

Test report No:
2640209R.702

FCC TEST REPORT

Product Name	DAS Gripper
Model and /or type reference	G401
Trademark	Genrobot.AI
FCC ID	2BX5WG401
Applicant's name / address	GENROBOT. AI CO.,LTD 109-1, 1st Floor, Building C, Zhongguancun Zhizao Street, No. 45 Chengfu Road, Haidian District, Beijing
Test method requested, standard	47 CFR FCC Part 15 (Section 15.247) ANSI C63.10: 2020
Verdict Summary	IN COMPLIANCE
Tested By (name / position & signature)	Reyn Chen / Supervisor 
Approved by (name / position & signature)	Well Wei / Manager 
Date of issue	2026-09-21
Report Version	V1.0
Report template No	Template_FCC Part 15C-RF-V1.0

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COMPETENCES AND GUARANTEES

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.

DEKRA is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.

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

Test Location	Room 101, 1/F., Building 7, Smart Science Park Phase 5. No. 8213, Fanhua Avenue, Economic and Technological Development Zone, Hefei, Anhui, China
Date(receive sample)	May. 09, 2026
Date (start test)	May. 29, 2026
Date (finish test)	Aug. 23, 2026

1. This report is only referred to the item that has undergone the test.
2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or Competent Authorities.
3. This document is only valid if complete; no partial reproduction can be made without previous written permission of DEKRA.
4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of DEKRA.

ENVIRONMENTAL CONDITIONS

The climatic conditions during the tests are within the limits specified by the manufacturer for the operation of the EUT and the test equipment. The climatic conditions during the tests were within the following limits:

Ambient temperature	15 °C – 35 °C
Relative Humidity air	30% - 60%

If explicitly required in the basic standard or applied product / product family standard the climatic values are recorded and documented separately in this test report.

POSSIBLE TEST CASE VERDICTS

Test case does not apply to test object	N/A
Test object does meet requirement	P (Pass) / PASS
Test object does not meet requirement	F (Fail) / FAIL
Not measured	N/M

ABBREVIATIONS

For the purposes of the present document, the following abbreviations apply:

EUT	: Equipment Under Test
QP	: Quasi-Peak
CAV	: CISPR Average
AV	: Average
CDN	: Coupling Decoupling Network
SAC	: Semi-Anechoic Chamber
OATS	: Open Area Test Site
BW	: Bandwidth
AM	: Amplitude Modulation
PM	: Pulse Modulation
HCP	: Horizontal Coupling Plane
VCP	: Vertical Coupling Plane
U_N	: Nominal voltage
T_x	: Transmitter
R_x	: Receiver
N/A	: Not Applicable
N/M	: Not Measured

DOCUMENT HISTORY

Report No.	Version	Description	Issued Date
2640209R.702	V1.0	Initial issue of report.	2026-09-21

REMARKS AND COMMENTS

1. The equipment under test (EUT) does meet the essential requirements of the stated standard(s)/test(s).
2. These test results on a sample of the device are for the purpose of demonstrating Compliance with 47 CFR FCC Part 15 (Section 15.247).
3. The measurement result is considered in conformance with the requirement if it is within the prescribed limit, It is not necessary to account the uncertainty associated with the measurement result.
4. The test results presented in this report relate only to the object tested.
5. The test report shall not be reproduced without the written approval of DEKRA Testing and Certification (Suzhou) Co., Ltd.
6. This report will not be used for social proof function in China market.
7. DEKRA declines any responsibility with the following test data provided by customer that may affect the validity of result:
 - Chapter 1.1 General Description of the Item(s);
 - Chapter 1.2 Channel List;

USED EQUIPMENT

Conducted Test/ SR103

Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date	Firmware Version	Software Version
Constant temperature and humidity chamber	Chuang Cexing	CCX-KS80DH	0005037	2026.05.11	2027.05.10	N/A	N/A
Wideband Radio Communication Tester	R&S	CMW 500	163864	2026.05.08	2027.05.07	V 4.0.60	N/A
MAX Signal Analyzer	Keysight	N9020A	MY56060147	2025.06.20	2026.06.19	A.17.55	N/A
MAX Signal Analyzer	Keysight	N9020A	MY56060147	2026.06.17	2027.06.16	A.17.55	N/A
RF Control Unit	Tonscend	JS0806-2	806JS2X02 1710251017	2025.06.29	2026.06.28	N/A	N/A
RF Control Unit	Tonscend	JS0806-2	806JS2X02 1710251017	2026.06.23	2027.06.22	N/A	N/A
Test Software	Tonscend	TS1120	JS1120-3	N/A	N/A	N/A	V3.6.21
Temperature/Humidity Meter	RITERS	RTS-8S	034	2025.08.25	2026.08.24	N/A	N/A

Radiated Emission(9KHz-1GHz) / AC102

Instrument	Manufacturer	Model No.	Serial No.	Cal. Date	Next Cal. Date	Firmware Versiom	Software version
Bilog Antenna	TESEQ	CBL6112D	57867	2025.10.27	2026.10.26	N/A	N/A
Loop Antenna	R&S	HFH2-Z2E	101181	2025.10.24	2026.10.23	N/A	N/A
EMI test receiver	R&S	ESR7	102753	2026.05.07	2027.05.06	V3.66SP1	
Temperature/ Humidity Meter	RTS-8S	RTS-8S	013	2025.08.29	2026.08.28	N/A	N/A
Temperature/ Humidity Meter	RTS-8S	RTS-8S	015	2025.08.25	2026.08.24	N/A	N/A
Test Software	TS+	TS Testing System	N/A	N/A	N/A	N/A	V1.0

Radiated Emission (1GHz-40GHz) / AC103

Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date	Firmware Version	Software Version
MAX Signal Analyzer	Keysight	N9020B	MY63490118	2025.08.08	2026.08.07	A35.06	N/A
MAX Signal Analyzer	Keysight	N9020B	MY63490118	2026.08.02	2027.08.01	A35.06	N/A
Horn Antenna	RF SPIN	DRH18-E	KV2D11A18ES	2025.10.19	2026.10.18	N/A	N/A
Low Noise Amplifier	Tonscend	TAP01018048S	AP23J8060307	2025.10.17	2026.10.16	N/A	N/A
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	01312	2025.10.18	2026.10.17	N/A	N/A
Low Noise Amplifier	ESE	LNA1840	LNA23070301	2025.10.17	2026.10.16	N/A	N/A
Temperature/Humidity Meter	RITERS	RTS-8S	029	2025.08.25	2026.08.24	N/A	N/A
Temperature/Humidity Meter	RITERS	RTS-8S	010	2025.08.25	2026.08.24	N/A	N/A
Test Software	Tonscend	J536	JS36-RSE	N/A	N/A	N/A	5.0.0

AC Power Line Conducted Emission / SR104

Equipment	Manufacturer	Model No.	Inventory No.	Cal Date	Cal Due Date	Firmware Version	Software Version
V-network	R&S	ENV216	101516	2026.05.10	2027.05.09	N/A	N/A
EMI test receiver	R&S	ESR3	103140	2026.05.08	2027.05.07	N/A	N/A
V-LISN	R&S	ENV4200	100748	2026.05.10	2027.05.09	N/A	N/A
cable	R&S	N/A	213	2026.05.10	2027.05.09	N/A	N/A
Dekra test software	Dekra	N/A	N/A	N/A	N/A	N/A	3

UNCERTAINTY

Uncertainties have been calculated according to the DEKRA internal document. The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95%.

Test item	Uncertainty
AC Power Line Conducted Emission	9kHz~150kHz: 2.8 dB 150kHz~30MHz: 2.4 dB
Power Output	± 1.3 dB
Radiated Emission(30MHz~1GHz)	Horizontal: 30MHz~300MHz: 3.5 dB, 300MHz~1GHz: 3.6 dB Vertical: 30MHz~300MHz: 3.6 dB, 300MHz~1GHz: 3.5 dB
Radiated Emission(1GHz~40GHz)	Horizontal: 1GHz~40GHz: 5.0 dB Vertical: 1GHz~40GHz: 4.8 dB
RF antenna conducted test	± 1.3 dB
Radiated Emission Band Edge	± 3.9 dB
DTS Bandwidth	± 1.0 kHz
Occupied Bandwidth	± 1.0 kHz
Power Density	± 1.3 dB

1 GENERAL INFORMATION

1.1 General Description of the Item(s)

Product Name:	DAS Gripper	
Model Name:	G401	
Trademark.:	Genrobot.AI	
FCC ID:	2BX5WG401	
Power Supply:	3.6V Battery	
Hardware Version:	V4.0	
Software Version:	0.0.55	
Manufacturer:	GENROBOT. AI CO.,LTD	
Manufacturer Address:	109-1, 1st Floor, Building C, Zhongguancun Zhizao Street, No. 45 Chengfu Road, Haidian District, Beijing	
Test Matrix/ IMEI:	RF Conducted	#1
	RSE	#2
Wireless specification:	SRD	
Operating frequency range(s):	902-928MHz	
Type of Modulation :	GFSK	
Smart System:	☒	SISO
	☐	MIMO-CDD
	☐	MIMO-Beamforming
Antenna Type:	FPC Antenna	
Antenna Gain:	1.20dBi	

Remark:

As above information is provided and confirmed by the applicant. DEKRA is not liable to the accuracy, suitability, reliability or/and integrity of the information.

1.2 Channel List

Working Frequency of Each Channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	903 MHz	2	915 MHz	3	927 MHz	--	--

Note: The General Description of the Item, Channel List in clause 1 are provided and confirmed by the client.

2 DESCRIPTION OF TEST SETUP

2.1 Auxiliary equipment /Accessories/Test software for the EUT

Auxiliary equipment	Type / Version	Manufacturer	Supplied by
(1) Notebook	Think pad x220	Lenovo	Adapter
(2) USB Control Cable	N/A	N/A	N/A
(3) USB Control Cable	N/A	N/A	N/A
software	Type / Version		
MobaXterm	N/A		

Accessories Information	Cable		
	Length used during test [m]	Attached during test	Shielded
(2)USB Control Cable	1	☒	☒
(3)USB Control Cable	8	☒	☒

2.2 Power setting in test

Mode	Channel	Frequency (MHz)	Power setting
SRD	1	903	default
	2	915	default
	3	928	default

3 VERDICT SUMMARY SECTION

This chapter presents an overview of standards and results. Refer to the next chapters for details of measured test results and applied test levels.

3.1 Standards

Standard	Year	Description
FCC CFR Title 47 Part 15 Subpart C Section 15.247	2024	Operation within the bands 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz.
ANSI C63.10	2020	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
KDB 558074 D01V05r02	2019	Guidance for performing compliance measurements on Digital Transmission System (DTS) operating under section 15.247

3.2 Deviation(s) from the Standard(s) / Test Specification(s)

The following deviation(s) was / were made from the published requirements of the listed standards: N/A.

(Please define the deviations from the standard(s) if applicable)

3.3 Overview of results

Requirement – Test Item of FCC	Standard(s)	Verdict	Remark
DTS Bandwidth	FCC 15.247(a)(2)	PASS	Test data please refer to Appendix A
Maximum conducted output power	15.247 (b)(3)	PASS	Test data please refer to Appendix B
Maximum power spectral density	FCC 15.247(e)	PASS	Test data please refer to Appendix C
Band edge measurements	FCC 15.247(d) FCC 15.205 FCC 15.209	N/A	See Note2
Conducted Spurious Emission	FCC 15.247(d), FCC 15.209	PASS	Test data please refer to Appendix D
Duty cycle	ANSI C63.10:2020	PASS	Test data please refer to Appendix E
Emissions in Restricted Bands	FCC 15.205 FCC 15.209	PASS	Test data please refer to Appendix F
AC Power Line Conducted Emission	FCC 15.207	PASS	Test data please refer to Appendix G
Antenna Requirement	FCC 15.203	PASS	---
Note1: The radiation measurement is pre tested under X, Y, and Z axis positioning to find the worst placement for final testing. Note2: No restricted band in the range ± 2 channel bandwidths of the Band-edges of the specified emission band. (608 MHz – 614 MHz and 960 MHz – 1240 MHz).			

3.4 Test Facility

Tset Location : FCC Designation Number: CN1321

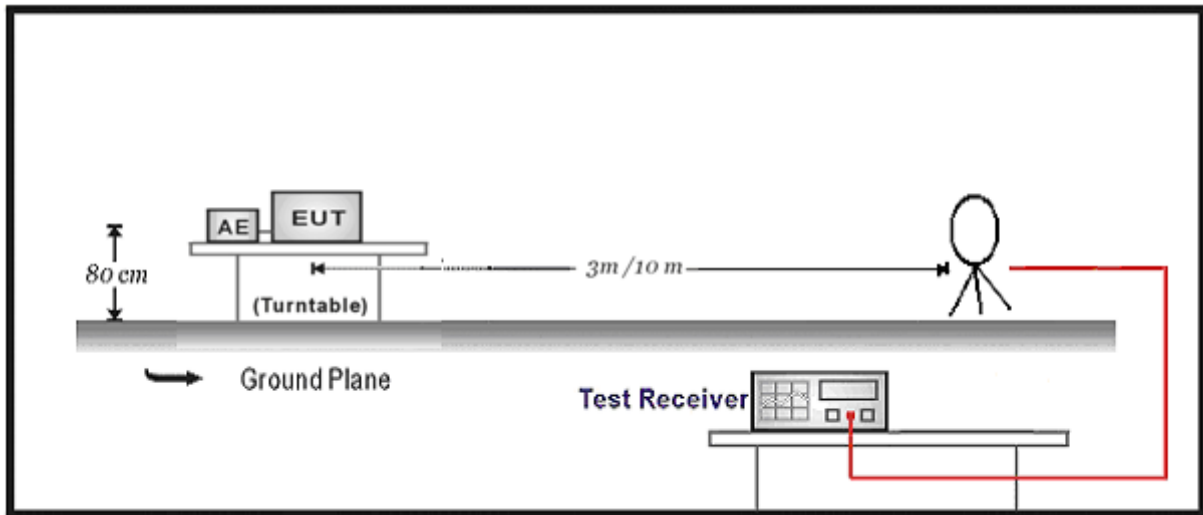
4 TEST ITEMS OF LIMIT/SETUP/PROCEDURE

4.1 Emissions in restricted frequency bands			VERDICT: PASS
4.1.1 Limit			
Standard		FCC Part 15 Subpart C Paragraph 15.205; 15.209.	
Restricted Bands of operation for FCC			
Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (GHz)
0.090 – 0.110	16.42 – 16.423	399.9 – 410	4.5 – 5.15
0.495 – 0.505	16.69475 –16.69525	608 – 614	5.35 – 5.46
2.1735 – 2.1905	16.80425 – 16.80475	960 – 1240	7.25 – 7.75
4.125 – 4.128	25.5 – 25.67	1300 – 1427	8.025 – 8.5
4.17725 – 4.17775	37.5 – 38.25	1435 – 1626.5	9.0 – 9.2
4.20725 – 4.20775	73 – 74.6	1645.5 – 1646.5	9.3 – 9.5
6.215 – 6.218	74.8 – 75.2	1660 – 1710	10.6 – 12.7
6.26775 – 6.26825	108 – 121.94	1718.8 – 1722.2	13.25 – 13.4
6.31175 – 6.31225	123 – 138	2200 – 2300	14.47 – 14.5
8.291 – 8.294	149.9 – 150.05	2310 – 2390	15.35 – 16.2
8.362 – 8.366	156.52475 – 156.52525	2483.5 – 2500	17.7 – 21.4
8.37625 – 8.38675	156.7 – 156.9	2690 – 2900	22.01 – 23.12
8.81425 – 8.81475	162.0125 – 167.17	3260 – 3267	23.6 – 24.0
12.29 – 12.293	167.72 – 173.2	3332 – 3339	31.2 – 31.8
12.51975–12.52025	240 – 285	3345.8 – 3358	36.43 – 36.5
12.57675–12.57725	322 – 335.4	3600 – 4400	Above 38.6
13.36 – 13.41	--	--	--
Restricted Band Emissions Limit			
Frequency (MHz)	Field strength (µV/m)	Field strength (dBµV/m)	Measurement distance (m)
0.009 - 0.49	2400/F(kHz)	48.5 – 13.8	300 _(Note 1)
0.49 - 1.705	24000/F(kHz)	33.8 - 23	30 _(Note 1)
1.705 - 30	30	29.5	30 _(Note 1)
30 - 88	100	40	3 _(Note 2)
88 - 216	150	43.5	3 _(Note 2)
216 - 960	200	46	3 _(Note 2)
Above 960	500	54	3 _(Note 2)
Note 1: At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed below 30 MHz, when performing measurements at a closer distance than specified, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade).			
Note 2: At frequencies at or above 30 MHz, measurements may be performed at a distance other than what is specified provided: measurements are not made in the near field except where it can be shown that near field			

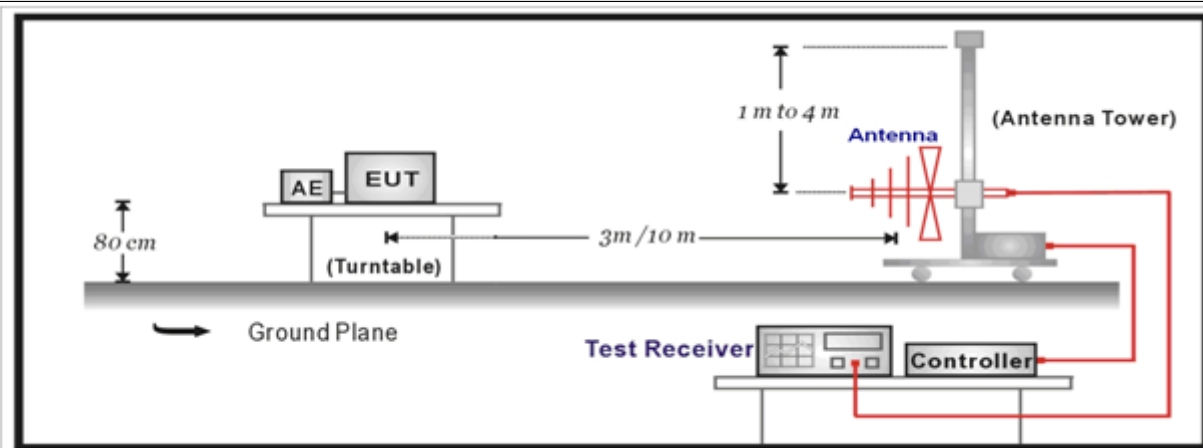
measurements are appropriate due to the characteristics of the device; and it can be demonstrated that the signal levels needed to be measured at the distance employed can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 meters unless it can be further demonstrated that measurements at a distance of 30 meters or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse linear-distance for field strength measurements; inverse-linear-distance-squared for power density measurements).

4.1.2 Test Setup

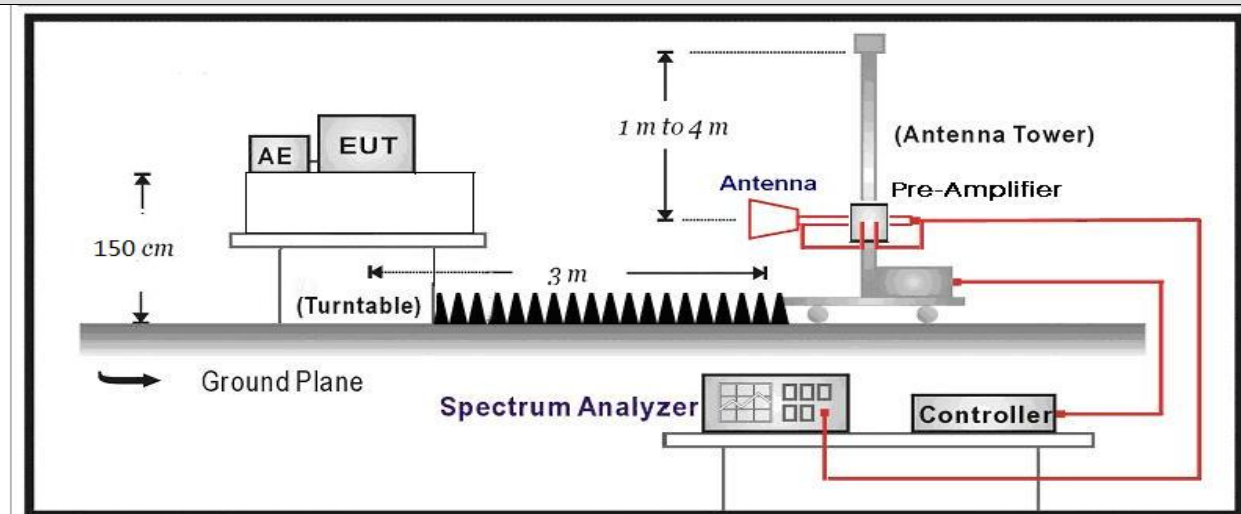
Below 30MHz Test Setup:



30MHz-1GHz Test Setup:



Above 1GHz Test Setup:



4.1.3 Test Procedure

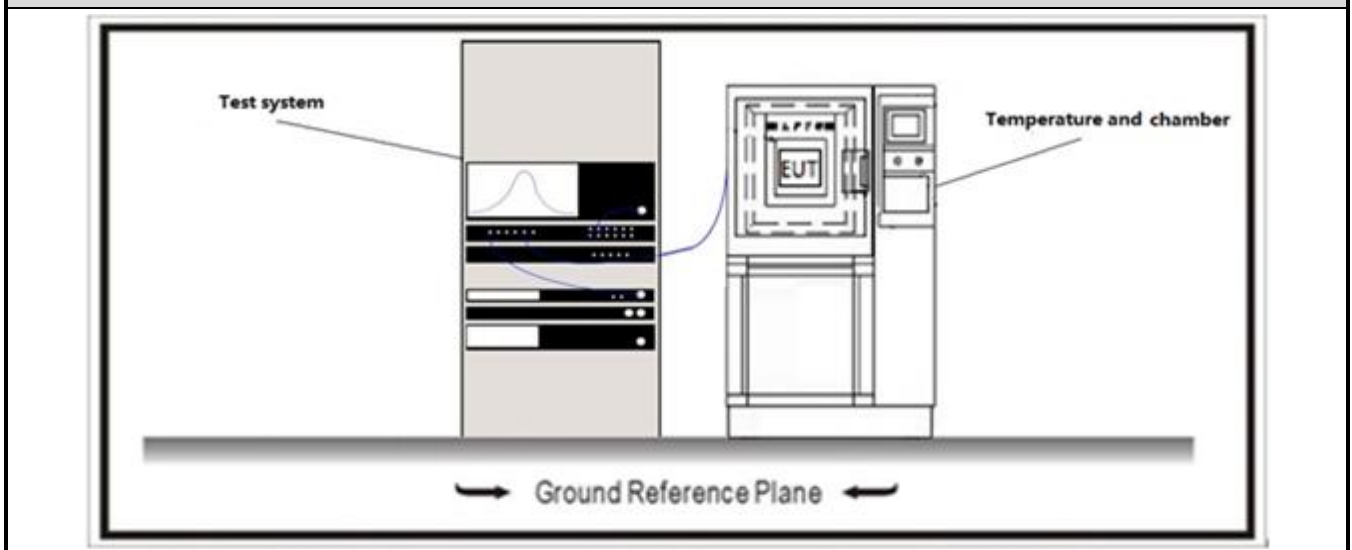
	References Rule		Chapter	Description
☒	ANSI C63.10		11.12	Emissions in restricted frequency bands
	☒	ANSI C63.10	11.12.1	Radiated emission measurements
	☒	ANSI C63.10	6.3	Radiated spurious emission test
	☒	ANSI C63.10	6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
	☒	ANSI C63.10	6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
	☒	ANSI C63.10	6.6	Radiated emissions from unlicensed wireless devices above 1 GHz
	☐	ANSI C63.10	11.12.2	Antenna-port conducted measurements
	☐	ANSI C63.10	11.12.2.3	Quasi-peak measurement procedure
	☐	ANSI C63.10	11.12.2.4	Peak power measurement procedure
	☐	ANSI C63.10	11.12.2.5	Average power measurement procedures
	☐	ANSI C63.10	11.12.2.5.1	Trace averaging with continuous EUT transmission at full power
	☐	ANSI C63.10	11.12.2.5.2	Trace averaging across ON and OFF times of the EUT transmissions followed by duty cycle correction
	☐	ANSI C63.10	11.12.2.5.3	Reduced VBW averaging across ON and OFF times of the EUT transmissions with max hold

4.2 Emissions in non-restricted frequency band**VERDICT: PASS****4.2.1 Limit**

Standard	FCC Part 15 Subpart C Paragraph 15.247(d).
RF Output power (Detection methods)	Limit(dB)
RF Output power(Average detector)	30dBc(Note1)
RF Output power(PK detector)	20dBc(Note2)

Note 1: If maximum conducted (average) output power was used to demonstrate compliance as described in 9.2, then the peak power in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum in-band peak PSD level in 100 kHz (i.e., 30 dBc).

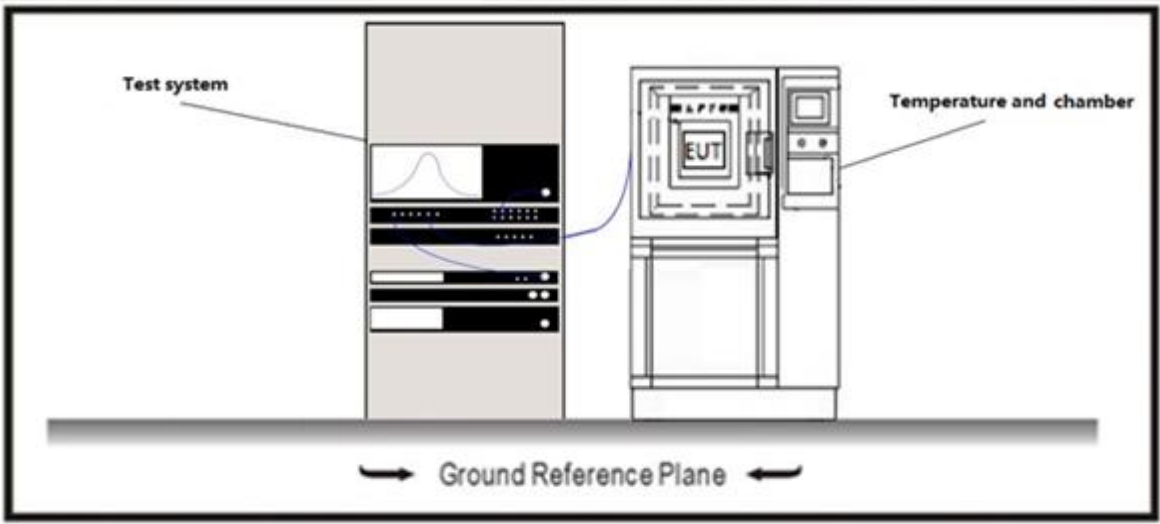
Note 2: If the maximum peak conducted output power procedure was used, then the peak output power measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz (i.e., 20 dBc).

4.2.2 Test Setup**4.2.3 Test Procedure**

References Rule	Chapter	Description
☒ ANSI C63.10	11.11	Emissions in non-restricted frequency bands
☒ ANSI C63.10	11.11.1	General
☒ ANSI C63.10	11.11.2	Reference level measurement
☒ ANSI C63.10	11.11.3	Emission level measurement

4.3 Duty cycle	VERDICT: PASS
----------------	---------------

4.3.1 Limit
N/A

4.3.2 Test Setup


4.3.3 Test Procedure			
References Rule		Chapter	Description
☒	ANSI C63.10	11.6	Duty cycle (D), transmission duration (T), and maximum power control level

4.4 Radiated Emission Band Edge

VERDICT: N/A

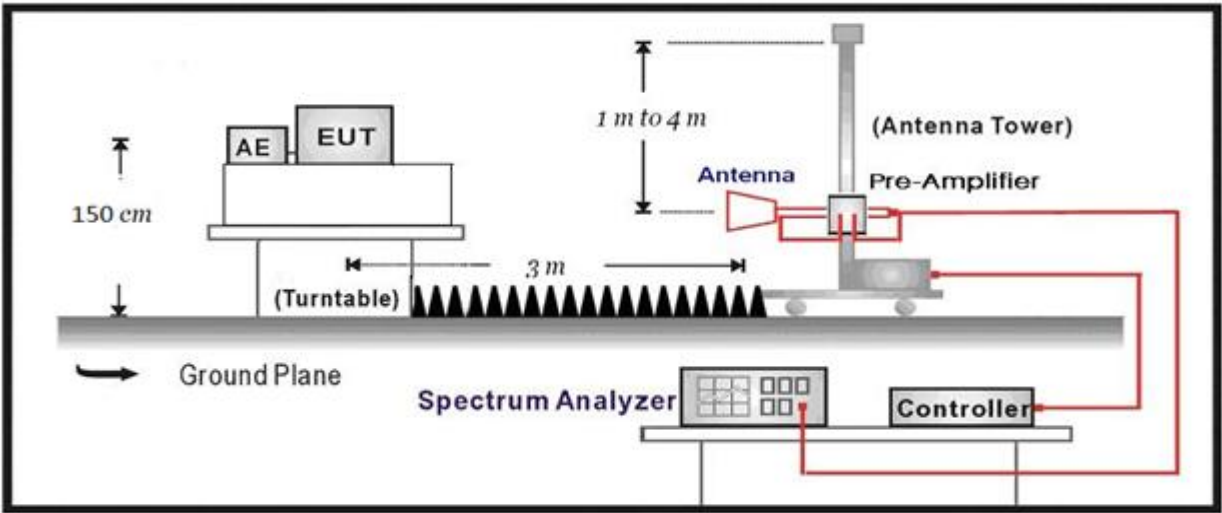
4.4.1 Limit

Standard		FCC Part 15 Subpart C Paragraph 15.247(d) , 15.205, 15.209		
Frequency bands (MHz)	Detector	Limit (dBμV/m)	RBW (MHz)	Distance (m)
2310-2390 2483.5-2500	PK	74	1	3
	AV	54	1	3

Note: The field strength of emissions appearing within these frequency bands shall not exceed the limits.

4.4.2 Test Setup

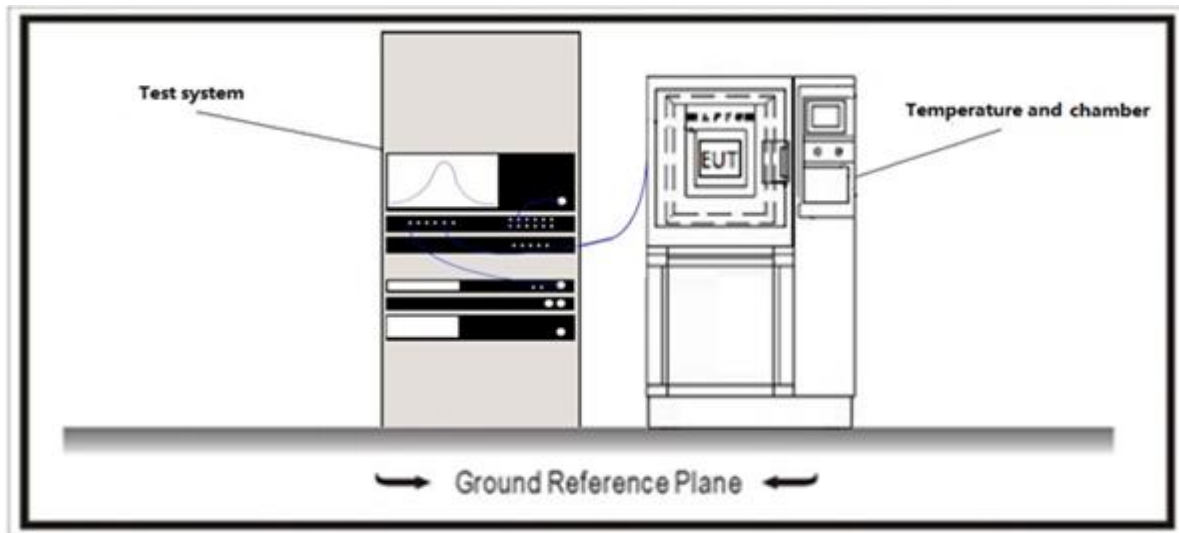
Above 1GHz Test Setup:



4.4.3 Test Procedure			
	References Rule	Chapter	Description
☒	ANSI C63.10	6.10	Band-edge testing
	☒ ANSI C63.10	6.10.5	Restricted-band band-edge measurements
	☐ ANSI C63.10	6.10.6	Marker-delta method
☒	ANSI C63.10	11.12	Emissions in restricted frequency bands
	☒ ANSI C63.10	11.12.1	Radiated emission measurements
	☒ ANSI C63.10	6.3	Radiated spurious emission test
☐	ANSI C63.10	6.4	Radiated emissions from unlicensed wireless devices below 30 MHz
☐	ANSI C63.10	6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz
☒	ANSI C63.10	6.6	Radiated emissions from unlicensed wireless devices above 1 GHz

4.5 DTS Bandwidth**VERDICT: PASS****4.5.1 Limit**

Standard	FCC Part 15 Subpart C Paragraph 15.247 (a)(2)
Systems using digital modulation techniques operate in the 2400-2483.5 MHz. The minimum 6 dB bandwidth shall be at least 500 kHz	
Standard	ANSI C63.10 Paragraph 6.7
The occupied bandwidth or the "99% emission bandwidth" is defined as the frequency range between two points, one above and the other below the carrier frequency, within which 99% of the total transmitted power of the fundamental transmitted emission is contained. The occupied bandwidth shall be reported for all equipment in addition to the specified bandwidth required in the applicable RSSs. The occupied bandwidth should be within the required frequency range.	

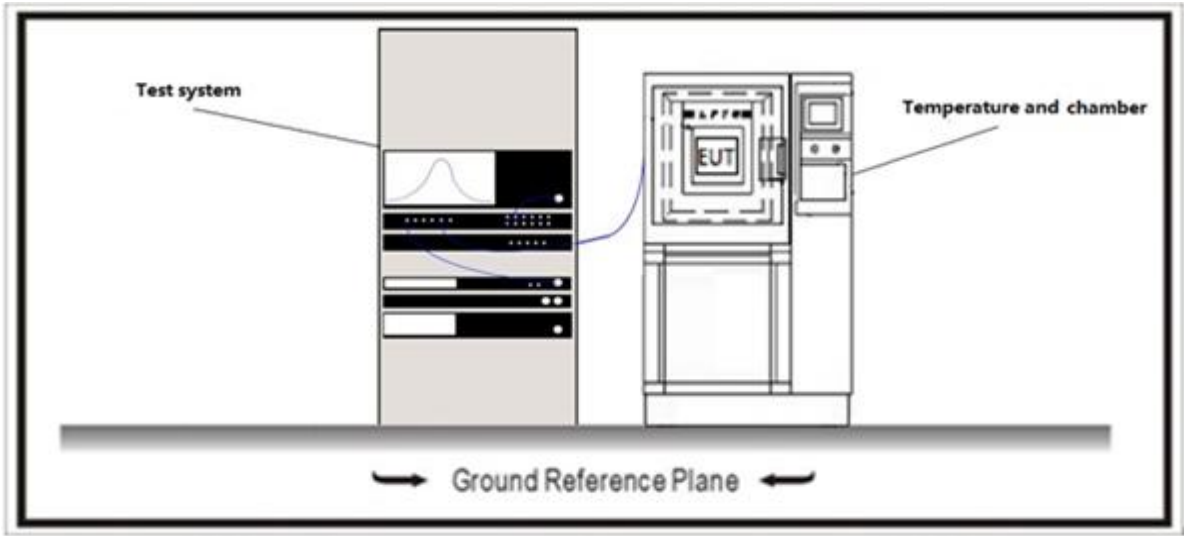
4.5.2 Test Setup**4.5.3 Test Procedure**

	Reference Rule	Chapter	Description
☒	ANSI C63.10	11.8	DTS bandwidth
☐	ANSI C63.10	11.8.1	Option 1
☒	ANSI C63.10	11.8.2	Option 2
☒	ANSI C63.10	6.9	Occupied bandwidth
☐	ANSI C63.10	6.9.2	relative measurement procedure
☒	ANSI C63.10	6.9.3	power bandwidth (99%) measurement procedure

4.6 Fundamental emission output power VERDICT: PASS

4.6.1 Limit			
Standard		FCC Part 15 Subpart C Paragraph 15.247 (b)(3)	
☐	GTX <6dBi		Pout≤30dBm
☒	GTX >6dBi		
	☒	Non-Fix point-point	Pout≤30-(GTX -6)
	☐	Fix point-point	Pout≤30-[(GTX-6)]/3
	☐	Point-to-multipoint	Pout≤30-(GTX-6)
	☐	Overlap Beams	Pout≤30-[(GTX-6)]/3
	☐	Avgregate power transmitted simultaneously on all beams	Pout≤30-[(GTX-6)]/3
	☐	single directional beam	Pout≤30-[(GTX-6)]/3+8dB
Note 1 : GTX directional gain of transmitting antennas.			
Note 2 : Pout is maximum conducted output power .			

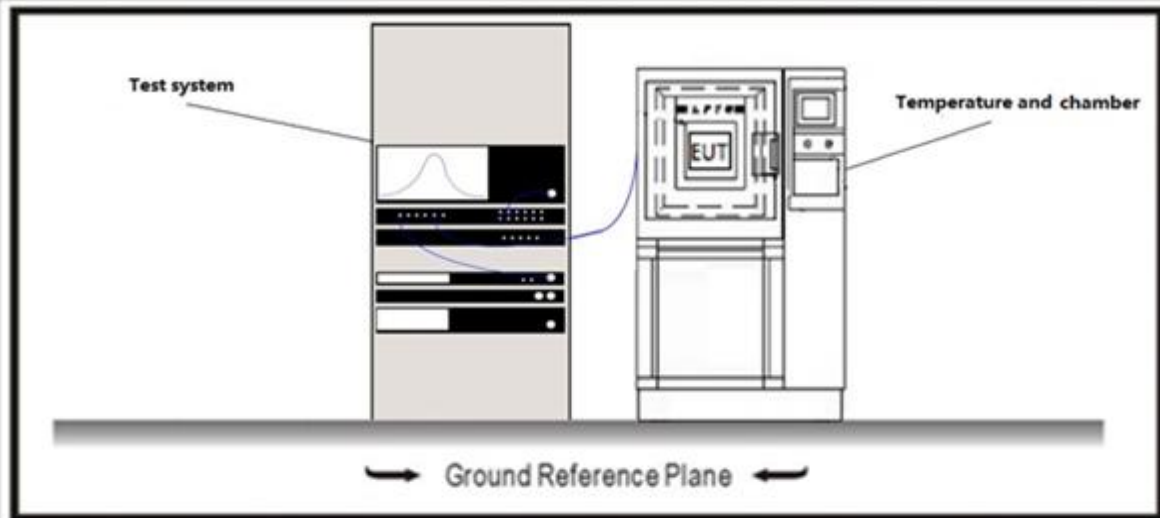
4.6.2 Test Setup



4.6.3 Test Procedure				
	References Rule		Chapter	Description
☒	ANSI C63.10		11.9	Fundamental emission output power
	☒	ANSI C63.10		Maximum peak conducted output power
	☐	☐	ANSI C63.10	11.9.1.1 RBW $\geq$ DTS bandwidth
		☐	ANSI C63.10	11.9.1.2 Integrated band power method
		☒	ANSI C63.10	11.9.1.3 PKPM1 Peak power meter method
	☒	ANSI C63.10		Maximum conducted (average) output power
	☐	☐	ANSI C63.10	11.9.2.2 Measurement using a spectrum analyzer (SA)
		☐	ANSI C63.10	11.9.2.2.2 Method AVGSA-1(Duty cycle $\geq$ 98%)
		☐	ANSI C63.10	11.9.2.2.3 Method AVGSA-1A(Duty cycle $\geq$ 98%)
		☐	ANSI C63.10	11.9.2.2.4 Method AVGSA-2(Duty cycle $\leq$ 98%)
		☐	ANSI C63.10	11.9.2.2.5 Method AVGSA-2A(Duty cycle $\leq$ 98%)
		☐	ANSI C63.10	11.9.2.2.4 Method AVGSA-3
		☐	ANSI C63.10	11.9.2.2.5 Method AVGSA-3A
		☒	ANSI C63.10	11.9.2.3 Measurement using a power meter (PM)
		☒	ANSI C63.10	11.9.2.3.1 Method AVGPM
		☐	ANSI C63.10	11.9.2.3.2 Method AVGPM-G

4.7 Power Density	VERDICT: PASS
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4.7.1 Limit:	
Standard	FCC Part 15 Subpart C Paragraph 15.247 (e)
Power Spectral Density≤8dBm/3kHz	

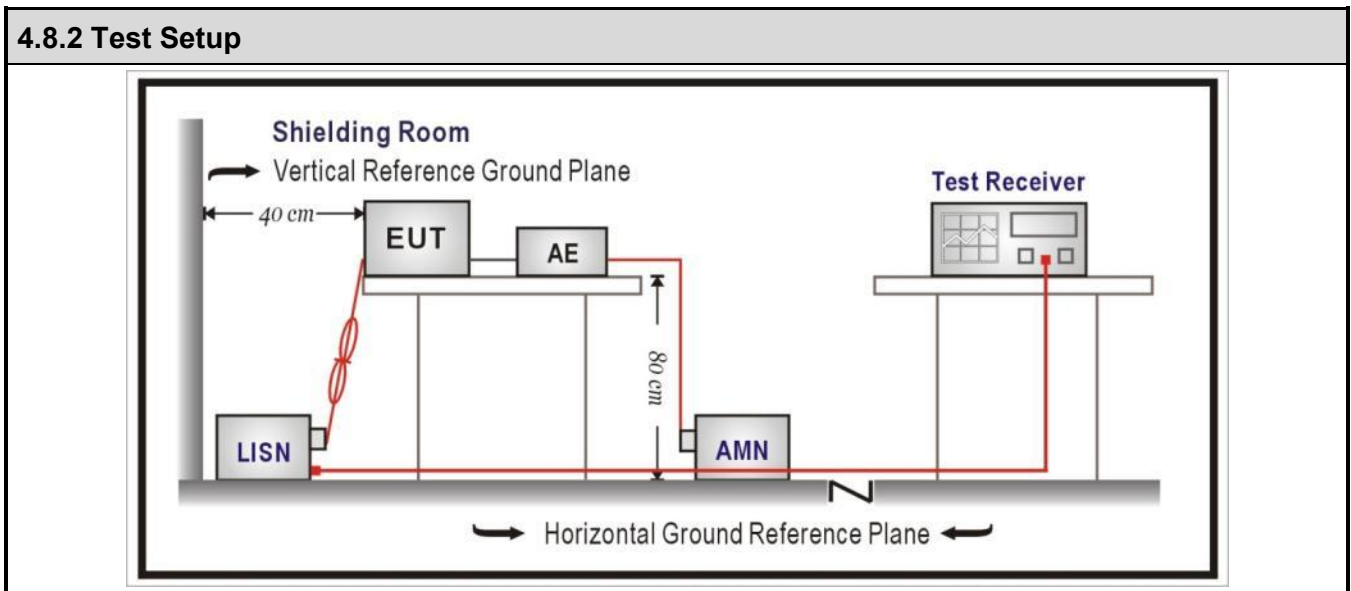
4.7.2 Test Setup
 The diagram illustrates the test setup. On the left, a 'Test system' is shown with a screen displaying a spectral plot. A cable connects it to a 'Temperature and chamber' on the right, which contains the 'EUT' (Equipment Under Test). Below both units is a 'Ground Reference Plane' indicated by a double-headed arrow.

4.7.3 Test Procedure			
	References Rule		Chapter
			Description
☒	ANSI C63.10		11.10
	☒	ANSI C63.10	11.10.2
	☐	ANSI C63.10	11.10.3
	☐	ANSI C63.10	11.10.4
	☐	ANSI C63.10	11.10.5
	☐	ANSI C63.10	11.10.6
	☐	ANSI C63.10	11.10.7
	☐	ANSI C63.10	11.10.8

4.8 AC Power Line Conducted Emission	VERDICT: PASS
---	----------------------

4.8.1 Limit		
Standard	FCC Part 15 Subpart C Paragraph 15.207 ;	
Frequency range [MHz]	Limit: QP [dB(μV) ¹⁾	Limit: AV [dB(μV) ¹⁾
0,15 - 0,50	66 – 56 ²⁾	56 - 46 ²⁾
0,50 - 5,0	56	46
5,0 - 30	60	50

¹⁾ At the transition frequency, the lower limit applies.
²⁾ The limit decreases linearly with the logarithm of the frequency.
NOTE 1: The exclusion band for transmitters shall be considered for transmitters operating at frequencies below 30 MHz.
NOTE 2: Where the AC output port is directly connected (or via a circuit breaker) to the AC power input port of the EUT the AC power output port need not to be tested.



4.8.3 Test Procedure			
	References Rule	Chapter	Item
☒	ANSI C63.10	6.2	Standard test method for ac power-line conducted emissions from unlicensed wireless devices

4.9 Antenna Requirement**VERDICT: PASS****4.9.1 Limit:****Standard**

FCC Part 15 Subpart C Paragraph 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. 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. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, §15.213, §15.217, §15.219, or §15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

4.9.2 Antenna Connector Construction:

The use of a permanently attached antenna



The antenna use of a unique coupling to the intentional radiator



The use of a nonstandard antenna jack or electrical connector

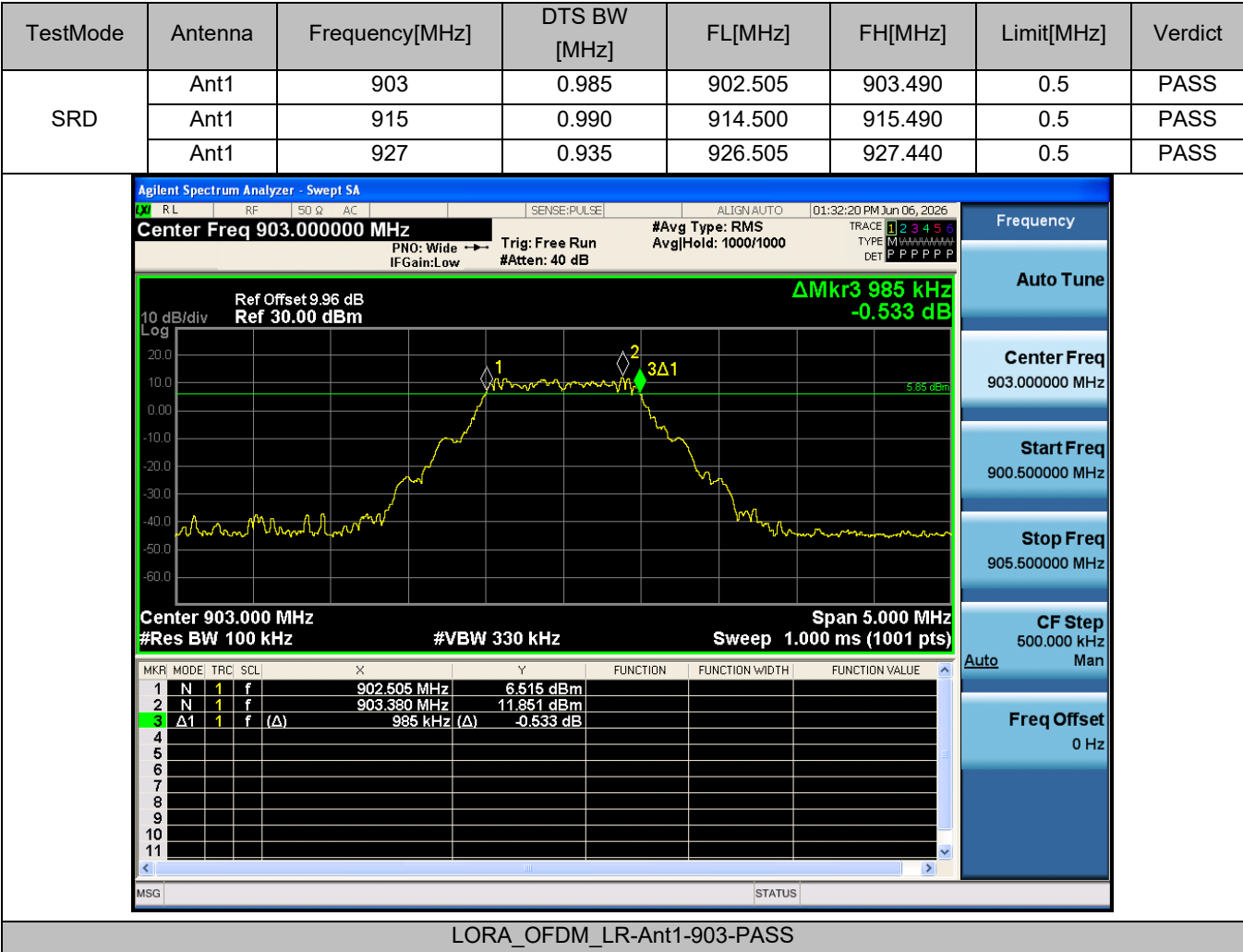
Please refer to the attached document "Internal Photograph" to show the antenna connector.

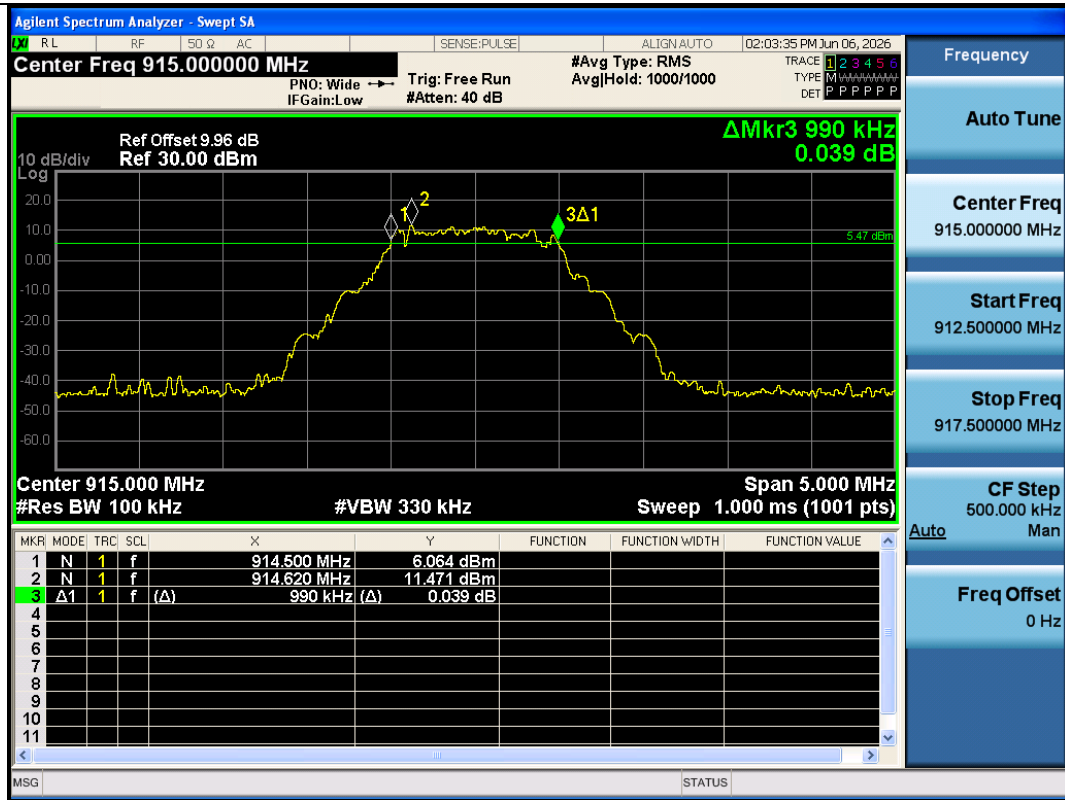
5 TEST SETUP PHOTO AND EUT PHOTO

Remark: The test setup photo and EUT Photo please see appendix.

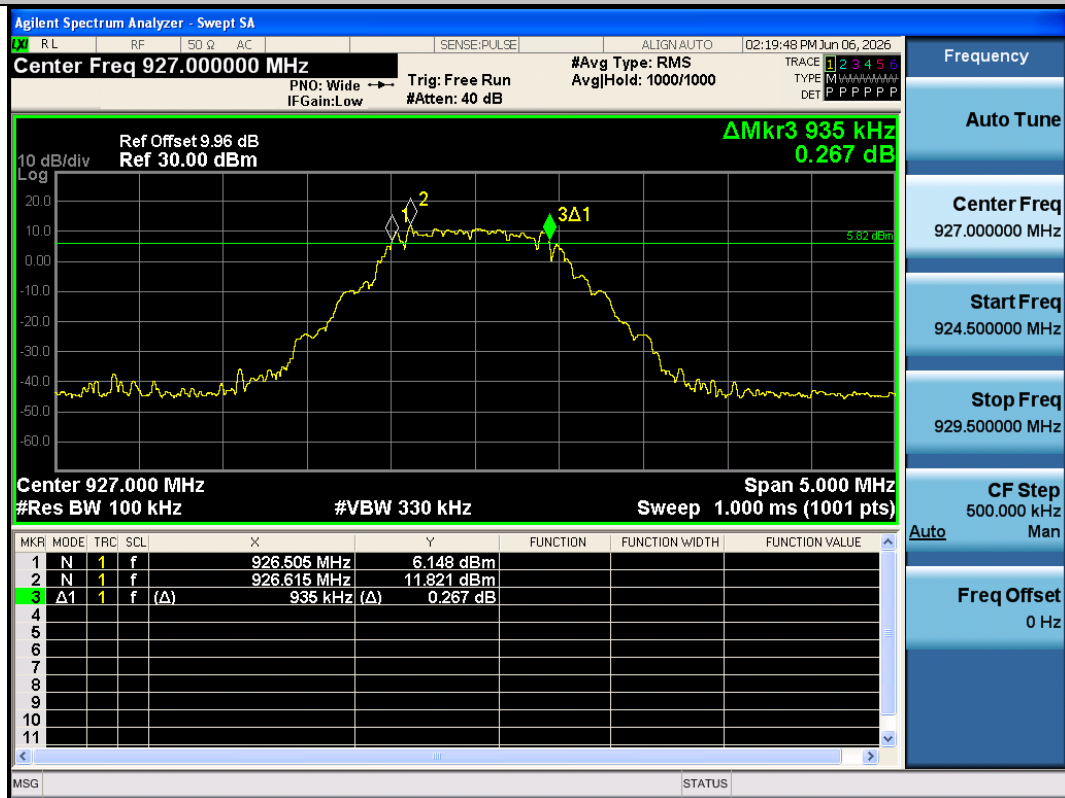
6 TEST RESULT

Appendix A: DTS Bandwidth





LORA_OFDM_LR-Ant1-915-PASS



LORA_OFDM_LR-Ant1-927-PASS

Appendix B: Maximum conducted output power

Mode	Channel	Test Frequency (MHz)	Conducted Power(dBm)	Limit(dBm)	Result
SRD	1	903	6.83	≤30	Pass
	2	915	6.53	≤30	Pass
	3	927	6.19	≤30	Pass

Appendix C:Maximum power spectral density

TestMode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
SRD	Ant1	903	-2.41	≤8.00	PASS
SRD	Ant1	915	-2.58	≤8.00	PASS
SRD	Ant1	927	-3.43	≤8.00	PASS

Agilent Spectrum Analyzer - Swept SA

Center Freq 903.000000 MHz

Ref Offset 9.96 dB

Ref 20.00 dBm

Mkr1 903.145 82 MHz

-2.409 dBm

Center 903.0000 MHz

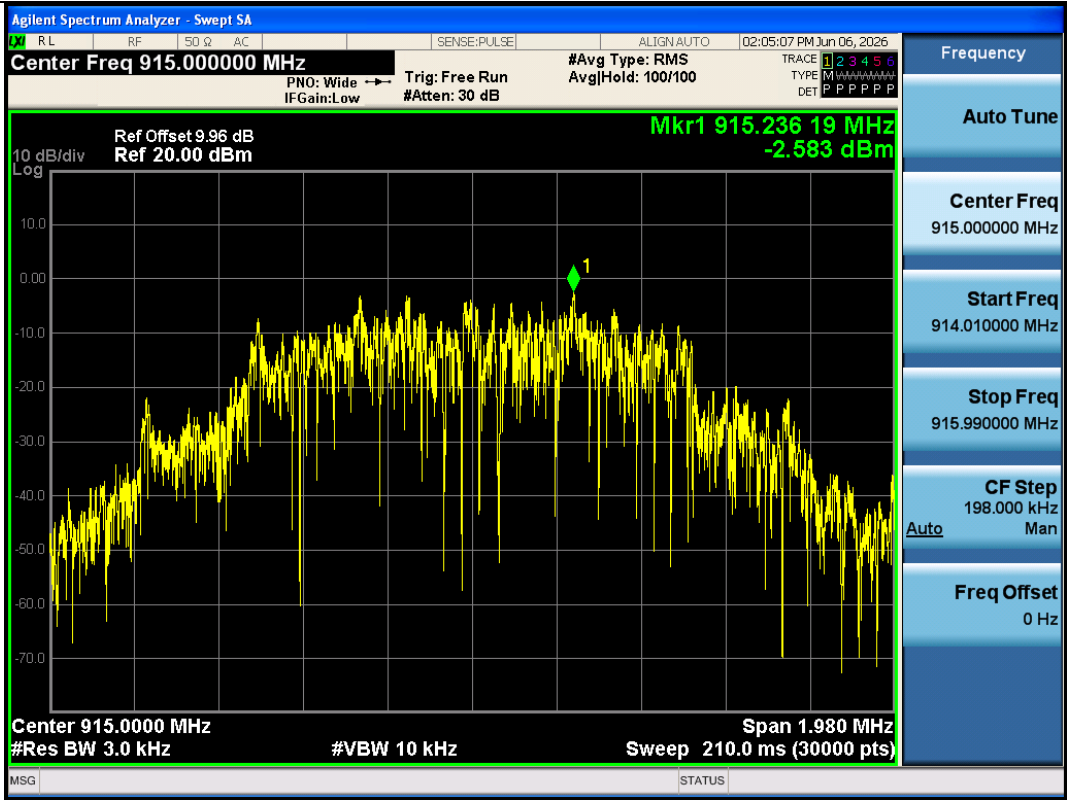
#Res BW 3.0 kHz

#VBW 10 kHz

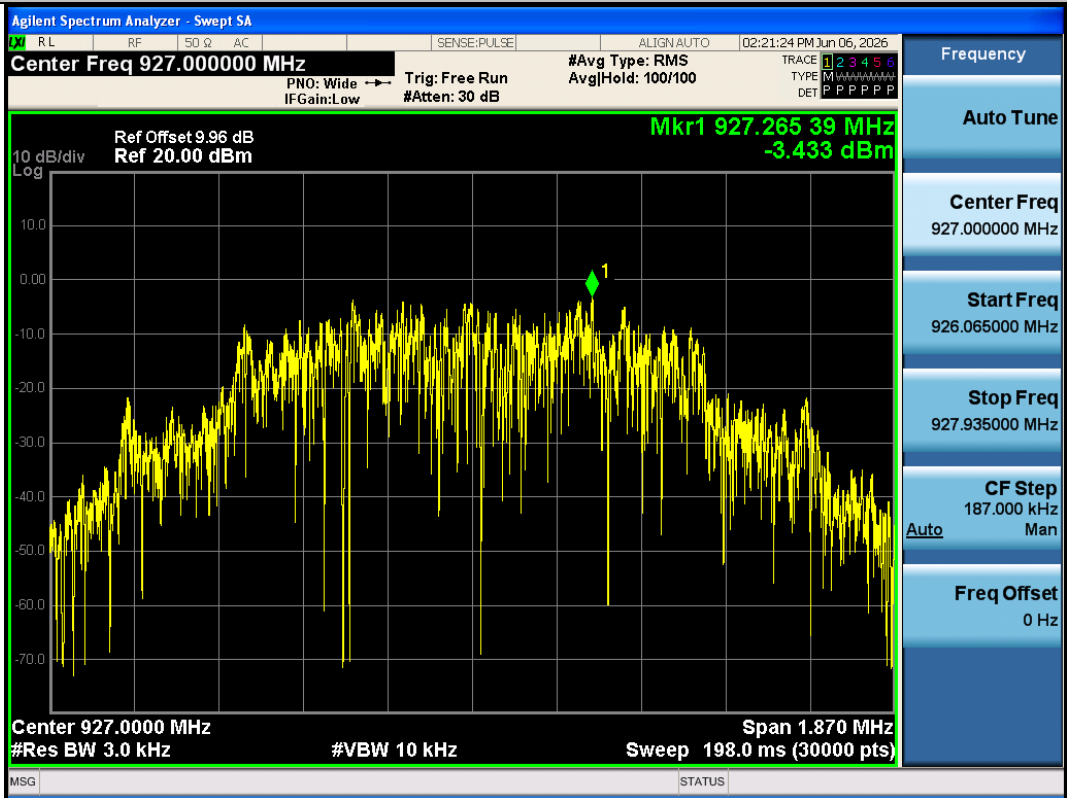
Span 1.970 MHz

Sweep 208.0 ms (30000 pts)

LORA_OFDM_LR-Ant1-903-PASS



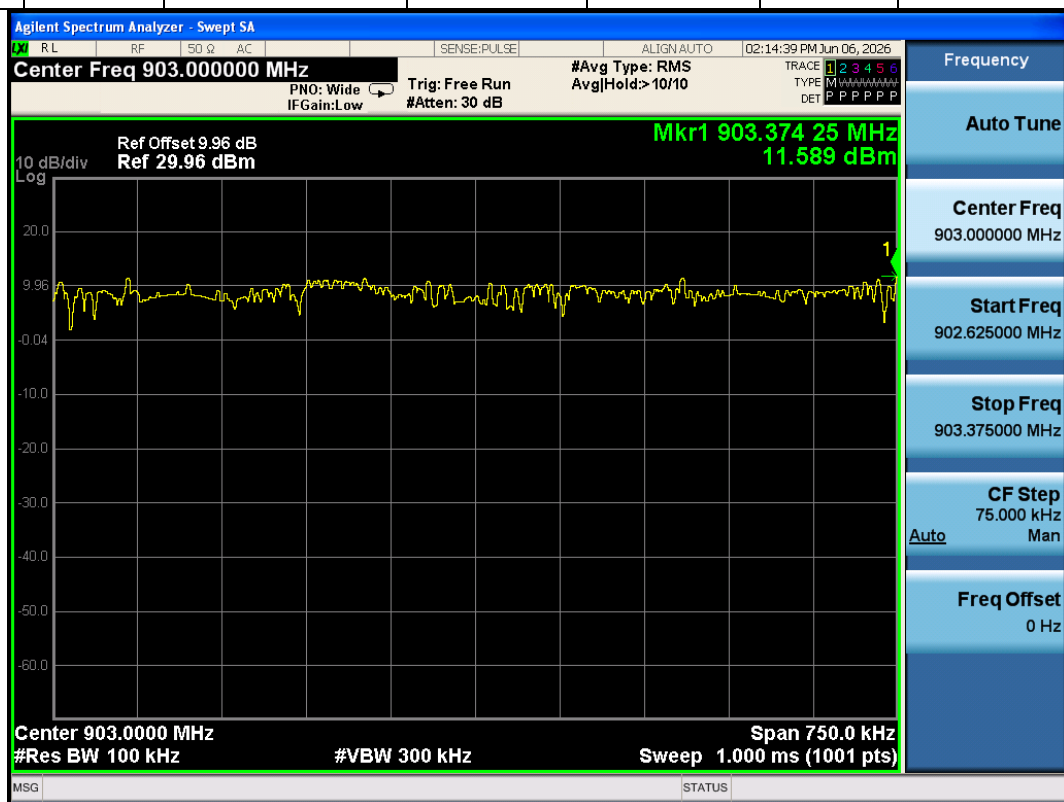
LORA_OFDM_LR-Ant1-915-PASS



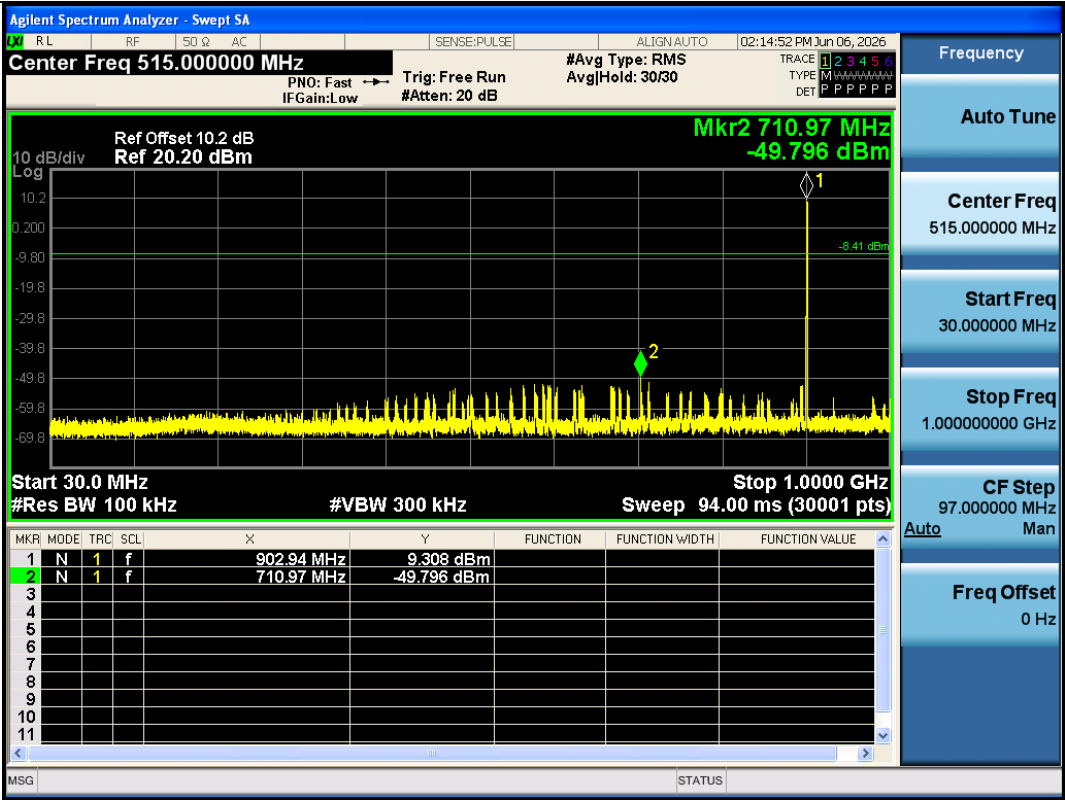
LORA_OFDM_LR-Ant1-927-PASS

Appendix D:Conducted Spurious Emission

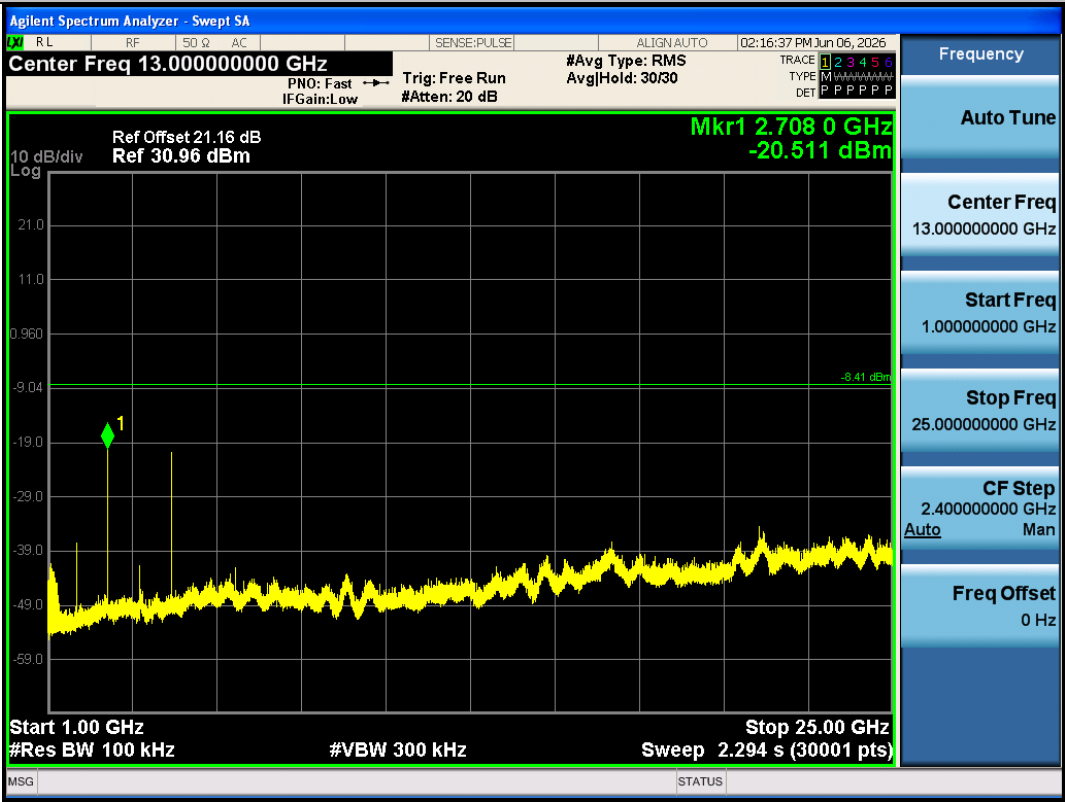
TestMode	Antenna	Frequency[MHz]	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
SRD	Ant1	903	0~Reference	11.59	11.59	---	PASS
SRD	Ant1	903	30~1000	11.59	-49.8	≤-8.41	PASS
SRD	Ant1	903	1000~25000	11.59	-20.51	≤-8.41	PASS
SRD	Ant1	915	0~Reference	11.72	11.72	---	PASS
SRD	Ant1	915	30~1000	11.72	-49.15	≤-8.28	PASS
SRD	Ant1	915	1000~25000	11.72	-23.25	≤-8.28	PASS
SRD	Ant1	927	0~Reference	11.55	11.55	---	PASS
SRD	Ant1	927	30~1000	11.55	-48.95	≤-8.45	PASS
SRD	Ant1	927	1000~25000	11.55	-19.52	≤-8.45	PASS



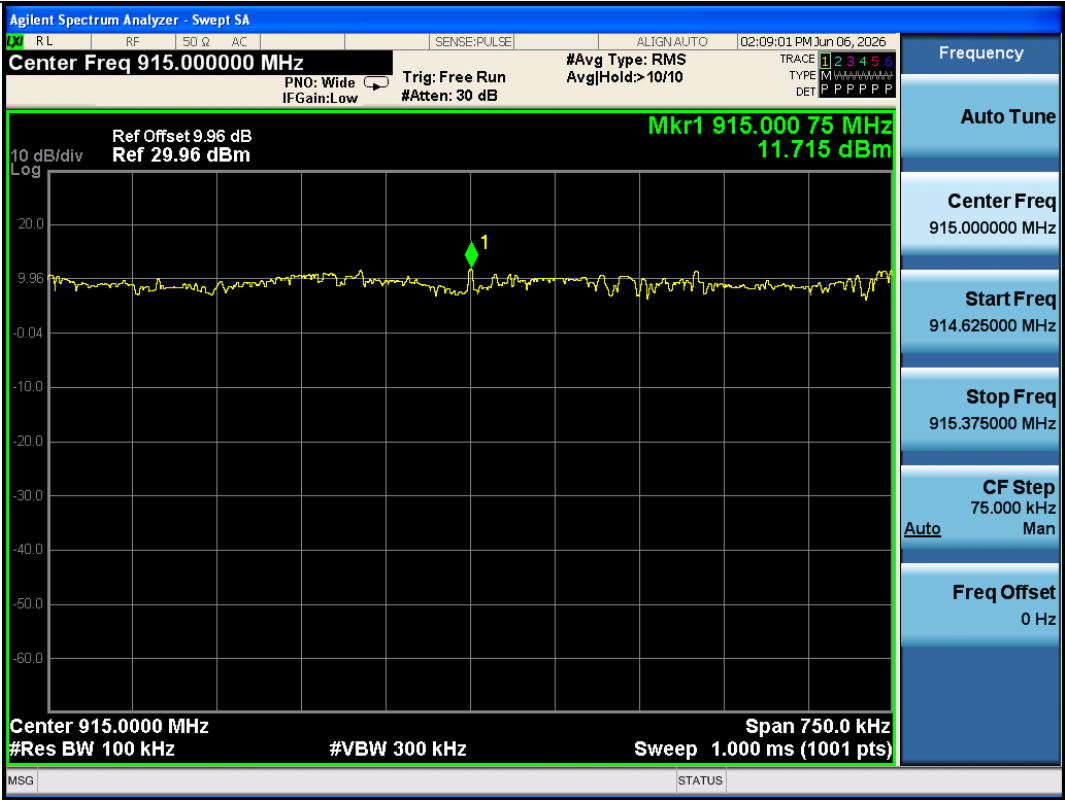
LORA_OFDM_LR-Ant1-903-0~Reference-PASS



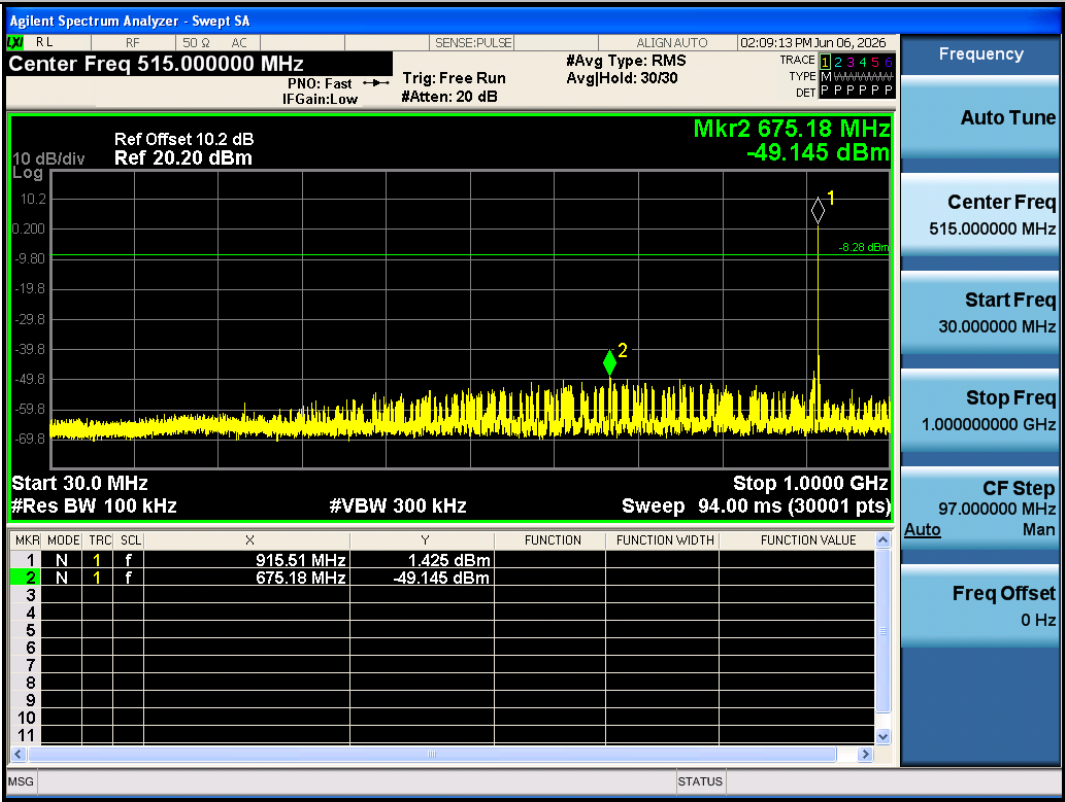
LORA_OFDM_LR-Ant1-903-30~1000-PASS



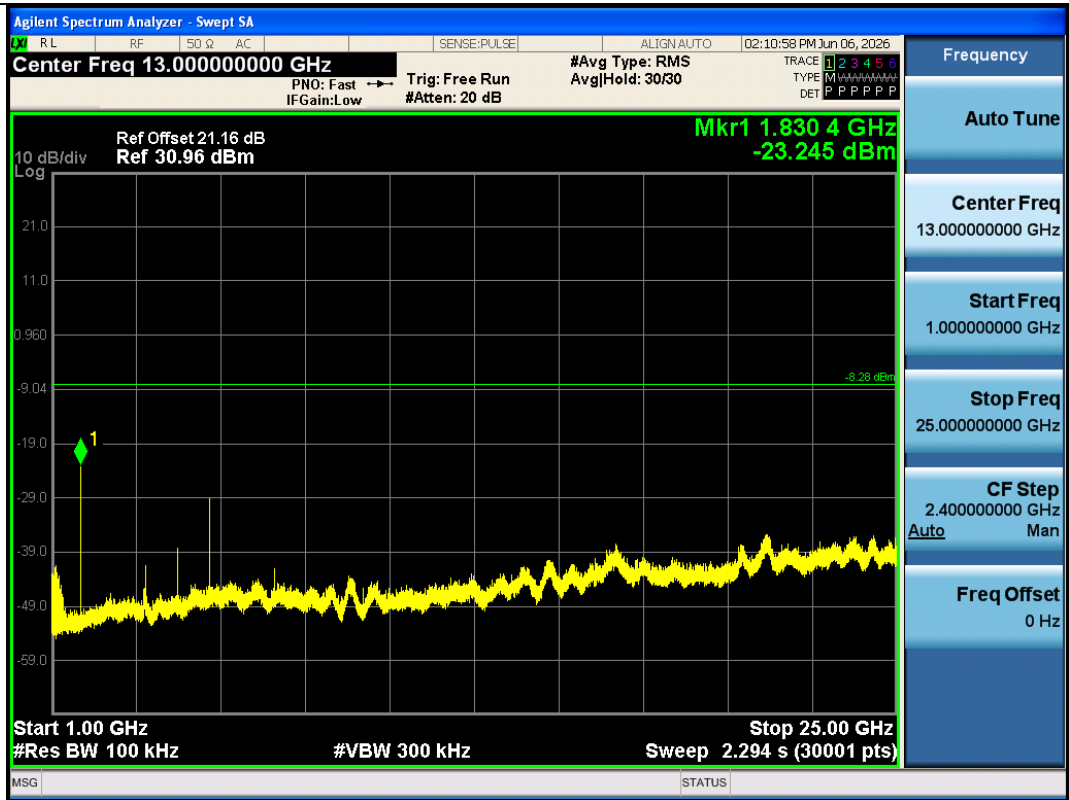
LORA_OFDM_LR-Ant1-903-1000~25000-PASS



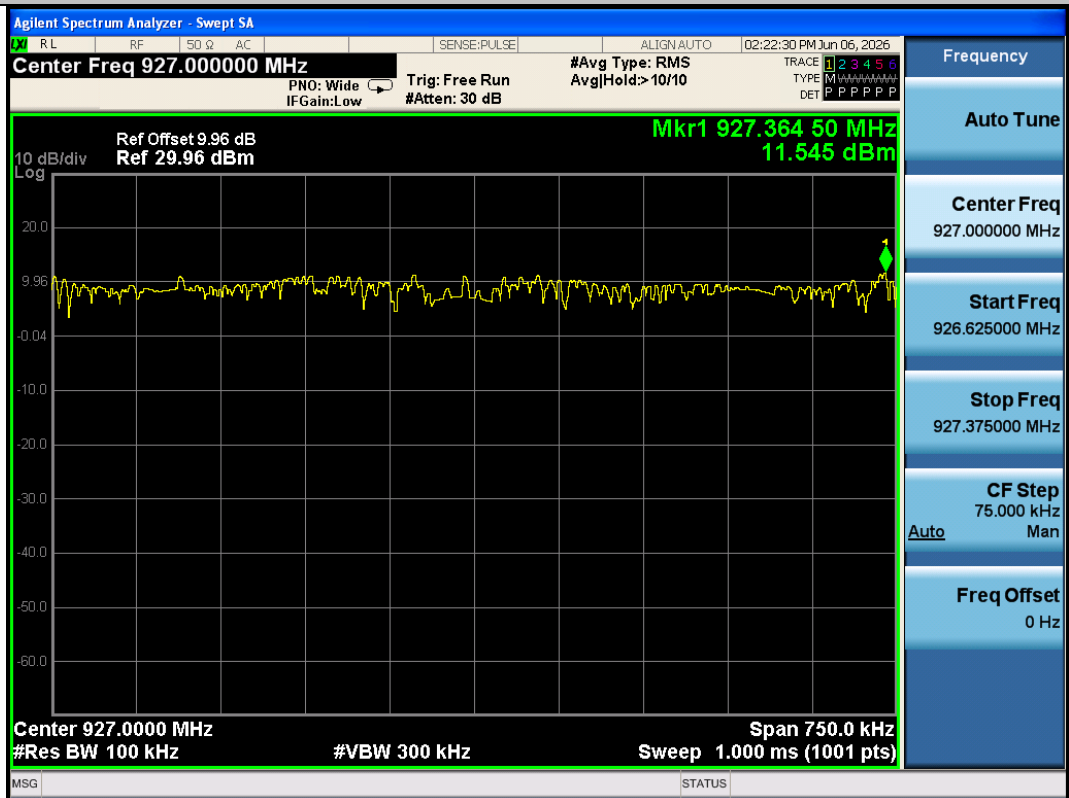
LORA_OFDM_LR-Ant1-915-0~Reference-PASS



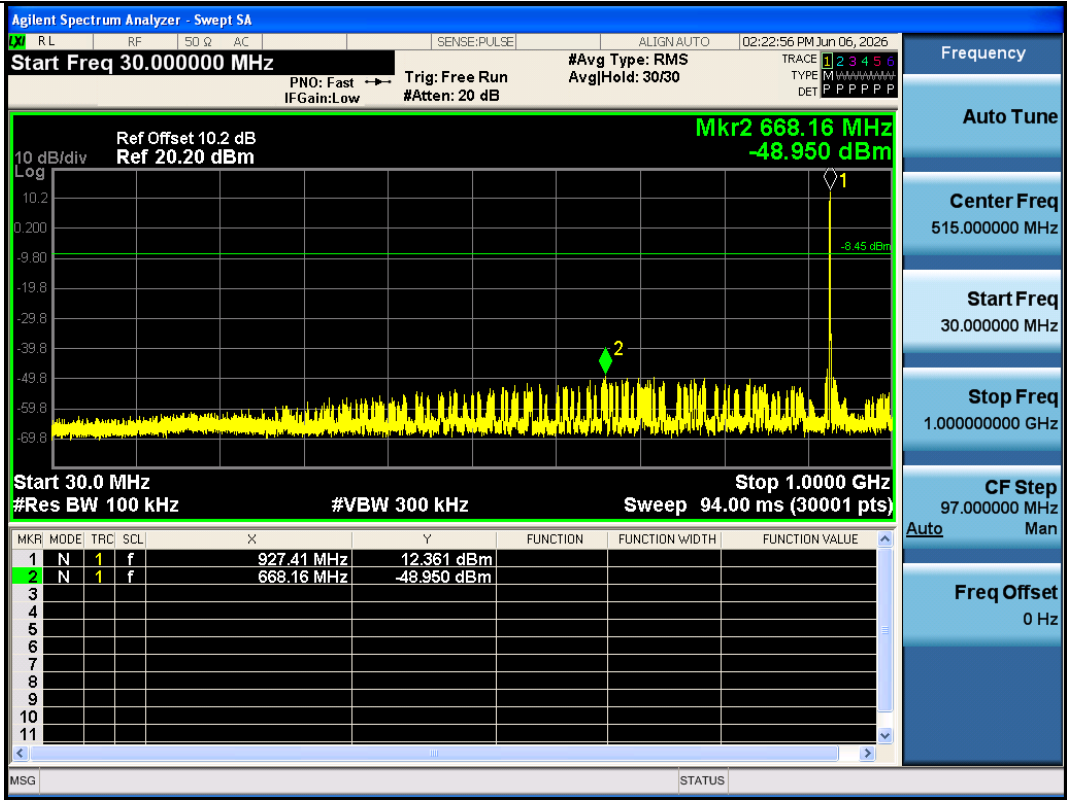
LORA_OFDM_LR-Ant1-915-30~1000-PASS



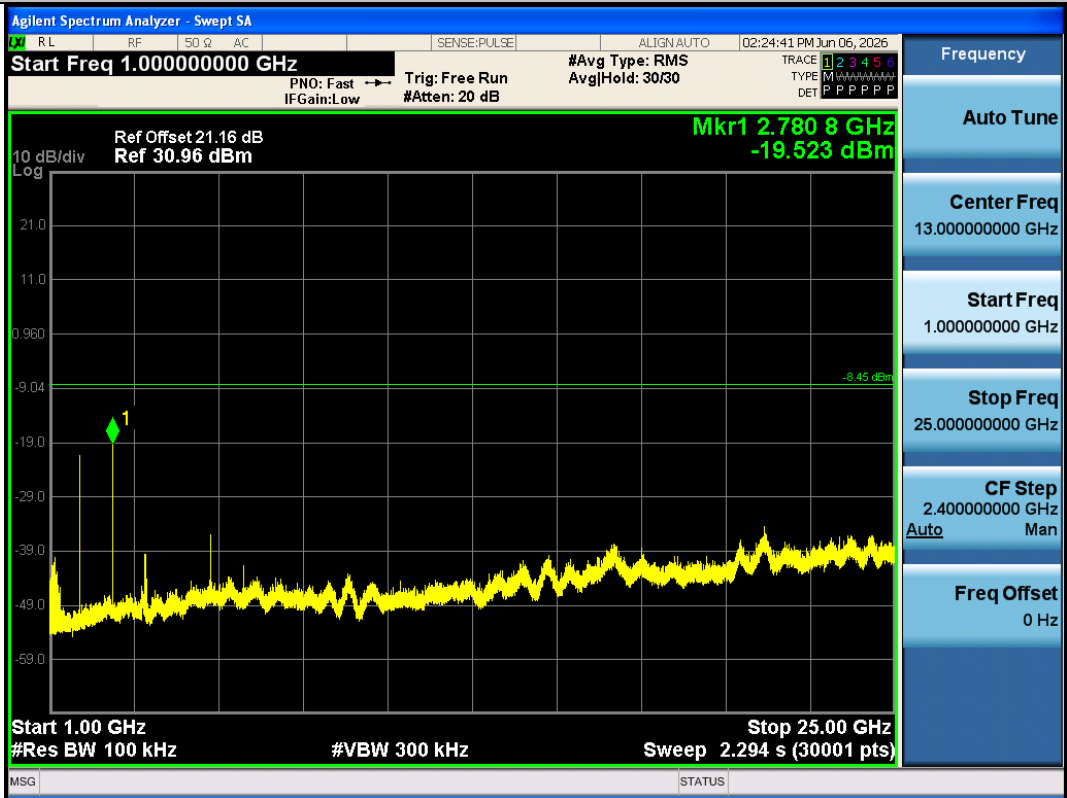
LORA_OFDM_LR-Ant1-915-1000~25000-PASS



LORA_OFDM_LR-Ant1-927-0~Reference-PASS

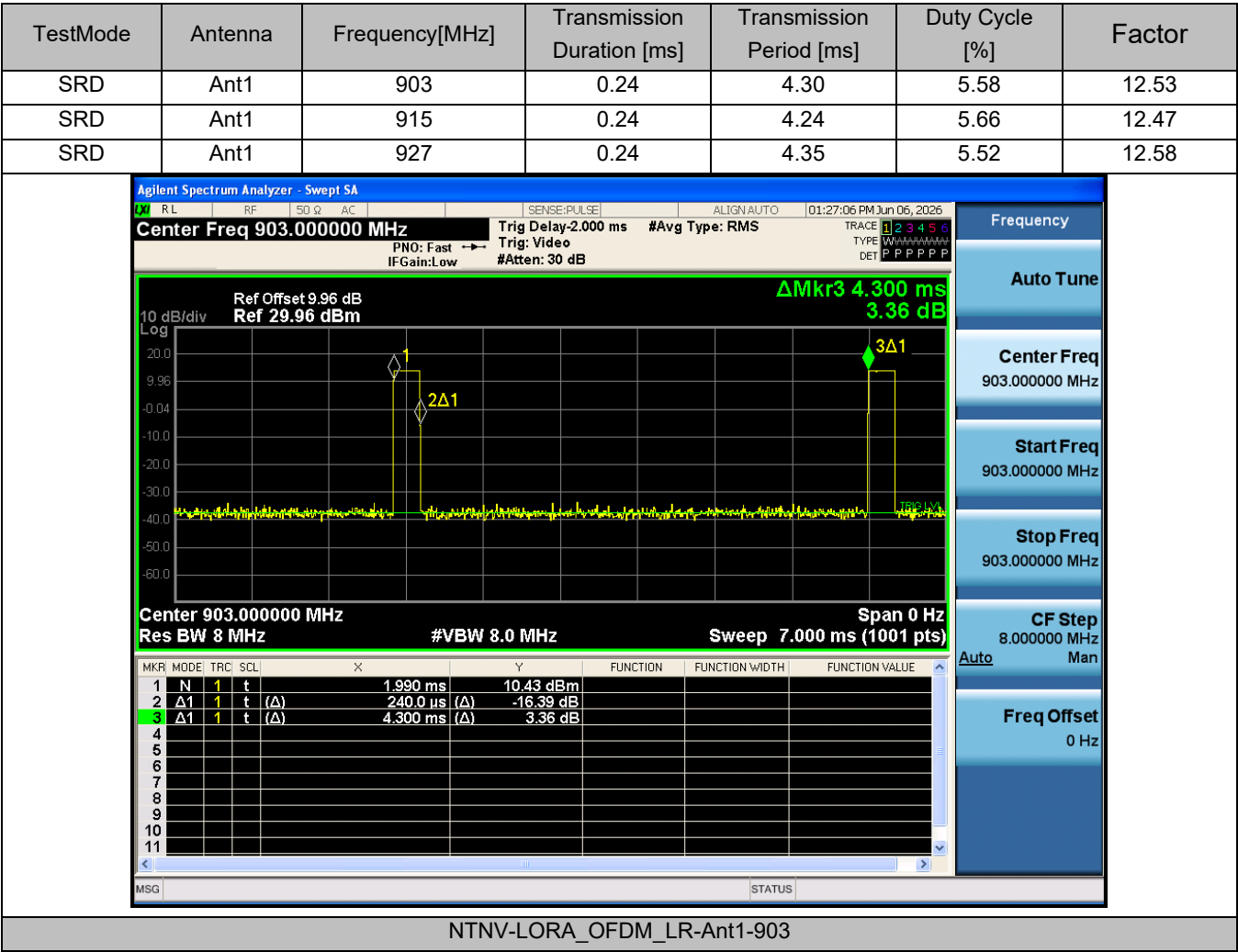


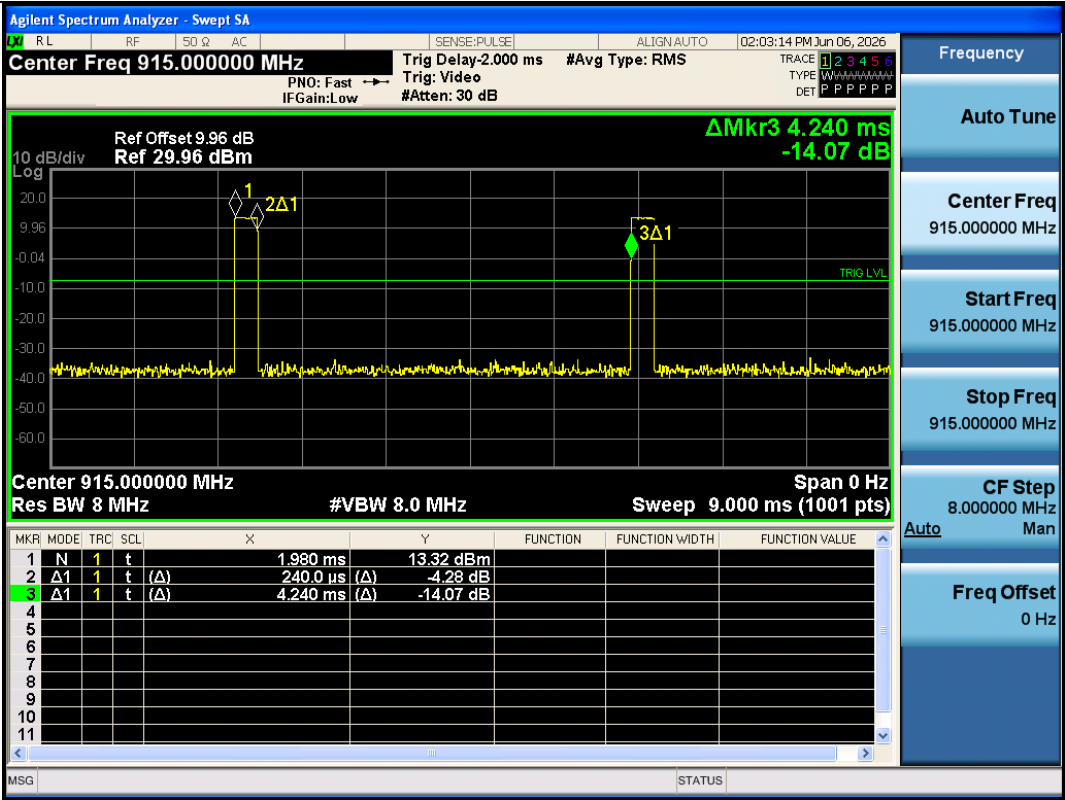
LORA_OFDM_LR-Ant1-927-30~1000-PASS



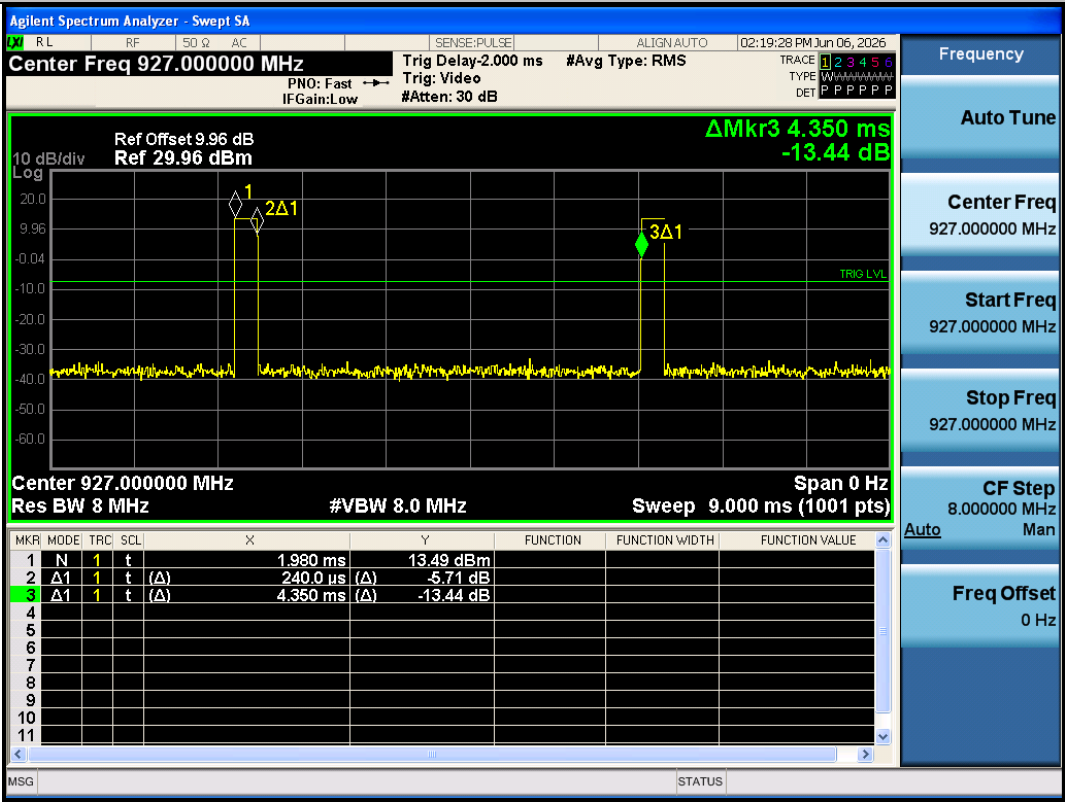
LORA_OFDM_LR-Ant1-927-1000~25000-PASS

Appendix E:Duty cycle





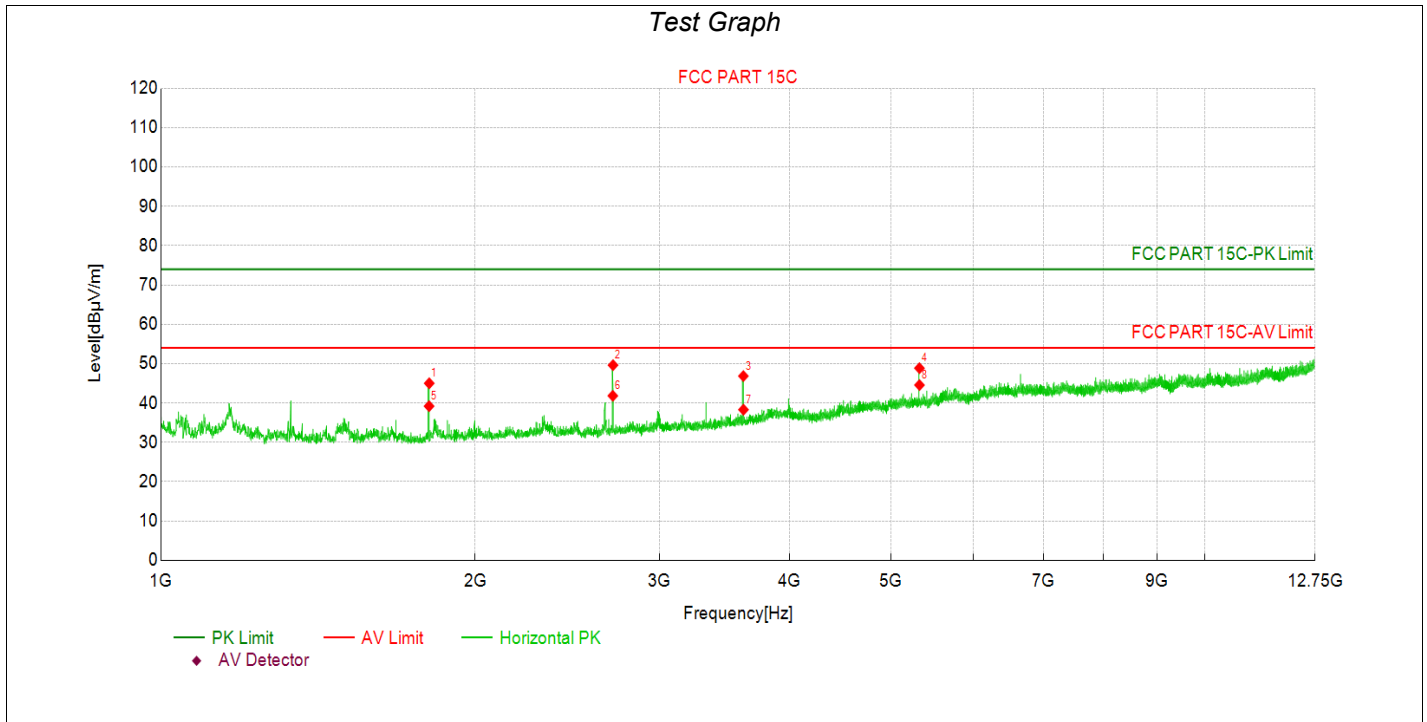
NTNV-LORA_OFDM_LR-Ant1-915



NTNV-LORA_OFDM_LR-Ant1-927

Appendix F: Emissions in Restricted Bands

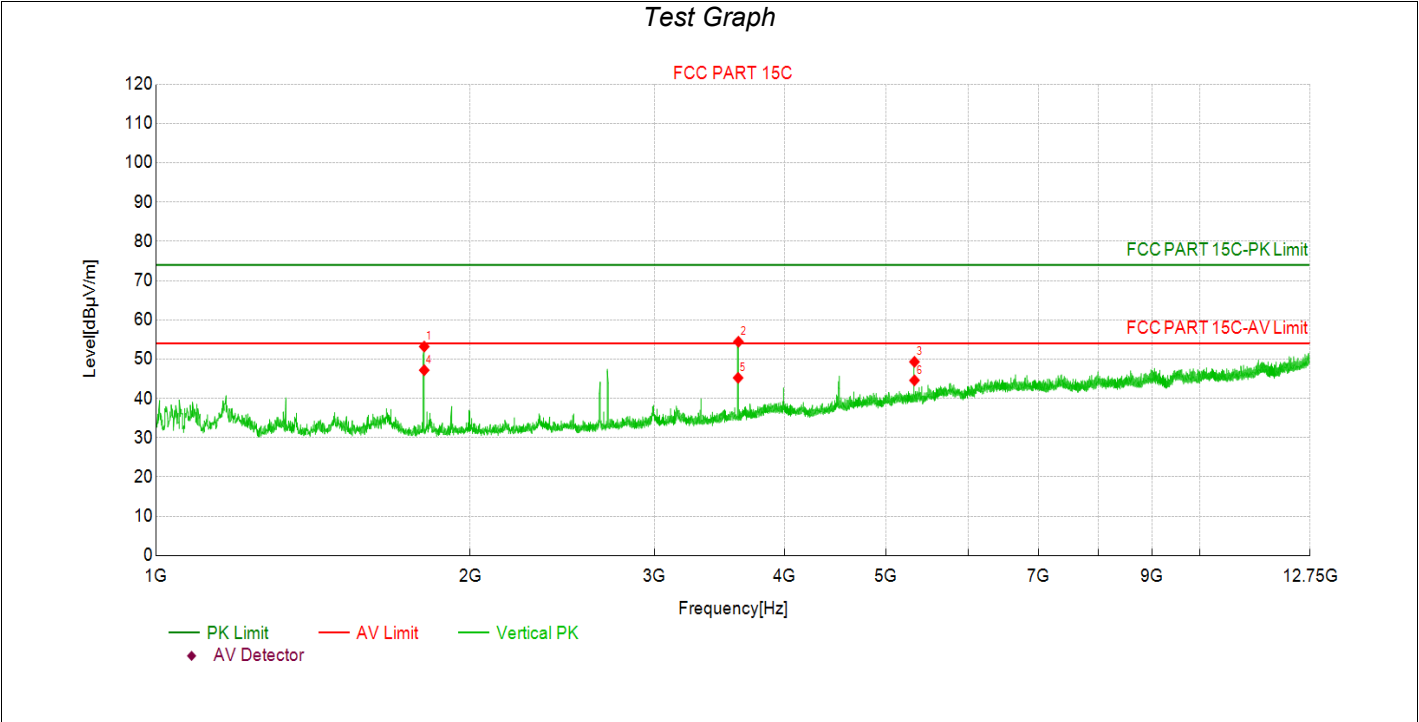
Transmit at 903MHz



Data List

NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	1806.83	65.78	45.01	-20.770	74.00	28.99	PK	Horizo	PASS
2	2710.28	65.93	49.61	-16.320	74.00	24.39	PK	Horizo	PASS
3	3613.07	60.02	46.85	-13.170	74.00	27.15	PK	Horizo	PASS
4	5327.92	54.09	48.86	-5.230	74.00	25.14	PK	Horizo	PASS
5	1806.18	59.96	39.19	-20.770	54.00	14.81	AV	Horizo	PASS
6	2708.97	58.15	41.83	-16.320	54.00	12.17	AV	Horizo	PASS
7	3613.72	51.47	38.30	-13.170	54.00	15.70	AV	Horizo	PASS
8	5328.57	49.79	44.56	-5.230	54.00	9.44	AV	Horizo	PASS

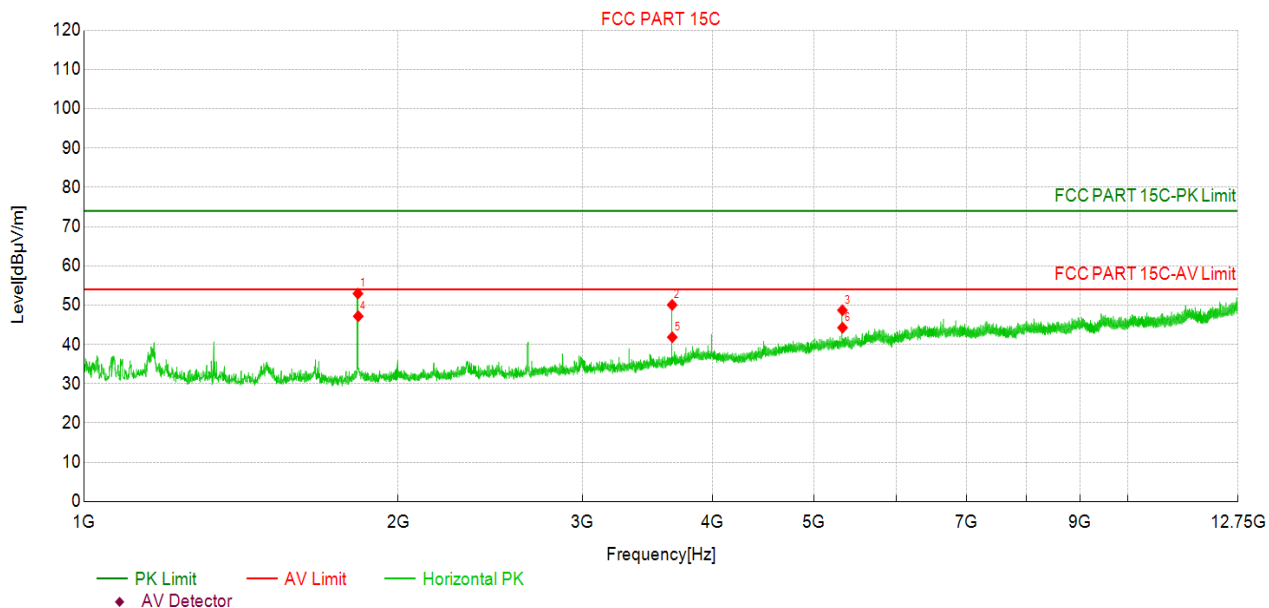
Transmit at 903MHz



Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	1806.83	73.98	53.21	-20.770	74.00	20.79	PK	Vertic	PASS
2	3613.72	67.61	54.44	-13.170	74.00	19.56	PK	Vertic	PASS
3	5327.92	54.55	49.32	-5.230	74.00	24.68	PK	Vertic	PASS
4	1806.83	67.96	47.19	-20.770	54.00	6.81	AV	Vertic	PASS
5	3611.11	58.42	45.24	-13.180	54.00	8.76	AV	Vertic	PASS
6	5328.57	49.84	44.61	-5.230	54.00	9.39	AV	Vertic	PASS

Transmit at 915MHz

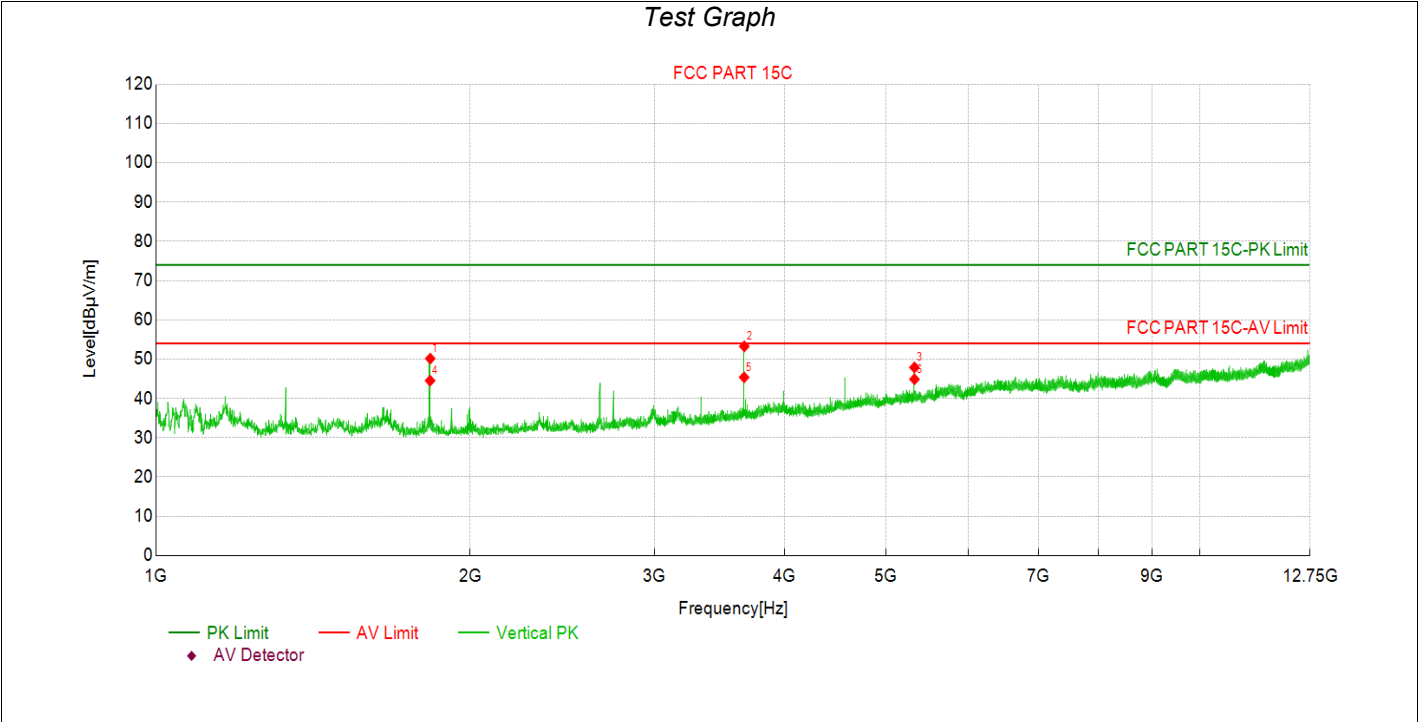
Test Graph



Data List

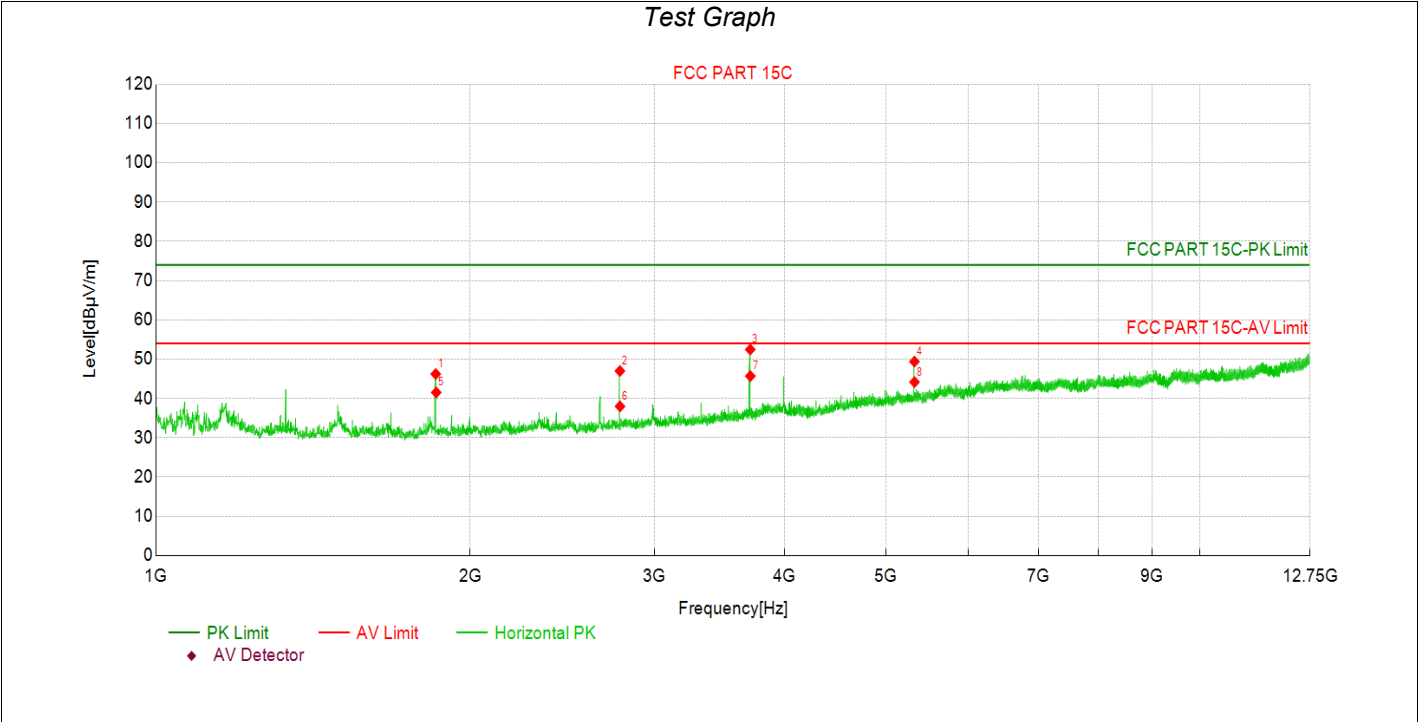
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	1829.68	73.48	52.95	-20.530	74.00	21.05	PK	Horizo	PASS
2	3659.42	62.95	50.07	-12.880	74.00	23.93	PK	Horizo	PASS
3	5327.92	53.93	48.70	-5.230	74.00	25.30	PK	Horizo	PASS
4	1830.99	67.71	47.18	-20.530	54.00	6.82	AV	Horizo	PASS
5	3660.72	54.71	41.84	-12.870	54.00	12.16	AV	Horizo	PASS
6	5328.57	49.50	44.27	-5.230	54.00	9.73	AV	Horizo	PASS

Transmit at 915MHz



Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	1830.99	70.67	50.14	-20.530	74.00	23.86	PK	Vertic	PASS
2	3660.72	66.13	53.26	-12.870	74.00	20.74	PK	Vertic	PASS
3	5327.92	53.13	47.90	-5.230	74.00	26.10	PK	Vertic	PASS
4	1830.33	65.05	44.52	-20.530	54.00	9.48	AV	Vertic	PASS
5	3659.42	58.26	45.38	-12.880	54.00	8.62	AV	Vertic	PASS
6	5328.57	50.12	44.89	-5.230	54.00	9.11	AV	Vertic	PASS

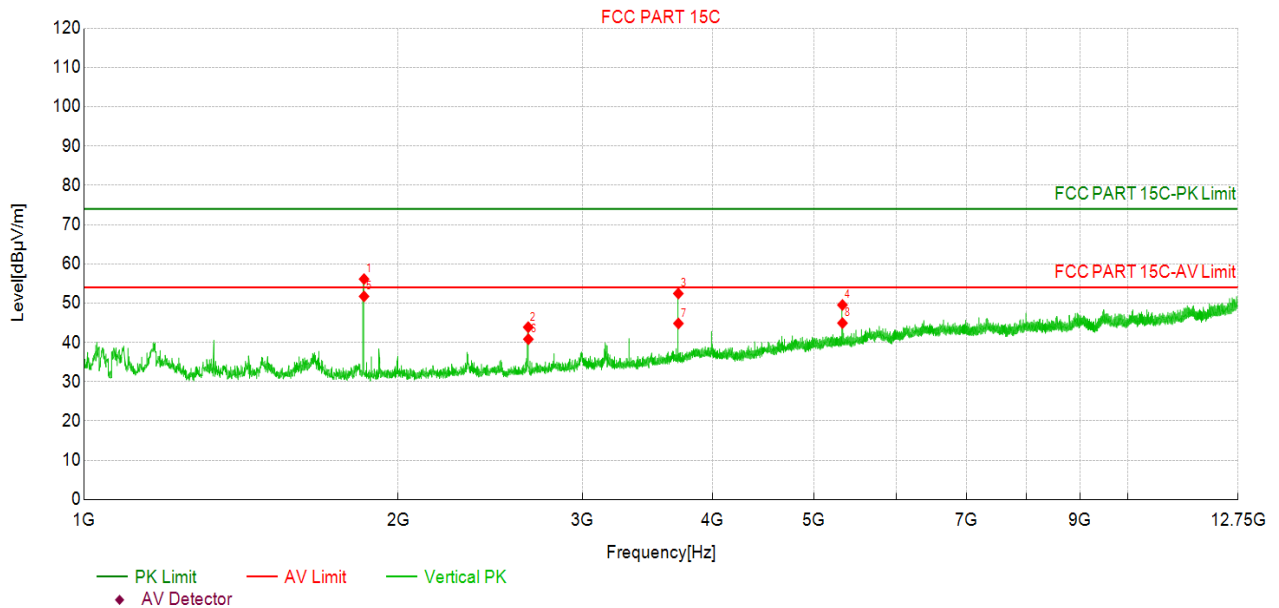
Transmit at 927MHz



Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	1853.18	66.50	46.23	-20.270	74.00	27.77	PK	Horizo	PASS
2	2782.08	62.87	46.99	-15.880	74.00	27.01	PK	Horizo	PASS
3	3709.03	64.92	52.45	-12.470	74.00	21.55	PK	Horizo	PASS
4	5327.92	54.62	49.39	-5.230	74.00	24.61	PK	Horizo	PASS
5	1855.14	61.78	41.53	-20.250	54.00	12.47	AV	Horizo	PASS
6	2782.74	53.86	37.99	-15.870	54.00	16.01	AV	Horizo	PASS
7	3709.68	58.15	45.69	-12.460	54.00	8.31	AV	Horizo	PASS
8	5328.57	49.40	44.17	-5.230	54.00	9.83	AV	Horizo	PASS

Transmit at 927MHz

Test Graph

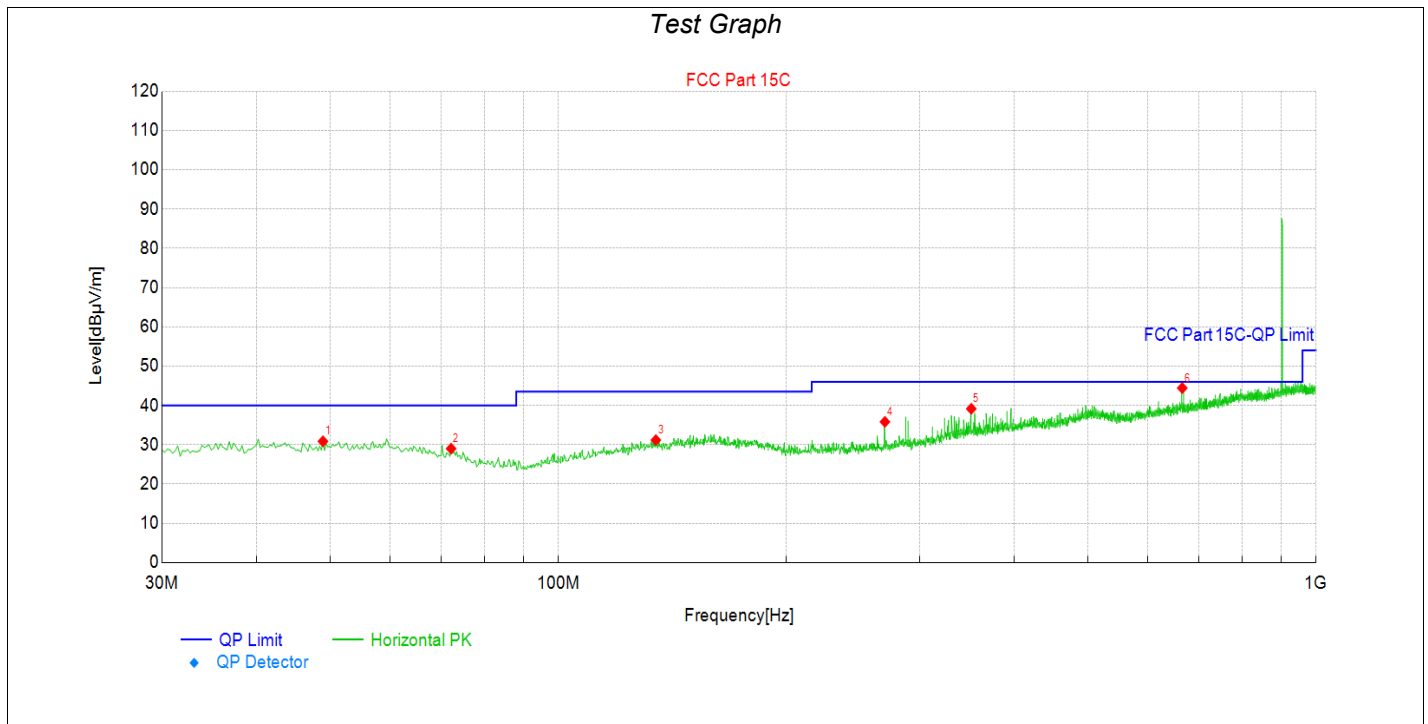


Data List

NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	1854.49	76.40	56.14	-20.260	74.00	17.86	PK	Vertic	PASS
2	2663.93	60.51	43.88	-16.630	74.00	30.12	PK	Vertic	PASS
3	3709.68	64.91	52.45	-12.460	74.00	21.55	PK	Vertic	PASS
4	5327.92	54.77	49.54	-5.230	74.00	24.46	PK	Vertic	PASS
5	1854.49	71.99	51.73	-20.260	54.00	2.27	AV	Vertic	PASS
6	2664.58	57.46	40.83	-16.630	54.00	13.17	AV	Vertic	PASS
7	3710.33	57.29	44.84	-12.450	54.00	9.16	AV	Vertic	PASS
8	5328.57	50.15	44.92	-5.230	54.00	9.08	AV	Vertic	PASS

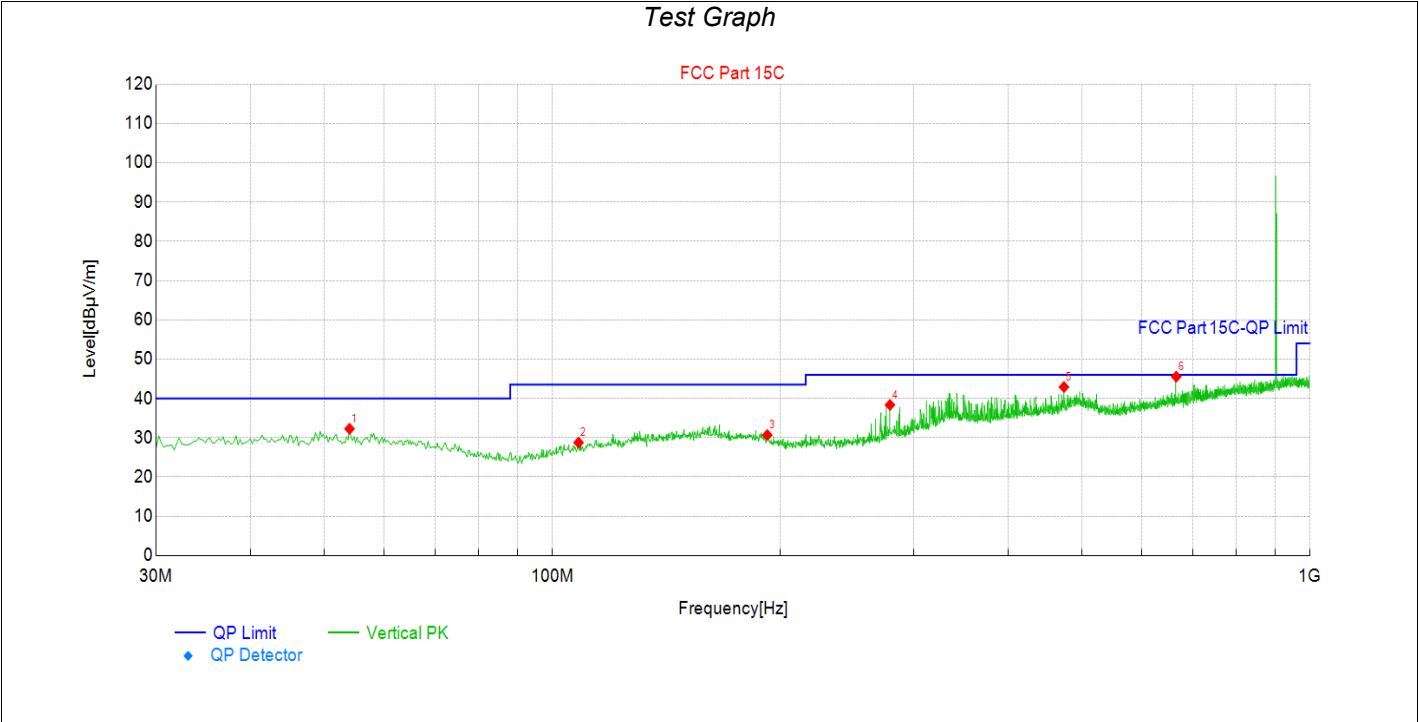
Note:

1. Level = Reading + Factor
2. Margin = Limit - Level
3. The test frequency range, 9kHz~30MHz, worst case are at least 20dB below the limits, therefore no data appear in the report.
4. The test frequency range, 18GHz~26GHz test result on peak is lower than average limit, all is the noise base, therefore no data appear in the report.

Radiated Emission below 1GHz:**Transmit at 903Mhz**

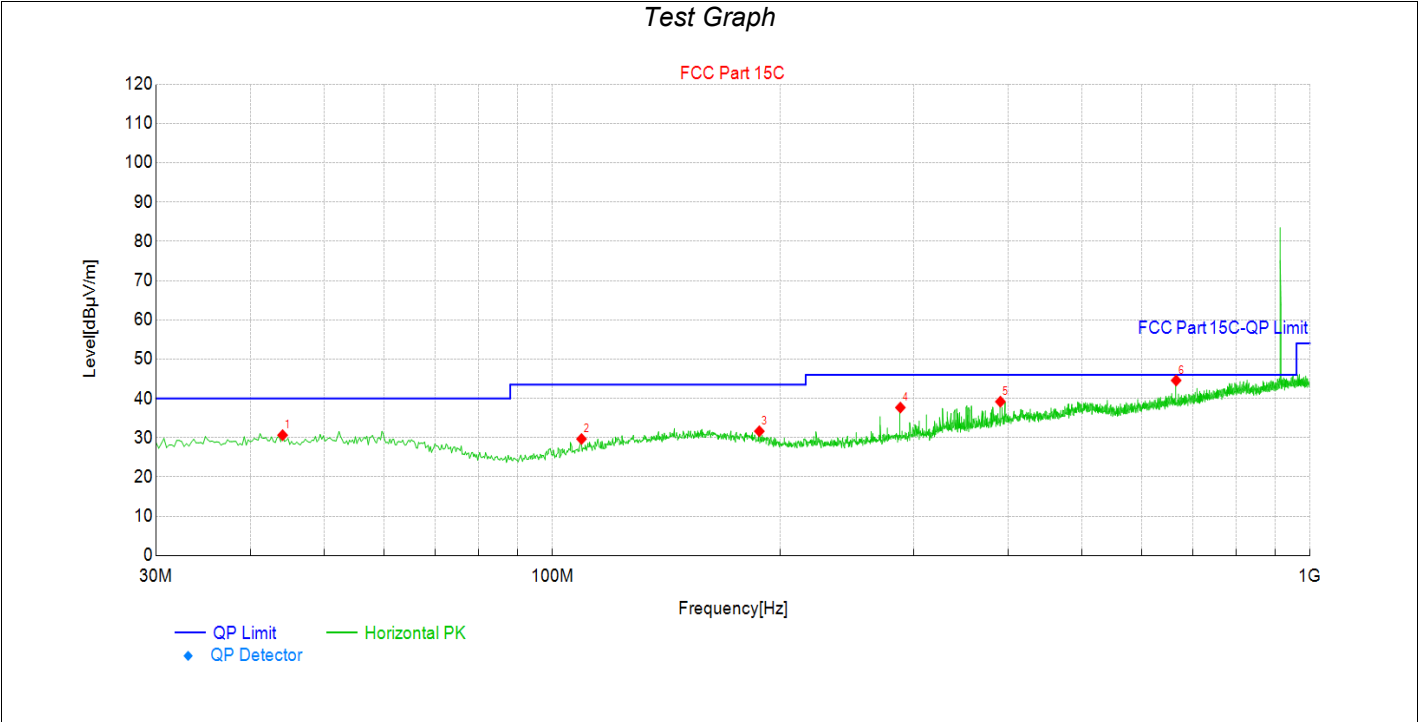
Data List									
NO	Frequency [MHz]	Reading [dBμV]	Level [dBμV/m]	Factor [dB/m]	Limit [dBμV/m]	Margin [dB]	Det	Pol	Verdict
1	48.92	16.14	30.87	14.730	40.00	9.13	PK	Horizo	PASS
2	72.20	16.32	29.00	12.680	40.00	11.00	PK	Horizo	PASS
3	134.52	16.90	31.18	14.280	43.50	12.32	PK	Horizo	PASS
4	269.83	20.94	35.83	14.890	46.00	10.17	PK	Horizo	PASS
5	350.83	21.76	39.15	17.390	46.00	6.85	PK	Horizo	PASS
6	666.08	19.56	44.43	24.870	46.00	1.57	PK	Horizo	PASS

Transmit at 903Mhz



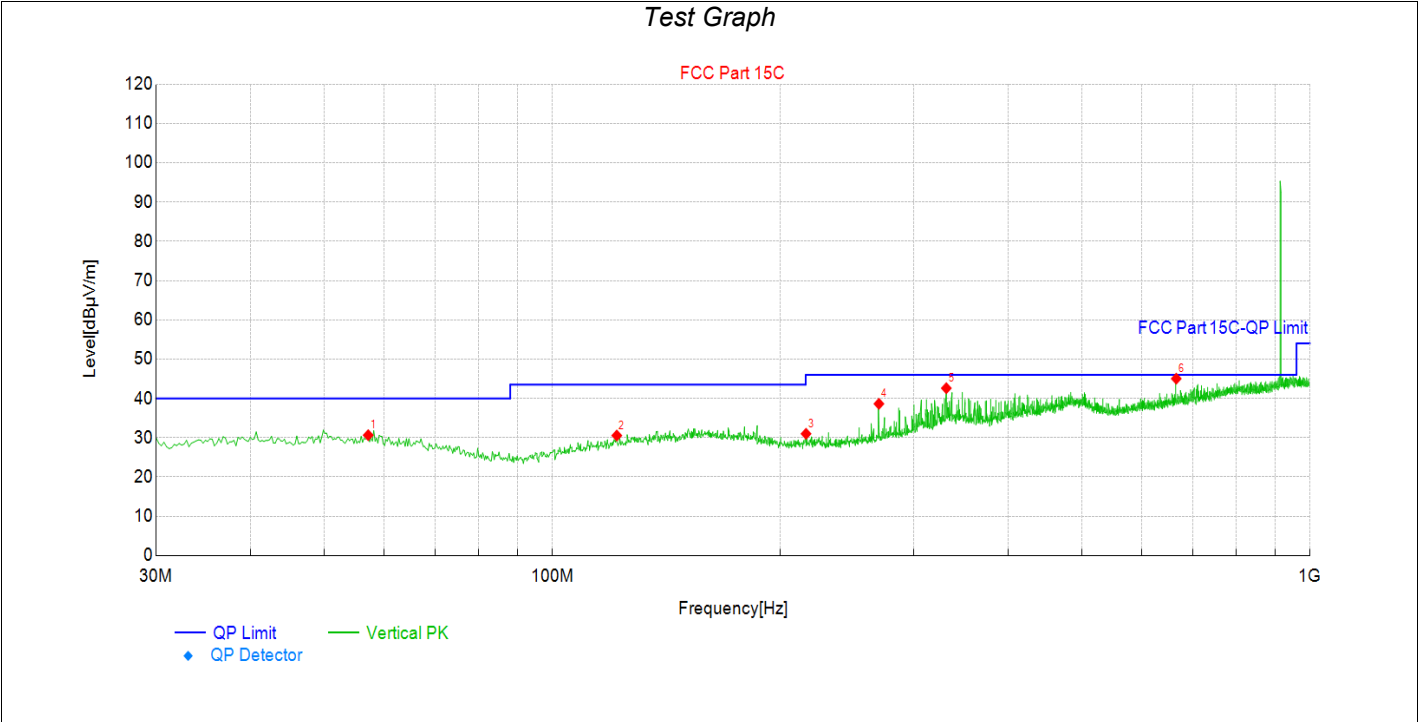
Data List									
NO	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	54.01	17.63	32.28	14.650	40.00	7.72	PK	Vertic	PASS
2	108.33	17.03	28.75	11.720	43.50	14.75	PK	Vertic	PASS
3	192.23	17.71	30.69	12.980	43.50	12.81	PK	Vertic	PASS
4	279.05	22.99	38.35	15.360	46.00	7.65	PK	Vertic	PASS
5	473.53	22.05	42.92	20.870	46.00	3.08	PK	Vertic	PASS
6	666.08	20.69	45.56	24.870	46.00	0.44	PK	Vertic	PASS

Transmit at 915Mhz



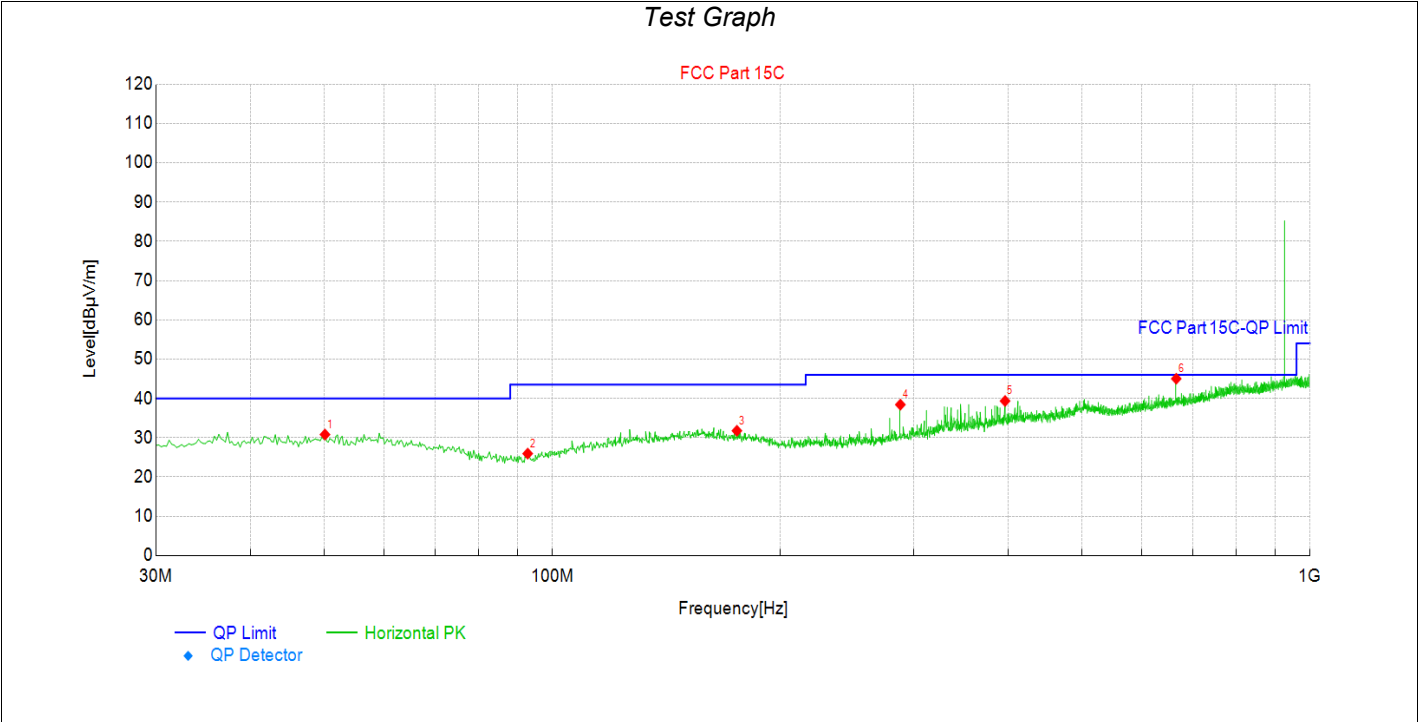
Data List									
NO	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	44.07	16.05	30.65	14.600	40.00	9.35	PK	Horizo	PASS
2	109.30	17.84	29.68	11.840	43.50	13.82	PK	Horizo	PASS
3	187.63	18.31	31.66	13.350	43.50	11.84	PK	Horizo	PASS
4	288.02	21.94	37.68	15.740	46.00	8.32	PK	Horizo	PASS
5	390.36	20.50	39.18	18.680	46.00	6.82	PK	Horizo	PASS
6	665.84	19.72	44.58	24.860	46.00	1.42	PK	Horizo	PASS

Transmit at 915Mhz

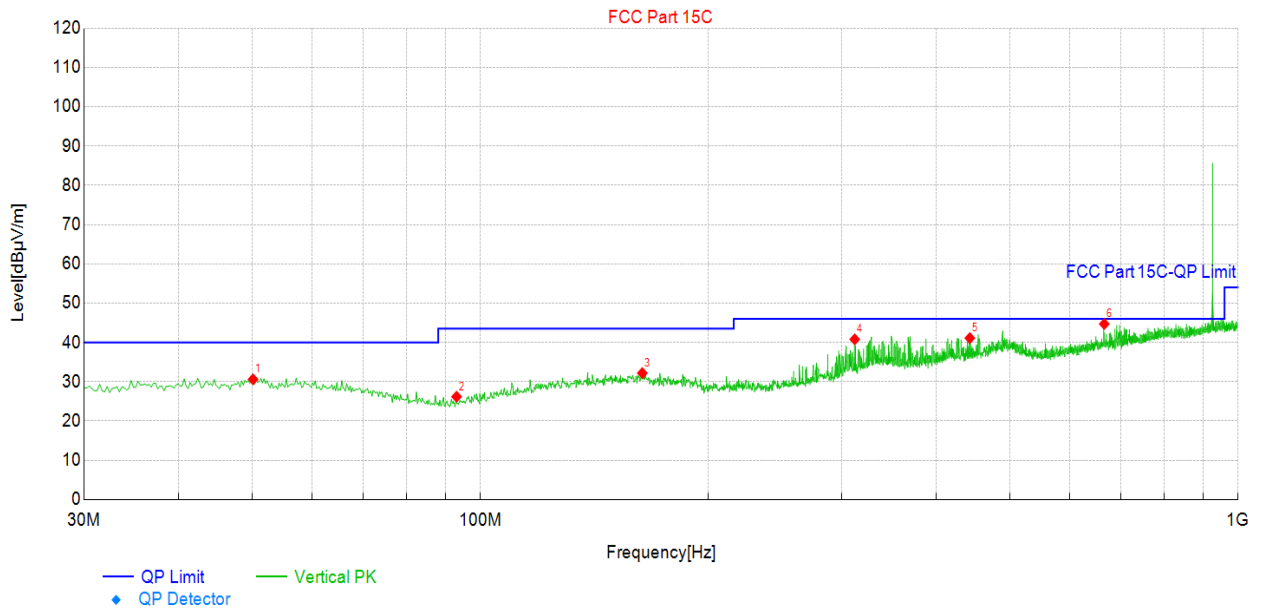


Data List									
NO	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	57.16	16.10	30.65	14.550	40.00	9.35	PK	Vertic	PASS
2	121.67	17.40	30.56	13.160	43.50	12.94	PK	Vertic	PASS
3	216.24	18.07	31.00	12.930	46.00	15.00	PK	Vertic	PASS
4	269.83	23.74	38.63	14.890	46.00	7.37	PK	Vertic	PASS
5	331.19	25.72	42.61	16.890	46.00	3.39	PK	Vertic	PASS
6	666.08	20.17	45.04	24.870	46.00	0.96	PK	Vertic	PASS

Transmit at 927Mhz



Data List									
NO	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	50.13	16.05	30.81	14.760	40.00	9.19	PK	Horizo	PASS
2	92.81	16.28	25.96	9.680	43.50	17.54	PK	Horizo	PASS
3	175.26	17.54	31.78	14.240	43.50	11.72	PK	Horizo	PASS
4	288.02	22.68	38.42	15.740	46.00	7.58	PK	Horizo	PASS
5	395.93	20.61	39.36	18.750	46.00	6.64	PK	Horizo	PASS
6	666.08	20.15	45.02	24.870	46.00	0.98	PK	Horizo	PASS

Transmit at 927Mhz*Test Graph***Data List**

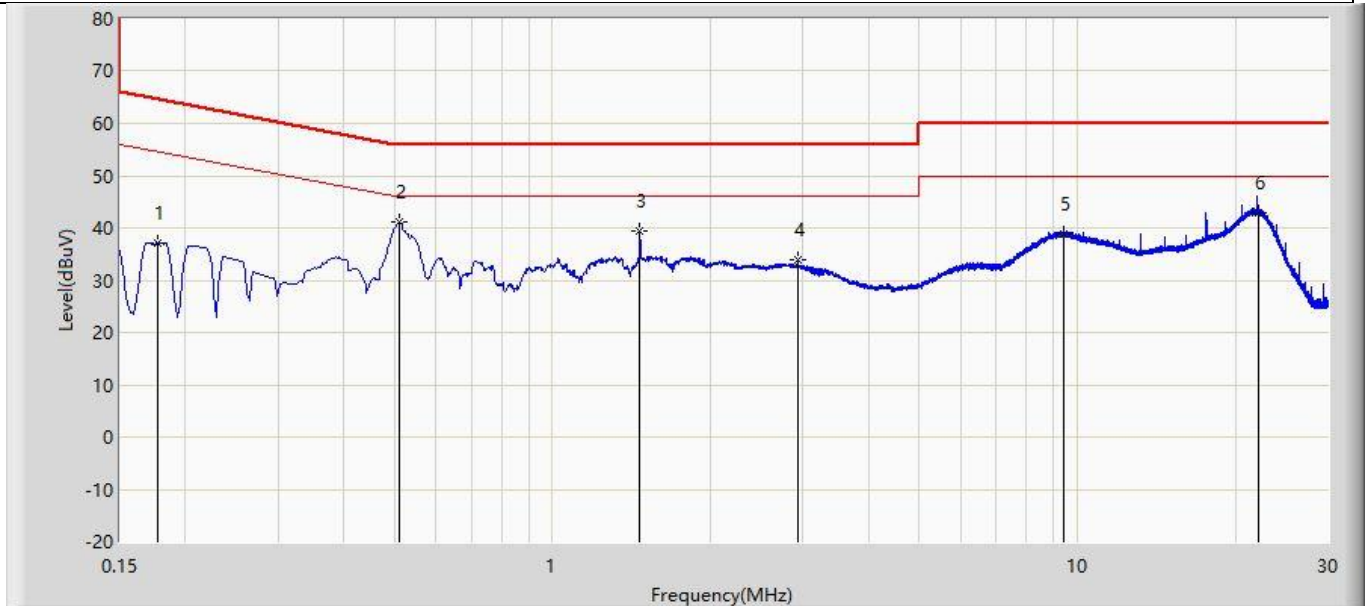
NO	Frequency [MHz]	Reading [dBµV]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Det	Pol	Verdict
1	50.13	15.84	30.60	14.760	40.00	9.40	PK	Vertic	PASS
2	93.05	16.48	26.19	9.710	43.50	17.31	PK	Vertic	PASS
3	163.62	16.91	32.20	15.290	43.50	11.30	PK	Vertic	PASS
4	312.03	24.42	40.80	16.380	46.00	5.20	PK	Vertic	PASS
5	442.74	20.94	41.11	20.170	46.00	4.89	PK	Vertic	PASS
6	666.08	19.83	44.70	24.870	46.00	1.30	PK	Vertic	PASS

Note:

1. All Readings below 1GHz are PK, PK as an alternative to CISPR quasi-peak measurements or average measurements.
2. Level=Reading+Factor.
3. The portion exceeding the limit is the fundamental frequency field strength, therefore it is not marked.

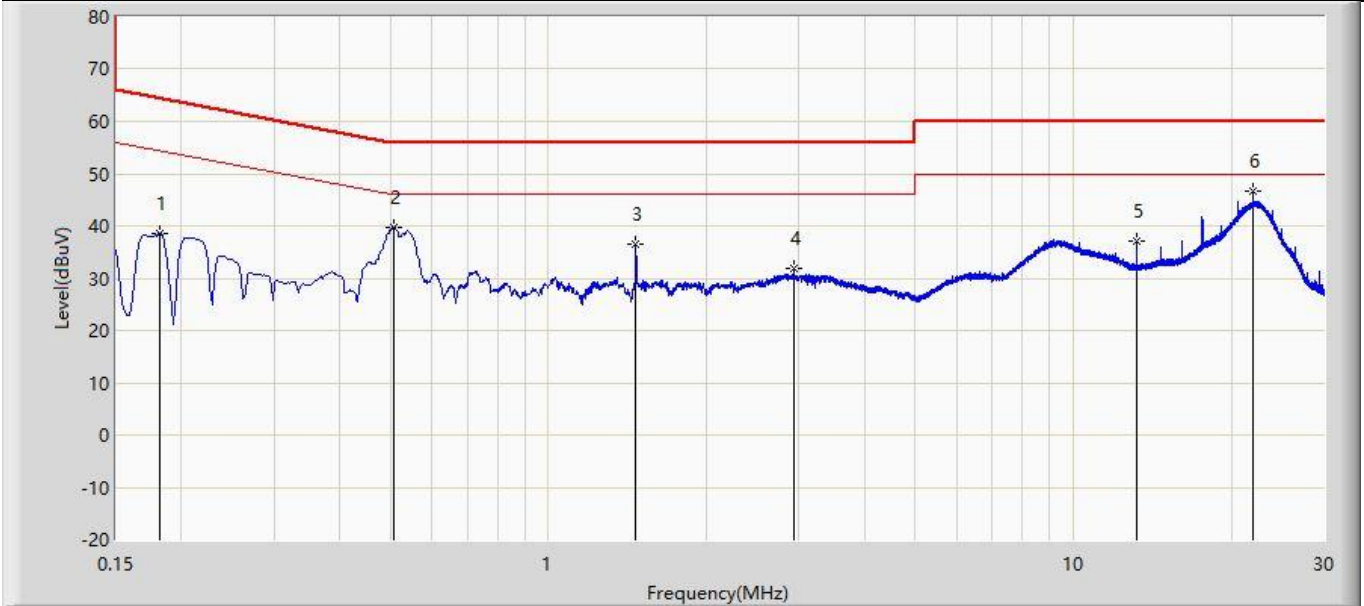
Appendix G: AC Power Line Conducted Emission

Profile: 2640209R	Page No.: 1
Limit: FCC 15.207	Margin: 0
Probe: ENV216_101189(0.009-30MHz)	Polarity: Line
EUT: DAS Gripper	Power: AC 120V/60Hz
Note: Transmit at 903MHz by Lora	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1		0.177	37.009	27.348	-27.616	64.625	9.662	QP
2	*	0.512	41.218	31.518	-14.782	56.000	9.700	QP
3		1.466	39.416	29.686	-16.584	56.000	9.731	QP
4		2.933	34.049	24.255	-21.951	56.000	9.794	QP
5		9.438	38.792	28.826	-21.208	60.000	9.966	QP
6		22.166	42.984	32.376	-17.016	60.000	10.608	QP

Profile: 2640209R	Page No.: 2
Limit: FCC 15.207	Margin: 0
Probe: ENV216_101189(0.009-30MHz)	Polarity: Neutral
EUT: DAS Gripper	Power: AC 120V/60Hz
Note: Transmit at 903MHz by Lora	



No	Mark	Frequency (MHz)	Measure Level (dBuV)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV)	Factor (dB)	Type
1		0.182	38.624	28.960	-25.770	64.394	9.664	QP
2		0.506	39.694	30.097	-16.306	56.000	9.598	QP
3		1.466	36.475	26.788	-19.525	56.000	9.687	QP
4		2.933	32.005	22.262	-23.995	56.000	9.742	QP
5		13.200	37.040	27.012	-22.960	60.000	10.028	QP
6	*	22.002	46.546	35.966	-13.454	60.000	10.580	QP

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