TEST REPORT

Product Name:	wireless module
FCC ID:	2BFD7-A39AS
Trademark:	Ashining®
Model Number:	A39-T900A21S1a
Prepared For:	Zhejiang Sunseeker Industrial Co.,Ltd.
Address:	988 Jinde Rd Jiangdong Industrial Park, Jinhua, Zhejiang, 321000, P.R.China
Manufacturer:	Chengdu Ashining Technology Co., Ltd.
Address:	Room 203-2 and 203-4, 2nd Floor, 5th Building, No. 3 Xixin Avenue, West High-Tech Zone, Chengdu City, Sichuan Province, 611731, China
Prepared By:	Shenzhen CTB Testing Technology Co., Ltd.
Address:	1&2/F., Building A, No.26, Xinhe Road, Xinqiao, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, China
Sample Received Date:	Jan. 14, 2025
Sample tested Date:	Jan. 14, 2025 to May. 27, 2025
Issue Date:	May. 27, 2025
Report No.:	CTB25042704201RF01
Test Standards	FCC CFR Title 47 Part 15 Subpart C Section 15.247 ANSI C63.10:2013
Test Results	PASS
Remark:	This is LoRa radio test report.

Compiled by:	Reviewed by:	Approved by:
Zhou Kui	Arron Liu	Bin Mei / Director

Note: If there is any objection to the inspection results in this report, please submit a written report to the company within 15 days from the date of receiving the report. The test report is effective only with both signature and specialized stamp. This result(s) shown in this report refer only to the sample(s) tested. Without written approval of Shenzhen CTB Testing Technology Co., Ltd. this report can't be reproduced except in full. The tested sample(s) and the sample information are provided by the client. "*" indicates the testing items were fulfilled by subcontracted lab. "#" indicates the items are not in CNAS accreditation scope.

TABLE OF CONTENT

(Note: N/A means not applicable)

1. VERSION

Report No.	Issue Date	Description	Approved
CTB25042704201RF01	May. 27, 2025	Original	Valid

2. TEST SUMMARY

The Product has been tested according to the following specifications:

Test Item	Test Requirement	Test method	Result
AC Power Line Conducted Emission	47 CFR Part 15 Subpart C Section 15.207	ANSI C63.10-2013	PASS
Radiated Spurious emissions	47 CFR Part 15 Subpart C Section 15.205/15.209/15.247(d)	ANSI C63.10-2013	PASS
Band edge and RF Conducted Spurious Emissions	47 CFR Part 15 Subpart C Section 15.247(d)/15.205(a)	ANSI C63.10-2013	PASS
Conducted Peak Output Power	47 CFR Part 15 Subpart C Section 15.247 (b)(2)	ANSI C63.10-2013	PASS
20dB Occupied Bandwidth	47 CFR Part 15 Subpart C Section 15.247 (a)(1)	ANSI C63.10-2013	PASS
Carrier Frequencies Separation	47 CFR Part 15 Subpart C Section 15.247 (a)(1)	ANSI C63.10-2013	PASS
Hopping Channel Number	47 CFR Part 15 Subpart C Section 15.247 (b)	ANSI C63.10-2013	PASS
Dwell Time	47 CFR Part 15 Subpart C Section 15.247 (a)(1)	ANSI C63.10-2013	PASS
Antenna Requirement	47 CFR Part 15 Subpart C Section 15.203/15.247 (c)	ANSI C63.10-2013	PASS

Remark:
Test according to ANSI C63.10-2013.

3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Item	Uncertainty
Occupancy bandwidth	U=±54.3Hz
Conducted output power Above 1G	U=±1.0dB
Conducted output power below 1G	U=±0.9dB
Power Spectral Density , Conduction	U=±1.0dB
Conduction spurious emissions	U=±2.8dB
Out of band emission	U=±54Hz
3m camber Radiated spurious emission(30MHz-1GHz)	U=±4.3dB
3m chamber Radiated spurious emission(1GHz-18GHz)	U=±4.5dB
humidity uncertainty	U=±5.3%
Temperature uncertainty	U=±0.59℃
Supply voltages	U=±3%
Time	U=±5%

4. PRODUCT INFORMATION AND TEST SETUP

4.1 Product Information

Model(s):	A39-T900A21S1a
Model Description:	N/A
Hardware Version:	0567
Software Version:	V1.0
Operation Frequency:	902.25-927.4375MHz
Max. RF output power:	21.839dBm
Type of Modulation:	LoRa
Antenna installation:	External antenna
Antenna Gain:	ANT1: 3.82dBi ANT2: 2.01dBi ANT3: 1.63dBi
Ratings:	DC 5V

4.2 Test Setup Configuration

See test photographs attached in EUT TEST SETUP PHOTOGRAPHS for the actual connections between Product and support equipment.

4.3 Support Equipment

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
1	Laptop	DELL	Vostro 5490	/	AE

Notes:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

4.4 Channel List

Channel List							
Channel	Frequency (MHz)	Channel	Frequenc y (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	902.2500	9	908.7500	17	915.2500	25	921.7500
2	903.0625	10	909.5625	18	916.0625	26	922.5625
3	903.8750	11	910.3750	19	916.8750	27	923.3750
4	904.6875	12	911.1875	20	917.6875	28	924.1875
5	905.5000	13	912.0000	21	918.5000	29	925.0000
6	906.3125	14	912.8125	22	919.3125	30	925.8125
7	907.1250	15	913.6250	23	920.1250	31	926.6250
8	907.9375	16	914.4375	24	920.9375	32	927.4375

4.5 Test Mode

All test mode(s) and condition(s) mentioned were considered and evaluated respectively by performing full tests, the worst data were recorded and reported.

Test mode	Low channel	Middle channel	High channel
Transmitting (8FSK)	902.25MHz	915.25MHz	927.4375MHz
Receiving (8FSK)	902.25MHz	915.25MHz	927.4375MHz

4.6 Test Environment

Humidity(%):	54
Atmospheric Pressure(kPa):	101
Normal Voltage(DC):	5V
Normal Temperature(℃)	23
Low Temperature(℃)	0
High Temperature(℃)	40

5. TEST FACILITY AND TEST INSTRUMENT USED

5.1 Test Facility

All measurement facilities used to collect the measurement data are located at 1&2F., Building A, No. 26, Xinhe Road, Xinqiao, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, China. The site and apparatus are constructed in conformance with the requirements of ANSI C63.4 and CISPR 16-1-1 other equivalent standards.

FCC Test Firm Registration Number: CN1276

5.2 Test Instrument Used

No.	Equipment	Manufacturer	Type No.	Serial No.	Firmware Version	Calibrated until
1	Spectrum Analyzer	Agilent	N9020A	MY52090073	A.14.16	2025/6/28
2	Power Sensor	Agilent	U2021XA	MY56120032	/	2025/6/28
3	Power Sensor	Agilent	U2021XA	MY56120034	/	2025/6/28
4	Communication test set	R&S	CMW500	108058	V3.5.80	2025/6/28
5	Spectrum Analyzer	KEYSIGHT	N9020A	MY51289897	A.14.16	2025/6/28
6	Signal Generator	Agilent	N5181A	MY50140365	A.01.60	2025/6/28
7	Vector signal generator	Agilent	N5182A	MY47420195	A.01.87	2025/6/28
8	Communication test set	Agilent	E5515C	MY50102567	B.19.07 (E1962B)	2025/6/28
9	2.4 GHz Filter	Shenxiang	MSF2400-2483.5MS-1154	20181015001	/	2025/6/30
10	5 GHz Filter	Shenxiang	MSF5150-5850MS-1155	20181015001	/	2025/6/30
11	Filter	Xingbo	XBLBQ-DZA120	190821-1-1	/	2025/6/30
12	BT&WI-FI Automatic test software	Micowave	MTS8310	Ver. 2.0.0.0	/	/
13	Rohde & Schwarz SFU Broadcast Test System	R&S	SFU	101017	/	2025/6/28
14	Temperature humidity chamber	Hongjing	TH-80CH	DG-15174	/	2025/6/28
15	234G Automatic test software	Micowave	MTS8200	Ver. 2.0.0.0	/	/
16	966 chamber	C.R.T.	966	/	/	2027/6/21
17	Receiver	R&S	ESPI	100362	RF_ATTEN_7 (104489/003)	2025/6/28
18	Amplifier	HP	8447E	2945A02747	/	2025/6/28
19	Amplifier	Agilent	8449B	3008A01838	/	2025/6/28
20	TRILOG Broadband Antenna	Schwarzbeck	VULB 9168	00869	/	2025/6/28

21	Double Ridged Broadband Horn Antenna	Schwarzbeck	BBHA9120D	01911	/	2025/6/28
22	EMI test software	Fala	EZ-EMC	FA-03A2 RE	/	/
23	Loop Antenna	Schwarzbeck	FMZB 1519B	1519B-224	/	2025/6/28
24	loop antenna	ZHINAN	ZN30900A	GTS534	/	/
25	40G Horn antenna	A/H/System	SAS-574	588	/	2025/6/28
26	Amplifier	AEROFLEX	Aeroflex	097	/	2025/6/28
27	Power Metter	KEYSIGHT	N1912AP	N/A	A.05.00	2025/6/28

Continuous disturbance

No.	Equipment	Manufacturer	Model No.	Serial No.	Firmware version	Calibrated until
1	843 Shield Room	C/ R/ T	843	/	/	2027/6/21
2	AMN	ROHDE&SCHWARZ	ESH3-Z5	831551852	/	2025/6/30
3	Pulse limiter	ROHDE&SCHWARZ	ESH3Z2	357881052	/	2025/6/28
4	EMI TEST RECEIVER	ROHDE&SCHWARZ	ESCI	100428	V4.42.SP3	2025/6/30
5	Coaxial cable	ZDECL	Z302S	18091904	/	2025/6/30
6	ISN	Schwarzbeck	NTFM8158	183	/	2025/6/30
7	Voltage sensor	Schwarzbeck	TK 9420	01189	/	2025/10/25
8	EZ-EMC	Frad	EMC-con3A1.1	/	/	/
9	Current Probe	FCC	F-52B	199453	/	2025/5/27
10	Communication test set	R&S	CMW500	108058	B.19.07 (E1962B)	2025/6/28
11	Communication test set	Agilent	E5515C	MY50102567	V3.5.80	2025/6/28

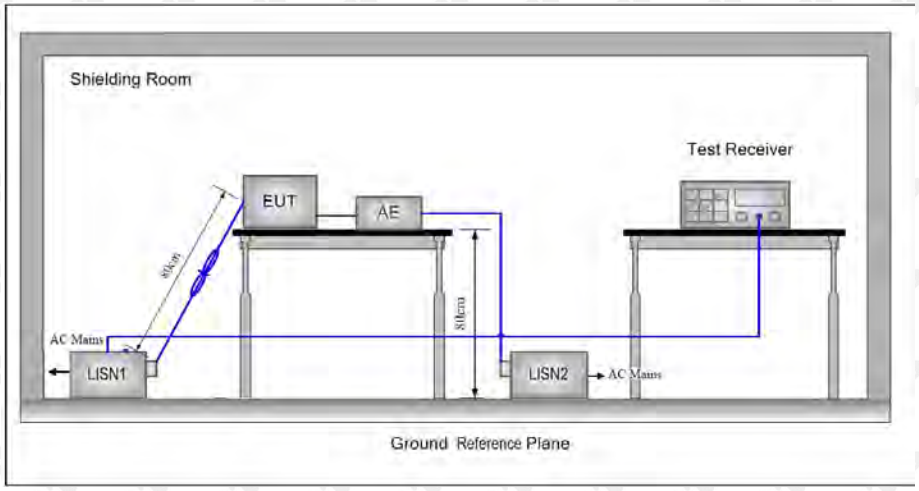
Radiated emission(No.1 Chamber)

No.	Equipment	Manufacturer	Model No.	Serial No.	Firmware version	Calibrated until
1	966 Chamber	C/ R/ T	966	/	/	2027/6/21
2	Double Ridged Broadband Horn Antenna	Schwarzbeck	BBHA 9120 D	01911	/	2025/7/06
3	TRILOG Broadband Antenna	Schwarzbeck	VULB 9168	00869	/	2025/6/29
4	Amplifier	Agilent	8449B	3008A01838	/	2025/6/30
5	Amplifier	HP	8447E	2945A02747	/	2025/6/28
6	loop antenna	Schwarzbeck	FMZB 1519B	1519B-224	/	2025/6/29
7	EMI TEST	ROHDE&SCHWARZ	ESPI	100362	RF_ATTEN_7	2025/6/28

	RECEIVER				(104489/003)	
8	Spectrum Analyzer	KEYSIGHT	N9020A	MY51289897	A.14.16	2025/6/28
9	Coaxial cable	ETS	RFC-SNS-100-NMS-80	/	/	2025/6/28
10	Coaxial cable	ETS	RFC-SN-100-NMS-20	/	/	2025/6/28
11	Coaxial cable	ETS	RFC-SNS-100-SMS-20	/	/	2025/6/28
12	Coaxial cable	ETS	RFC-NNS-100-NMS-300	/	/	2025/6/28
13	EMI test software	Frad	EZ-EMC	Ver/ FA-03A2 RE	/	/
14	Communication test set	R&S	CMW500	108058	B.19.07 (E1962B)	2025/6/28
15	Communication test set	Agilent	E5515C	MY50102567	V3.5.80	2025/6/28

6. AC POWER LINE CONDUCTED EMISSION

6.1 Block Diagram Of Test Setup



6.2 Limit

Frequency (MHz)	Maximum RF Line Voltage (dBμV)			
	CLASS A		CLASS B	
	Q.P.	Ave.	Q.P.	Ave.
0.15 - 0.50	79	66	66-56*	56-46*
0.50 - 5.00	73	60	56	46
5.00 - 30.0	73	60	60	50

* Decreasing linearly with the logarithm of the frequency

6.3 Test procedure

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,

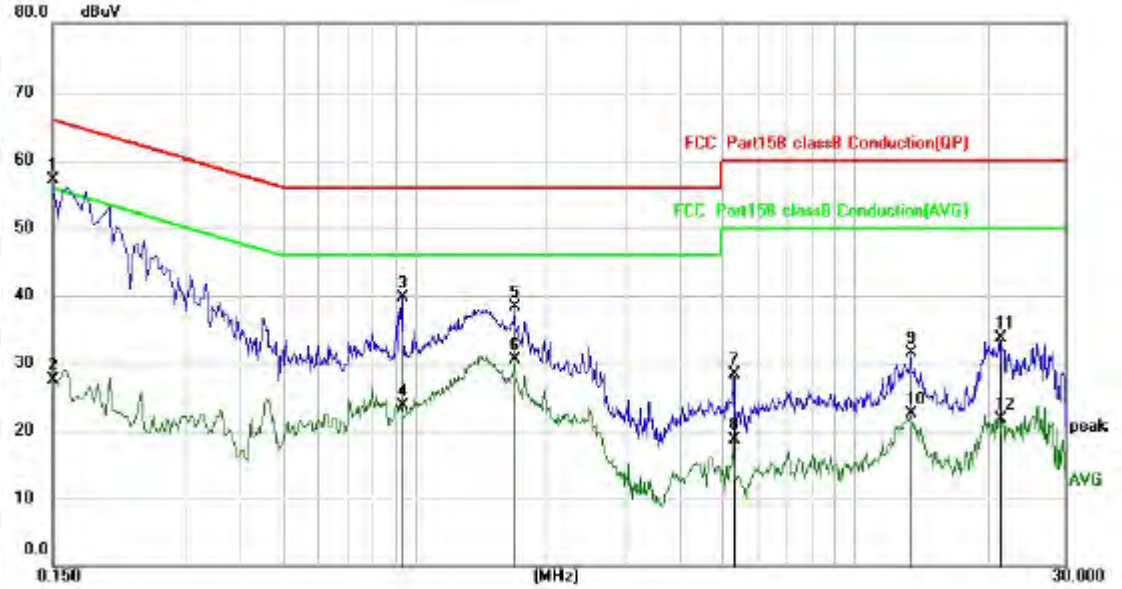
4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0,4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0,8 m from the boundary of the unit under test 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.

6.4 Test Result

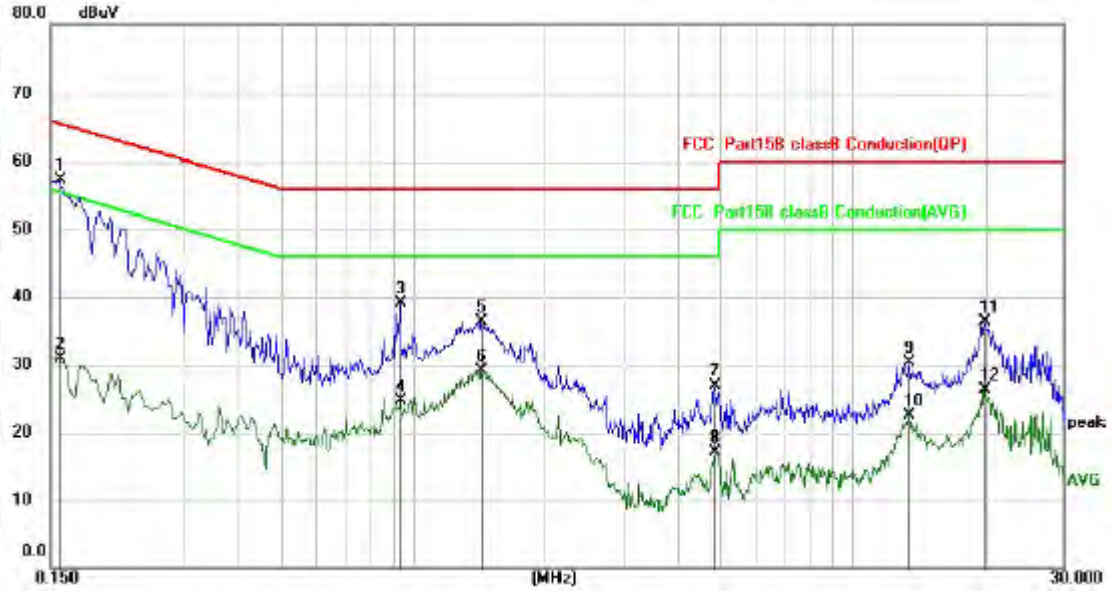
ANT1:

L: Worst case-LoRa (low channel)



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1	*	0.1500	46.17	10.89	57.06	66.00	-8.94	QP
2		0.1500	16.63	10.89	27.52	56.00	-28.48	AVG
3		0.9340	28.85	10.90	39.75	56.00	-16.25	QP
4		0.9340	12.90	10.90	23.80	46.00	-22.20	AVG
5		1.6820	27.00	11.38	38.38	56.00	-17.62	QP
6		1.6820	19.05	11.38	30.43	46.00	-15.57	AVG
7		5.3219	15.99	12.35	28.34	60.00	-31.66	QP
8		5.3219	6.31	12.35	18.66	50.00	-31.34	AVG
9		13.4179	18.10	13.31	31.41	60.00	-28.59	QP
10		13.4179	9.25	13.31	22.56	50.00	-27.44	AVG
11		21.3180	19.95	13.70	33.65	60.00	-26.35	QP
12		21.3180	8.06	13.70	21.76	50.00	-28.24	AVG

N: Worst case-LoRa (low channel)



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1	*	0.1580	46.39	10.86	57.25	65.57	-8.32	QP
2		0.1580	19.97	10.86	30.83	55.57	-24.74	AVG
3		0.9340	28.14	10.90	39.04	56.00	-16.96	QP
4		0.9340	13.78	10.90	24.68	46.00	-21.32	AVG
5		1.4260	25.06	11.22	36.28	56.00	-19.72	QP
6		1.4260	17.95	11.22	29.17	46.00	-16.83	AVG
7		4.8419	14.74	12.21	26.95	56.00	-29.05	QP
8		4.8419	4.84	12.21	17.05	46.00	-28.95	AVG
9		13.4379	17.07	13.31	30.38	60.00	-29.62	QP
10		13.4379	9.29	13.31	22.60	50.00	-27.40	AVG
11		19.9338	22.76	13.59	36.35	60.00	-23.65	QP
12		19.9338	12.74	13.59	26.33	50.00	-23.67	AVG

Remark:
1. Factor = Cable loss + LISN factor, Margin = Limit – Level
2. All modes were tested at AC 120V and 240V, only the worst result of AC 120V 60Hz was reported.
3. All the test modes completed for test. Only the worst result of LoRa Low Channel was reported.

7. RADIATED SPURIOUS EMISSION

7.1 Block Diagram Of Test Setup

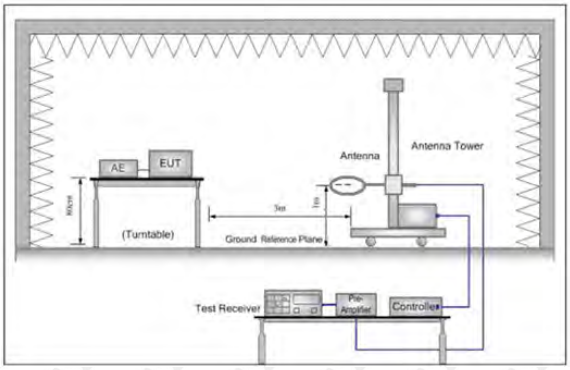


Figure 1. Below 30MHz

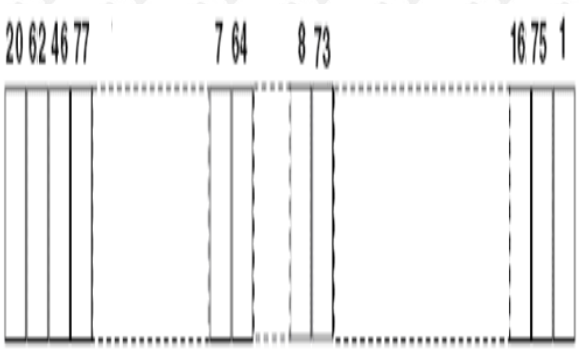


Figure 2. 30MHz to 1GHz

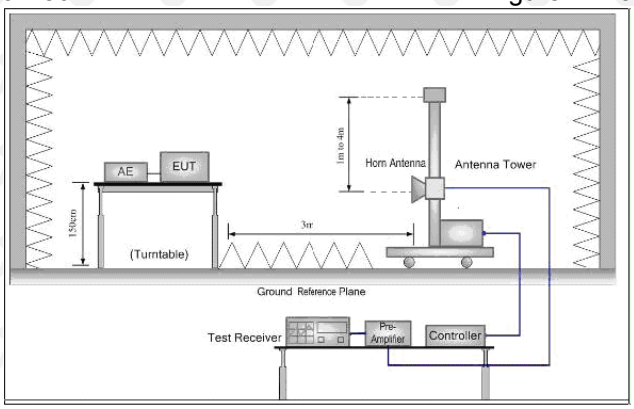


Figure 3. Above 1GHz

7.2 Limit

Spurious Emissions:

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: a.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.
b. The lower limit shall apply at the transition frequencies.
c. Emission level(dBuV/m)=20log Emission level(uV/m)

7.3 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 rota table 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 meter to 1.5 meter(Above 18GHz the distance is 1 meter and table is 1.5 meter).

h.Test the EUT in the lowest channel ,the middle channel ,the Highest channel

j.Repeat above procedures until all frequencies measured was complete.

Receiver set:

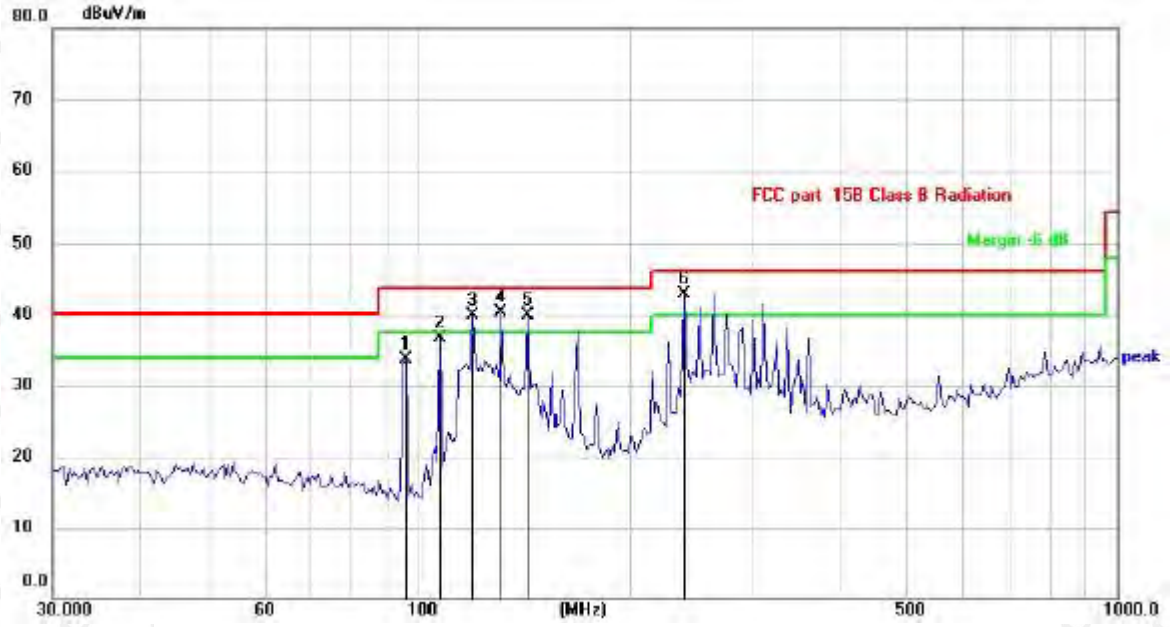
Frequency	Detector	RBW	VBW	Remark
0.009MHz-0.090MHz	Peak	10kHz	30KHz	Peak
0.009MHz-0.090MHz	Average	10kHz	30KHz	Average
0.090MHz-0.110MHz	Quasi-peak	10kHz	30KHz	Quasi-peak
0.110MHz-0.490MHz	Peak	10kHz	30KHz	Peak
0.110MHz-0.490MHz	Average	10kHz	30KHz	Average
0.490MHz -30MHz	Quasi-peak	10kHz	30kHz	Quasi-peak
30MHz-1GHz	Quasi-peak	100 kHz	300KHz	Quasi-peak
Above 1GHz	Peak	1MHz	3MHz	Peak
	Peak	1MHz	10Hz	Average

7.4 Test Result

Low channel below 1GHz Test Results:

ANT1:

Antenna polarity: H



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1		96.2672	43.49	-9.81	33.68	43.50	-9.82	QP
2		107.8876	44.40	-7.67	36.73	43.50	-6.77	QP
3	!	119.8555	45.37	-5.40	39.97	43.50	-3.53	QP
4	!	131.9889	45.54	-5.17	40.37	43.50	-3.13	QP
5	!	144.0818	43.70	-3.72	39.98	43.50	-3.52	QP
6	*	239.5669	46.93	-4.02	42.91	46.00	-3.09	QP

Remark: Transd = Cableloss + Antenna factor - Pre-amplifier; Margin = Limit – Level.

Antenna polarity: V

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1		96.2672	39.48	-9.81	29.67	43.50	-13.83	QP
2	*	119.8555	44.56	-5.40	39.16	43.50	-4.34	QP
3	!	131.9889	43.52	-5.17	38.35	43.50	-5.15	QP
4	!	144.0818	41.48	-3.72	37.76	43.50	-5.74	QP
5		263.8190	35.49	-3.56	31.93	46.00	-14.07	QP
6		504.7062	33.02	2.21	35.23	46.00	-10.77	QP

Remark: Transd = Cableloss + Antenna factor - Pre-amplifier; Margin = Limit – Level

ANT2:

Antenna polarity: H

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1	!	119.8556	43.31	-5.40	37.91	43.50	-5.59	QP
2	!	144.0819	41.72	-3.72	38.00	43.50	-5.50	QP
3	*	215.6455	44.26	-4.50	39.76	43.50	-3.74	QP
4	!	275.6398	44.02	-3.34	40.68	46.00	-5.32	QP
5		349.2500	40.88	-1.83	39.05	46.00	-6.95	QP
6	!	518.1556	38.38	2.40	40.78	46.00	-5.22	QP

Remark: Transd = Cableloss + Antenna factor - Pre-amplifier; Margin = Limit – Level.

Antenna polarity: V

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1		119.8556	33.27	-5.40	27.87	43.50	-15.63	QP
2		168.7093	32.84	-1.92	30.92	43.50	-12.58	QP
3	!	215.6455	43.38	-4.50	38.88	43.50	-4.62	QP
4		325.5958	35.94	-2.34	33.60	46.00	-12.40	QP
5	*	518.1556	39.48	2.40	41.88	46.00	-4.12	QP
6		869.1302	27.03	7.99	35.02	46.00	-10.98	QP

Remark: Transd = Cableloss + Antenna factor - Pre-amplifier; Margin = Limit – Level

ANT3:

Antenna polarity: H

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1		119.8556	40.93	-5.40	35.53	43.50	-7.97	QP
2		215.6456	40.84	-4.50	36.34	43.50	-7.16	QP
3		275.6399	41.91	-3.34	38.57	46.00	-7.43	QP
4	!	349.2500	42.08	-1.83	40.25	46.00	-5.75	QP
5	*	518.1556	38.65	2.40	41.05	46.00	-4.95	QP
6		892.2909	31.65	8.19	39.84	46.00	-6.16	QP

Remark: Transd = Cableloss + Antenna factor - Pre-amplifier; Margin = Limit – Level.

Antenna polarity: V

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1		119.8556	32.77	-5.40	27.37	43.50	-16.13	QP
2		168.7093	33.66	-1.92	31.74	43.50	-11.76	QP
3	!	215.6455	42.80	-4.50	38.30	43.50	-5.20	QP
4		325.5958	35.54	-2.34	33.20	46.00	-12.80	QP
5	*	518.1556	39.22	2.40	41.62	46.00	-4.38	QP
6		869.1302	30.57	7.99	38.56	46.00	-7.44	QP

Remark: Transd = Cableloss + Antenna factor - Pre-amplifier; Margin = Limit – Level

Above 1 GHz Test Results:

ANT1:

CH Low

Horizontal:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
1804.5	108.36	-5.84	52.69	74	-21.31	peak
1804.5	95.44	-5.84	43.65	54	-10.35	AVG
2706.75	56.40	-3.64	52.76	74	-21.24	peak
2706.75	47.15	-3.64	43.51	54	-10.49	AVG
3609	58.14	-0.95	57.19	74	-16.81	peak
3609	48.07	-0.95	47.12	54	-6.88	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
1804.5	108.33	-5.84	52.69	74	-21.31	peak
1804.5	95.44	-5.84	43.65	54	-10.35	AVG
2706.75	56.37	-3.64	52.73	74	-21.27	peak
2706.75	47.16	-3.64	43.52	54	-10.48	AVG
3609	58.28	-0.95	57.33	74	-16.67	peak
3609	48.08	-0.95	47.13	54	-6.87	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

CH Middle

Horizontal:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
1830.5	108.35	-5.71	52.67	74	-21.33	peak
1830.5	95.19	-5.71	45.61	54	-8.39	AVG
2745.75	56.04	-3.51	52.53	74	-21.47	peak
2745.75	46.87	-3.51	43.36	54	-10.64	AVG
3661	57.95	-0.82	57.13	74	-16.87	peak
3661	47.89	-0.82	47.07	54	-6.93	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
1830.5	108.44	-5.71	52.67	74	-21.33	peak
1830.5	95.09	-5.71	45.61	54	-8.39	AVG
2745.75	56.13	-3.51	52.62	74	-21.38	peak
2745.75	46.88	-3.51	43.37	54	-10.63	AVG
3661	58.10	-0.82	57.28	74	-16.72	peak
3661	47.95	-0.82	47.13	54	-6.87	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

CH High

Horizontal:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
1854.88	56.34	-5.65	52.36	74	-21.64	peak
1854.88	47.38	-5.65	46.89	54	-7.11	AVG
2782.31	56.09	-3.43	52.66	74	-21.34	peak
2782.31	47.29	-3.43	43.86	54	-10.14	AVG
3709.75	57.39	-0.75	56.64	74	-17.36	peak
3709.75	47.58	-0.75	46.83	54	-7.17	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
1854.88	56.38	-5.65	52.36	74	-21.64	peak
1854.88	47.20	-5.65	46.89	54	-7.11	AVG
2782.31	56.20	-3.43	52.77	74	-21.23	peak
2782.31	47.32	-3.43	43.89	54	-10.11	AVG
3709.75	57.34	-0.75	56.59	74	-17.41	peak
3709.75	47.54	-0.75	46.79	54	-7.21	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

Remark:
(1). Measuring frequencies from 1 GHz to the 25 GHz。
(2). All modes of operation were investigated and the worst-case emissions are reported.
(3). Radiated emission test from 9kHz to 10th harmonic of fundamental was verified, and no emission found except system noise floor in 9kHz to 30MHz and not recorded in this report.

ANT2:

CH Low

Horizontal:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
1804.5	108.47	-5.84	52.69	74	-21.31	peak
1804.5	95.52	-5.84	43.65	54	-10.35	AVG
2706.75	56.42	-3.64	52.78	74	-21.22	peak
2706.75	47.14	-3.64	43.50	54	-10.50	AVG
3609	58.21	-0.95	57.26	74	-16.74	peak
3609	48.07	-0.95	47.12	54	-6.88	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
1804.5	108.46	-5.84	52.69	74	-21.31	peak
1804.5	95.43	-5.84	43.65	54	-10.35	AVG
2706.75	56.38	-3.64	52.74	74	-21.26	peak
2706.75	47.21	-3.64	43.57	54	-10.43	AVG
3609	58.28	-0.95	57.33	74	-16.67	peak
3609	48.14	-0.95	47.19	54	-6.81	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

CH Middle

Horizontal:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
1830.5	108.44	-5.71	52.67	74	-21.33	peak
1830.5	95.18	-5.71	45.61	54	-8.39	AVG
2745.75	56.05	-3.51	52.54	74	-21.46	peak
2745.75	46.86	-3.51	43.35	54	-10.65	AVG
3661	57.99	-0.82	57.17	74	-16.83	peak
3661	47.84	-0.82	47.02	54	-6.98	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
1830.5	108.37	-5.71	52.67	74	-21.33	peak
1830.5	95.14	-5.71	45.61	54	-8.39	AVG
2745.75	55.95	-3.51	52.44	74	-21.56	peak
2745.75	46.80	-3.51	43.29	54	-10.71	AVG
3661	58.13	-0.82	57.31	74	-16.69	peak
3661	47.96	-0.82	47.14	54	-6.86	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

CH High

Horizontal:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
1854.88	56.40	-5.65	52.36	74	-21.64	peak
1854.88	47.34	-5.65	46.89	54	-7.11	AVG
2782.31	56.16	-3.43	52.73	74	-21.27	peak
2782.31	47.39	-3.43	43.96	54	-10.04	AVG
3709.75	57.30	-0.75	56.55	74	-17.45	peak
3709.75	47.71	-0.75	46.96	54	-7.04	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
1854.88	56.46	-5.65	52.36	74	-21.64	peak
1854.88	47.34	-5.65	46.89	54	-7.11	AVG
2782.31	56.10	-3.43	52.67	74	-21.33	peak
2782.31	47.35	-3.43	43.92	54	-10.08	AVG
3709.75	57.23	-0.75	56.48	74	-17.52	peak
3709.75	47.62	-0.75	46.87	54	-7.13	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

Remark:
(1). Measuring frequencies from 1 GHz to the 25 GHz。
(2). All modes of operation were investigated and the worst-case emissions are reported.
(3). Radiated emission test from 9kHz to 10th harmonic of fundamental was verified, and no emission found except system noise floor in 9kHz to 30MHz and not recorded in this report.

ANT3:

CH Low

Horizontal:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
1804.5	108.31	-5.84	52.69	74	-21.31	peak
1804.5	95.57	-5.84	43.65	54	-10.35	AVG
2706.75	56.32	-3.64	52.68	74	-21.32	peak
2706.75	47.10	-3.64	43.46	54	-10.54	AVG
3609	58.17	-0.95	57.22	74	-16.78	peak
3609	48.04	-0.95	47.09	54	-6.91	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
1804.5	108.40	-5.84	52.69	74	-21.31	peak
1804.5	95.46	-5.84	43.65	54	-10.35	AVG
2706.75	56.37	-3.64	52.73	74	-21.27	peak
2706.75	47.03	-3.64	43.39	54	-10.61	AVG
3609	58.21	-0.95	57.26	74	-16.74	peak
3609	48.01	-0.95	47.06	54	-6.94	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

CH Middle

Horizontal:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
1830.5	108.32	-5.71	52.67	74	-21.33	peak
1830.5	95.16	-5.71	45.61	54	-8.39	AVG
2745.75	56.12	-3.51	52.61	74	-21.39	peak
2745.75	46.73	-3.51	43.22	54	-10.78	AVG
3661	58.10	-0.82	57.28	74	-16.72	peak
3661	47.88	-0.82	47.06	54	-6.94	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
1830.5	108.37	-5.71	52.67	74	-21.33	peak
1830.5	95.13	-5.71	45.61	54	-8.39	AVG
2745.75	56.05	-3.51	52.54	74	-21.46	peak
2745.75	46.74	-3.51	43.23	54	-10.77	AVG
3661	58.11	-0.82	57.29	74	-16.71	peak
3661	48.02	-0.82	47.20	54	-6.80	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

CH High

Horizontal:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
1854.88	56.36	-5.65	52.36	74	-21.64	peak
1854.88	47.27	-5.65	46.89	54	-7.11	AVG
2782.31	56.19	-3.43	52.76	74	-21.24	peak
2782.31	47.38	-3.43	43.95	54	-10.05	AVG
3709.75	57.24	-0.75	56.49	74	-17.51	peak
3709.75	47.55	-0.75	46.80	54	-7.20	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

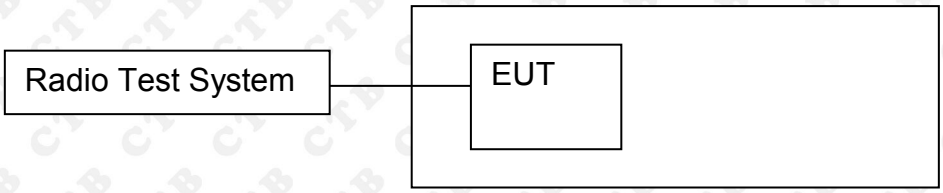
Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
1854.88	56.41	-5.65	52.36	74	-21.64	peak
1854.88	47.25	-5.65	46.89	54	-7.11	AVG
2782.31	56.10	-3.43	52.67	74	-21.33	peak
2782.31	47.29	-3.43	43.86	54	-10.14	AVG
3709.75	57.22	-0.75	56.47	74	-17.53	peak
3709.75	47.57	-0.75	46.82	54	-7.18	AVG
Remark: Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

Remark:
(1). Measuring frequencies from 1 GHz to the 25 GHz。
(2). All modes of operation were investigated and the worst-case emissions are reported.
(3). Radiated emission test from 9kHz to 10th harmonic of fundamental was verified, and no emission found except system noise floor in 9kHz to 30MHz and not recorded in this report.

8. BAND EDGE AND RF COUNDUCTED SPURIOUS EMISSIONS

8.1 Block Diagram Of Test Setup



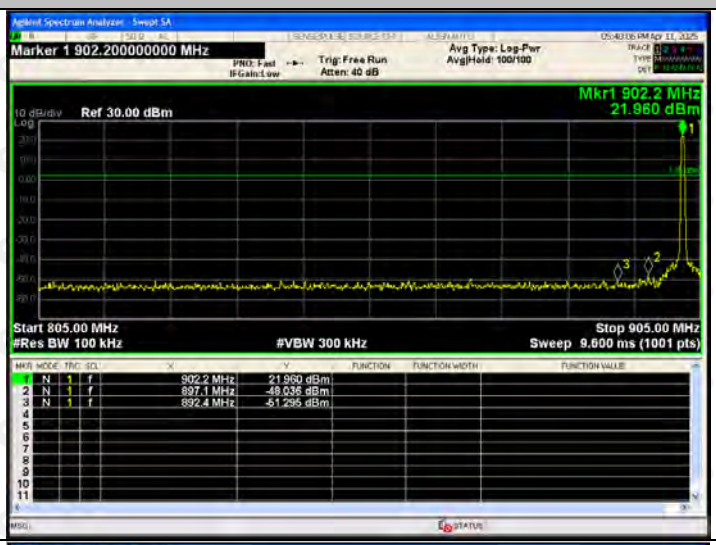
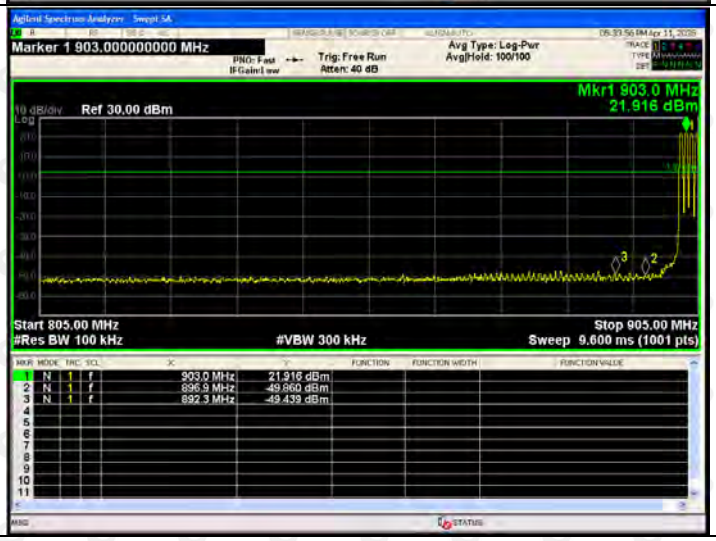
8.2 Limit

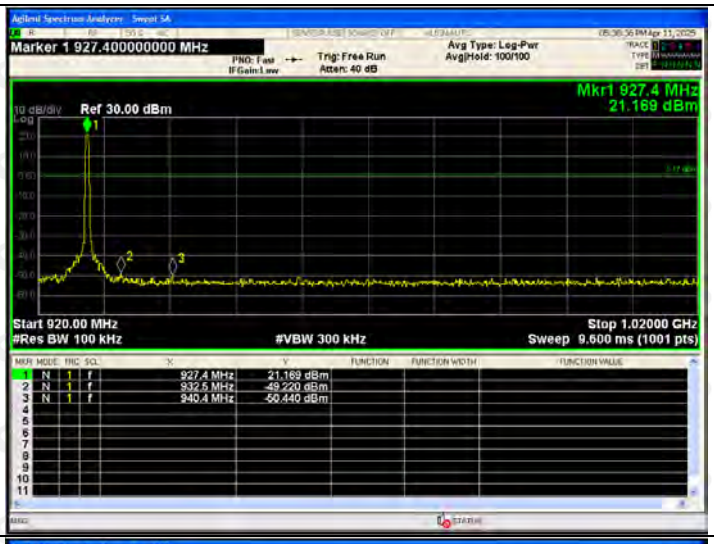
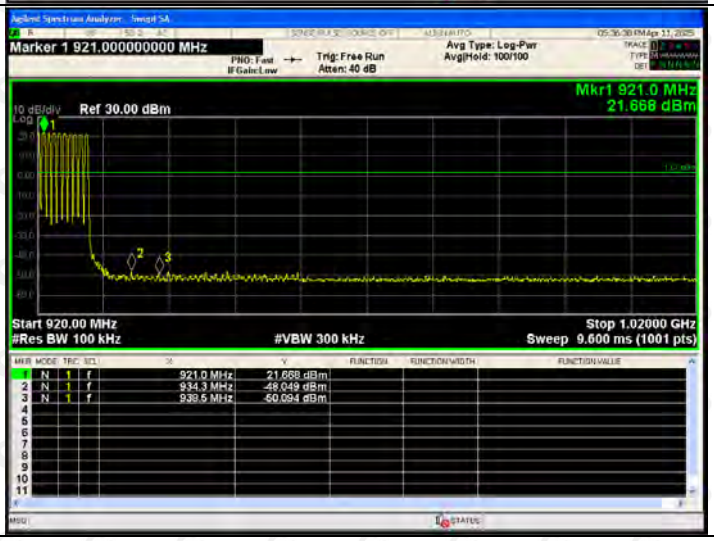
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

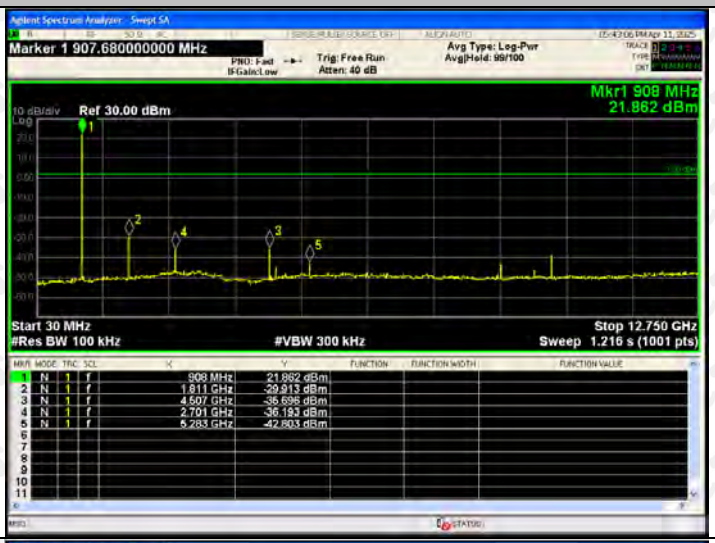
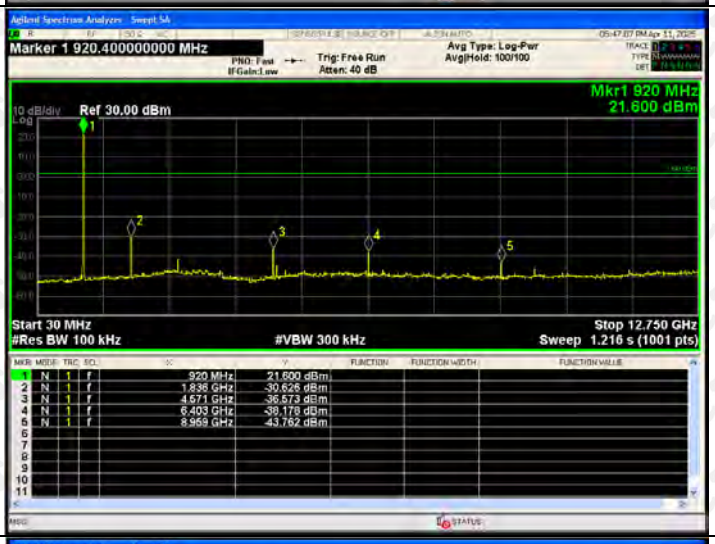
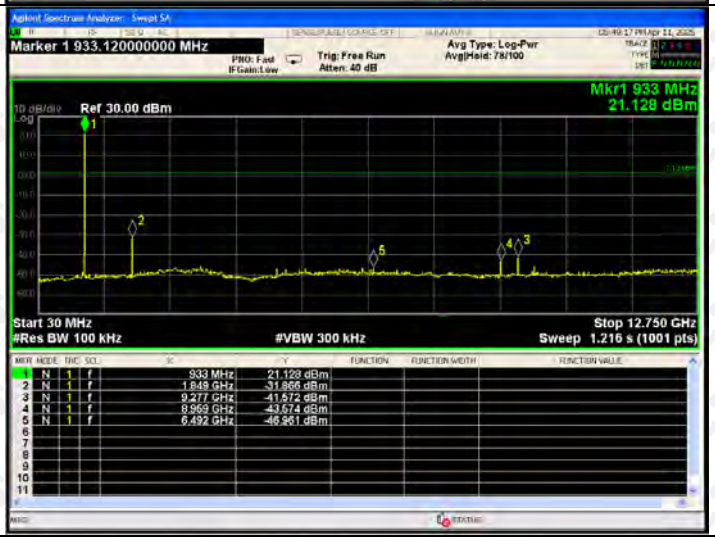
8.3 Test procedure

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum;
2. Set the spectrum analyzer:
Blow 30MHz:
RBW = 100kHz, VBW = 300kHz, Sweep = auto
Detector function = peak, Trace = max hold
Above 30MHz:
RBW = 100KHz, VBW = 300KHz, Sweep = auto
Detector function = peak, Trace = max hold

8.4 Test Result

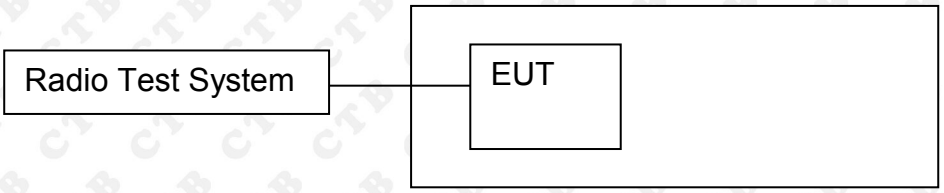
BAND EDGE Graphs			
LCH/ No Hop			
LCH/ Hop			

HCH/ No Hop	
HCH/ Hop	

RF Conducted Spurious Emissions Graphs			
LCH			
MCH			
HCH			

9. COUDUCTED PEAK OUTPUT POWER

9.1 Block Diagram Of Test Setup



9.2 Limit

The maximum peak conducted output power of the intentional radiator shall not exceed the following:
(1) 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.
(2) For frequency hopping systems operating in the 902-928 MHz band: 1 watt for systems employing at least 50 hopping channels; and, 0.25 watts for systems employing less than 50 hopping channels, but at least 25 hopping channels, as permitted under paragraph (a)(1)(i) of this section.
(3) For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the *maximum conducted output power* is the highest total transmit power occurring in any mode.
(4) 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.

Peak output Power: <1W=30dBm

9.3 Test procedure

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.
2. Set the spectrum analyzer: RBW = 1MHz. VBW = 3MHz. Sweep = auto; Detector Function = Peak.
3. Keep the EUT in transmitting at lowest, middle and highest channel individually. Record the max value.

9.4 Test Result

Antenna Gain: 3.82dBi

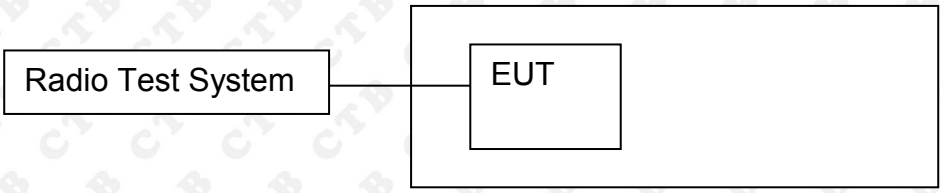
Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
LCH	21.839	30	PASS
MCH	21.595	30	PASS
HCH	21.100	30	PASS

Test Graph:

Graphs	
LCH	
MCH	
HCH	

10. 20DB OCCUPIED BANDWIDTH

10.1 Block Diagram Of Test Setup



10.2 Limit

For FHSS in the band 902-928 MHz: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping channels and the average time of occupancy on any channel shall not be greater than 0.4 seconds within a 20-second period. If the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping channels and the average time of occupancy on any channel shall not be greater than 0.4 seconds within a 10-second period. The maximum 20 dB bandwidth of the hopping channel shall be 500 kHz.

10.3 Test procedure

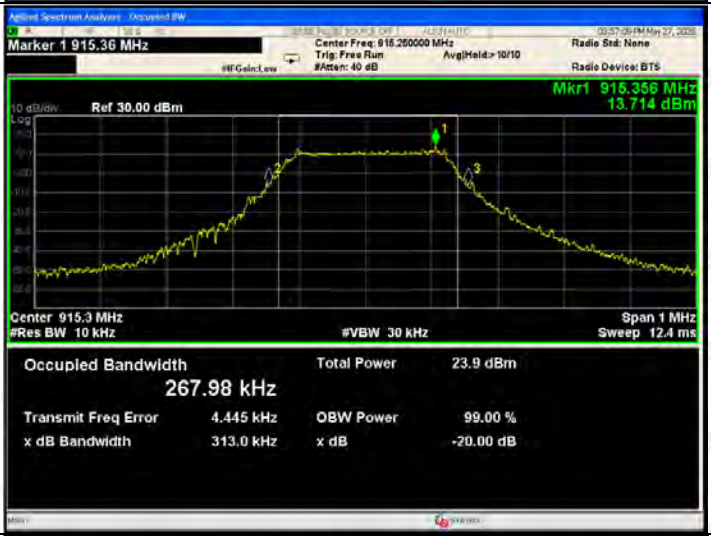
1. Rem1. Set RBW = 10 kHz.
2. Set the video bandwidth (VBW) ≥ 3 x RBW.
3. Detector = Peak. Span=500kHz
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

10.4 Test Result

Test Mode	Frequency	20dB Bandwidth (kHz)	Limit (kHz)	Result
LoRa	Low channel	303.1	**250**	**PASS**
	Mid channel	313.0	**250**	**PASS**
	High channel	314.0	**250**	**PASS**

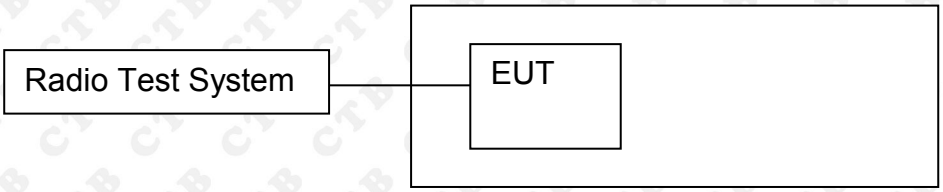
Note: All modes of operation were Pre-scan and the worst-case emissions are reported.

Test Graph:

Low channel		
Mid channel		
High channel		

11. CARRIERFREQUENCIES SEPARATION

11.1 Block Diagram Of Test Setup



11.2 Limit

At least 25kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

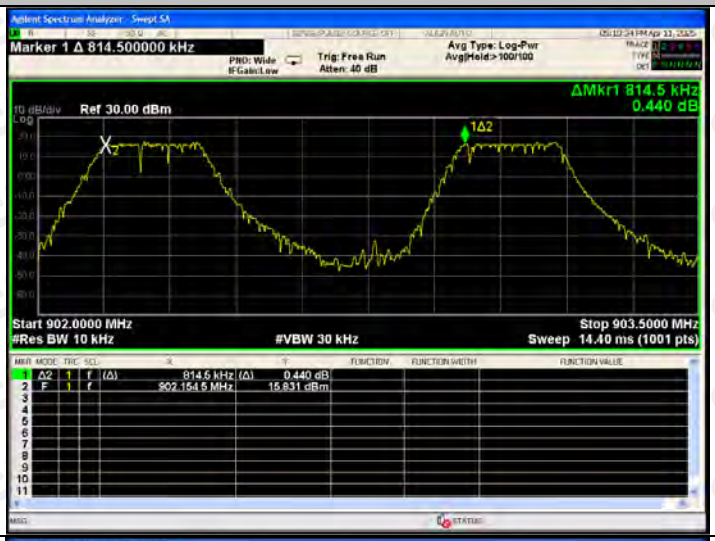
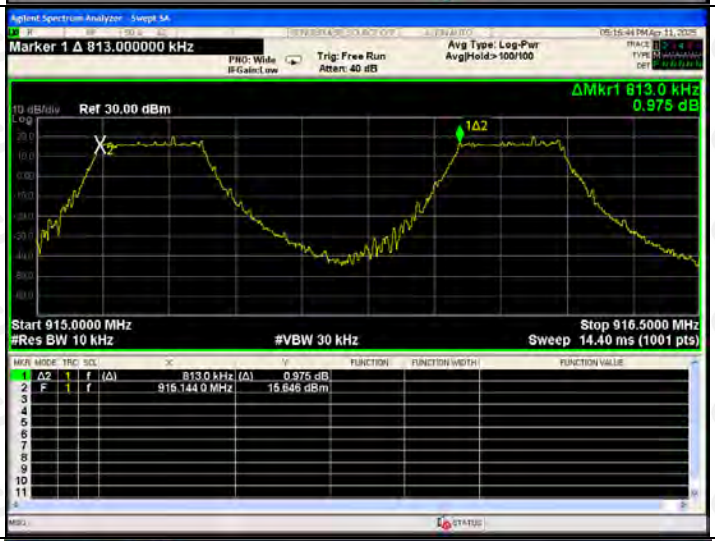
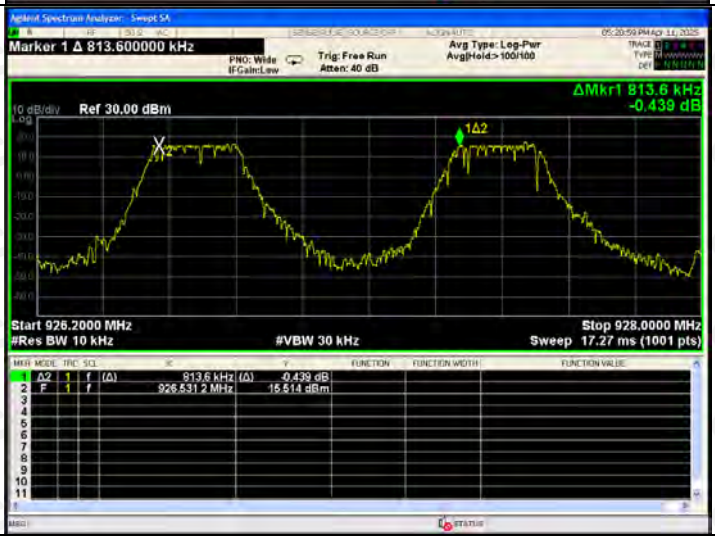
11.3 Test procedure

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.
2. Set the spectrum analyzer: RBW = 10kHz. VBW = 30kHz , Span = 1.0MHz. Sweep = auto; Detector Function = Peak. Trace = Max hold.
3. Allow the trace to stabilize. Use the marker-delta function to determine the separation between the peaks of the adjacent channels. The limit is specified in one of the subparagraphs of this Section Submit this plot.

11.4 Test Result

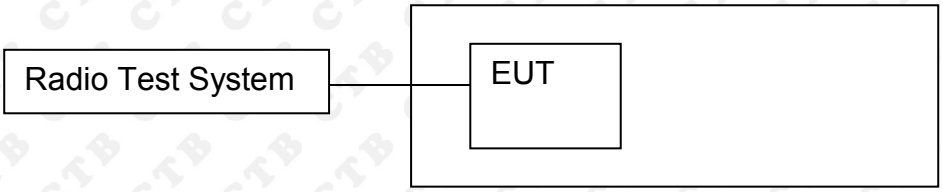
Test Mode	**Channel.**	**Carrier Frequency Separation [kHz]**	Limit (kHz)	**Verdict**
LoRa	LCH	814.5	303.1	PASS
	MCH	813.0	313.0	PASS
	HCH	813.6	314.0	PASS

Test Graph

Graphs		
LCH		
MCH		
HCH		

12. HOPPING CHANNEL NUMBER

12.1 Block Diagram Of Test Setup



12.2 Limit

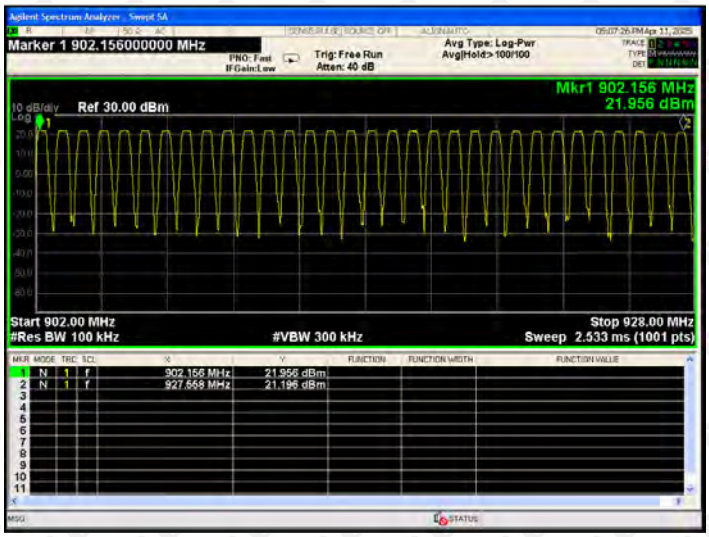
For FHSS in the band 902-928 MHz: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping channels and the average time of occupancy on any channel shall not be greater than 0.4 seconds within a 20-second period. If the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping channels and the average time of occupancy on any channel shall not be greater than 0.4 seconds within a 10-second period. The maximum 20 dB bandwidth of the hopping channel shall be 500 kHz.

12.3 Test procedure

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.
2. Set the spectrum analyzer: RBW = 100kHz. VBW = 300kHz. Sweep = auto; Detector Function = Peak. Trace = Max hold.
3. Allow the trace to stabilize. It may prove necessary to break the span up to sections. in order to clearly show all of the hopping frequencies. The limit is specified in one of the subparagraphs of this Section.
4. Set the spectrum analyzer: Start Frequency = 2.4GHz, Stop Frequency = 2.4835GHz. Sweep=auto;

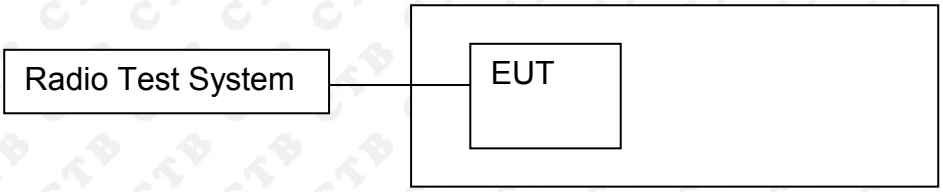
12.4 Test Result

Mode	Channel.	Number of Hopping Channel	Limit	Verdict
LoRa	Hop	32	＜50	PASS



13. DWELL TIME

13.1 Block Diagram Of Test Setup



13.2 Limit

For frequency hopping systems operating in the 902-928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period; if the 20 dB bandwidth of the hopping channel
is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period. The maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.

13.3 Test procedure

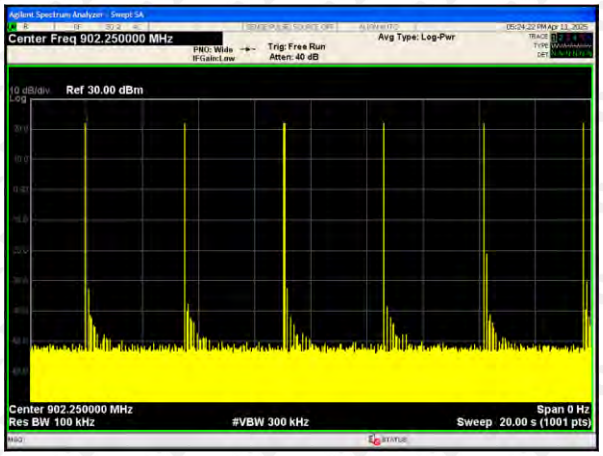
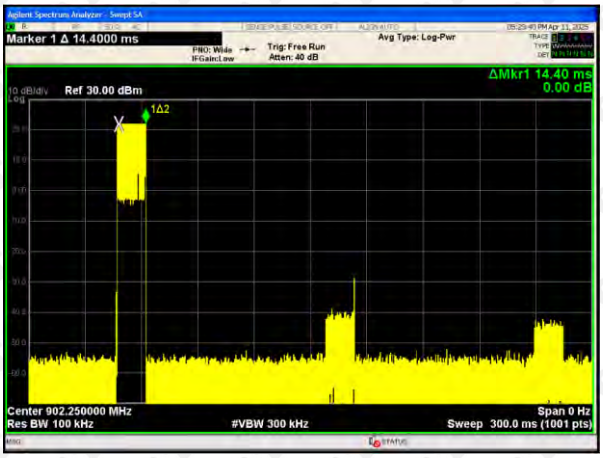
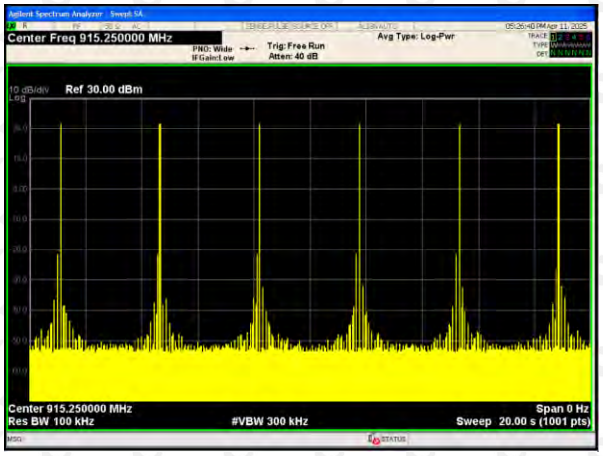
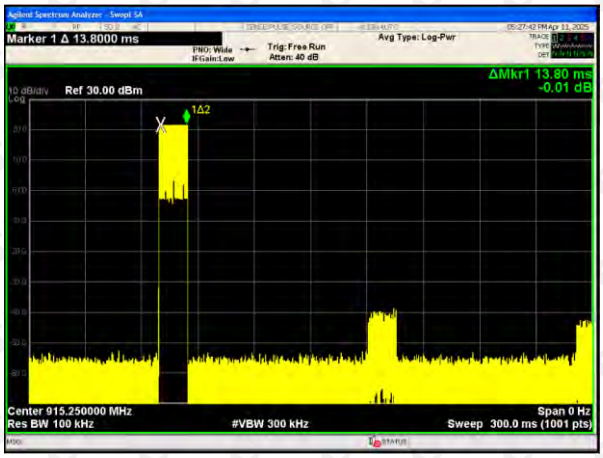
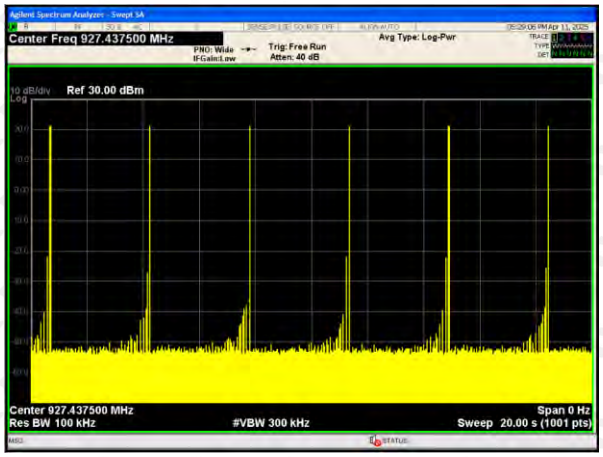
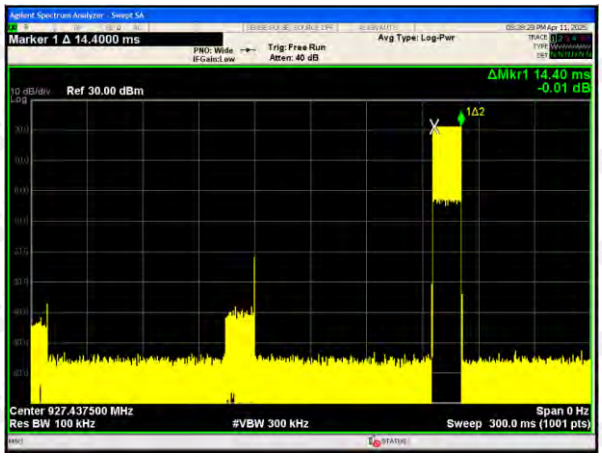
1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.
2. Set spectrum analyzer span = 0. Centred on a hopping channel;
3. Set RBW = 1MHz and VBW = 3MHz.Sweep = as necessary to capture the entire dwell time per hopping channel. Set the EUT for DH5, DH3 and DH1 packet transmitting.
4. Use the marker-delta function to determine the dwell time. If this value varies with different modes of operation (e.g.. data rate. modulation format. etc.). repeat this test for each variation. The limit is specified in one of the subparagraphs of this Section. Submit this plot(s).

13.4 Test Result

Channel	No. of transmission in20s(a)	Pulse Time (ms)(b)	Total Dwell Time in 20s (ms) (c)	Limit (ms)	Verdict
LCH	6	14.4	86.4	400	PASS
MCH	6	13.8	82.8	400	PASS
HCH	6	14.4	86.4	400	PASS

Remark: Total dwell time in 20s, c=(a)*(b)

Test Graph

Graphs	
	
	
	

14. ANTENNA REQUIREMENT

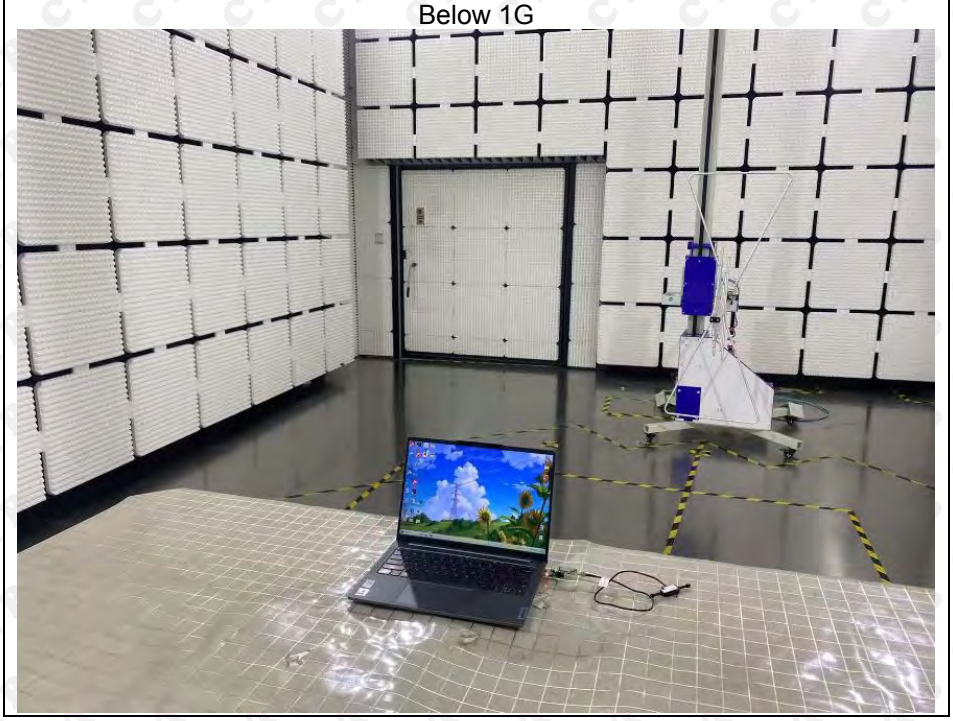
15.203 requirement:
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer 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:
he antenna is External antenna and no consideration of replacement. The best case gain of the ANT1 is 3.82dBi, ANT2 is 2.01dBi, ANT3 is 1.63dBi.

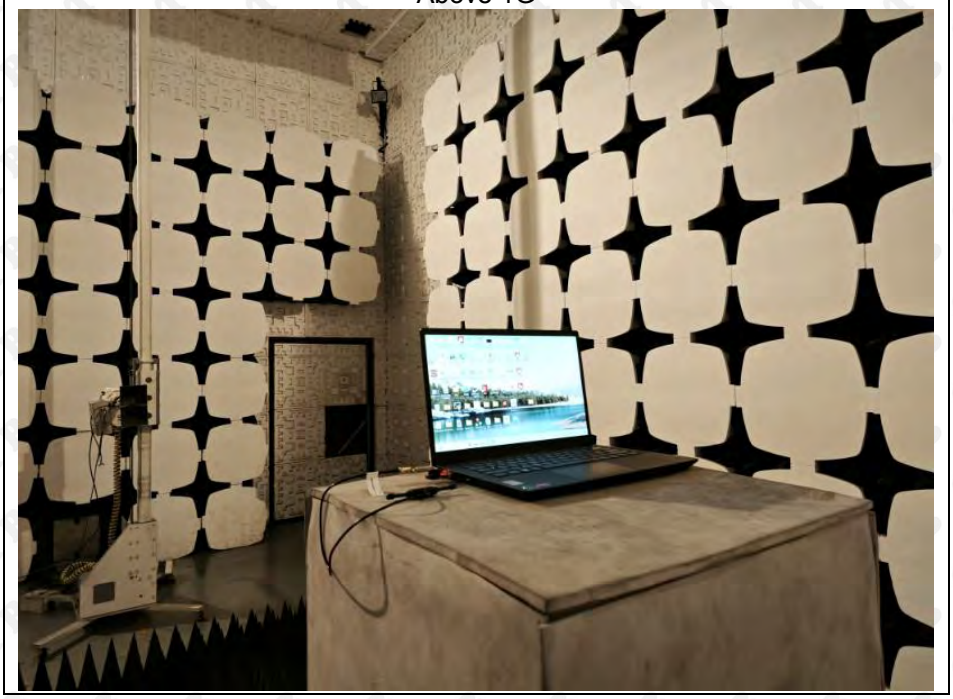
15. EUT TEST SETUP PHOTOGRAPHS

ANT1:
Radiated Emission

Below 1G



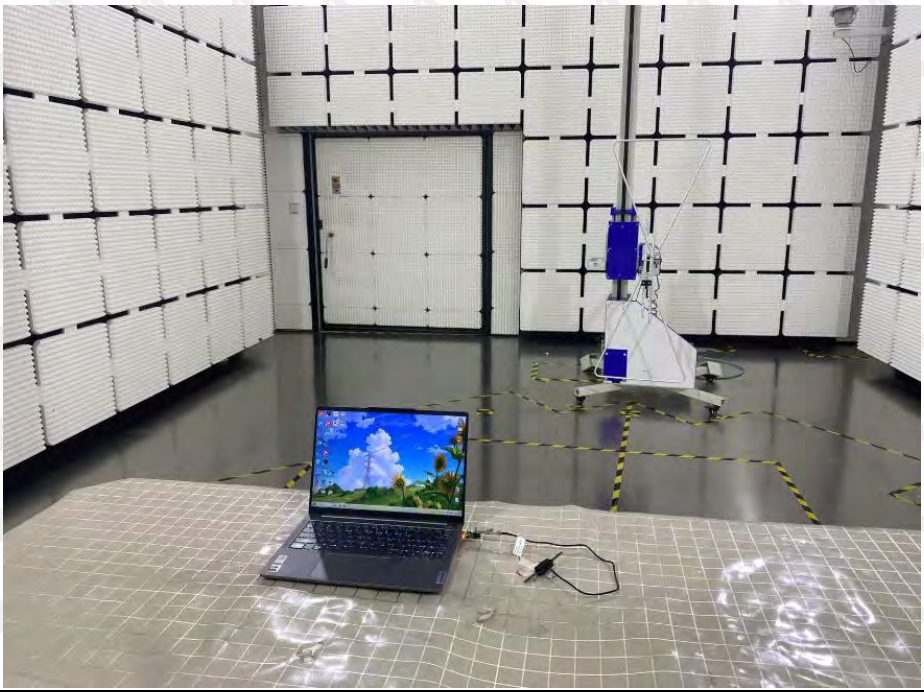
Above 1G



Conducted emissions

ANT2:
Radiated Emission

Below 1G

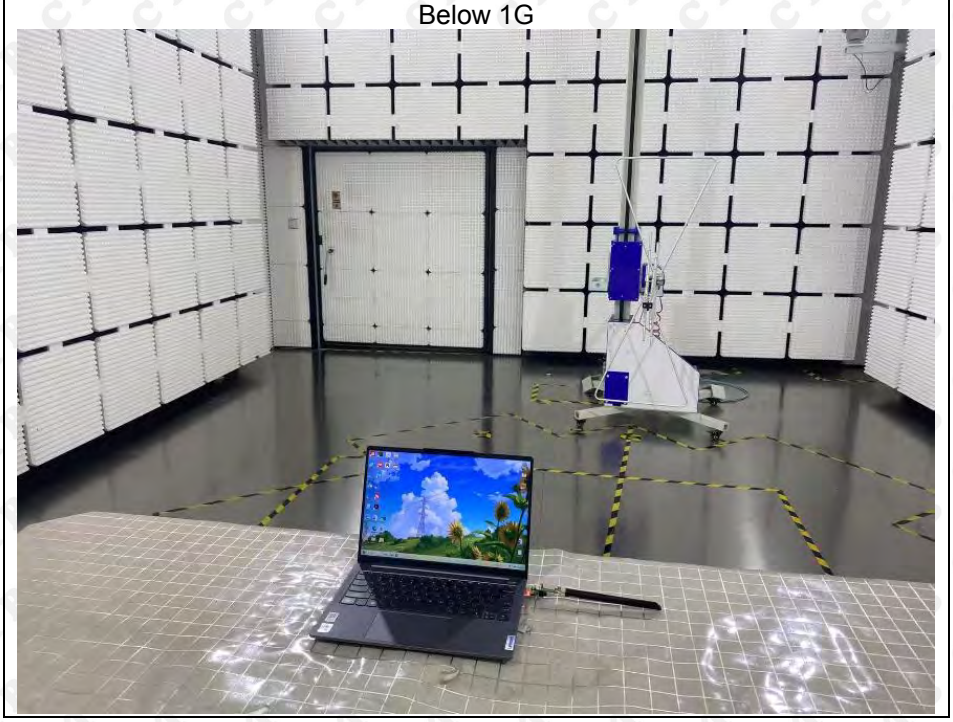


Above 1G

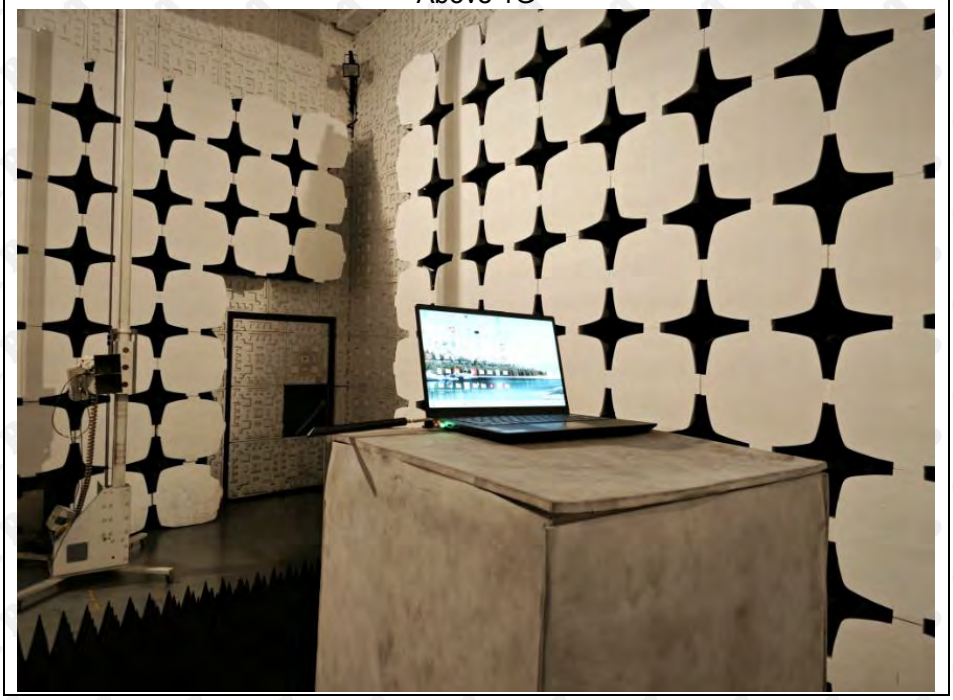
Conducted emissions

ANT3:
Radiated Emission

Below 1G



Above 1G



Conducted emissions

※※※※※ **END OF REPORT** ※※※