

Prüfbericht-Nr.: Test report No.:	50072296 001	Auftrags-Nr.: Order No.:	164082101	Seite 1 von 29 Page 1 of 29
Kunden-Referenz-Nr.: Client reference No.:	N/A	Auftragsdatum: Order date.:	20.12.2016	
Auftraggeber: Client:	THUMBS UP(UK) L' Unit L, Braintree Indu Kingdom	TD ustrial Estate, Brain Tree Roa	ad, South Ruislip,	HA4 0EJ, United
Prüfgegenstand: Test item:	Diamond Bluetooth S	Speaker		
Bezeichnung / Typ-Nr.: Identification / Type No.:	DIABTSPKP-PRM, [(PRIMARK)	DIABTSPKW-PRM		
Auftrags-Inhalt: Order content:	FCC approval			
Prüfgrundlage: Test specification:	CFR47 FCC Part 15: CFR47 FCC Part 15: FCC KDB Publication CFR47 FCC Part 15:	Subpart C Section 15.247 Subpart C Section 15.207 Subpart C Section 15.209 447498 v06 Subpart B Section 15.107 Subpart B Section 15.109		
Wareneingangsdatum: Date of receipt:	20.12.2016	0	The state of the s	
Prüfmuster-Nr.: Test sample Nc.:	A000480801-001 to A000480801-003	M)		
Prüfzeitraum: Testing period:	19.01.2017 - 22.02.2	017		
Ort der Prüfung: Place of testing:	Shenzhen Accurate Technology Co., Ltd.		4 8	
Prüflaboratorium: Testing laboratory:	TÜV Rheinland (She Co., Ltd.	nzhen)	3 3 3	S
Prüfergebnis*: Test result*:	Pass	Sandan Landan Landan	E	91 (2) (8) (6)
geprüft von / tested by:		kontrolliert von	I reviewed by:	
• 1	et la	04.00.0047		e fas
Datum Name/S	Alex Lan / Project Enginee		Name/Stellung	chnical Certifier Unterschrift
Date Name/P			Name/Position	Signature
Sonstiges / Other: FCC ID: 2AHHEDIABTSPI	KPRM			
Zustand des Prüfgegen Condition of the test item		_	ständig und unbe liete and undama	•
* Legende: 1 = sehr gut P(ass) = entspricht o.g. Legend: 1 = very good P(ass) = passed a.m. te	2 = good 3 = satisfa est specifications(s) F(ail) = fail	tspricht nicht o.g. Prüfgrundlage(n) ctory led a.m. test specifications(s)	4 = ausreichend N/A = nicht anwendt 4 = sufficient N/A = not applicable	5 = poor N/T = not tested
auszugsweise vervi This test report only relates to	elfältigt werden. Dieser l o the a. m. test sample. Wi	g. Prüfmuster und darf ohne Bericht berechtigt nicht zur Vo ithout permission of the test cen report does not entitle to carry	erwendung eines. ter this test report is	



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TEST SUMMARY

5.1.1 ANTENNA REQUIREMENT

RESULT: Passed

5.1.2 PEAK OUTPUT POWER

RESULT: Passed

5.1.3 CONDUCTED SPURIOUS EMISSIONS MEASURED IN 100kHz BANDWIDTH

RESULT: Passed

5.1.4 Spurious Emission

RESULT: Passed

5.1.5 20DB BANDWIDTH

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 CONDUCTED EMISSIONS

RESULT: Passed

5.1.10 RADIATED EMISSION

RESULT: Passed

6.1.1 ELECTROMAGNETIC FIELDS

RESULT: Pass



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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

2 Test Sites

2.1 Test Facilities

Shenzhen Accurate Technology Co., Ltd.

F1, Bldg. A, Changyuan New Meterial Port, Keyuan Rd., Science & Industry Park Nanshan District, Shenzhen 518057, P.R. China

FCC Registration No.: 752051

Test site Industry Canada No.: 5077A-2

The tests at the test site have been conducted under the supervision of a TÜV engineer.



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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 and Radiated emission							
Spectrum Analyzer	Rohde&Schwarz	FSV40	101495	2018-01-06			
Test Receiver	Rohde&Schwarz	ESCS30	100307	2018-01-06			
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	2018-01-09			
Loop Antenna	Schwarzbeck	FMZB1516	1516131	2018-01-09			
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	2018-01-09			
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	2018-01-09			
RF Switching Unit+PreAMP	Compliance Direction	RSU-M2	38322	2018-01-06			
Pre-Amplifier	Rohde&Schwarz	CBLU11835 40-01	3791	2018-01-06			
Radio Test Suite							
Spectrum Analyzer	Rohde & Schwarz	FSV40	101495	2018-01-06			
Conducted Emission	1						
Test Receiver	Rohde & Schwarz	ESCS30	100307	2018-01-06			
L.I.S.N.	Schwarzbeck	NLSK8126	8126431	2018-01-06			
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100815	2018-01-06			
50Ω Coaxial Switch	Anritsu Corp	MP59B	6200283933	2018-01-06			



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2.3 Traceability

All measurement equipment calibrations are traceable to NIM (National Institute of Metrology) or where calibration is performed in other countries, 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 $\pm 3 dB$.

2.6 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix 1 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 Shenzhen Accurate Technology Co., Ltd. test facility located at F1, Bldg. A, Changyuan New Meterial Port, Keyuan Rd., Science & Industry Park Nanshan District, Shenzhen 518057, 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 Diamond Bluetooth Speaker which supports Bluetooth function. According to the declaration of the applicant, the electrical circuit design, PCB layout and components used are identical for all models, only the model name and appearance are different

For details refer to the User Manual, Technical Description and Circuit Diagram.

3.2 Ratings and System Details

Table 2: Rating of EUT

Kind of Equipment:	Diamond Bluetooth Speaker
Type Designation:	DIABTSPKP-PRM, DIABTSPKW-PRM
Trade Mark:	PRIMARK
FCC ID	2AHHEDIABTSPKPRM

Table 3: Technical Specification of Bluetooth (BDR & EDR)

Technical Specification	Value
Operating Frequency band	2402 – 2480 MHz
Bluetooth Core Version	4.1, single mode
Channel Number	79 channels
Channel separation	1MHz
Extreme Temperature Range	-20°C to +55°C
Operating Voltage	DC 3.7V, 200mAh via built-in lithium Battery DC 5V, 500mA via Micro USB interface for Charging
Battery	Model: WHT502030 Ratings: 3.7V, 200mAh, 0.74Wh
Modulation	GFSK, 8DPSK, π/4DQPSK
Antenna Type	Internal Antenna, Non-User Replaceable
Antenna Gain	0dBi



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Table 4: RF channel and frequency of Bluetooth (BDR & EDR mode)

RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channe I	Frequency (MHz)
0	2402.00	20	2422.00	40	2442.00	60	2462.00
1	2403.00	21	2423.00	41	2443.00	61	2463.00
2	2404.00	22	2424.00	42	2444.00	62	2464.00
3	2405.00	23	2425.00	43	2445.00	63	2465.00
4	2406.00	24	2426.00	44	2446.00	64	2466.00
5	2407.00	25	2427.00	45	2447.00	65	2467.00
6	2408.00	26	2428.00	46	2448.00	66	2468.00
7	2409.00	27	2429.00	47	2449.00	67	2469.00
8	2410.00	28	2430.00	48	2450.00	68	2470.00
9	2411.00	29	2431.00	49	2451.00	69	2471.00
10	2412.00	30	2432.00	50	2452.00	70	2472.00
11	2413.00	31	2433.00	51	2453.00	71	2473.00
12	2414.00	32	2434.00	52	2454.00	72	2474.00
13	2415.00	33	2435.00	53	2455.00	73	2475.00
14	2416.00	34	2436.00	54	2456.00	74	2476.00
15	2417.00	35	2437.00	55	2457.00	75	2477.00
16	2418.00	36	2438.00	56	2458.00	76	2478.00
17	2419.00	37	2439.00	57	2459.00	77	2479.00
18	2420.00	38	2440.00	58	2460.00	78	2480.00
19	2421.00	39	2441.00	59	2461.00		

3.3 Independent Operation Modes

The basic operation modes are:

- A. On, Bluetooth Transmitting mode (BDR & EDR)
 - 1. low channel
 - 2. middle channel
 - 3. high channel
- B. On, Bluetooth hopping mode
- C. On, Play with Aux-in
- D. Charging
- E. Off



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3.4 Noise Generating and Noise Suppressing Parts

Refer to the Circuit Diagram.

3.5 Submitted Documents

- Technical Description
- PCB Layout
- Photo Document

- 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: 2014 and ANSI C63.10: 2013.

According to section 3.1, all tests were applied on model DIABTSPKP-PRM in this test report.

4.3 Special Accessories and Auxiliary Equipment

The EUT was tested with following accessories:

Description	Manufacturer	Туре	S/N
iPhone6S PLUS	Apple	ML6D2 CH/A	C35QJ76JGRWM
Notebook	LENOVO	ThinkPad X240	N/A
Printer	HP	HP LaserJet 1015	CNFG030424

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.

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4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test (Below 1GHz)

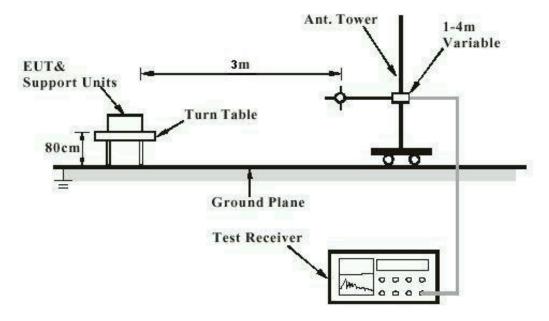
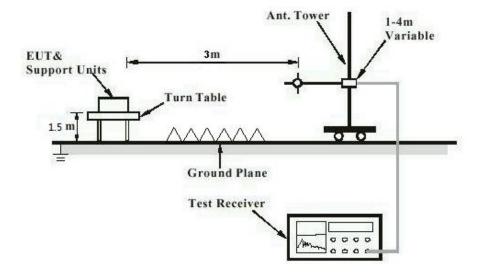


Diagram of Measurement Configuration for Radiation Test (Above 1GHz)





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Diagram of Measurement Equipment Configuration for Mains Conduction Measurement

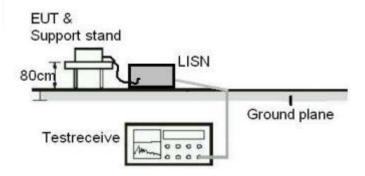
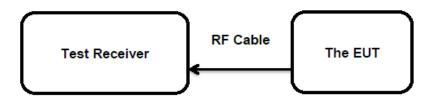


Diagram of Measurement Equipment Configuration for Conducted Transmitter Measurement





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5 Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT: Passed

Test standard : 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 with the provision.

Refer to EUT photo for details.



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5.1.2 Peak Output Power

RESULT: Passed

Test date : 2017-02-07

Test standard : FCC Part 15.247(b)(1)
Basic standard : ANSI C63.10: 2013
Limit : FHSS < 1 Watts
Kind of test site : Shielded room

Test setup

Test Channel : Low/ Middle/ High

Operation Mode : A
Ambient temperature : 25°C
Relative humidity : 55%
Atmospheric pressure : 101 kPa

Table 5: Test result of Peak Output Power

Test Mode	Channel	Measured Peak Output Powe		Limit
rest wode	Frequency (MHz)	(dBm)	(W)	(W)
	2402	-3.67	0.00043	
BDR	2441	-4.55	0.00035	< 1
	2480	-5.32	0.00029	
	2402	-3.82	0.00041	
EDR	2441	-4.74	0.00034	< 1
	2480	-5.56	0.00028	

Note: The cable loss is taken into account in results.



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5.1.3 Conducted spurious emissions measured in 100kHz Bandwidth

RESULT: Passed

Date of testing : 2017-02-22

Test standard : FCC part 15.247(d)
Basic standard : ANSI C63.10: 2013

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 : 25°C
Relative humidity : 55%
Atmospheric pressure : 101 kPa

All emissions are more than 20dB below fundamental, details refer to Appendix 1, and compliance is achived as well.



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5.1.4 Spurious Emission

RESULT: Passed

Date of testing 2017-02-17

Test standard FCC part 15.247(d)

FCC Part 15.205

Basic standard ANSI C63.10: 2013

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

Kind of test site 3m Semi-Anechoic Chamber

Test setup

Low/ Middle/ High

Test Channel .
Operation mode :
Ambient temperature : 25°C Relative humidity 55% Atmospheric pressure : 101 kPa

Remark:

During the pretest the EUT was rotated through three orthogonal axes to determine the attitude that maximizes the emissions. After that the EUT was manually handled to find the orientation that has the maximum emission, which is the orientation shown in the test setup photos.

Testing was carried out within frequency range 9 kHz to the tenth harmonics.

For details refer to Appendix 1.



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5.1.5 20dB Bandwidth

RESULT: Passed

2017-02-07

Date of testing :
Test standard :
Basic standard :
Kind of test site : FCC Part 15.247(a)(1) ANSI C63.10: 2013 Shielded room

Test setup

Low/ Middle/ High

Test Channel :
Operation Mode :
Ambient temperature :
Relative humidity :
Atmospheric pressure : Α 25°C 55% 101 kPa

Table 6: Test result of 20dB Bandwidth

Test Mode	Channel Frequency (MHz)	20dB Bandwidth (kHz)	2/3 of 20dB Bandwidth (kHz)	Limit (MHz)
	2402	1085.4	723.600	
BDR	2441	1081.0	720.667	/
	2480	1081.0	720.667	
	2402	1332.8	888.533	
EDR	2441	1371.9	914.600	/
	2480	1367.6	911.733	



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5.1.6 Frequency Separation

RESULT: Passed

Date of testing

: 2017-02-07 : FCC part 15.247(a)(1) : ANSI C63.4: 2003 : ≥ 25kHz or 2/3 of 20dE Date of testing Test standard Basic standard

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

Test setup

Low/ Middle/ High

Uperation Mode :
Ambient temperature :
Relative humidity :
Atmospheric press 25°C 55% 101 kPa

Table 7: Test result of Frequency Separation

Channel	Channel Frequency (MHz)	Measured Channel Separation (KHz)	Limit (kHz)	Result
Low Channel	2402	1002.9	≥ 25kHz or 2/3 of	Pass
Adjacency Channel	2403	1002.9	20dB bandwidth	1 033
Mid Channel	2441	1002.9	≥ 25kHz or 2/3 of	Pass
Adjacency Channel	2442	1002.9	20dB bandwidth	Pass
High Channel	2480	1002.9 ≥ 25kHz or 2/3 of		Pass
Adjacency Channel	2479	1002.9	20dB bandwidth	Pass



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5.1.7 Number of hopping frequency

RESULT: Passed

2017-02-07

Date of testing :
Test standard :
Basic standard :
Limits :
Kind of test site : FCC part 15.247(a)(1)(iii) ANSI C63.10: 2013

≥ 15 non-overlapping channels

Shield room

Test setup

Low/ Middle/ High

Test Channel : Low/ Mico
Operation Mode : B
Ambient temperature : 25°C
Relative humidity : 55%
Atmospheric pressure : 101 kPa

Table 8: 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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5.1.8 Time of Occupancy

RESULT: Passed

Date of testing : 2017-02-07

Test standard : FCC part 15.247(a)(1)(iii)
Basic standard : ANSI C63.10: 2013

Limits : <0.4s Kind of test site : Shield room

Test setup

Test Channel : Low/ Middle/ High

Operation Mode : A
Ambient temperature : 25°C
Relative humidity : 55%
Atmospheric pressure : 101 kPa

Table 9: Test result of Time of Occupancy

Test Mode	Channel	Data Packet	Pulse width (ms)	Measured Dwell time(s)	Limit (s)
BDR mode	2402	DH1	0.399	0.128	< 0.4s
		DH3	1.681	0.269	
		DH5	2.978	0.318	
	2441	DH1	0.384	0.123	
		DH3	1.739	0.278	
		DH5	3.065	0.327	
	2480	DH1	0.442	0.141	
		DH3	1.739	0.278	
		DH5	2.957	0.315	
EDR mode	2402	3DH1	0.384	0.123	
		3DH3	1.739	0.278	
		3DH5	3.044	0.325	
	2441	3DH1	0.442	0.141	
		3DH3	1.681	0.269	
		3DH5	2.978	0.318	
	2480	3DH1	0.391	0.125	
		3DH3	1.739	0.278	
		3DH5	3.022	0.322	

Note:

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

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



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5.1.9 Conducted emissions

RESULT: Passed

Date of testing

: 2017-02-20
: FCC Part 15.107(a) & FCC Part 15.207(a)
: ANSI C63.10: 2013 & ANSI C63.4: 2014
: 0.15 - 30MHz
: FCC Part 15.207(a) & FCC Part 15.207(a)
: Shield room Test standard
Basic standard
Frequency range

Limits

Kind of test site

Test setup

Input Voltage AC 120V, 60Hz via AC/DC Adapter of Notebook

Input Voltage
Operation Mode B+D, C+D Earthing Not connected

Ambient temperature : Relative humidity 25°C Relative humidity 55% Atmospheric pressure : 101 kPa

For details refer to Appendix 1.



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5.1.10 **Radiated Emission**

RESULT: Passed

Date of testing 2016-02-08

Test standard FCC Part 15.109(a) & FCC Part 15.209(a)

Basic standard ANSI C63.4: 2014 Frequency range 30 - 6000MHz Classification Class B

Limit FCC Part 15.109(a) & FCC Part 15.209(a)

Kind of test site 3m Semi-Anechoic Chamber

Test setup

Input Voltage DC 3.7V, 200mAh via built-in lithium Battery

DC 5V, 500mA via Micro USB interface for Charging

Operation mode C, D

Earthing Not connected

Ambient temperature 23°C Relative humidity 48% Atmospheric pressure : 101 kPa

Test data refer to Appendix 1.



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6 Safety Human Exposure

6.1 Radio Frequency Exposure Compliance

6.1.1 Electromagnetic Fields

RESULT: Pass

Test Specification

Test standard : FCC KDB Publication 447498 v06

Measurement Record:

The minimum distance for the EUT is 5mm.

Since maximum peak output power of the transmitter is -3.67 dBm \approx 0.43 mW <10 mW. Hence the EUT is excluded from SAR evaluation according to FCC KDB Publication 447498 D01 General RF Exposure Guidance v06.

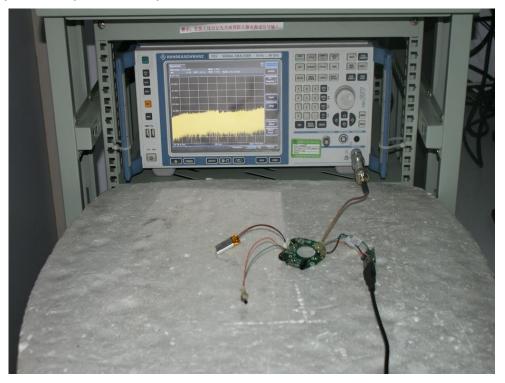


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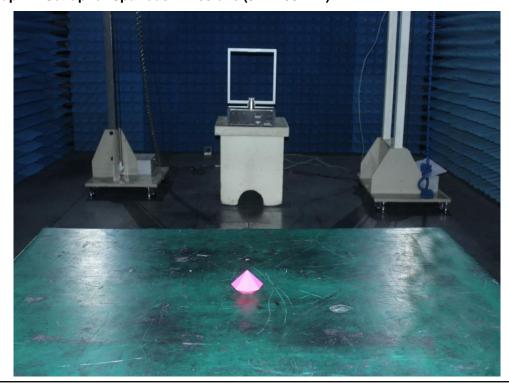
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7 Photographs of the Test Set-Up

Photograph 1: Set-up for Radio Spectrum Test



Photograph 2: Set-up for Spurious Emissions (9kHz-30MHz)





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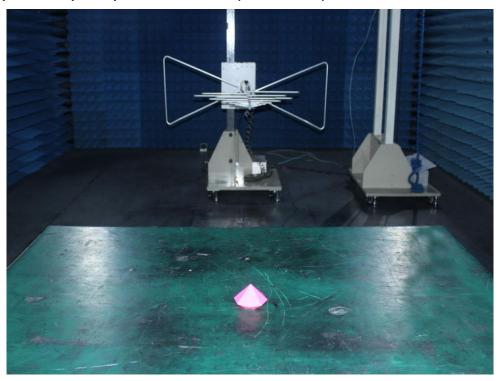
Prüfbericht - Nr.:

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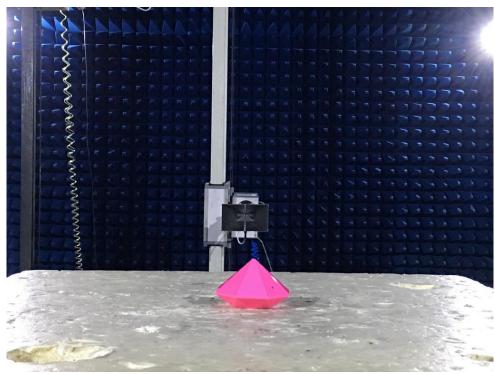
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Photograph 3: Set-up for Spurious Emissions (30MHz-1GHz)



Photograph 4: Set-up for Spurious Emissions (1GHz-18GHz)





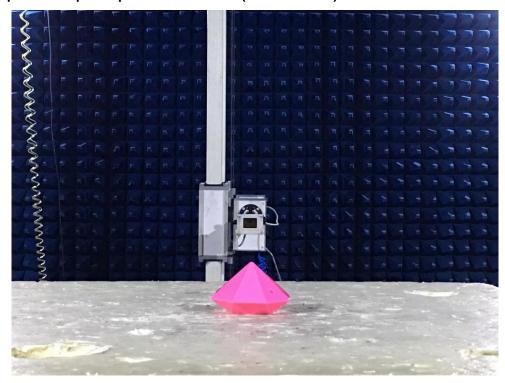
Produkte Products

Prüfbericht - Nr.: 50072296 001

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Test Report No.

Photograph 5: Set-up for Spurious Emissions (18GHz-26GHz)



Photograph 6: Set-up for Conducted Emissions





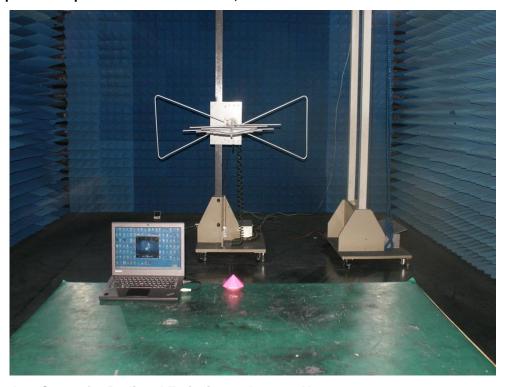
Products

Prüfbericht - Nr.: 50072296 001

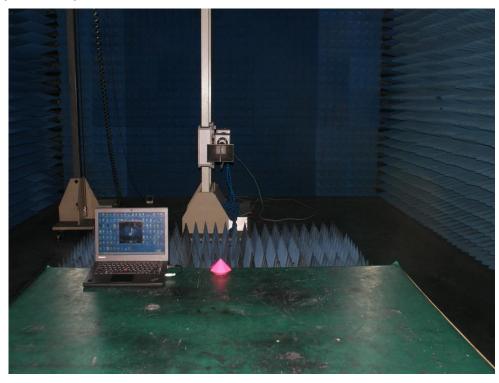
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Test Report No.

Photograph 7: Set-up for Radiated Emissions, below 1GHz



Photograph 8: Set-up for Radiated Emissions, above 1GHz





Products

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Figure 1: Test figure of spurious emissions, mode A.1, X polarity (9kHz -30MHz)

ACCURATE TECHNOLOGY CO., LTD

FCC Class B 3m Radiated

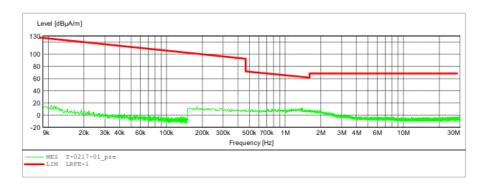
Diamond Bluetooth Speaker M/N:DIABTSPKPPRM

THUMBS UP (UK) LTD Manufacturer:

Test Site: 2# Chamber
Operator: LGWADE
Test Specification: DC 3.7V Comment: X Start of Test: 2017-2-17 /

SCAN TABLE: "LFRE Fin"
Short Description: Start Stop Step Detector Meas.
Frequency Frequency Width Time
9.0 kHz 150.0 kHz 100.0 Hz QuasiPeak 1.0 s
150.0 kHz 30.0 MHz 5.0 kHz QuasiPeak 1.0 s IF Transducer Bandw. 200 Hz 1516M 9 kHz

1516M





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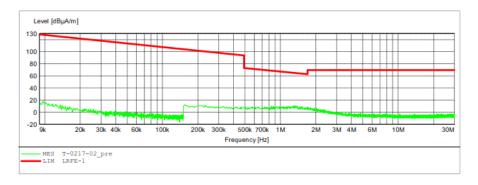
Figure 2: Test figure of spurious emissions, mode A.1, Y polarity (9kHz -30MHz)

ACCURATE TECHNOLOGY CO., LTD

FCC Class B 3m Radiated

EUT: Diamond Bluetooth Speaker M/N:DIABTSPKPPRM THUMBS UP (UK) LTD Manufacturer: Operating Condition: TX 2402MHz
Test Site: 2# Chamber Operator: LGWADE Test Specification: DC 3.7V Comment: Y
Start of Test: 2017-2-17 /

SCAN TABLE: "LFRE Fin"
Short Description:
Start Stop Step CAN TABLE: "LFRE F1"
Short Description: SUB_STD_VTERM2 1.70
Start Stop Step Detector Meas.
Frequency Frequency Width Time
9.0 kHz 150.0 kHz 100.0 Hz QuasiPeak 1.0 s
150.0 kHz 30.0 MHz 5.0 kHz QuasiPeak 1.0 s IF Transducer Bandw. 200 Hz 1516M





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Figure 3: Test figure of spurious emissions, mode A.1, Z polarity (9kHz -30MHz)

ACCURATE TECHNOLOGY CO., LTD

FCC Class B 3m Radiated

EUT: Diamond Bluetooth Speaker M/N:DIABTSPKPPRM THUMBS UP (UK) LTD Manufacturer: Operating Condition: TX 2402MHz
Test Site: 2# Chamber Operator: LGWADE
Test Specification: DC 3.7V Comment: Z Start of Test: 2017-2-17 /

SCAN TABLE: "LFRE Fin"
Short Description:
Start Stop Step Short Description: SUB_STD_VTERM2 1.70
Start Stop Step Detector Meas.
Frequency Frequency Width Time
9.0 kHz 150.0 kHz 100.0 Hz QuasiPeak 1.0 s
150.0 kHz 30.0 MHz 5.0 kHz QuasiPeak 1.0 s IF Transducer Bandw. 200 Hz 1516M

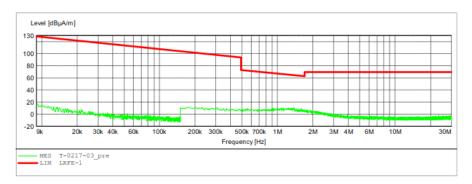




Figure 4: Test figure of spurious emissions, mode A.1, Horizontal polarity (30MHz – 1GHz)



ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: LGW2017 #1084 Standard: FCC Class B 3M Radiated

Test item: Radiation Test
Temp.(C)/Hum.(%) 23 C / 48 %

EUT: Diamond Bluetooth Speaker

Mode: TX 2402MHz

Model: DIABTSPKPPRM

Manufacturer: THUMBS UP(UK) LTD

576.6443

3

35.31

-2.60

32.71

Polarization: Horizontal
Power Source: DC 3.7V

Date: 17/02/08/

Engineer Signature: LGWADE

Distance: 3m

Note: 70.0 dBuV/m 50 30 10 60 70 600 700 Result Reading Freq. Factor Limit Margin Height Degree Detector No. Remark (MHz) (dBuV/m) (dB) (dBuV/m) (dBuV/m) (dB) QP 1 383,9318 40.73 -6.94 33.79 46.00 -12.21 447.9821 36.74 -5.38 31.36 46.00 QP 2 -14.64

46.00

QP

-13.29



Figure 5: Test figure of spurious emissions, mode A.1, Vertical polarity (30MHz – 1GHz)



ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: LGW2017 #1085 Standard: FCC Class B 3M Radiated

Test item: Radiation Test
Temp.(C)/Hum.(%) 23 C / 48 %

EUT: Diamond Bluetooth Speaker

Mode: TX 2402MHz

Model: DIABTSPKPPRM

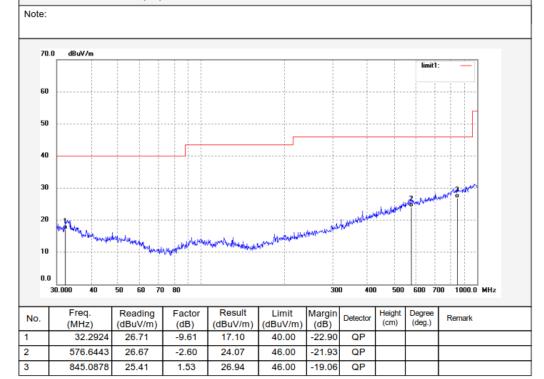
Manufacturer: THUMBS UP(UK) LTD

Polarization: Vertical Power Source: DC 3.7V Date: 17/02/08/

Time:

Engineer Signature: LGWADE

Distance: 3m





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Figure 6: Test figure of spurious emissions, mode A.1, Horizontal polarity (1GHz -18GHz)



ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park, Nanshan Shenzhen, P.R. China

Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Polarization: Horizontal

Power Source: DC 3.7V

Engineer Signature: LGWADE

Date: 17/02/08/

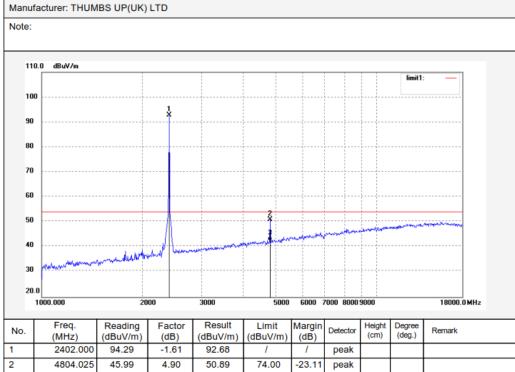
Distance: 3m

LGW2017 #1052 Standard: FCC Class B 3M Radiated Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

Diamond Bluetooth Speaker

Mode: TX 2402MHz Model: DIABTSPKPPRM





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Figure 7: Test figure of spurious emissions, mode A.1, Vertical polarity (1GHz - 18GHz)



ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park, Nanshan Shenzhen, P.R. China

Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Polarization: Vertical

Date: 17/02/08/

Distance: 3m

Power Source: DC 3.7V

Engineer Signature: LGWADE

LGW2017 #1053 Standard: FCC Class B 3M Radiated Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

Diamond Bluetooth Speaker Mode: TX 2402MHz

Model: DIABTSPKPPRM Manufacturer: THUMBS UP(UK) LTD

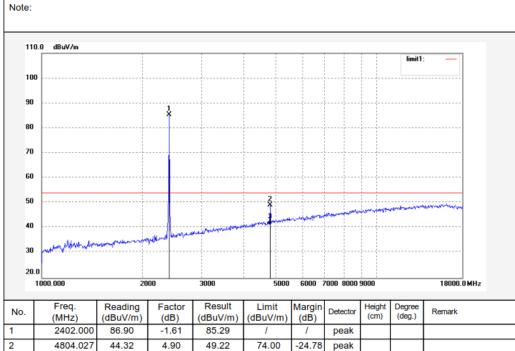
4804.027

3

36.44

4.90

41.34



54.00

-12.66

AVG

50072296 001



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Figure 8: Test figure of spurious emissions, mode A.1, Horizontal polarity (18GHz –25GHz)



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F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Polarization: Horizontal

Power Source: DC 3.7V

Engineer Signature: LGWADE

Date: 17/02/08/

Distance: 3m

Job No.: LGW2017 #1063 Standard: FCC Class B 3M Radiated Test item: Radiation Test Temp.(C)/Hum.(%) 23 C / 48 %

C)/Hum.(%) 23 C / 48 % Diamond Bluetooth Speaker

10.09

2.06

26072.999

26072.999

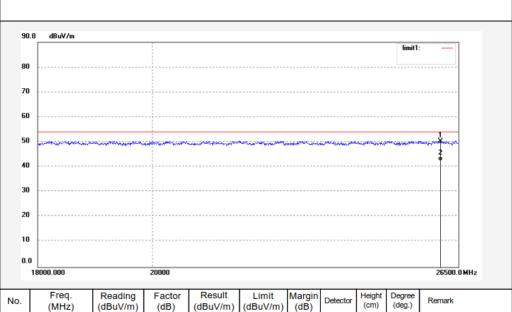
2

Mode: TX 2402MHz
Model: DIABTSPKPPRM

Model: DIABTSPKPPRM

Manufacturer: THUMBS UP(UK) LTD

Note:



74.00

54.00

-23.63

-11.66

peak

AVG

50.37

42.34

40.28

40.28

50072296 001



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Figure 9: Test figure of spurious emissions, mode A.1, Vertical polarity (18GHz – 25GHz)



ACCURATE TECHNOLOGY CO., LTD.

F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 2# Chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Polarization: Vertical

Date: 17/02/08/

Distance: 3m

Power Source: DC 3.7V

Engineer Signature: LGWADE

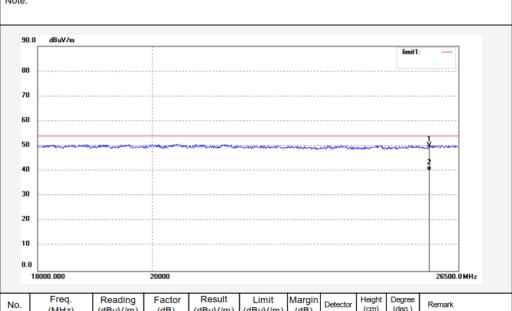
Job No.: LGW2017 #1062 Standard: FCC Class B 3M Radiated Test item: Radiation Test

Temp.(C)/Hum.(%) 23 C / 48 %

EUT: Diamond Bluetooth Speaker Mode: TX 2402MHz

Model: DIABTSPKPPRM Manufacturer: THUMBS UP(UK) LTD

Note:



50072296 001



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Figure 10: Test figure of spurious emissions, mode A.2, X polarity (9kHz -30MHz)

ACCURATE TECHNOLOGY CO., LTD

FCC Class B 3m Radiated

EUT: Diamond Bluetooth Speaker M/N:DIABTSPKPPRM
Manufacturer: THUMBS UP(UK) LTD

Operating Condition: TX 2441MHz
Test Site: 2# Chamber Test Site: 2# Chamber
Operator: LGWADE
Test Specification: DC 3.7V
Comment: X
Start of Test: 2017-2-17 /

SCAN TABLE: "LFRE Fin"

Short Description: Start Stop Step Detector Meas.

Frequency Frequency Width Time
9.0 kHz 150.0 kHz 100.0 Hz QuasiPeak 1.0 s
150.0 kHz 30.0 MHz 5.0 kHz QuasiPeak 1.0 s IF Transducer Bandw. 200 Hz 9 kHz 1516M

