

Applicant: Shenzhen Hong Xiang Rui Technology co.,Ltd.

Product: Carplay

Model No.: B5306, B5308, B5009, B5369, B5301, B5113, B5303, B5311,

A501, A502, A503, D3230, D3231, A504, A505, A506, A507,

A508, A509

Trademark: N/A

Test Standards: FCC Part 15.249

Test result:

It is herewith confirmed and found to comply with the

requirements set up by ANSI C63.10 & FCC Part 15 Subpart C,

Paragraph 15.249 regulations for the evaluation o

electromagnetic compatibility

Approved By

Terry Tang

Terry rung

Manager

Dated: September 06, 2024

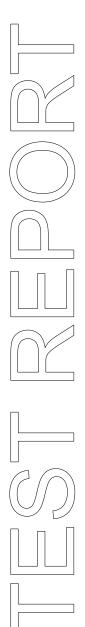
Results appearing herein relate only to the sample tested

The technical reports is issued errors and omissions exempt and is subject to withdrawal at

SHENZHEN TIMEWAY TESTING LABORATORIES

Zone C, 1st Floor, Block B, Jun Xiang Da Building, Zhongshan Park Road West, Tong Le Village, Nanshan District, Shenzhen, China

Tel (755) 83448688, Fax (755) 83442996, E-Mail:info@timeway-lab.com



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Date: 2024-09-06



Special Statement:

FCC-Registration No.: 744189

The EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications commission. The acceptance letter from the FCC is maintained in our files. Registration No.: 744189.

Industry Canada (IC) — Registration No.:5205A

The EMC Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 5205A.

A2LA (Certification Number:5013.01)

The EMC Laboratory has been accredited by the American Association for Laboratory Accreditation (A2LA). Certification Number:5013.01

CAB identifier: CN0033

Date: 2024-09-06



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1.0 General Details

1.1 Test Lab Details

Name: SHENZHEN TIMEWAY TESTING LABORATORIES.

Address: Zone C, 1st Floor, Block B, Jun Xiang Da Building, Zhongshan Park Road West, Tong Le

Village, Nanshan District, Shenzhen, China

Telephone: (755) 83448688 Fax: (755) 83442996

Site on File with the Federal Communications Commission – United Sates

Registration Number: 744189 For 3m Anechoic Chamber

1.2 Applicant Details

Applicant: Shenzhen Hong Xiang Rui Technology co.,Ltd.

Address: Room 910, Baoyunda R&D Complex Building, Qianjin 2nd Road, Xixiang Street, Baoan

District, Shenzhen, China

1.3 Description of EUT

Product: Carplay

Manufacturer: Shenzhen Hong Xiang Rui Technology co.,Ltd.

Address: Room 910, Baoyunda R&D Complex Building, Qianjin 2nd Road, Xixiang

Street, Baoan District, Shenzhen, China

Trademark: N/A Model Number: B5306

Additional Model Name B5308, B5009, B5369, B5301, B5113, B5303, B5311, A501, A502, A503,

D3230, D3231, A504, A505, A506, A507, A508, A509

Rating: DC12V Serial No.: B5306

Hardware Version: HZ-B500-MB VER2.0 Software Version: HZ WIFI20240810-1441

Operation Frequency: 2402-2480MHz

Modulation Type: GFSK, ∏/4DQPSK, 8DPSK

Number of Channels: 79 Channel Separation: 1MHz

Antenna Designation PCB antenna with gain -0.58dBi maximum (Get from the antenna specification)

1.4 Submitted Sample: 2 Samples

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1.5 Test Duration

2024-08-21 to 2024-09-06

1.6 Test Uncertainty

Conducted Emissions Uncertainty =3.6dB

Radiated Emissions below 1GHz Uncertainty =4.7dB

Radiated Emissions above 1GHz Uncertainty =6.0dB

Conducted Power Uncertainty =6.0dB

Occupied Channel Bandwidth Uncertainty =5%

Conducted Emissions Uncertainty =3.6dB

Note: The measurement uncertainty is for coverage factor of k=2 and a level of confidence of 95%.

1.7 Test Engineer

The sample tested by

Print Name: Andy Xing

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2.0 Test Equipment						
Instrument Type	Manufacturer	Model	Serial No.	Date of Cal.	Due Date	
ESPI Test Receiver	R&S	ESPI 3	100379	2024-07-12	2025-07-11	
LISN	R&S	EZH3-Z5	100294	2024-07-12	2025-07-11	
LISN	R&S	EZH3-Z5	100253	2024-07-12	2025-07-11	
Impuls-Begrenzer	R&S	ESH3-Z2	100281	2024-07-12	2025-07-11	
Loop Antenna	EMCO	6507	00078608	2022-07-18	2025-07-17	
Spectrum	R&S	FSIQ26	100292	2024-07-12	2025-07-11	
Horn Antenna	A-INFO	LB-180400-KF	J211060660	2022-07-18	2025-07-17	
Horn Antenna	R&S	BBHA 9120D	9120D-631	2022-07-18	2025-07-17	
Power meter	Anritsu	ML2487A	6K00003613	2024-07-12	2025-07-11	
Power sensor	Anritsu	MA2491A	32263	2024-07-12	2025-07-11	
Bilog Antenna	Schwarebeck	VULB9163	9163/340	2022-07-18	2025-07-17	
9*6*6 Anechoic			N/A	2022-07-26	2025-07-25	
EMI Test Receiver	RS	ESVB	826156/011	2024-07-12	2025-07-11	
EMI Test Receiver	RS	ESCS 30	834115/006	2024-07-12	2025-07-11	
Spectrum	HP/Agilent	E4407B	MY50441392	2024-07-12	2025-07-11	
Spectrum	RS	FSP	1164.4391.38	2024-07-12	2025-07-11	
RF Cable	Zhengdi	ZT26-NJ-NJ-8M/FA		2024-07-12	2025-07-11	
RF Cable	Zhengdi	7m		2024-07-12	2025-07-11	
Pre-Amplifier	Schwarebeck	BBV9743	#218	2024-07-12	2025-07-11	
Pre-Amplifier	HP/Agilent	8449B	3008A00160	2024-07-12	2025-07-11	
LISN	SCHAFFNER	NNB42	00012	2024-07-12	2025-07-11	
ESPI Test Receiver	R&S	ESPI 3	100379	2024-07-12	2025-07-11	
LISN	R&S	EZH3-Z5	100294	2024-07-12	2025-07-11	

2.2 Automation Test Software

For Conducted Emission Test

Name	Version		
EZ-EMC	Ver.EMC-CON 3A1.1		

For Radiated Emissions

Name	Version
EMI Test Software BL410-EV18.91	V18.905
EMI Test Software BL410-EV18.806 High Frequency	V18.06

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3.0 Technical Details

3.1 Summary of test results

The EUT has been tested according to the following specifications:

Standard	Test Type	Result	Notes
FCC Part 15, Paragraph 15.203	Antenna Requirement	Pass	Complies
FCC Part 15, Paragraph 15.207	Conducted Emission Test	N/A	N/A
FCC Part 15 Subpart C Paragraph 15.249(a) & 15.249(b) Limit	Field Strength of Fundamental	Pass	Complies
FCC Part 15, Paragraph 15.209	Radiated Emission Test	Pass	Complies
FCC Part 15 Subpart C Paragraph 15.249(d) Limit	Band Edge Test	Pass	Complies
FCC Part 15.215(c)	20dB bandwidth	Pass	Complies

3.2 Test Standards

FCC Part 15 Subpart C, Paragraph 15.249, ANSI C63.4:2014 and ANSI C63.10:2013

4.0 EUT Modification

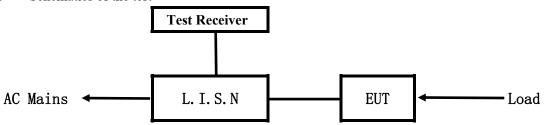
No modification by SHENZHEN TIMEWAY TESTING LABORATORIES

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5.0 Power Line Conducted Emission Test

5.1 Schematics of the test



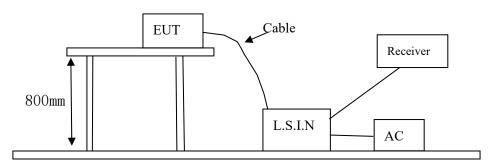
EUT: Equipment Under Test

5.2 Test Method and test Procedure

The EUT was tested according to ANSI C63.10-2013. The Frequency spectrum from 0.15MHz to 30MHz was investigated. The LISN used was 50ohm/50uH as specified by section 5.1 of ANSI C63.10-2013.

Test Voltage: N/A

Block diagram of Test setup



5.3 Configuration of the EUT

The EUT was configured according to ANSI C63.10-2013. All interface ports were connected to the appropriate peripherals. All peripherals and cables are listed below.

79 channels are provided to the EUT

A. EUT

Device	Manufacturer	Model	FCC ID
		B5306, B5308, B5009,	
		B5369, B5301, B5113,	
Complex	Shenzhen Hong Xiang Rui B5303, B5311, A501,		2 A POE D5206
Carplay	Technology co.,Ltd.	A502, A503, D3230,	2A8QF-B5306
		D3231, A504, A505,	
		A506, A507, A508, A509	

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B. Internal Device

Device	Manufacturer	Model	FCC ID/DOC
N/A			

C. Peripherals

Device	Manufacturer	Model	Rating
N/A			

5.4 EUT Operating Condition

Operating condition is according to ANSI C63.10-2013

- A Setup the EUT and simulators as shown on follow
- B Enable AF signal and confirm EUT active to normal condition

5.5 Power line conducted Emission Limit according to Paragraph 15.207

Frequency	Limits (dB µ V)		
(MHz)	Quasi-peak Level	Average Level	
0.15 ~ 0.50	66.0~56.0*	56.0~46.0*	
$0.50 \sim 5.00$	56.0	46.0	
5.00 ~ 30.00	60.0	50.0	

Notes:

- 1. *Decreasing linearly with logarithm of frequency.
- 2. The tighter limit shall apply at the transition frequencies

5.6 Test Results:

N/A

Note: EUT used in a vehicle, this test item not applicable.

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6 Radiated Emission Test

- 6.1 Test Method and test Procedure:
- (1) The EUT was tested according to ANSI C63.10-2013. The radiated test was performed at Timeway EMC Laboratory. This site is on file with the FCC laboratory division, Registration No. 744189
- (2) The EUT, peripherals were put on the turntable which table size is 1m x 1.5 m, table high 0.8 m. All set up is according to ANSI C63.10-2013.
- (3) The frequency spectrum from 9kHz to 25 GHz was investigated. The frequency spectrum is set as follows:

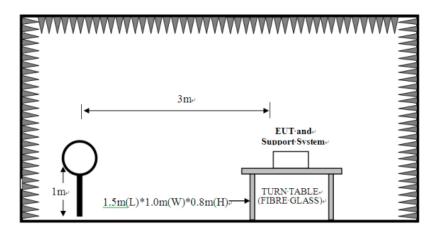
Frequency	Detector	RBW	VBW	Value
9KHz-150KHz	dz Quasi-peak		600Hz	Quasi-peak
150KHz-30MHz	Quasi-peak	9KHz 30KHz		Quasi-peak
30MHz-1GHz	Quasi-peak	120KHz	300KHz	Quasi-peak
Above 1GHz	Peak	1MHz	3MHz	Peak
ADOVE IGHZ	Peak	1MHz	10Hz	Average

(Note: for Fundamental frequency radiated emission measurement, RBW=3MHz, VBW=10MHz). Measurements were made at 3 meters.

- (4) The antenna high is varied from 1 m to 4 m high to find the maximum emission for each frequency.
- (5) The antenna polarization: Vertical polarization and Horizontal polarization.

Block diagram of Test setup

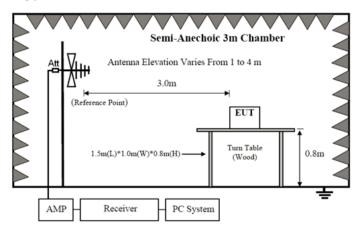
For radiated emissions from 9kHz to 30MHz



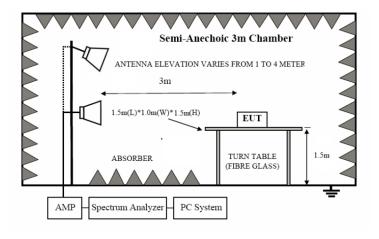
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For radiated emissions from 30MHz to1GHz



For radiated emissions above 1GHz



- 6.2 Configuration of the EUT
 Same as section 5.3 of this report
- 6.3 EUT Operating Condition

 Same as section 5.4 of this report.
- 6.4 Radiated Emission Limit

All emission from a digital device, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strength specified below:

A FCC Part 15 Subpart C Paragraph 15.249(a) Limit

Fundamental Frequency	Field Strength of Fundamental (3m)		Field Strength of Harmonics (3m)		
(MHz)	mV/m	dBuV/m	uV/m	dBuV/m	

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2400-2483.5 50	94 (Average)	114 (Peak)	500	54 (Average)	74 (Peak)
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Note:

- 1. RF Field Strength (dBuV) = 20 log RF Voltage (uV)
- 2.Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.
- 3. The emission limit in this paragraph is based on measurement instrumentation employing an average detector.

B. Frequencies in restricted band are complied to limit on Paragraph 15.209.

	<u> </u>	
Frequency Range (MHz)	Distance (m)	Field strength (dB μ V/m)
0.009-0.490	3	20log(2400/F(kHz)) +40log (300/3)
0.490-1.705	3	20log(24000/F(kHz)) +40log (30/3)
1.705-30	3	69.5
30-80	3	40.0
88-216	3	43.5
216-960	3	46.0
Above 960	3	54.0

Note:

- 1. RF Voltage (dBuV) = 20 log RF Voltage (uV)
- 2. In the Above Table, the tighter limit applies at the band edges.
- 3. Distance refers to the distance in meters between the measuring instrument antenna and the EUT
- 4. All scanning using PK detector. And the final emission level was get using QP detector for frequency range from 30-1000MHz.As to 1G-25G, the final emission level got using PK. For fundamental measurement, PK detector used.
- 5. The three modulation modes of GFSK, Pi/4D-QPSK and 8DPSK were tested. And only the worst case was recorded in the test report. GFSK was the worst case.

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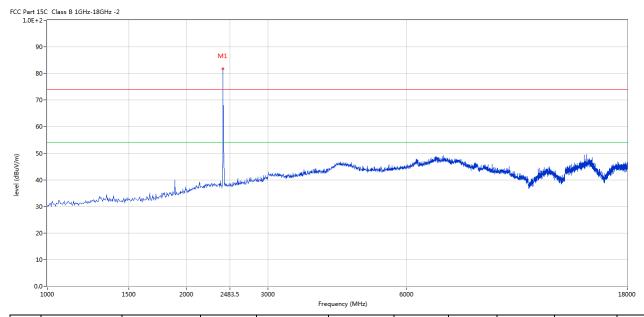


6.5 Test result

A Fundamental & Harmonics Radiated Emission Data

Please refer to the following test plots for details: Low Channel-2402MHz

Horizontal



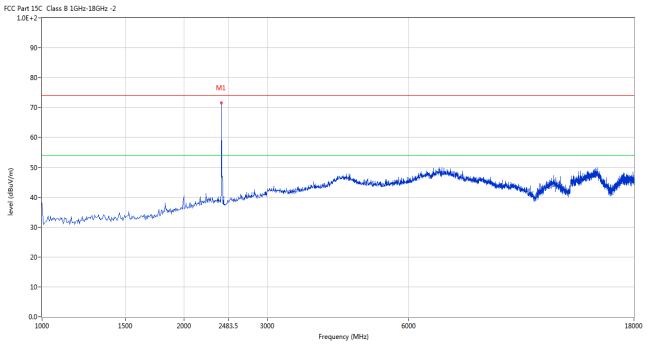
No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2402	81.72	-3.57	114.0	-32.28	Peak	73.00	100	Horizontal	Pass

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Vertical



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2402	71.55	-3.57	114.0	-42.45	Peak	328.00	100	Vertical	Pass

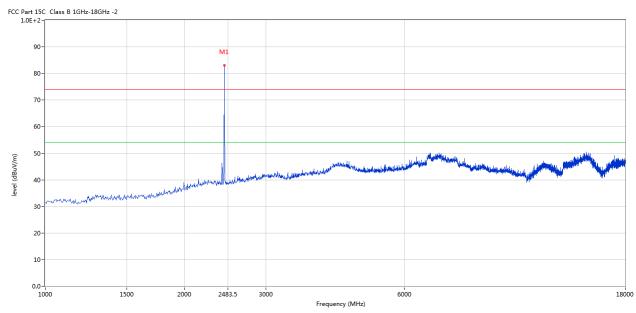
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Please refer to the following test plots for details: Middle Channel-2440MHz

Horizontal



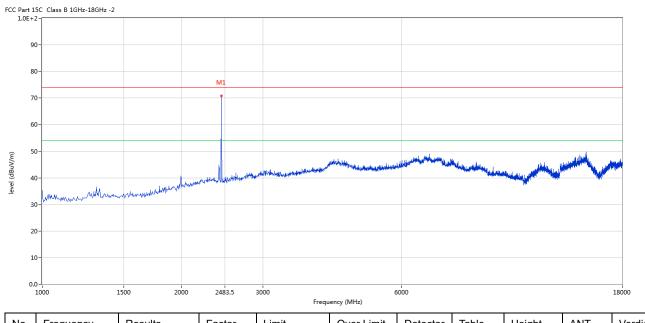
No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2441	83.08	-3.57	114.0	-30.92	Peak	32.00	100	Horizontal	Pass

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Vertical



Ī	No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
		(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
Ī	1	2441	70.72	-3.57	114.0	-43.28	Peak	246.00	100	Vertical	Pass

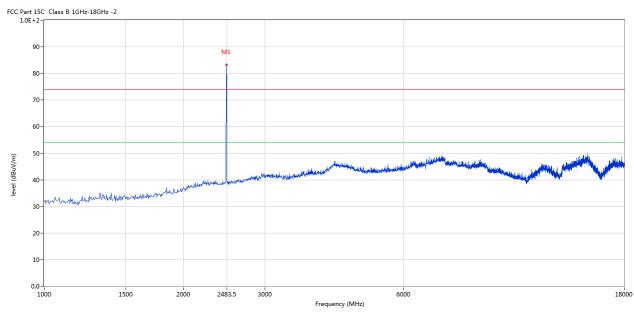
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Please refer to the following test plots for details: High Channel-2480MHz

Horizontal



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2480	83.19	-3.57	114.0	-30.81	Peak	63.00	100	Horizontal	Pass

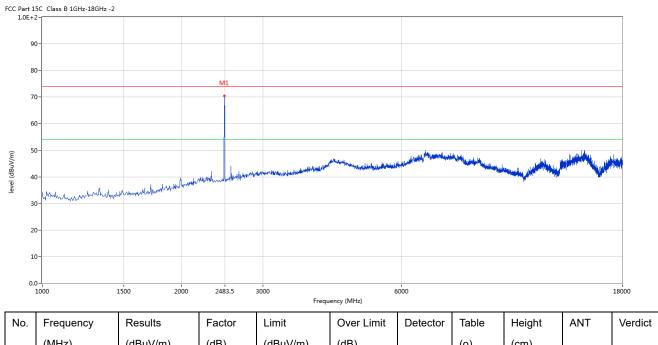
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Vertical



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2480	70.50	-3.57	114.0	-43.50	Peak	119.00	100	Vertical	Pass

Note: (1) Emission Level = Reading Level + Antenna Factor + Cable Loss-Amplifier

- (2) Margin=Emission-Limits
- (3) According to section 15.35(b), the peak limit is 20dB higher than the average limit
- (4) For test purpose, keep EUT continuous transmitting
- (5) For emission above 18GHz and Below 30MHz, It is only the floor noise and less than the limit for more than 20dB. No necessary to take down.
- (6) the measured PK value less than the AV limit.

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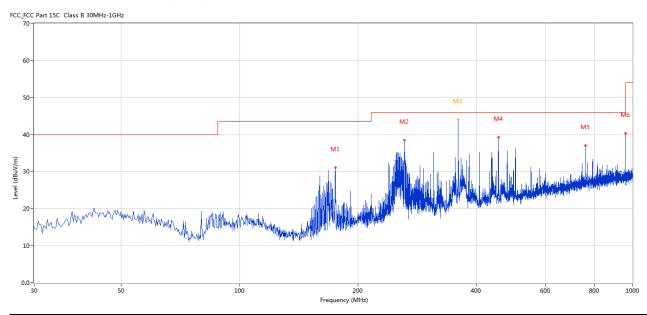


B. General Radiated Emission Data Radiated Emission In Horizontal (30MHz----1000MHz)

EUT set Condition: Keep Tx transmitting

Results: Pass

Please refer to following diagram for individual



No.	Frequency	Results	Factor	Limit	Margin	Detector	Table	Height	Antenna	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(Degree)	(cm)		
1	175.221	31.08	-15.63	43.5	12.42	Peak	44.00	100	Horizontal	Pass
2	262.984	38.52	-11.83	46.0	7.48	Peak	7.00	100	Horizontal	Pass
3*	359.960	43.99	-9.46	46.0	2.01	QP	65.00	100	Horizontal	Pass
4	455.966	39.33	-7.95	46.0	6.67	Peak	0.00	100	Horizontal	Pass
5	760.470	37.10	-3.26	46.0	8.90	Peak	62.00	100	Horizontal	Pass
6	959.998	40.40	-1.63	46.0	5.60	Peak	59.00	100	Horizontal	Pass

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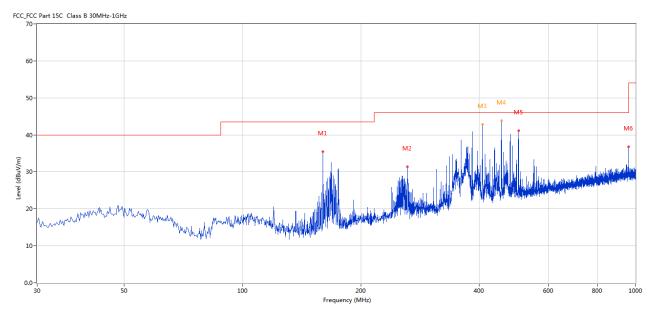


Radiated Emission In Vertical (30MHz----1000MHz)

EUT set Condition: Keep Tx transmitting

Results: Pass

Please refer to following diagram for individual



No.	Frequency	Results	Factor	Limit	Margin	Detector	Table	Height	Antenna	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(Degree)	(cm)		
1	160.190	35.46	-16.34	43.5	8.04	Peak	230.00	100	Vertical	Pass
2	262.742	31.38	-11.86	46.0	14.62	Peak	277.00	100	Vertical	Pass
3*	407.963	42.87	-8.47	46.0	3.13	QP	331.00	100	Vertical	Pass
4*	455.966	43.81	-7.95	46.0	2.19	QP	359.00	100	Vertical	Pass
5	503.969	41.11	-7.05	46.0	4.89	Peak	357.00	100	Vertical	Pass
6	959.755	36.84	-1.63	46.0	9.16	Peak	225.00	100	Vertical	Pass

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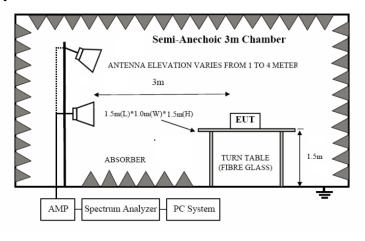


7. Band Edge

7.1 Test Method and test Procedure:

- (1) The EUT was tested according to ANSI C63.10–2013. The radiated test was performed at Timeway EMC Laboratory. This site is on file with the FCC laboratory division, Registration No. 744189
- (2) Set Spectrum as RBW=1MHz, VBW=3MHz and Peak detector used for PK value. RBW=1MHz, VBW=10Hz and Peak detector used for AV value.
- (3) The antenna high is varied from 1 m to 4 m high to find the maximum emission for each frequency.
- (4) The antenna polarization: Vertical polarization and Horizontal polarization.

7. 2 Radiated Test Setup



For the actual test configuration, please refer to the related items – Photos of Testing

7.3 Configuration of the EUT

Same as section 5.3 of this report

7.4 EUT Operating Condition

Same as section 5.4 of this report.

7.5 Band Edge Limit

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

The report refers only to the sample tested and does not apply to the bulk.

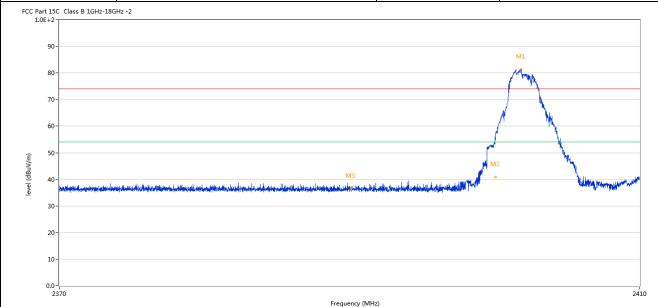
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7.6 Test Result

Product:	Carplay	Polarity	Horizontal
Mode	Keeping Transmitting	Test Voltage	DC12V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass		



No. Factor Limit Over Limit Detector ANT Verdict Frequency Results Table Height (dBuV/m) (dB) (dBuV/m) (dB) (MHz) (o) (cm) 2401.772 81.42 -3.57 74.0 7.42 Peak 62.00 100 Horizontal N/A 2 2400.000 56.01 -3.57 74.0 -17.99 Peak 65.33 100 Horizontal Pass 2** 2400.000 40.82 -3.57 54.0 -13.18 ΑV 100 65.33 Horizontal Pass 3 2390.000 36.34 -3.53 74.0 -37.66 Peak 51.50 100 Horizontal Pass

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]	Product:		Carp	olay		Detect	tor		Vertical	
	Mode]	Keeping Tr	ansmitting		Test Vol	tage		DC12V	
Te	emperature		24 de	eg. C,		Humid	ity		56% RH	
Te	est Result:		Pa	ss						
	rt 15C Class B 1GHz-18G E+2-	Hz -2			1		1			
	90-									
	80-							M1		
	70-									
	60-							$/ \setminus$		
							M2.			
Ē	50-							<u> </u>	k.	
el (dBuV/m)	40-	land of contract of the contra	anno de la borto	مان المان	M3		1	*		n
level (dBuV/m)	40-	المالية المراجعة المر	rinsalpapadentinida di tabbah	istologikisti karandasahilda andarahilda antik	M3	العصيبيس ويالديه فأواط	المرسيد	<u> </u>	Management	Marie Ma
level (dBuV/m)	40-	Jakin, Jakos Riik, alluss Javies veidendelui	o escapação do escapa do estado de la composição de la composição de la composição de la composição de la comp	isky kääjäin on on kaidland kirlekanissi	M3 invahilikkah liakid hidunun sahiki	المعادية والمعادية والمعاددة والمعاددة والمعاددة والمعاددة والمعاددة والمعاددة والمعاددة والمعاددة والمعاددة و	American de Maria	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Museum	U over the district of the
level (dBuV/m)	30- 20-	hatiqii biqaa qirib siiti naa Assan oo qibishii ini	ticassinus dinasunida. Natik d	istologiatistiseenskaatellasseleetaleessise	M3 nyakishirka isabid planensasahin	المراجع والمراجع والم	المحافظ لمداوسة بسيار	1	Manager upon	M. voda kajaliski kilo
	40- Maratha kunana kalipuntaka 30- 20-	anni den en e	ricassinaya dene sebeda de de dela de	hideijdagirin om yksahidda myksahiddan yisi	M3	ianaman an in dal yigi	den en la		Manage	U. water karintaliye
	30- 20-	and the nit is a function that is	Princes paragraphent series de la Little de	iskytätivän on eksikla eskäriekserise	M3 Frequency (MHz)	tanışını oğun deliştiği	Meller		Management	
ارس/wal (ما/س) اوموا ا	30- 20- 10-	Results	Factor	dightiging and	yariideka jajajan yasakii	Detector	Table	Height	ANT	2410
	30- 20- 10- 2370				Frequency (MHz)	Detector	Table (o)	Height (cm)		2410
No.	30- 20- 10- 2370	Results	Factor	Limit	Frequency (MHz) Over Limit	Detector Peak				2410
	30- 20- 10- 0.0- 2370 Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Frequency (MHz) Over Limit (dB)		(o)	(cm)	ANT	verdic

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	Product:		Ca	rplay		Po	olarity		Horizont	al
	Mode		Keeping 7	Fransmitting		Test	Voltage		DC12V	7
Τe	emperature		24 d	leg. C,		Hu	ımidity		56% RI	ł
To	est Result:		F	ass						
C Part	15C Class B 1GHz-18GHz +2-	-2								
	90-									
			М1							
•	80-		Jan	M						
	70-			\u_						
	60-		f	M ₂						
	50-		1							
-	30	b	W.	With						
(III / Appan		J.	Ψ	W.	Name of					
(iii/angn) isasi	40-	aldin the house and the second of the second	*	W.	And the same of th	وموأب المرسان والإرام والمرام	New Area Stall Language	بدارية والمتعارية والمتعارية والمتعارية والمتعارية والمتعارية والمتعارية والمتعارية والمتعارية والمتعارية والم	ويوالعارض فرنامه فأريني أونيا أونيا	rimonių delikėje
(Angn) level		to blanded was and a transfer of the state o		W.	White the same state of	وموامل المساون والإمامي	hite de sien deltallel, deus weiste	din the state of t	ahi, di anakadi kada il kanada ka	stream plaithrig
(Angr) least	40-	in the state of th		W.	Marine Constitution	angles de propinsi di Perbetang	المتار بالمدار والمار والم	di ndig ghared a fright afroinn	ah, J. mastanlik mitter (42 met a pampinal lage)	i o to man and a single significant of the signific
III (Angra) Isaasi	40 - Ramanan da	alder del complete anno complete		****	Maria de la Constitución de la C	هموالي الدسيدان والواطروي	nderderin er Allahik, en en derde	aki a li ga karaka kalika ka	oh, Lausenlause, 192 as a ganton loon	
III/Angn) isasi	40-	intellulation and the second and			Maring Language	an ta de	المتواطعة والمقابل المدير المتواط	disabilitati dipelanti dipelanti dipelanti	ah, J. destelektreter, Manaders meteorliser,	erence del de es
III/Angn) isasi	40-tundenblas isot dishibiti 30-	intellulation and the second and the second		2483.5		an tak medici diploma	hterstein pillelik pag disk	it on the state of a physical production of the state of	ah, J. Antické kadas (Mandra an Antisas)	2500
m/yudi (dbu/)m	40- 10- 20- 10-	Results	Factor	2483.5	i i	Detector	Table	Height	ak, Louisellusis, Mandron denlinen	2500
II/Angan lanai	40 - 40 - 40 - 40 - 40 - 40 - 40 - 40 -		Factor (dB)	2483.5	; Frequency (MHz)					2500
m/vdd) davel	30- 10- 2470	Results		2483.5 Limit	Frequency (MHz) Over Limit		Table	Height		

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]	Product:		Carp	olay		Detec	tor		Vertical	
Mode Temperature		I	Keeping Transmitting			Test Voltage		DC12V 56% RH		
		24 deg. C,			Humio	lity				
Te	Test Result: Pass									
	rt 15C Class B 1GHz-18G	Hz -2			•			•		
	90-									
	80-		M1							
	70-		ساسم	market.						
	60-			hy .						
			- 7	1						
Ē	50-			- la						
(dBuV/m)		1	کیم کیل	M2						
level (dBuV/m)	40-	ويستدر والمعارف والمروض والمعارف	HARLAND OF THE STREET	L	gan dipolantina dan di seringgan palatatan	and the second of the second	والمسالم أوارا والإستاد			d. daruma ada di plata
level (dBuV/m)		المناسبية وأعال والمستشعبة المال	Like John Committee Commit	L	idan kerkerkan kerkerkan disebagi	benesiumme, magnes helpste distaller op	والمسائم والمادة ويستويط	iritali kilonenti likonenti sirakin	કર્મ નાફ મહે તે હૈકો, કરીના છા મે સ્ટેક્સ હતો. સહે	d be-parketyfdy
level (dBuV/m)	40-	النباد شدند الحالب دار مرشد و الأسال	ush hard	L	atalish saharipitah kecali beranggan pada dan dan p	hannan manan dalah d	ندر المعالمة المعالم	iriigh heimeachtan him	يتاسيان عطر مطر المطالب المتاسان المجاور عدد بعام	l. br., andrályfika
level (dBuV/m)	30	المناوية والمعارضة و	in the state of th	L	edis, kerkeskeskeskeskeskeskeskeskeskeskeskeskesk	inciseres magnes dept disting	المسأور أداء «ويوزيها».	territaine de la constitue de	والمواجه أطر والمحاملة المواجه والمواجه والمواجم	d. dan mada digida a
level (dBuV/m)	30- 20- 10-	المستوعة والمعارب والمراسمة والمعاربة والمراسمة والمعاربة والمراسمة والمراسمة والمراسمة والمراسمة والمراسمة وا	HARLING TO SERVICE STREET	The Control of the Co		houseman vegen helpt littler g	غالم الأخرار الاستخدام الأخرار الإستان الأخرار الإستان الأخرار الإستان الأخرار الإستان الأخرار الإستان الأخرار	interd. America di Renardi (in America)	stady all did state of the part of the state	
level (dBuV/m)	30 - 20 -	المناور والمرافع والم	history and the second	L		hanisarina mangan dalah dilahan	a Jungan pendelanan	interest in the second in the	at ang	2500
O.	30- 20- 10-	Results	Factor	The Control of the Co	5	Detector	Table	Height	ANT	
	30 - 20 - 10 - 2470		Factor (dB)	2483.	5 Frequency (MHz)					2500
	30- 20- 10- 0.0- 2470	Results		2483.	5 Frequency (MHz) Over Limit		Table	Height		2500

Note: 1. The PK emission level less than the AV limit. No necessary to record the AV emission level.

2. The three modulation modes of GFSK, Pi/4D-QPSK and 8DPSK were tested. And only the worst case was recorded in the test report. GFSK was the worst case.

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8.0 Antenna Requirement

Applicable Standard

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

This product has an PCB antenna with gain -0.58dBi maximum. It fulfills the requirement of this section.

Test Result: Pass

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9.0 20dB Bandwidth Measurement

Test Configuration



Test Procedure

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 30kHz RBW and 100kHz VBW.

The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

Limit

N/A

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Test Result

Product:		Carplay			Test Mo	ode:	Kee	p transmitti	
Mode		Keep	oing Tran			Test Vol	tage		DC12V
Temperatur	Temperature 24 deg. C,			Humid	ity		56% RH		
Test Result	Test Result: Pass			Detect	or		PK		
20dB Bandwi	idth		894kH	Z					
Ref	10 dBm		*Att 2	0 dB	* RBW 3 * VBW 1 SWT 1	00 kHz	Mark	er 1 [T1 -1 2.401995	L.23 dBm
10				-			BW 8	[T1] 20 94.230769 1 [T1 no	
PK10-					M		Temp		.73 dBm 462 GHz
20			₩		\ 	T2		2.402432	0.89 dBm
30						V	<u>~</u>		
40								Λ _Λ	
W50							<u></u>		3
60									
70									
80									
-90									
Center	r 2.402	2 GHz		300]	kHz/			Spa	n 3 MHz

The report refers only to the sample tested and does not apply to the bulk.

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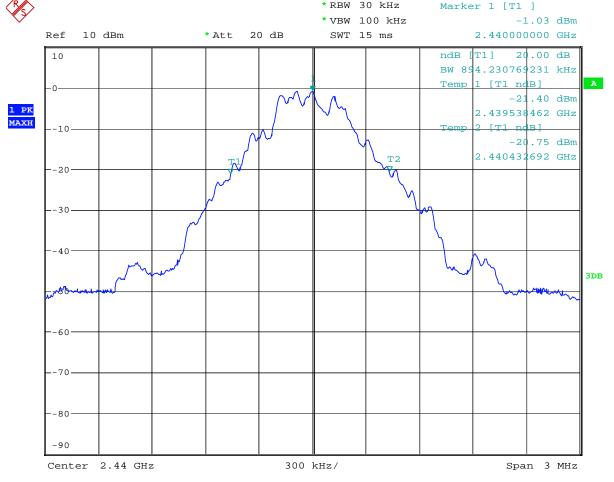
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GFSK			
Product:	Carplay	Test Mode:	Keep transmitting
Mode	Keeping Transmitting	Test Voltage	DC12V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK
20dB Bandwidth	894kHz		
	* RBW 3	0 kHz Mark	er 1 [T1]



Date: 4.SEP.2024 10:42:15

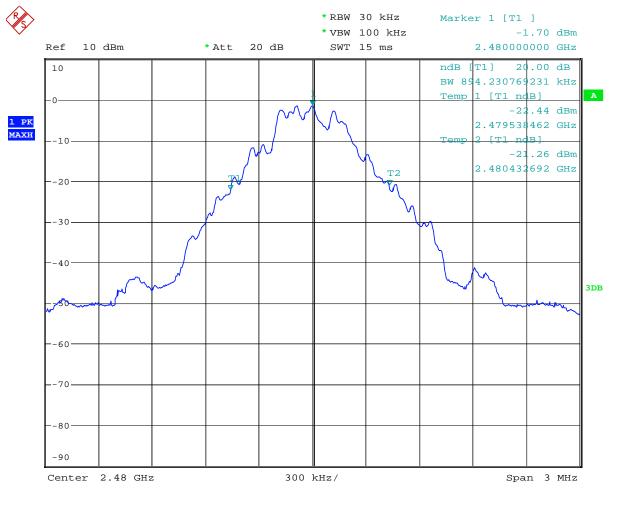
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GFSK			
Product:	Carplay	Test Mode:	Keep transmitting
Mode	Keeping Transmitting	Test Voltage	DC12V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK
20dB Bandwidth	894kHz		



Date: 4.SEP.2024 10:44:01

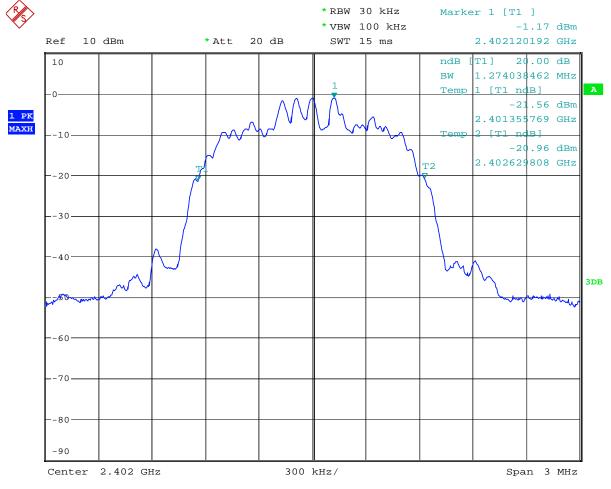
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Л/4DQPSK			
Product:	Carplay	Test Mode:	Keep transmitting
Mode	Keeping Transmitting	Test Voltage	DC12V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK
20dB Bandwidth	1.274MHz		
6		DI 20 1-II-	



Date: 4.SEP.2024 10:47:19

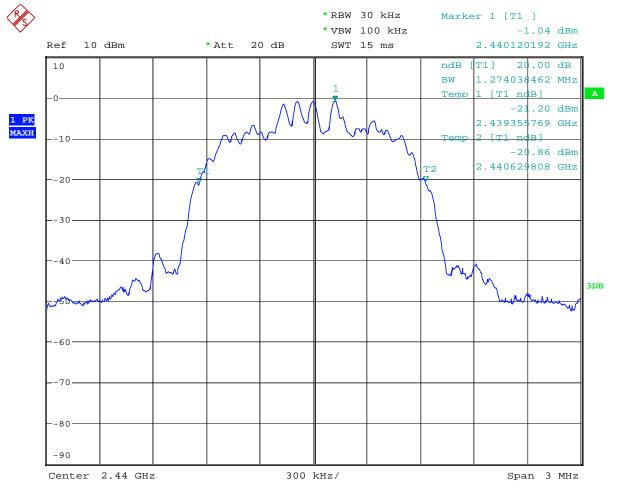
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Л/4DQPSK			
Product:	Carplay	Test Mode:	Keep transmitting
Mode	Keeping Transmitting	Test Voltage	DC12V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK
20dB Bandwidth	1.274MHz		



Date: 4.SEP.2024 10:46:43

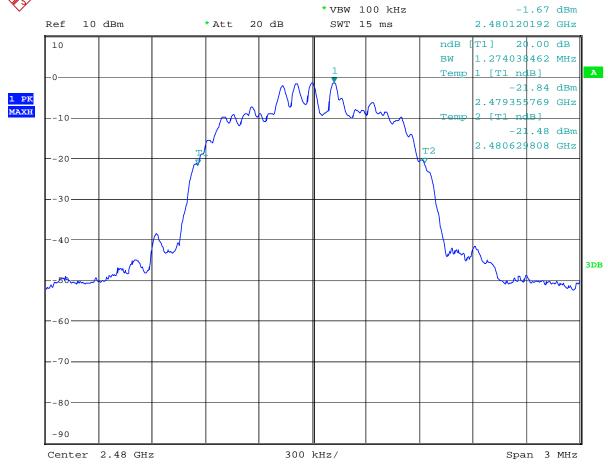
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Л/4DQPSK				
Product:	Carplay		Test Mode:	Keep transmitting
Mode	Keeping Transmitting		Test Voltage	DC12V
Temperature	24 deg. C,		Humidity	56% RH
Test Result:	Pass		Detector	PK
20dB Bandwidth	1.274MHz			
(R) SS		* RBW 30	- 11021	eer 1 [T1] -1.67 dBm
Ref 10 dBm	* Att 20 dB	SWT 1	5 ms	2.480120192 GHz



Date: 4.SEP.2024 10:46:01

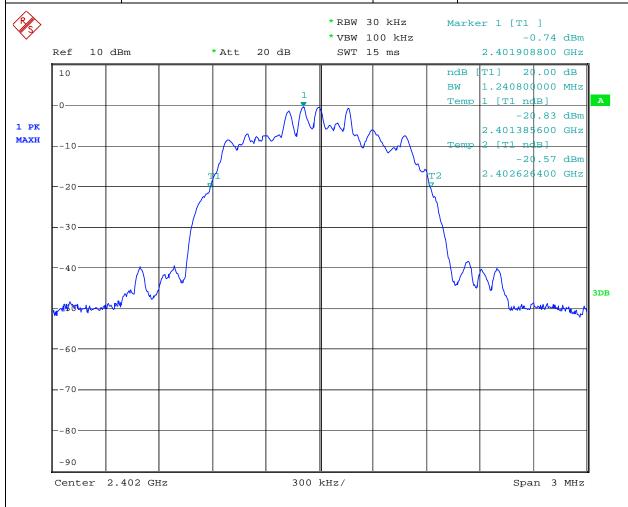
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8DPSK			
Product:	Carplay	Test Mode:	Keep transmitting
Mode	Keeping Transmitting	Test Voltage	DC12V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK
20dB Bandwidth	1.241MHz		



Date: 6.SEP.2024 12:36:08

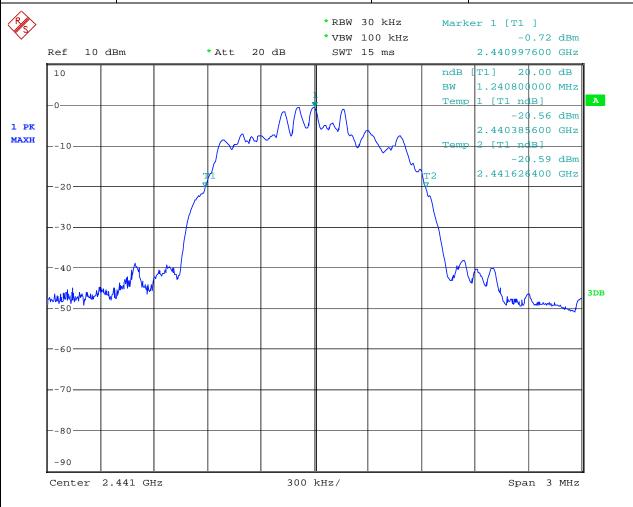
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8DPSK			
Product:	Carplay	Test Mode:	Keep transmitting
Mode	Keeping Transmitting	Test Voltage	DC12V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK
20dB Bandwidth	1.241MHz		



Date: 6.SEP.2024 12:44:06

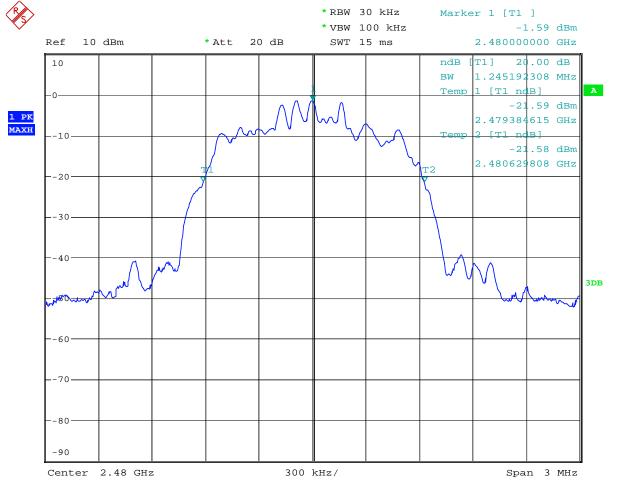
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8DPSK			
Product:	Carplay	Test Mode:	Keep transmitting
Mode	Keeping Transmitting	Test Voltage	DC12V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK
20dB Bandwidth	1.245MHz		
^			



Date: 6.SEP.2024 12:53:55

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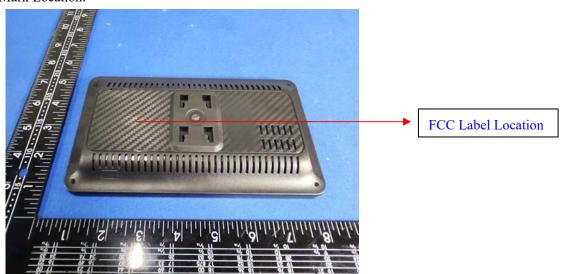
10.0 FCC ID Label

FCC ID: 2A8QF-B5306

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation

The label must not be a stick-on paper label. The label on these products must be permanently affixed to the product and readily visible at the time of purchase and must last the expected lifetime of the equipment not be readily detachable.

Mark Location:



Date: 2024-09-06

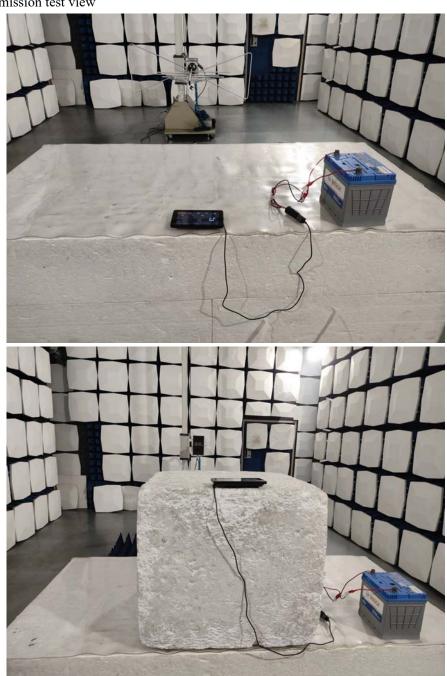


11.0 Photo of testing

11.1 Conducted test View

N/A

Radiated emission test view



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11.2 Photographs - EUT

Outside View



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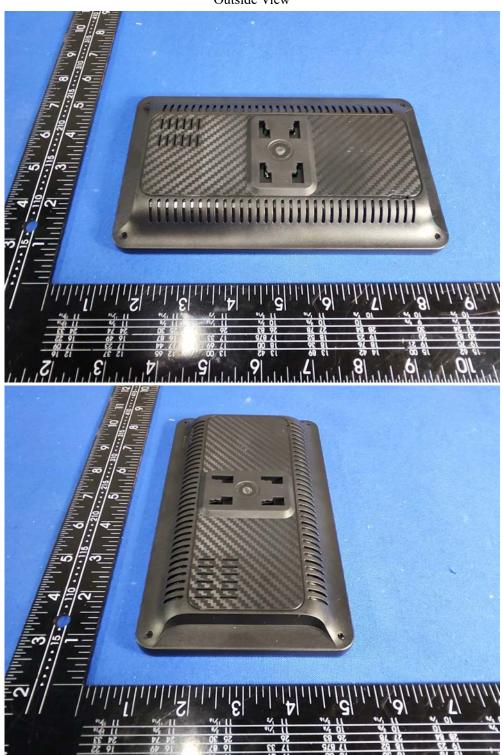
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Outside View



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Inside View





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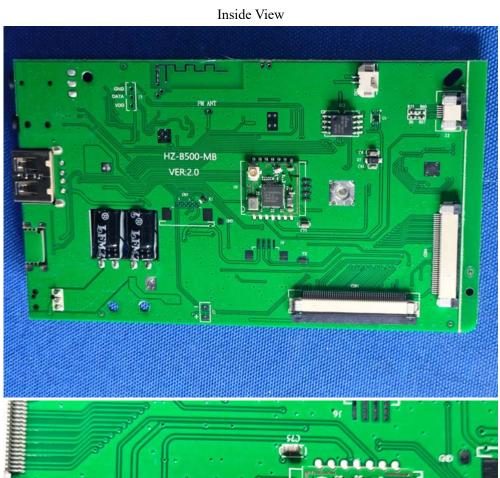
adopt any other remedies which may be appropriate.

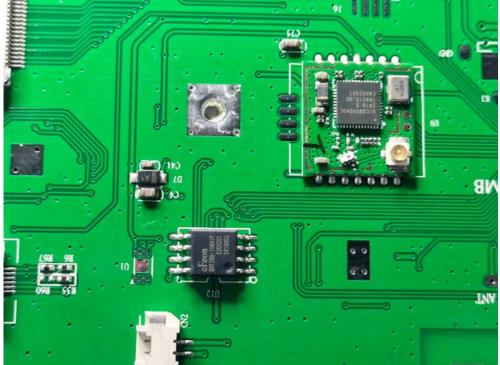
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Inside View





-- End of the report--

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