

Maximum Permissive Exposure

FCC ID: AK8-WE8853S
EUT: Bluetooth Module
M/N: WE-8853S

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 Group 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)	PK Output power (dBm)	Output power (mW)	antenna Gain (dBi)	antenna Gain (linear)	MPE (mW/cm ²)
GFSK (DSS)	2402	4.695	2.95	2.1	1.62	0.000952
	2441	4.763	2.99	2.1	1.62	0.000967
	2480	4.756	2.99	2.1	1.62	0.000965
8-DPSK (DSS)	2402	5.835	3.83	2.1	1.62	0.001237
	2441	5.876	3.87	2.1	1.62	0.001249
	2480	5.864	3.86	2.1	1.62	0.001246

Based on safety distance (r) **20cm**, the antenna gain (G) is **1.62 Numerical**, and the highest power output (P) is **3.87mW**, the power density (S) is **0.001249mW/cm²**.