

Prüfbericht-Nr.: 10051888 001 Auftrags-Nr.: 114029909 Seite 1 von 50 Test Report No .: Order No.: Page 1 of 50

Kunden-Referenz-Nr.: Auftragsdatum: June 24, 2015 N/A

Order date: Client Reference No .:

Auftraggeber: Qstarz International Co., Ltd., 6F-2, No. 160, Sec. 6, Ming-Chuan E. Rd., Nei-Hu, Client: Taipei, Taiwan

Prüfgegenstand: Bluetooth USB Adaptor Test item:

Bezeichnung / Typ-Nr.: BD-Q382A

Identification / Type No .:

Auftrags-Inhalt: FCC Part 15C (BR/EDR) Order content:

Prüfgrundlage: Test specification: FCC 47CFR Part 15: Subpart C Section 15.247

Wareneingangsdatum: 07/02/2015 Date of receipt:

Prüfmuster-Nr.: A000139693-002 Test sample No .: A000139693-001

Prüfzeitraum: 9-Jul-2015 - 11-Jul-2015 Testing period:

Ort der Prüfung: **EMC Laboratory Taipei** Place of testing:

Prüflaboratorium: TUV Rheinland Taiwan Ltd. Testing laboratory:

Prüfergebnis*: Pass Test result*:

kontrolliert von I reviewed by: geprüft von I tested by:

Rene Charton/Semor Project Manager Ryan W. T. Chen / Project Engineer 2015-07-17 2015-07-17 Name / Stellung Datum Name / Stellung Unterschrift Datum Unterschrift Name / Position Date Name I Position Signature Date Signature

Sonstiges I Other.

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

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

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

5.1.1 ANTENNA REQUIREMENT

RESULT: Passed

5.1.2 PEAK OUTPUT POWER

RESULT: Passed

5.1.3 20DB BANDWIDTH

RESULT: Passed

5.1.4 99% BANDWIDTH

RESULT: Passed

5.1.5 CONDUCTED SPURIOUS EMISSIONS AND FREQUENCY BAND EDGE MEASURED IN 100kHz BANDWIDTH

RESULT: Passed

5.1.6 Spurious Emission

RESULT: Passed

5.1.7 Frequency Separation

RESULT: Passed

5.1.8 NUMBER OF HOPPING FREQUENCY

RESULT: Passed

5.1.9 TIME OF OCCUPANCY

RESULT: Passed

5.2.1 Mains Conducted Emissions

RESULT: Passed

6.1.1 ELECTROMAGNETIC FIELDS

RESULT: Passed

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1. General Remarks

1.1 Complementary Materials

The following attachments are integral parts of this test report:

Appendix P: Photo Documentation

(File Name: 10051888APPENDIX P)

Appendix D: Test Result of Radiated Emissions

(File Name: 10051888APPENDIX D)

Test Specifications

The following standards were applied

Table 1: Applied Standard and Test Levels

Radio

FCC CFR47 Part 15: Subpart C Section 15.247

RSS-247 Issue 1 May 2015

RSS-Gen, Issue 4, November 2014

ANSI C63.10:2013

Public Notice DA 00-705

NCC Low-power Radio-frequency Devices Technical Regulations LP0002(2011)(100年6月28日)



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2. Test Sites

2.1 Test Laboratory

TUV Rheinland Taiwan Ltd. Taichung Branch Office

No.9, Lane 36, Minsheng Rd., Sec. 3, Daya District, Taichung City 428
Taiwan (R.O.C.)

2.2 Test Facility

TUV Rheinland Taiwan Ltd. Taipei Office

11F. No.758, Sec. 4, Bade Rd., Songshan Dist. Taipei City 105
Taiwan (R.O.C.)

FCC RegistrationNo.: 365730

IC Canada Registration No.: 9465A-1 TAF Accredited NCC Test Lab. No.:0759

TAF ISO17025 Certification effective periods: 2013-Jul-1st to 2016-Jun-30th



Testing Laboratory 0759

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2.3 List of Test and Measurement Instruments

Table 2: List of Test and Measurement Equipment

| Kind of Equipment | Manufacturer | Туре | S/N | Last Calibration | Next Calibration |
|----------------------------------|-------------------|------------------|-----------------|---------------------|---------------------|
| EMI Test Receiver | R&S | ESR7 | 101062 | 31-Aug-14 | 30-Aug-15 |
| Bilog Antenna | TESEQ | CBL6111D | 29802 | 4-Jul-14 | 3-Jul-16 |
| Spectrum Analyzer | R&S | FSV 40 | 100921 | 17-Dec-14 | 16-Dec-15 |
| Spectrum Analyzer | Agilent | N9010A | MY53470241 | 1-Apr-15 | 30-Mar-16 |
| Horn Antenna | ETS- Lindgren | 3117 | 138160 | 12-Jan-15 | 11-Jan-17 |
| Horn Antenna (18GHz~40GHz) | COM- POWER | AH840 | 101031 | 30-Oct-13 | 29-Oct-15 |
| Preamplifier (30MHz -1GHz) | HP | 8447F | 2805A03335 | 23-Aug-14 | 22-Aug-15 |
| Preamplifier (18 GHz -40 GHz) | COM- POWER | PAM-840 | 461257 | 26-Aug-14 | 25-Aug-15 |
| Pre-Amplifier (1GHz~18GHz) | EM Electronics | EM30180 | 60558 | 4-Nov-14 | 3-Nov-15 |
| Loop Antenna | Schwarzbeck | FMZB 1513 | 1513-076 | 22-Oct-14 | 21-Oct-15 |
| EMI Test Receiver | R&S | ESCI7 | 100797 | 28-Dec-14 | 27-Dec-15 |
| Spectrum Analyzer | R&S | FSL3 | 101943 | 14-Sep-14 | 14-Sep-15 |
| Temp. & Humid. Chamber | Giant Force | GCT-099- 40-S | MAF0103- 007 | 13-Jul-15 | 12-Jul-16 |
| LISN (1 phase) | R&S | ENV216 | 101243 | 1-Jun-15 | 1-Jun-16 |
| LISN | Rolf Heine | NNB- 2/16Z | 99080 | 26-Aug-14 | 25-Aug-15 |

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2.4 Traceability

All measurement equipment calibrations are traceable to NML(Taiwan)/NIST(USA) or where calibration is performed outside Taiwan, to equivalent nationally recognized standards organizations.

2.5 Calibration

requiring calibration is calibrated periodically in a suitably accredited Calibration Lab. Additionally all equipment is verified for proper performance on a regular basics using in house standards or comparisons.

2.6 Measurement Uncertainty

The estimated combined standard uncertainty for radiated emissions and conducted emissions measurements:.

Table 3: Emission Measurement Uncertainty

| Parameter | Uncertainty |
|--|-------------|
| RF power, conducted | ± 1.5 dB |
| Adjacent channel power | ±3 dB |
| Radiated emission of transmitter, valid up to 26 GHz | ± 6 dB |
| Radiated emission of receiver, valid up to 26 GHz | ± 6 dB |
| Temperature | ± 2 ºC |
| Humidity | ± 10 % |

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3. General Product Information

3.1 Product Function and Intended Use

"Bluetooth Ultimate USB Dongle enables wireless connectivity of your existing PC or notebook using the latest Bluetooth Technology and you don't have to remove it after PC or notebook powered off since the size of this dongle is so tiny that you even don't remember there is a dongle. The Dongle compliant with Bluetooth Standard 4.0 which support Bluetooth low energy feature and make the Bluetooth devices who with low energy in has long battery life. Adapted with this low energy technology, the dongle can connected a broad range BT4.0 low energy compliant devices with PC such as medical, PC peripherals, home and audio video control..etc to enjoy the benefit of low energy and

For details refer to the User Guide, Data Sheet and Circuit Diagram.

3.2 System Details and Ratings

convenience of Bluetooth wireless connection.

Table 4: Basic Information of EUT

| Item | EUT information |
|-------------------|-----------------------|
| Kind of Equipment | Bluetooth USB Adaptor |
| Type Designation | BD-Q382A |
| Brand Name | QSTARZ |
| FCC ID | WDYQ1040601 |

Table 5: Technical Specification of EUT

| Technical Specification | Value |
|-------------------------|-----------------------------|
| Operating Frequency | 2402 MHz ~ 2480 MHz |
| Channel Spacing | 1 MHz |
| Channel number | 79 |
| Operation Voltage | 5V (USB) |
| Modulation | GFSK, π /4 QPSK, 8 DPSK |
| Antenna gain | -11.27 dBi |

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Table 6: Frequency hopping information

| Technical Specification | Description |
|--------------------------|---|
| Hopping Range | Hereby we declare that the maximum frequency of this device is: 2402-2480MHz. This is according the Bluetooth Core Specification V2.1+EDR for devices which will be operated in the USA. This was checked during the Bluetooth Qualification tests (Test Case: TRM/CA/04). |
| Hopping Sequence | Example of a 79 hopping sequence in data mode: 33,04,21,44,23,42,53,46,55,48,40,59,72,29,76,31,08,73, 07,75,09,45,60,39,58,13,47,11,77,52,35,50,65,54,67,56, 69,62,71,64, 7,25,27,66,57,70,74,61,78,63,10,41,05,43, 15,44,64,68,02,70,06,01,51,03,55,05,03,66,53,49,36,47, |
| Receiver input bandwidth | The input bandwidth of the receiver is 1MHz. In every connection one Bluetooth device is the master and the other one is the slave. The master determines the hopping sequence. The slave follows this sequence. Both devices shift between RX and TX time slot according to the clock of the master. Additionally the type of connection is set up at the beginning of the connection. The master adapts its hopping frequency and its TX/RX timing according to the packet type of the connection. Also the slave of the connection will use these settings. Repeating of a packer has no influence on the hopping sequence. The hopping sequence generated by the master of the connection will be followed in any case. That means a repeated packet will not be send on the same frequency, it is send on the next frequency of the |

3.3 Independent Operation Modes

The basic operation modes are:

- A. Transmitting
 - 1. Low channel
 - 2. Middle channel
 - 3. High channel
- B. Receiving
- C. Standby
- D. Off



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3.4 Noise Generating and Noise Suppressing Parts

Refer to the Circuit Diagram.

3.5 Submitted Documents

- Circuit Diagram
- Instruction Manual
- Rating Label
- Technical Description

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4. Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

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

4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 4. All testing were performed according to the procedures in ANSI C63.10: 2009 and DA 00-705 of March 30, 2000.

The samples were used as follows: Conducted: **A000139693-001**

Radiation: A000139693-002

Full test was applied on all test modes, but only worst case was shown.

4.3 Special Accessories and Auxiliary Equipment

The product has been tested together with the following additional accessories:

| Kind of Equipment | Manufacturer | Model Name | S/N |
|-------------------|--------------|--------------|------------|
| Laptop | HP | HSTNN-Q78C-3 | CNF0339QBM |

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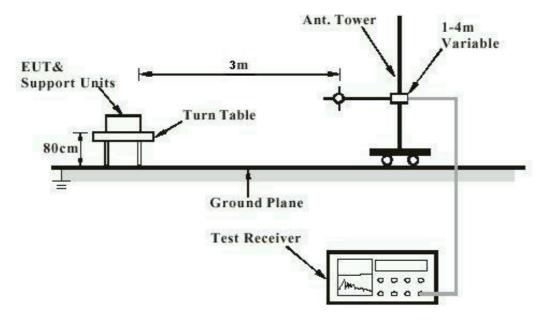
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4.4 Countermeasures to achieve EMC Compliance

The test sample which has been tested containing the noise suppression parts as in the Photo Appendix and the Test Setup Photos. No additional measures were employed to achieve compliance.

4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test



Note: Measurements above 1 GHz are done with a table height of 1.5m



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Diagram of Measurement Equipment Configuration for Mains Conduction Measurement

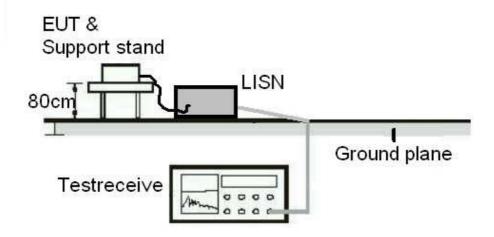
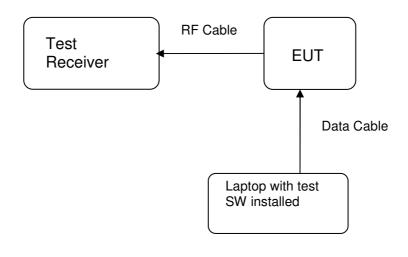


Diagram of Measurement Equipment Configuration for Conducted Transmitter Measurement





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5. Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT: Passed

Test standard : LP0002(2011): 2.2, 3.10.1, (3)

FCC Part 15.247(b)(4), Part 15.203 and RSS-

Gen 8.3

Requirement : use of approved antennas only with directional gains that

do not exceed 6 dBi

According to the manufacturer declaration, the EUT has an antenna with a directional gain of -11.27 dBi dBi. The antenna is a printed PCB trace with no possibility of replacement with a non-approved antenna by the end-user. Therefore, the EUT is considered to comply with this provision.

Refer to EUT photo for details.



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5.1.2 Peak Output Power

RESULT: Passed

Test standard FCC Part 15.247(b)(1),

RSS-247 5.4(2)

LP0002(2011): 3.10.1, (2)

Basic standard DA 00-705 of March 30, 2000

LP0002(2011) Appendix II

Kind of test site Shielded room

Test setup

Low/ Middle/ HighA Test Channel

Operation Mode

Ambient temperature :
Relative humidity :
Atmospheric pressure : 22-26 °C 50-65 % 100-103 l 100-103 kPa

Table 7: Test result of Peak Output Power, GFSK modulation

| Channel | Channel Frequency | Peak Output Power | | Limit |
|----------------|----------------------|-------------------|---------|-------|
| | (MHz) | (dBm) | (W) | (W) |
| Low Channel | 2402 | -0.20 | 0.00095 | 0.125 |
| Middle Channel | 2441 | 2.62 | 0.00183 | 0.125 |
| High Channel | 2480 | 4.64 | 0.00291 | 0.125 |

Table 8: Test result of Peak Output Power, 8DPSK modulation

| Channel | Channel Frequency | Peak Outpu | t Power | Limit |
|----------------|----------------------|------------|---------|-------|
| | (MHz) | (dBm) | (W) | (W) |
| Low Channel | 2402 | -1.05 | 0.00079 | 0.125 |
| Middle Channel | 2441 | 1.74 | 0.00149 | 0.125 |
| High Channel | 2480 | 3.77 | 0.00238 | 0.125 |

Pmax: 2.9114 mW



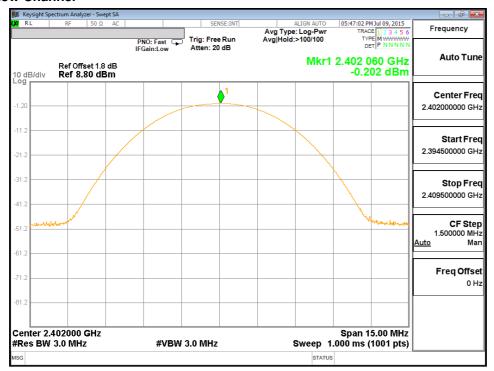
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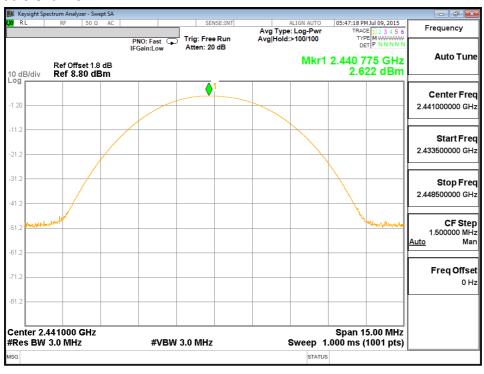
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Test Plot of Peak Output Power, GFSK modulation

Low Channel



Middle Channel



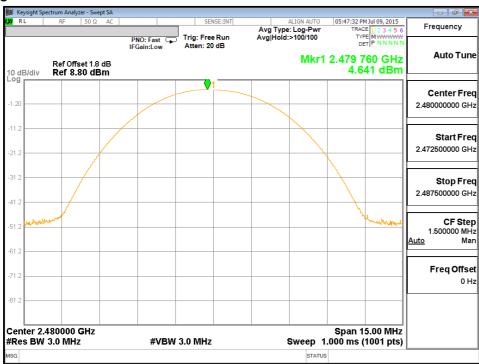


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Test Plot of Peak Output Power, 8DPSK modulation

Low Channel





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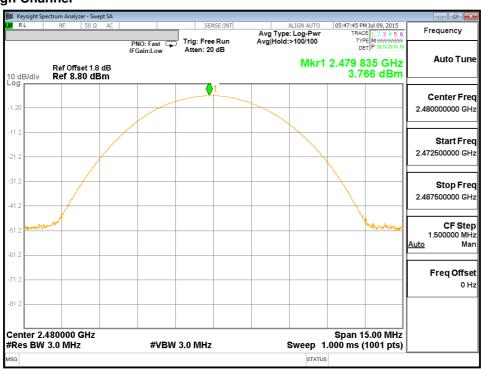
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Middle Channel



High Channel





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Test Report No.

5.1.3 20dB Bandwidth

RESULT: Passed

Test standard FCC Part 15.247(a)(1),

RSS-247 5.1(1)

LP0002(2011): 3.10.1, (6.1.1)

Basic standard DA 00-705 of March 30, 2000

LP0002(2011) Appendix II

Kind of test site Shielded room

Test setup

Test Channel Low/ Middle/ High

Operation Mode

Ambient temperature 22-26°C Relative humidity 50-65% Atmospheric pressure 100-103kPa

Table 9: Test result of 20dB Bandwidth, GFSK modulation

| Channel | Channel Frequency (MHz) | 20dB Bandwidth (kHz) | Limit (MHz) | Result |
|--------------|-------------------------------|-------------------------|----------------|--------|
| Low Channel | 2402 | 964 | 1.5 | Pass |
| Mid Channel | 2441 | 1024 | 1.5 | Pass |
| High Channel | 2480 | 963.4 | 1.5 | Pass |

Note: Limit is for Channel Separation of 1 MHz and a power limit of 125 mW.

Table 10: Test result of 20dB Bandwidth, 8DPSK modulation

| Channel | Channel Frequency (MHz) | 20dB Bandwidth (kHz) | Limit (MHz) | Result |
|--------------|-------------------------------|-------------------------|----------------|--------|
| Low Channel | 2402 | 1301 | 1.5 | Pass |
| Mid Channel | 2441 | 1302 | 1.5 | Pass |
| High Channel | 2480 | 1303 | 1.5 | Pass |

Note: Limit is for Channel Separation of 1 MHz and a power limit of 125 mW. If the carrier separation frequency of a Bluetooth Device is set at 1 MHz due to the firmware setting and the Bluetooth Standard, then the limit for the 20 dB Bandwidth, becomes 1 MHZ / 0.66666 = 1.5 MHz.



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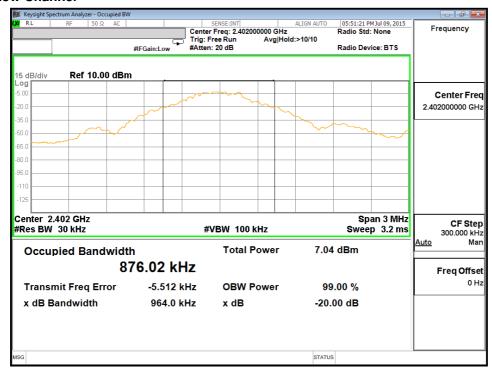
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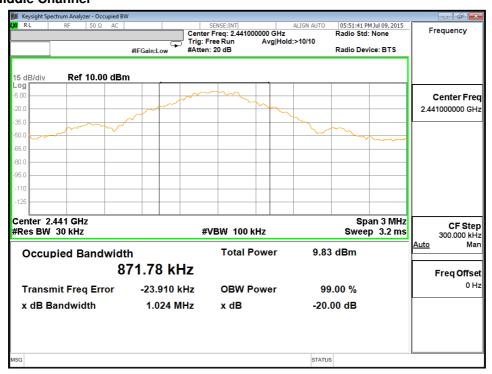
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Test Plot of 20dB Bandwidth, GFSK modulation

Low Channel



Middle Channel





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Test Plot of 20dB Bandwidth, 8DPSK modulation

Low Channel





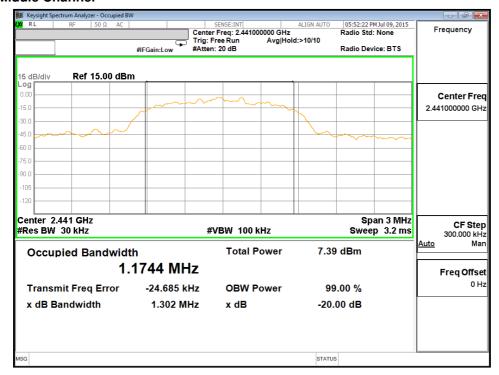
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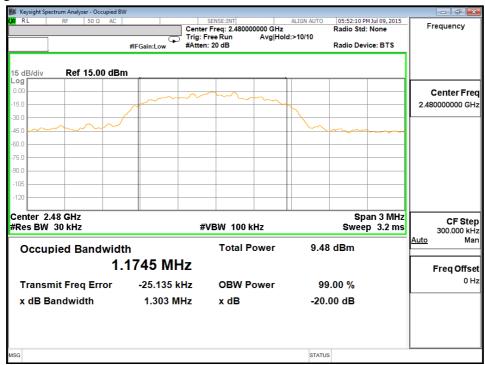
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Middle Channel



High Channel





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Test Report No.

5.1.4 99% Bandwidth

RESULT: Passed

Test standard RSS-Gen (Issue 4) Basic standard RSS-Gen (Issue 4) Kind of test site Shielded room

Test setup

Test Channel Low/ Middle/ High

Operation Mode : Α

Ambient temperature : 22-26°C Relative humidity : Atmospheric pressure : Relative humidity 50-65% 100-103kPa

Table 11: Test result of 99% Bandwidth, GFSK modulation

| Channel | Channel Frequency (MHz) | 99% Bandwidth (kHz) | Result |
|--------------|-------------------------------|------------------------|--------|
| Low Channel | 2402 | 879.41 | Pass |
| Mid Channel | 2441 | 875.27 | Pass |
| High Channel | 2480 | 873.37 | Pass |

Table 12: Test result of 99% Bandwidth, PSK modulation

| Channel | Channel Frequency (MHz) | 99% Bandwidth (kHz) | Result |
|--------------|-------------------------------|------------------------|--------|
| Low Channel | 2402 | 1172.9 | Pass |
| Mid Channel | 2441 | 1176 | Pass |
| High Channel | 2480 | 1172.9 | Pass |



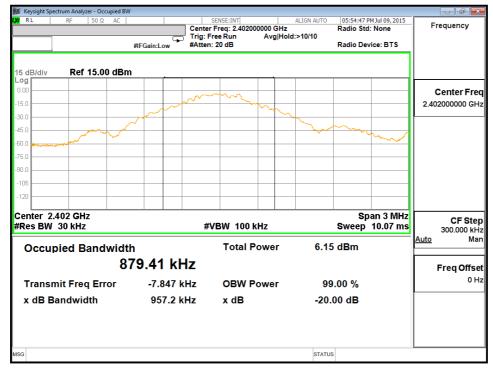
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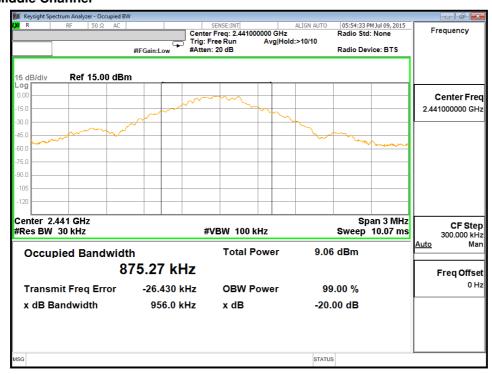
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Test Plot of 99% Bandwidth, GFSK modulation

Low Channel



Middle Channel





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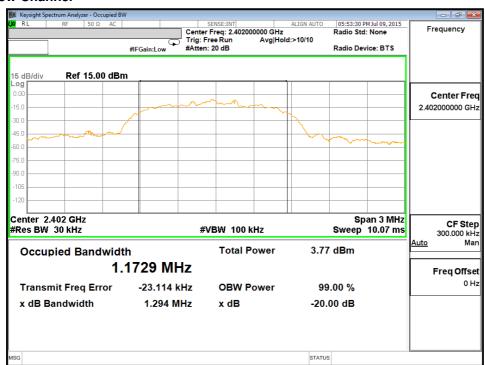
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Test Plot of 99% Bandwidth, 8DPSK modulation

Low Channel





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Middle Channel



High Channel





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Test Report No.

5.1.5 Conducted spurious emissions and Frequency Band Edge measured in 100kHz Bandwidth

RESULT: Passed

Test standard FCC part 15.247(d),

RSS-247 5.5

LP0002(2011): 3.10.1, (5) DA 00-705 of March 30, 2000

Basic standard :

LP0002(2011) Appendix II 20dB (below that in the 100kHz bandwidth within the

band that contains the highest level of the desired power)

Kind of test site Shielded room

Test setup

Limit

Test Channel Low/ Middle/ High

Operation Mode

Ambient temperature 22-26°C Relative humidity 50-65% Atmospheric pressure 100-103 kPa

All emissions are more than 20dB below fundamental, details refer to following test plot, and compliance is achived as well.

Due to the small size of the product and that there are no inductive components of significant size, 9kHz to 30MHz frequency range is not tested based on technical judgment.



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Test Plot of 100kHz Conducted Emissions, GFSK modulation

Low Channel



Middle Channel





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Test Plot of 100kHz Conducted Emissions, 8DPSK modulation

Low Channel





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Middle Channel



High Channel





Produkte Products

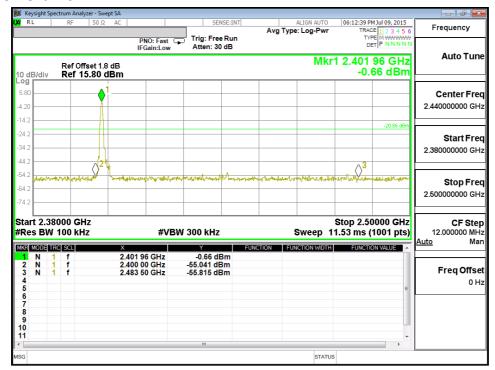
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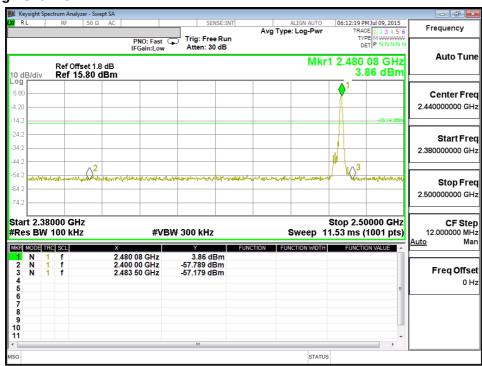
Test Plot of 100kHz Bandwidth of Frequency Band Edge, GFSK modulation

Low Channel

Test Report No.



High Channel





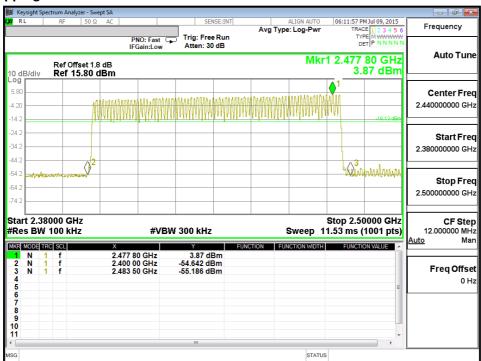
Products

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Hopping ON





Produkte Products

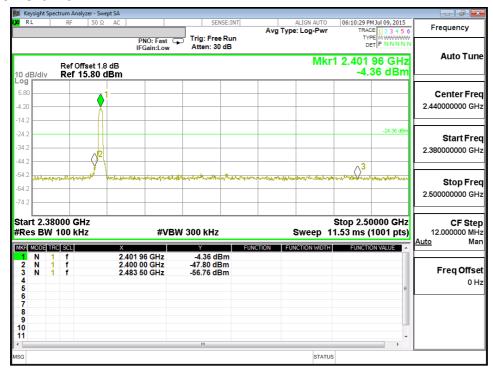
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Test Plot of 100kHz Bandwidth of Frequency Band Edge, 8DPSK modulation

Low Channel



High Channel





Products

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Hopping ON





Products

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Test Report No.

5.1.6 Spurious Emission

RESULT: Passed

Test standard FCC part 15.247(d), FCC 15.205, FCC 15.209, RSS-

210 2.2, RSS-247 5.5 and RSS-Gen 8.9

LP0002(2011): 3.10.1, (5)

Basic standard ANSI C63.10

Limits Radiated emissions which fall in the restricted bands,

> as defined in FCC 15.205(a) and RSS-Gen i4, 8.9 (Table 6), must comply with the radiated emission limits specified in FCC 15.209(a) and RSS-Gen i4,

8.9 (Table 4 and 5).

Radiated emissions which fall in the restricted bands. as defined in LP0002(2011): 2.7, must comply with

the radiated emission limits specified in

LP0002(2011): 2.8

Emission radiated outside the specified frequency bands must comply with the radiated emission limits specified in FCC 15.209(a) and FCC 15.249(a), RSS-Gen i4, 8.9 (Table 4 and 5) and RSS-210 A2.9(a). Emission radiated outside the specified frequency bands must comply with the radiated emission limits

specified in LP0002(2011): 2.8

3m Semi-Anechoic Chamber Kind of test site

Test setup

Test Channel Low/ Middle/ High

Operation Mode A, B

Remark: Testing was carried out within frequency range 30MHz to the tenth harmonic. For details refer to Appendix D. The Radiated Emissions testing was performed in the X, Y and Z axis orientation. The worst-case Axis orientation is recorded in this test report. Due to the small size of the product and that there are no inductive components of significant size, 9kHz to 30MHz frequency range is not tested based on technical judgment.



Products

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Test Report No.

5.1.7 Frequency Separation

RESULT: Passed

Test standard FCC part 15.247(a)(1)

RSS-247 5.1

LP0002(2011): 3.10.1, (6.1.1)

Basic standard DA 00-705 of March 30, 2000

LP0002(2011) Appendix II

Limit ≥ 25kHz or 2/3 of 20dB bandwidth, whichever is greater

Test setup

Test Channel Low/ Middle/ High

Operation Mode Ambient temperature **24**℃ Relative humidity 53%

Table 13: Test result of Frequency Separation

| Channel | Channel Frequency (MHz) | Measured Channel Separation (MHz) | Limit (kHz) | Result |
|----------------------|----------------------------|--|-------------------------------------|--------|
| Record Channel | 2441 | | > 05111 0/0 (| Pass |
| Record Channel adj 1 | 2440 | 1 | ≥ 25kHz or 2/3 of 20dB bandwidth | |
| Record Channel adj 2 | 2442 | | 200B bandwidth | |



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Test Plot of Frequency Separation

GFSK





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5.1.8 Number of hopping frequency

RESULT: Passed

Test standard FCC part 15.247(a)(1)(iii)

RSS-247 5.1(5)

LP0002(2011): 3.10.1, (6.1.2)

Basic standard DA 00-705 of March 30, 2000

LP0002(2011) Appendix II

Limits ≥ 15 non-overlapping channels

Kind of test site Shield room

Test setup

Test Channel Low/ Middle/ High

Operation Mode Α

22-26°C Ambient temperature : Relative humidity : Atmospheric pressure : 50-65% 100-103 kPa

Table 14: Test result of Number of hopping frequency

| Frequency Range | Measured Quantity of Hopping Channel | Limit | Result |
|--------------------|--------------------------------------|-------|--------|
| 2400 to 2483.5 MHz | 79 | ≥15 | Pass |



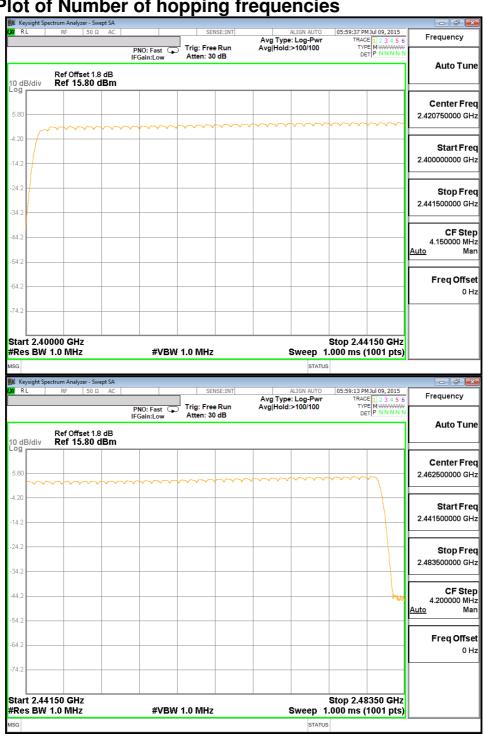
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Test Plot of Number of hopping frequencies





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Test Report No.

5.1.9 Time of Occupancy

RESULT: Passed

Test standard FCC part 15.247(a)(1)(iii) :

RSS-247 5.1(5)

LP0002(2011): 3.10.1, (6.1.2)

Basic standard DA 00-705 of March 30, 2000

LP0002(2011) Appendix II

Limits 0.4s

Kind of test site Shield room

Test setup

Test Channel Low/ Middle/ High

Operation Mode

Ambient temperature : 22-26°C Relative humidity : Atmospheric pressure : 50-65% 100-103 kPa

Table 15: Test result of Time of Occupancy

| Data Mode | Captured Burst (s) | Dwell time (s) | On+Off time (s) | Limit (s) | Result |
|-----------|--------------------------|-------------------|--------------------|--------------|--------|
| DH5 | 0.0030 | 0.3160 | 0.00376 | 0.4 | Pass |
| 3DH5 | 0.0030 | 0.3160 | 0.00376 | 0.4 | Pass |

Note:

Dwell time = Pulse width x (Hopping rate / Number of channels) x Period

Period = 0.4 (seconds/ channel) x 79 (channel) = 31.6 seconds.

Hopping rate = 1 / (On+Off time) = 266 Hz



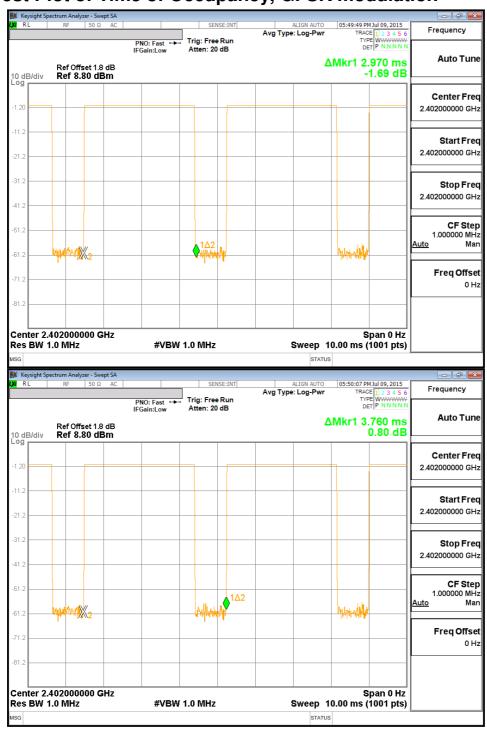
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Test Plot of Time of Occupancy, GFSK modulation



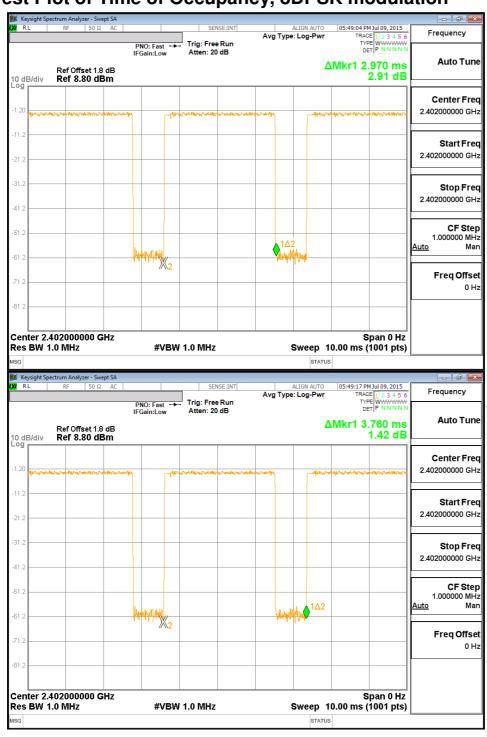


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Test Plot of Time of Occupancy, 8DPSK modulation





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5.2 Mains Emissions

5.2.1 Mains Conducted Emissions

RESULT: Passed

Test standard : FCC Part 15.207

FCC Part 15.107 RSS-Gen 8.8 LP0002: 2.3

Limits : Mains Conducted emissions as defined in

above test standards must comply with the mains conducted emission limits specified

Kind of test site : Shielded Room

Test setup

Test Channel : Middle Operation mode : A

Remark: For details refer to Appendix D.



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6. Safety Human exposure

6.1 Radio Frequency Exposure Compliance

6.1.1 Electromagnetic Fields

RESULT: Passed

Test standard : FCC KDB Publication 447498

The maximum peak output power of the transmitter is 2.9114 mW. The separation between hand and antenna is more than 2mm.

Hence the EUT is exclueded from SAR evaluation.
Please also refer to FCC KDB publication 447498 D01 v05: Mobile Portable RF Exposure



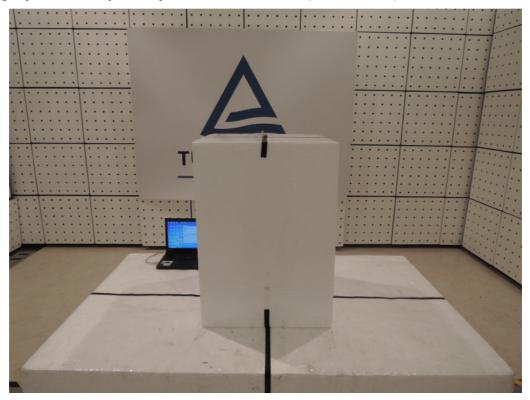
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7. Photographs of the Test Set-Up

Photograph 1: Set-up for Spurious Emissions (Front View)



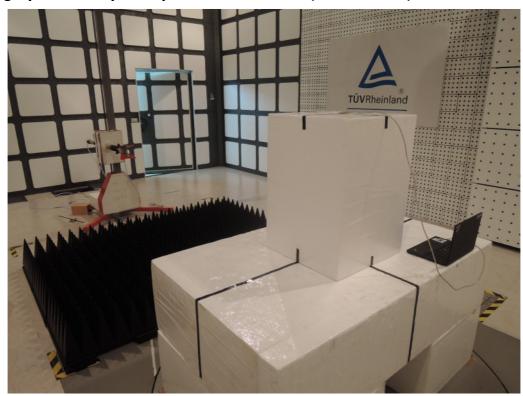


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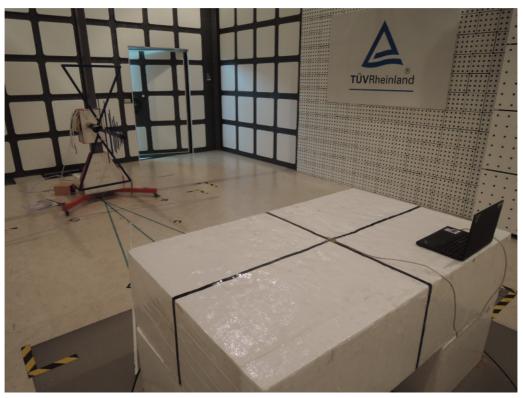
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Photograph 2: Set-up for Spurious Emissions (Back View 1)



Photograph 3: Set-up for Spurious Emissions (Back View 2)







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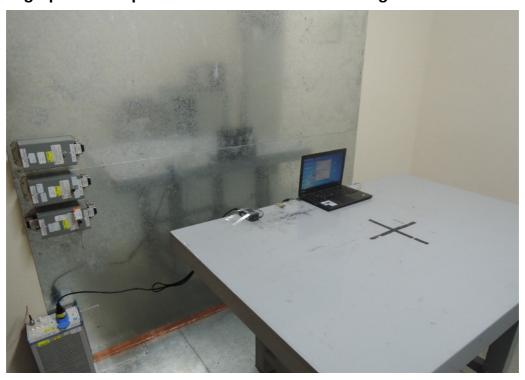
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Photograph 4: Set-up for Conducted testing



Photograph 5: Set-up for for Mains Conducted testing Front





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Photograph 6: Set-up for for Mains Conducted testing Back





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