

<b>Prüfbericht-Nr.:</b> <i>Test report No.:</i>	<b>50264292 001</b>	<b>Auftrags-Nr.:</b> <i>Order No.:</i>	168117944	Seite 1 von 36 <i>Page 1 of 36</i>	
<b>Kunden-Referenz-Nr.:</b> <i>Client reference No.:</i>	N/A	<b>Auftragsdatum:</b> <i>Order date.:</i>	03.06.2019		
<b>Auftraggeber:</b> <i>Client:</i>	<b>SRP COMPANIES</b> 85 RIO GRANDE DRIVE, SECOND FLOOR, CASTLE ROCK, CO 80104, United States				
<b>Prüfgegenstand:</b> <i>Test item:</i>	WIRELESS SOUND-PODS				
<b>Bezeichnung / Typ-Nr.:</b> <i>Identification / Type No.:</i>	M-67722				
<b>Auftrags-Inhalt:</b> <i>Order content:</i>	FCC approval				
<b>Prüfgrundlage:</b> <i>Test specification:</i>	CFR47 FCC Part 15: Subpart C Section 15.247 CFR47 FCC Part 15: Subpart C Section 15.207 CFR47 FCC Part 15: Subpart C Section 15.209 FCC KDB Publication 447498 v06 CFR47 FCC Part 15: Subpart B Section 15.107 CFR47 FCC Part 15: Subpart B Section 15.109				
<b>Wareneingangsdatum:</b> <i>Date of receipt:</i>	03.06.2019				
<b>Prüfmuster-Nr.:</b> <i>Test sample No.:</i>	A000930268-083 A000930268-084				
<b>Prüfzeitraum:</b> <i>Testing period:</i>	03.06.2019 - 01.07.2019				
<b>Ort der Prüfung:</b> <i>Place of testing:</i>	TÜV Rheinland (Shenzhen) Co., Ltd.				
<b>Prüflaboratorium:</b> <i>Testing laboratory:</i>	TÜV Rheinland (Shenzhen) Co., Ltd.				
<b>Prüfergebnis*:</b> <i>Test result*:</i>	Pass				
<b>geprüft von / tested by:</b>	<b>kontrolliert von / reviewed by:</b>				
Jackson Yang		Winnie Hou			
25.07.2019	Jackson Yang / Project Engineer	25.07.2019	Winnie Hou / Technical Certifier		
<b>Datum</b> <i>Date</i>	<b>Name/Stellung</b> <i>Name/Position</i>	<b>Unterschrift</b> <i>Signature</i>	<b>Datum</b> <i>Date</i>	<b>Name/Stellung</b> <i>Name/Position</i>	<b>Unterschrift</b> <i>Signature</i>
<b>Sonstiges / Other:</b>					
FCC ID: 2ATF5160478					
<b>Zustand des Prüfgegenstandes bei Anlieferung:</b> <i>Condition of the test item at delivery:</i>			Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged:</i>		
* Legende: 1 = sehr gut    2 = gut    3 = befriedigend    4 = ausreichend    5 = mangelhaft P(ass) = entspricht o.g. Prüfgrundlage(n)    F(ail) = entspricht nicht o.g. Prüfgrundlage(n)    N/A = nicht anwendbar    N/T = nicht getestet Legend: 1 = very good    2 = good    3 = satisfactory    4 = sufficient    5 = poor P(ass) = passed a.m. test specifications(s)    F(ail) = failed a.m. test specifications(s)    N/A = not applicable    N/T = not tested					
<b>Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines.</b>					
<i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>					

V04

## TEST SUMMARY

**5.1.1 ANTENNA REQUIREMENT***RESULT: Passed***5.1.2 PEAK OUTPUT POWER***RESULT: Passed***5.1.3 CONDUCTED SPURIOUS EMISSIONS MEASURED IN 100kHz BANDWIDTH***RESULT: Passed***5.1.4 SPURIOUS EMISSION***RESULT: Passed***5.1.5 20dB BANDWIDTH***RESULT: Passed***5.1.6 FREQUENCY SEPARATION***RESULT: Passed***5.1.7 NUMBER OF HOPPING FREQUENCY***RESULT: Passed***5.1.8 TIME OF OCCUPANCY***RESULT: Passed***5.1.9 CONDUCTED EMISSIONS***RESULT: Passed***5.1.10 RADIATED EMISSION***RESULT: Passed***6.1.1 ELECTROMAGNETIC FIELDS***RESULT: Pass*

## Contents

<b>1</b>	<b>GENERAL REMARKS</b> .....	<b>5</b>
<b>1.1</b>	<b>COMPLEMENTARY MATERIALS</b> .....	<b>5</b>
<b>2</b>	<b>TEST SITES</b> .....	<b>5</b>
<b>2.1</b>	<b>TEST FACILITIES</b> .....	<b>5</b>
<b>2.2</b>	<b>LIST OF TEST AND MEASUREMENT INSTRUMENTS</b> .....	<b>6</b>
<b>2.3</b>	<b>TRACEABILITY</b> .....	<b>8</b>
<b>2.4</b>	<b>CALIBRATION</b> .....	<b>8</b>
<b>2.5</b>	<b>MEASUREMENT UNCERTAINTY</b> .....	<b>8</b>
<b>2.6</b>	<b>LOCATION OF ORIGINAL DATA</b> .....	<b>8</b>
<b>2.7</b>	<b>STATUS OF FACILITY USED FOR TESTING</b> .....	<b>8</b>
<b>3</b>	<b>GENERAL PRODUCT INFORMATION</b> .....	<b>9</b>
<b>3.1</b>	<b>PRODUCT FUNCTION AND INTENDED USE</b> .....	<b>9</b>
<b>3.2</b>	<b>RATINGS AND SYSTEM DETAILS</b> .....	<b>9</b>
<b>3.3</b>	<b>INDEPENDENT OPERATION MODES</b> .....	<b>10</b>
<b>3.4</b>	<b>NOISE GENERATING AND NOISE SUPPRESSING PARTS</b> .....	<b>11</b>
<b>3.5</b>	<b>SUBMITTED DOCUMENTS</b> .....	<b>11</b>
<b>4</b>	<b>TEST SET-UP AND OPERATION MODES</b> .....	<b>12</b>
<b>4.1</b>	<b>PRINCIPLE OF CONFIGURATION SELECTION</b> .....	<b>12</b>
<b>4.2</b>	<b>TEST OPERATION AND TEST SOFTWARE</b> .....	<b>12</b>
<b>4.3</b>	<b>SPECIAL ACCESSORIES AND AUXILIARY EQUIPMENT</b> .....	<b>12</b>
<b>4.4</b>	<b>COUNTERMEASURES TO ACHIEVE EMC COMPLIANCE</b> .....	<b>12</b>
<b>4.5</b>	<b>TEST SETUP DIAGRAM</b> .....	<b>13</b>
<b>5</b>	<b>TEST RESULTS</b> .....	<b>15</b>
<b>5.1</b>	<b>TRANSMITTER REQUIREMENT &amp; TEST SUITES</b> .....	<b>15</b>
<b>5.1.1</b>	<i>Antenna Requirement</i> .....	<b>15</b>
<b>5.1.2</b>	<i>Peak Output Power</i> .....	<b>16</b>
<b>5.1.3</b>	<i>Conducted spurious emissions measured in 100kHz Bandwidth</i> .....	<b>17</b>
<b>5.1.4</b>	<i>Spurious Emission</i> .....	<b>18</b>
<b>5.1.5</b>	<i>20dB Bandwidth</i> .....	<b>19</b>
<b>5.1.6</b>	<i>Frequency Separation</i> .....	<b>22</b>
<b>5.1.7</b>	<i>Number of hopping frequency</i> .....	<b>24</b>
<b>5.1.8</b>	<i>Time of Occupancy</i> .....	<b>25</b>
<b>5.1.9</b>	<i>Conducted emissions</i> .....	<b>28</b>
<b>5.1.10</b>	<i>Radiated Emission</i> .....	<b>29</b>
<b>6</b>	<b>SAFETY HUMAN EXPOSURE</b> .....	<b>30</b>
<b>6.1</b>	<b>RADIO FREQUENCY EXPOSURE COMPLIANCE</b> .....	<b>30</b>
<b>6.1.1</b>	<i>Electromagnetic Fields</i> .....	<b>30</b>
<b>7</b>	<b>PHOTOGRAPHS OF THE TEST SET-UP</b> .....	<b>31</b>

**Prüfbericht- Nr.: 50264292 001**  
*Test Report No.*

**Seite 4 von 36**  
*Page 4 of 36*

<b>8</b>	<b>LIST OF TABLES.....</b>	<b>36</b>
<b>9</b>	<b>LIST OF PHOTOGRAPHS.....</b>	<b>36</b>

# 1 General Remarks

## 1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:  
Appendix 1: Test Result

# 2 Test Sites

## 2.1 Test Facilities

**TÜV Rheinland (Shenzhen) Co., Ltd.**

1F East & 2-4F, Cybio Technology Building No.1, No.16 Kejibei 2nd Road, Nanshan District, Shenzhen, 518057, China

FCC Registration No.: 694916

The tests at the test site have been conducted under the supervision of a TÜV engineer.

## 2.2 List of Test and Measurement Instruments

**Table 1: List of Test and Measurement Equipment**

<b>Conducted Emissions</b>				
<b>Equipment</b>	<b>Manufacturer</b>	<b>Model No.</b>	<b>Serial No.</b>	<b>Cal. Until</b>
EMI Test Receiver	R&S	ESR3	102428	2/15/2020
Artificial Mains Network	R&S	ENV216	102333	8/19/2019
<b>Radiated Emissions</b>				
<b>Equipment</b>	<b>Manufacturer</b>	<b>Model No.</b>	<b>Serial No.</b>	<b>Cal. Until</b>
EMI test receiver	R&S	ESR7	102022	1/24/2020
Horn Antenna	R&S	HF907	102706	9/3/2019
Preamplifier	FIT	SCU18F	180077	8/24/2019
Trilog-Broadband antenna	Schwarzbeck	VULB 9168	00945	12/9/2019
Switching and control interface	R&S	OSP 120	102038	N/A
<b>Radio Spectrum</b>				
<b>Equipment</b>	<b>Manufacturer</b>	<b>Model No.</b>	<b>Serial No.</b>	<b>Cal. Until</b>
Wireless Connectivity Tester	Rohde & Schwarz	CMW270	101375	8/30/2019
Signal Analyzer	Rohde & Schwarz	FSV 40	101441	8/30/2019
Vector Signal Generator	Rohde & Schwarz	SMBV100A	263301	8/30/2019
Signal Generator	Rohde & Schwarz	SMB100A	115186	8/30/2019
OSP	Rohde & Schwarz	OSP 150	101017	12/20/2019
Control PC	DELL	OptiPlex 7050	FTJZ9P2	N/A
Test Software	Rohde & Schwarz	WMS32 (V10.40.10)	N/A	N/A
Power Meter	Rohde & Schwarz	NRP2	107105	12/20/2019
Wideband Power Sensor	Rohde & Schwarz	NRP-Z81	105350	12/20/2019
<b>Spurious Emissions</b>				
<b>Equipment</b>	<b>Manufacturer</b>	<b>Model No.</b>	<b>Serial No.</b>	<b>Cal. Until</b>
EMI Test Receiver	Rohde & Schwarz	ESR 7	102021	9/3/2019
Signal Analyzer	Rohde & Schwarz	FSV 40	101439	8/30/2019
System Controller Interface	Rohde & Schwarz	SCI-100	S10010038	N/A
Filterbank	Rohde & Schwarz	Wlan	100759	8/30/2019
OSP	Rohde & Schwarz	OSP 120	102040	N/A
Pre-amplifier	Rohde & Schwarz	SCU08F1	08320031	9/29/2019
Amplifier	Rohde & Schwarz	SCU-18F	180070	8/30/2019

**Produkte**
*Products*
**Prüfbericht- Nr.: 50264292 001**
*Test Report No.*
**Seite 7 von 36**
*Page 7 of 36*

Amplifier	Rohde & Schwarz	SCU40A	100475	9/3/2019
Trilog Broadband Antenna (30 MHz - 1 GHz)	Schwarzbeck	VULB9162	193	9/2/2019
Double-Ridged Antenna (1 - 18 GHz)	ETS-LINDGREN	3117	00218717	9/2/2019
Wideband Ridged Horn Antenna (18-40 GHz)	Steatite	QMS-00880	19067	9/2/2019
Active Loop Antenna	Rohde & Schwarz	FMZB 1513	302	9/1/2019
Wideband Ridged Horn Antenna (12-18 GHz)	Steatite	QMS-00208	18313	9/2/2019
Test software	Rohde & Schwarz	EMC32 (V10.40.00)	N/A	N/A
Control PC	Dell	OptiPlex 7050	36NV9P2	N/A

## 2.3 Traceability

All measurement equipment calibrations are traceable to NIM (National Institute of Metrology) or where calibration is performed in other countries, to equivalent nationally recognized standards organizations.

## 2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

## 2.5 Measurement Uncertainty

The value of the measurement uncertainty of each parameter is listed as below:

**Table 2: Measurement Uncertainty**

Test Item	Uncertainty
RF Output Power	±0.99 dB
Power Spectral Density	±0.99 dB
Frequency Error	±3.3%
Occupied Channel Bandwidth	±2.08%
Conducted Spurious Emissions	±0.89 dB
Radiated Spurious Emissions	±3.68dB
Radiated Emissions	±4.52dB (30MHz~1GHz) ±4.37dB (1~6GHz)
Conducted Emissions	±3.3dB
Temperature	±2.5%
Humidity	±10%

## 2.6 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix 1 of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) file for certification follow-up purposes.

## 2.7 Status of Facility Used for Testing

The TÜV Rheinland (Shenzhen) Co., Ltd. test facility located at 1F East & 2-4F, Cybio Technology Building No.1, No.16 Kejibei 2nd Road, Nanshan District, Shenzhen, 518057, China is listed on the US Federal Communications Commission list of facilities approved to perform measurements.



### 3 General Product Information

#### 3.1 Product Function and Intended Use

The EUT is WIRELESS SOUND-PODS which supports Bluetooth function.  
 The Right Earbud and Left Earbud are electrical identical. When charging the Earbud the Bluetooth function will automatically turn off.  
 For details refer to the User Manual, Technical Description and Circuit Diagram.

#### 3.2 Ratings and System Details

**Table 3: Rating of EUT**

Kind of Equipment:	WIRELESS SOUND-PODS
Type Designation:	M-67722
FCC ID	2ATF5160478

**Table 4: Technical Specification of Bluetooth (BDR & EDR)**

Technical Specification	Value
Operating Frequency band	2402 – 2480 MHz
Bluetooth Version	5.0 (without BLE)
Channel Number	79 channels
Channel separation	1MHz
Operating Voltage	DC 3.7V, 50mAh via built-in lithium Battery Or Charged by Charging box or DC 5V via micro USB port
Battery	Internal lithium-ion battery (charging box): 3.7Vdc, 300mAh Internal lithium-ion battery (earbuds): 3.7Vdc, 50mAh
Modulation	GFSK, $\pi/4$ DQPSK
Antenna Type	Internal Antenna, Non-User Replaceable
Antenna Gain	1.75dBi

**Table 5: RF channel and frequency of Bluetooth (BDR & EDR mode)**

RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
0	2402.00	20	2422.00	40	2442.00	60	2462.00
1	2403.00	21	2423.00	41	2443.00	61	2463.00
2	2404.00	22	2424.00	42	2444.00	62	2464.00
3	2405.00	23	2425.00	43	2445.00	63	2465.00
4	2406.00	24	2426.00	44	2446.00	64	2466.00
5	2407.00	25	2427.00	45	2447.00	65	2467.00
6	2408.00	26	2428.00	46	2448.00	66	2468.00
7	2409.00	27	2429.00	47	2449.00	67	2469.00
8	2410.00	28	2430.00	48	2450.00	68	2470.00
9	2411.00	29	2431.00	49	2451.00	69	2471.00
10	2412.00	30	2432.00	50	2452.00	70	2472.00
11	2413.00	31	2433.00	51	2453.00	71	2473.00
12	2414.00	32	2434.00	52	2454.00	72	2474.00
13	2415.00	33	2435.00	53	2455.00	73	2475.00
14	2416.00	34	2436.00	54	2456.00	74	2476.00
15	2417.00	35	2437.00	55	2457.00	75	2477.00
16	2418.00	36	2438.00	56	2458.00	76	2478.00
17	2419.00	37	2439.00	57	2459.00	77	2479.00
18	2420.00	38	2440.00	58	2460.00	78	2480.00
19	2421.00	39	2441.00	59	2461.00		

### 3.3 Independent Operation Modes

The basic operation modes are:

- A. On, Bluetooth Transmitting mode (BDR & EDR)
  - 1. low channel
  - 2. middle channel
  - 3. high channel
- B. On, Bluetooth hopping mode
- C. Charging the Earbud Case
- D. Charging the Ear Buds
- E. Off

### **3.4 Noise Generating and Noise Suppressing Parts**

Refer to the Circuit Diagram.

### **3.5 Submitted Documents**

- Technical Description
- PCB Layout
- Photo Document
- Circuit Diagram
- Instruction Manual
- Rating Label

## 4 Test Set-up and Operation Modes

### 4.1 Principle of Configuration Selection

The equipment under test (EUT) was configured to measure its maximum power level. The test modes were adapted accordingly in reference to the instructions for use.

### 4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5. All testing were performed according to the procedures in ANSI C63.4: 2014 and ANSI C63.10: 2013.

### 4.3 Special Accessories and Auxiliary Equipment

The EUT was tested with following accessories:

Description	Manufacturer	Type	S/N
Portable Laptop	Lenovo	ThinkPad T480	N/A
Mobile Phone	Apple	iPhone 8	N/A

### 4.4 Countermeasures to achieve EMC Compliance

The test sample, which has been tested, contained the noise suppression parts as described in the Constructional Data Form or the Technical Construction File. No additional measures were employed to achieve compliance.

## 4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test (Below 1GHz)

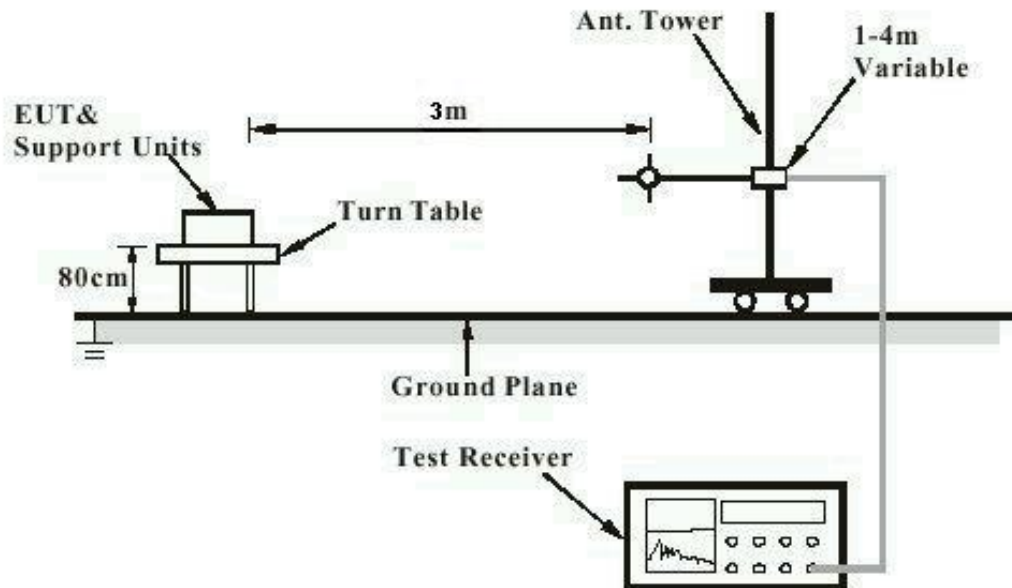


Diagram of Measurement Configuration for Radiation Test (Above 1GHz)

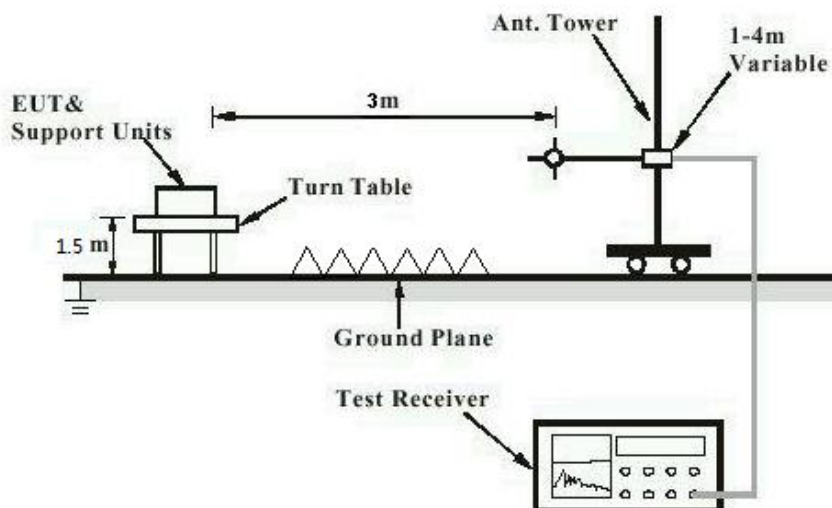


Diagram of Measurement Equipment Configuration for Mains Conduction Measurement

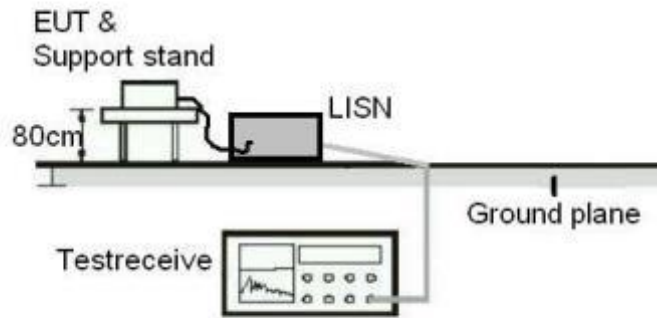
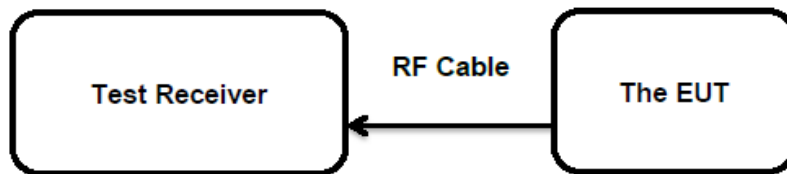


Diagram of Measurement Equipment Configuration for Conducted Transmitter Measurement



## 5 Test Results

### 5.1 Transmitter Requirement & Test Suites

#### 5.1.1 Antenna Requirement

**RESULT:****Passed**

Test standard : FCC Part 15.247(b)(4) and Part 15.203  
Limit : the use of antennas with directional gains that do not exceed 6 dBi

According to the manufacturer declared, the EUT has an internal antenna, the directional gain of antenna is 1.75dBi, and the antenna connector is designed with permanent attachment and no consideration of replacement. Therefore the EUT is considered sufficient to comply with the provision.

Refer to EUT photo for details.

## 5.1.2 Peak Output Power

**RESULT:**
**Passed**

Test date : 2019-06-27  
 Test standard : FCC Part 15.247(b)(1)  
 Basic standard : ANSI C63.10: 2013  
 Limit : FHSS < 1 Watts  
 Kind of test site : Shielded room

**Test setup**

Test Channel : Low/ Middle/ High  
 Operation Mode : A  
 Ambient temperature : 25°C  
 Relative humidity : 55%  
 Atmospheric pressure : 101 kPa

**Table 6: Test result of Peak Output Power**

Test Mode	Channel Frequency (MHz)	Measured Peak Output Power		Limit (W)
		(dBm)	(W)	
BDR	2402	-4.51	0.00035	< 1
	2441	-4.71	0.00034	
	2480	-4.02	0.00040	
EDR	2402	-4.24	0.00038	< 1
	2441	-4.86	0.00033	
	2480	-4.98	0.00032	

Note: The cable loss is taken into account in results.



### 5.1.3 Conducted spurious emissions measured in 100kHz Bandwidth

**RESULT:****Passed**

Date of testing : 2019-07-04  
Test standard : FCC part 15.247(d)

Basic standard : ANSI C63.10: 2013  
Limit : 20dB (below that in the 100kHz bandwidth within the band that contains the highest level of the desired power);  
In addition, radiated emissions which fall in the restricted bands, must also comply with the radiated emission limits specified in 15.209(a)

Kind of test site : Shield room

**Test setup**

Test Channel : Low/ Middle/ High  
Operation mode : A, B  
Ambient temperature : 25°C  
Relative humidity : 55%  
Atmospheric pressure : 101 kPa

All emissions are more than 20dB below fundamental, details refer to Appendix 1, and compliance is achieved as well.

## 5.1.4 Spurious Emission

**RESULT:****Passed**

Date of testing : 2019-06-27  
Test standard : FCC part 15.247(d)  
FCC Part 15.205  
Basic standard : ANSI C63.10: 2013  
Limits : Refer to 15.209(a) of FCC part 15.247(d)  
Kind of test site : 3m Semi-Anechoic Chamber

**Test setup**

Test Channel : Low/ Middle/ High  
Operation mode : A, B  
Ambient temperature : 23°C  
Relative humidity : 56%  
Atmospheric pressure : 101 kPa

**Remark:**

During the pretest the EUT was rotated through three orthogonal axes to determine the attitude that maximizes the emissions. After that the EUT was manually handled to find the orientation that has the maximum emission, which is the orientation shown in the test setup photos. Testing was carried out within frequency range 9 kHz to the tenth harmonics.

For details refer to Appendix 1.

### 5.1.5 20dB Bandwidth

**RESULT:**
**Passed**

Date of testing : 2019-06-27  
 Test standard : FCC Part 15.247(a)(1)  
 Basic standard : ANSI C63.10: 2013  
 Kind of test site : Shielded room

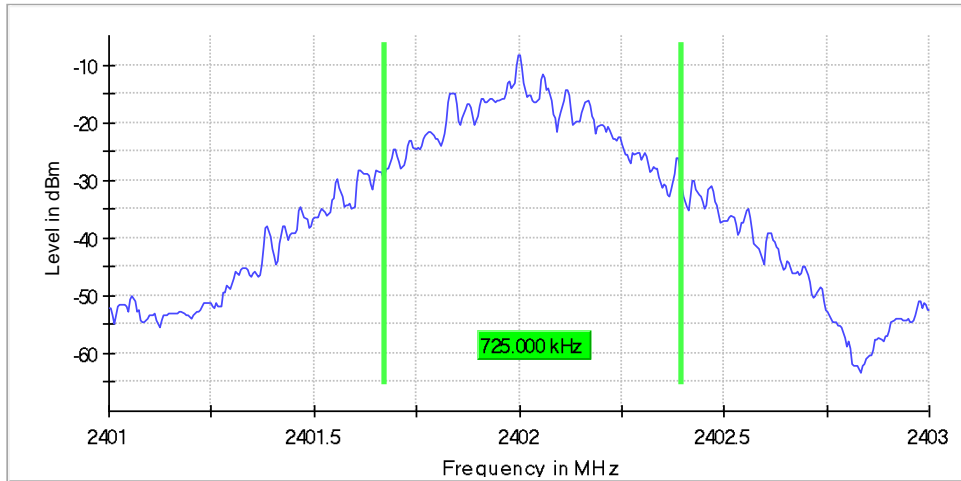
**Test setup**

Test Channel : Low/ Middle/ High  
 Operation Mode : A  
 Ambient temperature : 25°C  
 Relative humidity : 55%  
 Atmospheric pressure : 101 kPa

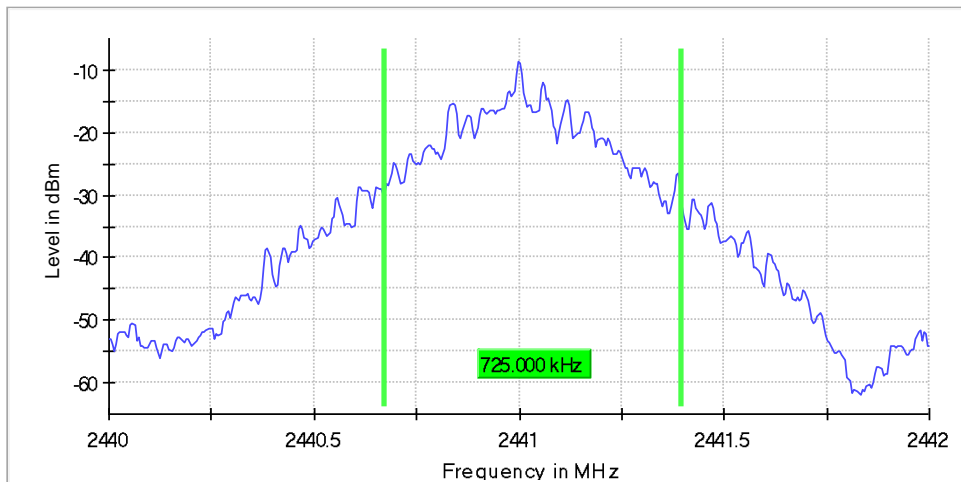
**Table 7: Test result of 20dB Bandwidth**

Test Mode	Channel Frequency (MHz)	20dB Bandwidth (kHz)	2/3 of 20dB Bandwidth (kHz)	Limit (MHz)
BDR	2402	725	483	/
	2441	725	483	
	2480	795	530	
EDR	2402	1155	770	/
	2441	1155	770	
	2480	1155	770	

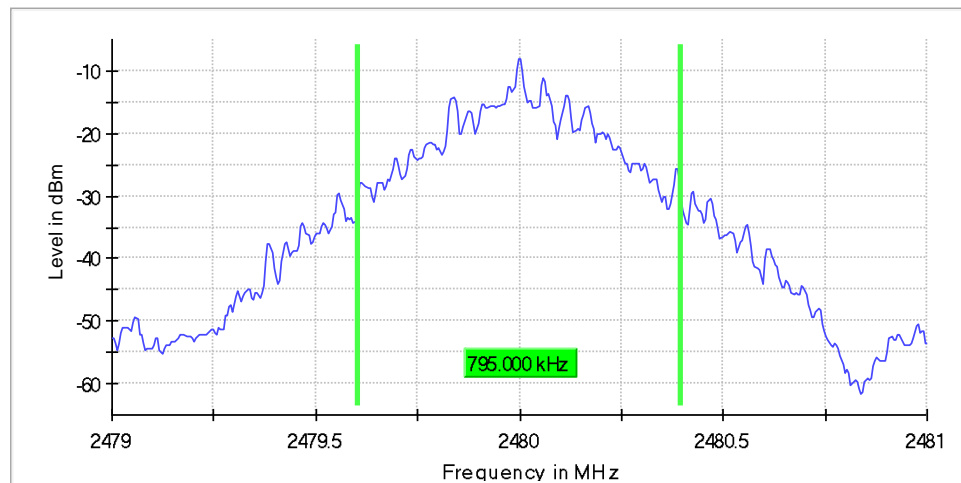
BDR 2402



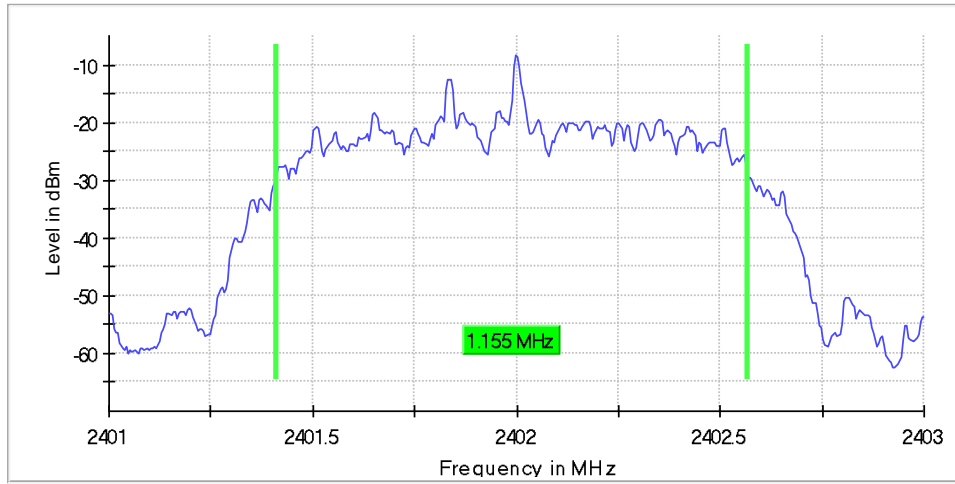
BDR 2441



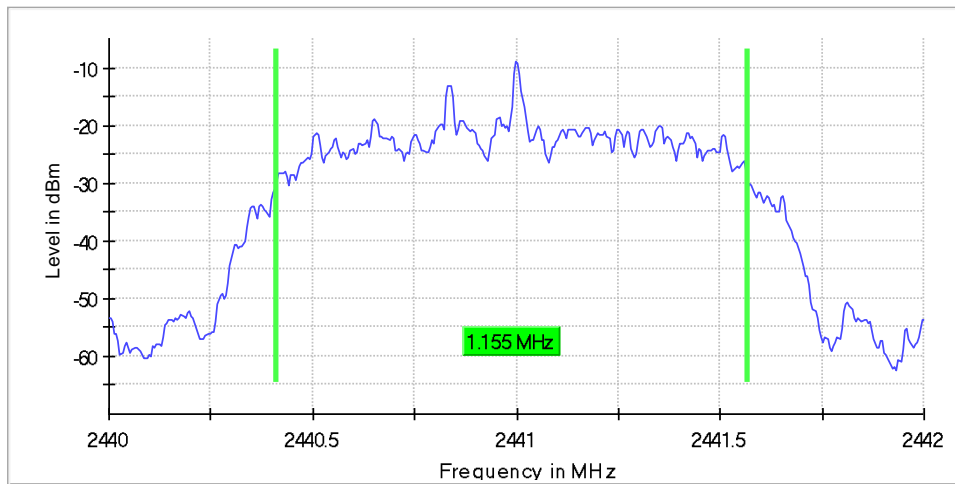
BDR 2480



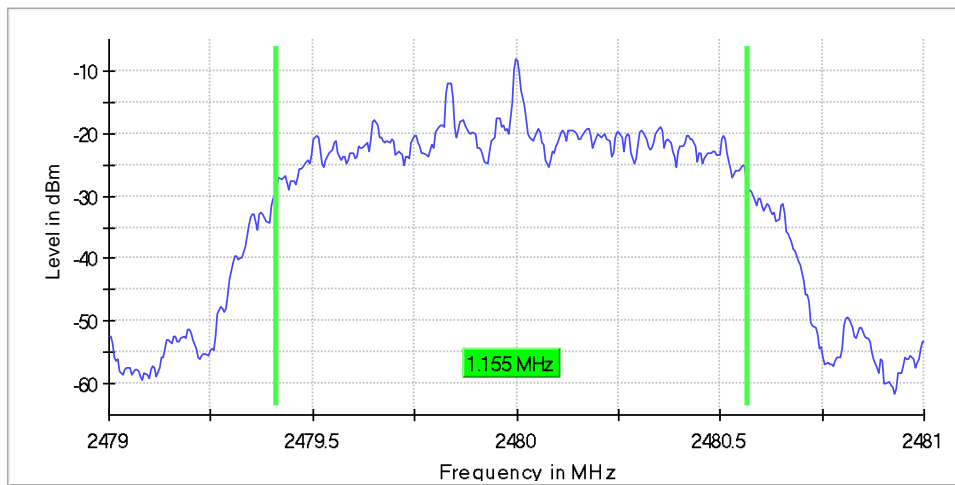
EDR 2402



EDR 2441



EDR 2480



### 5.1.6 Frequency Separation

**RESULT:**
**Passed**

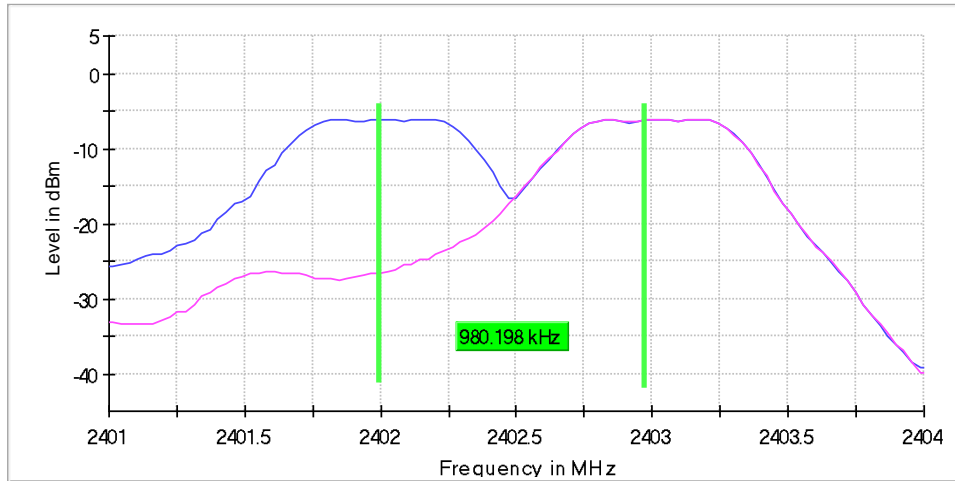
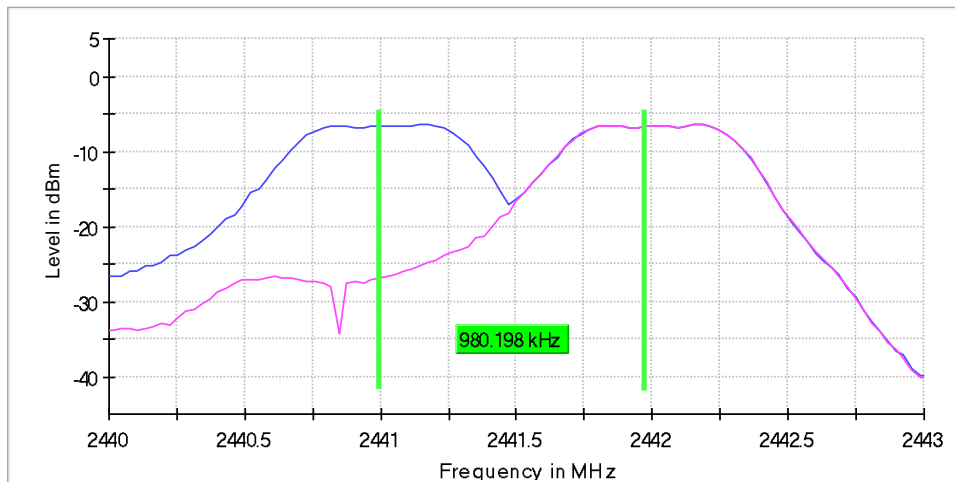
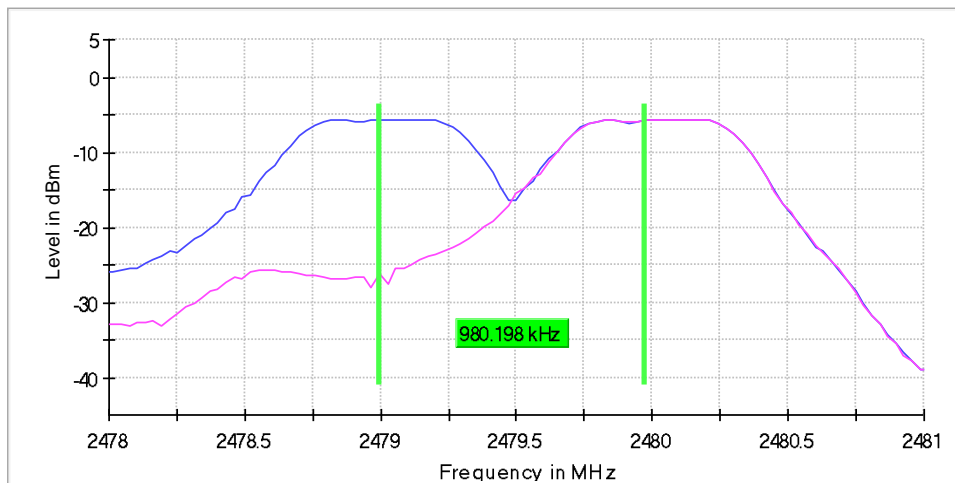
Date of testing : 2019-06-27  
 Test standard : FCC part 15.247(a)(1)  
 Basic standard : ANSI C63.4: 2003  
 Limit :  $\geq 25\text{kHz}$  or  $2/3$  of 20dB bandwidth, whichever is greater

**Test setup**

Test Channel : Low/ Middle/ High  
 Operation Mode : B  
 Ambient temperature : 25°C  
 Relative humidity : 55%  
 Atmospheric pressure : 101 kPa

**Table 8: Test result of Frequency Separation**

Channel	Channel Frequency (MHz)	Measured Channel Separation (KHz)	Limit (kHz)	Result
Low Channel	2402	980	$\geq 25\text{kHz}$ or $2/3$ of 20dB bandwidth	Pass
Adjacency Channel	2403			
Mid Channel	2441	980	$\geq 25\text{kHz}$ or $2/3$ of 20dB bandwidth	Pass
Adjacency Channel	2442			
High Channel	2480	980	$\geq 25\text{kHz}$ or $2/3$ of 20dB bandwidth	Pass
Adjacency Channel	2479			

**Low**

**Middle**

**High**


### 5.1.7 Number of hopping frequency

**RESULT:**
**Passed**

Date of testing : 2019-06-27  
 Test standard : FCC part 15.247(a)(1)(iii)  
 Basic standard : ANSI C63.10: 2013  
 Limits :  $\geq 15$  non-overlapping channels  
 Kind of test site : Shield room

**Test setup**

Test Channel : Low/ Middle/ High  
 Operation Mode : B  
 Ambient temperature : 25°C  
 Relative humidity : 55%  
 Atmospheric pressure : 101 kPa

**Table 9: Test result of Number of hopping frequency**

Frequency Range	Measured Quantity of Hopping Channel	Limit	Result
2400 to 2483.5 MHz	79	$\geq 15$	Pass



### 5.1.8 Time of Occupancy

**RESULT:**
**Passed**

Date of testing : 2019-06-27  
 Test standard : FCC part 15.247(a)(1)(iii)  
 Basic standard : ANSI C63.10: 2013  
 Limits : <0.4s  
 Kind of test site : Shield room

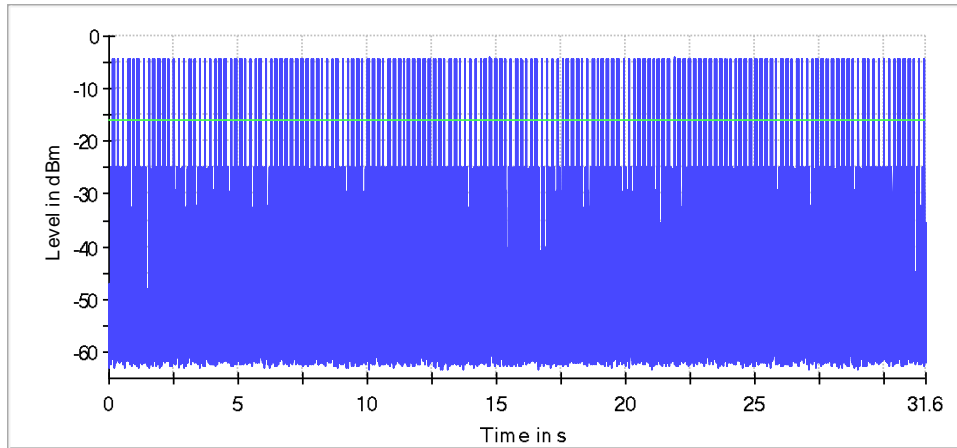
**Test setup**

Test Channel : Middle  
 Operation Mode : A  
 Ambient temperature : 25°C  
 Relative humidity : 55%  
 Atmospheric pressure : 101 kPa

**Table 10: Test result of Time of Occupancy**

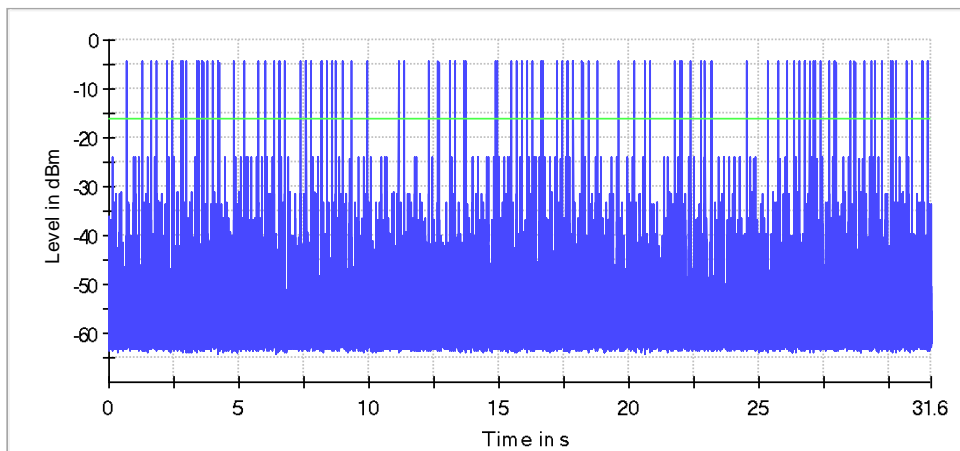
Test Mode	Channel	Data Packet	Measured Dwell time(s)	Limit (s)
BDR mode	2441	DH1	0.138	< 0.4s
		DH3	0.179	
		DH5	0.197	
EDR mode	2441	2DH1	0.136	
		2DH3	0.186	
		2DH5	0.180	

BDR DH1



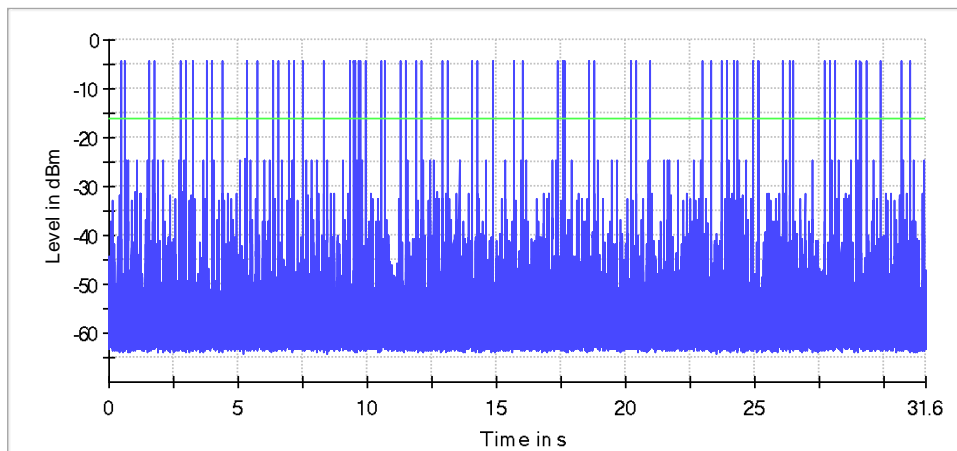
Trace Threshold

BDR DH3



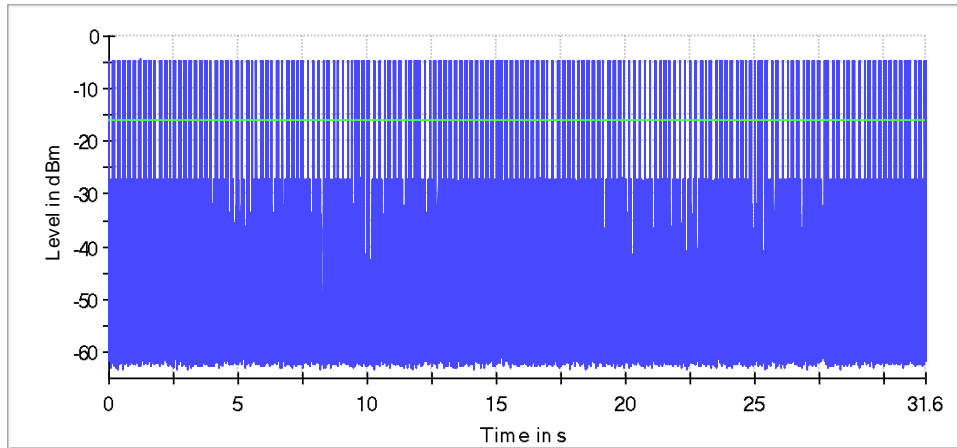
Trace Threshold

BDR DH5



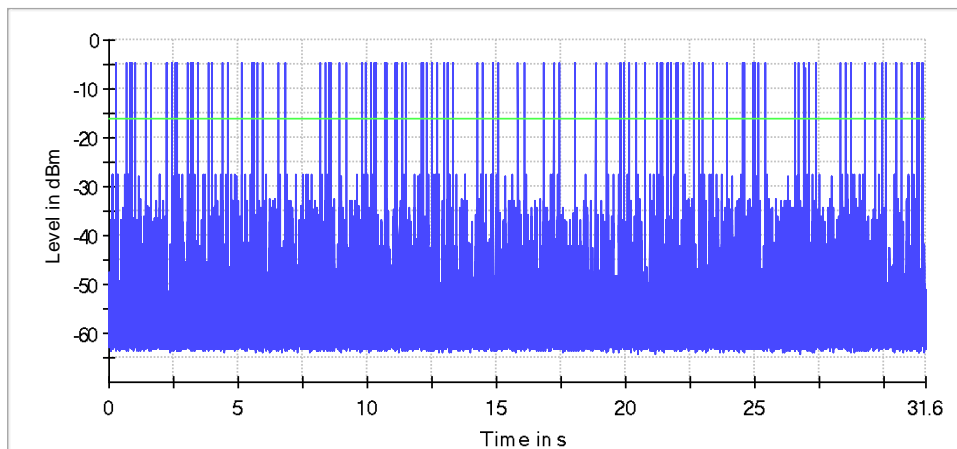
Trace Threshold

EDR 2DH1



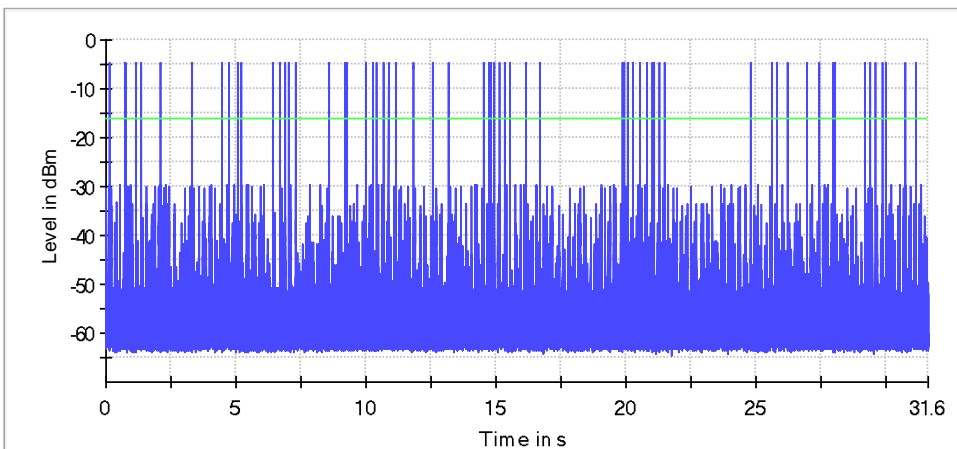
Trace Threshold

EDR 2DH3



Trace Threshold

EDR 2DH5



Trace Threshold

**Prüfbericht- Nr.: 50264292 001**  
Test Report No.Seite 28 von 36  
Page 28 of 36

## 5.1.9 Conducted emissions

**RESULT:****Passed**

Date of testing : 2019-06-19  
Test standard : FCC Part 15.107(a)  
Basic standard : ANSI C63.10: 2013 & ANSI C63.4: 2014  
Frequency range : 0.15 – 30MHz  
Limits : FCC Part 15.107(a)  
Kind of test site : Shield room

**Test setup**

Input Voltage : AC 120V, 60Hz  
Operation Mode : C  
Earthing : Not connected  
Ambient temperature : 26°C  
Relative humidity : 54%  
Atmospheric pressure : 101 kPa

For details refer to Appendix 1.

**Prüfbericht- Nr.: 50264292 001**  
Test Report No.**Seite 29 von 36**  
Page 29 of 36**5.1.10 Radiated Emission****RESULT:****Passed**

Date of testing : 2019-06-19  
Test standard : FCC Part 15.109(a) & FCC Part 15.209(a)  
Basic standard : ANSI C63.4: 2014  
Frequency range : 30 - 6000MHz  
Classification : Class B  
Limit : FCC Part 15.109(a) & FCC Part 15.209(a)  
Kind of test site : 3m Semi-Anechoic Chamber

**Test setup**

Input Voltage : AC 120V, 60Hz  
Operation mode : B, C, D  
Earthing : Not connected  
Ambient temperature : 25°C  
Relative humidity : 49%  
Atmospheric pressure : 101 kPa

Test data refer to Appendix 1.