

Maximum Permissive Exposure

FCC ID: BEJLC10SB

Product Name: Silver box RADIO ASM-RECEIVER

Model No: LC10S-B

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

LG Electronics USA 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.

2. MPE Calculation

2.1. WIFI 2.4G MPE

Based on safety distance (r) **20cm**, the antenna gain (G) is **1.950 Numerical**, and the highest power output (P) is **201.837mW**, the power density (S) is **0.078301mW/cm²**.

RF Exposure Calculations:

$$S = (P * G) / (4 * \pi * r^2) \text{ or } r = \sqrt{(P * G) / (4 * \pi * S)}$$

Where :

Based on safety distance (r)=	20 cm
Highest Power Output (P)=	23.05 dBm = 201.837 mW
Antenna Gain (G)=	2.9 dBi = 1.950 Numerical
MPE (S) = (P*G) / (4*π*r ²) =	= (201.837*1.950)/(4*4*π*20²)= 0.078301 mW/cm²

2.2. BT MPE

Based on safety distance (r) **20cm**, the antenna gain (G) is **1.950 Numerical**, and the highest power output (P) is **2.510mW**, the power density (S) is **0.000974 mW/cm²**.

RF Exposure Calculations:

$$S = (P * G) / (4 * \pi * r^2) \text{ or } r = \sqrt{(P * G) / (4 * \pi * S)}$$

Where :

Based on safety distance (r)=	20 cm
Highest Power Output (P)=	3.997 dBm = 2.510 mW
Antenna Gain (G)=	2.9 dBi = 1.950 Numerical
MPE (S) = (P*G) / (4* π *r ²) =	= (2.510*1.950)/(4*4*π*20²)= 0.000974 mW/cm²

2.3. WIFI 5G MPE

Based on safety distance (r) **20cm**, the antenna gain (G) is **2.291 Numerical**, and the highest power output (P) is **37.411mW**, the power density (S) is **0.017051 mW/cm²**.

RF Exposure Calculations:

$$S = (P * G) / (4 * \pi * r^2) \text{ or } r = \sqrt{(P * G) / (4 * \pi * S)}$$

Where :

Based on safety distance (r)=	20 cm
Highest Power Output (P)=	15.73 dBm = 37.411 mW
Antenna Gain (G)=	3.6 dBi = 2.291 Numerical
MPE (S) = (P*G) / (4* π *r ²) =	= (37.411*2.291)/(4*4*π*20²)= 0.017051 mW/cm²

MPE			
WIFI 2.4G (mW/cm ²)	BT (mW/cm ²)	Total (mW/cm ²)	Limit (mW/cm ²)
0.078301	0.000974	0.079275	≤ 1

MPE			
WIFI 5G (mW/cm ²)	BT (mW/cm ²)	Total (mW/cm ²)	Limit (mW/cm ²)
0.017051	0.000974	0.018025	≤ 1

Sincerely Yours,



Mr. Ben Cheng
Manager
AUDIX Technology Corporation

[Antenna specifications]

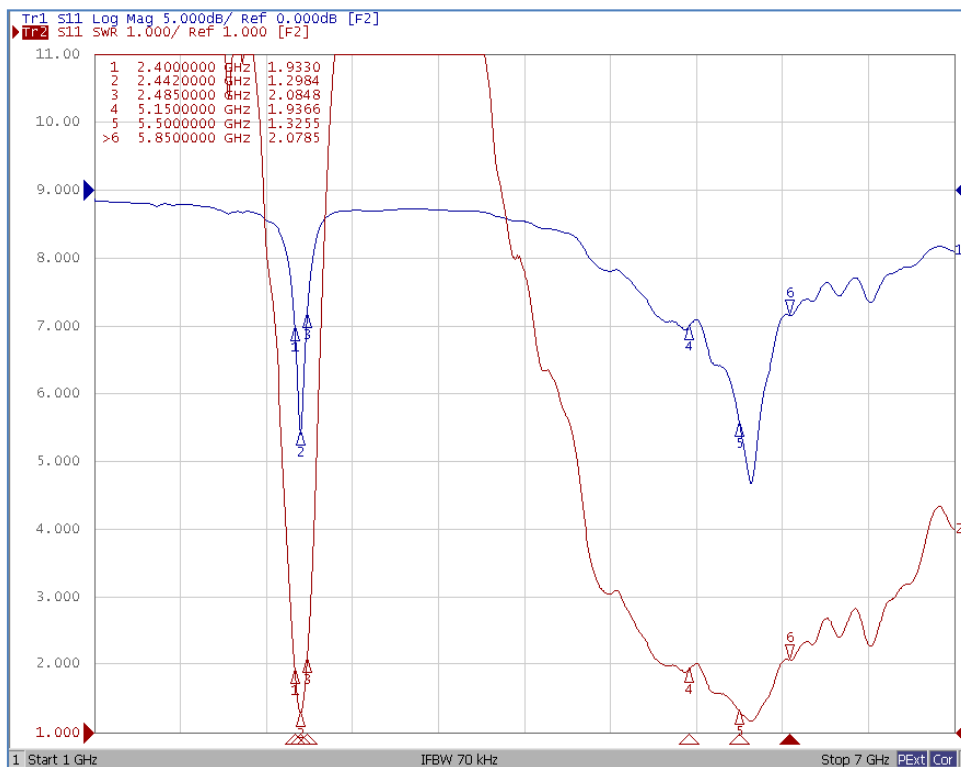
1. Antenna information

#No.	Item	Contents
1	Antenna Manufacturer	Amotech CO.LTD
2	Antenna Type	Dielectric Chip Antenna
3	Part #No.	AMAN1003030LG02
4	Frequency range [GHz]	2.400 ~2.485 / 5.150~5.875

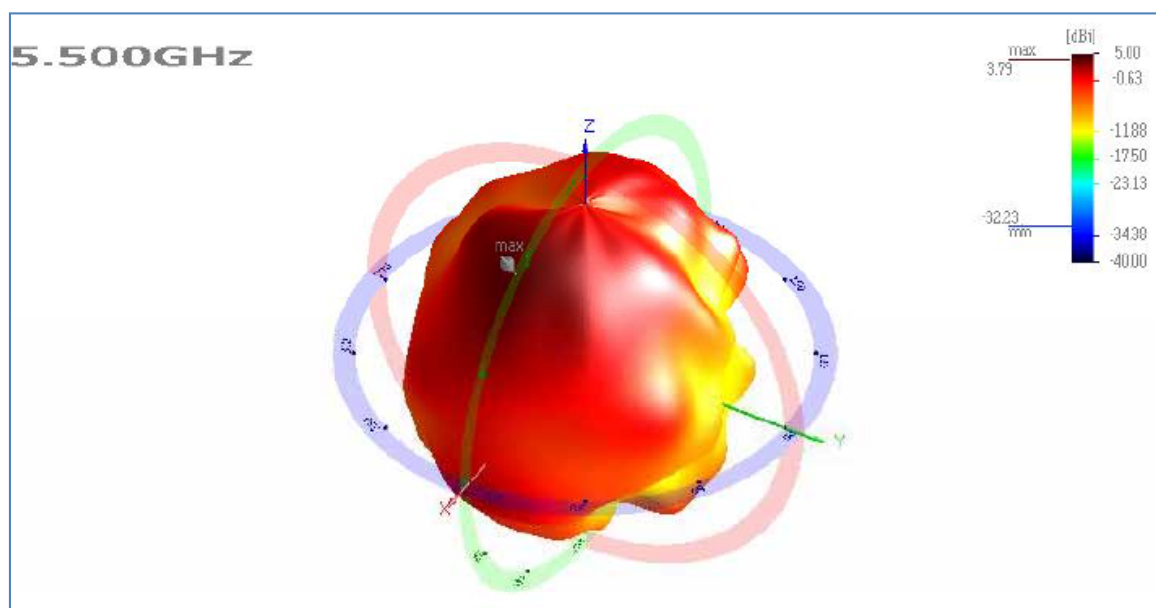
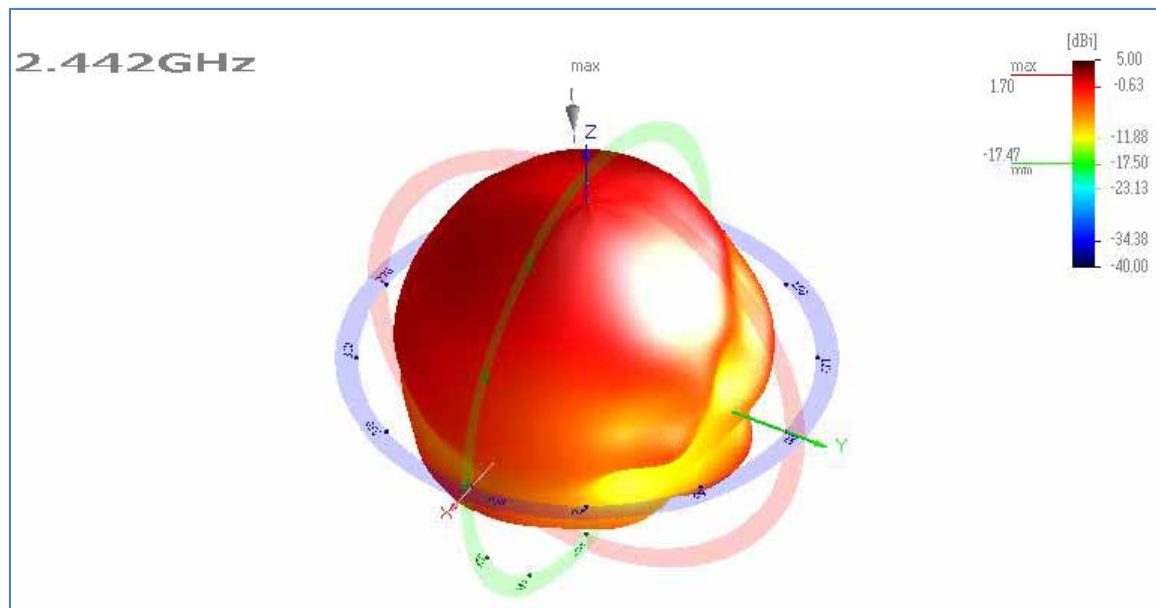
2. Antenna specification

#No.	Freq. [GHz]	Eff. [%]	Avg. [dBi]	Peak[dBi]	VSWR	Impedance [Ω]	Polarization
1	2.400	-	-	2.2	Max 2.2 : 1 (Center Frequency 1.5 : 1)	Nominal 50	Linear
2	2.442	69	-1.6	2.9			
3	2.485	-	-	2.7			
4	5.150	-	-	3.6			
5	5.500	49	-3.1	4.2			
6	5.850	-	-	2.9			

[VSWR = On the Set]



3. 3D_radiation pattern



4. Antenna Appearance

