

## MAXIMUM PERMISSIBLE EXPOSURE

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 ID2A86W-R1EUTWi-Fi Video DoorbellFrequency band (Operating)BT: 2.402GHz ~ 2.480GH (WLAN: 2.412GHz ~ 2.462GHz RLAN: 5.180GHz ~ 5.240GHz RLAN: 5.180GHz ~ 5.240GHz RLAN: 5.500GHz ~ 5.320GHz RLAN: 5.500GHz ~ 5.700GHz RLAN: 5.745GHz ~ 5.825GHz Others:Device categoryPortable (<20cm separation) Others OthersExposure classification Mobile (>20cm separation) Others Single antenna Multiple antennas Tx diversity Rx diversity Rx diversityMax. output powerWiFi 2.4G: 15.66dBm(0.0368W) 3.42 dBiAntenna gain (Max) SAR Evaluation3.42 dBi	Not Not	An oten and and the boy At
Frequency band (Operating) BT: 2.402GHz ~ 2.480GH   WLAN: 2.412GHz ~ 2.462GHz   RLAN: 5.180GHz ~ 5.240GHz   RLAN: 5.260GHz ~ 5.320GHz   RLAN: 5.260GHz ~ 5.320GHz   RLAN: 5.745GHz ~ 5.825GHz   Others:   Device category   Portable (<20cm separation)   Mobile (>20cm separation)   Others:   Device category   Portable (<20cm separation)   Mobile (>20cm separation)   Others   General Population/Uncontrolled exposure   General Population/Uncontrolled exposure   Multiple antenna   Multiple antennas   Tx diversity   Rx diversity   Tx/Rx diversity   Max. output power   WiFi 2.4G: 15.66dBm(0.0368W)   Antenna gain (Max)   3.42 dBi   Evaluation applied	FCC ID	2A86W-R1
(Operating) ⊠ WLAN: 2.412GHz ~ 2.462GHz   □ RLAN: 5.180GHz ~ 5.240GHz   □ RLAN: 5.260GHz ~ 5.320GHz   □ RLAN: 5.500GHz ~ 5.700GHz   □ RLAN: 5.745GHz ~ 5.825GHz   □ Others:   □ Device category   □ Portable (<20cm separation)   □ Mobile (>20cm separation)   □ Others   □ Occupational/Controlled exposure   □ General Population/Uncontrolled exposure   △ General Population/Uncontrolled exposure   □ Multiple antenna   □ Multiple antennas   □ Tx diversity   □ Rx diversity   □ Rternia gain (Max)   3.42 dBi   Evaluation applied	EUT Anboten Anbo	Wi-Fi Video Doorbell
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☐ Multiple antennas   ☐ Tx diversity   ☐ Rx diversity   ☐ Tx/Rx diversity   ☐ Tx/Rx diversity   Max. output power WiFi 2.4G: 15.66dBm(0.0368W)   Antenna gain (Max) 3.42 dBi   Evaluation applied ☑ MPE Evaluation	otek Anboten Anbo	General Population/Uncontrolled exposure
□ Tx diversity   □ Rx diversity   □ Tx/Rx diversity   □ Tx/Rx diversity   Max. output power WiFi 2.4G: 15.66dBm(0.0368W)   Antenna gain (Max) 3.42 dBi   Evaluation applied ☑ MPE Evaluation	Antenna diversity	Single antenna
Rx diversity   Tx/Rx diversity   Max. output power WiFi 2.4G: 15.66dBm(0.0368W)   Antenna gain (Max) 3.42 dBi   Evaluation applied MPE Evaluation	Anbor Ar hotek Anborer	Multiple antennas
Image: Constraint of the second system Image: Constraint of the second system   Max. output power WiFi 2.4G: 15.66dBm(0.0368W)   Antenna gain (Max) 3.42 dBi   Evaluation applied Image: MPE Evaluation	Anboten And stek anbot	Tx diversity
Max. output powerWiFi 2.4G: 15.66dBm(0.0368W)Antenna gain (Max)3.42 dBiEvaluation appliedMPE Evaluation	Anbotek Anbor Ar	Rx diversity
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Evaluation applied	Max. output power	WiFi 2.4G: 15.66dBm(0.0368W)
OP NOT IN NOT IN NOT	Antenna gain (Max)	3.42 dBi
SAR Evaluation	Evaluation applied	MPE Evaluation
	notek Anboten Anbo	SAR Evaluation

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Anbotek Product Safety

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

Frequency	Electric Field	Magnetic Field	Agnetic Field Power Density	
Range(MHz)	Strength(V/m)	Strength(A/m)	(mW/cm <sup>2</sup> )	Ant Lotek Anbo
ek Anboten I	(A) Limits for	Occupational/Cont	trol Exposures	And
300-1500	Anbor Ar	lek Antore	F/300	Anto G
1500-100000	Anbore Ann	otek -nbotek	Anbo 5	1ex 6
Anborto Anno otel	(B) Limits for Gen	eral Population/Un	control Exposures	otek unbotek
300-1500	Let obotek	Anboit - An	F/1500	30 sootek
1500-100000	pro protek	Anboten Anbo	tek 1.botek	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. 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	Tune up	Max. Tune	Antenna	Power density	Power density
	Power	tolerance	up Power	Gain	at 20cm	Limits
	(dBm)	(dBm)	(dBm)	(dBi)	(mW/cm2)	(mW/cm2 )
WiFi 2.4G	15.66	15.66 ±1	16.66	3.42	0.0203	wow1 K

Result: No Standalone SAR test is required.

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