



FCC PART 15C TEST REPORT

No. 24T04Z103041-011

for

IMOO INTERNATIONAL PTE. LTD

Watch Phone

Model Name: W2432AO

FCC ID: 2A6PP-GLI32

with

Hardware Version: GLI32-M-0

Software Version: 1.0.0

Issued Date: 2025-5-12

Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of CTTL.

Test Laboratory:

CTTL, Telecommunication Technology Labs, CAICT

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REPORT HISTORY

Report Number	Revision	Description	Issue Date
24T04Z103041-011	Rev.0	1 st edition	2025-3-20
24T04Z103041-011	Rev.1	Add test plots of “Peak Output Power”	2025-5-12

Note: the latest revision of the test report supersedes all previous version.

CONTENTS

1. TEST LABORATORY	5
1.1. INTRODUCTION & ACCREDITATION	5
1.2. TESTING LOCATION	5
1.3. TESTING ENVIRONMENT	6
1.4. PROJECT DATA	6
1.5. SIGNATURE	6
2. CLIENT INFORMATION	7
2.1. APPLICANT INFORMATION	7
2.2. MANUFACTURER INFORMATION	7
3. EQUIPMENT UNDER TEST (EUT) AND ANCILLARY EQUIPMENT (AE)	8
3.1. ABOUT EUT	8
3.2. INTERNAL IDENTIFICATION OF EUT	8
3.3. INTERNAL IDENTIFICATION OF AE	8
3.4. NORMAL ACCESSORY SETTING	8
3.5. GENERAL DESCRIPTION	8
4. REFERENCE DOCUMENTS	9
4.1. DOCUMENTS SUPPLIED BY APPLICANT	9
4.2. REFERENCE DOCUMENTS FOR TESTING	9
5. TEST RESULTS	10
5.1. SUMMARY OF TEST RESULTS	10
5.2. STATEMENTS	10
6. TEST FACILITIES UTILIZED	11
7. MEASUREMENT UNCERTAINTY	12
7.1. PEAK OUTPUT POWER - CONDUCTED	12
7.2. FREQUENCY BAND EDGES - CONDUCTED	12
7.3. TRANSMITTER SPURIOUS EMISSION - CONDUCTED	12
7.4. TRANSMITTER SPURIOUS EMISSION - RADIATED	12
7.5. TIME OF OCCUPANCY (DWELL TIME)	12
7.6. 20DB BANDWIDTH	12
7.7. CARRIER FREQUENCY SEPARATION	13
7.8. AC POWERLINE CONDUCTED EMISSION	13
ANNEX A: EUT PARAMETERS	14
ANNEX B: DETAILED TEST RESULTS	15
B.1. MEASUREMENT METHOD	15
B.2. PEAK OUTPUT POWER	16
B.3. FREQUENCY BAND EDGES - CONDUCTED	22

B.4. TRANSMITTER SPURIOUS EMISSION - CONDUCTED	29
B.5. RADIATED UNWANTED EMISSION	54
B.6. TIME OF OCCUPANCY (DWEIL TIME).....	66
B.7. 20dB BANDWIDTH.....	77
B.8. CARRIER FREQUENCY SEPARATION	83
B.9. NUMBER OF HOPPING CHANNELS.....	86
B.10. AC POWERLINE CONDUCTED EMISSION	90
B.11. ANTENNA REQUIREMENT.....	94
ANNEX C: ACCREDITATION CERTIFICATE	95

1. Test Laboratory

1.1. Introduction &Accreditation

Telecommunication Technology Labs, CAICT is an ISO/IEC 17025:2017 accredited test laboratory under American Association for Laboratory Accreditation (A2LA) with lab code 7049.01, and is also an FCC accredited test laboratory (CN1349), and ISED accredited test laboratory (CAB identifier:CN0066). The detail accreditation scope can be found on A2LA website

1.2. Testing Location

Conducted testing Location: CTTL(huayuan North Road)

Address: No. 52, Huayuan North Road, Haidian District, Beijing,
P. R. China100191

Radiated testing Location: CTTL(huayuan North Road)

Address: No. 52, Huayuan North Road, Haidian District, Beijing,
P. R. China100191

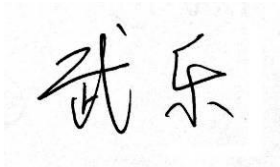
1.3. Testing Environment

Normal Temperature: 20-27℃
Relative Humidity: 20-50%

1.4. Project data

Testing Start Date: 2024-12-30
Testing End Date: 2025-3-20

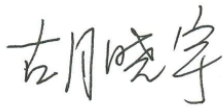
1.5. Signature



Wu Le
(Prepared this test report)



Sun Zhenyu
(Reviewed this test report)



Hu Xiaoyu
(Approved this test report)

2. Client Information

2.1. Applicant Information

Company Name: IMOO INTERNATIONAL PTE. LTD
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SINGAPORE(048619)
ContactCity: Timothy
Email: timothy@imoo.com
Telephone: 13537401347.00
Fax: /

2.2. Manufacturer Information

Company Name: IMOO INTERNATIONAL PTE. LTD
Address /Post: 9 RAFFLES PLACE #26-01 REPUBLIC PLAZA
SINGAPORE(048619)
ContactCity: Timothy
Email: timothy@imoo.com
Telephone: 13537401347.00
Fax: /

3. Equipment Under Test (EUT) and Ancillary Equipment (AE)

3.1. About EUT

Description	Watch Phone
Model Name	W2432AO
FCC ID	2A6PP-GLI32
Frequency Band	ISM 2400MHz~2483.5MHz
Type of Modulation	GFSK/ $\pi/4$ DQPSK/8DPSK
Number of Channels	79
Power Supply	3.87V DC by Battery
Antenna gain	-3.2dBi

3.2. Internal Identification of EUT

EUT ID*	SN or IMEI	HW Version	SW Version	Date of receipt
EUT1	867331070003125	GLI32-M-0	1.0.0	2025-01-07
EUT2	867331070003224	GLI32-M-0	1.0.0	2024-12-30

*EUT ID: is used to identify the test sample in the lab internally.

3.3. Internal Identification of AE

AE ID*	Description	Model	Manufacturer
AE1	Cable	XCP05V2	DONGGUAN IMOO TECHNOLOGY LIMITED

*AE ID: is used to identify the test sample in the lab internally.

3.4. Normal Accessory setting

Fully charged battery should be used during the test.

3.5. General Description

The Equipment Under Test (EUT) is a model of Watch Phone with integrated antenna. It consists of normal options: lithium battery and USB cable. Manual and specifications of the EUT were provided to fulfill the test. Samples undergoing test were selected by the Client.

4. Reference Documents

4.1. Documents supplied by applicant

EUT parameters, referring to Annex A for detailed information, is supplied by the client or manufacturer, which is the basis of testing.

4.2. Reference Documents for testing

The following documents listed in this section are referred for testing.

Reference	Title	Version
FCC Part15	FCC CFR 47, Part 15, Subpart C:	
	15.205 Restricted bands of operation;	
	15.209 Radiated emission limits, general requirements;	2024
	15.247 Operation within the bands 902–928MHz, 2400–2483.5 MHz, and 5725–5850 MHz.	
ANSI C63.10	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices	June,2013

5. Test Results

5.1. Summary of Test Results

Abbreviations used in this clause:

P Pass, The EUT complies with the essential requirements in the standard.

F Fail, The EUT does not comply with the essential requirements in the standard

NA Not Applicable, The test was not applicable

NP Not Performed, The test was not performed by CTTL

SUMMARY OF MEASUREMENT RESULTS	Sub-clause	Verdict
Peak Output Power	15.247 (b)(1)	P
Frequency Band Edges- Conducted	15.247 (d)	P
Transmitter Spurious Emission - Conducted	15.247 (d)	P
Radiated Unwanted Emission	15.247, 15.205, 15.209	P
Time of Occupancy (Dwell Time)	15.247 (a) (1)(iii)	P
20dB Bandwidth	15.247 (a)(1)	NA
Carrier Frequency Separation	15.247 (a)(1)	P
Number of hopping channels	15.247 (a)(iii)	P
AC Powerline Conducted Emission	15.107, 15.207	P
Antenna Requirement	15.203	P

Please refer to **ANNEX A** for detail.

The measurement is made according to ANSI C63.10.

5.2. Statements

CTTL has evaluated the test cases requested by the applicant /manufacturer as listed in section 5.1 of this report for the EUT specified in section 3 according to the standards or reference documents listed in section 4.2

6. Test Facilities Utilized

Conducted test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Period	Calibration Due date
1	Vector Signal Analyzer	FSQ26	100024	R&S	1 year	2026-03-09
2	Bluetooth Tester	CBT	100315	R&S	1 year	2026-03-08
2	Test Receiver	ESCI	100344	R&S	1 year	2025-04-01
3	LISN	ENV216	101200	R&S	1 year	2025-05-16
4	Shielding Room	S81	/	ETS-Lindgren	/	/

Radiated emission test system

No.	Equipment	Model	Serial Number	Manufacturer	Calibration Period	Calibration Due date
1	Test Receiver	ESW44	103023	R&S	1 year	2025-06-06
2	EMI Antenna	VULB 9163	01222	SCHWARZBECK	1 year	2025-09-11
3	EMI Antenna	3115	0016725	ETS-Lindgren	1 year	2025-04-11
4	EMI Antenna	3116	2663	ETS-Lindgren	1 year	2025-07-21

7. Measurement Uncertainty

7.1. Peak Output Power - Conducted

Measurement Uncertainty:

Measurement Uncertainty (k=2)	0.66dB
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7.2. Frequency Band Edges - Conducted

Measurement Uncertainty:

Measurement Uncertainty (k=2)	0.66dB
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7.3. Transmitter Spurious Emission - Conducted

Measurement Uncertainty:

Frequency Range	Uncertainty (k=2)
30 MHz ~ 8 GHz	1.22dB
8 GHz ~ 12.75 GHz	1.51dB
12.7GHz ~ 26 GHz	1.51dB

7.4. Transmitter Spurious Emission - Radiated

Measurement Uncertainty:

Frequency Range	Uncertainty(dBm) (k=2)
9kHz-30MHz	/
$30\text{MHz} \leq f \leq 1\text{GHz}$	4.72
$1\text{GHz} \leq f \leq 18\text{GHz}$	4.84
$18\text{GHz} \leq f \leq 40\text{GHz}$	5.12

7.5. Time of Occupancy (Dwell Time)

Measurement Uncertainty:

Measurement Uncertainty (k=2)	0.88ms
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7.6. 20dB Bandwidth

Measurement Uncertainty:

Measurement Uncertainty (k=2)	61.936Hz
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7.7. Carrier Frequency Separation

Measurement Uncertainty:

Measurement Uncertainty (k=2)	61.936Hz
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7.8. AC Powerline Conducted Emission

Measurement Uncertainty:

Measurement Uncertainty (k=2)	3.08dB
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ANNEX A: EUT parameters

Disclaimer: The antenna gain provided by the client may affect the validity of the measurement results in this report, and the client shall bear the impact and consequences arising therefrom.

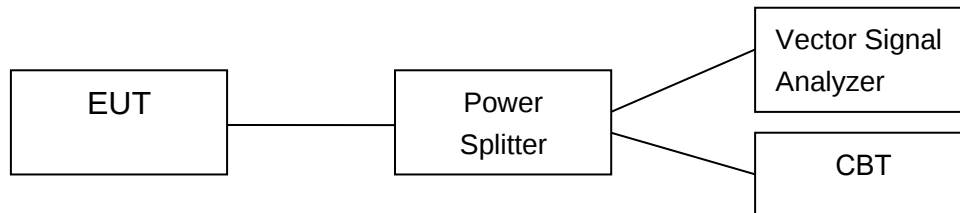
ANNEX B: Detailed Test Results

B.1. Measurement Method

B.1.1. Conducted Measurements

The measurement is made according to ANSI C63.10.

- 1). Connect the EUT to the test system correctly.
- 2). Set the EUT to the required work mode (Transmitter, receiver or transmitter & receiver).
- 3). Set the EUT to the required channel.
- 4). Set the EUT hopping mode (hopping or hopping off).
- 5). Set the spectrum analyzer to start measurement.
- 6). Record the values. Vector Signal Analyzer



B.1.2. Radiated Emission Measurements

The measurement is made according to ANSI C63.10

The radiated emission test is performed in semi-anechoic chamber. The EUT was placed on a non-conductive table with 80cm above the ground plane for measurement below 1GHz and 1.5m above the ground plane for measurement above 1GHz. The measurement antenna was placed at a distance of 3 meters from the EUT. The test is carried out on both vertical and horizontal polarization and only maximization result of both polarizations is kept. During the test, the turntable is rotated from 0° to 360° and the measurement antenna is moved from 1m to 4m to get the maximization result. The maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.

B.2. Peak Output Power

B.2.1. Peak Output Power – Conducted

Method of Measurement: See ANSI C63.10-clause 7.8.5

a) Use the following spectrum analyzer settings:

- Span: 6MHz
- RBW: 3MHz
- VBW: 3MHz
- Sweep time: 2.5ms
- Detector function: peak
- Trace: max hold

b) Allow trace to stabilize.

c) Use the marker-to-peak function to set the marker to the peak of the emission.

d) The indicated level is the peak output power.

Measurement Limit:

Standard	Limits	
FCC Part 15.247 (b)(1)	Bandwidth $\leq$ 1MHz	30dBm (1W)
	Bandwidth $>$ 1MHz	21dBm (125mW)

Measurement Results:

For GFSK

Channel	Ch 0 2402 MHz		Ch 39 2441 MHz		Ch 78 2480 MHz		Conclusion
Peak Output Power -Conducted (dBm)	Fig.1	1.83	Fig.2	3.23	Fig.3	2.52	P

For $\pi/4$ DQPSK

Channel	Ch 0 2402 MHz		Ch 39 2441 MHz		Ch 78 2480 MHz		Conclusion
Peak Output Power -Conducted (dBm)	Fig.4	1.78	Fig.5	3.12	Fig.6	2.52	P

For 8DPSK

Channel	Ch 0 2402 MHz		Ch 39 2441 MHz		Ch 78 2480 MHz		Conclusion
Peak Output Power -Conducted (dBm)	Fig.7	1.82	Fig.8	3.18	Fig.9	2.36	P

Conclusion: PASS

B.2.2. E.I.R.P.

The radiated E.I.R.P. is listed below:

Antenna gain = -3.2dBi

For GFSK

Channel	Ch 0 2402 MHz	Ch 39 2441 MHz	Ch 78 2480 MHz	Conclusion
E.I.R.P (dBm)	-1.37	0.03	-0.68	P

For $\pi/4$ DQPSK

Channel	Ch 0 2402 MHz	Ch 39 2441 MHz	Ch 78 2480 MHz	Conclusion
E.I.R.P (dBm)	-1.42	-0.08	-0.68	P

For 8DPSK

Channel	Ch 0 2402 MHz	Ch 39 2441 MHz	Ch 78 2480 MHz	Conclusion
E.I.R.P (dBm)	-1.38	-0.02	-0.84	P

Note: E.I.R.P. are calculated with the antenna gain.

Conclusion: PASS

Test graphs as below

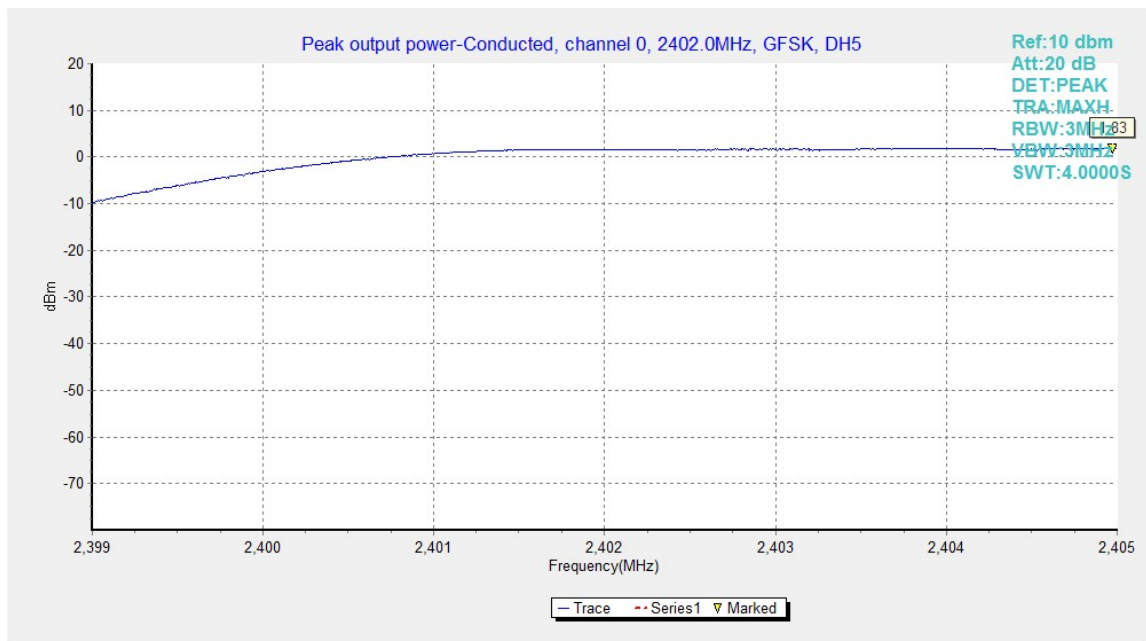


Fig.1. Peak Output Power -Conducted: GFSK, Channel 0,

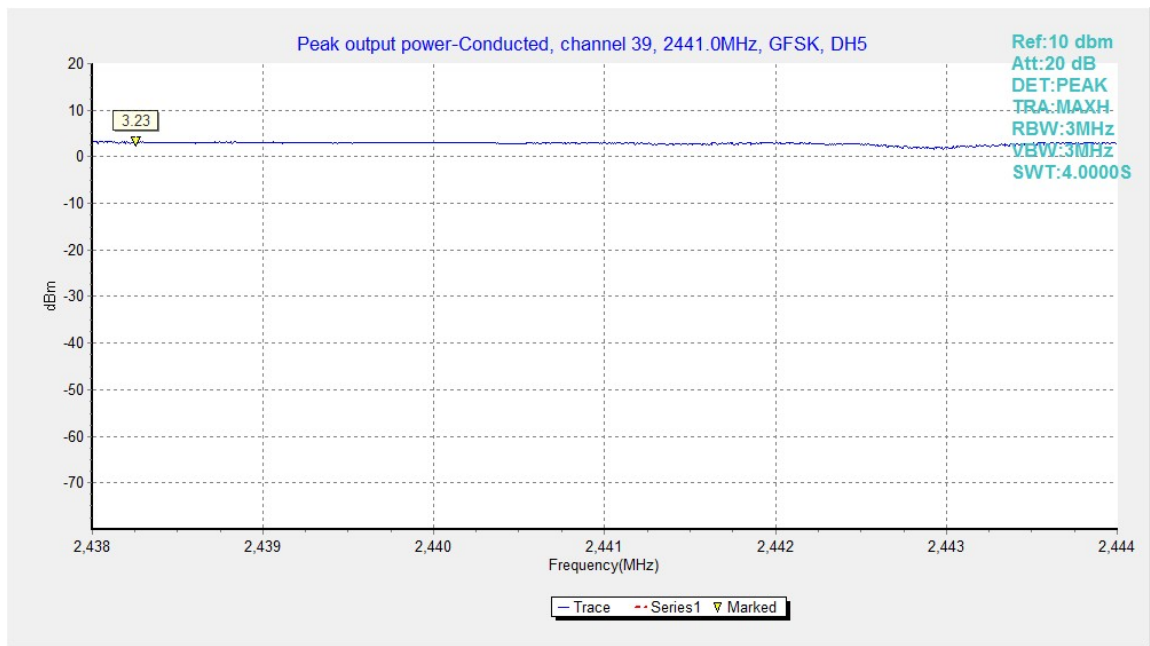


Fig.2. Peak Output Power -Conducted: GFSK, Channel 39,

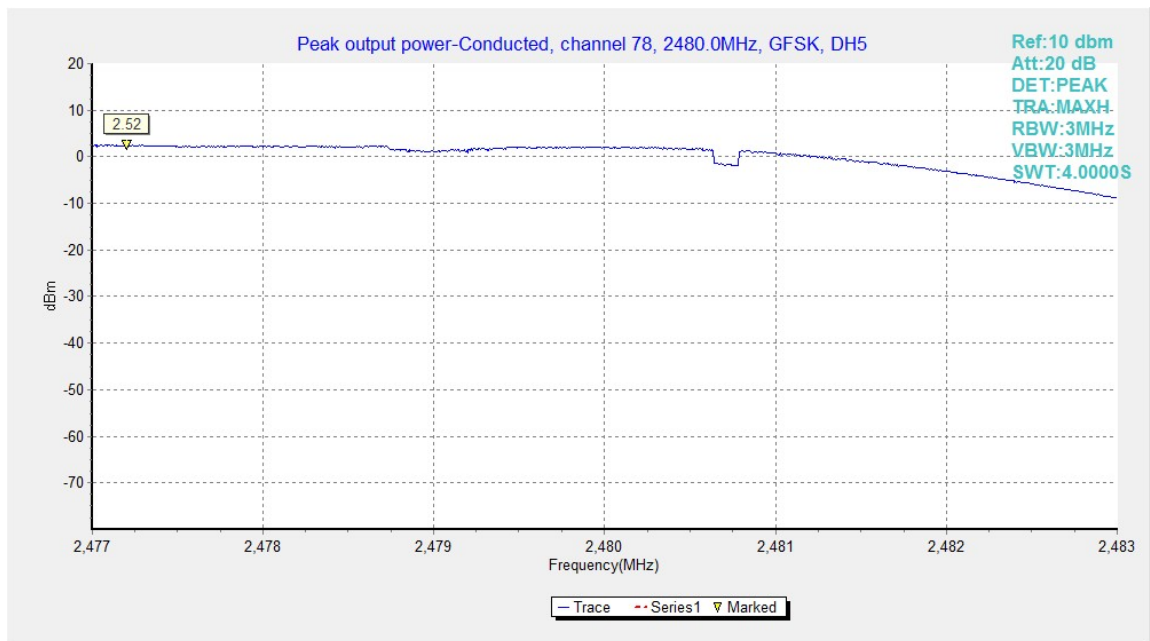


Fig.3. Peak Output Power -Conducted: GFSK, Channel 78,

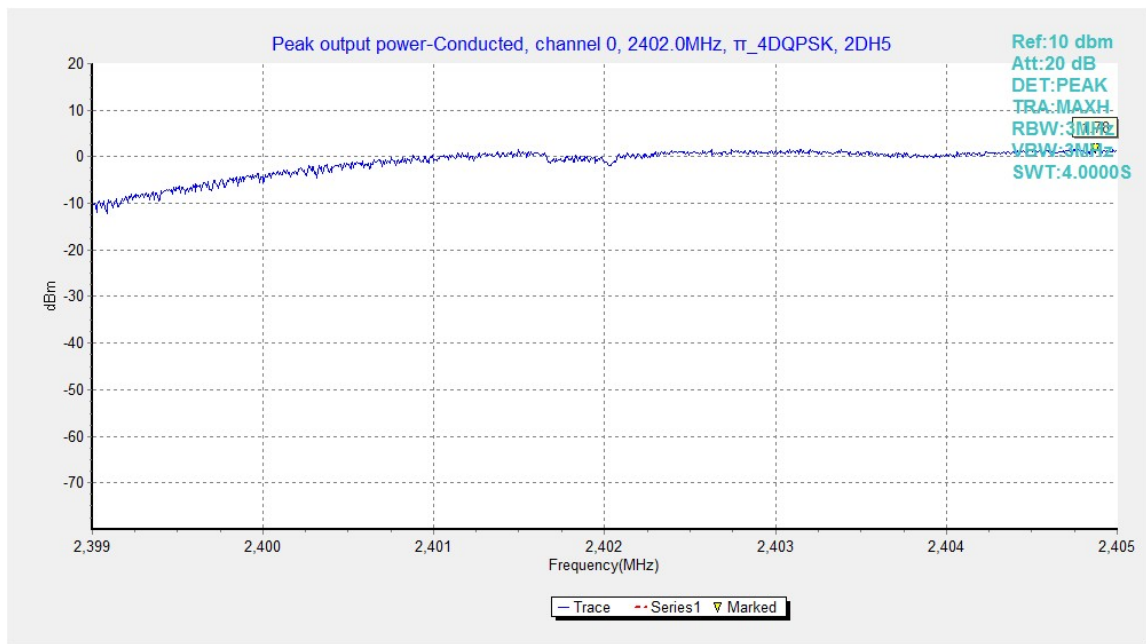


Fig.4. Peak Output Power -Conducted: $\pi/4$ DQPSK, Channel 0,

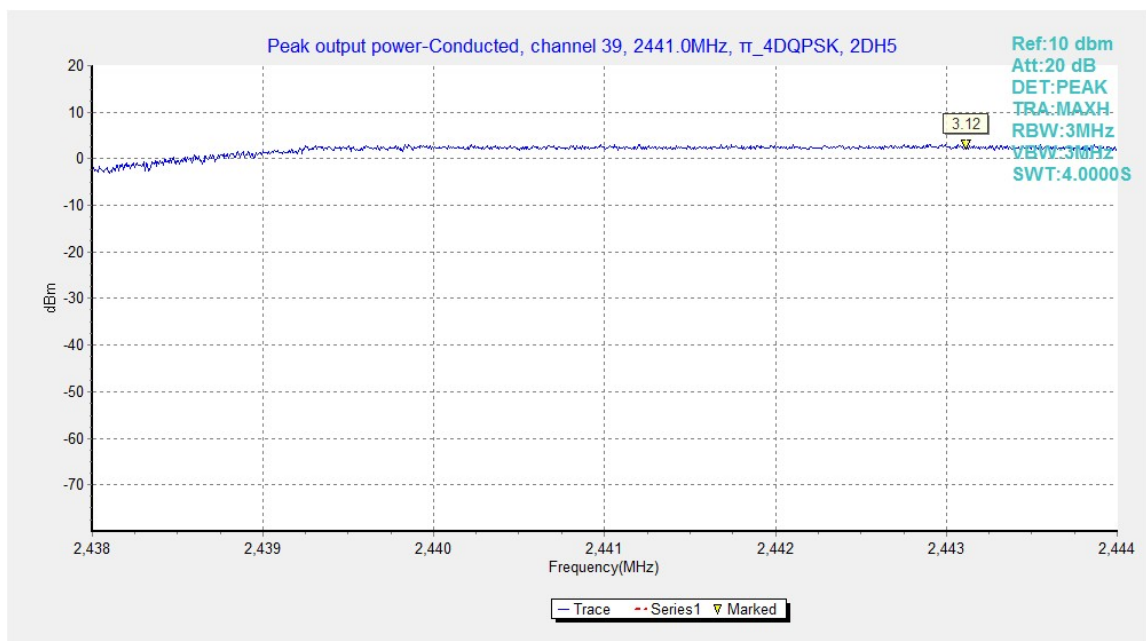


Fig.5. Peak Output Power -Conducted: $\pi/4$ DQPSK, Channel 39,

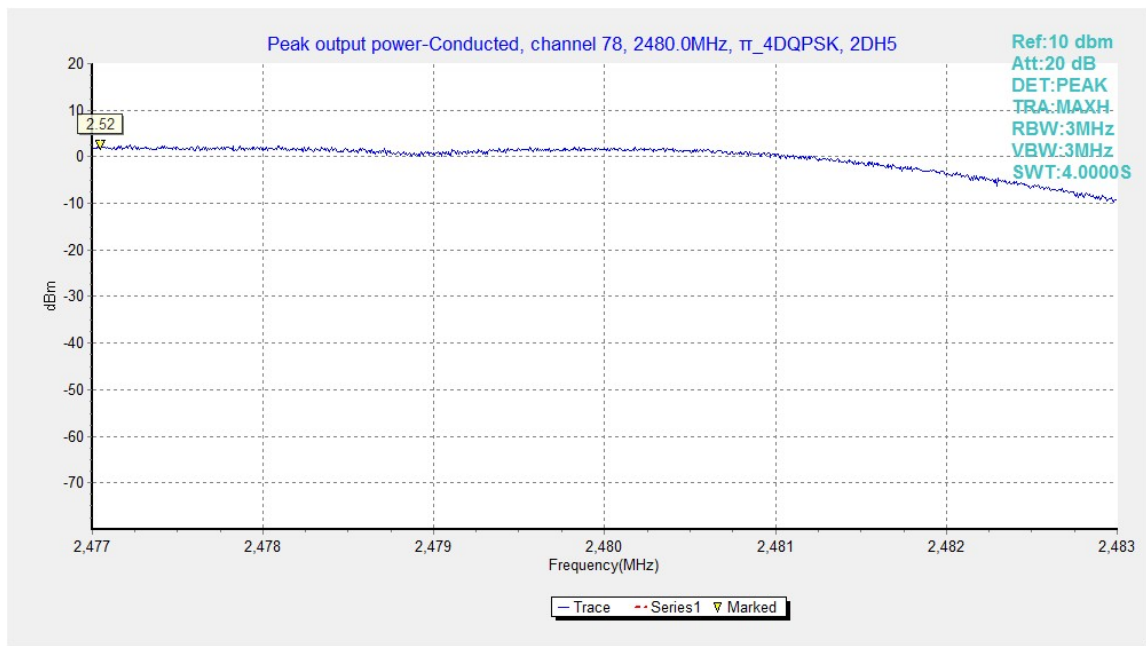


Fig.6. Peak Output Power -Conducted: $\pi/4$ DQPSK, Channel 78,

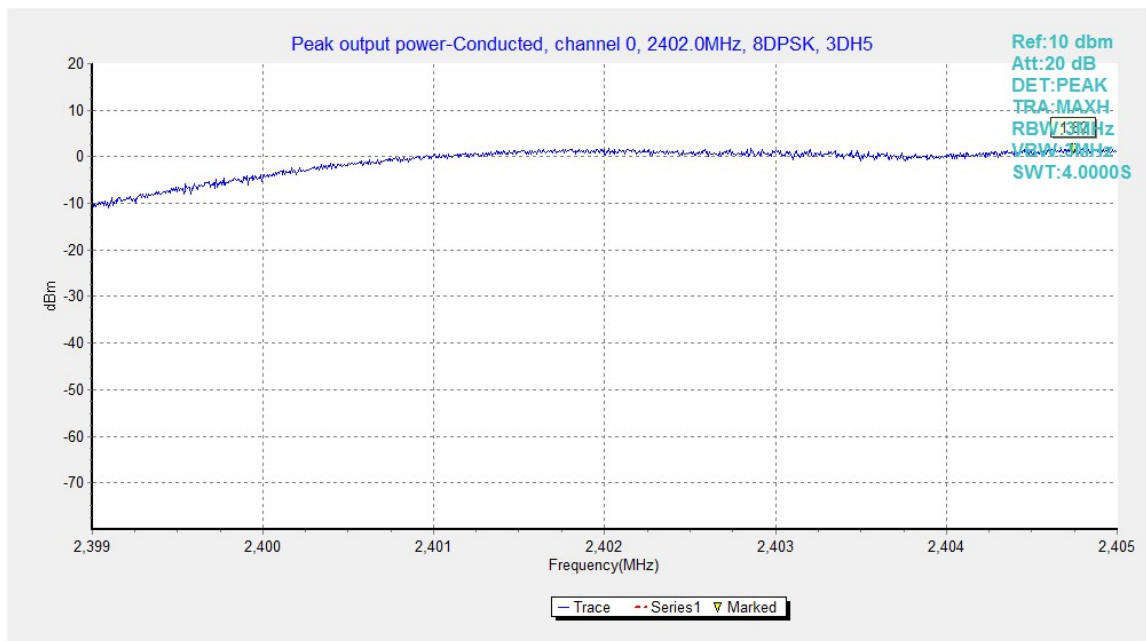


Fig.7. Peak Output Power -Conducted: 8DPSK, Channel 0,

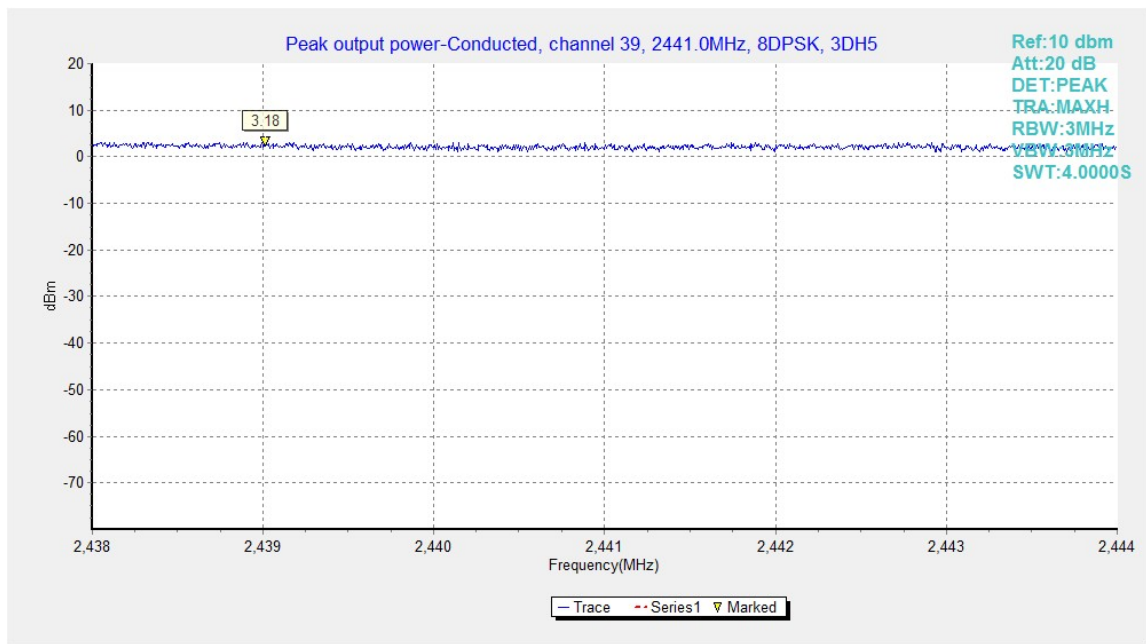


Fig.8. Peak Output Power -Conducted: 8DPSK, Channel 39,

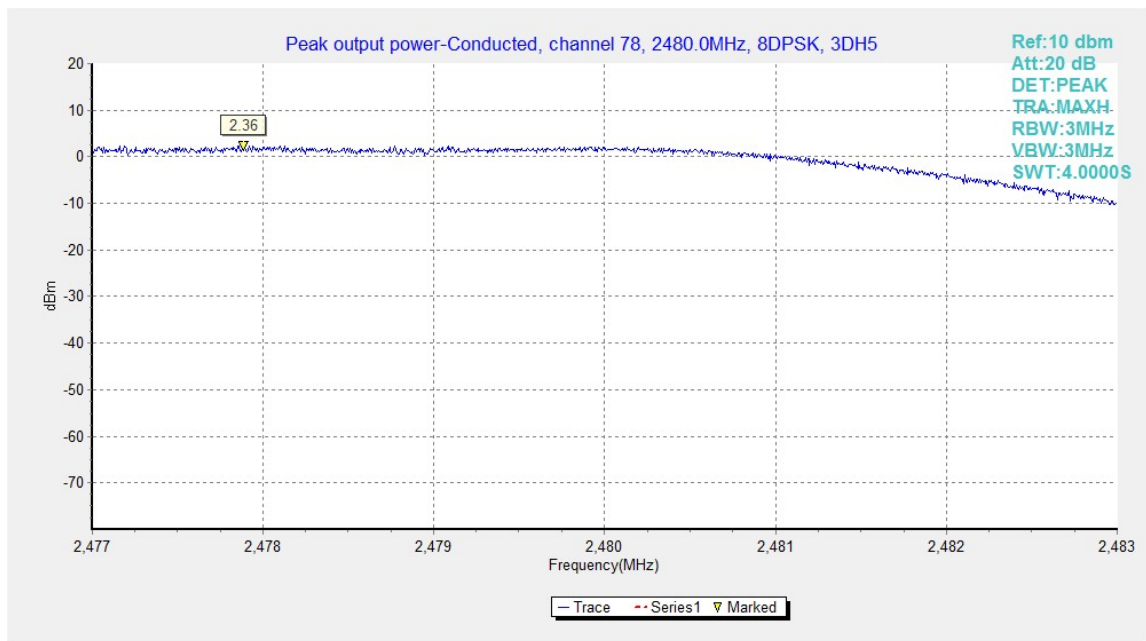


Fig.9. Peak Output Power -Conducted: 8DPSK, Channel 78,

B.3. Frequency Band Edges – Conducted

Method of Measurement: See ANSI C63.10-clause 7.8.6

Connect the spectrum analyzer to the EUT using an appropriate RF cable connected to the EUT output. Configure the spectrum analyzer settings as described below (be sure to enter all losses between the unlicensed wireless device output and the spectrum analyzer).

- Span: 10 MHz
- Resolution Bandwidth: 100 kHz
- Video Bandwidth: 300 kHz
- Sweep Time: Auto
- Detector: Peak
- Trace: max hold

Place a marker at the end of the restricted band closest to the transmit frequency to show compliance. Also measure any emissions in the restricted bands. Save the spectrum analyzer plot. Repeat for each power and modulation for lowest and highest channel.

Observe the stored trace and measure the amplitude delta between the peak of the fundamental and the peak of the band-edge emission. This is not an absolute field strength measurement; it is only a relative measurement to determine the amount by which the emission drops at the band edge relative to the highest fundamental emission level.

Measurement Limit:

Standard	Limit (dBc)
FCC 47 CFR Part 15.247 (d)	< -20

Measurement Result:

For GFSK

Channel	Hopping	Band Edge Power (dBc)		Conclusion
0	Hopping OFF	Fig.10	-55.62	P
	Hopping ON	Fig.11	-58.59	P
78	Hopping OFF	Fig.12	-56.72	P
	Hopping ON	Fig.13	-58.23	P

For $\pi/4$ DQPSK

Channel	Hopping	Band Edge Power (dBc)		Conclusion
0	Hopping OFF	Fig.14	-51.84	P
	Hopping ON	Fig.15	-57.71	P
78	Hopping OFF	Fig.16	-54.28	P
	Hopping ON	Fig.17	-56.42	P

For 8DPSK

Channel	Hopping	Band Edge Power (dBc)		Conclusion
0	Hopping OFF	Fig.18	-53.70	P
	Hopping ON	Fig.19	-56.33	P

78	Hopping OFF	Fig.20	-55.34	P
	Hopping ON	Fig.21	-55.67	P

Conclusion: PASS

Test graphs as below

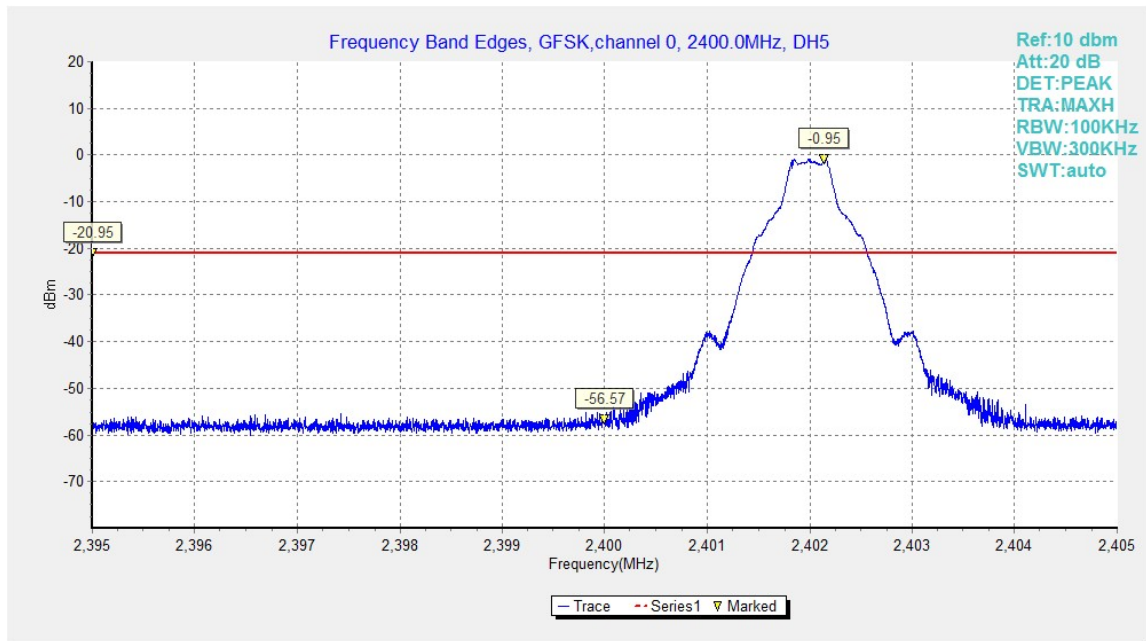


Fig.10. Frequency Band Edges: GFSK, Channel 0, Hopping Off

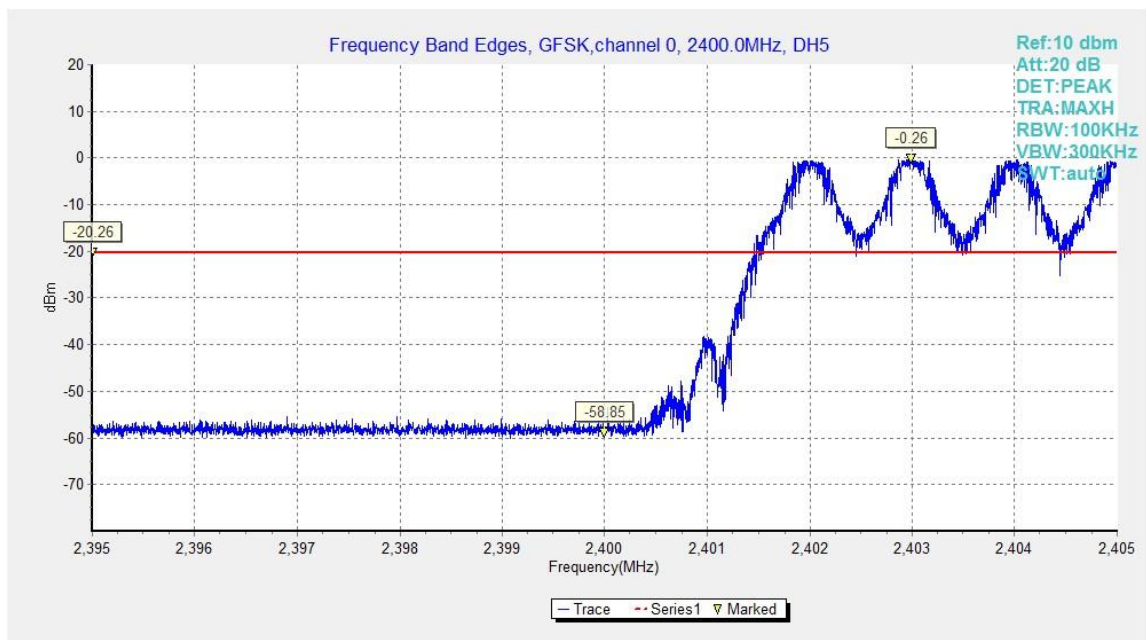


Fig.11. Frequency Band Edges: GFSK, Channel 0, Hopping On

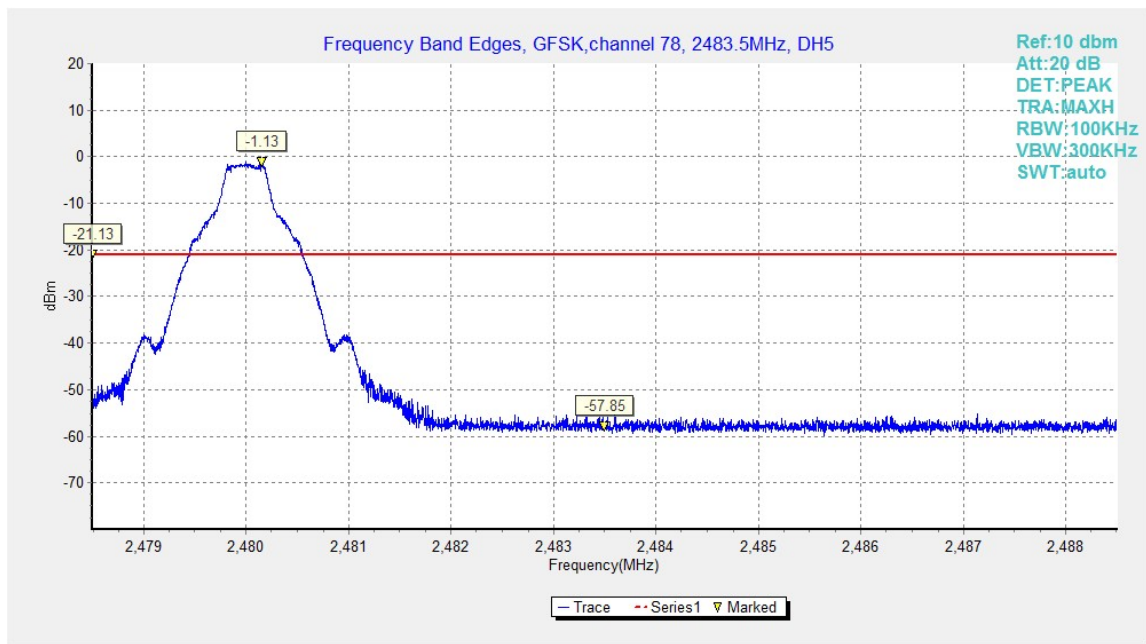


Fig.12. Frequency Band Edges: GFSK, Channel 78, Hopping Off

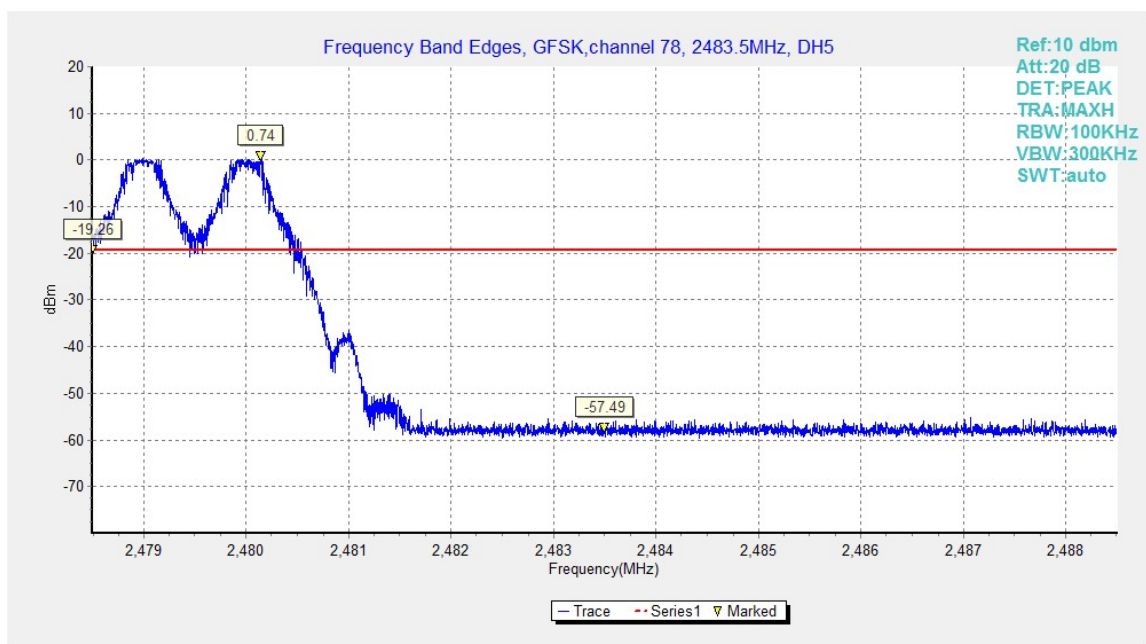


Fig.13. Frequency Band Edges: GFSK, Channel 78, Hopping On

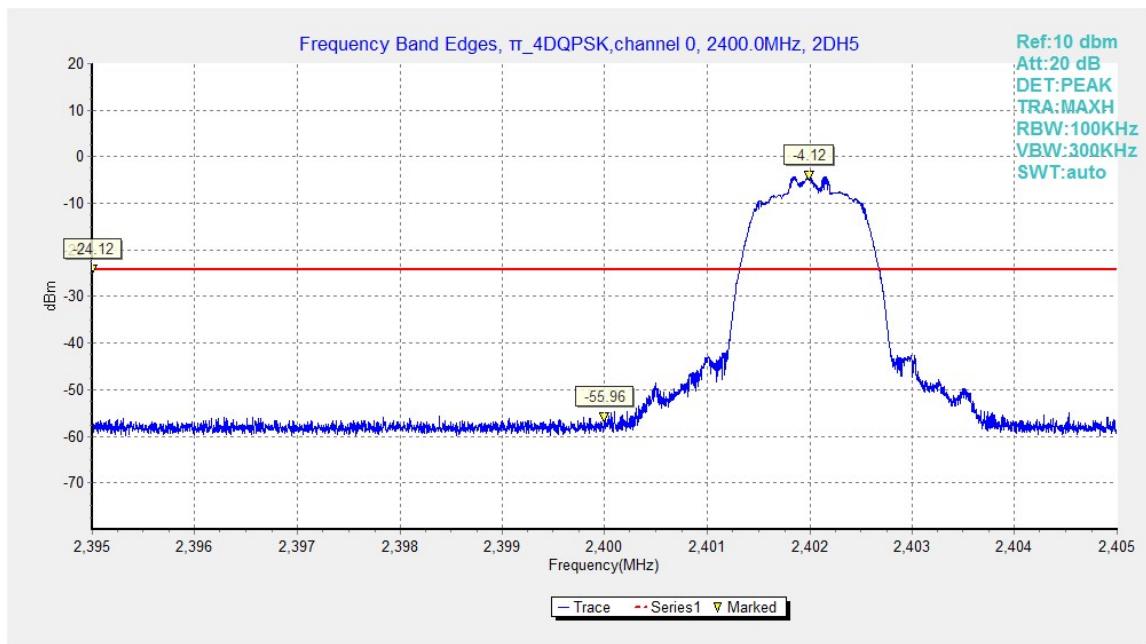


Fig.14. Frequency Band Edges: $\pi/4$ DQPSK, Channel 0, Hopping Off

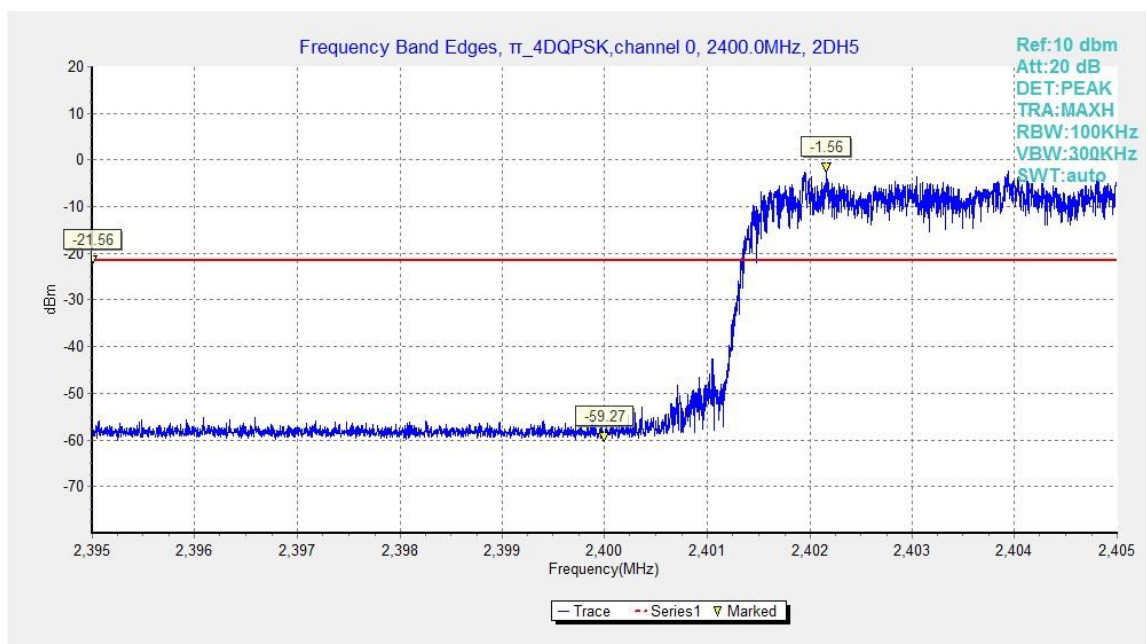


Fig.15. Frequency Band Edges: $\pi/4$ DQPSK, Channel 0, Hopping On

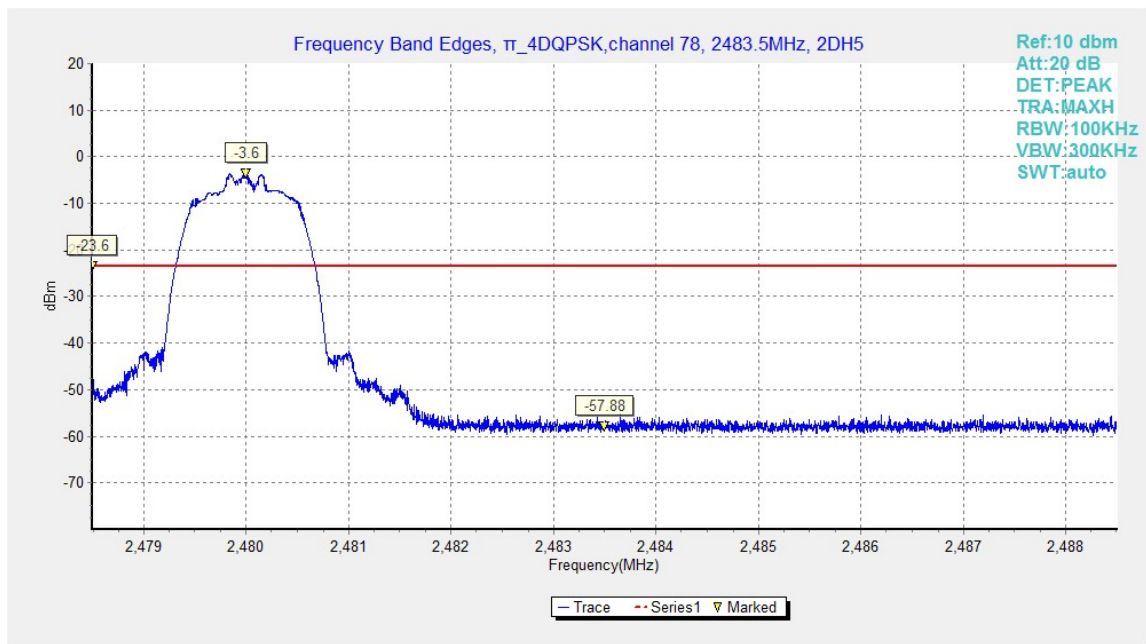


Fig.16. Frequency Band Edges: $\pi/4$ DQPSK, Channel 78, Hopping Off

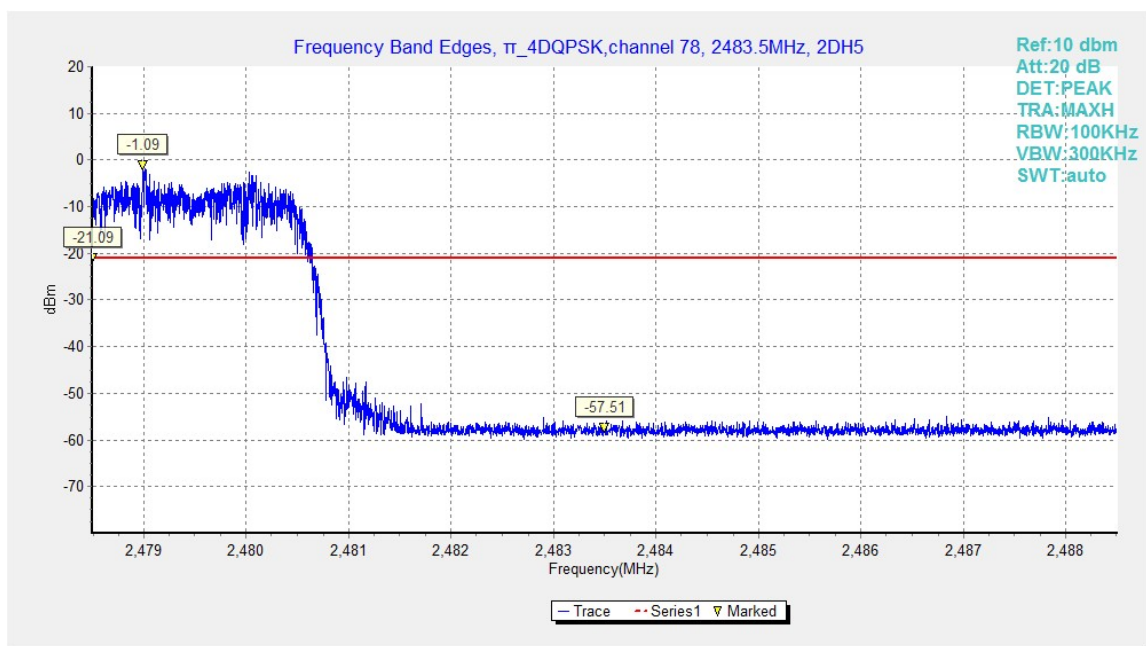


Fig.17. Frequency Band Edges: $\pi/4$ DQPSK, Channel 78, Hopping On

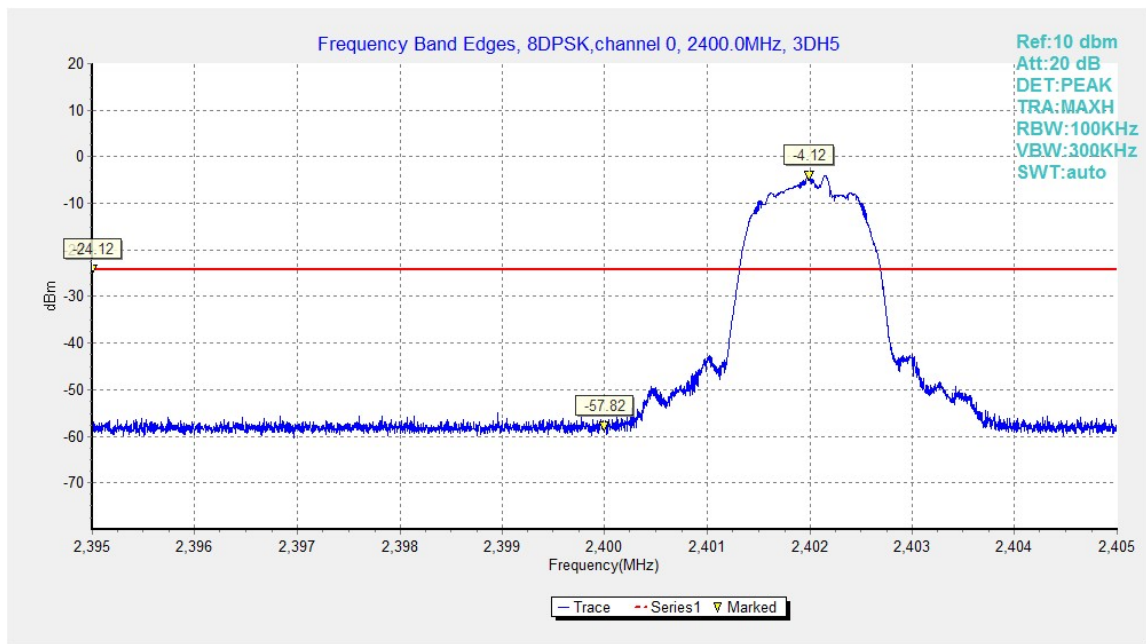


Fig.18. Frequency Band Edges: 8DPSK, Channel 0, Hopping Off

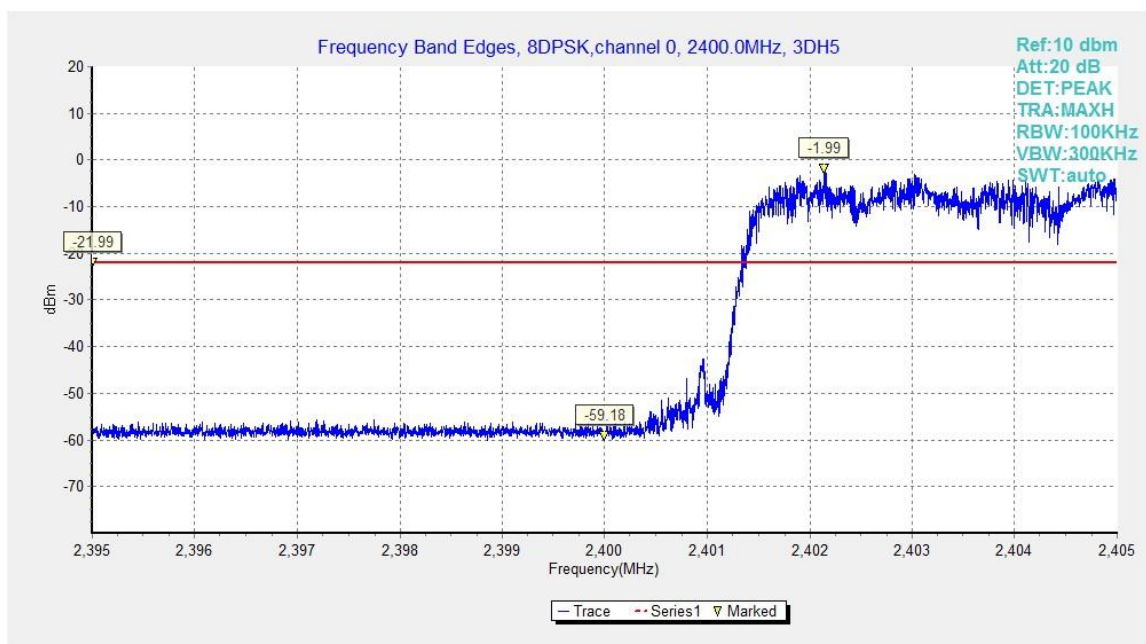


Fig.19. Frequency Band Edges: 8DPSK, Channel 0, Hopping On

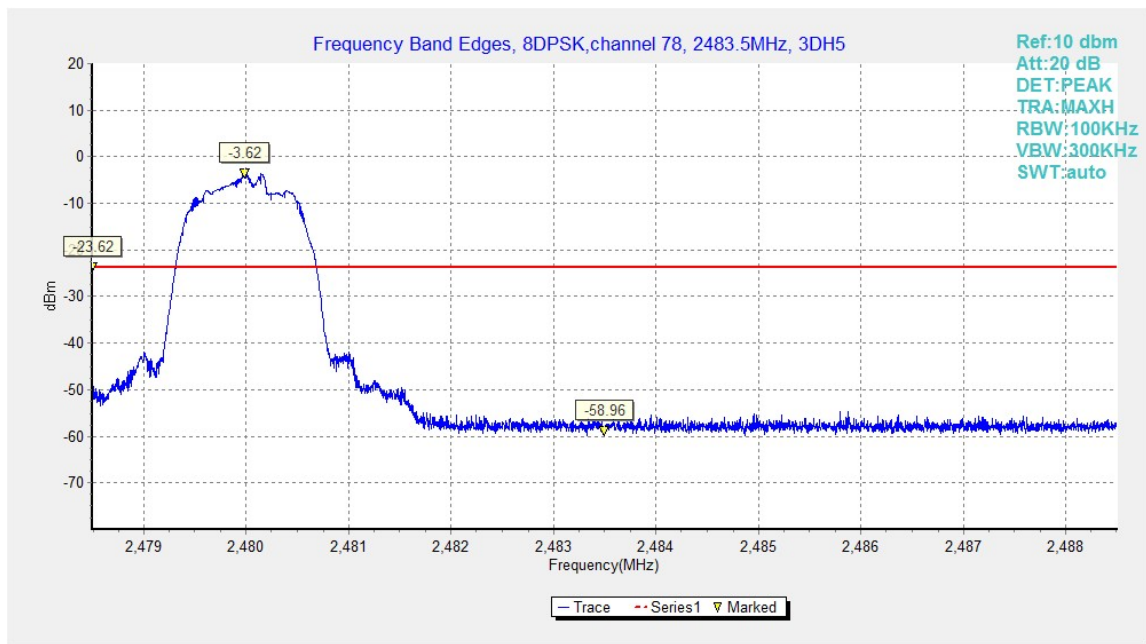


Fig.20. Frequency Band Edges: 8DPSK, Channel 78, Hopping Off

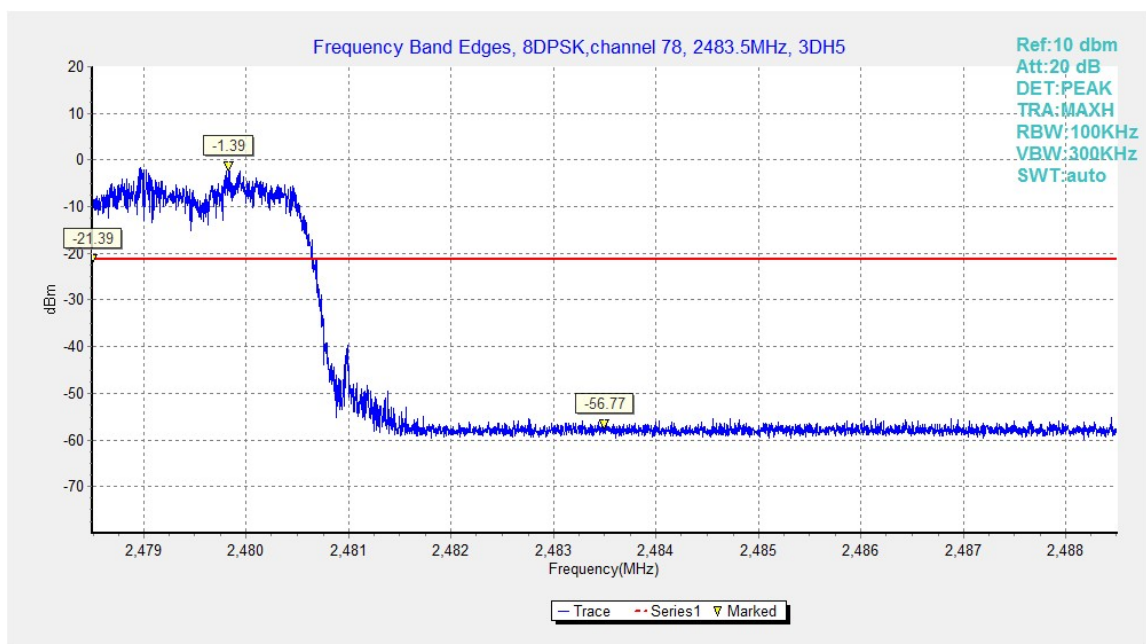


Fig.21. Frequency Band Edges: 8DPSK, Channel 78, Hopping On

B.4. Transmitter Spurious Emission - Conducted

Method of Measurement: See ANSI C63.10-clause 7.8.8

Measurement Procedure – Reference Level

1. Set the RBW = 100 kHz.
2. Set the VBW = 300 kHz.
3. Set the span to 5-30 % greater than the EBW.
4. Detector = peak.
5. Sweep time = auto couple.
6. Trace mode = max hold.
7. Allow trace to fully stabilize.
8. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW. Next, determine the power in 100 kHz band segments outside of the authorized frequency band using the following measurement:

Measurement Procedure - Unwanted Emissions

1. Set RBW = 100 kHz.
2. Set VBW = 300 kHz.
3. Set span to encompass the spectrum to be examined.
4. Detector = peak.
5. Trace Mode = max hold.
6. Sweep = auto couple.
7. Allow the trace to stabilize (this may take some time, depending on the extent of the span).

Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) is attenuated by at least the minimum requirements specified above.

Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.247 (d)	20dB below peak output power in 100 kHz bandwidth

Measurement Results:

For GFSK

Channel	Frequency Range	Test Results	Conclusion
Ch 0	Center Frequency	Fig.22	P

2402 MHz	30 MHz ~ 1 GHz	Fig.23	P
	1 GHz ~ 3 GHz	Fig.24	P
	3 GHz ~ 10 GHz	Fig.25	P
	10 GHz ~ 26 GHz	Fig.26	P
Ch 39 2441 MHz	Center Frequency	Fig.27	P
	30 MHz ~ 1 GHz	Fig.28	P
	1 GHz ~ 3 GHz	Fig.29	P
	3 GHz ~ 10 GHz	Fig.30	P
	10 GHz ~ 26 GHz	Fig.31	P
Ch 78 2480 MHz	Center Frequency	Fig.32	P
	30 MHz ~ 1 GHz	Fig.33	P
	1 GHz ~ 3 GHz	Fig.34	P
	3 GHz ~ 10 GHz	Fig.35	P
	10 GHz ~ 26 GHz	Fig.36	P

For $\pi/4$ DQPSK

Channel	Frequency Range	Test Results	Conclusion
Ch 0 2402 MHz	Center Frequency	Fig.37	P
	30 MHz ~ 1 GHz	Fig.38	P
	1 GHz ~ 3 GHz	Fig.39	P
	3 GHz ~ 10 GHz	Fig.40	P
	10 GHz ~ 26 GHz	Fig.41	P
Ch 39 2441 MHz	Center Frequency	Fig.42	P
	30 MHz ~ 1 GHz	Fig.43	P
	1 GHz ~ 3 GHz	Fig.44	P
	3 GHz ~ 10 GHz	Fig.45	P
	10 GHz ~ 26 GHz	Fig.46	P
Ch 78 2480 MHz	Center Frequency	Fig.47	P
	30 MHz ~ 1 GHz	Fig.48	P
	1 GHz ~ 3 GHz	Fig.49	P
	3 GHz ~ 10 GHz	Fig.50	P
	10 GHz ~ 26 GHz	Fig.51	P

For 8DPSK

Channel	Frequency Range	Test Results	Conclusion
Ch 0 2402 MHz	Center Frequency	Fig.52	P
	30 MHz ~ 1 GHz	Fig.53	P
	1 GHz ~ 3 GHz	Fig.54	P
	3 GHz ~ 10 GHz	Fig.55	P
	10 GHz ~ 26 GHz	Fig.56	P