

Maximum Permissive Exposure

FCC ID: U4G-RHINOIWE7

Product Name: 802.11abgn M.2 module w/SDIO interface

Model No: M2SD50NBT

1. According to FCC CFR 47 §1.1310, the criteria listed in the following table shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b).

Table 1 Limits for Maximum Permissible Exposure

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 (f = frequency)				
30-300	61.4	0.163	1.0	6
300-1500	...	...	f/300	6
1500-100,000	...	...	5.0	6
(B) Limits For General Population / Uncontrolled Exposure (f = frequency)				
30-300	27.5	0.073	0.2	30
300-1500	...	...	f/1500	30
1500-100,000	...	...	1.0	30

Datalogic S.r.l. declares that the product described above has been evaluated and found to comply with the RF exposure limits for humans, as specified based on ANSI/FCC recommendation.

2. MPE Calculation

2.1. WIFI 2.4G MPE

Based on safety distance (r) **20cm**, the antenna gain (G) is **3.981Numerical**, and the highest power output (P) is **177.011mW**, the power density (S) is **0.140192mW/cm²**.

RF Exposure Calculations:

$$S = (P * G) / (4 * \pi * r^2) \text{ or } r = \sqrt{(P * G) / (4 * \pi * S)}$$

Where :

Based on safety distance (r)=	20 cm
Highest Power Output (P)=	22.48 dBm = 177.011 mW
Antenna Gain (G)=	6 dBi = 3.981 Numerical
MPE (S) = (P*G) / (4*π*r ²) =	= (177.011*3.981)/(4*π*20²)= 0.140192 mW/cm²

2.2. WIFI 5G MPE

Based on safety distance (r) **20cm**, the antenna gain (G) is **6.310Numerical**, and the highest power output (P) is **71.121mW**, the power density (S) is **0.089281mW/cm²**.

RF Exposure Calculations:

$$S = (P * G) / (4 * \pi * r^2) \text{ or } r = \sqrt{(P * G) / (4 * \pi * S)}$$

Where :

Based on safety distance (r)=	20 cm		
Highest Power Output (P)=	18.52 dBm =	71.121	mW
Antenna Gain (G)=	8 dBi =	6.310	Numerical
MPE (S) = (P*G) / (4* π *r ²) =	= (71.121*6.310)/(4* π *20 ²)=		
		0.089281	mW/cm ²

Sincerely Yours,



Mr. Ben Cheng
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