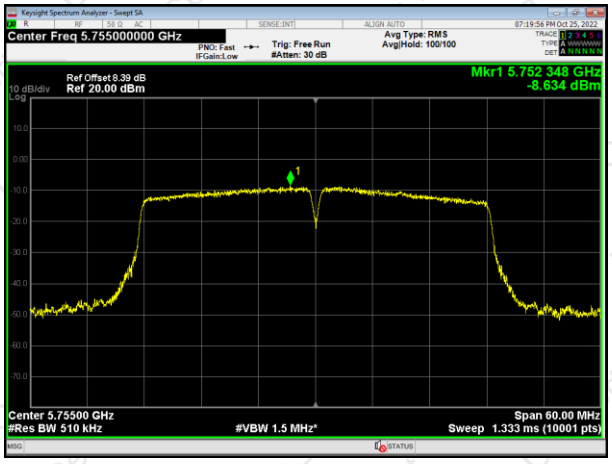
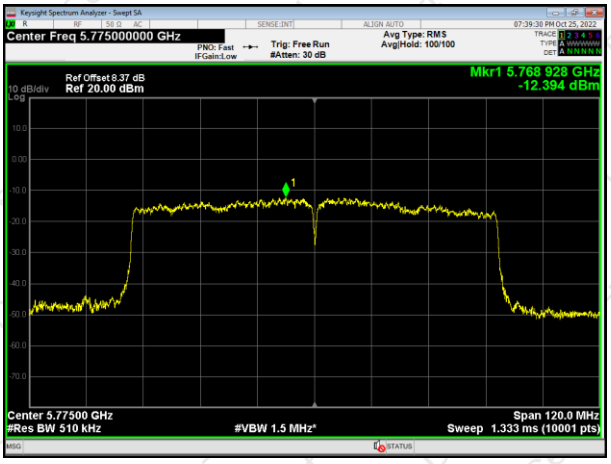
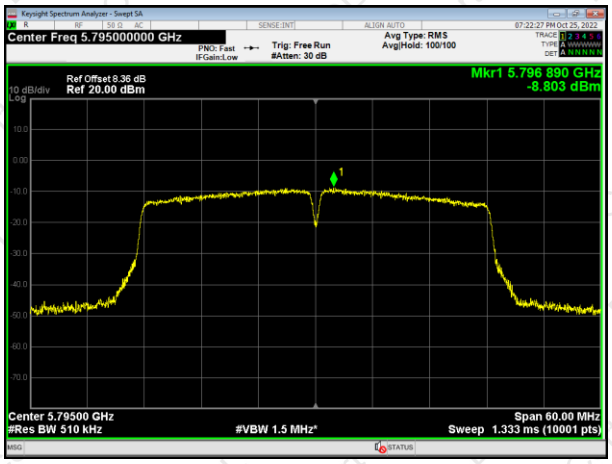
802.11n HT40	802.11ac HT80
	
5755MHz	5775MHz
	
5795MHz	

6. 6DB&26DB&99% BANDWIDTH TEST

6.1 APPLIED PROCEDURES / LIMIT

The 26 dB bandwidth is used to determine the conducted power limits.
There is no limit bandwidth for U-NII-1, U-NII-2-A and U-NII-2-C.
The minimum of 6dB Bandwidth measurement is 0.5 MHz for U-NII-3

6.1.1 TEST PROCEDURE

6dB Bandwidth	
Spectrum Parameters	Setting
RBW	100KHz
VBW	300KHz
Span	30MHz(20MHz Bandwidth mode) 60MHz(40MHz Bandwidth mode) 120MHz(80MHz Bandwidth mode)
Sweep Time	Auto
Detector	Peak
Trace Mode	Max Hold

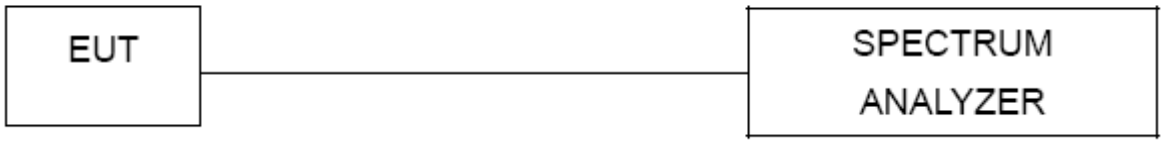
26dB Bandwidth	
Spectrum Parameters	Setting
RBW	approximately 1% of the emission bandwidth
VBW	>RBW
Span	30MHz(20MHz Bandwidth mode) 60MHz(40MHz Bandwidth mode) 120MHz(80MHz Bandwidth mode)
Sweep Time	Auto
Detector	Peak
Trace Mode	Max Hold

99% Occupied Bandwidth	
Spectrum Parameters	Setting
RBW	1% to 5% of the OBW
VBW	Approximately three times the RBW
Span	between 1.5 times and 5.0 times the OBW
Sweep Time	Auto
Detector	Peak
Trace Mode	Max Hold

6.1.2 DEVIATION FROM STANDARD

No deviation.

6.1.3 TEST SETUP



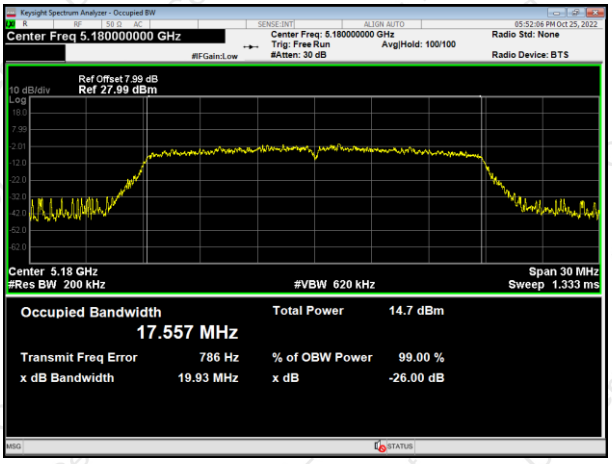
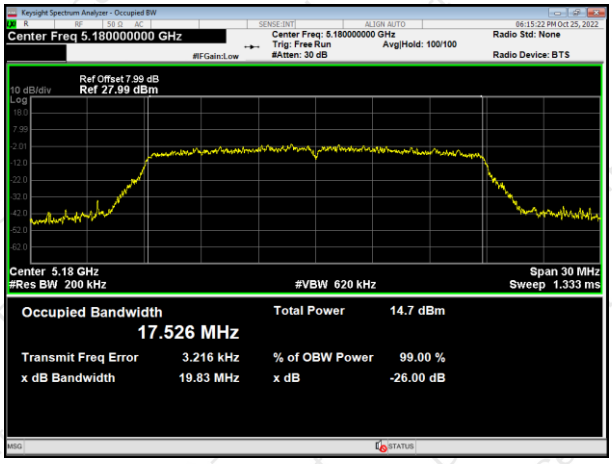
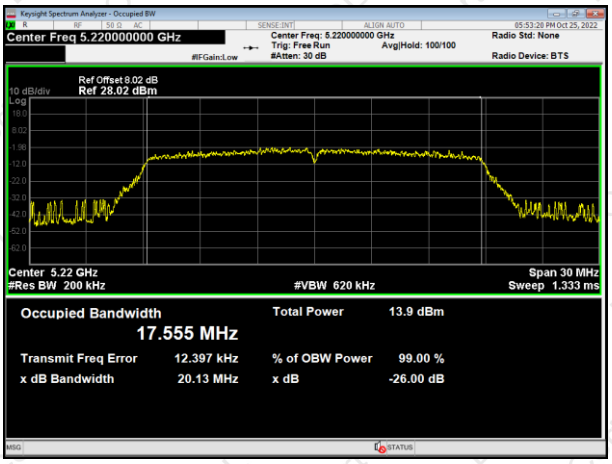
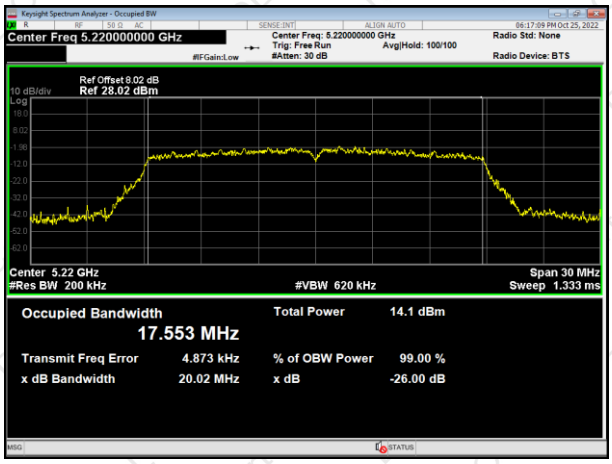
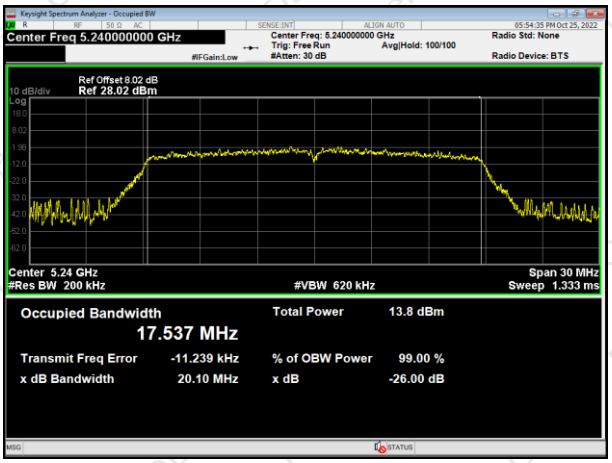
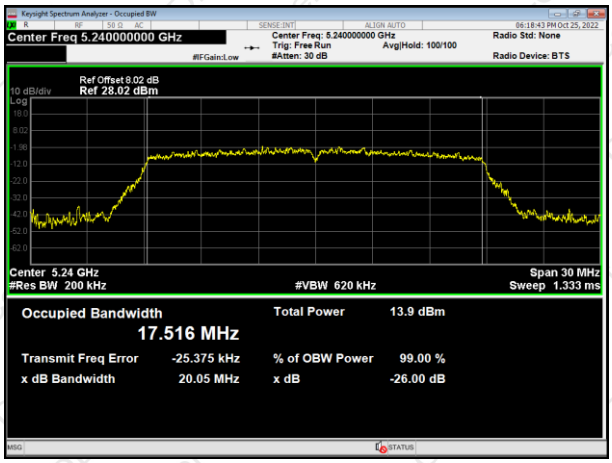
6.1.4 EUT OPERATION CONDITIONS

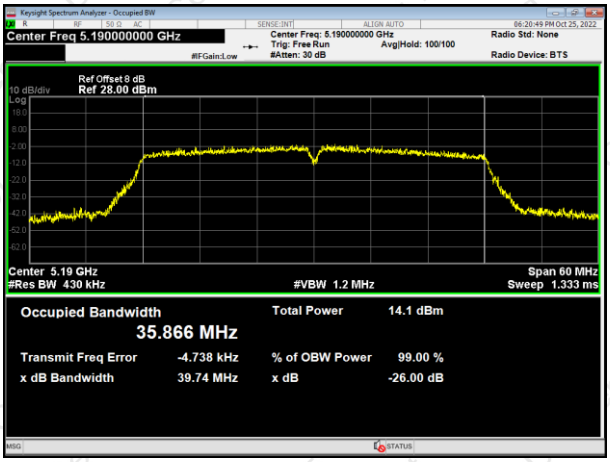
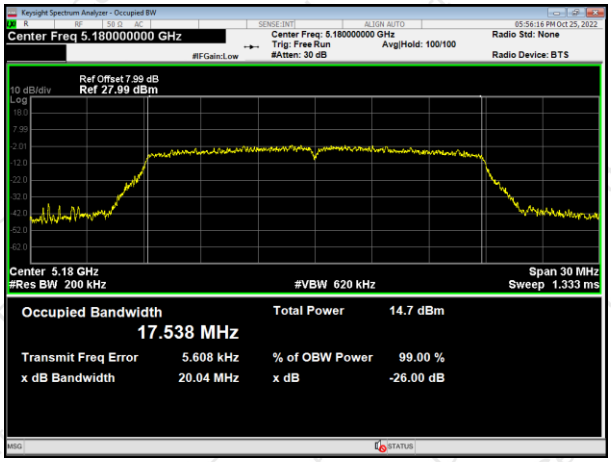
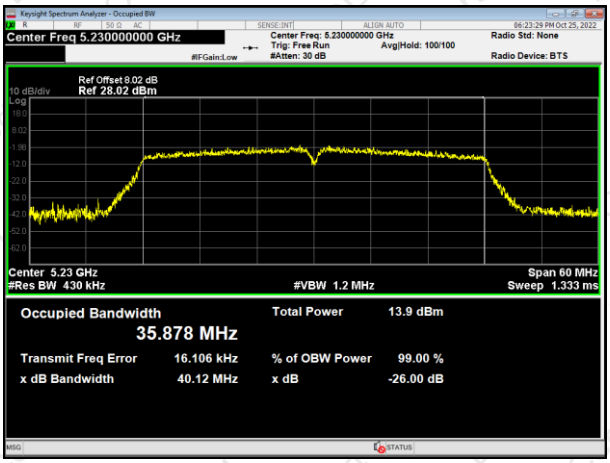
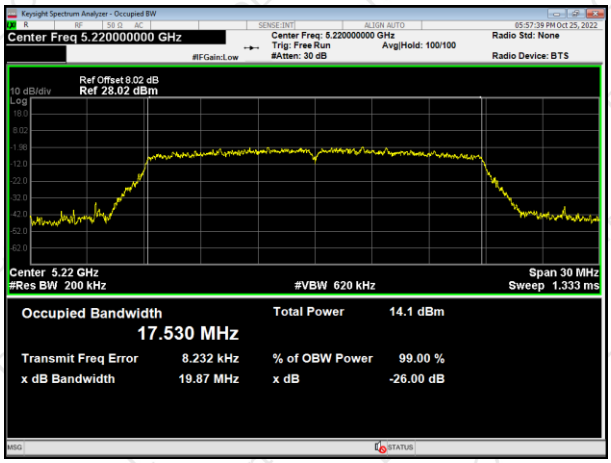
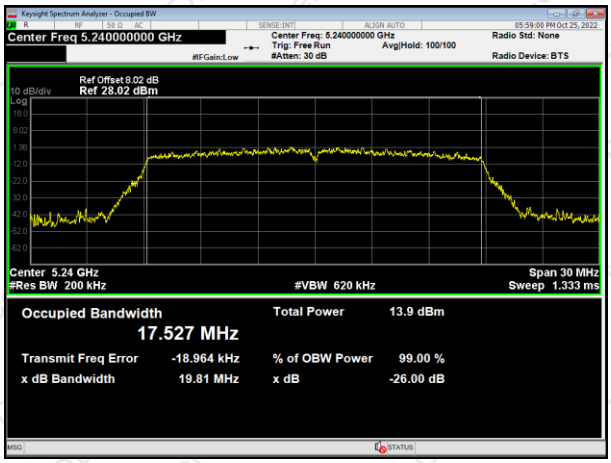
The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

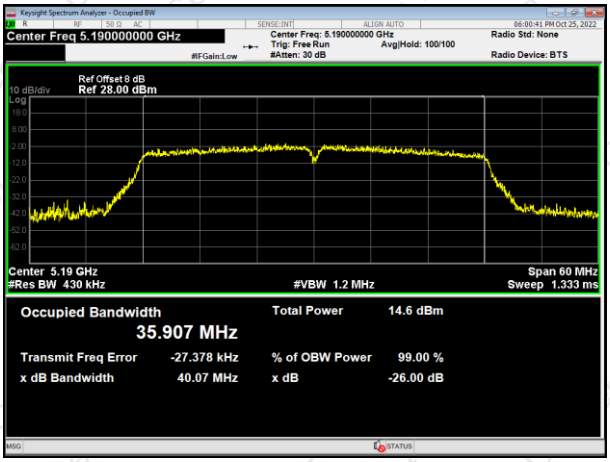
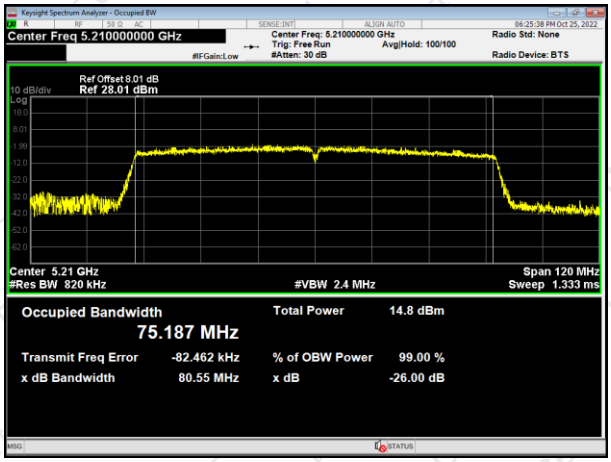
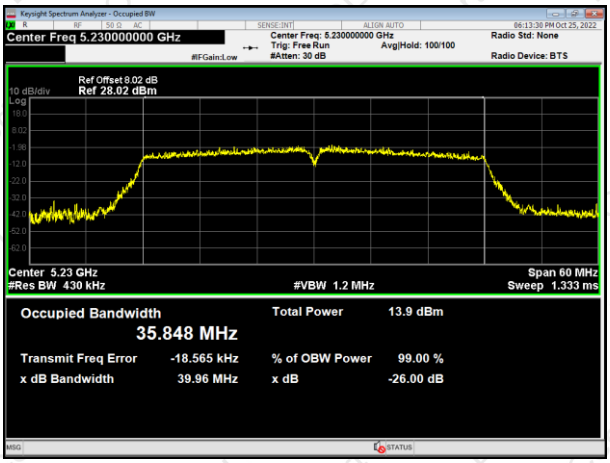
6.1.5 TEST RESULTS

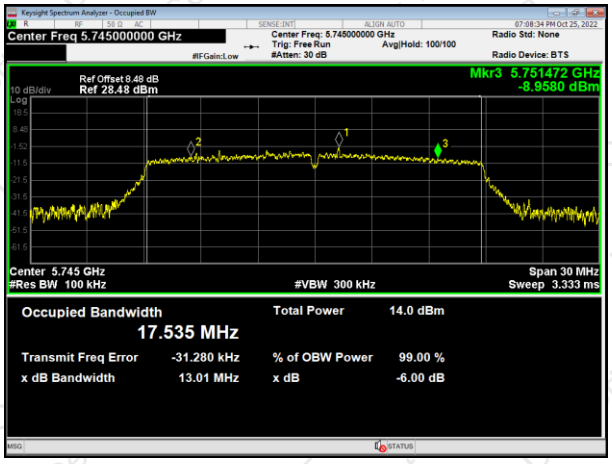
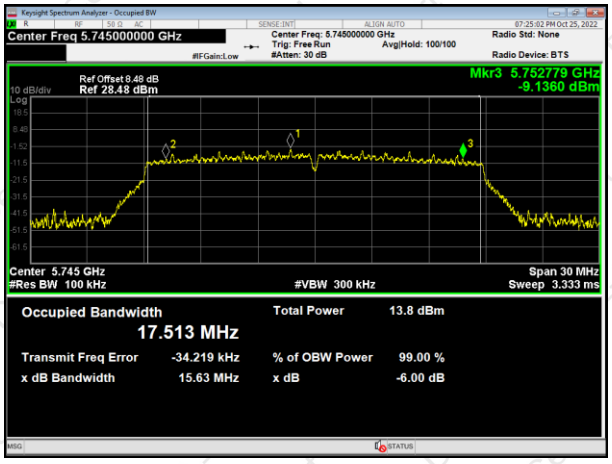
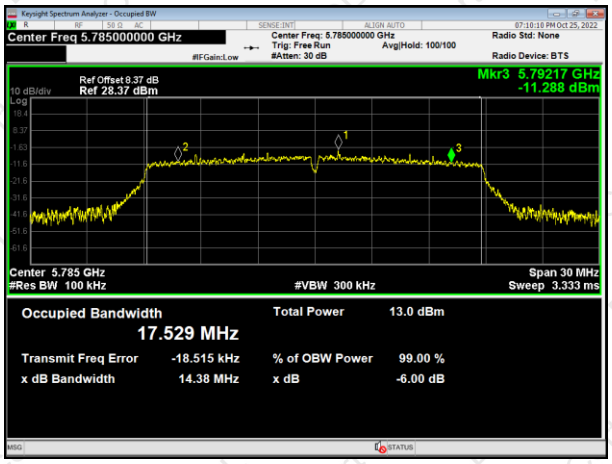
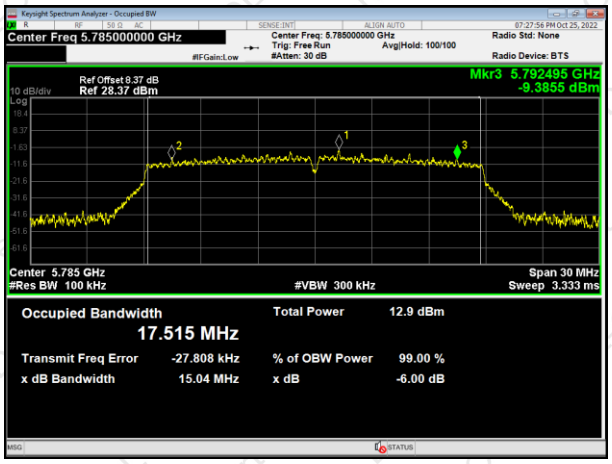
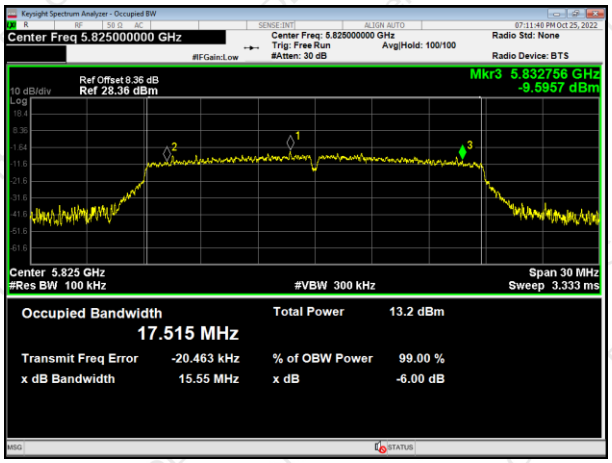
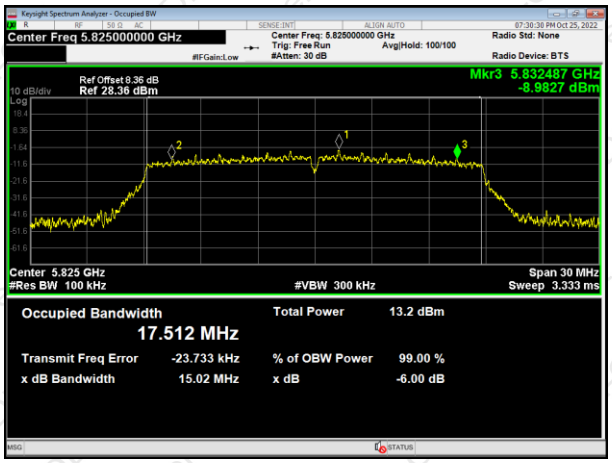
		Test Channel	26dB Bandwidth (MHz)	99% Bandwidth (MHz)	Result
Band 1	802.11a	Low	19.93	17.557	Pass
		Middle	20.13	17.555	Pass
		High	20.10	17.537	Pass
	802.11ac HT20	Low	19.83	17.526	Pass
		Middle	20.02	17.553	Pass
		High	20.05	17.516	Pass
	802.11ac HT40	Low	39.74	35.866	Pass
		High	40.12	35.878	Pass
	802.11n HT20	Low	20.04	17.538	Pass
		Middle	19.87	17.530	Pass
		High	19.81	17.527	Pass
	802.11n HT40	Low	40.07	35.907	Pass
		High	39.96	35.848	Pass
	802.11ac HT80	/	80.55	75.187	Pass

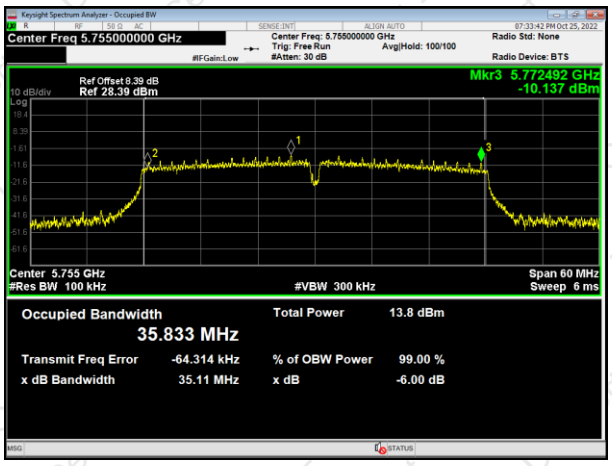
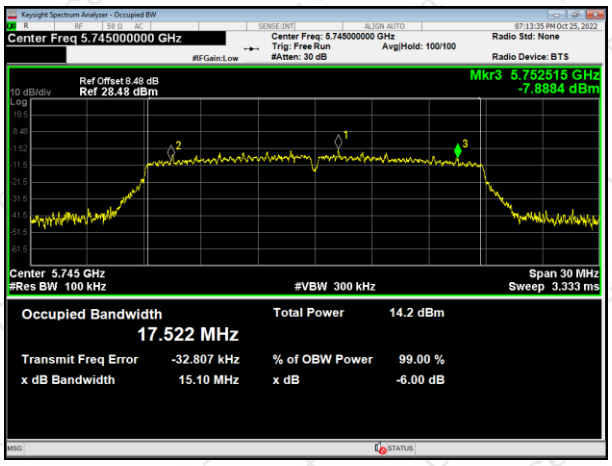
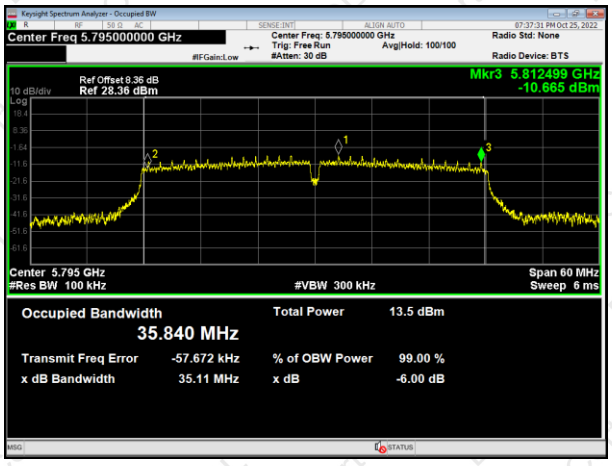
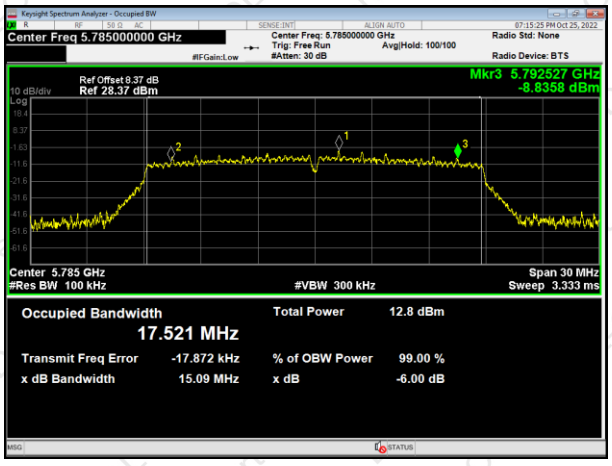
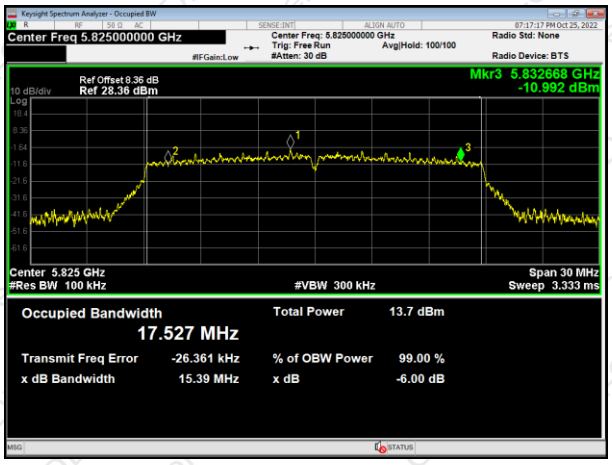
		Test Channel	6dB Bandwidth (MHz)	6dB Bandwidth Limit (MHz)	Result
Band 4	802.11a	Low	13.006	>0.5	Pass
		Middle	14.377	>0.5	Pass
		High	15.554	>0.5	Pass
	802.11ac HT20	Low	15.627	>0.5	Pass
		Middle	15.045	>0.5	Pass
		High	15.021	>0.5	Pass
	802.11ac HT40	Low	35.113	>0.5	Pass
		High	35.114	>0.5	Pass
	802.11n HT20	Low	15.096	>0.5	Pass
		Middle	15.090	>0.5	Pass
		High	15.390	>0.5	Pass
	802.11n HT40	Low	35.104	>0.5	Pass
		High	35.028	>0.5	Pass
	802.11ac HT80	/	75.123	>0.5	Pass

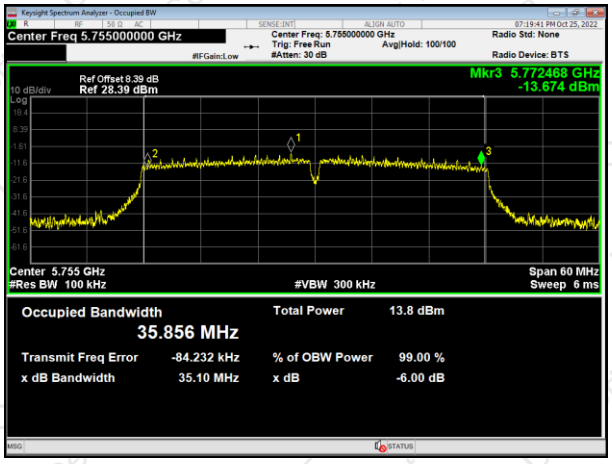
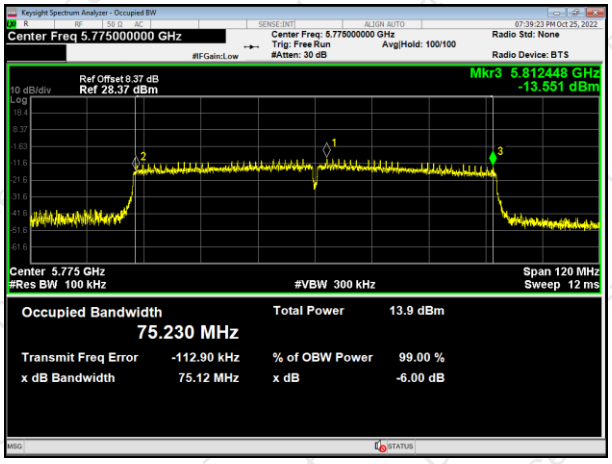
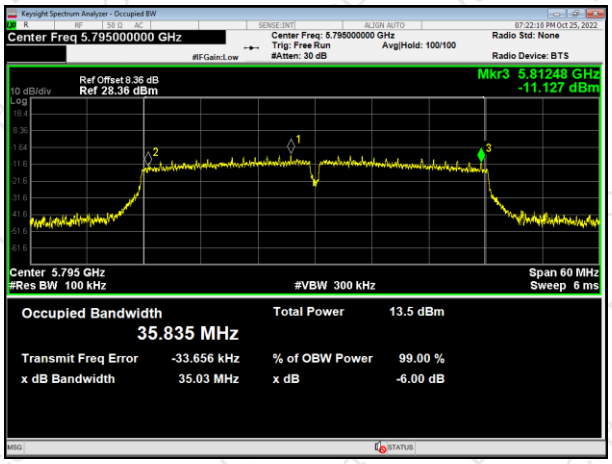
802.11a	802.11ac HT20
	
5180MHz	5180MHz
	
5200MHz	5200MHz
	
5240MHz	5240MHz

802.11ac HT40	802.11n HT20
	
5190MHz	5180MHz
	
5230MHz	5200MHz
	
	5240MHz

802.11n HT40	802.11ac HT80
	
5190MHz	5210MHz
	
5230MHz	

802.11a	802.11ac HT20
	
5745MHz	5745MHz
	
5785MHz	5785MHz
	
5825MHz	5825MHz

802.11ac HT40	802.11n HT20
	
5755MHz	5745MHz
	
5795MHz	5785MHz
	
	5825MHz

802.11n HT40	802.11ac HT80
	
5755MHz	5775MHz
	
5795MHz	

7. DUTY CYCLE TEST SIGNAL

7.1 APPLIED PROCEDURES / LIMIT

Pre-analysis Check: While conducting average power measurement, duty cycle of each mode shall be checked to ensure its duty cycle in order to compensate for the loss due to insufficient ratio of duty cycle. All duty cycle is pre-scanned, and result as obtained below shows only the most representative ones where duty cycle is conducted as the given transmission with given virtual operation that expresses the percentage.

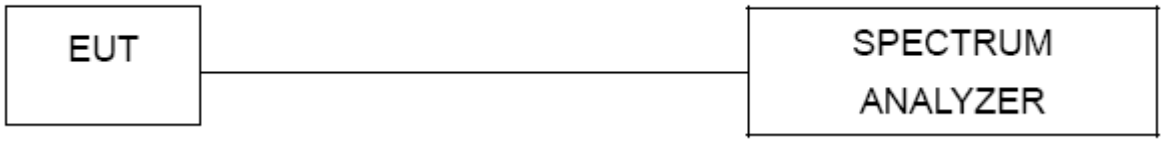
7.1.1 TEST PROCEDURE

1. Set RBW = 1 MHz.
2. Set the video bandwidth (VBW) ≥RBW.
3. Detector = Peak.
4. Sweep = auto couple.
5. Allow the trace to stabilize.
6. Span=0

7.1.2 DEVIATION FROM STANDARD

No deviation.

7.1.3 TEST SETUP



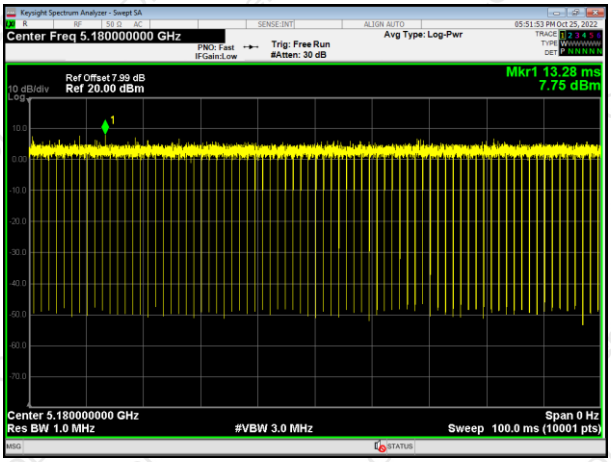
7.1.4 EUT OPERATION CONDITIONS

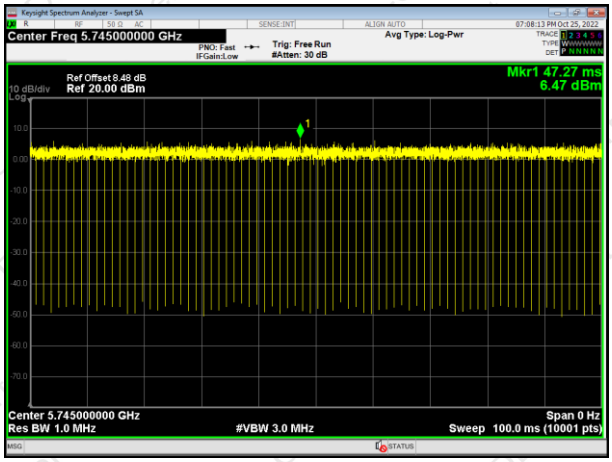
The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

7.1.5 TEST RESULTS

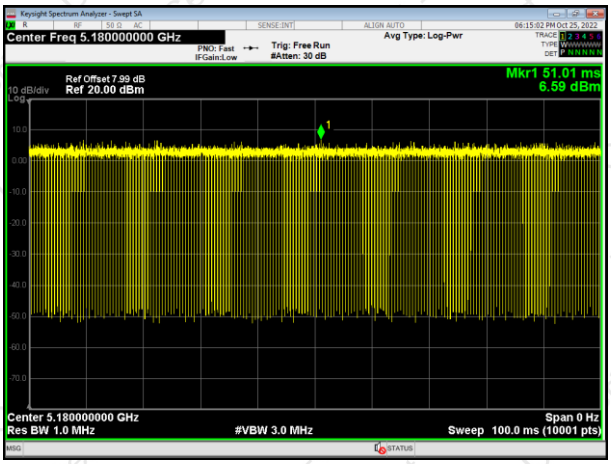
Operation Mode		Duty Cycle(%)	Duty Fator (dB) 10 * log (1/ Duty cycle)
Band 1	802.11a	97.6	0.11
	802.11ac (HT20)	93.7	0.28
	802.11ac (HT40)	88.8	0.52
	802.11n(HT20)	95.4	0.20
	802.11n(HT40)	91.43	0.39
	802.11ac(HT80)	82	0.86
Band 4	802.11a	97.48	0.11
	802.11ac (HT20)	93.41	0.30
	802.11ac (HT40)	88.56	0.53
	802.11n(HT20)	95.27	0.21
	802.11n(HT40)	91.21	0.40
	802.11ac(HT80)	81.55	0.89

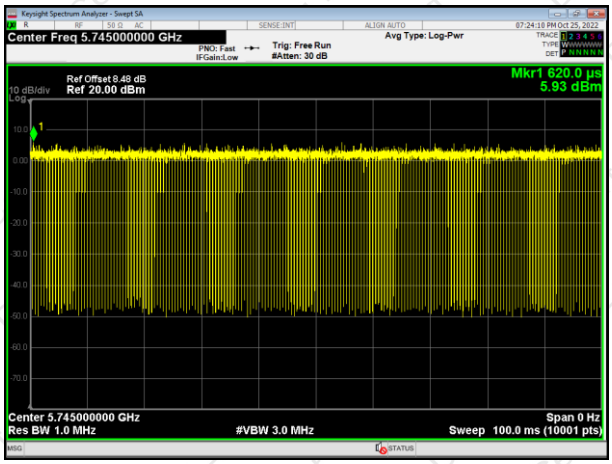
802.11a



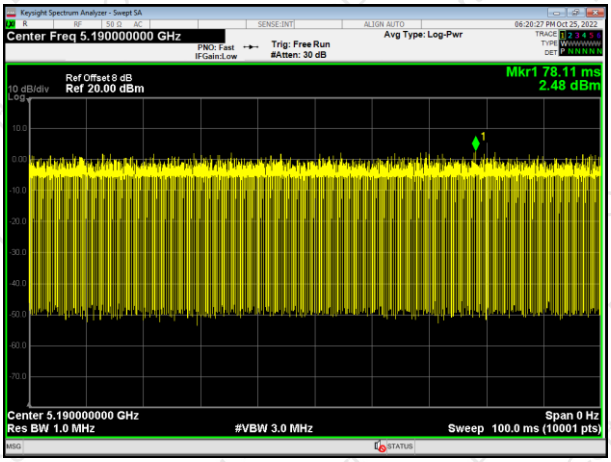


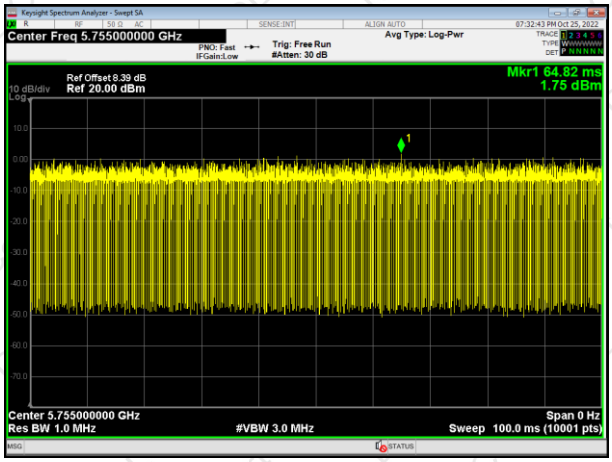
802.11ac HT20



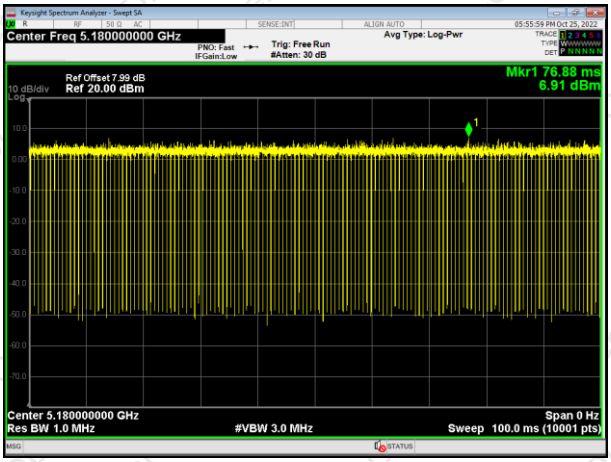


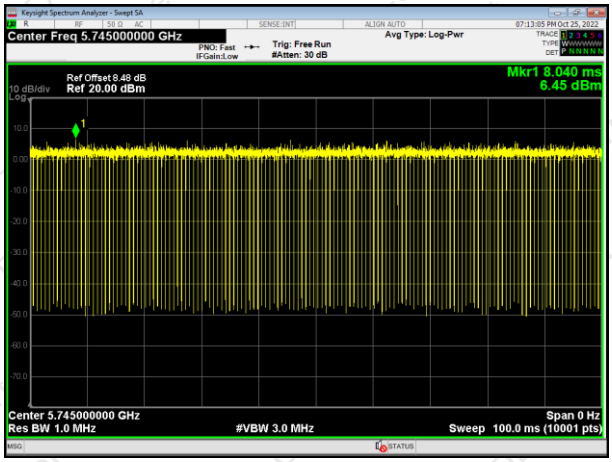
802.11ac HT40



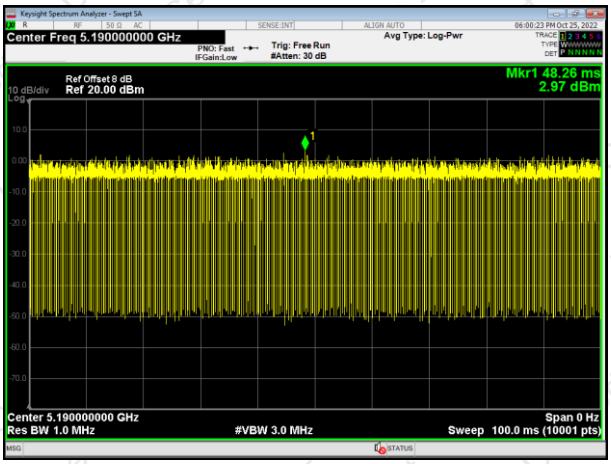


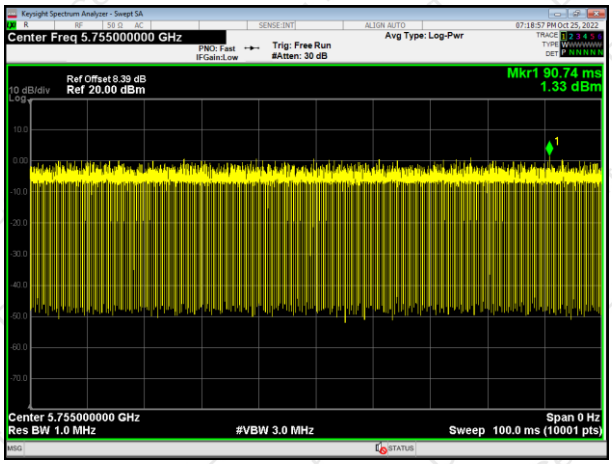
802.11n HT20



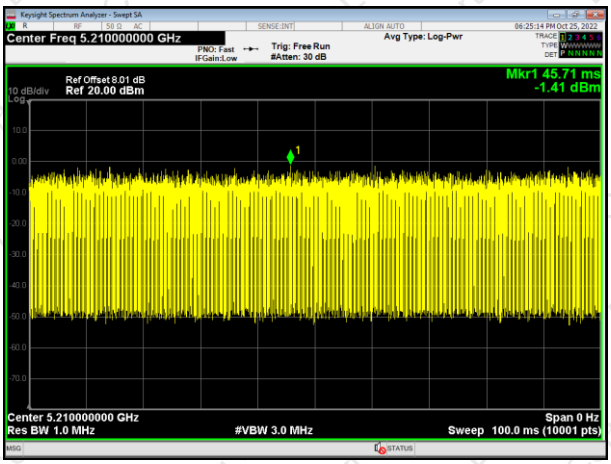


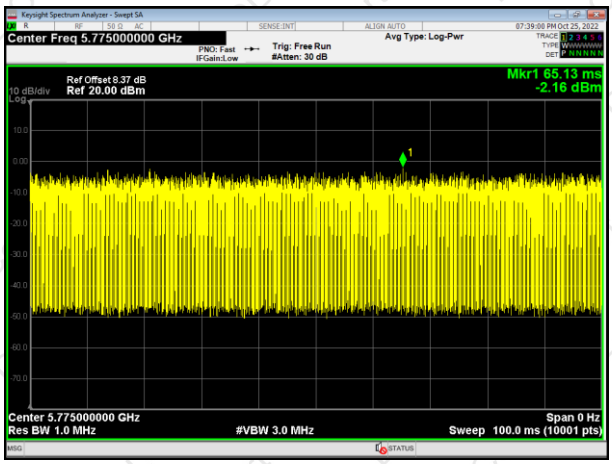
802.11n HT40





802.11ac HT80





8. FREQUENCY STABILITY

8.1 APPLIED PROCEDURES / LIMIT

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

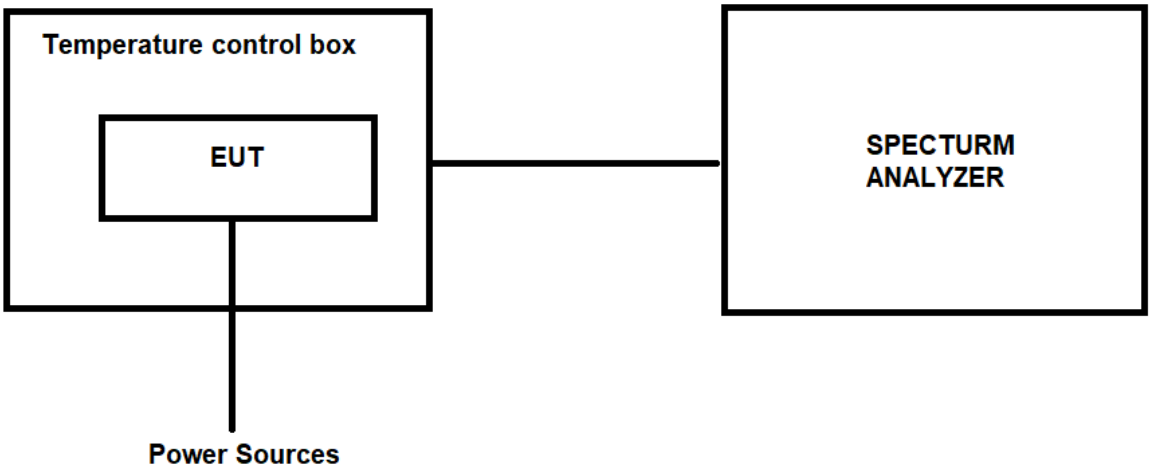
8.1.1 TEST PROCEDURE

1. The EUT was placed inside temperature chamber and powered and powered by nominal DC voltage.
2. Set EUT as normal operation.
3. Turn the EUT on and couple its output to spectrum.
4. Turn the EUT off and set the chamber to the highest temperature specified.
5. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT and measure the operating frequency.
6. Repeat step with the temperature chamber set to the lowest temperature.

8.1.2 DEVIATION FROM STANDARD

No deviation.

8.1.3 TEST SETUP



8.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

8.1.5 TEST RESULTS

Test Voltage	Test Temp.	Measured Frequency (MHz)	Spectrum Frequency (MHz)			Δ Frequency (MHz)		
			802.11a	802.11n HT20	802.11ac HT20	802.11a	802.11n HT20	802.11ac HT20
132V	-20℃	5180	5180.0323	5180.0352	5180.0345	-0.0323	-0.0352	-0.0345
		5220	5220.0351	5220.0314	5220.0363	-0.0351	-0.0314	-0.0363
		5240	5240.0231	5240.0261	5240.0251	-0.0231	-0.0261	-0.0251
		5745	5745.0363	5745.0337	5745.0313	-0.0363	-0.0337	-0.0313
		5785	5785.0385	5785.0345	5785.0331	-0.0385	-0.0345	-0.0331
		5825	5825.0341	5825.0376	5825.0350	-0.0341	-0.0376	-0.0350
108V		5180	5180.0234	5180.0235	5180.0232	-0.0234	-0.0235	-0.0232
		5220	5220.0322	5220.0352	5220.0346	-0.0322	-0.0352	-0.0346
		5240	5240.0264	5240.0263	5240.0235	-0.0264	-0.0263	-0.0235
		5745	5745.0220	5745.0224	5745.0227	-0.0220	-0.0224	-0.0227
		5785	5785.0382	5785.0312	5785.0342	-0.0382	-0.0312	-0.0342
		5825	5825.0447	5825.0457	5825.0466	-0.0447	-0.0457	-0.0466
120V	25℃	5180	5180.0542	5180.0531	5180.0570	-0.0542	-0.0531	-0.0570
		5220	5220.0260	5220.0287	5220.0262	-0.0260	-0.0287	-0.0262
		5240	5240.0358	5240.0340	5240.0343	-0.0358	-0.0340	-0.0343
		5745	5745.0342	5745.0322	5745.0352	-0.0342	-0.0322	-0.0352
		5785	5785.0483	5785.0414	5785.0464	-0.0483	-0.0414	-0.0464
		5825	5825.0225	5825.0283	5825.0240	-0.0225	-0.0283	-0.0240
132V	50℃	5180	5180.0317	5180.0362	5180.0352	-0.0317	-0.0362	-0.0352
		5220	5220.0275	5220.0240	5220.0237	-0.0275	-0.0240	-0.0237
		5240	5240.0326	5240.0351	5240.0373	-0.0326	-0.0351	-0.0373
		5745	5745.0662	5745.0635	5745.0654	-0.0662	-0.0635	-0.0654
		5785	5785.0422	5785.0422	5785.0441	-0.0422	-0.0422	-0.0441
		5825	5825.0672	5825.0616	5825.0646	-0.0672	-0.0616	-0.0646
108V	50℃	5180	5180.0312	5180.0320	5180.0363	-0.0312	-0.0320	-0.0363
		5220	5220.0214	5220.0264	5220.0275	-0.0214	-0.0264	-0.0275
		5240	5240.0325	5240.0352	5240.0353	-0.0325	-0.0352	-0.0353
		5745	5745.0431	5745.0434	5745.0435	-0.0431	-0.0434	-0.0435
		5785	5785.0252	5785.0253	5785.0242	-0.0252	-0.0253	-0.0242
		5825	5825.0725	5825.0724	5825.0752	-0.0725	-0.0724	-0.0752

Test Voltage	Test Temp.	Measured Frequency (MHz)	Spectrum Frequency (MHz)		Δ Frequency (MHz)	
			802.11n HT40	802.11ac HT40	802.11n HT40	802.11ac HT40
132V	-20℃	5190	5190.0214	5190.0234	-0.0214	-0.0234
		5230	5230.0329	5230.0368	-0.0329	-0.0368
		5755	5755.0556	5755.0557	-0.0556	-0.0557
		5795	5795.0618	5795.0615	-0.0618	-0.0615
108V		5190	5190.0254	5190.0232	-0.0254	-0.0232
		5230	5230.0326	5230.0347	-0.0326	-0.0347
		5755	5755.0245	5755.0670	-0.0245	-0.0670
		5795	5795.0448	5795.0478	-0.0448	-0.0478
120V	25℃	5190	5190.0274	5190.0256	-0.0274	-0.0256
		5230	5230.0670	5230.0655	-0.0670	-0.0655
		5755	5755.0253	5755.0268	-0.0253	-0.0268
		5795	5795.0566	5795.0536	-0.0566	-0.0536
132V	50℃	5190	5190.0658	5190.0645	-0.0658	-0.0645
		5230	5230.0565	5230.0557	-0.0565	-0.0557
		5755	5755.0470	5755.0438	-0.0470	-0.0438
		5795	5795.0365	5795.0324	-0.0365	-0.0324
108V	50℃	5190	5190.0555	5190.0550	-0.0555	-0.0550
		5230	5230.0338	5230.0336	-0.0338	-0.0336
		5755	5755.0314	5755.0337	-0.0314	-0.0337
		5795	5795.0467	5795.0446	-0.0467	-0.0446

Test Voltage	Test Temp.	Measured Frequency (MHz)	Spectrum Frequency (MHz)	Δ Frequency (MHz)
			802.11ac HT80	802.11ac HT80
132V	-20℃	5210	5210.0134	-0.0134
		5775	5775.0169	-0.0169
108V		5210	5210.0246	-0.0246
		5775	5775.0328	-0.0328
230V	25℃	5210	5210.0479	-0.0479
		5775	5775.0367	-0.0367
132V	50℃	5210	5210.0315	-0.0315
		5775	5775.0265	-0.0265
108V	50℃	5210	5210.0334	-0.0334
		5775	5775.0549	-0.0549

9. TRANSMISSION IN THE ABSENCE OF DATA

9.1 STANDARD REQUIREMENT

According to §15.407(c)

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization a description of how this requirement is met.

9.2 TEST RESULT

No non-compliance noted:
Refer to the theory of operation.

10. ANTENNA REQUIREMENT

10.1 STANDARD REQUIREMENT

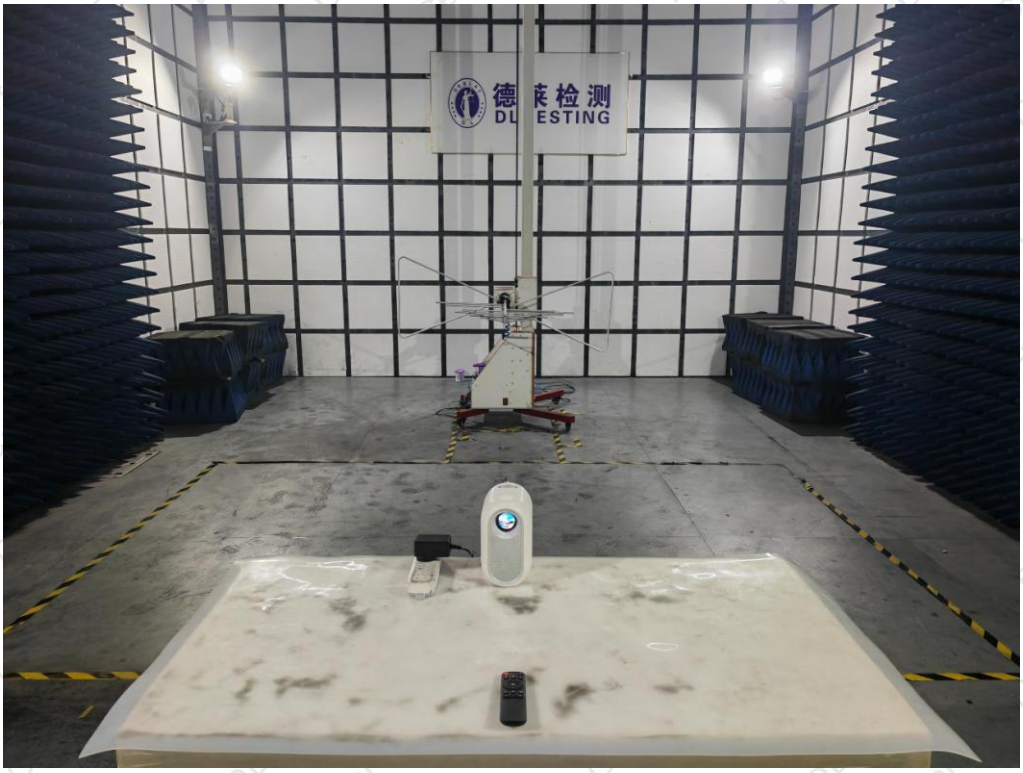
15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

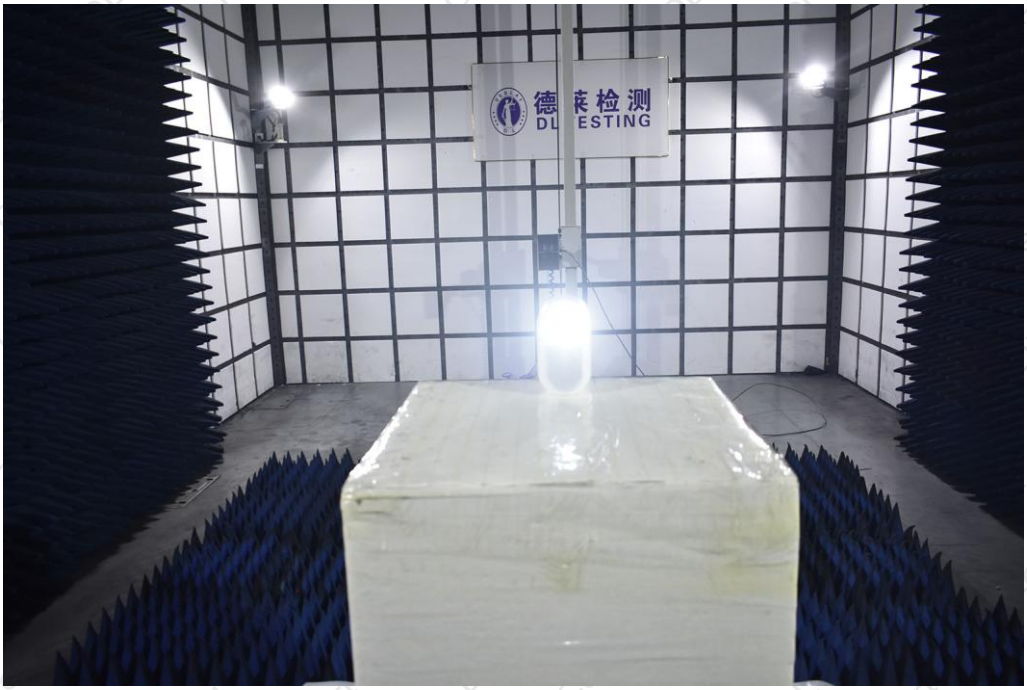
10.2 EUT ANTENNA

The EUT antenna is internal antenna, It comply with the standard requirement.

11. TEST SEUUP PHOTO

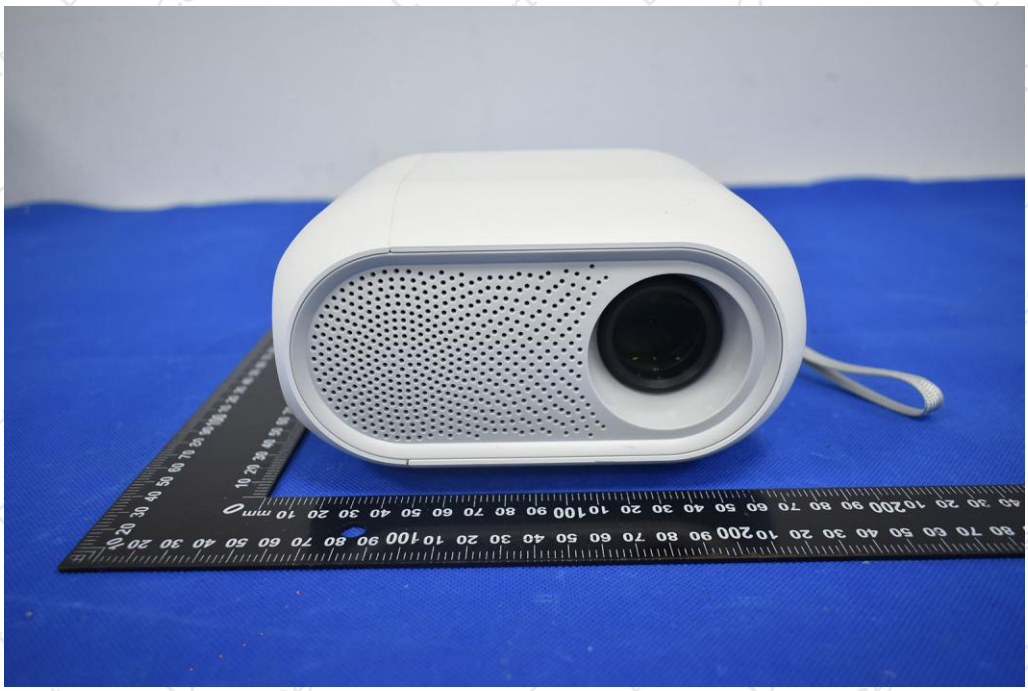
Radiated Measurement Photos

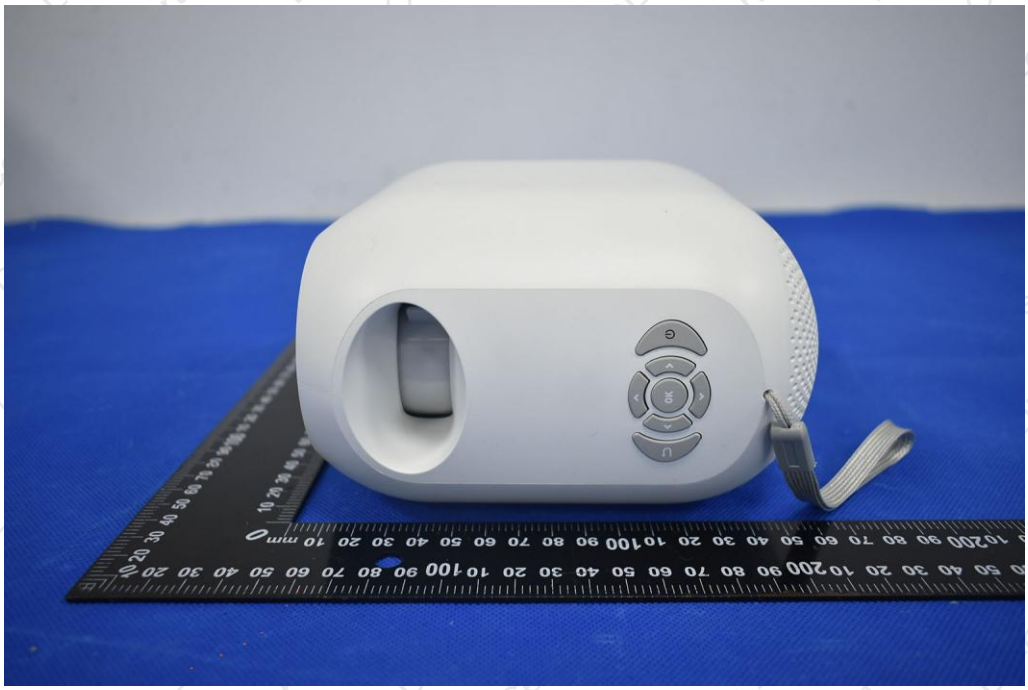




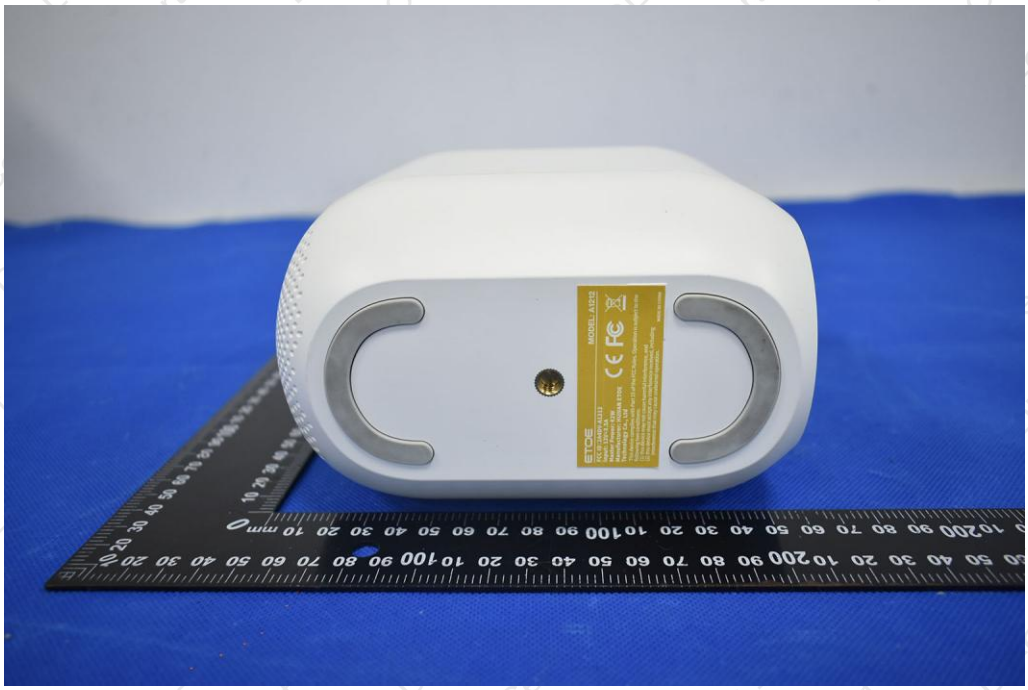
Conducted Measurement Photos

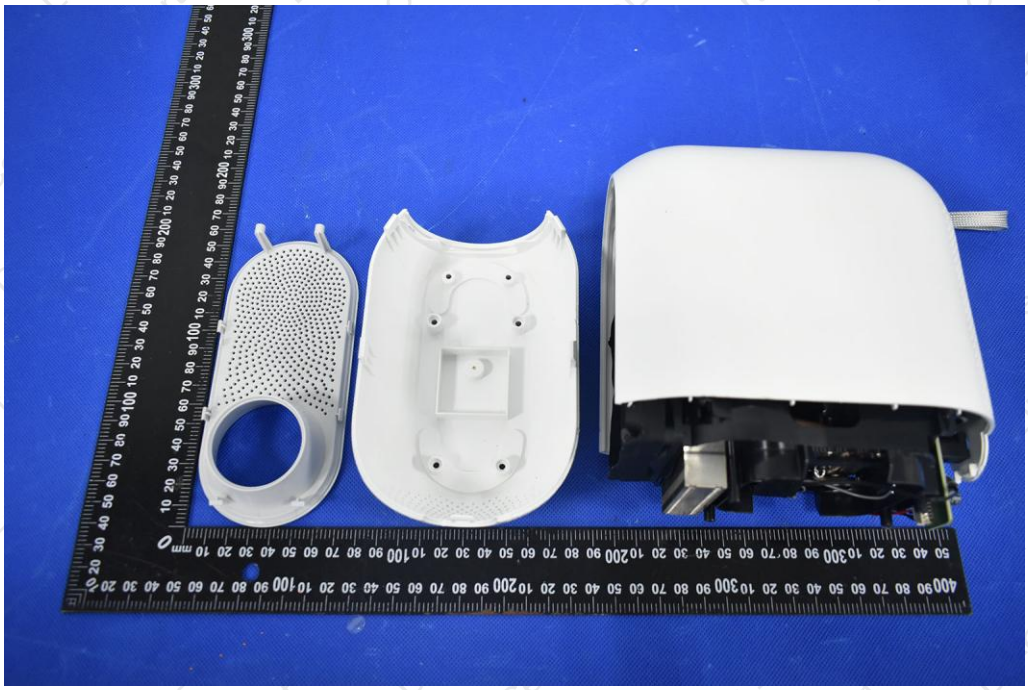
12. EUT PHOTO

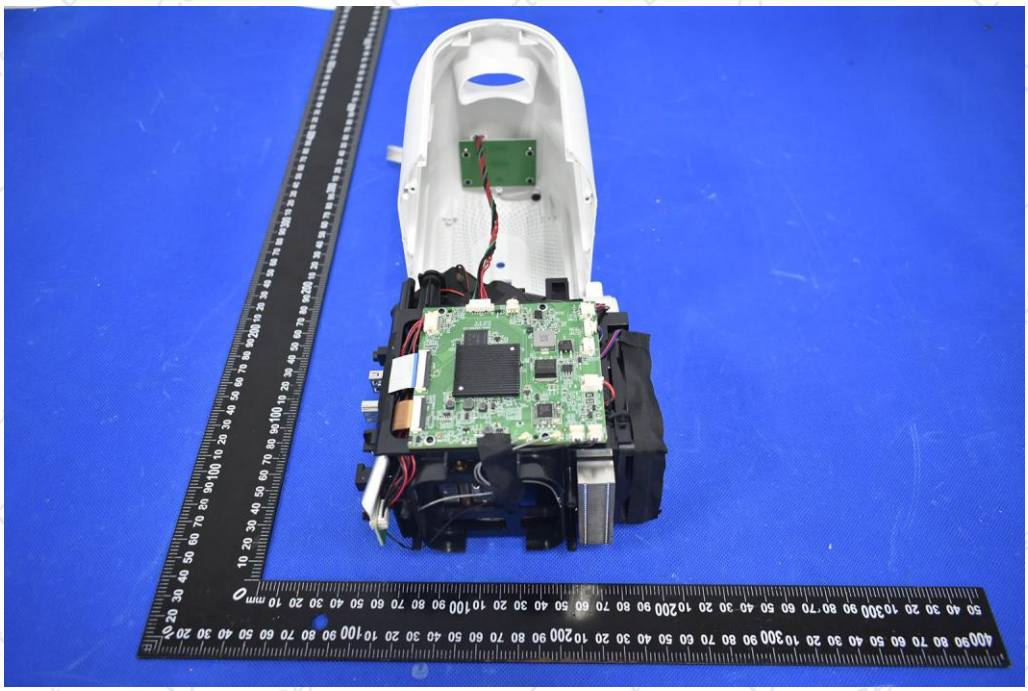


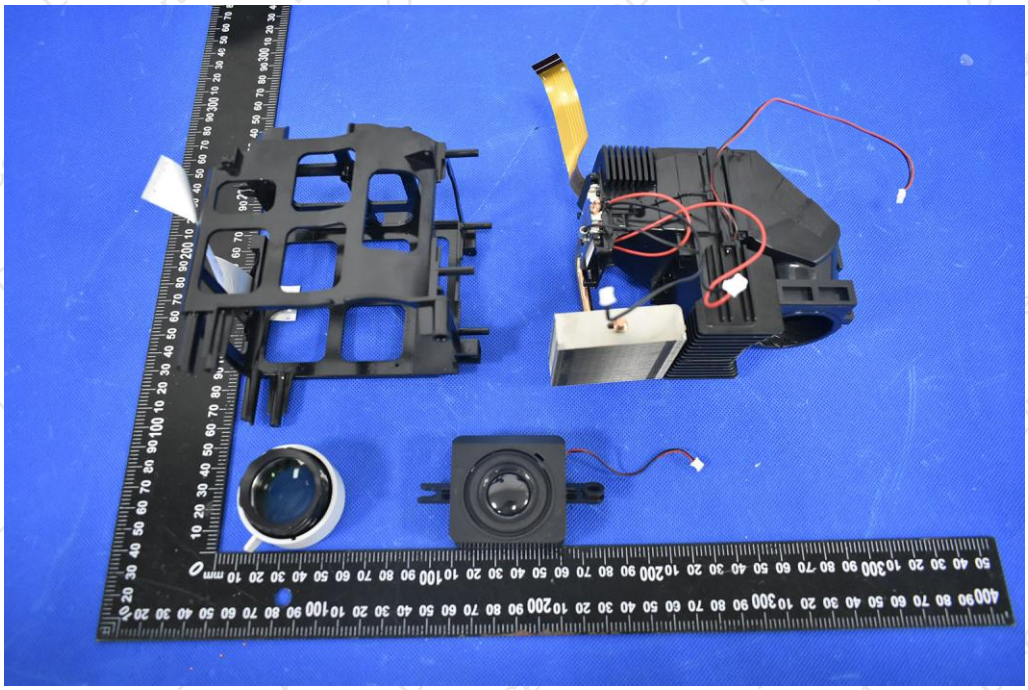



AUX
USB
HDMI
IR
DCIN









※※※※※ **END OF REPORT** ※※※※※