# **RF EXPOSURE EVALUATION**

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)

## FCC ID: 2AQ9M-SIM3200

## **EUT Specification**

Anbotek Product Safety

EUT And stek unbotek	RFID module
Frequency band (Operating)	WLAN: 2.412GHz ~ 2.462GHz
	🗌 WLAN: 5.18GHz ~ 5.24GHz
	🗌 WLAN: 5.745GHz ~ 5.825GHz
Anbor Ak abotek Anbote	⊠ Others: RFID: 902.75~927.25MHz
Device category	□ Portable (<20cm separation)
	⊠ Mobile (>20cm separation)
	Others
Exposure classification	Occupational/Controlled exposure
	General Population/Uncontrolled exposure
Antenna diversity	Single antenna
	🗌 Multiple antennas
	Tx diversity
	Rx diversity
	Tx/Rx diversity
Antenna gain (Max)	4 dBi
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)	n(A/m) Density(mW/cm <sup>2</sup> )		
rek abotek	(A) Limits for (	Occupational/Con	trol Exposures	botek I	
300-1500	K AIMORO	And tel-	F/300 6		
1500-100000	tek - abotek	Anbo	hotek 5.nbote	A. 6.04	
Anboten (B	) Limits for Gene	eral Population/U	ncontrol Exposures	Anbo	
300-1500	Anbort - An	ek Anboten	F/1500	30	
1500-100000	Anboten Anbo	welt wotek	Anboi 1 All	× 30 m	

## 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. 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.

## **Max Measurement Result**

Operating Mode	Measured Power	Tune up tolerance	Max. Tune up Power	Antenna Gain	Power density at 20cm	Power density Limits
(dBm)	(dBm)	(dBm)	(dBi)	(mW/ cm <sup>2</sup> )	(mW/cm <sup>2</sup> )	
RFID	29.850	29.850 ±1	30.850	A d	2421	0.6018

Note: These 4 antennas are from the same RF feed point. The antenna ports are all transmitted individually, not simultaneously.

Result: No Standalone SAR test is required.

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