

FCC ID:2AOWK-GQ022

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)

According to KDB447498 D01 General RF Exposure Guidance V06

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

$$E \text{ (V/m)} = \frac{\sqrt{30 * P * G}}{d}$$

$$\text{Power Density: } Pd \text{ (W/m}^2\text{)} = \frac{E^2}{377}$$

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.

BT:

Measurement Result

Operation Frequency: 2402MHz~2480MHz

Power density limited: 1mW/ cm²

Antenna Type: FPC antenna

Antenna gain: 1.7dBi;

R=20cm

mW=10^(dBm/10)

antenna gain Numeric=10^(dBi/10)

Channel Freq. (MHz)	modulation	conducted power	Tune-up power (dBm)	Max		Antenna		Evaluation result	Power density
		(dBm)		tune-up power		Gain			
				(dBm)	(mW)	(dBi)	Numeric	(mW/cm2)	(mW/cm2)
2402	DH5	-7.33	-7±1	-6	0.251	1.70	1.48	0.0001	1
2441		-6.86	-7±1	-6	0.251	1.70	1.48	0.0001	1
2480		-7.3	-7±1	-6	0.251	1.70	1.48	0.0001	1
2402	2DH5	-7.27	-7±1	-6	0.251	1.70	1.48	0.0001	1
2441		-6.82	-7±1	-6	0.251	1.70	1.48	0.0001	1
2480		-7.42	-7±1	-6	0.251	1.70	1.48	0.0001	1
2402	3DH5	-7.3	-7±1	-6	0.251	1.70	1.48	0.0001	1
2441		-6.88	-7±1	-6	0.251	1.70	1.48	0.0001	1
2480		-7.51	-7±1	-6	0.251	1.70	1.48	0.0001	1

Channel Freq. (MHz)	modulation	conducted power	Tune-up power (dBm)	Max		Antenna		Evaluation result	Power density
		(dBm)		tune-up power		Gain		(mW/cm2)	(mW/cm2)
				(dBm)	(mW)	(dBi)	Numeric		
2402	GFSK	-5.59	-5±1	-4	0.398	1.70	1.48	0.0001	1
2440		-5.17	-5±1	-4	0.398	1.70	1.48	0.0001	1
2480		-5.91	-5±1	-4	0.398	1.70	1.48	0.0001	1

SRD:

Operation Frequency: GFSK: 902.5 MHz~927.5MHz

Antenna Type: Antenna Type: FPC antenna

Antenna gain: Antenna: 1.5 dBi

R=20cm

Channel Freq. (MHz)	modulation	conducted power	Tune-up power (dBm)	Max		Antenna		Evaluation result (mW/cm2)	Power density Limits (mW/cm2)
		(dBm)		tune-up power		Gain			
				(dBm)	(mW)	(dBi)	Numeric		
905.00	GFSK	25.475	25±1	26	398.107	1.50	1.41	0.1119	0.60
915.85	GFSK	24.173	25±1	26	398.107	1.50	1.41	0.1119	0.61
926.5	GFSK	25.802	25±1	26	398.107	1.50	1.41	0.1119	0.62

Signature:**Date:** 2025-01-06**NAME AND TITLE** (Please print or type): alex li/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.