

TEST REPORT

Product Name : Wireless Carplay Activator
Brand Mark : N/A
Model No. : ZCWS-C06
Extension model : ZCWS-C01~C18
FCC ID : 2A3NH-ZCWS-C06
Report Number : BLA-EMC-202111-A6704
Date of Sample Receipt : 2021/11/11
Date of Test : 2021/12/8 to 2021/12/22
Date of Issue : 2021/12/22
Test Standard : 47 CFR Part 1.1307, Part 2.1093, KDB
447498
Test Result : Pass

Prepared for:

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Prepared by:

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2021/12/22



REPORT REVISE RECORD

Version No.	Date	Description
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1 TEST SUMMARY

Test item	Test Requirement	Test Method	Class/Severity	Result
RF Exposure	47 CFR Part 1.1307, Part 2.1093, KDB 447498	CFR 47 Part 2.1093	CFR 47 Part 2.1093	PASS

2 GENERAL INFORMATION

Applicant	Guangzhou Loyal Defender Electronics Co., Ltd.
Address	1-4F, NO.3 Jiahe Street, PengShang ZhiFu Road, Baiyun District, Guangzhou, China
Manufacturer	Guangzhou Loyal Defender Electronics Co., Ltd.
Address	1-4F, NO.3 Jiahe Street, PengShang ZhiFu Road, Baiyun District, Guangzhou, China
Factory	Guangzhou Loyal Defender Electronics Co., Ltd.
Address	1-4F, NO.3 Jiahe Street, PengShang ZhiFu Road, Baiyun District, Guangzhou, China
Product Name	Wireless Carplay Activator
Test Model No.	ZCWS-C06

3 GENERAL DESCRIPTION OF E.U.T.

Hardware Version	USBdongle_TF V:05 20210701
Software Version	tina_v459-carplay-aic8800-1011-noid
Operation Frequency:	2402MHz-2480MHz
Modulation Type:	GFSK, pi/4DQPSK, 8DPSK
Channel Spacing:	1MHz
Number of Channels:	79
Antenna Type:	PCB Antenna
Antenna Gain:	4dBi(Provided by the applicant)
Operation Frequency:	2402MHz-2480MHz
Modulation Type:	GFSK
Channel Spacing:	2MHz
Number of Channels:	40
Antenna Type:	PCB Antenna
Antenna Gain:	4dBi(Provided by the applicant)

4 LABORATORY LOCATION

All tests were performed at:
BlueAsia of Technical Services(Shenzhen) Co., Ltd.
Building C, No. 107, Shihuan Road, Shiyan Sub-District, Baoan District, Shenzhen, Guangdong Province,
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Telephone: TEL: +86-755-28682673 FAX: +86-755-28682673
No tests were sub-contracted.

5 RF EXPOSURE COMPLIANCE REQUIREMENT

5.1 STANDARD REQUIREMENT

According to KDB447498D01 General RF Exposure Guidance v06

Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

5.2 LIMITS

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:

$$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot \sqrt{f(\text{GHz})} \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR, where}$$

$f(\text{GHz})$ is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation¹⁷

The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion

5.3 EUT RF EXPOSURE

Operational Mode: EDR (pi/4DQPSK worst case)						
Channel	Maximum Peak Conducted Output Power (dBm)	Tune up tolerance (dB)	Maximum tune-up Power		Calculated value	Exclusion threshold
			(dBm)	(mW)		
2402 MHz	2.22	±1	3.22	2.10	0.65	3.0
2441 MHz	2.624	±1	3.624	2.30	0.72	
2480 MHz	3.097	±1	4.097	2.57	0.80	
Operational Mode: BLE						
2402 MHz	0.08	±1	1.08	1.28	0.40	3.0
2442 MHz	0.263	±1	1.263	1.34	0.42	
2480 MHz	0.769	±1	1.769	1.50	0.47	
Conclusion: the calculated value ≤3.0. SAR is exempted.						

----END OF REPORT----

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