Testing Laboratory
3024

Test Report No:
2570523R-RFNAV02S-I

TEST REPORT
FCC Rules&Regulations

Product Name	Telematics Platform 2
Brand Name	PCI, LHP Telematics
Model No.	PCI-TP2
FCC ID	LY5-PCITP2V2
Applicant´s Name / Address	PCI Private Limited 35 Pioneer Road North Singapore 628475 Singapore
Manufacturer's Name / Address (1)	PCI Private Limited 35 Pioneer Road North Singapore 628475 Singapore
Manufacturer's Name / Address (2)	LHP Telematics, LLC 17406 Tiller Court, Suite 100 Westfield, Indiana 46074, United States
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	Jennie She Jennie She
Approved By	Allen Lin Allen Lin
Date of Receipt	Aug. 05, 2024
Date of Issue	Aug. 27, 2025
Report Version	V1.0

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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.

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	Aug. 27, 2025

Permissive Change

Report No.	Version	Description	Issued Date
2480097R-RFUSV01S-B	V1.0	Original application.	Oct. 18, 2024
2570523R-RFNAV02S-I	V1.0	Class I Permissive Change: 1. Add the Brand Name “LHP Telematics”. 2. Add a new manufacturer “LHP Telematics, LLC”. After evaluation, it is not necessary to re-test and all test data was from original report.	Aug. 27, 2025

Summary of Test Result

Report Clause	Test Items	Result (PASS/FAIL)	Remark
-	AC Power Line Conducted Emission	N/A	Note
3	20dB Bandwidth	PASS	-
4	Carrier Frequency Separation	PASS	-
5	Maximum Conducted Output Power	PASS	-
6	Number of Hopping Frequency	PASS	-
7	Dwell Time	PASS	-
8	Antenna Port Conducted Emission	PASS	-
9	Transmitter Radiated Spurious Emission	PASS	-
Note: It was supplied power by DC-Powered for EUT. It's not necessary to apply to AC Power Line Conducted Emission test.			

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.

1. General Information

1.1. EUT Description

Frequency Range	2400 ~ 2483.5 MHz
Operating Frequency	2402 ~ 2480 MHz
Channel Number	79 Channels
Mode	Bluetooth BR / EDR
Type of Modulation	Frequency Hopping Spread Spectrum
Data Rate	Bluetooth BR uses a GFSK (1 Mbps)
	Bluetooth EDR uses a combination of π/4-DQPSK (2 Mbps) and 8DPSK (3 Mbps)

Antenna Information				
Ant.	Brand Name	Model No.	Type	Gain (dBi)
1	Green Antenna	GADWIFI-DP01	FPC	2.96

1.2. EUT Information

EUT Power Type	From DC power supply

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

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 and HC-CB10. 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
RF Conducted Emission	HC-SR12	Clemens Fang	21.5~25.5 / 55~61	2024/08/10~2024/08/16
Radiated Emission	HC-CB04	Ling Chen Cyril Chen	20~25 / 60~65	2024/08/09~2024/08/16
Radiated Emissions Co-location	HC-CB02	Scott Chang Gary Liao	22~25 / 51~58.5	2024/08/12~2024/08/16

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
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-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
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
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	2024/07/16	2025/07/15
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(11m)	Suhner	SF102_SF104	HC-CB04	30M-18 GHz	2024/08/07	2025/08/06
Coaxial Cable(3m)	Suhner,Rosnol	SF102_UP0264	HC-CB04-1	18G-40 GHz	2023/08/14	2024/08/13
Coaxial Cable(3m)	Suhner,Rosnol	SF102_UP0264	HC-CB04-1	18G-40 GHz	2024/08/13	2025/08/12
Radiated Software	Audix	e3 V9	HC-CB04_1	N/A	N/A	N/A

HC-CB02

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Cal. Date	Next Cal. Date
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	1272	30 MHz-2 GHz	2024/04/29	2025/04/28
Horn Antenna	Schwarzbeck	BBHA 9170	203	18G-40GHz	2024/02/02	2025/02/01
Pre-Amplifier	EMCI	EMC01820I	980365	30M-8 GHz,20 dB	2024/04/02	2025/04/01
Pre-Amplifier	EMEC	EM01G18GA	060741	1G-18 GHz,50 dB	2024/04/23	2025/04/22
Pre-Amplifier	DEKRA	AP-400C	201801231	18G-40 GHz,48 dB	2023/10/03	2024/10/02
Radio Communication Tester	Anritsu	MT8821C	6261915489	LTE & Cat.M1 & NB-IOT	2023/10/30	2024/10/29
Coaxial Cable(13m)	Suhner	SF104	HC-CB02	30M-18 GHz	2024/08/07	2025/08/06
Coaxial Cable(3m)	Suhner,Rosnol	SF102_UP0264	HC-CB02-1	18G-40 GHz 3 m	2023/08/14	2024/08/13
Coaxial Cable(3m)	Suhner,Rosnol	SF102_UP0264	HC-CB02-1	18G-40 GHz 3 m	2024/08/13	2025/08/12
Radiated Software	Audix	e3 V9	HC-CB02_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	DC 12V

2.2. Test Frequency Mode

Test Software	DutApiSisoACDualIf

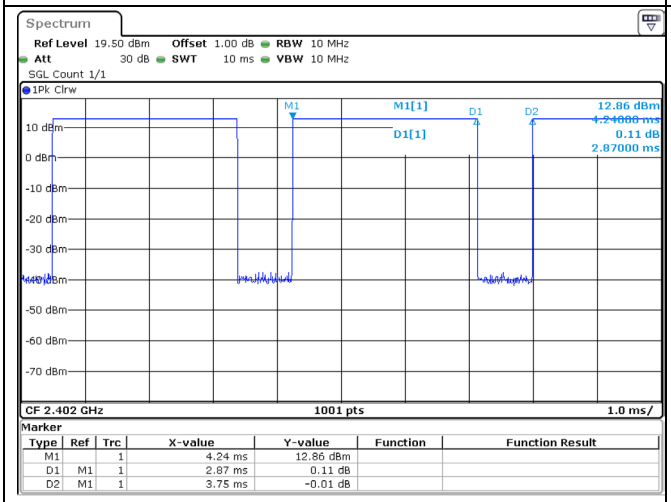
Modulation	Frequency (MHz)	Power Setting
GFSK	2402	12
	2440	12
	2480	12
8-DPSK	2402	10
	2440	10
	2480	10

2.3. Duty Cycle

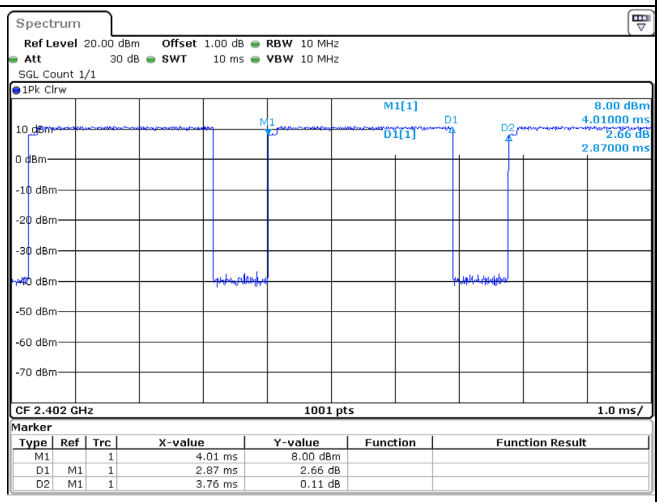
Modulation	On Times (ms)	On+Off Times (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)
GFSK	2.87	3.75	76.53	-2.32
8-DPSK	2.87	3.76	76.33	-2.35

Note: If the duty cycle correction factor lower than -20dB, the Max. duty cycle correction factor is -20dB.

GFSK



8-DPSK



2.4. The Worst Case Measurement Configuration

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 Z axis, so the measurement will follow this same test configuration.	

Tests Item	Simultaneous Transmission Analysis - Radiated Emission Co-location
Test Condition	Radiated measurement
Operating Mode	Transmit
1	WWAN LTE + WiFi 2.4 GHz
2	WWAN LTE + WiFi 5 GHz
3	WWAN LTE + Bluetooth
Refer to Appendix F for Radiated Emission Co-location.	

Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	Transmit
1	WWAN LTE + WiFi 2.4 GHz
2	WWAN LTE + WiFi 5 GHz
3	WWAN LTE + Bluetooth
Refer to DEKRA Test Report No.: 2570523R-RFNAV02S-M for Co-location RF Exposure Evaluation.	

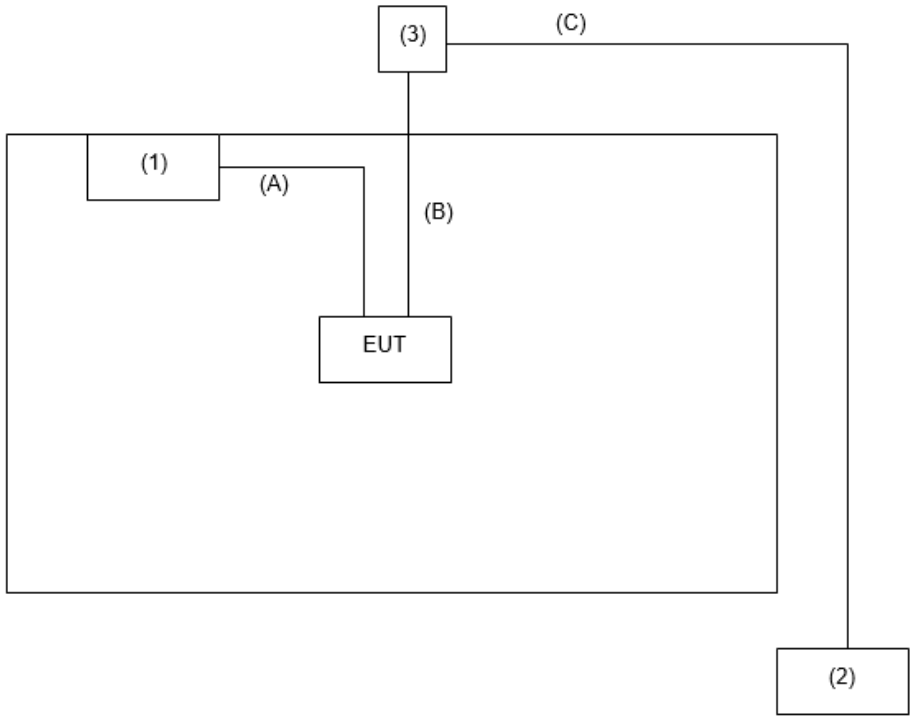
Note:
1. Determining compliance shall be based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
2. Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

2.5. Tested System Details

No.	Equipment	Brand Name	Model No.	Serial No.
1	DC Power supply	Topward	6303D	809497
2	Notebook	Lenovo	80T7	PF0MEEB0
3	Network cable connector	DEKRA	Z7	N/A

2.6. Configuration of Tested System

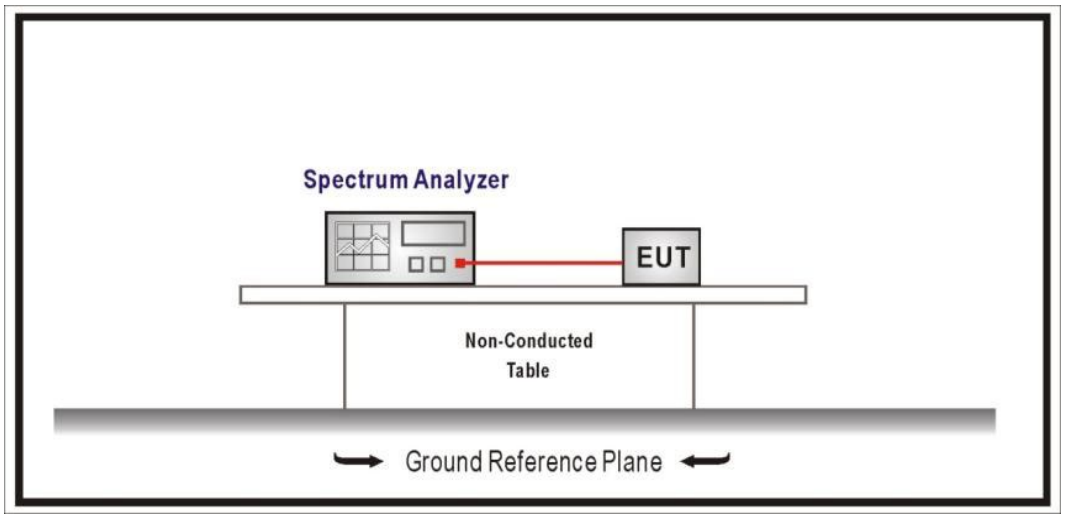
Connection Diagram



Signal Cable Type		Brand Name	Model No.	Signal cable Description
A	Power Cable	DEUTSCH	N/A	Non-Shielded, 1.9m
B	M12 to RJ45 Cable	Mouser	0985 YM57530 103	Non-Shielded, 1m
C	RJ45 Cable	DEKRA	SITE SETUP	Non-Shielded, 10m

3. 20dB Bandwidth

3.1. Test Setup



3.2. Test Limit

N/A

3.3. Test Procedures

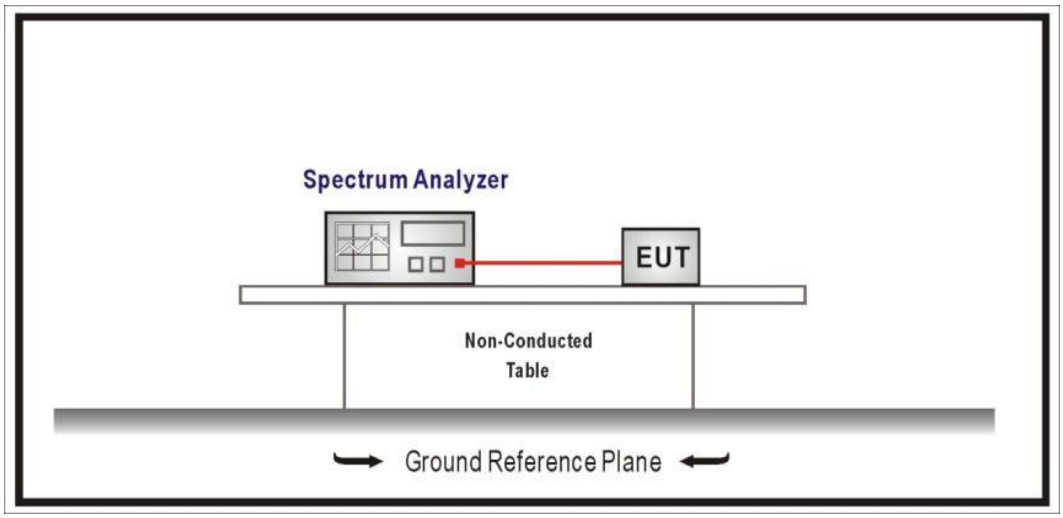
The EUT was setup according to ANSI C63.10: 2013 and tested according to FHSS test procedure of KDB 558074.

3.4. Test Result of 20dB Bandwidth

Refer as Appendix A

4. Carrier Frequency Separation

4.1. Test Setup



4.2. 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.

4.3. Test Procedures

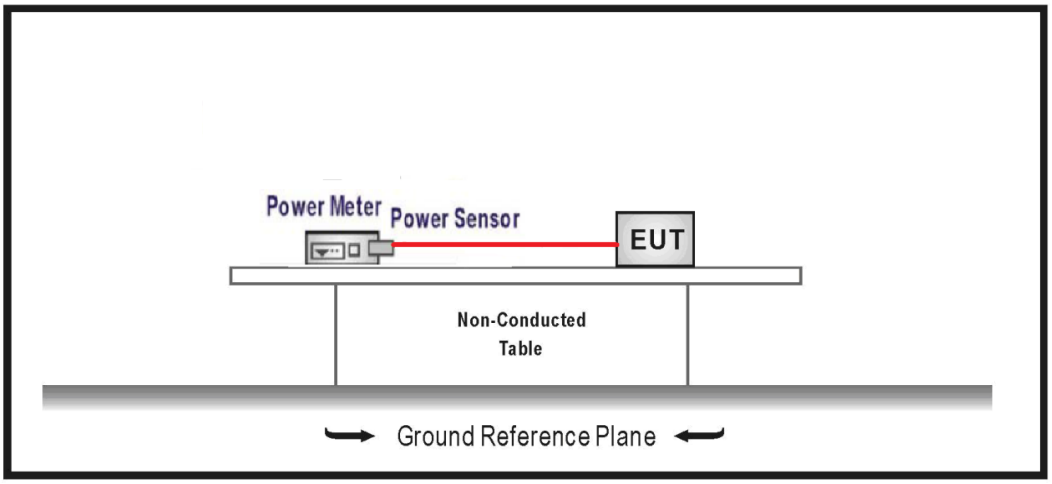
The EUT was setup according to ANSI C63.10: 2013 and tested according to FHSS test procedure of KDB 558074.

4.4. Test Result of Carrier Frequency Separation

Refer as Appendix B

5. Maximum Conducted Output Power

5.1. Test Setup



5.2. 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)

5.3. Test Procedures

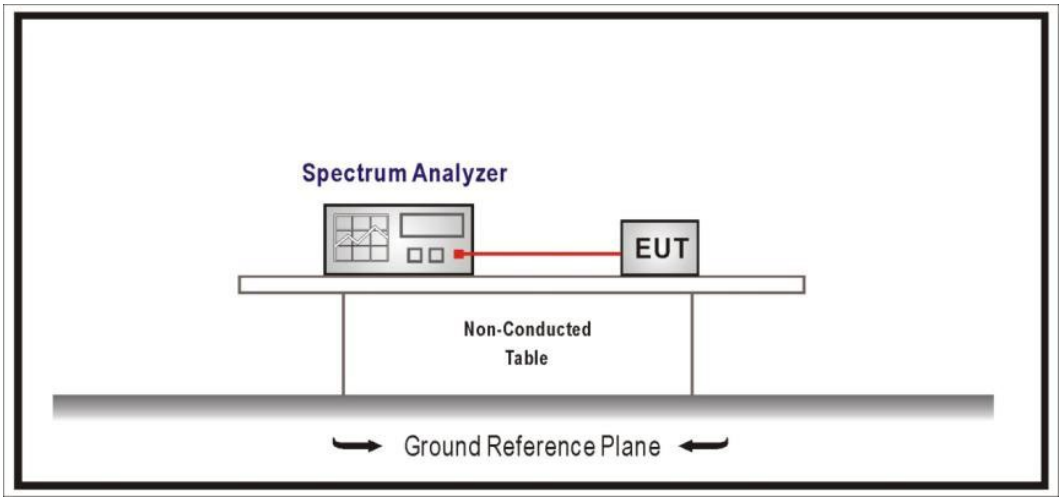
The EUT was setup according to ANSI C63.10: 2013 and tested according to FHSS test procedure of KDB 558074.

5.4. Test Result of Maximum Conducted Output Power

Refer as Appendix C

6. Number of Hopping Frequency

6.1. Test Setup



6.2. 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.

6.3. Test Procedure

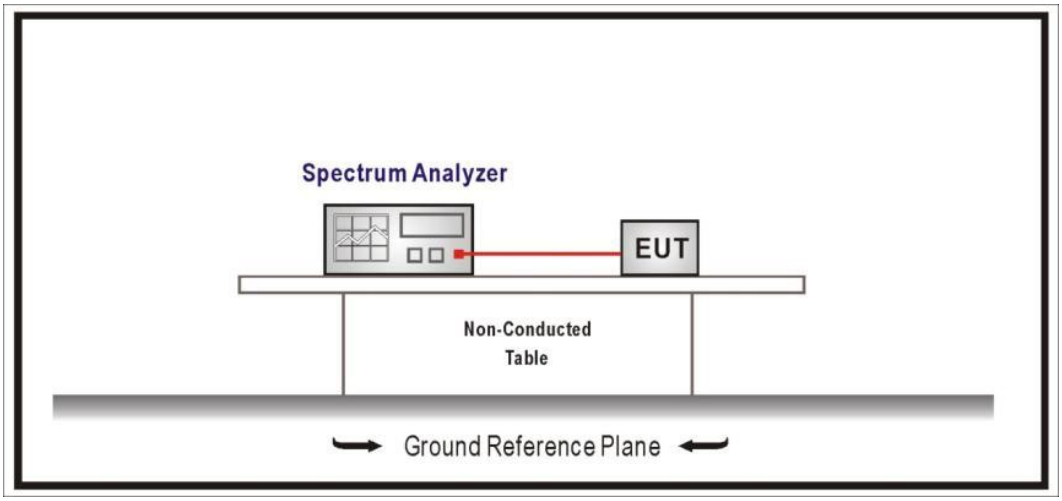
The EUT was setup according to ANSI C63.10: 2013 and tested according to FHSS test procedure of KDB 558074.

6.4. Test Result of Number of Hopping Frequency

Refer as Appendix D

7. Dwell Time

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.

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.

7.3. Test Procedure

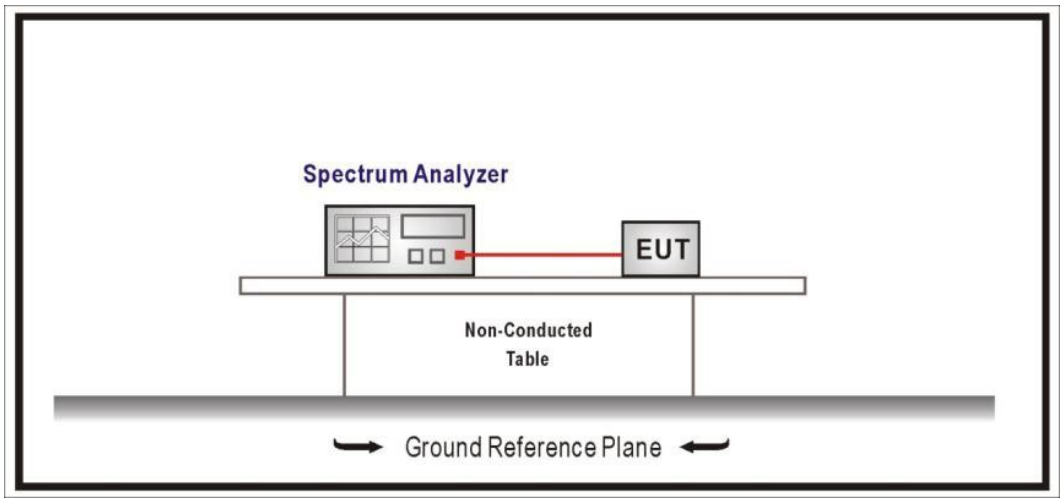
The EUT was setup according to ANSI C63.10: 2013 and tested according to FHSS test procedure of KDB 558074.

7.4. Test Result of Dwell Time

Refer as Appendix E

8. Antenna Port Conducted Emission

8.1. Test Setup



8.2. 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.

8.3. Test Procedure

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

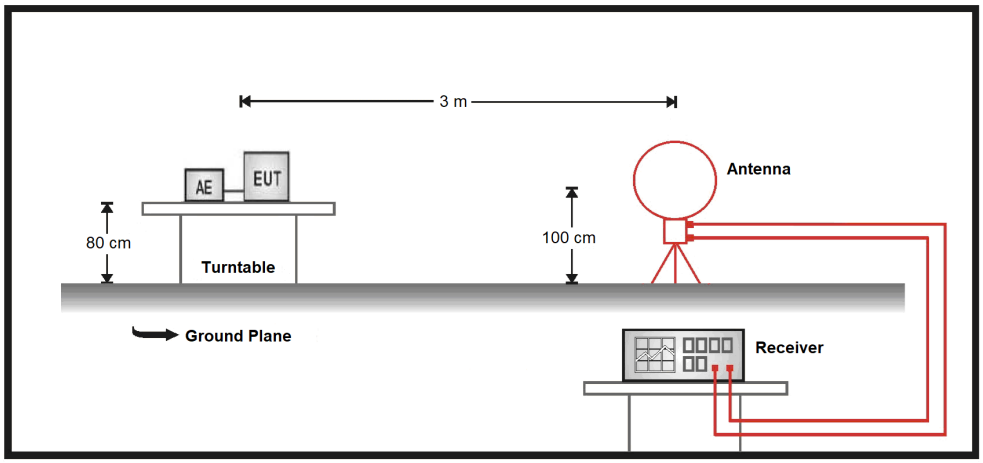
8.4. Test Result of Antenna Port Conducted Emission

Refer as Appendix F

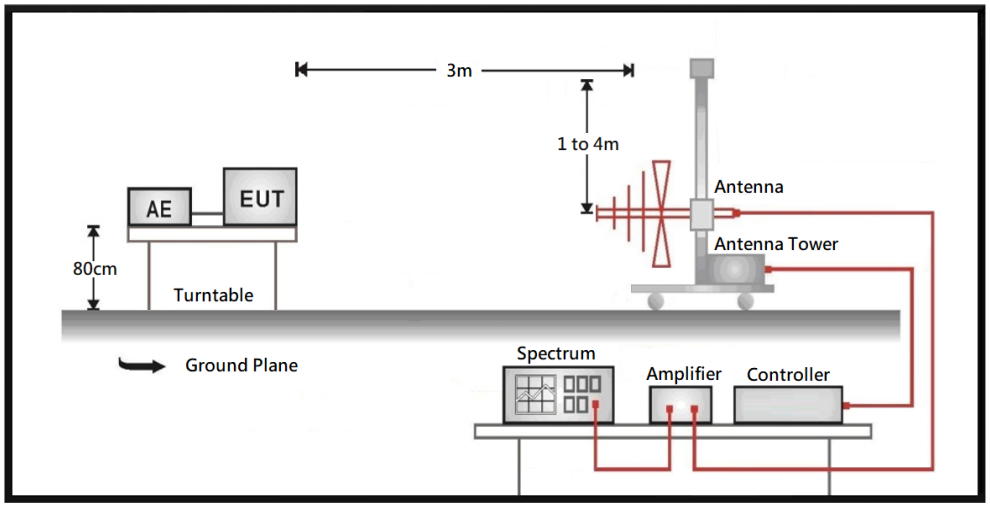
9. Transmitter Radiated Spurious Emission

9.1. Test Setup

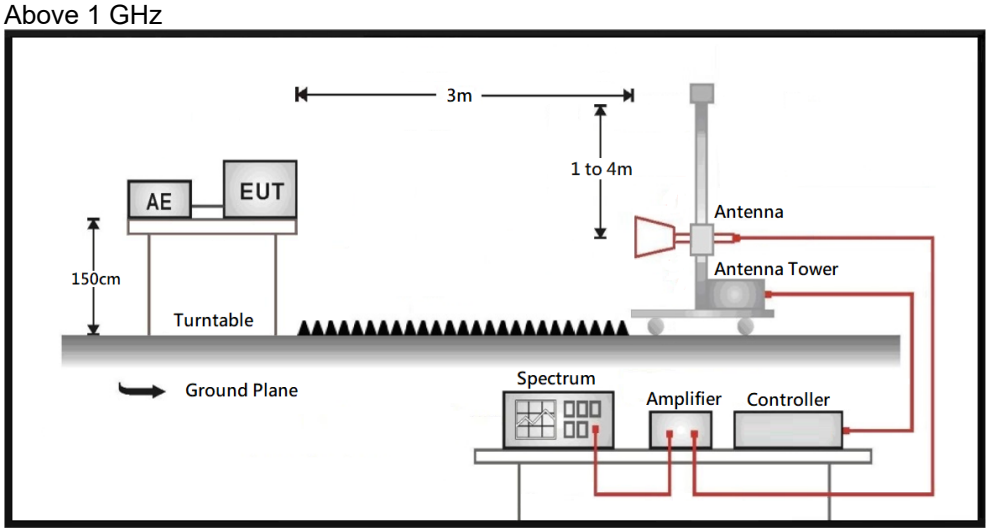
9 kHz ~ 30 MHz



30 MHz ~ 1 GHz



Above 1 GHz



9.2. 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.

9.3. 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 form 9 kHz(inculde 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.

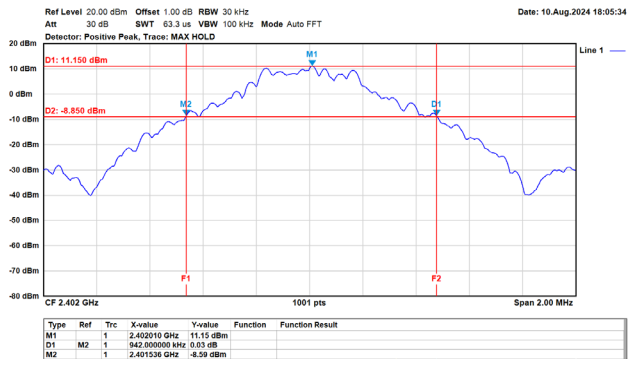
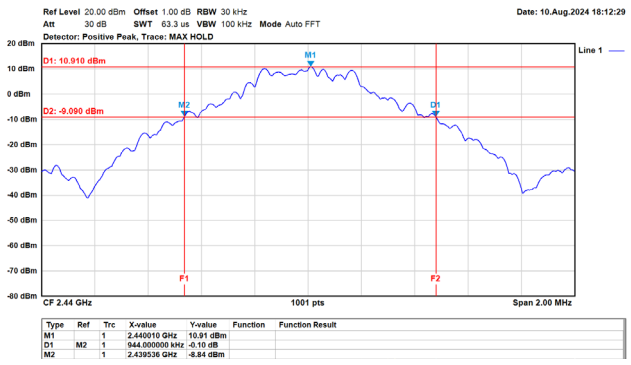
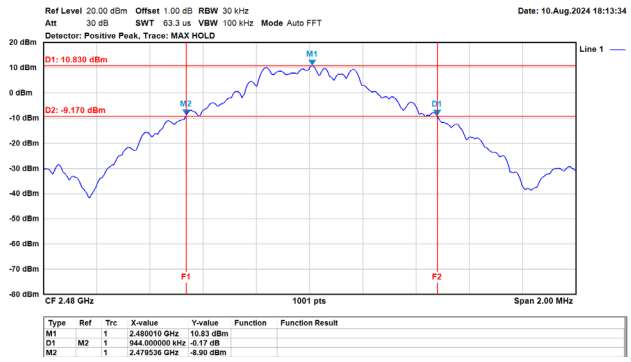
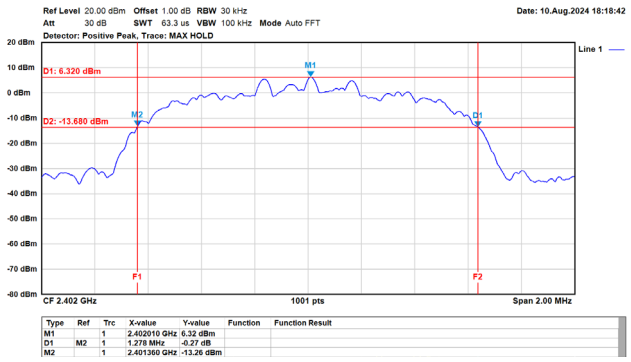
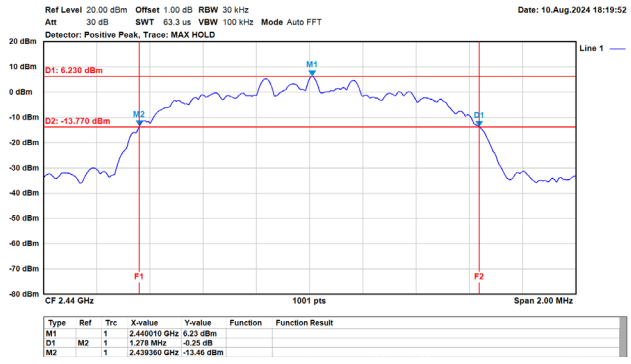
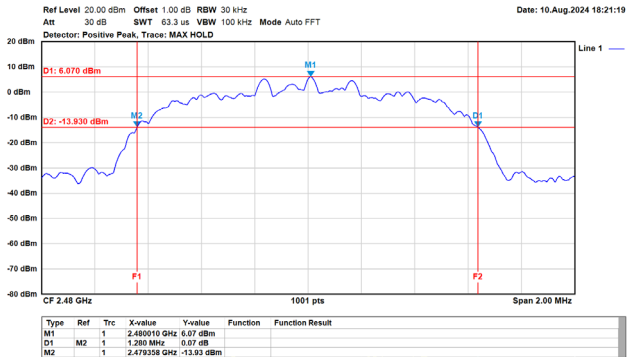
The bandwidth below 1 GHz setting on the field strength meter is 120 kHz and above 1 GHz is 1 MHz.

9.4. Test Result of Transmitter Radiated Spurious Emission

Refer as Appendix G

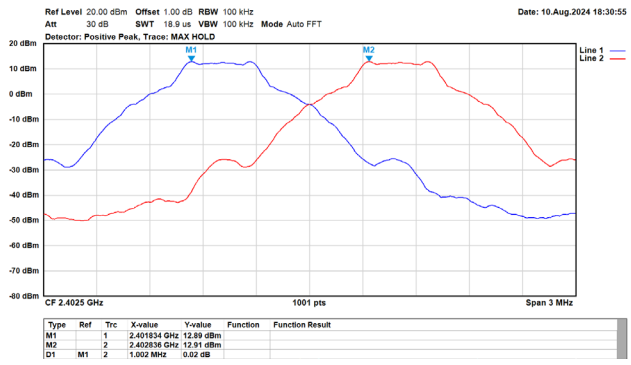
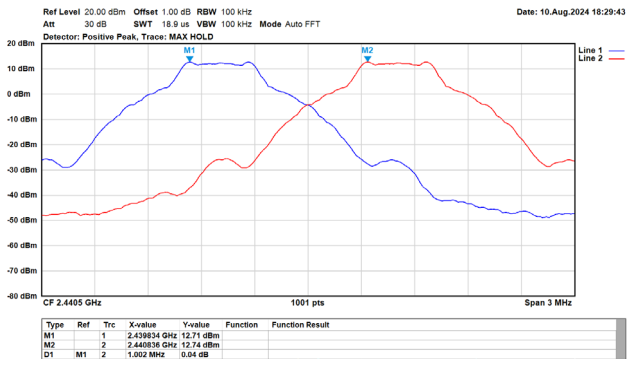
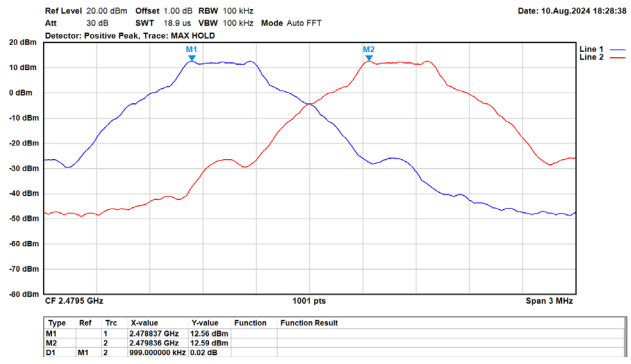
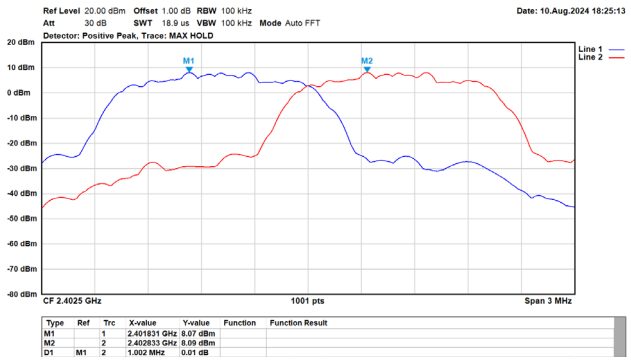
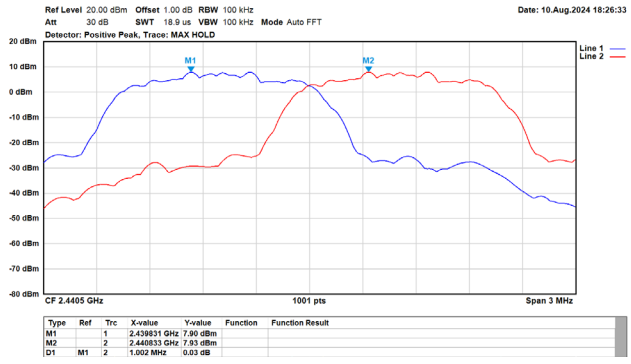
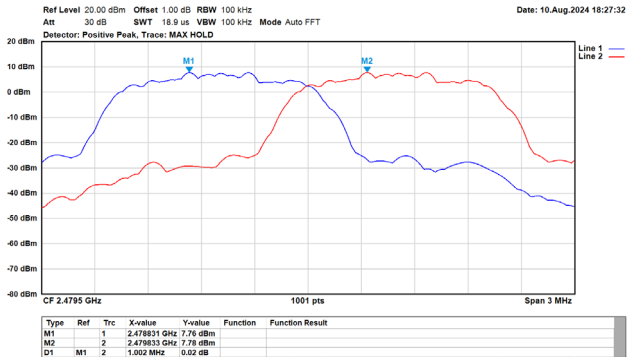
Appendix A. Test Result of 20dB Bandwidth

Modulation	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)
GFSK	2402	0.942	-
	2440	0.944	-
	2480	0.944	-
8-DPSK	2402	1.278	-
	2440	1.278	-
	2480	1.280	-

GFSK (DH5) / 2402 MHz	GFSK (DH5) / 2440 MHz
	
GFSK (DH5) / 2480 MHz	**8-DPSK (3DH5) / 2402 MHz**
	
8-DPSK (3DH5) / 2440 MHz	**8-DPSK (3DH5) / 2480 MHz**
	

Appendix B. Test Result of Carrier Frequency Separation

Modulation	Frequency (MHz)	Measure Level (MHz)	Limit (MHz)	Result
GFSK	2402	1.002	0.628	Pass
	2440	1.002	0.629	Pass
	2480	0.999	0.629	Pass
8-DPSK	2402	1.002	0.852	Pass
	2440	1.002	0.852	Pass
	2480	1.002	0.853	Pass

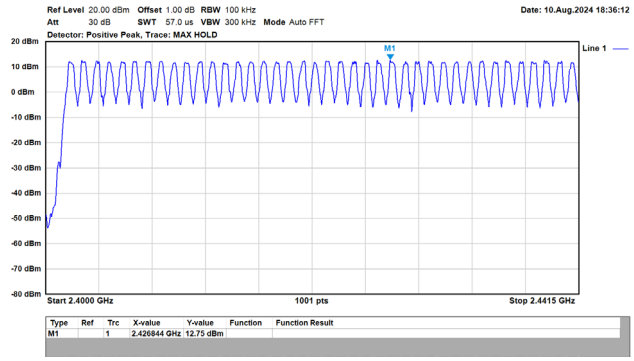
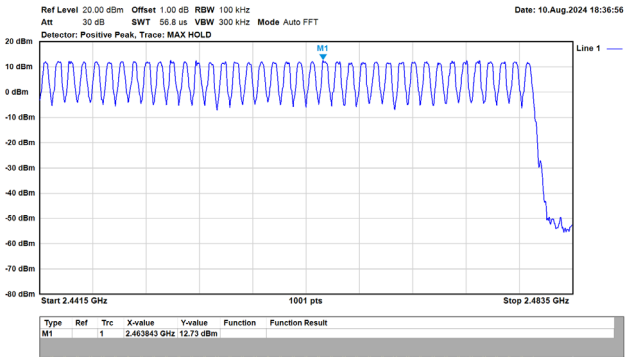
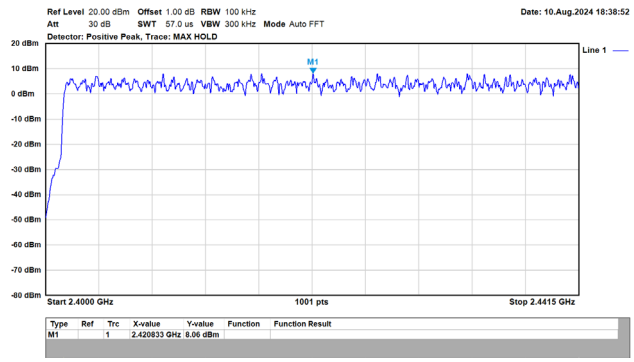
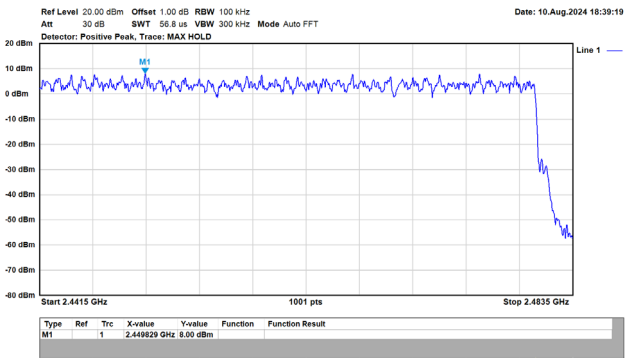
GFSK (DH5) / 2402 MHz	GFSK (DH5) / 2440 MHz
	
GFSK (DH5) / 2480 MHz	**8-DPSK (3DH5) / 2402 MHz**
	
8-DPSK (3DH5) / 2440 MHz	**8-DPSK (3DH5) / 2480 MHz**
	

Appendix C. Test Result of Maximum Conducted Output Power

Modulation	Frequency (MHz)	Maximum Conducted Peak Output Power (dBm)	Limit (dBm)	Result
GFSK	2402	12.86	20.97	Pass
	2440	12.68	20.97	Pass
	2480	12.66	20.97	Pass
8-DPSK	2402	9.99	20.97	Pass
	2440	9.91	20.97	Pass
	2480	9.84	20.97	Pass

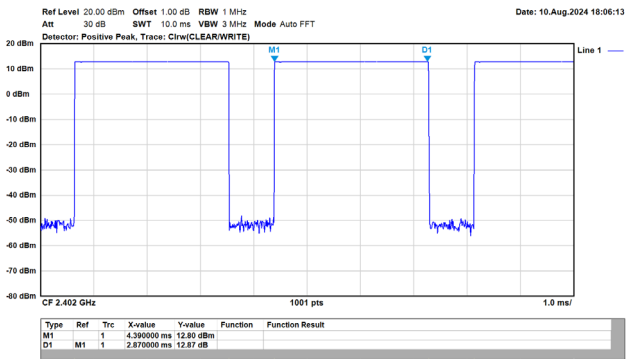
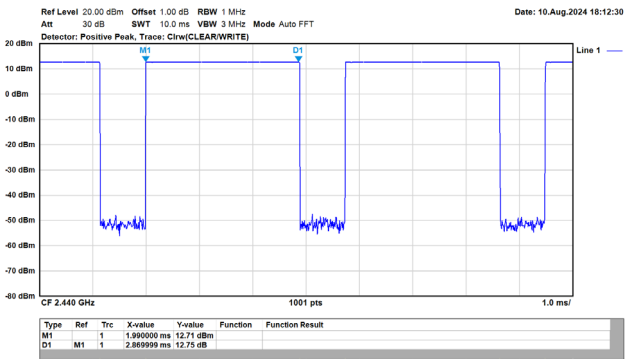
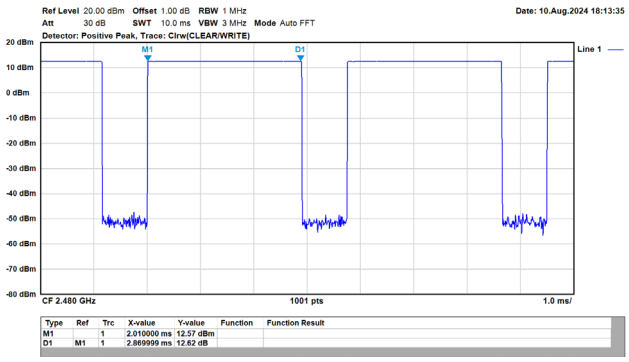
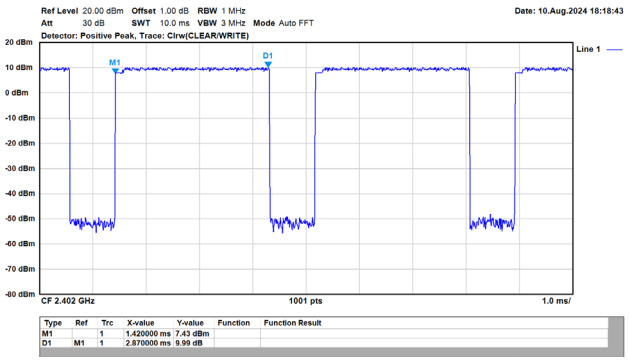
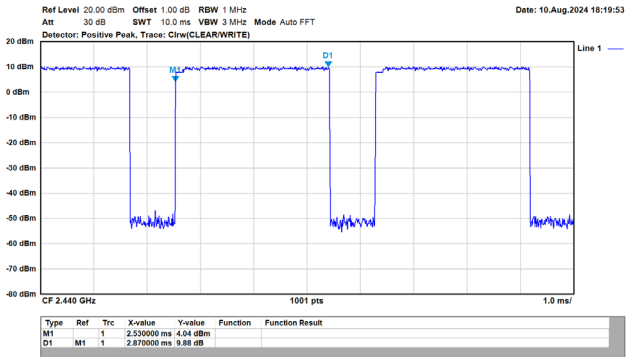
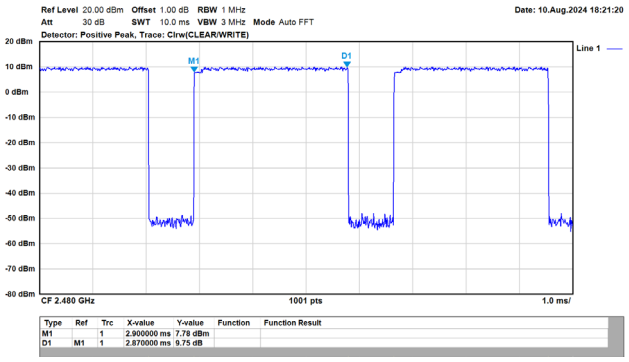
Appendix D. Test Result of Number of Hopping Frequency

Frequency Range (MHz)	Measure Level (Channels)	Limit (Channels)
2402.0 ~ 2480.0	79	≧ 75

GFSK (DH5) / 2402 MHz	GFSK (DH5) / 2480 MHz
	
8DPSK (3DH5) / 2402 MHz	**8DPSK (3DH5) / 2480 MHz**
	

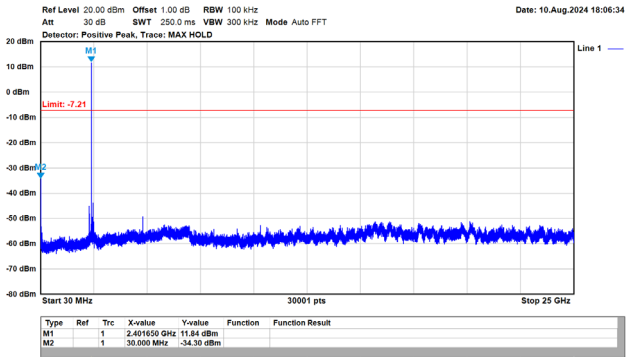
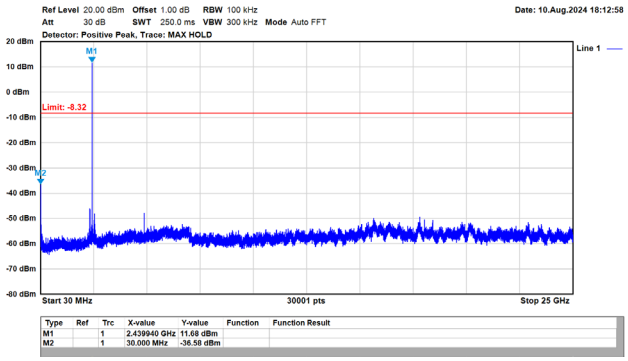
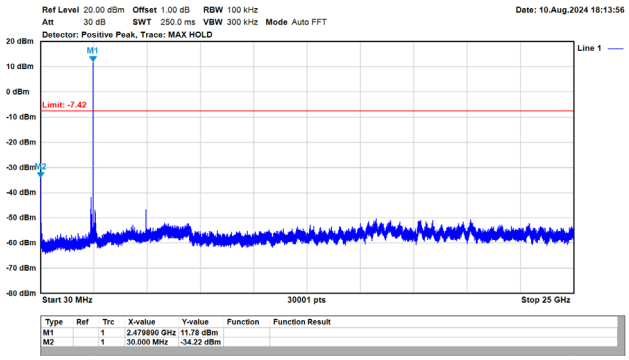
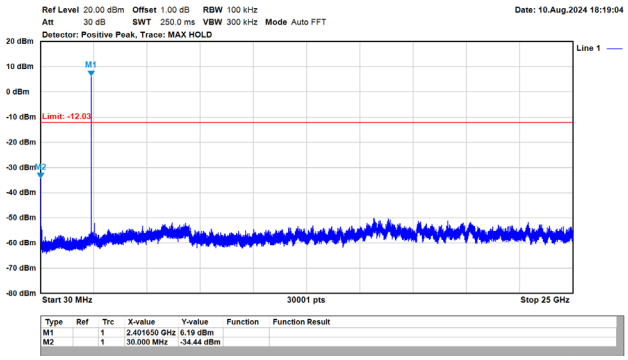
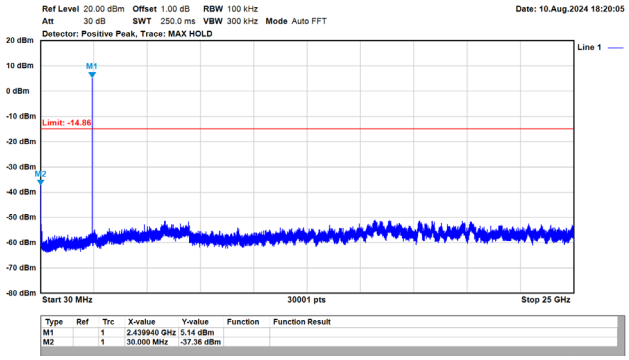
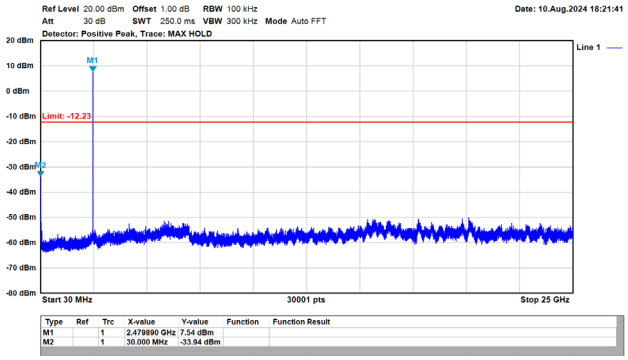
Appendix E. Test Result of Dwell Time

Modulation	Occupancy Time of Frequency Hopping System
GFSK	A) 2402 MHz Test Time Period: 0.4*79=31.60 sec, Time slot length : 2.870 ms = 0.002870 sec
	Dwell Time: 0.002870 *(266.67/79)*31.60 = 0.306 sec
	B) 2441 MHz Test Time Period: 0.4*79=31.60 sec, Time slot length : 2.869 ms = 0.002869 sec
	Dwell Time: 0.002869 *(266.67/79)*31.60 = 0.306 sec
	C) 2480 MHz Test Time Period: 0.4*79=31.60 sec, Time slot length : 2.869 ms = 0.002869 sec
	Dwell Time: 0.002869 *(266.67/79)*31.60 = 0.306 sec
8-DPSK	A) 2402 MHz Test Time Period: 0.4*79=31.60 sec, Time slot length : 2.870 ms = 0.002870 sec
	Dwell Time: 0.002870 *(266.67/79)*31.60 = 0.306 sec
	B) 2441 MHz Test Time Period: 0.4*79=31.60 sec, Time slot length : 2.870 ms = 0.002870 sec
	Dwell Time: 0.002870 *(266.67/79)*31.60 = 0.306 sec
	C) 2480 MHz Test Time Period: 0.4*79=31.60 sec, Time slot length : 2.870 ms = 0.002870 sec
	Dwell Time: 0.002870 *(266.67/79)*31.60 = 0.306 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。	

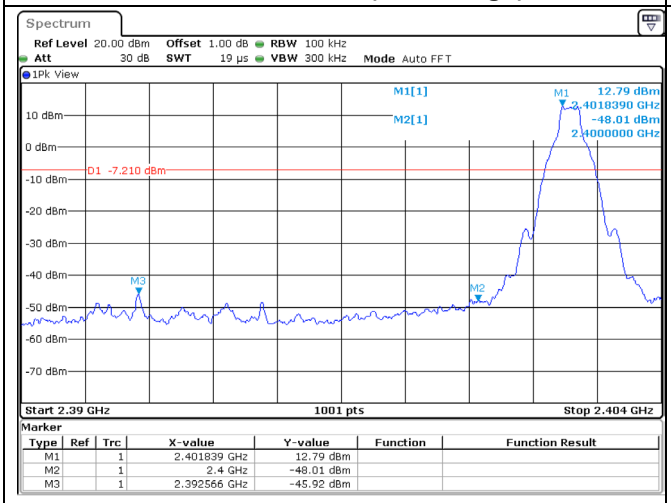
Hop rate / GFSK / 2402 MHz	Hop rate / GFSK / 2440 MHz
	
Hop rate / GFSK / 2480 MHz	**Hop rate / 8-DPSK / 2402 MHz**
	
Hop rate / 8-DPSK / 2440 MHz	**Hop rate / 8-DPSK / 2480 MHz**
	

Note: Dwell time＝time slot length * hop rate / number of hopping channels * period

Appendix F. Test Result of Antenna Port Conducted Emission

GFSK(DH5) / 2402 MHz	GFSK(DH5) / 2440 MHz
	
GFSK(DH5) / 2480 MHz	**8-DPSK (3DH5) / 2402 MHz**
	
8-DPSK (3DH5) / 2440 MHz	**8-DPSK (3DH5) / 2480 MHz**
	

GFSK / 2402 MHz (Band Edge)

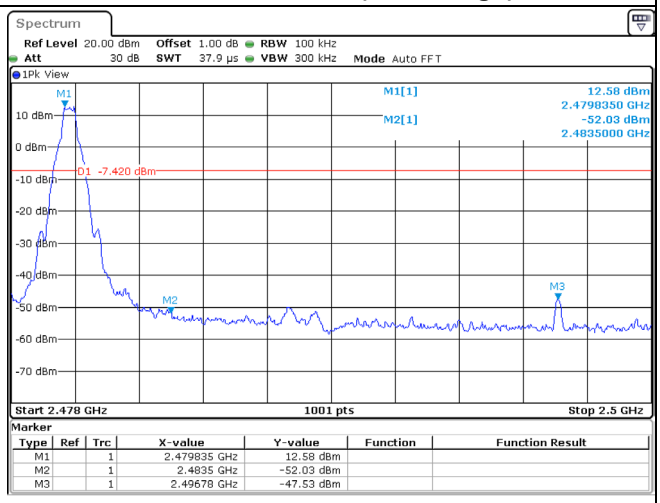


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.401839 GHz	12.79 dBm		
M2		1	2.4 GHz	-48.01 dBm		
M3		1	2.392566 GHz	-45.92 dBm		

Date: 10.AUG.2024 18:06:22

GFSK / 2480 MHz (Band Edge)

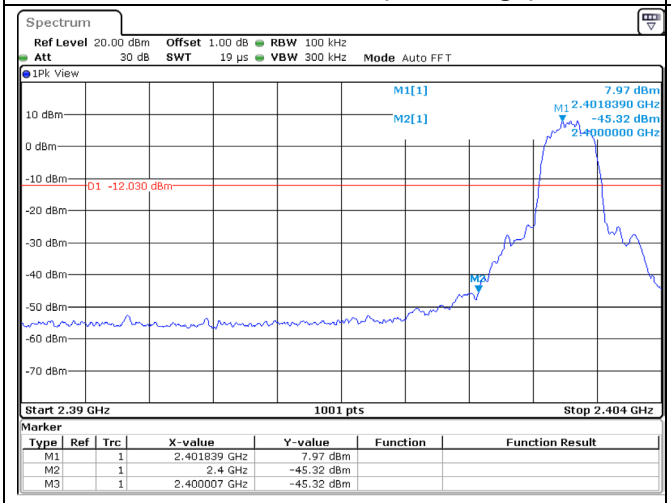


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.479835 GHz	12.58 dBm		
M2		1	2.4835 GHz	-52.03 dBm		
M3		1	2.49678 GHz	-47.53 dBm		

Date: 10.AUG.2024 18:13:44

8-DPSK / 2402 MHz (Band Edge)

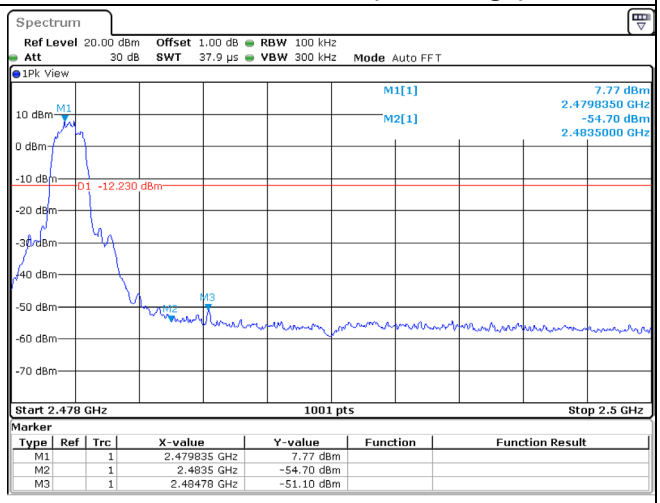


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.401839 GHz	7.97 dBm		
M2		1	2.4 GHz	-45.32 dBm		
M3		1	2.400007 GHz	-45.32 dBm		

Date: 10.AUG.2024 18:18:52

8-DPSK / 2480 MHz (Band Edge)



Marker

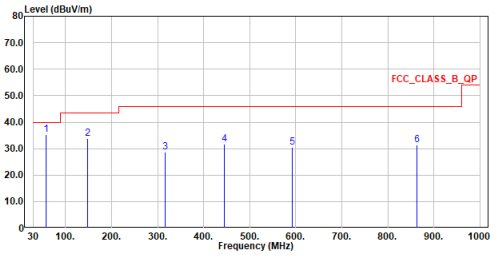
Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.479835 GHz	7.77 dBm		
M2		1	2.4835 GHz	-54.70 dBm		
M3		1	2.48478 GHz	-51.10 dBm		

Date: 10.AUG.2024 18:21:29

Appendix G. Test Result of Transmitter Radiated Spurious Emission

30 MHz ~ 1 GHz

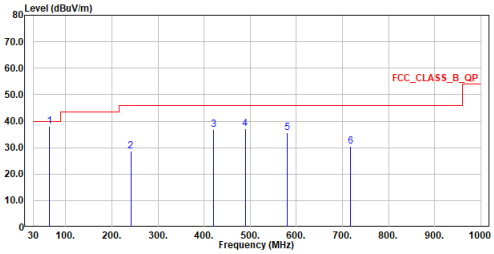
Site :HC-CB04
Condition :3m Horizontal
Mode :LF_DPSK_TX_2440MHz
Test By :Ling Chen



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	57.936	35.24	40.00	-4.76	38.08	-2.84	QP
2	148.098	33.76	43.50	-9.74	36.96	-3.20	QP
3	315.811	28.53	46.00	-17.47	30.73	-2.20	QP
4	445.500	31.82	46.00	-14.18	30.52	1.30	QP
5	591.727	30.57	46.00	-15.43	26.27	4.30	QP
6	862.794	31.32	46.00	-14.68	22.79	8.53	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_DPSK_TX_2440MHz
Test By :Ling Chen



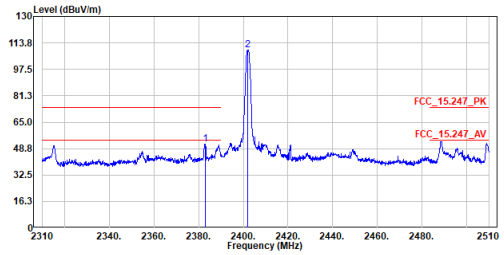
No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	64.581	38.06	40.00	-1.94	41.88	-3.82	QP
2	240.684	28.71	46.00	-17.29	33.40	-4.69	QP
3	420.813	36.91	46.00	-9.09	36.57	0.34	QP
4	488.956	37.02	46.00	-8.98	35.03	1.99	QP
5	580.039	35.71	46.00	-10.29	31.87	3.84	QP
6	717.100	30.52	46.00	-15.48	24.20	6.32	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

Band Edge and Harmonic

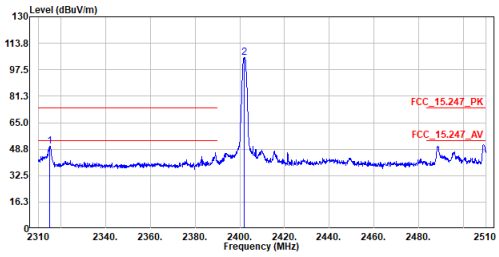
Site :HC-CB04
Condition :3m ,Horizontal
Mode :GFSK_TX_2402MHz
Test By :Ling Chen



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2382.900	51.60	74.00	-22.40	41.21	10.39	Peak
2	2401.900	109.56	------	------	99.12	10.44	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.

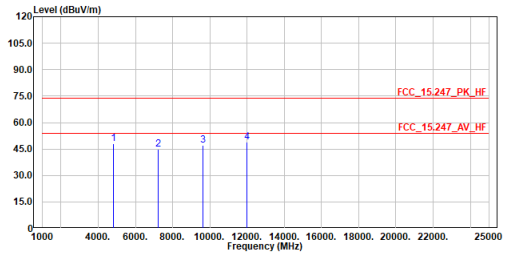
Site :HC-CB04
Condition :3m ,Vertical
Mode :GFSK_TX_2402MHz
Test By :Ling Chen



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2315.100	50.45	74.00	-23.55	40.23	10.22	Peak
2	2401.900	104.83	------	------	94.39	10.44	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.

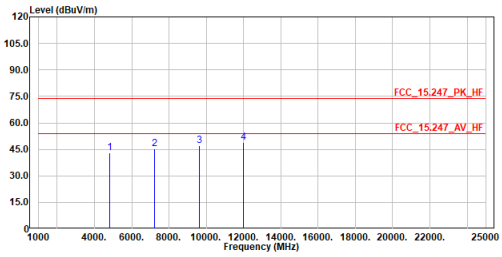
Site :HC-CB04
Condition :3m ,Horizontal
Mode :GFSK_TX_2402MHz
Test By :Cyril Chen



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	4804.000	48.17	74.00	-25.83	65.99	-17.82	Peak
2	7206.000	45.03	74.00	-28.97	57.86	-12.83	Peak
3	9608.000	46.97	74.00	-27.03	56.12	-9.15	Peak
4	12010.000	49.03	74.00	-24.97	54.87	-5.84	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.

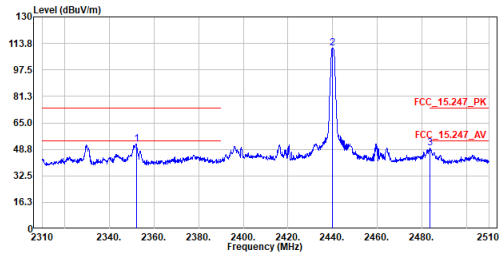
Site :HC-CB04
Condition :3m ,Vertical
Mode :GFSK_TX_2402MHz
Test By :Cyril Chen



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	4804.000	43.22	74.00	-30.78	61.04	-17.82	Peak
2	7206.000	45.17	74.00	-28.83	58.00	-12.83	Peak
3	9608.000	47.03	74.00	-26.97	56.18	-9.15	Peak
4	12010.000	49.05	74.00	-24.95	54.89	-5.84	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.

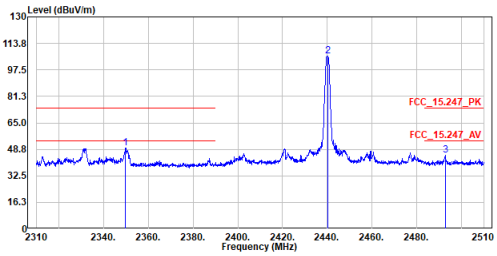
Site :HC-CB04
Condition :3m ,Horizontal
Mode :GFSK_TX_2440MHz
Test By :Ling Chen



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2352.100	51.90	74.00	-22.10	41.59	10.31	Peak
2	2439.900	110.86	------	------	100.33	10.53	Peak
3	2483.600	49.58	74.00	-24.42	38.94	10.64	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.

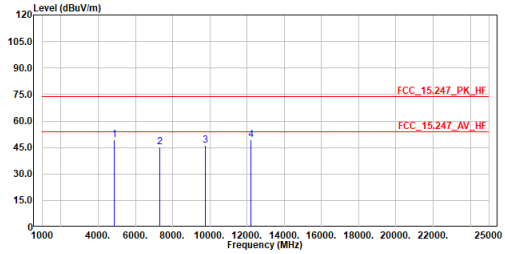
Site :HC-CB04
Condition :3m ,Vertical
Mode :GFSK_TX_2440MHz
Test By :Ling Chen



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2349.800	49.36	74.00	-24.64	39.05	10.31	Peak
2	2440.200	105.86	------	------	95.33	10.53	Peak
3	2492.800	44.97	74.00	-29.03	34.31	10.66	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.

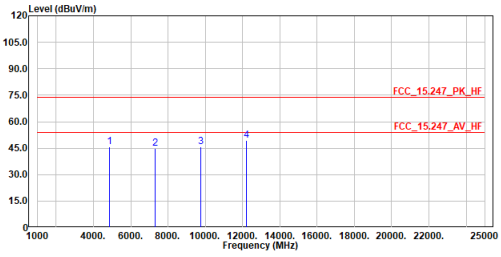
Site :HC-CB04
Condition :3m ,Horizontal
Mode :GFSK_TX_2440MHz
Test By :Cyril Chen



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	4880.000	49.30	74.00	-24.70	66.91	-17.61	Peak
2	7320.000	45.25	74.00	-28.75	57.89	-12.64	Peak
3	9760.000	46.11	74.00	-27.89	55.06	-8.95	Peak
4	12200.000	49.33	74.00	-24.67	54.97	-5.64	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.

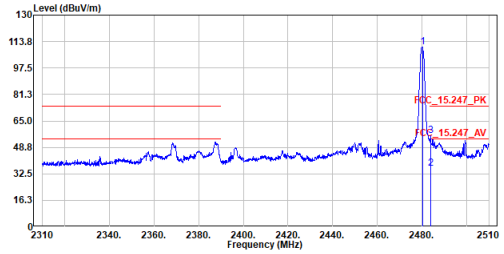
Site :HC-CB04
Condition :3m ,Vertical
Mode :GFSK_TX_2440MHz
Test By :Cyril Chen



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	4880.000	45.74	74.00	-28.26	63.35	-17.61	Peak
2	7320.000	45.00	74.00	-29.00	57.64	-12.64	Peak
3	9760.000	45.60	74.00	-28.40	54.55	-8.95	Peak
4	12200.000	49.49	74.00	-24.51	55.13	-5.64	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.

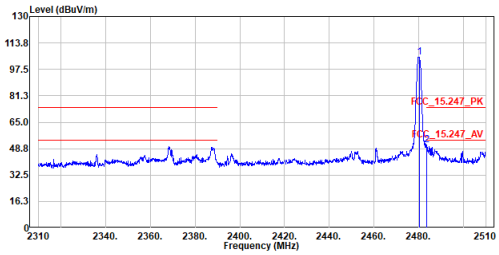
Site :HC-CB04
Condition :3m ,Horizontal
:RBW:1000 kHz VBW:3000 kHz
Mode :GFSK_TX_2480MHz
Test By :Ling Chen



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2480.200	110.18	------	------	99.55	10.63	Peak
2	2483.800	35.69	54.00	-18.31	25.04	10.65	Average
3	2483.800	55.69	74.00	-18.31	45.04	10.65	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.

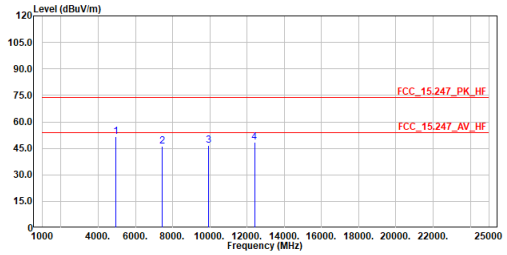
Site :HC-CB04
Condition :3m ,Vertical
Mode :GFSK_TX_2480MHz
Test By :Ling Chen



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2480.300	105.18	------	------	94.55	10.63	Peak
2	2483.700	51.04	74.00	-22.96	40.39	10.65	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.

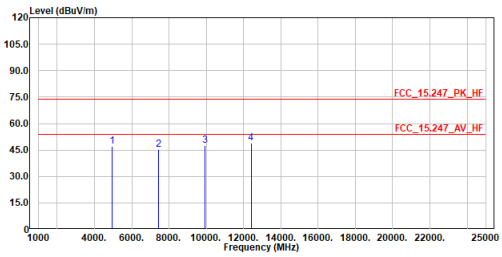
Site :HC-CB04
Condition :3m ,Horizontal
Mode :GFSK_TX_2480MHz
Test By :Cyril Chen



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	4960.000	51.52	74.00	-22.48	68.92	-17.40	Peak
2	7440.000	46.02	74.00	-27.98	58.46	-12.44	Peak
3	9920.000	46.72	74.00	-27.28	55.49	-8.77	Peak
4	12400.000	48.68	74.00	-25.32	54.11	-5.43	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.

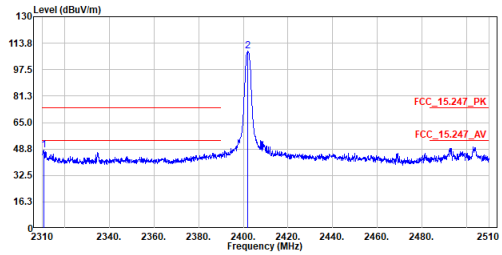
Site :HC-CB04
Condition :3m ,Vertical
Mode :GFSK_TX_2480MHz
Test By :Cyril Chen



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	4960.000	47.01	74.00	-26.99	64.41	-17.40	Peak
2	7440.000	45.28	74.00	-28.72	57.72	-12.44	Peak
3	9920.000	47.77	74.00	-26.23	56.54	-8.77	Peak
4	12400.000	48.96	74.00	-25.04	54.39	-5.43	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.

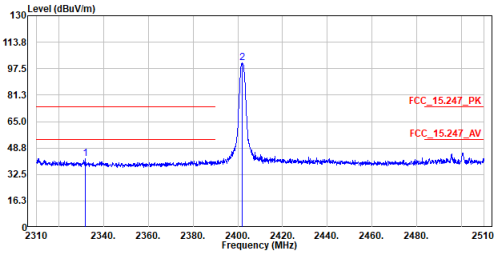
Site :HC-CB04
Condition :3m ,Horizontal
Mode :DPSK_TX_2402MHz
Test By :Ling Chen



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2310.600	48.03	74.00	-25.97	37.82	10.21	Peak
2	2402.100	108.76	------	------	98.32	10.44	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.

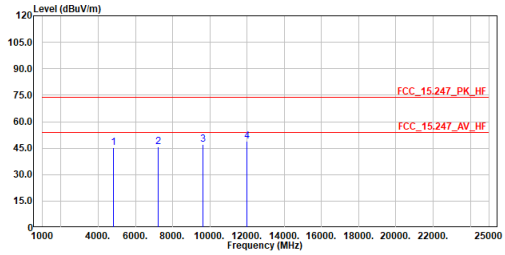
Site :HC-CB04
Condition :3m ,Vertical
Mode :DPSK_TX_2402MHz
Test By :Ling Chen



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2331.700	42.27	74.00	-31.73	32.00	10.27	Peak
2	2402.100	100.91	------	------	90.47	10.44	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.

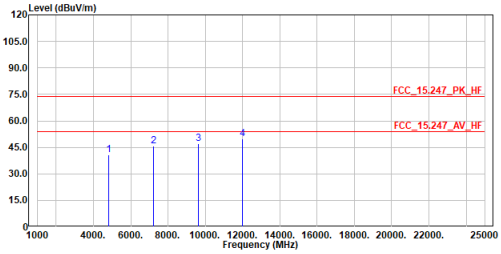
Site :HC-CB04
Condition :3m ,Horizontal
Mode :DPSK_TX_2402MHz
Test By :Cyril Chen



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	4804.000	45.40	74.00	-28.60	63.22	-17.82	Peak
2	7206.000	45.68	74.00	-28.32	58.51	-12.83	Peak
3	9608.000	47.02	74.00	-26.98	56.17	-9.15	Peak
4	12010.000	48.92	74.00	-25.08	54.76	-5.84	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.

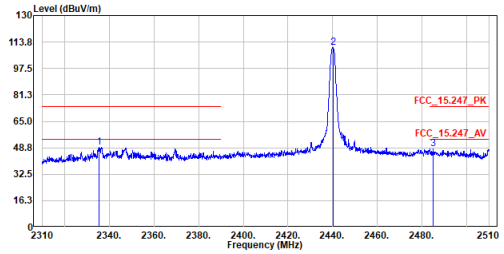
Site :HC-CB04
Condition :3m ,Vertical
Mode :DPSK_TX_2402MHz
Test By :Cyril Chen



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	4804.000	40.81	74.00	-33.19	58.63	-17.82	Peak
2	7206.000	45.66	74.00	-28.34	58.49	-12.83	Peak
3	9608.000	47.11	74.00	-26.89	56.26	-9.15	Peak
4	12010.000	49.67	74.00	-24.33	55.51	-5.84	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.

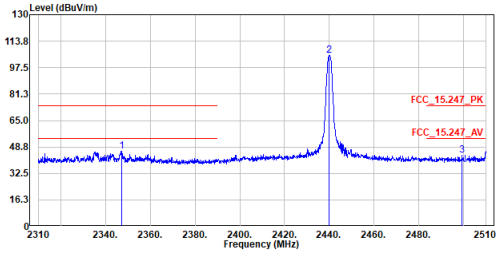
Site :HC-CB04
Condition :3m ,Horizontal
Mode :DPSK_TX_2440MHz
Test By :Ling Chen



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2335.500	49.17	74.00	-24.83	38.89	10.28	Peak
2	2440.100	110.25	------	------	99.72	10.53	Peak
3	2484.900	47.90	74.00	-26.10	37.25	10.65	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.

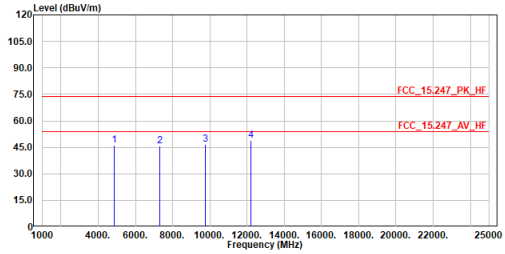
Site :HC-CB04
Condition :3m ,Vertical
Mode :DPSK_TX_2440MHz
Test By :Ling Chen



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2347.100	46.03	74.00	-27.97	35.72	10.31	Peak
2	2440.000	104.95	------	------	94.42	10.53	Peak
3	2499.300	43.64	74.00	-30.36	32.96	10.68	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.

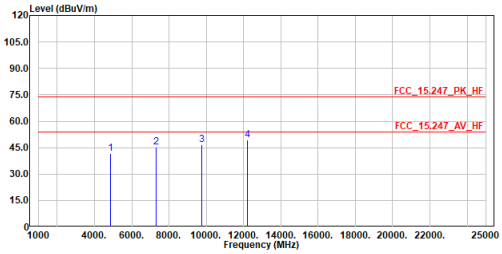
Site :HC-CB04
Condition :3m ,Horizontal
Mode :DPSK_TX_2440MHz
Test By :Cyril Chen



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	4880.000	46.22	74.00	-27.78	63.83	-17.61	Peak
2	7320.000	45.54	74.00	-28.46	58.18	-12.64	Peak
3	9760.000	46.62	74.00	-27.38	55.57	-8.95	Peak
4	12200.000	48.84	74.00	-25.16	54.48	-5.64	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.

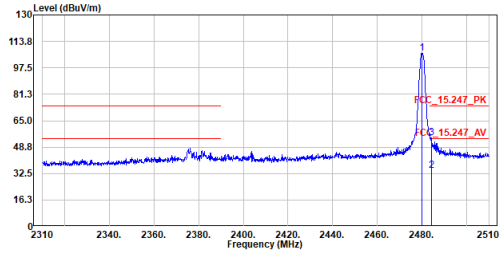
Site :HC-CB04
Condition :3m ,Vertical
Mode :DPSK_TX_2440MHz
Test By :Cyril Chen



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	4880.000	41.59	74.00	-32.41	59.20	-17.61	Peak
2	7320.000	45.07	74.00	-28.93	57.71	-12.64	Peak
3	9760.000	46.61	74.00	-27.39	55.56	-8.95	Peak
4	12200.000	49.29	74.00	-24.71	54.93	-5.64	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.

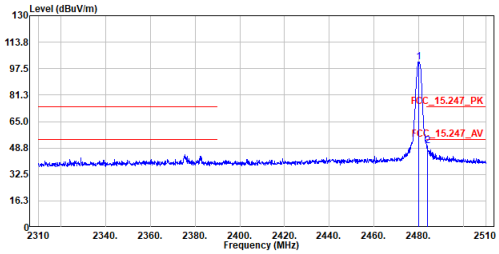
Site :HC-CB04
Condition :3m ,Horizontal
:RBW:1000 kHz VBW:3000 kHz
Mode :DPSK_TX_2480MHz
Test By :Ling Chen



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2480.100	106.62	------	------	95.99	10.63	Peak
2	2484.300	34.55	54.00	-19.45	23.90	10.65	Average
3	2484.300	54.55	74.00	-19.45	43.90	10.65	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.

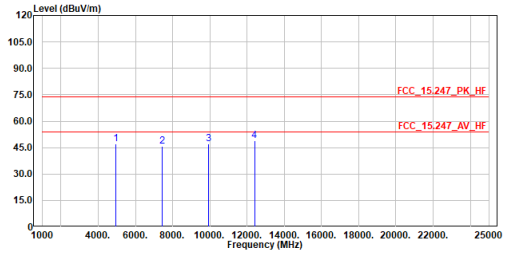
Site :HC-CB04
Condition :3m ,Vertical
Mode :DPSK_TX_2480MHz
Test By :Ling Chen



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2480.100	101.72	------	------	91.09	10.63	Peak
2	2483.800	50.09	74.00	-23.91	39.44	10.65	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.

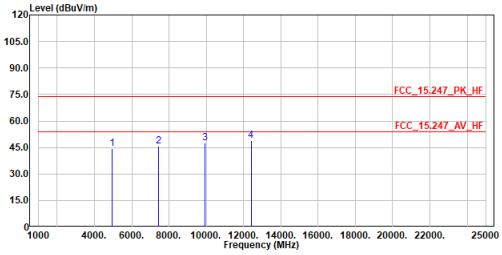
Site :HC-CB04
Condition :3m ,Horizontal
Mode :DPSK_TX_2480MHz
Test By :Cyril Chen



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	4960.000	47.27	74.00	-26.73	64.67	-17.40	Peak
2	7440.000	45.88	74.00	-28.12	58.32	-12.44	Peak
3	9920.000	47.04	74.00	-26.96	55.81	-8.77	Peak
4	12400.000	48.73	74.00	-25.27	54.16	-5.43	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 :DPSK_TX_2480MHz
Test By :Cyril Chen

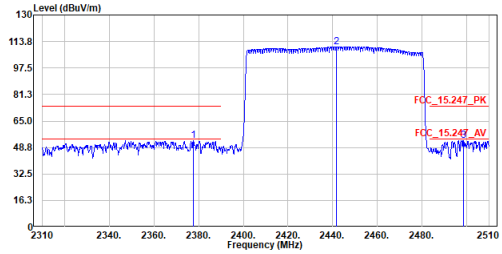


No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	4960.000	44.48	74.00	-29.52	61.88	-17.40	Peak
2	7440.000	45.58	74.00	-28.42	58.02	-12.44	Peak
3	9920.000	47.53	74.00	-26.47	56.30	-8.77	Peak
4	12400.000	49.08	74.00	-24.92	54.51	-5.43	Peak

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.

Band Edge – Hopping

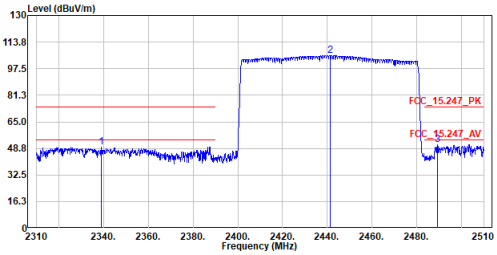
Site :HC-CB04
Condition :3m ,Horizontal
Mode :Hopping_GFSK
Test By :Ling Chen



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2377.600	52.80	74.00	-21.20	42.42	10.38	Peak
2	2441.800	110.61	------	------	100.07	10.54	Peak
3	2498.500	53.22	74.00	-20.78	42.54	10.68	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.

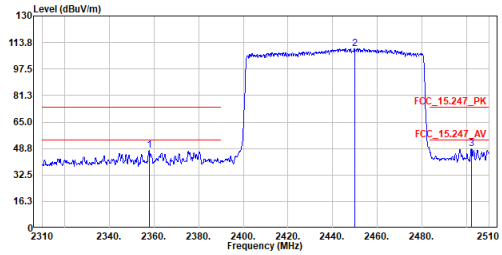
Site :HC-CB04
Condition :3m ,Vertical
Mode :Hopping_GFSK
Test By :Ling Chen



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2339.100	49.51	74.00	-24.49	39.23	10.28	Peak
2	2441.200	105.49	------	------	94.95	10.54	Peak
3	2489.400	51.11	74.00	-22.89	40.45	10.66	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.

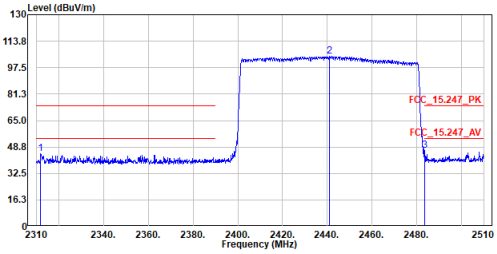
Site :HC-CB04
Condition :3m ,Horizontal
Mode :Hopping_DPSK
Test By :Ling Chen



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2357.800	47.34	74.00	-26.66	37.01	10.33	Peak
2	2449.900	110.02	------	------	99.47	10.55	Peak
3	2502.200	48.78	74.00	-25.22	38.09	10.69	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 :Hopping_DPSK
Test By :Ling Chen



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	2311.900	44.52	74.00	-29.48	34.30	10.22	Peak
2	2441.000	104.46	------	------	93.92	10.54	Peak
3	2483.500	46.61	74.00	-27.39	35.97	10.64	Peak

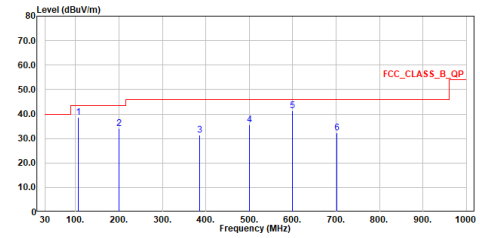
Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor
3. Over Limit = Level - Limit Line
4. The peak result complies with AVG limit, AVG result is deemed to comply with AVG limit.
5. The other emission levels were very low against the limit.

Appendix H. Test Result of Radiated Emissions Co-location

WWAN LTE + WiFi 2.4 GHz

30 MHz ~ 1 GHz:

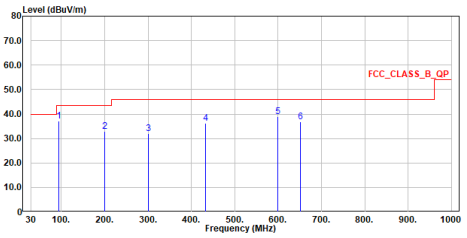
Site :HC-CB02
Condition :3m Horizontal
Mode :LF_WWAN LTE+WLAN_2.4G
Test by :Scott Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	106.679	38.58	43.50	-4.92	44.71	-6.13	QP
2	199.993	34.12	43.50	-9.38	40.13	-6.01	QP
3	385.020	31.45	46.00	-14.55	31.10	0.35	QP
4	500.014	35.51	46.00	-10.49	32.55	2.96	QP
5	600.021	41.46	46.00	-4.54	36.11	5.35	QP
6	701.483	32.18	46.00	-13.82	25.21	6.97	QP

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)
= 107 + 20log(3) – 104.8 = 11.8 dB
5. The other emission levels were very low against the limit.
6. The emission under 1GHz was not included since the emission levels are very low against the limit.

Site :HC-CB02
Condition :3m Vertical
Mode :LF_WWAN LTE+WLAN_2.4G
Test by :Scott Chang

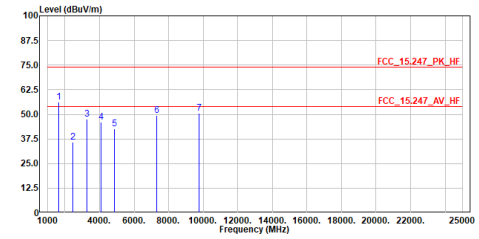


No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	94.311	37.03	43.50	-6.47	45.14	-8.11	QP
2	199.993	32.82	43.50	-10.68	38.83	-6.01	QP
3	300.000	32.07	46.00	-13.93	34.13	-2.06	QP
4	432.744	36.10	46.00	-9.90	34.46	1.64	QP
5	600.021	38.89	46.00	-7.11	33.54	5.35	QP
6	650.703	36.91	46.00	-9.09	30.69	6.22	QP

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)
= 107 + 20log(3) – 104.8 = 11.8 dB
5. The other emission levels were very low against the limit.
6. The emission under 1GHz was not included since the emission levels are very low against the limit.

Above 1 GHz:

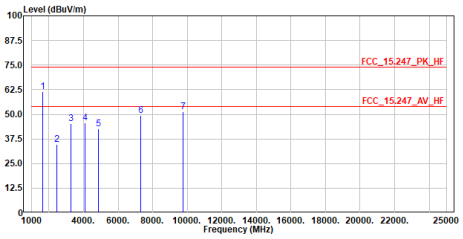
Site :HC-CB02
Condition :3m ,Horizontal
:RBW:1000 kHz VBW:3000 kHz
Mode :WLAN_2.4G+WWAN LTE
Test by :Gary Liao



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	1638.000	56.07	------	------	82.55	-26.48	Peak
2	2457.000	35.73	------	------	59.15	-23.42	Peak
3	3276.000	47.57	------	------	68.20	-20.63	Peak
4	4095.000	46.01	------	------	63.31	-17.30	Peak
5	4874.000	42.62	74.00	-31.38	57.10	-14.48	Peak
6	7311.000	49.44	74.00	-24.56	57.32	-7.88	Peak
7	9748.000	50.56	74.00	-23.44	54.84	-4.28	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.
6. "------" is WWAN signal, and the test result complies with limit -13dBm. Please refer to report number 2570523R-RFNAV02S-N & 2570523R-RFNAV02S-O for more detailed information.

Site :HC-CB02
Condition :3m ,Vertical
:RBW:1000 kHz VBW:3000 kHz
Mode :WLAN_2.4G+WWAN LTE
Test by :Gary Liao



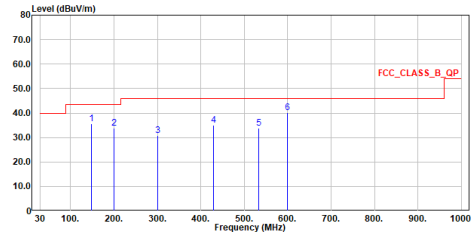
No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	1638.000	61.43	------	------	87.91	-26.48	Peak
2	2457.000	34.82	------	------	58.24	-23.42	Peak
3	3276.000	45.33	------	------	65.96	-20.63	Peak
4	4095.000	45.62	------	------	62.92	-17.30	Peak
5	4874.000	42.64	74.00	-31.36	57.12	-14.48	Peak
6	7311.000	49.56	74.00	-24.44	57.44	-7.88	Peak
7	9748.000	51.30	74.00	-22.70	55.58	-4.28	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.
6. "------" is WWAN signal, and the test result complies with limit -13dBm. Please refer to report number 2570523R-RFNAV02S-N & 2570523R-RFNAV02S-O for more detailed information.

WWAN LTE + WiFi 5 GHz

30 MHz ~ 1 GHz:

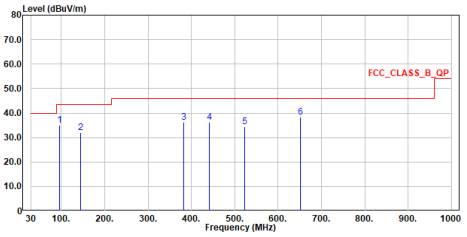
Site :HC-CB02
Condition :3m Horizontal
Mode :LF_WWAN LTE+WLAN_5G
Test by :Scott Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	148.146	35.63	43.50	-7.87	38.43	-2.80	QP
2	199.993	33.85	43.50	-9.65	39.86	-6.01	QP
3	300.000	30.85	46.00	-15.15	32.91	-2.06	QP
4	429.349	35.07	46.00	-10.93	33.56	1.51	QP
5	534.061	33.80	46.00	-12.20	30.24	3.56	QP
6	600.021	40.27	46.00	-5.73	34.92	5.35	QP

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)
= 107 + 20log(3) - 104.8 = 11.8 dB
5. The other emission levels were very low against the limit.
6. The emission under 1GHz was not included since the emission levels are very low against the limit.

Site :HC-CB02
Condition :3m Vertical
Mode :LF_WWAN LTE+WLAN_5G
Test by :Scott Chang

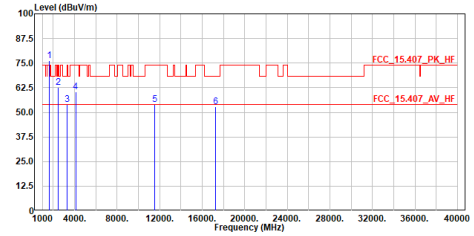


No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	95.766	34.92	43.50	-8.58	42.72	-7.80	QP
2	144.703	31.89	43.50	-11.61	34.84	-2.95	QP
3	382.401	36.29	46.00	-9.71	35.99	0.30	QP
4	441.232	36.32	46.00	-9.68	34.42	1.90	QP
5	522.663	34.27	46.00	-11.73	30.89	3.38	QP
6	650.703	38.46	46.00	-7.54	32.24	6.22	QP

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)
= 107 + 20log(3) - 104.8 = 11.8 dB
5. The other emission levels were very low against the limit.
6. The emission under 1GHz was not included since the emission levels are very low against the limit.

Above 1 GHz:

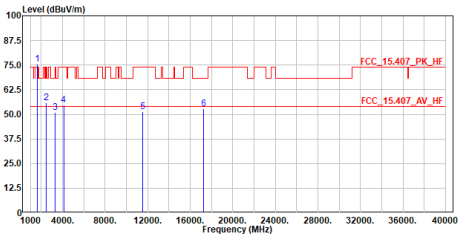
Site :HC-CB02
Condition :3m ,Horizontal
:RBW:1000 kHz VBW:3000 kHz
Mode :WLAN_5G+WWAN LTE
Test by :Gary Liao



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	1638.000	76.26	------	------	102.74	-26.48	Peak
2	2457.000	62.56	------	------	85.98	-23.42	Peak
3	3276.000	53.92	------	------	74.55	-20.63	Peak
4	4095.000	60.20	------	------	77.50	-17.30	Peak
5	11510.000	53.93	74.00	-20.07	55.67	-1.74	Peak
6	17265.000	52.73	68.20	-15.47	51.17	1.56	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.
6. "------" is WWAN signal, and the test result complies with limit -13dBm. Please refer to report number 2570523R-RFNAV02S-N & 2570523R-RFNAV02S-O for more detailed information.

Site :HC-CB02
Condition :3m ,Vertical
:RBW:1000 kHz VBW:3000 kHz
Mode :WLAN_5G+WWAN LTE
Test by :Gary Liao



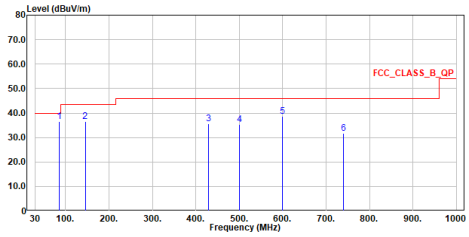
No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	1638.000	75.62	------	------	102.10	-26.48	Peak
2	2457.000	55.90	------	------	79.32	-23.42	Peak
3	3276.000	50.91	------	------	71.54	-20.63	Peak
4	4095.000	54.82	------	------	72.12	-17.30	Peak
5	11510.000	51.50	74.00	-22.50	53.24	-1.74	Peak
6	17265.000	52.75	68.20	-15.45	51.19	1.56	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.
6. "------" is WWAN signal, and the test result complies with limit -13dBm. Please refer to report number 2570523R-RFNAV02S-N & 2570523R-RFNAV02S-O for more detailed information.

WWAN LTE + Bluetooth

30 MHz ~ 1 GHz:

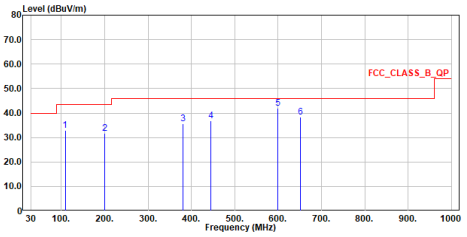
Site :HC-CB02
Condition :3m Horizontal
Mode :LF_WWAN LTE+WLAN_BT
Test by :Scott Chang



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	84.951	36.65	40.00	-3.35	44.53	-7.88	QP
2	145.236	36.40	43.50	-7.10	39.36	-2.96	QP
3	428.379	35.74	46.00	-10.26	34.26	1.48	QP
4	500.014	35.26	46.00	-10.74	32.30	2.96	QP
5	600.021	38.51	46.00	-7.49	33.16	5.35	QP
6	739.555	31.82	46.00	-14.18	24.03	7.79	QP

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)
= 107 + 20log(3) – 104.8 = 11.8 dB
5. The other emission levels were very low against the limit.
6. The emission under 1GHz was not included since the emission levels are very low against the limit.

Site :HC-CB02
Condition :3m Vertical
Mode :LF_WWAN LTE+WLAN_BT
Test by :Scott Chang

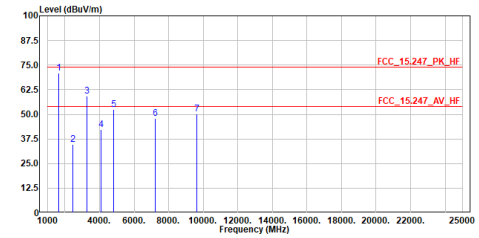


No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBm	dBm	dB	dBm	dB	
1	108.764	33.00	43.50	-10.50	38.76	-5.76	QP
2	199.993	31.83	43.50	-11.67	37.84	-6.01	QP
3	380.801	35.65	46.00	-10.35	35.39	0.26	QP
4	443.948	36.93	46.00	-9.07	34.91	2.02	QP
5	600.021	41.91	46.00	-4.09	36.56	5.35	QP
6	650.703	38.20	46.00	-7.80	31.98	6.22	QP

Note:
1. Level = Read Level + Factor
2. Factor = Antenna Factor + Cable Loss - Preamp Factor + Aux Factor
3. Over Limit = Level - Limit Line
4. Aux Factor = Convert E (dBuVm) to EIRP (dBm)
= 107 + 20log(3) – 104.8 = 11.8 dB
5. The other emission levels were very low against the limit.
6. The emission under 1GHz was not included since the emission levels are very low against the limit.

Above 1 GHz:

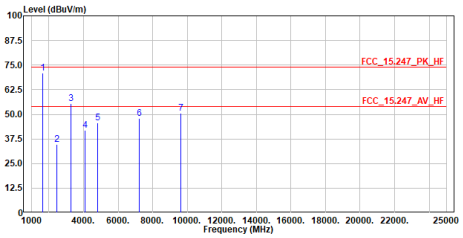
Site :HC-CB02
Condition :3m ,Horizontal
:RBW:1000 kHz VBW:3000 kHz
Mode :WLAN_BT+WWAN LTE
Test by :Gary Liao



No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	1638.000	70.90	------	------	97.38	-26.48	Peak
2	2457.000	34.85	------	------	58.27	-23.42	Peak
3	3276.000	59.37	------	------	80.00	-20.63	Peak
4	4095.000	42.17	------	------	59.47	-17.30	Peak
5	4804.000	52.42	74.00	-21.58	67.17	-14.75	Peak
6	7206.000	47.92	74.00	-26.08	55.91	-7.99	Peak
7	9608.000	50.26	74.00	-23.74	54.82	-4.56	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.
6. "------" is WWAN signal, and the test result complies with limit -13dBm. Please refer to report number 2570523R-RFNAV02S-N & 2570523R-RFNAV02S-O for more detailed information.

Site :HC-CB02
Condition :3m ,Vertical
:RBW:1000 kHz VBW:3000 kHz
Mode :WLAN_BT+WWAN LTE
Test by :Gary Liao



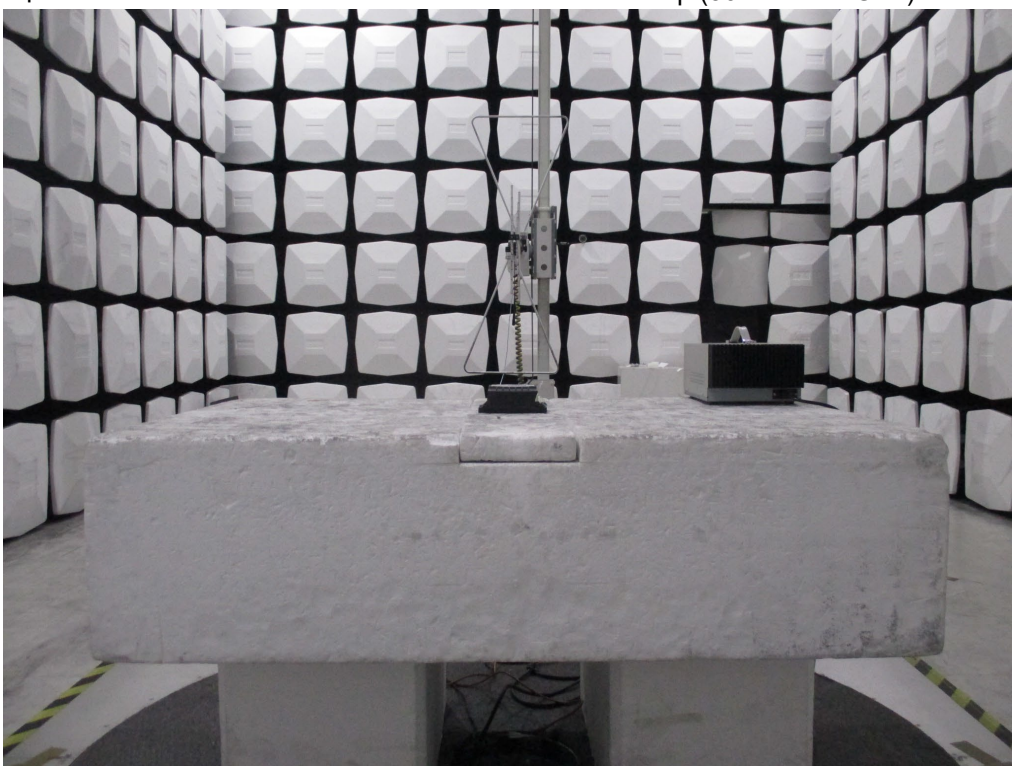
No.	Frequency	Level	Limit Line	Over Limit	Read Level	Factor	Remark
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB	
1	1638.000	70.95	------	------	97.43	-26.48	Peak
2	2457.000	34.80	------	------	58.22	-23.42	Peak
3	3276.000	55.56	------	------	76.19	-20.63	Peak
4	4095.000	41.77	------	------	59.07	-17.30	Peak
5	4804.000	45.82	74.00	-28.18	60.57	-14.75	Peak
6	7206.000	47.94	74.00	-26.06	55.93	-7.99	Peak
7	9608.000	50.48	74.00	-23.52	55.04	-4.56	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.
6. "------" is WWAN signal, and the test result complies with limit -13dBm. Please refer to report number 2570523R-RFNAV02S-N & 2570523R-RFNAV02S-O for more detailed information.

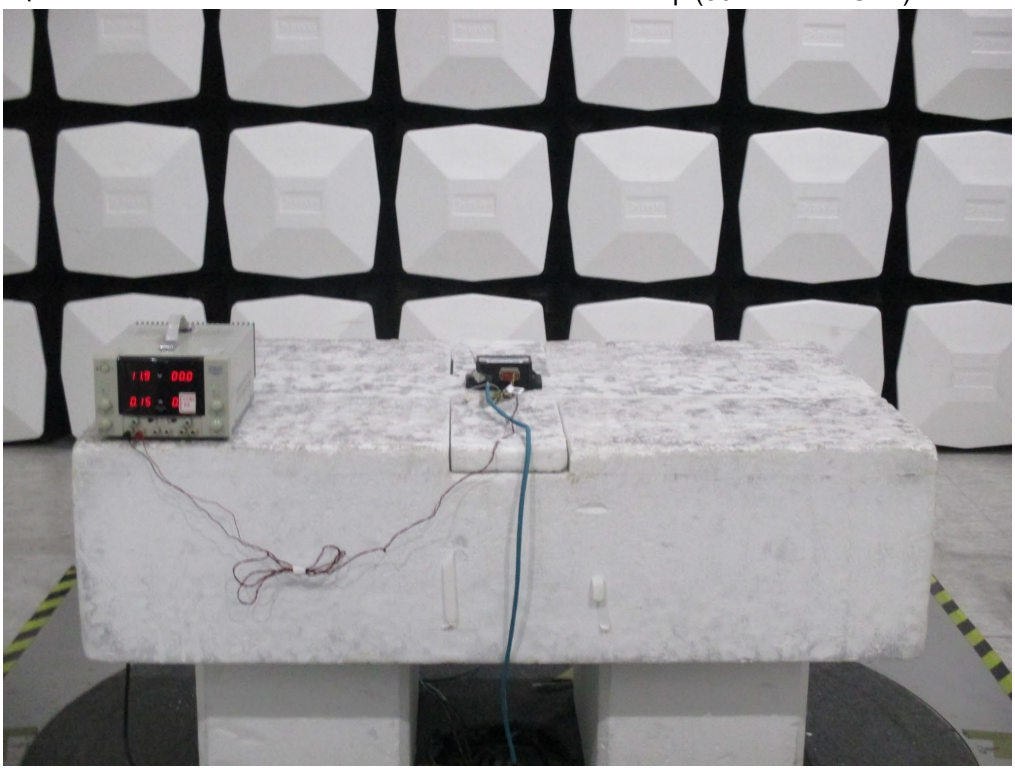
Appendix I. Test Setup Photograph

<Radiated Emission>

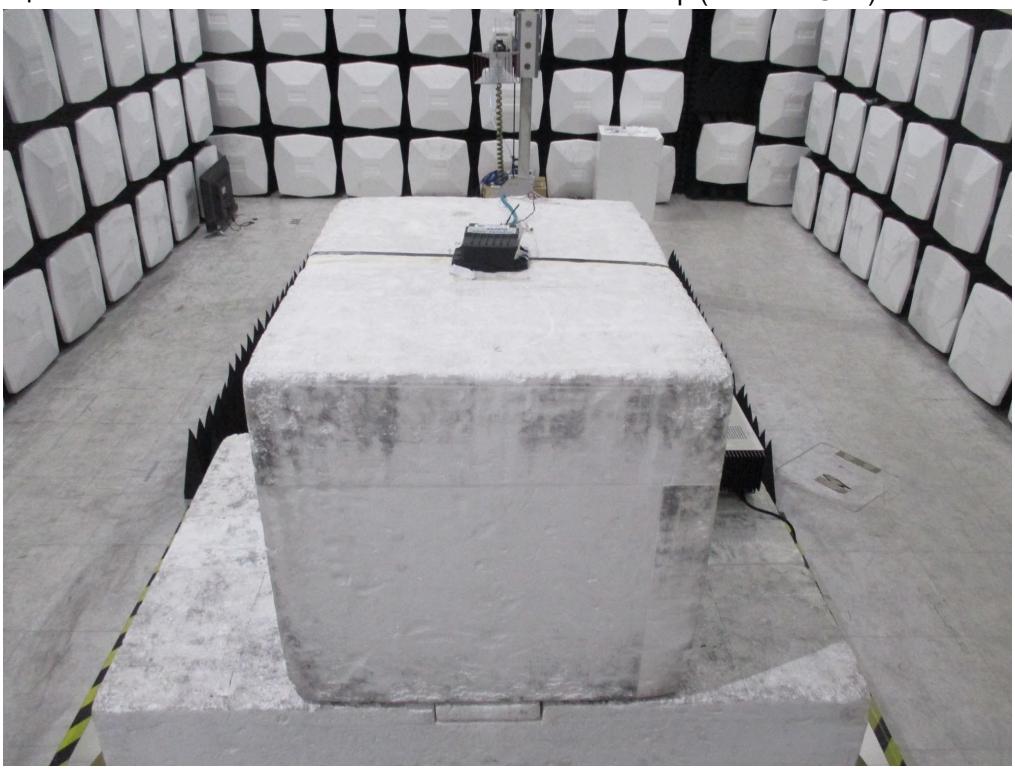
Description： Front View of Radiated Emission Test Setup (30 MHz ~ 1 GHz)



Description： Rear View of Radiated Emission Test Setup (30 MHz ~ 1 GHz)



Description： Front View of Radiated Emission Test Setup (Above 1 GHz)



Description： Rear View of Radiated Emission Test Setup (Above 1 GHz)