FCC ID: 2AQ64EMLLC

Maximum Permissible Exposure (MPE)

According to FCC 1.1310: 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 Exposure				
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
300-1,500			f/300	6
1,500-100,000			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
300-1,500			f/1500	30
1,500-100,000			1.0	30

f = frequency in MHz * = Plane-wave equivalent power density

MPE Calculation Method

E (V/m) = $\frac{\sqrt{30*P*G}}{d}$ Power Density: *Pd* (W/m²) = $\frac{E^2}{377}$

E = Electric field (V/m)

P = Average RF output power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

$Pd = \frac{30*P*G}{377*D^2}$

From the EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained.

Measurement Result

Hybrid mode system:
Operation Frequency: CSS: 902MHz~928MHz
Power density limited: 1mW/ cm^2
Antenna Type: PIFA Antenna
Antenna gain: -1dBi,
R=20cm

For FHSS mode:

Channel Freq. (MHz)	modulation	conducted power (dBm)	Tune-up power (dBm)	Max		Antenna		Evaluation result (mW/cm2)	Power density Limits (mW/cm2)
				tune-up power		Gain			
				(dBm)	(mW)	(dBi)	Numeric		
902.3	CSS	17.50	17±1	18	63.096	-1	0.79	0.00997	0.60153
908.5		17.44	17±1	18	63.096	-1	0.79	0.00997	0.60567
914.9		17.35	17±1	18	63.096	-1	0.79	0.00997	0.60993

For DTS mode:

Channel Freq. (MHz)	modulation	conducted power (dBm)	Tune-up power (dBm)	Max		Antenna		Evaluation result (mW/cm2)	Power density (mW/cm2)
				tune-up power		Gain			
				(dBm)	(mW)	(dBi)	Numeric		
903	CSS	17.45	17±1	18	63.096	-1	0.79	0.00997	0.60200
909.4		17.34	17±1	18	63.096	-1	0.79	0.00997	0.60627
914.2		17.24	17±1	18	63.096	-1	0.79	0.00997	0.60947

Conclusion:
For the max result : 0.00997≤ 0.60153 for Max Power Density, compliance the RF Exposure.

Jason chen

Signature: **Date:** 2018-09-20

NAME AND TITLE (Please print or type): Jason Chen/Manager

COMPANY (Please print or type): Shenzhen NTEK Testing Technology Co., Ltd./ 1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street Bao'an District, Shenzhen P.R. China.