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Maximum Permissive Exposure

FCC ID: 2AZ3IBP5000
Product Name: PROJECTOR
M/N: BP5000

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

GT Technology Chongqing Limited 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

Bluetooth:

Mode	Frequency (MHz)	PK Output power (dBm)	Output power (mW)	antenna Gain (dBi)	antenna Gain (linear)	MPE (mW/cm ²)
GFSK (DSS)	2402	5.250	3.350	3.3	2.14	0.00143
	2441	5.543	3.583	3.3	2.14	0.00152
	2480	5.827	3.826	3.3	2.14	0.00163
8-DPSK (DSS)	2402	5.072	3.215	3.3	2.14	0.00137
	2441	5.278	3.371	3.3	2.14	0.00143
	2480	5.158	3.279	3.3	2.14	0.00140
GFSK (DTS)	2402	9.513	8.939	3.3	2.14	0.00380
	2440	9.477	8.865	3.3	2.14	0.00377
	2480	9.278	8.468	3.3	2.14	0.00360

WiFi 2.4GHz:

Mode	Frequency (MHz)	PK Output power (dBm)	Output power (mW)	antenna Gain (dBi)	antenna Gain (linear)	MPE (mW/cm ²)
11b (DTS)	2412	16.39	43.551	5.615	3.64	0.03158
	2437	16.61	45.814	5.615	3.64	0.03322
	2462	16.53	44.978	5.615	3.64	0.03262
11g (DTS)	2412	16.58	45.499	5.615	3.64	0.03300
	2437	16.68	46.559	5.615	3.64	0.03376
	2462	16.48	44.463	5.615	3.64	0.03224
11n HT20 (DTS)	2412	16.27	42.364	5.615	3.64	0.03072
	2437	16.28	42.462	5.615	3.64	0.03079
	2462	16.36	43.251	5.615	3.64	0.03137
11n HT40 (DTS)	2422	13.84	24.210	5.615	3.64	0.01756
	2437	14.31	26.977	5.615	3.64	0.01956
	2452	14.58	28.708	5.615	3.64	0.02082

WiFi 5GHz:

Mode	Frequency (MHz)	PK Output power (dBm)	Output power (mW)	antenna Gain (dBi)	antenna Gain (linear)	MPE (mW/cm ²)
11a (U-NII-1)	5180	16.30	42.658	5.81	3.81	0.03236
	5200	16.43	43.954	5.81	3.81	0.03334
	5240	15.68	36.983	5.81	3.81	0.02805
11n HT20 (U-NII-1)	5180	15.88	38.726	5.81	3.81	0.02937
	5200	16.12	40.926	5.81	3.81	0.03104
	5240	15.48	35.318	5.81	3.81	0.02679
11n HT40 (U-NII-1)	5190	15.78	37.844	5.81	3.81	0.02870
	5230	15.59	36.224	5.81	3.81	0.02748

Mode	Frequency (MHz)	PK Output power (dBm)	Output power (mW)	antenna Gain (dBi)	antenna Gain (linear)	MPE (mW/cm ²)
11a (U-NII-3)	5745	14.61	28.907	6.42	4.39	0.02523
	5785	14.50	28.184	6.42	4.39	0.02460
	5825	14.15	26.002	6.42	4.39	0.02270
11n HT20 (U-NII-3)	5745	14.22	26.424	6.42	4.39	0.02306
	5785	13.94	24.774	6.42	4.39	0.02162
	5825	13.68	23.335	6.42	4.39	0.02037
11n HT40 (U-NII-3)	5755	14.25	26.607	6.42	4.39	0.02322
	5795	13.95	24.831	6.42	4.39	0.02167

Based on safety distance (r) **20cm**, the antenna gain (G) is **3.64 Numerical**, and the highest power output (P) is **46.559mW**, the power density (S) is **0.03376mW/cm²**.

Pursuant to RSS 102 section 4 table 4, the simultaneous MPE evaluation is as following:

Bluetooth MPE (mW/cm ²)	2.4G MPE (mW/cm ²)	Total MPE (mW/cm ²)	Limit (mW/cm ²)	Compliance or not
0.00380	0.03376	0.03756	1	YES

Bluetooth MPE (mW/cm ²)	5G MPE (mW/cm ²)	Total MPE (mW/cm ²)	Limit (mW/cm ²)	Compliance or not
0.00380	0.03334	0.03714	1	YES