

## FCC RF Exposure

EUT Description: VIDEO PROJECTOR

ModelNo.:X2,X200,A10,A1,A2,A3,A4,A5,A6,A7,A8

Equipment type: mobile device

Test procedures according to the technical standards: KDB 447498 D01 V06 and FCC 2.1091.

### 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/cm <sup>2</sup> )	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 <sup>2</sup> )	6
30–300	61.4	0.163	1.0	6
300–1500			f/300	6
1500–100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
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
300–1500			f/1500	30
1500–100,000			1.0	30

F = frequency in MHz

Formula:  $P_d = (P_{out} * G) / (4 * \pi * r^2)$

Where :

$P_d$  = power density in mW/cm<sup>2</sup>,

$P_{out}$  = 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

$P_d$  is the limit of MPE, 1 mW/cm<sup>2</sup>. 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.

### 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

## WIFI

	Output power (dBm/ mW)	Antenna Gain(dBi)	Power Density at R=20cm (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )	Result
U-NII 1 802.11a	6.39/4.36	4.18	0.00227	1.0	Pass
U-NII 1 802.11n(HT20)	6.26/4.23	4.18	0.00221	1.0	Pass
U-NII 1 802.11n(HT40)	7.34/5.42	4.18	0.00283	1.0	Pass
U-NII 1 802.11ac(HT20)	6.56/4.53	4.18	0.00236	1.0	Pass
U-NII 1 802.11ac(HT40)	7.38/5.47	4.18	0.00285	1.0	Pass
U-NII 1 802.11ac(HT80)	2.18/1.65	4.18	0.00086	1.0	Pass
U-NII 3 802.11a	13.11/20.46	4.18	0.01067	1.0	Pass
U-NII 3 802.11n(HT20)	13.02/20.04	4.18	0.01045	1.0	Pass
U-NII 3 802.11n(HT40)	7.58/5.73	4.18	0.00299	1.0	Pass
U-NII 3 802.11ac(HT20)	13.13/20.56	4.18	0.01072	1.0	Pass
U-NII 3 802.11ac(HT40)	7.39/5.48	4.18	0.00286	1.0	Pass
U-NII 3 802.11ac(HT80)	10.88/12.25	4.18	0.00639	1.0	Pass
802.11b	2.61/1.82	1.73	0.00054	1.0	Pass
802.11g	3.90/2.45	1.73	0.00073	1.0	Pass
802.11n20	3.84/2.42	1.73	0.00072	1.0	Pass

BT

	Output power(dBm)	Max tune-up(mW)	Antenna Gain(dBi)	Power Density at R=20cm (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )	Result
2402	0.55	1.14	1.73	0.00034	1.0	Pass
2441	0.28	1.07	1.73	0.00032	1.0	Pass
2480	0.44	1.11	1.73	0.00033	1.0	Pass

Note:2.4G / 5G cannot work at the same time and do not support the same development.

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Conclusion: No SAR is required