



FCC RF Exposure

Report No.: FCS202009015W01

EUT Description: Wi-Fi Switch

Model No.: LSPS8, LSPS1, LSPS2, LSPS3, LSPS5, LSPS6, LSPS7, LSPS8, LSPS9, LSPS10

FCC ID: 2AV9Z-LSPS8

Equipment type: fixed equipment

1. Limits

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)

Limits for Maximum Permissible Exposure (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm²)	Averaging time (minutes)			
(A) Limits for Occupational/Controlled Exposures							
0.3-3.0	614	1.63	*(100)	6			
3.0–30	1842/f	4.89/f	*(900/f ²)	6			
30–300	61.4	0.163	1.0	6			
300–1500			f/300	6			
1500-100,000			5	6			
	(B) Limits fo	or General Population/Uncontrol	led Exposure				
0.3–1.34	614	1.63	*(100)	30			
1.34–30	824/f	2.19/f	*(180/ f ²)	30			
30–300	27.5	0.073	0.2	30			
300–1500			f/1500	30			
1500-100,000			1.0	30			

F = frequency in MHz

Formula: Pd = $(Pout*G)/(4*\pi *r^2)$

Where:

 $Pd = power density in mW/cm^2$,

Pout = output power to antenna in mW;

G = gain of antenna in linear scale,

 $\pi = 3.14$;

R = distance between observation point and center of the radiator in cm

Pd id the limit of MPE, 1 mW/cm2. If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.



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2. Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

3. Test Result of RF Exposure Evaluation

	Output power	Antenna	Power Density	Limit	Result	
	(dBm/mW)	Gain(dBi)	at R=20cm	(mW/cm²)		
			(mW/cm²)			
802.11b	16.69/46.67	1.0	0.011686	1.0	Pass	
802.11g	16.67/46.45	1.0	0.011631	1.0	Pass	
802.11n(20MHz)	14.84/30.48	1.0	0.007632	1.0	Pass	
802.11n(40MHz)	14.94/31.19	1.0	0.007810	1.0	Pass	

Turn-up power			
Mode	Peak power range(dBm)		
WIFI	13.00-16.00		

	Output power	Antenna	Power Density	Limit	Result
WIFI	(dBm/mW)	Gain(dBi)	at R=20cm	(mW/cm ²)	
			(mW/cm ²)		
	18.00/63.096	1.0	0.01580	1.0	Pass

Conclusion: No RF exposure evaluation is required