

# **TEST REPORT**

Applicant	:	MtM+ Technology Corporation
Address	:	8F, 178, MinQuan East Road, Section 3, Taipei 10542, Taiwan
Equipment	:	M905
Model No.	:	nRF52832
Trade Name	:	MtM+ Technology

## I HEREBY CERTIFY THAT :

The sample was received on Nov. 08, 2017 and the testing was carried out on Nov. 08, 2017 at Cerpass Technology Corp. The test result refers exclusively to the test presented test model / sample. Without written approval of Cerpass Technology Corp., the test report shall not be reproduced except in full.

Approved by:

Mark Liao / Assistant Manager

Tested by:

Spree Yei / Engineer

Laboratory Accreditation:



Cerpass Technology Corporation Test Laboratory





# Contents

1.	Summ	ary of Test Procedure and Test Results	4
	1.1	Applicable Standards	4
2.	Test C	onfiguration of Equipment under Test	5
	2.1	Feature of Equipment under Test	5
	2.2	The Difference of EUT	5
3.	Gener	al Information of Test	6
4.	RF exp	posure evaluation	7
	4.1	Scope	7
	4.2	Normative References	7
	4.3	Compliance Criteria	7
	4.4	Routes to show compliance with low-power exclusion level	8
	4.5	Limits	8
	4.6	Evaluation Results	9



# History of this test report

Report No.	Issue Date	Description
TECJ1709052	Nov. 13, 2017	Original



# 1. Summary of Test Procedure and Test Results

# 1.1 Applicable Standards

The measurements shown in this test report were made in accordance with the procedures given in EUROPEAN COUNCIL DIRECTIVE 2014/53/EU.

EN 62479:2010



# 2. Test Configuration of Equipment under Test

# 2.1 Feature of Equipment under Test

Modulation Type	BLE:GFSK				
meddiadon Type	NFC: ASK				
Fraguanay Panga	BLE: 2400-2483.5MHz				
Fiequency Range	NFC: 13.56MHz				
Data Rate	BLE:1Mbps				
	BLE: Chip Antenna				
Antenna Type	NFC: Coil Antenna				
	BLE				
Antenna Gain	E1: -3.2 dBi				
	E3: -5.9 dBi				

\*NFC is passive mode.

## 2.2 The Difference of EUT

This model no. can use two kinds of RF Antenna.





# 3. General Information of Test

	Cerpass Technology Corporation Test Laboratory					
	Address: No.10, Ln. 2, Lianfu St., Luzhu Dist., Taoyuan City 33848,					
	Taiwan (R.O.C.)					
	Tel:+886-3-3226-888					
	Fax:+886-3-3	3226-881				
I Test Site	Address: No.	68-1, Shihbachongsi, Shihding Township,				
	New Taipei C	City 223, Taiwan, R.O.C.				
	Tel: +886-2-2663-8582					
	FCC	TW1079, TW1061, 390316, 228391, 641184				
	IC	4934E-1, 4934E-2				
		T-2205 for Telecommunication Test				
	VCCI	C-4663 for Conducted emission test				
		R-4218 for Radiated emission test				
		G-10812, G-10813 for radiated disturbance above 1GHz				
	Cerpass Technology (Suzhou) Co., Ltd					
	Address: No.66, Tangzhuang Road, Suzhou Industrial Park, Jiangsu					
	215006, China					
	Tel: +86-512-6917-5888					
	Fax: +86-512-6917-5666					
Test Site	FCC	916572, 331395				
	IC	7290A-1, 7290A-2				
		T-343 for Telecommunication Test				
	VCCI	C-2919 for Conducted emission test				
	1001	R-2670 for Radiated emission test				
		G-227 for radiated disturbance above 1GHz				
Test Condition	Normal Temperature : 25°C					
	Extreme Temperature : -40°C and 85°C					



# 4. RF exposure evaluation

#### 4.1 Scope

This International Standard provides simple conformity assessment methods for low-power electronic and electrical equipment to an exposure limit relevant to electromagnetic fields(EMF). If such equipment cannot be shown to comply with the applicable EMF exposure requirements using the methods included in this standard for EMF assessment, then other standards, including IEC 62311 or other (EMF) product standards, may be used for conformity assessment. This European Standard supersedes EN 50371:2002.

#### 4.2 Normative References

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

Council Recommendation 1999/519/EC of 12 July 1999 on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz), Official Journal L 199 of 30 July 1999.

IEC 62311, Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz - 300 GHz).

## 4.3 Compliance Criteria

Compliance of electromagnetic emissions from electronic and electrical equipment with the basic restrictions usually is determined by measurements and, in some cases, calculation of the exposure level. If the electrical power used by or radiated by the equipment is sufficiently low, the electromagnetic fields emitted will be incapable of producing exposures that exceed the basic restrictions. This standard provides simple EMF assessment procedures for this low power equipment.

Any relevant compliance assessment procedure which is consistent with the state of the art, reproducible and gives valid results can be used.

For transmitters intended for use with more than one antenna configuration option, the combination of transmitter and antenna(s) which generates the highest available antenna power and/or average total radiated power shall be assessed.



## 4.4 Routes to show compliance with low-power exclusion level

## 4.5 Limits

Equipment where the available antenna power and/or the average total radiated power is less than or equal to the 20mW (13dBm).





## 4.6 Evaluation Results

# RF Chip: E1

Ch.	Frq.(MHz)	TP (W)	Gain (num.)	D (m)	Electric Field(V/m)	Limit of Electric Field (V/m)	Result
0	2402	0.0016	-3.2	0.2	1.10	61	Pass

# RF Chip: E3

Ch.	Frq.(MHz)	TP (W)	Gain (num.)	D (m)	Electric Field(V/m)	Limit of Electric Field (V/m)	Result
0	2402	0.0009	-5.9	0.2	0.80	61	Pass