



RF EXPOSURE Test Report

Report No.: MTi220302012-02E3

Date of issue: 2022-06-09

Applicant: UP(Guangzhou)Electronics Co., Ltd.

Product name: CAR MULTIMEDIA PLAYER WITH RADIO

Model(s): PLINDVTB7, PLINDVTB10, PLINEQ7,
PLINTBL10, PLINTBL7

FCC ID: 2A4GI-PLINDVTB7

Shenzhen Microtest Co., Ltd.

<http://www.mtitest.com>



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TEST RESULT CERTIFICATION	
Applicant:	UP(Guangzhou)Electronics Co., Ltd.
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Manufacturer:	UP(Guangzhou)Electronics Co., Ltd.
Address:	2/F, Block 2, No. 13 Chaosheng Road, Jinghu Ave., Huadu Dist., Guangzhou, China
Factory:	UP(Guangzhou)Electronics Co., Ltd.
Address:	2/F, Block 2, No. 13 Chaosheng Road, Jinghu Ave., Huadu Dist., Guangzhou, China
Product description	
Product name	CAR MULTIMEDIA PLAYER WITH RADIO
Trademark	Pyle
Model Name	PLINDVTB7
Serial Model	PLINDVTB10, PLINEQ7, PLINTBL10, PLINTBL7
Standards.....	N/A
Test procedure	KDB 447498 D01 v06
Date of Test	
Date (s) of performance of tests	2022-03-02 ~ 2022-06-09
Test Result.....	Pass

Testing Engineer

:

Eugene Qiu

(Eugene Qiu)

Technical Manager

:

Leon Chen

(Leon Chen)

Authorized Signatory

:

Tom Xue

(Tom Xue)



RF EXPOSURE EVALUATION

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)

Limits for 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: $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2)$

Where

P_d = Power density in mW/cm²

P_{out} = output power to antenna in mW

G = Numeric gain of the antenna relative to isotropic antenna

π = 3.1415926

R = distance between observation point and center of the radiator in cm(20cm)

P_d 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.

Measurement Result

BT:

Operation Frequency: 2402-2480MHz,

Power density limited: 1mW/ cm²

2.4GWiFi:

Operation Frequency: WIFI 802.11b/g/n HT20: 2412-2462MHz,

802.11n HT40: 2422-2452MHz,

Power density limited: 1mW/ cm²

Antenna Type: External Antenna;

WIFI antenna gain: 0dBi

R=20cm

$mW=10^{(dBm/10)}$

antenna gain Numeric= $10^{(dBi/10)}=10^{(0/10)}=1$

BR+EDR:

Channel Freq. (MHz)	modulation	conducted power	Tune-up power (dBm)	Max		Antenna		Evaluation result	Power density Limits
		(dBm)		tune-up power		Gain		(mW/cm2)	(mW/cm2)
				(dBm)	(mW)	(dBi)	Numeric		
2402	GFSK	0.99	1±1	2	1.585	0	1.00	0.0003	1
2441		1.64	1±1	2	1.585	0	1.00	0.0003	1
2480		1.55	1±1	2	1.585	0	1.00	0.0003	1
2402	π/4-DQPSK	-1.42	(-1) ±1	0	1.000	0	1.00	0.0002	1
2441		-0.81	(-1) ±1	0	1.000	0	1.00	0.0002	1
2480		-0.94	(-1) ±1	0	1.000	0	1.00	0.0002	1
2402	8DPSK	-0.92	(-1) ±1	0	1.000	0	1.00	0.0002	1
2441		-0.62	(-1) ±1	0	1.000	0	1.00	0.0002	1
2480		-0.59	(-1) ±1	0	1.000	0	1.00	0.0002	1



2.4GWiFi:

Channel Freq. (MHz)	modulation	conducted power	Tune-up power	Max		Antenna	Evaluation result at 20cm	Power density Limits
		(dBm)	(dBm)	tune-up power		Gain	Power density(mW/cm2)	(mW/cm2)
		Ant A	Ant A	(dBm)	(mW)	Numeric		
		Ant A	Ant A	Ant A	Ant A	Ant A	Ant A	
2412	802.11b	19.85	20±1	21	125.89254	1	0.02505	1
2437		17.42	17±1	18	63.095734	1	0.01255	1
2462		16.22	17±1	18	63.095734	1	0.01255	1
2412	802.11g	15.73	16±1	17	50.118723	1	0.00997	1
2437		16.05	16±1	17	50.118723	1	0.00997	1
2462		15.23	16±1	17	50.118723	1	0.00997	1
2412	802.11n H20	15.42	15±1	16	39.810717	1	0.00792	1
2437		15.91	15±1	16	39.810717	1	0.00792	1
2462		14.99	15±1	16	39.810717	1	0.00792	1
2422	802.11n H40	15.18	15±1	16	39.810717	1	0.00792	1
2437		15.38	15±1	16	39.810717	1	0.00792	1
2452		15.78	15±1	16	39.810717	1	0.00792	1

Simultaneous transmit

BT+ 2.4GWiFi=0.0003+0.02505=0.02535

Conclusion:

For the max result: $0.02535 \leq 1.0$ SAR, No SAR is required.

----END OF REPORT----