FCC Radio Test Report

FCC ID	:	**QXO-AP4020**
Equipment	:	**Access Point**
Brand Name	:	**Extreme Networks**
Model Name	:	**AP4020**
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 May 08, 2025, and testing was started from May 08, 2025 and completed on May 09, 2025. We, SPORTON INTERNATIONAL INC. Hsinhua 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. Hsinhua Laboratory, the test report shall not be reproduced except in full.

Approved by: Jackson Tsai

SPORTON INTERNATIONAL INC. Hsinhua Laboratory

No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.)

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History of this test report

Report No.	Version	Description	Issued Date
FR462705-10AN	01	Initial issue of report	May 27, 2025

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(a)	Emission Bandwidth	PASS	-
3.2	15.407(a)	Maximum Conducted Output Power	PASS	-
3.3	15.407(a)	Peak Power Spectral Density	PASS	-
3.4	15.407(b)	Unwanted Emissions	PASS	-

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
Comments and explanations:
None.

Reviewed by: Barry Hsiao

Report Producer: Michelle Tsai

1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std. 802.11	Ch. Frequency (MHz)	Channel Number
5150-5250	a, n (HT20), ac (VHT20), ax (HEW20), be (EHT20)	5180-5240	36-48 [4]
5250-5350		5260-5320	52-64 [4]
5470-5725		5500-5700	100-140 [11]
Straddle 5720		5720	144 [1]
5725-5850		5745-5825	149-165 [5]
5150-5250	n (HT40), ac (VHT40), ax (HEW40), be (EHT40)	5190-5230	38-46 [2]
5250-5350		5270-5310	54-62 [2]
5470-5725		5510-5670	102-134 [5]
Straddle 5710		5710	142 [1]
5725-5850		5755-5795	151-159 [2]
5150-5250	ac (VHT80), ax (HEW80), be (EHT80)	5210	42 [1]
5250-5350		5290	58 [1]
5470-5725		5530-5610	106-122 [2]
Straddle 5690		5690	138 [1]
5725-5850		5775	155 [1]
5150-5350	ac (VHT160), ax (HEW160), be (EHT160)	5250	50 [1]
5470-5725		5570	114 [1]

Radio 1_Scan_1T1S

Band	Mode	BWch	Nant
5.47-5.725GHz	a20	20	1TX
5.725-5.85GHz	a20	20	1TX
5.47-5.725GHz	a40	40	1TX
5.725-5.85GHz	a40	40	1TX
5.47-5.725GHz	a80	80	1TX
5.725-5.85GHz	a80	80	1TX
5.15-5.25GHz	a160	160	1TX
5.25-5.35GHz	a160	160	1TX

Note:
- 11a, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- VHT20, VHT40, VHT80 and VHT160 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation.
- HEW20, HEW40, HEW80 and HEW160 use a combination of OFDMA-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM modulation.
- EHT20, EHT40, EHT80 and EHT160 use a combination of OFDMA-BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM, 4096QAM modulation.
- BWch is the nominal channel bandwidth.
- Evaluated EHT20/EHT40/EHT80/EHT160 mode only due to the similar modulation. The power setting of HT20/HT40/VHT20/VHT40/VHT80/VHT160/HEW20/HEW40/HEW80/HEW160 mode are the same or lower than EHT20/EHT40/EHT80/EHT160.

1.1.2 Antenna Information

Ant.	Brand	Model Name	Antenna Type	Connector	Support	Radio
1	Sercomm	6172005QWA01	PIFA	I-Pex	2.4G+5G	Radio 1_2.4G
						Radio 2_5G
2	Sercomm	6172005QWA02	PIFA	I-Pex	2.4G+5G	Radio 1_2.4G
						Radio 2_5G
3	Sercomm	6172005QWA04	PIFA	I-Pex	5G	Radio 3_5G
4	Sercomm	6172005QWA05	PIFA	I-Pex	5G	Radio 3_5G
5	Sercomm	6172005QWA06	PIFA	I-Pex	6G	Radio 3_6G
6	Sercomm	6172005QWA07	PIFA	I-Pex	6G	Radio 3_6G
7	Sercomm	6172005QWA03	PIFA	I-Pex	2.4G+5G+6G	Radio 1_Scan
8	Sercomm	6172005QWA08	PIFA	I-Pex	BT	BLE_chain 0
9	Sercomm	6172005QWA09	PIFA	I-Pex	BT	BLE_chain 1_H
10	Sercomm	6172005QWA10	PIFA	I-Pex	BT	BLE_chain 1_V
11	Sercomm	6172005QWA11	PIFA	I-Pex	GPS	N/A

Ant.	Port	Gain (dBi)											
		2.4G	5G				6G				BT chain 0	BT chain 1_H	BT chain 1_V
			UNII-1	UNII-2A	UNII-2C	UNII-3	UNII-5	UNII-6	UNII-7	UNII-8			
1	1	1.53	2.94	3.56	4.68	5.34	-	-	-	-	-	-	-
2	2	1.36	2.3	2.23	2.37	2.92	-	-	-	-	-	-	-
3	1	-	3.49	3.73	-	-	-	-	-	-	-	-	-
4	2	-	2.69	2.56	-	-	-	-	-	-	-	-	-
5	1	-	-	-	-	-	5.48	5.28	5.85	4.31	-	-	-
6	2	-	-	-	-	-	2.82	2.9	2.64	2.43	-	-	-
7	1	2.22	3.14	3.33	3.41	4.5	5.35	4.73	4.59	4.69	-	-	-
8	1	-	-	-	-	-	-	-	-	-	1.58	-	-
9	1	-	-	-	-	-	-	-	-	-	-	2.24	-
10	2	-	-	-	-	-	-	-	-	-	-	-	1.8

Composite Gain (dBi)										
Ant.		2.4G	UNII-1	UNII-2A	UNII-2C	UNII-3	UNII-5	UNII-6	UNII-7	UNII-8
1~2	DG [1SS]	1.55	3.19	4.6	5.41	5.34	-	-	-	-
	DG [2SS]	1.53	2.94	3.56	4.68	5.34	-	-	-	-
3~4	DG [1SS]	-	5.77	5.82	-	-	-	-	-	-
	DG [2SS]	-	3.49	3.73	-	-	-	-	-	-
5~6	DG [1SS]	-	-	-	-	-	5.58	5.33	5.93	5.02
	DG [2SS]	-	-	-	-	-	5.48	5.28	5.85	4.31

Note 1: The EUT has eleven antennas.

Note 2: The composite gain is derived as KDB 662911 D03 v01 which was used as directional gain. For more detail information, please refer to the Antenna Pattern Report AP462705.

For 2.4GHz function:

For IEEE 802.11 b/g/n/VHT/ax/be mode (1TX/2RX) (Radio 1)

Ant. 1 (port 1) could transmit/receive.

For IEEE 802.11 b/g/n/VHT/ax/be mode (2TX/2RX) (Radio 1)

Ant. 1 (port 1) and Ant. 2 (port 2) could transmit/receive simultaneously.

For b20, g20 mode (1TX/1RX) (Radio 1_Scan)

Ant. 7 (port 1) could transmit/receive.

For 5GHz function:

For IEEE 802.11 a/n/ac/ax/be mode (1TX/2RX) (Radio 2)

Ant. 1 (port 1) could transmit/receive.

For IEEE 802.11 a/n/ac/ax/be mode (2TX/2RX) (Radio 2)

Ant. 1 (port 1) and Ant. 2 (port 2) could transmit/receive simultaneously.

For IEEE 802.11 a/n/ac/ax/be mode (1TX/2RX) (Radio 3)

Ant. 3 (port 1) could transmit/receive.

For IEEE 802.11 a/n/ac/ax/be mode (2TX/2RX) (Radio 3)

Ant. 3 (port 1) and Ant. 4 (port 2) could transmit/receive simultaneously.

For a20, a40, a80, a160 (1TX/1RX) (Radio 1_Scan)

Ant. 7 (port 1) could transmit/receive.

For BT function:
For IEEE 802.15.1 Bluetooth mode (1TX/1RX) (Chain 0)
Ant. 8 (port 1) could transmit/receive.
For IEEE 802.15.1 Bluetooth mode (1TX/2RX) (Chain 1)
Ant. 9 (port 1) or Ant. 10 (port 2) could transmit/receive
Support diversity function and pre-tested on each single chain, the worst case was Ant. 10 (port 2) and it was recorded in this test report.
For 6GHz function:
For IEEE 802.11 a/ax/be mode (1TX/2RX) (Radio3)
Ant. 5 (port 1) could transmit/receive.
For IEEE 802.11 a/ax/be mode (2TX/2RX) (Radio 3)
Ant. 5 (port 1) and Ant. 6 (port 2) could transmit/receive simultaneously.
For 11a20, 11a40, 11a80, 11a160 (1TX/1RX) (Radio 1_Scan)
Ant. 7 (port 1) could transmit/receive.

1.1.3 EUT Information

Operational Condition				
EUT Power Type	From AC Adapter / PoE			
EUT Function	☐	Outdoor AP	☒	Indoor AP
	☐	Fixed P2P AP	☐	Client
Beamforming Function	☒	With beamforming	☐	Without beamforming
TPC Function	☒	With TPC Function	☐	Without TPC Function
Weather Band	☒	With 5600~5650MHz	☐	Without 5600~5650MHz
Resource Unit	☒	Full RU	☐	Partial RU
	☐	MRU(static preamble puncturing)	☐	MRU(dynamic preamble puncturing)

Type of EUT		
☒	Stand-alone	
☐	Combined (EUT where the radio part is fully integrated within another device)	
	Combined Equipment - Brand Name / Model No.:	…
☐	Plug-in radio (EUT intended for a variety of host systems)	
	Host System - Brand Name / Model No.:	
☐	Other:	

1.1.4 Mode Test Duty Cycle

Radio 1_Scan_1T1S

Mode	DC	DCF (dB)	T (s)	VBW (Hz)_1/T
a20_Nss1,(6Mbps)_1TX	0.547	2.62	128.281u	10k
a40_Nss1,(6Mbps)_1TX	0.538	2.69	128.281u	10k
a80_Nss1,(6Mbps)_1TX	0.539	2.68	129.688u	10k
a160_Nss1,(6Mbps)_1TX	0.538	2.69	129.688u	10k

Note. If DC < 0.98, the DCF was added while measuring Output power and PSD.

1.1.5 Table for Permissive Change

This product is an extension of original one reported under Sporton project number: FR462705AN
Below is the table for the change of the product with respect to the original one.

Modifications	Performance Checking
Scan radio straddle channel was added.	Emission Bandwidth, Maximum Conducted Output Power, Peak Power Spectral Density and Unwanted Emissions above 1GHz were evaluated.

1.2 Testing Applied Standards

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

- 47 CFR FCC Part 15
- ANSI C63.10-2013
- KDB 789033 D02 v02r01

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

- KDB 662911 D01 v02r01
- KDB 662911 D03 v01
- KDB 414788 D01 v01r01

1.3 Testing Location Information

Test Lab.：Sporton International Inc. Hsinhua Laboratory				
☒ Hsinhua **(TAF:** 3785**)**	**ADD:** No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.)			
	TEL: 886-3-327-3456		**FAX:** 886-3-327-0973	
Test site Designation No. TW3785 with FCC.				
Test Condition	**Test Site No.**	**Test Engineer**	**Test Environment**	**Test Date**
RF Conducted (Radio 1_Scan_ Straddle Channel)	TH07-HY	Johnny Yu	23.4~23.8°C / 53~60%	08/May/2025
☒ Wenhua 3rd. **(TAF:** 3785**)**	**ADD:** No. 58, Aly. 75, Ln. 564, Wenhua 3rd Rd., Guishan Dist. Taoyuan City 333, Taiwan (R.O.C.)			
	TEL: 886-3-327-0868			
Test site Designation No. TW0036 with FCC.				
Test Condition	**Test Site No.**	**Test Engineer**	**Test Environment**	**Test Date**
Radiated (Radio 1_Scan_ Straddle Channel)	03CH25-HY	Rian Chung	19.6~20.1°C / 52~55%	08/May/2025~09/May/2025

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**
Emission Bandwidth	3 MHz	Confidence levels of 95%
Maximum Conducted Output Power	2 dB	Confidence levels of 95%
Power Spectral Density	2 dB	Confidence levels of 95%
Unwanted Emissions	4.8 dB	Confidence levels of 95%
Temperature	0.41 °C	Confidence levels of 95%
Humidity	3.4 %	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

Test Software Version	PuTTY Release 0.62

Radio 1_Scan_1T1S

Mode	Power Setting
a20_Nss1,(6Mbps)_1TX	-
5720MHz Straddle 5.47-5.725GHz	72
5720MHz Straddle 5.725-5.85GHz	72
a40_Nss1,(6Mbps)_1TX	-
5710MHz Straddle 5.47-5.725GHz	63
5710MHz Straddle 5.725-5.85GHz	63
a80_Nss1,(6Mbps)_1TX	-
5690MHz Straddle 5.47-5.725GHz	71
5690MHz Straddle 5.725-5.85GHz	71

2.2 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests	
Tests Item	Emission Bandwidth Maximum Conducted Output Power Peak Power Spectral Density
Test Condition	Conducted measurement at transmit chains

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		
1	PoE Mode		
Operating Mode > 1GHz	CTX		
Orthogonal Planes of EUT	**X Plane**	**Y Plane**	**Z Plane**
			
Worst Planes of EUT	V (Radio 1_Scan)		

The Worst Case Mode for Following Conformance Tests	
Tests Item	Simultaneous Transmission Analysis
Operating Mode	CTX
1	Radio 1:2.4G+Radio 2:5G Full+Radio 3:6G Full+Radio 1:Scan 2.4G+ Radio 1:Scan 5G + Radio 1:Scan 6G+Bluetooth(chain 0)
2	Radio 1:2.4G+Radio 2:5G High(Band3/4)+Radio 3:5G Low(Band1/2)+Radio 1:Scan 2.4G+Radio 1:Scan 5G+Radio 1:Scan 6G+Bluetooth(chain 0)
3	Radio 1:2.4G+Radio 2:5G Full+Radio 3:6G Full+Radio 1:Scan 2.4G+Radio 1:Scan 5G+Radio 1:Scan 6G+Bluetooth(chain 1)
4	Radio 1:2.4G+Radio 2:5G High(Band3/4)+Radio 3:5G Low(Band1/2)+Radio 1:Scan 2.4G+Radio 1:Scan 5G+Radio 1:Scan 6G+Bluetooth(chain1)
Refer to Sporton Test Report No.: FA462705-10AA for Co-location RF Exposure Evaluation.	

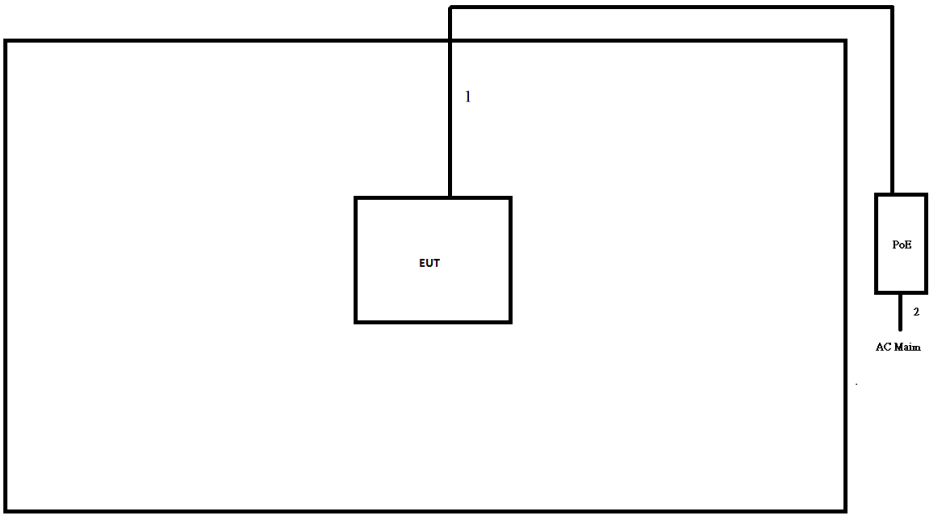
2.3 Support Equipment

Support Equipment – Conducted					
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**	**Remark**
1	Notebook	DELL	E5410	-	-
2	Adapter for NB	DELL	HA65NM130	-	-
3	Adapter	Powertron	PA1045-120HIB300	-	Provided by Customer

Support Equipment – Radiated					
No.	**Equipment**	**Brand Name**	**Model Name**	**FCC ID**	**Remark**
1	RJ-45 Cable	Power sync	CLN7VAF0015A	-	-
2	PoE	PHIHONG	POE60U-1BT-X	-	Provided by Customer/ Remote

2.4 Test Setup Diagram

Test Setup Diagram - Radiated Test (PoE Mode)



Item	Connection	Shielded	Length(m)	Remark
1	RJ-45 Cable	No	3.0	-
2	AC Power Cable	No	1.8	-

3 Transmitter Test Result

3.1 Emission Bandwidth

3.1.1 Emission Bandwidth Limit

Emission Bandwidth Limit
UNII Devices
☒ For the 5.15-5.25 GHz band, N/A
☒ For the 5.25-5.35 GHz band, N/A
☒ For the 5.47-5.725 GHz band, N/A
☒ For the 5.725-5.85 GHz band, 6 dB emission bandwidth ≥ 500kHz.

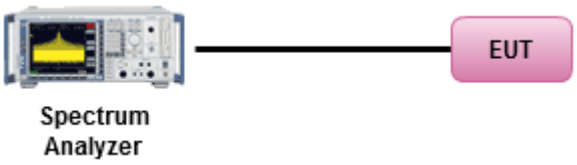
3.1.2 Measuring Instruments

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

3.1.3 Test Procedures

Test Method		
▪	For the emission bandwidth shall be measured using one of the options below:	
	☒	Refer as KDB 789033, clause C for EBW and clause D for OBW measurement.
	☐	Refer as ANSI C63.10, clause 6.9.3 for occupied bandwidth testing.
	☐	Refer as IC RSS-Gen, clause 6.7 for bandwidth testing.

3.1.4 Test Setup

Emission Bandwidth


3.1.5 Test Result of Emission Bandwidth

Refer as Appendix A

3.2 Maximum Conducted Output Power

3.2.1 Maximum Conducted Output Power Limit

Maximum Conducted Output Power Limit	
UNII Devices	
☒ For the 5.15-5.25 GHz band:	
	▪ Outdoor AP: the maximum conducted output power (P_{Out}) shall not exceed 1 W. If G_{TX} > 6 dBi, then P_{Out} = 30 – (G_{TX} – 6). e.i.r.p. at any elevation angle above 30 degrees ≤ 125mW [21dBm]
	▪ Indoor AP: the maximum conducted output power (P_{Out}) shall not exceed 1 W. If G_{TX} > 6 dBi, then P_{Out} = 30 – (G_{TX} – 6)
	▪ Point-to-point AP: the maximum conducted output power (P_{Out}) shall not exceed 1 W. If G_{TX} > 23 dBi, then P_{Out} = 30 – (G_{TX} – 23).
	▪ Mobile or Portable Client: the maximum conducted output power (P_{Out}) shall not exceed 250 mW. If G_{TX} > 6 dBi, then P_{Out} = 24 – (G_{TX} – 6).
☒ For the 5.25-5.35 GHz band, the maximum conducted output power (P_{Out}) shall not exceed 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. If G_{TX} > 6 dBi, then P_{Out} = 24 – (G_{TX} – 6).	
☒ For the 5.47-5.725 GHz band, the maximum conducted output power (P_{Out}) shall not exceed 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. If G_{TX} > 6 dBi, then P_{Out} = 24 – (G_{TX} – 6).	
☒ For the 5.725-5.85 GHz band:	
	▪ Point-to-multipoint systems (P2M): the maximum conducted output power (P_{Out}) shall not exceed 1 W. If G_{TX} > 6 dBi, then P_{Out} = 30 – (G_{TX} – 6).
	▪ Point-to-point systems (P2P): the maximum conducted output power (P_{Out}) shall not exceed 1 W.
P_{Out} = maximum conducted output power in dBm, **G_{TX}** = the maximum transmitting antenna directional gain in dBi.	

3.2.2 Measuring Instruments

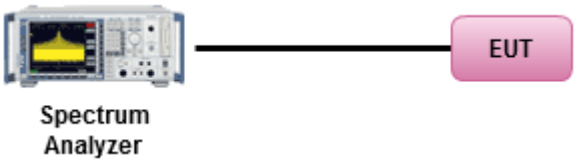
Refer a test equipment and calibration data table in this test report.

3.2.3 Test Procedures

Test Method	
▪ Maximum Conducted Output Power	
	Duty cycle ≥ 98%
	☐ Refer as KDB 789033, clause E Method SA-2 (spectral trace averaging).
	Duty cycle < 98%
	☒ Refer as KDB 789033, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)
	Wideband RF power meter and average over on/off periods with duty factor
	☐ Refer as KDB 789033, clause E Method PM (using an RF average power meter).
▪ For conducted measurement.	
	▪ If the EUT supports multiple transmit chains using options given below: Refer as KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.
	▪ If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \ldots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$

3.2.4 Test Setup

For Straddle channel

RF Output Power (Spectrum Analyzer)


3.2.5 Test Result of Maximum Conducted Output Power

Refer as Appendix B

3.3 Peak Power Spectral Density

3.3.1 Peak Power Spectral Density Limit

Peak Power Spectral Density Limit	
UNII Devices	
☒ For the 5.15-5.25 GHz band:	
	▪ Outdoor AP: the peak power spectral density (PPSD) shall not exceed 17dBm/MHz. If G_{TX} > 6 dBi, then P_{Out} = 17 – (G_{TX} – 6).
	▪ Indoor AP: the peak power spectral density (PPSD) shall not exceed 17dBm/MHz. If G_{TX} > 6 dBi, then P_{Out} = 17 – (G_{TX} – 6).
	▪ Point-to-point AP: the peak power spectral density (PPSD) shall not exceed 17dBm/MHz. If G_{TX} > 23 dBi, then P_{Out} = 17 – (G_{TX} – 23).
	▪ Mobile or Portable Client: the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If G_{TX} > 6 dBi, then PPSD= 11 – (G_{TX} – 6)..
☒ For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If G_{TX} > 6 dBi, then PPSD= 11 – (G_{TX} – 6).	
☒ For the 5.47-5.725 GHz band, the peak power spectral density (PPSD) ≤ 11 dBm/MHz. If G_{TX} > 6 dBi, then PPSD= 11 – (G_{TX} – 6).	
☒ For the 5.725-5.85 GHz band:	
	▪ Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz. If G_{TX} > 6 dBi, then PPSD= 30 – (G_{TX} – 6).
	▪ Point-to-point systems (P2P): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz.
PPSD = peak power spectral density that he same method as used to determine the conducted output power shall be used to determine the power spectral density. And power spectral density in dBm/MHz **G_{TX}** = the maximum transmitting antenna directional gain in dBi.	

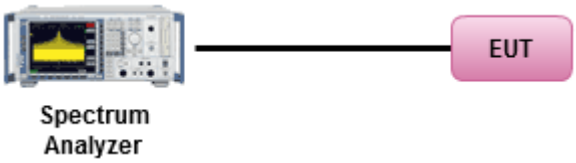
3.3.2 Measuring Instruments

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

3.3.3 Test Procedures

Test Method		
▪ Peak power spectral density procedures that the same method as used to determine the conducted output power shall be used to determine the peak power spectral density and use the peak search function on the spectrum analyzer to find the peak of the spectrum. For the peak power spectral density shall be measured using below options:		
	☐ Refer as KDB 789033, F)5) power spectral density can be measured using resolution bandwidths < 1 MHz provided that the results are integrated over 1 MHz bandwidth	
	Duty cycle ≥ 98%	
	☐ Refer as KDB 789033, clause E Method SA-2 (spectral trace averaging).	
	Duty cycle < 98%	
	☒ Refer as KDB 789033, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)	
▪ For conducted measurement.		
	▪ If the EUT supports multiple transmit chains using options given below:	
		▪ Measure and sum the spectra across the outputs. Refer as KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.
	▪	If multiple transmit chains, EIRP PPSD calculation could be following as methods: $PPSD_{total} = PPSD_1 + PPSD_2 + \ldots + PPSD_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = PPSD_{total} + DG$

3.3.4 Test Setup

Power Spectral Density


3.3.5 Test Result of Peak Power Spectral Density

Refer as Appendix C

3.4 Unwanted Emissions

3.4.1 Transmitter Radiated 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.

Un-restricted band emissions above 1GHz Limit	
Operating Band	**Limit**
5.15 - 5.25 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.25 - 5.35 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.47 - 5.725 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.725 - 5.85 GHz	5.650-5700 GHz: e.i.r.p. -27 ~ 10 dBm [68.2 ~ 105.2 dBuV/m@3m] 5.700-5720 GHz: e.i.r.p. 10 ~ 15.6 dBm [105.2 ~ 110.8 dBuV/m@3m] 5.720-5725 GHz: e.i.r.p. 15.6 ~ 27 dBm [110.8 ~ 122.2 dBuV/m@3m] 5.850-5.855 GHz: e.i.r.p. 27 ~ 15.6 dBm [122.2 ~ 110.8 dBuV/m@3m] 5.855-5.875 GHz: e.i.r.p. 15.6 ~ 10 dBm [110.8 ~ 105.2 dBuV/m@3m] 5.875-5.925 GHz: e.i.r.p. 10 ~ -27 dBm [105.2 ~ 68.2dBuV/m@3m] Other un-restricted band: e.i.r.p. -27 dBm [68.2 dBuV/m@3m]

Note 1: 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).

3.4.2 Measuring Instruments

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

3.4.3 Test Procedures

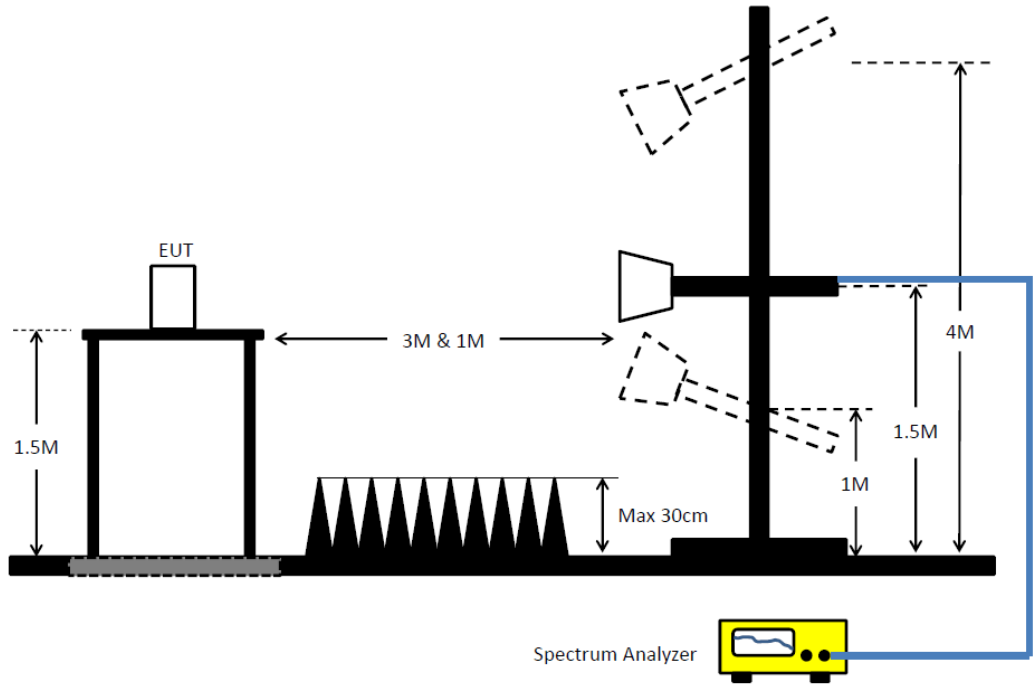
Test Method
▪ Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 m for frequencies 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).
▪ The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].
▪ For the transmitter unwanted emissions shall be measured using following options below:
▪ Refer as KDB 789033, clause G)2) for unwanted emissions into non-restricted bands.
▪ Refer as KDB 789033, clause G)1) for unwanted emissions into restricted bands.
☒ Refer as KDB 789033, G)6) Method VB (ANSI C63.10, clause 4.1.4.2.3), Reduced VBW.
☒ Refer as KDB 789033, clause G)5) (ANSI C63.10, clause 4.1.4.2.2), measurement procedure peak limit.
▪ For radiated measurement.
▪ Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m.
▪ Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m.
▪ Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz.
▪ The any unwanted emissions level shall not exceed the fundamental emission level.
▪ All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.
▪ Use the following spectrum analyzer settings:
▪ Set RBW=100 kHz for f < 1 GHz; VBW=3 * RBW; Sweep = auto; Detector function = peak; Trace = max hold.
▪ Set RBW = 1 MHz, VBW= 3MHz for f ≥ 1 GHz for peak measurement. For average measurement, refer as 1.1.4.
▪ KDB 414788 Open-Field Test Sites and Chamber Correlation Justification.
▪ Based on FCC 15.31(f)(2): measurements may be performed at a distance closer than that specified in regulations; however, an attempt should be made to avoid making measurements in the near field.
▪ Open-field site and chamber correlation testing had been performed and chamber measured test result is the worst case test result.

3.4.4 Measurement Results Calculation

The measured Level is calculated using:
Corrected Reading: Raw(Read Level) + AF(Antenna Factor) + CL(Cable Loss) - PA(Preamp Factor)

3.4.5 Test Setup

Above 1GHz



3.4.6 Test Result of Transmitter Unwanted Emissions

Refer as Appendix D

4 Test Equipment and Calibration Data

Instrument for Conducted Test

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
Signal Analyzer	R&S	FSV 40	101029	10Hz~40GHz	28/Oct/2024	27/Oct/2025
SMB100A Signal Generator	R&S	SMB100A	181147	100kHz~40GHz	16/Oct/2024	15/Oct/2025
Power Meter	Anritsu	ML2495A	1124009	300MHz~40GHz	28/Mar/2025	27/Mar/2026
Pulse Sensor	Anritsu	MA2411B	1027452	300MHz~40GHz	28/Mar/2025	27/Mar/2026
SENSE-15407_NII	Sporton	V5.11.23	N/A	N/A	N/A	N/A

Instrument for Radiated Test (03CH25-HY)

Instrument	Manufacturer /Brand	Model No.	Serial No.	Spec.	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH25-HY	1GHz~18GHz 3m	08/Aug/2024	07/Aug/2025
Signal Analyzer	ROHDE& SCHWARZ	FSV3044	101410	10Hz~44GHz	18/Nov/2024	17/Nov/2025
Double Ridged Guide Horn Antenna	SCHWARZBECK	BBHA 9120 D	2876	1GHz~18GHz	11/Jul/2024	10/Jul/2025
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	1248	18GHz~40GHz	04/Oct/2024	03/Oct/2025
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA 9170154	18GHz~40GHz	04/Jun/2024	03/Jun/2025
RF Cable	HUBER+ SUHNER	SUOFLEX 104	CB007	1GHz~40GHz	13/Feb/2025	14/Feb/2026
Preamplifier	SGH	PRAMP 118-H	20230515-3	1GHz~18GHz	24/May/2024	23/May/2025
Preamplifier	EMCI	EM01G18G	60940	1GHz~18GHz	22/Oct/2024	21/Oct/2025
Amplifier	EM	EM18G40GA	60874	18GHz ~ 40GHz	18/Apr/2025	17/Apr/2026
SENSE-15407-NII	Sporton	V5.11.23	NA	NA	NA	NA

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
5.47-5.725GHz	-	-	-	-	-
a20_Nss1,(6Mbps)_1TX	23.79M	14.708M	14M7D1D	23.79M	14.708M
a40_Nss1,(6Mbps)_1TX	52.745M	34.423M	34M4D1D	52.745M	34.423M
a80_Nss1,(6Mbps)_1TX	102.225M	73.688M	73M7D1D	102.225M	73.688M
5.725-5.85GHz	-	-	-	-	-
a20_Nss1,(6Mbps)_1TX	3.16M	10.815M	10M8D1D	3.16M	10.815M
a40_Nss1,(6Mbps)_1TX	3.16M	22.549M	22M5D1D	3.16M	22.549M
a80_Nss1,(6Mbps)_1TX	3.16M	34.503M	34M5D1D	3.16M	34.503M

Max-N dB = Maximum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
Max-OBW = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth for 5.725-5.85GHz band / Maximum 26dB down bandwidth for other band;
Min-OBW = Minimum 99% occupied bandwidth

Result

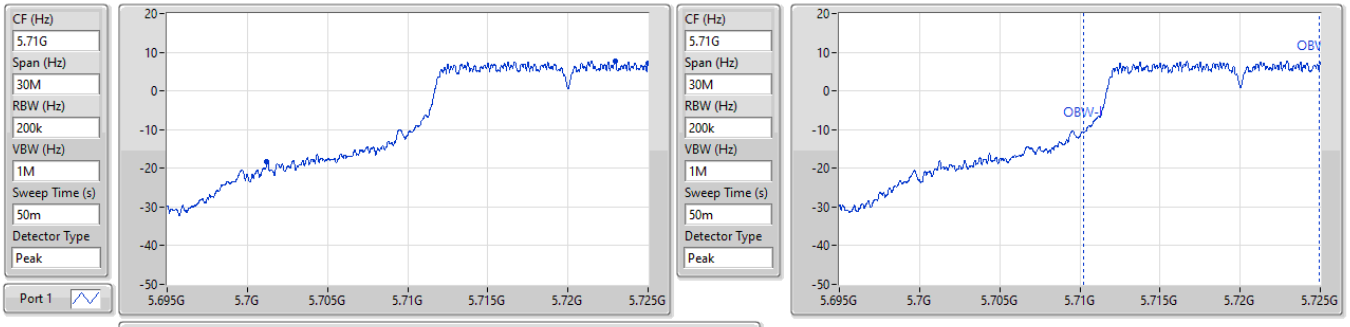
Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
a20_Nss1,(6Mbps)_1TX	-	-	-	-
5720MHz Straddle 5.47-5.725GHz	Pass	Inf	23.79M	14.708M
5720MHz Straddle 5.725-5.85GHz	Pass	500k	3.16M	10.815M
a40_Nss1,(6Mbps)_1TX	-	-	-	-
5710MHz Straddle 5.47-5.725GHz	Pass	Inf	52.745M	34.423M
5710MHz Straddle 5.725-5.85GHz	Pass	500k	3.16M	22.549M
a80_Nss1,(6Mbps)_1TX	-	-	-	-
5690MHz Straddle 5.47-5.725GHz	Pass	Inf	102.225M	73.688M
5690MHz Straddle 5.725-5.85GHz	Pass	500k	3.16M	34.503M

Port X-N dB = Port X 6dB down bandwidth for 5.725-5.85GHz band / 26dB down bandwidth for other band
Port X-OBW = Port X 99% occupied bandwidth

5.47-5.725GHz_a20_Nss1,(6Mbps)_1TX **EBW**

5720MHz Straddle 5.47-5.725GHz

08/05/2025

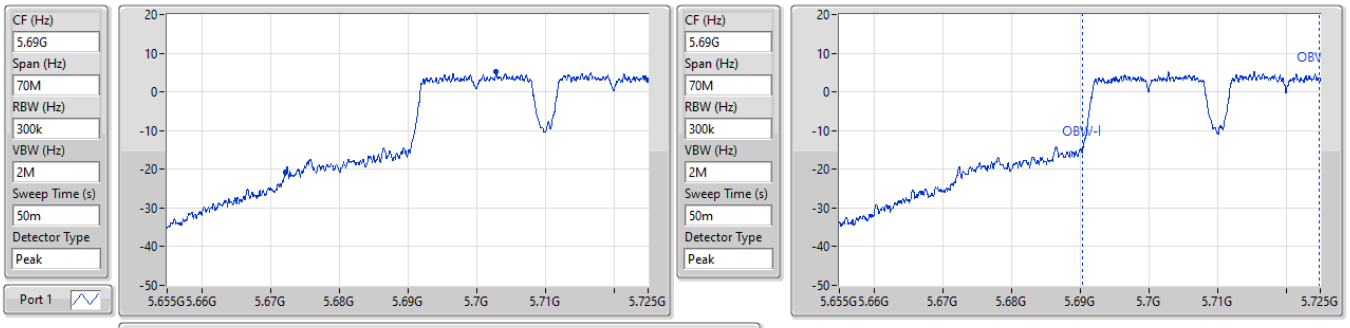


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
23.79M	5.70121G	5.725G	14.708M	5.71024G	5.724948G	Inf	1

5.47-5.725GHz_a40_Nss1,(6Mbps)_1TX **EBW**

5710MHz Straddle 5.47-5.725GHz

08/05/2025

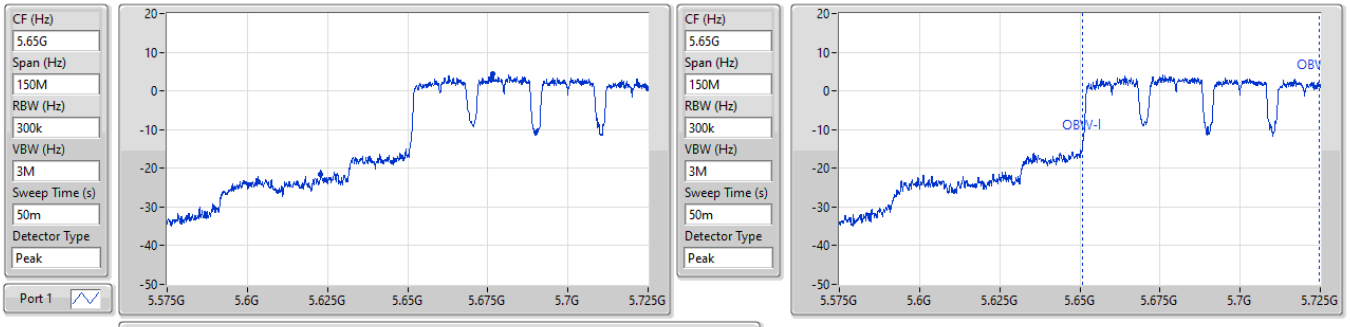


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
52.745M	5.672255G	5.725G	34.423M	5.69042G	5.724843G	Inf	1

5.47-5.725GHz_a80_Nss1,(6Mbps)_1TX **EBW**

5690MHz Straddle 5.47-5.725GHz

08/05/2025

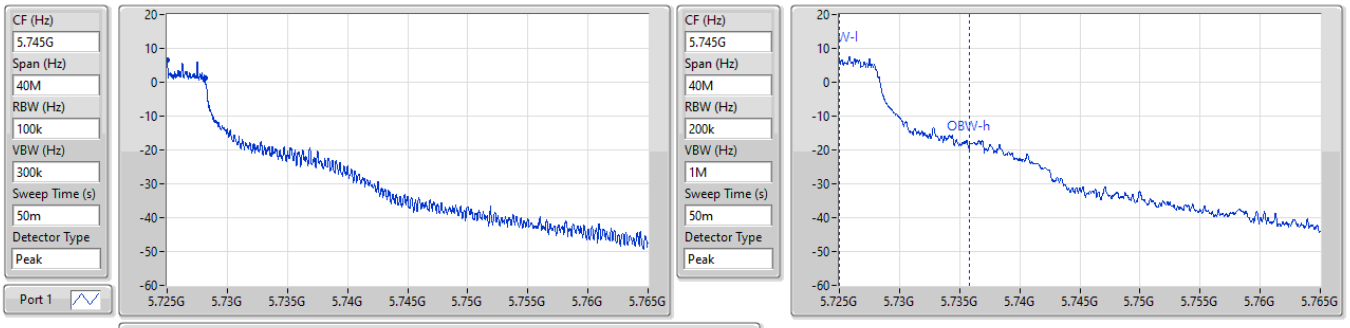


26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
102.225M	5.622775G	5.725G	73.688M	5.6509G	5.724588G	Inf	1

5.725-5.85GHz_a20_Nss1,(6Mbps)_1TX **EBW**

5720MHz Straddle 5.725-5.85GHz

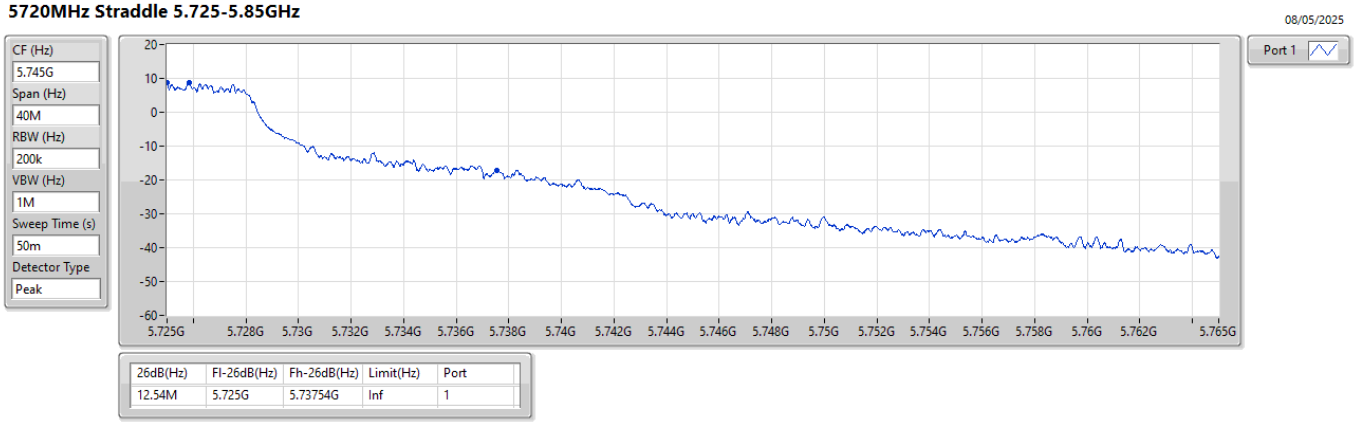
08/05/2025



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
3.16M	5.725G	5.72816G	10.815M	5.72501G	5.735825G	500k	1

5.725-5.85GHz_a20_Nss1,(6Mbps)_1TX **EBW**

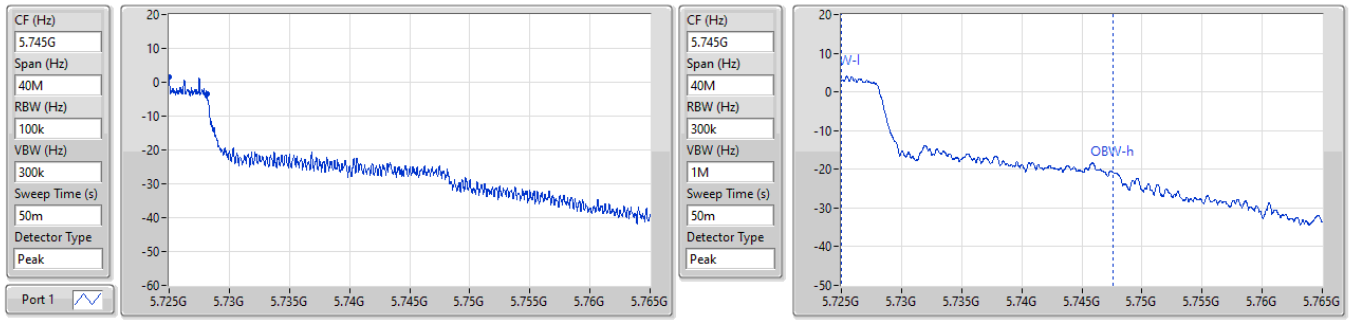
5720MHz Straddle 5.725-5.85GHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	Limit(Hz)	Port
12.54M	5.725G	5.73754G	Inf	1

5.725-5.85GHz_a40_Nss1,(6Mbps)_1TX **EBW**

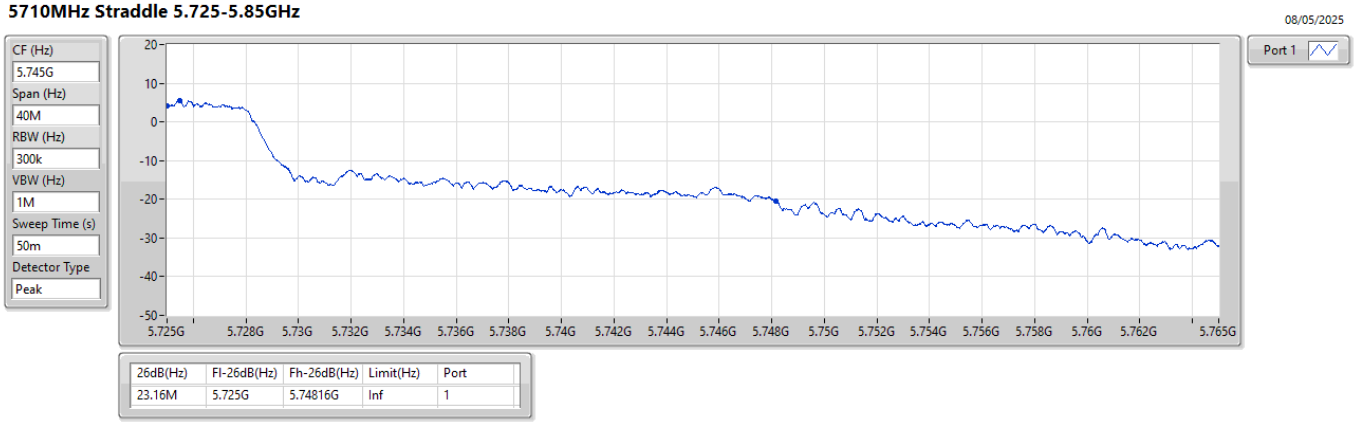
5710MHz Straddle 5.725-5.85GHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
3.16M	5.725G	5.72816G	22.549M	5.72501G	5.747559G	500k	1

5.725-5.85GHz_a40_Nss1,(6Mbps)_1TX **EBW**

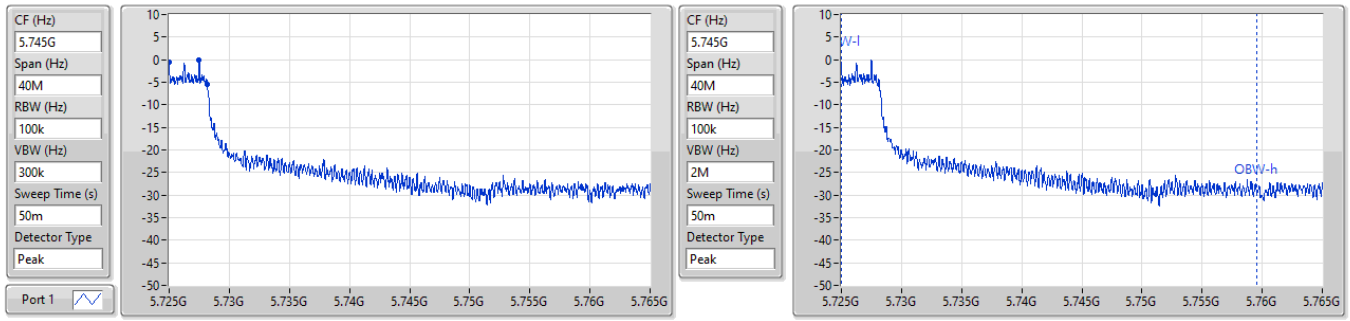
5710MHz Straddle 5.725-5.85GHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	Limit(Hz)	Port
23.16M	5.725G	5.74816G	Inf	1

5.725-5.85GHz_a80_Nss1,(6Mbps)_1TX **EBW**

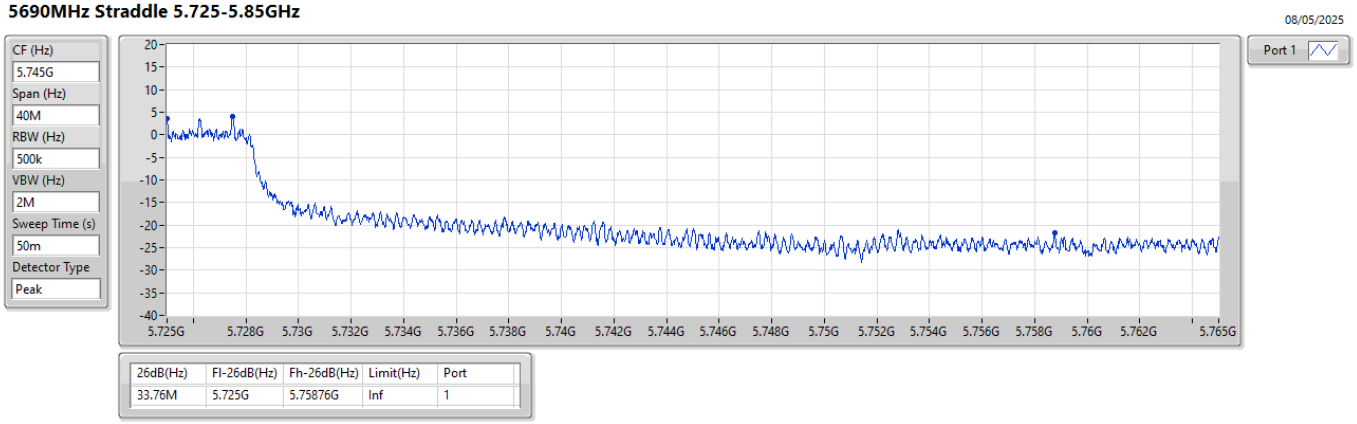
5690MHz Straddle 5.725-5.85GHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
3.16M	5.725G	5.72816G	34.503M	5.72501G	5.759513G	500k	1

5.725-5.85GHz_a80_Nss1,(6Mbps)_1TX EBW

5690MHz Straddle 5.725-5.85GHz



26dB(Hz)	Fl-26dB(Hz)	Fh-26dB(Hz)	Limit(Hz)	Port
33.76M	5.725G	5.75876G	Inf	1

Summary

Mode	Total Power (dBm)	Total Power (W)
5.47-5.725GHz	-	-
a20_Nss1,(6Mbps)_1TX	16.44	0.04406
a40_Nss1,(6Mbps)_1TX	15.64	0.03664
a80_Nss1,(6Mbps)_1TX	17.63	0.05794
5.725-5.85GHz	-	-
a20_Nss1,(6Mbps)_1TX	10.44	0.01107
a40_Nss1,(6Mbps)_1TX	5.76	0.00377
a80_Nss1,(6Mbps)_1TX	4.25	0.00266

Result

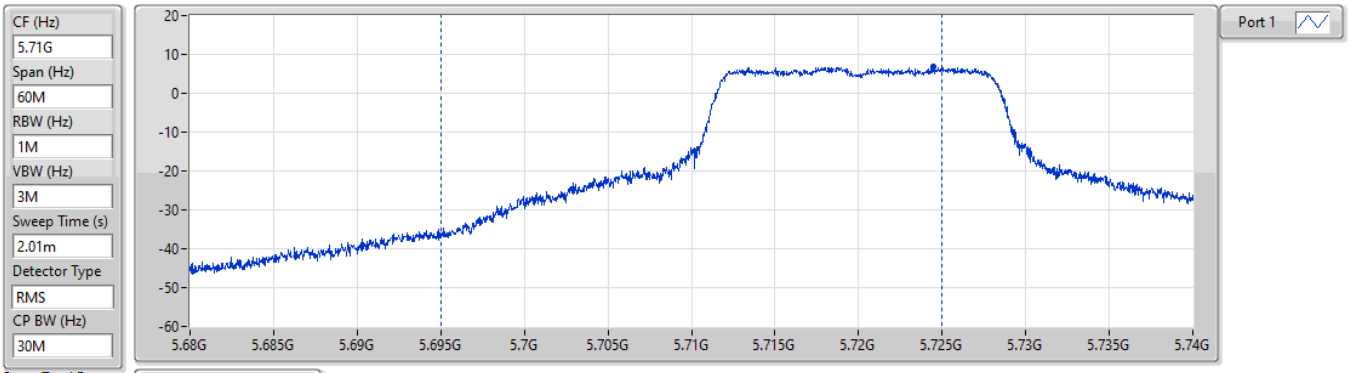
Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)
a20_Nss1,(6Mbps)_1TX	-	-	-	-	-
5720MHz Straddle 5.47-5.725GHz	Pass	3.41	16.44	16.44	23.98
5720MHz Straddle 5.725-5.85GHz	Pass	4.50	10.44	10.44	30.00
a40_Nss1,(6Mbps)_1TX	-	-	-	-	-
5710MHz Straddle 5.47-5.725GHz	Pass	3.41	15.64	15.64	23.98
5710MHz Straddle 5.725-5.85GHz	Pass	4.50	5.76	5.76	30.00
a80_Nss1,(6Mbps)_1TX	-	-	-	-	-
5690MHz Straddle 5.47-5.725GHz	Pass	3.41	17.63	17.63	23.98
5690MHz Straddle 5.725-5.85GHz	Pass	4.50	4.25	4.25	30.00

DG = Directional Gain; Port X = Port X output power
Inf = There's no restriction for the limit.

5.47-5.725GHz_a20_Nss1,(6Mbps)_1TX **AV Power**

5720MHz Straddle 5.47-5.725GHz_TX

08/05/2025

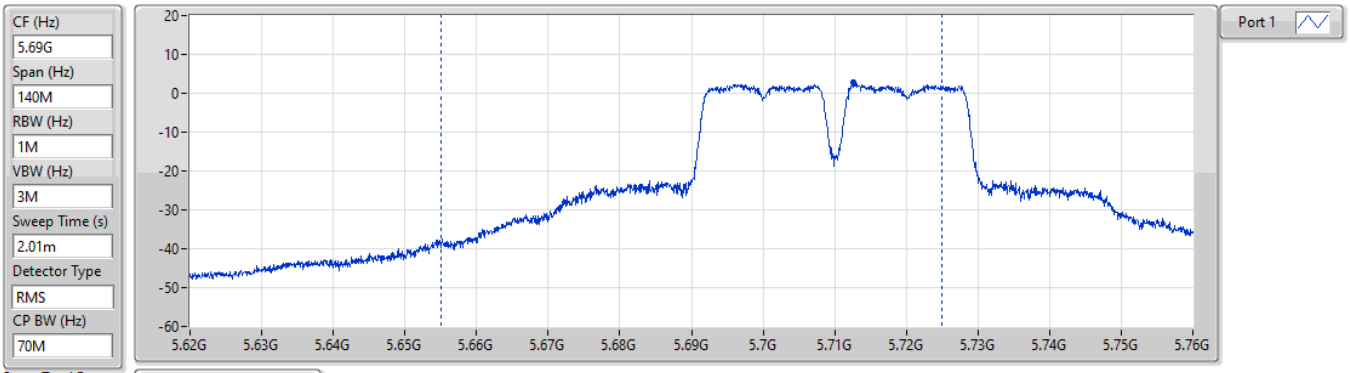


Sum(dBm)	P1(dBm)
16.44	16.44

5.47-5.725GHz_a40_Nss1,(6Mbps)_1TX **AV Power**

5710MHz Straddle 5.47-5.725GHz_TX

08/05/2025

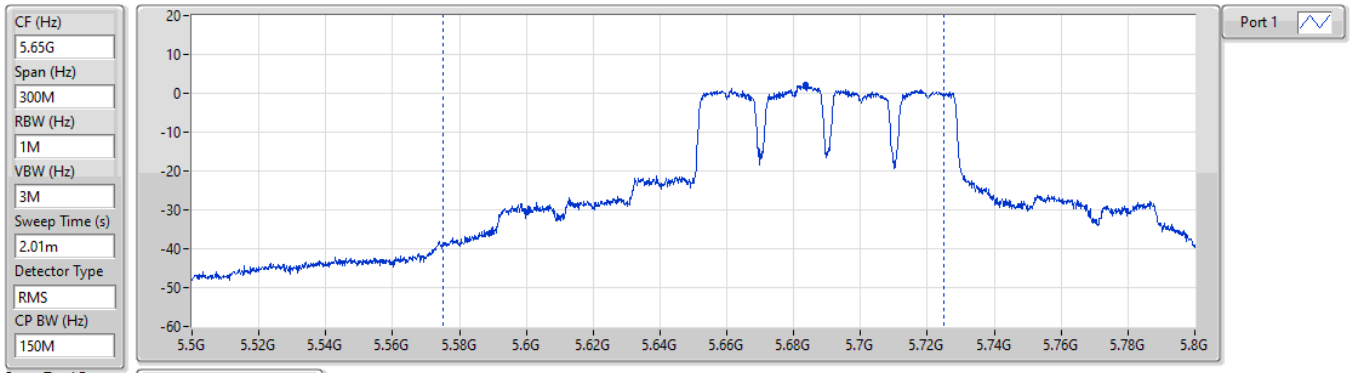


Sum(dBm)	P1(dBm)
15.64	15.64

5.47-5.725GHz_a80_Nss1,(6Mbps)_1TX **AV Power**

5690MHz Straddle 5.47-5.725GHz_TX

08/05/2025

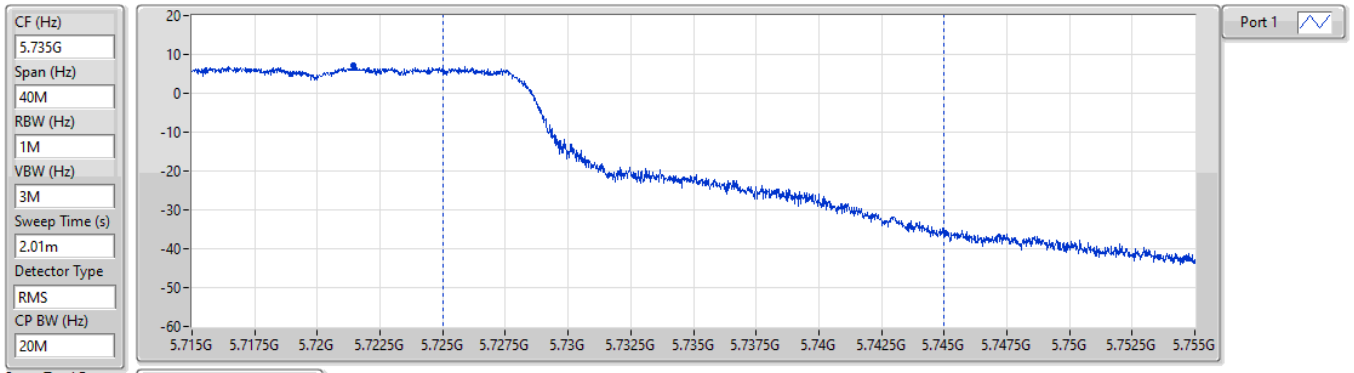


Sum(dBm)	P1(dBm)
17.63	17.63

5.725-5.85GHz_a20_Nss1,(6Mbps)_1TX **AV Power**

5720MHz Straddle 5.725-5.85GHz_TX

08/05/2025

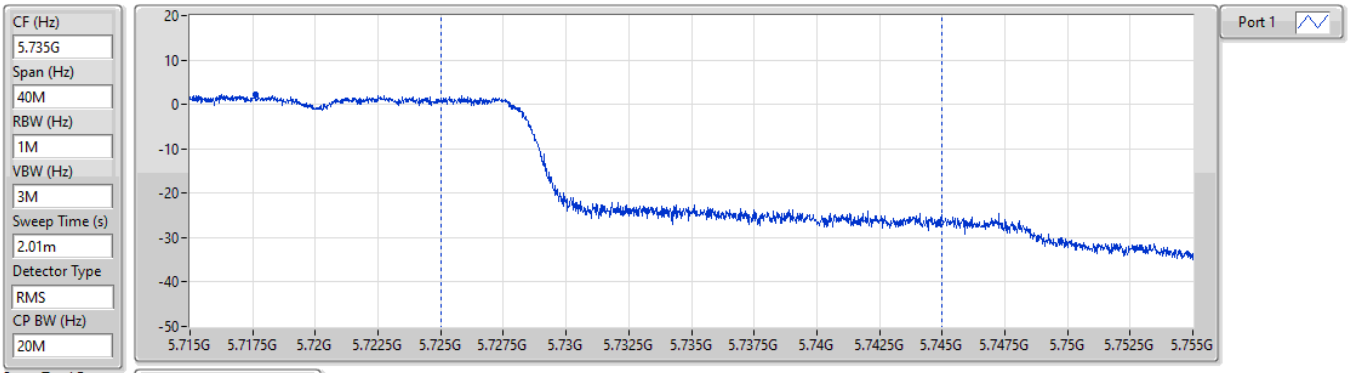


Sum(dBm)	P1(dBm)
10.44	10.44

5.725-5.85GHz_a40_Nss1,(6Mbps)_1TX **AV Power**

5710MHz Straddle 5.725-5.85GHz_TX

08/05/2025

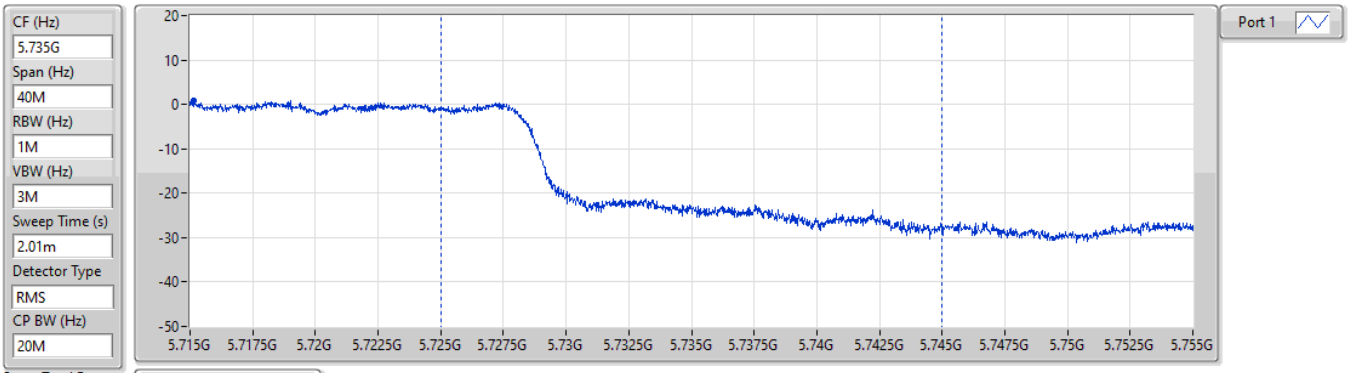


Sum(dBm)	P1(dBm)
5.76	5.76

5.725-5.85GHz_a80_Nss1,(6Mbps)_1TX **AV Power**

5690MHz Straddle 5.725-5.85GHz_TX

08/05/2025



Sum(dBm)	P1(dBm)
4.25	4.25

Summary

Mode	PD (dBm/RBW)
5.47-5.725GHz	-
a20_Nss1,(6Mbps)_1TX	4.81
a40_Nss1,(6Mbps)_1TX	0.32
a80_Nss1,(6Mbps)_1TX	-0.37
5.725-5.85GHz	-
a20_Nss1,(6Mbps)_1TX	3.22
a40_Nss1,(6Mbps)_1TX	-1.65
a80_Nss1,(6Mbps)_1TX	-3.02

RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band;

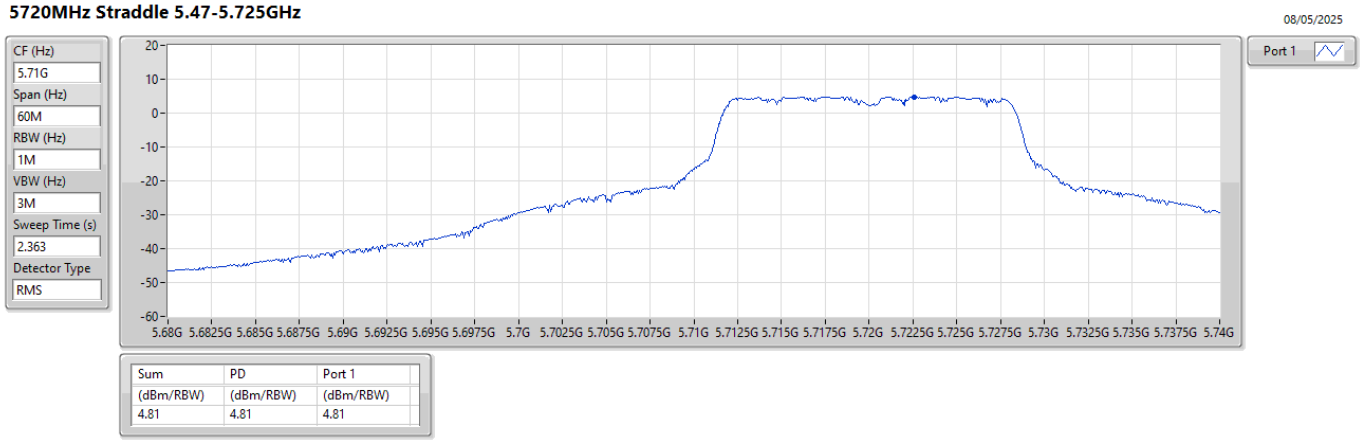
Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
a20_Nss1,(6Mbps)_1TX	-	-	-	-	-
5720MHz Straddle 5.47-5.725GHz	Pass	3.41	4.81	4.81	11.00
5720MHz Straddle 5.725-5.85GHz	Pass	4.50	3.22	3.22	30.00
a40_Nss1,(6Mbps)_1TX	-	-	-	-	-
5710MHz Straddle 5.47-5.725GHz	Pass	3.41	0.32	0.32	11.00
5710MHz Straddle 5.725-5.85GHz	Pass	4.50	-1.65	-1.65	30.00
a80_Nss1,(6Mbps)_1TX	-	-	-	-	-
5690MHz Straddle 5.47-5.725GHz	Pass	3.41	-0.37	-0.37	11.00
5690MHz Straddle 5.725-5.85GHz	Pass	4.50	-3.02	-3.02	30.00

DG = Directional Gain; RBW = 500kHz for 5.725-5.85GHz band / 1MHz for other band;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; Port X = Port X Power Density;
Inf = There's no restriction for the limit.

5.47-5.725GHz_a20_Nss1,(6Mbps)_1TX **PSD**

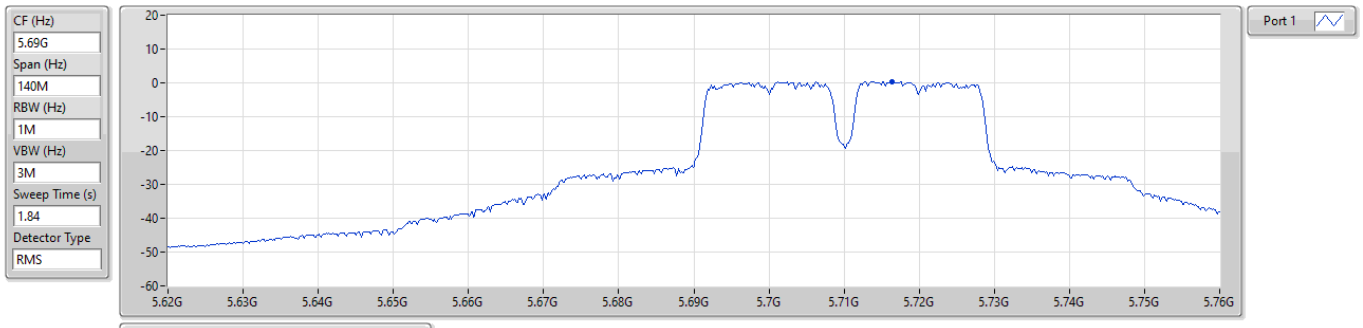
5720MHz Straddle 5.47-5.725GHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
4.81	4.81	4.81

5.47-5.725GHz_a40_Nss1,(6Mbps)_1TX **PSD**

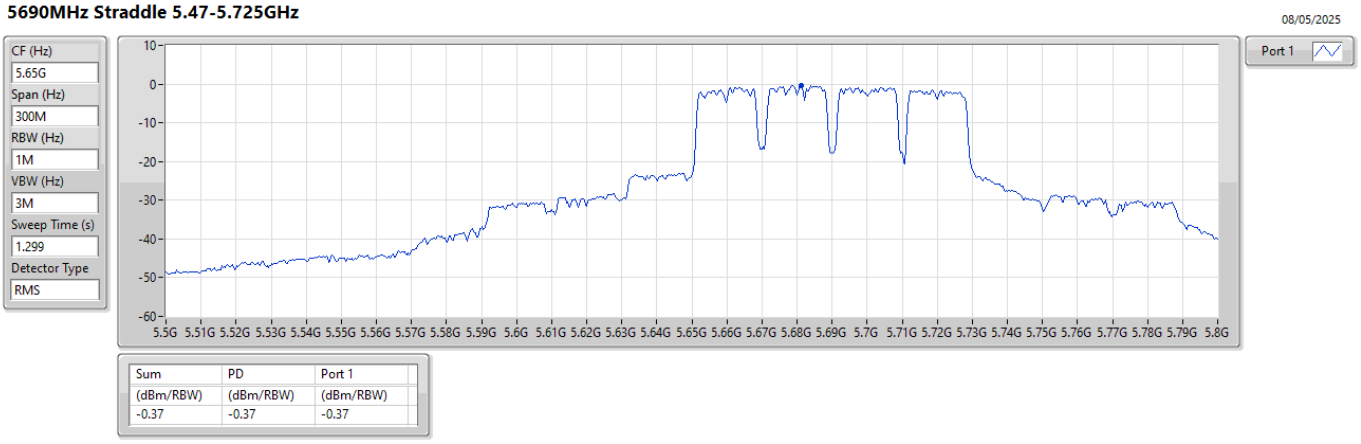
5710MHz Straddle 5.47-5.725GHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
0.32	0.32	0.32

5.47-5.725GHz_a80_Nss1,(6Mbps)_1TX **PSD**

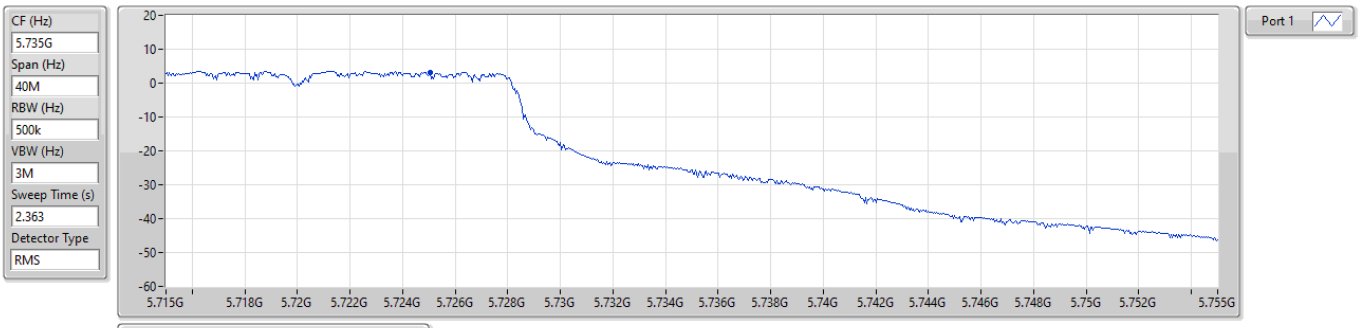
5690MHz Straddle 5.47-5.725GHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-0.37	-0.37	-0.37

5.725-5.85GHz_a20_Nss1,(6Mbps)_1TX **PSD**

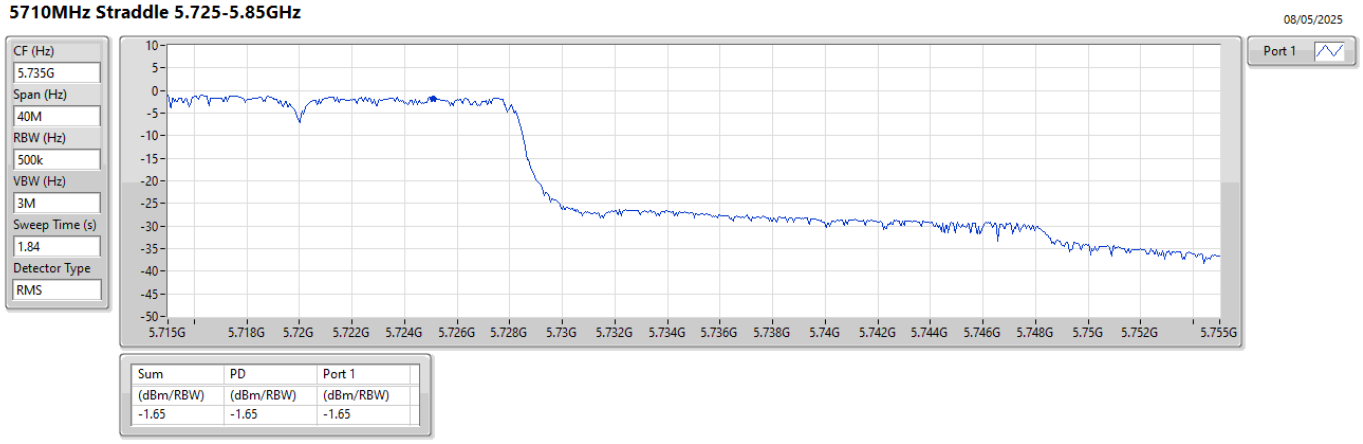
5720MHz Straddle 5.725-5.85GHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
3.22	3.22	3.22

5.725-5.85GHz_a40_Nss1,(6Mbps)_1TX **PSD**

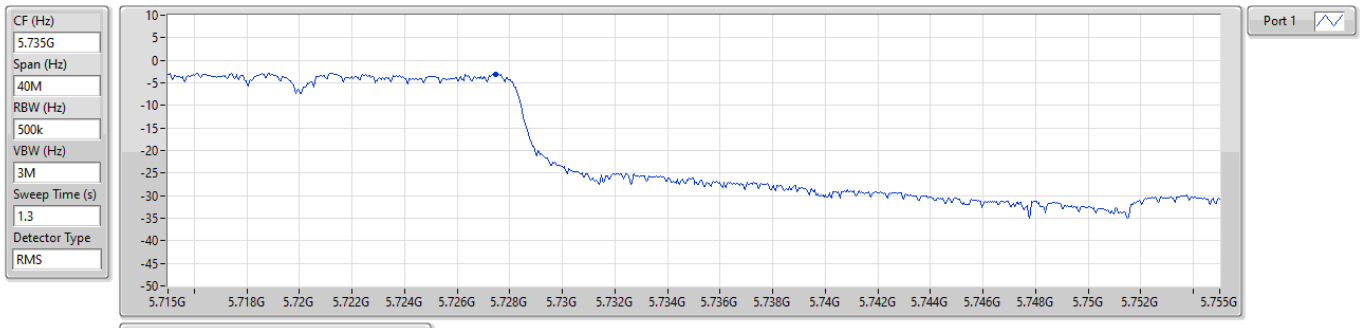
5710MHz Straddle 5.725-5.85GHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-1.65	-1.65	-1.65

5.725-5.85GHz_a80_Nss1,(6Mbps)_1TX **PSD**

5690MHz Straddle 5.725-5.85GHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-3.02	-3.02	-3.02

Summary

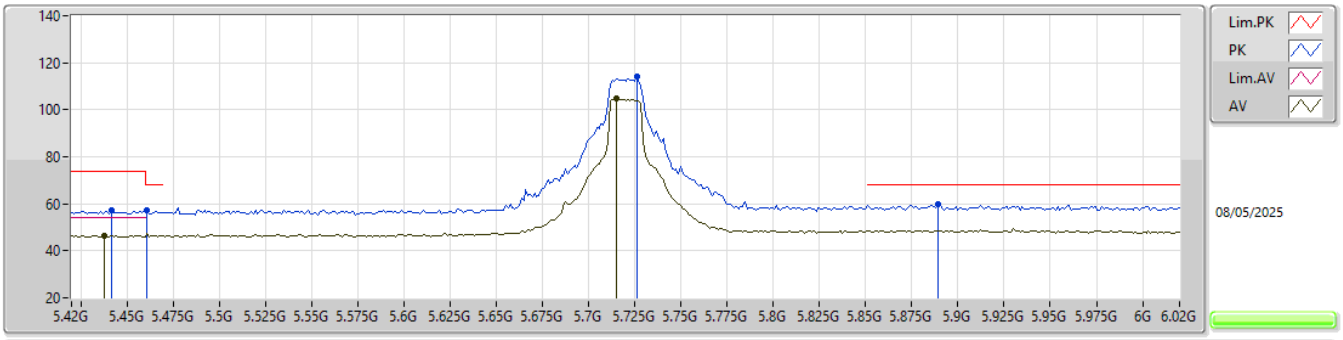
Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
5.47-5.725GHz	-	-	-	-	-	-	-	-	-	-
a20_Nss1,(6Mbps)_1TX	Pass	AV	5.438G	46.42	54.00	-7.58	3	Horizontal	343	1.77
a40_Nss1,(6Mbps)_1TX	Pass	AV	5.4328G	46.62	54.00	-7.38	3	Horizontal	343	1.76
a80_Nss1,(6Mbps)_1TX	Pass	PK	5.852G	63.35	68.20	-4.85	3	Horizontal	342	1.50

Result

Mode	Result	Type	Freq (Hz)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Dist (m)	Condition	Azimuth (°)	Height (m)
a20_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-	-	-	-
5720MHz Straddle 5.47-5.725GHz	Pass	AV	5.438G	46.42	54.00	-7.58	3	Horizontal	343	1.77
5720MHz Straddle 5.47-5.725GHz	Pass	AV	5.7152G	104.62	Inf	-Inf	3	Horizontal	343	1.77
5720MHz Straddle 5.47-5.725GHz	Pass	PK	5.4416G	57.00	74.00	-17.00	3	Horizontal	343	1.77
5720MHz Straddle 5.47-5.725GHz	Pass	PK	5.4608G	57.50	68.20	-10.70	3	Horizontal	343	1.77
5720MHz Straddle 5.47-5.725GHz	Pass	PK	5.726G	114.06	Inf	-Inf	3	Horizontal	343	1.77
5720MHz Straddle 5.47-5.725GHz	Pass	PK	5.8892G	59.57	68.20	-8.63	3	Horizontal	343	1.77
5720MHz Straddle 5.47-5.725GHz	Pass	AV	11.38464G	41.60	54.00	-12.40	3	Vertical	323	1.94
5720MHz Straddle 5.47-5.725GHz	Pass	PK	11.44128G	52.64	74.00	-21.36	3	Vertical	323	1.94
5720MHz Straddle 5.47-5.725GHz	Pass	AV	11.44032G	41.83	54.00	-12.17	3	Horizontal	266	2.18
5720MHz Straddle 5.47-5.725GHz	Pass	PK	11.4528G	53.02	74.00	-20.98	3	Horizontal	266	2.18
a40_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-	-	-	-
5710MHz Straddle 5.47-5.725GHz	Pass	AV	5.4328G	46.62	54.00	-7.38	3	Horizontal	343	1.76
5710MHz Straddle 5.47-5.725GHz	Pass	AV	5.7148G	100.54	Inf	-Inf	3	Horizontal	343	1.76
5710MHz Straddle 5.47-5.725GHz	Pass	PK	5.4556G	57.10	74.00	-16.90	3	Horizontal	343	1.76
5710MHz Straddle 5.47-5.725GHz	Pass	PK	5.4676G	57.21	68.20	-10.99	3	Horizontal	343	1.76
5710MHz Straddle 5.47-5.725GHz	Pass	PK	5.7256G	108.96	Inf	-Inf	3	Horizontal	343	1.76
5710MHz Straddle 5.47-5.725GHz	Pass	PK	5.9092G	59.94	68.20	-8.26	3	Horizontal	343	1.76
5710MHz Straddle 5.47-5.725GHz	Pass	AV	11.49648G	42.12	54.00	-11.88	3	Vertical	46	1.61
5710MHz Straddle 5.47-5.725GHz	Pass	PK	11.43824G	52.43	74.00	-21.57	3	Vertical	46	1.61
5710MHz Straddle 5.47-5.725GHz	Pass	AV	11.3816G	41.53	54.00	-12.47	3	Horizontal	205	1.27
5710MHz Straddle 5.47-5.725GHz	Pass	PK	11.43792G	52.79	74.00	-21.21	3	Horizontal	205	1.27
a80_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-	-	-	-
5690MHz Straddle 5.47-5.725GHz	Pass	AV	5.4584G	46.95	54.00	-7.05	3	Horizontal	342	1.50
5690MHz Straddle 5.47-5.725GHz	Pass	AV	5.6792G	99.07	Inf	-Inf	3	Horizontal	342	1.50
5690MHz Straddle 5.47-5.725GHz	Pass	PK	5.4572G	57.29	74.00	-16.71	3	Horizontal	342	1.50
5690MHz Straddle 5.47-5.725GHz	Pass	PK	5.4692G	57.61	68.20	-10.59	3	Horizontal	342	1.50
5690MHz Straddle 5.47-5.725GHz	Pass	PK	5.6636G	108.39	Inf	-Inf	3	Horizontal	342	1.50
5690MHz Straddle 5.47-5.725GHz	Pass	PK	5.852G	63.35	68.20	-4.85	3	Horizontal	342	1.50
5690MHz Straddle 5.47-5.725GHz	Pass	AV	11.43344G	41.59	54.00	-12.41	3	Vertical	299	2.81
5690MHz Straddle 5.47-5.725GHz	Pass	PK	11.34G	52.31	74.00	-21.69	3	Vertical	299	2.81
5690MHz Straddle 5.47-5.725GHz	Pass	AV	11.38064G	41.70	54.00	-12.30	3	Horizontal	214	1.37
5690MHz Straddle 5.47-5.725GHz	Pass	PK	11.41328G	52.29	74.00	-21.71	3	Horizontal	214	1.37

5.47-5.725GHz_a20_Nss1,(6Mbps)_1TX

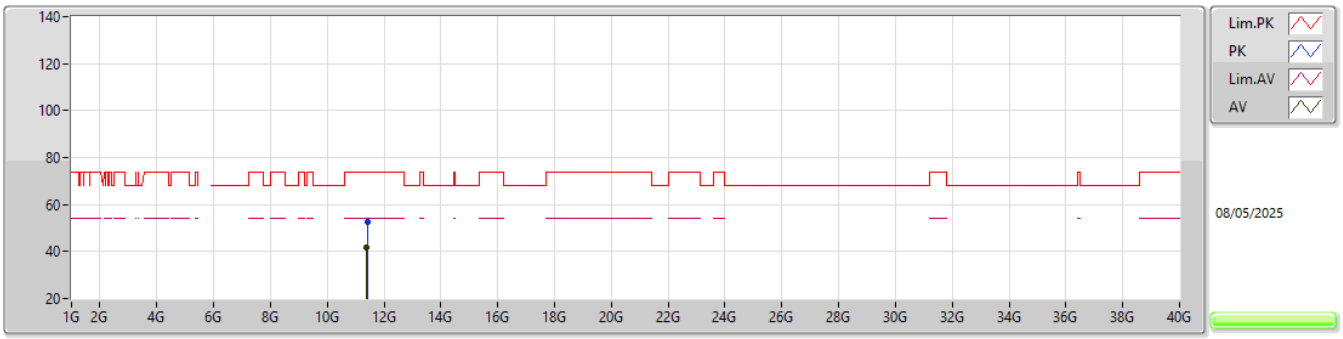
5720MHz Straddle 5.47-5.725GHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	(dBuV)	(dB)	(dB)	(dB)
AV	5.438G	46.42	54.00	-7.58	2.38	3	Horizontal	343	1.77	44.04	33.00	6.74	37.36
AV	5.7152G	104.62	Inf	-Inf	3.70	3	Horizontal	343	1.77	100.92	33.86	7.12	37.28
PK	5.4416G	57.00	74.00	-17.00	2.38	3	Horizontal	343	1.77	54.62	33.00	6.74	37.36
PK	5.4608G	57.50	68.20	-10.70	2.46	3	Horizontal	343	1.77	55.04	33.06	6.76	37.36
PK	5.726G	114.06	Inf	-Inf	3.77	3	Horizontal	343	1.77	110.29	33.90	7.15	37.28
PK	5.8892G	59.57	68.20	-8.63	4.11	3	Horizontal	343	1.77	55.46	34.46	6.86	37.21

5.47-5.725GHz_a20_Nss1,(6Mbps)_1TX

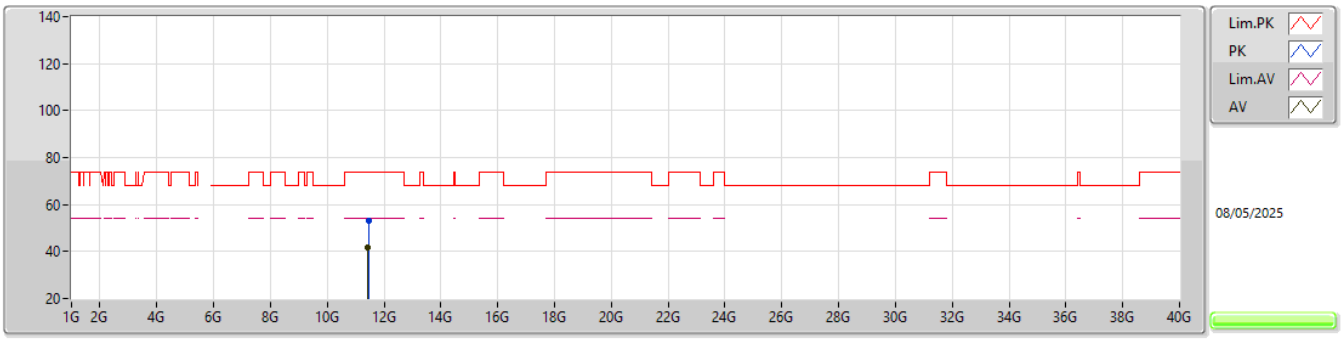
5720MHz Straddle 5.47-5.725GHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	(dBuV)	(dB)	(dB)	(dB)
AV	11.38464G	41.60	54.00	-12.40	6.90	3	Vertical	323	1.94	34.70	39.33	9.50	41.93
PK	11.44128G	52.64	74.00	-21.36	6.87	3	Vertical	323	1.94	45.77	39.22	9.51	41.86

5.47-5.725GHz_a20_Nss1,(6Mbps)_1TX

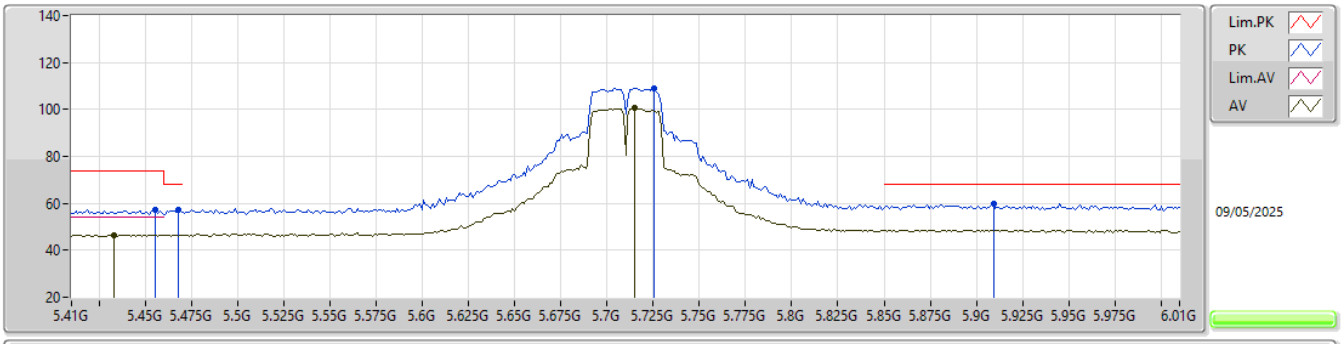
5720MHz Straddle 5.47-5.725GHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	(dBuV)	(dB)	(dB)	(dB)
AV	11.44032G	41.83	54.00	-12.17	6.87	3	Horizontal	266	2.18	34.96	39.22	9.51	41.86
PK	11.4528G	53.02	74.00	-20.98	6.87	3	Horizontal	266	2.18	46.15	39.21	9.51	41.85

5.47-5.725GHz_11a40_40MHz_Nss1,(6Mbps)_1TX

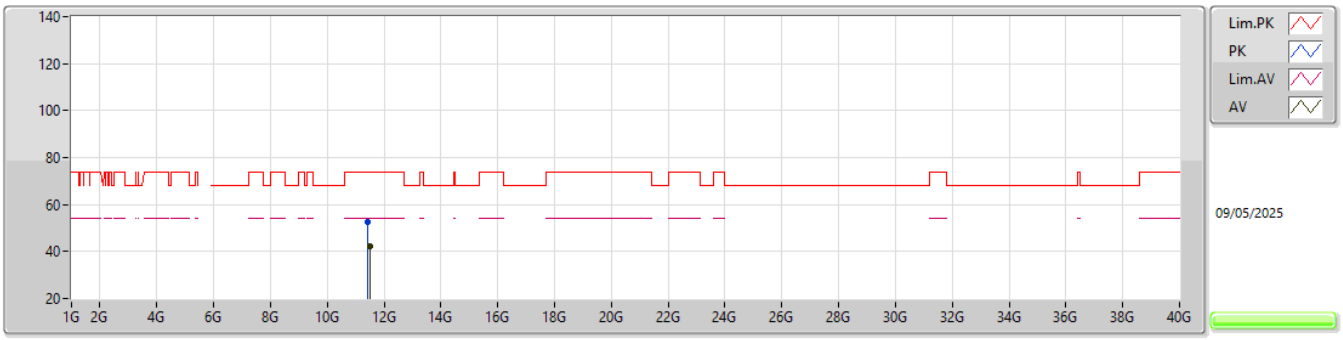
5710MHz Straddle 5.47-5.725GHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	(dBuV)	(dB)	(dB)	(dB)
AV	5.4328G	46.62	54.00	-7.38	2.37	3	Horizontal	343	1.76	44.25	33.00	6.73	37.36
AV	5.7148G	100.54	Inf	-Inf	3.70	3	Horizontal	343	1.76	96.84	33.86	7.12	37.28
PK	5.4556G	57.10	74.00	-16.90	2.43	3	Horizontal	343	1.76	54.67	33.03	6.76	37.36
PK	5.4676G	57.21	68.20	-10.99	2.52	3	Horizontal	343	1.76	54.69	33.11	6.77	37.36
PK	5.7256G	108.96	Inf	-Inf	3.76	3	Horizontal	343	1.76	105.20	33.90	7.14	37.28
PK	5.9092G	59.94	68.20	-8.26	4.05	3	Horizontal	343	1.76	55.89	34.48	6.77	37.20

5.47-5.725GHz_11a40_40MHz_Nss1,(6Mbps)_1TX

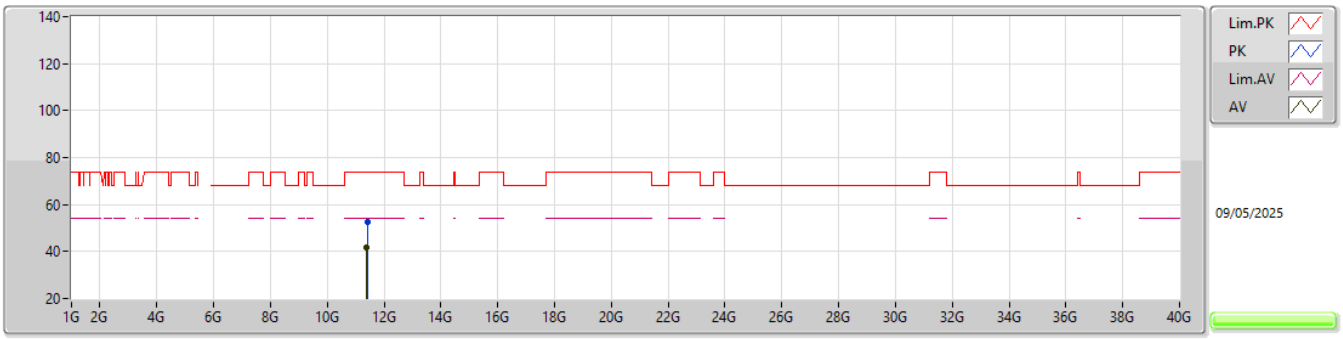
5710MHz Straddle 5.47-5.725GHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	(dBuV)	(dB)	(dB)	(dB)
AV	11.49648G	42.12	54.00	-11.88	7.01	3	Vertical	46	1.61	35.11	39.29	9.51	41.79
PK	11.43824G	52.43	74.00	-21.57	6.87	3	Vertical	46	1.61	45.56	39.22	9.51	41.86

5.47-5.725GHz_11a40_40MHz_Nss1,(6Mbps)_1TX

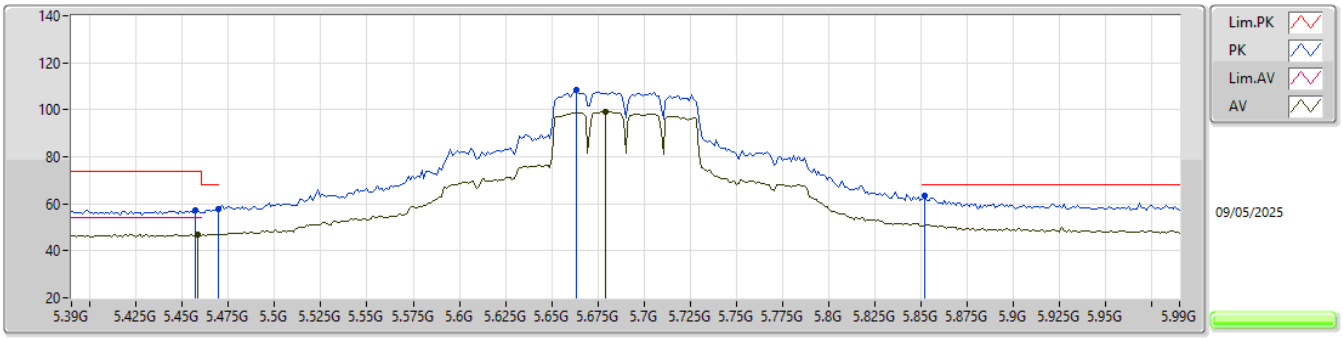
5710MHz Straddle 5.47-5.725GHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	(dBuV)	(dB)	(dB)	(dB)
AV	11.3816G	41.53	54.00	-12.47	6.91	3	Horizontal	205	1.27	34.62	39.34	9.50	41.93
PK	11.43792G	52.79	74.00	-21.21	6.87	3	Horizontal	205	1.27	45.92	39.22	9.51	41.86

5.47-5.725GHz_11a80_80MHz_Nss1,(6Mbps)_1TX

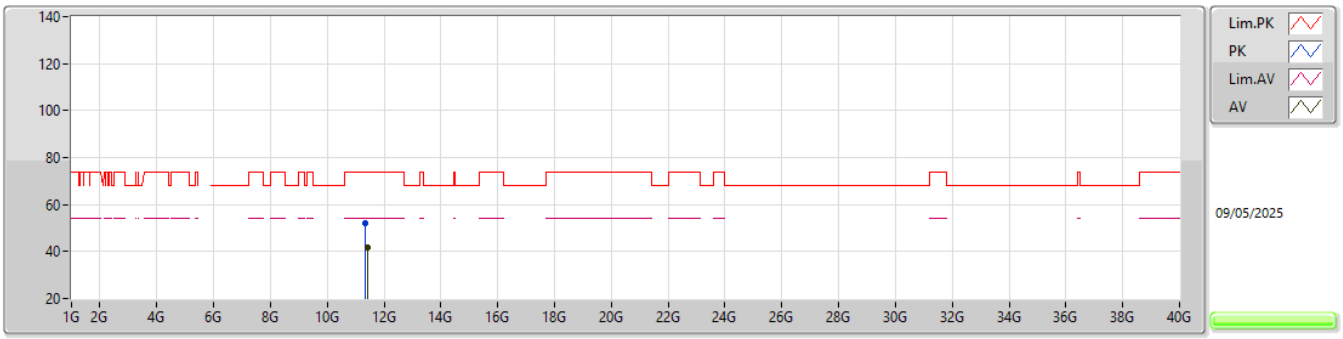
5690MHz Straddle 5.47-5.725GHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	(dBuV)	(dB)	(dB)	(dB)
AV	5.4584G	46.95	54.00	-7.05	2.45	3	Horizontal	342	1.50	44.50	33.05	6.76	37.36
AV	5.6792G	99.07	Inf	-Inf	3.39	3	Horizontal	342	1.50	95.68	33.63	7.05	37.29
PK	5.4572G	57.29	74.00	-16.71	2.44	3	Horizontal	342	1.50	54.85	33.04	6.76	37.36
PK	5.4692G	57.61	68.20	-10.59	2.53	3	Horizontal	342	1.50	55.08	33.12	6.77	37.36
PK	5.6636G	108.39	Inf	-Inf	3.23	3	Horizontal	342	1.50	105.16	33.51	7.02	37.30
PK	5.852G	63.35	68.20	-4.85	4.13	3	Horizontal	342	1.50	59.22	34.31	7.04	37.22

5.47-5.725GHz_11a80_80MHz_Nss1,(6Mbps)_1TX

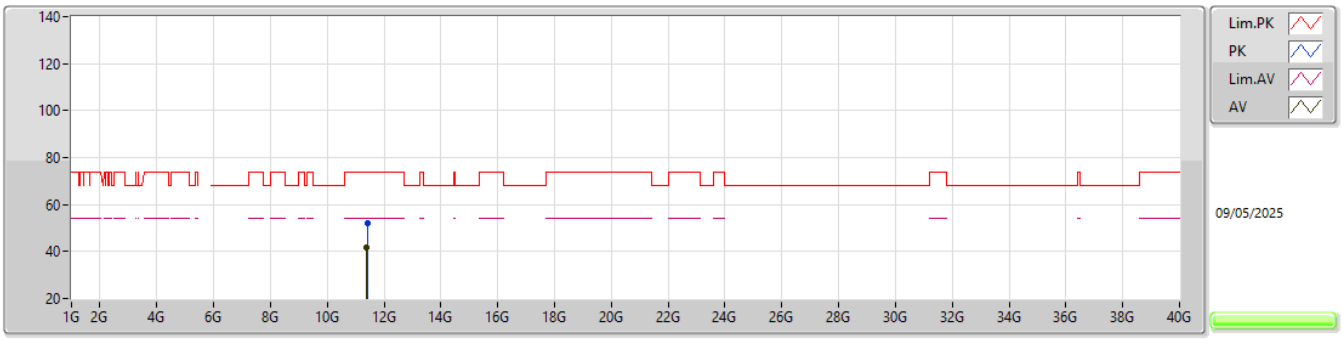
5690MHz Straddle 5.47-5.725GHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	(dBuV)	(dB)	(dB)	(dB)
AV	11.43344G	41.59	54.00	-12.41	6.87	3	Vertical	299	2.81	34.72	39.23	9.51	41.87
PK	11.34G	52.31	74.00	-21.69	6.90	3	Vertical	299	2.81	45.41	39.38	9.50	41.98

5.47-5.725GHz_11a80_80MHz_Nss1,(6Mbps)_1TX

5690MHz Straddle 5.47-5.725GHz_TX



Type	Freq	Level	Limit	Margin	Factor	Dist	Condition	Azimuth	Height	Raw	AF	CL	PA
	(Hz)	(dBuV/m)	(dBuV/m)	(dB)	(dB)	(m)		(°)	(m)	(dBuV)	(dB)	(dB)	(dB)
AV	11.38064G	41.70	54.00	-12.30	6.91	3	Horizontal	214	1.37	34.79	39.34	9.50	41.93
PK	11.41328G	52.29	74.00	-21.71	6.88	3	Horizontal	214	1.37	45.41	39.27	9.50	41.89