

Prüfbericht-Nr.: <i>Test report no.:</i>	CN22SRMQ 009	Auftrags-Nr.: <i>Order no.:</i>	168379672	Seite 1 von 8 <i>Page 1 of 8</i>
Kunden-Referenz-Nr.: <i>Client reference no.:</i>	N/A	Auftragsdatum: <i>Order date:</i>	2022-06-29	
Auftraggeber: <i>Client:</i>	SZ DJI TECHNOLOGY CO., LTD. 14th Floor, West Wing, Skyworth Semiconductor Design Building No.18 Gaoxin South 4th Ave Nanshan District, Shenzhen, P.R. China			
Prüfgegenstand: <i>Test item:</i>	DJI Mavic 3E, DJI Mavic 3T, DJI Mavic 3M			
Bezeichnung / Typ-Nr.: <i>Identification / Type no.:</i>	M3E, M3T, M3M (Trademark: DJI)			
Auftrags-Inhalt: <i>Order content:</i>	Test Report			
Prüfgrundlage: <i>Test specification:</i>	FCC Part 2: Section 2.1091			
Wareneingangsdatum: <i>Date of sample receipt:</i>	2022-10-10	Please refer to photo documents		
Prüfmuster-Nr.: <i>Test sample no.:</i>	A003350286-007			
Prüfzeitraum: <i>Testing period:</i>	2022-10-30 to 2022-11-04			
Ort der Prüfung: <i>Place of testing:</i>	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüflaboratorium: <i>Testing laboratory:</i>	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüfergebnis*: <i>Test result*:</i>	Pass			
geprüft von: <i>tested by:</i>	<u>x Bell Hu</u>	genehmigt von: <i>authorized by:</i>	<u>X Lin Lin</u>	
Datum: <i>Date:</i>	2022-11-16 <small>Signed by: Bell Hu</small>	Ausstellungsdatum: <i>Issue date:</i>	2022-11-16 <small>Signed by: Lin Lin</small>	
Stellung / Position:	Assistants Project Manager	Stellung / Position:	Reviewer	
Sonstiges / Other:	FCC ID: SS3-M3E2206 This report is based on original Report CN22SRMQ 004 for C2PC under below. 1. Adding a new model M3M, which has the same the electrical circuit design and PCB layout with the original models M3E and M3T, only different in camera function. 2. Adding the 5.1GHz SDR function to all models via updating software. The 5.1GHz SDR added in this report.			
Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of the test item at delivery:</i>	Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged</i>			
* Legende:	1 = sehr gut P(ass) = entspricht o.g. Prüfgrundlage(n)	2 = gut F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	3 = befriedigend N/A = nicht anwendbar	4 = ausreichend N/T = nicht getestet
* Legend:	1 = very good P(ass) = passed a.m. test specification(s)	2 = good F(ail) = failed a.m. test specification(s)	3 = satisfactory N/A = not applicable	4 = sufficient N/T = not tested
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>				

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TEST SUMMARY

3.1.1 RF EXPOSURE COMPLIANCE

RESULT: Pass

CONTENTS

1.	TEST SITES.....	4
1.1	TEST FACILITIES	4
1.2	TRACEABILITY	4
1.3	CALIBRATION.....	4
1.4	LOCATION OF ORIGINAL DATA	4
1.5	STATUS OF FACILITY USED FOR TESTING	4
2.	GENERAL PRODUCT INFORMATION	5
2.1	GENERAL DESCRIPTION	5
2.2	RATING AND SYSTEM DETAILS	5
3.	TEST RESULTS	6
3.1	TRANSMITTER REQUIREMENTS & TEST SUITES.....	6
3.1.1	<i>RF Exposure Compliance.....</i>	<i>6</i>
3.1.1.1	Radio Frequency Exposure Limit	7
3.1.1.2	Radio Frequency Exposure Calculation Formula.....	7
3.1.1.3	Simultaneous transmission MPE.....	7
3.1.1.4	Conclusion	7
4.	LIST OF TABLES.....	8

1. TEST SITES

1.1 TEST FACILITIES

TÜV Rheinland (Shenzhen) Co., Ltd.

362 Huanguan Road Middle Longhua District, Shenzhen 518110 People's Republic of China

FCC Registration No.: 694916

ISED wireless device testing laboratory: 25069

A2LA Certificate Number: 5162.01

1.2 Traceability

All measurement equipment calibrations are traceable to NIST or where calibration is performed outside the United States, to equivalent nationally recognized standards organizations.

1.3 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

1.4 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendixes of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) file for certification follow-up purposes.

1.5 Status of Facility Used for Testing

The TÜV Rheinland (Shenzhen) Co., Ltd. Test facility located at 362 Huanguan Road Middle Longhua District, Shenzhen 518110 People's Republic of China is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

2. GENERAL PRODUCT INFORMATION

2.1 GENERAL DESCRIPTION

The **EUT (Equipment Under Test)** is an aircraft (DJI Mavic 3E, DJI Mavic 3T, DJI Mavic 3M). It supports 2.4GHz SDR, 5.2GHz SDR, 5.8GHz SDR and GNSS functions.

*remark: SDR means specific defined radio, and cannot changes radio specification via software/firmware by end-users.

According to the declaration of the applicant, the electrical circuit design and PCB layout are identical for all models, the differences among them are as below.

M3E and M3T are identical to each other, they only differences is M3T camera with Thermal Imaging function and M3E without it.

M3M and M3E are identical to each other, the only difference is the M3M with multispectral camera and M3E without it.

For details refer to the User Manual, Technical Description and Circuit Diagram.

2.2 RATING AND SYSTEM DETAILS

Table 1: General Information of EUT

General Information of EUT	Value
Kind of Equipment	DJI Mavic 3E, DJI Mavic 3T, DJI Mavic 3M
Type Designation	M3E, M3T, M3M
FCC ID	SS3-M3E2206
Operating Temperature Range	-10°C ~ 40 °C
Operating Voltage	AC 100-240V, 50/60Hz input via AC/DC adapter` or Battery operated (DC 15.4V)
Testing Voltage	Fully charged battery
Radiofrequency operating mode	1) 2.4GHz SDR: operating within 2400-2483.5MHz, supports 1.4MHz/3MHz/10MHz/20MHz/40MHz Bandwidth 2) 5.2GHz SDR: operating within 5150-5250MHz, supports 10MHz/20MHz/40MHz Bandwidth 3) 5.8GHz SDR: operating within 5725-5850MHz, supports 1.4MHz/3MHz/10MHz/20MHz/40MHz Bandwidth 4) GNSS (receiver): operating within 1559-1610MHz
AC/DC adapter	Model: CDX265-100 Input: AC 100-240V, 50/60Hz, 2.5A Max USB-C Output: DC 5V, 3A or DC 9.0V,5.0A or DC 12.0V, 5A or DC 15.0V, 5A or DC 20.0V, 5A or DC 5.0-20V, 5A

3. Test Results

3.1 Transmitter Requirements & Test Suites

3.1.1 RF Exposure Compliance

RESULT: **Pass**

Test standard	:	FCC Part 1.1091
Limit	:	Table 1 of 47 CFR FCC Part 1.1310
Kind of test site	:	Shielded room

This device is mobile device, and the applicant declares that the minimum separation distance is greater than 20cm. Therefore MPE measurement or computational modelling should be used to determine compliance.

MPE Calculation is based on the conducted power, and considering maximum power and Antenna gain. The following formula is used to MPE evaluation.

$$Pd = \frac{P_{out} * G}{4R^2\pi}$$

Where

P_d = power density in mW/cm² or W/m²

P_{out} = output power to antenna in mW or W

G_{num} = Antenna gain in numeric

π = 3.14159

R = Distance between observation point and the center of radiator in cm or m

3.1.1.1 Radio Frequency Exposure Limit

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f ²)	6
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				
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

3.1.1.2 Radio Frequency Exposure Calculation Formula

Table 2: Test Results of RF Exposure Calculations for FCC, stand-alone mode

Operating Mode	Max. EIRP* incl. tune-up (dBm)	Distance (cm)	MPE P _d (mW/cm ²)	Limit (mW/cm ²)	Verdict
2.4GHz SDR	32.00	20	0.315	1.0	Pass
5.1GHz SDR	23.50	20	0.045	1.0	Pass
5.8GHz SDR	32.50	20	0.354	1.0	Pass

Note:

1. The 2.4GHz SDR and 5.8GHz SDR mode of EUT cannot transmitting simultaneously.
2. For the output Power of the 2.4G SDR, 5.1GHz and 5.8GHz SDR, Refer to test report CN22SRMQ 002 & CN22SRMQ 008&CN22SRMQ 003.
3. EIRP= Conducted power +Directional Gain

3.1.1.3 Simultaneous transmission MPE

Not applicable.

The 2.4GHz SDR, 5.1GHz SDR and 5.8GHz SDR mode of EUT cannot transmitting simultaneously.

3.1.1.4 Conclusion

Therefore the maximum calculations result of above are meet the requirement of Radio Frequency Exposure (MPE) limit.

4. List of Tables

Table 1: General Information of EUT	5
Table 3: Test Results of RF Exposure Calculations for FCC, stand-alone mode.....	7