TEST REPORT

Applicant Name :	Inrico Technologies Co.,Ltd
Address :	A1703, Shenzhen National Engineering Laboratory Building, No. 20 Gaoxin South 7th Road, Shenzhen, China
Report Number :	2504S23848E-RF-00D
FCC ID:	2AIV6-BC680

Test Standard (s)

FCC PART 15.407

Sample Description

Product Type:	4G LTE Smart Terminal
Model No.:	BC680
Trade Mark:	Inrico®
Date Received:	2025-04-09
Date of Test:	2025-05-22 to 2025-08-21
Report Date:	2025-08-21

Test Result:	The EUT complied with the standards above.

Prepared and Checked By:

Matt Liang
EMC Engineer

Approved By:

Bob Liao
EMC Engineer

TABLE OF CONTENTS

DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
Rev.00	2504S23848E-RF-00D	Original Report	2025-08-21

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Product	4G LTE Smart Terminal
Tested Model	BC680
Voltage Range#	AC 100V-240V 50/60Hz for adapter DC 5.0V from USB Type-C port DC 4.35V from desktop charger DC 3.8V from rechargeable battery
Adapter Information#	Model: HJ-0502000W2-US Input: 100-240 V~ 50/60Hz 0.3A Output: 5.0V ⎓2.0A 10.0W
Desktop Charger Information#	Model: CI-80E Input: 5V ⎓2000mA Output: 4.35V ⎓1000mA

Frequency Range	5G Wi-Fi: 5150-5250MHz; 5250-5350MHz 5470-5725MHz; 5725-5850MHz
Mode	802.11 a/n20/n40/ac20/ac40/ac80
Maximum Conducted Average Output Power	5150-5250MHz: 9.68dBm
	5250-5350MHz: 9.38dBm
	5470-5725MHz: 8.32dBm
	5725-5850MHz: 10.04dBm
Modulation Technique	OFDM
Antenna Specification#	Internal Antenna (It is provided by the applicant.)
	5150-5250MHz: 2.38dBi
	5250-5350MHz: 2.38dBi
	5470-5725MHz: 2.38dBi
	5725-5850MHz: 2.38dBi
Sample Serial Number	315P-6 (For CE&RSE Test), 315P-1 (For RF Conducted Test) (Assigned by ATC, Shenzhen)
Sample/EUT Status	Good condition
Note: The device is belong a client device.	

Objective

This type approval report is in accordance with Part 2-Subpart J, Part 15-Subparts A and E of the Federal Communication Commissions rules.

The tests were performed in order to determine compliance with FCC Part 15, Subpart E, section 15.203, 15.205, 15.207, 15.209 and 15.407 rules.

Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2020, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices. And KDB789033D02 General U-NII Test Procedures New Rules v02r01.

Unless otherwise stated there are no any additions to, deviations, or exclusions from the method.

Test Facility

The test site used by Shenzhen Accurate Technology Co., Ltd. to collect test data is located on the Floor 1, KuMaKe Building, Dongzhou Community, Guangming Street, Guangming District, Shenzhen, Guangdong, China.

Accredited by American Association for Laboratory Accreditation (A2LA).The Certificate Number is 4297.01.

Measurement Uncertainty

Parameter		Uncertainty
Occupied Channel Bandwidth		5 %
RF Frequency		$0.064*10^{-7}$
RF output power, conducted		0.3 dB
Unwanted Emission, conducted		1.2 dB
AC Power Lines Conducted Emissions		2.7 dB
Emissions, Radiated	9kHz - 30MHz	2.1 dB
	30MHz - 1GHz	4.3 dB
	1GHz - 18GHz	4.9 dB
	18GHz - 26.5GHz	5.2 dB
	26.5GHz - 40GHz	4.6 dB
Temperature		1 ℃
Humidity		7 %
Supply voltages		0.4 %

Note: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

SYSTEM TEST CONFIGURATION

Description of Test Configuration

The system was configured for testing in a typical fashion (as normally used by a typical user).

The device supports 802.11a/n20/n40/ac20/ac40/ac80 mode, the n20/n40 mode was reduced test as identical parameter with ac20/ac40 mode.

For 5150-5250MHz, 7 channels are provided to testing:

Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)
36	5180	40	5200	44	5220	48	5240
38	5190	42	5210	46	5230	/	/

For 802.11a/ac20, Channel 36, 40 and 48 were tested.
For 802.11ac40, Channel 38, 46 were tested.
For 802.11ac80, Channel 42 was tested.

For 5250-5350MHz, 7 channels are provided to testing:

Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)
52	5260	56	5280	60	5300	64	5320
54	5270	58	5290	62	5310	/	/

For 802.11a/ac20, Channel 52, 60 and 64 were tested.
For 802.11ac40, Channel 54, 62 were tested.
For 802.11ac80, Channel 58 was tested.

For 5470-5725MHz, 21 channels are provided to testing:

Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)
100	5500	112	5560	126	5630	140	5700
102	5510	116	5580	128	5640	142	5710
104	5520	118	5590	132	5660	144	5720
106	5530	120	5600	134	5670	/	/
108	5540	122	5610	136	5680	/	/
110	5550	124	5620	138	5690	/	/

For 802.11a/ac20, Channel 100, 116, 140 and 144 were tested.
For 802.11ac40, Channel 102, 110, 134 and 142 were tested.
For 802.11ac80, Channel 106, 122 and 138 were tested.
The Cross Frequency: 5690MHz, 5710MHz, 5720MHz

For 5725-5850MHz, 8 channels are provided to testing:

Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)	Channel	Freq. (MHz)
149	5745	153	5765	157	5785	161	5805
151	5755	155	5775	159	5795	165	5825

For 802.11a/ac20, Channel 149, 157 and 165 were tested.
For 802.11ac40, Channel 151 and 159 were tested.
For 802.11ac80, Channel 155 was tested.

EUT Exercise Software and Power Level

The system was configured for testing in an engineering mode, which was provided by manufacturer.

Exercise Software:	Engineering mode.				
For 5150-5250MHz:					
Mode	**Data Rate**	**Power Level**			
		Lowest Channel	**Middle Channel**		**Highest Channel**
802.11 a	6Mbps	16	16		16
802.11 ac20	MCS0	16	16		16
802.11 ac40	MCS0	16	/		16
802.11 ac80	MCS0	/	16		/
For 5250-5350MHz:					
Mode	**Data Rate**	**Power Level**			
		Lowest Channel	**Middle Channel**		**Highest Channel**
802.11 a	6Mbps	16	16		16
802.11 ac20	MCS0	16	16		16
802.11 ac40	MCS0	16	/		16
802.11 ac80	MCS0	/	16		/
For 5470-5725MHz:					
Mode	**Data Rate**	**Power Level**			
		Lowest Channel	**Middle Channel**	**Highest Channel**	**Cross Band**
802.11 a	6Mbps	16	16	16	16
802.11 ac20	MCS0	16	16	16	16
802.11 ac40	MCS0	15	/	15	15
802.11 ac80	MCS0	/	15	/	15
For 5725-5850MHz:					
Mode	**Data Rate**	**Power Level**			
		Lowest Channel	**Middle Channel**		**Highest Channel**
802.11 a	6Mbps	16	16		16
802.11 ac20	MCS0	16	16		16
802.11 ac40	MCS0	16	/		16
802.11 ac80	MCS0	/	16		/

Note 1: The information in the above table is provided by the applicant.
Note 2: The worse-case data rates are determined to be as above for each mode based upon investigations by measuring the output power and PSD across all data rates, bandwidths and modulations.

Special Accessories

No special accessory.

Equipment Modifications

No modification was made to the EUT tested.

Duty Cycle

Test result: Please refer to Appendix.

Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
/	/	/	/

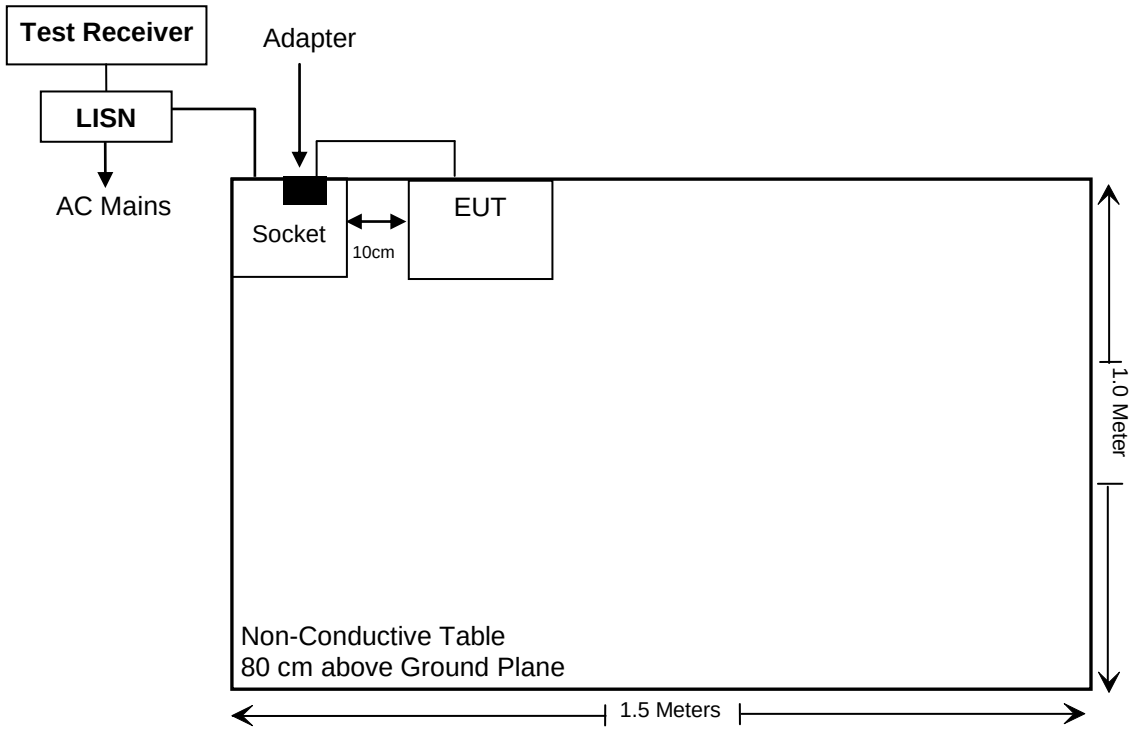
External I/O Cable

Cable Description	Shielding Type	Length (m)	From Port	To
USB Cable	NO	1.18	Adapter	EUT/ Desktop charger

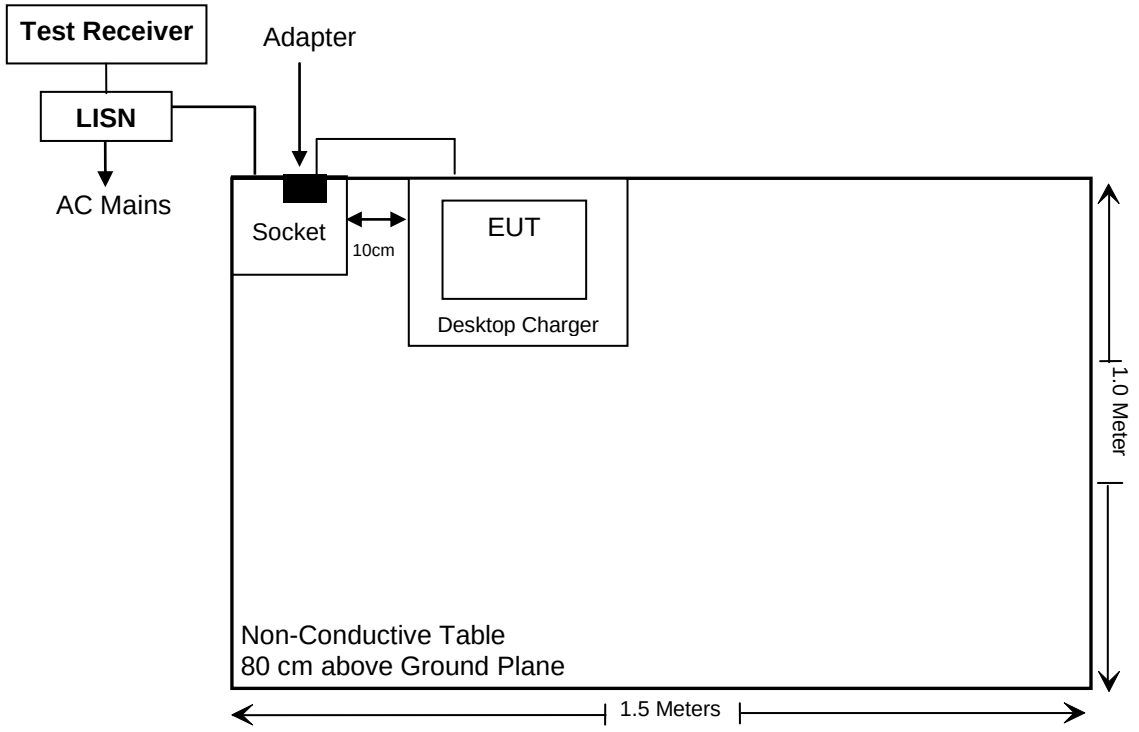
Block Diagram of Test Setup

For Conducted Emission:

For Adapter

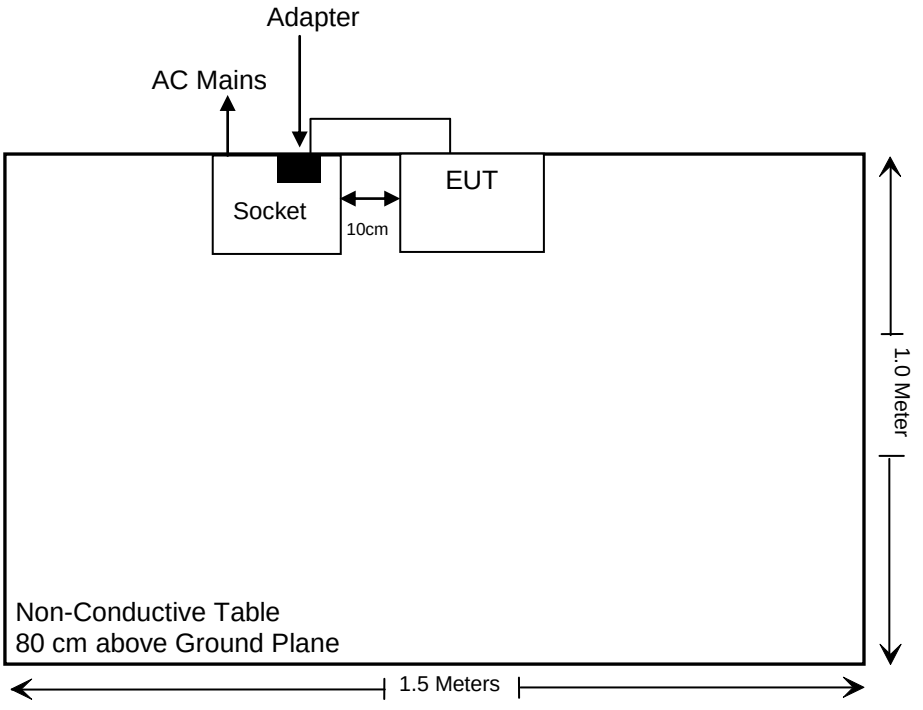


For Desktop Charger

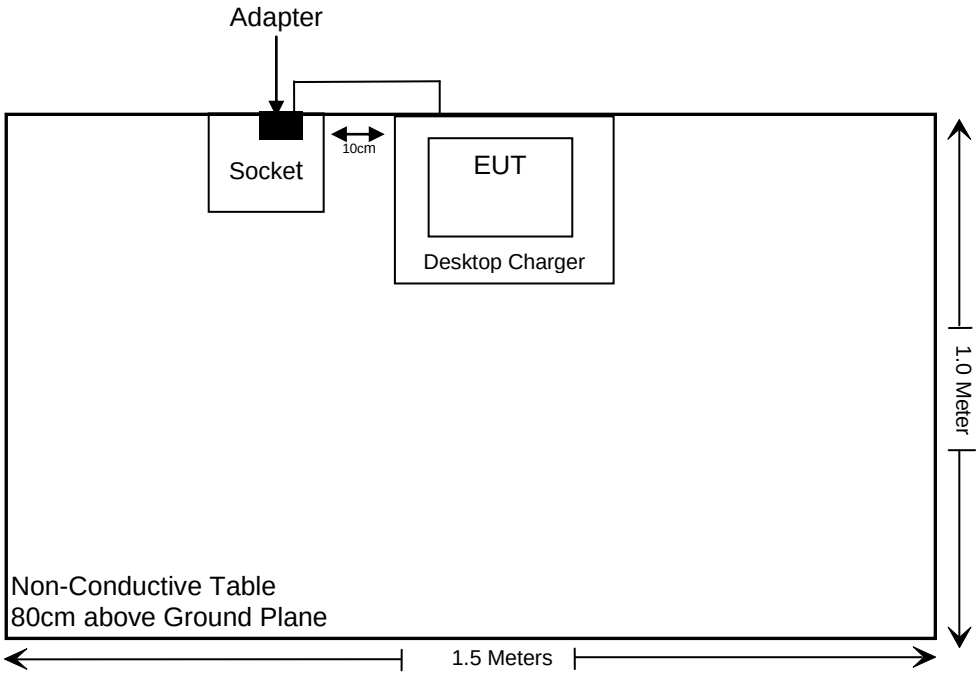


For Radiated Emission Below 1GHz:

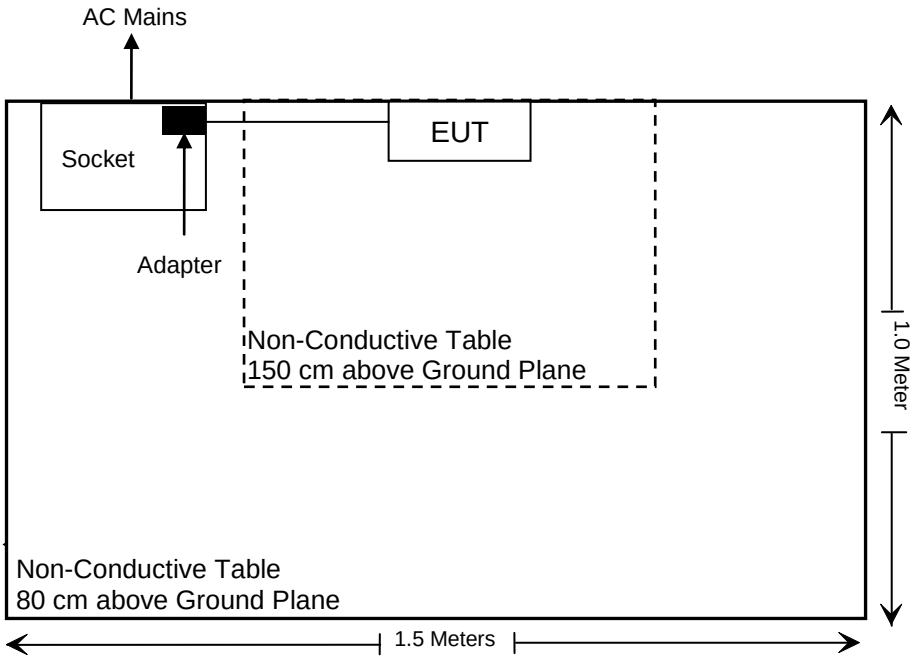
For Adapter



For Desktop Charger



For Radiated Emission Above 1GHz:



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§2.1093	RF Exposure(SAR)	Compliance
§15.203	Antenna Requirement	Compliance
§15.407(b)(8), §15.207(a)	Conducted Emissions	Compliance
§15.205 & §15.209 &§15.407(b) (1),(4),(8),(9),(10)	Undesirable Emission& Restricted Bands	Compliance
§15.407(a)(12),(e)	Bandwidth	Compliance
§15.407(a)(1),(3)	Conducted Transmitter Output Power	Compliance
§15.407(a)(1),(3)	Power Spectral Density	Compliance
§15.407(h)(1)	Transmit Power Control (TPC)	Not Applicable (The device does not support it)
§15.407(h)(2)	Dynamic Frequency Selection (DFS)	Compliance*

Compliance*- Please refer to the DFS report: 2504S23848E-RF-00E.

Note 1: For AC line conducted emissions, the maximum output power mode and channel was tested.

Note 2: For Radiated Spurious Emissions 9kHz~1GHz/18GHz~40GHz, the maximum output power mode and channel was tested.

Note 3: For Radiated Spurious Emissions, after pre-scan in the X, Y and Z axes of orientation, the worst case as setup photos was recorded.

Note4: The cable loss is 0.5dB, which was added into the all RF test results.

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Conducted Emissions Test					
Rohde & Schwarz	EMI Test Receiver	ESCI	100784	2024/11/08	2025/11/07
Rohde & Schwarz	L.I.S.N.	ENV216	101314	2024/11/08	2025/11/07
Anritsu Corp	50 Coaxial Switch	MP59B	6100237248	2024/10/08	2025/10/07
Rohde & Schwarz	Pulse Limiter	ESH3-Z2	100312	2024/10/08	2025/10/07
Unknown	RF Coaxial Cable	No.17	N0350	2024/10/08	2025/10/07
Test Software: e3 191218 (V9)					
Radiated Spurious Emission Test(Below 1GHz)					
Rohde & Schwarz	Test Receiver	ESR	102725	2024/11/08	2025/11/07
SONOMA INSTRUMENT	Amplifier	310N	186131	2025/03/26	2026/03/25
Schwarzbeck	Bilog Antenna	VULB9163	9163-323	2024/08/08	2027/08/07
Unknown	RF Coaxial Cable	No.12	N040	2024/10/08	2025/10/07
Unknown	RF Coaxial Cable	No.13	N300	2024/10/08	2025/10/07
Unknown	RF Coaxial Cable	No.14	N800	2024/10/08	2025/10/07
BACL	LOOP ANTENNA	1313-1A	3110711	2024/01/16	2027/01/15
Test Software: e3 191218 (V9)					
Radiated Spurious Emission Test(Above 1GHz)					
Rohde & Schwarz	Spectrum Analyzer	FSV40	101949	2024/10/08	2025/10/07
Decentest	Filter Switch Unit	DT7220FSU	DQ77927	2024/10/08	2025/10/07
Decentest	Multiplex Switch Test Control Set	DT7220CSU	DQ77924	2024/10/08	2025/10/07
A.H. Systems, inc.	Preamplifier	PAM-0118	226	2025/03/20	2026/03/19
Schwarzbeck	Horn Antenna	BBHA9120D	837	2023/02/22	2026/02/21
Unknown	RF Coaxial Cable	No.10	N050	2024/10/08	2025/10/07
Unknown	RF Coaxial Cable	No.11	N1000	2024/10/08	2025/10/07
Unknown	RF Coaxial Cable	No.19	N500	2024/10/08	2025/10/07
Schwarzbeck	HORN ANTENNA	BBHA9170	9170-359	2023/12/12	2026/12/11
BACL	Amplifier	BACL-1313-A1840	4012521	2025/05/30	2026/05/29
Unknown	RF Coaxial Cable	No.15	N600	2024/10/08	2025/10/07
Unknown	RF Coaxial Cable	No.16	N650	2024/10/08	2025/10/07
Test Software: e3 191218 (V9)					

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
RF Conducted test					
Rohde & Schwarz	Spectrum Analyzer	FSV-40	101948	2024/10/08	2025/10/07
Anritsu	Microwave Peak Power Sensor	MA24418A	12619	2025/03/26	2026/03/25
WEINSCHEL	10dB Attenuator	5324	AU 3842	2024/10/08	2025/10/07
Test Software: JDAutoTestSystem V1.0.0					

*** Statement of Traceability:** Shenzhen Accurate Technology Co., Ltd. attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

RF EXPOSURE

Applicable Standard

FCC§1.1310 and §2.1093.

Test Result

Please refer to the SAR report number: 2504S23848E-SAB.

FCC §15.203-ANTENNA REQUIREMENT

Applicable Standard

According to § 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the user of a standard antenna jack or electrical connector is prohibited. The structure and application of the EUT were analyzed to determine compliance with section §15.203 of the rules. §15.203 state that the subject device must meet the following criteria:

a. Antenna must be permanently attached to the unit.
b. Antenna must use a unique type of connector to attach to the EUT.
c. Unit must be professionally installed, and installer shall be responsible for verifying that the correct antenna is employed with the unit.

And according to FCC 47 CFR section 15.407 (a), if the transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Antenna Connector Construction

The EUT has one internal antenna arrangement, which were permanently attached to the EUT, fulfill the requirement of this section. Please refer to the EUT photos.

Frequency Range	Antenna gain
5150-5250MHz	2.38dBi
5250-5350MHz	2.38dBi
5470-5725MHz	2.38dBi
5725-5850MHz	2.38dBi

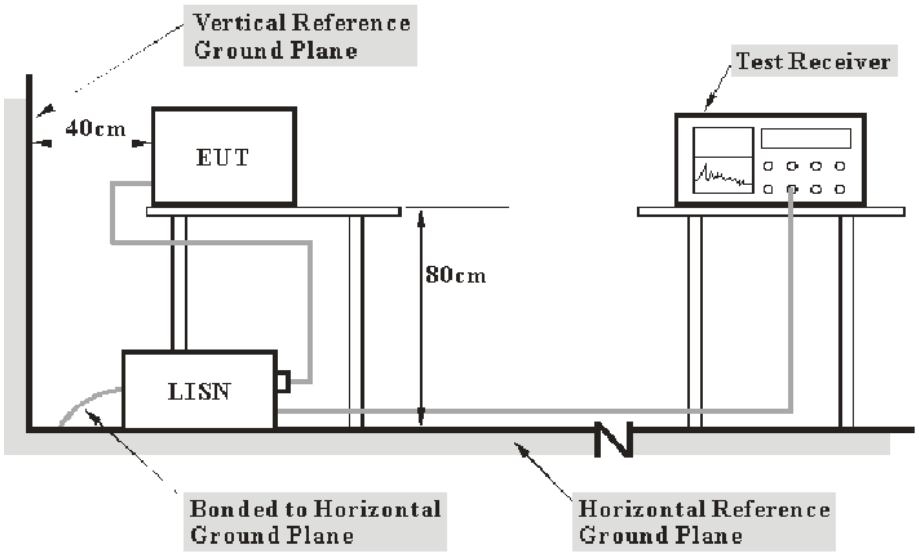
Result: Compliance.

FCC §15.407 (B) (8) §15.207 (A)-CONDUCTED EMISSIONS

Applicable Standard

FCC §15.207, §15.407(b) (8)

EUT Setup



Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The setup of EUT is according with per ANSI C63.10-2020 measurement procedure. The specification used was with the FCC Part 15.207 limits.

The spacing between the peripherals was 10 cm.

EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	IF B/W
150 kHz – 30 MHz	9 kHz

Test Procedure

During the conducted emission test, the adapter was connected to the LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All data was recorded in the Quasi-peak and average detection mode.

Calculation

The Factor is calculated by adding LISN VDF (Voltage Division Factor), Cable Loss and Limiter Attenuation. The basic equation is as follows:

Factor = LISN VDF + Cable Loss + 10dB Attenuation(Limiter)

The "**Over limit**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, an over limit of -7 dB means the emission is 7 dB below the limit. The equation for calculation is as follows:

Over Limit = Level - Limit
Level = Read Level + Factor

Test Data

Environmental Conditions

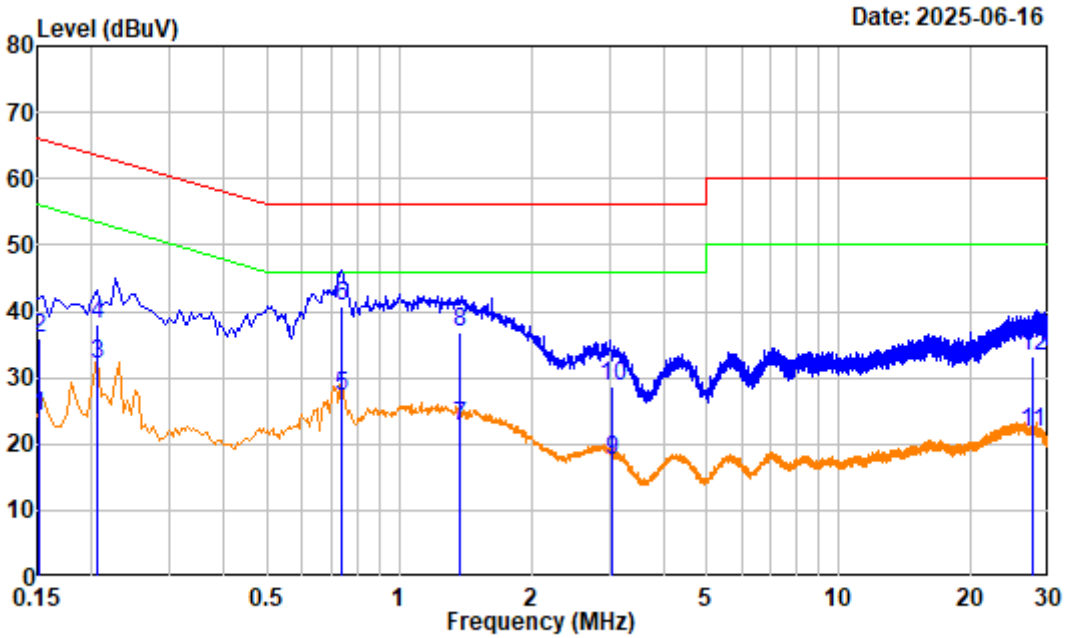
Temperature:	24.2 to 24.5 ℃
Relative Humidity:	44 to 46 %
ATM Pressure:	101.3 kPa
Test Engineer:	Jason Fan
Test Date:	2025-06-15 to 2025-06-16
EUT Operation Mode:	5G WIFI Transmitting

Test Result: Compliance, please refer to the below data.

Note: The maximum output power mode and channel: 802.11a High Channel 5825MHz was tested.

For Adapter

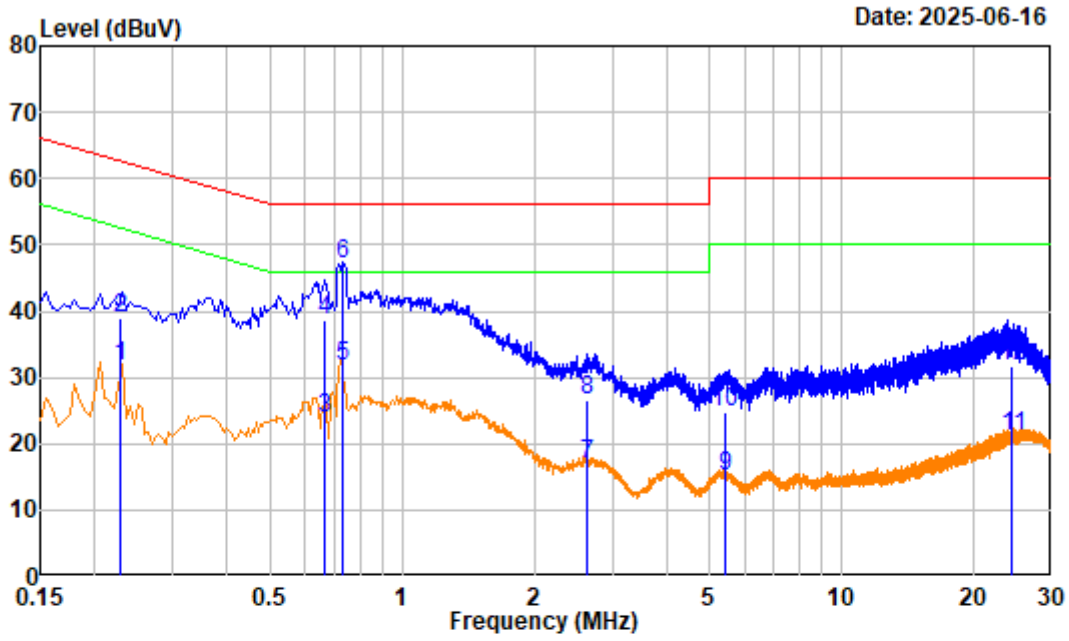
AC 120V/60Hz, Line:



Site : Shielding Room
Condition : Line
Project No. : 2504S23848E-RF Tester:Jason Fan
Test Mode : 5G WIFI Transmitting
Note : Adapter
Receiver Setting: IF B/W 9kHz PK/AV

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dBuV	dBuV	dBuV	dB	
1	0.152	20.13	4.07	24.20	55.87	-31.67	Average
2	0.152	20.13	15.93	36.06	65.87	-29.81	QP
3	0.206	20.31	11.81	32.12	53.36	-21.24	Average
4	0.206	20.31	17.70	38.01	63.36	-25.35	QP
5	0.742	20.54	6.77	27.31	46.00	-18.69	Average
6	0.742	20.54	20.14	40.68	56.00	-15.32	QP
7	1.376	20.71	2.08	22.79	46.00	-23.21	Average
8	1.376	20.71	16.06	36.77	56.00	-19.23	QP
9	3.040	20.71	-3.26	17.45	46.00	-28.55	Average
10	3.040	20.71	7.94	28.65	56.00	-27.35	QP
11	27.546	19.91	1.87	21.78	50.00	-28.22	Average
12	27.546	19.91	13.27	33.18	60.00	-26.82	QP

AC 120V/60Hz, Neutral:

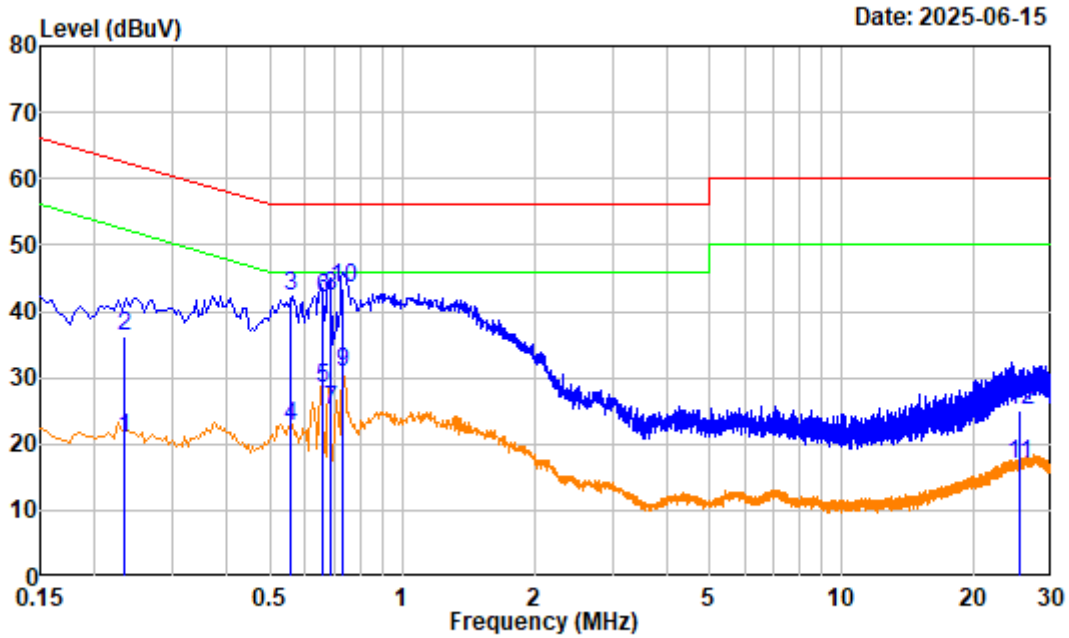


Site : Shielding Room
Condition : neutral
Project No. : 2504S23848E-RF Tester:Jason Fan
Test Mode : 5G WIFI Transmitting
Note : Adapter
Receiver Setting: IF B/W 9kHz PK/AV

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dBuV	dBuV	dBuV	dB	
1	0.228	19.82	12.02	31.84	52.52	-20.68	Average
2	0.228	19.82	19.16	38.98	62.52	-23.54	QP
3	0.665	20.66	3.32	23.98	46.00	-22.02	Average
4	0.665	20.66	17.96	38.62	56.00	-17.38	QP
5	0.730	20.71	10.90	31.61	46.00	-14.39	Average
6	0.730	20.71	26.44	47.15	56.00	-8.85	Peak
7	2.633	20.27	-3.50	16.77	46.00	-29.23	Average
8	2.633	20.27	6.33	26.60	56.00	-29.40	QP
9	5.401	20.63	-5.51	15.12	50.00	-34.88	Average
10	5.401	20.63	4.11	24.74	60.00	-35.26	QP
11	24.425	20.34	0.92	21.26	50.00	-28.74	Average
12	24.425	20.34	11.36	31.70	60.00	-28.30	QP

For Desktop Charger

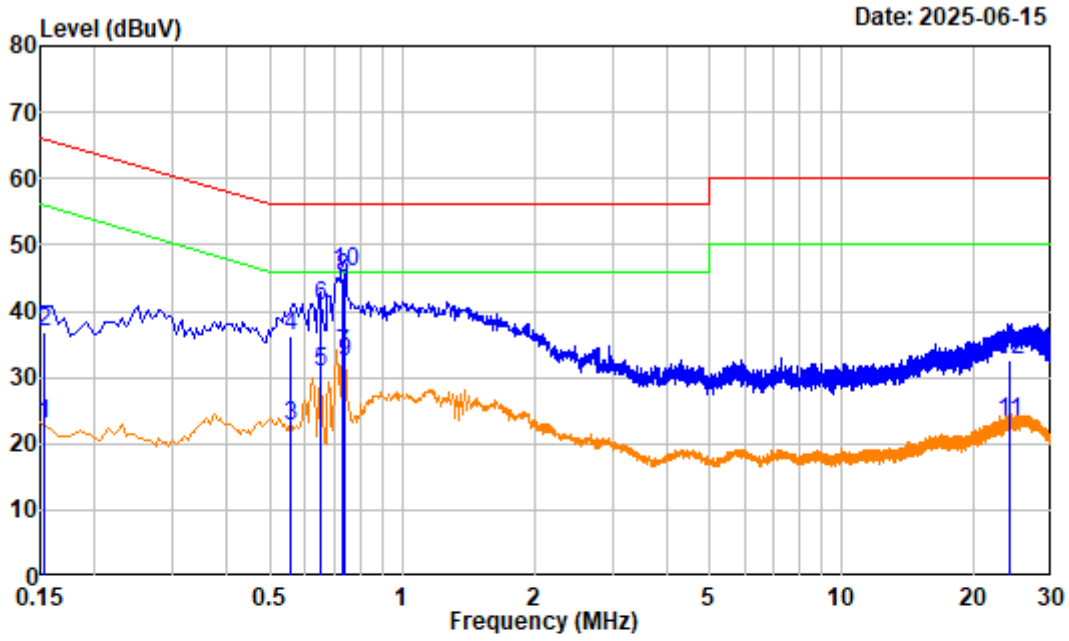
AC 120V/60Hz, Line:



Site : Shielding Room
Condition : Line
Project No. : 2504S23848E-RF Tester:Jason Fan
Test Mode : 5G WIFI Transmitting
Note : Charging base
Receiver Setting: IF B/W 9kHz PK/AV

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dBuV	dBuV	dBuV	dB	
1	0.234	20.29	0.61	20.90	52.30	-31.40	Average
2	0.234	20.29	15.95	36.24	62.30	-26.06	QP
3	0.559	20.25	21.91	42.16	56.00	-13.84	Peak
4	0.559	20.25	2.40	22.65	46.00	-23.35	Average
5	0.656	20.43	7.99	28.42	46.00	-17.58	Average
6	0.656	20.43	21.57	42.00	56.00	-14.00	QP
7	0.687	20.49	4.44	24.93	46.00	-21.07	Average
8	0.687	20.49	21.74	42.23	56.00	-13.77	QP
9	0.734	20.54	10.28	30.82	46.00	-15.18	Average
10	0.734	20.54	22.97	43.51	56.00	-12.49	QP
11	25.393	19.89	-2.85	17.04	50.00	-32.96	Average
12	25.393	19.89	5.13	25.02	60.00	-34.98	QP

AC 120V/60Hz, Neutral:



Site : Shielding Room
Condition : neutral
Project No. : 2504S23848E-RF Tester:Jason Fan
Test Mode : 5G WIFI Transmitting
Note : Charging base
Receiver Setting: IF B/W 9kHz PK/AV

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dBuV	dBuV	dBuV	dB	
1	0.153	20.28	2.60	22.88	55.86	-32.98	Average
2	0.153	20.28	16.53	36.81	65.86	-29.05	QP
3	0.555	20.51	2.10	22.61	46.00	-23.39	Average
4	0.555	20.51	15.78	36.29	56.00	-19.71	QP
5	0.650	20.64	10.16	30.80	46.00	-15.20	Average
6	0.650	20.64	20.18	40.82	56.00	-15.18	QP
7	0.730	20.71	12.73	33.44	46.00	-12.56	Average
8	0.730	20.71	24.21	44.92	56.00	-11.08	QP
9	0.740	20.71	11.72	32.43	46.00	-13.57	Average
10	0.740	20.71	25.15	45.86	56.00	-10.14	QP
11	24.083	20.35	2.82	23.17	50.00	-26.83	Average
12	24.083	20.35	12.30	32.65	60.00	-27.35	QP

FCC §15.205 & §15.209 & §15.407(B) (1), (4), (8), (9), (10)-UNDESIRABLE EMISSION

Applicable Standard

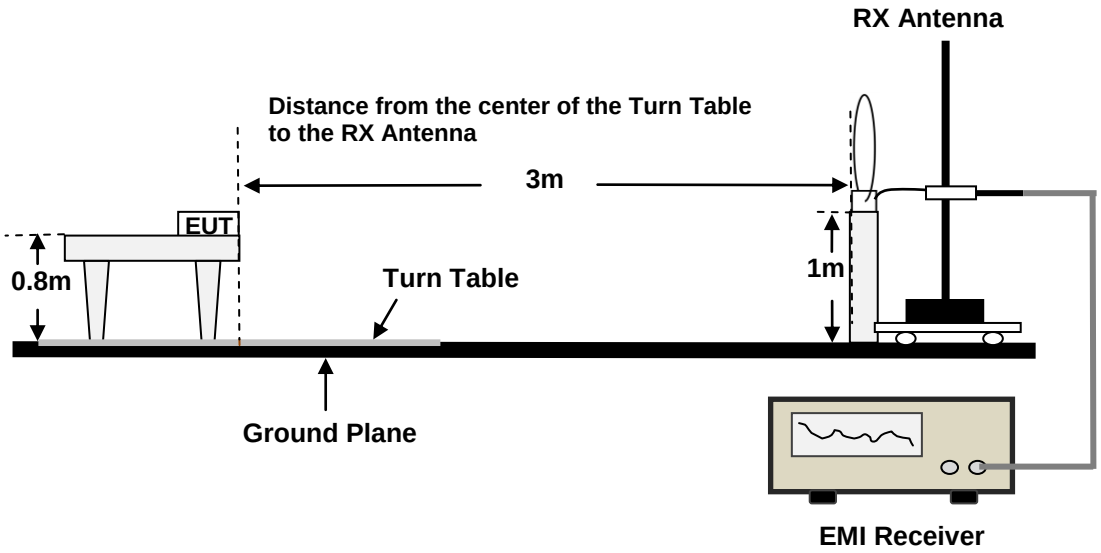
FCC §15.407 (b) (1), (4), (8), (9), (10); §15.209; §15.205;

(b) Undesirable emission limits. Except as shown in paragraph (b) (7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:
(1) 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.
(2) 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.
(3) 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.
(4) For transmitters operating in the 5.725-5.85 GHz band:
(i) 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.

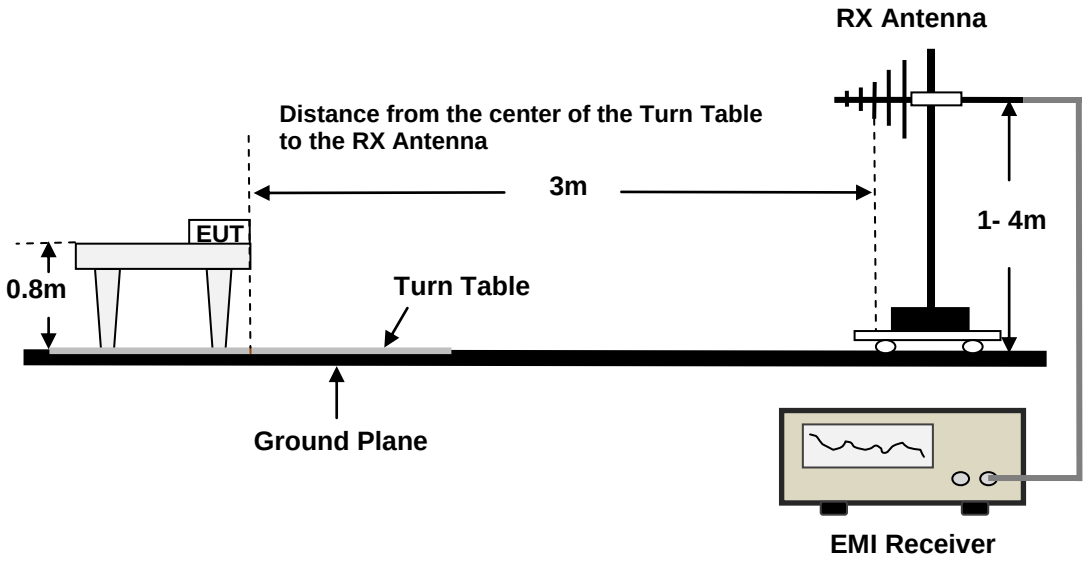
Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209.

EUT Setup

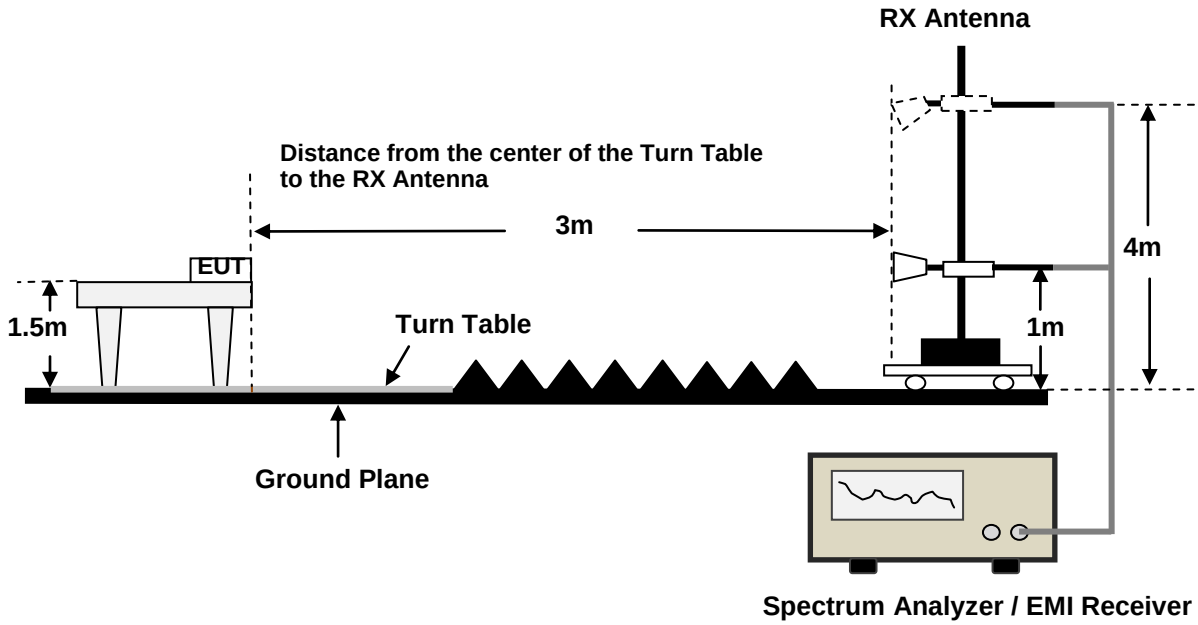
9kHz - 30MHz:



30MHz - 1GHz:



Above 1GHz:



The radiated emission performed in the 3 meters, using the setup accordance with the ANSI C63.10-2020. The specification used was the FCC 15.209, FCC 15.407 limits.

EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 9kHz to 40GHz.

During the radiated emission test, the EMI test receiver & Spectrum Analyzer Setup were set with the following configurations:

9kHz - 1000MHz:

Frequency Range	Measurement	RBW	Video B/W	IF B/W	Detector
9kHz - 150kHz	PK	0.3kHz	1kHz	/	PK
	QP/AV	/	/	200Hz	QP/AV
150kHz - 30MHz	PK	10kHz	30kHz	/	PK
	QP/AV	/	/	9kHz	QP/AV
30MHz - 1000MHz	PK	100kHz	300kHz	/	PK
	QP	/	/	120kHz	QP

1GHz -40GHz:
Pre-scan:

Measurement	Detector	Duty cycle	RBW	Video B/W
PK	Peak	Any	1MHz	3MHz
Ave.	Peak	>98%	1MHz	5kHz
		<98%	1MHz	≥1/T, no less than 5kHz

Final measurement for emission identified during the pre-scan:

Measurement	Detector	Duty cycle	RBW	Video B/W
PK	Peak	Any	1MHz	3MHz
Ave.	Peak	>98%	1MHz	10Hz
		<98%	1MHz	≥1/T

Note 1: T is minimum transmission duration
Note 2: The 1GHz-6.6GHz testing use the notch filter and the 6.6GHz-18GHz testing use high-pass filter.
Note 3: The band edge testing use 10dB attenuator.
Note 4: The filters and attenuators are all integrated within the filter switch unit.

Test Procedure

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

According to ANSI C63.10-2020, 9.2: For field strength measurements made at other than the distance specified by the limit, extrapolate the measured field strength to the field strength at the distance specified by the limit using an inverse distance correction factor (20 dB/decade of distance).

$$E_{SpecLimit} = E_{Meas} + 20\log\left(\frac{D_{Meas}}{D_{SpecLimit}}\right)$$

where

$E_{\text{SpecLimit}}$ is the field strength of the emission at the distance specified by the limit, in dBuV/m
E_{Meas} is the field strength of the emission at the measurement distance, in dBuV/m
D_{Meas} is the measurement distance, in m
$D_{\text{SpecLimit}}$ is the distance specified by the limit, in m

Note 1: If the maximized peak measured value is under the QP/Average limit by more than 6dB, then it is unnecessary to perform an QP/Average measurement.
Note 2: For above 1GHz, the test result of peak was 20dB below to the limit of peak, which can be compliant to the average limit, so just peak value was recorded.

Calculation

The Factor is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain. The basic equation is as follows:

Factor = Antenna Factor + Cable Loss - Amplifier Gain

The "**Over Limit/Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, an over limit/margin of -7dB means the emission is 7dB below the limit. The equation for calculation is as follows:

Over Limit/Margin = Level / Corrected Amplitude – Limit
Level / Corrected Amplitude = Read Level + Factor

Test Data

9kHz-1GHz

Environmental Conditions

Temperature:	23.4 ℃
Relative Humidity:	55 %
ATM Pressure:	100.2 kPa
Test Engineer:	Roger Ling
Test Date:	2025-05-23
EUT Operation Mode:	5G WIFI Transmitting

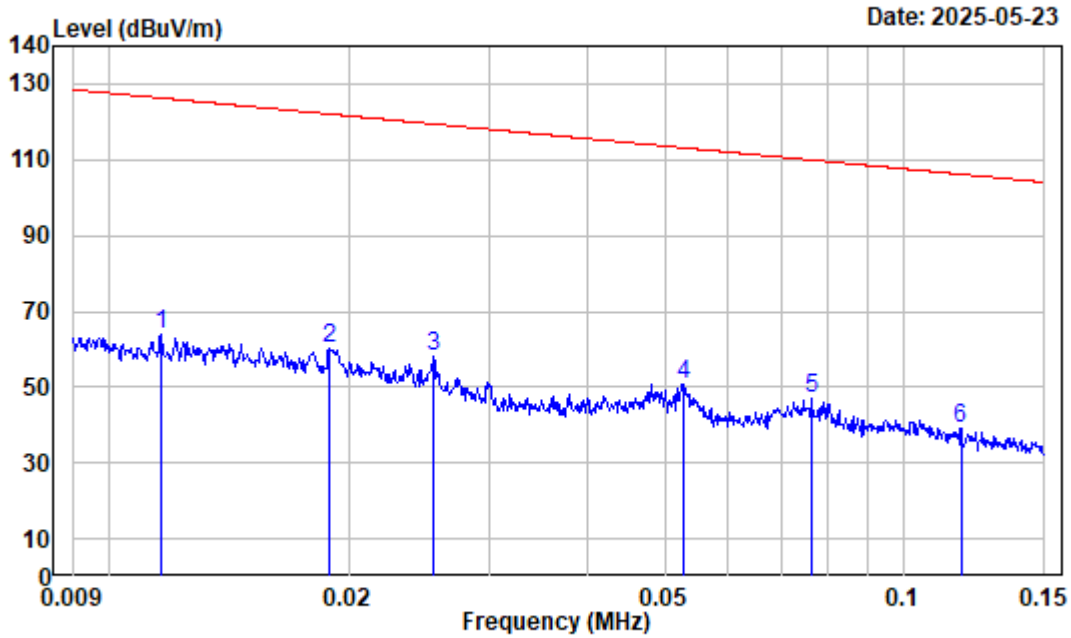
Test Result: Compliance, please refer to the below data.

Note 1: The Loop Antenna were tested in parallel, perpendicular, and ground-parallel. The worst orientation was parallel and the data was recorded in report.

Note 2: The maximum output power mode and channel: 802.11a High Channel 5825MHz was tested.

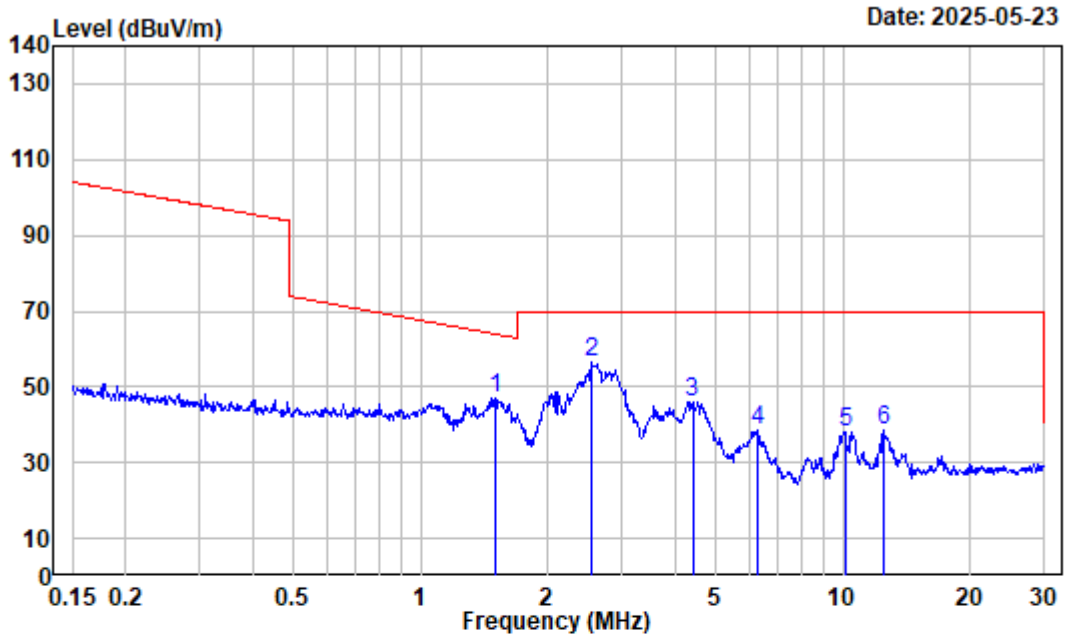
9kHz~30MHz:

For Adapter



Site : Chamber
Condition : 3m
Project No. : 2504S23848E-RF
Polarization : Parallel Tester: Roger Ling
Test Mode : 5G WIFI Transmitting
Note : Adapter
Receiver Setting: RBW:300Hz VBW:1kHz

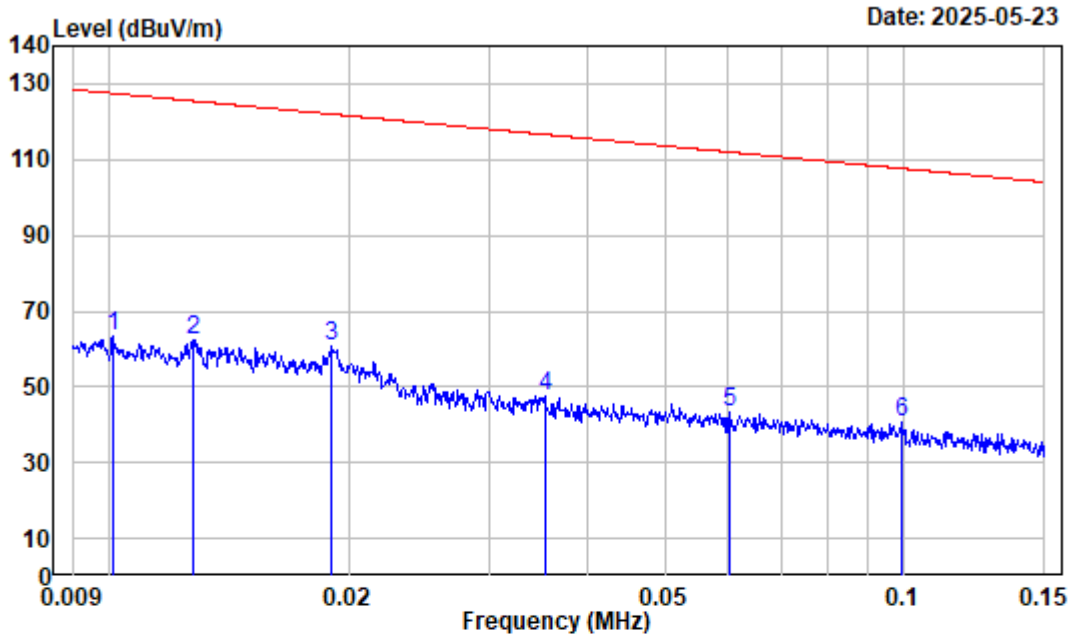
	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	0.012	35.11	28.71	63.82	126.30	-62.48	Peak
2	0.019	31.86	28.17	60.03	122.07	-62.04	Peak
3	0.026	28.92	29.05	57.97	119.45	-61.48	Peak
4	0.053	22.44	28.36	50.80	113.15	-62.35	Peak
5	0.076	19.07	28.03	47.10	109.95	-62.85	Peak
6	0.118	15.63	23.41	39.04	106.18	-67.14	Peak



Site : Chamber
Condition : 3m
Project No. : 2504S23848E-RF
Polarization : Parallel Tester: Roger Ling
Test Mode : 5G WIFI Transmitting
Note : Adapter
Receiver Setting: RBW:10kHz VBW:30kHz

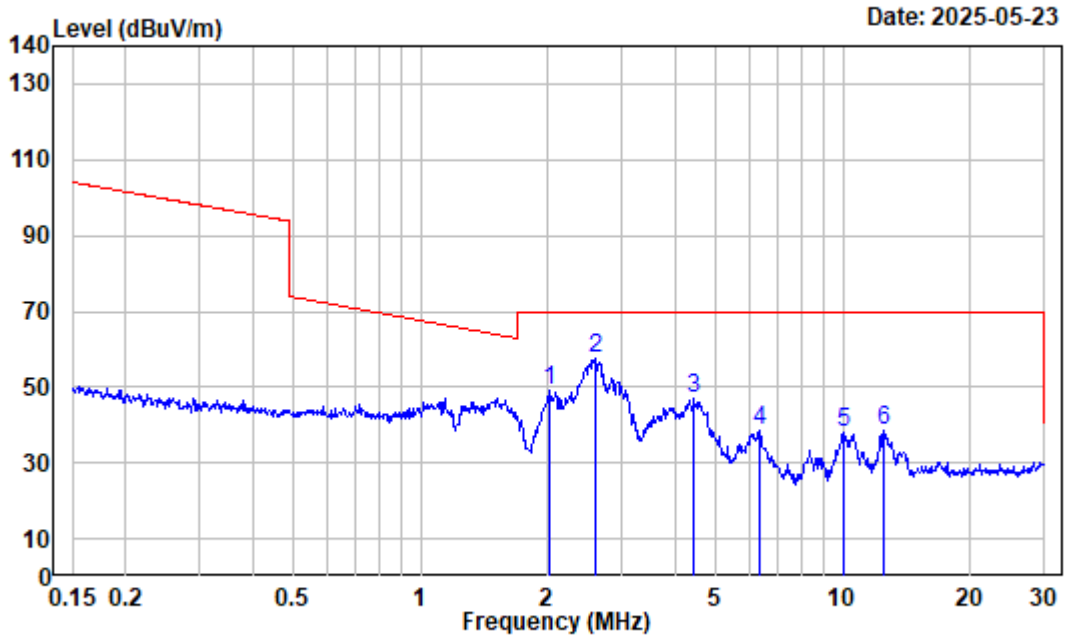
	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	1.503	-3.66	50.82	47.16	63.86	-16.70	Peak
2	2.540	-5.67	62.06	56.39	69.54	-13.15	Peak
3	4.407	-6.31	52.32	46.01	69.54	-23.53	Peak
4	6.252	-6.19	44.73	38.54	69.54	-31.00	Peak
5	10.125	-5.39	43.48	38.09	69.54	-31.45	Peak
6	12.449	-4.85	43.30	38.45	69.54	-31.09	Peak

For Desktop Charger



Site : Chamber
Condition : 3m
Project No. : 2504S23848E-RF
Polarization : Parallel Tester: Roger Ling
Test Mode : 5G WIFI Transmitting
Note : Desktop Charger
Receiver Setting: RBW:300Hz VBW:1kHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	0.010	35.79	27.46	63.25	127.52	-64.27	Peak
2	0.013	34.59	27.93	62.52	125.47	-62.95	Peak
3	0.019	31.79	28.83	60.62	122.00	-61.38	Peak
4	0.035	25.85	21.89	47.74	116.64	-68.90	Peak
5	0.060	21.34	21.93	43.27	111.98	-68.71	Peak
6	0.099	16.53	24.17	40.70	107.67	-66.97	Peak

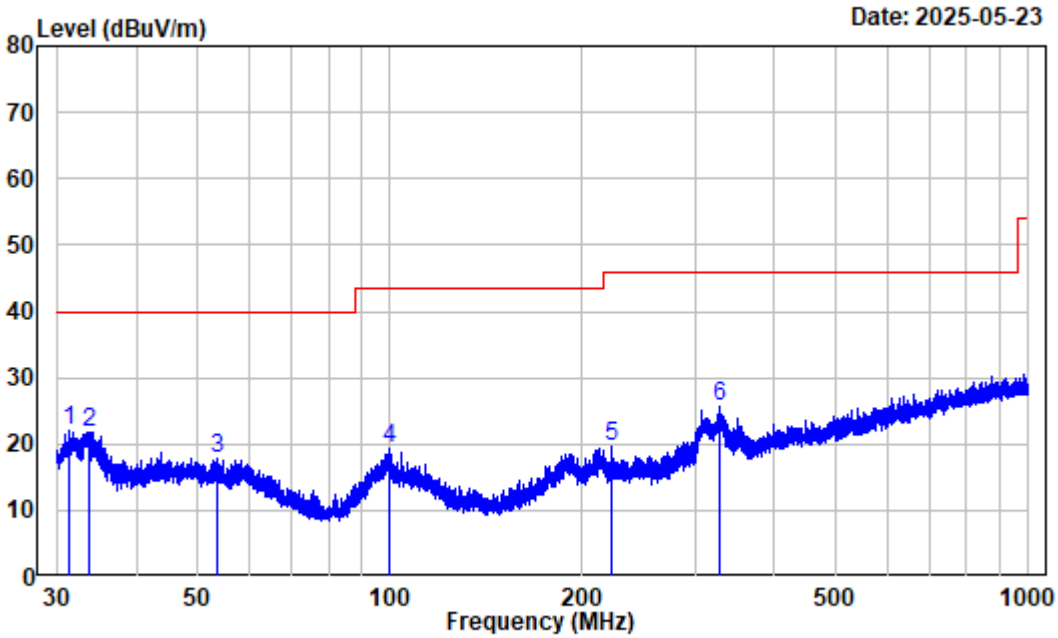


Site : Chamber
Condition : 3m
Project No. : 2504S23848E-RF
Polarization : Parallel Tester: Roger Ling
Test Mode : 5G WIFI Transmitting
Note : Desktop Charger
Receiver Setting: RBW:10kHz VBW:30kHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	2.012	-5.43	54.79	49.36	69.54	-20.18	Peak
2	2.608	-5.70	63.51	57.81	69.54	-11.73	Peak
3	4.430	-6.31	53.14	46.83	69.54	-22.71	Peak
4	6.386	-6.16	44.69	38.53	69.54	-31.01	Peak
5	10.072	-5.41	43.64	38.23	69.54	-31.31	Peak
6	12.449	-4.85	43.37	38.52	69.54	-31.02	Peak

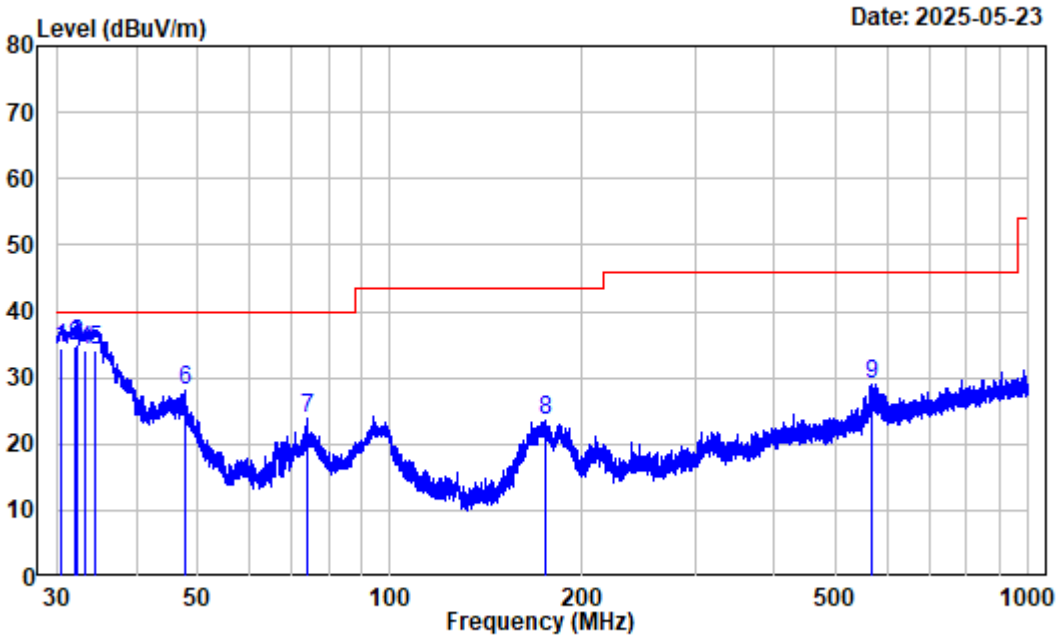
30MHz~1GHz:

For Adapter



Site : Chamber
Condition : 3m HORIZONTAL
Project No. : 2504S23848E-RF Tester: Roger Ling
Test Mode : 5G WIFI Transmitting
Note : Adapter
Receiver Setting: RBW:100kHz VBW:300kHz

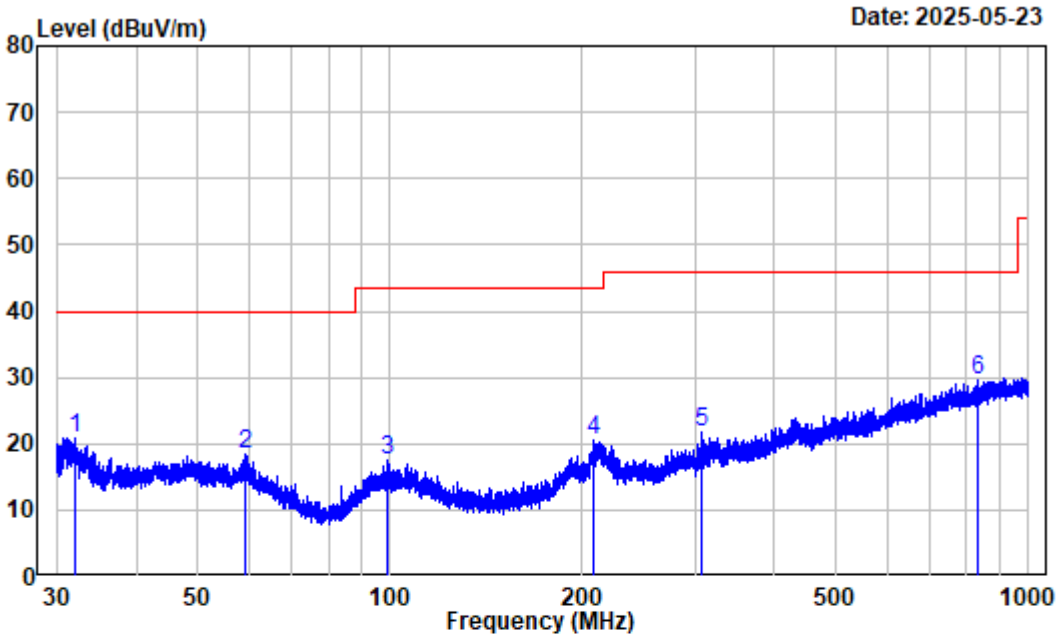
	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	31.482	-12.61	34.78	22.17	40.00	-17.83	Peak
2	33.739	-12.44	34.30	21.86	40.00	-18.14	Peak
3	53.576	-10.94	28.88	17.94	40.00	-22.06	Peak
4	99.746	-11.92	31.32	19.40	43.50	-24.10	Peak
5	221.878	-11.14	30.83	19.69	46.00	-26.31	Peak
6	327.456	-8.69	34.37	25.68	46.00	-20.32	Peak



Site : Chamber
Condition : 3m VERTICAL
Project No. : 2504S23848E-RF Tester: Roger Ling
Test Mode : 5G WIFI Transmitting
Note : Adapter
Receiver Setting: RBW:100kHz VBW:300kHz

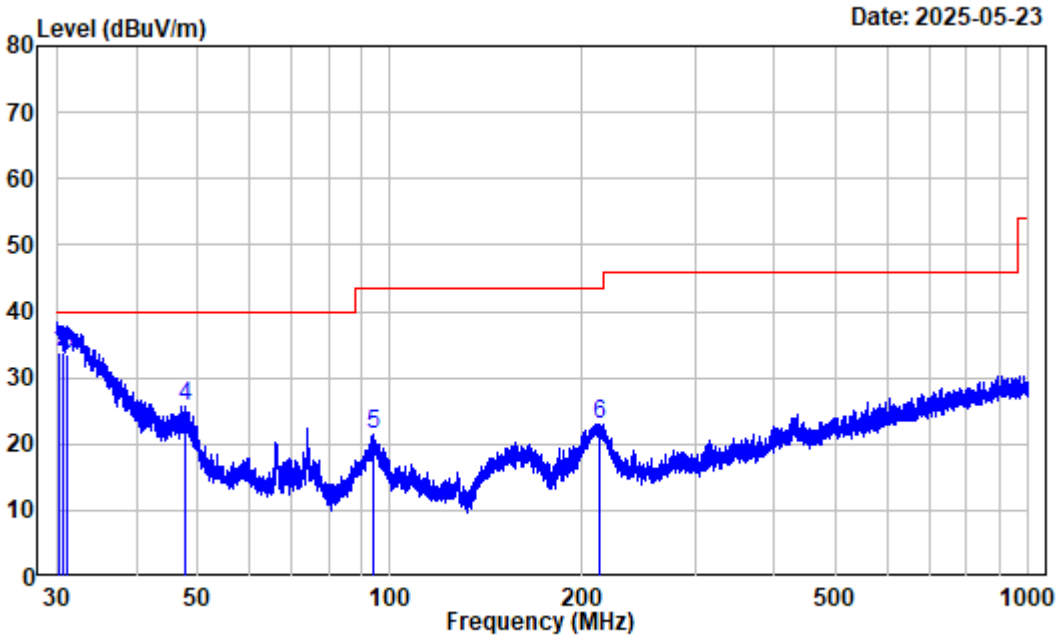
	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	30.584	-12.53	46.88	34.35	40.00	-5.65	QP
2	32.039	-12.61	47.33	34.72	40.00	-5.28	QP
3	32.392	-12.61	47.55	34.94	40.00	-5.06	QP
4	33.357	-12.53	46.79	34.26	40.00	-5.74	QP
5	34.517	-12.28	46.46	34.18	40.00	-5.82	QP
6	47.868	-10.35	38.43	28.08	40.00	-11.92	Peak
7	74.200	-16.24	40.09	23.85	40.00	-16.15	Peak
8	174.730	-13.81	37.42	23.61	43.50	-19.89	Peak
9	567.368	-3.90	32.89	28.99	46.00	-17.01	Peak

For Desktop Charger



Site : Chamber
Condition : 3m HORIZONTAL
Project No. : 2504S23848E-RF Tester: Roger Ling
Test Mode : 5G WIFI Transmitting
Note : Desktop Charger
Receiver Setting: RBW:100kHz VBW:300kHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	32.011	-12.61	33.54	20.93	40.00	-19.07	Peak
2	59.310	-10.71	29.08	18.37	40.00	-21.63	Peak
3	98.833	-12.04	29.51	17.47	43.50	-26.03	Peak
4	207.941	-11.22	31.65	20.43	43.50	-23.07	Peak
5	307.831	-9.53	31.15	21.62	46.00	-24.38	Peak
6	830.400	-0.10	29.66	29.56	46.00	-16.44	Peak



Site : Chamber
Condition : 3m VERTICAL
Project No. : 2504S23848E-RF Tester: Roger Ling
Test Mode : 5G WIFI Transmitting
Note : Desktop Charger
Receiver Setting: RBW:100kHz VBW:300kHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	30.317	-12.48	46.40	33.92	40.00	-6.08	QP
2	30.624	-12.53	46.29	33.76	40.00	-6.24	QP
3	31.207	-12.61	46.00	33.39	40.00	-6.61	QP
4	47.742	-10.37	35.97	25.60	40.00	-14.40	Peak
5	94.387	-12.92	34.24	21.32	43.50	-22.18	Peak
6	212.922	-11.13	34.13	23.00	43.50	-20.50	Peak

1GHz-40GHz: please refer to the Appendix.

FCC §15.407(a)(e)-BANDWIDTH

Applicable Standard

The maximum power spectral density is measured as a conducted emission by direct connection of a calibrated test instrument to the equipment under test. If the device cannot be connected directly, alternative techniques acceptable to the Commission may be used. Measurements in the 5.725-5.85 GHz band are made over a reference bandwidth of 500 kHz or the 26 dB emission bandwidth of the device, whichever is less. Measurements in the 5.15-5.25 GHz, 5.25-5.35 GHz, and the 5.47-5.725 GHz bands are made over a bandwidth of 1 MHz or the 26 dB emission bandwidth of the device, whichever is less. A narrower resolution bandwidth can be used, provided that the measured power is integrated over the full reference bandwidth.

Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

Test Procedure

According to KDB789033 D02 section II.C. and section II.D.

1. Emission Bandwidth (EBW)
a) Set RBW = approximately 1% of the emission bandwidth.
b) Set the VBW > RBW.
c) Detector = Peak.
d) Trace mode = max hold.
e) Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

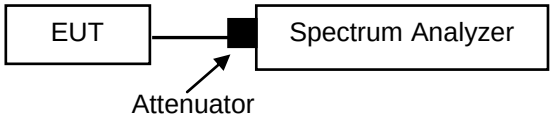
2. **Minimum Emission Bandwidth for the band 5.725-5.85 GHz**
Section 15.407(e) specifies the minimum 6 dB emission bandwidth of at least 500 KHz for the band 5.725-5.85 GHz. The following procedure shall be used for measuring this bandwidth:
a) Set RBW = 100 kHz.
b) Set the video bandwidth (VBW) ≥ 3 × RBW.
c) Detector = Peak.
d) Trace mode = max hold.
e) Sweep = auto couple.
f) Allow the trace to stabilize.
g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

3. 99% Occupied Bandwidth
The 99% occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission. Measurement of the 99% occupied bandwidth is *required* only as a condition for using the optional bandedge measurement techniques described in II.G.3.d). Measurements of 99% occupied bandwidth may also optionally be used in lieu of the EBW to define the minimum frequency range over which the spectrum is integrated when measuring maximum conducted output power as described in II.E. However, the EBW must be measured to determine bandwidth dependent limits on maximum conducted output power in accordance with Section 15.407(a).

The following procedure shall be used for measuring (99%) power bandwidth:

1. Set center frequency to the nominal EUT channel center frequency.
2. Set span = 1.5 times to 5.0 times the OBW.
3. Set RBW = 1% to 5% of the OBW
4. Set VBW ≥ 3 × RBW
5. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
6. Use the 99% power bandwidth function of the instrument (if available).
7. If the instrument does not have a 99% power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5% of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.

Note: For devices that use channel aggregation refer to III.A and III.C for determining 99% bandwidth.



Test Data

Please refer to the Appendix.

FCC §15.407(a) (1) (3)-CONDUCTED TRANSMITTER OUTPUT POWER

Applicable Standard

For an indoor access point operating in the band 5.15–5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For client devices in the 5.15–5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For an outdoor access point operating in the band 5.15–5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

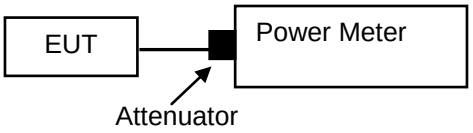
Test Procedure

According to KDB789033 D02 section II.E.3.a).

1. Place the EUT on a bench and set it in transmitting mode.

2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to one test equipment.

3. Add a correction factor to the display.



Test Data

Please refer to the Appendix.

FCC §15.407(a) (1) (3)-POWER SPECTRAL DENSITY

Applicable Standard

For an indoor access point operating in the band 5.15–5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For an outdoor access point operating in the band 5.15–5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

For client devices in the 5.15–5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

Test Procedure

According to KDB 789033 D02 General UNII Test Procedures New Rules v02r01

Duty cycle ≥98%

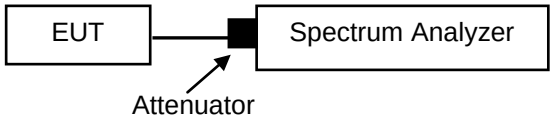
KDB 789033 D02 General UNII Test Procedures New Rules v02r01 Method SA-1 should be applied.

Duty cycle <98%, duty cycle variations are less than ±2%

KDB 789033 D02 General UNII Test Procedures New Rules v02r01 Method SA-2 should be applied.

Duty cycle <98%, duty cycle variations exceed ±2%

KDB 789033 D02 General UNII Test Procedures New Rules v02r01 Method SA-3 should be applied.



Test Data

Please refer to the Appendix.

APPENDIX

Frequency band	Remark
Radiated Spurious Emissions Above 1GHz Test Result	Refer to 2504S23848E-RF-00D-Appendix A(RSE Above 1GHz Test Result)
RF Conducted Test Result	Refer to 2504S23848E-RF-00D-Appendix B(RF Conducted Test Result)

EXHIBIT A-EUT PHOTOGRAPHS

Please refer to the Attachment: 2504S23848E-RF EUT EXTERNAL PHOTOGRAPHS and 2504S23848E-RF EUT INTERNAL PHOTOGRAPHS.

EXHIBIT B-TEST SETUP PHOTOGRAPHS

Please refer to the Attachment: 2504S23848E-RF-00D TEST SETUP PHOTOGRAPHS.

******* END OF REPORT *******