



FCC RADIO TEST REPORT

FCC ID : UXX-S5A509A
Equipment : E400-5GE-AM, X20-5GE-AM
Brand Name : Ericsson
Model Name : S5A509A
Marketing Name : E400-5GE-AM, X20-5GE-AM
Applicant : Ericsson Enterprise Wireless Solutions, Inc.
1100 W. Idaho St. Boise, ID 83702
Manufacturer : Ericsson Enterprise Wireless Solutions, Inc.
1100 W. Idaho St. Boise, ID 83702
Standard : FCC Part 15 Subpart E §15.407

The product was received on Jan. 20, 2025 and testing was performed from Jan. 28, 2025 to Jan. 29, 2025. We, Sporton International (USA) Inc, would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this partial report apply exclusively to the tested model / sample. Without written approval from Sporton International (USA) Inc, the test report shall not be reproduced except in full.

Approved by: Neil Kao

Sporton International (USA) Inc.
1175 Montague Expressway, Milpitas, CA 95035



Table of Contents

History of this test report.....	3
Summary of Test Result.....	4
1 General Description	5
1.1 Product Feature of Equipment Under Test.....	5
1.2 Modification of EUT	5
1.3 Testing Location	5
1.4 Applicable Standards.....	5
2 Test Configuration of Equipment Under Test	6
2.1 Carrier Frequency and Channel	6
3 Test Result	8
3.1 Contention Based Protocol	8
3.2 Antenna Requirements.....	32
4 List of Measuring Equipment.....	33



History of this test report

Report No.	Version	Description	Issue Date
FR241112001	01	Initial issue of report	Feb. 12, 2025

Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
3.1	15.407(d)(6)	Contention Based Protocol	Pass	-
3.2	15.203 15.407(a)	Antenna Requirement	Pass	-

Conformity Assessment Condition:

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/manufacture who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.

Disclaimer:

1. 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.
2. The only difference between X20-5GE-AM and E400-5GE-AM firmware versions are the subscription packages they support. These subscription packages are used to license advanced software features for different market segments. The features that are licensed in the subscription packages are primarily advanced networking features (IPSec, BGP, RIP, STP) and remote diagnostic tools.



1 General Description

1.1 Product Feature of Equipment Under Test

Product Feature
General Specs LTE/5G NR, Wi-Fi 2.4GHz 802.11b/g/n/ac/ax/be, Wi-Fi 5GHz 802.11a/n/ac/ax/be, Wi-Fi 6GHz 802.11ax/be and GNSS
Antenna Type WLAN: <Ant. 1>: PIFA Antenna <Ant. 2>: PIFA Antenna

Remark:

1. All the tests were performed with E400-5GE-AM.
2. The EUT's information above is declared by manufacturer. Please refer to Disclaimer in report summary.

1.2 Modification of EUT

No modifications made to the EUT during the testing.

1.3 Testing Location

Test Site	Sporton International (USA) Inc.
Test Site Location	1175 Montague Expressway Milpitas, CA 95035 TEL: 408 9043300
Test Site No.	Sporton Site No. DFS01-CA

FCC Designation No.: US1250

1.4 Applicable Standards

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

- ♦ FCC Part 15 Subpart E
- ♦ FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
- ♦ FCC KDB 987594 D02 U-NII 6 GHz EMC Measurement v03
- ♦ ANSI C63.10-2013

Remark: All the test items were validated and recorded in accordance with the standards without any modification during the testing.



2 Test Configuration of Equipment Under Test

2.1 Carrier Frequency and Channel

BW 20M	Channel	1	5	9	13	17	21	25	29
	Freq. (MHz)	5955	5975	5995	6015	6035	6055	6075	6095
BW 40M	Channel	3		11		19		27	
	Freq. (MHz)	5965		6005		6045		6085	
BW 80M	Channel	7				23			
	Freq. (MHz)	5985				6065			
BW 160M	Channel	15							
	Freq. (MHz)	6025							
BW 320M	Channel	31							
	Freq. (MHz)	6105							

BW 20M	Channel	33	37	41	45	49	53	57	61
	Freq. (MHz)	6115	6135	6155	6175	6195	6215	6235	6255
BW 40M	Channel	35		43		51		59	
	Freq. (MHz)	6125		6165		6205		6245	
BW 80M	Channel	39				55			
	Freq. (MHz)	6145				6225			
BW 160M	Channel	47							
	Freq. (MHz)	6185							
BW 320M	Channel	63							
	Freq. (MHz)	6265							



BW 20M	Channel	65	69	73	77	81	85	89	93
	Freq. (MHz)	6275	6295	6315	6335	6355	6375	6395	6415
BW 40M	Channel	67		75		83		91	
	Freq. (MHz)	6285		6325		6365		6405	
BW 80M	Channel	71				87			
	Freq. (MHz)	6305				6385			
BW 160M	Channel	79							
	Freq. (MHz)	6345							

BW 20M	Channel	117	121	125
	Freq. (MHz)	6535	6555	6575
BW 40M	Channel	123		
	Freq. (MHz)	6565		

BW 20M	Channel	129	133	137	141	145	149	153	157
	Freq. (MHz)	6595	6615	6635	6655	6675	6695	6715	6735
BW 40M	Channel	131		139		147		155	
	Freq. (MHz)	6605		6645		6685		6725	
BW 80M	Channel	135				151			
	Freq. (MHz)	6625				6705			
BW 160M	Channel	143							
	Freq. (MHz)	6665							

BW 20M	Channel	161	165	169	173	177	181	-	-
	Freq. (MHz)	6755	6775	6795	6815	6835	6855	-	-
BW 40M	Channel	163		171		179		-	
	Freq. (MHz)	6765		6805		6845		-	
BW 80M	Channel	167				-			
	Freq. (MHz)	6785				-			

3 Test Result

3.1 Contention Based Protocol

3.1.1 Limit of Contention Based Protocol

<FCC 14-30 CFR 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.

FCC KDB 987594 D02 U-NII 6GHz EMC Measurement v03

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 and stay off the 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.

Table 1. Criteria to determine number of times detection threshold test may be performed

If	Number of Tests	Placement of Incumbent Transmission
$BW_{EUT} \leq BW_{Inc}$	Once	Tune incumbent and EUT transmissions ($f_{c1} = f_{c2}$)
$BW_{Inc} < BW_{EUT} \leq 2BW_{Inc}$	Once	Incumbent transmission is contained within BW_{EUT}
$2BW_{Inc} < BW_{EUT} \leq 4BW_{Inc}$	Twice. Incumbent transmission is contained within BW_{EUT}	Incumbent transmission is located as closely as possible to the lower edge and upper edge, respectively, of the EUT channel
$BW_{EUT} > 4BW_{Inc}$	Three times	Incumbent transmission is located as closely as possible to the lower edge of the EUT channel, in the middle of EUT channel, and as closely as possible to the upper edge of the EUT channel

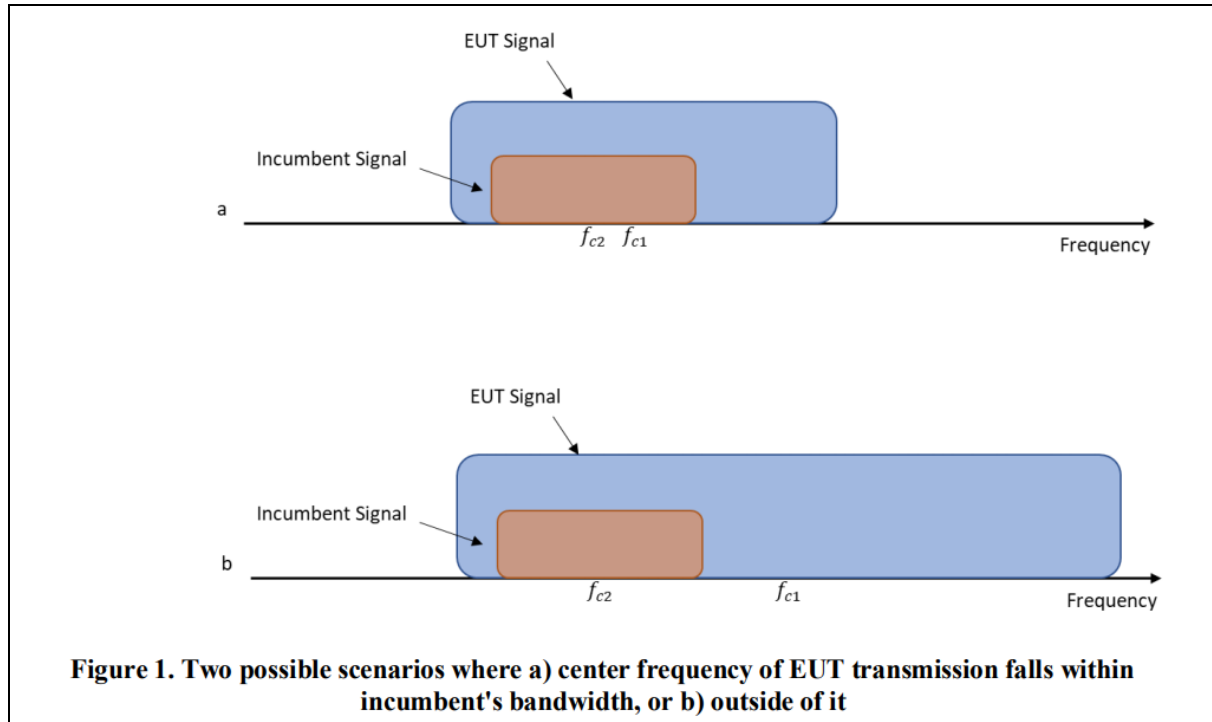
where:

BW_{EUT} : Transmission bandwidth of EUT signal

BW_{Inc} : Transmission bandwidth of the simulated incumbent signal (10 MHz wide AWGN signal)

f_{c1} : Center frequency of EUT transmission

f_{c2} : Center frequency of simulated incumbent signal



3.1.2 Measuring Instruments

Please refer to the measuring equipment list in this test report.

3.1.3 Test Procedures

The testing follows FCC KDB 987594 D02 U-NII 6GHz EMC Measurement v03.

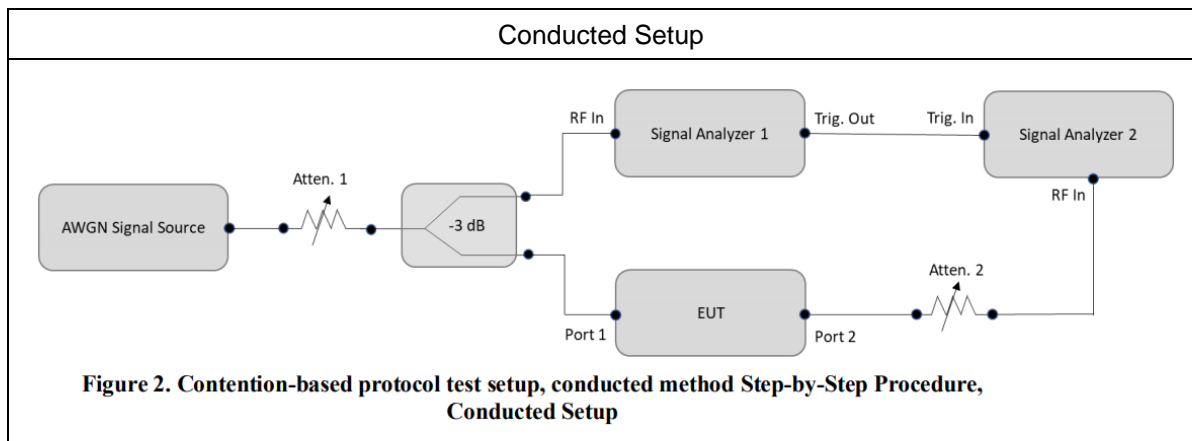
Section I) Contention Based Protocol

Conducted method Step-by-Step Procedure, Conducted Setup

1. Configure the EUT to transmit with a constant duty cycle.
2. Set the operating parameters of the EUT including power level, operating frequency, modulation and bandwidth.
3. Set the signal analyzer center frequency to the nominal EUT channel center frequency. The span range of the signal analyzer shall be between two times and five times the OBW of the EUT.
4. Connect the output port of the EUT to the signal analyzer 2, as shown in test setup Figure 2. Ensure that the attenuator 2 provides enough attenuation to not overload the signal analyzer 2 receiver.
5. Monitoring the signal analyzer 2, verify the EUT is operating and transmitting with the parameters set at step two.
6. Using an AWGN signal source, generate (but do not transmit, i.e., RF OFF) a 10 MHz-wide AWGN signal. Use Table 1 to determine the center frequency of the 10 MHz AWGN signal relative to the EUT's channel bandwidth and center frequency.
7. Set the AWGN signal power to an extremely low level (more than 20 dB below the -62 dBm threshold). Connect the AWGN signal source, via a 3-dB splitter, to the signal analyzer 1 and the EUT as shown in test setup Figure 2.
8. Transmit the AWGN signal (RF ON) and verify its characteristics on the signal analyzer 1.

9. Monitor the signal analyzer 2 to verify if the AWGN signal has been detected and the EUT has ceased transmission. If the EUT continues to transmit, then incrementally increase the AWGN signal power level until the EUT stops transmitting.
10. (Including all losses in the RF paths) Determine and record the AWGN signal power level (at the EUT's antenna port) at which the EUT ceased transmission. Repeat the procedure at least 10 times to verify the EUT can detect an AWGN signal with 90% (or better) level of certainty.
11. Refer to Table 1 to determine number of times the detection threshold testing needs to be repeated. If testing is required more than once, then go back to step 5, choose a different center frequency for the AWGN signal and repeat the process.
12. For the contention-based protocol test where only one channel in each supported sub-band needs to be tested. The narrowest and widest bandwidth in each channel shall be measured EUT was driven in MIMO mode, the interferer level was injected to both chains to monitor the performance, while the interferer level is determined according the lowest antenna gain among both antennas (i.e, lower interferer level).

3.1.4 Test Setup



3.1.5 Support Unit used in test configuration and system

Instrument	Brand Name	Model No.	Characteristics
Companion Device (Client)	Dell	Latitude 5440	802.11be EHT
Terminal (Notebook Server for AP)	Apple	A2338	LAN

3.1.6 Minimum Antenna gain for Contention Based Protocol Test

Antenna Gain	<UNII-5>: 5.5 dBi <UNII-6>: 5.4 dBi <UNII-7>: 5.0 dBi <UNII-8>: 5.1 dBi
--------------	--



3.1.7 Test Summary of Contention Based Protocol Test

Test Engineer :	Liliana Gonzalez	Temperature :	21.2°C
		Relative Humidity :	30.2%

Band	Channel Freq. (MHz)	Channel BW (MHz)	Incumbent freq. (MHz)	Injected AWGN Level (dBm)	Detection Rate (%)	Regulated Threshold level (dBm)	Adjusted Power (dBm)	Margin (dB)
UNII Band 5	6135	20	6135	-61.12	90	-62	-66.62	4.62
				Result: Stop Transmission				
				-62.08	< 90	-62	-67.58	5.58
				Result: Minimal Operation				
				-66	0	-62	-71.5	9.5
				Result: Normal Operation				
	6105	320	5950	-67.22	90	-62	-72.72	10.72
				Result: Stop Transmission				
				-68.23	< 90	-62	-73.73	11.73
				Result: Minimal Operation				
				-72	0	-62	-77.5	15.5
				Result: Normal Operation				
			6105	-70.96	100	-62	-76.46	14.46
				Result: Stop Transmission				
				-71.95	< 90	-62	-77.45	15.45
				Result: Minimal Operation				
				-76	0	-62	-81.5	19.5
				Result: Normal Operation				
			6260	-66.11	100	-62	-71.61	9.61
				Result: Stop Transmission				
				-67.09	< 90	-62	-72.59	10.59
				Result: Minimal Operation				
				-71	0	-62	-76.5	14.5
				Result: Normal Operation				

Note 1: Adjusted Power = Injected AWGN Level - minimum antenna gain (5.5 dBi).

Note 2: The antenna gain has included the path loss between RF connector and antenna.

Note 3: Margin = Regulated Threshold level - Adjusted Power.



Band	Channel Freq. (MHz)	Channel BW (MHz)	Incumbent freq. (MHz)	Injected AWGN Level (dBm)	Detection Rate (%)	Regulated Threshold level (dBm)	Adjusted Power (dBm)	Margin (dB)
UNII Band 6	6455	20	6455	-60.37	90	-62	-65.77	3.77
					Result: Stop Transmission			
				-61.33	< 90	-62	-66.73	4.73
					Result: Minimal Operation			
				-65	0	-62	-70.4	8.4
					Result: Normal Operation			
	6425	320	6270	-69.52	100	-62	-74.92	12.92
					Result: Stop Transmission			
				-70.49	< 90	-62	-75.89	13.89
					Result: Minimal Operation			
				-74.5	0	-62	-79.9	17.9
					Result: Normal Operation			
			6425	-57.27	100	-62	-62.67	0.67
					Result: Stop Transmission			
				-58.18	< 90	-62	-63.58	1.58
					Result: Minimal Operation			
				-62.5	0	-62	-67.9	5.9
					Result: Normal Operation			
			6580	-64.39	100	-62	-69.79	7.79
					Result: Stop Transmission			
				-65.4	< 90	-62	-70.8	8.8
					Result: Minimal Operation			
				-69.5	0	-62	-74.9	12.9
					Result: Normal Operation			

Note 1: Adjusted Power = Injected AWGN Level - minimum antenna gain (5.4 dBi).

Note 2: The antenna gain has included the path loss between RF connector and antenna.

Note 3: Margin = Regulated Threshold level - Adjusted Power.



Band	Channel Freq. (MHz)	Channel BW (MHz)	Incumbent freq. (MHz)	Injected AWGN Level (dBm)	Detection Rate (%)	Regulated Threshold level (dBm)	Adjusted Power (dBm)	Margin (dB)
UNII Band 7	6695	20	6695	-63.62	90	-62	-68.62	6.62
					Result: Stop Transmission			
				-64.61	< 90	-62	-69.61	7.61
					Result: Minimal Operation			
				-68.5	0	-62	-73	11
					Result: Normal Operation			
	6745	320	6590	-74.57	90	-62	-79.57	17.57
					Result: Stop Transmission			
				-75.56	< 90	-62	-80.56	18.56
					Result: Minimal Operation			
				-79.5	0	-62	-84.5	22.5
					Result: Normal Operation			
			6745	-60.66	100	-62	-65.66	3.66
					Result: Stop Transmission			
				-61.63	< 90	-62	-66.63	4.63
					Result: Minimal Operation			
				-65.5	0	-62	-70.5	8.5
					Result: Normal Operation			
			6900	-69.56	90	-62	-74.56	12.56
					Result: Stop Transmission			
				-70.57	< 90	-62	-75.57	13.57
					Result: Minimal Operation			
				-74.5	0	-62	-79.5	17.5
					Result: Normal Operation			

Note 1: Adjusted Power = Injected AWGN Level - minimum antenna gain (5.0 dBi).

Note 2: The antenna gain has included the path loss between RF connector and antenna.

Note 3: Margin = Regulated Threshold level - Adjusted Power.



Band	Channel Freq. (MHz)	Channel BW (MHz)	Incumbent freq. (MHz)	Injected AWGN Level (dBm)	Detection Rate (%)	Regulated Threshold level (dBm)	Adjusted Power (dBm)	Margin (dB)
UNII Band 8	7015	20	7015	-64.61	100	-62	-69.71	7.71
					Result: Stop Transmission			
				-65.64	< 90	-62	-70.74	8.74
					Result: Minimal Operation			
				-69.5	0	-62	-74.6	12.6
					Result: Normal Operation			
	6905	320	6750	-74.44	100	-62	-79.54	17.54
					Result: Stop Transmission			
				-75.4	< 90	-62	-80.5	18.5
					Result: Minimal Operation			
				-79.5	0	-62	-84.6	22.6
					Result: Normal Operation			
			6905	-58.72	100	-62	-63.82	1.82
					Result: Stop Transmission			
				-59.74	< 90	-62	-64.84	2.84
					Result: Minimal Operation			
				-64	0	-62	-69.1	7.1
					Result: Normal Operation			
			7060	-61.41	90	-62	-66.51	4.51
					Result: Stop Transmission			
				-62.45	< 90	-62	-67.55	5.55
					Result: Minimal Operation			
				-66.5	0	-62	-71.6	9.6
					Result: Normal Operation			

Note 1: Adjusted Power = Injected AWGN Level - minimum antenna gain (5.1 dBi).

Note 2: The antenna gain has included the path loss between RF connector and antenna.

Note 3: Margin = Regulated Threshold level - Adjusted Power.



3.1.8 Test Plots of Contention Based Protocol Test

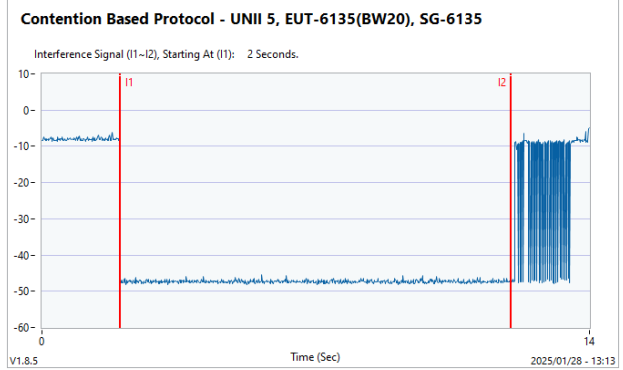
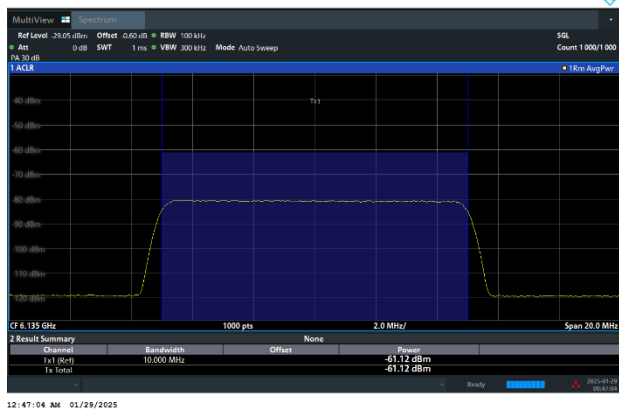
Contention Based Protocol Result Plots on U-NII 5 (AWGN Interference)

802.11be (EHT20) / 6135MHz

Threshold Level (TL) = -61.12dBm

802.11be (EHT20) / CH37

Test result is pass due to no transmission occur.

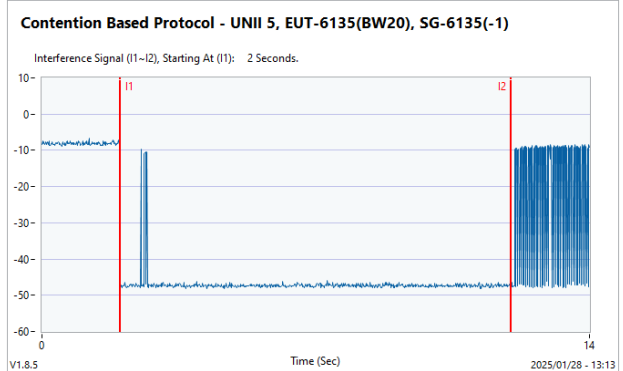
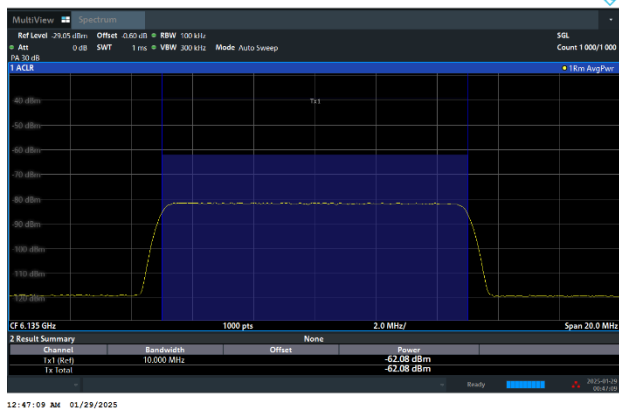


802.11be (EHT20) / 6135MHz

Threshold Level (TL) = -62.08dBm

802.11be (EHT20) / CH37

Transmit when the interferer is 1dB lower.

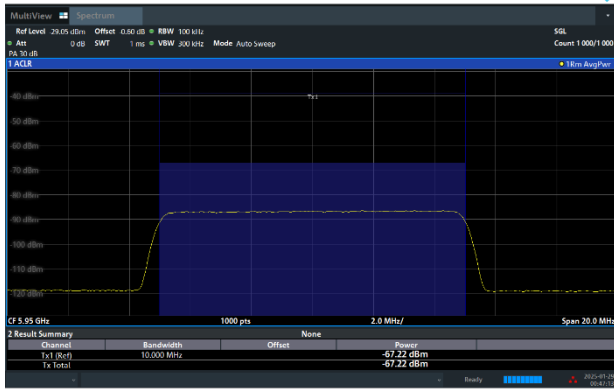




Contention Based Protocol Result Plots on U-NII 5 (AWGN Interference)

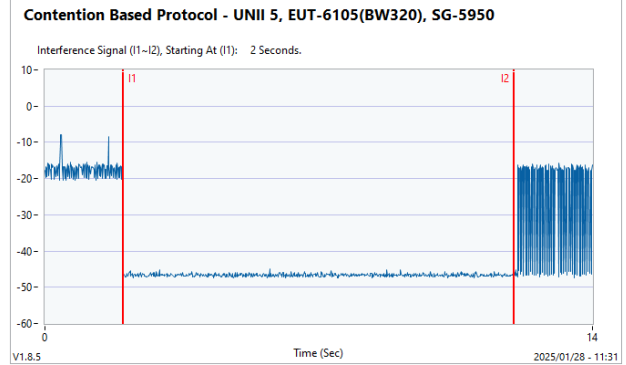
802.11be (EHT320) / 5950MHz (Lower edge)

Threshold Level (TL) = -67.22 dBm



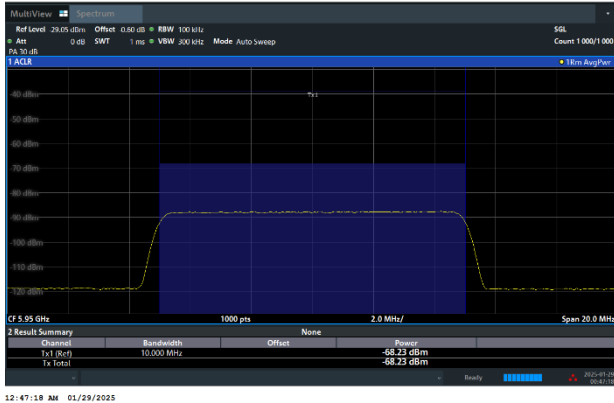
802.11be (EHT320) / CH31 (Lower edge)

Test result is pass due to no transmission occur.



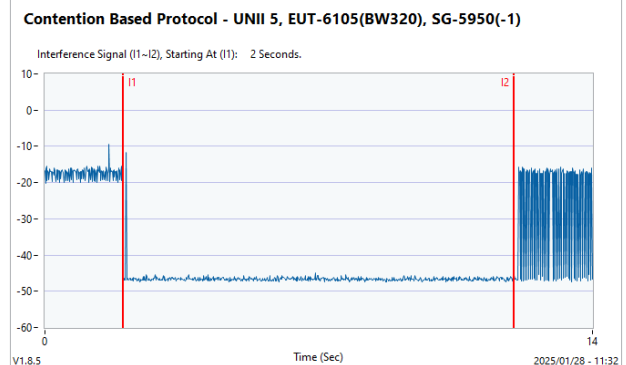
802.11be (EHT320) / 5950MHz (Lower edge)

Threshold Level (TL) = -68.23 dBm



802.11be (EHT320) / CH31 (Lower edge)

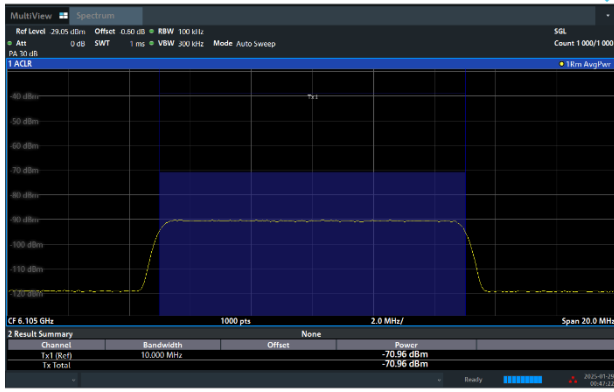
Transmit when the interferer is 1dB lower.





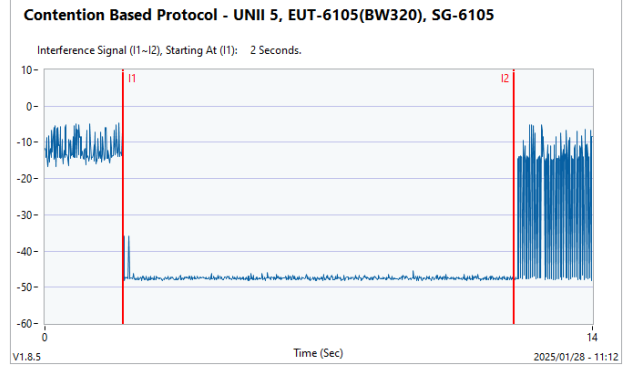
Contention Based Protocol Result Plots on U-NII 5 (AWGN Interference)

802.11be (EHT320) / 6105MHz (Middle)
Threshold Level (TL) = -70.96dBm

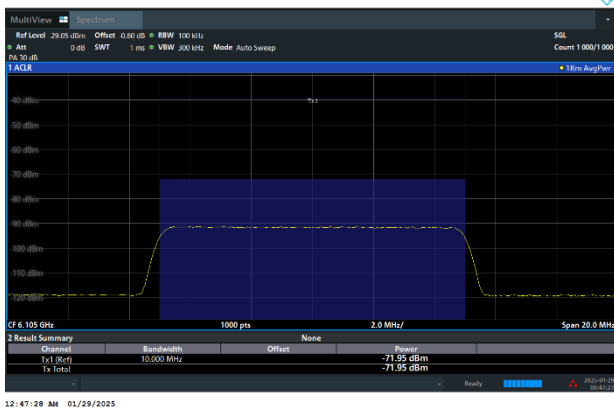


802.11be (EHT320) / CH31 (Middle)

Test result is pass due to no transmission occur.

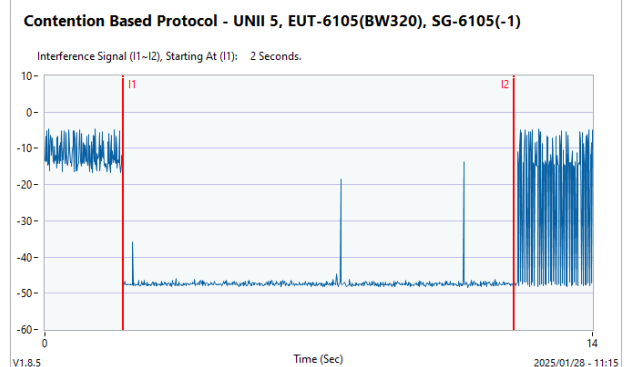


802.11be (EHT320) / 6105MHz (Middle)
Threshold Level (TL) = -71.95dBm



802.11be (EHT320) / CH31 (Middle)

Transmit when the interferer is 1dB lower.

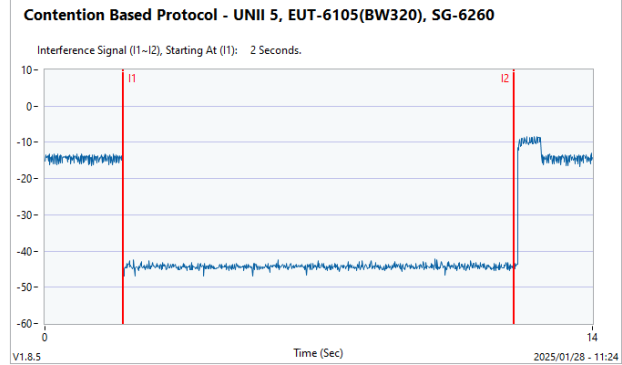
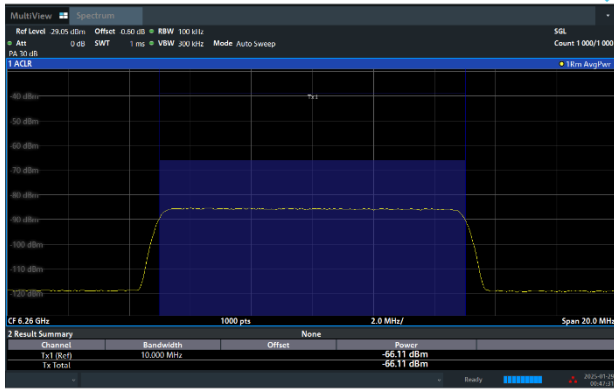




Contention Based Protocol Result Plots on U-NII 5 (AWGN Interference)

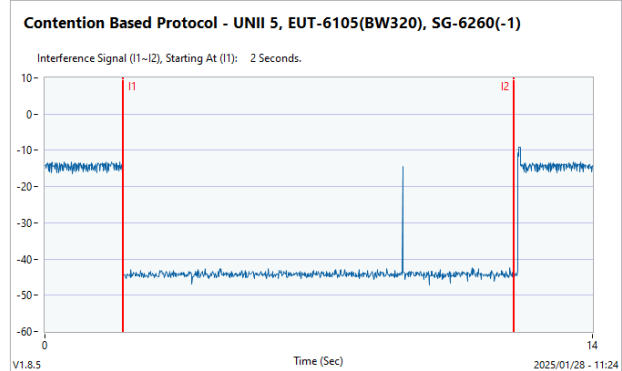
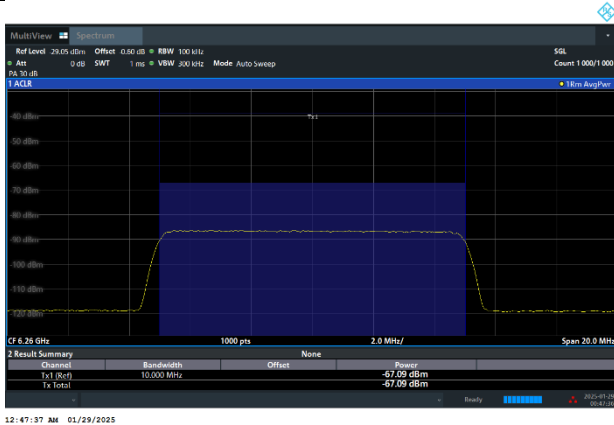
802.11be (EHT320) / 6260MHz (Upper edge)
Threshold Level (TL) = -66.11 dBm

802.11be (EHT320) / CH31 (Upper edge)
Test result is pass due to no transmission occur.



802.11be (EHT320) / 6260MHz (Upper edge)
Threshold Level (TL) = -67.09 dBm

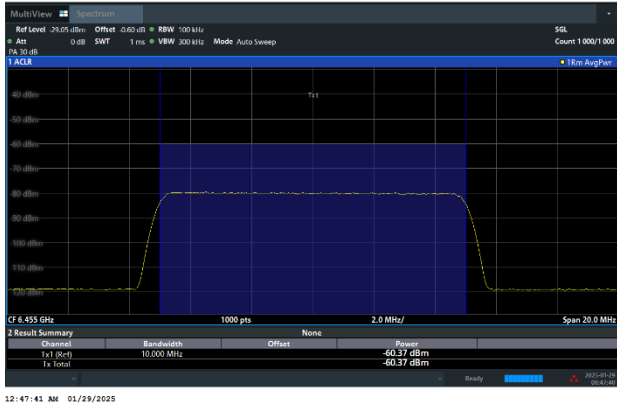
802.11be (EHT320) / CH31 (Upper edge)
Transmit when the interferer is 1dB lower.





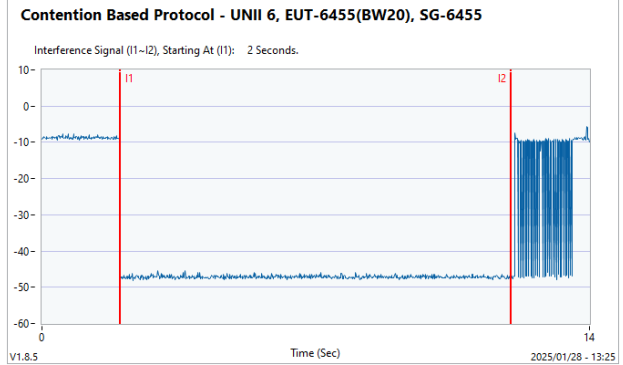
Contention Based Protocol Result Plots on U-NII 6 (AWGN Interference)

802.11be (EHT20) / 6455MHz
Threshold Level (TL) = -60.37dBm

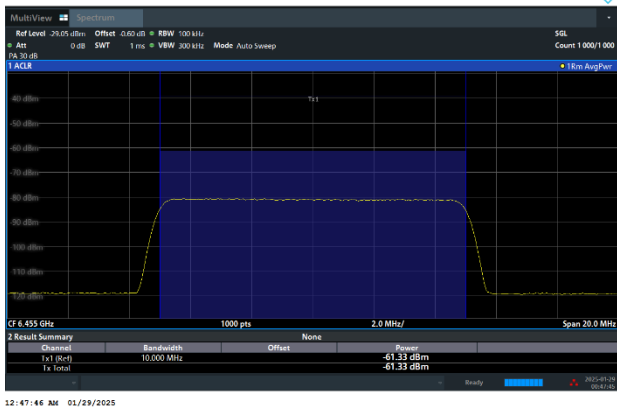


802.11be (EHT20) / CH101

Test result is pass due to no transmission occur.

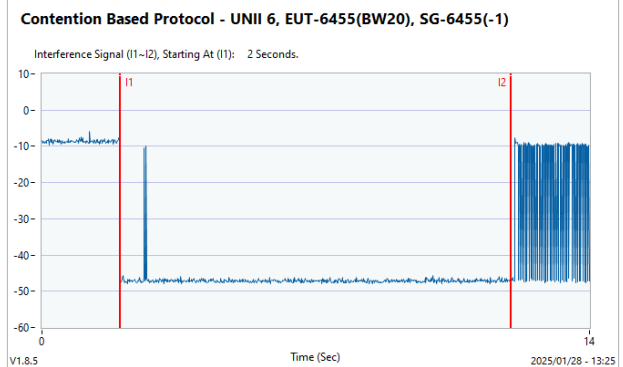


802.11be (EHT20) / 6455MHz
Threshold Level (TL) = -61.33dBm



802.11be (EHT20) / CH101

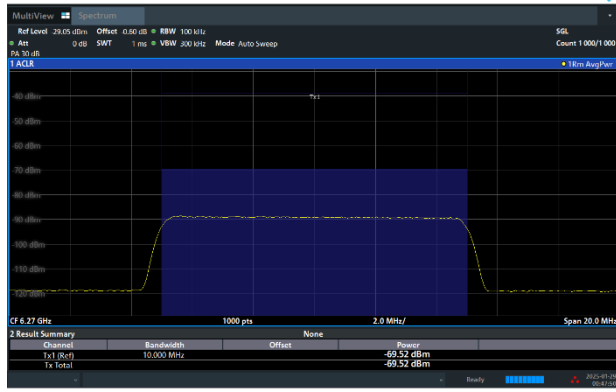
Transmit when the interferer is 1dB lower.



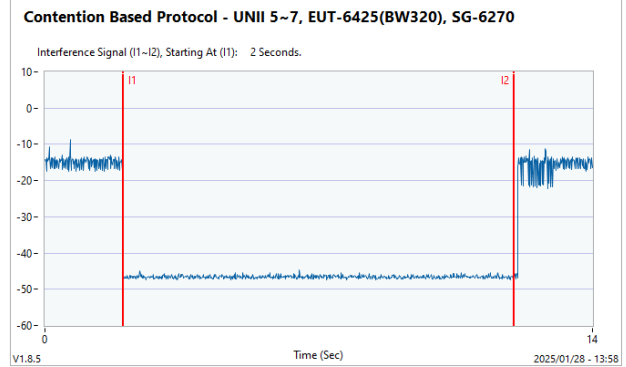


Contention Based Protocol Result Plots on U-NII 6 (AWGN Interference)

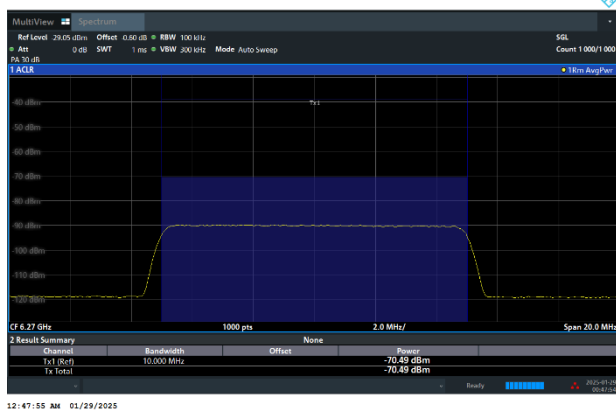
802.11be (EHT320) / 6270MHz (Lower edge)
Threshold Level (TL) = -69.52dBm



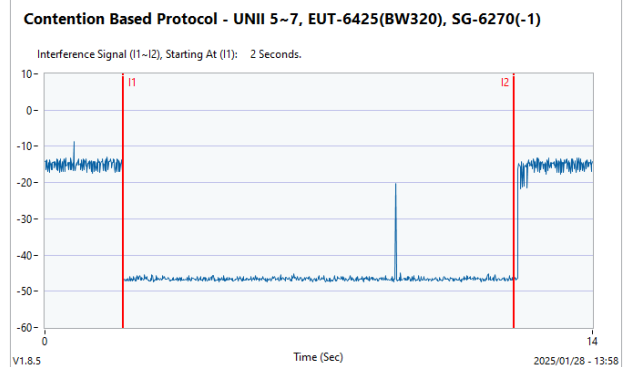
802.11be (EHT320) / CH95 (Lower edge)
Test result is pass due to no transmission occur.



802.11be (EHT320) / 6270MHz (Lower edge)
Threshold Level (TL) = -70.49dBm



802.11be (EHT320) / CH95 (Lower edge)
Transmit when the interferer is 1dB lower.

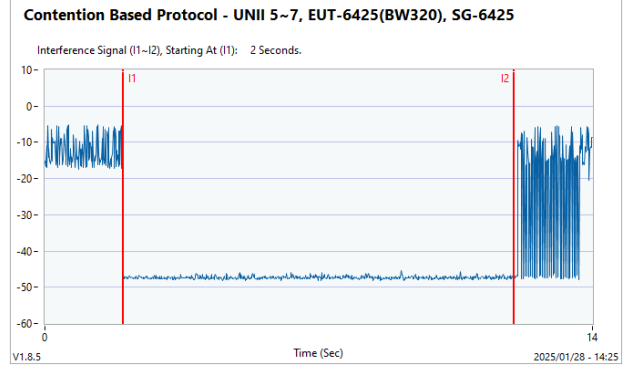
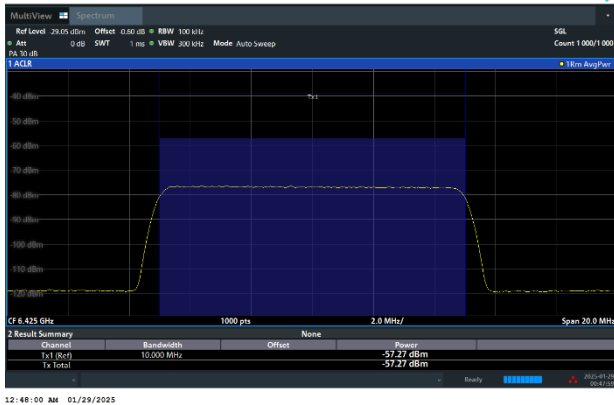




Contention Based Protocol Result Plots on U-NII 6 (AWGN Interference)

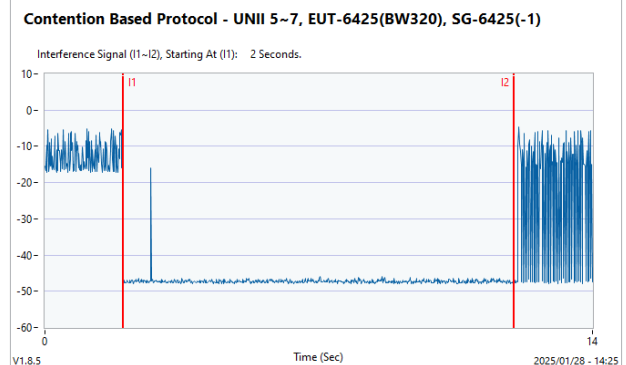
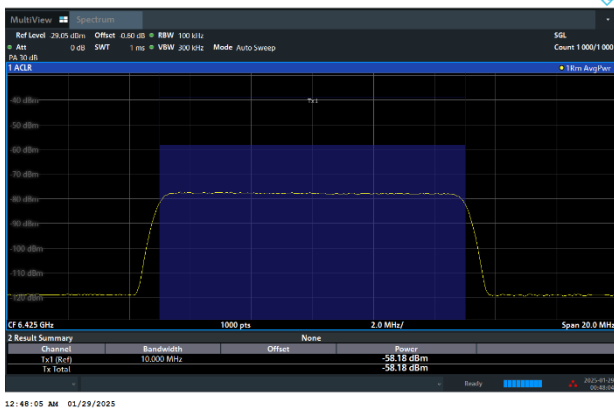
802.11be (EHT320) / 6425MHz (Middle)
Threshold Level (TL) = -57.27dBm

802.11be (EHT320) / CH95 (Middle)
Test result is pass due to no transmission occur.



802.11be (EHT320) / 6425MHz (Middle)
Threshold Level (TL) = -58.18dBm

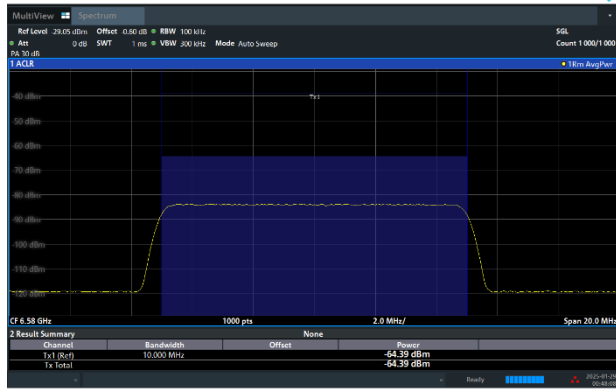
802.11be (EHT320) / CH95 (Middle)
Transmit when the interferer is 1dB lower.



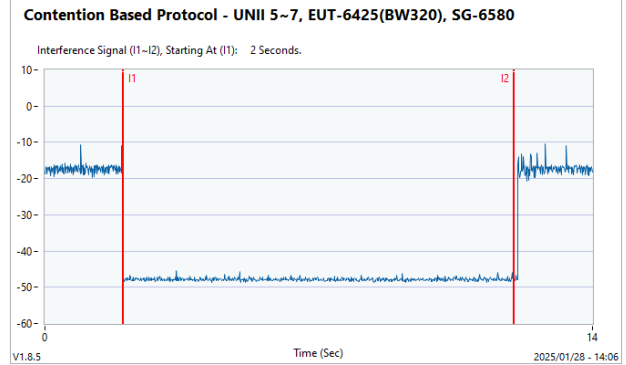


Contention Based Protocol Result Plots on U-NII 6 (AWGN Interference)

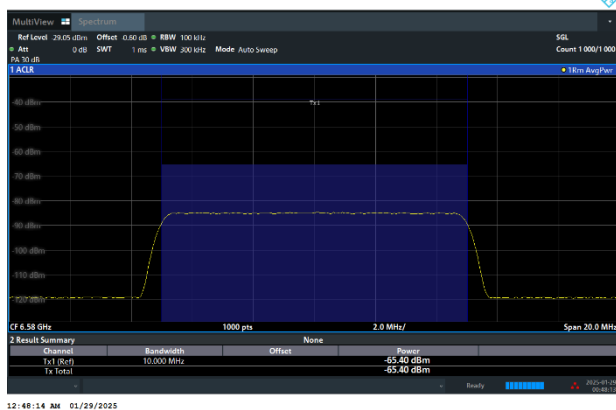
802.11be (EHT320) / 6580MHz (Upper edge)
Threshold Level (TL) = -64.39dBm



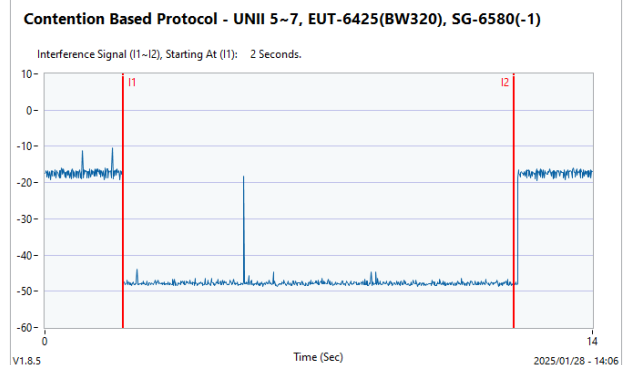
802.11be (EHT320) / CH95 (Upper edge)
Test result is pass due to no transmission occur.



802.11be (EHT320) / 6580MHz (Upper edge)
Threshold Level (TL) = -65.40dBm



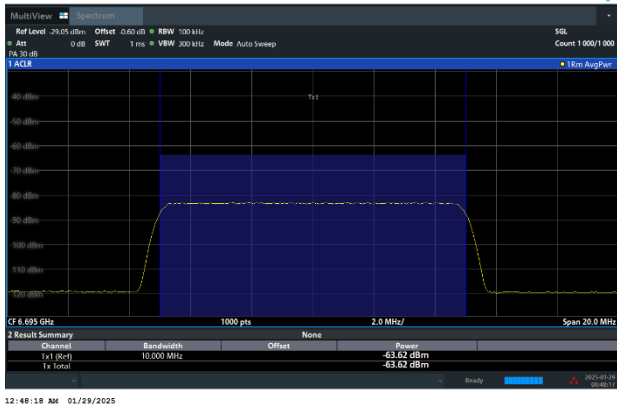
802.11be (EHT320) / CH95 (Upper edge)
Transmit when the interferer is 1dB lower.



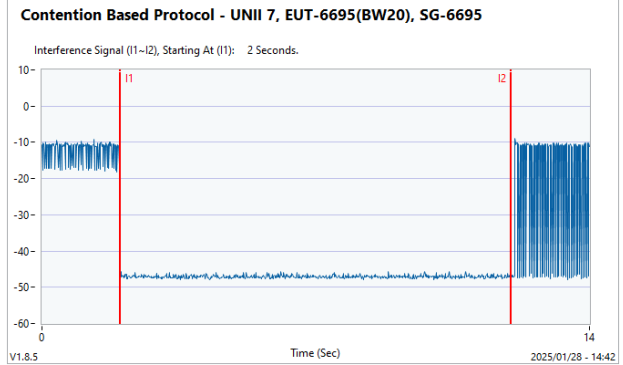


Contention Based Protocol Result Plots on U-NII 7 (AWGN Interference)

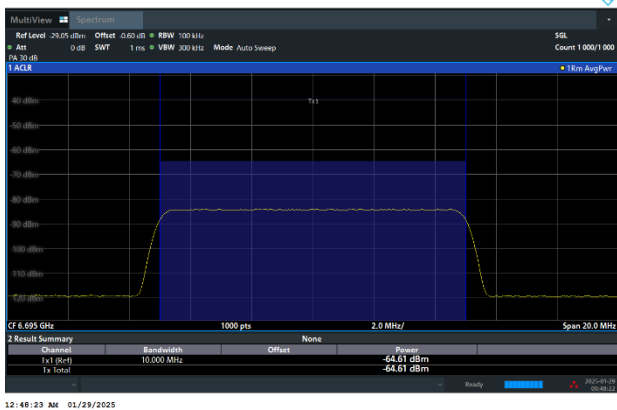
802.11be (EHT20) / 6695MHz
Threshold Level (TL) = -63.62dBm



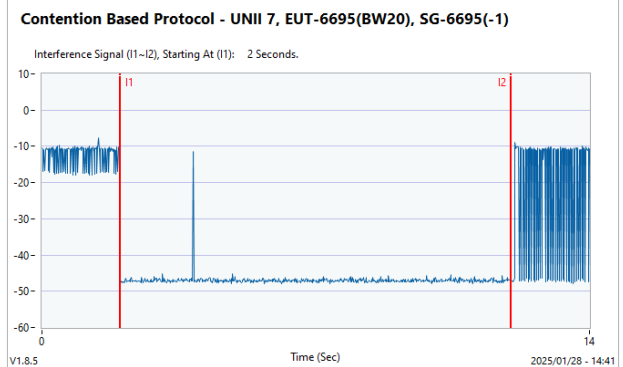
802.11be (EHT20) / CH149
Test result is pass due to no transmission occur.



802.11be (EHT20) / 6695MHz
Threshold Level (TL) = -64.61dBm



802.11be (EHT20) / CH149
Transmit when the interferer is 1dB lower.

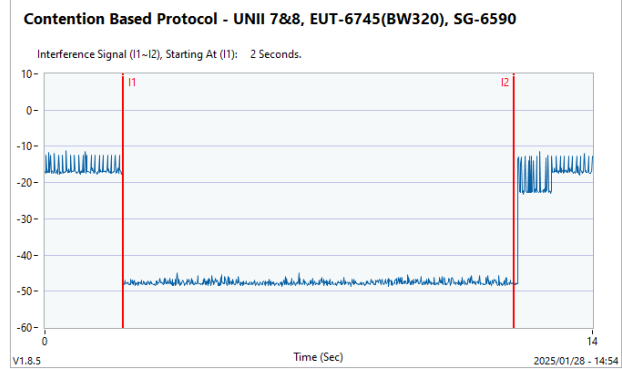




Contention Based Protocol Result Plots on U-NII 7 (AWGN Interference)

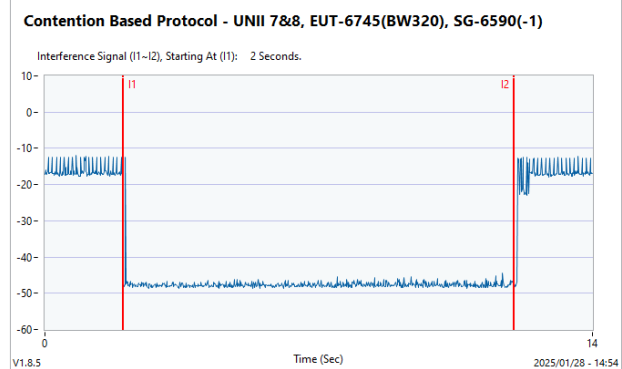
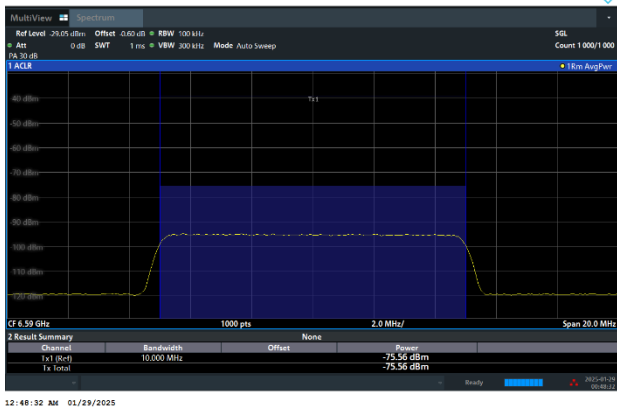
802.11be (EHT320) / 6590MHz (Lower edge)
Threshold Level (TL) = -74.57dBm

802.11be (EHT320) / CH159 (Lower edge)
Test result is pass due to no transmission occur.



802.11be (EHT320) / 6590MHz (Lower edge)
Threshold Level (TL) = -75.56dBm

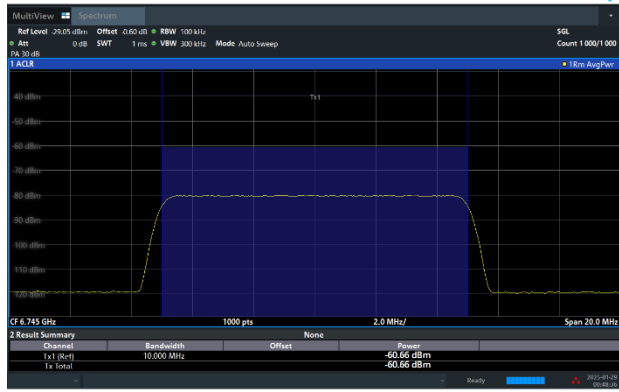
802.11be (EHT320) / CH159 (Lower edge)
Transmit when the interferer is 1dB lower.



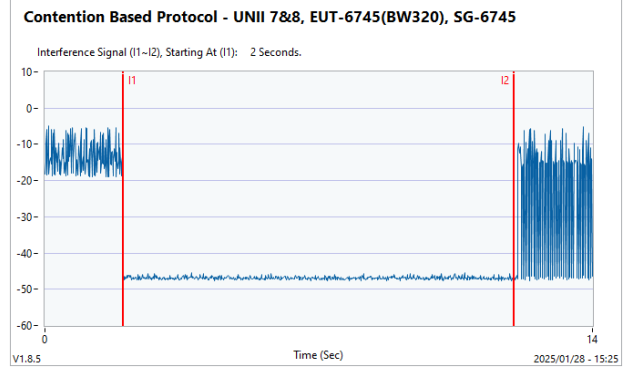


Contention Based Protocol Result Plots on U-NII 7 (AWGN Interference)

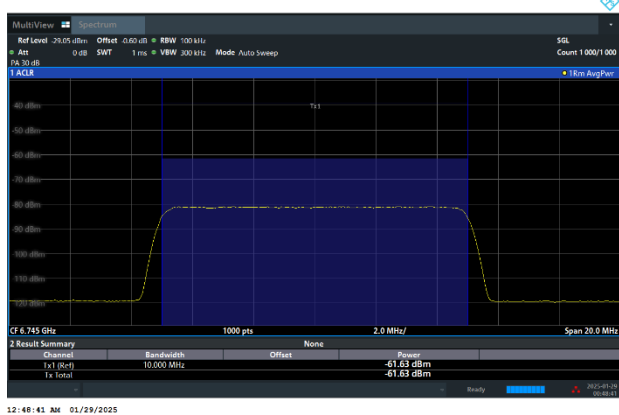
802.11be (EHT320) / 6745MHz (Middle)
Threshold Level (TL) = -60.66dBm



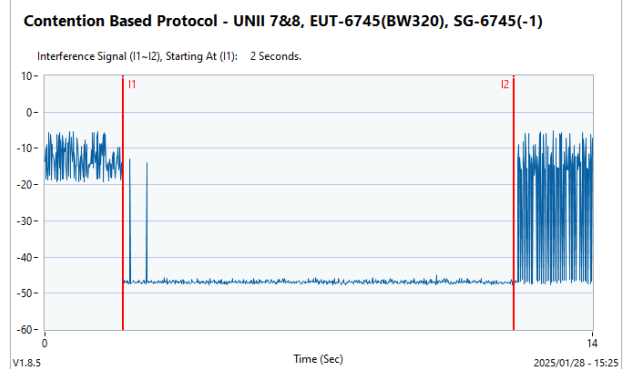
802.11be (EHT320) / CH159 (Middle)
Test result is pass due to no transmission occur.



802.11be (EHT320) / 6745MHz (Middle)
Threshold Level (TL) = -61.63dBm



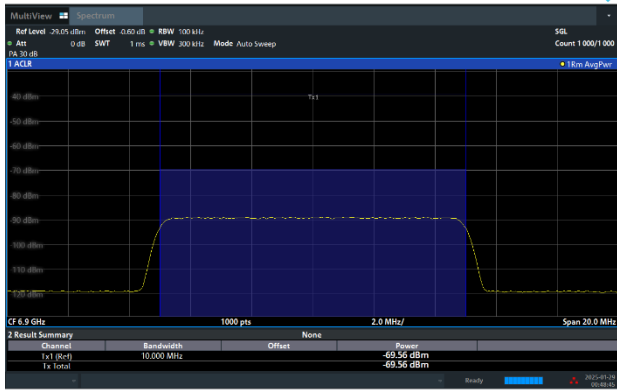
802.11be (EHT320) / CH159 (Middle)
Transmit when the interferer is 1dB lower.



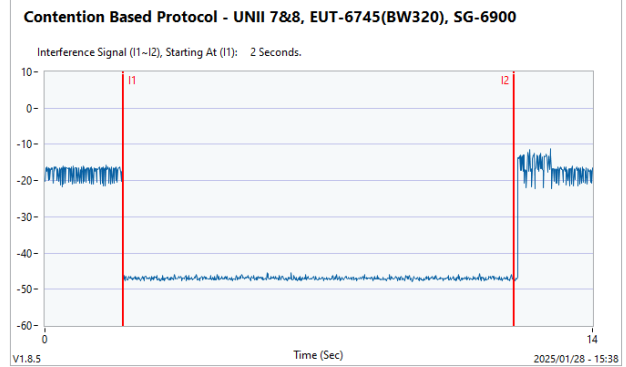


Contention Based Protocol Result Plots on U-NII 7 (AWGN Interference)

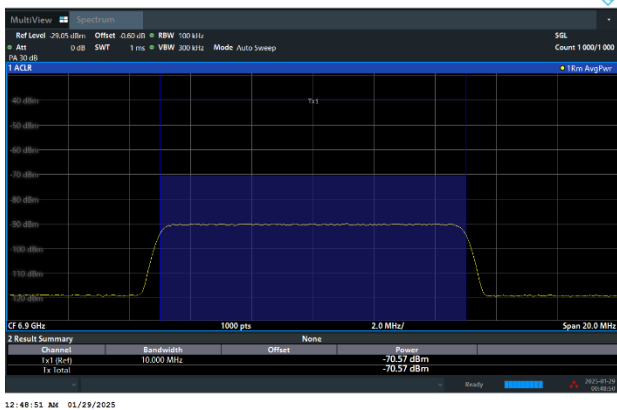
802.11be (EHT320) / 6900MHz (Upper edge)
Threshold Level (TL) = -69.56dBm



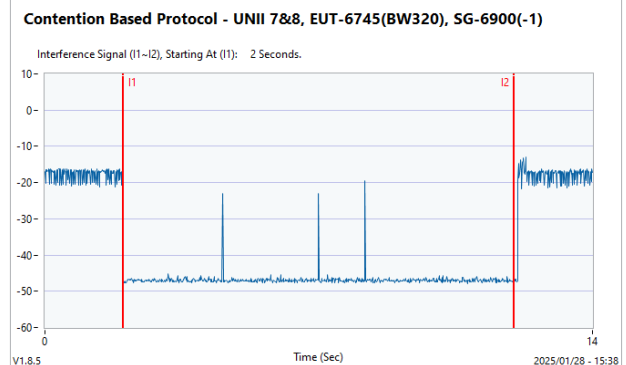
802.11be (EHT320) / CH159 (Upper edge)
Test result is pass due to no transmission occur.



802.11be (EHT320) / 6900MHz (Upper edge)
Threshold Level (TL) = -70.57dBm



802.11be (EHT320) / CH159 (Upper edge)
Transmit when the interferer is 1dB lower.





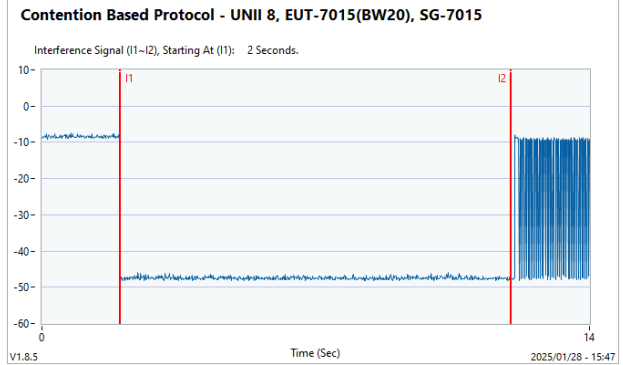
Contention Based Protocol Result Plots on U-NII 8 (AWGN Interference)

802.11be (EHT20) / 7015MHz
Threshold Level (TL) = -64.61dBm

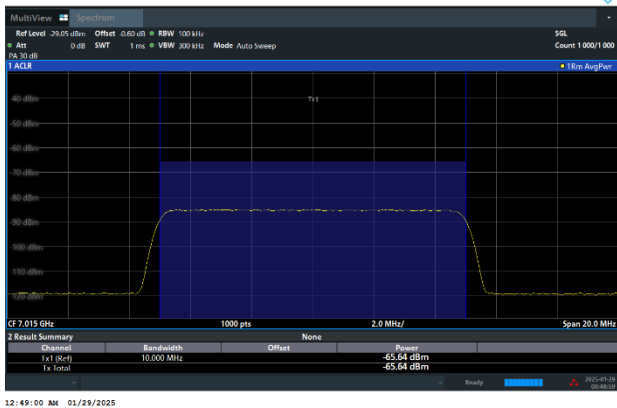


802.11be (EHT20) / CH213

Test result is pass due to no transmission occur.

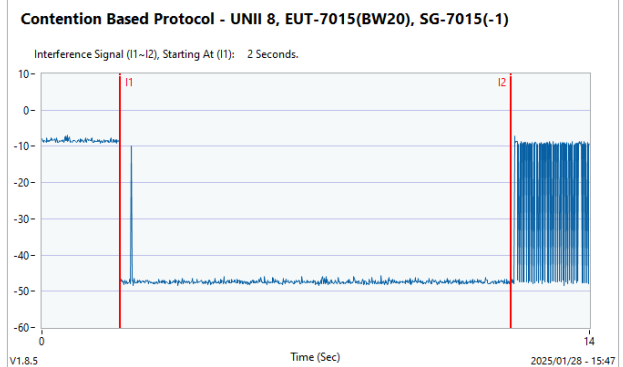


802.11be (EHT20) / 7015MHz
Threshold Level (TL) = -65.64dBm



802.11be (EHT20) / CH213

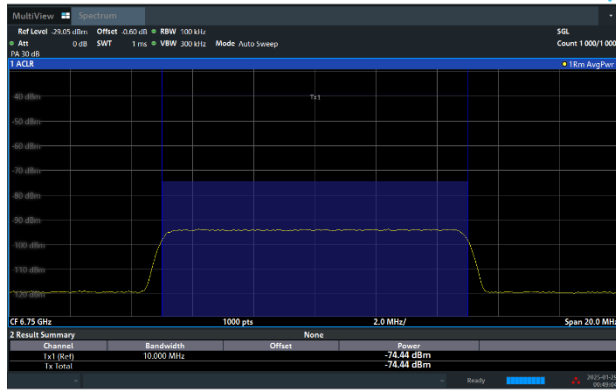
Transmit when the interferer is 1dB lower.



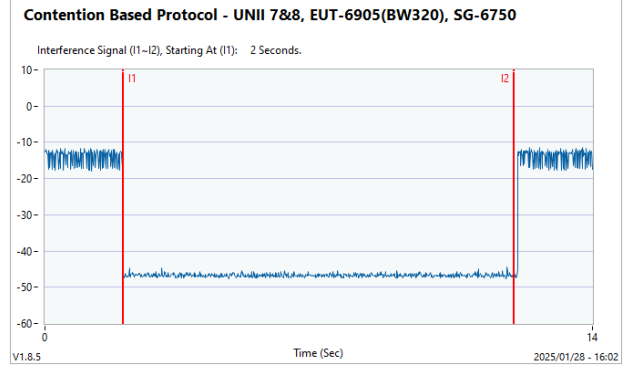


Contention Based Protocol Result Plots on U-NII 8 (AWGN Interference)

802.11be (EHT320) / 6750MHz (Lower edge)
Threshold Level (TL) = -74.44dBm



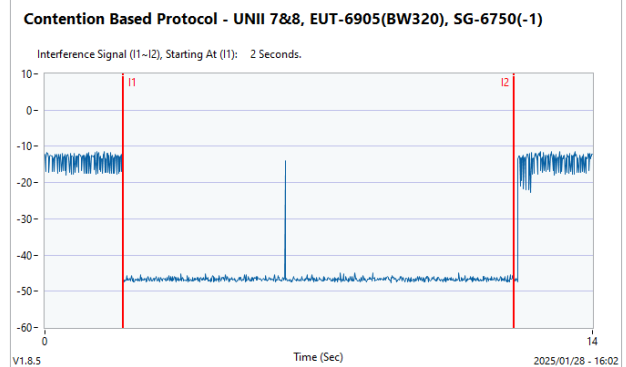
802.11be (EHT320) / CH191 (Lower edge)
Test result is pass due to no transmission occur.



802.11be (EHT320) / 6750MHz (Lower edge)
Threshold Level (TL) = -75.40dBm



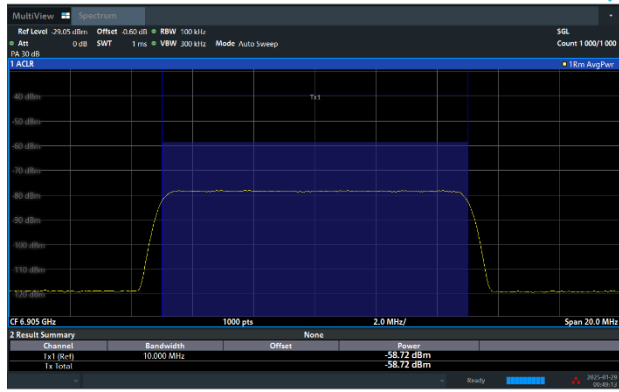
802.11be (EHT320) / CH191 (Lower edge)
Transmit when the interferer is 1dB lower.



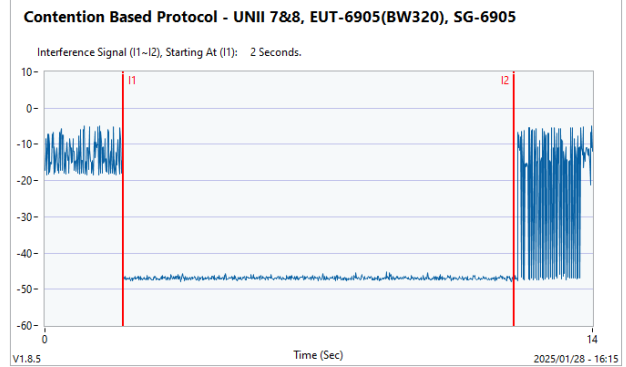


Contention Based Protocol Result Plots on U-NII 8 (AWGN Interference)

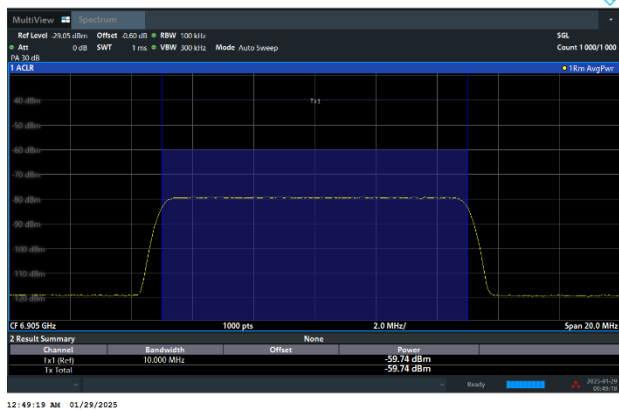
802.11be (EHT320) / 6905MHz (Middle)
Threshold Level (TL) = -58.72dBm



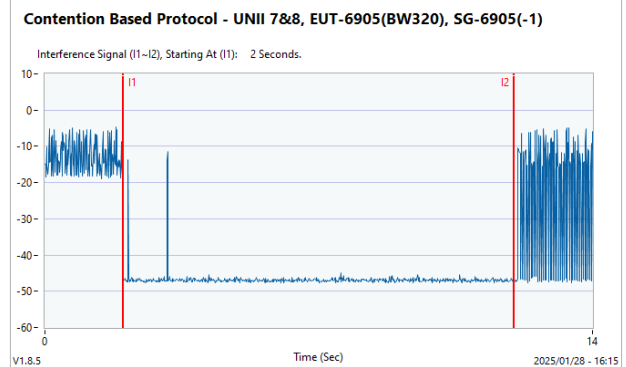
802.11be (EHT320) / CH191 (Middle)
Test result is pass due to no transmission occur.



802.11be (EHT320) / 6905MHz (Middle)
Threshold Level (TL) = -59.74dBm



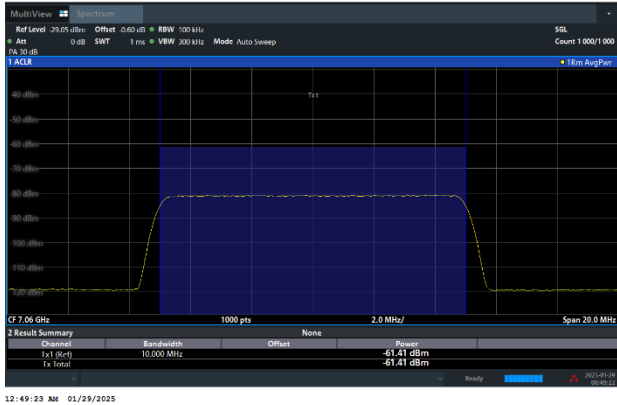
802.11be (EHT320) / CH191 (Middle)
Transmit when the interferer is 1dB lower.



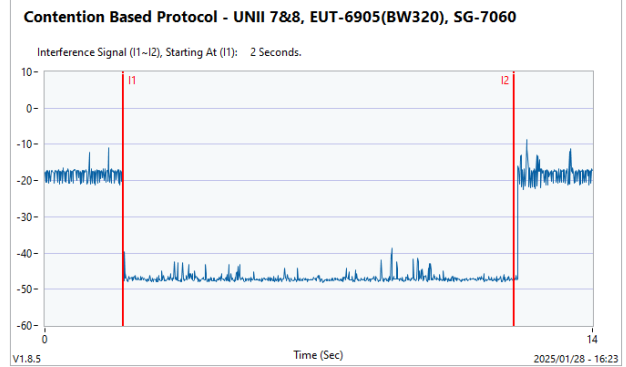


Contention Based Protocol Result Plots on U-NII 8 (AWGN Interference)

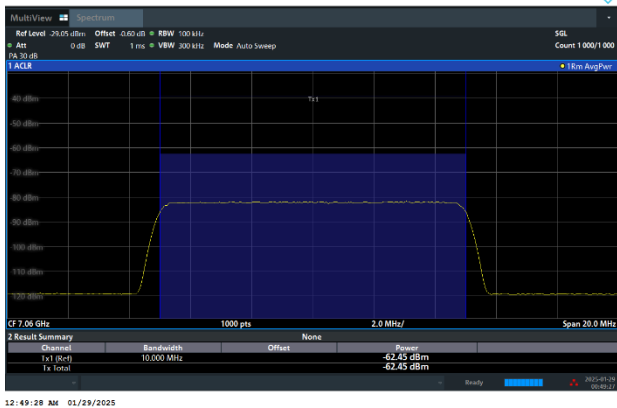
802.11be (EHT320) / 7060MHz (Upper edge)
Threshold Level (TL) = -61.41dBm



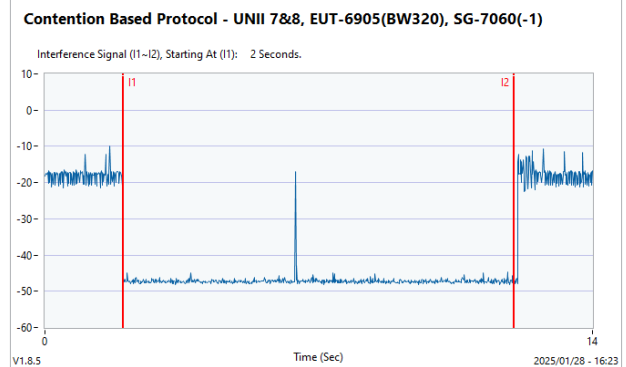
802.11be (EHT320) / CH191 (Upper edge)
Test result is pass due to no transmission occur.



802.11be (EHT320) / 7060MHz (Upper edge)
Threshold Level (TL) = -62.45dBm



802.11be (EHT320) / CH191 (Upper edge)
Transmit when the interferer is 1dB lower.

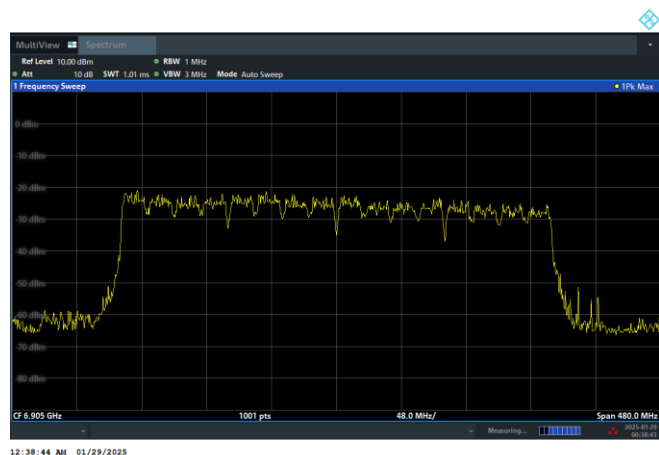


CBP verify with frequency domain plots

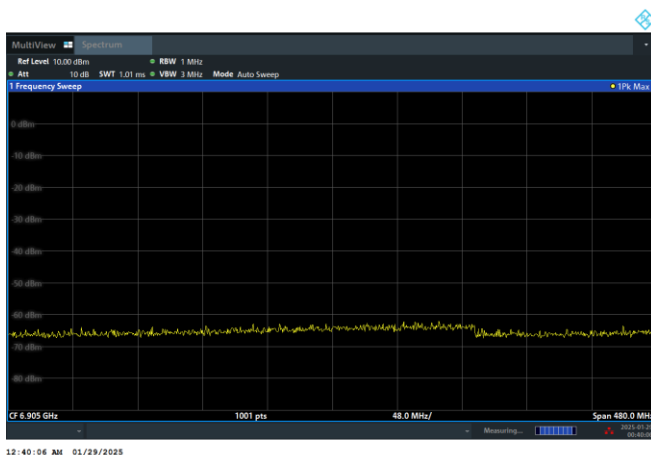
The device does support channel puncturing with regards to Contention Based Protocol.

1. The entire bandwidth 320MHz stops transmission after the incumbent signal appears.
2. The entire bandwidth 320MHz bandwidth is reduced to 80MHz or 160MHz.

Before incumbent injected on 320MHz channel



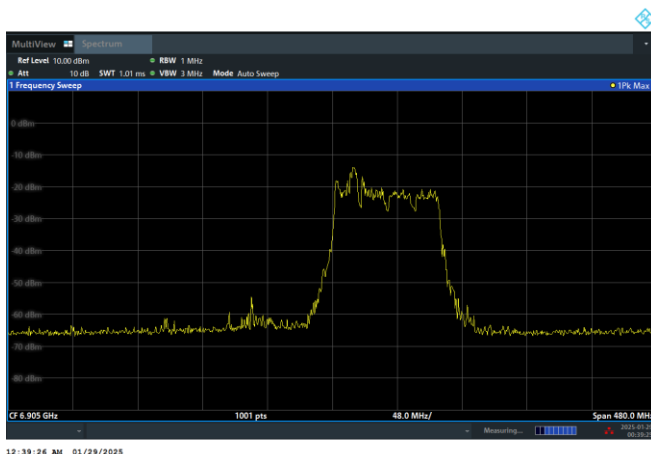
After 10MHz incumbent injected on center of channel, the entire 320MHz bandwidth stops transmission.



After 10MHz incumbent injected on bottom of channel, the EUT bandwidth is reduced from 320MHz to 160MHz.



After 10MHz incumbent injected on top of channel, the EUT bandwidth is reduced from 320MHz to 80MHz.





3.2 Antenna Requirements

3.2.1 Standard Applicable

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of § 15.211, 15.213, 15.217, 15.219, 15.221, or § 15.236. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with § 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

3.2.2 Antenna Anti-Replacement Construction

Antenna permanently attached.



4 List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
RF Vector Signal Generator	Keysight	N5182B	MY57300963	9KHz~6GHz	Mar. 26, 2024	Jan. 28, 2025~ Jan. 29, 2025	Mar. 25, 2025	CBP (DFS01-CA)
Frequency Extender for EXG or MXG	Keysight	N5182BX07	MY59360230	9kHz~7.2GHz	Mar. 26, 2024	Jan. 28, 2025~ Jan. 29, 2025	Mar. 25, 2025	CBP (DFS01-CA)
Spectrum Analyzer	R&S	FSV3013	101697	10Hz~13.6GHz	Sep. 26, 2024	Jan. 28, 2025~ Jan. 29, 2025	Sep. 25, 2025	CBP (DFS01-CA)
Hygrometer	Testo	608-H1	45142588	Temperature & Humidity	Aug. 14, 2024	Jan. 28, 2025~ Jan. 29, 2025	Aug. 13, 2025	CBP (DFS01-CA)
Manual Step Attenuator	Keysight	8496B	MY42151805	N/A	Feb. 22, 2024	Jan. 28, 2025~ Jan. 29, 2025	Feb. 21, 2025	CBP (DFS01-CA)
Manual Step Attenuator	Keysight	8496B	MY42158324	N/A	Feb. 22, 2024	Jan. 28, 2025~ Jan. 29, 2025	Feb. 21, 2025	CBP (DFS01-CA)
Power Divider	Woken	0120A040580 01M	DDTB6SW3G2	0.5Hz-8GHz	Calibration from System	Jan. 28, 2025~ Jan. 29, 2025	Calibration from System	CBP (DFS01-CA)
Power Divider	Woken	0120A040580 01M	DDTB6SW3A7	0.5GHz-8GHz	Calibration from System	Jan. 28, 2025~ Jan. 29, 2025	Calibration from System	CBP (DFS01-CA)
Power Divider	Woken	0120A020580 01M	DCMB51W3G9	0.5Hz-8GHz	Calibration from System	Jan. 28, 2025~ Jan. 29, 2025	Calibration from System	CBP (DFS01-CA)

————THE END————