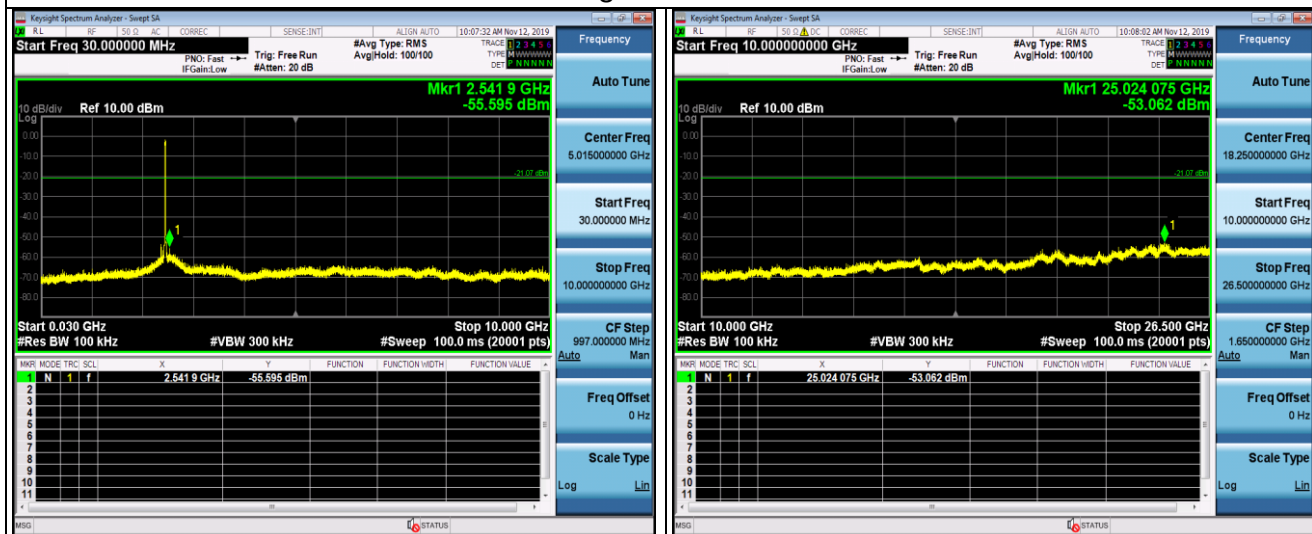


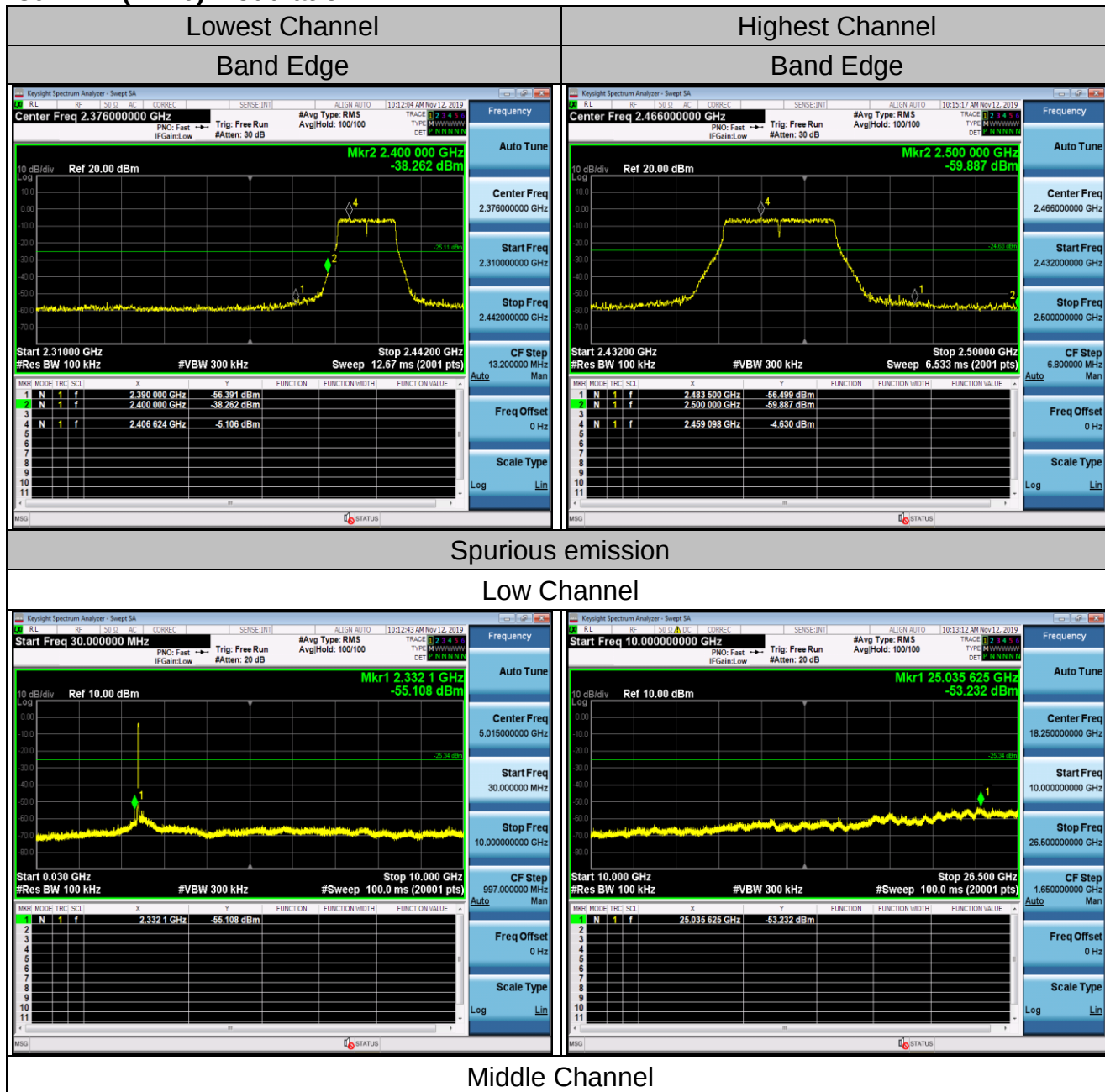


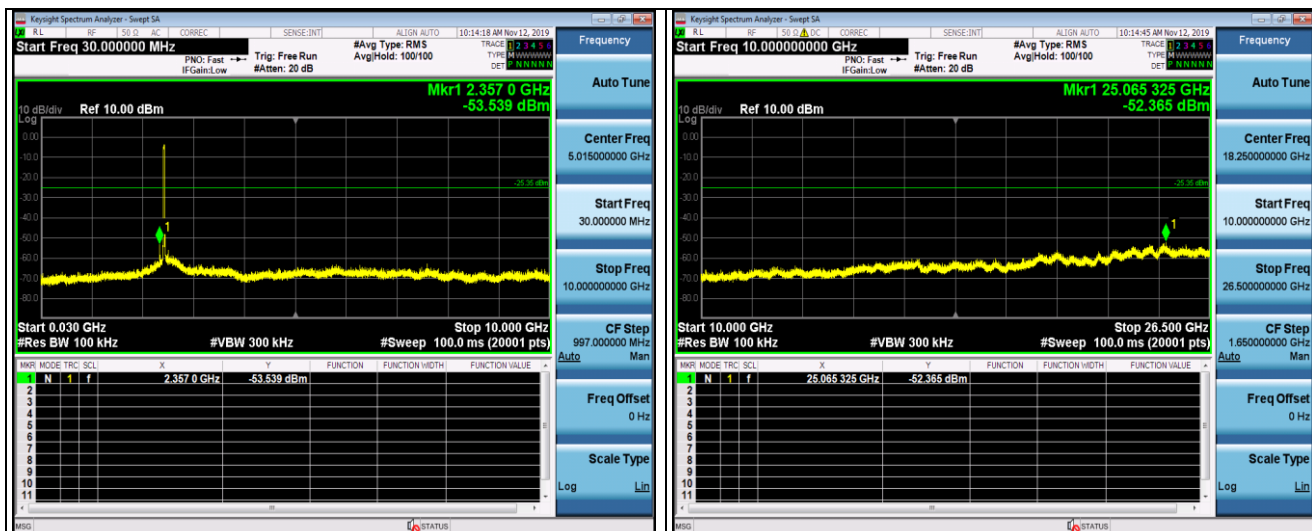
High Channel



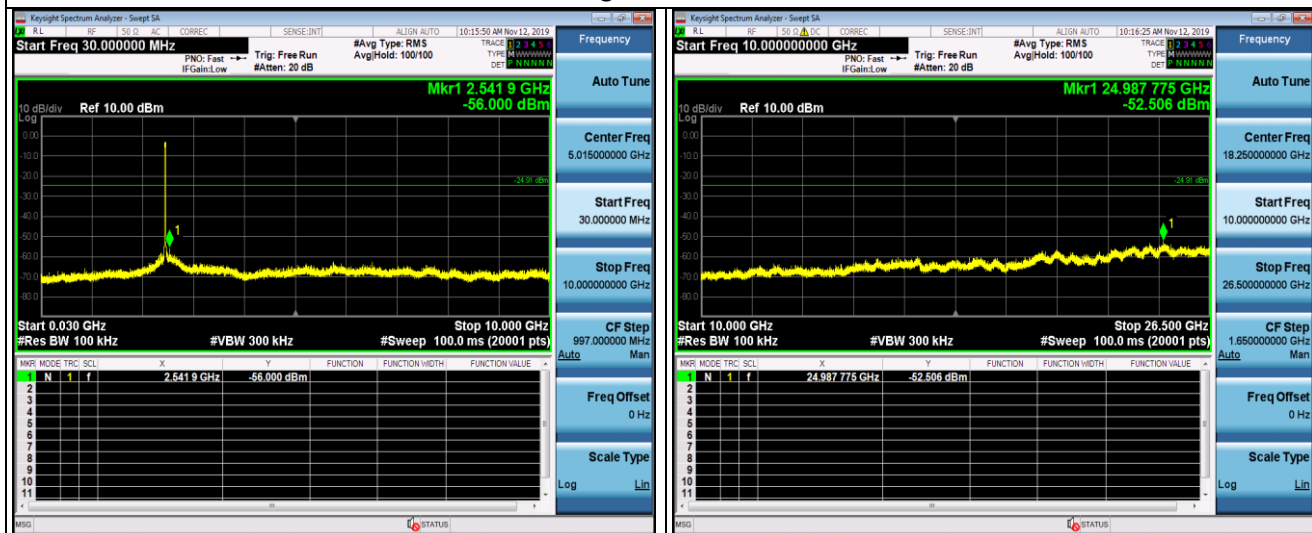


802.11n (HT20) Modulation





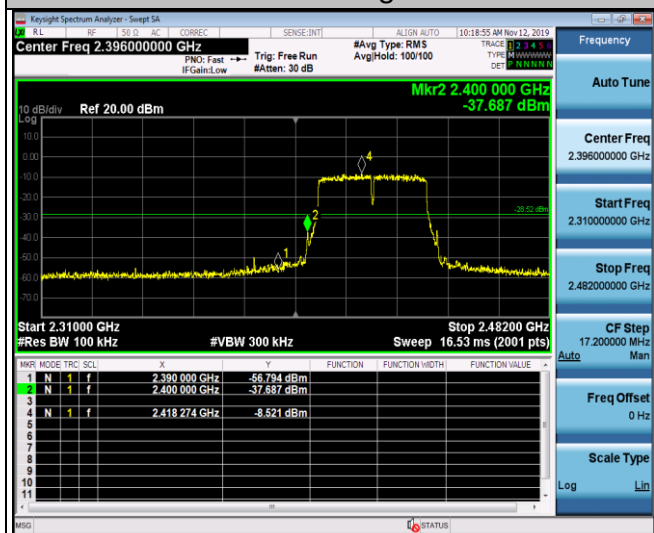
High Channel



802.11n (HT40) Modulation

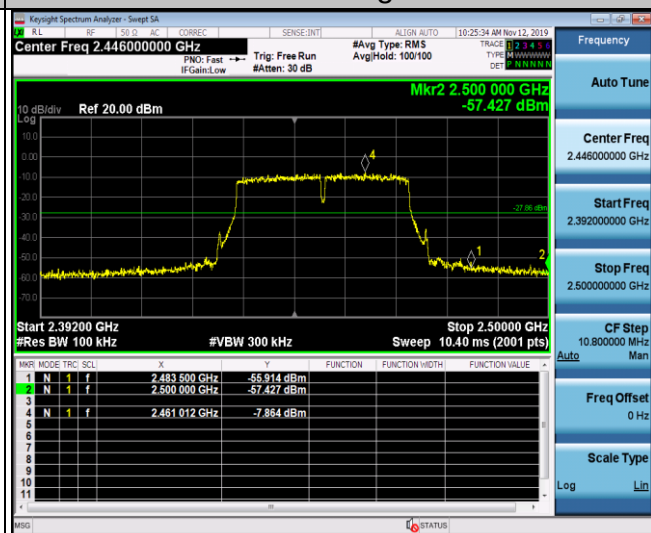
Lowest Channel

Band Edge



Highest Channel

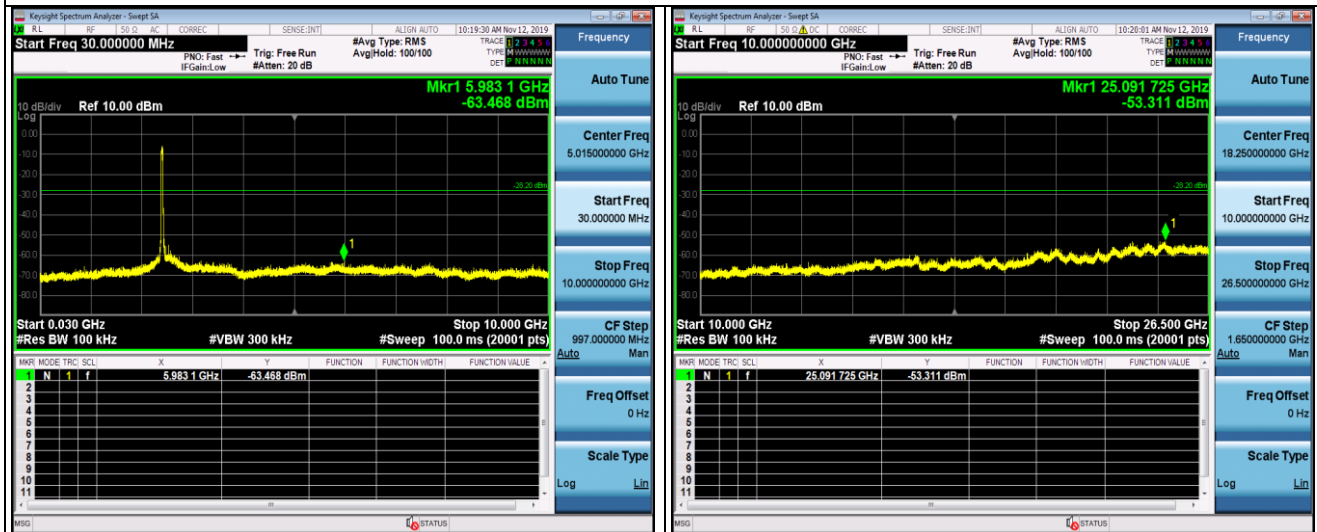
Band Edge



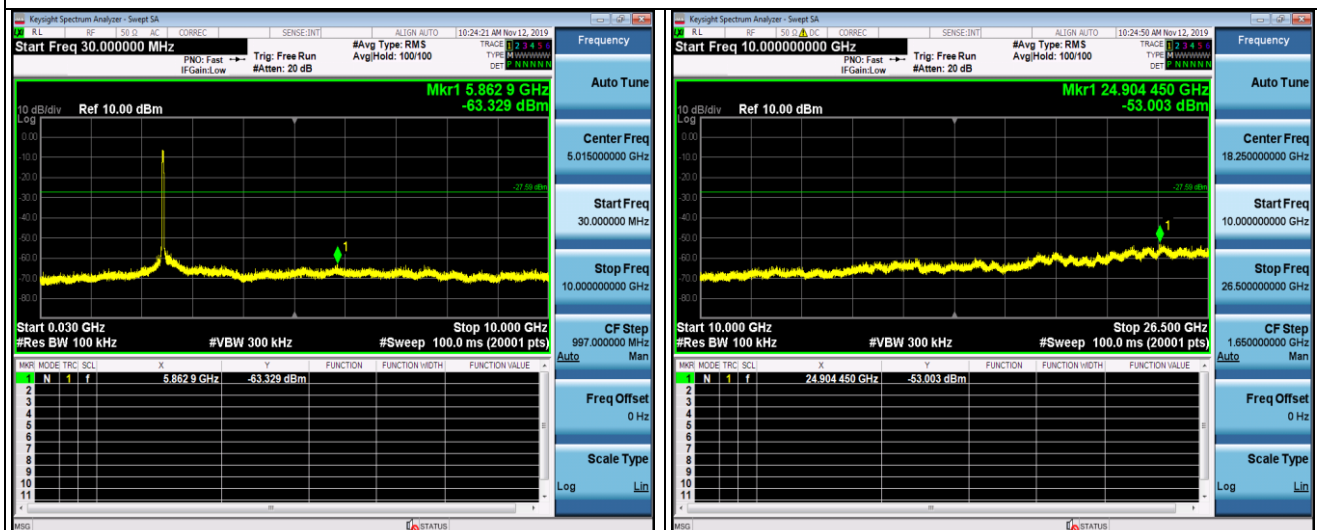


Spurious emission

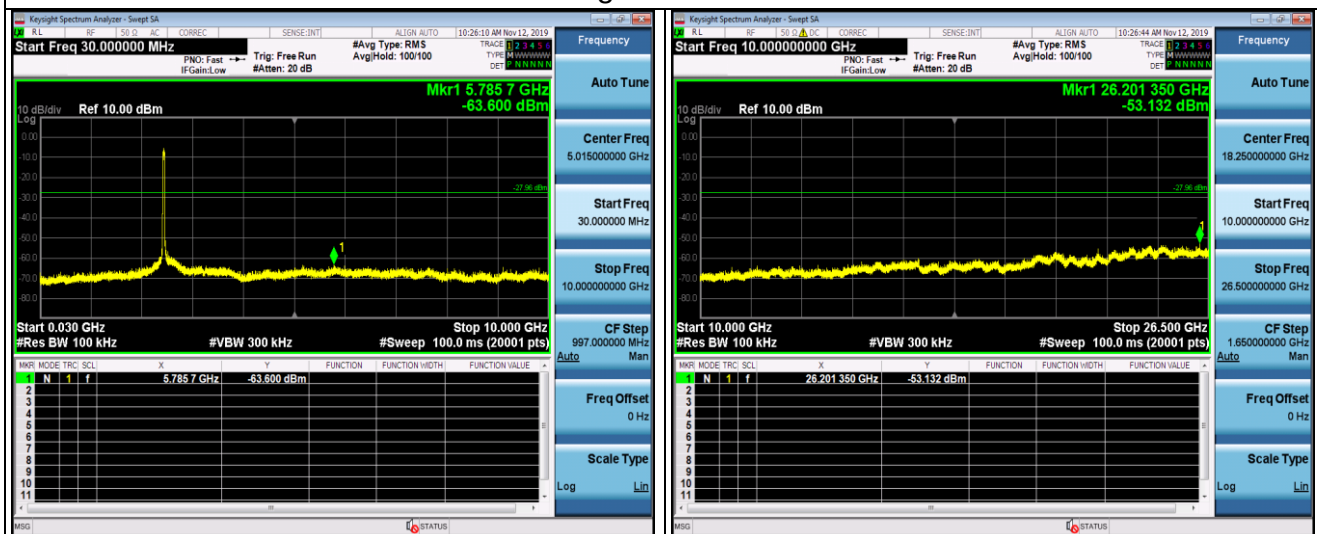
Low Channel



Middle Channel



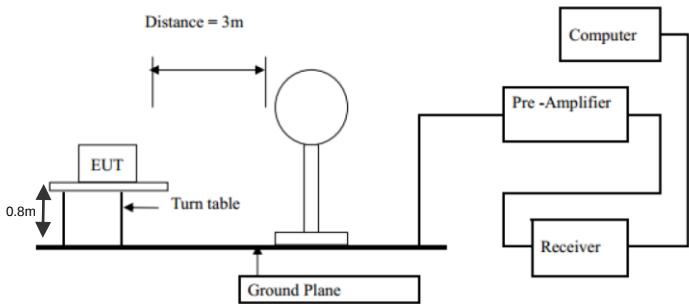
High Channel

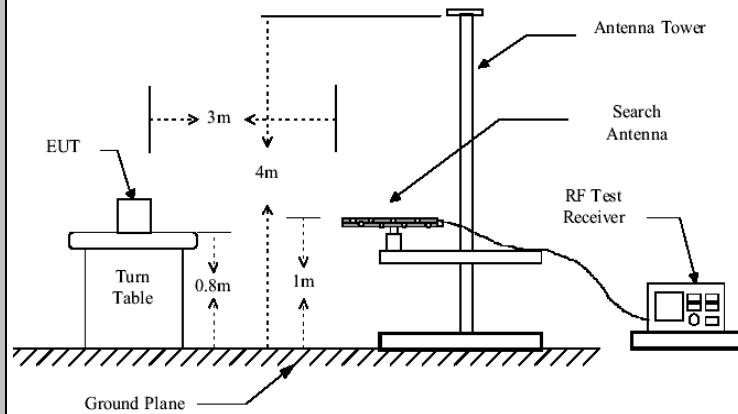




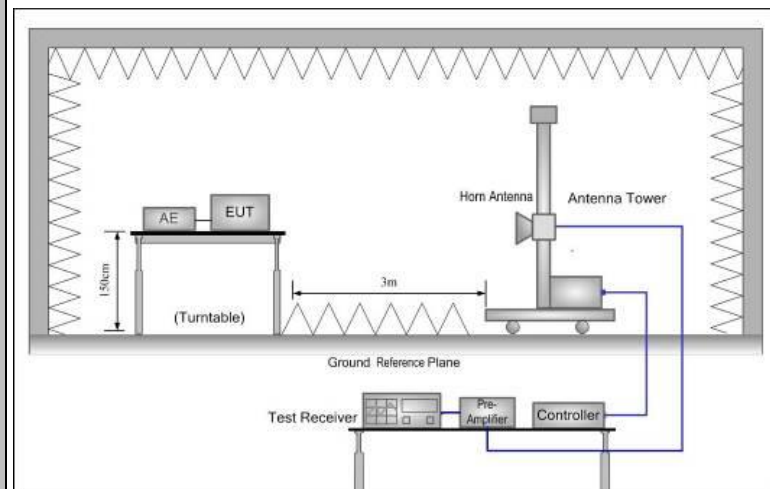
4.6. Radiated Spurious Emission Measurement

Test Specification

Test Requirement:	FCC Part15 C Section 15.209			
Test Method:	ANSI C63.10: 2013			
Frequency Range:	9 kHz to 25 GHz			
Measurement Distance:	3 m			
Antenna Polarization:	Horizontal & Vertical			
Operation mode:	Transmitting mode with modulation			
Receiver Setup:	Frequency	Detector	RBW	VBW
	9kHz- 150kHz	Quasi-peak	200Hz	1kHz
	150kHz- 30MHz	Quasi-peak	9kHz	30kHz
	30MHz-1GHz	Quasi-peak	120KHz	300KHz
	Above 1GHz	Peak	1MHz	3MHz
Limit:		Peak	1MHz	10Hz
				Average Value
Test setup:	Frequency	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	30	30	
	30-88	100	3	
Test setup:	88-216	150	3	
	216-960	200	3	
	Above 960	500	3	
Test setup:	Frequency	Field Strength (microvolts/meter)	Measurement Distance (meters)	Detector
	Above 1GHz	500	3	Average
		5000	3	Peak
Test setup:	For radiated emissions below 30MHz			
				
	30MHz to 1GHz			



Above 1GHz



Test Procedure:

- For the radiated emission test below 1GHz:
The EUT was placed on a turntable with 0.8 meter above ground. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a highPASS filter are used for the test in order to get better signal level.
For the radiated emission test above 1GHz:
Place the measurement antenna on a turntable with 1.5 meter above ground, which is away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which



	maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane. 3. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level 4. For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported. 5. Use the following spectrum analyzer settings: (1) Span shall wide enough to fully capture the emission being measured; (2) Set RBW=100 kHz for $f < 1$ GHz; $VBW \geq RBW$; Sweep = auto; Detector function = peak; Trace = max hold; (3) Set RBW = 1 MHz, VBW= 3MHz for $f \geq 1$ GHz for peak measurement. For average measurement: VBW = 10 Hz, when duty cycle is no less than 98 percent. $VBW \geq 1/T$, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.
Test results:	PASS

**Test Instruments**

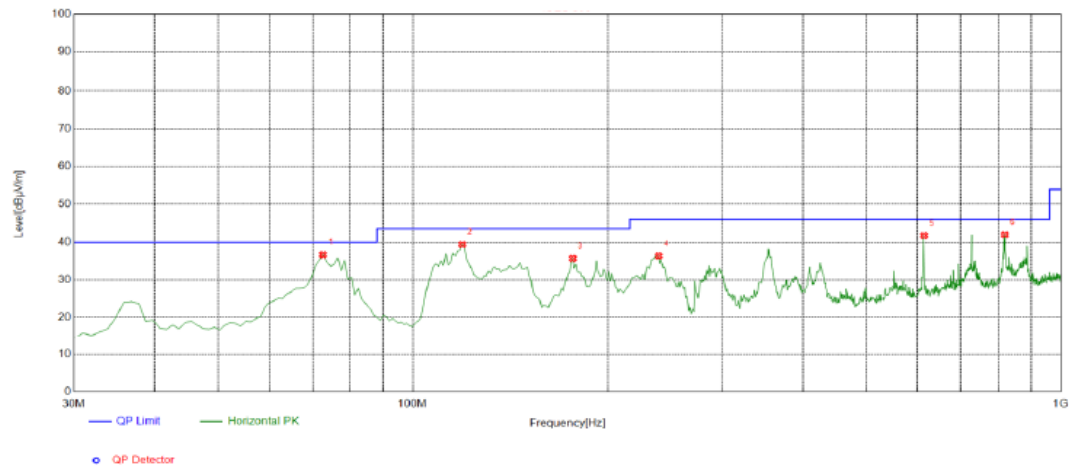
Radiated Emission Test Site (966)				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Receiver	R&S	ESCI-7	HKE-010	Dec. 27, 2019
Spectrum analyzer	Agilent	N9020A	HKE-048	Dec. 27, 2019
Preamplifier	EMCI	EMC051845S E	HKE-015	Dec. 27, 2019
Preamplifier	Agilent	83051A	HKE-016	Dec. 27, 2019
Loop antenna	Schwarzbeck	FMZB 1519 B	HKE-014	Dec. 26, 2019
Broadband antenna	Schwarzbeck	VULB 9163	HKE-012	Dec. 26, 2019
Horn antenna	Schwarzbeck	9120D	HKE-013	Dec. 26, 2019
Antenna Mast	Keleto	CC-A-4M	N/A	N/A
Position controller	Taiwan MF	MF7802	HKE-011	Dec. 27, 2019
Radiated test software	Tonscend	TS+ Rev 2.5.0.0	HKE-082	N/A
RF cable (9KHz-1GHz)	Times	381806-001	N/A	N/A
RF cable	Times	1-40G	HKE-034	Dec. 27, 2019
High Gain Antenna	Schwarzbeck	LB-180400KF	HKE-054	Dec. 27, 2018

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

**Test Data**

Temperature	22.8℃	Humidity	56%
Test Engineer	Eden Hu	Configurations	WIFI

Note: All the test modes completed for test. only the worst result of AC 120V/60Hz(802.11b at 2412MHz) was reported as below:

Below 1GHz**Horizontal****Test Graph****Suspected List**

Suspected List								
NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	72.6800	36.67	-18.15	40.00	3.33	100	225	Horizontal
2	119.240	39.39	-16.97	43.50	4.11	100	115	Horizontal
3	176.470	35.68	-17.01	43.50	7.82	100	254	Horizontal
4	239.520	36.38	-13.88	46.00	9.62	100	264	Horizontal
5	614.910	41.74	-5.54	46.00	4.26	100	38	Horizontal
6	819.580	41.97	-2.71	46.00	4.03	100	167	Horizontal

Remark: Margin = Limit – Level

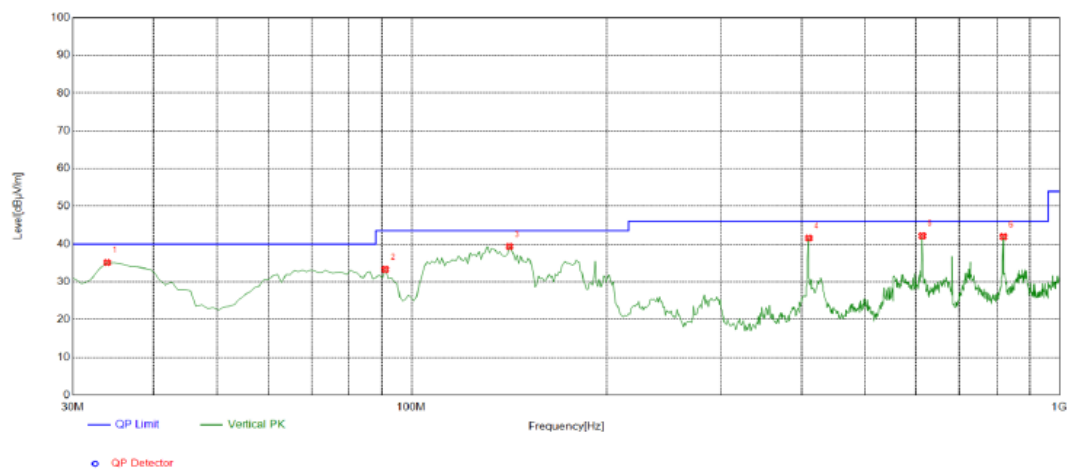
Correction factor = Cable lose + LISN insertion loss

Level=Test receiver reading + correction factor



Vertical

Test Graph



Suspected List

Suspected List								
NO.	Freq. [MHz]	Level [dBμV/m]	Factor [dB]	Limit [dBμV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	33.8800	35.09	-16.19	40.00	4.91	100	0	Vertical
2	91.1100	33.26	-16.88	43.50	10.24	100	177	Vertical
3	141.550	39.33	-19.14	43.50	4.17	100	332	Vertical
4	410.240	41.57	-10.22	46.00	4.43	100	261	Vertical
5	613.940	42.13	-5.54	46.00	3.87	100	177	Vertical
6	819.580	41.90	-2.71	46.00	4.10	100	116	Vertical

Remark: Margin = Limit – Level

Correction factor = Cable loss + LISN insertion loss

Level=Test receiver reading + correction factor

Harmonics and Spurious Emissions

Frequency Range (9 kHz-30MHz)

Frequency (MHz)	Level@3m (dBμV/m)	Limit@3m (dBμV/m)
--	--	--
--	--	--
--	--	--
--	--	--

Note:1. Emission Level=Reading+ Cable loss-Antenna factor-Amp factor

2. The emission levels are 20 dB below the limit value, which are not reported. It is deemed to comply with the requirement

**For 1GHz to 25GHz**

LOW CH1 (802.11b Mode)/2412MHz

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4824.00	55.71	-3.64	52.07	74	-21.93	Peak
4824.00	46.18	-3.64	42.54	54	-11.46	AVG
7236.00	56.45	-0.95	55.50	74	-18.50	Peak
7236.00	46.68	-0.95	45.73	54	-8.27	AVG

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4824.00	55.44	-3.64	51.80	74	-22.20	Peak
4824.00	47.67	-3.64	44.03	54	-9.97	AVG
7236.00	56.29	-0.95	55.34	74	-18.66	Peak
7236.00	46.06	-0.95	45.11	54	-8.89	AVG

MID CH6 (802.11b Mode)/2437

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.00	55.01	-3.51	51.50	74	-22.50	Peak
4874.00	47.40	-3.51	43.89	54	-10.11	AVG
7311.00	55.75	-0.82	54.93	74	-19.07	Peak
7311.00	46.47	-0.82	45.65	54	-8.35	AVG

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.00	56.65	-3.51	53.14	74	-20.86	Peak
4874.00	46.10	-3.51	42.59	54	-11.41	AVG
7311.00	55.52	-0.82	54.70	74	-19.30	Peak
7311.00	47.41	-0.82	46.59	54	-7.41	AVG

HIGH CH11 (802.11b Mode)/2462

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4924.00	56.28	-3.43	52.85	74	-21.15	Peak
4924.00	47.51	-3.43	44.08	54	-9.92	AVG
7386.00	56.45	-0.75	55.70	74	-18.30	Peak
7386.00	47.32	-0.75	46.57	54	-7.43	AVG



Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4924.00	55.81	-3.43	52.38	74	-21.62	Peak
4924.00	47.78	-3.43	44.35	54	-9.65	AVG
7386.00	55.76	-0.75	55.01	74	-18.99	Peak
7386.00	47.09	-0.75	46.34	54	-7.66	AVG

LOW CH1 (802.11g Mode)/2412

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4824.00	55.91	-3.64	52.27	74	-21.73	Peak
4824.00	47.50	-3.64	43.86	54	-10.14	AVG
7236.00	54.99	-0.95	54.04	74	-19.96	Peak
7236.00	47.16	-0.95	46.21	54	-7.79	AVG

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4824.00	56.69	-3.64	53.05	74	-20.95	Peak
4824.00	46.02	-3.64	42.38	54	-11.62	AVG
7236.00	56.21	-0.95	55.26	74	-18.74	Peak
7236.00	46.88	-0.95	45.93	54	-8.07	AVG

MID CH6 (802.11g Mode)/2437

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.00	56.12	-3.51	52.61	74	-21.39	Peak
4874.00	46.85	-3.51	43.34	54	-10.66	AVG
7311.00	55.86	-0.82	55.04	74	-18.96	Peak
7311.00	45.97	-0.82	45.15	54	-8.85	AVG

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.00	56.03	-3.51	52.52	74	-21.48	Peak
4874.00	46.05	-3.51	42.54	54	-11.46	AVG
7311.00	56.24	-0.82	55.42	74	-18.58	Peak
7311.00	47.44	-0.82	46.62	54	-7.38	AVG



HIGH CH11 (802.11g Mode)/2462

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4924.00	55.73	-3.43	52.30	74	-21.70	Peak
4924.00	47.25	-3.43	43.82	54	-10.18	AVG
7386.00	55.04	-0.75	54.29	74	-19.71	Peak
7386.00	47.23	-0.75	46.48	54	-7.52	AVG

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4924.00	56.03	-3.43	52.60	74	-21.40	Peak
4924.00	46.95	-3.43	43.52	54	-10.48	AVG
7386.00	54.81	-0.75	54.06	74	-19.94	Peak
7386.00	46.58	-0.75	45.83	54	-8.17	AVG

LOW CH1 (802.11n/H20 Mode)/2412

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4824.00	55.70	-3.64	52.06	74	-21.94	Peak
4824.00	46.90	-3.64	43.26	54	-10.74	AVG
7236.00	55.41	-0.95	54.46	74	-19.54	Peak
7236.00	45.99	-0.95	45.04	54	-8.96	AVG

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4824.00	56.99	-3.64	53.35	74	-20.65	Peak
4824.00	46.87	-3.64	43.23	54	-10.77	AVG
7236.00	54.84	-0.95	53.89	74	-20.11	Peak
7236.00	46.82	-0.95	45.87	54	-8.13	AVG

MID CH6 (802.11n/H20 Mode)/2437

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.00	56.82	-3.51	53.31	74	-20.69	Peak
4874.00	47.34	-3.51	43.83	54	-10.17	AVG
7311.00	56.15	-0.82	55.33	74	-18.67	Peak
7311.00	47.30	-0.82	46.48	54	-7.52	AVG



Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.00	55.54	-3.51	52.03	74	-21.97	Peak
4874.00	47.29	-3.51	43.78	54	-10.22	AVG
7311.00	55.61	-0.82	54.79	74	-19.21	Peak
7311.00	47.66	-0.82	46.84	54	-7.16	AVG

HIGH CH11 (802.11n/H20 Mode)/2462

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4924.00	56.15	-3.43	52.72	74	-21.28	Peak
4924.00	46.17	-3.43	42.74	54	-11.26	AVG
7386.00	55.14	-0.75	54.39	74	-19.61	Peak
7386.00	46.05	-0.75	45.30	54	-8.70	AVG

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4924.00	55.06	-3.43	51.63	74	-22.37	Peak
4924.00	47.90	-3.43	44.47	54	-9.53	AVG
7386.00	54.76	-0.75	54.01	74	-19.99	Peak
7386.00	45.83	-0.75	45.08	54	-8.92	AVG

LOW CH3 (802.11n/H40 Mode)/2422

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4844.00	57.75	-3.63	54.12	74	-19.88	Peak
4844.00	46.29	-3.63	42.66	54	-11.34	AVG
7266.00	55.11	-0.94	54.17	74	-19.83	Peak
7266.00	47.14	-0.94	46.20	54	-7.80	AVG

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4844.00	57.83	-3.63	54.20	74	-19.80	Peak
4844.00	47.63	-3.63	44.00	54	-10.00	AVG
7266.00	57.06	-0.94	56.12	74	-17.88	Peak
7266.00	45.82	-0.94	44.88	54	-9.12	AVG



MID CH6 (802.11n/H40 Mode)/2437

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.00	57.34	-3.51	53.83	74	-20.17	Peak
4874.00	46.95	-3.51	43.44	54	-10.56	AVG
7311.00	56.10	-0.82	55.28	74	-18.72	Peak
7311.00	46.46	-0.82	45.64	54	-8.36	AVG

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4874.00	55.76	-3.51	52.25	74	-21.75	Peak
4874.00	46.91	-3.51	43.40	54	-10.60	AVG
7311.00	57.05	-0.82	56.23	74	-17.77	Peak
7311.00	47.63	-0.82	46.81	54	-7.19	AVG

HIGH CH9 (802.11n/H40 Mode)/2452

Horizontal:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4904.00	55.03	-3.43	51.60	74	-22.40	Peak
4904.00	46.50	-3.43	43.07	54	-10.93	AVG
7356.00	56.03	-0.75	55.28	74	-18.72	Peak
7356.00	47.74	-0.75	46.99	54	-7.01	AVG

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
4904.00	55.54	-3.43	52.11	74	-21.89	Peak
4904.00	46.29	-3.43	42.86	54	-11.14	AVG
7356.00	55.14	-0.75	54.39	74	-19.61	Peak
7356.00	46.63	-0.75	45.88	54	-8.12	AVG

Notes:

- 1). Radiated emissions measured in frequency range from 1GHz~10th harmonic of foundation(ex. 26GHz) with an instrument using Peak/AV detector.
- 2). Only the worst emission points were reported, these emission levels which were -20dB below the limit were not recorded.
- 3). Factor (dB)= Ant. Fac (dB/m)+ Cab. Loss (dB)- Pre. Fac.(dB)
- 4). Emission Level (dBuV/m) = Reading (dBuV)+ Factor (dB)
- 5). Margin = Emission Level (dBuV/m)- Limit(dBuV/m)

**Test Result of Radiated Spurious at Band edges**

Operation Mode:
802.11b Mode TX CH Low (2412MHz)

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2310	57.52	-5.81	51.71	74	-22.29	Peak
2310	48.17	-5.81	42.36	54	-11.64	AVG
2390	56.23	-5.84	50.39	74	-23.61	Peak
2390	48.21	-5.84	42.37	54	-11.63	AVG
2400	56.80	-5.84	50.96	74	-23.04	Peak
2400	48.12	-5.84	42.28	54	-11.72	AVG

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2310	54.58	-5.81	48.77	74	-25.23	Peak
2310	50.73	-5.81	44.92	54	-9.08	AVG
2390	56.24	-5.84	50.40	74	-23.60	Peak
2390	47.75	-5.84	41.91	54	-12.09	AVG
2400	56.84	-5.84	51.00	74	-23.00	Peak
2400	48.28	-5.84	42.44	54	-11.56	AVG

Operation Mode: TX CH High (2462MHz)

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	56.70	-6.04	50.66	74	-23.34	Peak
2483.5	50.61	-6.04	44.57	54	-9.43	AVG
2500	56.03	-6.06	49.97	74	-24.03	Peak
2500	47.74	-6.06	41.68	54	-12.32	AVG

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	54.32	-6.04	48.28	74	-25.72	Peak
2483.5	50.21	-6.04	44.17	54	-9.83	AVG
2500	57.41	-6.06	51.35	74	-22.65	Peak
2500	48.40	-6.06	42.34	54	-11.66	AVG



Operation Mode: 802.11g Mode TX CH Low (2412MHz)

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2310	57.51	-5.81	51.70	74	-22.30	Peak
2310	50.67	-5.81	44.86	54	-9.14	AVG
2390	56.09	-5.84	50.25	74	-23.75	Peak
2390	47.56	-5.84	41.72	54	-12.28	AVG
2400	56.07	-5.84	50.23	74	-23.77	Peak
2400	48.09	-5.84	42.25	54	-11.75	AVG

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2310	57.71	-5.81	51.90	74	-22.10	Peak
2310	48.82	-5.81	43.01	54	-10.99	AVG
2390	57.09	-5.84	51.25	74	-22.75	Peak
2390	48.83	-5.84	42.99	54	-11.01	AVG
2400	57.33	-5.84	51.49	74	-22.51	Peak
2400	48.95	-5.84	43.11	54	-10.89	AVG

Operation Mode: TX CH High (2462MHz)

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	54.31	-6.04	48.27	74	-25.73	Peak
2483.5	48.31	-6.04	42.27	54	-11.73	AVG
2500	57.27	-6.06	51.21	74	-22.79	Peak
2500	48.93	-6.06	42.87	54	-11.13	AVG
Remark :Factor= Antenna Factor + Cable Loss - Pre-amplifier						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	55.37	-6.04	49.33	74	-24.67	Peak
2483.5	48.35	-6.04	42.31	54	-11.69	AVG
2500	56.64	-6.06	50.58	74	-23.42	Peak
2500	48.40	-6.06	42.34	54	-11.66	AVG



Operation Mode: 802.11n/H20 Mode TX CH Low (2412MHz)

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2310	55.42	-5.81	49.61	74	-24.39	Peak
2310	49.98	-5.81	44.17	54	-9.83	AVG
2390	56.10	-5.84	50.26	74	-23.74	Peak
2390	48.34	-5.84	42.50	54	-11.50	AVG
2400	56.68	-5.84	50.84	74	-23.16	Peak
2400	48.50	-5.84	42.66	54	-11.34	AVG

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2310	56.39	-5.81	50.58	74	-23.42	Peak
2310	48.07	-5.81	42.26	54	-11.74	AVG
2390	57.57	-5.84	51.73	74	-22.27	Peak
2390	48.38	-5.84	42.54	54	-11.46	AVG
2400	56.42	-5.84	50.58	74	-23.42	Peak
2400	48.39	-5.84	42.55	54	-11.45	AVG

Operation Mode: TX CH High (2462MHz)

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	54.48	-6.04	48.44	74	-25.56	Peak
2483.5	48.54	-6.04	42.50	54	-11.50	AVG
2500	57.62	-6.06	51.56	74	-22.44	Peak
2500	47.33	-6.06	41.27	54	-12.73	AVG

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	55.33	-6.04	49.29	74	-24.71	Peak
2483.5	48.10	-6.04	42.06	54	-11.94	AVG
2500	56.90	-6.06	50.84	74	-23.16	Peak
2500	48.72	-6.06	42.66	54	-11.34	AVG



Operation Mode: 802.11n/H40 Mode TX CH Low (2422MHz)

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2310	56.66	-5.81	50.85	74	-23.15	Peak
2310	50.70	-5.81	44.89	54	-9.11	AVG
2390	55.98	-5.84	50.14	74	-23.86	Peak
2390	47.47	-5.84	41.63	54	-12.37	AVG
2400	57.43	-5.84	51.59	74	-22.41	Peak
2400	49.67	-5.84	43.83	54	-10.17	AVG

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2310	56.67	-5.81	50.86	74	-23.14	Peak
2310	50.33	-5.81	44.52	54	-9.48	AVG
2390	56.88	-5.84	51.04	74	-22.96	Peak
2390	47.65	-5.84	41.81	54	-12.19	AVG
2400	56.43	-5.84	50.59	74	-23.41	Peak
2400	49.27	-5.84	43.43	54	-10.57	AVG

Operation Mode: TX CH High (2452MHz)

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	55.10	-6.04	49.06	74	-24.94	Peak
2483.5	49.24	-6.04	43.20	54	-10.80	AVG
2500	57.94	-6.06	51.88	74	-22.12	Peak
2500	47.07	-6.06	41.01	54	-12.99	AVG

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
2483.5	55.57	-6.04	49.53	74	-24.47	Peak
2483.5	50.46	-6.04	44.42	54	-9.58	AVG
2500	57.65	-6.06	51.59	74	-22.41	Peak
2500	47.39	-6.06	41.33	54	-12.67	AVG

Notes:

- 1). Factor (dB)= Ant. Fac (dB/m)+ Cab. Loss (dB)- Pre. Fac.(dB)
- 2). Emission Level (dBuV/m) = Reading (dBuV)+ Factor (dB)
- 3). Margin = Emission Level (dBuV/m)- Limit(dBuV/m)





4.7. ANTENNA REQUIREMENT

Standard Applicable

For intentional device, according to FCC 47 CFR Section 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. And according to FCC 47 CFR Section 15.247, if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

Refer to statement below for compliance.

The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited. Further, this requirement does not apply to intentional radiators that must be professionally installed.

Antenna Connected Construction

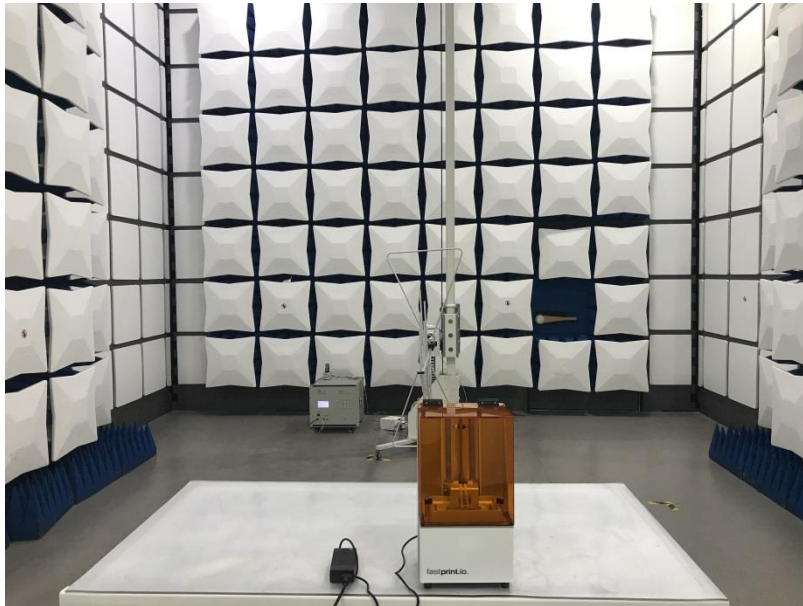
The antenna used in this product is a Chip Antenna, The directional gains of antenna used for transmitting is 1.5dBi.

Chip ANTENNA

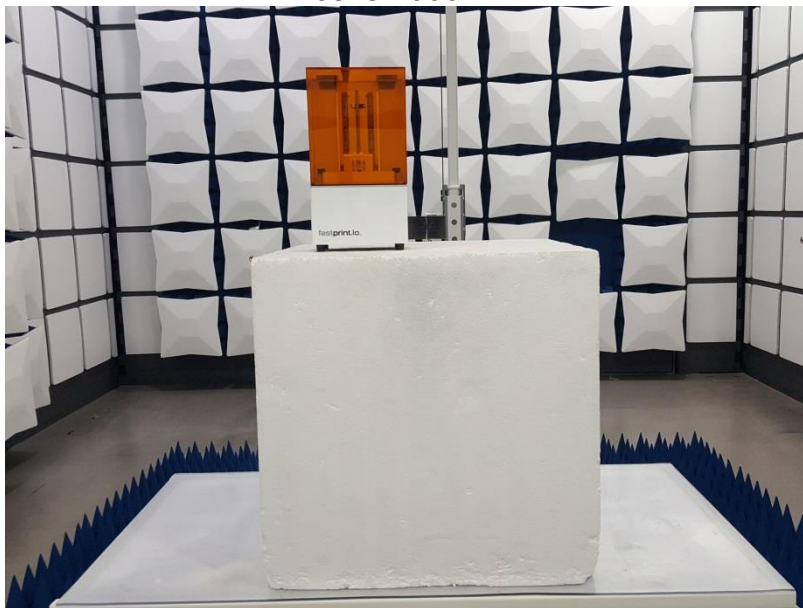


4.8. PHOTOGRAPH OF TEST

30MHz-1000MHz

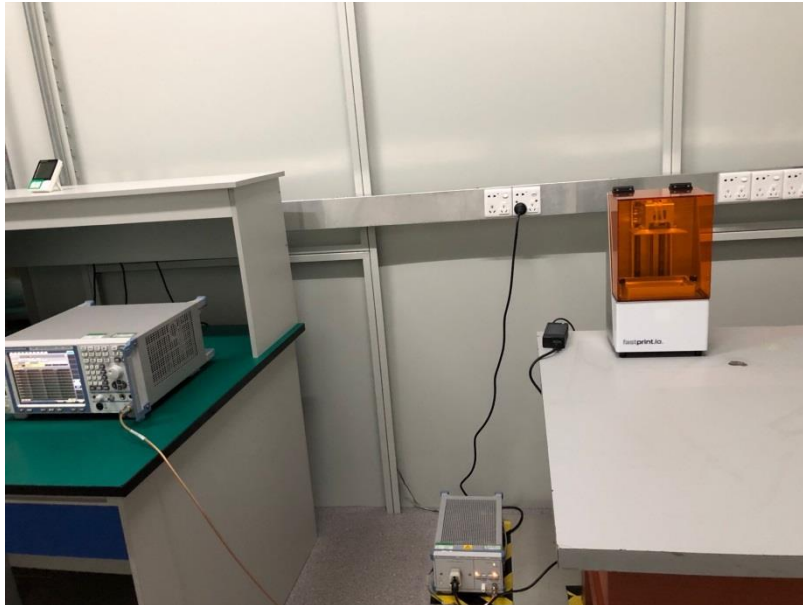


Above 1000MHz



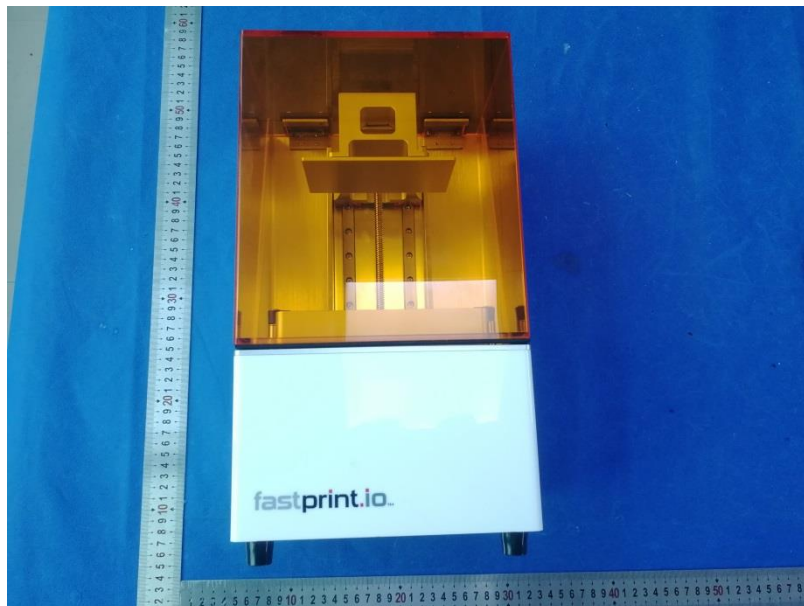


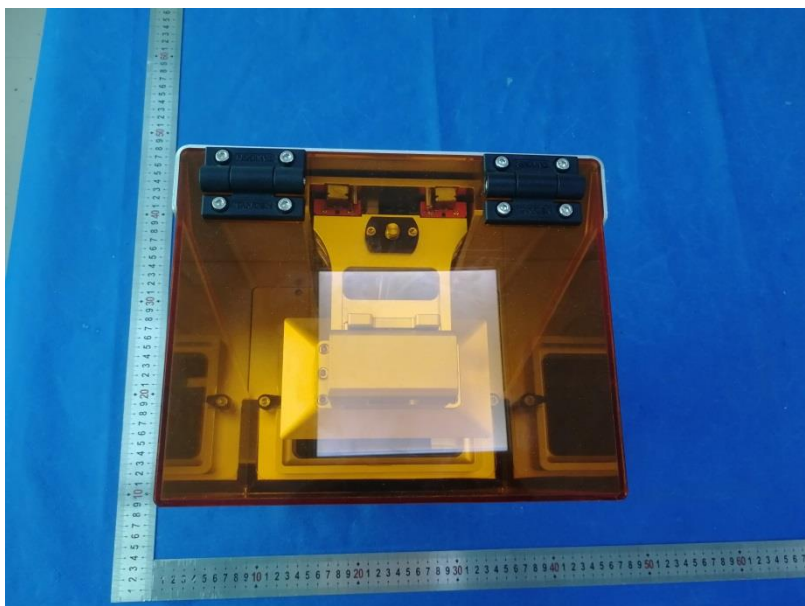
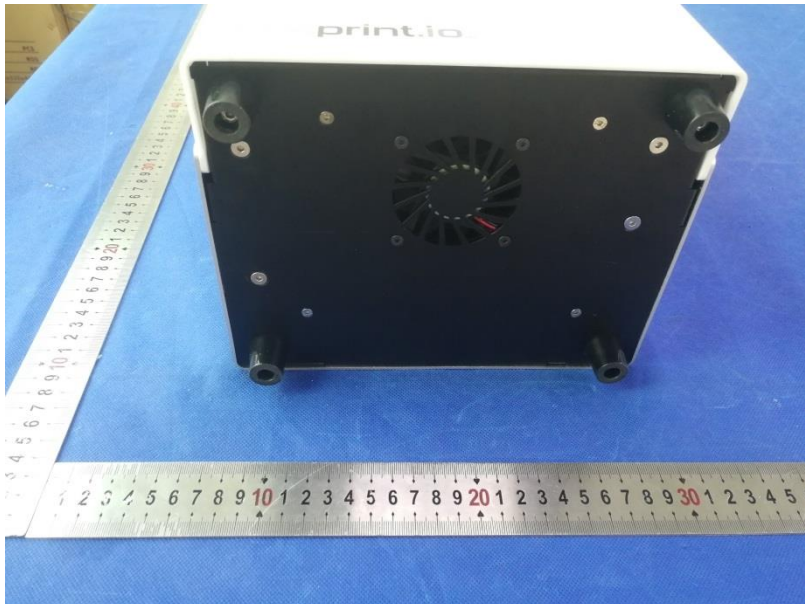
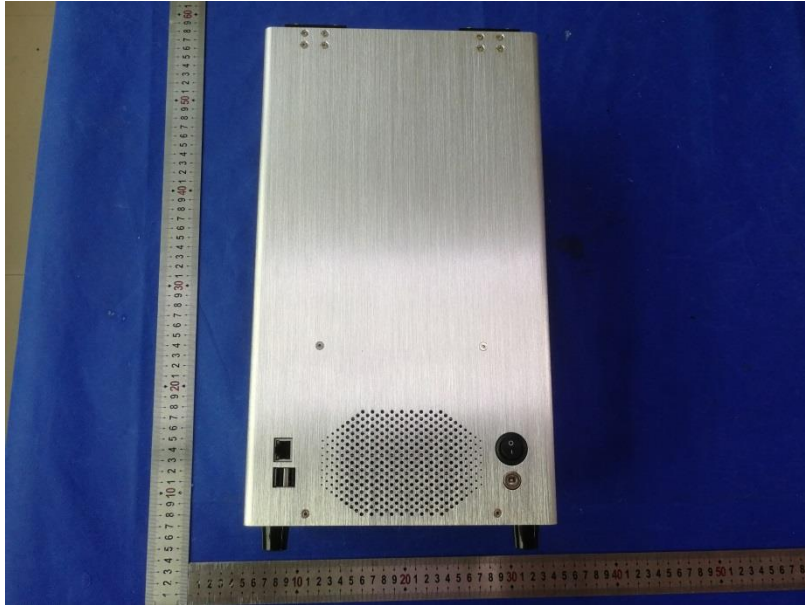
Conducted Emission

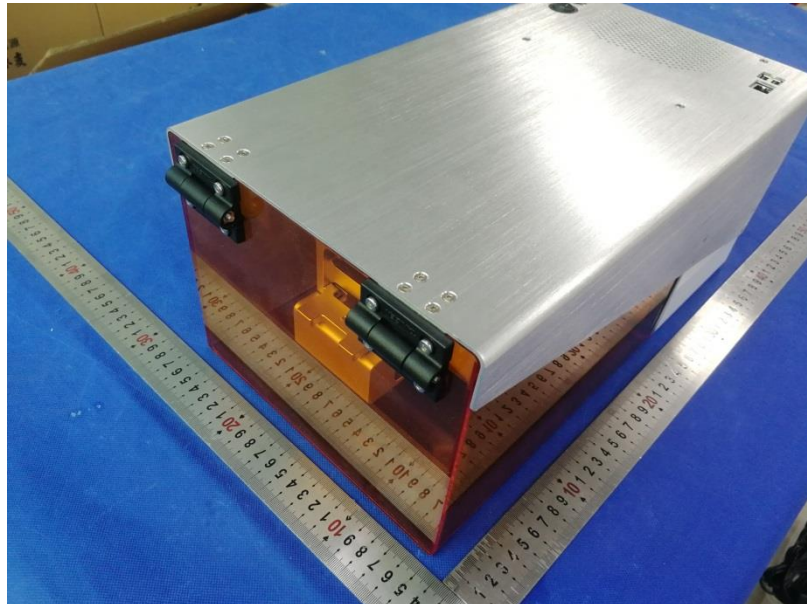
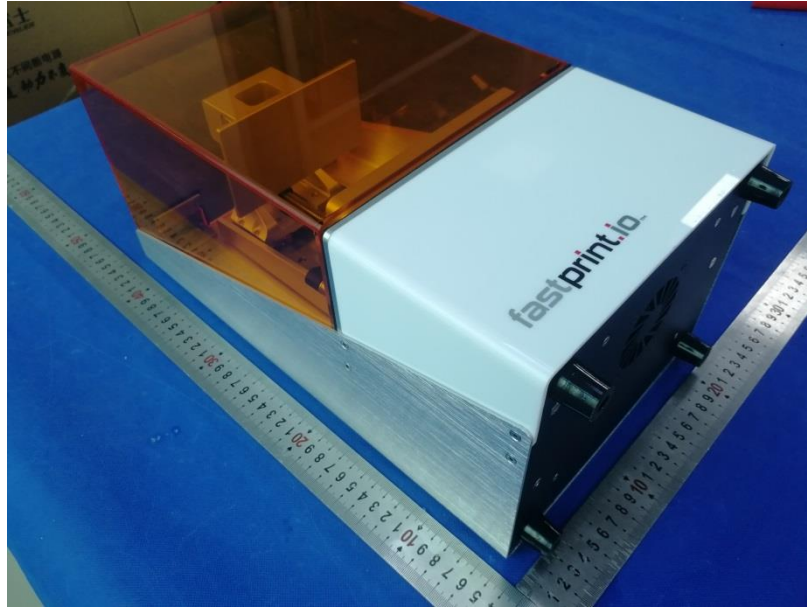


5. PHOTOS OF THE EUT

External photos

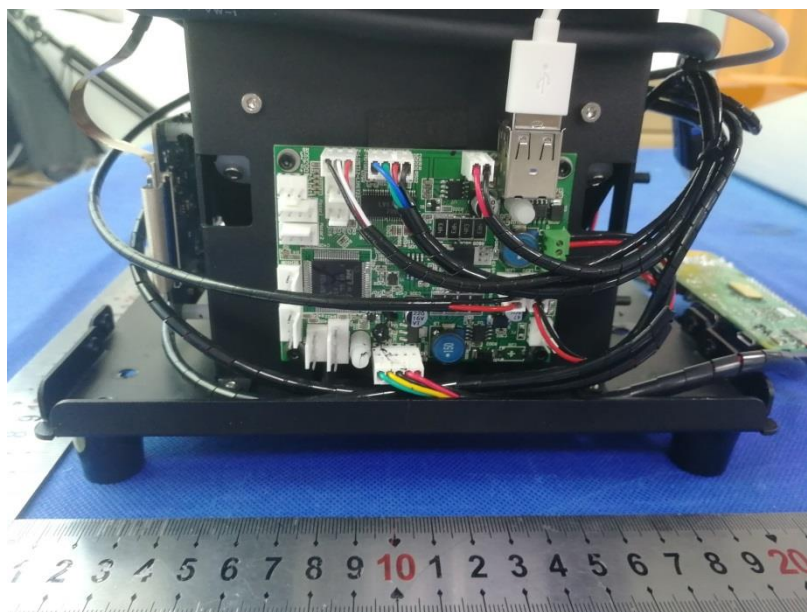
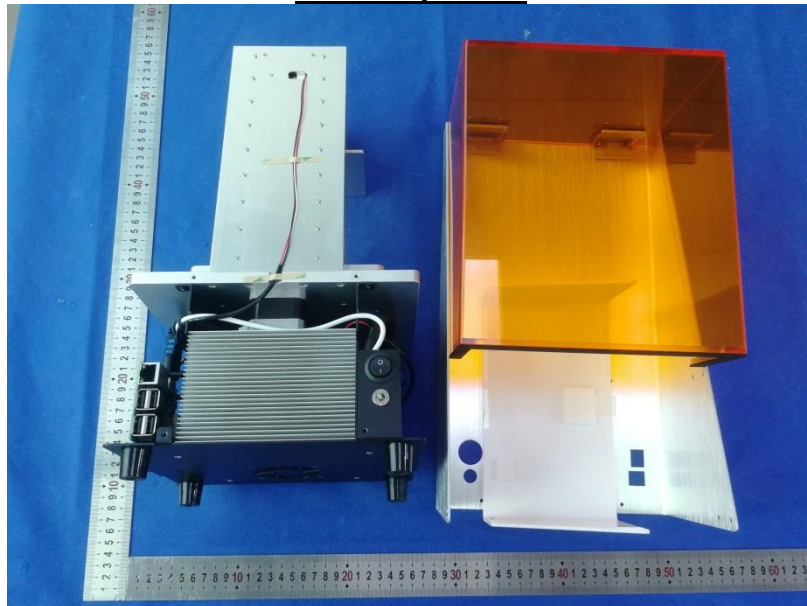


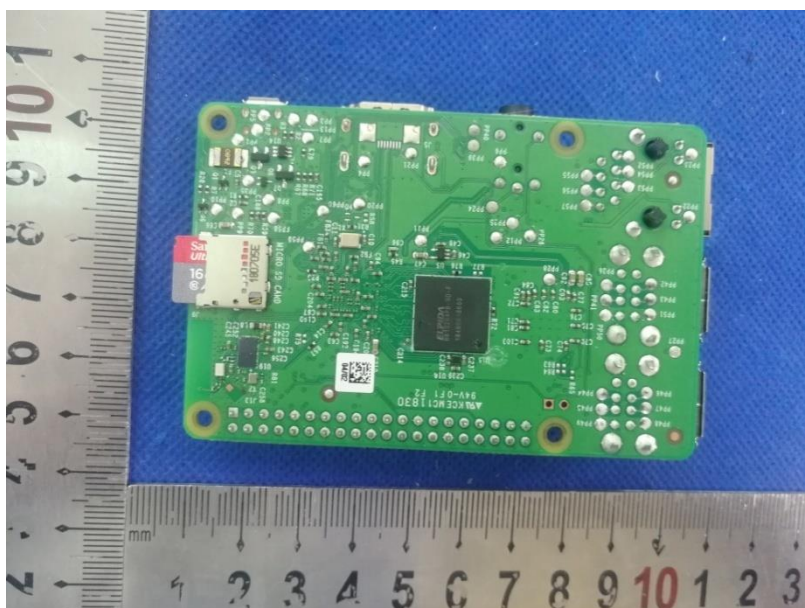
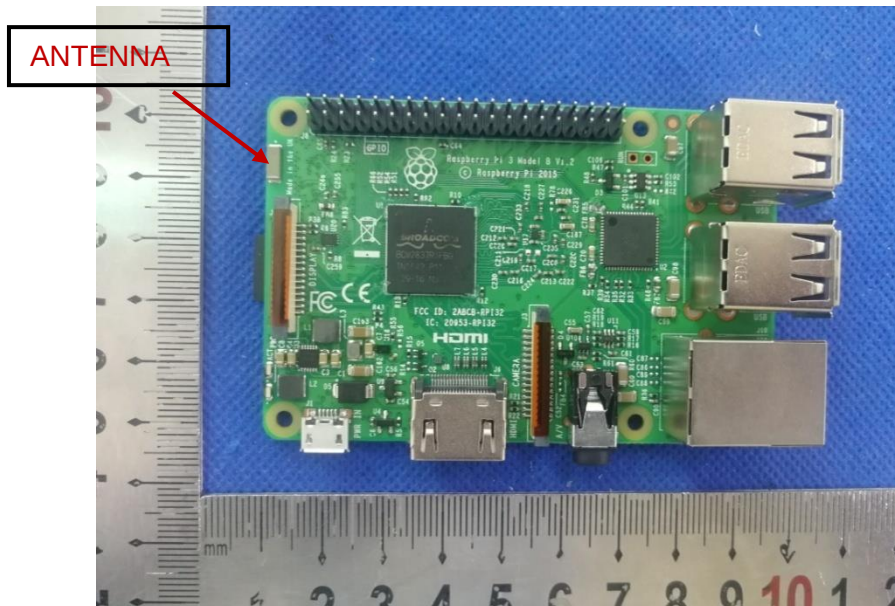
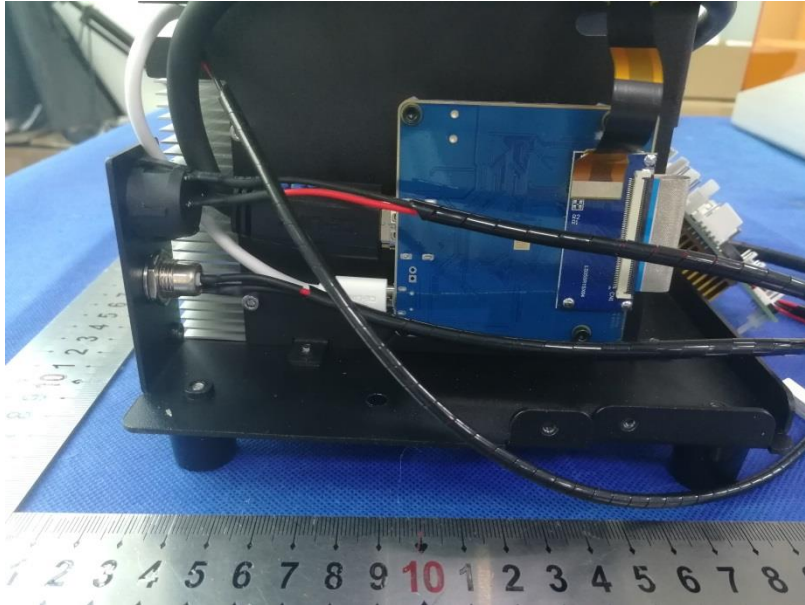


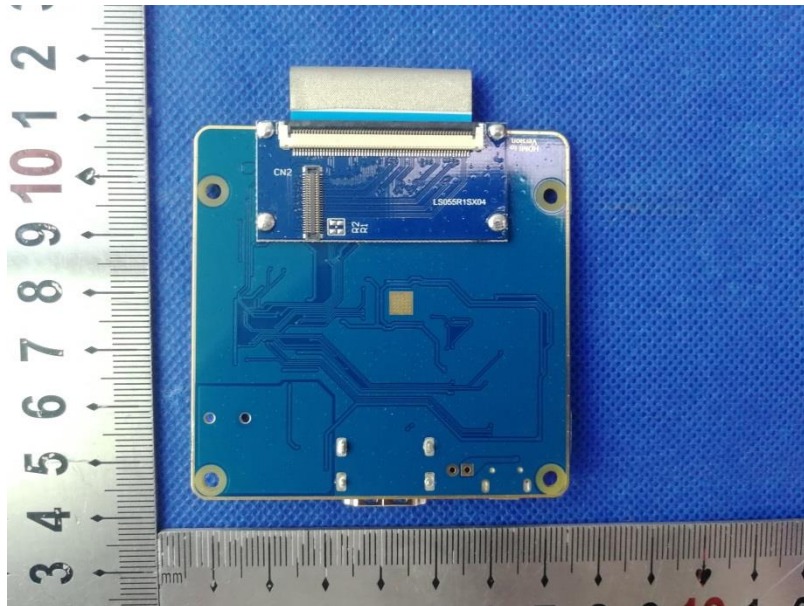
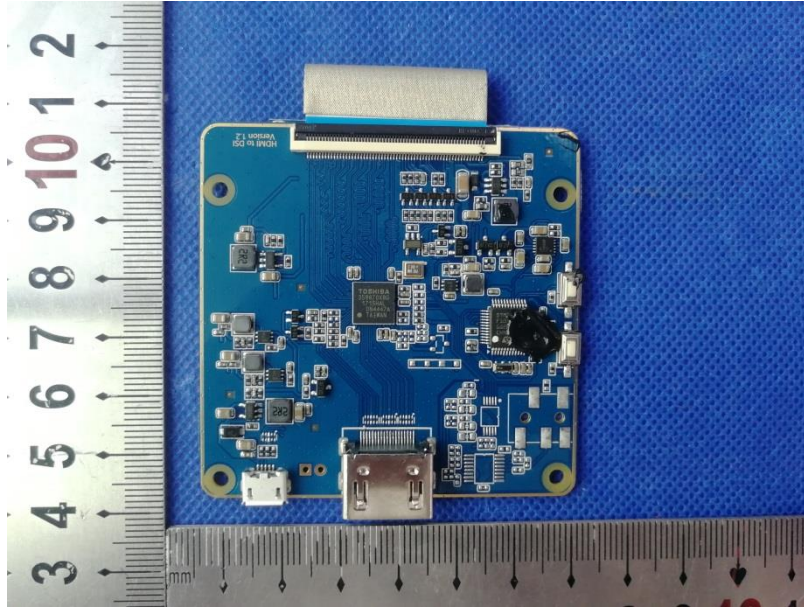


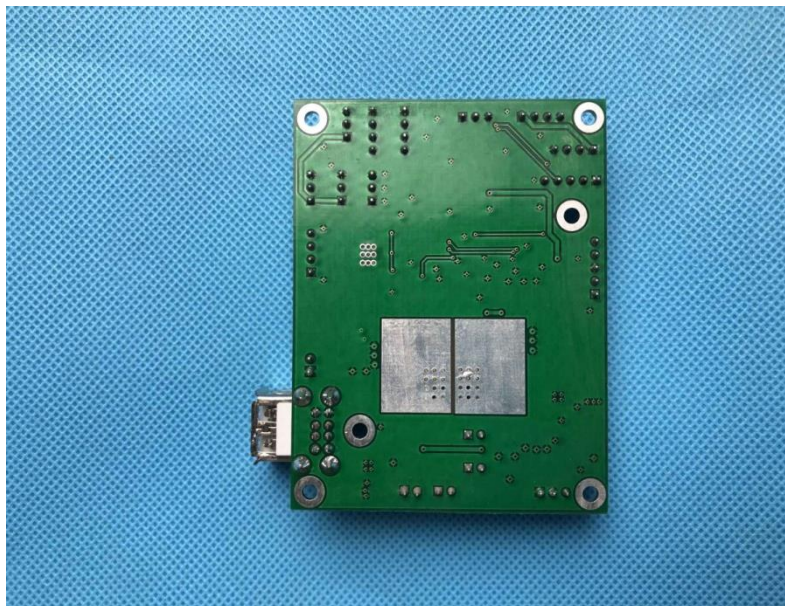
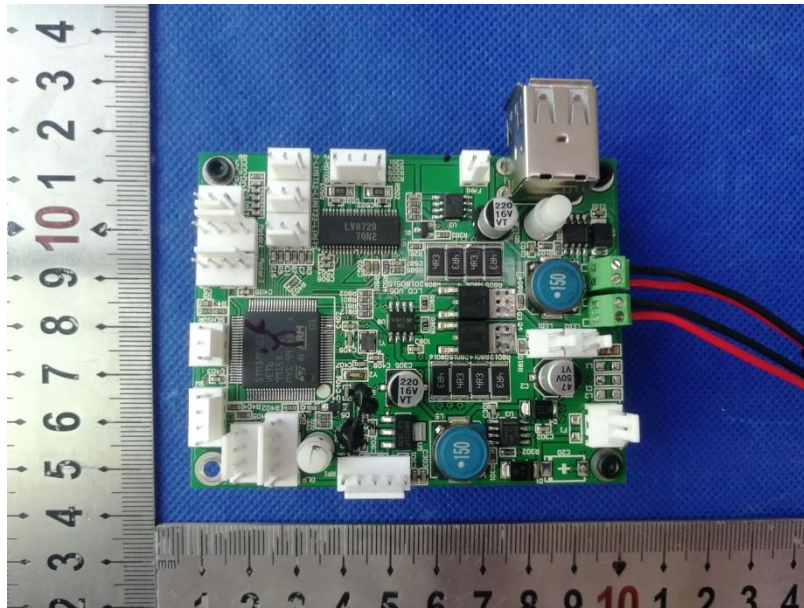


Internal photos









END