



MAXIMUM PERMISSIBLE EXPOSURE

TEST REPORT

For

ZTE TRUNKING TECHNOLOGY CORPORATION

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ShenZhen, P.R.China

FCC ID: 2AEKCPM790V

Report Type: Original Report	Product Type: DIGITAL MOBILE RADIO
Report Number:	RSZ180224002-20
Report Date:	2018-04-19
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Note: This report must not be used by the customer to claim product certification, approval, or endorsement by A2LA* or any agency of the Federal Government. * This report may contain data that are not covered by the A2LA accreditation and are marked with an asterisk “*”.

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FCC §1.1310 & FCC & §2.1091- MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Product Description for Equipment under Test (EUT)

The ZTE TRUNKING TECHNOLOGY CORPORATION's product, model number: PM790 VHF (FCC ID: 2AEKCPM790V) or the "EUT" in this report was a DIGITAL MOBILE RADIO which was measured approximately: 19.1 cm (L) × 17.7 cm (W) × 4.7 cm (H), rated with input voltage: DC 13.6 V.

Antenna Information:

Manufacturer	Antenna Type	Model No.	Length(cm)	Gain(dBi)
Kenbotong Technology Co., Ltd.	Monopole Antenna	TQC-150CII	110	3.5 dBi@136-174 MHz

*All measurement and test data in this report was gathered from production sample serial number: 1800236. (Assigned by BACL, Shenzhen). The EUT supplied by the applicant was received on 2018-02-24.

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located on the 6/F., West Wing, Third Phase of Wanli Industrial Building, Shihua Road, Futian Free Trade Zone, Shenzhen, Guangdong, China.

The test site has been approved by the FCC under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No.: 342867, the FCC Designation No.: CN1221.

The test site has been registered with ISED Canada under ISED Canada Registration Number 3062B.

Applicable Standard

According to subpart 1.1307 (b)(1), 2.1091 systems operating under the provisions of this section shall be operated in a manner that ensures the public is not exposed to RF energy level in excess of the communication guidelines.

Limits for Occupational/Controlled Exposure

Limits for occupational/Controlled Exposure				
Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time (Minutes)
0.3-1.34	614	1.63	*(100)	6
1.34-30	1842/f	4.89/f	*(900/f ²)	6
30-300	61.4	0.163	1.0	6
300-1500	/	/	f/300	6
1500-100,000	/	/	5.0	6

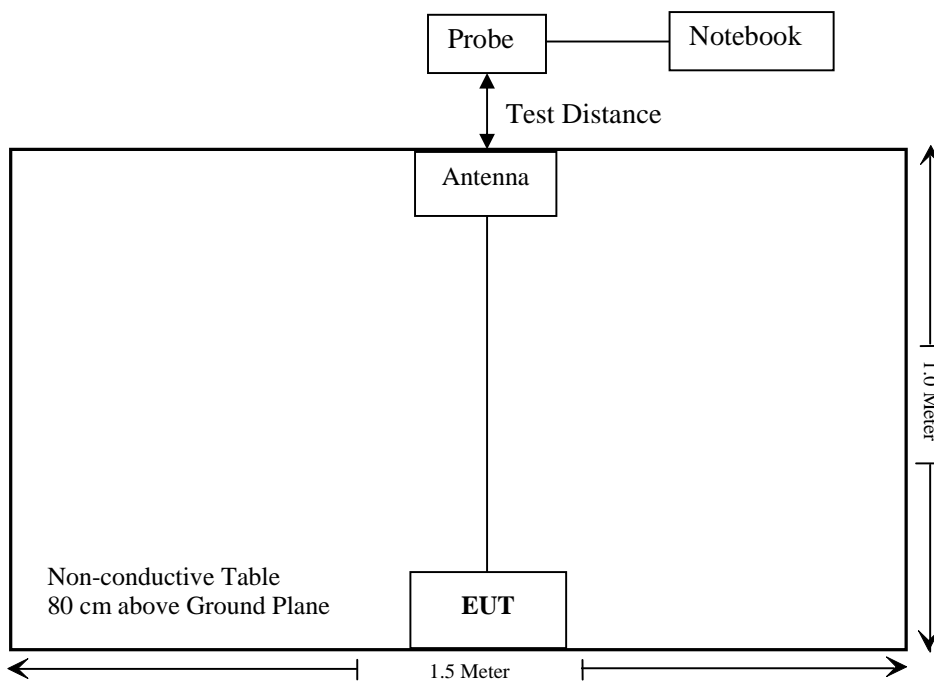
f = frequency in MHz

* = Plane-wave equivalent power density

Test Procedure

1. Place the EUT’s antenna was vertical polarization on the table.
2. The EUT was set to transmit at the frequency at the maximum RF power.
3. The distance between the test probe and the investigated EUT’s antenna aqual to the distance be specified as safety distance in the user manual.
4. Power density measurements were taken at the different heights of the probe from the ground (0.1 to 2 meters) while rotating versus azimuth (from 0⁰ to 360⁰) the antenna.
5. Adjusted the distance between the test probe and the tested antenna to the real safe distance, R_{real}, such that the measured highest power density in the “worst case” position was the same or slightly less than the test limit.
6. The measurement result of final measurements conducted at the chosen azimuth and different heights of the probe above the ground.
7. Average values of the power density were calculated for the imaginary whole human body (0.1-2.0 m), for the lower part of the body (01.-0.9 m) and for the upper part of the body (1.0-2.0 m).

Block Diagram of Test Setup



Test Equipment List

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
ETS-LINDGREN	Isotropic Electric Field Probe	HI-6005	00069461	2016-02-29	2019-02-28

* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

Test Data

Environmental Conditions

Temperature:	25 °C
Relative Humidity:	52 %
ATM Pressure:	101.0 kPa

The testing was performed by Dylan Li on 2018-04-19.

Test Mode: VHF-FM (155.7525MHz)

Measuring Probe Height (cm)	Power Density (mW/cm ²)			
	Distance (55cm)	Distance (60cm)	Distance (70cm)	Distance (80cm)
10	0.125	0.090	0.080	0.070
20	0.240	0.170	0.140	0.130
30	0.425	0.205	0.175	0.155
40	0.520	0.285	0.255	0.210
50	0.675	0.430	0.380	0.340
60	0.770	0.505	0.475	0.380
70	0.925	0.590	0.540	0.395
80	0.970	0.650	0.645	0.440
90	0.975	0.900	0.805	0.560
100	0.945	0.885	0.775	0.620
110	0.905	0.710	0.685	0.580
120	0.820	0.655	0.640	0.460
130	0.760	0.590	0.560	0.405
140	0.740	0.565	0.510	0.380
150	0.655	0.430	0.375	0.310
160	0.560	0.405	0.345	0.265
170	0.490	0.360	0.320	0.240
180	0.430	0.345	0.295	0.190
190	0.370	0.305	0.275	0.170
200	0.305	0.265	0.255	0.155

Test Mode: VHF-4FSK (155.7525MHz)

Mearsuring Probe Height (cm)	Power Density (mW/cm ²)			
	Distance (55cm)	Distance (60cm)	Distance (70cm)	Distance (80cm)
10	0.120	0.085	0.075	0.065
20	0.245	0.155	0.135	0.125
30	0.415	0.195	0.180	0.160
40	0.505	0.310	0.265	0.245
50	0.685	0.455	0.405	0.375
60	0.755	0.545	0.480	0.405
70	0.895	0.570	0.535	0.415
80	0.955	0.670	0.620	0.445
90	0.965	0.905	0.810	0.545
100	0.930	0.845	0.780	0.655
110	0.935	0.705	0.690	0.560
120	0.830	0.675	0.645	0.470
130	0.765	0.675	0.540	0.420
140	0.755	0.575	0.520	0.390
150	0.660	0.420	0.380	0.355
160	0.540	0.395	0.355	0.320
170	0.430	0.370	0.315	0.260
180	0.395	0.375	0.305	0.210
190	0.375	0.295	0.255	0.170
200	0.295	0.270	0.245	0.145

Test Result Summary

Maximum Power Density(mW/cm²)	0.975
Safety Distance (cm)	55
Result	Pass

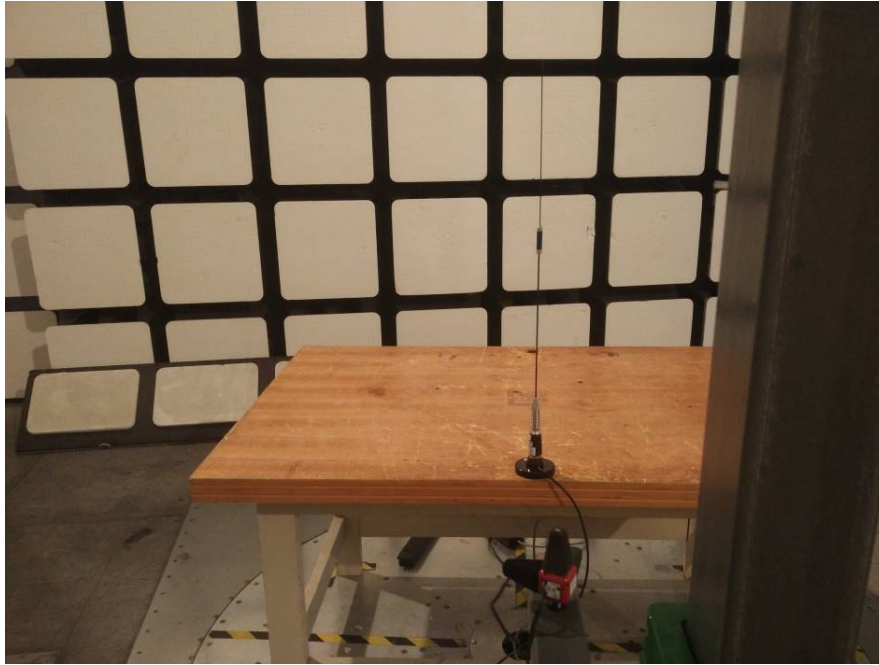
For simultaneously transmit system, the calculated power density should comply with:

$$\sum_i \frac{S_i}{S_{Limit,i}} \leq 1$$

Simultaneous transmitting consideration: (referring to the bluetooth report, the highest MPE is 0.0001mW/cm²)

The ratio=MPE/limit_{TNB}+MPE/limit_{DTS}=0.975/1+0.0001/1=0.9751 < 1.0, simultaneous exposure is not required.

Test Setup Photo



******* END OF REPORT *******