

Prüfbericht-Nr.: <i>Test report no.:</i>	CN22ZMXR 002	Auftrags-Nr.: <i>Order no.:</i>	168348142	Seite 1 von 24 Page 1 of 24	
Kunden-Referenz-Nr.: <i>Client reference no.:</i>	N/A	Auftragsdatum: <i>Order date:</i>	2021-12-21		
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 O3 Air Unit				
Bezeichnung / Typ-Nr.: <i>Identification / Type no.:</i>	QFP2AS				
Auftrags-Inhalt: <i>Order content:</i>	Test Report				
Prüfgrundlage: <i>Test specification:</i>	CFR47 FCC Part 15: Subpart C Section 15.407 CFR47 FCC Part 15: Subpart C Section 15.207 CFR47 FCC Part 15: Subpart C Section 15.209				
Wareneingangsdatum: <i>Date of sample receipt:</i>	2022-04-20	Please refer to photo documents			
Prüfmuster-Nr.: <i>Test sample no.:</i>	A003244725-013 A003244725-015				
Prüfzeitraum: <i>Testing period:</i>	2022-04-20 to 2022-05-05				
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>	 Hardy Suo		genehmigt von: <i>authorized by:</i>	 Lin Lin	
Datum: <i>Date:</i>	2022-05-10		Ausstellungsdatum: <i>Issue date:</i>	2022-05-10	
Stellung / Position:	Sachverständige(r) / Expert		Stellung / Position:	Sachverständige(r) / Expert	
Sonstiges / Other:	FCC ID: SS3-QFP2AS22 This report is for 5.8GHz SDR.				
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 F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	4 = ausreichend N/A = nicht anwendbar	5 = mangelhaft 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 F(ail) = failed a.m. test specification(s)	4 = sufficient N/A = not applicable	5 = poor N/T = not tested
<p>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.</p> <p><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></p>					

v05

TEST SUMMARY

5.1.1 ANTENNA REQUIREMENT

RESULT: Pass

5.1.2 MAXIMUM OUTPUT POWER

RESULT: Pass

5.1.3 POWER SPECTRAL DENSITY

RESULT: Pass

5.1.4 FREQUENCY STABILITY

RESULT: Pass

5.1.5 26dB BANDWIDTH AND 99% BANDWIDTH

RESULT: Pass

5.1.6 6dB BANDWIDTH

RESULT: Pass

5.1.7 RADIATED SPURIOUS EMISSION

RESULT: Pass

TABLE OF CONTENTS

1.	GENERAL REMARKS	4
1.1	COMPLEMENTARY MATERIALS	4
2.	TEST SITES	5
2.1	TEST FACILITIES	5
2.2	LIST OF TEST AND MEASUREMENT INSTRUMENTS.....	5
2.3	TRACEABILITY	6
2.4	CALIBRATION	6
2.5	UNCERTAINTY OF MEASUREMENT.....	6
2.6	LOCATION OF ORIGINAL DATA.....	6
2.7	STATUS OF FACILITY USED FOR TESTING.....	7
3.	GENERAL PRODUCT INFORMATION	8
3.1	PRODUCT FUNCTION AND INTENDED USE.....	8
3.2	RATINGS AND SYSTEM DETAILS	8
3.3	INDEPENDENT OPERATION MODES	12
3.4	NOISE GENERATING AND NOISE SUPPRESSING PARTS	13
3.5	SUBMITTED DOCUMENTS	13
4.	TEST SET-UP AND OPERATION MODES	14
4.1	PRINCIPLE OF CONFIGURATION SELECTION.....	14
4.2	TEST OPERATION	14
4.3	SPECIAL ACCESSORIES AND AUXILIARY EQUIPMENT	14
4.4	COUNTERMEASURES TO ACHIEVE ERM COMPLIANCE	14
4.5	TEST SETUP DIAGRAM	15
5.	TEST RESULTS	16
5.1	RADIO TEST REQUIREMENT & TEST SUITES (5GHZ BANDS)	16
5.1.1	<i>Antenna Requirement</i>	16
5.1.2	<i>Maximum output power.....</i>	17
5.1.3	<i>Power Spectral Density.....</i>	19
5.1.4	<i>Frequency Stability.....</i>	20
5.1.5	<i>26dB Bandwidth and 99% Bandwidth.....</i>	21
5.1.6	<i>6dB Bandwidth</i>	22
5.1.7	<i>Radiated Spurious Emission.....</i>	23
6.	LIST OF TABLES	24

1. General Remarks

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix A: Test Results of 5.8GHz SDR

Appendix B: Photographs of the Test Set-up

2. Test Sites

2.1 Test Facilities

TÜV Rheinland (Shenzhen) Co., Ltd.

No. 362 Huanguan Road Middle, Longhua District, Shenzhen 518110, People's Republic of China

FCC Accreditation Designation No.: CN1260

ISED Wireless Device Testing Laboratory: 25069

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Radio Spectrum Testing (TS8997-R&S)					
Equip. No.	Description	Manufacturer	Model	Serial No.	Calibrated until (DD.MM.YYYY)
G1825794	Wireless Connectivity Tester	R&S	CMW270	101375	09.08.2022
G1825795	Signal Analyzer	R&S	FSV 40	101441	09.08.2022
G1825796	Vector Signal Generator	R&S	SMBV100A	263301	09.08.2022
G1825797	Signal Generator	R&S	SMB100A	115186	09.08.2022
G1825798	OSP	R&S	OSP 150	101017	02.12.2022
G1825799	Control PC	DELL	OptiPlex 7050	FTJZ9P2	N/A
G1825800	Test Software	R&S	WMS32 (V11.00.00)	N/A	N/A
G1825801	Power Meter	R&S	NRP2	107105	02.12.2022
G1829620	Power Sensor	R&S	NRP-Z81	105677	09.08.2022
G1826483	Humid & Temp Programmable Tester	BOST	NTH090-60	19040801	02.04.2023
G1826431	Shielding Room 8#	Albatross	SR8	APC17151-SR8	22.06.2024
Unwanted Emission Testing (TS8996)					
Equip. No.	Description	Manufacturer	Model	Serial No.	Calibrated until (DD.MM.YYYY)
G1825844	Signal Generator	R&S	SMB100A	180840	09.08.2022
G1825845	Wideband Radio Communication Tester	R&S	CMW500	165339	09.08.2022
G1825846	Signal Analyzer	R&S	FSV 40	101440	09.08.2022
G1825847	System Controller Interface	R&S	SCI-100	S10010036	N/A
G1825849	Filterbank	R&S	GSM	100811	09.08.2022
G1825850	OSP	R&S	OSP 120	102041	N/A
G1825851	OSP	R&S	OSP 150	101385	02.12.2022
G1825852	Pre-amplifier	R&S	SCU08F1	08320030	09.08.2022
G1825853	Amplifier	R&S	SCU-18F	180079	09.08.2022
G1825854	Amplifier	R&S	SCU40A	100450	09.08.2022
G1825855	Trilog Broadband Antenna (30 MHz - 7 GHz)	Schwarzbeck	VULB 9162	192	08.08.2022
G1825856	Double-Ridged Antenna (1 -18 GHz)	ETS-LINDGREN	3117	00218719	08.08.2022

G1825857	Wideband Ridged Horn Antenna (12-18 GHz)	Steatite	QMS-00208	18312	08.08.2022
G1825858	Wideband Ridged Horn Antenna (18-40 GHz)	Steatite	QMS-00880	19066	08.08.2022
G1825859	Biconical Broadband Antenna (30 MHz - 1 GHz)	Schwarzbeck	VUBA 9117	357	02.08.2024
G1825860	Double Ridged Broadband Horn Antenna (1 - 18 GHz)	Schwarzbeck	BBHA 9120 D	01760	30.07.2024
G1825861	Broadband Horn Antenna (15 - 40 GHz)	Schwarzbeck	BBHA 9170	00862	02.08.2024
G1825862	Test software	R&S	EMC32 (V10.50.40)	N/A	N/A
G1825863	Control PC	Dell	OptiPlex 7050	36NW9P2	N/A
G1826432	3m Fully Anechoic Chamber	Albatross	FAC-3m	APC17151-FAC	22.06.2024

2.3 Traceability

All measurement equipment calibrations are traceable to NIM (National Institute of Metrology) or where calibration is performed in other countries, to equivalent nationally recognized standards organizations.

2.4 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.

2.5 Uncertainty of Measurement

The value of the measurement uncertainty of each parameter is listed as below:

Table 2: Measurement Uncertainty

Parameter	Uncertainty
Radio Frequency	$\pm 1 \times 10^{-7}$
RF Power (conducted)	± 2.5 dB
Radiated Emission of Transmitter, valid up to 26.5 GHz	± 6 dB
Radiated Emission of Receiver, valid up to 26.5 GHz	± 6 dB
Conducted Emission, (9kHz to 150kHz)/(150kHz to 30MHz)	± 3.70 dB / ± 3.30 dB
Radiated Emission (3m SAC), 30MHz to 1000MHz	± 4.52 dB
Radiated Emission (3m SAC), above 1000MHz	± 4.37 dB
Temperature	± 1 °C
Humidity	± 5 %
Voltage (DC)	± 1 %
Voltage (AC, <10kHz)	± 2 %

2.6 Location of Original Data

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

Prüfbericht - Nr.: CN22ZMXR 002
Test Report No.

Seite 7 von 24
Page 7 of 24

2.7 Status of Facility Used for Testing

The TÜV Rheinland (Shenzhen) Co., Ltd. Test facility located at No. 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.

3. General Product Information

3.1 Product Function and Intended Use

The EUT (Equipment Under Test) is a DJI Air Unit. It supports 2.4GHz SDR and 5.8GHz SDR functions.

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

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

For details refer to user manual and circuit diagram.

3.2 Ratings and System Details

Table 3: Technical Specification

General Information of EUT	Value
Kind of Equipment:	DJI O3 Air Unit
Type Designation:	QFP2AS
Trademark:	DJI
Operating Temperature Range:	0 °C ~ 40 °C
Operating Voltage:	7.4Vdc to 26.4Vdc
Radiofrequency operating mode:	1) 2.4GHz SDR (receiver): operating within 2400-2483.5MHz, supports 1.4MHz Bandwidth 2) 5.8GHz SDR: operating within 5725-5850MHz, supports 1.4MHz/10MHz/20MHz/40MHz Bandwidth
Technical Specification of 5.8GHz SDR	
Operating Frequency	5728.5-5846.5MHz for 1.4MHz Bandwidth 5730.12-5848.12MHz for 1.4MHz Bandwidth (CA mode) 5730.5-5844.5MHz for 10MHz Bandwidth 5735.5-5839.5MHz for 20MHz Bandwidth 5745.5-5829.5MHz for 40MHz Bandwidth
Type of Modulation	OFDM (QPSK, 16QAM, 64QAM)
Channel Number	60 channels for 1.4MHz Bandwidth 60 channels for 1.4MHz Bandwidth (CA mode) 115 channels for 10MHz Bandwidth 105 channels for 20MHz Bandwidth 85 channels for 40MHz Bandwidth
Channel Separation	2MHz for 1.4MHz Bandwidth 2MHz for 1.4MHz Bandwidth (CA mode) 1MHz for 10MHz Bandwidth 1MHz for 20MHz Bandwidth 1MHz for 40MHz Bandwidth
Antenna Type	Integral Antennas
Antenna Number	1Tx2Rx for SISO mode (ANT0 or ANT1) 2Tx2Rx for MIMO mode (ANT0+ANT1)
Antenna Gain	1.5dBi for ANT0

	1.5dBi for ANT1
The type of wideband data transmission equipment	Non-FHSS

Table 4: RF Channel and Frequency of 5.8GHz SDR

5.8GHz 1.4MHz Bandwidth (5728.5MHz-5846.5MHz)					
RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
1	5728.5	21	5768.5	41	5808.5
2	5730.5	22	5770.5	42	5810.5
3	5732.5	23	5772.5	43	5812.5
4	5734.5	24	5774.5	44	5814.5
5	5736.5	25	5776.5	45	5816.5
6	5738.5	26	5778.5	46	5818.5
7	5740.5	27	5780.5	47	5820.5
8	5742.5	28	5782.5	48	5822.5
9	5744.5	29	5784.5	49	5824.5
10	5746.5	30	5786.5	50	5826.5
11	5748.5	31	5788.5	51	5828.5
12	5750.5	32	5790.5	52	5830.5
13	5752.5	33	5792.5	53	5832.5
14	5754.5	34	5794.5	54	5834.5
15	5756.5	35	5796.5	55	5836.5
16	5758.5	36	5798.5	56	5838.5
17	5760.5	37	5800.5	57	5840.5
18	5762.5	38	5802.5	58	5842.5
19	5764.5	39	5804.5	59	5844.5
20	5766.5	40	5806.5	60	5846.5

5.8GHz 1.4MHz Bandwidth (CA Mode) (5730.12MHz-5848.12MHz)					
RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
1	5730.12	21	5770.12	41	5810.12
2	5732.12	22	5772.12	42	5812.12
3	5734.12	23	5774.12	43	5814.12
4	5736.12	24	5776.12	44	5816.12
5	5738.12	25	5778.12	45	5818.12
6	5740.12	26	5780.12	46	5820.12
7	5742.12	27	5782.12	47	5822.12
8	5744.12	28	5784.12	48	5824.12
9	5746.12	29	5786.12	49	5826.12
10	5748.12	30	5788.12	50	5828.12
11	5750.12	31	5790.12	51	5830.12
12	5752.12	32	5792.12	52	5832.12

13	5754.12	33	5794.12	53	5834.12
14	5756.12	34	5796.12	54	5836.12
15	5758.12	35	5798.12	55	5838.12
16	5760.12	36	5800.12	56	5840.12
17	5762.12	37	5802.12	57	5842.12
18	5764.12	38	5804.12	58	5844.12
19	5766.12	39	5806.12	59	5846.12
20	5768.12	40	5808.12	60	5848.12

5.8GHz 10MHzBandwidth (5730.5MHz-5844.5MHz)					
RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
1	5730.5	40	5769.5	79	5808.5
2	5731.5	41	5770.5	80	5809.5
3	5732.5	42	5771.5	81	5810.5
4	5733.5	43	5772.5	82	5811.5
5	5734.5	44	5773.5	83	5812.5
6	5735.5	45	5774.5	84	5813.5
7	5736.5	46	5775.5	85	5814.5
8	5737.5	47	5776.5	86	5815.5
9	5738.5	48	5777.5	87	5816.5
10	5739.5	49	5778.5	88	5817.5
11	5740.5	50	5779.5	89	5818.5
12	5741.5	51	5780.5	90	5819.5
13	5742.5	52	5781.5	91	5820.5
14	5743.5	53	5782.5	92	5821.5
15	5744.5	54	5783.5	93	5822.5
16	5745.5	55	5784.5	94	5823.5
17	5746.5	56	5785.5	95	5824.5
18	5747.5	57	5786.5	96	5825.5
19	5748.5	58	5787.5	97	5826.5
20	5749.5	59	5788.5	98	5827.5
21	5750.5	60	5789.5	99	5828.5
22	5751.5	61	5790.5	100	5829.5
23	5752.5	62	5791.5	101	5830.5
24	5753.5	63	5792.5	102	5831.5
25	5754.5	64	5793.5	103	5832.5
26	5755.5	65	5794.5	104	5833.5
27	5756.5	66	5795.5	105	5834.5
28	5757.5	67	5796.5	106	5835.5
29	5758.5	68	5797.5	107	5836.5
30	5759.5	69	5798.5	108	5837.5
31	5760.5	70	5799.5	109	5838.5
32	5761.5	71	5800.5	110	5839.5

33	5762.5	72	5801.5	111	5840.5
34	5763.5	73	5802.5	112	5841.5
35	5764.5	74	5803.5	113	5842.5
36	5765.5	75	5804.5	114	5843.5
37	5766.5	76	5805.5	115	5844.5
38	5767.5	77	5806.5		
39	5768.5	78	5807.5		

5.8GHz 20MHz Bandwidth (5735.5MHz-5839.5MHz)					
RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
1	5735.5	36	5770.5	71	5805.5
2	5736.5	37	5771.5	72	5806.5
3	5737.5	38	5772.5	73	5807.5
4	5738.5	39	5773.5	74	5808.5
5	5739.5	40	5774.5	75	5809.5
6	5740.5	41	5775.5	76	5810.5
7	5741.5	42	5776.5	77	5811.5
8	5742.5	43	5777.5	78	5812.5
9	5743.5	44	5778.5	79	5813.5
10	5744.5	45	5779.5	80	5814.5
11	5745.5	46	5780.5	81	5815.5
12	5746.5	47	5781.5	82	5816.5
13	5747.5	48	5782.5	83	5817.5
14	5748.5	49	5783.5	84	5818.5
15	5749.5	50	5784.5	85	5819.5
16	5750.5	51	5785.5	86	5820.5
17	5751.5	52	5786.5	87	5821.5
18	5752.5	53	5787.5	88	5822.5
19	5753.5	54	5788.5	89	5823.5
20	5754.5	55	5789.5	90	5824.5
21	5755.5	56	5790.5	91	5825.5
22	5756.5	57	5791.5	92	5826.5
23	5757.5	58	5792.5	93	5827.5
24	5758.5	59	5793.5	94	5828.5
25	5759.5	60	5794.5	95	5829.5
26	5760.5	61	5795.5	96	5830.5
27	5761.5	62	5796.5	97	5831.5
28	5762.5	63	5797.5	98	5832.5
29	5763.5	64	5798.5	99	5833.5
30	5764.5	65	5799.5	100	5834.5
31	5765.5	66	5800.5	101	5835.5
32	5766.5	67	5801.5	102	5836.5
33	5767.5	68	5802.5	103	5837.5

34	5768.5	69	5803.5	104	5838.5
35	5769.5	70	5804.5	105	5839.5

5.8GHz 40MHz Bandwidth (5745.5MHz-5829.5MHz)					
RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
1	5745.5	30	5774.5	59	5803.5
2	5746.5	31	5775.5	60	5804.5
3	5747.5	32	5776.5	61	5805.5
4	5748.5	33	5777.5	62	5806.5
5	5749.5	34	5778.5	63	5807.5
6	5750.5	35	5779.5	64	5808.5
7	5751.5	36	5780.5	65	5809.5
8	5752.5	37	5781.5	66	5810.5
9	5753.5	38	5782.5	67	5811.5
10	5754.5	39	5783.5	68	5812.5
11	5755.5	40	5784.5	69	5813.5
12	5756.5	41	5785.5	70	5814.5
13	5757.5	42	5786.5	71	5815.5
14	5758.5	43	5787.5	72	5816.5
15	5759.5	44	5788.5	73	5817.5
16	5760.5	45	5789.5	74	5818.5
17	5761.5	46	5790.5	75	5819.5
18	5762.5	47	5791.5	76	5820.5
19	5763.5	48	5792.5	77	5821.5
20	5764.5	49	5793.5	78	5822.5
21	5765.5	50	5794.5	79	5823.5
22	5766.5	51	5795.5	80	5824.5
23	5767.5	52	5796.5	81	5825.5
24	5768.5	53	5797.5	82	5826.5
25	5769.5	54	5798.5	83	5827.5
26	5770.5	55	5799.5	84	5828.5
27	5771.5	56	5800.5	85	5829.5
28	5772.5	57	5801.5		
29	5773.5	58	5802.5		

3.3 Independent Operation Modes

The basic operation modes are:

- A. On, 5.8GHz SDR wireless transmitting mode
 - 1) Low Channel
 - 2) Middle Channel
 - 3) High Channel

B. On, Normal Operation

C. Off

Remark: *USB-Type-C Port: only PC communication, not supports power supply function.

3.4 Noise Generating and Noise Suppressing Parts

Refer to the Circuit Diagram.

3.5 Submitted Documents

- Application Form
- Circuit Diagram
- Instruction Manual
- Photo Documents
- Technical Description
- Bill of Material
- Rating Label

4. Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

Radio Spectrum: The equipment under test (EUT) was configured at its highest power output in order to measure its highest possible radiation and conducted level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation

Test operation refers to test setup in chapter 5. All tests were performed according to the procedures in ANSI C63.10: 2013 and ANSI C63.4: 2014.

According to clause 3.1, all tests were performed on model QFP2AS in this report.

4.3 Special Accessories and Auxiliary Equipment

Table 5: List of Accessories and Auxiliary Equipment

Description	Manufacturer	Model	S/N	Rating
Laptop	Lenovo	T480	PF-16A6N8	N/A
DC Power Supply	FLUKE	PAN35-5A	YM002997	N/A

4.4 Countermeasures to Achieve ERM Compliance

The test sample which has been tested contained the noise suppression parts as described in the Technical Construction File (TCF). No additional measures were employed to achieve compliance.

4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test (Below 1GHz)

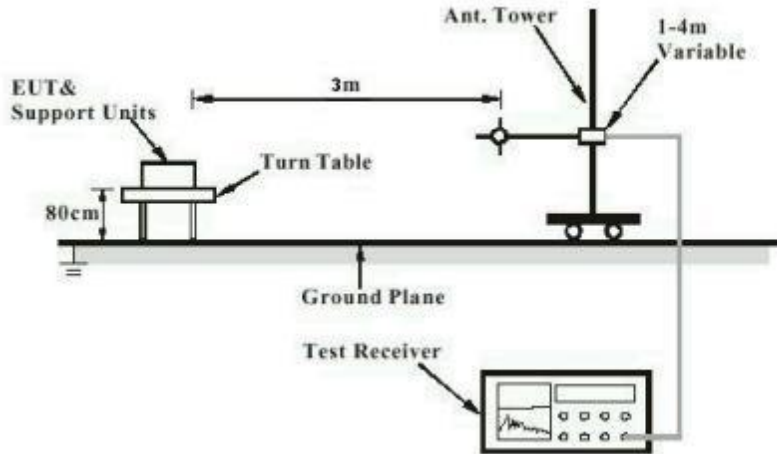


Diagram of Measurement Configuration for Radiation Test (Above 1GHz)

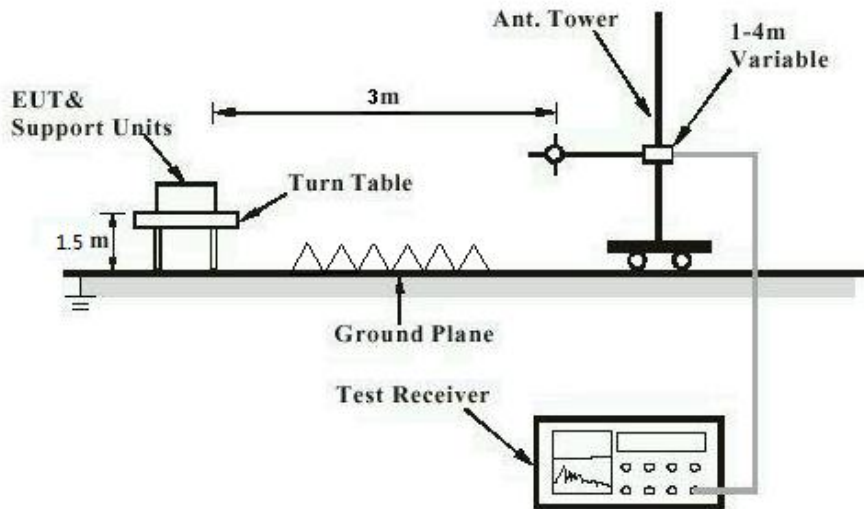
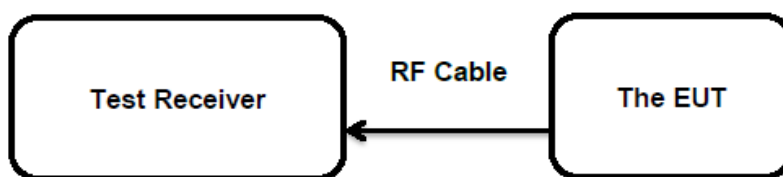


Diagram of Measurement Configuration for Conducted Transmitter Measurement



5. Test Results

5.1 Radio Test Requirement & Test Suites (5GHz Bands)

5.1.1 Antenna Requirement

RESULT:**Pass****Test Specification**

Test standard : FCC Part 15.203

According to the manufacturer declared, the EUT has integral antennas, the max. uncorrelated antenna gain antenna is 1.5dBi, permanent attachment and no consideration of replacement. Therefore the EUT is considered sufficient to comply with the provision.

Therefore the EUT is considered sufficient to comply with the provision.

Refer to EUT Photo for further details.

5.1.2 Maximum output power
RESULT:
Pass
Test Specification

Test standard : FCC Part 15.407 (a)
 Basic standard : ANSI C63.10:2013
 Limits : <1W (30dBm) (5725-5850MHz)
 Kind of test site : Shielded Room

Test Setup

Date of testing : 2022-04-19 to 2022-05-05
 Input voltage : 26.4Vdc
 Operation mode : A
 Test channel : Low / Middle / High
 Ambient temperature : 25 °C
 Relative humidity : 56 %
 Atmospheric pressure : 101 kPa

Worst case for SISO mode

Test Mode	Test Channel (MHz)	Measured Power		Limit (W)
		(dBm)	(W)	
1.4MHz BW	5728.5	16.2	0.0417	< 1.0
	5786.5	16.4	0.0437	
	5846.5	16.9	0.0490	
1.4MHz BW CA	5730.12	16.2	0.0417	
	5788.12	16.5	0.0447	
	5848.12	16.7	0.0468	
10MHz BW	5730.5	24.8	0.3020	
	5787.5	26.4	0.4365	
	5844.5	24.7	0.2951	
20MHz BW	5735.5	24.7	0.2951	
	5787.5	26.4	0.4365	
	5839.5	25.0	0.3162	
40MHz BW	5745.5	24.7	0.2951	
	5787.5	25.8	0.3802	
	5829.5	24.5	0.2818	

Max. e.i.r.p.=26.4dBm+1.5dBi=27.9dBm, which is less than 36dBm=4W.

Worst case for MIMO mode

Test Mode	Test Channel (MHz)	Measured Power		Limit (W)
		(dBm)	(W)	
1.4MHz BW	5728.5	18.8	0.0759	< 1.0
	5786.5	19.2	0.0832	
	5846.5	19.5	0.0891	
1.4MHz BW CA	5730.12	19.0	0.0794	
	5788.12	19.2	0.0832	
	5848.12	19.2	0.0832	
10MHz BW	5730.5	27.7	0.5888	
	5787.5	28.9	0.7762	
	5844.5	27.9	0.6166	
20MHz BW	5735.5	27.8	0.6026	
	5787.5	28.9	0.7762	
	5839.5	27.9	0.6166	
40MHz BW	5745.5	27.6	0.5754	
	5787.5	28.6	0.7244	
	5829.5	27.6	0.5754	

Max. e.i.r.p.=28.9dBm+1.5dBi=30.4dBm, which is less than 36dBm=4W.

Note:

- 1) The cable loss is taken into account in results.
- 2) Max. Antenna gain(G) of 5.8GHz SDR: 1.5dBi (uncorrelated antenna gain)
 e.i.r.p.=P_(Peak power)+ G, which is far below the 4 W

5.1.3 Power Spectral Density**RESULT:****Pass****Test Specification**

Test standard	: FCC Part 15.407 (a)
Basic standard	: ANSI C63.10:2013
Limits	: <30dBm/500KHz (5725-5850MHz)
Kind of test site	: Shielded Room

Test Setup

Date of testing	: 2022-04-19 to 2022-05-05
Input voltage	: 26.4Vdc
Operation mode	: A
Test channel	: Low / Middle / High
Ambient temperature	: 25 °C
Relative humidity	: 56 %
Atmospheric pressure	: 101 kPa

Refer to attached Appendix A for details of test data.

5.1.4 Frequency Stability**RESULT:****Pass****Test Specification**

Test standard	: FCC Part 15.407 (g)
Basic standard	: ANSI C63.10:2013
Limits	: Within assigned bands
Kind of test site	: Shielded Room

Test Setup

Date of testing	: 2022-04-19 to 2022-05-05
Input voltage	: 26.4Vdc
Operation mode	: A
Test channel	: Low / Middle / High
Ambient temperature	: 25 °C
Relative humidity	: 56 %
Atmospheric pressure	: 101 kPa

Refer to attached Appendix A for details of test data.

Prüfbericht - Nr.: CN22ZMXR 002
Test Report No.Seite 21 von 24
Page 21 of 24**5.1.5 26dB Bandwidth and 99% Bandwidth****RESULT:****Pass****Test Specification**

Test standard : FCC Part 15.407
Basic standard : ANSI C63.10:2013
Limits : N/A
Kind of test site : Shielded Room

Test Setup

Date of testing : 2022-04-19 to 2022-05-05
Input voltage : 26.4Vdc
Operation mode : A
Test channel : Low / Middle / High
Ambient temperature : 25 °C
Relative humidity : 56 %
Atmospheric pressure : 101 kPa

Refer to attached Appendix A for details of test data.

Prüfbericht - Nr.: CN22ZMXR 002
Test Report No.Seite 22 von 24
Page 22 of 24**5.1.6 6dB Bandwidth****RESULT:****Pass****Test Specification**

Test standard	: FCC Part 15.407 (e)
Basic standard	: ANSI C63.10:2013
Limits	: At least 500KHz (5725-5850MHz)
Kind of test site	: Shielded Room

Test Setup

Date of testing	: 2022-04-19 to 2022-05-05
Input voltage	: 26.4Vdc
Operation mode	: A
Test channel	: Low / Middle / High
Ambient temperature	: 25 °C
Relative humidity	: 56 %
Atmospheric pressure	: 101 kPa

Refer to attached Appendix A for details of test data.

5.1.7 Radiated Spurious Emission**RESULT:****Pass****Test Specification**

Test standard : FCC Part 15.407(b) & FCC Part 15.205 & FCC Part 15.209
Basic standard : ANSI C63.10:2013

Limits :
• For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Kind of test site :
3m Semi-Anechoic Chamber (below 1GHz)
3m Anechoic Chamber (above 1GHz)

Test Setup

Date of testing : 2022-04-19 to 2022-05-05
Input voltage : 26.4Vdc
Operation mode : A
Test channel : Low / Middle / High
Ambient temperature : 23 °C
Relative humidity : 48 %
Atmospheric pressure : 101 kPa

Refer to attached Appendix A for details of test data.

6. List of Tables

Table 1: List of Test and Measurement Equipment	5
Table 2: Measurement Uncertainty	6
Table 3: Technical Specification	8
Table 4: RF Channel and Frequency of 5.8GHz SDR	9
Table 5: List of Accessories and Auxiliary Equipment	14