FCC LISTED,
REGISTRATION
NUMBER: 905266

IC LISTED
REGISTRATION
NUMBER IC 4621

AT4 WIRELESS

Advanced Technologies for Wireless

CENTRO DE TECNOLOGÍA DE LAS COMUNICACIONES, S.A.

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TEST REPORT

Report No.: 24838RET.101

TEST NAME: FCC PART 15.247 RF TESTING FOR EQUIPMENT OPERATING IN THE 2400 – 2483.5 MHz FREQUENCY BAND

Product	:	HCI Baseband Controller Module
Trade Mark	:	Infineon
Model/type Ref.	:	UNISTONE
Manufacturer	:	INFINEON TECHNOLOGIES AG
Requested by	:	INFINEON TECHNOLOGIES AG
Other identification of the product	:	Product ID (Type Designation): PBA 313 08 FCC ID: Q2331308 IC: 6850A-31308
Standard(s)	:	USA FCC Part 15.247, 15.205, 15.209, 15.109,15.207 CANADA RSS-210

This test report includes 3 annexes and therefore the total number of pages is 82.

Date: 2006-12-13	Test operator A. Llamas	Revised by: Date: 2006.12.19 J.C. Soler Consultant	Approved by: Date: 2006.12.19 J.A. Rodrigo Technical Director	Page: 1 of 8

AT4 WIRELESS Centro de Tecnología de las Comunicaciones, S.A.

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1. COMPETENCE AND GUARANTEES

Centro de Tecnología de las Comunicaciones (AT4 WIRELESS), S.A. is a laboratory with a measurement facility in compliance with the requirements of Section 2.948 of the FCC rules and has been added to the list of facilities whose measurements data will be accepted in conjuction with applications for Certification under Parts 15 or 18 of the Commission's Rules. Registration Number: 905266.

Centro de Tecnología de las Comunicaciones (AT4 WIRELESS), S.A. is a laboratory with a measurement site in compliance with the requirements of RSS 212, Issue 1 (Provisional) and has been added to the list of filed sites of the Canadian Certification and Engineering Bureau. Reference File Number: IC 4621.

In order to assure the traceability to other national and international laboratories, AT4 WIRELESS has a calibration and maintenance programme for its measuring equipment.

AT4 WIRELESS guarantees the reliability of the data presented in this report, which is the result of measurements and tests performed to the item under test on the date and under the conditions stated on the report and is based on the knowledge and technical facilities available at AT4 WIRELESS at the time of execution of the test.

AT4 WIRELESS is liable to the client for the maintenance by its personnel of the confidentiality of all information related to the item under test and the results of the test.

2. GENERAL CONDITIONS

1. This report only refers to the item that has undergone the test.
2. This report does not constitute or imply by its own an approval of the product by the Certification Bodies or competent Authorities.
3. This document is only valid if complete; no partial reproduction can be made without written approval of AT4 WIRELESS.
4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written approval of AT4 WIRELESS and the Accreditation Bodies.

3. CHARACTERISTICS OF THE TEST

3.1 TEST REQUESTED

1. Measurements for frequency hopping spread spectrum equipment (Bluetooth) operating in the 2400 MHz -2483.5 MHz band and using, according to FCC Part 15.247.
2. Continuous conducted emission, power leads:

   Standard: FCC Rules and Regulations 47 CFR Part 15

   Limit: Class B

   Method: FCC Rules and Regulations 47 CFR Part 15, Subpart C

3.2 REQUIREMENTS AND METHOD

1. FCC parts 15.33, 15.35, 15.247, 15.207, 15.205, 15.209, 15.109 and the document DA 00-705:"Filing and Measurement Guidelines for Frequency Hopping Spread Spectrum Systems".

   The testing was performed according to the procedure in ANSI C63.4: 2003. Radiated testing was performed in AT4 WIRELESS' semi-anechoic chamber. This site has been fully described in a report submitted to the FCC and was accepted in a letter dated July 25, 2002.

2. FCC Rules and Regulations 47 CFR Part 15, Subpart C: Limits and methods of measurements for radio frequency devices. Intentional radiators.

The instrumentation used to perform the testing is listed below:

1. Semianechoic Absorber Lined Chamber IR 11. BS.
2. Control Chamber IR 12.BC.
3. Antenna mast EM 1072 NMT.
4. Rotating table EM 1084-4. ON.
5. Multi device controller ETS 2090.
6. Bilog antenna CHASE CBL6111.
7. Antenna tripod EMCO 11968C.
8. Double-ridge Guide Horn antenna 1-18 GHz HP 11966E.
9. Double-ridge Guide Horn antenna 18-40 GHz Agilent 119665J.
10. RF pre-amplifier Miteq JS4-12002600-30-5A.
11. Semianechoic Absorber Lined Chamber IR 11. BS.
12. RF pre-amplifier Miteq AFS5-04001300-15-10P-6.
13. RF pre-amplifier Schaffner CPA 9231.
14. Spectrum analyzer R&S ESIB 26.
15. Spectrum analyzer R&S FSM.
16. Transient limiter. HP 11947A.
17. Line Impedance Stabilization Network (L.I.S.N.) R&S. ESH2-Z5.
18. Bluetooth test set Anritsu MT8852A.

4. IDENTIFICATION DATA SUPPLIED BY THE APPLICANT

Identification data in this section has been supplied by the client.

4.1 APPLICANT

Name or Company: INFINEON TECHNOLOGIES AG

V.A.T.: SE556611638901

Address: Isafjordsgatan 16 **City:** Kista

Postal code: SE-16481 **Country:** Sweden

Telephone: +46 8 757 50 00 **Fax:** +46 8 757 47 73

4.2 REPRESENTATIVE

Name: Johan Meivert

4.3 TEST SAMPLES SUPPLIER

Name or Company: Same as indicated in point 4.1

Samples undergoing test have been selected by: **the client.**

4.4 IDENTIFICATION OF ITEM/ITEMS TESTED

Product: HCI Baseband Controller Module

Trade mark: Infineon **Model:** UNISTONE

Other identification of the product: Product ID (Type Designation): PBA 313 08
FCC ID: Q2331308
IC: 6850A-31308

Hw version: V1.0* **Sw version**: V2.07

Manufacturer: INFINEON TECHNOLOGIES AG

Country of manufacture: Sweden

Description: HCI Baseband Controller Module

5. USAGE OF SAMPLES, PERIOD OF TESTING AND ENVIRONMENTAL CONDITIONS

5.1 USAGE OF SAMPLES

Sample M/01 is formed by the following elements:

Control No.	Description	Model	Serial No.	Date of reception
24838/03	AC adaptor	KWM020-1505	DEH9947	06/09/06
24838/07	Test board	BlueMoon 3.0	---	06/09/06
24838/08	Bluetooth module	Unistone	---	06/09/06

Sample M/02 is formed by the following elements:

Control No.	Description	Model	Serial No.	Date of reception
24838/03	Test board	BlueMoon 3.0	---	06/09/06
24838/04	AC adaptor	KWM020-1505	DEH9952	06/09/06
24838/10	Bluetooth module	Unistone	---	18/09/06

Sample S/01 is composed of the following elements:

Control No.	Description	Model	Serial No.	Date of reception
24838/10	Bluetooth module	Unistone	---	18/09/06

During the tests were used next ancillary equipment:

Internal Control Nr.	Description	Model	Serial number	Date of arrival
24838/02	Board	---	---	18/09/06
24838/04	AC adaptor	KWM020-1505	DEH9952	18/09/06
24838/06	Antenna	---	---	18/09/06

1. Sample M/01 has undergone following test(s).
   Radiated measurements indicated in annex A.
2. Sample M/02 has undergone following test(s).
   All tests indicated in annex A, except radiated measurements.
3. Sample S/01 has undergone to the following test(s):
   Continuous conducted emission, power leads.

5.2 PERIOD OF TESTING

The performed test started on 2006-09-06 and finished on 2006-10-05.

The tests as detailed in this report have been performed at AT4 WIRELESS.

5.3 ENVIROMENTAL CONDITIONS

In the control chamber the following limits were not exceeded during the test:

Temperature	Min. = 25 ºC Max. = 25 ºC
Relative humidity	Min. = 48 % Max. = 48 %
Shielding effectiveness	> 100 dB
Electric insulation	> 10 kΩ
Reference resistance to earth	< 0,5 Ω

In the semianechoic chamber (21 meters x 11 meters x 8 meters) the following limits were no exceeded during the test.

Temperature	Min. = 24 ºC Max. = 24 ºC
Relative humidity	Min. = 51 % Max. = 51 %
Air pressure	Min. = 1020 mbar Max. = 1020 mbar
Shielding effectiveness	> 100 dB
Electric insulation	> 10 kΩ
Reference resistance to earth	< 0,5 Ω
Normal site attenuation (NSA)	< ±4 dB at 10 m distance between item under test and receiver antenna, (30 MHz to 1000 MHz)
Field homogenousity	More than 75% of illuminated surface is between 0 and 6 dB (26 MHz to 1000 MHz).

In the chamber for conducted measurements the following limits were no exceeded during the test:

Temperature	Min. = 22 ºC Max. = 23 ºC
Relative humidity	Min. = 50 % Max. = 50 %
Air pressure	Min. = 1019 mbar Max. = 1019 mbar
Shielding effectiveness	> 100 dB
Electric insulation	> 10 kΩ
Reference resistance to earth	< 0,5 Ω

6. TEST RESULTS

Abbreviations used in the VERDICT column of the following tables are:

P Pass

F Fail

NA not applicable

NM not measured

FCC PART 15 PARAGRAPH	VERDICT			
	NA	P	F	NM
15.247 Subclause (a) (1). 20 dB Bandwidth and Carrier frequency separation		P		
15.247 Subclause (a) (1) (iii). Number of hopping channels		P		
15.247 Subclause (a) (1) (iii). Time of occupancy (Dwell Time)		P		
15.247 Subclause (b). Maximum peak output power and antenna gain		P		
15.247 Subclause (d). Band-edge of conducted emissions (Transmitter)		P		
15.247 Subclause (d). Emission limitations conducted (Transmitter)		P		
15.247 Subclause (d). Emission limitations radiated (Transmitter)		P		
15.109. Receiver spurious radiation		P		
15.207. Continuous Conducted Emissions		P		

7. REMARKS AND COMMENTS

None.

8. SUMMARY

Based on the results of the performed test, stated in annex A the item under test is **IN COMPLIANCE** with the specifications listed in section 3.1 “TEST REQUESTED”.

NOTE: The results presented in this Test Report apply only to the particular item under test declared in section 4.4 “IDENTIFICATION OF ITEM/ITEMS TESTED” of this document, as presented for test on the date(s) declared in section 5, “USAGE OF SAMPLES, PERIOD OF TESTING AND ENVIRONMENTAL CONDITIONS”.

ANNEX A

TEST RESULTS

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TEST CONDITIONS

Power supply (V):

$V_{nominal}$ = 3.3 Vdc

Type of power supply = External power supply provided by test board. Test board is supplied with an AC adaptor

Type of antenna = Integral antenna

Maximum Declared Gain for antenna = 4 dBi

Operating Temperature Range (ºC):

T_n = -40 to + 85

TEST FREQUENCIES:

Lowest channel: 2402 MHz

Middle channel: 2441 MHz

Highest channel: 2480 MHz

The test set-up was made in accordance to the general provisions of ANSI C63.4: 2003.

CONDUCTED MEASUREMENTS

The equipment under test was connected to a lap-top PC computer and set up in a shielded room. Furthermore, it was connected to a Bluetooth signalling unit (Bluetooth test set) and to the spectrum analyser using a power splitter and low loss RF cables. The reading in the spectrum analyser is corrected taking into account the power splitter and the cable losses.

RADIATED MEASUREMENTS

All radiated tests were performed in a semi-anechoic chamber. The measurement antenna is situated at a distance of 3 m for the frequency range 30 MHz-1000 MHz (30 MHz-1000 MHz Bilog antenna) and at a distance of 1m for the frequency range 1 GHz-25 GHz (1 GHz-18 GHz Double ridge horn antenna and 18 GHz-40 GHz horn antenna).

For radiated emissions in the range 1 GHz-25 GHz that is performed at a distance closer than the specified distance, an inverse proportionality factor of 20 dB per decade is used to normalize the measured data for determining compliance.

The equipment under test was set up on a non-conductive (wooden) platform one meter above the ground plane and the situation and orientation was varied to find the maximum radiated emission. It was also rotated 360º and the antenna height was varied from 1 to 4 meters to find the maximum radiated emission.

Measurements were made in both horizontal and vertical planes of polarization.

An additional horn antenna is used to control the equipment under test with the Bluetooth signalling unit (Bluetooth test set).

Section 15.247 Subclause (a) (1). 20 dB Bandwidth and Carrier frequency separation

SPECIFICATION

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

RESULTS

(See next plots)

Modulation: GFSK

	Lowest frequency 2402 MHz	Middle frequency 2441 MHz	Highest frequency 2480 MHz
20 dB Spectrum bandwidth (kHz)	920	923	923
Measurement uncertainty (kHz)	±11		

Modulation: Π/4-DQPSK (2Mbps)

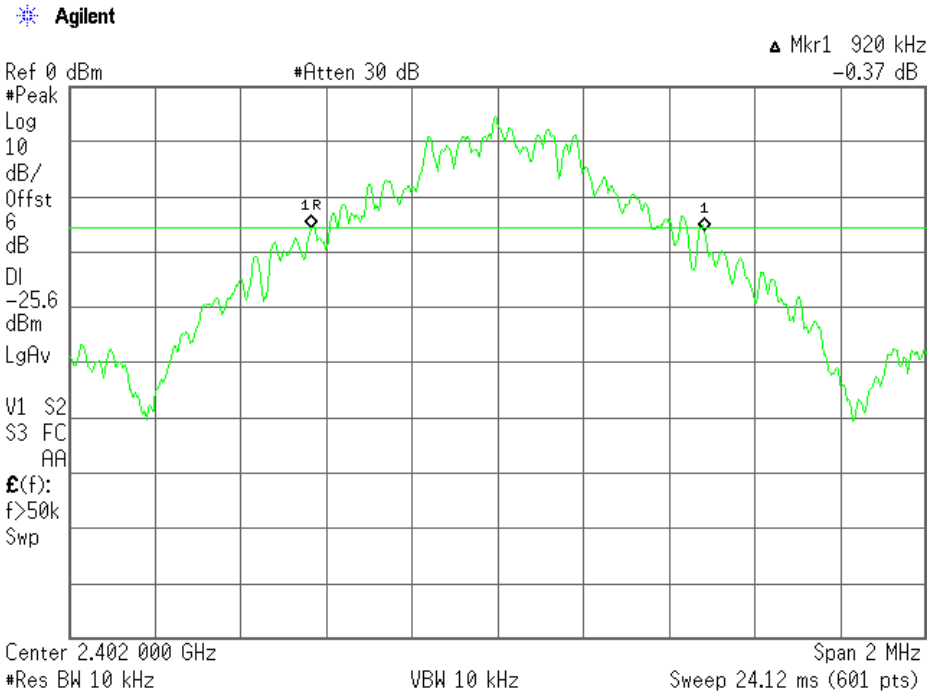
	Lowest frequency 2402 MHz	Middle frequency 2441 MHz	Highest frequency 2480 MHz
20 dB Spectrum bandwidth (kHz)	1240	1253	1247
Measurement uncertainty (kHz)	±11		

Modulation: 8-DPSK (3Mbps)

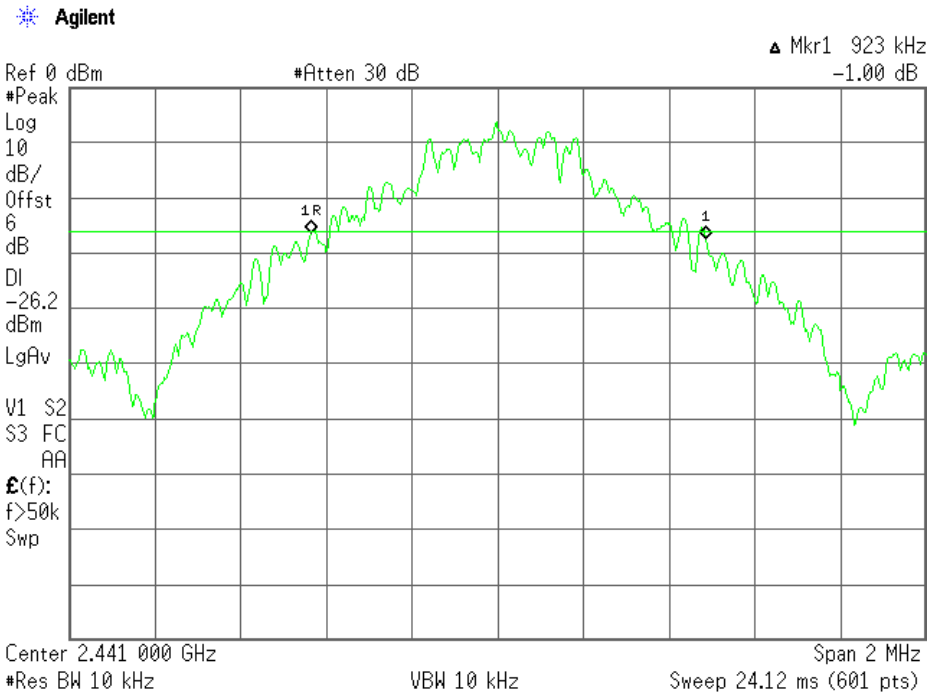
	Lowest frequency 2402 MHz	Middle frequency 2441 MHz	Highest frequency 2480 MHz
20 dB Spectrum bandwidth (kHz)	1210	1217	1213
Measurement uncertainty (kHz)	±11		

Modulation: GFSK

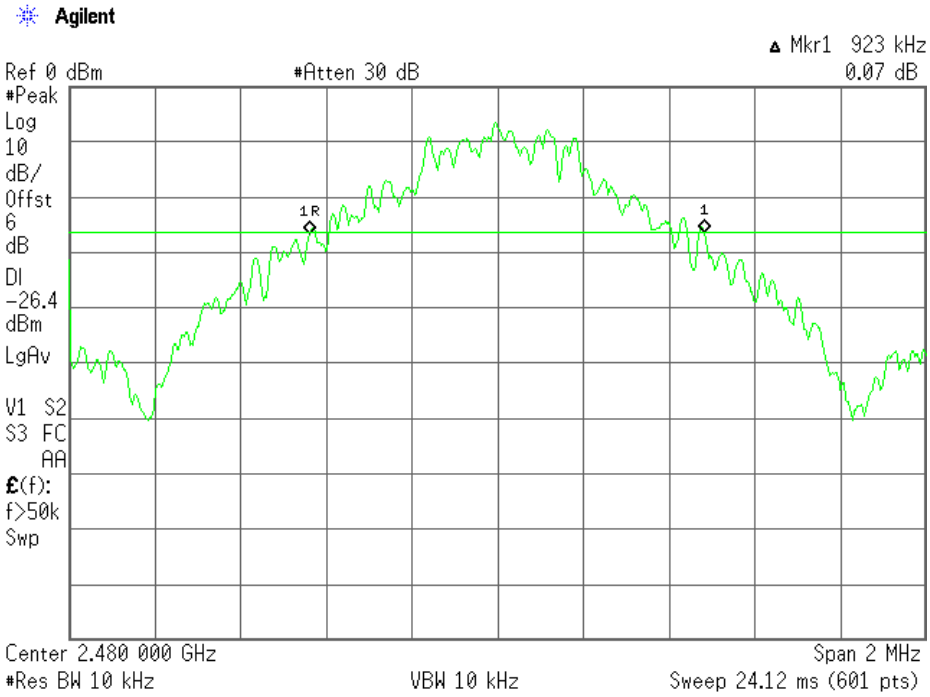
20 dB BANDWIDTH. Lowest Channel: 2402 MHz.



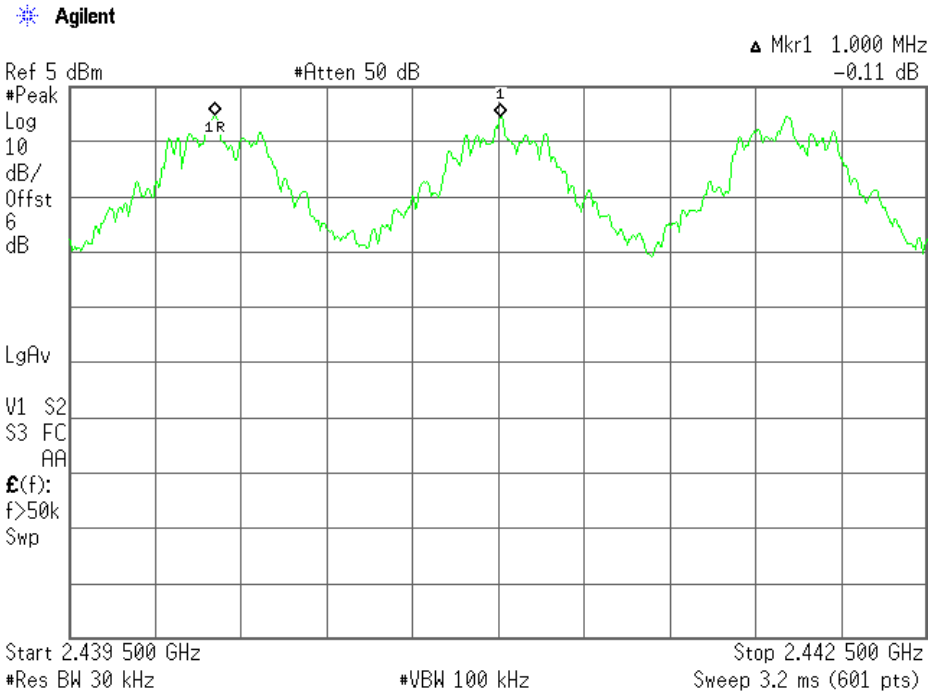
20 dB BANDWIDTH Middle Channel: 2441 MHz.



20 dB BANDWIDTH Highest Channel: 2480 MHz.



Carrier frequency separation

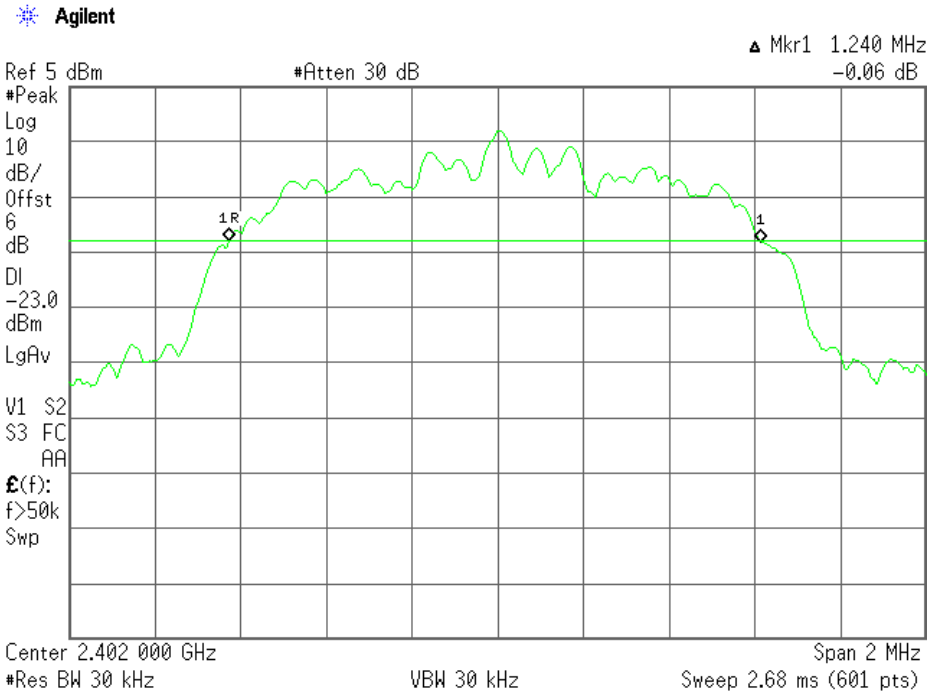


The hopping channel carrier frequencies are separated by a minimum of the 20 dB bandwidth of the hopping channel.

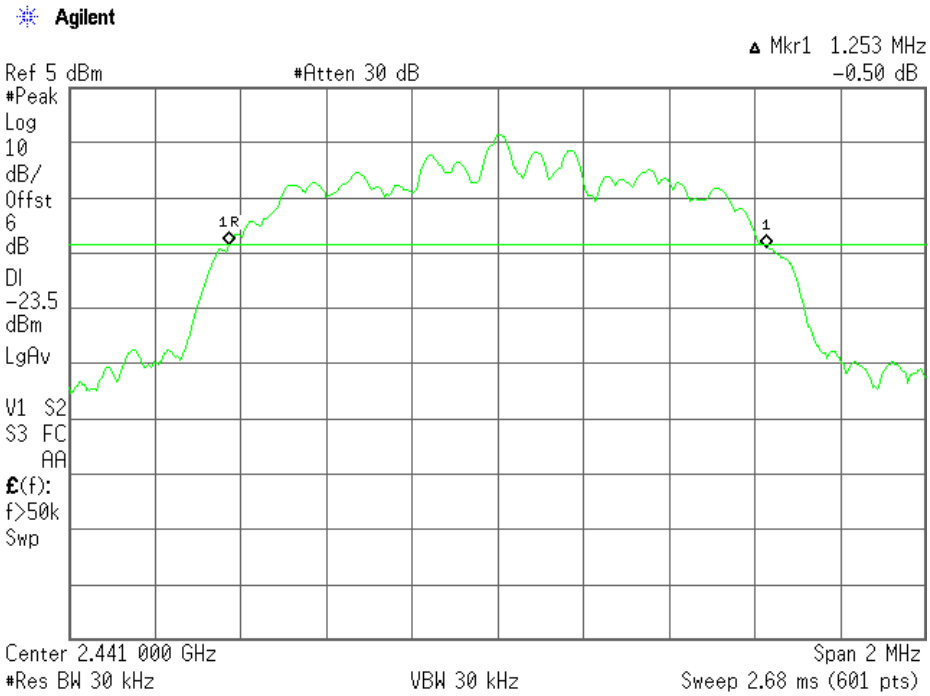
Verdict: PASS

Modulation: Π/4-**DQPSK**

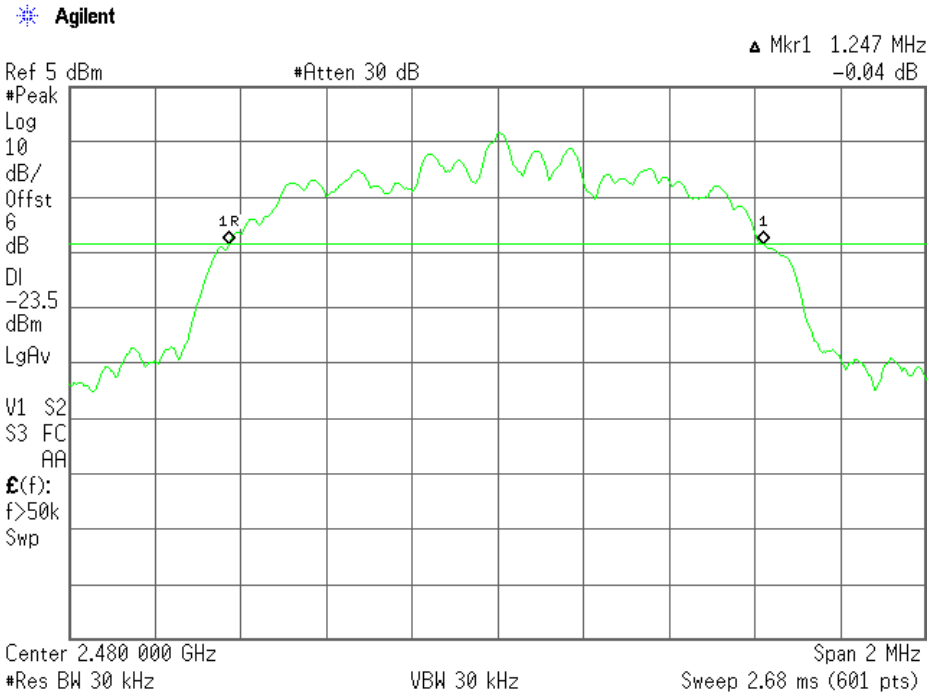
20 dB BANDWIDTH. Lowest Channel: 2402 MHz.



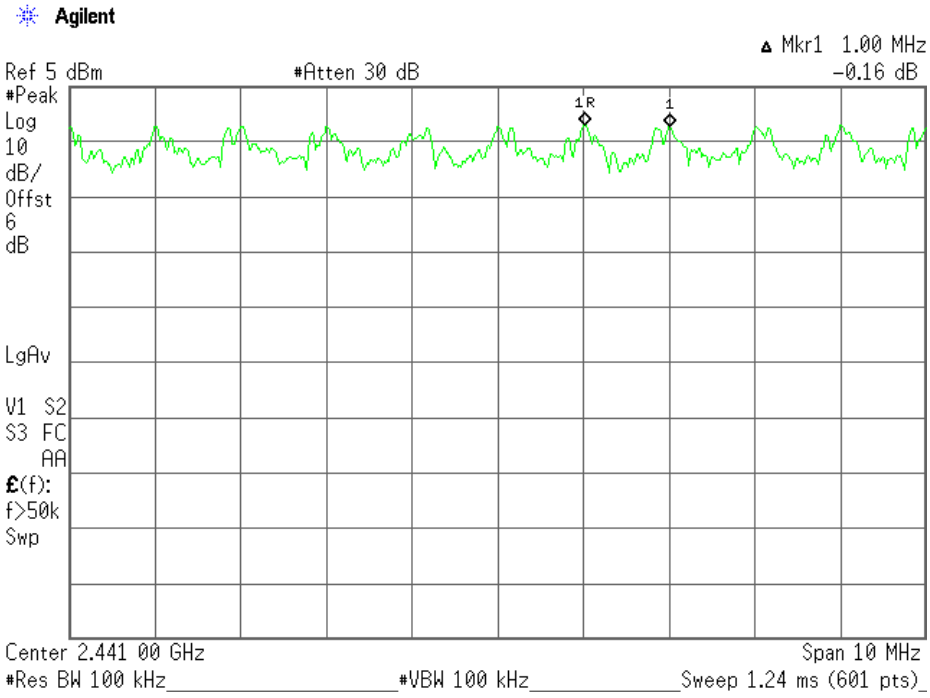
20 dB BANDWIDTH Middle Channel: 2441 MHz.



20 dB BANDWIDTH Highest Channel: 2480 MHz.



Carrier frequency separation

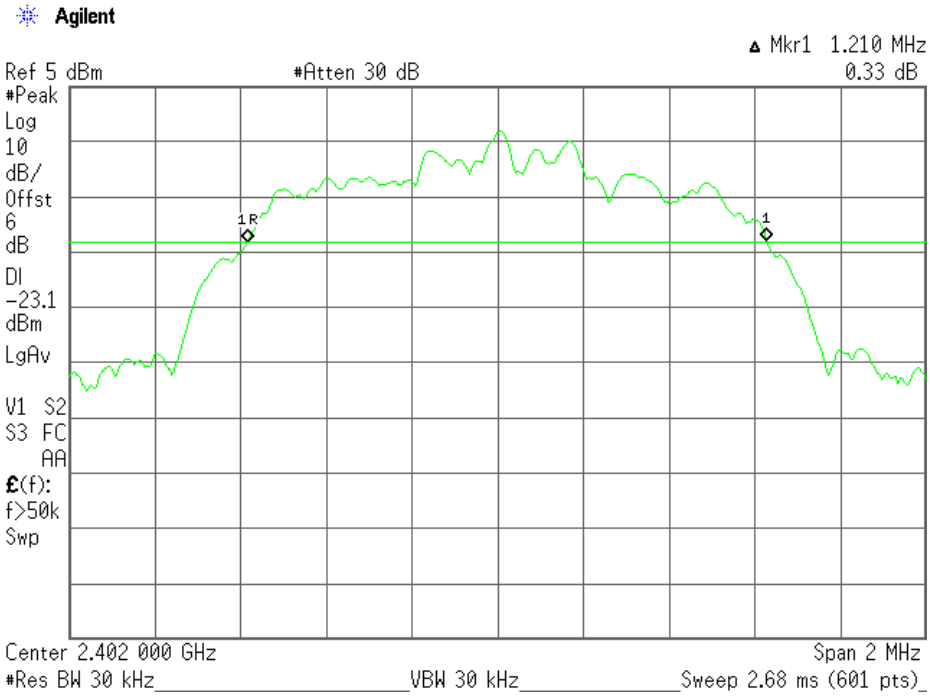


The hopping channel carrier frequencies are separated by a minimum of the two-thirds of the 20 dB bandwidth of the hopping channel

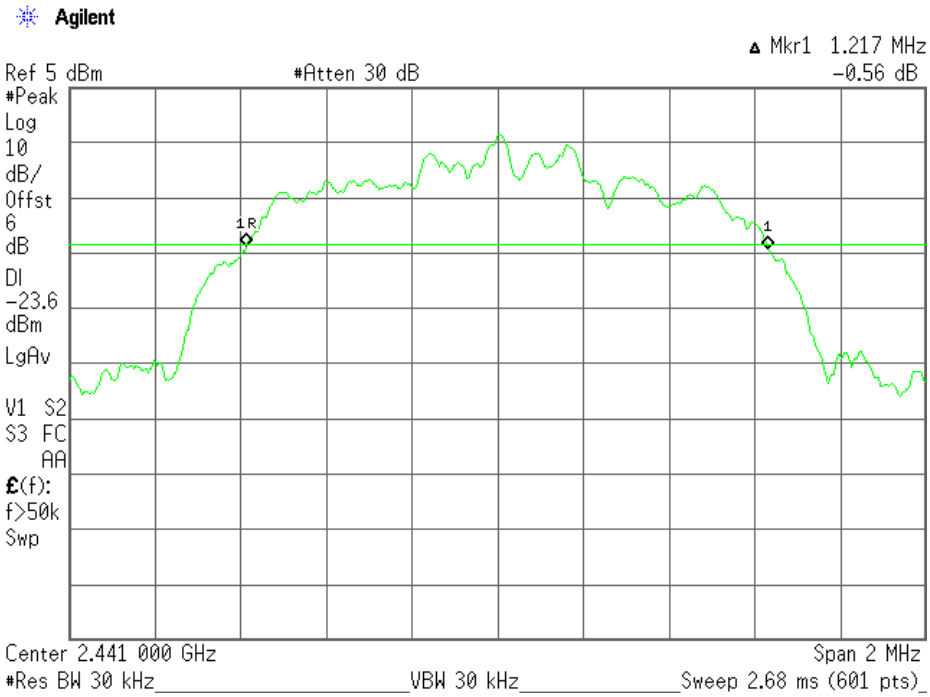
Verdict: PASS

Modulation: 8-DPSK

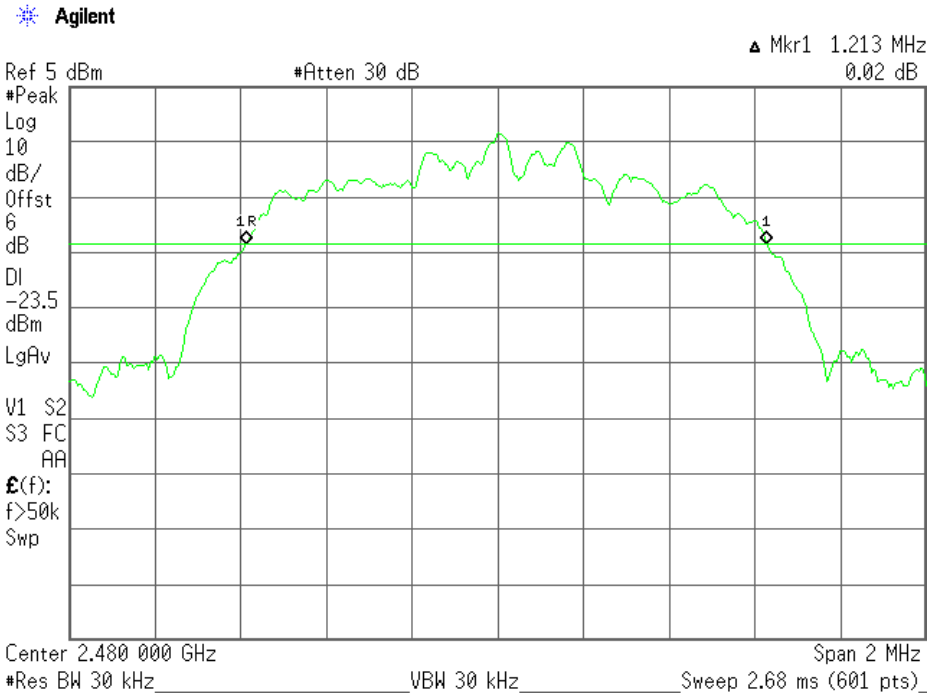
20 dB BANDWIDTH Lowest Channel: 2402 MHz.



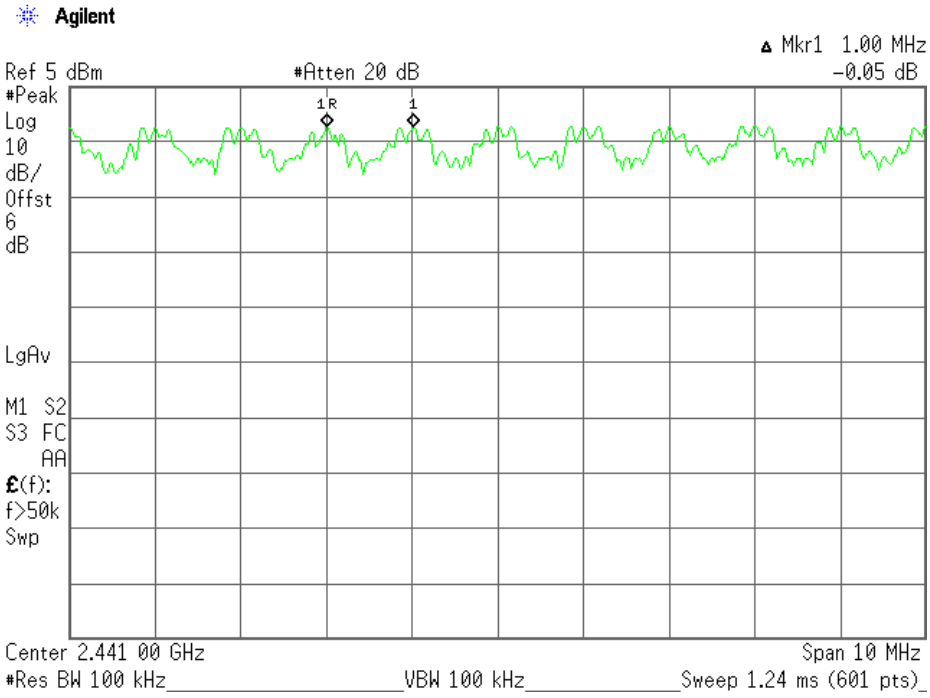
20 dB BANDWIDTH Middle Channel: 2441 MHz.



20 dB BANDWIDTH Highest Channel: 2480 MHz.



Carrier frequency separation



The hopping channel carrier frequencies are separated by a minimum of the two-thirds of the 20 dB bandwidth of the hopping channel.

Verdict: PASS

Section 15.247 Subclause (a) (1) (iii). Number of hopping channels

SPECIFICATION

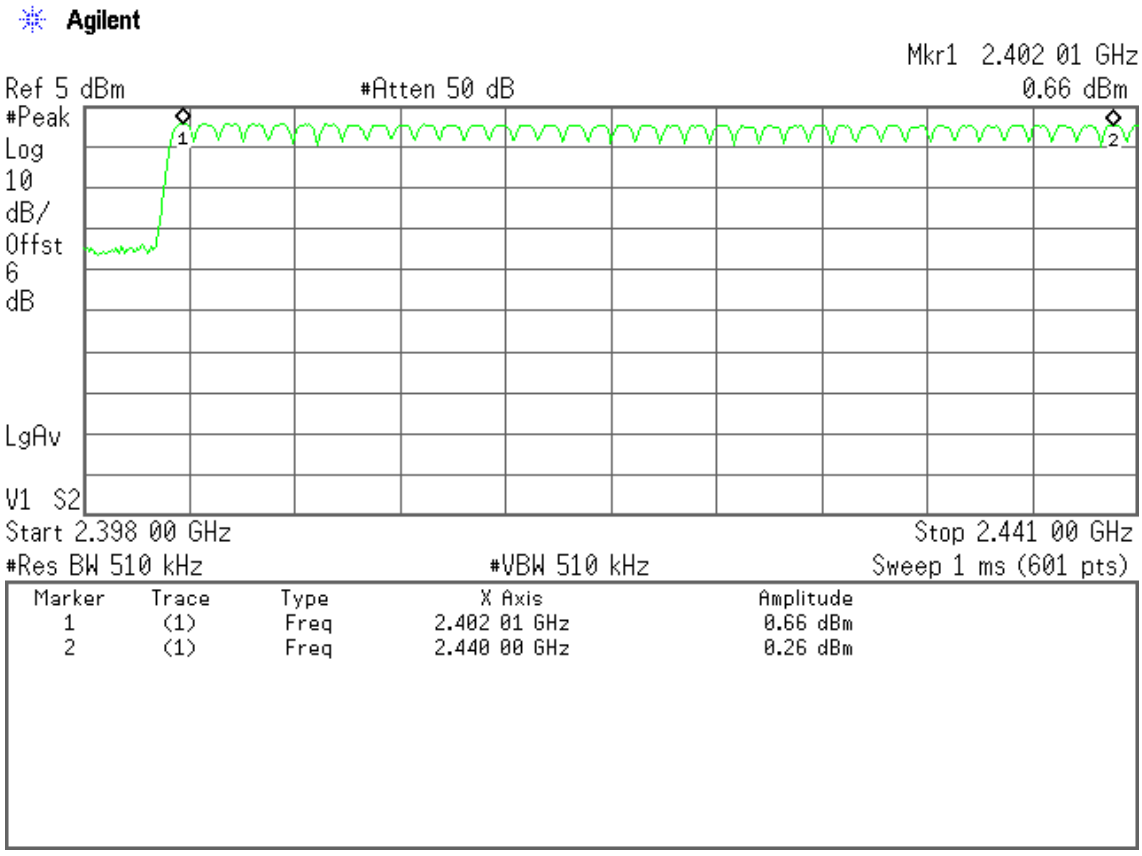
Frequency hopping system in the 2400-2483.5 MHz band shall use at least 15 channels.

RESULTS

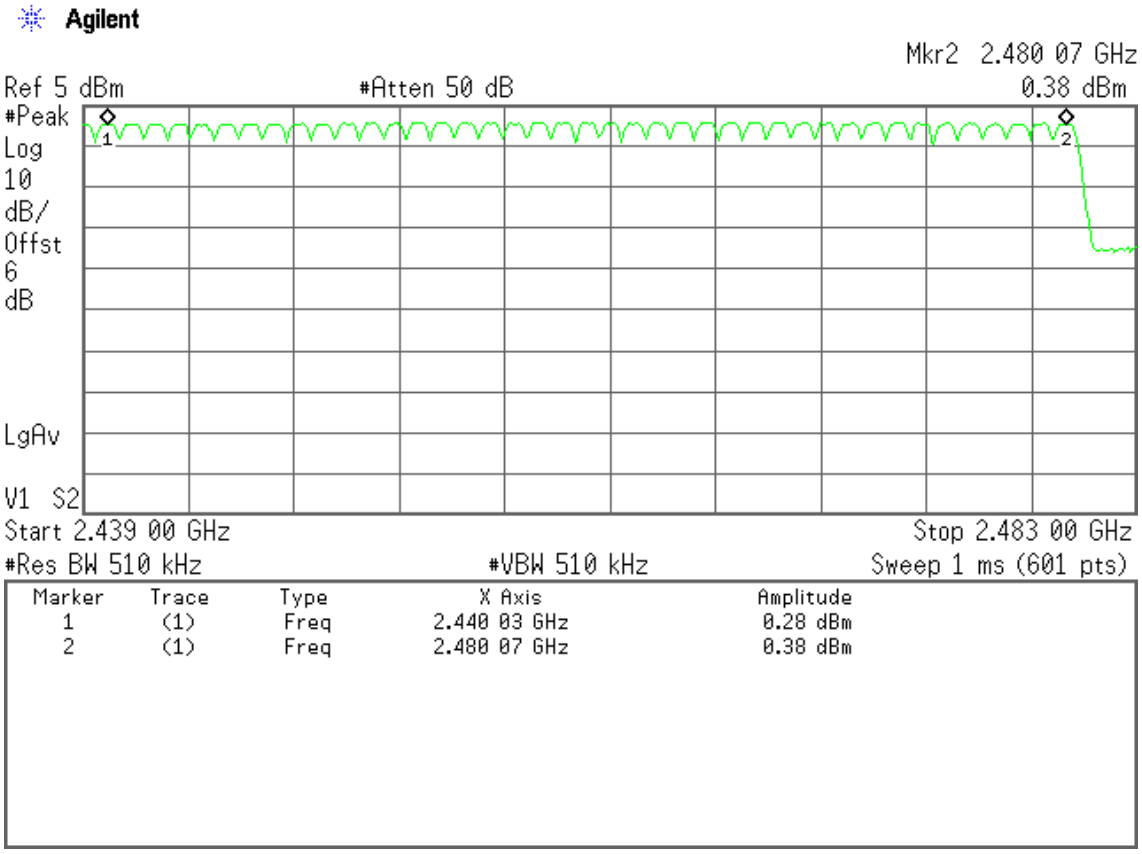
The number of hopping channels is 79 for all three modes (see next plots).

Modulation: GFSK

Number of hopping frequencies: 39



Number of hopping frequencies: 40

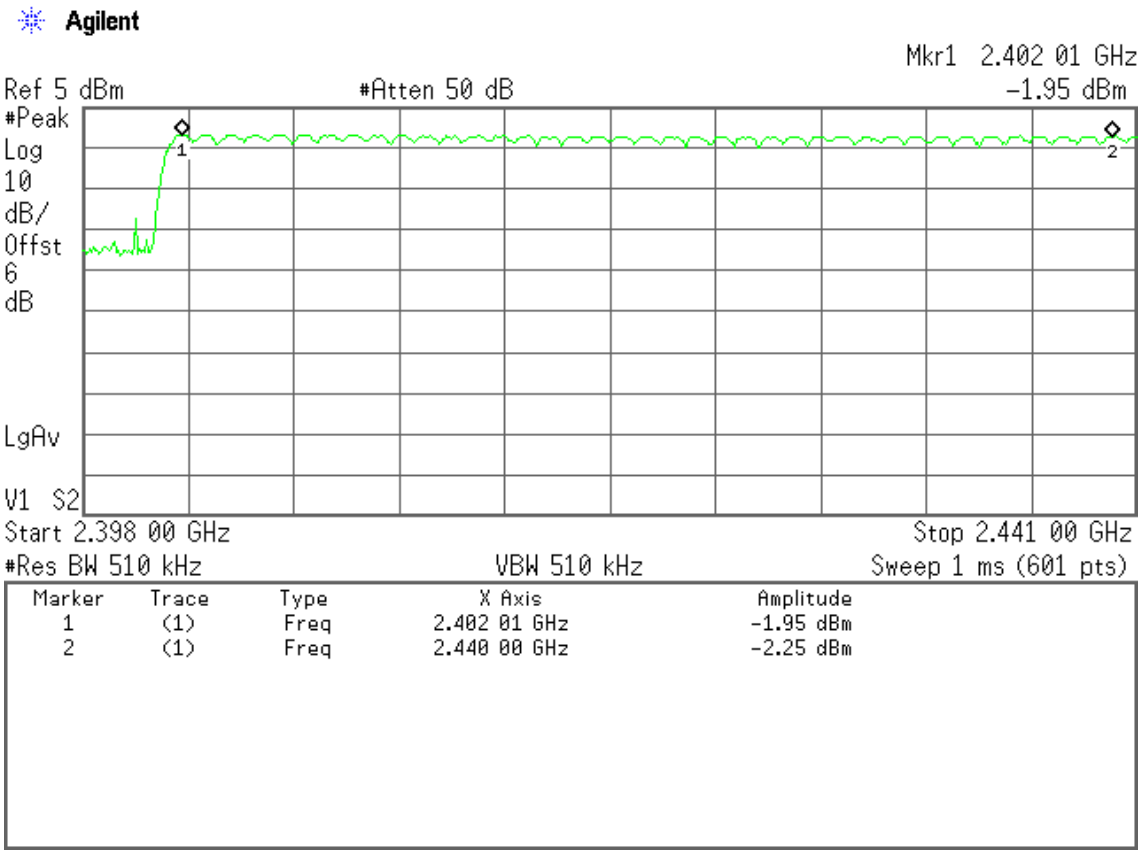


Total number of hopping frequencies: 79

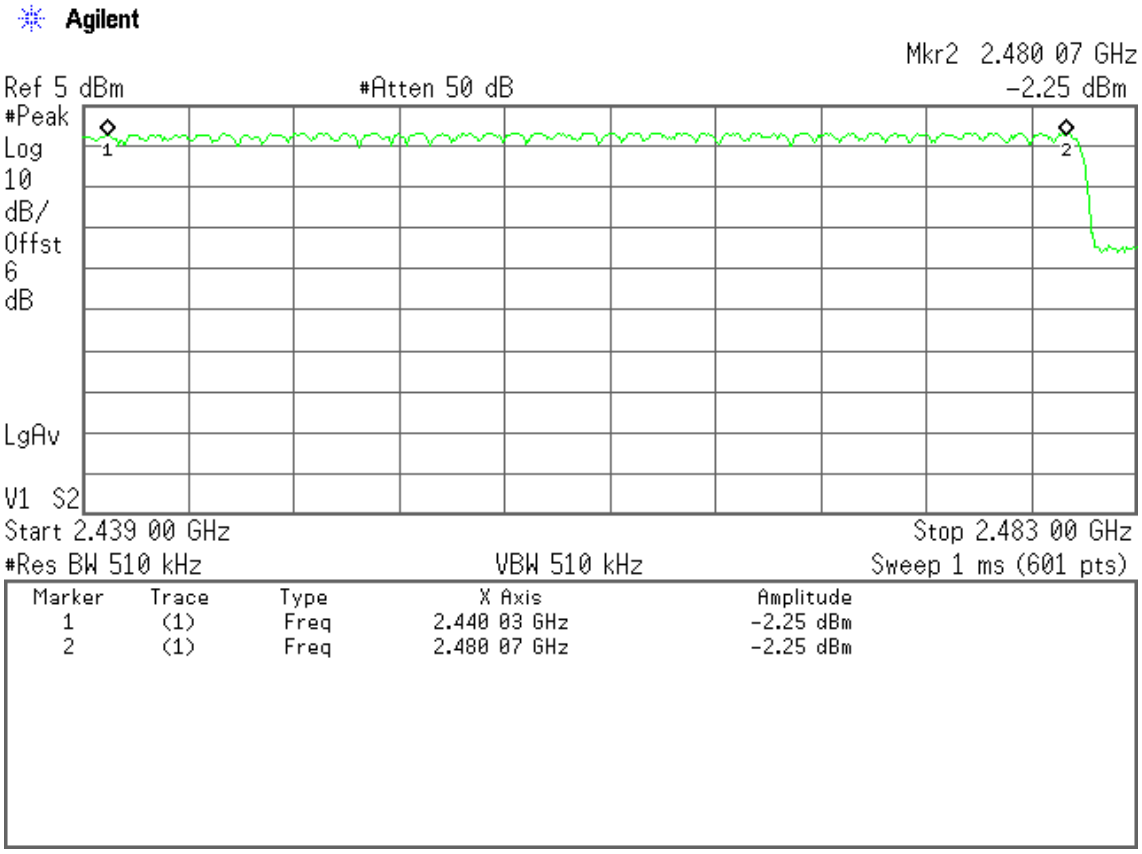
Verdict: PASS

Modulation: Π/4-**DQPSK**

Number of hopping frequencies: 39



Number of hopping frequencies: 40

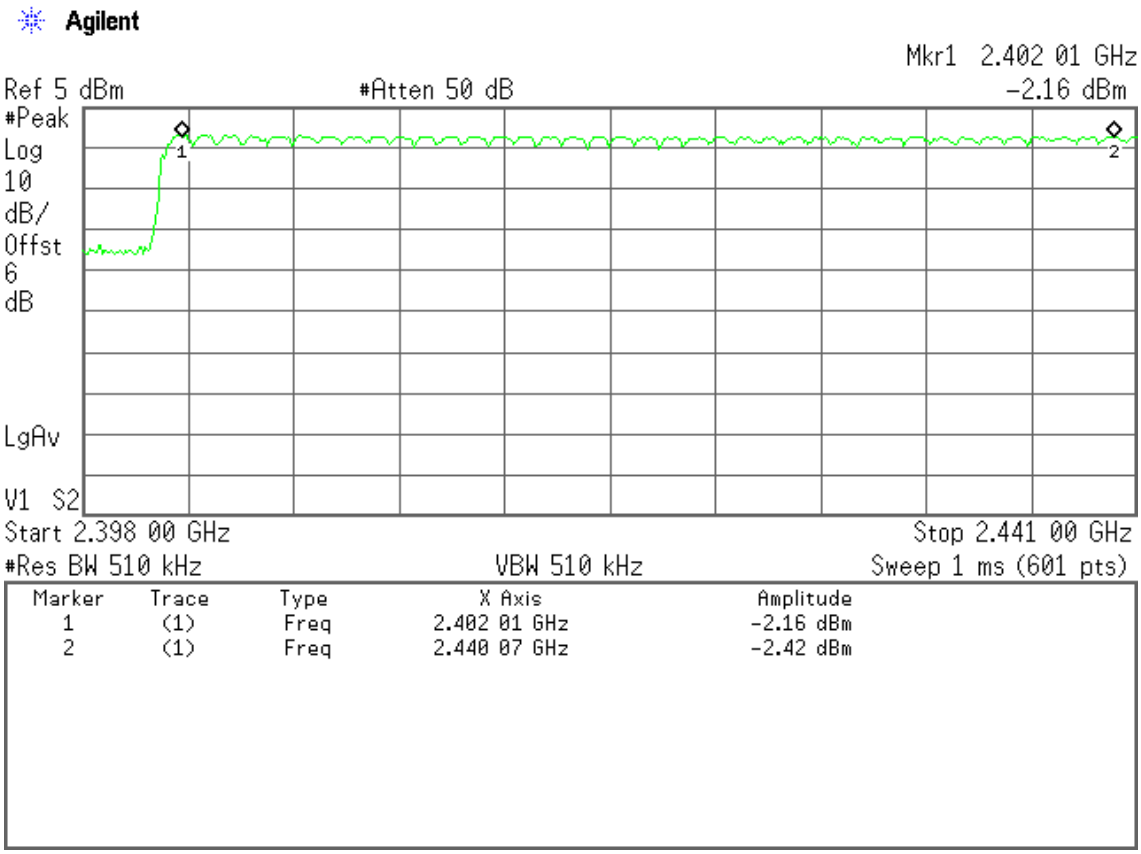


Total number of hopping frequencies: 79

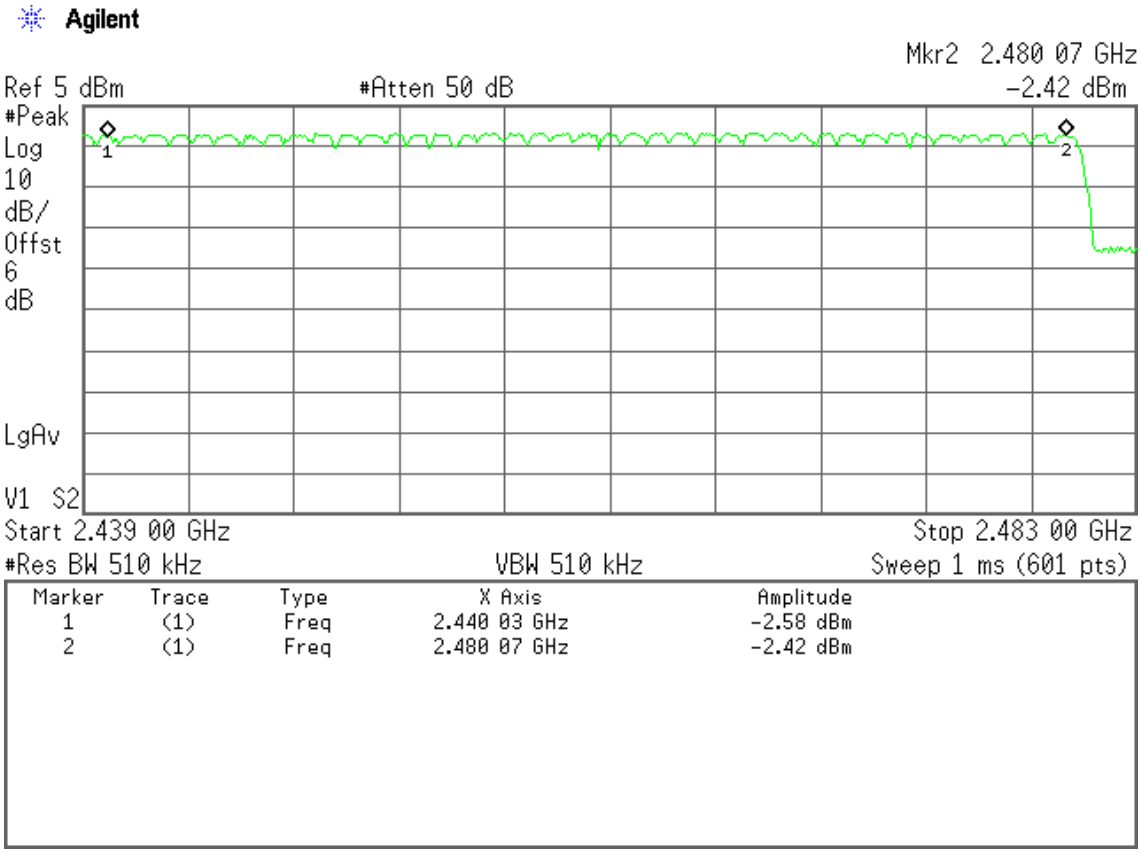
Verdict: PASS

Modulation: 8-DPSK

Number of hopping frequencies: 39



Number of hopping frequencies: 40



Total number of hopping frequencies: 79

Verdict: PASS

Section 15.247 Subclause (a) (1) (iii). Time of occupancy (Dwell Time)

SPECIFICATION

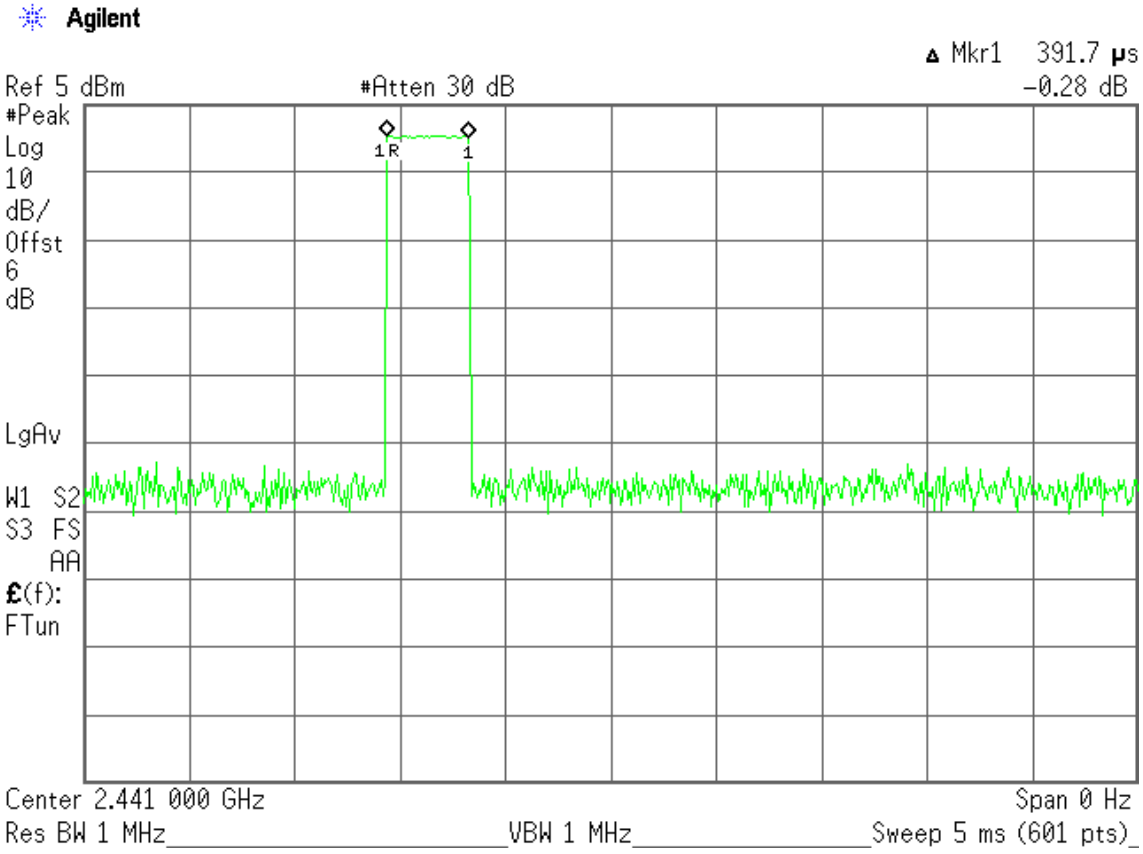
The average time of occupancy on any channel shall not be greater than 0.4 seconds (400 ms) within a period of 0.4 seconds multiplied by the number of hopping channels employed = 0.4 x 79= 31.6 seconds.

RESULTS

Modulation: GFSK

1. TIME OF OCCUPANCY (DWELL TIME) FOR PACKET TYPE DH1.

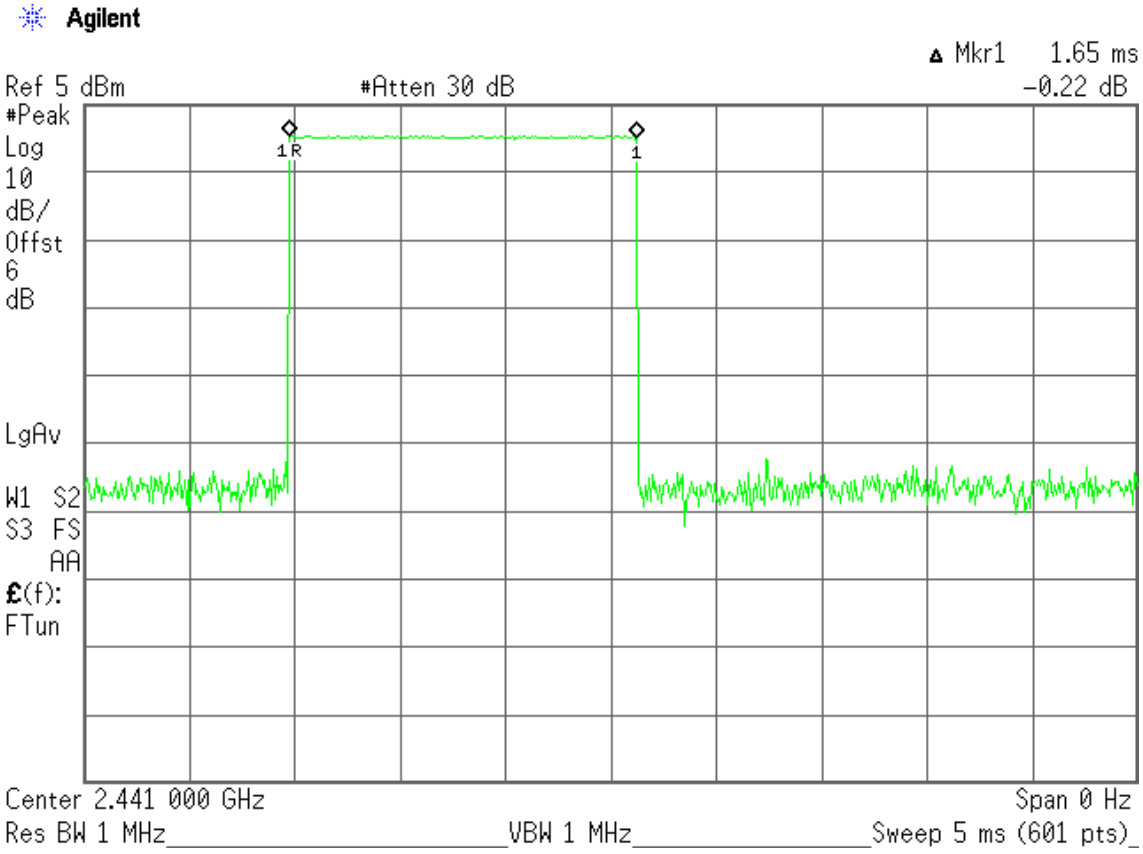
The system makes worst case 1600 hops per second or 1 time slot has a length of 625µs with 79 channels. A DH1 Packet need 1 time slot for transmitting and 1 time slot for receiving. Then the system makes worst case 1600/2 = 800 hops per second with 79 channels. So you have each channel 800/79 = 10.13 times per second and so for a period of 0.4 x 79 = 31.6 seconds you have 10.13 x 31.6 = 320.11 times of appearance.
Each Tx-time per appearance is 391.7 µs (see next plot).
So we have 320.11 x 391.7 µs = 125.39 ms per 31.6 seconds.



Verdict: PASS

2. TIME OF OCCUPANCY (DWELL TIME) FOR PACKET TYPE DH3.

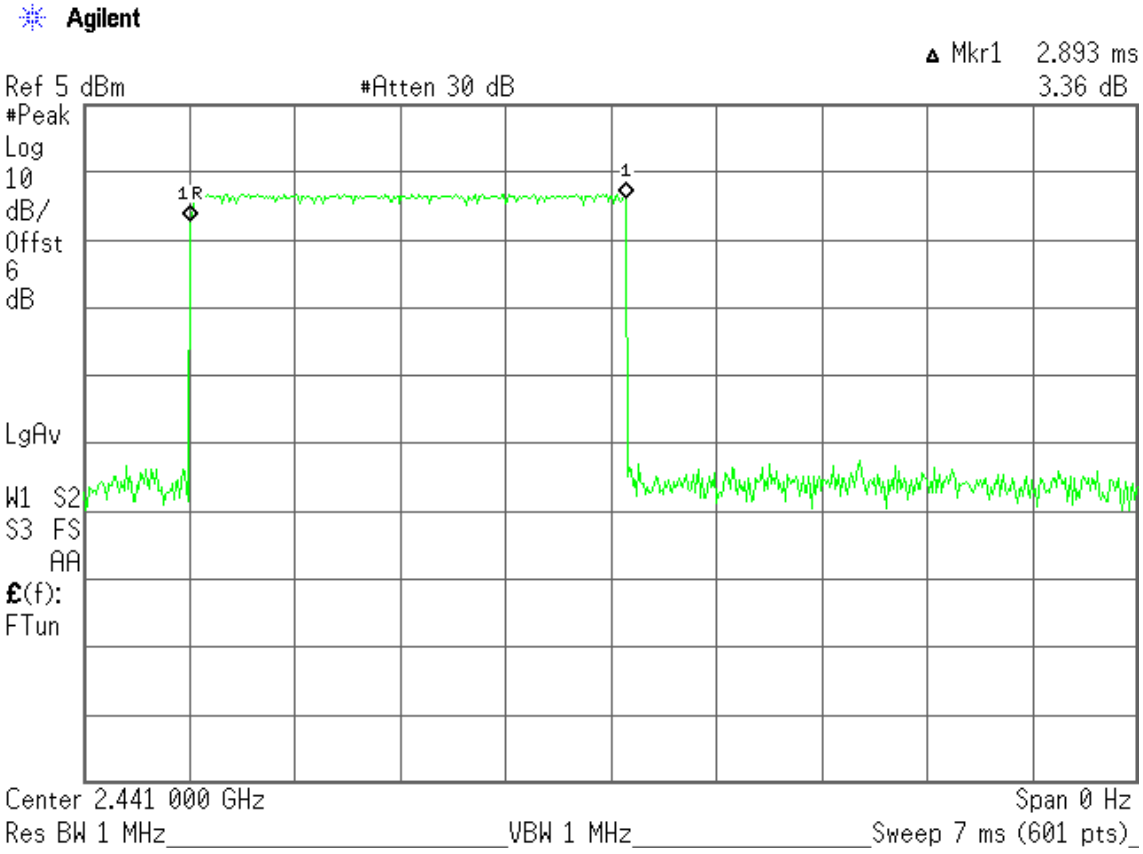
A DH3 Packet needs 3 time slots for transmitting and 1 time slot for receiving. Then the system makes worst case 1600/4 = 400 hops per second with 79 channels. So you have each channel 400/79 = 5.1 times per second and so for a period of 0.4 x 79 = 31.6 seconds you have 5.1 x 31.6 = 161.16 times of appearance.
Each Tx-time per appearance is 1.65 ms (see next plot).
So we have 161.16 x 1.65 ms = 265.91 ms per 31.6 seconds.



Verdict: PASS

3. TIME OF OCCUPANCY (DWELL TIME) FOR PACKET TYPE DH5.

A DH5 Packet needs 5 time slots for transmitting and 1 time slot for receiving. Then the system makes worst case 1600/6 = 266.67 hops per second with 79 channels. So you have each channel 266.67/79 = 3.37 times per second and so for a period of 0.4 x 79 = 31.6 seconds you have 3.37 x 31.6 = 106.49 times of appearance.
Each Tx-time per appearance is 2.893 ms (see next plot).
So we have 106.49 x 2.893 ms = 308.07 ms per 31.6 seconds.

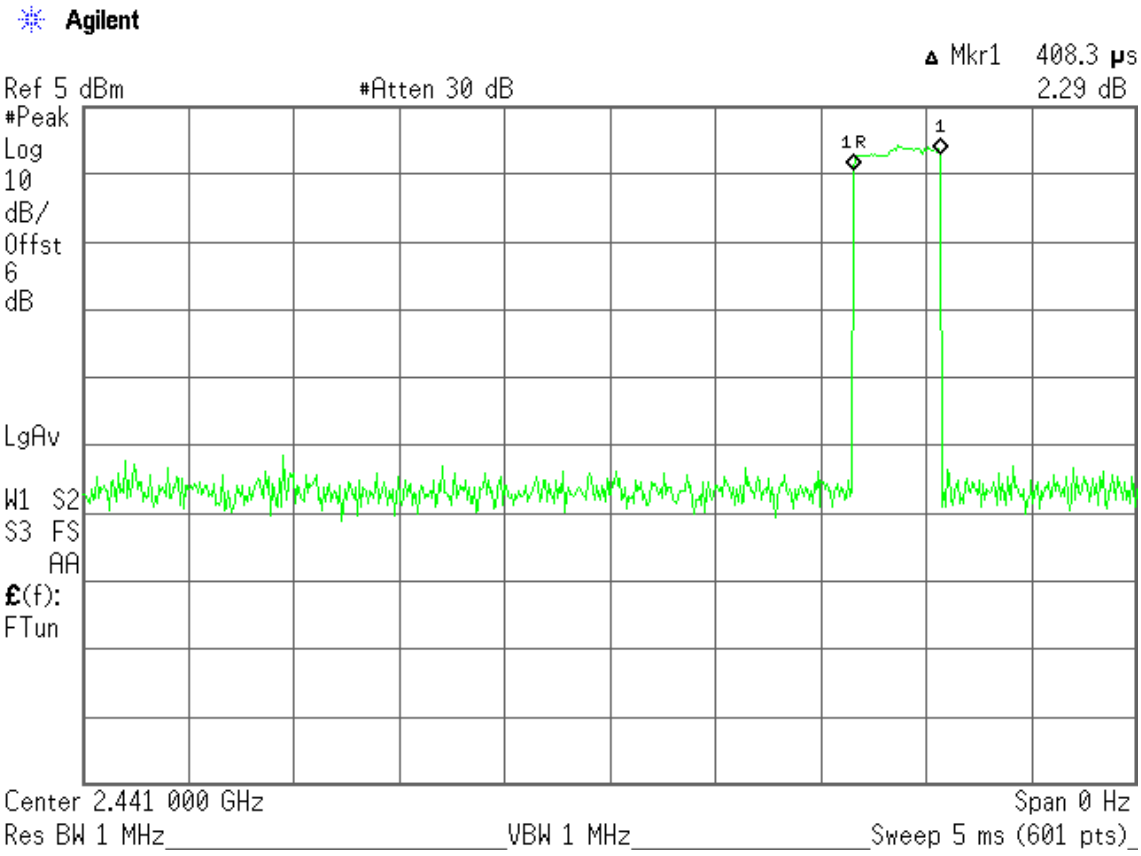


Verdict: PASS

Modulation: Π/4-**DQPSK**

1. TIME OF OCCUPANCY (DWELL TIME) FOR PACKET TYPE DH1.

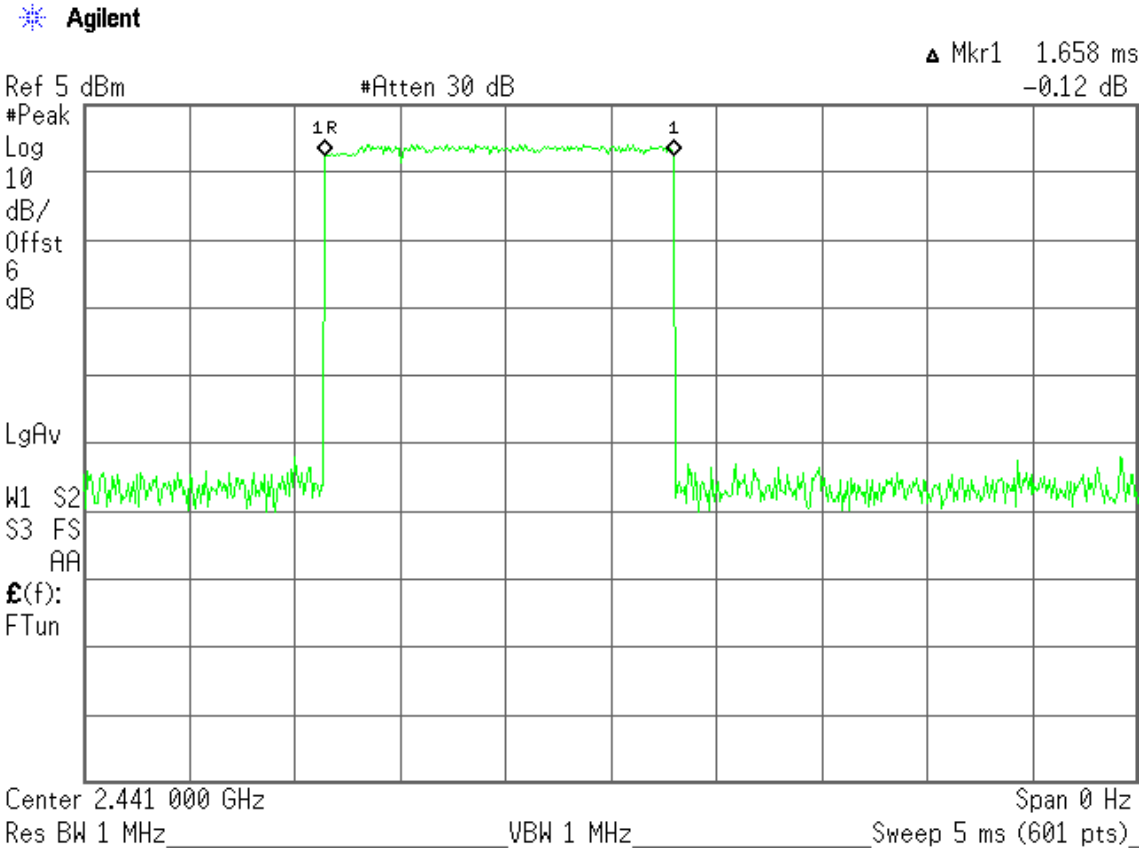
The system makes worst case 1600 hops per second or 1 time slot has a length of 625µs with 79 channels. A DH1 Packet need 1 time slot for transmitting and 1 time slot for receiving. Then the system makes worst case 1600/2 = 800 hops per second with 79 channels. So you have each channel 800/79 = 10.13 times per second and so for a period of 0.4 x 79 = 31.6 seconds you have 10.13 x 31.6 = 320.11 times of appearance.
Each Tx-time per appearance is 408.3 µs (see next plot).
So we have 320.11 x 408.3 µs =130.70 ms per 31.6 seconds.



Verdict: PASS

2. TIME OF OCCUPANCY (DWELL TIME) FOR PACKET TYPE DH3.

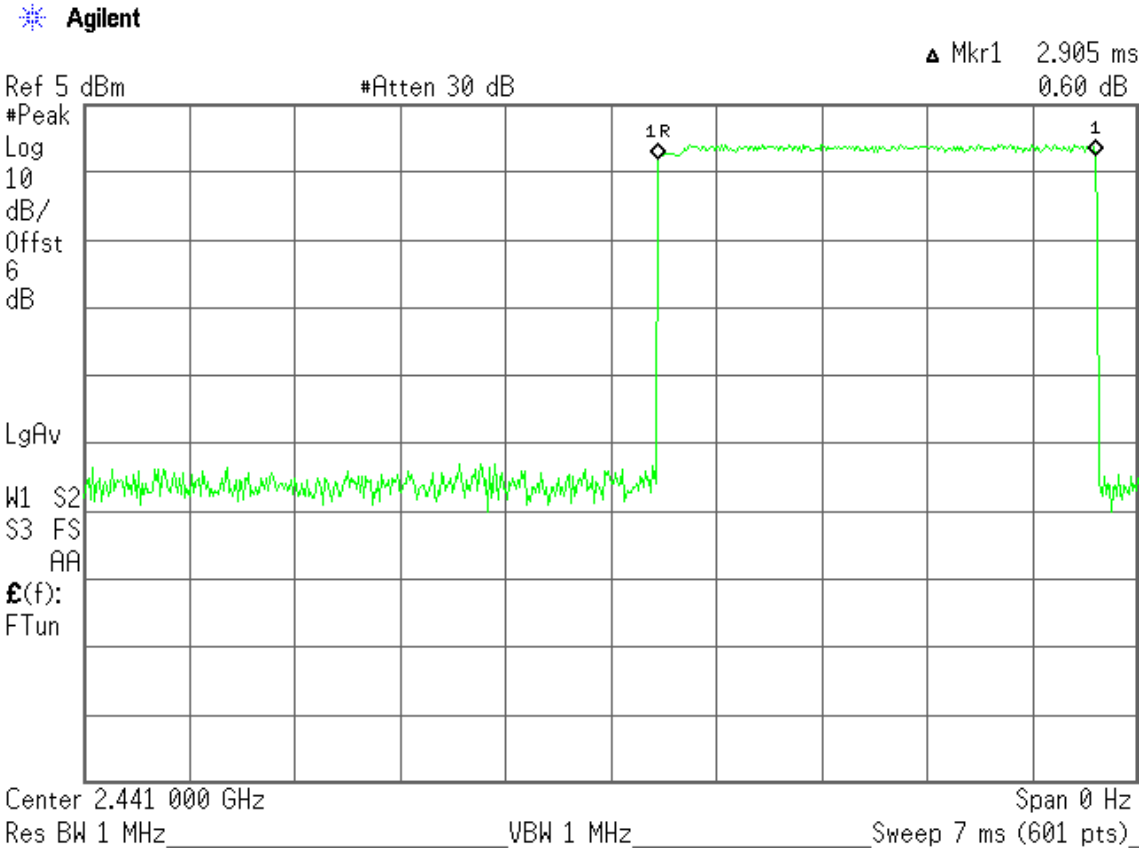
A DH3 Packet needs 3 time slots for transmitting and 1 time slot for receiving. Then the system makes worst case 1600/4 = 400 hops per second with 79 channels. So you have each channel 400/79 = 5.1 times per second and so for a period of 0.4 x 79 = 31.6 seconds you have 5.1 x 31.6 = 161.16 times of appearance.
Each Tx-time per appearance is 1.658 ms (see next plot).
So we have 161.16 x 1.658 ms = 267.20 ms per 31.6 seconds.



Verdict: PASS

3. TIME OF OCCUPANCY (DWELL TIME) FOR PACKET TYPE DH5.

A DH5 Packet needs 5 time slots for transmitting and 1 time slot for receiving. Then the system makes worst case 1600/6 = 266.67 hops per second with 79 channels. So you have each channel 266.67/79 = 3.37 times per second and so for a period of 0.4 x 79 = 31.6 seconds you have 3.37 x 31.6 = 106.49 times of appearance.
Each Tx-time per appearance is 2.905 ms (see next plot).
So we have 106.49 x 2.905 ms = 309.35 ms per 31.6 seconds.

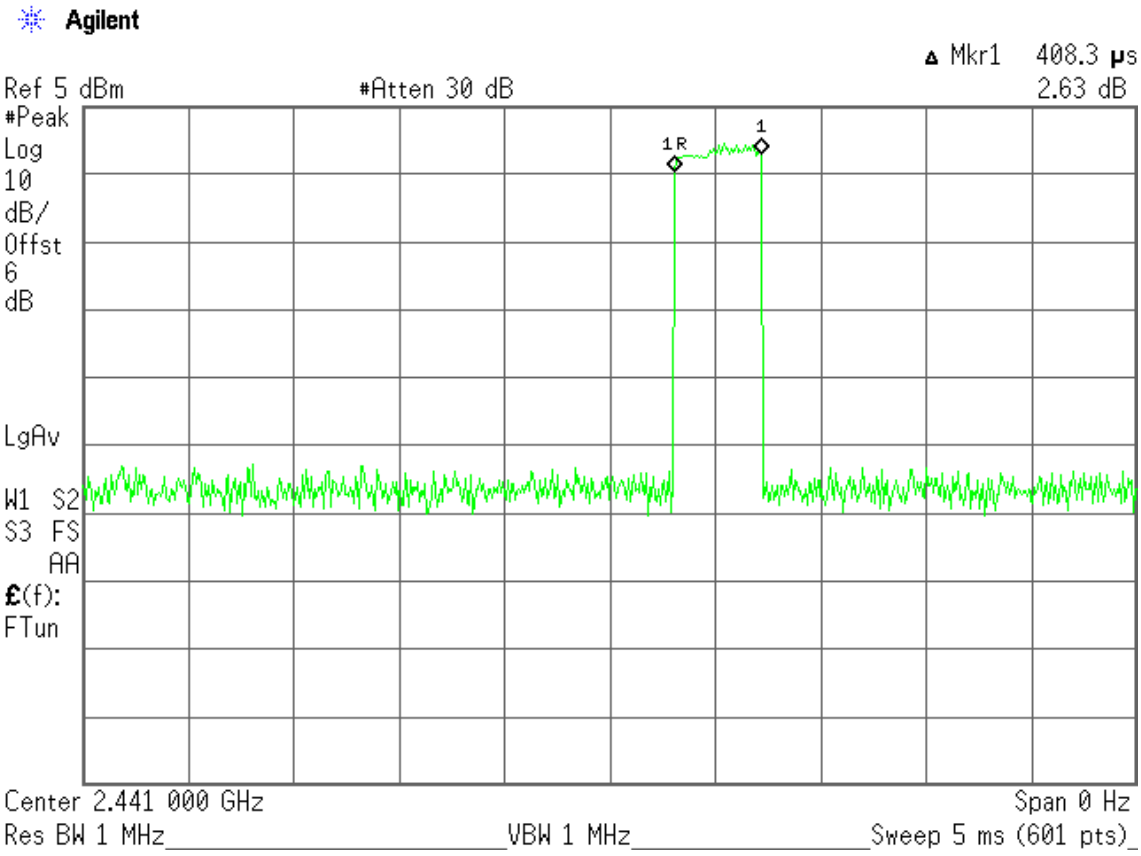


Verdict: PASS

Modulation: 8-DPSK

1. TIME OF OCCUPANCY (DWELL TIME) FOR PACKET TYPE DH1.

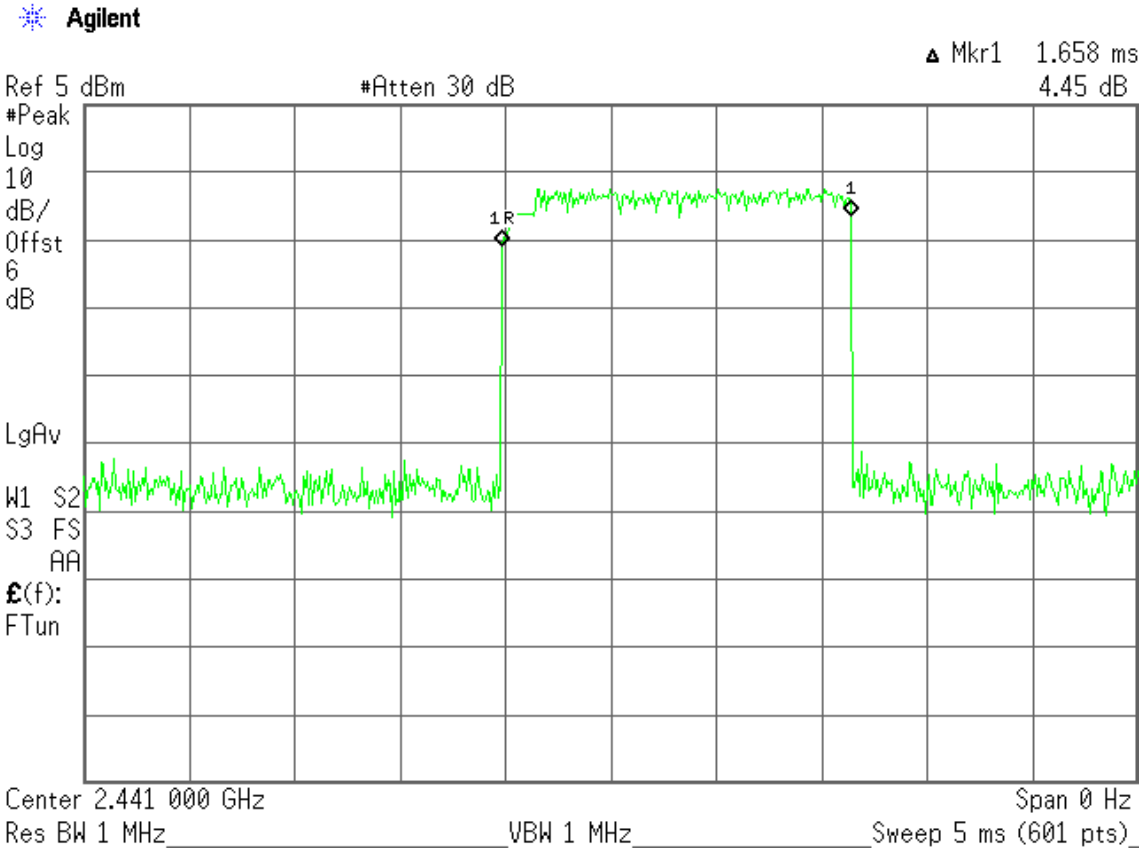
The system makes worst case 1600 hops per second or 1 time slot has a length of 625µs with 79 channels. A DH1 Packet need 1 time slot for transmitting and 1 time slot for receiving. Then the system makes worst case 1600/2 = 800 hops per second with 79 channels. So you have each channel 800/79 = 10.13 times per second and so for a period of 0.4 x 79 = 31.6 seconds you have 10.13 x 31.6 = 320.11 times of appearance.
Each Tx-time per appearance is 408.3 µs (see next plot).
So we have 320.11 x 408.3 µs =130.70 ms per 31.6 seconds.



Verdict: PASS

2. TIME OF OCCUPANCY (DWELL TIME) FOR PACKET TYPE DH3.

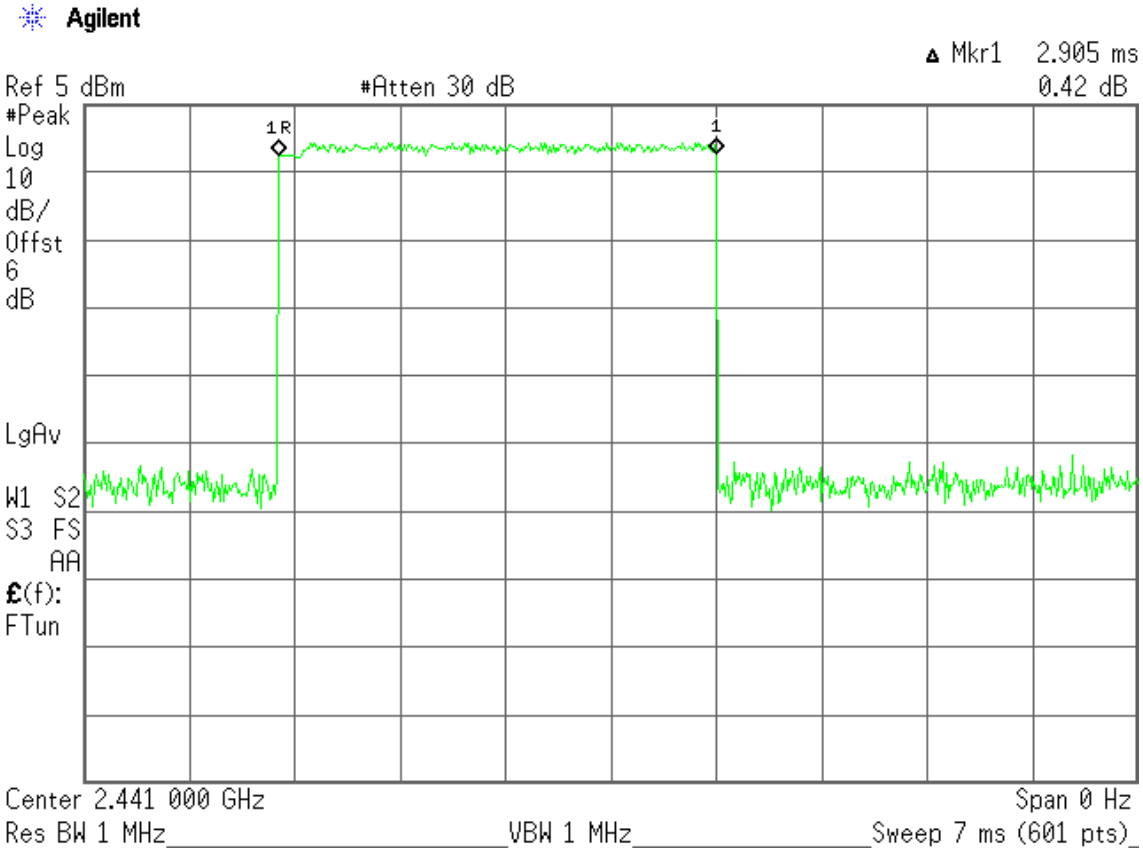
A DH3 Packet needs 3 time slots for transmitting and 1 time slot for receiving. Then the system makes worst case 1600/4 = 400 hops per second with 79 channels. So you have each channel 400/79 = 5.1 times per second and so for a period of 0.4 x 79 = 31.6 seconds you have 5.1 x 31.6 = 161.16 times of appearance.
Each Tx-time per appearance is 1.658 ms (see next plot).
So we have 161.16 x 1.658 ms = 267.20 ms per 31.6 seconds.



Verdict: PASS

3. TIME OF OCCUPANCY (DWELL TIME) FOR PACKET TYPE DH5.

A DH5 Packet needs 5 time slots for transmitting and 1 time slot for receiving. Then the system makes worst case 1600/6 = 266.67 hops per second with 79 channels. So you have each channel 266.67/79 = 3.37 times per second and so for a period of 0.4 x 79 = 31.6 seconds you have 3.37 x 31.6 = 106.49 times of appearance.
Each Tx-time per appearance is 2.905 ms (see next plot).
So we have 106.49 x 2.905 ms = 309.35 ms per 31.6 seconds.



Verdict: PASS

Section 15.247 Subclause (b). Maximum peak output power and antenna gain

SPECIFICATION

For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 hopping channels: 1 watt (30 dBm).

RESULTS

MAXIMUM PEAK OUTPUT POWER (CONDUCTED). See next plots.

Modulation: GFSK

	Lowest frequency 2402 MHz	Middle frequency 2441 MHz	Highest frequency 2480 MHz
Maximum peak power (dBm)	0.87	0.56	0.75
Measurement uncertainty (dB)	±1.5		

The maximum declared antenna gain for this device is 4 dBi, therefore the maximum theoretical peak radiated power (EIRP) in the three measurement channels for this device is 4.87 dBm or 3.07 mW.

The actual peak radiated power (EIRP) was measured for the lowest, middle and highest frequency (see next plots).

Modulation: Π/4-DQPSK (2Mbps)

	Lowest frequency 2402 MHz	Middle frequency 2441 MHz	Highest frequency 2480 MHz
Maximum peak power (dBm)	0.16	-0.30	-0.10
Measurement uncertainty (dB)	±1.5		

The maximum declared antenna gain for this device is 4 dBi, therefore the maximum theoretical peak radiated power (EIRP) in the three measurement channels for this device is 4.16 dBm or 2.61 mW.
The actual peak radiated power (EIRP) was measured for the lowest, middle and highest frequency (see next plots).

Modulation: 8-DPSK (3Mbps)

	Lowest frequency 2402 MHz	Middle frequency 2441 MHz	Highest frequency 2480 MHz
Maximum peak power (dBm)	0.58	0.26	0.45
Measurement uncertainty (dB)	±1.5		

The maximum declared antenna gain for this device is 4 dBi, therefore the maximum theoretical peak radiated power (EIRP) in the three measurement channels for this device is 4.58 dBm or 2.87 mW.
The actual peak radiated power (EIRP) was measured for the lowest, middle and highest frequency (see next plots).

MAXIMUM PEAK OUTPUT POWER (RADIATED).

Modulation: GFSK

	Lowest frequency 2402 MHz	Middle frequency 2441 MHz	Highest frequency 2480 MHz
Correction Factor (dB)	35.0	35.1	35.2
Maximum EIRP peak power (dBm)	1.52	1.79	2.97
Measurement uncertainty (dB)	+1.98 / -1.75		

Modulation: Π/4-DQPSK (2 Mbps)

	Lowest frequency 2402 MHz	Middle frequency 2441 MHz	Highest frequency 2480 MHz
Correction Factor (dB)	35.0	35.1	35.2
Maximum EIRP peak power (dBm)	2.65	2.76	3.72
Measurement uncertainty (dB)	+1.98 / -1.75		

Modulation: 8-DPSK (3Mbps)

	Lowest frequency 2402 MHz	Middle frequency 2441 MHz	Highest frequency 2480 MHz
Correction Factor (dB)	35.0	35.1	35.2
Maximum EIRP peak power (dBm)	2.88	3.56	4.18
Measurement uncertainty (dB)	+1.98 / -1.75		

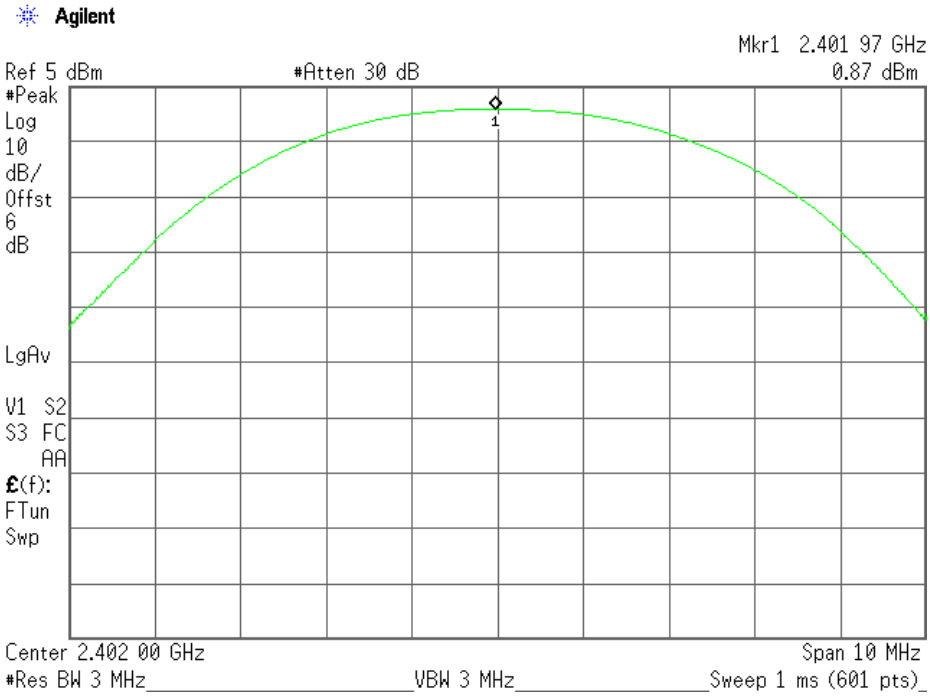
Declared peak gain: 4 dBi

The maximum directional gain of the antenna is less than 6 dBi and therefore the maximum output power is not required to be reduced from the stated values.

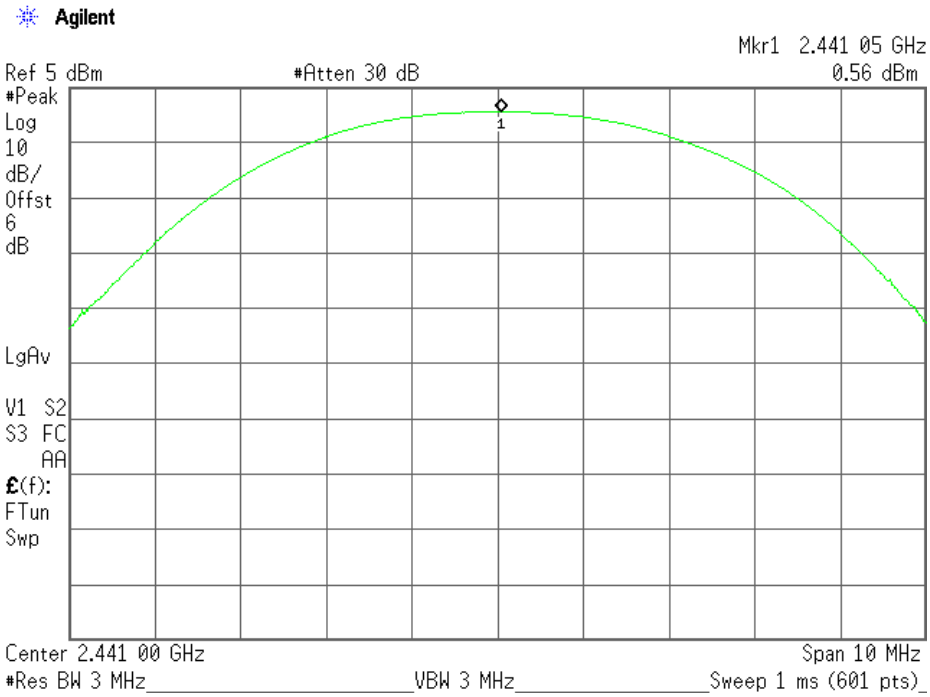
Verdict: PASS

PEAK OUTPUT POWER (CONDUCTED).

Modulation: GFSK Lowest Channel: 2402 MHz.

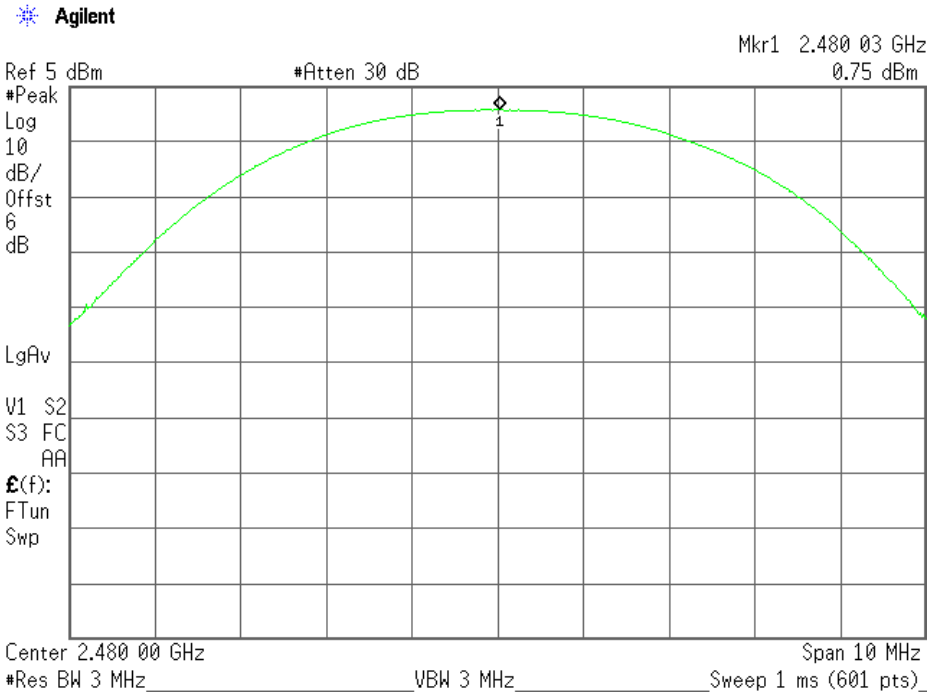


Modulation: GFSK Middle Channel: 2441 MHz.

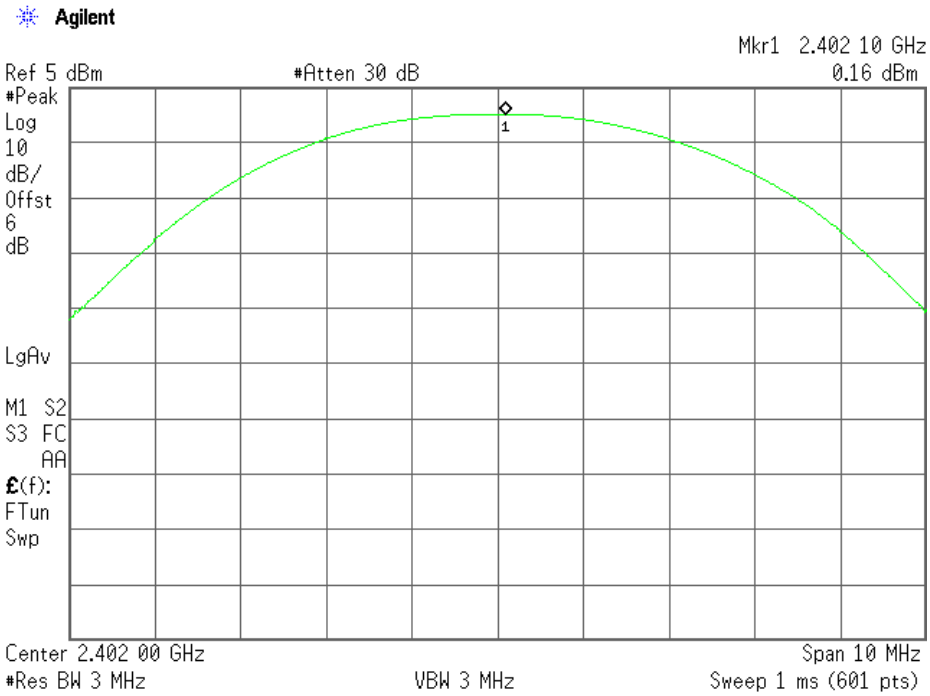


PEAK OUTPUT POWER (CONDUCTED).

Modulation: GFSK Highest Channel: 2480 MHz.

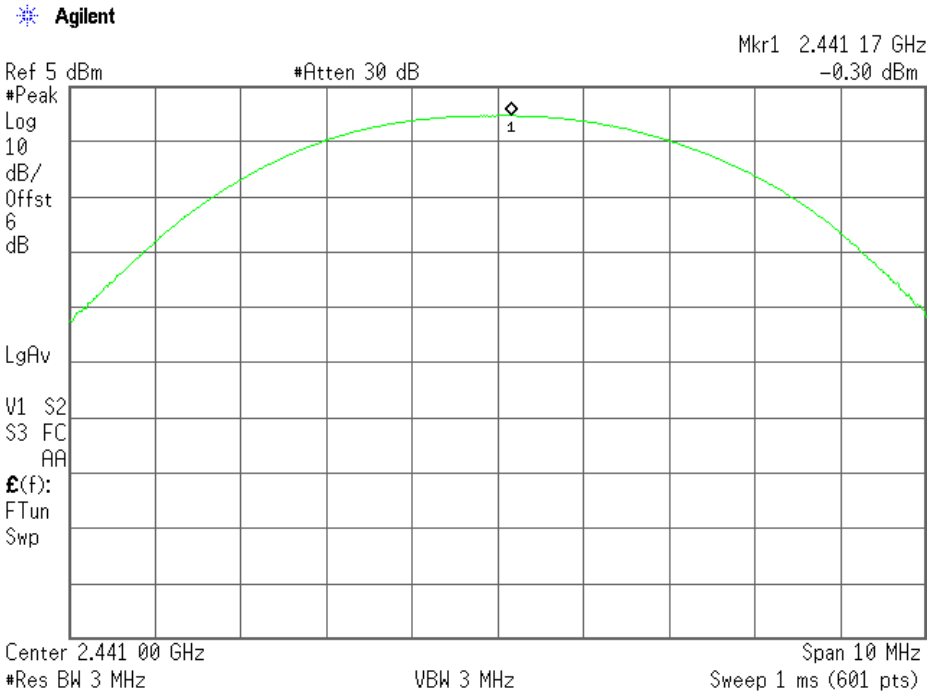


Modulation: Π/4-DQPSK Lowest Channel: 2402 MHz

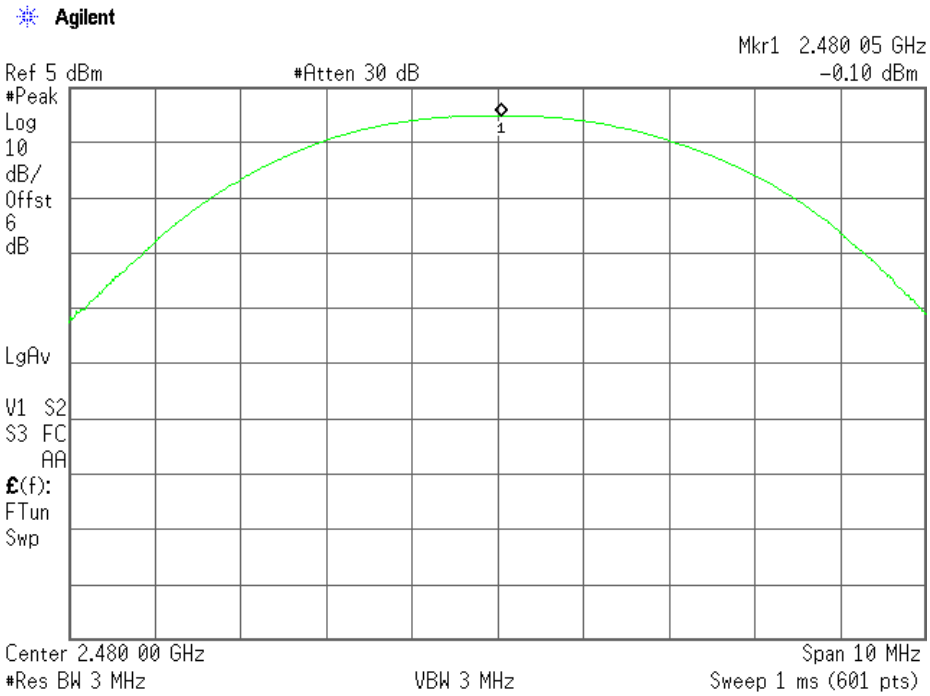


PEAK OUTPUT POWER (CONDUCTED)

Modulation: Π/4-DQPSK Middle Channel: 2441 MHz.

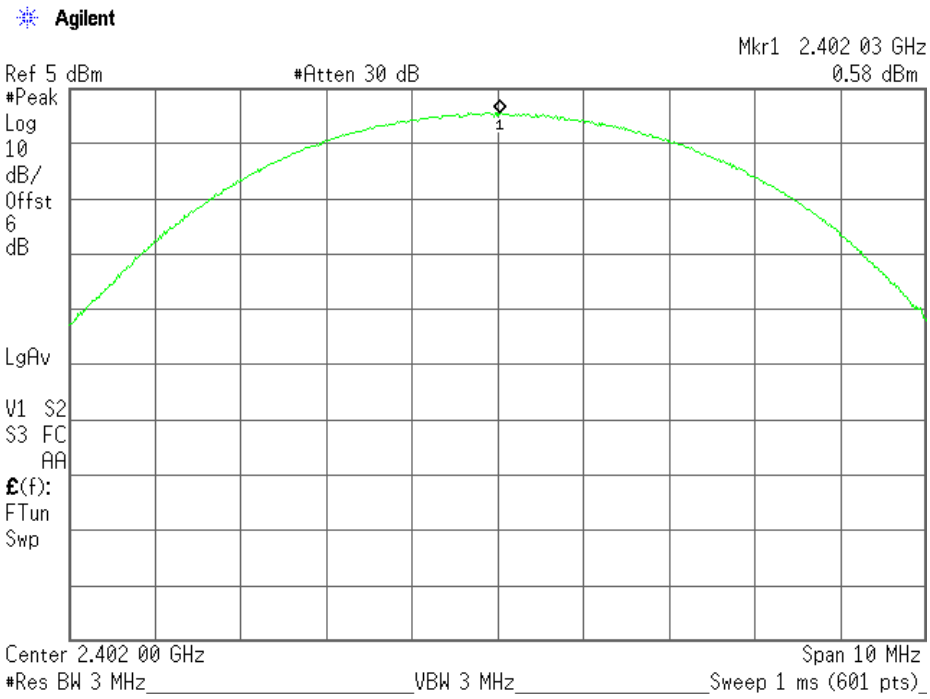


Modulation: Π/4-DQPSK Highest Channel: 2480 MHz.

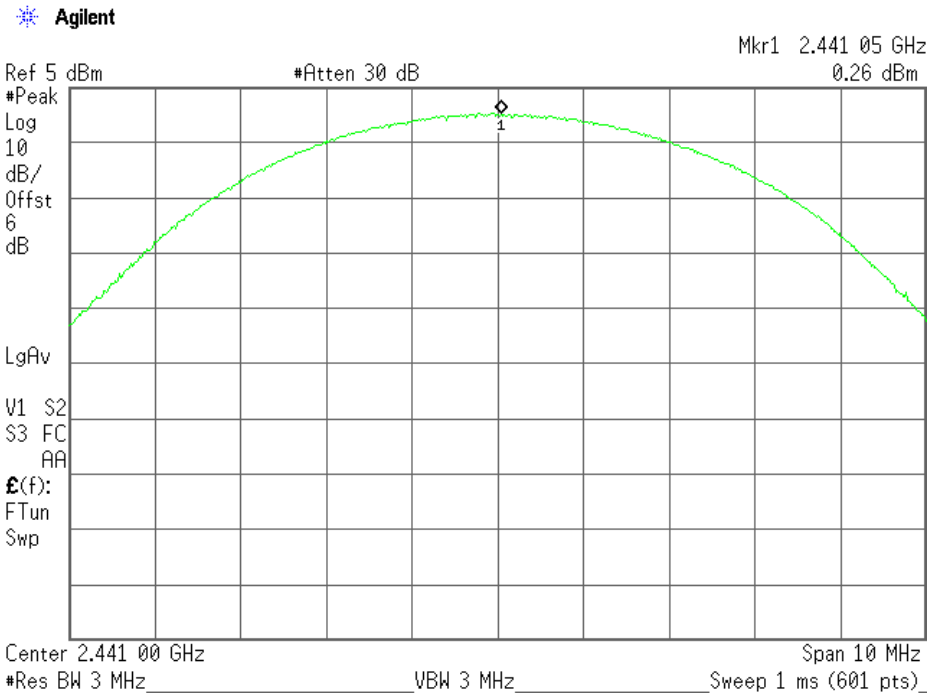


PEAK OUTPUT POWER (CONDUCTED).

Modulation: 8-DPSK Lowest Channel: 2402 MHz

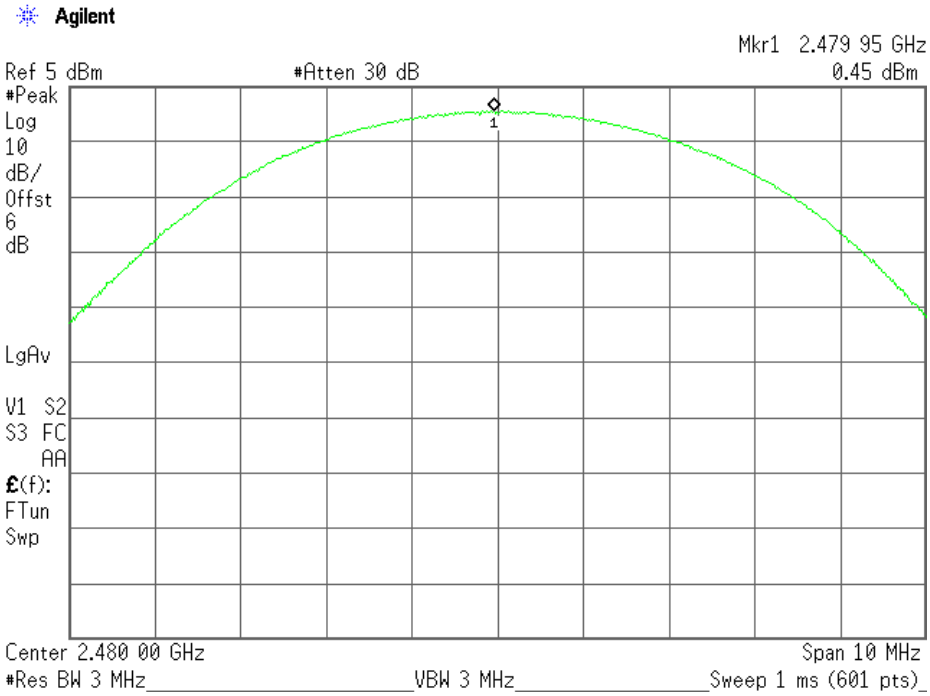


Modulation: 8-DPSK Middle Channel: 2441 MHz.



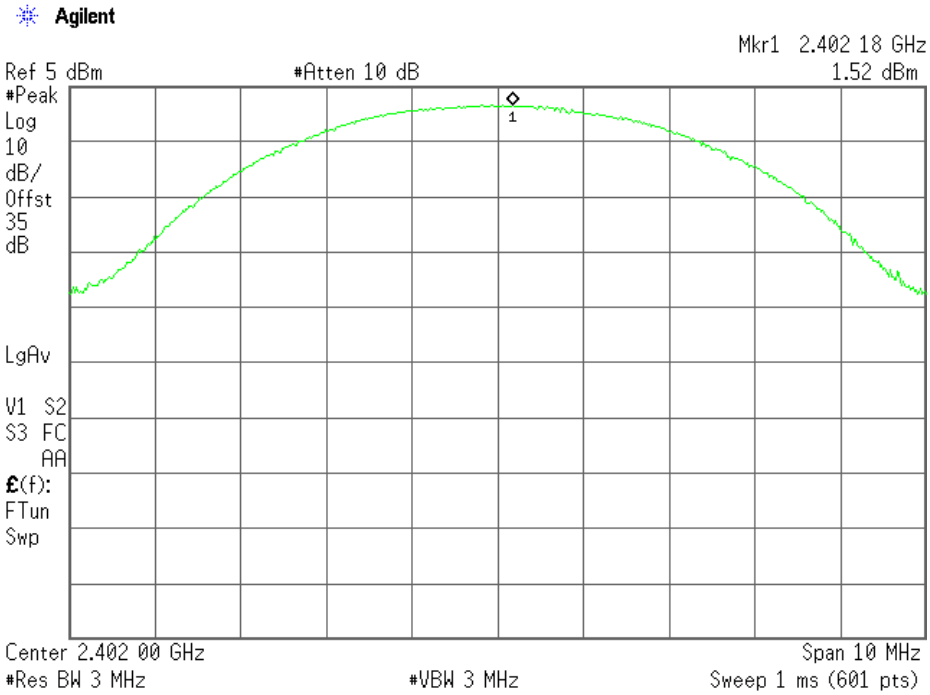
PEAK OUTPUT POWER (CONDUCTED).

Modulation: 8-DPSK Highest Channel: 2480 MHz.



PEAK OUTPUT POWER (RADIATED).

Modulation: GFSK Lowest Channel: 2402 MHz.



Modulation: GFSK Middle Channel: 2441 MHz.