



Test report No: 2650520R-0E3012110014-A

FCC TEST REPORT

Product Name	Peplink Pepwave Wireless Product
Trademark	
Model and /or type reference	Balance 310 5G BPL-310-5GP-T-PRM MAX Orbit 8 MAX-ORB-8-T-PRM
FCC ID	2BVXV-P1BE04
Applicant's name / address	PSG TECHNOLOGIES (S) PTE. LIMITED 68 CIRCULAR ROAD, #02-01, SINGAPORE 049422
Manufacturer's name / address	PSG TECHNOLOGIES (S) PTE. LIMITED 68 CIRCULAR ROAD, #02-01, SINGAPORE 049422
Test method requested, standard	FCC CFR Title 47 Part 15 Subpart B:2024, Class A
Verdict Summary	IN COMPLIANCE
Documented By (Adm. Specialist / Peggy Tu)	
Approved By (Director / Vincent Lin)	
Date of Report	2026/05/20
Date of Issue	2026/07/16
Report No.	2650520R-0E3012110014-A
Report Version	V1.0

INDEX

Description	Page
1. General Information	5
1.1. EUT Description	5
1.2. Mode of Operation	6
1.3. Configuration & Details of Tested System	8
1.4. EUT Exercise Software	9
2. Technical Test.....	10
2.1. Summary of Test Result	10
2.2. List of Test Equipment	11
2.3. Measurement Uncertainty	12
2.4. Test Environment	13
3. Conducted Emission	14
3.1. Test Specification	14
3.2. Test Setup	14
3.3. Limit.....	14
3.4. Test Procedure	15
3.5. Test Result	16
3.6. Test Photograph	18
4. Radiated Emission	19
4.1. Test Specification	19
4.2. Test Setup	19
4.3. Limit.....	20
4.4. Test Procedure	21
4.5. Test Result	22
4.6. Test Photograph	30

Product Photos: Please refer to the file: 2650520R-Product Photos

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DEKRA is a testing laboratory competent to carry out the tests described in this report.

In order to assure the traceability to other national and international laboratories, DEKRA has a calibration and maintenance program for its measurement equipment.

DEKRA guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated in the report and it is based on the knowledge and technical facilities available at DEKRA at the time of performance of the test.

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The results presented in this Test Report apply only to the particular item under test established in this document.

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General conditions

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2. The test results shown in the test report are traceable to the national/international standard through the calibration report of the equipment and evaluated measurement uncertainty herein.
3. This report must not be used to claim product endorsement by TAF or any agency of the government.
4. The test report shall not be reproduced without the written approval of DEKRA Testing and Certification Co., Ltd.
5. Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

Revision History

Report No.	Version	Description	Issued Date
2650520R-0E3012110014-A	V1.0	Initial issue of report.	2026-07-16

1. General Information

1.1. EUT Description

Product Name	Peplink Pepwave Wireless Product
Trademark	
Model No.	Balance 310 5G BPL-310-5GP-T-PRM MAX Orbit 8 MAX-ORB-8-T-PRM
Test Model No.	Balance 310 5G
EUT Max Frequency	5850 MHz
EUT Rated Voltage	Terminal Block: 12V - 54V DC 2x Power DIN: 54V DC
EUT Test Voltage	AC 120V/60Hz to DC 54V (AC adapter)

No	Accessories	Brand Name	Model Name	Power Rate	Remark
1	GPS Antenna	An jie	AEGQ3S-B0002	--	--
2	WIFI Antenna*2	WIESON	ARY121-1976-001-00	--	--
3	Cellular Antenna*4		04-410188-00	--	For Balance 310 5G and BPL-310-5GP-T-PRM only
4	Adapter	FSP	FSP280-AWAU3	AC Input:100-240V~, 3.3A,50-60Hz DC Output: 54.0V=5.19A 280.0W	Non-Shielded, 1.6m, with one ferrite core bonded.
5	Power Cord	QUEEN PUO	10100032005411	--	--

Note:

1. Model differences are due to different markets.
2. MAX Orbit 8 & MAX-ORB-8-T-PRM: Removed WWAN module, WWAN antenna ports and SIM slots.

1.2. Mode of Operation

DEKRA has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

Pre-Test Mode (Conducted Emission)
Mode 1: Balance 310 5G, Normal Operation(SFP+: 10Gbps + WAN: 10Gbps + LAN(PoE) 1~8: 2.5Gbps + USB-C 1~2: Load + GPS + Wi-Fi 5G + Wi-Fi 2.4G + WWAN 5G NR Band n78 Link + SIM Slot A + USB-C Console), Dual Power, AC Adapter(FSP280-AWAU3)
Mode 2: Balance 310 5G, Normal Operation(SFP+: 10Gbps + WAN: 10Gbps + LAN(PoE) 1~8: 2.5Gbps + USB-C 1~2: Load + GPS + Wi-Fi 5G + Wi-Fi 2.4G + WWAN 5G NR Band n78 Link + SIM Slot B + USB-C Console), Dual Power, AC Adapter(FSP280-AWAU3)
Mode 3: Balance 310 5G, Normal Operation(SFP+: 10Gbps + WAN: 10Gbps + LAN(PoE) 1~8: 2.5Gbps + USB-C 1~2: Load + GPS + Wi-Fi 5G + Wi-Fi 2.4G + WWAN LTE Band 41 Link + SIM Slot A + USB-C Console), Dual Power, AC Adapter(FSP280-AWAU3)
Mode 4: Balance 310 5G, Normal Operation(SFP+: 10Gbps + WAN: 10Gbps + LAN(PoE) 1~8: 2.5Gbps + USB-C 1~2: Load + GPS + Wi-Fi 5G + Wi-Fi 2.4G + WWAN WCDMA Band 2 Link + SIM Slot A + USB-C Console), Dual Power, AC Adapter(FSP280-AWAU3)
Mode 5: Balance 310 5G, Normal Operation(SFP+: 10Gbps + WAN: 10Gbps + LAN(PoE) 1~8: 2.5Gbps + USB-C 1~2: Load + GPS + Wi-Fi 5G + Wi-Fi 2.4G + WWAN LTE Band 41 Idle + SIM Slot A + USB-C Console), Dual Power, AC Adapter(FSP280-AWAU3)
Mode 6: Balance 310 5G, Normal Operation(SFP+: 10Gbps + WAN: 10Gbps + LAN(PoE) 1~8: 2.5Gbps + USB-C 1~2: Load + GPS + Wi-Fi 5G + Wi-Fi 2.4G + WWAN e-SIM on + USB-C Console), Dual Power, AC Adapter(FSP280-AWAU3)
Mode 7: Balance 310 5G, Normal Operation(SFP+: 10Gbps + WAN: 10Gbps + LAN 1~8: 2.5Gbps + GPS + Wi-Fi 5G + Wi-Fi 2.4G + WWAN LTE Band 41 Link + SIM Slot A + USB-C Console), Single Power(Source A), AC Adapter(FSP280-AWAU3)
Mode 8: Balance 310 5G, Normal Operation(SFP+: 10Gbps + WAN: 10Gbps + LAN 1~8: 2.5Gbps + GPS + Wi-Fi 5G + Wi-Fi 2.4G + WWAN LTE Band 41 Link + SIM Slot A + USB-C Console), Single Power(Source B), AC Adapter(FSP280-AWAU3)
Mode 9: MAX Orbit 8 GPS LNA 1, Normal Operation(SFP+: 10Gbps + WAN: 2.5Gbps + LAN(PoE) 1~8: 10Gbps + USB-C 1~2: Load + GPS + Wi-Fi 5G + Wi-Fi 2.4G + WWAN LTE Band 41 Link + SIM Slot A + USB-C Console), Dual Power, AC Adapter(FSP280-AWAU3)
Mode 10: MAX Orbit 8 GPS LNA 2, Normal Operation(SFP+: 10Gbps + WAN: 2.5Gbps + LAN(PoE) 1~8: 10Gbps + USB-C 1~2: Load + GPS + Wi-Fi 5G + Wi-Fi 2.4G + WWAN LTE Band 41 Link + SIM Slot A + USB-C Console), Dual Power, AC Adapter(FSP280-AWAU3)
Pre-Test Mode (Radiated Emission)
Mode 1: Balance 310 5G, Normal Operation(SFP+: 10Gbps + WAN: 10Gbps + LAN(PoE) 1~8: 2.5Gbps + USB-C 1~2: Load + GPS + Wi-Fi 5G + Wi-Fi 2.4G + WWAN 5G NR Band n78 Link + SIM Slot A + USB-C Console), Dual Power, AC Adapter(FSP280-AWAU3)
Mode 2: Balance 310 5G, Normal Operation(SFP+: 10Gbps + WAN: 10Gbps + LAN(PoE) 1~8: 2.5Gbps + USB-C 1~2: Load + GPS + Wi-Fi 5G + Wi-Fi 2.4G + WWAN 5G NR Band n78 Link + SIM Slot B + USB-C Console), Dual Power, AC Adapter(FSP280-AWAU3)
Mode 3: Balance 310 5G, Normal Operation(SFP+: 10Gbps + WAN: 10Gbps + LAN(PoE) 1~8: 2.5Gbps + USB-C 1~2: Load + GPS + Wi-Fi 5G + Wi-Fi 2.4G + WWAN LTE Band 41 Link + SIM Slot A + USB-C Console), Dual Power, AC Adapter(FSP280-AWAU3)
Mode 4: Balance 310 5G, Normal Operation(SFP+: 10Gbps + WAN: 10Gbps + LAN(PoE) 1~8: 2.5Gbps + USB-C 1~2: Load + GPS + Wi-Fi 5G + Wi-Fi 2.4G + WWAN WCDMA Band 2 Link + SIM Slot A + USB-C Console), Dual Power, AC Adapter(FSP280-AWAU3)
Mode 5: Balance 310 5G, Normal Operation(SFP+: 10Gbps + WAN: 10Gbps + LAN(PoE) 1~8: 2.5Gbps + USB-C 1~2: Load + GPS +

Wi-Fi 5G + Wi-Fi 2.4G + WWAN LTE Band 41 Idle + SIM Slot A + USB-C Console), Dual Power, AC Adapter(FSP280-AWAU3)

Mode 6: Balance 310 5G, Normal Operation(SFP+: 10Gbps + WAN: 10Gbps + LAN(PoE) 1~8: 2.5Gbps + USB-C 1~2: Load + GPS + Wi-Fi 5G + Wi-Fi 2.4G + WWAN e-SIM on + USB-C Console), Dual Power, AC Adapter(FSP280-AWAU3)

Mode 7: Balance 310 5G, Normal Operation(SFP+: 10Gbps + WAN: 10Gbps + LAN 1~8: 2.5Gbps + GPS + Wi-Fi 5G + Wi-Fi 2.4G + WWAN LTE Band 41 Link + SIM Slot A + USB-C Console), Single Power(Source A), AC Adapter(FSP280-AWAU3)

Mode 8: Balance 310 5G, Normal Operation(SFP+: 10Gbps + WAN: 10Gbps + LAN 1~8: 2.5Gbps + GPS + Wi-Fi 5G + Wi-Fi 2.4G + WWAN LTE Band 41 Link + SIM Slot A + USB-C Console), Single Power(Source B), AC Adapter(FSP280-AWAU3)

Mode 9: Balance 310 5G, Normal Operation(SFP+: 10Gbps + WAN: 10Gbps + LAN 1~8: 2.5Gbps + GPS + Wi-Fi 5G + Wi-Fi 2.4G + WWAN LTE Band 41 Link + SIM Slot A + USB-C Console), Terminal block Power, DC 12V

Mode 10: Balance 310 5G, Normal Operation(SFP+: 10Gbps + WAN: 10Gbps + LAN(PoE) 1~8: 2.5Gbps + USB-C 1~2: Load + GPS + Wi-Fi 5G + Wi-Fi 2.4G + WWAN LTE Band 41 Link + SIM Slot A + USB-C Console), Terminal block Power, DC 54V

Mode 11: MAX Orbit 8(GPS LNA 1), (SFP+: 10Gbps + LAN: 10Gbps + WAN(PoE) 1~8: 2.5Gbps + USB-C 1~2: Load + GPS + Wi-Fi 5G + Wi-Fi 2.4G + USB-C Console), Dual Power, AC Adapter(FSP280-AWAU3)

Mode 12: MAX Orbit 8(GPS LNA 2), (SFP+: 10Gbps + LAN: 10Gbps + WAN(PoE) 1~8: 2.5Gbps + USB-C 1~2: Load + GPS + Wi-Fi 5G + Wi-Fi 2.4G + USB-C Console), Dual Power, AC Adapter(FSP280-AWAU3)

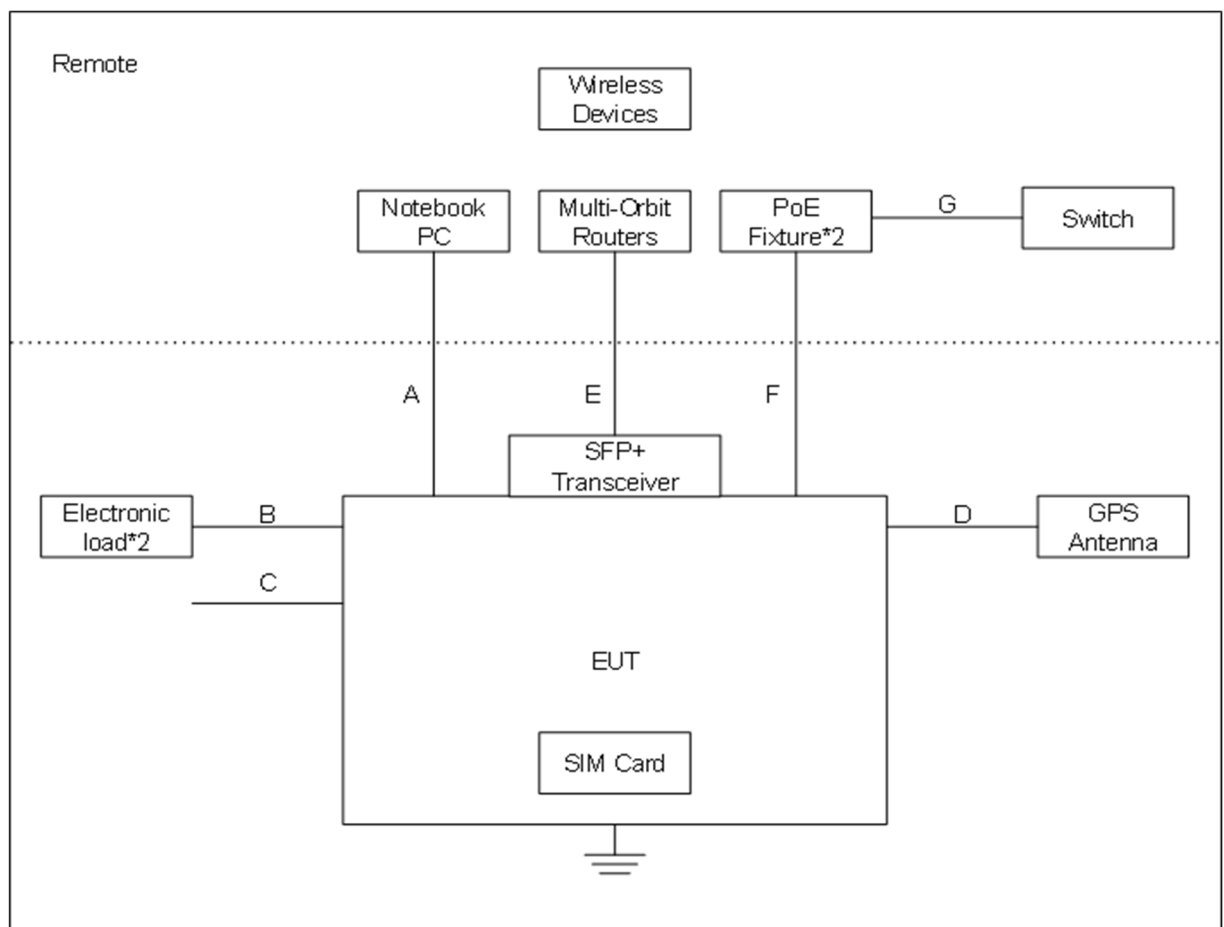
Final Test Mode	
Conducted Emission	Mode 3
Radiated Emission	Mode 3

Note:

1. Refer to Certified Cellular module report worst band to test.
2. The worst SIM Card slot is Slot-A.
3. This product supports client/master mode, but it does not affect EMC testing after evaluation.

1.3. Configuration & Details of Tested System

Connection Diagram



Tested System Details

Product	Manufacturer	Model No.	No.	Cable Type & Description
Notebook PC	Lenovo	TP00116D	A	LAN, Non-shielded 10m
Electronic load*2	ATORCH	DL24	B	USB-C, shielded 2m
Floating	N/A	N/A	C	USB-C, shielded 1m
GPS Antenna	An jie	AEGQ3S-B0002	D	SMA, shielded 5m
Multi-Orbit Routers	Peplink	MAX Orbit 8		
SFP+ Transceiver	FINISAR	FTLX8574D3BCL	E	Fiber, Non-shielded 3m
PoE Fixture*2	N/A	N/A	F	LAN *8, non-shielded 10m
SIM Card	R&S	CMW500		
Switch	Peplink	N/A	G	LAN *8, non-shielded 2m

Wireless Devices Inf.

Product	Manufacturer	Model No.
Base Station	R&S	CMW500
GPS Simulator	Orolia	GSG-5

Note:

- ☒ Use Full system setup configuration determines Worst-Case Mode.
- ☐ Use 2dB law program determines Max. Cable Configuration and Worst-Case Mode.
- ☒ Radiated emission item test: Performed using the Horn Antenna 3dB Beamwidth to 3m from the EUT size sufficient to cover the procedure.
- ☐ Radiated emission item test: Performed using the Horn Antenna 3dB Beamwidth non 3m distance sufficient to cover the size of the EUT program.

1.4. EUT Exercise Software

1	Setup the EUT and simulators as shown on 1.3.
2	Turn on the power of all equipment.
3	All the features of the EUT operation normally.

2. Technical Test

2.1. Summary of Test Result

- ☒ No deviations from the test standards
☐ Deviations from the test standards as below description:

Emission				
Performed Item	Normative References	Test Performed	Test Site	Verdict
Conducted Emission (Class A)	FCC CFR Title 47 Part 15 Subpart B:2024	Yes	HY-SR09	Pass
Radiated Emission (Class A)	FCC CFR Title 47 Part 15 Subpart B:2024	Yes	FS-CB01 HY-CB05	Pass

Note:

1. Test Site information refers to test Laboratory Information.
2. The test facility, measurement instrumentation and measurement methods used for verifying the compliance of ITE or digital apparatus with FCC CFR Title 47 Part 15 Subpart B shall comply either with the requirements in ANSI C63.4-2014, a ANSI C63.4a-2017.

Test Laboratory:	DEKRA Testing and Certification Co., Ltd. Linkou Laboratory
Address:	No. 85, Wenlin St., Linkou Dist., New Taipei City, 244017, Taiwan, R.O.C
Phone number:	+886-2-7753-2700
Fax number:	+886-2-2602-6881
Test Site	
FS: No.6, Lane 75, Wenlin St., Linkou Dist., New Taipei City, 244017, Taiwan, R.O.C No. 85, Wenlin St., Linkou Dist., New Taipei City, 244017, Taiwan, R.O.C	
HY: No.26, Huaya 1 st Rd., Guishan Dist., Taoyuan City 333411, Taiwan, R.O.C	

2.2. List of Test Equipment

Conducted Emission / HY-SR09

Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Due Date
EMI Test Receiver	R&S	ESR3	102041	2024/7/10	2026/7/9
Two-Line V-Network	R&S	ENV216	101493	2025/11/25	2027/11/24
Two-Line V-Network	R&S	ENV216	101492	2025/12/10	2027/12/9
V-LISN	Schwarzbeck	NNLK 8122	00164	2026/3/20	2028/3/19
Impedance Stabilization Network	TESEQ	ISN T800	61676	2026/6/4	2028/6/3
Impedance Stabilization Network	TESEQ	ISN T8-Cat6	61286	2024/6/18	2026/6/17
Impedance Stabilization Network	TESEQ	ISN ST08	61833	2024/6/19	2026/6/18
Coaxial Cable	SUHNER	RG 400	HC001-RG	2026/5/12	2027/5/11
Note : ISN T800 for LAN 10Mbps to 1Gbps, T8-Cat6 for LAN above 1Gbps, ST08 for Shielded LAN					
Test Software version : e3 V9					

Note: Test Receiver Detector: Quasipeak and Average Bandwidth: 9kHz

Radiated Emission (Below 1GHz) / FS-CB01

Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Due Date
Trilog-Broadband Antenna	Schwarzbeck	VULB 9168	01124	2025/10/1	2026/9/30
Trilog-Broadband Antenna	Schwarzbeck	VULB 9168	01126	2025/10/1	2026/9/30
EMI Test Receiver	R&S	ESR7	102255	2026/3/12	2027/3/11
EMI Test Receiver	R&S	ESR7	102254	2025/12/9	2026/12/8
Coaxial Cable	SUHNER	SUCOFLEX 106	AC043-SF	2026/7/5	2027/7/4
Coaxial Cable	SUHNER	SUCOFLEX 106	AC044-SF	2026/7/5	2027/7/4
Coaxial Cable	SUHNER	SUCOFLEX 106	AC045-SF	2026/7/5	2027/7/4
Coaxial Cable	SUHNER	SUCOFLEX 106	AC046-SF	2026/7/5	2027/7/4
Coaxial Cable	SUHNER	SUCOFLEX 106	AC047-SF	2026/7/5	2027/7/4
Coaxial Cable	SUHNER	SUCOFLEX 106	AC049-SF	2026/7/5	2027/7/4
Coaxial Cable	SUHNER	SUCOFLEX 106	AC051-SF	2026/7/5	2027/7/4
Coaxial Cable	SUHNER	SUCOFLEX 106	AC052-SF	2026/7/5	2027/7/4
Preamplifier	SGH	SGH0301	20211007-1	2026/4/7	2027/4/6
Preamplifier	SGH	SGH0301	20211007-5	2025/12/23	2026/12/22
NSA	DEKRA	N/A	N/A	2026/7/6	2027/7/5
Test Software version : e3 V9					

Note: Test Receiver Detector: Quasipeak Bandwidth: 120kHz

Radiated Emission (Above 1GHz) / HY-CB05

Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Due Date
Double Ridged Guide Horn Antenna	RF SPIN	DRH18-E	210504A18ES	2026/4/24	2028/4/23
Horn Antenna	COM-POWER	AH-840	10090015	2025/10/7	2027/10/6
EMI Test Receiver	R&S	ESR7	102502	2026/4/24	2027/4/23
Signal Analyzer	R&S	FSV3044	101115	2025/12/22	2027/12/21
Coaxial Cable	R&S	SUCOFLEX 104	LC037-SF	2026/6/11	2027/6/10
Coaxial Cable	VEGINEAN	VCA-VA500	HQ011C	2026/6/11	2027/6/10
Coaxial Cable	R&S	SUCOFLEX 106	LC035-SF	2026/6/11	2027/6/10
Preamplifier	SGH	SGH118-HS	20220411-2	2026/5/7	2027/5/6
Microwave Preamplifier with cable	SGH	SGH184	20220411-3	2026/5/7	2027/5/6
VSWR	DEKRA	N/A	N/A	2025/8/22	2026/8/21
Test Software version : e3 V9					

2.3. Measurement Uncertainty

Test Items	Uncertainty
Conducted Emission	± 2.40 dB
Radiated Emission (Below 1GHz)	± 5.60 dB
Radiated Emission (Above 1GHz)	± 4.70 dB

2.4. Test Environment

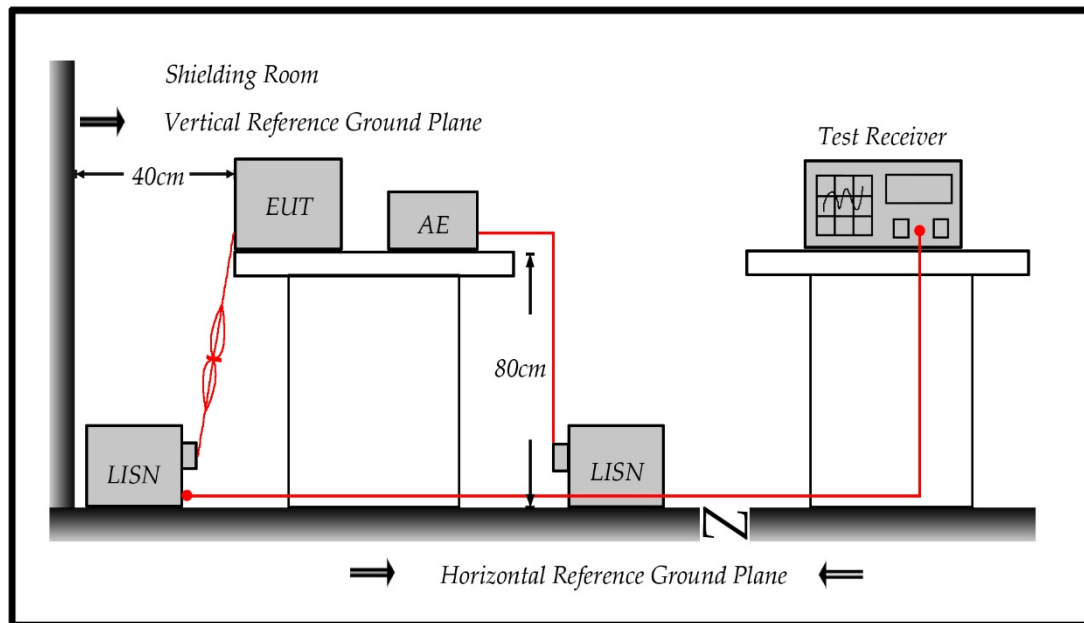
Performed Item	Items	Required
Conducted Emission	Temperature (°C)	10-40
	Humidity (%RH)	20-90
Radiated Emission	Temperature (°C)	10-40
	Humidity (%RH)	20-90

3. Conducted Emission

3.1. Test Specification

According to Standard : FCC Part 15 Subpart B, CISPR 22

3.2. Test Setup



3.3. Limit

Conducted emissions limits (AC mains power terminals)				
Frequency range (MHz)	Class A Quasi-peak (dBuV)	Class A Average (dBuV)	Class B Quasi-peak (dBuV)	Class B Average (dBuV)
0.15 - 0.5	79	66	66 to 56	56 to 46
0.5 - 5	73	60	56	46
5 - 30	73	60	60	50
Note:				
1. The more stringent limit applies at transition frequencies.				
2. The limit level in dBμV decreases linearly with the logarithm of frequency				

Remarks: In the above table, the tighter limit applies at the band edges.

3.4. Test Procedure

The EUT 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. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination.

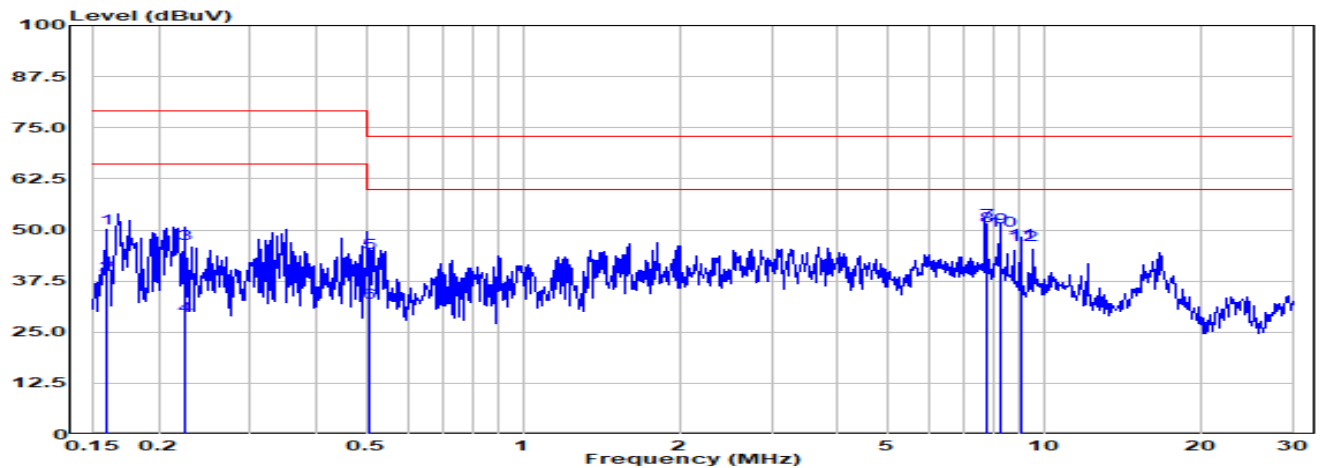
(Please refers to the block diagram of the test setup and photographs.)

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 on conducted measurement.

Conducted emissions were invested over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

3.5. Test Result

Model No	Balance 310 5G	Site	HY-SR09
Test Voltage	AC 120V/60Hz	Test Date	2026-06-15
Test Mode	Mode 3	Engineer	Sun Wu
Phase	Line	Temperature (°C)	24
Test Condition	--	Humidity (%RH)	59

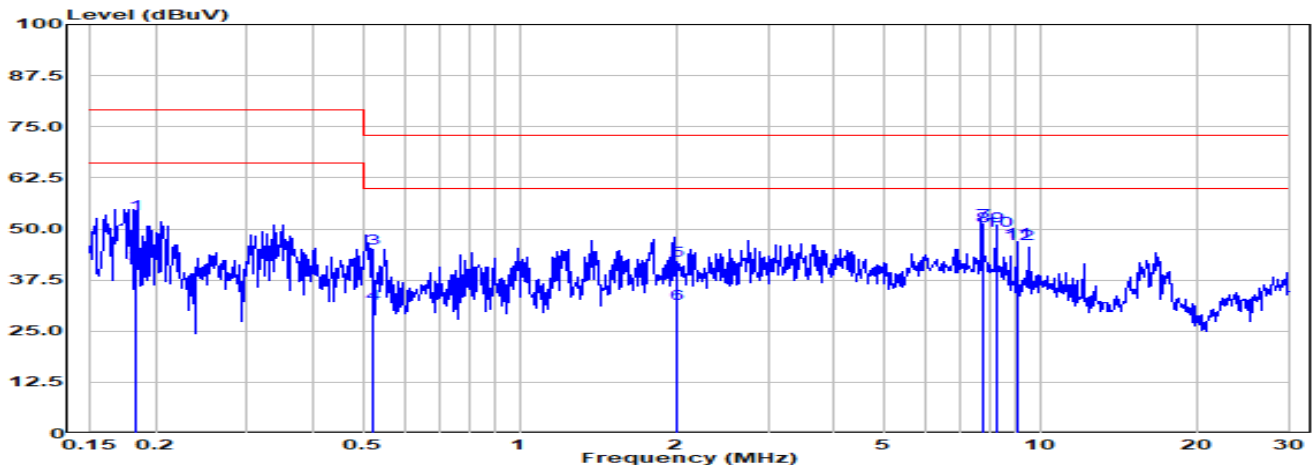


No	Frequency (MHz)	Emission Level (dBuV)	Limit (dBuV)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	0.159	50.30	79.00	-28.70	40.54	9.76	QP
2	0.159	38.94	66.00	-27.06	29.18	9.76	Average
3	0.225	46.66	79.00	-32.34	36.91	9.75	QP
4	0.225	28.87	66.00	-37.13	19.12	9.75	Average
5	0.508	44.46	73.00	-28.54	34.73	9.73	QP
6	0.508	32.30	60.00	-27.70	22.56	9.73	Average
7	7.754	51.70	73.00	-21.30	41.71	9.99	QP
8	7.754	50.97	60.00	-9.03	40.97	9.99	Average
9	8.270	50.79	73.00	-22.21	40.77	10.01	QP
10	8.270	49.94	60.00	-10.06	39.93	10.01	Average
11	9.047	46.92	73.00	-26.08	36.89	10.03	QP
12	9.047	46.45	60.00	-13.55	36.42	10.03	Average

Remark:

1. "*" means this data is the worst margin; "!" means this data is over limit.
2. Emission Level=Reading Level + Correct Factor(Correct Factor=LISN Factor+Cable Loss).
3. Margin=Emission Level-Limit

Model No	Balance 310 5G	Site	HY-SR09
Test Voltage	AC 120V/60Hz	Test Date	2026-06-15
Test Mode	Mode 3	Engineer	Sun Wu
Phase	Neutral	Temperature (°C)	24
Test Condition	--	Humidity (%RH)	59



No	Frequency (MHz)	Emission Level (dBuV)	Limit (dBuV)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB)	Detector Type
1	0.182	53.70	79.00	-25.30	43.98	9.71	QP
2	0.182	41.47	66.00	-24.53	31.76	9.71	Average
3	0.522	45.37	73.00	-27.63	35.67	9.70	QP
4	0.522	31.78	60.00	-28.22	22.08	9.70	Average
5	2.005	42.29	73.00	-30.71	32.50	9.79	QP
6	2.005	31.63	60.00	-28.37	21.84	9.79	Average
7	7.755	51.47	73.00	-21.53	41.53	9.94	QP
8	7.755	50.78	60.00	-9.22	40.85	9.94	Average
9	8.271	50.58	73.00	-22.42	40.63	9.95	QP
10	8.271	49.72	60.00	-10.29	39.76	9.95	Average
11	9.046	46.85	73.00	-26.15	36.88	9.97	QP
12	9.046	46.33	60.00	-13.67	36.35	9.97	Average

Remark:

1. "*" means this data is the worst margin; "!" means this data is over limit.
2. Emission Level=Reading Level + Correct Factor(Correct Factor=LISN Factor+Cable Loss).
3. Margin=Emission Level-Limit

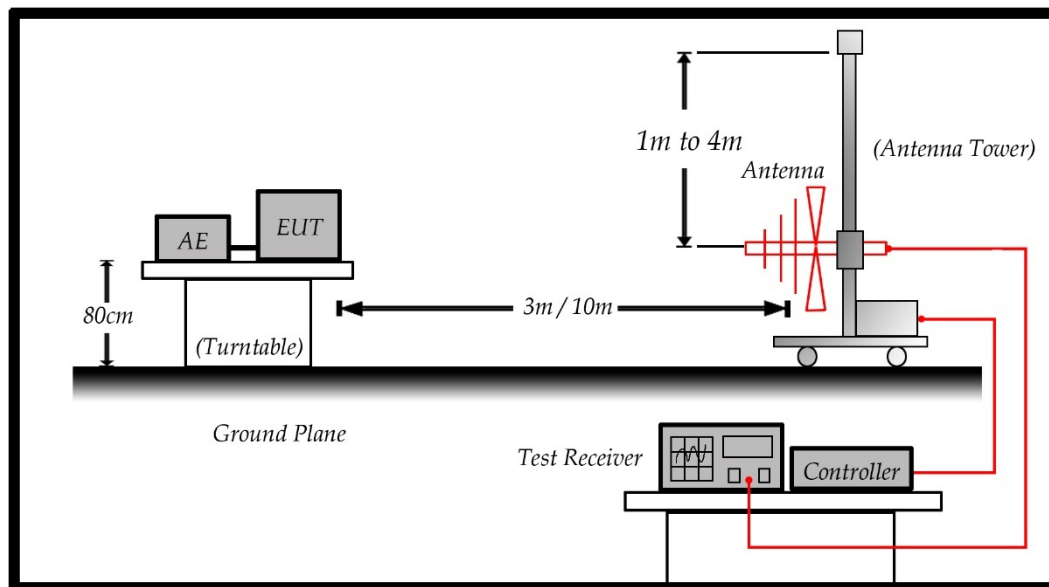
4. Radiated Emission

4.1. Test Specification

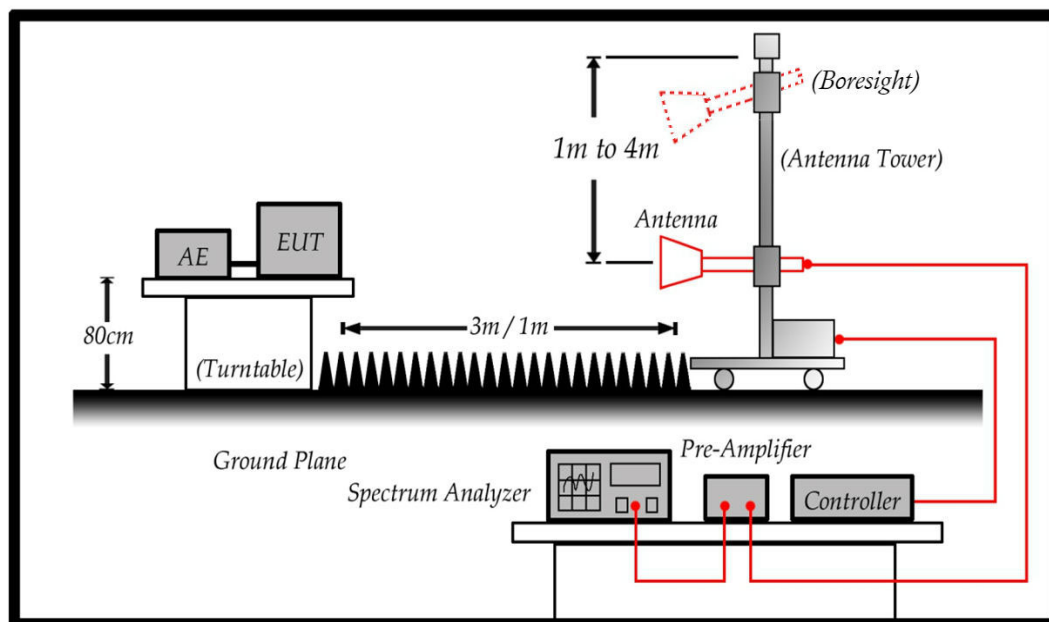
According to Standard : FCC Part 15 Subpart B, CISPR 22

4.2. Test Setup

Under 1GHz Test Setup:



Above 1GHz Test Setup:



4.3. Limit

Test shall not exceed the following value:

FCC Part 15 Subpart B Paragraph 15.109 Limits (dBuV/m)		
Frequency (MHz)	Distance(m)	dBuV/m
30-88	10	39
88-216	10	43.5
216-960	10	46.4
960-1000	10	49.5
1000-40000	3	60
18000-40000	1	69.5

Remark:

1. The tighter limit shall apply at the edge between two frequency bands.
2. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.
3. RF Voltage (dBuV/m) = $20 \log \text{RF Voltage (uV/m)}$

4.4. Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground.

The turn table can rotate 360 degrees to determine the position of the maximum emission level and the antenna (boresight antenna tower) can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated on radiated measurement.

For an unintentional radiator, including a digital device, the spectrum shall be investigated from the lowest radio frequency signal generated or used in the device, without going below the lowest frequency for which a radiated emission limit is specified, up to the frequency shown in the following table:

Highest frequency generated or used in the device or on which the device operates or tunes (MHz)	Upper frequency of measurement range (MHz)
Below 1.705	30
1.705 – 108	1000
108 – 500	2000
500 – 1000	5000
Above 1000	5 th harmonic of the highest frequency or 40 GHz, whichever is lower

On any frequency or frequencies below or equal to 1000MHz, the radiated limits shown are based on measuring equipment employing a quasi-peak detector function and above 1000MHz, the radiated limits shown are based measuring equipment employing an average detector function.

When average radiated emission measurement are included emission measurement Above 1000 MHz, there also is a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit.

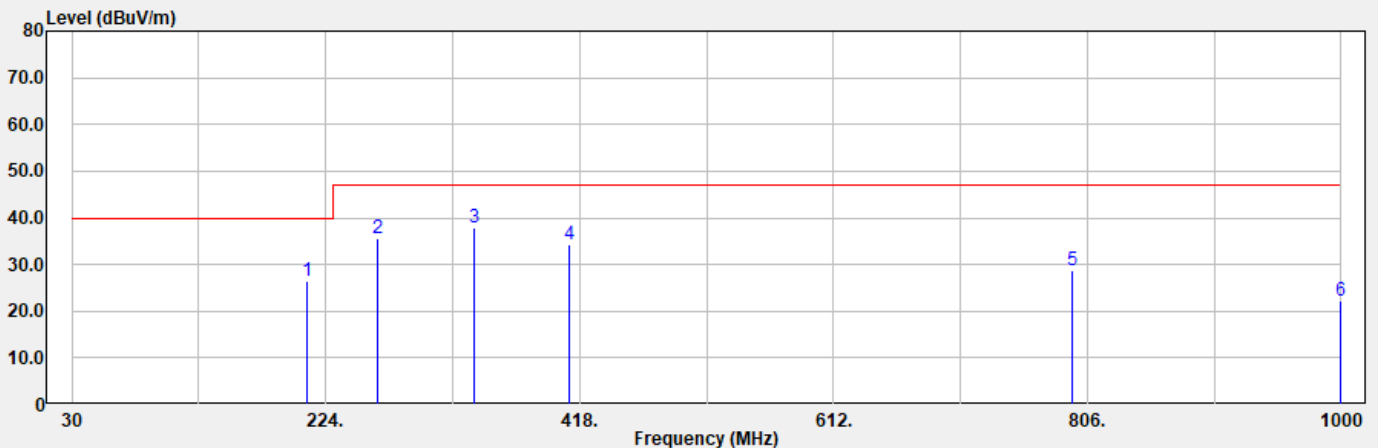
For class A, the measurement distance between the EUT and antenna is 10 meters for under 1GHz and above 1GHz.

For class B, the measurement distance between the EUT and antenna is 10 meters for under 1GHz and 3 meters for above 1GHz.

The bandwidth below 1GHz setting on the field strength meter (Test Receiver) is 120 kHz and above 1GHz is 1MHz.

4.5. Test Result

Model No	Balance 310 5G	Site	FS-CB01
Test Voltage	AC 120V/60Hz	Test Date	2026-07-09
Test Mode	Mode 3	Engineer	ZhengLamYap
Polarity	Horizontal	Temperature (°C)	21.8
Test Condition	--	Humidity (%RH)	54

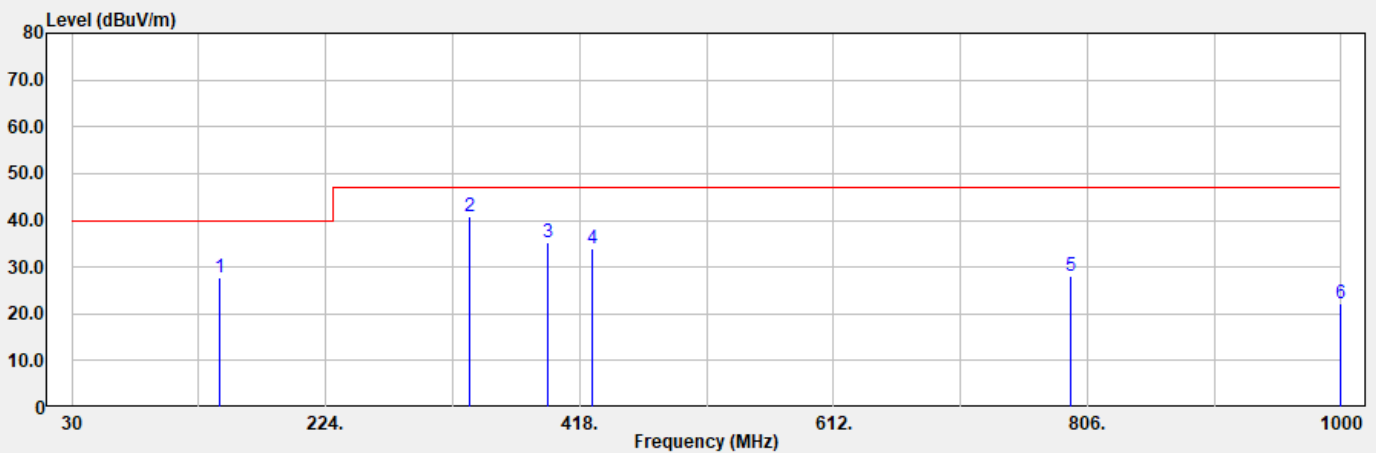


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Ant Pos (cm)	TT Pos (deg)	Detector Type
1	209.450	26.42	40.00	-13.58	52.33	-25.91	400	171	QP
2	263.733	35.61	47.00	-11.39	58.46	-22.85	400	157	QP
3*	337.602	37.72	47.00	-9.28	58.12	-20.40	300	229	QP
4	410.524	34.28	47.00	-12.72	52.66	-18.38	300	205	QP
5	794.463	28.79	47.00	-18.21	38.95	-10.16	154	360	QP
6	999.858	22.33	47.00	-24.67	30.00	-7.67	100	246	QP

Remark:

1. "*" means this data is the worst margin; "!" means this data is over limit.
2. Emission Level=Reading Level + Correct Factor(Correct Factor=Ant Factor+Cable Loss-Pre Amp).
3. Margin=Emission Level - Limit.
4. The above 1 GHz test. When PEAK measures level less than AV limit by 20 dBuV, its average is not measured separately.

Model No	Balance 310 5G	Site	FS-CB01
Test Voltage	AC 120V/60Hz	Test Date	2026-07-09
Test Mode	Mode 3	Engineer	ZhengLamYap
Polarity	Vertical	Temperature (°C)	21.8
Test Condition	--	Humidity (%RH)	54

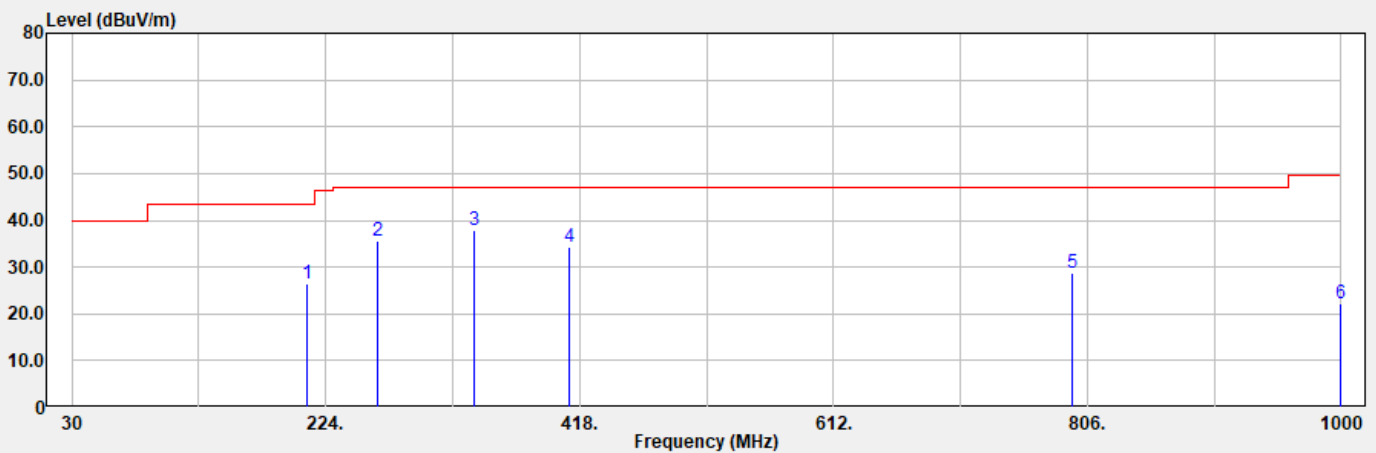


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Ant Pos (cm)	TT Pos (deg)	Detector Type
1	143.305	27.62	40.00	-12.38	50.51	-22.89	100	360	QP
2*	333.865	40.69	47.00	-6.31	60.93	-20.25	100	7	QP
3	394.292	35.20	47.00	-11.80	53.69	-18.48	100	157	QP
4	428.256	33.83	47.00	-13.17	51.20	-17.37	100	335	QP
5	793.807	28.15	47.00	-18.85	37.97	-9.82	200	360	QP
6	999.546	22.36	47.00	-24.64	29.55	-7.19	200	360	QP

Remark:

1. "*" means this data is the worst margin; "!" means this data is over limit.
2. Emission Level=Reading Level + Correct Factor(Correct Factor=Ant Factor+Cable Loss-Pre Amp).
3. Margin=Emission Level - Limit.
4. The above 1 GHz test. When PEAK measures level less than AV limit by 20 dBuV, its average is not measured separately.

Model No	Balance 310 5G	Site	FS-CB01
Test Voltage	AC 120V/60Hz	Test Date	2026-07-09
Test Mode	Mode 3	Engineer	ZhengLamYap
Polarity	Horizontal	Temperature (°C)	21.8
Test Condition	--	Humidity (%RH)	54

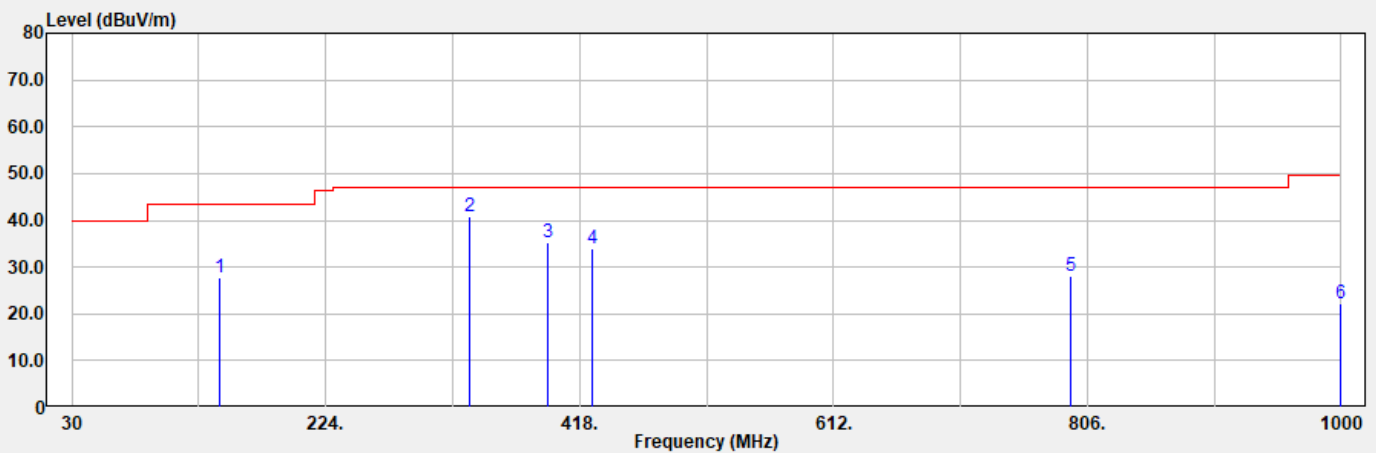


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Ant Pos (cm)	TT Pos (deg)	Detector Type
1	209.450	26.42	43.50	-17.08	52.33	-25.91	400	171	QP
2	263.733	35.61	47.00	-11.39	58.46	-22.85	400	157	QP
3*	337.602	37.72	47.00	-9.28	58.12	-20.40	300	229	QP
4	410.524	34.28	47.00	-12.72	52.66	-18.38	300	205	QP
5	794.463	28.79	47.00	-18.21	38.95	-10.16	154	360	QP
6	999.858	22.33	49.50	-27.17	30.00	-7.67	100	246	QP

Remark:

1. "" means this data is the worst margin; "!" means this data is over limit.
2. Emission Level=Reading Level + Correct Factor(Correct Factor=Ant Factor+Cable Loss-Pre Amp).
3. Margin=Emission Level - Limit.
4. The above 1 GHz test. When PEAK measures level less than AV limit by 20 dBuV, its average is not measured separately.

Model No	Balance 310 5G	Site	FS-CB01
Test Voltage	AC 120V/60Hz	Test Date	2026-07-09
Test Mode	Mode 3	Engineer	ZhengLamYap
Polarity	Vertical	Temperature (°C)	21.8
Test Condition	--	Humidity (%RH)	54

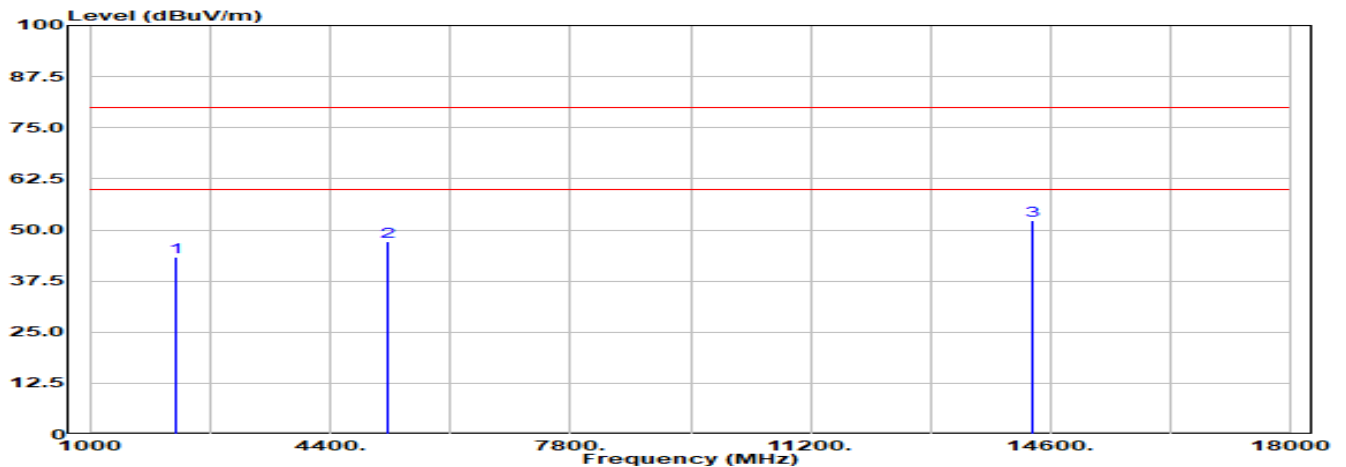


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Ant Pos (cm)	TT Pos (deg)	Detector Type
1	143.305	27.62	43.50	-15.88	50.51	-22.89	100	360	QP
2*	333.865	40.69	47.00	-6.31	60.93	-20.25	100	7	QP
3	394.292	35.20	47.00	-11.80	53.69	-18.48	100	157	QP
4	428.256	33.83	47.00	-13.17	51.20	-17.37	100	335	QP
5	793.807	28.15	47.00	-18.85	37.97	-9.82	200	360	QP
6	999.546	22.36	49.50	-27.14	29.55	-7.19	200	360	QP

Remark:

1. "*" means this data is the worst margin; "!" means this data is over limit.
2. Emission Level=Reading Level + Correct Factor(Correct Factor=Ant Factor+Cable Loss-Pre Amp).
3. Margin=Emission Level - Limit.
4. The above 1 GHz test. When PEAK measures level less than AV limit by 20 dBuV, its average is not measured separately.

Model No	Balance 310 5G	Site	HY-CB05
Test Voltage	AC 120V/60Hz	Test Date	2026-06-18
Test Mode	Mode 3	Engineer	Nat Cheng
Polarity	Horizontal	Temperature (°C)	20
Test Condition	--	Humidity (%RH)	53

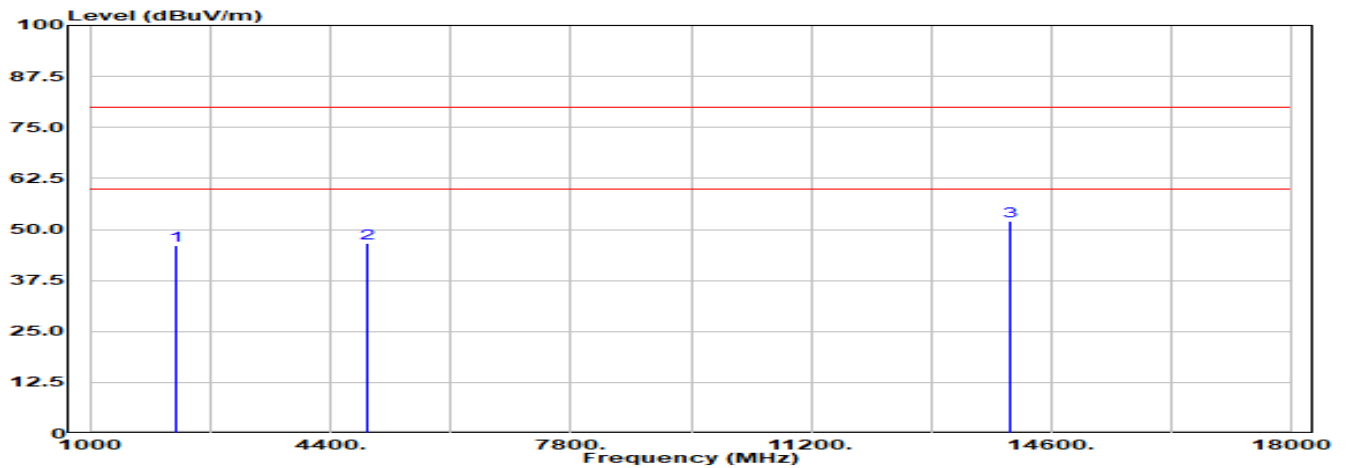


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Ant Pos (cm)	TT Pos (deg)	Detector Type
1	2194.000	43.38	80.00	-36.62	52.68	-9.30	100	360	Peak
2	5188.000	47.12	80.00	-32.88	48.27	-1.15	200	0	Peak
3	14345.000	52.30	80.00	-27.70	36.93	15.36	100	105	Peak

Remark:

1. "" means this data is the worst margin; "!" means this data is over limit.
2. Emission Level=Reading Level + Correct Factor(Correct Factor=Ant Factor+Cable Loss-Pre Amp).
3. Margin=Emission Level - Limit.
4. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Model No	Balance 310 5G	Site	HY-CB05
Test Voltage	AC 120V/60Hz	Test Date	2026-06-18
Test Mode	Mode 3	Engineer	Nat Cheng
Polarity	Vertical	Temperature (°C)	20
Test Condition	--	Humidity (%RH)	53

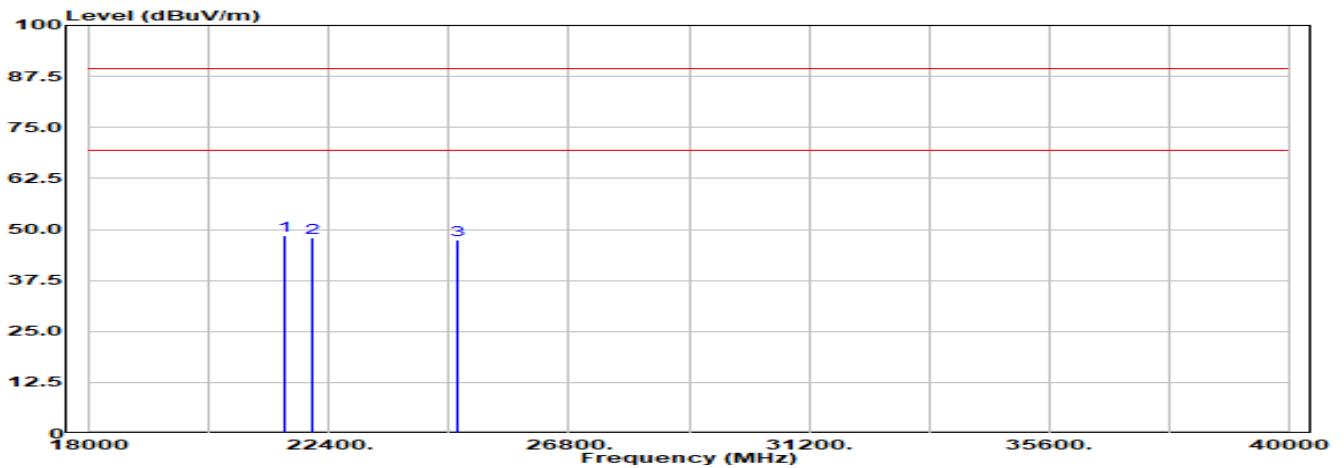


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Ant Pos (cm)	TT Pos (deg)	Detector Type
1	2194.000	46.07	80.00	-33.93	55.37	-9.30	200	152	Peak
2	4918.000	46.58	80.00	-33.42	48.00	-1.42	200	158	Peak
3	14039.000	51.93	80.00	-28.07	37.06	14.87	100	194	Peak

Remark:

1. "" means this data is the worst margin; "!" means this data is over limit.
2. Emission Level=Reading Level + Correct Factor(Correct Factor=Ant Factor+Cable Loss-Pre Amp).
3. Margin=Emission Level - Limit.
4. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Model No	Balance 310 5G	Site	HY-CB05
Test Voltage	AC 120V/60Hz	Test Date	2026-06-18
Test Mode	Mode 3	Engineer	Nat Cheng
Polarity	Horizontal	Temperature (°C)	20
Test Condition	--	Humidity (%RH)	53

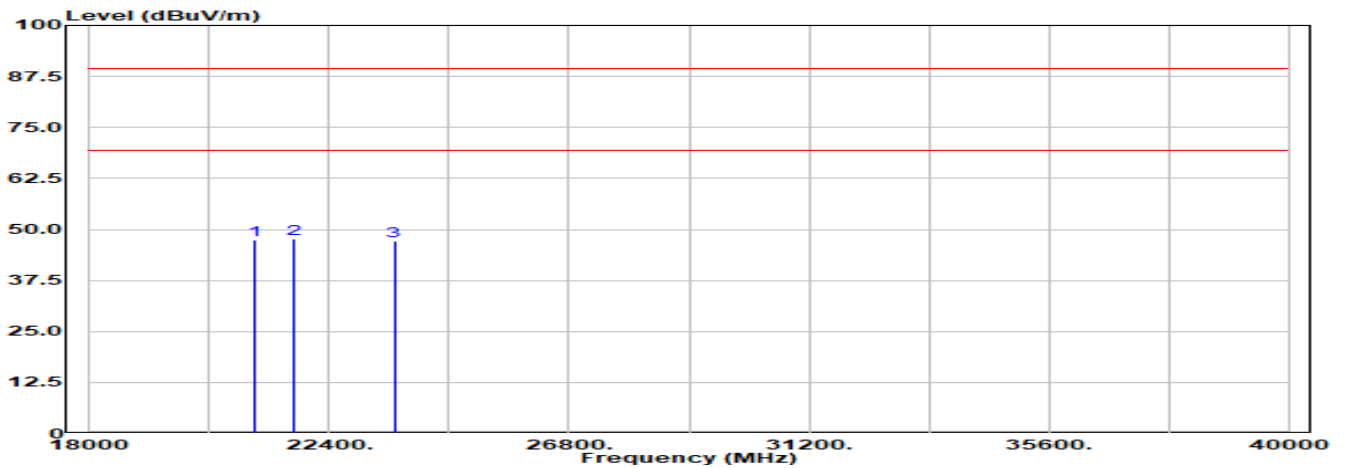


No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Ant Pos (cm)	TT Pos (deg)	Detector Type
1	21586.000	48.46	89.50	-41.04	36.63	11.84	100	236	Peak
2	22092.000	48.08	89.50	-41.42	36.29	11.79	100	290	Peak
3	24732.000	47.46	89.50	-42.04	33.60	13.86	100	311	Peak

Remark:

1. "" means this data is the worst margin; "!" means this data is over limit.
2. Emission Level=Reading Level + Correct Factor(Correct Factor=Ant Factor+Cable Loss-Pre Amp).
3. Margin=Emission Level - Limit.
4. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Model No	Balance 310 5G	Site	HY-CB05
Test Voltage	AC 120V/60Hz	Test Date	2026-06-18
Test Mode	Mode 3	Engineer	Nat Cheng
Polarity	Vertical	Temperature (°C)	20
Test Condition	--	Humidity (%RH)	53



No	Frequency (MHz)	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Reading Level (dBuV)	Correct Factor (dB/m)	Ant Pos (cm)	TT Pos (deg)	Detector Type
1	21014.000	47.50	89.50	-42.00	36.10	11.40	100	257	Peak
2	21762.000	47.79	89.50	-41.71	35.95	11.84	100	223	Peak
3	23588.000	47.08	89.50	-42.42	33.48	13.60	100	74	Peak

Remark:

1. "" means this data is the worst margin; "!" means this data is over limit.
2. Emission Level=Reading Level + Correct Factor(Correct Factor=Ant Factor+Cable Loss-Pre Amp).
3. Margin=Emission Level - Limit.
4. The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.