

IEEE 802.11b:
CH Low :



CH Mid :



CH High :



IEEE 802.11g:

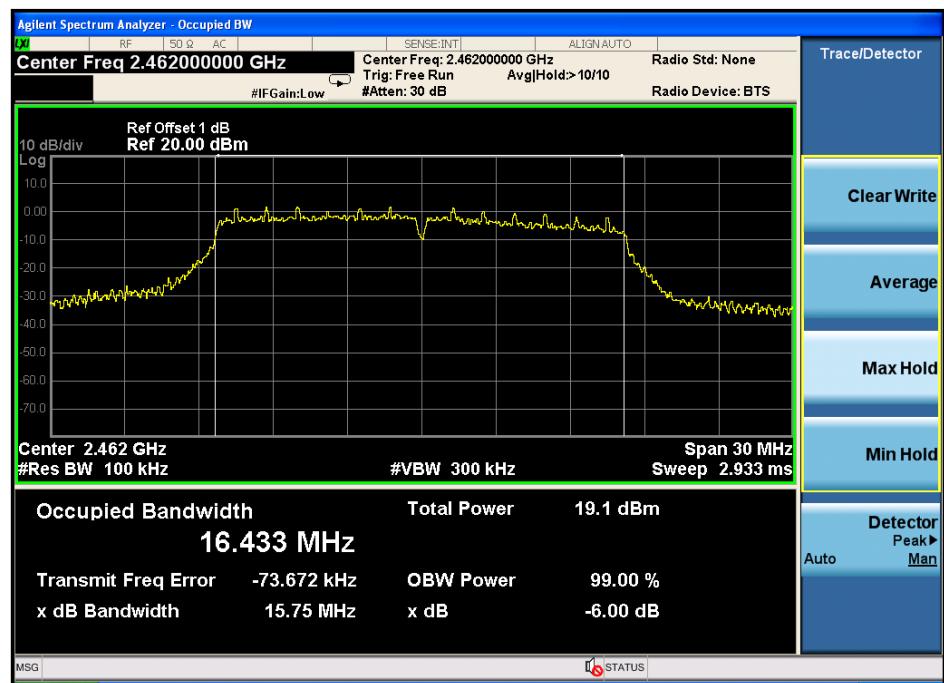
CH Low :



CH Mid:

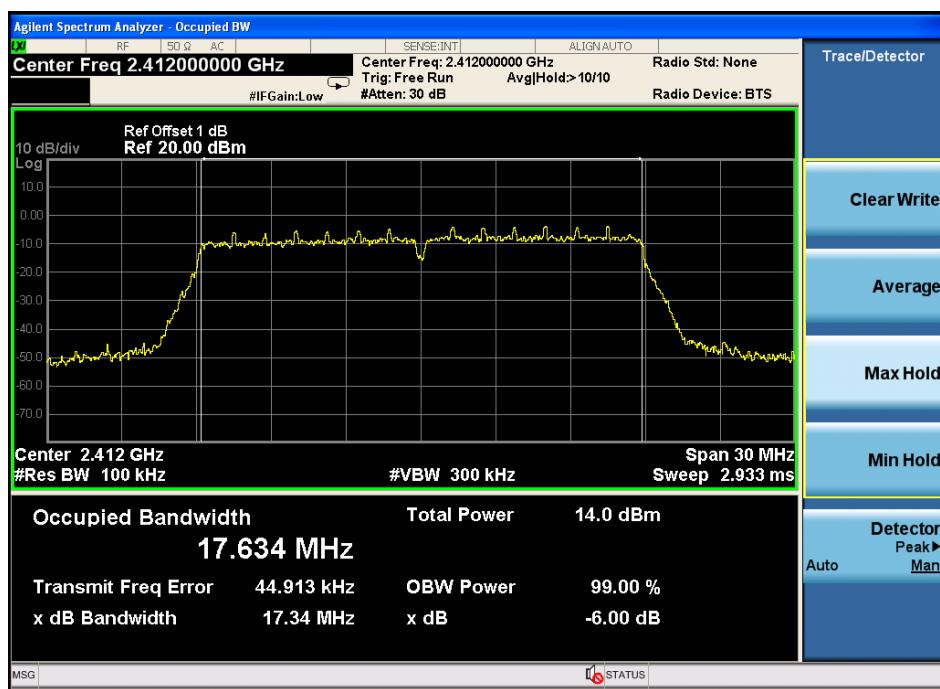


CH Hig:

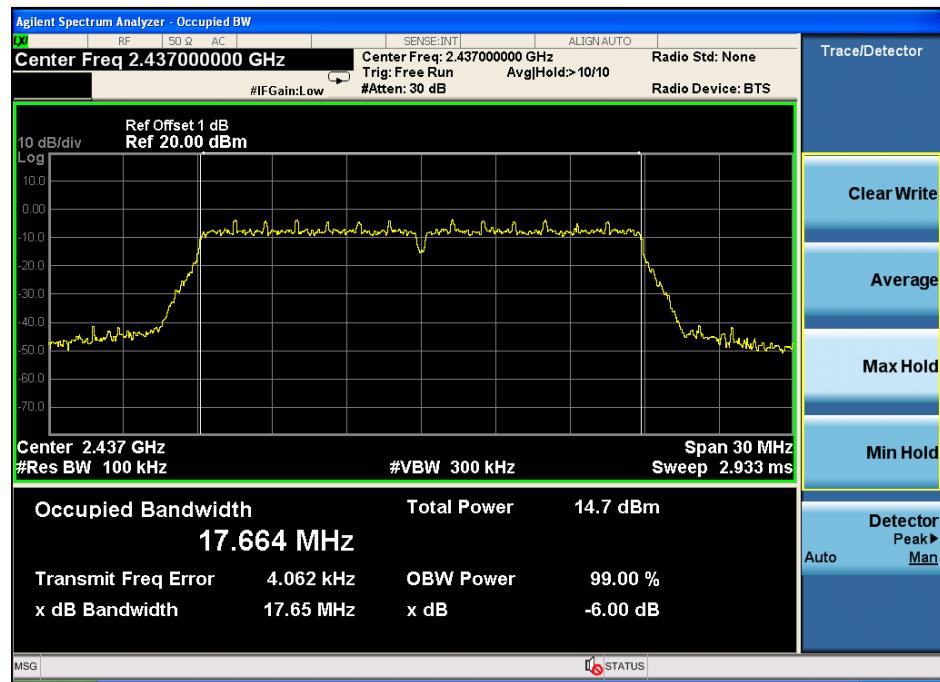


IEEE 802.11n HT20:

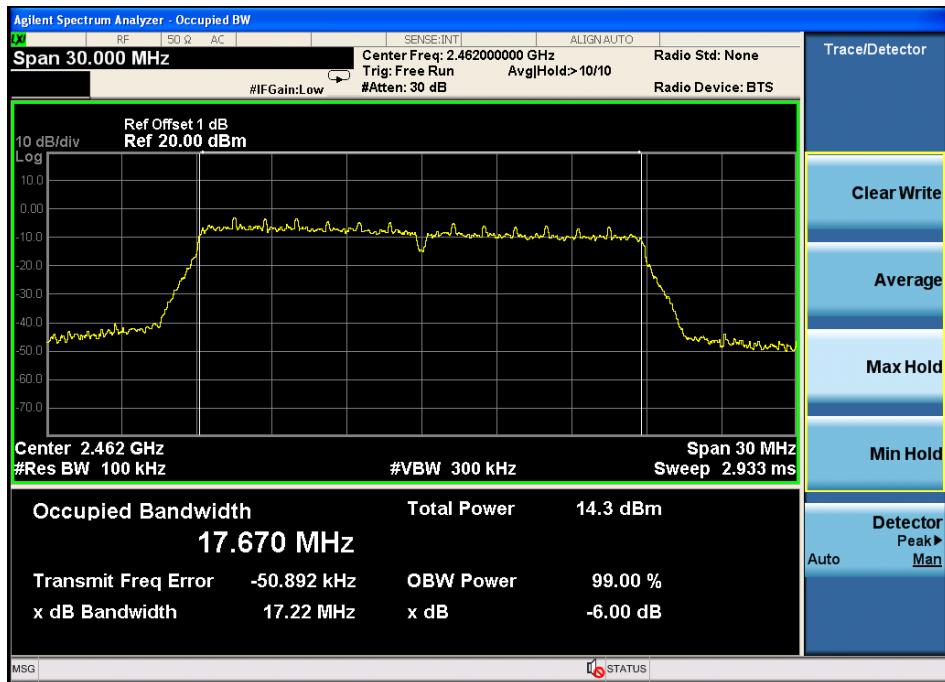
CH Low :



CH Mid :

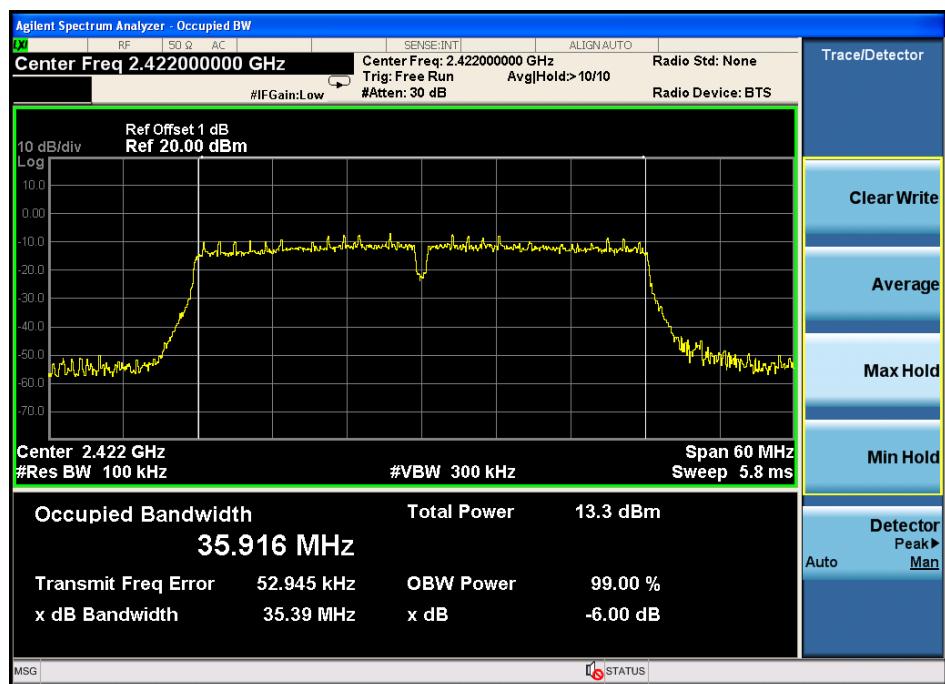


CH High :

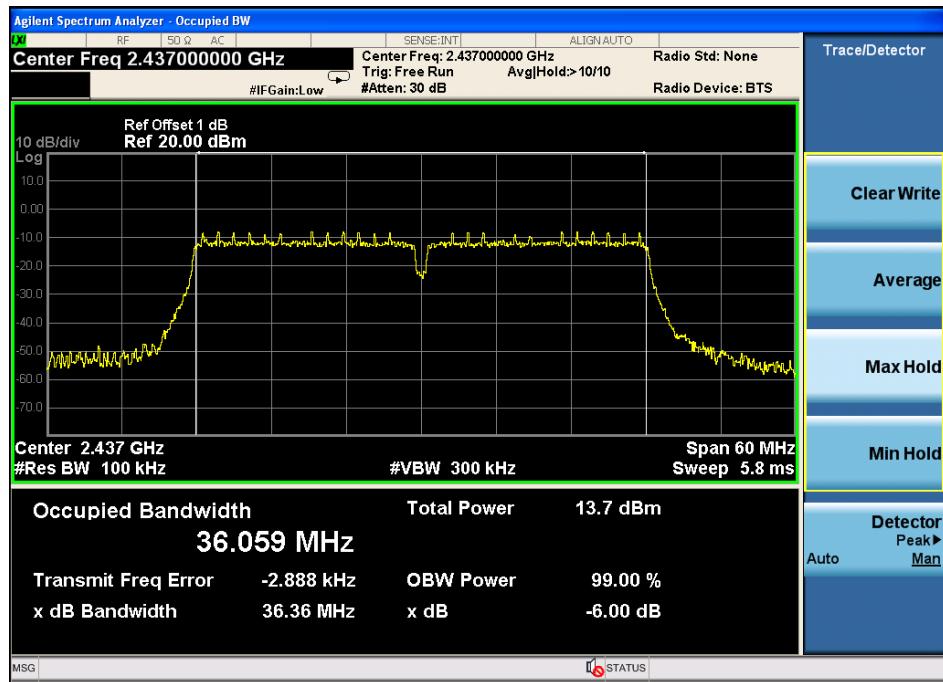


IEEE 802.11n/HT40:

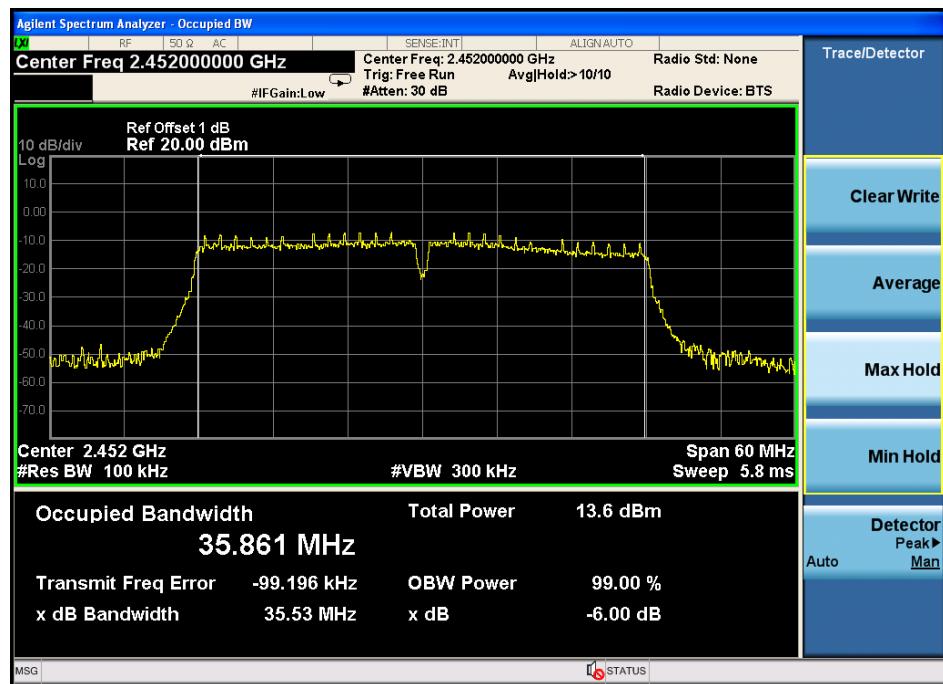
CH Low :



CH Mid:



CH High :



10 Band Edge Check

10.1 Test limit

Please refer section 15.247

All the lower and upper band-edges emissions appearing within 2310MHz to 2390MHz and 2483.5MHz to 2500MHz restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions outside operation frequency band 2400MHz to 2483.5MHz and 5725MHz to 5850MHz shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

10.2 Test Procedure

- 12.2.1 Put the EUT on a 0.8m high table, power on the EUT. Emissions were scanned and measured rotating the EUT to 360 degrees, Find the maximum Emission
- 12.2.2 Check the spurious emissions out of band.
- 12.2.3 RBW 1MHz ,VBW 3MHz ,peak detector for peak value , RBW 1MHz ,VBW 3MHz , RMS detector for AV value.

10.3 Test Setup

Same as 5.2.2.

10.4 Test Result

PASS.

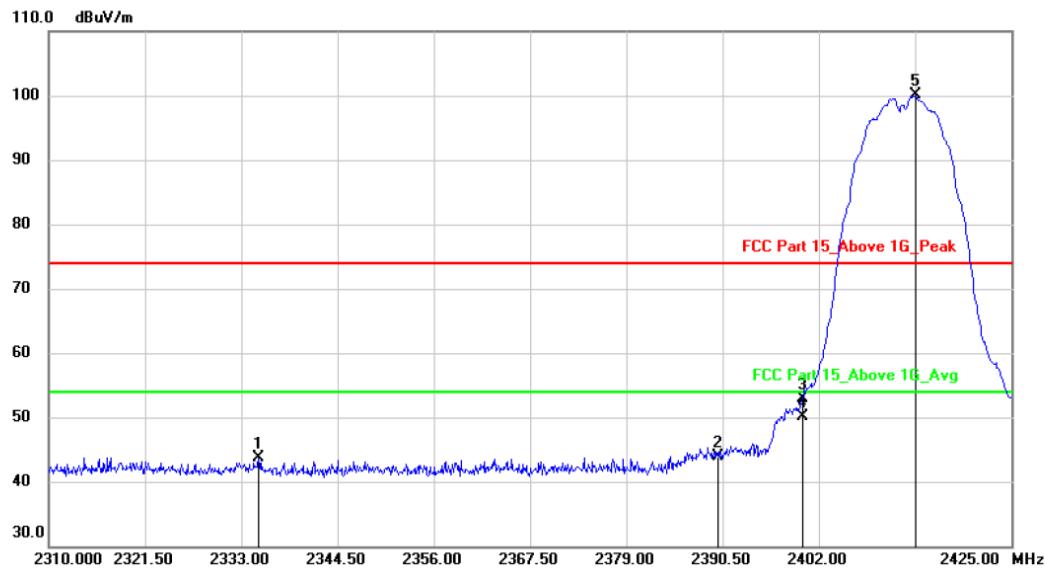
Detailed information please see the following page.

Radiated Method:

Site LAB Polarization: **Vertical** Temperature: 23.9
Limit: FCC Part 15_Above 1G_Peak Power: Humidity: 46 %
EUT: Distance: 3m
M/N:
Mode:802.11b low channel
Note:
Engineer Signature:

Radiated Emission Measurement

File :09 Data :#3 Date: 2017/6/26 Time: 9:55:46



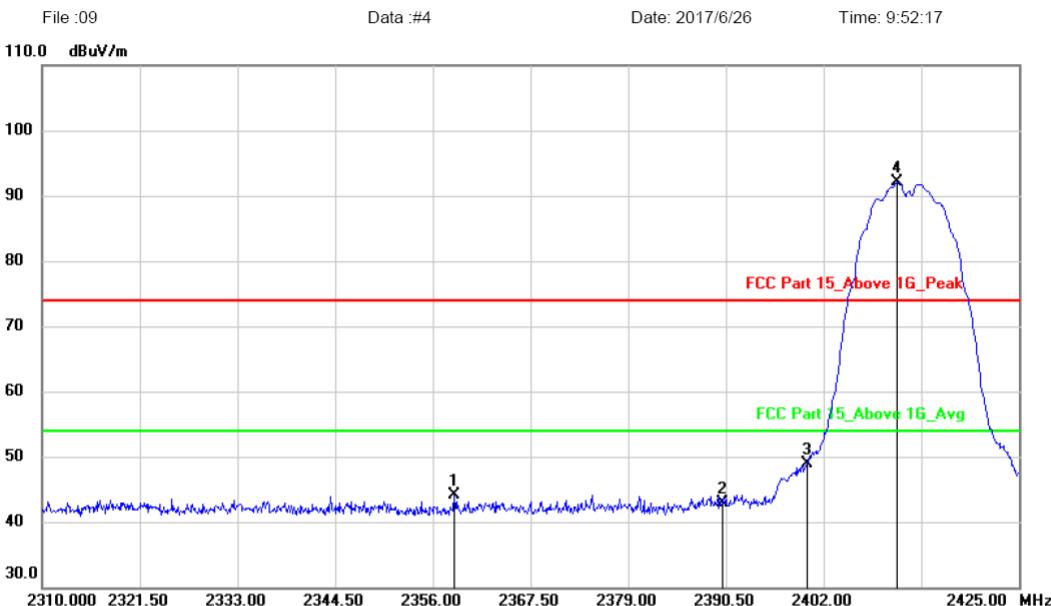
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2335.070	47.09	-3.34	43.75	74.00	-30.25	peak			
2		2390.000	47.39	-3.40	43.99	74.00	-30.01	peak			
3		2400.000	56.28	-3.41	52.87	74.00	-21.13	peak			
4		2400.000	53.51	-3.41	50.10	54.00	-3.90	AVG			
5	*	2413.500	103.44	-3.41	100.03	74.00	26.03	peak			

Note:1. *:Maximum data; x:Over limit; !:over margin.

2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

Site LAB
 Limit: FCC Part 15_Above 1G_Peak
 EUT:
 M/N:
 Mode:802.11b low channel
 Note:
 Engineer Signature:

Radiated Emission Measurement



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Antenna Height cm	Table Degree degree	Comment
1		2358.530	47.39	-3.38	44.01	74.00	-29.99	peak		
2		2390.000	46.39	-3.40	42.99	74.00	-31.01	peak		
3		2400.000	52.27	-3.41	48.86	74.00	-25.14	peak		
4	*	2410.625	95.43	-3.40	92.03	74.00	18.03	peak		

Note:1. *:Maximum data; x:Over limit; !:over margin.

2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

IEEE 802.11b CH High

Site LAB
 Limit: FCC Part 15_Above 1G_Peak
 EUT:
 M/N:
 Mode:802.11b high channel
 Note:
 Engineer Signature:

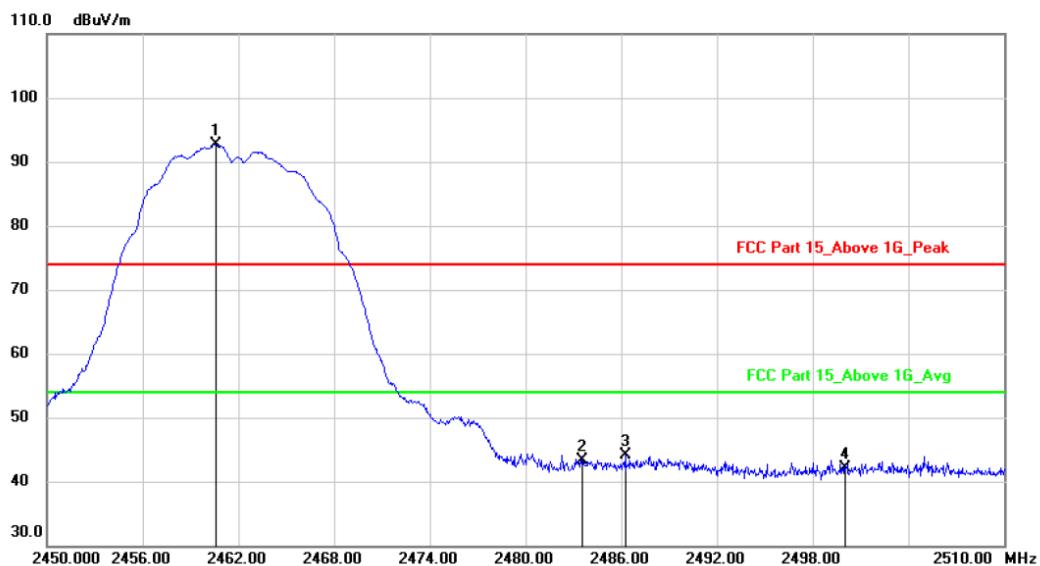
Radiated Emission Measurement

File :09

Data .#13

Date: 2017/6/26

Time: 9:25:49



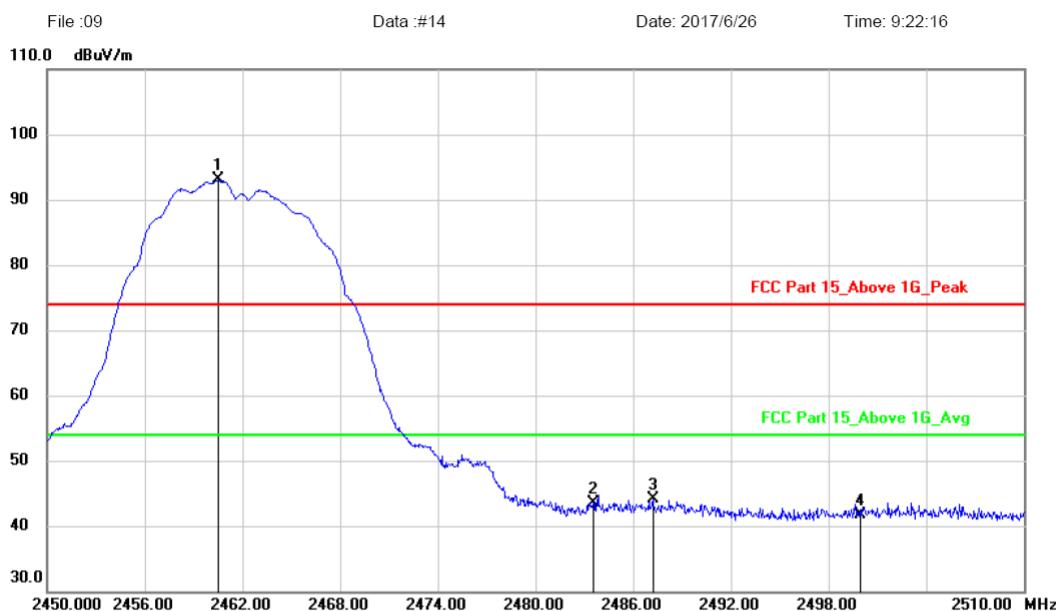
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Antenna Height cm	Table Degree degree	Comment
1	*	2460.620	96.06	-3.39	92.67	74.00	18.67	peak		
2		2483.500	46.64	-3.38	43.26	74.00	-30.74	peak		
3		2486.240	47.43	-3.38	44.05	74.00	-29.95	peak		
4		2500.000	45.48	-3.38	42.10	74.00	-31.90	peak		

Note:1. *:Maximum data; x:Over limit; !:over margin.

2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

Site LAB
 Limit: FCC Part 15_Above 1G_Peak
 EUT:
 M/N:
 Mode:802.11b high channel
 Note:
 Engineer Signature:

Radiated Emission Measurement



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Antenna Height cm	Table Degree degree	Comment
1	*	2460.500	96.40	-3.39	93.01	74.00	19.01	peak		
2		2483.500	46.87	-3.38	43.49	74.00	-30.51	peak		
3		2487.200	47.42	-3.39	44.03	74.00	-29.97	peak		
4		2500.000	45.09	-3.38	41.71	74.00	-32.29	peak		

Note:1. *:Maximum data; x:Over limit; !:over margin.

2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

IEEE 802.11g CH LOW

Site LAB
 Limit: FCC Part 15_Above 1G_Peak
 EUT:
 M/N:
 Mode:802.11g low channel
 Note:
 Engineer Signature:

Radiated Emission Measurement

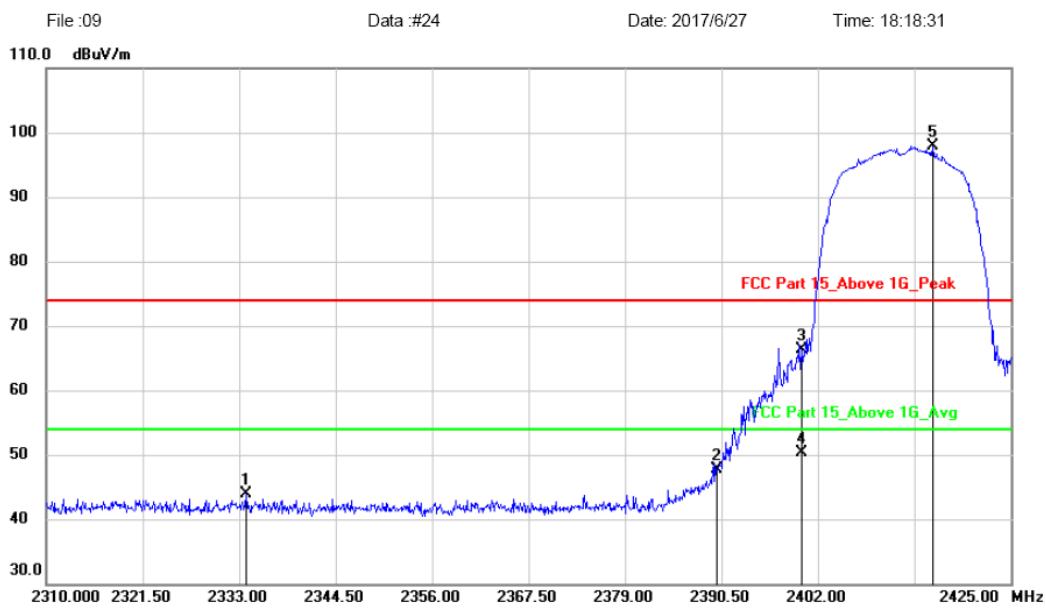
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree
1		2381.760	47.75	-3.40	44.35	74.00	-29.65	peak		
2		2390.000	50.64	-3.40	47.24	74.00	-26.76	peak		
3		2400.000	68.00	-3.41	64.59	74.00	-9.41	peak		
4		2400.000	52.11	-3.41	48.70	54.00	-5.30	AVG		
5	*	2414.650	100.51	-3.41	97.10	74.00	23.10	peak		

Note:1. *:Maximum data; x:Over limit; !:over margin.

2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

Site LAB
 Limit: FCC Part 15_Above 1G_Peak
 EUT:
 M/N:
 Mode:802.11g low channel
 Note:
 Engineer Signature:

Radiated Emission Measurement



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB	Detector	cm	degree	Comment
1	2333.805	47.29	-3.34	43.95	74.00	-30.05	peak			
2	2390.000	51.07	-3.40	47.67	74.00	-26.33	peak			
3	2400.000	69.72	-3.41	66.31	74.00	-7.69	peak			
4	2400.000	53.61	-3.41	50.20	54.00	-3.80	AVG			
5 *	2415.685	101.27	-3.41	97.86	74.00	23.86	peak			

Note: 1. *:Maximum data; x:Over limit; l:over margin.

2. Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

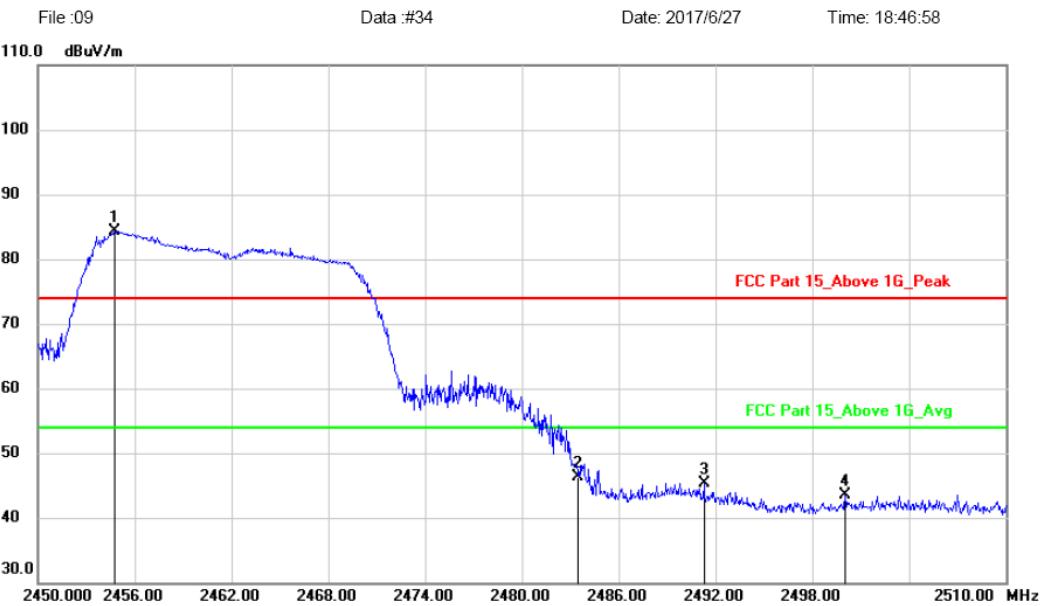
Note:1. *:Maximum data; x:Over limit; l:over margin.

2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

IE

Site LAB Polarization: **Horizontal** Temperature: 23.9
Limit: FCC Part 15_Above 1G_Peak Power: Humidity: 46 %
EUT: Distance: 3m
M/N:
Mode:802.11g high channel
Note:
Engineer Signature:

Radiated Emission Measurement



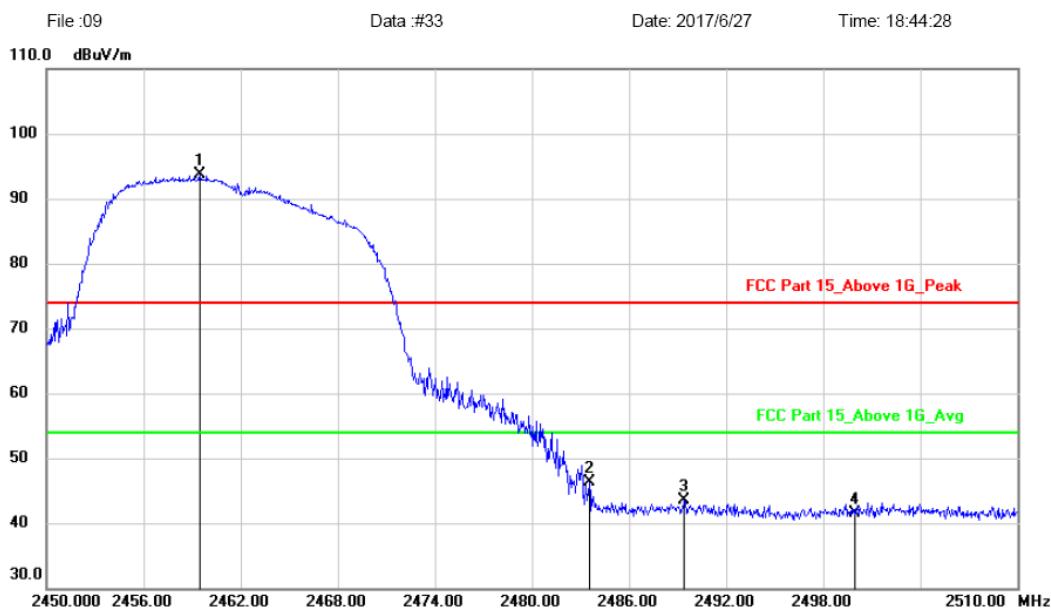
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB	dBuV/m	dB	Detector	cm	degree	
1	*	2454.740	87.62	-3.39	84.23	74.00	10.23	peak		
2		2483.500	49.64	-3.38	46.26	74.00	-27.74	peak		
3		2491.280	48.79	-3.39	45.40	74.00	-28.60	peak		
4		2500.000	46.88	-3.38	43.50	74.00	-30.50	peak		

Note:1. *:Maximum data; x:Over limit; l:over margin.

2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

Site LAB	Polarization: Vertical	Temperature: 23.9
Limit: FCC Part 15_Above 1G_Peak	Power:	Humidity: 46 %
EUT:	Distance: 3m	
M/N:		
Mode:802.11g high channel		
Note:		
Engineer Signature:		

Radiated Emission Measurement



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB	dBuV/m	dB	Detector	cm	degree	
1	*	2459.480	97.08	-3.39	93.69	74.00	19.69	peak		
2		2483.500	49.59	-3.38	46.21	74.00	-27.79	peak		
3		2489.420	46.87	-3.39	43.48	74.00	-30.52	peak		
4		2500.000	44.87	-3.38	41.49	74.00	-32.51	peak		

Note:1. *:Maximum data; x:Over limit; !:over margin.

2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

IEEE 802.11n HT20 CH Low

Site LAB Polarization: **Vertical** Temperature: 23.9
Limit: FCC Part 15_Above 1G_Peak Power: Humidity: 46 %
EUT: Distance: 3m
M/N:
Mode:802.11n HT20 low channel
Note:
Engineer Signature:

Radiated Emission Measurement

File :09

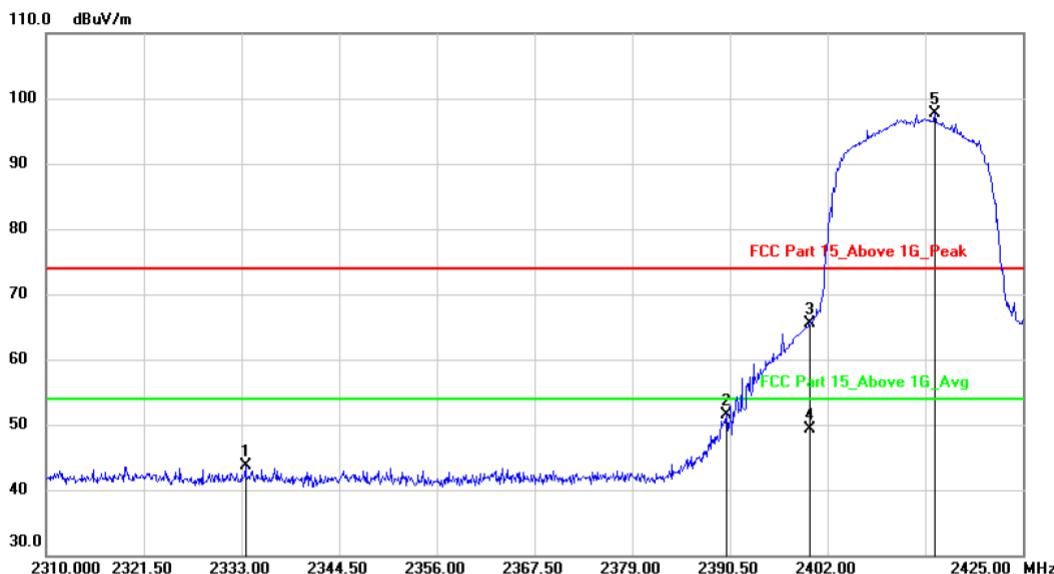
Data :#43

Date: 2017/6/27

Time: 19:17:00

23 9

humidity: 46 %



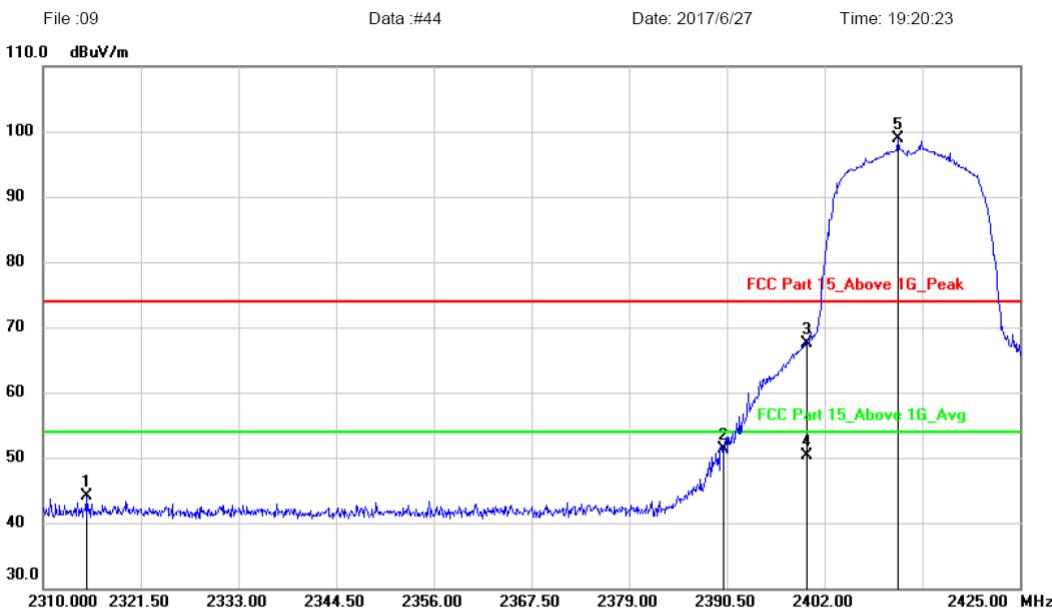
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2333.460	46.96	-3.34	43.62	74.00	-30.38	peak			
2		2390.000	54.82	-3.40	51.42	74.00	-22.58	peak			
3		2400.000	68.92	-3.41	65.51	74.00	-8.49	peak			
4		2400.000	52.71	-3.41	49.30	54.00	-4.70	AVG			
5	*	2414.650	101.07	-3.41	97.66	74.00	23.66	peak			

Note: 1. *:Maximum data; x:Over limit; !:over margin.

2. Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

Site LAB	Polarization: <i>Horizontal</i>	Temperature: 23.9
Limit: FCC Part 15_Above 1G_Peak	Power:	Humidity: 46 %
EUT:	Distance: 3m	
M/N:		
Mode:802.11n HT20 low channel		
Note:		
Engineer Signature:		

Radiated Emission Measurement



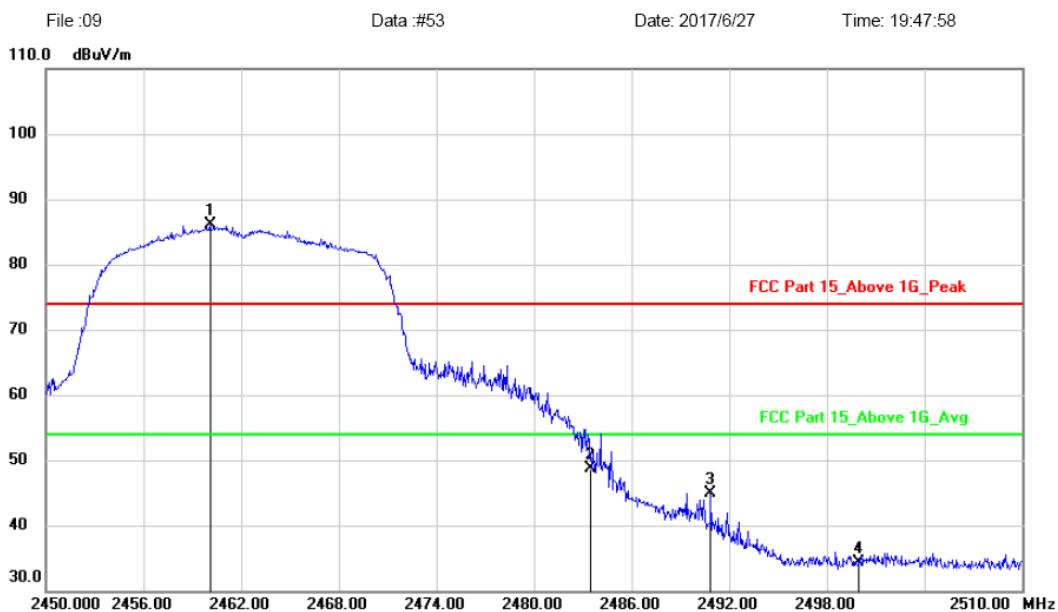
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Antenna Height cm	Table Degree degree	Comment
1	2315.060	47.39	-3.33	44.06	74.00	-29.94	peak			
2	2390.000	54.71	-3.40	51.31	74.00	-22.69	peak			
3	2400.000	70.82	-3.41	67.41	74.00	-6.59	peak			
4	2400.000	53.81	-3.41	50.40	54.00	-3.60	AVG			
5	*	2410.625	102.25	-3.40	98.85	74.00	24.85	peak		

Note:1. *:Maximum data; x:Over limit; !:over margin.

2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

IEEE 802.11n HT20 CH High

Site LAB
 Polarization: **Vertical**
 Limit: FCC Part 15_Above 1G_Peak
 Power:
 EUT: Distance: 3m
 Temperature: 23.9
 M/N:
 Humidity: 46 %
 Mode: 802.11n HT20 high channel
 Note:
 Engineer Signature:

Radiated Emission Measurement

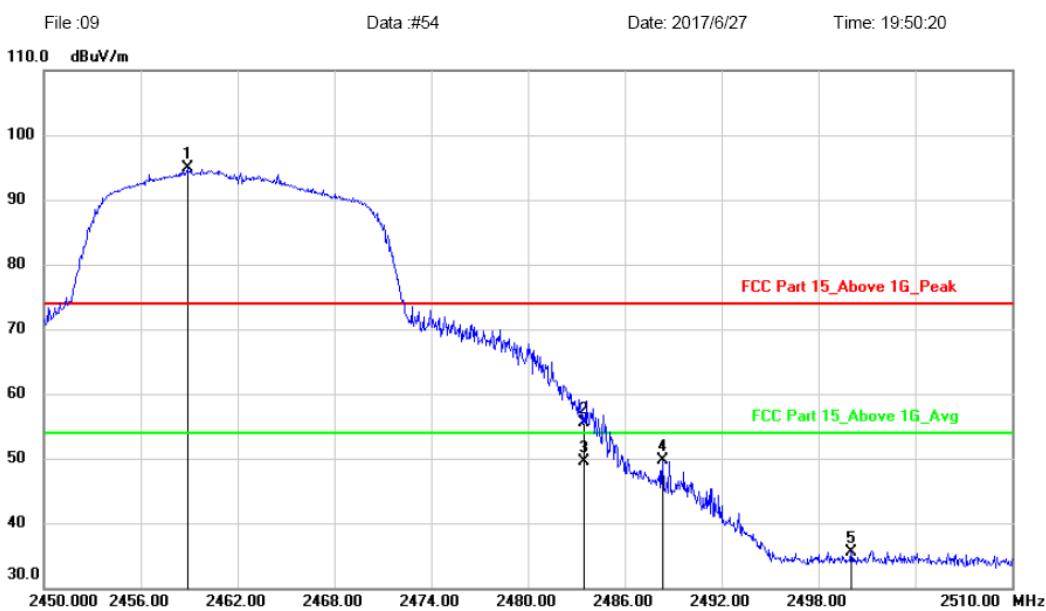
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree
1	*	2460.080	89.47	-3.39	86.08	74.00	12.08	peak		
2		2483.500	52.14	-3.38	48.76	74.00	-25.24	peak		
3		2490.860	48.37	-3.39	44.98	74.00	-29.02	peak		
4		2500.000	37.75	-3.38	34.37	74.00	-39.63	peak		

Note: 1. *:Maximum data; x:Over limit; !:over margin.

2. Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

Site LAB
 Limit: FCC Part 15_Above 1G_Peak
 EUT:
 M/N:
 Mode:802.11n HT20 high channel
 Note:
 Engineer Signature:

Radiated Emission Measurement

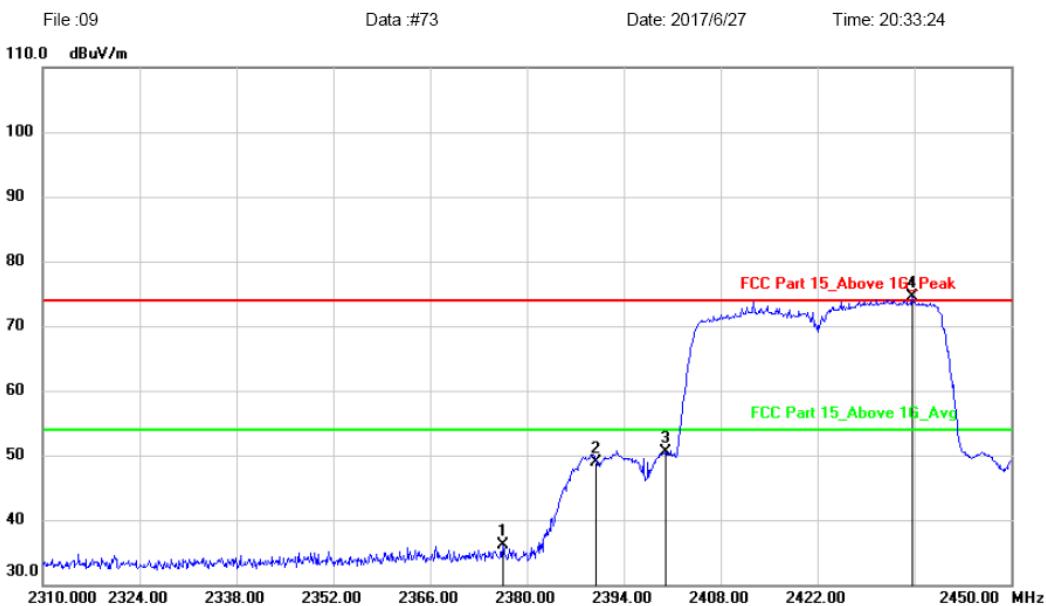


Note:1. *:Maximum data; x:Over limit; !:over margin.

2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

IEEE 802.11n HT40 CH Low

Site LAB
 Limit: FCC Part 15_Above 1G_Peak
 EUT:
 M/N:
 Mode:802.11n HT40 low channel
 Note:
 Engineer Signature:

Radiated Emission Measurement

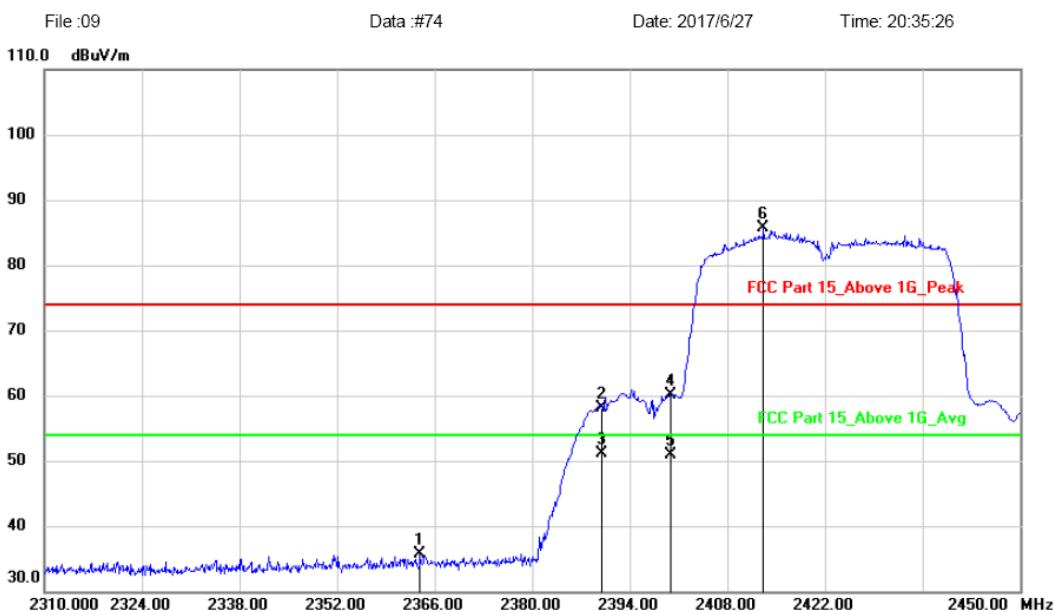
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dB	Margin Detector	Antenna Height cm	Table Degree degree	Comment
1		2376.500	39.49	-3.39	36.10	74.00	-37.90	peak		
2		2390.000	52.31	-3.40	48.91	74.00	-25.09	peak		
3		2400.000	53.85	-3.41	50.44	74.00	-23.56	peak		
4	*	2435.720	77.98	-3.40	74.58	74.00	0.58	peak		

Note:1. *:Maximum data; x:Over limit; !:over margin.

2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

Site LAB
 Limit: FCC Part 15_Above 1G_Peak
 EUT:
 M/N:
 Mode:802.11n HT40 low channel
 Note:
 Engineer Signature:

Radiated Emission Measurement



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Antenna Height cm	Table Degree	Comment
1		2363.900	39.11	-3.38	35.73	74.00	-38.27	peak		
2		2390.000	61.52	-3.40	58.12	74.00	-15.88	peak		
3		2390.000	54.48	-3.40	51.08	54.00	-2.92	AVG		
4		2400.000	63.52	-3.41	60.11	74.00	-13.89	peak		
5		2400.000	54.35	-3.41	50.94	54.00	-3.06	AVG		
6	*	2413.180	89.09	-3.41	85.68	74.00	11.68	peak		

Note:1. *:Maximum data; x:Over limit; l:over margin.

2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

IEEE 802.11n HT40 CH High

Site LAB Polarization: **Vertical** Temperature: 23.9
Limit: FCC Part 15_Above 1G_Peak Power: Humidity: 46 %
EUT: Distance: 3m
M/N:
Mode:802.11n HT40 high channel
Note:
Engineer Signature:

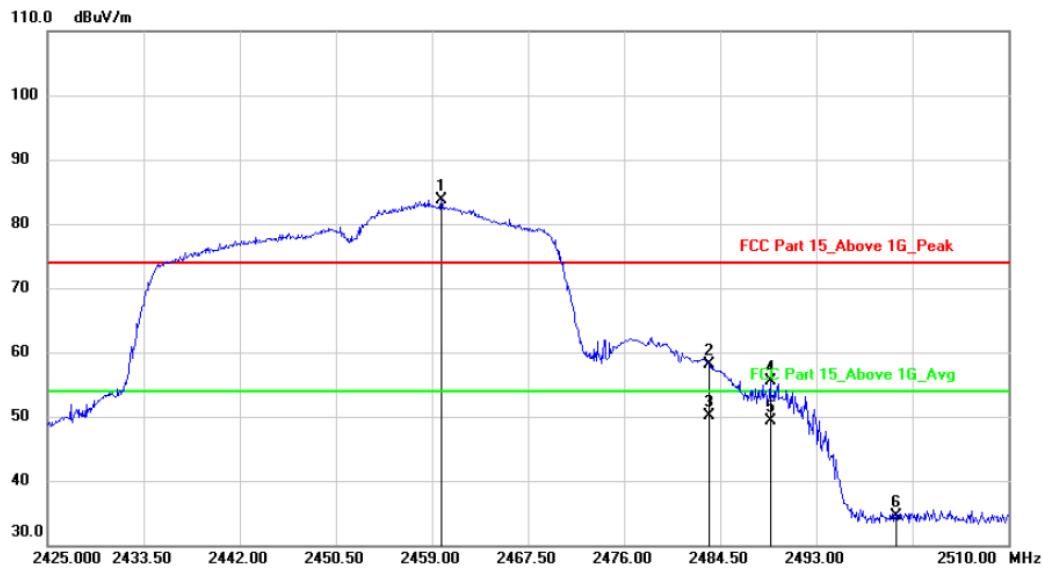
Radiated Emission Measurement

File :09

Data :#63

Date: 2017/6/27

Time: 20:12:04



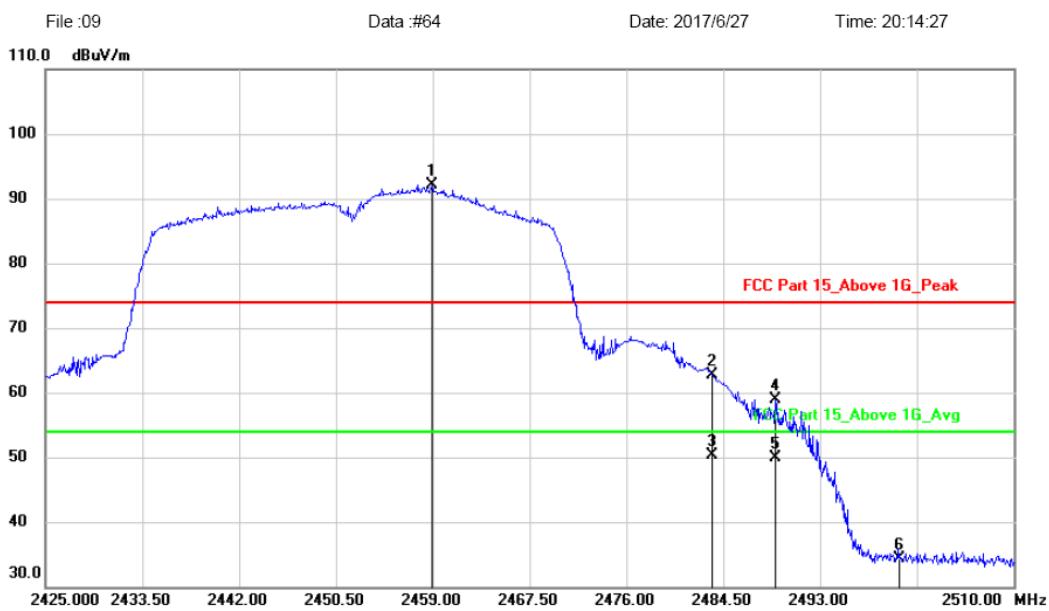
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	Antenna Height	Table Degree		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	2459.850	87.10	-3.39	83.71	74.00	9.71	peak			
2		2483.500	61.54	-3.38	58.16	74.00	-15.84	peak			
3		2483.500	53.48	-3.38	50.10	54.00	-3.90	AVG			
4		2488.920	58.90	-3.39	55.51	74.00	-18.49	peak			
5		2488.920	52.79	-3.39	49.40	54.00	-4.60	AVG			
6		2500.000	37.82	-3.38	34.44	74.00	-39.56	peak			

Note:1. *:Maximum data; x:Over limit; !:over margin.

2. Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

Site LAB
 Limit: FCC Part 15_Above 1G_Peak
 EUT:
 M/N:
 Mode:802.11n HT40 high channel
 Note:
 Engineer Signature:

Radiated Emission Measurement



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB	dBuV/m	dB	Detector	cm	degree	
1	*	2458.915	95.53	-3.39	92.14	74.00	18.14	peak		
2		2483.500	66.10	-3.38	62.72	74.00	-11.28	peak		
3		2483.500	53.68	-3.38	50.30	54.00	-3.70	AVG		
4		2489.090	62.26	-3.39	58.87	74.00	-15.13	peak		
5		2489.090	53.29	-3.39	49.90	54.00	-4.10	AVG		
6		2500.000	37.68	-3.38	34.30	74.00	-39.70	peak		

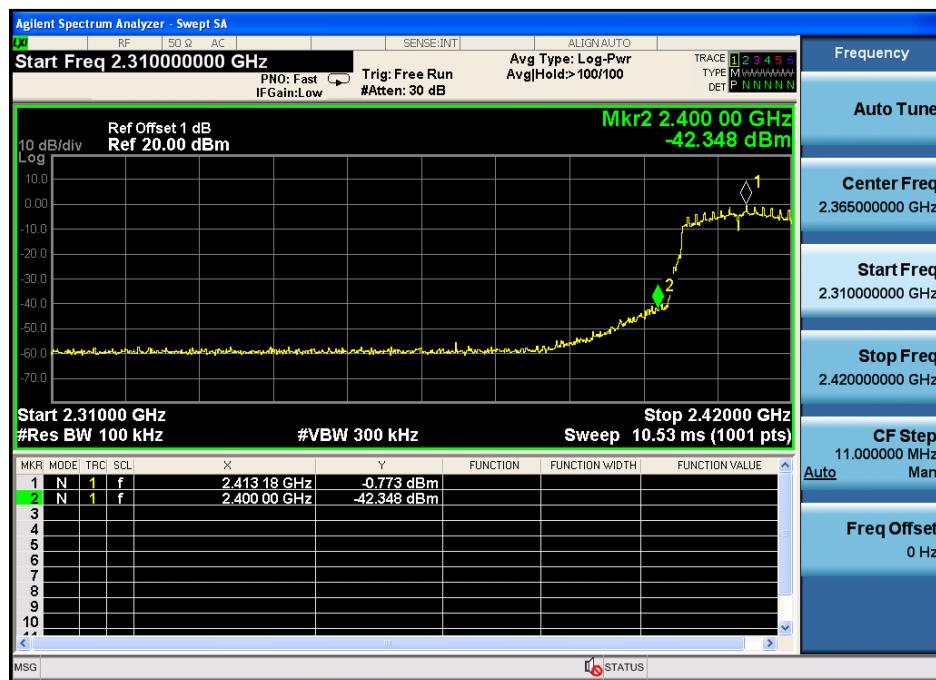
Note:1. *:Maximum data; x:Over limit; l:over margin.

2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

802.11b



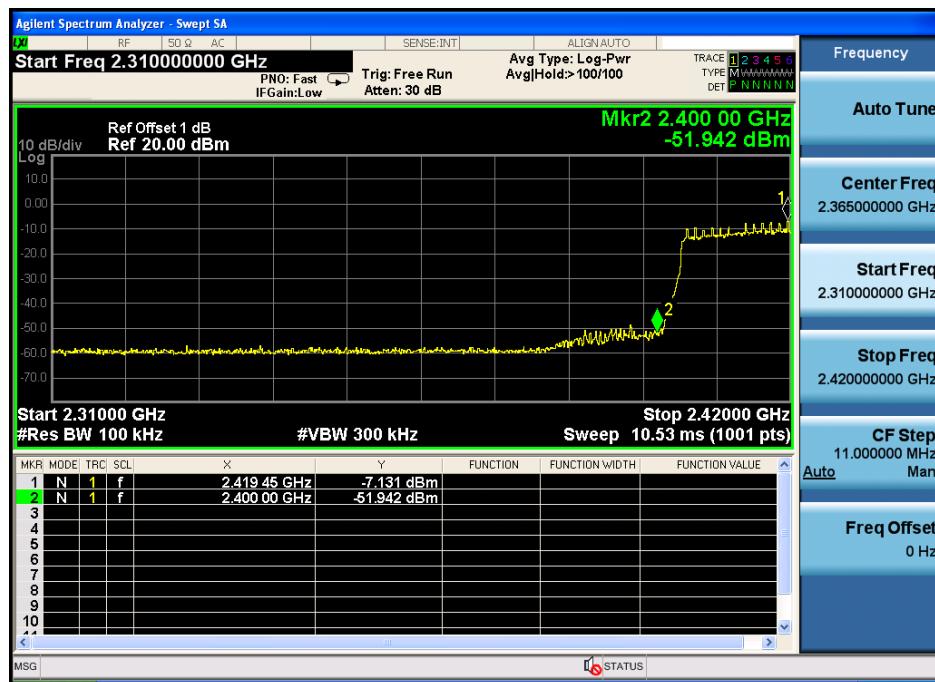
802.11g



802.11n HT20



802.11n HT40



11 Antenna Requirement

11.1 Standard 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 shall be considered sufficient to comply with the provisions of this Section. 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.

11.2 Antenna Connected Construction

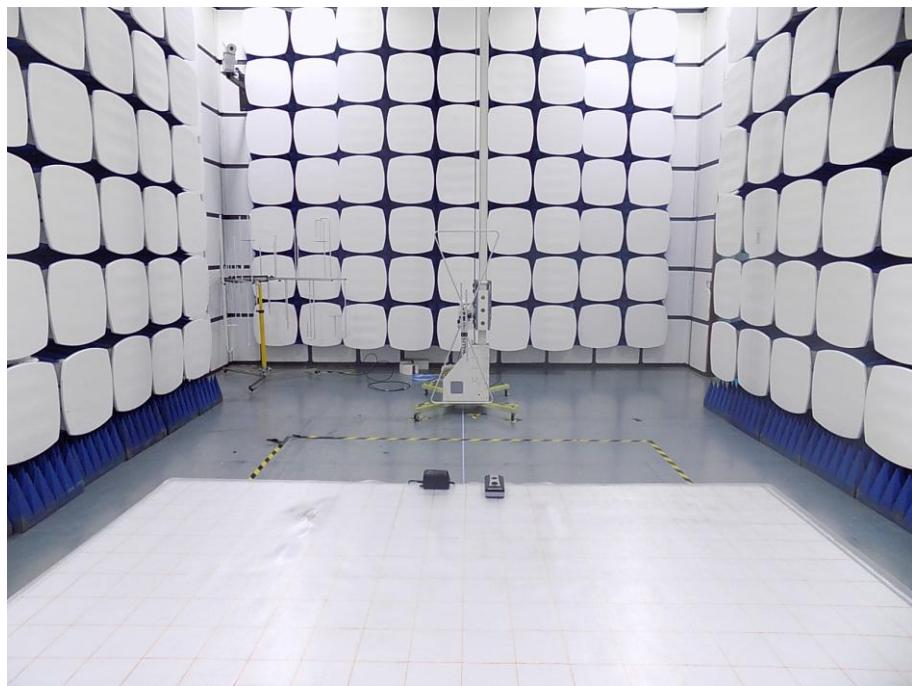
The antenna connector is PIFA antenna and no consideration of replacement. Please see EUT photo for details.

11.3 Result

The EUT antenna is PIFA antenna. It comply with the standard requirement.

12 Test setup photo

12.1 Photos of Radiated emission

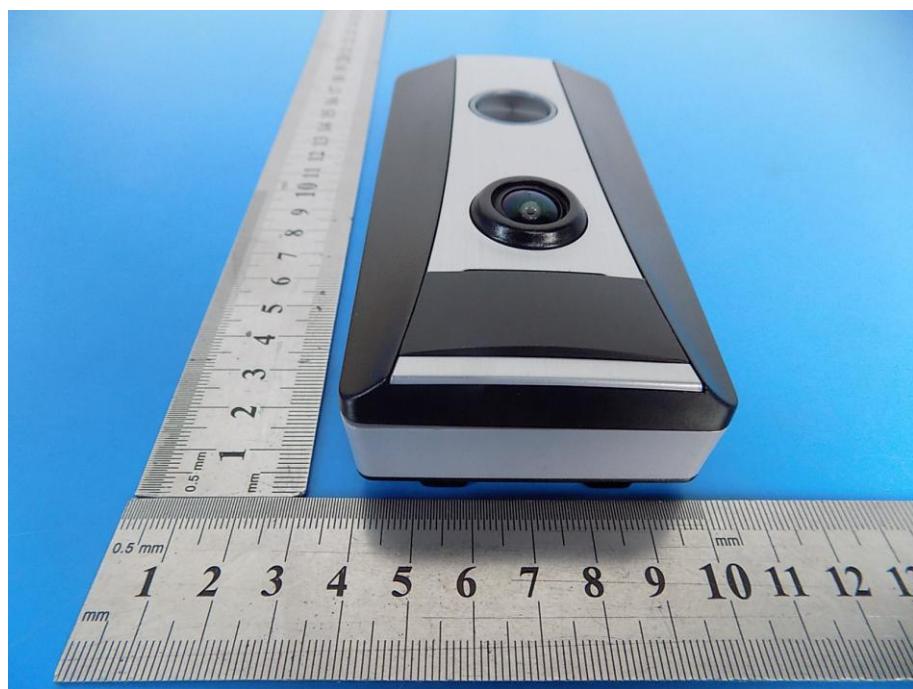


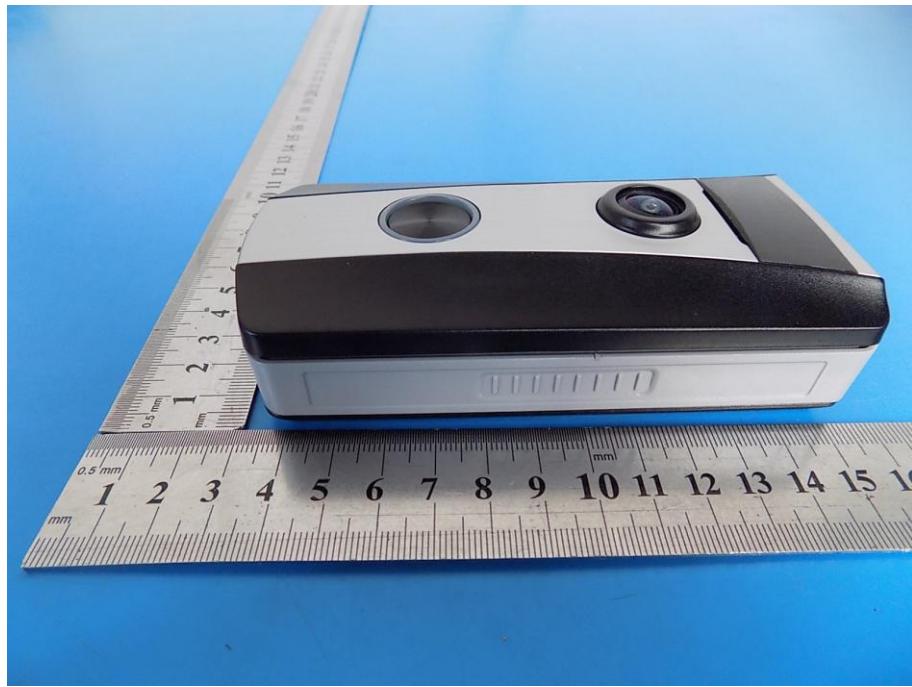
12.2 Photos of Conducted Emission test



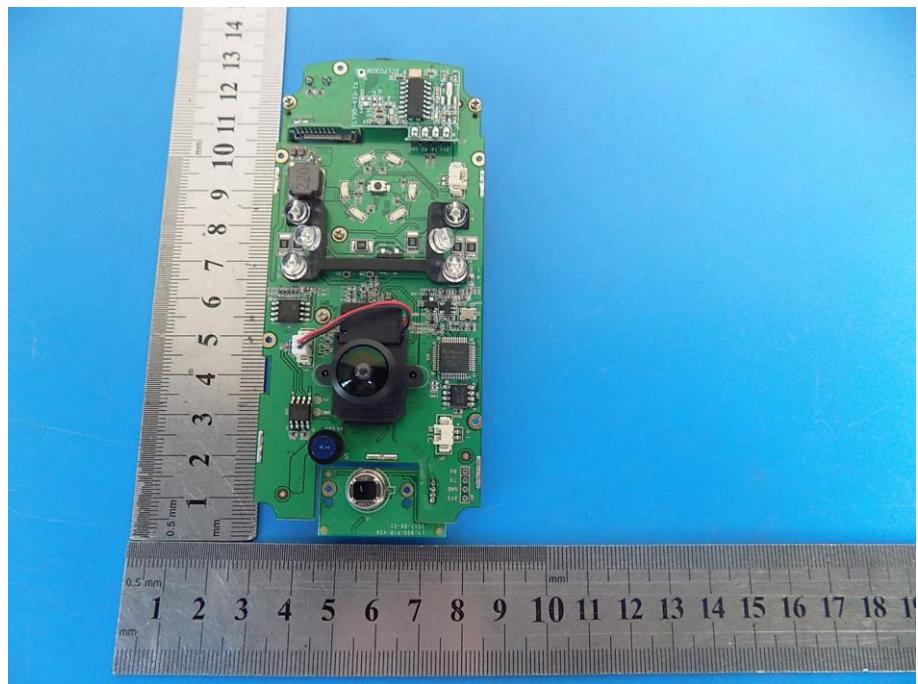
13 Photographs of EUT

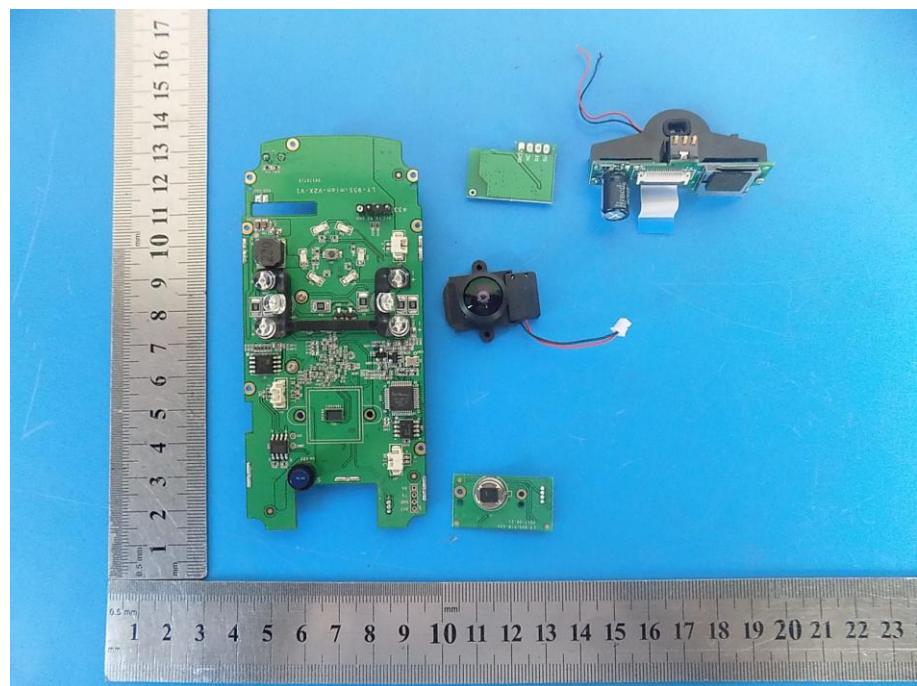
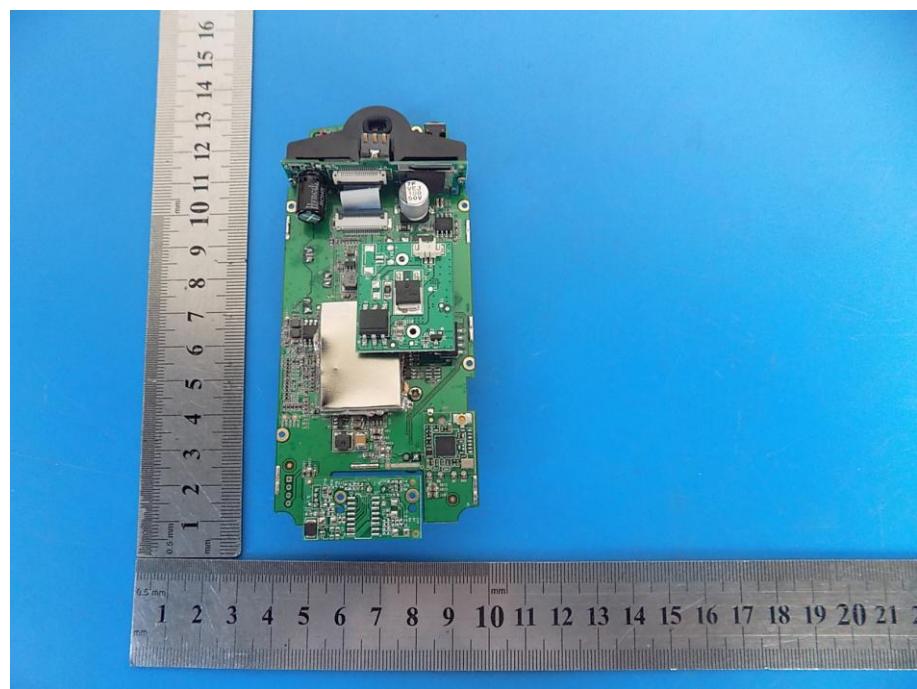


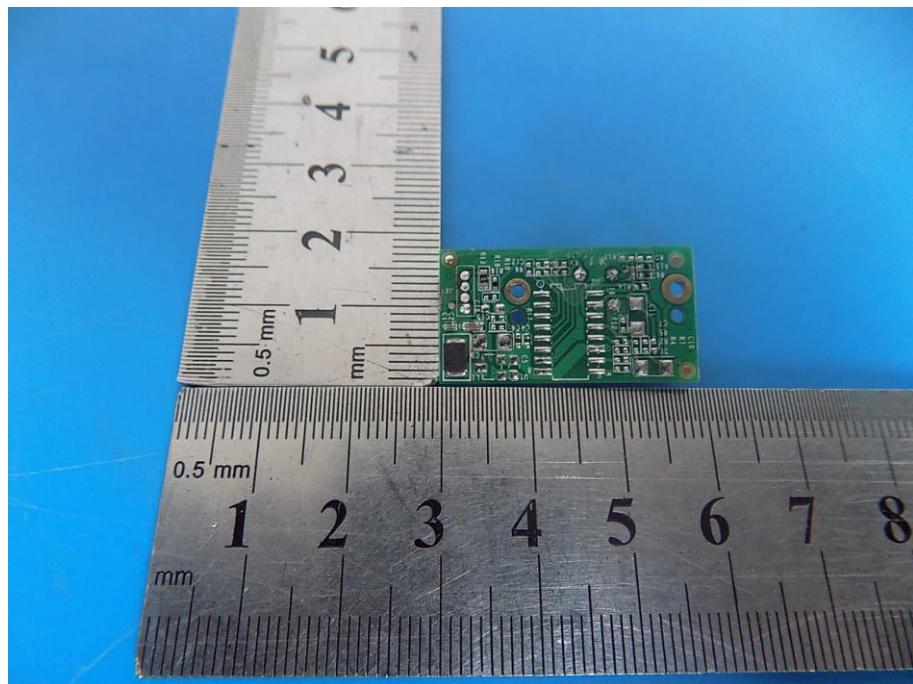
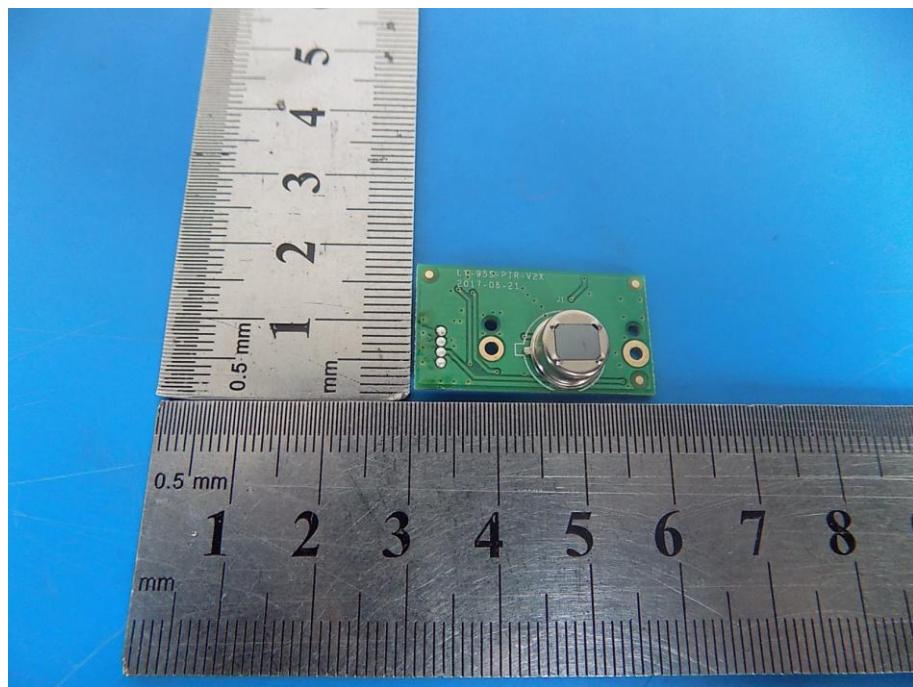


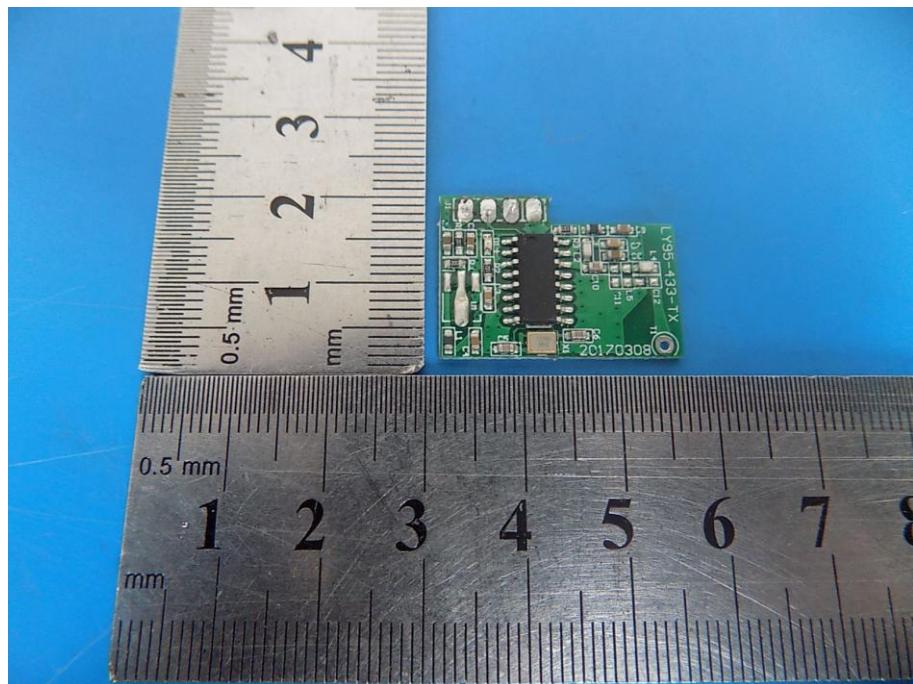
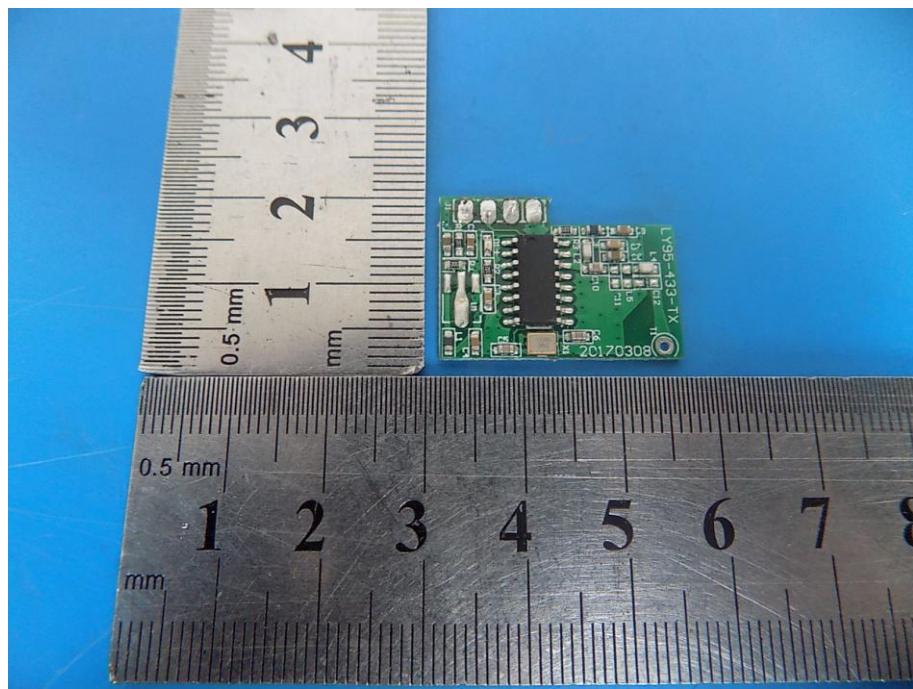


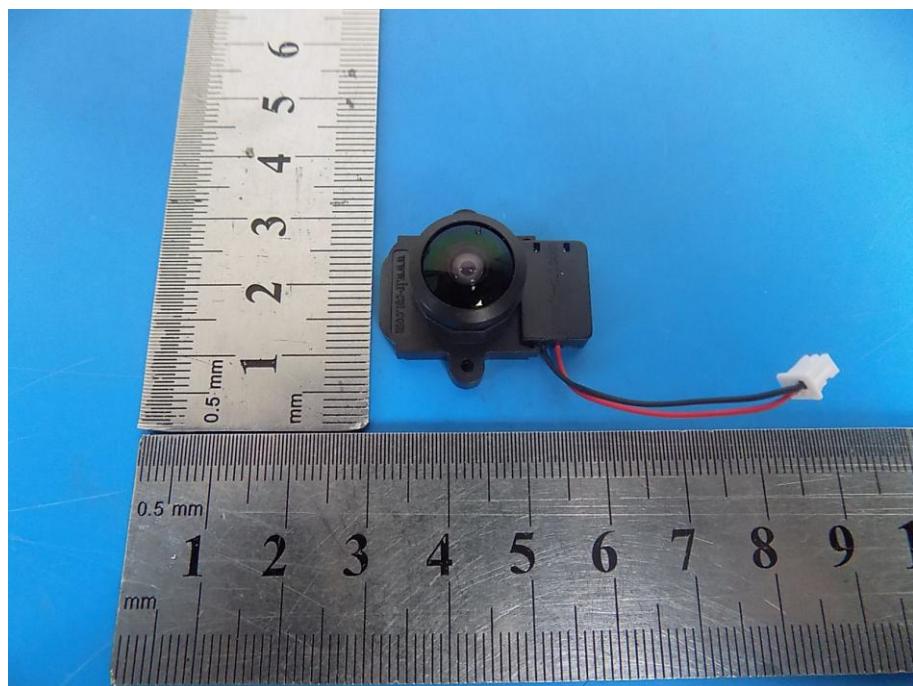
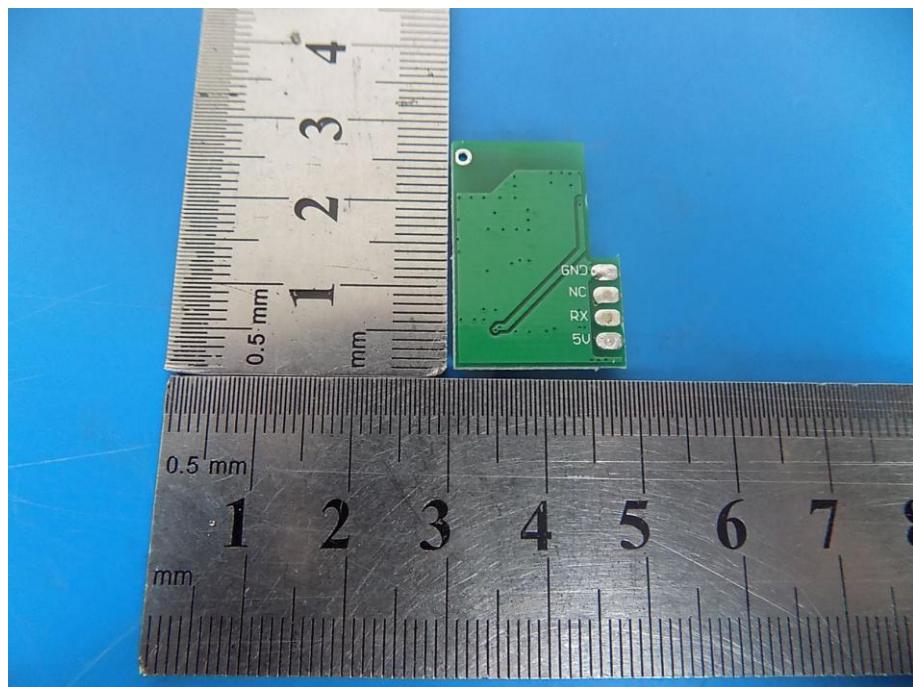


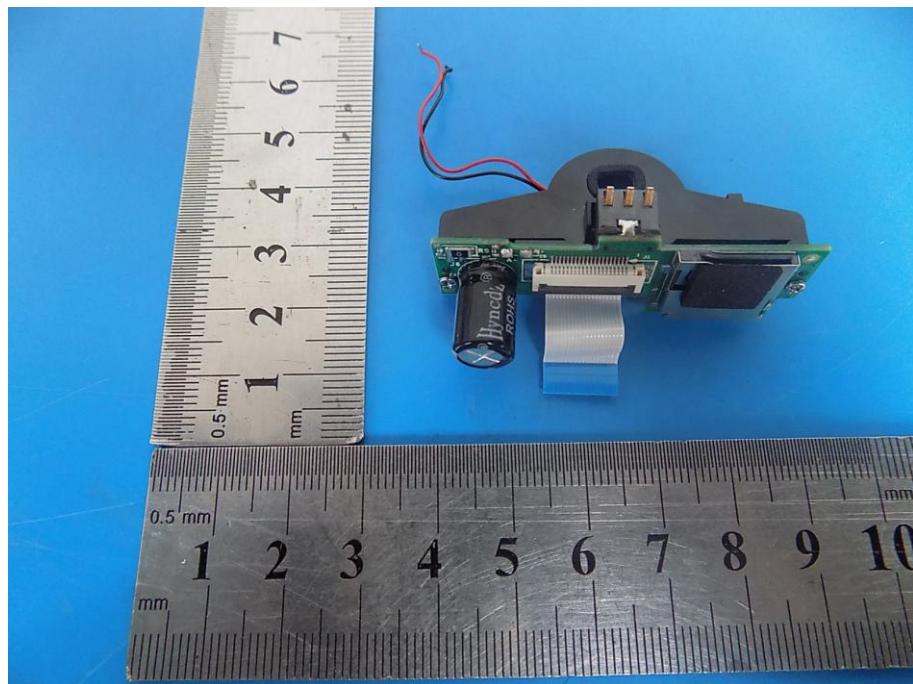
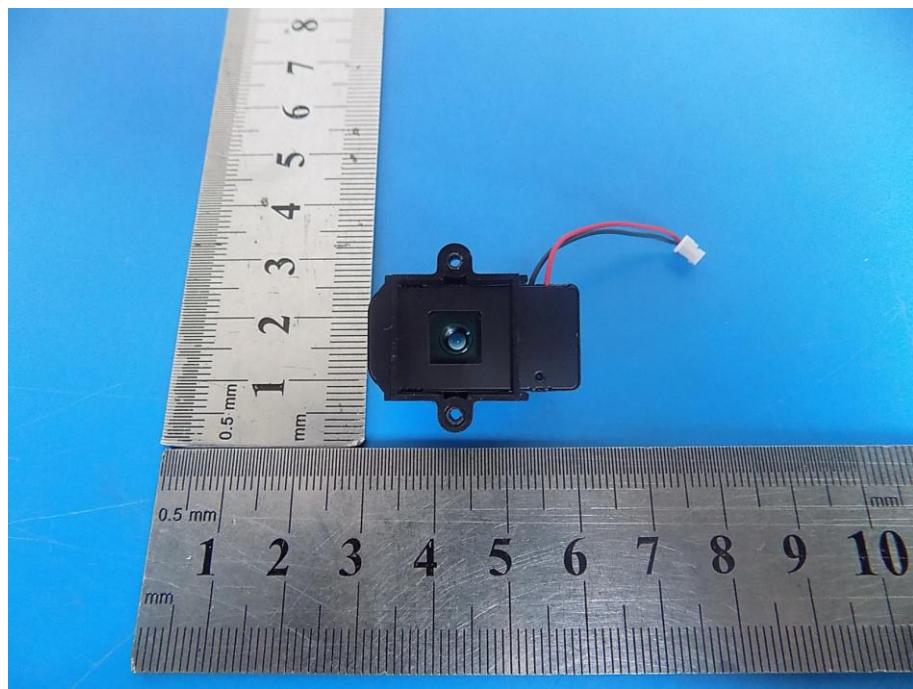


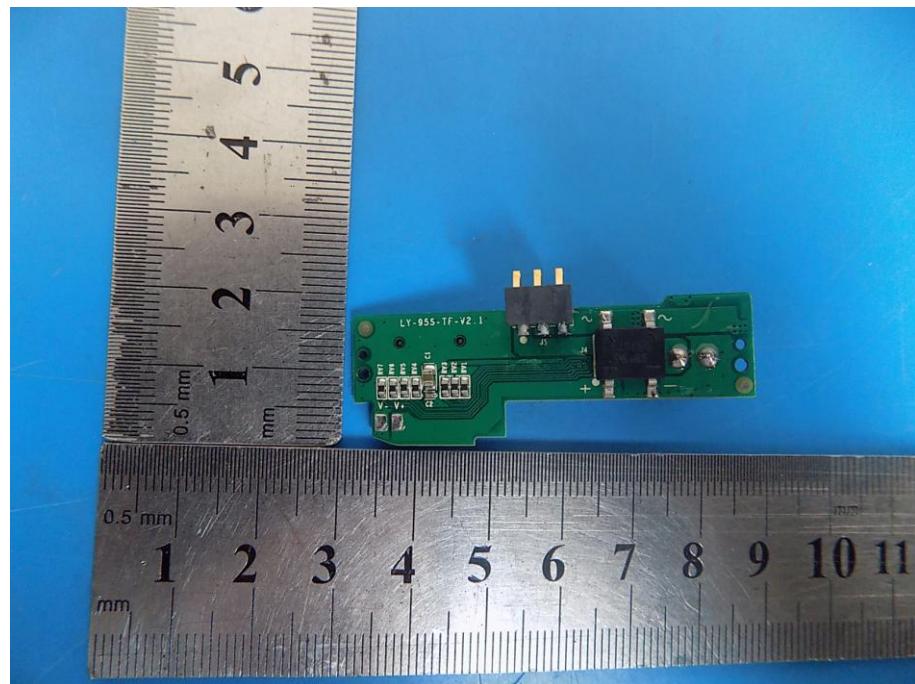
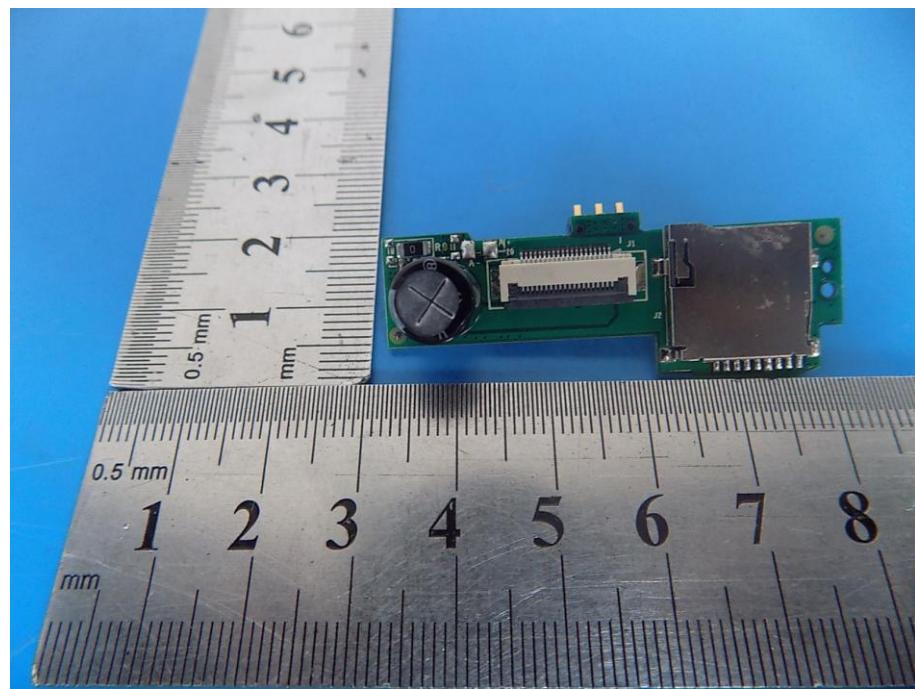












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