



MPE Test Report

Report No.: LGD-ESH-P22111124B-3

FCC ID: PII-31405

Product: RF Module with 902-928 MHz ISM frequency band

Model: ETII RF V2

Received Date: Nov.18, 2022

Test Date: Nov.18, 2022 to Dec.14, 2022

Issued Date: Dec.14, 2022

Applicant: Vantage Controls Inc.

Address: 2240 Campbell Creek Blvd Ste #110, Richardson, TX, United States 75082

Manufacturer: SHANGHAI LEGRAND ELECTRICAL CO., LTD

Address: 1&2/F, Building 1, No. 1358 Xiangyang Road, Minhang District
ShangHai, CHINA(201108)

Issued By: BUREAU VERITAS ADT (Shanghai) Corporation

Lab Address: No. 829, Xinzhuan Road, Shanghai, P.R.China (201612)



Test Lab
Cert 2343.01

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Release Control Record

Issue No.	Description	Date Issued
LGD-ESH-P22111124B-3	Original release	Dec.14, 2022



1 Certificate of Conformity

Product: RF Module with 902-928 MHz ISM frequency band

Brand: Vantage

Model: ETII RF V2

Applicant: Vantage Controls Inc.

Test Date: Nov.18, 2022 to Dec.14, 2022

Standards: FCC Part 2 (Section 2.1091)

KDB 447498 D01 General RF Exposure Guidance v06

IEEE C95.1-1992

The above equipment has been tested by **BUREAU VERITAS ADT (Shanghai) Corporation**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

Prepared by :

, Date:

Dec.14, 2022

Yan ZHOU

Project Engineer

Approved by :



Sean YU

RF Supervisor

, Date:

Dec.14, 2022

2 General Information

2.1 General Description of EUT

Product	RF Module with 902-928 MHz ISM frequency band
Brand	Vantage
Model	ETII RF V2
Difference	--
Power Rating	1.8Vdc- 3.6Vdc
Modulation Type	FSK
Modulation Technology	FHSS
Operating Frequency	907.3MHz-916.9MHz
Number of Channel	25
Output Power	15.136 dBm
Antenna Type	Monopole antenna
Antenna Connector	IPEX
Antenna Gain	1.58 dBi

Note:

1. For more details, please refer to the User's manual of the EUT.



2.2 Test Facility

Laboratory Name: Bureau Veritas ADT (ShangHai) Corporation

Laboratory Address: No.829, Xin Zhuan Road, Song Jiang District, Shanghai, China

Test Location: No.829, Xin Zhuan Road, Song Jiang District, Shanghai, China

A2LA Lab Code: 2343.01

FCC-Recognized Accredited Testing Lab: CN1213

ISED Recognized Lab: 6392A

FCC Accredited Test Site Number: 176467

3 RF Exposure

3.1 Limits For Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (minutes)
Limits For General Population / Uncontrolled Exposure				
300-1,500	-	-	F/1500	30
1,500-100,000	-	-	1.0	30

F = Frequency in MHz

3.2 MPE Calculation Formula

Power density (S) is calculated according to the formula:

$$S = PG / (4\pi R^2)$$

Where S = power density in mW/cm²

P = transmit power in mW

G = numeric gain of transmit antenna (numeric gain=Log-1(dB antenna gain/10))

R = distance (cm)

3.3 MPE Calculation Formula

The antenna of this product, under normal use condition, is at least 20cm from the body of the user. So the device is classified as Mobile Device.

3.4 Calculation Result of Maximum Permissible Exposure

The tuned conducted Power (declared by client)

Mode	Frequency (MHz)	Target Power (dBm)	Tolerance (dBm)	Lower Tolerance (dBm)	Upper Tolerance (dBm)
FHSS	907.3-916.9	14.2	±1	13.2	15.2

The measured conducted Power

Mode	Frequency (MHz)	Max. Conducted Output power(dBm)
FHSS	916.9	15.136

Frequency Band (MHz)	Max. Conducted output power(dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
907.3-916.9	15.2	1.58	20	0.0095	1

Conclusion:

The calculation result of MPE is less than the limit.

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