TEST REPORT

Product Name : Alarm Host
Model Number : PG-A01, PG-A02
FCC ID : 2AIT9PA-PG-A01

Prepared for	:	SZ PGST CO., LTD
Address	:	No.9 Building, Huafu Industrial Park, Huachang Road, Longhua District, Shenzhen, Guangdong, China
Prepared by	:	EMTEK (DONGGUAN) CO., LTD.
Address	:	-1&2/F.,Building 2, Zone A, Zhongda Marine Biotechnology Research and Development Base, No.9, Xincheng Avenue, Songshanhu High-technology Industrial Development Zone, Dongguan, Guangdong, China TEL: +86-0769-22807078 FAX: +86-0769-22807079
Report Number	:	EDG2410170046E00302R
Date(s) of Tests	:	Oct 17, 2024 to Jan 17, 2025
Date of issue	:	Jan 20, 2025

Table of Contents

1. TEST RESULT CERTIFICATION

Applicant	:	SZ PGST CO., LTD
Address	:	No.9 Building, Huafu Industrial Park, Huachang Road, Longhua District, Shenzhen, Guangdong, China
Manufacturer	:	SZ PGST CO., LTD
Address	:	No.9 Building, Huafu Industrial Park, Huachang Road, Longhua District, Shenzhen, Guangdong, China
Factory	:	SZ PGST CO., LTD
Address	:	No.9 Building, Huafu Industrial Park, Huachang Road, Longhua District, Shenzhen, Guangdong, China
EUT	:	Alarm Host
Model Name	:	PG-A01, PG-A02
Trademark	:	N/A

Measurement Procedure Used:

APPLICABLE STANDARDS	
STANDARD	**TEST RESULT**
§ 15.247(i), § 2.1091	**PASS**

The above equipment was tested by EMTEK(DONGGUAN) CO., LTD. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10 (2013) and the energy emitted by the sample EUT tested as described in this report is in compliance with the requirements of FCC Rules FCC § 15.247(i), § 2.1091.
The test results of this report relate only to the tested sample identified in this report

Date of Test : Oct 17, 2024 to Jan 17, 2025

Prepared by : Jessica Zhang /Editor

Reviewer : Warren Deng /Supervisor

Approved & Authorized Signer : Sam Lv / Manager

Modified History

Version	Report No.	Revision Date	Summary
	EDG2410170046E00302R	/	Original Report

2. EUT Specification

Characteristics	Description
Product:	Alarm Host
Model Number:	PG-A01, PG-A02 All products are identical except the model number and shape.Here we selected PG-A01 for all the test.
Sample:	2#
Device Type:	2.4G WIFI 433.9MHz
Data Rate:	802.11b 802.11g 802.11n(20MHz channel bandwidth) 802.11n(40MHz channel bandwidth)
Modulation:	DSSS with DBPSK/DQPSK/CCK for 802.11b; OFDM with BPSK/QPSK/16QAM/64QAM for 802.11g/n; ASK for 433.9MHz
Operating Frequency Range(s) :	2412-2462MHz for 802.11b/g/n(HT20); 2422-2452MHz for 802.11n(HT40); 433.9MHz
Number of Channels:	11 channels for 802.11b/g/n(HT20); 7 Channels for 802.11n(HT40); 1 channel for 433.9MHz
Transmit Power Max:	2.4G WIFI:16.29 dBm(0.042560 W) 433.9MHz:49.80dBuV@3m
Antenna Type:	2.4G WIFI:PCB antenna 433.9MHz:Spring antenna
Antenna Gain:	2.4G WIFI:1.37 dBi 433.9MHz:-3.0 dBi
Power supply:	DC 5V from adapter or DC3.7V built-in battery
Evaluation applied:	☒ MPE Evaluation ☐ SAR Evaluation

3. Test Requirement:

RF EXPOSURE EVALUATION

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency(RF) Radiation as specified in §1.1307(b)

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
(A) Limits for Occupational/Control Exposures				
300-1500	**--**	**--**	**F/300**	**6**
1500-100000	**--**	**--**	**5**	**6**
(B) Limits for General Population/Uncontrol Exposures				
300-1500	**--**	**--**	**F/1500**	**6**
1500-100000	**--**	**--**	**1**	**30**

Friis transmission formula: Pd= (Pout*G)\ (4*pi*R2)

Where

Pd= Power density in mW/cm^2

Pout=output power to antenna in mW

G= Numeric gain of the antenna relative to isotropic antenna

Pi=3.1416

R= distance between observation point and center of the radiator in cm

Pd the limit of MPE, $1mW/cm^2$. If we know the maximum gain of the nd total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

4. Measurement Result

Antenna gain:
2.4G: 1.37 dBi

Channel Freq. (MHz)	modulation	conducted power (dBm)	Tune-up power (dBm)	Max		Antenna		Evaluation result (mW/cm2)	Power density Limits (mW/cm2)
				tune-up power		Gain			
				(dBm)	(mW)	(dBi)	Numeric		
2412	11B	16.29	16±1	17	50.119	1.37	1.37	0.0137	1
2437		15.71	16±1	17	50.119	1.37	1.37	0.0137	1
2462		14.46	14±1	15	31.623	1.37	1.37	0.0086	1
2412	11G	15.55	15±1	16	39.811	1.37	1.37	0.0109	1
2437		14.9	15±1	16	39.811	1.37	1.37	0.0109	1
2462		13.6	14±1	15	31.623	1.37	1.37	0.0086	1
2412	11N20SISO	14.37	14±1	15	31.623	1.37	1.37	0.0086	1
2437		13.72	14±1	15	31.623	1.37	1.37	0.0086	1
2462		12.44	12±1	13	19.953	1.37	1.37	0.0054	1
2422	11N40SISO	13.26	13±1	14	25.119	1.37	1.37	0.0069	1
2437		12.44	12±1	13	19.953	1.37	1.37	0.0054	1
2452		11.26	11±1	12	15.849	1.37	1.37	0.0043	1

433.9MHz
Antenna gain: -3.0 dBi

Channel Freq. (MHz)	modulation	Max Field Strength (dBuV/m)	peak output power (dBm)	Tune-up power (dBm)	Max		Antenna		Evaluation result (mW/cm2)	Power density Limits (mW/cm2)
					tune-up power		Gain			
					(dBm)	(mW)	(dBi)	Numeric		
433.9	ASK	49.8	-45.43	-45±1	-44	0.0000398	-3.00	0.50	0.0000000039694	0.2893

According to KDB 447498, no stand-alone required for WIFI antenna, and no simultaneous SAR measurement is required.

*** End of Report ***