FCC Test Report

Report No.: AGC00749240804FR03

FCC ID	:	2A9G2-S2
APPLICATION PURPOSE	:	Original Equipment
PRODUCT DESIGNATION	:	Ski Helmet Intercom System
BRAND NAME	:	EJEAS
MODEL NAME	:	S2, S1, GY118, S2 Pro, S3, S3Pro
APPLICANT	:	shenzhen EJEAS Intelligent technology co., ltd.
DATE OF ISSUE	:	Sep. 18, 2024
STANDARD(S)	:	FCC Part 15 Subpart C §15.236
REPORT VERSION	:	V1.0

Attestation of Global Compliance (Shenzhen) Co., Ltd

Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Sep. 18, 2024	Valid	Initial Release

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1. General Information

Applicant	shenzhen EJEAS Intelligent technology co., ltd.
Address	Room 3A, B 1, Zhonxin road 9, Taoyuan Community, Dalang street, Longhua district, Shenzhen city, Guangdong province, China
Manufacturer	shenzhen EJEAS Intelligent technology co., ltd.
Address	Room 3A, B 1, Zhonxin road 9, Taoyuan Community, Dalang street, Longhua district, Shenzhen city, Guangdong province, China
Factory	shenzhen EJEAS Intelligent technology co., ltd.
Address	Room 3A, B 1, Zhonxin road 9, Taoyuan Community, Dalang street, Longhua district, Shenzhen city, Guangdong province, China
Product Designation	Ski Helmet Intercom System
Brand Name	EJEAS
Test Model	S2
Series Model(s)	S1, GY118, S2 Pro, S3, S3Pro
Difference Description	All the same except the model name and color.
Date of receipt of test item	Aug. 26, 2024
Date of Test	Aug. 26, 2024~Sep. 18, 2024
Deviation from Standard	No any deviation from the test method
Condition of Test Sample	Normal
Test Result	Pass
Test Report Form No	AGCER-FCC-DWM/D-V1

Note: The test results of this report relate only to the tested sample identified in this report.

Prepared By	Bibo Zhang (Project Engineer)	Sep. 18, 2024
Reviewed By	Calvin Liu (Reviewer)	Sep. 18, 2024
Approved By	Max Zhang (Authorized Officer)	Sep. 18, 2024

2. Product Information

2.1 Product Technical Description

Communication Type	Voice / Data
Operation Frequency Range	UHF:470MHz~488MHz
Modulation Type	GFSK
Channel Separation	200kHz
Number of channels	80 of channels
Maximum Transmitter Power	-3.76dBm (Max E.I.R.P)
Hardware Version	S2-V1.0
Software Version	V1.4.0
Antenna Designation	FPC Antenna
Antenna Gain	0.97dBi
Power Supply	DC 3.8V by battery or DC DV 5V from adapter

2.2 Test Frequency List

Channel Number	Frequency	Channel Number	Frequency
01	471.0 MHz	41	479.0 MHz
02	471.2 MHz	42	479.2 MHz
03	471.4 MHz	43	479.4 MHz
04	471.6 MHz	44	479.6 MHz
05	471.8 MHz	45	479.8 MHz
06	472.0 MHz	46	480.0 MHz
07	472.2 MHz	47	480.2 MHz
08	472.4 MHz	48	480.4 MHz
09	472.6 MHz	49	480.6 MHz
10	472.8 MHz	50	480.8 MHz
11	473.0 MHz	51	481.0 MHz
12	473.2 MHz	52	481.2 MHz
13	473.4 MHz	53	481.4 MHz
14	473.6 MHz	54	481.6 MHz
15	473.8 MHz	55	481.8 MHz

16	474.0 MHz	56	482.0 MHz
17	474.2 MHz	57	482.2 MHz
18	474.4 MHz	58	482.4 MHz
19	474.6 MHz	59	482.6 MHz
20	474.8 MHz	60	482.8 MHz
21	475.0 MHz	61	483.0 MHz
22	475.2 MHz	62	483.2 MHz
23	475.4 MHz	63	483.4 MHz
24	475.6 MHz	64	483.6 MHz
25	475.8 MHz	65	483.8 MHz
26	476.0 MHz	66	484.0 MHz
27	476.2 MHz	67	484.2 MHz
28	476.4 MHz	68	484.4 MHz
29	476.6 MHz	69	484.6 MHz
30	476.8 MHz	70	484.8 MHz
31	477.0 MHz	71	485.0 MHz
32	477.2 MHz	72	485.2 MHz
33	477.4 MHz	73	485.4 MHz
34	477.6 MHz	74	485.6 MHz
35	477.8 MHz	75	485.8 MHz
36	478.0 MHz	76	486.0 MHz
37	478.2 MHz	77	486.2 MHz
38	478.4 MHz	78	486.4 MHz
39	478.6 MHz	79	486.6 MHz
40	**478.8 MHz**	80	**486.8 MHz**

2.3 Related Submittal(S) / Grant (S)

This submittal(s) (test report) is intended for FCC ID: **2A9G2-S2,** filing to comply with Part 2, Part 15 of the Federal Communication Commission rules.

2.4 Test Methodology

The tests were performed according to following standards:

No.	Identity	Document Title
1	FCC 47 CFR Part 2	Frequency allocations and radio treaty matters; general rules and regulations
2	FCC 47 CFR Part 15	Radio Frequency Devices
3	ANSI C63.10-2013	American National Standard for Testing Unlicensed Wireless Devices
4	KDB 206256	D01 Wireless Microphone Certification v02r01
5	ETSI EN 300 422-1 V1.4.2(2011-08)	Electromagnetic compatibility and Radio spectrum Matters (ERM); Wireless microphones in the 25 MHz to 3 GHz frequency range; Part 1: Technical characteristics and methods of measurement.

2.5 Special Accessories

Not available for this EUT intended for grant.

2.6 Equipment Modifications

Not available for this EUT intended for grant.

2.7 Antenna Requirement

Standard Requirement
15.203 requirement: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.
EUT Antenna:
The non-detachable antenna inside the device cannot be replaced by the user at will. The gain of the antenna is 0.97dBi.

3. Test Environment

3.1 Address of The Test Laboratory

Laboratory: Attestation of Global Compliance (Shenzhen) Co., Ltd.

Address: 1-2/F, Building 19, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

3.2 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

CNAS-Lab Code: L5488

Attestation of Global Compliance (Shenzhen) Co., Ltd. has been assessed and proved to follow CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories.)

A2LA-Lab Cert. No.: 5054.02

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to follow ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

FCC-Registration No.: 975832

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files with Registration 975832.

IC-Registration No.: 24842(CAB identifier: CN0063)

Attestation of Global Compliance (Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the Certification and Engineering Bureau of Industry Canada. The acceptance letter from the IC is maintained in our files with Registration 24842.

3.3 Environmental Conditions

	Normal Conditions	Extreme Conditions
Temperature range (℃)	15 - 35	-20 - 50
Relative humidity range	20 % - 75 %	20 % - 75 %
Pressure range (kPa)	86 - 106	86 - 106
Power supply	DC 3.8V	LV: DC 3.23V/HV:DC 4.35V
Note: The Extreme Temperature and Extreme Voltages declared by the manufacturer.		

3.4 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%.

Test Items	Measurement Uncertainty
Frequency stability	±0.5%
Transmitter power conducted	±0.8dB
Transmitter power Radiated	±1.3dB
Conducted spurious emission 9kHz-40 GHz	±2.7dB
Conducted Emission	±3.2 dB
Radiated Emission below 1GHz	±3.9 dB
Radiated Emission above 1GHz	±4.8 dB
Occupied Channel Bandwidth	±2 %

3.5 List of Equipment Used

● RF Conducted Test System							
Used	Equipment No.	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
☒	AGC-ER-E036	Spectrum Analyzer	Agilent	N9020A	MY49100060	2024-05-24	2025-05-23
☒	AGC-ER-E062	Power Sensor	Agilent	U2021XA	MY54110007	2024-02-01	2025-01-31
☒	AGC-ER-E063	Power Sensor	Agilent	U2021XA	MY54110009	2024-02-01	2025-01-31
☒	AGC-EM-A152	6dB Attenuator	Eeatsheep	LM-XX-6-5W	N/A	2023-09-21	2025-09-20
☒	N/A	RF Connection Cable	N/A	1#	N/A	Each time	N/A
☒	N/A	RF Connection Cable	N/A	2#	N/A	Each time	N/A

● Radiated Spurious Emission							
Used	Equipment No.	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
☒	AGC-EM-E046	EMI Test Receiver	R&S	ESCI	10096	2024-02-01	2025-01-31
☒	AGC-EM-E061	Spectrum Analyzer	Agilent	N9010A	MY53470504	2024-05-28	2025-05-27
☒	AGC-EM-E086	Loop Antenna	ZHINAN	ZN30900C	18051	2024-03-05	2026-03-04
☒	AGC-EM-E001	Wideband Antenna	SCHWARZBECK	VULB9168	D69250	2023-05-11	2025-05-10
☒	AGC-EM-E029	Broadband Ridged Horn Antenna	ETS	3117	00034609	2024-03-31	2025-03-30
☒	AGC-EM-E082	Horn Antenna	SCHWARZBECK	BBHA 9170	#768	2023-09-24	2025-09-23
☒	AGC-EM-E146	Pre-amplifier	ETS	3117-PA	00246148	2024-07-24	2026-07-23
☒	AGC-EM-A088	UHF Filter	Microwave	N25155M2	498705	2024-05-23	2025-05-22
☒	AGC-EM-A138	6dB Attenuator	Eeatsheep	LM-XX-6-5W	N/A	2023-06-09	2025-06-08

● AC Power Line Conducted Emission							
Used	Equipment No.	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
☒	AGC-EM-E045	EMI Test Receiver	R&S	ESPI	101206	2024-05-28	2025-05-27
☒	AGC-EM-E023	AMN	R&S	100086	ESH2-Z5	2024-05-28	2025-05-27

● Test Software					
Used	Equipment No.	Test Equipment	Manufacturer	Model No.	Version Information
☒	AGC-EM-S001	CE Test System	R&S	ES-K1	V1.71
☒	AGC-EM-S011	RSE Test System	Tonscend	TS+-Ver2.1(JS36-RSE)	4.0.0.0

4.System Test Configuration

4.1 EUT Configuration

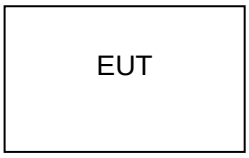
The EUT configuration for testing is installed on RF field strength measurement to meet the Commission's requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

4.2 EUT Exercise

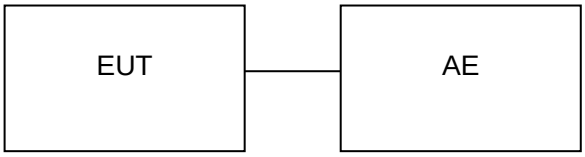
The Transmitter was operated in the normal operating mode. The TX frequency was fixed which was for the purpose of the measurements.

4.3 Configuration of Tested System

Radiated Emission Configure:



Conducted Emission Configure:



4.4 Equipment Used In Tested System

The following peripheral devices and interface cables were connected during the measurement:

☒ Test Accessories Come From The Laboratory

No.	Equipment	Manufacturer	Model No.	Specification Information	Cable
1	Adapter	Huawei	HW-200440C00	Input(AC):100V-240V 50/60Hz 2.4A Output(DC):USB-C(5V/3A)	--

4.5 Summary of Test Results

Item	FCC Rules	Description of Test	Result
1	§15.203	Antenna Equipment	Pass
2	§15.236(b)(1)(2)	Equivalent Isotropic Radiated Power (E.I.R.P.)	Pass
3	§15.236(f)(2)	99% Occupied Bandwidth	Pass
4	§15.236(g)	Emissions Within the Band	Pass
5	§15.236(g)	Emissions Out Side in This Band	Pass
6	§15.236(f)(3)	Frequency stability	Pass
7	§15.207	AC Power-Line Conducted Emission	Pass

5. Description of Test Modes

Summary table of Test Cases	
Test Item	Equipment Type / Modulation
	Wireless Microphones – GFSK
Radiated & Conducted Test Cases	Mode 1: DWM GFSK TX_CH01_471.0 MHz Mode 2: DWM GFSK TX_CH40_478.8 MHz Mode 3: DWM GFSK TX_CH80_486.8 MHz
AC Conducted Emission	Mode 1: Normal Transmitting (Connect adapter)

Note:
1. Only the result of the worst case was recorded in the report, if no other cases.
2. The battery is full-charged during the test.
3. For Radiated Emission, 3axis were chosen for testing for each applicable mode.
4. For Conducted Test method, a temporary antenna connector is provided by the manufacture.

6. RF Conducted Power and Equivalent Isotropic Radiated Power (E.I.R.P.) Measurement

6.1 Provisions Applicable

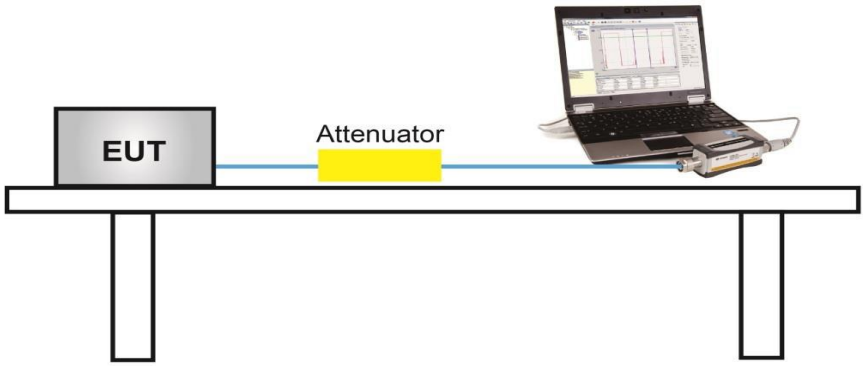
According to FCC Part 15.236(b)(1)(2) description below:

Frequency bands	Transmit E.I.R.P. (mW)
54-72 MHz (VHF) (TV Band Ch 2-4)	50
76-88 MHz (VHF) (TV Band Ch 5-6)	
174-216 MHz (VHF) (TV Band Ch 7-13)	
470-608 MHz (UHF) (TV Band Ch 14-36)	
614-616 MHz (guard band)	20
657-663 MHz (duplex gap)	

6.2 Measurement Procedure

Measurements may be performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since this measurement is made only during the ON time of the transmitter, no duty cycle correction is required

6.3 Measurement Setup (Block Diagram of Configuration)



6.4 Measurement Result

Test Data of Conducted Output Power and E.I.R.P.					
Test Mode	Test Frequency (MHz)	Peak Power (dBm)	EIRP (dBm)	Limits (dBm)	Pass or Fail
DWM_TX (GFSK)	471.000	-4.731	-3.76	≤16.99	Pass
	478.800	-5.294	-4.32	≤16.99	Pass
	486.800	-5.644	-4.67	≤16.99	Pass

Note: E.I.R.P.=RF Conducted Power (Peak Power) + Ant Gain

7. 99% Occupied Bandwidth Measurement

7.1 Provisions Applicable

According to FCC Part 15.236(b)(1)(2) description below:

Frequency bands	Maximum Bandwidth
54-72 MHz (VHF) (TV Band Ch 2-4)	not exceed 200 kHz
76-88 MHz (VHF) (TV Band Ch 5-6)	
174-216 MHz (VHF) (TV Band Ch 7-13)	
470-608 MHz (UHF) (TV Band Ch 14-36)	
614-616 MHz (guard band)	
657-663 MHz (duplex gap)	

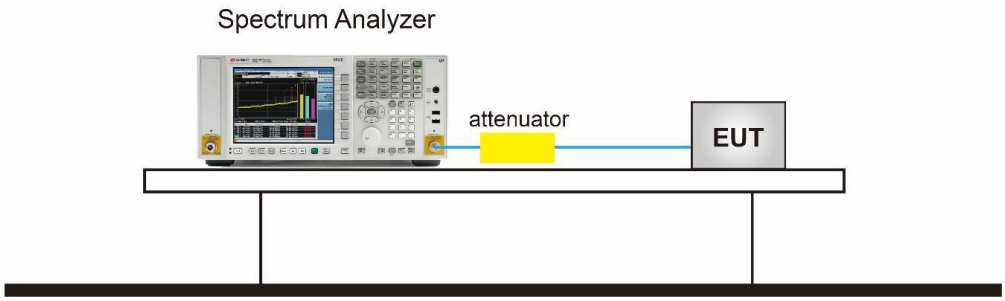
7.2 Measurement Procedure

For occupied bandwidth measurements, the input digital signal should be set to the manufacturer's maximum rated input and modulation requirements for the modulator.

- The 99% bandwidth spectrum analyzer setting reference is as follows:

1. Span = 1.5 times to 5 times the OBW
2. Set RBW = 1% to 5% the OBW
3. VBW ≥ 3 × RBW
4. Detector = Peak
5. Trace mode = Max hold
6. Sweep = Auto couple
7. Allow the trace was allowed to stabilize

7.3 Measurement Setup (Block Diagram of Configuration)

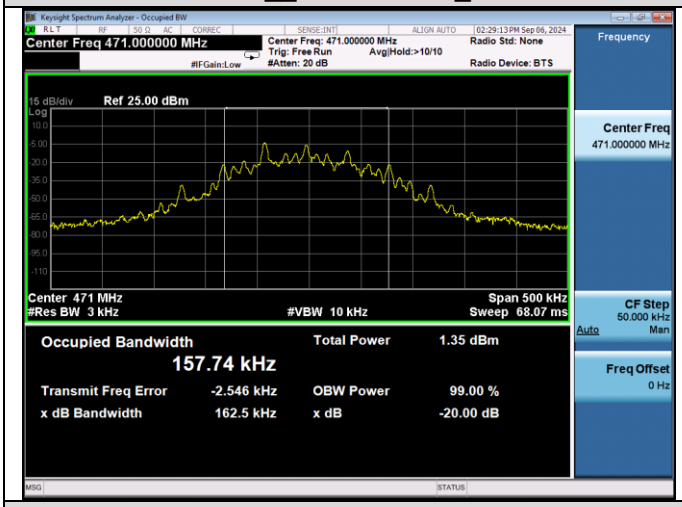


7.4 Measurement Result

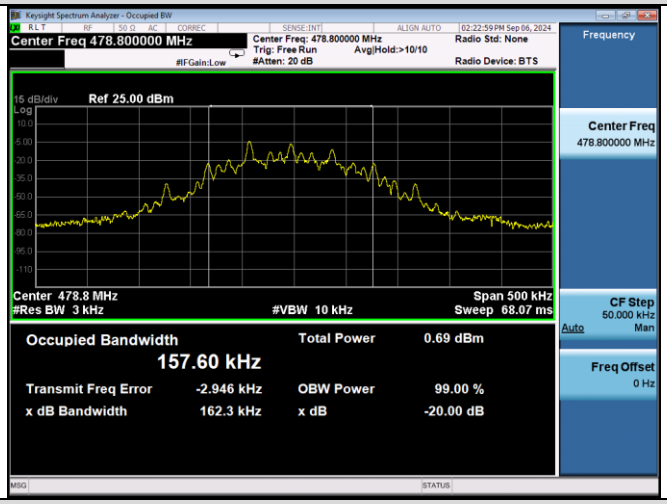
Test Data of Occupied Bandwidth					
Test Mode	Test Frequency (MHz)	99% Occupied Bandwidth (kHz)	-20dB Bandwidth (kHz)	Limits (kHz)	Pass or Fail
DWM_TX (GFSK)	471.000	157.74	162.5	＜200	Pass
	478.800	157.60	162.3	＜200	Pass
	486.800	157.33	162.3	＜200	Pass

Test plot as follows:

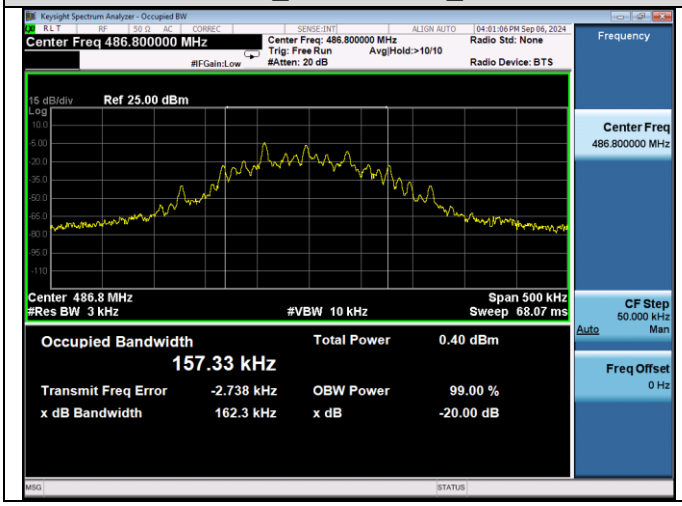
DWM TX__471.000MHz_GFSK



DWM TX_478.800MHz_GFSK



DWM TX_486.800MHz_GFSK



8. Emissions Within the Band and Emissions Outside the Band

8.1 Provisions Applicable

The transmitter unwanted emissions shall meet and be measured according to the requirements in sections 8.3 and 8.4 of ETSI EN 300 422-1.

8.2 Measurement Procedure

Emission outside the band:

1. On a test site, the EUT shall be placed on a turntable, and in the position closest to the normal use as declared by the user.
2. The test antenna shall be oriented initially for vertical polarization located 3m from the EUT to correspond to the transmitter.
3. The output of the antenna shall be connected to the measuring receiver and either a peak or quasi-peak detector was used for the measurement as indicated on the report. The detector selection is based on how close the emission level was approaching the limit.
4. The transmitter shall be switched on; if possible, without the modulation and the measurement receiver shall be tuned to the frequency of the transmitter under test.
5. The test antenna shall be raised and lowered through the specified range of height until the measuring receiver detects a maximum signal level.
6. The transmitter shall than be rotated through 360°in the horizontal plane, until the maximum signal level is detected by the measuring receiver.
7. The test antenna shall be raised and lowered again through the specified range of height until the measuring receiver detects a maximum signal level.
8. The maximum signal level detected by the measuring receiver shall be noted.
9. The measurement shall be repeated with the test antenna set to horizontal polarization.
10. Replace the antenna with a proper Antenna (substitution antenna).
11. The substitution antenna shall be oriented for vertical polarization and, if necessary, the length of the substitution antenna shall be adjusted to correspond to the frequency of transmitting.
12. The substitution antenna shall be connected to a calibrated signal generator.
13. If necessary, the input attenuator setting of the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.
14. The test antenna shall be raised and lowered through the specified range of the height to ensure that the maximum signal is received.
15. The input signal to substitution antenna shall be adjusted to the level that produces a level detected by the measuring receiver, that is equal to the level noted while the transmitter radiated power was measured, corrected for the change of input attenuation setting of the measuring receiver.
16. The input level to the substitution antenna shall be recorded as power level in dBm, corrected for any change of input attenuator setting of the measuring receiver.
17. The measurement shall be repeated with the test antenna and the substitution antenna oriented for horizontal polarization.

The following table is the setting of spectrum analyzer and receiver.

Spectrum Parameter	Setting
Start ~Stop Frequency	9kHz~150kHz/RB 200Hz for QP
Start ~Stop Frequency	150kHz~30MHz/RB 9KHz for QP
Start ~Stop Frequency	30MHz~1000MHz/RB 120kHz for QP
Start ~Stop Frequency	1000MHz~6000MHz/RB 1MHz for QP

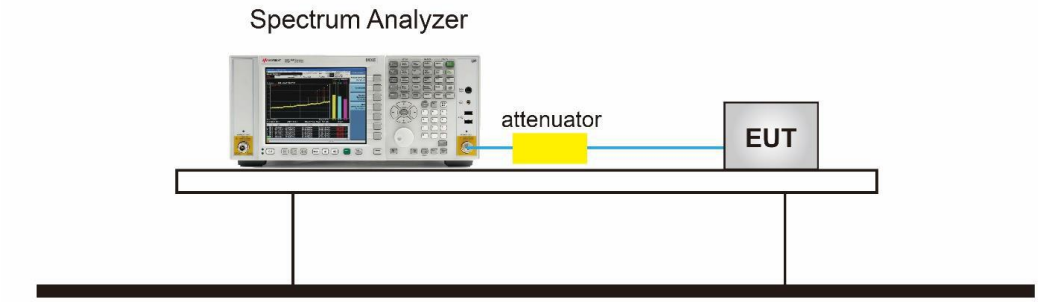
Receiver Parameter	Setting
Start ~Stop Frequency	9kHz~150kHz/RB 200Hz for QP
Start ~Stop Frequency	150kHz~30MHz/RB 9kHz for QP
Start ~Stop Frequency	30MHz~1000MHz/RB 120kHz for QP
Start ~Stop Frequency	1000MHz~6000MHz/RB 1MHz for QP

Emission outside the band:

☐Method of Measurement for Analogue Systems in ETSI EN 300 422-1 Subclass 8.3.1
☒Method of Measurement for Digital Systems in ETSI EN 300 422-1 Subclass 8.3.2

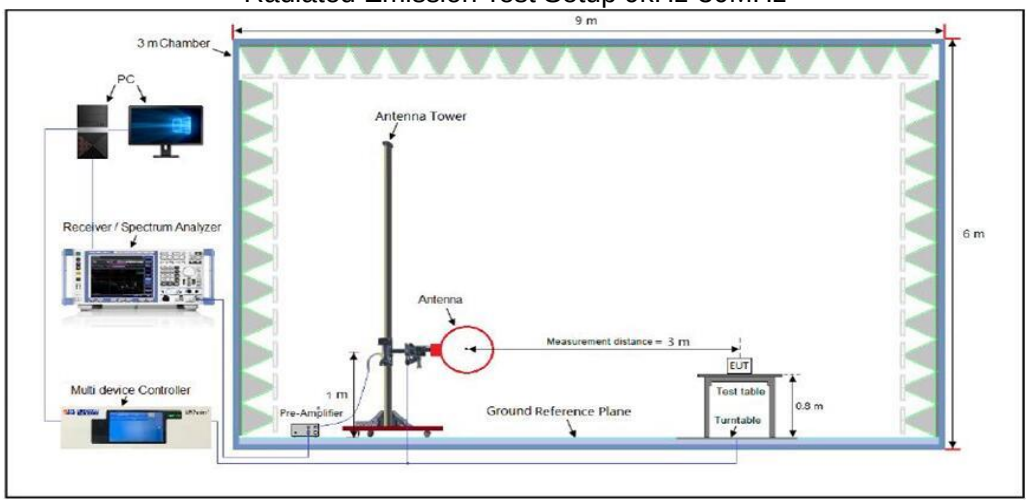
8.3 Measurement Setup (Block Diagram of Configuration)

☒Emission within the band:

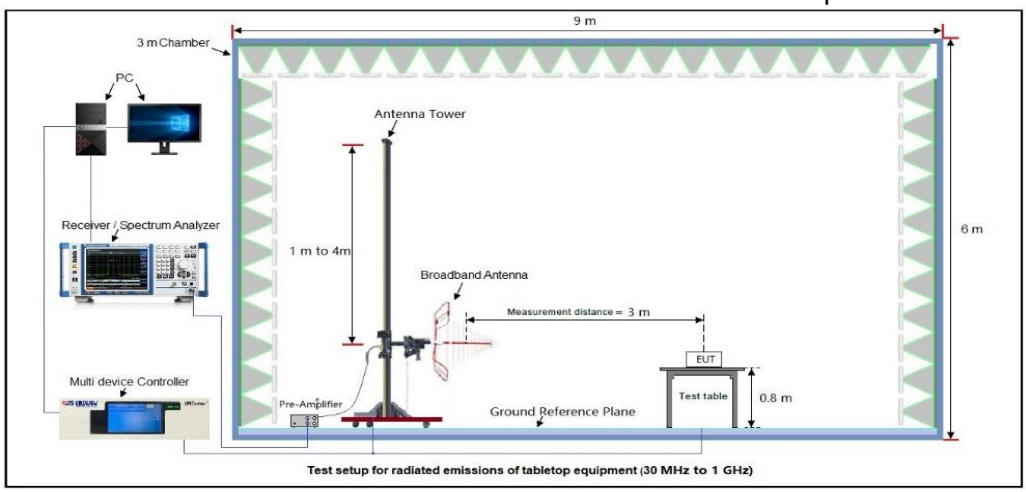


☒Emission outside the band:

Radiated Emission Test Setup 9kHz-30MHz

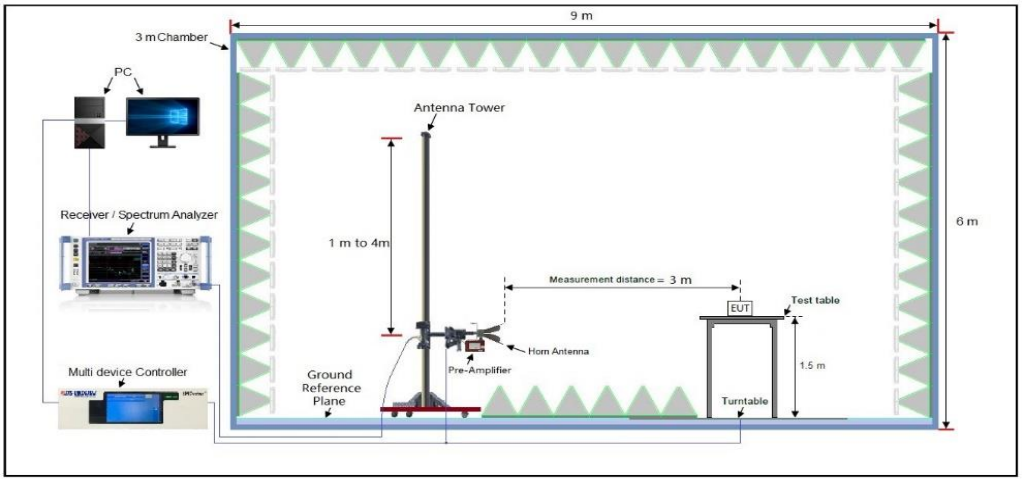


Radiated Emissions Below 30MHz-1GHz Test Setup



Test setup for radiated emissions of tabletop equipment (30 MHz to 1 GHz)

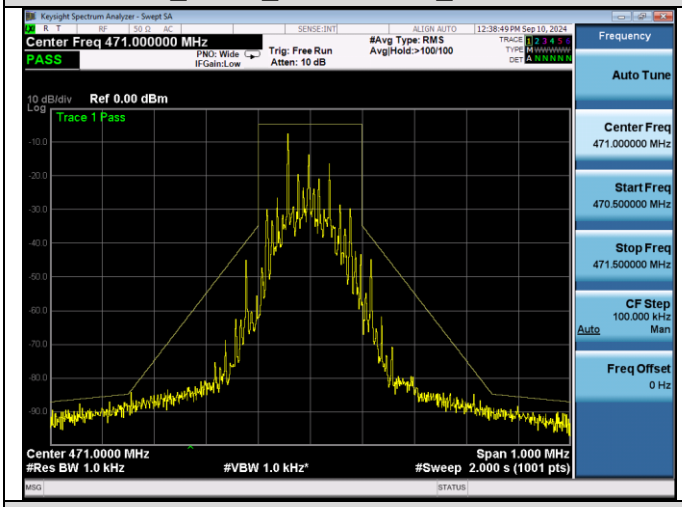
Radiated Emissions Above 1GHz Test Setup



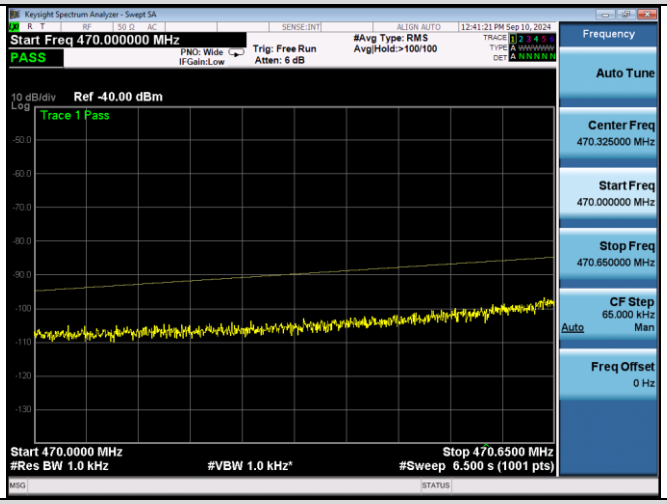
8.4 Measurement Result

Test plot as follows:

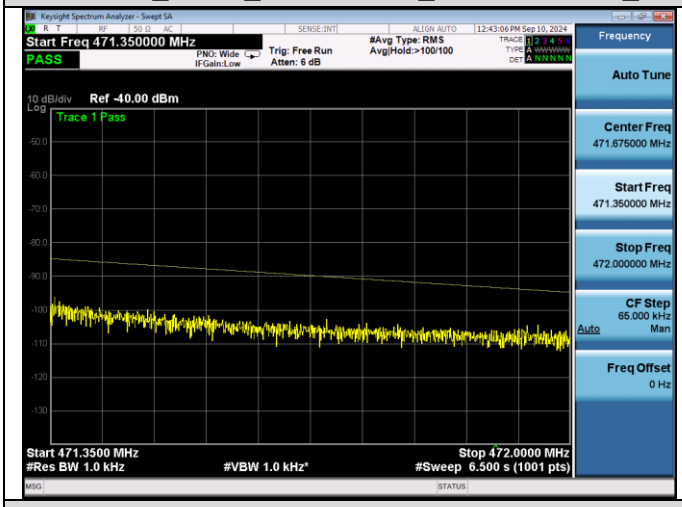
DWM TX_GFSK_471.000MHz_Emission Mask



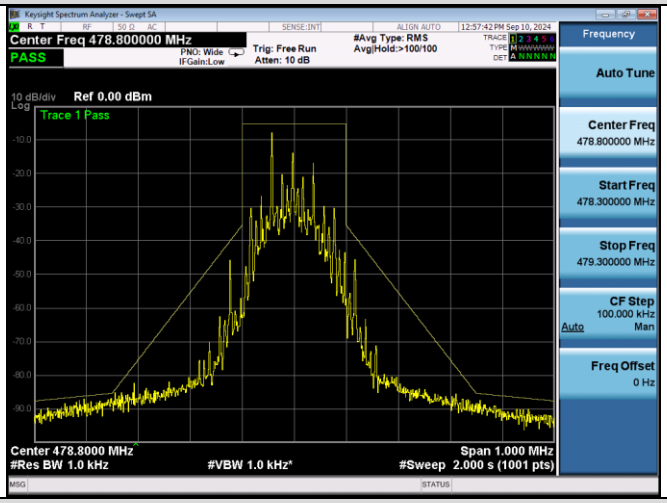
DWM TX_GFSK_471.000MHz_Emission Mask_L



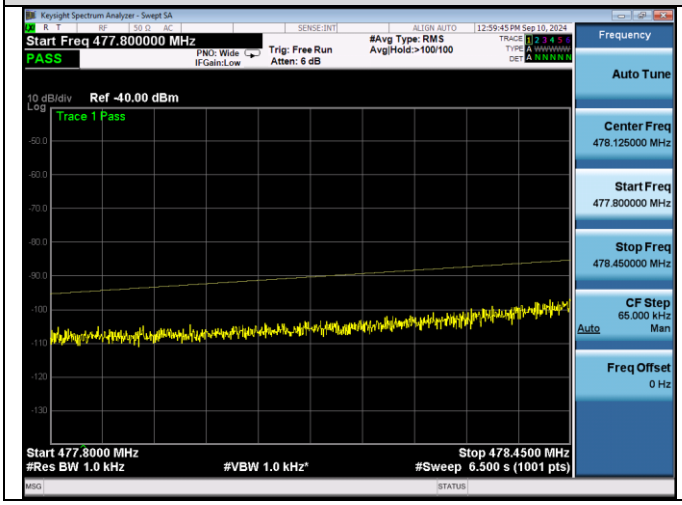
DWM TX_GFSK_471.000MHz_Emission Mask_R



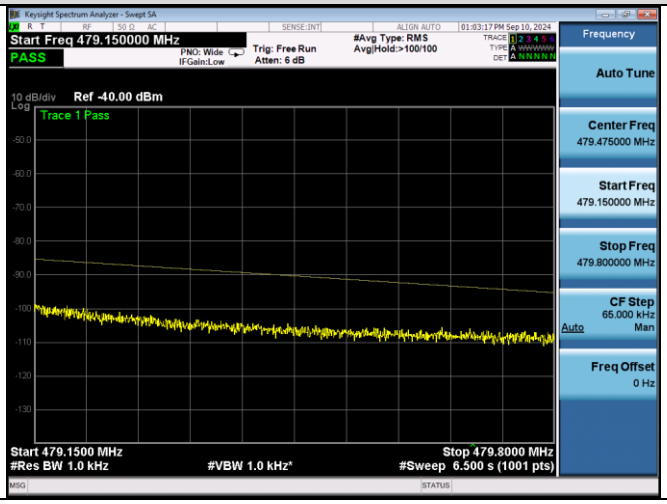
DWM TX_GFSK_478.800MHz_Emission Mask

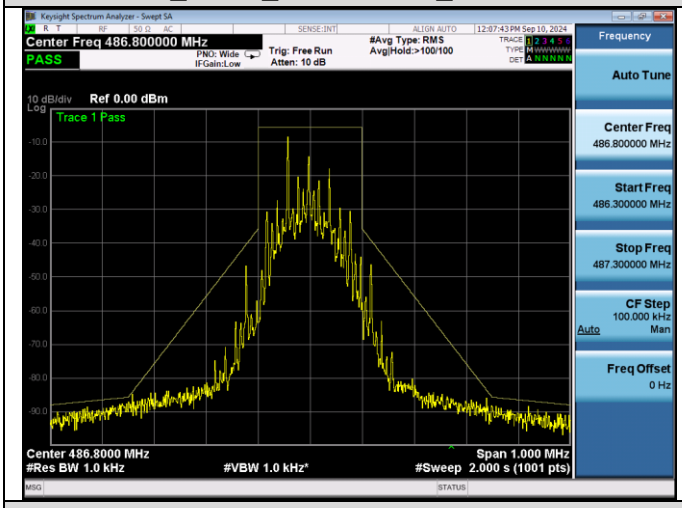
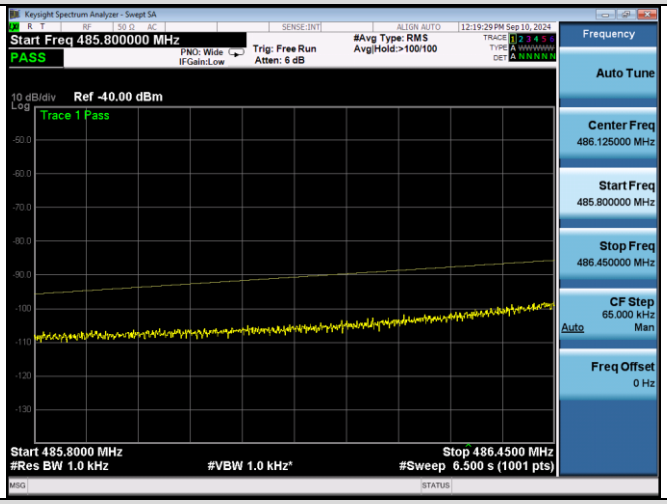
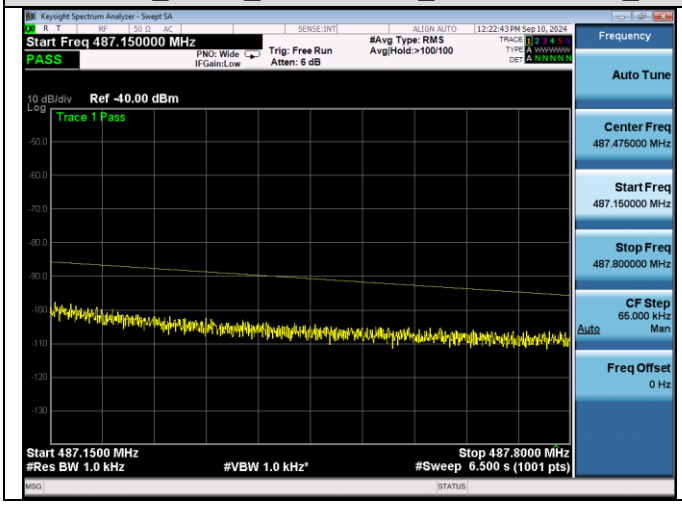


DWM TX_GFSK_478.800MHz_Emission Mask_L



DWM TX_GFSK_478.800MHz_Emission Mask_R



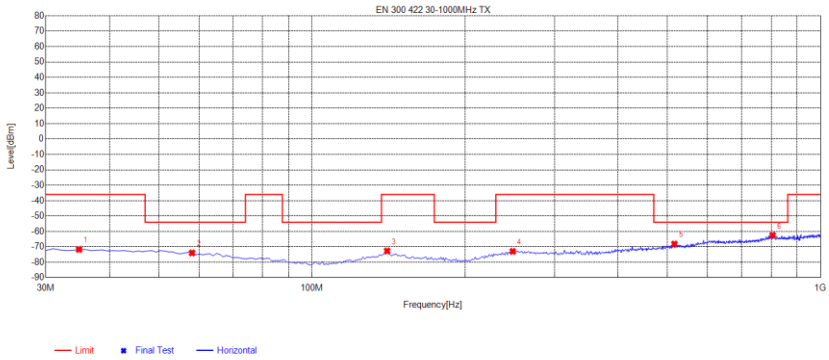
DWM TX_GFSK_486.800MHz_Emission Mask	DWM TX_GFSK_486.800MHz_Emission Mask_L
	
DWM TX_GFSK_486.800MHz_Emission Mask_R	/
	N/A

Note:

1.The manufacturer declared that the channel bandwidth is 200kHz.

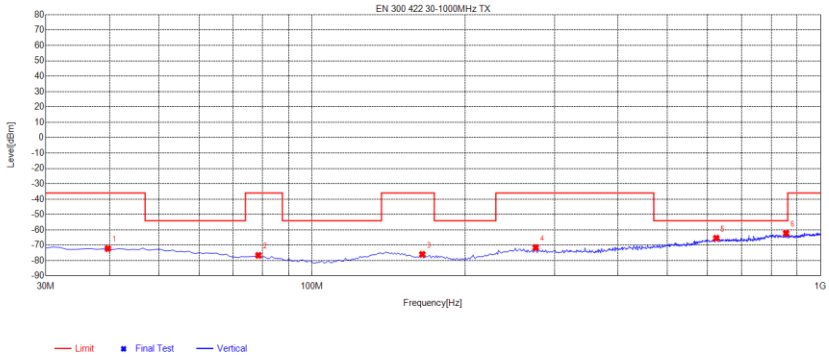
2.The carrier power is the ref level, and the factor had been edited in the “Input Correction” of the Spectrum Analyzer.

Test Mode:	TX: 471.000MHz	Polarity:	Horizontal



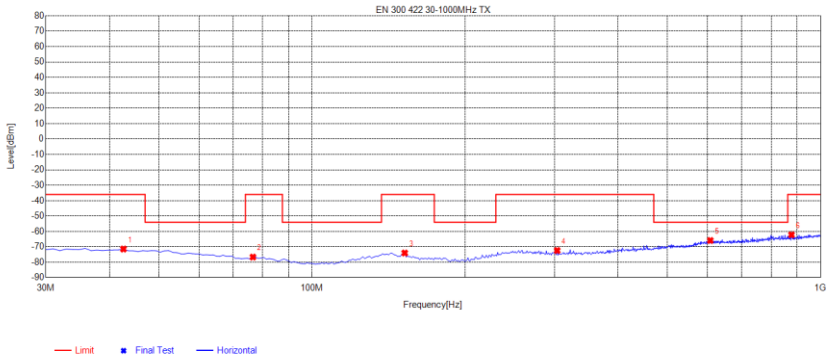
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	34.85	-100.95	-71.70	-36.00	35.70	29.25	350	Horizontal
2	58.13	-100.73	-73.93	-54.00	19.93	26.80	22	Horizontal
3	140.58	-99.97	-72.68	-36.00	36.68	27.29	6	Horizontal
4	248.25	-101.44	-72.95	-36.00	36.95	28.49	316	Horizontal
5	515.97	-100.31	-68.15	-54.00	14.15	32.16	342	Horizontal
6	805.03	-100.16	-62.50	-54.00	8.50	37.66	350	Horizontal

Test Mode:	TX: 471.000MHz	Polarity:	Vertical



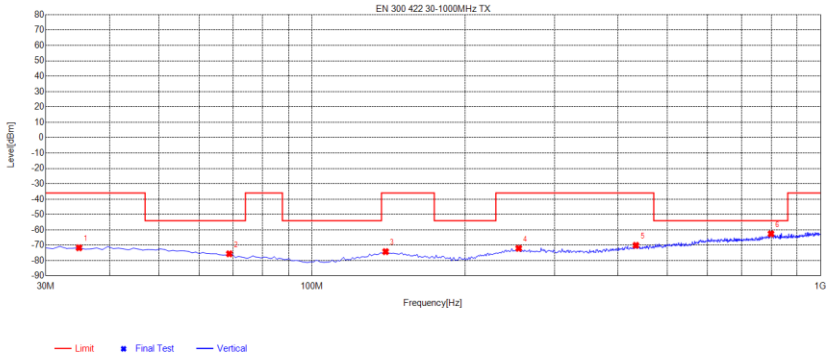
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	39.7	-101.64	-72.19	-36.00	36.19	29.45	88	Vertical
2	78.5	-100.97	-76.62	-36.00	40.62	24.35	44	Vertical
3	164.83	-100.57	-75.95	-36.00	39.95	24.62	70	Vertical
4	275.41	-99.93	-71.60	-36.00	35.60	28.33	105	Vertical
5	623.64	-100.20	-65.41	-54.00	11.41	34.79	321	Vertical
6	855.47	-99.40	-62.24	-54.00	8.24	37.16	182	Vertical

Test Mode:	TX: 478.800MHz	Polarity:	Horizontal



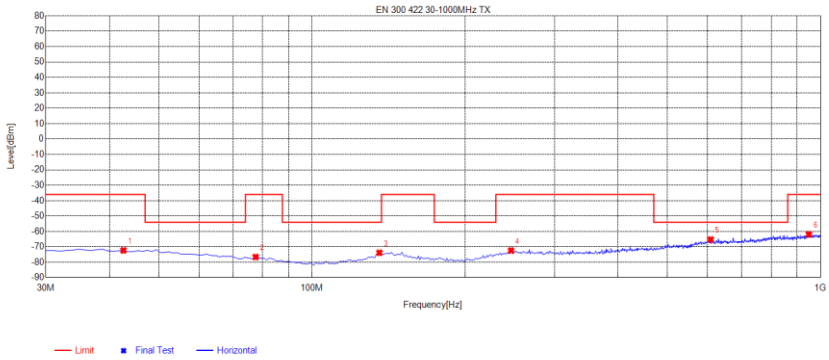
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	42.61	-100.70	-71.44	-36.00	35.44	29.26	252	Horizontal
2	76.56	-101.07	-76.65	-36.00	40.65	24.42	44	Horizontal
3	152.22	-99.93	-74.00	-36.00	38.00	25.93	295	Horizontal
4	303.54	-100.39	-72.38	-36.00	36.38	28.01	183	Horizontal
5	607.15	-100.70	-65.87	-54.00	11.87	34.83	191	Horizontal
6	876.81	-99.53	-62.19	-36.00	26.19	37.34	35	Horizontal

Test Mode:	TX: 478.800MHz	Polarity:	Vertical



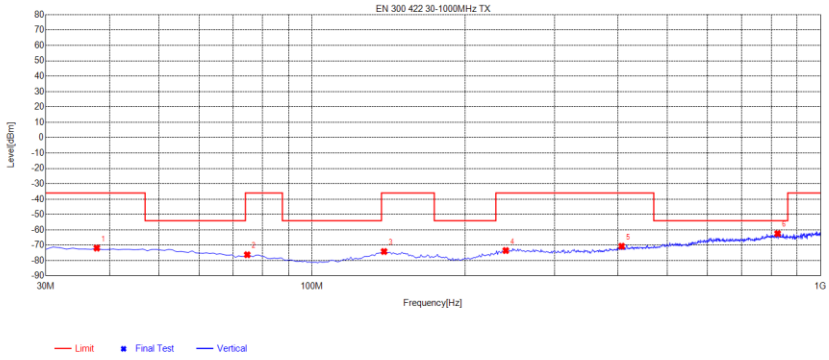
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	34.85	-100.95	-71.70	-36.00	35.70	29.25	152	Vertical
2	68.8	-100.46	-75.60	-54.00	21.60	24.86	82	Vertical
3	139.61	-101.45	-74.19	-36.00	38.19	27.26	126	Vertical
4	255.04	-100.63	-72.02	-36.00	36.02	28.61	342	Vertical
5	433.52	-100.63	-70.07	-36.00	34.07	30.56	299	Vertical
6	799.21	-100.27	-62.58	-54.00	8.58	37.69	108	Vertical

Test Mode:	TX: 486.800MHz	Polarity:	Horizontal



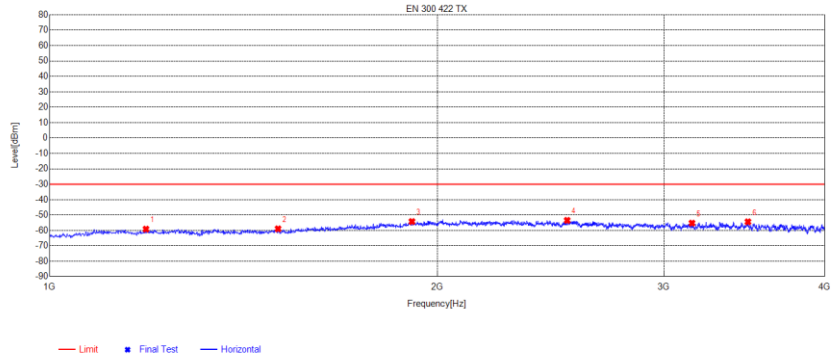
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	42.61	-101.56	-72.30	-36.00	36.30	29.26	27	Horizontal
2	77.53	-101.00	-76.61	-36.00	40.61	24.39	174	Horizontal
3	135.73	-100.20	-73.86	-54.00	19.86	26.34	10	Horizontal
4	246.31	-100.68	-72.40	-36.00	36.40	28.28	130	Horizontal
5	608.12	-100.09	-65.26	-54.00	11.26	34.83	208	Horizontal
6	948.59	-100.40	-61.91	-36.00	25.91	38.49	286	Horizontal

Test Mode:	TX: 486.800MHz	Polarity:	Vertical



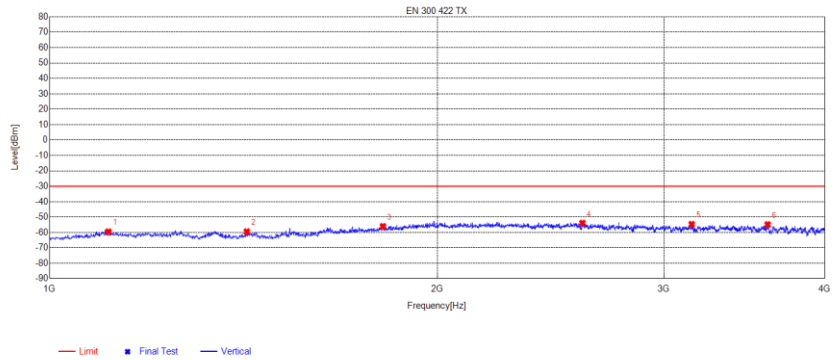
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	37.76	-101.23	-71.86	-36.00	35.86	29.37	178	Vertical
2	74.62	-100.69	-76.20	-36.00	40.20	24.49	117	Vertical
3	138.64	-101.14	-74.11	-36.00	38.11	27.03	230	Vertical
4	240.49	-101.12	-73.46	-36.00	37.46	27.66	333	Vertical
5	406.36	-100.49	-70.66	-36.00	34.66	29.83	100	Vertical
6	823.46	-99.86	-62.43	-54.00	8.43	37.43	350	Vertical

Test Mode:	TX: 471.000MHz	Polarity:	Horizontal



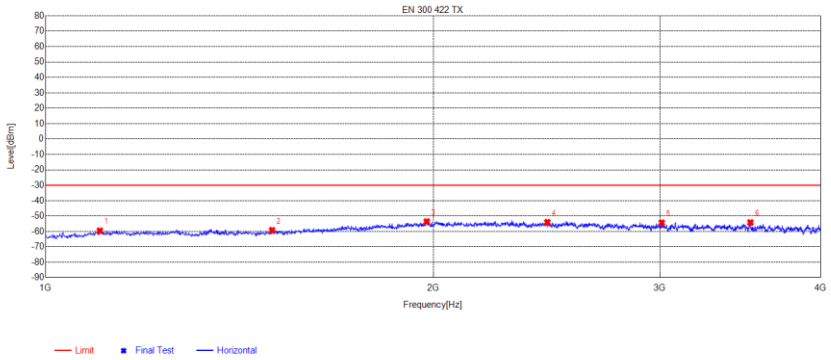
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	1187.5469	-55.08	-59.16	-30.00	29.16	-4.08	249	Horizontal
2	1504.126	-54.88	-58.96	-30.00	28.96	-4.08	304	Horizontal
3	1911.4779	-55.17	-54.24	-30.00	24.24	0.93	1	Horizontal
4	2523.6309	-55.96	-53.48	-30.00	23.48	2.48	203	Horizontal
5	3155.2888	-57.02	-55.26	-30.00	25.26	1.76	258	Horizontal
6	3487.6219	-56.68	-54.41	-30.00	24.41	2.27	221	Horizontal

Test Mode:	TX: 471.000MHz	Polarity:	Vertical



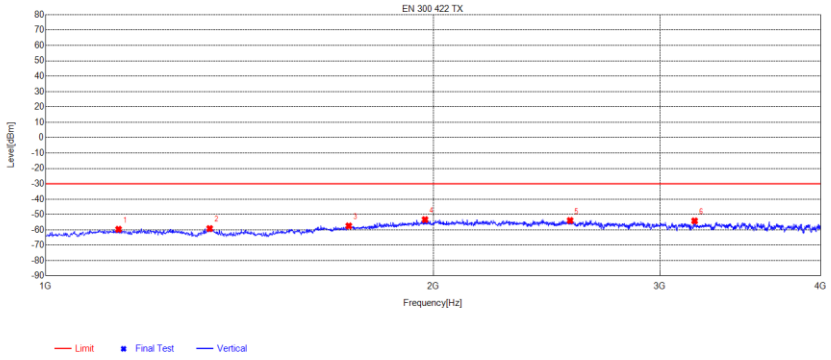
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	1110.2776	-55.48	-59.55	-30.00	29.55	-4.07	158	Vertical
2	1422.3556	-55.37	-59.49	-30.00	29.49	-4.12	167	Vertical
3	1814.7037	-55.81	-56.07	-30.00	26.07	-0.26	131	Vertical
4	2593.3984	-56.27	-53.93	-30.00	23.93	2.34	277	Vertical
5	3153.7884	-56.44	-54.68	-30.00	24.68	1.76	231	Vertical
6	3612.9032	-57.21	-54.87	-30.00	24.87	2.34	323	Vertical

Test Mode:	TX: 478.800MHz	Polarity:	Horizontal



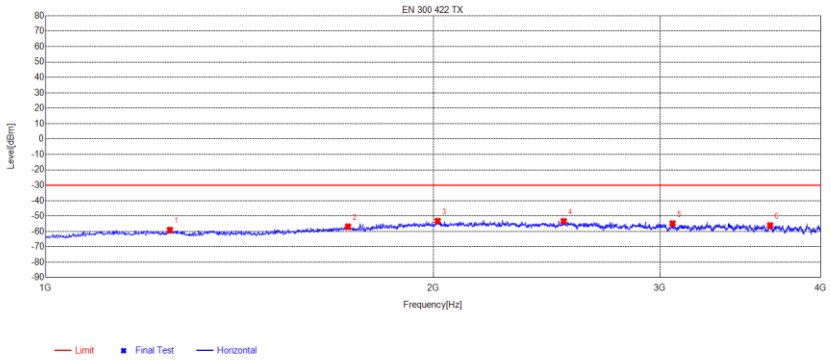
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	1101.2753	-55.47	-59.54	-30.00	29.54	-4.07	304	Horizontal
2	1498.8747	-55.10	-59.23	-30.00	29.23	-4.13	157	Horizontal
3	1976.7442	-55.34	-53.61	-30.00	23.61	1.73	93	Horizontal
4	2453.1133	-56.50	-54.02	-30.00	24.02	2.48	138	Horizontal
5	3010.5026	-55.89	-54.35	-30.00	24.35	1.54	102	Horizontal
6	3528.132	-56.52	-54.22	-30.00	24.22	2.30	341	Horizontal

Test Mode:	TX: 478.800MHz	Polarity:	Vertical



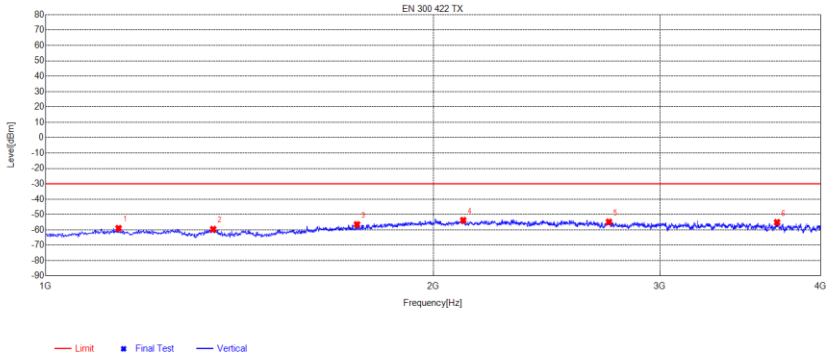
NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	1138.7847	-55.56	-59.63	-30.00	29.63	-4.07	166	Vertical
2	1340.5851	-55.06	-59.16	-30.00	29.16	-4.10	157	Vertical
3	1719.4299	-56.02	-57.45	-30.00	27.45	-1.43	0	Vertical
4	1970.7427	-55.01	-53.35	-30.00	23.35	1.66	304	Vertical
5	2555.1388	-56.33	-53.91	-30.00	23.91	2.42	75	Vertical
6	3192.7982	-56.00	-54.18	-30.00	24.18	1.82	212	Vertical

Test Mode:	TX: 486.800MHz	Polarity:	Horizontal



NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	1248.3121	-55.01	-59.10	-30.00	29.10	-4.09	83	Horizontal
2	1717.1793	-55.45	-56.91	-30.00	26.91	-1.46	248	Horizontal
3	2015.7539	-55.28	-53.24	-30.00	23.24	2.04	147	Horizontal
4	2525.8815	-55.85	-53.37	-30.00	23.37	2.48	120	Horizontal
5	3069.0173	-56.47	-54.84	-30.00	24.84	1.63	266	Horizontal
6	3654.9137	-58.46	-56.10	-30.00	26.10	2.36	303	Horizontal

Test Mode:	TX: 486.800MHz	Polarity:	Vertical



NO.	Freq. [MHz]	Reading [dBm]	Level [dBm]	Limit [dBm]	Margin [dB]	Factor [dB]	Angle [°]	Polarity
1	1138.7847	-54.91	-58.98	-30.00	28.98	-4.07	47	Vertical
2	1348.8372	-55.48	-59.59	-30.00	29.59	-4.11	204	Vertical
3	1744.9362	-55.39	-56.51	-30.00	26.51	-1.12	323	Vertical
4	2110.2776	-55.91	-53.78	-30.00	23.78	2.13	204	Vertical
5	2738.9347	-56.92	-54.87	-30.00	24.87	2.05	350	Vertical
6	3700.6752	-57.51	-55.14	-30.00	25.14	2.37	103	Vertical

9. Frequency Stability Measurement

9.1 Provisions Applicable

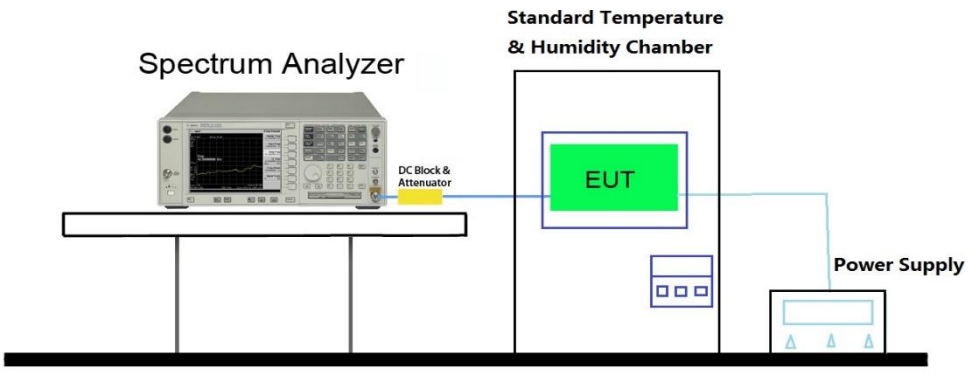
According to FCC Part 15.236(f)(3) description below:
The frequency tolerance of the carrier signal shall be maintained within ±0.005% of the operating frequency over a temperature variation of −20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. Battery operated equipment shall be tested using a new battery.

9.2 Measurement Procedure

The EUT was connected to a frequency counter or spectrum analyzer through the antenna output of each transmitter. The EUT was then placed in a temperature chamber.

1. The nominal frequency of the transmitter was measured and recorded.
2. The temperature chamber was then set to -30ºC.
3. Once the temperature had reached -30ºC the EUT was allowed to soak for 30 minutes.
4. After soaking at -30ºC for thirty minutes the EUT was turned on and the transmit frequency was measured and recorded.
5. Steps (b) through (d) were repeated for each temperature in 10ºC steps from -20ºC to +50ºC.
6. The EUT was then removed from the temperature chamber and allowed to adjust to nominal room temperature (20ºC).
7. The input voltage was checked and adjusted to the nominal level. The frequency was measured and recorded.
8. The input voltage was then varied to 85% of its nominal level. The frequency was measured and recorded.
9. The input voltage was then varied to 115% of its nominal level. The frequency was measured and recorded.

9.3 Measurement Setup (Block Diagram of Configuration)



9.4 Measurement Result

Test conditions		Frequency error (ppm)			Limit (ppm)	Result
Voltage (V)	Temperature (ºC)	Test Frequency (MHz)				
		471.000	478.800	486.800		
3.80	-30	0.490	0.653	0.601	±50	Pass
	-20	0.638	1.034	0.850		
	-10	0.543	0.590	0.625		
	0	0.869	0.894	0.878		
	10	0.874	0.707	1.079		
	20	0.689	0.893	0.945		
	30	0.662	0.946	0.602		
	40	0.809	0.828	0.609		
	50	0.572	0.687	1.060		
4.35	20	0.859	0.756	0.923		
3.23	20	0.577	0.967	0.937		

10. AC Power Line Conducted Emission Test

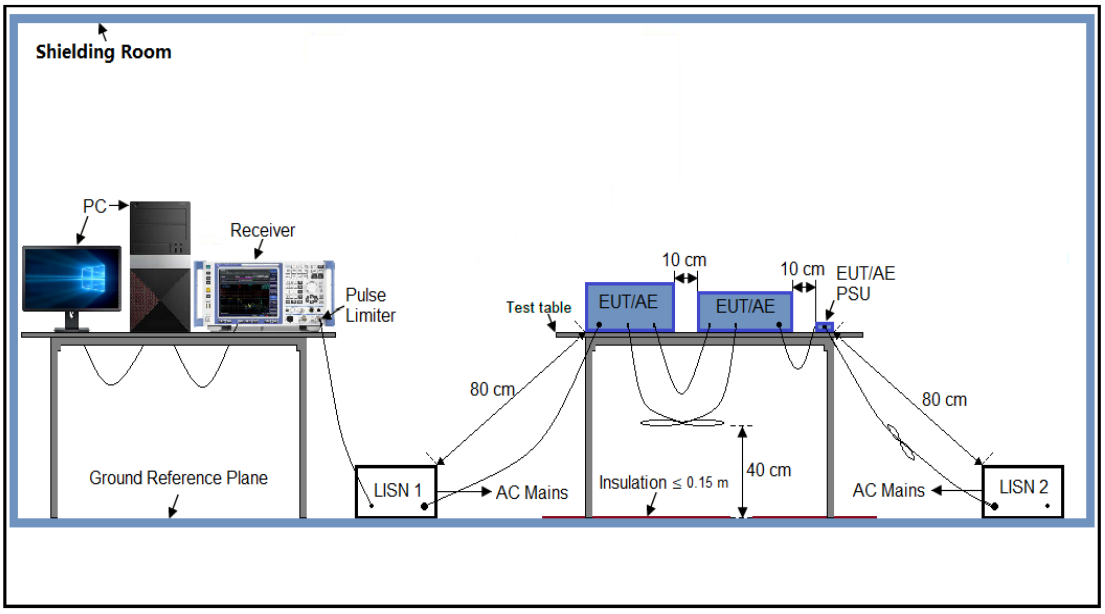
10.1 Measurement Limits

Frequency Range	Maximum RF Line Voltage	
	Q.P. (dBμV)	Average (dBμV)
150kHz~500kHz	66-56	56-46
500kHz~5MHz	56	46
5MHz~30MHz	60	50

Note:

1. The lower limit shall apply at the transition frequency.
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.

10.2 Measurement Setup (Block Diagram of Configuration)



10.3 Preliminary Procedure of Line Conducted Emission Test

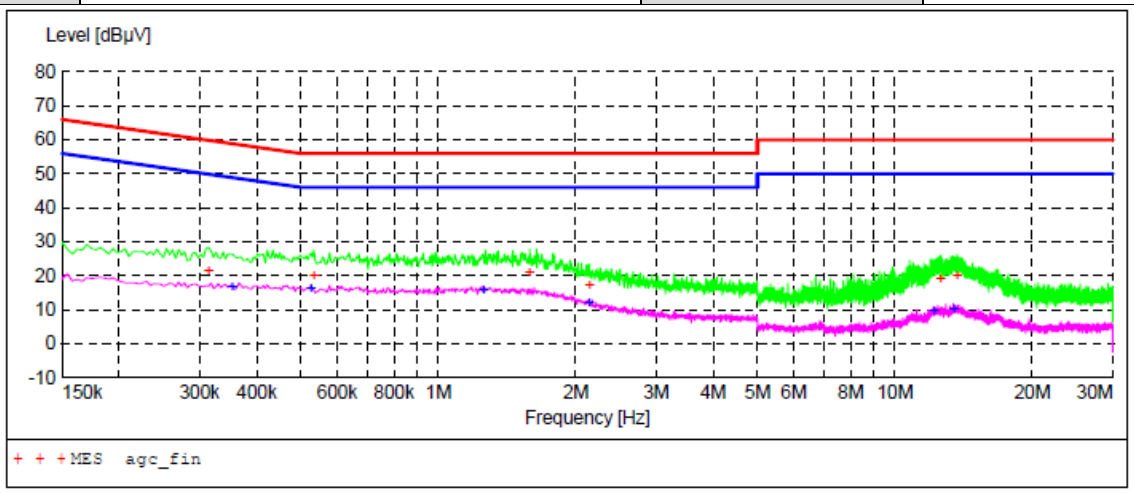
1. The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
2. Support equipment, if needed, was placed as per ANSI C63.10.
3. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10.
4. All support equipment received AC120V/60Hz power from a LISN, if any.
5. The EUT received DC 5V power from adapter which received AC120V/60Hz power from a LISN.
6. The test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
7. Analyzer / Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.
8. During the above scans, the emissions were maximized by cable manipulation.
9. The test mode(s) were scanned during the preliminary test.
10. Then, the EUT configuration and cable configuration of the above highest emission level were recorded for reference of final testing.

10.4 Final Procedure of Line Conducted Emission Test

1. EUT and support equipment was set up on the test bench as per step 2 of the preliminary test.
2. A scan was taken on both power lines, Line 1 and Line 2, recording at least the six highest emissions. Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. If EUT emission level was less –2dB to the A.V. limit in Peak mode, then the emission signal was re-checked using Q.P and Average detector.
3. The test data of the worst case condition(s) was reported on the Summary Data page.

10.5 Measurement Result

AC Power Line Conducted Emission Test			
Test Mode	Mode 1	LISN Line	Hot Side



MEASUREMENT RESULT: "agc_fin"

2024/8/30 23:40

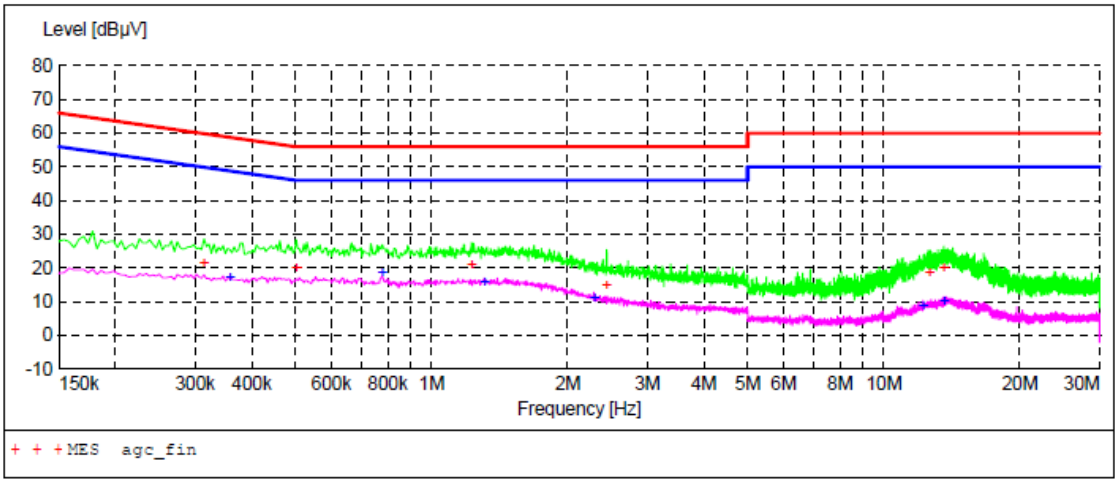
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line
0.314000	21.20	6.1	60	38.7	QP	L1
0.534000	19.80	6.2	56	36.2	QP	L1
1.586000	20.70	6.2	56	35.3	QP	L1
2.142000	16.80	6.2	56	39.2	QP	L1
12.610000	18.80	6.8	60	41.2	QP	L1
13.702000	20.00	6.8	60	40.0	QP	L1

MEASUREMENT RESULT: "agc_fin2"

2024/8/30 23:40

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line
0.354000	16.70	6.1	49	32.2	AV	L1
0.526000	16.10	6.2	46	29.9	AV	L1
1.254000	15.80	6.2	46	30.2	AV	L1
2.138000	11.70	6.2	46	34.3	AV	L1
12.182000	9.40	6.8	50	40.6	AV	L1
13.450000	10.20	6.8	50	39.8	AV	L1

AC Power Line Conducted Emission Test			
Test Mode	Mode 1	LISN Line	Neutral Side



MEASUREMENT RESULT: "agc_fin"

2024/8/30 23:37

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line
0.314000	21.10	6.1	60	38.8	QP	N
0.502000	19.80	6.2	56	36.2	QP	N
1.226000	20.90	6.2	56	35.1	QP	N
2.442000	14.90	6.3	56	41.1	QP	N
12.642000	18.50	6.8	60	41.5	QP	N
13.586000	19.70	6.8	60	40.3	QP	N

MEASUREMENT RESULT: "agc_fin2"

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Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line
0.358000	16.90	6.1	49	31.9	AV	N
0.778000	18.60	6.2	46	27.4	AV	N
1.310000	15.80	6.2	46	30.2	AV	N
2.286000	11.00	6.3	46	35.0	AV	N
12.218000	8.60	6.8	50	41.4	AV	N
13.586000	10.00	6.8	50	40.0	AV	N

Appendix I: Photographs of Test Setup

Refer to the Report No.: AGC00749240804AP01

Appendix II: Photographs of Test EUT

Refer to the Report No.: AGC00749240804AP02

-----End of Report-----

Conditions of Issuance of Test Reports

1. All samples and goods are accepted by the Attestation of Global Compliance (Shenzhen) Co., Ltd (the "Company") solely for testing and reporting in accordance with the following terms and conditions. The company provides its services on the basis that such terms and conditions constitute express agreement between the company and any person, firm or company requesting its services (the "Clients").

2. Any report issued by Company as a result of this application for testing services (the "Report") shall be issued in confidence to the Clients and the Report will be strictly treated as such by the Company. It may not be reproduced either in its entirety or in part and it may not be used for advertising or other unauthorized purposes without the written consent of the Company. The Clients to whom the Report is issued may, however, show or send it, or a certified copy thereof prepared by the Company to its customer, supplier or other persons directly concerned. The Company will not, without the consent of the Clients, enter into any discussion or correspondence with any third party concerning the contents of the Report, unless required by the relevant governmental authorities, laws or court orders.

3.The Company shall not be called or be liable to be called to give evidence or testimony on the Report in a court of law without its prior written consent, unless required by the relevant governmental authorities, laws or court orders.

4. In the event of the improper use of the report as determined by the Company, the Company reserves the right to withdraw it, and to adopt any other additional remedies which may be appropriate.

5. Samples submitted for testing are accepted on the understanding that the Report issued cannot form the basis of, or be the instrument for, any legal action against the Company.

6. The Company will not be liable for or accept responsibility for any loss or damage however arising from the use of information contained in any of its Reports or in any communication whatsoever about its said tests or investigations.

7.Clients wishing to use the Report in court proceedings or arbitration shall inform the Company to that effect prior to submitting the sample for testing.

8. The Company is not responsible for recalling the electronic version of the original report when any revision is made to them. The Client assumes the responsibility to providing the revised version to any interested party who uses them.

9. Subject to the variable length of retention time for test data and report stored hereinto as otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of the test report for a period of six years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after retention period. Under no circumstances shall we be liable for damage of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.