

US Tech Test Report:  
 FCC ID:  
 IC:  
 Test Report Number:  
 Issue Date:  
 Customer:  
 Model:

FCC Part 15/IC RSS Certification  
 2AHFE-SLFP1000  
 21143-SLFP1000  
 23-0016  
 February 7, 2024  
 StreamLabs  
 SLFP-1000

### Maximum Public Exposure to RF (MPE) CFR 15.247 (i), CFR 1.1310 (e)

The maximum exposure level to the public from the RF power of the EUT shall not exceed a power density, **S** as per the respective limits in Table 1 below, at a distance, **d**, of 20 cm (Mobile condition) from the EUT.

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)
<b>Limits for General Population/Uncontrolled Exposure</b>				
0.3-1.34	614	1.63	*100	30
1.34-30	824/f	2.19/f	*180/f <sup>2</sup>	30
30-300	27.5	0.073	0.2	30
300-1,500			f/1500	30
1,500-100,000			1.0	30

f = frequency in MHz \* = Plane-wave equivalent power density

Therefore, for:

#### MPE for 2400 MHz – 2483.5 MHz for WiFi:

Limit: 1.0 mW/cm<sup>2</sup>

Peak Power (dBm) = +10.1 dBm

Peak Power (Watts) = 0.010 W

Gain of Transmit Antenna = 0.97dB<sub>i</sub> = 1.25 numeric (Highest Gain)

d = Distance = 20 cm = 0.2 m

$$\begin{aligned}
 \mathbf{S} &= (\mathbf{PG} / 4\pi\mathbf{d}^2) = \mathbf{EIRP}/4\mathbf{A} = 0.010(1.25)/4\pi(0.2)^2 \\
 &= 0.0125/0.5030 = 0.0248 \text{ W/m}^2 \\
 &= (0.0248 \text{ W/m}^2) (1\text{m}^2/\text{W}) (0.1 \text{ mW/cm}^2) \\
 &= 0.00248 \text{ mW/cm}^2
 \end{aligned}$$

which is << less than S = 1.0 mW/cm<sup>2</sup>

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## RF Exposure Evaluation – IC

According to RSS-102, 2.5.2 Exemption Limits for Routine Evaluation

At or above 300 MHz and below 6 GHz and the source based time averaged maximum EIRP of the device is equal to or less than  $1.31 \times 10^{-2} \times f^{0.6834}$  in Watts (adjusted for tune up tolerance where applicable), where f= frequency in MHz

For 2.4 GHz Band:

$$\text{Limit} = 1.31 \times 10^{-2} \times 2440^{0.6834} = 2.7 \text{ Watts}$$

$$\text{Max EIRP for WiFi} = 10.1 \text{ dBm} + 0.97 \text{ dB} = 11.07 \text{ dBm} = 12.8 \text{ mW} \ll 2700 \text{ mW}$$