

RF TEST REPORT

For

Enping Warm Card Electronic Technology Co., Ltd

Product Name: Wireless microphone transmitter and receiver

Model(s): M-ONE

Report Reference No. : POCE230816256JRW

FCC ID : 2BCRY-M-ONE

Applicant's Name : Enping Warm Card Electronic Technology Co., Ltd

Address : No. 2, 1st Floor, No. 4 Xingfu Street 2nd Lane, Dong'an, Enping City

Testing Laboratory : Shenzhen POCE Technology Co., Ltd.

Address : 102 Building H1 & 1/F., Building H, Hongfa Science & Technology Park,
Tangtou, Shiyuan, Bao'an District, Shenzhen, Guangdong, China

Test Specification Standard : **FCC Rules and Regulations Part 15 Subpart C Section 15.236**
ANSI C63.10:2013
KDB 206256 D01 Wireless Microphone Certification v02

Date of Receipt : August 3, 2023

Date of Test : August 3, 2023 to September 18, 2023

Data of Issue : September 18, 2023

Result : **Pass**

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Revision History Of Report

Version	Description	REPORT No.	Issue Date
V1.0	Original	POCE230816256JRW	September 18, 2023

NOTE1:

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards.

Compiled by:



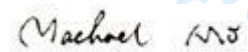
Ben Tang / File administrators

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Machael Mo / Manager

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1 TEST SUMMARY

1.1 Test Standards

The tests were performed according to following standards:

47 CFR Part 15.236: Operation of wireless microphones in the bands 54–72 MHz, 76–88 MHz, 174–216 MHz, 470–608 MHz and 614–698 MHz.

1.2 Summary of Test Result

Item	Standard	Requirement	Result
Antenna requirement	47 CFR Part 15.236	FCC part 15.203	Pass
AC Power Line Conducted Emission	47 CFR Part 15.236	FCC part 15.207	Pass
Conducted Peak Output Power	47 CFR Part 15.236	FCC part 15.236(d)(1)	Pass
RADIATED EMISSION MEASUREMENT	47 CFR Part 15.236	FCC part 15.236(d)(2)& ETSI EN300422-1	Pass
Channel Bandwidth	47 CFR Part 15.236	FCC part 15.236(f)(2)	Pass
Frequency Stability	47 CFR Part 15.236	FCC part 15.236(f)(3)	Pass

Note: 1.N/A -this device(EUT) is not applicable to this testing item
2. RF-conducted test results including cable loss.

2 GENERAL INFORMATION

2.1 Client Information

Applicant's Name : Enping Warm Card Electronic Technology Co., Ltd
Address : No. 2, 1st Floor, No. 4 Xingfu Street 2nd Lane, Dong'an, Enping City

Manufacturer : Enping Warm Card Electronic Technology Co., Ltd
Address : No. 2, 1st Floor, No. 4 Xingfu Street 2nd Lane, Dong'an, Enping City

2.2 Description of Device (EUT)

Product Name:	Wireless microphone transmitter and receiver
Model/Type reference:	M-ONE
Series Model:	M-02,M-03,M-04,JT-01,JT-02,JT-03,JT-04,JT-05,HD-01,HD-02,HD-03,HD-04,HD-05,SQ-01,SQ-02,SQ-03,SQ-04,F-01,F-02,F-03
Model Difference:	The product has many models, only the model name is different, and the other parts such as the circuit principle, pcb and electrical structure are the same.
Trade Mark:	N/A
Power Supply:	DC5V/1A Power from Adapter
Hardware Version:	V1.0
Software Version:	V1.0
Operation Frequency	550.25~573.75MHz
Modulation Type	FM
Channel number	20
Channel separation	N/A
Nominal channel bandwidth	1MHz/1.25MHz
Antenna Type	TX:Internal antenna
Antenna gain	0 dBi

Channel Number	Frequency(MHz)	Channel Number	Frequency(MHz)
01	550.25	11	562.50
02	551.25	12	563.75
03	552.50	13	565.00
04	553.75	14	566.25
05	555.00	15	567.50
06	556.25	16	568.75
07	557.50	17	570.00
08	558.75	18	571.25
09	560.00	19	572.50
10	561.25	20	573.75

2.3 Description of Test Modes

No	Title	Description
TM1	Transmitting mode	Keep the EUT in continuously transmitting mode
Remark:Only the data of the worst mode would be recorded in this report.		

Test channel	Frequency
Lowest channel	550.25MHz
Middle channel	561.25MHz
Highest channel	573.75MHz

2.4 Description of Support Units

Title	Manufacturer	Model No.	Serial No.
Adapter	SHENZHEN GROSUN TECHNOLOGY CO.,LTD	GS-P120150E663	/

2.5 Equipments Used During The Test

Conducted Emission at AC power line					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
loop antenna	EVERFINE	LLA-2	80900L-C	2023-02-27	2024-02-26
Power absorbing clamp	SCHWARZ BECK	MESS-ELEKTRONIK	/	2023-02-28	2024-02-27
Electric Network	SCHWARZ BECK	CAT5 8158	CAT5 8158#207	/	/
Cable	SCHWARZ BECK	/	/	2022-12-27	2023-12-27
Pulse Limiter	SCHWARZ BECK	VTSD 9561-F Pulse limiter 10dB Ateennator	561-G071	2023-02-27	2024-02-26
50ΩCoaxial Switch	Anritsu	MP59B	M20531	/	/
Test Receiver	Rohde & Schwarz	ESPI TEST RECEIVER	ID:1164.6607K 03-102109-MH	2023-06-13	2024-06-12
L.I.S.N	R&S	ESH3-Z5	831.5518.52	2022-12-29	2023-12-28

Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
RF Test Software	TACHOY	RTS-01	V2.0.0.0	/	/
High Pass filter	ZHINAN	OQHPF1-M1.5-18G-224	6210075	/	/
Power divider	MIDWEST	PWD-2533	SMA-79	2023-05-11	2026-05-10
DC power	HP	66311B	38444359	/	/
RF Sensor Unit	TACHOY	TR1029-2	000001	/	/
Vector signal generator	Keysight	N5181A	MY48180415	2022-12-10	2023-12-09
Signal generator	Keysight	N5182A	MY50143455	2022-12-29	2023-12-28
Spectrum Analyzer	Keysight	N9020A	MY53420323	2022-12-29	2023-12-28

Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
EMI Test software	Farad	EZ -EMC	V1.1.42	/	/
Positioning Controller	/	MF-7802	/	/	/
High Pass filter	ZHINAN	OQHPF1-M1.5-18G-224	6210075	/	/
Amplifier(18-40G)	COM-POWER	AH-1840	10100008-1	2022-04-05	2025-04-04
Horn antenna	COM-POWER	AH-1840 (18-40G)	10100008	2023-04-05	2025-04-04
Loop antenna	ZHINAN	ZN30900C	ZN30900C	2021-07-05	2024-07-04
Cable(LF)#2	Schwarzbeck	/	/	2023-02-27	2024-02-26
Cable(LF)#1	Schwarzbeck	/	/	2023-02-27	2024-02-26
Cable(HF)#2	Schwarzbeck	AK9515E	96250	2023-02-28	2024-02-27
Cable(HF)#1	Schwarzbeck	SYV-50-3-1	/	2023-02-27	2024-02-26
Power amplifier(LF)	Schwarzbeck	BBV9743	9743-151	2023-06-13	2024-06-12
Power amplifier(HF)	Schwarzbeck	BBV9718	9718-282	2023-06-13	2024-06-12
Spectrum Analyzer	R&S	FSP30	1321.3008K40-101729-jR	2023-06-14	2024-06-13
Horn Antenna	Sunol Sciences	DRH-118	A091114	2023-05-13	2025-05-12
Broadband Antenna	Sunol Sciences	JB6 Antenna	A090414	2023-05-21	2025-05-20
Test Receiver	R&S	ESCI	102109	2023-06-13	2024-06-12

2.6 Statement Of The Measurement Uncertainty

Test Item	Measurement Uncertainty
Conducted Disturbance (0.15~30MHz)	±3.41dB
Occupied Bandwidth	±3.63%
RF power density	±0.234%
Radio Frequency	2×10 ⁻⁷
RF conducted power	±0.733dB
Duty cycle	±3.1%
Conducted Spurious emissions	±1.98dB
Radiated Emission (Above 1GHz)	±5.46dB
Radiated Emission (Below 1GHz)	±5.79dB
Note: (1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	

2.7 Identification of Testing Laboratory

Company Name:	Shenzhen POCE Technology Co., Ltd.
Address:	101-102 Building H5 & 1/F., Building H, Hongfa Science & Technology Park, Tangtou, Shiyan, Bao'an District, Shenzhen, Guangdong, China
Phone Number:	+86-13267178997
Fax Number:	86-755-29113252

Identification of the Responsible Testing Location

Company Name:	Shenzhen POCE Technology Co., Ltd.
Address:	101-102 Building H5 & 1/F., Building H, Hongfa Science & Technology Park, Tangtou, Shiyan, Bao'an District, Shenzhen, Guangdong, China
Phone Number:	+86-13267178997
Fax Number:	86-755-29113252
FCC Registration Number:	0032847402
Designation Number:	CN1342
Test Firm Registration No.:	778666
A2LA Certificate Number:	6270.01

2.8 Announcement

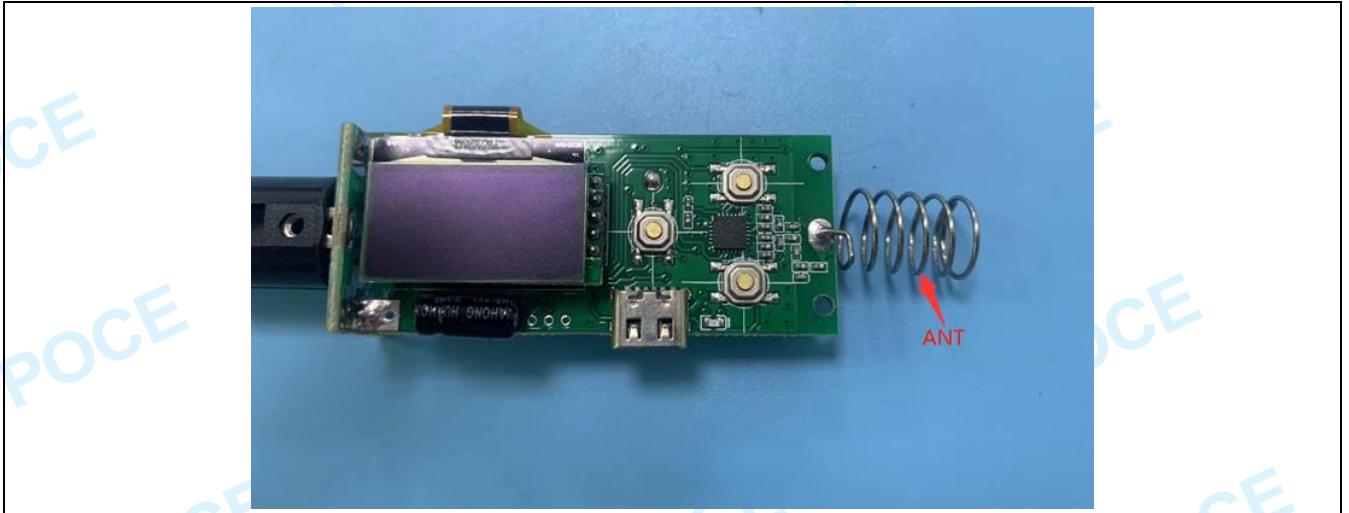
- (1) The test report reference to the report template version v0.
- (2) The test report is invalid if not marked with the signatures of the persons responsible for preparing, reviewing and approving the test report.
- (3) The test report is invalid if there is any evidence and/or falsification.
- (4) This document may not be altered or revised in any way unless done so by POCE and all revisions are duly noted in the revisions section.
- (5) Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.
- (6) The laboratory is only responsible for the data released by the laboratory, except for the part provided by the applicant.

3 Evaluation Results (Evaluation)

3.1 Antenna requirement

Test Requirement:	Refer to 47 CFR Part 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.
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3.1.1 Conclusion:



4 Radio Spectrum Matter Test Results (RF)

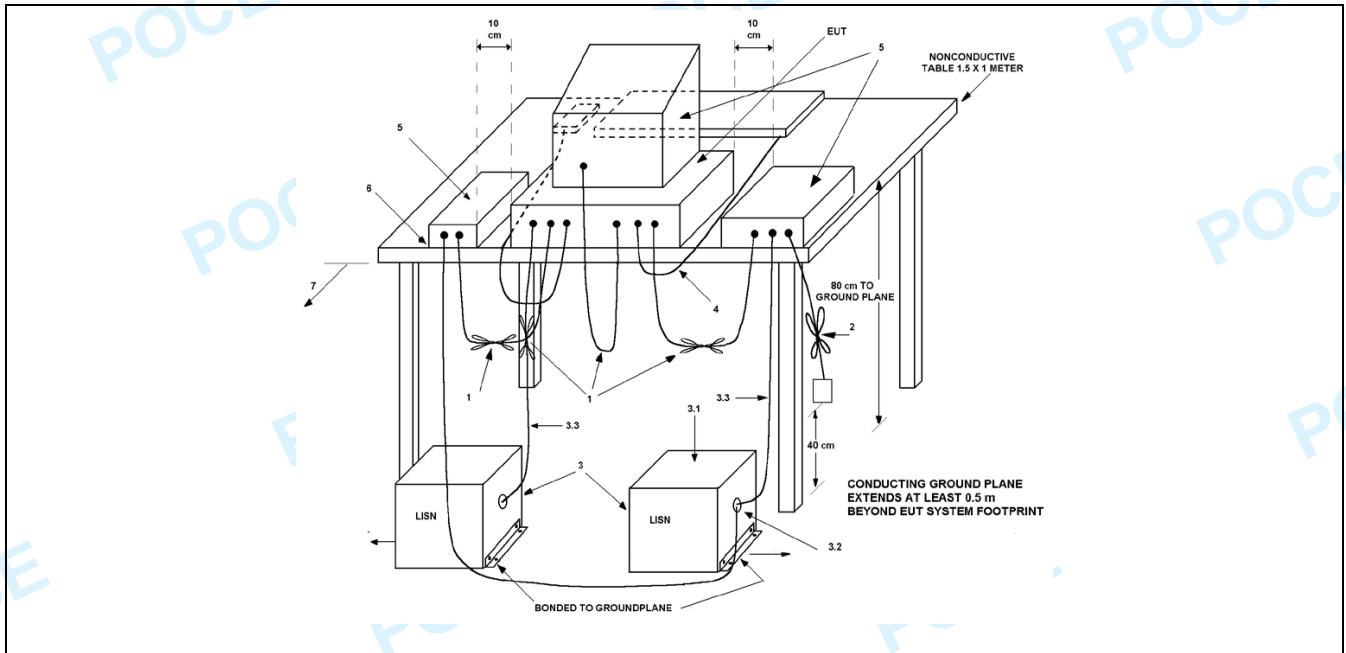
4.1 Conducted Emission at AC power line

Test Requirement:	Except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 μ H/50 ohms line impedance stabilization network (LISN).		
Test Limit:	Frequency of emission (MHz)	Conducted limit (dB μ V)	
		Quasi-peak	Average
	0.15-0.5	66 to 56*	56 to 46*
	0.5-5	56	46
	5-30	60	50
	*Decreases with the logarithm of the frequency.		
Test Method:	ANSI C63.10-2013 section 6.2		
Procedure:	Refer to ANSI C63.10-2013 section 6.2, standard test method for ac power-line conducted emissions from unlicensed wireless devices		

4.1.1 E.U.T. Operation:

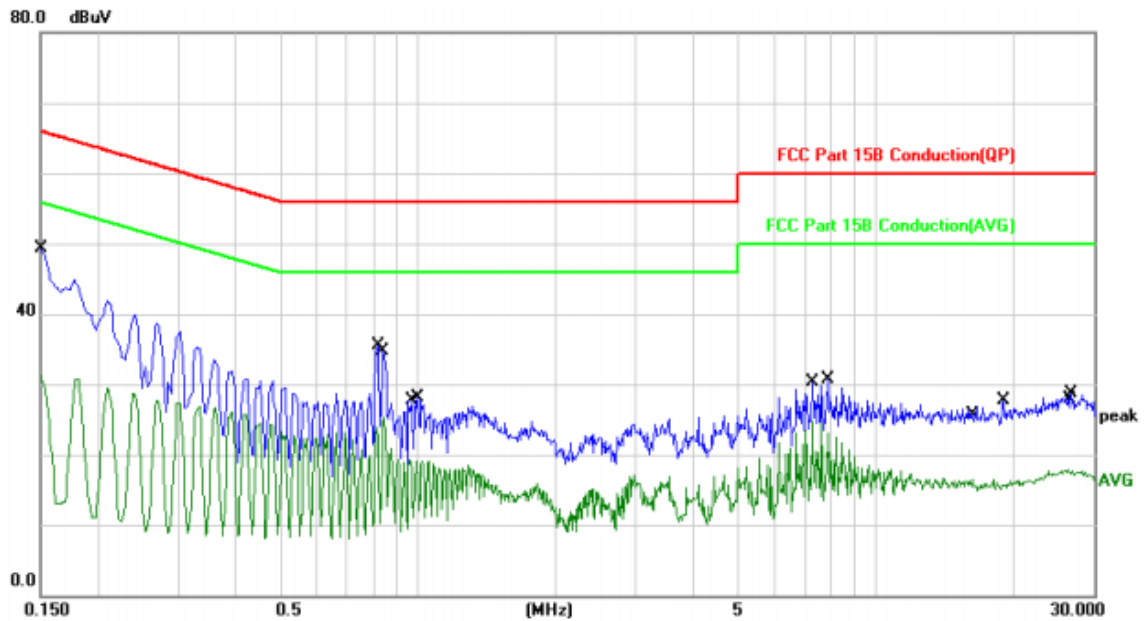
Operating Environment:					
Temperature:	23.7 °C	Humidity:	52.1 %	Atmospheric Pressure:	102 kPa
Pre test mode:	TM1				
Final test mode:	TM1				

4.1.2 Test Setup Diagram:



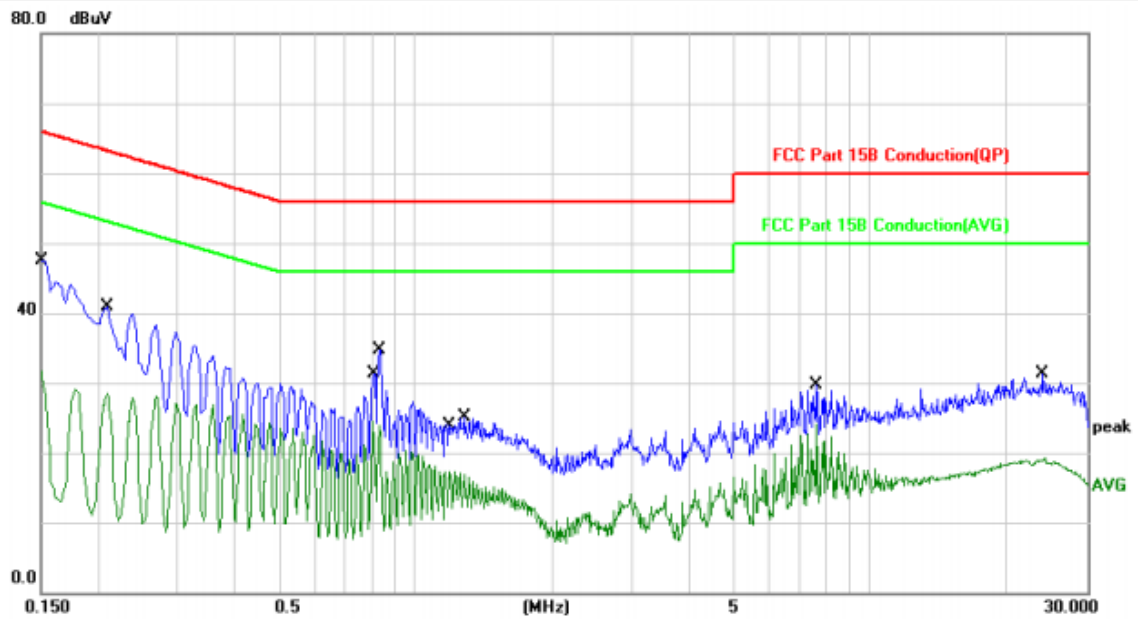
4.1.3 Test Data:

TM1 / Line: Line;Power:AC120V60Hz



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	*	0.1500	39.10	10.20	49.30	65.99	-16.69	QP	
2		0.1500	21.14	10.20	31.34	55.99	-24.65	AVG	
3		0.8180	25.48	10.10	35.58	56.00	-20.42	QP	
4		0.8460	15.20	10.09	25.29	46.00	-20.71	AVG	
5		0.9620	9.27	10.06	19.33	46.00	-26.67	AVG	
6		1.0020	17.96	10.05	28.01	56.00	-27.99	QP	
7		7.2900	13.88	10.87	24.75	50.00	-25.25	AVG	
8		7.8620	19.65	10.96	30.61	60.00	-29.39	QP	
9		16.3100	3.90	12.54	16.44	50.00	-33.56	AVG	
10		19.0500	14.64	12.97	27.61	60.00	-32.39	QP	
11		26.3300	4.08	13.82	17.90	50.00	-32.10	AVG	
12		26.7020	14.84	13.86	28.70	60.00	-31.30	QP	

TM1 / Line: Neutral ;Power:AC120V60Hz



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	*	0.1500	37.30	10.20	47.50	65.99	-18.49	QP	
2		0.1500	21.56	10.20	31.76	55.99	-24.23	AVG	
3		0.2100	30.72	10.19	40.91	63.20	-22.29	QP	
4		0.2100	18.35	10.19	28.54	53.20	-24.66	AVG	
5		0.8059	14.34	10.10	24.44	46.00	-21.56	AVG	
6		0.8340	24.67	10.09	34.76	56.00	-21.24	QP	
7		1.1900	7.28	10.06	17.34	46.00	-28.66	AVG	
8		1.2780	14.96	10.06	25.02	56.00	-30.98	QP	
9		7.6300	18.75	10.92	29.67	60.00	-30.33	QP	
10		7.6300	13.16	10.92	24.08	50.00	-25.92	AVG	
11		23.9780	17.67	13.56	31.23	60.00	-28.77	QP	
12		24.1460	5.71	13.58	19.29	50.00	-30.71	AVG	

1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Measurement Level = Reading level + Correct Factor, Over=Limit- Measurement

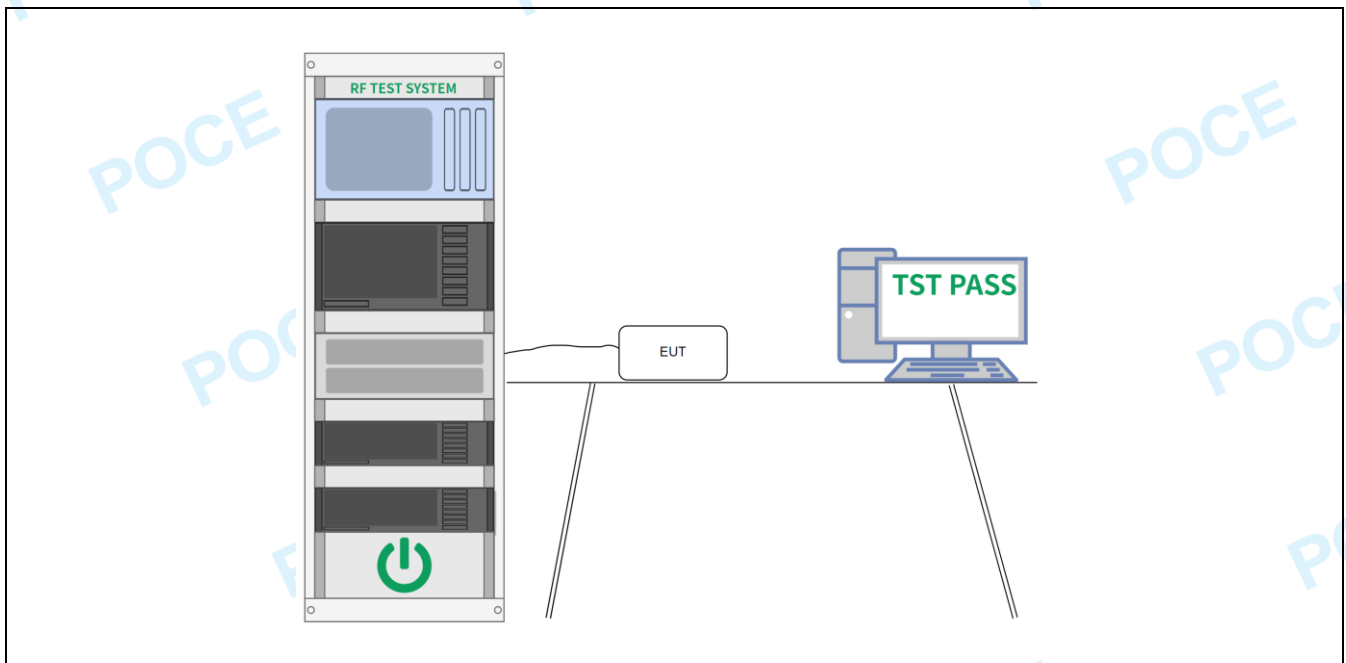
4.2 Conducted Output Power

Test Requirement:	FCC part 15.236(d)(1)
Test Limit:	According to FCC 15.236(d)(1), for low power auxiliary station operating in the 470-608, and 614-698 MHz bands, In the bands allocated and assigned for broadcast television and in the 600 MHz service band: 50 mW EIRP
Test Method:	ANSI C63.10:2013
Procedure:	<ol style="list-style-type: none"> The maximum peak output power was measured with a Spectrum Analyzer connected to the antenna terminal while EUT was operating in unmodulated situation. Power was supplied to the battery input connector a power supply. The power supply was set for +3.0VDC. The Spectrum Analyzer was connected at antenna terminal to measure RF power of the carrier. A Multimeter was connected in series with final RF Stage to measure the current; A Multimeter was used to measure final RF Stage supply voltage. Then the voltage v.s. current of the final RF Stage can be showed.

4.2.1 E.U.T. Operation:

Operating Environment:					
Temperature:	23.7 °C	Humidity:	52.1 %	Atmospheric Pressure:	102 kPa
Pre test mode:	TM1				
Final test mode:	TM1				

4.2.2 Test Setup Diagram:



4.2.3 Test Data:

Frequency (MHz)	Conducted Output Power (dBm)	ANT Gain (dBi)	EIRP (dBm)	Limit (dBm)	Result
550.25	-11.24	0	-11.24	17	PASS
561.25	-11.47	0	-11.47	17	PASS
573.75	-10.64	0	-10.64	17	PASS

EIRP= Conducted Output Power + ANT Gain

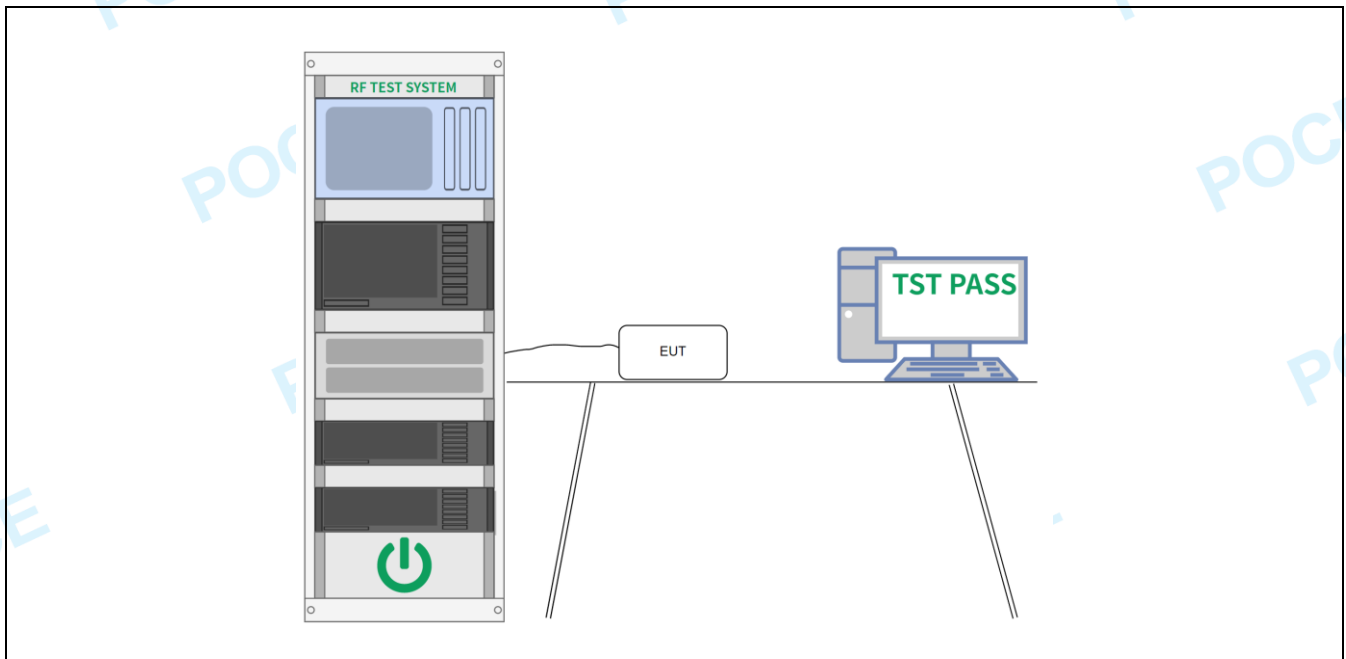
4.3 Channel Bandwidth

Test Requirement:	FCC Part15 C Section 15. 236(f)(2)
Test Limit:	<p>According to FCC 15.236(f)(2), The operating frequency within a permissible band of operation as defined in paragraph (c) must comply with the following requirements.</p> <p>(1) The frequency selection shall be offset from the upper or lower band limits by 25 kHz or an integral multiple thereof.</p> <p>(2) One or more adjacent 25 kHz segments within the assignable frequencies may be combined to form a channel whose maximum bandwidth shall not exceed 200 kHz. The operating bandwidth shall not exceed 200kHz. Emissions within the band from one megahertz below to one megahertz above the carrier frequency shall comply with the emission mask in Section 8.3 of ETSI EN 300 422-1 V1.4.2 (2011-08) (incorporated by reference, see §15.38). Emissions outside this band shall comply with the limit specified at the edges of the ETSI mask</p>
Test Method:	ANSI C63.10:2013
Procedure:	According to TIA-603 for additional Test Set-Up procedures, the occupied bandwidth of emission was measured with a Spectrum Analyzer connected to the antenna terminal while EUT was operating in 2.5kHz tone at an input level 16 dB greater than that necessary to produce 50 percent modulation. Then mark the -26dB Bandwidth and record it.

4.3.1 E.U.T. Operation:

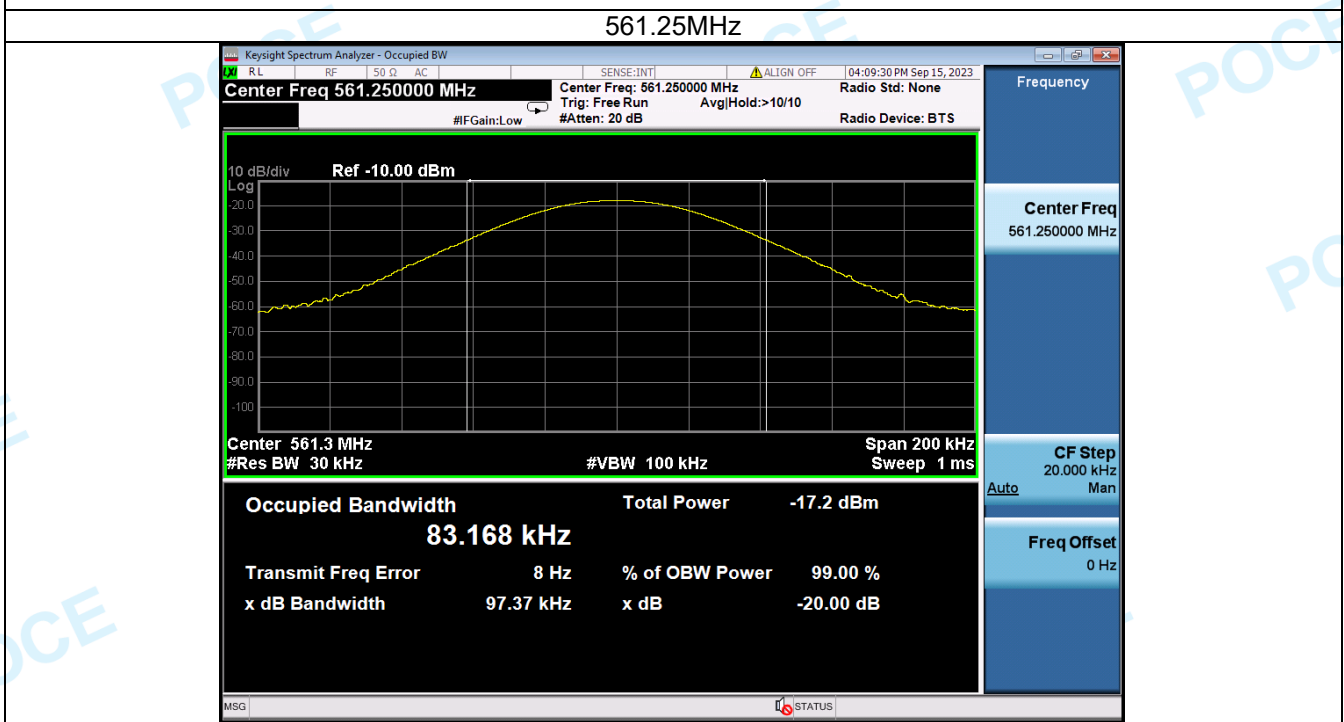
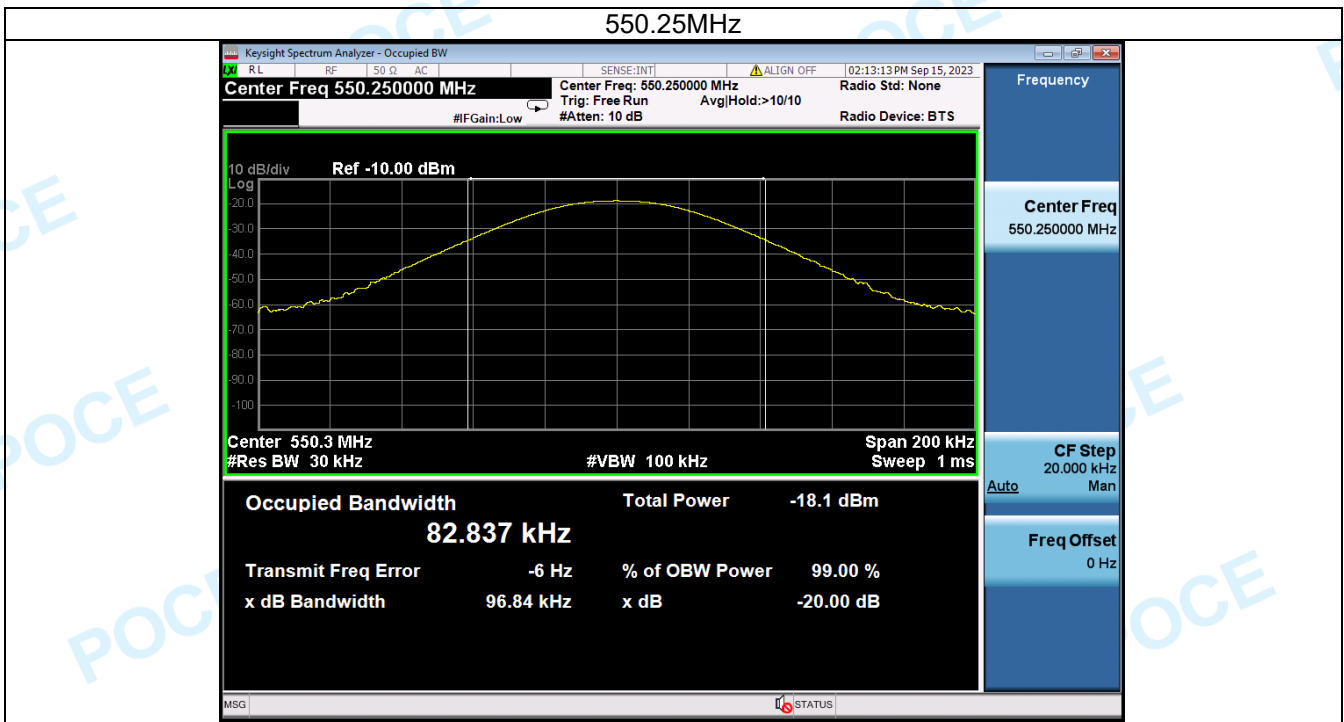
Operating Environment:					
Temperature:	23.7 °C	Humidity:	52.1 %	Atmospheric Pressure:	102 kPa
Pre test mode:	TM1				
Final test mode:	TM1				

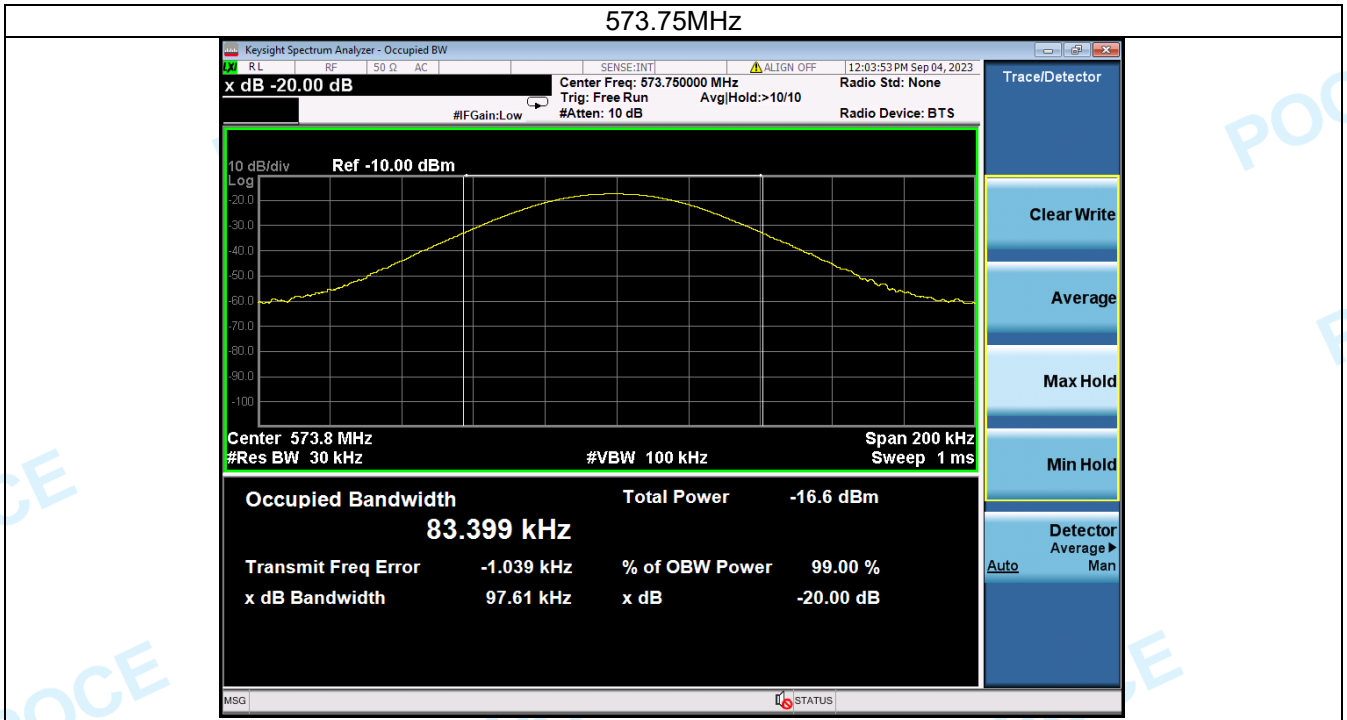
4.3.2 Test Setup Diagram:



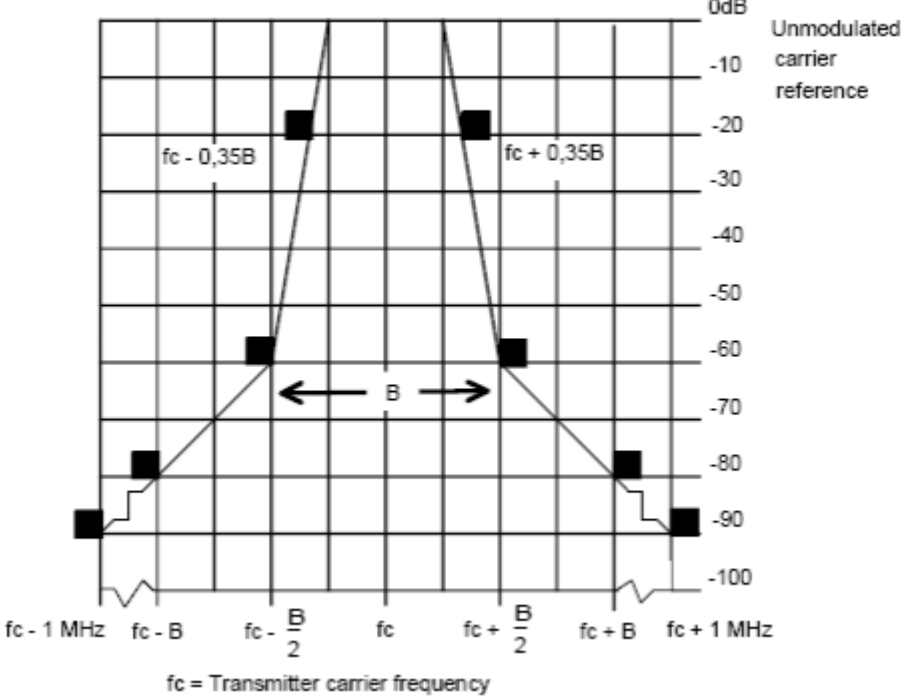
4.3.3 Test Data:

Frequency (MHz)	20dB bandwidth (KHz)	99%Bandwidth (kHz)	Limit (kHz)	Result
550.25	96.84	82.837	200	Pass
561.25	97.37	83.168	200	Pass
573.75	97.61	83.399	200	Pass





4.4 Necessary bandwidth

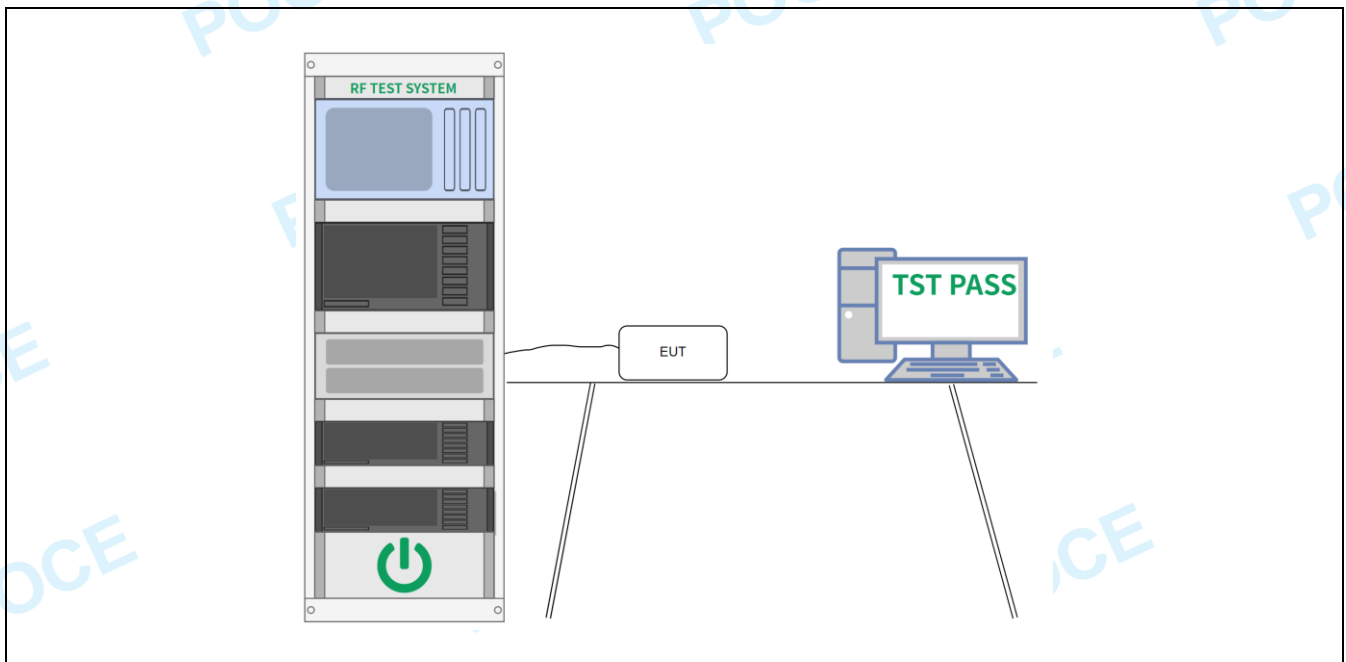
Test Requirement:	FCC part 15.236(f)(2)
Test Limit:	 <p style="text-align: center;">fc = Transmitter carrier frequency</p> <p>Standard Applicable According to §15.236 (g) Emissions within the band from one megahertz below to one megahertz above the carrier frequency shall comply with the emission mask in §8.3 of ETSI EN 300 422-1 V1.4.2 (2011-08), Electromagnetic compatibility and Radio spectrum Matters (ERM); Wireless UHF Microphones in the 25 MHz to 3GHz frequency range; Part 1: Technical characteristics and methods of measurement. Emissions outside of this band shall comply with the limits specified in section 8.4 of ETSI EN 300 422-1 V1.4.2 (2011-08). According to ETSI EN 300 422-2 V2.1.1 section 8.3, the transmitter output spectrum shall be within the mask defined in the following figure.</p>
Test Method:	ANSI C63.10:2013/ ETSI EN 300 422-1/-2
Procedure:	<p>Principal Spectrum Mask measuring method for digital transmitters:</p> <ul style="list-style-type: none"> - Spectrum mask below 1 GHz, see figure 4; for the spectrum mask above 1 GHz, see figure 5. <p>NOTE: This parameter also includes the limits for spectral components within the out-of-band region. The transmitter shall be modulated with the test signals defined in clause 7.1.2. In any case the mask shall not be exceeded.</p> <ul style="list-style-type: none"> - Step 1: Measure the "Carrier Power" with the spectrum analyser setup: <ul style="list-style-type: none"> • Centre Frequency = fc • Span = Zero span • Detector = RMS • Trace Mode = Average • RBW&VBW = 5 × B • Sweep time ≥ 2 s Step 2: Measure the "Maximum Relative Level (dBc) at Specified Carrier Offsets" with the following spectrum analyser setup: <ul style="list-style-type: none"> • Centre Frequency = fc • Span ≥ 5 × B

	<ul style="list-style-type: none"> • Detector = RMS • Trace Mode = Peak Hold • RBW&VBW = 1 kHz • Sweep time ≥ 2 s <p>Limits:</p> <ul style="list-style-type: none"> - Step 3: Measure the "transmitter wide band noise floor": The measurement of transmitter broad band noise floor shall be carried out according to clause 8.3.2.1. - Step 3a: Measure the "lower frequency transmitter wide band noise floor": - Start Frequency = $f_c - 5 \times B$ Stop Frequency = $f_c - 1,75 \times B$ - Detector = RMS - Trace Mode = Average - RBW&VBW = 1 kHz - Sweep time = 2 s per 200 kHz - Step 3b: Measure the "upper frequency transmitter wide band noise floor": - Start Frequency = $f_c + 1,75 \times B$ Stop Frequency = $f_c + 5 \times B$ - Detector = RMS - Trace Mode = Average - RBW&VBW = 1 kHz - Sweep time = 2 s per 200 kHz <p>Both spectrum ranges shall be measured. Limits: The spectrum mask for digital systems shall not be exceeded. See figure 4 for systems operating below 2 GHz and figure 5 for systems operating above 2 GHz.</p>
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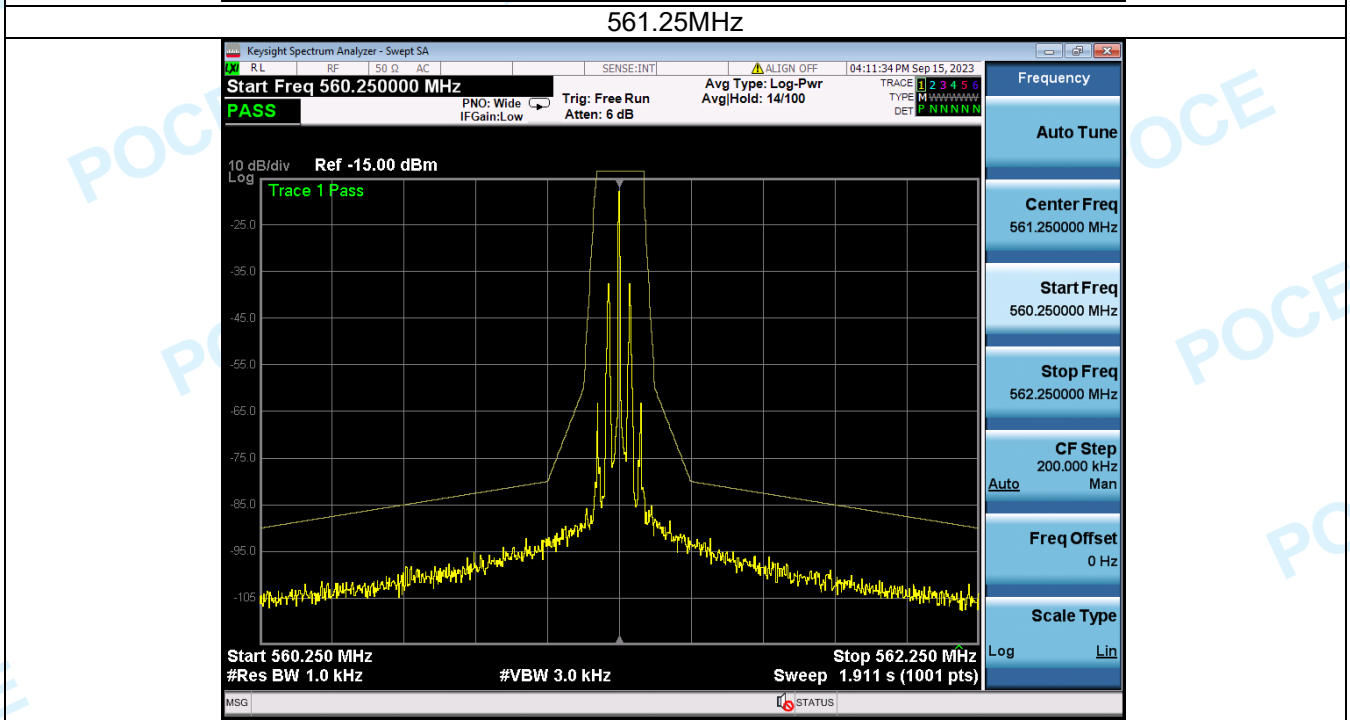
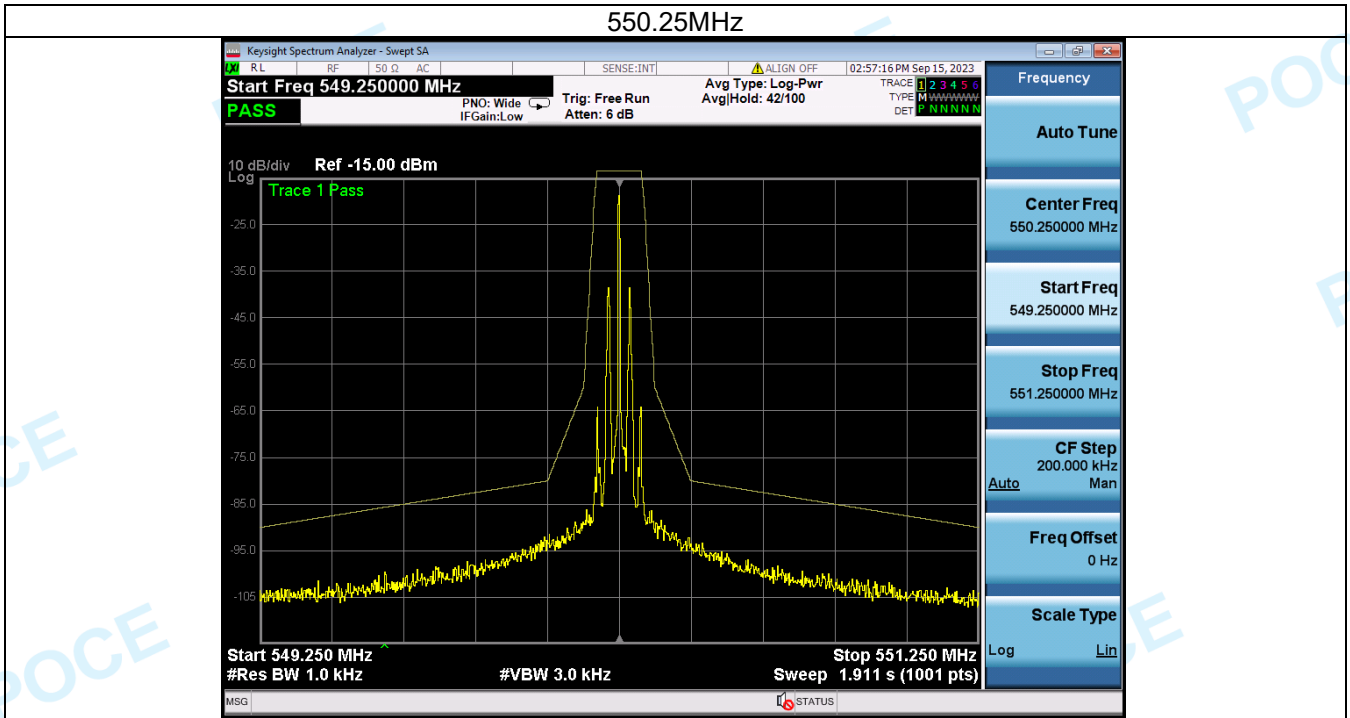
4.4.1 E.U.T. Operation:

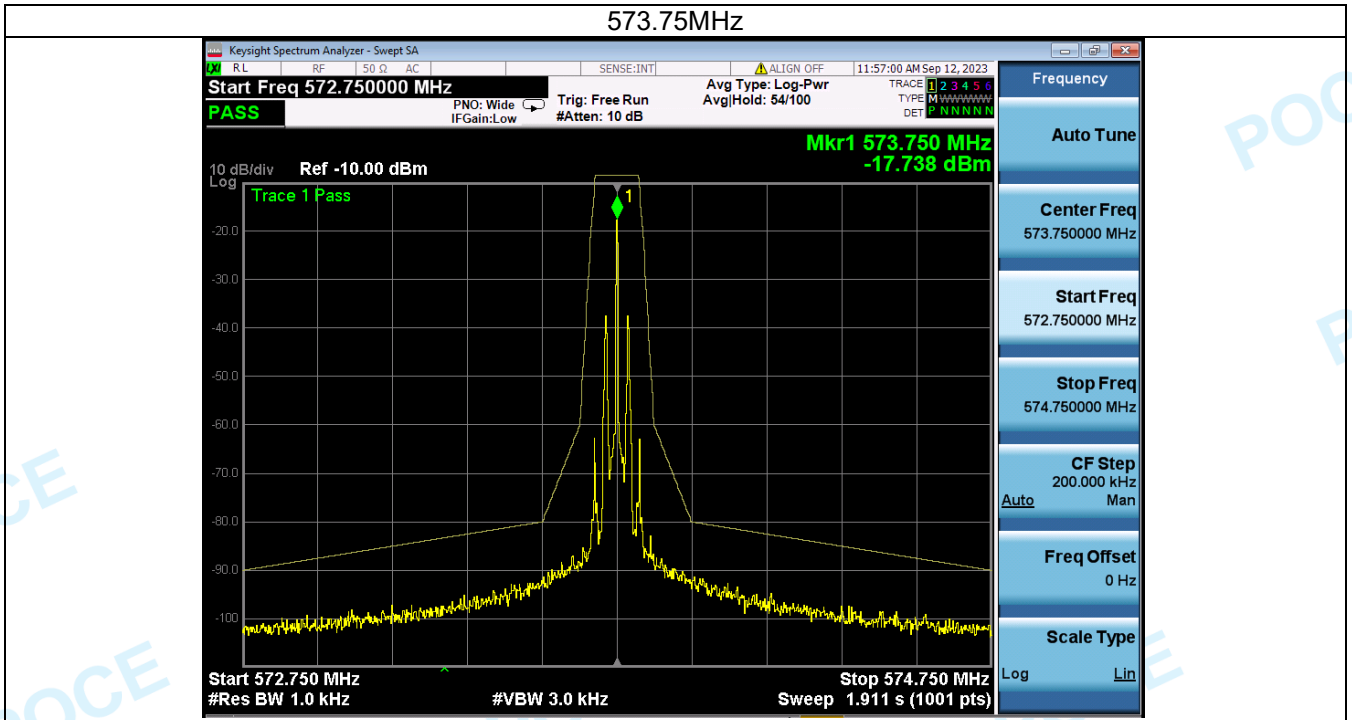
Operating Environment:					
Temperature:	23.7 °C	Humidity:	52.1 %	Atmospheric Pressure:	102 kPa
Pre test mode:	TM1				
Final test mode:	TM1				

4.4.2 Test Setup Diagram:



4.4.3 Test Data:





4.5 FREQUENCY STABILITY

Test Requirement:	FCC part 15.236(f)(3)
Test Limit:	± 50 ppm
Test Method:	ANSI C63.10: 2013
Procedure:	<ol style="list-style-type: none"> 1. Setup the configuration of the ambient temperature from -20°C to 50°C with sufficient time. And measure the different power of the EUT with an artificial power from highest to end point voltage. 2. Set frequency counter center frequency to the right frequency needs to be measured band.

4.5.1 E.U.T. Operation:

Operating Environment:					
Temperature:	23.7 °C	Humidity:	52.1 %	Atmospheric Pressure:	102 kPa
Pre test mode:	TM1				
Final test mode:	TM1				

4.5.2 Test Data:

Test frequency (MHz)	Test Conditions		Measure Frequency (MHz)	Frequency Error		Limit ppm	Result
	Voltage (V)	Temperature (°C)		(MHz)	ppm		
573.75	N	N	573.7568	0.0068	11.85	± 50 ppm	Pass
		L	573.7514	0.0014	2.44		
		H	573.7548	0.0048	8.37		
	L	N	573.7569	0.0069	12.03		
		L	573.7548	0.0048	8.37		
		H	573.7549	0.0049	8.54		
	H	N	573.7524	0.0024	4.18		
		L	573.7589	0.0089	15.51		
		H	573.7524	0.0024	4.18		

4.6 RADIATED EMISSION MEASUREMENT

Test Requirement:	FCC part 15.236(d)(2)&ETSI EN300422-1															
Test Limit:	<p style="text-align: center;">Table 3: Limits for spurious emissions</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th rowspan="2">State</th> <th colspan="3">Frequency</th> </tr> <tr> <th>47 MHz to 74 MHz 87.5 MHz to 137 MHz 174 MHz to 230 MHz 470 MHz to 862 MHz</th> <th>Other Frequencies below 1 000 MHz</th> <th>Frequencies above 1 000 MHz</th> </tr> </thead> <tbody> <tr> <td>Operation</td> <td>4 nW</td> <td>250 nW</td> <td>1 μW</td> </tr> <tr> <td>Standby</td> <td>2 nW</td> <td>2 nW</td> <td>20 nW</td> </tr> </tbody> </table>	State	Frequency			47 MHz to 74 MHz 87.5 MHz to 137 MHz 174 MHz to 230 MHz 470 MHz to 862 MHz	Other Frequencies below 1 000 MHz	Frequencies above 1 000 MHz	Operation	4 nW	250 nW	1 μW	Standby	2 nW	2 nW	20 nW
State	Frequency															
	47 MHz to 74 MHz 87.5 MHz to 137 MHz 174 MHz to 230 MHz 470 MHz to 862 MHz	Other Frequencies below 1 000 MHz	Frequencies above 1 000 MHz													
Operation	4 nW	250 nW	1 μW													
Standby	2 nW	2 nW	20 nW													
Test Method:	ANSI C63.10-2013, Section 6.4															
Procedure:	<p>1.The setup of EUT is according with per TIA/EIA Standard 603 and ANSI C63.4-2014 measurement procedure.</p> <p>2.The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.</p> <p>3.The frequency range up to tenth harmonic of the fundamental frequency was investigated.</p> <p>4.Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution.</p> <p>Spurious attenuation limit in dB = 43 + 10 Log₁₀ (power in Watts)</p>															

4.6.1 E.U.T. Operation:

Operating Environment:					
Temperature:	23.7 °C	Humidity:	52.1 %	Atmospheric Pressure:	102 kPa
Pre test mode:	TM1				
Final test mode:	TM1				

4.6.2 Test Data:

Between 9KHz – 30MHz

The emission from 9 kHz to 30MHz was pre-tested and found the result was 20dB lower than the limit, and according to 15.31(o) & RSS-Gen 6.13, the test result no need to reported.

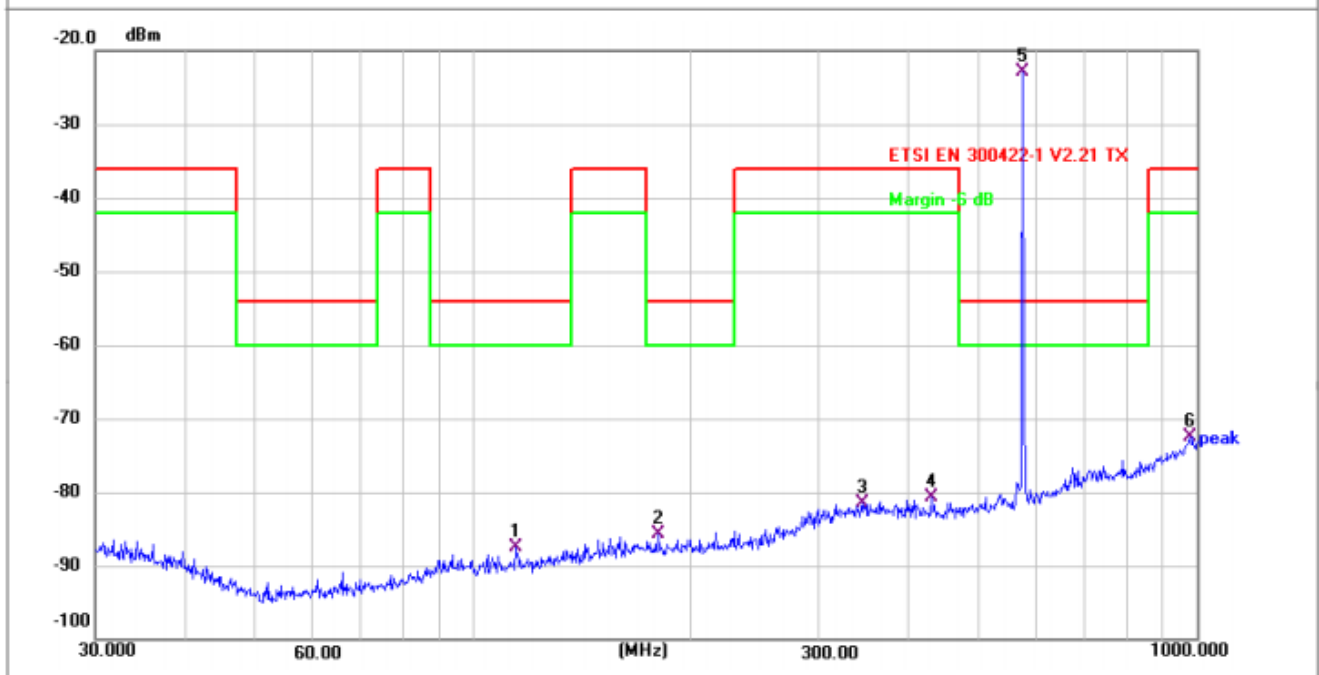
Between 30MHz – 1000MHz

TM1 / Polarization: Horizontal / Band: 2.4G / BW: 1 / CH: L



No.	Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	167.8243	-75.20	-3.37	-78.57	-36.00	-42.57	QP	149	24	P	
2	216.0240	-77.01	-2.68	-79.69	-54.00	-25.69	QP	149	245	P	
3	336.0352	-76.93	1.47	-75.46	-36.00	-39.46	QP	149	148	P	
4	406.0880	-73.73	1.35	-72.38	-36.00	-36.38	QP	149	354	P	
5 *	574.6258	-20.35	2.74	-17.61	-54.00	36.39	QP	149	58	P	Dominant wave
6	790.6188	-69.60	5.92	-63.68	-54.00	-9.68	QP	149	248	P	

TM1 / Polarization: Vertical / Band: 2.4G / BW: 1 / CH: L



No.	Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	114.5146	-82.51	-5.04	-87.55	-54.00	-33.55	QP	149	17	P	
2	180.0165	-82.58	-3.12	-85.70	-54.00	-31.70	QP	149	258	P	
3	344.3855	-82.19	0.68	-81.51	-36.00	-45.51	QP	149	269	P	
4	429.5228	-81.84	1.23	-80.61	-36.00	-44.61	QP	149	58	P	
5 *	574.6258	-26.76	3.90	-22.86	-54.00	31.14	QP	149	289	P	Dominant wave
6	979.1804	-82.38	9.87	-72.51	-36.00	-36.51	QP	149	358	P	

Remark: Over= Measurement Level - Limit
 Measurement Level=Test receiver reading + correction factor
 Correction Factor= Antenna Factor + Cable loss – Pre-amplifier

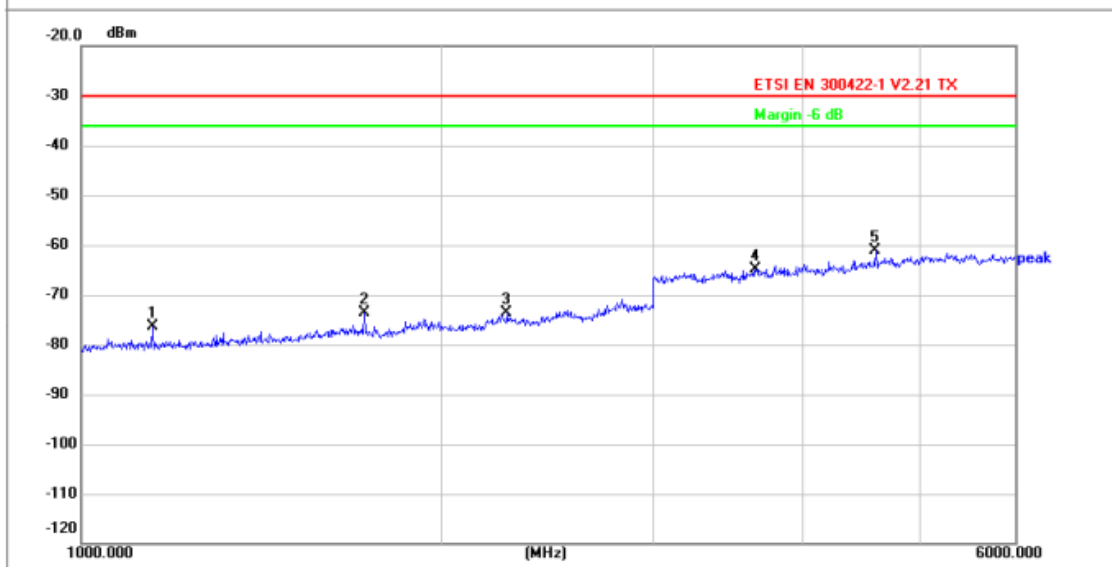
Above 1GHz

TM1 / Polarization: Horizontal / Band: 2.4G / BW: 1 / CH: L



No.	Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	1145.881	-53.55	-11.71	-65.26	-30.00	-35.26	peak	150	102	P	
2	1720.996	-55.07	-8.60	-63.67	-30.00	-33.67	peak	150	28	P	
3	2296.477	-62.38	-6.97	-69.35	-30.00	-39.35	peak	150	347	P	
4	3442.900	-58.00	-4.08	-62.08	-30.00	-32.08	peak	150	287	P	
5 *	4594.166	-55.15	-1.63	-56.78	-30.00	-26.78	peak	150	49	P	

TM1 / Polarization: Vertical / Band: 2.4G / BW: 1 / CH: L



No.	Frequency (MHz)	Reading (dBm)	Factor (dB)	Level (dBm)	Limit (dBm)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	1145.881	-63.89	-12.57	-76.46	-30.00	-46.46	peak	150	257	P	
2	1720.996	-63.13	-10.47	-73.60	-30.00	-43.60	peak	150	145	P	
3	2263.794	-65.14	-8.41	-73.55	-30.00	-43.55	peak	150	264	P	
4	3646.072	-60.97	-3.86	-64.83	-30.00	-34.83	peak	150	258	P	
5 *	4594.166	-60.05	-0.99	-61.04	-30.00	-31.04	peak	150	341	P	

Remark: Over= Measurement Level - Limit
 Measurement Level=Test receiver reading + correction factor
 Correction Factor= Antenna Factor + Cable loss – Pre-amplifier

5 TEST SETUP PHOTOS

Please refer to Setup Photo file

6 PHOTOS OF THE EUT

Please refer to external photos file and internal photos file

***** **End of Report** *****