

FCC RF Exposure

EUT Description: Projector

Model No.: D40S CS03 E400 E400S E400H E400W E401 E401S E401H E401W E420 E420S E420H E431 E431S E431H E431W E500 E500S E420W E421 E421S E421H E421W D40W E500H E450 E450S E450 E450W E452 E452S E452H E452W E460 E460S E460H E460W E462 E462S E462H E462W E600 E600S E600H E600W E601 E601S E601H E601W E602 E602S E602H E660 E660S E660H E660W H5 H6 H7 H8 H9 H10 D30 D30W D30A D30S D30H D40 D40H D40W

FCC ID: 2ANBA-D40S

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/cm ²)	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 for General Population/Uncontrolled 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/cm²,

Pout = output power to antenna in mW;

G = gain of antenna in linear scale,

π = 3.14;

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

Pd is 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.

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 (dBm/ mW)	Antenna Gain(dBi)	Power Density at R=20cm (mW/cm ²)	Limit (mW/cm ²)	Result
802.11b	13.46/22.181	1.0	0.005554	1.0	Pass
802.11g	11.61/14.487	1.0	0.003627	1.0	Pass
802.11n(20MHz)	11.29/13.458	1.0	0.003369	1.0	Pass
802.11n(40MHz)	11.61/14.487	1.0	0.003627	1.0	Pass

Turn-up power	
Mode	output power range(dBm)
WIFI	11.00-14.00

WIFI	Output power (dBm/ mW)	Antenna Gain(dBi)	Power Density at R=20cm (mW/cm ²)	Limit (mW/cm ²)	Result
	14.00/25.12	1.0	0.006295	1.0	Pass

Conclusion: No SAR is required