RF EXPOSURE Test Report

Product: Boomtag Car Charger

Trade Mark: BOOMPODS

Model Number: TCARUN

FCC ID: 2A36Q-TCARUN

Prepared for

Boompods EU Sp. z o.o

ul. Barbary 16 Granica 05-806 Komorow Poland

Prepared by

Shenzhen HongBiao Certification& Testing Co., Ltd

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TEST RESULT CERTIFICATION

Applicant's Name..... :	Boompods EU Sp. z o.o
Address ..... :	ul. Barbary 16 Granica 05-806 Komorow Poland
Manufacturer's Name ..... :	Dongguan Linyar Technology Co.,Ltd.
Address ..... :	The third floor, building 2,No.4 Xitou East Road,Houjie Town,Dongguan,China

Product description

Product name ..... :	Boomtag Car Charger
Model Number ..... :	TCARUN
Standards ..... :	FCC CFR 47 PART 1 , 1.1310
Test procedure ..... :	KDB 447498 D01 General RF Exposure Guidance v06

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

Date of Test .....:

Date (s) of performance of tests .....: Aug. 19, 2025~Aug. 21, 2025

Test Result.....: **Pass**

Testing Engineer : Zoe Su

(Z o e S u)

Technical Manager : Ming Liu

(M i n g L i u)

Authorized Signatory : Leo Su

(L e o S u)

Revision History

Revised No.	Date of Issue	Description
01	Aug. 21, 2025	Original

1 General Description

1.1 Description of EUT

Product name:	Boomtag Car Charger
Model name:	TCARUN
Series Model:	TBCARX, TDCASA
Different of series model:	Except for the model, color, and system differences (TCARUN for Apple+Google system, TBCARX for Apple system, TDCASA for Google system), all models have the same circuits and modules.
Operation frequency:	2402-2480MHz
Modulation type:	GFSK
Bit Rate of transmitter:	1 Mbps, 2 Mbps
Antenna type:	FPC Antenna
Antenna gain:	-0.2dBi
Max. output power:	1.08dBm
Hardware version:	V1.0
Software version:	V1.0
Battery:	DC 3.7V, 35mAh, 0.126Wh
Power supply:	Input: DC 12-24V 3.5A Max Total Output: 33W USB-C: DC 5V/3A, DC 9V/3A, DC 12V/2.5A (30W Max) PPS: DC 3.3-11V/3A (33W Max) USB-A+USB-C: DC 5V/3A (15W Max) USB-A: DC 5V/3A, DC 9V/3A, DC 12V/2.5A (30W Max)
Adapter information:	N/A

1.2 Test Mode

Pretest Test Mode	Description of Mode
1	TX
2	/
3	/

1.3 Test Setup

See photographs of the test setup in the report for the actual setup and connections between EUT and support equipment.

1.4 Ancillary Equipment

Equipment	Model	S/N	Manufacturer

2 Test Facilities and Accreditations

2.1 Test Laboratory

Test Site	Shenzhen HongBiao Certification& Testing Co., Ltd
Test Site Location	Room 102, 201, Building 2, Yuanwanggu RFID Industrial Park, Tongguan Road, Tianliao Community, Yutang Street, Guangming District, Shenzhen, China
Telephone:	(86-755) 2998 9321
Fax:	(86-755) 2998 5110
FCC Registration No.:	CN1341
A2LA Certificate No.:	6765.01

2.2 Environmental Conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:	15ºC~35ºC
Relative Humidity:	20%~75%
Air Pressure:	98kPa~101kPa

2.3 Measurement Uncertainty

The reported uncertainty of measurement y ± U, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95 %.
The data and results quoted in this document are true and accurate values, and uncertainties are not involved in the calculations.
In addition, components and mass production processes that are similar to testing equipment may introduce additional deviations, and the manufacturer is solely responsible for the continued compliance of the equipment.

Measurement Frequency Range	U，(dB)	Note
RF frequency	2x 10^{-5}	
RF power, conducted	± 0.57 dB	
Temperature	±1 degree	
Humidity	± 5 %	

2.4 Test Software

Software name	Manufacturer	Model	Version
RF Test System	MWRF	MTS 8310	V2.0.0.0

3 List of Test Equipment

RF							
Item	Equipment No.	Equipment name	Manufacturer	Model	Serial No.	Calibration date	Due date
1	HB-E041	MXG Anaiog Signal Generator	Agilent	N5181A	MY47070421	2025-05-07	2026-05-06
2	HB-E042	WIDEBAND RADIO COMMUNICATION TESTER	R&S	CMW500	132108	2025-05-08	2026-05-07
3	HB-E043	MXG Anaiog Signal Generator	Agilent	N5182A	US46240335	2025-05-08	2026-05-07
4	HB-E044	Signal& spectrum Analyzer	R&S	FSV3044	101264	2025-05-07	2026-05-06
5	HB-E045	RF Control Box	Noyetec	NY100-RFCB	N/A	2025-05-08	2026-05-07
6	HB-E058	Thermometer Clock Humidity Monitor	N/A	HTC-1S	N/A	2025-05-09	2026-05-08

Note: the calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).

4 RF Exposure

4.1 Standalone SAR test exclusion considerations

4.1.1. Limit

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).

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*R2)
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.

4.1.2. Test Result

BLE:
Operation Frequency: 2402-2480MHz,
Power density limited: 1mW/ cm^2

BLE:
1M:

Channel Freq. (MHz)	modulation	conducted power	Tune-up power (dBm)	Max		Antenna		Evaluation result	Power density Limits
		(dBm)		tune-up power		Gain		(mW/cm^2)	(mW/cm^2)
				(dBm)	(mW)	(dBi)	Numeric		
2402	GFSK	1.06	1±1	2	1.585	-0.2	0.95	0.0003	1
2440		0.92	1±1	2	1.585	-0.2	0.95	0.0003	1
2480		0.59	1±1	2	1.585	-0.2	0.95	0.0003	1

2M:

Channel Freq. (MHz)	modulation	conducted power	Tune-up power (dBm)	Max		Antenna		Evaluation result	Power density Limits
		(dBm)		tune-up power		Gain		(mW/cm^2)	(mW/cm^2)
				(dBm)	(mW)	(dBi)	Numeric		
2402	GFSK	1.08	1±1	2	1.585	-0.2	0.95	0.0003	1
2440		0.94	1±1	2	1.585	-0.2	0.95	0.0003	1
2480		0.6	1±1	2	1.585	-0.2	0.95	0.0003	1

According to KDB 447498 D01 General RF Exposure Guidance v06, At the transmit simultaneously calculation method is as follows:
Transmit simultaneously MPE = Σ of MPE ratios
MPE ratios = Field strengths or power density / MPE limit at the test frequency

For the max result: 0.0003≤1g SAR, No SAR is required.

******** END OF REPORT ********