

Prüfbericht - Nr.: 17019029 001

Test Report No.:

Auftraggeber: Zhongshan K-mate General Elec. Co., Ltd.

Client: Fuwan Industrial Zone, Fuwan South Road, Sunwen East Road, East

District, 528403 Zhongshan, Guangdong, P.R. China

Gegenstand der Prüfung: Bluetooth Stereo Headset

Test item:

Bezeichnung: BTH002-KMA04 Serien-Nr.: n.a. Identification: Serial No.:

\_\_\_\_\_

Wareneingangs-Nr.: 163072045 Eingangsdatum: 2010-12-24

Receipt No.: Date of receipt:

Prüfort: TÜV Rheinland (Guangdong) Ltd.

Testing location: EMC Laboratory

Guangzhou Auto Market, Yuan Gang Section of Guangshan Road, Guangzhou, P.R. China

FCC Registration No.: 833845

Prüfgrundlage: FCC CFR47 Part 15: Subpart C Section 15.247

Test specification: FCC CFR47 Part 15: Subpart C Section 15.207

FCC CFR47 Part 15: Subpart C Section 15.207
FCC CFR47 Part 15: Subpart C Section 15.209
FCC CFR47 Part 15: Subpart B Section 15.107
FCC CFR47 Part 15: Subpart B Section 15.109

Prüfergebnis: Der Prüfgegenstand entspricht oben genannter Prüfgrundlage(n).

Test Result: The test item passed the test specification(s).

Prüflaboratorium: TÜV Rheinland (Shenzhen) Co., Ltd. *Testing Laboratory:* 

geprüft/ tested by: kontrolliert/ reviewed by:

2011-03-15 Winnie Hou/Project Engineer 2011-03-29 Shawn Peng/Manager

 Datum
 Name/Stellung
 Unterschrift
 Datum
 Name/Stellung
 Unterschrift

 Date
 Name/Position
 Signature
 Date
 Name/Position
 Signature

Sonstiges/ Other Aspects:

Abkürzungen: P(ass) = entspricht Prüfgrundlage Abbreviations: P(ass) = passed
F(ail) = entspricht nicht Prüfgrundlage F(ail) = failed
NIA = nicht anwendbar NIA = not applicable
NIT = nicht getestet NIT = not tested

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 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 safety mark on this or similar products.



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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 CONDUCTED SPURIOUS EMISSIONS MEASURED IN 100KHZ BANDWIDTH

RESULT: Passed

5.1.5 Spurious Emission

RESULT: Passed

5.1.6 FREQUENCY SEPARATION

RESULT: Passed

5.1.7 NUMBER OF HOPPING FREQUENCY

RESULT: Passed

5.1.8 TIME OF OCCUPANCY

RESULT: Passed

6.1.1 ELECTROMAGNETIC FIELDS

RESULT: Passed



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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 of Radiated Emissions

# 2. Test Sites

# 2.1 Test Facilities

TÜV Rheinland (Guangdong) Ltd. EMC Laboratory

Guangzhou Auto Market, Yuan Gang Section of Guangshan Road, Guangzhou, P.R. China

FCC Registration No.: 833845



**Produkte Products** 

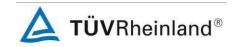
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# 2.2 List of Test and Measurement Instruments

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

Kind of Equipment	Manufacturer	Туре	S/N	Calibrated until			
Spurious emission	Spurious emission and Radiated emission						
EMI Test Receiver	Rohde & Schwarz	ESCI-3	100216	2011-03-16			
Spectrum Analyzer	Rohde & Schwarz	FSP30	100286	2011-03-16			
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100111	2012-03-16			
Trilog-Broadband Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9168	209	2011-08-21			
Double-Ridged Waveguide Horn Antenna	Rohde & Schwarz	HF906	100385	2011-08-24			
Pre-amplifier	MITEQ	AFS42- 00101800- 25-S-42	1101599	2011-07-31			
Standard Gain Horn Antenna	EMCO	3160-09	21642	2014-06-26			
Pre-amplifier	MITEQ	AFS33- 18002650- 30-8P-44	1108282	2011-03-16			
3m Anechoic Chamber	Albatross Project GmbH	N/A	N/A	2011-04-16			
Radio Test Suite	Radio Test Suite						
Receiver	Rohde & Schwarz	ESCI	100178	2011-09-26			
Spectrum analyzer	Agilent	E4404B	MY41440753	2011-09-26			



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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. Additionally all equipment is verified for proper performance on a regular basics using in house standards or comparisons.

# 2.5 Measurement Uncertainty

**Table 2: Emission Measurement Uncertainty** 

Measurement Type	Frequency	Uncertainty
AC Power Line Conducted Emission	150kHz - 30MHz	±3.0dB
Antenna Port Conducted Emission	< 1GHz	±0.39dB
	> 1GHz	±0.68dB
Radiated Emission	30MHz - 1GHz	±4.7dB
	> 1GHz	±4.5dB

# 2.6 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix1 of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) file for certification follow-up purposes.

# 2.7 Status of Facility Used for Testing

The TÜV Rheinland (Guangdong) Ltd. test facility located at Guangzhou Auto Market, Yuan Gang Section of Guangshan Road, Guangzhou, P.R. China is listed on the US Federal Communications Commission list of facilities approved to perform measurements.



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# 3. General Product Information

### 3.1 Product Function and Intended Use

The EUT is Bluetooth stereo headset. It operates at 2.4GHz ISM frequency band. For details refer to the User Manual, Technical Description and Circuit Diagram.

# 3.2 Ratings and System Details

**Table 3: Rating of EUT** 

Kind of Equipment:	Bluetooth Stereo Headset
Type Designation:	BTH002-KMA04
FCC ID	WAD-BTH002-KMA04

#### **Table 4: Technical Specification of EUT**

Technical Specification	Value
Operating Frequency band	2402 – 2480 MHz
Channel separation	1MHz
Extreme Temperature Range	-20°C to +45°C
Operation Voltage	DC 3.7V (via Lithium Battery)
Modulation	FHSS, GFSK, 8DPSK, $\pi/4$ DQPSK
Antenna Type	Internal Antenna, Non-User Replaceable
Antenna Gain	0dBi
RF Output Power	0.0030W (4.71dBm)

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**Table 5: Frequency hopping information** 

Technical Specification	Description
Hopping Range	The custumer declares 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-E).
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 hopping sequence.

# 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

- Bill of Material
- PCB Layout
- Photo Document
- Technical Description

- Circuit Diagram
- Instruction Manual
- Rating Label

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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 5. All testing were performed according to the procedures in ANSI C63.4: 2003.

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

# 4.3 Special Accessories and Auxiliary Equipment

The EUT was tested with following accessories

Description	Manufacturer	Туре	S/N
Notebook	lenovo	X60	L3-CG041 07/04

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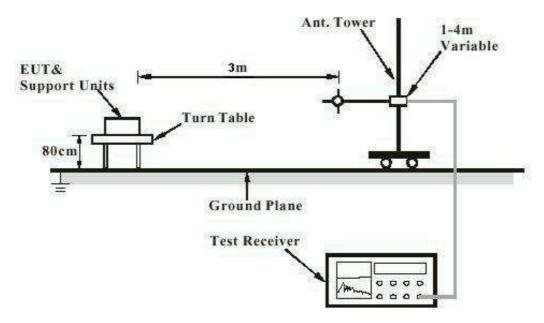
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# 4.4 Countermeasures to achieve EMC Compliance

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

# 4.5 Test Setup Diagram

**Diagram of Measurement Configuration for Radiation Test** 





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**Diagram of Measurement Equipment Configuration for Mains Conduction Measurement** 

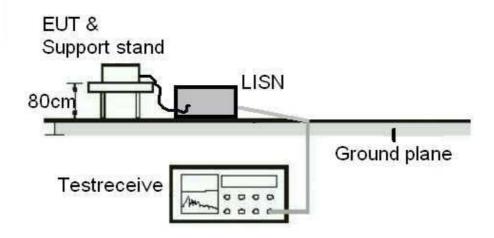
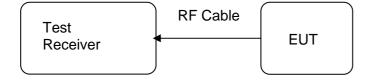


Diagram of Measurement Equipment Configuration for Conducted Transmitter Measurement





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# 5. Test Results

# 5.1 Transmitter Requirement & Test Suites

### 5.1.1 Antenna Requirement

RESULT: Passed

Test date : 2011-01-10

Test standard : FCC Part 15.247(b)(4) and Part 15.203

Limit : the use of antennas with directional gains that do

not exceed 6 dBi

According to the manufacturer declared, the EUT has an internal antenna, the directional gain of antenna is 0dBi, and the antenna connector is designed with permanent attachment and no consideration of replacement. Therefore the EUT is considered sufficient to comply the provision.

Refer to EUT photo for details.



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### 5.1.2 Peak Output Power

**RESULT: Passed** 

Test date 2011-01-10

Test standard :
Basic standard :
Limit :
Kind of test site : FCC Part 15.247(b)(1) ANSI C63.4: 2003

1 Watt

Shielded room

**Test setup** 

Low/ Middle/ High

Test Channel :
Operation Mode :
Ambient temperature :
Relative humidity :
Atmospheric pressure : **22**℃ 52% 101 kPa

Table 6: Test result of Peak Output Power, GFSK modulation

Channel	Channel Frequency	Peak Output Power		Limit
	(MHz)	(dBm)	(W)	(W)
Low Channel	2402	4.71	0.00296	1
Middle Channel	2441	3.97	0.00249	1
High Channel	2480	2.82	0.00191	1

Table 7: Test result of Peak Output Power, 8DPSK modulation

Channel	Channel Frequency	Peak Out	put Power	Limit
Onao.	(MHz)	(dBm)	(W)	(W)
Low Channel	2402	3.14	0.00206	1
Middle Channel	2441	2.41	0.00174	1
High Channel	2480	0.81	0.00121	1



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#### 5.1.3 20dB Bandwidth

RESULT: Passed

Date of testing : 2011-01-10

Test standard : FCC Part 15.247(a)(1)
Basic standard : ANSI C63.4: 2003
Kind of test site : Shielded room

**Test setup** 

Test Channel : Low/ Middle/ High

Operation Mode : A
Ambient temperature : 22°C
Relative humidity : 52%
Atmospheric pressure : 101 kPa

Table 8: Test result of 20dB Bandwidth, GFSK modulation

Channel	Channel Frequency (MHz)	20dB Bandwidth (kHz)	Limit (MHz)	Result
Low Channel	2402	825	/	Pass
Mid Channel	2441	825	/	Pass
High Channel	2480	825	/	Pass

Table 9: Test result of 20dB Bandwidth, 8DPSK modulation

Channel	Channel Frequency (MHz)	20dB Bandwidth (MHz)	Limit (MHz)	Result
Low Channel	2402	1.19	/	Pass
Mid Channel	2441	1.19	/	Pass
High Channel	2480	1.18	/	Pass

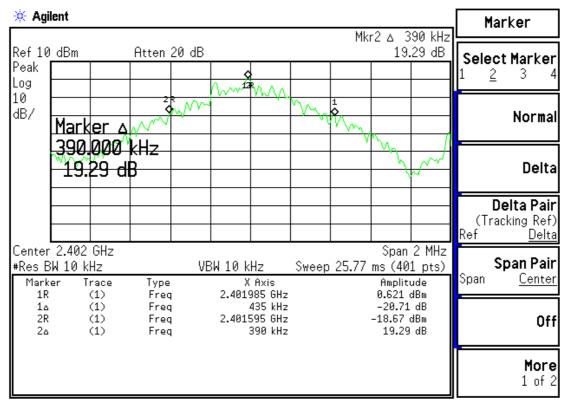


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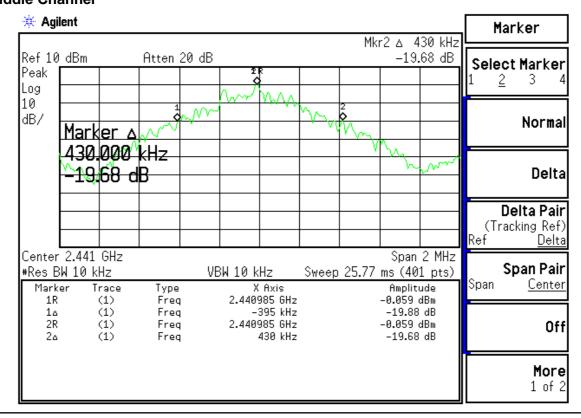
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### Test Plot of 20dB Bandwidth, GFSK modulation

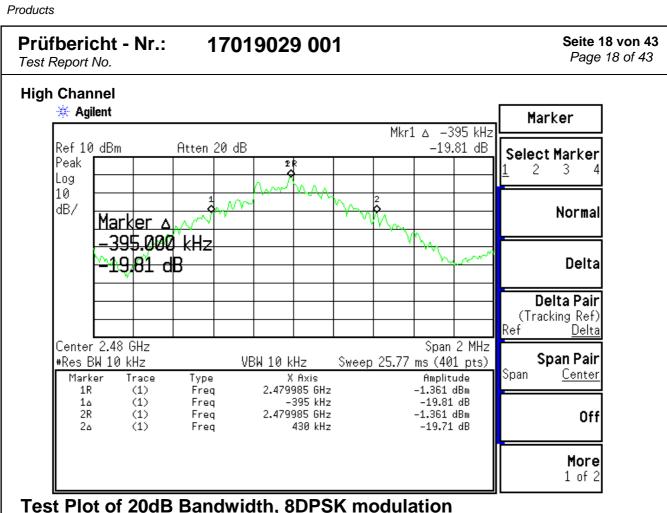
#### **Low Channel**



#### **Middle Channel**

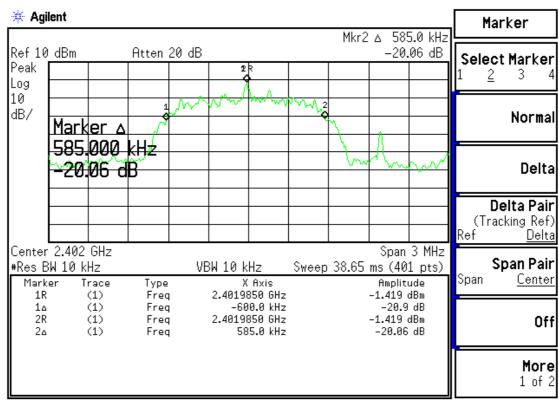




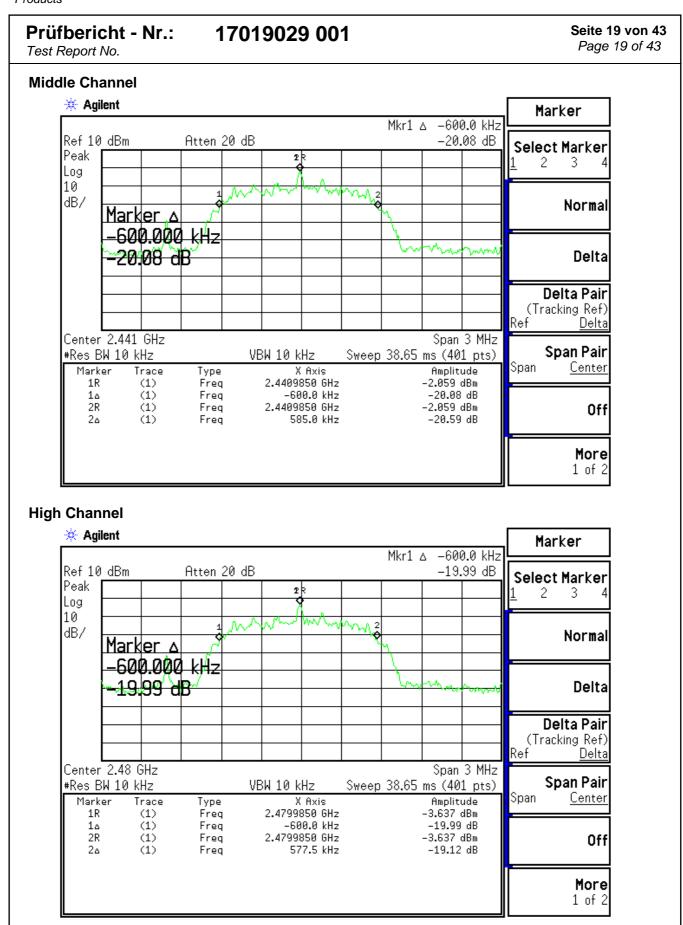


### Test Plot of 20dB Bandwidth, 8DPSK modulation

#### **Low Channel**









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### 5.1.4 Conducted spurious emissions measured in 100kHz **Bandwidth**

**RESULT: Passed** 

Date of testing 2011-01-14

Test standard FCC part 15.247(d) Basic standard ANSI C63.4: 2003

Limit 20dB (below that in the 100kHz bandwidth within

the band that contains the highest level of the

desired power)

Kind of test site Shield room

**Test setup** 

Test Channel Low/ High

Test Unanner :
Operation mode :
Ambient temperature : Α **22**℃ Relative humidity 52% Atmospheric pressure : 101 kPa

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



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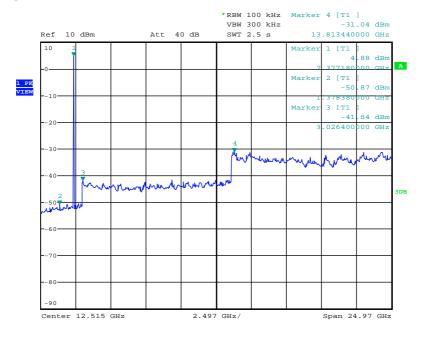
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### Test Plot of 100kHz Bandwidth of Frequency Band Edge, GFSK modulation

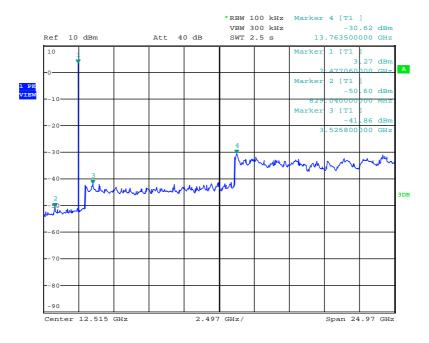
#### **Low Channel**

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Date: 14.JAN.2011 04:26:12

#### **High Channel**



Date: 14.JAN.2011 04:30:07



**Produkte Products** 

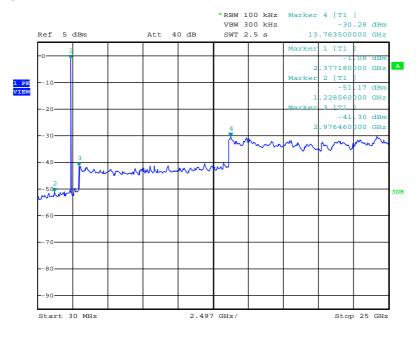
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### Test Plot of 100kHz Bandwidth of Frequency Band Edge, 8DPSK modulation

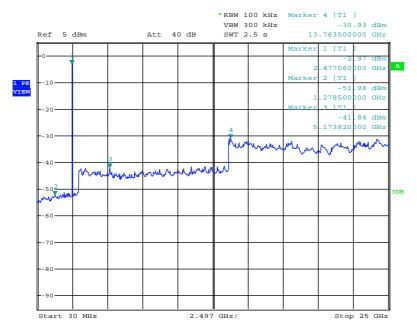
#### **Low Channel**

Test Report No.



Date: 28.JAN.2011 02:20:05

#### **High Channel**



Date: 28.JAN.2011 02:39:59



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# 5.1.5 Spurious Emission

**RESULT: Passed** 

Date of testing 2011-01-10 to 2011-01-14

Test standard FCC part 15.247(d) Basic standard ANSI C63.4: 2003

Refer to 15.209(a) of FCC part 15.247(d) Limits

In addition, radiated emissions which fall in the restricted bands, must also comply with the radiated emission limits specified

in 15.209(a)

Kind of test site 3m Semi-Anechoic Chamber

**Test setup** 

**Test Channel** Low/ Middle/ High

Operation mode A, C Ambient temperature **23**℃ Relative humidity 50% Atmospheric pressure : 101 kPa

Remark: Testing was carried out within frequency range 9kHz to the tenth harmonics. For details refer to Appendix 1. The Radiated Emissions testing was performed in the X, Y and Z axis mode. The X Axis mode is the worst-case recorded in this test report.



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# **5.1.6 Frequency Separation**

**RESULT: Passed** 

Date of testing 2011-01-13

Test standard FCC part 15.247(a)(1) Basic standard ANSI C63.4: 2003

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

greater

**Test setup** 

Low/ Middle/ High

I est Channel :
Operation Mode :
Ambient temperature :
Relative humidity :
Atmospheric pro-**22**℃ 52% Atmospheric pressure : 101 kPa

#### **Table 10: Test result of Frequency Separation**

Channel	Channel Frequency (MHz)	Measured Channel Separation (MHz)	Limit (kHz)	Result
Low Channel	2402	1	≥ 25kHz or 2/3 of	Pass
Adjacency Channel	2403	•	20dB bandwidth	
Mid Channel	2441	1	≥ 25kHz or 2/3 of	Pass
Adjacency Channel	2442	'	20dB bandwidth	
High Channel	2480	1	≥ 25kHz or 2/3 of	Pass
Adjacency Channel	2479	ı	20dB bandwidth	

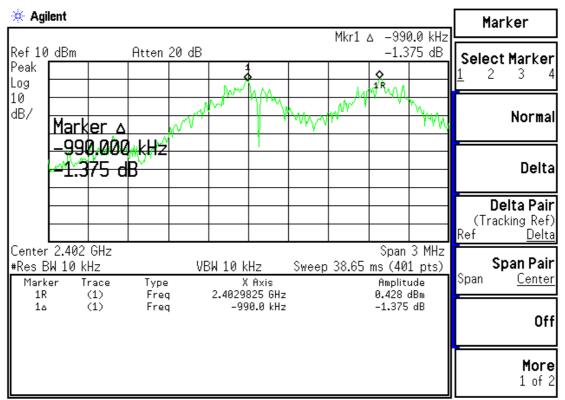


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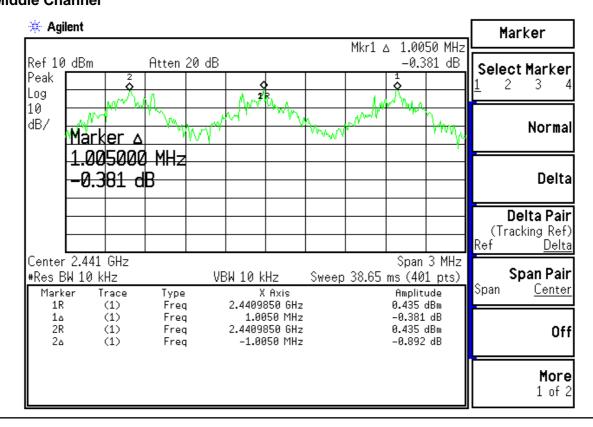
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# **Test Plot of Frequency Separation**

#### **Low Channel**



#### **Middle Channel**





Span Pair

Center

Off

More 1 of 2

Span

# **Produkte**

Center 2.48 GHz

#Res BW 10 kHz

Trace

(1)

(1)

Туре

Freq

Freq

Marker

1R

1۵

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VBW 10 kHz

X Axis

997.5 kHz

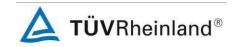
2.4789800 GHz

Span 3 MHz

Amplitude -0.888 dBm

-5.419 dB

Sweep 38.65 ms (401 pts)



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# 5.1.7 Number of hopping frequency

**RESULT: Passed** 

Date of testing 2011-01-13

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

Basic standard ANSI C63.4: 2003

Limits ≥ 15 non-overlapping channels

Kind of test site Shield room

**Test setup** 

Low/ Middle/ High

Test Channel :
Operation Mode :
Ambient temperature :
Relative humidity : Α **22**℃ 52% Atmospheric pressure : 101 kPa

#### Table 11: Test result of Number of hopping frequency

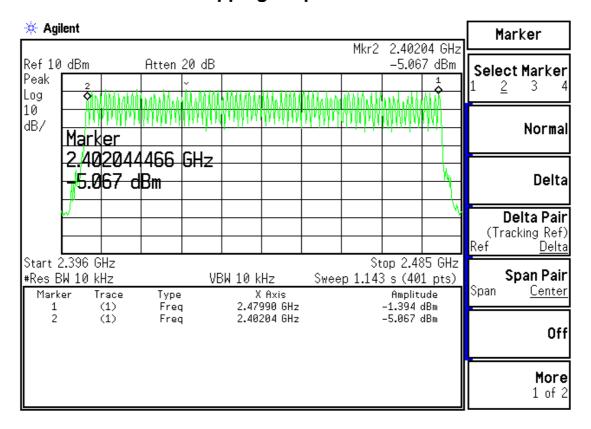
Frequency Range	Measured Quantity of Hopping Channel	Limit	Result
2400 to 2483.5 MHz	79	≥15	Pass



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# **Test Plot of Number of hopping frequencies**





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# 5.1.8 Time of Occupancy

**RESULT: Passed** 

Date of testing 2011-01-13

Date of testing Test standard Basic standard FCC part 15.247(a)(1)(iii)

ANSI C63.4: 2003

Limits 0.4s

Kind of test site : Shield room

**Test setup** 

Low/ Middle/ High

Test Channel : Low/ Mid
Operation Mode : A
Ambient temperature : 22°C
Relative humidity : 52%
Atmospheric pressure : 101 kPa

Table 12: Test result of Time of Occupancy, GFSK Modulation

Channel	Data Mode	Pulse width (ms)	Measured Dwell time (s)	Limit (s)	Result
Low Channel	DH1	0.570	0.182	0.4	Pass
	DH3	1.620	0.259	0.4	Pass
	DH5	3.120	0.332	0.4	Pass
Mid Channel	DH1	0.560	0.179	0.4	Pass
	DH3	1.580	0.253	0.4	Pass
	DH5	3.120	0.333	0.4	Pass
High Channel	DH1	0.560	0.179	0.4	Pass
	DH3	1.580	0.253	0.4	Pass
	DH5	3.090	0.330	0.4	Pass



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Test Report No.

Table 13: Test result of Time of Occupancy, 8DPSK Modulation

Channel	Data Mode	Pulse width (ms)	Measured Dwell time (s)	Limit (s)	Result
Low Channel	DH1	0.576	0.184	0.4	Pass
	DH3	1.840	0.294	0.4	Pass
	DH5	3.060	0.326	0.4	Pass
Mid Channel	DH1	0.582	0.186	0.4	Pass
	DH3	1.860	0.298	0.4	Pass
	DH5	3.120	0.333	0.4	Pass
High Channel	DH1	0.582	0.186	0.4	Pass
	DH3	1.840	0.294	0.4	Pass
	DH5	3.120	0.333	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

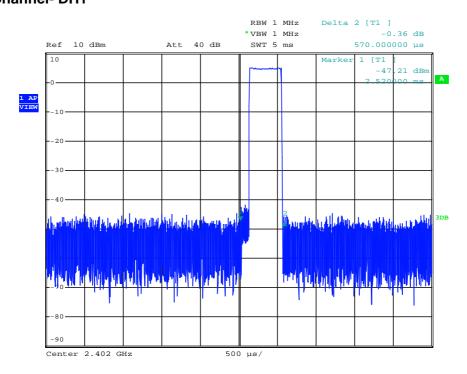


Prüfbericht - Nr.: 17019029 001

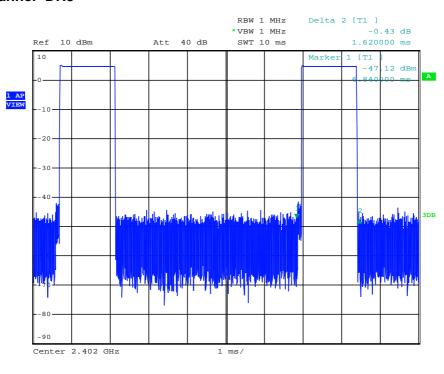
**Seite 31 von 43** *Page 31 of 43* 

Test Report No.

# Test Plot of Time of Occupancy, GFSK modulation Low Channel- DH1



#### Low Channel- DH3



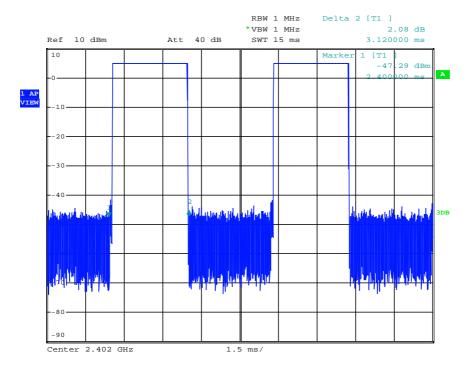


Prüfbericht - Nr.: 17019029 001

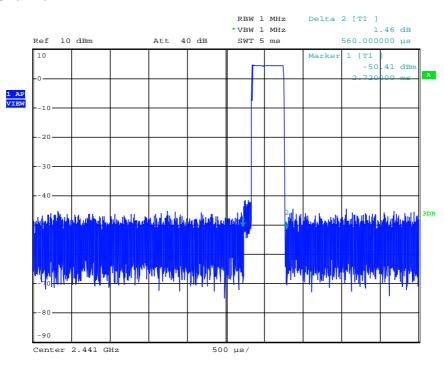
**Seite 32 von 43** *Page 32 of 43* 

Test Report No.

#### Low Channel- DH5



#### Middle Channel- DH1



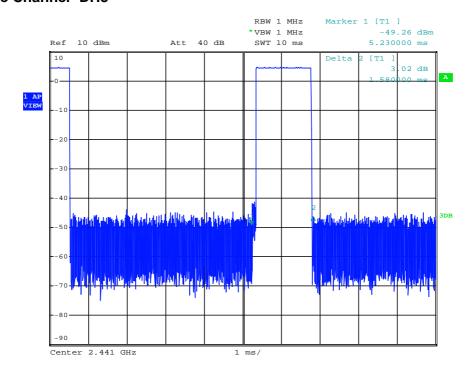


Prüfbericht - Nr.: 17019029 001

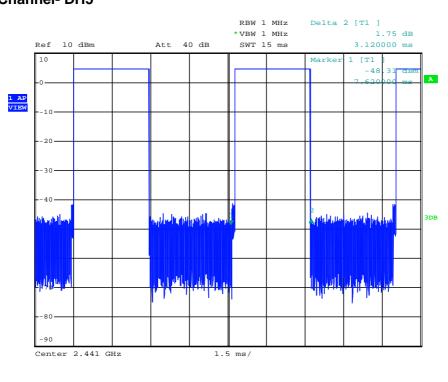
**Seite 33 von 43** *Page 33 of 43* 

### Middle Channel- DH3

Test Report No.



#### Middle Channel- DH5



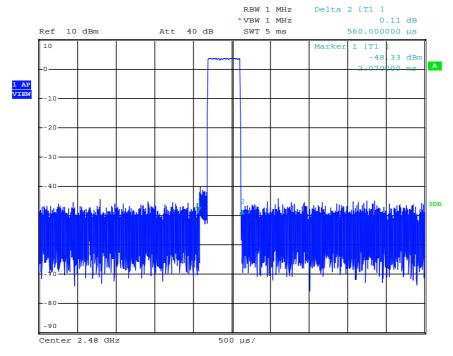


Prüfbericht - Nr.: 17019029 001

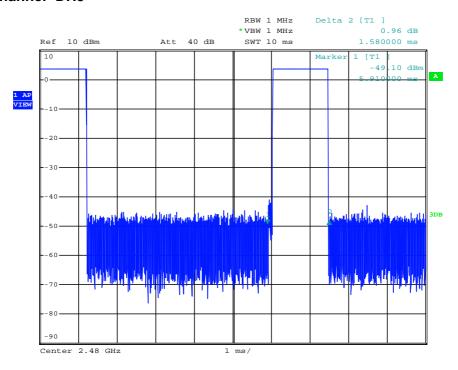
**Seite 34 von 43** *Page 34 of 43* 

Test Report No.





# High Channel- DH3

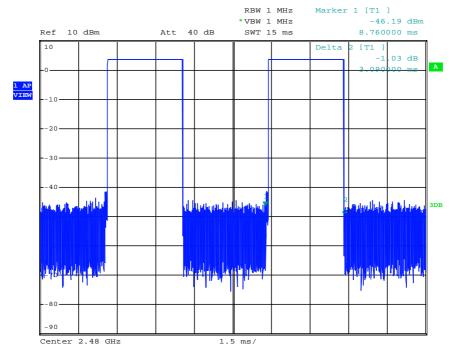




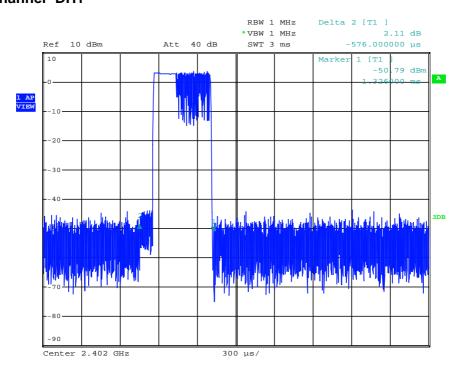
 Prüfbericht - Nr.:
 17019029 001
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 Test Report No.
 Page 35 of 43

#### **High Channel- DH5**



# Test Plot of Time of Occupancy, 8DPSK modulation Low Channel- DH1



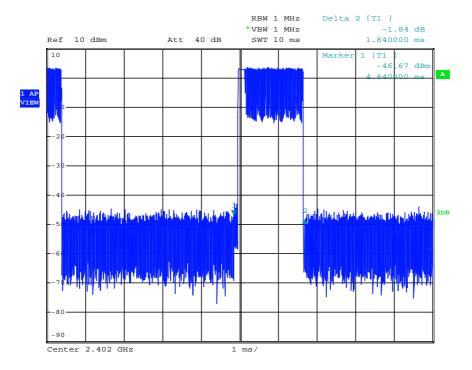


Prüfbericht - Nr.: 17019029 001

**Seite 36 von 43** *Page 36 of 43* 

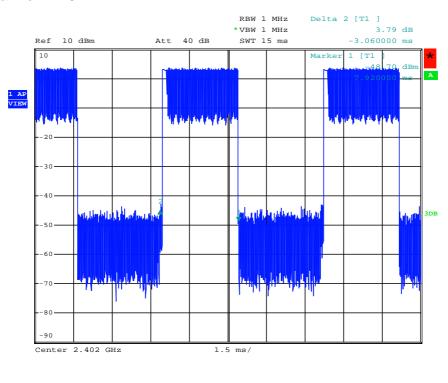
Test Report No.

#### Low Channel- DH3



\_\_\_\_\_\_

#### **Low Channel- DH5**



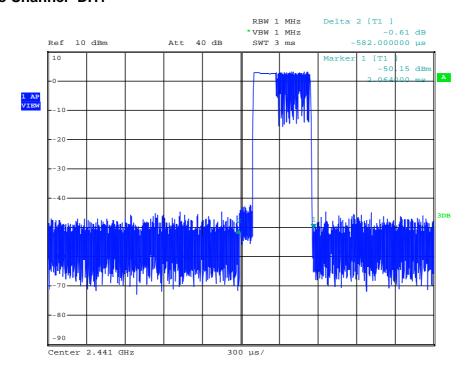


Prüfbericht - Nr.: 17019029 001

**Seite 37 von 43** *Page 37 of 43* 

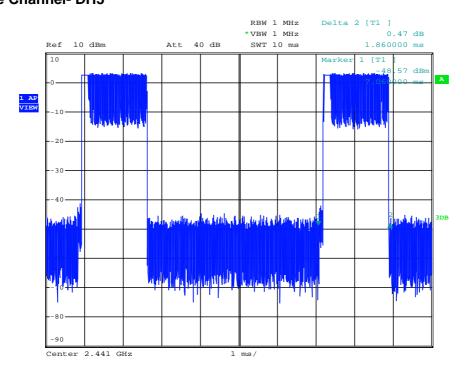
Test Report No.

#### Middle Channel- DH1



-----

### Middle Channel- DH3



\_\_\_\_\_

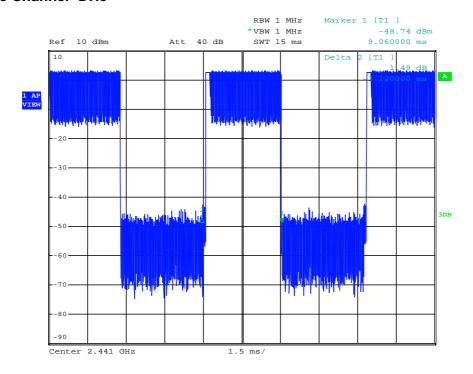


Prüfbericht - Nr.: 17019029 001

**Seite 38 von 43** *Page 38 of 43* 

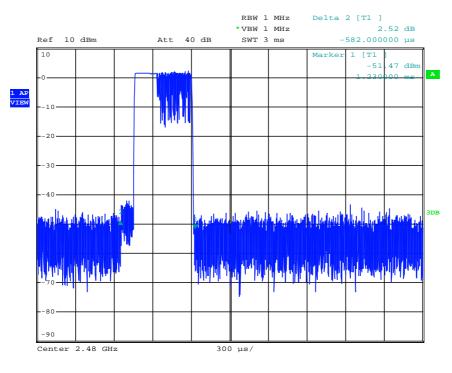
Test Report No.

#### Middle Channel- DH5



-----

### **High Channel- DH1**

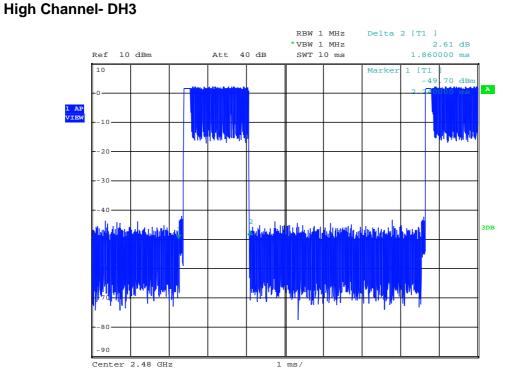




Prüfbericht - Nr.: 17019029 001

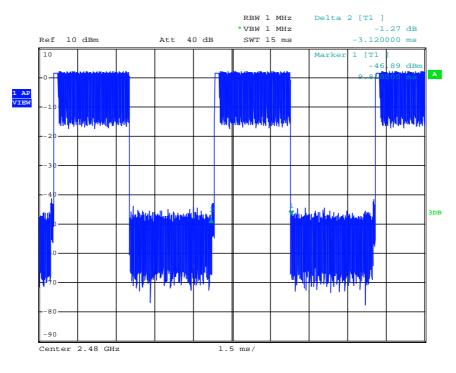
**Seite 39 von 43** *Page 39 of 43* 

Test Report No.



---

### **High Channel- DH5**





 Prüfbericht - Nr.:
 17019029 001
 Seite 40 von 43

 Test Report No.
 Page 40 of 43

## 6. Safety Human exposure

## **6.1 Radio Frequency Exposure Compliance**

### **6.1.1 Electromagnetic Fields**

RESULT: Passed

Test standard : FCC KDB Publication 447498

Since maximum peak output power of the transmitter is <60/f(GHz)mW, i.e. 0.0030mW<25(=60/2.4)mW, hence the EUT is exclueded from SAR evaluation according to FCC KDB publication 447498 D01: Mobile Portable RF Exposure.



 Prüfbericht - Nr.:
 17019029 001
 Seite 41 von 43

 Test Report No.
 Page 41 of 43

## 7. Photographs of the Test Set-Up

Photograph 1: Set-up for Spurious Emissions (9kHz-30MHz)



Photograph 2: Set-up for Spurious Emissions (30MHz-1GHz)





Prüfbericht - Nr.: 17019029 001

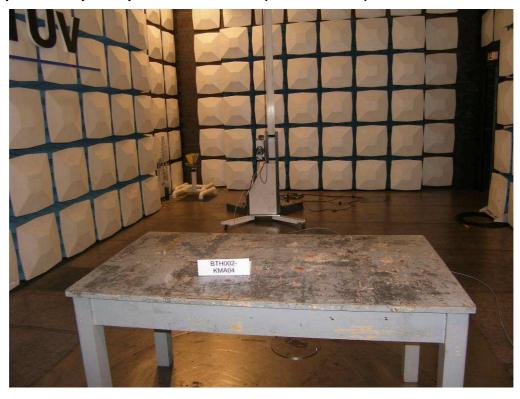
**Seite 42 von 43** *Page 42 of 43* 

Test Report No.

Photograph 3: Set-up for Spurious Emissions (1GHz-18GHz)



Photograph 4: Set-up for Spurious Emissions (18GHz-26GHz)



17019029 001

Page 1 of 72



### Test Plot of Spurious emission of A.1 – GFSK modulation Horizontal (9kHz - 30MHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

### **EMC Test Record (EMISSION)**

#### **Test Information**

Manufacturer:

K-Mate Test Item: Bluetooth Headset Identification BTH002-KMA04 Test Standard: FCC Part 15 Test Detail: RE

Operation Mode: Tx @ Low channel(BDR)

23 °C; 50 %RH; DC 3.7V by li-ion battery 163072045 100&300 Climate Condition: 101 kPa. Test Voltage / Freq. :

Receipt No.: Report No. 17019029 001

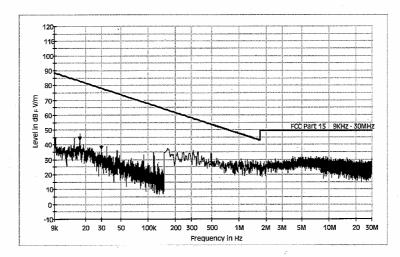
Result:

Test distance is 3m, Horizontal Comment:

Subrange 1

Frequency Range: 9kHz - 30MHz Receiver: TUV ESCI 3

TUV SAC Active Loop Antenna ZN30900A / TUV ESCI3 -TUV SAC Active Loop Antenna ZN30900A Transducer:



Result Table\_Single

Frequency (MHz)	QuasiPeak (dB¦ÌV/m)	Average (dB;IV/m)	Corr. (dB)	Polarity
0.017400		44.1	20.8	Н
0.030040		38.0	20.5	I
0.498000	28.6		20.8	Н
4.998000	27.4		22.0	Н

Date: 14/01/2011 - Time: 03:05:13 PM

Reviewed by: Tested by:



17019029 001

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### Test Plot of Spurious emission of A.1 – GFSK modulation Vertical (9kHz - 30MHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

### **EMC Test Record (EMISSION)**

#### **Test Information**

Manufacturer:

Test Item: Identification Test Standard:

Test Detail:

Operation Mode: Climate Condition:

Test Voltage / Freq. : Receipt No.: Report No.

Result:

K-Mate

Bluetooth Headset BTH002-KMA04 FCC Part 15

RE Tx @ Low channel(BDR)

23 °C; 50 %RH; DC 3.7V by li-ion battery 163072045 100&300

17019029 001

Test distance is 3m, Vertical

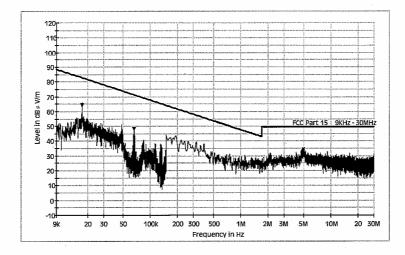
Subrange 1

Frequency Range: Transducer:

9kHz - 30MHz TUV ESCI 3

TUV SAC Active Loop Antenna ZN30900A / TUV ESCI3 -TUV SAC Active Loop Antenna ZN30900A

101 kPa.



Result Table\_Single

Frequency (MHz)	QuasiPeak (dB¦ÌV/m)	Average (dB¦ÌV/m)	Corr. (dB)	Polarity
0.017320		63.9	20.8	V
0.065640		48.1	20.4	V
2.138000	26.9		20.4	V
5,078000	30.6		22.0	V

Date: 14/01/2011 - Time: 03:11:53 PM

Tested by:

Reviewed by:



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### Test Plot of Spurious emission of A.1 – GFSK modulation Horizontal (30MHz - 1GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

### **EMC Test Record (Emission)**

#### **Common Information**

Manufacturer: K-Mate

Test Item: Bluetooth Headset Identification: BTH002-KMA04 Test Standard: FCC Part 15

Test Detail: RE

Tx @ Low channel(BDR) 23 ℃; 50 %RH; DC 3.7V by li-ion battery Operation Mode: Climate Condition: 101 kPa.

Test Voltage/ Freq: Receipt No: 163072045 100&300 Report No: 17019029 001

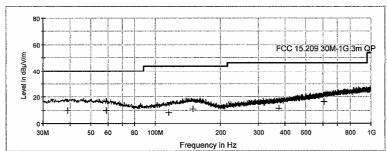
Result:

Test distance is 3m, Horizontal Comment:

Subrange 1 Frequency Range: 30M-1GHz **TUV ESIB 26** Receiver:

Transducer: TUV SAC UVLB 9168/ TUV ESIB26-TUV SAC UVLB 9168





Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBuV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
39.350000	9.6	14.0	30.4	40.0	Н
59.450000	9.5	12.8	30.5	40.0	Н
115.500000	8.0	11.7	35.5	43.5	H
149.800000	10.6	14.2	32.9	43.5	Н
374.450000	11.5	14.3	34.5	46.0	H
606.050000	16.4	18.4	29.6	46.0	H



Date: 10/01/2011 - Time: 18:13:13

### Test Plot of Spurious emission of A.1 – GFSK modulation Vertical (30MHz - 1GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

101 kPa.

### **EMC Test Record (Emission)**

#### **Common Information**

Manufacturer: Test Item:

K-Mate

Identification:

Bluetooth Headset BTH002-KMA04

Test Standard: Test Detail:

FCC Part 15 RE

Operation Mode:

Tx @ Low channel(BDR)

Climate Condition: Test Voltage/ Freq:

50 %RH; 23 °C; 50 %RH; DC 3.7V by li-ion battery

Receipt No:

163072045 100&300

Report No:

17019029 001

Result:

Comment:

Test distance is 3m, Vertical

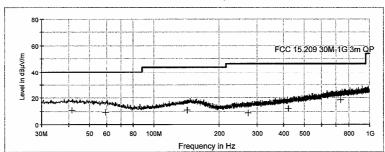
Subrange 1

Frequency Range:

30M-1GHz

Receiver: Transducer: **TUV ESIB 26** TUV SAC UVLB 9168/ TUV ESIB26-TUV SAC UVLB 9168





Limit and Margin QP

Date: 10/01/2011 - Time: 18:09:34

Frequency QuasiPeak Corr. Margin Limit Polarization								
Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	(dBµV/m)	Polarization			
41.650000	11.0	14.0	29.0	40.0	٧			
59.700000	9.4	12.8	30.6	40.0	V			
142.750000	10.7	13.7	32.8	43.5	٧			
274.700000	8.6	12.2	37.4	46.0	٧			
419.600000	12.1	15.2	33.9	46.0	٧			
737.850000	18.3	20.2	27.7	46.0	V			



## Test Plot of Spurious emission of A.1 – GFSK modulation Horizontal (1GHz – 18GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

### **EMC Test Record (Emission)**

#### **Common Information**

Manufacturer: K-Mate

Test Item: Bluetooth headset Identification: BTH002-KMA04
Test Standard: FCC Part 15

Test Detail: RE

 Operation Mode:
 Tx @ Low channel(BDR)

 Climate Condition:
 23 ℃; 50 %RH;
 101 kPa.

 Test Voltage/ Freq:
 DC 3.7V by li-ion battery

Test Voltage/ Freq: DC 3.7V by Ii-ion batter
Receipt No: 163072045 100&300
Report No: 17019029 001

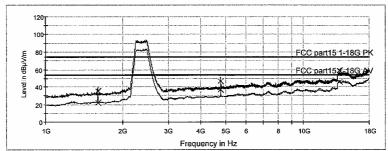
Result: Pas

Comment: Test distance is 3m, Horizontal

Subrange 1
Frequency Range: 1GHz-18GHz
Receiver: TUV FSP30

Transducer: TUV SAC HF906/ TUV FSP30-TUV SAC HF906

#### Pre TUV 1 to 18G HF906



Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
1601.000000	35.3	-14.0	38.7	74.0	H
4804.000000	46.3	-5.5	27.7	74.0	Н
13867.000000	58.7	9.2	15.3	74.0	Н

**Limit and Margin AV** 

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
1601.000000	22.4	-14.0	31.6	54.0	Н
4804.000000	36.6	-5.5	17.4	54.0	Н
13867.000000	45.9	9.2	8.1	54.0	Н

Date: 10/01/2011 - Time: 21:04:40





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### Test Plot of Spurious emission of A.1 – GFSK modulation Vertical (1GHz - 18GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

### **EMC Test Record (Emission)**

#### **Common Information**

Manufacturer:

Bluetooth headset Test Item: Identification: BTH002-KMA04 Test Standard: FCC Part 15

Test Detail: RE Operation Mode: Tx @ Low channel(BDR) Climate Condition: Test Voltage/ Freq: 23 ℃; 50 %RH; DC 3.7V by li-ion battery 101 kPa. Receipt No: 163072045 100&300

K-Mate

Report No: 17019029 001

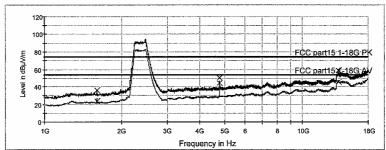
Result:

Comment: Test distance is 3m, Vertical Subrange 1

Frequency Range: 1GHz-18GHz TUV FSP30 Receiver:

Transducer: TUV SAC HF906/ TUV FSP30-TUV SAC HF906



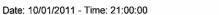


**Limit and Margin PK** 

Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
1601.000000	36.0	-14.0	38.0	74.0	٧
4804.000000	50.3	-5.5	23.7	74.0	٧
13867.000000	58.7	9.2	15.3	74.0	V

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
1601.000000	23.3	-14.0	30.7	54.0	٧
4804.000000	44.3	-5.5	9.7	54.0	V
13867.000000	45.9	9.2	8.1	54.0	٧



Tested by:

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### Test Plot of Spurious emission of A.1 – GFSK modulation Horizontal (18GHz - 26GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

### **EMC Test Record (Emission)**

#### **Common Information**

Manufacturer:

Test Item: Identification:

Test Standard: Test Detail:

Operation Mode:

Climate Condition: Test Voltage/ Freq:

Report No: Result:

Receipt No:

Comment:

Subrange 1

17019029 001

Test distance is 3m, Horizontal

Frequency Range: Receiver:

Transducer:

18GHz-25GHz TUV 3160-09

K-Mate

RE

Bluetooth headset

Tx @ Low channel(BDR)

23 ℃; 50 %RH; DC 3.7V by li-ion battery

163072045 100&300

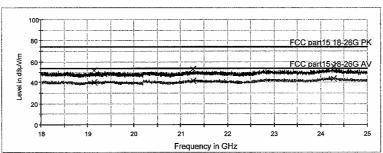
BTH002-KMA04

FCC Part 15

TUV SAC 3160-09/ TUV FSP30-TUV SAC 3160-09

101 kPa.





Limit and Margin PK

Zinite dira margini it										
Frequency (MHz)	MaxPeak (dBμV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization					
19145.000000	51.9	5.2	22.1	74.0	Н					
21277.000000	53.2	5.9	20.8	74.0	Н					
24274.000000	55.7	6.9	18.3	74.0	Н					

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
19145.000000	40.1	5.2	13.9	54.0	Н
21277.000000	41.3	5.9	12.7	54.0	Н
24274.000000	43.7	6.9	10.3	54.0	H





Date: 11/01/2011 - Time: 22:16:48

\_ Reviewed by:

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### Test Plot of Spurious emission of A.1 – GFSK modulation Vertical (18GHz - 26GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

### **EMC Test Record (Emission)**

#### **Common Information**

Manufacturer: K-Mate

Bluetooth headset Test Item: Identification: BTH002-KMA04 Test Standard: FCC Part 15 Test Detail: RE

Operation Mode: Tx @ Low channel(BDR)

Climate Condition: Test Voltage/ Freq: 101 kPa.

23 °C; 50 %RH; DC 3.7V by li-ion battery 163072045 100&300 Receipt No:

Report No: 17019029 001

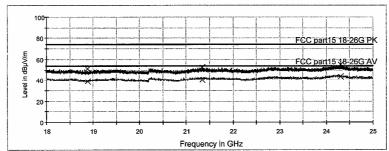
Comment: Test distance is 3m, Vertical

Subrange 1

18GHz-25GHz Frequency Range: Receiver: TUV 3160-09

Transducer: TUV SAC 3160-09/ TUV FSP30-TUV SAC 3160-09

Pre TUV 18 to 26.5 3160-09



Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
18894.000000	51.2	5.1	22.8	74.0	V
21350.000000	52.2	5.0	21.8	74.0	٧
24313.000000	55.0	6.9	19.0	74.0	V

Limit and Margin AV

Date: 11/01/2011 - Time: 22:12:59

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
18894.000000	38.9	5.1	15.1	54.0	V
21350.000000	40.4	5.0	13.6	54.0	٧
24313.000000	43.5	6.9	10.5	54.0	٧



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### Test Plot of Spurious emission of A.2 – GFSK modulation Horizontal (9kHz - 30MHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

### **EMC Test Record (EMISSION)**

#### **Test Information**

Manufacturer: Test Item:

Identification Test Standard:

Test Detail:

Operation Mode:

Climate Condition: Test Voltage / Freq. :

Receipt No.: Report No. Result:

Comment:

K-Mate

Bluetooth Headset BTH002-KMA04 FCC Part 15

RF

Tx @ Mid channel(BDR) 23 °C; 50 %RH; DC 3.7V by li-ion battery

163072045 100&300 17019029 001

Pass

Test distance is 3m, Horizontal

Subrange 1

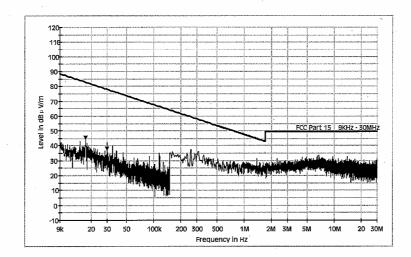
Frequency Range: Receiver: Transducer:

9kHz - 30MHz TUV ESCI 3

TUV SAC Active Loop Antenna ZN30900A / TUV ESCI3 -TUV

101 kPa.

SAC Active Loop Antenna ZN30900A



Result Table Single

1 toodic 1 db	0_09.0			
Frequency	QuasiPeak	Average	Corr.	Polarity
(MHz)	(dB¦ÌV/m)	(dB¦ÌV/m)	(dB)	
0.017400		45.5	20.8	Н
0.030120		37.7	20.5	Н
1.382000	25.9		20.4	. н
6.742000	26.9	****	22.0	Н

Date: 14/01/2011 - Time: 03:18:24 PM

Tested by: \_ FYC 200 1.18 Reviewed by:



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## Test Plot of Spurious emission of A.2 – GFSK modulation Vertical (9kHz – 30MHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

### **EMC Test Record (EMISSION)**

#### **Test Information**

Manufacturer: Test Item: Identification

Test Standard: Test Detail: Operation Mode:

Climate Condition: Test Voltage / Freq. :

Receipt No.: Report No. Result:

Comment:

K-Mate

Bluetooth Headset BTH002-KMA04 FCC Part 15 RE

Tx @ Mid channel(BDR)

23 °C; 50 %RH; DC 3.7V by li-ion battery 163072045 100&300

17019029 001 Pass

Test distance is 3m, Vertical

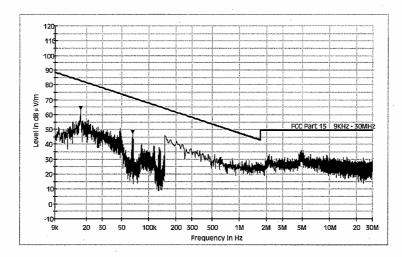
Subrange 1

Frequency Range: Receiver: Transducer: 9kHz - 30MHz TUV ESCI 3

TUV SAC Active Loop Antenna ZN30900A / TUV ESCI3 -TUV

101 kPa.

SAC Active Loop Antenna ZN30900A



Result Table\_Single

Frequency (MHz)	QuasiPeak (dB:iV/m)	Average (dB¦ÌV/m)	Corr. (dB)	Polarity
0.017320		64.0	20.8	V
0.065640		48.3	20.4	V
2.170000	28.9		20.4	V
5.038000	32.3		22.0	V

Date: 14/01/2011 - Time: 03:29:14 PM







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## Test Plot of Spurious emission of A.2 – GFSK modulation Horizontal (30MHz – 1GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

101 kPa.

### **EMC Test Record (Emission)**

#### **Common Information**

Manufacturer: K-Mate

Test Item: Bluetooth Headset Identification: BTH002-KMA04
Test Standard: FCC Part 15

Test Detail: RE

Operation Mode: Tx @ Mid channel(BDR)
Climate Condition: 23 °C: 50 %RH:

 Climate Condition:
 23 °C;
 50 %RH;

 Test Voltage/ Freq:
 DC 3.7V by li-ion battery

 Receipt No:
 163072045 100&300

Report No: 17019029 001
Result: Pass

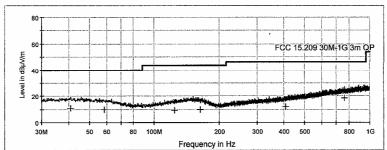
Comment: Test distance is 3m, Horizontal

Subrange 1

Frequency Range: 30M-1GHz Receiver: TUV ESIB 26

Transducer: TUV SAC UVLB 9168/ TUV ESIB26-TUV SAC UVLB 9168

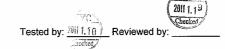




Limit and Margin QP

Date: 10/01/2011 - Time: 17:40:34

Lillie at	Lilling and margin <b>a</b>									
Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization					
41.150000	11.0	14.0	29.0	40.0	Н					
58.750000	9.8	12.9	30.2	40.0	Н					
124.800000	9.1	12.5	34.4	43.5	Н					
164.200000	9.9	13.7	33.6	43.5	Н					
407.700000	12.1	14.9	33.9	46.0	Н					
766 350000	18.5	20.4	27.5	46.0	Н					



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### Test Plot of Spurious emission of A.2 – GFSK modulation Vertical (30MHz - 1GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

101 kPa.

### **EMC Test Record (Emission)**

#### **Common Information**

Manufacturer: Test Item:

K-Mate

Identification:

Bluetooth Headset BTH002-KMA04

Test Standard: Test Detail:

FCC Part 15 RE

Operation Mode: Climate Condition: Tx @ Mid channel(BDR)

Test Voltage/ Freq:

23 °C; 50 %RH; DC 3.7V by li-ion battery

Receipt No:

163072045 100&300 17019029 001

Report No: Result:

Comment:

Test distance is 3m, Vertical

Subrange 1 Frequency Range:

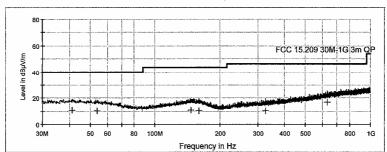
30M-1GHz

Receiver:

TUV ESIB 26

Transducer: TUV SAC UVLB 9168/ TUV ESIB26-TUV SAC UVLB 9168





Limit and Margin QP

Limit an	Limit and margin or									
Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization					
41.400000	11.0	14.0	29.0	40.0	V					
54.150000	10.1	13.2	29.9	40.0	V					
147.600000	10.9	14.0	32.6	43.5	٧					
160.450000	10.4	14.1	33.1	43.5	ν					
327.550000	10.2	13.5	35.8	46.0	٧					
631,400000	17.0	18.9	29.0	46.0	V					



Date: 10/01/2011 - Time: 17:44:56

Tested by: 2011 1.10 Reviewed by:

### Test Plot of Spurious emission of A.2 – GFSK modulation Horizontal (1GHz - 18GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

### **EMC Test Record (Emission)**

#### **Common Information**

Manufacturer: K-Mate

Test Item: Bluetooth headset Identification: BTH002-KMA04 Test Standard: FCC Part 15

Test Detail: RE

Operation Mode: Tx @ Mid channel(BDR) Climate Condition: 23 °C; 50 %RH; DC 3.7V by li-ion battery 101 kPa. Test Voltage/ Freq:

Receipt No: 163072045 100&300 17019029 001

Report No: Result:

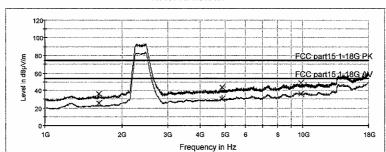
Test distance is 3m, Horizontal Comment:

Subrange 1

1GHz-18GHz Frequency Range: Receiver: TUV FSP30

Transducer: TUV SAC HF906/ TUV FSP30-TUV SAC HF906





**Limit and Margin PK** 

Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
1627.000000	35.8	-13.8	38.2	74.0	Н
4882.000000	43.0	-5.6	31.0	74.0	Н
9843.000000	48.9	5.4	25.1	74.0	Н

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization			
1627.000000	25.1	-13.8	28.9	54.0	Н			
4882.000000	29.9	-5.6	24.1	54.0	Н			
9843.000000	35.7	5.4	18.3	54.0	Н			





### Test Plot of Spurious emission of A.2 – GFSK modulation Vertical (1GHz - 18GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

### **EMC Test Record (Emission)**

#### **Common Information**

Manufacturer:

K-Mate

Test Item: Identification: Bluetooth headset BTH002-KMA04

Test Standard:

FCC Part 15

Test Detail:

RE Tx @ Mid channel(BDR)

Operation Mode: Climate Condition: Test Voltage/ Freq:

23 ℃; 50 %RH; DC 3.7V by li-ion battery

Receipt No:

163072045 100&300

Report No:

17019029 001

Result:

Pass

Comment:

Test distance is 3m, Vertical

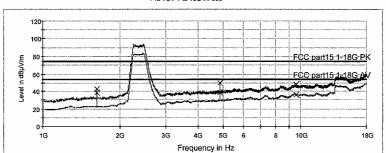
Subrange 1 Frequency Range:

1GHz-18GHz

Receiver: Transducer: TUV FSP30 TUV SAC HF906/ TUV FSP30-TUV SAC HF906

101 kPa.





**Limit and Margin PK** 

Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
1627.000000	42.4	-13.8	31.6	74.0	V
4882.000000	50.2	-5.6	23.8	74.0	V
9843.000000	48.5	4.8	25.5	74.0	٧

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
1627.000000	38.5	-13.8	15.5	54.0	V
4882.000000	38.4	-5.6	15.6	54.0	V
9843.000000	35.8	4.8	18.2	54.0	٧

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### Test Plot of Spurious emission of A.2 – GFSK modulation Horizontal (18GHz - 26GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

101 kPa.

### **EMC Test Record (Emission)**

#### **Common Information**

Manufacturer: K-Mate

Test Item: Bluetooth headset Identification: BTH002-KMA04 Test Standard: FCC Part 15 Test Detail: RE

Operation Mode: Tx @ Mid channel(BDR) Climate Condition:

23 ℃; 50 %RH; DC 3.7V by li-ion battery Test Voltage/ Freq: Receipt No: 163072045 100&300

Report No: 17019029 001

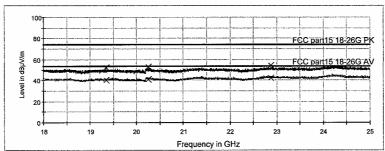
Test distance is 3m, Horizontal Comment:

Subrange 1

Frequency Range: 18GHz-25GHz Receiver: TUV 3160-09

Transducer: TUV SAC 3160-09/ TUV FSP30-TUV SAC 3160-09

Pre TUV 18 to 26.5 3160-09



Limit and Margin PK

million will w											
Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization						
19355.000000	52.2	5.3	21.8	74.0	Н						
20255.000000	52.8	5.6	21.2	74.0	Н						
22877.000000	54.2	6.4	19.8	74.0	H						

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
19355.000000	40.0	5.3	14.0	54.0	Н
20255.000000	40.9	5.6	13.1	54.0	Н
22877.000000	42.0	6.4	12.0	54.0	Н



### Test Plot of Spurious emission of A.2 – GFSK modulation Vertical (18GHz - 26GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

101 kPa.

### **EMC Test Record (Emission)**

#### **Common Information**

Manufacturer:

K-Mate

Test Item: Identification: Bluetooth headset BTH002-KMA04

Test Standard: Test Detail:

FCC Part 15 RE

Operation Mode: Climate Condition: Test Voltage/ Freq: Tx @ Mid channel(BDR)

23 °C; 50 %RH; DC 3.7V by li-ion battery 163072045 100&300

Receipt No: Report No: Result:

17019029 001

Test distance is 3m, Vertical Comment:

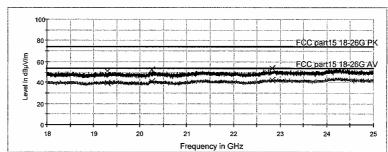
Subrange 1

Frequency Range:

18GHz-25GHz

Receiver: Transducer: TUV 3160-09 TUV SAC 3160-09/ TUV FSP30-TUV SAC 3160-09





Limit and Margin PK

	t arra margini i it										
Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization						
19309.000000	51.4	5.3	22.6	74.0	V						
20260.000000	52.7	5.6	21.3	74.0	V						
22834.000000	53.8	6.4	20.2	74.0	٧						

Limit and Margin AV

Little and Margin Av									
Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization				
19309.000000	39.7	5.3	14.3	54.0	V				
20260.000000	40.8	5.6	13.2	54.0	٧				
22834,000000	42.1	6.4	11.9	54.0	V				

Date: 11/01/2011 - Time: 22:27:12



17019029 001



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### Test Plot of Spurious emission of A.3 – GFSK modulation Horizontal (9kHz - 30MHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

### **EMC Test Record (EMISSION)**

#### **Test Information**

Manufacturer: Test Item:

Identification Test Standard: Test Detail:

Operation Mode: Climate Condition:

Test Voltage / Freq. : Receipt No.: Report No. Result:

Comment:

K-Mate

Bluetooth Headset BTH002-KMA04 FCC Part 15 RE

Tx @ High channel(BDR)

23 °C; 50 %RH; DC 3.7V by li-ion battery 163072045 100&300 17019029 001

Pass Test distance is 3m, Horizontal

Subrange 1

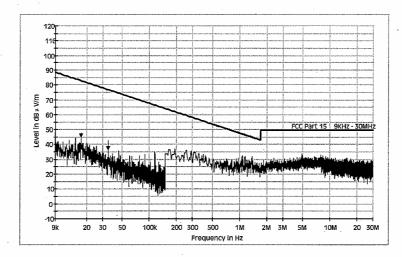
Frequency Range:

9kHz - 30MHz TUV ESCI 3 Transducer:

TUV SAC Active Loop Antenna ZN30900A / TUV ESCI3 -TUV

101 kPa.

SAC Active Loop Antenna ZN30900A



Result Table\_Single

Frequency (MHz)	QuasiPeak (dB¦ÌV/m)	Average (dB¦ÌV/m)	Corr. (dB)	Polarity
0.01740	)	46.0	20.8	H
0.03492	)	37.5	20.3	Н
1.15000	25.9		20.4	Н
4.85000	27.3		21.9	Н

Date: 14/01/2011 - Time: 02:31:19 PM

1 2611 1.18 Tested by:

Reviewed by:



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### Test Plot of Spurious emission of A.3 – GFSK modulation Vertical (9kHz - 30MHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

### **EMC Test Record (EMISSION)**

#### **Test Information**

Manufacturer: Test Item:

Identification Test Standard:

Test Detail:

Operation Mode:

Climate Condition:

Test Voltage / Freq. : Receipt No.:

Report No.

Result:

K-Mate

Bluetooth Headset BTH002-KMA04 FCC Part 15

RE Tx @ High channel(BDR) 23 °C; 50 %RH;

DC 3.7V by li-ion battery 163072045 100&300

17019029 001

Pass

Comment: Test distance is 3m, Vertical

Subrange 1

Frequency Range: Receiver: Transducer:

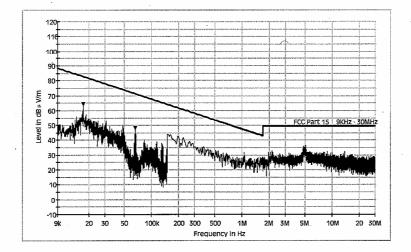
9kHz - 30MHz

TUV ESCI 3

TUV SAC Active Loop Antenna ZN30900A / TUV ESCI3 -TUV

101 kPa.

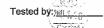
SAC Active Loop Antenna ZN30900A



Result Table\_Single

Frequency (MHz)	QuasiPeak (dB¦IV/m)	Average (dB¦ÌV/m)	Corr. (dB)	Polarity
0.017320		64.2	20.8	V
0.065640		48.3	20.4	V
2.142000	28.5		20.4	V
5.050000	31.4		22.0	V

Date: 14/01/2011 - Time: 02:50:39 PM







# Test Plot of Spurious emission of A.3 – GFSK modulation Horizontal (30MHz – 1GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

### **EMC Test Record (Emission)**

#### **Common Information**

Manufacturer: K-Mate

Test Item: Bluetooth Headset Identification: BTH002-KMA04
Test Standard: FCC Part 15

Test Detail: RE

Test Voltage/ Freq: DC 3.7V by li-ion batt Receipt No: 163072045 100&300 Report No: 17019029 001

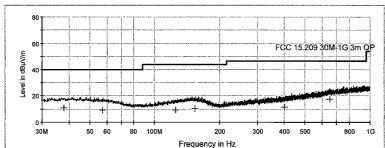
Result: Pass
Comment: Pass
Test distance is 3m, Horizontal

Subrange 1

Frequency Range: 30M-1GHz Receiver: TUV ESIB 26

Transducer: TUV SAC UVLB 9168/ TUV ESIB26-TUV SAC UVLB 9168





**Limit and Margin QP** 

Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization				
38.000000	10.7	13.8	29.3	40.0	Н				
57.650000	9.5	13.0	30.5	40.0	Н				
125.650000	9.2	12.6	34.3	43.5	Н				
153.900000	10.5	14.2	33.0	43.5	Н				
401.250000	11.6	14.7	34.4	46.0	Н				
652.250000	17.1	19.1	28.9	46.0	Н				

Tested by: 2011 1.1 Reviewed by: Checked

Date: 10/01/2011 - Time: 18:05:45



# Test Plot of Spurious emission of A.3 – GFSK modulation Vertical (30MHz – 1GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

101 kPa.

### **EMC Test Record (Emission)**

#### **Common Information**

Manufacturer: K-Mate

Test Item: Bluetooth Headset Identification: BTH002-KMA04
Test Standard: FCC Part 15

Test Detail: RE

Operation Mode: Tx @ High channel(BDR)
Climate Condition: 23 °C; 50 %RH;
Test Voltage/ Freq: DC 3.7V by li-ion battery

Receipt No: 163072045 100&300
Report No: 17019029 001
Result: Pass

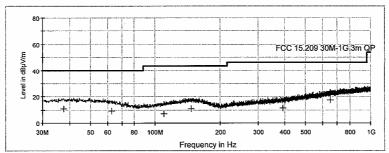
Comment: Test distance is 3m, Vertical

Subrange 1

Frequency Range: 30M-1GHz Receiver: TUV ESIB 26

Transducer: TUV SAC UVLB 9168/ TUV ESIB26-TUV SAC UVLB 9168





Limit and Margin QP

Date: 10/01/2011 - Time: 18:01:38

Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
37.650000	10.8	13.8	29.2	40.0	V
63.100000	9.1	12.2	30.9	40.0	٧
110.650000	7.3	11.2	36.2	43.5	٧
147.500000	11.0	14.0	32.5	43.5	٧
394.250000	11.5	14.6	34.5	46.0	V
653,250000	17.2	19.1	28.8	46.0	V



### Test Plot of Spurious emission of A.3 – GFSK modulation Horizontal (1GHz - 18GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

### **EMC Test Record (Emission)**

#### **Common Information**

Manufacturer: K-Mate

Test Item: Bluetooth headset Identification: BTH002-KMA04 Test Standard: FCC Part 15

Test Detail:

Operation Mode: Tx @ High channel(BDR) Climate Condition:

23 °C; 50 %RH; DC 3.7V by li-ion battery 163072045 100&300 101 kPa. Test Voltage/ Freq:

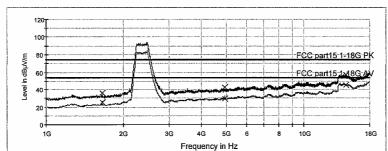
Receipt No: Report No: 17019029 001 Result: Pass

Comment: Test distance is 3m, Horizontal

Subrange 1 1GHz-18GHz TUV FSP30 Frequency Range: Receiver:

TUV SAC HF906/ TUV FSP30-TUV SAC HF906 Transducer:





Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization				
1652.000000	36.2	-13.6	37.8	74.0	н				
4959.000000	42.3	-5.8	31.7	74.0	Н				
14580,000000	57.4	9.2	16.6	74.0	Н				

Limit and Margin AV

Date: 10/01/2011 - Time: 20:44:49

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
1652.000000	25.6	-13.6	28.4	54.0	Н
4959.000000	29.4	-5.8	24.6	54.0	Н
14580.000000	44.7	9.2	9.3	54.0	Н



# Test Plot of Spurious emission of A.3 – GFSK modulation Vertical (1GHz – 18GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

### **EMC Test Record (Emission)**

#### **Common Information**

Manufacturer: K-Mate

Test Item: Bluetooth headset Identification: BTH002-KMA04
Test Standard: FCC Part 15

Test Detail: RE

Operation Mode: Tx @ High channel(BDR)
Climate Condition: 23 °C; 50 %RH; 101 kPa.
Test Voltage/ Freq: DC 3.7V by li-ion battery

 Receipt No:
 163072045 100&300

 Report No:
 17019029 001

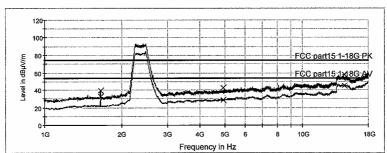
 Result:
 Pass

Comment: Test distance is 3m, Vertical

Subrange 1
Frequency Range: 1GHz-18GHz
Receiver: TUV FSP30

Transducer: TUV SAC HF906/ TUV FSP30-TUV SAC HF906

#### Pre TUV 1 to 18G HF906



Limit and Margin PK

Emilia margini i i									
Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization				
1652.000000	39.0	-13.6	35.0	74.0	Н				
4959.000000	42.3	-5.8	31.7	74.0	Н				
14580.000000	58.3	9.2	15.7	74.0	Н				

**Limit and Margin AV** 

Date: 10/01/2011 - Time: 20:48:27

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
1652.000000	32.4	-13.6	21.6	54.0	Н
4959.000000	28.9	-5.8	25.1	54.0	Н
14580.000000	44.6	9.2	9.4	54.0	Н

Tested by: \_\_\_\_\_ Reviewed by: \_\_\_

2011 1.19 Checked



### Test Plot of Spurious emission of A.3 – GFSK modulation Horizontal (18GHz - 26GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

### **EMC Test Record (Emission)**

#### **Common Information**

Manufacturer: K-Mate

Test Item: Bluetooth headset Identification: BTH002-KMA04 Test Standard: FCC Part 15

Test Detail: RE

Tx @ High channel(BDR) 23 °C; 50 %RH; DC 3.7V by li-ion battery 163072045 100&300 Operation Mode:

Climate Condition: 101 kPa. Test Voltage/ Freq:

Receipt No: Report No: 17019029 001 Result:

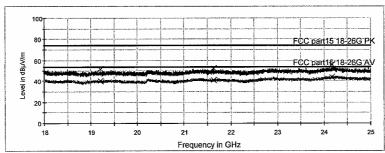
Comment: Test distance is 3m, Horizontal

Subrange 1

18GHz-25GHz Frequency Range: TUV 3160-09 Receiver:

TUV SAC 3160-09/ TUV FSP30-TUV SAC 3160-09 Transducer:





Limit and Margin PK

Frequency (MHz)	MaxPeak (dBμV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
19216.000000	51.9	5.3	22.1	74.0	Н
21631.000000	52.5	6.0	21.5	74.0	Н
24178.000000	55.8	6.9	18.2	74.0	Н

Limit and Margin AV

Date: 11/01/2011 - Time: 22:35:00

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
19216.000000	39.9	5.3	14.1	54.0	Н
21631.000000	41.0	6.0	13.0	54.0	H
24178.000000	43.4	6.9	10.6	54.0	Н



### Test Plot of Spurious emission of A.3 – GFSK modulation Vertical (18GHz - 26GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

### **EMC Test Record (Emission)**

#### **Common Information**

Manufacturer: K-Mate

Test Item: Bluetooth headset Identification: BTH002-KMA04 Test Standard: FCC Part 15

Test Detail: RE

Operation Mode: Tx @ High channel(BDR) Climate Condition: Test Voltage/ Freq: 23 °C; 50 %RH; DC 3.7V by li-ion battery 163072045 100&300 101 kPa.

Receipt No: Report No: 17019029 001

Result:

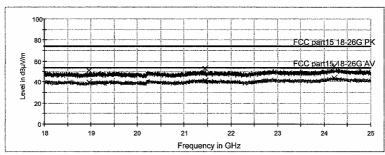
Comment: Test distance is 3m, Vertical

Subrange 1

18GHz-25GHz Frequency Range: Receiver: TUV 3160-09

TUV SAC 3160-09/ TUV FSP30-TUV SAC 3160-09 Transducer:

#### Pre TUV 18 to 26.5 3160-09



**Limit and Margin PK** 

Frequency (MHz)	MaxPeak (dBμV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
18963.000000	51.0	5.1	23.0	74.0	٧
21447.000000	52.8	5.9	21.2	74.0	ν
24210.000000	55.3	6.9	18.7	74.0	V

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization				
18963.000000	39.4	5.1	14.6	54.0	V				
21447.000000	41.1	5.9	12.9	54.0	٧				
24210.000000	43.5	6.9	10.5	54.0	ν				

Date: 11/01/2011 - Time: 22:32:55



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### Test Plot of Spurious emission of B – GFSK modulation Horizontal (9kHz - 30MHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

### **EMC Test Record (EMISSION)**

#### **Test Information**

Manufacturer:

Test Item: Identification Test Standard: Test Detail:

Operation Mode:

Climate Condition: Test Voltage / Freq. :

Receipt No.: Report No. Result.

K-Mate

Bluetooth Headset BTH002-KMA04 FCC Part 15 RF

Rx @ Mid channel(BDR) 23 °C; 50 %RH; DC 3.7V by li-ion battery 163072045 100&300

17019029 001

Pass

Comment: Test distance is 3m, Horizontal

Subrange 1

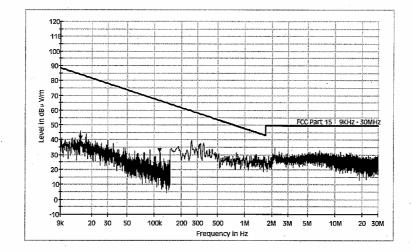
Frequency Range:

9kHz - 30MHz TUV ESCI 3 Transducer:

TUV SAC Active Loop Antenna ZN30900A / TUV ESCI3 -TUV

101 kPa.

SAC Active Loop Antenna ZN30900A



Result Table\_Single

Frequency (MHz)	QuasiPeak (dB¦IV/m)	Average (dB¦ÌV/m)	Corr. (dB)	Polarity
0.015080		41.1	20.5	Н
0.115480		32.6	21.1	H
2.158000	29.4		20.4	Н
6.786000	27.1		22.0	Н

Date: 14/01/2011 - Time: 02:14:26 PM







### Test Plot of Spurious emission of B - GFSK modulation Vertical (9kHz - 30MHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

### **EMC Test Record (EMISSION)**

#### **Test Information**

Manufacturer:

Bluetooth Headset Test Item: Identification BTH002-KMA04 Test Standard: FCC Part 15

RF Test Detail:

Operation Mode: Rx @ Mid channel(BDR)

K-Mate

Climate Condition: 23 ℃; 50 %RH; DC 3.7V by li-ion battery Test Voltage / Freq. : Receipt No.: Report No. 163072045 100&300

17019029 001

Result: Pass Comment: Test distance is 3m, Vertical

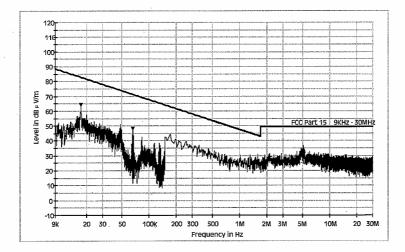
Subrange 1

Frequency Range: 9kHz - 30MHz Receiver:

Transducer: TUV SAC Active Loop Antenna ZN30900A / TUV ESCI3 -TUV

SAC Active Loop Antenna ZN30900A

101 kPa.



Result Table\_Single

Frequency (MHz)	QuasiPeak (dB¦lV/m)	Average (dB¦lV/m)	Corr. (dB)	Polarity
0.017320		64.0	20.8	V
0.065640		48.3	20.4	V
2.158000	29.2		20.4	V
5.050000	32.1		22.0	V

Date: 14/01/2011 - Time: 02:23:56 PM







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### Test Plot of Spurious emission of B –GFSK modulation Horizontal (30MHz - 1GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

### **EMC Test Record (Emission)**

#### **Common Information**

Manufacturer:

Bluetooth Headset Test Item: Identification: BTH002-KMA04 Test Standard: FCC Part 15 RE

Test Detail:

Operation Mode: Rx @ Mid channel(BDR) Climate Condition:

23 °C; 50 %RH; DC 3.7V by li-ion battery 101 kPa. Test Voltage/ Freq:

K-Mate

Receipt No: 163072045 100&300 Report No: 17019029 001

Result:

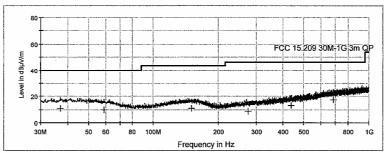
Comment: Test distance is 3m, Horizontal

Subrange 1

Frequency Range: 30M-1GHz Receiver: **TUV ESIB 26** 

Transducer: TUV SAC UVLB 9168/ TUV ESIB26-TUV SAC UVLB 9168





**Limit and Margin QP** 

Date: 10/01/2011 - Time: 18:16:22

Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
37.300000	10.9	13.7	29.1	40.0	Н
59.350000	9.5	12.8	30.5	40.0	Н
151.150000	10.7	14.2	32.8	43.5	H
277.000000	8.9	12.3	37.1	46.0	Н
437.900000	13.1	15.7	32.9	46.0	Н
685.700000	17.6	19.5	28.4	46.0	Н



# Test Plot of Spurious emission of B – GFSK modulation Vertical (30MHz - 1GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

### **EMC Test Record (Emission)**

#### **Common Information**

Manufacturer:

K-Mate

Test Item: Identification: Test Standard: Bluetooth Headset BTH002-KMA04 FCC Part 15

Test Detail:

RE

Operation Mode: Climate Condition: Rx @ Mid channel(BDR) 23 °C; 50 %RH; DC 3.7V by li-ion battery

Test Voltage/ Freq: Receipt No: Report No:

163072045 100&300

кероπ No: Result: 17019029 001

Result: Comment:

Test distance is 3m, Vertical

Subrange 1

Frequency Range:

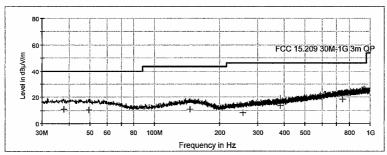
30M-1GHz TUV ESIB 26

Receiver: Transducer:

TUV SAC UVLB 9168/ TUV ESIB26-TUV SAC UVLB 9168

101 kPa.





Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
37.900000	10.7	13.8	29.3	40.0	٧
49.650000	10.5	13.5	29.5	40.0	٧
146.150000	10.7	13.9	32.8	43.5	٧
257.850000	8.1	11.8	37.9	46.0	٧
383.950000	13.7	14.4	32.3	46.0	V
745.850000	18.3	20.3	27.7	46.0	٧

Date: 10/01/2011 - Time: 18:18:44







### Test Plot of Spurious emission of B – GFSK modulation Horizontal (1GHz - 18GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

### **EMC Test Record (Emission)**

#### **Common Information**

Manufacturer: K-Mate

Test Item: Bluetooth headset Identification: BTH002-KMA04 Test Standard: FCC Part 15 RE

Test Detail:

Operation Mode: Rx @ Mid channel(BDR) 23 °C; 50 %RH; DC 3.7V by li-ion battery Climate Condition: 101 kPa. Test Voltage/ Freq:

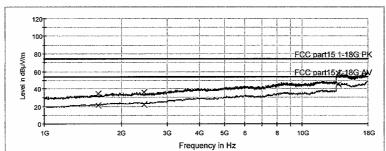
Receipt No: 163072045 100&300 Report No: 17019029 001

Result: Comment: Test distance is 3m, Horizontal

Subrange 1 1GHz-18GHz TUV FSP30 Frequency Range: Receiver:

TUV SAC HF906/ TUV FSP30-TUV SAC HF906 Transducer:





Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
1627.000000	34.0	-15.3	40.0	74.0	Н
2441.000000	35.9	-12.1	38.1	74.0	н
13848.000000	58.3	9.0	15.7	74.0	H

Limit and Margin AV

Date: 10/01/2011 - Time: 22:25:29

	Frequency (MHz)	Average (dBμV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
Ī	1627.000000	20.8	-15.3	33.2	54.0	Н
Ī	2441.000000	22.3	-12.1	31.7	54.0	Н
	13848.000000	45.2	9.0	8.8	54.0	Н



### Test Plot of Spurious emission of B – GFSK modulation Vertical (1GHz - 18GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

### **EMC Test Record (Emission)**

#### **Common Information**

Manufacturer:

Test Item: Bluetooth headset Identification: BTH002-KMA04 Test Standard: FCC Part 15 Test Detail:

Operation Mode: Rx @ Mid channel(BDR) 23 °C; 50 %RH; DC 3.7V by li-ion battery Climate Condition: Test Voltage/ Freq: 101 kPa.

K-Mate

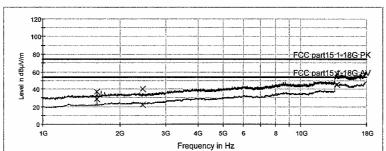
Receipt No: 163072045 100&300 Report No: 17019029 001 Result:

Comment: Test distance is 3m, Vertical

Subrange 1 Frequency Range: 1GHz-18GHz **TUV FSP30** Receiver:

TUV SAC HF906/ TUV FSP30-TUV SAC HF906 Transducer:





Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization			
1627.000000	37.1	-14.7	36.9	74.0	V			
2441.000000	39.7	-12.1	34.4	74.0	٧			
13848,000000	58.2	9.0	15.8	74.0	٧			

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
1627.000000	28.6	-14.7	25.4	54.0	V
2441.000000	22.4	-12.1	31.6	54.0	V .
13848.000000	45.1	9.0	8.9	54.0	٧



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# Test Plot of Spurious emission of B – GFSK modulation Horizontal (18GHz – 26GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

101 kPa.

# **EMC Test Record (Emission)**

#### **Common Information**

Manufacturer: K-Mate

Test Item: Bluetooth headset Identification: BTH002-KMA04
Test Standard: FCC Part 15

Test Detail: RE

Operation Mode: Rx @ Mid channel(BDR)
Climate Condition: 23 °C; 50 %RH;
Test Voltage/ Freq: DC 3.7V by li-ion battery

 Test Voltage/ Freq:
 DC 3.7V by li-ion batter

 Receipt No:
 163072045 100&300

 Report No:
 17019029 001

Result: Pass

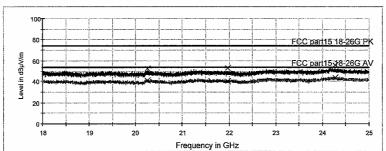
Comment: Test distance is 3m, Horizontal

Subrange 1

Frequency Range: 18GHz-26.5GHz Receiver: TUV 3160-09

Transducer: TUV SAC 3160-09/ TUV FSP30-TUV SAC 3160-09





Limit and Margin PK

-IIIII alla	a. 9				
Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
20250.000000	52.5	5.6	21.5	74.0	Н
21969.000000	53.3	6.1	20.7	74.0	Н
24281.000000	55.6	6.9	18.4	74.0	Н

Limit and Margin AV

	uency IHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
20250	.000000	40.9	5.6	13.1	54.0	Н
21969	.000000	40.3	6.1	13.7	54.0	Н
24281	.000000	43.5	6.9	10.5	54.0	H

Date: 11/01/2011 - Time: 22:40:56



# Test Plot of Spurious emission of B – GFSK modulation Vertical (18GHz – 26GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

# **EMC Test Record (Emission)**

## **Common Information**

Manufacturer: K-Mate

Test Item: Bluetooth headset Identification: BTH002-KMA04
Test Standard: FCC Part 15

Test Detail: RE

Operation Mode: Rx @ Mid channel(BDR)
Climate Condition: 23 °C; 50 %RH; 101 kPa.
Test Voltage/ Freq: DC 3.7V by li-ion battery

 Test Voltage/ Freq:
 DC 3.7V by li-ion batter

 Receipt No:
 163072045 100&300

 Report No:
 17019029 001

 Result:
 Pass

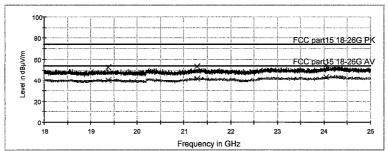
Comment: Test distance is 3m, Vertical

Subrange 1

Frequency Range: 18GHz-26.5GHz Receiver: TUV 3160-09

Transducer: TUV SAC 3160-09/ TUV FSP30-TUV SAC 3160-09

Pre TUV 18 to 26.5 3160-09



Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
19376.000000	52.3	5.4	21.7	74.0	٧
21278.000000	52.8	5.9	21.2	74.0	٧
24045.000000	54.6	6.8	19.4	74.0	ν

**Limit and Margin AV** 

-IIIII WIIW	14141 9111				
Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
19376.000000	40.0	5.4	14.0	54.0	V
21278.000000	41.4	5.9	12.6	54.0	٧
24045.000000	42.7	6.8	11.3	54.0	٧

2011 1.1<sup>9</sup>



# Test Plot of Spurious emission of A.1 – 8DPSK modulation Horizontal (9kHz - 30MHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

## **EMC Test Record (EMISSION)**

### **Test Information**

Manufacturer:

Test Item: Identification Test Standard:

Test Detail:

Operation Mode:

Climate Condition: Test Voltage / Freq. :

Receipt No.: Report No. Result:

K-Mate

Bluetooth Headset BTH002-KMA04 FCC Part 15 RE

101 kPa.

Tx @ Low channel(EDR) 23 °C; 50 %RH; DC 3.7V by li-ion battery 163072045 100&300 17019029 001

Pass

Test distance is 3m, Horizontal

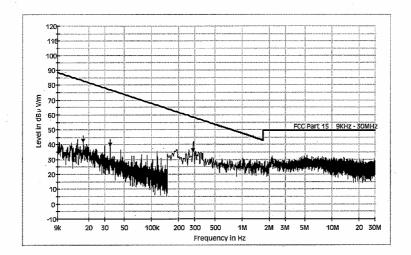
Subrange 1

Frequency Range: Receiver: Transducer:

9kHz - 30MHz TUV ESCI 3

TUV SAC Active Loop Antenna ZN30900A / TUV ESCI3 -TUV

SAC Active Loop Antenna ZN30900A



Result Table Single

	Frequency (MHz)	QuasiPeak (dB;lV/m)	Average (dB¦lV/m)	Corr. (dB)	Polarity
ſ	0.017400		42.5	20.8	H
ſ	0.034920		39.7	20.3	Н
Γ	0.290000		35.9	21.0	Н
	2.142000	29.8		20.4	Н

Date: 14/01/2011 - Time: 01:33:16 PM





17019029 001



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# Test Plot of Spurious emission of A.1 – 8DPSK modulation Vertical (9kHz - 30MHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

## **EMC Test Record (EMISSION)**

### **Test Information**

Manufacturer:

Bluetooth Headset Test Item: Identification BTH002-KMA04 Test Standard: FCC Part 15 RE

Test Detail:

Operation Mode: Tx @ Low channel(EDR) Climate Condition:

K-Mate

23 ℃; 50 %RH; DC 3.7V by li-ion battery Test Voltage / Freq. : 163072045 100&300

Receipt No.: Report No. 17019029 001

Result: Comment: Test distance is 3m, Vertical

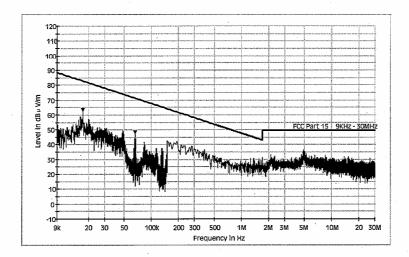
Subrange 1

Frequency Range: 9kHz - 30MHz Receiver: TUV ESCI 3

Transducer: TUV SAC Active Loop Antenna ZN30900A / TUV ESCI3 -TUV

SAC Active Loop Antenna ZN30900A

101 kPa.



**Result Table Single** 

Frequency (MHz)	QuasiPeak (dB¦lV/m)	Average (dB¦lV/m)	Corr. (dB)	Polarity
0.017400		63.4	20.8	H
0.065640		48.2	20.4	H
2.118000	28.9		20.4	Н
4.874000	30.9		21.9	Н

Date: 14/01/2011 - Time: 01:41:18 PM

Tested by: 1.18

Reviewed by:



Test Plot of Spurious emission of A.1 – 8DPSK modulation Horizontal (30MHz - 1GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

## **EMC Test Record (Emission)**

#### **Common Information**

Manufacturer:

K-Mate Bluetooth Headset

Test Item: Identification:

BTH002-KMA04

Test Standard: Test Detail:

FCC Part 15 RE

Operation Mode:

Climate Condition: Test Voltage/ Freq:

Tx @ Low channel(EDR) 23 °C; 50 %RH; DC 3.7V by li-ion battery

101 kPa.

Receipt No:

163072045 100&300

Report No:

17019029 001

Comment:

Test distance is 3m, Horizontal

Subrange 1

Frequency Range:

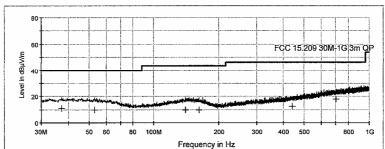
30M-1GHz

Receiver:

TUV ESIB 26

TUV SAC UVLB 9168/ TUV ESIB26-TUV SAC UVLB 9168 Transducer:





Limit and Margin QP

Date: 10/01/2011 - Time: 19:07:37

Lillin all	u maigiii	. <b>W</b> .			
Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
37.500000	10.9	13.8	29.1	40.0	Н
53.300000	9.7	13.3	30.4	40.0	Н
141.200000	10.0	13.6	33.5	43.5	Н
163.150000	10.0	13.8	33.5	43.5	Н
441.300000	12.7	15.8	33.3	46.0	Н
703.800000	17.7	19.7	28.3	46.0	Н





# Test Plot of Spurious emission of A.1 – 8DPSK modulation Vertical (30MHz – 1GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

## **EMC Test Record (Emission)**

#### **Common Information**

Manufacturer: K-Mate

Test Item: Bluetooth Headset Identification: BTH002-KMA04
Test Standard: FCC Part 15

Test Detail: RE

Operation Mode: Tx @ Low channel(EDR)
Climate Condition: 23 °C; 50 %RH; 101 kPa.
Test Voltage/ Freq: DC 3.7V by li-ion battery

Test Voltage/ Freq: DC 3.7V by li-ion battery
Receipt No: 163072045 100&300
Report No: 17019029 001

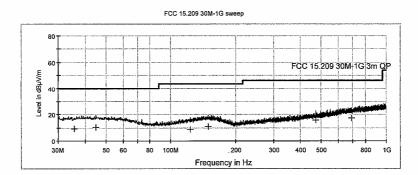
Result: Pass

Comment: Test distance is 3m, Vertical

Subrange 1

Frequency Range: 30M-1GHz Receiver: TUV ESIB 26

Transducer: TUV SAC UVLB 9168/ TUV ESIB26-TUV SAC UVLB 9168



## Limit and Margin QP

Date: 10/01/2011 - Time: 19:03:31

Frequency (MHz)	QuasiPeak (dBμV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
35.700000	9.3	13.5	30.7	40.0	٧
45.150000	10.5	13.7	29.5	40.0	V
123.500000	8.7	12.4	34.9	43.5	V
150.050000	10.6	14.2	32.9	43.5	V
472.450000	15.9	16.2	30.1	46.0	V
694.450000	17.7	19.6	28.3	46.0	٧



# Test Plot of Spurious emission of A.1 – 8DPSK modulation Horizontal (1GHz – 18GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

# **EMC Test Record (Emission)**

## **Common Information**

Manufacturer:

K-Mate

Test Item: Identification: Bluetooth headset BTH002-KMA04

Test Standard: Test Detail: FCC Part 15 RE

Operation Mode: Climate Condition: Test Voltage/ Freq: Tx @ Low channel(EDR) 23 ℃; 50 %RH; DC 3.7V by li-ion battery

Test Voltage/ Freq: DC 3.7V by li-ion batt Receipt No: 163072045 1008300

Report No: Result: 17019029 001

Comment:

Test distance is 3m, Horizontal

Subrange 1 Frequency Range:

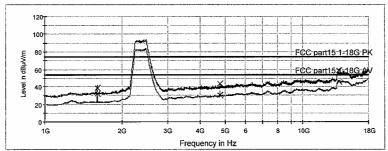
1GHz-18GHz TUV FSP30

Receiver: Transducer:

TUV SAC HF906/ TUV FSP30-TUV SAC HF906

101 kPa.





Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
1601.000000	38.6	-14.0	35.4	74.0	Н
4804.000000	43.0	-5.5	31.0	74.0	Н
13867.000000	58.5	9.2	15.5	74.0	Н

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
1601.000000	32.0	-14.0	22.0	54.0	Н
4804.000000	30.5	-5.5	23.5	54.0	Н
13867.000000	45.8	9.2	8.2	54.0	Н

# Test Plot of Spurious emission of A.1 – 8DPSK modulation Vertical (1GHz – 18GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

# **EMC Test Record (Emission)**

## **Common Information**

Manufacturer: K-Mate

Test Item: Bluetooth headset Identification: BTH002-KMA04
Test Standard: FCC Part 15
Test Detail: RE

Operation Mode: Tx @ Low channel(EDR)

Climate Condition: 23 °C; 50 %RH; 101 kPa.
Test Voltage/ Freq: DC 3.7V by li-ion battery

Test Voltage/ Freq: DC 3.7V by li-ion batte
Receipt No: 163072045 100&300
Report No: 17019029 001

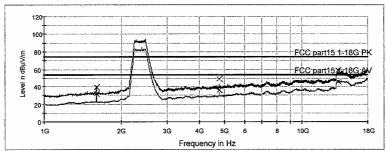
Result: Pass

Comment: Test distance is 3m, Vertical

Subrange 1
Frequency Range: 1GHz-18GHz
Receiver: TUV FSP30

Transducer: TUV SAC HF906/ TUV FSP30-TUV SAC HF906

### Pre TUV 1 to 18G HF906



Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
1601.000000	39.1	-14.0	34.9	74.0	V
4804.000000	48.9	-5.5	25.1	74.0	V
13867.000000	58.7	9.2	15.3	74.0	V

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
1601.000000	31.6	-14.0	22.4	54.0	v
4804.000000	35.8	-5.5	18.2	54.0	٧
13867.000000	45.9	9.2	8.1	54.0	٧





# Test Plot of Spurious emission of A.1 – 8DPSK modulation Horizontal (18GHz - 26GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

101 kPa.

## **EMC Test Record (Emission)**

## **Common Information**

Manufacturer: K-Mate

Test Item: Bluetooth headset Identification: BTH002-KMA04 Test Standard: FCC Part 15

Test Detail: RE

Operation Mode: Tx @ Low channel(EDR) Climate Condition:

23 °C; 50 %RH; DC 3.7V by li-ion battery Test Voltage/ Freq:

Receipt No: 163072045 100&300 Report No: 17019029 001

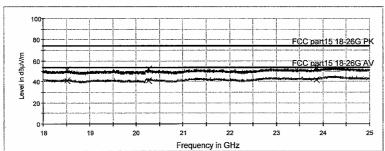
Comment: Test distance is 3m, Horizontal

Subrange 1

18GHz-25GHz Frequency Range: Receiver: TUV 3160-09

TUV SAC 3160-09/ TUV FSP30-TUV SAC 3160-09 Transducer:

Pre TUV 18 to 26.5 3160-09



Limit and Margin PK

Frequency MaxPeak Corr. Margin Limit Polarization (MHz) (dBµV/m) (dB) (dB) (dBµV/m)						
						Polarization
						1.5
	18522.000000	52.0	5.0	22.0	74.0	Н
	20277.000000	52.4	5.6	21.6	74.0	H .
	23858.000000	53.7	6.7	20.3	74.0	Н

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
18522.000000	40.5	5.0	13.5	54.0	Н
20277.000000	41.1	5.6	12.9	54.0	Н
23858.000000	41.8	6.7	12.2	54.0	Н



# Test Plot of Spurious emission of A.1 – 8DPSK modulation Vertical (18GHz – 26GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

# **EMC Test Record (Emission)**

## **Common Information**

Manufacturer: K-Mate

Test Item: Bluetooth headset Identification: BTH002-KMA04
Test Standard: FCC Part 15

Test Detail: RE

Operation Mode: Tx @ Low channel(EDR)
Climate Condition: 23 °C; 50 %RH; 101 kPa.
Test Voltage/ Freq: DC 3.7V by li-ion battery

Test Voltage/ Freq: DC 3.7V by Ii-ion batter
Receipt No: 163072045 100&300
Report No: 17019029 001

Result: Pass

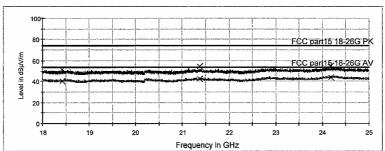
Comment: Test distance is 3m, Vertical

Subrange 1

Frequency Range: 18GHz-25GHz Receiver: 1UV 3160-09

Transducer: TUV SAC 3160-09/ TUV FSP30-TUV SAC 3160-09





Limit and Margin PK

-IIIIIC WIIW					
Frequency (MHz)	MaxPeak (dBμV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
18428.000000	51.9	4.9	22.1	74.0	٧
21379.000000	54.3	5.9	19.7	74.0	٧
24180.000000	55.3	6.9	18.7	74.0	٧

**Limit and Margin AV** 

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
18428.000000	40.2	4.9	13.8	54.0	V
21379.000000	41.9	5.9	12.1	54.0	V
24180.000000	43.6	6.9	10.4	54.0	V





Date: 11/01/2011 - Time: 21:45:14

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# Test Plot of Spurious emission of A.2 – 8DPSK modulation Horizontal (9kHz - 30MHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

## **EMC Test Record (EMISSION)**

### **Test Information**

Manufacturer:

Identification Test Standard: Test Detail:

Operation Mode:

Climate Condition: Test Voltage / Freq. :

Receipt No.: Report No. Result:

Comment:

K-Mate

Bluetooth Headset BTH002-KMA04 FCC Part 15 RE

Tx @ Mid channel(EDR)

23 °C; 50 %RH; DC 3.7V by li-ion battery 163072045 100&300 101 kPa.

17019029 001

Pass Test distance is 3m, Horizontal

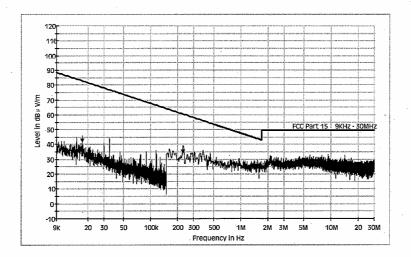
Subrange 1

Frequency Range: Transducer:

9kHz - 30MHz TUV ESCI 3

TUV SAC Active Loop Antenna ZN30900A / TUV ESCI3 -TUV

SAC Active Loop Antenna ZN30900A



**Result Table Single** 

				Antana and an analysis of the same and a sam	
	Frequency	QuasiPeak	Average	Corr.	Polarity
	(MHz)	(dB¦ÌV/m)	(dB İV/m)	(dB)	
Г	0.017400		42.6	20.8	Н
Г	0.230000		35.1	21.0	Н
	2.146000	29.0		20.4	H
Г	9.298000	26.5		22.1	Н

Date: 14/01/2011 - Time: 01:50:13 PM



Reviewed by:



17019029 001



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# Test Plot of Spurious emission of A.2 – 8DPSK modulation Vertical (9kHz - 30MHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

## **EMC Test Record (EMISSION)**

### **Test Information**

Manufacturer: Test Item:

Identification Test Standard: Test Detail:

Operation Mode:

Climate Condition: Test Voltage / Freq. : Receipt No.:

Report No. Result:

Comment:

K-Mate

Bluetooth Headset BTH002-KMA04 FCC Part 15 RE

Tx @ Mid channel(EDR)

23 °C; 50 %RH; DC 3.7V by li-ion battery 163072045 100&300

17019029 001

Test distance is 3m, Vertical

Subrange 1

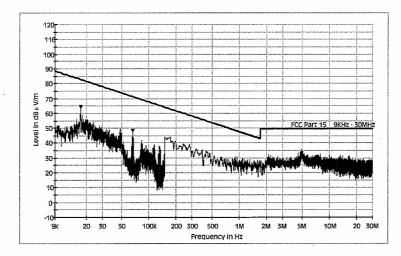
Frequency Range: Transducer:

9kHz - 30MHz TUV ESCI 3

TUV SAC Active Loop Antenna ZN30900A / TUV ESCI3 -TUV

101 kPa.

SAC Active Loop Antenna ZN30900A



Result Table\_Single

Frequency (MHz)	QuasiPeak (dB;lV/m)	Average (dB¦lV/m)	Corr. (dB)	Polarity
0.017400		64.0	20.8	Н
0.065640		48.2	20.4	Н
4.914000	31.7		22.0	Н
13.262000	25.9		21.1	Н

Date: 14/01/2011 - Time: 01:59:12 PM







# Test Plot of Spurious emission of A.2 – 8DPSK modulation Horizontal (30MHz – 1GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

# **EMC Test Record (Emission)**

## **Common Information**

Manufacturer:

Test Item: Identification:

Test Standard:

Test Detail:

Operation Mode: Climate Condition: Test Voltage/ Freq:

Receipt No: Report No: Result:

Comment:

Receiver:

Transducer:

17019029 001 Pass

Test distance is 3m, Horizontal

Subrange 1 Frequency Range: 30M-1GHz

TUV ESIB 26

K-Mate

RE

Bluetooth Headset

Tx @ Mid channel(EDR)

23 °C; 50 %RH; DC 3.7V by li-ion battery

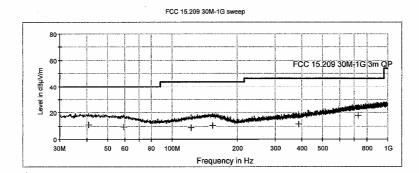
163072045 100&300

BTH002-KMA04

FCC Part 15

TUV SAC UVLB 9168/ TUV ESIB26-TUV SAC UVLB 9168

101 kPa.



Limit and Margin QP

Date: 10/01/2011 - Time: 18:49:56

LIIIII aii	Lillit and margin &								
Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization				
41.050000	10.9	14.0	29.1	40.0	Н				
59.600000	9.4	12.8	30.6	40.0	Н				
122.400000	8.7	12.4	34.8	43.5	Н				
154.050000	10.5	14.2	33.0	43.5	Н				
386.100000	11.2	14.5	34.8	46.0	Н				
732.650000	18.1	20.1	27.9	46.0	Н				





# Test Plot of Spurious emission of A.2 – 8DPSK modulation Vertical (30MHz – 1GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

# **EMC Test Record (Emission)**

#### **Common Information**

Manufacturer: K-Mate

Test Item: Bluetooth Headset Identification: BTH002-KMA04
Test Standard: FCC Part 15

Test Detail: RE

Operation Mode: Tx @ Mid channel(EDR)
Climate Condition: 23 °C; 50 %RH; 101 kPa.

Climate Condition: 23 °C; 50 %RH;
Test Voltage/ Freq: DC 3.7V by Ii-ion battery
Receipt No: 163072045 100&300

Report No: 17019029 001

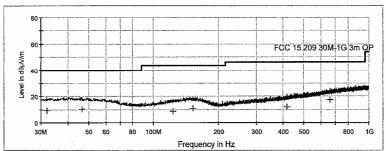
Comment: Test distance is 3m, Vertical

Subrange 1

Frequency Range: 30M-1GHz Receiver: TUV ESIB 26

Transducer: TUV SAC UVLB 9168/ TUV ESIB26-TUV SAC UVLB 9168

FCC 15.209 30M-1G sweep



Limit and Margin QP

Date: 10/01/2011 - Time: 18:44:10

9									
Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization				
32.050000	9.5	13.3	30.5	40.0	V				
46.600000	10.1	13.6	29.9	40.0	V				
123.250000	8.6	12.4	34.9	43.5	V				
153.300000	10.9	14.2	32.6	43.5	V				
419.350000	12.1	15.2	33.9	46.0	٧				
661 350000	17.3	19.2	28.7	46.0	V				



Tested by:



**17019029 001** Page 45 of 72



# Test Plot of Spurious emission of A.2 – 8DPSK modulation Horizontal (1GHz – 18GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

# **EMC Test Record (Emission)**

## **Common Information**

Manufacturer:

K-Mate

Test Item: Identification: Test Standard: Bluetooth headset BTH002-KMA04

Test Detail:

FCC Part 15 RE

Operation Mode: Climate Condition: Tx @ Mid channel(EDR)

Climate Condition: Test Voltage/ Freq: Receipt No: 23 °C; 50 %RH; DC 3.7V by li-ion battery 163072045 100&300

Report No:

17019029 001

Result: Comment:

Test distance is 3m, Horizontal

Subrange 1 Frequency Range:

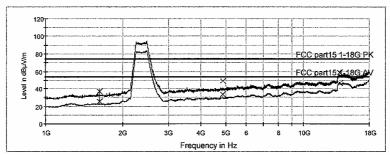
1GHz-18GHz TUV FSP30

Receiver: Transducer:

TUV SAC HF906/ TUV FSP30-TUV SAC HF906

101 kPa.





Limit and Margin PK

Frequency (MHz)	MaxPeak (dBμV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
1625.000000	37.1	-13.9	36.9	74.0	Н
4882.000000	48.7	-5.6	25.3	74.0	Н
13852.000000	59.1	9.6	14.9	74.0	Н

**Limit and Margin AV** 

	3				
Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
1625.000000	25.6	-13.9	28.4	54.0	Н
4882.000000	33.4	-5.6	20.6	54.0	Н
13852.000000	46.3	9.6	7.7	54.0	Н

Date: 10/01/2011 - Time: 21:32:47



**17019029 001** Page 46 of 72



# Test Plot of Spurious emission of A.2 – 8DPSK modulation Vertical (1GHz – 18GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

101 kPa.

## **EMC Test Record (Emission)**

## **Common Information**

Manufacturer: K-Mate

Test Item: Bluetooth headset Identification: BTH002-KMA04
Test Standard: FCC Part 15

Test Detail: RE

Test Voltage/ Freq: DC 3.7V by li-ion battern
Receipt No: 163072045 100&300
Report No: 17019029 001

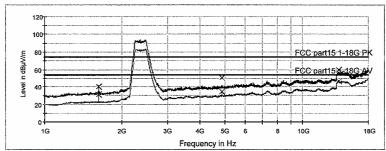
Result: Pas

Comment: Test distance is 3m, Vertical Subrange 1

Frequency Range: 1GHz-18GHz Receiver: TUV FSP30

Transducer: TUV SAC HF906/ TUV FSP30-TUV SAC HF906





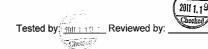
Limit and Margin PK

Frequency (MHz)	MaxPeak (dBμV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
1625.000000	40.2	-13.9	33.8	74.0	V
4882.000000	50.4	-5.6	23.6	74.0	V
13852.000000	59.4	9.6	14.6	74.0	V

Limit and Margin AV

Date: 10/01/2011 - Time: 21:27:52

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
1625.000000	31.1	-13.9	22.9	54.0	V
4882.000000	33.9	-5.6	20.1	54.0	٧
13852.000000	46.3	9.6	7.7	54.0	V



# Test Plot of Spurious emission of A.2 – 8DPSK modulation Horizontal (18GHz - 26GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

101 kPa.

## **EMC Test Record (Emission)**

#### **Common Information**

K-Mate Manufacturer:

Bluetooth headset Test Item: Identification: BTH002-KMA04 Test Standard: FCC Part 15

Test Detail: RE

Operation Mode: Tx @ Mid channel(EDR) 23 °C; 50 %RH; DC 3.7V by li-ion battery

Climate Condition: Test Voltage/ Freq: 163072045 100&300 Receipt No: Report No: 17019029 001

Result:

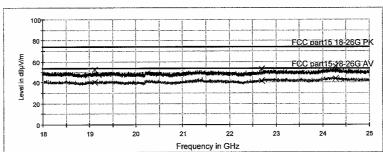
Test distance is 3m, Horizontal Comment:

Subrange 1

Frequency Range: 18GHz-25GHz TUV 3160-09 Receiver:

TUV SAC 3160-09/ TUV FSP30-TUV SAC 3160-09 Transducer:





#### Limit and Margin PK

Frequency (MHz)	MaxPeak (dBμV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
19121.000000	52.1	5.2	21.9	74.0	Н
22696.000000	53.3	6.3	20.7	74.0	H
24271 000000	55.5	6.9	18.5	74.0	Н

## Limit and Margin AV

Date: 11/01/2011 - Time: 21:54:24

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
19121.000000	40.3	5.2	13.7	54.0	Н
22696.000000	41.6	6.3	12.4	54.0	Н
24271.000000	43.8	6.9	10.2	54.0	Н

Tested by: \_ Reviewed by:



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# Test Plot of Spurious emission of A.2 – 8DPSK modulation Vertical (18GHz - 26GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

# **EMC Test Record (Emission)**

## **Common Information**

Manufacturer:

K-Mate Test Item: Bluetooth headset Identification: BTH002-KMA04 Test Standard: FCC Part 15

Test Detail: RE

Tx @ Mid channel(EDR) Operation Mode: 23 °C; 50 %RH; DC 3.7V by li-ion battery Climate Condition: Test Voltage/ Freq: 101 kPa.

Receipt No: 163072045 100&300 Report No: 17019029 001

Result:

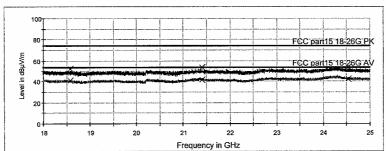
Test distance is 3m, Vertical Comment:

Subrange 1

18GHz-25GHz Frequency Range: Receiver: TUV 3160-09

TUV SAC 3160-09/ TUV FSP30-TUV SAC 3160-09 Transducer:





Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
18584.000000	52.5	5.0	21.5	74.0	٧
21408.000000	53.8	5.9	20.2	74.0	٧
24543 000000	54.0	7.0	20.0	74.0	V

Limit and Margin AV

Limit and margin Av									
Frequency (MHz)	Average (dBμV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization				
18584.000000	40.5	5.0	13.5	54.0	٧				
21408.000000	41.6	5.9	12.4	54.0	٧				
24543 000000	42.4	7.0	11.6	54.0	V				

Date: 11/01/2011 - Time: 21:56:07



17019029 001



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# Test Plot of Spurious emission of A.3 – 8DPSK modulation Horizontal (9kHz - 30MHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

## **EMC Test Record (EMISSION)**

## **Test Information**

Manufacturer: Test Item: Identification

Test Standard: Test Detail:

Operation Mode:

Climate Condition:

Test Voltage / Freq. : Receipt No.: Report No. Result:

Comment:

K-Mate

Bluetooth Headset BTH002-KMA04 FCC Part 15

RE Tx @ High channel(EDR)

101 kPa.

23 ℃; 50 %RH; DC 3.7V by li-ion battery 163072045 100&300

17019029 001

Test distance is 3m, Horizontal

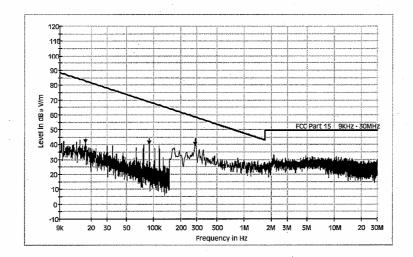
Subrange 1

Frequency Range: Transducer:

9kHz - 30MHz TUV ESCI 3

TUV SAC Active Loop Antenna ZN30900A / TUV ESCI3 -TUV

SAC Active Loop Antenna ZN30900A

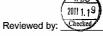


**Result Table Single** 

Frequency (MHz)	QuasiPeak (dB;lV/m)	Average (dB¦ÌV/m)	Corr. (dB)	Polarity
. 0.017400		42.2	20.8	H
0.089320		41.1	21.0	. Н
0.290000		40.1	21.0	H
2.130000	28.8		20.4	Н

Date: 14/01/2011 - Time: 01:23:06 PM

Tested by:



17019029 001

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# Test Plot of Spurious emission of A.3 – 8DPSK modulation Vertical (9kHz - 30MHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

## **EMC Test Record (EMISSION)**

### **Test Information**

Manufacturer: Test Item: Identification

Test Standard: Test Detail:

Operation Mode:

Climate Condition: Test Voltage / Freq. :

Receipt No.: Report No. Result:

K-Mate

Bluetooth Headset BTH002-KMA04 FCC Part 15

RE Tx @ High channel(EDR)

23 °C; 50 %RH; DC 3.7V by li-ion battery 163072045 100&300 17019029 001

Test distance is 3m, Vertical

Subrange 1

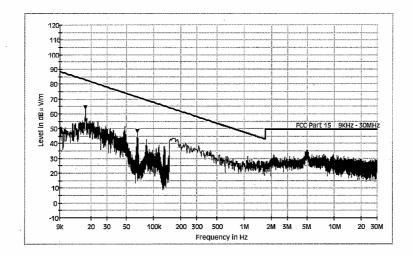
Frequency Range: Transducer:

9kHz - 30MHz TUV ESCI 3

TUV SAC Active Loop Antenna ZN30900A / TUV ESCI3 -TUV

101 kPa.

SAC Active Loop Antenna ZN30900A



**Result Table Single** 

	Frequency (MHz)	QuasiPeak (dB¦lV/m)	Average (dB¦ÌV/m)	Corr. (dB)	Polarity
,	0.017400		64.0	20.8	Н
	0.065640		48.3	20.4	Н
	4.978000	30.9		22.0	Н
	9.862000	26.6		22.2	Н

Date: 14/01/2011 - Time: 01:27:18 PM

Tested by: Checke



# Test Plot of Spurious emission of A.3 – 8DPSK modulation Horizontal (30MHz - 1GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

## **EMC Test Record (Emission)**

## **Common Information**

Manufacturer:

Test Item: Bluetooth Headset Identification: BTH002-KMA04 Test Standard: FCC Part 15

Test Detail: RE

Operation Mode: Tx @ High channel(EDR)

23 °C; 50 %RH; DC 3.7V by li-ion battery 101 kPa. Climate Condition:

K-Mate

Test Voltage/ Freq: Receipt No: 163072045 100&300

Report No: 17019029 001 Result:

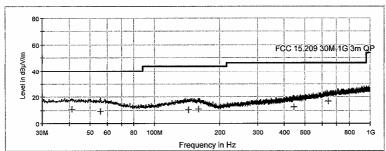
Test distance is 3m, Horizontal Comment:

Subrange 1

Frequency Range: 30M-1GHz **TUV ESIB 26** Receiver:

Transducer: TUV SAC UVLB 9168/ TUV ESIB26-TUV SAC UVLB 9168





Limit and Margin QP

Date: 10/01/2011 - Time: 18:55:06

Enime and margin at							
	Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization	
	41.500000	11.0	14.0	29.0	40.0	Н	
	56.200000	9.0	13.1	31.0	40.0	Н	
	144.600000	10.1	13.8	33.4	43.5	Н	
	160.950000	10.6	14.0	32.9	43.5	Н	
	443.600000	12.6	15.8	33.4	46.0	Н	
	639,400000	17.0	19.0	29.0	46.0	Н	



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# Test Plot of Spurious emission of A.3 – 8DPSK modulation Vertical (30MHz - 1GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

101 kPa.

## **EMC Test Record (Emission)**

## **Common Information**

Manufacturer: K-Mate

Test Item: Bluetooth Headset Identification: BTH002-KMA04 Test Standard: FCC Part 15 RE Test Detail:

Operation Mode: Tx @ High channel(EDR) Climate Condition:

23 ℃; 50 %RH; DC 3.7V by li-ion battery Test Voltage/ Freq: Receipt No: 163072045 100&300

Report No: 17019029 001

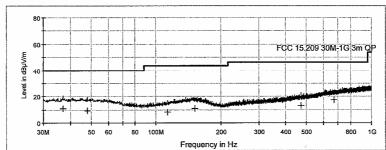
Result:

Test distance is 3m, Vertical Comment:

Subrange 1 Frequency Range: 30M-1GHz Receiver: **TUV ESIB 26** 

TUV SAC UVLB 9168/ TUV ESIB26-TUV SAC UVLB 9168 Transducer:





Limit and Margin QP

Date: 10/01/2011 - Time: 18:59:15

Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
(1711 12)	(45,47,11)	(0.2)	(35)	(	
37.050000	10.7	13.7	29.3	40.0	٧
48.050000	9.3	13.6	30.7	40.0	V
113.550000	8.0	11.5	35.5	43.5	V
151.750000	11.1	14.2	32.4	43.5	V
471.350000	13.0	16.2	33.0	46.0	V
671.900000	17.4	19.4	28.6	46.0	V





# Test Plot of Spurious emission of A.3 – 8DPSK modulation Horizontal (1GHz – 18GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

101 kPa.

## **EMC Test Record (Emission)**

#### **Common Information**

Manufacturer: K-Mate

Test Item: Bluetooth headset Identification: BTH002-KMA04
Test Standard: FCC Part 15

Test Detail: RE

Operation Mode: Tx @ High channel(EDR)

Climate Condition: 23 °C; 50 %RH; Test Voltage/ Freq: DC 3.7V by li-ion battery

Test Voltage/ Freq: DC 3.7V by Ii-ion battery
Receipt No: 163072045 100&300
Report No: 17019029 001

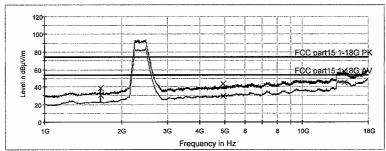
Result: Pass

Comment: Test distance is 3m, Horizontal

Subrange 1
Frequency Range: 1GHz-18GHz
Receiver: TUV FSP30

Transducer: TUV SAC HF906/ TUV FSP30-TUV SAC HF906





**Limit and Margin PK** 

Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
1652.000000	38.4	-13.6	35.6	74.0	Н
4959.000000	42.9	-5.8	31.1	74.0	H
14580.000000	57.6	9.2	16.4	74.0	Н

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
1652.000000	29.8	-13.6	24.2	54.0	Н
4959.000000	29.4	-5.8	24.6	54.0	Н
14580.000000	44.6	9.2	9.4	54.0	Н



# Test Plot of Spurious emission of A.3 – 8DPSK modulation Vertical (1GHz - 18GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

101 kPa.

# **EMC Test Record (Emission)**

## **Common Information**

Manufacturer: K-Mate

Test Item: Bluetooth headset Identification: BTH002-KMA04 Test Standard: FCC Part 15

Test Detail: RE

Tx @ High channel(EDR) 23 °C; 50 %RH; DC 3.7V by li-ion battery Operation Mode: Climate Condition:

Test Voltage/ Freq:

Receipt No: 163072045 100&300 Report No: 17019029 001

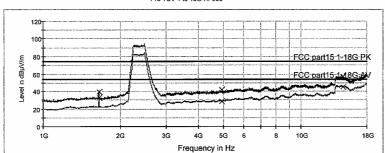
Result: Pass

Test distance is 3m, Vertical Comment:

Subrange 1 Frequency Range: 1GHz-18GHz Receiver: TUV FSP30

Transducer: TUV SAC HF906/ TUV FSP30-TUV SAC HF906





**Limit and Margin PK** 

Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
1652.000000	39.3	-13.6	34.7	74.0	V
4959.000000	41.8	-5.8	32.2	74.0	٧
14580.000000	57.4	9.2	16.6	74.0	٧

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
1652.000000	33.0	-13.6	21.0	54.0	v
4959.000000	28.9	-5.8	25.1	54.0	V
14580.000000	44.7	9.2	9.3	54.0	٧



# Test Plot of Spurious emission of A.3 – 8DPSK modulation Horizontal (18GHz - 26GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

101 kPa.

## **EMC Test Record (Emission)**

## **Common Information**

Manufacturer:

K-Mate Test Item: Bluetooth headset Identification: BTH002-KMA04 Test Standard: FCC Part 15

Test Detail: RE

Operation Mode: Climate Condition: Tx @ High channel(EDR) 50 %RH;

23 °C; 50 %RH; DC 3.7V by li-ion battery Test Voltage/ Freq: Receipt No: 163072045 100&300

Report No: 17019029 001 Pass

Result:

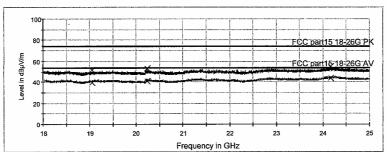
Test distance is 3m, Horizontal Comment:

Subrange 1

Frequency Range: 18GHz-25GHz Receiver: TUV 3160-09

Transducer: TUV SAC 3160-09/ TUV FSP30-TUV SAC 3160-09

Pre TUV 18 to 26.5 3160-09



Limit and Margin PK

Frequency (MHz)	MaxPeak (dBμV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
19052.000000	51.8	5.1	22.2	74.0	Н
20237.000000	53.4	5.6	20.6	74.0	Н
24170.000000	55.0	6.9	19.0	74.0	Н

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
19052.000000	39.8	5.1	14.2	54.0	Н
20237.000000	41.0	5.6	13.0	54.0	Н
24170.000000	43.5	6.9	10.5	54.0	Н

Date: 11/01/2011 - Time: 22:06:08



## 17019029 001

**TÜV**Rheinland®

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# Test Plot of Spurious emission of A.3 – 8DPSK modulation Vertical (18GHz - 26GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

## **EMC Test Record (Emission)**

#### **Common Information**

Manufacturer:

Test Item: Identification: Test Standard:

Test Detail:

Operation Mode: Climate Condition: Test Voltage/ Freq:

Receipt No: Report No:

Frequency Range:

Comment: Subrange 1

Receiver:

Transducer:

Test distance is 3m, Vertical

18GHz-25GHz

17019029 001

TUV 3160-09

K-Mate

RE

Bluetooth headset

Tx @ High channel(EDR)

23 °C; 50 %RH; DC 3.7V by li-ion battery

Pre TUV 18 to 26.5 3160-09

21

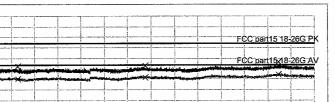
163072045 100&300

BTH002-KMA04

FCC Part 15

TUV SAC 3160-09/ TUV FSP30-TUV SAC 3160-09

101 kPa.



22

Frequency in GHz

23

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
18642.000000	52.1	5.0	21.9	74.0	V
21381.000000	53.2	5.9	20.8	74.0	V
24228.000000	56.2	6.9	17.8	74.0	٧

20

19

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
18642.000000	40.0	5.0	14.0	54.0	٧
21381.000000	41.6	5.9	12.4	54.0	ν
24228.000000	43.9	6.9	10.1	54.0	٧

2011.10



Date: 11/01/2011 - Time: 22:09:08

Reviewed by: Tested by:

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# Test Plot of Spurious emission of B – 8DPSK modulation Horizontal (9kHz - 30MHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

## **EMC Test Record (EMISSION)**

## **Test Information**

Manufacturer:

Identification Test Standard:

Test Detail:

Operation Mode:

Climate Condition:

Test Voltage / Freq. : Receipt No.: Report No. Result:

Comment:

K-Mate

Bluetooth Headset BTH002-KMA04 FCC Part 15 RE

Rx @ Mid channel(EDR)

23 ℃; 50 %RH; DC 3.7V by li-ion battery

163072045 100&300 17019029 001

Test distance is 3m, Horizontal

Subrange 1

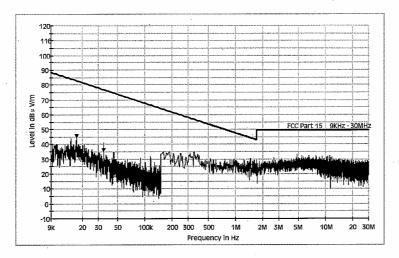
Frequency Range: Transducer:

9kHz - 30MHz TUV ESCI 3

TUV SAC Active Loop Antenna ZN30900A / TUV ESCI3 -TUV

101 kPa.

SAC Active Loop Antenna ZN30900A



Result Table\_Single

Frequency (MHz)	QuasiPeak (dBjlV/m)	Average (dB¦lV/m)	Gorr. (dB)	Polarity
0.017400		45.3	20.6	Н
0.034920		35.8	20.1	Н
1.454000	25.9		21.6	H
4.774000	27.2		22.3	Н

Date: 14/01/2011 - Time: 01:12:13 PM



Reviewed by:



17019029 001

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# Test Plot of Spurious emission of B – 8DPSK modulation Vertical (9kHz - 30MHz)

TUV Rheinland (Guangdong) Ltd.

**EMC Test Service** 

## **EMC Test Record (EMISSION)**

### **Test Information**

Manufacturer: K-Mate

Test Item: Bluetooth Headset Identification BTH002-KMA04 Test Standard: FCC Part 15 RE

Test Detail:

Operation Mode: Rx @ Mid channel(EDR) Climate Condition:

23 ℃; 50 %RH; DC 3.7V by li-ion battery 163072045 100&300 Test Voltage / Freq. : Receipt No.: Report No.

17019029 001 Result: Pass

Comment: Test distance is 3m, Vertical

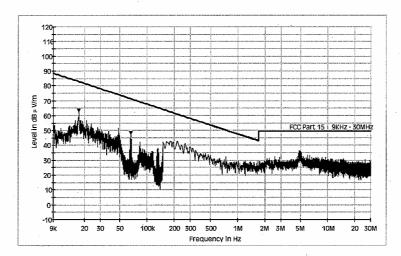
Subrange 1

Frequency Range: 9kHz - 30MHz TUV ESCI 3

Transducer: TUV SAC Active Loop Antenna ZN30900A / TUV ESCI3 -TUV

SAC Active Loop Antenna ZN30900A

101 kPa.



Result Table\_Single

Date: 14/01/2011 - Time: 01:16:53 PM

Frequency (MHz)	QuasiPeak (dB¦lV/m)	Average (dB¦lV/m)	Corr. (dB)	Polarity
0.017400		63.4	20.8	. н
0.065640		48.4	20.4	H
4.806000	32.2		21.9	H
9.454000	26.6		22.1	Н

2011 1.19 / tiric's 2011 1 50 Tested by: Reviewed by:

17019029 001

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# Test Plot of Spurious emission of B -8DPSK modulation Horizontal (30MHz - 1GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

## **EMC Test Record (Emission)**

## **Common Information**

Manufacturer:

K-Mate

Test Item: Identification: Bluetooth Headset

Test Standard:

BTH002-KMA04 FCC Part 15

Test Detail:

RE

Operation Mode:

Rx @ Mid channel(EDR)

Climate Condition: Test Voltage/ Freq:

23 ℃; 50 %RH; DC 3.7V by li-ion battery

Receipt No: Report No:

163072045 100&300 17019029 001

Result:

Comment:

Test distance is 3m, Horizontal

Subrange 1

Frequency Range:

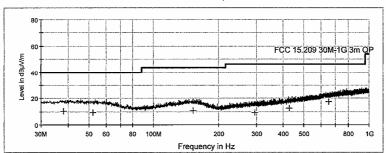
30M-1GHz TUV ESIB 26

Receiver: Transducer:

TUV SAC UVLB 9168/ TUV ESIB26-TUV SAC UVLB 9168

101 kPa.





Limit and Margin QP

- IIIII C CIII	Ellingana margin Qi								
Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization				
38.350000	10.4	13.9	29.6	40.0	н				
52.550000	9.2	13.3	30.8	40.0	Н				
152.700000	11.1	14.2	32.4	43.5	Н				
295.550000	9.3	12.7	36.7	46.0	Н				
426.600000	12.3	15.4	33.8	46.0	Н				
652,000000	17.2	19.1	28.8	46.0	Н				



Date: 10/01/2011 - Time: 19:11:15

# Test Plot of Spurious emission of B – 8DPSK modulation Vertical (30MHz – 1GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

# **EMC Test Record (Emission)**

## **Common Information**

Manufacturer:

Test Item: Identification:

Test Standard: Test Detail:

Operation Mode: Climate Condition:

Test Voltage/ Freq: Receipt No: Report No:

Result: Comment:

ification: BTH002-KMA04 Standard: FCC Part 15

RE
Rx @ Mid channel(EDR)
23 °C: 50 %RH:

23 ℃; 50 %RH; DC 3.7V by li-ion battery 163072045 100&300

17019029 001 Pass

K-Mate

Bluetooth Headset

Test distance is 3m, Vertical

Subrange 1

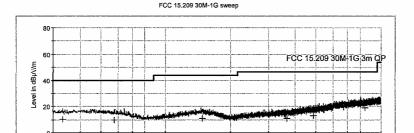
Frequency Range: Receiver: 30M-1GHz TUV ESIB 26

Transducer:

TUV SAC UVLB 9168/ TUV ESIB26-TUV SAC UVLB 9168

400

101 kPa.



Frequency in Hz

Limit and Margin QP

Date: 10/01/2011 - Time: 19:14:01

Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
33.400000	10.6	13.3	29.4	40.0	٧
58.150000	9.7	12.9	30.3	40.0	V
148,200000	10.7	14.1	32.8	43.5	V
365.850000	10.8	14.1	35.2	46.0	٧
487.600000	13.3	16.4	32.7	46.0	٧
846.750000	18.9	21.0	27.1	46.0	٧

Tested by: MIT 1 n Reviewed by: WILL 19

# Test Plot of Spurious emission of B – 8DPSK modulation Horizontal (1GHz – 18GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

101 kPa.

## **EMC Test Record (Emission)**

#### **Common Information**

Manufacturer: K-Mate

Test Item: Bluetooth headset Identification: BTH002-KMA04
Test Standard: FCC Part 15

Test Detail: RE

Operation Mode: Rx @ Mid channel(EDR)
Climate Condition: 23 °C; 50 %RH;
Test Voltage/ Freq: DC 3.7V by li-ion battery

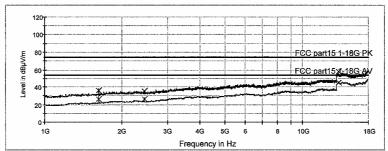
Test Voltage/ Freq: DC 3.7V by li-ion battery
Receipt No: 163072045 100&300
Report No: 17019029 001

Result: Pass
Comment: Test distance is 3m, Horizontal

Subrange 1
Frequency Range: 1GHz-18GHz
Receiver: TUV FSP30

Transducer: TUV SAC HF906/ TUV FSP30-TUV SAC HF906

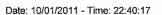
### Pre TUV 1 to 18G HF906



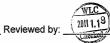
Limit and Margin PK

Frequency (MHz)	y MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
1627.0000	00 36.1	-14.7	37.9	74.0	٧
2441.0000	00 34.9	-12.1	39.1	74.0	٧
13848.0000	00 57.8	9.0	16.2	74.0	٧

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
1627.000000	26.0	-14.7	28.0	54.0	٧
2441.000000	26.4	-12.1	27.6	54.0	٧
13848.000000	45.1	9.0	8.9	54.0	٧







# Test Plot of Spurious emission of B – 8DPSK modulation Vertical (1GHz - 18GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

# **EMC Test Record (Emission)**

## **Common Information**

Manufacturer:

K-Mate

Test Item: Identification: Bluetooth headset BTH002-KMA04

Test Standard: Test Detail:

FCC Part 15

Operation Mode: Climate Condition: Rx @ Mid channel(EDR)

Test Voltage/ Freq: Receipt No:

23 °C; 50 %RH; DC 3.7V by li-ion battery 163072045 100&300

Report No: Result:

17019029 001

Comment:

Subrange 1

Test distance is 3m, Vertical

Frequency Range: Receiver:

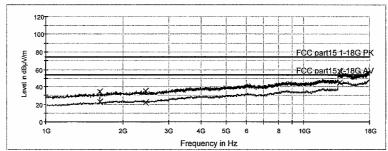
1GHz-18GHz TUV FSP30

Transducer:

TUV SAC HF906/ TUV FSP30-TUV SAC HF906

101 kPa.

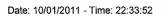




**Limit and Margin PK** 

Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
1627.000000	34.7	-14.7	39.3	74.0	Н
2441.000000	34.8	-12.1	39.2	74.0	Н
13848.000000	57.9	9.0	16.1	74.0	Н

Ziiiit aira iiiai giii / t ·								
Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization			
1627.000000	22.6	-14.7	31.4	54.0	Н			
2441.000000	22.3	-12.1	31.7	54.0	Н			
13848.000000	45.1	9.0	8.9	54.0	Н			







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# Test Plot of Spurious emission of B – 8DPSK modulation Horizontal (18GHz – 26GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

## **EMC Test Record (Emission)**

#### **Common Information**

Manufacturer: K-Mate

Test Item: Bluetooth headset Identification: BTH002-KMA04
Test Standard: FCC Part 15

Test Detail: RE

Operation Mode: Rx @ Mid channel(EDR)
Climate Condition: 23 °C; 50 %RH; 101 kPa.
Test Voltage/ Freq: DC 3.7V by li-ion battery

 Test Voltage/ Freq:
 DC 3.7V by li-ion batter

 Receipt No:
 163072045 100&300

 Report No:
 17019029 001

 Result:
 Pass

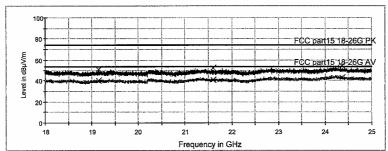
Comment: Test distance is 3m, Horizontal

Subrange 1

Frequency Range: 18GHz-26.5GHz Receiver: TUV 3160-09

Transducer: TUV SAC 3160-09/ TUV FSP30-TUV SAC 3160-09





Limit and Margin PK

militaria margini i it						
Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization	
19152.000000	51.2	5.2	22.8	74.0	٧	
21609.000000	52.6	6.0	21.4	74.0	٧	
24368,000000	54.7	7.0	19.3	74.0	V	

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
19152.000000	39.8	5.2	14.2	54.0	V
21609.000000	40.8	6.0	13.2	54.0	٧
24368.000000	43.1	7.0	10.9	54.0	V

Date: 11/01/2011 - Time: 23:03:00



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# Test Plot of Spurious emission of B – 8DPSK modulation Vertical (18GHz - 26GHz)

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

# **EMC Test Record (Emission)**

## **Common Information**

Manufacturer: Test Item:

K-Mate

Identification: Test Standard: Bluetooth headset BTH002-KMA04 FCC Part 15

Test Detail:

Operation Mode:

RE Rx @ Mid channel(EDR)

Climate Condition: Test Voltage/ Freq: Receipt No: Report No:

23 °C; 50 %RH; DC 3.7V by li-ion battery 163072045 100&300

17019029 001

Result: Comment:

Test distance is 3m, Vertical

Subrange 1

Frequency Range:

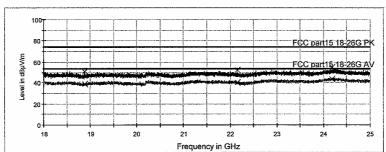
18GHz-26.5GHz TUV 3160-09

Receiver: Transducer:

TUV SAC 3160-09/ TUV FSP30-TUV SAC 3160-09

101 kPa.





Limit and Margin PK

Ziiiii ana margii i i						
Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization	
18883.000000	51.6	5.1	22.4	74.0	٧	
22167.000000	52.1	6.1	21.9	74.0	٧	
24182.000000	54.3	6.9	19.7	74.0	٧	

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
18883.000000	39.5	5.1	14.5	54.0	٧
22167.000000	41.0	6.1	13.0	54.0	V
24182.000000	42.1	6.9	11.9	54.0	٧

Date: 11/01/2011 - Time: 23:00:41





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# Test Plot of Radiated emissions in restricted bands, Mode A.1 – GFSK modulation, Horizontal

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

101 kPa.

# **EMC Test Record (Emission)**

## **Common Information**

Manufacturer: K-Mate

Test Item: Bluetooth headset Identification: BTH002-KMA04
Test Standard: FCC Part 15
Test Detail: Band edge

Operation Mode: Tx @ Low channel(BDR)
Climate Condition: 23 °C; 50 %RH;
Test Voltage/ Freq: DC 3.7V by li-ion battery

Test Voltage/ Freq: DC 3.7V by li-ion batter
Receipt No: 163072045 100&300
Report No: 17019029 001

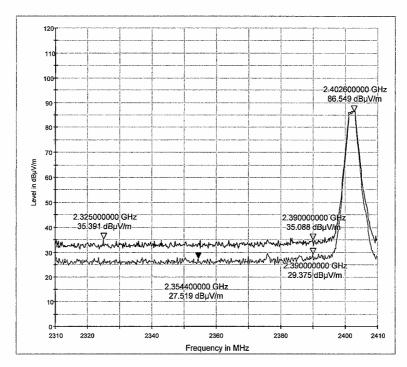
Result: Pass

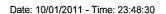
Comment: Test distance is 3m, Horizontal Subrange 1

Frequency Range: 2GHz-3GHz Receiver: TUV FSP30

Transducer: TUV SAC HF906/ TUV FSP30-TUV SAC HF906

Pre TUV 1 to 18G HF906







# Test Plot of Radiated emissions in restricted bands, Mode A.1 -**GFSK modulation, Vertical**

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

101 kPa.

## **EMC Test Record (Emission)**

### **Common Information**

Manufacturer: K-Mate

Test Item: Bluetooth headset Identification: BTH002-KMA04 Test Standard: FCC Part 15 Test Detail: Band edge

Operation Mode: Tx @ Low channel(BDR) Climate Condition:

23 °C; 50 %RH; DC 3.7V by li-ion battery Test Voltage/ Freq:

163072045 100&300 Receipt No: Report No: 17019029 001 Result:

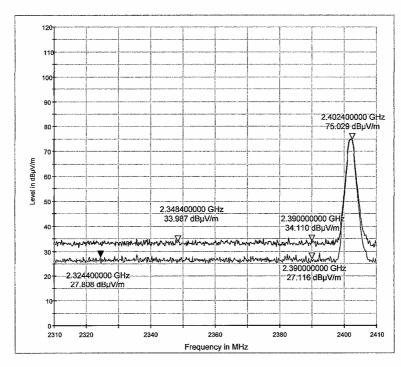
Comment: Test distance is 3m, Vertical

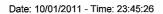
Subrange 1 2GHz-3GHz Frequency Range:

Receiver: **TUV FSP30** 

TUV SAC HF906/ TUV FSP30-TUV SAC HF906 Transducer:

Pre TUV 1 to 18G HF906







## 17019029 001

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# Test Plot of Radiated emissions in restricted bands, Mode A.3 -**GFSK modulation, Horizontal**

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

# **EMC Test Record (Emission)**

## **Common Information**

Manufacturer: Test Item:

K-Mate Bluetooth headset BTH002-KMA04

Identification: Test Standard: Test Detail:

FCC Part 15 Band edge

Operation Mode: Climate Condition: Tx @ High channel(BDR) 23 °C; 50 %RH; DC 3.7V by li-ion battery

Test Voltage/ Freq: Receipt No: Report No:

163072045 100&300

Result:

17019029 001 Pass

Comment: Subrange 1 Test distance is 3m, Horziontal

Frequency Range: Receiver:

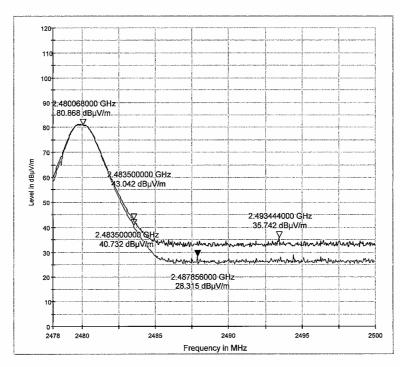
2GHz-3GHz **TUV FSP30** 

Transducer:

TUV SAC HF906/ TUV FSP30-TUV SAC HF906

101 kPa.

#### Pre TUV 1 to 18G HF906





Date: 10/01/2011 - Time: 23:29:56

Tested by: Mil. 10 Reviewed by: Checked

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# Test Plot of Radiated emissions in restricted bands, Mode A.3 -**GFSK modulation, Vertical**

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

101 kPa.

## **EMC Test Record (Emission)**

### **Common Information**

Manufacturer: K-Mate

Test Item: Bluetooth headset Identification: BTH002-KMA04 Test Standard: FCC Part 15 Test Detail: Band edge

Operation Mode: Tx @ High channel(BDR) Climate Condition:

23 ℃; 50 %RH; DC 3.7V by li-ion battery Test Voltage/ Freq: Receipt No: 163072045 100&300

Report No: 17019029 001

Result:

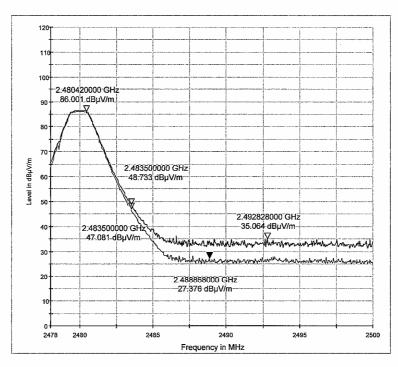
Comment: Test distance is 3m, Vertical

Subrange 1

Date: 10/01/2011 - Time: 23:35:41

2GHz-3GHz Frequency Range: **TUV FSP30** Receiver:

Transducer: TUV SAC HF906/TUV FSP30-TUV SAC HF906





# Test Plot of Radiated emissions in restricted bands, Mode A.1 -**8DPSK modulation, Horizontal**

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

101 kPa.

## **EMC Test Record (Emission)**

### Common Information

Manufacturer: K-Mate

Test Item: Bluetooth headset Identification: BTH002-KMA04 Test Standard: FCC Part 15 Test Detail: Band edge

Operation Mode: Tx @ High channel(EDR) Climate Condition:

23 °C; 50 %RH; DC 3.7V by li-ion battery Test Voltage/ Freq: Receipt No: 163072045 100&300

Report No: 17019029 001

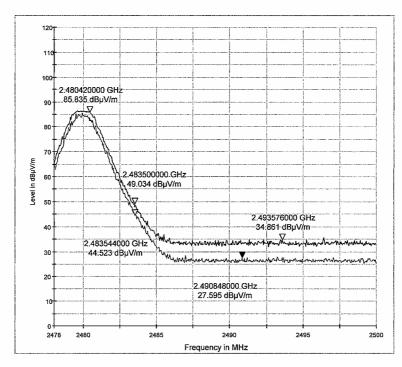
Result:

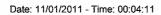
Comment: Test distance is 3m, Horizontal

Subrange 1

2GHz-3GHz Frequency Range: Receiver: **TUV FSP30** 

Transducer: TUV SAC HF906/ TUV FSP30-TUV SAC HF906







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## Test Plot of Radiated emissions in restricted bands, Mode A.1 -8DPSK modulation, Vertical

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

101 kPa.

# **EMC Test Record (Emission)**

### Common Information

Manufacturer: K-Mate

Test Item: Bluetooth headset Identification: BTH002-KMA04 Test Standard: FCC Part 15 Test Detail: Band edge

Operation Mode: Tx @ High channel(EDR) Climate Condition:

23 °C; 50 %RH; DC 3.7V by li-ion battery Test Voltage/ Freq: Receipt No: 163072045 100&300

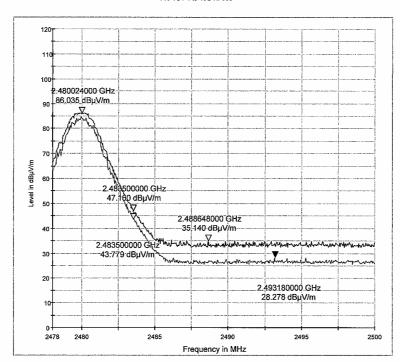
Report No: 17019029 001

Result: Comment: Test distance is 3m, Vertical

Subrange 1

2GHz-3GHz Frequency Range: **TUV FSP30** Receiver:

TUV SAC HF906/ TUV FSP30-TUV SAC HF906 Transducer:





Date: 11/01/2011 - Time: 00:01:29

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# Test Plot of Radiated emissions in restricted bands, Mode A.3 – 8DPSK modulation, Horizontal

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

## **EMC Test Record (Emission)**

#### **Common Information**

Manufacturer: K-Mate

Test Item: Bluetooth headset Identification: BTH002-KMA04
Test Standard: FCC Part 15
Test Detail: Band edge

Operation Mode: Tx @ Low channel(EDR)

Climate Condition: 23 °C; 50 %RH; 101 kPa. Test Voltage/ Freq: DC 3.7V by li-ion battery

Test Voltage/ Freq: DC 3.7V by Ii-ion batter
Receipt No: 163072045 100&300
Report No: 17019029 001

Result: Pa

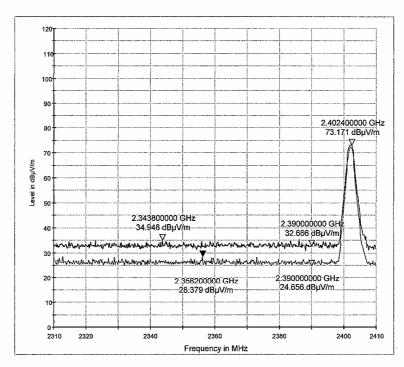
Date: 10/01/2011 - Time: 23:56:22

Comment: Test distance is 3m, Vertical Subrange 1

Frequency Range: 2GHz-3GHz Receiver: TUV FSP30

Transducer: TUV SAC HF906/ TUV FSP30-TUV SAC HF906

Pre TUV 1 to 18G HF906





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## Test Plot of Radiated emissions in restricted bands, Mode A.3 -8DPSK modulation, Vertical

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

101 kPa.

## **EMC Test Record (Emission)**

### **Common Information**

Manufacturer: K-Mate

Test Item: Bluetooth headset Identification: BTH002-KMA04 Test Standard: FCC Part 15 Test Detail: Band edge

Operation Mode: Tx @ Low channel(EDR) Climate Condition:

23 °C; 50 %RH; DC 3.7V by li-ion battery Test Voltage/ Freq: 163072045 100&300 Receipt No:

Report No: 17019029 001

Result:

Date: 10/01/2011 - Time: 23:54:13

Comment: Test distance is 3m, Horizontal

Subrange 1

2GHz-3GHz Frequency Range: TUV FSP30 Receiver:

TUV SAC HF906/ TUV FSP30-TUV SAC HF906 Transducer:

