

FCC and ISED Test Report

Manufacturer: SkyShips Automotive Ltd.

Model:G7 Infotainment Headunit

In accordance with FCC 47 CFR Part 15C

Technology (2.4 GHz WLAN)



Prepared for: Skyships Automotive Ltd.
Saling Barn, Piccotts Lane
Great Saling, Braintree
CM7 5DW

FCC ID: 2BA3IG7A01233

COMMERCIAL-IN-CONFIDENCE

Document 75965807-03 Issue 01

SIGNATURE

NAME	JOB TITLE	RESPONSIBLE FOR	ISSUE DATE
Matthew Russell	Chief Engineer	Authorised Signatory	20 November 2025

Signatures in this approval box have checked this document in line with the requirements of TÜV SÜD document control rules.

RESPONSIBLE FOR	NAME	DATE	SIGNATURE
Testing	Mohiuddin Mohammed	20 November 2025	
Testing	Joshua Peploe-Williams	20 November 2025	
Testing	Thomas Biddlecombe	20 November 2025	
Testing	Pier-Angelo Lorusso	20 November 2025	

EXECUTIVE SUMMARY / ENGINEERING STATEMENT

The measurements shown in this report were made in accordance with the procedures described on the test pages A sample of this product was tested to demonstrate limited compliance with FCC 47 CFR Part 15C: 2024 for the tests detailed in section 1.3. The sample tested was found to comply with the requirements defined in the applied rules.

FCC Accreditation: 492497/UK2010 Octagon House, Fareham Test Laboratory.

ISED Accreditation: 12669A/UK0003 Octagon House, Fareham Test Laboratory.

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Contents

1	Report Summary	2
1.1	Report Modification Record.....	2
1.2	Introduction.....	2
1.3	Brief Summary of Results	3
1.4	Customer Supplied Form	4
1.5	Product Information	8
1.6	Deviations from the Standard.....	8
1.7	EUT Modification Record	8
1.8	Test Location.....	8
2	Test Details	9
2.1	Restricted Band Edges.....	9
2.2	Authorised Band Edges	15
2.3	Maximum Conducted Output Power	19
2.4	Power Spectral Density.....	23
2.5	Emission Bandwidth	28
2.6	Spurious Radiated Emissions	36
3	Measurement Uncertainty	67



1 Report Summary

1.1 Report Modification Record

Alterations and additions to this report will be issued to the holders of each copy in the form of a complete document.

Issue	Description of Change	Date of Issue
01	First version	20-Nov-2025

Table 1

1.2 Introduction

Applicant	Skyships Automotive Ltd.
Manufacturer	Skyships Automotive Ltd.
Model Number(s)	A-01233
Serial Number(s)	0024581
Hardware Version(s)	A1
Software Version(s)	7.1
Number of Samples Tested	1
Test Specification/Issue/Date	FCC 47 CFR Part 15C: 2024
Order Number	PO05683
Date	16-September-2025
Date of Receipt of EUT	03-October-2025
Start of Test	08-September-2025
Finish of Test	24-October-2025
Name of Engineer(s)	Mohiuddin Mohammed, Joshua Peploe-Williams, Thomas Biddlecombe and Pier-Angelo Lorusso
Related Document(s)	ANSI C63.10 (2020) ANSI C63.4 (2014) KDB 662911 D01 v02r01



1.3 Brief Summary of Results

A brief summary of the tests carried out in accordance with FCC 47 CFR Part 15C is shown below.

Section	Specification Clause	Test Description	Result	Comments/Base Standard
Configuration and Mode: 2.4 GHz WiFi SISO - Single Antenna				
2.1	15.205	Restricted Band Edges	Pass	
2.2	15.247 (d)	Authorised Band Edges	Pass	
2.3	15.247 (b)	Maximum Conducted Output Power	Pass	
2.4	15.247 (e)	Power Spectral Density	Pass	
2.5	15.247 (a)(2)	Emission Bandwidth	Pass	
2.6	15.209 and 15.247 (d)	Spurious Radiated Emissions	Pass	
-	15.203	Antenna Requirement	N/T	The EUT meets this requirement as the device is only professionally installed.

Table 2



1.4 Customer Supplied Form

Equipment Description

Technical Description: (Please provide a brief description of the intended use of the equipment including the technologies the product supports)		Automotive Infotainment Headunit - A vehicle infotainment controller containing FM receiver, GPS, and Bluetooth. The unit has no direct user interface and is controlled remotely from controls in the vehicle. It has three video outputs that drive remote displays.	
Manufacturer:		Skyships Automotive Limited	
Model:		G7 Infotainment Headunit	
Part Number:		A-01233	
Hardware Version:		A1	
Software Version:		7.1	
FCC ID of the product under test – see guidance here		2BA3IG7A01233	
IC ID of the product under test – see guidance here		N/A	
Device Category	Mobile ☐	Portable ☐	Fixed ☒
Equipment is fitted with an Audio Low Pass Filter		Yes ☐	No ☒

Intentional Radiators

Technology	Bluetooth	Wi-Fi	Wi-Fi	Wi-Fi	2G 2	2G 5
Frequency Range (MHz to MHz)	2400 - 2483.5	2400 - 2483.5	5150 - 5250	5730 - 5835	1850 - 1910	824 - 849
Conducted Declared Output Power (dBm)	11	18	14	14	32.06	29.24
Antenna Gain (dBi)	-0.1	-0.1	5.1	5.1	3.0	3.0
Supported Bandwidth(s) (MHz) (e.g. 1 MHz, 20 MHz, 40 MHz)	1	20	20,40,80	20,40,80		
Modulation Scheme(s) (e.g. GFSK, QPSK etc)	DQPSK	DSSS/CCK , OFDM	OFDM	OFDM	GMSK	GMSK
ITU Emission Designator (see guidance here) (not mandatory for Part 15 devices)	Various	Various	Various	Various	Various	Various
Bottom Frequency (MHz)	2402	2412	5180	5745	1850	824
Middle Frequency (MHz)	2441	2437	-	-	TBC	TBC
Top Frequency (MHz)	2480	2462	5240	5825	1910	849

Technology	HSPA+ 2	HSPA+ 4	HSPA+ 5	LTE 2	LTE 4	LTE 5
Frequency Range (MHz to MHz)	1850 - 1910	1710 - 1755	824 - 849	1850 - 1910	1710 - 1755	824 - 849
Conducted Declared Output Power (dBm)	23.14	23.14	22.87	23.14	23.14	22.87
Antenna Gain (dBi)	3.0	3.0	3.0	3.0	3.0	3.0
Supported Bandwidth(s) (MHz) (e.g. 1 MHz, 20 MHz, 40 MHz)				1.4, 3, 5, 10, 15, 20	1.4, 3, 5, 10, 15, 20	1.4, 3, 5, 10
Modulation Scheme(s) (e.g. GFSK, QPSK etc)	8PSK	8PSK	8PSK	OFDM	OFDM	OFDM
ITU Emission Designator (see guidance here) (not mandatory for Part 15 devices)	Various	Various	Various	Various	Various	Various
Bottom Frequency (MHz)	1850	1710	824	1850	1710	824
Middle Frequency (MHz)	TBC	TBC	TBC	TBC	TBC	TBC
Top Frequency (MHz)	1910	1755	849	1910	1755	849

Technology	LTE 7	LTE 12				
Frequency Range (MHz to MHz)	2500 - 2570	699 - 716				
Conducted Declared Output Power (dBm)	22.68	22.97				
Antenna Gain (dBi)	3.0	3.0				
Supported Bandwidth(s) (MHz) (e.g. 1 MHz, 20 MHz, 40 MHz)	5, 10, 15, 20	1.4, 3, 5, 10				
Modulation Scheme(s) (e.g. GFSK, QPSK etc)	OFDM	OFDM				
ITU Emission Designator (see guidance here) (not mandatory for Part 15 devices)	Various	Various				
Bottom Frequency (MHz)	2500	699				
Middle Frequency (MHz)	TBC	TBC				
Top Frequency (MHz)	2570	716				



Un-intentional Radiators

Highest frequency generated or used in the device or on which the device operates or tunes	2.133GHz
Lowest frequency generated or used in the device or on which the device operates or tunes	400kHz
Class A Digital Device (Use in commercial, industrial or business environment) ☐	
Class B Digital Device (Use in residential environment only) ☒	

AC Power Source

AC supply frequency:		Hz
Voltage		V
Max current:		A
Single Phase ☐ Three Phase ☐		

DC Power Source

Nominal voltage:		V
Extreme upper voltage:		V
Extreme lower voltage:		V
Max current:		A

Battery Power Source

Voltage:	13.7	V
End-point voltage:	9.5	V (Point at which the battery will terminate)
Alkaline ☐ Leclanche ☐ Lithium ☐ Nickel Cadmium ☐ Lead Acid* ☒ *(Vehicle regulated)		
Other ☐	Please detail:	

Charging

Can the EUT transmit whilst being charged	Yes ☐ No ☒
---	---

Temperature

Minimum temperature:	-40	°C
Maximum temperature:	70	°C



Cable Loss

Adapter Cable Loss (Conducted sample)	0.775 @ 2.4 GHz 0.78 @ 5 GHz	dB
--	---------------------------------	----

Antenna Characteristics

Antenna connector ☒		State impedance	50	Ohm
Temporary antenna connector ☐		State impedance	N/A	Ohm
Integral antenna ☐	Type:		Gain	dBi
External antenna ☒	Type:		-0.1	dBi

For external antenna only:
Standard Antenna Jack ☐ If yes, describe how user is prohibited from changing antenna (if not professional installed):
Equipment is only ever professionally installed ☒
Non-standard Antenna Jack ☐
All part 15 applications will need to show how the antenna gain was derived either from a manufacturer data sheet or a measurement. Where the gain of the antenna is inherently accounted for as a result of the measurement, such as field strength measurements on a part 15.249 or 15.231 device, so the gain does not necessarily need to be verified. However, enough information regarding the construction of the antenna shall be provided. Such information maybe photographs, length of wire antenna etc.

Ancillaries (if applicable)

Manufacturer:		Part Number:	
Model:		Country of Origin:	

I hereby declare that the information supplied is correct and complete.

Name: Adam Dickison
Position held: Systems Engineer
Date: 24 October 2025



1.5 Product Information

1.5.1 Technical Description

Automotive Infotainment Headunit - A vehicle infotainment controller containing FM receiver, GPS, and Bluetooth. The unit has no direct user interface and is controlled remotely from controls in the vehicle. It has three video outputs that drive remote displays.

1.6 Deviations from the Standard

No deviations from the applicable test standard were made during testing.

1.7 EUT Modification Record

The table below details modifications made to the EUT during the test programme.

The modifications incorporated during each test are recorded on the appropriate test pages.

Modification State	Description of Modification still fitted to EUT	Modification Fitted By	Date Modification Fitted
Model: G7 Infotainment Headunit, Serial Number: 0024581			
0	As supplied by the customer	Not Applicable	Not Applicable

Table 3

1.8 Test Location

TÜV SÜD conducted the following tests at our Octagon House Test Laboratory.

Test Name	Name of Engineer(s)	Accreditation
Configuration and Mode: 2.4 GHz WiFi SISO - Single Antenna		
Restricted Band Edges	Mohiuddin Mohammed	UKAS
Authorised Band Edges	Mohiuddin Mohammed	UKAS
Maximum Conducted Output Power	Joshua Peploe-Williams and Thomas Biddlecombe	UKAS
Power Spectral Density	Thomas Biddlecombe	UKAS
Emission Bandwidth	Thomas Biddlecombe	UKAS
Spurious Radiated Emissions	Mohiuddin Mohammed and Pier-Angelo Lorusso	UKAS

Table 4

Laboratory Address: TÜV SÜD, Octagon House,
Concorde Way, Fareham, Hampshire,
PO15 5RL, United Kingdom



2 Test Details

2.1 Restricted Band Edges

2.1.1 Specification Reference

FCC 47 CFR Part 15C, Clause 15.205

2.1.2 Equipment Under Test and Modification State

Model : G7 Infotainment Headunit, S/N: 0024581 - Modification State 0

2.1.3 Date of Test

03-October-2025 to 24-October-2025

2.1.4 Test Method

This test was performed in accordance with ANSI C63.10, clause 6.10.5 and 11.12.1. Plots for average measurements were taken in accordance with ANSI C63.10, clause 11.12.2.5.2.

The DUT was powered by 13.6VDC throughout the test.

2.1.5 Environmental Conditions

Ambient Temperature 21.6 – 22.7 °C

Relative Humidity 33.6 – 52.8 %

2.1.6 Test Results

2.4 GHz WiFi SISO - Single Antenna

Mode	Data Rate/MCS	Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBμV/m)	Average Level (dBμV/m)
802.11b	1 Mbps	2412	2390	58.11	49.31
802.11b	1 Mbps	2462	2483.5	57.89	49.95
802.11g	6 Mbps	2412	2390	62.99	44.60
802.11g	6 Mbps	2462	2483.5	66.29	50.95
802.11n HT20	MCS0	2412	2390	65.87	46.24
802.11n HT20	MCS0	2462	2483.5	65.99	47.68

Table 5

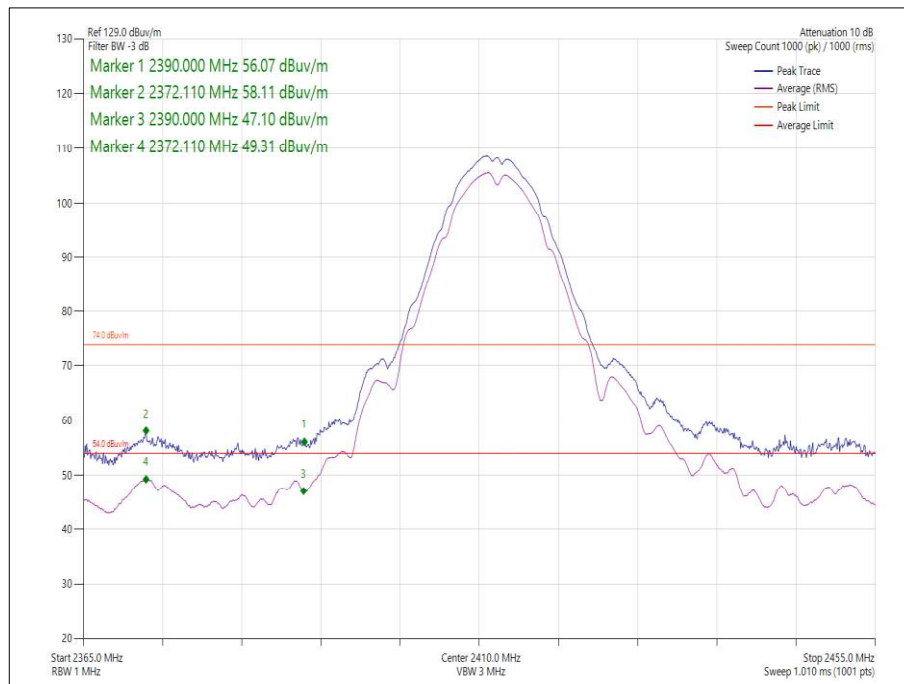


Figure 1 - 802.11b - 1 Mbps - 2412 MHz - Band Edge Frequency 2390 MHz

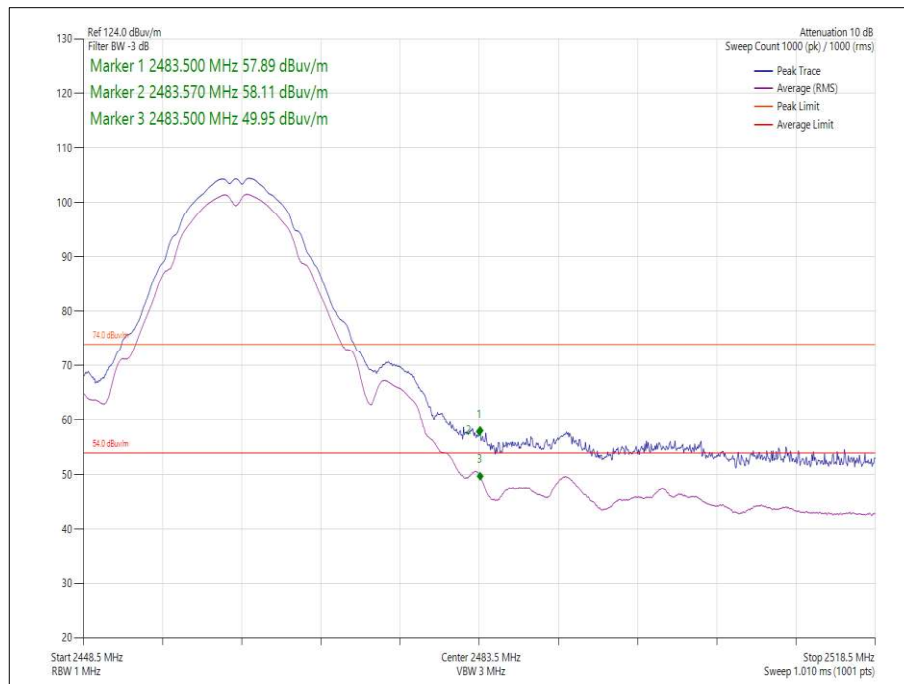


Figure 2 - 802.11b - 1 Mbps - 2462 MHz - Band Edge Frequency 2483.5 MHz

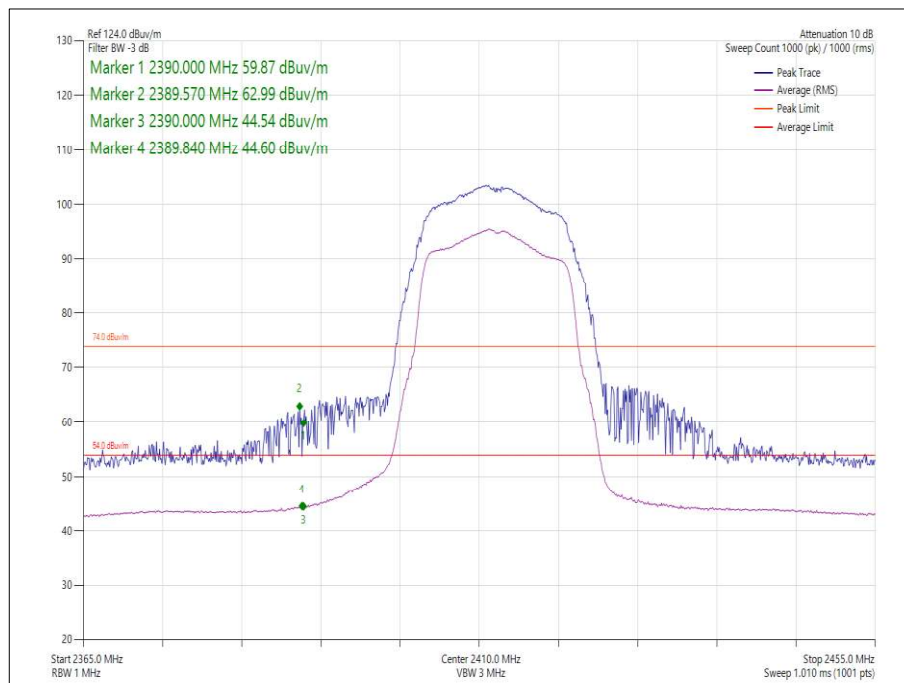


Figure 3 - 802.11g - 6 Mbps - 2412 MHz - Band Edge Frequency 2390 MHz

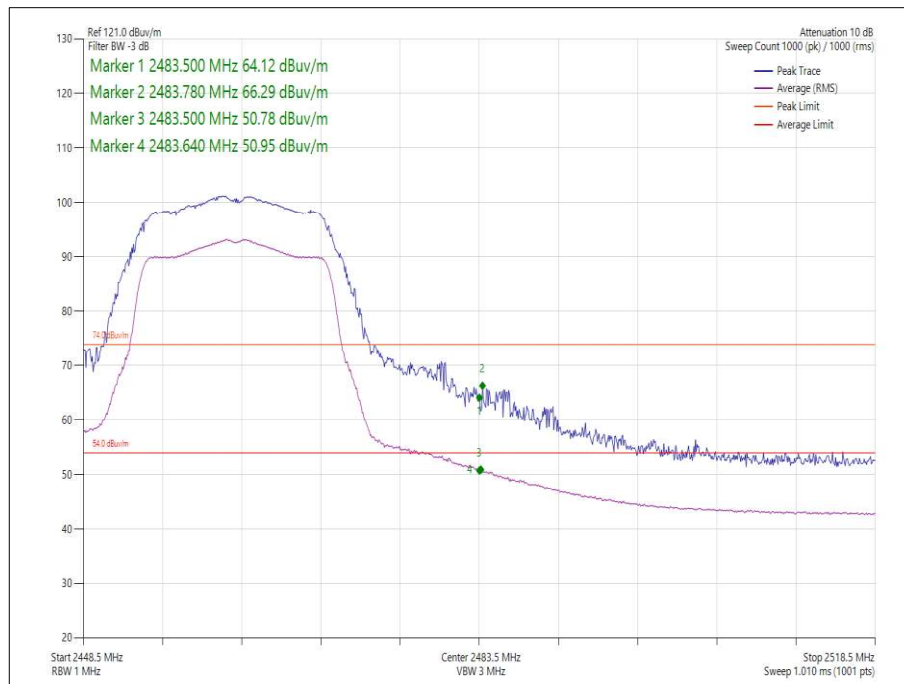


Figure 4 - 802.11g - 6 Mbps - 2462 MHz - Band Edge Frequency 2483.5 MHz

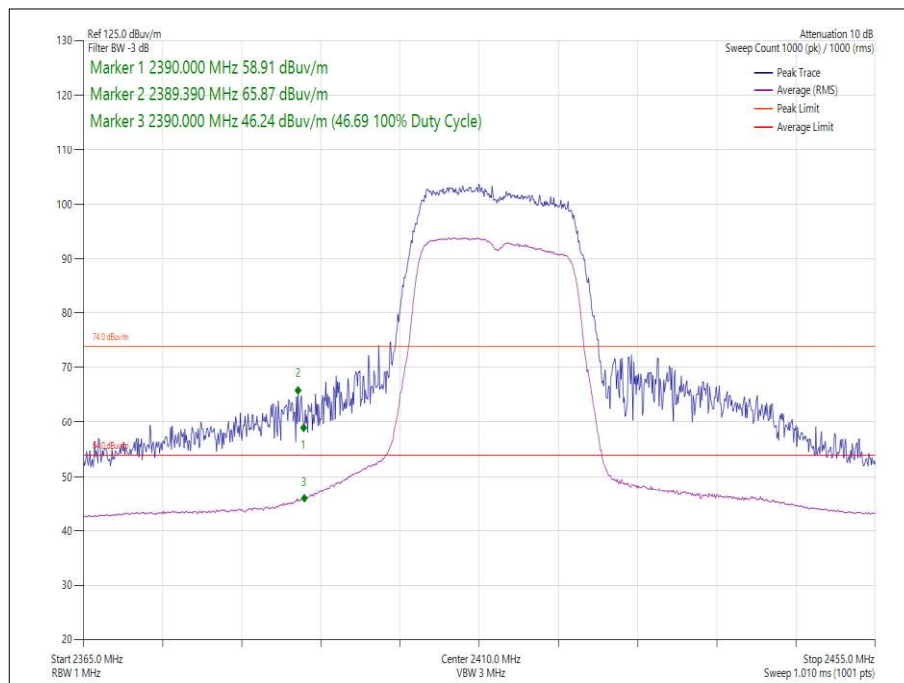


Figure 5 - 802.11n HT20 - MCS0 - 2412 MHz - Band Edge Frequency 2390 MHz

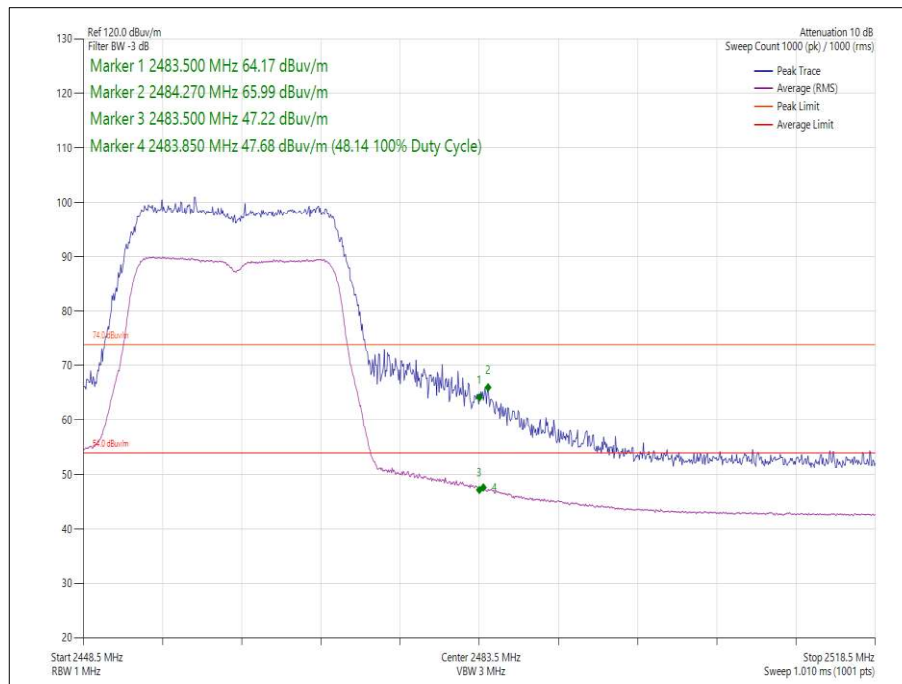


Figure 6 - 802.11n HT20 - MCS0 - 2462 MHz - Band Edge Frequency 2483.5 MHz

FCC 47 CFR Part 15, Limit Clause 15.209

Frequency (MHz)	Field Strength ($\mu\text{V}/\text{m}$ at 3 m)
30 to 88	100
88 to 216	150
216 to 960	200
Above 960	500

Table 6

ISED RSS-GEN, Limit Clause 8.9

Frequency (MHz)	Field Strength ($\mu\text{V}/\text{m}$ at 3 m)
30 to 88	100
88 to 216	150
216 to 960	200
Above 960*	500

Table 7

*Unless otherwise specified, for all frequencies greater than 1 GHz, the radiated emission limits for licence-exempt radio apparatus stated in applicable RSSs (including RSS-Gen) are based on measurements using a linear average detector function having a minimum resolution bandwidth of 1 MHz. If an average limit is specified for the EUT, then the peak emission shall also be measured with instrumentation properly adjusted for such factors as pulse desensitization to ensure the peak emission is less than 20 dB above the average limit.



2.1.7 Test Location and Test Equipment Used

This test was carried out in RF Chamber 11.

Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Expires
True RMS Multimeter	Fluke	79 Series III	411	12	09-Jan-2026
Hygrometer	Rotronic	I-1000	3220	12	02-Dec-2025
Emissions Software	TUV SUD	EmX V3.5.5	5125	-	Software
3m Semi-Anechoic Chamber	Rainford	RF Chamber 11	5136	36	14-Nov-2027
Mast	Maturo	TAM 4.0-P	5158	-	TU
Mast and Turntable Controller	Maturo	Maturo NCD	5159	-	TU
Turntable	Maturo	TT 15WF	5160	-	TU
Antenna (DRG, 1 GHz to 10.5 GHz)	Schwarzbeck	BBHA9120B	5215	12	05-Jul-2026
Pre-Amplifier (1 GHz to 26.5 GHz)	Agilent Technologies	8449B	5445	12	10-Jul-2026
EMI Test Receiver	Rohde & Schwarz	ESW44	5527	12	14-Aug-2026
2m Coaxial Cable Assy	Junkosha	MWX221-02000AMSAMS/A	6360	12	13-May-2026
1m SMA Cable	Junkosha	MWX221-01000AMSAMS/B	6919	12	08-Dec-2025
Cable Assy 8m (N to N) 18GHz	Junkosha	MWX221-08000NMSNMS/B	7049	12	01-Jun-2026

Table 8

TU – Traceability Unscheduled



2.2 Authorised Band Edges

2.2.1 Specification Reference

FCC 47 CFR Part 15C, Clause 15.247 (d)

2.2.2 Equipment Under Test and Modification State

Model : G7 Infotainment Headunit, S/N: 0024581 - Modification State 0

2.2.3 Date of Test

03-October-2025 to 24-October-2025

2.2.4 Test Method

The test was performed in accordance with ANSI C63.10, clause 6.10.4.

2.2.5 Environmental Conditions

Ambient Temperature	22.7 – 23.8°C
Relative Humidity	33.6 - 37.9 %

2.2.6 Test Results

2.4 GHz WiFi SISO - Single Antenna

Mode	Data Rate/MCS	Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBc)
802.11b	1 Mbps	2412	2400	-36.71
802.11n HT20	6 Mbps	2412	2400	-38.73
802.11g	MCS0	2412	2400	-36.42

Table 9

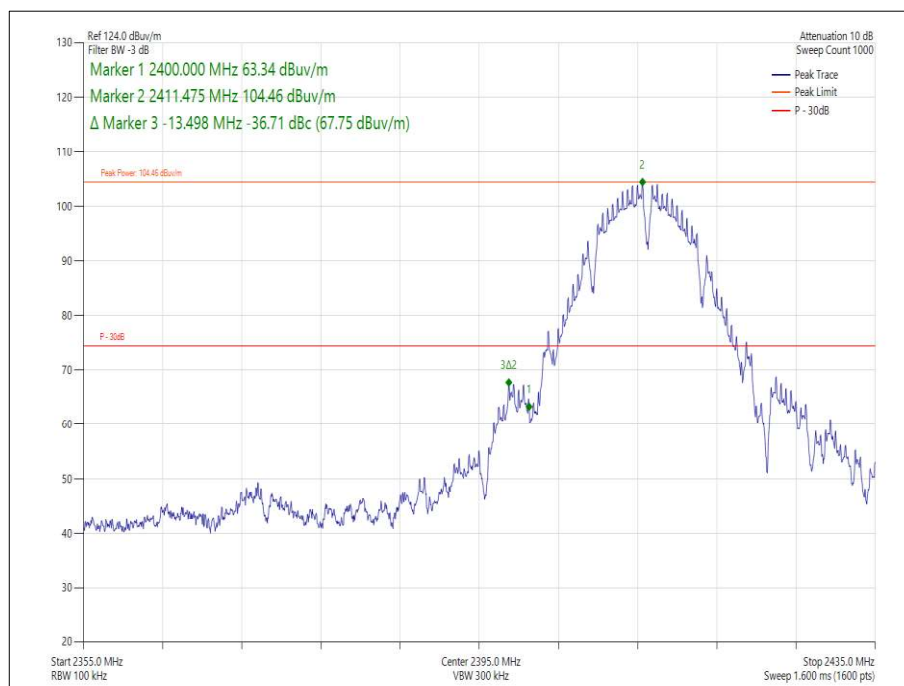
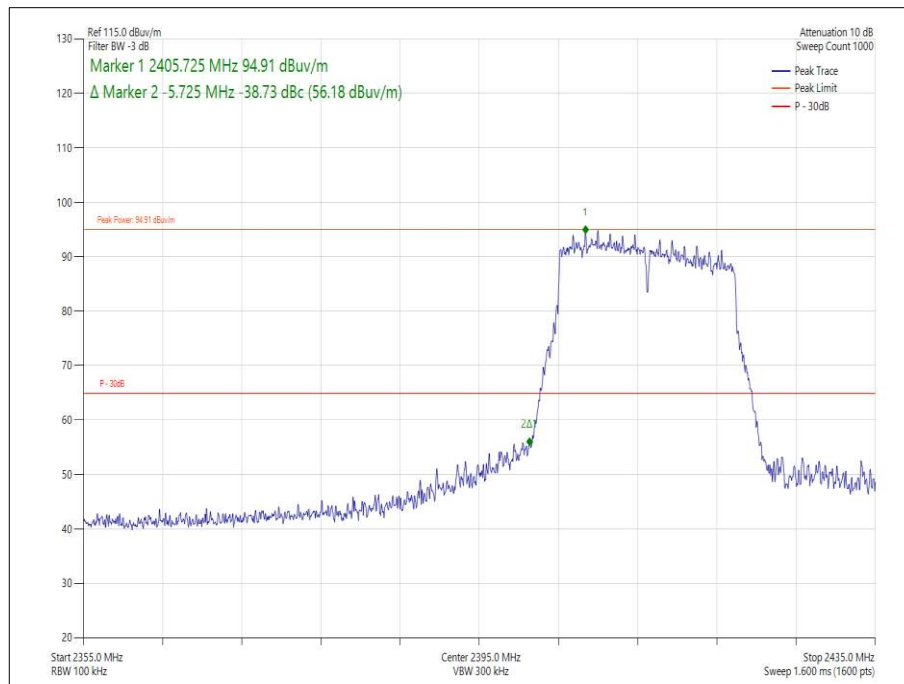
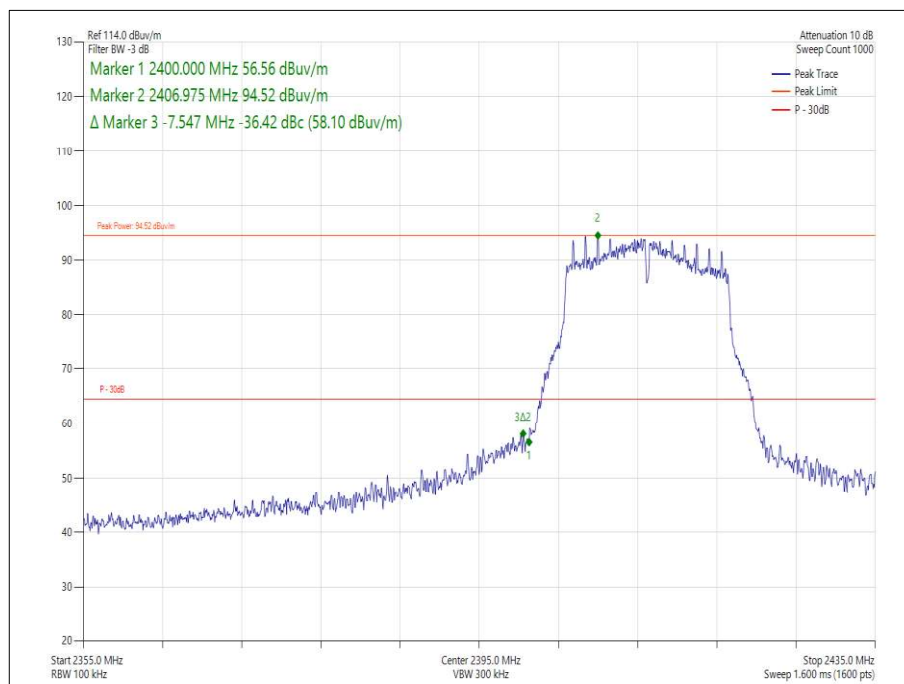


Figure 7 - 802.11b - 1 Mbps
2412 MHz - Band Edge Frequency 2400 MHz



**Figure 8 - 802.11n HT20 - 6 Mbps
2412 MHz - Band Edge Frequency 2400 MHz**



**Figure 9 - 802.11g - MCS0
2412 MHz - Band Edge Frequency 2400 MHz**

FCC 47 CFR Part 15, Limit Clause 15.247 (d)

20 dB below the fundamental measured in a 100 kHz bandwidth using a peak detector. If the transmitter complies with the conducted power limits, based on the use of RMS averaging over a time interval, the attenuation required shall be 30 dB below the fundamental instead of 20 dB.

ISED RSS-247, Limit Clause 5.5

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of root-mean-square averaging over a time interval, as permitted under Section 5.4(4), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general field strength limits specified in RSS-Gen is not required.

2.2.7 Test Location and Test Equipment Used

This test was carried out in RF Chamber 11.

Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Expires
True RMS Multimeter	Fluke	79 Series III	411	12	09-Jan-2026
Hygrometer	Rotronic	I-1000	3220	12	02-Dec-2025
Emissions Software	TUV SUD	EmX V3.5.5	5125	-	Software
3m Semi-Anechoic Chamber	Rainford	RF Chamber 11	5136	36	14-Nov-2027
Mast	Maturo	TAM 4.0-P	5158	-	TU
Mast and Turntable Controller	Maturo	Maturo NCD	5159	-	TU
Turntable	Maturo	TT 15WF	5160	-	TU
Antenna (DRG, 1 GHz to 10.5 GHz)	Schwarzbeck	BBHA9120B	5215	12	05-Jul-2026
Pre-Amplifier (1 GHz to 26.5 GHz)	Agilent Technologies	8449B	5445	12	10-Jul-2026
EMI Test Receiver	Rohde & Schwarz	ESW44	5527	12	14-Aug-2026
2m Coaxial Cable Assy	Junkosha	MWX221-02000AMSAMS/A	6360	12	13-May-2026
1m SMA Cable	Junkosha	MWX221-01000AMSAMS/B	6919	12	08-Dec-2025
Cable Assy 8m (N to N) 18GHz	Junkosha	MWX221-08000NMSNMS/B	7049	12	01-Jun-2026
Wireless Connectivity Tester	Rohde & Schwarz	CMW270	7076	12	15-Apr-2026

Table 10

TU - Traceability Unscheduled



2.3 Maximum Conducted Output Power

2.3.1 Specification Reference

FCC 47 CFR Part 15C, Clause 15.247 (b)

2.3.2 Equipment Under Test and Modification State

G7 Infotainment Headunit, S/N: 0024581 - Modification State 0.

2.3.3 Date of Test

08-September-2025 to 09-September-2025

2.3.4 Test Method

The test was performed in accordance with ANSI C63.10 clause 11.9.1.1

For the purpose of this test, the customer supplied a cable which they confirmed to have 0.775 dB of loss which was added to the measured path loss.

The path loss was measured using a spectrum analyzer and a calibrated signal generator.

2.3.5 Environmental Conditions

Ambient Temperature 21.3 - 22.5 °C

Relative Humidity 40.2 - 50.9 %



2.3.6 Test Results

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (b)(3)	Test Method(s):	C63.10 11.9.2.3.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11b	Duty Cycle (%):	99.4
Data Rate:	1 Mbps	DCCF (dB):	-
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	-0.10
Active Port(s):	A	Active Chain(s):	-

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2412	15.84	-	-	-	15.84	30.00	-14.16
2437	16.42	-	-	-	16.42	30.00	-13.58
2462	17.25	-	-	-	17.25	30.00	-12.75

Table 11 - FCC Maximum Conducted (average) Output Power Results



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (b)(3)	Test Method(s):	C63.10 11.9.2.3.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11g	Duty Cycle (%):	98.6
Data Rate:	6 Mbps	DCCF (dB):	-
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	-0.10
Active Port(s):	A	Active Chain(s):	-

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2412	9.66	-	-	-	9.66	30.00	-20.34
2437	10.25	-	-	-	10.25	30.00	-19.75
2462	10.75	-	-	-	10.75	30.00	-19.25

Table 12 - FCC Maximum Conducted (average) Output Power Results



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (b)(3)	Test Method(s):	C63.10 11.9.2.3.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11n HT20	Duty Cycle (%):	89.7
Modulation Coding Scheme:	MCS0	DCCF (dB):	-
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	-0.10
Active Port(s):	A	Active Chain(s):	-

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2412	9.22	-	-	-	9.22	30.00	-20.78
2437	9.79	-	-	-	9.79	30.00	-20.21
2462	10.60	-	-	-	10.60	30.00	-19.40

Table 13 - FCC Maximum Conducted (average) Output Power Results

FCC 47 CFR Part 15, Limit Clause 15.247 (b)(3)

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt.

2.3.7 Test Location and Test Equipment Used

This test was carried out in EMC Laboratory 2.

Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Expires
HygroPalm	Rotronic	HP21	5358	12	13-Nov-2025
USB Power Sensor	Boonton	RTP5008	5833	12	29-Aug-2026
Signal Conditioning Unit	TUV SUD	SPECTRUM_SCU001	6350	12	02-Sep-2026
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6638	12	29-Aug-2026

Table 14



2.4 Power Spectral Density

2.4.1 Specification Reference

FCC 47 CFR Part 15C, Clause 15.247 (e)

2.4.2 Equipment Under Test and Modification State

G7 Infotainment Headunit, S/N: 0024581 - Modification State 0.

2.4.3 Date of Test

13-October-2025

2.4.4 Test Method

This test was performed in accordance with ANSI C63.10, clause 11.10.5.

Where the EUT duty cycle was < 98 % and repeatable within 2 %, the spectrum analyser was set to trace (power) averaging and a duty cycle correction was added as calculated in the result tables below (Method AVGPSD-2).

2.4.5 Environmental Conditions

Ambient Temperature	21.3 °C
Relative Humidity	46.2 %



2.4.6 Test Results

2.4 GHz WiFi SISO - Single Antenna

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (e)	Test Method(s):	C63.10 11.10.5
Additional Reference(s):	-		
Note(s):	DCCF was added to the spectrum analyser reference level offset.		

DUT Configuration			
Mode:	802.11b	Duty Cycle (%):	99.4
Data Rate:	1 Mbps	DCCF (dB):	0.03
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	-0.10
Active Port(s):	A	Active Chain(s):	0

Test Frequency (MHz)	RBW (kHz)	PSD (dBm/RBW)					Limit (dBm/3 kHz)	Margin (dB)
		A	B	C	D	Σ		
2412	100.0	0.24	-	-	-	0.24	8.00	-7.76
2437	100.0	1.02	-	-	-	1.02	8.00	-6.99
2462	100.0	1.59	-	-	-	1.59	8.00	-6.41

Table 15 - Maximum Power Spectral Density Results



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (e)	Test Method(s):	C63.10 11.10.5
Additional Reference(s):	-		
Note(s):	DCCF was added to the spectrum analyser reference level offset.		

DUT Configuration			
Mode:	802.11g	Duty Cycle (%):	98.6
Data Rate:	6 Mbps	DCCF (dB):	0.06
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	-0.10
Active Port(s):	A	Active Chain(s):	0

Test Frequency (MHz)	RBW (kHz)	PSD (dBm/RBW)					Limit (dBm/3 kHz)	Margin (dB)
		A	B	C	D	Σ		
2412	100.0	-7.86	-	-	-	-7.86	8.00	-15.86
2437	100.0	-6.84	-	-	-	-6.84	8.00	-14.84
2462	100.0	-5.94	-	-	-	-5.94	8.00	-13.94

Table 16 - Maximum Power Spectral Density Results



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (e)	Test Method(s):	C63.10 11.10.5
Additional Reference(s):	-		
Note(s):	DCCF was added to the spectrum analyser reference level offset.		

DUT Configuration			
Mode:	802.11n HT20	Duty Cycle (%):	89.7
Modulation Coding Scheme:	MCS0	DCCF (dB):	0.47
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	-0.10
Active Port(s):	A	Active Chain(s):	0

Test Frequency (MHz)	RBW (kHz)	PSD (dBm/RBW)					Limit (dBm/3 kHz)	Margin (dB)
		A	B	C	D	Σ		
2412	100.0	-9.27	-	-	-	-9.27	8.00	-17.27
2437	100.0	-8.21	-	-	-	-8.21	8.00	-16.21
2462	100.0	-7.86	-	-	-	-7.86	8.00	-15.86

Table 17 - Maximum Power Spectral Density Results

FCC 47 CFR Part 15, Limit Clause 15.247 (e)

The power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

ISED RSS-247, Limit Clause 5.2(b)

The transmitter power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission



2.4.7 Test Location and Test Equipment Used

This test was carried out in EMC Chamber 2.

Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Expires
GPSDR Frequency Standard	Spectracom	SecureSync 1200-0408-0601	4393	6	18-Mar-2026
HygroPalm	Rotronic	HP21	5358	12	13-Nov-2025
MXA Signal Analyser	Keysight Technologies	N9020B	5528	24	10-Aug-2027
Signal Conditioning Unit	TUV SUD	SPECTRUM_SCU001	6350	12	02-Sep-2026
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6638	12	29-Aug-2026

Table 18



2.5 Emission Bandwidth

2.5.1 Specification Reference

FCC 47 CFR Part 15C, Clause 15.247 (a)(2)

2.5.2 Equipment Under Test and Modification State

G7 Infotainment Headunit, S/N: 0024581 - Modification State 0.

2.5.3 Date of Test

13-October-2025

2.5.4 Test Method

This test was performed in accordance with ANSI C63.10, clause 11.8.1 for 6 dB BW and 6.9.3 for 99% occupied bandwidth measurements.

2.5.5 Environmental Conditions

Ambient Temperature 21.3 °C

Relative Humidity 46.2 %

2.5.6 Test Results

2.4 GHz WiFi SISO - Single Antenna

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (a)(2)	Test Method(s):	C63.10 6.9.3 C63.10 6.9.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11b	Duty Cycle (%):	-
Data Rate:	1 Mbps	DCCF (dB):	-
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	-
Active Port(s):	A	Active Chain(s):	-

Test Frequency (MHz)	6 dB Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2412	7.160	-	-	-	≥500.0
2437	7.160	-	-	-	≥500.0
2462	7.200	-	-	-	≥500.0

Table 19 - 6 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2412	11.440	-	-	-	-
2437	11.920	-	-	-	-
2462	12.240	-	-	-	-

Table 20 - 99% Bandwidth Results



Figure 10 - 2412 MHz (CH1) 99% Bandwidth



Figure 11 - 2412 MHz (CH1) 6 dB Bandwidth



Figure 12 - 2437 MHz (CH6) 99% Bandwidth



Figure 13 - 2437 MHz (CH6) 6 dB Bandwidth



Figure 14 - 2462 MHz (CH11) 99% Bandwidth



Figure 15 - 2462 MHz (CH11) 6 dB Bandwidth



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (a)(2)	Test Method(s):	C63.10 6.9.3 C63.10 6.9.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11g	Duty Cycle (%):	-
Data Rate:	6 Mbps	DCCF (dB):	-
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	-
Active Port(s):	A	Active Chain(s):	-

Test Frequency (MHz)	6 dB Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2412	16.440	-	-	-	≥500.0
2437	16.440	-	-	-	≥500.0
2462	16.440	-	-	-	≥500.0

Table 21 - 6 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2412	16.620	-	-	-	-
2437	16.560	-	-	-	-
2462	16.560	-	-	-	-

Table 22 - 99% Bandwidth Results



Figure 16 - 2412 MHz (CH1) 99% Bandwidth



Figure 17 - 2412 MHz (CH1) 6 dB Bandwidth



Figure 18 - 2437 MHz (CH6) 99% Bandwidth



Figure 19 - 2437 MHz (CH6) 6 dB Bandwidth



Figure 20 - 2462 MHz (CH11) 99% Bandwidth



Figure 21 - 2462 MHz (CH11) 6 dB Bandwidth



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (a)(2)	Test Method(s):	C63.10 6.9.3 C63.10 6.9.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	802.11n HT20	Duty Cycle (%):	-
Modulation Coding Scheme:	MCS0	DCCF (dB):	-
Antenna Configuration:	SISO	Peak Antenna Gain (dBi):	-
Active Port(s):	A	Active Chain(s):	-

Test Frequency (MHz)	6 dB Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2412	17.880	-	-	-	≥500.0
2437	17.880	-	-	-	≥500.0
2462	17.880	-	-	-	≥500.0

Table 23 - 6 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2412	17.820	-	-	-	-
2437	17.820	-	-	-	-
2462	17.820	-	-	-	-

Table 24 - 99% Bandwidth Results