

FCC PART 15.245

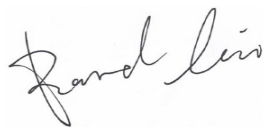
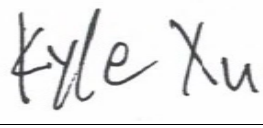
TEST REPORT

For

Ningbo Pdlux Electronic Technology CO.,LTD.

17F, Commerce building of Ningbo, No 588, south Tiantong road, yinzhou district, Ningbo, China

FCC ID: 2AIWW-PD-V9

Report Type: Original Report	Product Name: X-band Doppler Sensing Devices
Report Number: <u>RKSA250506001-00A</u>	
Report Date: <u>2025-06-10</u>	
Reviewed By: <u>Bard Liu</u>	
Approved By: <u>Kyle Xu</u>	
Test Laboratory: Bay Area Compliance Laboratories Corp. (Kunshan) No.248 Chenghu Road, Kunshan, Jiangsu Province, China Tel: +86-512-86175000 Fax: +86-512-88934268 www.baclcorp.com.cn	

Note: This test report is prepared for the customer shown above and for the device described herein. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp. (Kunshan). This report must not be used by the customer to claim product certification, approval, or endorsement by NVLAP, or any agency of the U.S. Government.

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REPORT REVISION HISTORY

Number of Revisions	Report No.	Version	Issue Date	Description
0	RKSA250506001-00A	R1V1	2025-06-10	Initial Release

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Applicant:	Ningbo Pdlux Electronic Technology CO.,LTD.
Product Name:	X-band Doppler Sensing Devices
Tested Model:	PD-V9S
Series Model:	PD-V9-P, PD-V9-H
Model Difference:	The number and length of the pins
Power Supply:	DC 5V
RF Function:	SRD
Operating Band/Frequency:	10503.5-10541.3 MHz
Maximum Field Strength of Fundamental:	102.32 dBμV/m @3m
Modulation Type:	CW
Antenna Type:	PCB Antenna

All measurement and test data in this report was gathered from production sample serial number: RKSA250506001-1 (Assigned by the BACL (Kunshan). The EUT supplied by the applicant was received on 2025-05-06.)

Objective

This type approval report is prepared for *Ningbo Pdlux Electronic Technology CO.,LTD.* in accordance with Part 2-Subpart J, and Part 15-Subparts A and C of the Federal Communication Commission rules.

The tests were performed in order to determine compliance with FCC Part 15, Subpart C, and section 15.203, 15.205, 15.207, 15.209 and 15.245 rules.

Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2013, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.

Measurement Uncertainty

Item		Uncertainty
AC Power Lines Conducted Emissions		3.19 dB
RF conducted test with spectrum		0.9dB
RF Output Power with Power meter		0.5dB
Radiated emission	9 kHz~150 kHz	3.8dB
	150 kHz~30 MHz	3.4dB
	30MHz~1GHz	6.11dB
	1GHz~6GHz	4.45dB
	6GHz~18GHz	5.23dB
	18GHz~40GHz	5.65dB
	40GHz ~50GHz	4.92dB
	50GHz ~60GHz	5.16dB
Occupied Bandwidth		0.5kHz
Temperature		1.0°C
Humidity		6%

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Kunshan) to collect test data is located on the No.248 Chenghu Road, Kunshan, Jiangsu Province, China.

Bay Area Compliance Laboratories Corp. (Kunshan) is accredited in accordance with ISO/IEC 17025:2017 by NVLAP (Lab code: 600338-0), and the lab has been recognized as the FCC accredited lab under the KDB 974614 D01, the FCC Designation No.: CN5055.

SYSTEM TEST CONFIGURATION**Justification**

Operation Frequency Details:

Channel	Frequency (MHz)
Low Channel	10503.5
Middle Channel	10524.2
High Channel	10541.3

EUT Exercise Software

Engineer Mode was used during the test.

★Power level: Default

Note: The power level was declared by the applicant.

Support Equipment List and Details

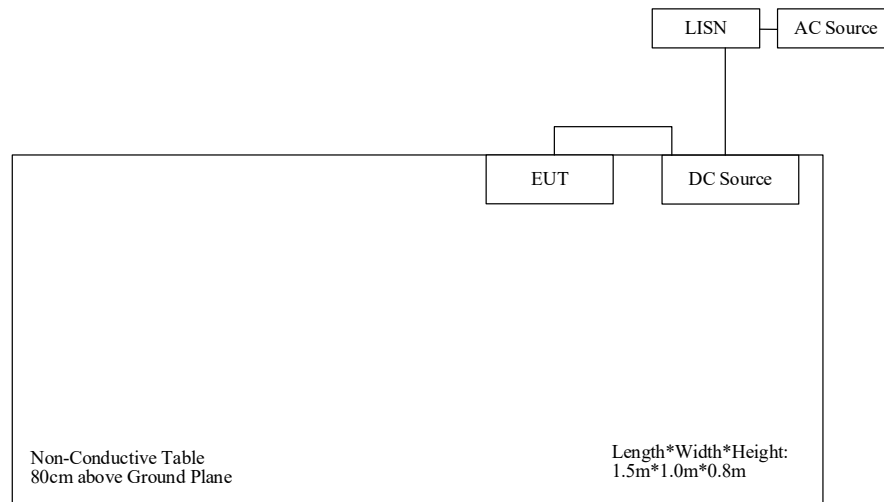
Manufacturer	Description	Model	Serial Number
ZHAOXIN	DC Source	RXN-605D	DC002

External I/O Cable

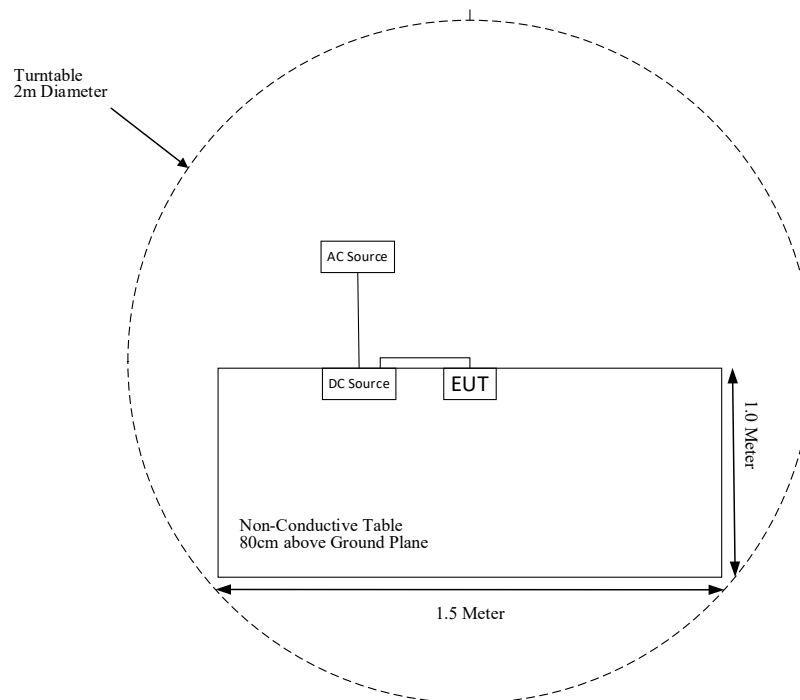
Cable Description	Length (m)	From Port	To Port
Power Cable 1	1.0	EUT	DC Source
Power Cable 2	1.0	DC Source	LISN/AC Source

Block Diagram of Test Setup

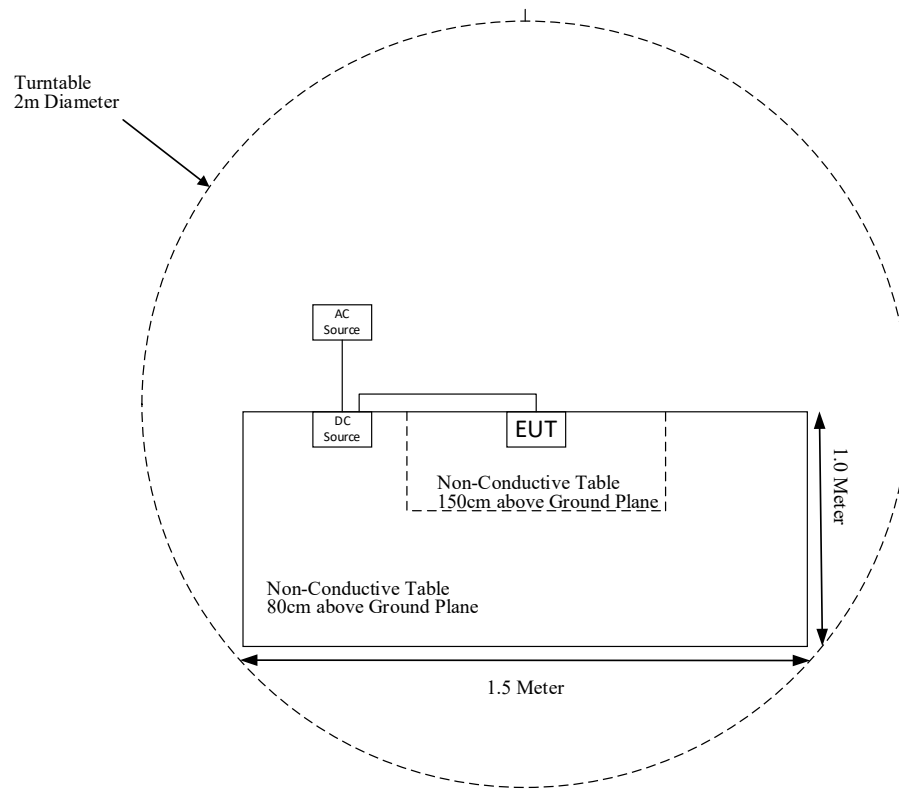
For Conducted Emissions:



For Radiated Emissions(Below 1GHz):



For Radiated Emissions(Above 1GHz):



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§ 1.1307 (b) (3) & §2.1091	RF EXPOSURE	Compliant
§15.203	Antenna Requirement	Compliant
§15.207 (a)	AC Line Conducted Emissions	Compliant
15.205, §15.209, §15.245	Radiated Emissions& Out of Band Emission	Compliant
§15.215 (c)	20 dB Bandwidth	Compliant

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Radiated Emission Test (Chamber 1#)					
Rohde & Schwarz	EMI Test Receiver	ESCI	100195	2025-04-09	2026-04-08
Sunol Sciences	Hybrid Antenna	JB3	A090314-1	2024-11-08	2027-11-07
Sonoma Instrument	Pre-amplifier	310N	171205	2025-04-09	2026-04-08
Rohde & Schwarz	Auto test Software	EMC32	100361	N/A	N/A
MICRO-COAX	Coaxial Cable	Cable-8	008	2025-04-09	2026-04-08
MICRO-COAX	Coaxial Cable	Cable-9	009	2025-04-09	2026-04-08
MICRO-COAX	Coaxial Cable	Cable-10	010	2025-04-09	2026-04-08
BACL	Active Loop Antenna	1313-1A	4041511	2024-11-22	2027-11-21
Narda	6 dB Attenuator	771-6	10690812-2-1	2024-11-08	2027-11-07
Radiated Emission Test (Chamber 2#)					
Rohde & Schwarz	EMI Test Receiver	ESU40	100207	2025-04-09	2026-04-08
ETS-LINDGREN	Horn Antenna	3115	9207-3900	2024-11-03	2027-11-02
ETS-LINDGREN	Horn Antenna	3116	2516	2024-12-12	2027-12-11
A.H.Systems, inc	Amplifier	PAM-0118P	512	2025-04-09	2026-04-08
SELECTOR	Amplifier	EM18G40G	060726	2025-04-09	2026-04-08
Rohde & Schwarz	Auto test Software	EMC32	100361	N/A	N/A
MICRO-COAX	Coaxial Cable	Cable-11	011	2025-04-09	2026-04-08
MICRO-COAX	Coaxial Cable	Cable-12	012	2025-04-09	2026-04-08
MICRO-COAX	Coaxial Cable	Cable-13	013	2025-04-09	2026-04-08
HP	SPECTRUM ANALYER	8565E	3442A00253	2025-04-09	2026-04-08
FMI	Horn Antenna	24245-AB	51	2025-04-09	2026-04-08
HP	Harmonic Mixer	11970U	2332A00837	2025-04-09	2026-04-08
Eastsheep	Attenuator	2W-N-JK-18G	10dB-01	2025-04-08	2026-04-07
MICRO-COAX	Coaxial Cable	Cable-6	006	2025-04-09	2026-04-08
Conducted Emission Test					
Rohde & Schwarz	EMI Test Receiver	ESR	1316.3003K03-101746-zn	2025-04-08	2026-04-07
Rohde & Schwarz	LISN	ENV216	101115	2025-04-08	2026-04-07
Audix	Test Software	e3	V9	N/A	N/A
Rohde & Schwarz	Pulse limiter	ESH3-Z2	100552	2025-04-08	2026-04-07
MICRO-COAX	Coaxial Cable	Cable-15	015	2025-04-08	2026-04-07

Statement of Traceability: Bay Area Compliance Laboratories Corp. (Kunshan) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

§1.1307 (b) (3) & §2.1091 – RF EXPOSURE

Applicable Standard

According to subpart 2.1091 systems operating under the provisions of this section shall be operated in a manner that ensures the public is not exposed to RF energy level in excess of the communication guidelines.

According to KDB 447498 D04 Interim General RF Exposure Guidance

MPE-Based Exemption:

General frequency and separation-distance dependent MPE-based effective radiated power(ERP) thresholds are in Table B.1 [Table 1 of § 1.1307(b)(1)(i)(C)] to support an exemption from further evaluation from 300 kHz through 100 GHz.

Table 1 to § 1.1307(b)(3)(i)(C) - Single RF Sources Subject to Routine Environmental Evaluation

RF Source frequency (MHz)	Threshold ERP (watts)
0.3-1.34	$1,920 R^2$.
1.34-30	$3,450 R^2/f^2$.
30-300	$3.83 R^2$.
300-1,500	$0.0128 R^2 f$.
1,500-100,000	$19.2 R^2$.

R is the minimum separation distance in meters

f = frequency in MHz

Result

Mode	Frequency Range (MHz)	★Tune up EIRP (dBm)	ERP		Evaluation Distance (m)	ERP Limit (W)
			(dBm)	(W)		
SRD	10503.5 –10541.3	7.5	5.35	0.00343	0.2	0.768

Note:

1. For the above tune up power were declared by the manufacturer.
2. Chose the maximum power to do RF exposure analysis.
3. This device maximum E-Field level is 102.32 dBμV/m at 3m, so the EIRP power is 7.12 dBm.
4. EIRP (dBm)=Field Strength of Fundamental(dBuV/m)-95.2 (dB)
5. ERP (dBm)= EIRP (dBm) -2.15(dB)

Result: Compliance

FCC§15.203 - ANTENNA REQUIREMENT

Applicable Standard

For intentional device, according to §15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used.

Antenna Connector Construction

The EUT has one antenna for TX and one antenna for RX, which were permanently attached to the EUT, fulfill the requirement of this section, please refer to the EUT photos.

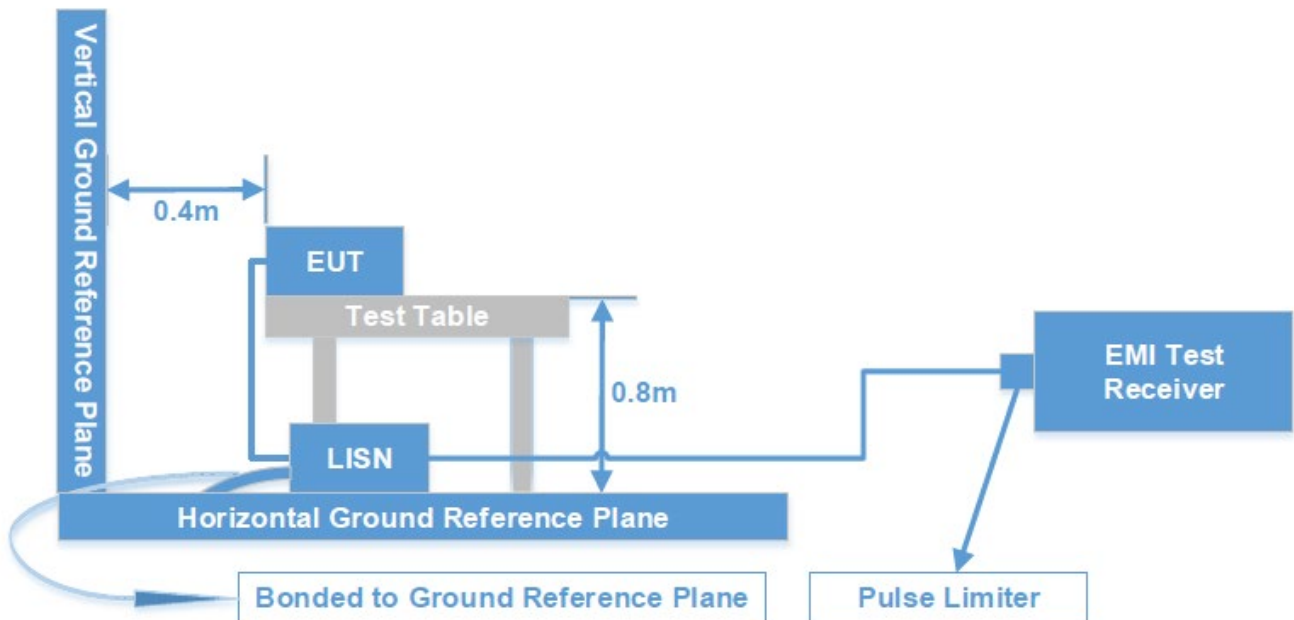
Result: Compliant.

FCC §15.207 (a) - AC LINE CONDUCTED EMISSIONS

Applicable Standard

FCC §15.207(a)

Test System Setup



The measurement procedure of EUT setup is according with ANSI C63.10-2013. The related limit was specified in FCC Part 15.207.

The spacing between the peripherals was 10 cm.

EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	RBW	VBW
150 kHz - 30 MHz	9 kHz	30 kHz

Test Procedure

ANSI C63.10-2013 clause 6.2

During the conducted emission test, the EUT was connected to the outlet of the LISN.

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

If the maximum peak value of the emissions is below the average limit, the QP value and average value measurement will not need to be performed and only record the maximum peak measured value to meet the requirements.

Level & Over Limit Calculation

The Level is calculated by adding LISN VDF (Voltage Division Factor), Cable Loss and Transient Limiter Attenuation from the Meter Reading. The basic equation is as follows:

Factor (dB) = LISN VDF (dB) + Cable Loss (dB) + Transient Limiter Attenuation (dB)

Level (dBμV) = Read level (dBμV) + Factor (dB)

The “**Over Limit**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, an Over Limit of 7 dB means the emission is 7 dB above the limit. The equation for Over Limit calculation is as follows:

Over Limit (dB) = Level (dBμV) - Limit (dBμV)

Test Results Summary

According to the recorded data in following table, the EUT complied with the FCC Part 15.207.

Test Data: See Appendix

FCC§15.205, §15.209&§15.245- RADIATED EMISSIONS& OUT OF BAND EMISSION**Applicable Standard**

According to FCC§15.245 (b), The field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

Fundamental frequency (MHz)	Field strength of fundamental (millivolts/meter)	Field strength of harmonics (millivolts/meter)
902-928	500	1.6
2435-2465	500	1.6
5785-5815	500	1.6
10500-10550	2500	25.0
24075-24175	2500	25.0

(1) Regardless of the limits shown in the above table, harmonic emissions in the restricted bands below 17.7 GHz, as specified in §15.205, shall not exceed the field strength limits shown in §15.209. Harmonic emissions in the restricted bands at and above 17.7 GHz shall not exceed the following field strength limits:

(i) For the second and third harmonics of field disturbance sensors operating in the 24075-24175 MHz band and for other field disturbance sensors designed for use only within a building or to open building doors, 25.0 mV/m.

(ii) For all other field disturbance sensors, 7.5 mV/m.

(iii) Field disturbance sensors designed to be used in motor vehicles or aircraft must include features to prevent continuous operation unless their emissions in the restricted bands, other than the second and third harmonics from devices operating in the 24075-24175 MHz band, fully comply with the limits given in §15.209. Continuous operation of field disturbance sensors designed to be used in farm equipment, vehicles such as fork lifts that are intended primarily for use indoors or for very specialized operations, or railroad locomotives, railroad cars and other equipment which travels on fixed tracks is permitted. A field disturbance sensor will be considered not to be operating in a continuous mode if its operation is limited to specific activities of limited duration (e.g., putting a vehicle into reverse gear, activating a turn signal, etc.).

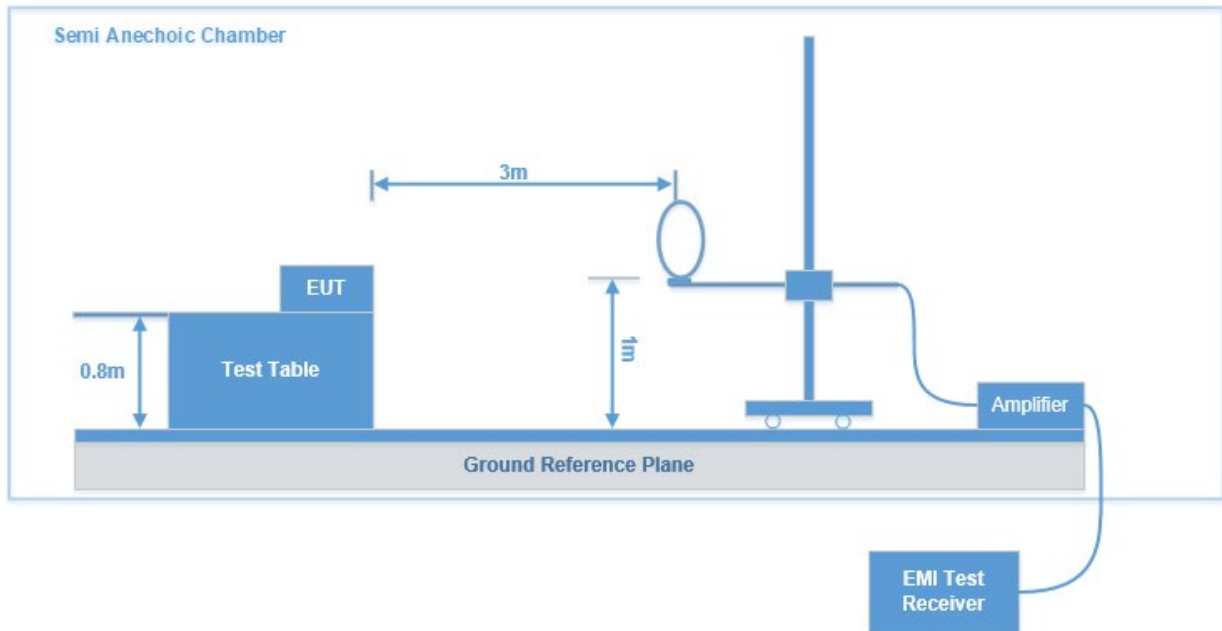
(2), Field strength limits are specified at a distance of 3 meters.

(3) Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.

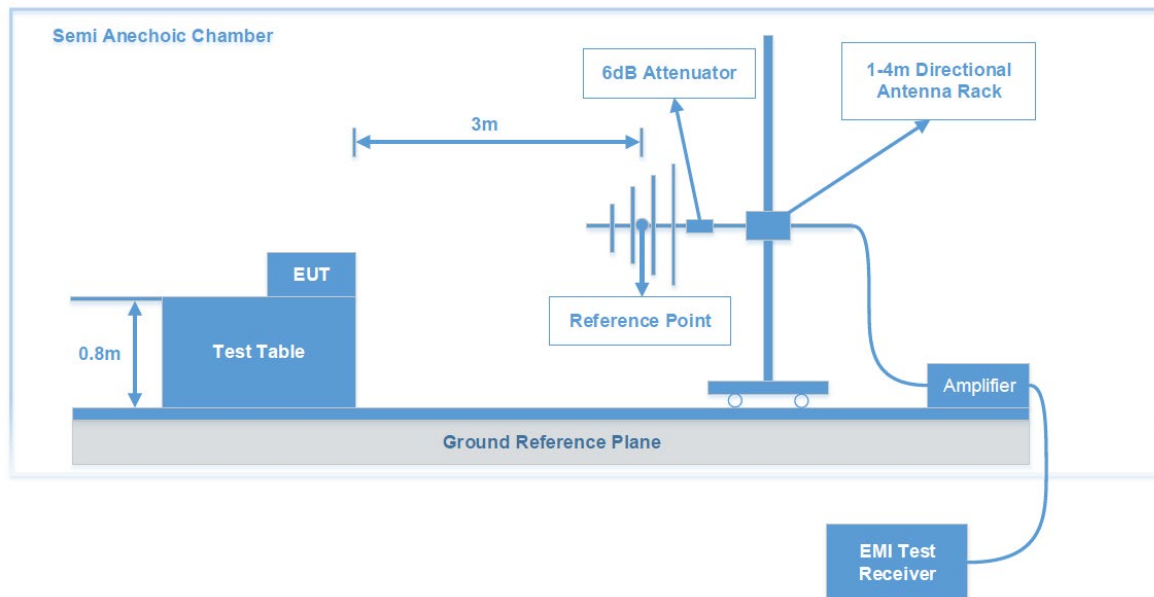
(4) The emission limits shown above are based on measurement instrumentation employing an average detector. The provisions in §15.35 for limiting peak emissions apply.

Test System Setup

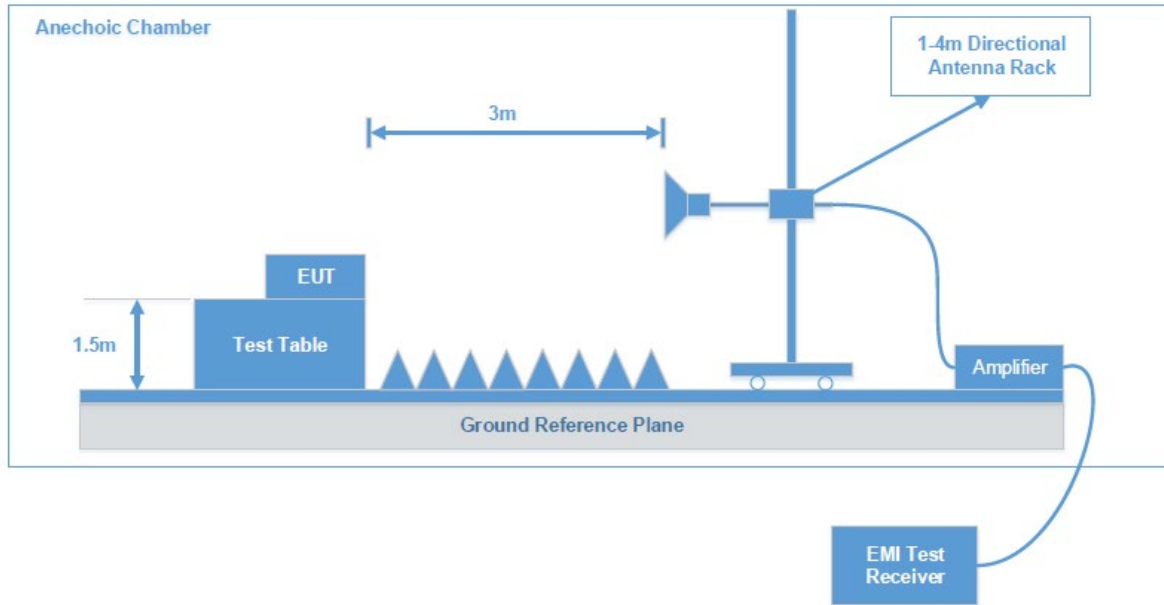
9 kHz - 30 MHz:



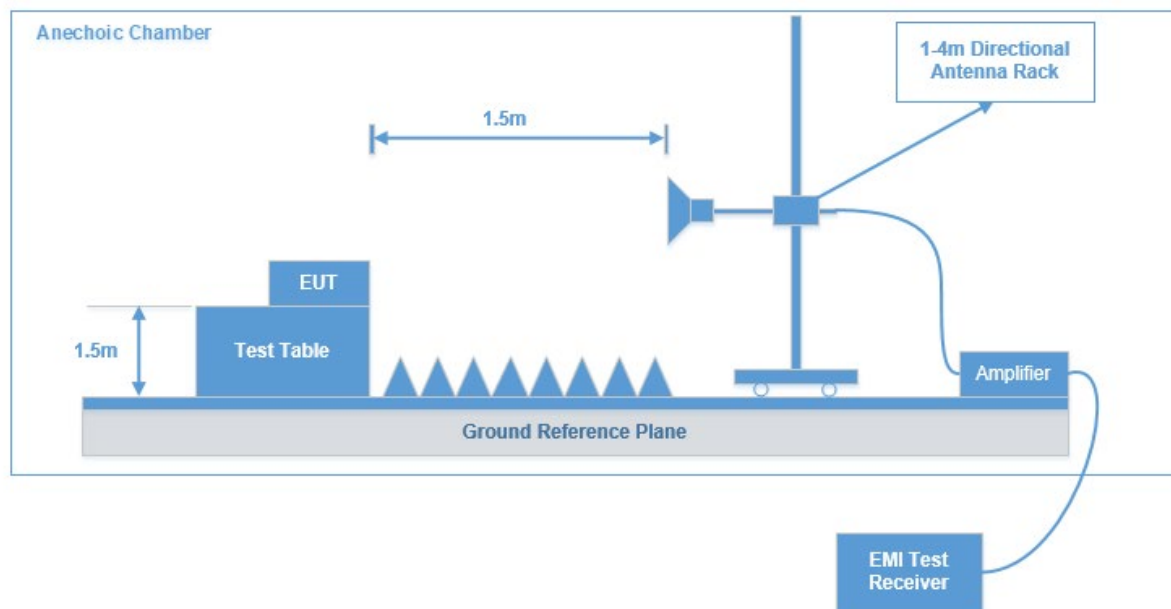
30 MHz - 1 GHz:

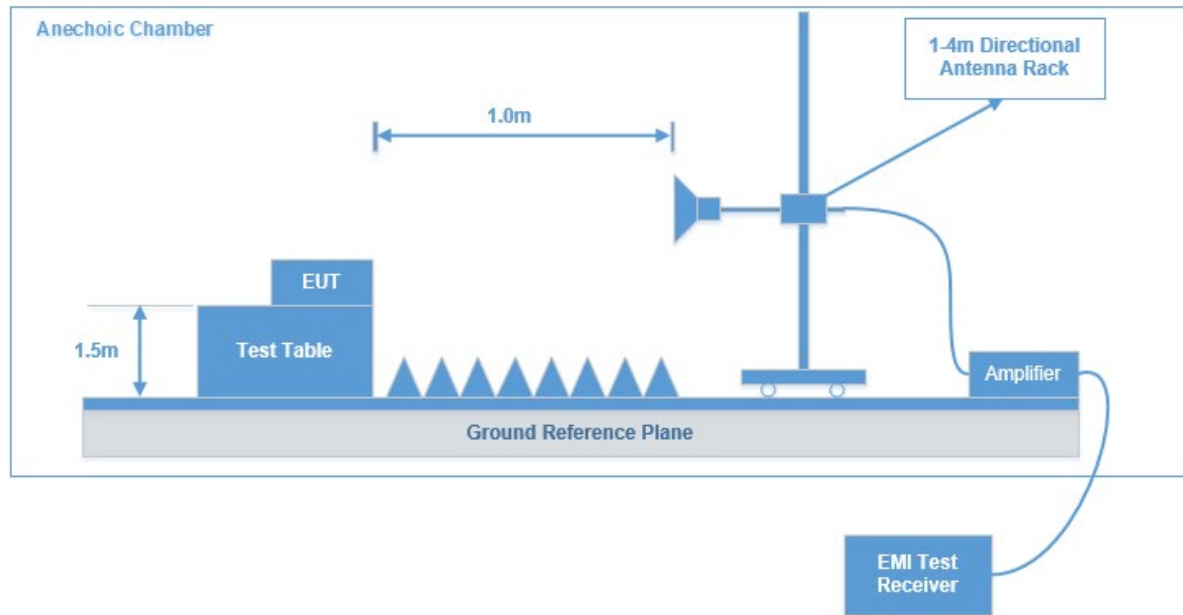


1 GHz - 18 GHz:



18 GHz - 40 GHz:



40 GHz - 60 GHz:

The radiated emission and out of band emission tests were performed in the 3 meters chamber test site, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC 15.209/15.205 and FCC 15.245 limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

Test Equipment Setup

The system was investigated from 9 kHz to 60 GHz.

During the radiated emission test, the EMI test receiver Setup was set with the following configurations:

Frequency Range	RBW	VBW	IF B/W	Detector	Measurement
9 kHz - 150 kHz	200 Hz	1 kHz	200 Hz	QP/Average	QP/Average
150 kHz - 30 MHz	9 kHz	30 kHz	9 kHz	QP/ Average	QP/ Average
30 MHz - 1000 MHz	120 kHz	300 kHz	/	Peak	Peak
	/	/	120 kHz	QP	QP
1 GHz-40 GHz	1MHz	3 MHz	/	Peak	Peak
	1MHz	3 MHz	/	Average	Average
40 GHz-60 GHz	1MHz	3 MHz	/	Peak	Peak
	1MHz	10Hz	/	Peak	Average

Note: If the maximized peak measured value complies with under the QP/Average limit more than 6dB, then it is unnecessary to perform a QP/Average measurement.

Test Procedure

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

If the measured peak level of the emissions that the measuring receiver reading level plus corrected factor is at least 10 dB below the QP emission limit, there's no need to record the measured QP level of the emissions in the report.

For 9 kHz-30MHz test, the lowest height of the magnetic antenna shall be 1 m above the ground and three antenna orientations (parallel, perpendicular, and ground-parallel) shall be measured.

Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

$$\text{Corrected Amplitude (dB}\mu\text{V/m)} = \text{Meter Reading (dB}\mu\text{V)} + \text{Antenna Factor (dB/m)} + \text{Cable Loss (dB)} - \text{Amplifier Gain (dB)}$$

Note: The QuasiPeak (dB μ V/m), MaxPeak (dB μ V/m), Average (dB μ V/m) which shown in the data table are all Corrected Amplitude.

The “**Margin/ Over Limit**” column of the following data tables indicates the degree of Compliance with the applicable limit. For example, a margin of 7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

$$\begin{aligned}\text{Margin (dB)} &= \text{Limit (dB}\mu\text{V/m)} - \text{Corrected Amplitude (dB}\mu\text{V/m)} \\ \text{Over Limit (dB)} &= \text{Level (dB}\mu\text{V/m)} - \text{Limit (dB}\mu\text{V/m)}\end{aligned}$$

Test Results Summary

According to the data in the following table, the EUT complied with the FCC Part 15.209 &15.205 & 15.245.

Test Data: See Appendix

FCC §15.215(c) - 20 dB BANDWIDTH TESTING

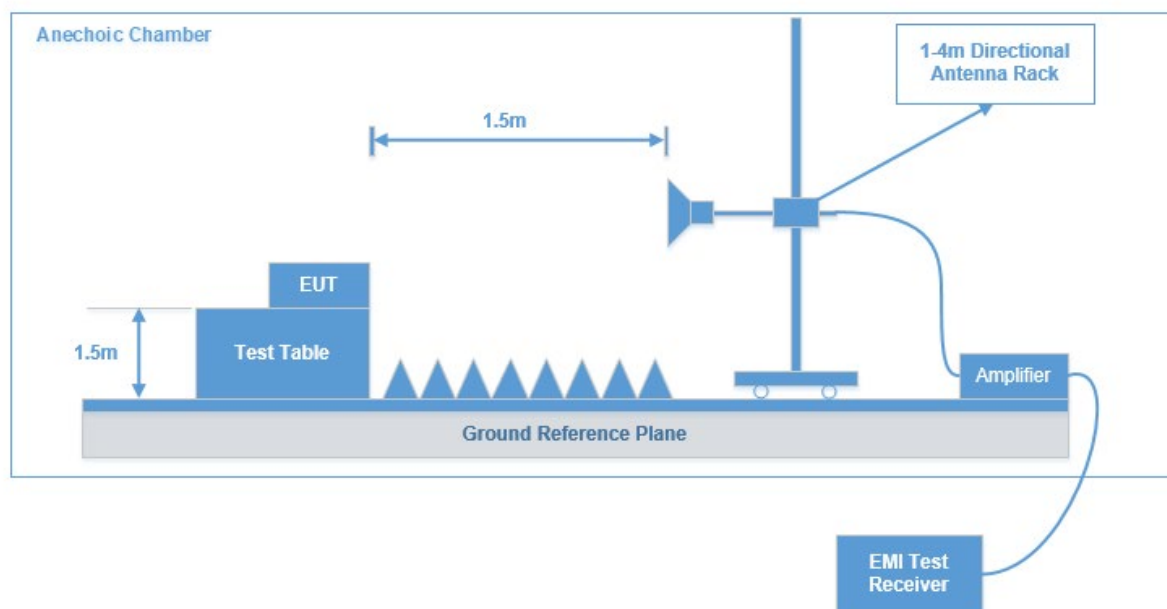
Applicable Standard

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

Test Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Position the EUT on the test table without connection to measurement instrument. Turn on the EUT. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.
3. Measure the frequency difference of two frequencies that were attenuated 20 dB from the reference level. Record the frequency difference as the emission bandwidth.
4. Repeat above procedures until all frequencies measured were complete.

Test System Setup



Test Data: See Appendix

APPENDIX - TEST DATA

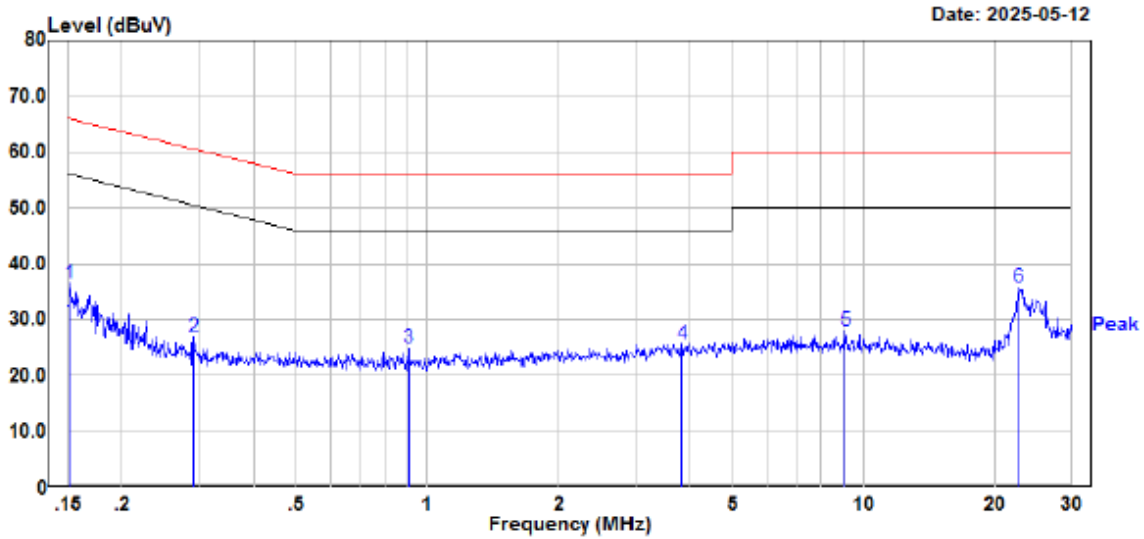
CONDUCTED EMISSIONS

Environmental Conditions & Test Information

Test Date:	2025-05-12
Temperature:	23 °C
Relative Humidity:	41 %
ATM Pressure:	101.2 kPa
Test Result:	Pass
Test Engineer:	Myles Miao

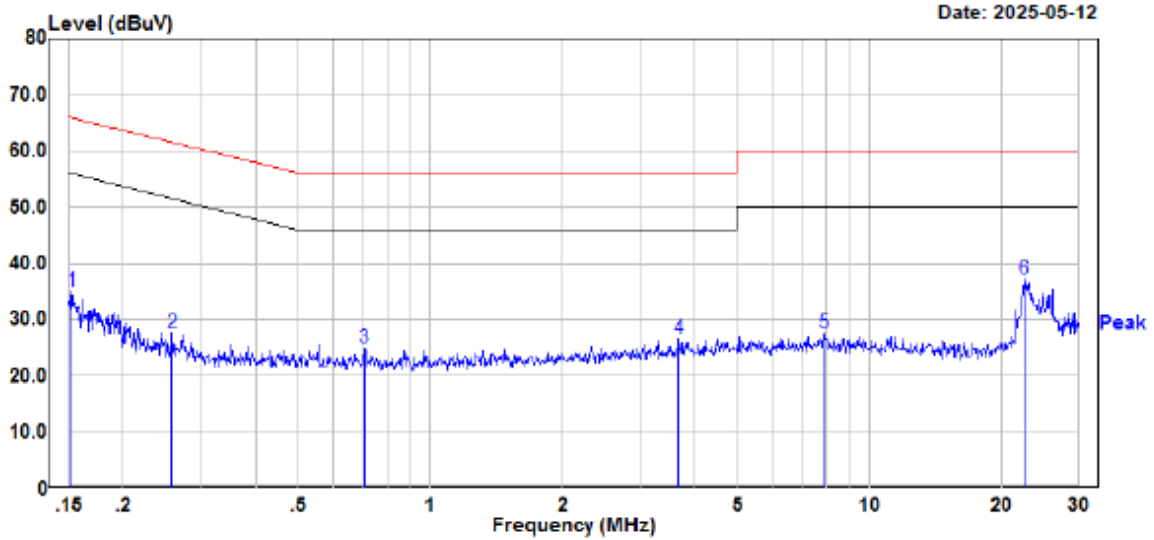
EUT operation mode: Transmitting in maximum output power channel (Low channel)

Line:



Site : CE
Condition : limit\FCC PART 15.207
: DET:Peak
Project No. : RKSA250506001
Model : PD-V9S
Phase : L
Voltage : 120V/60Hz
Mode : Mode 1
Test Equipment : ENV216,ESR
Receiver Setting : RBW: 9 kHz,Sweep Time: Auto
Temperature : 23.0°C
Humidity : 41%
Atmospheric pressure: 101.2KPa
Test Engineer : Myles Miao

	Freq	Read		Level	Limit	Over	Remark
		Level	Factor				
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.152	16.46	20.12	36.58	65.92	-29.34	Peak
2	0.291	6.57	20.16	26.73	60.49	-33.76	Peak
3	0.907	5.10	19.82	24.92	56.00	-31.08	Peak
4	3.829	5.43	20.25	25.68	56.00	-30.32	Peak
5	9.070	8.02	20.06	28.08	60.00	-31.92	Peak
6	22.693	15.91	19.78	35.69	60.00	-24.31	Peak

Neutral:

Site : CE
 Condition : limit\FCC PART 15.207
 : DET:Peak
 Project No. : RKSA250506001
 Model : PD-V9S
 Phase : N
 Voltage : 120V/60Hz
 Mode : Mode 1
 Test Equipment : ENV216,ESR
 Receiver Setting : RBW: 9 kHz,Sweep Time: Auto
 Temperature : 23.0°C
 Humidity : 41%
 Atmospheric pressure: 101.2KPa
 Test Engineer : Myles Miao

		Read			Limit	Over	
	Freq	Level	Factor	Level	Line	Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.152	14.87	20.12	34.99	65.88	-30.89	Peak
2	0.258	7.35	20.14	27.49	61.49	-34.00	Peak
3	0.707	4.77	20.06	24.83	56.00	-31.17	Peak
4	3.680	6.26	20.25	26.51	56.00	-29.49	Peak
5	7.888	7.45	20.12	27.57	60.00	-32.43	Peak
6	22.468	17.35	19.77	37.12	60.00	-22.88	Peak

RADIATED EMISSIONS

Environmental Conditions & Test Information

Test Item:	RADIATED EMISSIONS		
	9kHz - 30 MHz	30 MHz - 1 GHz	1 GHz – 18 GHz
Test Date:	2025-05-13	2025-05-12	2025-06-06
Temperature:	24.3 °C	25.8 °C	24.5 °C
Relative Humidity:	48 %	38 %	49 %
ATM Pressure:	101.4 kPa	101.2 kPa	100.7 kPa
Test Result:	Pass	Pass	Pass
Test Engineer:	Jonathan	Jonathan	Destine Hu

Test Item:	RADIATED EMISSIONS	
	18 GHz – 40 GHz	40 GHz – 60 GHz
Test Date:	2025-05-23 ~ 2025-06-04	2025-05-27
Temperature:	24.6°C ~ 25.2 °C	25.0 °C
Relative Humidity:	52 % ~ 59%	53 %
ATM Pressure:	100.4 kPa ~101.5 kPa	101.4 kPa
Test Result:	Pass	Pass
Test Engineer:	Hugh Wu	Hugh Wu

Test Result: Compliant

EUT operation mode: Transmitting

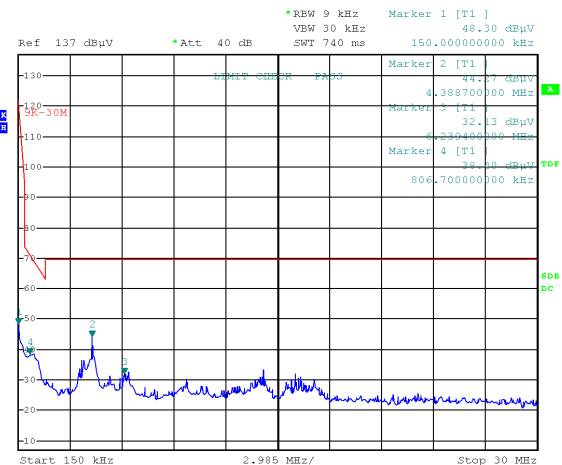
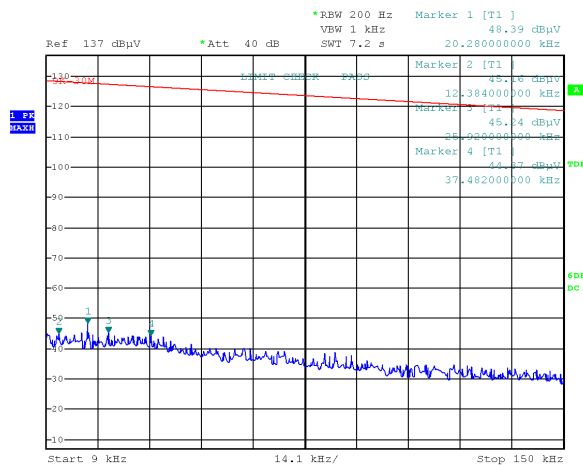
After pre-scan in the X, Y and Z axes of orientation, the worst case X axes is below:

9 kHz-30MHz: Transmitting in maximum output power channel (Low channel)

Parallel (worst case):

9 kHz-150 kHz

150 kHz -30 MHz



9 kHz-150 kHz:

Frequency	Corrected Amplitude	Detector	Corrected Factor	Limit	Margin
(MHz)	(dB μ V/m) @3m	PK/QP/Ave.	(dB/m)	(dB μ V/m @ 3m)	(dB)
0.012384	45.16	PK	-0.52	125.75	80.59
0.020280	48.39	PK	-0.56	121.46	73.07
0.025920	45.24	PK	-0.59	119.33	74.09
0.037482	44.37	PK	-1.81	116.13	71.76

150 kHz -30 MHz:

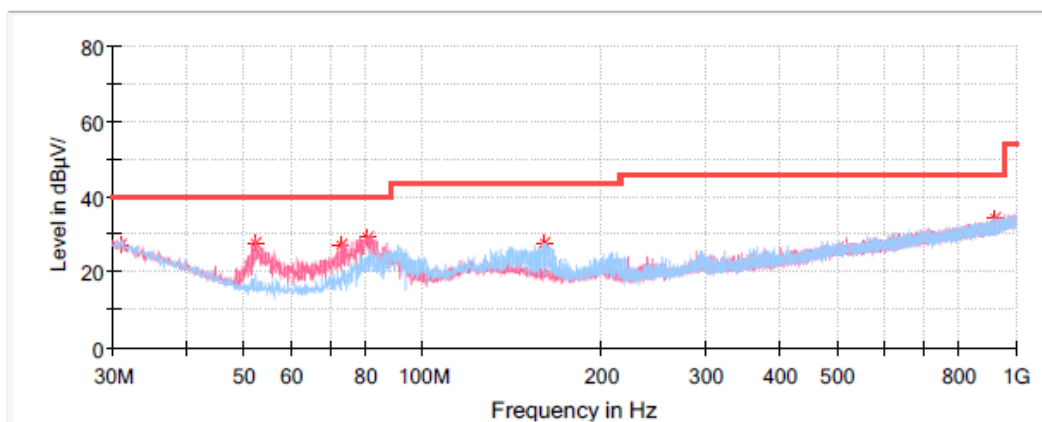
Frequency	Corrected Amplitude	Detector	Corrected Factor	Limit	Margin
(MHz)	(dB μ V/m) @3m	PK/QP/Ave.	(dB/m)	(dB μ V/m @ 3m)	(dB)
0.15000	48.30	PK	-11.34	104.08	55.78
0.80670	38.40	PK	-26.26	69.47	31.07
4.38870	44.27	PK	-31.97	69.54	25.27
6.23940	32.13	PK	-32.25	69.54	37.41

30 MHz - 1 GHz:

Low Channel

Common Information

Project No: RKSA250506001
EUT Model: PD-V9S
Test Mode: Transmitting in SRD mode low channel
Standard: FCC Part 15.205 & FCC Part 15.209 & FCC Part 15.245
Test Equipment: ESCI, JB3, 310N
Receiver Setting: RBW: 100 kHz, VBW: 300 kHz, Sweep Time: Auto
Temperature: 25.8°C
Humidity: 38%
Barometric Pressure: 101.2kPa
Test Engineer: Jonathan
Test Date: 2025/5/12

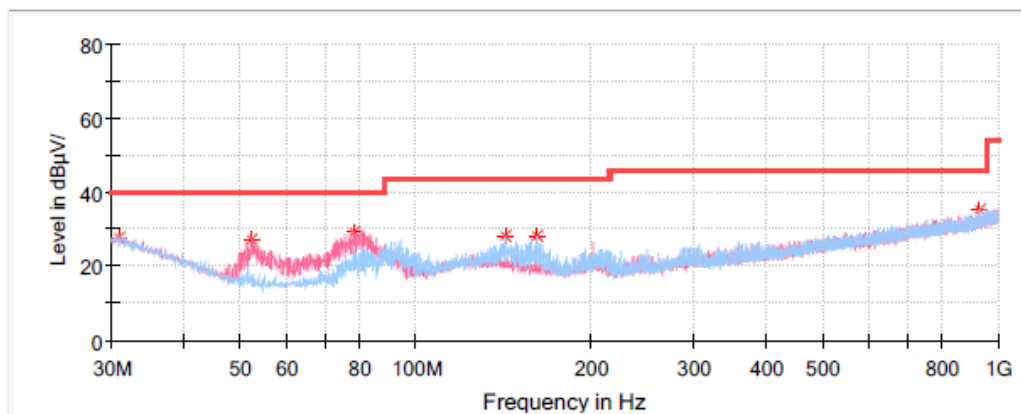


Critical_Freqs

Frequency (MHz)	MaxPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
30.970000	27.08	40.00	12.92	H	-5.4
52.310000	27.76	40.00	12.24	V	-17.0
72.922500	27.20	40.00	12.80	V	-16.7
80.925000	29.09	40.00	10.91	V	-17.1
159.980000	27.57	43.50	15.93	H	-12.1
922.278750	34.38	46.00	11.62	V	0.7

Middle Channel**Common Information**

Project No: RKSA250506001
EUT Model: PD-V9S
Test Mode: Transmitting in SRD mode middle channel
Standard: FCC Part 15.205 & FCC Part 15.209 & FCC Part 15.245
Test Equipment: ESCI, JB3, 310N
Receiver Setting: RBW: 100 kHz, VBW: 300 kHz, Sweep Time: Auto
Temperature: 25.8°C
Humidity: 38%
Barometric Pressure: 101.2kPa
Test Engineer: Jonathan
Test Date: 2025/5/12

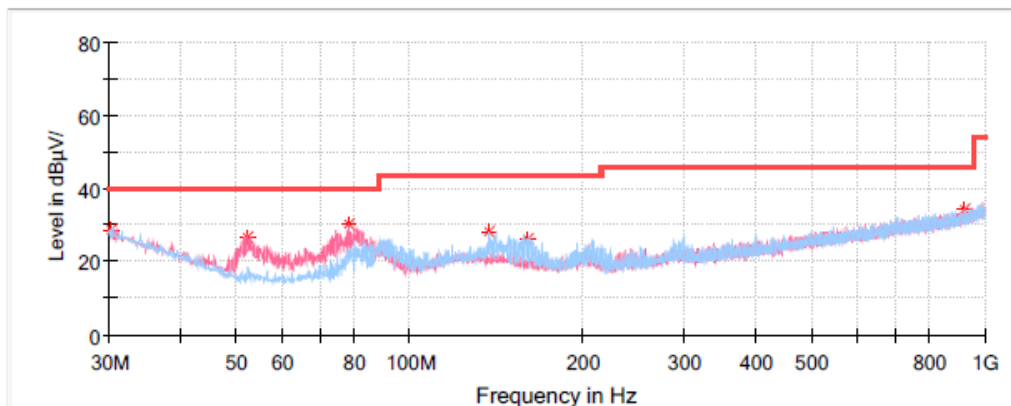
**Critical_Freqs**

Frequency (MHz)	MaxPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
30.848750	27.63	40.00	12.37	H	-5.3
52.310000	27.33	40.00	12.67	V	-17.0
78.257500	29.03	40.00	10.97	V	-17.1
142.156250	27.93	43.50	15.57	H	-11.3
161.677500	27.94	43.50	15.56	H	-12.2
929.068750	35.41	46.00	10.59	H	0.9

High Channel

Common Information

Project No: RKSA250506001
EUT Model: PD-V9S
Test Mode: Transmitting in SRD mode high channel
Standard: FCC Part 15.205 & FCC Part 15.209 & FCC Part 15.245
Test Equipment: ESCI, JB3, 310N
Receiver Setting: RBW: 100 kHz, VBW: 300 kHz, Sweep Time: Auto
Temperature: 25.8°C
Humidity: 38%
Barometric Pressure: 101.2kPa
Test Engineer: Jonathan
Test Date: 2025/5/12



Critical_Freqs

Frequency (MHz)	MaxPeak (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
30.242500	28.78	40.00	11.22	H	-4.9
52.310000	26.63	40.00	13.37	V	-17.0
78.257500	30.00	40.00	10.00	V	-17.1
137.670000	28.29	43.50	15.21	H	-11.2
160.101250	26.05	43.50	17.45	H	-12.1
923.370000	34.34	46.00	11.66	H	0.8

1 GHz – 18 GHz

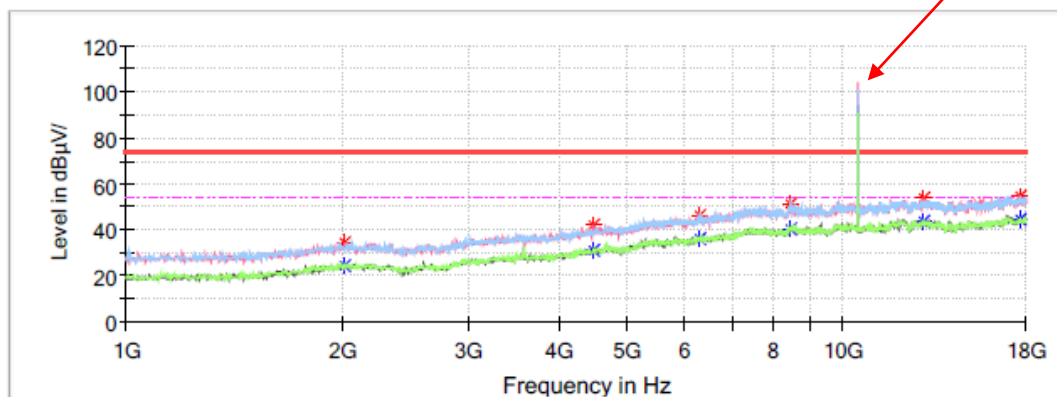
Low Channel

Common Information

Project No.: RKSA250506001
EUT Model: PD-V9S
Test Mode: Transmitting
Standard: FCC Part 15.245
Test Equipment: ESU40,3115,PAM-0118P
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Temperature: 24.5°C
Humidity: 49%
Atmospheric Pressure: 100.7kPa
Test Engineer: Destine Hu
Test Date: 2025/6/6

Fundamental

Full Spectrum



Critical Freqs

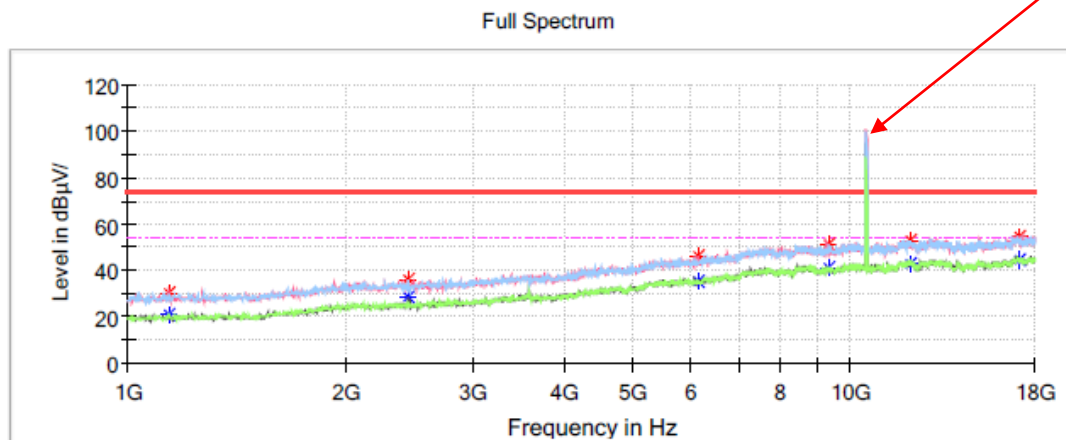
Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2013.200000	34.59	---	74.00	39.41	V	-10.5
2013.200000	---	24.35	54.00	29.65	V	-10.5
4488.400000	42.31	---	74.00	31.69	V	-4.9
4488.400000	---	30.82	54.00	23.18	V	-4.9
6293.800000	---	36.14	54.00	17.86	H	-0.8
6293.800000	46.26	---	74.00	27.74	H	-0.8
8422.200000	50.80	---	74.00	23.20	H	4.2
8422.200000	---	40.54	54.00	13.46	H	4.2
12934.000000	53.72	---	74.00	20.28	V	8.7
12934.000000	---	43.68	54.00	10.32	V	8.7
17697.400000	---	44.33	54.00	9.67	H	11.0
17697.400000	54.18	---	74.00	19.82	H	11.0

Middle Channel

Common Information

Project No.: RKSA250506001
EUT Model: PD-V9S
Test Mode: Transmitting
Standard: FCC Part 15.245
Test Equipment: ESU40,3115,PAM-0118P
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Temperature: 24.5°C
Humidity: 49%
Atmospheric Pressure: 100.7kPa
Test Engineer: Destine Hu
Test Date: 2025/6/6

Fundamental



Critical_Freqs

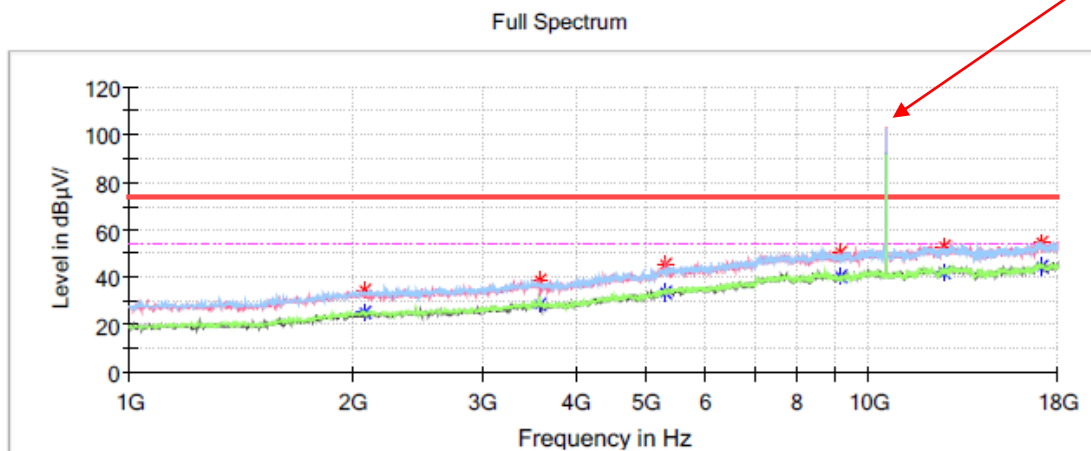
Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
1139.400000	30.03	---	74.00	43.97	V	-15.4
1139.400000	---	20.78	54.00	33.22	V	-15.4
2441.600000	36.11	---	74.00	37.89	V	-10.2
2441.600000	---	28.37	54.00	25.63	V	-10.2
6151.000000	45.91	---	74.00	28.09	V	-0.9
6151.000000	---	35.64	54.00	18.36	V	-0.9
9302.800000	51.20	---	74.00	22.80	H	4.4
9302.800000	---	40.81	54.00	13.19	H	4.4
12077.200000	---	43.01	54.00	10.99	H	8.1
12077.200000	53.11	---	74.00	20.89	H	8.1
17126.200000	---	44.24	54.00	9.76	V	11.0
17126.200000	54.93	---	74.00	19.07	V	11.0

High Channel

Common Information

Project No.: RKSA250506001
EUT Model: PD-V9S
Test Mode: Transmitting
Standard: FCC Part 15.245
Test Equipment: ESU40,3115,PAM-0118P
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Temperature: 24.5°C
Humidity: 49%
Atmospheric Pressure: 100.7kPa
Test Engineer: Destine Hu
Test Date: 2025/6/6

Fundamental

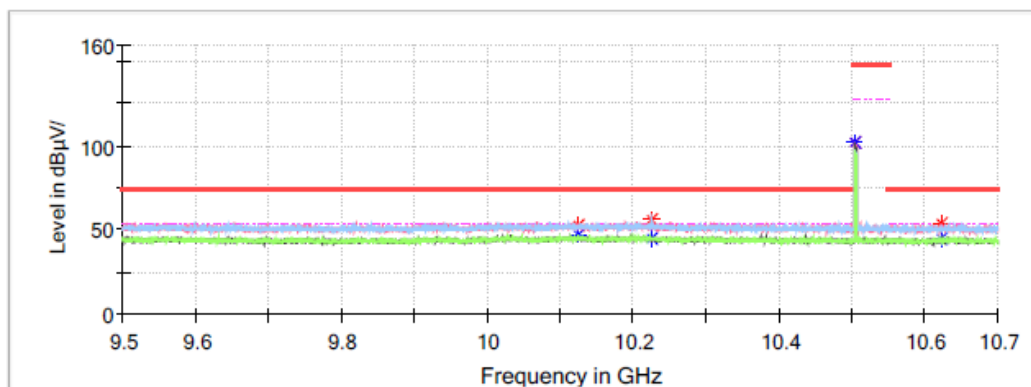


Critical Freqs

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
2081.200000	---	24.93	54.00	29.07	V	-10.4
2081.200000	34.78	---	74.00	39.22	V	-10.4
3587.400000	---	28.63	54.00	25.37	H	-7.1
3587.400000	38.29	---	74.00	35.71	H	-7.1
5290.800000	---	33.77	54.00	20.23	V	-2.3
5290.800000	45.20	---	74.00	28.80	V	-2.3
9139.600000	---	40.03	54.00	13.97	V	4.4
9139.600000	50.37	---	74.00	23.63	V	4.4
12638.200000	---	41.85	54.00	12.15	H	8.7
12638.200000	53.12	---	74.00	20.88	H	8.7
17119.400000	---	44.83	54.00	9.17	H	11.1
17119.400000	54.34	---	74.00	19.66	H	11.1

Band Edge:**Low Channel****Common Information**

Project No.: RKSA250506001
EUT Model: PD-V9S
Test Mode: Transmitting
Standard: FCC Part 15.245
Test Equipment: ESU40,3115,PAM-0118P
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Temperature: 24.5°C
Humidity: 49%
Atmospheric Pressure: 100.7kPa
Test Engineer: Destine Hu
Test Date: 2025/6/6

Full Spectrum**Critical Freqs**

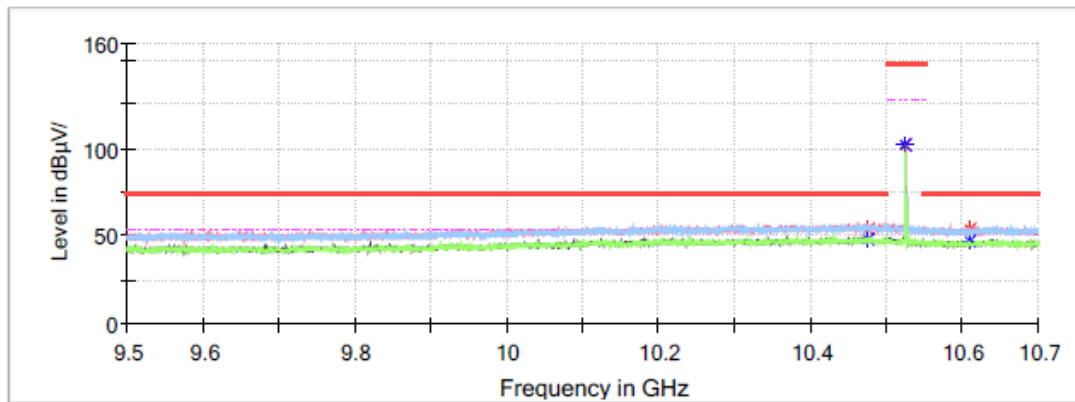
Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
10124.240000	52.43	---	74.00	21.57	V	7.0
10124.240000	---	47.07	54.00	6.93	V	7.0
10226.360000	55.59	---	74.00	18.41	H	7.0
10226.360000	---	45.19	54.00	8.81	H	7.0
10504.760000	---	101.86	127.96	26.10	V	7.1
10504.760000	101.99	---	147.96	45.97	V	7.1
10622.360000	---	44.69	54.00	9.31	V	6.9
10622.360000	53.93	---	74.00	20.07	V	6.9

Middle Channel

Common Information

Project No.: RKSA250506001
EUT Model: PD-V9S
Test Mode: Transmitting
Standard: FCC Part 15.245
Test Equipment: ESU40,3115,PAM-0118P
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Temperature: 24.5°C
Humidity: 49%
Atmospheric Pressure: 100.7kPa
Test Engineer: Destine Hu
Test Date: 2025/6/6

Full Spectrum



Critical Freqs

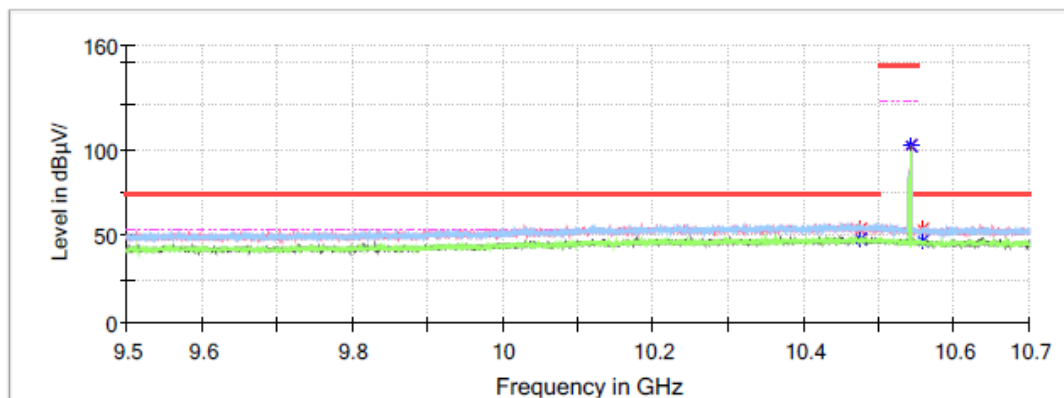
Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
10476.200000	---	47.90	54.00	6.10	V	10.9
10476.200000	54.21	---	74.00	19.79	V	10.9
10524.680000	---	101.35	127.96	26.61	V	10.2
10524.680000	101.48	---	147.96	46.48	V	10.2
10609.280000	---	46.44	54.00	7.56	H	9.0
10609.280000	54.24	---	74.00	19.76	H	9.0

High Channel

Common Information

Project No.: RKSA250506001
EUT Model: PD-V9S
Test Mode: Transmitting
Standard: FCC Part 15.245
Test Equipment: ESU40,3115,PAM-0118P
Receiver Setting: RBW: 1MHz, VBW: 3MHz, Sweep Time: Auto
Temperature: 24.5°C
Humidity: 49%
Atmospheric Pressure: 100.7kPa
Test Engineer: Destine Hu
Test Date: 2025/6/6

Full Spectrum



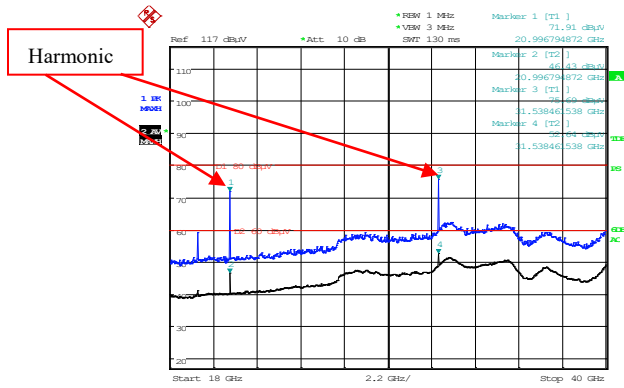
Critical_Freqs

Frequency (MHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
10474.760000	---	47.99	54.00	6.01	V	10.9
10474.760000	53.93	---	74.00	20.07	V	10.9
10542.200000	102.32	---	147.96	45.64	V	9.5
10542.200000	---	102.21	127.96	25.75	V	9.5
10558.640000	53.28	---	74.00	20.72	H	9.2
10558.640000	---	47.31	54.00	6.69	H	9.2

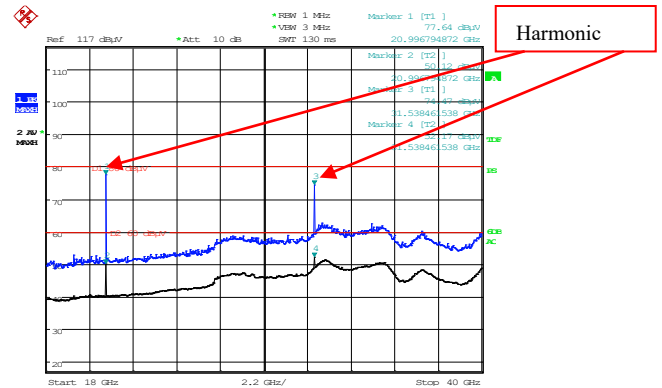
18 GHz - 40 GHz:

Low channel

Horizontal



Vertical



Project No.: RKSA250506001
Date: 4.JUN.2025 11:37:39

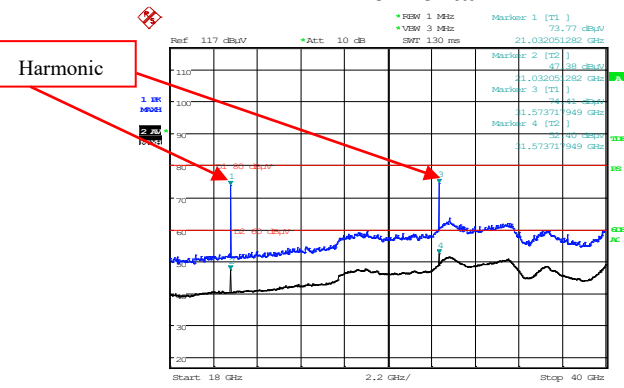
Tester: Hugh Wu

Project No.: RKSA250506001
Date: 4.JUN.2025 12:14:18

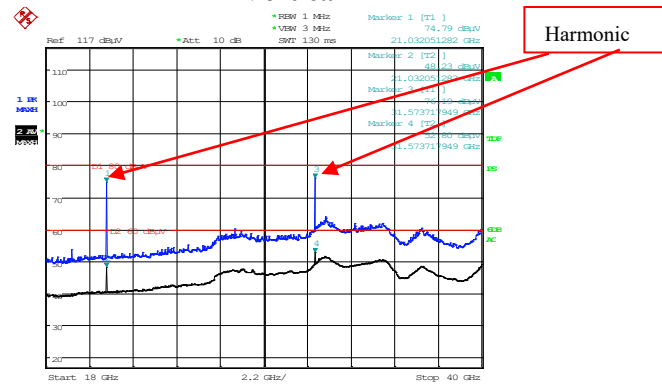
Tester: Hugh Wu

Middle channel

Horizontal



Vertical



Project No.: RKSA250506001
Date: 23.MAY.2025 21:16:54

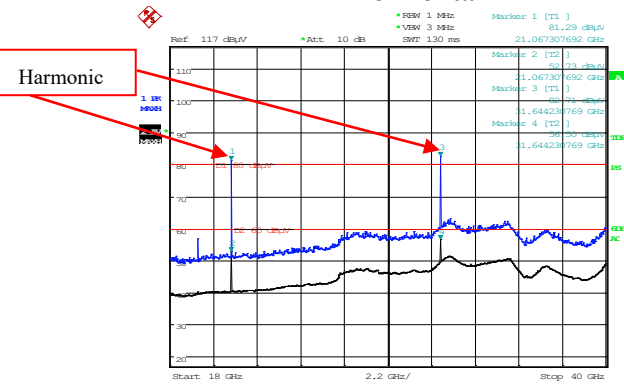
Tester: Hugh Wu

Project No.: RKSA250506001
Date: 23.MAY.2025 21:50:05

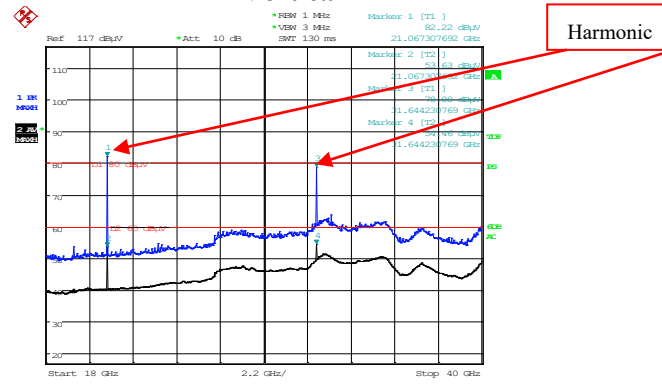
Tester: Hugh Wu

High channel

Horizontal



Vertical



Project No.: RKSA250506001
Date: 4.JUN.2025 12:48:21

Tester: Hugh Wu

Project No.: RKSA250506001
Date: 4.JUN.2025 13:24:46

Tester: Hugh Wu

Note: The test distance is 1.5m. The unit of limit and test level are dBμV/m.

18 GHz - 40 GHz:**Low channel**

Frequency (GHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
21.00	---	46.43	83.50	37.07	H	13.18
21.00	71.91	---	103.50	31.59	H	13.18
31.54	---	52.64	83.50	30.86	H	21.79
31.54	75.69	---	103.50	27.81	H	21.79
21.00	---	50.12	83.50	33.38	V	13.18
21.00	77.64	---	103.50	25.86	V	13.18
31.54	---	52.17	83.50	31.33	V	21.79
31.54	74.47	---	103.50	29.03	V	21.79

Middle channel

Frequency (GHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
21.03	---	47.38	83.50	36.12	H	13.18
21.03	73.77	---	103.50	29.73	H	13.18
31.57	---	52.40	83.50	31.10	H	21.88
31.57	74.41	---	103.50	29.09	H	21.88
21.03	---	48.23	83.50	35.27	V	13.18
21.03	74.79	---	103.50	28.71	V	13.18
31.57	---	52.80	83.50	30.70	V	21.88
31.57	76.19	---	103.50	27.31	V	21.88

High channel

Frequency (GHz)	MaxPeak (dB μ V/m)	Average (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Pol	Corr. (dB/m)
21.07	---	52.73	83.50	30.77	H	13.19
21.07	81.29	---	103.50	22.21	H	13.19
31.64	---	56.50	83.50	27.00	H	22.08
31.64	82.71	---	103.50	20.79	H	22.08
21.07	---	53.63	83.50	29.87	V	13.19
21.07	82.22	---	103.50	21.28	V	13.19
31.64	---	54.46	83.50	29.04	V	22.08
31.64	78.88	---	103.50	24.62	V	22.08

Extrapolation factor of 20dB/decade from 3m to 1.5m

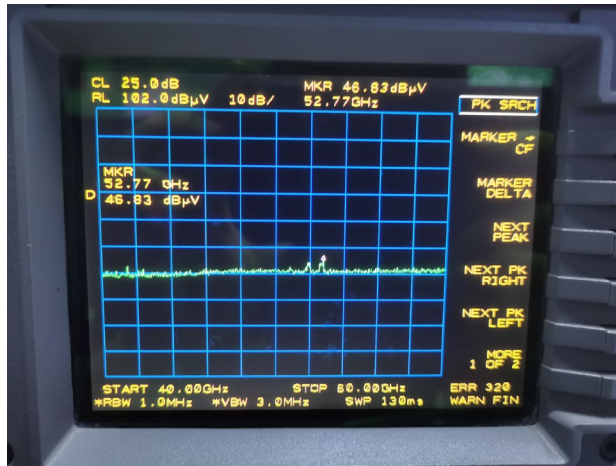
Distance extrapolation factor = $20 \log (\text{specific distance [3m]}/\text{test distance [1.5m]})$ dB

Limit = Specific limits(dB μ V/m) + distance extrapolation factor (6dB)

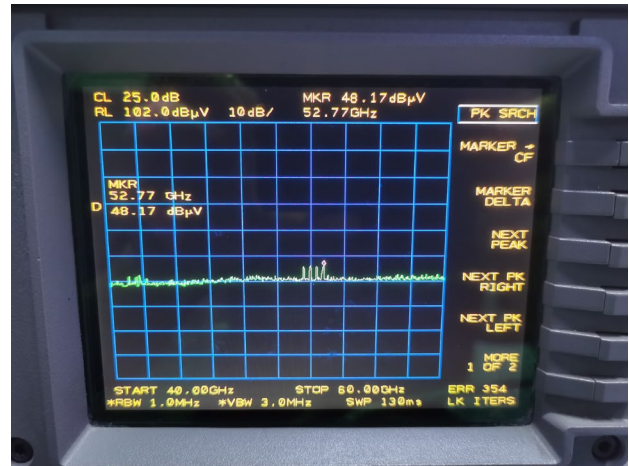
40 GHz - 60 GHz:

Low channel

Horizontal

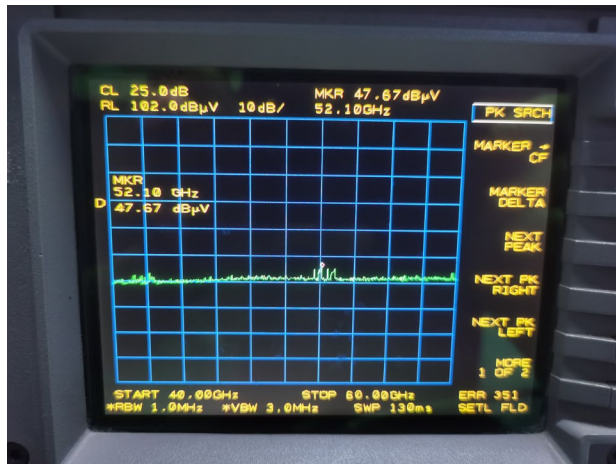


Vertical

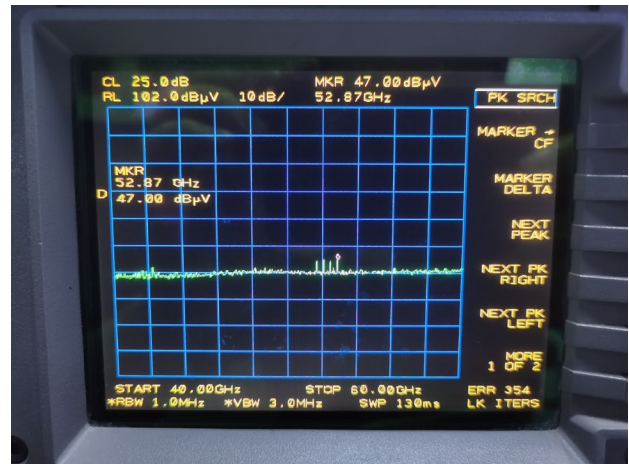


Middle channel

Horizontal

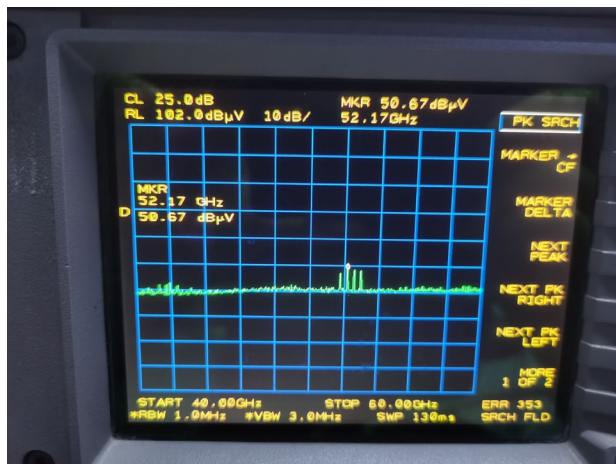


Vertical

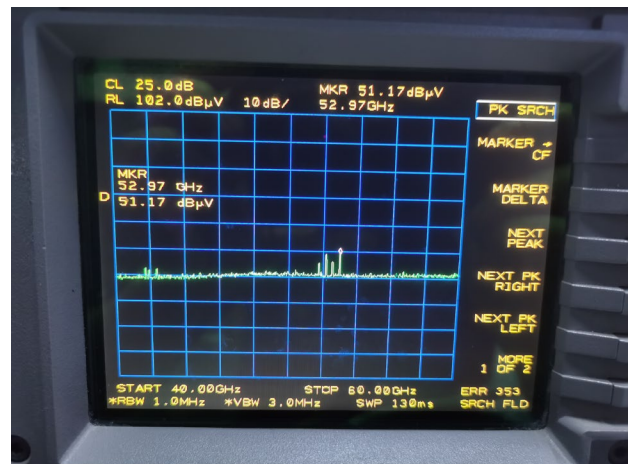


High channel

Horizontal



Vertical



40 GHz - 60 GHz:

Frequency (GHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
Low Channel							
52.77	46.83	83.54	36.71	150	H	156	25
52.77	48.17	83.54	35.37	200	V	148	25
Middle Channel							
52.10	47.67	83.54	35.87	200	H	168	25
52.87	47.00	83.54	36.54	150	V	45	25
High Channel							
52.17	50.67	83.54	32.87	150	H	245	25
52.97	51.17	83.54	32.37	150	V	159	25

Note: The limit on the peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. Therefore, when the measured peak level of the emissions is at least 20 dB below the peak emission limit, there's no need to record the measured AV level of the emissions.

Extrapolation factor of 20dB/decade from 3m to 1.0m

Distance extrapolation factor = $20 \log (\text{specific distance [3m]}/\text{test distance [1m]})$ dB

Limit = Specific limits(dBμV/m) + distance extrapolation factor (9.54dB)

20 dB BANDWIDTH TESTING

Environmental Conditions & Test Information

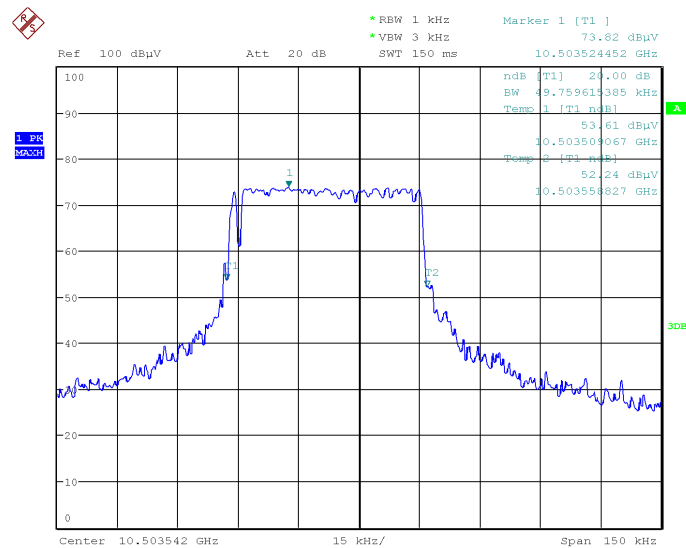
Test Date:	2025-06-09
Temperature:	23.2 °C
Relative Humidity:	52 %
ATM Pressure:	100.6 kPa
Test Result:	Pass
Test Engineer:	Neil Zhou

Test Result: Compliant.

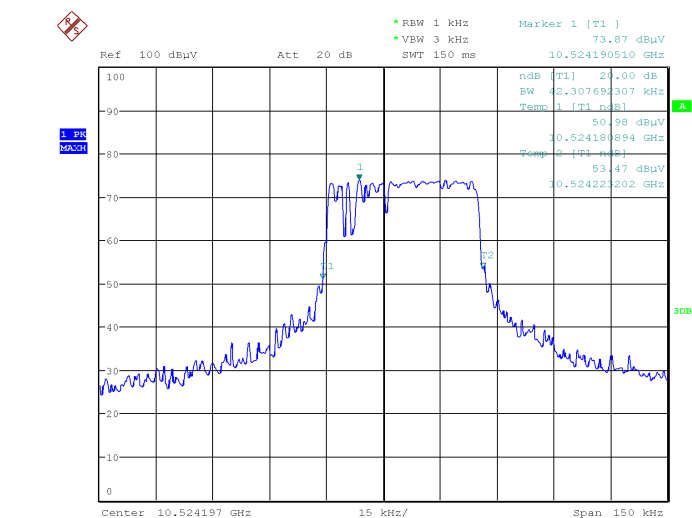
Test Mode: Transmitting

Channel	20 dB BANDWIDTH (kHz)
Low	49.759615
Middle	42.307692
High	48.317308

Low channel

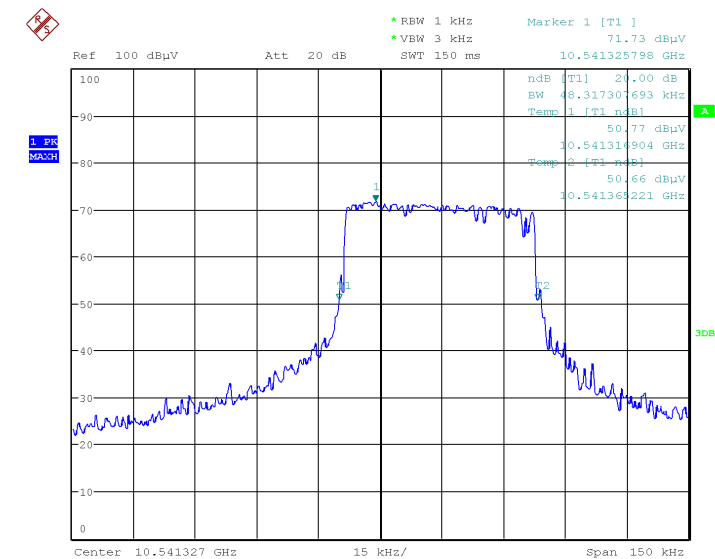


Middle channel



ProjectNo.:RKSA250506001 Tester:Neil Zhou
Date: 9.JUN.2025 09:55:35

High channel



ProjectNo.:RKSA250506001 Tester:Neil Zhou
Date: 9.JUN.2025 09:59:43

EUT PHOTOGRAPHS

Please refer to the attachment EXHIBIT A - EUT EXTERNAL PHOTOGRAPHS, EXHIBIT B - EUT INTERNAL PHOTOGRAPHS.

TEST SETUP PHOTOGRAPHS

Please refer to the attachment EXHIBIT C - TEST SETUP PHOTOGRAPHS.

Declarations

1. The laboratory is not responsible for the authenticity of any information provided by the applicant. Information from the applicant that may affect test results is marked with “★”.
2. The test data was only valid for the test sample(s).
3. This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.
4. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.
5. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor $k=2$ with the 95.45% confidence interval.

*******END OF REPORT*******