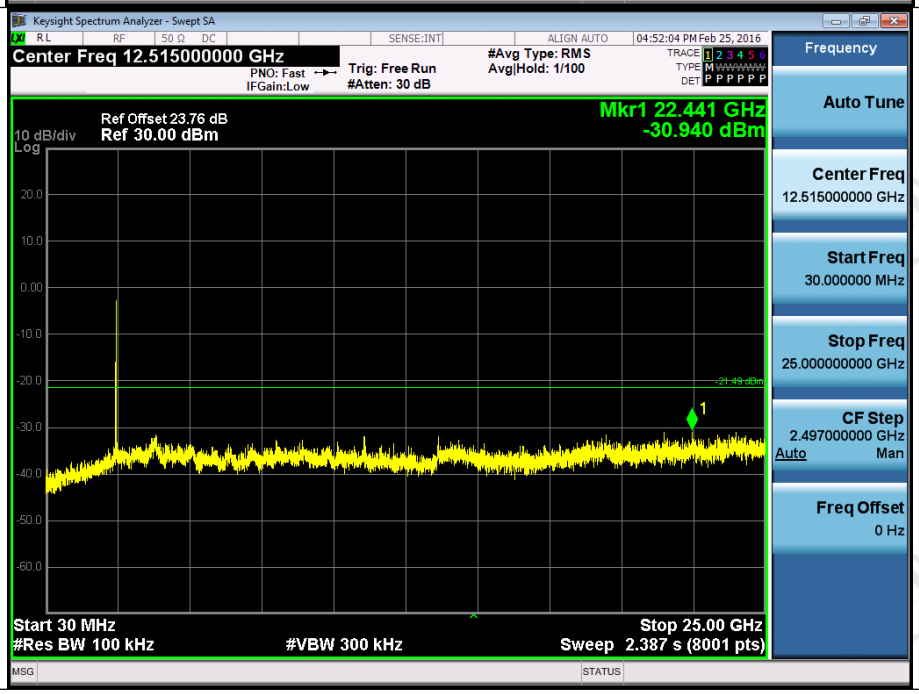
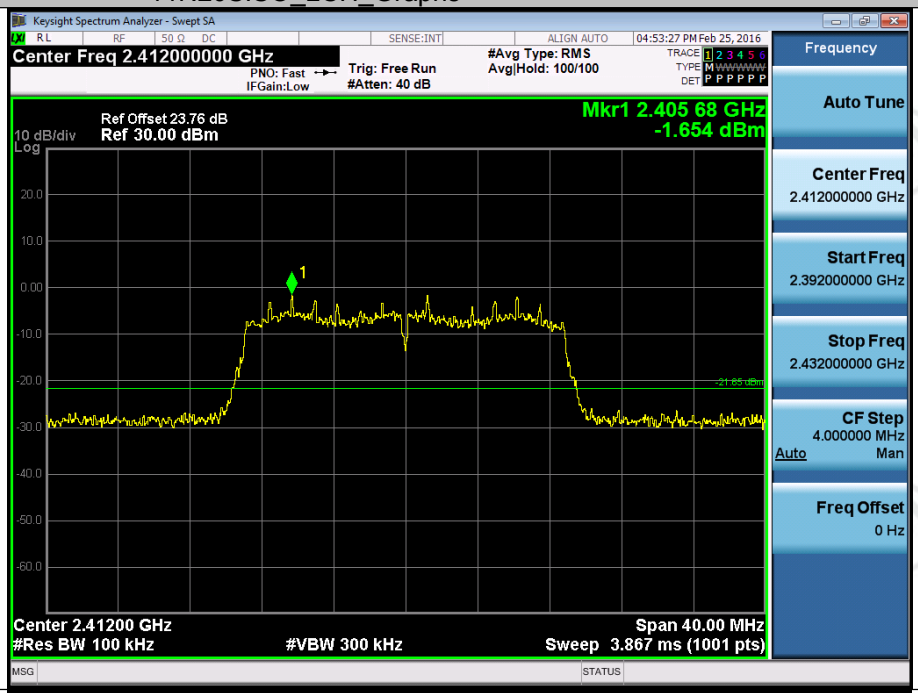
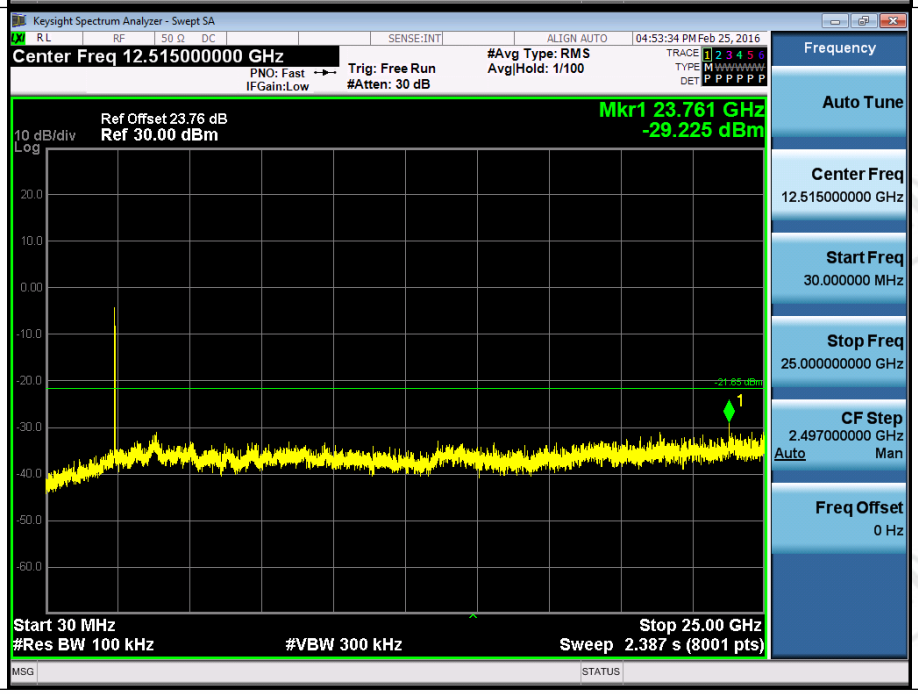
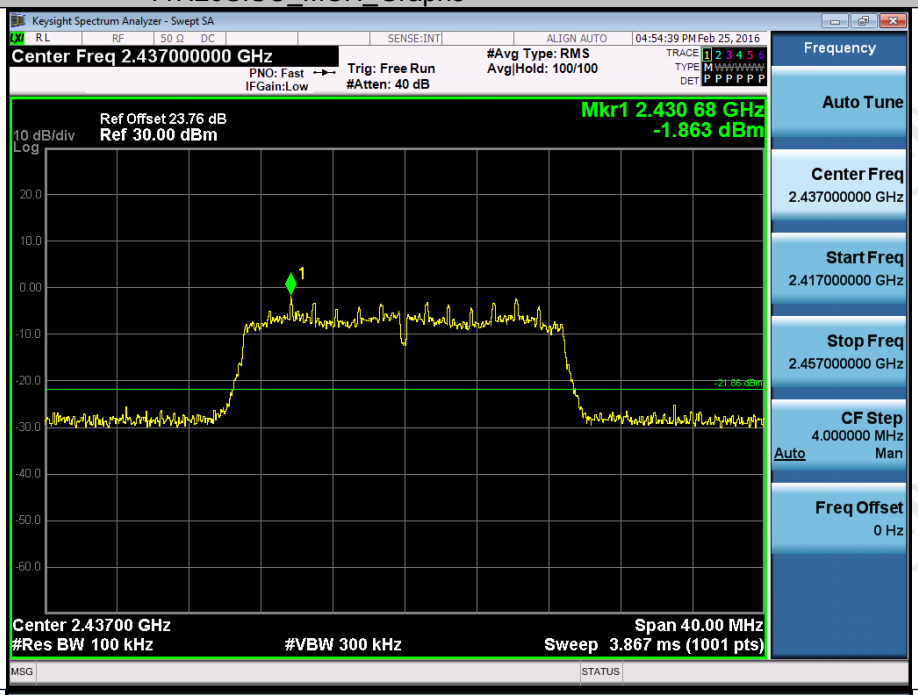
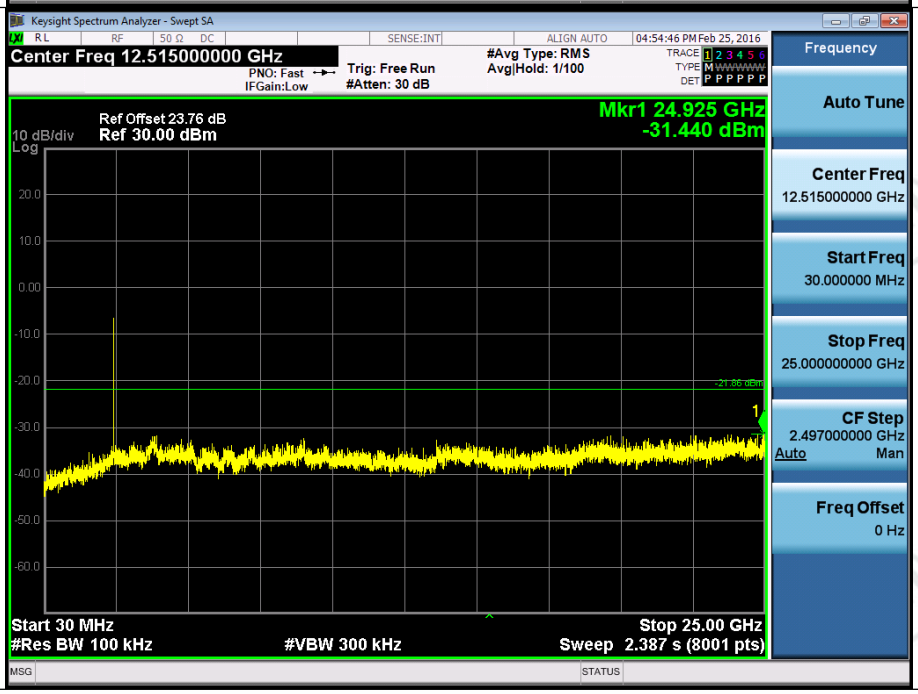
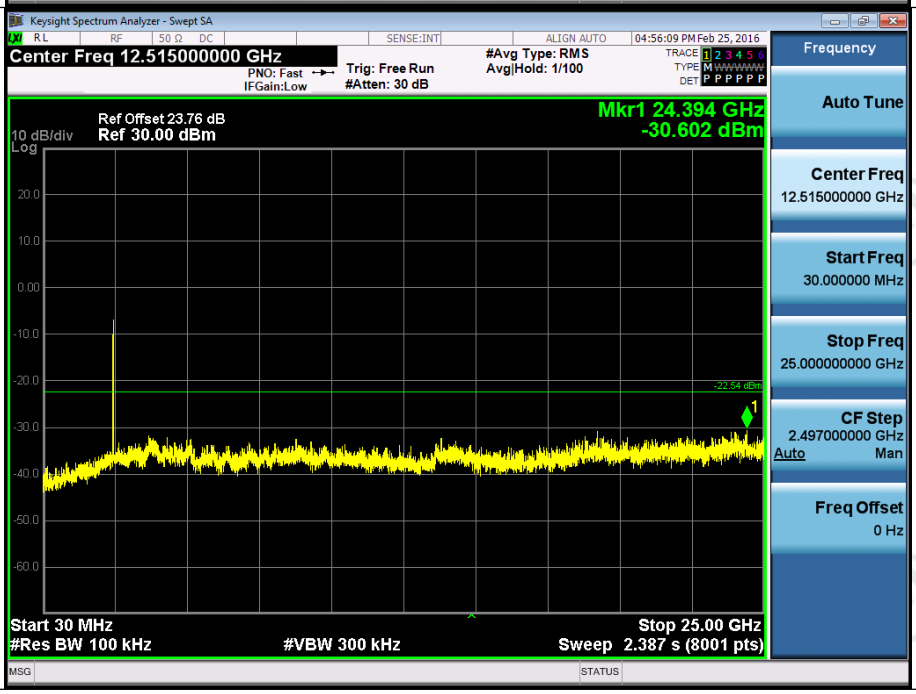
11G_HCH_Graphs		
Pref/11G/HCH		
Puw/11G/HCH		

11N20SISO_LCH_Graphs	
Pref/11N20SISO/LCH	
Puw/11N20SISO/LCH	

11N20SISO_MCH_Graphs		
Pref/11N20SISO/MCH		
Puw/11N20SISO/MCH		

11N20SISO_HCH_Graphs		
Pref/11N20SISO/HCH		
Puw/11N20SISO/HCH		

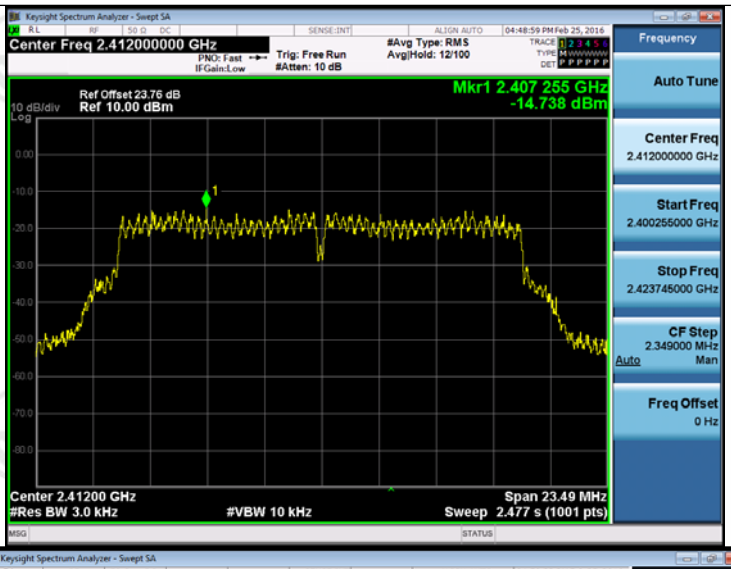
Appendix E): Power Spectral Density

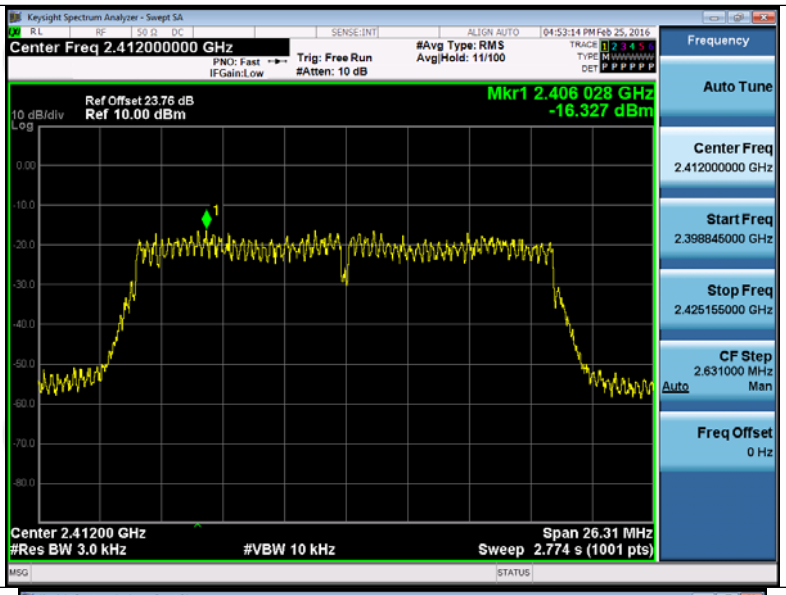
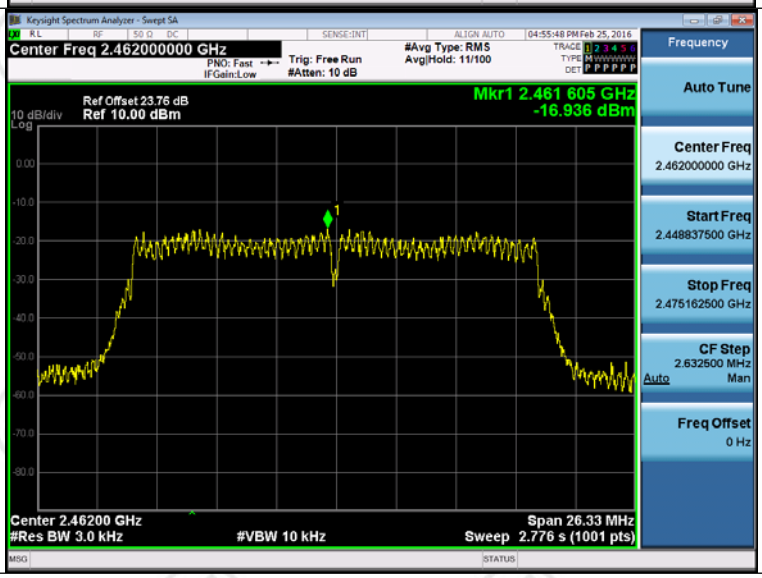
Result Table

Mode	Channel	Power Spectral Density [dBm]	Verdict
11B	LCH	-11.035	PASS
11B	MCH	-10.878	PASS
11B	HCH	-11.565	PASS
11G	LCH	-14.738	PASS
11G	MCH	-14.848	PASS
11G	HCH	-15.734	PASS
11N20SISO	LCH	-16.327	PASS
11N20SISO	MCH	-16.629	PASS
11N20SISO	HCH	-16.936	PASS

Test Graph

Graphs		
11B/LCH		
11B/MCH		
11B/HCH		

11G/LCH		
11G/MCH		
11G/HCH		

11N20SISO/LCH		
11N20SISO/MCH		
11N20SISO/HCH		

Appendix F): Antenna Requirement

15.203 requirement:

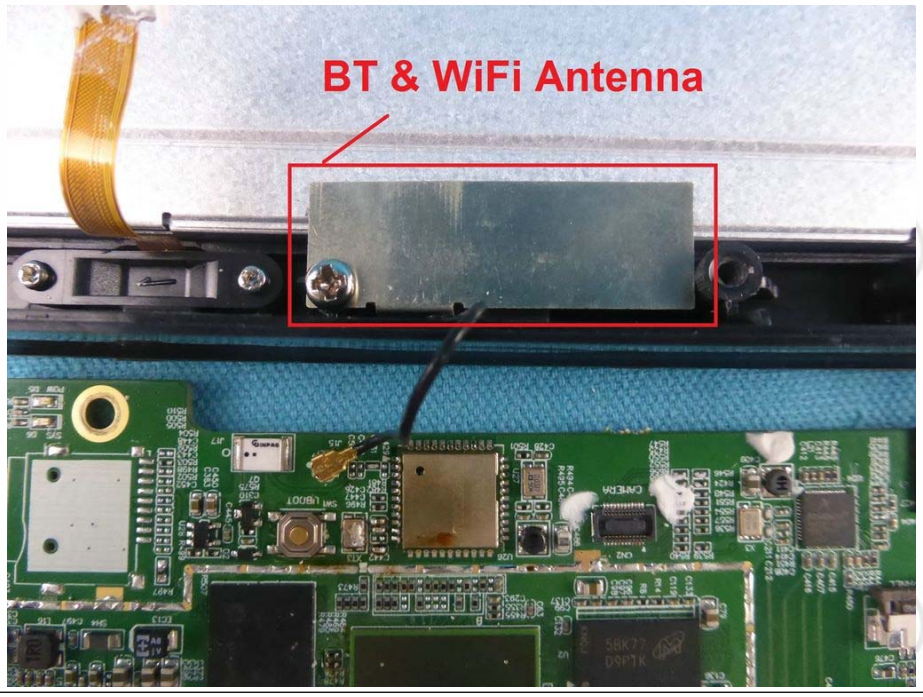
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

15.247(b) (4) requirement:

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

EUT Antenna:	

The antenna is connect with the main PCB and no consideration of replacement. The best case gain of the antenna is 2dBi.



Appendix G): AC Power Line Conducted Emission

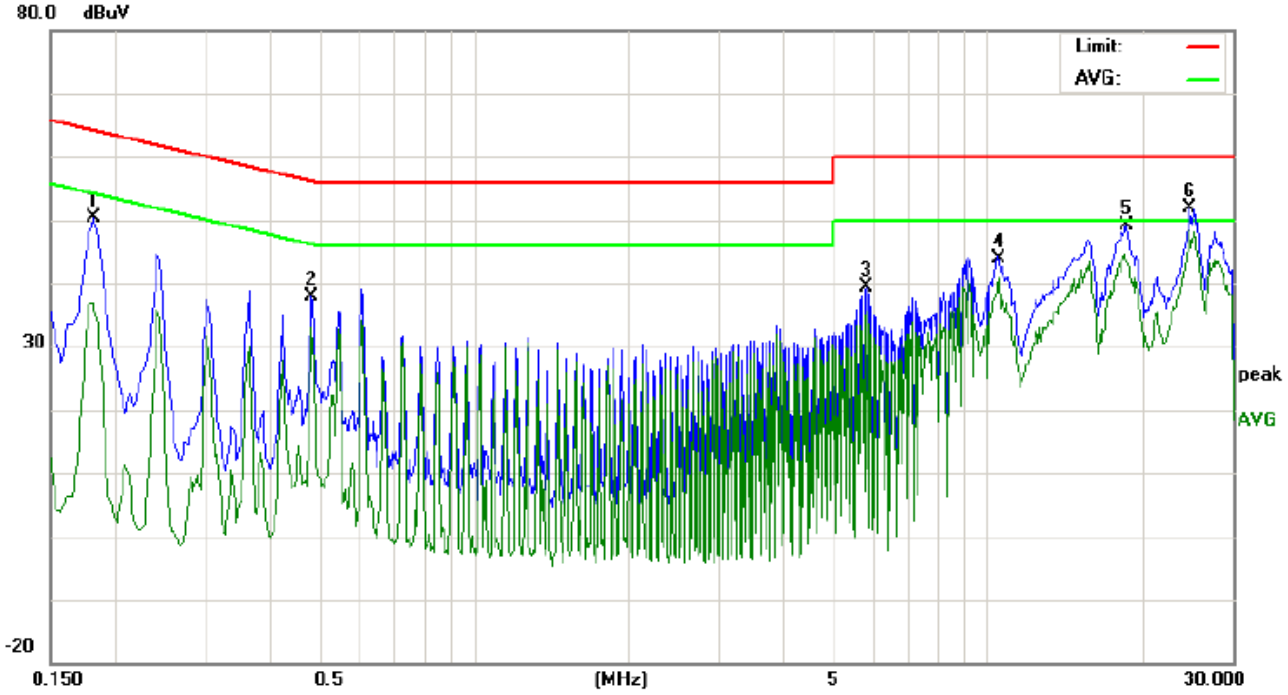
<table>
<tr><td>Test Procedure:</td><td>Test frequency range :150KHz-30MHz
1) The mains terminal disturbance voltage test was conducted in a shielded room.
2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50Ω/50μH + 5Ω linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.
3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane,
4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2.
5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.</td></tr>
<tr><td>Limit:</td><td>
<table>
<tr><td rowspan="2">Frequency range (MHz)</td><td colspan="2">Limit (dBμV)</td></tr>
<tr><td>Quasi-peak</td><td>Average</td></tr>
<tr><td>0.15-0.5</td><td>66 to 56*</td><td>56 to 46*</td></tr>
<tr><td>0.5-5</td><td>56</td><td>46</td></tr>
<tr><td>5-30</td><td>60</td><td>50</td></tr>
</table>
* The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.
NOTE : The lower limit is applicable at the transition frequency</td></tr>
</table>

Measurement Data

An initial pre-scan was performed on the live and neutral lines with peak detector.

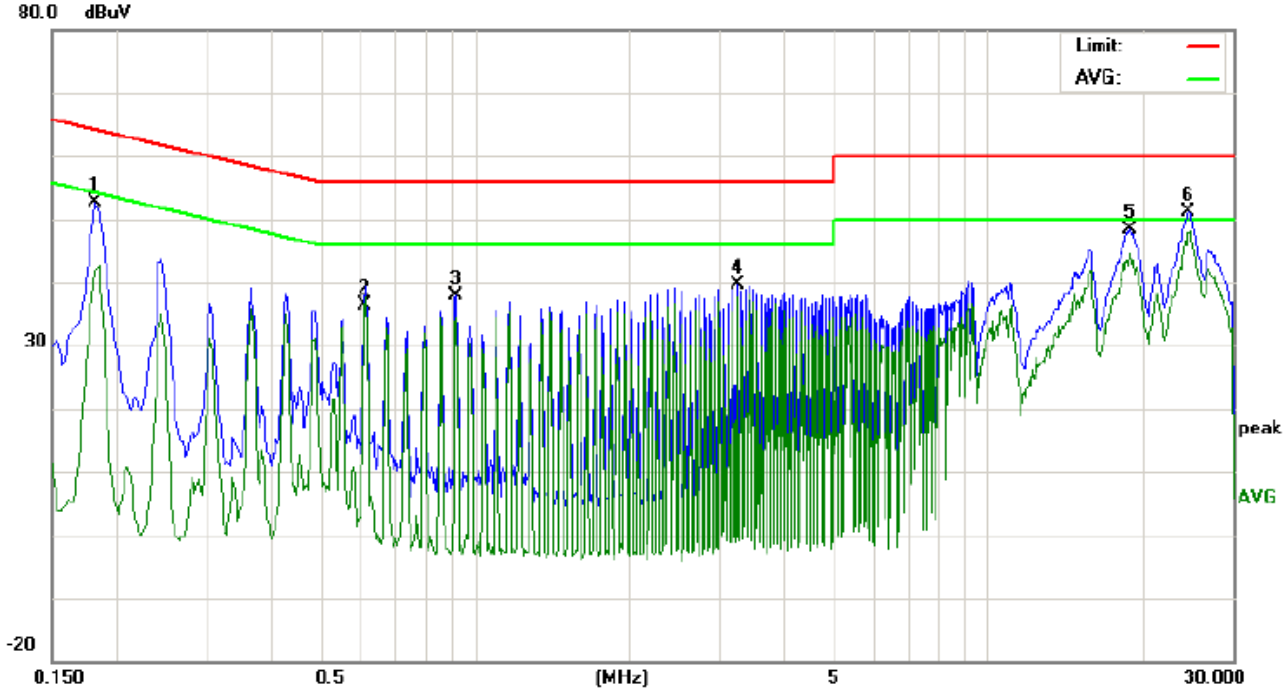
Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

Live line:



No.	Freq.	Reading_Level (dBuV)			Correct Factor	Measurement (dBuV)			Limit (dBuV)		Margin (dB)			
	MHz	Peak	QP	AVG	dB	peak	QP	AVG	QP	AVG	QP	AVG	P/F	Comment
1	0.1819	40.50	39.91	27.84	9.80	50.30	49.71	37.64	64.39	54.39	-14.68	-16.75	P	
2	0.4860	27.96	25.04	22.28	9.90	37.86	34.94	32.18	56.24	46.24	-21.30	-14.06	P	
3	5.8150	29.50	26.49	23.52	10.00	39.50	36.49	33.52	60.00	50.00	-23.51	-16.48	P	
4	10.5400	33.87	29.00	26.01	10.01	43.88	39.01	36.02	60.00	50.00	-20.99	-13.98	P	
5	18.5100	37.77	36.97	33.66	10.38	48.15	47.35	44.04	60.00	50.00	-12.65	-5.96	P	
6	24.7600	41.50	40.54	37.93	10.40	51.90	50.94	48.33	60.00	50.00	-9.06	-1.67	P	

Neutral line:



No.	Freq.	Reading_Level (dBuV)			Correct Factor	Measurement (dBuV)			Limit (dBuV)		Margin (dB)			
	MHz	Peak	QP	AVG	dB	peak	QP	AVG	QP	AVG	QP	AVG	P/F	Comment
1	0.1819	42.85	40.60	30.69	9.80	52.65	50.40	40.49	64.39	54.39	-13.99	-13.90	P	
2	0.6037	29.48	28.19	28.09	9.90	39.38	38.09	37.99	56.00	46.00	-17.91	-8.01	P	
3	0.9076	27.80	25.32	24.15	10.00	37.80	35.32	34.15	56.00	46.00	-20.68	-11.85	P	
4	3.2630	29.63	28.24	24.51	10.00	39.63	38.24	34.51	56.00	46.00	-17.76	-11.49	P	
5	18.9700	38.07	39.65	35.72	10.42	48.49	50.07	46.14	60.00	50.00	-9.93	-3.86	P	
6	24.5200	40.78	39.68	36.65	10.41	51.19	50.09	47.06	60.00	50.00	-9.91	-2.94	P	

Notes:

1. The following Quasi-Peak and Average measurements were performed on the EUT:

2. Final Test Level =Receiver Reading + LISN Factor + Cable Loss.

Appendix H): Restricted bands around fundamental frequency (Radiated)

Receiver Setup:

Frequency	Detector	RBW	VBW	Remark
30MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak
Above 1GHz	Peak	1MHz	3MHz	Peak
	Peak	1MHz	10Hz	Average

Test Procedure:

Below 1GHz test procedure as below:

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
f. Place a marker at the end of the restricted band closest to the transmit frequency to show compliance. Also measure any emissions in the restricted bands. Save the spectrum analyzer plot. Repeat for each power and modulation for lowest and highest channel

Above 1GHz test procedure as below:

g. Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber change form table 0.8 metre to 1.5 metre(Above 18GHz the distance is 1 meter and table is 1.5 metre).
h. Test the EUT in the lowest channel , the Highest channel
i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is worse case.
j. Repeat above procedures until all frequencies measured was complete.

Limit:

Frequency	Limit (dBμV/m @3m)	Remark
30MHz-88MHz	40.0	Quasi-peak Value
88MHz-216MHz	43.5	Quasi-peak Value
216MHz-960MHz	46.0	Quasi-peak Value
960MHz-1GHz	54.0	Quasi-peak Value
Above 1GHz	54.0	Average Value
	74.0	Peak Value

Test plot as follows:

Worse case mode:		802.11b (11Mbps)								
Frequency (MHz)	Read Level (dBμV)	Level (dBμV/m)	Antenna Factor (dB/m)	Cable Loss (dB)	Premap Factor (dB)	Limit (dBμV/m)	Over Limit (dB)	Antenna Polaxis	Remark	Test channel
2390.00	46.41	46.01	32.53	4.28	37.21	74	-27.99	H	PK	Lowest
2390.00	48.32	47.92	32.53	4.28	37.21	74	-26.08	V	PK	Lowest
2483.50	47.62	47.65	32.71	4.51	37.19	74	-26.35	H	PK	Highest
2483.50	47.90	47.93	32.71	4.51	37.19	74	-26.07	V	PK	Highest

Worse case mode:		802.11g (6Mbps)								
Frequency (MHz)	Read Level (dBμV)	Level (dBμV/m)	Antenna Factor (dB/m)	Cable Loss (dB)	Premap Factor (dB)	Limit (dBμV/m)	Over Limit (dB)	Antenna Polaxis	Remark	Test channel
2390.00	62.76	62.36	32.53	4.28	37.21	74	-11.64	H	PK	Lowest
2390.00	44.31	43.91	32.53	4.28	37.21	54	-10.09	H	AV	Lowest
2390.00	61.97	61.57	32.53	4.28	37.21	74	-12.43	V	PK	Lowest
2390.00	46.41	46.01	32.53	4.28	37.21	54	-7.99	V	AV	Lowest
2483.50	63.56	63.59	32.71	4.51	37.19	74	-10.41	H	PK	Highest
2483.50	46.03	46.06	32.71	4.51	37.19	54	-7.94	H	AV	Highest
2483.50	63.30	63.33	32.71	4.51	37.19	74	-10.67	V	PK	Highest
2483.50	45.12	45.15	32.71	4.51	37.19	54	-8.85	V	AV	Highest

Worse case mode:		802.11n(HT20) (6.5Mbps)								
Frequency (MHz)	Read Level (dBμV)	Level (dBμV/m)	Antenna Factor (dB/m)	Cable Loss (dB)	Premap Factor (dB)	Limit (dBμV/m)	Over Limit (dB)	Antenna Polaxis	Remark	Test channel
2390.00	60.39	59.99	32.53	4.28	37.21	74	-14.01	H	PK	Lowest
2390.00	44.68	44.28	32.53	4.28	37.21	54	-9.72	H	AV	Lowest
2390.00	62.41	62.01	32.53	4.28	37.21	74	-11.99	V	PK	Lowest
2390.00	46.69	46.29	32.53	4.28	37.21	54	-7.71	V	AV	Lowest
2483.50	62.59	62.62	32.71	4.51	37.19	74	-11.38	H	PK	Highest
2483.50	45.12	45.15	32.71	4.51	37.19	54	-8.85	H	AV	Highest
2483.50	61.86	61.89	32.71	4.51	37.19	74	-12.11	V	PK	Highest
2483.50	45.43	45.46	32.71	4.51	37.19	54	-8.54	V	AV	Highest

Note:

1) Through Pre-scan transmitting mode and charge+transmitter mode with all kind of modulation and data rate, find the 11Mbps of rate is the worst case of 802.11b; 6Mbps of rate is the worst case of 802.11g; 6.5Mbps of rate is the worst case of 802.11n(HT20), and then Only the worst case is recorded in the report.

2) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading - Correct Factor

Correct Factor = Preamplifier Factor– Antenna Factor–Cable Factor

Appendix I): Radiated Spurious Emissions

Receiver Setup:

Frequency	Detector	RBW	VBW	Remark
0.009MHz-0.090MHz	Peak	10kHz	30kHz	Peak
0.009MHz-0.090MHz	Average	10kHz	30kHz	Average
0.090MHz-0.110MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
0.110MHz-0.490MHz	Peak	10kHz	30kHz	Peak
0.110MHz-0.490MHz	Average	10kHz	30kHz	Average
0.490MHz -30MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
30MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak
Above 1GHz	Peak	1MHz	3MHz	Peak
	Peak	1MHz	10Hz	Average

Test Procedure:

Below 1GHz test procedure as below:

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

Above 1GHz test procedure as below:

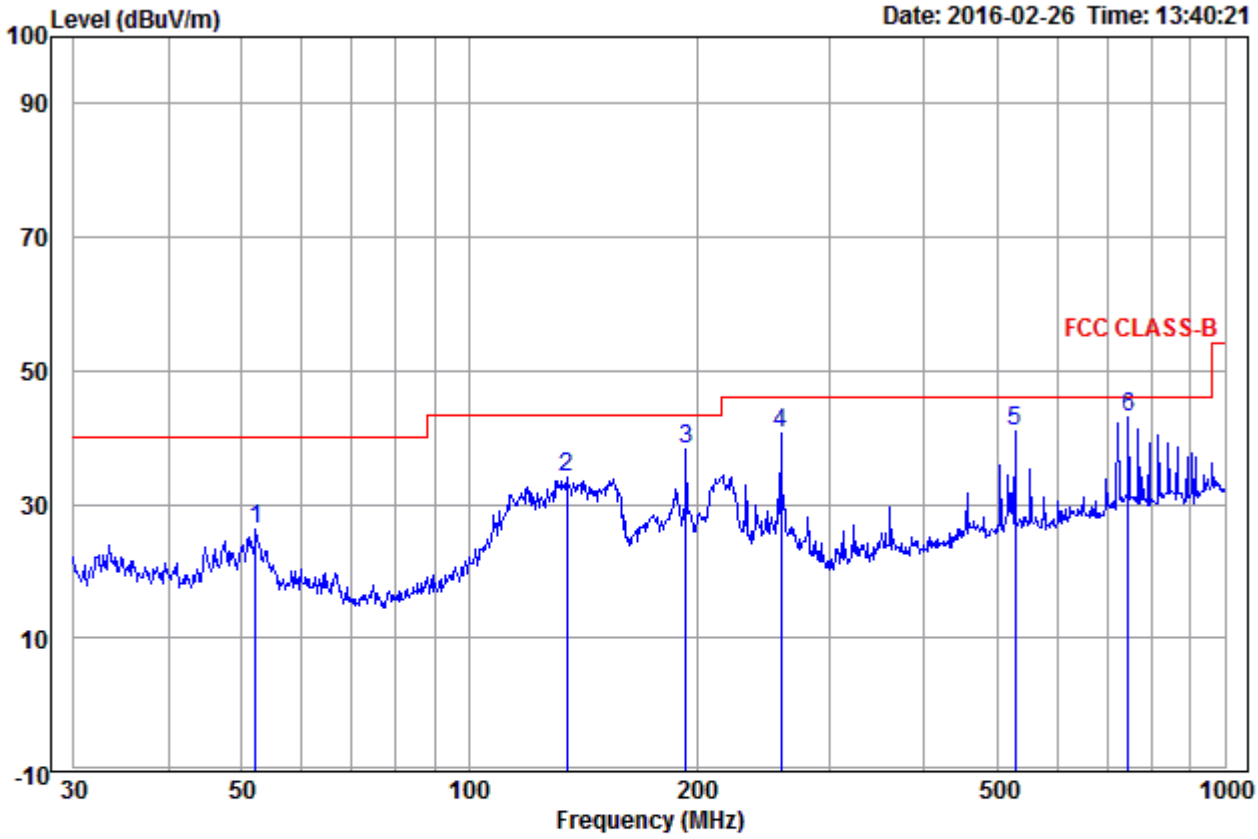
g. Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 metre to 1.5 metre(Above 18GHz the distance is 1 meter and table is 1.5 metre)..
h. Test the EUT in the lowest channel ,the middle channel ,the Highest channel
i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is worse case.
j. Repeat above procedures until all frequencies measured was complete.

Limit:

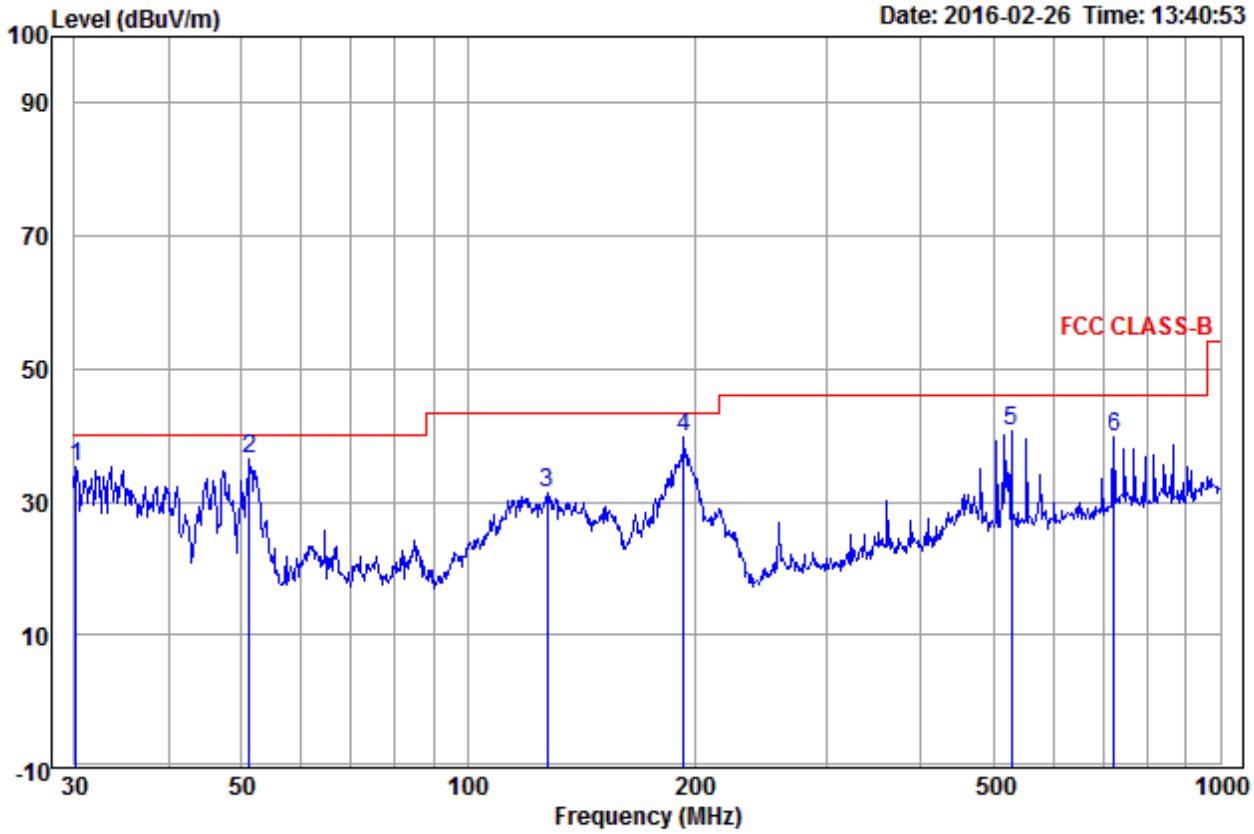
Frequency	Field strength (microvolt/meter)	Limit (dBμV/m)	Remark	Measurement distance (m)
0.009MHz-0.490MHz	2400/F(kHz)	-	-	300
0.490MHz-1.705MHz	24000/F(kHz)	-	-	30
1.705MHz-30MHz	30	-	-	30
30MHz-88MHz	100	40.0	Quasi-peak	3
88MHz-216MHz	150	43.5	Quasi-peak	3
216MHz-960MHz	200	46.0	Quasi-peak	3
960MHz-1GHz	500	54.0	Quasi-peak	3
Above 1GHz	500	54.0	Average	3

Note: 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.

Radiated Spurious Emissions test Data:
Radiated Emission below 1GHz



	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	52.208	14.79	1.41	10.02	26.22	40.00	-13.78	Horizontal	
2	134.559	10.64	1.58	21.81	34.03	43.50	-9.47	Horizontal	
3	193.773	11.39	2.14	24.88	38.41	43.50	-5.09	Horizontal	
4	258.326	12.60	2.36	25.69	40.65	46.00	-5.35	Horizontal	
5	528.246	18.52	3.18	19.17	40.87	46.00	-5.13	Horizontal	
6 pp	744.866	20.97	4.00	17.95	42.92	46.00	-3.08	Horizontal	



	Freq	Ant Factor	Cable Loss	Read Level	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB		
1	30.105	12.52	1.18	21.61	35.31	40.00	-4.69	Vertical	
2 pp	51.301	14.92	1.40	20.02	36.34	40.00	-3.66	Vertical	
3	127.665	11.09	1.58	18.73	31.40	43.50	-12.10	Vertical	
4	193.773	11.39	2.14	26.26	39.79	43.50	-3.71	Vertical	
5	528.246	18.52	3.18	19.10	40.80	46.00	-5.20	Vertical	
6	721.726	20.83	3.94	14.96	39.73	46.00	-6.27	Vertical	

Transmitter Emission above 1GHz

Test mode:			802.11b(11Mbps)		Test Frequency:			2412MHz	
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1098.763	29.97	2.39	38.68	51.20	44.88	74	-29.12	Pass	H
1668.044	31.18	2.98	37.72	48.27	44.71	74	-29.29	Pass	H
3776.385	32.96	5.48	36.94	46.32	47.82	74	-26.18	Pass	H
4824.000	34.73	5.10	36.82	47.30	50.31	74	-23.69	Pass	H
7236.000	36.42	6.69	37.45	43.50	49.16	74	-24.84	Pass	H
9648.000	37.93	7.70	37.83	43.18	50.98	74	-23.02	Pass	H
1162.051	30.13	2.47	38.55	52.36	46.41	74	-27.59	Pass	V
1597.401	31.05	2.92	37.82	47.51	43.66	74	-30.34	Pass	V
3786.010	32.95	5.47	36.94	46.56	48.04	74	-25.96	Pass	V
4824.000	34.73	5.10	36.82	47.81	50.82	74	-23.18	Pass	V
7236.000	36.42	6.69	37.45	43.83	49.49	74	-24.51	Pass	V
9648.000	37.93	7.70	37.83	42.47	50.27	74	-23.73	Pass	V

Test mode:			802.11b(11Mbps)		Test Frequency:			2437MHz	
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1276.818	30.41	2.60	38.34	48.49	43.16	74	-30.84	Pass	H
1668.044	31.18	2.98	37.72	48.80	45.24	74	-28.76	Pass	H
3738.129	32.99	5.48	36.95	45.67	47.19	74	-26.81	Pass	H
4874.000	34.84	5.09	36.81	47.33	50.45	74	-23.55	Pass	H
7311.000	36.43	6.76	37.43	42.99	48.75	74	-25.25	Pass	H
9748.000	38.03	7.61	37.85	42.76	50.55	74	-23.45	Pass	H
1162.051	30.13	2.47	38.55	52.19	46.24	74	-27.76	Pass	V
1663.803	31.17	2.97	37.72	48.66	45.08	74	-28.92	Pass	V
3766.785	32.97	5.48	36.94	47.25	48.76	74	-25.24	Pass	V
4874.000	34.84	5.09	36.81	47.52	50.64	74	-23.36	Pass	V
7311.000	36.43	6.76	37.43	43.14	48.90	74	-25.10	Pass	V
9748.000	38.03	7.61	37.85	43.03	50.82	74	-23.18	Pass	V

Test mode:			802.11b(11Mbps)		Test Frequency:			2462MHz	
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1098.763	29.97	2.39	38.68	50.12	43.80	74	-30.20	Pass	H
1668.044	31.18	2.98	37.72	48.31	44.75	74	-29.25	Pass	H
4924.000	34.94	5.07	36.81	45.62	48.82	74	-25.18	Pass	H
7386.000	36.44	6.83	37.42	44.57	50.42	74	-23.58	Pass	H
9848.000	38.14	7.53	37.87	43.07	50.87	74	-23.13	Pass	H
1162.051	30.13	2.47	38.55	52.25	46.30	74	-27.70	Pass	V
1668.044	31.18	2.98	37.72	47.37	43.81	74	-30.19	Pass	V
3747.656	32.98	5.48	36.95	45.95	47.46	74	-26.54	Pass	V
4924.000	34.94	5.07	36.81	47.09	50.29	74	-23.71	Pass	V
7386.000	36.44	6.83	37.42	44.03	49.88	74	-24.12	Pass	V
9848.000	38.14	7.53	37.87	43.09	50.89	74	-23.11	Pass	V

Test mode:			802.11g(6Mbps)		Test Frequency:			2412MHz	
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1098.763	29.97	2.39	38.68	50.90	44.58	74	-29.42	Pass	H
1668.044	31.18	2.98	37.72	47.84	44.28	74	-29.72	Pass	H
4096.875	33.05	5.40	36.89	45.90	47.46	74	-26.54	Pass	H
4824.000	34.73	5.10	36.82	46.40	49.41	74	-24.59	Pass	H
7236.000	36.42	6.69	37.45	43.10	48.76	74	-25.24	Pass	H
9648.000	37.93	7.70	37.83	43.03	50.83	74	-23.17	Pass	H
1162.051	30.13	2.47	38.55	51.96	46.01	74	-27.99	Pass	V
1668.044	31.18	2.98	37.72	46.91	43.35	74	-30.65	Pass	V
3738.129	32.99	5.48	36.95	45.71	47.23	74	-26.77	Pass	V
4824.000	34.73	5.10	36.82	45.77	48.78	74	-25.22	Pass	V
7236.000	36.42	6.69	37.45	42.78	48.44	74	-25.56	Pass	V
9648.000	37.93	7.70	37.83	43.05	50.85	74	-23.15	Pass	V

Test mode:			802.11g(6Mbps)		Test Frequency:			2437MHz	
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1098.763	29.97	2.39	38.68	49.86	43.54	74	-30.46	Pass	H
1746.251	31.31	3.04	37.61	52.90	49.64	74	-24.36	Pass	H
3728.625	33.00	5.48	36.95	46.25	47.78	74	-26.22	Pass	H
4874.000	34.84	5.09	36.81	47.74	50.86	74	-23.14	Pass	H
7311.000	36.43	6.76	37.43	43.49	49.25	74	-24.75	Pass	H
9748.000	38.03	7.61	37.85	43.03	50.82	74	-23.18	Pass	H
1162.051	30.13	2.47	38.55	50.69	44.74	74	-29.26	Pass	V
1638.585	31.12	2.95	37.76	47.09	43.40	74	-30.60	Pass	V
4128.280	33.13	5.38	36.89	45.80	47.42	74	-26.58	Pass	V
4874.000	34.84	5.09	36.81	44.67	47.79	74	-26.21	Pass	V
7311.000	36.43	6.76	37.43	42.32	48.08	74	-25.92	Pass	V
9748.000	38.03	7.61	37.85	42.04	49.83	74	-24.17	Pass	V

Test mode:			802.11g(6Mbps)		Test Frequency:			2462MHz	
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1098.763	29.97	2.39	38.68	49.56	43.24	74	-30.76	Pass	H
1668.044	31.18	2.98	37.72	47.76	44.20	74	-29.80	Pass	H
3616.451	33.08	5.50	36.97	45.61	47.22	74	-26.78	Pass	H
4924.000	34.94	5.07	36.81	47.07	50.27	74	-23.73	Pass	H
7386.000	36.44	6.83	37.42	44.50	50.35	74	-23.65	Pass	H
9848.000	38.14	7.53	37.87	42.35	50.15	74	-23.85	Pass	H
1162.051	30.13	2.47	38.55	51.49	45.54	74	-28.46	Pass	V
1746.251	31.31	3.04	37.61	51.48	48.22	74	-25.78	Pass	V
3607.257	33.09	5.50	36.97	45.66	47.28	74	-26.72	Pass	V
4924.000	34.94	5.07	36.81	46.12	49.32	74	-24.68	Pass	V
7386.000	36.44	6.83	37.42	44.18	50.03	74	-23.97	Pass	V
9848.000	38.14	7.53	37.87	42.76	50.56	74	-23.44	Pass	V

Test mode: 802.11n(HT20)(6.5Mbps)					Test Frequency:			2412MHz	
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1129.964	30.05	2.43	38.62	48.34	42.20	74	-31.8	Pass	H
1668.044	31.18	2.98	37.72	47.74	44.18	74	-29.82	Pass	H
3747.656	32.98	5.48	36.95	46.34	47.85	74	-26.15	Pass	H
4824.000	34.73	5.10	36.82	43.35	46.36	74	-27.64	Pass	H
7236.000	36.42	6.69	37.45	42.56	48.22	74	-25.78	Pass	H
9648.000	37.93	7.70	37.83	42.37	50.17	74	-23.83	Pass	H
1162.051	30.13	2.47	38.55	52.14	46.19	74	-27.81	Pass	V
1759.638	31.33	3.05	37.60	46.86	43.64	74	-30.36	Pass	V
3903.444	32.87	5.46	36.92	46.45	47.86	74	-26.14	Pass	V
4824.000	34.73	5.10	36.82	43.59	46.60	74	-27.40	Pass	V
7236.000	36.42	6.69	37.45	43.54	49.20	74	-24.80	Pass	V
9636.161	37.91	7.71	37.83	42.76	50.55	74	-23.45	Pass	V

Test mode: 802.11n(HT20)(6.5Mbps)					Test Frequency:			2437MHz	
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1098.763	29.97	2.39	38.68	48.96	42.64	74	-31.36	Pass	H
1668.044	31.18	2.98	37.72	47.86	44.30	74	-29.70	Pass	H
3747.656	32.98	5.48	36.95	46.32	47.83	74	-26.17	Pass	H
4874.000	34.84	5.09	36.81	44.55	47.67	74	-26.33	Pass	H
7311.000	36.43	6.76	37.43	43.81	49.57	74	-24.43	Pass	H
9748.000	38.03	7.61	37.85	42.87	50.66	74	-23.34	Pass	H
1153.210	30.11	2.46	38.57	51.83	45.83	74	-28.17	Pass	V
1741.812	31.30	3.04	37.62	51.19	47.91	74	-26.09	Pass	V
3738.129	32.99	5.48	36.95	46.31	47.83	74	-26.17	Pass	V
4874.000	34.84	5.09	36.81	43.91	47.03	74	-26.97	Pass	V
7311.000	36.43	6.76	37.43	42.60	48.36	74	-25.64	Pass	V
9748.000	38.03	7.61	37.85	43.00	50.79	74	-23.21	Pass	V

Test mode: 802.11n(HT20)(6.5Mbps)					Test Frequency:			2462MHz	
Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Level (dBμV/m)	Limit (dBμV/m)	Over Limit (dB)	Result	Antenna Polaxis
1098.763	29.97	2.39	38.68	49.39	43.07	74	-30.93	Pass	H
1668.044	31.18	2.98	37.72	48.21	44.65	74	-29.35	Pass	H
3747.656	32.98	5.48	36.95	45.91	47.42	74	-26.58	Pass	H
4924.000	34.94	5.07	36.81	44.32	47.52	74	-26.48	Pass	H
7386.000	36.44	6.83	37.42	43.59	49.44	74	-24.56	Pass	H
9848.000	38.14	7.53	37.87	42.94	50.74	74	-23.26	Pass	H
1162.051	30.13	2.47	38.55	52.44	46.49	74	-27.51	Pass	V
1663.803	31.17	2.97	37.72	47.57	43.99	74	-30.01	Pass	V
3766.785	32.97	5.48	36.94	45.80	47.31	74	-26.69	Pass	V
4924.000	34.94	5.07	36.81	44.73	47.93	74	-26.07	Pass	V
7386.000	36.44	6.83	37.42	44.30	50.15	74	-23.85	Pass	V
9848.000	38.14	7.53	37.87	42.71	50.51	74	-23.49	Pass	V

Note:

1) Through Pre-scan transmitting mode with all kind of modulation and data rate, find the 11Mbps of rate is the worst case of 802.11b; 6Mbps of rate is the worst case of 802.11g; 6.5Mbps of rate is the worst case of 802.11n(HT20), and then Only the worst case is recorded in the report.

2) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading - Correct Factor

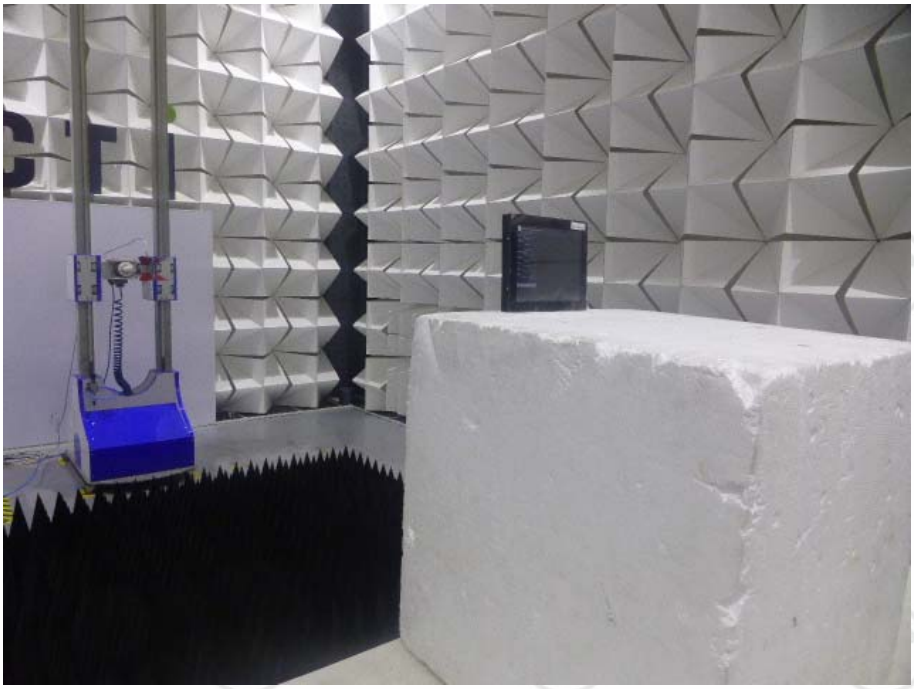
Correct Factor = Preamplifier Factor– Antenna Factor–Cable Factor

3) Peak detector is used

PHOTOGRAPHS OF TEST SETUP

Test mode No.: 57-863756

Radiated spurious emission Test Setup-1(Below 1GHz)

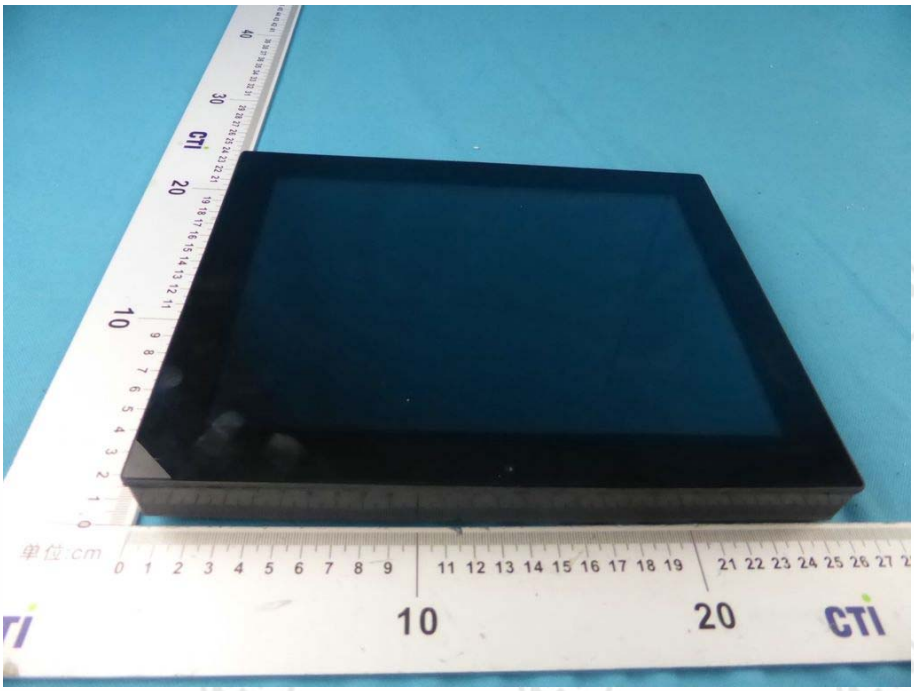


Radiated spurious emission Test Setup-2(Above 1GHz)

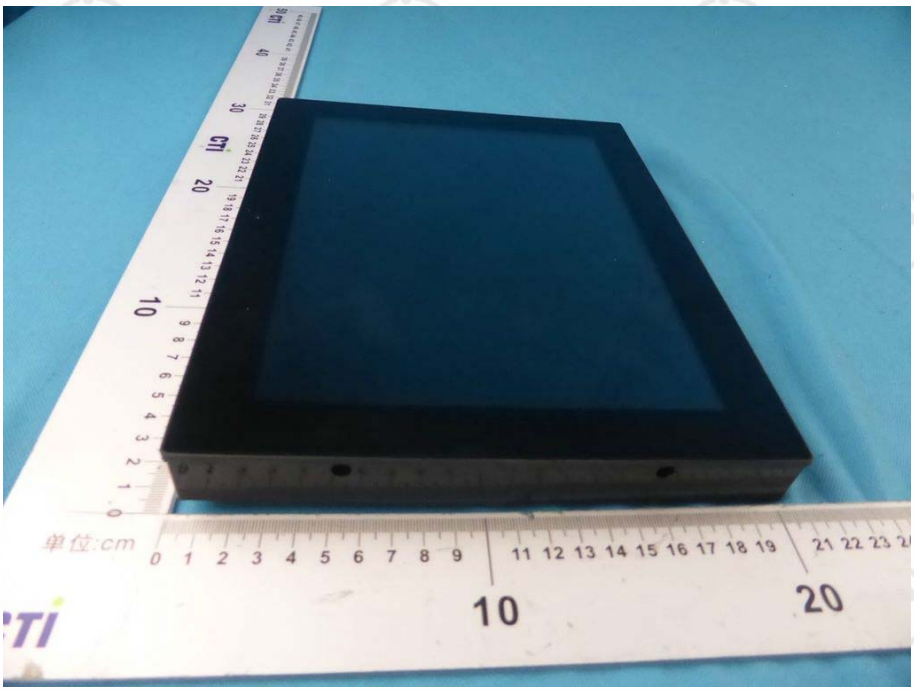
Conducted emission Test Setup

PHOTOGRAPHS OF EUT Constructional Details

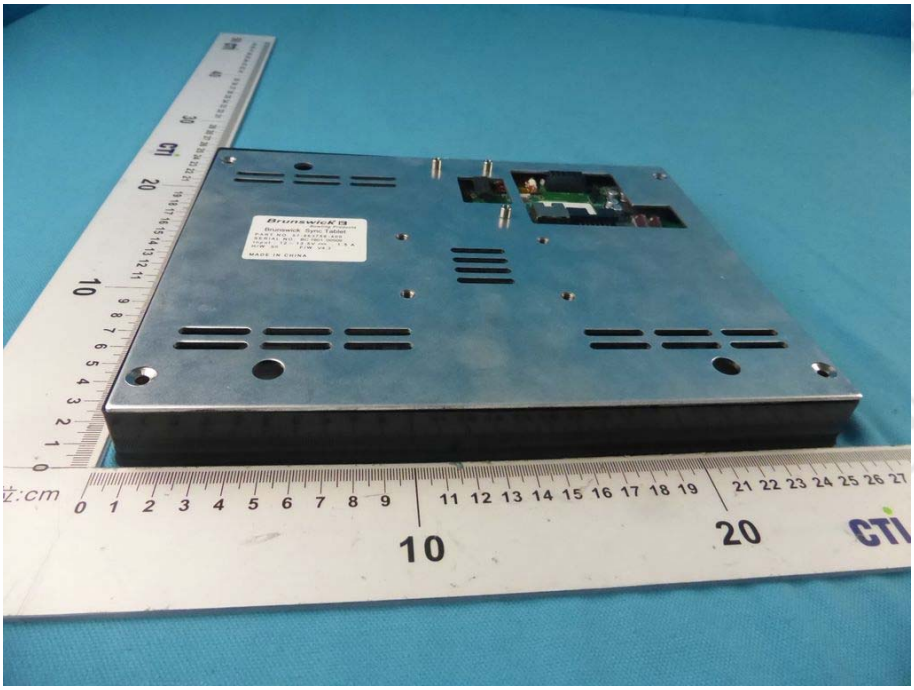
Test mode No.: 57-863756



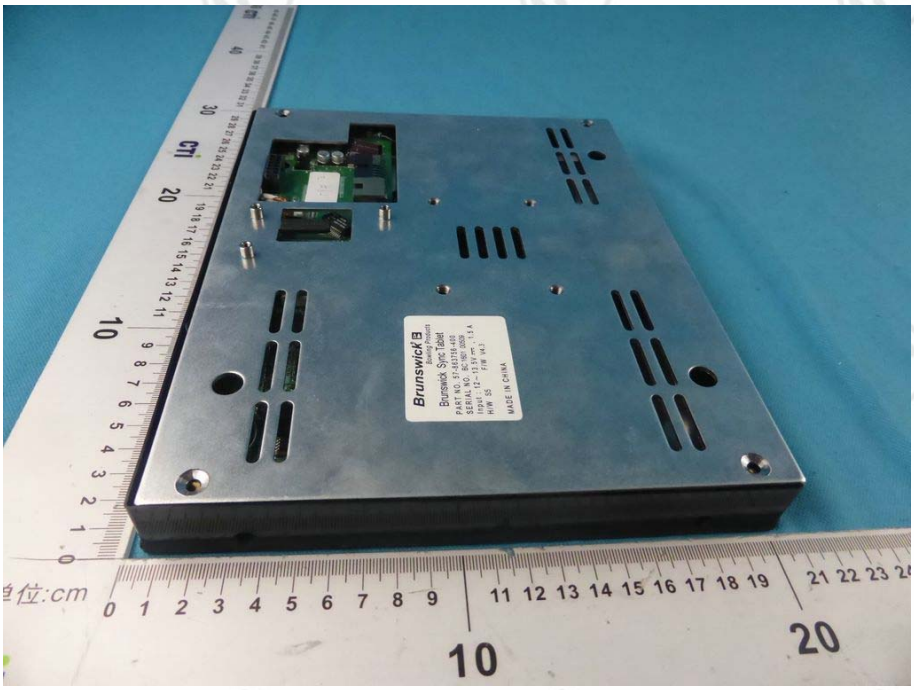
View of product-1



View of product-2

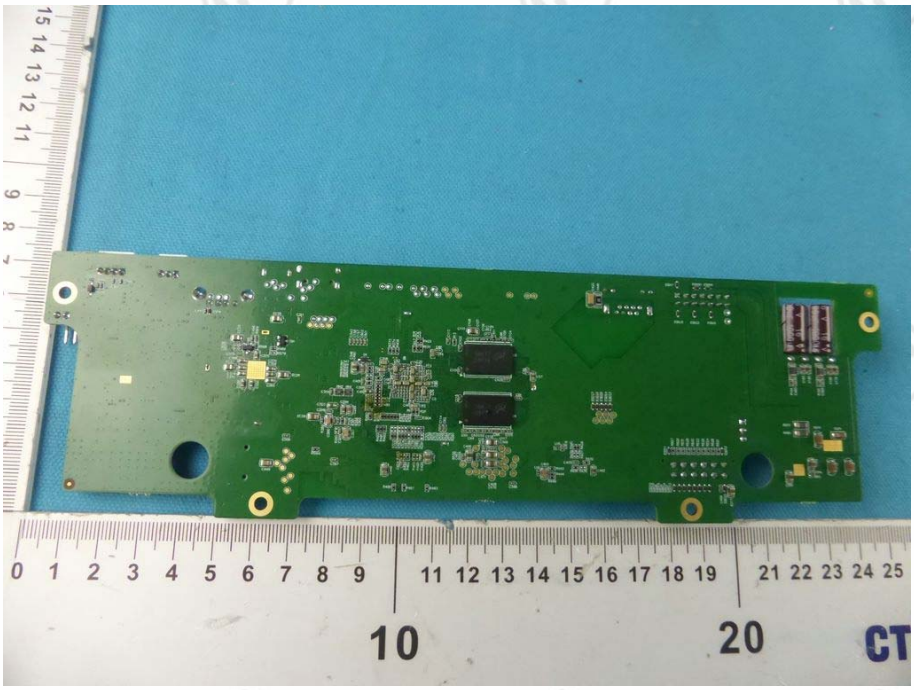


View of product-3

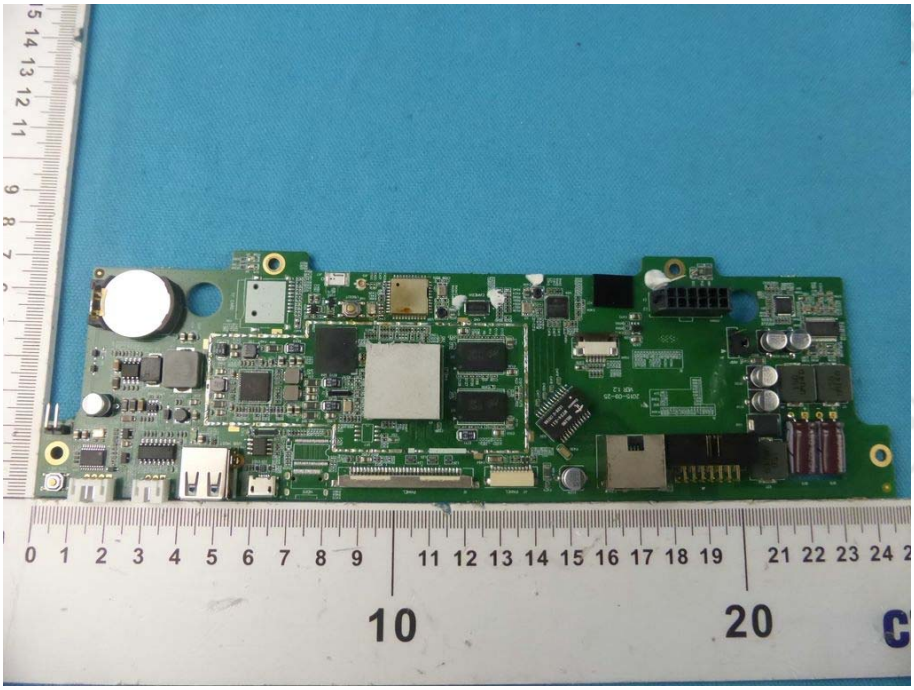


View of product-4

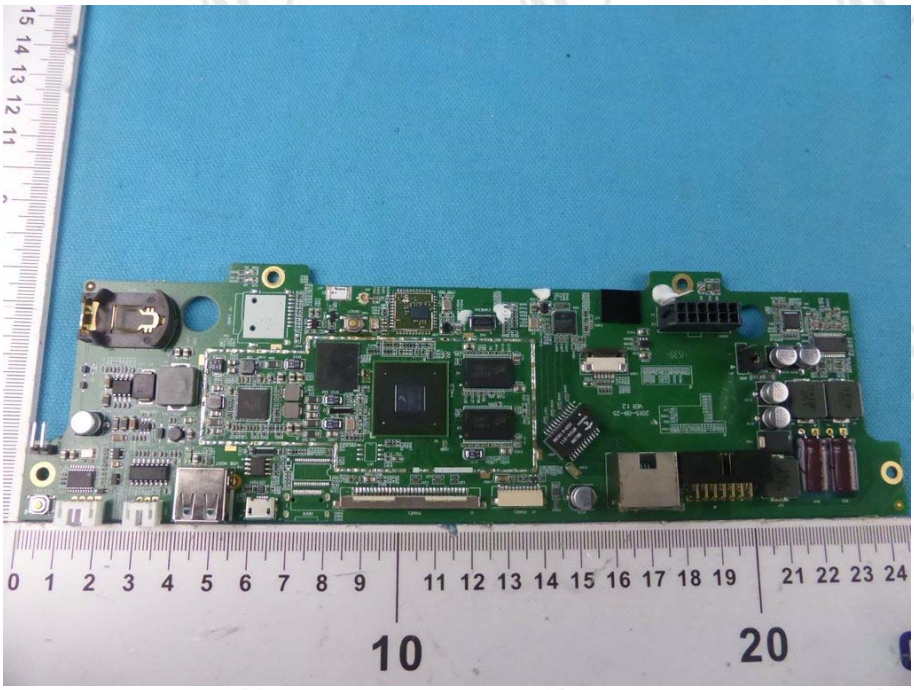
View of product-5



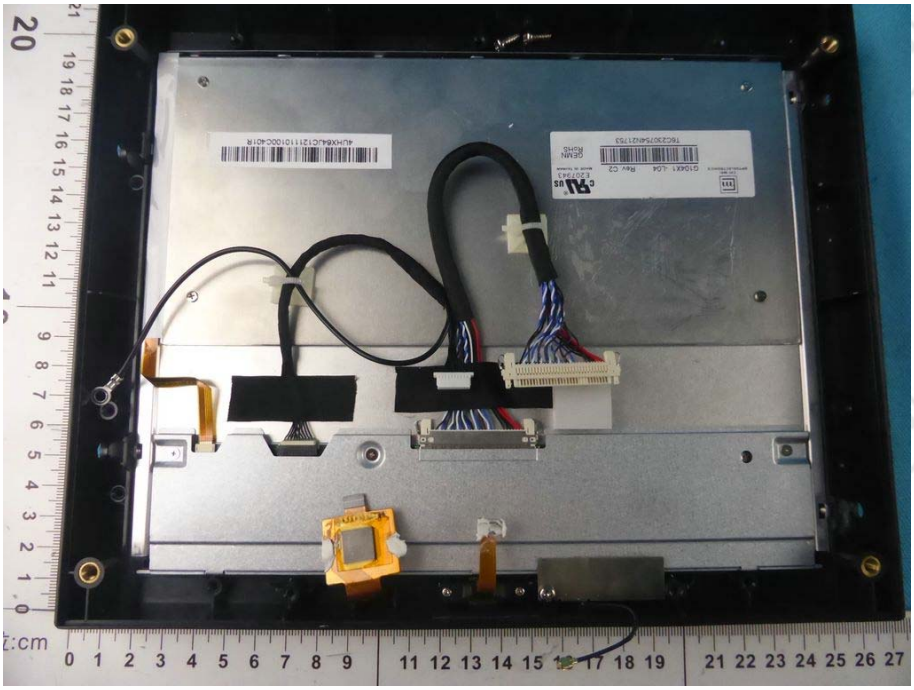
View of product-6



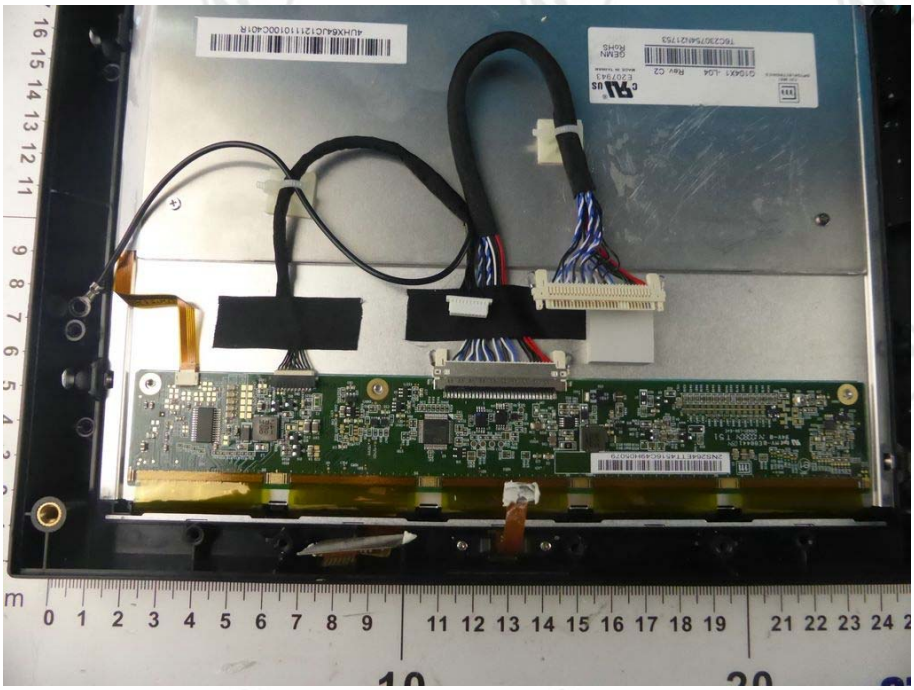
View of product-7



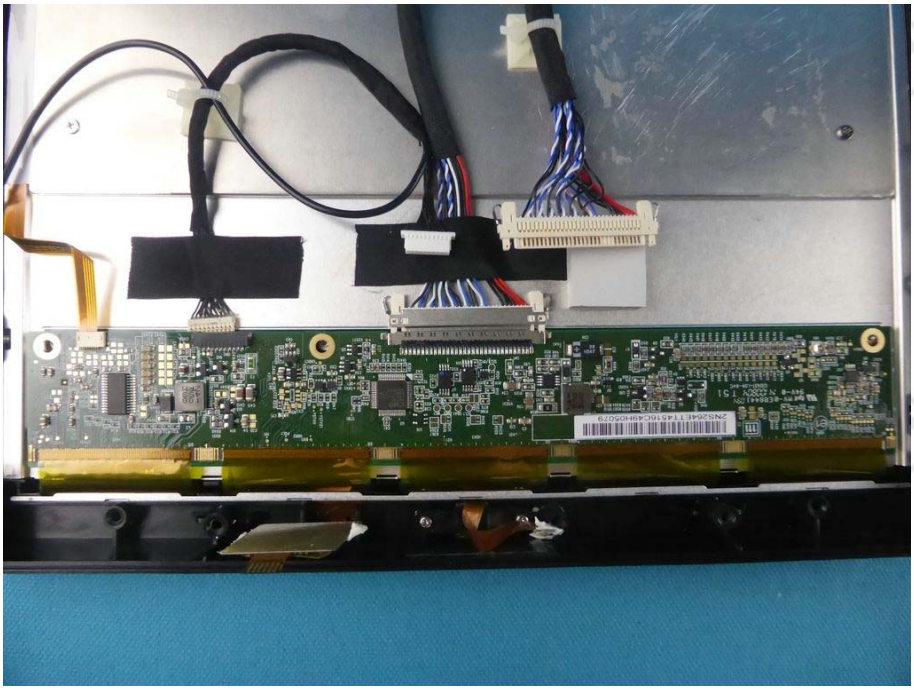
View of product-8



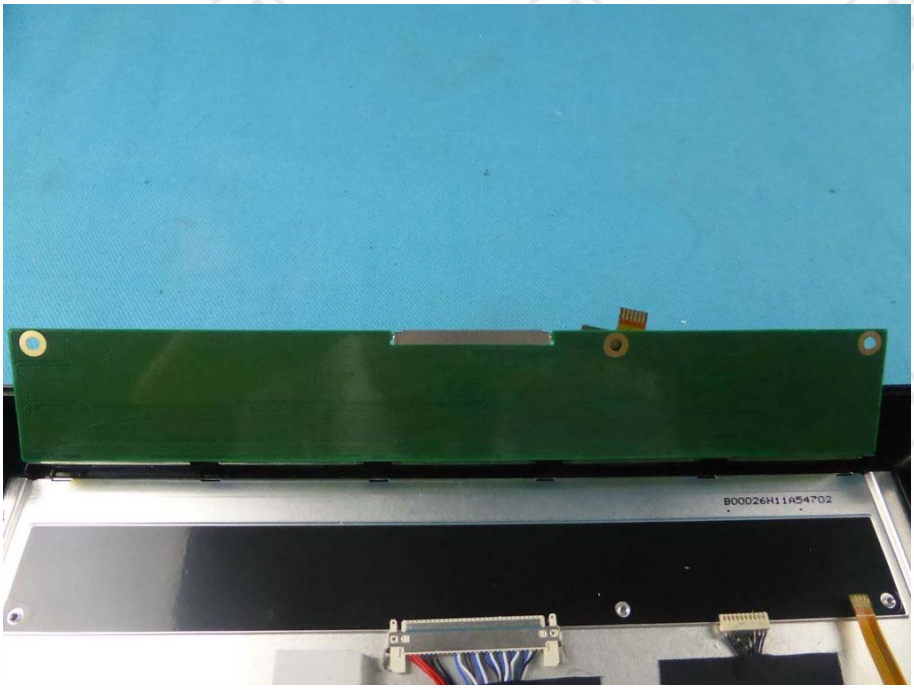
View of product-9



View of product-10



View of product-11



View of product-12

*** End of Report ***

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