FCC Test Report

Test report
On Behalf of
Shenzhen Haimeilan Technology Co., LTD.
For
Smart Phone
Model No.: S25 Ultra, S24 Ultra, S23 Ultra, C25 Ultra, C24 Ultra, C23 Ultra, X23 Ultra, X24 Ultra, X25 Ultra, Z23 Ultra, Z24 Ultra, Z25 Ultra, C10 Plus, C30 Plus, G50 Plus, G60 Plus, C73, C7 Ultra, Polaris7 Pro, C3 Luxury, G37 Ultra, M13 Pro, Polaris7, Rise77 Luxury, Opus33 Luxury, Acro77 Luxury, Sirius40 Ultra, H50 Ultra, G3 Luxury, Rise30 Ultra, G7 Ultra, E-on33 Ultra, Vista16 Ultra, I24 Ultra, I25 Ultra, X24, S01, C25, S10, S11, S08, S25 MAX, I15 Ultra, S24 Pro Max

FCC ID: 2BDI3-S

Prepared For :	**Shenzhen Haimeilan Technology Co., LTD.** **9V777, East 9th Floor, Building 2, SEG Science Park, Huaqiang North Street, Futian District, Shenzhen, 518000 China**
Prepared By :	**Shenzhen HUAK Testing Technology Co., Ltd.** **1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China**
Date of Test:	**Dec. 18, 2024 ~ Feb. 17, 2025**
Date of Report:	**Feb. 17, 2025**
Report Number:	**HK2412187831-2E**

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Test Result Certification

Applicant's name ..... :	Shenzhen Haimeilan Technology Co., LTD.
Address ..... :	9V777, East 9th Floor, Building 2, SEG Science Park, Huaqiang North Street, Futian District, Shenzhen, 518000 China
Manufacturer's Name ..... :	Shenzhen Yinma Intelligent Technology Co., Ltd
Address ..... :	2nd Floor, Building 2, Donglongxing Science and Technology Park, Dalang Street, Longhua District, Shenzhen, 518000 China
Product description	
Trade Mark:	N/A
Product name..... :	Smart Phone
Series Models ..... :	S25 Ultra, S24 Ultra, S23 Ultra, C25 Ultra, C24 Ultra, C23 Ultra, X23 Ultra, X24 Ultra, X25 Ultra, Z23 Ultra, Z24 Ultra, Z25 Ultra, C10 Plus, C30 Plus, G50 Plus, G60 Plus, C73, C7 Ultra, Polaris7 Pro, C3 Luxury, G37 Ultra, M13 Pro, Polaris7, Rise77 Luxury, Opus33 Luxury, Acro77 Luxury, Sirius40 Ultra, H50 Ultra, G3 Luxury, Rise30 Ultra, G7 Ultra, E-on33 Ultra, Vista16 Ultra, I24 Ultra, I25 Ultra, X24, S01, C25, S10, S11, S08, S25 MAX, I15 Ultra, S24 Pro Max
Standards ..... :	FCC Rules and Regulations Part 15 Subpart E Section 15.407 ANSI C63.10: 2013

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Date of Test ..... :	
Date (s) of performance of tests ..... :	**Dec. 18, 2024 ~ Feb. 17, 2025**
Date of Issue..... :	**Feb. 17, 2025**
Test Result..... :	**Pass**

Testing Engineer : Len Liao

(Len Liao)

Technical Manager : Silver Wan

(Silver Wan)

Authorized Signatory : Jason Zhou

(Jason Zhou)

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** Modified History **

Revision	Description	Issued Data	Remark
Revision 1.0	Initial Test Report Release	Feb. 17, 2025	Jason Zhou

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TEL : +86-755 2302 9901 FAX : +86-755 2302 9901 E-mail : service@cer-mark.com
Add: 1-2F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

1. Test Result Summary

1.1. Test Procedures and Results

Requirement	CFR 47 Section	Result
Antenna requirement	§15.203	PASS
AC Power Line Conducted Emission	§15.207	PASS
Maximum Conducted Output Power	§15.407(a)	PASS
6dB Emission Bandwidth	§15.407(e)	N/A
26dB Emission Bandwidth& 99% Occupied Bandwidth	§15.407(a)	PASS
Power Spectral Density	§15.407(a)	PASS
Band edge	§15.407(b)/15.209/15.205	PASS
Radiated Emission	§15.407(b)/15.209/15.205	PASS
Frequency Stability	§15.407(g)	PASS

Note:

1. PASS: Test item meets the requirement.

2. Fail: Test item does not meet the requirement.

3. N/A: Test case does not apply to the test object.

4. The test result judgment is decided by the limit of test standard.

1.2. Information of the Test Laboratory

Shenzhen HUAK Testing Technology Co., Ltd.
Add.: 1-2/F., Building B2, Junfeng Zhongcheng Zhizao Innovation Park, Heping, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

Testing Laboratory Authorization：

A2LA Accreditation Code is 4781.01.
FCC Designation Number is CN1229.
Canada IC CAB identifier is CN0045.
CNAS Registration Number is L9589.

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1.3. Measurement Uncertainty

The reported uncertainty of measurement y ± U, where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2, providing a level of confidence of approximately 95 %.

No.	Item	MU
1	Conducted Emission	±0.37dB
2	RF power, conducted	±3.35dB
3	Spurious emissions, conducted	±2.20dB
4	All emissions, radiated(<1G)	±3.90dB
5	All emissions, radiated(>1G)	±4.28dB
6	Temperature	±0.1°C
7	Humidity	±1.0%

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2. EUT Description

2.1. General Description of EUT

Equipment	Smart Phone
Model Name	S25 Ultra
Serial Models	S24 Ultra, S23 Ultra, C25 Ultra, C24 Ultra, C23 Ultra, X23 Ultra, X24 Ultra, X25 Ultra, Z23 Ultra, Z24 Ultra, Z25 Ultra, C10 Plus, C30 Plus, G50 Plus, G60 Plus, C73, C7 Ultra, Polaris7 Pro, C3 Luxury, G37 Ultra, M13 Pro, Polaris7, Rise77 Luxury, Opus33 Luxury, Acro77 Luxury, Sirius40 Ultra, H50 Ultra, G3 Luxury, Rise30 Ultra, G7 Ultra, E-on33 Ultra, Vista16 Ultra, I24 Ultra, I25 Ultra, X24, S01, C25, S10, S11, S08, S25 MAX, I15 Ultra, S24 Pro Max
Model Difference	All model's the function, software and electric circuit are the same, only with a product appearance, color and model named different. Test sample mode: S25 Ultra.
Trade Mark	N/A
FCC ID	2BDI3-S
Operation Frequency:	IEEE 802.11a/n/ac (HT20) 5.180GHz-5.240GHz IEEE 802.11n/ac (HT40) 5.190GHz-5.230GHz IEEE 802.11ac(HT80) 5.210GHz
Modulation Technology:	IEEE 802.11a/n/ac
Modulation Type	256QAM, 64QAM, 16QAM, QPSK, BPSK for OFDM
Antenna Type	FPC Antenna
Antenna Gain	1.2dBi
Power Source	DC 5V From Type-C or DC 3.85V From Battery
Power Supply:	DC 5V From Type-C or DC 3.85V From Battery
Hardware Version	V1.0
Software Version	V1.0
Note: 1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual. 2. Antenna gain Refer to the antenna specifications. 3. The cable loss data is obtained from the supplier. 4. The test results in the report only apply to the tested sample.	

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2.2. Operation Frequency each of channel

802.11a/802.11n/ 802.11ac (HT20)		802.11n/802.11ac (HT40)		802.11ac(HT80)	
Channel	Frequency	Channel	Frequency	Channel	Frequency
36	5180	38	5190	42	5210
40	5200	46	5230		
44	5220				
48	5240				

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

2.3. Operation of EUT During Testing

For 802.11a/n (HT20)/ac(HT20)

Band I (5150 - 5250 MHz)		
Channel Number	Channel	Frequency (MHz)
36	Low	5180
40	Mid	5200
48	High	5240

For 802.11n (HT40)/ac(HT40)

Band I (5150 - 5250 MHz)		
Channel Number	Channel	Frequency (MHz)
38	Low	5190
46	High	5230

For 802.11ac(HT80)

Band I (5150 - 5250 MHz)	
Channel Number	Frequency (MHz)
42	5210

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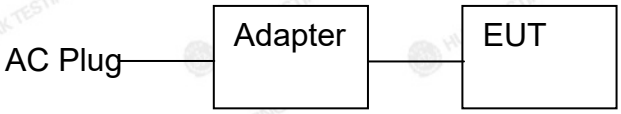
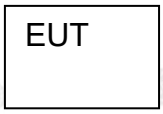
2.4. Description of Test Setup

Operation of EUT during conducted testing and below 1GHz radiation testing:



Operation of EUT during above1GHz radiation testing:



The sample was placed (0.8m below 1GHz, 1.5m above 1GHz) above the ground plane of 3m chamber. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case are shown in Test Results of the following pages. The worst case is X position.

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2.5. Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Trade Mark	Model/Type No.	Specification	Remark
1	Smart Phone	N/A	S25 Ultra	N/A	EUT
2	USB Cable	N/A	N/A	Length:0.82m	Accessory
3	Adapter	N/A	APD5-2	Input: AC 100-240V, 50/60Hz, 0.5A Output: DC 5V, 2A	Accessory

Note:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.
3. For conducted measurements (Output Power, 26db Bandwidth and 99% Occupied Bandwidth, Power Spectral Density, Spurious Emissions), the antenna of EUT is connected to the test equipment via temporary antenna connector, the antenna connector is soldered on the antenna port of EUT, and the temporary antenna connector is listed in the Test Instruments.

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3. Genera Information

3.1. Test environment and mode

Operating Environment:	
Temperature:	25.0 °C
Humidity:	56 % RH
Atmospheric Pressure:	1010 mbar
Test Mode:	
Engineering mode:	Keep the EUT in continuous transmitting by select channel and modulations
The sample was placed 0.8m/1.5m for blow/above 1GHz above the ground plane of 3m chamber. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case are shown in Test Results of the following pages.	

We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows:	
Per-scan all kind of data rate in lowest channel, and found the follow list which it was worst case.	
Mode	Data rate
802.11a	6 Mbps
802.11n(HT20)	MCS0
802.11n(HT40)	MCS0
802.11ac(HT20)/ac(HT40)/ac(HT80)	MCS0
Final Test Mode:	
Operation mode:	Keep the EUT in continuous transmitting with modulation

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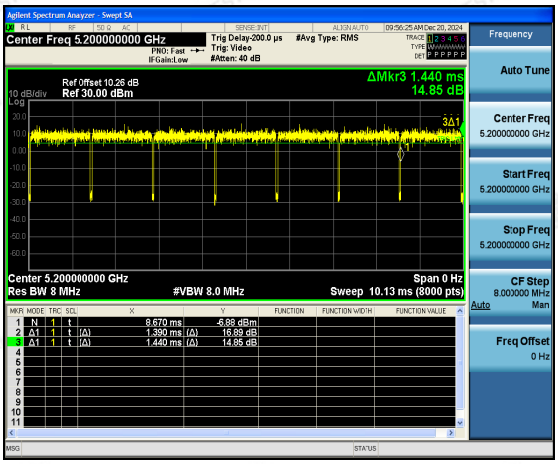
Mode Test Duty Cycle：

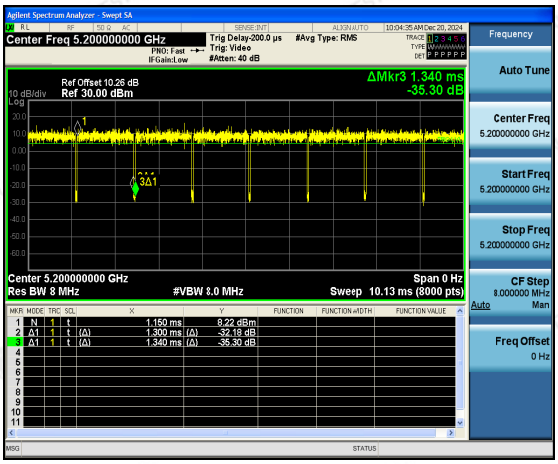
Mode	Duty Cycle	Duty Cycle Factor (dB)
802.11a	0.97	-0.22
802.11n(HT20)	0.97	-0.18
802.11n(HT40)	0.93	-0.18
802.11ac(HT20)	0.97	-0.18
802.11ac(HT40)	0.94	-0.18
802.11ac(HT80)	0.86	-0.18

Test plots as follows:

802.11a



802.11n(HT20)



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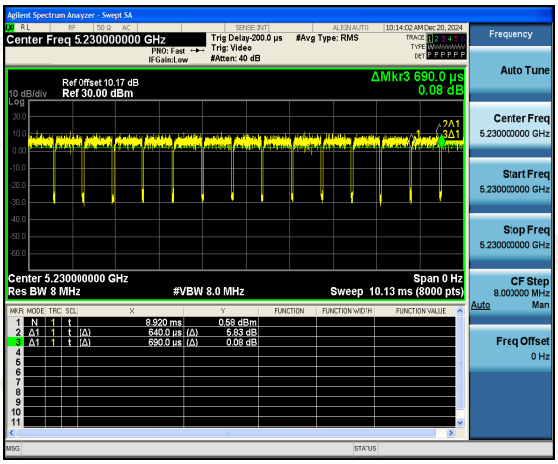
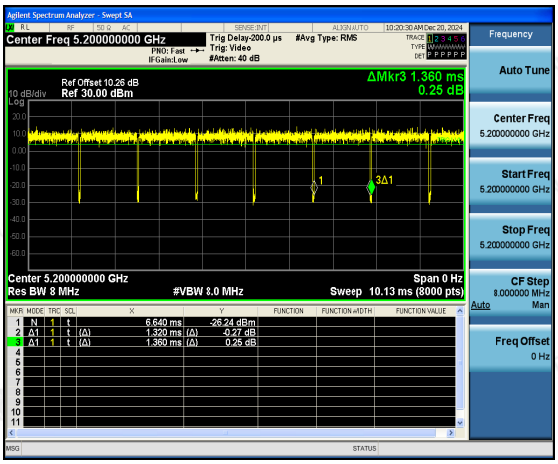
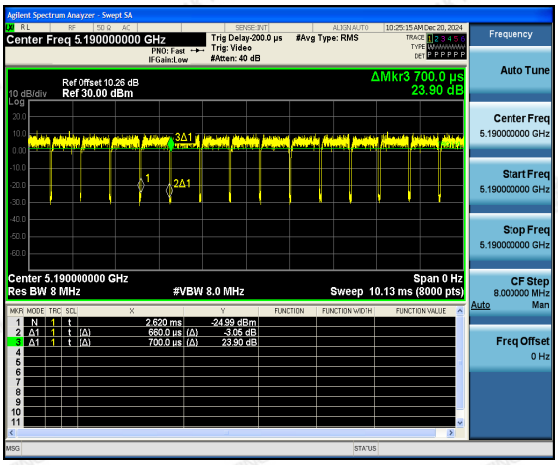
802.11n(HT40)



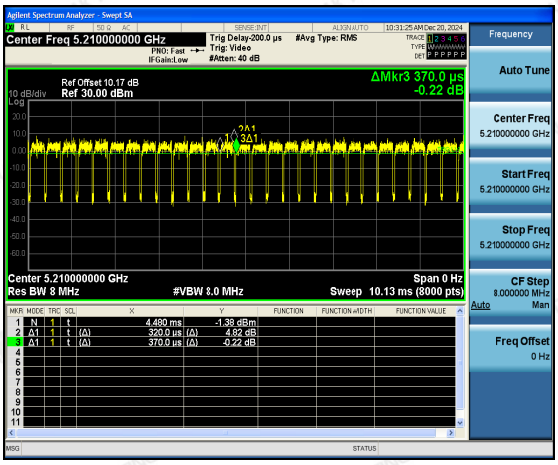
802.11ac(HT20)



802.11ac(HT40)



802.11ac(HT80)



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4. Test Results and Measurement Data

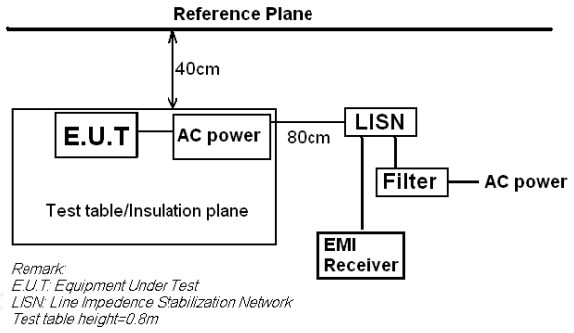
4.1. Conducted Emission

4.1.1. Test Specification

Test Requirement:	FCC Part15 C Section 15.207
Test Method:	ANSI C63.10:2013
Frequency Range:	150 kHz to 30 MHz
Receiver setup:	RBW=9 kHz, VBW=30 kHz, Sweep time=auto
Limits:	

Frequency range (MHz)	Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

Test Setup:



Test Mode:	Tx Mode
Test Procedure:	1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment. 2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs). 3. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10: 2013 on conducted measurement.
Test Result:	Pass

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4.1.2. Test Instruments

Conducted Emission Shielding Room Test Site (843)					
Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Date**	**Calibration Due**
Receiver	R&S	ESR	HKE-005	Feb. 20, 2024	Feb. 19, 2025
LISN	R&S	ENV216	HKE-002	Feb. 20, 2024	Feb. 19, 2025
LISN	R&S	ENV216	HKE-059	Feb. 20, 2024	Feb. 19, 2025
Coax cable (9KHz-30MHz)	Times	381806-002	N/A	Feb. 20, 2024	Feb. 19, 2025
EMI Test Software	Tonscend	JS32-CE 2.5.0.6	HKE-081	N/A	N/A
10dB Attenuator	Schwarzbeck	VTSD9561F	HKE-153	Feb. 20, 2024	Feb. 19, 2025

Note: *The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).*

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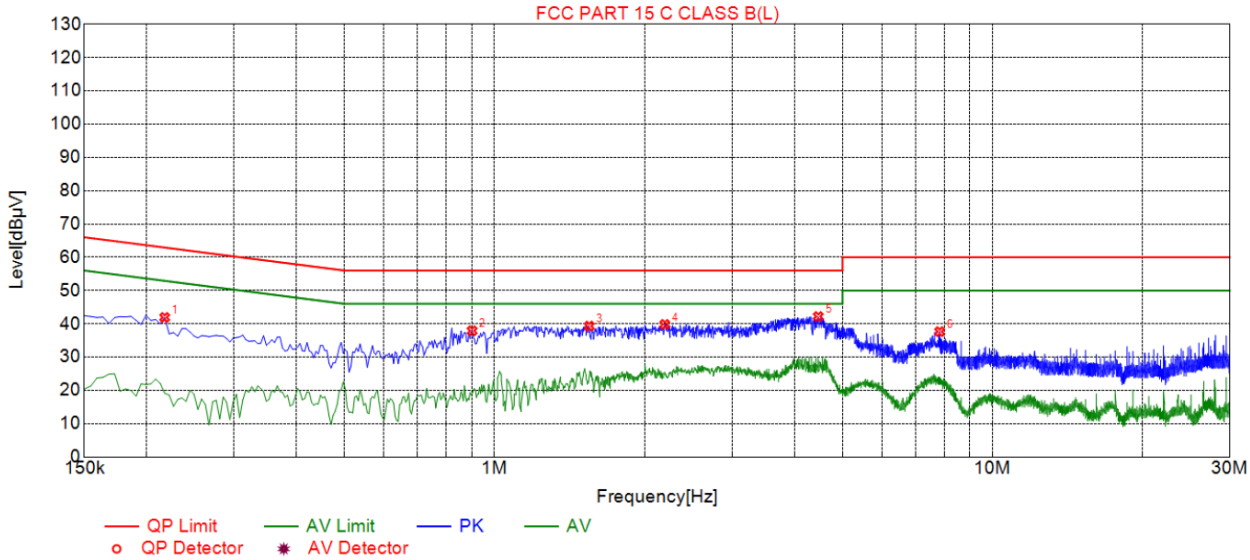
4.1.3. Test data

Test Model No.: S25 Ultra
Test Specification: Line



Suspected List								
NO.	Freq. [MHz]	Level [dBμV]	Factor [dB]	Limit [dBμV]	Margin [dB]	Reading [dBμV]	Detector	Type
1	0.2175	41.92	19.85	62.91	20.99	22.07	PK	L
2	0.9015	37.91	19.87	56.00	18.09	18.04	PK	L
3	1.5495	39.32	19.93	56.00	16.68	19.39	PK	L
4	2.1975	39.82	19.99	56.00	16.18	19.83	PK	L
5	4.4700	42.19	20.09	56.00	13.81	22.10	PK	L
6	7.8360	37.66	20.04	60.00	22.34	17.62	PK	L

Remark: Margin = Limit – Level
Correction factor = Cable lose + LISN insertion loss
Level=Test receiver reading + correction factor

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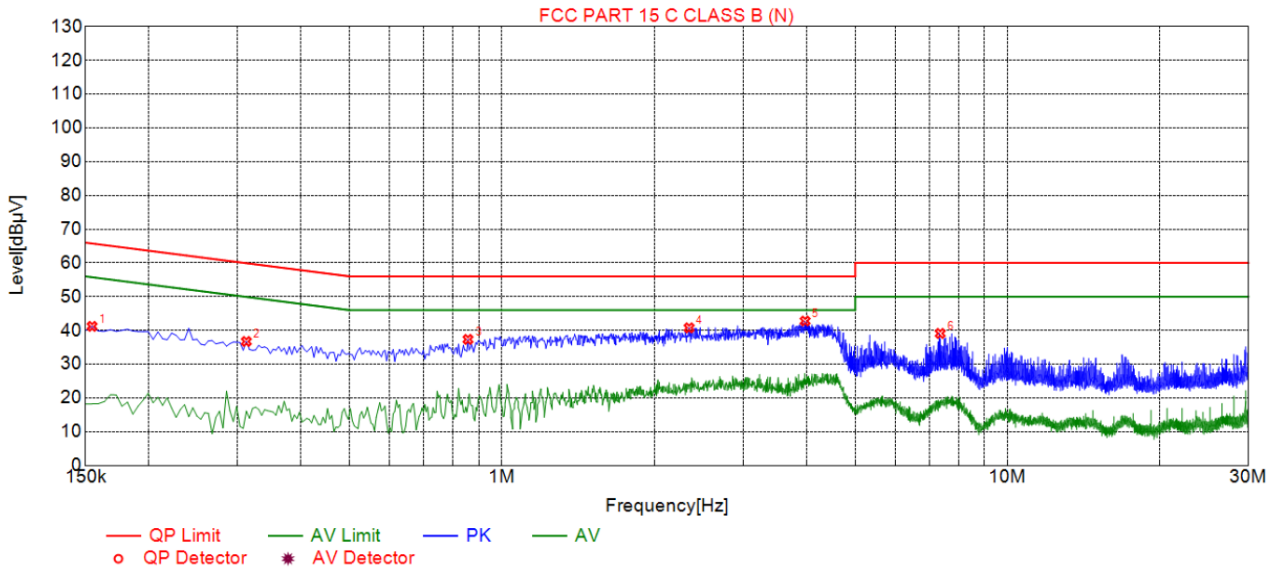
Test Specification: Neutral



Suspected List								
NO.	Freq. [MHz]	Level [dBµV]	Factor [dB]	Limit [dBµV]	Margin [dB]	Reading [dBµV]	Detector	Type
1	0.1545	41.20	19.73	65.75	24.55	21.47	PK	N
2	0.3120	36.73	19.75	59.92	23.19	16.98	PK	N
3	0.8565	37.35	19.74	56.00	18.65	17.61	PK	N
4	2.3460	40.76	19.88	56.00	15.24	20.88	PK	N
5	3.9795	42.78	19.97	56.00	13.22	22.81	PK	N
6	7.3635	39.11	19.95	60.00	20.89	19.16	PK	N

Remark: Margin = Limit – Level
Correction factor = Cable lose + LISN insertion loss
Level=Test receiver reading + correction factor

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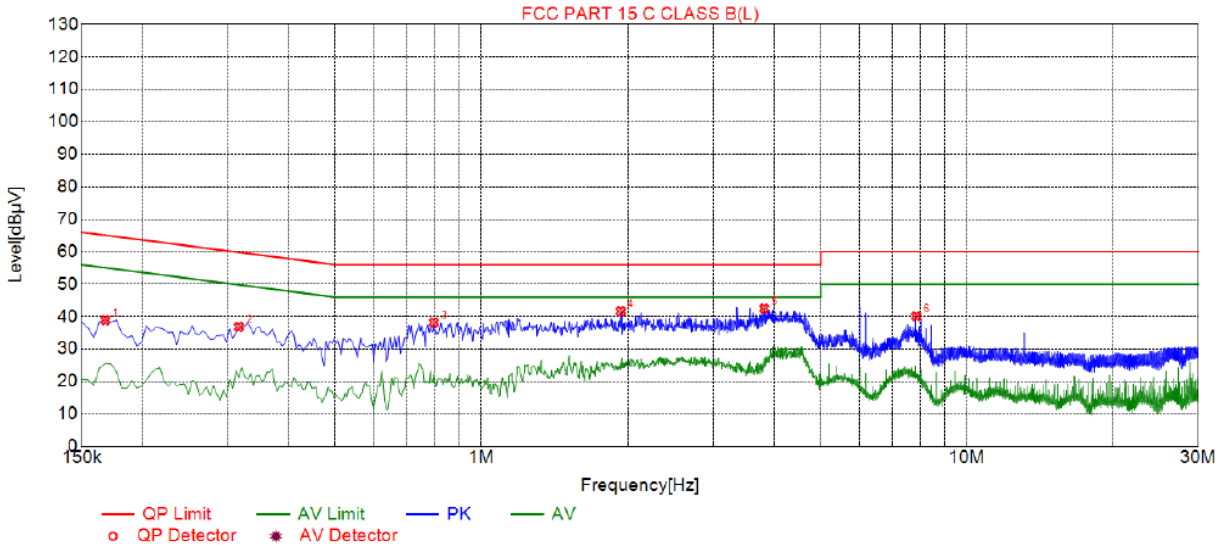
Series Model No.: X24 Ultra
Test Specification: Line



Suspected List								
NO.	Freq. [MHz]	Level [dBμV]	Factor [dB]	Limit [dBμV]	Margin [dB]	Reading [dBμV]	Detector	Type
1	0.1680	38.88	19.81	65.06	26.18	19.07	PK	L
2	0.3165	36.84	19.85	59.80	22.96	16.99	PK	L
3	0.7980	38.20	19.86	56.00	17.80	18.34	PK	L
4	1.9365	41.66	19.96	56.00	14.34	21.70	PK	L
5	3.8265	42.50	20.09	56.00	13.50	22.41	PK	L
6	7.8630	40.14	20.04	60.00	19.86	20.10	PK	L

Remark: Margin = Limit – Level
Correction factor = Cable lose + LISN insertion loss
Level=Test receiver reading + correction factor

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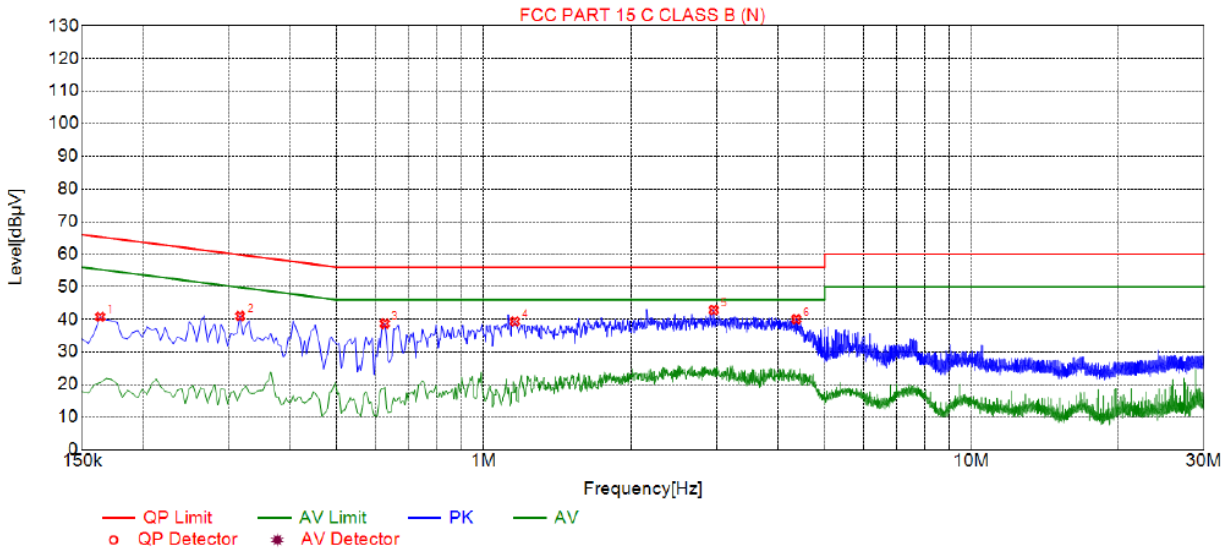
Test Specification: Neutral



Suspected List								
NO.	Freq. [MHz]	Level [dBµV]	Factor [dB]	Limit [dBµV]	Margin [dB]	Reading [dBµV]	Detector	Type
1	0.1635	40.80	19.68	65.28	24.48	21.12	PK	N
2	0.3165	41.03	19.75	59.80	18.77	21.28	PK	N
3	0.6270	38.70	19.74	56.00	17.30	18.96	PK	N
4	1.1580	39.35	19.77	56.00	16.65	19.58	PK	N
5	2.9625	42.87	19.92	56.00	13.13	22.95	PK	N
6	4.3755	40.04	19.98	56.00	15.96	20.06	PK	N

Remark: Margin = Limit – Level
Correction factor = Cable lose + LISN insertion loss
Level=Test receiver reading + correction factor

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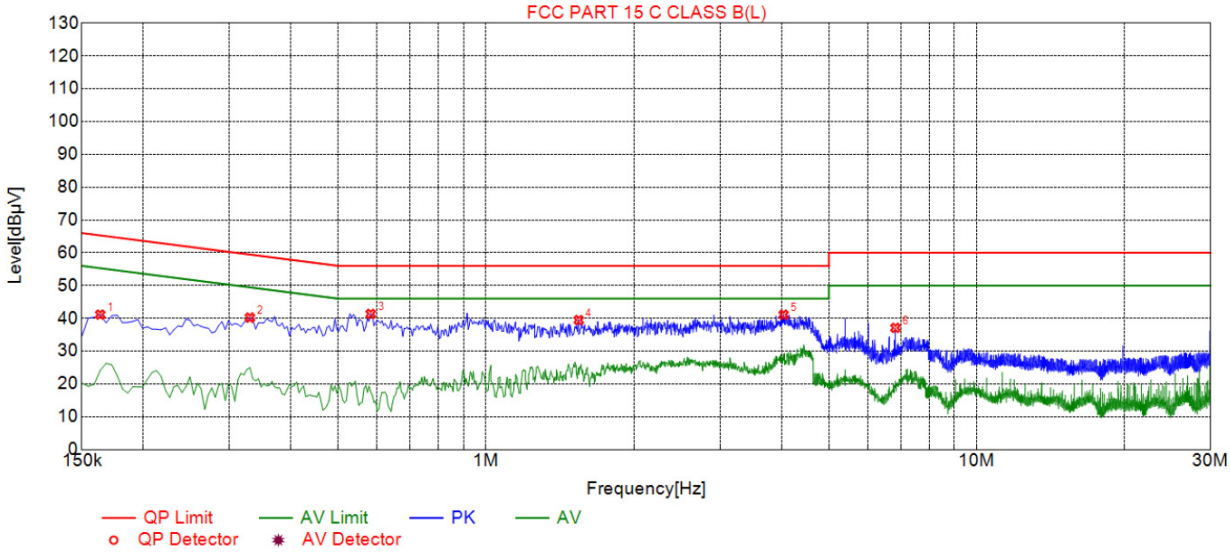
Series Model No.: C24 Ultra
Test Specification: Line



Suspected List

NO.	Freq. [MHz]	Level [dBμV]	Factor [dB]	Limit [dBμV]	Margin [dB]	Reading [dBμV]	Detector	Type
1	0.1635	41.14	19.78	65.28	24.14	21.36	PK	L
2	0.3300	40.23	19.84	59.45	19.22	20.39	PK	L
3	0.5820	41.35	19.86	56.00	14.65	21.49	PK	L
4	1.5450	39.47	19.93	56.00	16.53	19.54	PK	L
5	4.0425	41.10	20.09	56.00	14.90	21.01	PK	L
6	6.8325	37.10	20.07	60.00	22.90	17.03	PK	L

Remark: Margin = Limit – Level
Correction factor = Cable lose + LISN insertion loss
Level=Test receiver reading + correction factor

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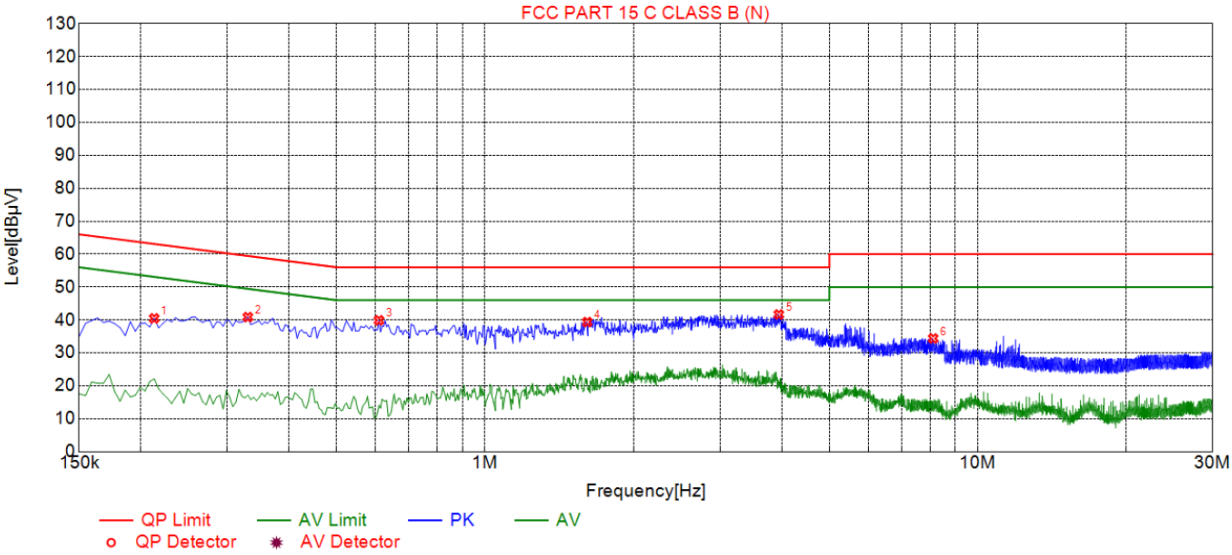
Test Specification: Neutral



Suspected List								
NO.	Freq. [MHz]	Level [dBμV]	Factor [dB]	Limit [dBμV]	Margin [dB]	Reading [dBμV]	Detector	Type
1	0.2130	40.48	19.74	63.09	22.61	20.74	PK	N
2	0.3300	40.87	19.74	59.45	18.58	21.13	PK	N
3	0.6090	39.89	19.74	56.00	16.11	20.15	PK	N
4	1.6125	39.37	19.80	56.00	16.63	19.57	PK	N
5	3.9480	41.66	19.97	56.00	14.34	21.69	PK	N
6	8.1240	34.39	19.92	60.00	25.61	14.47	PK	N

Remark: Margin = Limit – Level
Correction factor = Cable lose + LISN insertion loss
Level=Test receiver reading + correction factor

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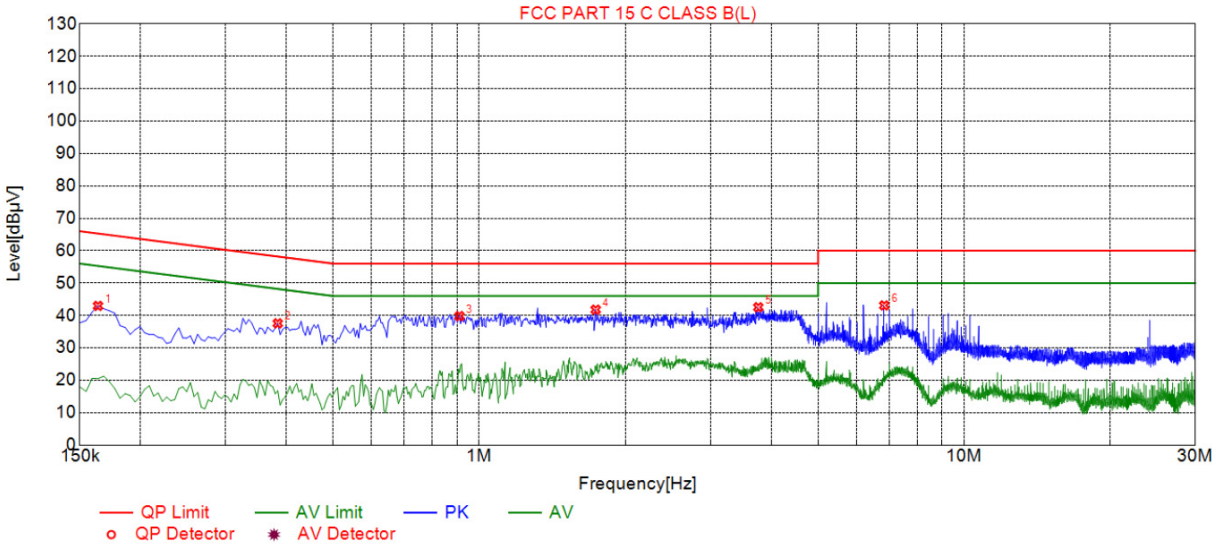
Series Model No.: C25
Test Specification: Line



Suspected List								
NO.	Freq. [MHz]	Level [dBμV]	Factor [dB]	Limit [dBμV]	Margin [dB]	Reading [dBμV]	Detector	Type
1	0.1635	42.95	19.78	65.28	22.33	23.17	PK	L
2	0.3840	37.57	19.85	58.19	20.62	17.72	PK	L
3	0.9105	39.80	19.87	56.00	16.20	19.93	PK	L
4	1.7385	41.78	19.95	56.00	14.22	21.83	PK	L
5	3.7635	42.53	20.09	56.00	13.47	22.44	PK	L
6	6.8460	43.09	20.07	60.00	16.91	23.02	PK	L

Remark: Margin = Limit – Level
Correction factor = Cable lose + LISN insertion loss
Level=Test receiver reading + correction factor

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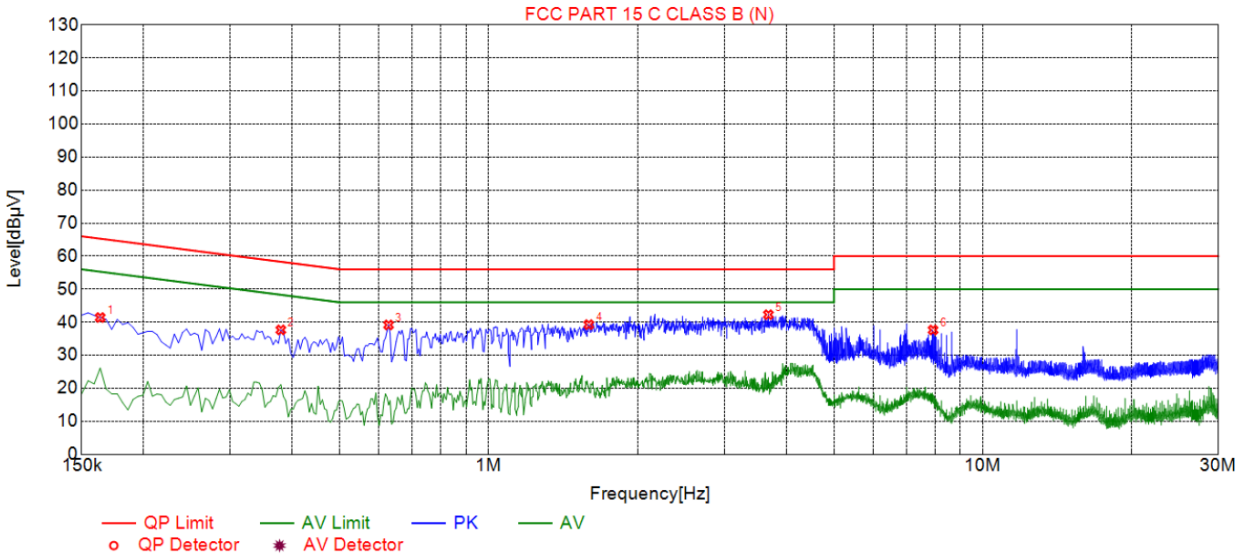
Test Specification: Neutral



Suspected List								
NO.	Freq. [MHz]	Level [dBµV]	Factor [dB]	Limit [dBµV]	Margin [dB]	Reading [dBµV]	Detector	Type
1	0.1635	41.41	19.68	65.28	23.87	21.73	PK	N
2	0.3795	37.66	19.74	58.29	20.63	17.92	PK	N
3	0.6270	39.17	19.74	56.00	16.83	19.43	PK	N
4	1.5945	39.27	19.80	56.00	16.73	19.47	PK	N
5	3.6825	42.27	19.97	56.00	13.73	22.30	PK	N
6	7.9350	37.64	19.93	60.00	22.36	17.71	PK	N

Remark: Margin = Limit – Level
Correction factor = Cable lose + LISN insertion loss
Level=Test receiver reading + correction factor

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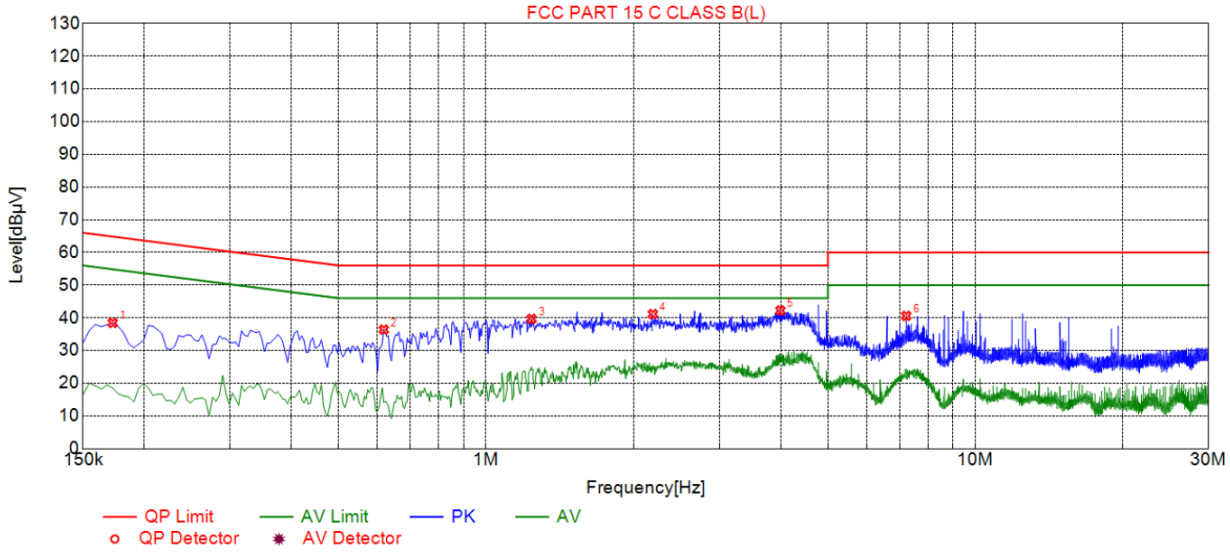
Series Model No.: I15 Ultra
Test Specification: Line



Suspected List								
NO.	Freq. [MHz]	Level [dBµV]	Factor [dB]	Limit [dBµV]	Margin [dB]	Reading [dBµV]	Detector	Type
1	0.1725	38.45	19.84	64.84	26.39	18.61	PK	L
2	0.6180	36.40	19.86	56.00	19.60	16.54	PK	L
3	1.2390	39.66	19.90	56.00	16.34	19.76	PK	L
4	2.1930	41.14	19.99	56.00	14.86	21.15	PK	L
5	3.9975	42.25	20.09	56.00	13.75	22.16	PK	L
6	7.2285	40.60	20.06	60.00	19.40	20.54	PK	L

Remark: Margin = Limit – Level
Correction factor = Cable lose + LISN insertion loss
Level=Test receiver reading + correction factor

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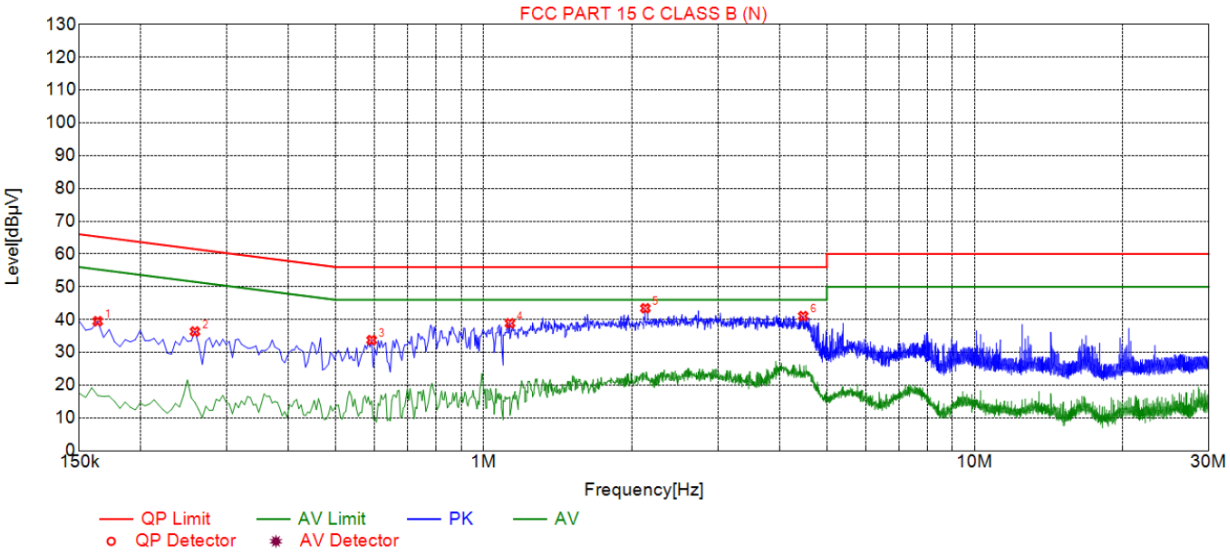
Test Specification: Neutral



Suspected List								
NO.	Freq. [MHz]	Level [dBµV]	Factor [dB]	Limit [dBµV]	Margin [dB]	Reading [dBµV]	Detector	Type
1	0.1635	39.47	19.68	65.28	25.81	19.79	PK	N
2	0.2580	36.35	19.73	61.50	25.15	16.62	PK	N
3	0.5910	33.72	19.74	56.00	22.28	13.98	PK	N
4	1.1310	38.87	19.77	56.00	17.13	19.10	PK	N
5	2.1345	43.44	19.85	56.00	12.56	23.59	PK	N
6	4.4745	41.05	19.98	56.00	14.95	21.07	PK	N

Remark: Margin = Limit – Level
Correction factor = Cable lose + LISN insertion loss
Level=Test receiver reading + correction factor

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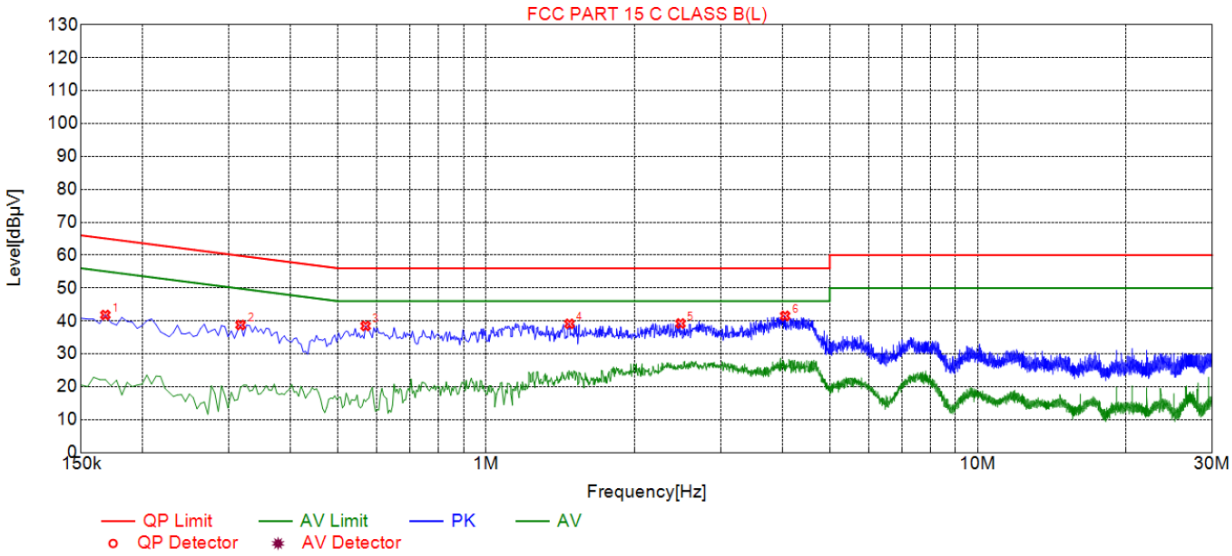
Series Model No.: C7 Ultra
Test Specification: Line



Suspected List								
NO.	Freq. [MHz]	Level [dBµV]	Factor [dB]	Limit [dBµV]	Margin [dB]	Reading [dBµV]	Detector	Type
1	0.1680	41.82	19.81	65.06	23.24	22.01	PK	L
2	0.3165	38.78	19.85	59.80	21.02	18.93	PK	L
3	0.5685	38.48	19.86	56.00	17.52	18.62	PK	L
4	1.4775	39.12	19.92	56.00	16.88	19.20	PK	L
5	2.4855	39.22	20.01	56.00	16.78	19.21	PK	L
6	4.0560	41.54	20.09	56.00	14.46	21.45	PK	L

Remark: Margin = Limit – Level
Correction factor = Cable lose + LISN insertion loss
Level=Test receiver reading + correction factor

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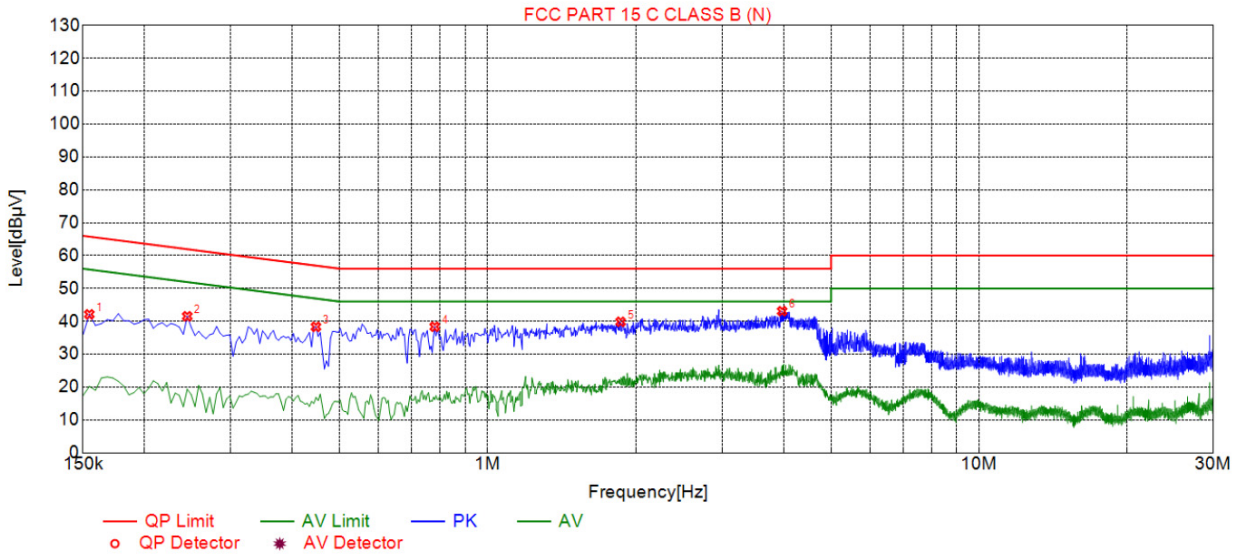
Test Specification: Neutral



Suspected List								
NO.	Freq. [MHz]	Level [dBµV]	Factor [dB]	Limit [dBµV]	Margin [dB]	Reading [dBµV]	Detector	Type
1	0.1545	42.12	19.73	65.75	23.63	22.39	PK	N
2	0.2445	41.53	19.73	61.94	20.41	21.80	PK	N
3	0.4470	38.33	19.74	56.93	18.60	18.59	PK	N
4	0.7800	38.35	19.74	56.00	17.65	18.61	PK	N
5	1.8645	39.84	19.83	56.00	16.16	20.01	PK	N
6	3.9750	43.08	19.97	56.00	12.92	23.11	PK	N

Remark: Margin = Limit – Level
Correction factor = Cable lose + LISN insertion loss
Level=Test receiver reading + correction factor

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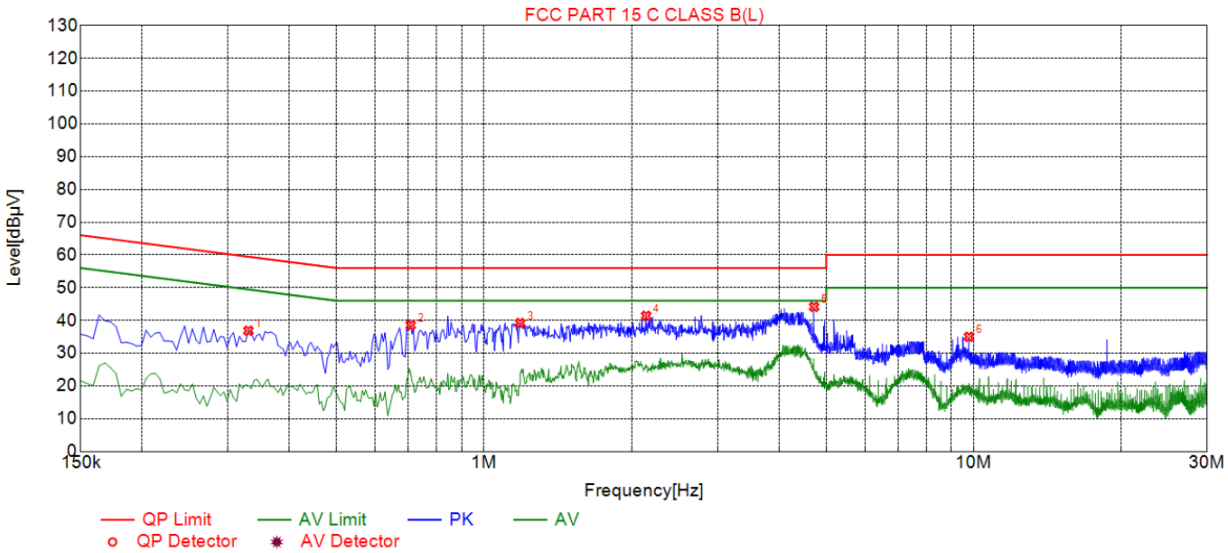
Series Model No.: S24 Ultra
Test Specification: Line



Suspected List								
NO.	Freq. [MHz]	Level [dBµV]	Factor [dB]	Limit [dBµV]	Margin [dB]	Reading [dBµV]	Detector	Type
1	0.3300	36.88	19.84	59.45	22.57	17.04	PK	L
2	0.7080	38.56	19.86	56.00	17.44	18.70	PK	L
3	1.1850	39.20	19.90	56.00	16.80	19.30	PK	L
4	2.1435	41.42	19.98	56.00	14.58	21.44	PK	L
5	4.7220	44.17	20.11	56.00	11.83	24.06	PK	L
6	9.7800	35.02	19.97	60.00	24.98	15.05	PK	L

Remark: Margin = Limit – Level
Correction factor = Cable lose + LISN insertion loss
Level=Test receiver reading + correction factor

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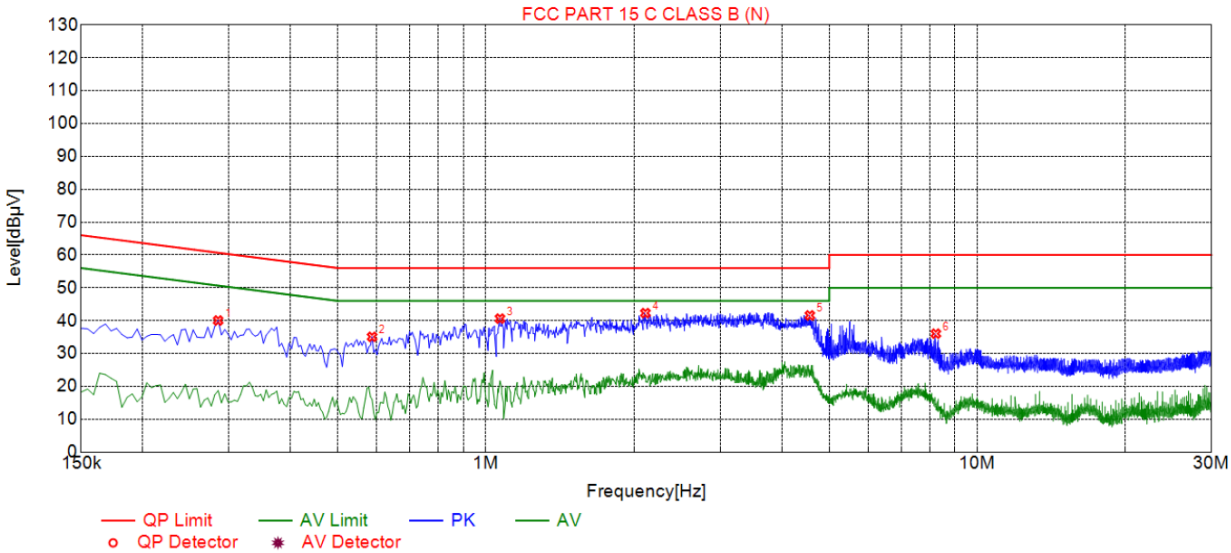
Test Specification: Neutral



Suspected List								
NO.	Freq. [MHz]	Level [dBµV]	Factor [dB]	Limit [dBµV]	Margin [dB]	Reading [dBµV]	Detector	Type
1	0.2850	40.04	19.73	60.67	20.63	20.31	PK	N
2	0.5865	35.08	19.74	56.00	20.92	15.34	PK	N
3	1.0680	40.62	19.75	56.00	15.38	20.87	PK	N
4	2.1120	42.30	19.85	56.00	13.70	22.45	PK	N
5	4.5645	41.60	19.98	56.00	14.40	21.62	PK	N
6	8.2410	36.04	19.92	60.00	23.96	16.12	PK	N

Remark: Margin = Limit – Level
Correction factor = Cable lose + LISN insertion loss
Level=Test receiver reading + correction factor

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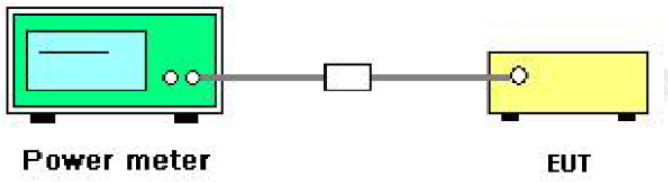
4.2. Maximum Conducted Output Power

4.2.1. Test Specification

Test Requirement:	FCC Part15 E Section 15.407(a)
Test Method:	KDB789033 D02 General UNII Test Procedures New Rules v02.r01 Section E
Limit:	Frequency Band (MHz) / Limit 5150-5250 / 250mW for client devices
Test Setup:	
Test Mode:	Transmitting mode with modulation
Test Procedure:	1. The testing follows the Measurement Procedure of KDB789033 D02 General UNII Test Procedures New Rules v02r01 Section E, 3, a. 2. The RF output of EUT was connected to the power meter by RF cable and attenuator. The path loss was compensated to the results for each measurement. 3. Set to the maximum power setting and enable the EUT transmit continuously. 4. Measure the conducted output power and record the results in the test report.
Test Result:	PASS
Remark:	Conducted output power= measurement power +10log(1/x) X is duty cycle=1, so 10log(1/1)=0 Conducted output power= measurement power

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4.2.2. Test Instruments

RF Test Room					
Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Date**	**Calibration Due**
Spectrum analyzer	Agilent	N9020A	HKE-025	Feb. 20, 2024	Feb. 19, 2025
Power meter	Agilent	E4419B	HKE-085	Feb. 20, 2024	Feb. 19, 2025
Power Sensor	Agilent	E9300A	HKE-086	Feb. 20, 2024	Feb. 19, 2025
RF cable	Times	1-40G	HKE-034	Feb. 20, 2024	Feb. 19, 2025
RF automatic control unit	Tonscend	JS0806-2	HKE-060	Feb. 20, 2024	Feb. 19, 2025
RF Test Software	Tonscend	JS1120-3 Version 3.5.39	HKE-083	N/A	N/A

Note: *The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).*

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4.2.3. Test Data

Configuration Band I (5150 - 5250 MHz)				
Mode	Test Channel	Maximum Conducted Output Power (dBm)	FCC Limit (dBm)	Result
802.11a	CH36	7.24	24	PASS
802.11a	CH40	8.47	24	PASS
802.11a	CH48	8.04	24	PASS
802.11n(HT20)	CH36	7.13	24	PASS
802.11n(HT20)	CH40	6.34	24	PASS
802.11n(HT20)	CH48	7.88	24	PASS
802.11n(HT40)	CH38	6.21	24	PASS
802.11n(HT40)	CH46	7.45	24	PASS
802.11ac(HT20)	CH36	6.04	24	PASS
802.11ac(HT20)	CH40	6.18	24	PASS
802.11ac(HT20)	CH48	7.32	24	PASS
802.11ac(HT40)	CH38	6.13	24	PASS
802.11ac(HT40)	CH46	7.41	24	PASS
802.11ac(HT80)	CH42	6.41	24	PASS
Note: 1.The test results including the cable lose.				

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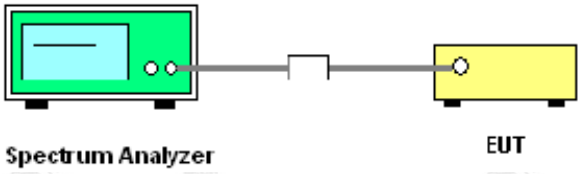
4.3. 6db Emission Bandwidth

4.3.1. Test Specification

Test Requirement:	FCC CFR47 Part 15 Section 15.407(e)
Test Method:	KDB789033 D02 General UNII Test Procedures New Rules v02r01 Section C
Limit:	>500kHz
Test Setup:	
Test Mode:	Transmitting mode with modulation
Test Procedure:	1. KDB789033 D02 General UNII Test Procedures New Rules v02r01 Section C. 2. Set to the maximum power setting and enable the EUT transmit continuously. 3. Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. Set the Video bandwidth (VBW) = 300 kHz. In order to make an accurate measurement. The 6dB bandwidth must be greater than 500 kHz. 4. Measure and record the results in the test report.
Test Result:	N/A

4.3.2. Test Instruments

RF Test Room					
Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Date**	**Calibration Due**
Spectrum analyzer	Agilent	N9020A	HKE-025	Feb. 20, 2024	Feb. 19, 2025
RF cable	Times	1-40G	HKE-034	Feb. 20, 2024	Feb. 19, 2025
RF automatic control unit	Tonscend	JS0806-2	HKE-060	Feb. 20, 2024	Feb. 19, 2025
RF Test Software	Tonscend	JS1120-3 Version 3.5.39	HKE-083	N/A	N/A

Note: *The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).*

4.3.3Test data

N/A

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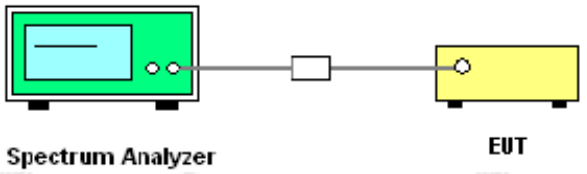
4.4. 26dB Bandwidth and 99% Occupied Bandwidth

4.4.1. Test Specification

Test Requirement:	47 CFR Part 15C Section 15.407
Test Method:	KDB789033 D02 General UNII Test Procedures New Rules v02r01 Section C
Limit:	No restriction limits
Test Setup:	
Test Mode:	Transmitting mode with modulation
Test Procedure:	1. KDB789033 D02 General UNII Test Procedures New Rules v02r01 Section C. 2. Set to the maximum power setting and enable the EUT transmit continuously. 3. Make the measurement with the spectrum analyzer's resolution bandwidth RBW = 1% EBW, VBW≥3RBW, In order to make an accurate measurement. 4. Measure and record the results in the test report.
Test Result:	PASS

4.4.2. Test Instruments

RF Test Room					
Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Date**	**Calibration Due**
Spectrum analyzer	Agilent	N9020A	HKE-025	Feb. 20, 2024	Feb. 19, 2025
RF cable	Times	1-40G	HKE-034	Feb. 20, 2024	Feb. 19, 2025
RF automatic control unit	Tonscend	JS0806-2	HKE-060	Feb. 20, 2024	Feb. 19, 2025
RF Test Software	Tonscend	JS1120-3 Version 3.5.39	HKE-083	N/A	N/A

Note: *The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).*

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4.4.3. Test data

Mode	Test Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	Verdict
802.11a	CH36	5180	19.90	PASS
802.11a	CH40	5200	19.82	PASS
802.11a	CH48	5240	19.82	PASS
802.11n(HT20)	CH36	5180	20.10	PASS
802.11n(HT20)	CH40	5200	20.36	PASS
802.11n(HT20)	CH48	5240	20.22	PASS
802.11n(HT40)	CH38	5190	40.27	PASS
802.11n(HT40)	CH46	5230	40.06	PASS
802.11ac(HT20)	CH36	5180	20.16	PASS
802.11ac(HT20)	CH40	5200	20.11	PASS
802.11ac(HT20)	CH48	5240	20.29	PASS
802.11ac(HT40)	CH38	5190	40.15	PASS
802.11ac(HT40)	CH46	5230	40.47	PASS
802.11ac(HT80)	CH42	5210	80.64	PASS

Test plots as follows:

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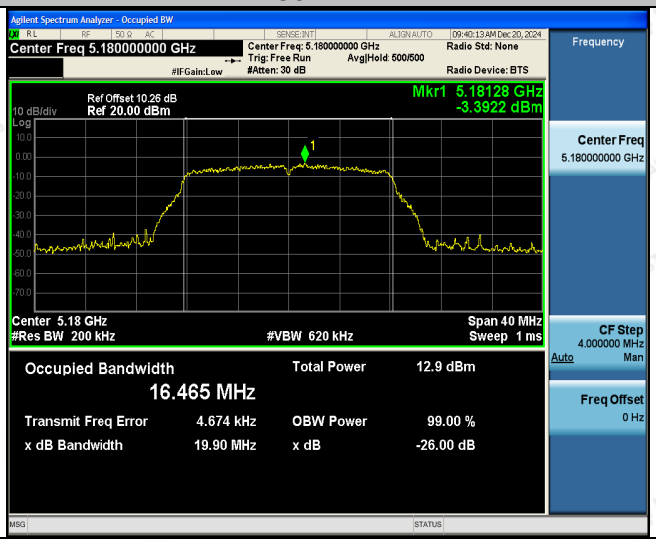
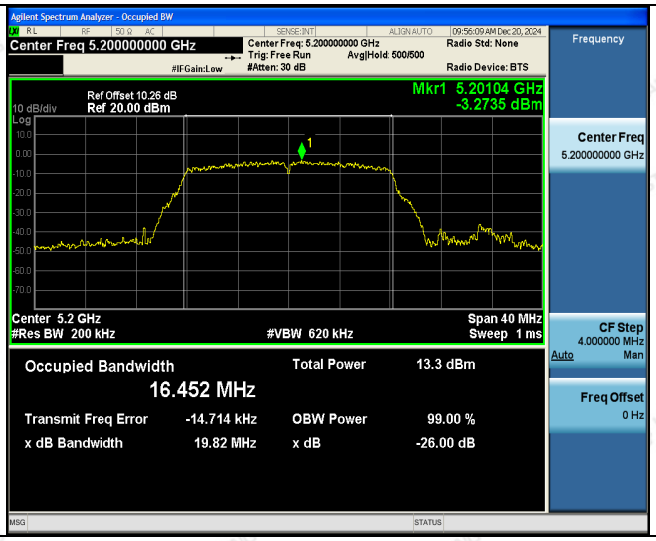
Band I （5150 – 5250 MHz）

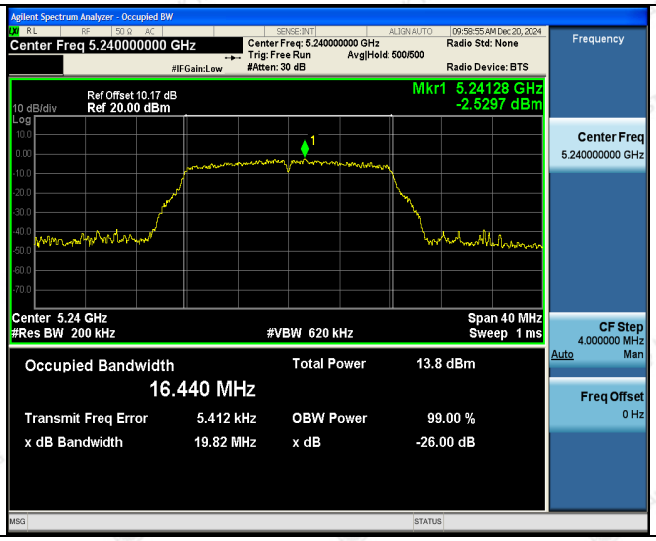
802.11a



Low



Mid



High

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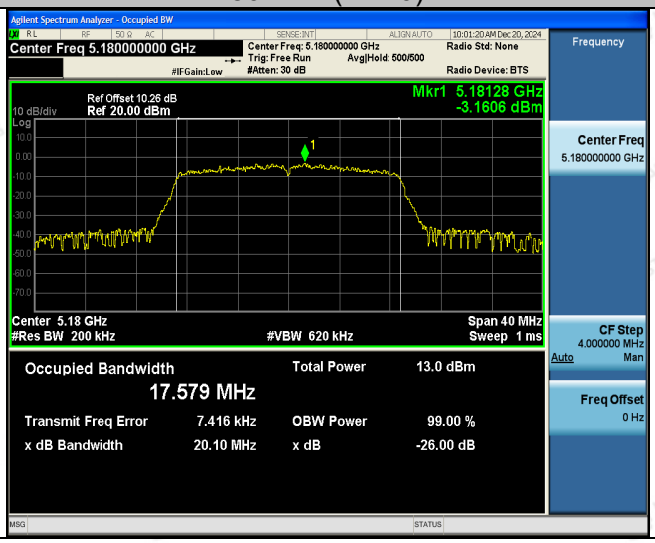
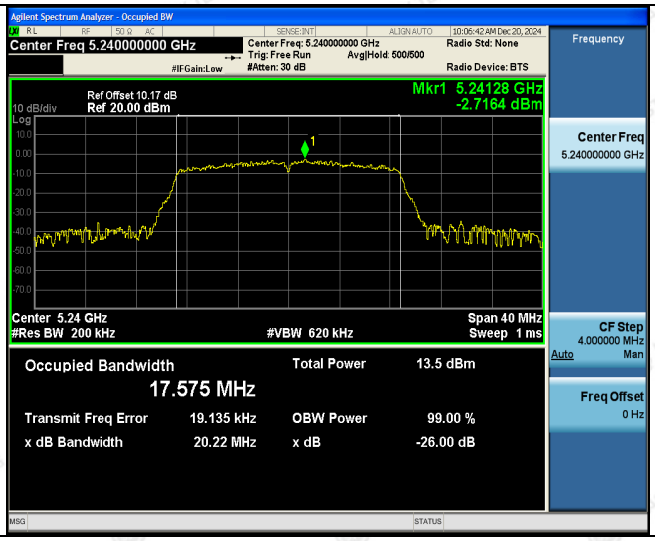
802.11n(HT20)



Low

Mid



High

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802.11n(HT40)

Low

High

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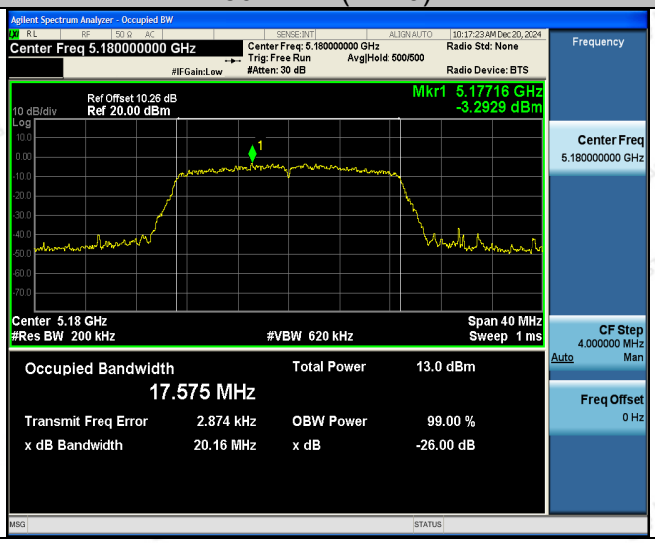
802.11ac(HT20)



Low

Mid

High

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802.11ac(HT40)

Low

High

802.11ac(HT80)

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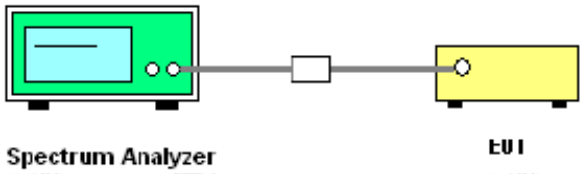
4.5. Power Spectral Density

4.5.1. Test Specification

Test Requirement:	FCC Part15 E Section 15.407 (a)
Test Method:	KDB789033 D02 General UNII Test Procedures New Rules v02r01 Section F
Limit:	≤11.00dBm/MHz for Band I 5150MHz-5250MHz
Test Setup:	
Test Mode:	Transmitting mode with modulation
Test Procedure:	1. Set the spectrum analyzer or EMI receiver span to view the entire emission bandwidth. 2. Set RBW = 1 MHz, VBW ≥ 3*RBW, Sweep time = Auto, Detector = RMS. 3. Allow the sweeps to continue until the trace stabilizes. 4. Use the peak marker function to determine the maximum amplitude level. 5. The E.I.R.P spectral density used radiated test method. At a test site that has been validated using the procedures of ANSI C63.4 or the latest CISPR 16-1-4 for measurements above 1 GHz, so as to simulate a near free-space environment.
Test Result:	PASS

4.5.2. Test Instruments

RF Test Room					
Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Date**	**Calibration Due**
Spectrum analyzer	Agilent	N9020A	HKE-025	Feb. 20, 2024	Feb. 19, 2025
RF cable	Times	1-40G	HKE-034	Feb. 20, 2024	Feb. 19, 2025
RF automatic control unit	Tonscend	JS0806-2	HKE-060	Feb. 20, 2024	Feb. 19, 2025
RF Test Software	Tonscend	JS1120-3 Version 3.5.39	HKE-083	N/A	N/A

Note: *The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).*

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4.5.3. Test data

Mode	Test Channel	Level [dBm/MHz]	Limit (dBm/MHz)	Result
802.11a	CH36	1.60	11	PASS
802.11a	CH40	1.57	11	PASS
802.11a	CH48	2.10	11	PASS
802.11n(HT20)	CH36	0.87	11	PASS
802.11n(HT20)	CH40	2.47	11	PASS
802.11n(HT20)	CH48	1.93	11	PASS
802.11n(HT40)	CH38	-1.61	11	PASS
802.11n(HT40)	CH46	-1.09	11	PASS
802.11ac(HT20)	CH36	0.88	11	PASS
802.11ac(HT20)	CH40	1.55	11	PASS
802.11ac(HT20)	CH48	1.09	11	PASS
802.11ac(HT40)	CH38	-1.98	11	PASS
802.11ac(HT40)	CH46	-1.53	11	PASS
802.11ac(HT80)	CH42	-3.16	11	PASS

Note: Instrument attenuation and cable loss See test diagram

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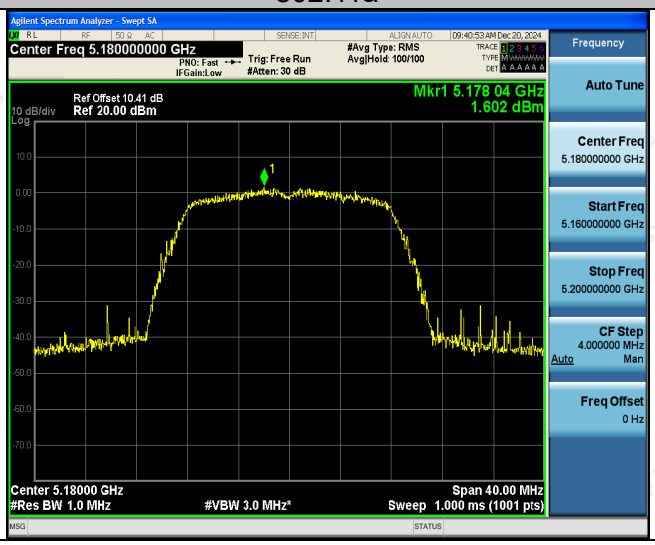
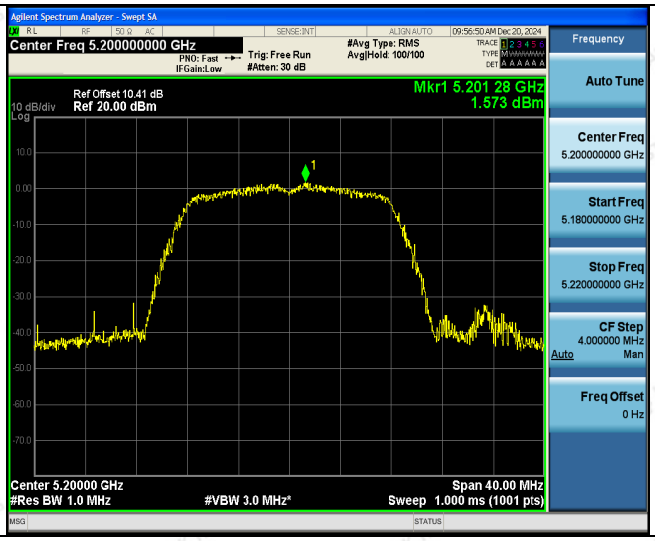
Test plots as follows:
Band I （5150 – 5250 MHz）

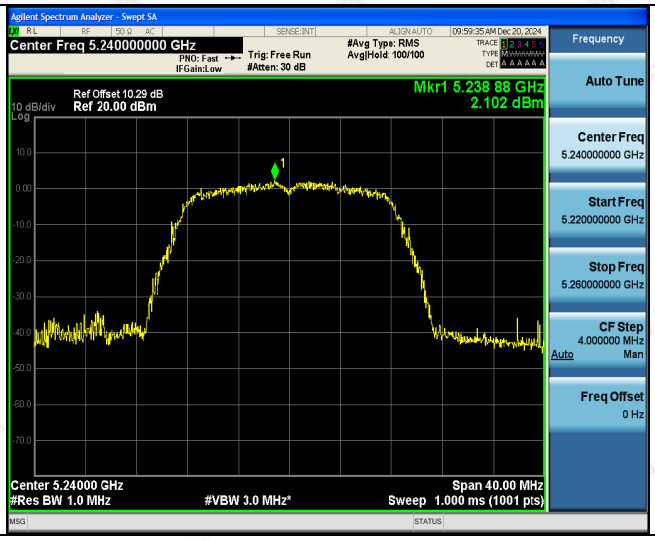
802.11a



Low



Mid



High

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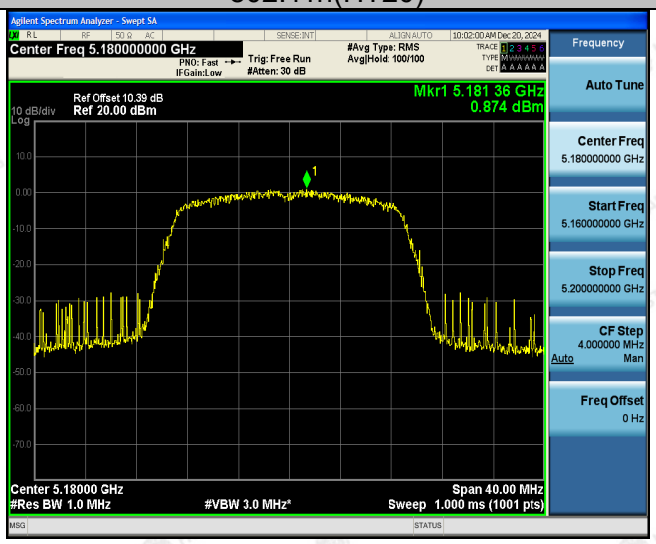
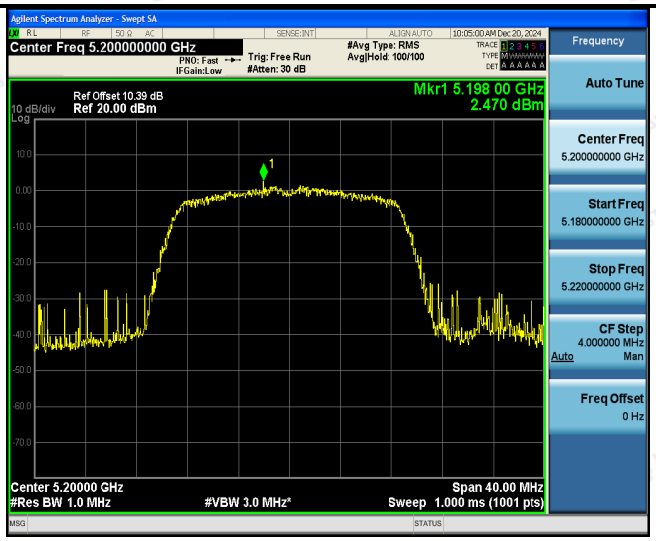
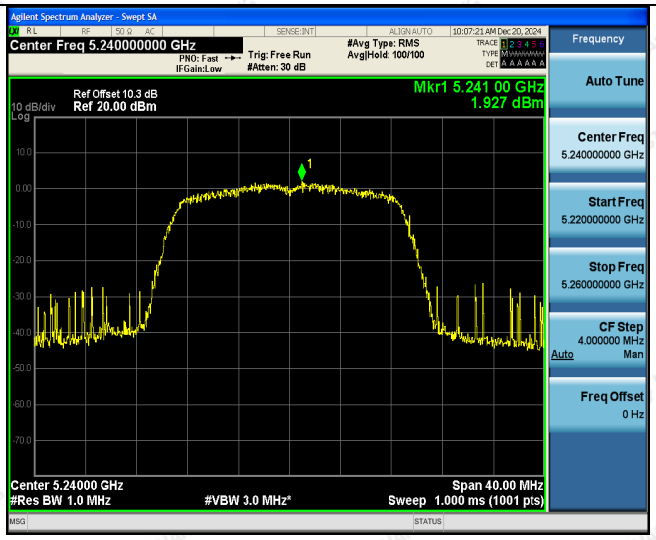
802.11n(HT20)



Low



Mid



High

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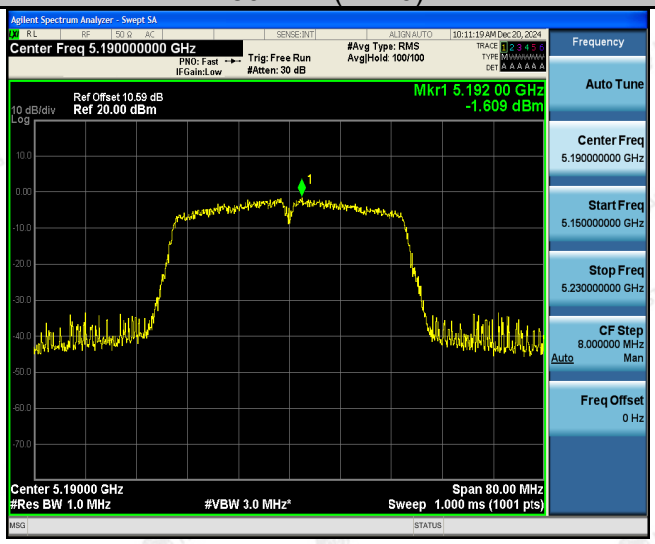
802.11n(HT40)



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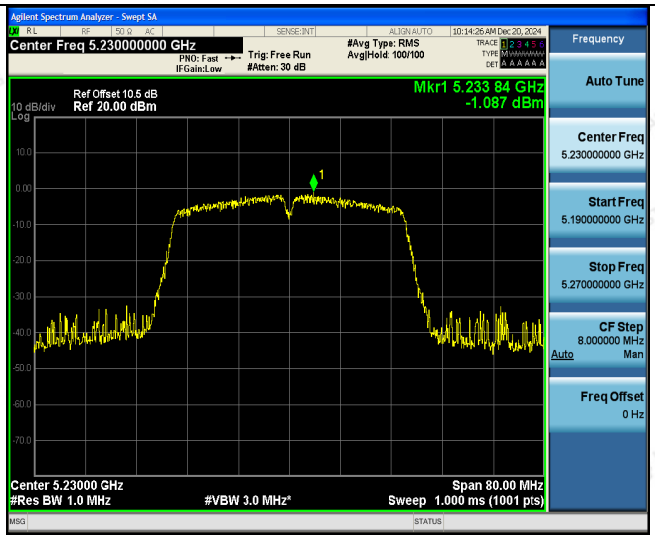

High

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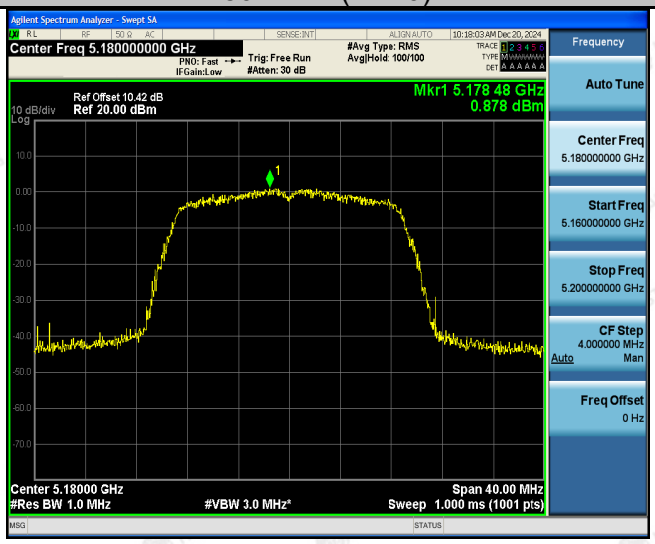
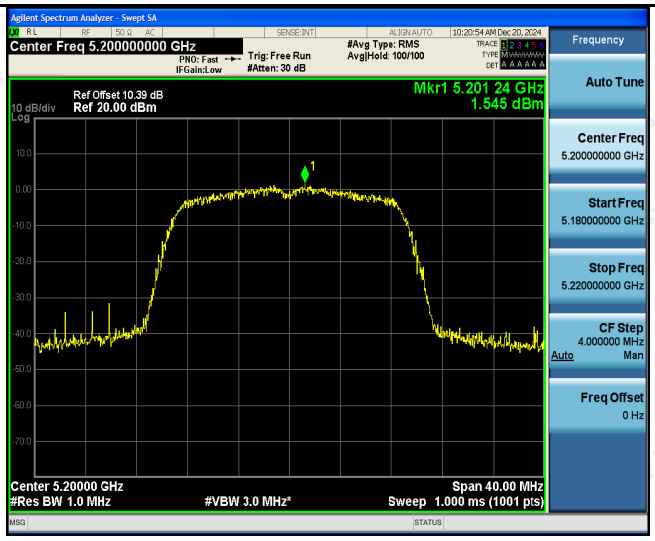
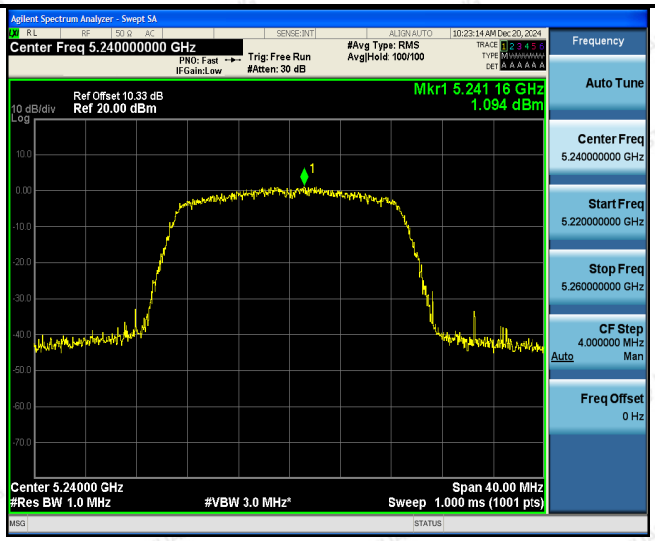
802.11ac(HT20)



Low



Mid



High

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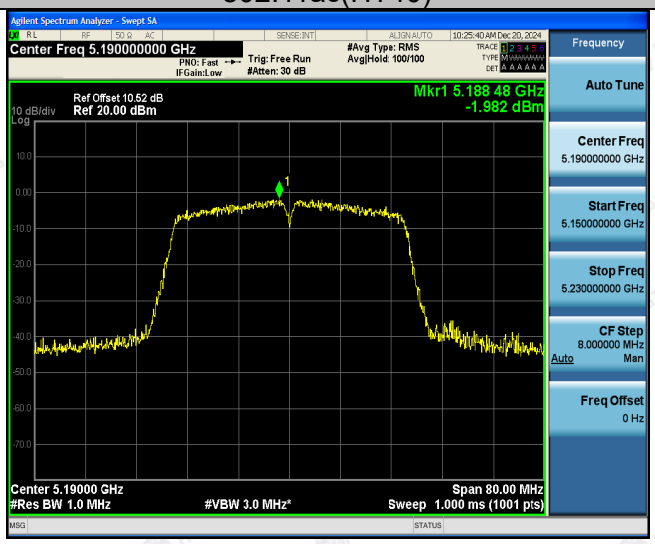
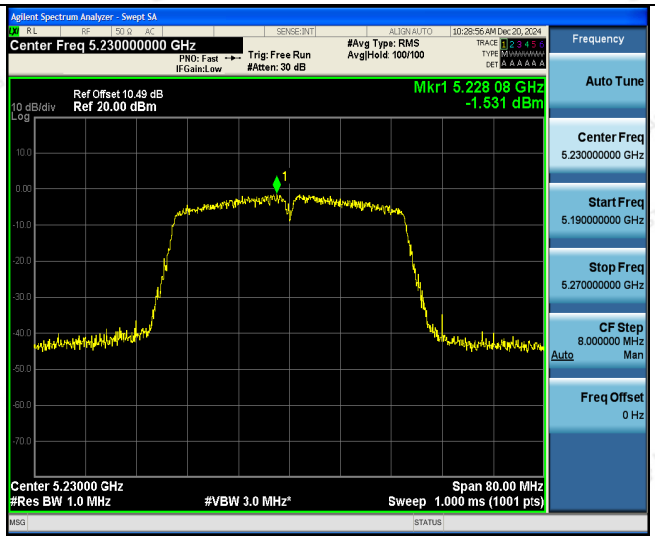
802.11ac(HT40)



Low



High

802.11ac(HT80)

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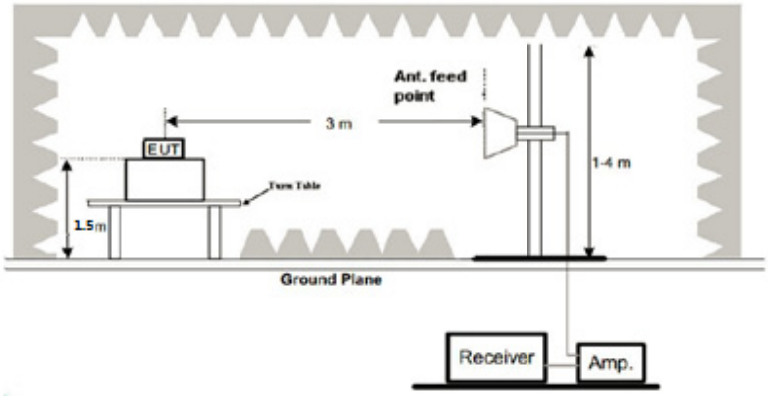
4.6. Band Edge

4.6.1. Test Specification

Test Requirement:	FCC CFR47 Part 15E Section 15.407
Test Method:	ANSI C63.10 2013
Limit:	For band I&II&III: E[dBμV/m] = EIRP[dBm] + 95.2=68.2 dBμV/m, for EIRP(dBm)= **-27dBm** 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. For band IV(5715-5725MHz&5850-5860MHz): E[dBμV/m] = EIR
Test Setup:	
Test Mode:	Transmitting mode with modulation

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Test Procedure:	1. The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation. 2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. 3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. 4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading. 5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. 6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi peak or average method as specified and then reported in a data sheet.
Test Result:	PASS

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4.6.2. Test Instruments

Radiated Emission Test Site (966)					
Name of Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Date**	**Calibration Due**
Spectrum analyzer	Agilent	N9020A	HKE-025	Feb. 20, 2024	Feb. 19, 2025
Spectrum analyzer	R&S	FSV3044	HKE-126	Feb. 20, 2024	Feb. 19, 2025
Preamplifier	EMCI	EMC051845S	HKE-006	Feb. 20, 2024	Feb. 19, 2025
Preamplifier	Schwarzbeck	BBV 9743	HKE-016	Feb. 20, 2024	Feb. 19, 2025
Preamplifier	A.H. Systems	SAS-574	HKE-182	Feb. 20, 2024	Feb. 19, 2025
6dB Attenuator	Pasternack	6db	HKE-184	Feb. 20, 2024	Feb. 19, 2025
EMI Test Receiver	Rohde & Schwarz	ESR-7	HKE-010	Feb. 20, 2024	Feb. 19, 2025
Broadband Antenna	Schwarzbeck	VULB9168	HKE-167	Feb. 21, 2024	Feb. 20, 2026
Loop Antenna	COM-POWER	AL-130R	HKE-014	Feb. 21, 2024	Feb. 20, 2026
Horn Antenna	Schwarzbeck	9120D	HKE-013	Feb. 21, 2024	Feb. 20, 2026
EMI Test Software	Tonscend	JS32-RE 5.0.0	HKE-082	N/A	N/A
RSE Test Software	Tonscend	JS36-RSE 5.0.0	HKE-184	N/A	N/A

Note: *The calibration interval of the above test instruments is 12 months and the calibrations are traceable to international system unit (SI).*

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4.6.3. Test Data

Operation Mode: 802.11a Mode with 5.2G TX CH Low

Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5150	55.26	-2.49	52.77	74	-21.23	peak
5150	/	-2.49	/	54	/	AVG
Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Level-Limit.						

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5150	54.19	-2.49	51.7	74	-22.3	peak
5150	/	-2.49	/	54	/	AVG
Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Level-Limit.						

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Operation Mode: TX CH High with 5.2G

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5350	54.89	-2.11	52.78	74	-21.22	peak
5350	/	-2.11	/	54	/	AVG
Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Level-Limit.						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5350	52.63	-2.11	50.52	74	-23.48	peak
5350	/	-2.11	/	54	/	AVG
Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Level-Limit.						

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Operation Mode: 802.11n/HT20 Mode with 5.2G TX CH Low

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5150	55.47	-2.49	52.98	74	-21.02	peak
5150	/	-2.49	/	54	/	AVG
Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Level-Limit.						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5150	53.19	-2.49	50.7	74	-23.3	peak
5150	/	-2.49	/	54	/	AVG
Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Level-Limit.						

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Operation Mode: TX CH High with 5.2G

Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5350	54.67	-2.11	52.56	74	-21.44	peak
5350	/	-2.11	/	54	/	AVG
Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Level-Limit.						

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5350	52.41	-2.11	50.3	74	-23.7	peak
5350	/	-2.11	/	54	/	AVG
Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Level-Limit.						

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Operation Mode: 802.11 n/HT40 Mode with 5.2G TX CH Low

Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5150	53.29	-2.49	50.8	74	-23.2	peak
5150	/	-2.49	/	54	/	AVG
Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Level-Limit.						

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5150	51.82	-2.49	49.33	74	-24.67	peak
5150	/	-2.49	/	54	/	AVG
Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Level-Limit.						

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Operation Mode: TX CH High with 5.2G

Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5350	55.12	-2.11	53.01	74	-20.99	peak
5350	/	-2.11	/	54	/	AVG
Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Level-Limit.						

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5350	54.26	-2.11	52.15	74	-21.85	peak
5350	/	-2.11	/	54	/	AVG
Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Level-Limit.						

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Operation Mode: 802.11 ac/HT20 Mode with 5.2G TX CH Low

Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5150	54.71	-2.49	52.22	74	-21.78	peak
5150	/	-2.49	/	54	/	AVG
Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Level-Limit.						

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5150	52.96	-2.49	50.47	74	-23.53	peak
5150	/	-2.49	/	54	/	AVG
Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Level-Limit.						

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Operation Mode: TX CH High with 5.2G

Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5350	55.29	-2.11	53.18	74	-20.82	peak
5350	/	-2.11	/	54	/	AVG
Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Level-Limit.						

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5350	53.48	-2.11	51.37	74	-22.63	peak
5350	/	-2.11	/	54	/	AVG
Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Level-Limit.						

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Operation Mode: 802.11 ac/HT40 Mode with 5.2G TX CH Low

Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5150	54.27	-2.49	51.78	74	-22.22	peak
5150	/	-2.49	/	54	/	AVG
Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Level-Limit.						

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5150	53.68	-2.49	51.19	74	-22.81	peak
5150	/	-2.49	/	54	/	AVG
Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Level-Limit.						

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Operation Mode: TX CH High with 5.2G

Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5350	53.18	-2.11	51.07	74	-22.93	peak
5350	/	-2.11	/	54	/	AVG
Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Level-Limit.						

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5350	52.09	-2.11	49.98	74	-24.02	peak
5350	/	-2.11	/	54	/	AVG
Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Level-Limit.						

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Operation Mode: 802.11 ac/HT80 Mode with 5.2G TX CH Low

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5150	52.69	-2.49	50.2	74	-23.8	peak
5150	/	-2.49	/	54	/	AVG
Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Level-Limit.						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5150	51.03	-2.49	48.54	74	-25.46	peak
5150	/	-2.49	/	54	/	AVG
Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Level-Limit.						

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Operation Mode: TX CH High with 5.2G

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5350	55.42	-2.11	53.31	74	-20.69	peak
5350	/	-2.11	/	54	/	AVG
Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Level-Limit.						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5350	53.66	-2.11	51.55	74	-22.45	peak
5350	/	-2.11	/	54	/	AVG
Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Level-Limit.						

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All the test modes completed for test. only the worst result of Mode 1(802.11a Mode)
Series Model No.: X24 Ultra

Operation Mode: 802.11a Mode with 5.2G TX CH Low

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5150	54.26	-2.49	51.77	74	-22.23	peak
5150	/	-2.49	/	54	/	AVG
Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Level-Limit.						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5150	52.61	-2.49	50.12	74	-23.88	peak
5150	/	-2.49	/	54	/	AVG
Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Level-Limit.						

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Operation Mode: TX CH High with 5.2G

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5350	53.94	-2.11	51.83	74	-22.17	peak
5350	/	-2.11	/	54	/	AVG
Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Level-Limit.						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5350	51.43	-2.11	49.32	74	-24.68	peak
5350	/	-2.11	/	54	/	AVG
Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Level-Limit.						

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Series Model No.: C24 Ultra

Operation Mode: 802.11a Mode with 5.2G TX CH Low

Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5150	54.26	-2.49	51.77	74	-22.23	peak
5150	/	-2.49	/	54	/	AVG
Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Level-Limit.						

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5150	53.14	-2.49	50.65	74	-23.35	peak
5150	/	-2.49	/	54	/	AVG
Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Level-Limit.						

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Operation Mode: TX CH High with 5.2G

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5350	54.19	-2.11	52.08	74	-21.92	peak
5350	/	-2.11	/	54	/	AVG
Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Level-Limit.						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5350	53.42	-2.11	51.31	74	-22.69	peak
5350	/	-2.11	/	54	/	AVG
Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Level-Limit.						

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Series Model No.: C25

Operation Mode: 802.11a Mode with 5.2G TX CH Low

Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5150	54.86	-2.49	52.37	74	-21.63	peak
5150	/	-2.49	/	54	/	AVG
Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Level-Limit.						

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5150	52.19	-2.49	49.7	74	-24.3	peak
5150	/	-2.49	/	54	/	AVG
Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Level-Limit.						

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Operation Mode: TX CH High with 5.2G

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5350	53.99	-2.11	51.88	74	-22.12	peak
5350	/	-2.11	/	54	/	AVG
Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Level-Limit.						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5350	51.47	-2.11	49.36	74	-24.64	peak
5350	/	-2.11	/	54	/	AVG
Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Level-Limit.						

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Series Model No.: I15 Ultra

Operation Mode: 802.11a Mode with 5.2G TX CH Low

Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5150	54.19	-2.49	51.7	74	-22.3	peak
5150	/	-2.49	/	54	/	AVG
Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Level-Limit.						

Vertical:

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
5150	52.64	-2.49	50.15	74	-23.85	peak
5150	/	-2.49	/	54	/	AVG
Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Level-Limit.						

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Operation Mode: TX CH High with 5.2G

Horizontal

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5350	55.23	-2.11	53.12	74	-20.88	peak
5350	/	-2.11	/	54	/	AVG
Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Level-Limit.						

Vertical:

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector Type
(MHz)	(dBμV)	(dB)	(dBμV/m)	(dBμV/m)	(dB)	
5350	53.18	-2.11	51.07	74	-22.93	peak
5350	/	-2.11	/	54	/	AVG
Remark: Factor = Cable loss + Antenna factor + Attenuator – Preamplifier; Level = Reading + Factor; Margin = Level-Limit.						

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