## 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: XZF-CM213S

## **EUT Specification**

EUT	DIGITAL WIRELESS CAMERA					
Frequency band (Operating)	□WLAN: 2.412GHz ~ 2.462GHz					
	□WLAN: 5.18GHz ~ 5.32GHz / 5.50GHz ~ 5.70GHz					
	□WLAN: 5.745GHz ~ 5825GHz					
	Others					
Device category	☐Portable (<20cm separation)					
	Mobile (>20cm separation)					
	Others					
<b>Exposure classification</b>	$\square$ Occupational/Controlled exposure (S = 5mW/cm2)					
	⊠General Population/Uncontrolled exposure (S=1mW/cm2)					
Antenna diversity	⊠Single antenna					
	☐Multiple antennas					
	☐Tx diversity					
	□Rx diversity					
	☐Tx/Rx diversity					
Max. output power	13.01dBm (19.99mW)					
Antenna gain (Max)	0 dBi					
Evaluation applied	MPE Evaluation					
	☐SAR Evaluation					

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				
(A) Limits for Occupational/Control Exposures								
300-1500			F/300	6				
1500-100000			5	6				
(B) Limits for General Population/Uncontrol Exposures								
300-1500			F/1500	6				
1500-100000			1	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.

## **Measurement Result**

Antenna gain: 0 dBi

Channel	Output Peak	Output Peak	Antenna Gain	Power density at	Power density			
	power (dBm)	power	(dBi)	$20 \text{cm} (\text{mW/cm}^2)$	Limits			
		(mW)			$(mW/cm^2)$			
01	13.01	19.99	0	0.0041	1			
20	12.39	17.34	0	0.0036	1			
40	12.66	18.45	0	0.0038	1			

Signature

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