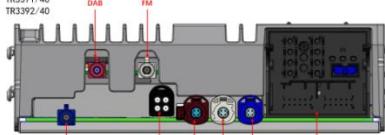
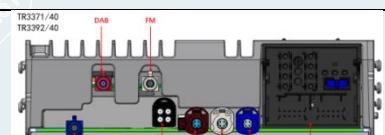
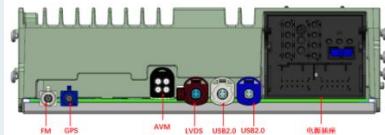


1.5 MODEL DIFFERENCE DESCRIPTIONS

The sample (product name: Multimedia Player Assembly, model: TR3392/40) and its additional model TR3371/40, TR3361/40 and TR3382/40 are different from appearance design, AM, FM radio antenna port, DAB interface and DAB function. In addition, PCB board, RAM and storage capacity are the same.

Product name	Model	Wirelessfunction	other differences	
		DAB port	PCB	Appearance
Multimedia Player Assembly	TR3392/40 (Base)	Contains DAB interface and DAB functions	TR3392/40 has one more small PCB board than TR3382/40. The function of the small PCB board is DAB, and the radio function moved from the main board	
	TR3371/40 (Variant)	Contains DAB interface and DAB functions	Same as TR3392/40	 <p>Mounting bracket is different from TR3392/40</p>
	TR3361/40 (Variant)	Not contains DAB interface and DAB functions	Same as TR3382/40	 <p>Mounting bracket, radio antenna location is different from TR3392/40</p>
	TR3382/40 (Variant)	Not contains DAB interface and DAB functions	TR3382/40 has one less PCB board than TR3392/40, does not support DAB, and the radio module is integrated on the motherboard	 <p>Mounting bracket, radio antenna location is different from TR3392/40</p>

2 LABORATORY AND ACCREDITATIONS

2.1 LABORATORY

The tests & measurements refer to this report were performed by Shenzhen EMC Laboratory of Guangzhou GRG Metrology & Test Co., Ltd.

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P.C.: 518110
Tel : 0755-61180008
Fax: 0755-61180008

2.2 ACCREDITATIONS

Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

USA A2LA (Certificate#:2861.01)

The measuring facility of laboratories has been authorized or registered by the following approval agencies.

Canada ISED (Company Number: 24897, CAB identifier:CN0069)

USA FCC (Registration Number: 759402, Designation Number:CN1198)

Copies of granted accreditation certificates are available for downloading from our web site,
<http://www.grgtest.com>

----- The following blanks -----

3 EVALUATION METHOD

Exposure category: General population/uncontrolled environment

EUT Type: Production Unit

Device Type: Mobile Device

Refer Standard: KDB 447498 D01 General RF Exposure Guidance v06

FCC Part 2 §2.1091

Systems operating under the provisions of FCC 47 CFR section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as mobile device whereby a distance of 0.2m normally can be maintained between the user and the device, and below RF Permissible Exposure limit shall comply with.

In accordance with KDB447498D01 for Simultaneous transmission MPE test exclusion applies when the sum of the MPE ratios for all simultaneous transmitting antennas incorporated in a host device, based on the calculated/estimated, numerically modeled or measured field strengths or power density, is ≤ 1.0 . The MPE ratio of each antenna is determined at the minimum test separation distance required by the operating configurations and exposure conditions of the host device, according to the ratio of field strengths or power density to MPE limit, at the test frequency. Either the maximum peak or spatially averaged results from measurements or numerical simulations may be used to determine the MPE ratios. Spatial averaging does not apply when MPE is estimated using simple calculations based on far-field plane-wave equivalent conditions. The antenna installation and operating requirements for the host device must meet the minimum test separation distances required by all antennas, in both standalone and simultaneous transmission operations, to satisfy compliance.

4 LIMITS FOR GENERAL POPULATION/UNCONTROLLED EXPOSURE

(B) Limits for General Population/Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength(H) (A/m)	Power Density (S) (Mw/cm ²)	Averaging Time[E] ² , [H] ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	F/1500	30
1500-100,000	/	/	1.0	30

Note: f=frequency in MHz; *Plane-wave equivalent power density.

5 CALCULATION METHOD

Predication of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S=PG/4\pi R^2$$

Where: S=power density

P=power input to antenna

G=power gain of the antenna in the direction of interest relative to anisotropic radiator

R=distance to the center of radiation of the antenna

From the EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the maximum gain of the used as following information, the RF power density can be obtained.

Frequency Band	Antenna type	Maximum antenna gain
2.402~2.480GHz	PCB antenna	2dBi

6 ESTIMATION RESULT

6.1 POWER TEST RESULTS

DH5

Test Channel	Fundamental Frequency (GHz)	Max Output Power(dBm)	Limit (dBm)	Peak/Average	Pass/Fail
Lowest	2.402	9.05	20.97	Peak	Pass
Middle	2.441	10.90			Pass
Highest	2.480	10.97			Pass

2DH5

Test Channel	Fundamental Frequency (GHz)	Max Output Power(dBm)	Limit (dBm)	Peak/Average	Pass/Fail
Lowest	2.402	7.84	20.97	Peak	Pass
Middle	2.441	9.26			Pass
Highest	2.480	9.12			Pass

3DH5

Test Channel	Fundamental Frequency (GHz)	Max Output Power(dBm)	Limit (dBm)	Peak/Average	Pass/Fail
Lowest	2.402	8.14	20.97	Peak	Pass
Middle	2.441	9.55			Pass
Highest	2.480	9.40			Pass

6.2 MANUFACTURING TOLERANCE

Frequency (MHz)	BT		
	DH5	2DH5	3DH5
	2480	2441	2441
Target (dBm)	10.0	8.5	9.0
Tolerance \pm (dB)	1.0	1.0	1.0

6.3 MEASUREMENT RESULTS

Mode	Output power		Antenna Gain (dBi)	Antenna Gain (linear)	MPE (mW/cm ²)	MPE Limits (mW/cm ²)
	(dBm)	(mW)				
DH5	11	12.5893	2	1.5849	0.0040	1.0000
2DH5	9.5	8.9125	2	1.5849	0.0028	1.0000
3DH5	10	10.0000	2	1.5849	0.0032	1.0000

Remark:

1. Maximum average power including tune-up tolerance;
2. MPE use distance is 20cm from manufacturer declaration of user manual.

7 CONCLUSION

The measurement results comply with the FCC Limit per 47 CFR 2.1091 for the uncontrolled RF Exposure of mobile device.

----- End of Report -----