RADIO TEST REPORT

FCC ID	:	2BNVN9WRWDC24210USA
Equipment	:	Wine Aerator
Brand Name	:	KAIROS
Model Name	:	9WRWDC24210
Applicant	:	MEGADOTS LIMITED FLAT 305 2 CUTTER LANE, LONDON, ENGLAND SE10 0ZT
Manufacturer	:	MEGADOTS LIMITED FLAT 305 2 CUTTER LANE, LONDON, ENGLAND SE10 0ZT
Standard	:	47 CFR FCC Part 15.255

The product was received on Jan. 21, 2025, and testing was started from Feb. 03, 2025 and completed on Apr. 11, 2025. We, Sporton International Inc. Hsinchu Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2020 47 CFR FCC Part 15.255 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. Hsinchu Laboratory, the test report shall not be reproduced except in full.

Approved by: Rex Liao

Sporton International Inc. Hsinchu Laboratory
No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)

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History of this test report

Report No.	Version	Description	Issued Date
FR450331-01	01	Initial issue of report	Mar. 13, 2025
FR450331-01	02	Remove the blank page in section 4.	Mar. 24, 2025
FR450331-01	03	1. Update the ref standard to 15.255(c)(2)(iii)(A) 2. Update the duty cycle in section 1.1.6	Mar. 31, 2025
FR450331-01	04	Update the duty cycle in section 1.1.6.	Apr. 14, 2025

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.207	AC Power Conducted Emissions	PASS	Note 1
3.2	15.255(e)	Occupied Bandwidth	PASS	-
3.3	15.255(c)(2)(iii)(A)	EIRP Power	PASS	-
-	15.255(c)(2)(iii)(A)	Peak Conducted Power	PASS	Note 2
3.4	15.255(d)	Transmitter Spurious Emissions	PASS	-
3.5	15.255(f)	Frequency Stability	PASS	-
3.6	15.255(a),(h)	Operation Restriction and Group Installation	PASS	-

Note 1: When the EUT is supplied power by battery, it's not necessary to apply to AC Power Conducted Emissions test.
Note 2: Field disturbance Sensors/radar (unrestricted radar use-case applications) w/o test.

Conformity Assessment Condition:

1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the chapter "Measurement Uncertainty".

Disclaimer:

The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

Reviewed by: Sam Chen

Report Producer: Sophia Shiung

1 General Description

1.1 Information

1.1.1 RF General Information

RF General Information			
Frequency Range	**Operating Frequency (GHz)**	**Test Frequency (GHz)**	**Modulation**
57-71 GHz	Channel 1: 61.1 / Channel 2: 61.2 / Channel 3: 61.3 / Channel 4: 61.4	61.1, 61.2, 61.4	CW

1.1.2 Antenna Information

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	Remark
1	Millitronic Co., LTD	9WRWDC24210	PCB	N/A	6	1TX

Note: The above information was declared by manufacturer.

1.1.3 Power Levels

Worst Power Levels	
Applicable power levels	☐ Conducted ☒ EIRP
Frequency (GHz)	Highest (P_{high}):
	Peak Power (dBm)
61.1	6.28
61.2	4.67
61.4	3.06

1.1.4 Operating Conditions

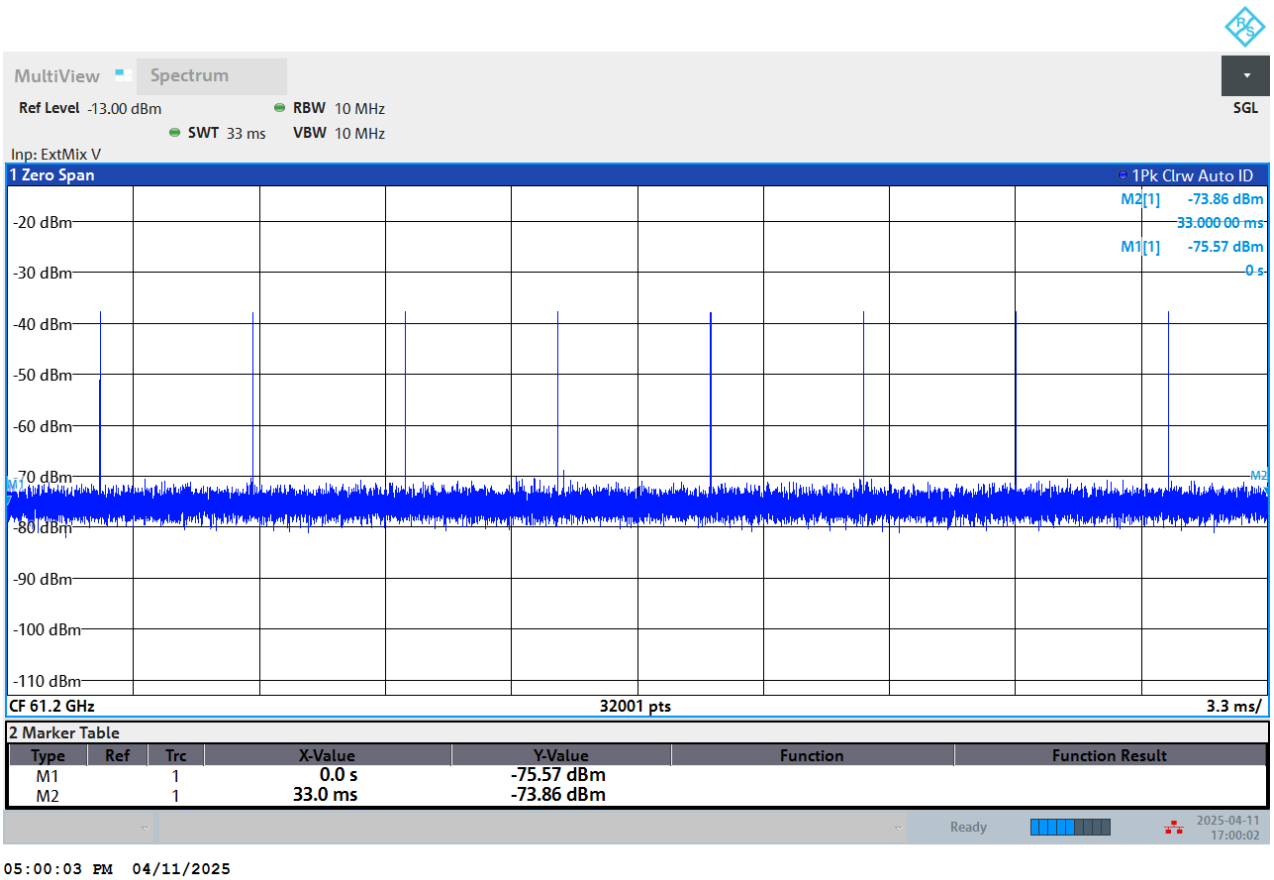
Operating Conditions			
☐ -20 °C to +50 °C			
☒ 0 °C to +45 °C			
☐ Other:			
EUT Power Type	From Lithium-ion Battery (3.7V) or host system		
Test Software Version	Tera Term 4.75		
Supply Voltage	☐ AC	State AC voltage	V
Supply Voltage	☒ DC	State DC voltage 5	V

1.1.5 Equipment Use Condition

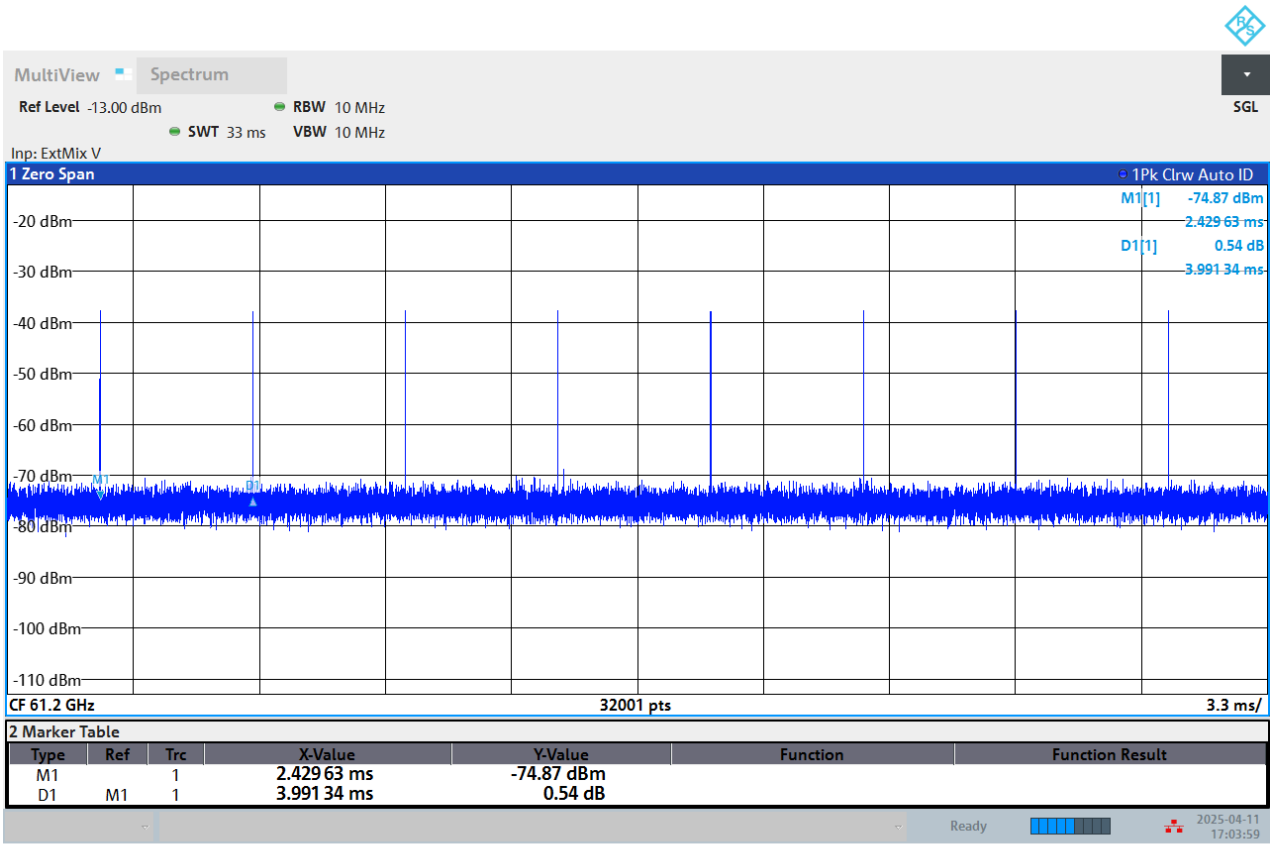
Equipment Use Condition	
☐	Fixed field disturbance sensors at 61-61.5GHz
☐	Except fixed field disturbance sensors at 61-61.5GHz
☐	Except fixed field disturbance sensors
☐	Field disturbance sensors/radar
☐	For fixed field disturbance sensors that occupy 500 MHz or less
☐	Field disturbance sensor/radar Personal portable equipment
☐	Field disturbance Sensors /radar(Outdoor drones/UA uses)
☐	Field disturbance Sensors /radar(vehicular applications (e.g., in-cabin radars))
☒	Field disturbance Sensors /radar(unrestricted radar use-case applications)
☐	Field disturbance Sensors /radar(Fixed outdoor or vehicular uses)(except in-cabin)
☐	For pulsed field disturbance sensors/radars

1.1.6 Duty Cycle

Spectrum plot					
TX-on per 33ms (ms)	One pulse off time (ms)	Off time per 33ms (ms)	One pulse off time limit (ms)	Off time per 33ms limit (ms)	Duty Cycle(%)
0.04125	3.99134	32.9588	2	25.5	0.0125
On Time					



Off Time



05:03:59 PM 04/11/2025

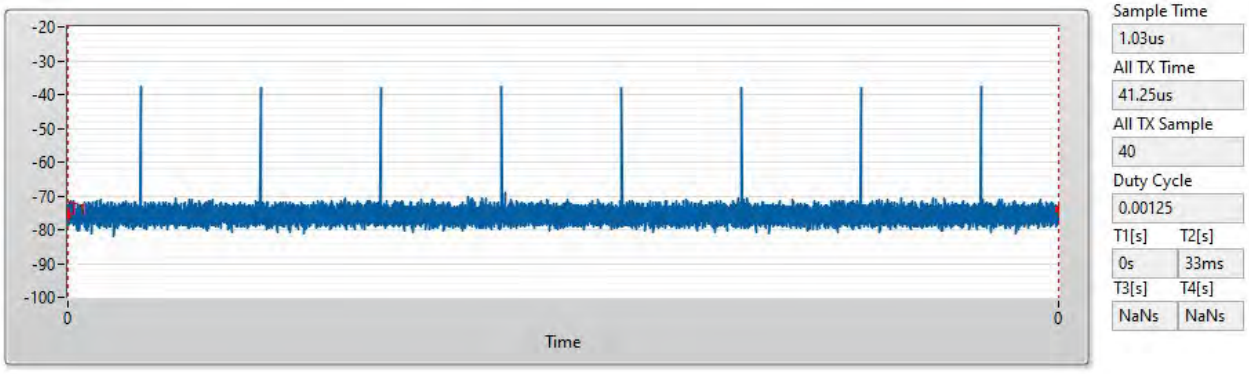
Scope Result

T1:0s, T2:33ms, Sample time = 1.03us

All TX sample = 40

All TX time = 1.03us x 40 = 41.25us

Off Time = 33ms – 41.25us = 32.9588 ms



1.1.7 Table for EUT Information

EUT	Color of Outer	Description
EUT 1	Black	The EUT has three different housings with different colors, but their internal circuit boards are identical.
EUT 2	Green	
EUT 3	Red	

Note 1: From the above EUTs, the EUT 1 was selected to test and its data was recorded in this report.

Note 2: The above information was declared by manufacturer.

1.2 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- 47 CFR FCC Part 15.255
- ANSI C63.10-2020 Section 9. “Procedures for testing millimeter-wave systems”

The following reference test guidance is not within the scope of accreditation of TAF.

- FCC KDB 414788 D01 v01r01 radiation
- FCC KDB 364244 D01 V01

1.3 Testing Location

Testing Location Information	
Test Lab.：Sporton International Inc. Hsinchu Laboratory	
Hsinchu	ADD: No.8, Ln. 724, Bo’ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)
(TAF: 3787)	TEL: 886-3-656-9065 FAX: 886-3-656-9085
	Test site Designation No. TW3787 with FCC.
	Conformity Assessment Body Identifier (CABID) TW3787 with ISED.

Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
Radiated (Frequency Stability)	TH01-CB	Jay Lo	24.5~24.6 / 56~59	Feb. 06, 2025
Radiated < 1GHz (Others)	03CH05-CB	Alex Kuo	21.9~22.4 / 60~62	Feb. 03, 2025~ Feb. 26, 2025
Radiated > 1GHz (Others)	03CH06-CB	Gordon Hung	22.5-22.9 / 58-60	Feb. 05, 2025~ Feb. 06, 2025
Radiated > 1GHz (Duty Cycle)	03CH06-CB		22.5-22.9 / 58-60	Apr. 11, 2025
AC Conduction	CO02-CB	Joe Chu	23~24 / 50~51	Feb. 07, 2025

2 Test Configuration of Equipment under Test

2.1 Parameters of Test Software Setting

Frequency (GHz)	61.1, 61.2, 61.4
Software Setting	Default

2.2 Conformance Tests and Related Test Frequencies

Test Item	Test Frequencies (GHz)
AC Power Conducted Emissions Test Voltage: 120Vac / 60Hz	Random
Occupied Bandwidth	61.1, 61.2, 61.4
EIRP Power	61.1, 61.2, 61.4
Transmitter Spurious Emissions (below 1 GHz)	Random
Transmitter Spurious Emissions (1 GHz-40 GHz)	61.1, 61.2, 61.4
Transmitter Spurious Emissions (above 40 GHz)	61.1, 61.2, 61.4
Frequency Stability	61.2

Note: For AC Power Conducted Emissions test:

Test Mode	Description
1	Charge mode_EUT 1 powered by host system

For Transmitter Spurious Emissions tests:

After evaluating, EUT in Y axis was the worst case, so the measurement will follow this same test configuration.

For Transmitter Spurious Emissions below 1 GHz test:

Test Mode	Description
1	Normal link mode_EUT 1 powered by battery in Y axis
2	Charge mode_EUT 1 powered by host system in Y axis
Mode 2 generated the worst test result, so it was recorded in this report.	

2.3 EUT Operation during Test

During the test, executed the test program to control the EUT continuously transmit RF signal.

2.4 Accessories

N/A

2.5 Support Equipment

For AC Conduction:

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	NB	Lenovo	X260	N/A
B	Console board	Millitronic Co., LTD	Board03	N/A
C	Earphone	e-Power	GT-02	N/A
D	Mouse	Logitech	M-U0026	N/A

For Radiated (Frequency Stability):

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	NB	DELL	E4300	N/A
B	Console cable	Millitronic Co., LTD	Cable01	N/A
C	Console board	Millitronic Co., LTD	Board03	N/A

For Radiated < 1GHz (Others):

Support Equipment				
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**
A	NB	DELL	E4300	N/A
B	Console Board	Millitronic Co., LTD	Board03	N/A
C	Earphone	e-Power	S90W	N/A
D	Mouse	Logitech	M-U0026	N/A

For Radiated > 1GHz (Others) and Radiated > 1GHz (Duty Cycle):

N/A

2.6 Far Field Boundary Calculations

The far-field boundary is given as:

far field = (2 * L^2) /**λ**

where:

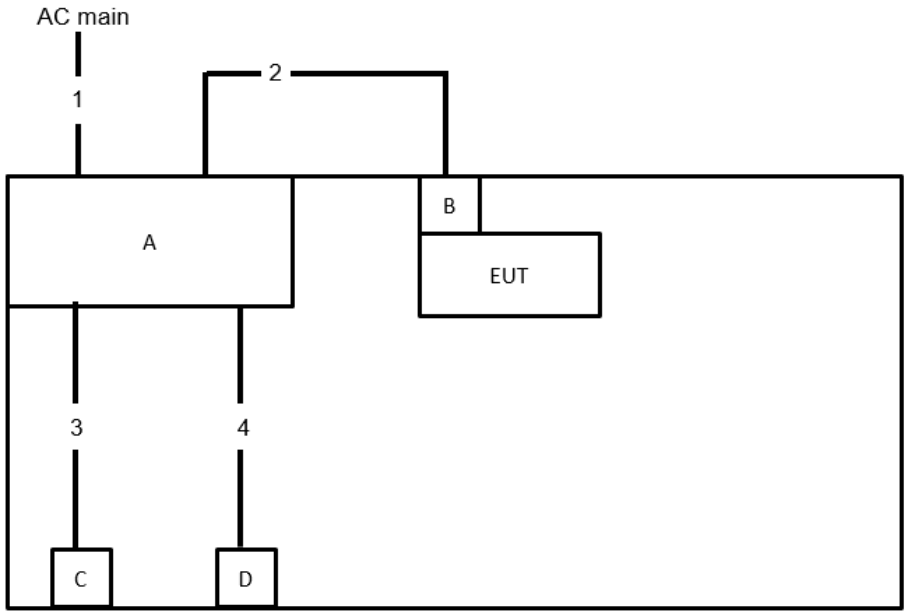
L = Largest Antenna Dimension, including the reflector, in meters

λ= wavelength in meters

Far Field (m)				
Frequency (GHz)	**L (m)**	**Lambda (m)**	**d(Far Field) (m)**	**d(Far Field) (cm)**
61.1	0.0128	0.0049100	0.067	6.67
61.2	0.0128	0.0049020	0.067	6.68
61.4	0.0128	0.0048860	0.067	6.71

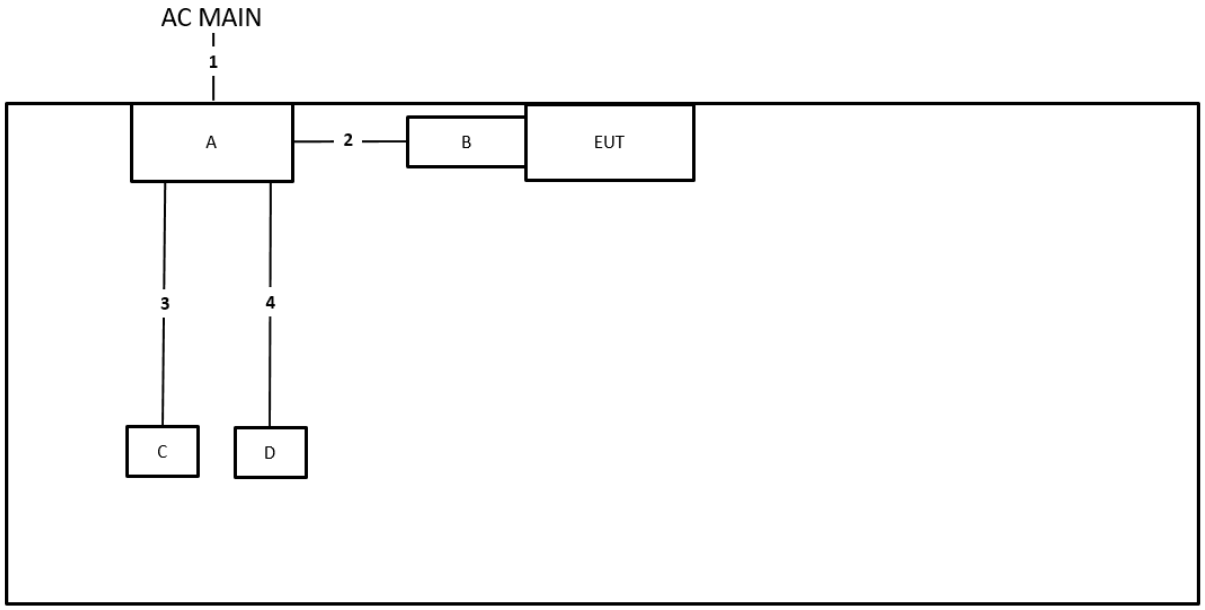
2.7 Test Setup Diagram

Test Setup Diagram - AC Power Conducted Emissions



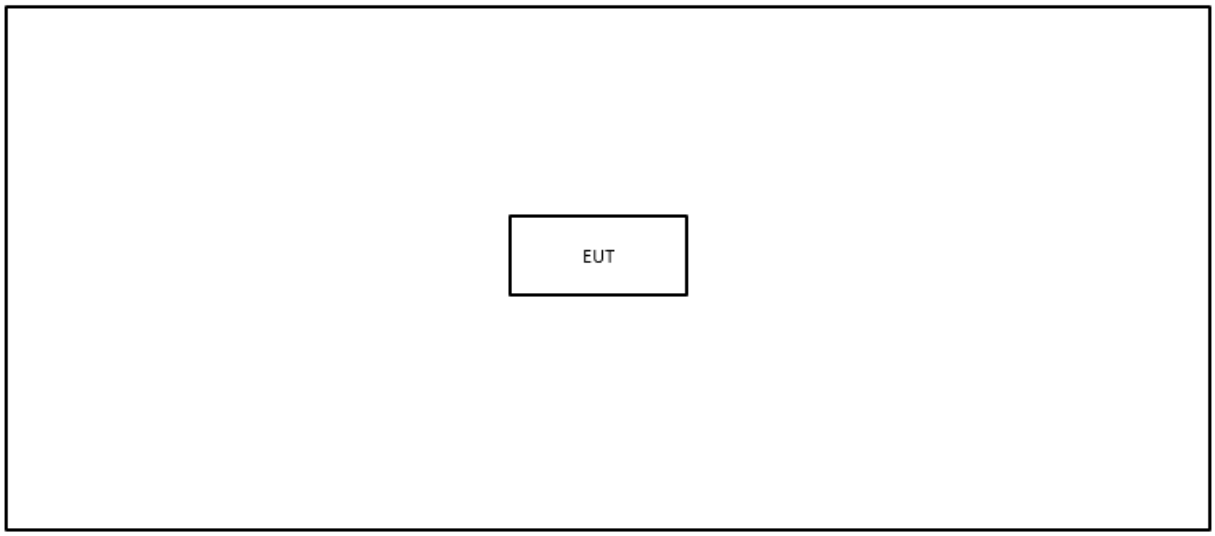
Item	Connection	Shielded	Length
1	Power cable	No	2.3m
2	USB cable	Yes	1.5m
3	Audio cable	No	1.2m
4	USB cable	Yes	1.8m

Test Setup Diagram - Transmitter Spurious Emissions below 1 GHz



Item	Connection	Shielded	Length
1	Power cable	No	2.6m
2	USB cable	Yes	1.8m
3	Audio cable	No	1.2m
4	USB cable	Yes	1.5m

Test Setup Diagram - Transmitter Spurious Emissions above 1 GHz



3 Transmitter Test Result

3.1 AC Power Conducted Emissions

3.1.1 Limit of AC Power Conducted Emissions

AC Power Conducted Emissions Limit		
Frequency Emission (MHz)	**Quasi-Peak**	**Average**
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50
Note: * Decreases with the logarithm of the frequency.		

3.1.2 Measuring Instruments

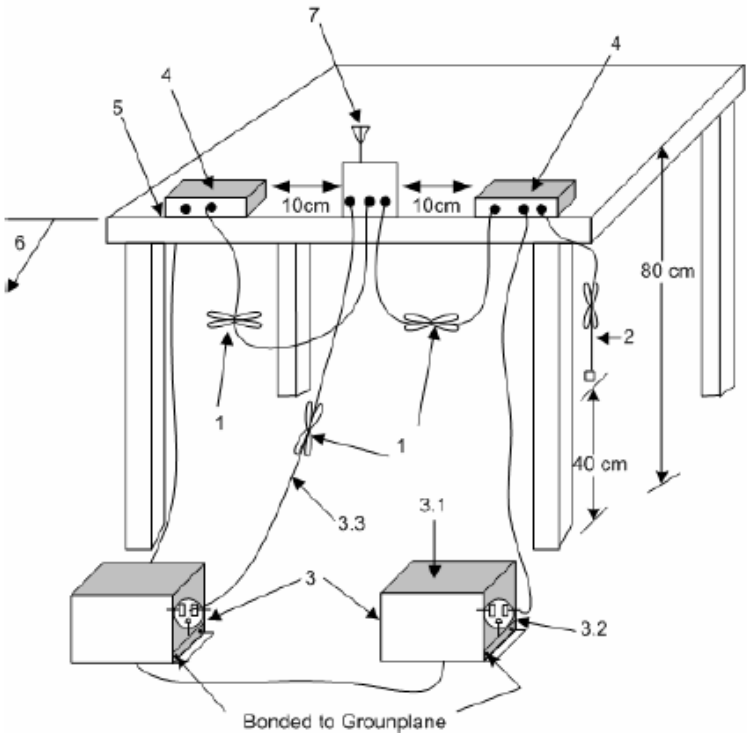
Refer a measuring instruments list in this test report.

3.1.3 Test Procedures

Method of measurement: Refer as ANSI C63.10-2020, clause 6.2.

3.1.4 Test Setup

AC Power Conducted Emissions



1—Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 cm to 40 cm long.
2—The I/O cables that are not connected to an accessory shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
3—EUT connected to one LISN. Unused LISN measuring port connectors shall be terminated in 50 Ω loads. LISN may be placed on top of, or immediately beneath, reference ground plane.
3.1—All other equipment powered from additional LISN(s).
3.2—A multiple-outlet strip may be used for multiple power cords of non-EUT equipment.
3.3—LISN at least 80 cm from nearest part of EUT chassis.
4—Non-EUT components of EUT system being tested.
5—Rear of EUT, including peripherals, shall all be aligned and flush with edge of tabletop.
6—Edge of tabletop shall be 40 cm removed from a vertical conducting plane that is bonded to the ground plane.
7—Antenna can be integral or detachable. If detachable, then the antenna shall be attached for this test.

3.1.5 Measurement Results Calculation

The measured Level is calculated using:

a. Corrected Reading: LISN Factor (LISN) + Attenuator (AT/AUX) + Cable Loss (CL) + Read Level (Raw) = Level

b. Margin = -Limit + Level

3.1.6 Test Result of AC Power Conducted Emissions

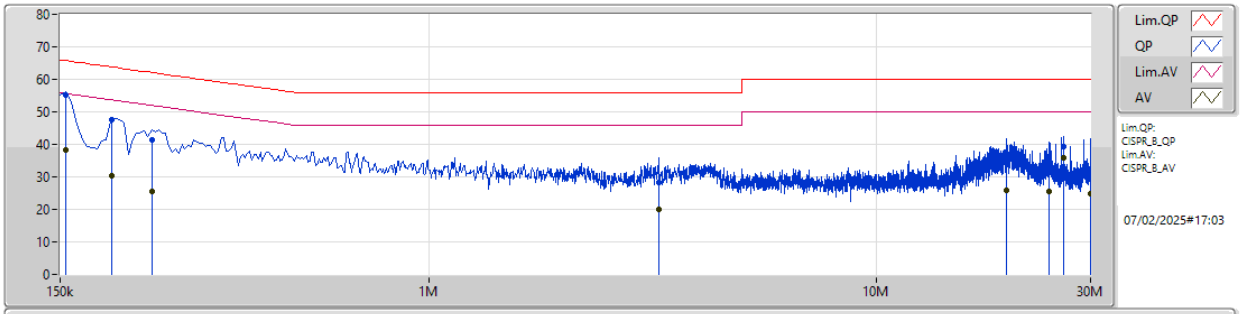
Test Conditions	see ANSI C63.10, clause 5.11
Test Setup	see ANSI C63.10, clause 6.2.3

NOTE 1: If equipment having different channel plan and nominal channel bandwidth modes (see test report clause 1.1.1), the measurements are uninfluenced by different channel plan and nominal channel bandwidth modes, may not need to be repeated for all modes. If equipment having different transmit operating modes (see test report clause 1.1.2), the measurements are uninfluenced by different transmit operating modes, may not need to be repeated for all the operating modes. Similar, if the equipment supports different modulations and/or data rates, the measurements described in ANSI C63.10, clause 5.12 may not need to be repeated for all these modulations and data rates. Simple comparison of engineering test across all operating modes, modulations and data rates may need to be performed to define the worse case combination to be used for the conformance testing.

NOTE 2: “>20dB” means the tables in this clause should only list values of spurious emissions that exceed the level of 20 dB below the applicable limit, see ANSI C63.4, clause 10.1.8.1.

Phase	Line

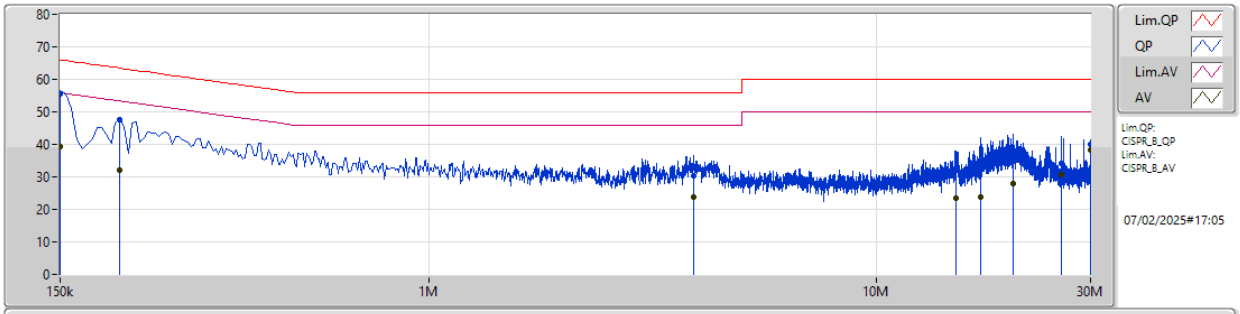
Mode 1



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	154.5k	55.05	65.75	-10.70	10.15	Line	"Worst"	44.90	0.05	0.08	10.02
AV	154.5k	38.18	55.75	-17.57	10.15	Line	-	28.03	0.05	0.08	10.02
QP	195k	47.43	63.82	-16.39	10.14	Line	-	37.29	0.05	0.07	10.02
AV	195k	30.38	53.82	-23.44	10.14	Line	-	20.24	0.05	0.07	10.02
QP	240k	41.41	62.10	-20.69	10.15	Line	-	31.26	0.05	0.08	10.02
AV	240k	25.44	52.10	-26.66	10.15	Line	-	15.29	0.05	0.08	10.02
QP	3.251M	28.34	56.00	-27.66	10.31	Line	-	18.03	0.11	0.15	10.05
AV	3.251M	20.00	46.00	-26.00	10.31	Line	-	9.69	0.11	0.15	10.05
QP	19.455M	34.97	60.00	-25.03	10.71	Line	-	24.26	0.38	0.32	10.01
AV	19.455M	25.78	50.00	-24.22	10.71	Line	-	15.07	0.38	0.32	10.01
QP	24.234M	35.15	60.00	-24.85	10.83	Line	-	24.32	0.49	0.31	10.03
AV	24.234M	25.38	50.00	-24.62	10.83	Line	-	14.55	0.49	0.31	10.03
QP	26.102M	39.17	60.00	-20.83	10.89	Line	-	28.28	0.53	0.31	10.05
AV	26.102M	35.97	50.00	-14.03	10.89	Line	-	25.08	0.53	0.31	10.05
QP	29.972M	32.17	60.00	-27.83	11.03	Line	-	21.14	0.60	0.33	10.10
AV	29.972M	24.81	50.00	-25.19	11.03	Line	-	13.78	0.60	0.33	10.10

Phase	Neutral

Mode 1



Type	Freq	Level	Limit	Margin	Factor	Condition	Comment	Raw	LISN	CL	AT
	(Hz)	(dBuV)	(dBuV)	(dB)	(dB)			(dBuV)	(dB)	(dB)	(dB)
QP	150k	55.66	66.00	-10.34	10.15	Neutral	"Worst"	45.51	0.05	0.08	10.02
AV	150k	39.28	56.00	-16.72	10.15	Neutral	-	29.13	0.05	0.08	10.02
QP	204k	47.62	63.44	-15.82	10.14	Neutral	-	37.48	0.05	0.07	10.02
AV	204k	32.05	53.44	-21.39	10.14	Neutral	-	21.91	0.05	0.07	10.02
QP	3.894M	30.34	56.00	-25.66	10.32	Neutral	-	20.02	0.11	0.15	10.06
AV	3.894M	23.69	46.00	-22.31	10.32	Neutral	-	13.37	0.11	0.15	10.06
QP	14.978M	32.02	60.00	-27.98	10.49	Neutral	-	21.53	0.24	0.22	10.03
AV	14.978M	23.59	50.00	-26.41	10.49	Neutral	-	13.10	0.24	0.22	10.03
QP	17.084M	34.85	60.00	-25.15	10.54	Neutral	-	24.31	0.25	0.27	10.02
AV	17.084M	23.92	50.00	-26.08	10.54	Neutral	-	13.38	0.25	0.27	10.02
QP	20.184M	36.53	60.00	-23.47	10.60	Neutral	-	25.93	0.26	0.33	10.01
AV	20.184M	27.93	50.00	-22.07	10.60	Neutral	-	17.33	0.26	0.33	10.01
QP	25.877M	34.02	60.00	-25.98	10.65	Neutral	-	23.37	0.30	0.31	10.04
AV	25.877M	30.80	50.00	-19.20	10.65	Neutral	-	20.15	0.30	0.31	10.04
QP	29.967M	40.09	60.00	-19.91	10.76	Neutral	-	29.33	0.33	0.33	10.10
AV	29.967M	38.28	50.00	-11.72	10.76	Neutral	-	27.52	0.33	0.33	10.10

3.2 Occupied Bandwidth

3.2.1 Limit of Occupied Bandwidth

6dBc Bandwidth (see Note 1)	None
99% Occupied Bandwidth (see Note 2)	None

NOTE 1: The 6dBc bandwidth is the frequency bandwidth of the signal power at the -6 dBc points when measured with a 100 kHz resolution bandwidth. These measurements shall also be performed at normal test conditions.

NOTE 2: The 99% occupied bandwidth is the frequency bandwidth of the signal power at the 99% channel power of occupied bandwidth when resolution bandwidth should be approximately 1 % to 5 % of the occupied bandwidth (OBW). These measurements shall also be performed at normal test conditions.

3.2.2 Measuring Instruments

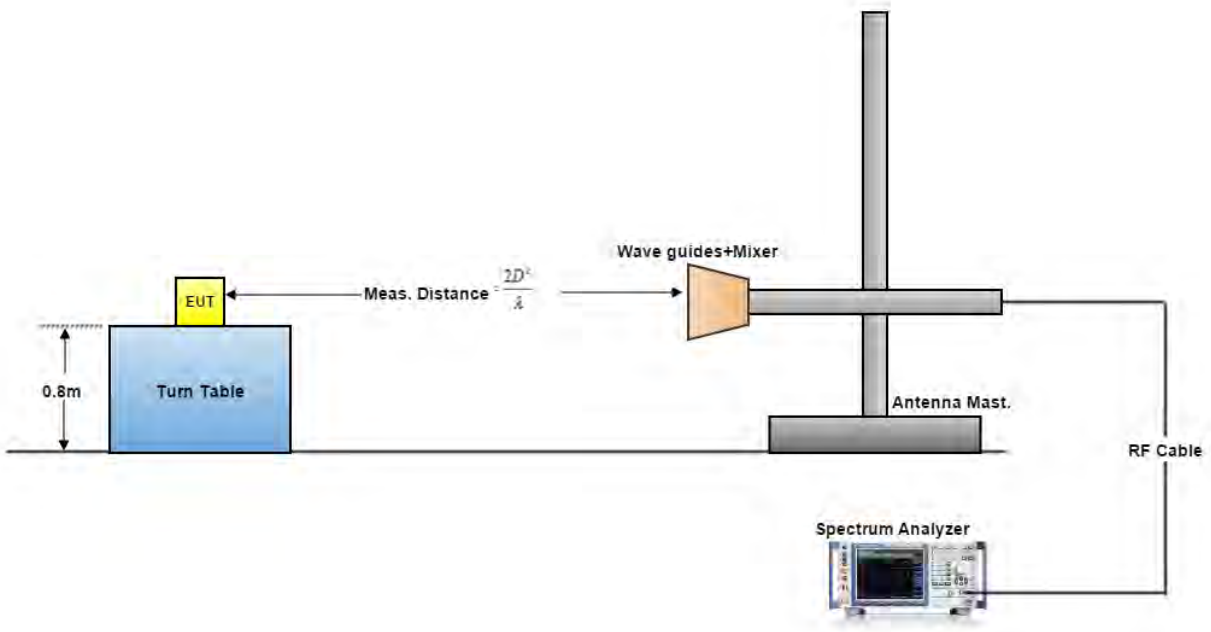
Refer a measuring instruments list in this test report.

3.2.3 Test Procedures

Method of measurement: Refer as ANSI C63.10-2020, clauses 9.4.

3.2.4 Test Setup

Occupied Channel Bandwidth



3.2.5 Test Result of Occupied Bandwidth

Test Conditions	see ANSI C63.10, clause 5.11
Test Setup	see ANSI C63.10, clause 9.4

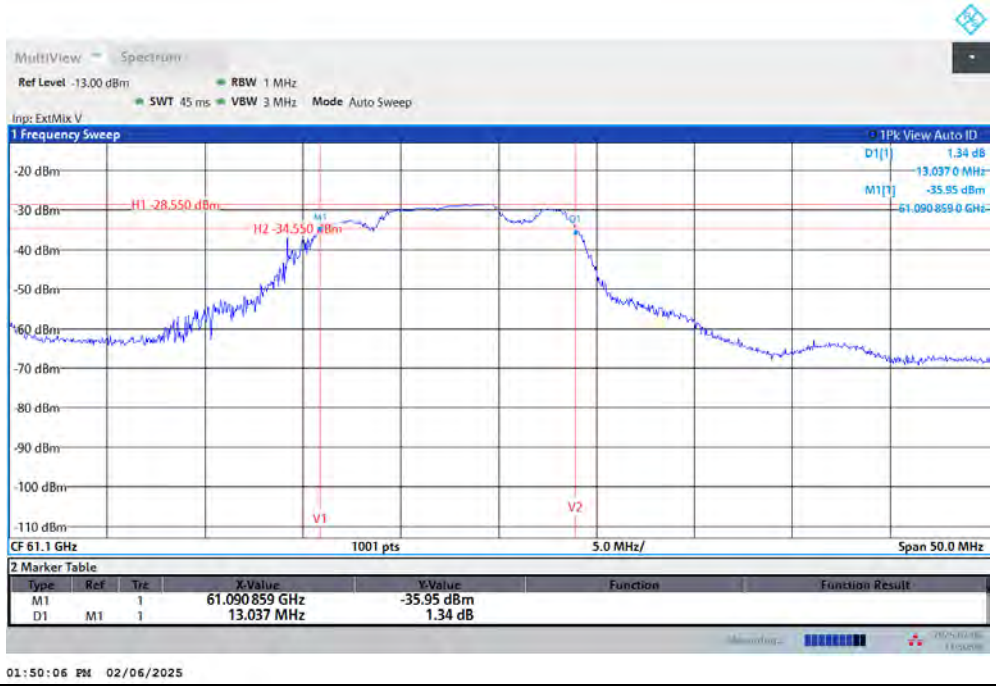
NOTE: If equipment having different transmit operating modes (see test report clause 1.1.2), the measurements are uninfluenced by different transmit operating modes, may not need to be repeated for all the operating modes. Similar, if the equipment supports different modulations and/or data rates, the measurements described in ANSI C63.10, clause 5.11 may not need to be repeated for all these modulations and data rates. Simple comparison of engineering test across all operating modes, modulations and data rates may need to be performed to define the worse case combination to be used for the conformance testing. Refer as ANSI C63.10, clause 15, observe and record with plotted graphs or photographs the worst-case (i.e., widest) occupied bandwidth produced by these different modulation sources.

Test Results			
Test Freq. (GHz)	**6 dBc Bandwidth (MHz)**	**99% Occupied Bandwidth (MHz)**	**Limit (MHz)**
61.1	13.037	15.341	N/A
61.2	13.536	15.598	N/A
61.4	17.333	19.908	N/A

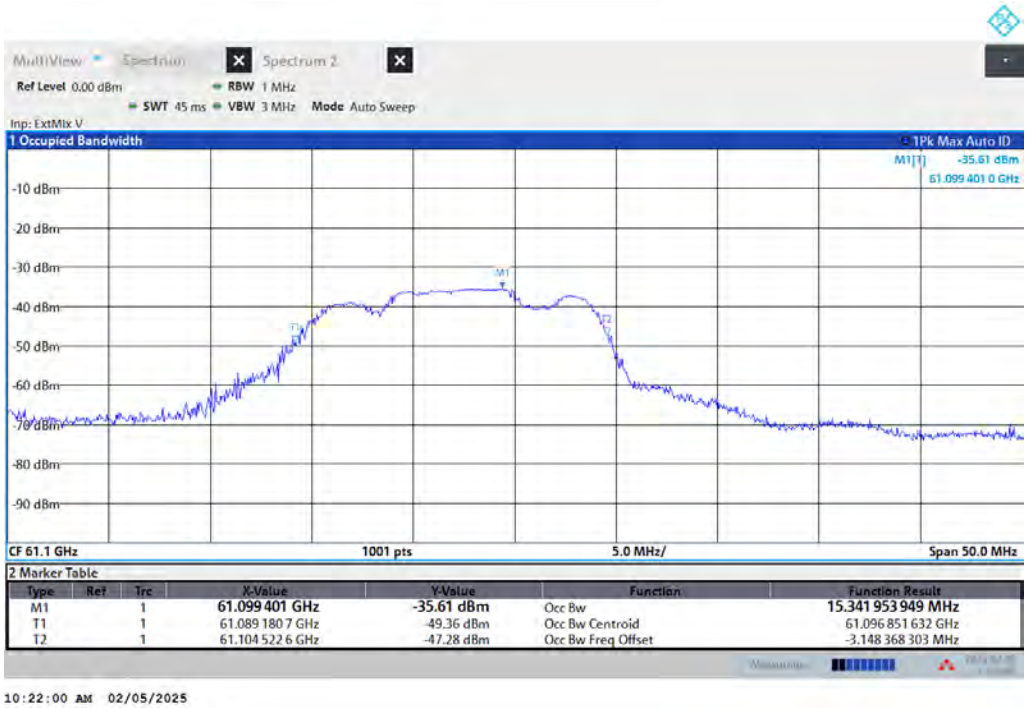
3.2.5.1 Bandwidth Plots

For 61.1 GHz:

6 dBc Bandwidth

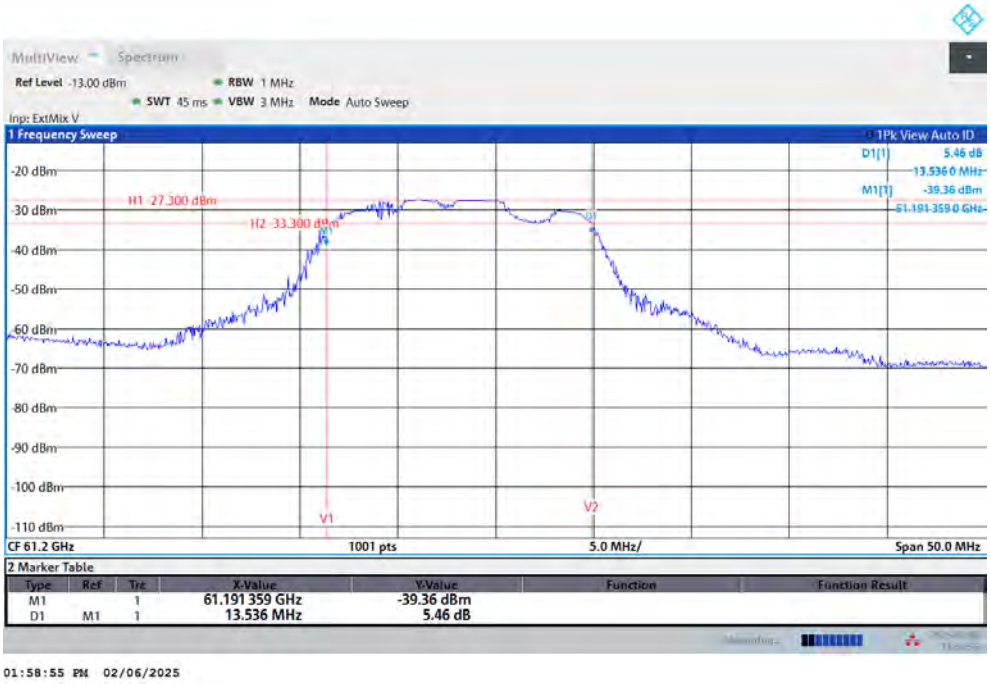


Occupied Bandwidth

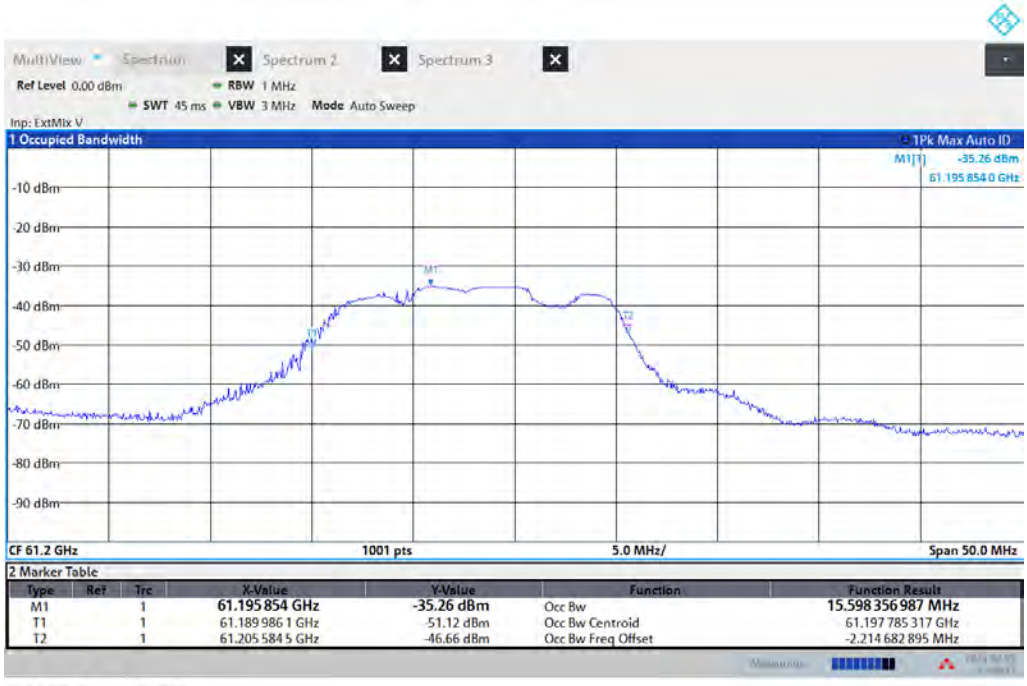


For 61.2 GHz:

6 dBc Bandwidth

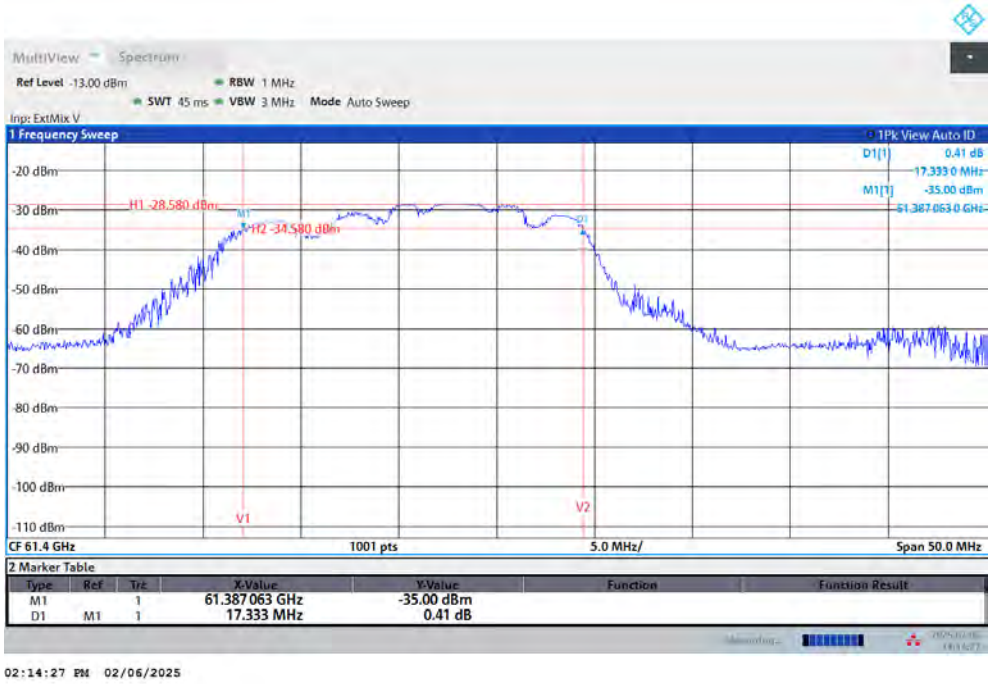


Occupied Bandwidth

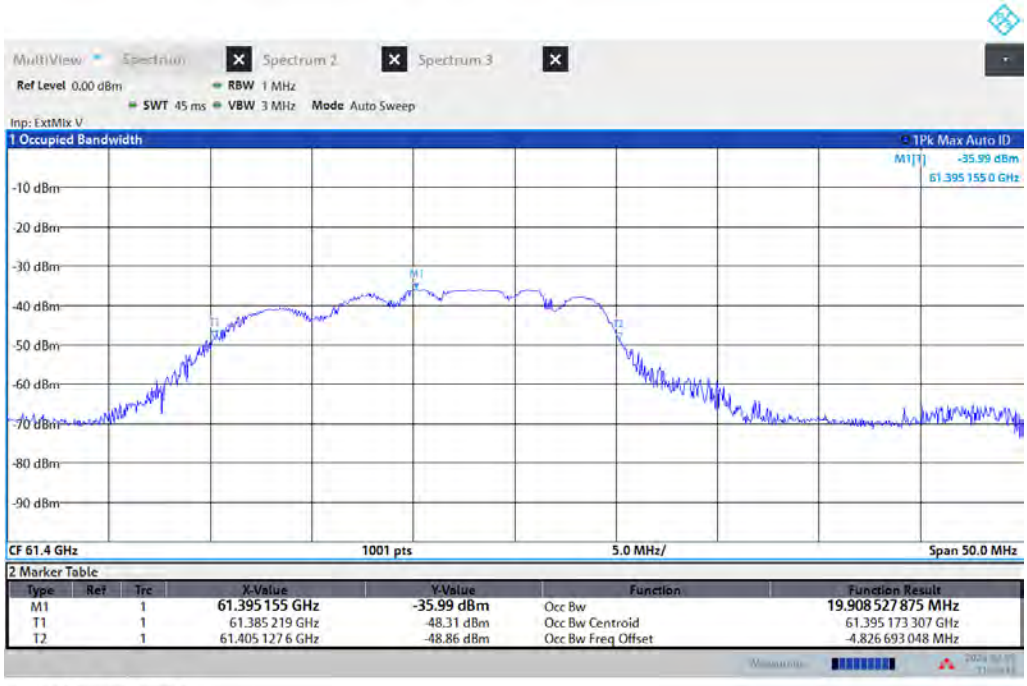


For 61.4 GHz:

6 dBc Bandwidth



Occupied Bandwidth



3.3 EIRP Power

3.3.1 Limit of EIRP Power

Applications	Frequency Range (GHz)	Peak (dBm)	Average (dBm)	Duty Cycle Requirement
Field disturbance sensors/radar	57 ~ 71	< 10	N/A	N/A
For fixed field disturbance sensors that occupy 500 MHz or less	61 ~ 61.5	< 43	< 40	N/A
	57 ~ 61 & 61.5 ~ 71	< 13	< 10	N/A
Field disturbance sensor/radar Personal portable equipment	59.3 ~ 71	< 10	N/A	N/A
Field disturbance Sensors /radar (Outdoor drones/UA uses)	60 ~ 64	< 20	N/A	At least 16.5 ms off time per 33 ms Operation shall be limited to a maximum of 121.92 m above ground level.
Field disturbance Sensors /radar (vehicular applications (e.g., in-cabin radars))	57 ~ 59.4	Indoor < 20 Outdoor< 30	N/A	N/A
Field disturbance Sensors /radar (unrestricted radar use-case applications)	57 ~ 61.56	< 3	N/A	N/A
		< 20	N/A	At least 16.5 ms off time per 33 ms
	57 ~ 64	< 14	N/A	At least 25.5 ms off time per 33 ms
Field disturbance Sensors /radar (Fixed outdoor or vehicular uses) (except in-cabin)	57 ~ 64	< 20	N/A	At least 16.5 ms off time per 33 ms
For pulsed field disturbance sensors/radars	57 ~ 64	< 33	< 13	Pulse duration < 6 ns Duty cycle < 10%, in any 0.3 µs time window
	61.5 ~ 64	< 25	< 5	Any 0.3 µs time window

NOTE: For the applicable limit, see 15.255 (c)

3.3.2 Measuring Instruments

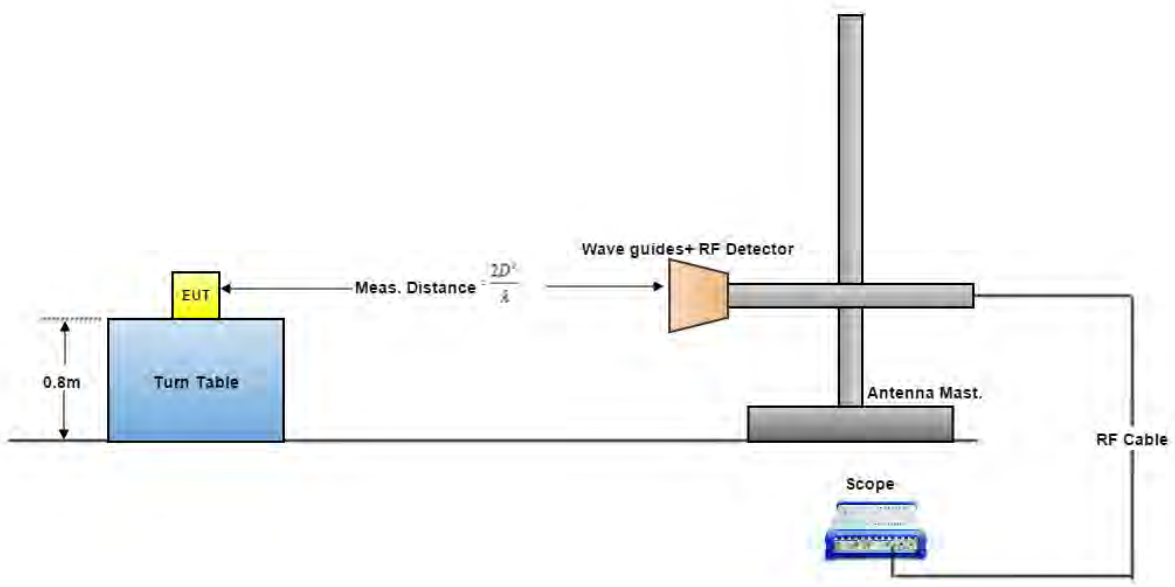
Refer a measuring instruments list in this test report.

3.3.3 Test Procedures

Method of measurement: Refer as ANSI C63.10-2020 clause 9.8.

3.3.4 Test Setup

EIPR Power



3.3.5 Test Result of EIRP Power

Test Conditions	see ANSI C63.10, clause 5.11 & clause 9
Test Setup	see ANSI C63.10, clause 9.8

NOTE: If the equipment supports different modulations and/or data rates, the measurements described in ANSI C63.10, clause 5.11 may not need to be repeated for all these modulations and data rates. Simple comparison of engineering test across all operating modes, modulations and data rates may need to be performed to define the worst case combination to be used for the conformance testing.

3.3.6 Test Result of EIRP Power

Freq. (GHz)	Rx Gain (dBi)	P-Peak (dBm)	Test Distance (m)	EIRP-Peak (dBm)	EIRP-Peak Limit (dBm)	Test Result
61.1	23.6	-32.26	0.50	6.28	14	Pass
61.2	23.6	-33.88	0.50	4.67	14	Pass
61.4	23.6	-35.52	0.50	3.06	14	Pass

Calculate the EIRP from the radiated measurement in the far-field using Equation:

$EIRP = 21.98 – 20\log(\lambda) + 20\log(D) + P – G$

where:

EIRP: is the equivalent isotropic radiated power, in dBm

P: is the power measured at the output of the test antenna, in dBm

λ: is the wavelength of the emission under investigation [300/fMHz], in m

G: is the gain of the test antenna, in dBi.

Note: Due to the large dimensions of the 22 dB reflector, the far field measurement distance is in excess of 100 m. For in-band tests, the reflector was removed to expose the smaller 20.1 dBi patch, allowing measurements to be made in the far field at 3 m. The 20.4 dB reflector gain was added to the measured results.

3.4 Transmitter Spurious Emissions

3.4.1 Limit of Transmitter Spurious Emissions

Frequency Range	Limit
Radiated emissions below 40 GHz	Reference to section 15.209
Radiated emissions above 40 GHz – 200GHz	90 pW/cm^2 @ 3 m (Equivalent EIRP 102 μW, -9.91dBm)
NOTE 1: For the applicable limit, see 15.255(d). NOTE 2: Spurious emissions shall not exceed the level of the fundamental emission.	

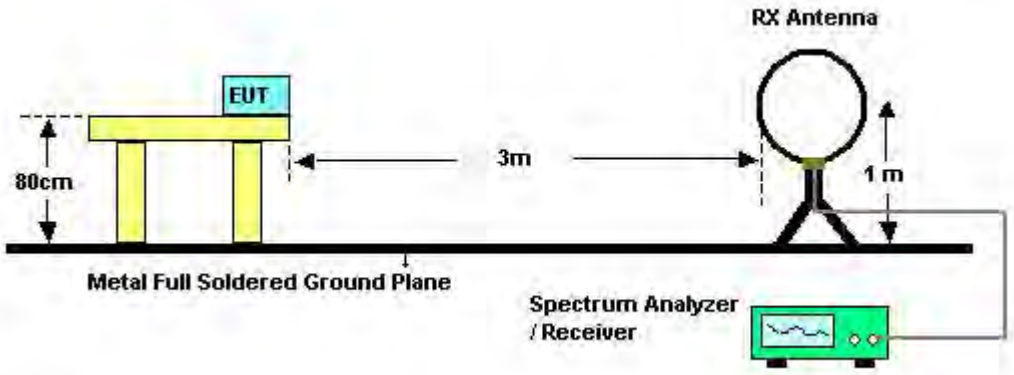
3.4.2 Test Procedures

Method of measurement: Refer as ANSI C63.10-2020, clause 9.11

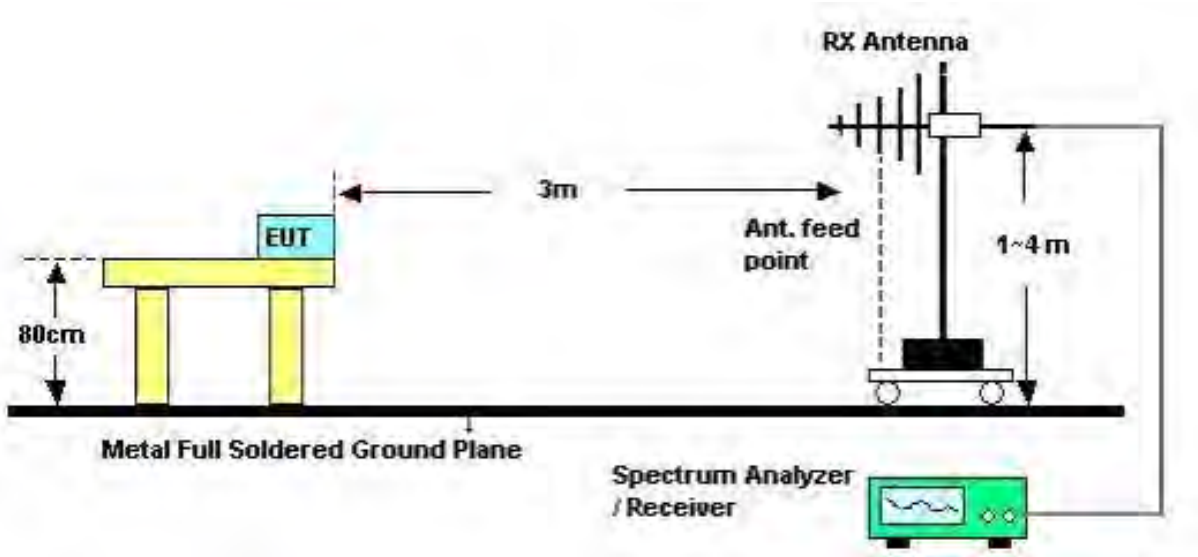
3.4.3 Test Setup

Transmitter Spurious Emissions

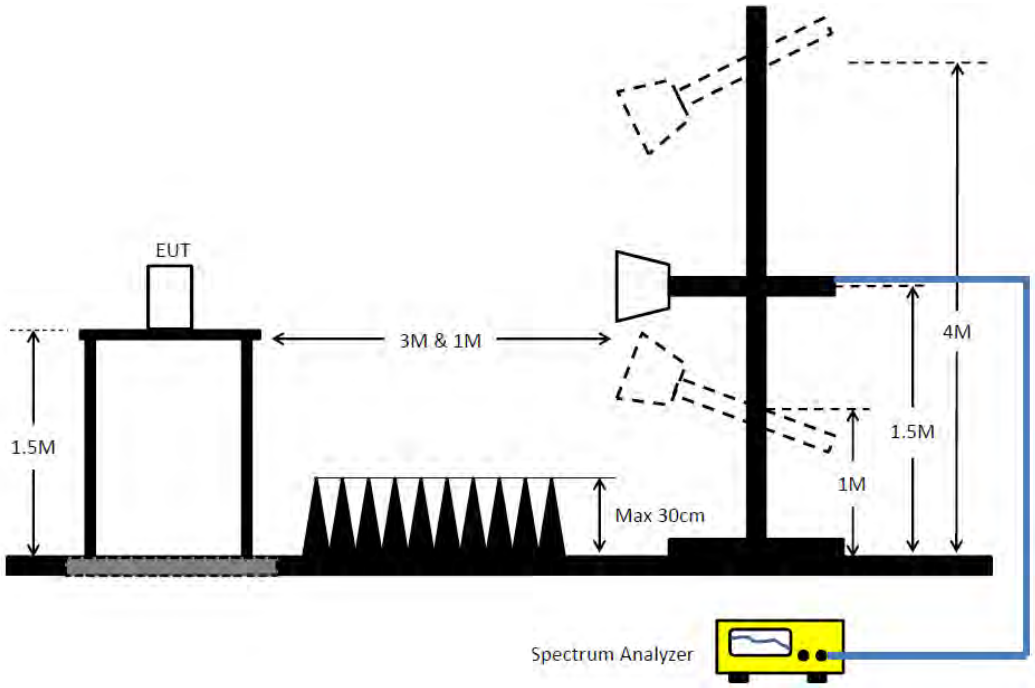
9kHz ~30MHz



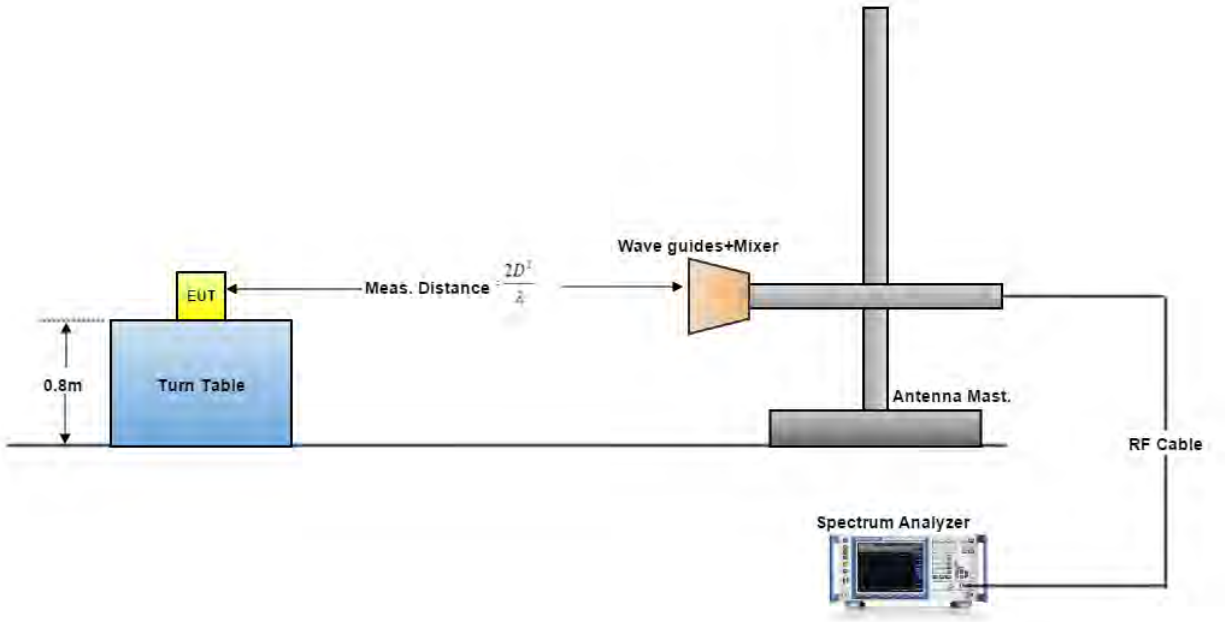
30MHz~1GHz



1GHz ~40GHz



Above 40GHz



A measuring distance of at 3 m shall be used for measurements at frequencies up to 15 GHz. For frequencies above 15 GHz, any suitable measuring distance may be used. The measurement distance is chosen up to far field distance, depending on the test system noise floor for detecting spurious emission signals. Then above 15 GHz shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade from spec. distance (3 m) to measurement distance. Distance extrapolation factor = 20 log (spec. distance [3 m] / measurement distance [N m]) (dB) .The measurements described in ANSI C63.10, clause 7.8.6. If the emission cannot be detected at 1 m, reduce the RBW to increase system sensitivity. Note the value. If the emission still cannot be detected, move the horn closer to the EUT, noting the distance at which a measurement is made.

3.4.4 Measurement Results Calculation

The measured Level is calculated using:

For below 40GHz

Corrected Reading: Antenna factor (AF) + Cable loss (CL) + Read level (Raw) - Preamp factor (PA)(if applicable) = Level.

For above 40GHz

EIRP = Meas. Level - RX Antenna Gain + 20*log(4*Pi(3.14159)*D/(300/(Frequency*1000)))

3.4.5 Test Result of Transmitter Spurious Emissions

Test Conditions	see ANSI C63.10, clause 5.11 & clause 9
Test Setup	see ANSI C63.10, clause 9.11, 9.12
NOTE: If equipment having different channel plan and nominal channel bandwidth modes (see test report clause 1.1.1), the measurements are uninfluenced by different channel plan and nominal channel bandwidth modes, may not need to be repeated for all modes.	

3.4.5.1 Test Result of Transmitter Spurious Emissions (Below 30MHz)

There is a comparison data of both open-field test site and alternative test site - semi-Anechoic chamber according to KDB414788 Radiated Test Site, and the result came out very similar.

All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.

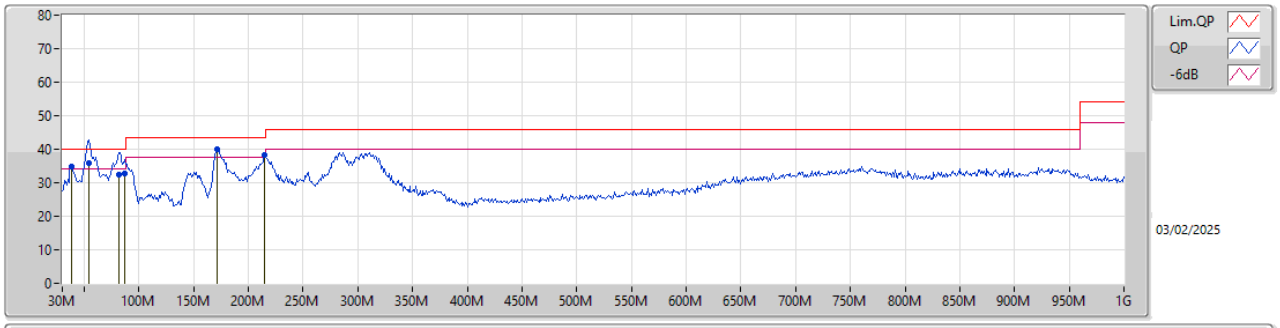
The radiated emissions were investigated from 9 kHz or the lowest frequency generated within the device, up to the 10 harmonic or 40 GHz, whichever is appropriate.

3.4.5.2 Test Result of Transmitter Spurious Emissions

Test Range	30 MHz – 1000 MHz

Vertical

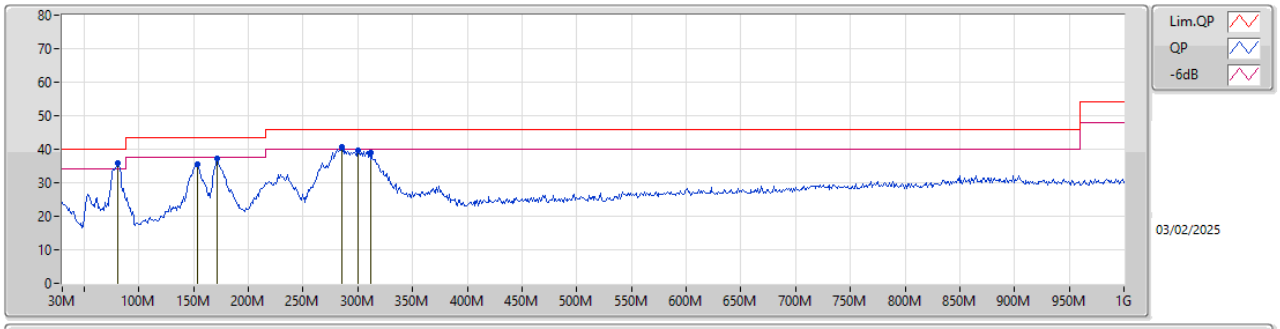
Mode 2



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV)	(dB/m)	(dB)	(dB)
PK	38.73M	34.92	40.00	-5.08	-10.70	3	Vertical	277	1.00	-	45.62	19.78	1.05	31.53
QP	54.25M	35.92	40.00	-4.08	-17.37	3	Vertical	339	1.50	-	53.29	13.10	1.19	31.66
QP	81.41M	32.27	40.00	-7.73	-17.05	3	Vertical	153	1.25	-	49.32	13.25	1.42	31.72
QP	87.23M	32.76	40.00	-7.24	-15.85	3	Vertical	255	1.00	-	48.61	14.43	1.45	31.73
PK	171.62M	40.06	43.50	-3.44	-14.15	3	Vertical	17	1.00	"Worst"	54.21	15.64	1.98	31.77
PK	214.3M	38.38	43.50	-5.12	-14.70	3	Vertical	154	1.00	-	53.08	14.87	2.21	31.78

Horizontal

Mode 2



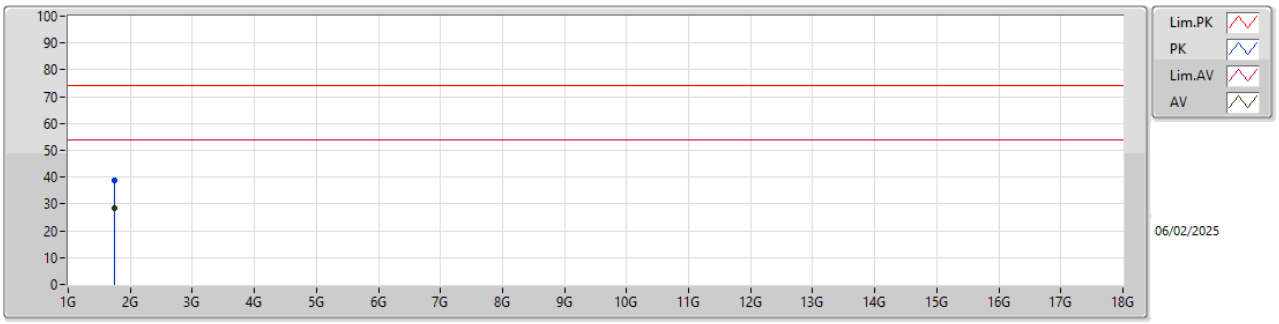
Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV)	(dB/m)	(dB)	(dB)
PK	80.44M	35.84	40.00	-4.16	-17.12	3	Horizontal	226	2.00	"Worst"	52.96	13.19	1.41	31.72
PK	153.19M	35.48	43.50	-8.02	-13.63	3	Horizontal	191	2.00	-	49.11	16.26	1.87	31.76
PK	171.62M	37.09	43.50	-6.41	-14.15	3	Horizontal	159	2.00	-	51.24	15.64	1.98	31.77
PK	285M	40.56	46.00	-5.44	-10.44	3	Horizontal	290	1.50	-	51.00	18.82	2.57	31.83
PK	300.63M	39.50	46.00	-6.50	-10.05	3	Horizontal	320	1.25	-	49.55	19.15	2.64	31.84
PK	312.27M	38.96	46.00	-7.04	-9.68	3	Horizontal	277	1.00	-	48.64	19.48	2.70	31.86

Test Range	1 GHz – 18 GHz

For 61.1GHz:

Vertical

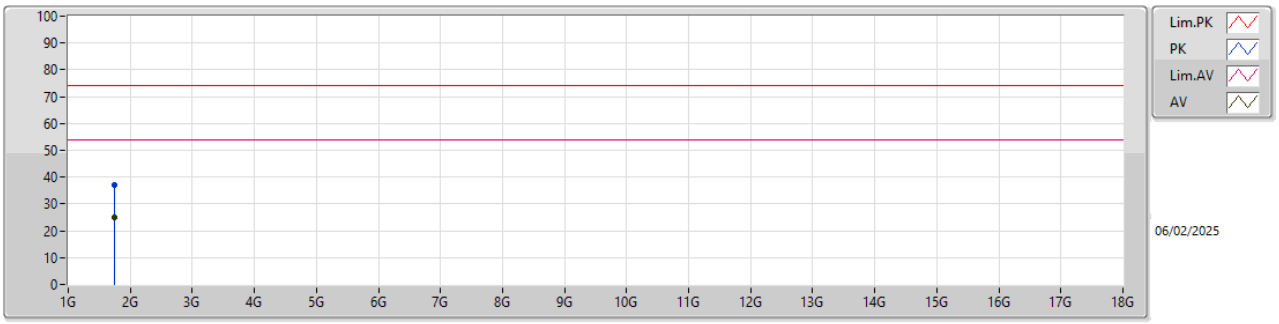
Radiated Emissions above 1GHz_61100MHz



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV)	(dB/m)	(dB)	(dB)
PK	1.74065G	38.76	74.00	-35.24	-3.64	3	Vertical	137	1.50	-	42.40	25.11	4.12	32.87
AV	1.7487G	28.64	54.00	-25.36	-3.54	3	Vertical	137	1.50	"Worst"	32.18	25.19	4.14	32.87

Horizontal

Radiated Emissions above 1GHz_61100MHz

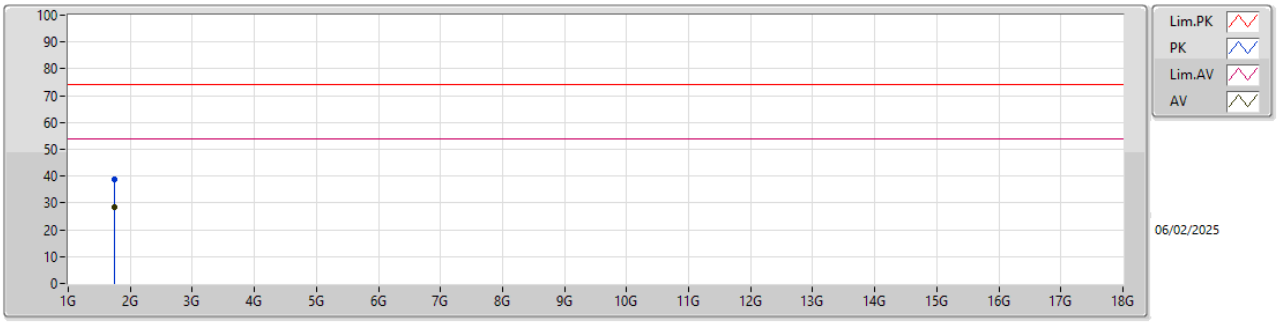


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV)	(dB/m)	(dB)	(dB)
PK	1.74495G	36.86	74.00	-37.14	-3.59	3	Horizontal	356	1.50	-	40.45	25.15	4.13	32.87
AV	1.74605G	24.97	54.00	-29.03	-3.58	3	Horizontal	356	1.50	"Worst"	28.55	25.16	4.13	32.87

For 61.2GHz:

Vertical

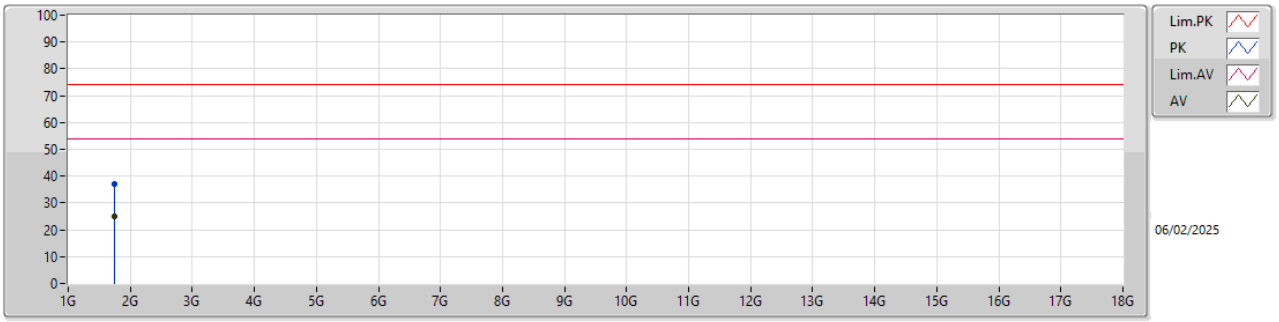
Radiated Emissions above 1GHz_61200MHz



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV)	(dB/m)	(dB)	(dB)
PK	1.74278G	38.85	74.00	-35.15	-3.61	3	Vertical	145	1.56	-	42.46	25.13	4.13	32.87
AV	1.74753G	28.42	54.00	-25.58	-3.56	3	Vertical	145	1.56	"Worst"	31.98	25.18	4.13	32.87

Horizontal

Radiated Emissions above 1GHz_61200MHz

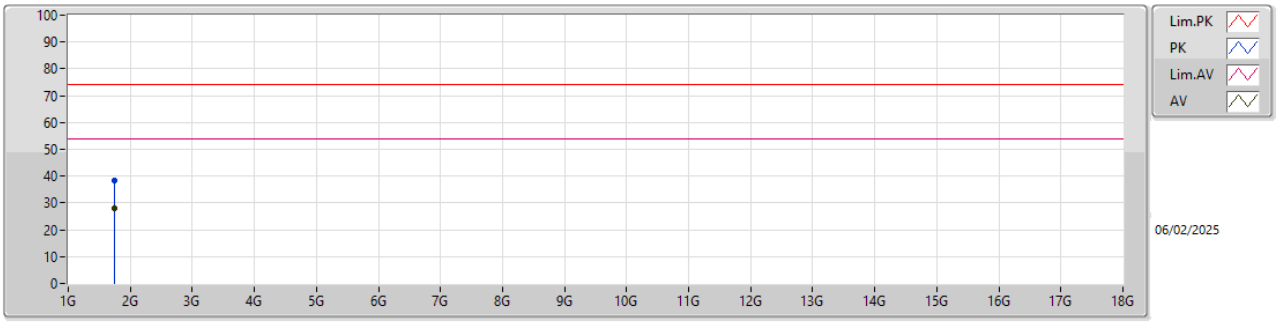


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV)	(dB/m)	(dB)	(dB)
PK	1.74618G	37.02	74.00	-36.98	-3.58	3	Horizontal	360	1.72	-	40.60	25.16	4.13	32.87
AV	1.74596G	24.84	54.00	-29.16	-3.58	3	Horizontal	360	1.72	"Worst"	28.42	25.16	4.13	32.87

For 61.4GHz:

Vertical

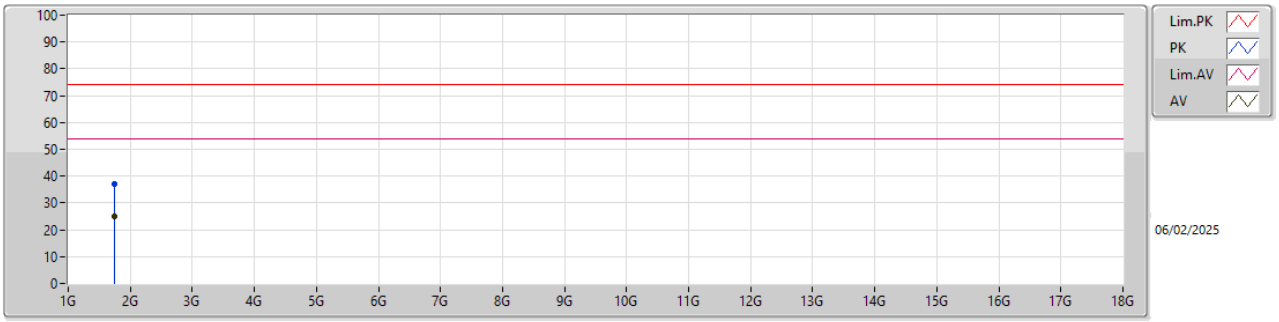
Radiated Emissions above 1GHz_61400MHz



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV)	(dB/m)	(dB)	(dB)
PK	1.7485G	38.49	74.00	-35.51	-3.55	3	Vertical	128	1.50	-	42.04	25.18	4.14	32.87
AV	1.74924G	28.12	54.00	-25.88	-3.54	3	Vertical	128	1.50	"Worst"	31.66	25.19	4.14	32.87

Horizontal

Radiated Emissions above 1GHz_61400MHz



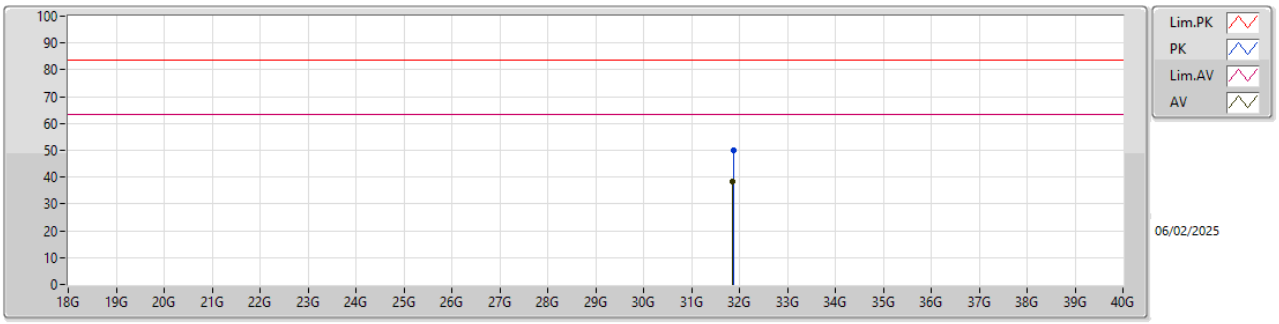
Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV)	(dB/m)	(dB)	(dB)
PK	1.7492G	36.92	74.00	-37.08	-3.54	3	Horizontal	353	1.59	-	40.46	25.19	4.14	32.87
AV	1.74861G	25.03	54.00	-28.97	-3.54	3	Horizontal	353	1.59	"Worst"	28.57	25.19	4.14	32.87

Test Range	18 GHz – 40 GHz

For 61.1GHz:

Vertical

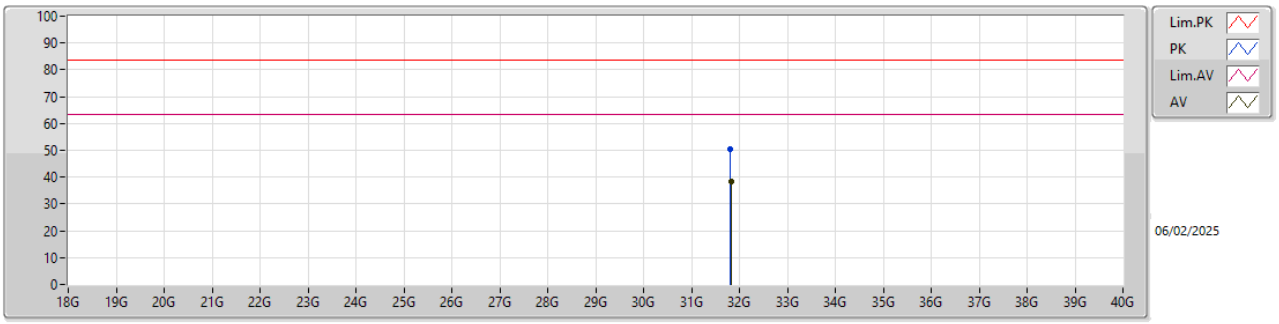
Radiated Emissions above 1GHz_61100MHz



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV)	(dB/m)	(dB)	(dB)
PK	31.88845G	50.09	83.54	-33.45	12.97	1	Vertical	66	1.50	-	37.12	41.02	20.17	48.22
AV	31.86625G	38.54	63.54	-25.00	13.01	1	Vertical	66	1.50	"Worst"	25.53	41.07	20.17	48.23

Horizontal

Radiated Emissions above 1GHz_61100MHz

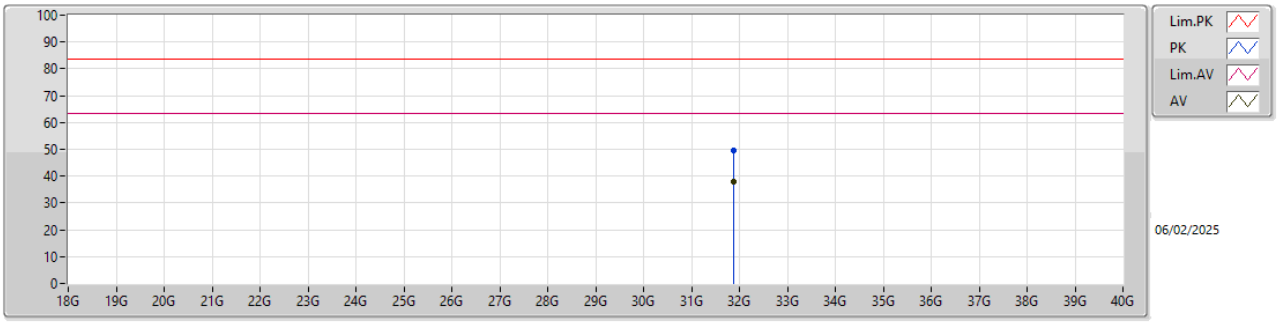


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV)	(dB/m)	(dB)	(dB)
PK	31.80805G	50.37	83.54	-33.17	12.93	1	Horizontal	312	1.50	-	37.44	41.02	20.15	48.24
AV	31.832G	38.52	63.54	-25.02	12.99	1	Horizontal	312	1.50	"Worst"	25.53	41.06	20.16	48.23

For 61.2GHz:

Vertical

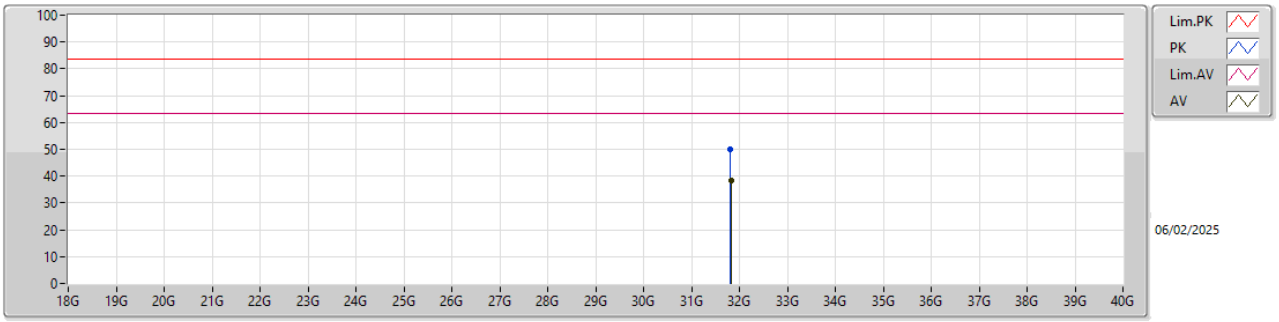
Radiated Emissions above 1GHz_61200MHz



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV)	(dB/m)	(dB)	(dB)
PK	31.88279G	49.36	83.54	-34.18	12.98	1	Vertical	52	1.45	-	36.38	41.03	20.17	48.22
AV	31.87841G	37.98	63.54	-25.56	12.99	1	Vertical	52	1.45	"Worst"	24.99	41.04	20.17	48.22

Horizontal

Radiated Emissions above 1GHz_61200MHz

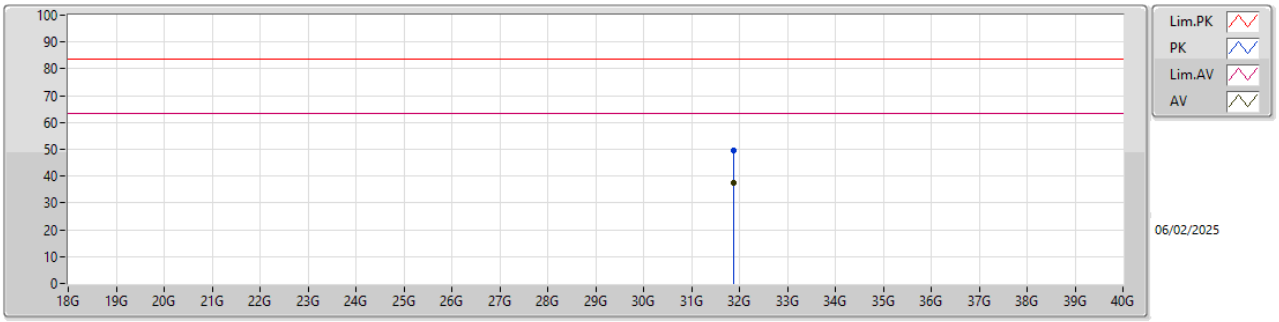


Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV)	(dB/m)	(dB)	(dB)
PK	31.81826G	49.82	83.54	-33.72	12.96	1	Horizontal	334	1.63	-	36.86	41.04	20.16	48.24
AV	31.82371G	38.26	63.54	-25.28	12.97	1	Horizontal	334	1.63	"Worst"	25.29	41.05	20.16	48.24

For 61.4GHz:

Vertical

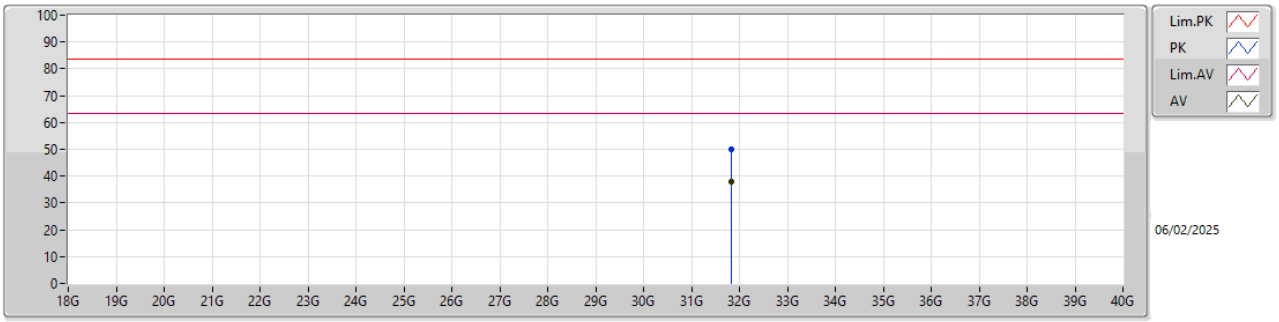
Radiated Emissions above 1GHz_61400MHz



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV)	(dB/m)	(dB)	(dB)
PK	31.8831G	49.65	83.54	-33.89	12.98	1	Vertical	37	1.41	-	36.67	41.09	20.14	48.25
AV	31.88663G	37.29	63.54	-26.25	12.98	1	Vertical	37	1.41	"Worst"	24.31	41.09	20.14	48.25

Horizontal

Radiated Emissions above 1GHz_61400MHz



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Comment	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB/m)	(m)		(°)	(m)		(dBuV)	(dB/m)	(dB)	(dB)
PK	31.8264G	50.21	83.54	-33.33	12.98	1	Horizontal	308	1.54	-	37.23	41.05	20.16	48.23
AV	31.83155G	38.05	63.54	-25.49	12.99	1	Horizontal	308	1.54	"Worst"	25.06	41.06	20.16	48.23

Test Range	40GHz – 200GHz

Test Frequency (GHz)	Rx Antenna Gain (dBi)	Measurement Distance (m)	Read Worse Frequency (GHz)	Read Level (dBm)
61.1	23.6	1.00	51.01	-73.20
EIRP (dBm)	**Specification Distance (m)**	**Power Density (pW/cm^2)**	**Limit (pW/cm^2)**	**Test Result**
-30.21	3.0	0.8433	90	PASS

Test Frequency (GHz)	Rx Antenna Gain (dBi)	Measurement Distance (m)	Read Worse Frequency (GHz)	Read Level (dBm)
61.2	23.6	1.00	51.10	-74.42
EIRP (dBm)	**Specification Distance (m)**	**Power Density (pW/cm^2)**	**Limit (pW/cm^2)**	**Test Result**
-31.41	3.0	0.6390	90	PASS

Test Frequency (GHz)	Rx Antenna Gain (dBi)	Measurement Distance (m)	Read Worse Frequency (GHz)	Read Level (dBm)
61.4	23.6	1.00	51.26	-75.09
EIRP (dBm)	**Specification Distance (m)**	**Power Density (pW/cm^2)**	**Limit (pW/cm^2)**	**Test Result**
-32.05	3.0	0.5512	90	PASS

Note:

EIRP = Prx – Grx + Free Space Path Loss = Prx – Grx + 20Log(4πd/ λ)2
Which
Prx = Read Level.
Grx = Rx Antenna Gain.
A distance factor is offset and the formula is 20LOG(D1/D2)
Which
D1 = Specification Distance
D2 = Measurement Distance

3.5 Frequency Stability

3.5.1 Limit of Frequency Stability

Frequency Stability	Limit
Refer as 15.255(f) and ANSI C63.10-2020, clause 9.5	within the frequency bands
Note: These measurements shall also be performed at normal and extreme test conditions.	

3.5.2 Measuring Instruments

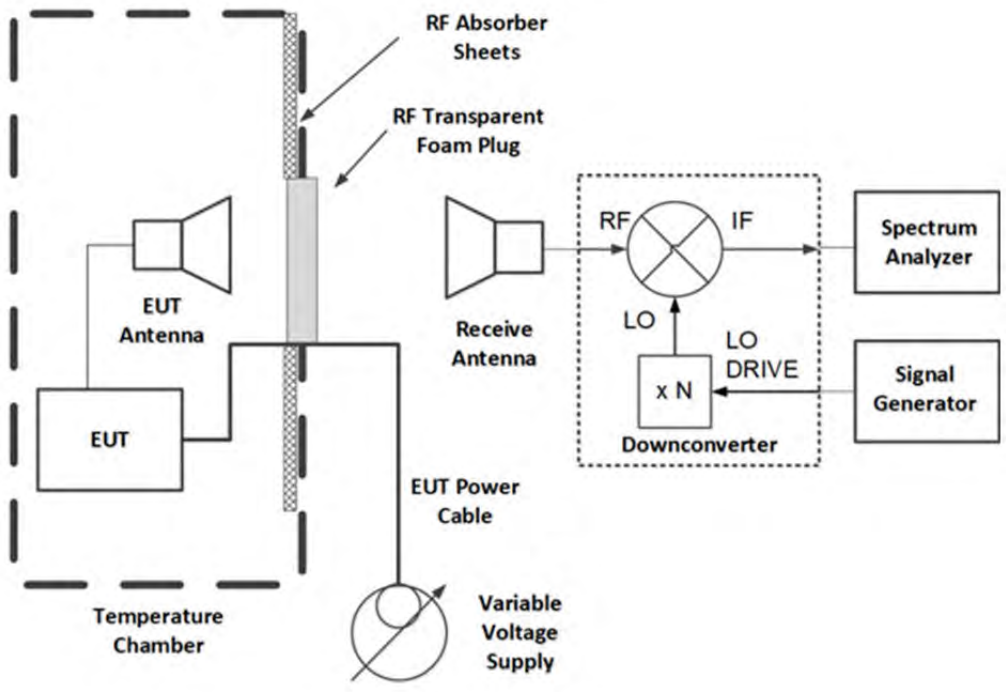
Refer a measuring instruments list in this test report.

3.5.3 Test Procedures

Method of measurement: Refer as ANSI C63.10-2020, clauses 9.5.

3.5.4 Test Setup

Frequency Stability



3.5.5 Test Result of Frequency Stability

Test Conditions	see ANSI C63.10, clause 5.11 & clause 9
Test Setup	see ANSI C63.10, clause 9.5
NOTE: If equipment having different channel plan and nominal channel bandwidth modes (see test report clause 1.1.1), the measurements are uninfluenced by different channel plan and nominal channel bandwidth modes, may not need to be repeated for all modes.	

3.5.5.1 Frequency Stability with Respect to Ambient Temperature

For 61.2 GHz:

Frequency Stability with Respect to Ambient Temperature			
Test Results			
Test Temperature (°C)	**Measured Frequency (MHz)**	**Delta Frequency (kHz)**	**Limit (±kHz)**
0	61197.161	310	within band
10	61197.133	282	within band
20	61196.851	Reference	within band
30	61196.489	-362	within band
40	61196.421	-430	within band
45	61195.913	-938	within band
NOTE: The manufacturer's specified temperature range of 0 to 45°C.			

3.5.5.2 Frequency Stability When Varying Supply Voltage

For 61.2 GHz:

Frequency Stability When Varying Supply Voltage			
Test Results			
Test Voltage: (Vdc)	**Measured Frequency (MHz)**	**Delta Frequency (kHz)**	**Limit (±kHz)**
4.25	61196.236	-279	within band
5	61196.515	Reference	within band
5.75	61196.386	-129	within band

3.6 Operation Restriction and Group Installation

3.6.1 Limit of Operation Restriction and Group Installation

Item	Limit
Operation Restriction	Operation is not permitted for the following products: ♦ Equipment used on aircraft or satellites. (Refer as 15.255 (a)) ♦ Field disturbance sensors, including vehicle radar systems, unless the field disturbance sensors are employed for fixed operation. (Refer as 15.255 (a))
Group Installation	Operation is not permitted for the following products: ♦ External phase-locking (Refer as 15.255 (h))

3.6.2 Result of Operation Restriction

Manufacturer declares that EUT will not been used on aircraft or satellites. Then user manual will include a statement to caution EUT is not permitted for used on aircraft or satellites.

3.6.3 Result of Group Installation

The frequency, amplitude and phase of the transmit signal are set within the EUT. There are no external phase-locking inputs or any other means of combining two or more units together to realize a beam-forming array.

4 Test Equipment and Calibration Data

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
LISN	Schwarzbeck	NSLK 8127	8127650	9kHz ~ 30MHz	Apr. 15, 2024	Apr. 14, 2025	Conduction (CO02-CB)
LISN	Schwarzbeck	NSLK 8127	8127647	9kHz ~ 30MHz	Apr. 24, 2024	Apr. 23, 2025	Conduction (CO02-CB)
EMI Receiver	Agilent	N9038A	MY52260140	9kHz ~ 8.4GHz	May 15, 2024	May 14, 2025	Conduction (CO02-CB)
COND Cable	Woken	Cable	02	0.15MHz ~ 30MHz	Oct. 16, 2024	Oct. 15, 2025	Conduction (CO02-CB)
Pulse Limiter	Schwarzbeck	VTSD 9561F-N	00378	9kHz ~ 30MHz	Oct. 16, 2024	Oct. 15, 2025	Conduction (CO02-CB)
Test Software	SPORTON	SENSE-EMI	V5.11	150kHz-30MHz	N.C.R.	N.C.R.	Conduction (CO02-CB)
Loop Antenna	Teseq	HLA 6121	65417	9kHz - 30MHz	Oct. 16, 2024	Oct. 15, 2025	Radiation (03CH05-CB)
3m Semi Anechoic Chamber NSA	TDK	SAC-3M	03CH05-CB	30MHz ~ 1GHz	Aug. 01, 2024	Jul. 31, 2025	Radiation (03CH05-CB)
Bilog Antenna with 6dB Attenuator	TESEQ & EMCI	CBL 6112D & N-6-06	35236 & AT-N0610	30MHz ~ 2GHz	Mar. 23, 2024	Mar. 22, 2025	Radiation (03CH05-CB)
Amplifier	EMCI	EMC330N	980331	20MHz ~ 3GHz	May 02, 2024	May 01, 2025	Radiation (03CH05-CB)
Spectrum Analyzer	R&S	FSP40	100304	9kHz ~ 40GHz	Apr. 17, 2024	Apr. 16, 2025	Radiation (03CH05-CB)
EMI Test Receiver	R&S	ESR7	102172	9kHz ~ 7GHz	Oct. 21, 2024	Oct. 20, 2025	Radiation (03CH05-CB)
RF Cable-low	Woken	RG402	Low Cable-04+23	30MHz~1GHz	Oct. 01, 2024	Sep. 30, 2025	Radiation (03CH05-CB)
Test Software	SPORTON	SENSE-EMI	V5.11.8	30MHz-40GHz	N.C.R.	N.C.R.	Radiation (03CH05-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH06-CB	1GHz ~18GHz 3m	Oct. 08, 2024	Oct. 07, 2025	Radiation (03CH06-CB)
Horn Antenna	SCHWARZBECK	BBHA9120D	BBHA 9120D-1292	1GHz~18GHz	Jul. 29, 2024	Jul. 28, 2025	Radiation (03CH06-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Sep. 23, 2024	Sep. 22, 2025	Radiation (03CH06-CB)
Pre-Amplifier	EMCI	EMC12630SE	980383	1GHz ~ 18GHz	Jul. 31, 2024	Jul. 30, 2025	Radiation (03CH06-CB)
Pre-Amplifier	SGH	SGH184	20221107-3	18GHz ~ 40GHz	Nov. 25, 2024	Nov. 24, 2025	Radiation (03CH06-CB)
Signal analyzer	R&S	FSV3044	101667	9kHz~44GHz	Aug. 20, 2024	Aug. 19, 2025	Radiation (03CH06-CB)

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
RF Cable-high	Woken	RG402	High Cable-05+68	1GHz~18GHz	Oct. 01, 2024	Sep. 30, 2025	Radiation (03CH06-CB)
High Cable	Woken	WCA0929M	40G#5+6	1GHz ~ 40GHz	Oct. 01, 2024	Sep. 30, 2025	Radiation (03CH06-CB)
*Harmonic Mixer	R&S	FS-Z60	100114	40GHz~60GHz	Nov. 22, 2024	Nov. 21, 2026	Radiation (03CH06-CB)
*Harmonic Mixer	R&S	FS-Z75	100966	50GHz~75GHz	Nov. 22, 2024	Nov. 21, 2026	Radiation (03CH06-CB)
*Harmonic Mixer	R&S	FS-Z90	102135	60GHz~90GHz	Sep. 13, 2024	Sep. 12, 2026	Radiation (03CH06-CB)
*Harmonic Mixer	R&S	FS-Z140	101160	90GHz~140GHz	Feb. 22, 2023	Feb. 21, 2025	Radiation (03CH06-CB)
*Harmonic Mixer	R&S	FS-Z220	101065	140GHz~220GHz	Feb. 22, 2023	Feb. 21, 2025	Radiation (03CH06-CB)
Standard Horn Antenna	Custom Microwave	M19RH	U91113-A	40 ~ 60 GHz	N.C.R.	N.C.R.	Radiation (03CH06-CB)
Standard Horn Antenna	Custom Microwave	M15RH	V91113-A	50 ~ 75 GHz	N.C.R.	N.C.R.	Radiation (03CH06-CB)
Standard Horn Antenna	Custom Microwave	M12RH	E91113-A	60 ~ 90 GHz	N.C.R.	N.C.R.	Radiation (03CH06-CB)
Standard Horn Antenna	Custom Microwave	M08RH	F91113-A	90 ~ 140 GHz	N.C.R.	N.C.R.	Radiation (03CH06-CB)
Standard Horn Antenna	Custom Microwave	M05RH	G91113-A	140 ~ 220 GHz	N.C.R.	N.C.R.	Radiation (03CH06-CB)
Test Software	SPORTON	SENSE-EMI	V5.11.8	30MHz-40GHz	N.C.R.	N.C.R.	Radiation (03CH06-CB)
Spectrum analyzer	R&S	FSV40	100979	9kHz~40GHz	May 27, 2024	May 26, 2025	Radiation (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-06	1 GHz – 18 GHz	Oct. 01, 2024	Sep. 30, 2025	Radiation (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-07	1 GHz – 18 GHz	Oct. 01, 2024	Sep. 30, 2025	Radiation (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-08	1 GHz – 18 GHz	Oct. 01, 2024	Sep. 30, 2025	Radiation (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-09	1 GHz – 18 GHz	Oct. 01, 2024	Sep. 30, 2025	Radiation (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz – 18 GHz	Oct. 01, 2024	Sep. 30, 2025	Radiation (TH01-CB)
Cable 9k-18G	Woken	RG402	Cable-95	9 kHz –18 GHz	Oct. 01, 2024	Sep. 30, 2025	Radiation (TH01-CB)
Temp. and Humidity Chamber	Ten Billion	TTH-D3SP	TBN-931011	-30~100 degree	May 20, 2024	May 19, 2025	Radiation (TH01-CB)

Note: Calibration Interval of instruments listed above is one year.

"*" Calibration Interval of instruments listed above is two years.

N.C.R. means Non-Calibration required.

5 Measurement Uncertainty

Test Items	Uncertainty	Remark
Conducted Emission (150kHz ~ 30MHz)	3.8 dB	Confidence levels of 95%
Radiated Emission (9kHz ~ 30MHz)	4.1 dB	Confidence levels of 95%
Radiated Emission (30MHz ~ 1,000MHz)	4.2 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	4.2 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	4.0 dB	Confidence levels of 95%
Radiated Emission (40GHz ~ 60GHz)	3.0 dB	Confidence levels of 95%
Radiated Emission (60GHz ~ 90GHz)	3.2 dB	Confidence levels of 95%
Radiated Emission (90GHz ~ 200GHz)	2.5 dB	Confidence levels of 95%
Temperature	1.2°C	Confidence levels of 95%