



RF EXPOSURE REPORT

For

Motic China Group Co.,Ltd

Motic BLDG, TORCH HI-TECH INDUSTRIAL DEV ZONE, XIAMEN FUJIAN, CHINA,
361006

FCC ID: PVEM150I

Report Type: Original Report	Product Name: Digital Microscope
Report Number:	2407V46068E-RF-02
Report Date:	2024-12-20
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REPORT REVISION HISTORY

Number of Revisions	Report No.	Version	Issue Date	Description
0	2407V46068E-RF-02	R1V1	2024-12-20	Initial Release

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Product Name:		Digital Microscope
Tested Model:		M150i
Adapter Information	Model:	ICP30A-120-2500
	Input:	AC 100-240V, 50/60Hz, 0.8A
	Output:	DC 12V, 2.5A
Power Supply:		AC 120V, 60Hz
Maximum Conducted Output Power:		18.46dBm
Frequency Range:		2412-2462MHz
Modulation Technique:		802.11b: DSSS-DBPSK, DQPSK, CCK 802.11g/n: OFDM-BPSK, QPSK, 16QAM, 64QAM
Antenna Type:		FPC
Number of TX Chain(s)		2
Number of RX Chain(s)		2
★Maximum Antenna Gain:		3.4dBi
EUT Received Status:		Good

Note:

1. The Maximum Antenna Gain was declared by manufacturer.
2. All measurement and test data in this report was gathered from production sample serial number: 2O27-1 (Assigned by the BACL(Xiamen). The EUT supplied by the applicant was received on 2024-06-15)

Objective

This test report is prepared for *Motic China Group Co.,Ltd* in accordance with Part 2-Subpart J, Part 15-Subparts A and C of the Federal Communication Commissions rules.

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Xiamen) to collect test data is located on the Unit 102, No. 902 Meifeng South Road, Binhai West Avenue, Science and Technology Innovation Park, Torch High tech Zone XiaMen.

Bay Area Compliance Laboratories Corp. (Xiamen) Lab is accredited to ISO/IEC 17025 by A2LA (Certificate Number: 7134.01) and the lab has been recognized as the FCC accredited lab under the KDB 974614 D01, the FCC Designation No. : CN1384.

FCC§15.247 (i), §1.1307(b)(1) & §2.1091 – MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Applicable Standard

According to FCC §1.1307(b)(1) & §2.1091, systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

Limits for Maximum Permissible Exposure (MPE)

(B) Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time (minutes)
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; * = Plane-wave equivalent power density;
According to §1.1307(b)(1) & §2.1091 RF exposure is calculated.

Calculated Formulary

Predication of MPE limit at a given distance

$S = PG/4\pi R^2$ = power density (in appropriate units, e.g. mW/cm²);

P = power input to the antenna (in appropriate units, e.g., mW);

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain;

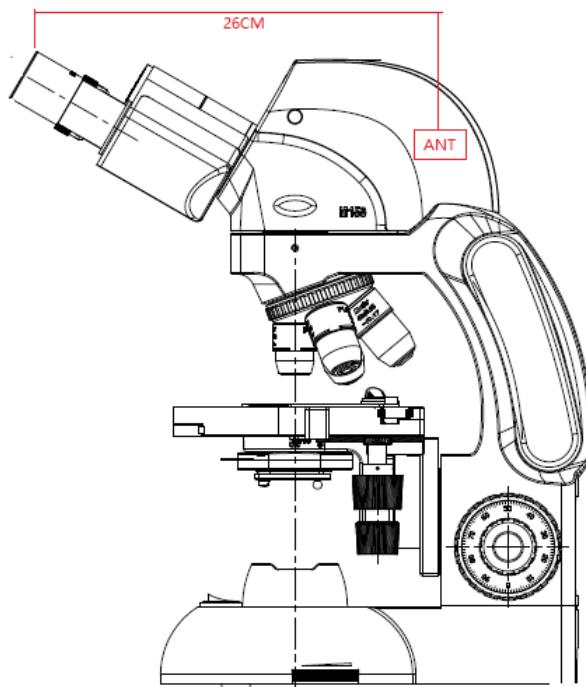
R = distance to the center of radiation of the antenna (appropriate units, e.g., cm);

Calculated Data

Mode	Frequency (MHz)	Antenna Gain		Tune-up Output Power		Evaluation Distance (cm)	Power Density (mW/cm ²)	MPE Limit (mW/cm ²)
		(dBi)	(numeric)	(dBm)	(mW)			
2.4G WIFI	2412-2462	3.4	2.19	18.5	70.79	20	0.0308	1

Note:

1. The Tune-up output power was declared by the Manufacturer.
2. The observation point to the antenna is about 26cm.



Result: The device meets MPE at distance 20cm.

EUT PHOTOGRAPHS

Please refer to the attachment 2407V46068E-RF-EXP EUT EXTERNAL PHOTOGRAPHS and 2407V46068E-RF-INP EUT INTERNAL PHOTOGRAPHS.

Declarations

1. Bay Area Compliance Laboratories Corp. (Xiamen) is not responsible for authenticity of any information provided by the applicant. Information from the applicant that may affect test results are marked with an asterisk “★”.
2. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested.
3. Unless required by the rule provided by the applicant or product regulations, then decision rule in this report did not consider the uncertainty.
4. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor $k=2$ with the 95% confidence interval.
5. This report cannot be reproduced except in full, without prior written approval of Bay Area Compliance Laboratories Corp. (Xiamen).
6. This report is valid only with a valid digital signature. The digital signature may be available only under the adobe software above version 7.0.

***** END OF REPORT *****