

### **RF EXPOSURE EVALUATION**

KDB 447498 D01 Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies v06.

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency(RF) Radiation as specified in §1.1307(b)

# **EUT Specification**

FCC ID	2A4K9-B1
EUT Anbotek Anbot	Projector
Anbo, ok botek Ant	BT: 2.402GHz ~ 2.480GHz
	⊠ WLAN: 2.412GHz ~ 2.462GHz
	RLAN: 5.180GHz ~ 5.240GHz
Frequency band (Operating)	) 🛛 RLAN: 5.260GHz ~ 5.320GHz
	RLAN: 5.500GHz ~ 5.700GHz
	⊠ RLAN: 5.745GHz ~ 5.825GHz
	Others
hotek Anbore And	Portable (<20cm separation)
Device category	Mobile (>20cm separation)
	Others
Exposure classification	Occupational/Controlled exposure (S = 5mW/cm2)
Exposure classification	General Population/Uncontrolled exposure (S=1mW/cm2)
tek nbotek Anbo	Single antenna
	Multiple antennas
Antenna diversity	Tx diversity
	Rx diversity
botek Anbote	Tx/Rx diversity
	BT: 2.78dBi
	WiFi 2.4G: 1.52dBi
Antenna gain (Max)	WiFi 5.2G: 3.25dBi
Antenna gain (wax)	WiFi 5.3G: 2.92dBi
	WiFi 5.6G: 3.53dBi
Anbo' Ai hotek	WiFi 5.8G: 2.56dBi
Evaluation applied	MPE Evaluation
	SAR Evaluation

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Anbotek Product Safety

#### Limits for Maximum Permissible Exposure(MPE)

Frequency	Electric Field	Magnetic Field	Power	Average	
Range(MHz)	Strength(V/m)	Strength(A/m)	Density(mW/cm <sup>2</sup> )	Time	
L Anboten	(A) Limits for C	Occupational/Contr	ol Exposures	ter Anb.	
300-1500	Anbo-	hotek - Anbote	F/300	botek 6 M	
1500-100000	K AIMOTO	pore And tak- poorer A05			
nbort Ant	(B) Limits for Gene	ral Population/Unc	control Exposures	Amorek	
300-1500	tek - obotek	Anbor	F/1500	And G	
1500-100000	inbor - Am	k sthoter	And sk 1 sbotek	30	

## Friis transmission formula: Pd=(Pout\*G)\(4\*pi\*R2)

Where

Pd= Power density in mW/cm<sup>2</sup>

Pout=output power to antenna in Mw

G= gain of antenna in linear scale

Pi=3.1416

R= distance between observation point and center of the radiator in cm

Pd the limit of MPE, 1mW/cm2. If we know the maximum gain of the antenna and total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

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100	00		1.0	10	Dite	20	0°
Operating Mode	· Power			Antenna Gain	density at 20cm	Power density Limits	
		(dBr	(dBm)	(dBm)	(dBi)	(mW/ cm2 )	(mW/cm2 )
BDR+EDR	1.11	1.11	±1	2.11	2.78	0.0006	lotek
BLE	0.96	0.96	±1	1.96	2.78	0.0006	K 1 hotek
WiFi 2.4G	16.29	16.29	p±1	17.29	1.52	0.0151	1 201
WiFi 5.2G	15.18	15.18	±10th	16.18	3.25	0.0175	ofer 1 And
WiFi 5.3G	16.01	16.01	±1	17.01 M	2.92	0.0196	inboten 1 Ant
WiFi 5.6G	13.88	13.88	±1	14.88	3.53	0.0138	Anborek
WiFi 5.8G	14.96	14.96	±1	15.96	2.56	0.0142	nbbtek
anbo	Let.	~b01		Pur	- oter	Anbo	1. Star

### Max Measurement Result

- No. Applicable Simultaneous Transmission
- 1. WiFi+BDR/EDR

2. WiFi+BLE

The Maximum simultaneous transmission for WiFi+BDR/EDR:

$$\sum_{i} \frac{S_i}{S_{Limit,i}}$$

=SwiFi 5.3G/Slimit-5.3+ SwiFi BDR+EDR/Slimit-2.4G

=0.0196/1+0.0006/1

=0.0202

< 1.0

Result: No Standalone SAR test is required.

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