

RF EXPOSURE EVALUATION REPORT

APPLICANT	;	Bragi GMBH		
PRODUCT NAME	:	The Dash Left		
MODEL NAME	:	B1000L		
TRADE NAME	:	Bragi		
BRAND NAME	:	Bragi		
FCC ID	;	2AF5TB1000L		
STANDARD(S)	;,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	47CFR 2.1093 KDB 447498 D01 General RF Exposure Guidance v06		
ISSUE DATE	;	2016-3-9		
ſ	No.	RLAB GROCES		

SHENZHEN MORLAR COMMUNICATIONS TECHNOLOGY Co., Ltd.

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DIRECTORY

1. TECHNICAL INFORMATION			
1.1. IDENTIFICATION OF APPLICANT			
1.1. IDENTIFICATION OF APPLICANT 1.2. IDENTIFICATION OF MANUFACTURER			
1.3. EQUIPMENT UNDER TEST (EUT) ······			
1.3.1. PHOTOGRAPHS OF THE EUT			
1.3.2. IDENTIFICATION OF ALL USED EUT			
1.4. APPLIED REFERENCE DOCUMENTS			
2.DEVICE CATEGORY AND RF EXPOSURE LI	MIT	<u></u>	
AB SLAP JORE MO	AB ALAB	ORL MO.	
3.MEASUREMENT OF CONDUCTED PEAK OU	ITPUT POWER		
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ANNEX A GENERAL INFORMATION -------10

		Change History		
	Issue	Date	Reason for change	
	1.0	2016-3-9	First edition	
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TEST REPORT DECLARATION

Applicant	Bragi GMBH	
Applicant Address	Sendlinger Str. 7/ Angerblock 2.OG, 80331 München, Germany	
Manufacturer	Bragi GMBH	
Manufacturer Address	Sendlinger Str. 7/ Angerblock 2.OG, 80331 München, Germany	
Product Name	The Dash Left	
Model Name	B1000L	
Brand Name Bragi		
HW Version	B1.2 for Beta3	
SW Version	B3_RC2	
Test Standards 47CFR 2.1093; KDB 447498 D01 General RF Exposure Guidance		
Issue Date	2016-3-9	
SAR Evaluation	Not Required	

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REPORT No. : SZ16010032S05

1. TECHNICAL INFORMATION

Note: the following data is based on the information by the applicant.

1.1. Identification of Applicant

Company Name:	Bragi GMBH
Address:	Sendlinger Str. 7/ Angerblock 2.OG, 80331 München, Germany

1.2. Identification of Manufacturer

Company Name:	Bragi GMBH
Address:	Sendlinger Str. 7/ Angerblock 2.OG, 80331 München, Germany

1.3. Equipment Under Test (EUT)

Model Name:	B1000L
Trade Name:	Bragi
Brand Name:	Bragi
Hardware Version:	B1.2 for Beta3
Software Version:	B3_RC2
Frequency Bands:	Bluetooth 2.1+EDR/ Bluetooth 4.0:2402-2480MHz;
Modulation Mode:	Bluetooth 2.1+EDR: GFSK/π/4-DQPSK/8-DPSK
OF B MILAB	Bluetooth 4.0: GFSK;
Antenna type:	Fixed Internal Antenna
Development Stage:	Identical prototype

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- 1.3.1. Photographs of the EUT
- 1. EUT front view

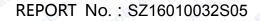


2. EUT view



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1.3.2. Identification of all used EUT

The EUT identity consists of numerical and letter characters, the letter character indicates the test sample, and the following two numerical characters indicate the software version of the test sample.

EUT Identity	Hardware Version	Software Version	
1#	B1.2 for Beta3	B3_RC2	

1.4. Applied Reference Documents

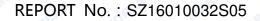
Leading reference documents for testing:

~	No.	Identity	Document Title		
	1 OPLAS	47 CFR§2.1093	Radiofrequency Radiation Exposure Evaluation: portable devices		
	2	KDB 447498 D01v06	General RF Exposure Guidance		

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2. DEVICE CATEGORY AND RF EXPOSURE LIMIT

Per user manual, this device is a Bluetooth Headset. Based on 47CFR 2.1093, this device belongs to portable device category with General Population/Uncontrolled exposure.

Portable Devices:

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47CFR 2.1093(b)

For purposes of this section, a portable device is defined as a transmitting device designed to be used so that the radiating structure(s) of the device is/are within 20 centimeters of the body of the user.

GENERAL POPULATION / UNCONTROLLED EXPOSURE

47CFR 2.1093(d) (2)

Limits for General Population/Uncontrolled exposure: 0.08 W/kg as averaged over the whole-body and spatial peak SAR not exceeding 1.6 W/kg as averaged over any 1 gram of tissue (defined as a tissue volume in the shape of a cube). Exceptions are the hands, wrists, feet and ankles where the spatial peak SAR shall not exceed 4 W/kg, as averaged over any 10 grams of tissue (defined as a tissue volume in the shape of a cube). General Population/Uncontrolled limits apply when the general public may be exposed, or when persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or do not exercise control over their exposure. Warning labels placed on consumer devices such as cellular telephones will not be sufficient reason to allow these devices to be evaluated subject to limits for occupational/controlled exposure in paragraph (d)(1) of this section.

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3. MEASUREMENT OF CONDUCTED PEAK OUTPUT POWER

1. Bluetooth Average output power

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Band	Channel	Frequency	Output Power(dBm)		
Dallu	Channel	(MHz)	GFSK	π/4-DQPSK	8-DPSK
3 M. JAB	0	2402	7.77	7.60	7.75
BT2.1+EDR	39	2441	9.41	9.39	9.36
LAB ORL	78	2480	9.34	9.31	9.27

			Output Power(dBm)	
Band	Channel	Frequency		
		(MHz)	GFSK	
RLAP	0 0	2402	6.12	
BT4.0	19	2440	7.36	
MORL	39	2480	7.12	

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4. RF EXPOSURE EVALUATION

The device only incorporates a Bluetooth transmitter, so standalone SAR evaluation is required for Bluetooth and simultaneous SAR is not required.

Standalone transmission SAR evaluation

According to KDB 447498 section 4.3.1, the 1-g SAR test exclusion thresholds at test separation Distances \leq 50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)]·[$\sqrt{f}(GHz)$] ≤ 3.0

The maximum tune-up limit power is 8.91mW @ 2.441GHz

When Bluetooth Headset is worn on the head, BT antenna spacing 0mm from body, so use **5mm** as the most conservative minimum test separation distance,

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)]·[$\sqrt{f}(GHz)$] =2.76 \leq 3.0

So SAR evaluation is not required for this device.

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ANNEX A GENERAL INFORMATION

1. Identification of the Responsible Testing Laboratory

Company Name:	Shenzhen Morlab Communications Technology Co., Ltd.		
Department:	Morlab Laboratory		
Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China		
Responsible Test Lab Manager:	Mr. Su Feng		
Telephone:	+86 755 36698555		
Facsimile:	+86 755 36698525		

2. Identification of the Responsible Testing Location

Name:	Shenzhen Morlab Communications Technology Co., Ltd. Morlab Laboratory
Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China

***** END OF REPORT *****

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