

# ELECTROMAGNETIC EMISSION COMPLIANCE REPORT FOR LOW-POWER, NON-LICENSED TRANSMITTER

Test Report No. : OT-184-RWD-010

AGR No. : A183A-272

Applicant : MOTREX CO., LTD.

Address : (Mullae-dong 3(sam)-ga, Ace High-Tech City B/D), 1-1103, 775, Yeongdeungpo-gu,

Seoul, South Korea

Manufacturer : MOTREX CO., LTD.

Address : (Mullae-dong 3(sam)-ga, Ace High-Tech City B/D), 1-1103, 775, Yeongdeungpo-gu,

Seoul, South Korea

Type of Equipment : MTXM100LFFL

FCC ID. : BP9-MTXM100LFFL

Model Name : MTXM100LFFL

Serial number : N/A

Total page of Report : 6 pages (including this page)

Date of Incoming : March 22, 2018

Date of issue : April 11, 2018

### **SUMMARY**

The equipment complies with the regulation; FCC PART 15 SUBPART C Section 15.247

This test report only contains the result of a single test of the sample supplied for the examination.

It is not a generally valid assessment of the features of the respective products of the mass-production.

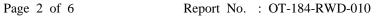
Reviewed by

Jae-Ho Lee / Chief Engineer ONETECH Corp. Approved by:

Keun-Young, Choi / Vice President

Report No.: OT-184-RWD-010

ONETECH Corp.





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# **Revision History**

Rev. No.	Issue Report No.	Issued Date	Revisions	Section Affected	
0	OT-184-RWD-010 April 11, 2018		Initial Issue	All	



Report No.: OT-184-RWD-010



### 1. VERIFICATION OF COMPLIANCE

Applicant : MOTREX CO., LTD.

Address : (Mullae-dong 3(sam)-ga, Ace High-Tech City B/D), 1-1103, 775, Yeongdeungpo-gu, Seoul, South Korea

Contact Person: Young Kwon

Telephone No. : +82-70-4626-8187

FCC ID : BP9-MTXM100LFFL

Model Name : MTXM100LFFL

Brand Name : Serial Number : N/A

Date : April 11, 2018

EQUIPMENT CLASS	DSS – PART 15 SPREAD SPECTRUM TRANSMITTER
E.U.T. DESCRIPTION	MTXM100LFFL
KIND OD EQUIPMENT	Modular Transmitter
THIS REPORT CONCERNS	Original Grant
MEASUREMENT PROCEDURES	ANSI C63.10: 2013
TYPE OF EQUIPMENT TESTED	Pre-Production
KIND OF EQUIPMENT AUTHORIZATION REQUESTED	Certification
EQUIPMENT WILL BE OPERATED UNDER FCC RULES PART(S)	FCC PART 15 SUBPART C Section 15.247
Modifications on the Equipment to Achieve Compliance	None
Final Test was Conducted On	3 m, Semi Anechoic Chamber

<sup>-.</sup> The above equipment was tested by ONETECH Corp. for compliance with the requirement set forth in the FCC Rules and Regulations. This said equipment in the configuration described in this report, shows the maximum emission levels emanating from equipment are within the compliance requirements.

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### 2. GENERAL INFORMATION

### 2.1 Product Description

The MOTREX CO., LTD., Model MTXM100LFFL (referred to as the EUT in this report) is a MTXM100LFFL. The product specification described herein was obtained from product data sheet or user's manual.

Device Type	MTXM100LFFL		
Operating Frequency	2 402 MHz ~ 2 480 MHz		
	1 Mbps   6.16 dBm		
RF Output Power	2 Mbps   4.47 dBm		
	3 Mbps 4.56 dBm		
Number of Channel	79 Channels		
Modulation Type	GFSK for 1 Mbps, π/4-DQPSK for 2 Mbps, 8-DPSK for 3 Mbps		
Antenna Type	Chip Antenna		
Antenna Gain	0 dBi		
List of each Osc. or crystal  Freq.(Freq. >= 1 MHz)	12.288 MHz, 16 MHz, 24 MHz, 26MHz, 27 MHz, 32 MHz, 55.4667 MHz		
Rated Supply Voltage	DC 12.0 V		

### 2.2 Alternative type(s)/model(s); also covered by this test report.

-. None

### 3. EUT MODIFICATIONS

-. None

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### 4. MAXIMUM PERMISSIBLE EXPOSURE

### 4.1 RF Exposure Calculation

According to the FCC rule 1.1310, the limit for General Population/Uncontrolled exposure is  $1 \text{ mW/cm}^2$  for the device operating  $1500 \sim 100000 \text{ MHz}$ .

4.2 EUT Description

4.2 EU1 Description				
Kind of EUT	MTXM100LFFL			
	☐ Wireless Microphone: 494.000 MHz ~ 501.000 MHz			
Operating Frequency Band	and 498.200 MHz ~ 505.200 MHz			
	□ WLAN: 2 412 MHz ~ 2 462 MHz			
	□ WLAN: 5 180 MHz ~ 5 240 MHz			
	□ WLAN: 5 745 MHz ~ 5 825 MHz			
	■ Bluetooth: 2 402 MHz ~ 2 480 MHz			
	☐ Bluetooth BLE: 2 402 MHz ~ 2 480 MHz			
	1 Mbps	6.16 dBm		
MAX. RF OUTPUT POWER	2 Mbps	4.47 dBm		
	3 Mbps	4.56 dBm		
Antenna Gain	0 dBi			
Exposure	■ MPE			
	□ SAR			
Evaluation Applied	□ N/A			

### 4.3 3 Calculated MPE Safe Distance

According to above equation, the following result was obtained.

Operating Freq. Band	Operating Mode	Target Power W/tolerance	Max tune up power		Antenna Gain		Power Density (mW/cm²) @ 20 cm	Limit (mW/cm²)
(MHz)		(dBm)	(dBm)	(mW)	Log	Linear	Separation	
	1 Mbps	$5.66 \pm 0.5$	6.16	4.13			0.000 08	1.00
2 402 ~ 2 480	2 Mbps	$3.97 \pm 0.5$	4.47	2.80	0	1.0	0.000 06	1.00
2 400	3 Mbps	$4.06 \pm 0.5$	4.56	2.86			0.000 06	1.00