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Maximum Permissive Exposure

FCC ID: 2AEMXJP202CWXPZ

Product Name: Sub-GHz wireless communication board

M/N: QCIOT-000-CWXPOCZ

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 Exposures (f = frequency)				
30-300	27.5	0.073	0.2	30
300-1500	---	---	f/1500	30
1500-100,000	---	---	1.0	30

2. MPE Calculation

Funai Electric R & D (Shenzhen) Co., Ltd. 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.

RF Exposure Calculations: $S = (P * G) / (4 * \pi * r^2)$ or $r = \sqrt{(P * G) / (4 * \pi * S)}$

2.1. Estimation Result

EUT: Sub-GHz wireless communication board		
M/N: QCIOT-000-CWXPOCZ		
Test date: 2023-05-24	Pressure: 102.3±1.0 kpa	Humidity: 53.6±3.0%
Tested by: Jerry	Test site: RF site	Temperature: 25.5±0.6 °C

Test Mode	Output Power (dBm)	Output Power (mW)	Antenna Gain (dBi)	Antenna Gain (Linear)	MPE
FSK 1B 902.2	-12.05	0.06	0.75	1.19	0.0000148
FSK 1B 927.8	-6.27	0.24	0.75	1.19	0.0000558
FSK 3 902.4	-8.63	0.14	0.75	1.19	0.0000324
FSK 3 927.6	-10.05	0.10	0.75	1.19	0.0000234
OFDM OPT1 903.2	-6.36	0.23	0.75	1.19	0.0000547
OFDM OPT1 927.2	-8.33	0.15	0.75	1.19	0.0000347
OFDM OPT2 902.8	-10.71	0.08	0.75	1.19	0.0000201
OFDM OPT2 927.6	-8.31	0.15	0.75	1.19	0.0000349
OFDM OPT3 902.4	-12.01	0.06	0.75	1.19	0.0000149
OFDM OPT3 927.6	-9.14	0.12	0.75	1.19	0.0000288
OFDM OPT4 902.2	-7.74	0.17	0.75	1.19	0.0000398
OFDM OPT4 927.8	-9.83	0.10	0.75	1.19	0.0000246
Conclusion: Pass					



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Based on safety distance (r) **20cm**, the antenna gain (G) numerical as below:

Antenna Information	
Antenna Type	IMD Antenna
Peak Gain	0.75dBi

and the FSK 1B 927.8 highest power output (P) is **0.24mW**;
the FSK 1B 927.8 power density (S) is **0.0000558 mW/cm²**.