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Report No.: 1608RSU00503  
Report Version: V01  
Issue Date: 10-23-2016

## RF Exposure Evaluation Declaration

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**FCC ID:** DD4ULXD8X52

**APPLICANT:** Shure Incorporated

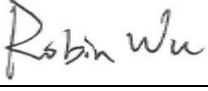
**Application Type:** Certification


**Product:** Wireless Gooseneck Transmitter

**Model No.:** ULXD8 X52

**Brand Name:** SHURE

**FCC Classification:** Digital Transmission System (DTS)  
Low Power Communication Device Transmitter (DXX)

Reviewed By :   
Manager : \_\_\_\_\_  
( Robin Wu )

Approved By :   
CEO : \_\_\_\_\_  
( 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.

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## Revision History

Report No.	Version	Description	Issue Date	Note
1608RSU00503	Rev. 01	Initial report	10-23-2016	Valid

## 1. PRODUCT INFORMATION

Product Name	Wireless Gooseneck Transmitter
Model No.	ULXD8
Frequency Range	X52 Band: 902 ~ 928 MHz
Working Mode	Normal Mode and HD Mode
Power Level	0.25mW & 10mW & 20mW
Antenna Type	PIFA
Antenna Gain	Max Peak Gain 1.45dBi
<b>Components</b>	
Rechargeable Li-ion Battery	Model: SB900A OUTPUT: 3.7Vdc, 1320mAh, 4.88Wh

Note 1: The EUT has two frequency bands (Q51 band and S50 band). Q51 band has three power levels (1mW & 10mW & 20mW), S50 band has two power levels (1mW & 10mW). Power levels are switchable among these power levels.

Note 2: The EUT is capable of operating with AA alkaline batteries or with the Shure SB900A rechargeable battery pack.

## 2. RF Exposure Evaluation

### 2.1. Limits

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

#### LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm <sup>2</sup> )	Average Time (Minutes)
(A) Limits for Occupational/ Control Exposures				
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6
(B) Limits for General Population/ Uncontrolled Exposures				
300-1500	--	--	f/1500	6
1500-100,000	--	--	1	30

f= Frequency in MHz

Calculation Formula:  $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot r^2)$

Where

$P_d$  = power density in mW/cm<sup>2</sup>

$P_{out}$  = output power to antenna in mW

$G$  = gain of antenna in linear scale

$\pi$  = 3.1416

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

$P_d$  is the limit of MPE, 1mW/cm<sup>2</sup>. If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance  $r$  where the MPE limit is reached.

## 2.2. Test Result of RF Exposure Evaluation

Product	Wireless Gooseneck Transmitter
Test Item	RF Exposure Evaluation

Antenna Gain: Refer to Clause 1 of antenna description.

### For X52 ISM Band:

Test Mode	Frequency Band (MHz)	Maximum Average Output Power (dBm)	Power Density at R = 20 cm (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
Normal Mode HD Mode	902.4 ~ 927.6	14.16	0.0072	0.6016

### CONCULISON:

Therefore, the Max Power Density at R (20 cm) =  $0.0072\text{mW/cm}^2 < 0.6016\text{mW/cm}^2$ .

So the EUT complies with the requirement.

\_\_\_\_\_ The End \_\_\_\_\_