RF Exposure Evaluation Declaration

FCC ID:	2ATW7-PSA27W
APPLICANT:	STONKAM CO., LTD
Application Type:	Certification
Product:	Radar Detection System
Model No.:	PSA27W
Trademark:	STONKAM
FCC Classification:	Digital Transmission System (DTS)
Test Date:	December 25, 2020

Reviewed By: (Kevin Guo)

Approved By: (Robin Wu)

Revision History

Report No.	Version	Description	Issue Date	Note
2011RSU081-U2	Rev. 01	Initial Report	12-25-2020	Valid

CONTENTS

1. General Information

1.1. Applicant

STONKAM CO., LTD
5/F, #3 Building, Huangzhou Industrial Park, Chebei Rd., Tianhe Dist., 510665 Guangzhou, China

1.2. Manufacturer

STONKAM CO., LTD
5/F, #3 Building, Huangzhou Industrial Park, Chebei Rd., Tianhe Dist., 510665 Guangzhou, China

1.3. Testing Facility

☒	**Test Site – MRT Suzhou Laboratory**	
	Laboratory Location (Suzhou - Wuzhong)	
	D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China	
	Laboratory Location (Suzhou - SIP)	
	4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China	
	Laboratory Accreditations	
	A2LA: 3628.01	CNAS: L10551
	FCC: CN1166	ISED: CN0001
	VCCI: R-20025, G-20034, C-20020, T-20020	
☐	**Test Site – MRT Shenzhen Laboratory**	
	Laboratory Location (Shenzhen)	
	1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China	
	Laboratory Accreditations	
	A2LA: 3628.02	CNAS: L10551
	FCC: CN1284	ISED: CN0105
☐	**Test Site – MRT Taiwan Laboratory**	
	Laboratory Location (Taiwan)	
	No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)	
	Laboratory Accreditations	
	TAF: L3261-190725	
	FCC: 291082, TW3261	ISED: TW3261

2. PRODUCT INFORMATION

2.1. Feature of Equipment under Test

Product Name	Radar Detection System
Model No.	PSA27W
Brand Name:	STONKAM
Wi-Fi Specification:	802.11b/g/n
EUT Identification No.:	20201127accessory#03

2.2. Product Specification Subjective to this Report

Frequency Range	802.11b/g/n-HT20: 2412 ~ 2462 MHz
Channel Number	802.11b/g/n-HT20: 11
Type of Modulation	802.11b: DSSS 802.11g/n: OFDM
Data Rate	802.11b: 1/2/5.5/11Mbps 802.11g: 6/9/12/18/24/36/48/54Mbps 802.11n: up to 72.2Mbps
Antenna Type:	FPC Antenna
Antenna Gain:	3dBi

Note 1: For other features of this EUT, test report will be issued separately.

Note 2: All product information is provided by the manufacturer.

3. RF Exposure Evaluation

3.1. Limits

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 (Minutes)
(A) Limits for Occupational/ Control Exposures				
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6
(B) Limits for General Population/ Uncontrolled Exposures				
300-1500	--	--	f/1500	6
1500-100,000	--	--	1	30

f= Frequency in MHz

Calculation Formula: $Pd = (Pout*G)/(4*pi*r^2)$

Where
Pd = power density in mW/cm^2
Pout = output power to antenna in mW
G = gain of antenna in linear scale
Pi = 3.1416
r = distance between observation point and center of the radiator in cm

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

3.2. Test Result of RF Exposure Evaluation

Product	Radar Detection System
Test Item	RF Exposure Evaluation

Antenna Gain: Refer to clause 2.2.

Test Mode	Frequency Band (MHz)	Conducted Average Power (dBm)	Antenna Gain (dBi)	Maximum EIRP (dBm)
802.11b/g/n	2412 ~ 2462	20.10	3	23.10

Test Mode	Frequency Band (MHz)	Maximum EIRP (dBm)	Safety Distance (cm)	Power Density (mW/cm^2)	Limit of Power Density (mW/cm^2)
802.11b/g/n	2412 ~ 2462	23.10	20	0.0406	1

CONCLUSION:

The max Power Density at R (20 cm) = 0.0406mW/cm^2 < 1mW/cm^2.

So the safety distance is 20cm for device installed without any other radio equipment.

The End

Appendix A - EUT Photograph

Refer to “2011RSU081-UE” file.