

Test Report No:
2460427R-RFUSV01S-A

TEST REPORT

FCC Rules&Regulations

Product Name	RFID Reader
Brand Name	Dynamic Intelligences
Model No.	DI-050
FCC ID	2BLJCDI050
Applicant's Name / Address	Dynamic Intelligences Co., Ltd. 3857 Birch Street #92 Newport Beach, California, 92660,United States
Manufacturer's Name / Address	Dynamic Intelligences Co., Ltd. No.45, Lanjhous St., Jhongli City, Taoyuan County 32088, Taiwan (R.O.C.)
Test Method Requested, Standard	FCC CFR Title 47 Part 15 Subpart C Section 15.247 ANSI C63.10-2013
Verdict Summary	IN COMPLIANCE
Documented By	 Amelia Wu
Approved By	 Allen Lin
Date of Receipt	Jun. 14, 2024
Date of Issue	Oct. 15, 2024
Report Version	V1.0

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Appendix I. Test Setup Photograph

Competences and Guarantees

DEKRA is a testing laboratory competent to carry out the tests described in this report.

In order to assure the traceability to other national and international laboratories, DEKRA has a calibration and maintenance program for its measurement equipment.

DEKRA guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated in the report and it is based on the knowledge and technical facilities available at DEKRA at the time of performance of the test.

DEKRA is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.

The results presented in this Test Report apply only to the particular item under test established in this document.

IMPORTANT: No parts of this report may be reproduced or quoted out of context, in any form or by any means, except in full, without the previous written permission of DEKRA.

General Conditions

1. The test results relate only to the samples tested.
2. The test results shown in the test report are traceable to the national/international standard through the calibration report of the equipment and evaluated measurement uncertainty herein.
3. This report must not be used to claim product endorsement by TAF or any agency of the government.
4. The test report shall not be reproduced without the written approval of DEKRA Testing and Certification Co., Ltd.
5. Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

Revision History

Version	Description	Issued Date
V1.0	Initial issue of report	Oct. 15, 2024

Summary of Test Result

Report Clause	Test Items	Result (PASS/FAIL)	Remark
3	AC Power Line Conducted Emission	PASS	-
4	20dB Bandwidth	PASS	-
5	Carrier Frequency Separation	PASS	-
6	Maximum Conducted Output Power	PASS	-
7	Number of Hopping Frequency	PASS	-
8	Dwell Time	PASS	-
9	Antenna Port Conducted Emission	PASS	-
10	Transmitter Radiated Spurious Emission	PASS	-

Comments and Explanations

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Comments and Remarks

The product specification and testing instructions for the EUT declared in the report are provided by the manufacturer who will take all responsibilities for the accuracy.

1. General Information

1.1. EUT Description

Frequency Range	902 ~ 928 MHz
Operating Frequency	902.75 ~ 927.25 MHz
Channel Number	50 Channels
Channel Spacing	500 kHz
Type of Modulation	ASK

Accessories Information				
No.	Equipment Name	Brand Name	Model No.	Rating
1	Adapter	Sunny Electronics Corp.	SYS1649-5012-T3	INPUT: 100~240V, 1.5A, 50~60Hz OUTPUT: 12.0V, 4.16A, 50.0W
No.	Equipment Name	Description		
2	Power Cable	Non-Shielded, 1.8m		

Antenna Information				
Ant.	Brand Name	Model No.	Type	Gain (dBi)
1	Dynamic Intelligences	DI-915M06-NF	Patch	9

1.2. EUT Information

EUT Power Type	From Adapter
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1.3. Testing Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ 47 CFR FCC Part 15
- ♦ ANSI C63.10-2013

The following reference test guidance is not within the scope of accreditation of TAF:

- ♦ KDB 558074 D01 v05r02
- ♦ KDB 414788 D01 v01r01

1.4. Testing Location Information

Testing Location Information		
Test Laboratory : DEKRA Testing and Certification Co., Ltd.		
1 (TAF: 3024)	ADD: No.372-2, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 31061, Taiwan, R.O.C. TEL: +886-3-582-8001 FAX: +886-3-582-8958 Test site Designation No. TW3024 with FCC. Conformity Assessment Body Identifier (CABID) TW3024 with ISED.	
2 (TAF: 3024)	ADD: No.372, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 31061, Taiwan, R.O.C. TEL: +886-3-582-8001 FAX: +886-3-582-8958 Test site Designation No. TW3024 with FCC. Conformity Assessment Body Identifier (CABID) TW3024 with ISED.	
Test site number for address 1 includes HC-SR02. Test site number for address 2 includes HC-CB02, HC-CB03, HC-CB04, HC-SR10 and HC-SR12.		

Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
AC Conduction Emission	HC-SR02	Cyril Chen	24 / 62	2024/07/10
RF Conducted Emission	HC-SR12	Kevin Teng	24 / 55	2024/07/10
Radiated Emission	HC-CB04	Ling Chen	23.6 / 43	2024/07/09

1.5. Measurement Uncertainty

Uncertainties have been calculated according to the DEKRA internal document with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)).

Test item	Uncertainty
AC Power Line Conducted Emission	± 2.34 dB
20dB Bandwidth	± 282.55 Hz
Carrier Frequency Separation	± 282.55 Hz
Maximum Conducted Output Power	± 1.16 dB
Number of Hopping Frequency	N/A
Dwell Time	± 19.555 msec
Antenna Port Conducted Emission	± 2.47 dB
Transmitter Radiated Spurious Emission	± 3.52 dB below 1 GHz ± 3.56 dB above 1 GHz

1.6. List of Test Equipment

HC-SR02

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Cal. Date	Next Cal. Date
Artificial Mains Network	R&S	ENV4200	848411/010	9kHz-30MHz, 4line/100A	2023/12/15	2024/12/14
EMI Test Receiver	R&S	ESR3	102608	9 kHz - 3.6 GHz	2023/09/19	2024/09/18
Two-Line V-Network	R&S	ENV216	100096	9kHz-30MHz	2024/06/03	2025/06/02
Coaxial Cable(9 m)	Harbour	RG-400	HC-SR02	9 kHz–2500 MHz	2023/08/04	2024/08/03
EMI Testing System	Audix	e3 210616 dekra V9	HC-SR02	N/A	N/A	N/A

HC-SR12

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Cal. Date	Next Cal. Date
High Speed Peak Power Meter Dual Input	Anritsu	ML2496A	1602004	0.3-40 GHz	2023/10/25	2024/10/24
Pulse Power Sensor	Anritsu	MA2411B	1531043	0.3-40 GHz	2023/10/25	2024/10/24
EXA Signal Analyzer	Keysight	N9010A	MY51440132	10 Hz-44 GHz	2023/12/11	2024/12/10
Pulse Power Sensor	Anritsu	MA2411B	1531044	0.3-40 GHz	2023/10/25	2024/10/24
Signal & Spectrum Analyzer	R&S	FSV40	101869	10Hz-40GHz	2024/06/20	2025/06/19

HC-CB04

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Cal. Date	Next Cal. Date
Signal and Spectrum Analyzer	R&S	FSVA40	101435	10 Hz-40 GHz	2024/05/17	2025/05/16
Signal Analyzer	R&S	FSVA40	101455	10 Hz-40 GHz	2023/10/03	2024/10/02
EXA Signal Analyzer	Keysight	N9010A	MY51440132	10 Hz-44 GHz	2023/12/11	2024/12/10
Trilog Broadband Antenna	Schwarzbeck	VULB 9168	1209	30 MHz-2 GHz	2024/06/11	2025/06/10
Double Ridged Horn Antenna	RF SPIN	DRH18-E	211212A18EN	1G-18GHz	2023/11/17	2024/11/16
Horn Antenna	Schwarzbeck	BBHA 9170	203	18G-40GHz	2024/02/02	2025/02/01
Pre-Amplifier	EMCI	EMC01820I	980364	30M-8 GHz,20 dB	2024/06/04	2025/06/03
Pre-Amplifier	EMEC	EM01G18GA	060835	1-18 GHz,50 dB	2023/07/24	2024/07/23
Pre-Amplifier	DEKRA	AP-400C	201801231	18G-40 GHz,48 dB	2023/10/03	2024/10/02
EMI Test Receiver	R&S	ESR7	102260	10 Hz-7 GHz	2023/11/27	2024/11/26
Magnetic Loop Antenna	Teseq	HLA 6121	44287	0.01-30 MHz	2023/10/13	2024/10/12
Coaxial Cable(11m)	Suhner	SF102_SF104	HC-CB04	30M-18 GHz	2023/08/08	2024/08/07
Coaxial Cable(3m)	Suhner,Rosno	SF102_UP0264	HC-CB04-1	18G-40 GHz	2023/08/14	2024/08/13
Radiated Software	Audix	e3 V9	HC-CB04_1	N/A	N/A	N/A

Note: All equipment upon which need to calibrated are with calibration period of 1 year.

2. Test Configuration of EUT

2.1. Test Condition

EUT Operational Condition	
Testing Voltage	AC 120V/60Hz

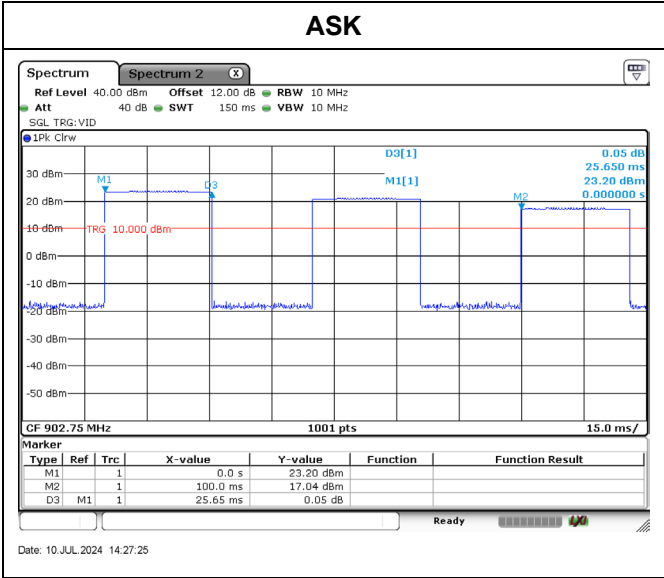
2.2. Test Frequency Mode

Test Software Version	v1.04.34.2024/3/4 (3)
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Frequency (MHz)	Power Setting
902.75	20
915.25	20
927.25	20

2.3. Duty Cycle

Modulation	On Times (ms)	On+Off Times (ms)	Duty Cycle (%)	Duty Factor (dB)
ASK	51.30	100.00	51.30	-5.80



2.4. The Worst Case Measurement Configuration

Tests Item	AC Power Line Conducted Emission
Test Condition	AC power line conducted measurement for line and neutral
Operating Mode	Transmit

Tests Item	20dB Bandwidth Carrier Frequency Separation Maximum Conducted Output Power Number of Hopping Frequency Dwell Time Antenna Port Conducted Emission
Test Condition	Conducted measurement at transmit chains

Tests Item	Transmitter Radiated Spurious Emission
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.
Operating Mode < 1GHz	Transmit
Operating Mode > 1GHz	Transmit
The EUT was performed at X axis, Y axis and Z axis position for adiated spurious emission test. The worst case was found at Y axis, so the measurement will follow this same test configuration.	

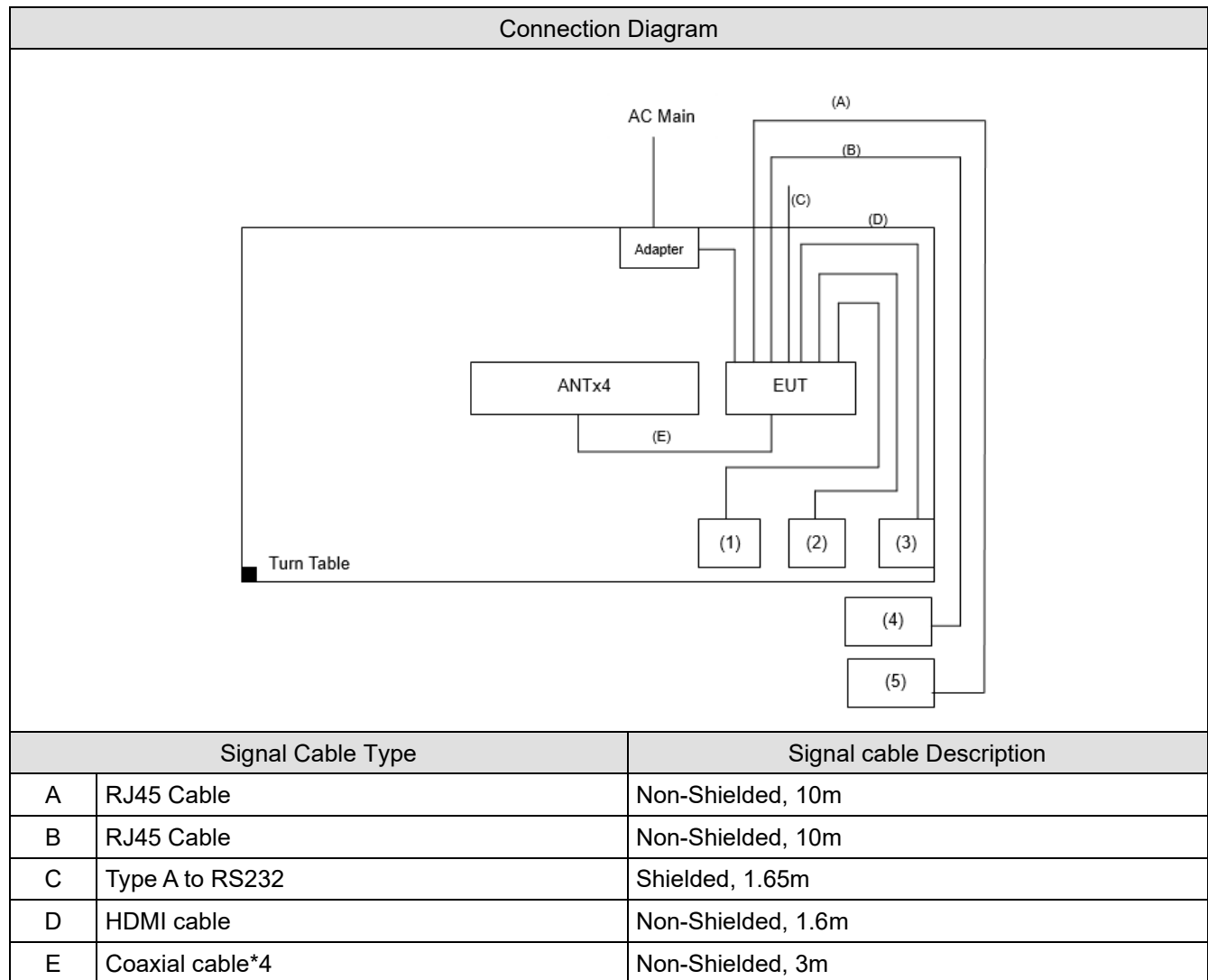
Note:

1. Determining compliance shall be based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
2. Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
3. For radiated spurious emission below 1 GHz and AC power line conducted emission have performed all modes of operation were investigated and the worst-case emissions are reported.

2.5. Tested System Details

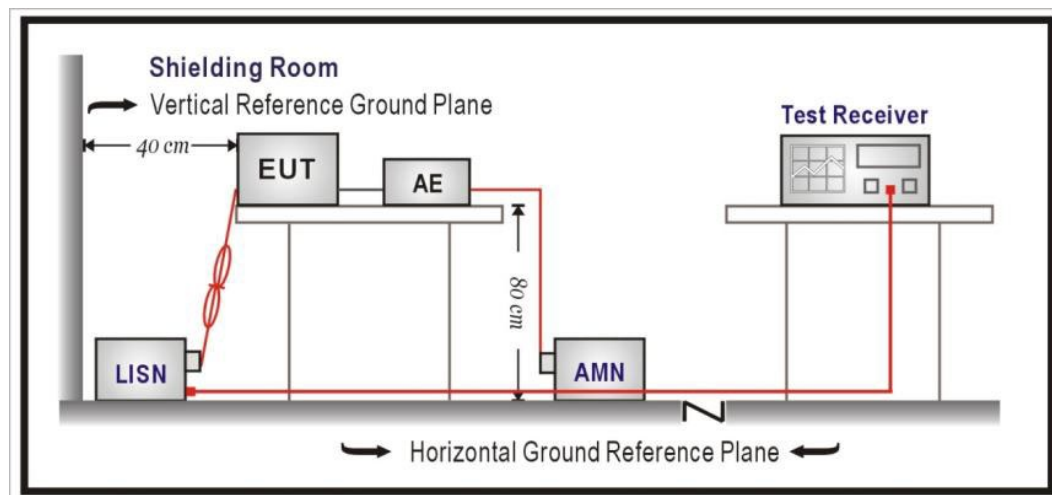
No.	Equipment	Brand Name	Model No.	Serial No.
1	Mouse	Microsoft	1113	X821908-015
2	Keyboard	Lenovo	SIL22-W07	22E0F91
3	Monitor	ASUS	MX27U	H3LMRS013536
4	Notebook	ASUS	E402S	GBN0CV14W224476
5	Notebook	Lenovo	80T7	PF01EUZD

2.6. Configuration of Tested System



3. AC Power Line Conducted Emission

3.1. Test Setup



3.2. Test Limit

Frequency (MHz)	QP (dBuV)	AV (dBuV)
0.15 - 0.50	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30	60	50

Remarks: In the above table, the tighter limit applies at the band edges.

3.3. Test Procedure

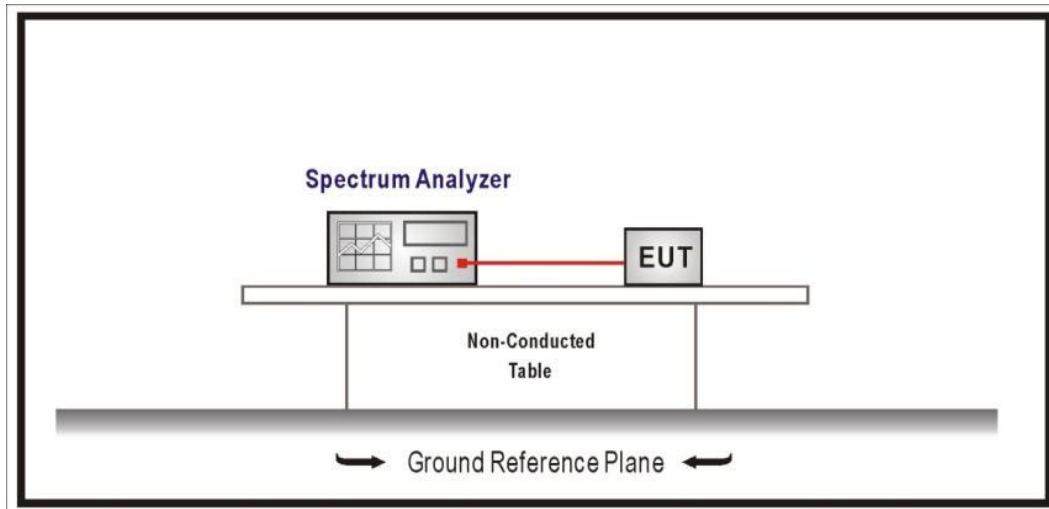
The EUT was setup according to ANSI C63.10: 2013 for AC Power Line Conducted Emissions.

3.4. Test Result of AC Power Line Conducted Emission

Refer as Appendix A

4. 20dB Bandwidth

4.1. Test Setup



4.2. Test Limit

N/A

4.3. Test Procedures

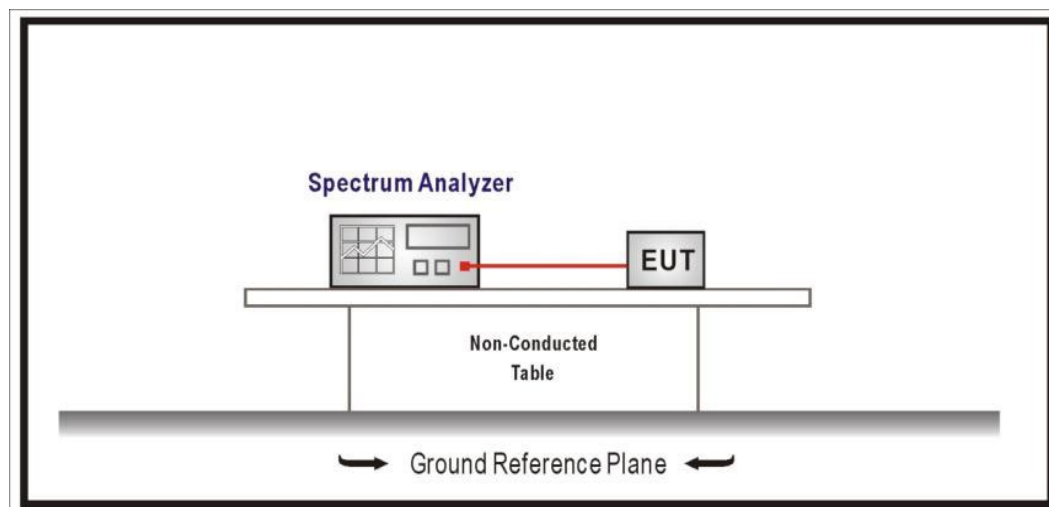
The EUT was setup according to ANSI C63.10: 2013 and tested according to FHSS test procedure of KDB 558074.

4.4. Test Result of 20dB Bandwidth

Refer as Appendix B

5. Carrier Frequency Separation

5.1. Test Setup



5.2. Test 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 Maximum Conducted Output Power no greater than 125 mW. The system shall hop to channel frequencies that are selected at the system hopping rate from a pseudo randomly ordered list of hopping frequencies. Each frequency must be used equally on the average by each transmitter. The system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with the transmitted signals.

5.3. Test Procedures

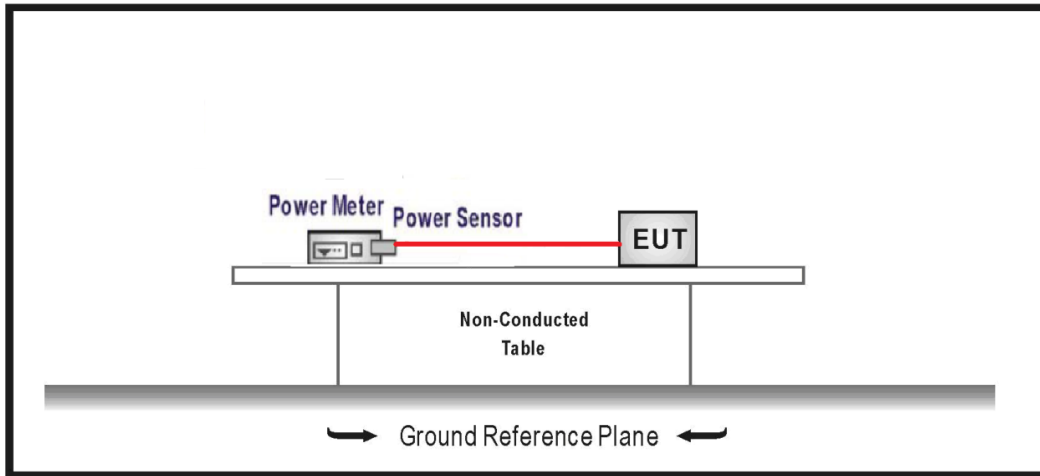
The EUT was setup according to ANSI C63.10: 2013 and tested according to FHSS test procedure of KDB 558074.

5.4. Test Result of Carrier Frequency Separation

Refer as Appendix C

6. Maximum Conducted Output Power

6.1. Test Setup



6.2. Test Limit

For frequency hopping systems operating in the 902 ~ 928 MHz band:

1. Number of Hopping Frequencies ≥ 50 : 1 watt (30dBm)
2. $50 >$ Number of Hopping Frequencies ≥ 25 : 0.25 watt (23.98dBm)

For frequency hopping systems operating in the 2400 ~ 2483.5 MHz band:

1. Number of Hopping Frequencies ≥ 75 : 1 watt (30dBm)
2. $75 >$ Number of Hopping Frequencies ≥ 15 : 0.125 watts (20.97dBm)

For frequency hopping systems operating in the 5725 ~ 5850 MHz band:

Number of Hopping Frequencies ≥ 75 : 1 watt (30dBm)

6.3. Test Procedures

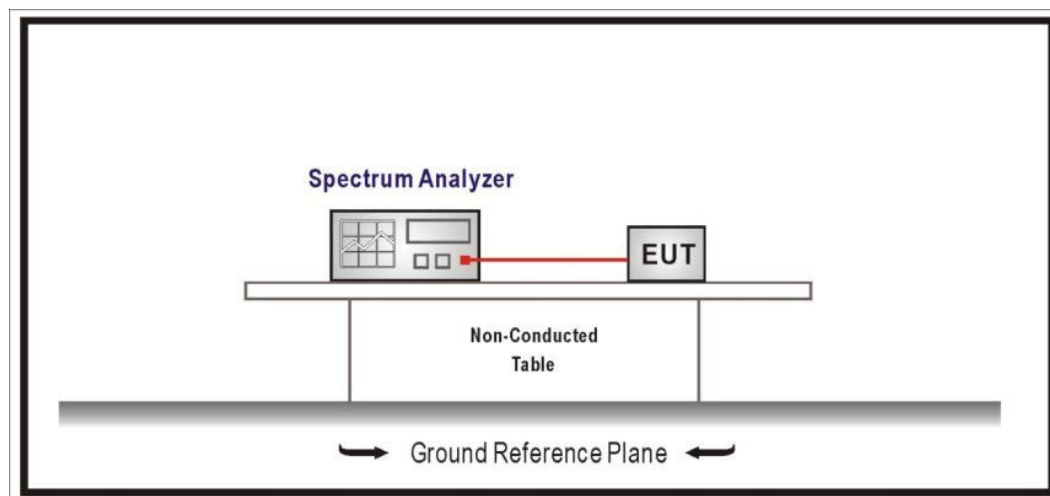
The EUT was setup according to ANSI C63.10: 2013 and tested according to FHSS test procedure of KDB 558074.

6.4. Test Result of Maximum Conducted Output Power

Refer as Appendix D

7. Number of Hopping Frequency

7.1. Test Setup



7.2. Test 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.

Frequency hopping systems in the 2400 ~ 2483.5 MHz band shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used.

Frequency hopping systems operating in the 5725 ~ 5850 MHz band shall use at least 75 hopping frequencies. The maximum 20 dB bandwidth of the hopping channel is 1 MHz. The average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 30 second period.

7.3. Test Procedure

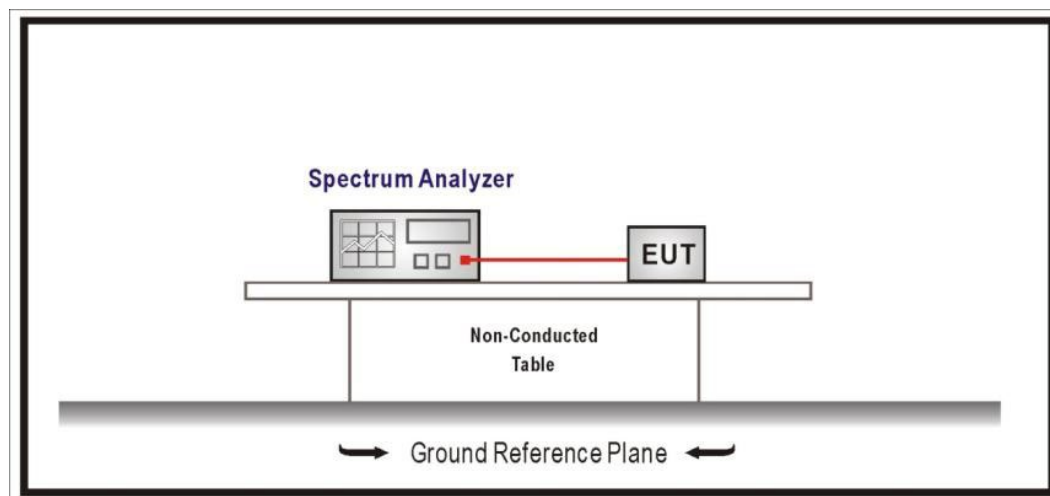
The EUT was setup according to ANSI C63.10: 2013 and tested according to FHSS test procedure of KDB 558074.

7.4. Test Result of Number of Hopping Frequency

Refer as Appendix E

8. Dwell Time

8.1. Test Setup



8.2. Test 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.

For frequency hopping systems operating in the 2400-2483.5 MHz bands. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

For frequency hopping systems operating in the 5725-5850 MHz bands. The average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 30 second period.

8.3. Test Procedure

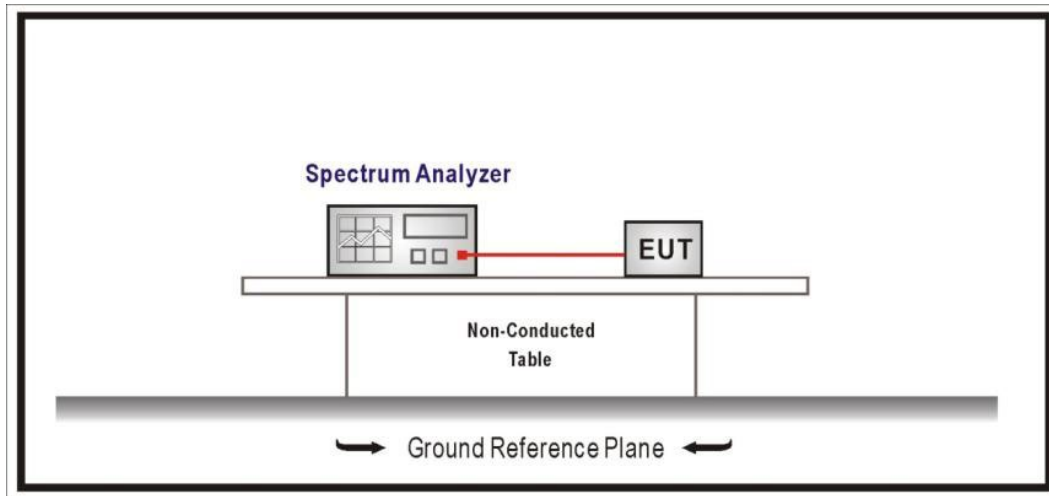
The EUT was setup according to ANSI C63.10: 2013 and tested according to FHSS test procedure of KDB 558074.

8.4. Test Result of Dwell Time

Refer as Appendix F

9. Antenna Port Conducted Emission

9.1. Test Setup



9.2. Test Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the radio frequency power that is produced 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 measurement, provided the transmitter demonstrates compliance with the peak conducted power limit.

9.3. Test Procedure

The EUT was setup according to ANSI C63.10: 2013 and tested according to FHSS test procedure of KDB 558074.

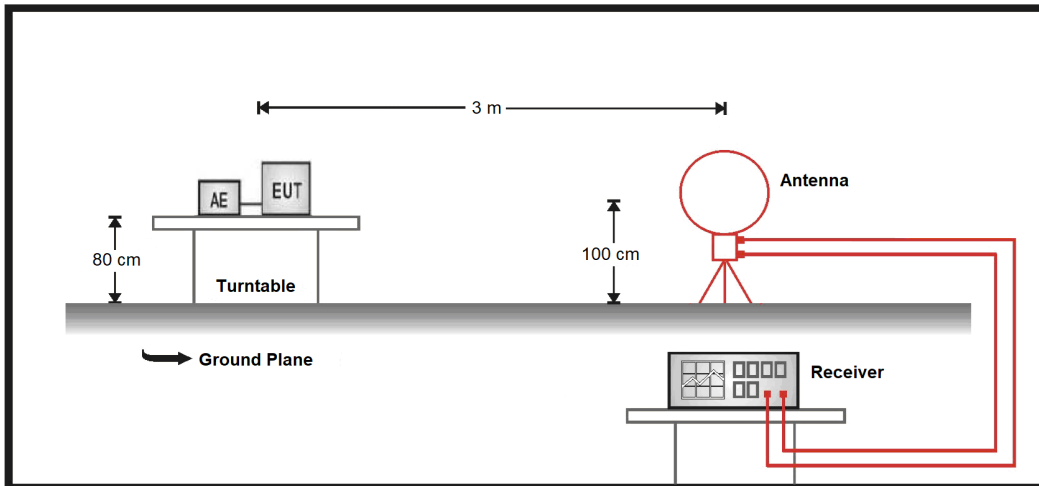
9.4. Test Result of Antenna Port Conducted Emission

Refer as Appendix G

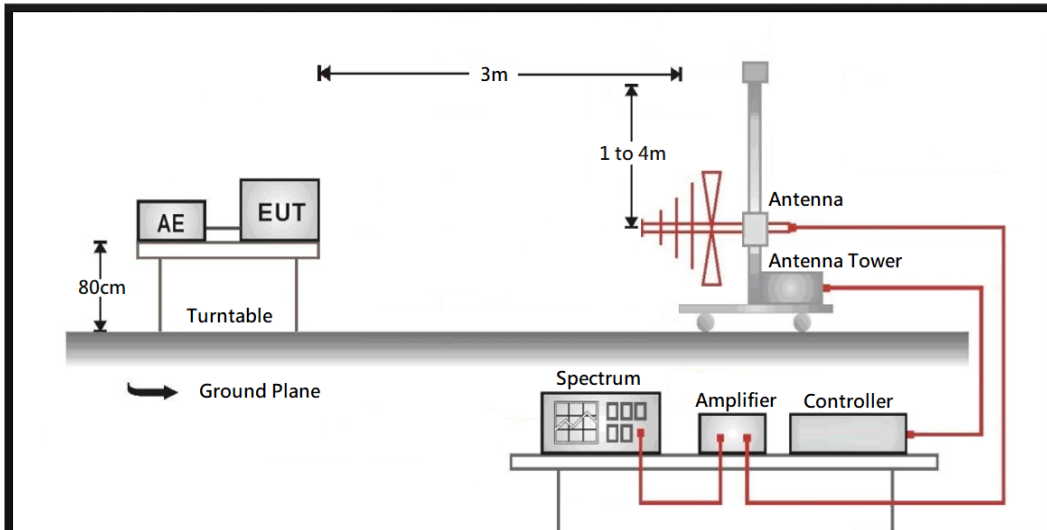
10. Transmitter Radiated Spurious Emission

10.1. Test Setup

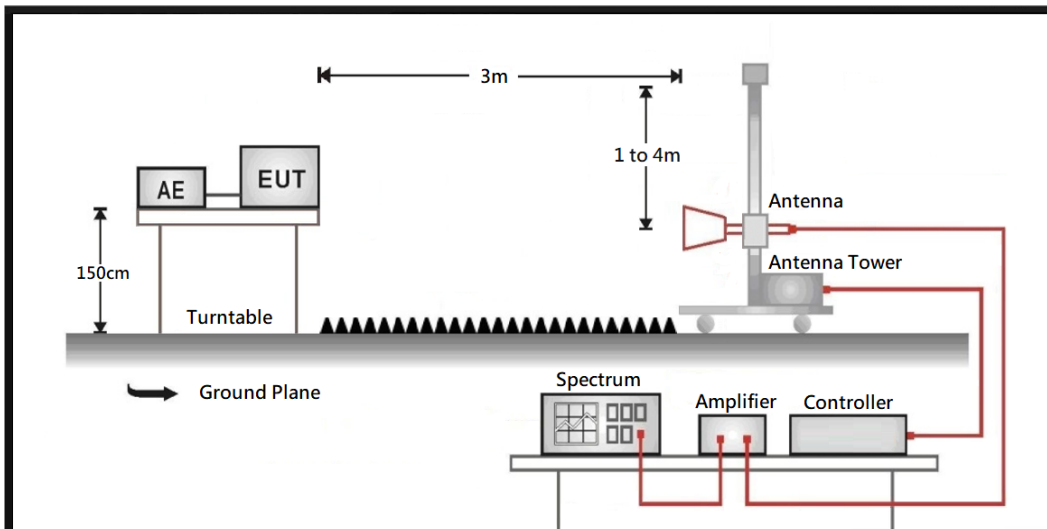
9 kHz ~ 30 MHz



30 MHz ~ 1 GHz



Above 1 GHz



10.2. Test Limit

Frequency (MHz)	Field strength (uV/m)	Field strength (dBuV/m)	Measurement distance (m)
0.009 – 0.490	2400/F(kHz)	20 log (2400/F(kHz))	300
0.490 – 1.705	24000/F(kHz)	20 log (24000/F(kHz))	30
1.705 - 30	30	29.5	30
30 - 88	100	40	3
88 - 216	150	43.5	3
216 - 960	200	46	3
Above 960	500	54	3

Remarks:

1. Field strength (dBuV/m) = 20 log Field strength (uV/m)
2. In the Above Table, the tighter limit applies at the band edges.
3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

10.3. Test Procedure

The EUT was setup according to ANSI C63.10: 2013 and tested according to FHSS test procedure of KDB 558074.

The EUT and its simulators are placed on a turn table which is 0.8 or 1.5 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level.

The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level. Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to ANSI C63.10: 2013 on radiated measurement.

On any frequency or frequencies from 9 kHz(include The the lowest oscillator frequency generated within the device up to the 10th harmonic) to 1000 MHz, the limit shown are based on measuring equipment employing a quasi-peak detector function and on any frequency or frequencies above 1000 MHz the radiated limit shown are based upon the use of measurement instrumentation employing an average detector function. When average radiated emission measurement are included emission measurement below 1000 MHz, there also is a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit.

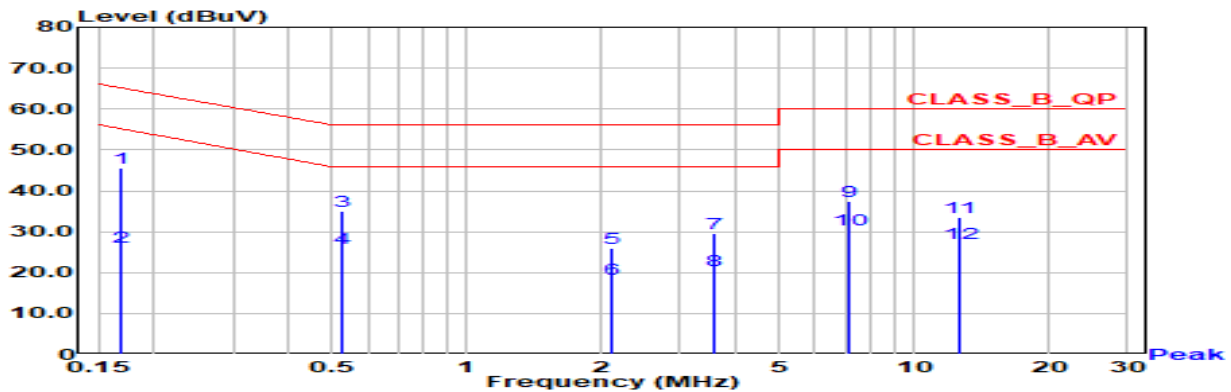
The bandwidth below 1 GHz setting on the field strength meter is 120 kHz and above 1 GHz is 1 MHz.

10.4. Test Result of Transmitter Radiated Spurious Emission

Refer as Appendix H

Appendix A. Test Result of AC Power Line Conducted Emission

Test Mode	Transmit	Phase	Line
Test Condition	ASK / 915.25 MHz		

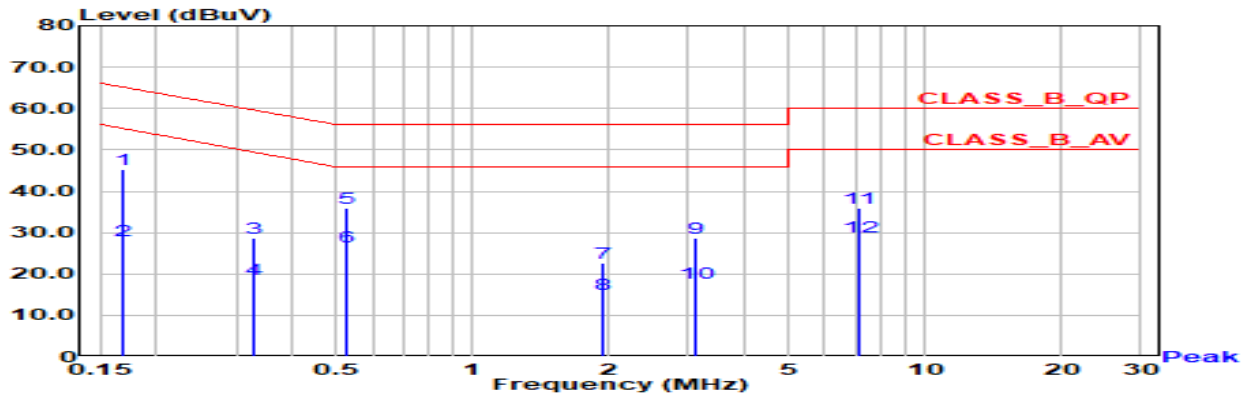


No	Frequency (MHz)	Emission Level (dBuV)	Limit (dBuV)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	0.169	45.45	65.03	-19.58	35.78	9.67	QP
2	0.169	26.26	55.03	-28.77	16.59	9.67	AV
3	0.524	35.16	56.00	-20.84	25.49	9.67	QP
4	0.524	26.02	46.00	-19.98	16.34	9.67	AV
5	2.107	25.83	56.00	-30.17	15.97	9.86	QP
6	2.107	18.56	46.00	-27.44	8.69	9.86	AV
7	3.570	29.65	56.00	-26.35	19.75	9.91	QP
8	3.570	20.52	46.00	-25.48	10.61	9.91	AV
9	7.175	37.37	60.00	-22.63	27.35	10.02	QP
*10	7.175	30.51	50.00	-19.49	20.49	10.02	AV
11	12.592	33.37	60.00	-26.63	23.19	10.18	QP
12	12.592	27.08	50.00	-22.92	16.90	10.18	AV

Remark:

1. "*" means this data is the worst emission level.
2. Emission Level = Reading Level + Correct Factor (Correct Factor = LISN Insertion Loss + Cable Loss).
3. Margin = Emission Level - Limit.

Test Mode	Transmit	Phase	Neutral
Test Condition	ASK / 915.25 MHz		

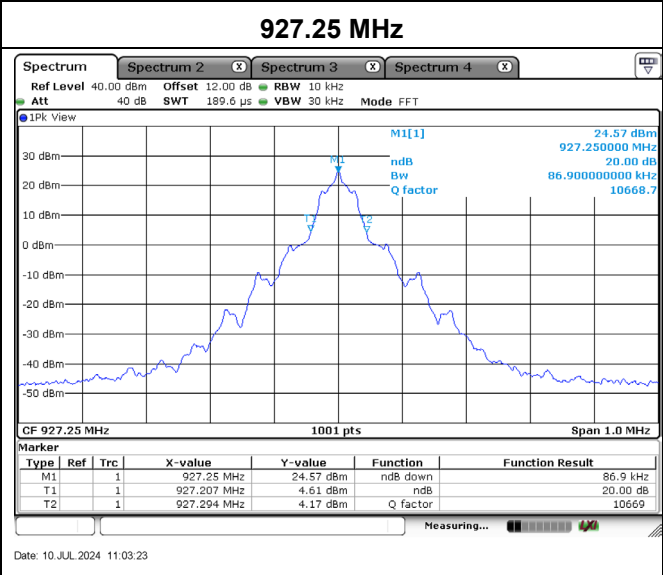
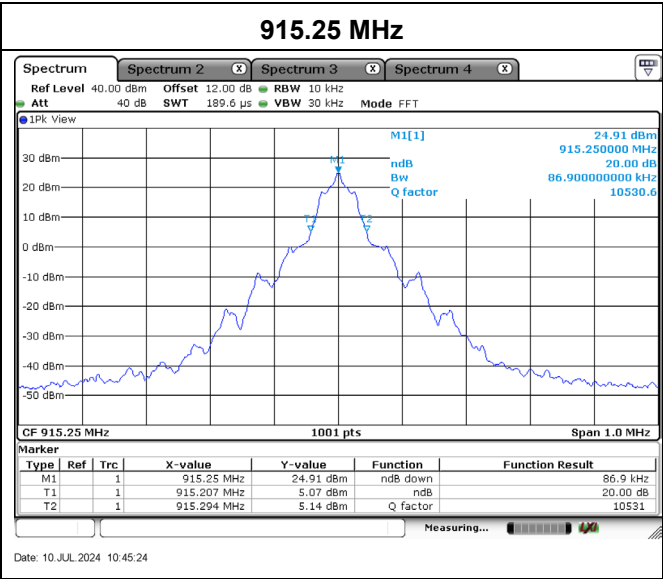
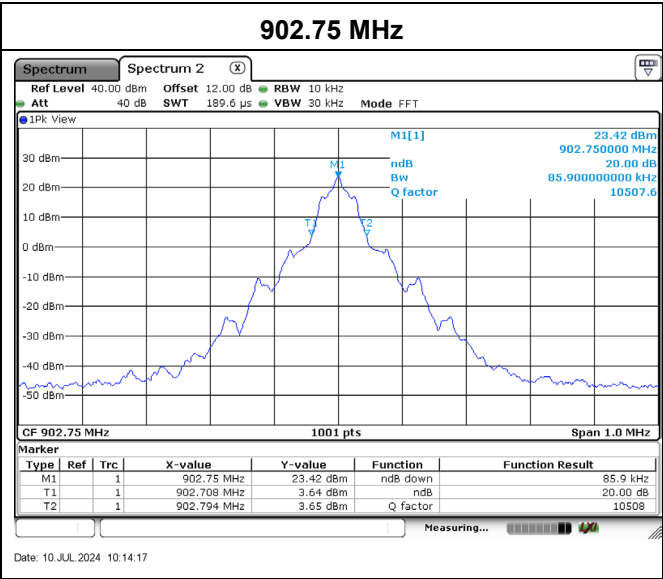


Remark:

1. "*" means this data is the worst emission level.
2. Emission Level = Reading Level + Correct Factor (Correct Factor = LISN Insertion Loss + Cable Loss).
3. Margin = Emission Level - Limit.

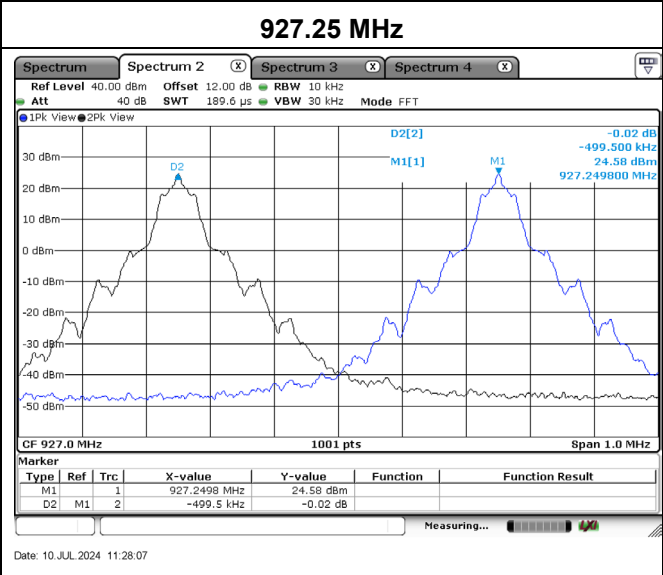
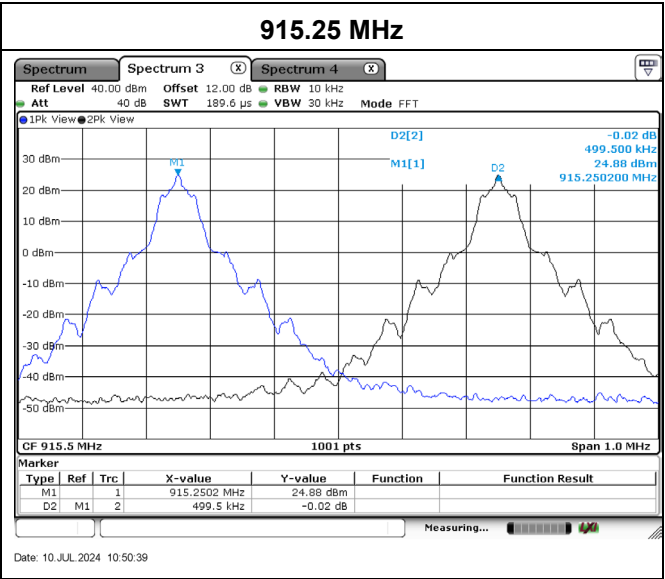
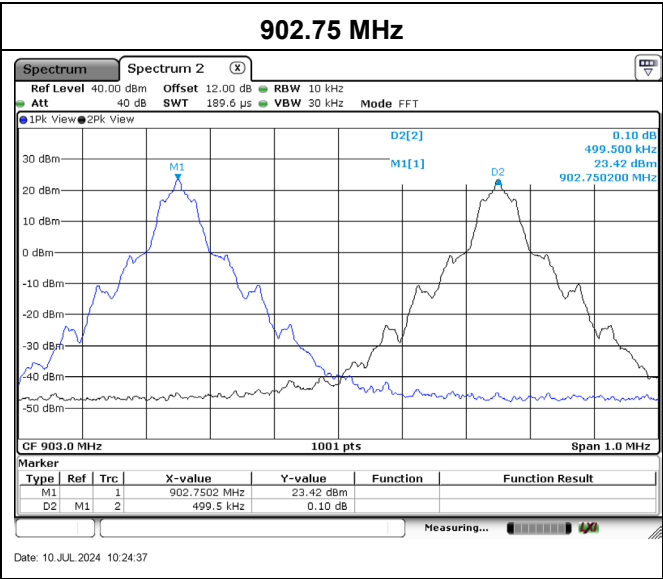
Appendix B. Test Result of 20dB Bandwidth

Frequency (MHz)	Measure Level (MHz)	Limit (MHz)
902.75	0.085	-
915.25	0.086	-
927.25	0.086	-



Appendix C. Test Result of Carrier Frequency Separation

Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
902.75	0.499	0.085	Pass
915.25	0.499	0.086	Pass
975.25	0.499	0.086	Pass

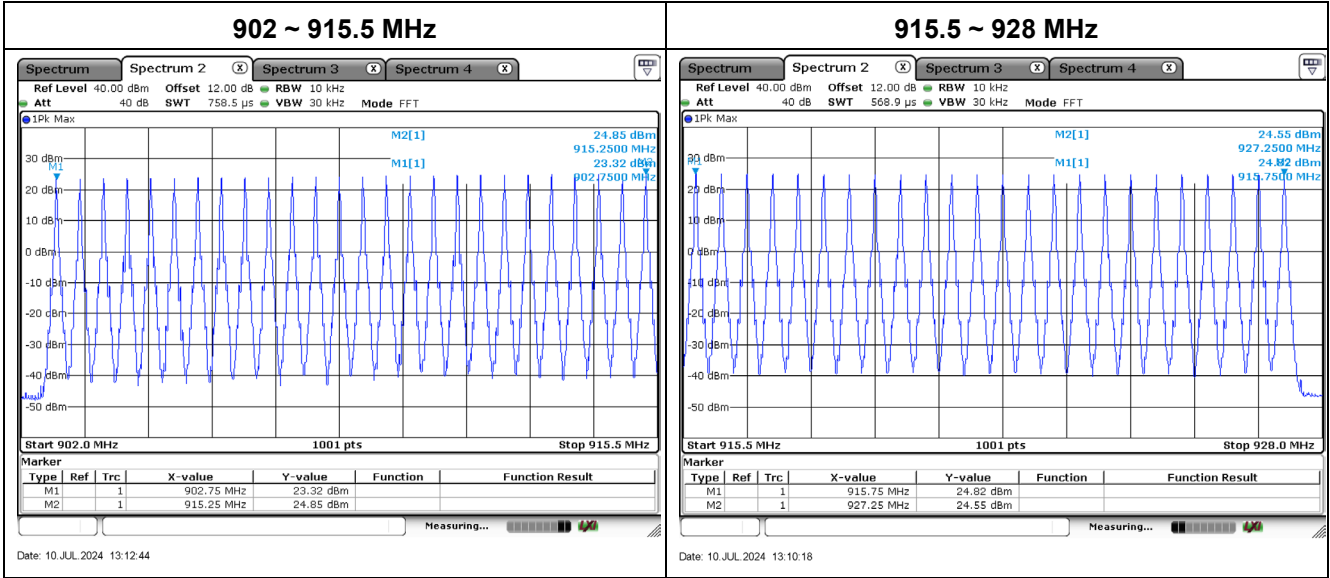


Appendix D. Test Result of Maximum Conducted Output Power

Frequency (MHz)	Maximum Conducted Peak Output Power (dBm)	Limit (dBm)	Result
902.75	23.30	27.00	Pass
915.25	24.53	27.00	Pass
927.25	24.27	27.00	Pass

Appendix E. Test Result of Number of Hopping Frequency

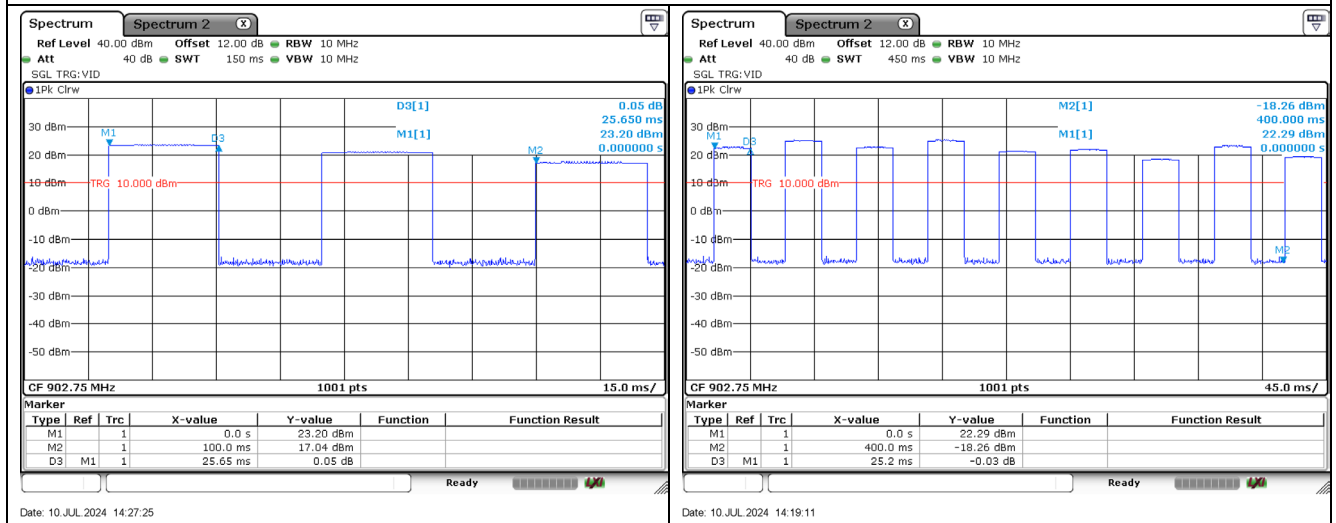
Measure Level (Channels)	Limit (Channels)
50	≥ 50



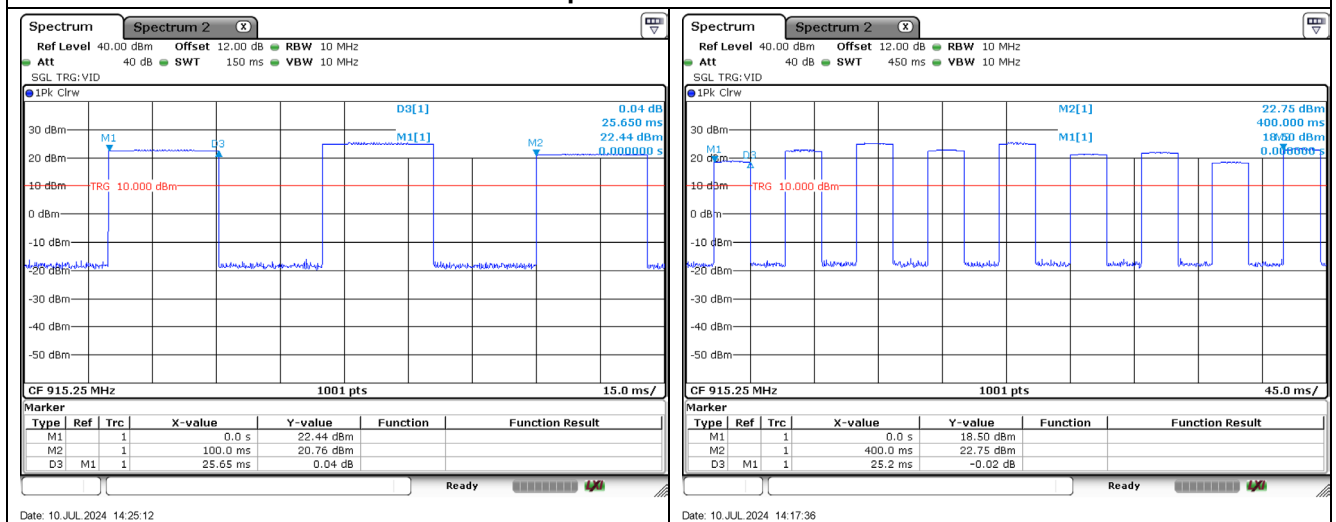
Appendix F. Test Result of Dwell Time

Occupancy Time of Frequency Hopping System
A) 902.75 MHz Test Time Period: $0.4 \times 50 = 20$ sec, Time slot length : 51.3 ms = 0.0513 sec
Dwell Time : $0.0513 \times 4 = 0.205$ sec
B) 915.25 MHz Test Time Period: $0.4 \times 50 = 20$ sec, Time slot length : 51.3 ms = 0.0513 sec
Dwell Time : $0.0513 \times 4 = 0.205$ sec
C) 927.25 MHz Test Time Period: $0.4 \times 50 = 20$ sec, Time slot length : 51.2 ms = 0.0512 sec
Dwell Time : $0.0512 \times 4 = 0.205$ sec
Test Result: The Average Occupancy Time of Each Highest, Middle and Lowest Channel Is Less Than 0.4 sec, And Corresponds to The Standard.

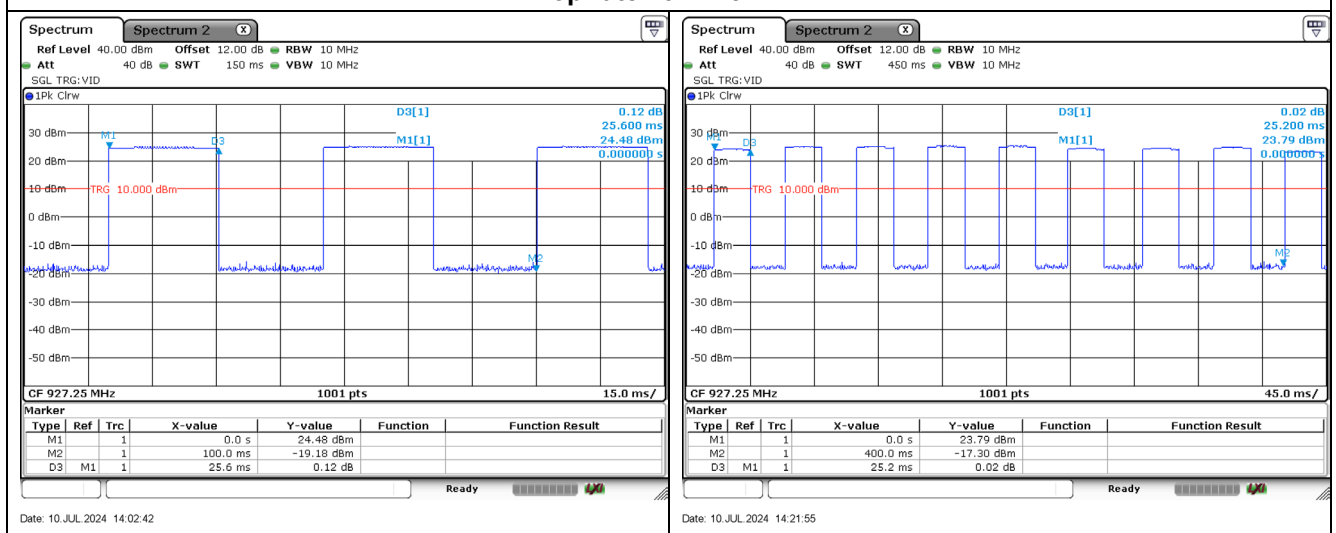
Hop rate / 902.25 MHz



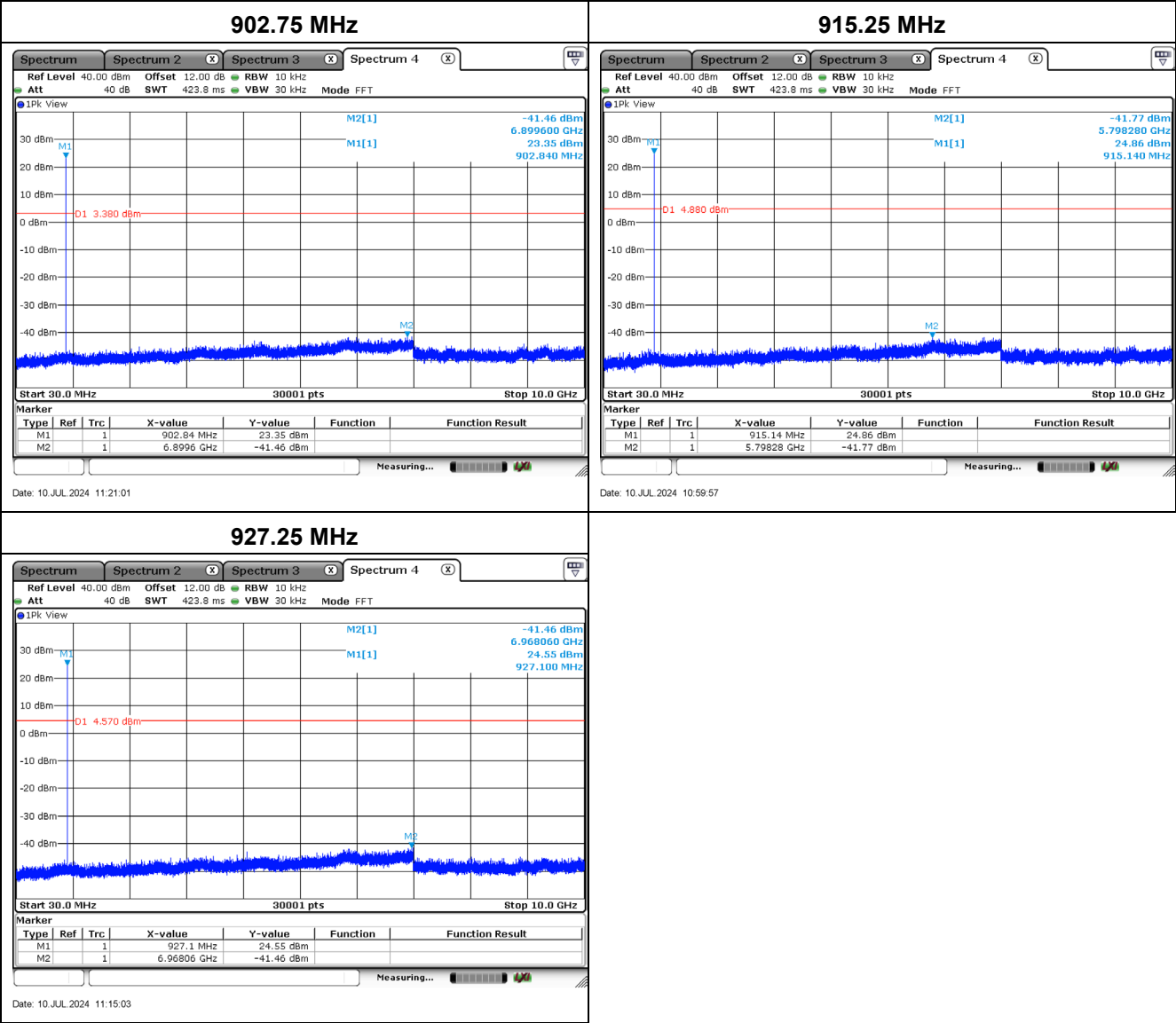
Hop rate / 915.25 MHz

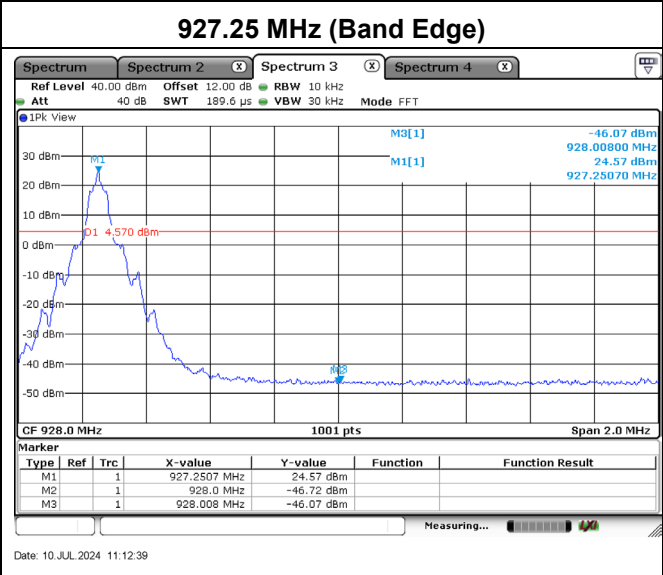
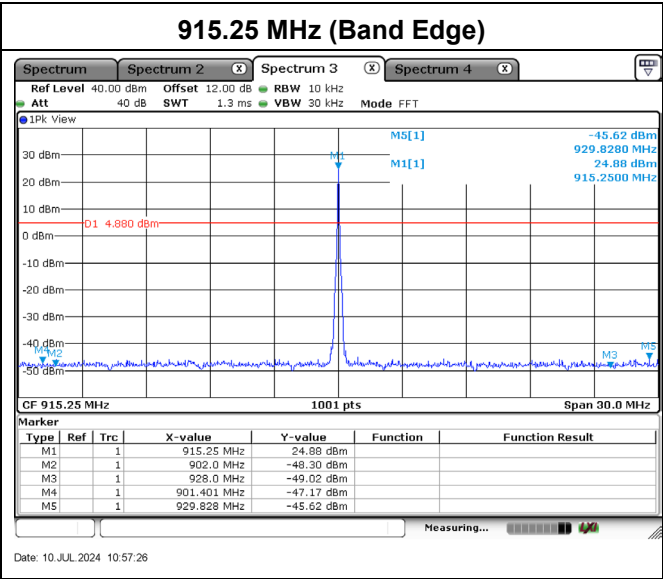
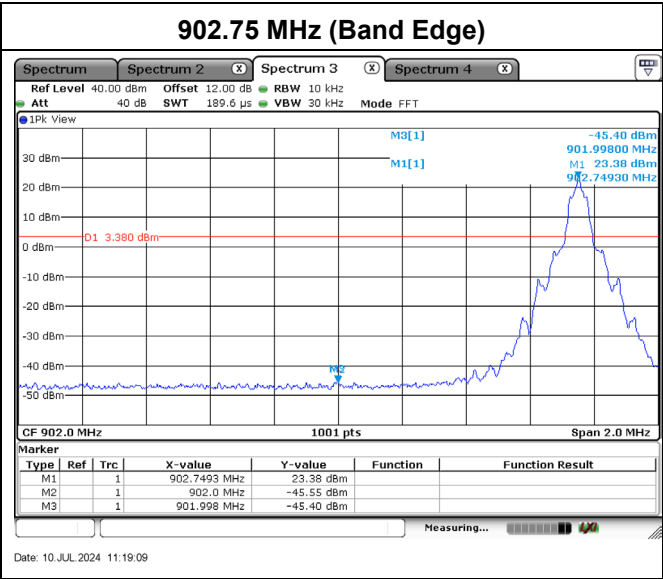


Hop rate / 927.25 MHz



Appendix G. Test Result of Antenna Port Conducted Emission

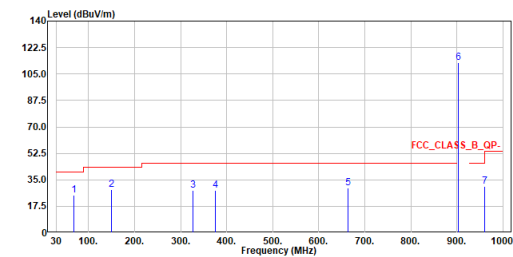




Appendix H. Test Result of Transmitter Radiated Spurious Emission

30 MHz ~ 1 GHz

Site :HC-CB04
Condition :3m Horizontal
Mode :LF_SRD_TX_902.75MHz
Test By :Ling Chen

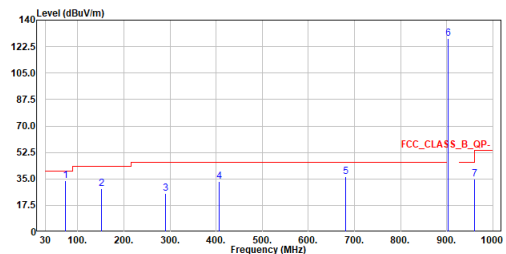


No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	Line	Limit	Level		
	MHz	dBuV/m	dB	dB	dB	dB	
1	67.442	24.88	40.00	-15.12	29.13	-4.25	QP
2	149.553	28.39	43.50	-15.11	31.47	-3.08	QP
3	326.820	27.88	46.00	-18.12	29.72	-1.84	QP
4	374.981	28.13	46.00	-17.87	28.86	-0.73	QP
5	663.653	29.70	46.00	-16.30	24.14	5.56	QP
6	902.758	112.64	-----	-----	103.86	8.78	QP
7	960.000	30.40	46.00	-15.60	20.61	9.79	QP

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.
5. The other emission levels were very low against the limit.

Site :HC-CB04
Condition :3m Vertical
Mode :LF_SRD_TX_902.75MHz
Test By :Ling Chen

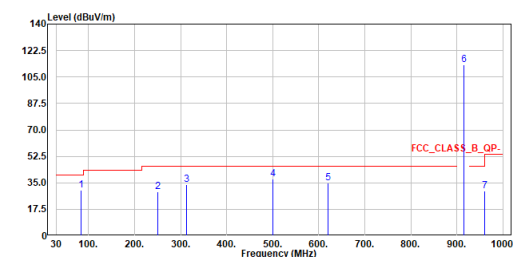


No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	Line	Limit	Level		
	MHz	dBuV/m	dB	dB	dB	dB	
1	72.777	33.83	40.00	-6.17	39.47	-5.64	QP
2	151.978	28.38	43.50	-15.12	31.46	-3.08	QP
3	289.621	25.28	46.00	-20.72	28.18	-2.90	QP
4	407.039	33.36	46.00	-12.64	33.38	-0.02	QP
5	680.773	36.65	46.00	-9.35	30.98	5.67	QP
6	902.758	112.60	-----	-----	118.82	8.78	QP
7	960.000	34.89	46.00	-11.11	25.10	9.79	QP

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.
5. The other emission levels were very low against the limit.

Site :HC-CB04
Condition :3m Horizontal
Mode :LF_SRD_TX_915.25MHz
Test By :Ling Chen

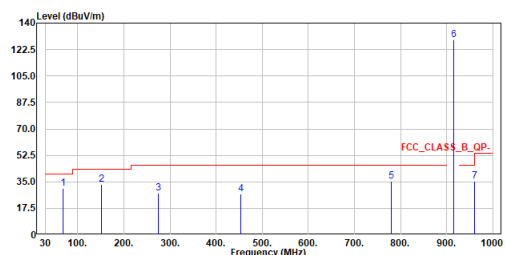


No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	Line	Limit	Level		
	MHz	dBuV/m	dB	dB	dB	dB	
1	83.981	30.01	40.00	-9.99	38.63	-8.62	QP
2	249.996	29.16	46.00	-16.84	33.66	-4.50	QP
3	311.979	33.93	46.00	-12.07	36.28	-2.35	QP
4	500.014	37.31	46.00	-8.69	35.17	2.14	QP
5	620.003	35.02	46.00	-10.98	30.17	4.85	QP
6	915.271	113.06	-----	-----	103.99	9.07	QP
7	960.000	29.45	46.00	-16.55	19.66	9.79	QP

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.
5. The other emission levels were very low against the limit.

Site :HC-CB04
Condition :3m Vertical
Mode :LF_SRD_TX_915.25MHz
Test By :Ling Chen

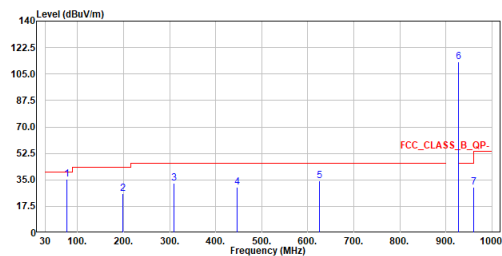


No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	Line	Limit	Level		
	MHz	dBuV/m	dB	dB	dB	dB	
1	67.394	30.58	40.00	-9.42	34.83	-4.25	QP
2	151.347	33.12	43.50	-10.38	36.14	-3.02	QP
3	273.858	27.56	46.00	-18.44	31.05	-3.49	QP
4	452.629	27.08	46.00	-18.92	25.63	1.45	QP
5	780.198	35.56	46.00	-10.44	27.94	7.62	QP
6	915.271	118.69	-----	-----	119.62	9.07	QP
7	960.000	35.54	46.00	-10.46	25.75	9.79	QP

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.
5. The other emission levels were very low against the limit.

Site :HC-CB04
 Condition :3m Horizontal
 Mode :LF_SRD_TX_927.25MHz
 Test By :Ling Chen

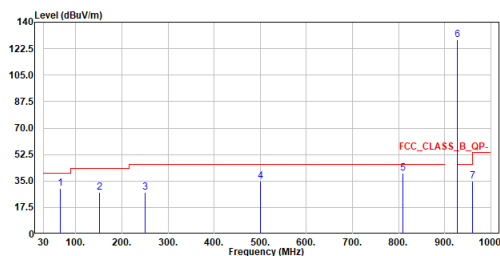


No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	75.833	35.60	40.00	-4.40	41.92	-6.32	QP
2	198.489	25.90	43.50	-17.60	32.44	-6.54	QP
3	308.681	32.96	46.00	-13.04	35.43	-2.47	QP
4	446.373	29.94	46.00	-16.06	28.62	1.32	QP
5	624.998	34.56	46.00	-11.44	29.59	4.97	QP
6	927.299	113.27	-----	-----	103.97	9.30	QP
7	960.000	30.32	46.00	-15.68	20.53	9.79	QP

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.
5. The other emission levels were very low against the limit.

Site :HC-CB04
 Condition :3m Vertical
 Mode :LF_SRD_TX_927.25MHz
 Test By :Ling Chen



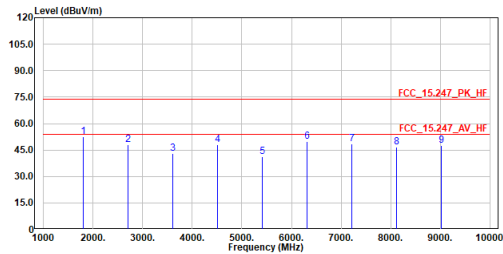
No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	66.618	30.36	40.00	-9.64	34.68	-4.32	QP
2	151.590	27.50	43.50	-16.00	30.55	-3.05	QP
3	249.996	27.51	46.00	-18.49	32.01	-4.50	QP
4	500.014	34.71	46.00	-11.29	32.57	2.14	QP
5	808.765	40.09	46.00	-5.91	32.21	7.88	QP
6	927.250	128.55	-----	-----	119.25	9.30	QP
7	959.988	34.74	46.00	-11.26	24.95	9.79	QP

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The emission under 30MHz was not included since the emission levels are very low against the limit.
5. The other emission levels were very low against the limit.

Above 1 GHz

Site :HC-CB04
Condition :3m ,Horizontal
Mode :SRD_TX_902.75MHz
Test By :Ling Chen

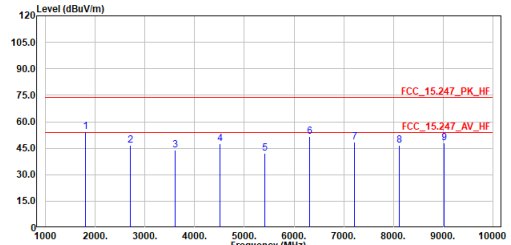


No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	Line	Limit	Level		
			dBuV/m	dB	dBuV	dB	
1	1805.500	52.58	74.00	-21.42	76.09	-23.51	Peak
2	2708.250	47.87	74.00	-26.13	68.81	-28.94	Peak
3	3611.000	43.23	74.00	-30.77	61.72	-31.49	Peak
4	4513.750	48.10	74.00	-25.90	63.83	-25.73	Peak
5	5416.600	41.22	74.00	-32.78	55.39	-32.71	Peak
6	6319.250	50.02	74.00	-23.98	60.93	-23.91	Peak
7	7222.000	48.67	74.00	-25.33	57.08	-25.31	Peak
8	8124.750	46.72	74.00	-27.28	55.13	-27.21	Peak
9	9027.500	47.64	74.00	-26.36	54.63	-26.39	Peak

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
5. The other emission levels were very low against the limit.

Site :HC-CB04
Condition :3m ,Vertical
Mode :SRD_TX_902.75MHz
Test By :Ling Chen

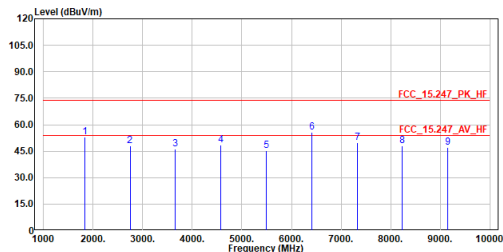


No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	Line	Limit	Level		
			dBuV/m	dB	dBuV	dB	
1	1805.500	54.24	74.00	-19.76	77.75	-23.51	Peak
2	2708.250	46.86	74.00	-27.14	67.80	-27.14	Peak
3	3611.000	43.84	74.00	-30.16	62.33	-30.16	Peak
4	4513.750	47.36	74.00	-26.64	63.09	-26.64	Peak
5	5416.600	42.14	74.00	-31.86	56.31	-31.86	Peak
6	6319.250	51.44	74.00	-22.56	62.35	-22.56	Peak
7	7222.000	48.25	74.00	-25.75	56.66	-25.75	Peak
8	8124.750	46.86	74.00	-27.14	55.27	-27.14	Peak
9	9027.500	48.19	74.00	-25.81	55.18	-25.81	Peak

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
5. The other emission levels were very low against the limit.

Site :HC-CB04
Condition :3m ,Horizontal
Mode :SRD_TX_915.25MHz
Test By :Ling Chen

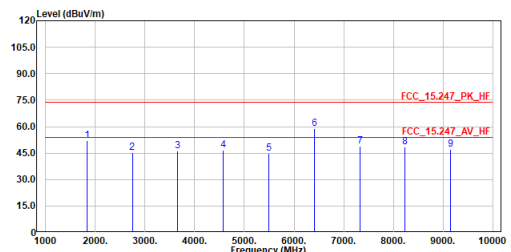


No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	Line	Limit	Level		
			dBuV/m	dB	dBuV	dB	
1	1830.500	52.99	74.00	-21.01	76.41	-23.42	Peak
2	2745.750	47.97	74.00	-26.03	68.78	-26.03	Peak
3	3661.000	46.33	74.00	-27.67	64.64	-27.67	Peak
4	4576.250	48.57	74.00	-25.43	64.13	-25.43	Peak
5	5491.500	45.17	74.00	-28.83	59.30	-28.83	Peak
6	6406.750	55.77	74.00	-18.23	66.16	-18.23	Peak
7	7322.000	49.60	74.00	-24.40	58.02	-24.40	Peak
8	8237.250	47.86	74.00	-26.14	55.99	-26.14	Peak
9	9152.500	46.89	74.00	-27.11	53.63	-27.11	Peak

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
5. The other emission levels were very low against the limit.

Site :HC-CB04
Condition :3m ,Vertical
Mode :SRD_TX_915.25MHz
Test By :Ling Chen

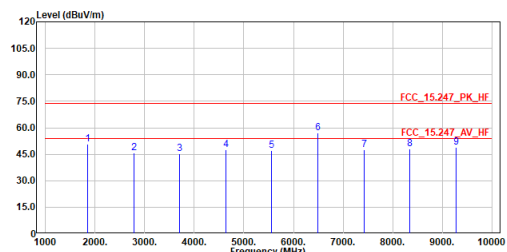


No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	Line	Limit	Level		
			dBuV/m	dB	dBuV	dB	
1	1830.500	52.08	74.00	-21.92	75.50	-21.92	Peak
2	2745.750	45.36	74.00	-28.64	66.17	-28.64	Peak
3	3661.000	46.11	74.00	-27.89	64.42	-27.89	Peak
4	4576.250	46.55	74.00	-27.45	62.11	-27.45	Peak
5	5491.500	44.86	74.00	-29.14	58.99	-29.14	Peak
6	6406.750	58.73	74.00	-15.27	69.12	-15.27	Peak
7	7322.000	49.00	74.00	-25.00	57.42	-25.00	Peak
8	8237.250	48.29	74.00	-25.71	56.42	-25.71	Peak
9	9152.500	47.25	74.00	-26.75	53.99	-26.75	Peak

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
5. The other emission levels were very low against the limit.

Site :HC-CB04
Condition :3m ,Horizontal
Mode :SRD_TX_927.25MHz
Test By :Ling Chen

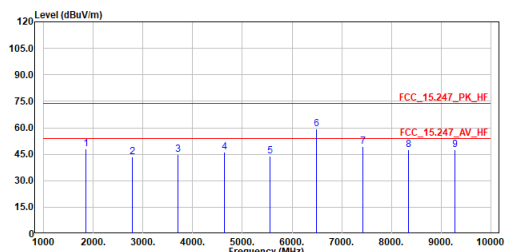


No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	1854.500	50.62	74.00	-23.38	73.96	-23.34	Peak
2	2781.750	45.77	74.00	-28.23	66.47	-20.70	Peak
3	3709.000	45.50	74.00	-28.50	63.63	-18.13	Peak
4	4636.250	47.64	74.00	-26.36	63.03	-15.39	Peak
5	5563.500	47.01	74.00	-26.99	60.97	-13.96	Peak
6	6490.750	57.17	74.00	-16.83	67.06	-9.89	Peak
7	7418.350	47.47	74.00	-26.53	55.89	-8.42	Peak
8	8345.250	47.89	74.00	-26.11	55.77	-7.88	Peak
9	9272.500	48.80	74.00	-25.20	55.30	-6.50	Peak

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
5. The other emission levels were very low against the limit.

Site :HC-CB04
Condition :3m ,Vertical
Mode :SRD_TX_927.25MHz
Test By :Ling Chen



No.	Frequency	Level	Limit	Over	Read	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	1854.500	48.05	74.00	-25.95	71.39	-23.34	Peak
2	2781.750	43.37	74.00	-30.63	64.07	-20.70	Peak
3	3709.000	44.96	74.00	-29.04	63.09	-18.13	Peak
4	4636.250	45.97	74.00	-28.03	61.36	-15.39	Peak
5	5563.650	44.01	74.00	-29.99	57.97	-13.96	Peak
6	6490.750	59.51	74.00	-14.49	69.40	-9.89	Peak
7	7418.000	49.43	74.00	-24.57	57.85	-8.42	Peak
8	8345.250	47.57	74.00	-26.43	55.45	-7.88	Peak
9	9275.500	47.41	74.00	-26.59	53.89	-6.48	Peak

Note:

1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
5. The other emission levels were very low against the limit.