RF Exposure Report

Report No.: AGC02390231203CH01

IC	:	25657-2564C
APPLICATION PURPOSE	:	Original Equipment
PRODUCT DESIGNATION	:	BDE Bluetooth 5.1 Dual Mode Transceiver Module Based on CC2564C
BRAND NAME	:	BDE
MODEL NAME	:	BDE-BD2564CN
APPLICANT	:	Guangzhou BDE Technology Inc.
DATE OF ISSUE	:	Jan. 10, 2024
STANDARD(S)	:	RSS-102 Issue 5
REPORT VERSION	:	V1.0

***A**ttestation of **G**lobal **C**ompliance (Shenzhen) Co., Ltd*

Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Jan. 10, 2024	Valid	Initial Release

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1. General Information

Applicant	Guangzhou BDE Technology Inc.
Address	B2-403, ChuangYi Building, 162 Science Avenue, Huangpu District, Guangzhou 510663, China
Manufacturer	Guangzhou BDE Technology Inc.
Address	B2-403, ChuangYi Building, 162 Science Avenue, Huangpu District, Guangzhou 510663, China
Factory	Guangzhou BDE Technology Inc.
Address	B2-403, ChuangYi Building, 162 Science Avenue, Huangpu District, Guangzhou 510663, China
Product Designation	BDE Bluetooth 5.1 Dual Mode Transceiver Module Based on CC2564C
Brand Name	BDE
Test Model	BDE-BD2564CN
Series Model(s)	N/A
Difference Description	N/A
Date of receipt of test item	Aug. 07, 2023
Date of Test	Aug. 08, 2023 to Nov. 08, 2023
Deviation from Standard	No any deviation from the test method
Condition of Test Sample	Normal
Test Result	Pass
Test Report Form No	AGCER-ISED-RF Exposure-V1

Note: The test results of this report relate only to the tested sample identified in this report.

Prepared By	Alan Duan (Project Engineer)	Jan. 10, 2024
Reviewed By	Calvin Liu (Reviewer)	Jan. 10, 2024
Approved By	Max Zhang (Authorized Officer)	Jan. 10, 2024

2. Product Information

2.1 Product Technical Description

Frequency Band (Operating)	☐WLAN: 2.412GHz ~ 2.462GHz ☐WLAN: 5.18GHz ~ 5.32GHz / 5.50GHz ~ 5.70GHz ☐WLAN: 5.745GHz ~ 5825GHz ☒Bluetooth: 2.402GHz ~ 2.480GHz ☐Other:
Hardware Version	1.1
Software Version	1.0
Modulation Type	BT_BLE: GFSK BT_BR_EDR: GFSK, π /4-DQPSK, 8DPSK
Device Category	☒Portable (<20cm separation)
Antenna Diversity	☒Single antenna ☐Multiple antennas ☐Tx diversity ☐Rx diversity ☐Tx/Rx diversity
Antenna Designation	Patch antenna
Antenna Gain	2.2dBi
Minimum Assessment Distance	15mm
Evaluation Applied	☒SAR Evaluation

3. Test Environment

3.1 Address of The Test Laboratory

Laboratory: Attestation of Global Compliance (Shenzhen) Co., Ltd.

Address: 1-2/F, Building 19, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

3.2 Test Facility

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

CNAS-Lab Code: L5488

Attestation of Global Compliance (Shenzhen) Co., Ltd. has been assessed and proved to follow CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories.)

A2LA-Lab Cert. No.: 5054.02

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to follow ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

FCC-Registration No.: 975832

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files with Registration 975832.

IC-Registration No.: 24842(CAB identifier: CN0063)

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the Certification and Engineering Bureau of Industry Canada. The acceptance letter from the IC is maintained in our files with Registration 24842.

3.3 Environmental Conditions

	Normal Conditions
Temperature range (℃)	15 - 35
Relative humidity range	20% - 75%
Pressure range (kPa)	86 - 106
Power supply	DC 3.3V

4. RSS-102 RF Exposure Assessment Measurements

4.1 Measurement Limits

SAR evaluation is required if the separation distance between the user and/or bystander and the antenna and/or radiating element of the device is less than or equal to 20 cm, except when the device operates at or below the applicable output power level (adjusted for tune-up tolerance) for the specified separation distance defined in Table 1.

Table 1: SAR evaluation — Exemption limits for routine evaluation based on frequency and separation distance[4,5]

Frequency (MHz)	Exemption Limits (mW)				
	At separation distance of ≤5 mm	At separation distance of 10 mm	At separation distance of 15 mm	At separation distance of 20 mm	At separation distance of 25 mm
≤300	71 mW	101 mW	132 mW	162 mW	193 mW
450	52 mW	70 mW	88 mW	106 mW	123 mW
835	17 mW	30 mW	42 mW	55 mW	67 mW
1900	7 mW	10 mW	18 mW	34 mW	60 mW
2450	4 mW	7 mW	15 mW	30 mW	52 mW
3500	2 mW	6 mW	16 mW	32 mW	55 mW
5800	1 mW	6 mW	15 mW	27 mW	41 mW

Frequency (MHz)	Exemption Limits (mW)				
	At separation distance of 30 mm	At separation distance of 35 mm	At separation distance of 40 mm	At separation distance of 45 mm	At separation distance of ≥50 mm
≤300	223 mW	254 mW	284 mW	315 mW	345 mW
450	141 mW	159 mW	177 mW	195 mW	213 mW
835	80 mW	92 mW	105 mW	117 mW	130 mW
1900	99 mW	153 mW	225 mW	316 mW	431 mW
2450	83 mW	123 mW	173 mW	235 mW	309 mW
3500	86 mW	124 mW	170 mW	225 mW	290 mW
5800	56 mW	71 mW	85 mW	97 mW	106 mW

Output power level shall be the higher of the maximum conducted or equivalent isotropically radiated power (e.i.r.p.) source-based, time-averaged output power. For controlled use devices where the 8 W/kg for 1 gram of tissue applies, the exemption limits for routine evaluation in Table 1 are multiplied by a factor of 5. For limb-worn devices where the 10gram value applies, the exemption limits for routine evaluation in Table 1 are multiplied by a factor of 2.5. If the operating frequency of the device is between two frequencies located in Table 1, linear interpolation shall be applied for the applicable separation distance. For test separation distance less than 5 mm, the exemption limits for a separation distance of 5 mm can be applied to determine if a routine evaluation is required.
For medical implants devices, the exemption limit for routine evaluation is set at 1 mW. The output power of a medical implants device is defined as the higher of the conducted or e.i.r.p to determine whether the device is exempt from the SAR evaluation.

4.2 Measurement Results

Test Mode	Frequency (MHz)	Tune up Tolerance	Antenna gain (dBi)	Max Tune up Power (dBm)	Max Tune up EIRP (dBm)	Calculation Results (mW)	Exemption Limits (mW)
BT_EDR	2441	8±1	2.2	9	11.2	13.18	15
BT_BLE	2480	7±1	2.2	8	10.2	10.47	15

Note：

1. Max Tune up Power (mW) = 10^(Max Tune up power (dBm)/10)
2. The power for this evaluation had to be taken into account the condition of the device's antenna and is exempted using a power tolerance.

4.3 Measurement Conclusion

Since Source-base time average power is below SAR test exclusion power thresholds, the SAR evaluation is not required.

-----End of Report-----

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9. Subject to the variable length of retention time for test data and report stored hereinto as otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of the test report for a period of six years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after retention period. Under no circumstances shall we be liable for damage of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.