RF Exposure Evaluation Declaration

IC:	DD4MXWNDX8G
Applicant:	5800 West Touhy Avenue, Niles, IL 60714-4608, USA
Product:	Networked Docking Station
Model No.:	MXWNDX8G
Brand Name:	SHURE, SHURE
ISED Rule(s):	RSS-102 Issue 6
Result:	Complies
Evaluation Date:	2024-08-26

Reviewed By: Jame Yuan

Approved By: Robin Wu

ACCREDITED
TESTING LABORATORY
CERTIFICATE #3628.01

Revision History

Report No.	Version	Description	Issue Date	Note
2407RSU002-C4	V01	Initial Report	2024-08-28	Valid

CONTENTS

1. General Information

1.1. Applicant

Shure Incorporated

5800 West Touhy Avenue, Niles, IL 60714-4608, USA

1.2. Manufacturer

Shure Incorporated

5800 West Touhy Avenue, Niles, IL 60714-4608, USA

1.3. Testing Facility

<table>
<tr><td>☒</td><td colspan="5">Test Site – MRT Suzhou Laboratory</td></tr>
<tr><td></td><td colspan="5">Laboratory Location (Suzhou - Wuzhong)
D8 Building, No.2 Tian’edang Rd., Wuzhong Economic Development Zone, Suzhou, China
Laboratory Location (Suzhou - SIP)
4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China
Laboratory Location (Suzhou - Wujiang)
Building 1, No.1 Xingdong Road, Wujiang, Suzhou, Jiangsu, People’s Republic of China</td></tr>
<tr><td></td><td colspan="5">Laboratory Accreditations</td></tr>
<tr><td></td><td colspan="2">A2LA: 3628.01</td><td colspan="3">CNAS: L10551</td></tr>
<tr><td></td><td colspan="2">FCC: CN1166</td><td colspan="3">ISED: CN0001</td></tr>
<tr><td></td><td rowspan="2">VCCI:</td><td>☐R-20025</td><td>☐G-20034</td><td>☐C-20020</td><td>☐T-20020</td></tr>
<tr><td></td><td>☐R-20141</td><td>☐G-20134</td><td>☐C-20103</td><td>☐T-20104</td></tr>
<tr><td>☐</td><td colspan="5">Test Site – MRT Shenzhen Laboratory</td></tr>
<tr><td></td><td colspan="5">Laboratory Location (Shenzhen)
1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China</td></tr>
<tr><td></td><td colspan="5">Laboratory Accreditations</td></tr>
<tr><td></td><td colspan="2">A2LA: 3628.02</td><td colspan="3">CNAS: L10551</td></tr>
<tr><td></td><td colspan="2">FCC: CN1284</td><td colspan="3">ISED: CN0105</td></tr>
<tr><td>☐</td><td colspan="5">Test Site – MRT Taiwan Laboratory</td></tr>
<tr><td></td><td colspan="5">Laboratory Location (Taiwan)
No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)</td></tr>
<tr><td></td><td colspan="5">Laboratory Accreditations</td></tr>
<tr><td></td><td colspan="5">TAF: 3261</td></tr>
<tr><td></td><td colspan="2">FCC: 291082, TW3261</td><td colspan="3">ISED: TW3261</td></tr>
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1.4. Product Information

Product Name	Networked Docking Station
Model No.	MXWNDX8G
BLE Specification	BLE 1M/2M
Operating Temperature	5 ~ 40°C
Antenna Information	Refer to section 1.5
Power Type	AC/DC adapter input
Accessory	
Adapter	Model No.: SBC10-USB45WPD-UTJ Input: 100-240V~, 50-60Hz, 1.2A Output: 5.0V/9.0V/12.0V/15.0V⎓3.0A, 20.0V⎓2.25A, 45.0W MAX
Remarks: The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer.	

1.5. Antenna Details

Technology	Frequency Range (MHz)	Antenna Type	Max Peak Gain (dBi)
BLE	2402 ~ 2480	PIFA Antenna	3.66

1.6. Device Classification

According to the user manual, this device is classified as a Mobile Device. So, the RF exposure evaluation requirements of RSS-102 Issue 6 for mobile device exposure conditions subject to MPE limits.

2. RF Exposure Evaluation

2.1. Limits

The electric and magnetic field strength reference levels, power density reference levels, and associated reference period for devices employed by the general public (uncontrolled environment) and controlled-use devices (controlled environment) are specified in following. Note that the power density limits specified in these tables apply to whole body exposure conditions.

Frequency range (MHz)	Electric field (V_{RMS}/m)	Magnetic field (A_{RMS}/m)	Power density (W/m^2)	Reference period (minutes)
Limits for devices used by the general public (uncontrolled environment)				
10-20	27.46	0.0728	2	6
20-48	58.07 / $f^{0.25}$	0.1540 / $f^{0.25}$	8.944 / $f^{0.5}$	6
48-300	22.06	0.05852	1.291	6
300-6000	3.142 $f^{0.3417}$	0.008335 $f^{0.3417}$	0.02619 $f^{0.6834}$	6
6000-15000	61.4	0.163	10	6
15000-50000	61.4	0.163	10	$616000/f^{1.2}$
150000-300000	0.158 $f^{0.5}$	4.21×10^{-4} $f^{0.5}$	6.67×10^{-5} f	$616000/f^{1.2}$
Limits for controlled-use devices (controlled environment)				
10-20	61.4	0.163	10	6
20-48	129.8 / $f^{0.25}$	0.3444 / $f^{0.25}$	44.72 / $f^{0.5}$	6
48-100	49.33	0.1309	6.455	6
100-6000	15.60 $f^{0.25}$	0.04138$f^{0.25}$	0.6455 $f^{0.5}$	6
6000-15000	137	0.364	50	6
15000-50000	137	0.364	50	$616000/f^{1.2}$
150000-300000	0.354$f^{0.5}$	9.40×10^{-4} $f^{0.5}$	3.33×10^{-4} f	$616000/f^{1.2}$

2.2. Extemption Limits for Exposure Evaluation

According to RSS-102 section 6.6: Field reference level (FRL) exposure evaluation is required if the separation distance between the user and/or bystander and the device's radiating element is greater than 20 cm (i.e. mobile devices), except when the device operates as follows:

- below 20 MHz and the source-based, time-averaged maximum EIRP of the device is equal to or less than 1 W (adjusted for tune-up tolerance)
- at or above 20 MHz and below 48 MHz and the source-based, time-averaged maximum EIRP of the device is equal to or less than $4.49/f^{0.5}$W (adjusted for tune-up tolerance), where f is in MHz
- at or above 48 MHz and below 300 MHz and the source-based, time-averaged maximum EIRP of the device is equal to or less than 0.6 W (adjusted for tune-up tolerance)
- at or above 300 MHz and below 6 GHz and the source-based, time-averaged maximum EIRP of the device is equal to or less than $1.31\times10^{-2}f^{0.6834}$W (adjusted for tune-up tolerance), where f is in MHz
- at or above 6 GHz and the source-based, time-averaged maximum EIRP of the device is equal to or less than 5 W (adjusted for tune-up tolerance)

2.3. Field reference level (FRL) evaluation

Mobile devices or other apparatus under the scope of RSS-102 requiring an FRL exposure evaluation shall be assessed in accordance with the requirements outlined in the latest version of IEEE C95.3.

Calculation Formula: $Pd = (Pout*G)/(4*pi*r^2)$

Where

Pd = power density in W/m^2

Pout = output power to antenna in W

G = gain of antenna in linear scale

Pi = 3.1416

r = distance between observation point and center of the radiator in m

2.4. Calculated Result

Product	Networked Docking Station
Test Item	RF Exposure Evaluation

Test Mode	Frequency Band (MHz)	Max. EIRP (dBm)	Max. EIRP (mW)	R (cm)	Power Density (mW/m^2)	Limits (mW/cm^2)
BLE	2402 ~ 2480	9.02	7.98	20	0.0016	0.5351

Notes:

1. The Max. EIRP was from Original Report No.: 2407RSU002-C2.
2. R is from user manual.

Conclusion:

The device qualifies for RF exposure at 20cm distance.

The End