

RF Exposure Evaluation Report

Report Reference No...... : **MTEB25030242-H**

FCC ID..... : **2APU9-HRD-907**

Compiled by

(position+printed name+signature)..: File administrators Alisa Luo



Supervised by

(position+printed name+signature)..: Test Engineer Sunny Deng



Approved by

(position+printed name+signature)..: Manager Yvette Zhou



Date of issue..... : **Mar.20,2025**

Representative Laboratory Name. : **Shenzhen Most Technology Service Co., Ltd.**

Address..... : No.5, 2nd Langshan Road, North District, Hi-tech Industrial Park,
Nanshan, Shenzhen, Guangdong, China.

Applicant's name..... : **Shenzhen Hanrongda Electronic Co., Ltd.**

Address..... : No.21, LiYuanxia,Xin Li Road, Ping Hu Town, Long Gang District,
Shenzhen

Test specification/ Standard..... : **47 CFR Part 1.1307**

47 CFR Part 2.1093

TRF Originator..... : Shenzhen Most Technology Service Co., Ltd.

Shenzhen Most Technology Service Co., Ltd. All rights reserved.

This publication may be reproduced in whole or in part for non-commercial purposes as long as the Shenzhen Most Technology Service Co., Ltd. is acknowledged as copyright owner and source of the material. Shenzhen Most Technology Service Co., Ltd. takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context.

Test item description..... : Multi-functional Emergency Radio

Trade Mark..... : HanRongDa

Model/Type reference..... : HRD-907

Listed Models : HRD-907S, ZWS-907, ZWS-907S

Modulation Type..... : GFSK, $\pi/4$ DQPSK, 8DPSK

Operation Frequency..... : From 2402MHz to 2480MHz

Hardware Version..... V1.0

Software Version..... V1.0

Rating..... : DC 3.7V by Battery
DC 5V by USB Port

Result..... : PASS

TEST REPORT

Equipment under Test : Multi-functional Emergency Radio

Model /Type : HRD-907

Listed Models : HRD-907S, ZWS-907, ZWS-907S

Remark : Only the model “HRD-907” was tested, Their electrical circuit design, layout, components used and internal wiring are identical, Only the model name and Appearance is different.

Applicant : Shenzhen Hanrongda Electronic Co., Ltd.

Address : No.21, LiYuanxia,Xin Li Road, Ping Hu Town, Long Gang District, Shenzhen

Manufacturer : Shenzhen Hanrongda Electronic Co., Ltd.

Address : No.21, LiYuanxia,Xin Li Road, Ping Hu Town, Long Gang District, Shenzhen

Test Result:	PASS
---------------------	-------------

The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

1. Revision History

Revision	Issue Date	Revisions	Revised By
00	2025.03.20	Initial Issue	Alisa Luo

2. SAR Evaluation

2.1 RF Exposure Compliance Requirement

2.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06

4.3.1. Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

2.1.2 Limits

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$$\left[\frac{\text{max. power of channel, including tune-up tolerance, mW}}{\text{(min. test separation distance, mm)}} \right] \cdot \left[\sqrt{f(\text{GHz})} \right]$$

 ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

$f(\text{GHz})$ is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation¹⁷

. The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion

2.1.3 EUT RF Exposure

Measurement Data

BLE

GFSK			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2402MHz)	1.560	1.560 ± 1	2.56
Middle(2440MHz)	0.651	0.651 ± 1	1.651
Highest(2480MHz)	0.594	0.594 ± 1	1.594

Worst case: GFSK						
Channel	Maximum Peak Conducted Output Power (dBm)	Maximum tune-up Power		Calculated value	Exclusion threshold	SAR Test Exclusion
		(dBm)	(mW)			
Lowest(2402MHz)	1.560	2.56	1.80	0.56	3.0	Yes

EDR

GFSK			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2402MHz)	-0.859	-0.859 ± 1	0.141
Middle(2441MHz)	-0.485	-0.485 ± 1	0.515
Highest(2480MHz)	-0.483	-0.483 ± 1	0.517

$\pi/4$ DQPSK			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2402MHz)	1.463	1.463 ± 1	2.463
Middle(2441MHz)	1.861	1.861 ± 1	2.861
Highest(2480MHz)	1.855	1.855 ± 1	2.855

8DPSK			
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power
			(dBm)
Lowest(2402MHz)	1.868	1.868 ± 1	2.868
Middle(2441MHz)	2.342	2.342 ± 1	3.342
Highest(2480MHz)	2.215	2.215 ± 1	3.215

Worst case: 8DPSK						
Channel	Maximum Peak Conducted Output Power (dBm)	Maximum tune-up Power		Calculated value	Exclusion threshold	SAR Test Exclusion
		(dBm)	(mW)			
Middle(2441MHz)	2.342	3.342	2.16	0.67	3.0	Yes

.....THE END OF REPORT.....