



Solutions

# TEST REPORT

**Test Report No.: UL-RPT-RP-14642160-7116-FCC**

**Applicant \*** : Visteon Electronics Germany GmbH  
**Model No. \*** : DDU  
**FCC ID \*** : 2AA98-DDU  
**Technology \*** : Bluetooth – Basic Rate (BR) & Enhanced Data Rate (EDR)  
**Test Standard(s)** : **FCC Parts 15.209(a) & 15.247**  
For details of applied tests refer to test result summary

1. This test report shall not be reproduced in full or partial, without the written approval of UL International Germany GmbH.
2. The results in this report apply only to the sample tested.
3. The test results in this report are traceable to the national or international standards.
4. **Test Report Version 1.2 supersede Version 1.1 with immediate effect**  
Test Report No. UL-RPT-RP-14642160-7116-FCC Version 1.2, Issue Date 18 JANUARY 2024 replaces  
Test Report No. UL-RPT-RP-14642160-7116-FCC Version 1.1, Issue Date 13 NOVEMBER 2023, which is no longer valid.
5. Result of the tested sample: **Pass**
6. All information marked with a (\*) were provided by customer / applicant or authorized representative

Prepared by: Muhammad Faiq Khan  
Title: Project Engineer  
Date: 18 January 2024

Approved by: Rachid Acharkaoui  
Title: Operations Manager  
Date: 18 January 2024



Deutsche  
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D-PL-19381-02-00

This laboratory is accredited by DAkkS.  
The tests reported herein have been performed in  
accordance with its' terms of accreditation.

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## **Table of Contents**

<b>1. Customer Information *</b>	<b>4</b>
1.1. Applicant Information	4
1.2. Manufacturer Information	4
<b>2. Summary of Testing</b>	<b>5</b>
2.1. General Information	5
Applied FCC Rule Part(s)	5
Location	5
Date Information	5
2.2. Summary of Test Results	6
2.3. Methods and Procedures	6
2.4. Deviations from the Test Specification	6
<b>3. Equipment Under Test (EUT)</b>	<b>7</b>
3.1. Identification of Equipment Under Test (EUT) *	7
3.2. Description of EUT *	7
3.3. Modifications Incorporated in the EUT	7
3.4. Additional Information Related to Testing *	8
3.5. Support Equipment	8
A. Support Equipment (In-house)	8
B. Support Equipment (Manufacturer supplied) *	8
<b>4. Operation and Monitoring of the EUT during Testing</b>	<b>9</b>
4.1. Operating Modes	9
4.2. Configuration and Peripherals	10
<b>5. Measurements, Examinations and Derived Results</b>	<b>11</b>
5.1. General Comments	11
5.2. Test Results	12
5.2.1. Transmitter 20 dB Bandwidth	12
5.2.2. Transmitter Duty Cycle	16
5.2.3. Transmitter Carrier Frequency Separation	21
5.2.4. Transmitter Number of Hopping Frequencies and Average Time of Occupancy	25
5.2.5. Transmitter Maximum Peak Output Power	30
5.2.6. Transmitter Radiated Emissions	40
5.2.7. Transmitter Band Edge Radiated Emissions	49
<b>6. Measurement Uncertainty</b>	<b>67</b>
<b>7. Used equipment</b>	<b>68</b>
<b>8. Report Revision History</b>	<b>69</b>
<b>APPENDIX A: UNTESTED VARIANTS</b>	<b>70</b>

## **1. Customer Information \***

### **1.1. Applicant Information**

<b>Company Name:</b>	Visteon Electronics Germany GmbH
<b>Company Address:</b>	Amalienbadstr.41a 76227, Karlsruhe Germany
<b>Contact Person:</b>	Nikhil Patil
<b>Contact E-Mail Address:</b>	nikhil.patil@visteon.com
<b>Contact Phone No.:</b>	+49-162-1332246

### **1.2. Manufacturer Information**

<b>Company Name:</b>	<b>Visteon Electronics Germany GmbH</b>
<b>Company Address:</b>	Amalienbadstr.41a 76227, Karlsruhe Germany
<b>Contact Person:</b>	Nikhil Patil
<b>Contact E-Mail Address:</b>	nikhil.patil@visteon.com
<b>Contact Phone No.:</b>	+49-162-1332246

## **2. Summary of Testing**

### **2.1. General Information**

#### **Applied FCC Rule Part(s)**

<b>Specification Reference:</b>	47CFR15.247
<b>Specification Title:</b>	Code of Federal Regulations Volume 47 (Telecommunications): Part 15 Subpart C (Intentional Radiators) - Section 15.247
<b>Specification Reference:</b>	47CFR15.209
<b>Specification Title:</b>	Code of Federal Regulations Volume 47 (Telecommunications): Part 15 Subpart C (Intentional Radiators) - Sections 15.209

#### **Location**

<b>Location of Testing:</b>	UL International Germany GmbH Hedelfinger Strasse. 61, 70327 Stuttgart, GERMANY
<b>Registration Number:</b>	399704

#### **Date Information**

<b>Order Date:</b>	05 January 2023
<b>EUT Arrived:</b>	19 June 2023
<b>Test Dates:</b>	11 August 2023 to 01 September 2023
<b>EUT Returned:</b>	-/-

**2.2. Summary of Test Results**

Frequency Hopping Spread Spectrum (FHSS): 2400-2483.5 MHz					
FCC Part 15 Clause	Compliance Test Description	Test Result			
		C	N.C.	N.P.	N.A.
15.207	Transmitter AC Conducted Emissions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
15.247(a)(1)	Transmitter Minimum 20 dB Bandwidth	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15.35(c)	Transmitter Duty Cycle	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15.247(a)(1)	Transmitter Carrier Frequency Separation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15.247(a)(1)(iii)	Transmitter Number of Hopping Frequencies and Average Time of Occupancy	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15.247(b)(1)	Transmitter Maximum Peak Output Power	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15.247(d) & 15.209(a)	Transmitter Radiated Emissions	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15.247(d) & 15.209(a)	Transmitter Band Edge Radiated Emissions	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>C: COMPLIED   N.C.: NOT COMPLIED   N.P.: NOT PERFORMED   N.A.: NOT APPLICABLE</b>					
<p><b>Decision rule:</b>                      If the decision rule is not included in the applied customer specification or testing standard, the binary statement for simple acceptance, as defined in ILAC G8: 2019 Section 4.2.1, is applied as the decision rule for a pass/ fail statement.                      If the measured value is on the limit, the result is defined as a pass. In this case the risk of a false positive is 50%. For further information regarding risk assessment refer to ILAC G8: 2019.</p>					

**Note(s):**

1. The EUT is vehicular equipment and will be powered by the battery of the vehicle, therefore no AC conducted emission tests are required.

**2.3. Methods and Procedures**

<b>Reference:</b>	ANSI C63.10-2013
<b>Title:</b>	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
<b>Reference:</b>	FCC KDB 558074 D01 DTS Meas Guidance v05r02 April 2, 2019
<b>Title:</b>	Guidance for compliance measurements on Digital Transmission System, Frequency Hopping Spread Spectrum System, and Hybrid System Devices Operating Under Section 15.247 of the FCC rules
<b>Reference:</b>	FCC KDB 174176 D01 Line Conducted FAQ v01r01 June 3, 2015
<b>Title:</b>	AC Power-Line Conducted Emissions Frequently Asked Questions

**2.4. Deviations from the Test Specification**

For the measurements contained within this test report, there were no deviations from, additions to, or exclusions from the test specification identified above.

### **3. Equipment Under Test (EUT)**

#### **3.1. Identification of Equipment Under Test (EUT) \***

<b>Brand Name:</b>	VISTEON
<b>Model Name or Number:</b>	DDU
<b>Test Sample Serial Number:</b>	DDU-ADV, ADVC200008 (Radiated Test Sample)
<b>Hardware Version Number:</b>	000C
<b>FCC ID:</b>	2AA98-DDU

<b>Brand Name:</b>	VISTEON
<b>Model Name or Number:</b>	DDU - ADV
<b>Test Sample Serial Number:</b>	DDU-ADV, ADVC200009 (Conducted Test Sample)
<b>Hardware Version Number:</b>	000C
<b>FCC ID:</b>	2AA98-DDU

#### **3.2. Description of EUT \***

The equipment under test was an In-Vehicle-Infotainment, contains Model Name: DDU supporting Bluetooth BR/EDR operations in 2400-2483.5 MHz ISM band.

#### **3.3. Modifications Incorporated in the EUT**

No modifications were applied to the EUT during testing.

**3.4. Additional Information Related to Testing \***

<b>Technology Tested:</b>	Bluetooth – BR/EDR		
<b>FCC Equipment Classification:</b>	Frequency hopping spread spectrum (FHSS)		
<b>Type of Unit:</b>	Transceiver		
<b>Power Supply Requirement(s):</b>	28V DC via external power supply		
<b>Highest internally generated clock and/ or oscillator frequency:</b>	5,85 GHz		
<b>Mode(s):</b>	Basic Rate (BR)	Enhanced Data Rate (EDR)	
<b>Modulation(s):</b>	GFSK	$\pi/4$ -DQPSK	8DQPSK
<b>Packet Type (s):</b>	DH1 DH3 DH5	2DH1 2DH3 2DH5	3DH1 3DH3 3DH5
<b>Data Rate (Mbit/s):</b>	1	2	3
<b>Declared Antenna Gain:</b>	0 dBi		
<b>Antenna Type:</b>	External Antenna		
<b>Antenna Details:</b>	Impedance 50 Ohms		
<b>Operating Frequency Range:</b>	2402 MHz to 2480 MHz		
<b>Channel Spacing:</b>	1 MHz		
<b>Transmit Channels Tested:</b>	<b>Channel ID</b>	<b>RF Channel</b>	<b>Frequency (MHz)</b>
	Bottom	0	2402
	Middle	38	2440
	Top	78	2480

**3.5. Support Equipment**

The following support equipment was used to exercise the EUT during testing:

**A. Support Equipment (In-house)**

Item	Description	Brand Name	Model Name or Number	Serial Number
1	Laptop with Qualcomm Radio Control Tool QRCT Ver 4.0.211.0	HP	Probook 650 G1	5CG6143YWB

**B. Support Equipment (Manufacturer supplied) \***

Item	Description	Brand Name	Model Name or Number	Serial Number
1	Driver Truck Display With Antenna	Visteon	Scania 2886824	-/-



## **4. Operation and Monitoring of the EUT during Testing**

### **4.1. Operating Modes**

The EUT was tested in the following operating mode(s):

Continuous Transmitting Fixed Channel Frequency Mode (Hopping OFF) with Modulated Carrier

- Maximum Power: PWR 9
- Test Channels: Bottom | Middle | Top
- BT-Mode & Packet Type: PRBS9
  - BT-BR Mode : (DH1| DH3 | DH5) or
  - BT-EDR Mode : (2DH1| 2DH3 | 2DH5) & (3DH1| 3DH3 | 3DH5)

Continuous Transmitting Hopping Channels Frequency Mode (Hopping ON) with Modulated Carrier

- Maximum Power: PWR 9
- Test Channels: Hopping ON
- BT-Mode & Packet Type: PRBS9
  - BT-BR Mode : (DH1| DH3 | DH5) or
  - BT-EDR Mode : (2DH1| 2DH3 | 2DH5) & (3DH1| 3DH3 | 3DH5)

## **4.2. Configuration and Peripherals**

- The customer supplied document containing the setup instructions "Procedure\_for\_running\_RF\_test\_using\_QRCT\_Scania.pdf" was used for configuration.

### **EUT Power Supply:**

- The EUT was powered with 28 V DC via an external AC/DC power supply

### **Test Mode Activation:**

- The EUT can be connected with the Test laptop via USB cables supplied by the customer.
- The test modes were activated by Qualcomm Radio Control Tool.

### **Conducted Measurements:**

- Specially prepared conducted sample with temporary RF SMA connector were used for all conducted measurements.

○

### **Radiated Measurements:**

- Radiated measurements were performed with the radiated test sample with the external antenna.
- The EUT with its external antenna was evaluated for the worst-case position w.r.t to maximum radiated power measured and following position of the EUT and antenna was found out to be the worst case. Therefore, this report includes relevant results.
  - Worst-case: EUT laying and the external antenna in standing position
- Radiated measurements below 30 MHz were performed with the EUT positioned on the turn table and rotating 360 degrees while the loop antenna height was set at 100 cm.
- Radiated measurements above 30 MHz were performed with the EUT positioned on the turn table and rotating 360° while the antenna height varies from 1 to 4 m over the measurement frequency range.
- R&S® EMC32 V11.30 Software was used for the Radiated spurious emission measurements.
- As the continuous transmission of the EUT ( $D \geq 98\%$ ) cannot be achieved and EUT was transmitting with different duty cycles w.r.t to different modes. Duty Cycle Correction Factors were added to all average measurements respectively according to the modes used to compensate as if it was transmitting with 100% duty cycle.

## **5. Measurements, Examinations and Derived Results**

### **5.1. General Comments**

Measurement uncertainties are evaluated in accordance with current best practice. Our reported expanded uncertainties are based on standard uncertainties, which are multiplied by an appropriate coverage factor to provide a statistical confidence level of approximately 95%. Please refer to Section 6 *Measurement Uncertainty* for details.

In accordance with DAkkS requirements all the measurement equipment is on a calibration schedule. All equipment was within the calibration period on the date of testing.

**5.2. Test Results**

**5.2.1. Transmitter 20 dB Bandwidth**

**Test Summary:**

<b>Test Engineer:</b>	Muhammad Faiq Khan	<b>Test Date:</b>	08 August 2023
<b>Test Sample Serial Number:</b>	ADVC200009 (Conducted Test Sample)		
<b>Test Site Identification</b>	SR 9		

<b>FCC Reference:</b>	Part 15.247(a)(1)
<b>Test Method Used:</b>	ANSI C63.10:2013 Section 7.8.7 referencing Section 6.9.2

**Environmental Conditions:**

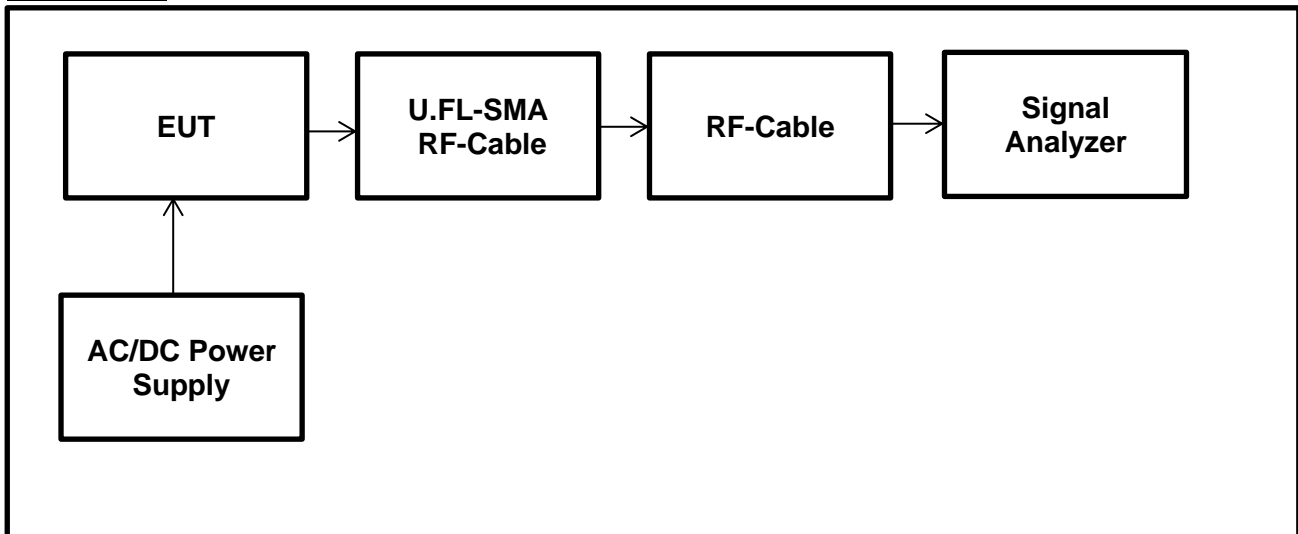
<b>Temperature (°C):</b>	22.7
<b>Relative Humidity (%):</b>	51.3

**Note(s):**

1. The spectrum analyser resolution bandwidth was set to 30 kHz and video bandwidth 100 kHz. A Peak detector was used, sweep time was set to auto and the trace mode was Max Hold. The span was set to 2.5 MHz. Normal and delta markers were placed 20 dB down from the peak of the carrier. These results are documented in the table below.
2. The final measurements were performed with Packet Type DH5, 2-DH5 and 3-DH5 which gives maximum payload & wider bandwidth.
3. The RF port on the EUT was connected to the spectrum analyser using suitable attenuation and RF cable. The measured values take into consideration the external attenuation correction factors.
  - o The SMA Cable from EUT with maximum attenuation of 0.7 dB at the tested frequencies.
  - o The RF cable from the EUT to Analyzer with maximum attenuation of 0.9 dB at the tested frequencies.

Therefore, total a reference level offset 1.60 dB was added to each of the at the tested frequencies conducted plots.

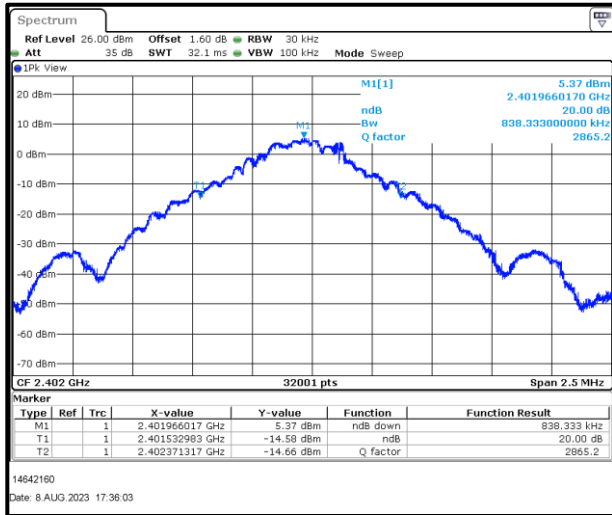
**Test Setup:**



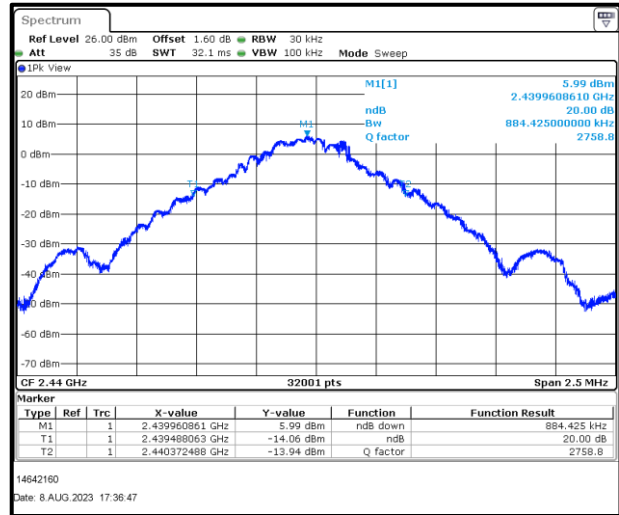
**Transmitter 20 dB Bandwidth (continued)**

**Results: BT-BR/EDR Mode / Packet Type: DH5/ Hopping OFF / PWR 9**

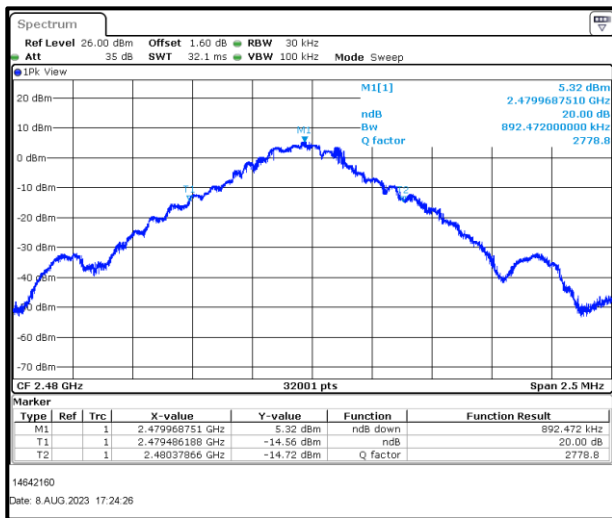
Mode   Packet Type	Channel	20 dB Bandwidth (kHz)
DH5	Bottom	838.33
	Middle	884.43
	Top	892.47



Bottom



Middle



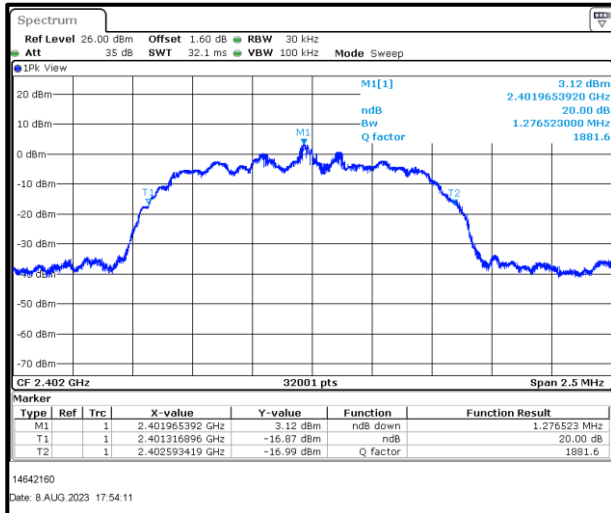
Top

Result: **Pass**

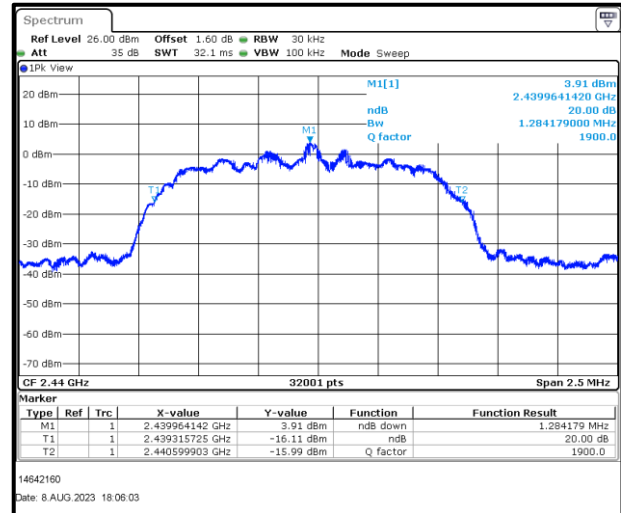
**Transmitter 20 dB Bandwidth (continued)**

**Results: BT-BR/EDR Mode / Packet Type: 2-DH5/ Hopping OFF / PWR 9**

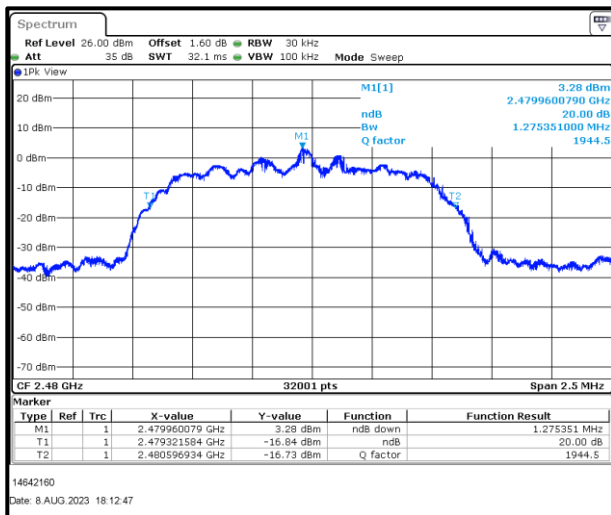
Mode   Packet Type	Channel	20 dB Bandwidth (kHz)
2-DH5	Bottom	1276.52
	Middle	1284.18
	Top	1275.35



Bottom



Middle



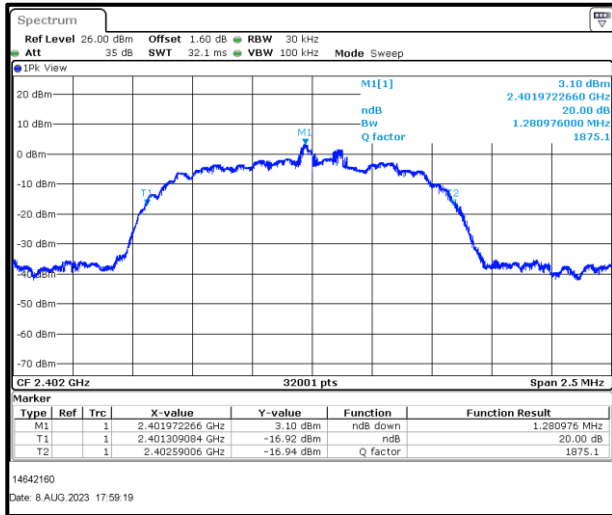
Top

Result: **Pass**

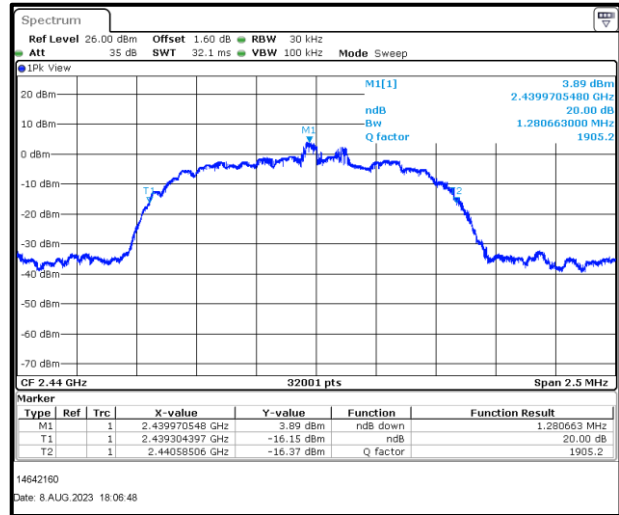
**Transmitter 20 dB Bandwidth (continued)**

**Results: BT-BR/EDR Mode / Packet Type: 3-DH5/ Hopping OFF / PWR 9**

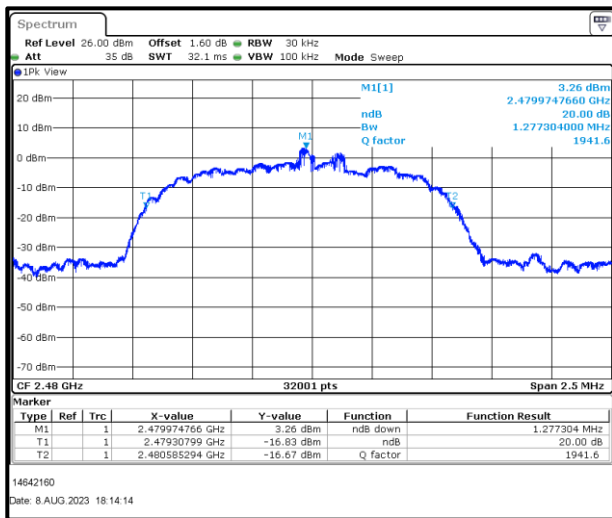
Mode   Packet Type	Channel	20 dB Bandwidth (kHz)
3-DH5	Bottom	1280.98
	Middle	1280.66
	Top	1277.30



Bottom



Middle



Top

Result: **Pass**

**5.2.2. Transmitter Duty Cycle**

**Test Summary:**

<b>Test Engineer:</b>	Muhammad Faiq Khan	<b>Test Date:</b>	08 August 2023 & 01 September 2023
<b>Test Sample Serial Number:</b>	ADVC200009 (Conducted Test Sample)		
<b>Test Site Identification</b>	SR 9		

<b>FCC Reference:</b>	Part 15.35(c)
<b>Test Method Used:</b>	FCC KDB 558074 Section 9.b) referencing ANSI C63.10 Section 7.5

**Environmental Conditions:**

<b>Temperature (°C):</b>	22.2 to 22.7
<b>Relative Humidity (%):</b>	51.3 to 67.2

**Note:**

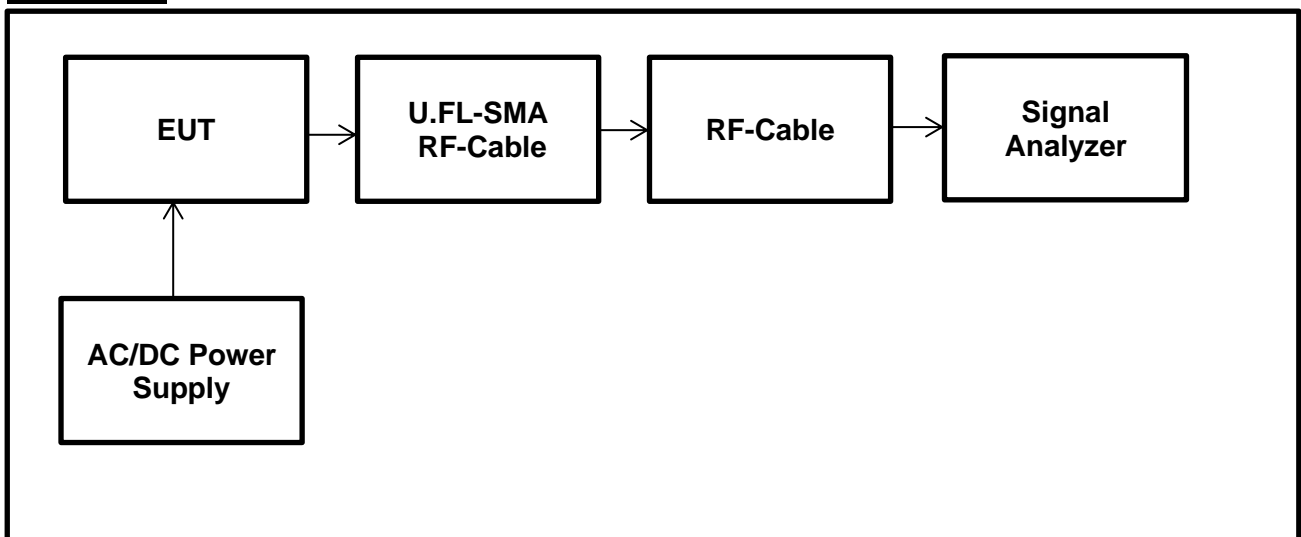
- The transmitter duty cycle was measured using a spectrum analyser in the time domain and calculated by using the following calculation:  

$$Duty\ Cycle\ (\%) = 100 \times [On\ Time\ (T_{ON})] / [Period(T_{ON} + T_{OFF})\ or\ 100ms\ whichever\ is\ the\ lesser]$$

$$Duty\ Cycle\ Correction\ Factor = 10 \log 1 / [On\ Time\ (T_{ON})] / [Period(T_{ON} + T_{OFF})\ or\ 100ms\ whichever\ is\ the\ lesser]$$
- The RF port on the EUT was connected to the spectrum analyser using suitable attenuation and RF cable. The measured values take into consideration the external attenuation correction factors.
  - The UFL to SMA Cable from PCB with maximum attenuation of 0.7 dB at the tested frequencies.
  - The RF cable from the EUT to Analyzer with maximum attenuation of 0.9 dB at the tested frequencies.

Therefore, total a reference level offset 1.60 dB was added to each of the at the tested frequencies conducted plots.

**Test Setup:**

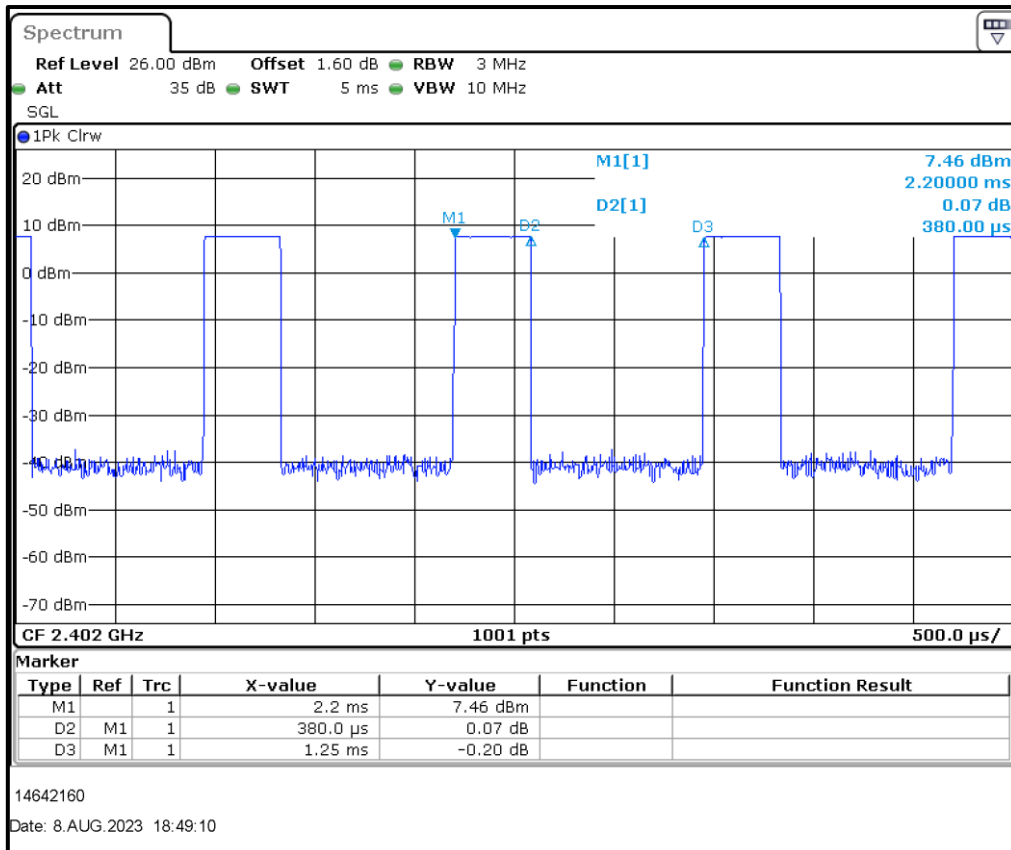




**Transmitter Duty Cycle (continued)**

**Results: BT-BR Mode / Packet Type: DH1 / Hopping OFF/ Bottom Channel / MAX PWR 9**

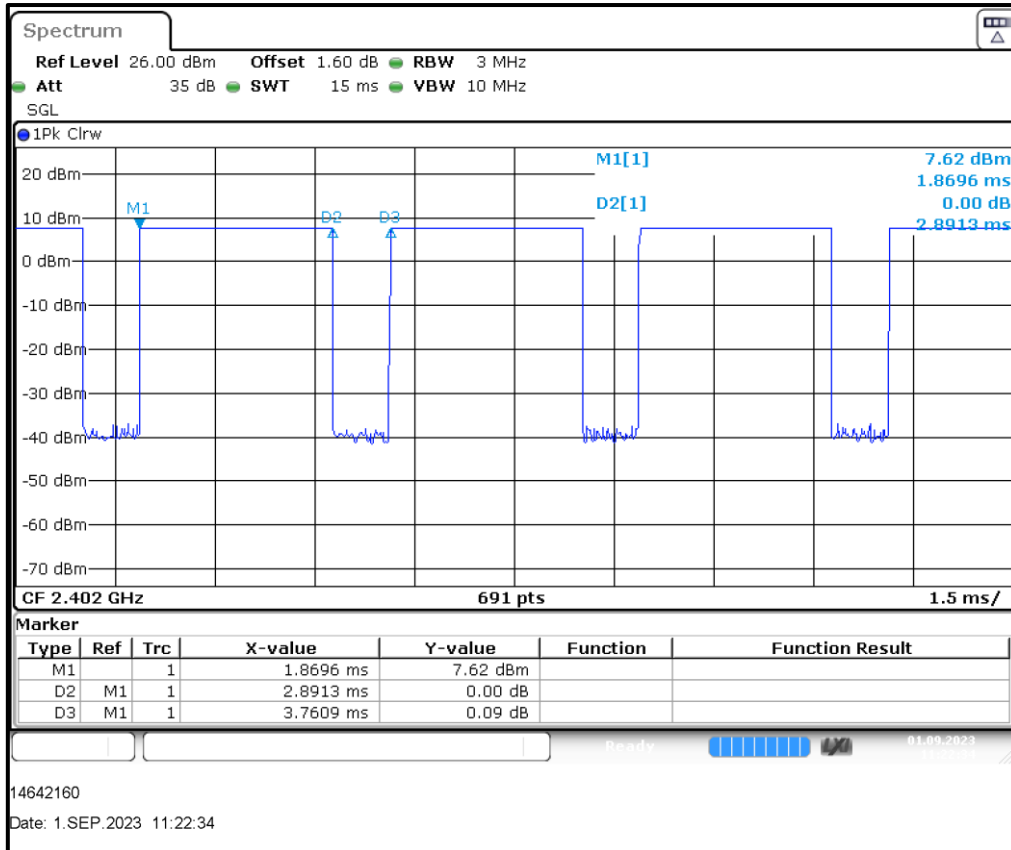
Pulse On Time (T <sub>ON</sub> ) (ms)	Pulse Period (T <sub>ON</sub> +T <sub>OFF</sub> ) (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)
0.380	1.250	30.40	5.17



**Transmitter Duty Cycle (continued)**

**Results: BT-BR Mode / Packet Type: 1DH5 / Hopping OFF/ Bottom Channel / MAX PWR 9**

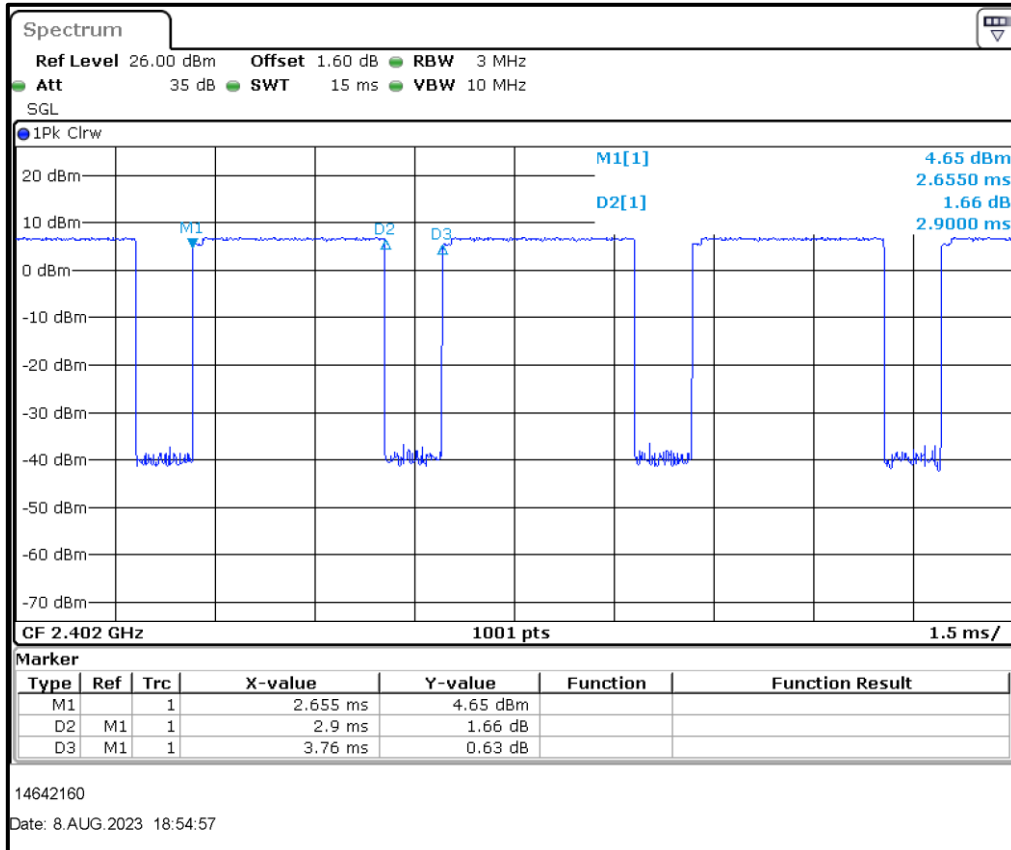
Pulse On Time (T <sub>ON</sub> ) (ms)	Pulse Period (T <sub>ON</sub> +T <sub>OFF</sub> ) (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)
2.8913	3.7609	76.88	1.14



**Transmitter Duty Cycle (continued)**

**Results: BT-BR Mode / Packet Type: 2DH5 / Hopping OFF/ Bottom Channel / MAX PWR 9**

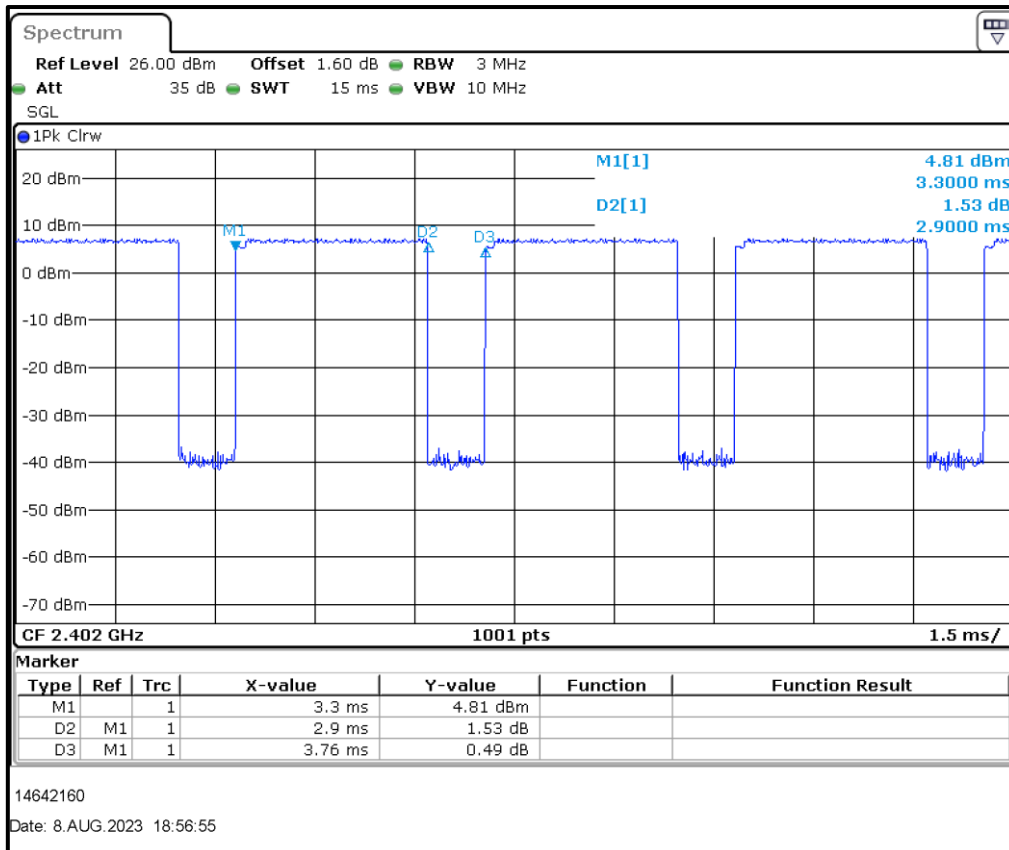
Pulse On Time (T <sub>ON</sub> ) (ms)	Pulse Period (T <sub>ON</sub> +T <sub>OFF</sub> ) (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)
2.900	3.760	77.13	1.13



**Transmitter Duty Cycle (continued)**

**Results: BT-BR Mode / Packet Type: 3DH5 / Hopping OFF/ Bottom Channel / MAX PWR 9**

Pulse On Time (T <sub>ON</sub> ) (ms)	Pulse Period (T <sub>ON</sub> +T <sub>OFF</sub> ) (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)
2.900	3.760	77.13	1.13



**5.2.3. Transmitter Carrier Frequency Separation**

**Test Summary:**

<b>Test Engineer:</b>	Muhammad Faiq Khan	<b>Test Date:</b>	8 August 2023
<b>Test Sample Serial Number:</b>	ADVC200009 (Conducted Test Sample)		
<b>Test Site Identification</b>	SR 9		

<b>FCC Reference:</b>	Part 15.247(a)(1)
<b>Test Method Used:</b>	FCC KDB 558074 Section 9.b) referencing ANSI C63.10:2013 Section 7.8.2

**Environmental Conditions:**

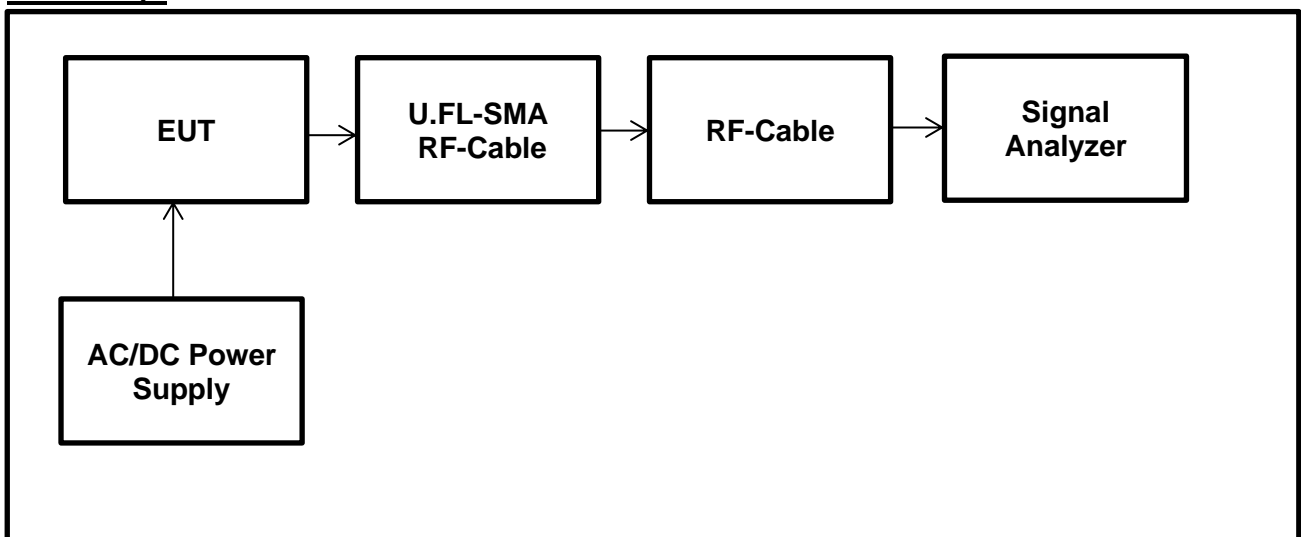
<b>Temperature (°C):</b>	22.7
<b>Relative Humidity (%):</b>	51.3

**Notes:**

1. The spectrum analyser resolution bandwidth was set to 30 kHz and video bandwidth of 100 kHz. A peak detector was used, sweep time was set to auto and trace mode was Max Hold. The span was set to 3 MHz. A marker was placed of one signal and then a delta marker was placed in the same place on the second signal, the results are recorded in the table below.
2. The final measurements were performed with Packet Type DH5, 2-DH5 and 3-DH5 which gives maximum payload & wider bandwidth.
3. The RF port on the EUT was connected to the spectrum analyser using suitable attenuation and RF cable. The measured values take into consideration the external attenuation correction factors.
  - o The UFL to SMA Cable from PCB with maximum attenuation of 0.7 dB at the tested frequencies.
  - o The RF cable from the EUT to Analyzer with maximum attenuation of 0.9 dB at the tested frequencies

Therefore, total a reference level offset 1.60 dB was added to each of the at the tested frequencies conducted plots.

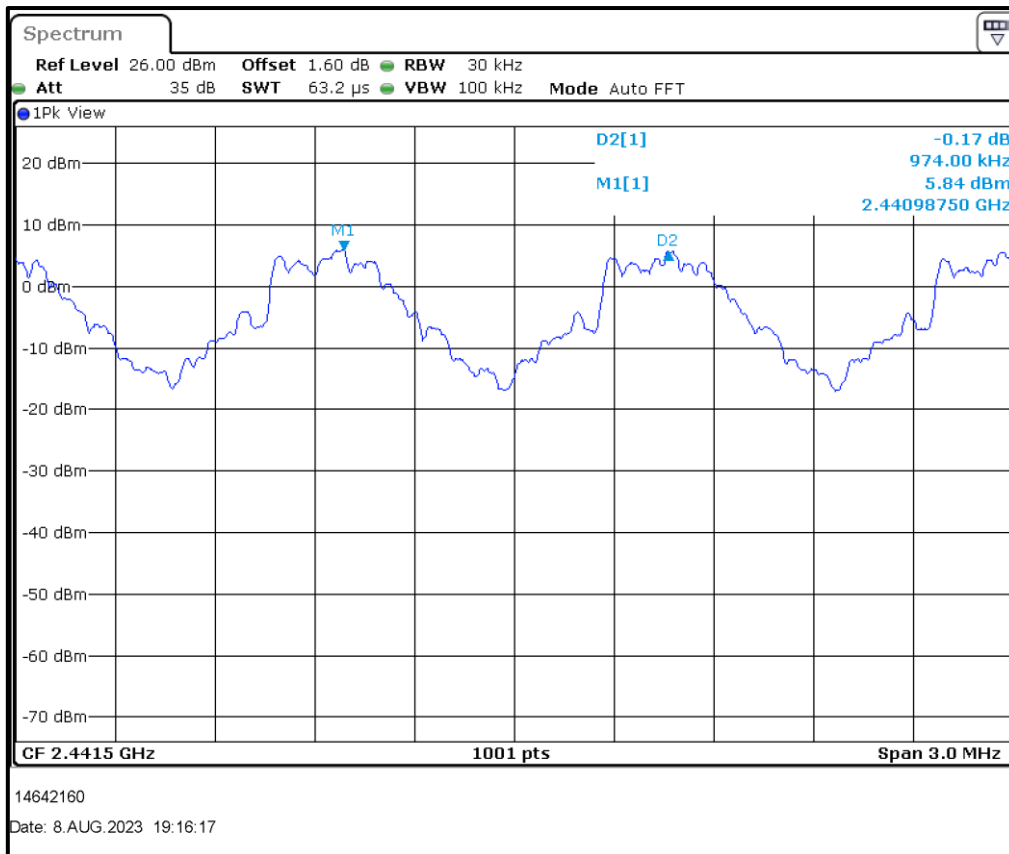
**Test Setup:**



**Transmitter Carrier Frequency Separation (continued)**

**Results: BT-BR Mode / Packet Type: DH5 / Hopping ON / MAX PWR 9**

Carrier Frequency Separation (kHz)	Limit (20 dB BW) (kHz)	Margin (kHz)	Result
974.00	838.33	135.67	Complied

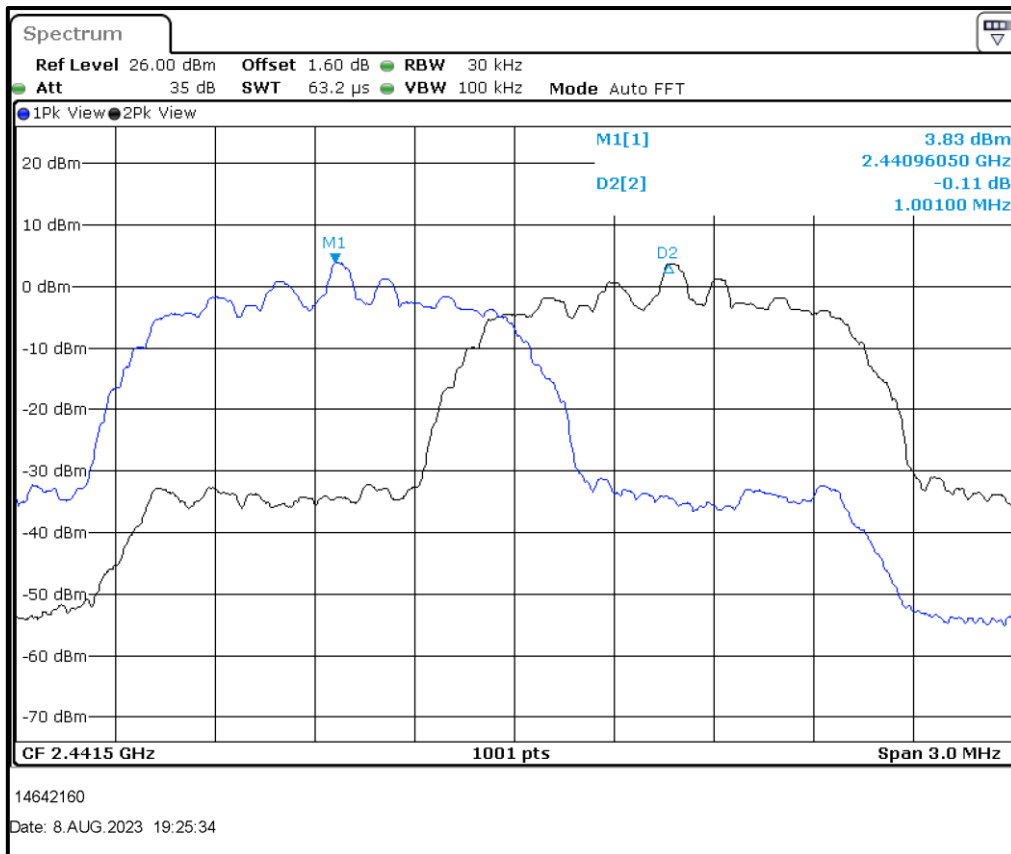


**Result: Pass**

**Transmitter Carrier Frequency Separation (continued)**

**Results: BT-EDR Mode / Packet Type: 2DH5 / Hopping ON / MAX PWR 9**

Carrier Frequency Separation (kHz)	Limit (20 dB BW) (kHz)	Margin (kHz)	Result
1001.00	1275.35	274.35	Complied

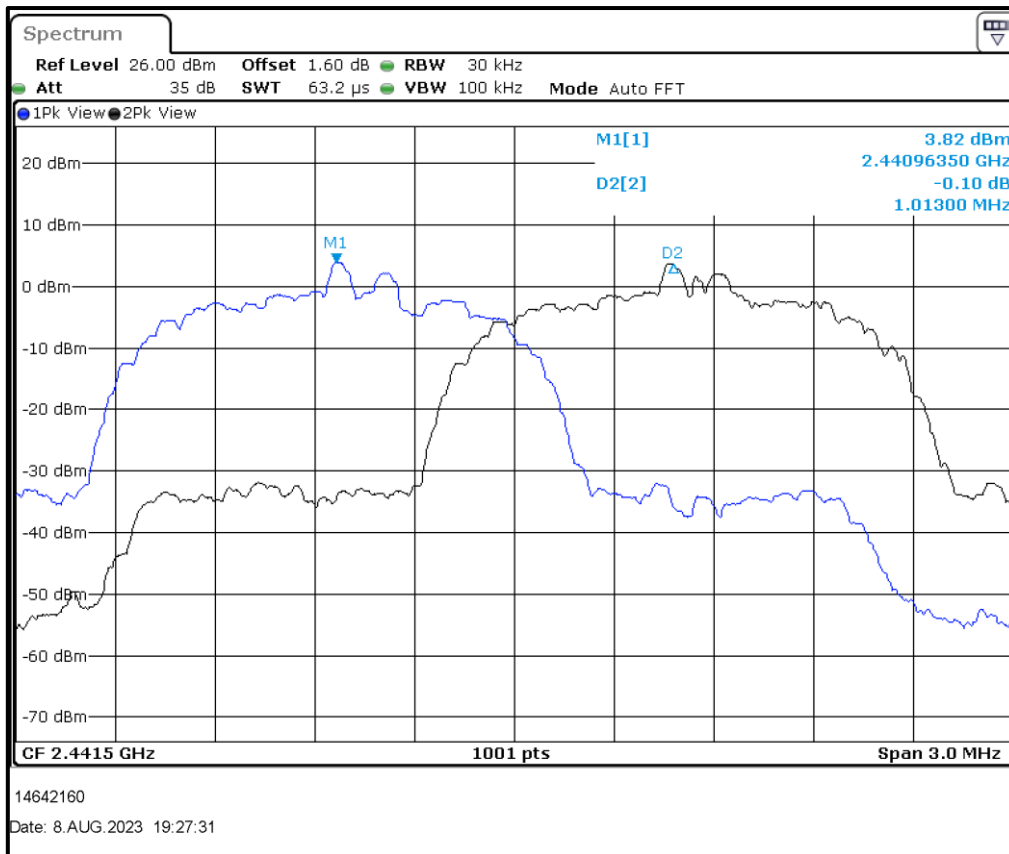


**Result: Pass**

**Transmitter Carrier Frequency Separation (continued)**

**Results: BT-EDR Mode / Packet Type: 3DH5 / Hopping ON / MAX PWR 9**

Carrier Frequency Separation (kHz)	Limit (20 dB BW) (kHz)	Margin (kHz)	Result
1013.00	1277.30	264.30	Complied



**Result: Pass**



**5.2.4. Transmitter Number of Hopping Frequencies and Average Time of Occupancy****Test Summary:**

<b>Test Engineer:</b>	Muhammad Faiq Khan	<b>Test Date:</b>	08 August 2023 & 14 August 2023
<b>Test Sample Serial Number:</b>	ADVC200009 (Conducted Test Sample)		
<b>Test Site Identification</b>	SR 9		

<b>FCC Reference:</b>	Part 15.247(a)(1)(iii)
<b>Test Method Used:</b>	FCC KDB 558074 Section 9.b) referencing ANSI C63.10:2013 Sections 7.8.3 & 7.8.4

**Environmental Conditions:**

<b>Temperature (°C):</b>	22.7
<b>Relative Humidity (%):</b>	51.3

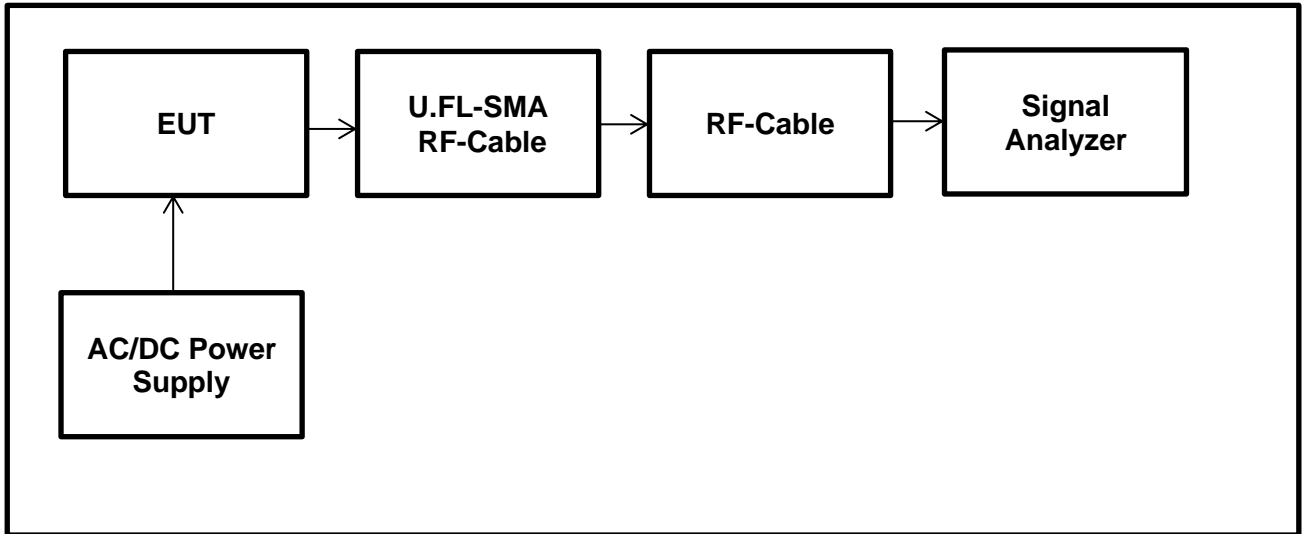
**Notes:**

- Tests were performed to identify the average time of occupancy in number of channels (79) x 0.4 seconds. The calculated period is 31.6 seconds.
- The spectrum analyser was set up for the Number of Hopping Frequencies measurement as follows: the resolution bandwidth was set to 100 kHz and video bandwidth of 300 kHz. A peak detector was used, sweep time was set to auto and trace mode was Max Hold. The span was set to 100 MHz.
- The spectrum analyser was set up for the Emission Width measurement as follows: the resolution bandwidth was set to 1 MHz and video bandwidth of 3 MHz. A peak detector was used and sweep time was set to auto with a span of zero Hz. The emission width is recorded in the table below
- The spectrum analyser was set up for the Number of Hopping Frequencies in 32 seconds measurement as follows: the resolution bandwidth was set to 300 kHz and video bandwidth of 1 MHz. A peak detector was used and sweep time was set to 32 seconds. The EUT was set to transmit in a hopping frequency mode with zero span. The total number of hopping frequencies were recorded in the table below.
- The final measurements were performed only with Packet Type DH5, 2-DH5 and 3-DH5 which gives maximum payload & maximum Average Time of Occupancy.
- The RF port on the EUT was connected to the spectrum analyser using suitable attenuation and RF cable. The measured values take into consideration the external attenuation correction factors.
  - The UFL to SMA Cable from PCB with maximum attenuation of 0.7 dB at the tested frequencies.
  - The RF cable from the EUT to Analyzer with maximum attenuation of 0.9 dB at the tested frequencies

Therefore, total a reference level offset 1.60 dB was added to each of the at the tested frequencies conducted plots.

**Transmitter Number of Hopping Frequencies and Average Time of Occupancy**

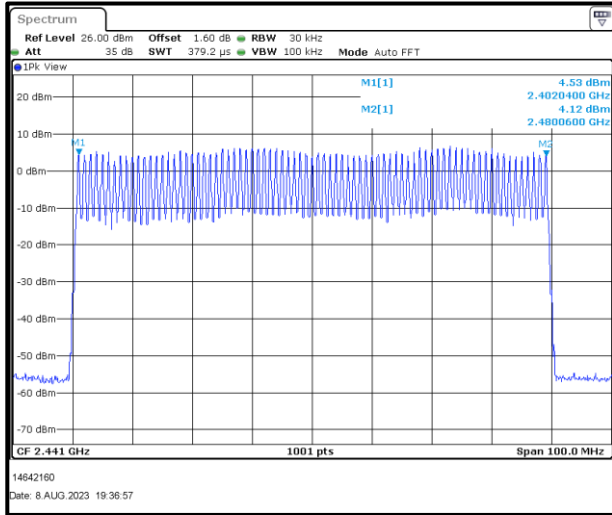
**Test Setup:**



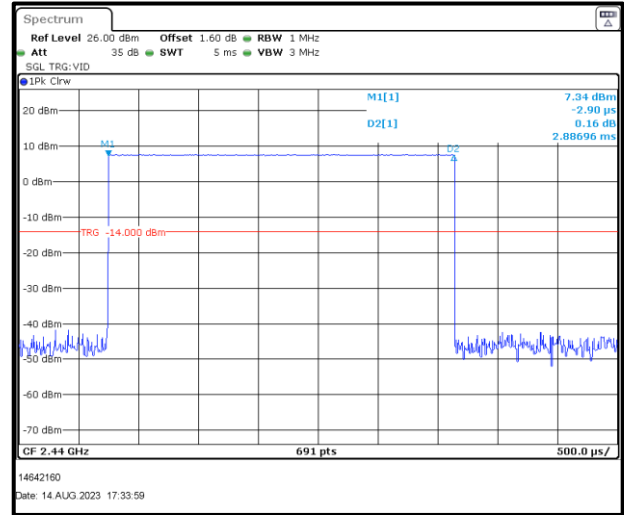
**Transmitter Number of Hopping Frequencies and Average Time of Occupancy**

**Results: BT-BR Mode / Packet Type: DH5 / Hopping ON / MAX PWR 9**

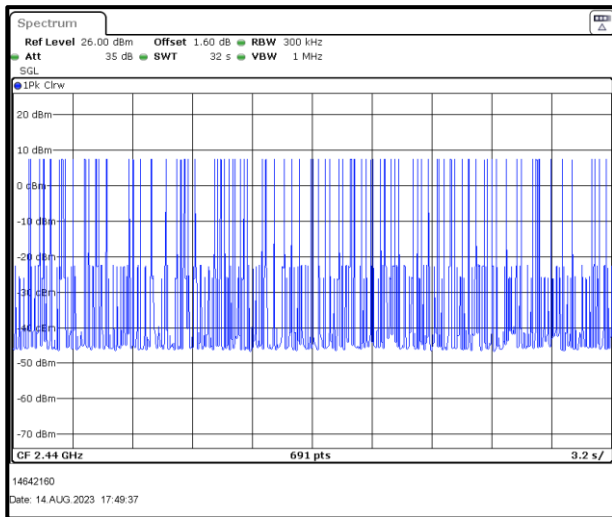
Emission Width (ms)	Number of Hops in 31.6 Seconds	Average Time of Occupancy (s)	Limit (s)	Margin (s)	Result
2.88696	96	0.277	0.4	0.123	Complied



Number of Hopping Frequencies



Emission Width



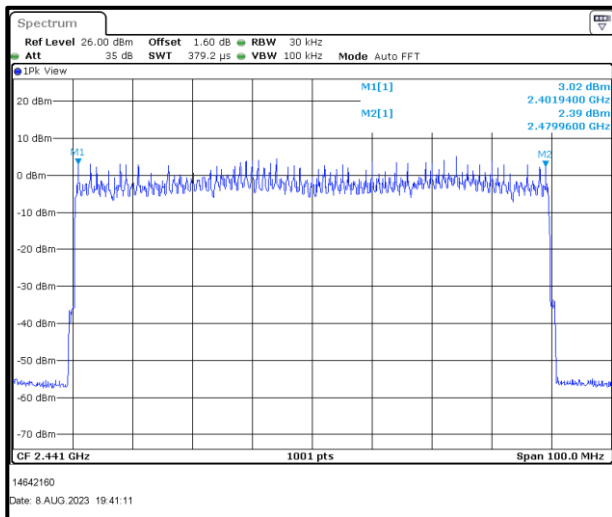
Number of Hopping Frequencies in 32 s

Result: **Pass**

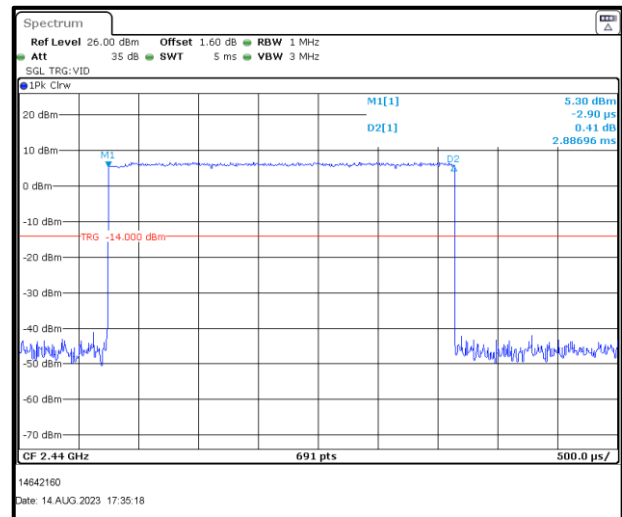
**Transmitter Number of Hopping Frequencies and Average Time of Occupancy**

**Results: BT-EDR Mode / Packet Type: 2DH5 / Hopping ON / MAX PWR 9**

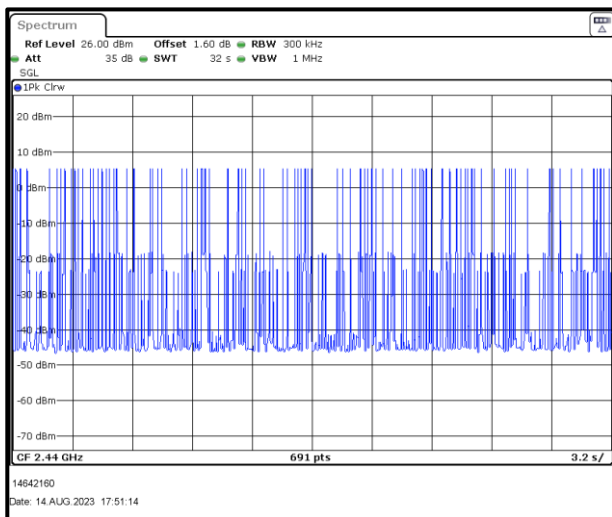
Emission Width (ms)	Number of Hops in 31.6 Seconds	Average Time of Occupancy (s)	Limit (s)	Margin (s)	Result
2.88696	91	0.263	0.4	0.137	Complied



Number of Hopping Frequencies



Emission Width



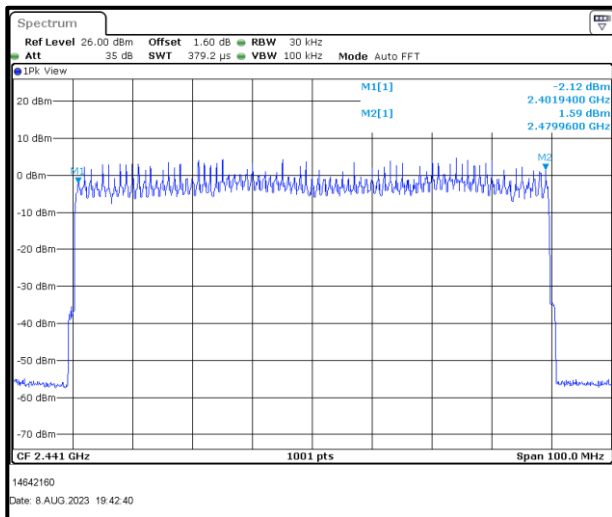
Number of Hopping Frequencies in 32 s

Result: **Pass**

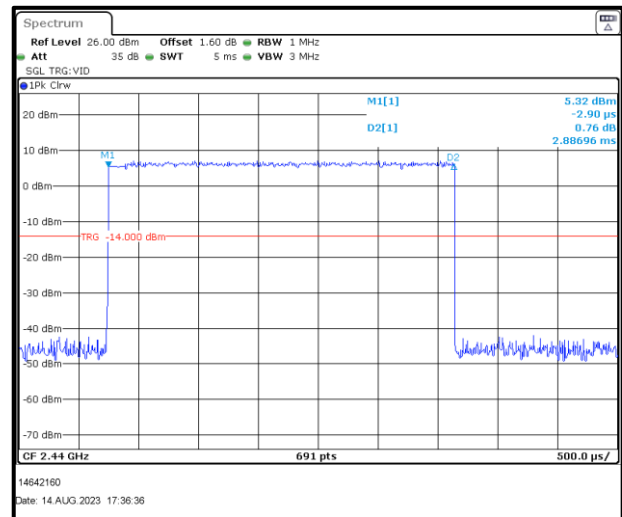
**Transmitter Number of Hopping Frequencies and Average Time of Occupancy**

**Results: BT-EDR Mode / Packet Type: 3DH5 / Hopping ON / MAX PWR 9**

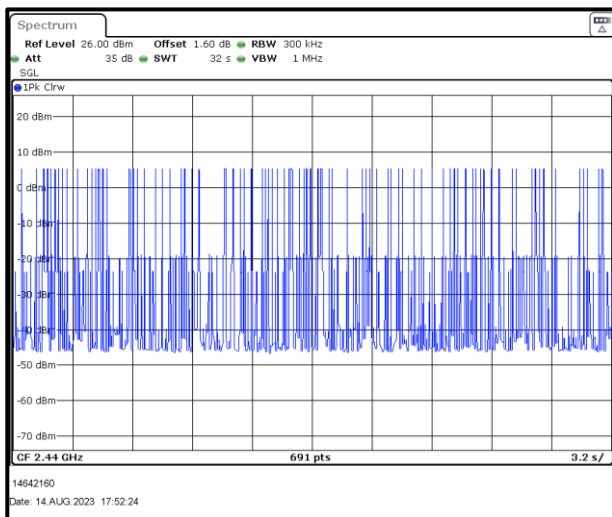
Emission Width (ms)	Number of Hops in 31.6 Seconds	Average Time of Occupancy (s)	Limit (s)	Margin (s)	Result
2.88696	87	0.251	0.4	0.149	Complied



Number of Hopping Frequencies



Emission Width



Number of Hopping Frequencies in 32 s

Result: **Pass**

**5.2.5. Transmitter Maximum Peak Output Power**

**Test Summary:**

<b>Test Engineer:</b>	Muhammad Faiq Khan	<b>Test Date:</b>	08 August 2023
<b>Test Sample Serial Number:</b>	ADVC200009 (Conducted Test Sample)		
<b>Test Site Identification</b>	SR 9		

<b>FCC Reference:</b>	Part 15.247(b)(1)
<b>Test Method Used:</b>	FCC KDB 558074 Section 9.b) referencing ANSI C63.10:2013 Section 7.8.5

**Environmental Conditions:**

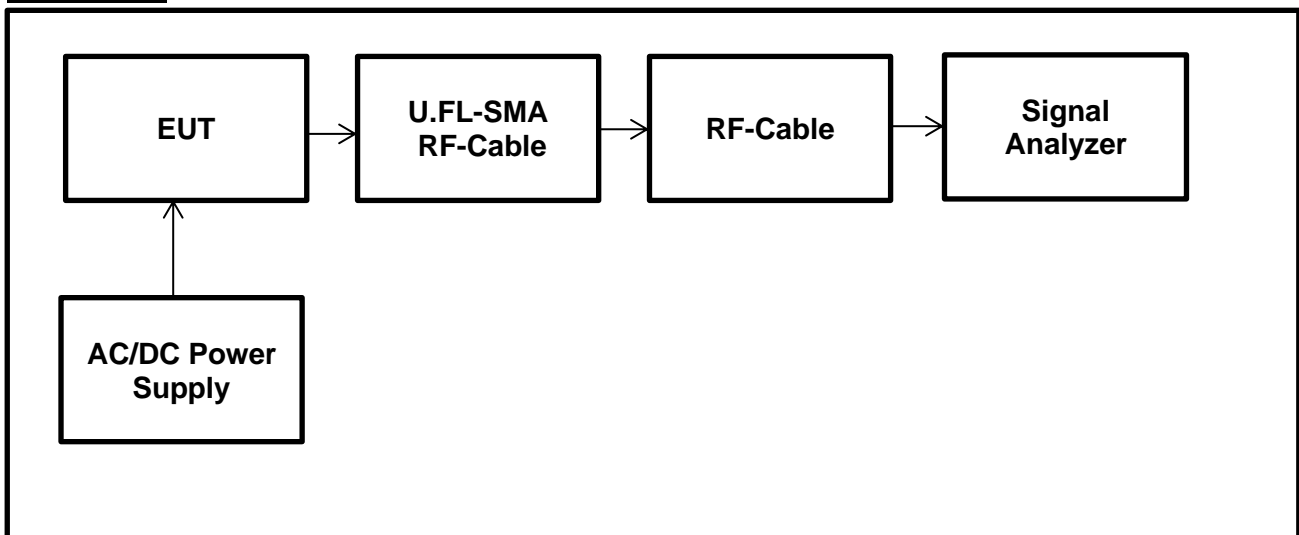
<b>Temperature (°C):</b>	22.7
<b>Relative Humidity (%):</b>	51.3

**Notes:**

1. The spectrum analyser resolution bandwidth was set to 1 MHz and video bandwidth of 3 MHz for the BR data rate and resolution bandwidth was set to 2 MHz and video bandwidth of 10 MHz for EDR data rates. A peak detector was used, sweep time was set to auto and trace mode was Max Hold. The span was set to approximately five times the 20 dB bandwidth. Therefore, span was set to 4 MHz for BR data rate and 6.5 MHz for EDR data rates. A marker was placed at the peak of the signal and the results recorded in the tables below.
2. The measurements were performed on all supported modulation schemes, data rates and packet types were initially investigated to determine the mentioned worst case (terms highest output power).
3. The RF port on the EUT was connected to the spectrum analyser using suitable attenuation and RF cable. The measured values take into consideration the external attenuation correction factors.
  - o The UFL to SMA Cable from PCB with maximum attenuation of 0.7 dB at the tested frequencies.
  - o The RF cable from the EUT to Analyzer with maximum attenuation of 0.9 dB at the tested frequencies

Therefore, total a reference level offset 1.60 dB was added to each of the at the tested frequencies conducted plots.
4. As EUT employs at least 75 non-overlapping hopping channels in operating band, in accordance with 15.247(b)(1) maximum peak conducted output power limit 1 Watt / 30 dBm has been applied.
5. The declared antenna gain was added to the conducted peak power to obtain the EIRP.

**Test Setup:**

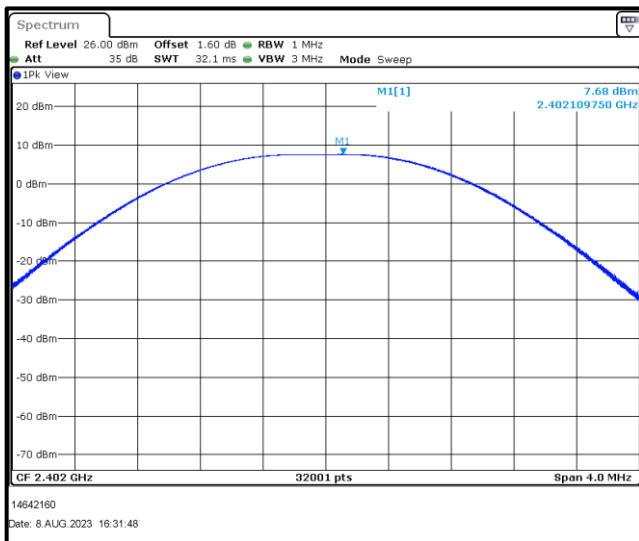


**Transmitter Maximum Peak Output Power (continued)**

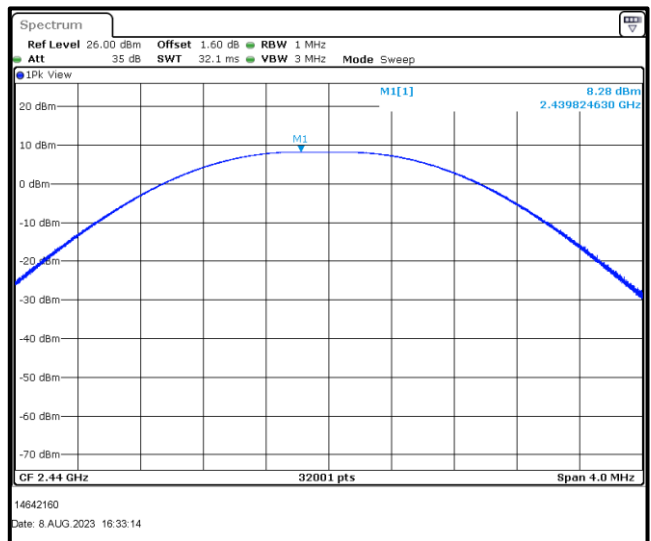
**Results: BT-BR Mode / Packet Type: DH1 / Hopping OFF/ MAX PWR 9**

Channel	Conducted Peak Power (dBm)	Conducted Peak Power Limit (dBm)	Margin (dB)	Result
Bottom	7.68	30.00	22.32	Complied
Middle	8.28	30.00	21.72	Complied
Top	7.40	30.00	22.60	Complied

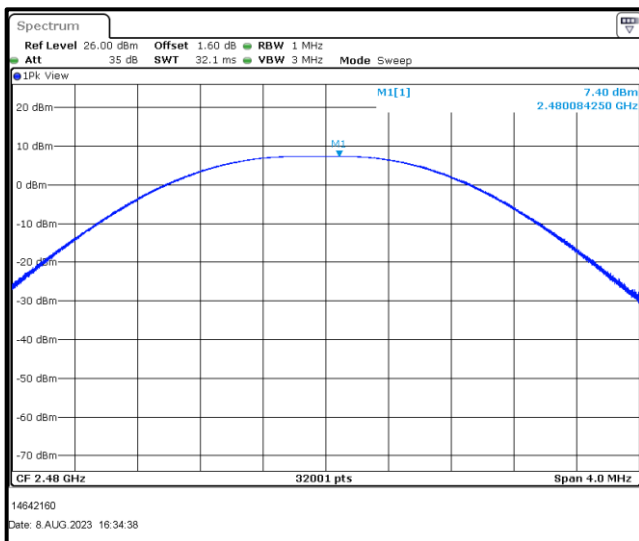
Channel	Conducted Peak Power (dBm)	Declared Antenna Gain (dBi)	EIRP (dBm)	De Facto EIRP Limit (dBm)	Margin (dB)	Result
Bottom	7.68	0.0	7.68	36.00	28.32	Complied
Middle	8.28	0.0	8.28	36.00	27.72	Complied
Top	7.40	0.0	7.40	36.00	28.60	Complied



Bottom Channel



Middle Channel



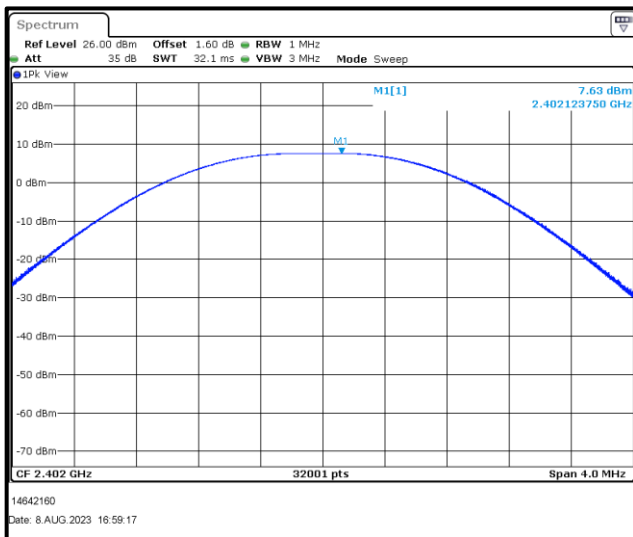
Top Channel

**Transmitter Maximum Peak Output Power (continued)**

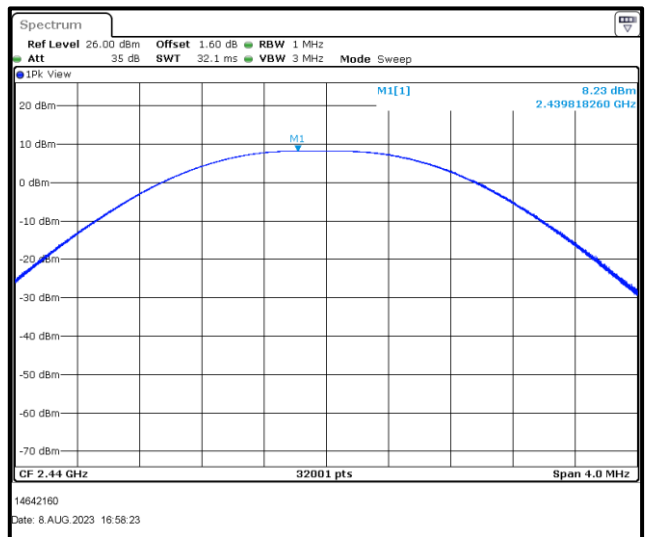
**Results: BT-BR Mode / Packet Type: DH3 / Hopping OFF/ MAX PWR 9**

Channel	Conducted Peak Power (dBm)	Conducted Peak Power Limit (dBm)	Margin (dB)	Result
Bottom	7.63	30.00	22.37	Complied
Middle	8.23	30.00	21.77	Complied
Top	7.37	30.00	22.63	Complied

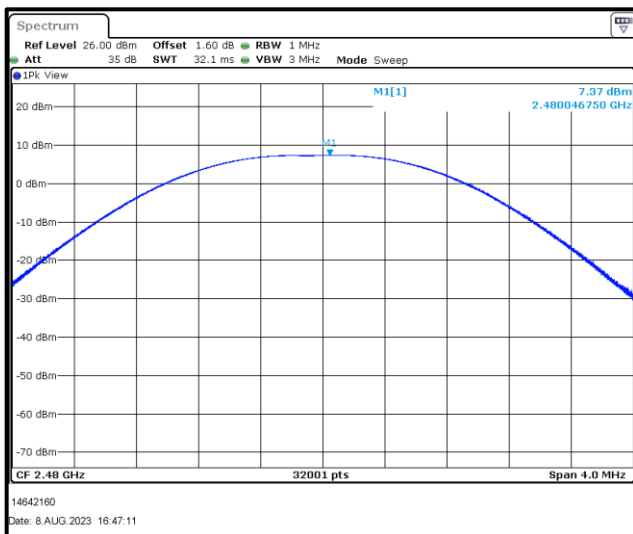
Channel	Conducted Peak Power (dBm)	Declared Antenna Gain (dBi)	EIRP (dBm)	De Facto EIRP Limit (dBm)	Margin (dB)	Result
Bottom	7.63	0.0	7.63	36.00	28.37	Complied
Middle	8.23	0.0	8.23	36.00	27.77	Complied
Top	7.37	0.0	7.37	36.00	28.63	Complied



Bottom Channel



Middle Channel



Top Channel

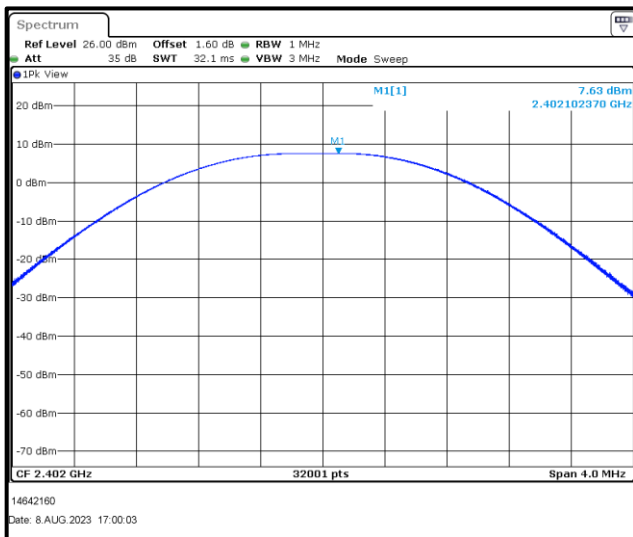


**Transmitter Maximum Peak Output Power (continued)**

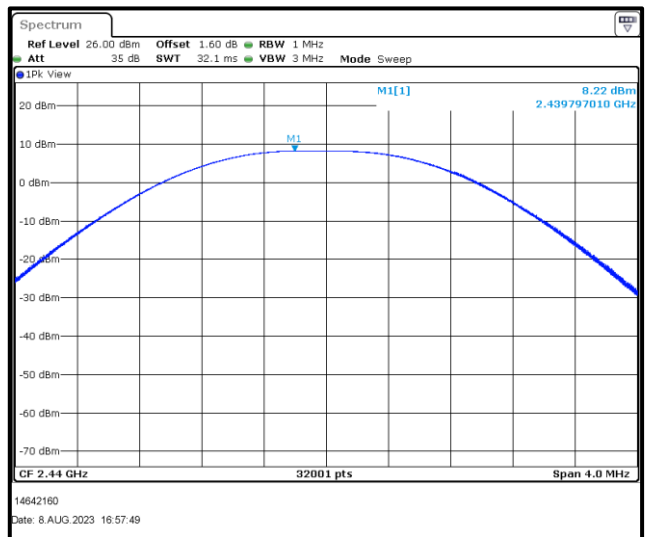
**Results: BT-BR Mode / Packet Type: DH5 / Hopping OFF/ MAX PWR 9**

Channel	Conducted Peak Power (dBm)	Conducted Peak Power Limit (dBm)	Margin (dB)	Result
Bottom	7.63	30.00	22.37	Complied
Middle	8.22	30.00	21.78	Complied
Top	7.37	30.00	22.63	Complied

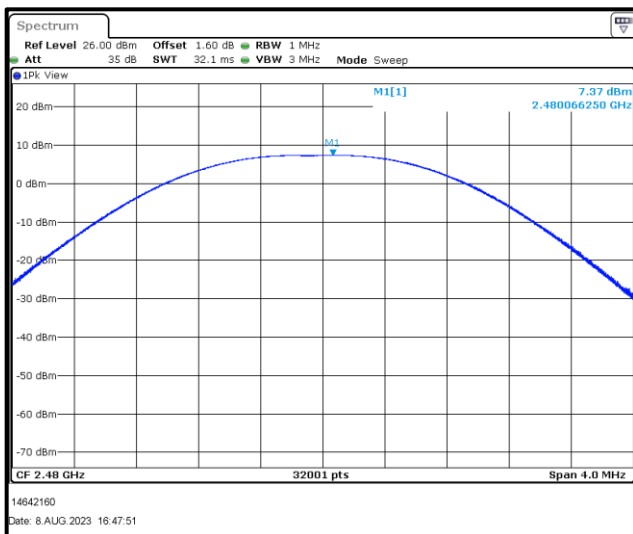
Channel	Conducted Peak Power (dBm)	Declared Antenna Gain (dBi)	EIRP (dBm)	De Facto EIRP Limit (dBm)	Margin (dB)	Result
Bottom	7.63	0.0	7.63	36.00	28.37	Complied
Middle	8.22	0.0	8.22	36.00	27.78	Complied
Top	7.37	0.0	7.37	36.00	28.63	Complied



**Bottom Channel**



**Middle Channel**



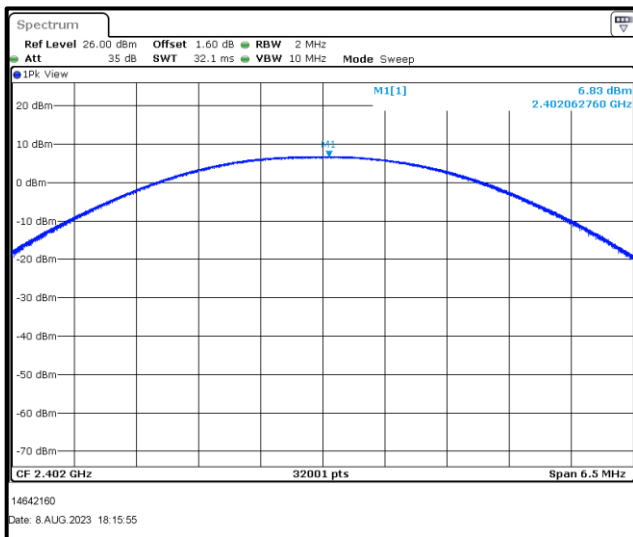
**Top Channel**

**Transmitter Maximum Peak Output Power (continued)**

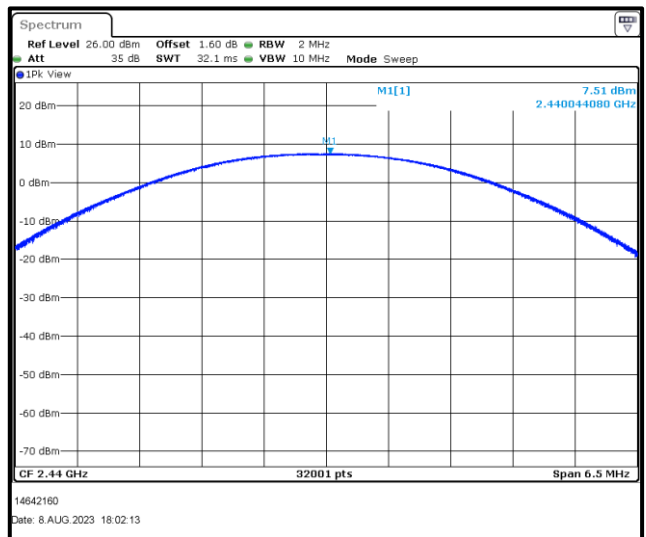
**Results: BT-EDR Mode / Packet Type: 2DH1 / Hopping OFF/ MAX PWR 9**

Channel	Conducted Peak Power (dBm)	Conducted Peak Power Limit (dBm)	Margin (dB)	Result
Bottom	6.83	30.00	23.17	Complied
Middle	7.51	30.00	22.49	Complied
Top	6.76	30.00	23.24	Complied

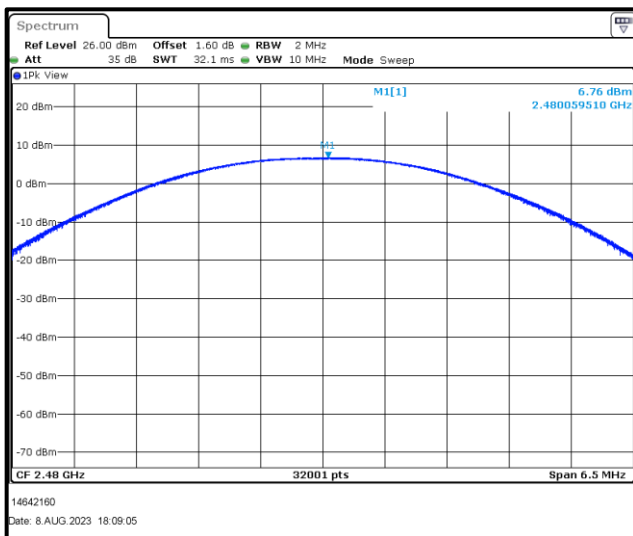
Channel	Conducted Peak Power (dBm)	Declared Antenna Gain (dBi)	EIRP (dBm)	De Facto EIRP Limit (dBm)	Margin (dB)	Result
Bottom	6.83	0.0	6.83	36.00	29.17	Complied
Middle	7.51	0.0	7.51	36.00	28.49	Complied
Top	6.76	0.0	6.76	36.00	29.24	Complied



Bottom Channel



Middle Channel



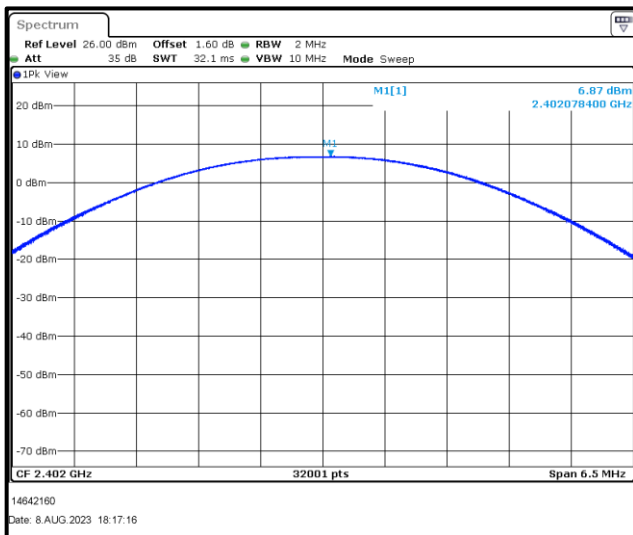
Top Channel

**Transmitter Maximum Peak Output Power (continued)**

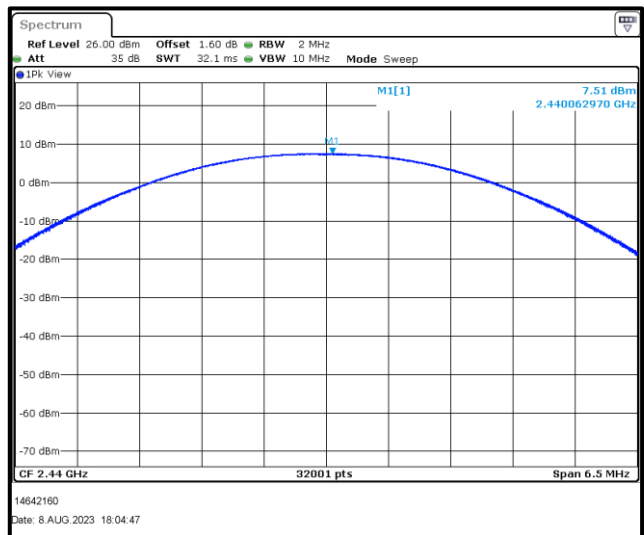
**Results: BT-EDR Mode / Packet Type: 2DH3 / Hopping OFF/ MAX PWR 9**

Channel	Conducted Peak Power (dBm)	Conducted Peak Power Limit (dBm)	Margin (dB)	Result
Bottom	6.87	30.00	23.13	Complied
Middle	7.51	30.00	22.49	Complied
Top	6.76	30.00	23.24	Complied

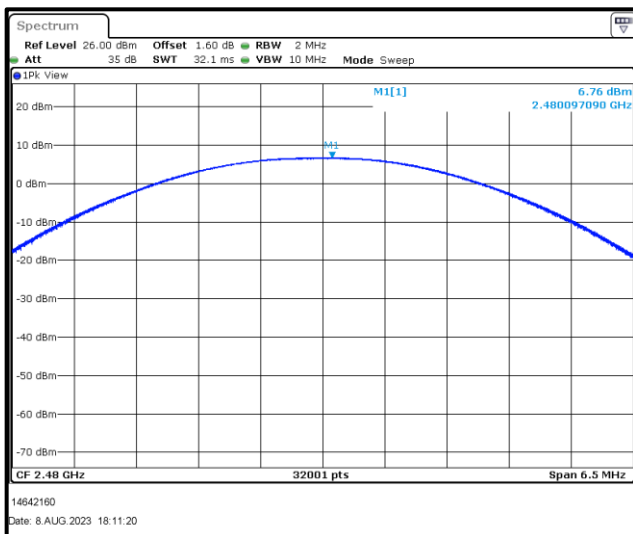
Channel	Conducted Peak Power (dBm)	Declared Antenna Gain (dBi)	EIRP (dBm)	De Facto EIRP Limit (dBm)	Margin (dB)	Result
Bottom	6.87	0.0	6.87	36.00	29.13	Complied
Middle	7.51	0.0	7.51	36.00	28.49	Complied
Top	6.76	0.0	6.76	36.00	29.24	Complied



**Bottom Channel**



**Middle Channel**



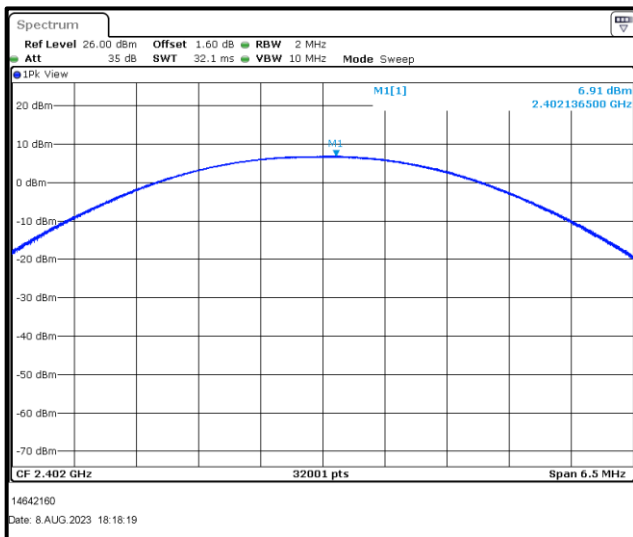
**Top Channel**

**Transmitter Maximum Peak Output Power (continued)**

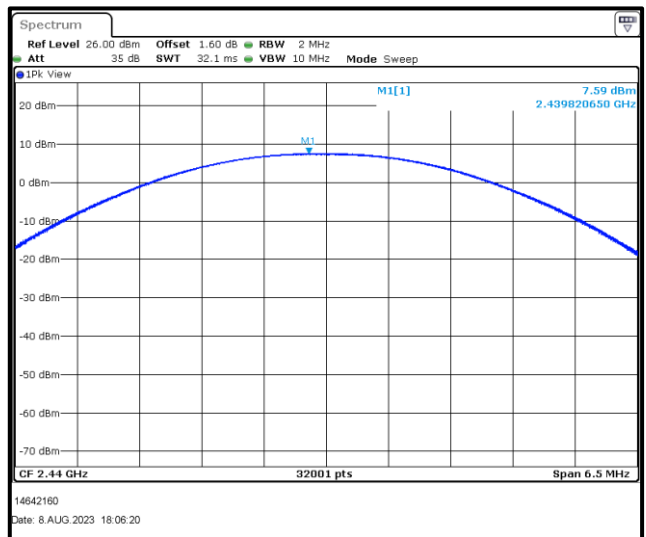
**Results: BT-EDR Mode / Packet Type: 2DH5 / Hopping OFF/ MAX PWR 9**

Channel	Conducted Peak Power (dBm)	Conducted Peak Power Limit (dBm)	Margin (dB)	Result
Bottom	6.91	30.00	23.09	Complied
Middle	7.59	30.00	22.41	Complied
Top	6.82	30.00	23.18	Complied

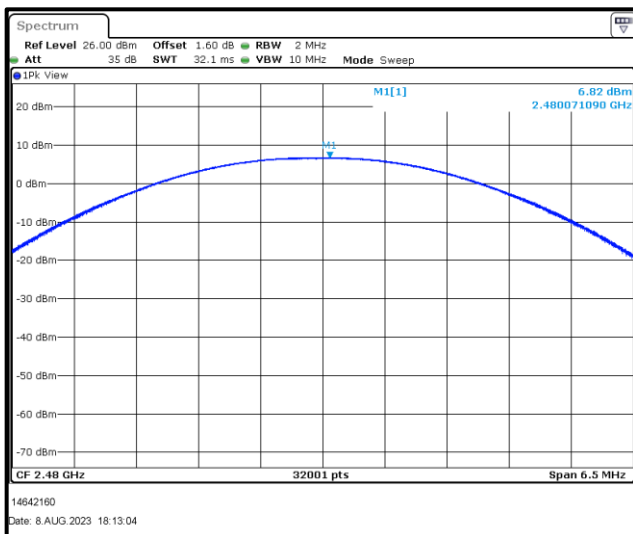
Channel	Conducted Peak Power (dBm)	Declared Antenna Gain (dBi)	EIRP (dBm)	De Facto EIRP Limit (dBm)	Margin (dB)	Result
Bottom	6.91	0.0	6.91	36.00	29.09	Complied
Middle	7.59	0.0	7.59	36.00	28.41	Complied
Top	6.82	0.0	6.82	36.00	29.18	Complied



Bottom Channel



Middle Channel



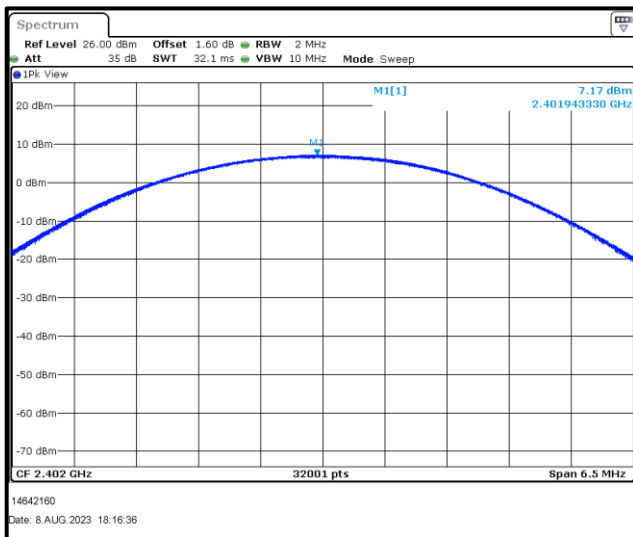
Top Channel

**Transmitter Maximum Peak Output Power (continued)**

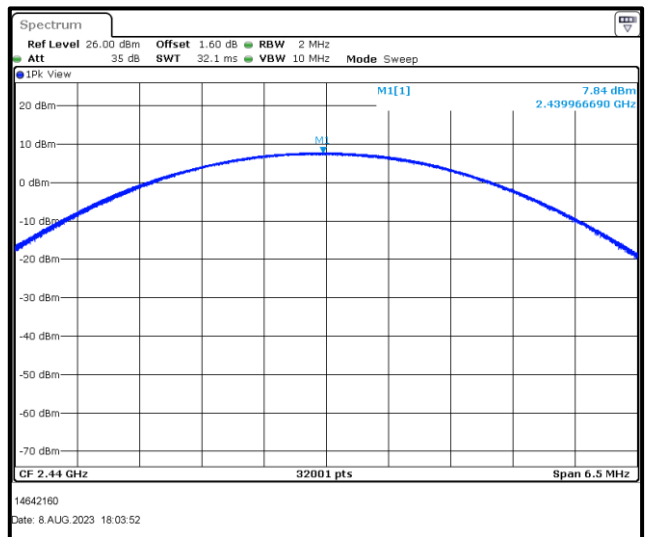
**Results: BT-EDR Mode / Packet Type: 3DH1 / Hopping OFF/ MAX PWR 9**

Channel	Conducted Peak Power (dBm)	Conducted Peak Power Limit (dBm)	Margin (dB)	Result
Bottom	7.17	30.00	22.83	Complied
Middle	7.84	30.00	22.16	Complied
Top	7.01	30.00	22.99	Complied

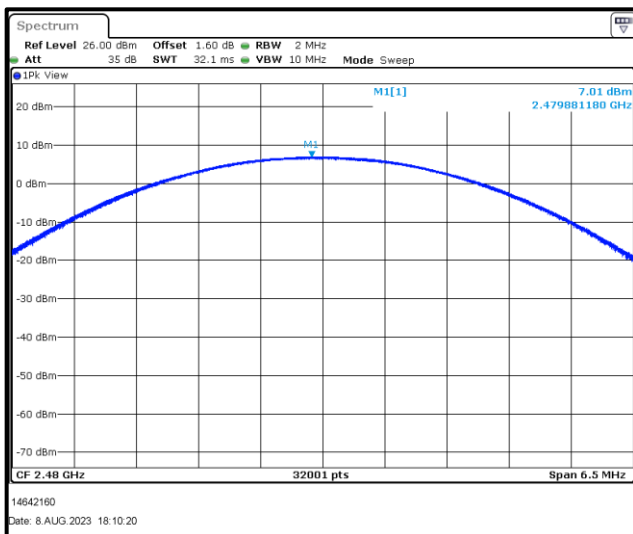
Channel	Conducted Peak Power (dBm)	Declared Antenna Gain (dBi)	EIRP (dBm)	De Facto EIRP Limit (dBm)	Margin (dB)	Result
Bottom	7.17	0.0	7.17	36.00	28.83	Complied
Middle	7.84	0.0	7.84	36.00	28.16	Complied
Top	7.01	0.0	7.01	36.00	28.99	Complied



Bottom Channel



Middle Channel



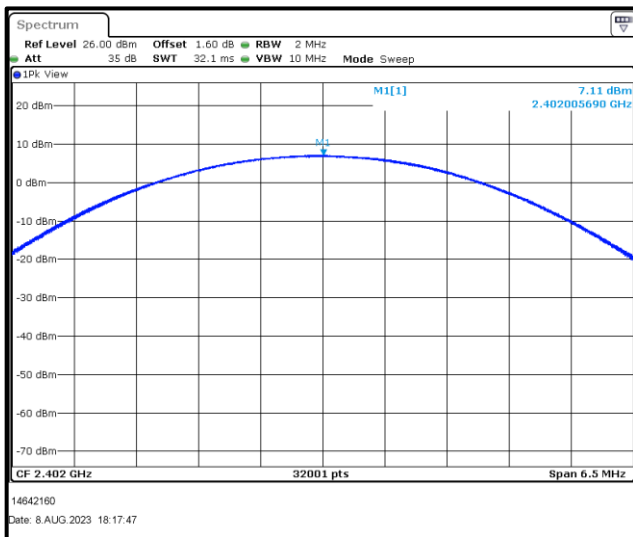
Top Channel

**Transmitter Maximum Peak Output Power (continued)**

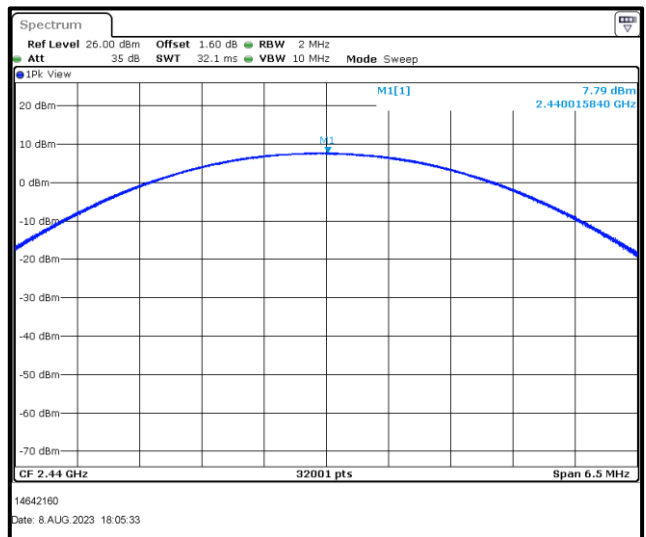
**Results: BT-EDR Mode / Packet Type: 3DH3 / Hopping OFF/ MAX PWR 9**

Channel	Conducted Peak Power (dBm)	Conducted Peak Power Limit (dBm)	Margin (dB)	Result
Bottom	7.11	30.00	22.89	Complied
Middle	7.79	30.00	22.21	Complied
Top	6.95	30.00	23.05	Complied

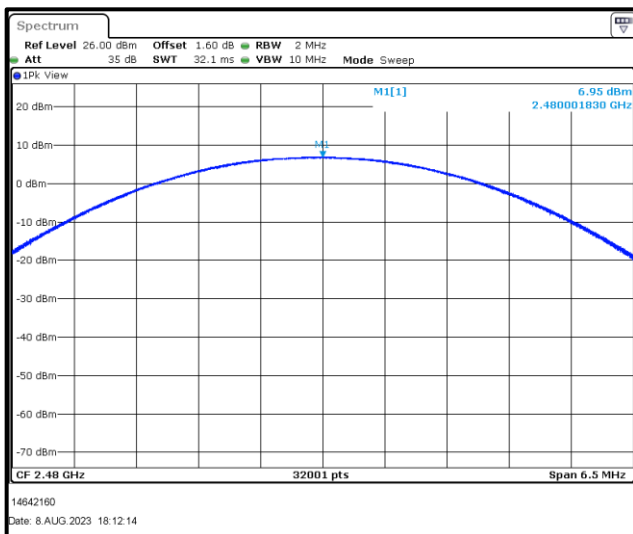
Channel	Conducted Peak Power (dBm)	Declared Antenna Gain (dBi)	EIRP (dBm)	De Facto EIRP Limit (dBm)	Margin (dB)	Result
Bottom	7.11	0.0	7.11	36.00	28.89	Complied
Middle	7.79	0.0	7.79	36.00	28.21	Complied
Top	6.95	0.0	6.95	36.00	29.05	Complied



Bottom Channel



Middle Channel



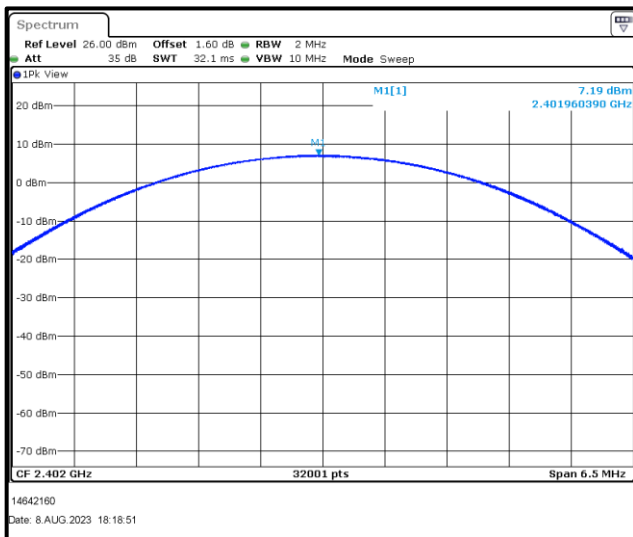
Top Channel

**Transmitter Maximum Peak Output Power (continued)**

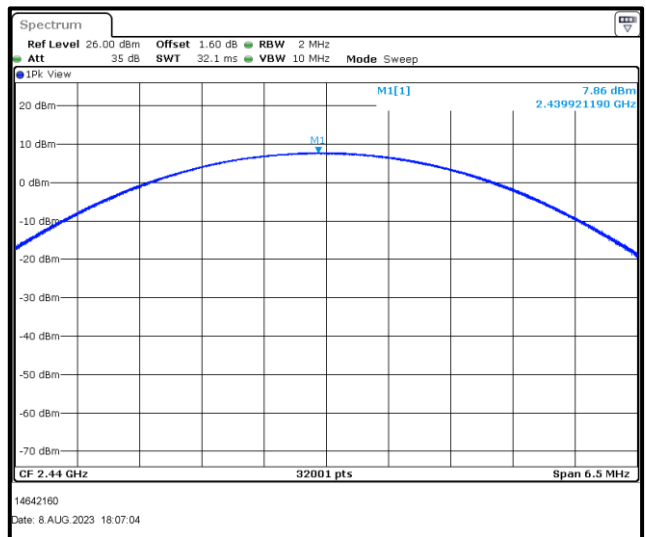
**Results: BT-EDR Mode / Packet Type: 3DH5 / Hopping OFF/ MAX PWR 9**

Channel	Conducted Peak Power (dBm)	Conducted Peak Power Limit (dBm)	Margin (dB)	Result
Bottom	7.19	30.00	22.81	Complied
Middle	7.86	30.00	22.14	Complied
Top	7.03	30.00	22.97	Complied

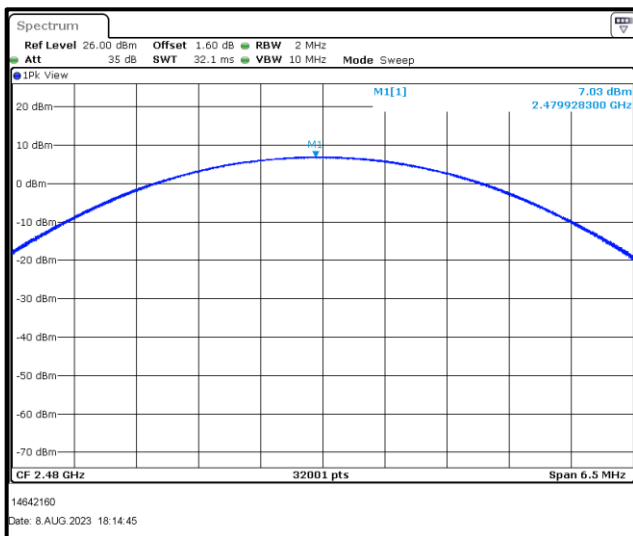
Channel	Conducted Peak Power (dBm)	Declared Antenna Gain (dBi)	EIRP (dBm)	De Facto EIRP Limit (dBm)	Margin (dB)	Result
Bottom	7.19	0.0	7.19	36.00	28.81	Complied
Middle	7.86	0.0	7.86	36.00	28.14	Complied
Top	7.03	0.0	7.03	36.00	28.97	Complied



Bottom Channel



Middle Channel



Top Channel

**5.2.6. Transmitter Radiated Emissions****Test Summary:**

<b>Test Engineer:</b>	Abbas Al-Hussainy	<b>Test Date:</b>	31 August 2023
<b>Test Sample Serial Number:</b>	ADVC200008 (Radiated Test Sample)		
<b>Test Site Identification</b>	SR 1/2		

<b>FCC Reference:</b>	Parts 15.247(d) & 15.209(a)
<b>Test Method Used:</b>	ANSI C63.10:2013 Sections 6.3 and 6.4
<b>Frequency Range</b>	9 kHz to 30 MHz

**Environmental Conditions:**

<b>Temperature (°C):</b>	24.0
<b>Relative Humidity (%):</b>	46.4

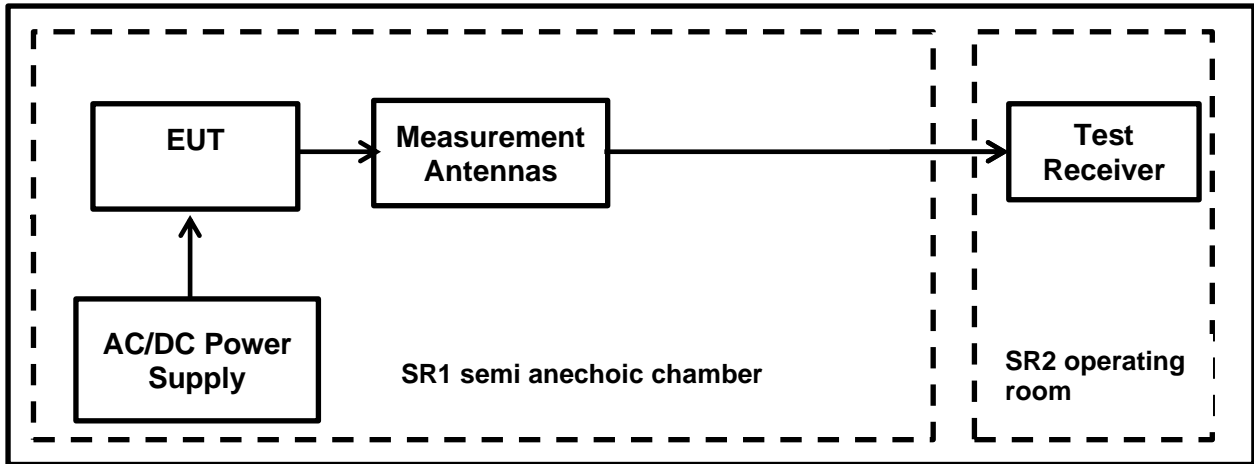
**Notes:**

- In accordance with FCC KDB 414788 D01 Radiated Test Site & ANSI C63.10 clause 5.2 an alternative test site that can demonstrate equivalence to a open area test site may be used. Therefore, the measurement was performed in a Semi Anechoic Chamber. (The OATS / SAC comparison data is available upon request).
- The limits are specified at a test distances of 30 and 300 metres. However, as specified in FCC Section 15.31 (f)(2) & ANSI C63.10 clause 6.4.3, measurements may be performed at a closer distance and the measured level extrapolated to the specified measurement distance using the method described in clauses 6.4.4, specifically sub-clause 6.4.4.1 which specifies that the measured level shall be extrapolated to the specified distance by conservatively presuming that the field strength decays at 40 dB/decade.  
Therefore, measurements were performed at a measurement distance of 3 m.
- Therefore, the limit values are extrapolated to a measurement distance of 3 m.
  - 9 kHz- 490 kHz: limits extrapolated from 300 m to 3 m by adding 80 dB at 40 dB /decade.
  - 490 kHz-1705 kHz: limits extrapolated from 30 m to 3 m by adding 40 dB at 40 dB /decade.
- Measurements below 30 MHz were performed in a semi-anechoic chamber SR1/ 2 (Asset Number 1603665) at a distance of 3 m. The EUT was placed at a height of 80 cm above the reference ground plane in the centre of the chamber turntable. The measurement loop antenna height was 80 cm.
- The preliminary scans showed similar emission levels below 30 MHz, for each channel & modes of operation. Therefore, final radiated emissions measurements were performed with the EUT set to the following worst case (in terms of highest output power).
  - BT-EDR Mode | Packet Type: 1DH1 | Hopping OFF | MAX PWR 9 | Middle Channel
- The final measured value, for the given emission, in the table below incorporates the calibrated antenna factor and cable loss.
- All other emissions shown on the pre-scan plot were investigated and found to be below the measurement system noise floor.
- Pre-scans were performed, and markers placed on the highest measured levels. The test receiver was set to:
  - Frequency range: 9 kHz-150 kHz: RBW: 1 kHz /VBW: 3 kHz
  - Frequency range: 150 kHz – 30 MHz: RBW: 10 kHz /VBW: 30 kHz
  - Detector: Max-Peak detector
  - Trace Mode: Max Hold



**Transmitter Radiated Emissions (continued)**

**Test Setup:**

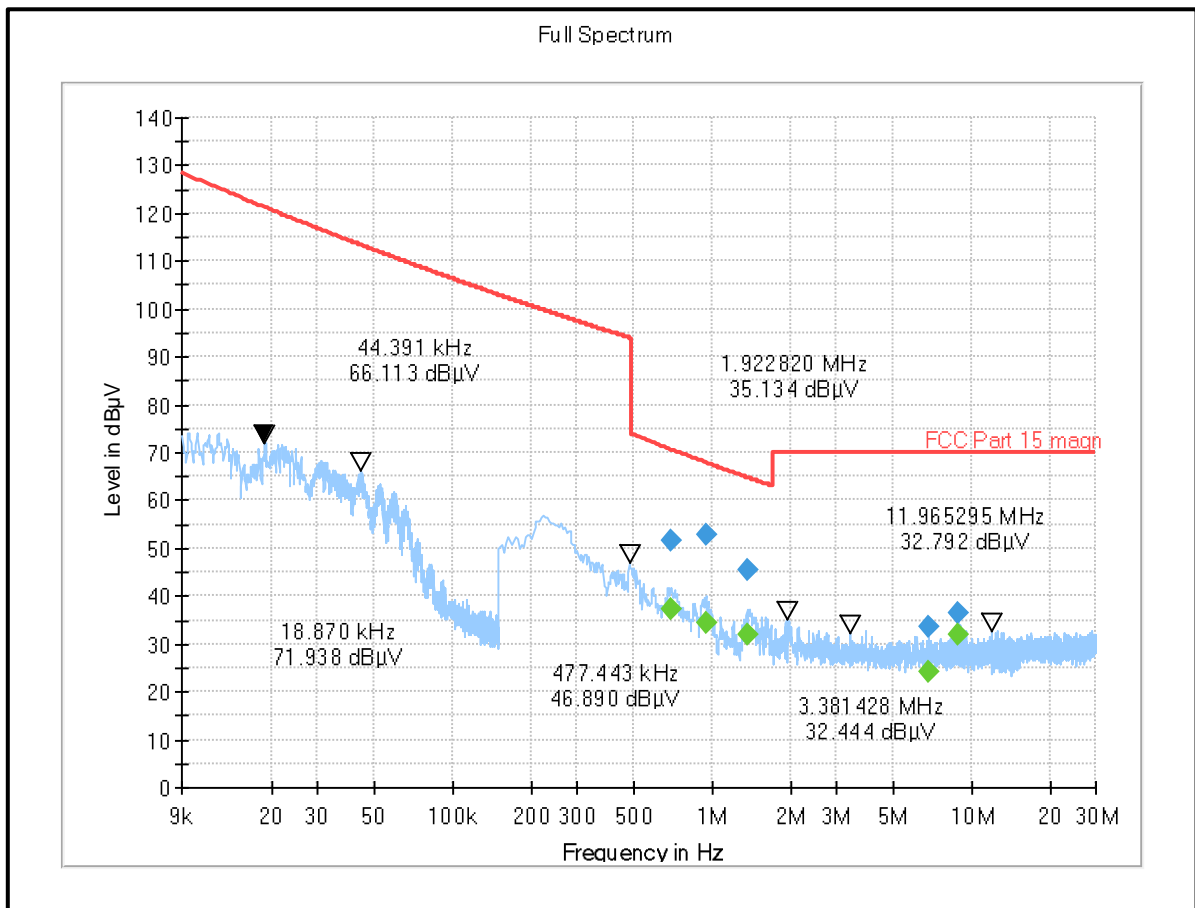


**Transmitter Radiated Emissions (continued)**

**Results: BT-EDR Mode / Packet Type: 1DH1 / Hopping OFF/ MAX PWR 9 / Middle Channel**

Frequency (MHz)	Loop Antenna Orientation	MaxPeak Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
0.692430	0° to the EUT	51.64	70.62	18.98	Complied
0.943800	0° to the EUT	52.74	67.89	15.15	Complied
1.360545	0° to the EUT	45.44	64.81	19.36	Complied
6.835120	90° to the EUT	33.76	70.00	36.24	Complied
8.861180	90° to the EUT	36.52	70.00	33.48	Complied

**Plot: 9 kHz – 30 MHz:**  
**BT-EDR Mode / Packet Type: 1DH1 / Hopping OFF/ MAX PWR 9 / Middle Channel**



**Result: Pass**

**Transmitter Radiated Emissions (continued)**

**Test Summary:**

<b>Test Engineer:</b>	Abbas Al-Hussainy	<b>Test Date:</b>	31 August 2023
<b>Test Sample Serial Number:</b>	ADVC200008 (Radiated Test Sample)		
<b>Test Site Identification</b>	SR 1/2		

<b>FCC Reference:</b>	Parts 15.247(d) & 15.209(a)
<b>Test Method Used:</b>	ANSI C63.10:2013 Sections 6.3 and 6.5
<b>Frequency Range</b>	30 MHz to 1000 MHz

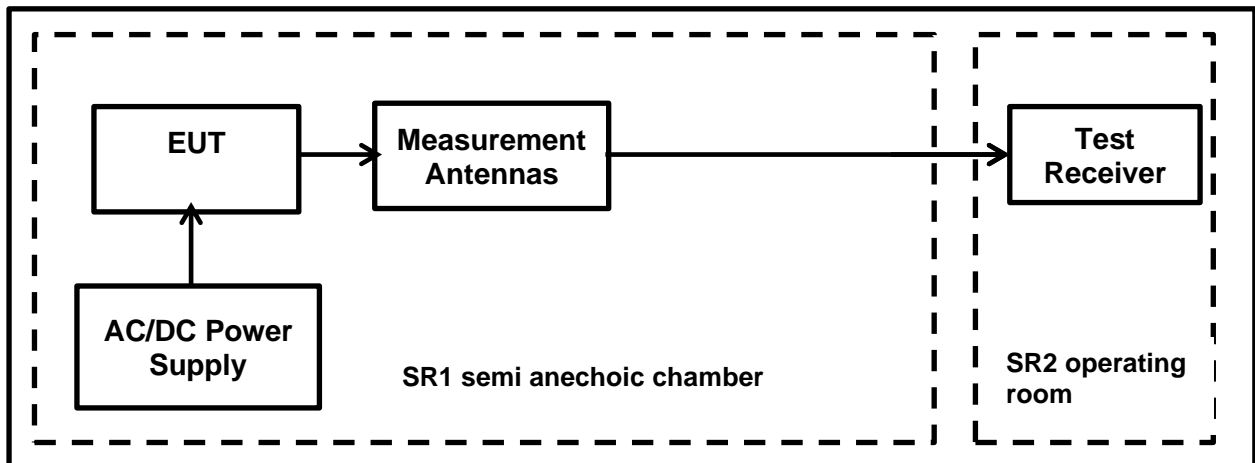
**Environmental Conditions:**

<b>Temperature (°C):</b>	24.0
<b>Relative Humidity (%):</b>	46.4

**Note(s):**

- Measurements below 1 GHz were performed in a semi-anechoic chamber (Asset Number K0001) at a distance of 3 metres. The EUT was placed at a height of 80 cm above the reference ground plane in the centre of the chamber turntable. Maximum emission levels were determined by height searching the measurement antenna over the range 1 metre to 4 metres.
- Pre-scans were performed, and markers placed on the highest measured levels. The test receiver resolution bandwidth was set to 100 kHz and video bandwidth 300 kHz. A peak detector was used, sweep time was set to auto and trace mode was Max Hold.
- The preliminary scans showed similar emission levels below 30 MHz, for each channel & modes of operation. Therefore, final radiated emissions measurements were performed with the EUT set to the following worst case (in terms of highest output power).
  - BT-EDR Mode | Packet Type: 1DH1 | Hopping OFF | MAX PWR 9 | Middle Channel
- The final measured value, for the given emission, in the table below incorporates the calibrated antenna factor and cable loss.
- All other emissions shown on the pre-scan plot were investigated and found to be below the measurement system noise floor.

**Test Setup:**

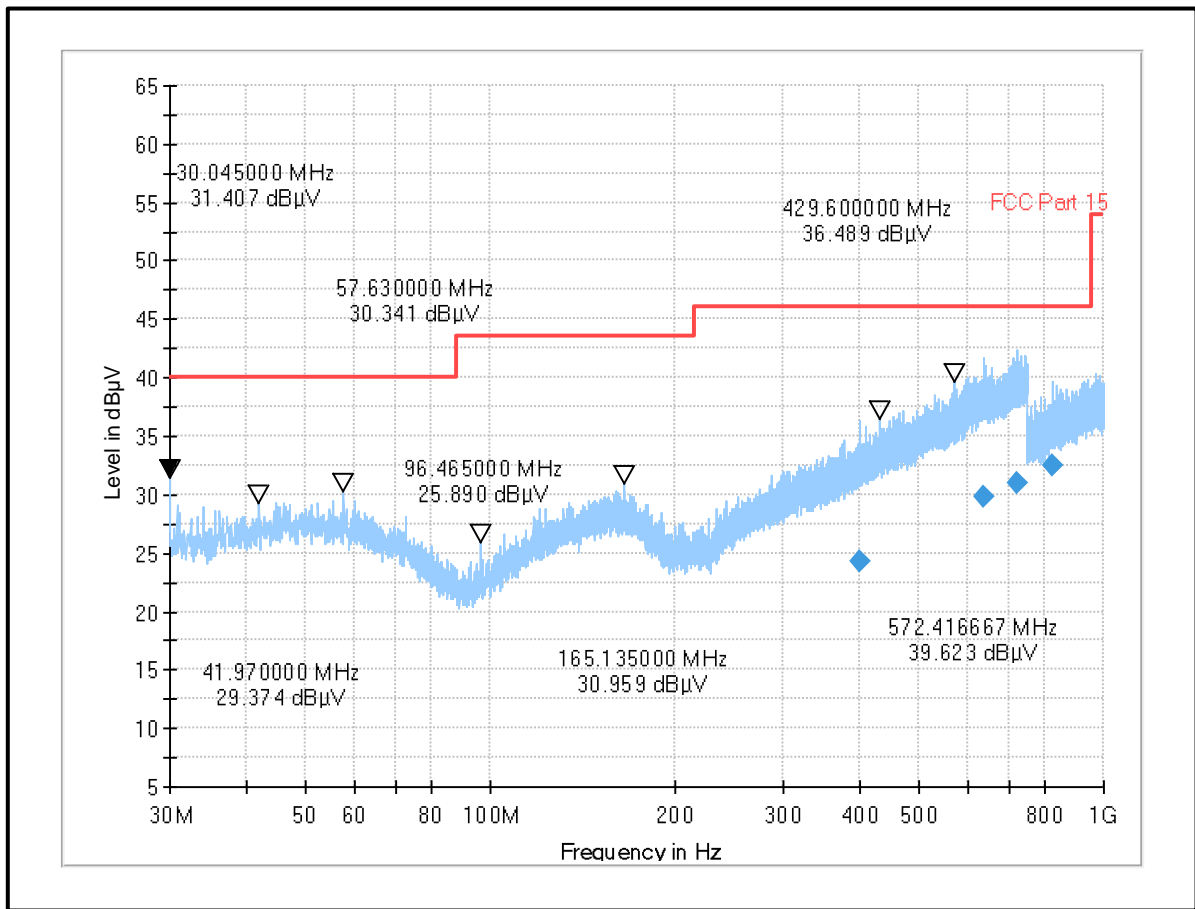


**Transmitter Radiated Emissions (continued)**

**Results: BT-EDR Mode / Packet Type: 1DH1 / Hopping OFF/ MAX PWR 9 / Middle Channel**

Frequency (MHz)	Antenna Polarization	MaxPeak Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Result
400.300000	Horizontal	24.20	46.00	21.80	Complied
635.291667	Horizontal	29.79	46.00	16.21	Complied
725.208333	Vertical	30.91	46.00	15.09	Complied
822.458333	Vertical	32.52	46.00	13.48	Complied

**Plot: 30 MHz – 1 GHz:  
BT-EDR Mode / Packet Type: 1DH1 / Hopping OFF/ MAX PWR 9 / Middle Channel**



**Result: Pass**

**Transmitter Radiated Emissions (continued)****Test Summary:**

<b>Test Engineer:</b>	Muhammad Faiq Khan	<b>Test Date:</b>	23 August 2023
<b>Test Sample Serial Number:</b>	ADVC200008 (Radiated Test Sample)		
<b>Test Site Identification</b>	SR 1/2		

<b>FCC Reference:</b>	Parts 15.247(d) & 15.209(a)
<b>Test Method Used:</b>	ANSI C63.10:2013 Sections 6.3 and 6.5
<b>Frequency Range</b>	1 GHz to 25 GHz

**Environmental Conditions:**

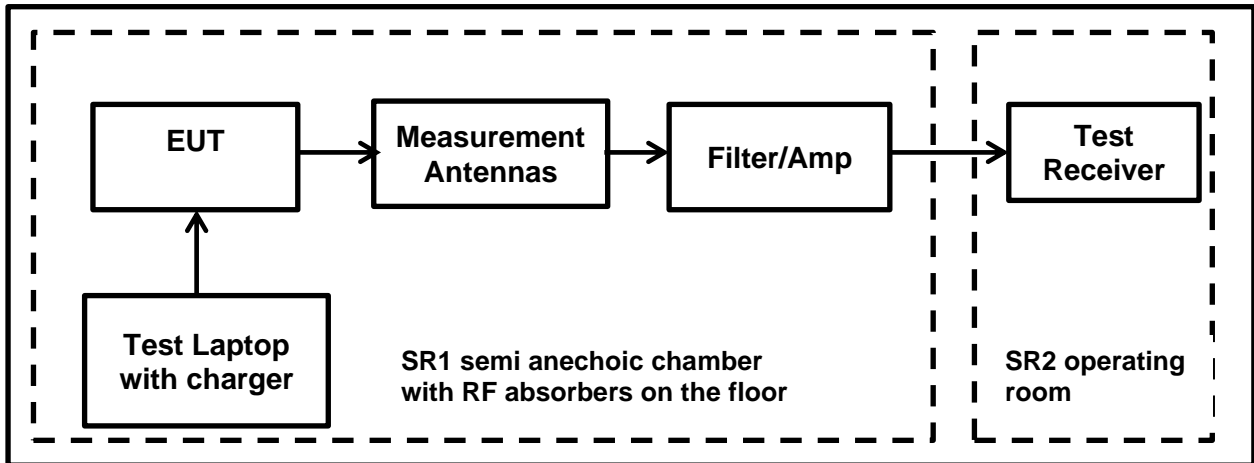
<b>Temperature (°C):</b>	27.2
<b>Relative Humidity (%):</b>	55.5

**Note(s):**

- Pre-scans above 1 GHz were performed in a semi-anechoic chamber SR1/ 2 (Asset Number 1603665) with RF absorbers on the floor at a distance of 3 m. The EUT was placed at a height of 1.5 m above the test chamber floor in the centre of the chamber turntable. All measurement antennas were placed at a fixed height of 1.5 m above the test chamber floor, in line with the EUT. Final measurements above 1 GHz were performed in a semi-anechoic chamber SR1/ 2 (Asset Number 1603665) with absorber on the floor at a distance of 3 m. The EUT was placed at a height of 1.5 m above the reference ground plane in the centre of the chamber turntable. Maximum emission levels were determined by height searching the measurement antenna over the range 1 m to 4 m.
- The emissions shown at frequencies approximately 2.4 GHz to 2.4835 GHz on the 1 GHz to 18 GHz plots are the EUT fundamental for the tested channel.
- Pre-scans were performed, and a marker placed on the highest measured level of the appropriate plot. The test receiver resolution bandwidth was set to 1 MHz and video bandwidth 3 MHz. The sweep time was set to auto.
- The preliminary scans showed similar emission levels below 30 MHz, for each channel & modes of operation. Therefore, final radiated emissions measurements were performed with the EUT set to the following worst case (in terms of highest output power).
  - BT-EDR Mode | Packet Type: 1DH1 | Hopping OFF | MAX PWR 9 | Middle Channel
- The final measured value, for the given emission, in the table below incorporates the calibrated antenna factor and cable loss.
- \*In accordance with ANSI C63.10 Section 6.6.4.3 (Note 1), if the peak measured value complies with the average limit, it is unnecessary to perform an average measurement."
- For frequency range 1 GHz to 18 GHz, all other emissions shown on the pre-scan plots were investigated and found to be below system noise floor.
- In accordance with ANSI C63.10-2013 Section 5.3.3 & 6.5.3 measurements above 18 GHz were performed at closer distance (1 m); because at specified measurement distance (3m) for compliance the instrumentation noise floor was typically close to the radiated emission limit.
- For frequency range between 18 GHz and 25 GHz, no critical emissions were found. All emissions shown on the pre-scans were investigated and found to be below the noise floor of the measurement system.

**Transmitter Radiated Emissions (continued)**

**Test Setup:**

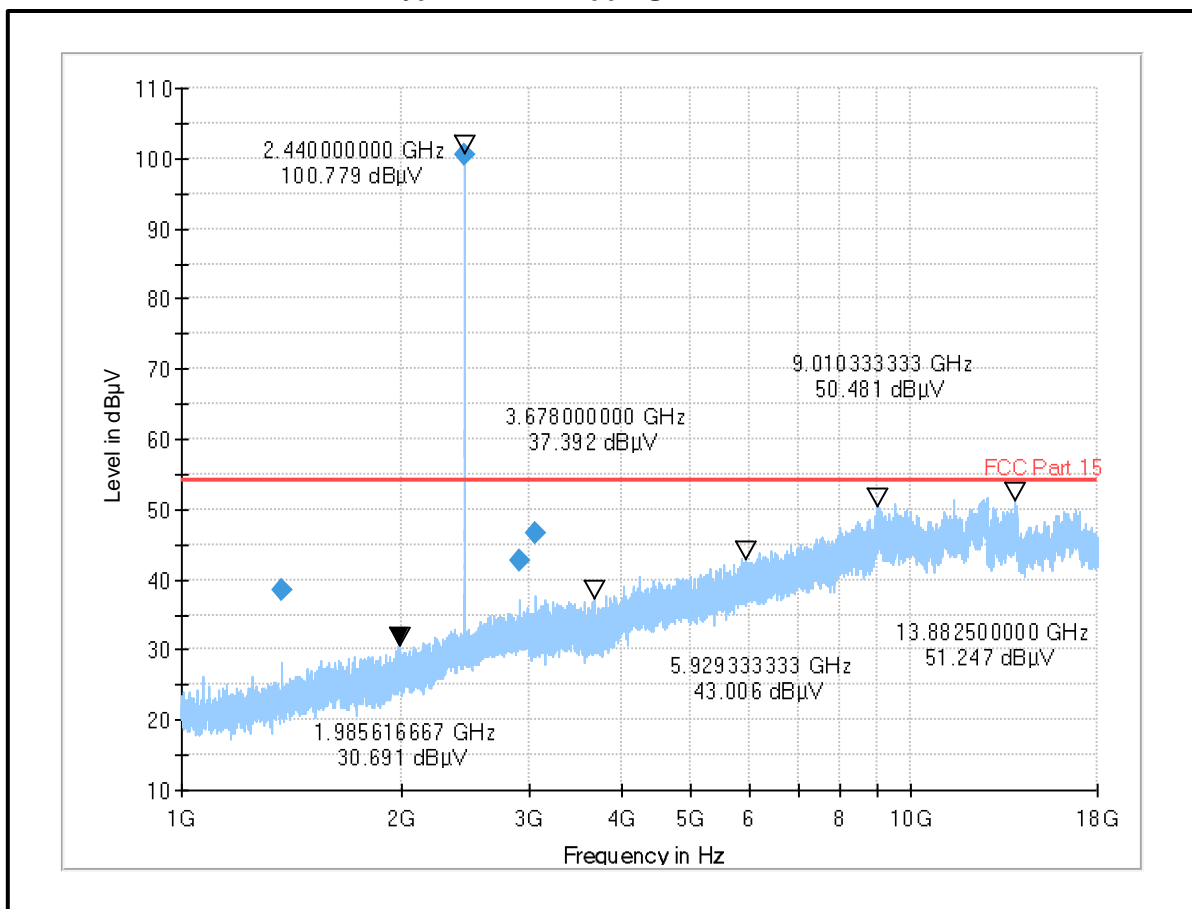


**Transmitter Radiated Emissions (continued)**

**Results: BT-EDR Mode / Packet Type: 1DH1 / Hopping OFF/ MAX PWR 9 / Middle Channel**

Frequency (MHz)	Antenna Polarization	MaxPeak Level (dB $\mu$ V/m)	Average Limit (dB $\mu$ V/m)	Margin (dB)	Result
1374.833333	Vertical	38.37	54.00	15.63	Complied
2903.983333	Horizontal	42.57	54.00	11.43	Complied
3054.333333	Vertical	46.66	54.00	7.34	Complied

**Plot: 1 GHz – 18 GHz:**  
**BT-EDR Mode / Packet Type: 1DH1 / Hopping OFF/ MAX PWR 9 / Middle Channel**



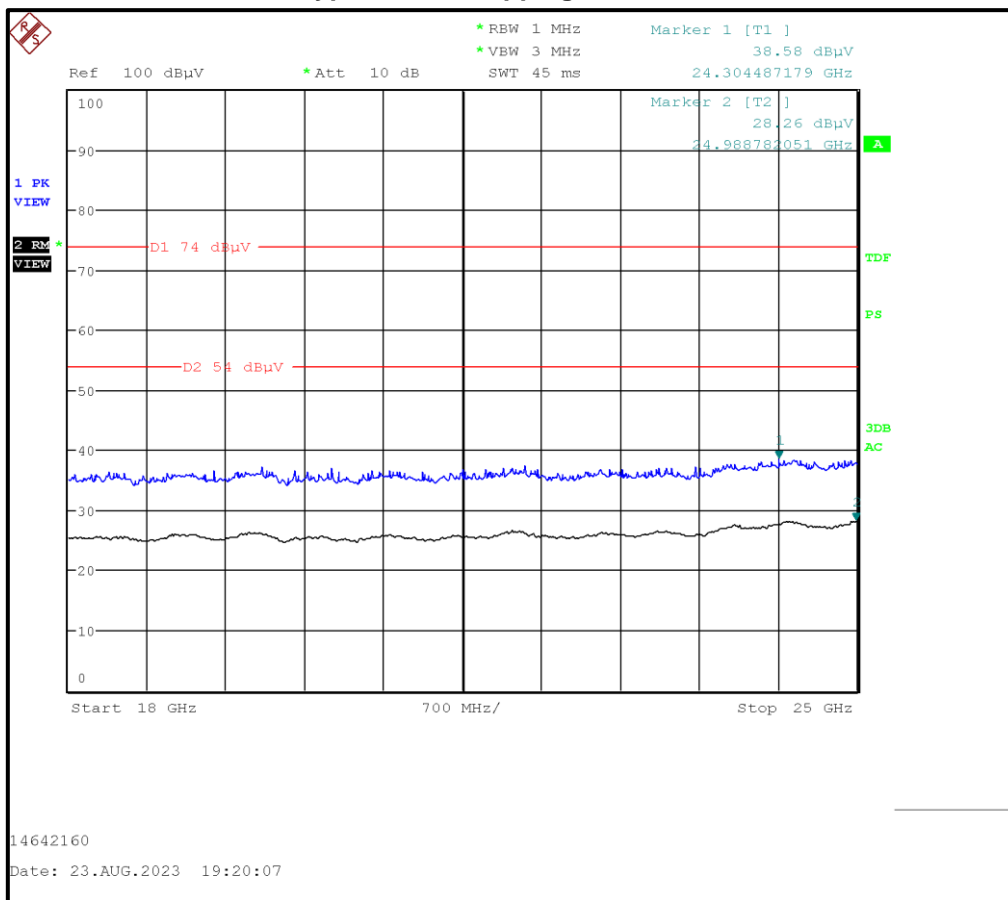
**Result: Pass**

**Transmitter Radiated Emissions (continued)**

**Results: BT-EDR Mode / Packet Type: 1DH1 / Hopping OFF/ MAX PWR 9 / Middle Channel**

Frequency (MHz)	Antenna Polarization	MaxPeak Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
No critical spurious emissions were found					

**Plot: 18 GHz – 25 GHz:**  
**BT-EDR Mode / Packet Type: 1DH1 / Hopping OFF/ MAX PWR 9 / Middle Channel**



**Result: Pass**



**5.2.7. Transmitter Band Edge Radiated Emissions**

**Test Summary:**

<b>Test Engineer:</b>	Abbas Al-Hussainy	<b>Test Date:</b>	24 August 2023 & 01 September 2023
<b>Test Sample Serial Number:</b>	ADVC200008 (Radiated Test Sample)		
<b>Test Site Identification</b>	SR 1/2		

<b>FCC Reference:</b>	Parts 15.247(d), 15.209(a) & 15.205(a)
<b>Test Method Used:</b>	FCC KDB 558074 Section 9
	ANSI C63.10:2013 Section 7.8.6 referencing Section 6.10
	Emissions in Authorized-band / non-restricted frequency bands: ANSI C63.10:2013 Section 6.10.4
	Emissions in restricted frequency bands: ANSI C63.10:2013 Section 6.10.5

**Environmental Conditions:**

<b>Temperature (°C):</b>	23.4 to 27.2
<b>Relative Humidity (%):</b>	54.8 to 55.5

**Note(s):**

1. The measurements were in a semi-anechoic chamber SR1/ 2 (Asset Number 1603665) with RF absorbers on the floor at a distance of 3 m. The EUT was placed at a height of 1.5 m above the test chamber floor in the centre of the chamber turntable. Maximum emission levels were determined by height searching the measurement antenna over the range 1 m to 4 m
2. As the lower band edge falls within a non-restricted band, measurements were performed in accordance with ANSI C63.10:2013 Section 6.10.4. As the maximum peak conducted output power was previously measured, in accordance with FCC Part 15.247(d) lower band edge measurement was performed with a peak detector and the -20 dBc limit applied.
3. As the lower band edge falls within a non-restricted band, only peak measurements are required. The test receiver resolution bandwidth was set to 100 kHz and video bandwidth 300 kHz. A peak detector was used, sweep time was set to auto and trace mode was Max Hold. The test receiver was left to sweep for a sufficient length of time in order to maximise the carrier level and out-of-band emissions. A marker and corresponding reference level line were placed on the peak of the carrier. Marker frequencies and levels were recorded.
4. The restricted band peak measurements were performed in accordance with ANSI C63.10:2013 Section 6.10.5
5. As the upper band edge falls within a restricted band both peak and average measurements were recorded by placing a marker at the edge of the band. For peak measurements the test receiver resolution bandwidth was set to 1 MHz and the video bandwidth 3 MHz A peak detector was used, sweep time was set to auto and trace mode was Max Hold. For average measurements the test receiver resolution bandwidth was set to 1 MHz and the video bandwidth 3 MHz and Average detector was used, the trace mode was Max hold. A marker was placed on the band edge spot frequencies and a second marker placed on the highest emission level in the adjacent restricted band of operation (where a higher-level emission was present). Marker frequencies and levels were recorded.
6. There is a restricted band 10 MHz below the lower band edge. The test receiver was set up as follows: the RBW set to 1 MHz, the VBW set to 3 MHz, with the sweep time set to auto couple. Peak and average measurements were performed with their respective detectors. Markers were placed on the highest point on each trace.

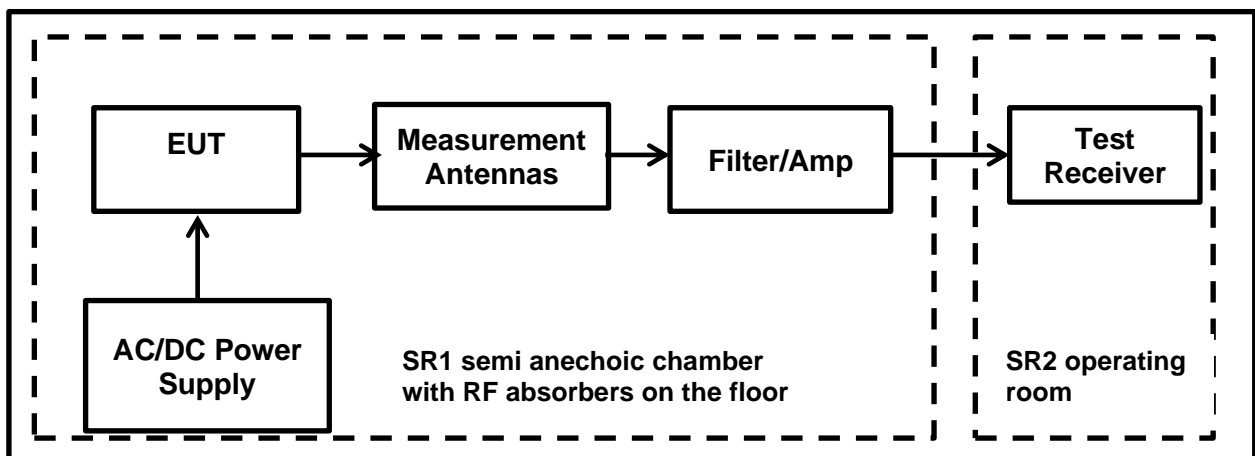
7. The final measured value, for the given emission, in the table below incorporates the calibrated antenna factor and cable loss.

**Transmitter Band Edge Radiated Emissions (continued)**

8. In accordance with ANSI C63.10 Section 6.10.4 the measurements were performed twice :
  - once with the Fixed Channel Frequency Mode (Hopping OFF)
  - repeated with Hopping Channels Frequency Mode (Hopping ON)
9. The final radiated emissions measurements were performed with the EUT set to the following worst-case mode with highest output power and on the mode with the widest bandwidth.
  - BT-BR Mode | Packet Type: 1-DH1 | Hopping OFF | MAX PWR 9
  - BT-BR Mode | Packet Type: 1-DH5 | Hopping OFF | MAX PWR 9
  - BT-BR Mode | Packet Type: 1-DH1 | Hopping ON | MAX PWR 9
  - BT-BR Mode | Packet Type: 1-DH5 | Hopping ON | MAX PWR 9
  
  - BT-EDR Mode | Packet Type: 2-DH5 | Hopping OFF | MAX PWR 9
  - BT-EDR Mode | Packet Type: 2-DH5 | Hopping ON | MAX PWR 9
  
  - BT-EDR Mode | Packet Type: 3-DH5 | Hopping OFF | MAX PWR 9
  - BT-EDR Mode | Packet Type: 3-DH5 | Hopping ON | MAX PWR 9
10. \*\*As the continuous transmission of the EUT ( $D \geq 98\%$ ) cannot be achieved and EUT was transmitting continuously at different Duty Cycles with respect to the used data rates (duty cycle variations are less than  $\pm 2\%$  at the respective data rate). Therefore, Duty Cycle Correction Factors were added to all average measurements according to the below table, to compute the corrected average values of the emissions that would have been measured had the test been performed at 100% Duty Cycle.

Data rate	Duty cycle	Correction factor
	(%)	(dB)
DH1	30.40	5.17
DH5	76.88	1.14
2DH5	77.13	1.13
3DH5	77.13	1.13

**Test Setup:**



**Transmitter Band Edge Radiated Emissions (continued)**

**Results: BT-EDR Mode / Packet Type: 1-DH1 / Hopping OFF / MAX PWR 9**

**Results: Lower Band Edge / Peak**

Frequency (MHz)	Peak Level (dBµV/m)	-20 dBc Limit (dBµV/m)	Margin (dB)	Result
2399.45	44.05	79.80	35.75	Complied
2400.00	40.88	79.80	38.92	Complied

**Results: 2310 to 2390 MHz Restricted Band / Peak**

Frequency (MHz)	Peak Level (dBµV/m)	Peak Limit (dBµV/m)	Margin (dB)	Result
2338.33	46.53	74.00	27.47	Complied

**Results: 2310 to 2390 MHz Restricted Band / Average**

Frequency (MHz)	Average Level (dBµV/m)	Duty Cycle Correction Factor (dB)	Corrected Average Level (dBµV/m)	Average Limit (dBµV/m)	Margin (dB)	Result
2339.53	44.24	5.17	49.41**	54.00	4.59	Complied

**Results: Upper Band Edge / Peak**

Frequency (MHz)	Peak Level (dBµV/m)	Peak Limit (dBµV/m)	Margin (dB)	Result
2483.50	52.83	74.00	21.17	Complied
2483.58	52.04	74.00	21.96	Complied

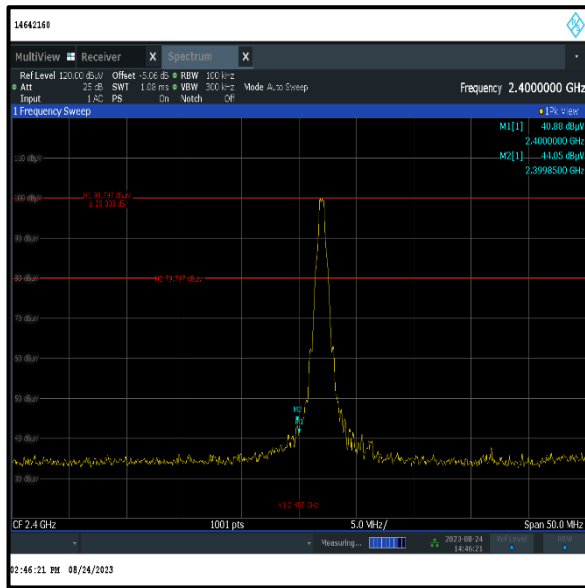
**Results: Upper Band Edge / Average**

Frequency (MHz)	Average Level (dBµV/m)	Duty Cycle Correction Factor (dB)	Corrected Average Level (dBµV/m)	Average Limit (dBµV/m)	Margin (dB)	Result
2483.50	47.96	5.17	53.13**	54.00	0.87	Complied
2485.58	48.31	5.17	53.48**	54.00	0.52	Complied

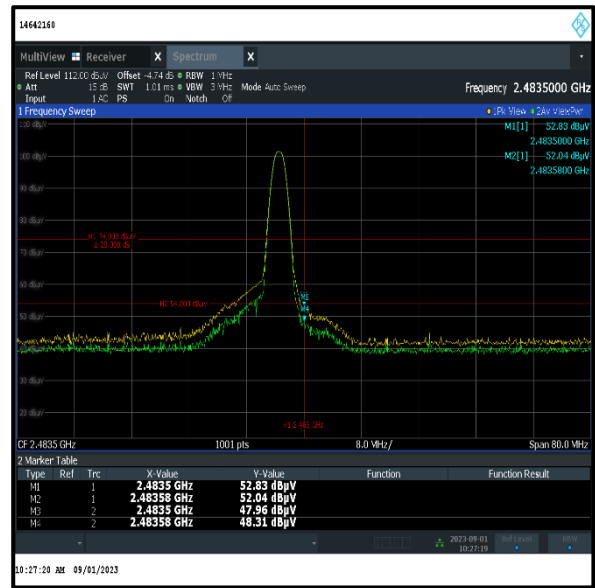
**Result: Pass within Measurement Uncertainty**

**Transmitter Band Edge Radiated Emissions (continued)**

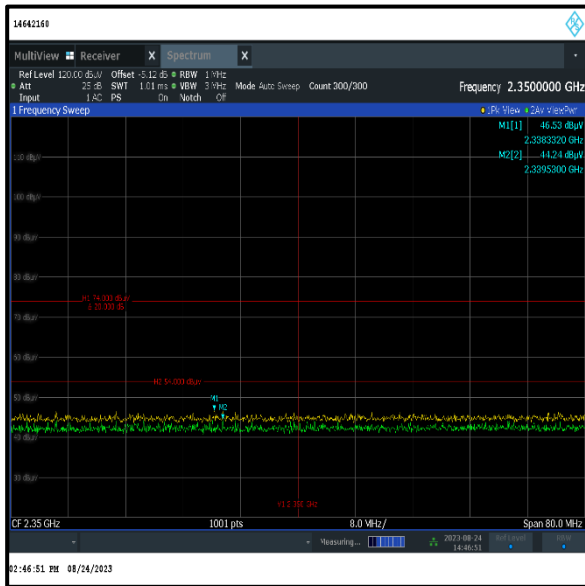
**Results: BT-EDR Mode / Packet Type: 1-DH1 / Hopping OFF / MAX PWR 9**



Lower Band Edge Peak Measurement



Upper Band Edge Peak & Average Measurement



2310 MHz to 2390 MHz Restricted Band

**Result: Pass within Measurement Uncertainty**

**Transmitter Band Edge Radiated Emissions (continued)**

**Results: BT-EDR Mode / Packet Type: 1-DH1 / Hopping ON / MAX PWR 9**

**Results: Lower Band Edge / Peak**

Frequency (MHz)	Peak Level (dBµV/m)	-20 dBc Limit (dBµV/m)	Margin (dB)	Result
2399.45	39.45	81.19	41.74	Complied
2400.00	36.92	81.19	44.27	Complied

**Results: 2310 to 2390 MHz Restricted Band / Peak**

Frequency (MHz)	Peak Level (dBµV/m)	Peak Limit (dBµV/m)	Margin (dB)	Result
2355.04	47.69	74.00	26.31	Complied

**Results: 2310 to 2390 MHz Restricted Band / Average**

Frequency (MHz)	Average Level (dBµV/m)	Duty Cycle Correction Factor (dB)	Corrected Average Level (dBµV/m)	Average Limit (dBµV/m)	Margin (dB)	Result
2333.06	44.48	5.17	49.65**	54.00	4.35	Complied

**Results: Upper Band Edge / Peak**

Frequency (MHz)	Peak Level (dBµV/m)	Peak Limit (dBµV/m)	Margin (dB)	Result
2483.50	51.24	74.00	22.76	Complied
2484.22	50.32	74.00	23.68	Complied

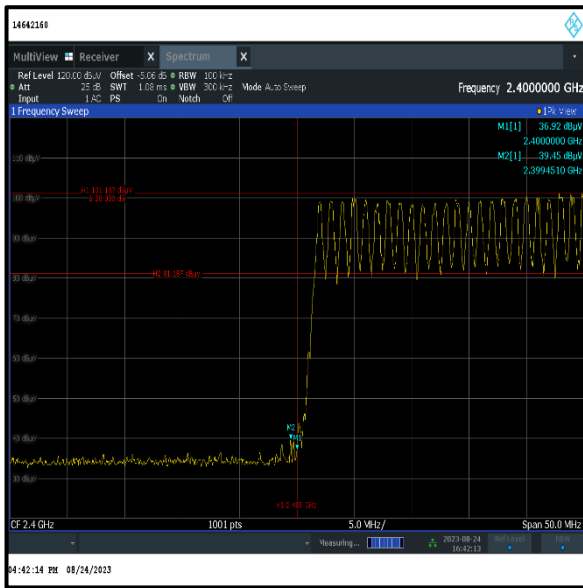
**Results: Upper Band Edge / Average**

Frequency (MHz)	Average Level (dBµV/m)	Duty Cycle Correction Factor (dB)	Corrected Average Level (dBµV/m)	Average Limit (dBµV/m)	Margin (dB)	Result
2483.50	45.90	5.17	51.07**	54.00	2.93	Complied
2501.32	46.58	5.17	51.75**	54.00	2.25	Complied

**Result: Pass within Measurement Uncertainty**

**Transmitter Band Edge Radiated Emissions (continued)**

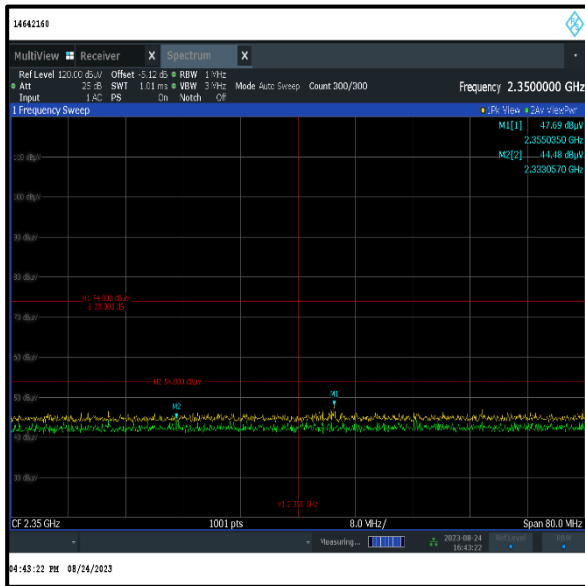
**Results: BT-EDR Mode / Packet Type: 1-DH1 / Hopping ON / MAX PWR 9**



**Lower Band Edge Peak Measurement**



**Upper Band Edge Peak & Average Measurement**



**2310 MHz to 2390 MHz Restricted Band**

**Result: Pass within Measurement Uncertainty**

**Transmitter Band Edge Radiated Emissions (continued)****Results: BT-EDR Mode / Packet Type: 1-DH5 / Hopping OFF / MAX PWR 9****Results: Lower Band Edge / Peak**

Frequency (MHz)	Peak Level (dB $\mu$ V/m)	-20 dBc Limit (dB $\mu$ V/m)	Margin (dB)	Result
2399.80	44.44	79.96	35.52	Complied
2400.00	40.22	79.96	39.74	Complied

**Results: 2310 to 2390 MHz Restricted Band / Peak**

Frequency (MHz)	Peak Level (dB $\mu$ V/m)	Peak Limit (dB $\mu$ V/m)	Margin (dB)	Result
2365.82	46.85	74.00	27.15	Complied

**Results: 2310 to 2390 MHz Restricted Band / Average**

Frequency (MHz)	Average Level (dB $\mu$ V/m)	Duty Cycle Correction Factor (dB)	Corrected Average Level (dB $\mu$ V/m)	Average Limit (dB $\mu$ V/m)	Margin (dB)	Result
2326.34	44.85	1.14	45.99**	54.00	8.01	Complied

**Results: Upper Band Edge / Peak**

Frequency (MHz)	Peak Level (dB $\mu$ V/m)	Peak Limit (dB $\mu$ V/m)	Margin (dB)	Result
2483.50	56.03	74.00	17.97	Complied
2483.82	56.27	74.00	17.73	Complied

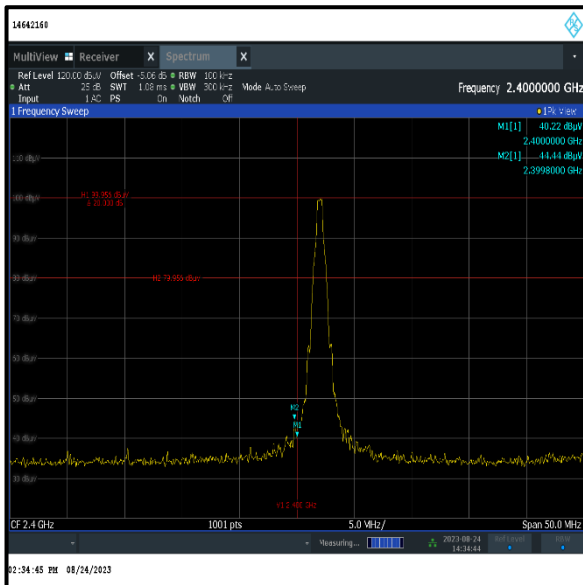
**Results: Upper Band Edge / Average**

Frequency (MHz)	Average Level (dB $\mu$ V/m)	Duty Cycle Correction Factor (dB)	Corrected Average Level (dB $\mu$ V/m)	Average Limit (dB $\mu$ V/m)	Margin (dB)	Result
2483.50	51.01	1.14	52.15**	54.00	1.85	Complied
2483.82	51.46	1.14	52.60**	54.00	1.40	Complied

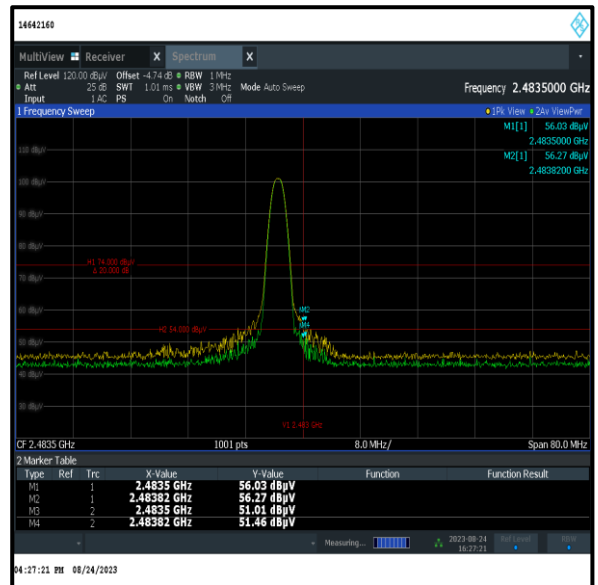
**Result: Pass within Measurement Uncertainty**

**Transmitter Band Edge Radiated Emissions (continued)**

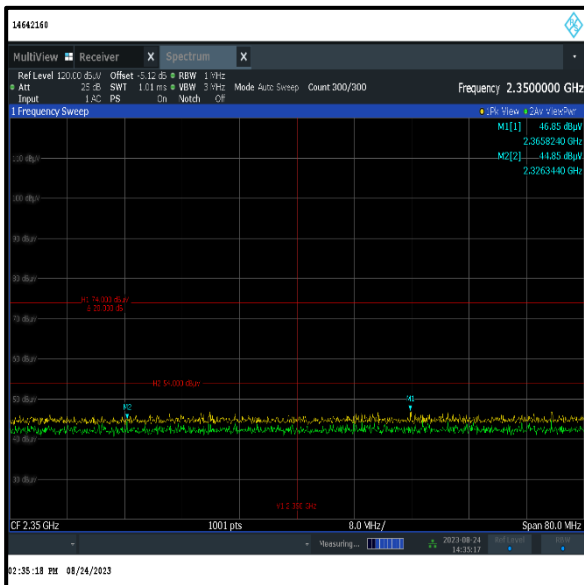
**Results: BT-EDR Mode / Packet Type: 1-DH5 / Hopping OFF / MAX PWR 9**



**Lower Band Edge Peak Measurement**



**Upper Band Edge Peak & Average Measurement**



**2310 MHz to 2390 MHz Restricted Band**

**Result: Pass within Measurement Uncertainty**



**Transmitter Band Edge Radiated Emissions (continued)**

**Results: BT-EDR Mode / Packet Type: 1-DH5 / Hopping ON / MAX PWR 9**

**Results: Lower Band Edge / Peak**

Frequency (MHz)	Peak Level (dBµV/m)	-20 dBc Limit (dBµV/m)	Margin (dB)	Result
2399.70	37.49	80.52	43.03	Complied
2400.00	34.34	80.52	46.18	Complied

**Results: 2310 to 2390 MHz Restricted Band / Peak**

Frequency (MHz)	Peak Level (dBµV/m)	Peak Limit (dBµV/m)	Margin (dB)	Result
2315.32	47.06	74.00	26.94	Complied

**Results: 2310 to 2390 MHz Restricted Band / Average**

Frequency (MHz)	Average Level (dBµV/m)	Duty Cycle Correction Factor (dB)	Corrected Average Level (dBµV/m)	Average Limit (dBµV/m)	Margin (dB)	Result
2347.12	44.62	1.14	45.76**	54.00	8.24	Complied

**Results: Upper Band Edge / Peak**

Frequency (MHz)	Peak Level (dBµV/m)	Peak Limit (dBµV/m)	Margin (dB)	Result
2483.50	46.88	74.00	27.12	Complied
2483.66	51.58	74.00	22.42	Complied

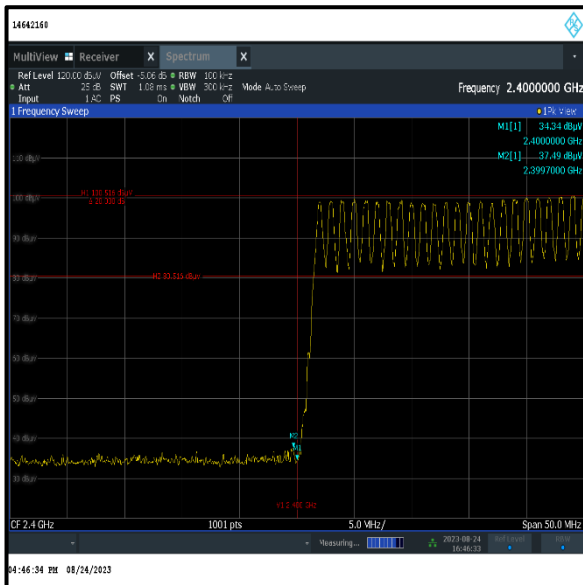
**Results: Upper Band Edge / Average**

Frequency (MHz)	Average Level (dBµV/m)	Duty Cycle Correction Factor (dB)	Corrected Average Level (dBµV/m)	Average Limit (dBµV/m)	Margin (dB)	Result
2483.50	44.38	1.14	45.52**	54.00	8.48	Complied
2483.82	48.22	1.14	49.36**	54.00	4.64	Complied

**Result: Pass**

**Transmitter Band Edge Radiated Emissions (continued)**

**Results: BT-EDR Mode / Packet Type: 1-DH5 / Hopping ON / MAX PWR 9**



**Lower Band Edge Peak Measurement**



**Upper Band Edge Peak & Average Measurement**



**2310 MHz to 2390 MHz Restricted Band**

**Result: Pass**

**Transmitter Band Edge Radiated Emissions (continued)**

**Results: BT-EDR Mode / Packet Type: 2-DH5 / Hopping OFF / MAX PWR 9**

**Results: Lower Band Edge / Peak**

Frequency (MHz)	Peak Level (dBµV/m)	-20 dBc Limit (dBµV/m)	Margin (dB)	Result
2399.80	42.86	77.09	34.23	Complied
2400.00	40.33	77.09	36.76	Complied

**Results: 2310 to 2390 MHz Restricted Band / Peak**

Frequency (MHz)	Peak Level (dBµV/m)	Peak Limit (dBµV/m)	Margin (dB)	Result
2381.09	46.97	74.00	27.03	Complied

**Results: 2310 to 2390 MHz Restricted Band / Average**

Frequency (MHz)	Average Level (dBµV/m)	Duty Cycle Correction Factor (dB)	Corrected Average Level (dBµV/m)	Average Limit (dBµV/m)	Margin (dB)	Result
2336.01	45.22	1.13	46.35**	54.00	7.65	Complied

**Results: Upper Band Edge / Peak**

Frequency (MHz)	Peak Level (dBµV/m)	Peak Limit (dBµV/m)	Margin (dB)	Result
2483.50	52.99	74.00	21.01	Complied
2484.14	53.79	74.00	20.21	Complied

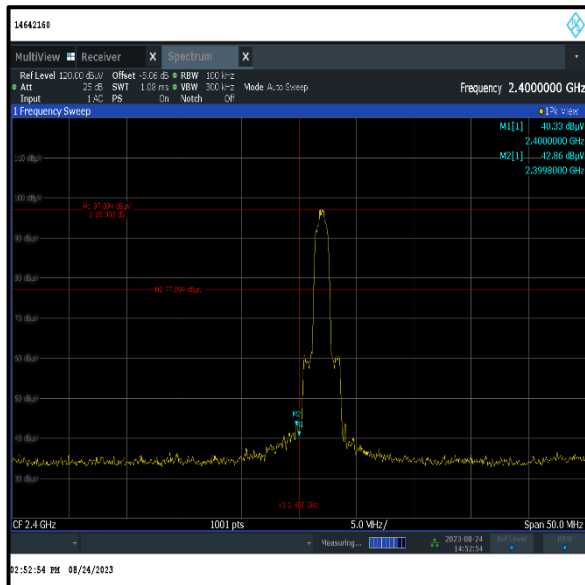
**Results: Upper Band Edge / Average**

Frequency (MHz)	Average Level (dBµV/m)	Duty Cycle Correction Factor (dB)	Corrected Average Level (dBµV/m)	Average Limit (dBµV/m)	Margin (dB)	Result
2483.50	47.13	1.13	48.26**	54.00	5.74	Complied
2483.98	49.54	1.13	50.67**	54.00	3.33	Complied

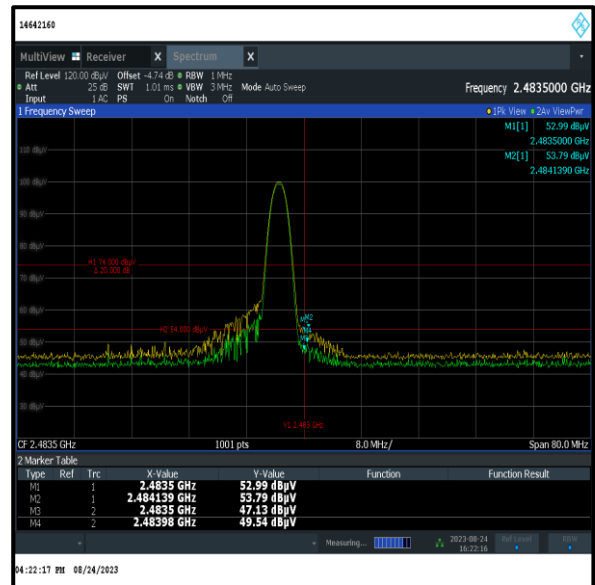
**Result: Pass**

**Transmitter Band Edge Radiated Emissions (continued)**

**Results: BT-EDR Mode / Packet Type: 2-DH5 / Hopping OFF / MAX PWR 9**



**Lower Band Edge Peak Measurement**



**Upper Band Edge Peak & Average Measurement**



**2310 MHz to 2390 MHz Restricted Band**

**Result: Pass**

**Transmitter Band Edge Radiated Emissions (continued)**

**Results: BT-EDR Mode / Packet Type: 2-DH5 / Hopping ON / MAX PWR 9**

**Results: Lower Band Edge / Peak**

Frequency (MHz)	Peak Level (dBµV/m)	-20 dBc Limit (dBµV/m)	Margin (dB)	Result
2399.70	40.27	78.31	38.04	Complied
2400.00	36.58	78.31	41.73	Complied

**Results: 2310 to 2390 MHz Restricted Band / Peak**

Frequency (MHz)	Peak Level (dBµV/m)	Peak Limit (dBµV/m)	Margin (dB)	Result
2370.38	47.90	74.00	26.10	Complied

**Results: 2310 to 2390 MHz Restricted Band / Average**

Frequency (MHz)	Average Level (dBµV/m)	Duty Cycle Correction Factor (dB)	Corrected Average Level (dBµV/m)	Average Limit (dBµV/m)	Margin (dB)	Result
2375.18	45.29	1.13	46.42**	54.00	7.58	Complied

**Results: Upper Band Edge / Peak**

Frequency (MHz)	Peak Level (dBµV/m)	Peak Limit (dBµV/m)	Margin (dB)	Result
2483.50	50.29	74.00	23.71	Complied
2484.70	50.67	74.00	23.33	Complied

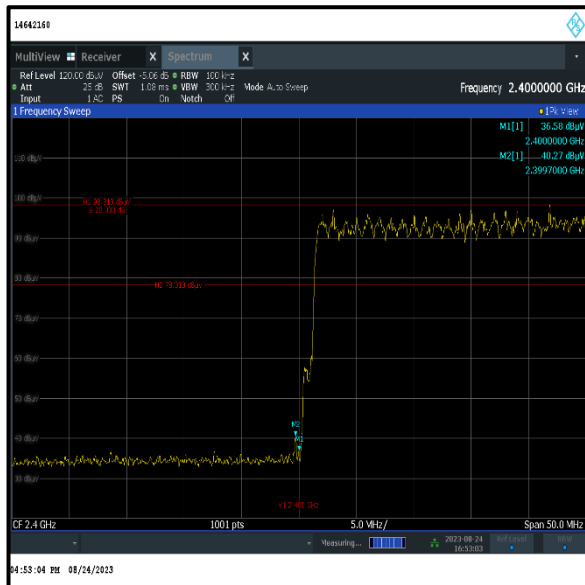
**Results: Upper Band Edge / Average**

Frequency (MHz)	Average Level (dBµV/m)	Duty Cycle Correction Factor (dB)	Corrected Average Level (dBµV/m)	Average Limit (dBµV/m)	Margin (dB)	Result
2483.50	42.54	1.13	43.67**	54.00	10.33	Complied
2484.70	46.75	1.13	47.88**	54.00	6.12	Complied

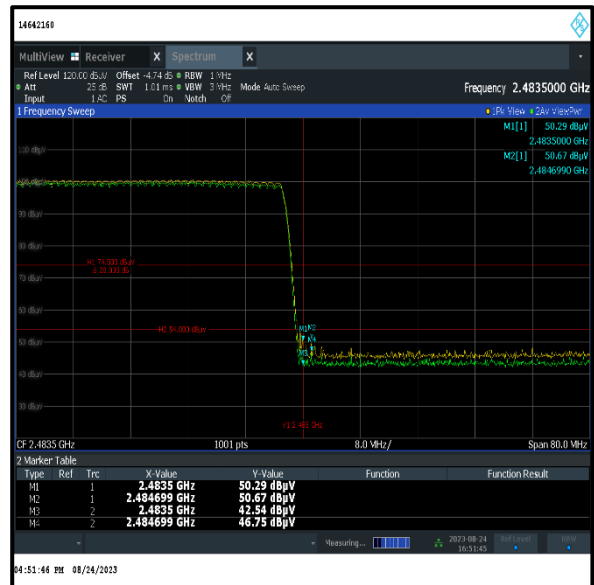
**Result: Pass**

**Transmitter Band Edge Radiated Emissions (continued)**

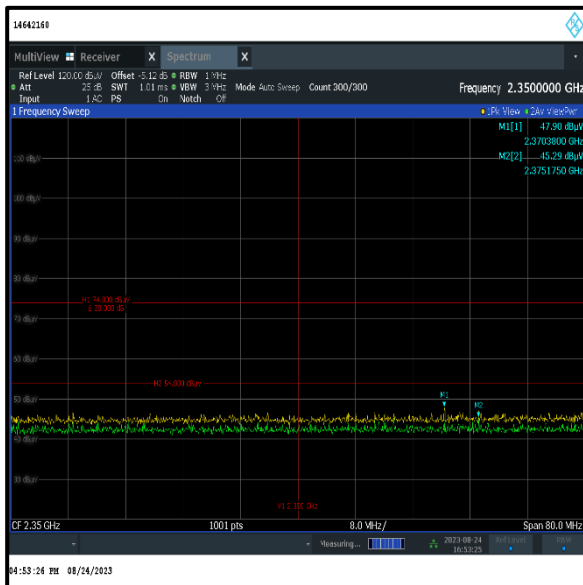
**Results: BT-EDR Mode / Packet Type: 2-DH5 / Hopping ON / MAX PWR 9**



**Lower Band Edge Peak Measurement**



**Upper Band Edge Peak & Average Measurement**



**2310 MHz to 2390 MHz Restricted Band**

**Result: Pass**

**Transmitter Band Edge Radiated Emissions (continued)**

**Results: BT-EDR Mode / Packet Type: 3-DH5 / Hopping OFF / MAX PWR 9**

**Results: Lower Band Edge / Peak**

Frequency (MHz)	Peak Level (dBµV/m)	-20 dBc Limit (dBµV/m)	Margin (dB)	Result
2399.95	45.39	77.23	31.84	Complied
2400.00	44.37	77.23	32.86	Complied

**Results: 2310 to 2390 MHz Restricted Band / Peak**

Frequency (MHz)	Peak Level (dBµV/m)	Peak Limit (dBµV/m)	Margin (dB)	Result
2344.73	46.94	74.00	27.06	Complied

**Results: 2310 to 2390 MHz Restricted Band / Average**

Frequency (MHz)	Average Level (dBµV/m)	Duty Cycle Correction Factor (dB)	Corrected Average Level (dBµV/m)	Average Limit (dBµV/m)	Margin (dB)	Result
2376.45	44.43	1.13	45.56**	54.00	8.44	Complied

**Results: Upper Band Edge / Peak**

Frequency (MHz)	Peak Level (dBµV/m)	Peak Limit (dBµV/m)	Margin (dB)	Result
2483.50	56.10	74.00	17.90	Complied
2485.34	56.27	74.00	17.73	Complied

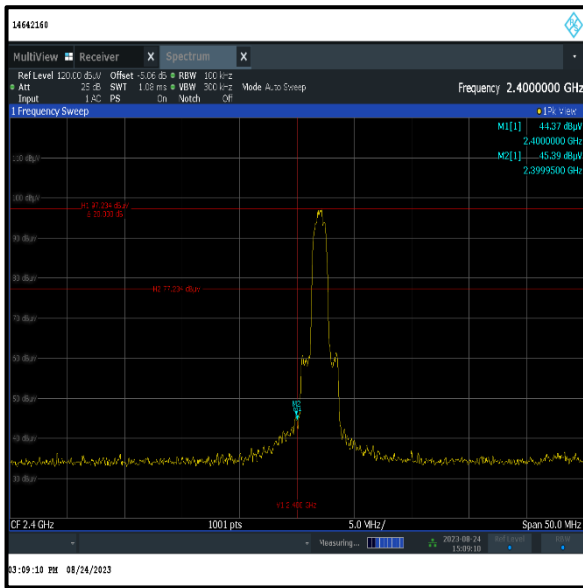
**Results: Upper Band Edge / Average**

Frequency (MHz)	Average Level (dBµV/m)	Duty Cycle Correction Factor (dB)	Corrected Average Level (dBµV/m)	Average Limit (dBµV/m)	Margin (dB)	Result
2483.50	51.50	1.13	52.63**	54.00	1.37	Complied
2483.98	52.21	1.13	53.34**	54.00	0.66	Complied

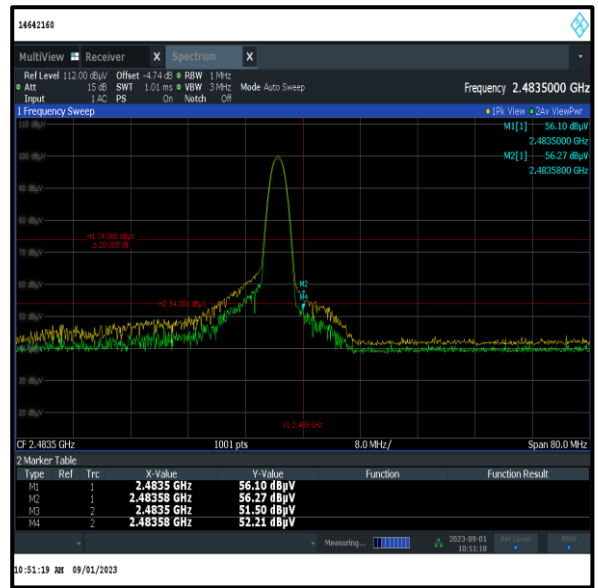
**Result: Pass within Measurement Uncertainty**

**Transmitter Band Edge Radiated Emissions (continued)**

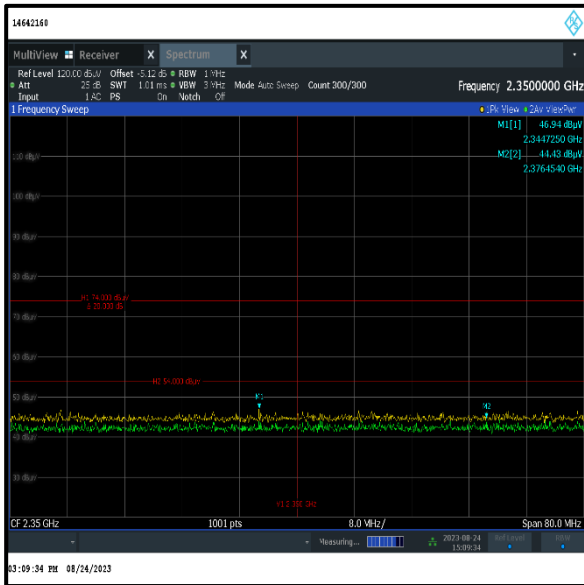
**Results: BT-EDR Mode / Packet Type: 3-DH5 / Hopping OFF / MAX PWR 9**



**Lower Band Edge Peak Measurement**



**Upper Band Edge Peak & Average Measurement**



**2310 MHz to 2390 MHz Restricted Band**

**Result: Pass within Measurement Uncertainty**



**Transmitter Band Edge Radiated Emissions (continued)**

**Results: BT-EDR Mode / Packet Type: 3-DH5 / Hopping ON / MAX PWR 9**

**Results: Lower Band Edge / Peak**

Frequency (MHz)	Peak Level (dBµV/m)	-20 dBc Limit (dBµV/m)	Margin (dB)	Result
2397.00	37.07	78.51	41.44	Complied
2400.00	35.70	78.51	42.81	Complied

**Results: 2310 to 2390 MHz Restricted Band / Peak**

Frequency (MHz)	Peak Level (dBµV/m)	Peak Limit (dBµV/m)	Margin (dB)	Result
2389.56	47.11	74.00	26.89	Complied

**Results: 2310 to 2390 MHz Restricted Band / Average**

Frequency (MHz)	Average Level (dBµV/m)	Duty Cycle Correction Factor (dB)	Corrected Average Level (dBµV/m)	Average Limit (dBµV/m)	Margin (dB)	Result
2387.40	44.92	1.13	46.05**	54.00	7.95	Complied

**Results: Upper Band Edge / Peak**

Frequency (MHz)	Peak Level (dBµV/m)	Peak Limit (dBµV/m)	Margin (dB)	Result
2483.50	46.28	74.00	27.72	Complied
2484.38	50.57	74.00	23.43	Complied

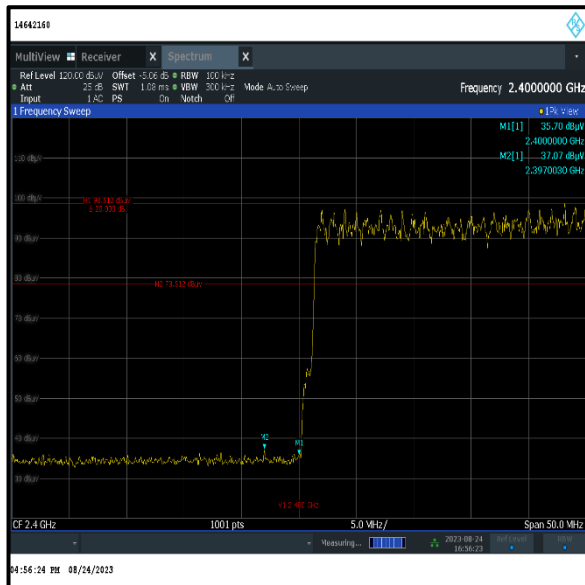
**Results: Upper Band Edge / Average**

Frequency (MHz)	Average Level (dBµV/m)	Duty Cycle Correction Factor (dB)	Corrected Average Level (dBµV/m)	Average Limit (dBµV/m)	Margin (dB)	Result
2483.50	44.38	1.13	45.51**	54.00	8.49	Complied
2484.38	46.43	1.13	47.56**	54.00	6.44	Complied

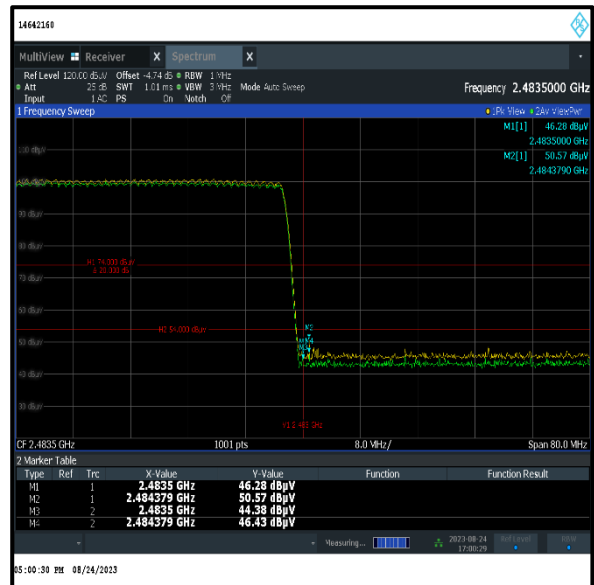
**Result: Pass**

**Transmitter Band Edge Radiated Emissions (continued)**

**Results: BT-EDR Mode / Packet Type: 3-DH5 / Hopping ON / MAX PWR 9**



**Lower Band Edge Peak Measurement**



**Upper Band Edge Peak & Average Measurement**



**2310 MHz to 2390 MHz Restricted Band**

**Result: Pass**

## 6. Measurement Uncertainty

The expression of uncertainty of a measurement result allows realistic comparison of results with reference values and limits given in specifications and standards.

The uncertainty of the result may need to be taken into account when interpreting the measurement results.

The reported expanded uncertainties below are based on a standard uncertainty multiplied by an appropriate coverage factor such that a confidence level of approximately 95% is maintained. For the purposes of this document “approximately” is interpreted as meaning “effectively” or “for most practical purposes”.

Measurement Type	Confidence Level (%)	Calculated Uncertainty
Conducted Maximum Peak Output Power	95%	±0.59 dB
Radiated Spurious Emissions	95%	±3.10 dB
Band Edge Radiated Emissions	95%	±3.10 dB
Transmitter Duty Cycle	95%	±3.4%
Carrier Frequency Separation	95%	±92 Hz
Average Time of Occupancy	95%	±3.53 ns
20 dB Bandwidth	95%	±0.87 %

The methods used to calculate the above uncertainties are in line with those recommended within the various measurement specifications. Where measurement specifications do not include guidelines for the evaluation of measurement uncertainty the published guidance of the appropriate accreditation body is followed.

## 7. Used equipment

### Test site: SR 1/2

ID	Manufacturer	Type	Model	Serial	Calibration Date	Cal. Cycle (months)
1	Rohde & Schwarz	Antenna, Loop	HFH2-Z2	831247/012	18/07/2023	36
377	BONN Elektronik	Amplifier, Low Noise Pre	BLMA 0118-1A	025294B	18/07/2023	12
423	Bonn Elektronik	Amplifier, Low Noise Pre	BLMA 1840-1A	55929	18/07/2023	12
460	Deisel	Turntable	DT 4250 S	n/a	n/a	n/a
465	Schwarzbeck	Antenna, Trilog Broadband	VULB 9168	9168-240	02/09/2020	42
495	Rohde & Schwarz	Antenna, log. - periodical	HL050	100296	06/08/2021	36
496	Rohde & Schwarz	Antenna, log. - periodical	HL050	100297	22/08/2022	24
588	Maturo	Controller	NCD	029/7180311	n/a	n/a
591	Rohde & Schwarz	Receiver	ESU 40	100244/040	13/07/2023	12
669	Rohde & Schwarz	EMI Test Receiver	ESW 44	103087	13/07/2023	18
607	Schwarzbeck	Antenna broadband horn antenna	BBHA 9170	9170-561	15/10/2019	48
608	Rohde & Schwarz	Switch Matrix	OSP 120	101227	lab verification	n/a
628	Maturo	Antenna mast	CAM 4.0-P	224/19590716	n/a	n/a
629	Maturo	Kippeinrichtung	KE 2.5-R-M	MAT002	n/a	n/a
-/	Testo	Thermo-Hygrometer	608-H1	01	lab verification	n/a
328	SPS	AC/DC power distribution system	PAS 5000	A2464 00/2 0200	lab verification	n/a
1603665	Siemens Matsushita Components	semi-anechoic chamber SR1/ 2	-/	B83117-A1421-T161	n/a	n/a
681	Maturo	Antenna mast, tilting	BAM4.5-P	402/0718.1	n/a	n/a

### Test site: SR 9

ID	Manufacturer	Type	Model	Serial	Calibration Date	Cal. Cycle (months)
625	Schwarzbeck	Antenna, H-field	HFSL 7101	109	lab verification only relative measurements	n/a
637	Rohde & Schwarz	Spectrum Analyser	FSV40	101587	12/07/2023	12
327	SPS	AC/DC power distribution system	PAS 5000	A2464 00/1 0200	lab verification	n/a
-/	Testo	Thermo-Hygrometer	608-H1	07	lab verification	n/a
645	Weiss Umwelttechnik	Climatic Chamber	LabEvent T/110/70/3	5822619794 0010	lab verification	n/a

### 8. Report Revision History

Version Number	Revision Details		
	Page No(s)	Clause	Details
1.0	70	-	Initial Version
1.1	8	3.5	Support equipment (Manufacturer supplied) updated
<b>Test Report Version 1.2 supersede Version 1.1 with immediate effect</b> Test Report No. UL-RPT-RP-14642160-7116-FCC Version 1.2, Issue Date 18 JANUARY 2024 replaces Test Report No. UL-RPT-RP-14642160-7116-FCC Version 1.1, Issue Date 13 NOVEMBER 2023, which is no longer valid.			
1.2	as below	as below	<b>Current Version</b>
	22	5.2.3	Result table updated

## **APPENDIX A: UNTESTED VARIANTS**

The tested EUT corresponds to the sample DDU-ADV (with part number VPPFEF-20B337-\*\*) which was declared to be the worst-case scenario by customer. The other possible samples associated to model DDU are as follows:

<b>Sample reference</b>	<b>Visteon Part No</b>
DDU-MID	VPPFEF-20B337-**
DDU-BSC	VPPFEF-20B337-**

--- END OF REPORT ---