

Produkte
Products

Prüfbericht - Nr.: 14019927 001

Test Report No.:

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Auftraggeber: <i>Client:</i>	ModeLabs Technologies Limited 31/F., China Online Centre 333 Lockhart Road Wanchai Hong Kong				
Gegenstand der Prüfung: <i>Test Item:</i>	Bluetooth Headset				
Bezeichnung: <i>Identification:</i>	BLUETREK Bizz	Serien-Nr.: <i>Serial No.:</i>	Engineering sample		
Wareneingangs-Nr.: <i>Receipt No.:</i>	071210003, 080111001	Eingangsdatum: <i>Date of Receipt:</i>	10.12.2007, 11.01.2008		
Prüfort: <i>Testing Location:</i>	TÜV Rheinland Hong Kong Ltd. 9th Floor, Oriental News Building, 7 Wang Tai Road, Kowloon Bay, Kowloon, Hong Kong Hong Kong Productivity Council HKPC Building, 78 Tat Chee Avenue, Kowloon, Hong Kong				
Prüfgrundlage: <i>Test Specification:</i>	FCC Part 15, Subpart B				
Prüfergebnis: <i>Test Result:</i>	Der Prüfgegenstand entspricht oben genannter Prüfgrundlage(n). <i>The test item passed the test specification(s).</i>				
Prüflaboratorium: <i>Testing Laboratory:</i>	TÜV Rheinland Hong Kong Ltd. 9th Floor, Oriental News Building, 7 Wang Tai Road, Kowloon Bay, Kowloon, Hong Kong				
geprüft / tested by:	kontrolliert / reviewed by:				
09.10.2008	Ryan Chen Engineer		09.10.2008	Sharon Li Project Engineer	
Datum Date	Name/Stellung Name/Position	Unterschrift Signature	Datum Date	Name/Stellung Name/Position	Unterschrift Signature
Sonstiges / Other Aspects: FCCID: QITBT4F					
Abkürzungen:	P(pass) F(fail) N/A N/T	= entspricht Prüfgrundlage = entspricht nicht Prüfgrundlage = nicht anwendbar = nicht getestet	Abbreviations:	P(pass) F(fail) N/A N/T	= passed = failed = not applicable = not tested
<p>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.</p> <p><i>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.</i></p>					

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Test Summary

Spurious Radiated Emissions

Result: Pass

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List of Test and Measurement Instruments

Hong Kong Productivity Council (Registration number: 90656)

Kind of Equipment	Manufacturer	Type	S/N	Cal Due Date
Semi-anechoic Chamber	Frankonia	Nil	Nil	28 Mar 09
Test Receiver	Rohde & Schwarz	ESU26	100050	06 Aug 09
Biconical Antenna	Rohde & Schwarz	HK116	841489/016	08 Mar 09
Log.-Periodic Antenna	Rohde & Schwarz	HL223	841516/020	28 Feb 09
Horn Antenna	EMCO	3115	9002-3351	27 Feb 10
Coaxial Cable 50ohm	Rosenberger	RTK081-05S-05S-10m	LA2-001-10M / 002	15 May 09

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General Product Information

Product Function and Intended Use

The equipment under test (EUT) is a 2.4GHz Bluetooth Headset with SD card reader. The Bluetooth function part was covered by the TUV Rheinland Hong Kong Ltd. Test report 14017892 001. The card reader function will be tested in this report.

FCCID: QITBT4F

Model	Product description
BLUETREK Bizz	Bluetooth Headset

Ratings and System Details

	Receiver
Frequency range	2402 - 2480MHz
Number of channels	79
Type of antenna	Fixed External Antenna
Power supply	3.7V lithium battery

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Independent Operation Modes

The basic operation modes are:

- Power: On and Off

For further information refer to User Manual

Submitted Documents

The submitted documents are listed as follow:

- Circuit diagram
- Block diagram
- User manual
- Label artwork

Related Submittal(s) Grants

This is a single application for certification of the Receiver.

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Test Set-up and Operation Mode

Principle of Configuration Selection

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

Test Operation and Test Software

Test operation should refer to test methodology.

- There was no special software to exercise the device.

Special Accessories and Auxiliary Equipment

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

- Laptop: Sony PCG-605P, serial no.: 28189570 7103703

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Test Methodology

Radiated Emission

The radiated emission measurements were performed according to the procedures in ANSI C63.4-2003.

The equipment under test (EUT) was placed at the middle of the 80 cm height turntable, and the turntable is 3 meters far from the measuring antenna. During the testing, the EUT was operated and arranged for maximum emissions. The EUT was tested in three orthogonal planes.

The investigation is performed with the EUT rotated 360 °, the antenna height scanned between 1m and 4m, and the antenna rotated to repeat the measurements for both the horizontal and vertical antenna polarizations. Repeat the measurement steps until the maximum emissions were obtained.

All radiated tests were performed at an antenna to EUT with 3 meters distance, unless stated otherwise in particular parts of this test report.

Field Strength Calculation

The field strength at 3 m was established by adding the meter reading of the spectrum analyzer to the factors associated with antenna correction factor, cable loss, preamplifiers and filter attenuation.

The equation is expressed as follow:

$$FS = R + AF + CF + FA - PA$$

Where FS = Field Strength in dBuV/m at 3 meters.

R = Reading of Spectrum Analyzer in dBuV.

AF = Antenna Factor in dB.

CF = Cable Attenuation Factor in dB.

FA = Filter Attenuation Factor in dB.

PA = Preamplifier Factor in dB.

FA and PA are only be used for the measuring frequency above 1 GHz.

Test Results

Spurious Radiated Emissions

Section 15.109

RESULT:

Pass

Test Specification	:	FCC Part 15 Section 15.109
Test Method	:	ANSI 63.4-2003
Measurement Location	:	Semi Anechoic Chamber
Measurement Distance	:	3m
Detector Function	:	Quasi Peak
Measurement BW	:	120 kHz
Measuring Frequency Range	:	30-1000MHz
Mode of operation	:	Data transfer via the USB port

Polarization: Vertical

Frequency (MHz)	Field strength at 3m (dB μ V/m)	Limit at 3m (dB μ V/m)	Delta to Limit (dB)
105.840	28.2	43.5	-15.3
487.010	39.5	43.5	-4.0
531.230	36.4	43.5	-7.1
719.980	33.1	43.5	-10.4
959.974	39.5	43.5	-4.0

Polarization: Horizontal

Frequency (MHz)	Field strength at 3m (dB μ V/m)	Limit at 3m (dB μ V/m)	Delta to Limit (dB)
177.690	27.5	43.5	-16.0
959.974	49.1	43.5	-5.6

Remark: There is no spurious emission found between lowest oscillating frequency to 30 MHz.

Limit

Section 15.109

The field strength of radiated emissions from unintentional radiators at a distance of 3 meters:

Frequency (MHz)	Field strength (μ V/m)	Field strength (dB μ V/m)	Measurement distance (m)
30-88	100	$20 \log(100) = 40.0$	3
88-216	150	$20 \log(150) = 43.5$	3
216-960	200	$20 \log(200) = 46.0$	3
Above 960	500	$20 \log(500) = 54.0$	3