

TEST REPORT

Product Name : Vehicle Audio System
Brand Mark : N/A
Model No. : R4500
Extension model : R4000
Report Number : BLA-EMC-202205-A5904
FCC ID : 2A2K9-R4500
Date of Sample Receipt : 2022/5/26
Date of Test : 2022/5/26 to 2022/6/7
Date of Issue : 2022/6/7
Test Standard : 47 CFR Part 1.1307, Part 2.1093, KDB
447498
Test Result : Pass

Prepared for:

PROSPEC ELECTRONICS of SC, Inc.
3325 SOUTH MORGANS POINT ROAD Mt. PLEASANT. South
Carolina United States

Prepared by:

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Date:

2022/6/7



REPORT REVISE RECORD

Version No.	Date	Description
00	2022/6/7	Original

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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	PROSPEC ELECTRONICS of SC, Inc.
Address	3325 SOUTH MORGANS POINT ROADMt. PLEASANT. South Carolina United States
Manufacturer	PROSPEC ELECTRONICS of SC, Inc.
Address	3325 SOUTH MORGANS POINT ROADMt. PLEASANT. South Carolina United States
Factory	Audio Link Co.,Ltd.
Address	Left Side of Floor 4,Building B,No.2,Lilian Road,Lianhu Community,Tangxia Town,Dongguan City,Guangdong Province,523719,China.
Product Name	Vehicle Audio System
Test Model No.	R4500
Extension model	R4000
Note	Their electrical circuit design, layout, components used and internal wiring are identical, Only the Item numbers and colors are different

3 GENERAL DESCRIPTION OF E.U.T.

Hardware Version	V06
Software Version	B01.01.2(MCU)/R4500(V0.30)
Operation Frequency:	2402MHz-2480MHz
Modulation Type:	GFSK
Channel Spacing:	2MHz
Number of Channels:	40
Antenna Type:	PCB Antenna
Antenna Gain:	0dBi(Provided by the applicant)

Operation Frequency:	2402MHz-2480MHz
Modulation Type:	GFSK, pi/4DQPSK, 8DPSK
Channel Spacing:	1MHz
Number of Channels:	79
Antenna Type:	PCB Antenna
Antenna Gain:	0dBi(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.

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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: BDR (GFSK worst case)						
Channel	Maximum Peak Conducted Output Power (dBm)	Tune up tolerance (dB)	Maximum tune-up Power		Calculated value	Exclusion threshold
			(dBm)	(mW)		
2402MHz	0.121	±1	1.121	1.29	0.40	3.0
2441MHz	-0.726	±1	0.274	1.07	0.33	
2480MHz	-2.624	±1	-1.624	0.69	0.22	
Operational Mode: BLE						
2402 MHz	-0.56	±1	0.44	1.11	0.34	3.0
2442 MHz	-1.383	±1	-0.383	0.92	0.29	
2480 MHz	-3.242	±1	-2.242	0.60	0.19	
Conclusion: the calculated value ≤3.0, SAR is exempted.						

----END OF REPORT----

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