Produkte
Products

Prüfbericht - Nr.: *Test Report No.:*	**17013167 001**		**Seite 1 von 94** *Page 1 of 94*
Auftraggeber: *Client:*	**Namtai Electronic (Shenzhen) Co., Ltd.** **Gusu Industrial Estate, Xixiang, Baoan, Shenzhen** **Guangdong 518126, P.R. China**		
Gegenstand der Prüfung: *Test item:*	**Wireless Headset-1**		
Bezeichnung: *Identification:*	**CECHYA-0075**	**Serien-Nr.:** *Serial No.:*	**n.a.**
Wareneingangs-Nr.: *Receipt No.:*	**163052345**	**Eingangsdatum:** *Date of receipt:*	**2009-07-15**
Prüfort: *Testing location:*	**TÜV Rheinland (Guangdong) Ltd.** **EMC Laboratory** **Guangzhou Auto Market, Yuan Gang Section of Guangshan Road, Guangzhou, P.R. China** **FCC Registration No.: 833845** **Test site Industry Canada No.: 2932C-1**		
Prüfgrundlage: *Test specification:*	**FCC CFR47 Part 15: Subpart C Section 15.247** **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** **RSS-210 Issue 7 June 2007** **RSS Gen Issue 2 June 2007** **RSS-102 Issue 2 November, 2005**		
Prüfergebnis: *Test Result:*	**Der Prüfgegenstand entspricht oben genannter Prüfgrundlage(n).** *The test item passed the test specification(s).*		
Prüflaboratorium: *Testing Laboratory:*	**TÜV Rheinland (Shenzhen) Co., Ltd.**		

geprüft/ *tested by:*			**kontrolliert/** *reviewed by:*		
2009-08-17	Winnie Hou/ Project Engineer		2009-08-21	Sam Lin / Project Manager	
Datum *Date*	**Name/Stellung** *Name/Position*	**Unterschrift** *Signature*	**Datum** *Date*	**Name/Stellung** *Name/Position*	**Unterschrift** *Signature*

Sonstiges/ *Other Aspects:*

Abkürzungen:	*P(ass)*	=	*entspricht Prüfgrundlage*	*Abbreviations:*	*P(ass)*	=	*passed*
	F(ail)	=	*entspricht nicht Prüfgrundlage*		*F(ail)*	=	*failed*
	N/A	=	*nicht anwendbar*		*N/A*	=	*not applicable*
	N/T	=	*nicht getestet*		*N/T*	=	*not tested*

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 100KHZ BANDWIDTH OF FREQUENCY BAND EDGE
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

5.1.9 PEAK POWER DENSITY
RESULT: Passed

5.1.10 CONDUCTED EMISSIONS
RESULT: Passed

5.1.11 RADIATED EMISSIONS
RESULT: Passed

Contents

1. General Remarks

1.1 Complementary Materials

None.

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

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Kind of Equipment	Manufacturer	Type	S/N	Calibrated until
Spurious emission and Radiated emission				
EMI Test Receiver	Rohde & Schwarz	ESCI-3	100216	2009-11-26
Spectrum Analyzer	Rohde & Schwarz	FSP30	100286	2009-08-24
Trilog-Broadband Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9168	209	2009-11-07
Double-Ridged Waveguide Horn Antenna	Rohde & Schwarz	HF906	100385	2009-08-18
Pre-amplifier	MITEQ	AFS42-00101800-25-S-42	1101599	2010-07-31
Standard Gain Horn Antenna	EMCO	3160-09	21642	N/A
Pre-amplifier	MITEQ	AFS33-18002650-30-8P-44	1108282	2010-07-31
3m Anechoic Chamber	Albatross Project GmbH	N/A	N/A	2010-04-16
Radio Test Suite				
EMI Test Receiver	Rohde & Schwarz	ESCI	100178	2009-09-27
Receiver	R&S	ESCI	100178	2009-09-27
Conducted Emission				
EMI Test Receiver	Rohde & Schwarz	ESCS30	100316	2010-03-27
Artificial Mains Network	Rohde & Schwarz	ESH2-Z5	100114	2010-03-27

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

The estimated combined standard uncertainty for radiated emissions and conducted emissions measurements are ±3dB.

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.

3. General Product Information

3.1 Product Function and Intended Use

The EUT is headset with Bluetooth technology. The Wireless headset is only designed for SONY PlayStation® 3. It operates at 2.4GHz ISM frequency band.
For details refer to the User Manual and Circuit Diagram.

3.2 Ratings and System Details

Table 2: Rating of EUT

Kind of Equipment:	Wireless Headset-1
Type Designation:	CECHYA-0075
FCC ID	VZVHEADSET-1
IC	7561A-HEADSET-1

Table 3: Technical Specification of EUT

Technical Specification	Value
Operating Frequency band	2402 – 2480 MHz
Channel separation	1MHz
Extreme Temperature Range	-20ºC to +60ºC
Operation Voltage	DC 3.7V via re-chargeable Li-ion battery
Modulation	Frequency Hopping Spread Spectrum
Antenna Type	Internal Antenna, Non-User Replaceable
Antenna Gain	0.25dBi
RF Output Power	0.002W (3.11dBm)
External Ports	USB port for charging and data transfer

Table 4: Frequency hopping information

Technical Specification	Description
Hopping Range	Hereby we declare that the maximum frequency of this device is: 2402-2480MHz. This is according the Bluetooth Core Specification V2.1+EDR for devices which will be operated in the USA. This was checked during the Bluetooth Qualification tests (Test Case: TRM/CA/04-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. Charging
E. Off

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

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.
Note: The Model No. was indicated as SCVCD during testing phase, while the final formal Model No. was revised to 'CECHYA-0075' by manufacturer later.

4.3 Special Accessories and Auxiliary Equipment

Kind of Equipment	Manufacturer	Type	S/N
Notebook	IBM	X60	L3-BZ383

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

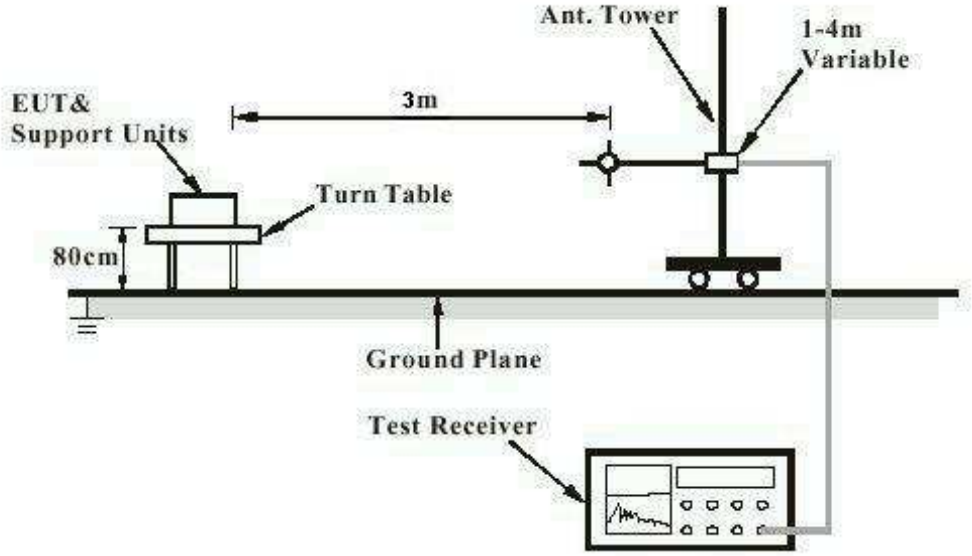


Diagram of Measurement Equipment Configuration for Conduction Measurement

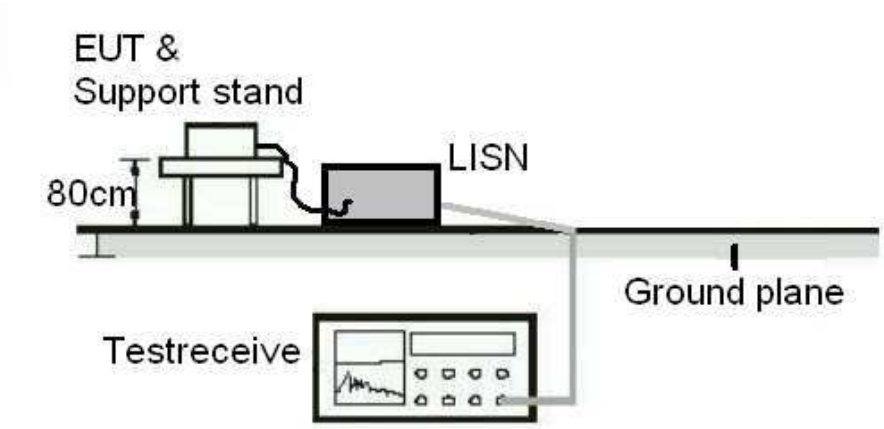
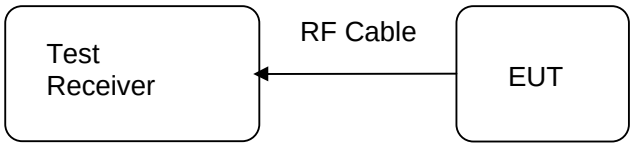


Diagram of Measurement Equipment Configuration for Transmitter Measurement



5. Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT: **Passed**

Test date	:	2009-08-03
Test standard	:	FCC Part 15.247(b)(4) and Part 15.203 RSS Gen 7.1.4
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 0.25dBi, 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.

5.1.2 Peak Output Power

RESULT: **Passed**

Test date	:	2009-07-24
Test standard	:	FCC Part 15.247(b)(1) RSS-210 A8.4 (2)
Basic standard	:	ANSI C63.4: 2003
Limit	:	1 Watt
Kind of test site	:	Shielded room

Test setup

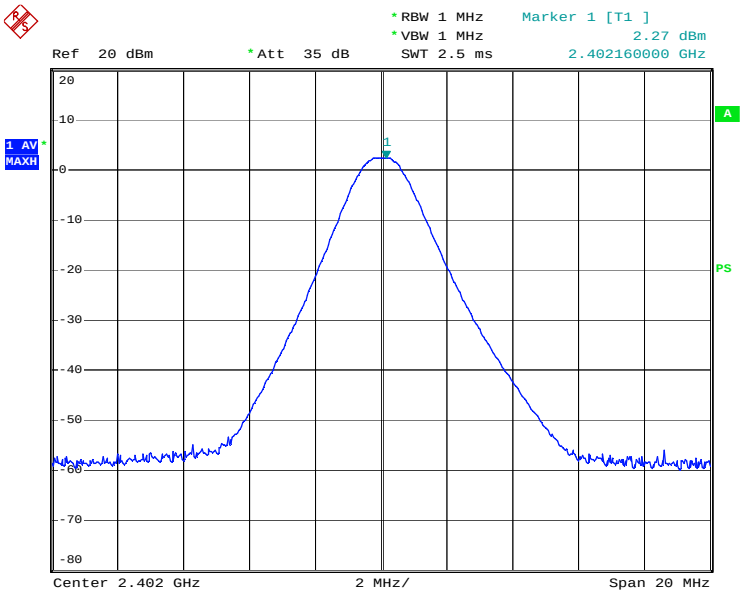
Test Channel	:	Low/ Middle/ High
Operation Mode	:	A
Ambient temperature	:	24℃
Relative humidity	:	53%
Atmospheric pressure	:	101 kPa

Table 5: Test result of Peak Output Power

Channel	Channel Frequency (MHz)	Peak Output Power		Limit
		(dBm)	(W)	(W)
Low Channel	2402	2.27	0.0017	1
Middle Channel	2441	2.86	0.0019	1
High Channel	2480	2.51	0.0018	1

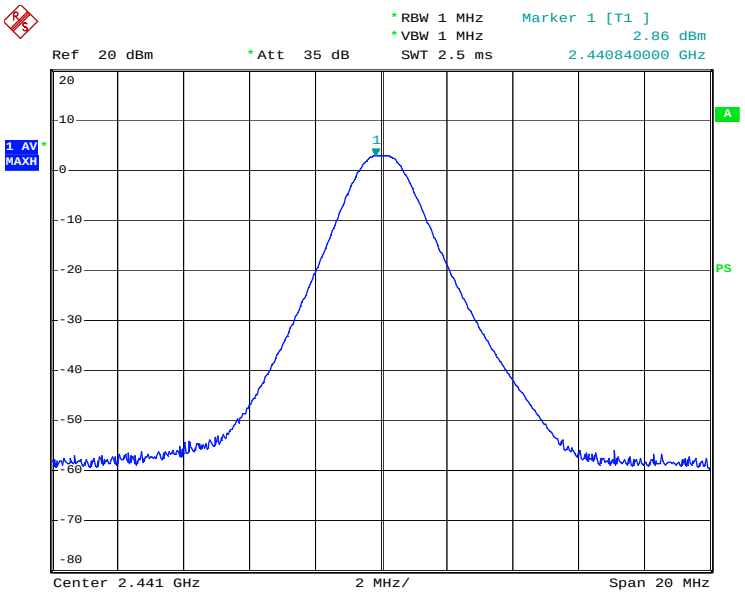
Test Plot of Peak Output Power

Low Channel



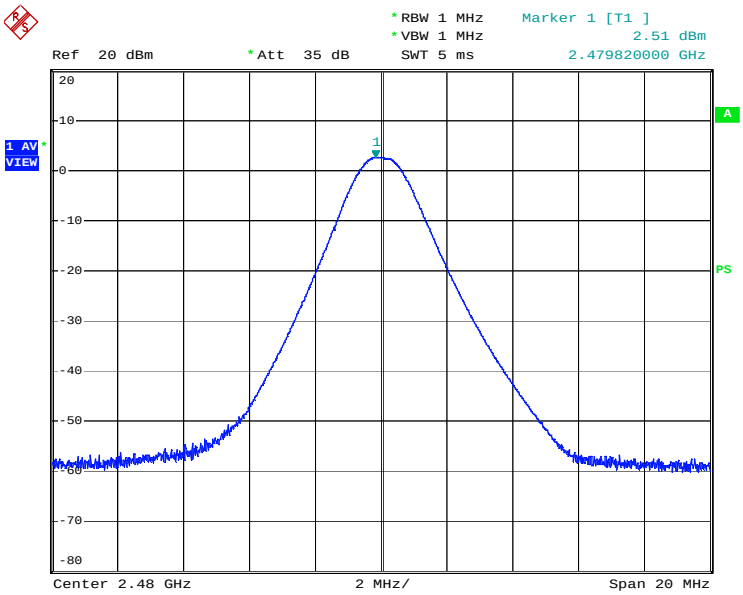
Date: 4.AUG.2009 14:36:05

Middle Channel



Date: 4.AUG.2009 15:08:18

High Channel



Date: 4.AUG.2009 15:11:13

5.1.3 20dB Bandwidth

RESULT: **Passed**

Date of testing	:	2009-07-24
Test standard	:	FCC Part 15.247(a)(1) RSS-210 A8.1 (a)
Basic standard	:	ANSI C63.4: 2003
Kind of test site	:	Shielded room

Test setup

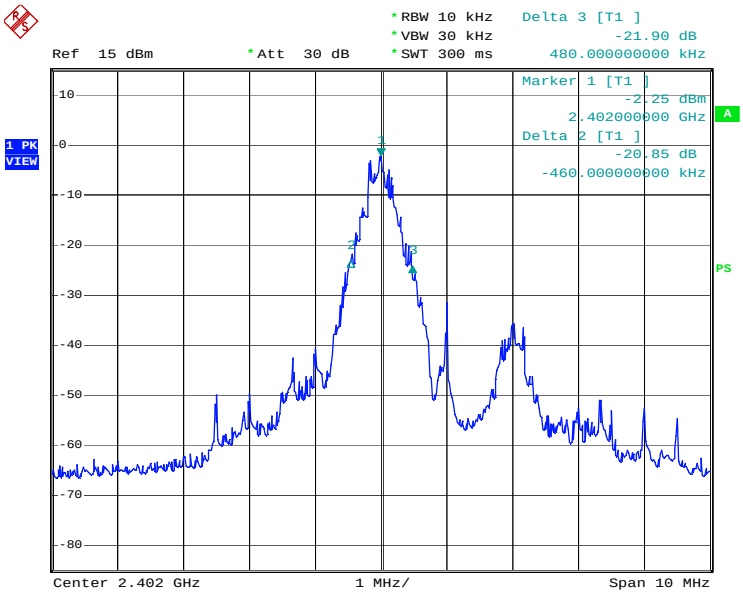
Test Channel	:	Low/ Middle/ High
Operation Mode	:	A
Ambient temperature	:	24℃
Relative humidity	:	53%
Atmospheric pressure	:	101 kPa

Table 6: Test result of 20dB Bandwidth

Channel	Channel Frequency (MHz)	20dB Bandwidth (kHz)	Limit (MHz)	Result
Low Channel	2402	940	/	Pass
Mid Channel	2441	940	/	Pass
High Channel	2480	900	/	Pass

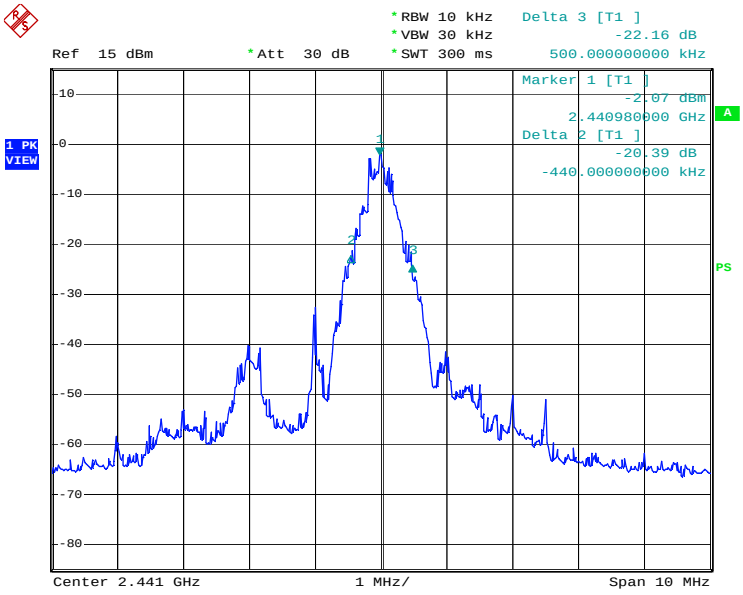
Test Plot of 20dB Bandwidth

Low Channel



Date: 24.JUL.2009 13:49:42

Middle Channel



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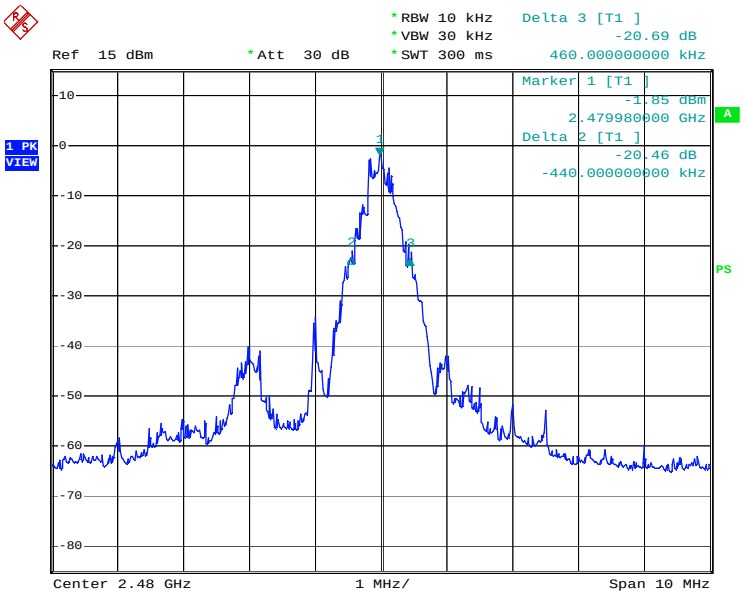
High Channel



Date: 24.JUL.2009 13:46:43

5.1.4 100kHz Bandwidth of Frequency Band Edge

RESULT: **Passed**

Date of testing	:	2009-07-24
Test standard	:	FCC part 15.247(d) RSS-210 A8.5
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); In addition, radiated emissions which fall in the restricted bands, must also comply with the radiated emission limits specified in 15.209(a)
Kind of test site	:	Shield room

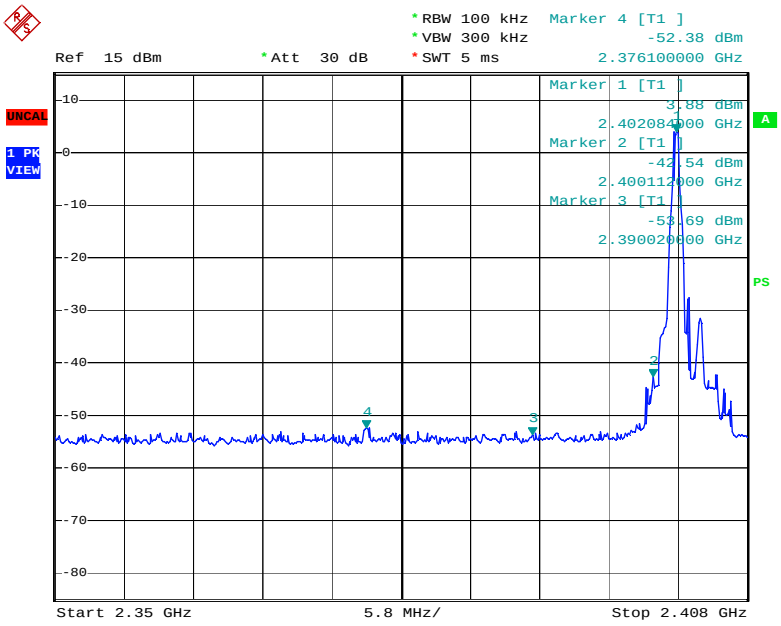
Test setup

Test Channel	:	Low/ High
Operation mode	:	A
Ambient temperature	:	24℃
Relative humidity	:	53%
Atmospheric pressure	:	101 kPa

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

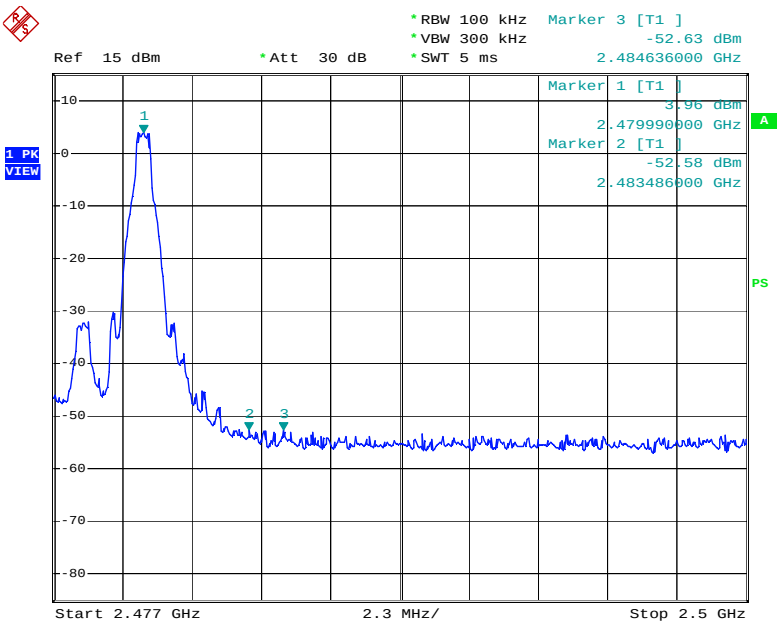
Test Plot of 100kHz Bandwidth of Frequency Band Edge

Low Channel



Date: 24.JUL.2009 14:31:47

High Channel



Date: 24.JUL.2009 14:37:39

5.1.5 Spurious Emission

RESULT: **Passed**

Date of testing	:	2009-07-31 to 2009-08-03
Test standard	:	FCC part 15.247(d) RSS-210 Clause 2.2
Basic standard	:	ANSI C63.4: 2003
Limits	:	Refer to 15.209(a) of FCC part 15.247(d) Refer to RSS-210 Table 2
Kind of test site	:	3m Semi-Anechoic Chamber

Test setup

Test Channel	:	Low/ Middle/ High
Operation mode	:	A, B
Ambient temperature	:	23℃
Relative humidity	:	50%
Atmospheric pressure	:	101 kPa

Remark: Testing was carried out within frequency range 30MHz to the tenth harmonics. For details refer to following test curves.

Test Plot of Spurious emission of A.1 – Horizontal (30MHz – 1GHz)

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

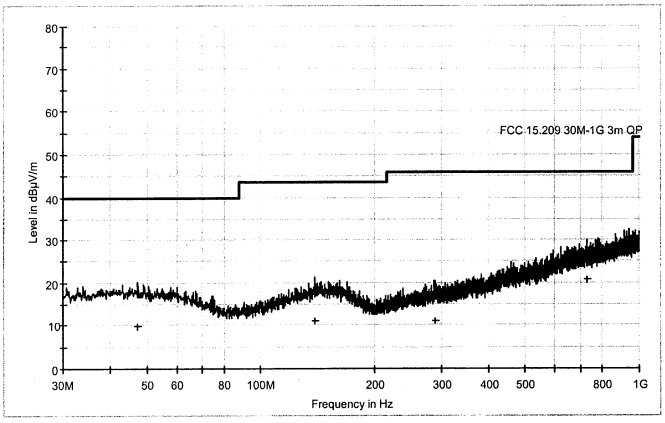
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Namtai Electronic (Shenzhen) Co., Ltd.
Test Item:	Bluetooth Headset
Identification	SCVCD
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	A.1
Climate Condition:	23℃; 55%RH; 101kPa.
Test Voltage / Freq. :	Build-in battery
Receipt No.:	163052345 300
Report No.	17013167 001
Result:	Pass
Comment:	

Subrange 1

Frequency Range:	30MHz - 1GHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



Limit and Margin

Frequency (MHz)	QuasiPeak (dB µ V/m)	Corr. (dB)	Margin (dB)	Limit (dB µ V/m)	Polarity
47.350000	9.7	14.4	30.3	40.0	H
139.100000	11.2	14.9	32.3	43.5	H
289.450000	11.2	14.8	34.8	46.0	H
725.850000	20.7	23.6	25.3	46.0	H

Date: 7/29/2009 - Time: 4:05:07 PM Tested by: DW 2009.7.29 Checked Reviewed by: WLC 2009.8.03 Checked

Test Plot of Spurious emission of A.1 – Vertical (30MHz – 1GHz)

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

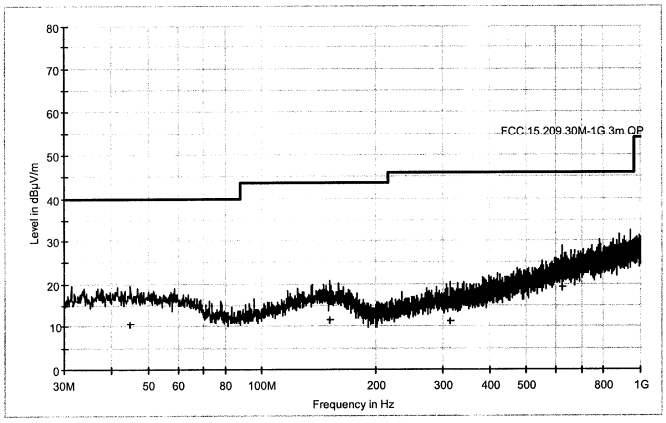
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Namtai Electronic (Shenzhen) Co., Ltd.
Test Item:	Bluetooth Headset
Identification	SCVCD
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	A.1
Climate Condition:	23℃; 55%RH; 101kPa.
Test Voltage / Freq. :	Build-in battery
Receipt No.:	163052345 300
Report No.	17013167 001
Result:	Pass
Comment:	

Subrange 1

Frequency Range:	30MHz - 1GHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



Limit and Margin

Frequency (MHz)	QuasiPeak (dB µ V/m)	Corr. (dB)	Margin (dB)	Limit (dB µ V/m)	Polarity
44.900000	10.5	14.5	29.5	40.0	V
151.600000	11.9	15.7	31.6	43.5	V
313.950000	11.5	15.4	34.5	46.0	V
621.450000	19.3	22.1	26.7	46.0	V

Date: 7/29/2009 - Time: 3:57:23 PM Tested by: DW 2009.7.31 Checked Reviewed by: WLC 2009.8.03 Checked

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

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

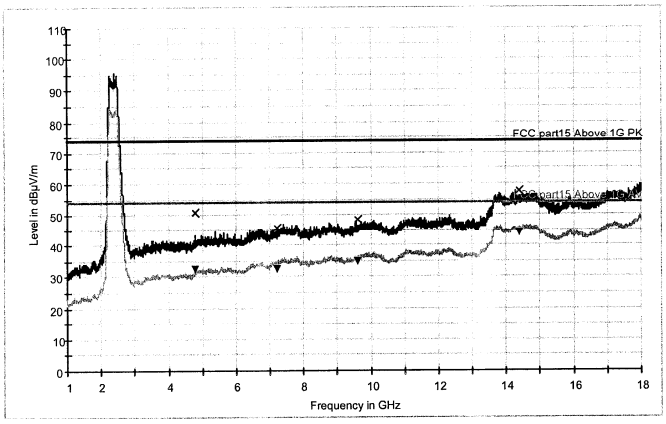
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Namtai Electronic (Shenzhen) Co., Ltd.
Test Item:	Bluetooth Headset
Identification	SCVCD
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	A.1
Climate Condition:	23℃; 55%RH; 101kPa.
Test Voltage / Freq. :	Build-in battery
Receipt No.:	163052345 300
Report No.	17013167 001
Result:	Pass
Comment:	

Subrange 1

Frequency Range:	1GHz - 18GHz
Receiver:	TUV FSP 30
Transducer:	TUV SAC HF906 / TUV FSP 30-TUV SAC HF906



Date: 7/2/2009 - Time: 11:05:33 AM Tested by: _____ Reviewed by: _____

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dB µ V/m)	Margin (dB)	Limit (dB µ V/m)	Polarity	Corr. (dB)
4804.000000	50.9	23.1	74.0	H	-5.9
7206.000000	45.8	28.2	74.0	H	-2.0
9608.000000	48.3	25.7	74.0	H	2.2
14412.000000	57.5	16.5	74.0	H	6.5

Limit and Margin AV

Frequency (MHz)	Average (dB µ V/m)	Margin (dB)	Limit (dB µ V/m)	Polarity	Corr. (dB)
4804.000000	32.5	21.5	54.0	H	-5.9
7206.000000	32.7	21.3	54.0	H	-2.0
9608.000000	34.9	19.1	54.0	H	2.2
14412.000000	44.1	9.9	54.0	H	6.5

Date: 7/2/2009 - Time: 11:05:33 AM

Tested by: DW 2009 7 21 Checked

Reviewed by: WLC 2009 8 03 Checked

Test Plot of Spurious emission of A.1 – Vertical (1GHz – 18GHz)

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

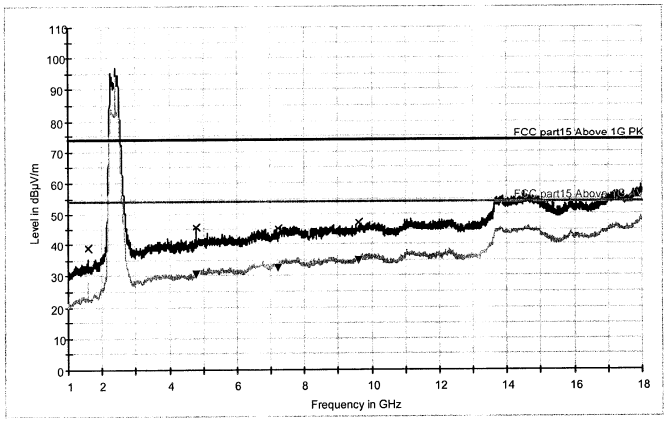
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Namtai Electronic (Shenzhen) Co., Ltd.
Test Item:	Bluetooth Headset
Identification	SCVCD
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	A.1
Climate Condition:	23℃; 55%RH; 101kPa.
Test Voltage / Freq. :	Build-in battery
Receipt No.:	163052345 300
Report No.	17013167 001
Result:	Pass
Comment:	

Subrange 1

Frequency Range:	1GHz - 18GHz
Receiver:	TUV FSP 30
Transducer:	TUV SAC HF906 / TUV FSP 30-TUV SAC HF906



Date: 7/2/2009 - Time: 11:11:36 AM Tested by: _____ Reviewed by: _____

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dB µ V/m)	Margin (dB)	Limit (dB µ V/m)	Polarity	Corr. (dB)
1602.000000	38.9	35.1	74.0	V	-14.4
4804.000000	45.7	28.3	74.0	V	-5.9
7206.000000	45.2	28.8	74.0	V	-2.0
9608.000000	47.1	26.9	74.0	V	2.2

Limit and Margin AV

Frequency (MHz)	Average (dB µ V/m)	Margin (dB)	Limit (dB µ V/m)	Polarity	Corr. (dB)
1602.000000	32.2	21.8	54.0	V	-14.4
4804.000000	30.6	23.4	54.0	V	-5.9
7206.000000	32.6	21.4	54.0	V	-2.0
9608.000000	34.8	19.2	54.0	V	2.2

Date: 7/2/2009 - Time: 11:11:36 AM Tested by: DW 2009 7.31 Checked Reviewed by: WLC 2009 8.03 Checked

Test Plot of Spurious emission of A.1 – Horizontal (18GHz – 26GHz)

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

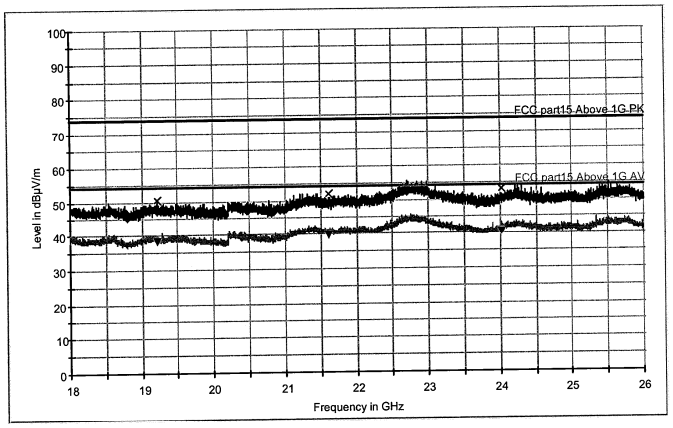
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Namtai Electronic (Shenzhen) Co., Ltd.
Test Item:	Bluetooth Headset
Identification	SCVCD
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	A.1
Climate Condition:	23℃; 55%RH; 101kPa.
Test Voltage / Freq. :	Build-in battery
Receipt No.:	163052345 300
Report No.	17013167 001
Result:	Pass
Comment:	

Subrange 1

Frequency Range:	18GHz - 26GHz
Receiver:	TUV FSP 30
Transducer:	TUV SAC 3160-09 / TUV FSP 30-TUV SAC 3160-09



Date: 7/30/2009 - Time: 11:49:01 AM

Tested by: DW 2009.7.30 Checked

Reviewed by: WLC 2009.8.03 Checked

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dB µ V/m)	Corr. (dB)	Margin (dB)	Limit (dB µ V/m)	Polarity
19216.000000	50.5	4.4	23.5	74.0	H
21618.000000	52.0	5.5	22.0	74.0	H
24020.000000	53.0	5.6	21.0	74.0	H

Limit and Margin AV

Frequency (MHz)	Average (dB µ V/m)	Corr. (dB)	Margin (dB)	Limit (dB µ V/m)	Polarity
19216.000000	38.2	4.4	15.8	54.0	H
21618.000000	39.8	5.5	14.2	54.0	H
24020.000000	40.6	5.6	13.4	54.0	H

Date: 7/30/2009 - Time: 11:49:01 AM

Tested by: DW 2009 7.31 Checked

Reviewed by: WLC 2009 8.03 Checked

Test Plot of Spurious emission of A.1 – Vertical (18GHz – 26GHz)

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

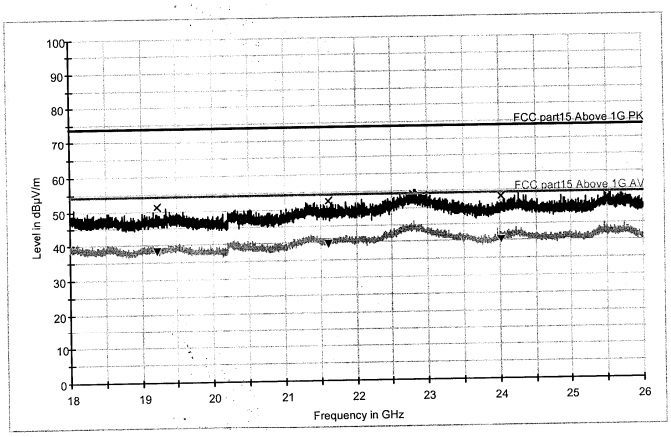
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Namtai Electronic (Shenzhen) Co., Ltd.
Test Item:	Bluetooth Headset
Identification	SCVCD
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	A.1
Climate Condition:	23℃; 55%RH; 101kPa.
Test Voltage / Freq. :	Build-in battery
Receipt No.:	163052345 300
Report No.	17013167 001
Result:	Pass
Comment:	

Subrange 1

Frequency Range:	18GHz - 26GHz
Receiver:	TUV FSP 30
Transducer:	TUV SAC 3160-09 / TUV FSP 30-TUV SAC 3160-09



Date: 7/30/2009 - Time: 11:52:13 AM Tested by: DW 2009.7.31 Reviewed by: WLC 2009.8.03 Checked

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dB µ V/m)	Corr. (dB)	Margin (dB)	Limit (dB µ V/m)	Polarity
19216.000000	51.3	4.4	22.7	74.0	V
21618.000000	52.4	5.5	21.6	74.0	V
24020.000000	53.1	5.6	20.9	74.0	V

Limit and Margin AV

Frequency (MHz)	Average (dB µ V/m)	Corr. (dB)	Margin (dB)	Limit (dB µ V/m)	Polarity
19216.000000	38.1	4.4	15.9	54.0	V
21618.000000	39.7	5.5	14.3	54.0	V
24020.000000	40.5	5.6	13.5	54.0	V

Date: 7/30/2009 - Time: 11:52:13 AM Tested by: _____ Reviewed by: _____

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

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

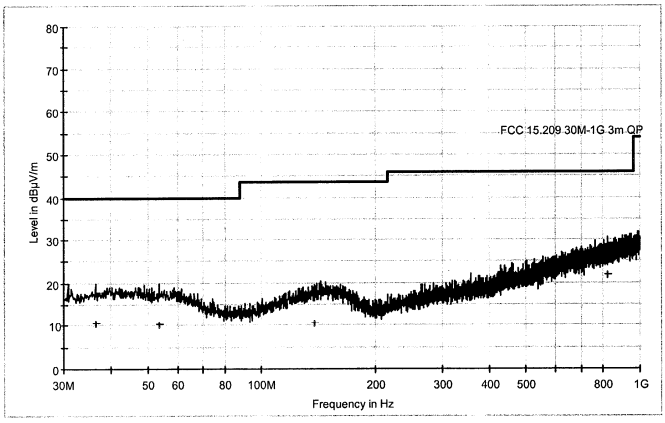
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Namtai Electronic (Shenzhen) Co., Ltd.
Test Item:	Bluetooth Headset
Identification	SCVCD
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	A.2
Climate Condition:	23℃; 55%RH; 101kPa.
Test Voltage / Freq. :	Build-in battery
Receipt No.:	163052345 300
Report No.	17013167 001
Result:	Pass
Comment:	

Subrange 1

Frequency Range:	30MHz - 1GHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



Limit and Margin

Frequency (MHz)	QuasiPeak (dB µ V/m)	Corr. (dB)	Margin (dB)	Limit (dB µ V/m)	Polarity
36.450000	10.5	14.3	29.5	40.0	H
53.750000	10.3	14.1	29.7	40.0	H
137.650000	10.8	14.8	32.7	43.5	H
824.450000	21.9	24.8	24.1	46.0	H

Date: 7/29/2009 - Time: 4:07:52 PM Tested by: DW 2009.7.31 Checked Reviewed by: WLC 2009.8.03 Checked

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

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

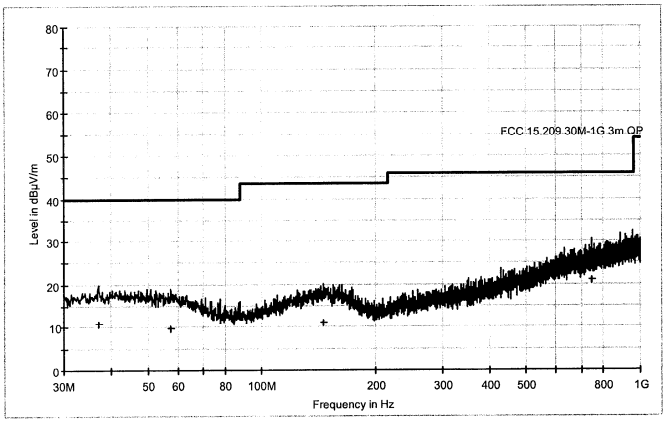
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Namtai Electronic (Shenzhen) Co., Ltd.
Test Item:	Bluetooth Headset
Identification	SCVCD
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	A.2
Climate Condition:	23℃; 55%RH; 101kPa.
Test Voltage / Freq. :	Build-in battery
Receipt No.:	163052345 300
Report No.	17013167 001
Result:	Pass
Comment:	

Subrange 1

Frequency Range:	30MHz - 1GHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



Limit and Margin

Frequency (MHz)	QuasiPeak (dB µ V/m)	Corr. (dB)	Margin (dB)	Limit (dB µ V/m)	Polarity
37.050000	10.8	14.3	29.2	40.0	V
57.650000	9.9	13.9	30.1	40.0	V
145.450000	11.1	15.3	32.4	43.5	V
745.000000	21.1	23.9	24.9	46.0	V

Date: 7/29/2009 - Time: 4:10:17 PM Tested by: Reviewed by:

Test Plot of Spurious emission of A.2 –Horizontal (1GHz – 18GHz)

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

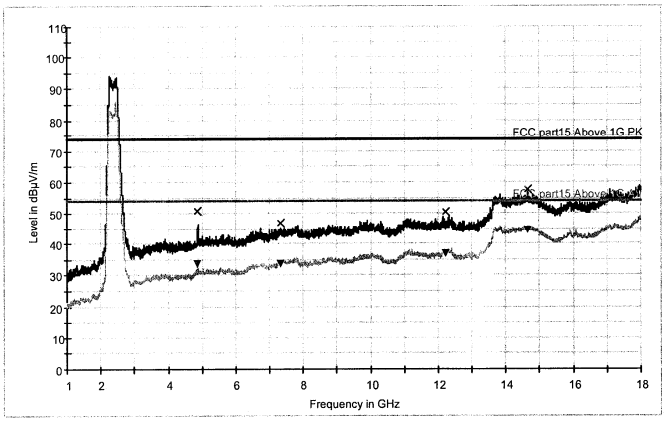
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Namtai Electronic (Shenzhen) Co., Ltd.
Test Item:	Bluetooth Headset
Identification	SCVCD
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	A.2
Climate Condition:	23℃; 55%RH; 101kPa.
Test Voltage / Freq. :	Build-in battery
Receipt No.:	163052345 300
Report No.	17013167 001
Result:	Pass
Comment:	

Subrange 1

Frequency Range:	1GHz - 18GHz
Receiver:	TUV FSP 30
Transducer:	TUV SAC HF906 / TUV FSP 30-TUV SAC HF906



Date: 7/2/2009 - Time: 11:28:28 AM Tested by: _____ Reviewed by: _____

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dB µ V/m)	Margin (dB)	Limit (dB µ V/m)	Polarity	Corr. (dB)
4882.000000	50.9	23.1	74.0	H	-6.0
7323.000000	46.9	27.1	74.0	H	-1.3
12205.000000	50.6	23.4	74.0	H	1.8
14646.000000	57.5	16.5	74.0	H	6.4

Limit and Margin AV

Frequency (MHz)	Average (dB µ V/m)	Margin (dB)	Limit (dB µ V/m)	Polarity	Corr. (dB)
4882.000000	33.8	20.2	54.0	H	-6.0
7323.000000	33.6	20.4	54.0	H	-1.3
12205.000000	36.8	17.2	54.0	H	1.8
14646.000000	44.6	9.4	54.0	H	6.4

Date: 7/2/2009 - Time: 11:28:28 AM Tested by: _____ Reviewed by: _____

Test Plot of Spurious emission of A.2 –Vertical (1GHz – 18GHz)

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

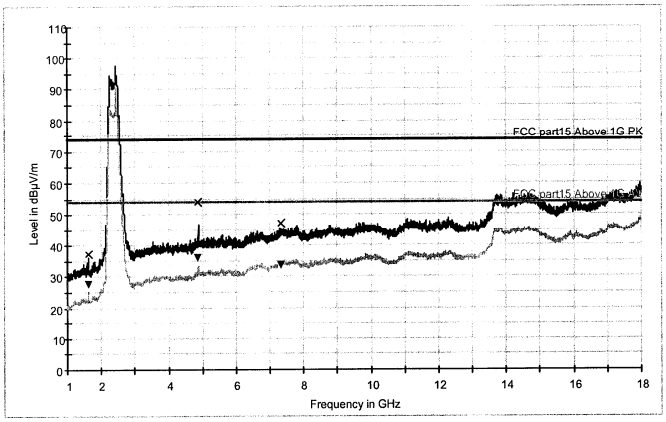
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Namtai Electronic (Shenzhen) Co., Ltd.
Test Item:	Bluetooth Headset
Identification	SCVCD
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	A.2
Climate Condition:	23℃; 55%RH; 101kPa.
Test Voltage / Freq. :	Build-in battery
Receipt No.:	163052345 300
Report No.	17013167 001
Result:	Pass
Comment:	

Subrange 1

Frequency Range:	1GHz - 18GHz
Receiver:	TUV FSP 30
Transducer:	TUV SAC HF906 / TUV FSP 30-TUV SAC HF906



Date: 7/2/2009 - Time: 11:23:08 AM Tested by: D.W. 2009.7.21 Checked Reviewed by: WLC 2009.8.03 Checked

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dB µ V/m)	Margin (dB)	Limit (dB µ V/m)	Polarity	Corr. (dB)
1626.000000	37.2	36.8	74.0	V	-14.2
4882.000000	54.0	20.0	74.0	V	-6.0
7323.000000	47.2	26.8	74.0	V	-1.3

Limit and Margin AV

Frequency (MHz)	Average (dB µ V/m)	Margin (dB)	Limit (dB µ V/m)	Polarity	Corr. (dB)
1626.000000	27.9	26.1	54.0	V	-14.2
4882.000000	36.3	17.7	54.0	V	-6.0
7323.000000	33.7	20.3	54.0	V	-1.3

Date: 7/2/2009 - Time: 11:23:08 AM Tested by: DW 2009 7 31 Checked Reviewed by: WLC 2009 8 03 Checked

Test Plot of Spurious emission of A.2 – Horizontal (18GHz – 26GHz)

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

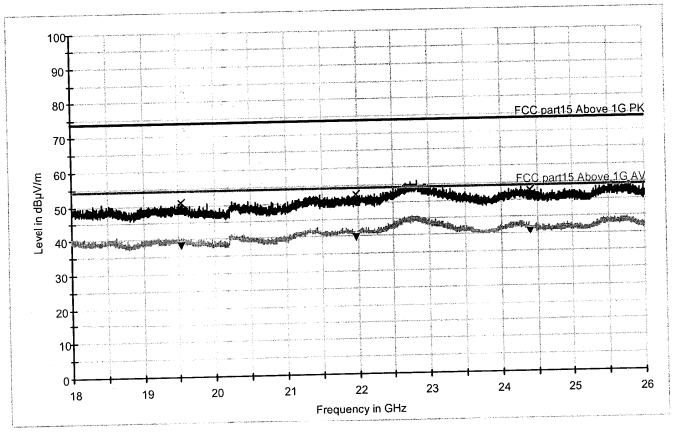
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Namtai Electronic (Shenzhen) Co., Ltd.
Test Item:	Bluetooth Headset
Identification	SCVCD
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	A.2
Climate Condition:	23℃; 55%RH; 101kPa.
Test Voltage / Freq. :	Build-in battery
Receipt No.:	163052345 300
Report No.	17013167 001
Result:	Pass
Comment:	

Subrange 1

Frequency Range:	18GHz - 26GHz
Receiver:	TUV FSP 30
Transducer:	TUV SAC 3160-09 / TUV FSP 30-TUV SAC 3160-09



Date: 7/30/2009 - Time: 11:59:31 AM Tested by: Reviewed by: 2009.8.03 Checker

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarity
19528.000000	51.1	4.4	22.9	74.0	H
21969.000000	52.4	6.3	21.6	74.0	H
24410.000000	52.6	5.7	21.4	74.0	H

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarity
19528.000000	38.3	4.4	15.7	54.0	H
21969.000000	39.8	6.3	14.2	54.0	H
24410.000000	40.7	5.7	13.3	54.0	H

Date: 7/30/2009 - Time: 11:59:31 AM

Tested by: _____

Reviewed by: WLC 2009.8.03 Checked

Test Plot of Spurious emission of A.2 – Vertical (18GHz – 26GHz)

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

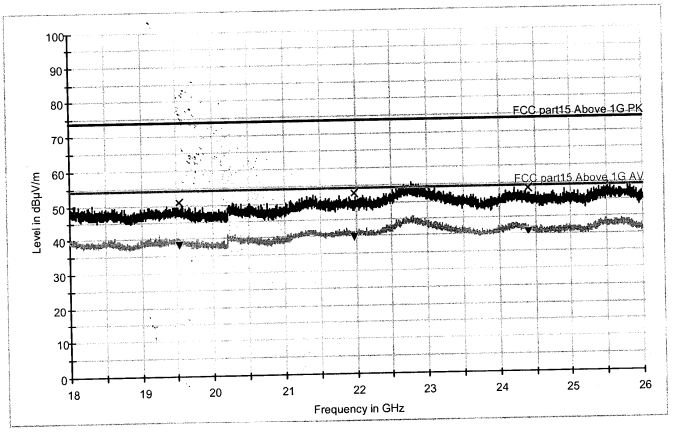
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Namtai Electronic (Shenzhen) Co., Ltd.
Test Item:	Bluetooth Headset
Identification	SCVCD
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	A.2
Climate Condition:	23℃; 55%RH; 101kPa.
Test Voltage / Freq. :	Build-in battery
Receipt No.:	163052345 300
Report No.	17013167 001
Result:	Pass
Comment:	

Subrange 1

Frequency Range:	18GHz - 26GHz
Receiver:	TUV FSP 30
Transducer:	TUV SAC 3160-09 / TUV FSP 30-TUV SAC 3160-09



Date: 7/30/2009 - Time: 11:54:53 AM

Tested by: DW 2009 7 31 Checked

Reviewed by: WLC 2009 8 03 Checked

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

Limit and Margin PK

Frequency (MHz)	MaxPeak (dB µ V/m)	Corr. (dB)	Margin (dB)	Limit (dB µ V/m)	Polarity
19528.000000	50.8	4.4	23.2	74.0	V
21969.000000	52.9	6.3	21.1	74.0	V
24410.000000	53.4	5.7	20.6	74.0	V

Limit and Margin AV

Frequency (MHz)	Average (dB µ V/m)	Corr. (dB)	Margin (dB)	Limit (dB µ V/m)	Polarity
19528.000000	38.4	4.4	15.6	54.0	V
21969.000000	39.8	6.3	14.2	54.0	V
24410.000000	40.7	5.7	13.3	54.0	V

Date: 7/30/2009 - Time: 11:54:53 AM

Tested by: _____ DW 2009.7.31 Checked

Reviewed by: _____ 2009.8.03

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

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

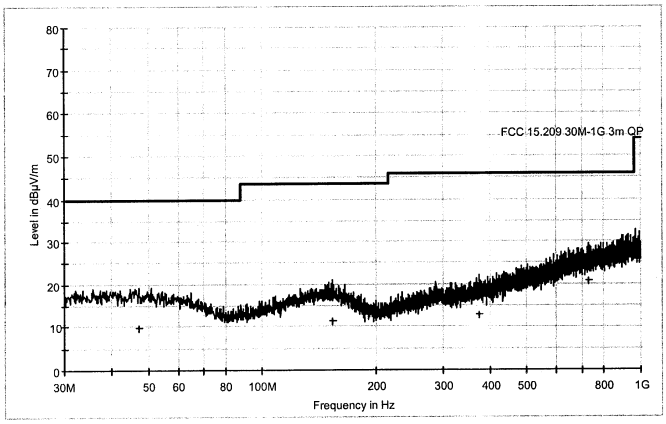
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Namtai Electronic (Shenzhen) Co., Ltd.
Test Item:	Bluetooth Headset
Identification	SCVCD
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	A.3
Climate Condition:	23℃; 55%RH; 101kPa.
Test Voltage / Freq. :	Build-in battery
Receipt No.:	163052345 300
Report No.	17013167 001
Result:	Pass
Comment:	

Subrange 1

Frequency Range:	30MHz - 1GHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



Limit and Margin

Frequency (MHz)	QuasiPeak (dB µ V/m)	Corr. (dB)	Margin (dB)	Limit (dB µ V/m)	Polarity
47.100000	9.9	14.4	30.1	40.0	H
153.650000	11.7	15.7	31.8	43.5	H
375.200000	13.0	16.8	33.0	46.0	H
729.850000	20.9	23.7	25.1	46.0	H

Date: 7/29/2009 - Time: 4:12:53 PM Tested by: Checked Reviewed by: WLC 2009.8.03 Checked

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

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

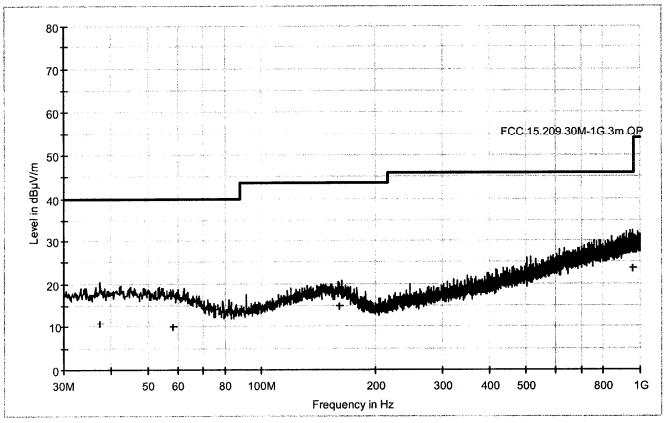
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Namtai Electronic (Shenzhen) Co., Ltd.
Test Item:	Bluetooth Headset
Identification	SCVCD
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	A.3
Climate Condition:	23℃; 55%RH; 101kPa.
Test Voltage / Freq. :	Build-in battery
Receipt No.:	163052345 300
Report No.	17013167 001
Result:	Pass
Comment:	

Subrange 1

Frequency Range:	30MHz - 1GHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC UVLB 9168 / TUV ESCI3 -TUV SAC UVLB 9168



Limit and Margin

Frequency (MHz)	QuasiPeak (dB µ V/m)	Corr. (dB)	Margin (dB)	Limit (dB µ V/m)	Polarity
37.400000	11.0	14.4	29.0	40.0	V
58.500000	10.2	13.8	29.8	40.0	V
160.000000	15.1	15.6	28.4	43.5	V
959.250000	23.6	26.5	22.4	46.0	V

Date: 7/29/2009 - Time: 4:17:25 PM Tested by: D W 2009 7. 31 Checked Reviewed by: WLC 2009 8.03 Checked

Test Plot of Spurious emission of A.3 – Horizontal (1GHz – 18GHz)

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

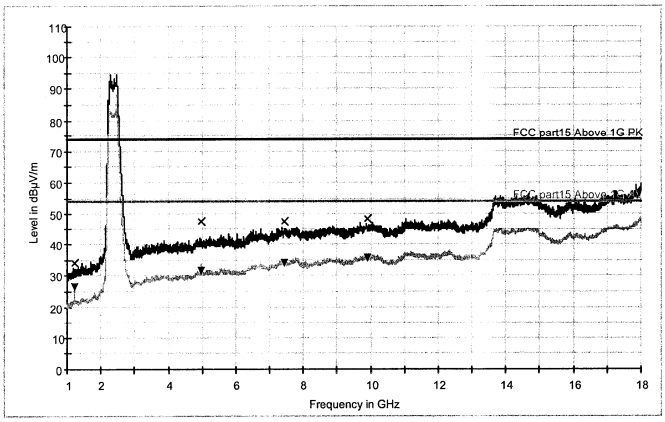
EMC Test Record (EMISSION)

Test Information

Manufacturer:	Namtai Electronic (Shenzhen) Co., Ltd.
Test Item:	Bluetooth Headset
Identification	SCVCD
Test Standard:	FCC Part 15
Test Detail:	Radiated Emission
Operation Mode:	A.3
Climate Condition:	23℃; 55%RH; 101kPa.
Test Voltage / Freq. :	Build-in battery
Receipt No.:	163052345 300
Report No.	17013167 001
Result:	Pass
Comment:	

Subrange 1

Frequency Range:	1GHz - 18GHz
Receiver:	TUV FSP 30
Transducer:	TUV SAC HF906 / TUV FSP 30-TUV SAC HF906



Date: 7/2/2009 - Time: 11:34:28 AM Tested by: 2009.7.31 Checked Reviewed: Checked