

# MAXIMUM PERMISSIBLE EXPOSURE TEST REPORT

For

## TYT ELECTRONICS CO., LTD

Block 39-1, Optoelectronics-information industry base, Nan'an, Quanzhou, Fujian, China

**FCC ID: POD-DMR3**

<b>Report Type:</b> Original Report	<b>Product Name:</b> DMR mobile radio
<b>Report Number:</b>	RXM170927052-20
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**Note:** This test report is prepared for the customer shown above and for the device described herein. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp. (Dongguan).

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

### Product Description for Equipment under Test (EUT)

The **TYT ELECTRONICS CO., LTD**'s product, model number: **MD-9600 (FCC ID: POD-DMR3)** ( the "EUT") in this report was a **DMR mobile radio**, which was measured approximately: 18.8 cm (L) x 14.3 cm (W) x 5.0 cm (H), DC 13.8V.

#### Antenna Information:

Manufacturer	Antenna Type	Model No.	Length (cm)	Gain (dBi)
nagoya Antenna	Monopole Antenna	NL-770R	43	3.2dBi@136-174MHz 5.5dBi@ 400-470MHz

*\*All measurement and test data in this report was gathered from production sample serial number: 170927052 (Assigned by BACL,Dongguan). The EUT was received on 2017-09-26.*

### Applicable Standard

According to 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 Maximum Permissible Exposure (MPE)

Limits for Occupational/Controlled Exposure				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm <sup>2</sup> )	Averaging Time  E ,  H  or S (minutes)
0.3- 3.0	614	1.63	(100)*	6
3.0 - 30	1842/f	4.89/f	(900/f <sup>2</sup> )*	6
30-300	61.4	0.163	1.0	6
300-1500	/	/	f/300	6
1500-100,000	/	/	5	6

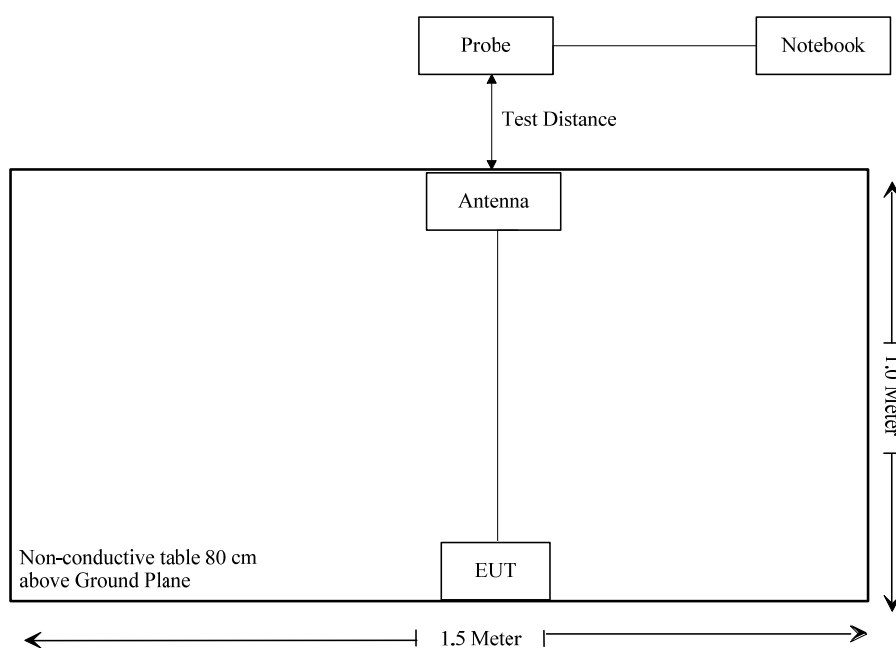
f = frequency in MHz;

\* = 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 maximum RF power.
3. The Distance between the test probe and the investigated EUT`s antenna equal to the distance be specified as safety distance in the user manual.
4. Power density measurements were taken at different heights of the probe from the ground (0.1 to 2 meters) while rotating versus azimuth (from 0° to 360°) 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 results of final measurements conducted at the chosen azimuth and different heights of the probe above the ground.
7. Average values of power density were calculated for the imaginary whole human body (0.1–2.0 m), for the lower part of the body (0.1–0.9 m) and for the upper part of the body (1.0–2.0 m).

### Block Diagram of Test Setup



### Test Equipment List and Details

Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Due Date
ETS-LINDGREN	Field Probe	HI-6005	00069461	2016-2-29	2019-2-28

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

**Test Data****Environmental Conditions**

<b>Temperature:</b>	28.2 °C
<b>Relative Humidity:</b>	52 %
<b>ATM Pressure:</b>	100.6 kPa

The testing was performed by Pean Zhu on 2017-10-13 .

Test Mode:VHF-FM(155.7525 MHz)

Measuring Probe Height (cm)	Power Density (mW/cm <sup>2</sup> )				
	Distance (40cm)	Distance (50cm)	Distance (60cm)	Distance (70cm)	Distance (80cm)
10	0.037	0.035	0.034	0.023	0.033
20	0.055	0.042	0.031	0.025	0.018
30	0.077	0.052	0.039	0.03	0.021
40	0.106	0.061	0.033	0.034	0.031
50	0.133	0.062	0.037	0.04	0.038
60	0.158	0.066	0.04	0.045	0.038
70	0.188	0.073	0.047	0.051	0.036
80	0.182	0.072	0.05	0.053	0.032
90	0.153	0.067	0.051	0.045	0.034
100	0.114	0.059	0.052	0.047	0.038
110	0.125	0.065	0.051	0.048	0.042
120	0.153	0.073	0.056	0.051	0.044
130	0.168	0.092	0.055	0.064	0.046
140	0.154	0.097	0.066	0.057	0.041
150	0.127	0.071	0.047	0.041	0.034
160	0.085	0.046	0.045	0.04	0.031
170	0.065	0.035	0.031	0.033	0.026
180	0.042	0.03	0.029	0.026	0.022
190	0.035	0.023	0.022	0.021	0.023
200	0.023	0.018	0.017	0.02	0.018

Test Mode:VHF-4FSK(155.7525 MHz)

Measuring Probe Height (cm)	Power Density (mW/cm <sup>2</sup> )				
	Distance (40cm)	Distance (50cm)	Distance (60cm)	Distance (70cm)	Distance (80cm)
10	0.031	0.023	0.029	0.021	0.024
20	0.05	0.039	0.023	0.018	0.007
30	0.064	0.042	0.031	0.02	0.014
40	0.098	0.057	0.026	0.023	0.02
50	0.126	0.052	0.03	0.031	0.034
60	0.145	0.057	0.028	0.037	0.031
70	0.178	0.066	0.044	0.043	0.024
80	0.173	0.066	0.047	0.042	0.02
90	0.151	0.058	0.047	0.033	0.033
100	0.11	0.051	0.048	0.036	0.031
110	0.117	0.064	0.048	0.045	0.039
120	0.149	0.069	0.055	0.039	0.032
130	0.158	0.084	0.047	0.059	0.035
140	0.141	0.084	0.06	0.051	0.039
150	0.126	0.069	0.038	0.033	0.024
160	0.083	0.039	0.036	0.032	0.023
170	0.055	0.023	0.025	0.024	0.018
180	0.033	0.019	0.023	0.021	0.021
190	0.026	0.014	0.01	0.019	0.021
200	0.023	0.018	0.017	0.02	0.018

Test Mode:UHF-FM(453.2125 MHz)

Measuring Probe Height (cm)	Power Density (mW/cm <sup>2</sup> )				
	Distance (40cm)	Distance (50cm)	Distance (60cm)	Distance (70cm)	Distance (80cm)
10	0.063	0.051	0.034	0.03	0.037
20	0.091	0.087	0.067	0.045	0.031
30	0.072	0.06	0.051	0.031	0.026
40	0.041	0.029	0.025	0.019	0.023
50	0.048	0.049	0.043	0.044	0.036
60	0.096	0.112	0.116	0.106	0.073
70	0.192	0.155	0.167	0.135	0.13
80	0.309	0.201	0.189	0.141	0.143
90	0.563	0.316	0.238	0.164	0.138
100	0.76	0.39	0.256	0.196	0.138
110	0.739	0.387	0.257	0.205	0.142
120	0.551	0.332	0.24	0.195	0.143
130	0.384	0.247	0.195	0.163	0.124
140	0.289	0.191	0.165	0.127	0.101
150	0.223	0.147	0.128	0.104	0.082
160	0.163	0.114	0.103	0.085	0.075
170	0.117	0.088	0.082	0.075	0.064
180	0.081	0.068	0.061	0.057	0.056
190	0.057	0.061	0.052	0.05	0.053
200	0.042	0.046	0.055	0.054	0.042

Test Mode:UHF-4FSK(453.2125 MHz)

Measuring Probe Height (cm)	Power Density (mW/cm <sup>2</sup> )				
	Distance (40cm)	Distance (50cm)	Distance (60cm)	Distance (70cm)	Distance (80cm)
10	0.05	0.046	0.025	0.027	0.034
20	0.086	0.08	0.054	0.042	0.02
30	0.065	0.05	0.047	0.024	0.014
40	0.029	0.018	0.015	0.013	0.018
50	0.047	0.046	0.039	0.031	0.034
60	0.087	0.103	0.109	0.101	0.061
70	0.182	0.146	0.155	0.124	0.127
80	0.297	0.197	0.178	0.129	0.134
90	0.557	0.306	0.231	0.162	0.13
100	0.749	0.382	0.25	0.185	0.128
110	0.736	0.377	0.246	0.199	0.137
120	0.55	0.322	0.229	0.188	0.138
130	0.379	0.237	0.189	0.158	0.12
140	0.278	0.183	0.157	0.123	0.098
150	0.215	0.141	0.118	0.094	0.077
160	0.158	0.105	0.096	0.075	0.063
170	0.106	0.08	0.078	0.073	0.052
180	0.075	0.056	0.056	0.056	0.043
190	0.046	0.059	0.047	0.046	0.044
200	0.042	0.046	0.055	0.054	0.042

## Test Result Summary:

Average Power Density over body (mW/cm <sup>2</sup> )	Whole body	0.244
	lower part	0.164
	High part	0.31
Maximum Power Density (mW/cm <sup>2</sup> )		0.76
Safety Distance (cm)		40
Result		Compliance

## Test Setup Photo



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