Maximum Permissible Exposure (MPE)

Evaluation Report

Product： **VIDEOSCOPE SYSTEM**

Model Number： F1700

Applicant： **Medical Intubation Technology Corp.**

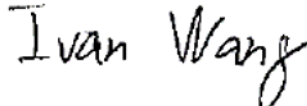Address： 2F, No.75, Wenhwa 1st Rd., Guishan District, Taoyuan 33382, Taiwan

Issued By： Interocean EMC Technology Corp.
Interocean EMC Technology Tin-Fu Laboratory

LAB Location： No. 5-2, Lin 1, Tin-Fu, Lin-Kou Dist., New Taipei City, Taiwan 244, R.O.C.

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The test result in this report is only subjected to the test sample.

Report Issued： 2018/10/22

Project Engineer： _Ivan Wang_
Ivan Wang

Approved： _Jerry Liu_
Jerry Liu

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1   RF Exposure Limit

According to 47 CFR §1.1310: The criteria listed in the below table shall be used to evaluate   the environmental impact of human exposure to radio-frequency (RF) radiation as specified in 1.1307(b), except in the case of portable devices which shall be evaluated according to the provisions of §2.1093.

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				
30-300	61.4	0.163	1.0	6
300-1500	…	…	F/300	6
1500-100,000	…	…	5	6
(B)Limits For General Population / Uncontrolled Exposure				
30-300	27.5	0.073	0.2	30
300-1500	…	…	F/1500	30
1500-100,000	…	…	1.0	30

F = Frequency in MHz

2   Formula

Formula: $Pd = (Pout*G) / (4*\pi*R^2)$

where

Pd = power density in mW/cm2

Pout = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.14

R = distance between observation point and center of the radiator in cm (20cm)

Pd 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.

3   Results

Frequency (MHz)	Maximum measured transmitter power (dBm)	Tune-up power tolerance (dB)	Total Maximum power (dBm)	Maximum Antenna gain (dBi)	Maximum Antenna gain (numeric)	Output power To antenna (mW)	Power density (mW/cm^2)	Limit of Power density (mW/cm^2)	Result
2412	10.62	($\pm$)2	12.62	2	1.58	18.28	0.006	1.0	PASS
2437	11.23	($\pm$)2	13.23	2	1.58	21.04	0.007	1.0	PASS
2462	11.36	($\pm$)2	13.36	2	1.58	21.68	0.007	1.0	PASS