

Prüfbericht-Nr.: <i>Test report no.:</i>	CN24F0Q2 004	Auftrags-Nr.: <i>Order no.:</i>	168438695	Seite 1 von 26 Page 1 of 26
Kunden-Referenz-Nr.: <i>Client reference no.:</i>	N/A	Auftragsdatum: <i>Order date:</i>	2023-08-09	
Auftraggeber: <i>Client:</i>	SZ DJI TECHNOLOGY CO., LTD Lobby of T2, DJI Sky City, No. 53 Xianyuan Road, Xili Community, Xili Street, Nanshan District, Shenzhen, China			
Prüfgegenstand: <i>Test item:</i>	DJI Goggles 3			
Bezeichnung / Typ-Nr.: <i>Identification / Type no.:</i>	TKGS3 (Trademark: DJI)			
Auftrags-Inhalt: <i>Order content:</i>	Test Report			
Prüfgrundlage: <i>Test specification:</i>	CFR47 FCC Part 15: Subpart E Section 15.407 CFR47 FCC Part 15: Subpart C Section 15.207 CFR47 FCC Part 15: Subpart C Section 15.209 RSS-247 Issue 3 August 2023 RSS-Gen Issue 5 February 2021			
Wareneingangsdatum: <i>Date of sample receipt:</i>	2023-11-13	Please refer to Photo Document		
Prüfmuster-Nr.: <i>Test sample no.:</i>	A003598699-029~032 A003598699-014, 024			
Prüfzeitraum: <i>Testing period:</i>	2023-11-24 - 2024-01-03			
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 Jonathan Li</u>	
Datum: <i>Date:</i> 2024-02-21	Signed by: Bell Hu	Ausstellungsdatum: <i>Issue date:</i> 2024-02-21	Signed by: Jonathan Li	
Stellung / Position:	Sachverständige(r)/Expert	Stellung / Position:	Sachverständige(r)/Expert	
Sonstiges / <i>Other:</i>	FCC ID: SS3-TKGS323, IC: 11805A-TKGS323, PMN: DJI Goggles 3, HVIN: TKGS3 This report is for 5.8GHz SDR and 5.8GHz Wi-Fi.			
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:	P(ass) = entspricht o.g. Prüfgrundlage(n)	F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet
* Legend:	P(ass) = passed a.m. test specification(s)	F(ail) = failed a.m. test specification(s)	N/A = not applicable	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 above mentioned 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>				

v05

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Anmerkungen
Remarks

1	<p>Alle eingesetzten Prüfmittel waren zum angegebenen Prüfzeitraum gemäß eines festgelegten Kalibrierungsprogramms unseres Prüfhauses kalibriert. Sie entsprechen den in den Prüfprogrammen hinterlegten Anforderungen. Die Rückverfolgbarkeit der eingesetzten Prüfmittel ist durch die Einhaltung der Regelungen unseres Managementsystems gegeben. Detaillierte Informationen bezüglich Prüfkonditionen, Prüfequipment und Messunsicherheiten sind im Prüflabor vorhanden und können auf Wunsch bereitgestellt werden.</p> <p><i>The equipment used during the specified testing period was calibrated according to our test laboratory calibration program. The equipment fulfils the requirements included in the relevant standards. The traceability of the test equipment used is ensured by compliance with the regulations of our management system. Detailed information regarding test conditions, equipment and measurement uncertainty is available in the test laboratory and could be provided on request.</i></p>
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3	<p>Prüfklausel mit der Note * wurden an qualifizierte Unterauftragnehmer vergeben und sind unter der jeweiligen Prüfklausel des Berichts beschrieben. Abweichungen von Prüfspezifikation(en) oder Kundenanforderungen sind in der jeweiligen Prüfklausel im Bericht aufgeführt.</p> <p><i>Test clauses with remark of * are subcontracted to qualified subcontractors and described under the respective test clause in the report.</i> <i>Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report.</i></p>
4	<p>Die Entscheidungsregel für Konformitätserklärungen basierend auf numerischen Messergebnissen in diesem Prüfbericht basiert auf der "Null-Grenzwert-Regel" und der "Einfachen Akzeptanz" gemäß ILAC G8:2019 und IEC Guide 115:2021, es sei denn, in der auf Seite 1 dieses Berichts genannten angewandten Norm ist etwas anderes festgelegt oder vom Kunden gewünscht. Dies bedeutet, dass die Messunsicherheit nicht berücksichtigt wird und daher auch nicht im Prüfbericht angegeben wird. Zu weiteren Informationen bezüglich des Risikos durch diese Entscheidungsregel siehe ILAC G8:2019.</p> <p><i>The decision rule for statements of conformity, based on numerical measurement results, in this test report is based on the "Zero Guard Band Rule" and "Simple Acceptance" in accordance with ILAC G8:2019 and IEC Guide 115:2021, unless otherwise specified in the applied standard mentioned on Page 1 of this report or requested by the customer. This means that measurement uncertainty is not taken in account and hence also not declared in the test report. For additional information on the resulting risk based of this decision rule please refer to ILAC G8:2019.</i></p>

Test Summary

5.1.1 ANTENNA REQUIREMENT

RESULT: Pass

5.1.2 MAXIMUM OUTPUT POWER

RESULT: Pass

5.1.3 CONDUCTED POWER SPECTRAL DENSITY

RESULT: Pass

5.1.4 FREQUENCY STABILITY

RESULT: Pass

5.1.5 6dB BANDWIDTH

RESULT: Pass

5.1.6 99% BANDWIDTH

RESULT: Pass

5.1.7 RADIATED SPURIOUS EMISSION

RESULT: Pass

5.1.8 CONDUCTED EMISSION ON AC MAINS

RESULT: Pass

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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: Test Results of 5.8GHz Wi-Fi

Appendix C: Test Results of 5.2GHz Wi-Fi

Appendix D: 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, 518110, Shenzhen, P. R. China.

FCC Accreditation Designation No.: 694916

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 (SRD-Tonscend)					
Equipment	Manufacturer	Model	Serial No.	Cal. Date	Cal. until
EXA Signal Analyzer, Multi-touch	Keysight	N9010B	MY60241175	2023-09-22	2024-09-21
MXG X-Series RF Vector Signal Generator	Keysight	N5182B	MY61250137	2023-09-22	2024-09-21
EXG X-Series Microwave Analog Signal Generator	Keysight	N5173B	MY61250141	2023-09-22	2024-09-21
DC power supply	Keysight	E3642A	MY61276100	2023-09-22	2024-09-21
Power Control Unit	Tonscend	JS0806-4ADC	N/A	2023-09-22	2024-09-21
Automation Control Unit	Tonscend	JS0806-2	21C8060396	2023-09-22	2024-09-21
Test Software	Tonscend	JS1120-3	N/A	N/A	N/A
Control PC	Lenovo	TianYi510S-071MB	YLX23JMF	N/A	N/A
Shielding Room 8#	Albatross	SR8	APC17151-SR8	2021-06-22	2024-06-22
Unwanted Emission Testing (TS9975)					
Equipment	Manufacturer	Model	Serial No.	Cal. Date	Cal. until
EMI Test Receiver	R&S	ESR 7	102021	2023-07-26	2024-07-25
Signal Analyzer	R&S	FSV 40	101439	2023-07-26	2024-07-25
System Controller Interface	R&S	SCI-100	S10010038	N/A	N/A
Filterbank	R&S	Wlan	100759	2023-07-26	2024-07-25
OSP	R&S	OSP 120	102040	N/A	N/A
Pre-amplifier	R&S	SCU08F1	08320031	2023-07-26	2024-07-25
Amplifier	R&S	SCU-18F	180070	2023-07-26	2024-07-25
Amplifier	R&S	SCU40A	100475	2023-07-26	2024-07-25
Trilog Broadband Antenna (30 MHz - 7 GHz)	Schwarzbeck	VULB 9162	193	2022-08-07	2024-08-06

Double-Ridged Antenna (1 -18 GHz)	ETS-LINDGREN	3117	00218717	2022-08-07	2024-08-06
Wideband Ridged Horn Antenna (18-40 GHz)	Steatite	QMS-00880	19067	2022-08-28	2024-08-27
Active Loop Antenna	Schwarzbeck	FMZB 1513	302	2022-08-07	2024-08-06
Test software	R&S	EMC32 (V10.60.10)	N/A	N/A	N/A
Control PC	Dell	OptiPlex 7050	36NV9P2	N/A	N/A
3m Semi-Anechoic Chamber	Albatross	SAC-3m	APC17151-SAC	2021-06-22	2024-06-22

Conducted Emission				
Equipment	Manufacturer	Model No.	Serial No.	Cal. Until
EMI Test Receiver	R&S	ESR3	102680	2024-02-23
Artificial Mains Network	R&S	ENV216	101445	2024-02-23
EMC32 test software	R&S	EMC32(Ver.10.50.00)	N/A	N/A

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 Measurement Uncertainty

The estimated combined standard uncertainty for radiated emissions and conducted emissions measurements as below table.

Table 2: Measurement Uncertainty

Parameter	Uncertainty (k=2)
RF output power, conducted	± 0.99 dB
Occupied Channel Bandwidth	± 2.08 %
RF power density, conducted	± 0.99 dB
Unwanted Emissions, conducted	± 0.89 dB
All emissions, radiated	±4.17 dB
Conducted Emission, (9kHz to 150kHz)/(150kHz to 30MHz)	± 3.70 dB / ± 3.30 dB

2.6 Location of Original Data

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

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, 518110, Shenzhen, P. R. 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 Goggles 3. It supports Bluetooth dual mode, 2.4GHz, 2.4GHz Wi-Fi, 5.2/5.8GHz Wi-Fi, 2.4GHz SDR, 5.2/5.8GHz SDR and GNSS 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.

3.2 Ratings and System Details

Table 3: Technical Specification of EUT

General Information of EUT	Value
Kind of Equipment:	DJI Goggles 3
Type Designation:	TKGS3
Trademark:	DJI
FCC ID:	SS3-TKGS323
IC:	11805A-TKGS323
PMN:	DJI Goggles 3
HVIN:	TKGS3
Operating Voltage:	7.2V DC by built-in battery or DC 5V/9V by AC/DC adapter
Testing Voltage:	Fully charged battery
Radiofrequency operating mode:	1) Bluetooth: operating within 2400-2483.5MHz, Classic Bluetooth (BR&EDR), Bluetooth BLE (1Mbps&2Mbps) 2) 2.4GHz SDR: operating within 2400-2483.5MHz, supports 1.4MHz/3MHz/5MHz/10MHz/20MHz/40MHz/60MHz Bandwidth 3) 2.4GHz Wi-Fi: operating within 2400-2483.5MHz, supports 20MHz/40MHz Bandwidth and IEEE 802.11 b/g/n20/n40 4) 2.4GHz: operating within 2400-2483.5MHz, GFSK, 1Mbps&2Mbps 5) 5.2GHz Wi-Fi: operating with 5150-5250MHz, supports 20MHz/40MHz/80MHz Bandwidth and IEEE 802.11 a/n20/n40/ac20/ac40/ac80 6) 5.2GHz SDR: operating within 5150-5250MHz, supports 10MHz/20MHz/40MHz Bandwidth *(For US only, not supported in IC) 7) 5.8GHz SDR: operating within 5725-5850MHz, supports 1.4MHz/3MHz/5MHz/10MHz/20MHz/40MHz/60MHz/80MHz Bandwidth 8) 5.8GHz Wi-Fi: operating within 5725-5850MHz, supports 20MHz/40MHz/80MHz Bandwidth and IEEE 802.11 a/n20/n40/ac20/ac40/ac80
Technical Specification of 5.8GHz SDR	
Operating Frequency:	5728.5-5846.12MHz for 1.4MHz Bandwidth 5727.5-5844.5MHz for 3MHz Bandwidth 5732.5-5846.74MHz for 5MHz Bandwidth 5730.5-5844.5MHz for 10MHz Bandwidth 5735.5-5839.5MHz for 20MHz Bandwidth 5745.5-5829.5MHz for 40MHz Bandwidth

	5755.5-5819.5MHz for 60MHz Bandwidth 5765.5-5809.5MHz for 80MHz Bandwidth
Type of Modulation:	OFDM (QPSK, 16QAM, 64QAM)
Channel Number:	194 channels for 1.4MHz Bandwidth 126 channels for 3MHz Bandwidth 239 channels for 5MHz Bandwidth 313 channels for 10MHz Bandwidth 105 channels for 20MHz Bandwidth 85 channels for 40MHz Bandwidth 65 channels for 60MHz Bandwidth 45 channels for 80MHz Bandwidth
Antenna Type:	Integral Antennas
Antenna Number:	1Tx for SISO mode (ANT0 or ANT1 or ANT2 or ANT3) 2Tx for MIMO mode (ANT0+ANT1, or ANT0+ANT3, or ANT2+ANT1, or ANT2+ANT3, Uncorrelated signal)
Antenna Gain:	2.5dBi for ANT0 / ANT1 3.5dBi for ANT2 / ANT3 (Provided by the Client)
The type of wideband data transmission equipment:	DTS
Technical Specification of 5.2GHz Wi-Fi	
Operating Frequency:	5180–5240MHz for 802.11 a/n20/n40/ac20/ac40/ac80
Type of Modulation:	OFDM(BPSK/QPSK/16QAM/64QAM) OFDMA(BPSK/QPSK/16QAM/64QAM/256QAM)
Data Rate:	6/9/12/18/24/36/48/54 Mbps for 802.11a MCS0 ~ MCS15 for 802.11 20/n40/ac20/ac40/ac80
Channel Number:	4 channels for 802.11a/n20/ac20 2 channels for 802.11n40/ac40 1 channels for 802.11ac80
Channel Separation:	20MHz, 40MHz, 80MHz
Antenna Type:	Integral Antenna
Antenna Number:	1
Antenna Gain:	5 dBi (Provided by the Client)
Technical Specification of 5.8GHz Wi-Fi	
Operating Frequency:	5745–5825MHz for 802.11 a/n20/n40/ac20/ac40/ac80
Type of Modulation:	OFDM(BPSK/QPSK/16QAM/64QAM) OFDMA(BPSK/QPSK/16QAM/64QAM/256QAM)
Data Rate:	6/9/12/18/24/36/48/54 Mbps for 802.11a MCS0 ~ MCS15 for 802.11 20/n40/ac20/ac40/ac80
Channel Number:	5 channels for 802.11a/n20/ac20 2 channels for 802.11n40/ac40 1 channels for 802.11ac80
Channel Separation:	20MHz, 40MHz, 80MHz
Antenna Type:	Integral Antenna
Antenna Number:	1
Antenna Gain:	3.5 dBi (Provided by the Client)

Table 4: RF Channel and Frequency of 5GHz Wi-Fi

U-NII-3					
20MHz Bandwidth		40MHz Bandwidth		80MHz Bandwidth	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	151	5755	155	5775
153	5765	159	5795		
157	5785				
161	5805				
165	5825				

U-NII-1					
20MHz Bandwidth		40MHz Bandwidth		80MHz Bandwidth	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	38	5190	42	5210
40	5200	46	5230		
44	5220				
48	5240				

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, 5.8GHz Wi-Fi wireless transmitting mode
 - 1) Low Channel
 - 2) Middle Channel
 - 3) High Channel
- C. On, 5.2GHz Wi-Fi wireless transmitting mode
 - 1) Low Channel
 - 2) Middle Channel
 - 3) High Channel

3.4 Noise Generating and Noise Suppressing Parts

Refer to Circuit Diagram for further details.

3.5 Submitted Documents

- Application Form
- User Manual
- ID Label and Location Info
- Operation Description

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.

Emission: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

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

According to clause 3.1, all tests were performed on model TKGS3 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	/
AC/DC Adapter	/	PD-30CN	/	Input: 100-240V, 50/60Hz, 0.8A Max Output: 3.3-11V, 2.72A or 5V/3A or 9V/3A or 12V/2.5A or 15V/2A

4.4 Countermeasures to Achieve EMC 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)

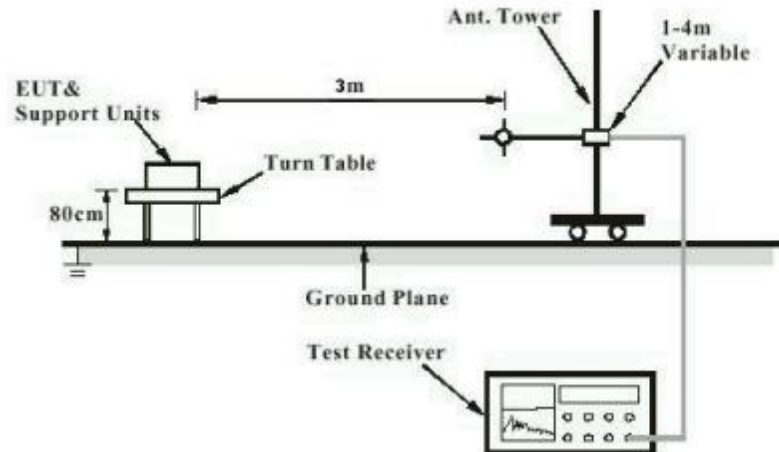


Diagram of Measurement Configuration for Radiation Test (Above 1GHz)

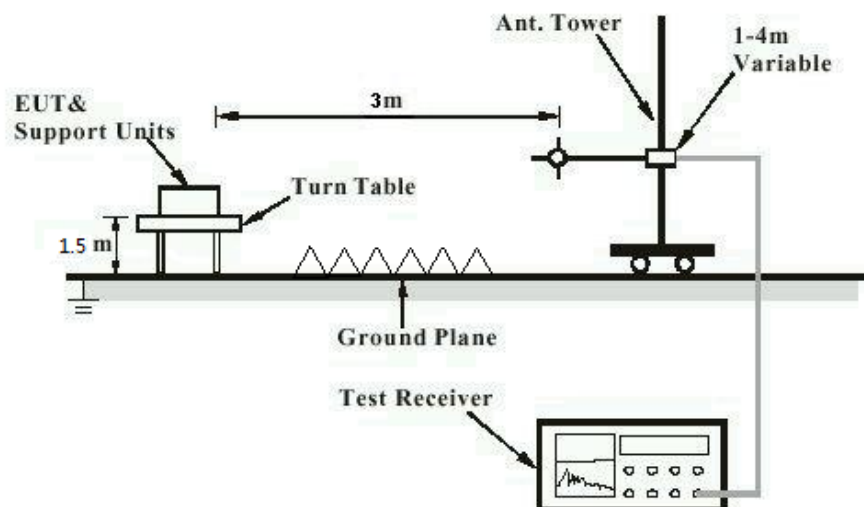


Diagram of Measurement Configuration for Mains Conduction Measurement

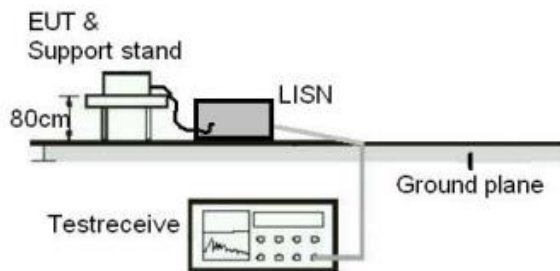
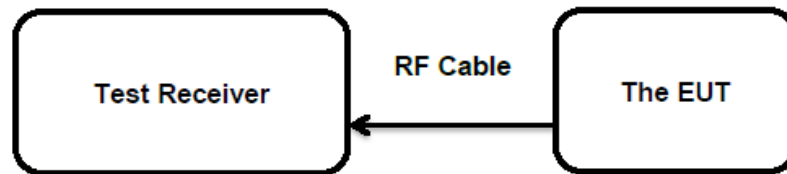


Diagram of Measurement Configuration for Conducted Transmitter Measurement



5 Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

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

Test standard : FCC Part 15.203
RSS-Gen Clause 6.8
Limit : the use of antennas with directional gains that do not exceed 6 dBi

The EUT have Integral Antennas, the max. uncorrelated antenna gain antenna is 3.5dBi for 5.8GHz Wi-Fi, 3.5dBi for 5.8GHz SDR and 5dBi for 5.2GHz Wi-Fi, permanent attachment and no consideration of replacement..

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) RSS-247 clause 6.2
Basic standard	:	ANSI C63.10: 2013 FCC: <250mW (23.98dBm) (5150-5250MHz) <1W (30dBm) (5725-5850MHz)
Limits	:	IC: * Max e.i.r.p.<200mW (5150-5250MHz) *200 mW (23dBm) or 10 dBm + 10 logB, where B is the 99% emission bandwidth in MHz, where is lesser. *Max conducted output power <1W (30dBm) (5725-5850MHz)
Kind of test site	:	Shielded Room

Test Setup

Date of testing	:	2023-11-28 to 2024-01-03
Input voltage	:	Fully charged battery
Operation mode	:	A, B, C
Test channel	:	Low / Middle / High
Ambient temperature	:	25.2 °C
Relative humidity	:	37 %
Atmospheric pressure	:	101 kPa

For details refer to following test result.

Table 6: Test Result of Maximum Conducted Output Power, 5.2GHz Wi-Fi

Test Mode	Data Rate	Test Channel	Conducted Average Power		Conducted power FCC Limit (W)	Average EIRP		EIRP ISED Limit (W)
			(dBm)	(W)		(dBm)	(W)	
802.11a	1 Mbps	36	13.83	0.0242	0.25	18.83	0.0764	*200 mW (23dBm) or 10 dBm + 10 logB, where B is the 99% emission bandwidth in MHz, where is lesser.
		40	13.64	0.0231		18.64	0.0731	
		48	13.15	0.0207		18.15	0.0653	
802.11n (HT20)	MCS0	36	13.95	0.0248		18.95	0.0785	
		40	13.84	0.0242		18.84	0.0766	
		48	12.83	0.0192		17.83	0.0607	
802.11n (HT40)	MCS0	36	13.66	0.0232		18.66	0.0735	
		40	13.95	0.0248		18.95	0.0785	
802.11ac (VHT20)	MCS0	48	13.06	0.0202		18.06	0.0640	
		38	13.49	0.0223		18.49	0.0706	
		46	12.82	0.0191		17.82	0.0605	
802.11ac (VHT40)	MCS0	38	13.38	0.0218		18.38	0.0689	
		46	12.86	0.0193	17.86	0.0611		
802.11ac (VHT80)	MCS0	42	13.36	0.0217	18.36	0.0685		

The Maximum antenna Gain is 5dBi for U-NII-1 band

Table 7: Test Result of Maximum Conducted Output Power, 5.8GHz Wi-Fi

Test Mode	Data Rate	Test Channel (MHz)	Measured Average Power		Limit (W)
			(dBm)	(W)	
802.11a	1 Mbps	5745	14.37	0.0274	< 1.0
		5785	14.37	0.0274	
		5825	14.63	0.0290	
802.11n (HT20)	MCS0	5745	14.79	0.0301	
		5785	14.51	0.0282	
		5825	15.35	0.0343	
802.11n (HT40)	MCS0	5755	14.56	0.0286	
		5795	15.00	0.0316	
802.11ac (VHT20)	MCS0	5745	14.56	0.0286	
		5785	14.63	0.0290	
		5825	14.87	0.0307	
802.11ac (VHT40)	MCS0	5755	13.91	0.0246	
		5795	15.17	0.0329	
802.11ac (VHT80)	MCS0	5775	14.06	0.0255	
Maximum Measured Value			15.35	0.0343	
Max. e.i.r.p.=15.35dBm+3.5dBi=18.85dBm, which is less than 36dBm=4W.					

Table 8: Test Result of Maximum Conducted Output Power, 5.8GHz SDR

Worst case: SISO mode (ANT 1)

Test Mode	Test Channel (MHz)	Measured Average Power		Limit (W)
		(dBm)	(W)	
1.4MHz BW	5728.5	25.70	0.3715	< 1.0
	5786.5	25.37	0.3443	
	5846.12	24.58	0.2871	
3MHz BW	5727.5	26.68	0.4656	
	5787.2	25.39	0.3459	
	5847.2	25.89	0.3882	
5MHz BW	5732.5	27.62	0.5781	
	5787.5	27.62	0.5781	
	5845.74	27.77	0.5984	
10MHz BW	5846.74	-6.21	0.0002	
	5730.5	25.94	0.3926	
	5786.5	27.72	0.5916	
20MHz BW	5844.5	25.25	0.3350	
	5735.5	27.82	0.6053	
	5786.5	27.71	0.5902	
40MHz BW	5839.5	27.31	0.5383	
	5745.5	23.81	0.2404	
	5786.5	26.78	0.4764	
	5790.5	24.94	0.3119	
	5810.5	23.26	0.2118	
	5820.5	22.86	0.1932	
60MHz BW	5826.5	22.37	0.1726	
	5829.5	22.16	0.1644	
	5755.5	21.54	0.1426	
	5765.5	21.72	0.1486	
	5786.5	24.65	0.2917	
80MHz BW	5810.5	21.84	0.1528	
	5819.5	21.17	0.1309	
	5765.5	18.63	0.0729	
	5785.5	18.67	0.0736	
	5786.5	24.43	0.2773	
Maximum Measured Value	5789.5	18.80	0.0759	
	5809.5	18.27	0.0671	
		27.82	0.6053	

Max. e.i.r.p.=27.82dBm+2.5dBi=30.32dBm, which is less than 36dBm=4W.

Antenna Gain: 2.5dBi for Ant1

Worst case: MIMO mode (ANT 0+3)

Test Mode	Test Channel (MHz)	Measured Average Power		Limit (W)
		(dBm)	(W)	
1.4MHz BW	5728.5	25.53	0.3573	< 1.0
	5786.5	25.81	0.3811	
	5846.12	28.05	0.6383	
3MHz BW	5727.5	28.54	0.7145	
	5787.2	28.77	0.7534	
	5847.2	28.56	0.7178	
5MHz BW	5732.5	28.59	0.7228	
	5787.5	27.30	0.5370	
	5845.74	28.47	0.7031	
10MHz BW	5730.5	28.60	0.7244	
	5786.5	28.82	0.7621	
	5844.5	28.71	0.7430	
20MHz BW	5735.5	28.56	0.7178	
	5786.5	28.81	0.7603	
	5839.5	28.75	0.7499	
40MHz BW	5745.5	23.98	0.2500	
	5786.5	26.25	0.4217	
	5827.5	23.56	0.2270	
	5828.5	23.09	0.2037	
	5829.5	22.63	0.1832	
60MHz BW	5755.5	23.65	0.2317	
	5786.5	24.16	0.2606	
	5819.5	23.26	0.2118	
80MHz BW	5765.5	24.21	0.2636	
	5786.5	24.06	0.2547	
	5809.5	23.78	0.2388	
Maximum Measured Value		28.81	0.7603	
Max. e.i.r.p.=28.81dBm+3.5dBi=32.31dBm, which is less than 36dBm=4W.				

Note:

- 1) The cable loss is taken into account in results, $e.i.r.p.=P_{(Peak\ power)}+G$
- 2) Antenna gain(G) of 5.8GHz Wi-Fi : 3.5dBi
 Antenna gain(G) of 5.2GHz Wi-Fi : 5dBi
 Antenna gain(G) of 5.8GHz SDR: 3.5dBi (uncorrelated Singals)

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5.1.3 Conducted Power Spectral Density

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

Test standard	: FCC Part 15.407 (a) RSS-247 clause 6.2
Basic standard	: ANSI C63.10: 2013 FCC: <11dBm/MHz (5150-5250MHz) <30dBm/500KHz (5725-5850MHz)
Limits	: IC: e.i.r.p. spectral density <10dBm/MHz (5150-5250MHz) <30dBm/500KHz (5725-5850MHz)
Kind of test site	: Shielded Room

Test Setup

Date of testing	: 2023-11-28 to 2024-01-03
Input voltage	: Fully charged battery
Operation mode	: A, B, C
Test channel	: Low / Middle / High
Ambient temperature	: 25.2 °C
Relative humidity	: 37 %
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the appendix A, B, C.

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5.1.4 Frequency Stability

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

Test standard : FCC Part 15.407 (g)
RSS-Gen Clause 6.11

Basic standard : ANSI C63.10: 2013

Limits : Within assigned bands

Kind of test site : Shielded Room

Test Setup

Date of testing : 2023-11-28 to 2024-01-03

Input voltage : Fully charged battery

Operation mode : A, B, C

Test channel : Low / Middle / High

Ambient temperature : 25.2 °C

Relative humidity : 37 %

Atmospheric pressure : 101 kPa

For the measurement records, refer to the appendix A, B, C.

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5.1.5 6dB Bandwidth

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

Test standard : FCC Part 15.407 (e)
RSS-247 clause 6.2.4.1

Basic standard : ANSI C63.10: 2013

Limits : At least 500KHz (5725-5850MHz)

Kind of test site : Shielded Room

Test Setup

Date of testing : 2023-11-28 to 2024-01-03

Input voltage : Fully charged battery

Operation mode : A, B

Test channel : Low / Middle / High

Ambient temperature : 25.2 °C

Relative humidity : 37 %

Atmospheric pressure : 101 kPa

For the measurement records, refer to the appendix A, B.

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5.1.6 99% Bandwidth

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

Test standard : FCC Part 15.407
RSS-Gen Clause 6.6
Basic standard : ANSI C63.10: 2013
Limits : N/A
Kind of test site : Shielded Room

Test Setup

Date of testing : 2023-11-28 to 2024-01-03
Input voltage : Fully charged battery
Operation mode : A, B, C
Test channel : Low / Middle / High
Ambient temperature : 25.2 °C
Relative humidity : 37 %
Atmospheric pressure : 101 kPa

For the measurement records, refer to the appendix A, B, C.

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 RSS-247 clause 6.2 & RSS-GEN clause 8.9 and 8.10
Basic standard	: ANSI C63.10: 2013 <ul style="list-style-type: none">• For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.• For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.• For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz. Emissions outside the band 5470-5600 MHz and 5650-5725 MHz shall not exceed -27 dBm/MHz e.i.r.p.• 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. Restricted Bands meet the requirement of 15.209 limit and RSS-GEN
Limits	:
Kind of test site	: 3m Semi-anechoic Chamber
Test Setup	
Date of testing	: 2023-12-03 to 2023-12-30
Input voltage	: Fully charged battery
Operation mode	: A, B, C
Test channel	: Low / Middle / High
Ambient temperature	: Refer to test result
Relative humidity	: Refer to test result
Atmospheric pressure	: 101 kPa

Remark:

Testing was carried out within frequency range 9kHz to the tenth harmonics. Only the worst case spurious emissions configuration of the each mode were reported.

For the measurement records, refer to the appendix A, B, C.

5.1.8 Conducted Emission on AC Mains

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

Test standard	: FCC Part 15.207(a) RSS-Gen Section 8.8
Basic standard	: ANSI C63.10: 2013
Frequency range	: 0.15 – 30MHz
Classification	: Class B
Limits	: FCC Part 15.207(a) RSS-Gen Table 4
Kind of test site	: Shielded Room

Test Setup

Date of testing	: 2023-11-24
Input voltage	: AC 120V, 60Hz
Operation mode	: A, B, C
Earthing	: Not connected
Ambient temperature	: 25.0 °C
Relative humidity	: 51.2 %
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the appendix A, B, C.

6 Photographs of the Test Set-Up

For photographs of the test set-up, refer to the appendix D.

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