

RF EXPOSURE EVALUATION REPORT

Application No.: GZCR2505000682HS
Applicant: BAUF HOME GmbH
Address of Applicant: Frankfurter Straße 16, 74072 Heilbronn, Germany
Manufacturer: BAUF HOME GmbH
Address of Manufacturer: Frankfurter Straße 16, 74072 Heilbronn, Germany
Factory: TCL Air Conditioner (Zhong Shan) Co., Ltd.
Address of Factory: 59 Nantou Road West, Nantou, Zhongshan, Guangdong, China
Product Name: Air conditioner
Model No.: BRAC-SP-INE2-18-R3
(Indoor unit: BRAC-SP-INE2-18-R3-I, Outdoor unit: BRAC-SP-INE2-18-R3-O) ♣

♣ Please refer to section 2 of this report which indicates which model was actually tested and which were electrically identical.

Trade Mark: **BAUF**

Standard(s) : EN IEC 62311: 2020
Date of Receipt: 2024-10-30
Date of Evaluation: 2024-11-11
Date of Issue: 2025-07-03

Evaluation Result:	Pass*
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* In the configuration evaluated, the EUT complied with the standards specified above.



Jerry Chan
Manager



Revision Record			
Version	Report No.	Date	Remark
01	GZCR241000128605	2024-12-24	Original
C01	GZCR241000128605C01	2025-07-03	Amendment report: Changed applicant, manufacturer, product name, model no. and trade mark.

Authorized for issue by:			
	<i>Pank Feng</i>		
	Pank Feng/Project Engineer		
	<i>Vico Cui</i>		
	Vico Cui/Reviewer		



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2 Evaluation Summary

Note:

E.U.T./EUT means Equipment Under Test.

Pass means the test result passed the test standard requirement, please find the detailed decision rule in the report relative section.

♣ Remark for report GZCR241000128605

♣ Declaration of EUT Family Grouping:

Model No.:

TAC-18CHSD(011630)/*I ("*" represent different panel, "*" =Z, HA, IA, KA, HC, JC, KC, HD, KD, JE, KE, WE, LF, IF, KF, VA, VB, VC, VD, VE, VF, XA11, XA21, XA31, XA41, XA51, XA61, XA71, XA72, XA81, XA82, XA91, XAA1, XAB1, XAC1, XAD1, XAE1, YA11, YA21, YA31, TP11, TP21, TP31, TP41, TP51, TP61, TP71, TP72, TP81, TP91, TPA1, TPB1, TPG11, TPH21, TPG21, TPG31, UA11, UA12, UG11, UG21, UG31, UA21, TPH11, TPH21, DWA, LGA),

S18P9S1 (Indoor unit: SN18P9S1, Outdoor unit: ST18P3), TAC-18CHSD/UG11V3A

According to the declaration from the applicant, the electrical circuit design, layout, components used and internal wiring were identical for all models, with only difference on the appearance color of panel.

Therefore only one model **TAC-18CHSD(011630)/UA11I** was evaluated in this report.

♣ Remark for report GZCR241000128605C01:

This report GZCR241000128605C01 is based on original report GZCR241000128605, with the following changes:

1. Changed applicant's and manufacturer's information.
2. Changed product name and trade mark.
3. Changed model number to BRAC-SP-INE2-18-R3(Indoor unit: BRAC-SP-INE2-18-R3-I, Outdoor unit: BRAC-SP-INE2-18-R3-O).

According to the declaration of the applicant, the Model BRAC-SP-INE2-18-R3 in this report and the Model TAC-18CHSD(011630)/UA11I in the original report were identical, with only difference being the model name and trade mark.

Evaluated data in report GZCR241000128605 was kept in this report GZCR241000128605C01.



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4 General Information

4.1 Details of E.U.T.

Power supply:	AC 220-240V 50Hz
	Clock frequency: <15MHz
	AC mains cable:3 wires 2.0m unshielded
	signal cable:5.0m x 5 wires unshielded
Cable(s):	AC mains cable:3 wires 2.0m unshielded
	signal cable:5.0m x 5 wires unshielded
Operation Frequency:	2402MHz to 2480MHz
Modulation Type:	GFSK
Channel Spacing:	2MHz
Number of Channels:	40
Antenna Gain:	2.5 dBi
Operation Frequency:	802.11b/g/n(HT20): 2412MHz to 2472MHz
Modulation Type:	802.11b: DSSS (CCK, DQPSK, DBPSK), 802.11g/n: OFDM (64QAM, 16QAM, QPSK, BPSK)
Channel Spacing:	5MHz
Number of Channels:	802.11b/g/n(HT20): 13
Antenna Gain:	2.5 dBi

Remark: The information in this section is provided by the applicant or manufacturer, SGS is not liable to the accuracy, suitability, reliability or/and integrity of the information.

4.2 Evaluating Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou Branch EMC Laboratory,
No.198, Kezhu Road, Science City, Economic & Technological Development Area, Guangzhou,
Guangdong, China 510663

Tel: +86 20 82155555

No tests were sub-contracted.



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4.3 Facility

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

- **ACMA**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory can also perform testing for the Australian/New Zealand Regulatory Compliance Mark (RCM).

- **SGS UK(Certificate No.: 32), SGS-TUV SAARLAND and SGS-FIMKO**

Have approved SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory as a supplier of EMC TESTING SERVICES and SAFETY TESTING SERVICES.

- **FCC Recognized Accredited Test Firm(Registration No.: 486818)**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been accredited and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Designation Number: CN5016, Test Firm Registration Number: 486818.

- **ISED (Registration No.: 4620B, CAB identifier: CN0052)**

SGS-CSTC Standards Technical Services Co., Ltd., has been registered by Innovation Science and Economic Development Canada for Wireless Device Testing laboratories to test to Canadian radio equipment requirements. Registration No. 4620B, CAB identifier: CN0052.

- **VCCI (Registration No.: R-12460, C-12584, G-20107 and T-11179)**

The 10m Semi-anechoic chamber, 966 Anechoic Chamber and Shielded Room of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-12460, C-12584, G-20107 and T-11179 respectively.

- **CBTL (Lab Code: TL129)**

SGS-CSTC Standards Technical Services Co., Ltd., E&E Laboratory has been assessed and fully comply with the requirements of ISO/IEC 17025:2017, the Basic Rules, IECEE 01 and Rules of procedure IECEE 02, and the relevant IECEE CB-Scheme Operational documents.

4.4 Deviation from Standards

None

4.5 Abnormalities from Standard Conditions

None



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5 Technical Requirements Specification

5.1 General Description of Applied Standards

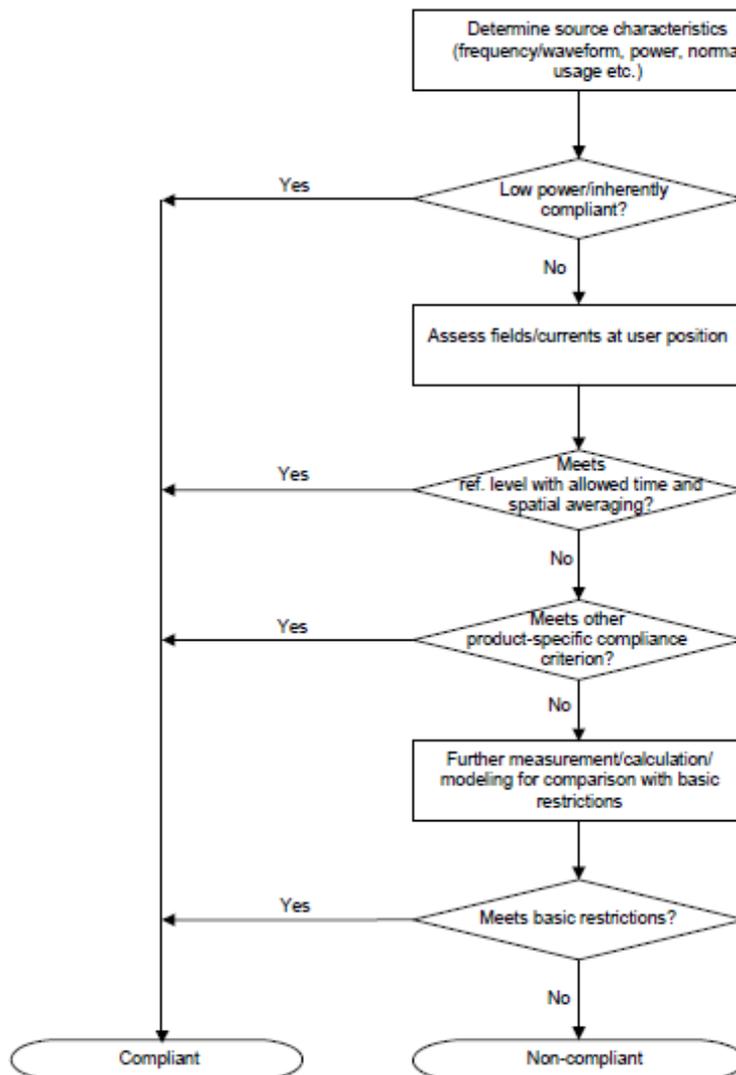
EN 62311 Generic standard to demonstrate the compliance of electronic and electrical apparatus with the basic restrictions related to human exposure to electromagnetic fields (0 Hz-300 GHz) is to demonstrate the compliance of apparatus with the basic restrictions or reference levels on exposure of the general public related to electric, magnetic, electromagnetic fields as well as induced and contact current.

5.2 RF Exposure Evaluation

5.2.1 Limit & Test Method

EN 62311 Generic standard to demonstrate the compliance of electronic and electrical apparatus with the basic restrictions related to human exposure to electromagnetic fields (0 Hz - 300 GHz) is to demonstrate the compliance of apparatus with the basic restrictions or reference levels on exposure of the general public related to electric, magnetic, electromagnetic fields as well as induced and contact current.

Assessment flowchart:



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Note: The decision “low power / inherently compliant” shall be based on an assessment where the emissions are specified in a performance standard e.g. a transmitter performance standard and where the output power is limited to a level that cannot exceed the basic restriction. It can also be any other product standard giving the same limitation on the emission level. Some products use a technology or input powers that have the consequence that the emissions cannot exceed the basic restrictions, e.g. non-radio transmitter products like wrist-watches, ADSL modems, computers, telecommunications equipment and hi-fi systems. This shall also be taken into account when the assessment is made.

According to EN 62311, the criteria listed in the below table shall be used to evaluate the environmental impact of human exposure to radio-frequency (RF) radiation as specified table 2 of Council Recommendation 1999/519/EC.

Table 2

**Reference levels for electric, magnetic and electromagnetic fields
(0 Hz to 300 GHz, unperturbed rms values)**

Frequency range	E-field strength (V/m)	H-field strength (A/m)	B-field (μT)	Equivalent plane wave power density S_{eq} (W/m ²)
0-1 Hz	—	$3,2 \times 10^4$	4×10^4	—
1-8 Hz	10 000	$3,2 \times 10^4/f^2$	$4 \times 10^4/f^2$	—
8-25 Hz	10 000	$4\ 000/f$	$5\ 000/f$	—
0,025-0,8 kHz	$250/f$	$4/f$	$5/f$	—
0,8-3 kHz	$250/f$	5	6,25	—
3-150 kHz	87	5	6,25	—
0,15-1 MHz	87	$0,73/f$	$0,92/f$	—
1-10 MHz	$87/f^{1/2}$	$0,73/f$	$0,92/f$	—
10-400 MHz	28	0,073	0,092	2
400-2 000 MHz	$1,375 f^{1/2}$	$0,0037 f^{1/2}$	$0,0046 f^{1/2}$	$f/200$
2-300 GHz	61	0,16	0,20	10

Notes:

1. *f* as indicated in the frequency range column.
2. For frequencies between 100 kHz and 10 GHz, S_{eq} , E^2 , H^2 , and B^2 are to be averaged over any six-minute period.
3. For frequencies exceeding 10 GHz, S_{eq} , E^2 , H^2 , and B^2 are to be averaged over any $68/f^{1.05}$ -minute period (*f* in GHz).
4. No E-field value is provided for frequencies < 1 Hz, which are effectively static electric fields. For most people the annoying perception of surface electric charges will not occur at field strengths less than 25 kV/m. Spark discharges causing stress or annoyance should be avoided.



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The antenna of the product, under normal use condition is at least 20cm away from the body of the user. Warning statement to the user for keeping 20cm separation distance and the prohibition of operating to a person has been printed on the user manual. So, this product under normal use is located on electromagnetic far field between the human body.

Far Field Calculation Formula

$$E = \frac{\sqrt{30PG(\theta, \phi)}}{r}$$

G = antenna gain relative to an isotropic antenna
 θ, ϕ = elevation and azimuth angles to point of investigation
r = distance from observation point to the antenna

5.2.2 Conclusion

Normal use condition for Distance between antenna and body: 20cm

For 2.4G Wi-Fi

The max EIRP in report 4842019325300C was tested for 802.11b (HT20) at 2412 channel as below:

Antenna Gain (dBi)	Numeric Gain	Conducted power (dBm)	EIRP (dBm)	Power (mW)	Distance (m)	E Field Strength (V/m)	E Field Strength Limit (V/m)	Result
2.5	1.778279	15.7	18.2	66.069	0.2	7.039	61	Pass

For BT BLE

The max EIRP in report 4842019325300B was tested at 2402 channel as below:

Antenna Gain:	2.5	dBi						
Numeric Gain:	1.778279							
dBi	Numeric Gain	Conducted power (dBm)	EIRP (dBm)	Power (mW)	Distance (m)	E Field Strength (V/m)	E Field Strength Limit (V/m)	Result
2.5	1.778279	6.4	8.9	7.762	0.2	2.413	61	Pass

The RF module can be transmitted at the same time, so the result $7.039/61 + 2.413/61 = 0.155 < 1$, so the device meets the RF exposure and without SAR test.



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6 EUT Constructional Details (EUT Photos)

Refer to Appendix_Photographs of EUT Constructional Details for GZCR2410001286HS

- End of the Report -



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