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Maximum Permissive Exposure

FCC ID: Y9E-IAD18009
EUT: Smart Signboard
Model No.: IAD-18001

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

Sony Corporation 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

Mode	Frequency (MHz)	Output power (dBm)	Output power (mW)	antenna Gain (dBi)	antenna Gain (linear)	MPE (mW/cm ²)
11b	2412	15.69	37.07	1.98	1.58	0.011640
	2437	15.81	38.11	1.98	1.58	0.011966
	2462	15.25	33.50	1.98	1.58	0.010518
11g	2412	11.77	15.03	1.98	1.58	0.004720
	2437	13.56	22.70	1.98	1.58	0.007128
	2462	11.80	15.14	1.98	1.58	0.004753
11n HT20	2412	10.31	10.74	1.98	1.58	0.003372
	2437	13.09	20.37	1.98	1.58	0.006397
	2462	10.80	12.02	1.98	1.58	0.003775
11n HT40	2422	10.61	11.51	1.98	1.58	0.003614
	2437	10.32	10.76	1.98	1.58	0.003380
	2452	10.44	11.07	1.98	1.58	0.003475

Based on **safety** distance (r) **20cm**, the antenna gain (G) is **1.58 Numerical**, and the highest power output (P) is **38.11mW**, the power density (S) is **0.011966mW/cm²**.