

FCC RF Exposure

FCC ID: 2ACRAHX-TS108

Applicant: HARXON CORPORATION

Exposure category: General population/uncontrolled environment

EUT Type: Smart Antenna

Refer Standard: FCC Part 2.1091: Radio Frequency (RF) Exposure Compliance of Radio communication Apparatus (All Frequency Bands)

KDB 447498 D01

FCC MPE Limited:

Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time (minutes)
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

Test Data

Predication of MPE limit at a given distance

$$S = \frac{PG}{4\pi R^2}$$

Where: S = power density

P = power input to the antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain.

R = distance to the center of radiation of the antenna (20cm)

Antenna Gain information

Antenna Gain for BT:1dBi

Maximum Conduct Power & Manufacturing tolerance

Test mode	Frequency (MHz)	Max. RF Power(dBm)	Tolerance ±(dB)
GFSK (Bluetooth)	2441	2.6	2±1

Calculation results: pass

Mode	Frequency (MHz)	Maximum tune up power(dBm)	ANT Gain(dBi)	RF distance(cm)	Result (mW/cm ²)	Limit (mW/cm ²)
GFSK (Bluetooth)	2441	3	1	20	0.0004 (PASS)	1