FCC TEST REPORT

FCC ID: SY4-A01024

On Behalf of

Shanghai Huace Navigation Technology LTD.

Geodetic GNSS Receiver (X900)

Model No.: 1192110016

Prepared for	:	Shanghai Huace Navigation Technology LTD.
Address	:	Building C, 599 Gaojing Road, Qingpu District, Shanghai, China

Prepared By	:	Shenzhen Alpha Product Testing Co., Ltd.
Address	:	Building i, No.2, Lixin Road, Fuyong Street, Bao'an District, 518103, Shenzhen, Guangdong, China

Report Number	:	T1880947 06
Date of Receipt	:	June 19, 2018
Date of Test	:	June 19, 2018- August 23, 2018
Date of Report	:	August 27, 2018
Version Number	:	REV0

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TEST REPORT DECLARATION

Applicant	:	Shanghai Huace Navigation Technology LTD.
Address	:	Building C, 599 Gaojing Road, Qingpu District, Shanghai, China
Manufacturer	:	Shanghai Huace Navigation Technology LTD.
Address	:	Building C, 599 Gaojing Road, Qingpu District, Shanghai, China
EUT Description	:	Geodetic GNSS Receiver (X900)
	(A) Model No.	: 1192110016
	(B) Trademark	: CHCNAV

Measurement Standard Used:

FCC Rules and Regulations Part 15 Subpart C Section 15.247: 2017,

ANSI C63.10:2013

The device described above is tested by Shenzhen Alpha Product Testing Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C limits both conducted and radiated emissions. The test results are contained in this test report and Shenzhen Alpha Product Testing Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these tests.

After the test, our opinion is that EUT compliance with the requirement of the above standards.

This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Shenzhen Alpha Product Testing Co., Ltd.

Tested by (name + signature).....…..:	Reak Yang Project Engineer	Reak Yang ……
Approved by (name + signature)…....:	Simple Guan Project Manager	……
Date of issue…… ……..:	August 27, 2018	

Revision History

Revision	Issue Date	Revisions	Revised By
00	August 27, 2018	Initial released Issue	Simple Guan

1. SUMMARY OF STANDARDS AND RESULTS

1.1.Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below:

Test Item	Standards Paragraph	Result
Maximum Peak Output Power	FCC Part 15: 15.247(b)(1) ANSI C63.10 :2013	P
Bandwidth	FCC Part 15: 15.215 ANSI C63.10 :2013	P
Carrier Frequency Separation	FCC Part 15: 15.247(a)(1) ANSI C63.10 :2013	P
Number Of Hopping Channel	FCC Part 15: 15.247(a)(1)(iii) ANSI C63.10 :2013	P
Dwell Time	FCC Part 15: 15.247(a)(1)(iii) ANSI C63.10 :2013	P
Radiated Emission	FCC Part 15: 15.209 FCC Part 15: 15.247(d) ANSI C63.10 :2013	P
Band Edge Compliance	FCC Part 15: 15.247(d) ANSI C63.10 :2013	P
Power Line Conducted Emissions	FCC Part 15: 15.207 ANSI C63.10 :2013	P
Antenna requirement	FCC Part 15: 15.203	P
Note:	1. P is an abbreviation for Pass. 2. F is an abbreviation for Fail. 3. N/A is an abbreviation for Not Applicable.	

2. GENERAL INFORMATION

2.1.Description of Device (EUT)

Description	:	Geodetic GNSS Receiver (X900)
Model Number	:	1192110016 1. The model name “1192110016” information not listed on marking plate at testing & certification stage, but will be listed in white rectangular frame of marking plate at MP stage. 2. The model name “1192110016” corresponding client’s internal model is “Geodetic GNSS Receiver (X900)Un-RT4”.
Trademark	:	N/A
Test Voltage	:	DC 7.4V from Battery, DC 12V For Adapter
Technology	:	BT 2.0 + EDR
Operation frequency	:	2402-2480MHz
Channel No.	:	79 Channels
Modulation type	:	GFSK, π /4 DQPSK, 8 DPSK
Antenna Type	:	Internal Antenna, Maximum Gain is 1dBi
Software version	:	8.43
Hardware version	:	V2.4
AC/DC Adapter	:	Model: DPS-40AB-11 Input: AC100-240V, 50-60Hz, 1.2A Output: DC 12V, 3.3A Max.

2.2.Accessories of Device (EUT)

Accessory 1 : N/A

2.3.Tested Supporting System Details

No.	Description	Manufacturer	Model	Serial Number	Certification or DOC
1	Notebook	ACER	ZQT	N/A	DOC

2.4.Block Diagram of connection between EUT and simulators

2.5.Test Mode Description

Tested mode, channel, and data rate information		
Mode	**Channel**	**Frequency (MHz)**
GFSK	Low :CH0	2402
	Middle: CH39	2441
	High: CH78	2480
π /4 DQPSK	Low :CH0	2402
	Middle: CH39	2441
	High: CH78	2480
8 DPSK	Low :CH0	2402
	Middle: CH39	2441
	High: CH78	2480

2.6.Test Conditions

Items	Required	Actual
Temperature range:	15-35℃	27℃
Humidity range:	25-75%	56%
Pressure range:	86-106kPa	98kPa

2.7.Test Facility

Shenzhen Alpha Product Testing Co., Ltd
Building i, No.2, Lixin Road, Fuyong Street, Bao'an District, 518103,
Shenzhen, Guangdong, China

June 21, 2018 File on Federal Communication Commission
Registration Number: 293961

July 25, 2017 Certificated by IC
Registration Number: 12135A

2.8.Measurement Uncertainty

(95% confidence levels, k=2)

Item	Uncertainty
Uncertainty for Power point Conducted Emissions Test	2.74dB
Uncertainty for Radiation Emission test in 3m chamber (below 30MHz)	2.13 dB(Polarize: V)
	2.57dB(Polarize: H)
Uncertainty for Radiation Emission test in 3m chamber (30MHz to 1GHz)	3.77dB(Polarize: V)
	3.80dB(Polarize: H)
Uncertainty for Radiation Emission test in 3m chamber (1GHz to 25GHz)	4.16dB(Polarize: H)
	4.13dB(Polarize: V)
Uncertainty for radio frequency	5.4×10-8
Uncertainty for conducted RF Power	0.37dB
Uncertainty for temperature	0.2℃
Uncertainty for humidity	1%
Uncertainty for DC and low frequency voltages	0.06%

2.9.Test Equipment List

Equipment	Manufacturer	Model No.	Serial No.	Last cal.	Cal. Due day
Spectrum analyzer	Agilent	E4407B	MY49510055	2017.09.23	2018.09.22
Horn Antenna	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D(1201)	2016.09.30	2018.09.29
Filter	KANGMAI	ZLPF-LDC-1000- 1959	1209002075	2017.09.22	2018.09.21
Filter	WAINWRIGHT	WHKX2.80/18G- 12SS	SN1	2017.09.22	2018.09.21
RF Cable	Resenberger	Cable 4	N/A	2017.09.22	2018.09.21
Signal Analyzer	Agilent	N9020A	MY499100060	2017.09.23	2018.09.22
Amplifier	HP	HP8347A	2834A00455	2017.09.23	2018.09.22
Amplifier	Agilent	8449B	3008A02664	2017.09.23	2018.09.22
Filter	WAINWRIGHT	WHKX1.0G/15G- 10SS	SN40	2017.09.22	2018.09.21
Test Receiver	ROHDE&SCHWARZ	ESR	1316.3003K03-102082-Wa	2017.09.23	2018.09.22
Bilog Antenna	SCHWARZBECK	VULB 9168	9168-438	2016.09.30	2018.09.29
9*6*6 anechoic chamber	CHENYU	9*6*6	N/A	2016.07.21	2020.07.20
RF Cable	Resenberger	Cable 1	N/A	2017.09.22	2018.09.21
RF Cable	Resenberger	Cable 2	N/A	2017.09.22	2018.09.21
RF Cable	Resenberger	Cable 3	N/A	2017.09.28	2018.09.27
Power Sensor	DARE	RPR3006W	15100041SNO91	2017.09.23	2018.09.22
Loop Antenna	SCHWARZBECK	FMZB 1519B	00005	2016.09.29	2018.09.28
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA 9170294	2017.02.22	2019.02.21
Preamplifier	SCHWARZBECK	BBV9721	9721-031	2017.09.03	2018.09.02
Attenuator	HP	8494B	DC-18G	2017.10.22	2018.10.23
Spectrum analyzer	ROHDE&SCHWARZ	FSQ40	200061	2017.12.28	2018.12.27
Power meter	Agilent	E4419B	GB40202122	2017.09.22	2018.09.21
20dB Attenuator	ICPROBING	IATS1	82347	2017.09.22	2018.09.21
L.I.S.N.#1	Schwarzbeck	NSLK8126	8126466	2017.09.22	2018.09.21

3. MAXIMUM PEAK OUTPUT POWER

3.1.Limit

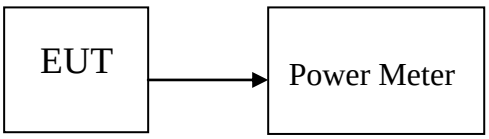
Please refer section15.247.

For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts, the e.i.r.p shall not exceed 4W

3.2.Test Procedure

The transmitter output is connected to the RF Power Meter. The RF Power Meter is set to the peak power detection.

3.3.Test Setup



3.4.Test Result

Test site: RF site			Tested by: Reak		
Mode	Freq (MHz)	PK Output Power (dBm)	PK Output Power (mW)	Limit (dBm)	Margin (dB)
GFSK	2402	3.559	2.27	30	26.441
	2441	3.463	2.22	30	26.537
	2480	3.554	2.27	30	26.446
π /4 DQPSK,	2402	0.743	1.19	21	20.257
	2441	0.603	1.15	21	20.397
	2480	0.717	1.18	21	20.283
8 DPSK	2402	0.869	1.22	21	20.131
	2441	0.807	1.20	21	20.193
	2480	0.704	1.18	21	20.296
Conclusion: PASS					

4. BANDWIDTH

4.1.Limit

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

4.2.Test Procedure

The transmitter output was directly connected to a spectrum analyzer with a 50Ω cable. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 30kHz RBW and 100kHz VBW. The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

4.3.Test Result

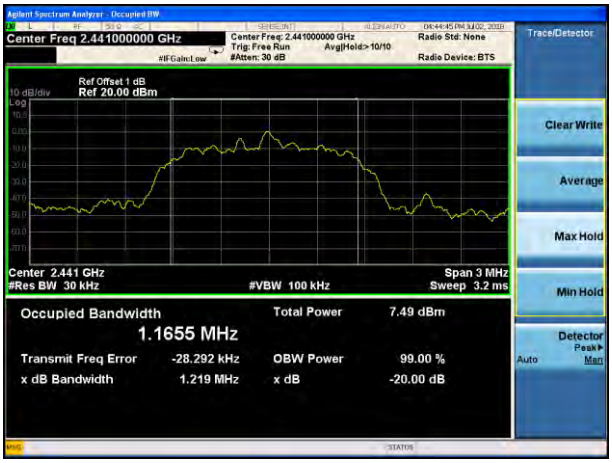
Mode	Freq (MHz)	20dB Bandwidth (KHz)	Limit (kHz)	Conclusion
GFSK	2402	843.9	/	PASS
	2441	860.4	/	PASS
	2480	860.3	/	PASS
π /4 DQPSK	2402	1219.0	/	PASS
	2441	1219.0	/	PASS
	2480	1217.0	/	PASS
8 DPSK	2402	1213.0	/	PASS
	2441	1207.0	/	PASS
	2480	1210.0	/	PASS

Orginal Test data For 20dB bandwidth

GFSK:

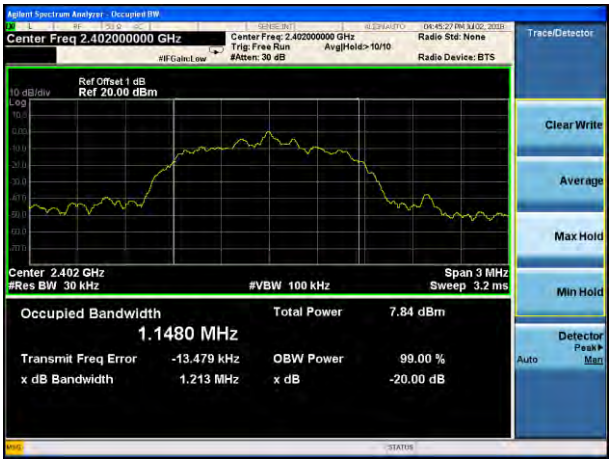
π /4 DQPSK:

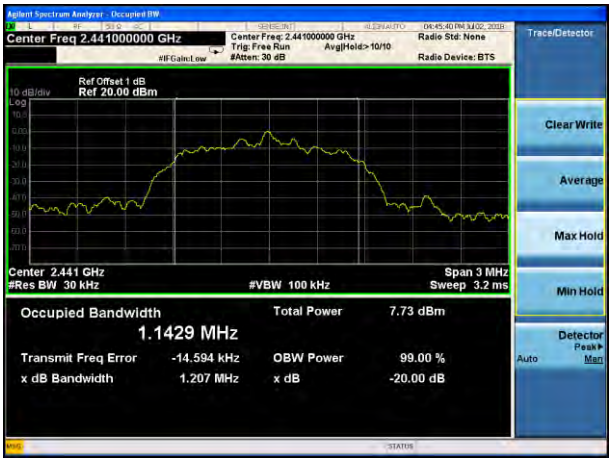

Agilent Spectrum Analyzer - Occupied BW
Center Freq 2.402000000 GHz
Center Freq: 2.402000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
#IFGain:Low
Trace/Detector
Ref Offset 1 dB
10 dB/div
Ref 20.00 dBm
Log
Clear Write
Average
Max Hold
Min Hold
Center 2.402 GHz
#Res BW 30 kHz
#VBW 100 kHz
Span 3 MHz
Sweep 3.2 ms
Occupied Bandwidth
1.1675 MHz
Total Power
7.67 dBm
Transmit Freq Error
-28.504 kHz
OBW Power
99.00 %
x dB Bandwidth
1.219 MHz
x dB
-20.00 dB
Detector
Peak
Auto
Man
MSG
STATUS

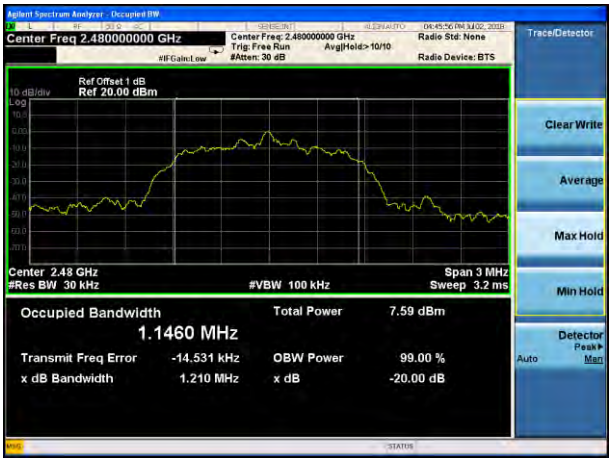

Agilent Spectrum Analyzer - Occupied BW
Center Freq 2.441000000 GHz
Center Freq: 2.441000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
#IFGain:Low
Trace/Detector
Ref Offset 1 dB
10 dB/div
Ref 20.00 dBm
Log
Clear Write
Average
Max Hold
Min Hold
Center 2.441 GHz
#Res BW 30 kHz
#VBW 100 kHz
Span 3 MHz
Sweep 3.2 ms
Occupied Bandwidth
1.1655 MHz
Total Power
7.49 dBm
Transmit Freq Error
-28.292 kHz
OBW Power
99.00 %
x dB Bandwidth
1.219 MHz
x dB
-20.00 dB
Detector
Peak
Auto
Man
MSG
STATUS


Agilent Spectrum Analyzer - Occupied BW
Center Freq 2.480000000 GHz
Center Freq: 2.480000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
#IFGain:Low
Trace/Detector
Ref Offset 1 dB
10 dB/div
Ref 20.00 dBm
Log
Clear Write
Average
Max Hold
Min Hold
Center 2.48 GHz
#Res BW 30 kHz
#VBW 100 kHz
Span 3 MHz
Sweep 3.2 ms
Occupied Bandwidth
1.1685 MHz
Total Power
7.28 dBm
Transmit Freq Error
-28.667 kHz
OBW Power
99.00 %
x dB Bandwidth
1.217 MHz
x dB
-20.00 dB
Detector
Peak
Auto
Man
MSG
STATUS

8 DPSK:


Agilent Spectrum Analyzer - Occupied BW
Center Freq 2.402000000 GHz
Center Freq: 2.402000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
Trace/Detector
Ref Offset 1 dB
10 dB/div
Ref 20.00 dBm
Log
Clear Write
Average
Max Hold
Min Hold
Center 2.402 GHz
#Res BW 30 kHz
#VBW 100 kHz
Span 3 MHz
Sweep 3.2 ms
Occupied Bandwidth
1.1480 MHz
Total Power
7.84 dBm
Transmit Freq Error
-13.479 kHz
OBW Power
99.00 %
x dB Bandwidth
1.213 MHz
x dB
-20.00 dB
Detector
Peak
Auto
Man
MSG
STATUS


Agilent Spectrum Analyzer - Occupied BW
Center Freq 2.441000000 GHz
Center Freq: 2.441000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
Trace/Detector
Ref Offset 1 dB
10 dB/div
Ref 20.00 dBm
Log
Clear Write
Average
Max Hold
Min Hold
Center 2.441 GHz
#Res BW 30 kHz
#VBW 100 kHz
Span 3 MHz
Sweep 3.2 ms
Occupied Bandwidth
1.1429 MHz
Total Power
7.73 dBm
Transmit Freq Error
-14.594 kHz
OBW Power
99.00 %
x dB Bandwidth
1.207 MHz
x dB
-20.00 dB
Detector
Peak
Auto
Man
MSG
STATUS


Agilent Spectrum Analyzer - Occupied BW
Center Freq 2.480000000 GHz
Center Freq: 2.480000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
Trace/Detector
Ref Offset 1 dB
10 dB/div
Ref 20.00 dBm
Log
Clear Write
Average
Max Hold
Min Hold
Center 2.48 GHz
#Res BW 30 kHz
#VBW 100 kHz
Span 3 MHz
Sweep 3.2 ms
Occupied Bandwidth
1.1460 MHz
Total Power
7.59 dBm
Transmit Freq Error
-14.531 kHz
OBW Power
99.00 %
x dB Bandwidth
1.210 MHz
x dB
-20.00 dB
Detector
Peak
Auto
Man
MSG
STATUS

5. CARRIER FREQUENCY SEPARATION

5.1. Limit

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW

5.2. Test Procedure

The transmitter output was directly connected to a spectrum analyzer with a 50Ω cable. The carrier frequency was measured by spectrum analyzer with 20kHz RBW and 60kHz VBW.

5.3. Test Result

Mode/Channel	Channel separation (MHz)	20dB Bandwidth (KHz)	Limit (KHz)	Conclusion
GFSK	1.002	860.4	573.6	PASS
π /4 DQPSK	1.000	1219.0	812.67	PASS
8 DPSK	1.000	1213.0	808.67	PASS

Orginal test data for channel separation

GFSK

π /4 DQPSK

8 DPSK

6. NUMBER OF HOPPING CHANNEL

6.1.Limit

Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels

6.2.Test Procedure

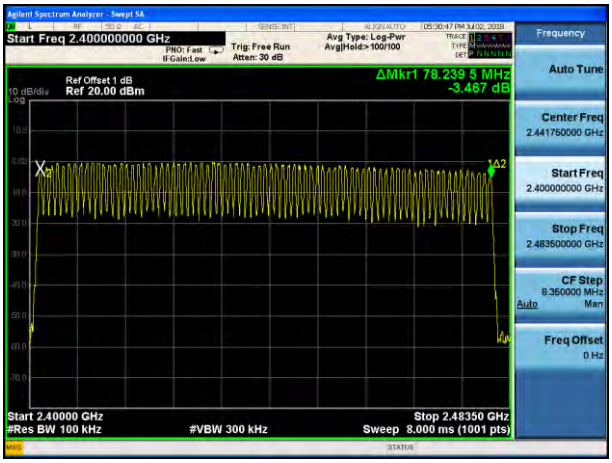
The transmitter output was directly connected to a spectrum analyzer with a 50Ω cable. The number of hopping channel was measured by spectrum analyzer with 100kHz RBW and 300KHz VBW.

6.3.Test Result

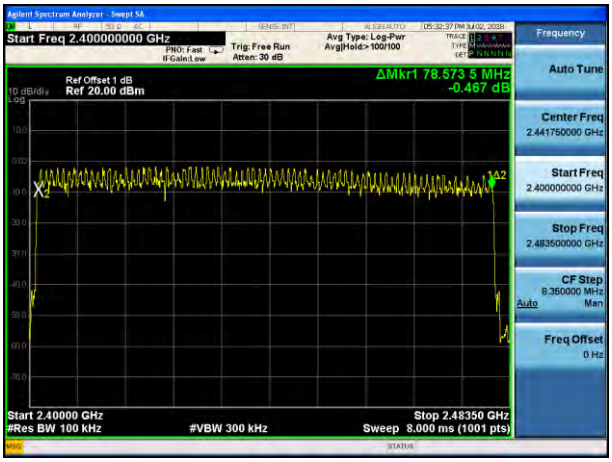
Mode	Number of hopping channel	Limit	Conclusion
GFSK	79	>15	PASS
π /4 DQPSK	79	>15	PASS
8 DPSK	79	>15	PASS

Original test data for hopping channel number

GFSK



π /4 DQPSK



8 DPSK

7. DWELL TIME

7.1. Test limit

Please refer section15.247

According to §15.247(a)(1)(iii), Frequency hopping systems operating in the 2400MHz-2483.5 MHz. The average time of occupancy on any frequency shall not greater than 0.4 s within period of 0.4 sec- onds multiplied by the number of hopping channel employed.

7.2. Test Procedure

7.2.1. Place the EUT on the table and set it in transmitting mode.

7.2.2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.

7.2.3. Set center frequency of spectrum analyzer = operating frequency.

7.2.4. Set the spectrum analyzer as RBW, VBW=1MHz, Span = 0Hz, Sweep = auto.

7.2.5. Repeat above procedures until all frequency measured were complete.

7.3. Test Result

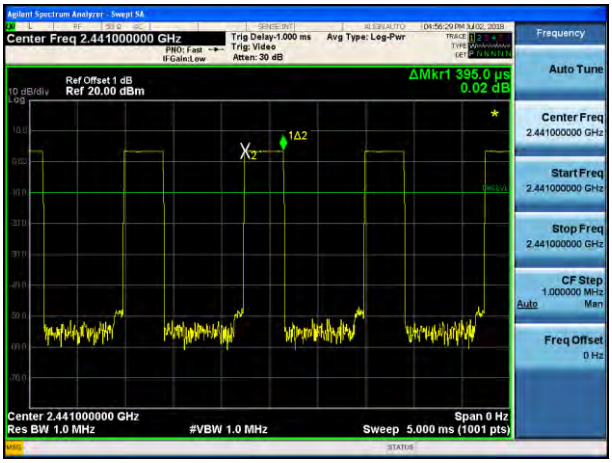
PASS.

Detailed information please see the following page.

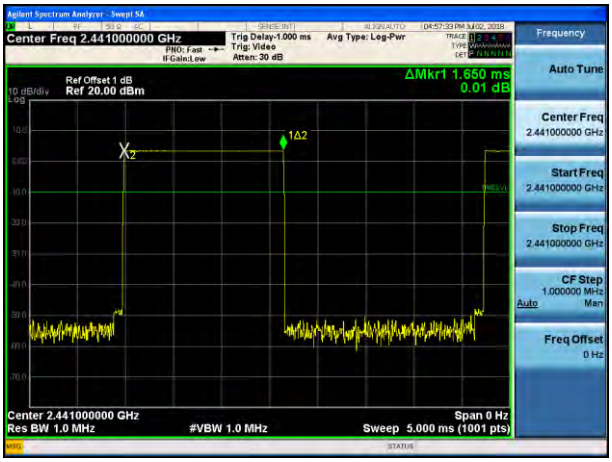
Mode	Data Packet	Frequency (MHz)	Pulse Duration (ms)	Dwell Time (s)	Limit (s)	Conclusion
GFSK	DH1	2441	0.395	0.126	<0.4	PASS
	DH3	2441	1.650	0.264	<0.4	PASS
	DH5	2441	2.900	0.309	<0.4	PASS
π /4 DQPSK	DH1	2441	0.410	0.131	<0.4	PASS
	DH3	2441	1.660	0.266	<0.4	PASS
	DH5	2441	2.910	0.310	<0.4	PASS
8 DPSK	DH1	2441	0.410	0.131	<0.4	PASS
	DH3	2441	1.650	0.264	<0.4	PASS
	DH5	2441	2.900	0.309	<0.4	PASS
Note: 1 A period time = 0.4 (s) * 79 = 31.6(s) 2 DH1 time slot = Pulse Duration * (1600/(2*79)) * A period time/1000 DH3 time slot = Pulse Duration * (1600/(4*79)) * A period time/1000 DH5 time slot = Pulse Duration * (1600/(6*79)) * A period time/1000						

GFSK

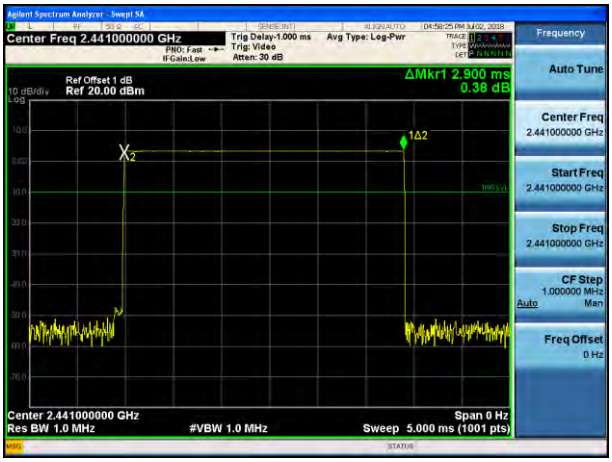
DH1:



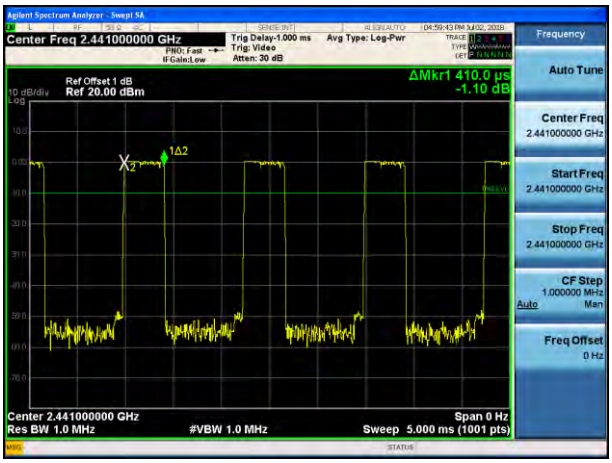
DH3:



DH5



π /4 DQPSK
DH1



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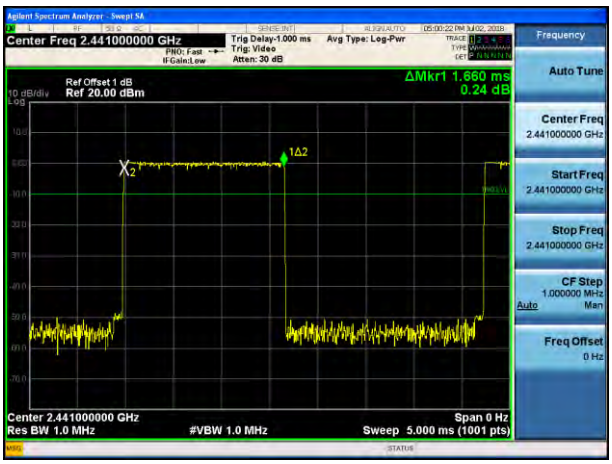
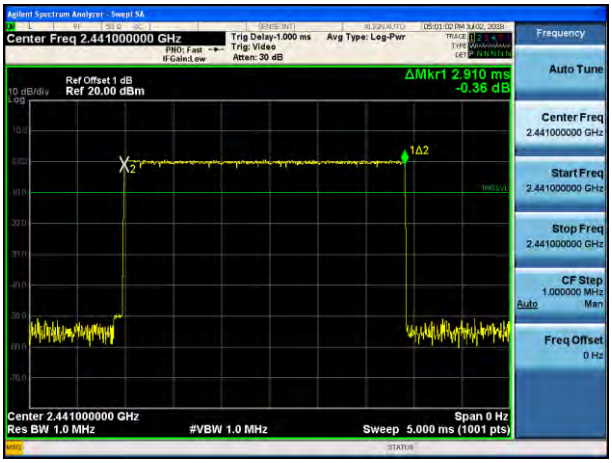
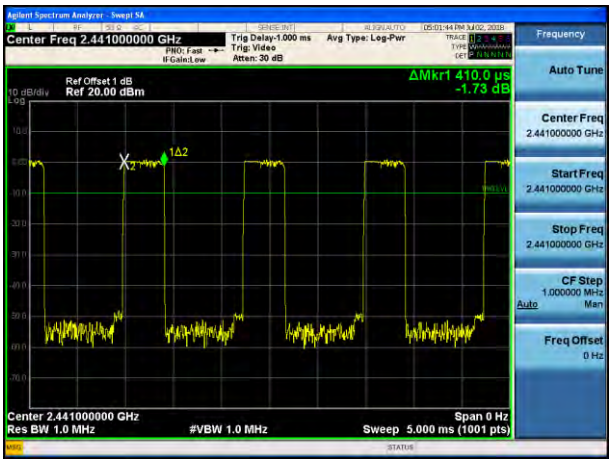


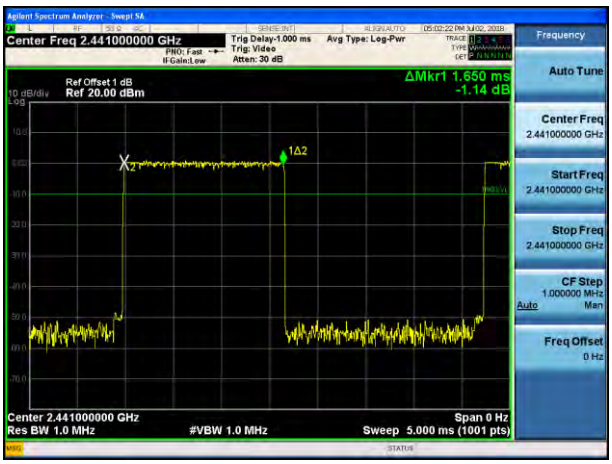
DH5



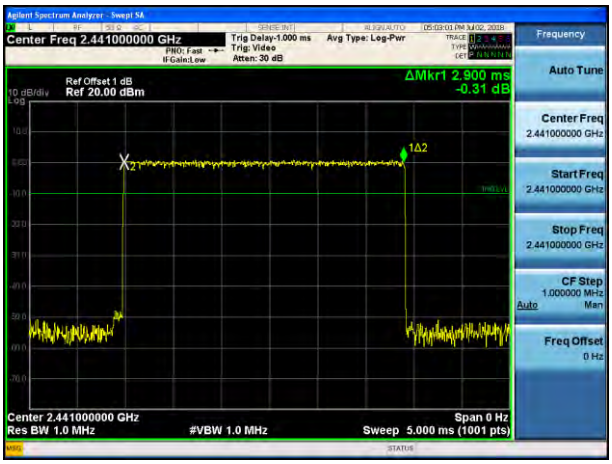
8 DPSK
DH1



DH3



DH5



8. RADIATED EMISSIONS

8.1.Limit

All the emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

15.205 Restricted frequency band

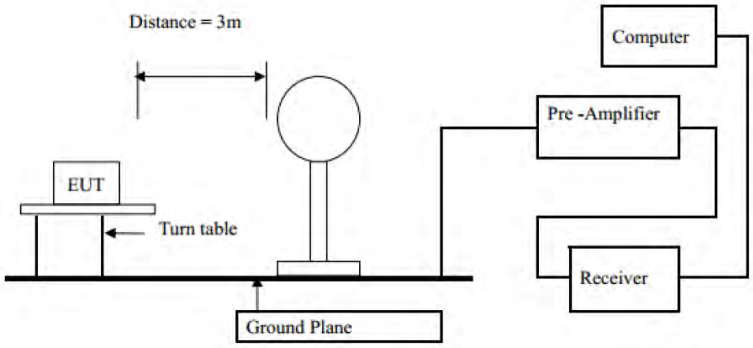
MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
[1]0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2690 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	([2])

15.209 Limit

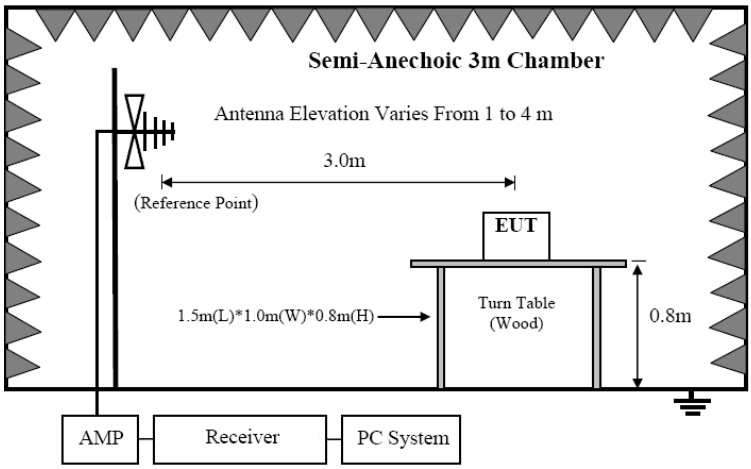
FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		μV/m	dB(μV)/m
0.009-0.490	300	2400/F(KHz)	/
0.490-1.705	30	24000/F(KHz)	/
1.705-30	30	30	29.5
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0
Above 1000	3	74.0 dB(μV)/m (Peak) 54.0 dB(μV)/m (Average)	

8.2.Block Diagram of Test setup

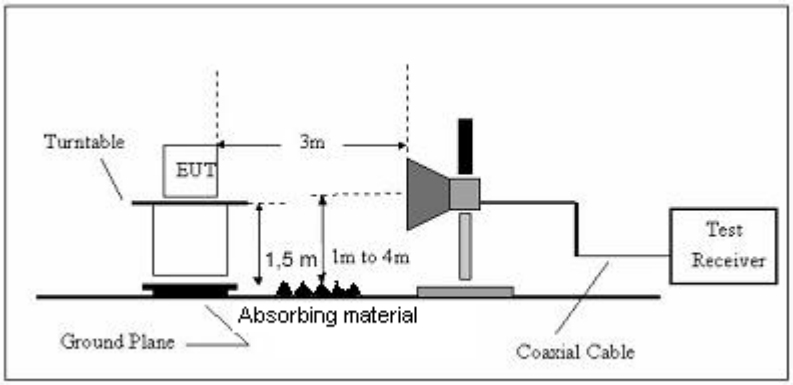
8.2.1 In 3m Anechoic Chamber Test Setup Diagram for below 30MHz



8.2.2 In 3m Anechoic Chamber Test Setup Diagram for 30MHz to 1GHz



8.2.2 In 3m Anechoic Chamber Test Setup Diagram for frequency above 1GHz



Note: For harmonic emissions test a appropriate high pass filter was inserted in the input port of AMP.

8.3.Test Procedure

(1) EUT was placed on a non-metallic table, 80 cm above the ground plane inside a semi-anechoic chamber for below 1GHz test, 150 cm above the ground plane inside a semi-anechoic chamber for above 1GHz test

(2) Setup EUT and simulator as shown in section 1.4 and 6.1

(3) Test antenna was located 3m from the EUT on an adjustable mast. Below pre-scan procedure was first performed in order to find prominent radiated emissions.

(a) Change work frequency or channel of device if practicable.

(b) Change modulation type of device if practicable.

(c) Rotated EUT though three orthogonal axes to determine the attitude of EUT arrangement produces highest emissions

(4) Spectrum frequency from 9KHz to 25GHz (tenth harmonic of fundamental frequency) was investigated

(5) For final emissions measurements at each frequency of interest, the EUT were rotated and the antenna height was varied between 1m and 4m in order to maximize the emission. Measurements in both horizontal and vertical polarities were made and the data was recorded. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.10 :2013on Radiated Emission test.

(6) For emissions above 1GHz, both Peak and Average level were measured with Spectrum Analyzer, and the RBW is set at 1MHz, VBW is set at 3MHz for Peak measure; RBW is set at 1MHz, VBW is set at 10Hz for Average measure.

8.4.Test Result

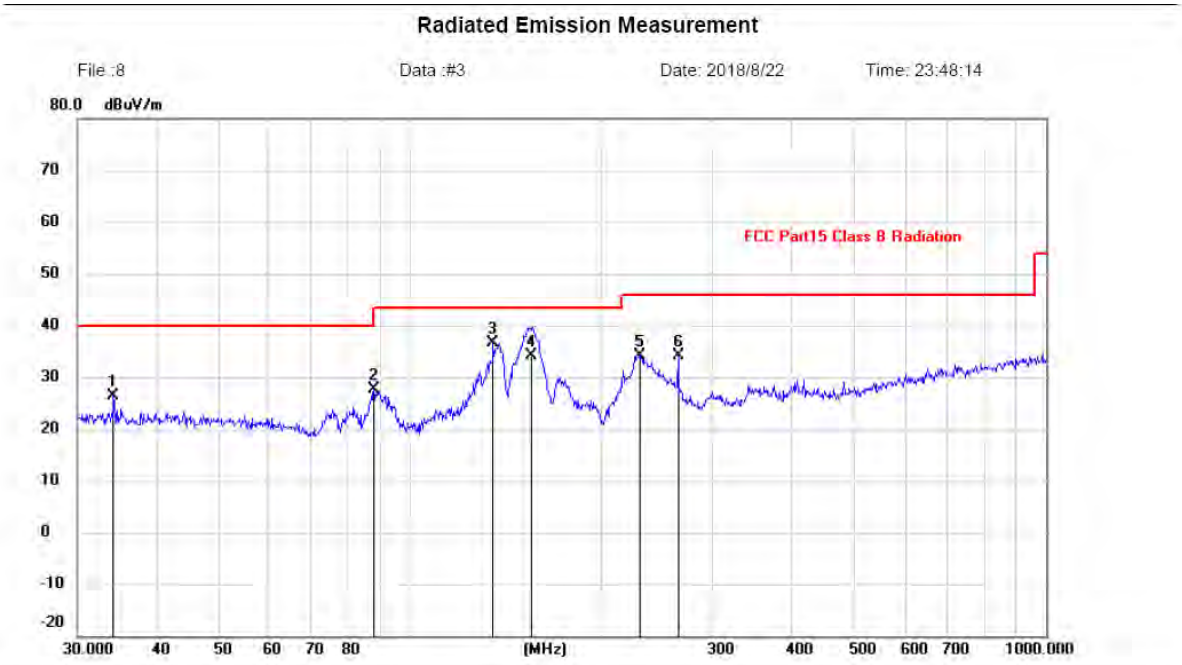
We have scanned the 10th harmonic from 9KHz to the EUT's highest frequency..
Detailed information please see the following page.

From 9KHz to 30MHz: Conclusion: PASS

Note: The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

From 30MHz to 1000MHz: Conclusion: PASS

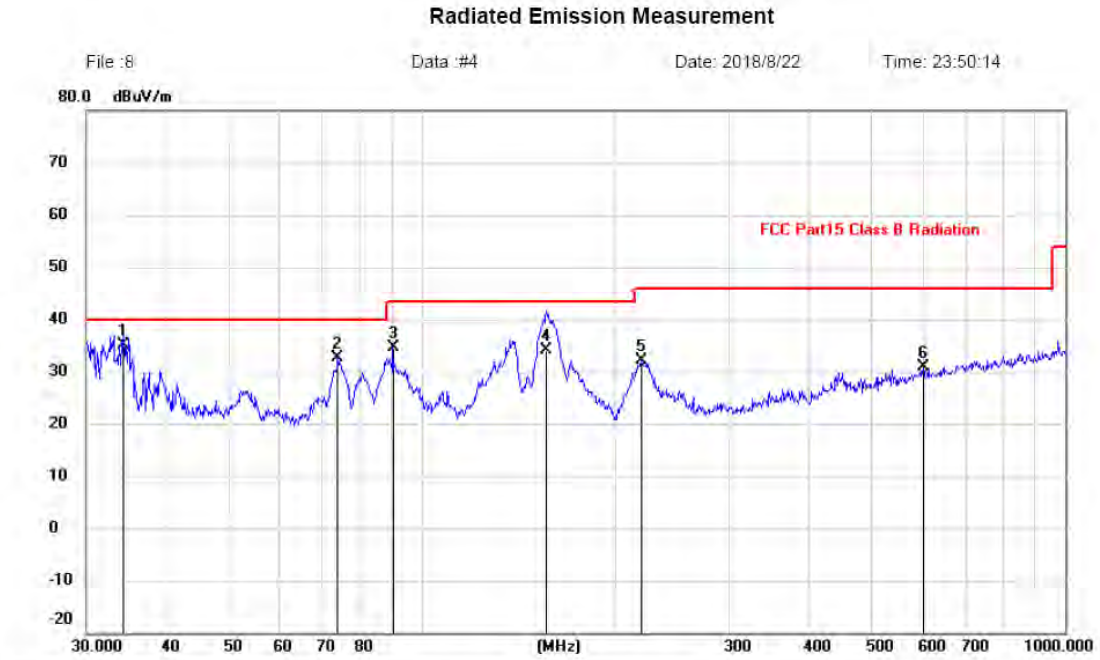
Horizontal



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		34.1561	12.92	13.46	26.38	40.00	-13.62	peak			
2		87.7248	17.95	9.73	27.68	40.00	-12.32	peak			
3	*	135.5062	23.10	13.56	36.66	43.50	-6.84	peak			
4		154.8204	19.69	14.56	34.25	43.50	-9.25	QP			
5		230.0985	22.45	11.79	34.24	46.00	-11.76	peak			
6		263.8190	21.62	12.51	34.13	46.00	-11.87	peak			

Note:1. *:Maximum data; x:Over limit; !:over margin.
2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

Vertical



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	*	34.2760	21.54	13.47	35.01	40.00	-4.99	QP			
2		73.8756	22.20	10.45	32.65	40.00	-7.35	peak			
3		90.2205	24.86	9.81	34.67	43.50	-8.83	peak			
4		155.9101	19.63	14.57	34.20	43.50	-9.30	QP			
5		219.0753	20.91	11.26	32.17	46.00	-13.83	peak			
6		601.4265	11.49	19.41	30.90	46.00	-15.10	peak			

Note:1. *:Maximum data; x:Over limit; !:over margin.
2.Measurement=Reading Level+Correct Factor; Correct Factor=Antenna Factor+Cable Loss.

Remark: All modes have been tested, and only worst data of GFSK mode, Channel 2402MHz was listed in this report.

From 1G-25GHz

Test Mode: GFSK TX Low									
Freq (MHz)	Read Level (dBuV/m)	Polar (H/V)	Antenna Factor (dB/m)	Cable loss(dB)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4804	43.90	V	33.95	10.18	34.26	53.77	74	20.23	PK
4804	34.06	V	33.95	10.18	34.26	43.93	54	10.07	AV
7206	/		/						
9608	/		/						
4804	43.22	H	33.95	10.18	34.26	53.09	74	20.91	PK
4804	33.83	H	33.95	10.18	34.26	43.70	54	10.30	AV
7206									
9608									
Test Mode: GFSK TX Mid									
4882	41.24	V	33.93	10.2	34.29	51.08	74	22.92	PK
4882	32.06	V	33.93	10.2	34.29	41.90	54	12.10	AV
7323	/								
9764	/								
4882	41.52	H	33.93	10.2	34.29	51.36	74	22.64	PK
4882	32.18	H	33.93	10.2	34.29	42.02	54	11.98	AV
7323									
9764									
Test Mode: GFSK TX High									
4960	42.19	V	33.98	10.22	34.25	52.14	74	21.86	PK
4960	33.03	V	33.98	10.22	34.25	42.98	54	11.02	AV
7440	/								
9920	/								
4960	42.20	H	33.98	10.22	34.25	52.15	74	21.85	PK
4960	31.81	H	33.98	10.22	34.25	41.76	54	12.24	AV
7440	/								
9920	/								

Note:

1, Result = Read level + Antenna factor + cable loss-Amp factor

2, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

From 1G-25GHz

Freq (MHz)	Read Level (dBuV/m)	Polar (H/V)	Antenna Factor (dB/m)	Cable loss(dB)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Test Mode: π /4 DQPSK TX Low									
4804	42.68	V	33.95	10.18	34.26	52.55	74	21.45	PK
4804	31.67	V	33.95	10.18	34.26	41.54	54	12.46	AV
7206	/		/						
9608	/		/						
4804	43.90	H	33.95	10.18	34.26	53.77	74	20.23	PK
4804	31.77	H	33.95	10.18	34.26	41.64	54	12.36	AV
7206									
9608									
Test Mode: π /4 DQPSK TX Mid									
4882	43.67	V	33.93	10.2	34.25	53.55	74	20.45	PK
4882	31.20	V	33.93	10.2	34.25	41.08	54	12.92	AV
7323	/								
9764	/								
4882	43.92	H	33.93	10.2	34.29	53.76	74	20.24	PK
4882	32.86	H	33.93	10.2	34.29	42.70	54	11.30	AV
7323									
9764									
Test Mode: π /4 DQPSK TX High									
4960	42.10	V	33.98	10.22	34.25	52.05	74	21.95	PK
4960	32.24	V	33.98	10.22	34.25	42.19	54	11.81	AV
7440	/								
9920	/								
4960	42.61	H	33.98	10.22	34.25	52.56	74	21.44	PK
4960	31.95	H	33.98	10.22	34.25	41.90	54	12.10	AV
7440	/								
9920	/								

Note:

1, Result = Read level + Antenna factor + cable loss-Amp factor

2, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

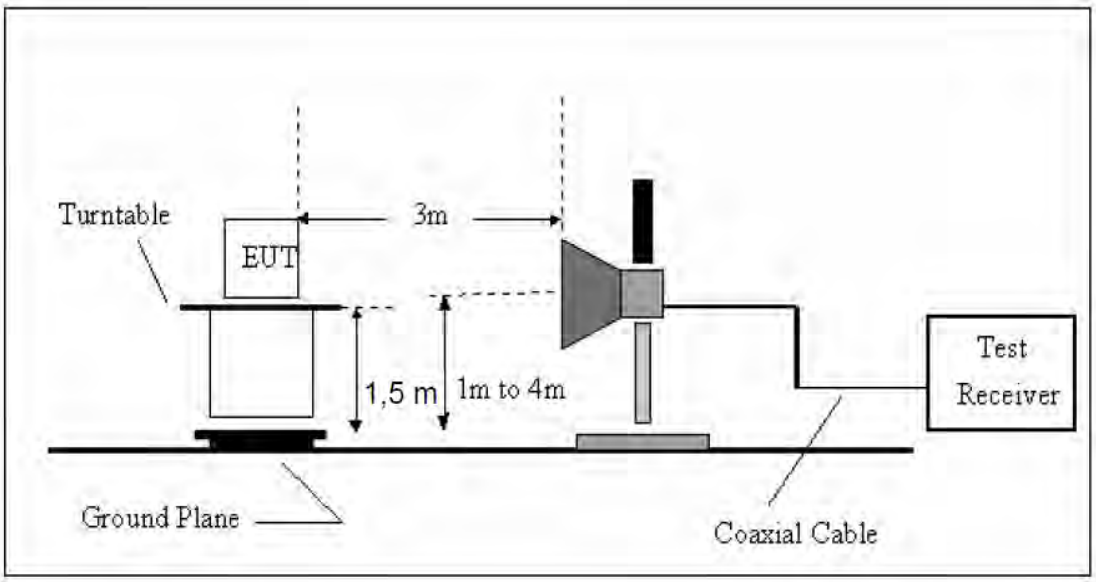
From 1G-25GHz

Test Mode: 8 DPSK TX Low									
Freq (MHz)	Read Level (dBuV/m)	Polar (H/V)	Antenna Factor (dB/m)	Cable loss(dB)	Amp Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
4804	41.54	V	33.95	10.18	34.26	51.41	74	22.59	PK
4804	32.13	V	33.95	10.18	34.26	42.00	54	12.00	AV
7206	/		/						
9608	/		/						
4804	40.63	H	33.95	10.18	34.26	50.50	74	23.50	PK
4804	31.76	H	33.95	10.18	34.26	41.63	54	12.37	AV
7206									
9608									
Test Mode: 8 DPSK TX Mid									
4882	42.02	V	33.93	10.2	34.29	51.86	74	22.14	PK
4882	32.67	V	33.93	10.2	34.29	42.51	54	11.49	AV
7323	/								
9764	/								
4882	42.18	H	33.93	10.2	34.29	52.02	74	21.98	PK
4882	33.09	H	33.93	10.2	34.29	42.93	54	11.07	AV
7323									
9764									
Test Mode: 8 DPSK TX High									
4960	42.12	V	33.98	10.22	34.25	52.07	74	21.93	PK
4960	32.34	V	33.98	10.22	34.25	42.29	54	11.71	AV
7440	/								
9920	/								
4960	42.14	H	33.98	10.22	34.25	52.09	74	21.91	PK
4960	33.15	H	33.98	10.22	34.25	43.10	54	10.90	AV
7440	/								
9920	/								

Note:
1, Result = Read level + Antenna factor + cable loss-Amp factor
2, All the other emissions not reported were too low to read and deemed to comply with FCC limit.

9. BAND EDGE COMPLIANCE

9.1.Block Diagram of Test Setup



9.2.Limit

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

9.3.Test Procedure

All restriction band and non- restriction band have been tested, only worse case is reported.

9.4.Test Result

PASS. (See below detailed test data)

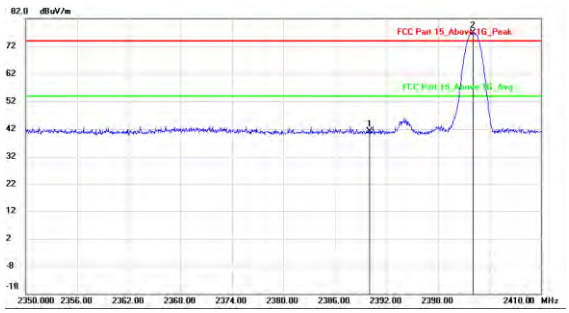
Radiated Plots:

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

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

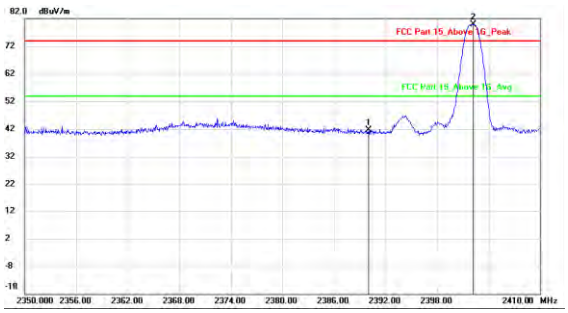
GFSK

Hopping-off CH LOW :



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		2390.000	44.44	-3.40	41.04	74.00	-32.96	peak			
2	*	2402.020	80.33	-3.41	76.92	74.00	2.92	peak			

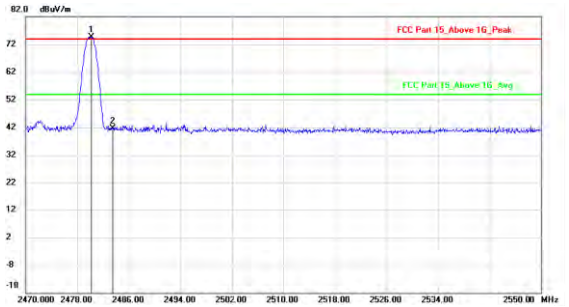
Vertical



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		2390.000	45.12	-3.40	41.72	74.00	-32.28	peak			
2	*	2402.200	83.38	-3.41	79.97	74.00	5.97	peak			

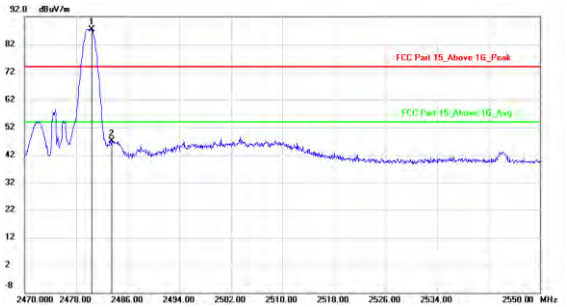
Horizontal

Hopping-off CH High :



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	*	2480.160	78.09	-3.38	74.71	74.00	0.71	peak			
2		2483.500	45.05	-3.38	41.67	74.00	-32.33	peak			

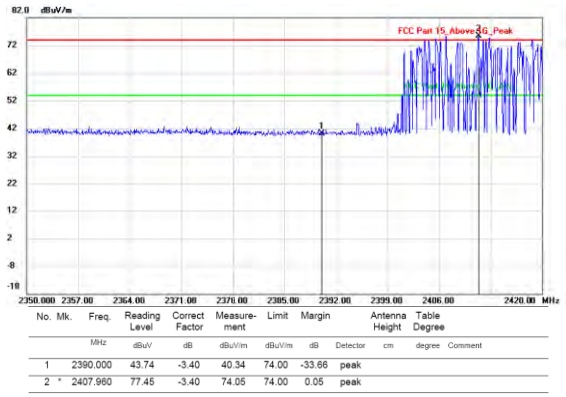
Vertical



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	*	2480.400	90.85	-3.38	87.47	74.00	13.47	peak			
2		2483.500	50.55	-3.38	47.17	74.00	-26.83	peak			

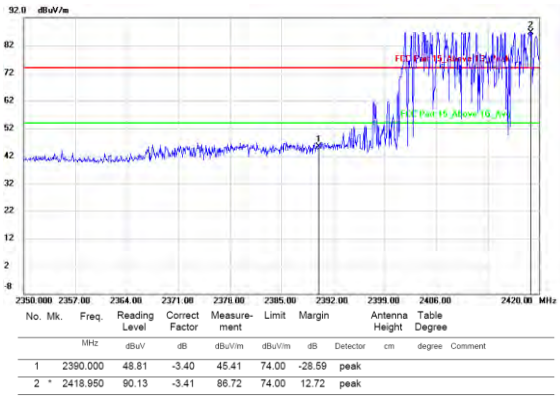
Horizontal

Hopping-On Low



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		cm	degree	
1		2390.000	43.74	-3.40	40.34	74.00	-33.66	peak			
2	*	2407.960	77.45	-3.40	74.05	74.00	0.05	peak			

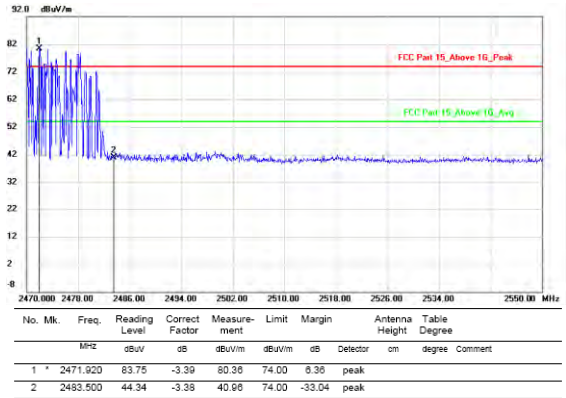
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		cm	degree	
1		2390.000	48.81	-3.40	45.41	74.00	-28.59	peak			
2	*	2418.950	90.13	-3.41	86.72	74.00	12.72	peak			

Horizontal

Hopping-On High



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		cm	degree	
1	*	2471.920	83.75	-3.39	80.36	74.00	6.36	peak			
2		2483.500	44.34	-3.38	40.96	74.00	-33.04	peak			

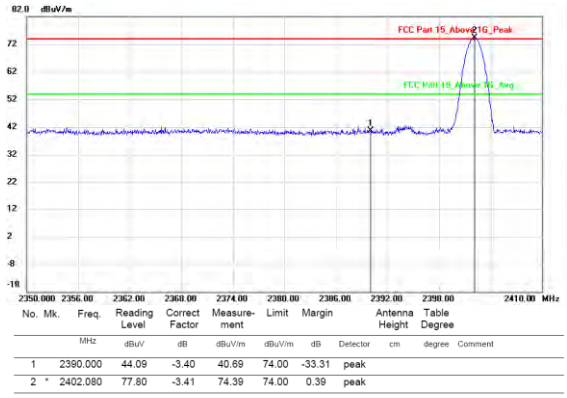
Vertical

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	Detector	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		cm	degree	
1		2390.000	44.07	-3.40	40.67	74.00	-33.33	peak			
2	*	2402.260	85.47	-3.41	82.06	74.00	8.06	peak			

Horizontal

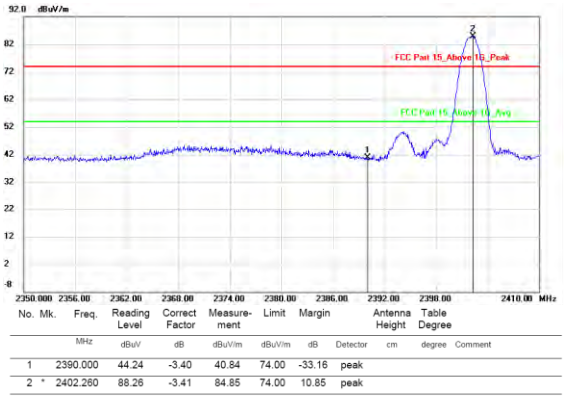
π /4 DQPSK

Low



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		2390.000	44.09	-3.40	40.69	74.00	-33.31	peak		
2	*	2402.080	77.80	-3.41	74.39	74.00	0.39	peak		

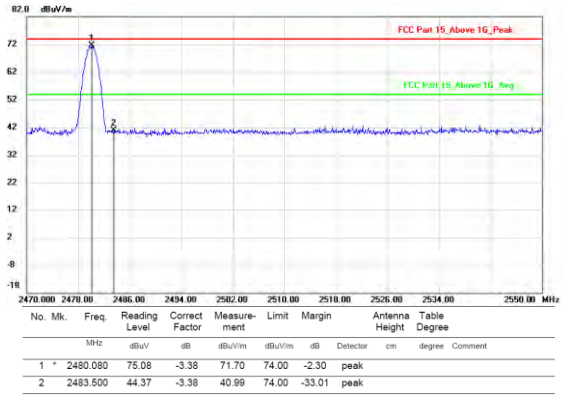
Vertical



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		2390.000	44.24	-3.40	40.84	74.00	-33.16	peak		
2	*	2402.260	88.26	-3.41	84.85	74.00	10.85	peak		

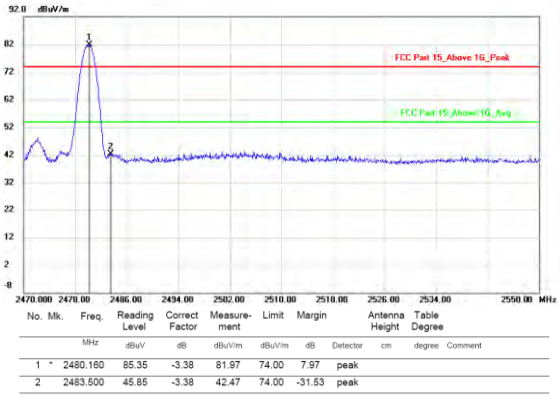
Horizontal

High



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	*	2480.080	75.08	-3.38	71.70	74.00	-2.30	peak		
2		2483.500	44.37	-3.38	40.99	74.00	-33.01	peak		

Vertical

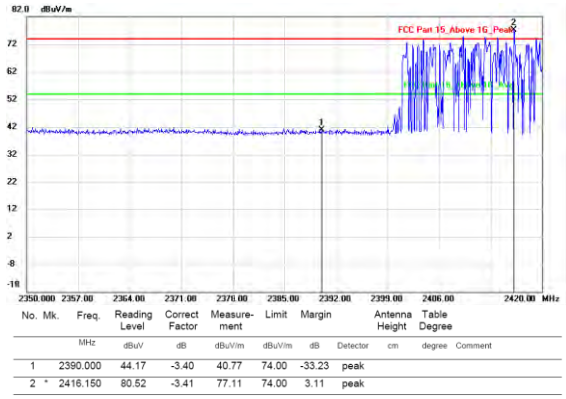


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	Antenna Height	Table Degree	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree
1	*	2480.160	85.35	-3.38	81.97	74.00	7.97	peak		
2		2483.500	45.85	-3.38	42.47	74.00	-31.53	peak		

Horizontal

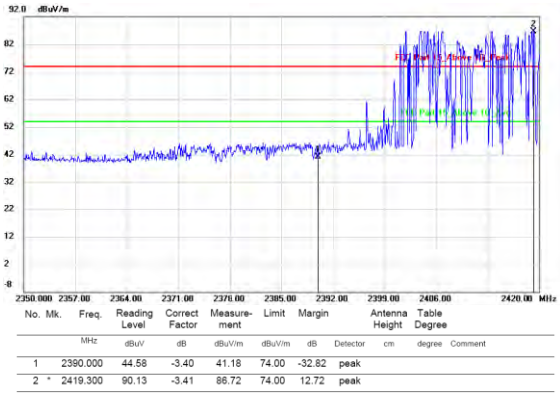
Hopping

Low



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	Antenna Height	Table Degree	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree		
1		2390.000	44.17	-3.40	40.77	74.00	-33.23			peak	
2	*	2416.150	80.52	-3.41	77.11	74.00	3.11			peak	

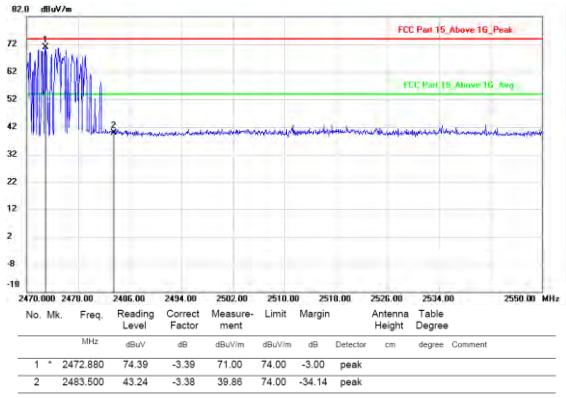
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	Antenna Height	Table Degree	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree		
1		2390.000	44.58	-3.40	41.18	74.00	-32.82			peak	
2	*	2419.300	90.13	-3.41	86.72	74.00	12.72			peak	

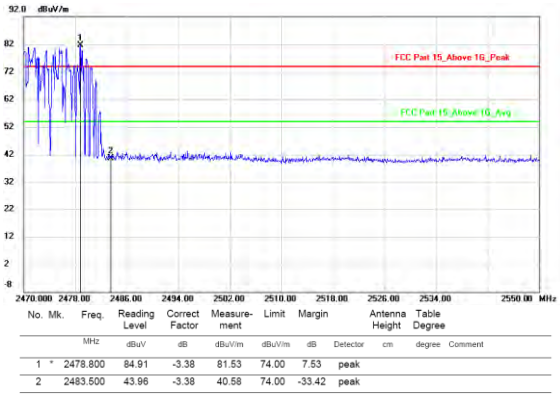
Horizontal

High



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	Antenna Height	Table Degree	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree		
1	*	2472.880	74.39	-3.39	71.00	74.00	-3.00			peak	
2		2483.500	43.24	-3.38	39.86	74.00	-34.14			peak	

Vertical

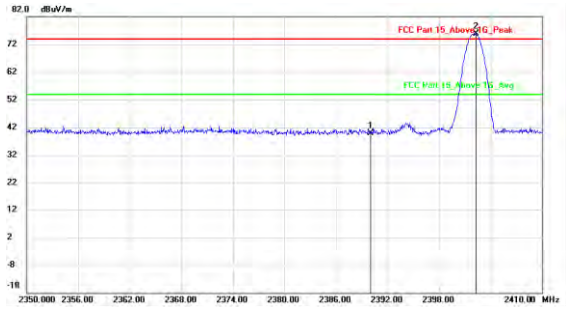


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	Antenna Height	Table Degree	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	cm	degree		
1	*	2478.800	84.91	-3.38	81.53	74.00	7.53			peak	
2		2483.500	43.96	-3.38	40.58	74.00	-33.42			peak	

Horizontal

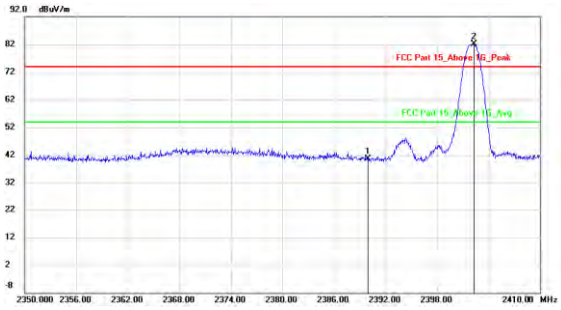
8 DPSK

Hopping-off CH LOW :



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		2390.000	43.33	-3.40	39.93	74.00	-34.07	peak		
2	*	2402.260	79.39	-3.41	75.98	74.00	1.98	peak		

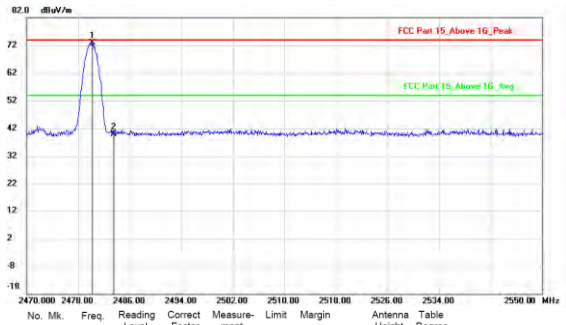
Vertical



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		2390.000	45.31	-3.40	41.91	74.00	-32.09	peak		
2	*	2402.500	89.99	-3.41	86.58	74.00	12.58	peak		

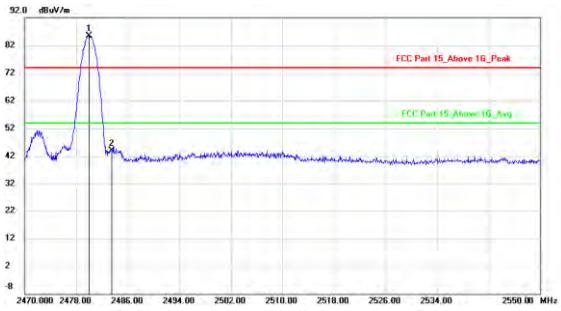
Horizontal

Hopping-off CH High :



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	*	2480.160	76.36	-3.38	72.98	74.00	-1.02	peak		
2		2483.500	43.22	-3.38	39.84	74.00	-34.16	peak		

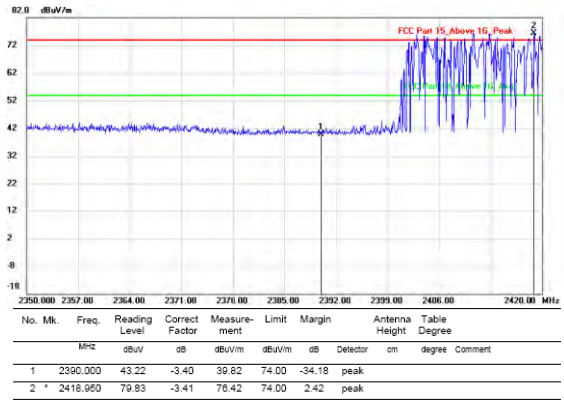
Vertical



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	*	2480.000	88.84	-3.38	85.46	74.00	11.46	peak		
2		2483.500	47.25	-3.38	43.87	74.00	-30.13	peak		

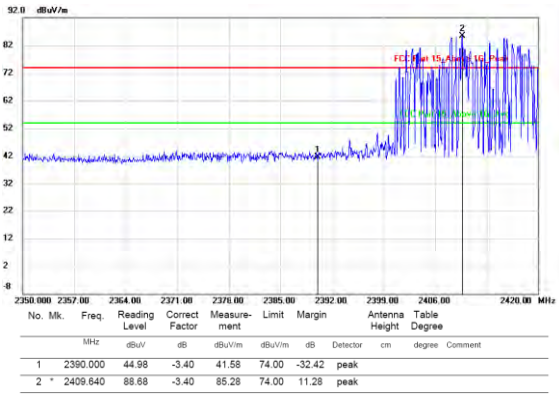
Horizontal

Hopping-On Low



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		2390.000	43.22	-3.40	39.82	74.00	-34.18	peak		
2	*	2418.950	79.83	-3.41	76.42	74.00	2.42	peak		

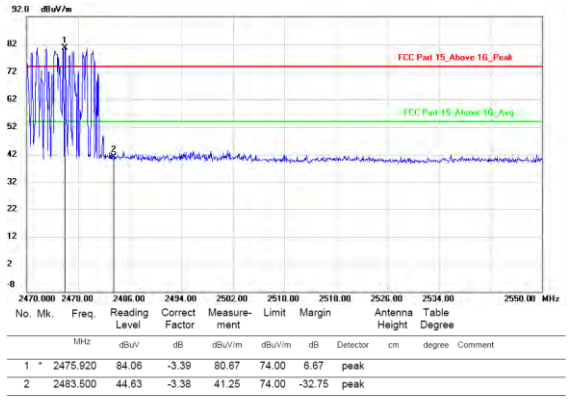
Vertical



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		2390.000	44.98	-3.40	41.58	74.00	-32.42	peak		
2	*	2409.640	88.68	-3.40	85.28	74.00	11.28	peak		

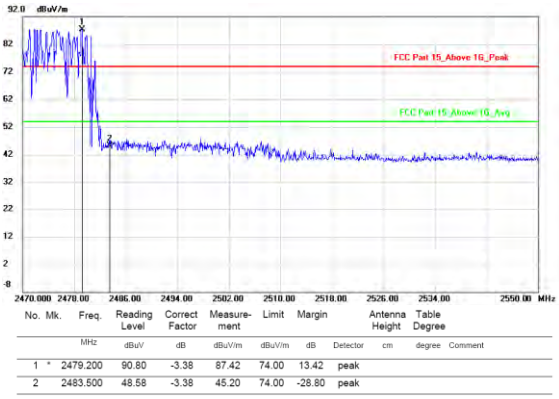
Horizontal

Hopping-On High



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	*	2475.920	84.06	-3.39	80.67	74.00	6.67	peak		
2		2483.500	44.63	-3.38	41.25	74.00	-32.75	peak		

Vertical



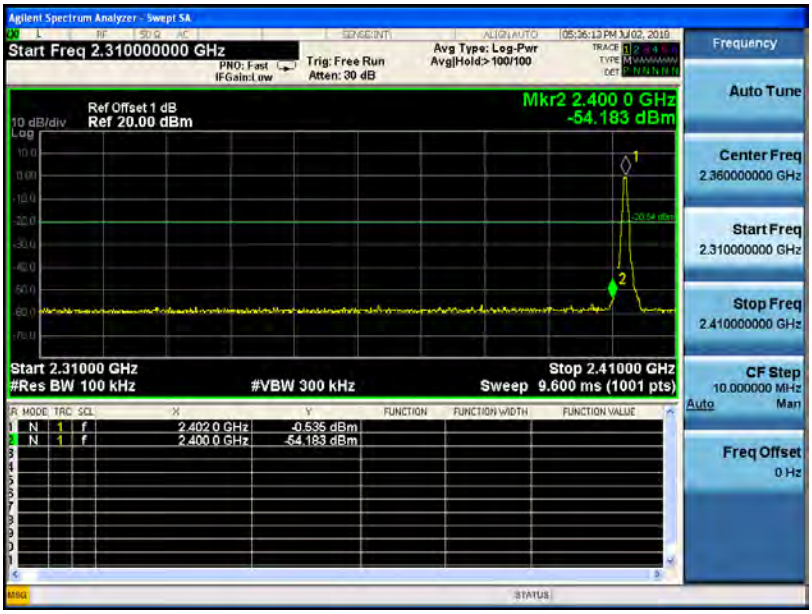
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree Comment
1	*	2479.200	90.80	-3.38	87.42	74.00	13.42	peak		
2		2483.500	48.58	-3.38	45.20	74.00	-28.80	peak		

Horizontal

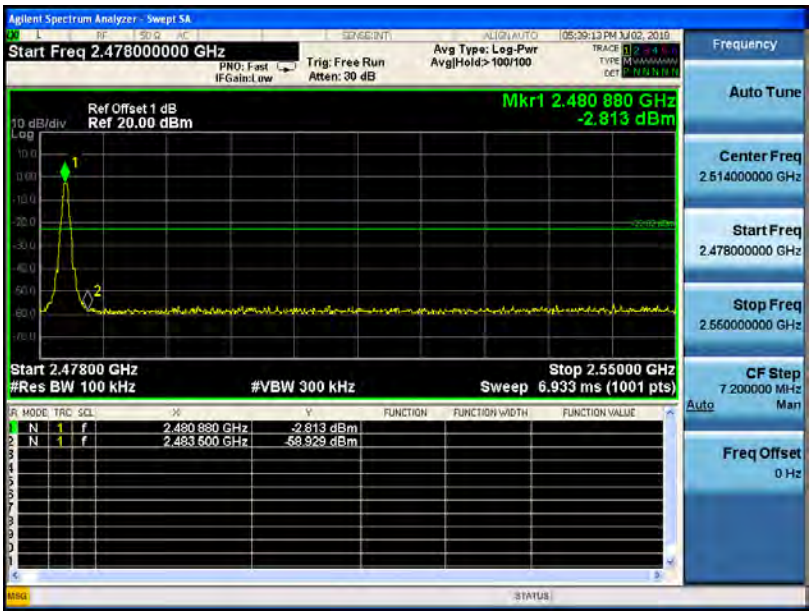
Conducted Method

GFSK

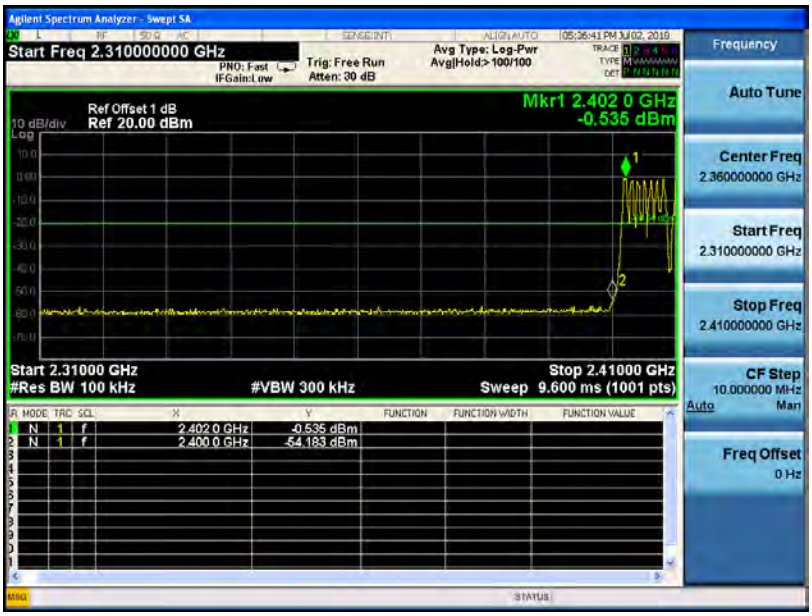
Hopping-off CH LOW :



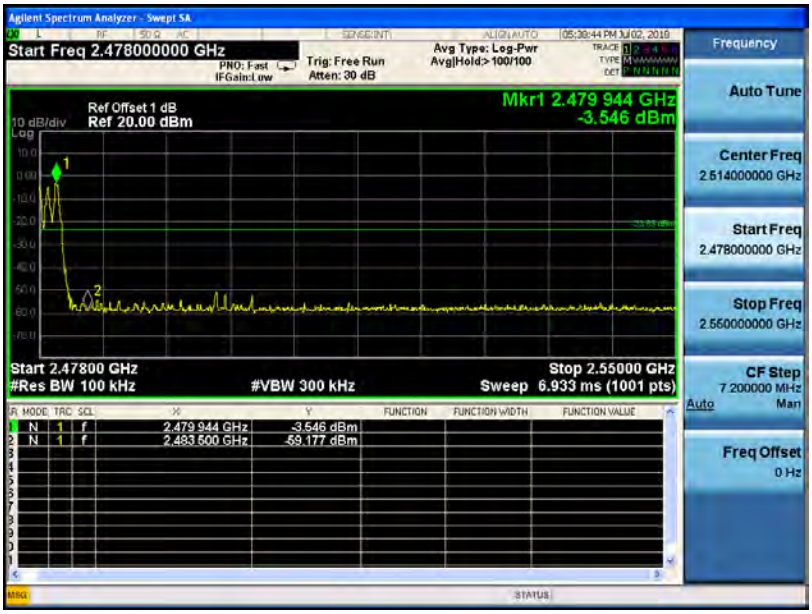
Hopping-off CH High :



Hopping-on Low

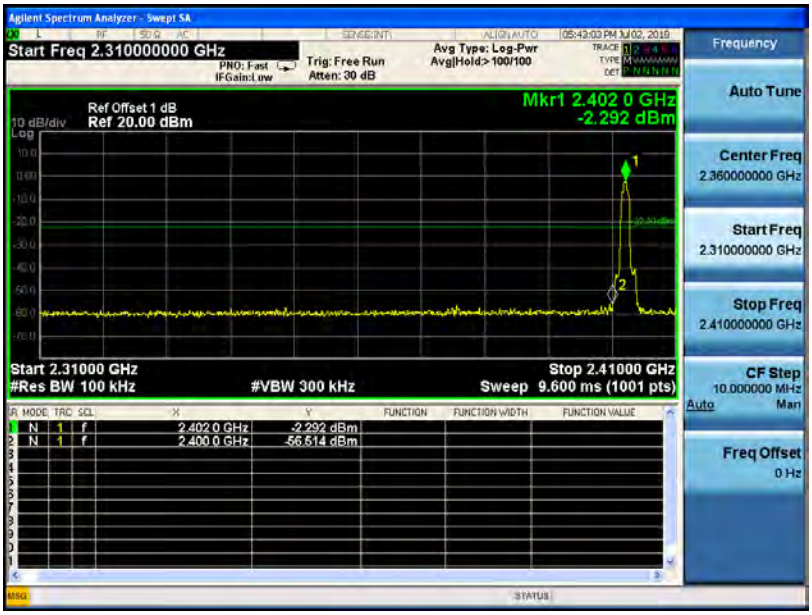


Hopping-on High

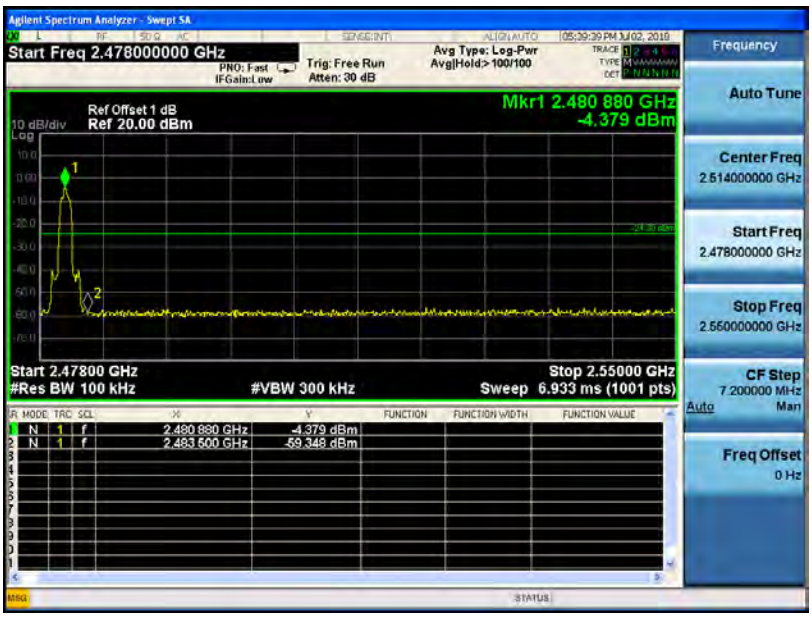


π /4 DQPSK

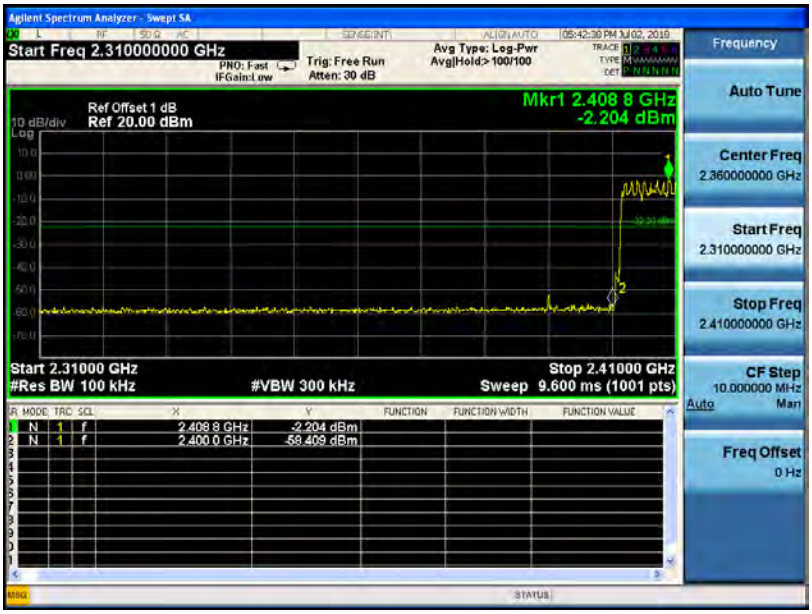
Hopping-off CH Low



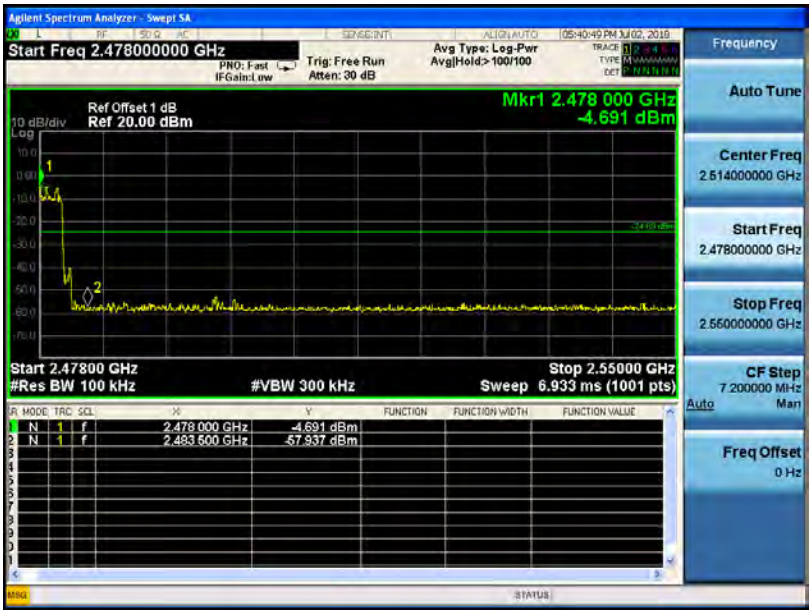
Hopping-off CH High



Hopping-on Low

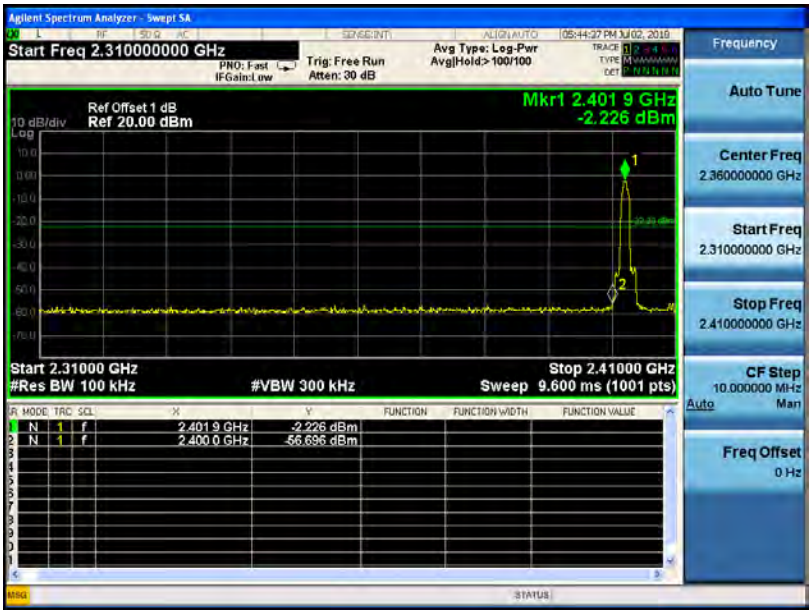


Hopping-on High

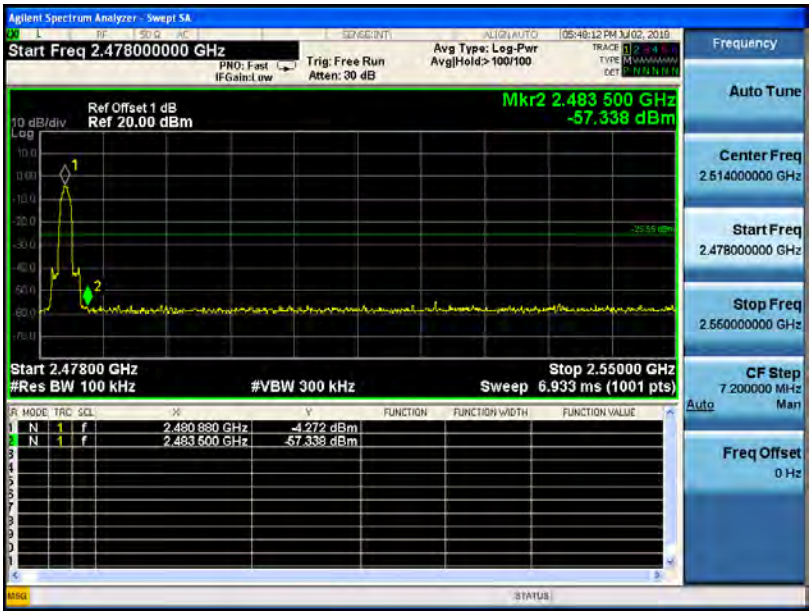


8-DPSK

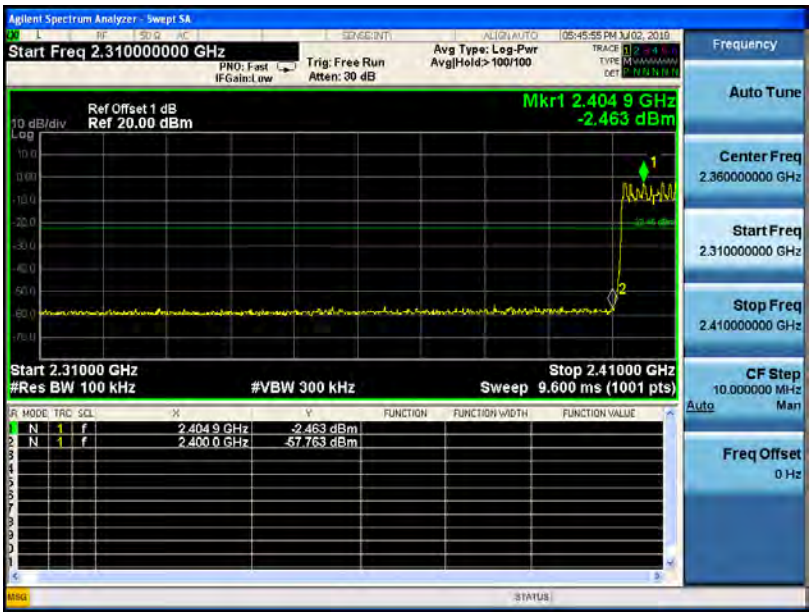
Hopping-off CH LOW :



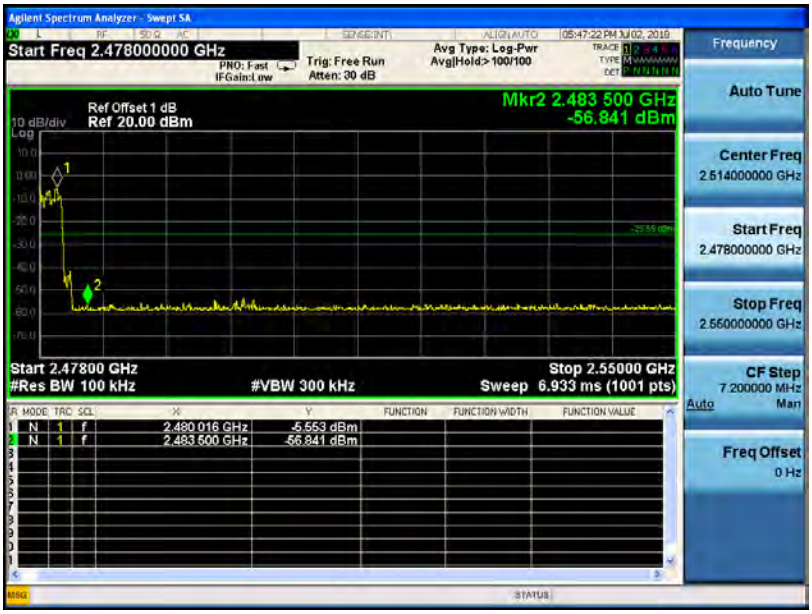
Hopping-off CH High :



Hopping-on Low

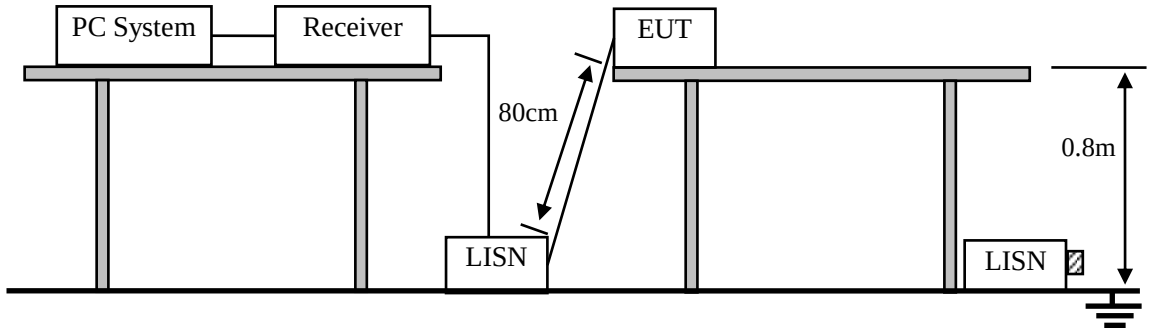


Hopping-on High



10. POWER LINE CONDUCTED EMISSIONS

10.1. Block Diagram of Test Setup



:50Ω Terminator

10.2. Limit

Frequency	Maximum RF Line Voltage	
	Quasi-Peak Level dB(μV)	Average Level dB(μV)
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*
500kHz ~ 5MHz	56	46
5MHz ~ 30MHz	60	50

Notes: 1. * Decreasing linearly with logarithm of frequency.
2. The lower limit shall apply at the transition frequencies.

10.3. Test Procedure

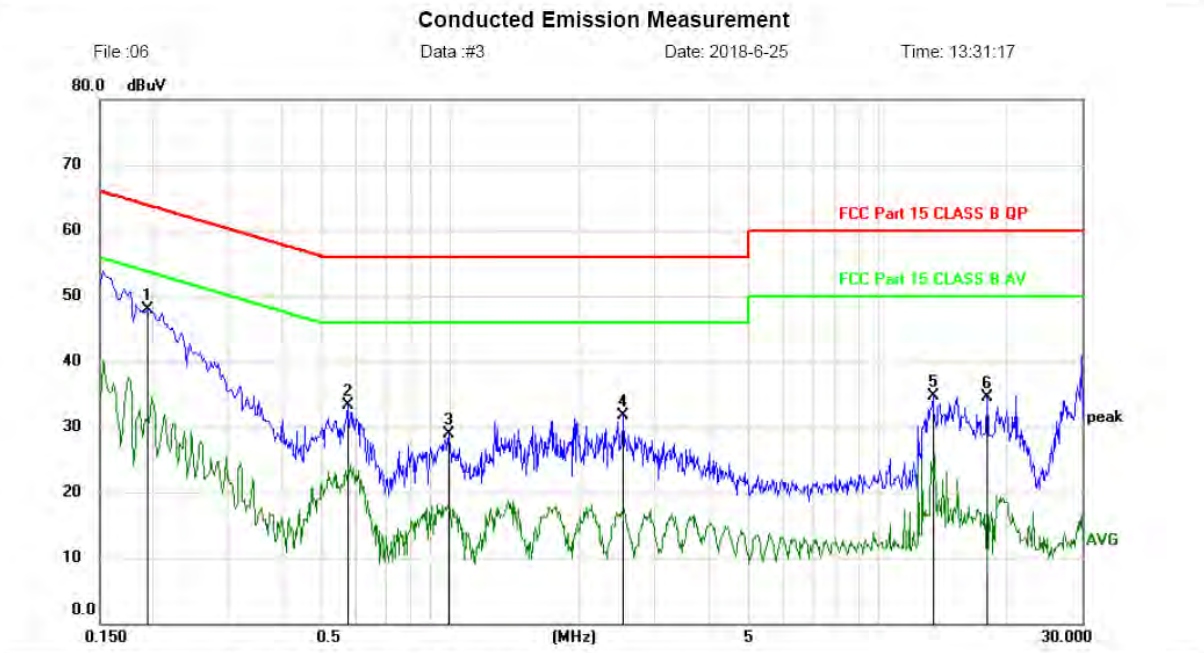
(1) The EUT was placed on a non-metallic table, 80cm above the ground plane.
(2) Setup the EUT and simulator as shown in 10.1
(3) The EUT Power connected to the power mains through a power adapter and a line impedance stabilization network (L.I.S.N1). The other peripheral devices power cord connected to the power mains through a line impedance stabilization network (L.I.S.N2), this provided a 50-ohm coupling impedance for the EUT (Please refer to the block diagram of the test setup and photographs). Both sides of power line were checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.10 :2013on conducted Emission test.
(4) The bandwidth of test receiver is set at 10KHz.
(5) The frequency range from 150 KHz to 30MHz is checked.

10.4. Test Result

PASS. (See below detailed test data)

Note: If peak Result comply with AV limit, QP and AV Result is deemed to comply with AV limit

Phase: L

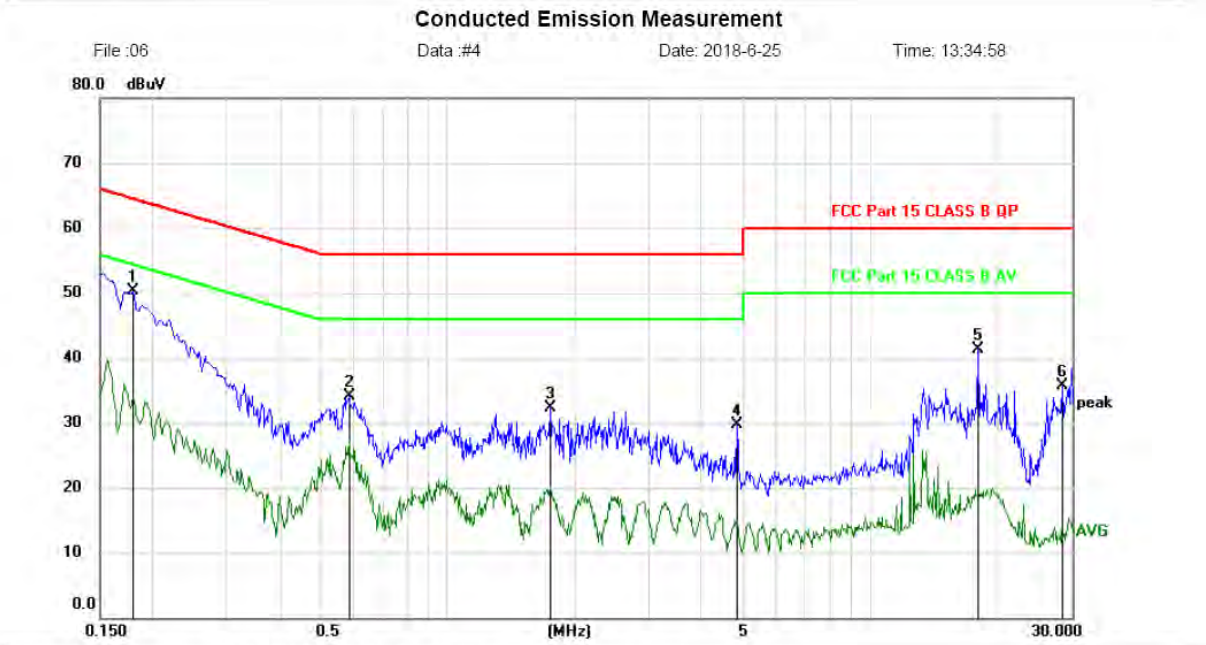


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1949	38.31	9.67	47.98	63.83	-15.85	peak	
2		0.5730	23.56	9.72	33.28	56.00	-22.72	peak	
3		0.9840	19.09	9.77	28.86	56.00	-27.14	peak	
4		2.5350	21.71	9.94	31.65	56.00	-24.35	peak	
5		13.4190	24.38	10.35	34.73	60.00	-25.27	peak	
6		17.9579	24.05	10.43	34.48	60.00	-25.52	peak	

*:Maximum data x:Over limit !:over margin

Note: Measurement=Reading Level+Correc Factor. Factor=(LISN or ISN or PLC or Current Probe)Factor+Cable

Phase: N



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1800	40.61	9.67	50.28	64.49	-14.21	peak	
2		0.5850	24.42	9.72	34.14	56.00	-21.86	peak	
3		1.7460	22.49	9.85	32.34	56.00	-23.66	peak	
4		4.8330	19.59	10.15	29.74	56.00	-26.26	peak	
5		18.0210	30.92	10.43	41.35	60.00	-18.65	peak	
6		28.5180	24.78	10.94	35.72	60.00	-24.28	peak	

*:Maximum data x:Over limit !:over margin

Note: Measurement=Reading Level+Correc Factor. Factor=(LISN or ISN or PLC or Current Probe)Factor+Cable

Remark: All modes have been tested, and only worst data of BT link was listed in this report.

11. ANTENNA REQUIREMENTS

11.1. Limit

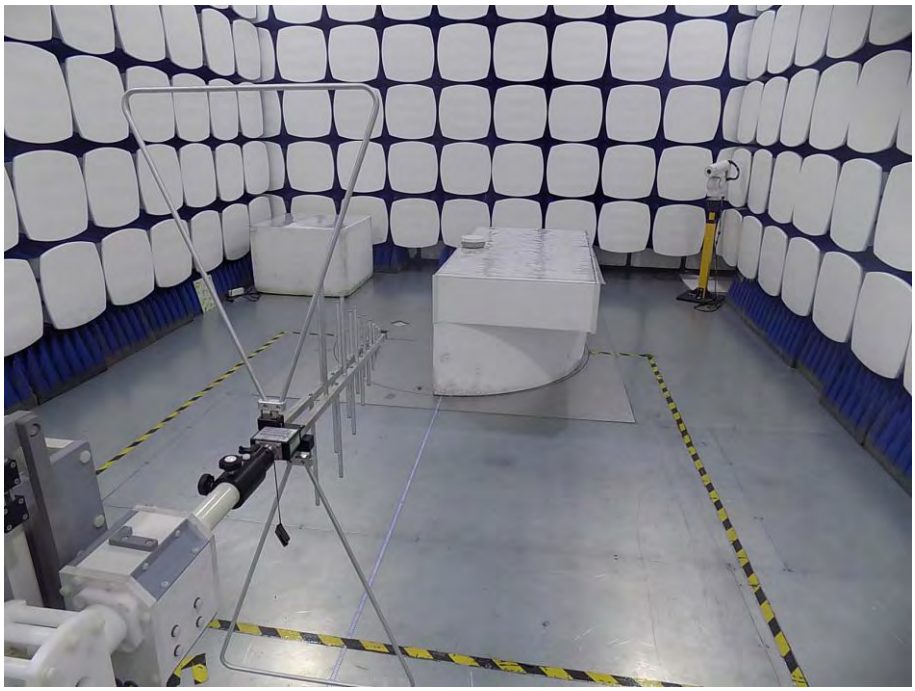
For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional 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.

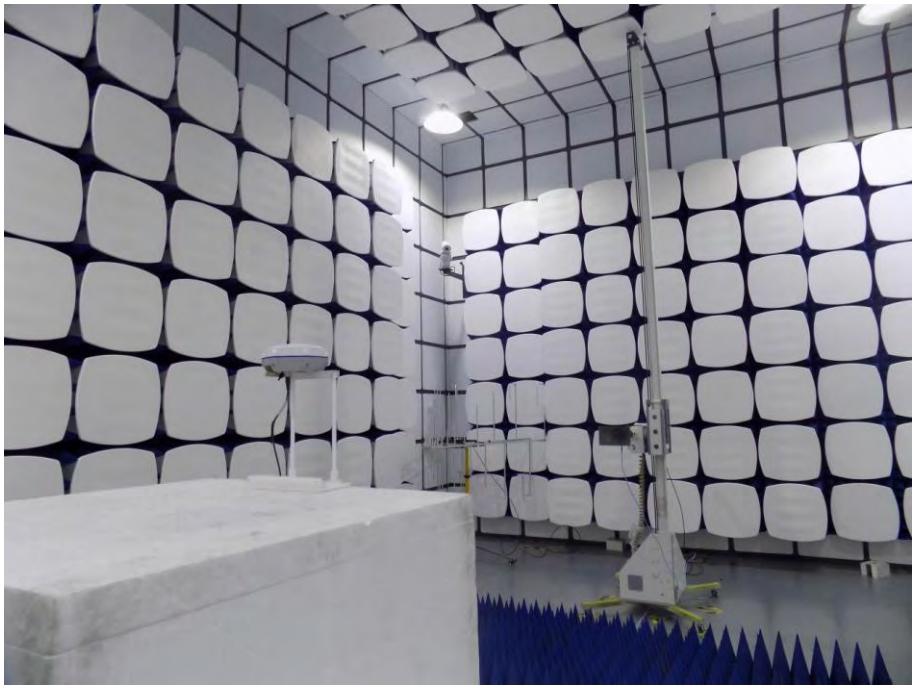
11.2. Result

The EUT antenna is PCB Antenna. It complies with the standard requirement.

12. TEST SETUP PHOTO

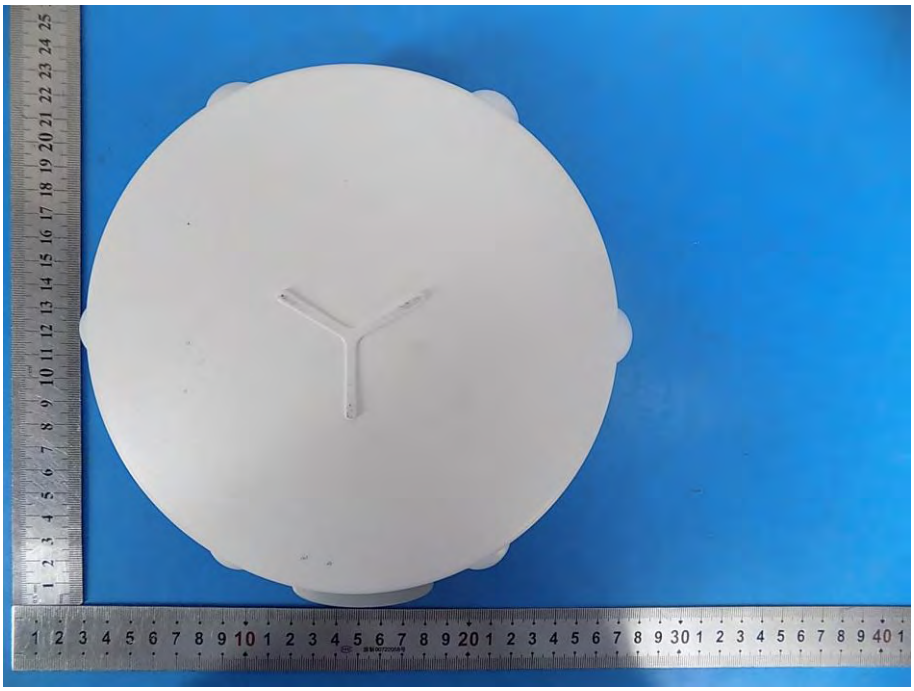
12.1. Photos of Radiated emission

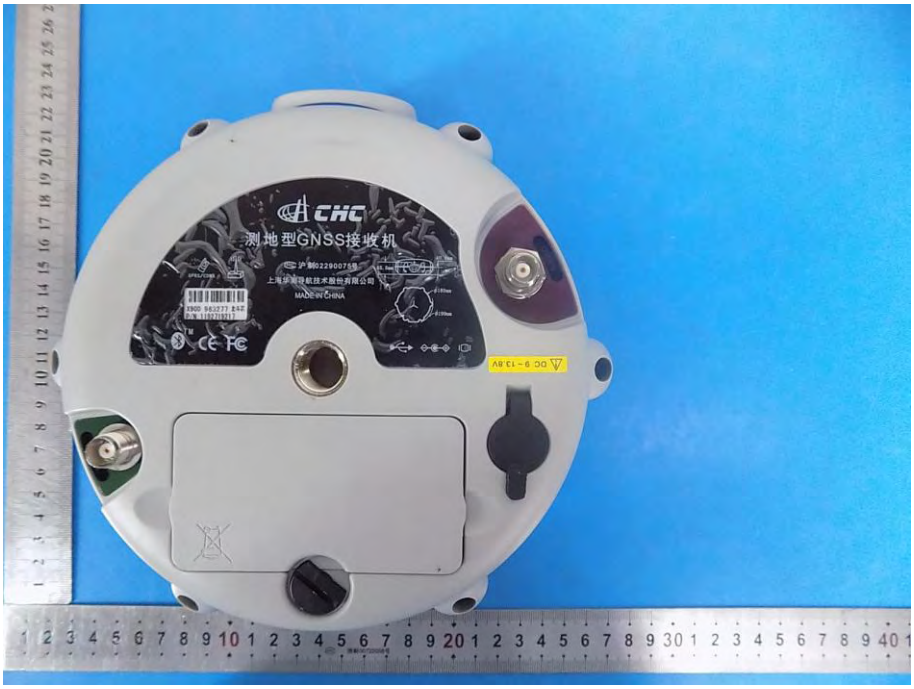


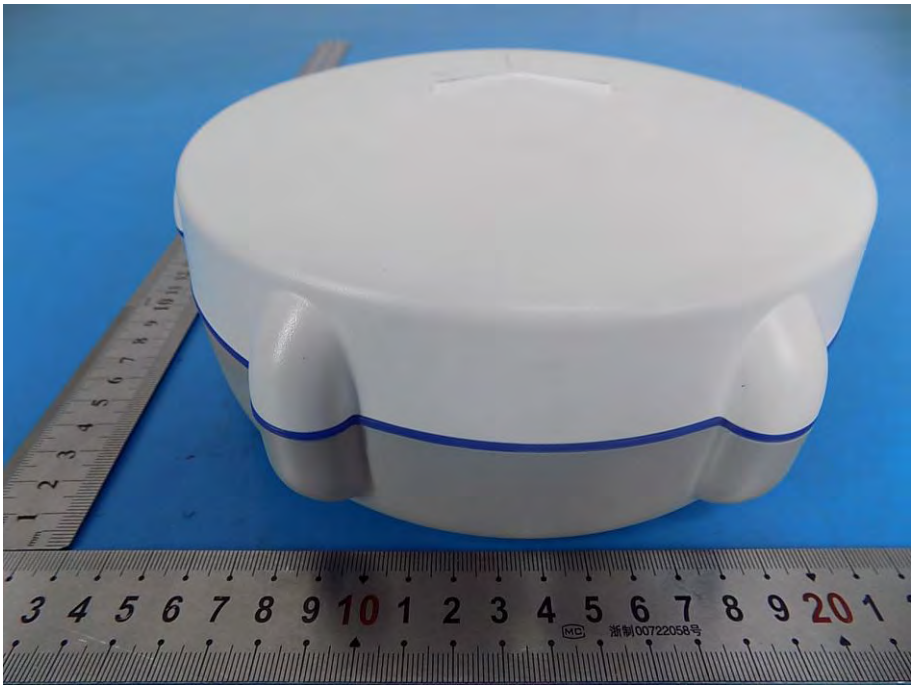


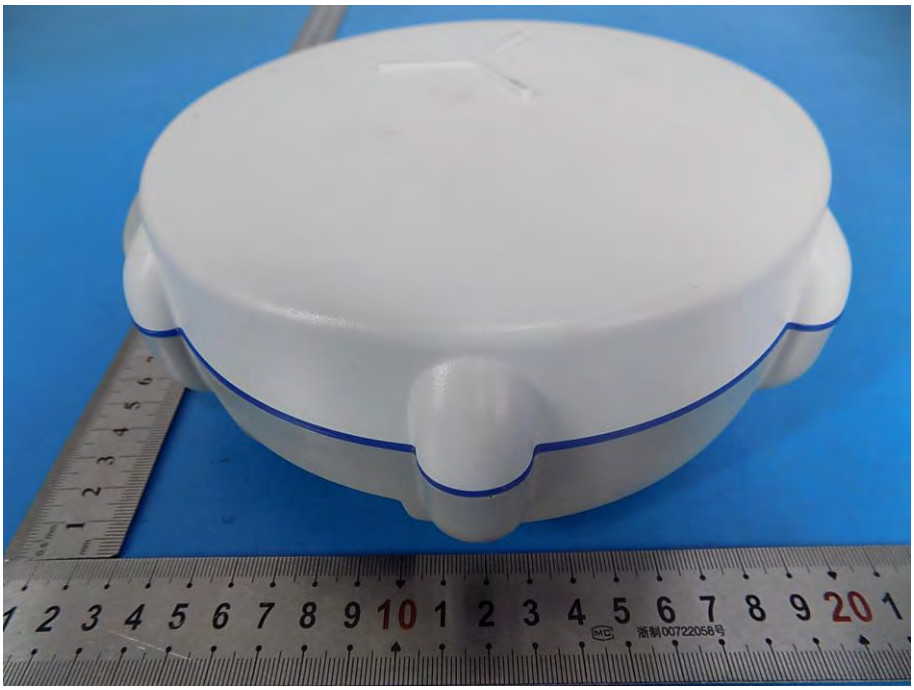
12.2.Photos of Conducted Emission test

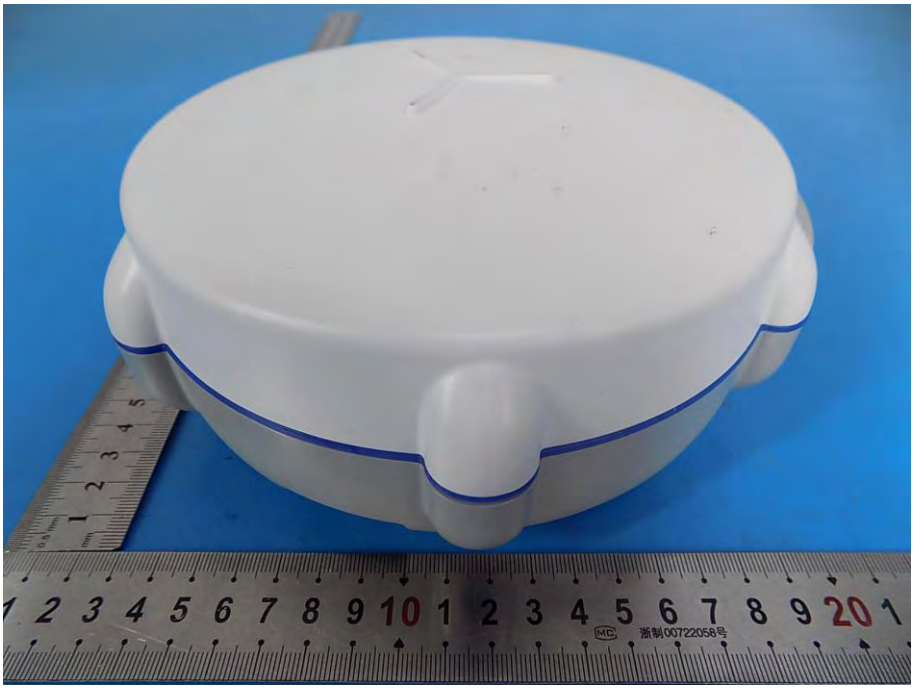
13. PHOTOS OF EUT

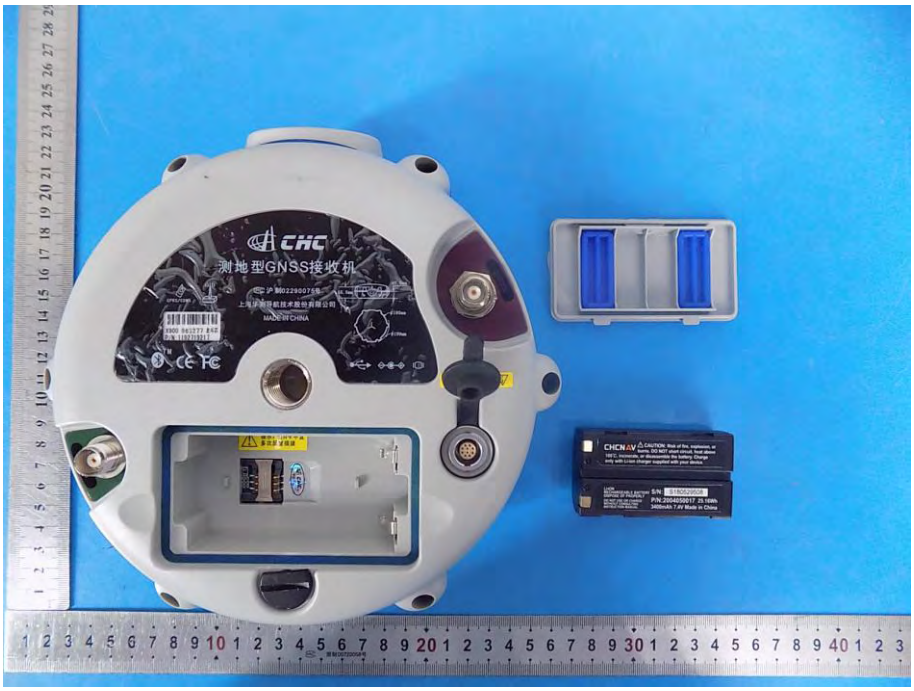



CHC
测地型GNSS接收机
MADE IN CHINA

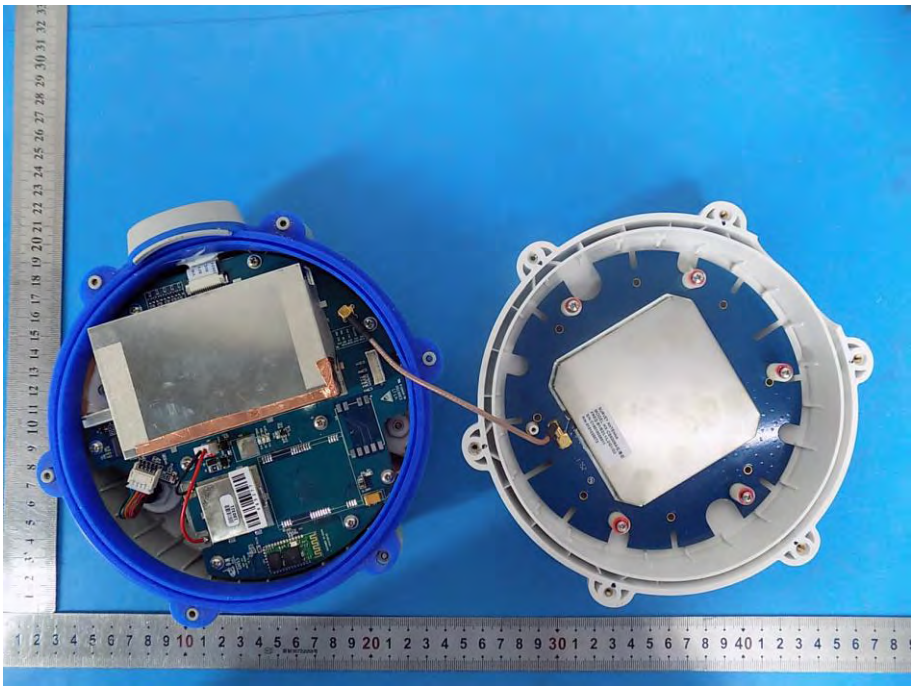


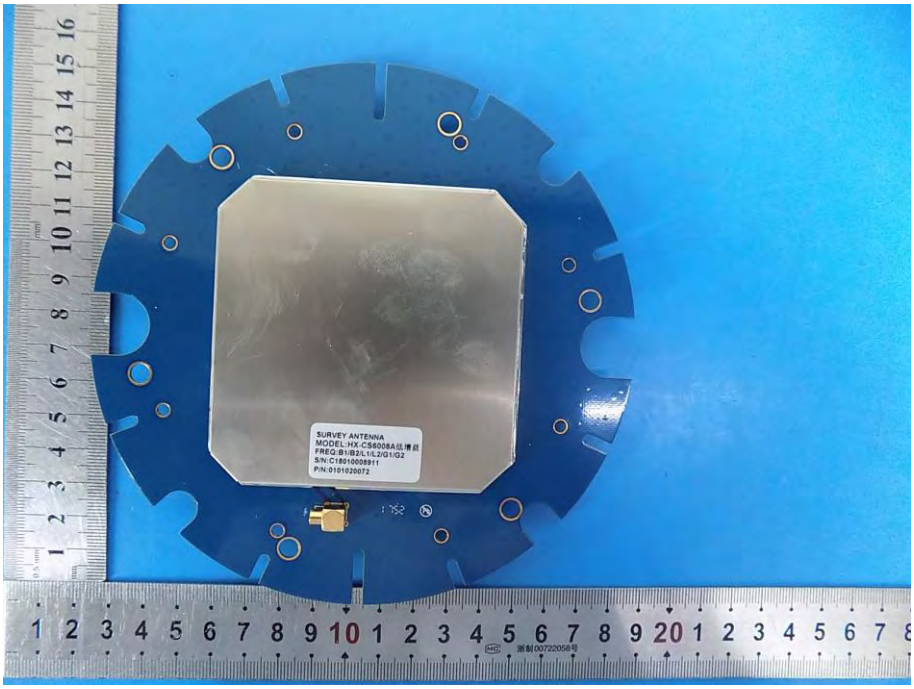





CHC
测地型GNSS接收机


CHCNAV
CAUTION: Risk of fire, explosion, or burns. DO NOT short circuit, heat above 100°C, incinerate, or disassemble the battery. Charge only with Li-ion charger supplied with your device.
LI-ION
RECHARGEABLE BATTERY
DISPOSE OF PROPERLY
DO NOT USE OR CHARGE
WITHOUT CONSULTING
INSTRUCTION MANUAL
S/N: S180529508
P/N:2004050017 25.16Wh
3400mAh 7.4V Made in China

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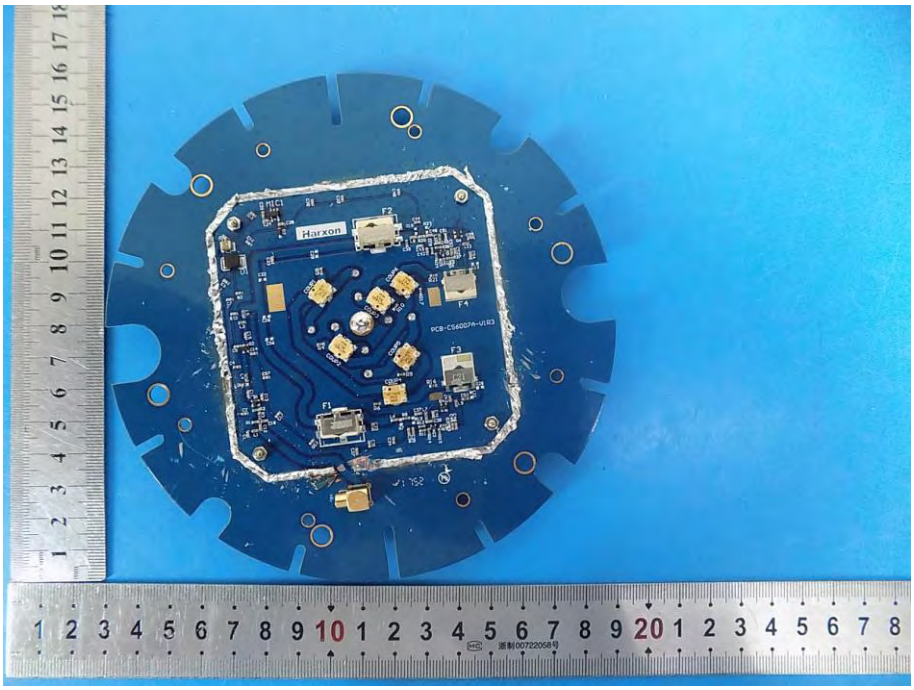
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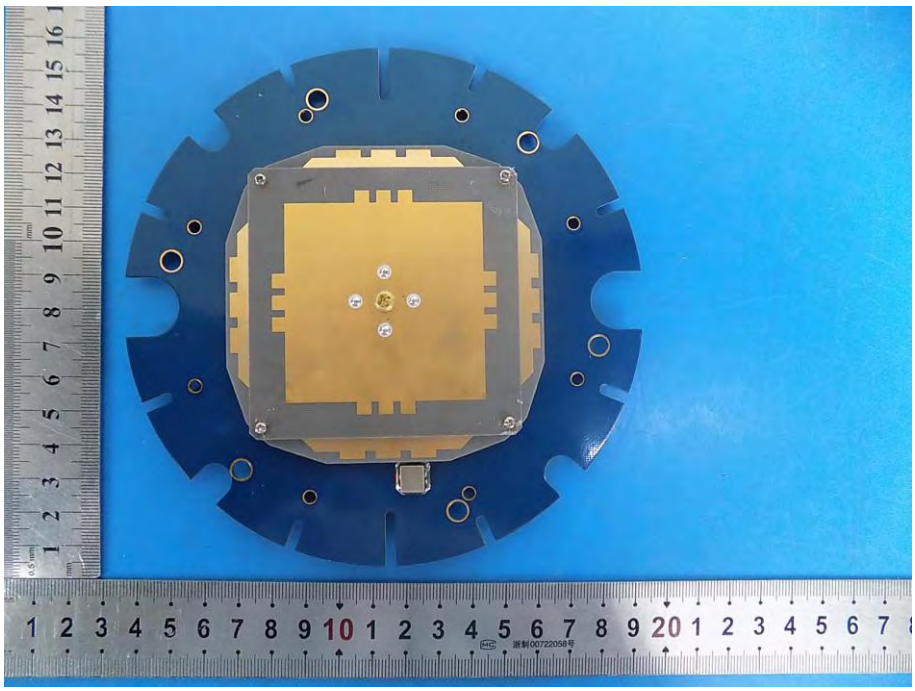
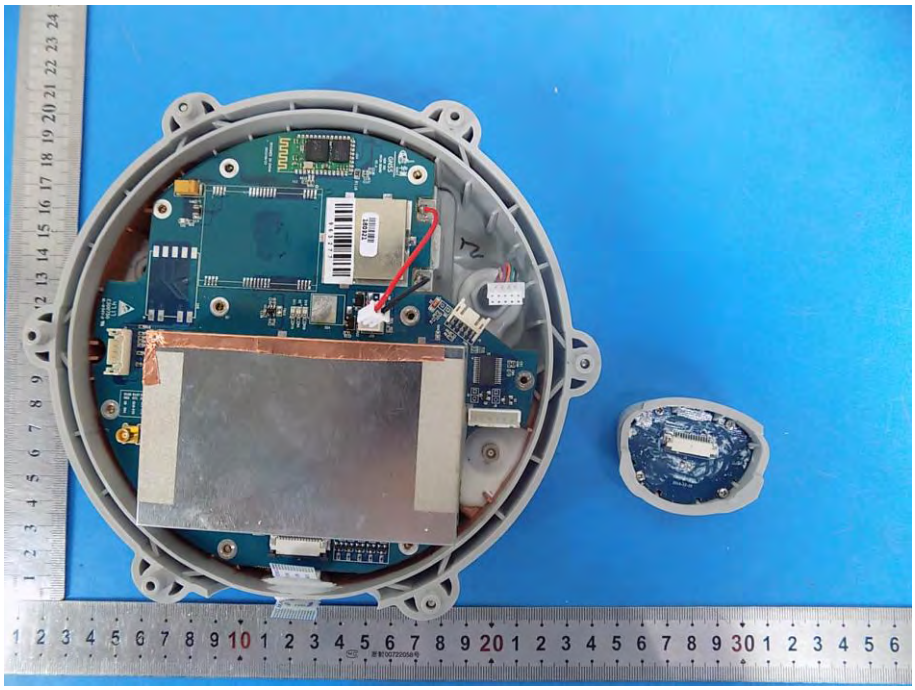
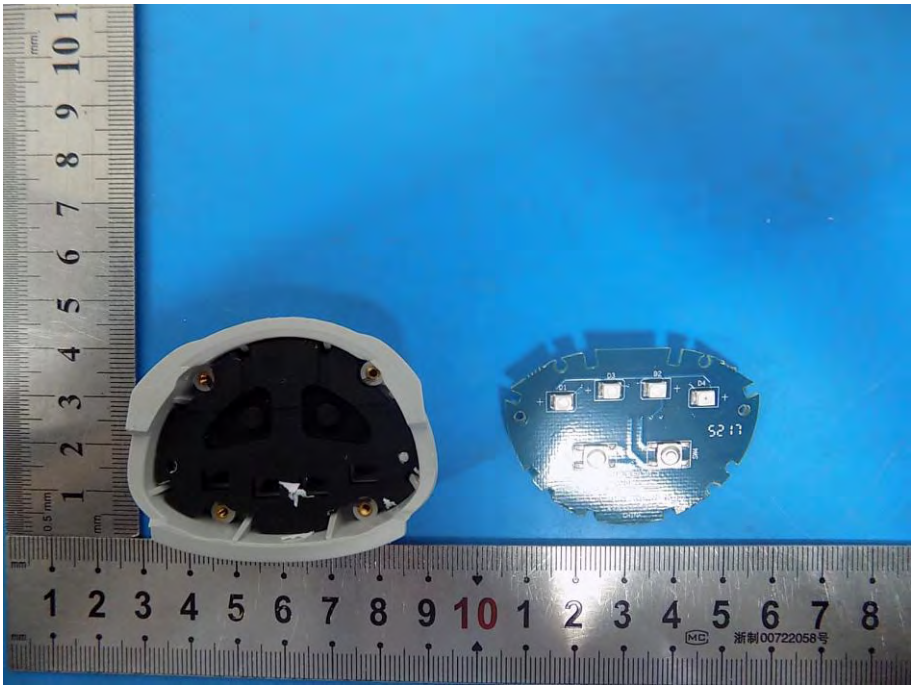
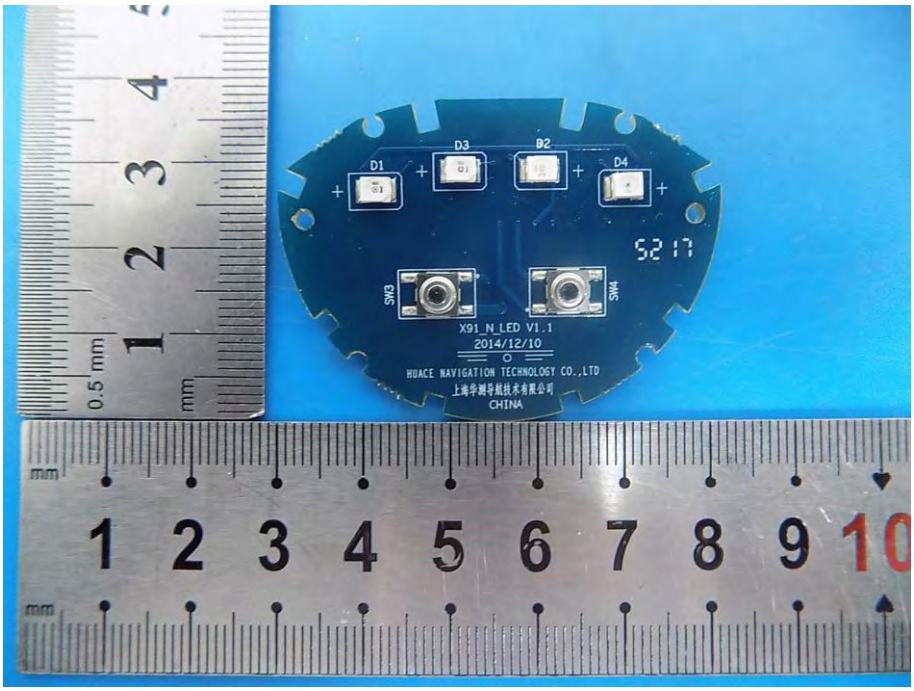
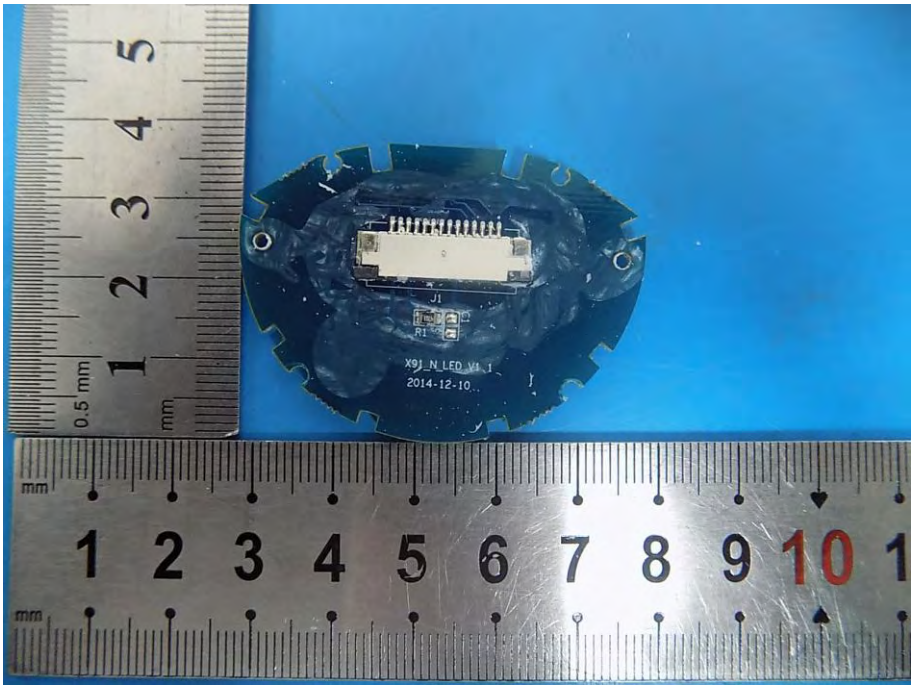
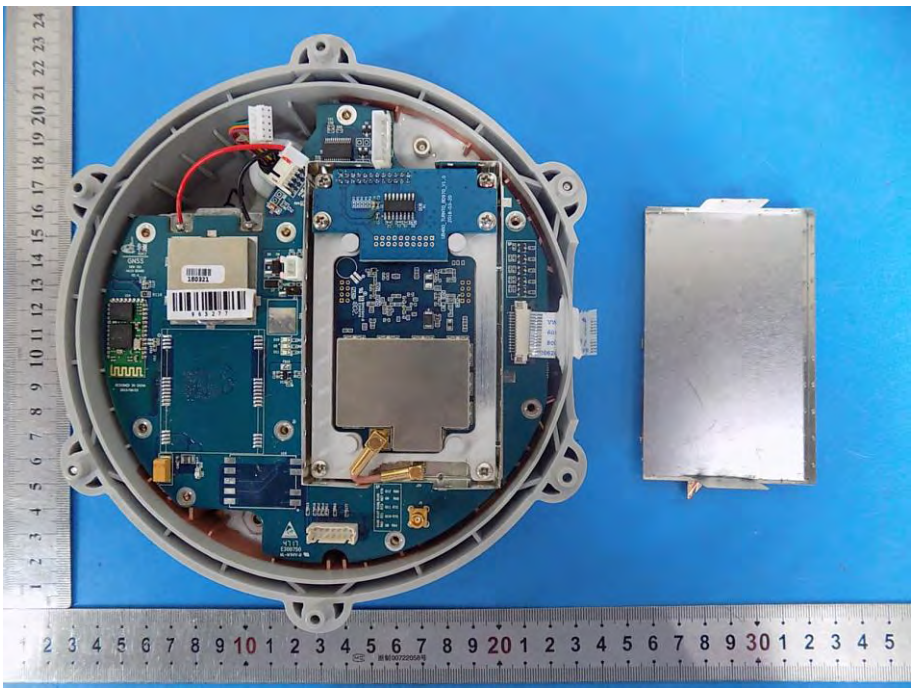


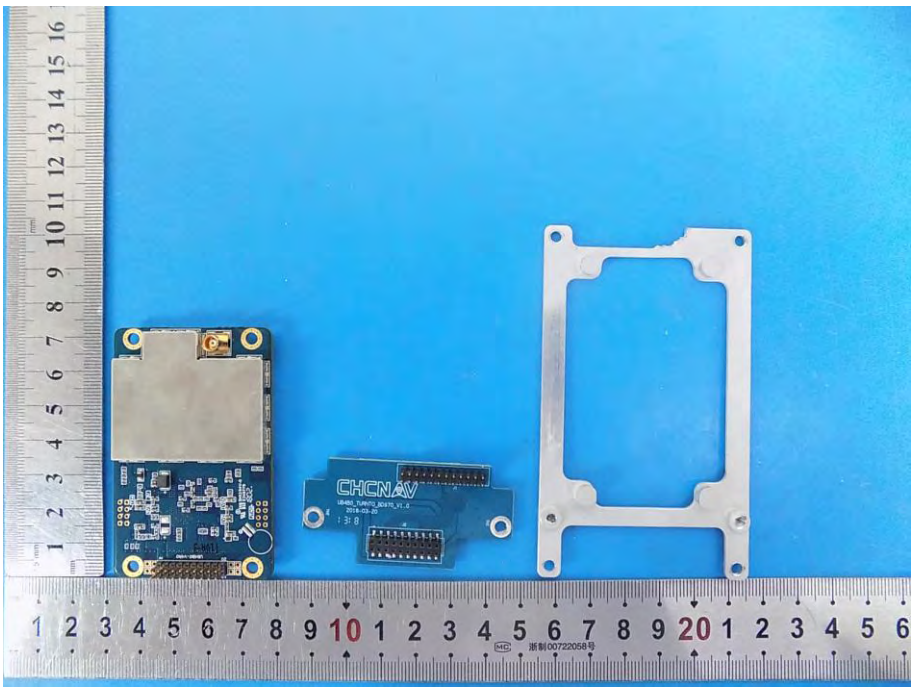


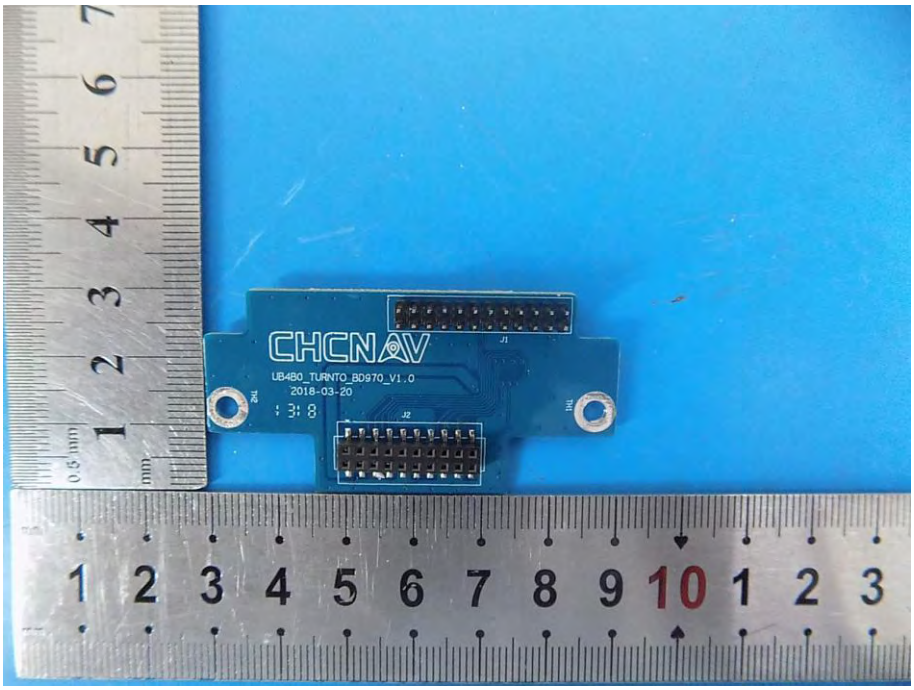



D1
D3
D2
D4
SW3
SW4
X91_N_LED V1.1
2014/12/10
HUACE NAVIGATION TECHNOLOGY CO.,LTD
上海华测导航技术有限公司
CHINA


J1
R1
X9J_N_LED_V1.1
2014-12-10
mm
1 2 3 4 5 6 7 8 9 10 1



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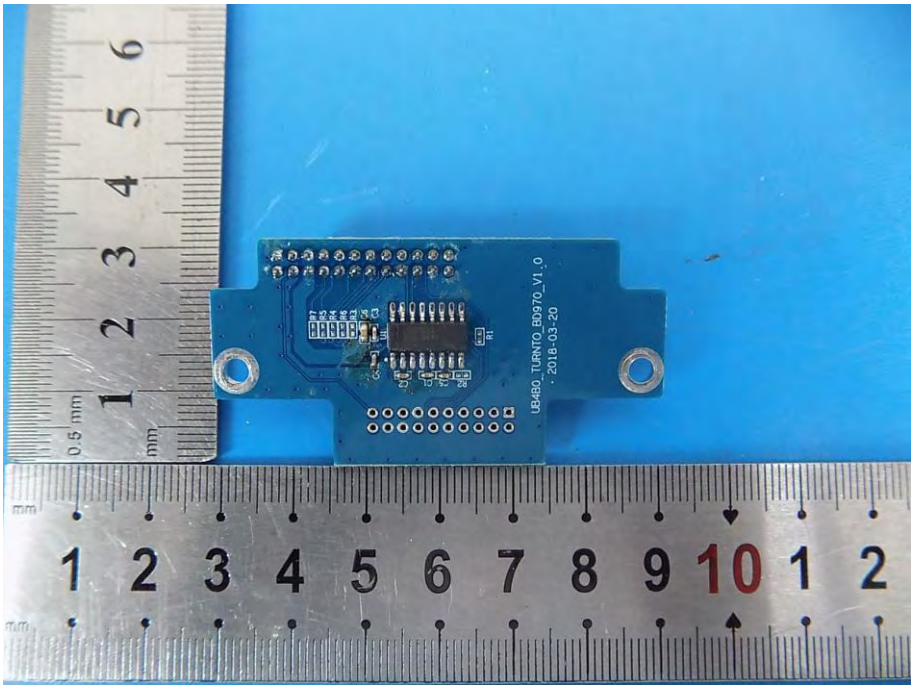
2018-03-20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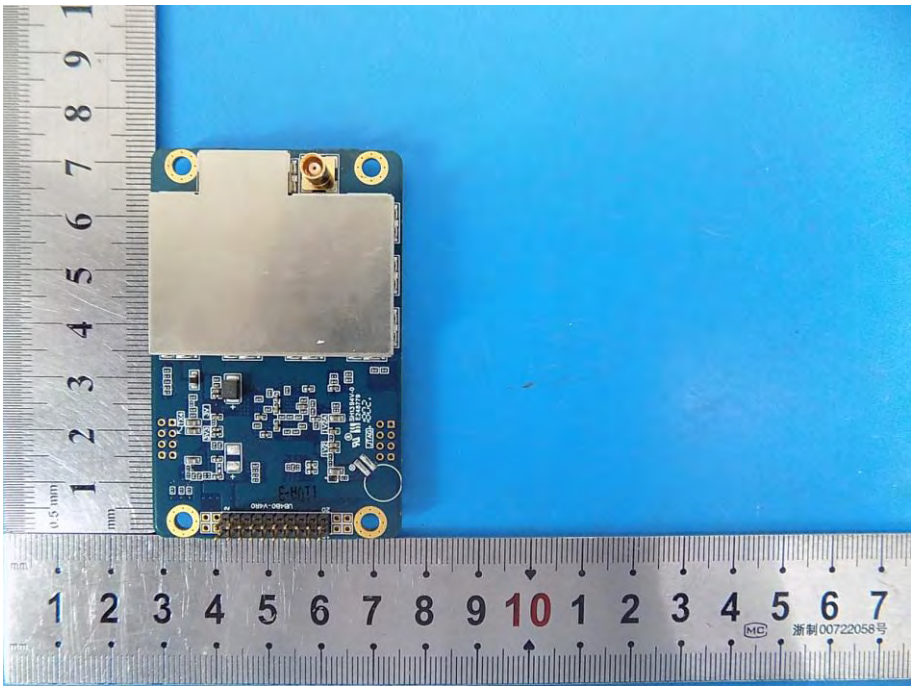

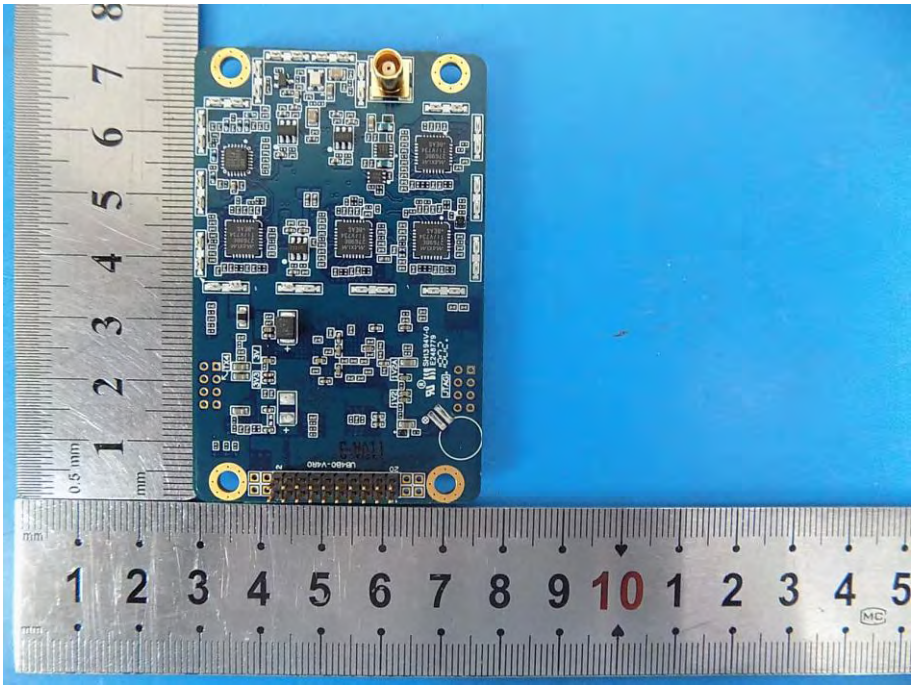

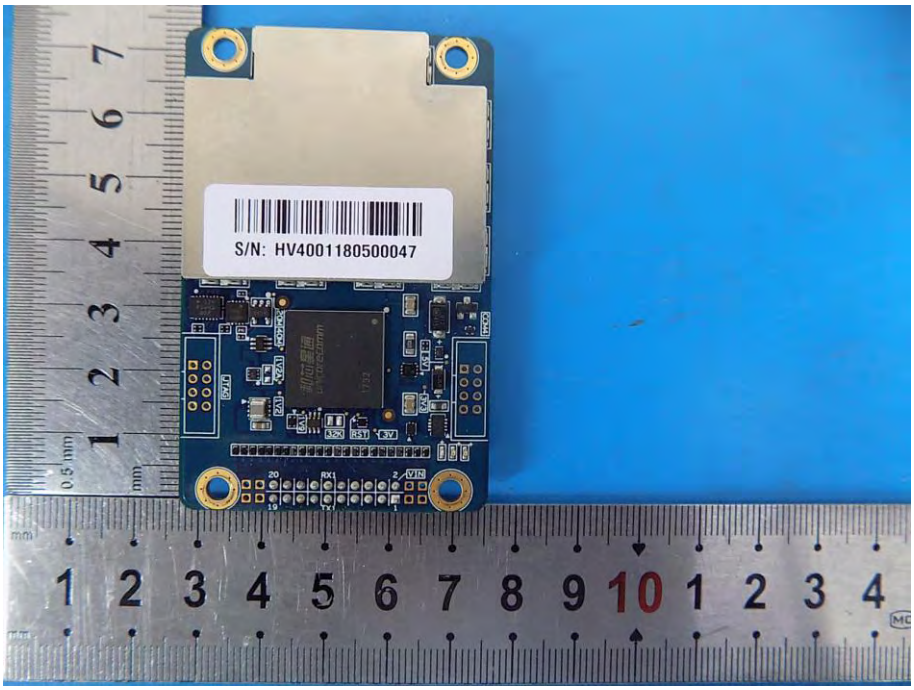
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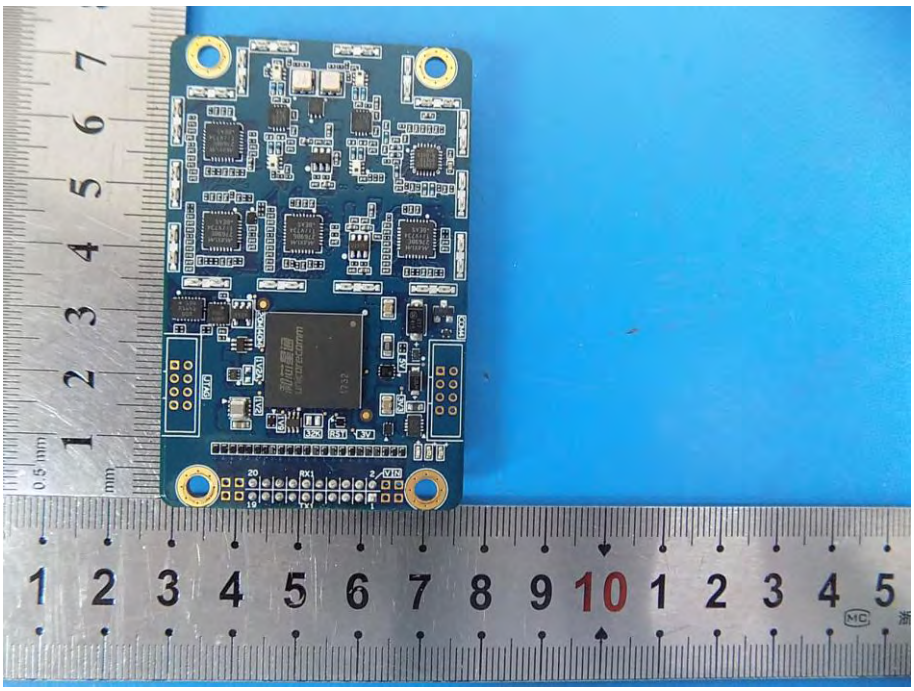

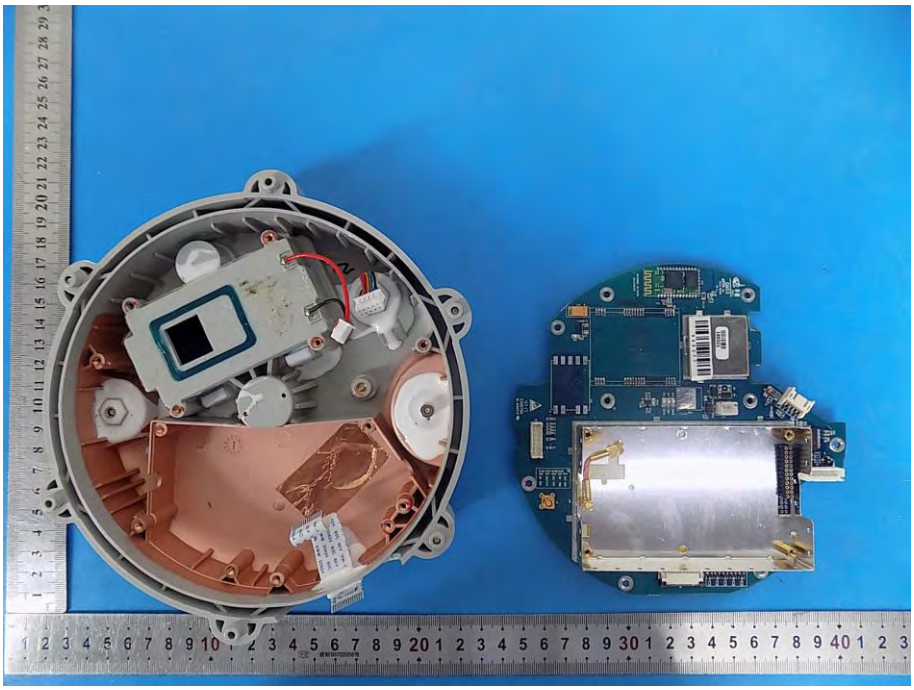

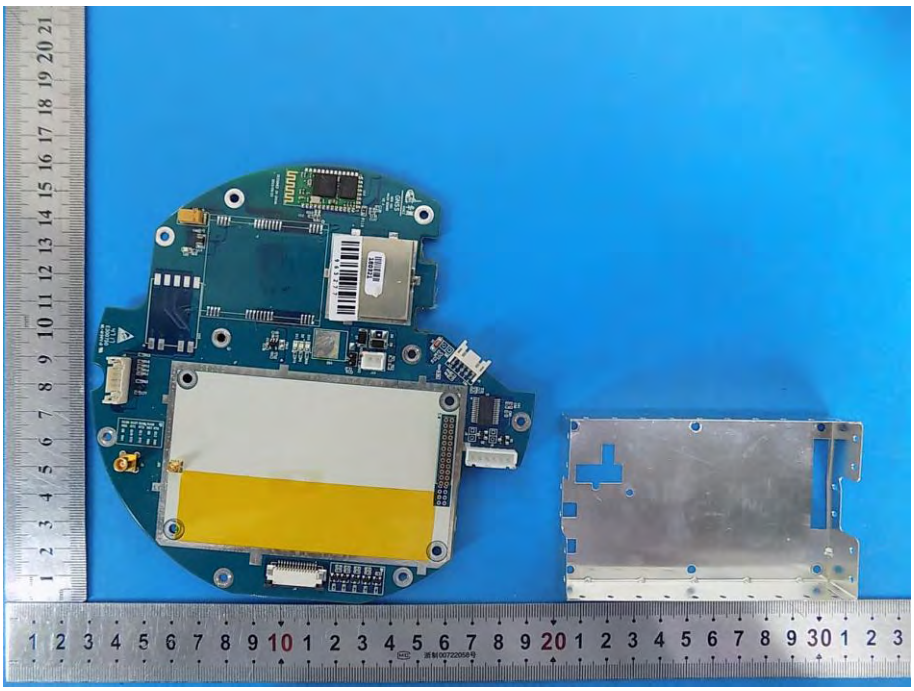

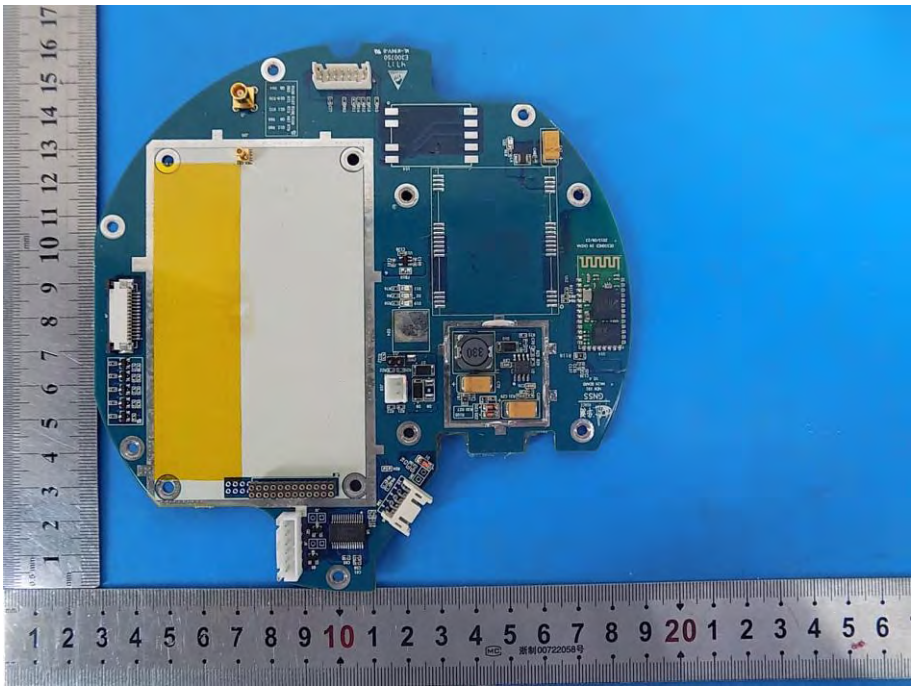

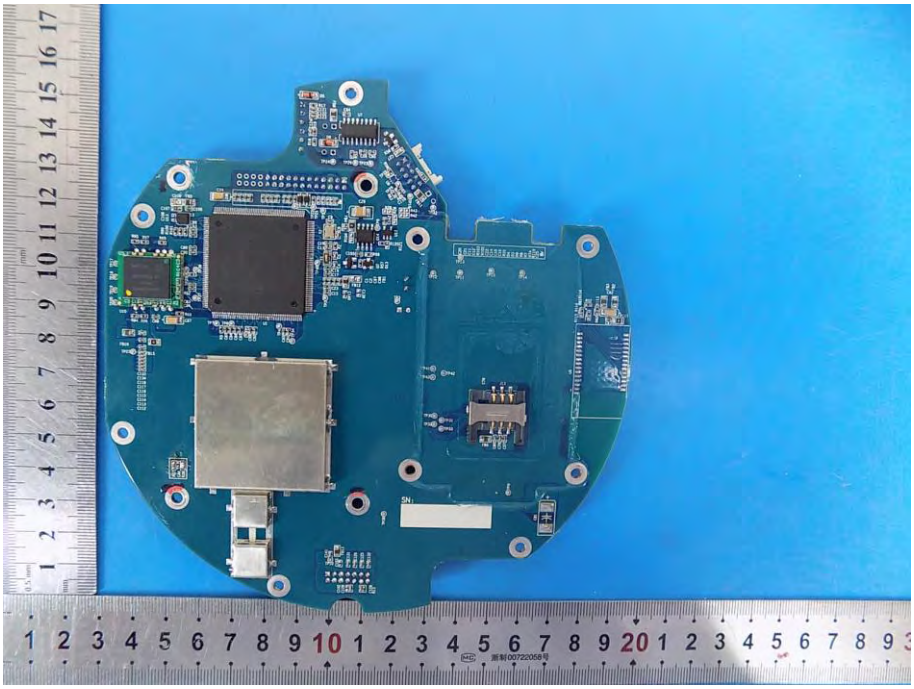

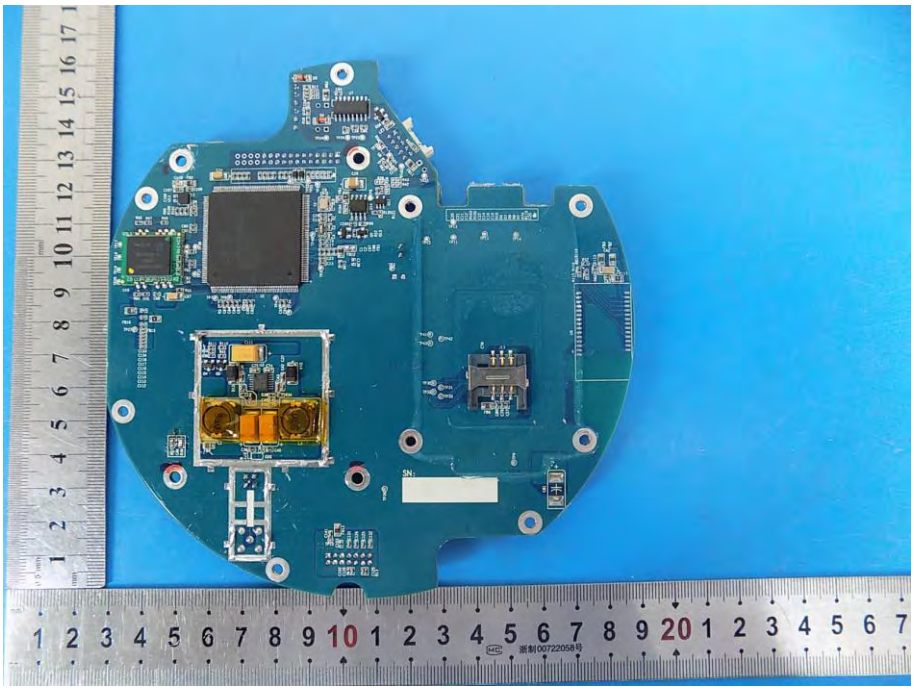

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