TCT 通测检测 TESTING CENTRE TECHNOLOGY

TEST REPORT

FCC ID. ..... :	2AMNH-SSCD-FMUS	
Test Report No..... :	TCT210806E042	
Date of issue..... :	Aug. 12, 2021	
Testing laboratory ..... :	SHENZHEN TONGCE TESTING LAB	
Testing location/ address:	TCT Testing Industrial Park Fuqiao 5th Industrial Zone, Fuhai Street, Bao'an District Shenzhen, Guangdong, 518103, People's Republic of China	
Applicant's name..... :	Berlin Brands Group Inc.	
Address..... :	101 Montgomery Street, Suite 1900, San Francisco, California 94104, United States	
Manufacturer's name ... :	Shenzhen Adition Audio Science & Technology CO., LTD.	
Address..... :	Floor1-5, No.2 Building, Huidebao Industrial Park, No.11, Second Industrial Zone, Baihua Community, Guangming Sub-district, Guangming District, Shenzhen, China	
Standard(s) ..... :	FCC CFR Title 47 Part 1.1307	
Test item description ..... :	Silver Star and Black Star CD-FM Radio with BT	
Trade Mark ..... :	auna	
Model/Type reference..... :	US-10033125, US-10033126, US-10038634	
Rating(s)..... :	AC 120V/60Hz	
Date of receipt of test item ..... :	Aug. 06, 2021	
Date (s) of performance of test..... :	See dates for each test case	
Tested by (+signature) ... :	Brave Zeng	Brave. Zeng.
Check by (+signature).... :	Beryl Zhao	Beryl Zhao
Approved by (+signature):	Tomsin	Tomsin

General disclaimer:

This report shall not be reproduced except in full, without the written approval of SHENZHEN TONGCE TESTING LAB. This document may be altered or revised by SHENZHEN TONGCE TESTING LAB personnel only, and shall be noted in the revision section of the document. The test results in the report only apply to the tested sample.

Table of Contents

Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com

1. General Product Information

1.1. EUT description

Test item description .....:	Silver Star and Black Star CD-FM Radio with BT
Model/Type reference.....:	US-10033125
Sample Number.....:	TCT210806E005-0101
Bluetooth Version .....:	V4.2
Operation Frequency.....:	2402MHz~2480MHz
Transfer Rate .....:	1/2 Mbits/s
Number of Channel.....:	79
Modulation Type.....:	GFSK, π/4-DQPSK
Modulation Technology .....:	FHSS
Antenna Type.....:	PCB Antenna
Antenna Gain.....:	0dBi
Rating(s).....:	AC 120V/60Hz
Remark .....:	/

Note: The antenna gain listed in this report is provided by applicant, and the test laboratory is not responsible for this parameter.

1.2. Model(s) list

No.	Model No.	Tested with
1	US-10033125	☒
Other models	US-10033126, US-10038634	☐

Note: US-10033125 is tested model, other models are derivative models. The models are identical in circuit and PCB layout, only different on the model names. So the test data of US-10033125 can represent the remaining models.

Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com

1.3. Operation Frequency

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
0	2402MHz	20	2422MHz	40	2442MHz	60	2462MHz
1	2403MHz	21	2423MHz	41	2443MHz	61	2463MHz
…	…	…	…	…	…	…	…
10	2412MHz	30	2432MHz	50	2452MHz	70	2472MHz
11	2413MHz	31	2433MHz	51	2453MHz	71	2473MHz
…	…	…	…	…	…	…	…
18	2420MHz	38	2440MHz	58	2460MHz	78	2480MHz
19	2421MHz	39	2441MHz	59	2461MHz	-	
Remark: Channel 0, 39 &78 have been tested for GFSK, π/4-DQPSK modulation mode.							

Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com

2. General Information

2.1. Test environment and mode

Item	Normal condition
Temperature	+25ºC
Voltage	AC 120V/60Hz
Humidity	56%
Atmospheric Pressure:	1008 mbar
Test Mode:	
Engineering mode:	Keep the EUT in continuous transmitting by select channel

2.2. Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Equipment	Model No.	Serial No.	FCC ID	Trade Name
/	/	/	/	/

Note:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.

2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

3. For conducted measurements (Output Power, 20dB Occupied Bandwidth, Carrier Frequencies Separation, Hopping Channel Number, Dwell Time, Spurious Emissions), the antenna of EUT is connected to the test equipment via temporary antenna connector, the antenna connector is soldered on the antenna port of EUT, and the temporary antenna connector is listed in the Test Instruments.

Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com

3. Facilities and Accreditations

3.1. Facilities

The test facility is recognized, certified, or accredited by the following organizations:

- FCC - Registration No.: 645098

  SHENZHEN TONGCE TESTING LAB

  Designation Number: CN1205

  The testing lab has been registered and fully described in a report with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

- IC - Registration No.: 10668A-1

  SHENZHEN TONGCE TESTING LAB

  CAB identifier: CN0031

  The testing lab has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing.

3.2. Location

SHENZHEN TONGCE TESTING LAB

Address: TCT Testing Industrial Park Fuqiao 5th Industrial Zone, Fuhai Street, Bao'an District Shenzhen, Guangdong, 518103, People's Republic of China

TEL: +86-755-27673339

4. Test Results and Measurement Data

According to §1.1307(b), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

Remark: 1) The maximum output power for antenna is -2.02dBm (0.63mW) at 2402MHz, 0dBi antenna gain (with 1.00 numeric antenna gain.)
2) For mobile or fixed location transmitters, no SAR consideration applied. The minimum separation generally be used is at least 20cm, even if the calculation indicate that the MPE distance would be lesser.

Calculation

Given $E = \frac{\sqrt{30 \times P \times G}}{d}$ & $S = \frac{E^2}{3770}$

Where E = *Field Strength in Volts / meter*
P = *Power in Watts*
G=*Numeric antenna gain*
d=*Distance in meters*
S=*Power Density in milliwatts / square centimeter*

Maximum Permissible Exposure
output power= 0.63mW
Numeric Antenna gain= 1.00
Substituting the MPE safe distance using d=20cm into above equation.
Yields:
*S=0.000199*P*G*
Where P=Power in mW
G=Numeric antenna gain
S=Power density in mW/cm^2
Power density= 0.000125mW/cm^2

(For mobile or fixed location transmitters, the maximum power density is 1.0 mW/cm^2 even if the calculation
indicates that the power density would be larger.)

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

Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com