

Prüfbericht-Nr.: Auftrags-Nr.: Seite 1 von 29 16060205 001 174023970 Order No.: Page 1 of 29 Test Report No.: Auftragsdatum: Kunden-Referenz-Nr.: 450812 02 Jul. 2014 Client Reference No.: Order date .: Auftraggeber: Bang & Olufsen a/s Client: Peter Bangs Vei 15, 7600 Struer, Denmark Prüfgegenstand: FCC ID: Bluetooth Speaker TTUBEOPLAYA2 Test item: FCC ID: Bezeichnung / Typ-Nr.: IC ID: BeoPlay A2 3775B-BEOPLAYA2 IC ID: Identification / Type No.: Auftrags-Inhalt: TUV Rheinland - EMC service Order content: Prüfgrundlage: ANSI C63.4: 2009 Test specification: FCC Part 15: 2013-10 Subpart C section 15.207, 15.209 and 15.247 RSS-210: 2010-12 Wareneingangsdatum: 31.Mar.2014 Date of receipt: Prüfmuster-Nr.: N/A Test sample No.: Prüfzeitraum: Refer to test report Testing period: Ort der Prüfung: Refer to section 2.1 Place of testing: TÜV Rheinland Prüflaboratorium: (Guangdong) Ltd. Testing laboratory: Prüfergebnis*: **Pass** Test result*: geprüft von / tested by: kontrolliert von / reviewed by: 22 Jul. 2014 Max Y. C. Yao/ Department Manager Amy Wang/ Senior Project Engineer 22 Jul. 2014 Datum Name/Stellung Unterschrift Datum Name/Stellung Unterschrift Name/Position Date Signature Date Name/Position Signature Sonstiges / Other: BT technology. Zustand des Prüfgegenstandes bei Anlieferung: Prüfmuster vollständig und unbeschädigt

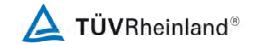
Zustand des Prüfgegenstandes bei Anlieferung: Prüfmuster vollständig und unbeschädigt Condition of the test item at delivery:

Prüfmuster vollständig und unbeschädigt Test item complete and undamaged

1 = sehr gut 3 = befriedigend 4 = ausreichend 5 = mangelhalt Legende: 2 = gut P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet Legend: 5 = poor 1 = very good 2 = good3 = satisfactory 4 = sufficient F(ail) = failed a.m. test specifications(s) N/A = not applicable N/T = not tested P(ass) = passed a.m. test sp

Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.

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.

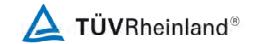


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Test Summary

Test items	Result
Conducted Emission	Pass
Radiated Spurious Emission	Pass
Antenna requirement	Pass
Maximum Peak Output power	Pass
20dB Bandwidth	Pass
Hopping Channel Carrier Frequency Separation	Pass
Number of Hopping Frequency Used	Pass
Time of Occupancy (Dwell Time)	Pass
Band-edge Emission	Pass
Power spectral density	N/A
Out-Of-Band Emission measurement	Pass
99% Bandwidth	Pass
Electromagnetic Fields	Pass

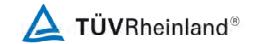


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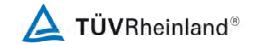
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1 General Remarks

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

EST Technology Co., Ltd. Santun(guantai Road), Houjie Town, DongGuan City, GuangDong, China.

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
EMI Test Receiver	Rohde & Schwarz	ESHS30	832354	July,30,13	1 year
Artificial Mains Networ	Rohde & Schwarz	ENV216	101260	July,30,13	1 year
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	101100	July,25,13	1 year
EMI Test Receiver	Rohde & Schwarz	ESVS10	100004	July,23,13	1 year
Spectrum Analyzer	Agilent	E4411B	MY50140697	July,23,13	1 year
Bilog Antenna	Teseq	CBL 6111D	27090	July,29,13	1 year
Signal Amplifier	Agilent	310N	187037	July,23,13	1 year
Horn Antenna	SCHWARZBECK	BBHA 9120 D	BBHA9120D1002	July.29,13	1 year
Signal Amplifier	SCHWARZBECK	BBV9718	9718-212	July.23,13	1 year
Spectrum Analyzer	Agilent	E4408B	MY44211139	July.23,13	1 year
RF Cable	Hubersuhner	RG 214/U	513423	July.21,13	1 year



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2.3 Traceability

All measurement equipment calibrations are traceable to NIST or where calibration is performed outside the United States, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications.

2.5 Measurement Uncertainty

Uncertainty for conducted emissions measurements is 2.54dB.

Uncertainty for radiated emissions measurements is 3.62dB (30M-1GHz) and 4.11dB (> 1GHz)

The reported expanded uncertainty is based on a standard uncertainty multiply by a coverage factor k=2, providing a level of confidence of approximately 95%.

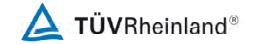
2.6 Location of original data

The original copies of 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 (Guangdong) file for certification follow-up purposes.

2.7 Status of facility used for testing

EST Technology Co., Ltd.

Santun(guantai Road), Houjie Town, DongGuan City, GuangDong, China. is listed on the US Federal Communications Commission list of facilities approved to perform measurements, the register no. 989591.



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3 General Product Information

The tested sample is a "Bluetooth speaker" with model numbers "BeoPlay A2" for new approval, which is intended to enable Bluetooth connectivity with Notebook or smart phone, and play the music from Bluetooth device.

For details refer to the Technical Documentation or User manual.

3.1 Product Function and Intended Use

For details refer to the Technical Documentation or User manual.

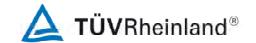
3.2 Ratings and System Details

Type Designation:	BeoPlay A2	
Frequency range:	2402MHz~2480MHz	
Number of employed channels:	79 channels	
Channel Spacing:	1MHz	
Modulation Type:	FHSS (GFSK, π/4-DQPSK, 8-DPSK)	
Type of antenna:	Internal antenna	
	Adapter Input: 100~240Vac, 50/60Hz;	
Power supply:	Adapter Output: 15Vdc;	
	7.2Vdc from Internal battery	
Equipment type:	Portable Equipment	
Protection Class:	Class III for Internal battery	
Flotection Class.	Class II for AC adapter	

For details refer to the Technical Documentation or User manual.

3.3 Independent Operation Modes

A. Transmitting mode.



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3.4 Submitted Documents

- 1. Block Diagram
- 2. Schematics
- 3. Operation Description
- 4. Components List
- 5. FCC label and location
- 6. User Manual
- 7. Internal Photos
- 8. External Photos
- 9. Application form



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4 Test Set-up and Operation Mode

4.1 Principle of Configuration Selection

Emission: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

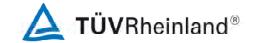
Refer to test set-up in chapter 5.

4.3 Special Accessories and Auxiliary Equipment

None.

4.4 Countermeasures to achieve EMC Compliance

The test sample, which has been tested, contained the noise suppression parts as described in the technical document. No additional measures were employed to achieve compliance.



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4.5 Test set-up

Diagram 1 of Configuration for Testing Radiated Emission 30MHz -1 GHz

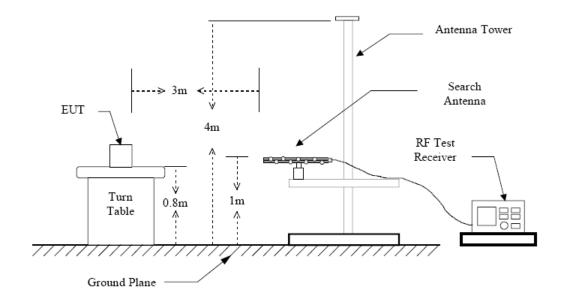
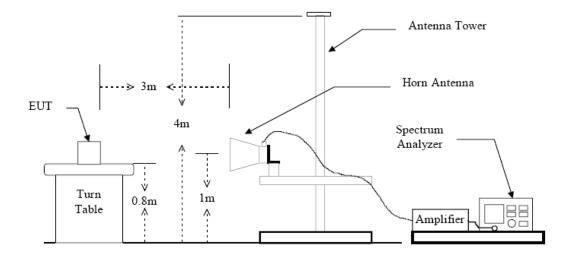
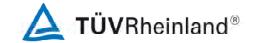


Diagram 2 of Configuration for Testing Radiated Emission above 1 GHz





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Diagram 3 of Configuration for Testing Conducted Emission

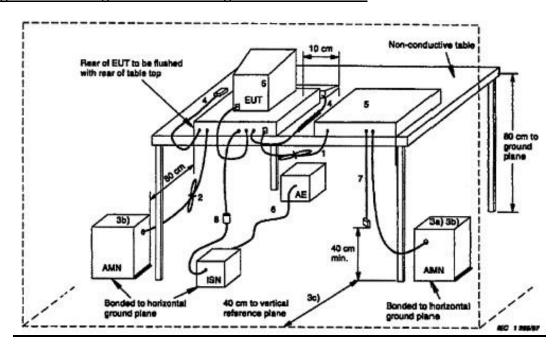
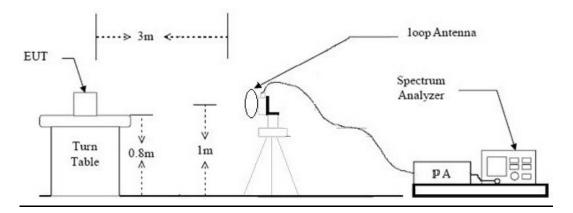
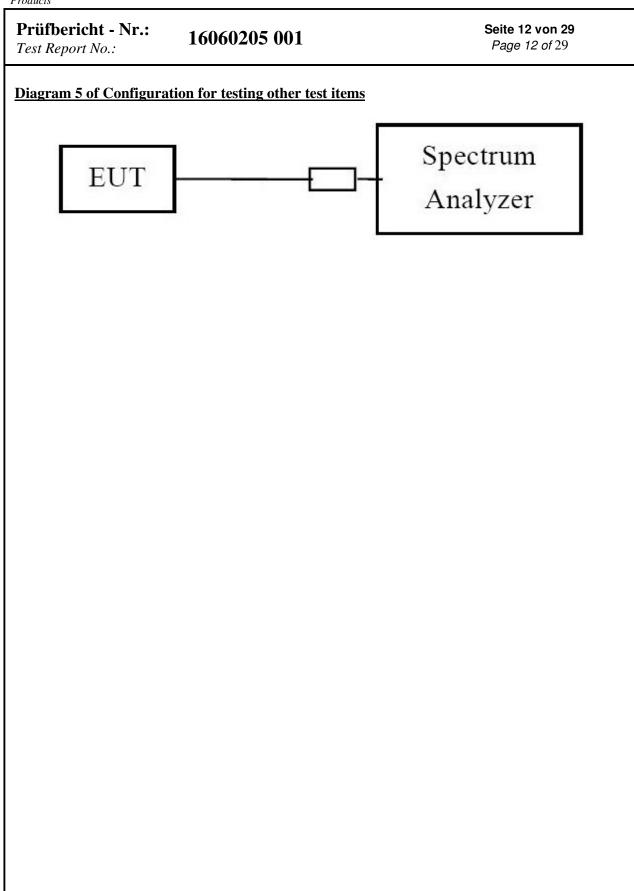
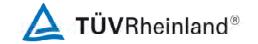


Diagram 4 of Configuration for Testing Radiated Emission below 30MHz









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5 Test Results EMISSION

5.1 Conducted Emission

RESULT: PASS

Date of testing: May 28, 2014

Test specification: FCC Part 15 Per Section 15.207(a); RSS-Gen 7.2.4 Limits: FCC Part 15 Per Section 15.207(a); RSS-Gen 7.2.4

Test procedure: ANSI C63.4

Deviations from Standard Test Procedures: None

Kind of test site: Shielded room

Operation mode: Transmitting at fix channel with max power

Power supply: Adapter Input: 120Vac, 60Hz

Temperature: 25.3 °C Humidity: 58 %

Test procedure:

For tabletop device, the EUT and its peripherals were placed on a wooden table, 80cm above the horizontal reference plane and 40cm away from vertical reference plane in a shielded room. For floor-standing device, the EUT shall be placed either directly on the reference ground plane or on insulating material as described in ANSI C63.4 Clause 6.3.2.1.

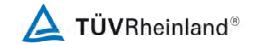
The EUT was connected to input power source through a line impedance stabilization network (LISN). The excess length of the power cord between the EUT and the LISN shall be folded back and forth at the center of the lead to form a bundle not exceeding 40cm in length.

The EUT was tested in a typical model of operation in accordance with ANSI C63.4:2009, Pre-test was performed in peak and average detection mode. Final measurement was performed using quasipeak and average detection on the live and neutral lines with the worst case.

The test software Rohde & Schwarz EMC32 was used during the test.

If the result of the measurement with the Quasi Peak detector is below the Average limit, the measurement with Average Detector may be omitted.

Refer to appendix 1 for test result.



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5.2 Radiated Spurious Emission

RESULT: PASS

Date of testing: Jun. 03, 2014

Test specification: FCC Part 15 Per Section 15.209(a); RSS-Gen 7.2.1 Limits: FCC Part 15 Per Section 15.209(a); RSS-Gen 7.2.1

Test procedure: ANSI C63.4

Deviations from Standard Test Procedures: None

Kind of test site: 3m Semi-anechoic chamber

Operation mode: Transmitting at fix channel with max power

(High, Low, Mid)

Power supply:

Adapter Input: 120Vac, 60Hz
7.2Vdc from Internal battery

Temperature: 25.6 °C Humidity: 56 %

Test procedure:

For tabletop device and the peripherals were placed on a wooden table, 80cm above ground plane in semi-anechoic chamber. For floor-standing equipment, the EUT and all cables shall be insulated, if required, from the ground plane by up to 12mm of insulating material in semi-anechoic chamber. The EUT was set 3 meters away from the receiving antenna, which was mounted on a variable-height antenna tower. Test shall be made with the antenna positioned in both the horizontal and vertical planes of polarization. The antenna height shall be varied from 1m to 4m. The table was rotated 360 degrees to detect the suspected emission frequency points. The position of the worst radiation case with both horizontal and vertical receiving antenna polarization was recorded together with the suspected emission frequency points above-mentioned.

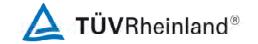
The EUT was tested in a typical model of operation in accordance with ANSI C63.4:2009, Pre-test was performed in peak detection mode. Finial measurement was performed using quasi-peak detection with the worst case.

The test software Rohde & Schwarz EMC32 was used during the test.

Note:

While testing, the EUT is connected with a serial port bridge board for test mode setup. The length of the communication cable between the EUT and the bridge board, which including Tx, Rx, GND serial pins, is minimized to reduce the unwanted influence to test result. The bridge board can be connected to a host computer with standard DB9 com port cable for running of the test setup software. After setup successfully, the EUT can keep the test mode with the host computer and the cable removed.

Refer to appendix 1 for test result.



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5.3 Antenna requirement

RESULT: PASS

Date of testing:

Test specification: FCC Part 15 Per Section 15.203

FCC Part 15 Per Section 15.247(b)

RSS-Gen 7.1.4

For intentional device, according to 15.203, and intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible

party shall be used with the device.

And according to 15.247(b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by amount in dB than the directional

gain of the antenna exceeds of 6dBi.

As the antenna is permanently printed on RF Board, there is no consideration of replacement.

And the max gain of the antenna is 2.55dBi.



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5.4 Maximum Peak Output Power

RESULT: PASS

Date of testing: Jun. 07, 2014

Test specification: FCC Part 15 Per Section 15.247(b)(3); RSS-210

A8.4

Limits: 1 Watt.
Deviations from Standard Test Procedures: None

Test procedure: Procedure specified in ANSI C63.4

Kind of test site: Shielded room

Operation mode: Transmitting at fix channel

(High, Low, Mid)

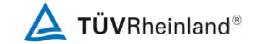
Power supply: Adapter Input: 120Vac, 60Hz

7.2Vdc from Internal battery

Temperature: 25.3 °C Humidity: 58 %

Table 2: Peak Conducted Power

	Freq Result (dBm)	Limit		Margin	
Mode		(dBm)	dBm	w	(dB)
	2402	2.514	30.00	1	27.486
GFSK	2441	4.491	30.00	1	25,509
	2480	4.096	30.00	1	25.904
	2402	2.205	21,00	0,125	18.795
8-DPSK	2441	4.069	21.00	0.125	16.931
	2480	3.700	21.00	0.125	17.300



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5.5 20dB Bandwidth

RESULT: PASS

Date of testing: Jun. 07, 2014

Test specification: FCC Part 15 Per Section 15.247(a)(2); RSS-210

A8.1

Limits: FCC Part 15 Per Section 15.247(a)(2); RSS-210

A8.1

Deviations from Standard Test procedures: None

Test procedure: Procedure specified in ANSI C63.4

Kind of test site: Shielded room

Operation mode: Transmitting at fix channel

(High, Low, Mid)

Power supply: Adapter Input: 120Vac, 60Hz

7.2Vdc from Internal battery

Temperature: 25.3 °C Humidity: 58 %

Test procedure:

- 1. Connect the antenna port of the EUT to the spectrum analyzer by a low lost cable.
- 2. Set the EUT to proper test mode with relative test software and hardware.
- 3. Spectrum analyzer setting: Centered Frequency= measured channel, RBW=30 kHz, VBW=100 kHz.
- 4. Mark the peak power frequency point and the -20dB upper and lower frequency points.
- 5. Read the frequency delta value between the -20dB upper and lower frequency points.
- 6. Repeat step 2 to 5 until all the channels required are finished.

Table 3: 20dB Bandwidth

Mode	Freq. (MHz)	20dB Bandwidth (MHz)	Conclusion
	2402	0.859	PASS
GFSK	2441	0.869	PASS
	2480	0.864	PASS
	2402	1.217	PASS
8-DPSK	2441	1.220	PASS
	2480	1.220	PASS



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5.6 Hopping Channel Carrier Frequency Separation

RESULT: PASS

Date of testing: Jun. 07, 2014

Test specification: FCC Part 15 Per Section 15.247(a)(1); RSS-210

A8.1

Limits: FCC Part 15 Per Section 15.247(a)(1): RSS-210

A8.1

Deviations from Standard Test procedures: None

Test procedure: Procedure specified in ANSI C63.4

Kind of test site: Shielded room Operation mode: Hopping mode

Power supply: Adapter Input: 120Vac, 60Hz

7.2Vdc from Internal battery

Temperature: 25.3 °C Humidity: 58 %

Test procedure:

1. Connect the antenna port of the EUT to the spectrum analyzer by a low lost cable.

- 2. Set the EUT to proper test mode with relative test software and hardware.
- 3. Spectrum analyzer setting: Centered Frequency = measured channel, RBW = 30 kHz, VBW = 100 kHz, Frequency Span = wide enough to cover the adjacent channel.
- 4. Mark the peak power frequency point of the measured channel and its adjacent channel(s)
- 5. Read the frequency delta value between the measured channel and its adjacent channel(s)
- 6. Repeat step 3 to 5 until all the channels measured are finished.

Table 4: Hopping Channel Carrier Frequency Separation

Mode	Channel	Channel separation (MHz)	Limit	Conclusion
	Low CH	1.000	0.838 MHz	PASS
GFSK	Mid CH	1.013	0.831 MHz	PASS
	High CH	1.006	0.832 MHz	PASS
172.0	Low CH	1.006	~ 2/2 - 64 - 20 ID D - 1-114	PASS
8-DPSK	Mid CH	1.006	> 2/3 of the 20dB Bandwidth or 25[kHz](whichever is greater)	PASS
	High CH	1.000	23[kH2](whichever is greater)	PASS



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5.7 Number of Hopping Frequency Used

RESULT: PASS

Date of testing: Jun. 07, 2014

Test specification: FCC Part 15 Per Section 15.247(a)(1)(iii); RSS-210

A8.1

Limits: FCC Part 15 Per Section 15.247(a)(1)(iii); RSS-210

A8.1

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

Deviations from Standard Test procedures: None

Test procedure: Procedure specified in ANSI C63.4

Kind of test site: Shielded room Operation mode: Hopping mode

Power supply: Adapter Input: 120Vac, 60Hz

7.2Vdc from Internal battery

Temperature: 25.3 °C Humidity: 58 %

Test procedure:

- 1. Connect the antenna port of the EUT to the spectrum analyzer by a low lost cable.
- 2. Set the EUT to proper test mode with relative test software and hardware.
- 3. Spectrum analyzer setting: RBW = 100 kHz, VBW≥RBW, Frequency Span = wide enough to cover the channels to be plotted.
- 4. Set the spectrum analyzer to Max-hold mode and plot the result(s) with record of all hopping channel.

Table 5: Number of Hopping Frequency Used

Mode	Number of hopping channel	Limit	Conclusion
GFSK	79	>15	PASS
8-DPSK	79	>15	PASS



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5.8 Time of Occupancy (Dwell Time)

RESULT: PASS

Date of testing: Jun. 11, 2014

Test specification: FCC Part 15 Per Section 15.247(a)(1)(iii); RSS-210

A8.1

Limits: FCC Part 15 Per Section 15.247(a)(1)(iii); RSS-210

A8.1

The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping

channels employed.

Deviations from Standard Test procedures: None

Test Procedure: Procedure specified in ANSI C63.4

Kind of test site: Shielded room

Operation mode: Transmitting at fix channel

(Mid)

Power supply: Adapter Input: 120Vac, 60Hz

7.2Vdc from Internal battery

Temperature: 25.3 °C Humidity: 58 %

Test procedure:

- 1. Connect the antenna port of the EUT to the spectrum analyzer by a low lost cable.
- 2. Set the EUT to proper test mode with relative test software and hardware.
- 3. Spectrum analyzer setting: Centered Frequency = measured channel, RBW = 1MHz, VBW≥RBW, Frequency Span = 0 Hz.
- 4. Set sweep time properly to capture the entire dwell time per hopping channel.
- 5. Set detector type to Peak and trace mode to Max Hold and make the measurement.
- 6. Repeat step 3-5 until all channels measured were complete.

Table 6: Time of Occupancy (Dwell Time)

Mode	Dwell time (ms)	Limit	Conclusion
GFSK DH1	158.00	<400ms	PASS
GFSK DH3	270.18	<400ms	PASS
GFSK DH5	321.25	<400ms	PASS
8-DPSK DH1	142.20	<400ms	PASS
8-DPSK DH3	270.18	<400ms	PASS
8-DPSK DH5	319.10	<400ms	PASS



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5.9 Band-edge Emission

RESULT: PASS

Date of testing: May 30, 2014

Test specification: FCC Part 15 Per Section 15.247(d); RSS-210

Clause 2.2

Limits: FCC Part 15 Per Section 15.247(d); RSS-210

Clause 2.2

In addition:

FCC Part 15 - radiated emission which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits

specified in section 15.209(a).

Deviations from Standard Test procedures: None

Test Procedure: Procedure specified in ANSI C63.4

Kind of test site: Shielded room

Operation mode: Transmitting at fix channel

(High, Low, Mid)

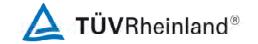
Power supply: Adapter Input: 120Vac, 60Hz

7.2Vdc from Internal battery

Temperature: 25.6 °C Humidity: 56 %

Test procedure:

- 1. EUT was placed on a turn table, which is 0.8 meter high above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. Power on the EUT and let it working in test mode, then test it. EUT is set 3 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1 meter and 4 meters to find out the maximum emission level. Both horizontal and vertical polarizations of antenna are set on test.
- 2. Spectrum analyzer setting: (a) PEAK: RBW=VBW=1MHz / Sweep=AUTO
 - (b) AVERAGE: RBW=1MHz / VBW=10Hz / Sweep=AUTO



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5.10 Power spectral density

RESULT: N/A

Date of testing: ---

Test specification: FCC Part 15 Per Section 15.247(e); RSS-210 A8.2 Limits: FCC Part 15 Per Section 15.247(e); RSS-210 A8.2

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous

transmission.

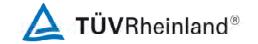
Deviations from Standard Test procedures: None

Test procedure: Procedure specified in ANSI C63.4

Kind of test site: Shielded room

Operation mode: --Power supply: --Temperature: --Humidity: ---

EUT does not use DTS technics, therefore this test is not applicable.



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5.11 Out-of-Band Emission (Conducted spurious emission)

RESULT: PASS

Date of testing: Jun. 11, 2014

Test specification: FCC Part 15 Per Section 15.247(d); RSS-210 A8.5 Limits: FCC Part 15 Per Section 15.247(d); RSS-210 A8.5

In any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

neasurement

In addition:

FCC Part 15 - radiated emission which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits

specified in section 15.209(a).

Deviations from Standard Test procedures: None

Test Procedure: Procedure specified in ANSI C63.4

Kind of test site: Shielded room

Operation mode: Transmitting at fix channel

(Mid)

Power supply: Adapter Input: 120Vac, 60Hz

7.2Vdc from Internal battery

Temperature: 25.3 °C Humidity: 58 %

Test procedure:

- 1. Connect the antenna port of the EUT to the spectrum analyzer by a low lost cable.
- 2. Set the EUT to proper test mode with relative test software and hardware.
- 3. Spectrum analyzer setting: RBW = 100 kHz, VBW≥RBW.
- 4. Set proper frequency span respectively for out-of-band emission measurement of the band edge and the whole range (up to 10 times of the carrier frequency.)
- 5. Set the trace mode to Max Hold and mark the peak reading of any spurious emission recorded.



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Table 7: Out-Of-Band Emission measurement (conducted spurious emission)

Emission (Carrier operating at Channel low, mid and high)	Attenuation	Limit (dB)
30MHz to 25GHz	All emission in this 100kHz bandwidth are attenuated more than 20dB from the carrier	△≥20

Note: Refer to Appendix 1 for measurement data.



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5.12 99% Bandwidth

RESULT: PASS

Date of testing: Jun. 07, 2014
Test specification: RSS-210, A8.1 (c)

Limits: N/A
Deviations from Standard Test procedures: None

Test procedure: Procedure specified in ANSI C63.4

Kind of test site: Shielded room

Operation mode: Transmitting at fix channel

(High, Low, Mid)

Power supply: Adapter Input: 120Vac, 60Hz

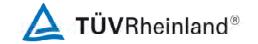
7.2Vdc from Internal battery

Temperature: 25.3 °C Humidity: 58 %

Test procedure:

1. Connect the antenna port of the EUT to the spectrum analyzer by a low lost cable.

- 2. Set the EUT to proper test mode with relative test software and hardware.
- 3. Spectrum analyzer setting: Centered Frequency= measured channel, RBW=30kHz, VBW=100kHz.
- 4. Repeat step 2 to 3 until all the channels required are finished.



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6. Safety Human exposure

6.1 Radio Frequency Exposure Compliance

6.1.1 Electromagnetic Fields

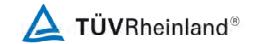
RESULT: PASS

Test standard: RSS-102 Issue 4

FCC KDB Publication 447498

The maximum peak output power of the transmitter is 2.813 mW only, which less than 20mW. Hence the EUT is exempted from routine evaluation limits (SAR Evaluation) according to clause 2.5.1 of RSS-102 Issue 4.

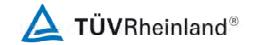
The minimum distance for the EUT is 5mm, since maximum peak output power of the transmitter is 2.813 mW < 10 mW, hence the EUT is excluded from SAR evaluation according to FCC KDB publication 447498 D01: Mobile and Portable RF Exposure Guidance v05.



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7. Photographs of	the Test Set-Up	
Photograph 1: Set-up for	Power Line Conducted Emiss	ion



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Photograph 2: Set-up for Radiation Measurement below 1GHz								
Photograph 3: Set-up for	r Radiation Measurement above 1GHz							



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Photograph 3: Set-up for Radiation Measurement above 1GHz	28

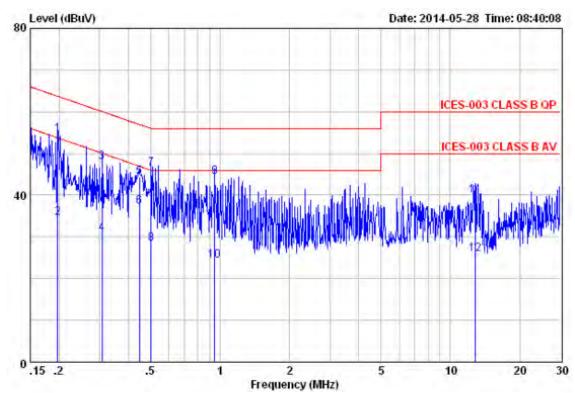


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1. POWER LINE CONDUCTED EMISSIONS



Limit : ICES-003 CLASS B QP LINE Phase : LINE

Env. / Ins. : Temp:25.3'C Humi:58% Press:101.50kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 15V From Adapter Input AC 120V/60Hz

M/N : BeoPlay A2 Test Mode : TX Mode

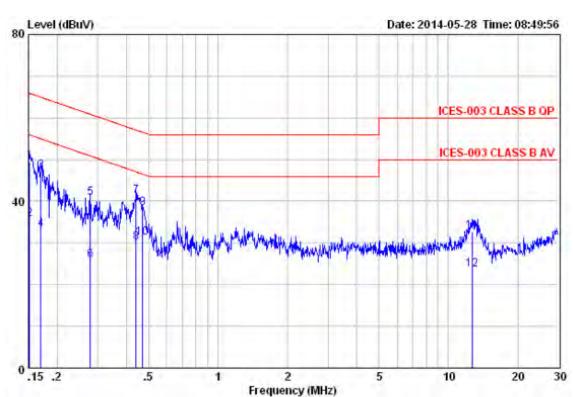
	Freq.	LISN Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuv/m)	Limits (dBuv/m)	Margin (dB)	Remark
1	0.20	9.61	9.80	35.22	54.63	63.71	9.08	QP
2	0.20	9.61	9.80	15.22	34.63	53.71	19.08	Average
3	0.31	9.61	9.83	28.39	47.83	60.06	12.23	QP
4	0.31	9.61	9.83	11.39	30.83	50.06	19.23	Average
5	0.45	9.61	9.81	24.86	44.28	56.93	12.65	QP
6	0.45	9.61	9.81	17.86	37.28	46.93	9.65	Average
7	0.50	9.61	9.81	26.98	46.40	56.00	9.60	QP
8	0.50	9.61	9.81	8.98	28.40	46.00	17.60	Average
9	0.95	9.63	9.82	24.85	44.30	56.00	11.70	QP
10	0.95	9.63	9.82	4.85	24.30	46.00	21.70	Average
11	12.85	9.67	9.91	20.22	39.80	60.00	20.20	QP
12	12.85	9.67	9.91	6.22	25.80	50.00	24.20	Average



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Limit : ICES-003 CLASS B QP LINE Phase : NEUTRAL

Env. / Ins. : Temp:25.3'C Humi:58% Press:101.50kPa

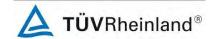
Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 15V From Adapter Input AC 120V/60Hz

M/N : BeoPlay A2 Test Mode : TX Mode

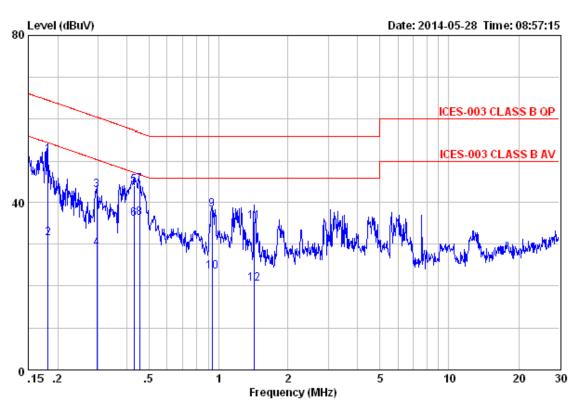
		LISN	Cable		Emission			
	Freq.	Factor	Loss	Reading	Level	Limits	Margin	Remark
	(MHz)	(dB/m)	(dB)	(dBuV)	(dBuv/m)	(dBuv/m)	(dB)	
1	0.15	9.46	9.81	30.30	49.57	65.91	16.34	QP
2	0.15	9.46	9.81	16.30	35.57	55.91	20.34	Average
3	0.17	9.52	9.81	27.88	47.21	64.99	17.78	QP
4	0.17	9.52	9.81	13.88	33.21	54.99	21.78	Average
5	0.28	9.60	9.83	21.40	40.83	60.85	20.02	QP
6	0.28	9.60	9.83	6.40	25.83	50.85	25.02	Average
7	0.44	9.59	9.81	21.77	41.17	57.07	15.90	QP
8	0.44	9.59	9.81	10.77	30.17	47.07	16.90	Average
9	0.47	9.59	9.81	18.88	38.28	56.49	18.21	QP
10	0.47	9.59	9.81	11.88	31.28	46.49	15.21	Average
11	12.65	9.73	9.92	13.00	32.65	60.00	27.35	QP
12	12.65	9.73	9.92	4.00	23.65	50.00	26.35	Average



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Limit : ICES-003 CLASS B QP LINE Phase : LINE

Env. / Ins. : Temp:25.3'C Humi:58% Press:101.50kPa

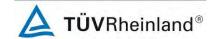
Engineer : Tony

EUT : Portable Bluetooth Speaker

Power : DC 15V From Adapter Input AC 120V/60Hz

M/N : BeoPlay A2 Test Mode : RX Mode Emission

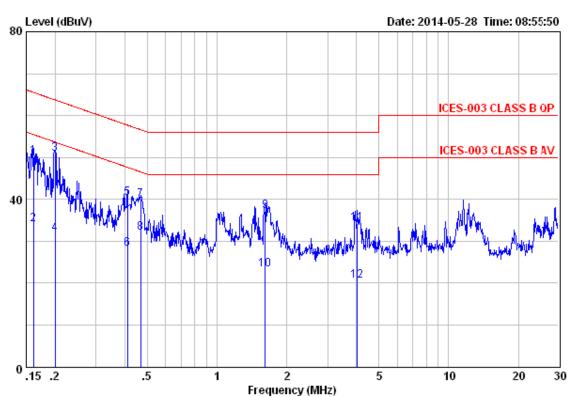
	Freq. (MHz)	Reading (dBuV)	Level (dBuv/m)		_	Remark
1	0.18	32.01	51.42	64.42	13.00	QP
2	0.18	12.01	31.42	54.42	23.00	Average
3	0.30	23.59	43.03	60.37	17.34	QP
4	0.30	9.59	29.03	50.37	21.34	Average
5	0.43	24.73	44.15	57.24	13.09	QP
6	0.43	16.73	36.15	47.24	11.09	Average
7	0.45	24.85	44.27	56.80	12.53	QP
8	0.45	16.85	36.27	46.80	10.53	Average
9	0.93	18.87	38.32	56.00	17.68	QP
10	0.93	3.87	23.32	46.00	22.68	Average
11	1.43	16.07	35.51	56.00	20.49	QP
12	1.43	1.07	20.51	46.00	25.49	lverage



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Limit : ICES-003 CLASS B QP LINE Phase : NEUTRAL

Env. / Ins. : Temp:25.3'C Humi:58% Press:101.50kPa

Engineer : Tony

FUT : Portable Bluetooth Speaker

Fower : DC 15V From Adapter Input AC 120V/60Hz

M/N : BeoPlay A2 Test Mode : RX Mode

Em	i	ss	i	o	n
	_		_	~	**

	Freq. (MHz)	Reading (dBuV)	Level (dBuv/m)	Limits (dBuv/m	_	Remark
1	0.16	30.73	50.04	65.38	15.34	QP
2	0.16	14.73	34.04	55.38	21.34	Average
3	0.20	31.36	50.76	63.62	12.86	QP
4	0.20	12.36	31.76	53.62	21.86	Average
5	0.41	20.99	40.40	57.64	17.24	QP
6	0.41	8.99	28.40	47.64	19.24	Average
7	0.47	20.60	40.00	56.54	16.54	OP
8	0.47	12.60	32.00	46.54	14.54	Average
9	1.61	17.69	37.14	56.00	18.86	QP
10	1.61	3.69	23.14	46.00	22.86	Average
11	4.01	14.92	34.40	56.00	21.60	QP
12	4.01	0.92	20.40	46.00	25.60	Average

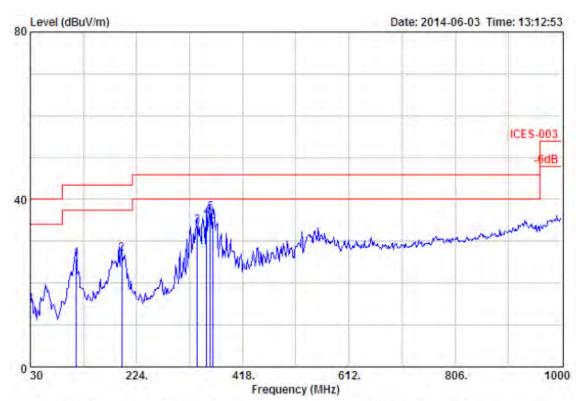


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2. RADIATED EMISSIONS (30MHz-1GHz)



Site no. : 3m Chamber Data no. : 829

Dis. / Ant. : 3m 27137 Ant. pol. : HORIZONTAL

Limit : ICES-003

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 15V From Adapter Input AC 120V/60Hz

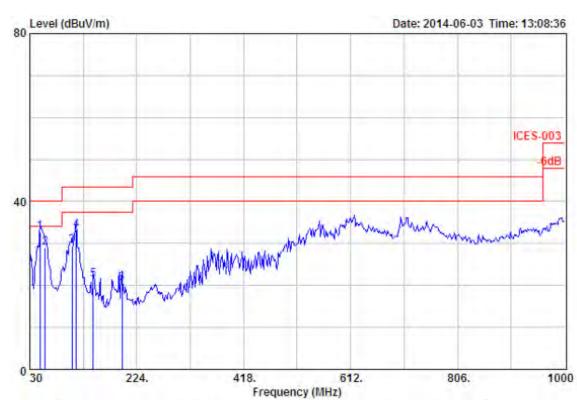
M/N : BeoPlay A2 Test Mode : GFSK TX 2402MHz

		Ant.	Cable		Emission			
	Freq.	Factor	Loss	Reading	Level	Limits	Margin	Remark
	(MHz)	(dB/m)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	114.39	10.85	3.26	11.77	25.88	43.50	17.62	QP
2	196.84	7.72	4.26	15.08	27.06	43.50	16.44	QP
3	334.58	13.99	5.52	14.18	33.69	46.00	12.31	QP
4	352.04	14.47	5.69	15.40	35.56	46.00	10.44	QP
5	358.83	14.45	5.73	16.50	36.68	46.00	9.32	QP
6	363.68	14.61	5.72	14.44	34.77	46.00	11.23	QP



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Site no. : 3m Chamber Data no. : 828

Dis. / Ant. : 3m 27137 Ant. pol. : VERTICAL

Limit : ICES-003

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

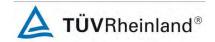
Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 15V From Adapter Input AC 120V/60Hz

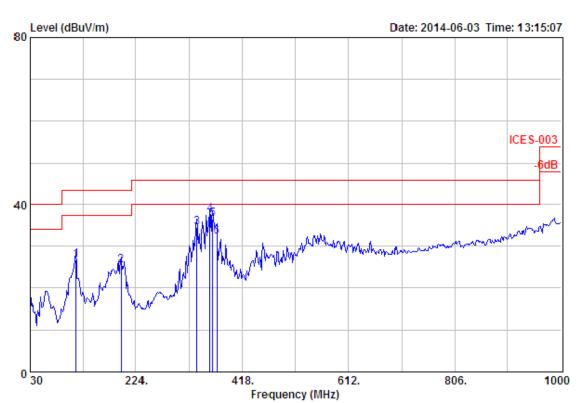
M/N : BeoPlay A2 Test Mode : GFSK TX 2402MHz

		Ant.	Cable		Emission			
	Freq.	Factor (dB/m)		-	Level (dBuV/m)		-	Remark
1	48.43	8.37	2.30	22.04	32.71	40.00	7.29	QP
2	58.13	4.91	2.54	21.47	28.92	40.00	11.08	QP
3	106.63	10.15	3.15	16.04	29.34	43.50	14.16	QP
4	114.39	10.85	3.26	18.99	33.10	43.50	10.40	QP
5	145.43	11.22	3.73	6.38	21.33	43.50	22.17	QP
6	196.84	7.72	4.26	8.47	20.45	43.50	23.05	QP



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Site no. : 3m Chamber Data no. : 830

Dis. / Ant. : 3m 27137 Ant. pol. : HORIZONTAL

Limit : ICES-003

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 15V From Adapter Input AC 120V/60Hz

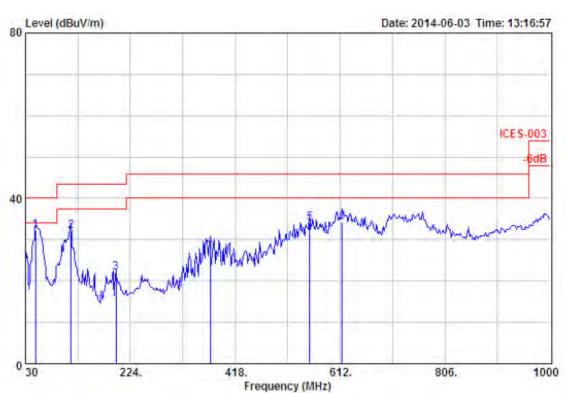
M/N : BeoPlay A2 Test Mode : GFSK TX 2441MHz

	-	Factor	Loss	Reading	Emission Level (dBuV/m)	Limits	_	Remark
1	114.39	10.85	3.26	12.72	26.83	43.50	16.67	QP
2	196.84	7.72	4.26	13.50	25.48	43.50	18.02	QP
3	334.58	13.99	5.52	14.95	34.46	46.00	11.54	QP
4	358.83	14.45	5.73	17.52	37.70	46.00	8.30	QP
5	363.68	14.61	5.72	16.31	36.64	46.00	9.36	QP
6	371.44	14.89	5.77	11.68	32.34	46.00	13.66	QP



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Site no. : 3m Chamber Data no. : 831

Dis. / Ant. : 3m 27137 Ant. pol. : VERTICAL

Limit : ICES-003

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 15V From Adapter Input AC 120V/60Hz

M/N : BeoPlay A2 Test Mode : GFSK TX 2441MHz

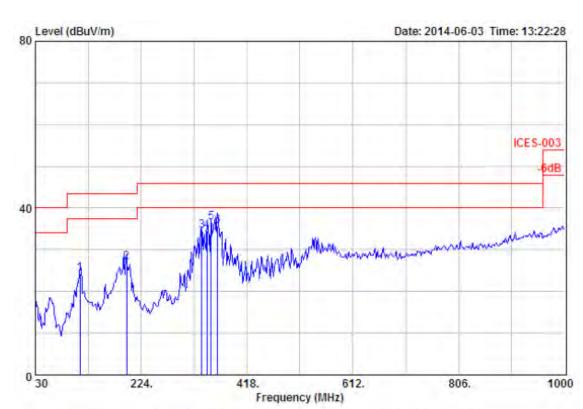
		Ant.			Emission			
	-			-	Level		-	Remark
	(MHz)	(dB/m)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	48.43	8.37	2.30	21.58	32.25	40.00	7.75	QP
2	114.39	10.85	3.26	17.90	32.01	43.50	11.49	QP
3	196.84	7.72	4.26	10.08	22.06	43.50	21.44	QP
4	371.44	14.89	5.77	7.72	28.38	46.00	17.62	QP
5	555.74	19.61	7.08	7.49	34.18	46.00	11.82	QP
6	615.88	19.97	7.47	6.97	34.41	46.00	11.59	QP



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Site no. : 3m Chamber Data no. : 833

Dis. / Ant. : 3m 27137 Ant. pol. : HORIZONTAL

Limit : ICES-003

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 15V From Adapter Input AC 120V/60Hz

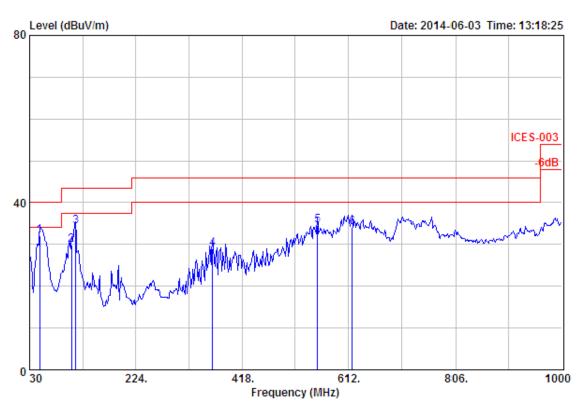
M/N : BeoPlay A2 Test Mode : GFSK TX 2480MHz

	Ant.		Cable		Emission			
	Freq. (MHz)				Level (dBuV/m)		-	Remark
1	111.48	10.60	3.22	10.46	24.28	43.50	19.22	QP
2	196.84	7.72	4.26	15.07	27.05	43.50	16.45	QP
3	334.58	13.99	5.52	15.00	34.51	46.00	11.49	QP
4	344.28	14.28	5.63	14.62	34.53	46.00	11.47	QP
5	352.04	14.47	5.69	16.28	36.44	46.00	9.56	QP
6	363.68	14.61	5.72	15.42	35.75	46.00	10.25	QP



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Site no. : 3m Chamber Data no. : 832
Dis. / Ant. : 3m 27137 Ant. pol. : VERTICAL

Limit : ICES-003

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

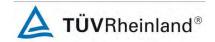
Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 15V From Adapter Input AC 120V/60Hz

M/N : BeoPlay A2 Test Mode : GFSK TX 2480MHz

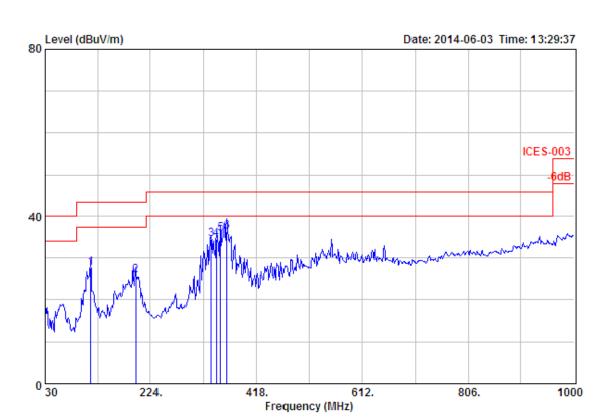
	-	Factor	Loss	Reading	Emission Level (dBuV/m)	Limits	_	Remark
1	48.43	8.37	2.30	21.34	32.01	40.00	7.99	QP
2	106.63	10.15	3.15	16.46	29.76	43.50	13.74	QP
3	114.39	10.85	3.26	20.29	34.40	43.50	9.10	QP
4	363.68	14.61	5.72	8.55	28.88	46.00	17.12	QP
5	555.74	19.61	7.08	7.92	34.61	46.00	11.39	QP
6	618.79	20.02	7.49	6.57	34.08	46.00	11.92	QP



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Site no. : 3m Chamber Data no. : 834

Dis. / Ant. : 3m 27137 Ant. pol. : HORIZONTAL

Limit : ICES-003

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

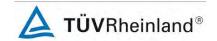
EUT : Bluetooth Speaker

Power : DC 15V From Adapter Input AC 120V/60Hz

M/N : BeoPlay A2

Test Mode : 8-DPSK TX 2402MHz

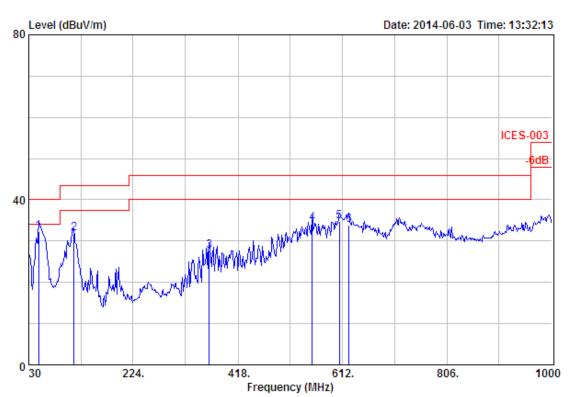
		Ant.	Cable		Emission			
	-			_		Limits (dBuV/m)	_	Remark
		(GD/III)	(45)	(GDGV)	(GDGV/III)	(\abav/10)		
1	114.39	10.85	3.26	13.60	27.71	43.50	15.79	QP
2	196.84	7.72	4.26	13.88	25.86	43.50	17.64	QP
3	334.58	13.99	5.52	15.02	34.53	46.00	11.47	QP
4	344.28	14.28	5.63	14.61	34.52	46.00	11.48	QP
5	352.04	14.47	5.69	15.75	35.91	46.00	10.09	QP
6	363.68	14.61	5.72	16.10	36.43	46.00	9.57	QP



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Site no. : 3m Chamber Data no.: 835
Dis. / Ant. : 3m 27137 Ant. pol.: VERTICAL

Limit : ICES-003

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

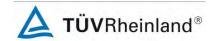
EUT : Bluetooth Speaker

Power : DC 15V From Adapter Input AC 120V/60Hz

M/N : BeoPlay A2

Test Mode : 8-DPSK TX 2402MHz

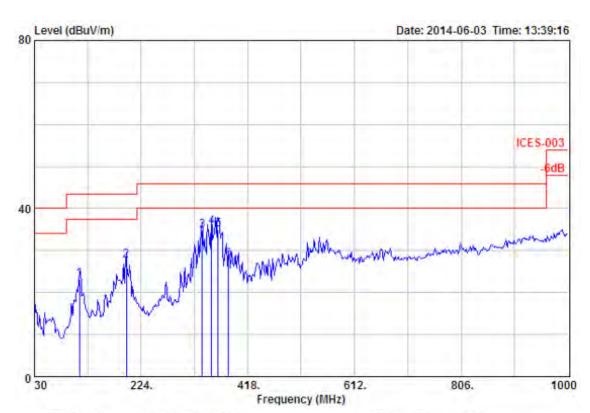
	-	Factor	Loss	Reading	Emission Level (dBuV/m)	Limits	_	Remark	
1	48.43	8.37	2.30	21.63	32.30	40.00	7.70	QP	
2	114.39	10.85	3.26	17.83	31.94	43.50	11.56	QP	
3	363.68	14.61	5.72	7.34	27.67	46.00	18.33	QP	
4	555.74	19.61	7.08	7.55	34.24	46.00	11.76	QP	
5	606.18	19.77	7.41	7.66	34.84	46.00	11.16	QP	
6	623.64	20.08	7.53	6.16	33.77	46.00	12.23	QP	



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Site no. : 3m Chamber Data no. : 837

Dis. / Ant. : 3m 27137 Ant. pol. : HORIZONTAL

Limit : ICES-003

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 15V From Adapter Input AC 120V/60Hz

M/N : BeoPlay A2

Test Mode : 8-DPSK TX 2441MHz

	Ant.		Cable		Emission			
	Freq.	Factor	Loss	Reading	Level	Limits	Margin	Remark
	(MHz)	(dB/m)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
	111 40		0.00	0.40	26 22	40 50	20.20	O.D.
					23.22			-
2	196.84	7.72	4.26	15.72	27.70	43.50	15.80	QP
3	334.58	13.99	5.52	15.17	34.68	46.00	11.32	QP
4	352.04	14.47	5.69	15.47	35.63	46.00	10.37	QP
5	363.68	14.61	5.72	14.61	34.94	46.00	11.06	QP
6	383.08	15.18	5.81	6.94	27.93	46.00	18.07	QP

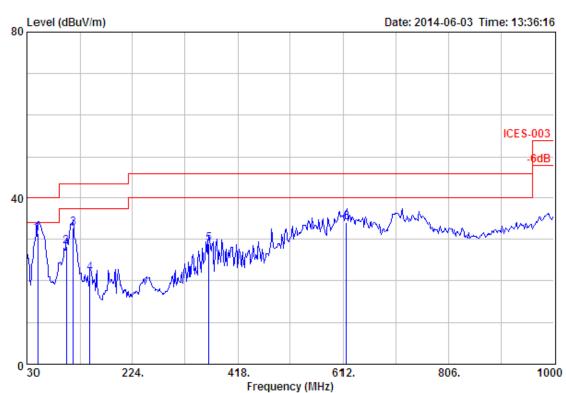
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Site no. : 3m Chamber Data no. : 836
Dis. / Ant. : 3m 27137 Ant. pol. : VERTICAL

Limit : ICES-003

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

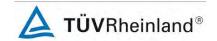
EUT : Bluetooth Speaker

Power : DC 15V From Adapter Input AC 120V/60Hz

M/N : BeoPlay A2

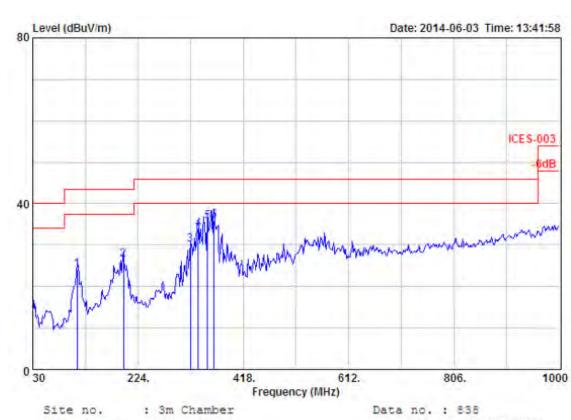
Test Mode : 8-DPSK TX 2441MHz

_		-	Factor	Loss	Reading	Emission Level (dBuV/m)	Limits	_	Remark
	1	48.43	8.37	2.30	20.75	31.42	40.00	8.58	QP
	2	101.78	9.65	3.07	15.65	28.37	43.50	15.13	QP
	3	114.39	10.85	3.26	18.63	32.74	43.50	10.76	QP
	4	145.43	11.22	3.73	6.93	21.88	43.50	21.62	QP
	5	363.68	14.61	5.72	8.63	28.96	46.00	17.04	QP
	6	616.85	19.99	7.49	6.53	34.01	46.00	11.99	QP



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Dis. / Ant. : 3m 27137 Ant. pol. : HORIZONTAL

Limit : ICES-003 Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

: DC 15V From Adapter Input AC 120V/60Hz Power

: BeoPlay A2

Test Mode : 8-DPSK TX 2480MHz

				Reading	Level (dBuV/m)	Limits		Remark
1	111.48	10.60	3.22	10.18	24.00	43.50	19.50	QP
2	196.84	7.72	4.26	14.55	26.53	43.50	16.97	QP
3	320.03	13.57	5.37	11.03	29.97	46.00	16.03	QP
4	334.58	13.99	5.52	14.27	33.78	46.00	12.22	QP
5	352.04	14.47	5.69	15.44	35.60	46.00	10.40	QP
6	363.68	14.61	5.72	15.51	35.84	46.00	10.16	QP

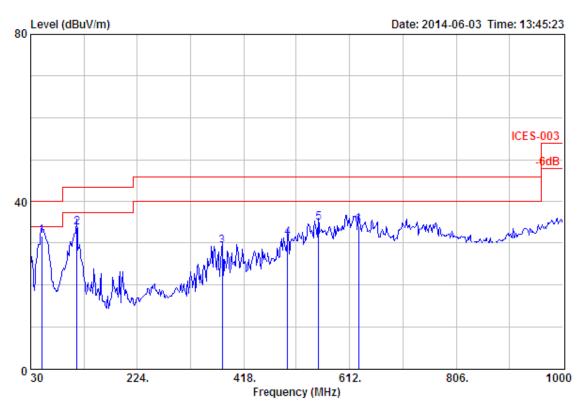
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Site no. : 3m Chamber Data no. : 839

Dis. / Ant. : 3m 27137 Ant. pol. : VERTICAL

Limit : ICES-003

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

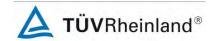
EUT : Bluetooth Speaker

Power : DC 15V From Adapter Input AC 120V/60Hz

M/N : BeoPlay A2

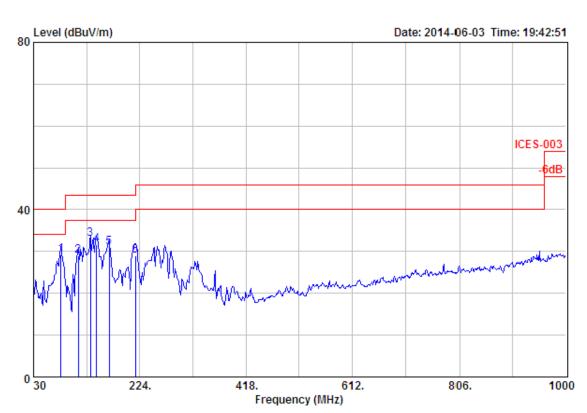
Test Mode : 8-DPSK TX 2480MHz

		Ant.	Cable		Emission	Emission		
	_			_		Limits (dBuV/m)	_	Remark
1	50.37	7.43	2.35	21.98	31.76	40.00	8.24	QP
2	114.39	10.85	3.26	19.87	33.98	43.50	9.52	QP
3	378.23	14.98	5.78	8.56	29.32	46.00	16.68	QP
4	499.48	17.87	6.72	6.74	31.33	46.00	14.67	QP
5	555.74	19.61	7.08	8.37	35.06	46.00	10.94	QP
6	628.49	20.14	7.56	6.54	34.24	46.00	11.76	QP



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Site no. : 3m Chamber Data no. : 840

Dis. / Ant. : 3m 27137 Ant. pol. : HORIZONTAL

Limit : ICES-003

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 15V From Adapter Input AC 120V/60Hz

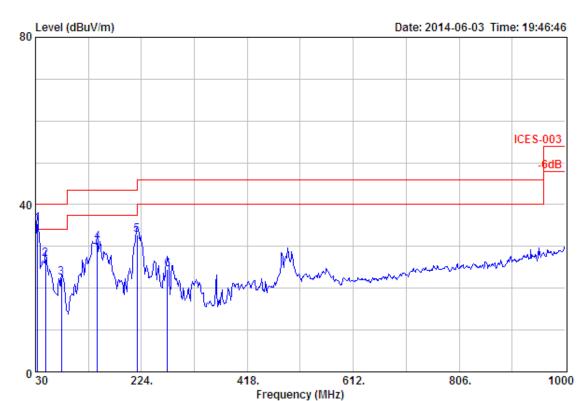
M/N : BeoPlay A2 Test Mode : RX Mode

	_	Factor	Loss	Reading	Emission Level (dBuV/m)	Limits	_	Remark
1	80.44	7.07	1.25	20.78	29.10	40.00	10.90	QP
2	111.48	10.60	1.44	16.92	28.96	43.50	14.54	QP
3	133.79	11.36	1.56	20.05	32.97	43.50	10.53	QP
4	145.43	11.22	1.53	18.93	31.68	43.50	11.82	QP
5	167.74	9.43	1.71	19.93	31.07	43.50	12.43	QP
6	216.24	8.80	1.95	18.22	28.97	46.00	17.03	QP



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Site no. : 3m Chamber Data no. : 841

Dis. / Ant. : 3m 27137 Ant. pol. : VERTICAL

: ICES-003

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

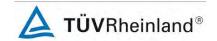
Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 15V From Adapter Input AC 120V/60Hz

: BeoPlay A2 M/N Test Mode : RX Mode

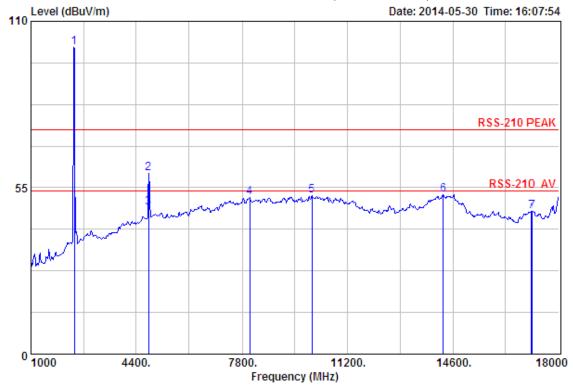
	_	Factor	Loss	Reading	Emission Level (dBuV/m)	Limits	_	Remark
1	33.88	16.11	0.70	18.64	35.45	40.00	4.55	QP
2	48.43	8.37	0.98	17.59	26.94	40.00	13.06	QP
3	77.53	6.80	1.20	14.40	22.40	40.00	17.60	QP
4	143.49	11.29	1.55	18.06	30.90	43.50	12.60	QP
5	216.24	8.80	1.95	22.02	32.77	46.00	13.23	QP
6	271.53	12.49	2.29	9.83	24.61	46.00	21.39	QP



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3. RADIATED EMISSIONS (1GHz-18GHz)



Site no. : 3m Chamber Data no. : 769

Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : RSS-210 PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

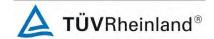
EUT : Bluetooth Speaker

Power : DC 15V From Adapter Input AC 120V/60Hz

M/N : BeoPlay A2 Test Mode : GFSK TX 2402MHz

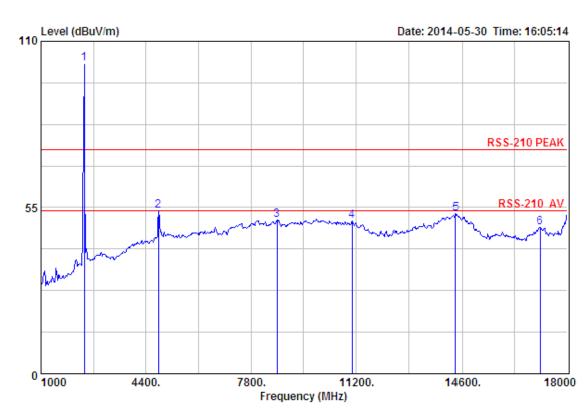
	Freq.	Ant. Factor (dB/m)	Loss	Factor	Reading	Emission Level (dBuV/m)	Limits	_	Remark
1	2402.00	27.61	6.62	34.18	101.41	101.46	74.00	-27.46	Peak
2	4804.00	31.25	11.77	31.81	48.58	59.79	74.00	14.21	Peak
3	4804.00	31.25	11.77	0.00	5.28	48.30	54.00	5.70	Average
4	8038.00	36.95	11.40	31.28	34.59	51.66	74.00	22.34	Peak
5	10044.00	38.18	11.56	31.85	34.63	52.52	74.00	21.48	Peak
6	14294.00	41.71	10.92	33.08	33.24	52.79	74.00	21.21	Peak
	17133.00	40.26				47.20	74.00	26.80	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3m Chamber Data no. : 768

Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : RSS-210 PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

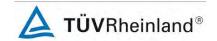
EUT : Bluetooth Speaker

Power : DC 15V From Adapter Input AC 120V/60Hz

M/N : BeoPlay A2 Test Mode : GFSK TX 2402MHz

	Freq.	Factor	Loss	Factor	Reading	Emission g Level (dBuV/m)	Limits	_	Remark
1	2402.00	27.61	6.62	34.18	102.64	102.69	74.00	-28.69	Peak
2	4804.00	31.25	11.77	31.81	42.69	53.90	74.00	20.10	Peak
3	8633.00	37.24	11.45	32.31	34.51	50.89	74.00	23.11	Peak
4	11064.00	39.48	11.24	33.78	33.58	50.52	74.00	23.48	Peak
5	14413.00	41.80	10.92	32.78	32.95	52.89	74.00	21.11	Peak
6	17116.00	40.19	10.95	32.92	30.15	48.37	74.00	25.63	Peak

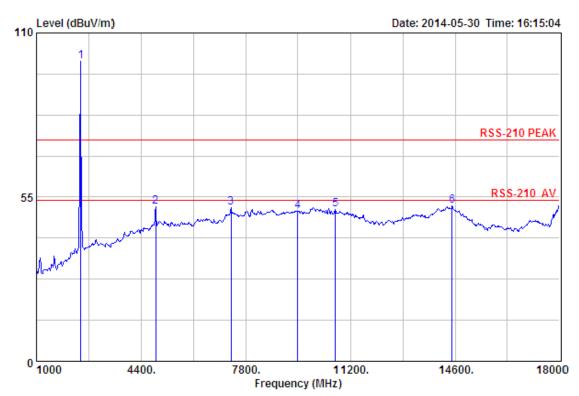
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3m Chamber Data no. : 773

Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : RSS-210 PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 15V From Adapter Input AC 120V/60Hz

M/N : BeoPlay A2 Test Mode : GFSK TX 2441MHz

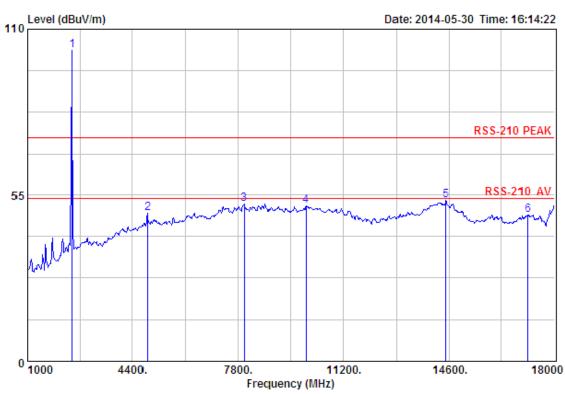
	Freq.	Factor	Loss	Factor	Reading	Emission Level (dBuV/m)	Limits	_	Remark
1	2441.00	27.60	6.67	34.12	100.38	100.53	74.00	-26.53	Peak
2	4859.00	31.34	11.99	31.88	40.40	51.85	74.00	22.15	Peak
3	7324.00	36.55	11.57	31.99	35.41	51.54	74.00	22.46	Peak
4	9500.00	37.99	11.71	31.92	32.39	50.17	74.00	23.83	Peak
5	10724.00	39.22	11.30	33.14	33.49	50.87	74.00	23.13	Peak
6	14498.00	41.88	10.93	33.08	32.32	52.05	74.00	21.95	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3m Chamber Data no. : 772
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : RSS-210 PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

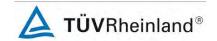
EUT : Bluetooth Speaker

Power : DC 15V From Adapter Input AC 120V/60Hz

M/N : BeoPlay A2 Test Mode : GFSK TX 2441MHz

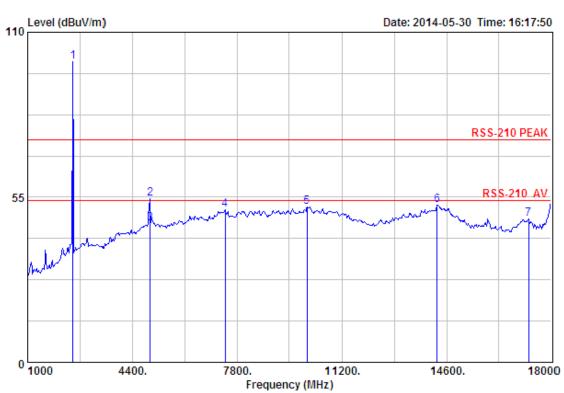
	Freq.	Factor	Loss	Factor	Reading	Level	Limits	_	Remark
1	2441.00	27.60	6.67	34.12	102.65	102.80	74.00	-28.80	Peak
2	4882.00	31.37	12.07	31.90	37.40	48.94	74.00	25.06	Peak
3	8004.00	37.01	11.40	31.22	34.76	51.95	74.00	22.05	Peak
4	9993.00	38.12	11.59	31.78	33.47	51.40	74.00	22.60	Peak
5	14498.00	41.88	10.93	33.08	33.62	53.35	74.00	20.65	Peak
6	17133.00	40.26	10.94	33.03	30.24	48.41	74.00	25.59	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3m Chamber Data no. : 774

Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : RSS-210 PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

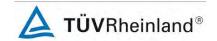
EUT : Bluetooth Speaker

Power : DC 15V From Adapter Input AC 120V/60Hz

M/N : BeoPlay A2 Test Mode : GFSK TX 2480MHz

	Freq.		Loss	Factor	Reading	Emission g Level (dBuV/m)	Limits	_	Remark
1	2480.00	27.58	6.71	34.03	99.91	100.17	74.00	-26.17	Peak
2	4960.00	31.49	12.44	31.97	42.54	54.50	74.00	19.50	Peak
3	4960.00	31.49	12.44	0.00	2.32	46.25	54.00	7.75	Average
4	7409.00	36.58	11.60	31.97	34.63	50.84	74.00	23.16	Peak
5	10078.00	38.24	11.54	31.92	33.90	51.76	74.00	22.24	Peak
6	14294.00	41.71	10.92	33.08	32.85	52.40	74.00	21.60	Peak
7	17269.00	40.78	10.89	33.87	29.94	47.74	74.00	26.26	Peak

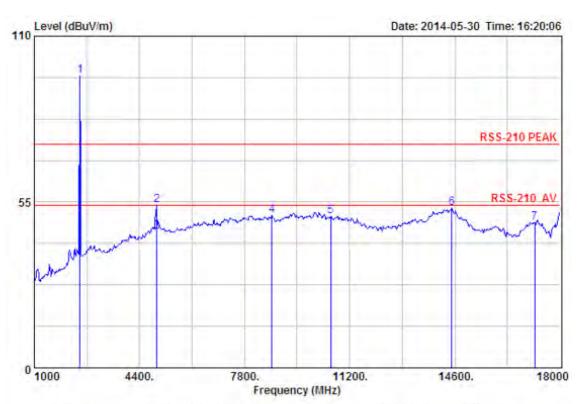
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3m Chamber Data no. : 775

Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : RSS-210 PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

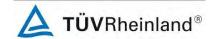
Fower : DC 15V From Adapter Input AC 120V/60Hz

M/N : BeoPlay A2
Test Mode : GFSK TX 2480MHz
Ant. Cable Amp

		Ant.	Cable	Amp		Emission			
	Freq. (MHz)	Factor (dB/m)	Loss (dB)	Factor (dB)		Level (dBuV/m)		Margin (dB)	Remark
1	2480.00	27.58	6.71	34.03	96.66	96.92	74.00	-22.92	Peak
2	4960.00	31.49	12.44	31.97	41.99	53.95	74.00	20.05	Peak
3	4960.00	31.49	12.44	0.00	1.07	45.00	54.00	9.00	Average
4	8684.00	37.32	11.45	32.43	34.19	50.53	74.00	23.47	Peak
5	10588.00	39.07	11.31	32.88	32.88	50.38	74.00	23.62	Peak
6	14498.00	41.88	10.93	33.08	33.32	53.05	74.00	20.95	Peak
7	17184.00	40.45	10.92	33.34	30.12	48.15	74.00	25.85	Peak

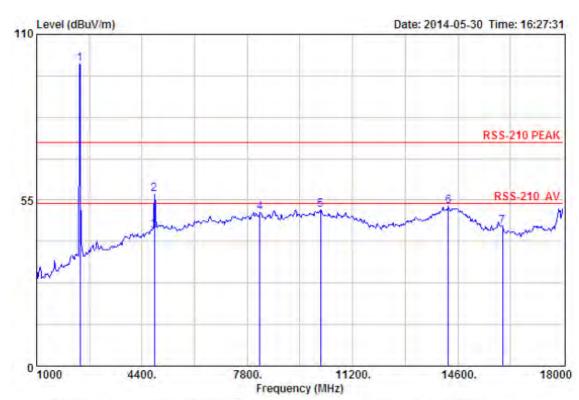
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

The emission levels that are 20dB below the official limit are not reported.



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Site no. : 3m Chamber Data no. : 778

Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : RSS-210 PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

: Tony Engineer

: Bluetooth Speaker EUT

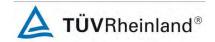
: DC 15V From Adapter Input AC 120V/60Hz Power

M/N : BeoPlay A2

Test Mode : 8-DPSK TX 2402MHz

	Freq.	Ant. Factor (dB/m)	Cable Loss (dB)	-	Reading	Emission Level (dBuV/m)	Limits		Remark
1	2402.00	27.61	6.62	34.18	100.15	100.20	74.00	-26.20	Peak
2	4804.00	31.25	11.77	31.81	45.66	56.87	74.00	17.13	Peak
3	4804.00	31.25	11.77	0.00	1.83	44.85	54.00	9,15	Average
4	8208.00	36.66	11.42	31.46	34.33	50.95	74.00	23.05	Peak
5	10163.00	38.39	11.50	32.08	33.90	51.71	74.00	22.29	Peak
6	14294.00	41.71	10.92	33.08	33.39	52.94	74.00	21.06	Peak
7	16045.00	37.13	10.65	32.79	31.34	46.33	74.00	27.67	Peak

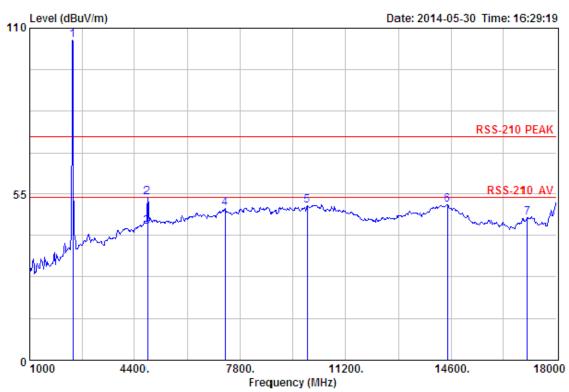
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3m Chamber Data no. : 779

Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : RSS-210 PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

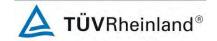
Power : DC 15V From Adapter Input AC 120V/60Hz

M/N : BeoPlay A2

Test Mode : 8-DPSK TX 2402MHz

	Freq.			Factor	Reading	Emission g Level (dBuV/m)	Limits	_	Remark
1	2402.00	27.61	6.62	34.18	106.08	106.13	74.00	-32.13	Peak
2	4804.00	31.25	11.77	31.81	42.81	54.02	74.00	19.98	Peak
3	4804.00	31.25	11.77	0.00	1.19	44.21	54.00	9.79	Average
4	7324.00	36.55	11.57	31.99	34.01	50.14	74.00	23.86	Peak
5	9959.00	38.13	11.60	31.77	33.23	51.19	74.00	22.81	Peak
6	14481.00	41.86	10.93	33.02	31.70	51.47	74.00	22.53	Peak
7	17048.00	39.93	10.97	33.09	29.38	47.19	74.00	26.81	Peak

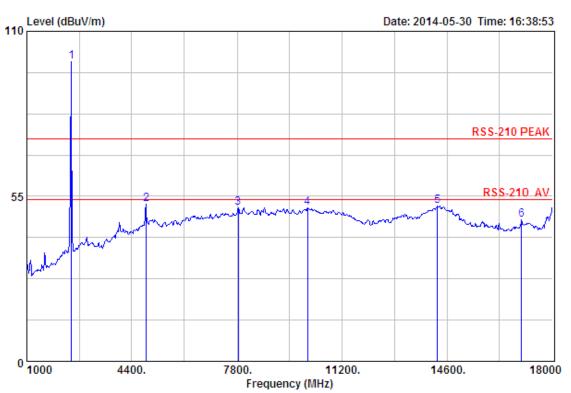
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3m Chamber Data no. : 782

Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : RSS-210 PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

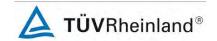
Power : DC 15V From Adapter Input AC 120V/60Hz

M/N : BeoPlay A2

Test Mode : 8-DPSK TX 2441MHz

	Freq.			-		Emission Level		Margin	Remark
	(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	2441.00	27.60	6.67	34.12	99.61	99.76	74.00	-25.76	Peak
2	4882.00	31.37	12.07	31.90	40.90	52.44	74.00	21.56	Peak
3	7834.00	36.68	11.47	31.40	34.39	51.14	74.00	22.86	Peak
4	10078.00	38.24	11.54	31.92	33.18	51.04	74.00	22.96	Peak
5	14294.00	41.71	10.92	33.08	32.19	51.74	74.00	22.26	Peak
6	17014.00	39.80	10.98	33.17	29.66	47.27	74.00	26.73	Peak

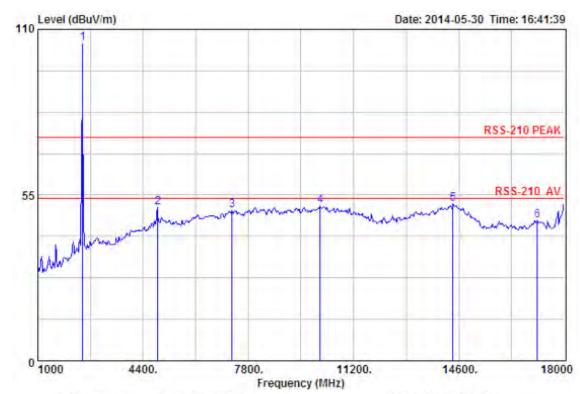
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3m Chamber Data no. : 783

Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : RSS-210 PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

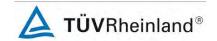
Power : DC 15V From Adapter Input AC 120V/60Hz

M/N : BeoPlay A2

Test Mode : 8-DPSK TX 2441MHz

	Freq. (MHz)	Ant. Factor (dB/m)		Amp Factor (dB)	Reading	Emission Level (dBuV/m)	Limits	Margin (dB)	Remark
1	2441.00	27.60	6.67	34.12	105.31	105.46	74.00	-31,46	Peak
2	4882.00	31.37	12.07	31.90	39.19	50.73	74.00	23.27	Peak
3	7273.00	36.54	11.56	32.04	33.89	49.95	74.00	24.05	Peak
4	10129.00	38.33	11.52	32.01	33.54	51.38	74.00	22.62	Peak
5	14413.00	41.80	10.92	32.78	32.07	52.01	74.00	21.99	Peak
6	17133.00	40.26	10.94	33.03	28.35	46.52	74.00	27.48	Peak

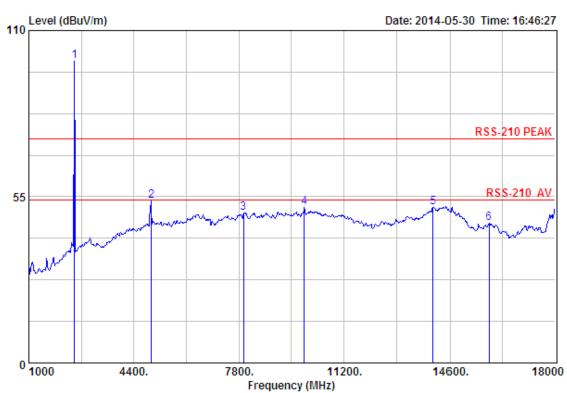
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3m Chamber Data no. : 785

Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : RSS-210 PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 15V From Adapter Input AC 120V/60Hz

M/N : BeoPlay A2

Test Mode : 8-DPSK TX 2480MHz

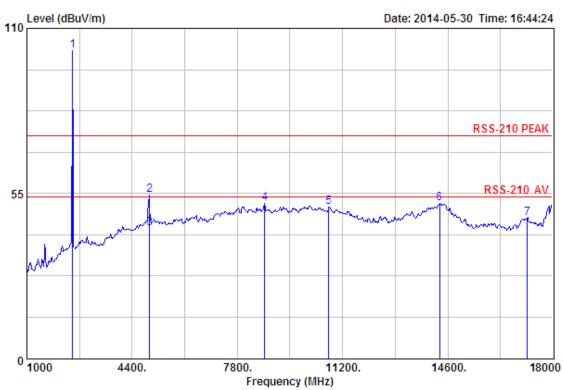
	-	Factor	Loss	Factor	Reading	Emission Level (dBuV/m)	Limits	Margin (dB)	Remark
1	2480.00	27.58	6.71	34.03	99.68	99.94	74.00	-25.94	Peak
2	4960.00	31.49	12.44	31.97	41.71	53.67	74.00	20.33	Peak
3	7953.00	36.91	11.42	31.26	32.59	49.66	74.00	24.34	Peak
4	9908.00	38.14	11.61	31.76	33.53	51.52	74.00	22.48	Peak
5	14073.00	41.52	10.90	33.75	32.72	51.39	74.00	22.61	Peak
6	15858.00	37.30	10.79	33.47	31.62	46.24	74.00	27.76	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3m Chamber Data no. : 784

Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : RSS-210 PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

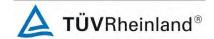
Power : DC 15V From Adapter Input AC 120V/60Hz

M/N : BeoPlay A2

Test Mode : 8-DPSK TX 2480MHz

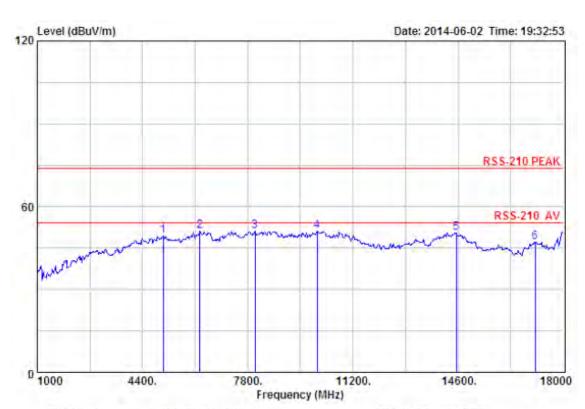
	-	Factor		Factor	Reading	Emission g Level (dBuV/m)		_	Remark
1	2480.00	27.58	6.71	34.03	102.25	102.51	74.00	-28.51	Peak
2	4960.00	31.49	12.44	31.97	42.62	54.58	74.00	19.42	Peak
3	4960.00	31.49	12.44	0.00	-0.28	43.65	54.00	10.35	Average
4	8684.00	37.32	11.45	32.43	35.42	51.76	74.00	22.24	Peak
5	10758.00	39.26	11.30	33.20	33.31	50.67	74.00	23.33	Peak
6	14328.00	41.74	10.92	32.98	31.96	51.64	74.00	22.36	Peak
7	17167.00	40.39	10.93	33.24	28.93	47.01	74.00	26.99	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3m Chamber Data no. : 825

Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : RSS-210 PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

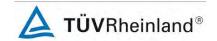
EUT : Bluetooth Speaker

Power : DC 15V From Adapter Input AC 120V/60Hz

M/N : BeoPlay A2 Test Mode : RX Mode

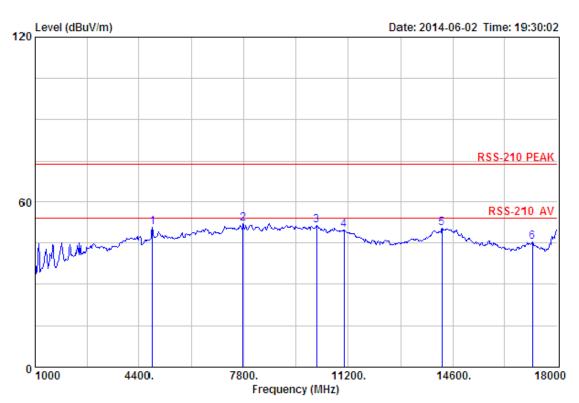
		Ant.	Cable	Amp		Emission			
	Freq. (MHz)	Factor (dB/m)	Loss (dB)	Factor (dB)			Limits (dBuV/m)		Remark
1	5063.00	31.58	12.51	32.11	37.57	49.55	74.00	24.45	Peak
2	6253.00	33.42	12,17	31.96	37.42	51.05	74.00	22.95	Peak
3	8038.00	36.95	11.40	31.28	33.91	50.98	74.00	23.02	Peak
4	10044.00	38.18	11.56	31.85	33.39	51.28	74.00	22.72	Peak
5	14549.00	41.77	10.92	33.26	31.17	50.60	74.00	23.40	Peak
6	17099.00	40.13	10.95	32.96	29.11	47.23	74.00	26.77	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3m Chamber Data no. : 824

Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : RSS-210 PEAK

Env. / Ins. : Temp:25.6';Humi:56%;Press:101.52kPa

Engineer : Tony

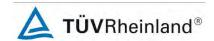
EUT : Bluetooth Speaker

Power : DC 15V From Adapter Input AC 120V/60Hz

M/N : BeoPlay A2 Test Mode : RX Mode

	-	Factor	Loss	Factor	Reading		Limits (dBuV/m)	_	Remark
1	4808.00	31.25	11.77	31.81	39.47	50.68	74.00	23.32	Peak
2	7783.00	36.59	11.50	31.45	35.65	52.29	74.00	21.71	Peak
3	10163.00	38.39	11.50	32.08	33.54	51.35	74.00	22.65	Peak
4	11064.00	39.48	11.24	33.78	32.88	49.82	74.00	24.18	Peak
5	14243.00	41.67	10.91	33.24	31.29	50.63	74.00	23.37	Peak
6	17184.00	40.45	10.92	33.34	27.40	45.43	74.00	28.57	Peak

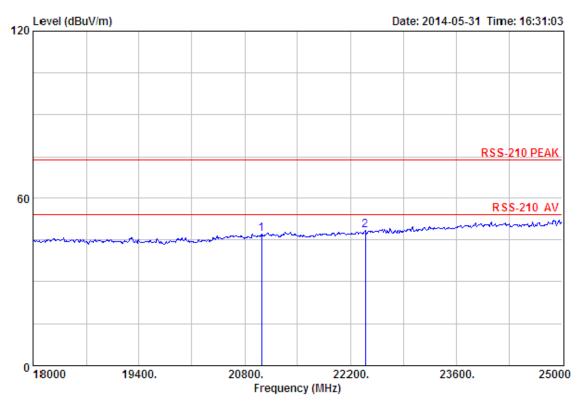
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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4. RADIATED EMISSIONS (18GHz-25GHz)



Site no. : 3m Chamber Data no.: 796

Dis. / Ant. : 3m ANT ABVOE 18G Ant. pol. : HORIZONTAL

: RSS-210 PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

: Tony Engineer

: Bluetooth Speaker EUT

Power : DC 15V From Adapter Input AC 120V/60Hz

M/N : BeoPlay A2 Test Mode : GFSK TX 2402MHz

Ant. Cable Amp

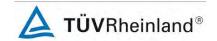
Freq. Factor Loss Factor Reading Level Limits Margin Remark

(dB/m) (dB) (dB) (dBuV) (dBuV/m) (dBuV/m) (dB)

1 21024.00 46.29 20.14 35.78 16.46 47.11 74.00 26.89 Peak 2 22389.00 45.78 20.79 34.48 16.29 48.38 74.00 25.62

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

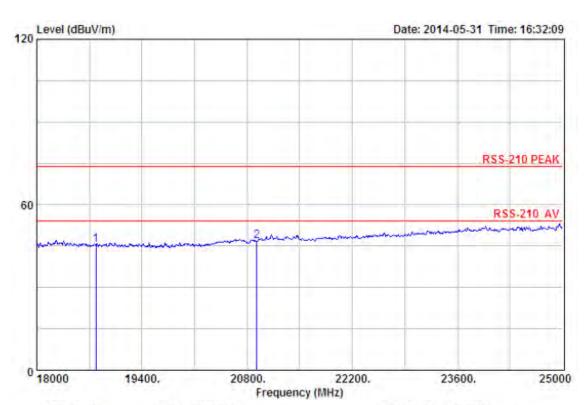
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Site no. : 3m Chamber Data no. : 797

Dis. / Ant. : 3m ANT ABOVE 18G Ant. pol. : VERTICAL

Limit : RSS-210 PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 15V From Adapter Input AC 120V/60Hz

Ant. Cable Amp Emission

M/N : BeoPlay A2 Test Mode : GFSK TX 2402MHz

	Freq. (MHz)						Limits (dBuV/m)		Remark
1	18784.00	45.20	18.28	35,66	17.60	45.42	74.00	28.58	Peak

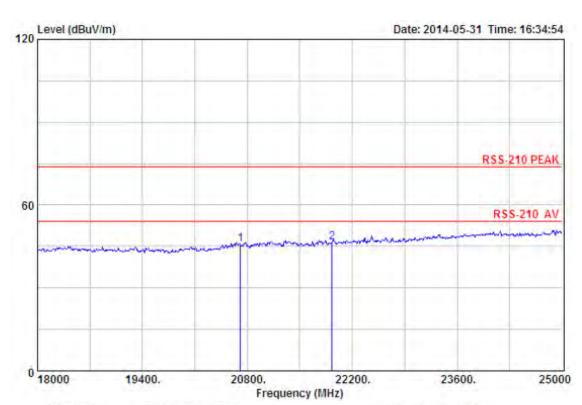
2 20926.00 46.26 20.10 35.87 16.25 46.74 74.00 27.26 Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3m Chamber Data no. : 799

Dis. / Ant. : 3m ANT ABVOE 18G Ant. pol. : HORIZONTAL

Limit : RSS-210 PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 15V From Adapter Input AC 120V/60Hz

M/N : BeoPlay A2 Test Mode : GFSK TX 2441MHz

Ant. Cable Amp Emission

Freq. Factor Loss Factor Reading Level Limits Margin Remark

(MHz) (dB/m) (dB) (dB) (dBuV) (dBuV/m) (dBuV/m) (dB)

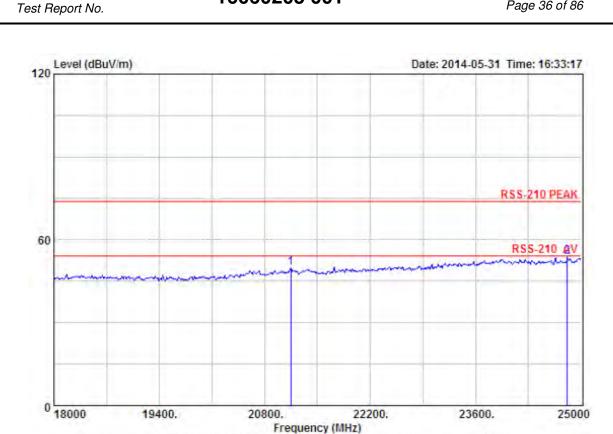
1 20709.00 46.12 20.00 36.07 15.64 45.69 74.00 28.31 Peak 2 21927.00 45.75 20.53 34.97 15.30 46.61 74.00 27.39 Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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: 3m Chamber Data no. : 798

Dis. / Ant. : 3m ANT ABOVE 18G Ant. pol. : VERTICAL

: RSS-210 PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

: Tony Engineer

: Bluetooth Speaker EUT

Power : DC 15V From Adapter Input AC 120V/60Hz

: BeoPlay A2 Test Mode : GFSK TX 2441MHz

Ant. Cable Amp Emission Freq. Factor Loss Factor Reading Level Limits Margin Remark

(MHz) (dB/m) (dB) (dB) (dBuV) (dBuV/m) (dBuV/m) (dB)

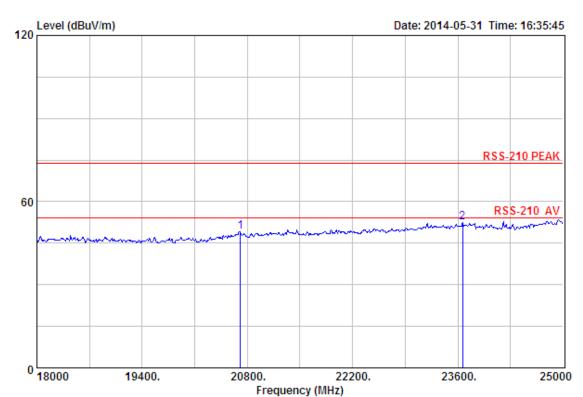
1 21143.00 46.21 20.19 35.67 19.04 49.77 74.00 24.23 2 24818.00 45.96 22.49 34.08 19.32 53.69 74.00 20.31

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3m Chamber Data no. : 800

Dis. / Ant. : 3m ANT ABVOE 18G Ant. pol. : HORIZONTAL

Limit : RSS-210 PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 15V From Adapter Input AC 120V/60Hz

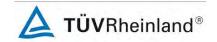
M/N : BeoPlay A2 Test Mode : GFSK TX 2480MHz

Ant. Cable Amp Emission

Freq. Factor Loss Factor Reading Level Limits Margin Remark (MHz) (dB/m) (dB) (dB) (dBuV) (dBuV/m) (dB)

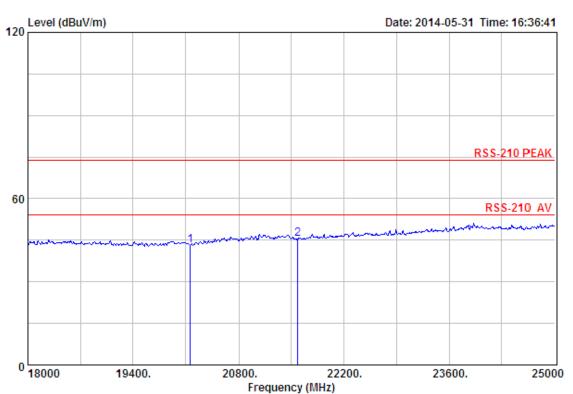
1 20709.00 46.12 20.00 36.07 19.25 49.30 74.00 24.70 Peak 2 23663.00 45.67 21.74 33.14 18.07 52.34 74.00 21.66 Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3m Chamber Data no. : 801

Dis. / Ant. : 3m ANT ABOVE 18G Ant. pol. : VERTICAL

Limit : RSS-210 PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 15V From Adapter Input AC 120V/60Hz

M/N : BeoPlay A2 Test Mode : GFSK TX 2480MHz

Ant. Cable Amp Emission

Freq. Factor Loss Factor Reading Level Limits Margin Remark

(MHz) (dB/m) (dB) (dB) (dBuV) (dBuV/m) (dBuV/m) (dB)

1 20163.00 46.07 19.75 36.54 13.81 43.09 74.00 30.91 Peak

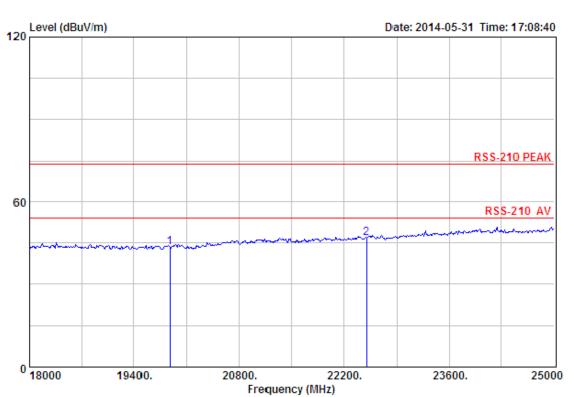
2 21584.00 45.95 20.38 35.28 14.43 45.48 74.00 28.52 Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3m Chamber Data no. : 802

Dis. / Ant. : 3m ANT ABVOE 18G Ant. pol. : HORIZONTAL

Limit : RSS-210 PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 15V From Adapter Input AC 120V/60Hz

M/N : BeoPlay A2

Test Mode : 8-DPSK TX 2402MHz

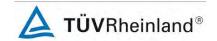
Ant. Cable Amp Emission

Freq. Factor Loss Factor Reading Level Limits Margin Remark

 $(MHz) \qquad (dB/m) \qquad (dB) \qquad (dB) \qquad (dBuV) \qquad (dBuV/m) \qquad (dBuV/m) \qquad (dB)$

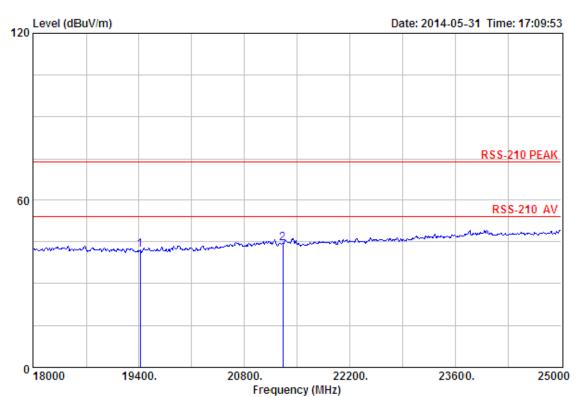
1 19876.00 46.05 19.54 36.59 14.48 43.48 74.00 30.52 Peak 2 22501.00 45.80 20.85 34.38 14.68 46.95 74.00 27.05 Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3m Chamber Data no.: 803
Dis. / Ant. : 3m ANT ABOVE 18G Ant. pol.: VERTICAL

Dis. / Ant. : 3m ANT ABOVE 18G Limit : RSS-210 PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 15V From Adapter Input AC 120V/60Hz

M/N : BeoPlay A2

Test Mode : 8-DPSK TX 2402MHz

	-	Factor	Loss	Factor	_	Level	Limits (dBuV/m)	_	Remark
_	19414.00 21304.00								Peak Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

Appendix 1

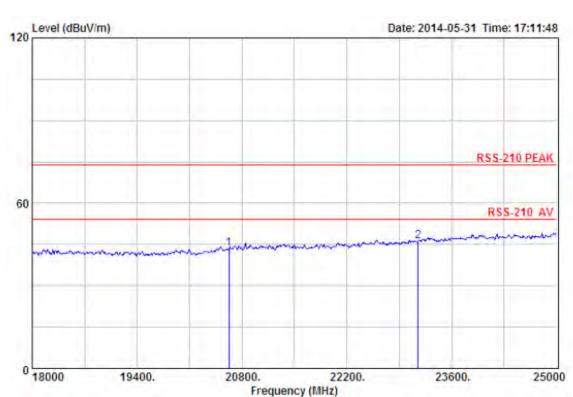


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Site no. : 3m Chamber Data no. : 805

Dis. / Ant. : 3m ANT ABVOE 18G Ant. pol. : HORIZONTAL

Limit : RSS-210 PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 15V From Adapter Input AC 120V/60Hz

M/N : BeoPlay A2

Test Mode : 8-DPSK TX 2441MHz

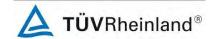
Ant. Cable Amp Emission

Freq. Factor Loss Factor Reading Level Limits Margin Remark

(MHz) (dB/m) (dB) (dB) (dBuV) (dBuV/m) (dBuV/m) (dB)

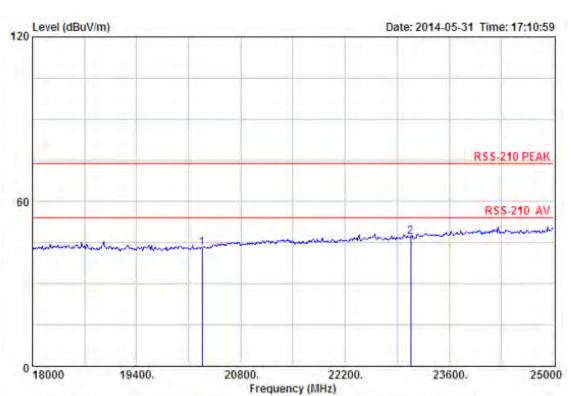
1 20625.00 46.07 19.96 36.14 13.63 43.52 74.00 30.48 Peak 2 23152.00 45.63 21.28 33.69 12.97 46.19 74.00 27.81 Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3m Chamber Data no. : 804

Dis. / Ant. : 3m ANT ABOVE 18G Ant. pol. : VERTICAL

: RSS-210 PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

: Tony Engineer

EUT : Bluetooth Speaker

Power : DC 15V From Adapter Input AC 120V/60Hz

M/N : BeoPlay A2

Test Mode : 8-DPSK TX 2441MHz

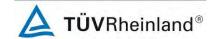
> Ant. Cable Amp Emission

Freq. Factor Loss Factor Reading Level Limits Margin Remark

(MHz) (dB/m) (dB) (dB) (dBuV) (dBuV/m) (dBuV/m) (dB)

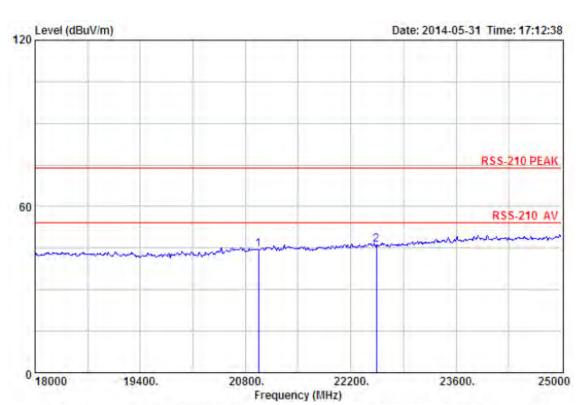
1 20282.00 46.04 19.81 36.45 13.87 43.27 74.00 30.73 Peak 2 23082.00 45.62 21.22 33.77 14.15 47.22 74.00 26.78 Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3m Chamber Data no. : 806

Dis. / Ant. : 3m ANT ABVOE 18G Ant. pol. : HORIZONTAL

Limit : RSS-210 PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 15V From Adapter Input AC 120V/60Hz

M/N : BeoPlay A2

Test Mode : 8-DPSK TX 2480MHz

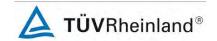
Ant. Cable Amp Emission

Freq. Factor Loss Factor Reading Level Limits Margin Remark

(MHz) (dB/m) (dB) (dB) (dBuV) (dBuV/m) (dBuV/m) (dB)

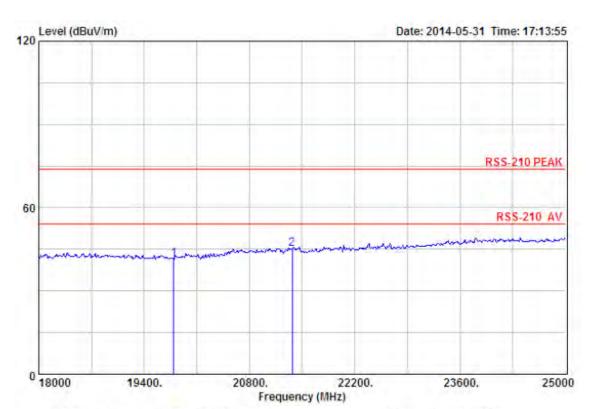
1 20975.00 46.29 20.12 35.82 13.94 44.53 74.00 29.47 Peak 2 22543.00 45.79 20.88 34.32 13.74 46.09 74.00 27.91 Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3m Chamber Data no. : 807

Dis. / Ant. : 3m ANT ABOVE 18G Ant. pol. : VERTICAL

Limit : RSS-210 PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 15V From Adapter Input AC 120V/60Hz

M/N : BeoPlay A2

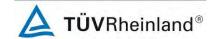
Test Mode : 8-DPSK TX 2480MHz

Ant. Cable Amp Emission

Freq. Factor Loss Factor Reading Level Limits Margin Remark
(MHz) (dB/m) (dB) (dB) (dBuV) (dBuV/m) (dBuV/m) (dB)

1 19792.00 46.01 19.44 36.53 12.69 41.61 74.00 32.39 Peak 2 21367.00 46.08 20.29 35.46 14.10 45.01 74.00 28.99 Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

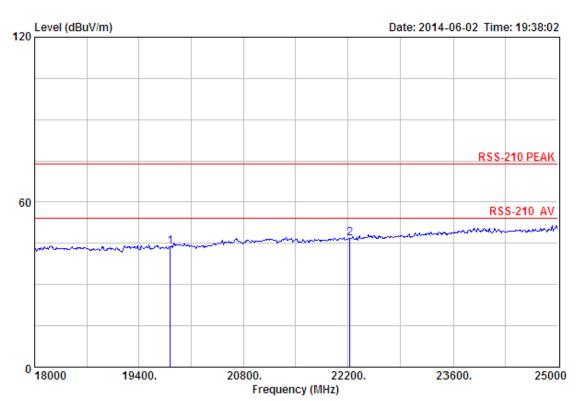


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Appendix 1

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: 3m Chamber Data no. : 826 Site no.

Dis. / Ant. : 3m ANT ABVOE 18G Ant. pol. : HORIZONTAL

: RSS-210 PEAK Limit

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

: Bluetooth Speaker

: DC 15V From Adapter Input AC 120V/60Hz Power

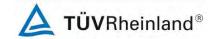
: BeoPlay A2 M/N Test Mode : RX Mode

> Ant. Cable Amp Emission

Freq. Factor Loss Factor Reading Level Limits Margin Remark (dB/m) (dB) (dB) (dBuV) (dBuV/m) (dBuV/m) (dB)

1 19820.00 46.03 19.47 36.55 14.75 43.70 74.00 30.30 2 22228.00 45.74 20.70 34.66 15.16 46.94 74.00 27.06

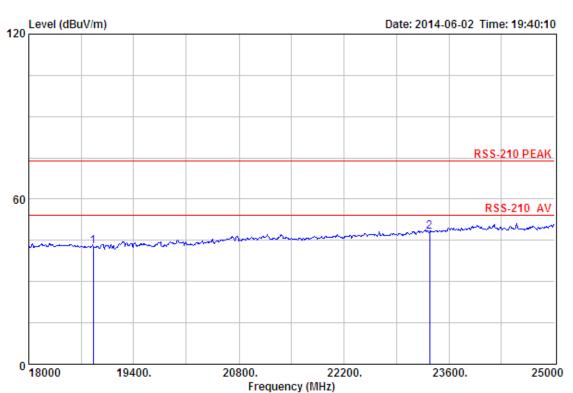
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Appendix 1



Site no. : 3m Chamber Data no. : 827

Dis. / Ant. : 3m ANT ABOVE 18G Ant. pol. : VERTICAL

Limit : RSS-210 PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 15V From Adapter Input AC 120V/60Hz

M/N : BeoPlay A2 Test Mode : RX Mode

Ant. Cable Amp Emission

Freq. Factor Loss Factor Reading Level Limits Margin Remark

(MHz) (dB/m) (dB) (dB) (dBuV) (dBuV/m) (dBuV/m) (dB)

1 18861.00 45.26 18.38 35.72 14.85 42.77 74.00 31.23 Peak 2 23341.00 45.67 21.45 33.48 14.52 48.16 74.00 25.84 Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



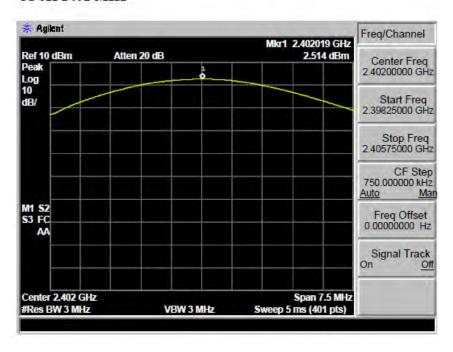
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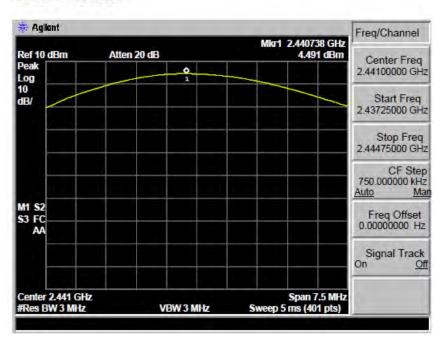
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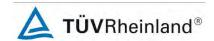
5. MAXIMUM PEAK OUTPUT POWER

GFSK 2402 MHz



GFSK 2441 MHz



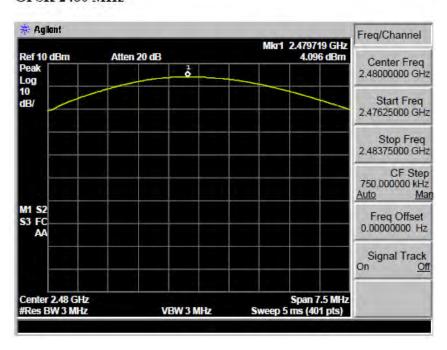


Test Report No.

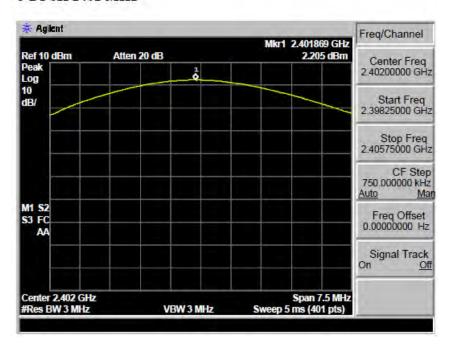
16060205 001

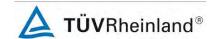
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GFSK 2480 MHz



8-DPSK 2402 MHz



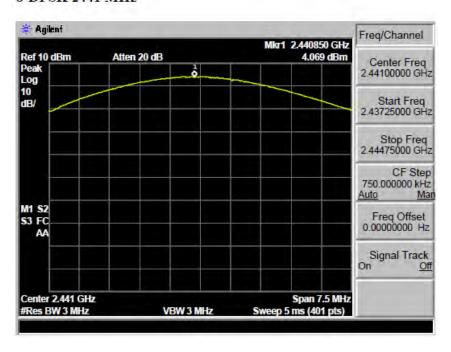


Test Report No.

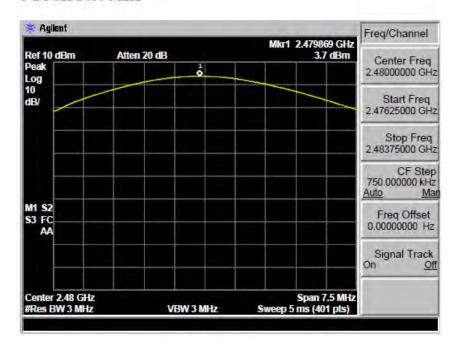
16060205 001

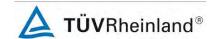
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8-DPSK 2441 MHz



8-DPSK 2480 MHz





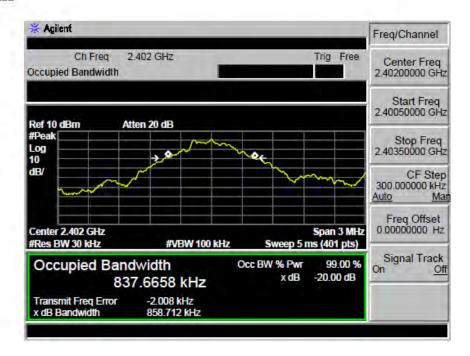
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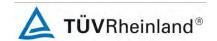
6. 20 dB BANDWIDTH

GFSK 2402MHz



GFSK 2441MHz



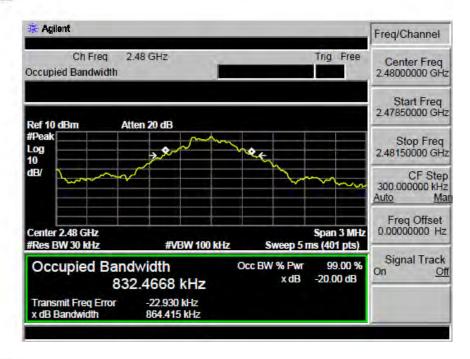


Test Report No.

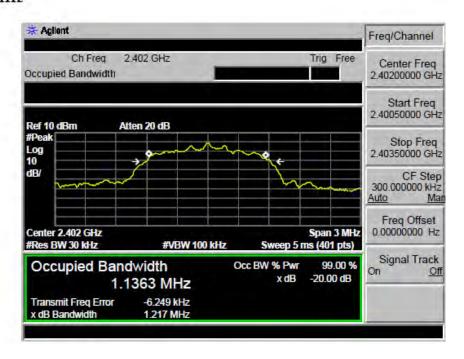
16060205 001

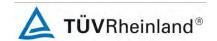
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GFSK 2480MHz



8-DPSK 2402MHz



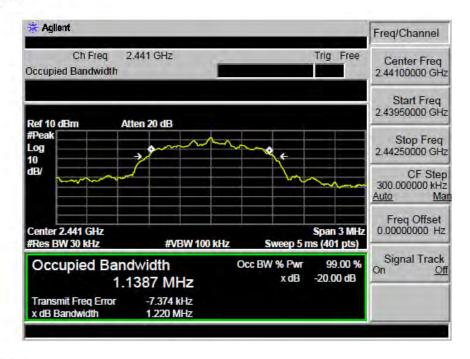


Test Report No.

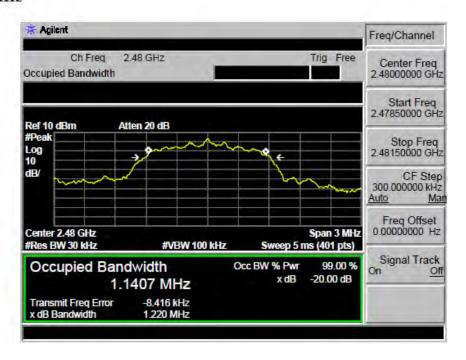
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8-DPSK 2441MHz



8-DPSK 2480MHz



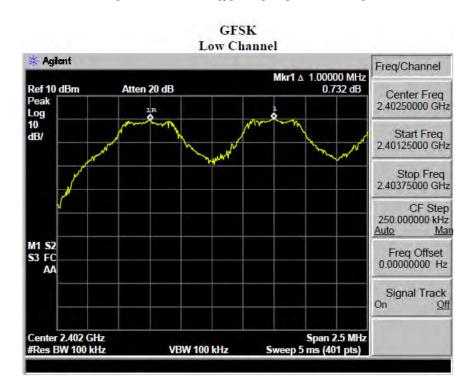


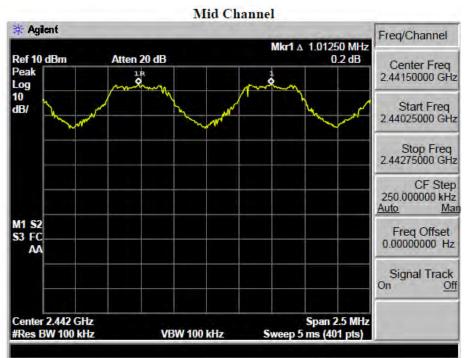
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7. CARRIER FREQUENCY SEPARATION



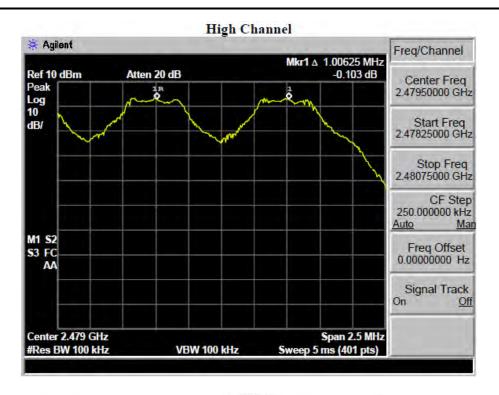


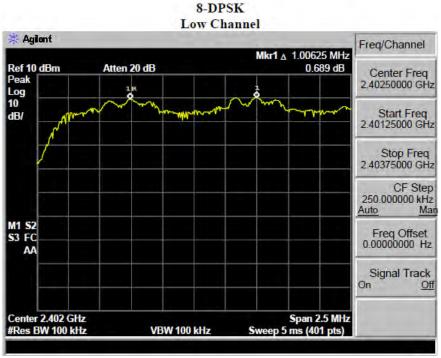


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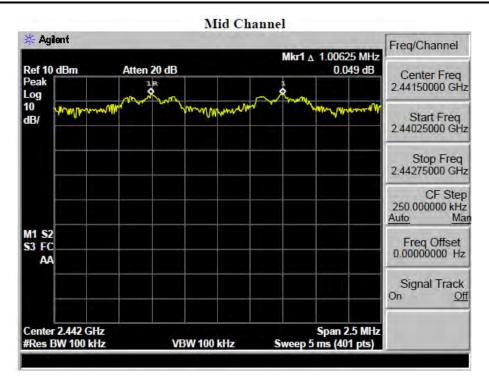


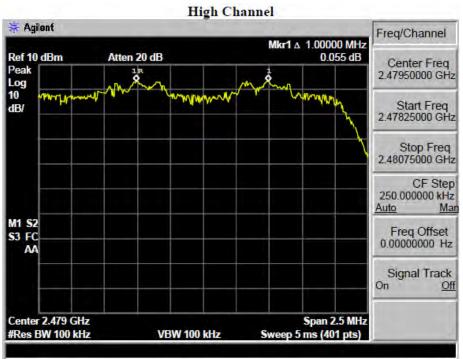


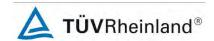
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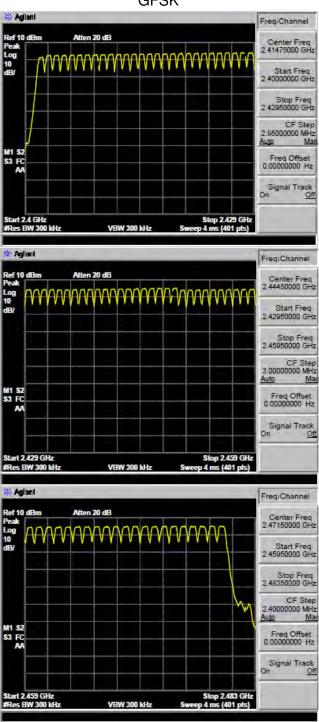
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8. NUMBER OF HOPPING CHANNEL





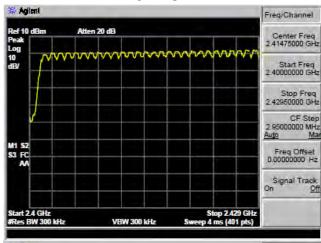


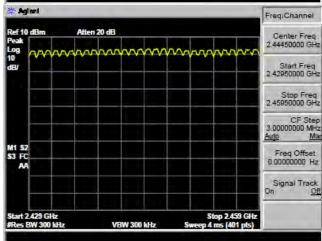
Test Report No.

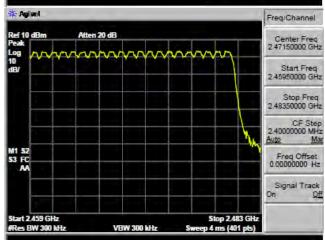
16060205 001

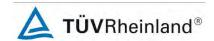
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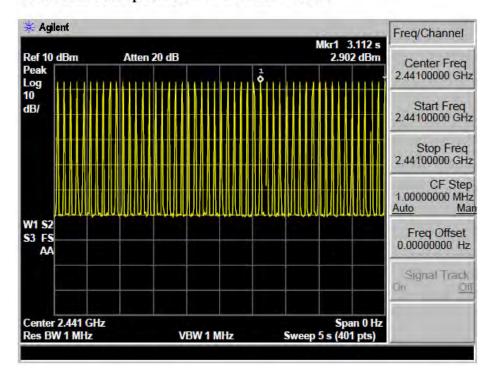
Test Report No.

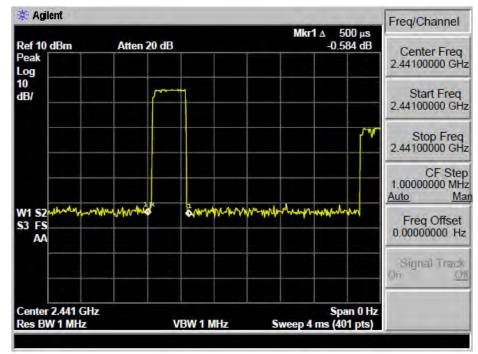
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9. DWELL TIME

GFSK DH1: 50hop/5s * 0.4 * 79 * 0.50ms = 158.00





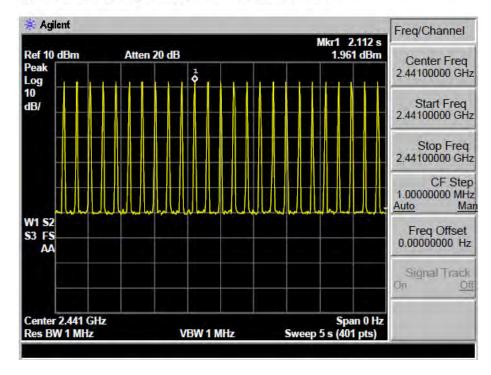


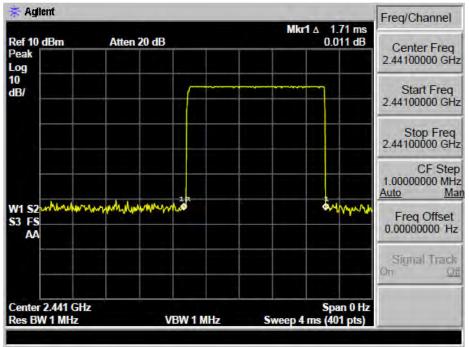
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GFSK DH3: 25hop/5s * 0.4 * 79 * 1.71ms= 270.18





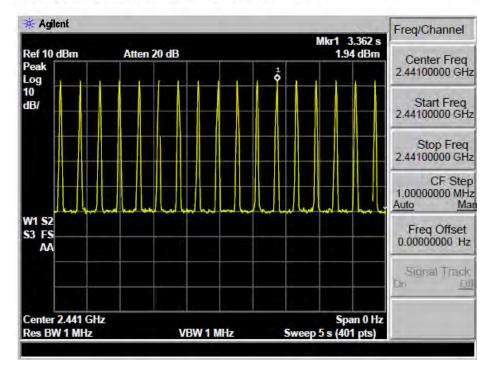


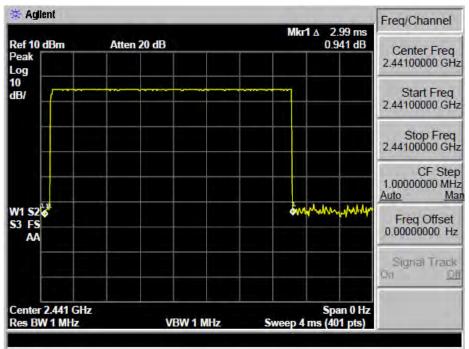
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GSFK DH5: 17hop/5s * 0.4 * 79 *2.99ms = 321.25





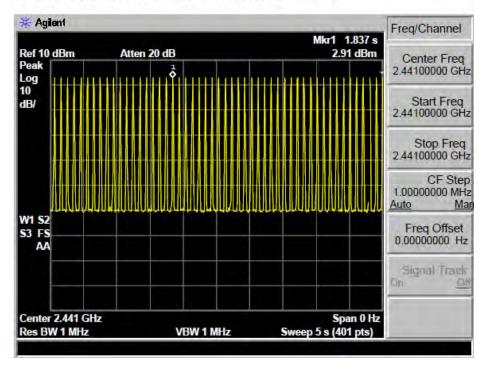


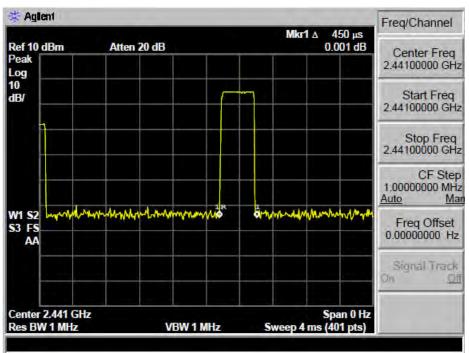
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8-DPSK DH1: 50hop/5s * 0.4 * 79 * 0.45ms = 142.20





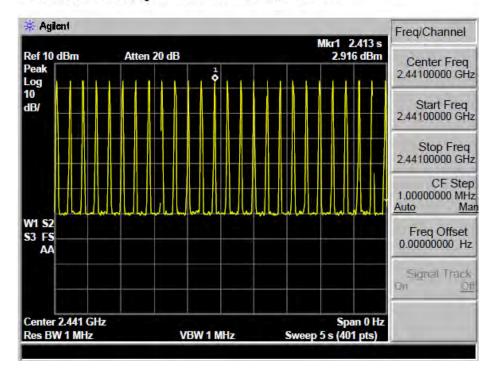


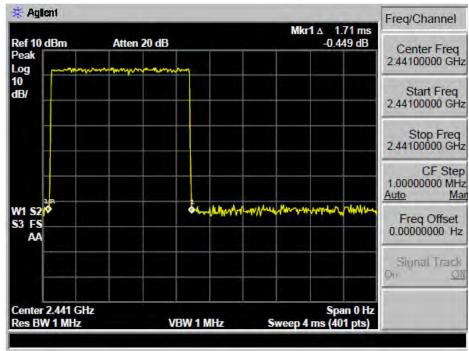
Test Report No.

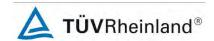
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8-DPSK DH3: 25hop/5s * 0.4 * 79 * 1.71ms= 270.18





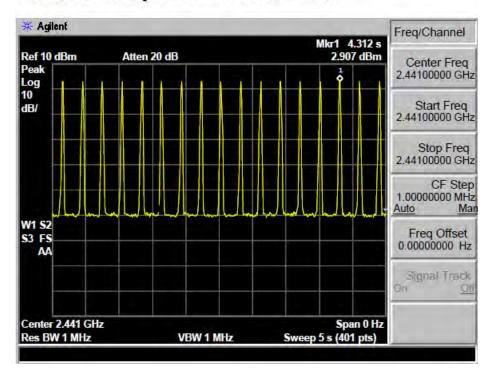


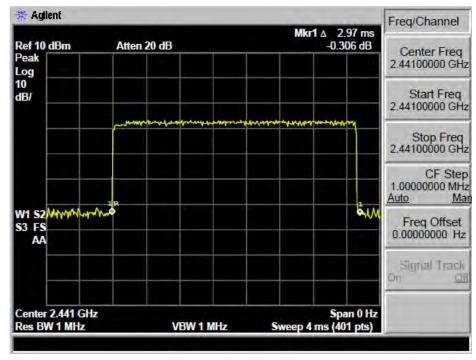
Test Report No.

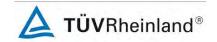
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8-DPSK DH5: 17hop/5s * 0.4 * 79 *2.97ms = 319.10



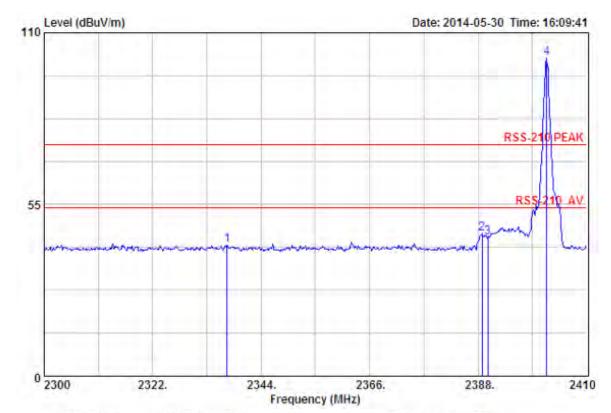




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10. BAND-EDGE COMPLIANCE



Site no. : 3m Chamber Data no. : 770

Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : RSS-210 PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

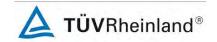
Power : DC 15V From Adapter Input AC 120V/60Hz

M/N : BeoPlay A2

Test Mode : GFSK TX 2402MHz (No Hopping)

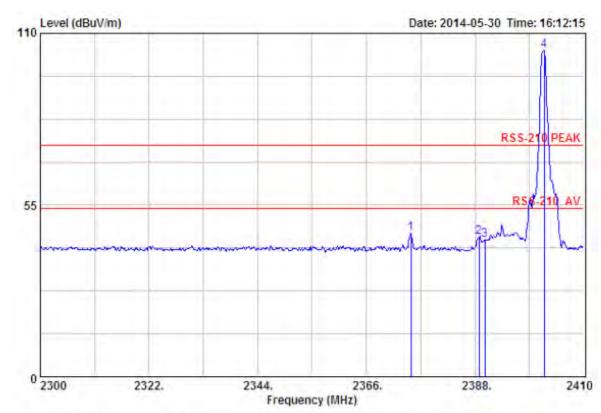
		Ant.	Cable	Amp	Emission				
	Freq.				-	Level (dBuV/m)			Remark
1	2337.07	27.73	6.56	34.23	41.78	41.84	74.00	32.16	Peak
2	2388.77	27.64	6.62	34.19	45.48	45.55	74.00	28.45	Peak
3	2390.00	27.64	6.62	34.19	44.40	44.47	74.00	29.53	Peak
4	2401.86	27.61	6.62	34.18	101.88	101.93	74.00	-27.93	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3m Chamber Data no. : 771

Dis. / Ant. : 3m ANT 1-18G Ant, pol. : VERTICAL

Limit : RSS-210 PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 15V From Adapter Input AC 120V/60Hz

M/N : BeoPlay A2

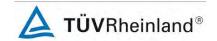
Test Mode : GFSK TX 2402MHz (No Hopping)

Ant. Cable Amp Emission
Freq. Factor Loss Factor Reading Level Limits Margin Remark

(MHz) (dB/m) (dB) (dB) (dBuV) (dBuV/m) (dBuV/m) (dB)

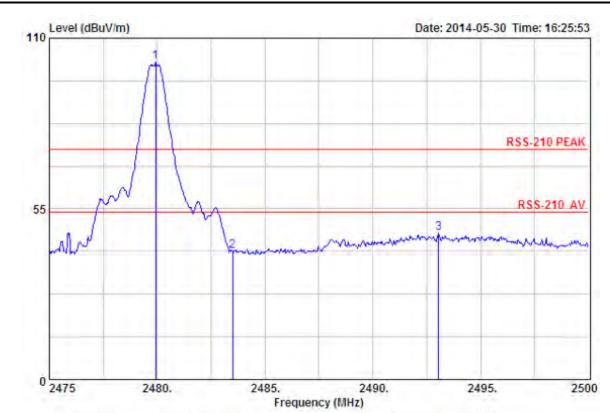
_											-
	1	2375.02	27.64	6.60	34.19	45.95	46.00	74.00	28.00	Peak	
	2	2388.77	27.64	6.62	34,19	44.53	44.60	74.00	29.40	Peak	
	3	2390.00	27.64	6.62	34.19	43.66	43.73	74.00	30.27	Peak	
	4	2401.97	27.61	6.62	34.18	104.50	104.55	74.00	-30.55	Peak	

Remarks: 1, Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3m Chamber Data no. : 777

Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : RSS-210 PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUI : Bluetooth Speaker

Power : DC 15V From Adapter Input AC 120V/60Hz

M/N : BeoPlay A2

Test Mode : GFSK TX 2480MHz (No Hopping)

Ant. Cable Amp Emission

Freq. Factor Loss Factor Reading Level Limits Margin Remark

(MHz) (dB/m) (dB) (dB) (dBuV) (dBuV/m) (dBuV/m) (dB)

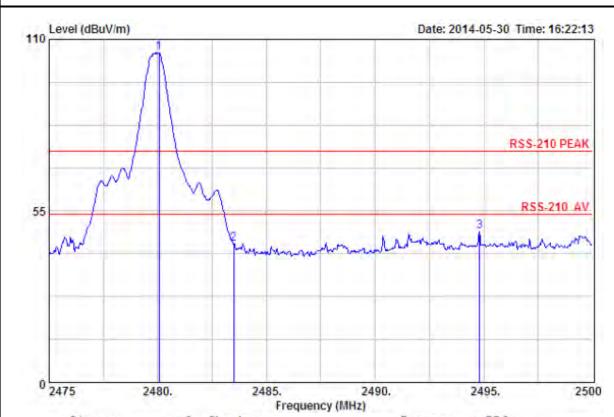
1 2479.93 27.58 6.71 34.03 102.05 102.31 74.00 -28.31 Peak 2 2483.50 27.58 6.71 34.03 41.09 41.35 74.00 32.65 Peak 3 2493.05 27.58 6.73 34.03 46.77 47.05 74.00 26.95 Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3m Chamber Data no. : 776

Dis, / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : RSS-210 PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 15V From Adapter Input AC 120V/60Hz

M/N : BeoPlay A2

Test Mode : GFSK TX 2480MHz (No Hopping)

Ant. Cable Amp Emission

Freq. Factor Loss Factor Reading Level Limits Margin Remark

(MHz) (dB/m) (dB) (dB) (dBuV) (dBuV/m) (dBuV/m) (dB)

1 2480.05 27.58 6.71 34.03 105.49 105.75 74.00 -31.75 Peak 2 2483.50 27.58 6.71 34.03 44.19 44.45 74.00 29.55 Peak 3 2494.80 27.57 6.73 34.00 48.00 48.30 74.00 25.70 Peak

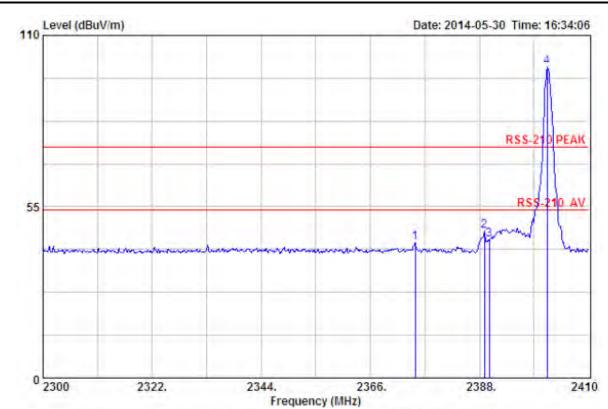
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading,



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Site no. : 3m Chamber Data no. : 781

Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : RSS-210 PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Fower : DC 15V From Adapter Input AC 120V/60Hz

M/N : BeoPlay A2

Test Mode : 8-DPSK TX 2402MHz (No Hopping)
Ant. Cable Amp Emission

Freq. Factor Loss Factor Reading Level Limits Margin Remark (MHz) (dB/m) (dB) (dB) (dBuV) (dBuV/m) (dBuV/m) (dB)

1	2375.02	27.64	6.60	34.19	43.33	43.38	74.00	30.62	Peak
2	2388.99	27.64	6.62	34.19	47.05	47.12	74.00	26.88	Peak
3	2390.00	27.64	6.62	34.19	44.28	44.35	74.00	29.65	Peak
4	2401.64	27.61	6.62	34.18	99.99	100.04	74.00	-26.04	Peak

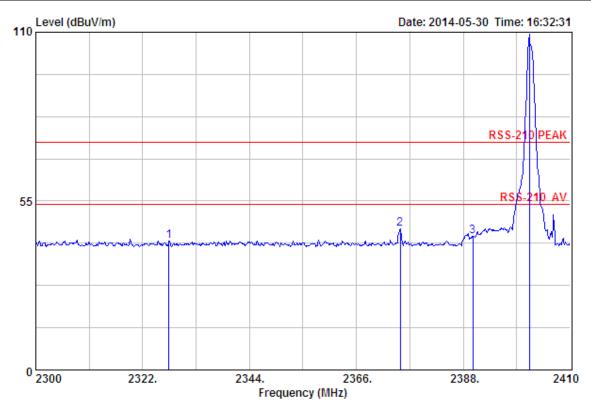
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

The emission levels that are 20dB below the official limit are not reported.



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Site no. : 3m Chamber Data no. : 780
Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : RSS-210 PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 15V From Adapter Input AC 120V/60Hz

M/N : BeoPlay A2

Test Mode : 8-DPSK TX 2402MHz (No Hopping)

Ant. Cable Amp Emission
Freq. Factor Loss Factor Reading Level Limits Margin Remark

(MHz) (dB/m) (dB) (dB) (dBuV/m) (dBuV/m) (dB)

1	2327.39	27.73	6.54	34.23	42.07	42.11	74.00	31.89	Peak
2	2375.02	27.64	6.60	34.19	45.76	45.81	74.00	28.19	Peak
3	2390.00	27.64	6.62	34.19	43.47	43.54	74.00	30.46	Peak
4	2401.64	27.61	6.62	34.18	109.31	109.36	74.00	-35.36	Peak

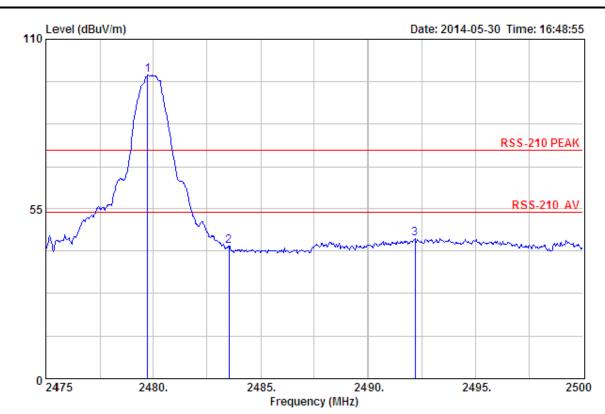
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Appendix 1



Site no. : 3m Chamber Data no. : 786

Dis. / Ant. : 3m ANT 1-18G Ant. pol. : HORIZONTAL

Limit : RSS-210 PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUT : Bluetooth Speaker

Power : DC 15V From Adapter Input AC 120V/60Hz

M/N : BeoPlay A2

Test Mode : 8-DPSK TX 2480MHz (No Hopping)

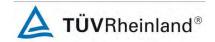
Ant. Cable Amp Emission

Freq. Factor Loss Factor Reading Level Limits Margin Remark (MHz) (dB/m) (dB) (dB) (dBuV) (dBuV/m) (dBuV/m) (dB)

1 2479.73 27.58 6.71 34.03 98.12 98.38 74.00 -24.38 Peak

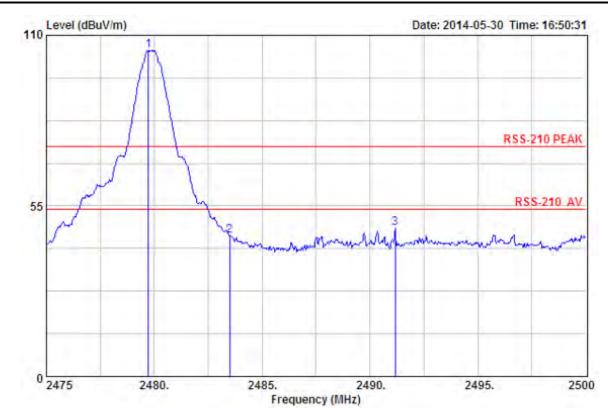
2 2483.50 27.58 6.71 34.03 42.56 42.82 74.00 31.18 Peak 3 2492.18 27.58 6.73 34.03 44.96 45.24 74.00 28.76 Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.



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Site no. : 3m Chamber Data no. : 787

Dis. / Ant. : 3m ANT 1-18G Ant. pol. : VERTICAL

Limit : RSS-210 PEAK

Env. / Ins. : Temp:25.6'; Humi:56%; Press:101.52kPa

Engineer : Tony

EUI : Bluetooth Speaker

Power : DC 15V From Adapter Input AC 120V/60Hz

M/N : BeoFlay A2

Test Mode : 8-DPSK TX 2480MHz (No Hopping)

Ant. Cable Amp Emission

Freq. Factor Loss Factor Reading Level Limits Margin Remark (MHz) (dB/m) (dB) (dB) (dBuV) (dBuV/m) (dBuV/m) (dB)

1 2470 72 27 50 6 71 24 02 104 02 105 10 74 00 21 10 Posts

1 2479.73 27.58 6.71 34.03 104.92 105.18 74.00 -31.18 Peak 2 2483.50 27.58 6.71 34.03 45.09 45.35 74.00 28.65 Peak 3 2491.18 27.58 6.73 34.03 47.63 47.91 74.00 26.09 Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.

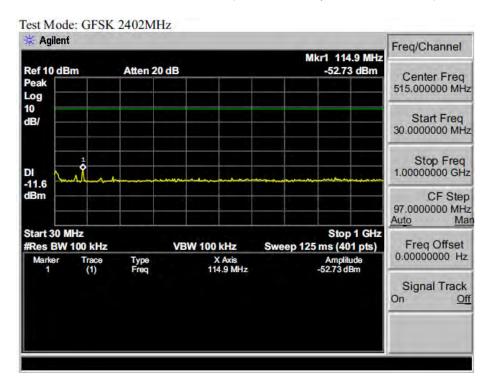


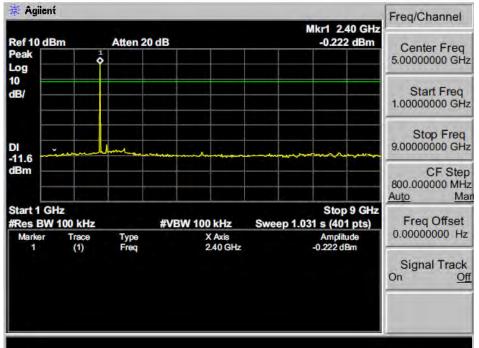
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11. Out-of-Band Emission (Conducted spurious emission)

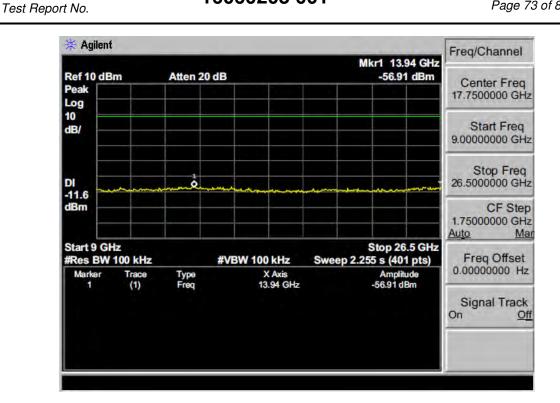


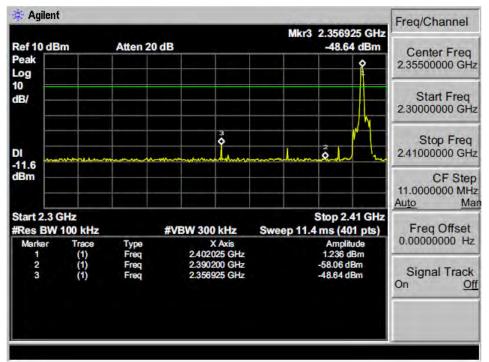




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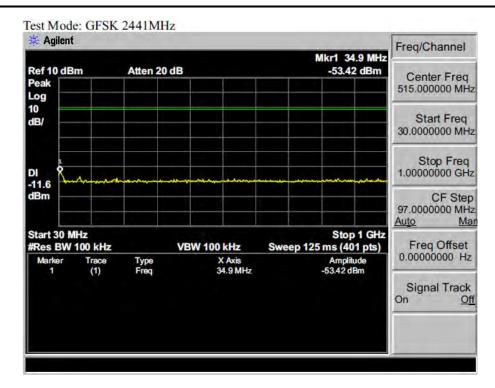


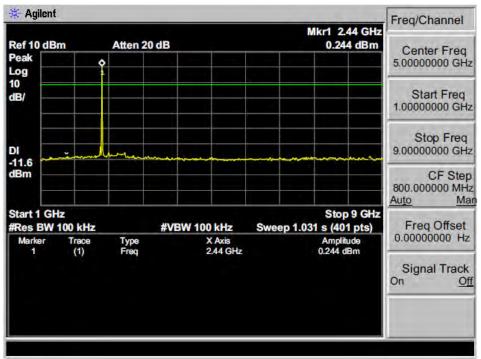


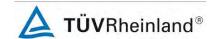
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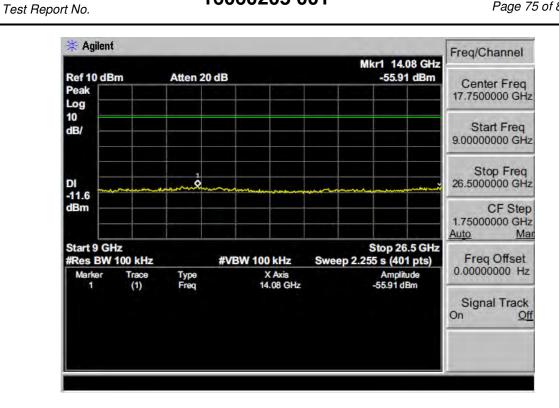






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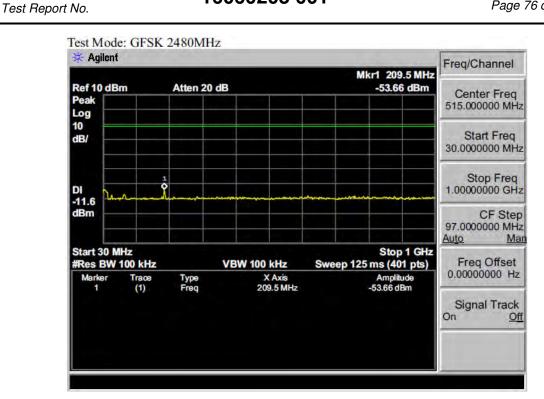
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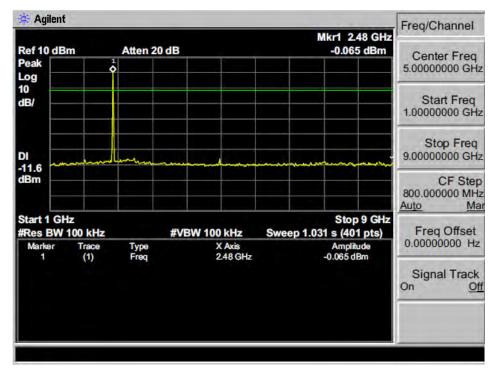


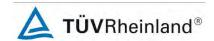


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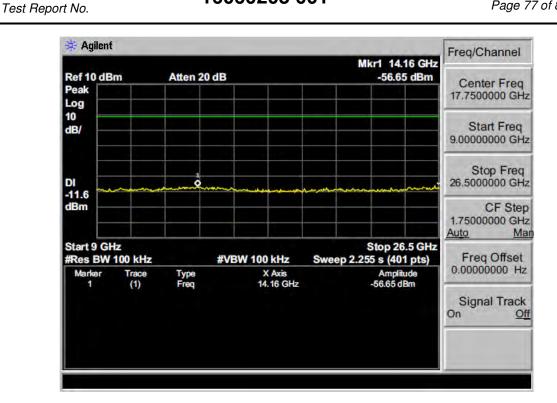


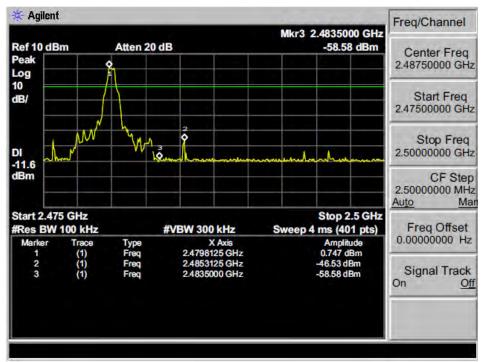


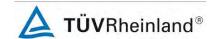


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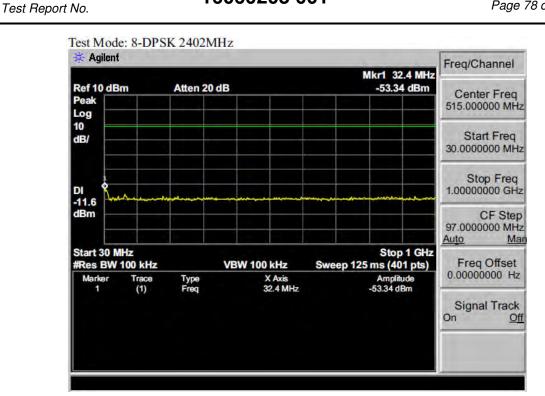


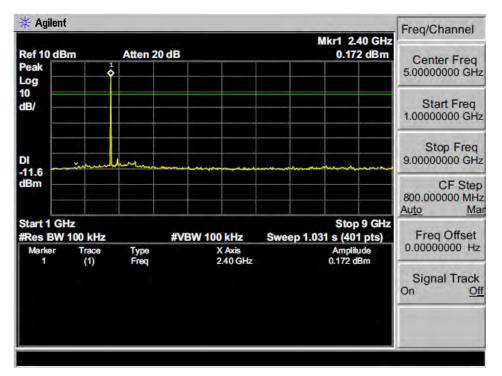




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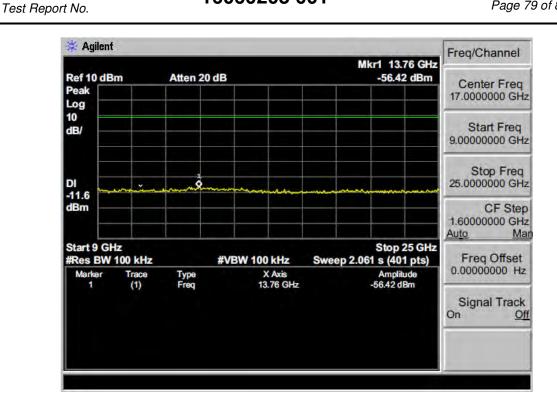


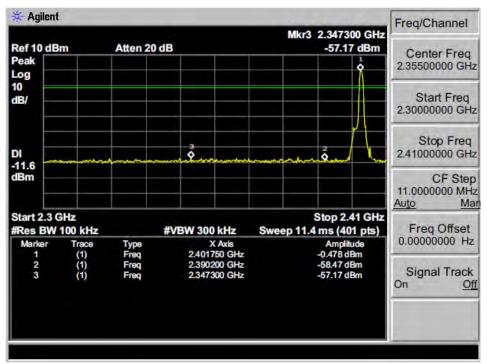




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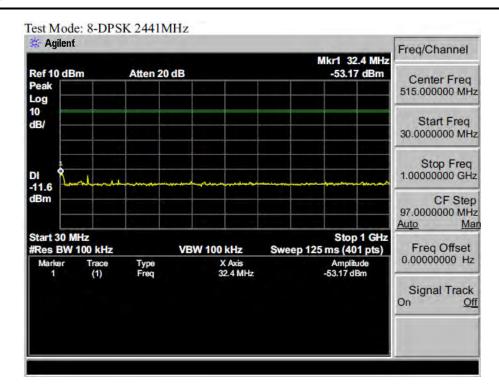


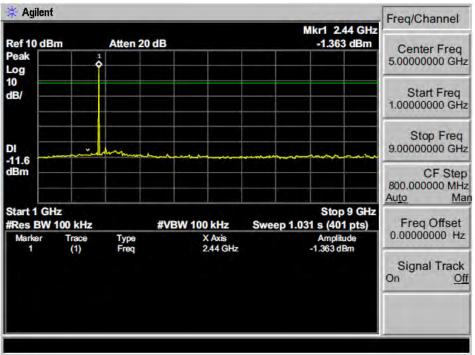


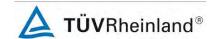
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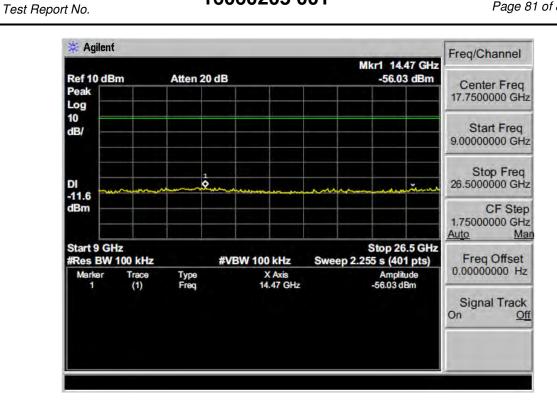






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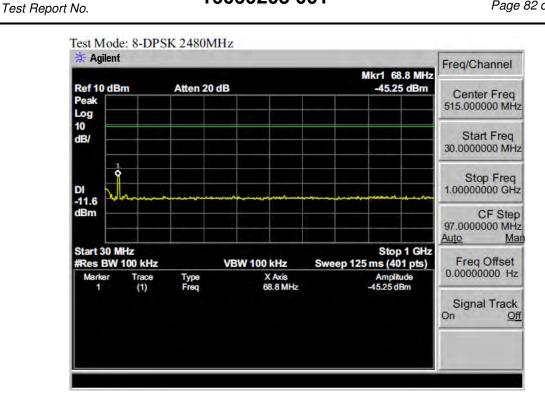
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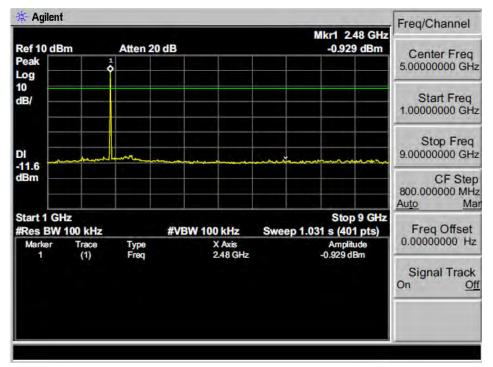




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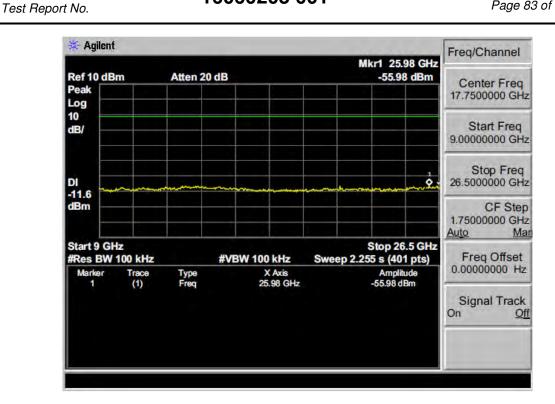


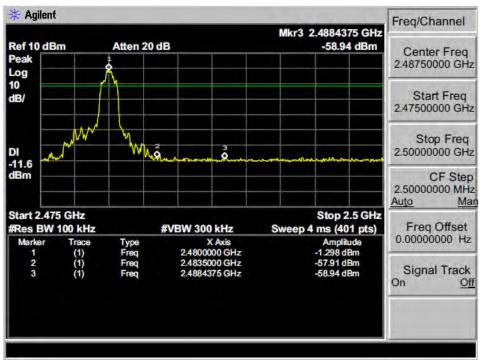




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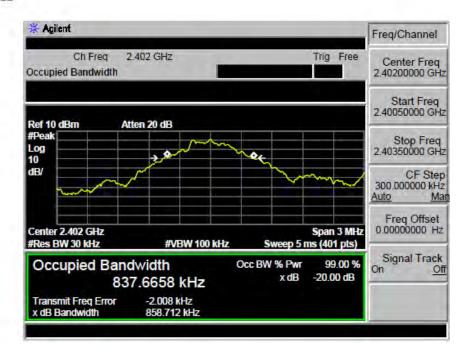
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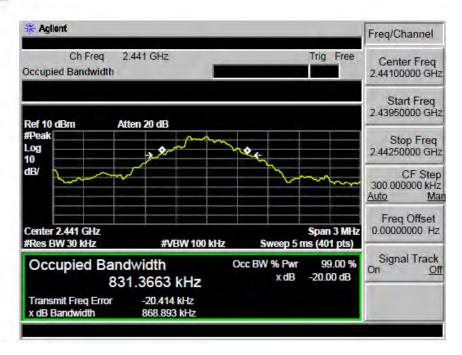
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12. 99% BANDWIDTH

GFSK 2402MHz



GFSK 2441MHz



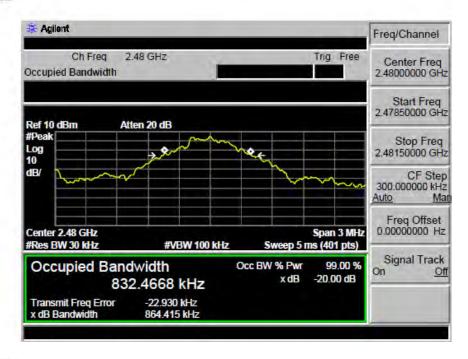


Test Report No.

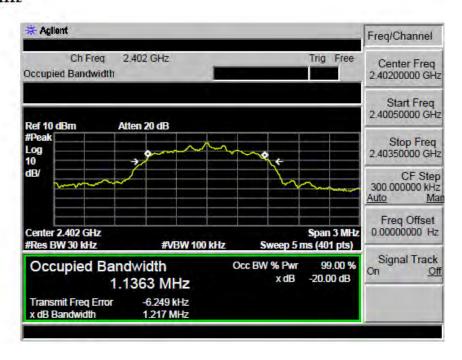
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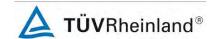
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GFSK 2480MHz



8-DPSK 2402MHz



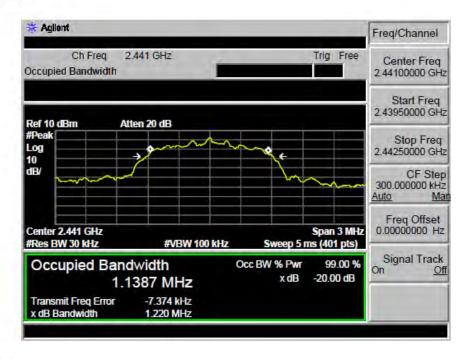


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8-DPSK 2441MHz



8-DPSK 2480MHz

