FCC RF Exposure

EUT Description:Portable car display screen
ModelNo.:X70
Series Model: X70-1,X20,X30,X90,Q5,A70,A90,A100,B70,B90,B100
C50,C70,C80,C90,C100,C200,C300,C400,C500,G50
G70,G90,G100
FCC ID: 2BDT2-X70
Equipment type: Stationary equipment

Test procedures according to the technical standards: KDB 447498 D01 V06 andFCC 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^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/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.

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

Modulation	Channel Freq. (MHz)	Conducted power (dBm)	Max tune-up power (mW)	Antenna Gain (dBi)	Antenna gain numeric	Evaluation result (mW/cm2)	Power density Limits (mW/cm2)
802.11b	2412	14.37	27.35	-0.6	0.87	0.00473616	1
	2437	14.05	25.41	-0.6	0.87	0.00440021	1
	2462	14.14	25.94	-0.6	0.87	0.00449199	1
802.11g	2412	14.29	26.85	-0.6	0.87	0.00464958	1
	2437	13.19	20.84	-0.6	0.87	0.00360883	1
	2462	13.14	20.60	-0.6	0.87	0.00356727	1
802.11n	2412	12.90	19.50	-0.6	0.87	0.00337679	1
	2437	12.18	16.51	-0.6	0.87	0.00285901	1
	2462	12.21	16.63	-0.6	0.87	0.00287979	1

Wifi：Conclusion: the max result : 0.00473616≤ 1.0 compliance with FCC's RF Exposure.

Conclusion: No SAR is required