RF Exposure Evaluation Declaration

FCC ID: DD4MXW8W

APPLICANT: Shure Incorporated

Application Type: Certification

Product: Gooseneck Base Transmitter (DECT)

Model No.: MXW8 Z10, MXW8W Z10

Brand Name: SHURE

FCC Classification: Unlicensed PCS Base Station (PUB)

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ACCREDITED
TESTING LABORATORY
CERTIFICATE #3628.01

Revision History

Report No.	Version	Description	Issue Date	Note
1709RSU041-U2	Rev. 01	Initial Report	04-26-2018	Valid

1. PRODUCT INFORMATION

Product Name:	Gooseneck Base Transmitter (DECT)
Model No.:	MXW8 Z10, MXW8W Z10
Brand Name:	SHURE

Note: MXW8 Z10 housing colour is black, but MXW8W Z10 housing colour is white, any others are same.

1.1. Product Specification Subjective to this Report

Frequency Range:	1921.536 ~ 1928.448MHz
Number of Channels:	5
Maximum Output Power:	19.70dBm
Type of Modulation:	Digital (Gaussian Frequency Shift Keying)
Antenna Gain:	-0.86dBi

1.2. Working Frequencies

UPCS Channel	Frequency (MHz)
Upper Band Edge	**1930.000**
0 (Highest)	1928.448
1	1926.720
2	1924.992
3	1923.264
4 (Lowest)	1921.536
Lowest Band Edge	**1920.000**

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

Where
Pd = power density in mW/cm^2
Pout = 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

Pd is the limit of MPE, $1mW/cm^2$. 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	Gooseneck Base Transmitter (DECT)
Test Item	RF Exposure Evaluation

Antenna Gain: Refer to Clause 1.1 of antenna description.

Frequency Band (MHz)	Maximum EIRP (dBm)	Power Density at R = 20 cm (mW/cm^2)	Limit (mW/cm^2)
1921.536 ~ 1928.448	18.84	0.0152	1

CONCULISON:

Therefore, the Max Power Density at R (20 cm) = 0.0152mW/cm^2 < 1mW/cm^2.

So the EUT complies with the requirement.

The End