

TEST REPORT

Report No.: 26061087HKG-003

Hasbro Far East Ltd.

Application For Certification
(Original Grant)

FCC ID: RS4-G2896RX

Transceiver – 2.4GHz RC Doll

Prepared and Checked by:

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Date: September 15, 2026

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TEST REPORT

GENERAL INFORMATION

Grantee:	Hasbro Far East Ltd.
Grantee Address:	18-20/F Hang Seng Tower, 33 Wai Yip Street, Kowloon Bay, Kowloon, Hong Kong.
Manufacturer:	Hasbro Far East Ltd.
Manufacturer Address:	18-20/F Hang Seng Tower, 33 Wai Yip Street, Kowloon Bay, Kowloon, Hong Kong.
FCC ID:	RS4-G2896RX
Model:	G2896
Additional Model:	G4483
Type of EUT:	Transceiver
Description of EUT:	SW ULTIMATE GROGU COLLECTORS EDITION
Brand Name:	SW ULTIMATE GROGU COLLECTORS EDITION
Factory Code:	E
Vendor Code:	ZC-022
Serial Number:	Not Labelled
Sample Receipt Date:	June 23, 2026
Date of Test:	July 08, 2026 to August 11, 2026
Environmental Conditions:	Temperature: +10 to 40°C Relative Humidity: 10 to 90%
Conclusion:	Test was conducted by client submitted sample. The submitted sample as received complied with the 47 CFR Part 15 Certification.

TEST REPORT

SUMMARY OF TEST RESULT

Test Items	FCC Part 15 Section	Results
Transmitter Power Line Conducted Emissions	15.207	Complied
Radiated Emission	15.249, 15.209	Complied
Radiated Emission on the Bandedge		Complied
Radiated Emission in Restricted Bands	15.205	Complied

The equipment under test is found to be complying with the following standards:

FCC Part 15, October 1, 2024 Edition

- Note:
1. The EUT uses a permanently attached antenna which, in accordance to section 15.203, is considered sufficient to comply with the provisions of this section.
 2. Pursuant to FCC Part 15 Section 15.215(c), the 20dB bandwidth of the emission was contained within the frequency band designated (mentioned as above) which the EUT operated. The effects, if any, from frequency sweeping, frequency hopping, other modulation techniques and frequency stability over expected variations in temperature and supply voltage were considered.

TEST REPORT

TABLE OF CONTENTS

1.0	GENERAL DESCRIPTION.....	5
1.1	Product Description	5
1.2	Related Submittal(s) Grants.....	5
1.3	Test Methodology	5
1.4	Test Facility.....	5
2.0	SYSTEM TEST CONFIGURATION.....	6
2.1	Justification	6
2.2	EUT Exercising Software.....	6
2.3	Special Accessories.....	6
2.4	Measurement Uncertainty.....	6
2.5	Support Equipment List and Description	6
3.0	EMISSION RESULTS.....	7
3.1	Field Strength Calculation	7
3.2	Radiated Emission Configuration Photograph.....	8
3.3	Radiated Emission Data	8
3.4	Conducted Emission Configuration Photograph	8
3.5	Conducted Emission Data	8
3.6	Conducted Emission Test Setup.....	8
4.0	EQUIPMENT PHOTOGRAPHS.....	18
5.0	PRODUCT LABELLING	18
6.0	TECHNICAL SPECIFICATIONS	18
7.0	INSTRUCTION MANUAL	18
8.0	MISCELLANEOUS INFORMATION	19
8.1	Radiated Emission on the Bandedge	19
8.2	Emissions Test Procedures.....	20
8.3	Occupied Bandwidth	24
9.0	CONFIDENTIALITY REQUEST.....	25
10.0	EQUIPMENT LIST	25

TEST REPORT

1.0 GENERAL DESCRIPTION

1.1 Product Description

The Equipment Under Test (EUT), is a portable 2.4GHz Transceiver (Main Unit) for a RC doll. The sample supplied operated on 6 channels which are 2425MHz, 2438MHz, 2443MHz, 2450MHz, 2461MHz and 2474MHz.

The EUT is powered by 4 x 1.5V D batteries or 5.0V USB port. After switching on the EUT, the doll will perform different actions based on the switches pressed in the cookie and the detonator. The cookie and the detonator can interact with the doll, but only either one can interact with the doll at a time. The cookie and the detonator cannot interact with each other.

The Model: G4483 is the same as the Model: G2896 in hardware aspect as declared by client. The models are different in model number and packaging only as declared by client.

Antenna Type: Internal, Integral

For electronic filing, the brief circuit description is saved with filename: Descri.pdf.

1.2 Related Submittal(s) Grants

This is a single application for certification of a transceiver.

The Certificate procedure of transceiver for this transceiver (with FCC ID: RS4-G2896T2 and RS4-G2896T1) is being processed as the same time of this application.

1.3 Test Methodology

Both AC mains line-conducted and emission measurements were performed according to the procedures in ANSI C63.10-2020+ Cor.1-2023+C63.10a-2024+Errata to C63.10a-2024. All radiated measurements were performed in an 3m Chamber. Preliminary scans were performed in the 3m Chamber only to determine worst case modes. All radiated tests were performed at an antenna to EUT distance of 3 meters, unless stated otherwise in the “**Justification Section**” of this Application.

1.4 Test Facility

The 3m Chamber used to collect the radiated data is located at Workshop No. 3, G/F., World-Wide Industrial Centre, 43-47 Shan Mei Street, Fo Tan, Sha Tin, N.T., Hong Kong SAR, China. This test facility and site measurement data have been placed on file with the FCC.

TEST REPORT

2.0 SYSTEM TEST CONFIGURATION

2.1 Justification

The system was configured for testing in a typical fashion (as a customer would normally use it), and in the confines as outlined in ANSI C63.10-2020+Cor.1-2023+C63.10a-2024+Errata to C63.10a-2024.

The device was powered by 6.0VDC (4 x 1.5V D Batteries) or 5.0VDC USB port.

For maximizing emissions below 30 MHz, the EUT was rotated through 360°, the centre of the loop antenna was placed 1 meter above the ground, and the antenna polarization was changed. For maximizing emission at and above 30 MHz, the EUT was rotated through 360°, the antenna height was varied from 1 meter to 4 meters above the ground plane, and the antenna polarization was changed. This step-by-step procedure for maximizing emissions led to the data report in Exhibit 3.0.

The unit was operated standalone and placed in the center of the turntable.

The equipment under test (EUT) was configured for testing in a typical fashion (as a customer would normally use it). The EUT was mounted to a plastic stand if necessary and placed on the wooden turntable, which enabled the engineer to maximize emissions through its placement in the three orthogonal axes.

2.2 EUT Exercising Software

The EUT exercise program (if any) used during radiated testing was designed to exercise the various system components in a manner similar to a typical use.

2.3 Special Accessories

There are no special accessories necessary for compliance of this product.

2.4 Measurement Uncertainty

Decision Rule for compliance: For FCC/IC standard, the measured value must be within the limits of applicable standard without accounting for the measurement uncertainty. For EN/IEC/HKTA/HKTC standard, conformity rules will be used as per standard directly excepted EN/IEC 61000-3-2, EN/IEC 61000-3-3, HKTA1004, HKCA1008, HKTA1019, HKTA1020, HKTA1041 and HKTA1044.

2.5 Support Equipment List and Description

Description	Remark
USB-C cable with length of 1.04 meter long	Provided by Applicant
AC/DC Adaptor (Model: Cp0154-05030000UA1; Input: 100-240 VAC/50-60Hz 0.5A Max; Output: 5.0VDC 3A)	Provided by Applicant

TEST REPORT

3.0 EMISSION RESULTS

Data is included of the worst case configuration (the configuration which resulted in the highest emission levels). A sample calculation, configuration photographs and data tables of the emissions are included.

3.1 Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any), Average Factor (optional) from the measured reading.

The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CF - AG - AV$$

where

FS	=	Field Strength in dB μ V/m
RA	=	Receiver Amplitude (including preamplifier) in dB μ V
AF	=	Antenna Factor in dB
CF	=	Cable Attenuation Factor in dB
AG	=	Amplifier Gain in dB
AV	=	Average Factor in dB

In the following table(s), the reading shown on the data table reflects the preamplifier gain.

An example for the calculations in the following table is as follows:

$$FS = RR + LF$$

where

FS	=	Field Strength in dB μ V/m
RR	=	RA - AG - AV in dB μ V
LF	=	CF + AF in dB

Assume a receiver reading of 52.0 dB μ V is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB are added. The amplifier gain of 29.0 dB and average factor of 5.0 dB are subtracted, giving a field strength of 27.0 dB μ V/m. This value in dB μ V/m was converted to its corresponding level in μ V/m.

RA	=	52.0 dB μ V/m	
AF	=	7.4 dB	RR = 18.0 dB μ V
CF	=	1.6 dB	LF = 9.0 dB
AG	=	29.0 dB	
AV	=	5.0 dB	
FS	=	RR + LF	
FS	=	18.0 + 9.0 = 27.0 dB μ V/m	

Level in μ V/m = Common Antilogarithm [(27.0 dB μ V/m)/20] = 22.4 μ V/m

TEST REPORT

3.2 Radiated Emission Configuration Photograph

The worst case in radiated emission was found at 12125 MHz

For electronic filing, the worst case radiated emission configuration photographs are saved with filename: Radiated Photos.pdf.

3.3 Radiated Emission Data

The data on the following page lists the significant emission frequencies, the limit and the margin of compliance. Numbers with a minus sign are below the limit.

Judgment: Passed by 7.3 dB

3.4 Conducted Emission Configuration Photograph

The worst case in line-conducted emission was found at 0.537 MHz

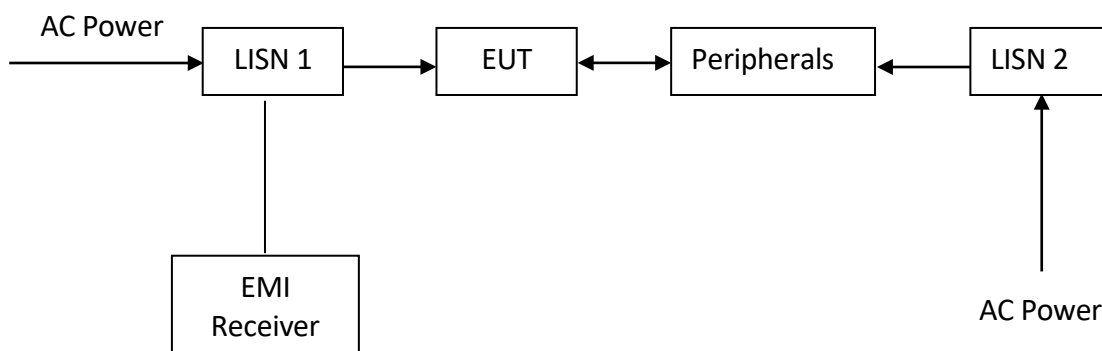
For electronic filing, the worst-case line-conducted configuration photographs are saved with filename: Setup Photos.pdf.

3.5 Conducted Emission Data

The data on the following page lists the significant emission frequencies, the limit and the margin of compliance. Numbers with a minus sign are below the limit.

Judgment: Passed by 3.25 dB

3.6 Conducted Emission Test Setup



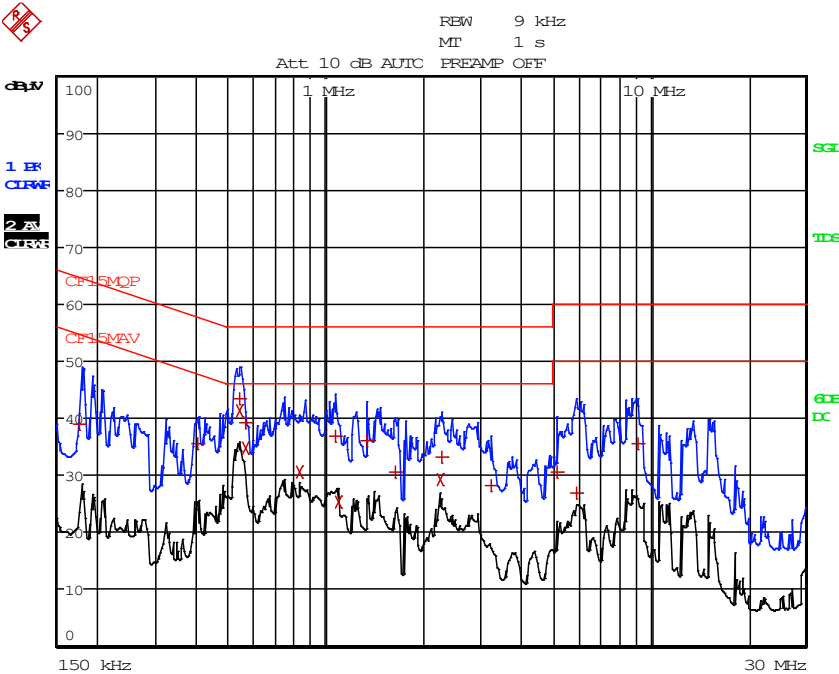
The EUT along with its peripherals were placed on a 1.0m(W)×1.5m(L) and 0.8m in height wooden table and the EUT was adjusted to maintain a 0.4 meter space from a vertical reference plane. The EUT was connected to power mains through a line impedance stabilization network (LISN), which provided 50 ohm coupling impedance for measuring instrument and the chassis ground was bounded to the horizontal ground plane of shielded room. The excess power cable between the EUT and the LISN was bundled.

All connecting cables of EUT and peripherals were moved to find the maximum emission.

TEST REPORT

CONDUCTED EMISSION

Model: G2896
Date of Test: August 06, 2026
Worst-Case Operating Mode: Sound mode(interact with cookie ;Powered by by Adaptor)



EDIT PEAK LIST (Final Measurement Results)

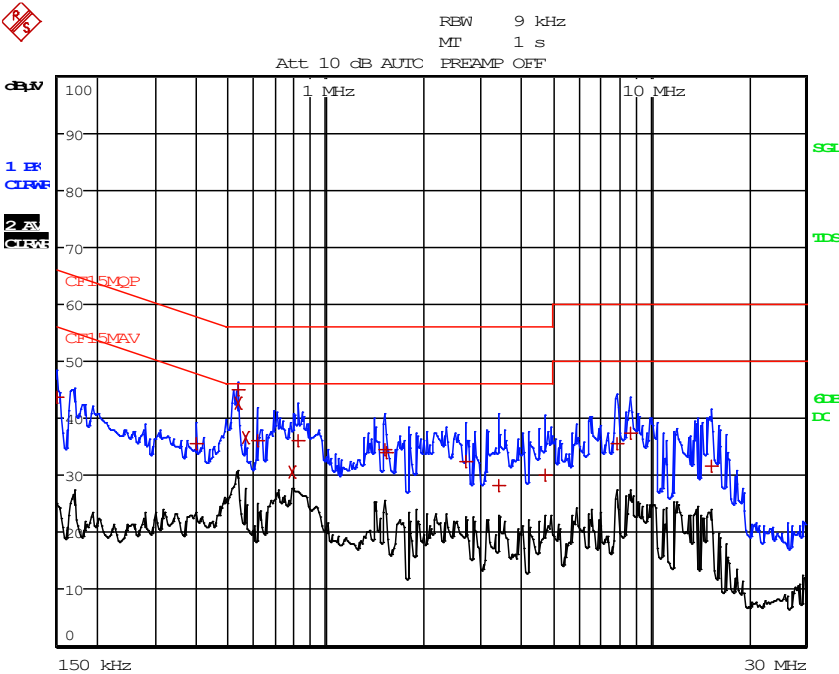
Trace1:	CF15MQP		
Trace2:	CF15MAV		
Trace3:	---		
TRACE	FREQUENCY	LEVEL dBμV	DELTA LIMIT dB
1 Quasi Peak	177 kHz	39.06 N	-25.56
1 Quasi Peak	402 kHz	35.54 N	-22.26
1 Quasi Peak	541.5 kHz	43.41 N	-12.58
2 CISPR Average	541.5 kHz	41.26 N	-4.73
1 Quasi Peak	568.5 kHz	39.33 N	-16.66
2 CISPR Average	568.5 kHz	34.80 N	-11.19
2 CISPR Average	829.5 kHz	30.59 N	-15.40
1 Quasi Peak	1.077 MHz	36.74 L1	-19.25
2 CISPR Average	1.095 MHz	25.37 N	-20.62
1 Quasi Peak	1.3425 MHz	36.06 N	-19.93
1 Quasi Peak	1.6395 MHz	30.64 L1	-25.35
2 CISPR Average	2.265 MHz	29.35 N	-16.65
1 Quasi Peak	2.2785 MHz	33.13 L1	-22.86
1 Quasi Peak	3.2235 MHz	28.25 N	-27.74
1 Quasi Peak	5.1405 MHz	30.68 N	-29.31
1 Quasi Peak	5.9415 MHz	26.92 N	-33.07
1 Quasi Peak	9.1095 MHz	35.51 N	-24.48

Note: Measurement Uncertainty is ±4.2dB at a level of confidence of 95%.

TEST REPORT

CONDUCTED EMISSION

Model: G2896
Date of Test: August 06, 2026
Worst-Case Operating Mode: Sound mode(interact with detonator ;Powered by by Adaptor)



EDIT PEAK LIST (Final Measurement Results)				
Trace1:	CF15MOP			
Trace2:	CF15MAV			
Trace3:	---			
TRACE	FREQUENCY	LEVEL dBμV	DELTA LIMIT dB	
1 Quasi Peak	150 kHz	43.67 L1	-22.32	
1 Quasi Peak	397.5 kHz	35.60 N	-22.30	
1 Quasi Peak	537 kHz	45.00 N	-10.99	
2 CISPR Average	537 kHz	42.74 N	-3.25	
2 CISPR Average	568.5 kHz	36.65 N	-9.34	
1 Quasi Peak	618 kHz	35.97 N	-20.02	
2 CISPR Average	789 kHz	30.59 N	-15.40	
1 Quasi Peak	825 kHz	36.22 N	-19.78	
1 Quasi Peak	1.518 MHz	34.54 N	-21.45	
1 Quasi Peak	1.5315 MHz	33.90 N	-22.09	
1 Quasi Peak	2.6925 MHz	32.31 N	-23.68	
1 Quasi Peak	3.4035 MHz	28.33 L1	-27.67	
1 Quasi Peak	4.7355 MHz	30.02 N	-25.97	
1 Quasi Peak	7.971 MHz	35.69 N	-24.30	
1 Quasi Peak	8.664 MHz	37.31 N	-22.68	
1 Quasi Peak	15.3285 MHz	31.58 N	-28.41	

Note: Measurement Uncertainty is ±4.2dB at a level of confidence of 95%.

TEST REPORT

RADIATED EMISSIONS

Model: G2896
Date of Test: July 08, 2026
Worst-Case Operating Mode: Transmitting

Table 1

Pursuant to FCC Part 15 Section 15.249 Requirement

Lowest Channel

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Average (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
H	2425.000	73.7	33	29.4	70.1	94.0	-23.9
H	2400.000	49.0	33	29.4	45.4	54.0	-8.6
H	4850.000	41.2	33	34.9	43.1	54.0	-10.9
V	7275.000	32.8	33	37.9	37.7	54.0	-16.3
H	9700.000	33.4	33	40.4	40.8	54.0	-13.2
V	12125.000	39.2	33	40.5	46.7	54.0	-7.3
V	14550.000	39.0	33	38.4	44.4	54.0	-9.6

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)
H	2425.000	101.6	33	29.4	98.0	114.0	-16.0
H	2400.000	62.6	33	29.4	59.0	74.0	-15.0
H	4850.000	57.3	33	34.9	59.2	74.0	-14.8
V	7275.000	52.4	33	37.9	57.3	74.0	-16.7
H	9700.000	52.6	33	40.4	60.0	74.0	-14.0
V	12125.000	58.1	33	40.5	65.6	74.0	-8.4
V	14550.000	54.2	33	38.4	59.6	74.0	-14.4

- Notes: 1. Peak Detector Data unless otherwise stated.
2. Average detector is applied according to ANSI C63.10-2020+Cor.1-2023+C63.10a-2024+ Errata to C63.10a-2024.
3. All measurements were made at 3 meters.
4. Negative value in the margin column shows emission below limit.
5. Horn antenna is used for the emission over 1000MHz.
6. Emissions within the restricted band meet the requirement of FCC Part 15 Section 15.205.
7. Measurement Uncertainty is ± 5.3 dB at a level of confidence of 95%.

TEST REPORT

RADIATED EMISSIONS

Model: G2896
Date of Test: July 08, 2026
Worst-Case Operating Mode: Transmitting

Table 2

Pursuant to FCC Part 15 Section 15.249 Requirement

Middle Channel

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Average (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
H	2450.000	73.7	33	29.4	70.1	94.0	-23.9
H	4900.000	37.0	33	34.9	38.9	54.0	-15.1
V	7350.000	33.8	33	37.9	38.7	54.0	-15.3
V	9800.000	36.0	33	40.4	43.4	54.0	-10.6
V	12250.000	38.8	33	40.5	46.3	54.0	-7.7
V	14700.000	36.8	33	38.4	42.2	54.0	-11.8

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)
H	2450.000	99.5	33	29.4	95.9	114.0	-18.1
H	4900.000	54.7	33	34.9	56.6	74.0	-17.4
V	7350.000	55.8	33	37.9	60.7	74.0	-13.3
V	9800.000	58.8	33	40.4	66.2	74.0	-7.8
V	12250.000	56.9	33	40.5	64.4	74.0	-9.6
V	14700.000	50.2	33	38.4	55.6	74.0	-18.4

- Notes: 1. Peak Detector Data unless otherwise stated.
2. Average detector is applied according to ANSI C63.10-2020+Cor.1-2023+C63.10a-2024+ Errata to C63.10a-2024.
3. All measurements were made at 3 meters.
4. Negative value in the margin column shows emission below limit.
5. Horn antenna is used for the emission over 1000MHz.
6. Emissions within the restricted band meet the requirement of FCC Part 15 Section 15.205.
7. Measurement Uncertainty is ± 5.3 dB at a level of confidence of 95%.

TEST REPORT

RADIATED EMISSIONS

Model: G2896
Date of Test: July 08, 2026
Worst-Case Operating Mode: Transmitting

Table 3

Pursuant to FCC Part 15 Section 15.249 Requirement

Highest Channel

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Average (dBμV/m)	Average Limit at 3m (dBμV/m)	Margin (dB)
H	2474.000	73.5	33	29.4	69.9	94.0	-24.1
H	2483.500	49.7	33	29.4	46.1	54.0	-7.9
V	4948.000	37.5	33	34.9	39.4	54.0	-14.6
V	7422.000	32.9	33	37.9	37.8	54.0	-16.2
V	9896.000	33.5	33	40.4	40.9	54.0	-13.1
H	12370.000	38.8	33	40.5	46.3	54.0	-7.7
H	14844.000	38.4	33	38.4	43.8	54.0	-10.2

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m - Peak (dBμV/m)	Peak Limit at 3m (dBμV/m)	Margin (dB)
H	2474.000	99.5	33	29.4	95.9	114.0	-18.1
H	2483.500	63.5	33	29.4	59.9	74.0	-14.1
V	4948.000	53.2	33	34.9	55.1	74.0	-18.9
V	7422.000	52.5	33	37.9	57.4	74.0	-16.6
V	9896.000	53.1	33	40.4	60.5	74.0	-13.5
H	12370.000	55.6	33	40.5	63.1	74.0	-10.9
H	14844.000	52.0	33	38.4	57.4	74.0	-16.6

- Notes:
1. Peak Detector Data unless otherwise stated.
 2. Average detector is applied according to ANSI C63.10-2020+Cor.1-2023+C63.10a-2024+ Errata to C63.10a-2024.
 3. All measurements were made at 3 meters.
 4. Negative value in the margin column shows emission below limit.
 5. Horn antenna is used for the emission over 1000MHz.
 6. Emissions within the restricted band meet the requirement of FCC Part 15 Section 15.205.
 7. Measurement Uncertainty is ± 5.3 dB at a level of confidence of 95%.

TEST REPORT

RADIATED EMISSIONS

Model: G2896
Date of Test: July 08, 2026
Worst-Case Operating Mode: Sound mode (interact with cookie; Powered by by Battery)

Table 4

Pursuant to FCC Part 15 Section 15.209 Requirement

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-amp (dB)	Antenna Factor (dB)	Net at 3m (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)
V	81.774	37.0	16	7.0	28.0	40.0	-12.0
V	141.065	33.6	16	14.0	31.6	43.5	-11.9
V	162.163	26.1	16	16.0	26.1	43.5	-17.4
H	188.474	29.9	16	16.0	29.9	43.5	-13.6
V	510.514	20.5	16	27.0	31.5	46.0	-14.5
V	965.686	17.8	16	33.0	34.8	54.0	-19.2

- Notes:
1. Peak Detector Data unless otherwise stated.
 2. All measurements were made at 3 meters.
 3. Negative value in the margin column shows emission below limit.
 4. Horn antenna is used for the emission over 1000MHz.
 5. Emissions within the restricted band meet the requirement of FCC Part 15 Section 15.205.
 6. Measurement Uncertainty is ± 5.3 dB at a level of confidence of 95%.

TEST REPORT

RADIATED EMISSIONS

Model: G2896
Date of Test: July 08, 2026
Worst-Case Operating Mode: Sound mode (interact with detonator; Powered by by Battery)

Table 5

Pursuant to FCC Part 15 Section 15.209 Requirement

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-amp (dB)	Antenna Factor (dB)	Net at 3m (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)
V	81.046	39.0	16	7.0	30.0	40.0	-10.0
V	94.141	31.0	16	11.0	26.0	43.5	-17.5
V	141.186	33.0	16	14.0	31.0	43.5	-12.5
V	188.231	28.9	16	16.0	28.9	43.5	-14.6
H	235.761	26.3	16	19.0	29.3	46.0	-16.7
H	405.026	20.4	16	24.0	28.4	46.0	-17.6

- Notes:
1. Peak Detector Data unless otherwise stated.
 2. All measurements were made at 3 meters.
 3. Negative value in the margin column shows emission below limit.
 4. Horn antenna is used for the emission over 1000MHz.
 5. Emissions within the restricted band meet the requirement of FCC Part 15 Section 15.205.
 6. Measurement Uncertainty is ± 5.3 dB at a level of confidence of 95%.

TEST REPORT

RADIATED EMISSIONS

Model: G2896
Date of Test: July 08, 2026
Worst-Case Operating Mode: Sound mode (interact with cookie ; Powered by by Adaptor)

Table 6

Pursuant to FCC Part 15 Section 15.209 Requirement

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-amp (dB)	Antenna Factor (dB)	Net at 3m (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)
V	40.306	36.6	16	10.0	30.6	40.0	-9.4
V	80.561	40.5	16	6.0	30.5	40.0	-9.5
V	188.838	30.0	16	16.0	30.0	43.5	-13.5
V	377.745	21.9	16	24.0	29.9	46.0	-16.1
V	789.874	23.0	16	31.0	38.0	46.0	-8.0
V	939.860	18.2	16	33.0	35.2	46.0	-10.8

- Notes: 1. Peak Detector Data unless otherwise stated.
2. All measurements were made at 3 meters.
3. Negative value in the margin column shows emission below limit.
4. Horn antenna is used for the emission over 1000MHz.
5. Emissions within the restricted band meet the requirement of FCC Part 15 Section 15.205.
6. Measurement Uncertainty is ± 5.3 dB at a level of confidence of 95%.

TEST REPORT

RADIATED EMISSIONS

Model: G2896
Date of Test: July 08, 2026
Worst-Case Operating Mode: Sound mode (interact with detonator ; Powered by by Adaptor)

Table 7

Pursuant to FCC Part 15 Section 15.209 Requirement

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-amp (dB)	Antenna Factor (dB)	Net at 3m (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)
V	36.911	37.2	16	10.0	31.2	40.0	-8.8
V	80.561	39.9	16	6.0	29.9	40.0	-10.1
V	188.474	30.2	16	16.0	30.2	43.5	-13.3
V	596.238	22.6	16	29.0	35.6	46.0	-10.4
V	923.370	18.0	16	33.0	35.0	46.0	-11.0
V	938.284	18.6	16	33.0	35.6	46.0	-10.4

- Notes:
1. Peak Detector Data unless otherwise stated.
 2. All measurements were made at 3 meters.
 3. Negative value in the margin column shows emission below limit.
 4. Horn antenna is used for the emission over 1000MHz.
 5. Emissions within the restricted band meet the requirement of FCC Part 15 Section 15.205.
 6. Measurement Uncertainty is ± 5.3 dB at a level of confidence of 95%.

TEST REPORT

4.0 EQUIPMENT PHOTOGRAPHS

For electronic filing, the photographs are saved with filename: External Photos.pdf and Internal Photos.pdf.

5.0 PRODUCT LABELLING

For electronics filing, the FCC ID label artwork and the label location are saved with filename: Label.pdf.

6.0 TECHNICAL SPECIFICATIONS

For electronic filing, the block diagram and schematic of the tested EUT are saved with filename: Block.pdf and Circuit.pdf respectively.

7.0 INSTRUCTION MANUAL

For electronic filing, a preliminary copy of the Instruction Manual is saved with filename: Manual.pdf.

This manual will be provided to the end-user with each unit sold/leased in the United States.

TEST REPORT

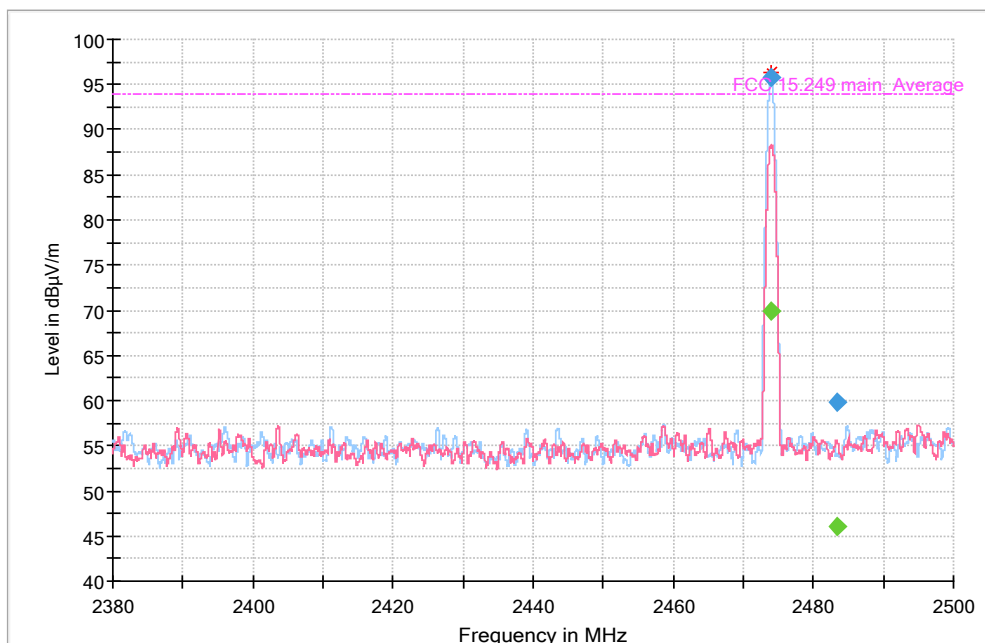
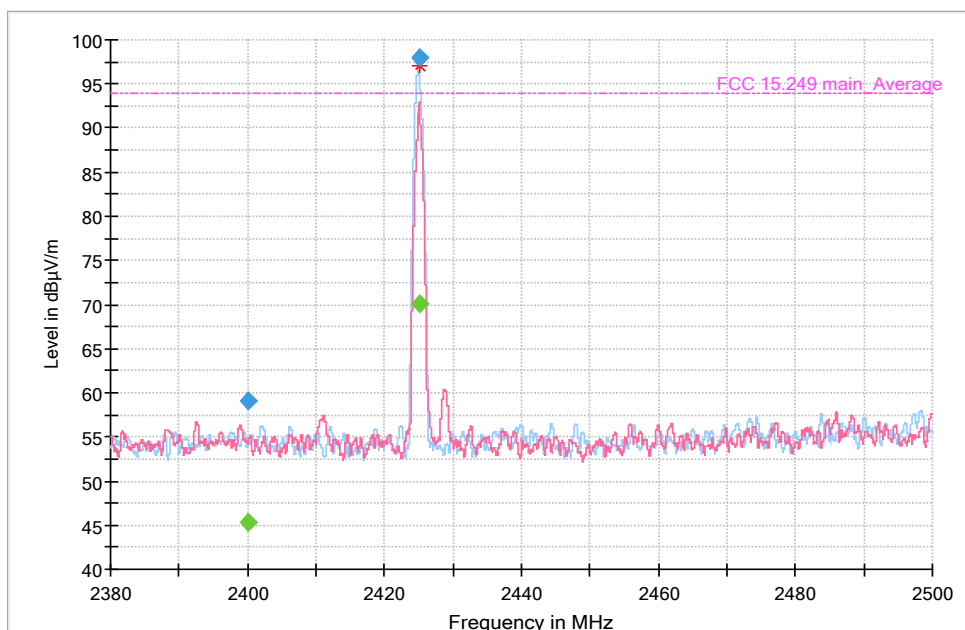
8.0 MISCELLANEOUS INFORMATION

The miscellaneous information includes details of the test procedure and measured bandwidth.

8.1 Radiated Emission on the Bandedge

The emission of bandedge data were shown on the above radiated data table of 1 & 3 respectively.

Emissions radiated outside of the specified frequency bands, except harmonics, are attenuated by 50dB below the level of the fundamental or to the general radiated emissions limits in Section 15.209, whichever is the lesser attenuation, which meet the requirement of Part 15.249(d).



TEST REPORT

8.2 Emissions Test Procedures

The following is a description of the test procedure used by Intertek Testing Services Hong Kong Ltd. in the measurements of transmitter operating under the Part 15, Subpart C rules.

The transmitting equipment under test (EUT) is placed on a wooden turntable which is four feet in diameter and approximately 0.8m in height above the ground plane for emission measurement at or below 1GHz and 1.5m in height above the ground plane for emission measurement above 1GHz. During the radiated emissions test, the turntable is rotated and any cables leaving the EUT are manipulated to find the configuration resulting in maximum emissions. The EUT is adjusted through all three orthogonal axis to obtain maximum emission levels. The antenna height and polarization are also varied during the testing to search for maximum signal levels. The height of the antenna is varied from one to four meters.

Detector function for radiated emissions is in peak mode. Average readings, when required, are taken by measuring the duty cycle of the equipment under test and subtracting the corresponding amount in dB from the measured peak readings. A detailed description for the calculation of the average factor can be found in Exhibit 8.3.

The frequency range scanned is from the lowest radio frequency signal generated in the device which is greater than 9 kHz to the tenth harmonic of the highest fundamental frequency or 40 GHz, whichever is lower. For line conducted emissions, the range scanned is 150 kHz to 30 MHz.

The EUT is warmed up for 15 minutes prior to the test.

AC power to the unit is varied from 85% to 115% nominal and variation in the fundamental emission field strength is recorded. If battery powered, a new, fully charged battery is used.

Conducted measurements were made as described in ANSI C63.10-2020+Cor.1-2023+C63.10a-2024+ Errata to C63.10a-2024.

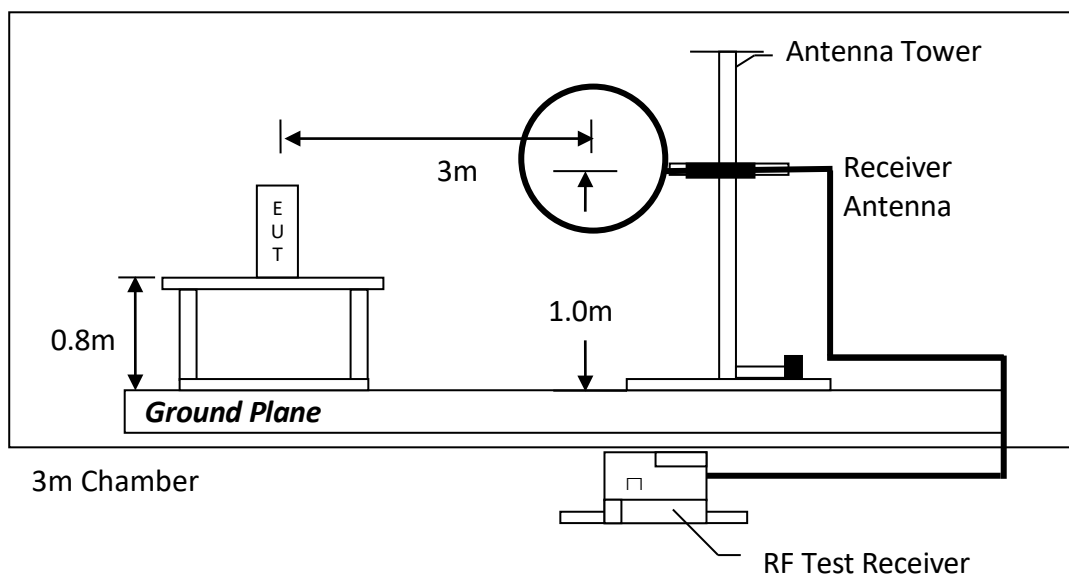
The IF bandwidth used for measurement of radiated signal strength was 100 kHz or greater when frequency is below 1000 MHz. Where pulsed transmissions of short enough pulse duration warrant, a greater bandwidth is selected according to the recommendations of Hewlett Packard Application Note 150-2. A discussion of whether pulse desensitivity is applicable to this unit is included in this report (See Exhibit 8.1). Above 1000 MHz, a resolution bandwidth of 1 MHz is used.

Transmitter measurements are normally conducted at a measurement distance of three meters. However, to assure low enough noise floor in the forbidden bands and above 1 GHz, signals are acquired at a distance of one meter or less. All measurements are extrapolated to three meters using inverse scaling, unless otherwise reported. Measurements taken at a closer distance are so marked.

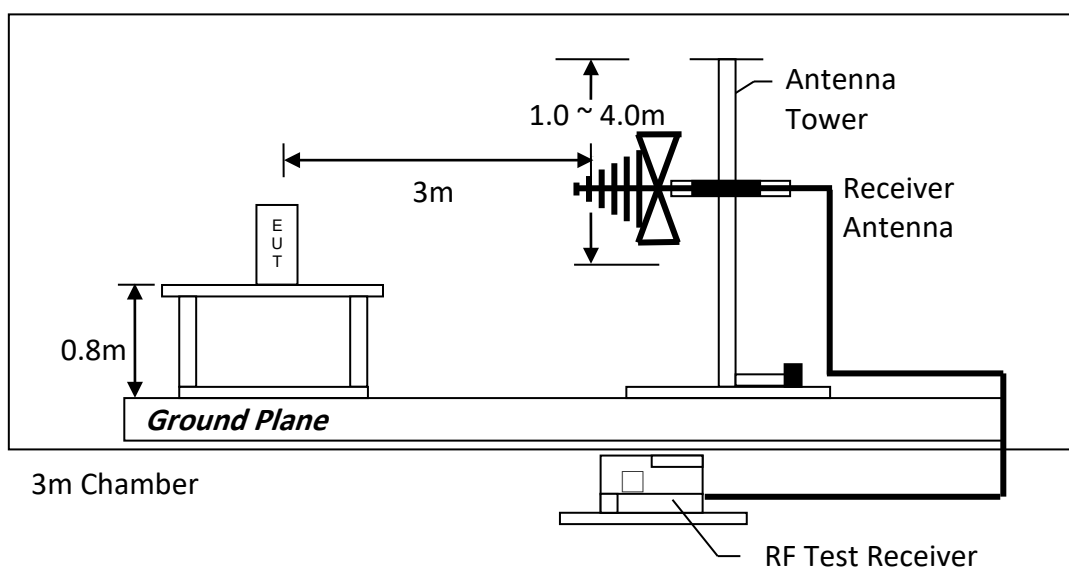
TEST REPORT

8.2.1 Radiated Emission Test Setup

The figure below shows the test setup, which is utilized to make these measurements.



Test setup of radiated emissions 9kHz to 30MHz

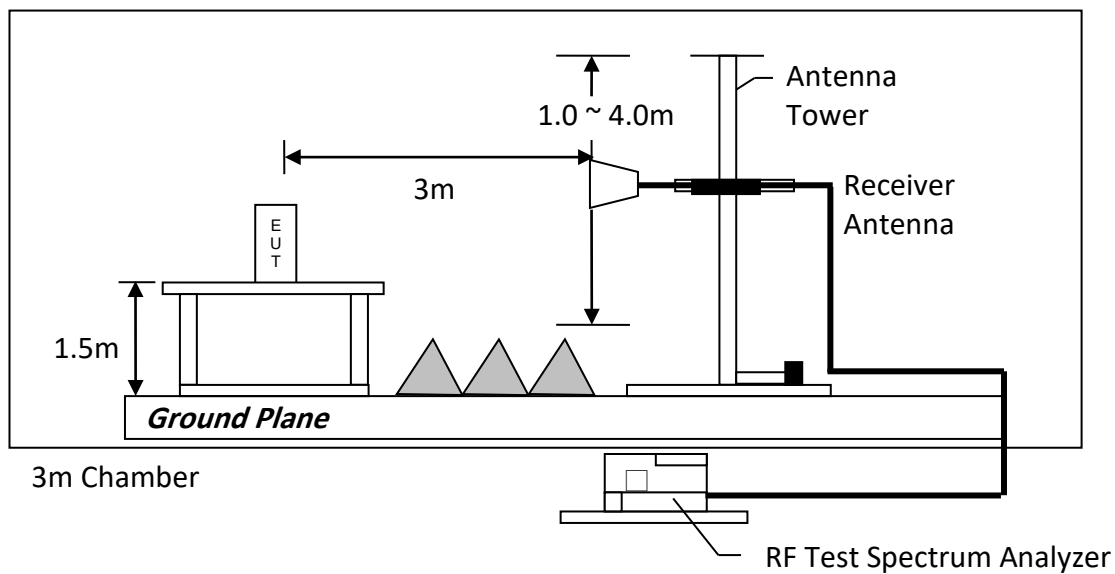


Test setup of radiated emissions 30MHz to 1GHz

TEST REPORT

8.2.1 Radiated Emission Test Setup

The figure below shows the test setup, which is utilized to make these measurements.



Test setup of radiated emissions above 1GHz

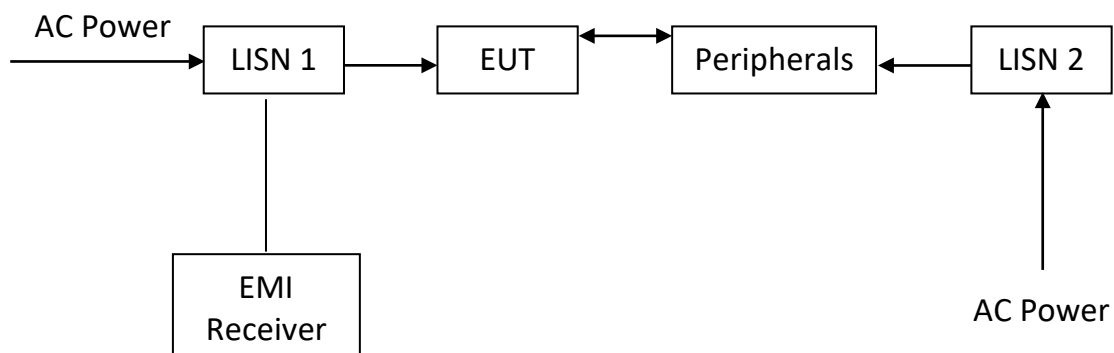
TEST REPORT

8.2.2 Conducted Emission Test Procedures

For tabletop equipment, the EUT along with its peripherals were placed on a 1.0m(W)×1.5m(L) and 0.8m in height wooden table. For floor-standing equipment, the EUT and all cables were insulated, if required, from the ground plane by up to 12 mm of insulating material. The EUT was adjusted to maintain a 0.4 meter space from a vertical reference plane. The EUT was connected to power mains through a line impedance stabilization network (LISN), which provided 50 ohm coupling impedance for measuring instrument and the chassis ground was bounded to the horizontal ground plane of shielded room. The excess power cable between the EUT and the LISN was bundled.

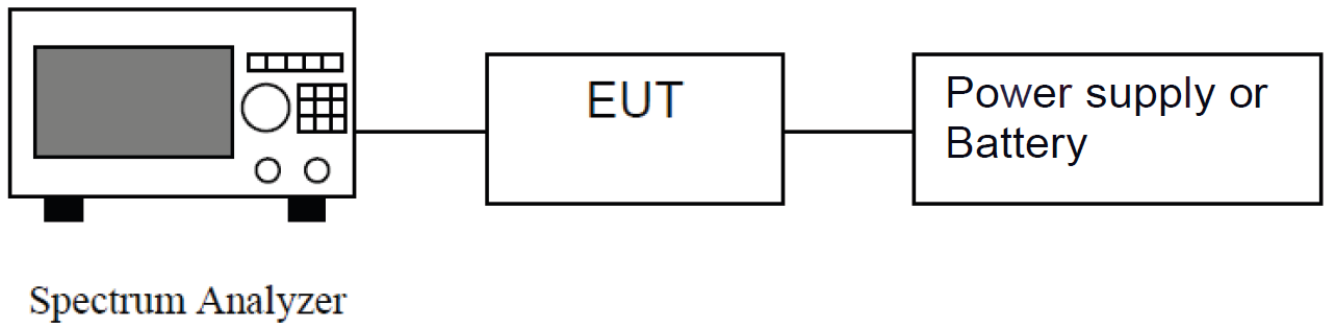
All connecting cables of EUT and peripherals were moved to find the maximum emission.

8.2.3 Conducted Emission Test Setup



TEST REPORT

8.3 Occupied Bandwidth

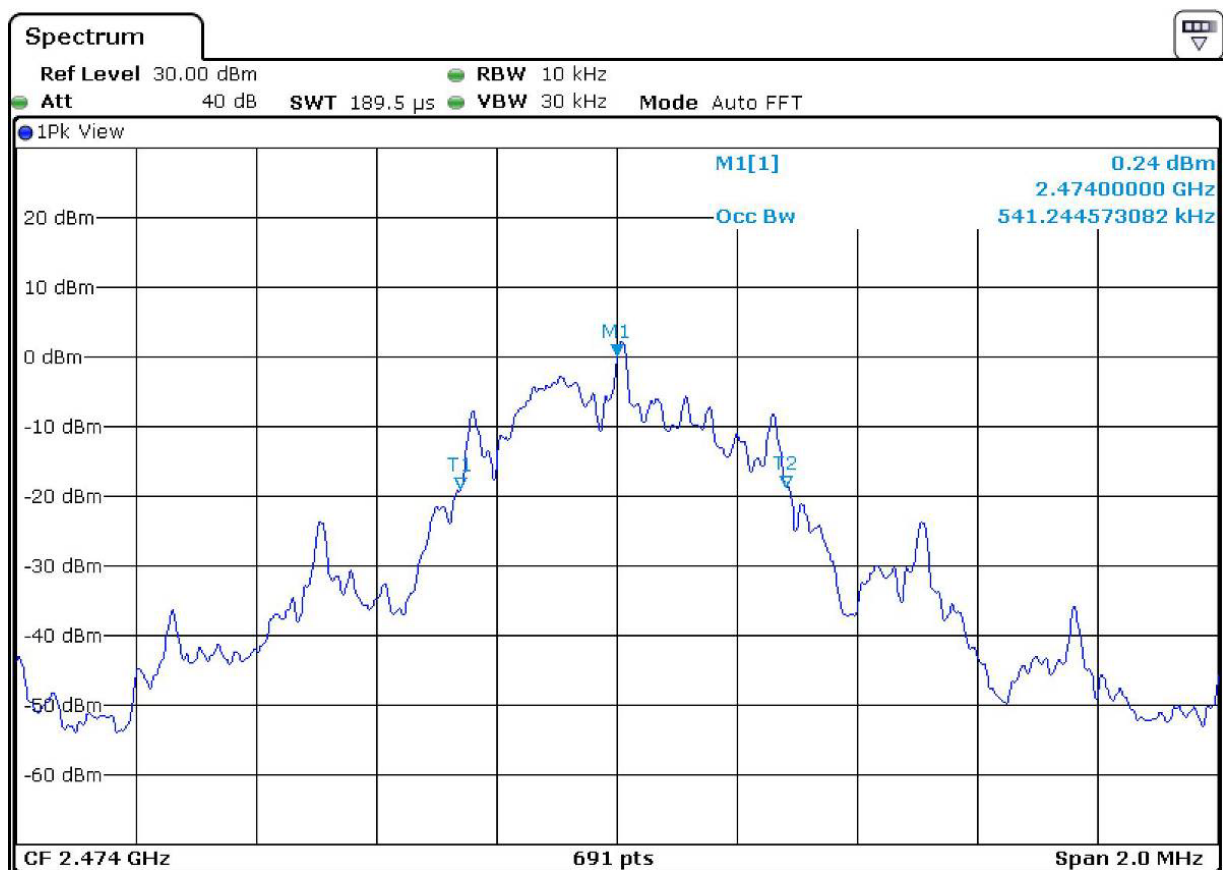


Block diagram of Test setup

Occupied Bandwidth Results:

	Occupied Bandwidth (kHz)
Low Channel: 2425	535
Middle Channel: 2450	541
High Channel: 2474	541

The worst case is shown as below:



TEST REPORT

9.0 CONFIDENTIALITY REQUEST

For electronic filing, a preliminary copy of the confidentiality request is saved with filename: request.pdf.

10.0 EQUIPMENT LIST

1) Radiated Emissions Test & Bandedge Measurement

Equipment	EMI Test Receiver (9kHz to 26.5GHz)	Biconical Antenna (30MHz to 300MHz)	Log Periodic Antenna
Registration No.	EW-3156	EW-3242	EW-3243
Manufacturer	ROHDESCHWARZ	EMCO	EMCO
Model No.	ESR26	3110C	3148B
Calibration Date	May 02, 2025	July 30, 2024	July 30, 2024
Calibration Due Date	November 02, 2026	October 30, 2026	October 30, 2026

Equipment	Double Ridged Guide Antenna (1GHz - 18GHz)	Active Loop Antenna (H-field) (9kHz to 30MHz)	Solid State Low Noise Preamplifier Assembly (1 - 18)GHz
Registration No.	EW-1133	EW-2313	EW-3431
Manufacturer	EMCO	ELECTROMETRI	BONN ELEKTRO
Model No.	3115	EM-6876	BLMA 0118-5G
Calibration Date	January 23, 2025	December 19, 2025	December 11, 2025
Calibration Due Date	October 23, 2026	December 19, 2027	December 11, 2026

Equipment	2.4GHz Notch Filter	14m Double Shield RF Cable (9kHz - 6GHz)	RF Cable 14m (1GHz to 26.5GHz)
Registration No.	EW-2213b	EW-2376	EW-2781
Manufacturer	MICROTRONICS	RADIALL	GREATBILLION
Model No.	BRM50701-02	n m/br56/bnc m 14m	SMA m/SHF5MPU /SMA m ra14m,26G
Calibration Date	March 04, 2026	November 06, 2025	February 18, 2025
Calibration Due Date	March 04, 2027	November 06, 2026	August 18, 2026

Equipment	12 metre RF Cable (1-40)GHz	Pyramidal Horn Antenna
Registration No.	EW-2774	EW-1679
Manufacturer	GREATBILLION	SCHWARZBECK
Model No.	SMA m-m ra 12m 40G outdoor	BBHA9170
Calibration Date	February 18, 2025	August 20, 2025
Calibration Due Date	August 18, 2026	February 20, 2027

TEST REPORT

2) OBW Measurement

Equipment	EMI Test Receiver (10Hz to 40GHz)
Registration No.	EW-3016
Manufacturer	ROHDESCHWARZ
Model No.	FSV40
Calibration Date	November 17, 2025
Calibration Due Date	November 17, 2026

3) Conduct Emissions Test

Equipment	RF Cable 240cm (RG142) (9kHz to 30MHz)	Artificial Mains Network	EMI Test Receiver (9kHz to 3GHz)
Registration No.	EW-2454	EW-3360	EW-2500
Manufacturer	RADIAL	ROHDESCHWARZ	ROHDESCHWARZ
Model No.	Bnc m st / 142 / bnc mra 240cm	ENV-216	ESCI
Calibration Date	June 12, 2025	Jul 01, 2026	Mar 31, 2026
Calibration Due Date	September 12, 2026	May 31, 2027	Mar 31, 2027

4) Control Software for Radiated Emission

Software Information	
Software Name	EMC32
Manufacturer	ROHDESCHWARZ
Software version	10.50.40

END OF TEST REPORT