RF Exposure Evaluation Declaration

FCC ID: 2AWAS-910-00086

APPLICANT: Mavenir Systems, Inc.

Application Type: Certification

Product: B25 4T4R 160W Radio Unit

Model No.: MR44MA

Trade Mark: MAVENIR

Test Procedure(s): KDB 447498 D01v06

Reviewed By: Jame Yuan

Approved By: Robin Wu

Revision History

Report No.	Version	Description	Issue Date	Note
2104RSU074-U2	Rev. 01	Initial Report	05-14-2021	Valid

1. Product Information

Product Name	B25 4T4R 160W Radio Unit
Model No.	MR44MA
Test Device Serial No.	MAV000018
Hardware Version	B0.1
Software Version	MD3.2
Voltage Range	-48VDC
LTE Operating Band (s)	FDD Band 25, single carrier
T_X Frequency Range	Band 25: 1930 ~ 1995 MHz
R_X Frequency Range	Band 25: 1850 ~ 1915 MHz
Modulation Type	QPSK, 16QAM, 64QAM, 256QAM
Max Antenna Gain	15dBi

Note: All information is provided by the manufacturer, test laboratory will not be responsible if any error.

2. RF Exposure Evaluation

2.1. Test Limit

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

Product	B25 4T4R 160W Radio Unit
Test Item	RF Exposure Evaluation

Test Mode	Frequency Band (MHz)	Maximum EIRP (dBm)	Safety Distance (cm)	Power Density (mW/cm^2)	Limit of Power Density (mW/cm^2)
LTE Band 25	1930 ~ 1995	67.02	634	0.9968	1

Note 1: Maximum turn-up output power is 46 dBm per each port declared by the manufacturer.

Note 2: The max Power Density at R (634 cm) = 0.9969 mW/cm^2 < 1 mW/cm^2.

Therefore, the Min Safety Distance is 634 cm.

The End

Appendix - EUT Photograph

Refer to “2104RSU074-UE” file.