Prüfbericht-Nr.: *Test report no.*:	**CN253LBU 003**	**Auftrags-Nr.:** *Order no.*:	168538804	Seite 1 von 11 *Page 1 of 11*
Kunden-Referenz-Nr.: *Client reference no.*:	N/A	**Auftragsdatum:** *Order date:*	2025-02-17	
Auftraggeber: *Client*:	Suzhou BLUESTONE New Power Co., Ltd. Building 2A-101 #No.69, Weixin Road, Suzhou Industrial Park, 215000 Jiangsu Province, P.R. China			
Prüfgegenstand: *Test item*:	T-BOX			
Bezeichnung / Typ-Nr.: *Identification / Type no.*:	CF-T12VNA08			
Auftrags-Inhalt: *Order content*:	Test Report			
Prüfgrundlage: *Test specification*:	CFR Title 47 FCC Part 2: Section 2.1091 CFR Title 47 FCC Part 1: Section 1.1310 RSS-102 Issue 5 February 2021			

Wareneingangsdatum: *Date of sample receipt*:	2025-02-26	Please refer to Photo Document
Prüfmuster-Nr.: *Test sample no:*	N/A	
Prüfzeitraum: *Testing period*:	N/A	
Ort der Prüfung: *Place of testing*:	N/A	
Prüflaboratorium: *Testing laboratory:*	TÜV Rheinland (Shenzhen) Co., Ltd.	
Prüfergebnis*: *Test result**:	Pass	

geprüft von: tested by: **Datum:** *Date:* 2025-07-08	X Jonathan Li Signed by: Jonathan Li	**genehmigt von:** *authorized by*: **Ausstellungsdatum:** *Issue date:* 2025-07-08	X Bell Hu Signed by: Bell Hu
Stellung / Position:	Sachverständige(r)/Expert	**Stellung** / Position:	Sachverständige(r)/Expert

Sonstiges / *Other*:	FCC ID:2A8GZ3004006 IC ID:33788-3004006 HVIN:3004006 Contains FCC ID: XMR201905AG35LA, IC: 10224A- 2019AG35NA This report is for RF exporure evalation.

Zustand des Prüfgegenstandes bei Anlieferung: *Condition of the test item at delivery*:	Prüfmuster vollständig und unbeschädigt *Test item complete and undamaged*

* Legende:	P(ass) = entspricht o.g. Prüfgrundlage(n)	F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet
** Legend:*	*P(ass) = passed a.m. test specification(s)*	*F(ail) = failed a.m. test specification(s)*	*N/A = not applicable*	*N/T = not tested*

Anmerkungen
Remarks

1	Alle eingesetzten Prüfmittel waren zum angegebenen Prüfzeitraum gemäß eines festgelegten Kalibrierungsprogramms unseres Prüfhauses kalibriert. Sie entsprechen den in den Prüfprogrammen hinterlegten Anforderungen. Die Rückverfolgbarkeit der eingesetzten Prüfmittel ist durch die Einhaltung der Regelungen unseres Managementsystems gegeben. Detaillierte Informationen bezüglich Prüfkonditionen, Prüfequipment und Messunsicherheiten sind im Prüflabor vorhanden und können auf Wunsch bereitgestellt werden. *The equipment used during the specified testing period was calibrated according to our test laboratory calibration program. The equipment fulfils the requirements included in the relevant standards. The traceability of the test equipment used is ensured by compliance with the regulations of our management system.* *Detailed information regarding test conditions, equipment and measurement uncertainty is available in the test laboratory and could be provided on request.*
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3	Prüfklausel mit der Note * wurden an qualifizierte Unterauftragnehmer vergeben und sind unter der jeweiligen Prüfklausel des Berichts beschrieben. Abweichungen von Prüfspezifikation(en) oder Kundenanforderungen sind in der jeweiligen Prüfklausel im Bericht aufgeführt. *Test clauses with remark of * are subcontracted to qualified subcontractors and descripted under the respective test clause in the report.* *Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report.*
4	Die Entscheidungsregel für Konformitätserklärungen basierend auf numerischen Messergebnisen in diesem Prüfbericht basiert auf der "Null-Grenzwert-Regel" und der "Einfachen Akzeptanz" gemäß ILAC G8:2019 und IEC Guide 115:2023, es sei denn, in der auf Seite 1 dieses Berichts genannten angewandten Norm ist etwas anderes festgelegt oder vom Kunden gewünscht. Dies bedeutet, dass die Messunsicherheit nicht berücksichtigt wird und daher auch nicht im Prüfbericht angegeben wird. Zu weiteren Informationen bezueglich des Risikos durch diese Entscheidungsregel siehe ILAC G8:2019. *The decision rule for statements of conformity, based on numerical measurement results, in this test report is based on the "Zero Guard Band Rule" and "Simple Acceptance" in accordance with ILAC G8:2019 and IEC Guide 115:2023, unless otherwise specified in the applied standard mentioned on Page 1 of this report or requested by the customer. This means that measurement uncertainty is not taken in account and hence also not declared in the test report. For additional information to the resulting risk based of this decision rule please refer to ILAC G8:2019.*

TEST SUMMARY

5.1.1 RF EXPOSURE COMPLIANCE

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: N/A

2. Test Sites

2.1 Test Facilities

TÜV Rheinland (Shenzhen) Co., Ltd.
2-3F, 101 & 102, No.2, Nuclear Power Industrial Park, Fuming Community, Fucheng Street, Longhua District, Shenzhen 518000, China

FCC Accreditation Designation No.: 694916

ISED Wireless Device Testing Laboratory: 25069

2.2 Traceability

All measurement equipment calibrations are traceable to NIST or where calibration is performed outside the United States, to equivalent nationally recognized standards organizations.

2.3 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.

2.4 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix A of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) file for certification follow-up purposes.

2.5 Status of Facility Used for Testing

The TÜV Rheinland (Shenzhen) Co., Ltd. facility located at 2-3F, 101 & 102, No.2, Nuclear Power Industrial Park, Fuming Community, Fucheng Street, Longhua District, Shenzhen 518000, People's Republic of China is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

3. General Product Information

3.1 Product Function and Intended Use

The product is a T-BOX which supports Bluetooth and GSM/WCDMA/LTE wireless technology.
This product contains LTE module “AG35-LA” (FCC ID: XMR201905AG35LA IC: 10224A-2019AG35NA).
For details refer to the User Manual, Technical Description and Circuit Diagram.

3.2 Ratings and System Details

Table 1: Technical Specification of EUT

General Information of EUT	**Value**
Kind of Equipment:	T-BOX
Type Designation:	CF-T12VNA08
FCC ID:	2A8GZ3004006
IC ID:	33788-3004006
Operating Voltage:	DC 13.5V
Operating Temperature Range:	-40 °C ~ +85 °C
Technical Specification of Bluetooth LE	
Operating Frequency:	2402-2480MHz
Type of Modulation:	GFSK
Channel Number:	40 channels
Data Rate:	1Mbps
Channel Separation:	2 MHz
Antenna Type:	PIFA Antenna
Antenna Gain:	0.72 dBi
Technical Specification of GSM / WCDMA / LTE	
GSM Operating Band:	GSM 850: 824 to 849 MHz GSM 1900: 1850 to 1910 MHz
WCDMA Operating Band:	WCDMA Band 2: 1850 to 1910 MHz WCDMA Band 4: 1710 to 1755 MHz WCDMA Band 5: 824 to 849 MHz
LTE Operating Band:	LTE Band 2: 1850 to 1910 MHz LTE Band 4: 1710 to 1755 MHz LTE Band 5: 824 to 849 MHz LTE Band 7: 2500 to 2570MHz LTE Band 12: 699 to 716 MHz LTE Band 13: 777 to 787 MHz LTE Band 17: 704 to 716 MHz
Type of Modulation:	GSM: GMSK(GPRS/EGPRS), 8PSK(EGPRS) WCDMA & LTE: QPSK, 16QAM
Antenna Type:	Internal Antenna
Antenna Gain:	0 dBi (Provided by the Client)

4. Test Results

4.1 Transmitter Requirements & Test Suites

4.1.1 RF Exposure Compliance

RESULT: **Pass**

Test standard	:	RSS-102 Issue 5 47 CFR FCC Part 2.1091
Limit	:	Table 1 of 47 CFR FCC Part 1.1310 Table 4 of RSS-102 Issue 5
Kind of test site	:	Shielded room

This device is mobile device, and the applicant declares that the minimum separation distance is greater than 20cm. Therefore MPE measurement or computational modeling should be used to determine compliance.

Radio Frequency Exposure Calculation Formula:

MPE Calculation is based on the conducted power and considering maximum power and Antenna gain. The following formula is used to MPE evaluation.

$$Pd = \frac{Pout * G}{4R^2\pi}$$

Where,
P_d = power density in mW/cm^2 or W/m^2
P_{out} = output power to antenna in mW or W
G_{num} = Antenna gain in numeric
π = 3.14159
R = Distance between observation point and the center of radiator in cm or m

4.1.1.1 FCC Part 1.1310, Part 2.1091

Radio Frequency Exposure of FCC Limit

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f2)	6
30-300	61.4	0.163	1.0	6
300-1500			f/300	6
1500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f2)	30
30-300	27.5	0.073	0.2	30
300-1500			f/1500	30
1500-100,000			1.0	30

Table 2: Test Results of RF Exposure Calculations for FCC, Stand-alone mode

Operating Mode (Worst-case)	Max. EIRP (dBm)	Distance (cm)	MPE (mW/cm^2)	Limit (mW/cm^2)	Verdict
Bluetooth	-5.19	20	0.0000	1.0	Pass
LTE B5*	25	20	0.0629	0.550	Pass

*Refer to certificated module FCC ID: XMR201905AG35LA, Antenna Gain: 0dBi Max

Table 3: Test Results of RF Exposure Calculations for FCC, Simultaneous mode

Operating Mode (Worst-case)	Distance (cm)	Sum of the ratios	Limit	Verdict
Bluetooth+LTE B5	20	0.115	1.0	Pass

➢ **Conclusion**

Therefore the maximum calculations result of above are meet the requirement of Radio Frequency Exposure (MPE) limit.

4.1.1.2 RSS-102 Exemption Limits for Routine Evaluation – RF Exposure Evaluation

Exemption from Routine Evaluation Limits – RF Exposure Evaluation

Table 4: RF Field Strength Limits for Devices Used by the General Public (Uncontrolled Environment)

Frequency Range (MHz)	Electric Field (V/m rms)	Magnetic Field (A/m rms)	Power Density (W/m^2)	Reference Period (minutes)
0.003-10[21]	83	90	-	Instantaneous*
0.1-10	-	$0.73/f$	-	6**
1.1-10	$87/f^{0.5}$	-	-	6**
10-20	27.46	0.0728	2	6
20-48	$58.07/f^{0.25}$	$0.1540/f^{0.25}$	$8.944/f^{0.5}$	6
48-300	22.06	0.05852	1.291	6
300-6000	$3.142f^{0.3417}$	$0.008335f^{0.3417}$	$0.02619f^{0.6834}$	6
6000-15000	61.4	0.163	10	6
15000-150000	61.4	0.163	10	$616000/f^{1.2}$
150000-300000	$0.158f^{0.5}$	$4.21 \times 10^{-4} f^{0.5}$	$6.67 \times 10^{-5} f$	$616000/f^{1.2}$

Note: f is frequency in MHz.
*Based on nerve stimulation (NS).
** Based on specific absorption rate (SAR).

Table 4: RF Exposure Calculations for ISED, Stand-alone mode

Operating Mode (Worst-case)	Max. EIRP (dBm)	Distance (cm)	Calculation (W/m2)	ISED Limit (W/m2)	Verdict
Bluetooth	-5.19	20	0.0002	5.351	Pass
LTE B5*	25	20	0.6294	2.302	Pass

*Refer to certificated module IC: 10224A- 2019AG35NA, Antenna Gain: 0dBi Max

Table 5: Test Results of RF Exposure Calculations for ISED, Simultaneous mode

Operating Mode (Worst-case)	Distance (cm)	Sum of the ratios	Limit	Verdict
Bluetooth+LTE B5	20	0.273	1.0	Pass

➢ **Conclusion**

Therefore the maximum calculations result of above are meet the requirement of Radio Frequency Exposure (MPE) limit.

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========== END OF REPORT ==========