



Maximum Permissible Exposure Evaluation

FCC ID:2AVE6TG6XL

IC:25970-TG6XL

Original Grant

Report No.	:	TBR-C-202512-0263-152
Applicant	:	Tractive GmbH
Equipment Under Test (EUT)		
EUT Name	:	Tractive Dog 6 XL
Model No.	:	TG6XLC
HVIN	:	TG6XLC
Series Model No.	:	----
Brand Name	:	Tractive
Sample ID	:	HC-C-202512-0263-01-01#& HC-C-202512-0263-01-02#
Receipt Date	:	2025-12-24
Test Date	:	2025-12-24 to 2026-04-22
Issue Date	:	2026-04-23
Standards	:	47 CFR Part 2.1093 RSS-102 Issue 6 December 15, 2023
Conclusions	:	PASS
		In the configuration tested, the EUT complied with the standards specified above.
Test By	:	 Lily Zhang
Reviewed By	:	 Camille Li
Approved By	:	 Ivan Su
This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in the report.		

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Revision History

Report No.	Version	Description	Issued Date
TBR-C-202512-0263-152	Rev.01	Initial issue of report	2026-04-23



1. General Information about EUT

1.1 Client Information

Applicant	:	Tractive GmbH
Address	:	Poststrasse 4, Pasching, 4061, Austria
Manufacturer	:	Tractive GmbH
Address	:	Poststrasse 4, Pasching, 4061, Austria

1.2 General Description of EUT (Equipment Under Test)

EUT Name	:	Tractive Dog 6 XL
Models No.	:	TG6XLC
Model Different	:	N/A
Product Description	Operation Frequency:	Bluetooth 5.0(BLE): 2402MHz~2480MHz LTE Band 2: TX: 1850MHz-1910MHz LTE Band 4: TX: 1710MHz-1755MHz LTE Band 5: TX: 824MHz-849MHz LTE Band 7: TX: 2500MHz -2570MHz LTE Band 12: TX: 699MHz -716MHz LTE Band 13: TX: 777MHz -787MHz LTE Band 38: TX: 2570MHz -2620MHz LTE Band 66: TX: 1710MHz -1780MHz
	Modulation: Type	BLE: GFSK LTE: QPSK,16QAM
	Category:	LTE Cat 1 bis
Power Rating	:	Input: DC 5V, 1A
Li-ion Polymer Battery	:	DC 3.87V by 2150mAh
Software Version	:	----
Hardware Version	:	TG6XL

1.3 Antenna Gain

Bluetooth (LE): -2.53dBi Soldered Copper Antenna
LTE Band 2: -2dBi FPC Antenna
LTE Band 4: -2dBi FPC Antenna
LTE Band 5: -4.9dBi FPC Antenna
LTE Band 7: -9.8dBi FPC Antenna
LTE Band 12: -4.9dBi FPC Antenna
LTE Band 13: -4.9dBi FPC Antenna
LTE Band 38: -9.8dBi FPC Antenna
LTE Band 66: -2dBi FPC Antenna
Remark: The above antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.



2. Measurement Uncertainty

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %.

Test Item	Parameters	Expanded Uncertainty (ULab)
Conducted Emission	Level Accuracy: 9kHz~150kHz 150kHz to 30MHz	± 3.50 dB ± 3.10 dB
Radiated Emission	Level Accuracy: 9kHz to 30 MHz	± 4.60 dB
Radiated Emission	Level Accuracy: 30MHz to 1000 MHz	± 4.50 dB
Radiated Emission	Level Accuracy: Above 1000MHz	± 4.20 dB
Temperature	/	$\pm 0.6^{\circ}\text{C}$
Humidity	/	$\pm 4\%$
Supply voltages	/	$\pm 2\%$
Time	/	$\pm 4\%$

3. Test Equipment and Test Site

Antenna Conducted Emission					
Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Due Date
Spectrum Analyzer	Rohde & Schwarz	FSV40-N	102197	Jun. 16, 2025	Jun. 15, 2026
MXA Signal Analyzer	KEYSIGHT	N9020B	MY60110172	Aug. 27, 2025	Aug. 26, 2026
MXA Signal Analyzer	Agilent	N9020A	MY47380425	Aug. 27, 2025	Aug. 26, 2026
Vector Signal Generator	Agilent	N5182A	MY50141294	Aug. 27, 2025	Aug. 26, 2026
Analog Signal Generator	Agilent	N5181A	MY48180463	Aug. 27, 2025	Aug. 26, 2026
Vector Signal Generator	KEYSIGHT	N5182B	MY59101429	Aug. 27, 2025	Aug. 26, 2026
Analog Signal Generator	KEYSIGHT	N5173B	MY61252685	Aug. 27, 2025	Aug. 26, 2026
RF Control Unit	Tonsced	JS0806-2	21F8060439	Aug. 27, 2025	Aug. 26, 2026
Power Control Box	Tonsced	JS0806-4ADC	21C8060387	N/A	N/A
RF Power Sensor	DARE!! Instruments	RadiPowerRPR3 006W	17I00015SNO26	Aug. 27, 2025	Aug. 26, 2026
			17I00015SNO29	Aug. 27, 2025	Aug. 26, 2026
			17I00015SNO31	Aug. 27, 2025	Aug. 26, 2026
			17I00015SNO33	Aug. 27, 2025	Aug. 26, 2026
Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	144382	Aug. 27, 2025	Aug. 26, 2026
Universal Radio Communication Tester	Rohde&Schwarz	CMW500	168796	Feb. 20, 2025	Feb.19, 2026
Temperature and Humidity Chamber	ZhengHang	ZH-QTH-225D	ZH2107290	Jun. 16, 2025	Jun. 15, 2026



4. Test Facility

The testing report were performed by the Shenzhen Toby Technology Co., Ltd., in their facilities located at 1/F., Building 6, Rundongsheng Industrial Zone, Longzhu, Xixiang, Bao'an District, Shenzhen, Guangdong, China. At the time of testing, the following bodies accredited the Laboratory:

CNAS (L5813)

The Laboratory has been accredited by CNAS to ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories for the competence in the field of testing. And the Registration No.: CNAS L5813.

A2LA Certificate No.: 4750.01

The laboratory has been accredited by American Association for Laboratory Accreditation(A2LA) to ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories for the technical competence in the field of Electrical Testing. And the A2LA Certificate No.: 4750.01.FCC Accredited Test Site Number: 854351. Designation Number: CN1223.

IC Registration No.: (11950A)

The Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing. The site registration: Site# 11950A. CAB identifier: CN0056.



5. Maximum RF average output tune up power among production units

Mode	Maximum Peak Power (dBm)	
Bluetooth LE	Maximum Test Power	Tune up power
	4.71	4.0±1
	Maximum Average Power (dBm)	
	Maximum Test Power	Tune up power
LTE Band2	23.99	24±1
LTE Band4	22.02	22±1
LTE Band5	24.16	24±1
LTE Band7	23.77	24±1
LTE Band12	22.88	22±1
LTE Band13	24.10	24±1
LTE Band38	23.47	24±1
LTE Band66	22.13	22±1

6. RF Exposure Evaluation

General Note:

- Per KDB 447498 D01v06 the 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances 50 mm are determined by:

$$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR}$$
 - f(GHz) is the RF channel transmit frequency in GHz
 - Power and distance are rounded to the nearest mW and mm before calculation
 - The result is rounded to one decimal place for comparison
- RSS 102 Issue6-7.1.6. Time-averaged SAR (TAS) and time-averaged PD (TPD) algorithms, TAS algorithms are as follows:

Band	LTE Cat 1 bis								BLE
	B2	B4	B5	B7	B12	B13	B38	B66	
Frequency(GHz)	1.9093	1.7543	0.8483	2.5675	0.7153	0.7845	2.6175	1.7793	2.48
Max.Power(dBm)	25	23	25	25	23	25	25	23	5
Max.Power(mW)	316.23	199.53	316.23	316.23	199.53	316.23	316.23	199.53	3.16
Duty cycle(%)	0.094	0.115	0.107	0.100	0.076	0.081	0.124	0.094	63.48
Duty factor adjusted Max. output Power(mW)	0.30	0.23	0.34	0.32	0.15	0.26	0.39	0.19	2.01
Separation distance(mm)	5	5	5	5	5	5	5	5	5
Estimated SAR	0.08	0.06	0.06	0.10	0.03	0.05	0.13	0.05	0.63
SAR Testing Required	No	No	No	No	No	No	No	No	No
Estimated SAR	0.0110	0.0081	0.0083	0.0135	0.0034	0.0060	0.0169	0.0067	0.0843

If Estimated SAR ≤ 3.0, The SAR Testing No Required.



Duty Cycle

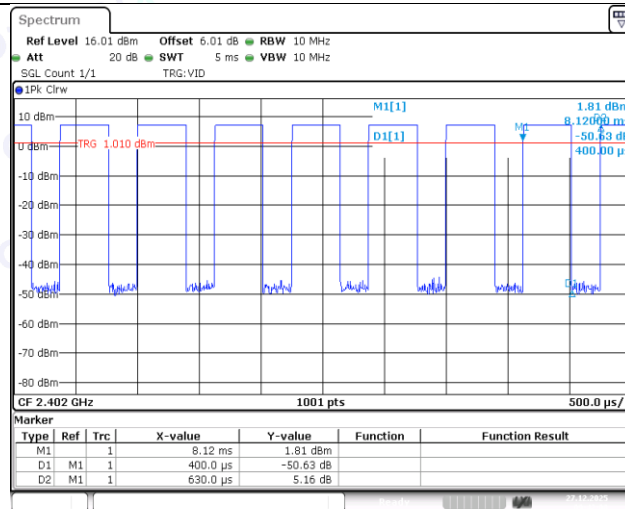
Mode	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]
Bluetooth LE	0.40	0.63	63.49
LTE Band2	3.9	4170	0.094
LTE Band4	4.8	4170	0.115
LTE Band5	4.5	4200	0.107
LTE Band7	4.8	4800	0.100
LTE Band12	3.6	4740	0.076
LTE Band13	3.9	4830	0.081
LTE Band38	5.4	4350	0.124
LTE Band66	3.9	4200	0.094

Note1: Duty cycle(%)=Transmission Duration / Transmission Period *100%.

Note2: For LET having 3 ON periods in one cycle.

Test Plots

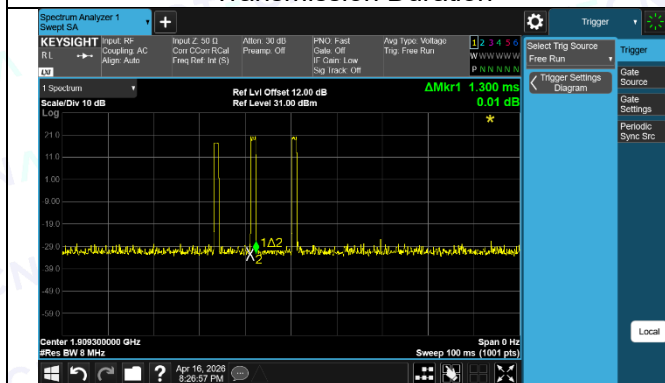
Bluetooth LE



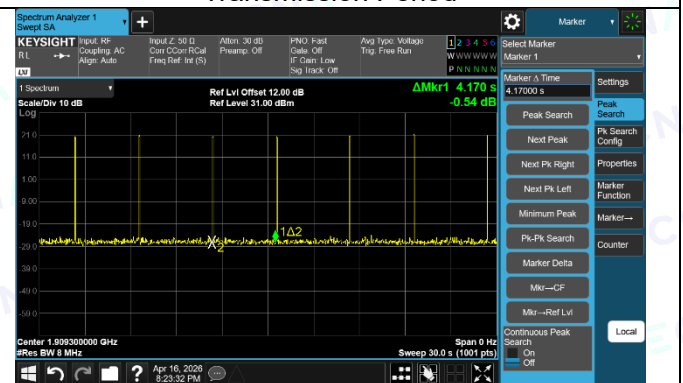
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LTE Band2

Transmission Duration

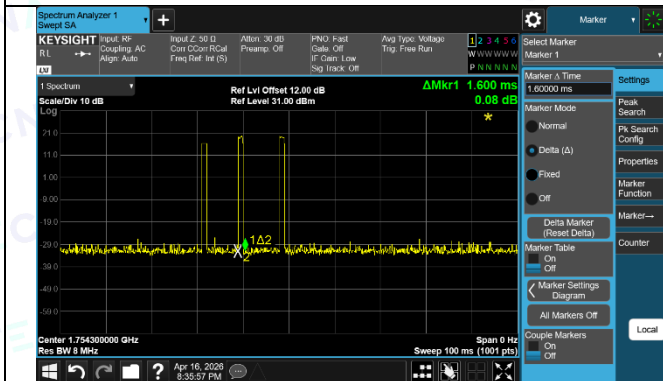


Transmission Period

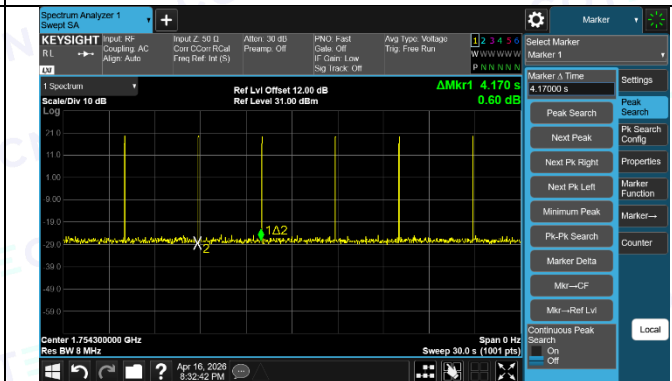


LTE Band4

Transmission Duration

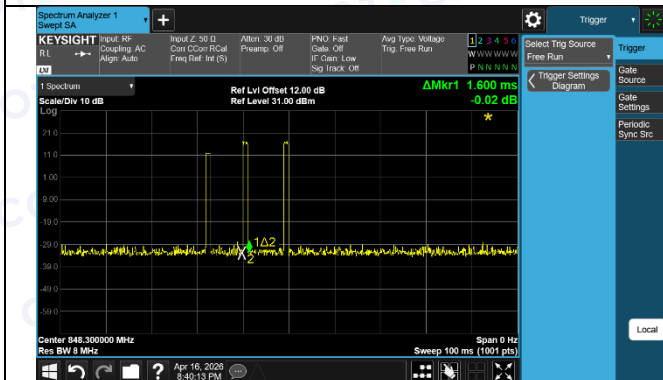


Transmission Period

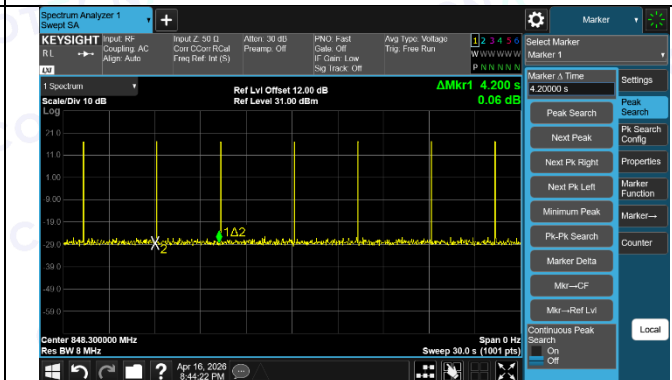


LTE Band5

Transmission Duration

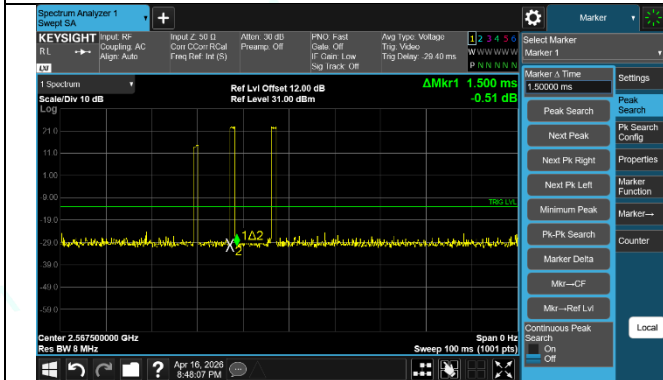


Transmission Period

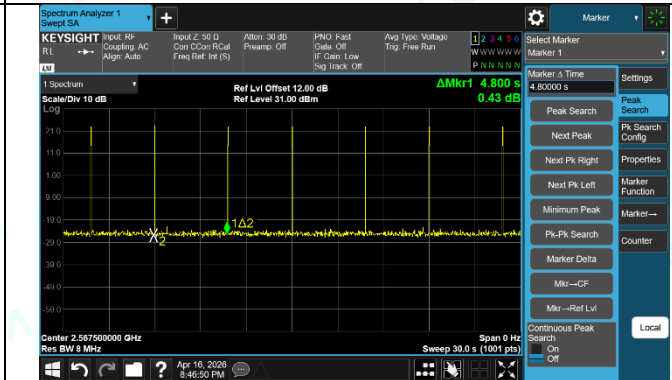


LTE Band7

Transmission Duration



Transmission Period



LTE Band12

Transmission Duration

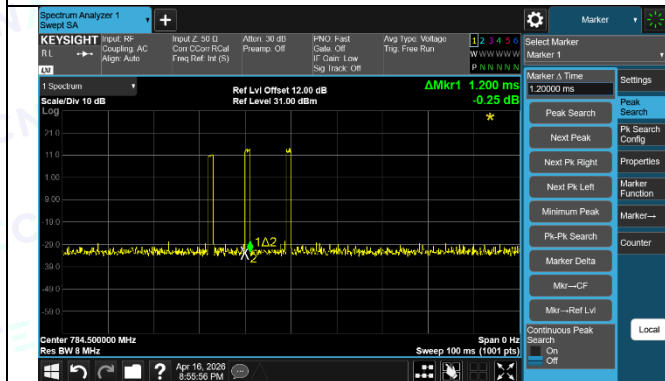


Transmission Period



LTE Band13

Transmission Duration

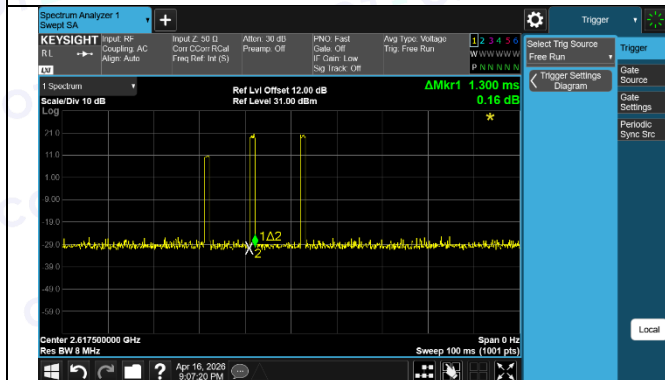


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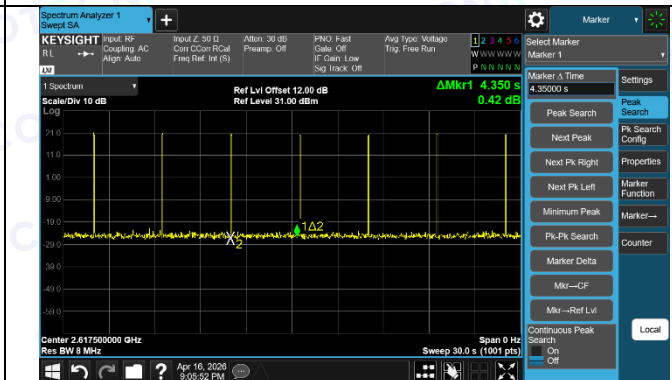


LTE Band38

Transmission Duration

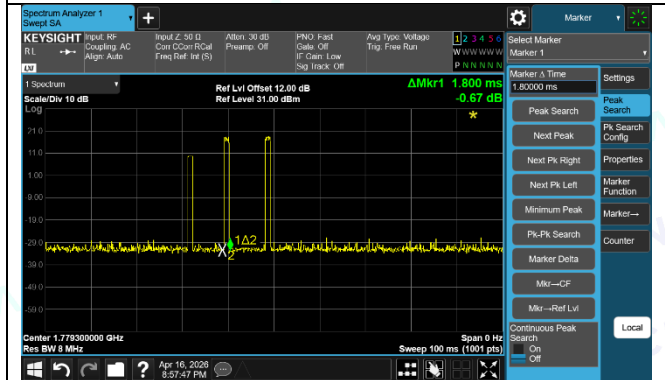


Transmission Period

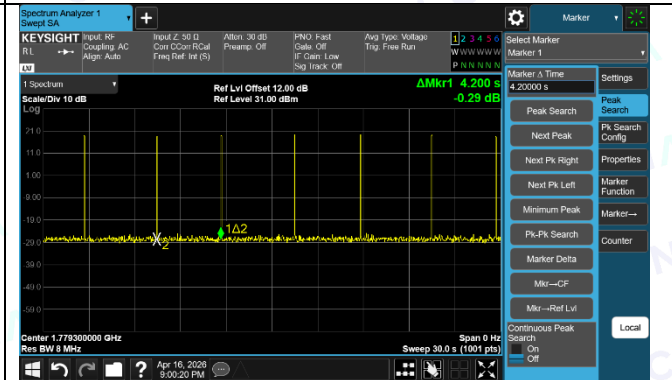


LTE Band66

Transmission Duration



Transmission Period



7. Simultaneous Transmission Analysis

According to the EUT characteristic, WWAN and Bluetooth can transmit simultaneously.

1	2	1+2
BLE	LTE Cat 1 bis	Summed 1g SAR (W/kg)
Estimated 1g SAR (W/kg)	Estimated 1g SAR (W/kg)	
0.0843	0.0110	0.0953

Conclusion: Per KDB 447498 D01v06, when the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion and and complied with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg for 1g SAR and 4.0 W/kg for extremity SAR) specified in FCC 47 CFR part 2 (2.1093).

-----END OF THE REPORT-----

