



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.: KR26-SRF0137-A Page(1) of (41)	 KCTL
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1. Client

- Name : Samsung Electronics Co., Ltd.
- Address : 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep. of Korea
- Date of Receipt : 2026-06-29

2. Use of Report : Certification

3. Name of Product / Model : Bluetooth Headset / SM-U600

4. Manufacturer / Country of Origin : Samsung Electronics Co., Ltd. / Vietnam

5. FCC ID : A3LSMU600

6. Date of Test : 2026-07-06 to 2026-08-18

7. Location of Test : ☒ Permanent Testing Lab ☐ On Site Testing
 (Address: 65, Sinwon-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Korea)

8. Test method used : FCC Part 15 Subpart C, 15.247

9. Test Result : Refer to the test result in the test report

Affirmation	Tested by	Technical Manager
	Name : Jaehyun Park  (Signature)	Name : Bobae Lee  (Signature)

2026-08-19

Eurofins KCTL Co.,Ltd.

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REPORT REVISION HISTORY

Date	Revision	Page No
2026-08-10	Originally issued	-
2026-08-19	Updated the Conducted Emissions	39-41

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Note. The report No. KR26-SRF0137 is superseded by the report No. KR26-SRF0137-A.

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

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1. General information

Client : Samsung Electronics Co., Ltd.
 Address : 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep. of Korea
 Manufacturer : Samsung Electronics Co., Ltd.
 Address : 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Rep. of Korea
 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 : Bluetooth Headset
 Model : SM-U600
 Modulation technique : Bluetooth(QHS) : Pi/4 QPSK, Pi/4 DQPSK, 8PSK, D8PSK
 Number of channels : 38 ch
 Power source : DC 3.85 V
 Antenna specification : Inverted-F Antenna
 Antenna gain : -8.59 dBi
 Frequency range : 2 404 Mhz ~ 2 478 Mhz
 Software version : U600.001
 Hardware version : REV1.0
 Test device serial No. : R4AL600GBWZ
 Operation temperature : 0 °C ~ 35 °C

2.1. Frequency/channel operations

This device contains the following capabilities:

QHS-P2/P3/P4/P5/P6

Ch.	Frequency (MHz)
01	2 404
.	.
19	2 440
.	.
38	2 478

Table 2.1-1. QHS-P2/P3/P4/P5/P6

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.

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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.

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



4. Summary of tests

FCC Part section(s)	Parameter	Test Condition	Test results
15.247(b)(1),(4)	Maximum peak output power	Conducted	Pass
15.247(a)(1)	Carrier frequency separation		Pass
15.247(a)(1)	20 dB channel bandwidth		Pass
15.247(a)(iii) 15.247(b)(1)	Number of hopping channel		Pass
15.247(a)(iii)	Time of occupancy (dwell time)		Pass
15.207(a)	AC Conducted Emissions		Pass
15.247(d)	Conducted Spurious Emissions		Pass
15.205(a), 15.209(a)	Spurious emission	Radiated	Pass
	Band-edge, restricted band		Pass

Notes:

- All modes of operation and data rates were investigated. The test results shown in the following sections represent the worst-case emissions.
- 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.
- EUT was investigated in three orthogonal orientations X, Y and Z. it was determined that Y orientation was worst-case orientation. Therefore, all final radiated testing was performed with the EUT in Y orientation.
- The test procedure(s) in this report were performed in accordance as following.
 - ANSI C63.10-2020+Cor.1-2023
 - KDB 558074 D01 v05r02
- The worst-case data rate were:
QHS-P6(1023 Packet)

5. Measurement uncertainty

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI C63.10-2020.

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 ($\pm$)	
Conducted RF power	0.9 dB	
Conducted spurious emission	1.7 dB	
Radiated spurious emissions	Below 30 MHz:	2.4 dB
	30 MHz ~ 1 000 MHz	2.6 dB
	1 000 MHz ~ 18 000 MHz	4.7 dB
	Above 18 000 MHz	4.8 dB
Conducted emissions	150 kHz ~ 30 MHz	2.8 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	9.85	9 000	11.20
50	9.88	10 000	11.35
100	9.91	11 000	11.32
200	9.97	12 000	11.44
300	10.03	13 000	11.56
400	10.07	14 000	11.64
500	10.10	15 000	11.82
600	10.15	16 000	11.83
700	10.17	17 000	11.98
800	10.20	18 000	12.06
900	10.20	19 000	12.33
1 000	10.23	20 000	12.81
2 000	10.41	21 000	13.43
3 000	10.54	22 000	11.28
4 000	10.67	23 000	12.46
5 000	10.74	24 000	12.30
6 000	10.87	25 000	12.92
7 000	10.91	26 000	13.25
8 000	11.15	26 500	12.87

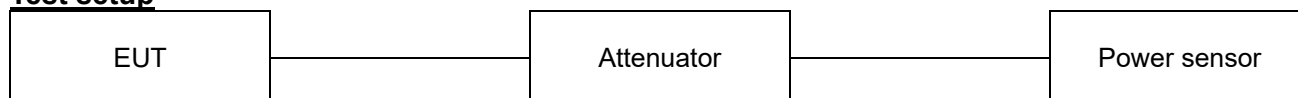
Note:

Offset(dB) = RF cable loss(dB) + Attenuator(dB)

7 Test results

7.1. Maximum peak output power

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 §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.

Test procedure

ANSI C63.10 - Section 7.8.5

Test settings

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

Note:

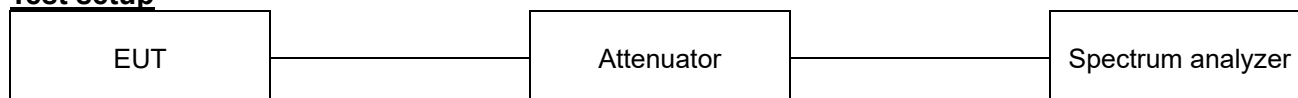
A peak responding power sensor is used, where the power sensor system video bandwidth is greater than the occupied bandwidth of the EUT.

Test results

Frequency(MHz)	Data rate (Mbps)	Packet length (Bytes)	Measured output power(dBm)		Limit (dBm)
			Peak	Average	
2 404	2 (QHS-P2)	339	12.84	9.93	20.97
		1023	12.86	10.07	
2 440		339	12.76	9.84	
		1023	12.77	9.96	
2 478		339	12.68	9.78	
		1023	12.74	9.91	
2 404	3 (QHS-P3)	339	12.90	9.96	
		1023	12.90	10.04	
2 440		339	12.81	9.86	
		1023	12.82	9.95	
2 478		339	12.73	9.79	
		1023	12.73	9.89	
2 404	4 (QHS-P4)	339	12.85	10.00	
		1023	12.85	10.01	
2 440		339	12.74	9.91	
		1023	12.75	9.92	
2 478		339	12.68	9.85	
		1023	12.69	9.87	
2 404	5 (QHS-P5)	339	13.32	10.06	
		1023	13.35	10.08	
2 440		339	13.24	9.97	
		1023	13.26	9.99	
2 478		339	13.16	9.90	
		1023	13.17	9.91	
2 404	6 (QHS-P6)	339	13.33	10.07	
		1023	13.36	10.09	
2 440		339	13.26	10.00	
		1023	13.28	10.02	
2 478		339	13.17	9.92	
		1023	13.19	9.93	

7.2. Carrier frequency separation

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.

Test procedure

ANSI C63.10 - Section 7.8.2

Test settings

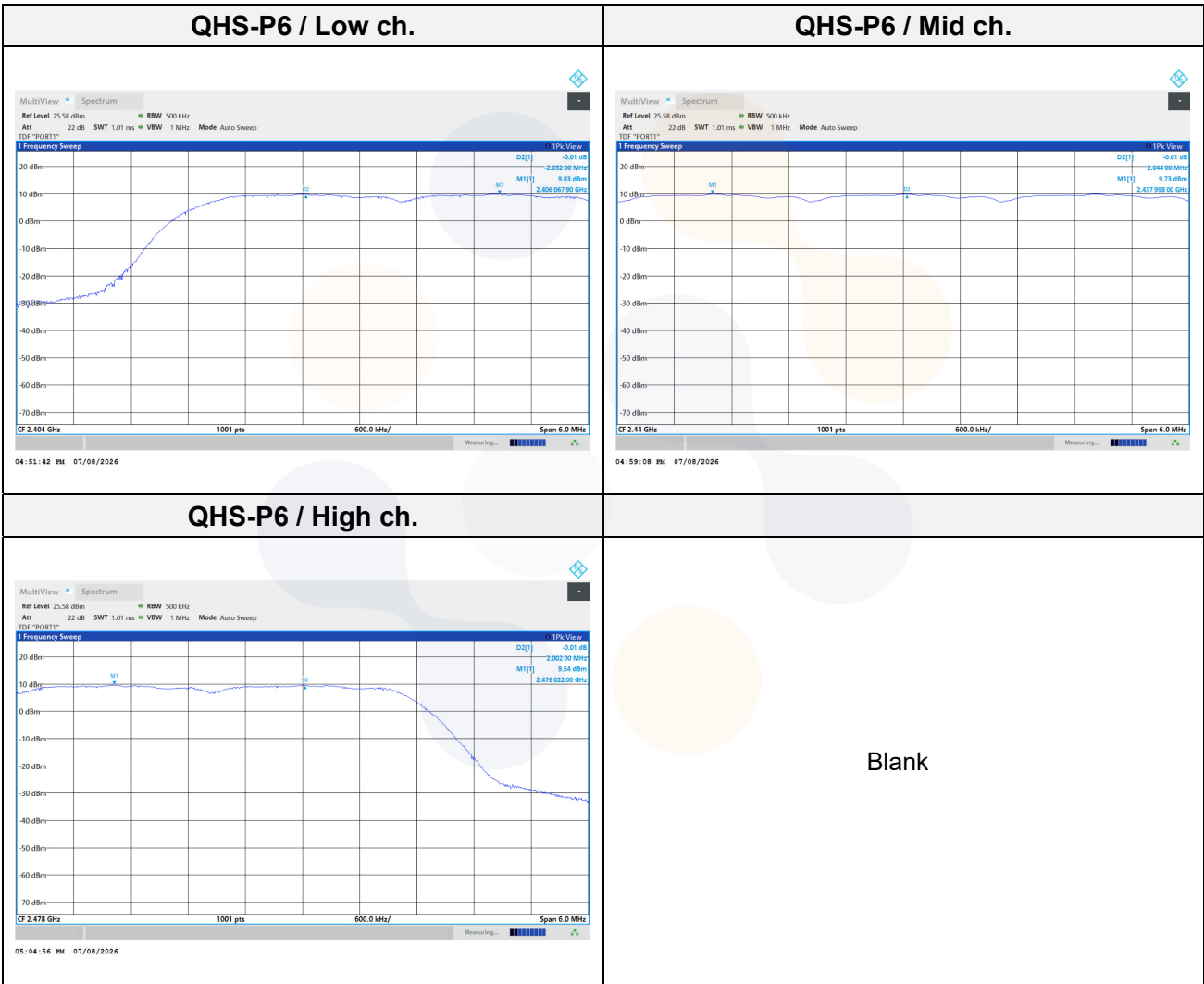
- Span: Wide enough to capture the peaks of two adjacent channels.
- RBW: Start with the RBW set to approximately 30 % of the channel spacing; adjust as necessary to best identify the center of each individual channel.
- Video (or average) bandwidth (VBW) $\geq$ RBW.
- Sweep: No faster than coupled (auto) 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.

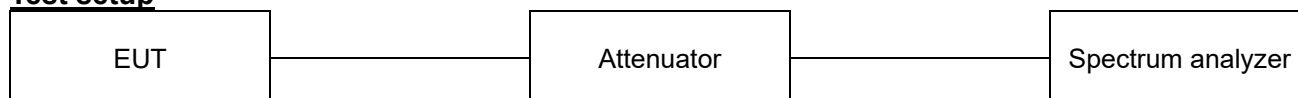
Test results

Frequency(MHz)	Data rate (Mbps)	Packet length (Bytes)	Carrier frequency separation(MHz)	Limit(MHz)
2 404	6 (QHS-P6)	1023	2.032	1.664
2 440			2.044	1.668
2 478			2.002	1.664



7.3. 20 dB channel 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.

Test procedure

ANSI C63.10 - Section 6.9.2

Test settings

20dB channel bandwidth

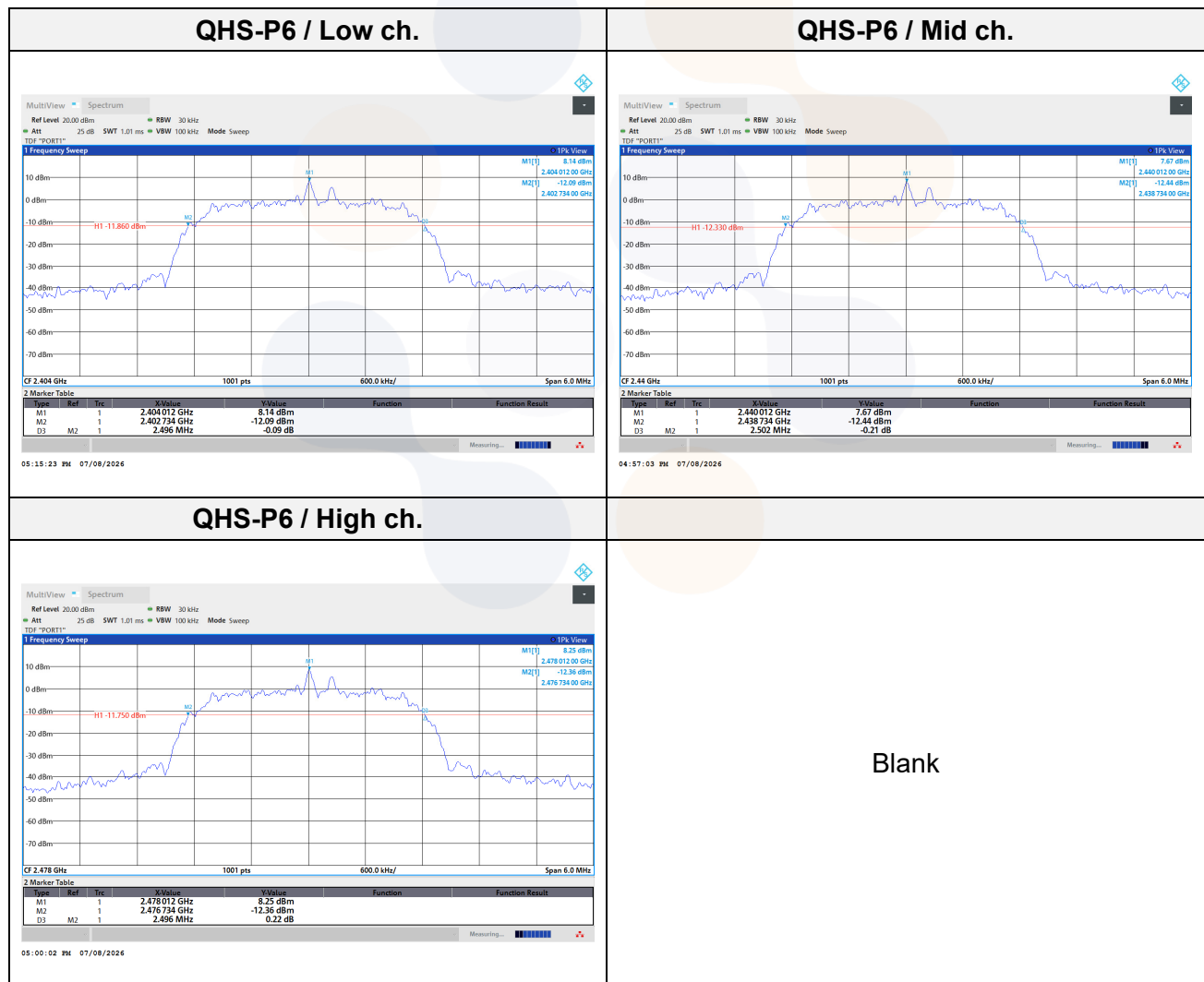
A dBc bandwidth is measured as the width of the spectral envelope of the modulated signal, at an amplitude level reduced from a reference value by a specified ratio (or in decibels, a specified number of dB down from the reference value). Typical ratios, expressed in dB, are -6 dB, -20 dB, and -26 dB, 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.
- Allow the trace to stabilize.
- 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.
- 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).
- 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 dBc 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.

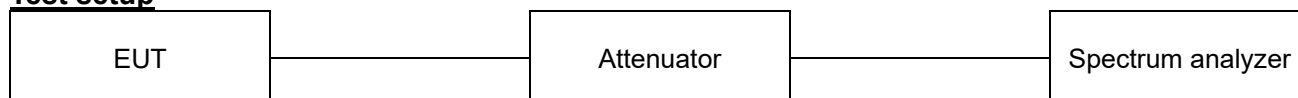
Test results

Frequency(MHz)	Data rate (Mbps)	Packet length (Bytes)	20 dB Bandwidth (MHz)
2 402	6 (QHS-P6)	1023	2.496
2 441			2.502
2 480			2.496



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.

Test procedure

ANSI C63.10 - Section 7.8.3

Test settings

- 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.
- 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.
- VBW $\geq$ RBW.
- Sweep: No faster than coupled (auto) time.
- Detector function: Peak.
- Trace: Max hold.
- Allow the trace to stabilize.

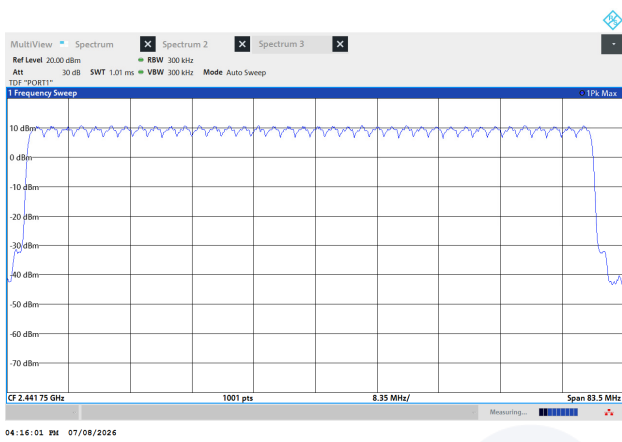
It might prove necessary to break the span up into subranges to show clearly all of the hopping frequencies. Compliance of an EUT with the appropriate regulatory limit shall be determined for the number of hopping channels. A plot of the data shall be included in the test report.

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.

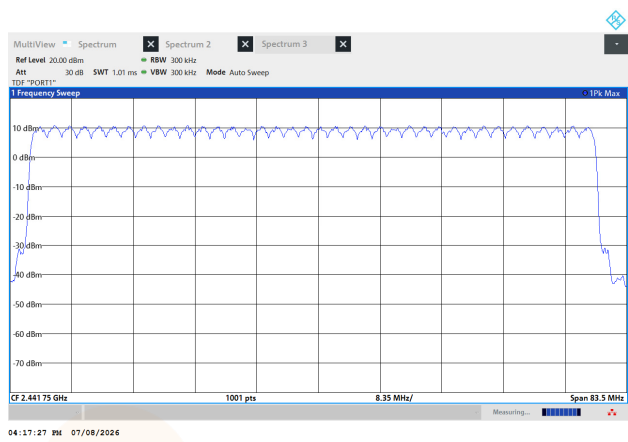
Test results

Mode	Packet	Number of hopping channel	Limit
QHS-P2	339	38	≥15
QHS-P2	1023	38	≥15
QHS-P3	339	38	≥15
QHS-P3	1023	38	≥15
QHS-P4	339	38	≥15
QHS-P4	1023	38	≥15
QHS-P5	339	38	≥15
QHS-P5	1023	38	≥15
QHS-P6	339	38	≥15
QHS-P6	1023	38	≥15

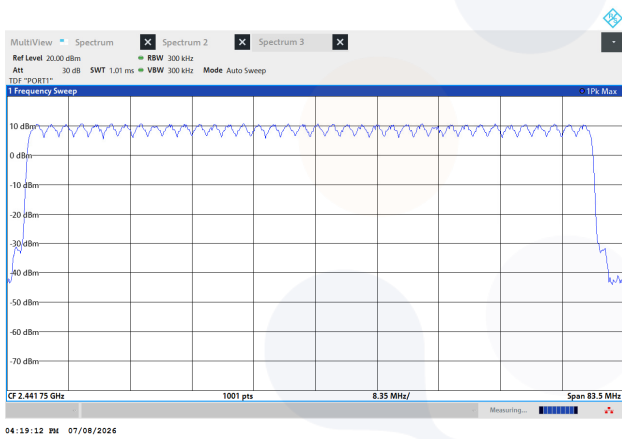
QHS-P2



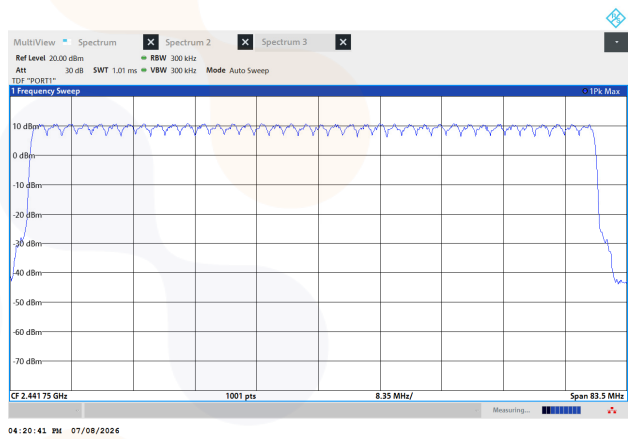
QHS-P3



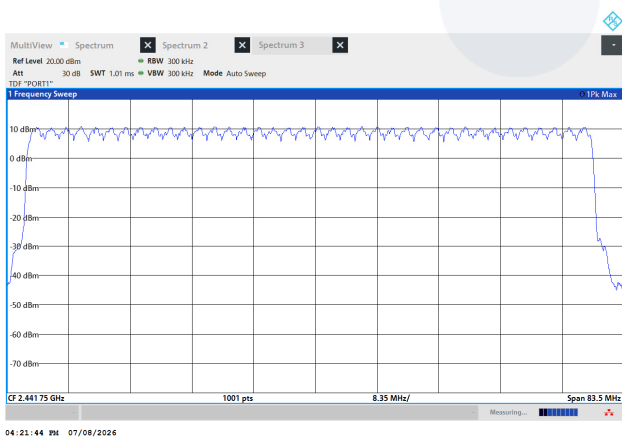
QHS-P4



QHS-P5



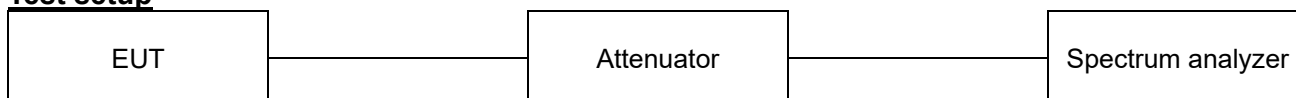
QHS-P6



Blank

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.

Test procedure

ANSI C63.10 - Section 7.8.4

Test settings

- Span: Zero span, centered on a hopping channel.
- $RBW \leq \text{channel spacing}$ 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 = $1/\text{hopping rate}$) 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

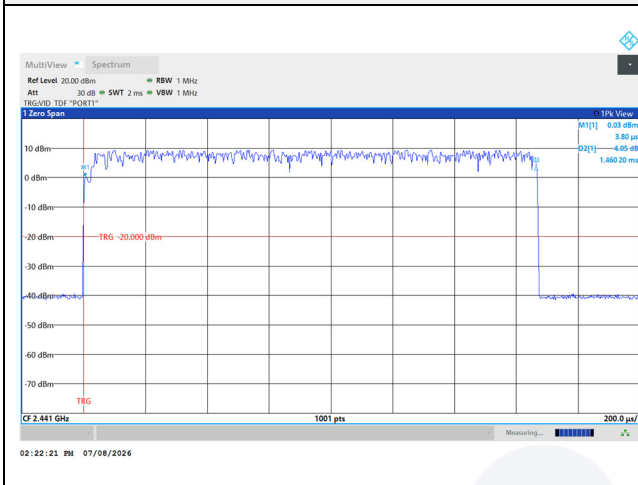
- Non-AFH

Mode	Packet	Frequency (MHz)	Pulse Width (ms)	Number of Pulses in 1.52 S	Number of Pulses in 1.52S X 10 = 15.2 S	Result (s)	Limit (s)
QHS-P2	339	2 440	1.460	21	210	0.307	0.400
QHS-P2	1023		4.207	8	80	0.337	
QHS-P3	339		0.998	21	210	0.210	
QHS-P3	1023		2.816	11	110	0.310	
QHS-P4	339		0.766	32	320	0.245	
QHS-P4	1023		2.136	16	160	0.342	
QHS-P5	339		0.633	32	320	0.203	
QHS-P5	1023		1.724	16	160	0.276	
QHS-P6	339		0.542	32	320	0.174	
QHS-P6	1023		1.450	16	160	0.232	

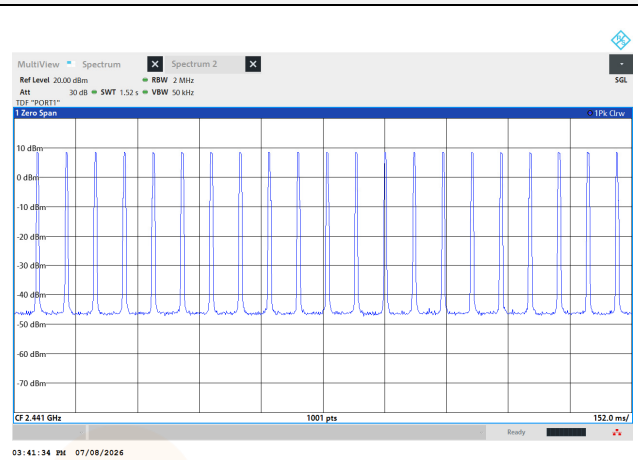
Notes:

- Non-AFH
 - Period Time: 0.4 sec x 38 channels = 15.2 sec
 - Result (s)= Number of Pulses in 15.2 S X Pulse Width (ms)

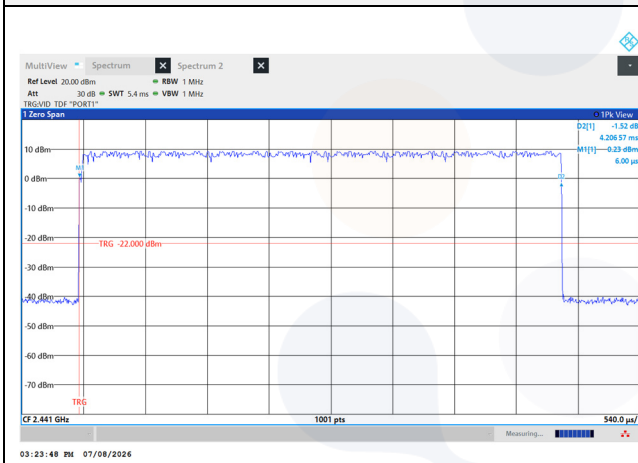
QHS-P2(339 Packet) / Pulse Width



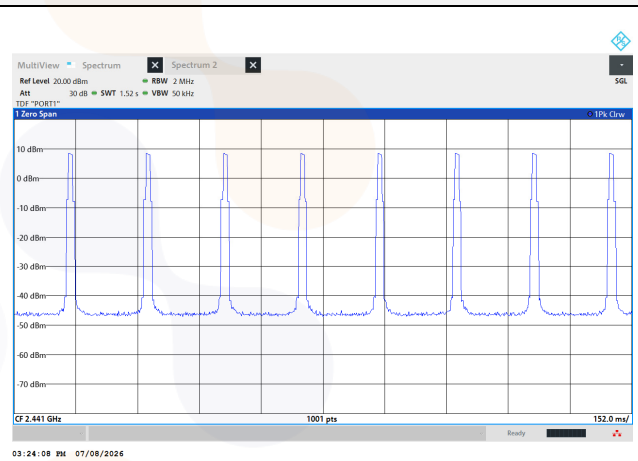
QHS-P2(339 Packet) / Pulse count 21



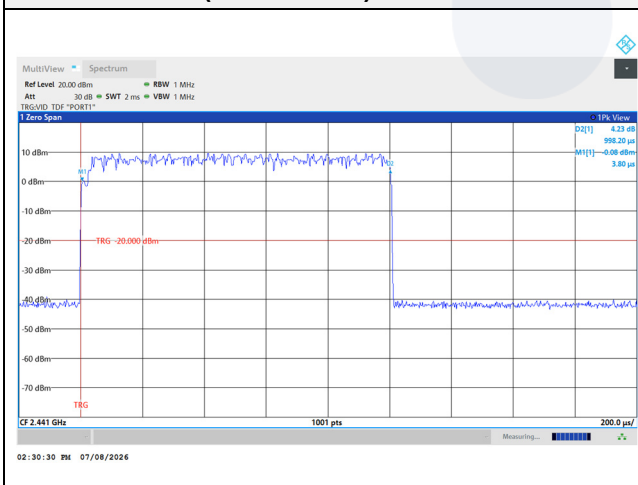
QHS-P2(1023 Packet) / Pulse Width



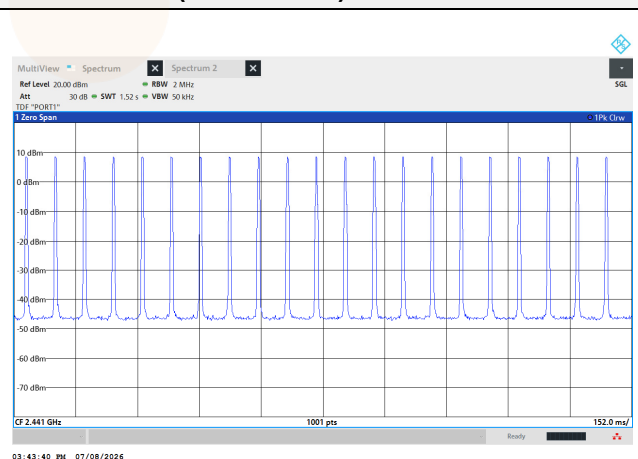
QHS-P2(1023 Packet) / Pulse count 8



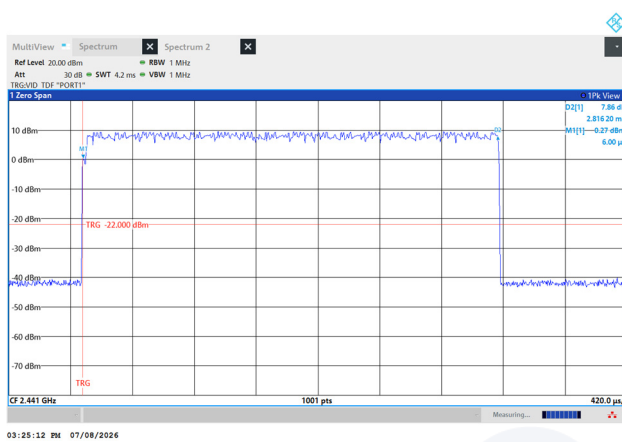
QHS-P3(339 Packet) / Pulse Width



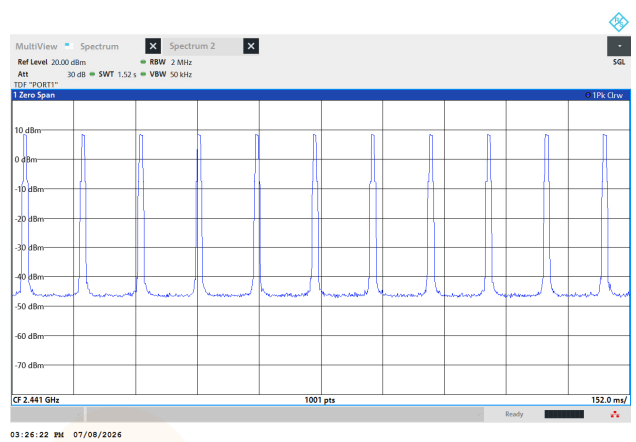
QHS-P3(339 Packet) / Pulse count 21



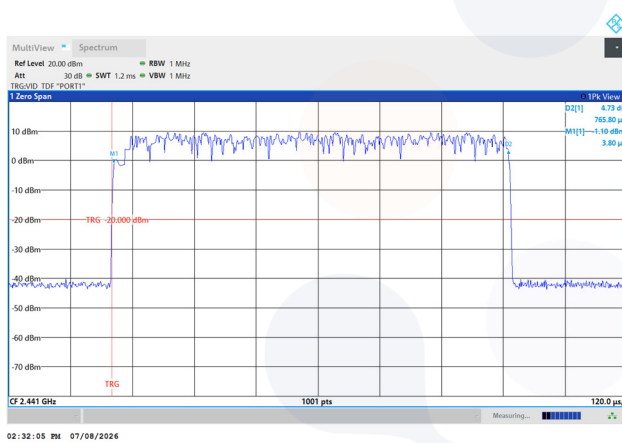
QHS-P3(1023 Packet) / Pulse Width



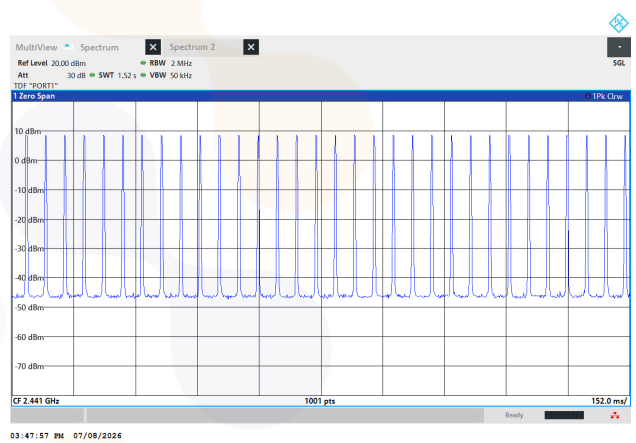
QHS-P3(1023 Packet)/ Pulse count 11



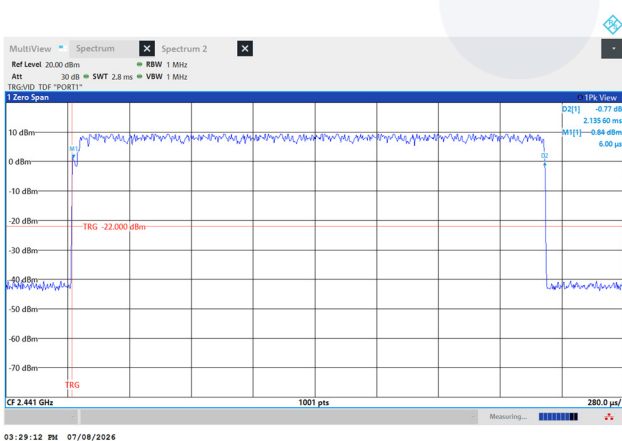
QHS-P4(339 Packet) / Pulse Width



QHS-P4(339 Packet) / Pulse count 32



QHS-P4(1023 Packet) / Pulse Width



QHS-P4(1023 Packet) / Pulse count 16

