FCC PART 15B

TEST REPORT

For

QUANZHOU KAILI ELECTRONICS CO., LTD.

Kaili Electronic Industrial Park(Photoelectric Information Base), Xiamei Town, Nanan, Quanzhou City, Fujian Province, China

FCC ID: 2AQX5KD-UV5R

Report Type:	**Product Name:**
Original Report	Two Way Radio

Report Number:	2407Y44307E-EM-01
Report Date:	2024-10-16
Reviewed By:	Stein Peng
Approved By:	Miles Chen
Prepared By:	Bay Area Compliance Laboratories Corp. (Xiamen) Unit 102, No. 902 Meifeng South Road, Binhai West Avenue, Science and Technology Innovation Park, Torch High tech Zone XiaMen Tel: +86-592-3200111 www.baclcorp.com.cn

TABLE OF CONTENTS

REPORT REVISION HISTORY

Number of Revisions	Report No.	Version	Issue Date	Description
0	2407Y44307E-EM-01	R1V1	2024-10-16	Initial Release

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Applicant:		QUANZHOU KAILI ELECTRONICS CO., LTD.
Product Name:		Two Way Radio
Tested Model:		KD-UV-5R
Charger Information	Model:	KC-Z4050-T4
	Input:	DC 5V, 1A
	Output:	DC 8.4V, 0.6A
Power Supply:		DC 7.4V from battery or DC 8.4V from charger
★Highest Operating Frequency:		470 MHz
EUT Receive Status:		Good
Note: *1. The highest operating frequency is provided by the applicant.* *2. All measurement and test data in this report was gathered from production sample serial number: 2SOS-1 (Assigned by the BACL (Xiamen). The EUT was received on 2024-10-11).*		

Objective

This report is prepared for *QUANZHOU KAILI ELECTRONICS CO., LTD.* in accordance with Part 2-Subpart J, and Part 15-Subparts A and B of the Federal Communication Commission's rules.

Test Facility

The test site used by Bay Area Compliance Laboratories Corp. (Xiamen) to collect test data is located on Unit 102, No. 902 Meifeng South Road, Binhai West Avenue, Science and Technology Innovation Park, Torch High tech Zone XiaMen.

Bay Area Compliance Laboratories Corp. (Xiamen) Lab is accredited to ISO/IEC 17025 by A2LA (Certificate Number: 7134.01) and the lab has been recognized as the FCC accredited lab under the KDB 974614 D01, the FCC Designation No. : CN1384.

Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the product as specified in CISPR 16-4-2. This uncertainty represents expanded uncertainty expressed at 95% confidence level using a coverage factor of k=2.

$$u_c(y) = \sqrt{\sum_i c_i^2 \; u^2(x_i)}$$

Item	Frequency Range	U_{lab} = 2 u_c (y) (Confidence of 95%)
Conducted Emission	150kHz-30MHz	2.33dB
Radiated Emission	30MHz~200MHz	4.38dB
	200MHz~1GHz	4.50dB
	1GHz~6GHz	4.58dB
Humidity		5%
Temperature		1℃

SYSTEM TEST CONFIGURATION

Test Mode and Voltage

The system was configured for testing in a typical mode (as normally used by a typical user).	
Test mode:	Test Mode 1: Charging & Scanning Test Mode 2: Charging & Receiving
Test voltage:	Test Mode 1: DC 8.4V from charger(AC 120V/60Hz) Test Mode 2: DC 8.4V from charger(AC 120V/60Hz)
Remark:	During all emission tests, the EUT was configured to measure its highest possible emission level and the worst case's test data was presented in this test report.

Description of Test Configuration

Operation Modes	Operation Frequency Range (MHz)	Test Frequency (MHz)
Scanning	136-174 400-470	136-174 400-470
VHF Receiving	136-174	136.0125, 155, 173.9875
UHF Receiving	400-470	400.0125, 435, 469.9875

EUT Exercise Software

No exercise software was used to test.

Special Accessories

No special accessory was used.

Equipment Modifications

No modification was made to the EUT tested.

Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
HP	RF Communications test set	8920A	3524A07202
/	Antenna	/	/
Jiangxi Jian Aohai Technology Co.,Ltd.	POWER ADAPTER	A319-050200U-US2	/

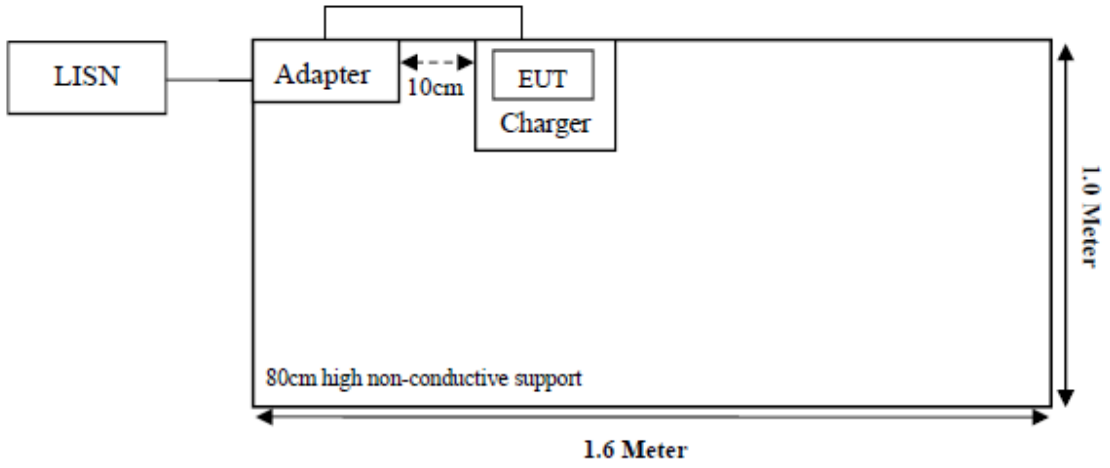
External I/O Cable

Cable Description	Length (m)	From Port	To Port
Antenna Cable	3.0	8920A	Antenna

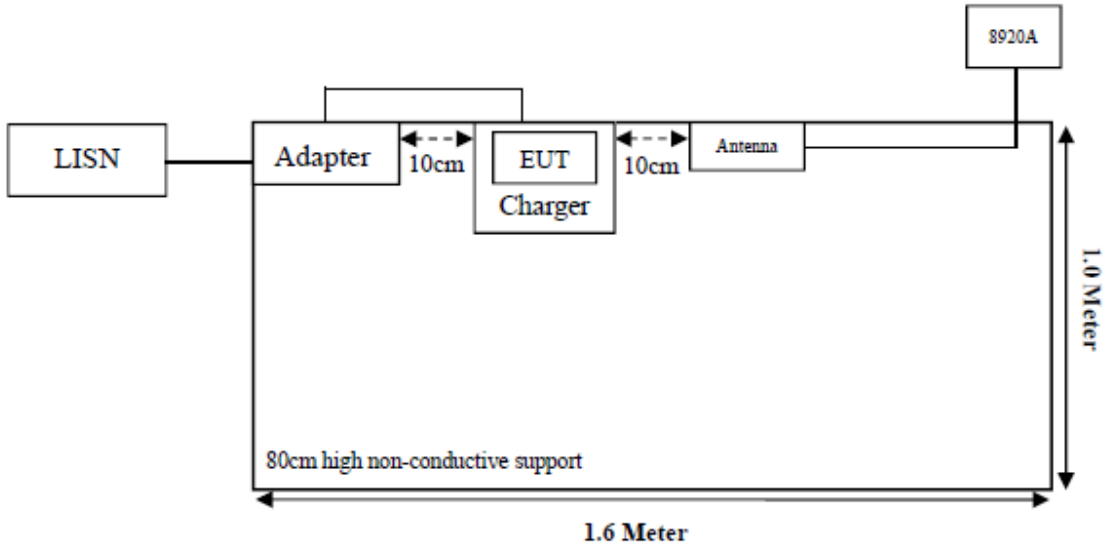
Block Diagram of Test Setup

Conducted Emission:

Test Mode 1:

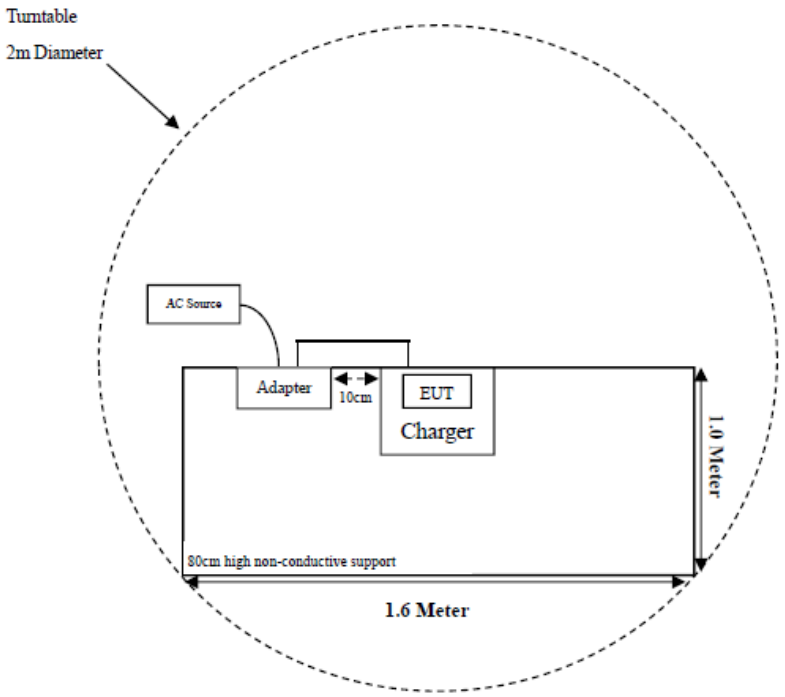


Test Mode 2:



Radiated Emission:

Test Mode 1:



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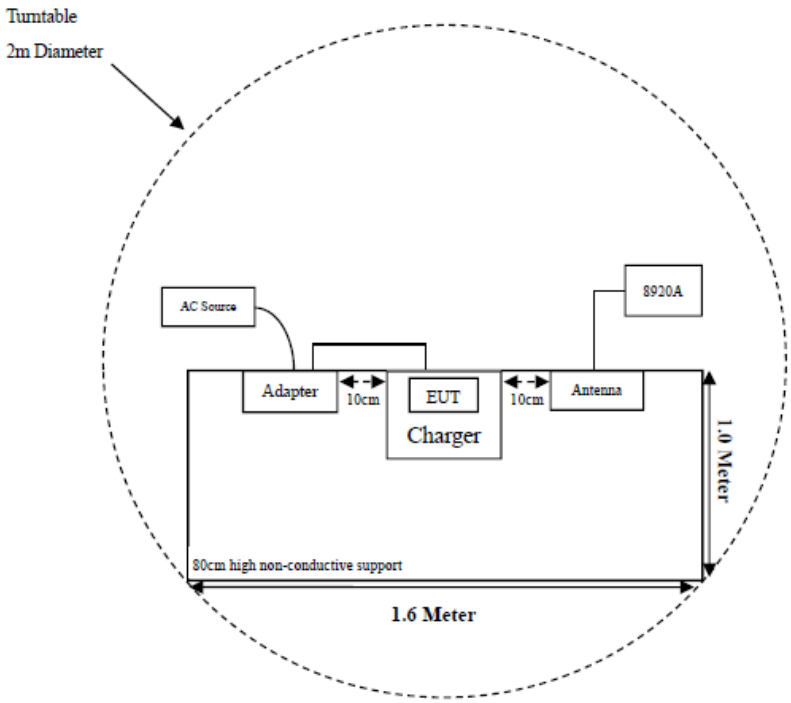


SUMMARY OF TEST RESULTS

Rule Part	Description of Test	Results
FCC§15.107	Conducted Emission	Compliant
FCC§15.109	Radiated Emission	Compliant
FCC §15.121(b)	Scanning receivers and frequency converters used with scanning receivers	Compliant

TEST EQUIPMENT LIST

Test Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due Date
Conducted Emission					
EMI Test Receiver	Rohde & Schwarz	ESR	103105	2024/03/29	2025/03/28
LISN	Rohde & Schwarz	ENV216	100129	2024/03/29	2025/03/28
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	0357.8810.54	2024/03/29	2025/03/28
Coaxial Cable	XINHANGWEIBO	XH400T-N-4M	CC001	2024/03/29	2025/03/28
Test Software	Audix	E3	18621a	N/A	N/A
Radiated Emission 30 MHz to 1 GHz					
EMI Test Receiver	Rohde & Schwarz	ESR	103103	2024/03/29	2025/03/28
Antenna	Sunol Sciences	JB6	A122022-5	2023/07/27	2026/07/26
Amplifier	Sonoma	310B	120903	2024/03/29	2025/03/28
Coaxial Cable	XINHANGWEIBO	XH400T-N-4M	CC002	2024/03/29	2025/03/28
Coaxial Cable	XINHANGWEIBO	XH460B-N-2M	CC006	2024/03/29	2025/03/28
Coaxial Cable	XINHANGWEIBO	XH460B-N-12M	CC007	2024/03/29	2025/03/28
Test Software	Audix	E3	18621a	N/A	N/A
Radiated Emission Above 1 GHz					
Spectrum Analyzer	Rohde & Schwarz	FSV40-N	102051	2024/03/29	2025/03/28
Double Ridge Guide Horn Antenna	A.H.Systems	SAS-571	1980	2023/07/28	2026/07/27
Preamplifier	A.H.Systems	PAM-0118P	489	2024/03/29	2025/03/28
Coaxial Cable	XINHANGWEIBO	XH800A-N-6M	CC003	2024/03/29	2025/03/28
Coaxial Cable	XINHANGWEIBO	XH800A-N-1M	CC005	2024/03/29	2025/03/28
Test Software	Audix	E3	18621a	N/A	N/A
Scanning Receiver					
Coaxial Cable	N/A	N/A	N/A	Each time	Each time
RF Communications test set	HP	8920A	3524A07202	2024/04/26	2025/04/25
Power Splitter	narda	4426LB-2	1661	N/A	N/A
Microwave Analog Signal Generator	Agilent	N5183A	MY47420335	2024/03/29	2025/03/28
Attenuator	Electronic Corporation	30-WA-FFN-30	1172435	2024/03/29	2025/03/28

Statement of Traceability: Bay Area Compliance Laboratories Corp. (Xiamen) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

FCC §15.107 - CONDUCTED EMISSION

Applicable Standard

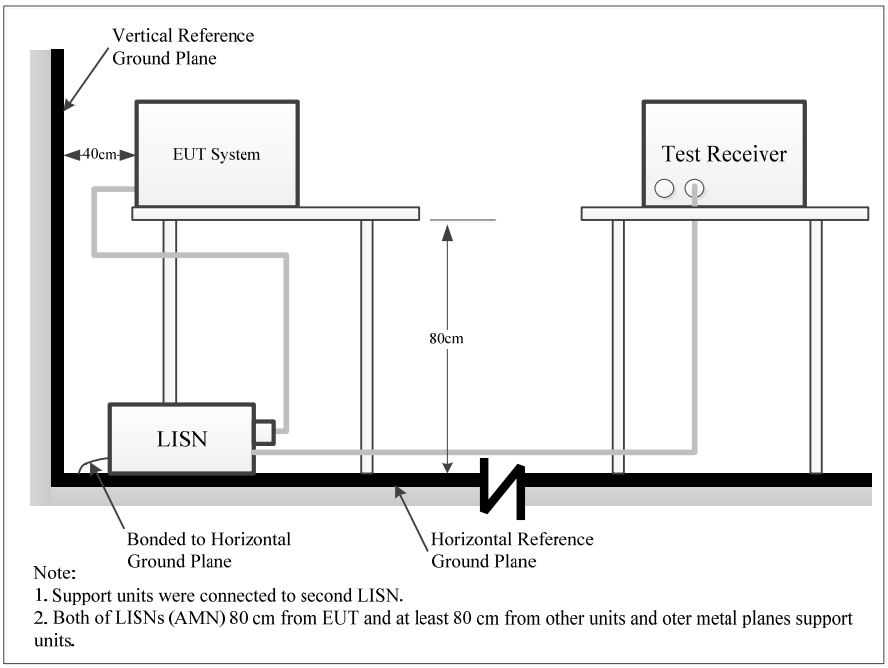
FCC §15.107

(a) Except for Class A digital devices, for equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 μH/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the band edges.

Frequency of emission (MHz)	Conducted limit (dBμV)	
	Quasi-peak	Average
0.15–0.5	66 to 56*	56 to 46*
0.5–5	56	46
5–30	60	50

*Decreases with the logarithm of the frequency.

Test System Setup



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

The measurement procedure of test setup is according with ANSI C63.4-2014. The related limit was specified in FCC Part 15.107 Class B limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

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	RBW	VBW	Detector
150 kHz – 30 MHz	9 kHz	30 kHz	QP/AV

Test Procedure

The frequency and amplitude of the six highest ac power-line conducted emissions relative to the limit, measured over all the current-carrying conductors of the EUT power cords, and the operating frequency or frequency to which the EUT is tuned (if appropriate), should be reported, unless such emissions are more than 20 dB below the limit. AC power-line conducted emissions measurements are to be separately carried out only on each of the phase ("hot") line(s) and (if used) on the neutral line(s), but not on the ground [protective earth] line(s). If less than six emission frequencies are within 20 dB of the limit, then the noise level of the measuring instrument at representative frequencies should be reported. The specific conductor of the power-line cord for each of the reported emissions should be identified. Measure the six highest emissions with respect to the limit on each current-carrying conductor of each power cord associated with the EUT (but not the power cords of associated or peripheral equipment that are part of the test configuration). Then, report the six highest emissions with respect to the limit from among all the measurements identifying the frequency and specific current carrying conductor identified with the emission. The six highest emissions should be reported for each of the current-carrying conductors, or the six highest emissions may be reported over all the current-carrying conductors.

Result &Margin Calculation

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

Factor (dB) = LISN VDF (dB) + Cable Loss (dB) + Transient Limiter Attenuation (dB)
Result (dBµV) = Reading (dBµV) + Factor (dB)

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

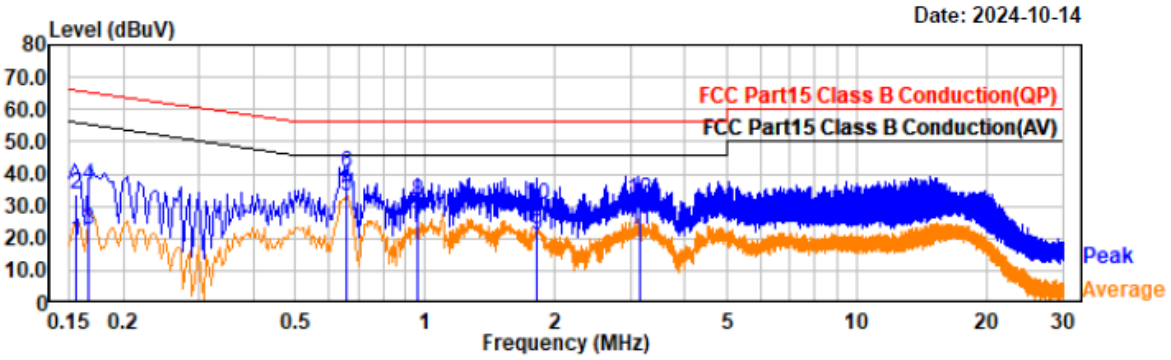
Margin (dB) = Limit (dBµV) –Result (dBµV)

Test Data

Note: The worst case as below

Project No.: 2407Y44307E-EM
Test Mode: Mode 2(136.0125MHz)
EUT Model: KD-UV-5R

Temp/Humi/ATM: 25.2℃/55%/100.1kPa
Tested by: Lucas Lin
Power Source: DC 8.4V from charger (AC 120V/60Hz)

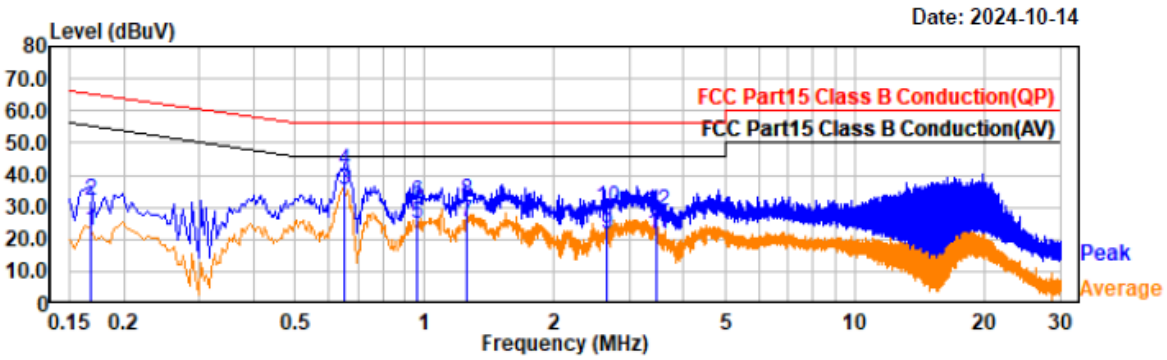


Trace: 1

Freq MHz	Reading dBuV	Factor dB	Result dBuV	Limit dBuV	Margin dB	Phase	Remark
0.16	-1.74	20.88	19.14	55.70	36.56	Line	Average
0.16	12.77	20.88	33.65	65.70	32.05	Line	QP
0.17	2.03	20.79	22.82	55.12	32.30	Line	Average
0.17	15.41	20.79	36.20	65.12	28.92	Line	QP
0.66	12.39	20.46	32.85	46.00	13.15	Line	Average
0.66	19.85	20.46	40.31	56.00	15.69	Line	QP
0.97	2.26	20.88	23.14	46.00	22.86	Line	Average
0.97	10.82	20.88	31.70	56.00	24.30	Line	QP
1.81	-0.25	21.10	20.85	46.00	25.15	Line	Average
1.81	9.24	21.10	30.34	56.00	25.66	Line	QP
3.13	1.91	20.83	22.74	46.00	23.26	Line	Average
3.13	11.16	20.83	31.99	56.00	24.01	Line	QP

Project No.: 2407Y44307E-EM
Test Mode: Mode 2(136.0125MHz)
EUT Model: KD-UV-5R

Temp/Humi/ATM: 25.2℃/55%/100.1kPa
Tested by: Lucas Lin
Power Source: DC 8.4V from charger (AC 120V/60Hz)



Trace: 1

Freq MHz	Reading dBuV	Factor dB	Result dBuV	Limit dBuV	Margin dB	Phase	Remark
0.17	2.13	20.70	22.83	55.10	32.27	Neutral	Average
0.17	11.54	20.70	32.24	65.10	32.86	Neutral	QP
0.65	14.95	20.32	35.27	46.00	10.73	Neutral	Average
0.65	20.95	20.32	41.27	56.00	14.73	Neutral	QP
0.96	4.06	20.86	24.92	46.00	21.08	Neutral	Average
0.96	10.66	20.86	31.52	56.00	24.48	Neutral	QP
1.25	4.52	20.95	25.47	46.00	20.53	Neutral	Average
1.25	10.89	20.95	31.84	56.00	24.16	Neutral	QP
2.64	0.55	20.92	21.47	46.00	24.53	Neutral	Average
2.64	8.72	20.92	29.64	56.00	26.36	Neutral	QP
3.47	0.69	20.81	21.50	46.00	24.50	Neutral	Average
3.47	7.88	20.81	28.69	56.00	27.31	Neutral	QP

FCC §15.109 - RADIATED EMISSION IN FREQUENCY

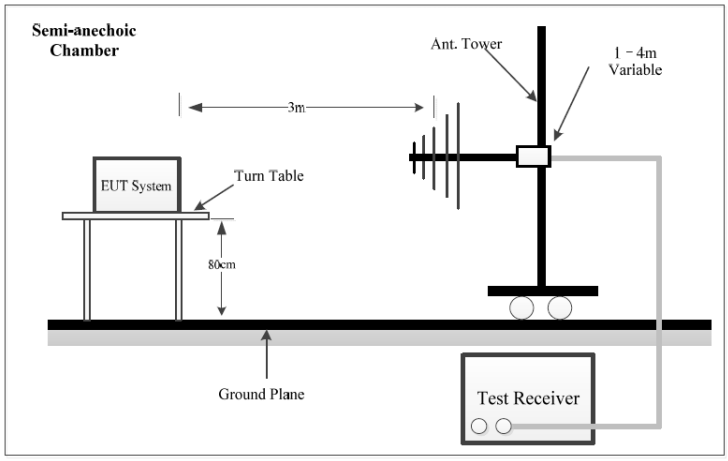
Applicable Standard

FCC§15.109
(a) Except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

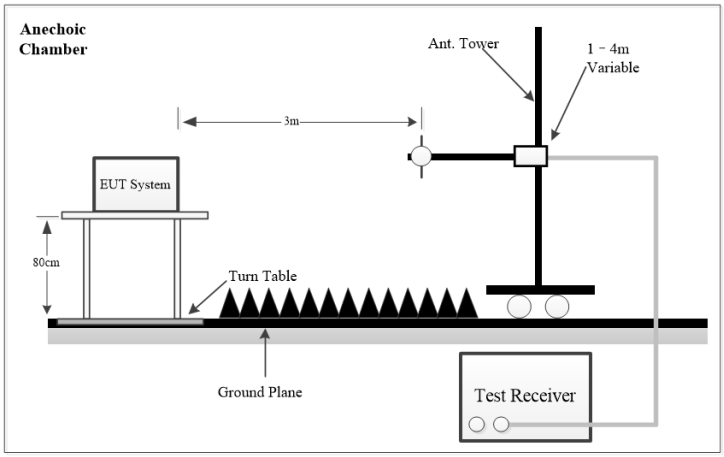
Frequency of emission (MHz)	Field strength (microvolts/meter)
30–88	100
88–216	150
216–960	200
Above 960	500

Test System Setup

Below 1 GHz:



Above 1 GHz:



The radiated emission tests were performed in the 3 meters chamber test site, using the setup accordance

with the ANSI C63.4-2014. The specification used was the FCC Part 15.109 Class B limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.

EMI Test Receiver Setup

The system was investigated from 30 MHz to 5 GHz.

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

Frequency Range	RBW	VBW	Detector
30 MHz – 1000 MHz	120 kHz	300 kHz	QP
Above 1 GHz	1 MHz	3MHz	PK
	1 MHz	10Hz	AV

Test Procedure

The frequency and amplitude of the six highest ac power-line conducted emissions relative to the limit, measured over all the current-carrying conductors of the EUT power cords, and the operating frequency or frequency to which the EUT is tuned (if appropriate), should be reported, unless such emissions are more than 20 dB below the limit. AC power-line conducted emissions measurements are to be separately carried out only on each of the phase ("hot") line(s) and (if used) on the neutral line(s), but not on the ground [protective earth] line(s). If less than six emission frequencies are within 20 dB of the limit, then the noise level of the measuring instrument at representative frequencies should be reported. The specific conductor of the power-line cord for each of the reported emissions should be identified. Measure the six highest emissions with respect to the limit on each current-carrying conductor of each power cord associated with the EUT (but not the power cords of associated or peripheral equipment that are part of the test configuration). Then, report the six highest emissions with respect to the limit from among all the measurements identifying the frequency and specific current carrying conductor identified with the emission. The six highest emissions should be reported for each of the current-carrying conductors, or the six highest emissions may be reported over all the current-carrying conductors.

Result &Margin Calculation

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

Factor (dB/m) =Antenna Factor (dB/m) + Cable Loss (dB) - Amplifier Gain (dB)
Result (dBμV/m) = Reading (dBμV) + Factor (dB/m)

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

Margin (dB) = Limit (dBμV/m) –Result (dBμV/m)

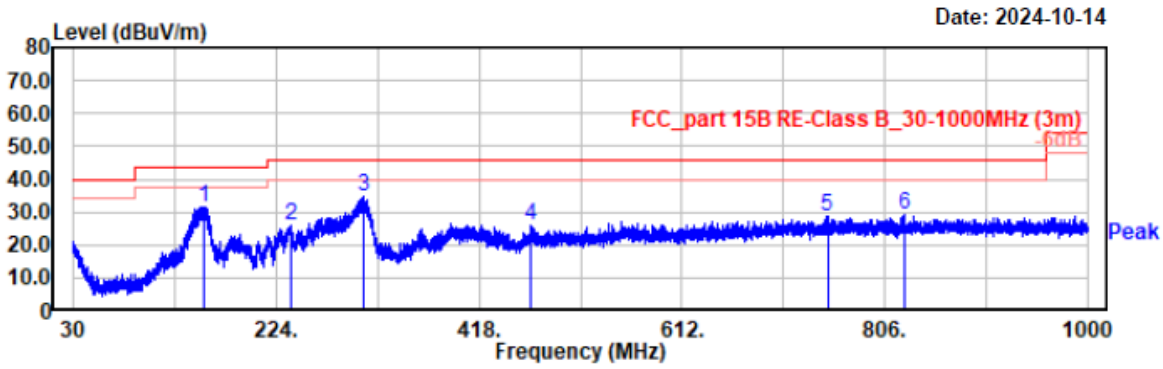
Test Data

Please refer to below plots:

1) 30MHz-1GHz:

Project No.: 2407Y44307E-EM
Test Mode: Mode 1(136-174MHz)
EUT Model: KD-UV-5R
Test distance: 3m

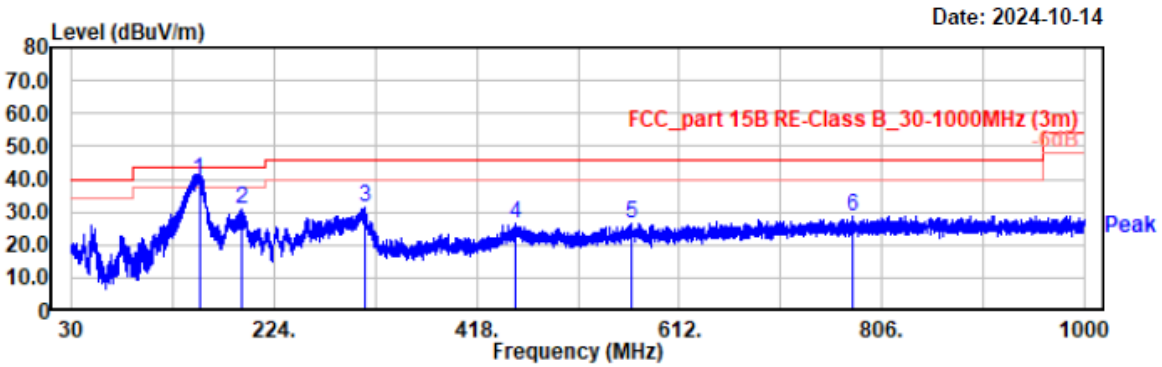
Temp/Humi/ATM: 24.6℃/50%/100.1kPa
Tested by: Jason Hu
Power Source: DC 8.4V from charger (AC 120V/60Hz)



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
155.52	43.02	-11.35	31.67	43.50	11.83	Horizontal	Peak
237.77	37.96	-11.84	26.12	46.00	19.88	Horizontal	Peak
307.91	43.73	-9.07	34.66	46.00	11.34	Horizontal	Peak
467.18	30.18	-4.28	25.90	46.00	20.10	Horizontal	Peak
751.20	28.02	0.54	28.56	46.00	17.44	Horizontal	Peak
825.50	27.59	1.66	29.25	46.00	16.75	Horizontal	Peak

Project No.: 2407Y44307E-EM
Test Mode: Mode 1(136-174MHz)
EUT Model: KD-UV-5R
Test distance: 3m

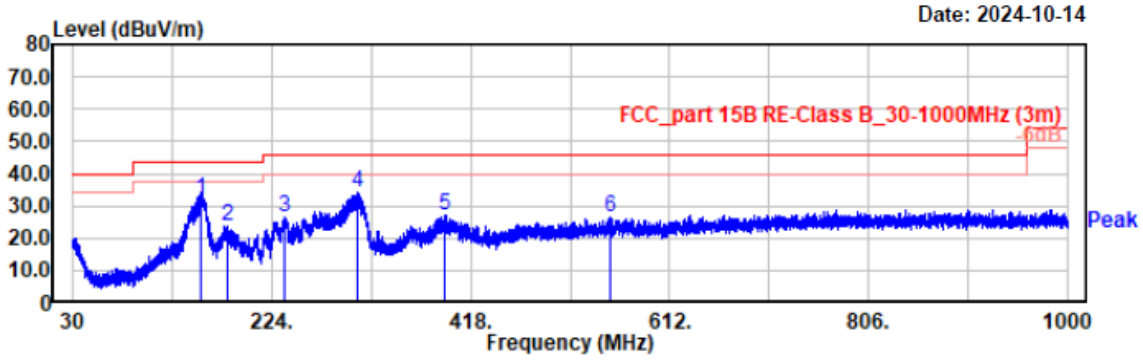
Temp/Humi/ATM: 24.6℃/50%/100.1kPa
Tested by: Jason Hu
Power Source: DC 8.4V from charger (AC 120V/60Hz)



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
152.13	50.90	-11.23	39.67	43.50	3.83	Vertical	QP
193.54	42.92	-12.12	30.80	43.50	12.70	Vertical	Peak
310.33	40.20	-9.01	31.19	46.00	14.81	Vertical	Peak
455.73	31.13	-4.70	26.43	46.00	19.57	Vertical	Peak
566.90	28.95	-2.46	26.49	46.00	19.51	Vertical	Peak
777.97	27.59	1.03	28.62	46.00	17.38	Vertical	Peak

Project No.: 2407Y44307E-EM
Test Mode: Mode 1(400-470MHz)
EUT Model: KD-UV-5R
Test distance: 3m

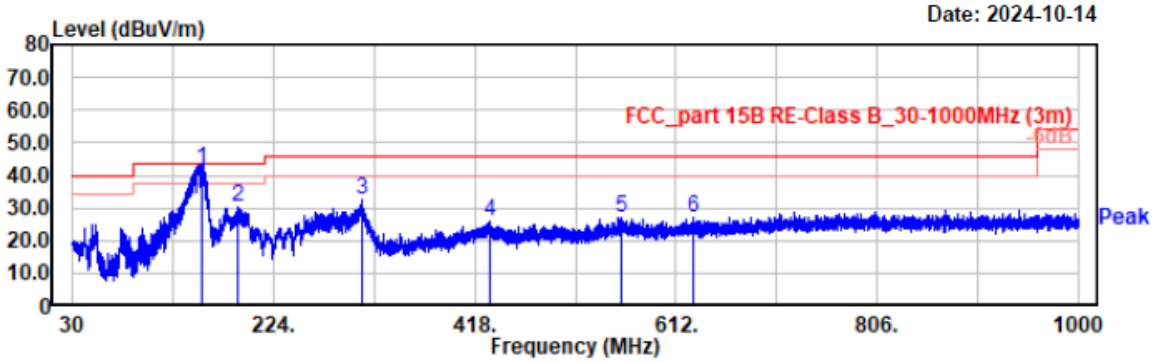
Temp/Humi/ATM: 24.6℃/50%/100.1kPa
Tested by: Jason Hu
Power Source: DC 8.4V from charger (AC 120V/60Hz)



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
155.03	43.46	-11.41	32.05	43.50	11.45	Horizontal	QP
180.25	36.22	-12.36	23.86	43.50	19.64	Horizontal	Peak
236.13	38.60	-11.95	26.65	46.00	19.35	Horizontal	Peak
306.84	43.12	-9.09	34.03	46.00	11.97	Horizontal	Peak
392.00	33.81	-6.64	27.17	46.00	18.83	Horizontal	Peak
554.87	28.96	-2.63	26.33	46.00	19.67	Horizontal	Peak

Project No.: 2407Y44307E-EM
Test Mode: Mode 1(400-470MHz)
EUT Model: KD-UV-5R
Test distance: 3m

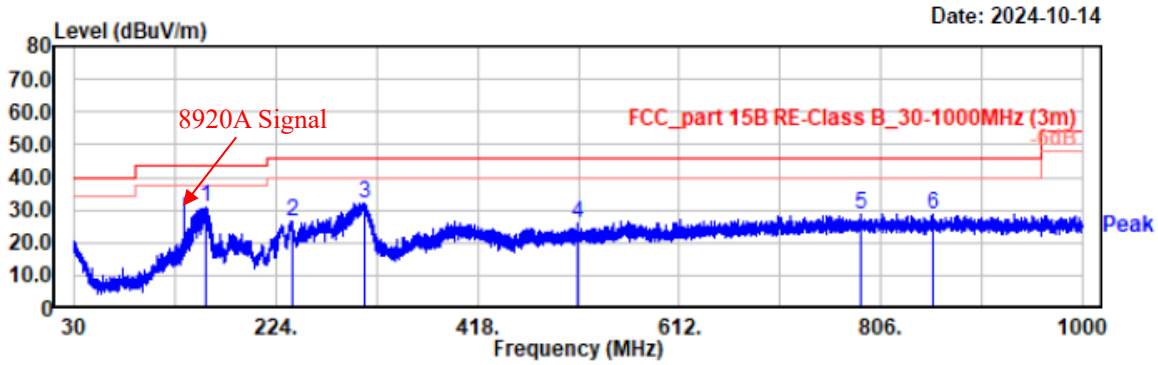
Temp/Humi/ATM: 24.6℃/50%/100.1kPa
Tested by: Jason Hu
Power Source: DC 8.4V from charger (AC 120V/60Hz)



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
154.86	53.49	-11.38	42.11	43.50	1.39	Vertical	QP
190.24	42.34	-12.26	30.08	43.50	13.42	Vertical	Peak
308.88	41.47	-9.04	32.43	46.00	13.57	Vertical	Peak
432.26	31.45	-5.34	26.11	46.00	19.89	Vertical	Peak
559.91	29.72	-2.60	27.12	46.00	18.88	Vertical	Peak
629.36	28.57	-1.38	27.19	46.00	18.81	Vertical	Peak

Project No.: 2407Y44307E-EM
Test Mode: Mode 2(136.0125MHz)
EUT Model: KD-UV-5R
Test distance: 3m

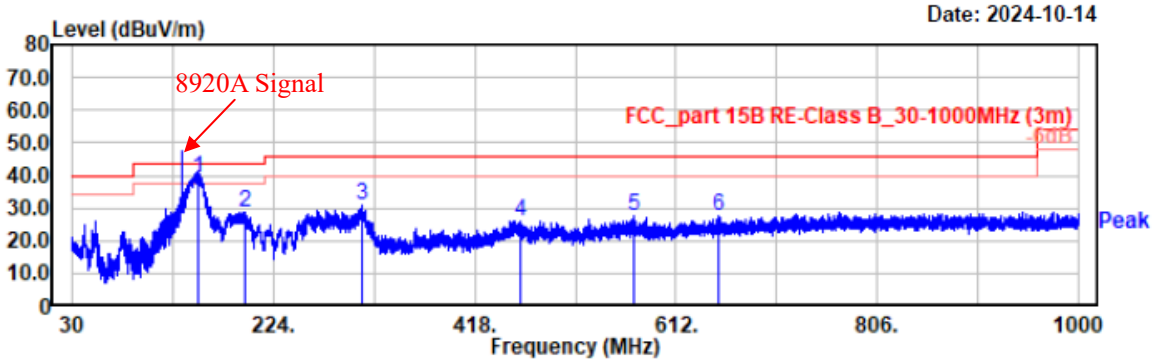
Temp/Humi/ATM: 24.6℃/50%/100.1kPa
Tested by: Jason Hu
Power Source: DC 8.4V from charger
(AC 120V/60Hz)



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
156.49	42.29	-11.39	30.90	43.50	12.60	Horizontal	Peak
239.13	38.15	-11.75	26.40	46.00	19.60	Horizontal	Peak
308.88	41.28	-9.04	32.24	46.00	13.76	Horizontal	Peak
514.22	29.51	-3.41	26.10	46.00	19.90	Horizontal	Peak
787.18	27.62	1.10	28.72	46.00	17.28	Horizontal	Peak
855.66	26.52	1.97	28.49	46.00	17.51	Horizontal	Peak

Project No.: 2407Y44307E-EM
Test Mode: Mode 2(136.0125MHz)
EUT Model: KD-UV-5R
Test distance: 3m

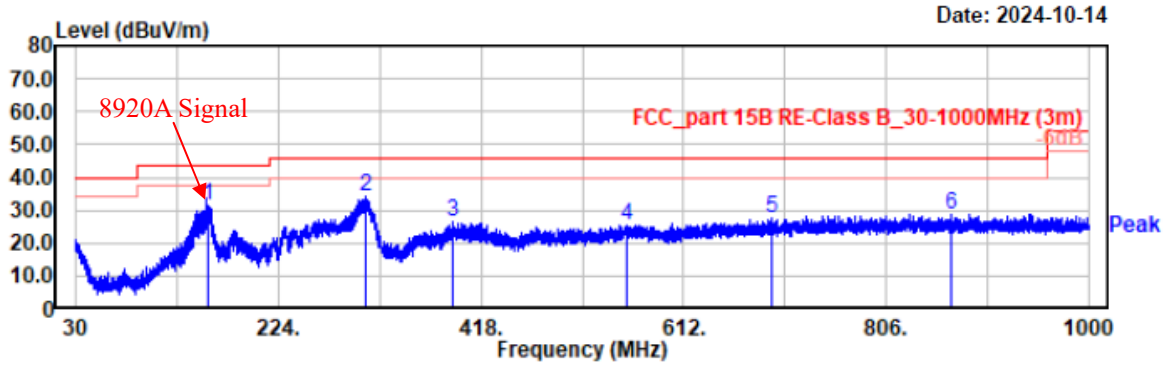
Temp/Humi/ATM: 24.6℃/50%/100.1kPa
Tested by: Jason Hu
Power Source: DC 8.4V from charger
(AC 120V/60Hz)



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
150.86	50.21	-11.14	39.07	43.50	4.43	Vertical	QP
196.74	40.47	-11.79	28.68	43.50	14.82	Vertical	Peak
308.78	39.91	-9.04	30.87	46.00	15.13	Vertical	Peak
462.23	30.71	-4.52	26.19	46.00	19.81	Vertical	Peak
572.23	30.16	-2.47	27.69	46.00	18.31	Vertical	Peak
652.35	28.63	-0.94	27.69	46.00	18.31	Vertical	Peak

Project No.: 2407Y44307E-EM
Test Mode: Mode 2(155MHz)
EUT Model: KD-UV-5R
Test distance: 3m

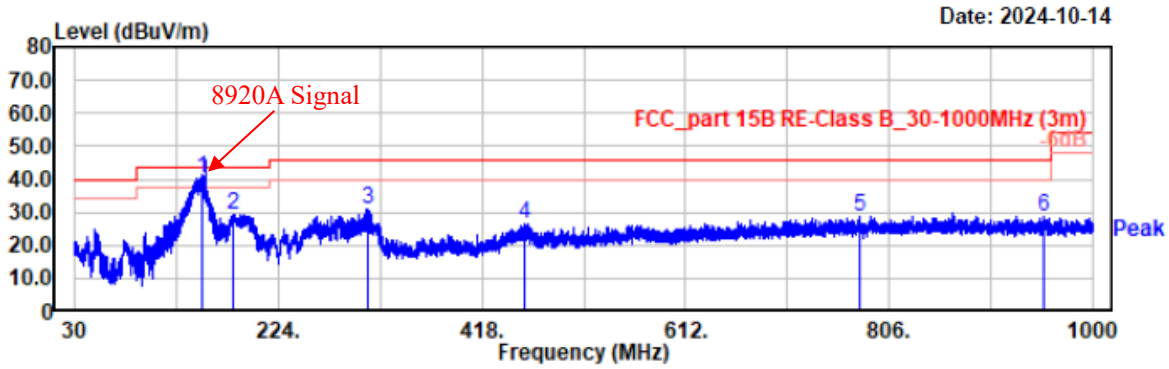
Temp/Humi/ATM: 24.6℃/50%/100.1kPa
Tested by: Jason Hu
Power Source: DC 8.4V from charger
(AC 120V/60Hz)



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
156.97	43.00	-11.48	31.52	43.50	11.98	Horizontal	Peak
307.13	43.10	-9.09	34.01	46.00	11.99	Horizontal	Peak
391.42	32.87	-6.64	26.23	46.00	19.77	Horizontal	Peak
557.39	28.20	-2.61	25.59	46.00	20.41	Horizontal	Peak
696.00	27.89	-0.43	27.46	46.00	18.54	Horizontal	Peak
868.27	26.43	2.15	28.58	46.00	17.42	Horizontal	Peak

Project No.: 2407Y44307E-EM
Test Mode: Mode 2(155MHz)
EUT Model: KD-UV-5R
Test distance: 3m

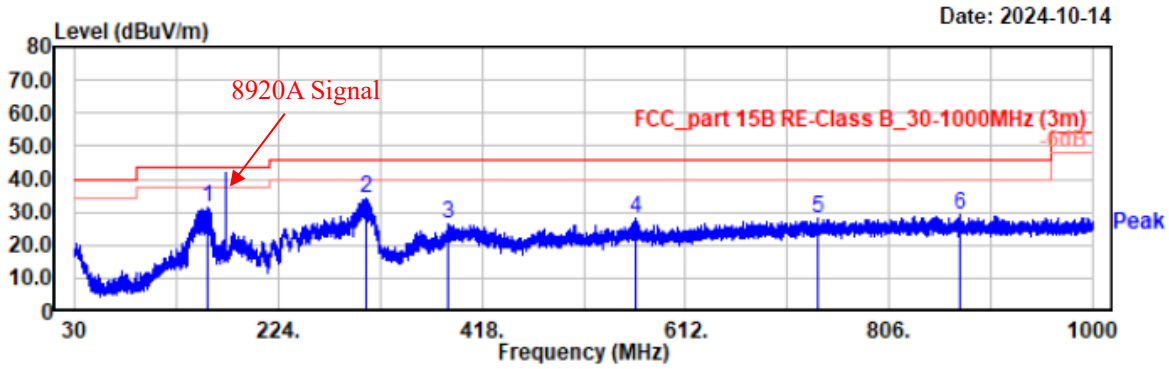
Temp/Humi/ATM: 24.6℃/50%/100.1kPa
Tested by: Jason Hu
Power Source: DC 8.4V from charger
(AC 120V/60Hz)



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
151.15	51.45	-11.15	40.30	43.50	3.20	Vertical	QP
180.64	41.72	-12.36	29.36	43.50	14.14	Vertical	Peak
309.07	40.15	-9.04	31.11	46.00	14.89	Vertical	Peak
457.96	31.24	-4.68	26.56	46.00	19.44	Vertical	Peak
777.58	27.89	1.02	28.91	46.00	17.09	Vertical	Peak
953.83	25.65	3.23	28.88	46.00	17.12	Vertical	Peak

Project No.: 2407Y44307E-EM
Test Mode: Mode 2(173.9875MHz)
EUT Model: KD-UV-5R
Test distance: 3m

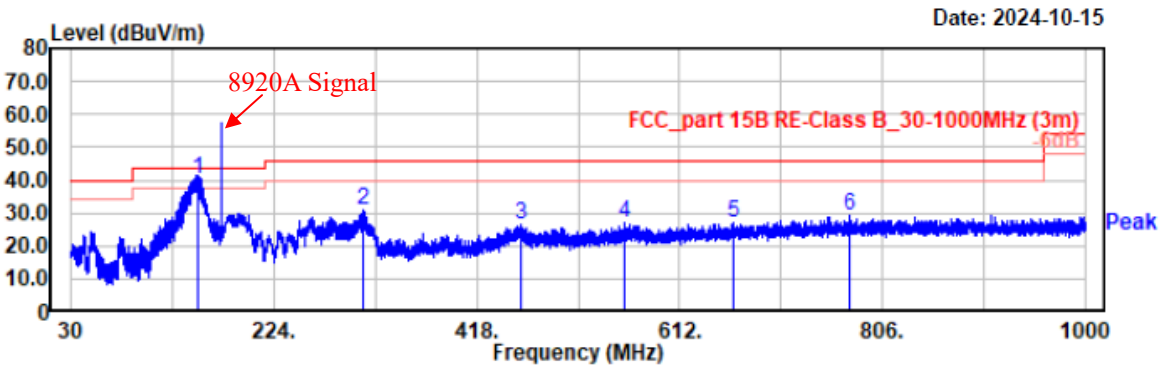
Temp/Humi/ATM: 24.6℃/50%/100.1kPa
Tested by: Jason Hu
Power Source: DC 8.4V from charger (AC 120V/60Hz)



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
157.26	42.90	-11.48	31.42	43.50	12.08	Horizontal	Peak
307.71	43.13	-9.08	34.05	46.00	11.95	Horizontal	Peak
385.51	33.31	-6.87	26.44	46.00	19.56	Horizontal	Peak
564.28	30.42	-2.48	27.94	46.00	18.06	Horizontal	Peak
738.20	27.78	0.32	28.10	46.00	17.90	Horizontal	Peak
872.83	27.00	2.19	29.19	46.00	16.81	Horizontal	Peak

Project No.: 2407Y44307E-EM
Test Mode: Mode 2(173.9875MHz)
EUT Model: KD-UV-5R
Test distance: 3m

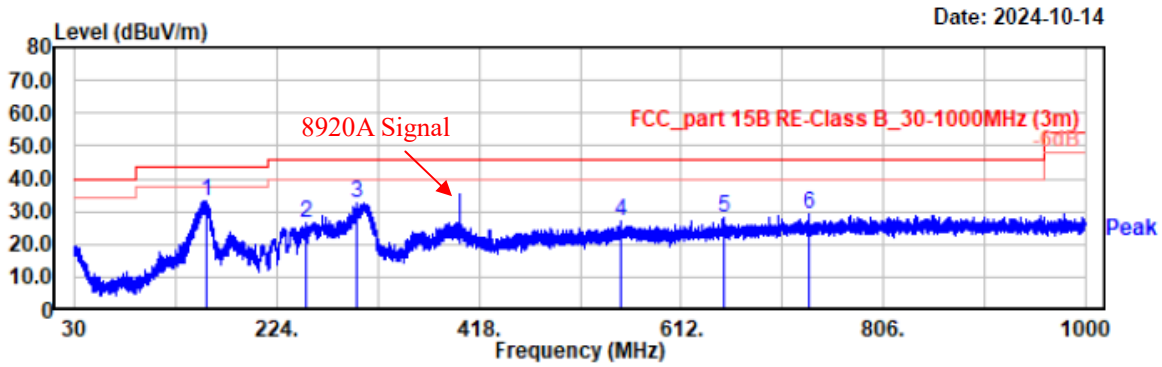
Temp/Humi/ATM: 24.6℃/50%/100.1kPa
Tested by: Jason Hu
Power Source: DC 8.4V from charger
(AC 120V/60Hz)



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
151.64	51.68	-11.18	40.50	43.50	3.00	Vertical	QP
310.04	40.10	-9.02	31.08	46.00	14.92	Vertical	Peak
460.58	31.23	-4.63	26.60	46.00	19.40	Vertical	Peak
560.11	29.63	-2.60	27.03	46.00	18.97	Vertical	Peak
664.19	28.07	-0.76	27.31	46.00	18.69	Vertical	Peak
773.80	28.20	0.92	29.12	46.00	16.88	Vertical	Peak

Project No.: 2407Y44307E-EM
Test Mode: Mode 2(400.0125MHz)
EUT Model: KD-UV-5R
Test distance: 3m

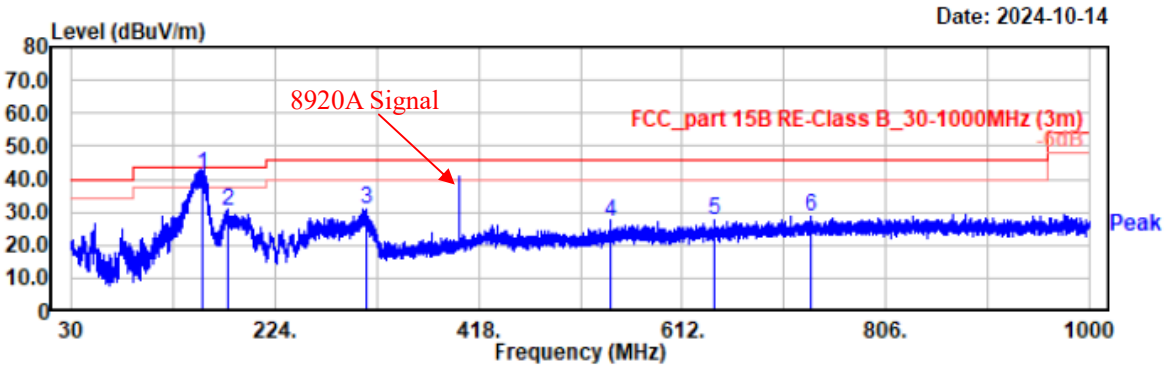
Temp/Humi/ATM: 24.6℃/50%/100.1kPa
Tested by: Jason Hu
Power Source: DC 8.4V from charger
(AC 120V/60Hz)



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
155.91	44.61	-11.31	33.30	43.50	10.20	Horizontal	Peak
252.13	37.96	-11.40	26.56	46.00	19.44	Horizontal	Peak
300.92	41.95	-9.17	32.78	46.00	13.22	Horizontal	Peak
554.29	29.89	-2.64	27.25	46.00	18.75	Horizontal	Peak
652.26	28.86	-0.94	27.92	46.00	18.08	Horizontal	Peak
735.09	28.90	0.31	29.21	46.00	16.79	Horizontal	Peak

Project No.: 2407Y44307E-EM
Test Mode: Mode 2(400.0125MHz)
EUT Model: KD-UV-5R
Test distance: 3m

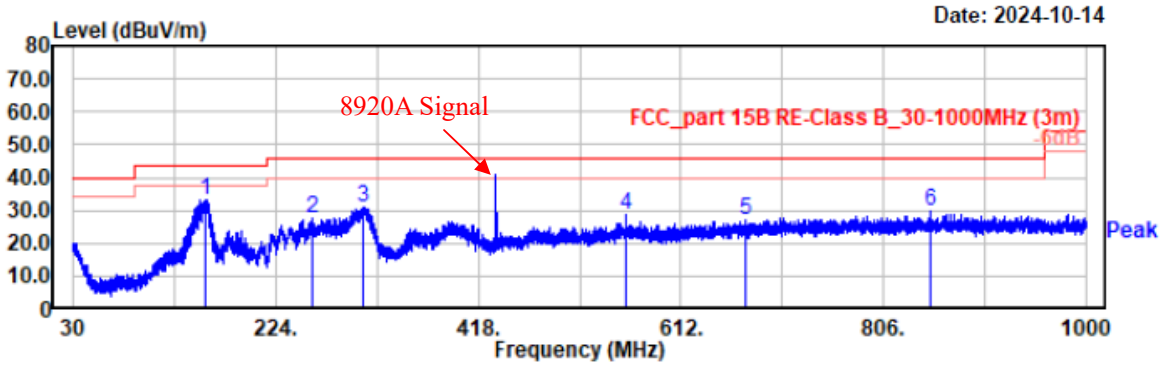
Temp/Humi/ATM: 24.6℃/50%/100.1kPa
Tested by: Jason Hu
Power Source: DC 8.4V from charger (AC 120V/60Hz)



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
154.98	52.66	-11.41	41.25	43.50	2.25	Vertical	QP
179.19	42.68	-12.29	30.39	43.50	13.11	Vertical	Peak
310.23	39.97	-9.02	30.95	46.00	15.05	Vertical	Peak
543.71	30.29	-2.98	27.31	46.00	18.69	Vertical	Peak
642.94	28.58	-1.06	27.52	46.00	18.48	Vertical	Peak
734.61	28.33	0.28	28.61	46.00	17.39	Vertical	Peak

Project No.: 2407Y44307E-EM
Test Mode: Mode 2(435MHz)
EUT Model: KD-UV-5R
Test distance: 3m

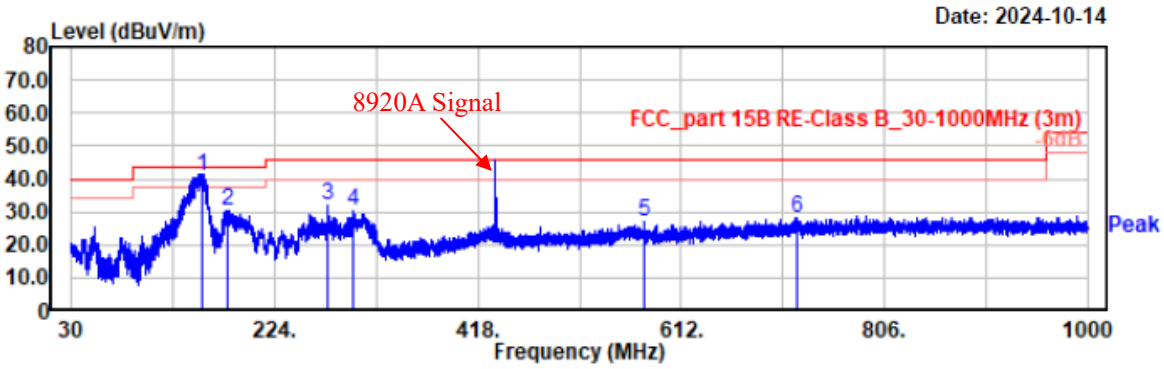
Temp/Humi/ATM: 24.6℃/50%/100.1kPa
Tested by: Jason Hu
Power Source: DC 8.4V from charger
(AC 120V/60Hz)



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
156.29	44.51	-11.35	33.16	43.50	10.34	Horizontal	Peak
258.24	38.99	-11.16	27.83	46.00	18.17	Horizontal	Peak
307.71	39.96	-9.08	30.88	46.00	15.12	Horizontal	Peak
559.14	31.39	-2.61	28.78	46.00	17.22	Horizontal	Peak
674.08	27.68	-0.61	27.07	46.00	18.93	Horizontal	Peak
850.81	27.63	1.94	29.57	46.00	16.43	Horizontal	Peak

Project No.: 2407Y44307E-EM
Test Mode: Mode 2(435MHz)
EUT Model: KD-UV-5R
Test distance: 3m

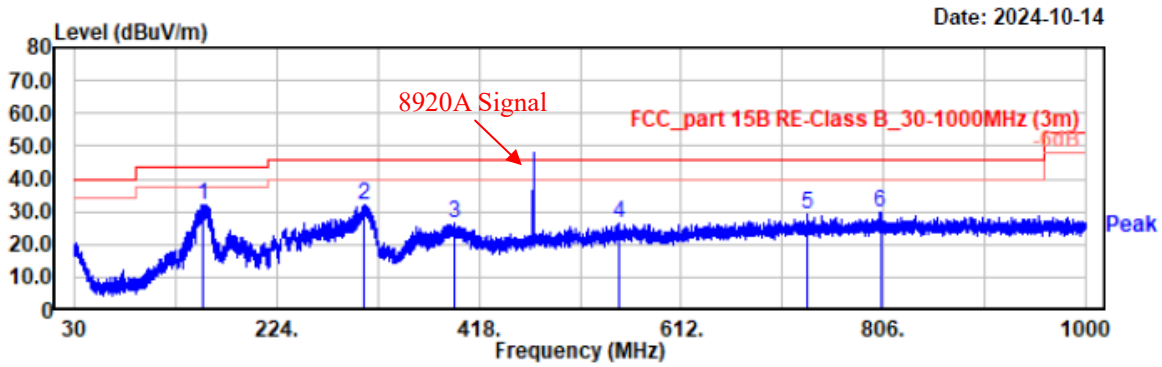
Temp/Humi/ATM: 24.6℃/50%/100.1kPa
Tested by: Jason Hu
Power Source: DC 8.4V from charger
(AC 120V/60Hz)



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
154.16	51.95	-11.24	40.71	43.50	2.79	Vertical	QP
178.60	42.84	-12.24	30.60	43.50	12.90	Vertical	Peak
273.96	41.71	-9.67	32.04	46.00	13.96	Vertical	Peak
298.98	39.61	-9.20	30.41	46.00	15.59	Vertical	Peak
577.08	29.38	-2.55	26.83	46.00	19.17	Vertical	Peak
722.39	28.23	0.05	28.28	46.00	17.72	Vertical	Peak

Project No.: 2407Y44307E-EM
Test Mode: Mode 2(469.9875MHz)
EUT Model: KD-UV-5R
Test distance: 3m

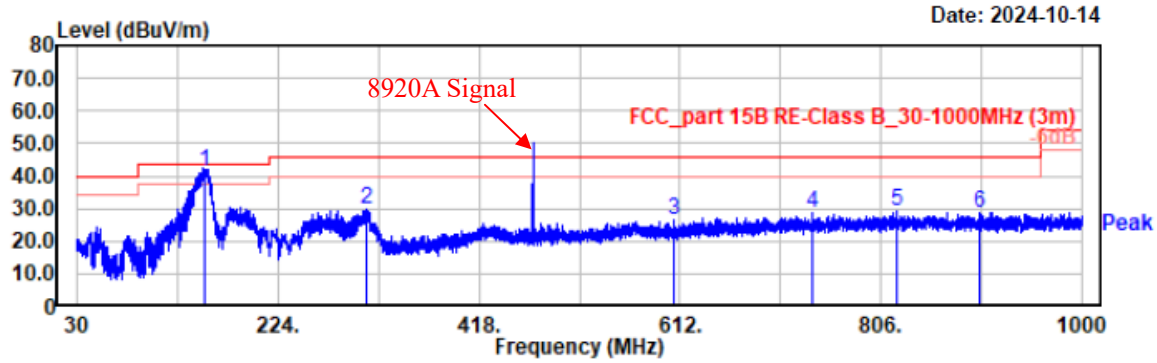
Temp/Humi/ATM: 24.6℃/50%/100.1kPa
Tested by: Jason Hu
Power Source: DC 8.4V from charger
(AC 120V/60Hz)



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
153.58	43.38	-11.26	32.12	43.50	11.38	Horizontal	Peak
308.29	41.25	-9.06	32.19	46.00	13.81	Horizontal	Peak
395.11	32.93	-6.62	26.31	46.00	19.69	Horizontal	Peak
552.93	28.99	-2.68	26.31	46.00	19.69	Horizontal	Peak
733.35	28.80	0.23	29.03	46.00	16.97	Horizontal	Peak
803.28	28.30	1.26	29.56	46.00	16.44	Horizontal	Peak

Project No.: 2407Y44307E-EM
Test Mode: Mode 2(469.9875MHz)
EUT Model: KD-UV-5R
Test distance: 3m

Temp/Humi/ATM: 24.6℃/50%/100.1kPa
Tested by: Jason Hu
Power Source: DC 8.4V from charger
(AC 120V/60Hz)

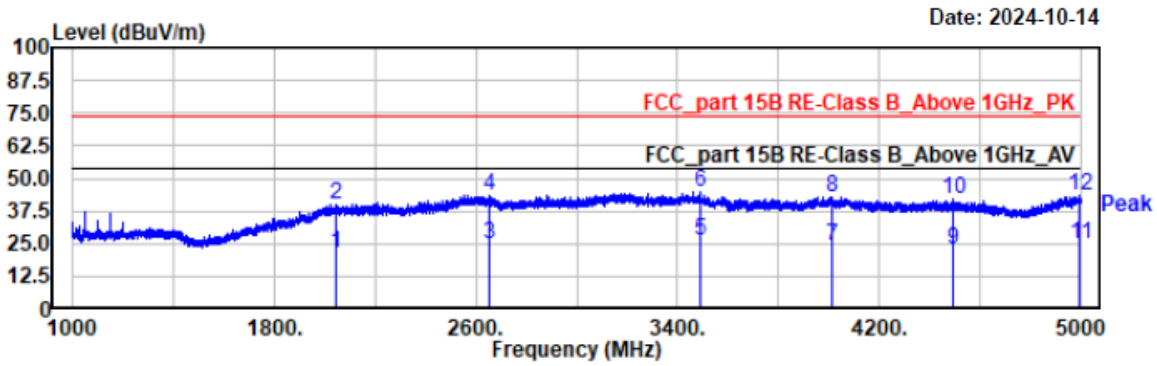


Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
152.80	52.46	-11.30	41.16	43.50	2.34	Vertical	QP
309.17	38.93	-9.04	29.89	46.00	16.11	Vertical	Peak
606.67	28.66	-2.20	26.46	46.00	19.54	Vertical	Peak
740.33	28.63	0.33	28.96	46.00	17.04	Vertical	Peak
821.52	27.38	1.63	29.01	46.00	16.99	Vertical	Peak
901.25	26.36	2.54	28.90	46.00	17.10	Vertical	Peak

2）1GHz ~ 5GHz (Worst Case)

Project No.: 2407Y44307E-EM
Test Mode: Mode 2(400.0125MHz)
EUT Model: KD-UV-5R
Test distance: 3m

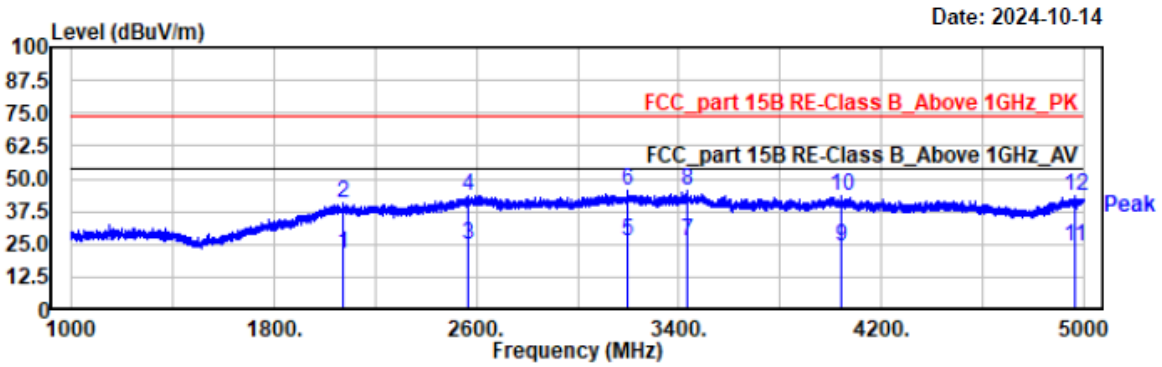
Temp/Humi/ATM: 24.5℃/50%/100.1kPa
Tested by: Jason Hu
Power Source: DC 8.4V from charger (AC 120V/60Hz)



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2044.40	26.61	-5.55	21.06	54.00	32.94	horizontal	Average
2044.40	45.70	-5.55	40.15	74.00	33.85	horizontal	Peak
2650.40	27.29	-2.76	24.53	54.00	29.47	horizontal	Average
2650.40	46.21	-2.76	43.45	74.00	30.55	horizontal	Peak
3487.60	29.31	-3.25	26.06	54.00	27.94	horizontal	Average
3487.60	48.05	-3.25	44.80	74.00	29.20	horizontal	Peak
4012.00	27.43	-3.59	23.84	54.00	30.16	horizontal	Average
4012.00	46.43	-3.59	42.84	74.00	31.16	horizontal	Peak
4494.80	27.49	-4.67	22.82	54.00	31.18	horizontal	Average
4494.80	46.48	-4.67	41.81	74.00	32.19	horizontal	Peak
4996.80	29.18	-4.50	24.68	54.00	29.32	horizontal	Average
4996.80	48.11	-4.50	43.61	74.00	30.39	horizontal	Peak

Project No.: 2407Y44307E-EM
Test Mode: Mode 2(400.0125MHz)
EUT Model: KD-UV-5R
Test distance: 3m

Temp/Humi/ATM: 24.5℃/50%/100.1kPa
Tested by: Jason Hu
Power Source: DC 8.4V from charger (AC 120V/60Hz)



Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2072.40	27.02	-5.78	21.24	54.00	32.76	vertical	Average
2072.40	46.43	-5.78	40.65	74.00	33.35	vertical	Peak
2563.60	27.51	-2.82	24.69	54.00	29.31	vertical	Average
2563.60	46.57	-2.82	43.75	74.00	30.25	vertical	Peak
3196.40	28.53	-2.24	26.29	54.00	27.71	vertical	Average
3196.40	47.54	-2.24	45.30	74.00	28.70	vertical	Peak
3434.80	29.32	-2.91	26.41	54.00	27.59	vertical	Average
3434.80	48.33	-2.91	45.42	74.00	28.58	vertical	Peak
4040.00	27.90	-3.44	24.46	54.00	29.54	vertical	Average
4040.00	46.82	-3.44	43.38	74.00	30.62	vertical	Peak
4966.40	29.06	-4.65	24.41	54.00	29.59	vertical	Average
4966.40	48.02	-4.65	43.37	74.00	30.63	vertical	Peak

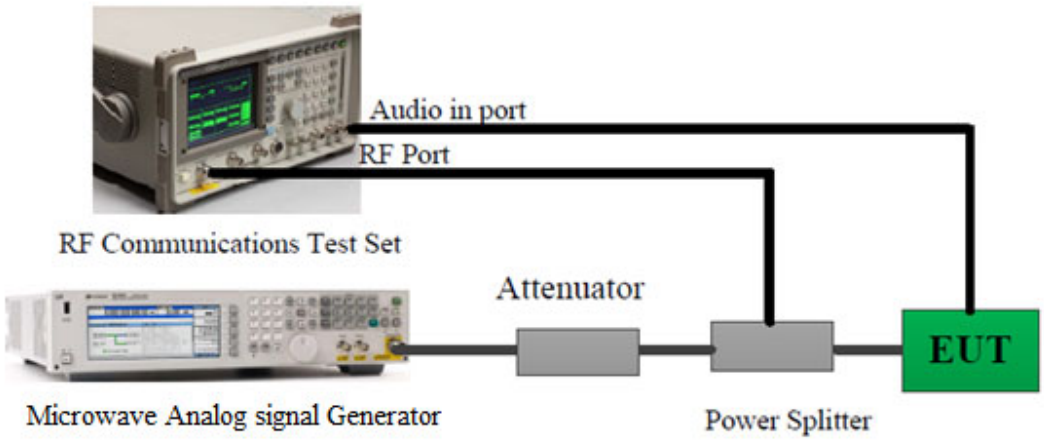
FCC §15.121(b) – SCANNING RECEIVERS AND FREQUENCY CONVERTERS USED WITH SCANNING RECEIVERS

Applicable Standard

FCC §15.121(b).
(b) Except as provided in paragraph (c) of this section, scanning receivers shall reject any signals from the Cellular Radiotelephone Service frequency bands that are 38 dB or lower based upon a 12 dB SINAD measurement, which is considered the threshold where a signal can be clearly discerned from any interference that may be present.

Test Procedure

1. Connected the EUT as the below block diagram;



2. Apply a signal to the EUT antenna port at lowest, middle, highest channel frequencies of the operating band;
3. Adjust the audio output level of the EUT to it's rated value with the distortion less than 10%;
4. Adjust the 8920 output power to produce 12 dB SINAD without the audio output power dropping by more than 3 dB; These output level of the 8920 at each channel frequency is the sensitivity of the EUT;
5. Select the lowest or worst case sensitivity level for all of the bands as the reference sensitivity;
6. Adjust the Signal Generator output to a level of +60 dB above the reference sensitivity obtained in step 5 and its frequency to the frequency point in the Cellular Band;
7. Set the EUT squelch to threshold, the signal required to open the squelch must be lower than the reference sensitivity level;
8. Set the EUT in a scanning mode and allow it to scan through it's complete receiving range;
9. If the EUT un-squelched or stopped on any frequency, receiving at this frequency, then adjust the signal generator output level until 12 dB SINAD is produced, this level is the spurious value and the difference between the reference sensitivity and the spurious value is the rejection ratio and must be at least 38 dB;
10. Repeat above procedure at the frequencies 824, 836, 849 MHz for the mobile band, and 869, 881.5 and 894 MHz for the Cellular Base Band.

Test Data

Test Mode:	Scanning	**Test Engineer:**	Lucas Lin
Test Date:	2024-10-15	**Test Result:**	Pass

Environment Conditions:					
Temperature: (°C)	24.8	Relative Humidity: (%)	53	ATM Pressure: (kPa)	100.1

Scanning Frequency Range (MHz)	**Test Frequency (MHz)**	**Measurement Result (Worst Case) (dB)**	**Limit (dB)**
136-174	824, 836 849, 869 881.5, 894	45	>38
400-470	824, 836, 849, 869, 881.5, 895	42	>38

EXHIBIT A - EUT PHOTOGRAPHS

Please refer to the attachment 2407Y44307E-EM-EXP EUT EXTERNAL PHOTOGRAPHS and 2407Y44307E-EM-INP EUT INTERNAL PHOTOGRAPHS

EXHIBIT B – TEST SETUP PHOTOGRAPHS

Please refer to the attachment 2407Y44307E-EM-TSP TEST SETUP PHOTOGRAPHS.

Declarations

1. Bay Area Compliance Laboratories Corp. (Xiamen) is not responsible for authenticity of any information provided by the applicant. Information from the applicant that may affect test results are marked with an asterisk "★".

2. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested.

3. Unless required by the rule provided by the applicant or product regulations, then decision rule in this report did not consider the uncertainty.

4. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor k=2 with the 95 % confidence interval.

5. This report cannot be reproduced except in full, without prior written approval of Bay Area Compliance Laboratories Corp. (Xiamen).

6. This report is valid only with a valid digital signature. The digital signature may be available only under the adobe software above version 7.0.

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