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: YQTDV7952

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				
Exposure classification	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	-1.54dBm (0.705mW)				
Antenna gain (Max)	4 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 ²)	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/cm²

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: 4 dBi

Channel	Channel	Output Peak	Antenna Gain	Power density at	Power density
	Frequency	power (mW)	(dBi)	$20 \text{cm} (\text{mW/cm}^2)$	Limits
	(MHz)				(mW/cm^2)
Low	2402	0.705	4	3.52e-4	1
Middle	2441	0.644	4	3.22e-4	1
High	2480	0.637	4	3.18e-4	1

Signature

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