

## CTC Laboratories, Inc.

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# **Maximum Permissible Exposure Evaluation**

FCC ID: 2A3DY-2021VSPW

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**

Product Name:	Evercade VS console and wired controllers			
Trade Mark:	BLAZE			
Model/Type reference:	FG-VSPW-CON-USA-PRE			
Listed Model(s):	FG-VSPW-CON-GU-PRE, FG-VSPW-CON-EFIGS-PRE, FG-VSSW-CON-USA-STA, FG-VSSW-CON-GU-STA, FG-VSSW-CON-EFIGS-STA, FG-WIRW-CTR-EFIGS, FG-WIRB-CTR-EFIGS, FG-SOLW-CON, FG-SOLB-CON			
Model Difference:	All these models are identical in the same PCB, layout and electrical circuit. Different is external packing and model number.			
Frequency band (Operating)	<ul><li>□BT: 2.402GHz ~ 2.480GHz</li><li>□BLE: 2.402GHz ~ 2.480GHz</li><li>□WLAN: 2.412GHz ~ 2.462GHz</li><li>□Others</li></ul>			
Device category	☐ Portable (<5mm separation) ☐ Mobile (>20cm separation) ☐ Fixed (>20cm separation) ☐ Others			
Exposure classification	☐ Occupational/Controlled exposure (S=5mW/cm2) ☐ General Population/Uncontrolled exposure (S=1mW/cm2)			
Antenna diversity	Single antenna  Multiple antenna  Tx diversity  Rx diversity  Tx/Rx diversity			
Antenna gain (Max)	1.0dBi			
Evaluation applied				

Report No.: CTC20211561E05



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

Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density(mW/cm²)	Average 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\*R<sup>2</sup>)

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/cm<sup>2</sup>. 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**

Test Mode	Channel Frequency (MHz)	Max. Measured Power (dBm)	Max. Tune up Power (dBm)	Antenna Gain (dBi)	Power density at 20cm (mW/cm <sup>2</sup> )	Power density Limits (mW/cm²)
802.11 n20	2462	17.78	18.50	1.0	0.017731	1

### Note:

- 1. Calculate by Worst-case mode.
- 2. Max. Tune Up Power by Manufacturer's Declaration, and Max. Tune Up Power is used to calculate.
- 3. For a more detailed features description, please refer to the RF Test Report.

