

RF EXPOSURE EVALUATION REPORT

Application No.: GZCR2308000817HS
Applicant: HANTECH IKLIMLENDIRME SAN.TIC.A.S.
Address of Applicant: Ziya Gökalp Mah. Süleyman Demirel Blv. No:138 7-E, Başakşehir İstanbul, Türkiye
Manufacturer: GD TCL Intelligent Heating & Ventilating Equipment Co., Ltd.
Address of Manufacturer: NO. 7 Yuanlin Road, Nantou Town, Zhongshan City, Guangdong, P.R.China
Factory: GD TCL Intelligent Heating & Ventilating Equipment Co., Ltd.
Address of Factory: NO. 7 Yuanlin Road, Nantou Town, Zhongshan City, Guangdong, P.R.China
Equipment Under Test (EUT):
EUT Name: Air Conditioner
Model No.: Indoor Unit: HNT-D42VMTC/I
 Outdoor Unit: HNT-O42VMTC/O
Trade Mark: HANTECH
Standard(s) : EN/IEC 62311: 2020
Date of Receipt: 2023-06-29
Date of Evaluation: 2023-06-29 to 2023-06-30
Date of Issue: 2023-08-14

Evaluation Result:

Pass*

* In the configuration evaluated, the EUT complied with the standards specified above.



Jerry Chan
Manager



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Revision Record			
Version	Report No.	Date	Remark
01	GZCR230600065404	2023-06-30	Original
C01	GZCR230600065404C01	2023-08-14	Co-license report: Updated applicant's information, model name, trade mark.

Authorized for issue by:			
			
		Simon Cai/Project Engineer	
			
		Ricky Liu/Reviewer	

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 Co-license report GZCR230600065404C01:

This report GZCR230600065404C01 was a Co-license report copied from the GZCR230600065404 original report, in which the applicant's name & address and model name, trade mark were changed.

According to the declaration of the applicant, the Model Indoor Unit: HNT-D42VMTC/I and Outdoor Unit: HNT-O42VMTC/O in this report and the Model TCC-42D2HWH/DV(02) in the original report were identical, with only difference being trade mark and model name.

Therefore original data was kept in this report GZCR230600065404C01.

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4 General Information

4.1 Details of E.U.T.

Power supply: AC 220-240V 50Hz
Battery operation: DC 3V =DC 1.5V x 2 size AAA batteries
Clock frequency:<15MHz
Cable(s): AC mains cable:3 wires 2.0m unshielded
signal cable:5.0m x 5 wires unscreened

The RF parameter refer to report 4842020356400B

4.2 Evaluating Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou Branch EMC Laboratory,
198 Kezhu Road, Sciencetech Park, Guangzhou Economic & Technology Development District,
Guangzhou, China 510663

Tel: +86 20 82155555 Fax: +86 20 82075059

No tests were sub-contracted.



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Guangzhou Branch EMC Laboratory

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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

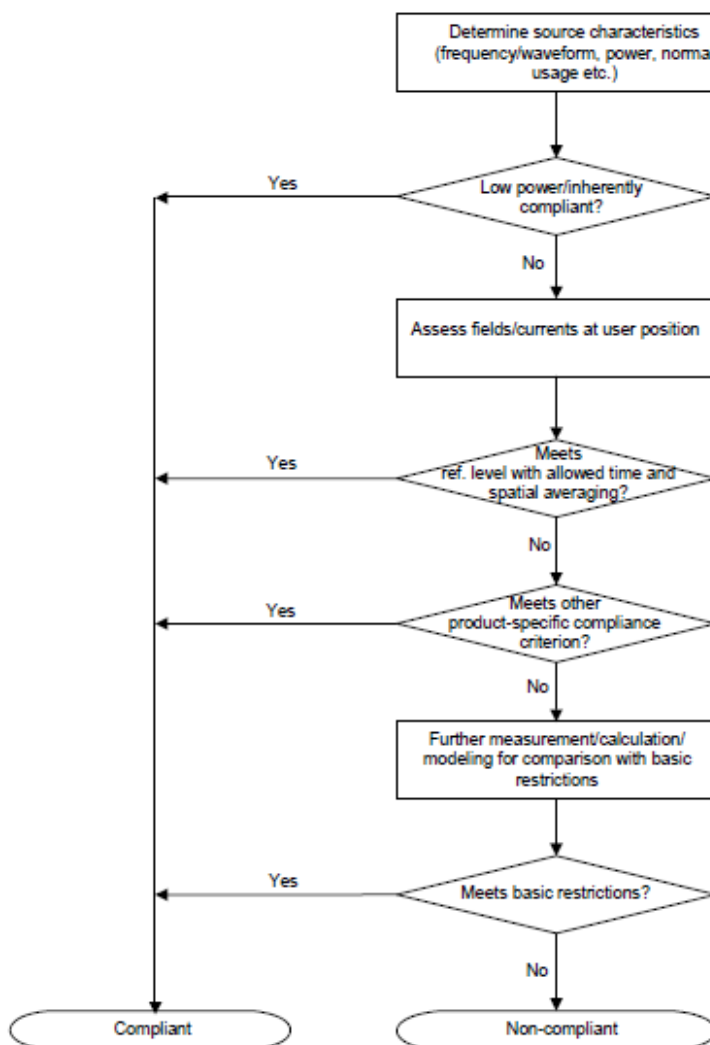
EN 62311 Generic standard to demonstrate the compliance of electronic and electrical apparatus with the basic restrictions related to human exposure to electromagnetic fields (0 Hz-300 GHz) is to demonstrate the compliance of apparatus with the basic restrictions or reference levels on exposure of the 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:



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

For Wi-Fi

The max EIRP in report 4842020356400B was tested for 802.11g (HT20) at 2472 channel as below:

Antenna Gain:	3	dBi						
Numeric Gain:	1.995262							
dBi	Numeric Gain	Conducted power (dBm)	EIRP (dBm)	Power (mW)	Distance (m)	E Field Strength (V/m)	E Field Strength Limit (V/m)	Result
3	1.995262	15.3	18.3	67.608	0.2	10.058	61	Pass

6 EUT Constructional Details (EUT Photos)

Refer to Appendix - Photographs of EUT Constructional Details for GZCR2308000817HS

- End of the Report -