MPE/RF EXPOSURE EVALUATION REPORT

FCC CFR 47 Part 1.1310

Report No.: DIGI135-U5 Rev A

Company: Digi International Inc.

Model Name: XBSG

Part Numbers: XB-WSB-9S-001
XB-WSB-UT-001
XB-WSB-UM-001
XB-WSB-US-001

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Company: Digi International Inc.

Model Name: XBSG

To: FCC CFR 47 Part 1.1310

Test Report Serial No.: DIGI135-U5 Rev A

This report supersedes: NONE

Applicant: Digi International Inc.
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Issue Date: 28th April 2025

This Test Report is Issued Under the Authority of:

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1. MAXIMUM PERMISSABLE EXPOSURE

Calculations for Maximum Permissible Exposure Levels
Power Density = Pd (mW/cm^2) = EIRP/($4*\pi*d^2$)
EIRP = P * G
P = Peak output power (mW)
G = Antenna numeric gain (numeric)
d = Separation distance (cm)
Numeric Gain = 10 ^ (G (dBi)/10)

The calculations in the table below use the highest conducted power values together with the highest antenna gain specified for the EUT. These calculations represent worst case in terms of the exposure levels.

The radio modules used by Digi were assessed for compliance to RF exposure requirements of FCC CFR 47 Part 1.1310.

These calculations represent worst case in terms of the exposure levels

Frequency Range	Freq (MHz)	Ant Gain (dBi)	Numeric Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Calculated Power Density (mW/cm^2) @ 20cm	Power Density Limit (mWc/m^2)	Min Calculated safe distance for Limit (cm)	RATIO Power Density/ Limit
902 – 928 MHz	902.2	8.00	6.31	17.6	57.54	0.0722	0.60	6.930	0.1201

Calculated Power Density/Power Density Limit
$Pd_{Calc1}/Pd_{Limit1} + Pd_{Calc2}/Pd_{Limit2} < 1$.

Note: for mobile or fixed location transmitters the minimum separation distance is 20cm, even if calculations indicate the MPE distance to be less.

SUMMARY; Minimum safe distance to meet the RF exposure requirements = 20cm

Specification - Maximum Permissible Exposure Limits

The Limits are defined in Table 1 of FCC §1.1310.

Table 1 to § 1.1310(e)(1)—Limits for Maximum Permissible Exposure (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(ii) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	<30
1.34-30	824/f	2.19/f	*($180/f^2$)	<30
30-300	27.5	0.073	0.2	<30
300-1,500			f/1500	<30
1,500-100,000			1.0	<30

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