MPE REPORT

FCC ID: 2AUJR- T28A

Date of issue: Sept. 27, 2019

Report number:	MTi19082907-1E2
Sample description:	GPS Tracker
Model(s):	T28A, T6, T8, T20, S2, S6, S8, SE2, SE6, SE8, V2, V6, V8, V10, V12, V16
Applicant:	Shenzhen Geman E-Commerce Co., Ltd.
Address:	4A120, Exchange Square, No. 1 Huanan City, Pinghu Town, Longgang District, Shenzhen, Guangdong, China
Date of test:	Sept. 05, 2019 to Sept. 25, 2019

Shenzhen Microtest Co., Ltd.

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TEST RESULT CERTIFICATION	
Applicant's name:	Shenzhen Geman E-Commerce Co., Ltd.
Address:	4A120, Exchange Square, No. 1 Huanan City, Pinghu Town, Longgang District, Shenzhen, Guangdong, China
Manufacture's name:	Shenzhen Geman E-Commerce Co., Ltd.
Address:	4A120, Exchange Square, No. 1 Huanan City, Pinghu Town, Longgang District, Shenzhen, Guangdong, China
Product name:	GPS Tracker
Trademark:	AHGUEP
Model and/or type reference:	T28A, T6, T8, T20, S2, S6, S8, SE2, SE6, SE8, V2, V6, V8, V10, V12, V16
Serial model:	CM2-1102120
RF exposure procedures:	KDB 447498 D01 v06

This device described above has been tested by Shenzhen Microtest Co., Ltd and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

Tested by: Demi Mu Sept. 25, 2019

Reviewed by: Blue Zheng Sept. 27, 2019

Approved by: Smith Chen Sept. 27, 2019

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)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposure				
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
300-1,500			f/300	6
1,500-100,000			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
300-1,500			f/1500	30
1,500-100,000			1.0	30

f = frequency in MHz * = Plane-wave equivalent power density

MPE Calculation Method

Friis transmission formula: $Pd= (Pout*G)\ (4*pi*R^2)$

Where

Pd= Power density in mW/cm2

Pout=output power to antenna in mW

G= Numeric gain of the antenna relative to isotropic antenna

Pi=3.1415926

R= distance between observation point and center of the radiator in cm (20cm)

Pd the limit of MPE, 1mW/cm2. If we know the maximum gain of the antenna and total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

Measurement Result

R=20cm

GSM 850:

Channel	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		
128	29.92	30±1	31	1258.925	0.80	1.20	0.3011	1
190	30.01	30±1	31	1258.925	0.80	1.20	0.3011	1
251	30.04	30±1	31	1258.925	0.80	1.20	0.3011	1

GSM 1900:

Channel	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		
512	28.72	28±1	29	794.328	0.80	1.20	0.1900	1
661	28.42	28±1	29	794.328	0.80	1.20	0.1900	1
810	27.62	28±1	29	794.328	0.80	1.20	0.1900	1

GPRS850:

Channel	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		
128	29.30	29±1	30	1000.000	0.80	1.20	0.2392	1
190	29.17	29±1	30	1000.000	0.80	1.20	0.2392	1
251	29.00	29±1	30	1000.000	0.80	1.20	0.2392	1

GPRS1900:

Channel	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		
512	28.61	28±1	29	794.328	0.80	1.20	0.1900	1
661	28.25	28±1	29	794.328	0.80	1.20	0.1900	1
810	27.39	28±1	29	794.328	0.80	1.20	0.1900	1

Conclusion:

For the max result: 0.3011≤ 1.0 for 1g SAR, No SAR is required.

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