RF EXPOSURE
Test Report

Report No.:	MTi220225001-01E3
Date of issue:	2022-07-25
Applicant:	Promaster Electronic LLC
Product name:	GPS TRACKER
Model(s):	AVT-200, APT-100, APT-110, APT-120, AVT-210
FCC ID:	2A6P9-AUTOSKYUS

Shenzhen Microtest Co., Ltd.

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Instructions

1. The report shall not be partially reproduced without the written consent of the laboratory;
2. The test results of this report are only responsible for the samples submitted;
3. This report is invalid without the seal and signature of the laboratory;
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5. Any objection to this report shall be submitted to the laboratory within 15 days from the date of receipt of the report.

TEST RESULT CERTIFICATION	
Applicant's name.....:	Promaster Electronic LLC
Address.....:	25511 Budde Rd, Ste 1602, The Woodlands, Texas, 77380, USA
Manufacturer's Name .....:	Promaster Electronic LLC
Address.....:	25511 Budde Rd, Ste 1602, The Woodlands, Texas, 77380, USA
Product description	
Product name ..... :	GPS TRACKER
Trademark .....:	AUTOSKY
Model Name .....:	AVT-200
Serial Model	APT-100, APT-110, APT-120, AVT-210
Standards.....:	N/A
Test procedure.....:	KDB 447498 D01 v06
Date of Test	
Date (s) of performance of tests ..... :	2022-06-14 ~2022-07-25
Test Result..... :	Pass
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.	

Testing Engineer : Eugene Qiu

(Eugene Qiu)

Technical Manager : Leon Chen

(Leon Chen)

Authorized Signatory : Tom Xue

(Tom Xue)

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

2G:

GSM850: TX824.2MHz~848.8MHz /RX869.2MHz~893.8MHz; 0.8dBi

PCS1900: TX1850.2MHz~1909.8MHz /RX1930.2MHz~1989.8MHz 1.8dBi

4G:

LTE FDD Band 2: 1850.7 – 1909.3MHz 1.5dBi

LTE TDD Band 4: 1710.7 – 1754.3MHz 1.5dBi

LTE FDD Band 5: 824.7 – 848.3MHz 0.8dBi

LTE TDD Band 66: 1710.7 – 1779.3MHz 1.5dBi

Antenna Type: FPC Antenna;
R=20cm

mW=10^(dBm/10)

antenna gain Numeric=10^(dBi/10)

RF Power Output

Frequency Band	Highest Averaged Power Output(dBm)	Highest Frame-Averaged Output Power (dBm)	Antenna Gain(dBi)
GPRS 850 4TS	33.00	29.99	0.8
GPRS 1900 4TS	31.00	27.99	1.8
LTE Band 2	23.00	23.00	1.5
LTE Band 4	24.00	24.00	1.5
LTE Band 5	23.00	23.00	0.8
LTE Band 66	24.00	24.00	1.5

Notes:

1) Division Factors

To average the power, the division factor is as follows:

1TX-slot = 1 transmit time slot out of 8 time slots=> conducted power divided by (8/1) => -9.03dB

2TX-slots = 2 transmit time slots out of 8 time slots=> conducted power divided by (8/2) => -6.02dB

3TX-slots = 3 transmit time slots out of 8 time slots=> conducted power divided by (8/3) => -4.26dB

4TX-slots = 4 transmit time slots out of 8 time slots=> conducted power divided by (8/4) => -3.01dB

2) According to the conducted power as above, the measurements are performed with 1Txslots for 850MHz and 1900MHz.

Frequency range	Limit(mW/cm^2)	Results(mW/cm^2)	Verdict
GPRS 850 4TS	0.55	0.238	Pass
GPRS 1900 4TS	1.00	0.189	Pass
LTE Band 2	1.00	0.056	Pass
LTE Band 4	1.00	0.070	Pass
LTE Band 5	0.549	0.048	Pass
LTE Band 66	1.00	0.070	Pass

Conclusion:

For the max result: 0.238/0.55=0.433≤ 1.0 , so compilance RF exposure requirement

----END OF REPORT----