

Testing Laboratory
3787

RADIO TEST REPORT

FCC ID : QXO-AP5020
Equipment : Access Point
Brand Name : Extreme Networks
Model Name : AP5020
Applicant : Extreme Networks, Inc.
2121 RDU Center Drive Morrisville North Carolina
United States 27560
Manufacturer : Extreme Networks, Inc.
2121 RDU Center Drive Morrisville North Carolina
United States 27560
Standard : 47 CFR FCC Part 15.407

The product was received on Jan. 23, 2024, and testing was started from Nov. 20, 2024 and completed on Dec. 10, 2024. We, Sporton International Inc. Hsinchu Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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

Approved by: Rex Liao

Sportun International Inc. Hsinchu Laboratory

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



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Appendix A. Test Results of Unwanted Emissions**Appendix B. Test Photos****Photographs of EUT v01**



History of this test report



Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.2	15.203	Antenna Requirement	PASS	-
3.1	15.407(b)	Unwanted Emissions	PASS	-

Conformity Assessment Condition:

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

Disclaimer:

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

Reviewed by: Sam Chen

Report Producer: Wendy Pan



1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std. 802.11	Ch. Frequency (MHz)	Channel Number
5925-7125	ax (HEW20), be (EHT20)	5955-7095	1-229 [58]
5925-7125	ax (HEW40), be (EHT40)	5965-7085	3-227 [29]
5925-7125	ax (HEW80), be (EHT80)	5985-7025	7-215 [14]
5925-7125	ax (HEW160), be (EHT160)	6025-6985	15-207 [7]
5925-7125	be (EHT320)	6105-6905	31-191 [6]

<Radio 1>

Band	Mode	BWch (MHz)	Nant
UNII 5-8	ax (HEW20)	20	2TX
UNII 5-8	ax (HEW20)-BF	20	2TX
UNII 5-8	be (EHT20)	20	2TX
UNII 5-8	be (EHT20)-BF	20	2TX
UNII 5-8	ax (HEW40)	40	2TX
UNII 5-8	ax (HEW40)-BF	40	2TX
UNII 5-8	be (EHT40)	40	2TX
UNII 5-8	be (EHT40)-BF	40	2TX
UNII 5-8	ax (HEW80)	80	2TX
UNII 5-8	ax (HEW80)-BF	80	2TX
UNII 5-8	be (EHT80)	80	2TX
UNII 5-8	be (EHT80)-BF	80	2TX
UNII 5-8	ax (HEW160)	160	2TX
UNII 5-8	ax (HEW160)-BF	160	2TX
UNII 5-8	be (EHT160)	160	2TX
UNII 5-8	be (EHT160)-BF	160	2TX

<For Radio 3>

Band	Mode	BWch (MHz)	Nant
UNII 5-8	ax (HEW20)	20	2TX/4TX
UNII 5-8	ax (HEW20)-BF	20	2TX/4TX
UNII 5-8	be (EHT20)	20	2TX/4TX
UNII 5-8	be (EHT20)-BF	20	2TX/4TX



Band	Mode	BWch (MHz)	Nant
UNII 5-8	ax (HEW40)	40	2TX/4TX
UNII 5-8	ax (HEW40)-BF	40	2TX/4TX
UNII 5-8	be (EHT40)	40	2TX/4TX
UNII 5-8	be (EHT40)-BF	40	2TX/4TX
UNII 5-8	ax (HEW80)	80	2TX/4TX
UNII 5-8	ax (HEW80)-BF	80	2TX/4TX
UNII 5-8	be (EHT80)	80	2TX/4TX
UNII 5-8	be (EHT80)-BF	80	2TX/4TX
UNII 5-8	ax (HEW160)	160	2TX/4TX
UNII 5-8	ax (HEW160)-BF	160	2TX/4TX
UNII 5-8	be (EHT160)	160	2TX/4TX
UNII 5-8	be (EHT160)-BF	160	2TX/4TX
UNII 5-8	be (EHT320)	320	2TX/4TX
UNII 5-8	be (EHT320)-BF	320	2TX/4TX

Note:

- HEW20, HEW40, HEW80 and HEW160 use a combination of OFDMA-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM modulation.
- EHT20, EHT40, EHT80 and EHT160, EHT320 use a combination of OFDMA-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM, 4096QAM modulation.
- BWch is the nominal channel bandwidth.



1.1.2 Antenna Information

Ant.	Operating Band	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	WLAN 2.4GHz / 5GHz	Sercomm	6172001TJH.20	PIFA	I-PEX	Note 1
2	WLAN 2.4GHz / 5GHz	Sercomm	6172001TJH.21	PIFA	I-PEX	
3	WLAN 2.4GHz / 5GHz	Sercomm	6172001TJH.22	PIFA	I-PEX	
4	WLAN 2.4GHz / 5GHz	Sercomm	6172001TJH.23	PIFA	I-PEX	
5	WLAN 6GHz	Sercomm	6172001TJH.24	PIFA	I-PEX	
6	WLAN 6GHz	Sercomm	6172001TJH.25	PIFA	I-PEX	
7	WLAN 6GHz	Sercomm	6172001TJH.26	PIFA	I-PEX	
8	WLAN 6GHz	Sercomm	6172001TJH.27	PIFA	I-PEX	
9	WLAN 5GHz / 6GHz	Sercomm	6172001TJH.28	PIFA	I-PEX	
10	WLAN 5GHz / 6GHz	Sercomm	6172001TJH.29	PIFA	I-PEX	
11	Bluetooth / Zigbee	Sercomm	6172001TJH.30	PIFA	I-PEX	4.22
12	Bluetooth / Zigbee	Sercomm	6172001TJH.31	PIFA	I-PEX	4.12
13	Bluetooth / Zigbee	Sercomm	6172001TJH.32	PIFA	I-PEX	4.19
14	GPS	Sercomm	6172001TJH.33	PIFA	I-PEX	1.176GHz: 4.50 1.575GHz: 4.20

Ant.	Port							
	2.4GHz (Radio 1)	2.4GHz (Radio 3)	5GHz (Radio 1)	5GHz (Radio 2)	6GHz (Radio 1)	6GHz (Radio 3)	Bluetooth / Zigbee	GPS
1	1	-	-	1	-	-	-	-
2	2	-	-	2	-	-	-	-
3	3	1	-	3	-	-	-	-
4	4	2	-	4	-	-	-	-
5	-	-	-	-	-	1	-	-
6	-	-	-	-	-	2	-	-
7	-	-	-	-	-	3	-	-
8	-	-	-	-	-	4	-	-
9	-	-	1	-	1	-	-	-
10	-	-	2	-	2	-	-	-
11	-	-	-	-	-	-	1	-
12	-	-	-	-	-	-	2	-
13	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	1



Note 1:

Ant.	Antenna Gain (dBi)									
	2.4GHz	5GHz UNII 1	5GHz UNII 2A	5GHz UNII 2C	5GHz UNII 3	6GHz UNII 5	6GHz UNII 6	6GHz UNII 7	6GHz UNII 8	
1	2.91	4.88	4.99	5.07	5.29	-	-	-	-	-
2	3.17	3.95	3.41	5.00	5.07	-	-	-	-	-
3	2.98	4.49	4.06	4.40	3.93	-	-	-	-	-
4	2.64	4.75	4.07	4.71	4.40	-	-	-	-	-
5	-	-	-	-	-	5.33	4.93	5.50	4.83	
6	-	-	-	-	-	5.41	4.54	5.26	5.39	
7	-	-	-	-	-	5.95	5.96	4.82	4.77	
8	-	-	-	-	-	5.79	5.88	5.89	5.91	
9	-	3.07	2.35	2.59	3.21	2.71	2.66	4.37	3.21	
10	-	3.01	2.66	3.88	4.23	4.41	3.82	3.37	4.42	
11	-	-	-	-	-	-	-	-	-	
12	-	-	-	-	-	-	-	-	-	
13	-	-	-	-	-	-	-	-	-	
14	-	-	-	-	-	-	-	-	-	

Ant.	Item	Directional gain (dBi)									
		2.4GHz	5GHz UNII 1	5GHz UNII 2A	5GHz UNII 2C	5GHz UNII 3	6GHz UNII 5	6GHz UNII 6	6GHz UNII 7	6GHz UNII 8	
1~4 (4TX)	4T1S	6.00	8.49	7.89	8.04	7.52	-	-	-	-	-
	4T2S	3.17	5.49	4.99	5.07	5.29	-	-	-	-	-
	4T4S	3.17	4.88	4.99	5.07	5.29	-	-	-	-	-
1~2 (2TX)	2T1S	3.9	7.09	6.19	6.33	5.81	-	-	-	-	-
	2T2S	3.17	4.88	4.99	5.07	5.29	-	-	-	-	-
3~4 (2TX)	2T1S	3.05	5.48	5.79	6.26	5.87	-	-	-	-	-
	2T2S	2.98	4.75	4.07	4.71	4.40	-	-	-	-	-
5~8 (4TX)	4T1S	-	-	-	-	-	9.23	8.77	9.49	9.13	
	4T2S	-	-	-	-	-	6.23	5.96	6.49	6.13	
	4T4S	-	-	-	-	-	5.95	5.96	5.89	5.91	
5~6 (2TX)	2T1S	-	-	-	-	-	7.38	6.63	8.00	7.03	
	2T2S	-	-	-	-	-	5.41	4.93	5.50	5.39	
9~10 (2TX)	2T1S	-	4.51	4.52	6.00	5.95	5.82	4.82	5.36	5.47	
	2T2S	-	3.07	2.66	3.88	4.23	4.41	3.82	4.37	4.42	

Note 2: The above information (excepting WLAN gain) was declared by manufacturer.



Note 3: The antenna gain (WLAN) and directional gain (WLAN) are measured which follow the procedure of KDB 662911 D03.

Note 4: The Bluetooth / Zigbee function of Antenna 13 is not enabled at this time.

Note 5: The DFS band is not enabled at this time.

Note 6:

<For Radio 1>**2.4GHz Function****IEEE 802.11b/g/n/VHT/ax/be****For 2TX/2RX:**

Port 1 and Port 2 can be used as transmitting/receiving antenna.

Port 1 and Port 2 could transmit/receive simultaneously.

For 2TX/4RX:

Port 1, Port 2, Port 3 and Port 4 can be used as receiving antenna, but only Port 1 and Port 2 can be used as transmitting antenna.

Port 1, Port 2, Port 3 and Port 4 could receive simultaneously, but only Port 1 and Port 2 could transmit simultaneously.

For 4TX/4RX:

Port 1, Port 2, Port 3 and Port 4 can be used as transmitting/receiving antenna.

Port 1, Port 2, Port 3 and Port 4 could transmit/receive simultaneously.

5GHz Function**IEEE 802.11a/n/ac/ax/be****For 2TX/2RX:**

Port 1 and Port 2 can be used as transmitting/receiving antenna.

Port 1 and Port 2 could transmit/receive simultaneously.

6GHz Function**IEEE 802.11ax/be****For 2TX/2RX:**

Port 1 and Port 2 can be used as transmitting/receiving antenna.

Port 1 and Port 2 could transmit/receive simultaneously.

<For Radio 2>**5GHz Function****IEEE 802.11a/n/ac/ax/be****For 2TX/4RX:**

Port 1, Port 2, Port 3 and Port 4 can be used as receiving antenna, but only Port 1 and Port 2 can be used as transmitting antenna.

Port 1, Port 2, Port 3 and Port 4 could receive simultaneously, but only Port 1 and Port 2 could transmit simultaneously.

For 4TX/4RX:

Port 1, Port 2, Port 3 and Port 4 can be used as transmitting/receiving antenna.

Port 1, Port 2, Port 3 and Port 4 could transmit/receive simultaneously.

**<For Radio 3>****2.4GHz Function****IEEE 802.11b/g/n/VHT/ax/be****For 1TX/2RX:**

Port 1 and Port 2 can be used as receiving antenna, but only Port 1 can be used as transmitting antenna.

Port 1 and Port 2 could receive simultaneously.

For 2TX/2RX:

Port 1 and Port 2 can be used as transmitting/receiving antenna.

Port 1 and Port 2 could transmit/receive simultaneously.

6GHz Function**IEEE 802.11ax/be****For 2TX/4RX:**

Port 1, Port 2, Port 3 and Port 4 can be used as receiving antenna, but only Port 1 and Port 2 can be used as transmitting antenna.

Port 1, Port 2, Port 3 and Port 4 could receive simultaneously, but only Port 1 and Port 2 could transmit simultaneously.

For 4TX/4RX:

Port 1, Port 2, Port 3 and Port 4 can be used as transmitting/receiving antenna.

Port 1, Port 2, Port 3 and Port 4 could transmit/receive simultaneously.

<For Radio 4>**Bluetooth/Zigbee Functions****For 1TX/1RX:**

The EUT supports the antenna with TX and RX diversity functions.

Both Port 1 and Port 2 support transmit and receive functions, but only one of them will be used at one time.

The Port 1 generated the worst case, so it was selected to test and record in the report.



1.1.3 EUT Operational Condition

EUT Power Type	From Power Adapter / PoE			
Beamforming Function	<input checked="" type="checkbox"/>	With beamforming	<input type="checkbox"/>	Without beamforming
The product has beamforming function for 11n/VHT/11ax/11be in 2.4GHz, 11n/11ac/11ax/11be in 5GHz and 11ax/11be in 6GHz.				
Device Type	<input checked="" type="checkbox"/>	Indoor Access Point	<input type="checkbox"/>	Subordinate
	<input type="checkbox"/>	Indoor Client	<input type="checkbox"/>	Standard Power Access Point
	<input type="checkbox"/>	Dual Client	<input type="checkbox"/>	Standard Client
	<input type="checkbox"/>	Fixed Client	<input type="checkbox"/>	Very Low Power
Condition of EUT	<input checked="" type="checkbox"/>	Indoor	<input type="checkbox"/>	Outdoor
Channel Puncturing Function	<input type="checkbox"/>	Supported Static Puncturing		
	<input type="checkbox"/>	Supported Dynamic Puncturing		
	<input checked="" type="checkbox"/>	Unsupported		
Support RU	<input checked="" type="checkbox"/>	Full RU	<input type="checkbox"/>	Partial RU
Test Software Version	AccessMTool 3.3.0.4 DOS [ver 6.1.7601]			

Note: The above information was declared by manufacturer.



1.1.4 Table for EUT Information

EUT	GPS Integrated Module
1	With
2	Without

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

Note 2: The above information was declared by manufacturer.

1.1.5 Table for Radio Function

Radio	Support Band		
	2.4GHz	5GHz	6GHz
1	BW: 20MHz	UNII 1~2A, UNII2C~3 (scan) BW: 20/40/80MHz	UNII 5 or UNII 5~8 (scan) BW: 20/40/80/160MHz
2	-	UNII 2C~3 or UNII 1~3 BW: 20/40/80/160MHz	-
3	BW: 20MHz	-	UNII 7~8 or UNII 5~8 BW: 20/40/80/160/320MHz
4	Bluetooth / Zigbee		
5	GPS		

Note: The above information was declared by manufacturer.



1.1.6 Table for EUT Operation Mode

Mode	Radio 1	Radio 2	Radio 3	Radio 4	Radio 5	Note
1	2.4GHz 4x4	5GHz (UNII 1~3) 4x4	6GHz (UNII 5~8) 4x4	Bluetooth or Zigbee	GPS	Tri Radio
2	2.4GHz 2x2 (TX) / 6GHz (2RX)	5GHz (UNII 1~3) 4x4	6GHz (UNII 5~8) 4x4	Bluetooth or Zigbee	GPS	Full Band w/Scan
3	5GHz (UNII 1~3) 2x2 (TX) / 6GHz (2RX)	5GHz (UNII 1~3) 4x4	6GHz (UNII 5~8) 4x4	Bluetooth or Zigbee	GPS	Full Band w/Scan
4	5GHz (UNII 1~2A) 2x2	5GHz (UNII 2C~3) 4x4	6GHz (UNII 5~8) 4x4	Bluetooth or Zigbee	GPS	Dual 5GHz w/6GHz
5	6GHz (UNII 5~8) 2x2 (TX) / 2.4GHz (2RX)	5GHz (UNII 1~3) 4x4	2.4GHz 2x2	Bluetooth or Zigbee	GPS	DBDC w/Scan
6	5GHz (UNII 1~3) 2x2 (TX) / 2.4GHz (2RX)	5GHz (UNII 1~3) 4x4	2.4GHz 2x2	Bluetooth or Zigbee	GPS	DBDC w/Scan
7	5GHz (UNII 1~2A) 2x2	5GHz (UNII 2C~3) 4x4	2.4GHz 2x2	Bluetooth or Zigbee	GPS	Dual 5GHz /2.4GHz
8	6GHz (UNII 5) 2x2	5GHz (UNII 1~3) 4x4	6GHz (UNII 7~8) 4x4	Bluetooth or Zigbee	GPS	Dual 6GHz w/5GHz

Note1: The Radio 1 and Radio 2 can't operate at the same frequency simultaneously.

Note2: The above information was declared by manufacturer.

1.1.7 Table for Permissive Change

This product is an extension of original one reported under Sporton project number: FR410321AC

Below is the table for the change of the product with respect to the original one.

Modifications	Performance Checking
1. Add TX function for UNII-2C and UNII-3 bands to Radio 1 through Firmware by factory.	After evaluating, it doesn't affect the test results.
2. Change the source of the BAW filter for 6GHz in Radio 1. And cause the change of the BAW filter, the layout is different from the original one.	Unwanted Emissions



1.2 Applicable Standards

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

- ♦ 47 CFR FCC Part 15.407
- ♦ ANSI C63.10-2013
- ♦ FCC KDB 789033 D02 v02r01

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

- ♦ FCC KDB 987594 D02 v02r01
- ♦ FCC KDB 412172 D01 v01r01

1.3 Testing Location Information

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

Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
Radiated	03CH01-CB	George Fan	21.2-22.3 / 56-59	Nov. 20, 2024~ Dec. 10, 2024
	03CH04-CB		22.7-23.8 / 56-59	

1.4 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)

Test Items	Uncertainty	Remark
Radiated Emission (1GHz ~ 18GHz)	4.2 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	4.0 dB	Confidence levels of 95%



2 Test Configuration of EUT

2.1 Test Channel Mode

<Radio 1>

Mode
802.11be EHT20_Nss2,(MCS0)_2TX
5955MHz
802.11be EHT40_Nss2,(MCS0)_2TX
5965MHz
802.11be EHT80_Nss2,(MCS0)_2TX
5985MHz
802.11be EHT160_Nss2,(MCS0)_2TX
6025MHz
802.11be EHT20-BF_Nss1,(MCS0)_2TX
5955MHz
802.11be EHT40-BF_Nss1,(MCS0)_2TX
5965MHz
802.11be EHT80-BF_Nss1,(MCS0)_2TX
5985MHz
802.11be EHT160-BF_Nss1,(MCS0)_2TX
6025MHz

Note:

- Evaluated EHT20/EHT40/EHT80/EHT160 mode only due to the similar modulation.
The power setting of VHT20/VHT40/VHT80/VHT160 mode are the same or lower than
EHT20/EHT40/EHT80/EHT160.



2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	Unwanted Emissions
Test Condition	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.
Operating Mode > 1GHz	CTX The EUT was performed at X axis, Y axis and Z axis position, and the worst case was found at Z axis. So, the measurement will follow this same test configuration
1	EUT 1 in Z axis + Radio 1_UNII 5 (2T1S) (Beamforming) and (2T2S)

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis - Co-location RF Exposure Evaluation
Operating Mode	
1	Radio 1 (WLAN 2.4GHz) + Radio 2 (WLAN 5GHz/UNII 1&3) + Radio 3 (WLAN 6GHz/UNII 5~8) + Radio 4 (Zigbee)
2	Radio 1 (WLAN 2.4GHz) + Radio 2 (WLAN 5GHz/UNII 1&3) + Radio 3 (WLAN 6GHz/UNII 5~8) + Radio 4 (Bluetooth)
3	Radio 1 (WLAN 5GHz/UNII 1) + Radio 2 (WLAN 5GHz/UNII 3) + Radio 3 (WLAN 6GHz/UNII 5~8) + Radio 4 (Zigbee)
4	Radio 1 (WLAN 5GHz/UNII 1) + Radio 2 (WLAN 5GHz/UNII 3) + Radio 3 (WLAN 6GHz/UNII 5~8) + Radio 4 (Bluetooth)
5	Radio 1 (WLAN 6GHz/UNII 5~8) + Radio 2 (WLAN 5GHz/UNII 1&3) + Radio 3 (WLAN 2.4GHz) + Radio 4 (Zigbee)
6	Radio 1 (WLAN 6GHz/UNII 5~8) + Radio 2 (WLAN 5GHz/UNII 1&3) + Radio 3 (WLAN 2.4GHz) + Radio 4 (Bluetooth)
7	Radio 1 (WLAN 5GHz/UNII 1) + Radio 2 (WLAN 5GHz/UNII 3) + Radio 3 (WLAN 2.4GHz) + Radio 4 (Zigbee)
8	Radio 1 (WLAN 5GHz/UNII 1) + Radio 2 (WLAN 5GHz/UNII 3) + Radio 3 (WLAN 2.4GHz) + Radio 4 (Bluetooth)
9	Radio 1 (WLAN 6GHz/UNII 5) + Radio 2 (WLAN 5GHz/UNII 1&3) + Radio 3 (WLAN 6GHz/UNII 7~8) + Radio 4 (Zigbee)
10	Radio 1 (WLAN 6GHz/UNII 5) + Radio 2 (WLAN 5GHz/UNII 1&3) + Radio 3 (WLAN 6GHz/UNII 7~8) + Radio 4 (Bluetooth)
11	Radio 1 (WLAN 5GHz/UNII 1~3) + Radio 2 (WLAN 5GHz/UNII 1~3) + Radio 3 (WLAN 6GHz/UNII 5~8) + Radio 4 (Zigbee)
12	Radio 1 (WLAN 5GHz/UNII 1~3) + Radio 2 (WLAN 5GHz/UNII 1~3) + Radio 3 (WLAN 6GHz/UNII 5~8) + Radio 4 (Bluetooth)



13	Radio 1 (WLAN 5GHz/UNII 1~3) + Radio 2 (WLAN 5GHz/UNII 1~3) + Radio 3 (WLAN 2.4GHz) + Radio 4 (Zigbee)
14	Radio 1 (WLAN 5GHz/UNII 1~3) + Radio 2 (WLAN 5GHz/UNII 1~3) + Radio 3 (WLAN 2.4GHz) + Radio 4 (Bluetooth)

Refer to Sporton Test Report No.: FA410321-08 for Co-location RF Exposure Evaluation.

Note: The adapter is for measurement only, would not be marketed.
adapter information as below:

Power	Brand Name	Model Name
Adapter	Powertron	PA1045-120HIB300

2.3 EUT Operation during Test

non-beamforming mode:

The EUT was programmed to be in continuously transmitting mode.

beamforming mode:

During the test, the following programs under WIN 7 were executed.

The program was executed as follows:

1. During the test, the EUT operation to normal function.
2. Executed command fixed test channel under DOS.
3. Executed "Lantest.exe" to link with the remote workstation to transmit and receive packet by Client.

2.4 Accessories

Accessories
Mount bracket *1

2.5 Support Equipment

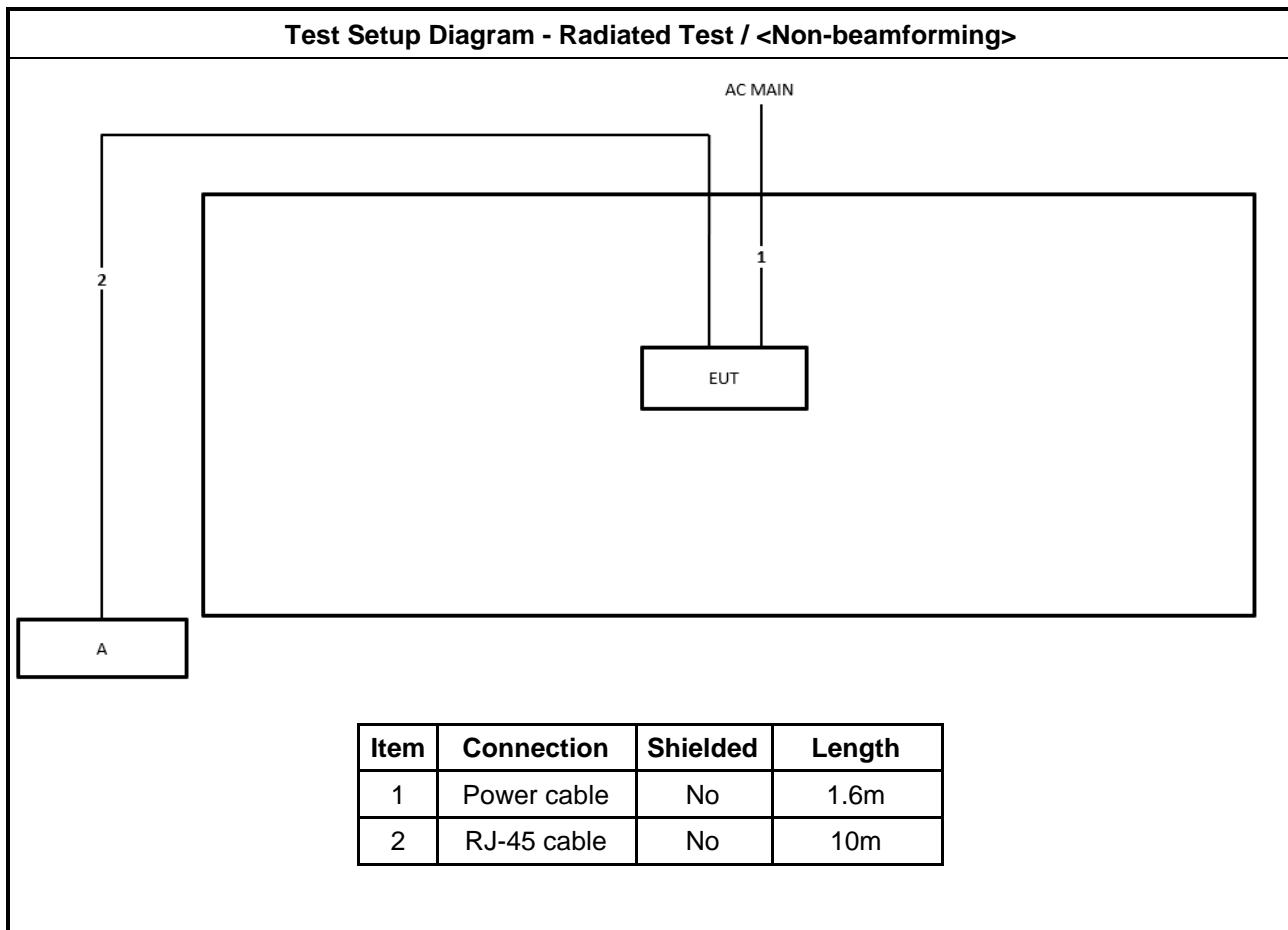
For Radiated <Non-Beamforming>:

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook	DELL	E4300	N/A
B	AC Adapter	Powertron	PA1045-120HIB300	N/A

For Radiated <Beamforming>:

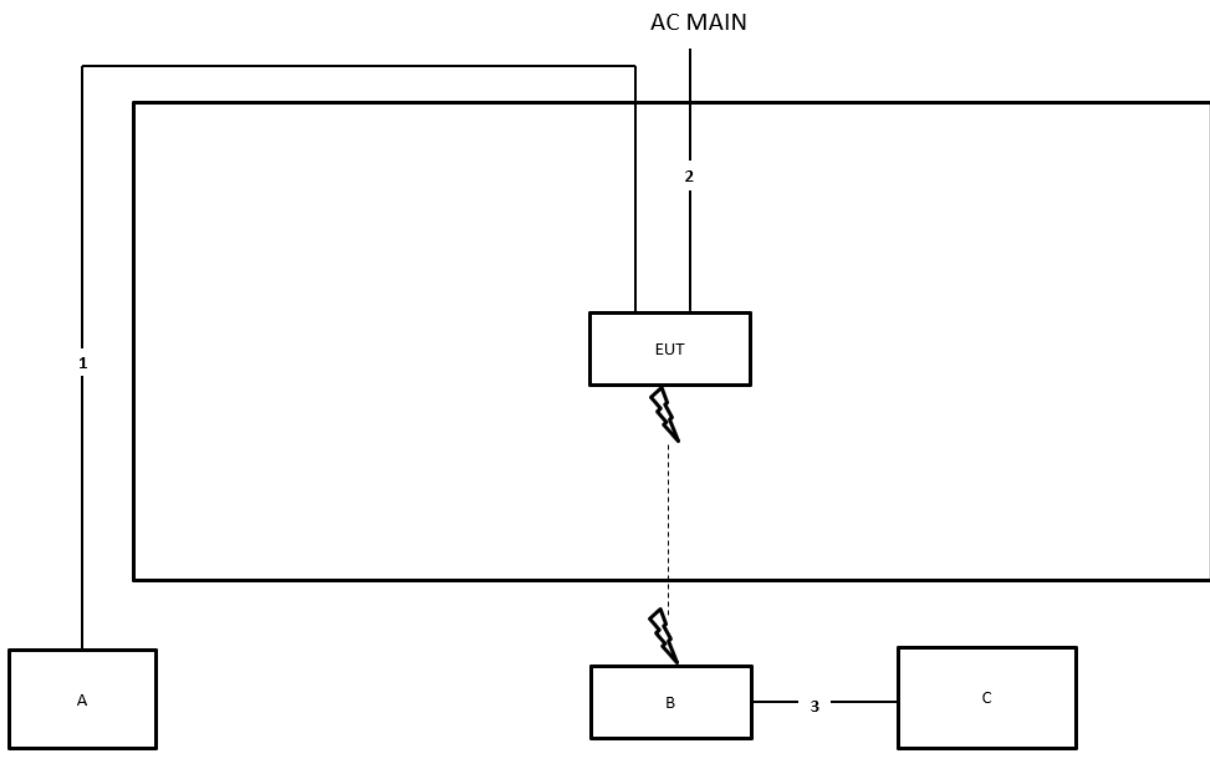
Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook	DELL	E4300	N/A
B	Client	Extreme Networks	AP 5020	N/A
C	Notebook	DELL	E4300	N/A
D	AC Adapter	Powertron	PA1045-120HIB300	N/A

2.6 Test Setup Diagram





Test Setup Diagram - Radiated Test / <Beamforming>



Item	Connection	Shielded	Length
1	RJ-45 cable	No	10m
2	Power cable	No	1.6m
3	RJ-45 cable	No	10m



3 Transmitter Test Result

3.1 Unwanted Emissions

3.1.1 Transmitter Unwanted Emissions Limit

Unwanted emissions below 1 GHz and restricted band emissions above 1GHz limit			
Frequency Range (MHz)	Field Strength (uV/m)	Field Strength (dBuV/m)	Measure Distance (m)
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300
0.490~1.705	24000/F(kHz)	33.8 - 23	30
1.705~30.0	30	29	30
30~88	100	40	3
88~216	150	43.5	3
216~960	200	46	3
Above 960	500	54	3

Note 1: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

Note 3: Using the distance of 1m during the test for above 18 GHz, and the test value to correct for the distance factor at 3m($20 \times \log(\text{standard distance} / \text{test distance}) = 20\log(3/1) = 9.54\text{dB}$).

EX. Above 18GHz emission limit calculation (3m to 1m) = 54dBuV/m at 3m + 9.54dB = 63.54 dBuV/m at 1m.



Un-restricted band emissions above 1GHz Limit	
Frequency	Limit
Any outside the 5.945 – 7.125 GHz emission	<p>e.i.r.p. -27 dBm [68.2 dBuV/m@3m]</p> <p>Note 1: Using the distance of 1m during the test for above 18 GHz, and the test value to correct for the distance factor at 3m(20 x log (standard distance/test distance) = 20log(3/1) = 9.54dB. EX. Above 18GHz emission limit calculation (3m to 1m) = 68.2dBuV/m at 3m + 9.54dB = 77.74 dBuV/m at 1m.</p> <p>Note 2:-27 dBm EIRP OOB is measured RMS which is a deviation from the current 15E rules for 5 GHz bands. In addition, 15.35(b) applies where the peak emissions must be limited to no more than 20 dB above the average limit.</p>



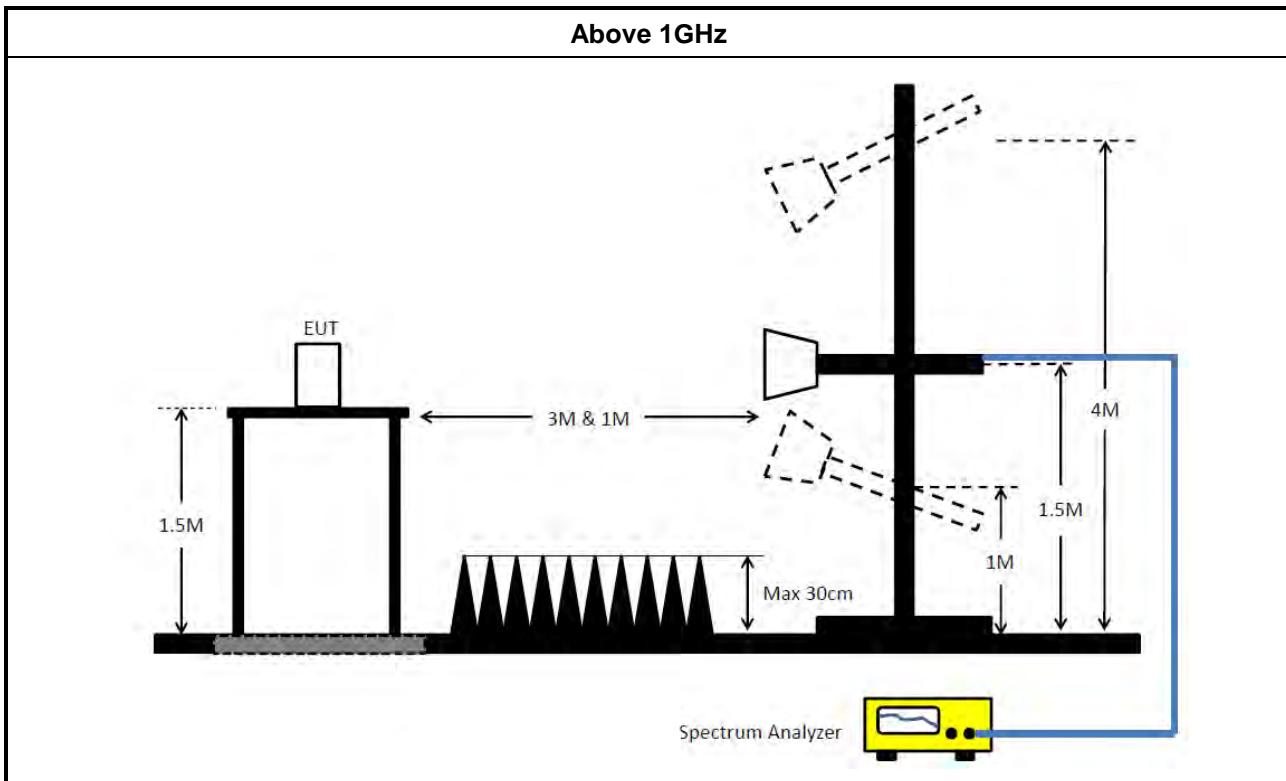
3.1.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.1.3 Test Procedures

Test Method	
<ul style="list-style-type: none">According to FCC KDB 987594 D02 II.G. the unwanted emission measurement procedure shall refer to KDB 789300(except emission MASK). Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 m for frequencies above 30 MHz, unless it can be further demonstrated that measurements at a distance of 30 m or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).	
<ul style="list-style-type: none">The average emission levels shall be measured in [duty cycle \geq 98 or duty factor].	
<ul style="list-style-type: none">For the transmitter unwanted emissions shall be measured using following options below:	
<ul style="list-style-type: none">Refer as FCC KDB 789033 D02, clause G)2) for unwanted emissions into non-restricted bands.	
<ul style="list-style-type: none">Refer as FCC KDB 789033 D02, clause G)1) for unwanted emissions into restricted bands.	
<ul style="list-style-type: none"><input checked="" type="checkbox"/> Refer as FCC KDB 789033 D02, G)6) Method AD (Trace Averaging). (For unrestricted band measurement)	
<ul style="list-style-type: none"><input type="checkbox"/> Refer as FCC KDB 789033 D02, G)6) Method VB (Reduced VBW).	
<ul style="list-style-type: none"><input checked="" type="checkbox"/> Refer as ANSI C63.10, clause 11.12.2.5.3 (Reduced VBW). $VBW \geq 1/T$, where T is pulse time. (For restricted band average measurement)	
<ul style="list-style-type: none"><input type="checkbox"/> Refer as ANSI C63.10, clause 7.5 average value of pulsed emissions.	
<ul style="list-style-type: none"><input checked="" type="checkbox"/> Refer as FCC KDB 789033 D02, clause G)5) measurement procedure peak limit.	
<ul style="list-style-type: none"><input type="checkbox"/> Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak limit.	
<ul style="list-style-type: none">Refer as FCC KDB 789033 D02, clause G)3)d)ii) for Band edge Integration measurements.	
<ul style="list-style-type: none">For emission MASK shall be measured using following options below:	
	<input checked="" type="checkbox"/> Refer as FCC KDB 987594 D02, J) In-Band Emissions
<ul style="list-style-type: none">For radiated measurement.	
<ul style="list-style-type: none"><input type="checkbox"/> Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m.	
<ul style="list-style-type: none"><input type="checkbox"/> Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m.	
<ul style="list-style-type: none"><input type="checkbox"/> Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz.	
<ul style="list-style-type: none">The any unwanted emissions level shall not exceed the fundamental emission level.	
<ul style="list-style-type: none">All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.	

3.1.4 Test Setup



3.1.5 Measurement Results Calculation

The measured Level is calculated using:

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

3.1.6 Test Result of Transmitter Unwanted Emissions

Refer as Appendix A



4 Test Equipment and Calibration Data

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH01-CB	1GHz ~18GHz 3m	May 04, 2024	May 03, 2025	Radiation (03CH01-CB)
Horn Antenna	ETS-Lindgren	3115	00143147	750MHz~18GHz	Oct. 18, 2024	Oct. 17, 2025	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Sep. 23, 2024	Sep. 22, 2025	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02121	1GHz ~ 26.5GHz	May 17, 2024	May 16, 2025	Radiation (03CH01-CB)
Pre-Amplifier	SGH	SGH1840	20230109-3	18~40GHz	Jan. 12, 2024	Jan. 11, 2025	Radiation (03CH01-CB)
Signal Analyzer	R&S	FSV40	101904	9kHz ~ 40GHz	Apr. 26, 2024	Apr. 25, 2025	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-16	1 GHz ~ 18 GHz	Oct. 01, 2024	Sep. 30, 2025	Radiation (03CH01-CB)
RF Cable-high	Woken	RG402	High Cable-16+17	1 GHz ~ 18 GHz	Oct. 01, 2024	Sep. 30, 2025	Radiation (03CH01-CB)
High Cable	Woken	WCA0929M	40G#5+6	1GHz ~ 40 GHz	Oct. 01, 2024	Sep. 30, 2025	Radiation (03CH01-CB)
Band Rejector	MTJ	6G Band Rejector	BRJ-01	1GHz ~ 7.4GHz	Oct. 02, 2024	Oct. 01, 2025	Radiation (03CH01-CB)
Band Rejector	MTJ	6G Band Rejector	BRJ-02	1GHz ~ 8GHz	Oct. 02, 2024	Oct. 01, 2025	Radiation (03CH01-CB)
Test Software	SPORTON	SENSE-1540 7_NII	V5.11. 23	5.15GHz-7.115GHz	N.C.R.	N.C.R.	Radiation (03CH01-CB)
3m Semi Anechoic Chamber VSWR	TDK	SAC-3M	03CH04-CB	1GHz ~18GHz 3m	Feb. 22, 2024	Feb. 21, 2025	Radiation (03CH04-CB)
Horn Antenna	SCHWARZBECK	BBHA 9120 D 1370	BBHA 9120 D 1370	1GHz~18GHz	Jul. 11, 2024	Jul. 10, 2025	Radiation (03CH04-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Sep. 23, 2024	Sep. 22, 2025	Radiation (03CH04-CB)
Pre-Amplifier	SGH	SGH5265	20211115-1	1~ 26.5GHz	Jan. 17, 2024	Jan. 16, 2025	Radiation (03CH04-CB)
Pre-Amplifier	SGH	SGH1840	20230109-3	18~40GHz	Jan. 12, 2024	Jan. 11, 2025	Radiation (03CH04-CB)
Spectrum Analyzer	R&S	FSP40	100142	9kHz~40GHz	Mar. 19, 2024	Mar. 18, 2025	Radiation (03CH04-CB)
RF Cable-high	Woken	RG402	High Cable-21	1GHz - 18GHz	Oct. 01, 2024	Sep. 30, 2025	Radiation (03CH04-CB)
RF Cable-high	Woken	RG402	High Cable-21+67	1GHz - 18GHz	Oct. 01, 2024	Sep. 30, 2025	Radiation (03CH04-CB)
High Cable	Woken	WCA0929M	40G#5+6	1GHz ~ 40 GHz	Oct. 01, 2024	Sep. 30, 2025	Radiation (03CH04-CB)
Band Rejector	MTJ	6G Band Rejector	BRJ-01	1GHz ~ 7.4GHz	Oct. 02, 2024	Oct. 01, 2025	Radiation (03CH04-CB)



RADIO TEST REPORT

Report No. : FR410321-08AB

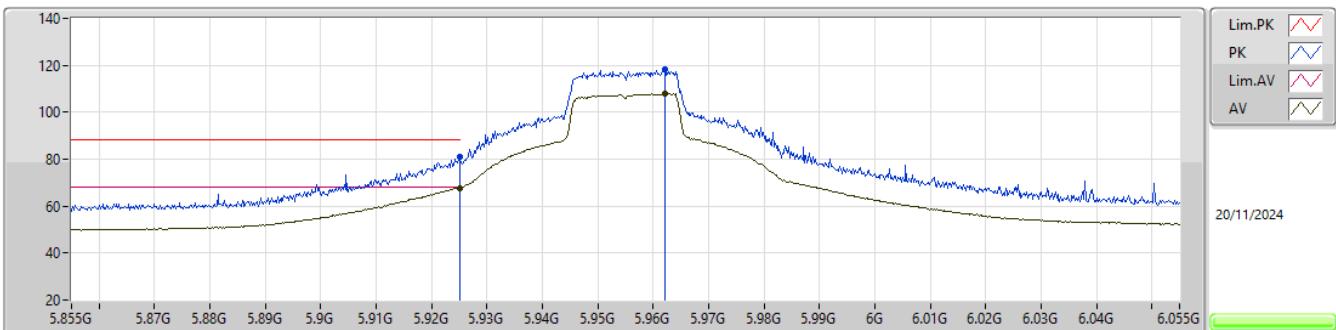
Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Remark
Band Rejector	MTJ	6G Band Rejector	BRJ-02	1GHz ~ 8GHz	Oct. 02, 2024	Oct. 01, 2025	Radiation (03CH04-CB)
Test Software	SPORTON	SENSE-15407_NII	V5.11. 23	5.15GHz-7.115GHz	N.C.R.	N.C.R.	Radiation (03CH04-CB)

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

N.C.R means Non-Calibration required.

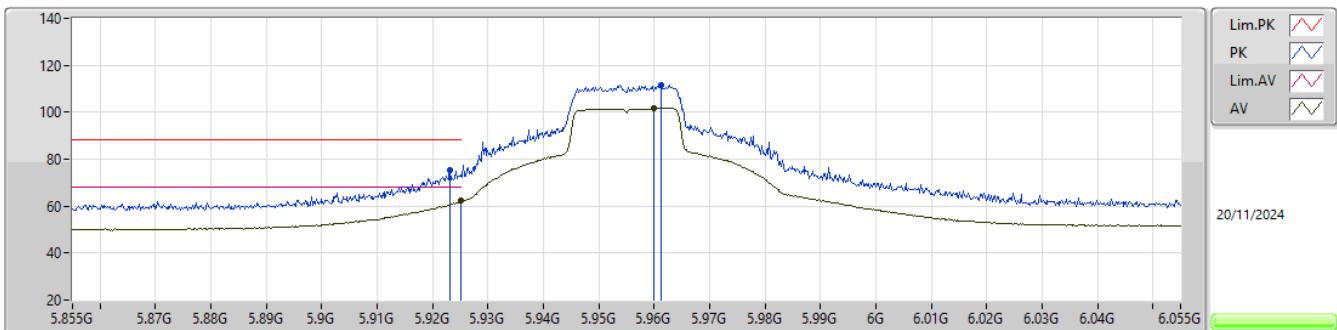
**Summary**

Mode	Result	Type	Freq	Level	Limit	Margin	Dist	Condition	Azimuth	Height	Comments
			(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(m)		(°)	(m)	
5.925-6.425GHz	-	-	-	-	-	-	-	-	-	-	-
802.11be EHT40-BF_Nss1,(MCS0)_2TX	Pass	RMS	5.9248G	67.98	68.20	-0.22	3	Vertical	229	2.44	-

5.925-6.425GHz_802.11be EHT20_Nss2,(MCS0)_2TX
5955MHz_TX


EUT Z_2TX
Setting 80
01-C-C-J-8-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition (*)	Azimuth (m)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	5.925G	81.02	88.20	-7.18	71.07	3	Vertical	126	2.54	-	34.95	7.44	32.44			
RMS	5.925G	67.83	68.20	-0.37	57.88	3	Vertical	126	2.54	-	34.95	7.44	32.44			
PK	5.9622G	118.47	Inf	-Inf	108.29	3	Vertical	126	2.54	-	35.15	7.47	32.44			
RMS	5.9622G	108.02	Inf	-Inf	97.84	3	Vertical	126	2.54	-	35.15	7.47	32.44			

5.925-6.425GHz_802.11be EHT20_Nss2,(MCS0)_2TX
5955MHz_TX


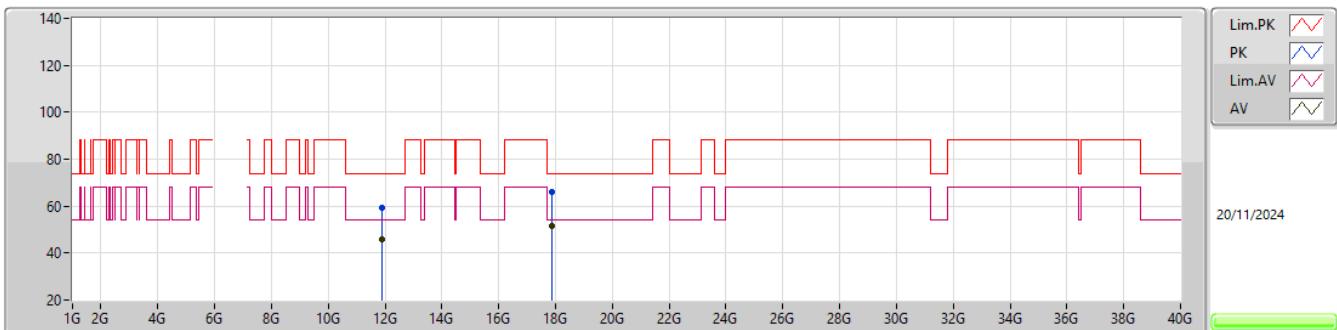
EUT Z_2TX
Setting 80
01-C-J-8-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition (*)	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	5.9232G	75.49	88.20	-12.71	65.55	3	Horizontal	138	1.00	-	34.94	7.44	32.44			
RMS	5.925G	62.19	68.20	-6.01	52.24	3	Horizontal	138	1.00	-	34.95	7.44	32.44			
PK	5.9612G	111.55	Inf	-Inf	101.38	3	Horizontal	138	1.00	-	35.14	7.47	32.44			
RMS	5.96G	101.83	Inf	-Inf	91.66	3	Horizontal	138	1.00	-	35.14	7.47	32.44			



5.925-6.425GHz_802.11be EHT20_Nss2,(MCS0)_2TX

5955MHz_TX



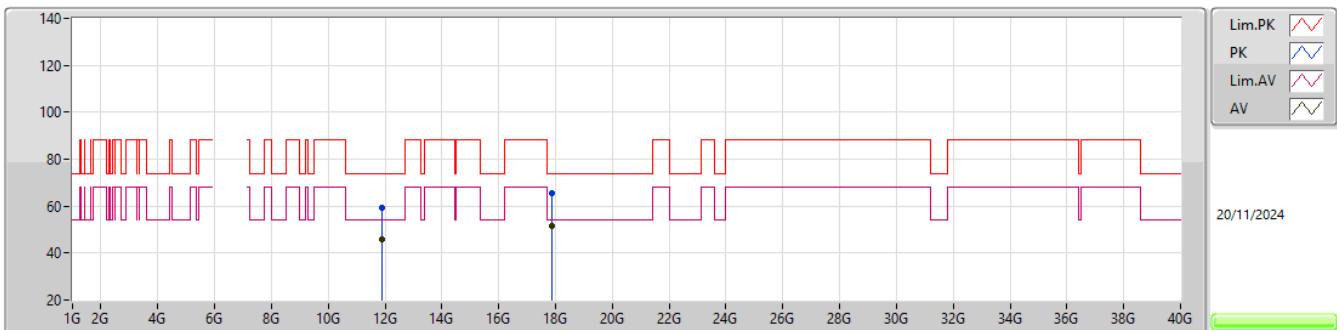
EUT Z_2TX
Setting 80
01-C-J-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition (*)	Azimuth (m)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	11.90899G	59.50	74.00	-14.50	41.21	3	Vertical	55	1.64	-	38.78	12.27	32.76				
AV	11.9092G	45.81	54.00	-8.19	27.52	3	Vertical	55	1.64	-	38.78	12.27	32.76				
PK	17.86352G	65.88	74.00	-8.12	42.01	3	Vertical	67	1.86	-	41.15	14.19	31.47				
AV	17.86258G	51.31	54.00	-2.69	27.44	3	Vertical	67	1.86	-	41.15	14.19	31.47				



5.925-6.425GHz_802.11be EHT20_Nss2,(MCS0)_2TX

5955MHz_TX



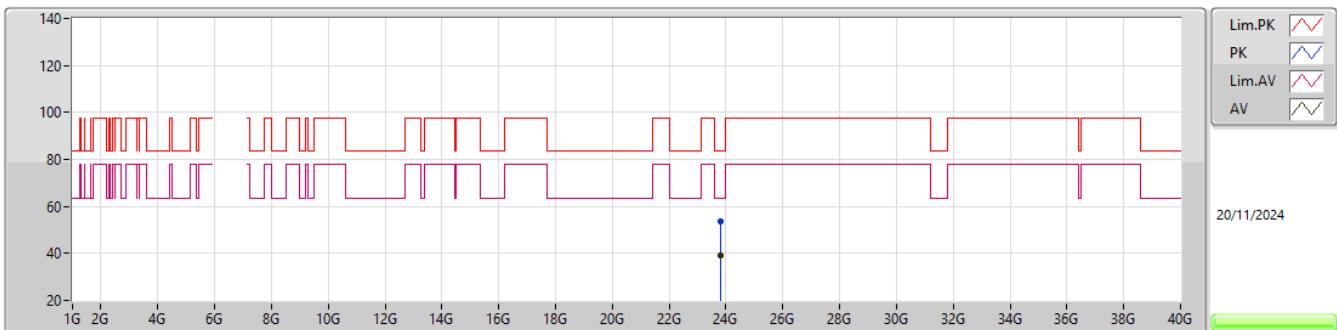
EUT Z_2TX
Setting 80
01-C-J-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition (*)	Azimuth (m)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	11.9118G	59.44	74.00	-14.56	41.15	3	Horizontal	140	1.75	-	38.78	12.27	32.76				
AV	11.90896G	45.67	54.00	-8.33	27.38	3	Horizontal	140	1.75	-	38.78	12.27	32.76				
PK	17.86577G	65.44	74.00	-8.56	41.56	3	Horizontal	133	1.53	-	41.16	14.19	31.47				
AV	17.86543G	51.35	54.00	-2.65	27.47	3	Horizontal	133	1.53	-	41.16	14.19	31.47				



5.925-6.425GHz_802.11be EHT20_Nss2,(MCS0)_2TX

5955MHz_TX



EUT Z_2TX
Setting 80
01-C-J-8

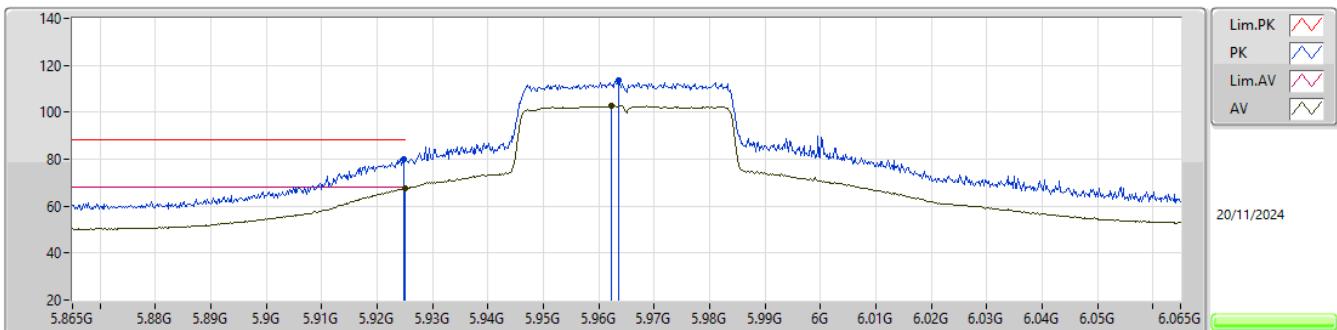
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PK	23.81996G	53.75	83.54	-29.79	44.48	1	Vertical	246	1.61	-	39.10	17.35	47.18				
AV	23.81853G	39.38	63.54	-24.16	30.11	1	Vertical	246	1.61	-	39.10	17.35	47.18				



5.925-6.425GHz_802.11be EHT20_Nss2,(MCS0)_2TX

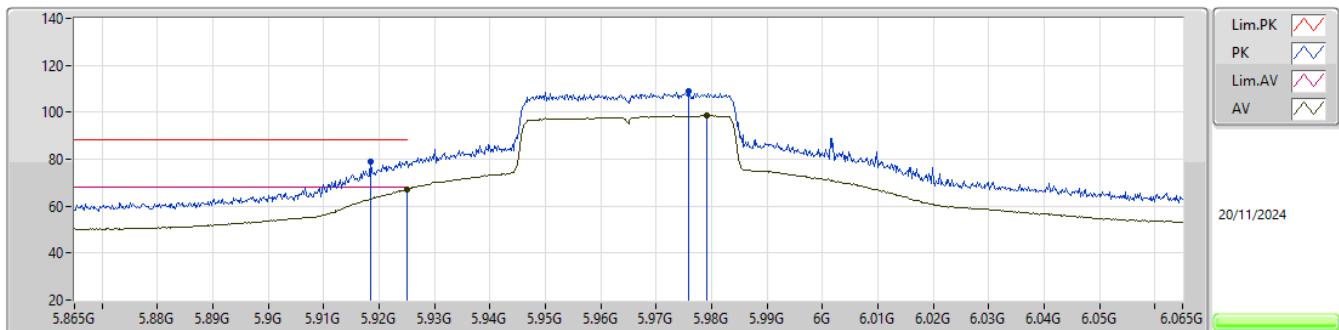
5955MHz_TX



5.925-6.425GHz_802.11be EHT40_Nss2,(MCS0)_2TX
5965MHz_TX


EUT Z_2TX
Setting 68
01-C-J-8-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition (*)	Azimuth (m)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	5.9248G	80.25	88.20	-7.95	70.30	3	Vertical	125	2.55	-	34.95	7.44	32.44			
RMS	5.925G	67.67	68.20	-0.53	57.72	3	Vertical	125	2.55	-	34.95	7.44	32.44			
PK	5.9636G	113.82	Inf	-Inf	103.64	3	Vertical	125	2.55	-	35.15	7.47	32.44			
RMS	5.9622G	102.84	Inf	-Inf	92.66	3	Vertical	125	2.55	-	35.15	7.47	32.44			

5.925-6.425GHz_802.11be EHT40_Nss2,(MCS0)_2TX
5965MHz_TX


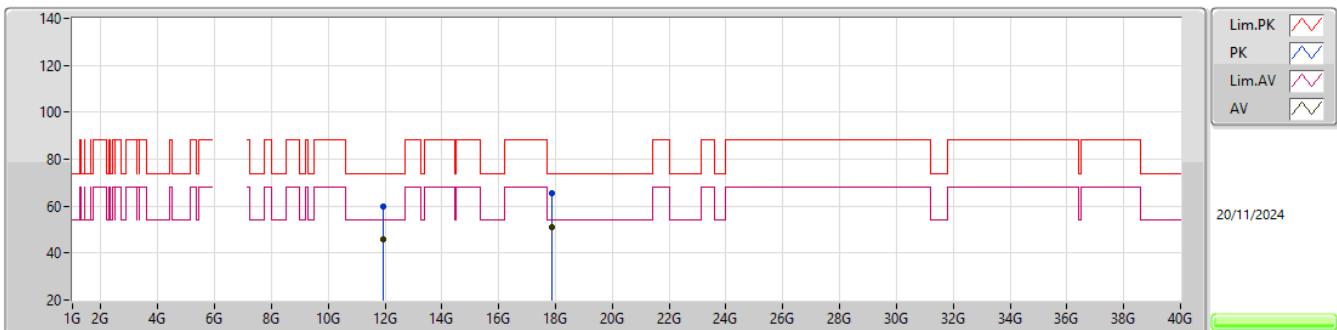
EUT Z_2TX
Setting 68
01-C-J-8-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition (*)	Azimuth (m)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	5.9184G	79.18	88.20	-9.02	69.27	3	Horizontal	137	1.00	-	34.91	7.44	32.44			
RMS	5.925G	67.31	68.20	-0.89	57.36	3	Horizontal	137	1.00	-	34.95	7.44	32.44			
PK	5.9758G	109.01	Inf	-Inf	98.77	3	Horizontal	137	1.00	-	35.20	7.48	32.44			
RMS	5.9792G	98.53	Inf	-Inf	88.27	3	Horizontal	137	1.00	-	35.22	7.48	32.44			



5.925-6.425GHz_802.11be EHT40_Nss2,(MCS0)_2TX

5965MHz_TX



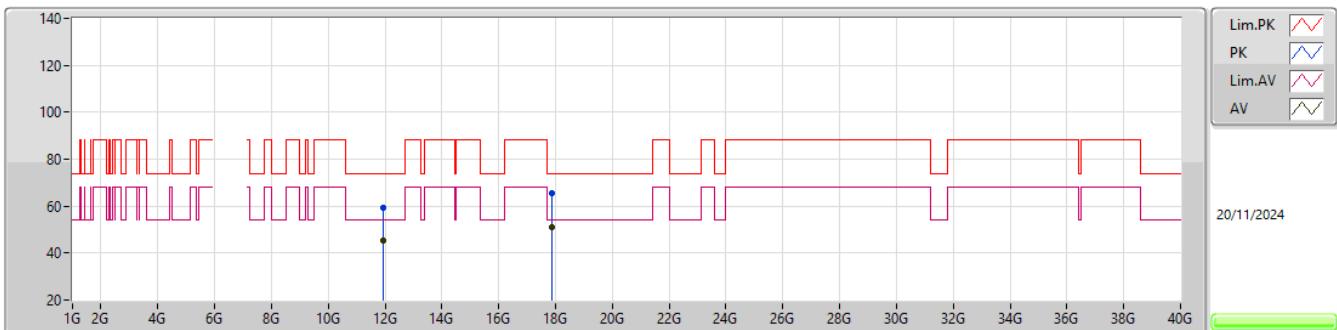
EUT Z_2TX
Setting 68
01-C-J-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition (*)	Azimuth (m)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	11.93148G	59.60	74.00	-14.40	41.34	3	Vertical	246	1.59	-	38.74	12.29	32.77				
AV	11.92908G	45.64	54.00	-8.36	27.38	3	Vertical	246	1.59	-	38.74	12.29	32.77				
PK	17.8938G	65.26	74.00	-8.74	41.22	3	Vertical	297	1.99	-	41.28	14.20	31.44				
AV	17.89314G	51.23	54.00	-2.77	27.21	3	Vertical	297	1.99	-	41.27	14.20	31.45				



5.925-6.425GHz_802.11be EHT40_Nss2,(MCS0)_2TX

5965MHz_TX



EUT Z_2TX
Setting 68
01-C-J-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition (*)	Azimuth (m)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	11.92792G	59.11	74.00	-14.89	40.85	3	Horizontal	295	1.64	-	38.74	12.29	32.77				
AV	11.9292G	45.49	54.00	-8.51	27.23	3	Horizontal	295	1.64	-	38.74	12.29	32.77				
PK	17.89336G	65.36	74.00	-8.64	41.34	3	Horizontal	40	1.92	-	41.27	14.20	31.45				
AV	17.8932G	51.26	54.00	-2.74	27.24	3	Horizontal	40	1.92	-	41.27	14.20	31.45				



5.925-6.425GHz_802.11be EHT40_Nss2,(MCS0)_2TX

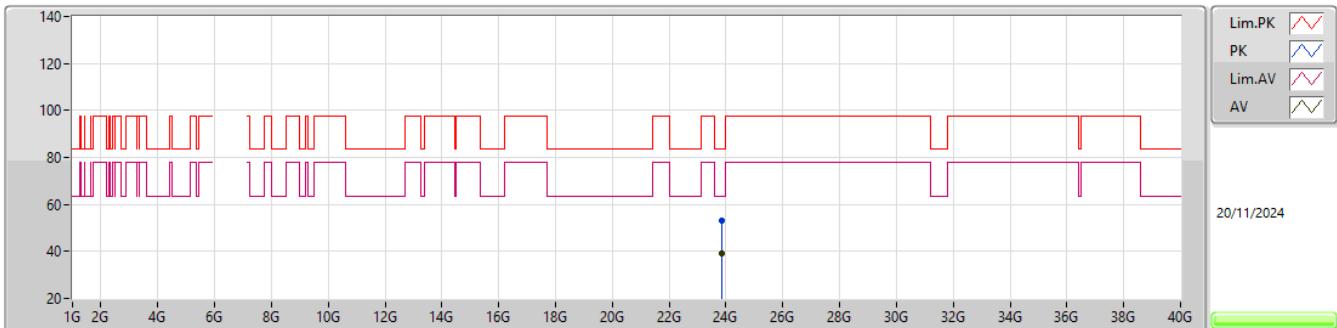
5965MHz_TX





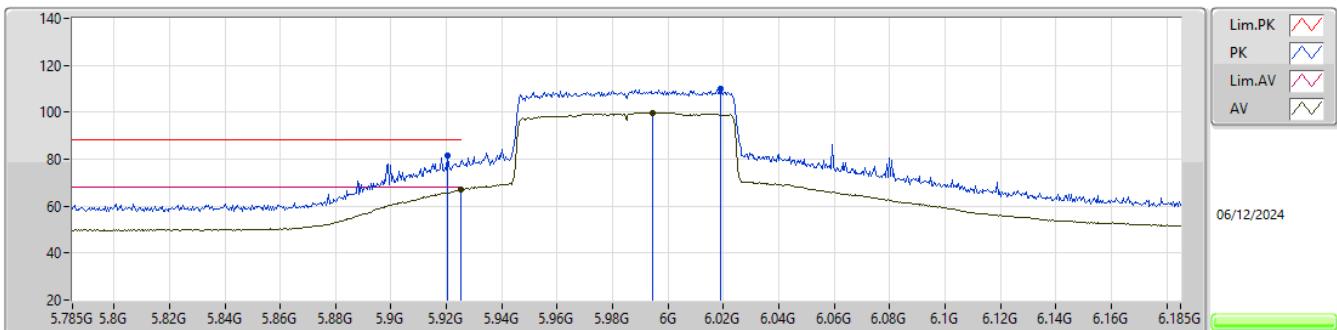
5.925-6.425GHz_802.11be EHT40_Nss2,(MCS0)_2TX

5965MHz_TX

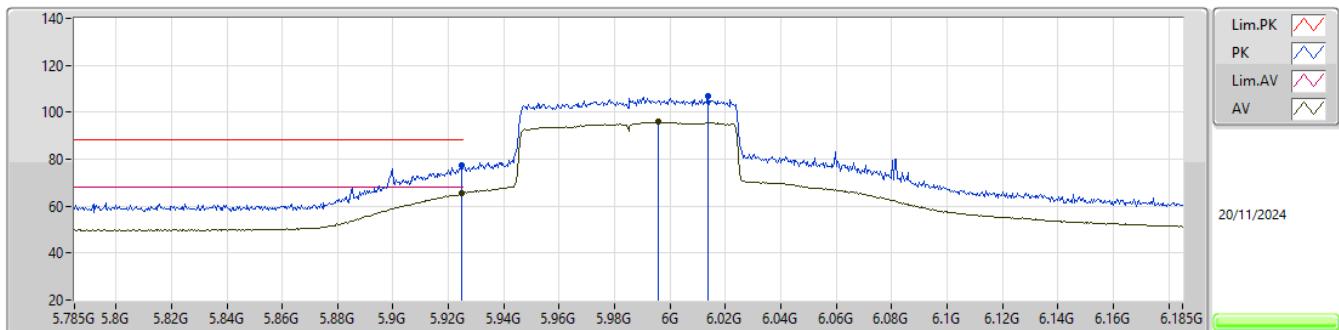


EUT Z_2TX
Setting 68
01-C-J-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition (*)	Azimuth (m)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	23.85867G	52.85	83.54	-30.69	43.57	1	Horizontal	336	1.43	-	39.08	17.36	47.16				
AV	23.85781G	39.06	63.54	-24.48	29.78	1	Horizontal	336	1.43	-	39.08	17.36	47.16				

5.925-6.425GHz_802.11be EHT80_Nss2,(MCS0)_2TX
5985MHz_TX

EUT Z_2TX
 Setting 68
 01-C-J-8-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition (*)	Azimuth (m)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	5.9202G	81.59	88.20	-6.61	71.67	3	Vertical	124	2.42	-	34.92	7.44	32.44			
RMS	5.925G	67.11	68.20	-1.09	57.16	3	Vertical	124	2.42	-	34.95	7.44	32.44			
PK	6.019G	110.00	Inf	-Inf	99.59	3	Vertical	124	2.42	-	35.34	7.51	32.44			
RMS	5.9946G	99.88	Inf	-Inf	89.54	3	Vertical	124	2.42	-	35.28	7.50	32.44			

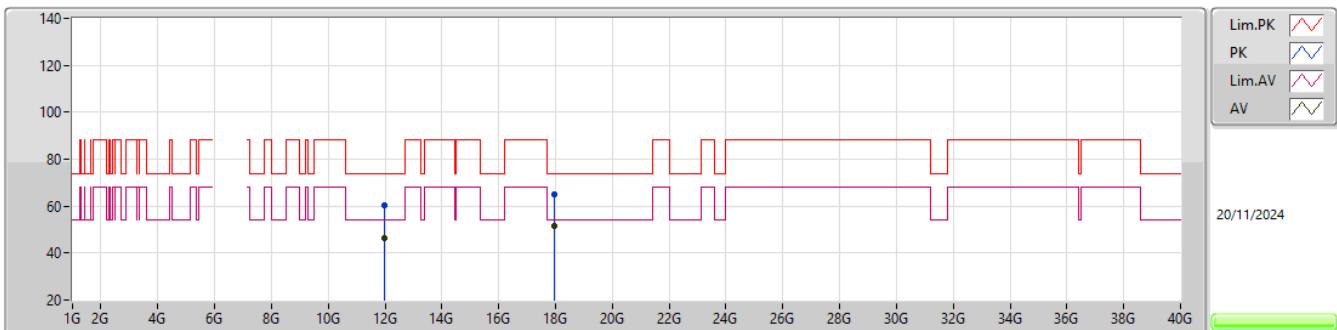
5.925-6.425GHz_802.11be EHT80_Nss2,(MCS0)_2TX
5985MHz_TX

EUT Z_2TX
Setting 68
01-C-J-8-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition (*)	Azimuth (m)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	5.9246G	77.33	88.20	-10.87	67.38	3	Horizontal	138	1.02	-	34.95	7.44	32.44			
RMS	5.9246G	65.31	68.20	-2.89	55.36	3	Horizontal	138	1.02	-	34.95	7.44	32.44			
PK	6.0138G	106.86	Inf	-Inf	96.46	3	Horizontal	138	1.02	-	35.33	7.51	32.44			
RMS	5.9958G	95.89	Inf	-Inf	85.55	3	Horizontal	138	1.02	-	35.28	7.50	32.44			



5.925-6.425GHz_802.11be EHT80_Nss2,(MCS0)_2TX

5985MHz_TX



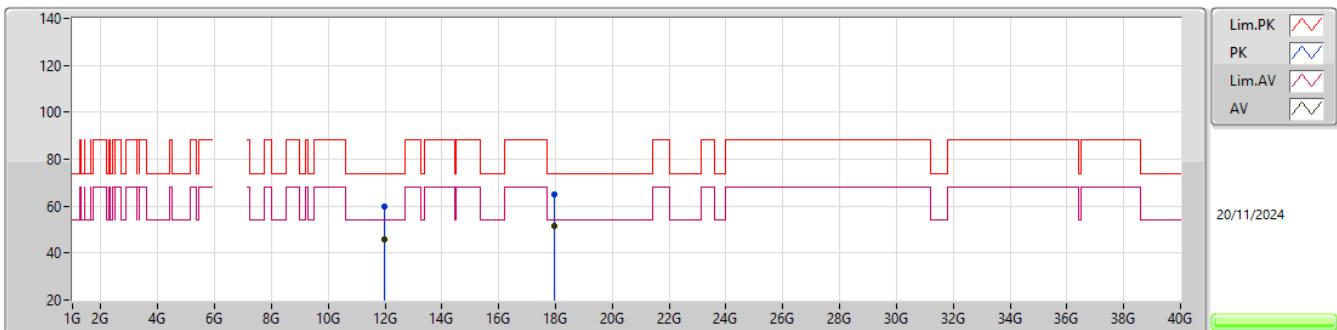
EUT Z_2TX
Setting 68
01-C-J-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition (*)	Azimuth (m)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	11.97173G	60.31	74.00	-13.69	42.07	3	Vertical	311	1.74	-	38.70	12.33	32.79				
AV	11.9721G	46.19	54.00	-7.81	27.95	3	Vertical	311	1.74	-	38.70	12.33	32.79				
PK	17.95686G	65.17	74.00	-8.83	40.93	3	Vertical	212	1.38	-	41.41	14.22	31.39				
AV	17.95521G	51.44	54.00	-2.56	27.21	3	Vertical	212	1.38	-	41.41	14.22	31.40				



5.925-6.425GHz_802.11be EHT80_Nss2,(MCS0)_2TX

5985MHz_TX



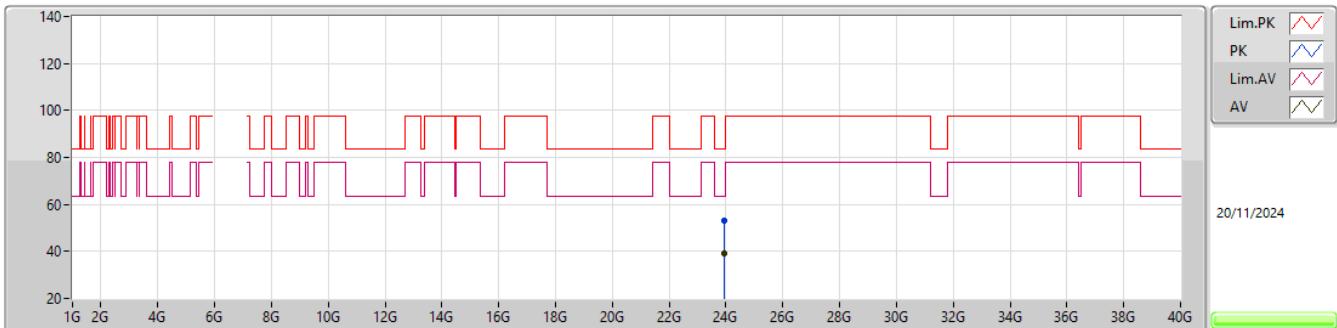
EUT Z_2TX
Setting 68
01-C-J-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition (*)	Azimuth (m)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	11.96911G	59.61	74.00	-14.39	41.37	3	Horizontal	121	1.85	-	38.70	12.33	32.79				
AV	11.97197G	46.10	54.00	-7.90	27.86	3	Horizontal	121	1.85	-	38.70	12.33	32.79				
PK	17.95419G	65.15	74.00	-8.85	40.92	3	Horizontal	139	1.68	-	41.41	14.22	31.40				
AV	17.95255G	51.46	54.00	-2.54	27.23	3	Horizontal	139	1.68	-	41.41	14.22	31.40				



5.925-6.425GHz_802.11be EHT80_Nss2,(MCS0)_2TX

5985MHz_TX



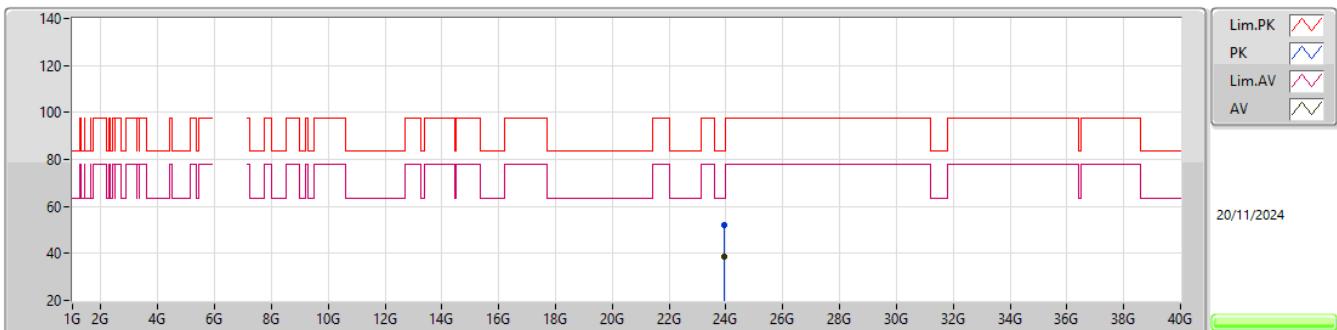
EUT Z_2TX
Setting 68
01-C-J-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition (*)	Azimuth (m)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	23.93944G	53.26	83.54	-30.28	44.00	1	Vertical	336	1.93	-	39.00	17.38	47.12				
AV	23.93881G	39.00	63.54	-24.54	29.74	1	Vertical	336	1.93	-	39.00	17.38	47.12				



5.925-6.425GHz_802.11be EHT80_Nss2,(MCS0)_2TX

5985MHz_TX



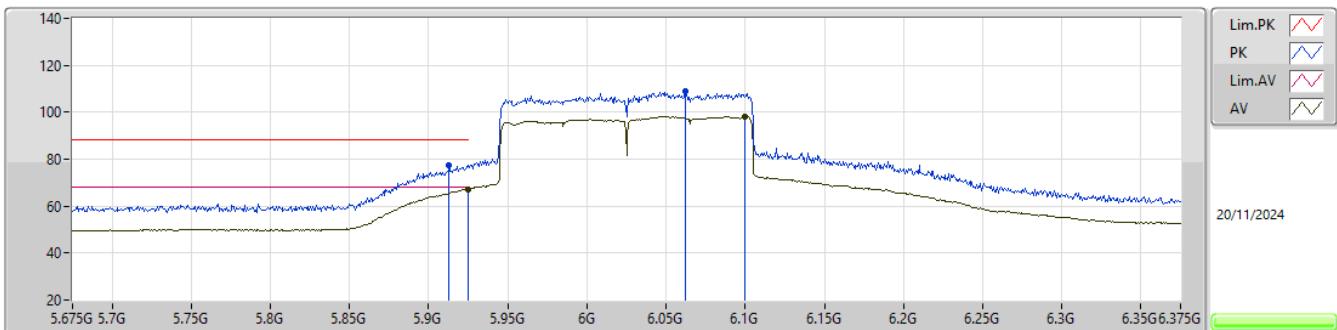
EUT Z_2TX
Setting 68
01-C-J-8

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition (*)	Azimuth (m)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	23.93991G	52.06	83.54	-31.48	42.80	1	Horizontal	169	1.84	-	39.00	17.38	47.12				
AV	23.93873G	38.74	63.54	-24.80	29.48	1	Horizontal	169	1.84	-	39.00	17.38	47.12				



5.925-6.425GHz_802.11be EHT160_Nss2,(MCS0)_2TX

6025MHz_TX



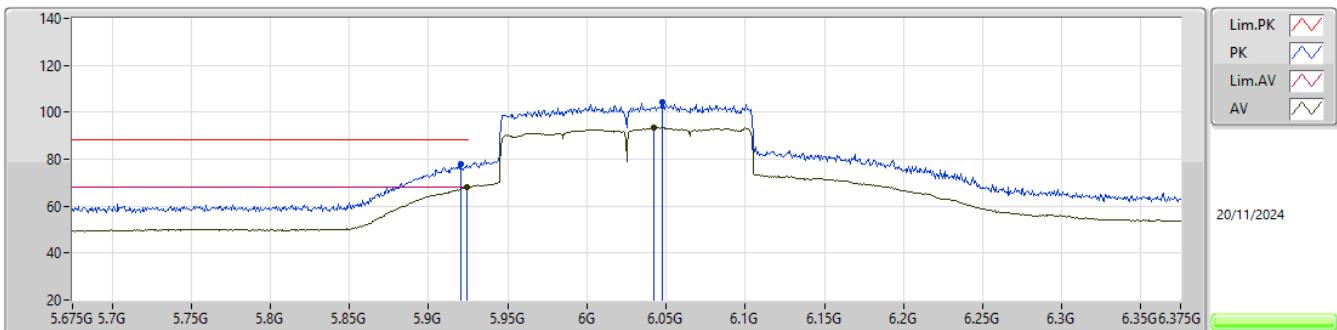
EUT Z_2TX
Setting 68
01-C-J-8-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition (*)	Azimuth (m)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	5.913G	77.53	88.20	-10.67	67.66	3	Vertical	110	2.39	-	34.88	7.43	32.44				
RMS	5.9249G	67.32	68.20	-0.88	57.37	3	Vertical	110	2.39	-	34.95	7.44	32.44				
PK	6.0621G	108.78	Inf	-Inf	98.28	3	Vertical	110	2.39	-	35.40	7.53	32.43				
RMS	6.0999G	98.31	Inf	-Inf	87.80	3	Vertical	110	2.39	-	35.40	7.54	32.43				



5.925-6.425GHz_802.11be EHT160_Nss2,(MCS0)_2TX

6025MHz_TX



EUT Z_2TX
Setting 68
01-C-J-8-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition (*)	Azimuth (m)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	5.92G	78.06	88.20	-10.14	68.14	3	Horizontal	140	1.01	-	34.92	7.44	32.44				
RMS	5.9242G	67.89	68.20	-0.31	57.94	3	Horizontal	140	1.01	-	34.95	7.44	32.44				
PK	6.0474G	104.09	Inf	-Inf	93.61	3	Horizontal	140	1.01	-	35.39	7.52	32.43				
RMS	6.0425G	93.40	Inf	-Inf	82.93	3	Horizontal	140	1.01	-	35.38	7.52	32.43				



5.925-6.425GHz_802.11be EHT160_Nss2,(MCS0)_2TX

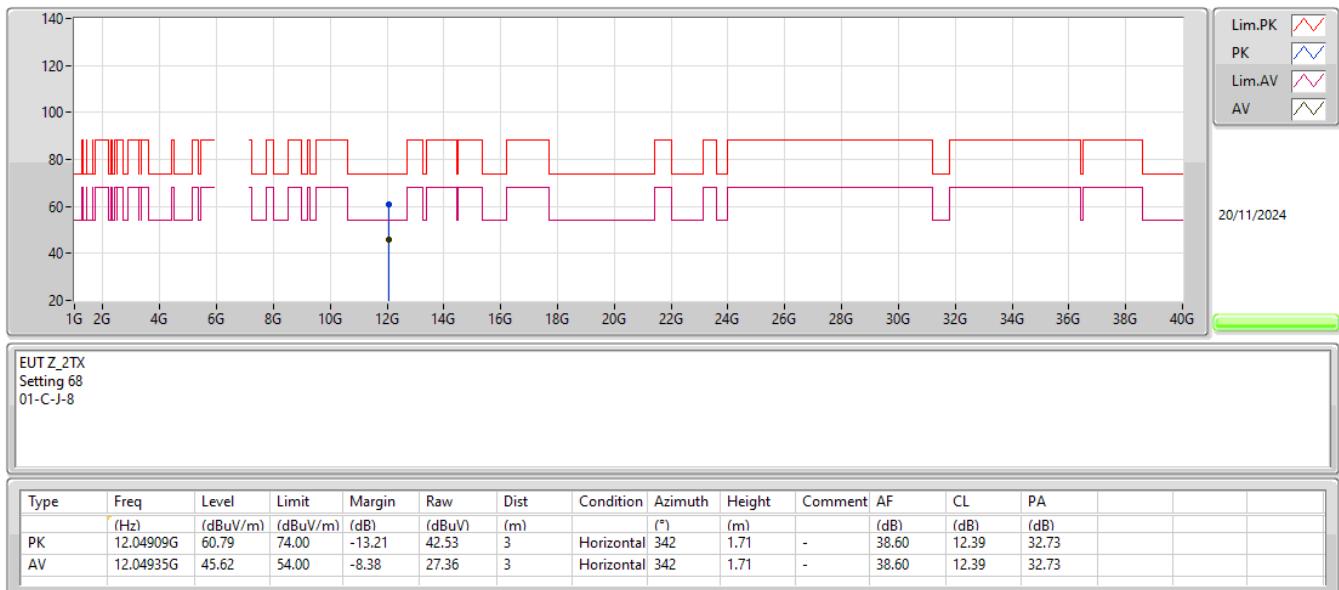
6025MHz_TX





5.925-6.425GHz_802.11be EHT160_Nss2,(MCS0)_2TX

6025MHz_TX





5.925-6.425GHz_802.11be EHT160_Nss2,(MCS0)_2TX

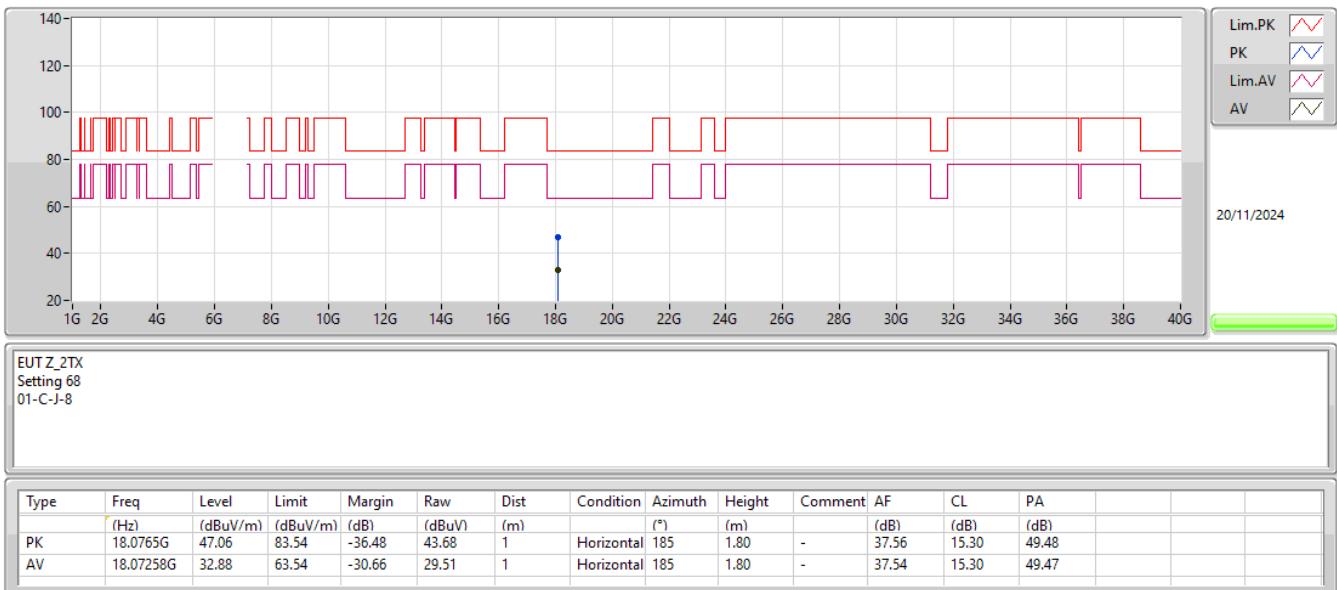
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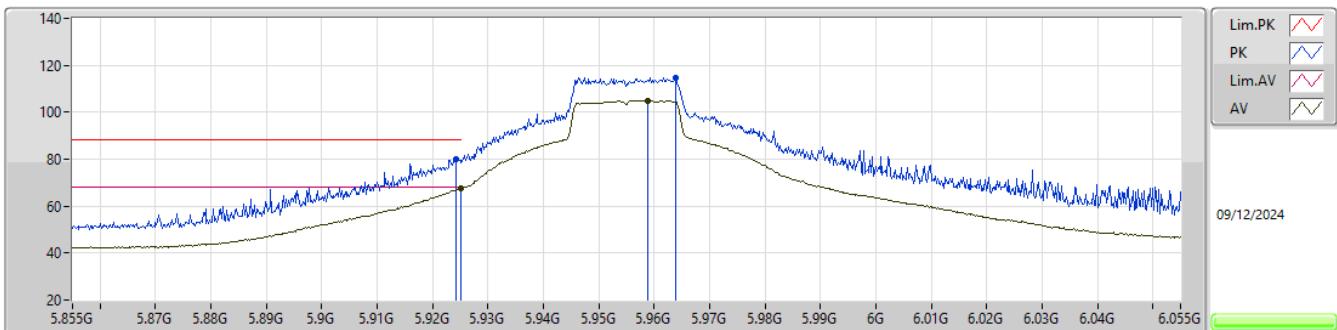




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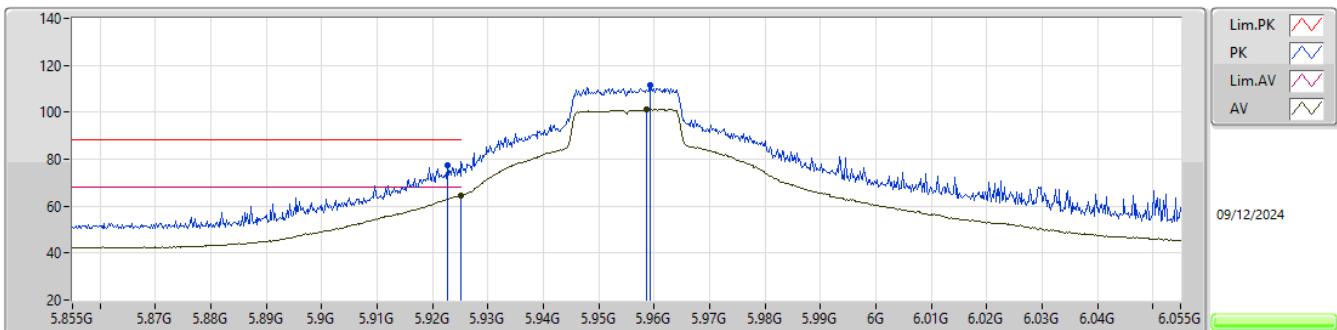
6025MHz_TX



5.925-6.425GHz_802.11be EHT20-BF_Nss1,(MCS0)_2TX
5955MHz_TX


EUT Z_2TX
Setting 86
04-D-M-2-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition (*)	Azimuth (m)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	5.9242G	80.11	88.20	-8.09	85.14	3	Vertical	230	2.43	-	32.40	5.64	43.07			
RMS	5.925G	67.38	68.20	-0.82	72.41	3	Vertical	230	2.43	-	32.40	5.64	43.07			
PK	5.9638G	114.85	Inf	-Inf	119.80	3	Vertical	230	2.43	-	32.43	5.67	43.05			
RMS	5.9588G	104.90	Inf	-Inf	109.87	3	Vertical	230	2.43	-	32.42	5.66	43.05			

5.925-6.425GHz_802.11be EHT20-BF_Nss1,(MCS0)_2TX
5955MHz_TX


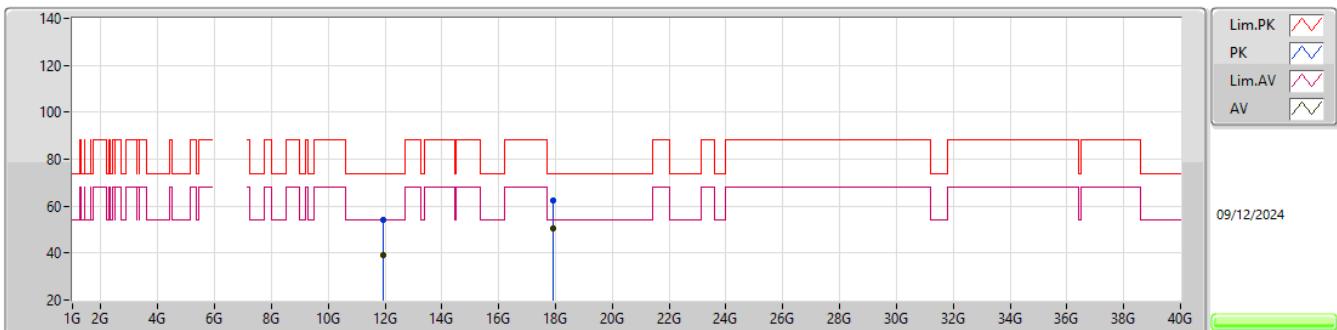
EUT Z_2TX
Setting 86
04-D-M-2-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition (*)	Azimuth (m)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	5.9226G	77.66	88.20	-10.54	82.69	3	Horizontal	117	1.00	-	32.40	5.64	43.07			
RMS	5.925G	64.39	68.20	-3.81	69.42	3	Horizontal	117	1.00	-	32.40	5.64	43.07			
PK	5.9592G	111.40	Inf	-Inf	116.37	3	Horizontal	117	1.00	-	32.42	5.66	43.05			
RMS	5.9586G	101.13	Inf	-Inf	106.10	3	Horizontal	117	1.00	-	32.42	5.66	43.05			



5.925-6.425GHz_802.11be EHT20-BF_Nss1,(MCS0)_2TX

5955MHz_TX



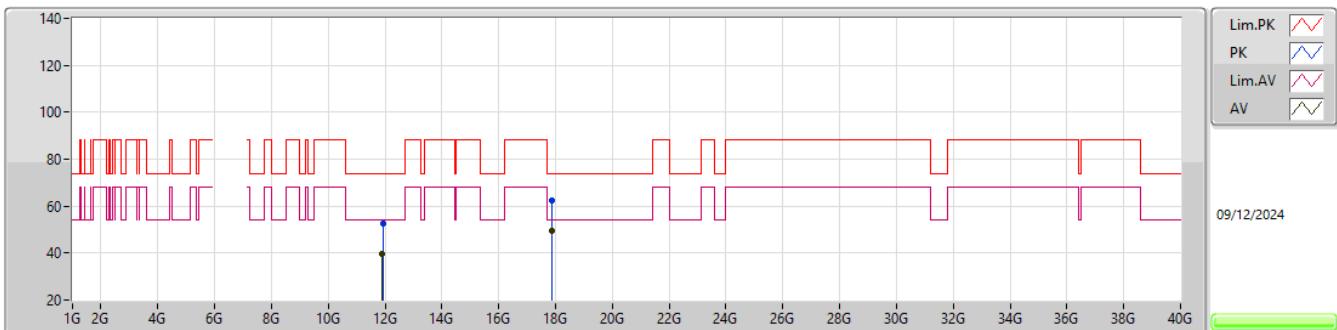
EUT Z_2TX
Setting 86
04-D-M-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition (*)	Azimuth (m)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	11.917G	54.03	74.00	-19.97	47.25	3	Vertical	256	2.17	-	38.93	10.79	42.94				
AV	11.917G	39.37	54.00	-14.63	32.59	3	Vertical	256	2.17	-	38.93	10.79	42.94				
PK	17.9147G	62.67	74.00	-11.33	40.35	3	Vertical	175	1.80	-	47.22	16.65	41.55				
AV	17.9136G	50.64	54.00	-3.36	28.35	3	Vertical	175	1.80	-	47.20	16.65	41.56				



5.925-6.425GHz_802.11be EHT20-BF_Nss1,(MCS0)_2TX

5955MHz_TX



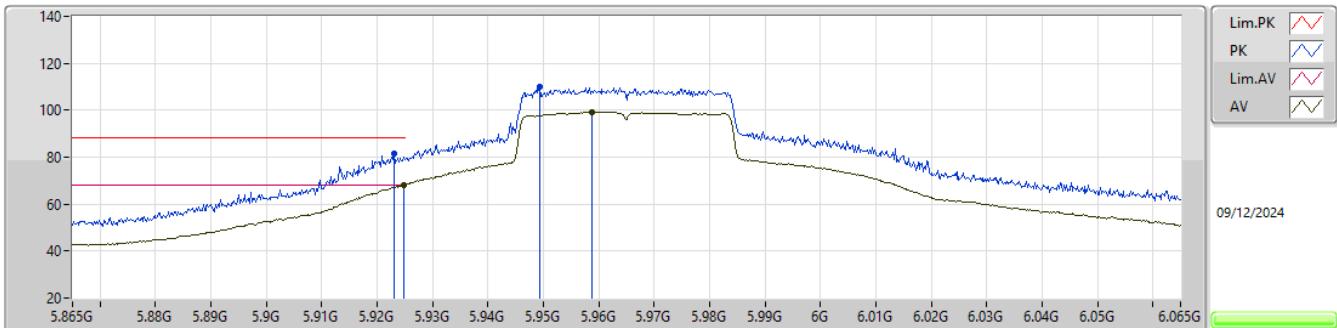
EUT Z_2TX
Setting 86
04-D-M-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition (*)	Azimuth (m)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	11.91618G	52.69	74.00	-21.31	45.91	3	Horizontal	297	2.34	-	38.93	10.79	42.94				
AV	11.91184G	39.62	54.00	-14.38	32.86	3	Horizontal	297	2.34	-	38.92	10.78	42.94				
PK	17.87132G	62.48	74.00	-11.52	41.27	3	Horizontal	183	1.80	-	46.21	16.63	41.63				
AV	17.87428G	49.38	54.00	-4.62	28.09	3	Horizontal	183	1.80	-	46.28	16.63	41.62				



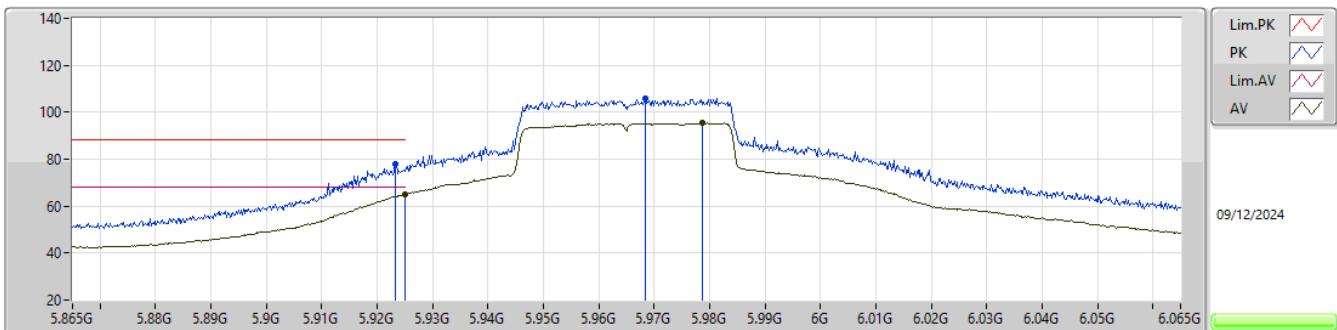
5.925-6.425GHz_802.11be EHT40-BF_Nss1,(MCS0)_2TX

5965MHz_TX



EUT Z_2TX
Setting 75
04-D-M-2-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition (*)	Azimuth (m)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	5.923G	81.61	88.20	-6.59	86.64	3	Vertical	229	2.44	-	32.40	5.64	43.07				
RMS	5.9248G	67.98	68.20	-0.22	73.01	3	Vertical	229	2.44	-	32.40	5.64	43.07				
PK	5.9494G	110.02	Inf	-Inf	115.02	3	Vertical	229	2.44	-	32.40	5.66	43.06				
RMS	5.9588G	99.35	Inf	-Inf	104.32	3	Vertical	229	2.44	-	32.42	5.66	43.05				

5.925-6.425GHz_802.11be EHT40-BF_Nss1,(MCS0)_2TX
5965MHz_TX


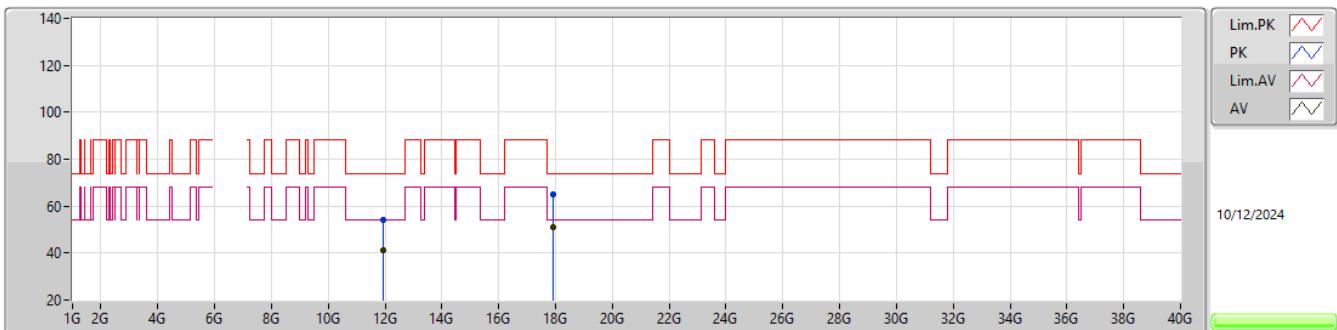
EUT Z_2TX
Setting 75
04-D-M-2-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition (*)	Azimuth (m)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	5.9232G	77.81	88.20	-10.39	82.84	3	Horizontal	118	1.00	-	32.40	5.64	43.07			
RMS	5.925G	64.91	68.20	-3.29	69.94	3	Horizontal	118	1.00	-	32.40	5.64	43.07			
PK	5.9684G	106.10	Inf	-Inf	111.04	3	Horizontal	118	1.00	-	32.44	5.67	43.05			
RMS	5.9786G	95.51	Inf	-Inf	100.41	3	Horizontal	118	1.00	-	32.46	5.68	43.04			



5.925-6.425GHz_802.11be EHT40-BF_Nss1,(MCS0)_2TX

5965MHz_TX



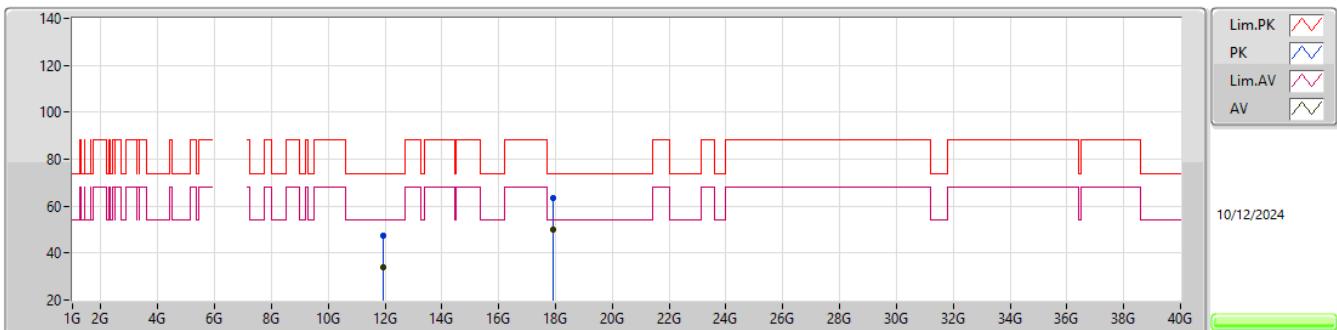
EUT Z_2TX
Setting 75
04-D-M-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition (*)	Azimuth (m)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	11.92845G	54.26	74.00	-19.74	47.43	3	Vertical	89	2.41	-	38.96	10.80	42.93				
AV	11.93355G	41.00	54.00	-13.00	34.16	3	Vertical	89	2.41	-	38.97	10.80	42.93				
PK	17.91195G	64.76	74.00	-9.24	42.51	3	Vertical	125	1.80	-	47.16	16.65	41.56				
AV	17.9094G	51.09	54.00	-2.91	28.90	3	Vertical	125	1.80	-	47.11	16.64	41.56				



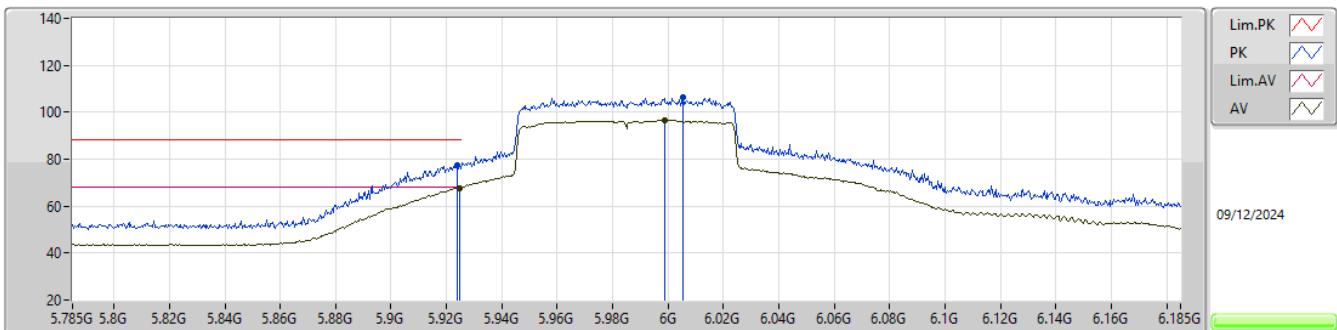
5.925-6.425GHz_802.11be EHT40-BF_Nss1,(MCS0)_2TX

5965MHz_TX



EUT Z_2TX
Setting 75
04-D-M-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition (*)	Azimuth (m)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	11.9386G	47.44	74.00	-26.56	40.59	3	Horizontal	300	2.66	-	38.98	10.80	42.93				
AV	11.9406G	34.15	54.00	-19.85	27.30	3	Horizontal	300	2.66	-	38.98	10.80	42.93				
PK	17.9179G	63.35	74.00	-10.65	40.96	3	Horizontal	314	2.23	-	47.29	16.65	41.55				
AV	17.91825G	50.02	54.00	-3.98	27.62	3	Horizontal	314	2.23	-	47.30	16.65	41.55				

5.925-6.425GHz_802.11be EHT80-BF_Nss1,(MCS0)_2TX
5985MHz_TX


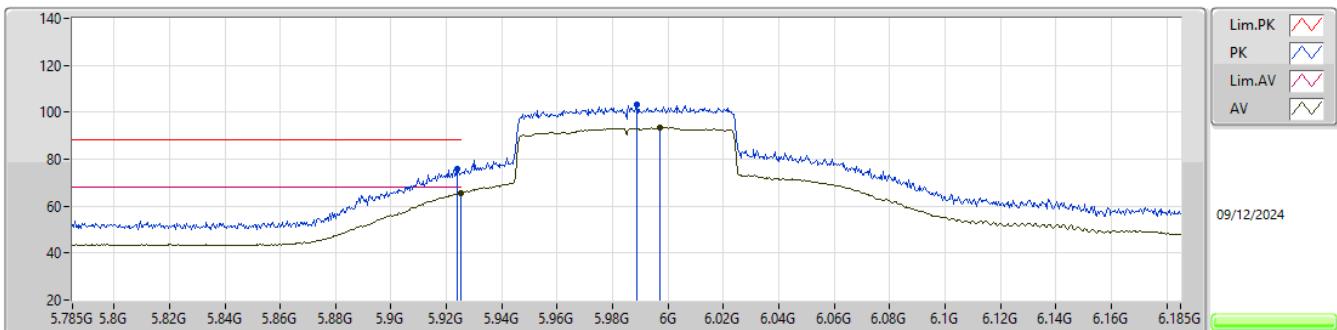
EUT Z_2TX
Setting 71
04-D-M-2-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition (*)	Azimuth (m)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)			
PK	5.9238G	77.46	88.20	-10.74	82.49	3	Vertical	228	2.41	-	32.40	5.64	43.07			
RMS	5.9246G	67.78	68.20	-0.42	72.81	3	Vertical	228	2.41	-	32.40	5.64	43.07			
PK	6.0054G	106.27	Inf	-Inf	111.09	3	Vertical	228	2.41	-	32.51	5.70	43.03			
RMS	5.9986G	96.63	Inf	-Inf	101.47	3	Vertical	228	2.41	-	32.50	5.69	43.03			



5.925-6.425GHz_802.11be EHT80-BF_Nss1,(MCS0)_2TX

5985MHz_TX



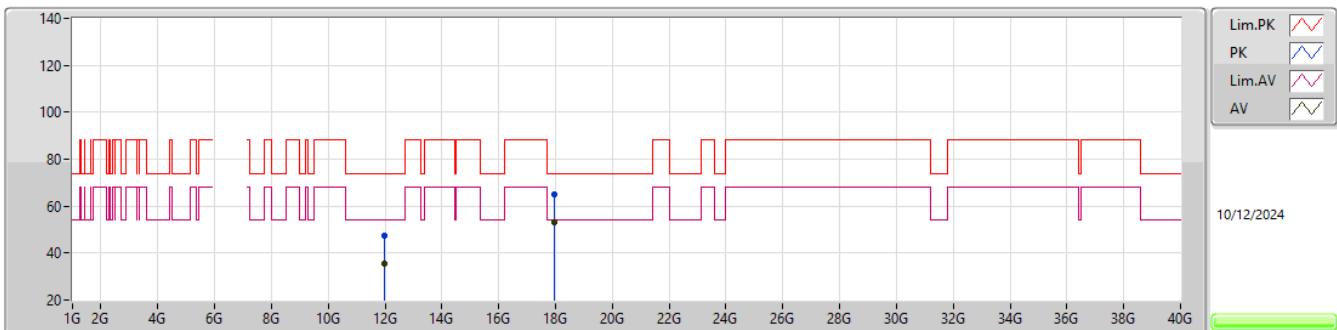
EUT Z_2TX
Setting 71
04-D-M-2-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition (*)	Azimuth (m)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	5.9238G	75.64	88.20	-12.56	80.67	3	Horizontal	140	1.02	-	32.40	5.64	43.07				
RMS	5.925G	65.44	68.20	-2.76	70.47	3	Horizontal	140	1.02	-	32.40	5.64	43.07				
PK	5.9886G	103.04	Inf	-Inf	107.92	3	Horizontal	140	1.02	-	32.48	5.68	43.04				
RMS	5.997G	93.46	Inf	-Inf	98.31	3	Horizontal	140	1.02	-	32.49	5.69	43.03				



5.925-6.425GHz_802.11be EHT80-BF_Nss1,(MCS0)_2TX

5985MHz_TX



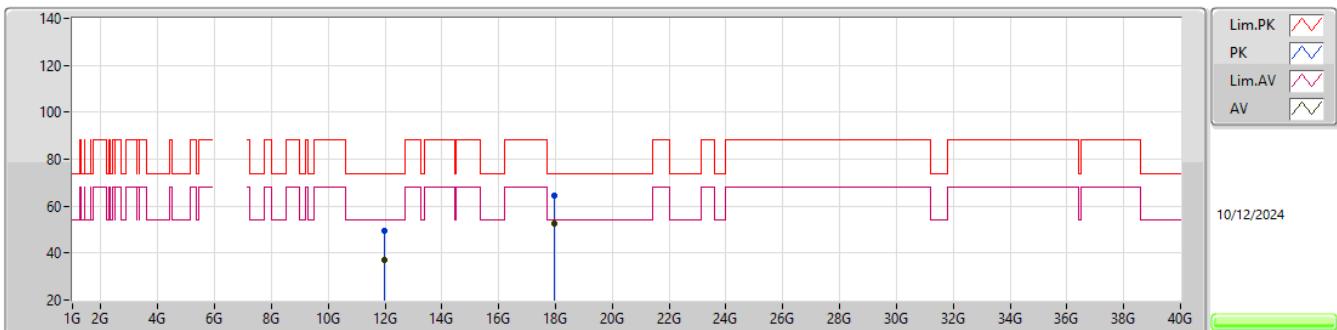
EUT Z_2TX
Setting 71
04-D-M-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition (*)	Azimuth (m)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	11.97165G	47.49	74.00	-26.51	40.53	3	Vertical	203	2.80	-	39.04	10.83	42.91				
AV	11.9712G	35.71	54.00	-18.29	28.75	3	Vertical	203	2.80	-	39.04	10.83	42.91				
PK	17.9709G	65.12	74.00	-8.88	41.24	3	Vertical	257	1.82	-	48.67	16.67	41.46				
AV	17.9678G	53.33	54.00	-0.67	29.55	3	Vertical	257	1.82	-	48.57	16.67	41.46				



5.925-6.425GHz_802.11be EHT80-BF_Nss1,(MCS0)_2TX

5985MHz_TX



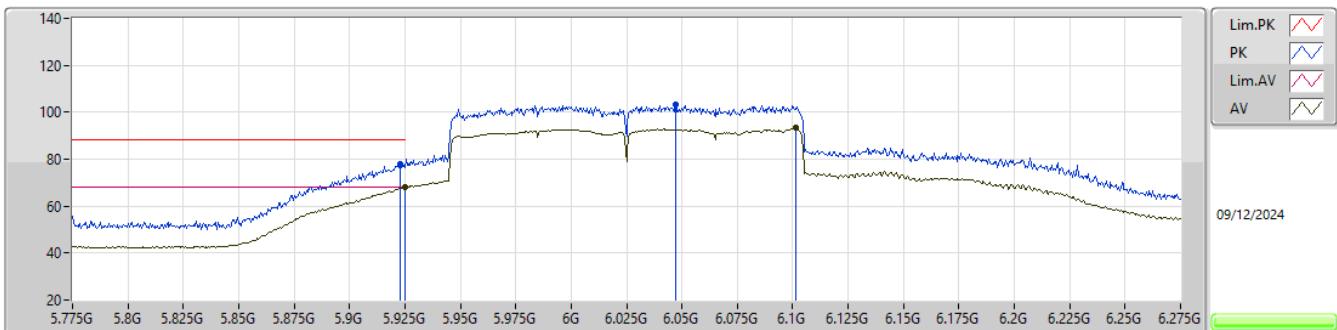
EUT Z_2TX
Setting 71
04-D-M-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition (*)	Azimuth (m)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	11.96045G	49.57	74.00	-24.43	42.64	3	Horizontal	309	1.36	-	39.02	10.82	42.91				
AV	11.96295G	37.25	54.00	-16.75	30.31	3	Horizontal	309	1.36	-	39.03	10.82	42.91				
PK	17.9756G	64.62	74.00	-9.38	40.58	3	Horizontal	281	1.23	-	48.82	16.67	41.45				
AV	17.97525G	52.70	54.00	-1.30	28.67	3	Horizontal	281	1.23	-	48.81	16.67	41.45				



5.925-6.425GHz_802.11be EHT160-BF_Nss1,(MCS0)_2TX

6025MHz_TX



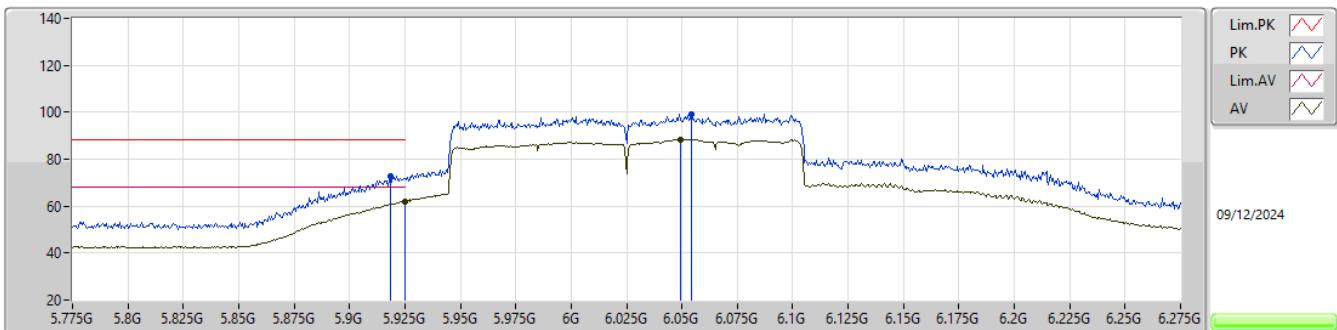
EUT Z_2TX
Setting 70
04-D-M-2-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition (*)	Azimuth (m)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	5.923G	77.70	88.20	-10.50	82.73	3	Vertical	226	2.28	-	32.40	5.64	43.07				
RMS	5.925G	67.89	68.20	-0.31	72.92	3	Vertical	226	2.28	-	32.40	5.64	43.07				
PK	6.047G	103.47	Inf	-Inf	108.15	3	Vertical	226	2.28	-	32.59	5.74	43.01				
RMS	6.1015G	93.38	Inf	-Inf	98.08	3	Vertical	226	2.28	-	32.51	5.79	43.00				



5.925-6.425GHz_802.11be EHT160-BF_Nss1,(MCS0)_2TX

6025MHz_TX



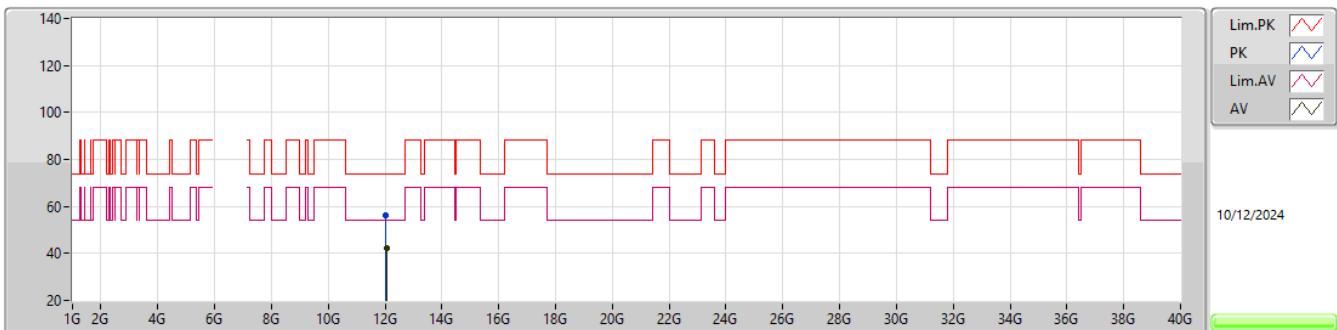
EUT Z_2TX
Setting 70
04-D-M-2-10

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition (*)	Azimuth (°)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	5.9185G	72.73	88.20	-15.47	77.77	3	Horizontal	151	1.04	-	32.40	5.64	43.08				
RMS	5.925G	61.83	68.20	-6.37	66.86	3	Horizontal	151	1.04	-	32.40	5.64	43.07				
PK	6.0545G	99.14	Inf	-Inf	103.82	3	Horizontal	151	1.04	-	32.59	5.74	43.01				
RMS	6.0495G	88.48	Inf	-Inf	93.15	3	Horizontal	151	1.04	-	32.60	5.74	43.01				



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6025MHz_TX



EUT Z_2TX
Setting 70
04-D-M-2

Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Raw (dBuV)	Dist (m)	Condition	Azimuth (*)	Height (m)	Comment	AF (dB)	CL (dB)	PA (dB)				
PK	12.03115G	56.19	74.00	-17.81	48.99	3	Vertical	167	2.12	-	39.22	10.88	42.90				
AV	12.0578G	42.06	54.00	-11.94	34.76	3	Vertical	167	2.12	-	39.30	10.91	42.91				



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6025MHz_TX





5.925-6.425GHz_802.11be EHT160-BF_Nss1,(MCS0)_2TX

6025MHz_TX

