

RF EXPOSURE EVALUATION REPORT

Application No.: GZCR2109021074AT
Applicant: Develco Products
Address of Applicant: Tangen 6 Aarhus N 8200 Denmark
Manufacturer: Develco Products
Address of Manufacturer: Tangen 6 Aarhus N 8200 Denmark
Factory: GPV
Address of Factory: 834 Moo 4-Bangpoo Industrial Estate Soi 11,12-Sukhumvit Road-Praksa-Muang · Samutprakarn·10280·Thailand

Equipment Under Test (EUT):

EUT Name: Motion Sensor
Model No.: MOSZB-154
Trade Mark: Motion Sensor
Standard(s) : 47 CFR PART 1, Subpart I, Section 1.1307
47 CFR PART 1, Subpart I, Section 1.1310
47 CFR PART 2, Subpart J, Section 2.1091
KDB447498D01 General RF Exposure Guidance v06

Date of Receipt: 2021-09-03
Date of Evaluation: 2021-09-06 to 2021-09-08
Date of Issue: 2021-09-15

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

Kobe Jian
EMC Laboratory Manager



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Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2021-09-15		Original

Authorized for issue by			
Tested By		 <hr/> Curry Wu/Project Engineer	
Reviewed By		 <hr/> Ricky Liu/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.



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4 General Information

4.1 Details of E.U.T.

Power supply:	DC 3V(2*AA battery)
Internal Source:	More than 108MHz
Frequency Range:	2405MHz to 2480MHz
Modulation Type:	O-QPSK
Number of Channels:	16
Sample Type:	Fixed device
Antenna Type:	PCB Antenna
Antenna Gain:	1.0dBi

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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4.3 Facility

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

- **NVLAP (Lab Code: 200611-0)**

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou EMC Laboratory is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP/NIST). NVLAP Code: 200611-0.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

- **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.

- **CNAS (Lab Code: L0167)**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been assessed and in compliance with CNAS-CL01:2018 accreditation criteria for testing laboratories (identical to ISO/IEC 17025:2017 General Requirements) for the Competence of Testing Laboratories.

- **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 RF Exposure Evaluation

5.1.1 Limit & Test Method

According to FCC Part1.1310: 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 part1.1307(b)

TABLE 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)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3–3.0	614	1.63	*(100)	6
3.0–30	1842/f	4.89/f	*(900/f ²)	6
30–300	61.4	0.163	1.0	6
300–1500 .....	.....	.....	f/300	6
1500–100,000 .....	.....	.....	5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*(180/f ²)	30
30–300	27.5	0.073	0.2	30
300–1500 .....	.....	.....	f/1500	30
1500–100,000 .....	.....	.....	1.0	30

F= Frequency in MHz

Friis Formula

Friis transmission formula: $P_d = (P_{out} * G) / (4 * \pi * R^2)$

Where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

For Uncontrolled Environment, the MPE limit of 300MHz to 1500MHz is f/1500 mW/cm², the MPE limit of 1500MHz to 100000MHz is 1.0 mW/cm². 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.



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5.1.2 Conclusion

Antenna	Max Antenna Gain (dBi)	Max Antenna Gain (Numeric)	Max tune-up tolerance power (dBm)	Max tune-up Tolerance power to Antenna (mW)	Power Density at R = 20 cm (mW/cm ²)	Limit (mW/cm ²)	MPE Ratios	Result
1	1	1.26	6.82	4.81	0.0012	1	0.0012	PASS

6 EUT Constructional Details (EUT Photos)

Refer to appendix - external and internal photos for GZCR2109021074AT

- End of the Report -



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