

MRT Technology (Suzhou) Co., Ltd

Phone: +86-512-66308358 Fax: +86-512-66308368 www.mrt-cert.com

Report No.: 1412RSU00903 Report Version: Issue Date: 12-18-2014

RF Exposure Evaluation Declaration

FCC ID: 2AAMSHM-9641M

APPLICANT: SHENZHEN NST INDUSTRY AND TRADE CO. LTD

Certification **Application Type:**

9.6 Inch Tablet **Product:**

HM-9641M Model No.:

Digital Transmission System (DTS) **FCC Classification:**

Dec. 11 ~ 17, 2014 **Test Date:**

Reviewed By : Robin Wu)

Approved By : Marlinchen

(Marlin Chen)

The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standards through the calibration of the equipment and evaluated measurement uncertainty herein.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

FCC ID: 2AAMSHM-9641M

Page Number: 1 of 5





Revision History

Report No.	Version	Description	Issue Date
1412RSU00903	Rev. 01	Initial report	12-18-2014



1. RF Exposure Evaluation

1.1. Limits

SAR Test Exclusion Thresholds for 100 MHz - 6 GHz and ≤ 50 mm

Approximate SAR Test Exclusion Power Thresholds at Selected Frequencies and Test Separation Distances are illustrated in the following Table. The equation and threshold in Note 1 must be applied to determine SAR test exclusion.

MHz	5	10	15	20	25	mm
150	39	77	116	155	194	SAR Test
300	27	55	82	110	137	Exclusion
450	22	45	67	89	112	Threshold
835	16	33	49	66	82	(mW)
900	16	32	47	63	79	
1500	12	24	37	49	61	
1900	11	22	33	44	54	
2450	10	19	29	38	48	
3600	8	16	24	32	40	
5200	7	13	20	26	33	
5400	6	13	19	26	32	
5800	6	12	19	25	31	
MHz	30	35	40	45	50	mm
150	232	~	240	- 4-		0.45
	232	271	310	349	387	SAR Test
300	164	192	219	349 246	387 274	SAR Test Exclusion
300 450						
	164	192	219	246	274	Exclusion
450	164 134	192 157	219 179	246 201	274 224	Exclusion Threshold
450 835	164 134 98	192 157 115	219 179 131	246 201 148	274 224 164	Exclusion Threshold
450 835 900	164 134 98 95	192 157 115 111	219 179 131 126	246 201 148 142	274 224 164 158	Exclusion Threshold
450 835 900 1500	164 134 98 95 73	192 157 115 111 86	219 179 131 126 98	246 201 148 142 110	274 224 164 158 122	Exclusion Threshold
450 835 900 1500 1900	164 134 98 95 73 65	192 157 115 111 86 76	219 179 131 126 98 87	246 201 148 142 110 98	274 224 164 158 122 109	Exclusion Threshold
450 835 900 1500 1900 2450	164 134 98 95 73 65 57	192 157 115 111 86 76 67	219 179 131 126 98 87 77	246 201 148 142 110 98 86	274 224 164 158 122 109 96	Exclusion Threshold
450 835 900 1500 1900 2450 3600	164 134 98 95 73 65 57 47	192 157 115 111 86 76 67 55	219 179 131 126 98 87 77 63	246 201 148 142 110 98 86 71	274 224 164 158 122 109 96 79	Exclusion Threshold
450 835 900 1500 1900 2450 3600 5200	164 134 98 95 73 65 57 47	192 157 115 111 86 76 67 55 46	219 179 131 126 98 87 77 63 53	246 201 148 142 110 98 86 71 59	274 224 164 158 122 109 96 79 66	Exclusion Threshold

Note 1:

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:

FCC ID: 2AAMSHM-9641M Page Number: 3 of 5



[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] * $[\sqrt{f(GHz)}] \le 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

- f(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison
- 3.0 and 7.5 are referred to as the numeric thresholds in the step 2 below

The test exclusions are applicable only when the minimum test separation distance is \leq 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 according to 5) in section 4.1 is applied to determine SAR test exclusion.



1.2. Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

The temperature and related humidity: 18°C and 78% RH.

1.3. Test Result of RF Exposure Evaluation

Product	9.6 Inch Tablet
Test Item	RF Exposure Evaluation

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 1.2dBi for 2.4GHz in logarithm scale.

Output Power into Antenna:

Test Mode	Frequency Band (MHz)	Maximum output power to antenna (mW)	SAR Test Exclusion Threshold (mW)
802.11b/g/n	2412~2462	9.04	10
BLE	2402~2480	0.63	10

Per FCC KDB 447498 D01v05r02, the SAR exclusion threshold for distances<50mm is defined by the following equation:

$$\frac{\textit{Max Power of Channel (mW)}}{\textit{Test Separation Dist (mm)}} * \sqrt{\textit{Frequency(GHz)}} \le 3.0$$

Based on the maximum conducted power of Wi-Fi/Bluetooth and the antenna to use separation distance, Wi-Fi and Bluetooth SAR were not required;

$$[(9.04 \text{mW/5})^* \sqrt{2.412}] = 2.808 < 3.0, [(0.63 \text{mW/5})^* \sqrt{2.440}] = 0.197 < 3.0.$$

Note: When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

_____ The End _____