



2.8.7 Test Location and Test Equipment Used

This test was carried out in RF Chamber 18.

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Expiry Date
Hygrometer	Rotronic	I-1000	3068	12	07-Nov-2024
1800-6000 MHz Power Splitter	Mini-Circuits	ZN2PD-63-S+	4055	-	O/P Mon
Attenuator 5W 30dB DC-18GHz	Aaren	AT40A-4041-D18-30	5505	12	22-Feb-2025
2-Way Power Divider (2-8 GHz)	Aaren	AT30A-TE0208-2-AF	5685	12	02-Jan-2025
Digital Multimeter	Fluke	115	6145	12	06-Jun-2025
Cable (SMA to SMA 1m)	Junkosha	MWX221/B	6305	12	20-May-2025
MXA Signal Analyser	Keysight Technologies	N9020B	6419	24	28-Feb-2025
Directional Coupler 2-8GHz	RF-Lambda	RFDC2G8G10	6447	-	O/P Mon
Directional Coupler 2-8GHz	RF-Lambda	RFDC2G8G10	6448	-	O/P Mon
Signal Conditioning Unit	TUV SUD	SPECTRUM_SCU001	6517	12	22-Feb-2025
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6526	12	22-Feb-2025
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6527	12	05-Mar-2025
AC Programmable Power Supply	iTech	IT7324	6665	-	O/P Mon

Table 681

O/P Mon - Output Monitored using calibrated equipment



2.9 Contention Based Protocol

2.9.1 Specification Reference

FCC 47 CFR Part 15E, Clause 15.407 (d)(6)
ISED RSS-248, Clause 4.7

2.9.2 Equipment Under Test and Modification State

A3112, S/N: LG21599063 - Modification State 0

2.9.3 Date of Test

26-July-2024

2.9.4 Test Method

This test was performed in accordance with KDB 987594 D02, clause I.

The AWGN signal level was initially set at a level much less than the required threshold level ($\ll -62$ dBm) it was verified at this point that transmissions from the device under test (DUT) were present. The signal level was gradually increased until it was observed that the DUT continuously ceased transmissions with the AWGN signal present, i.e. no partial transmissions other than short control signalling transmissions.

The AWGN Signal level recorded is the level into the DUT's receiver, corrected for all cable losses. The minimum antenna gain value was then used to correct the level as described in KDB 987594 D04.

Timing plots showing verification that transmissions from the DUT responded to the interferer have been included in the test results below.

2.9.5 Test Setup Diagram

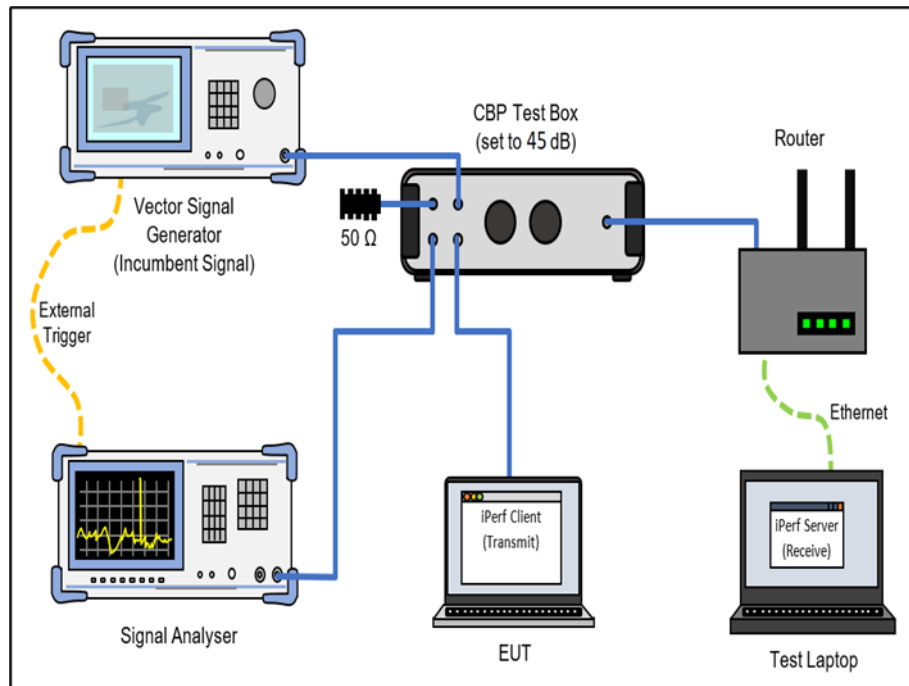


Figure 362 - Test Equipment Setup Diagram

2.9.6 Environmental Conditions

Ambient Temperature	23.5 °C
Relative Humidity	34.9 %



2.9.7 Test Results

6 GHz WLAN

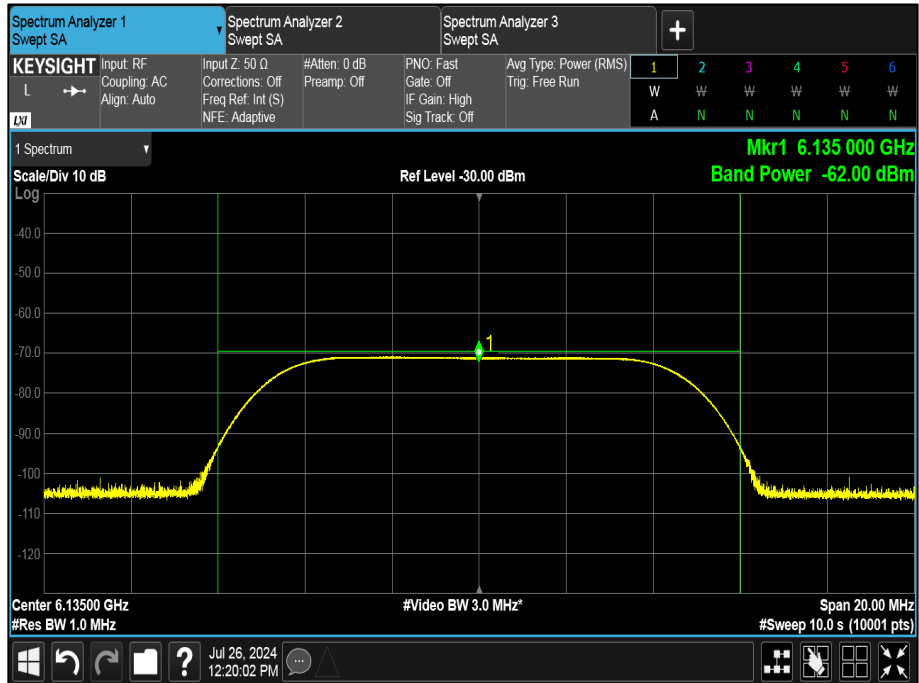


Figure 363 - Example of AWGN Signal



Parameter	Results		
U-NII Band	5	5	5
Channel Number	37	37	37
Bandwidth (MHz)	20	20	20
DUT Centre Frequency (MHz)	6135	6135	6135
AWGN Centre Frequency (MHz)	6135	6135	6135
AWGN Signal Power (dBm)	-76.36	-73.86	-72.73
Antenna Gain (dBi)	1.30	1.30	1.30
Adjusted Power (dBm)	-77.66	-75.16	-74.03
Detection Limit (dBm)	-62.0	-62.0	-62.0
EUT Tx Status (OFF/Minimal/ON)	ON	Minimal	OFF

Table 682 - U-NII-5, Minimum Bandwidth



Figure 364 - U-NII-5, Minimum Bandwidth



Parameter	Results		
U-NII Band	5	5	5
Channel Number	47	47	47
Bandwidth (MHz)	160	160	160
DUT Centre Frequency (MHz)	6185	6185	6185
AWGN Centre Frequency (MHz)	6110	6110	6110
AWGN Signal Power (dBm)	-70.62	-68.31	-67.60
Antenna Gain (dBi)	1.30	1.30	1.30
Adjusted Power (dBm)	-71.92	-69.61	-68.90
Detection Limit (dBm)	-62.0	-62.0	-62.0
EUT Tx Status (OFF/Minimal/ON)	ON	Minimal	OFF

Table 683 - U-NII-5, Maximum Bandwidth (AWGN Low)

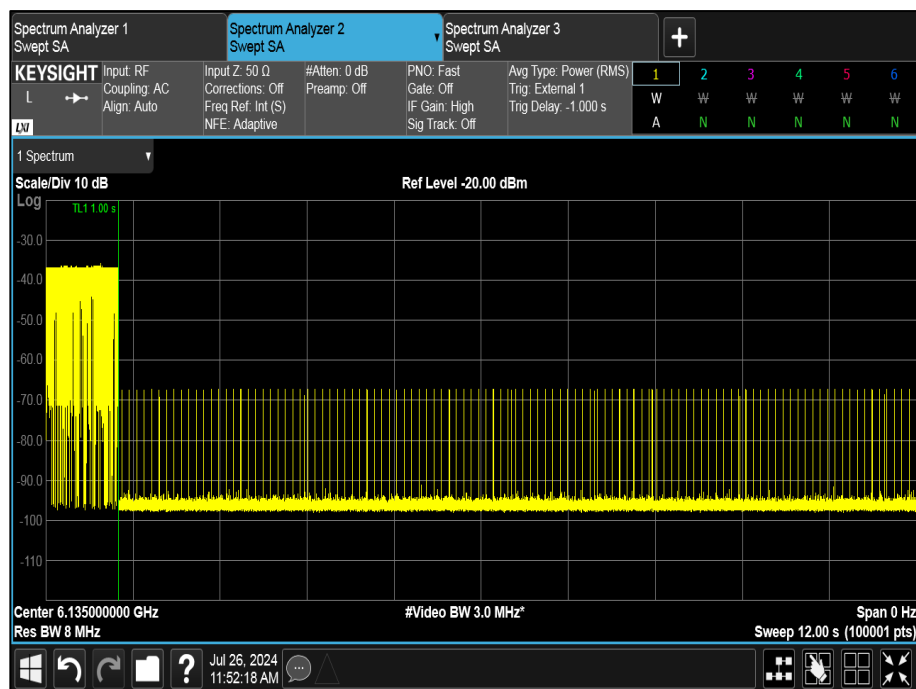


Figure 365 - U-NII-5, Minimum Bandwidth (AWGN Low)



Parameter	Results		
U-NII Band	5	5	5
Channel Number	47	47	47
Bandwidth (MHz)	160	160	160
DUT Centre Frequency (MHz)	6185	6185	6185
AWGN Centre Frequency (MHz)	6185	6185	6185
AWGN Signal Power (dBm)	-73.11	-70.63	-68.72
Antenna Gain (dBi)	1.30	1.30	1.30
Adjusted Power (dBm)	-74.41	-71.93	-70.02
Detection Limit (dBm)	-62.0	-62.0	-62.0
EUT Tx Status (OFF/Minimal/ON)	ON	Minimal	OFF

Table 684 - U-NII-5, Maximum Bandwidth (AWGN Mid)

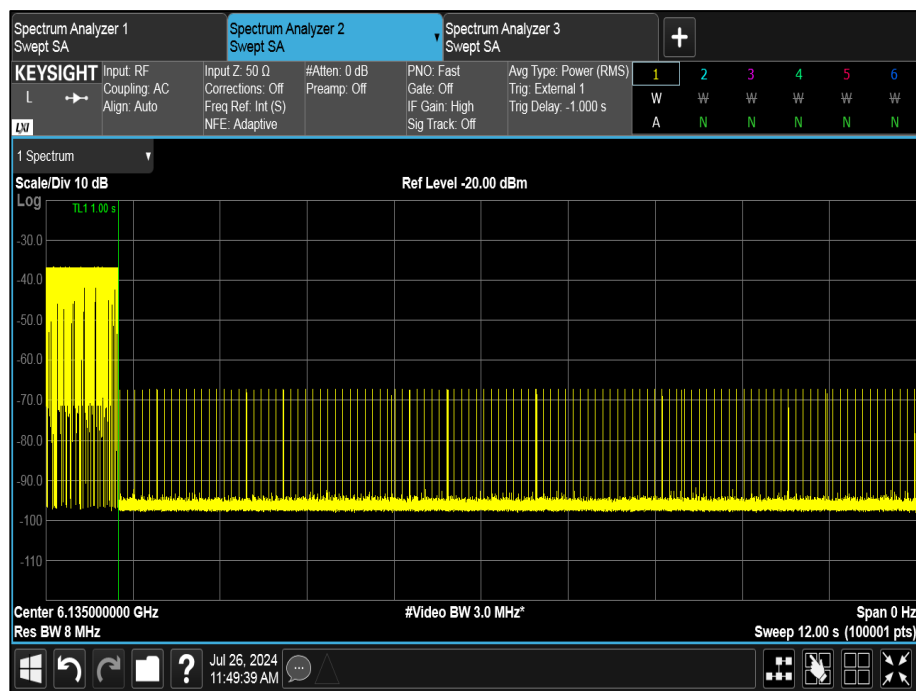


Figure 366 - U-NII-5, Minimum Bandwidth (AWGN Mid)



Parameter	Results		
U-NII Band	5	5	5
Channel Number	47	47	47
Bandwidth (MHz)	160	160	160
DUT Centre Frequency (MHz)	6185	6185	6185
AWGN Centre Frequency (MHz)	6260	6260	6260
AWGN Signal Power (dBm)	-67.44	-65.67	-64.34
Antenna Gain (dBi)	1.30	1.30	1.30
Adjusted Power (dBm)	-68.74	-66.97	-65.64
Detection Limit (dBm)	-62.0	-62.0	-62.0
EUT Tx Status (OFF/Minimal/ON)	ON	Minimal	OFF

Table 685 - U-NII-5, Maximum Bandwidth (AWGN High)

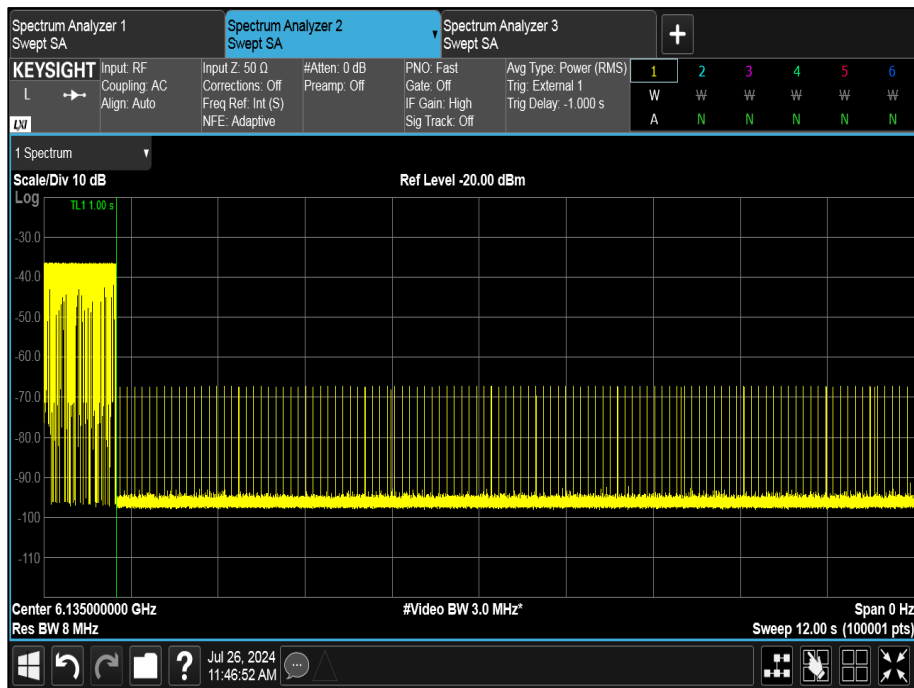


Figure 367 - U-NII-5, Minimum Bandwidth (AWGN High)



Parameter	Results		
U-NII Band	6	6	6
Channel Number	101	101	101
Bandwidth (MHz)	20	20	20
DUT Centre Frequency (MHz)	6455	6455	6455
AWGN Centre Frequency (MHz)	6455	6455	6455
AWGN Signal Power (dBm)	-76.36	-73.96	-73.05
Antenna Gain (dBi)	1.30	1.30	1.30
Adjusted Power (dBm)	-77.66	-75.26	-74.35
Detection Limit (dBm)	-62.0	-62.0	-62.0
EUT Tx Status (OFF/Minimal/ON)	ON	Minimal	OFF

Table 686 - U-NII-6, Minimum Bandwidth

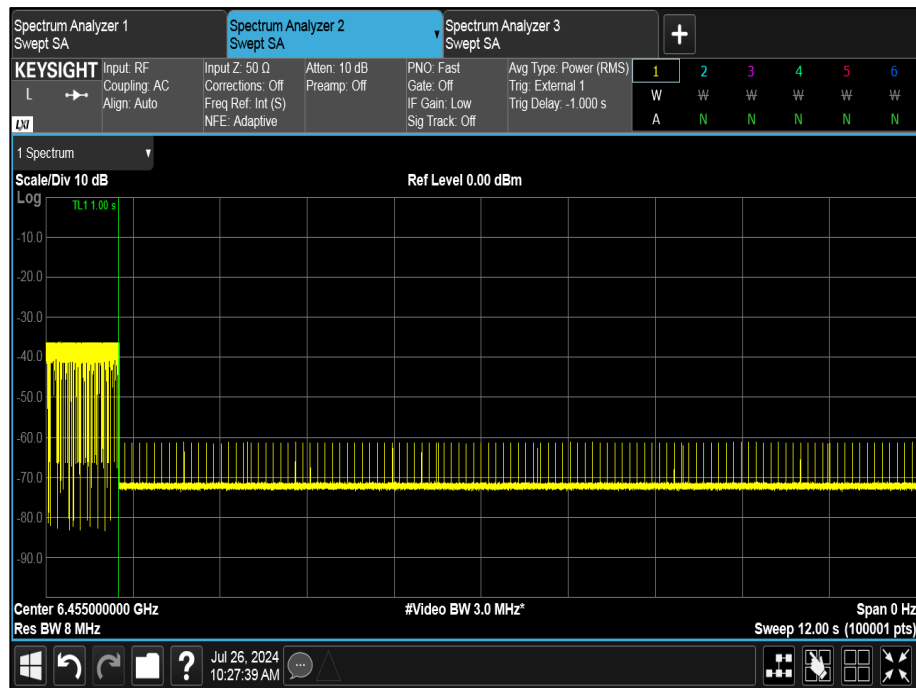


Figure 368 - U-NII-6, Minimum Bandwidth



Parameter	Results		
U-NII Band	6	6	6
Channel Number	111	111	111
Bandwidth (MHz)	160	160	160
DUT Centre Frequency (MHz)	6505	6505	6505
AWGN Centre Frequency (MHz)	6430	6430	6430
AWGN Signal Power (dBm)	-73.47	-69.34	-68.98
Antenna Gain (dBi)	1.30	1.30	1.30
Adjusted Power (dBm)	-74.77	-70.64	-70.28
Detection Limit (dBm)	-62.0	-62.0	-62.0
EUT Tx Status (OFF/Minimal/ON)	ON	Minimal	OFF

Table 687 - U-NII-6, Maximum Bandwidth (AWGN Low)

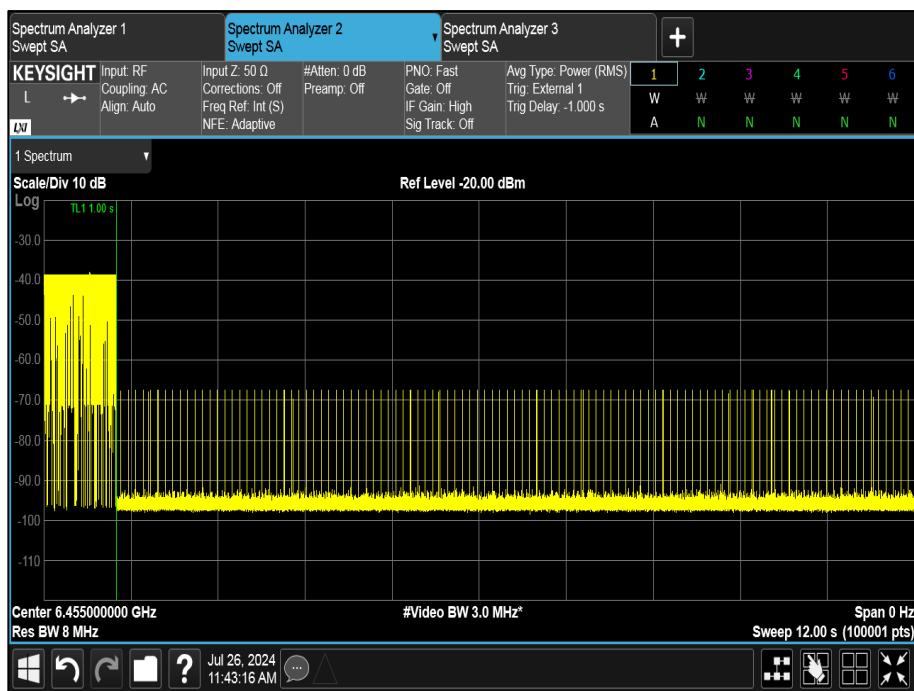


Figure 369 - U-NII-6, Minimum Bandwidth (AWGN Low)



Parameter	Results		
U-NII Band	6	6	6
Channel Number	111	111	111
Bandwidth (MHz)	160	160	160
DUT Centre Frequency (MHz)	6505	6505	6505
AWGN Centre Frequency (MHz)	6505	6505	6505
AWGN Signal Power (dBm)	-72.32	-70.53	-67.34
Antenna Gain (dBi)	1.30	1.30	1.30
Adjusted Power (dBm)	-73.62	-71.83	-68.64
Detection Limit (dBm)	-62.0	-62.0	-62.0
EUT Tx Status (OFF/Minimal/ON)	ON	Minimal	OFF

Table 688 - U-NII-6, Maximum Bandwidth (AWGN Mid)

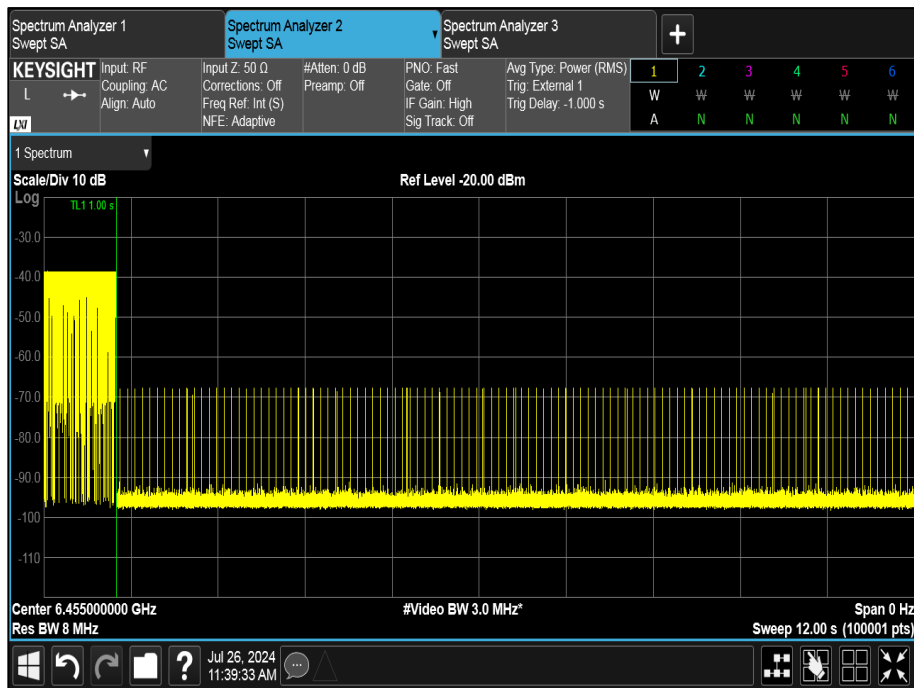


Figure 370 - U-NII-6, Minimum Bandwidth (AWGN Mid)



Parameter	Results		
U-NII Band	6	6	6
Channel Number	111	111	111
Bandwidth (MHz)	160	160	160
DUT Centre Frequency (MHz)	6505	6505	6505
AWGN Centre Frequency (MHz)	6580	6580	6580
AWGN Signal Power (dBm)	-68.80	-65.16	-64.66
Antenna Gain (dBi)	1.30	1.30	1.30
Adjusted Power (dBm)	-70.10	-66.46	-65.96
Detection Limit (dBm)	-62.0	-62.0	-62.0
EUT Tx Status (OFF/Minimal/ON)	ON	Minimal	OFF

Table 689 - U-NII-6, Maximum Bandwidth (AWGN High)

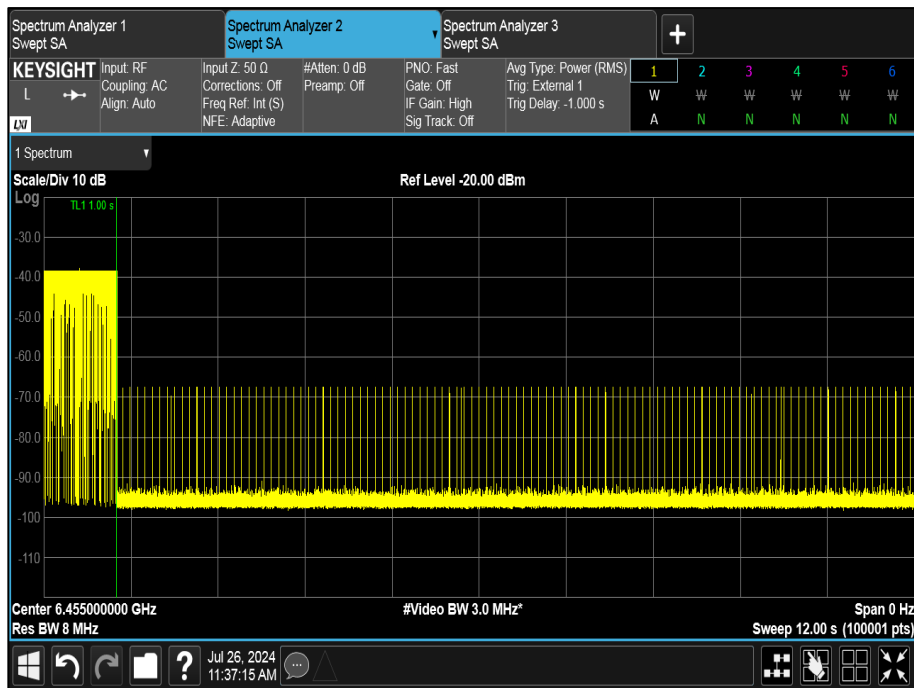


Figure 371 - U-NII-6, Minimum Bandwidth (AWGN High)



Parameter	Results		
U-NII Band	7	7	7
Channel Number	133	133	133
Bandwidth (MHz)	20	20	20
DUT Centre Frequency (MHz)	6615	6615	6615
AWGN Centre Frequency (MHz)	6615	6615	6615
AWGN Signal Power (dBm)	-75.51	-73.41	-72.61
Antenna Gain (dBi)	1.30	1.30	1.30
Adjusted Power (dBm)	-76.81	-74.71	-73.91
Detection Limit (dBm)	-62.0	-62.0	-62.0
EUT Tx Status (OFF/Minimal/ON)	ON	Minimal	OFF

Table 690 - U-NII-7, Minimum Bandwidth

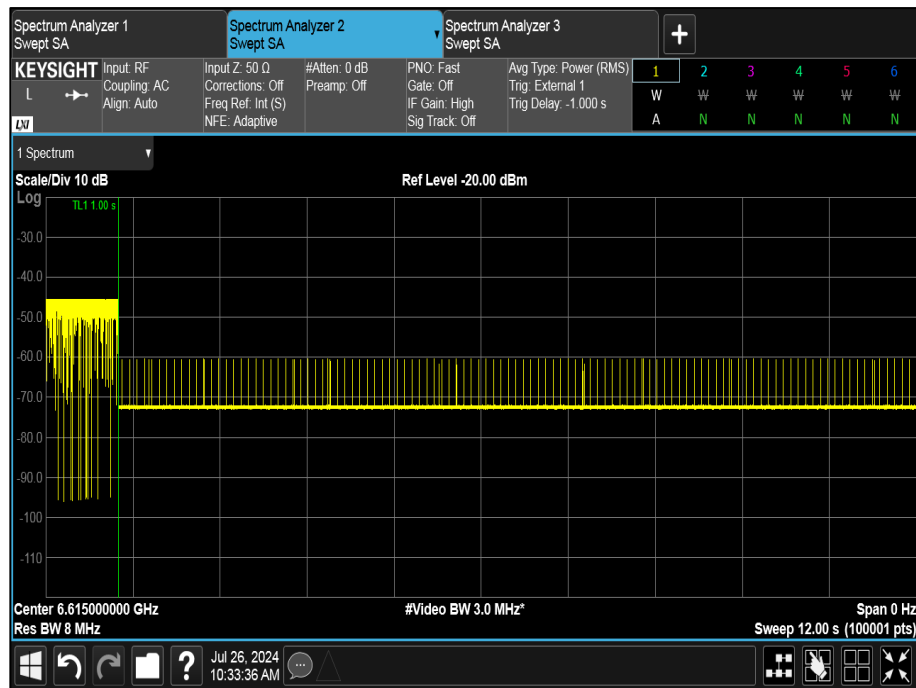


Figure 372 - U-NII-7, Minimum Bandwidth



Parameter	Results		
U-NII Band	7	7	7
Channel Number	143	143	143
Bandwidth (MHz)	160	160	160
DUT Centre Frequency (MHz)	6665	6665	6665
AWGN Centre Frequency (MHz)	6590	6590	6590
AWGN Signal Power (dBm)	-70.53	-67.45	-66.24
Antenna Gain (dBi)	1.30	1.30	1.30
Adjusted Power (dBm)	-71.83	-68.75	-67.54
Detection Limit (dBm)	-62.0	-62.0	-62.0
EUT Tx Status (OFF/Minimal/ON)	ON	Minimal	OFF

Table 691 - U-NII-7, Maximum Bandwidth (AWGN Low)

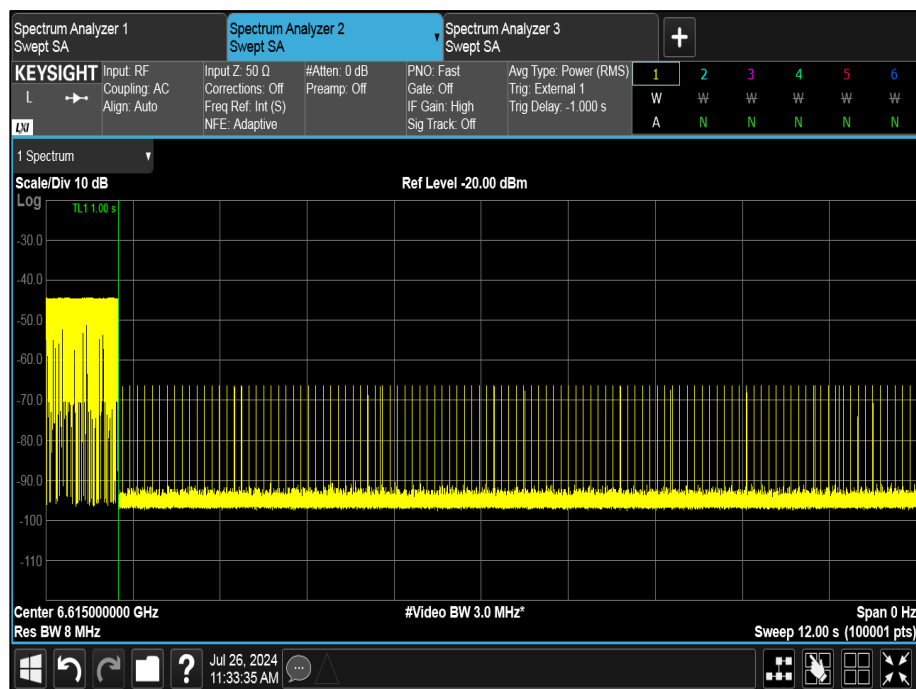


Figure 373 - U-NII-7, Minimum Bandwidth (AWGN Low)



Parameter	Results		
U-NII Band	7	7	7
Channel Number	143	143	143
Bandwidth (MHz)	160	160	160
DUT Centre Frequency (MHz)	6665	6665	6665
AWGN Centre Frequency (MHz)	6665	6665	6665
AWGN Signal Power (dBm)	-71.43	-68.97	-63.85
Antenna Gain (dBi)	1.30	1.30	1.30
Adjusted Power (dBm)	-72.73	-70.27	-65.15
Detection Limit (dBm)	-62.0	-62.0	-62.0
EUT Tx Status (OFF/Minimal/ON)	ON	Minimal	OFF

Table 692 - U-NII-7, Maximum Bandwidth (AWGN Mid)

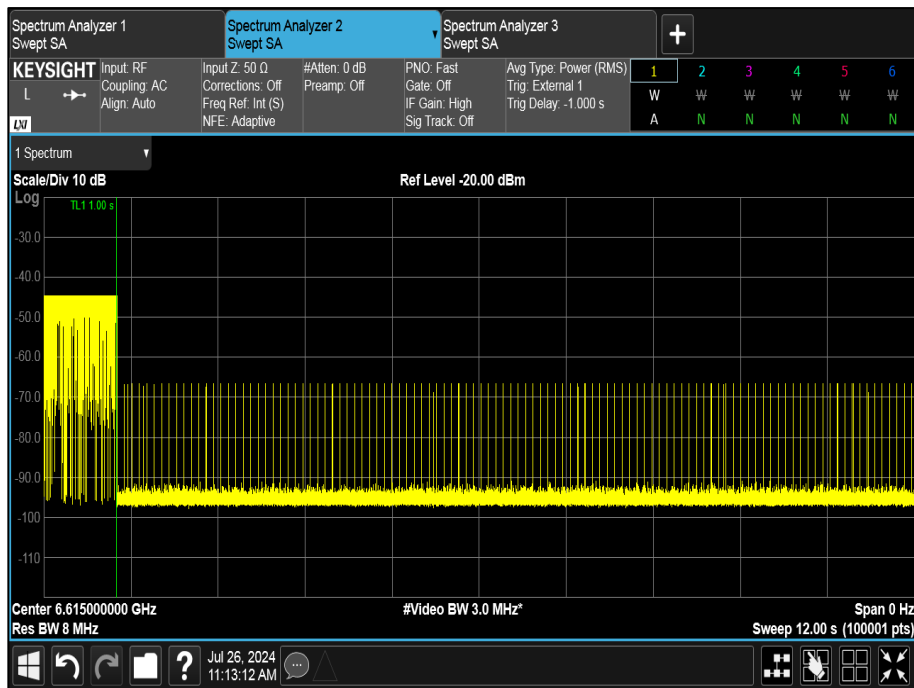


Figure 374 - U-NII-7, Minimum Bandwidth (AWGN Mid)



Parameter	Results		
U-NII Band	7	7	7
Channel Number	143	143	143
Bandwidth (MHz)	160	160	160
DUT Centre Frequency (MHz)	6665	6665	6665
AWGN Centre Frequency (MHz)	6740	6740	6740
AWGN Signal Power (dBm)	-67.63	-65.52	-61.73
Antenna Gain (dBi)	1.30	1.30	1.30
Adjusted Power (dBm)	-68.93	-66.82	-63.03
Detection Limit (dBm)	-62.0	-62.0	-62.0
EUT Tx Status (OFF/Minimal/ON)	ON	Minimal	OFF

Table 693 - U-NII-7, Maximum Bandwidth (AWGN High)

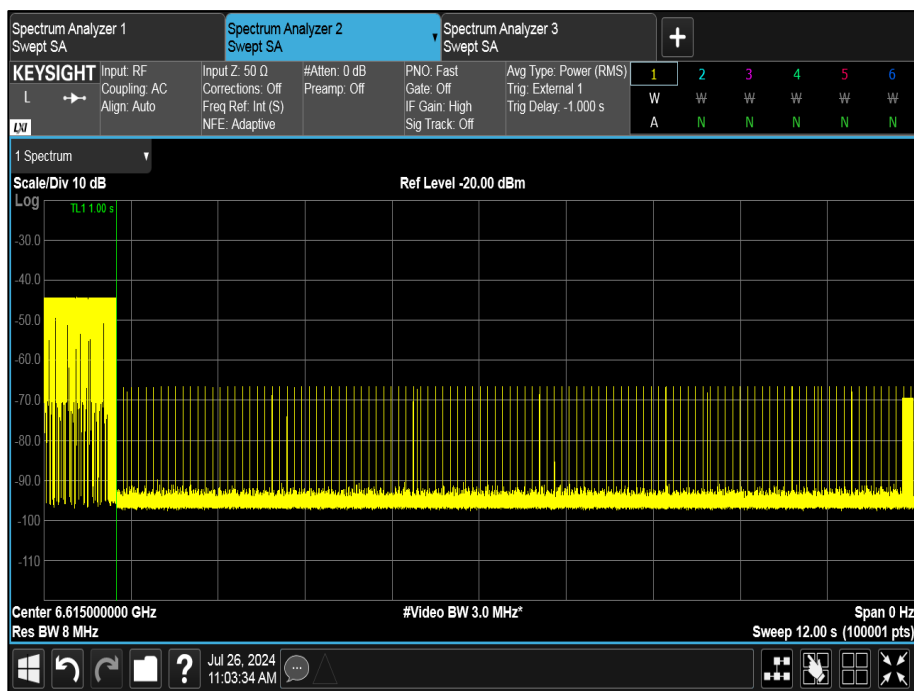


Figure 375 - U-NII-7, Minimum Bandwidth (AWGN High)



Parameter	Results		
U-NII Band	8	8	8
Channel Number	197	197	197
Bandwidth (MHz)	20	20	20
DUT Centre Frequency (MHz)	6935	6935	6935
AWGN Centre Frequency (MHz)	6935	6935	6935
AWGN Signal Power (dBm)	-72.26	-66.61	-66.41
Antenna Gain (dBi)	1.30	1.30	1.30
Adjusted Power (dBm)	-77.95	-75.16	-74.56
Detection Limit (dBm)	-62.0	-62.0	-62.0
EUT Tx Status (OFF/Minimal/ON)	ON	Minimal	OFF

Table 694 - U-NII-8, Minimum Bandwidth

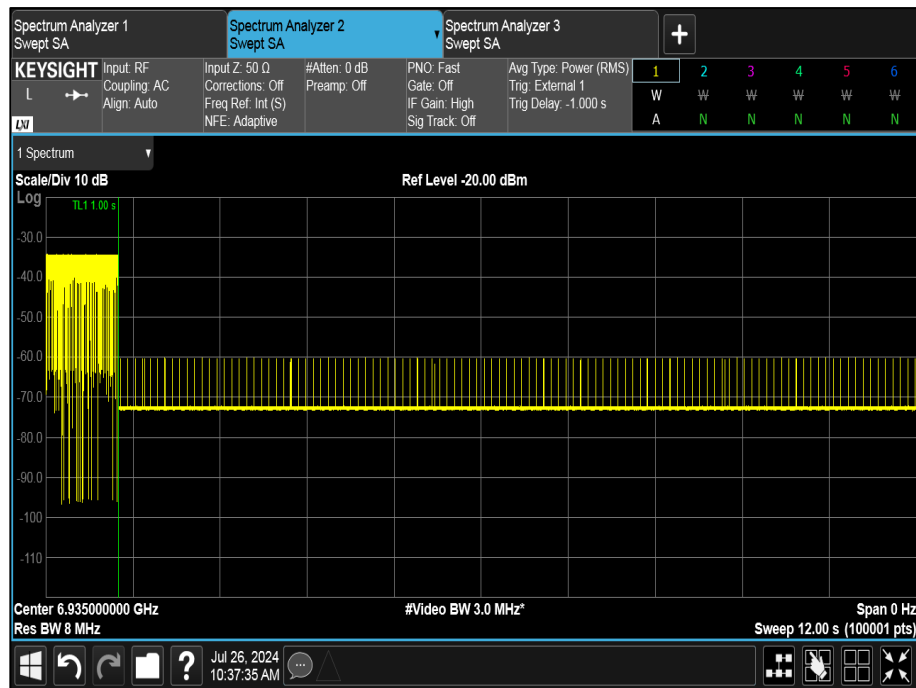


Figure 376 - U-NII-8, Minimum Bandwidth



Parameter	Results		
U-NII Band	8	8	8
Channel Number	207	207	207
Bandwidth (MHz)	160	160	160
DUT Centre Frequency (MHz)	6985	6985	6985
AWGN Centre Frequency (MHz)	6910	6910	6910
AWGN Signal Power (dBm)	-72.26	-66.61	-66.41
Antenna Gain (dBi)	1.30	1.30	1.30
Adjusted Power (dBm)	-73.56	-67.91	-67.71
Detection Limit (dBm)	-62.0	-62.0	-62.0
EUT Tx Status (OFF/Minimal/ON)	ON	Minimal	OFF

Table 695 - U-NII-8, Maximum Bandwidth (AWGN Low)

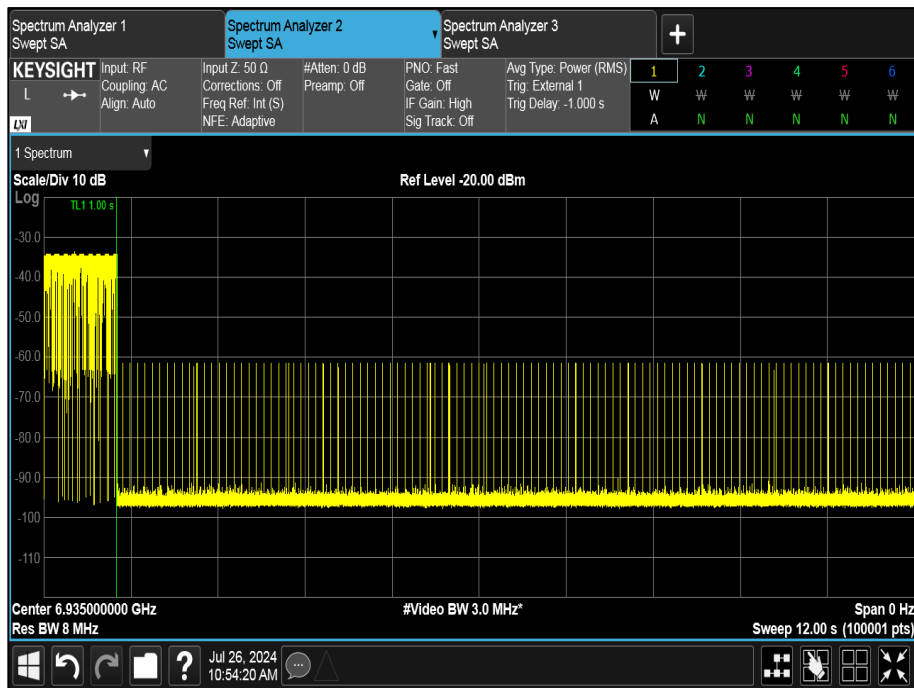


Figure 377 - U-NII-8, Minimum Bandwidth (AWGN Low)



Parameter	Results		
U-NII Band	8	8	8
Channel Number	207	207	207
Bandwidth (MHz)	160	160	160
DUT Centre Frequency (MHz)	6985	6985	6985
AWGN Centre Frequency (MHz)	6985	6985	6985
AWGN Signal Power (dBm)	-70.79	-67.51	-66.51
Antenna Gain (dBi)	1.30	1.30	1.30
Adjusted Power (dBm)	-72.09	-68.81	-67.81
Detection Limit (dBm)	-62.0	-62.0	-62.0
EUT Tx Status (OFF/Minimal/ON)	ON	Minimal	OFF

Table 696 - U-NII-8, Maximum Bandwidth (AWGN Mid)

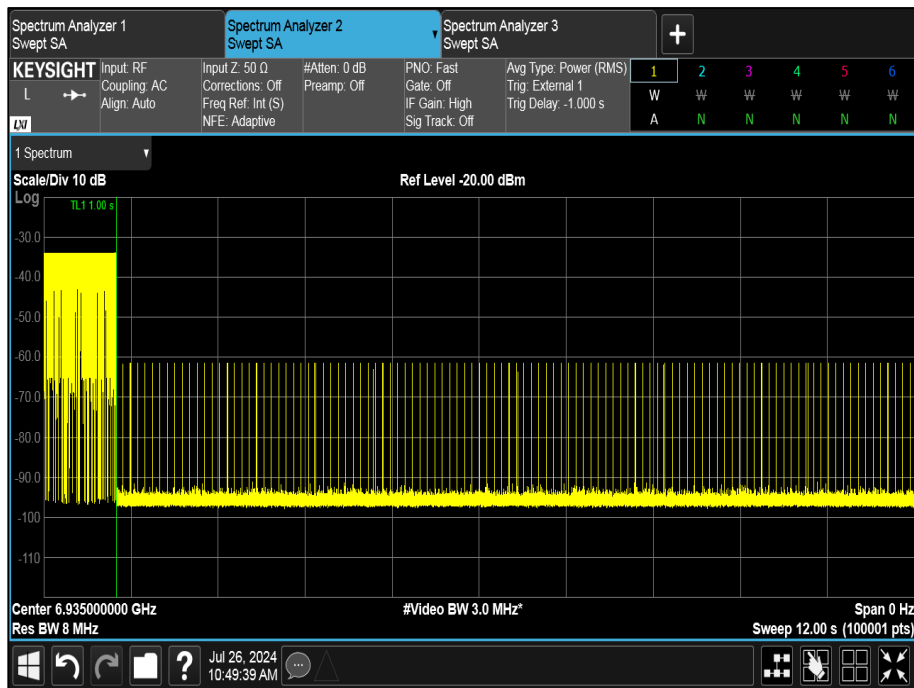


Figure 378 - U-NII-8, Minimum Bandwidth (AWGN Mid)



Parameter	Results		
U-NII Band	8	8	8
Channel Number	207	207	207
Bandwidth (MHz)	160	160	160
DUT Centre Frequency (MHz)	6985	6985	6985
AWGN Centre Frequency (MHz)	7060	7060	7060
AWGN Signal Power (dBm)	-67.81	-62.79	-62.40
Antenna Gain (dBi)	1.30	1.30	1.30
Adjusted Power (dBm)	-69.11	-64.09	-63.70
Detection Limit (dBm)	-62.0	-62.0	-62.0
EUT Tx Status (OFF/Minimal/ON)	ON	Minimal	OFF

Table 697 - U-NII-8, Maximum Bandwidth (AWGN High)

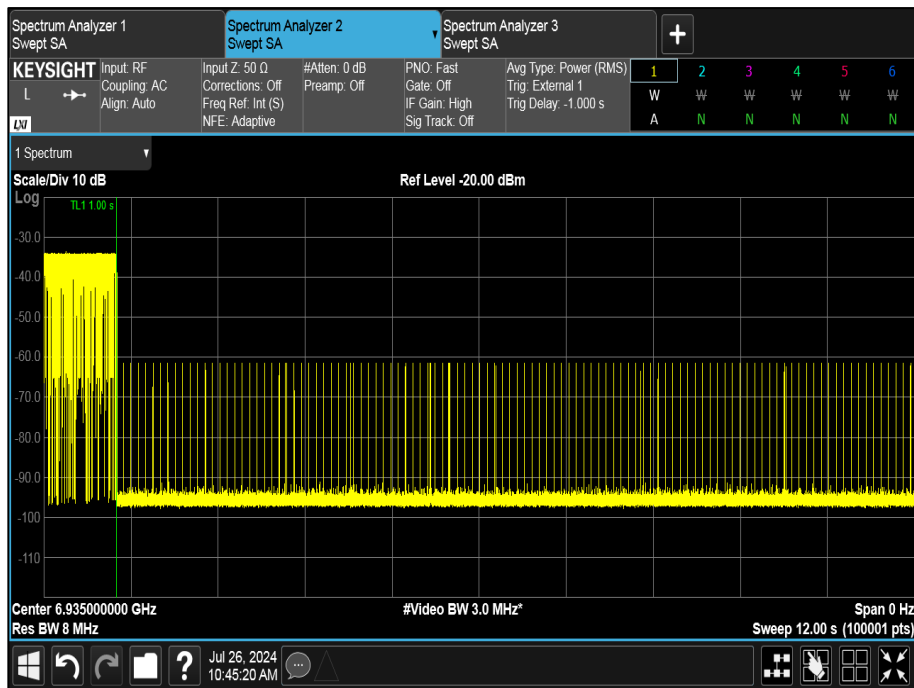


Figure 379 - U-NII-8, Minimum Bandwidth (AWGN High)



FCC 47 CFR Part 15.407 (d)(6)

Indoor access points, subordinate devices and client devices operating in the 5.925-7.125 GHz band must employ a contention-based protocol.

KDB 987594, Limit Clause I

Indoor access points, subordinate devices and client devices operating in the 5.925-7.125 GHz band (herein referred to as unlicensed devices) are required to use technologies that include a contention-based protocol to avoid co-channel interference with incumbent devices sharing the band. To ensure incumbent co-channel operations are detected in a technology-agnostic manner, unlicensed devices are required to detect co-channel radio frequency energy (energy detect) and avoid simultaneous transmission.

Unlicensed low-power indoor devices must detect co-channel radio frequency power that is at least -62 dBm or lower. Upon detection of energy in the band, unlicensed low power indoor devices must vacate the channel (in which incumbent signal is transmitted) and stay off the incumbent channel as long as detected radio frequency power is equal to or greater than the threshold (-62 dBm). The -62 dBm (or lower) threshold is referenced to a 0 dBi antenna gain.

To ensure incumbent operations are reliably detected in the band, low power indoor devices must detect RF energy throughout their intended operating channel. For example, an 802.11 device that plans to transmit a 40 MHz- wide signal (on a primary 20 MHz channel and a secondary 20 MHz channel) must detect energy throughout the entire 40 MHz channel. Additionally, low-power indoor devices must detect co-channel energy with 90% or greater certainty.

ISED RSS-248, Limit Clause 4.7.2

The minimum detection threshold power is the received power referenced to a 0 dBi antenna. Devices shall use a contention-based protocol to detect the presence of any emissions on the channel that the device intends to occupy. The device shall be able to detect, within its entire occupied bandwidth, a radio frequency power of at least -62 dBm or lower.

If an emission is detected on a channel, the device shall cease transmissions and shall not resume transmissions on this channel while the detected radio frequency power is at or above the -62 dBm threshold.



2.9.8 Test Location and Test Equipment Used

This test was carried out in Shielded Laboratory 1.

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Expiry Date
EXA Signal Analyser	Keysight Technologies	N9010B	4968	24	29-Jan-2026
Cable (K Type 2m)	Junkosha	MWX241-02000KMS	5421	12	07-Mar-2025
3.5 mm 2m Cable	Junkosha	MWX221-02000DMS	5429	12	16-May-2025
WiFi 6E Tri-Band Gaming Router	Asus	GT-AXE110000	5926	-	TU
Cable (K Type 2m)	Junkosha	MWX241-02000KMSKMS/B	5936	12	23-May-2025
Cable (K Type 2m)	Junkosha	MWX241-02000KMSKMS/B	5938	12	23-May-2025
Thermohygrometer	R.S Components	1364	6352	12	13-Jun-2025
Test Coupling Network	TUV SUD	TUV_RxTest_001	6387	12	04-Sep-2024
Vector Signal Generator (7.5GHz)	Rohde & Schwarz	SMM100A	6532	36	11-Apr-2026

Table 698

TU - Traceability Unscheduled



3 Measurement Uncertainty

For a 95% confidence level, the measurement uncertainties for defined systems are:

Test Name	Measurement Uncertainty
Emission Bandwidth	± 3.91 MHz
Dual Client Test	± 1.38 dB
Transmit Power Control	± 1.49 dB
Maximum Conducted Output Power	± 1.38 dB
Maximum Conducted Power Spectral Density	± 1.49 dB
Authorised Band Edges	± 6.3 dB
Spurious Radiated Emissions	30 MHz to 1 GHz: ± 5.2 dB 1 GHz to 40 GHz: ± 6.3 dB
Unwanted Emissions within the 5925-7125 MHz band	± 3.45 dB
Contention Based Protocol	Time: 0.30% Interferer BW: 267.98 kHz Interferer Level: 0.80 dB

Table 699

Measurement Uncertainty Decision Rule – Accuracy Method

Determination of conformity with the specification limits is based on the decision rule according to IEC Guide 115:2021, Clause 4.4.3 (Procedure 2). The measurement results are directly compared with the test limit to determine conformance with the requirements of the standard.

Risk: The uncertainty of measurement about the measured result is negligible with regard to the final pass/fail decision. The measurement result can be directly compared with the test limit to determine conformance with the requirement (compare IEC Guide 115). The level of risk to falsely accept and falsely reject items is further described in ILAC-G8.