



TEST REPORT

Eurofins KCTL Co.,Ltd. 65, Sinwon-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Korea TEL: 82-70-4904-0113 FAX: 82-505-299-8311 www.kctl.co.kr	Report No.: KR25-SRF0223 Page (1) of (51)	 KCTL
1. Client		
◦ Name : TORDER Co.,Ltd ◦ Address : 46F, Park one tower2, 108, Yeoui-daero, Yeongdeungpo-gu, Seoul, Republic of Korea ◦ Date of Receipt : 2025-08-05		
2. Use of Report : Certification		
3. Name of Product / Model : Order tablet / T2N		
4. Manufacturer / Country of Origin : Shenzhen Tuohai Times Technology Co., Ltd / China		
5. FCC ID : 2BTKVT2N		
6. IC Certificate No. : 34933-T2N		
7. Date of Test : 2025-10-14 to 2025-11-10		
8. Location of Test : ☒ Permanent Testing Lab ☐ On Site Testing (Address:65, Sinwon-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Korea)		
9. Test method used : FCC Part 15 Subpart C, 15.247 RSS-247 Issue 4 July 2025 RSS-Gen Issue 5 February 2021		
10. Test Result : Refer to the test result in the test report		
Affirmation	Tested by Name : Youngju Jo  (Signature)	Technical Manager Name : Euijung Kim  (Signature)
2025-12-23		
Eurofins KCTL Co.,Ltd.		
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REPORT REVISION HISTORY

Date	Revision	Page No
2025-12-23	Originally issued	-

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General remarks for test reports

Statement concerning the uncertainty of the measurement systems used for the tests

(may be required by the product standard or client)

☐ Internal procedure used for type testing through which traceability of the measuring uncertainty has been established:

Procedure number, issue date and title:

Calculations leading to the reported values are on file with the testing laboratory that conducted the testing.

☒ Statement not required by the standard or client used for type testing

CONTENTS

1.	General information	4
2.	Device information	4
2.1.	Frequency/channel operations.....	5
2.2.	RF power setting in TEST SW	5
3.	Antenna requirement	6
4.	Summary of tests.....	7
5.	Measurement uncertainty	8
6.	Measurement results explanation example	9
7	Test results	10
7.1.	Maximum peak output power.....	10
7.2.	Carrier frequency separation	12
7.3.	20 dB channel bandwidth & 99% bandwidth.....	15
7.4.	Number of hopping channels.....	20
7.5.	Time of occupancy(Dwell time).....	22
7.6.	Radiated spurious emissions & band edge.....	26
7.7.	Conducted Spurious Emission.....	45
7.8.	AC Conducted emission	49
8.	Measurement equipment.....	51

1. General information

Client : TORDER Co.,Ltd
 Address : 46F, Park one tower2, 108, Yeoui-daero, Yeongdeungpo-gu, Seoul, Republic of Korea
 Manufacturer : Shenzhen Tuohai Times Technology Co., Ltd
 Address : 4-6F, Block B, Xinghui Technology Park, 2nd Road of GuShu, Xixiang Sub-district, Bao'an District, Shenzhen City.
 Laboratory : Eurofins KCTL Co.,Ltd.
 Address : 65, Sinwon-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Korea
 Accreditations : FCC Site Designation No: KR0040, FCC Site Registration No: 687132
 VCCI Registration No. : R-20080, G-20078, C-20059, T-20056
 CAB Identifier: KR0040
 ISED Number: 8035A
 KOLAS No.: KT231

2. Device information

Equipment under test : Order tablet
 Model : T2N
 Modulation technique : Bluetooth(BDR/EDR) : GFSK, $\pi/4$ DQPSK, 8DPSK
 Number of channels : 79 ch
 Power source : DC 9 V
 Antenna specification : PIFA Antenna
 Antenna gain : 1.30 dBi
 Frequency range : 2 402 MHz ~ 2 480 MHz
 Software version : torder 1.5.84
 Hardware version : torder_T2N_P1C2X432_20251015_V1.1.0
 Test device serial No. : TO240SG16569
 Operation temperature : -20 °C ~ 50 °C

2.1. Frequency/channel operations

This device contains the following capabilities:
 Bluetooth(BDR, EDR)

Ch.	Frequency (MHz)
00	2 402
39	2 441
78	2 480

Table 2.1.1. Bluetooth(BDR/EDR)

15.247 Requirements for Bluetooth transmitter:

- This Bluetooth module has been tested by a Bluetooth Qualification Lab, and we confirm the following:
 - 1) This system is hopping pseudo-randomly.
 - 2) Each frequency is used equally on the average by each transmitter.
 - 3) The receiver input bandwidths that match the hopping channel bandwidths of their corresponding transmitters
 - 4) The receiver shifts frequencies in synchronization with the transmitted signals.
- 15.247(g): The system, consisting of both the transmitter and the receiver, must be designed to comply with all of the regulations in this Section 15.247 should the transmitter be presented with a continuous data (or information) stream.
- 15.247(h): The coordination of frequency hopping systems in any other manner for the express purpose of avoiding the simultaneous occupancy of individual hopping frequencies by multiple transmitters is not permitted.

2.2. RF power setting in TEST SW

Operation mode	Test Program	Test mode	Power Setting
Bluetooth	Android-based test program	DH1	9
		DH3	9
		DH5	9
		2DH1	9
		2DH3	9
		2DH5	9
		3DH1	9
		3DH3	9
		3DH5	9

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3. Antenna requirement

Requirement of FCC part section 15.203:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

Requirement of RSS-Gen Section 6.8:

The applicant for equipment certification shall provide a list of all antenna types that may be used with the transmitter, where applicable (i.e. for transmitters with detachable antenna), indicating the maximum permissible antenna gain (in dBi) and the required impedance for each antenna. The test report shall demonstrate the compliance of the transmitter with the limit for maximum equivalent isotropically radiated power (e.i.r.p.) specified in the applicable RSS, when the transmitter is equipped with any antenna type, selected from this list.

For expediting the testing, measurements may be performed using only the antenna with highest gain of each combination of transmitter and antenna type, with the transmitter output power set at the maximum level. However, the transmitter shall comply with the applicable requirements under all operational conditions and when in combination with any type of antenna from the list provided in the test report (and in the notice to be included in the user manual, provided below).

When measurements at the antenna port are used to determine the RF output power, the effective gain of the device's antenna shall be stated, based on a measurement or on data from the antenna's manufacturer.

The test report shall state the RF power, output power setting and spurious emission measurements with each antenna type that is used with the transmitter being tested.

Immediately following the above notice, the manufacturer shall provide a list of all antenna types which can be used with the transmitter, indicating the maximum permissible antenna gain (in dBi) and the required impedance for each antenna type.

- The transmitter has permanently attached PIFA Antenna (Internal antenna) on board.
- The EUT Complies with the requirement of §15.203, §15.247.

4. Summary of tests

FCC Part ss section(s)	IC Rule reference	Parameter	Test Condition	Test results
15.247(b)(1),(4)	RSS-247 (6.2.3.2)	Maximum peak output power	Conducted	Pass
15.247(a)(1)	RSS-247 (6.2.3.1)(a)	Carrier frequency separation		Pass
15.247(a)(1)	RSS-247 (6.2.1)(a)	20 dB channel bandwidth		Pass
-	RSS-Gen (6.7)	Occupied bandwidth		Pass
15.247(a)(iii) 15.247(b)(1)	RSS-247 6.2.3.1(b)	Number of hopping channel		Pass
15.247(a)(iii)	RSS-247 (6.2.3.1)(b)	Time of occupancy(dwell time)		Pass
15.207(a)	RSS-Gen (8.8)	AC Conducted Emissions		Pass
15.247(d)	RSS-247 (6.6)	Conducted Spurious Emissions	Radiated	Pass
15.205(a), 15.209(a)	RSS-247 (6.6) RSS-Gen(8.9), (8.10)	Spurious emission		Pass
		Band-edge, restricted band		Pass

Notes:

1. All modes of operation and data rates were investigated. The test results shown in the following sections represent the worst case emissions.
2. According to exploratory test no any obvious emission were detected from 9 kHz to 30 MHz. Although these tests were performed other than open field site, adequate comparison measurements were confirmed against 30 m open field site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.
3. EUT was investigated in three orthogonal orientations X, Y and Z. it was determined that X orientation was worst-case orientation. Therefore, all final radiated testing was performed with the EUT in X orientation.
4. The test procedure(s) in this report were performed in accordance as following.
 - ◆ ANSI C63.10-2020
 - ◆ ANSI C63.10-2020+Cor.1-2023+C63.10a-2024+Errata to C63.10a-2024
 - ◆ KDB 558074 D01 v05r02
5. The worst-case data rate were:
 - BDR Packet type DH-1
 - EDR Packet type 3DH-1

5. Measurement uncertainty

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.10-2020, ANSI C63.10-2020+Cor.1-2023+C63.10a-2024+Errata to C63.10a-2024. All measurement uncertainty values are shown with a coverage factor of $k=2$ to indicated a 95 % level of confidence. The measurement data shown herein meets or exceeds the U_{CISPR} measurement uncertainty values specified in CISPR 16-4-2 and thus, can be compared directly to specified limits to determine compliance.

Parameter	Expanded uncertainty ($\pm$)	
Maximum Peak Output Power	0.9 dB	
6 dB Channel Bandwidth	0.1 %	
Occupied Bandwidth	0.1 %	
Number of hopping channel	0.1 %	
Time of occupancy(dwel time)	0.1 ms	
Conducted spurious emission	2.0 dB	
Radiated spurious Emissions (Bandedge, restricted band)	Below 30 MHz	2.3 dB
	30 MHz to 1 000 MHz	2.6 dB
	1 000 MHz to 18 000 MHz	4.8 dB
	Above 18 000 MHz	4.8 dB
AC Conducted Emissions	150 kHz to 30 MHz	2.9 dB

6. Measurement results explanation example

The offset level is set in the spectrum analyzer to compensate the RF cable loss factor between EUT conducted output port and spectrum analyzer.

With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Frequency (MHz)	Factor(dB)	Frequency (MHz)	Factor(dB)
30	9.14	11 000	11.17
50	8.73	12 000	11.09
100	8.93	13 000	11.65
200	9.28	14 000	11.60
300	9.57	15 000	11.98
400	9.74	16 000	12.23
500	9.88	17 000	12.30
600	10.00	18 000	13.00
700	10.03	19 000	12.05
800	10.12	20 000	12.23
900	10.18	21 000	12.63
1 000	10.01	22 000	12.59
2 000	10.38	23 000	12.76
3 000	10.46	24 000	12.64
4 000	10.79	25 000	12.53
5 000	10.87	26 000	12.74
6 000	10.63	26 500	12.68
7 000	10.64	27 000	12.68
8 000	11.08	28 000	13.14
9 000	10.51	29 000	13.70
10 000	11.00	30 000	13.75

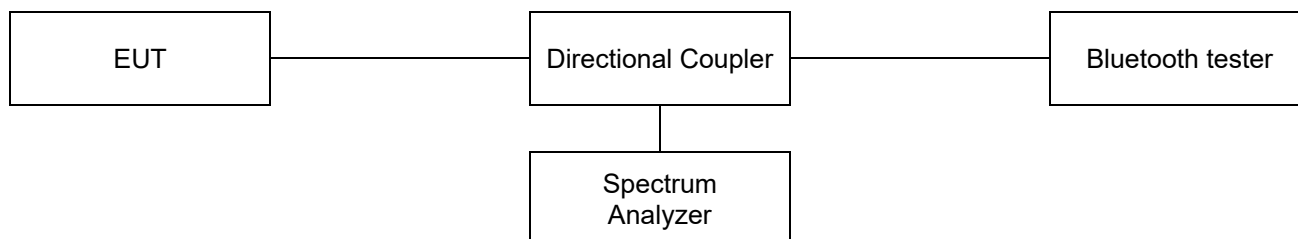
Note.

Offset(dB) = RF cable loss(dB) + Power Divider(dB)

7 Test results

7.1. Maximum peak output power

Test setup



Limit

FCC

According to §15.247(a)(1),

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 2 400-2 483.5 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.

According to §15.247(b)(1),

For frequency hopping systems operating in the 2 400-2 483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5 725-5 850 MHz band: 1 watt. For all other frequency hopping systems in the 2 400-2 483.5 MHz band: 0.125 watts.

According to §15.247(b)(4),

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

IC

According to RSS-247(6.2.3.2),

For FHSs operating in the band 2400-2483.5 MHz,

- If the hopset uses 75 or more hopping channels, the maximum peak conducted output power shall not exceed 1.0 W
- If the hopset uses less than 75 hopping channels the maximum peak conducted output power shall not exceed 0.125 W
- The e.i.r.p. shall not exceed 4 W, except as provided in sections 6.5 a) and b).

Test procedure

ANSI C63.10-2020 - Section 7.8.5,

ANSI C63.10-2020+Cor.1-2023+C63.10a-2024+Errata to C63.10a-2024- Section 7.8.5

Test settings

The test follows ANSI C63.10-2020 – Section 7.8.5. Using the power sensor instead of a spectrum analyzer.

The test follows ANSI C63.10-2020+Cor.1-2023+C63.10a-2024+Errata to C63.10a-2024– Section 7.8.5. Using the power sensor instead of a spectrum analyzer.

Notes:

A peak responding power sensor is used, where the power sensor system video bandwidth is greater than the occupied bandwidth of the EUT.

Test results

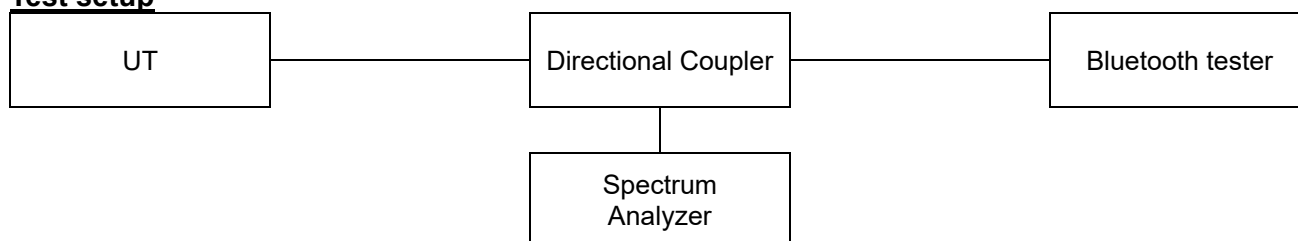
Frequency(MHz)	Data rate (Mbps)	Measured output power(dBm)						
		Conducted output power (dBm)		Limit (dBm)	Ant Gain (dBi)	Max. e.i.r.p. (dBm)		Max e.i.r.p. Limit (dBm)
		Peak	Average			Peak	Average	
2 402	1	8.67	7.90	30.00	1.30	9.97	9.20	36.02
2 441	1	9.14	8.38			10.44	9.68	
2 480	1	6.99	6.18			8.29	7.48	
2 402	2	10.16	7.54			11.46	8.84	
2 441	2	10.77	7.92			11.90	9.22	
2 480	2	8.54	5.81			9.84	7.11	
2 402	3	10.50	7.56			11.80	8.86	
2 441	3	11.03	8.03			12.33	9.33	
2 480	3	8.87	5.85			10.17	7.15	

Notes:

1. E.I.R.P. Calculation: E.I.R.P. (dBm) = Conducted output power (dBm) + Antenna gain (dBi)

7.2. Carrier frequency separation

Test setup



Limit

FCC

According to §15.247(a)(1),

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 2 400-2 483.5 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.

IC

According RSS-247(6.2.3.1)(a),

FHS operating in the band 2 400-2 483.5 MHz 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 that the systems operate with an output power no greater than 0.125 W.

Test procedure

ANSI C63.10-2020 - Section 7.8.2

ANSI C63.10-2020+Cor.1-2023+C63.10a-2024+Errata to C63.10a-2024- Section 7.8.2

Test settings

- Span: Wide enough to capture the peaks of two adjacent channels.
- RBW: Start with the RBW set to approximately 30 % of the channel spacing; adjust as necessary to best identify the center of each individual channel.
- Video (or average) bandwidth (VBW) ≥ RBW.
- Sweep: No faster than coupled (auto) time.
- Detector function: Peak.
- Trace: Max hold.
- Allow the trace to stabilize.

Use the marker-delta function to determine the separation between the peaks of the adjacent channels. Compliance of an EUT with the appropriate regulatory limit shall be determined. A plot of the data shall be included in the test report.

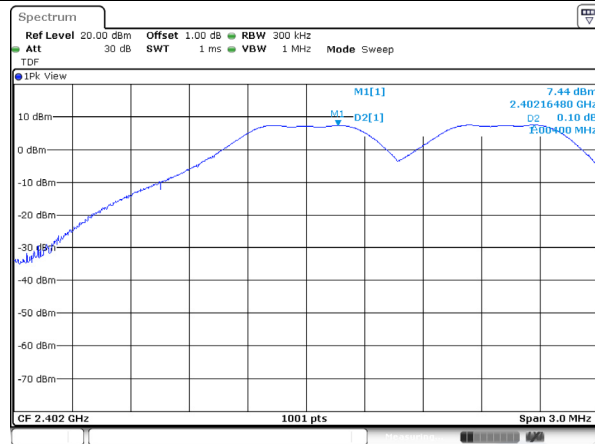
Where the device shares the same channel plan (carrier frequencies and number of channels) across multiple data rates or modulation schemes then the carrier separation need only be measured for one of those modulation schemes or data rates.

Test results

Frequency(MHz)	Data rate(Mbps)	Carrier frequency separation(MHz)	Limit(MHz)
2 402	1	1.004	0.631
2 441	1	1.001	0.631
2 480	1	1.020	0.631
2 402	3	1.005	0.839
2 441	3	1.002	0.843
2 480	3	0.992	0.841



GFSK / Low ch.



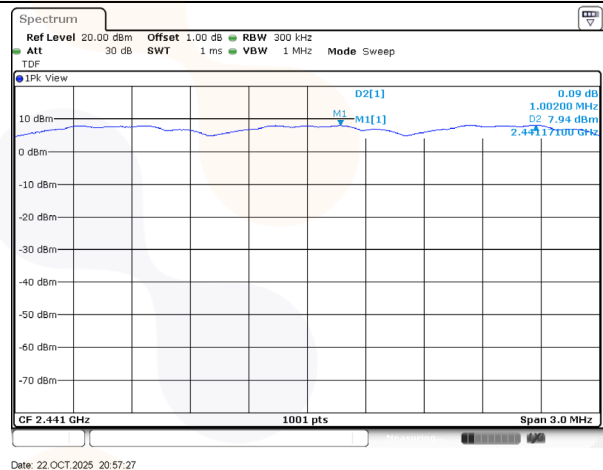
8DPSK / Low ch.



GFSK / Mid ch.



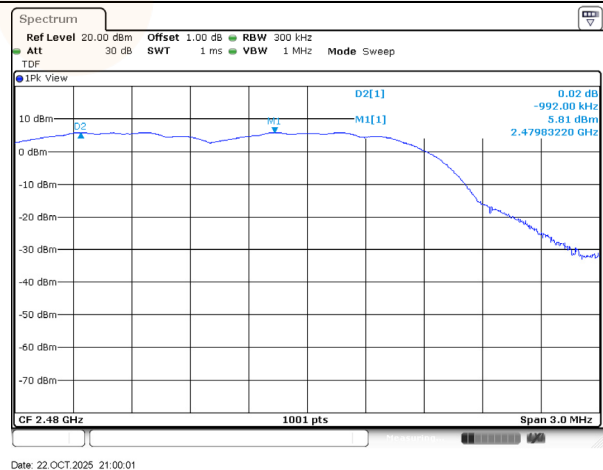
8DPSK / Mid ch.



GFSK / High ch.

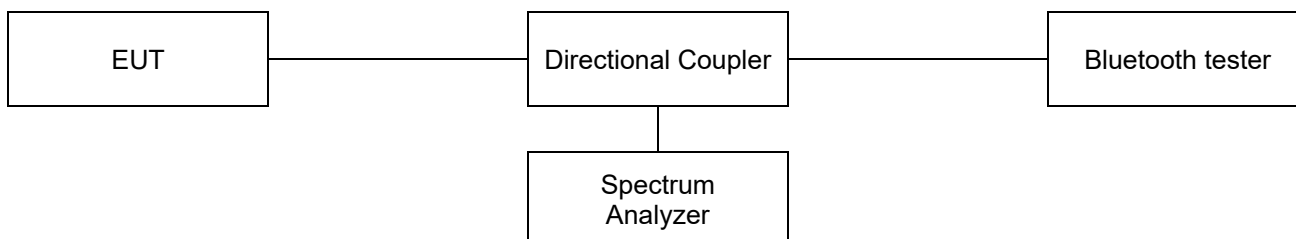


8DPSK / High ch.



7.3. 20 dB channel bandwidth & 99% bandwidth

Test setup



Limit

According to §15.247(a)(1),

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 2 400-2 483.5 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.

According to RSS-247(6.2.1)(a),

The bandwidth of a frequency hopping channel is the 20 dB emission bandwidth, measured with the hopping stopped.

Test procedure

ANSI C63.10-2020 - Section 6.9.2, 6.9.3

ANSI C63.10-2020+Cor.1-2023+C63.10a-2024+Errata to C63.10a-2024- Section 6.9.2, 6.9.3

Test settings

20dB channel bandwidth

The occupied bandwidth is measured as the width of the spectral envelope of the modulated signal, at an amplitude level reduced from a reference value by a specified ratio (or in decibels, a specified number of dB down from the reference value). Typical ratios, expressed in dB, are -6 dB, -20 dB, and -26 dB, corresponding to 6 dB BW, 20 dB BW, and 26 dB BW, respectively. In this subclause, the ratio is designated by “-xx dB.” The reference value is either the level of the unmodulated carrier or the highest level of the spectral envelope of the modulated signal, as stated by the applicable requirement. Some requirements might specify a specific maximum or minimum value for the “-xx dB” bandwidth; other requirements might specify that the “-xx dB” bandwidth be entirely contained within the authorized or designated frequency band.

- The spectrum analyzer center frequency is set to the nominal EUT channel center frequency.
- Span: Two times and five times the OBW.
- RBW = 1 % to 5 % of the OBW and VBW ≥ 3 x RBW
- Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation.
- The dynamic range of the instrument at the selected RBW shall be more than 10 dB below the target “-xx dB down” requirement; that is, if the requirement calls for measuring the -20 dB OBW, the instrument noise floor at the selected RBW shall be at least 30 dB below the reference value.
- Detector: peak
- Trace mode: max hold.

- h) Allow the trace to stabilize.
- i) Determine the “-xx dB down amplitude” using ((reference value) – xx). Alternatively, this calculation may be made by using the marker-delta function of the instrument.
- j) If the reference value is determined by an unmodulated carrier, then turn the EUT modulation ON, and either clear the existing trace or start a new trace on the spectrum analyzer and allow the new trace to stabilize. Otherwise, the trace from step g) shall be used for step j).
- k) Place two markers, one at the lowest frequency and the other at the highest frequency of the envelope of the spectral display, such that each marker is at or slightly below the “-xx dB down amplitude” determined in step h). If a marker is below this “-xx dB down amplitude” value, then it shall be as close as possible to this value. The occupied bandwidth is the frequency difference between the two markers. Alternatively, set a marker at the lowest frequency of the envelope of the spectral display, such that the marker is at or slightly below the “-xx dB down amplitude” determined in step h). Reset the marker-delta function and move the marker to the other side of the emission until the delta marker amplitude is at the same level as the reference marker amplitude. The marker-delta frequency reading at this point is the specified emission bandwidth.

Occupied bandwidth

The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission.

The following procedure shall be used for measuring 99% power bandwidth:

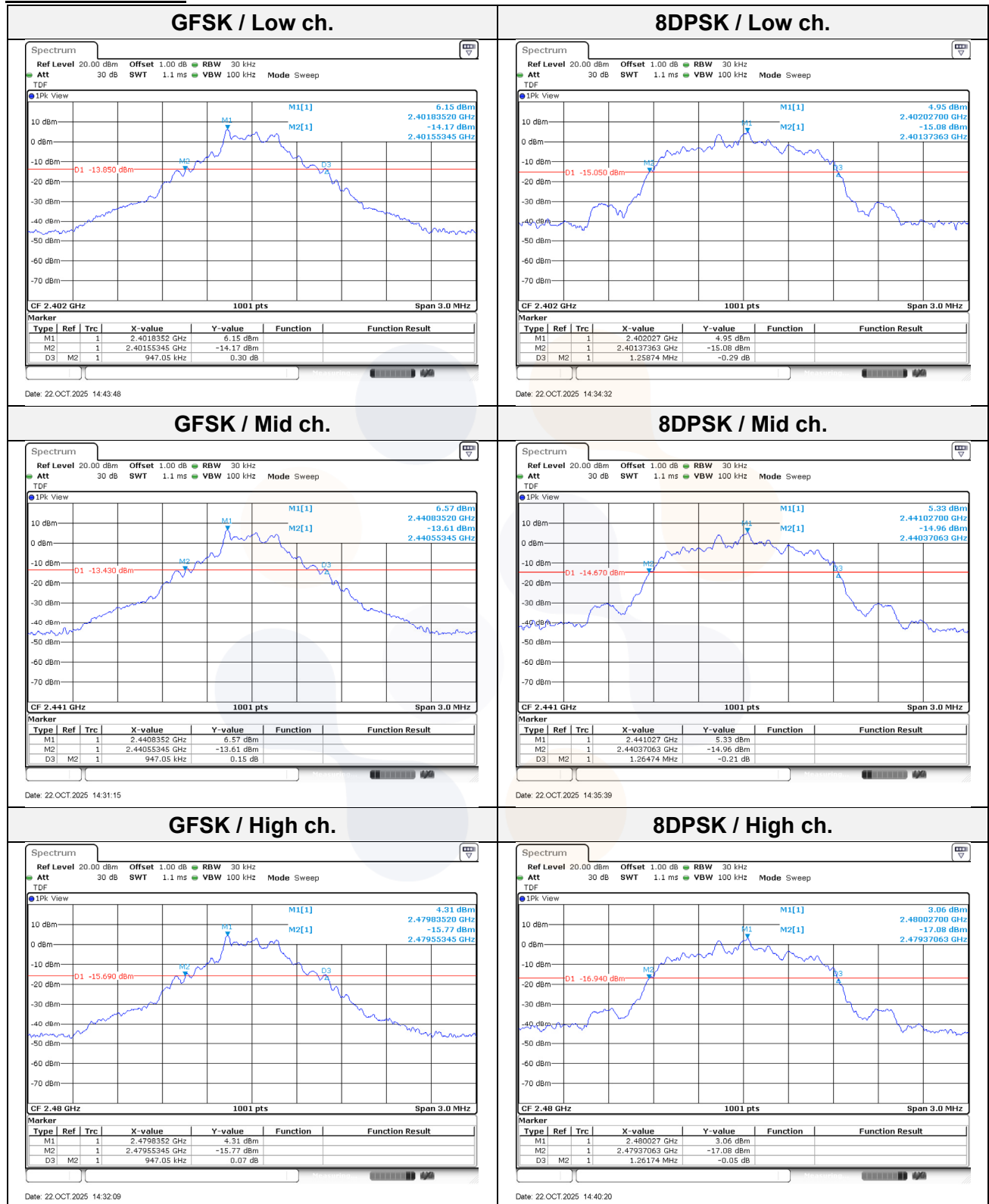
- a) The instrument center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be between 1.5 times and 5.0 times the OBW.
- b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW, and VBW shall be at least three times the RBW, unless otherwise specified by the applicable requirement.
- c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than $[10 \log (OBW/RBW)]$ below the reference level. Specific guidance is given in 4.1.6.2.
- d) Step a) through step c) might require iteration to adjust within the specified range.
- e) Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max-hold mode (until the trace stabilizes) shall be used.
- f) Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth.
- g) If the instrument does not have a 99% power bandwidth function, then the trace data points are recovered and directly summed in linear power terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5% of the total is reached; that frequency is recorded as the upper frequency. The 99% power bandwidth is the difference between these two frequencies.
- h) The occupied bandwidth shall be reported by providing spectral plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

Test results

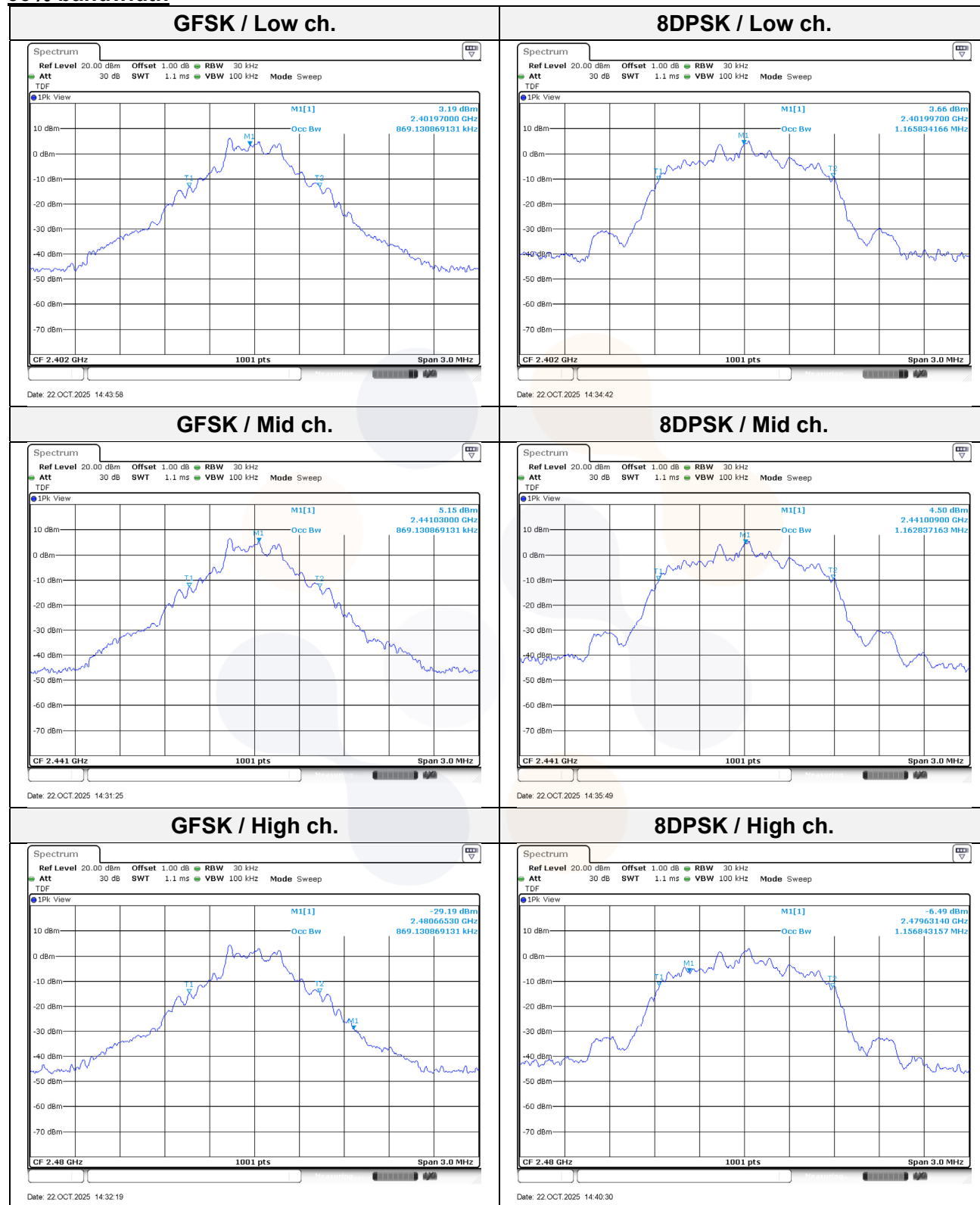
Frequency(MHz)	Data rate (Mbps)	20 dB Bandwidth (MHz)	99% Bandwidth (MHz)
2 402	1	0.947	0.869
2 441	1	0.947	0.869
2 480	1	0.947	0.869
2 402	3	1.259	1.166
2 441	3	1.265	1.163
2 480	3	1.262	1.157



20 dB bandwidth

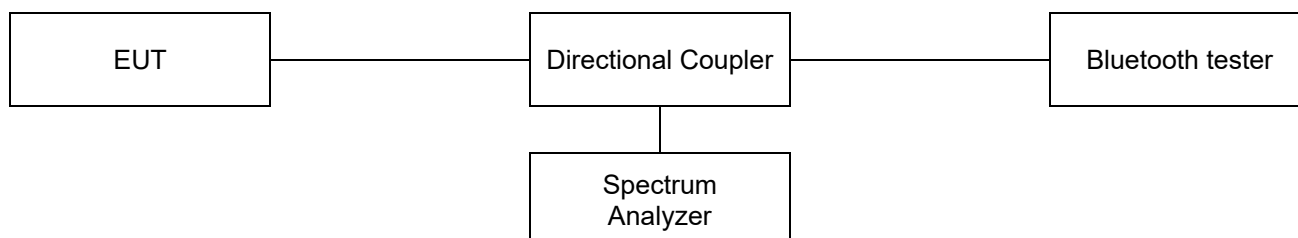


99% bandwidth



7.4. Number of hopping channels

Test setup



Limit

According to §15.247(a)(1)(iii),

Frequency hopping systems in the 2 400-2 483.5 MHz band shall use at least 15 channels.

According to RSS-247(6.2.3.1)(b),

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

Test procedure

ANSI C63.10-2020 - Section 7.8.3

ANSI C63.10-2020+Cor.1-2023+C63.10a-2024+Errata to C63.10a-2024- Section 7.8.3

Test settings

a) Span: The frequency band of operation. Depending on the number of channels the device supports, it may be necessary to divide the frequency range of operation across multiple spans, to allow the individual channels to be clearly seen.

b) RBW: To identify clearly the individual channels, set the RBW to less than 30 % of the channel spacing or the 20 dB bandwidth, whichever is smaller.

c) VBW ≥ RBW.

d) Sweep: No faster than coupled (auto) time.

e) Detector function: Peak.

f) Trace: Max hold.

g) Allow the trace to stabilize.

It might prove necessary to break the span up into subranges to show clearly all of the hopping frequencies. Compliance of an EUT with the appropriate regulatory limit shall be determined for the number of hopping channels. A plot of the data shall be included in the test report.

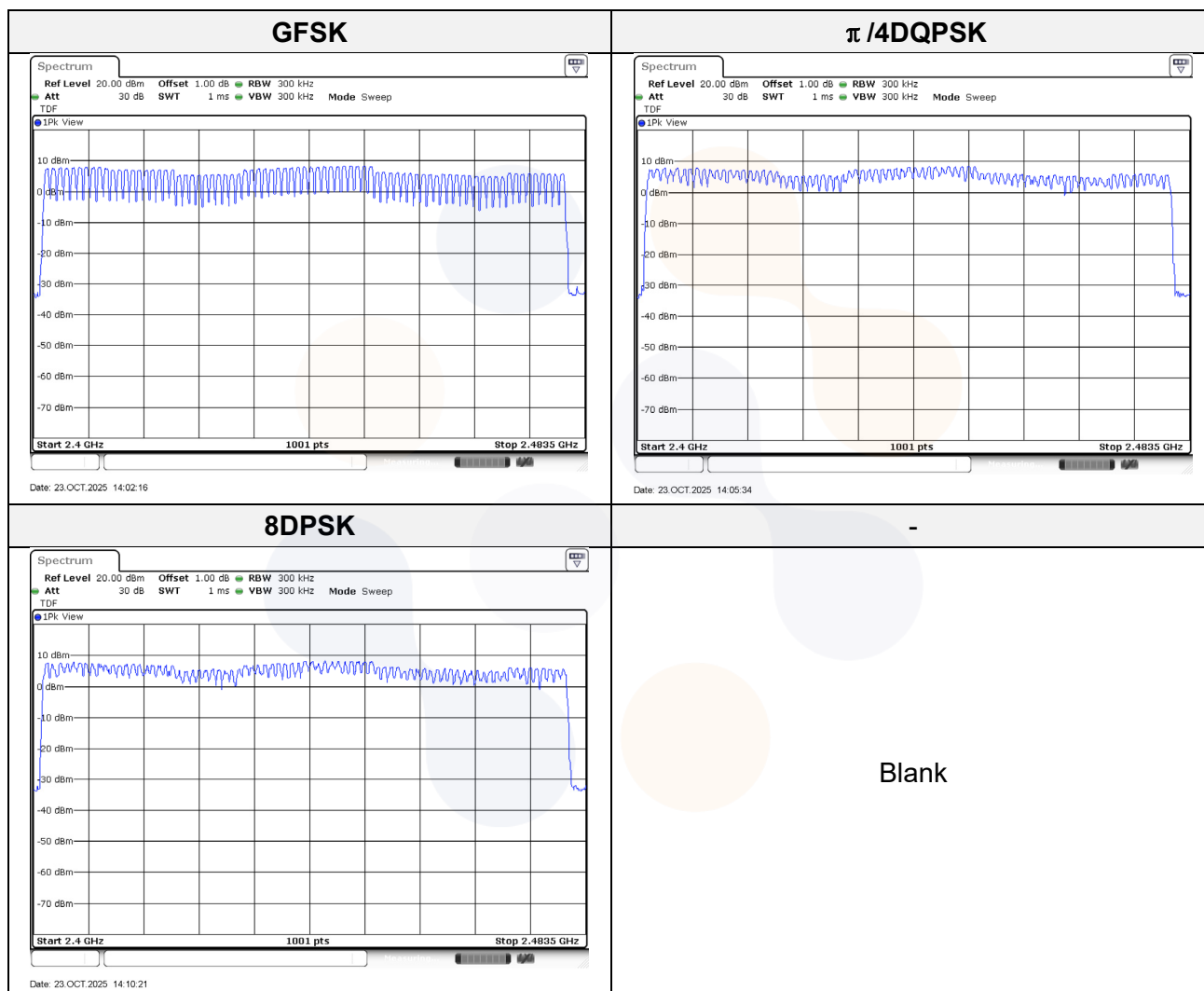
Where the device shares the same channel plan (carrier frequencies and number of channels) across multiple data rates or modulation schemes then the number of channels need only be measured for one of those modulation schemes or data rates.

Test results

Mode	Number of hopping channel	Limit
GFSK	79	≥15
$\pi/4$ DQPSK	79	≥15
8DPSK	79	≥15

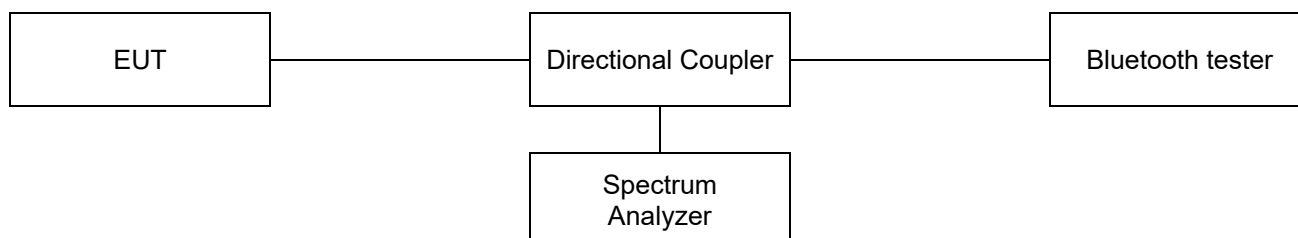
Notes:

- In case of AFH mode, minimum number of hopping channels is 20.



7.5. Time of occupancy(Dwell time)

Test setup



Limit

According to §15.247(a)(1)(iii),

Frequency hopping systems in the 2 400-2 483.5 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.

According to RSS-247(6.2.3.1)(b),

The average time of occupancy on any channel shall not be greater than 0.4 s within a period of 0.4 s, multiplied by the number of hopping channels employed. Transmissions on particular hopping frequencies may be avoided or suppressed provided that at least 15 hopping channels are used.

Test procedure

ANSI C63.10-2020 - Section 7.8.4

ANSI C63.10-2020+Cor.1-2023+C63.10a-2024+Errata to C63.10a-2024- Section 7.8.4

Test settings

- Span: Zero span, centered on a hopping channel.
- RBW $\leq$ channel spacing and $\gg 1 / T$, where T is the expected transmission time per hop.
- Sweep: Set so that the start of the first transmission and end of the last transmission for the hop are clearly captured. Setting the sweep time to be slightly longer than the hopping period per channel (hopping period = 1/hopping rate) should achieve this.
- Use a video trigger, where possible with a trigger delay, so that the start of the transmission is clearly observed. The trigger level might need adjustment to reduce the chance of triggering when the system hops on an adjacent channel.
- Detector function: Peak.
- Trace: Clear-write, single sweep.
- Place markers at the start of the first transmission on the channel and at the end of the last transmission. The dwell time per hop is the time between these two markers.

Test results

Non-AFH						
Modulation	Frequency (MHz)	Pulse Width (ms)	Hopping rate (hop/s)	Number of Channels	Result (s)	Limit (s)
DH1	2 441	0.405	800.000	79	0.129	0.400
DH3		1.659	400.000		0.266	
DH5		2.911	266.667		0.310	
2-DH1		0.398	800.000		0.127	
2-DH3		1.654	400.000		0.264	
2-DH5		2.901	266.667		0.309	
3-DH1		0.396	800.000		0.127	
3-DH3		1.646	400.000		0.263	
3-DH5		2.899	266.667		0.309	

AFH						
Modulation	Frequency (MHz)	Pulse Width (ms)	Hopping rate (hop/s)	Number of Channels	Result (s)	Limit (s)
DH1	2 441	0.405	400.000	20	0.065	0.400
DH3		1.659	200.000		0.133	
DH5		2.911	133.333		0.155	
2-DH1		0.398	400.000		0.064	
2-DH3		1.654	200.000		0.132	
2-DH5		2.901	133.333		0.155	
3-DH1		0.396	400.000		0.063	
3-DH3		1.646	200.000		0.132	
3-DH5		2.899	133.333		0.155	

Notes:

1. Non-AFH

- Period Time: 0.4 sec x 79 channels = 31.6 sec
- Result (s)= (Hopping rate (hop/s/slot) / 79 channels) x 31.6 sec x Pulse width (ms)

2. AFH

- Period Time: 0.4 sec x 20 channels = 8 sec
- Result (s)= (Hopping rate (hop/s/slot) / 20 channels) x 8 sec x Pulse width (ms)

In order to simplify the report, the attached plot is the Non-AFH in Test mode.

