

FCC ID: 2AVBD-TUYA5-24V

RF Exposure Evaluation

FCC KDB publication 447498 D01 General RF Exposure Guidance v06: Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies.

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)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)	
and the state of the second	(A) Limits	for Occupational/Controlled	Exposures	The state of the s	
0.3–3.0	614	1.63	*(100)	Contraction of the second	
3.0–30	1842/f	4.89/f	*(900/f ²)	6 5 6 5 m	
30–300	61.4	0.163	5 ¹⁰ 1.0 ⁰ 1 ²	STAR 6 LES STA	
300–1500	the the of the	Star of the star of	f/300	the start of a start	
1500–100,000	active stilling of	All is the of the state of	6 15 1th 10	6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	
Ma a a fill a fill and	(B) Limits for	General Population/Uncontro	lled Exposure	C C C LESTING	
0.3–1.34	614	1.63	*(100)	30	
1.34–30	824/f	2.19/f	*(180/f ²)	30 ° ji	
30–300	27.5	0.073	0.2	S (30 S S	
300–1500	of a letter the a	Contraction of the state	f/1500	o 30 m c	
1500–100,000	ING GO AND		5 ¹⁰ 1.0 5 1.0	1 ¹⁰	

Limits for Maximum Permissible Exposure (MPE)

f = frequency in MHz

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 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.

Test Procedure

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



Shenzhen QC Testing Laboratory Co., Ltd.

Test Result of RF Exposure Evaluation

Antenna Gain: 2.499dBi

For 2.4G Wi-Fi worst case

Test Frequency (MHz)	Minimum Separation Distance (cm)	Output Power (dBm)	Target power (dBm)	Target power (mW)	Antenna Gain (Numeric)	Power Density Limit (mW/cm ²)	Power Density At 20 cm (mW/cm ²)	Test Results
2412	20.00	18.53	18±1	79.433	1.78	ల ి1ి ఉ	0.0281	Pass
2422	20.00	18.1	18±1	79.433	0 1.78	Street of a start	0.0281	Pass
2437	20.00	17.5	17±1	63.096	1.78	A MARCH	0.0223	Pass
2452	20.00	16.62	16±1	50.119	1.78	and the stand	0.0177	Pass
2462	20.00	16.99	≥ 17±1 ∕	63.096	1.78	6 1. C . M	0.0223	Pass

The measurement results comply with the FCC Limit per 47 CFR 2.1091 for the uncontrolled RF Exposure.

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