



MPE Report

According to

FCC Part1.1310(b) & KDB 447498**RSS-102: Issue 5, March 19, 2015**

Applicant	:	Mitac International Corporation
Address	:	Building B, No.209, Sec.1, Nan Gang Rd., Nan Gang Dist., Taipei, Taiwan, R.O.C.
Manufacturer	:	Mitac Computer (Kunshan) Co., Ltd.
Address	:	No.269, 2nd Avenue, District A, Comprehensive Free Trade Zone, Kunshan, Jiangsu, P.R.C
Equipment	:	Portable Navigation Device
Model No.	:	N538-5000
Brand Name	:	Mitac' Mio' Navman' Magellan'
FCC ID	:	P4Q-N538-5000
IC ID	:	2420C-N538

■ The test result refers exclusively to the test presented test model / sample.,

■ Without written approval of **CerpPASS Technology (Suzhou) Co.,Ltd.** the test report shall not be reproduced except in full.

■ The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Rules and Regulations Part 15. The test report has been issued separately.

■ The test report must not be used by the clients to claim product certification approval by **NVLAP** or any agency of the Government.

Approved by:

Miro Chueh
EMC/RF Manager

Laboratory Accreditation:

CerpPASS Technology Corporation Test Laboratory

<input type="checkbox"/>	NVLAP LAB Code:	200954-0
	TAF LAB Code:	1439

CerpPASS Technology (SuZhou) Co., Ltd.

<input checked="" type="checkbox"/>	NVLAP LAB Code:	200814-0
	CNAS LAB Code:	L5515



1. Radio Frequency Exposure

LIMIT

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)	Average Time (Minutes)
(A) Limits for Occupational/ Control Exposures				
300-1500	--	--	F/300	6
1500-100,000	--	--	5	6
(B) Limits for General Population/ Uncontrolled Exposures				
300-1500	--	--	F/1500	6
1500-100,000	--	--	1	30

F= Frequency in MHz

Friis Formula

Friis transmission formula: $P_d = (P_{out} * G) / (4 * \pi * r^2)$

Where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

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

P_d 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.

The temperature and related humidity: 18°C and 78% RH.



3. Test Result of RF Exposure Evaluation

Test Item	:	RF Exposure Evaluation
-----------	---	------------------------

Antenna Gain:

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 3.0dBi or 1.00 in logarithm scale.

Output Power into Antenna & RF Exposure Evaluation Distance:

Frequency Band (MHz)	Maximum Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm ²)
2405.35-2477.35 MHz	0.24	0.00142900

Note:

The power density Pd (4th column) at a distance of 20 cm calculated from the Friis transmission formula is far below the limit of 1 mW/cm².