



FCC RF Exposure Evaluation

FCC ID: 2AJ2D-MD700

1. Product Information

Product name	Diagnostic Tool
Test Model	MD700
Additional Model No.	iScan Pro, iScan Pros,MOTOSTAR, MOTOSTAR Pro , MOTOSTAR
	Pros,MS70 Pro, MS70 Pros, Moto Tuner,Marine Pro, D700 Pro, D700
	Pros, D700 S,DC706 Pro, DC706 Pros,ECU Pro,
	HDECU,HDECUPRO,AutoEcu ,ECU MASTER , HD ECU PROS ,Moto
	ECU, Diesel ECU pro, Diesel Pro, M700, M700 PRO, M700 PROS,
	M700 MASTER ,FK100, FK100 Pro,IM700, IM700 S, IM700 Pro,IM706,
	IM706S, IM706 Pro,KeyMaster 7,KeyMaster 7S, KeyMaster 7 Pro,Odo
	Master Pro, Boat Master, MS75, MS75S, MS75 Pro, DB700, DB700
	Pro,DB700S,DB706, DB706 Pro,DB706S,MS70 Pro, MS70 Pros,iScan
	700, iScan 700S, iScan 700 Pro, iScan 700 Pros,MOTO 700, MOTO
	700S,MOTO 700 Pro, MOTO 700 Pros,MK75, MK75S, MK75 Pro,MK75
	Pros,MK70S, MK70 Pro,MK70 Pros,MK706, MK706S, MK706 Pro
Model Declaration	PCB board, structure and internal of these model(s) are the
ics 100	same, So no additional models were tested
Power Supply	Input: DC 5V
Handaran Vancian	DC 3.7V by Rechargeable Li-ion Battery, 3700mAh
Hardware Version	V1.0
Software Version	V1.0
Frequency Range	2412MHz ~ 2462MHz
Channel Spacing	5MHz
Channel Number	11 Channels for 20MHz bandwidth (2412~2462MHz)
Modulation Type	IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK)
Antonna Deceription	IEEE 802.11n: OFDM (64QAM, 16QAM, QPSK, BPSK)
Antenna Description	Internal Antenna, 1.62dBi (max.)
Exposure category	General population/uncontrolled environment
EUT Type	Production Unit
Device Type	Mobile Devices
Date of Test	December 10, 2024 ~ December 24, 2024
Data of Damont	December 25, 2024
Date of Report	December 25, 2024





-\s_-

2. Evaluation Method

Systems operating under the provisions of FCC 47 CFR section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as mobile device whereby a distance of 0.2m normally can be maintained between the user and the device, and below RF Permissible Exposure limit shall comply with.

In accordance with KDB447498D01 for Simultaneous transmission MPE test exclusion applies when the sum of the MPE ratios for all simultaneous transmitting antennas incorporated in a host device, based on the calculated/estimated, numerically modelled or measured field strengths or power density, is ≤ 1.0. The MPE ratio of each antenna is determined at the minimum test separation distance required by the operating configurations and exposure conditions of the host device, according to the ratio of field strengths or power density to MPE limit, at the test frequency. Either the maximum peak or spatially averaged results from measurements or numerical simulations may be used to determine the MPE ratios. Spatial averaging does not apply when MPE is estimated using simple calculations based on far-field plane-wave equivalent conditions. The antenna installation and operating requirements for the host device must meet the minimum test separation distances required by all antennas, in both standalone and simultaneous transmission operations, to satisfy compliance.















FCC ID: 2AJ2D-MD700















3. Limit

3. 1 Refer Evaluation Method

ANSI C95.1–1999: IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.

FCC KDB publication 447498 D01 General 1 RF Exposure Guidance v06: Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies.

FCC ID: 2AJ2D-MD700

<u>FCC CFR 47 part1 1.1310:</u> Radiofrequency radiation exposure limits. <u>FCC CFR 47 part2 2.1091:</u> Radiofrequency radiation exposure evaluation: mobile devices

3. 2 Limit

Limits for Maximum Permissible Exposure (MPE)/Controlled Exposure

Frequency	Electric Field	Magnetic Field	Power Density	Averaging Time				
Range(MHz)	Strength(V/m)	Strength(A/m)	(mW/cm²)	(minute)				
THE WALLES	Limits for Occupational/Controlled Exposure							
0.3 - 3.0	614	1.63	(100) *	1454 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				

Limits for Maximum Permissible Exposure (MPE)/Uncontrolled Exposure

Frequency	Electric Field	Magnetic Field	Power Density	Averaging Time
Range(MHz)	Strength(V/m)	Strength(A/m)	(mW/cm²)	(minute)
	Limits for Oc	cupational/Control	led Exposure	
0.3 - 3.0	614	1.63	(100) *	30
3.0 - 30	824/f	2.19/f	(180/f ²)*	30
30 – 300	27.5	0.073	0.2	30
300 – 1500		γ ₃ /	f/1500	30
1500 – 100,000	Till the ting	L813 /	1.0 mg Lab	30

F=frequency in MHz

4. MPE Calculation Method

Predication of MPE limit at a given distance Equation from page 18 of OET Bulletin 65, Edition 97-01

S=PG/4πR²

Where: S=power density

P=power input to antenna

G=power gain of the antenna in the direction of interest relative to an isotropic radiator

R=distance to the center of radiation of the antenna

5. Antenna Information

EUT can only use antennas certificated as follows provided by manufacturer;

Internal Identification	Antenna type and antenna number	Operate frequency band	Maximum antenna gain	Note
Antenna	Internal Antenna	2412MHz-2462MHz	1.62dBi(Max.)	WIFI Antenna



Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen,

^{*=}Plane-wave equivalent power density





6. Conducted Power

< 2.4G WIFI>

FCC ID: 2AJ2D-MD700

Mode	Channel	Frequency(MHz)	Max Conducted Power (dBm)
IEEE 802.11b	2 LC3.	2412	15.86
	6	2437	15.84
	11	2462	15.37
IEEE 802.11n HT20	1	2412	14.92
	6	2437	14.76
	11	2462	14.49

7. Manufacturing Tolerance

<2.4G WIFI>

12.TO WILL 12						
11B (Peak)						
Channel	Channel 1	Channel 6	Channel 11			
Target (dBm)	15.0	15.0	15.0			
Tolerance ±(dB)	1.0	1.0	1.0			
11N20SISO (Peak)						
Channel	Channel 1	Channel 6	Channel 11			
Target (dBm) 14.0		14.0	14.0			
Tolerance ±(dB)	1.0	1.0	1.0			

8. Measurement Results

8.1 Standalone MPE

As declared by the Applicant, the EUT is a wireless device used in a fix application, at least 20 cm from any body part of the user or nearby persons; from the maximum EUT RF output power, the minimum separation distance, r =20cm, as well as the gain of the used antenna refer to antenna information, the RF power density can be obtained.

[2.4GWLAN]

Modulation Type	Output power		Antenna Gain	Antenna Gain	MPE	MPE Limits
Wedalation Type	dBm	mW	(dBi)	(linear)	(mW/cm2)	(mW/cm2)
IEEE 802.11b	Lab16.0	39.8107	1.62	1.5346	0.0120	1.0000
IEEE 802.11n HT20	15.0	39.8107	1.62	1.5346	0.0091	1.0000

Remark:

- 1. Output power including tune-up tolerance;
- 2. MPE evaluate distance is 20cm from user manual provide by manufacturer;

8.2 Simultaneous Transmission MPE

Not Applicable

9. Conclusion

The measurement results comply with the FCC Limit per 47 CFR 2.1091 for the uncontrolled RF Exposure of mobile device.







10. Description of Test Facility

NVLAP Accreditation Code is 600167-0. FCC Designation Number is CN5024. CAB identifier is CN0071. CNAS Registration Number is L4595. Test Firm Registration Number: 254912.



Les Testing Lab

125 立河位河股份 LCS Tosting Lab LCS Testing Lab

LES TESTINGLAD

FCC ID: 2AJ2D-MD700

.....THE END OF REPORT.....

医扩散性测度的 LCS Tosting Lab 1至工资报检测股份

15 文形位测股份

VST LCS Testing Lat

NSA 立语检测股份 LCS Testing Lab

TAT LCS Testing Lab

北京 LCS Testing Lab









