	15.42	0.0348	17.87	0.0612	30.0000	1.0000	Pass
6405	14.82	0.0303	17.27	0.0533	30.0000	1.0000	Pass
6445	14.92	0.0310	17.37	0.0546	30.0000	1.0000	Pass
6485	15.49	0.0354	17.94	0.0622	30.0000	1.0000	Pass
6525	15.56	0.0360	18.01	0.0632	30.0000	1.0000	Pass
6685	15.51	0.0356	17.96	0.0625	30.0000	1.0000	Pass
6845	15.58	0.0361	18.03	0.0635	30.0000	1.0000	Pass
6885	15.53	0.0357	17.98	0.0628	30.0000	1.0000	Pass
7085	15.02	0.0318	17.47	0.0558	30.0000	1.0000	Pass

Test Mode	IEEE 802.11ax (HE40)_ Ant 2	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
5965	15.34	0.0342	17.79	0.0601	30.0000	1.0000	Pass
6165	14.61	0.0289	17.06	0.0508	30.0000	1.0000	Pass
6405	15.54	0.0358	17.99	0.0630	30.0000	1.0000	Pass
6445	15.54	0.0358	17.99	0.0630	30.0000	1.0000	Pass
6485	15.00	0.0316	17.45	0.0556	30.0000	1.0000	Pass
6525	15.04	0.0319	17.49	0.0561	30.0000	1.0000	Pass
6685	15.16	0.0328	17.61	0.0577	30.0000	1.0000	Pass
6845	15.30	0.0339	17.75	0.0596	30.0000	1.0000	Pass
6885	15.51	0.0356	17.96	0.0625	30.0000	1.0000	Pass
7085	15.56	0.0360	18.01	0.0632	30.0000	1.0000	Pass

Test Mode	IEEE 802.11ax (HE40)_ Total	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
5965	18.44	0.0698	20.89	0.1228	30.0000	1.0000	Pass
6165	18.04	0.0637	20.49	0.1121	30.0000	1.0000	Pass
6405	18.21	0.0661	20.66	0.1163	30.0000	1.0000	Pass
6445	18.25	0.0669	20.70	0.1175	30.0000	1.0000	Pass
6485	18.26	0.0670	20.71	0.1178	30.0000	1.0000	Pass
6525	18.32	0.0679	20.77	0.1193	30.0000	1.0000	Pass
6685	18.35	0.0684	20.80	0.1202	30.0000	1.0000	Pass
6845	18.45	0.0700	20.90	0.1231	30.0000	1.0000	Pass
6885	18.53	0.0713	20.98	0.1253	30.0000	1.0000	Pass
7085	18.31	0.0677	20.76	0.1191	30.0000	1.0000	Pass

Test Mode	IEEE 802.11ax (HE80)_ Ant 1	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
5985	18.52	0.0711	20.97	0.1250	30.0000	1.0000	Pass
6145	18.42	0.0695	20.87	0.1222	30.0000	1.0000	Pass
6385	17.82	0.0605	20.27	0.1064	30.0000	1.0000	Pass
6465	17.72	0.0592	20.17	0.1040	30.0000	1.0000	Pass
6545	18.29	0.0675	20.74	0.1186	30.0000	1.0000	Pass
6625	18.56	0.0718	21.01	0.1262	30.0000	1.0000	Pass
6785	18.51	0.0710	20.96	0.1247	30.0000	1.0000	Pass
6865	18.58	0.0721	21.03	0.1268	30.0000	1.0000	Pass
6945	18.53	0.0713	20.98	0.1253	30.0000	1.0000	Pass
7025	18.02	0.0634	20.47	0.1114	30.0000	1.0000	Pass

Test Mode	IEEE 802.11ax (HE80)_ Ant 2	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
5985	18.34	0.0682	20.79	0.1199	30.0000	1.0000	Pass
6145	17.61	0.0577	20.06	0.1014	30.0000	1.0000	Pass
6385	18.54	0.0714	20.99	0.1256	30.0000	1.0000	Pass
6465	18.34	0.0682	20.79	0.1199	30.0000	1.0000	Pass
6545	17.80	0.0603	20.25	0.1059	30.0000	1.0000	Pass
6625	18.04	0.0637	20.49	0.1119	30.0000	1.0000	Pass
6785	18.16	0.0655	20.61	0.1151	30.0000	1.0000	Pass
6865	18.30	0.0676	20.75	0.1189	30.0000	1.0000	Pass
6945	18.51	0.0710	20.96	0.1247	30.0000	1.0000	Pass
7025	18.56	0.0718	21.01	0.1262	30.0000	1.0000	Pass

Test Mode	IEEE 802.11ax (HE80)_ Total	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
5985	21.44	0.1394	23.89	0.2450	30.0000	1.0000	Pass
6145	21.04	0.1272	23.49	0.2236	30.0000	1.0000	Pass
6385	21.21	0.1320	23.66	0.2320	30.0000	1.0000	Pass
6465	21.05	0.1274	23.50	0.2239	30.0000	1.0000	Pass
6545	21.06	0.1277	23.51	0.2245	30.0000	1.0000	Pass
6625	21.32	0.1355	23.77	0.2381	30.0000	1.0000	Pass
6785	21.35	0.1364	23.80	0.2398	30.0000	1.0000	Pass
6865	21.45	0.1397	23.90	0.2456	30.0000	1.0000	Pass
6945	21.53	0.1422	23.98	0.2501	30.0000	1.0000	Pass
7025	21.31	0.1352	23.76	0.2376	30.0000	1.0000	Pass

Test Mode	IEEE 802.11ax (HE160)_ Ant 1	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
6025	21.54	0.1426	23.99	0.2506	30.0000	1.0000	Pass
6345	20.63	0.1156	23.08	0.2032	30.0000	1.0000	Pass
6505	21.54	0.1426	23.99	0.2506	30.0000	1.0000	Pass
6665	21.58	0.1439	24.03	0.2529	30.0000	1.0000	Pass
6825	21.41	0.1384	23.86	0.2432	30.0000	1.0000	Pass
6985	20.91	0.1233	23.36	0.2168	30.0000	1.0000	Pass

Test Mode	IEEE 802.11ax (HE160)_ Ant 2	Tested Date	2024/5/9~5/14
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Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
6025	20.96	0.1247	23.41	0.2193	30.0000	1.0000	Pass
6345	21.53	0.1422	23.98	0.2500	30.0000	1.0000	Pass
6505	20.97	0.1250	23.42	0.2198	30.0000	1.0000	Pass
6665	20.52	0.1127	22.97	0.1982	30.0000	1.0000	Pass
6825	20.64	0.1159	23.09	0.2037	30.0000	1.0000	Pass
6985	21.52	0.1419	23.97	0.2495	30.0000	1.0000	Pass

Test Mode	IEEE 802.11ax (HE160)_ Total	Tested Date	2024/5/9~5/14
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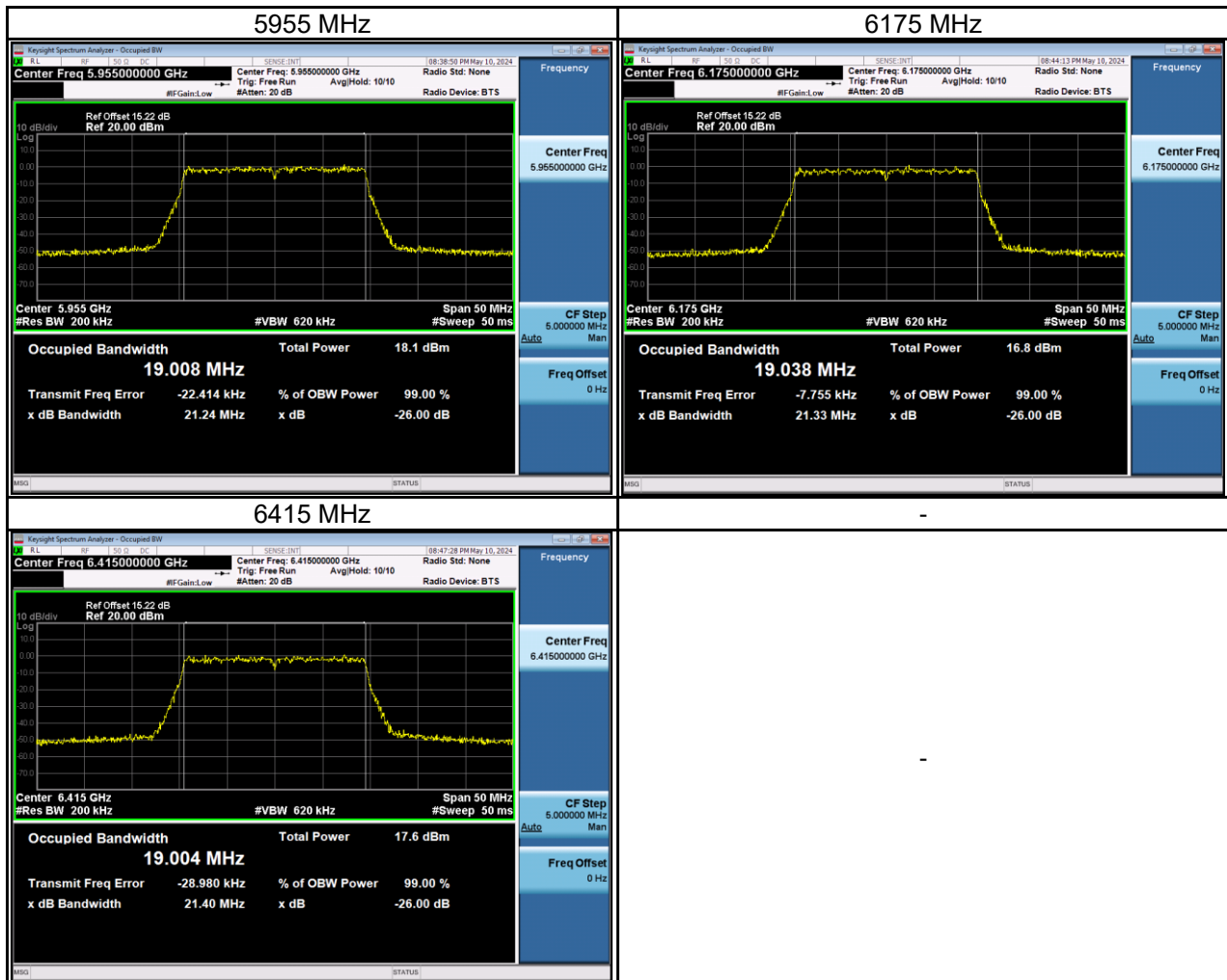
Test Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	E.I.R.P. (dBm)	E.I.R.P. (W)	E.I.R.P. Limit (dBm)	E.I.R.P. Limit (W)	Result
6025	24.27	0.2673	26.72	0.4699	30.0000	1.0000	Pass
6345	24.11	0.2578	26.56	0.4533	30.0000	1.0000	Pass
6505	24.27	0.2676	26.72	0.4704	30.0000	1.0000	Pass
6665	24.09	0.2566	26.54	0.4511	30.0000	1.0000	Pass
6825	24.05	0.2542	26.50	0.4469	30.0000	1.0000	Pass
6985	24.24	0.2652	26.69	0.4662	30.0000	1.0000	Pass

APPENDIX B MAXIMUM TRANSMITTER CHANNEL BANDWIDTH

For NSS1:

Test Mode	IEEE 802.11ax (HE20)_ Ant 1
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Test Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	Limit (MHz)	Result
5955	21.24	19.17	320	Pass
6175	21.33	19.11	320	Pass
6415	21.40	19.15	320	Pass



Test Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	Limit (MHz)	Result
6435	21.32	19.16	320	Pass
6475	21.25	19.19	320	Pass
6515	21.28	19.12	320	Pass



Test Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	Limit (MHz)	Result
6535	21.21	19.18	320	Pass
6695	21.19	19.17	320	Pass
6855	21.50	19.12	320	Pass



Test Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	Limit (MHz)	Result
6875	21.05	19.15	320	Pass
6995	21.37	19.15	320	Pass
7095	21.35	19.14	320	Pass

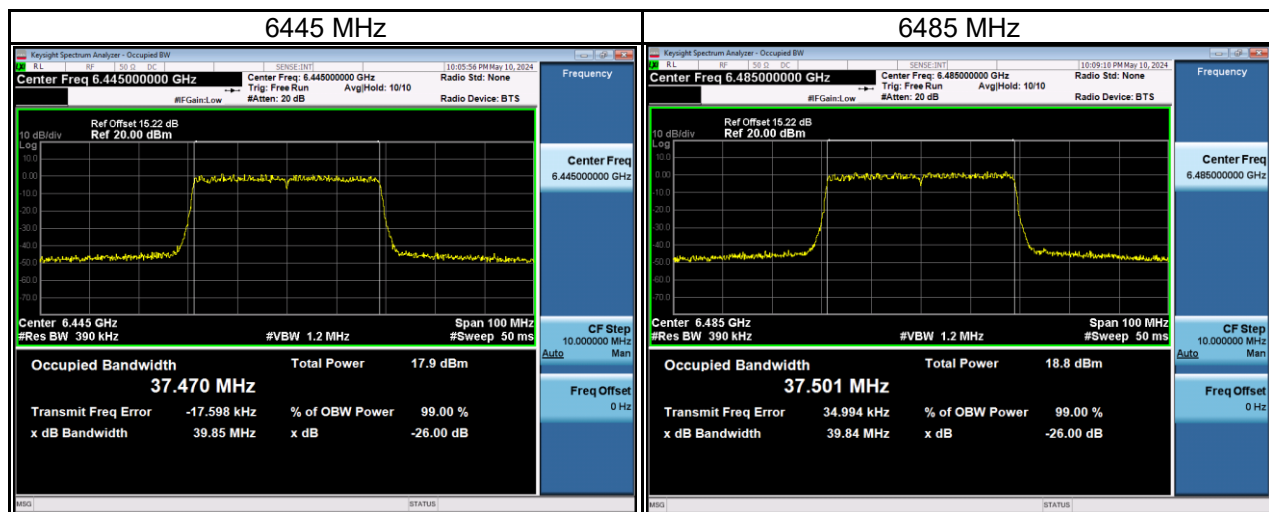


Test Mode	IEEE 802.11ax (HE40)_ Ant 1
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Test Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	Limit (MHz)	Result
5965	39.85	37.59	320	Pass
6165	39.89	37.58	320	Pass
6405	39.81	37.60	320	Pass



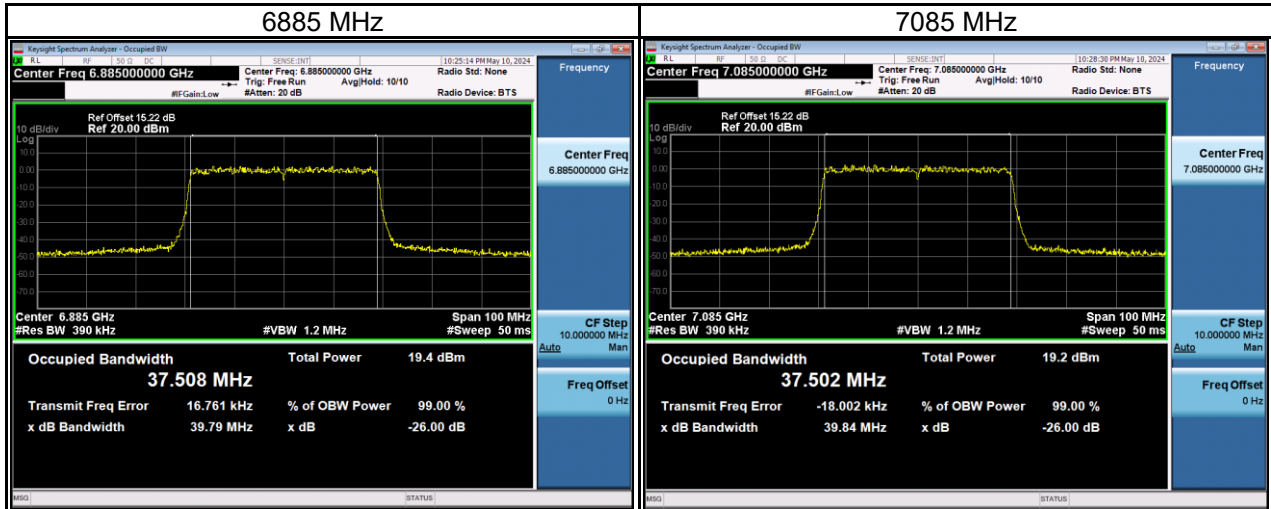
Test Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	Limit (MHz)	Result
6445	39.85	37.57	320	Pass
6485	39.84	37.66	320	Pass



Test Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	Limit (MHz)	Result
6525	39.83	37.59	320	Pass
6685	39.83	37.58	320	Pass
6845	39.89	37.59	320	Pass



Test Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	Limit (MHz)	Result
6885	39.79	37.56	320	Pass
7085	39.84	37.60	320	Pass

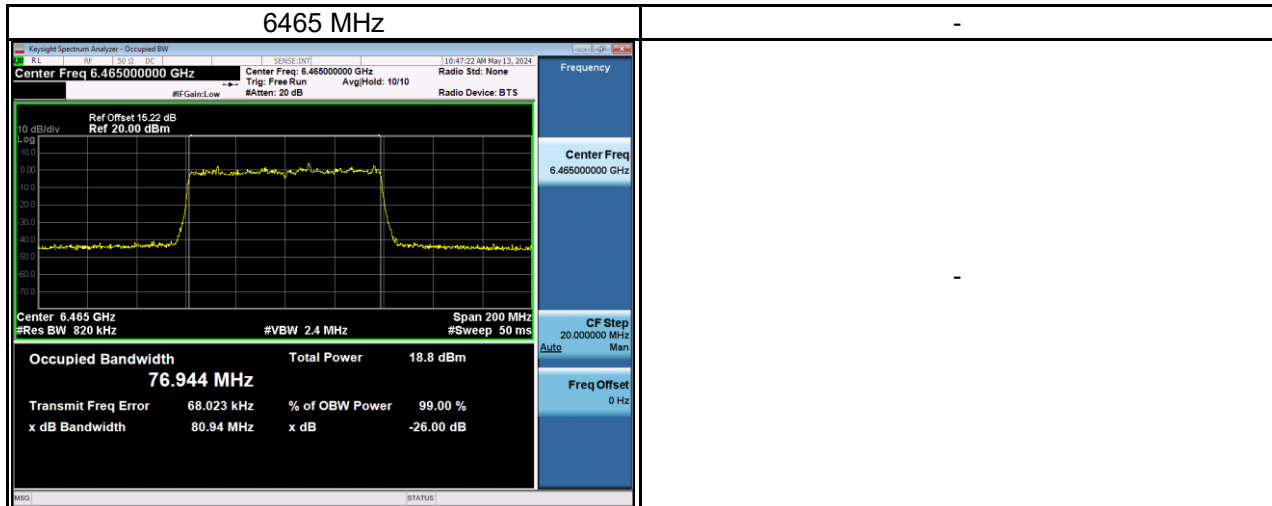


Test Mode	IEEE 802.11ax (HE80)_ Ant 1
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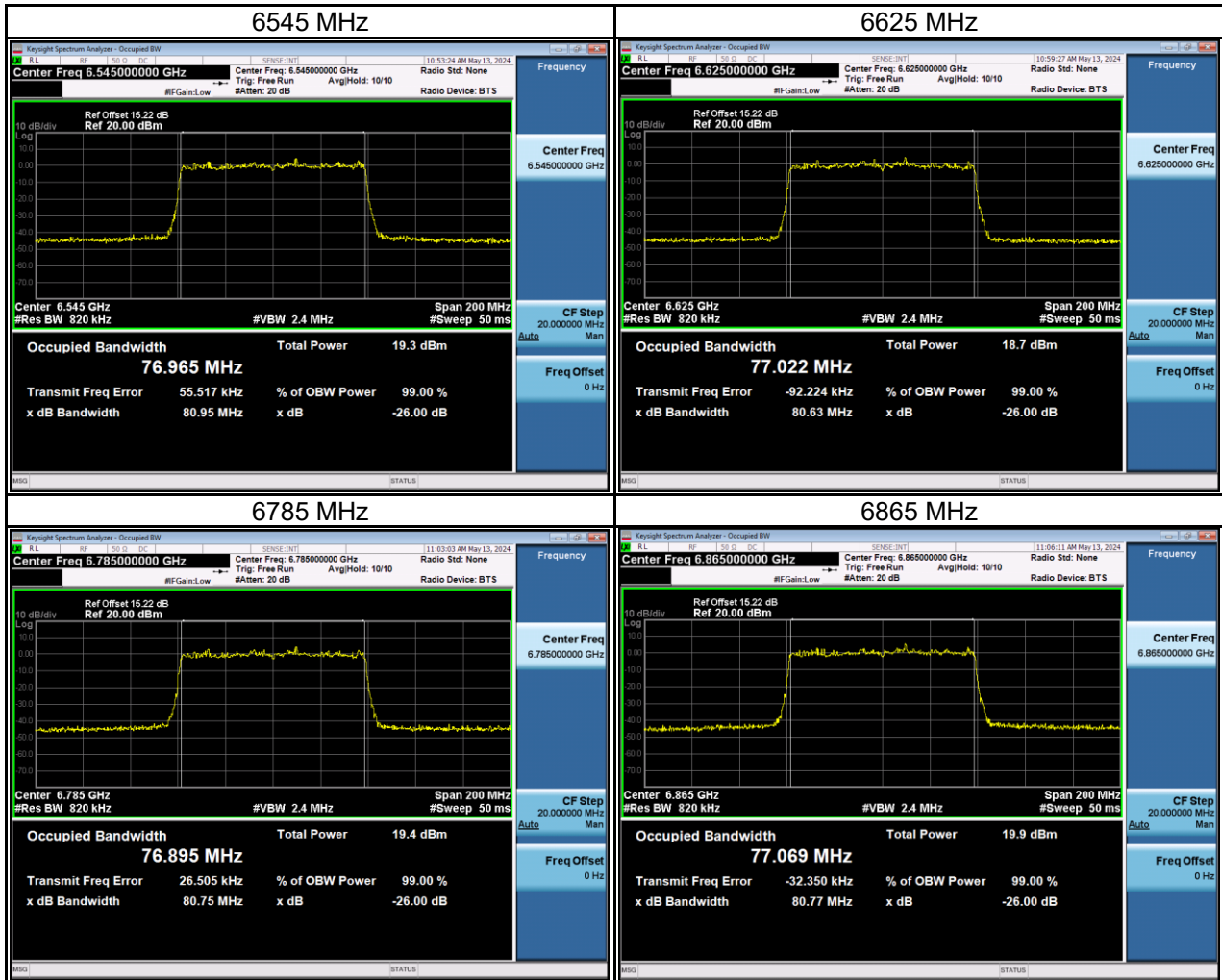
Test Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	Limit (MHz)	Result
5985	80.60	77.10	320	Pass
6145	80.94	77.25	320	Pass
6385	80.83	77.18	320	Pass



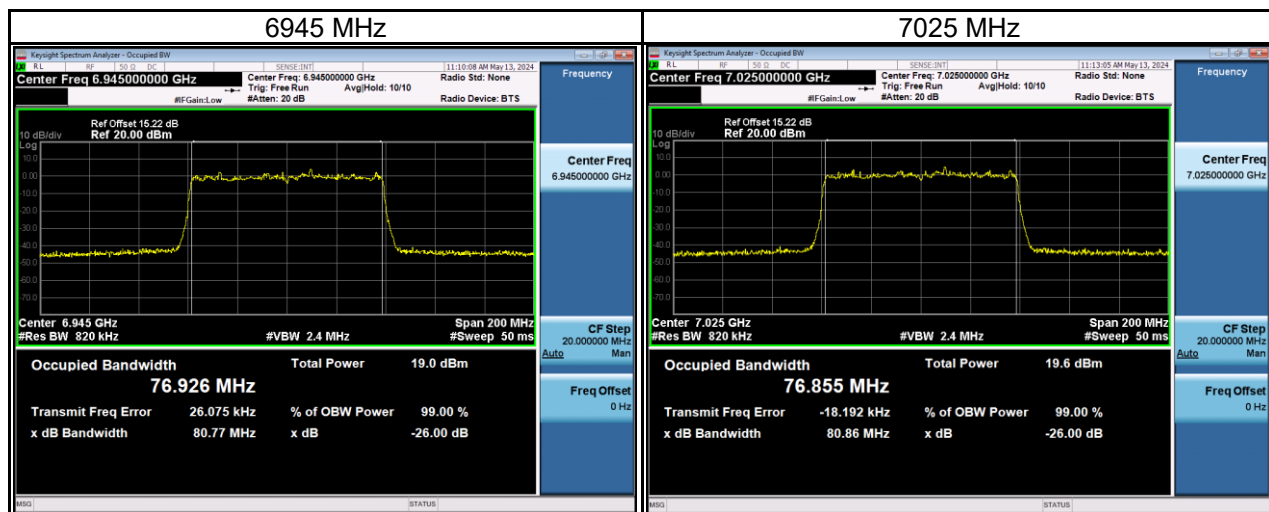
Test Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	Limit (MHz)	Result
6465	80.94	77.26	320	Pass



Test Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	Limit (MHz)	Result
6545	80.95	77.22	320	Pass
6625	80.63	77.05	320	Pass
6785	80.75	77.17	320	Pass
6865	80.77	77.29	320	Pass

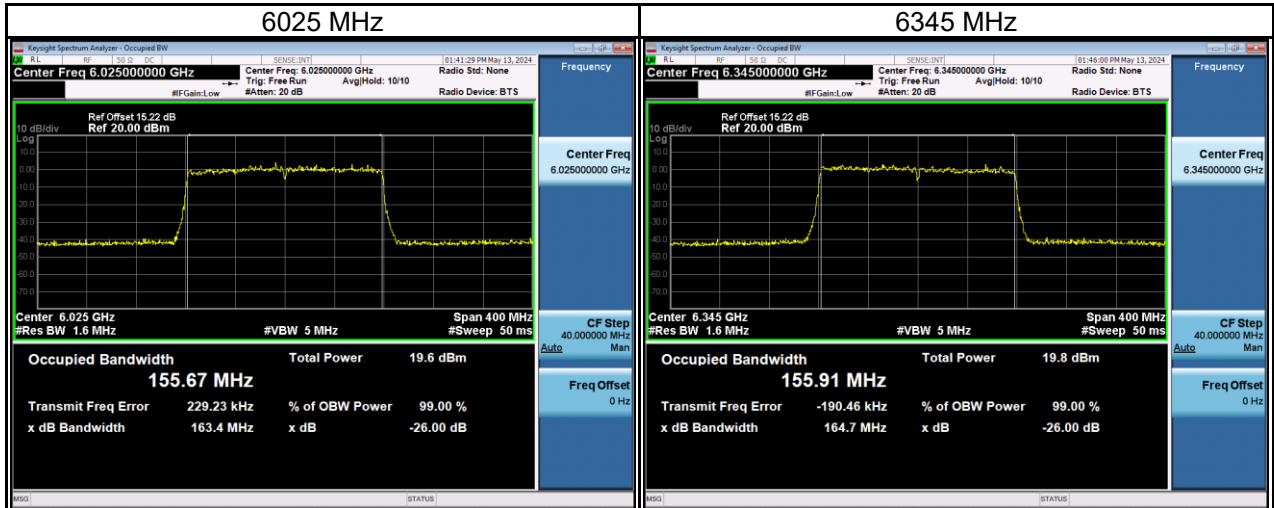


Test Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	Limit (MHz)	Result
6945	80.77	77.18	320	Pass
7025	80.86	77.17	320	Pass

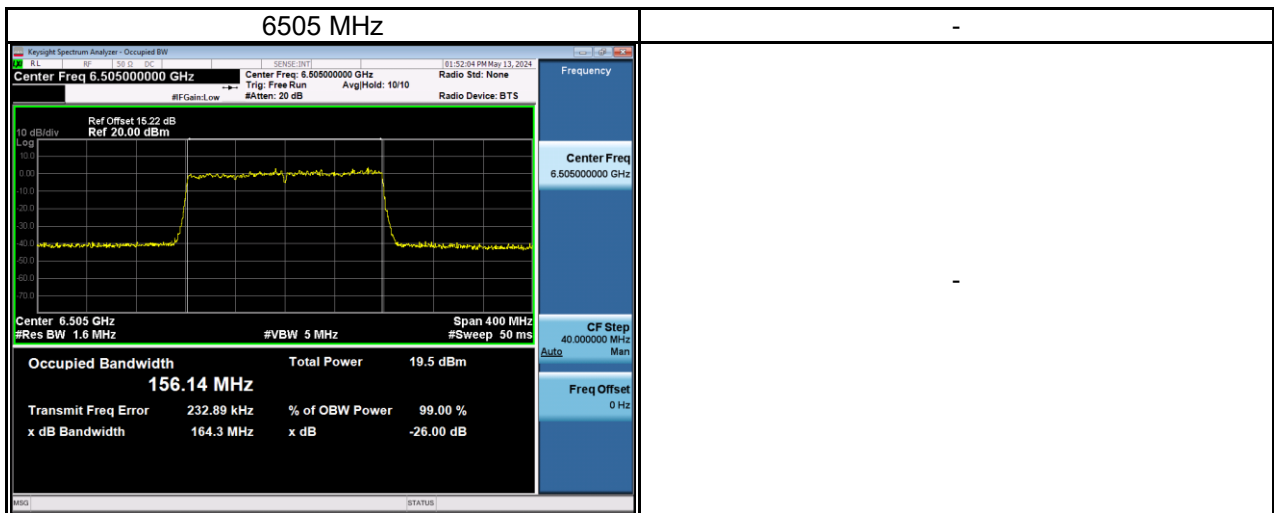


Test Mode	IEEE 802.11ax (HE160)_ Ant 1
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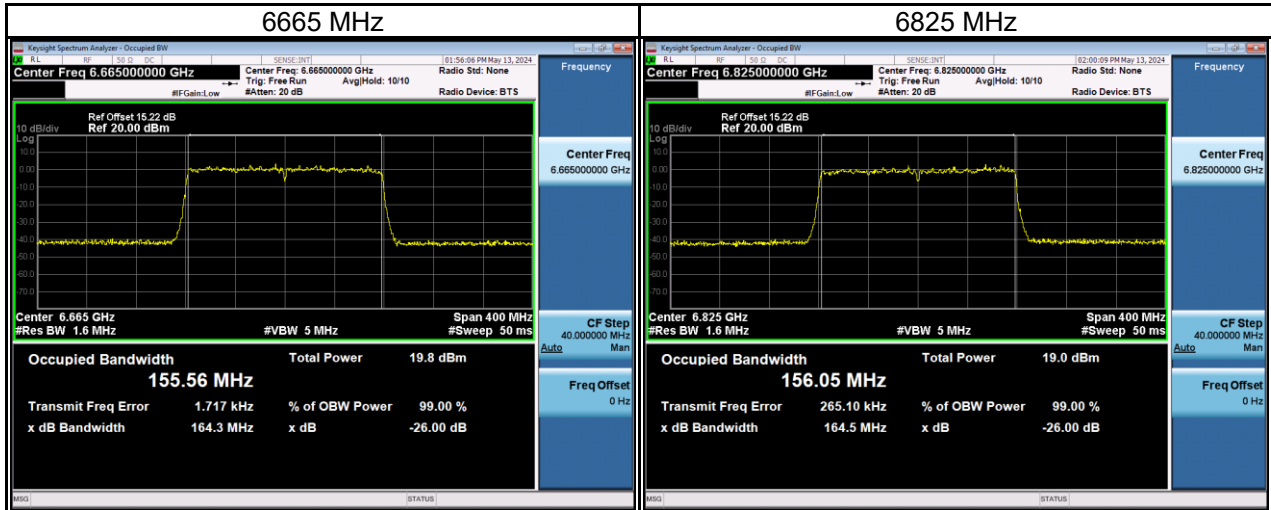
Test Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	Limit (MHz)	Result
6025	163.40	156.17	320	Pass
6345	164.70	156.24	320	Pass



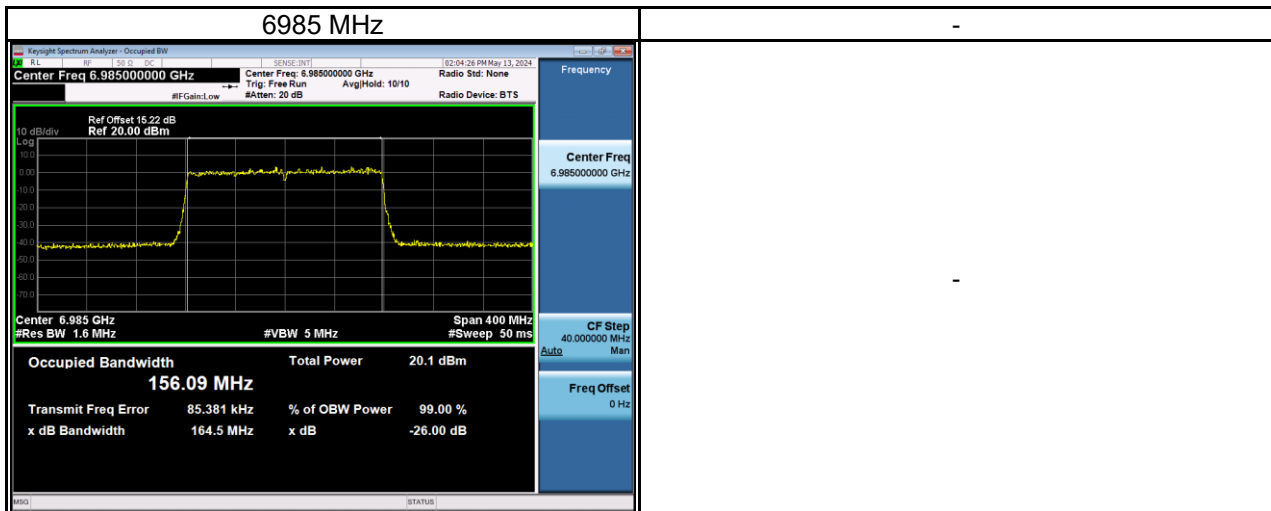
Test Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	Limit (MHz)	Result
6505	164.30	156.76	320	Pass



Test Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	Limit (MHz)	Result
6665	164.30	156.14	320	Pass
6825	164.50	156.63	320	Pass



Test Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	Limit (MHz)	Result
6985	164.50	156.49	320	Pass



For NSS2:

Test Mode	IEEE 802.11ax (HE20)_ Ant 1
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Test Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	Limit (MHz)	Result
5955	21.39	19.22	320	Pass
6175	21.48	19.21	320	Pass
6415	21.38	19.25	320	Pass

