



Regulatory Test Report

Prepared for Harman Becker Automotive Systems

This report presents detailed information on

CY20 DA LOWER

Prepared by

Aravind Buddana

Engineer II

Approved by

Jason Kanakry

General Manager

Issue date: 05/31/2022

Report No: AH22021401-HAR-004-TR1 v2

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The test is traceable to national standard or related international standard

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- **Test Request Information**

Test Request #: 7700119407

Test Requested By: Mark Bowman
Harman International Industries, Inc.
30001 Cabot Drive, Novi, MI 48377

Test item Description: CY20 DA LOWER

Part Number: T246

DUT Sample Number: AH22021401-HAR-004#2, AH22021401-HAR-004#3

Hardware Version of DUT: PV1

Software Version of DUT: 1.22.010

Component Category of DUT: N/A

FCC ID: 2AHPN-BE2865

Type of Test: FCC/ISED Certification

Test Method: CFR Title 47 FCC Part 15.247, ISED Canada RSS-247 Issue 2,
ISED Canada RSS-Gen Issue 5, FCC KDB 558074 D01 15.247 Measurement Guidance v05
and ANSI C63.10-2013

Deviations from standard: None

Approved Test Plan Number: N/A

Test Plan Revision: N/A

Date test sample received: 02-14-2022

Date test started: 02-22-2022

Date test finished: 03-19-2022

- **Test Laboratory Information**

Location of Test Lab:	The radiated and conducted emissions test sites are located at Bureau Veritas 815 N. Opdyke Rd #100, Auburn Hills, MI 48326, Phone: +1-248-836-4700
Key Contact:	Jason Kanakry (General Manager) Jason.Kanakry@BureauVeritas.com Phone: +1-248-836-4747
Laboratory Accreditations:	BUREAU VERITAS CONSUMER PRODUCTS SERVICES, INC is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories.
ISO/IEC 17025:2017:	5678.01
FCC Test Site Number:	US1278 (242530)
IC Test Site Number:	US0229 (26240)

• **Statement of Conformity**

RSS-GEN	RSS 247	Part 15	Comments
6.4		15.15(b)	There are no controls accessible to the user that varies the output power to operate in violation of the regulatory requirements.
		15.19	The label is shown in the label exhibit.
		15.21	Information to the user is shown in the instruction manual exhibit.
		15.27	No special accessories are required for compliance.
3.2		15.31	The EUT was tested in accordance with the measurement standards in this section.
6.13.2		15.33	Frequency range was investigated according to this section, unless noted in specific rule section under which the equipment operates.
6.13.1		15.35	The EUT emissions were measured using the measurement detector and bandwidth specified in this section, unless noted in specific rule section under which the equipment operates.
6.8		15.203	EUT employs integrated PCB antenna with 2.80dBi gain.
8.10		15.205 15.209	The fundamental is not in a Restricted band and the spurious and harmonic emissions in the Restricted bands comply with the general emission limits of 15.209 or RSS-Gen as applicable
8.8		15.207	N/A. EUT is vehicle battery powered only.

CFR Title 47 FCC Part 15.247, ISED Canada RSS-247 Issue 2

• **Conducted Testing**

Test Summary

This test report supports an application for certification of a transmitter operating pursuant to:

CFR Title 47 FCC Part 15.247, ISED Canada RSS-247 Issue 2

The product is the **CY20 DA LOWER**, It is a direct sequence spread spectrum transmitter that operates in the 2412-2462MHz frequency range.

Details	Description
Frequency Range (MHz)	2412 – 2462
Tested Modes	802.11b 802.11g 802.11n (HT20).
Number of Channels	11
Tested Channels	1, 6 ,11
DUT Antenna Type	Integrated PCB antenna
DUT Antenna Gain	2.80dBi <input checked="" type="checkbox"/> Provided by Customer <input type="checkbox"/> Not Provided by Customer

We found that the product met the requirements.

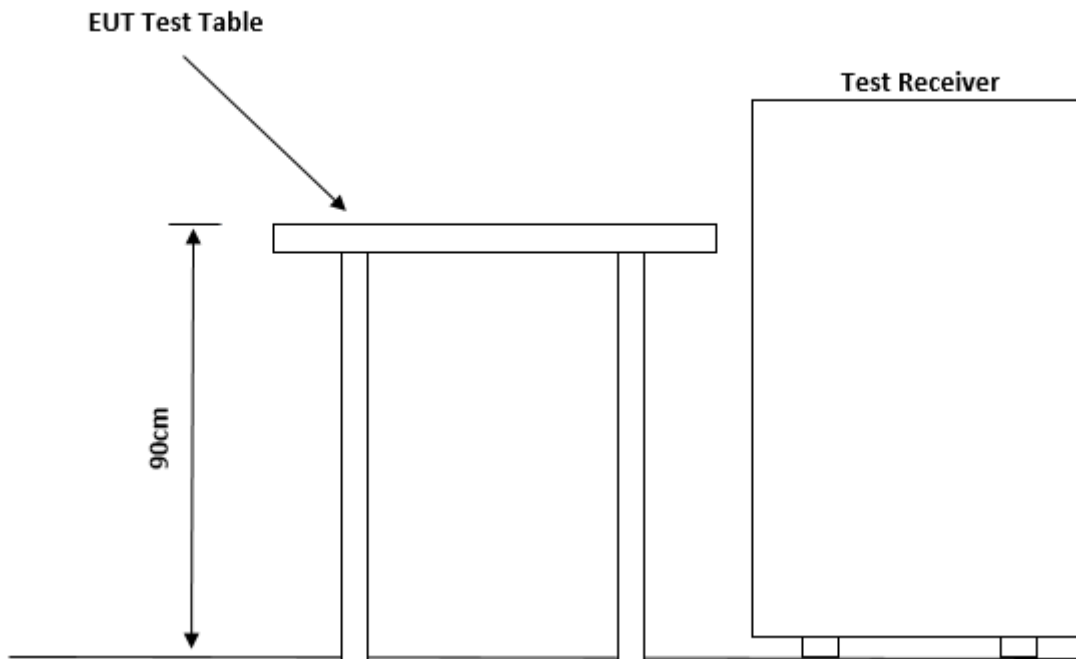
Test samples were received in good condition and remains good and functional post testing.

Test Item	Sample #	Result
FCC 15.247 2.4G WLAN	AH22021401-HAR-004#2	Meets Requirements

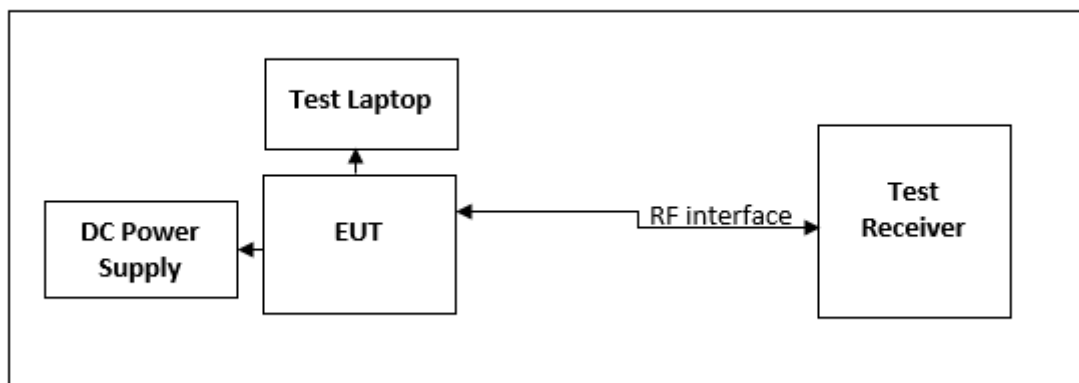
Test Setup

Conducted Test Site Description

The site is accommodated to test tabletop and floor standing test equipment.



TEST SETUP DIAGRAM



Test Equipment Used

ID #	Equipment	Manufacturer	Model #	Serial #	Cal Due
BVD0226	Spectrum Analyzer 10Hz-44GHz	Rohde & Schwarz	FSV3044	101018	01/14/2023
BVD0227	8 port switch unit for Wireless Test system	Rohde & Schwarz	OSP150	101100	12/17/2022
BVD0228	8 port switch unit for Wireless Test system	Rohde & Schwarz	OSP220	101632	12/16/2022
BVD0224	Signal Generator 100kHz-40GHz	Rohde & Schwarz	SMB100A	181741	11/19/2022
BVD0225	Signal Generator 100k-6GHz with GPS simulator	Rohde & Schwarz	SMW200A	107664	11/18/2022
BVD0250	Wireless Connectivity Tester 70M-6GHz	Rohde & Schwarz	CMW270	102113	11/18/2022
BVD0343	DC Regulated Power Supply	Circuit Specialists, INC	CSI3020X	595215	N/A
BVD0321	Fixed Attenuator 2W 20dB -40GHz	Mini-Circuits	BW-K20-2W44+	2103	03/21/2023
BVD0164	Multimeter	Fluke	287	46320236	03/06/2023
BVD0229	Temp and Humidity Meter	Fluke	971	12001009	05/01/2023
N/A	Test-PC	Lenovo ThinkPad	E560	PF0L0N9R	N/A

Customer Supplied Equipment

ID #	Equipment	Manufacturer	Model	Serial #	Version No.
N/A	Cable Harness	Harman	N/A	N/A	N/A
N/A	USB Hub	Harman	N/A	3526408	N/A
N/A	USB 2.0 Ethernet Adapter	Trendnet	TU2-ET100	RA0JU56004466	V6.0R

Equipment List (Software)

ID #	Equipment	Manufacturer	Model	Version No.	
N/A	EMC Test Software	Rodhe & Schwarz	EMC32	11.20.00	N/A

FCC 15.247 2.4G WLAN

Channels and modes available

802.11b, 802.11g and 802.11n (HT20)

Channel	Freq. (MHz)	Channel	Freq. (MHz)
1	2412	8	2447
2	2417	9	2452
3	2422	10	2457
4	2427	11	2462
5	2432		
6	2437		
7	2442		

Notes:

- Channels which were marked bold were tested.
- Output power measurements were performed at the lowest and highest data rate of each supported 802.11 mode.

Antenna Gain	2.80dBi
Number of transmit Chains	1
Equipment Type	Equipment with wideband modulation other than frequency hopping

Power Settings

802.11b		802.11g	
Channel	Power Setting	Channel	Power Setting
1	13	1	13
6	13	6	13
11	13	11	13
802.11n (HT20)			
Channel	Power Setting		
1	13		
6	13		
11	13		

Test Results Summary

Test	Frequency (MHz)	802.11b	802.11g	802.11n (HT20)
RF Output Power	2412/2437/2462	PASS	PASS	PASS
Power Spectral Density	2412/2437/2462	PASS	PASS	PASS
DTS Bandwidth (6dB)	2412/2437/2462	PASS	PASS	PASS
Occupied Channel Bandwidth 99%	2412/2437/2462	PASS	PASS	PASS
Band Edges Low	2412	PASS	PASS	PASS
Band Edges High	2462	PASS	PASS	PASS
Conducted Spurious Emissions	2412/2437/2462	PASS	PASS	PASS

RF Output Power

Test according to FCC title 47 part 15 §15.247(b), KDB 558074 D01 DTS Meas Guidance v05 and ANSI C63.10-2013 11.9.2.3.2

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1.

Expanded Combined Uncertainty of absolute Level Measurement (K=2) < 1 dB

802.11b

Data Rate	Gated RMS (dBm) 2412 MHz	Gated RMS (dBm) 2437 MHz	Gated RMS (dBm) 2462 MHz	Limit (dBm)	Duty Cycle (%)	Power Setting
1 Mbps	11.819	11.536	11.017	30	99.769	30.0
11 Mbps	11.052	11.182	10.618	30	97.744	30.0

802.11g

Data Rate	Gated RMS (dBm) 2412 MHz	Gated RMS (dBm) 2437 MHz	Gated RMS (dBm) 2462 MHz	Limit (dBm)	Duty Cycle (%)	Power Setting
6 Mbps	12.171	12.363	11.581	30	98.588	30.0
54 Mbps	11.951	11.970	11.462	30	89.823	30.0

802.11n (HT20)

Data Rate	Gated RMS (dBm) 2412 MHz	Gated RMS (dBm) 2437 MHz	Gated RMS (dBm) 2462 MHz	Limit (dBm)	Duty Cycle (%)	Power Setting
MCS0	12.145	12.046	11.308	30	98.492	30.0
MCS7	12.088	11.940	11.285	30	89.162	30.0

Power Spectral Density

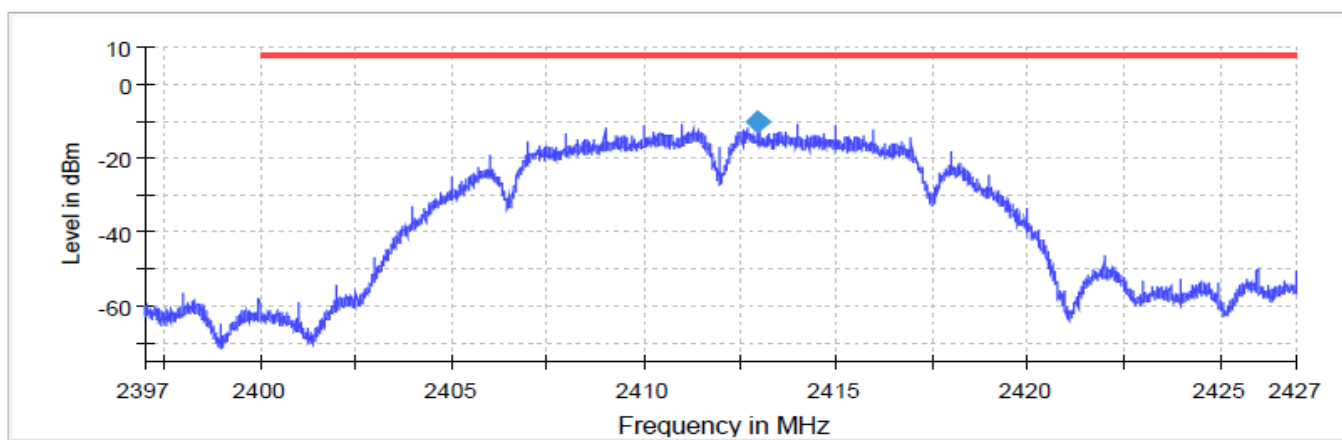
Test according to FCC title 47 part 15 §15.247(a),€ , KDB 558074 D01 DTS Meas Guidance v05 F and ANSI C63.10-2013

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1. Expanded Uncertainty (K=2) < 1.3 dB

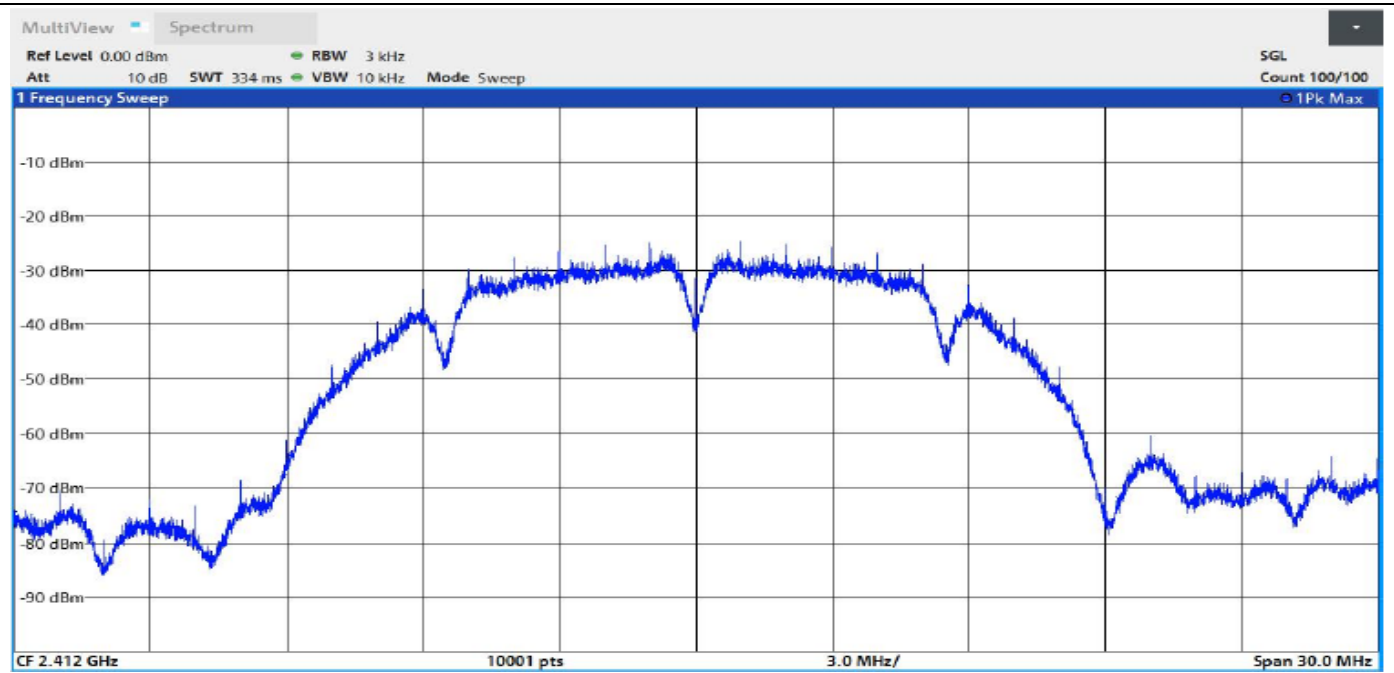
Mode	Data Rate	PSD (dBm) 2412 MHz	PSD (dBm) 2437 MHz	PSD (dBm) 2462 MHz	Limit (dBm)
802.11b	1 Mbps	-10.339	-10.278	-10.894	8.0

802.11b 2412MHz 1Mbps

Power Spectral Density



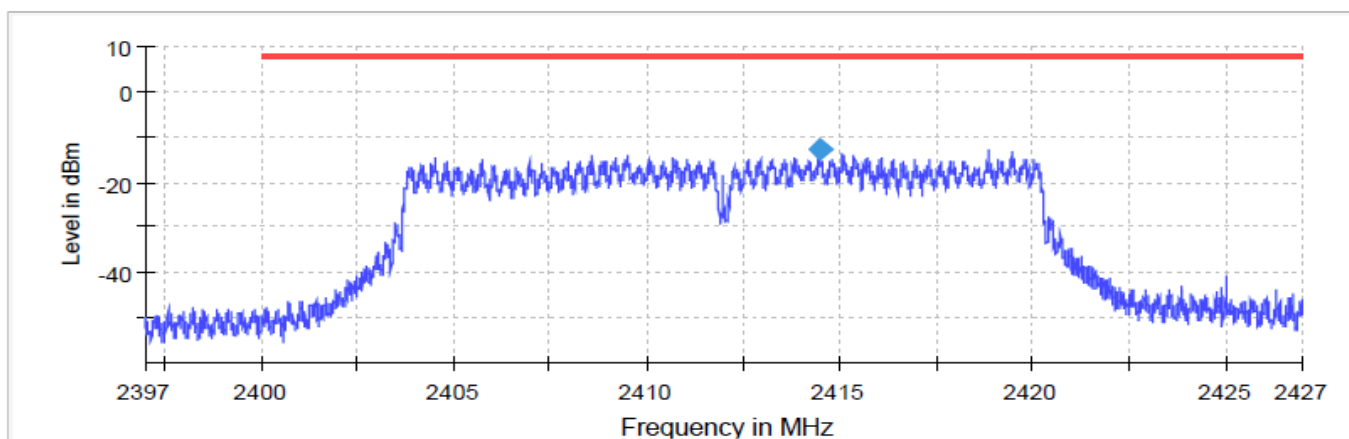
Connector 1 Sum Level Limit PSD



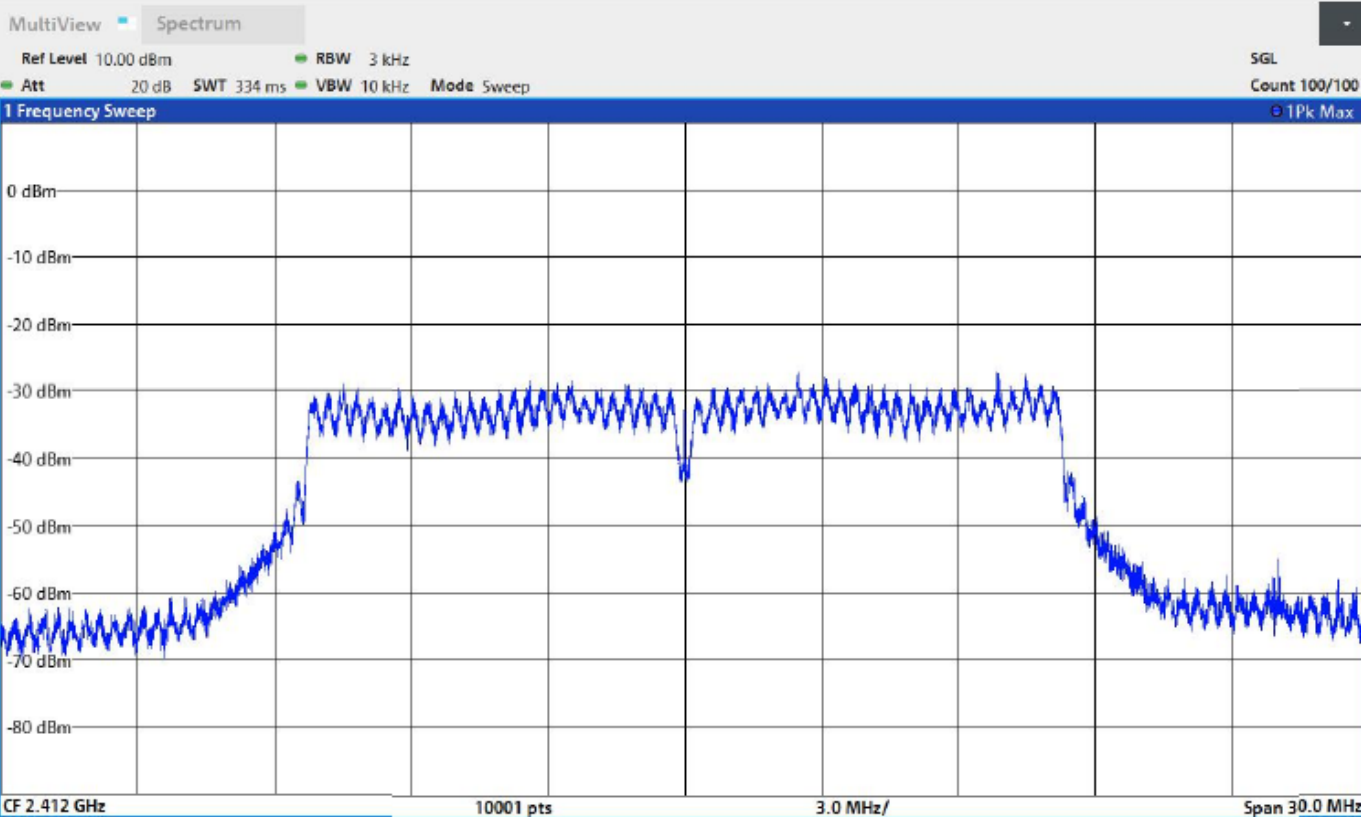
Mode	Data Rate	PSD (dBm) 2412 MHz	PSD (dBm) 2437 MHz	PSD (dBm) 2462 MHz	Limit (dBm)
802.11g	6 Mbps	-12.912	-13.769	-13.982	8.0

802.11g 2412MHz 6Mbps

Power Spectral Density



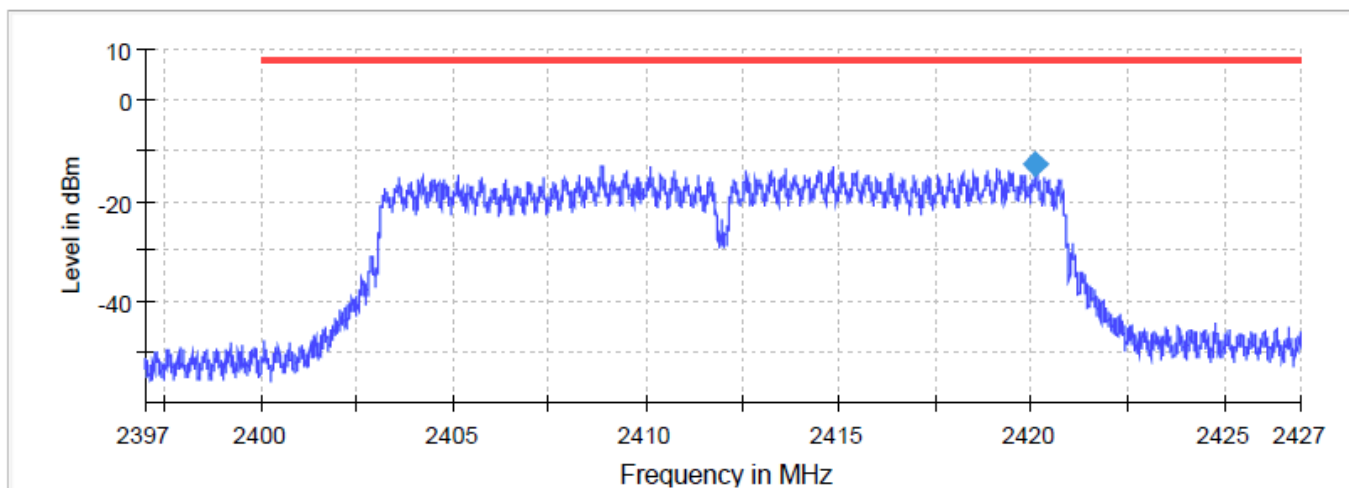
Connector 1 Sum Level Limit PSD



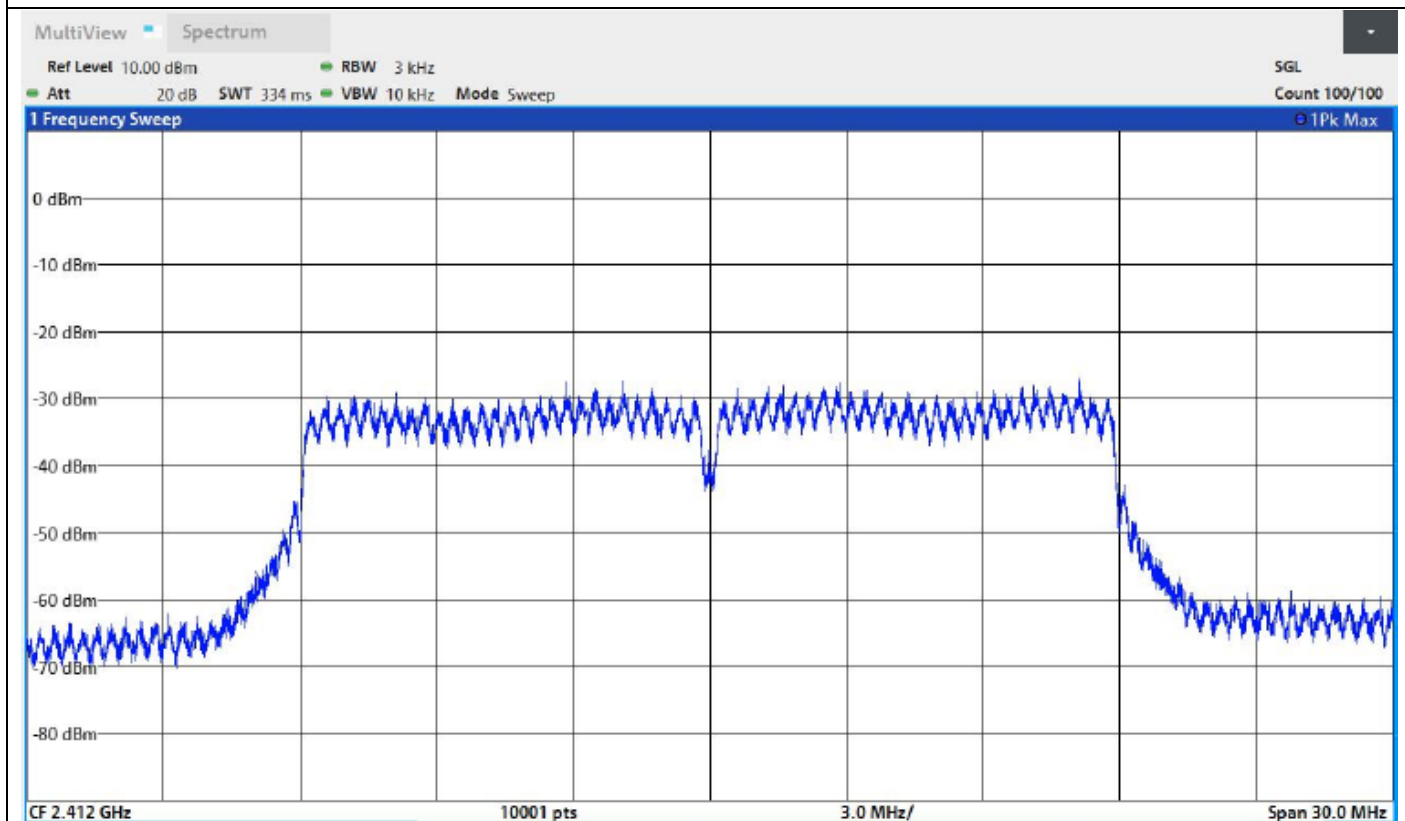
Mode	Data Rate	PSD (dBm) 2412 MHz	PSD (dBm) 2437 MHz	PSD (dBm) 2462 MHz	Limit (dBm)
802.11n	MCS0	-12.638	-12.303	-13.442	8.0

802.11n (HT20) 2412MHz MCS0

Power Spectral Density



Connector 1 Sum Level Limit PSD



Occupied Channel Bandwidth

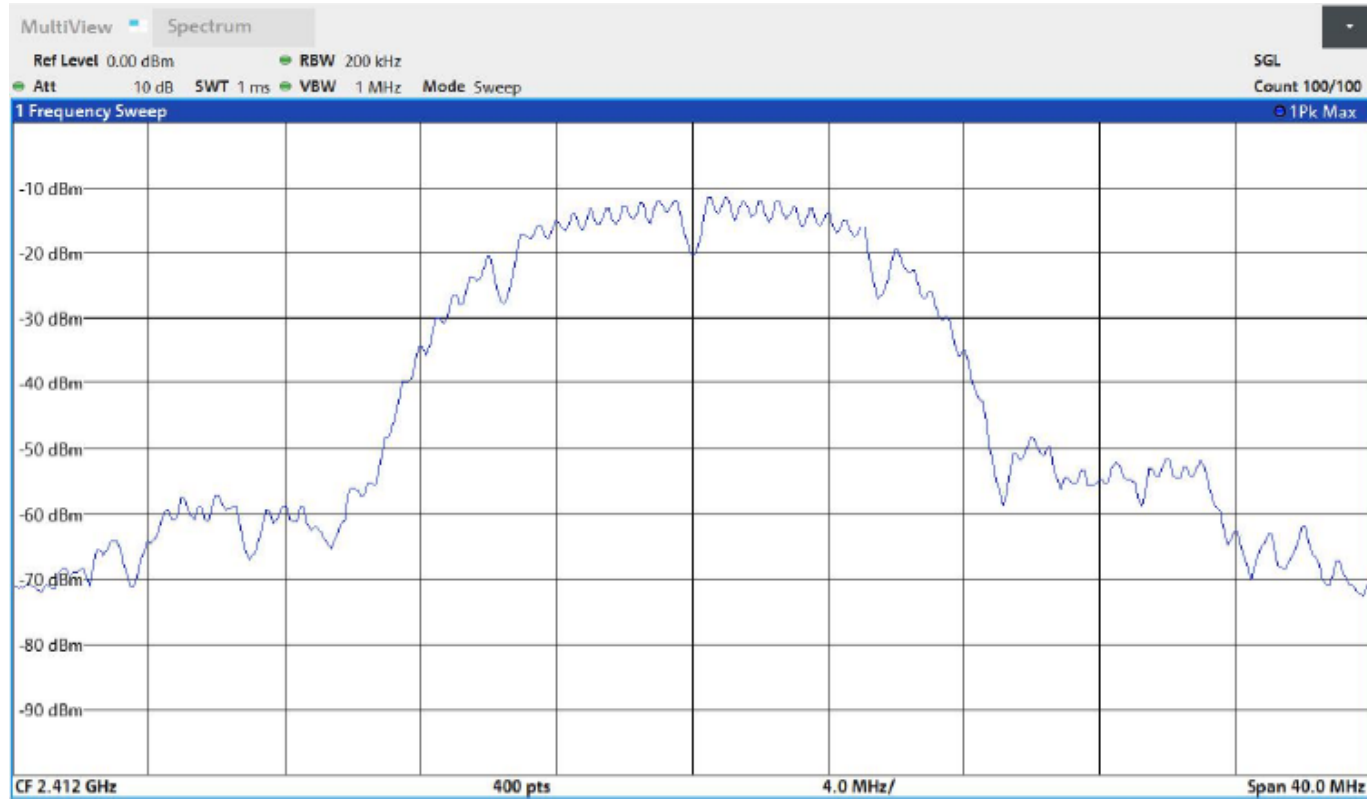
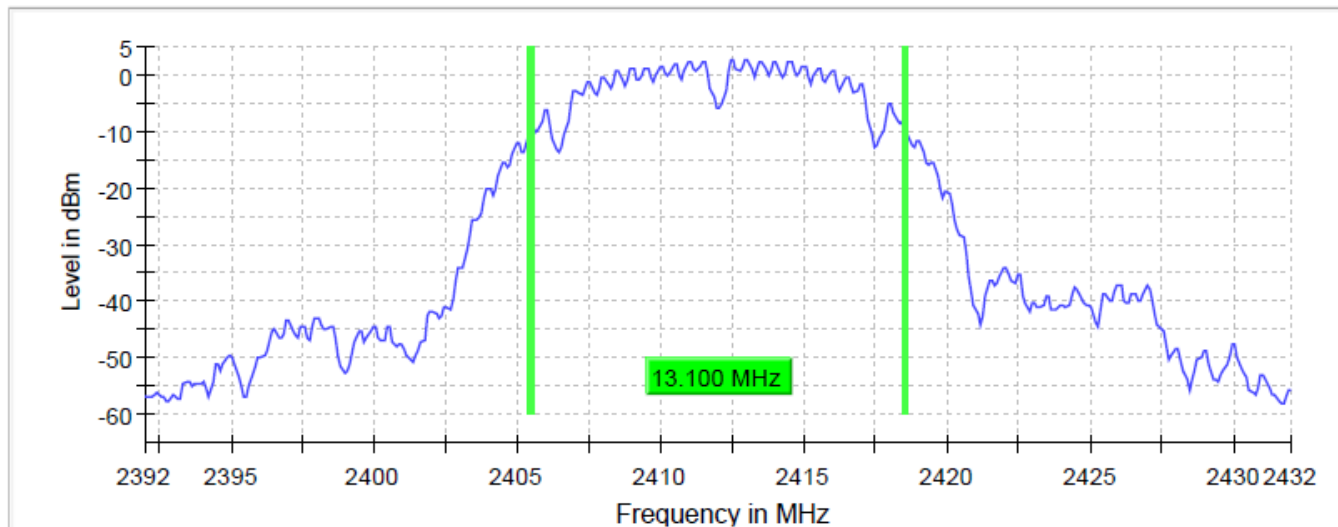
Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v05 and ANSI C63.10-2013 11.8.1

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1. Expanded Uncertainty (K=2) < 2%

Data Rate	DUT Frequency (MHz)	Bandwidth (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)
802.11b 1Mbps	2412.000000	13.100000	2405.450000	2418.550000
802.11g 6Mbps	2412.000000	16.700000	2403.650000	2420.350000
802.11n (HT20) MCS0	2412.000000	17.700000	2403.150000	2420.850000
802.11b 1Mbps	2437.000000	13.200000	2430.350000	2443.550000
802.11g 6Mbps	2437.000000	16.700000	2428.650000	2445.350000
802.11n (HT20) MCS0	2437.000000	17.700000	2428.150000	2445.850000
802.11b 1Mbps	2462.000000	13.400000	2455.250000	2468.650000
802.11g 6Mbps	2462.000000	16.700000	2453.650000	2470.350000
802.11n (HT20) MCS0	2462.000000	17.700000	2453.150000	2470.850000

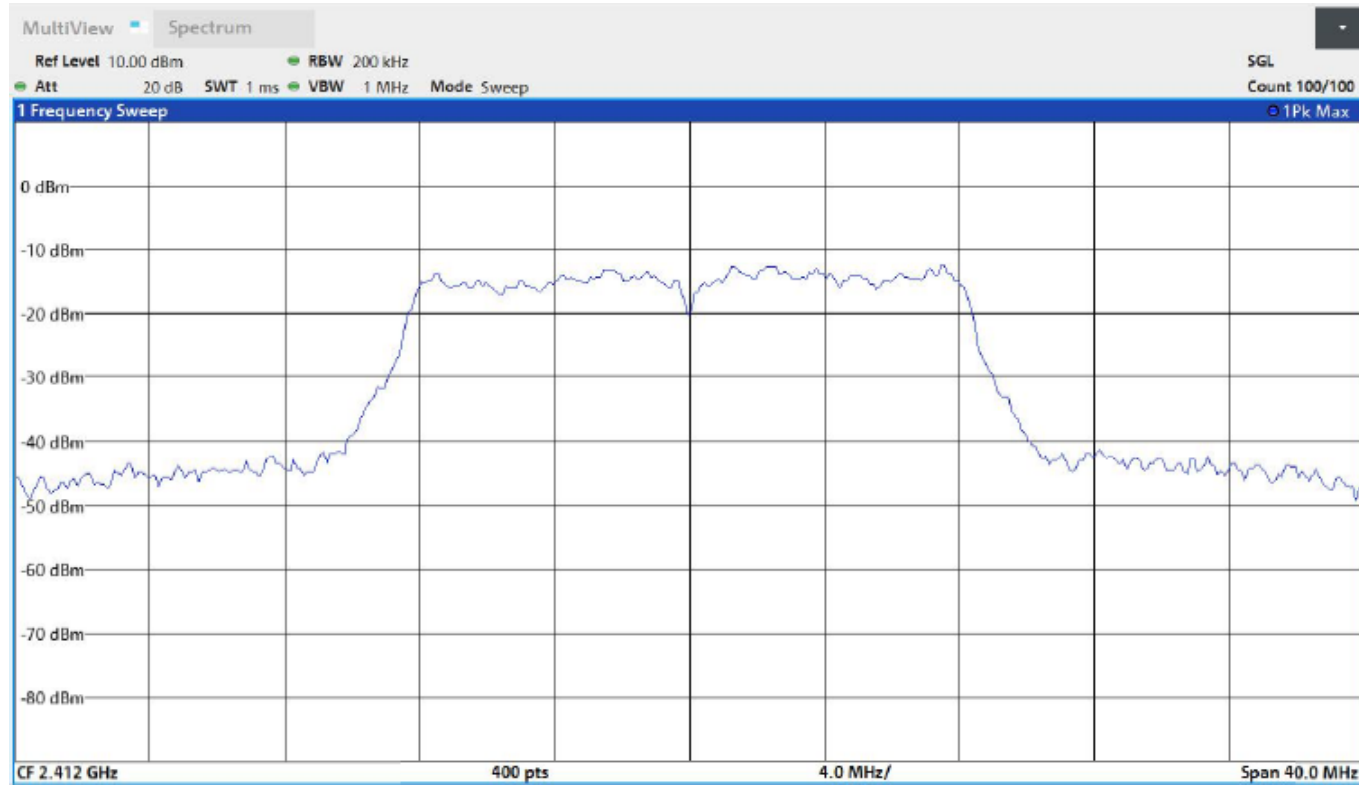
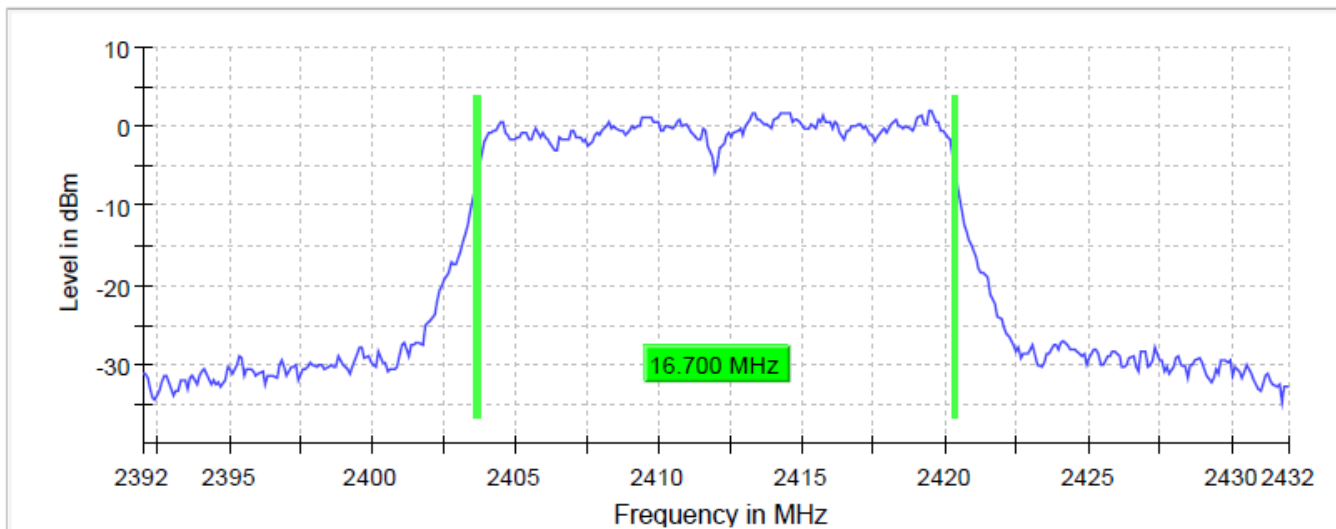
802.11b 1Mbps 2412MHz

99 % Bandwidth



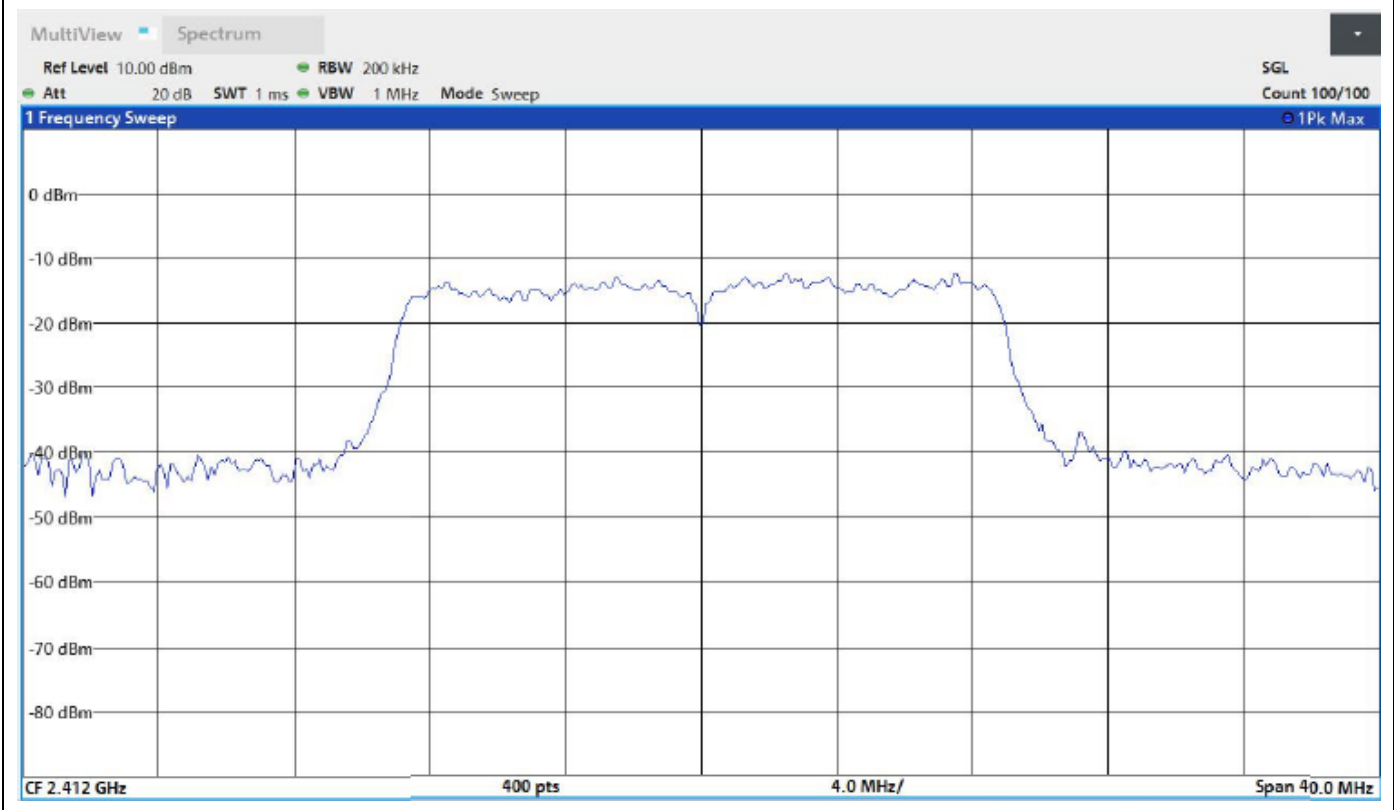
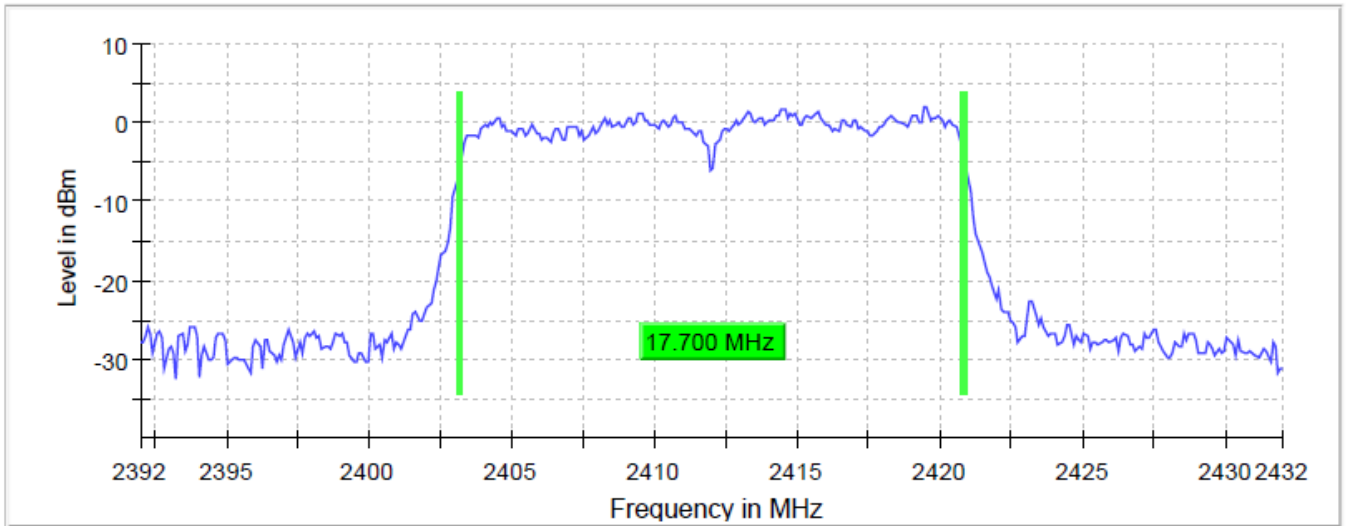
802.11g 6Mbps 2412MHz

99 % Bandwidth



802.11n MCS0 2412MHz

99 % Bandwidth



DTS Bandwidth (6dB)

Definition: Test according to FCC title 47 part 15 §15.247(a), KDB 558074 D01 DTS Meas Guidance v05 and ANSI C63.10-2013

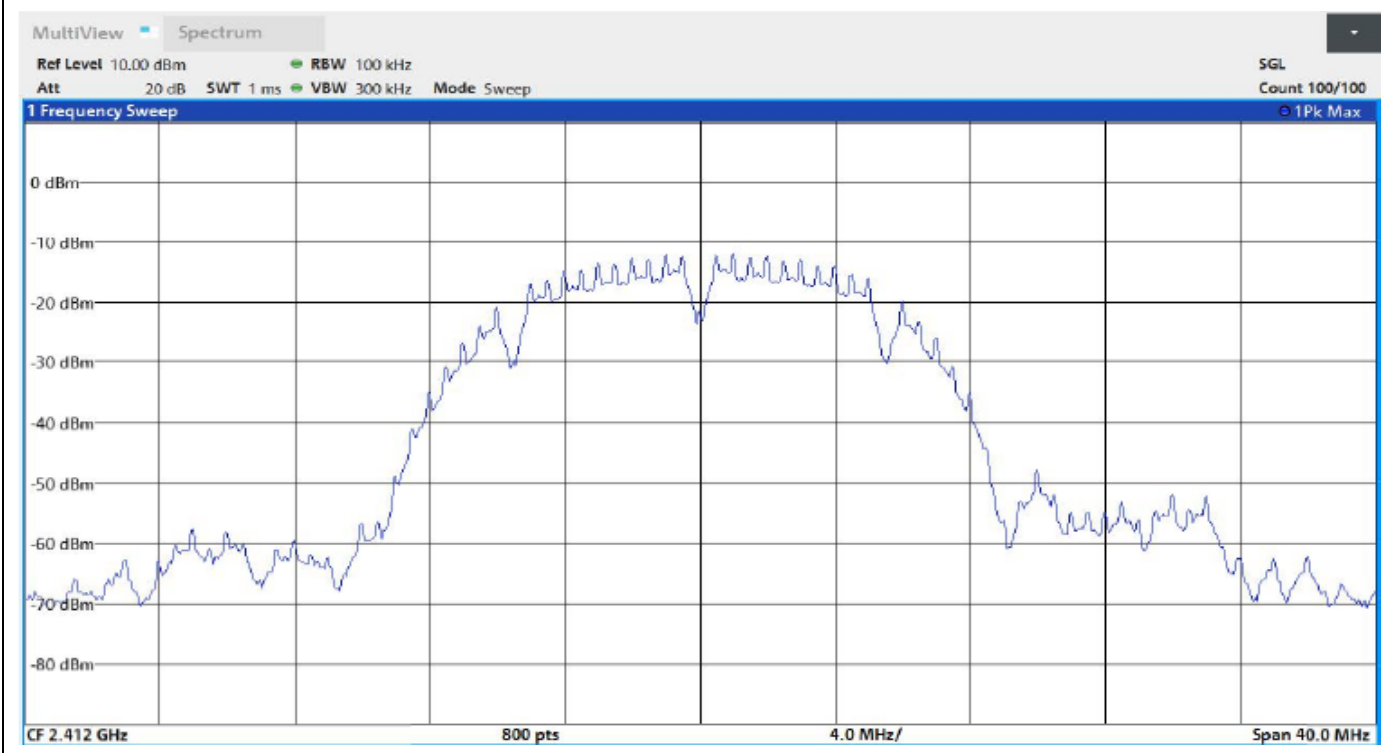
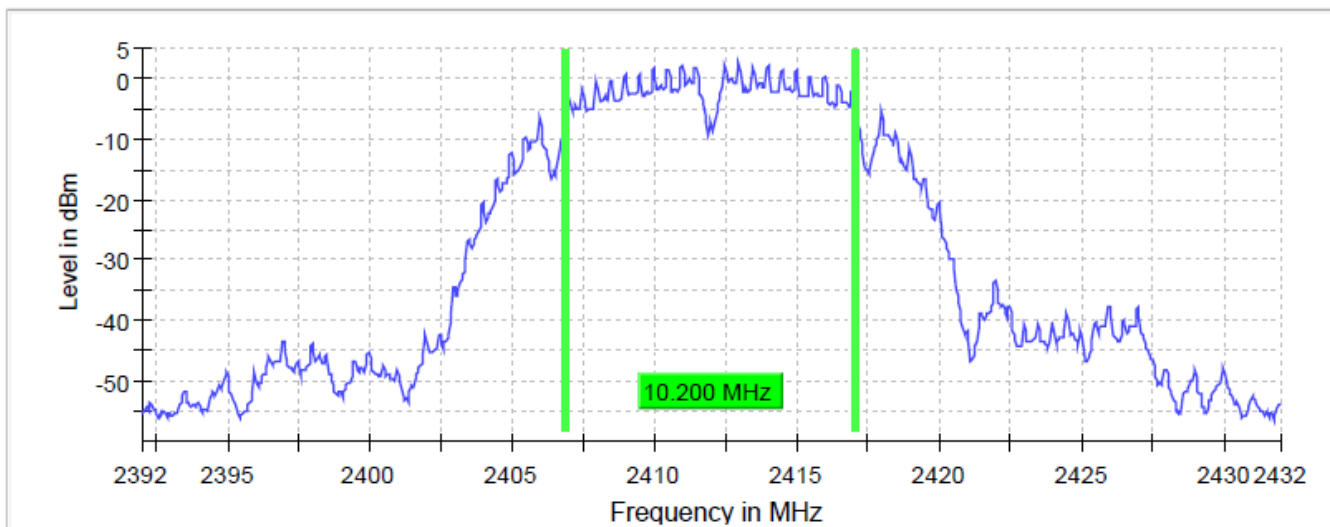
11.8.1

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1. Expanded Uncertainty (K=2) < 2%

Data Rate	DUT Frequency (MHz)	Bandwidth (MHz)	Band Edge Left (MHz)	Band Edge Right (MHz)	Minimum Limit (MHz)
802.11b 1Mbps	2412.000000	10.200000	2406.875000	2417.075000	0.500000
802.11g 6Mbps	2412.000000	16.400000	2403.775000	2420.175000	0.500000
802.11n (HT20) MCS0	2412.000000	17.450000	2403.375000	2420.825000	0.500000
802.11b 1Mbps	2437.000000	10.150000	2431.875000	2442.025000	0.500000
802.11g 6Mbps	2437.000000	16.450000	2428.725000	2445.175000	0.500000
802.11n (HT20) MCS0	2437.000000	17.650000	2428.125000	2445.775000	0.500000
802.11b 1Mbps	2462.000000	10.200000	2456.875000	2467.075000	0.500000
802.11g 6Mbps	2462.000000	16.400000	2453.775000	2470.175000	0.500000
802.11n (HT20) MCS0	2462.000000	17.600000	2453.175000	2470.775000	0.500000

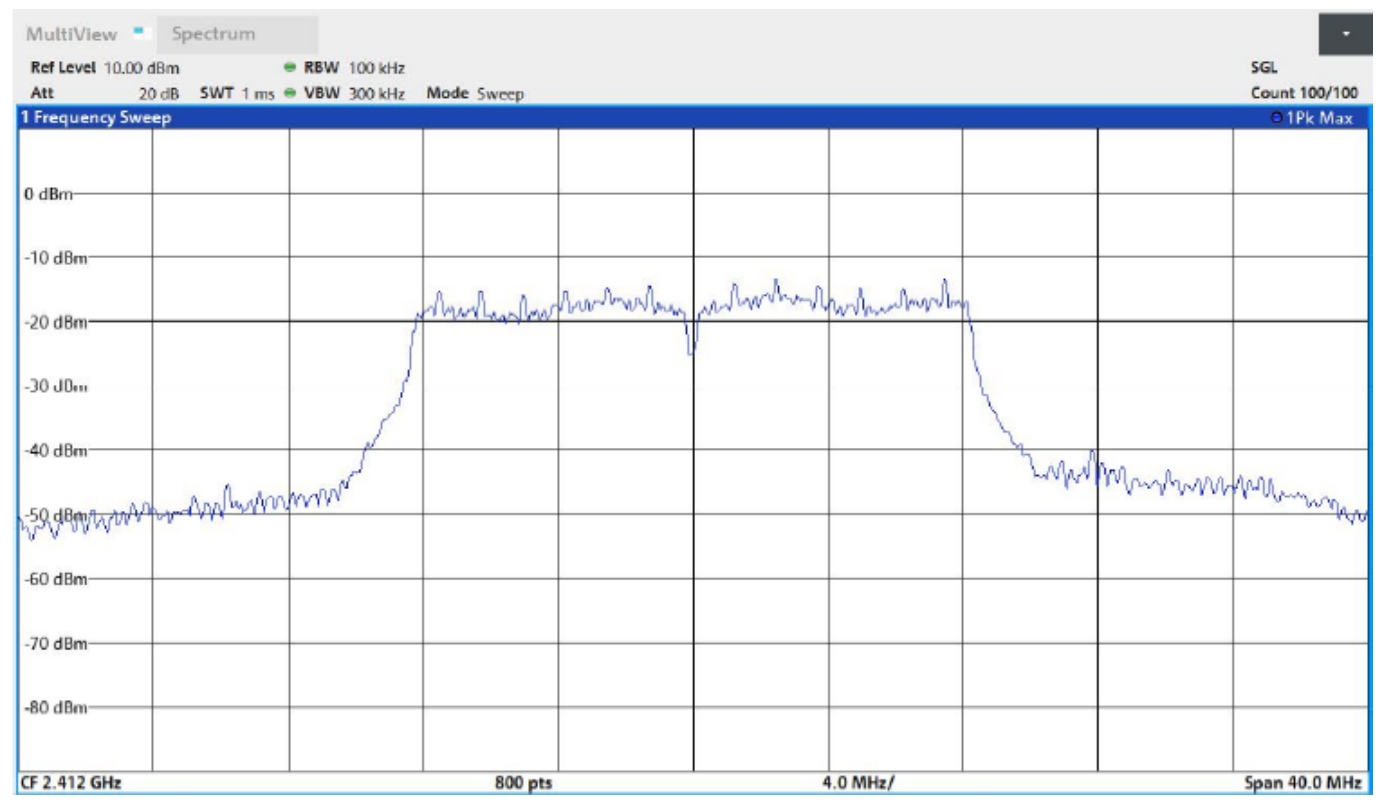
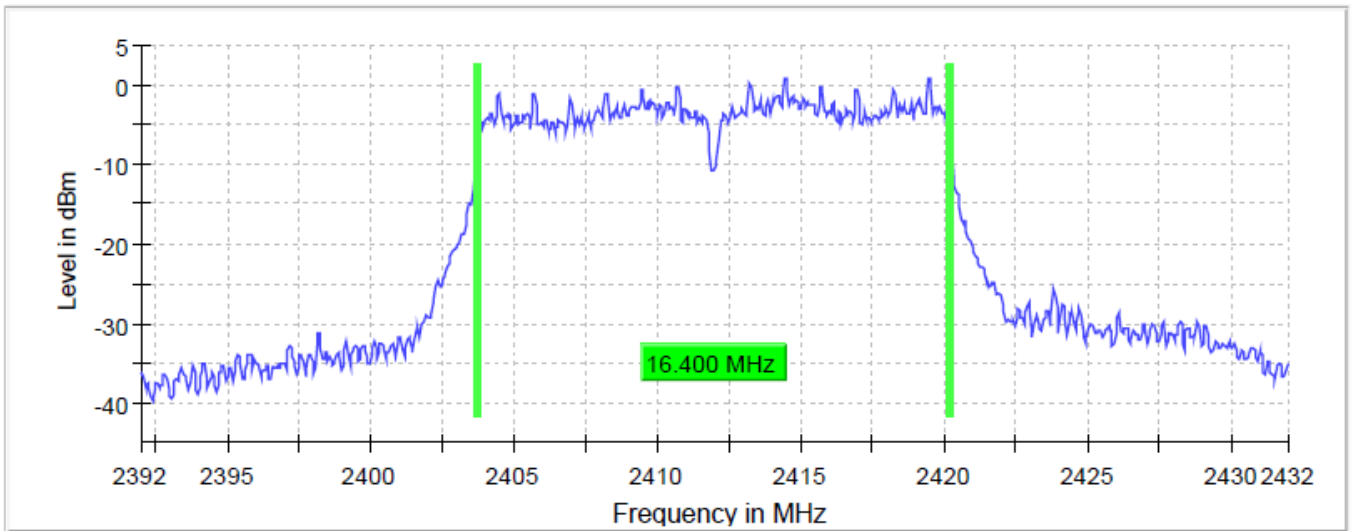
802.11b 2412MHz 1Mbps

6 dB Bandwidth



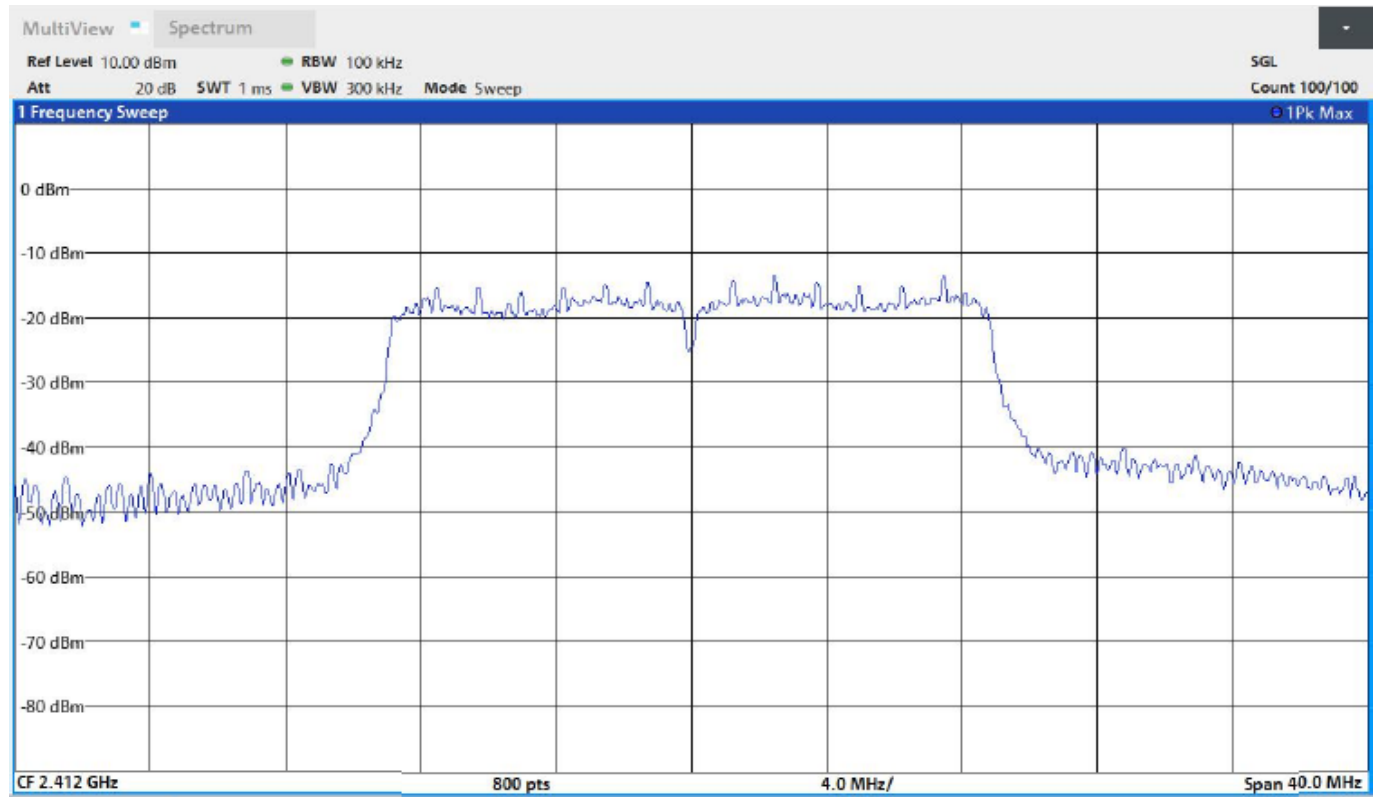
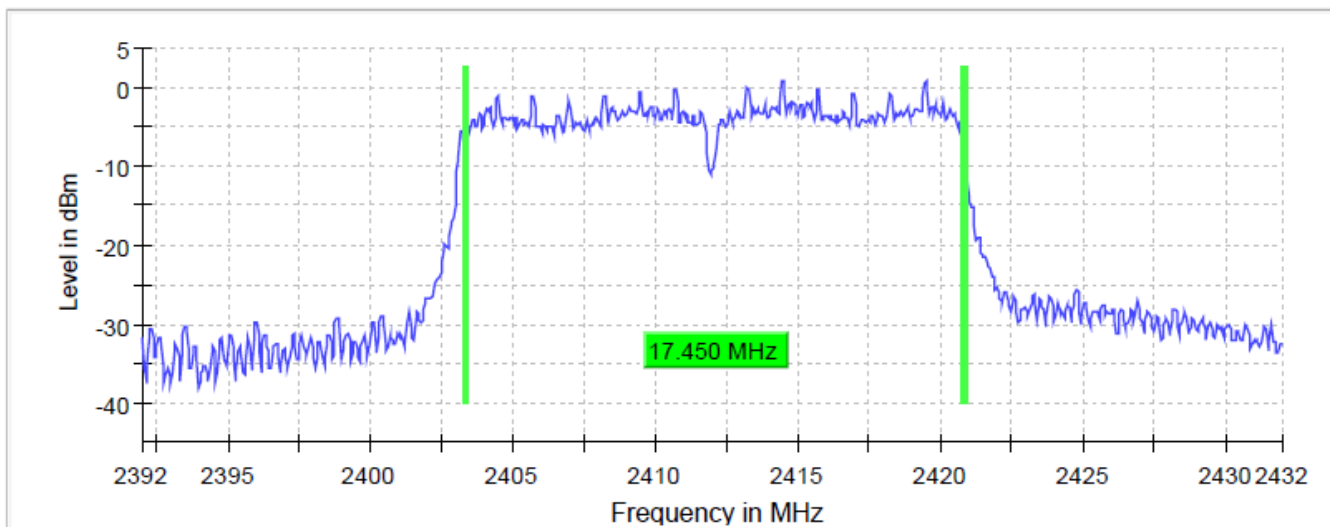
802.11g 2412MHz 6Mbps

6 dB Bandwidth



802.11n 2412MHz MCS0

6 dB Bandwidth



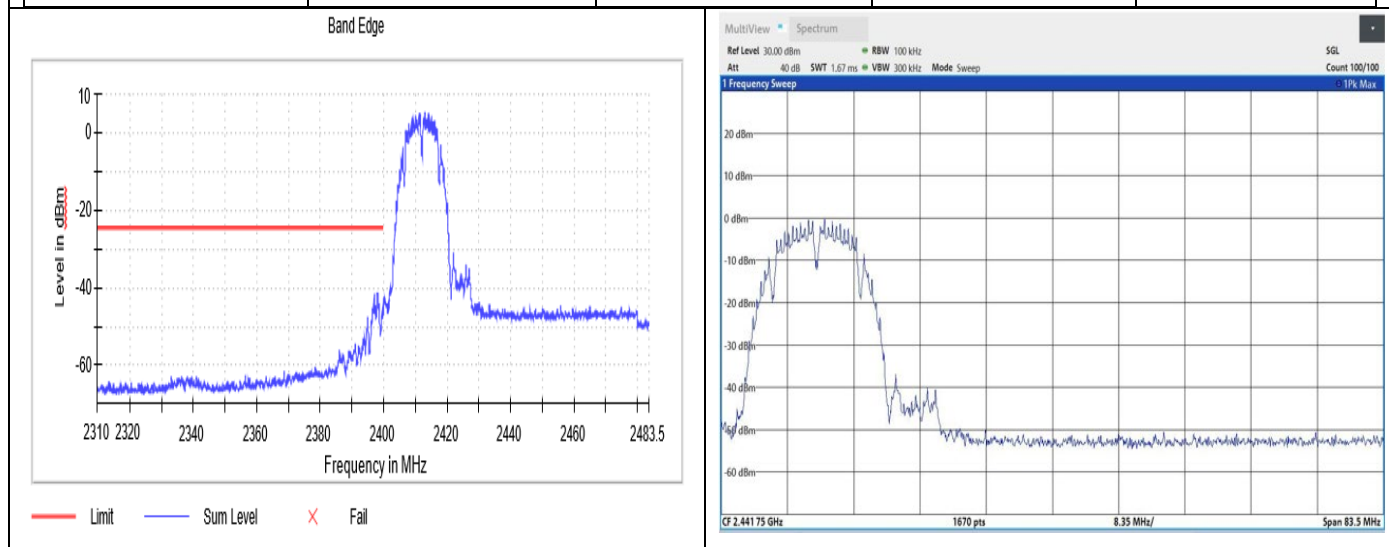
Conducted Band Edge

Test according to FCC title 47 part 15 §15.247(d), KDB 558074 D01 DTS Meas Guidance v05 8.7 and ANSI C63.10-2013

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1. Expanded Uncertainty (K=2) < 0.8 dB

Band Edge Low (802.11b 1Mbps 2412MHz)	
Frequency (MHz)	Level (dBm)
2412.975000	5.4

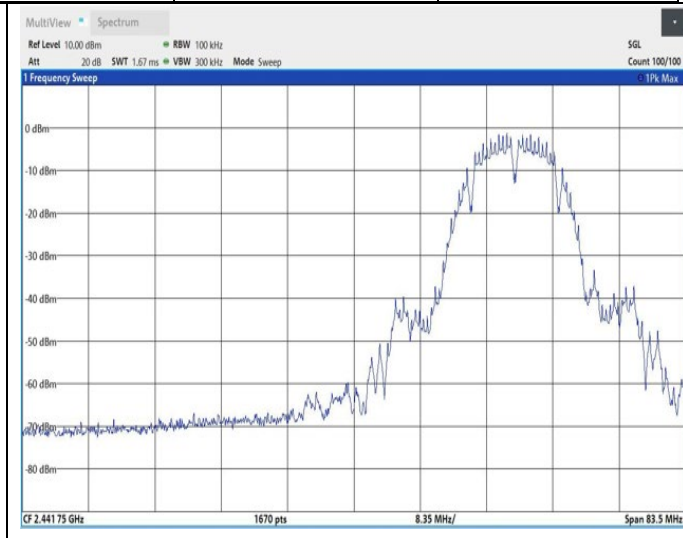
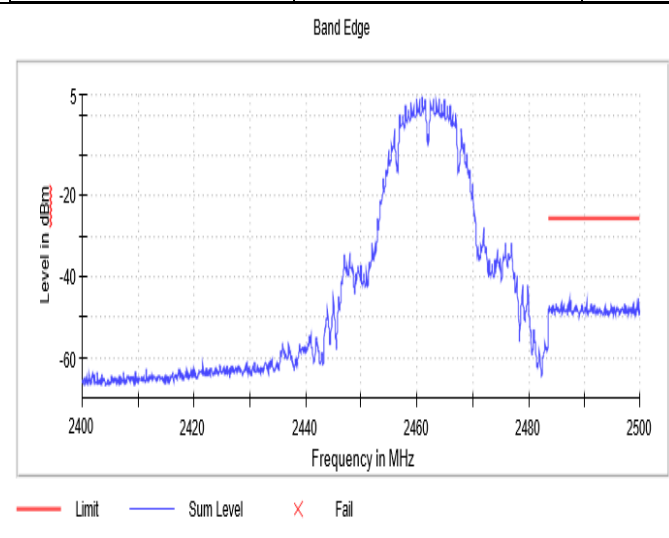
Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2397.975000	-41.6	17.0	-24.6	PASS
2398.025000	-41.6	17.0	-24.6	PASS
2397.025000	-41.7	17.1	-24.6	PASS
2396.975000	-41.7	17.2	-24.6	PASS
2399.975000	-43.5	18.9	-24.6	PASS
2398.525000	-44.1	19.5	-24.6	PASS
2398.475000	-44.1	19.5	-24.6	PASS
2398.075000	-44.3	19.7	-24.6	PASS
2397.075000	-44.4	19.8	-24.6	PASS
2397.475000	-44.7	20.1	-24.6	PASS
2396.925000	-44.7	20.2	-24.6	PASS
2397.525000	-44.7	20.2	-24.6	PASS
2397.925000	-44.8	20.3	-24.6	PASS
2398.275000	-44.9	20.3	-24.6	PASS
2398.225000	-44.9	20.3	-24.6	PASS



Band Edge High (802.11b 1Mbps 2462MHz)

Frequency (MHz)	Level (dBm)
2460.975000	4.5

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2487.375000	-45.2	19.7	-25.5	PASS
2499.825000	-45.2	19.7	-25.5	PASS
2499.875000	-45.6	20.1	-25.5	PASS
2490.475000	-45.7	20.2	-25.5	PASS
2487.725000	-45.8	20.3	-25.5	PASS
2490.525000	-45.8	20.3	-25.5	PASS
2485.975000	-45.9	20.4	-25.5	PASS
2487.675000	-46.1	20.6	-25.5	PASS
2487.425000	-46.2	20.8	-25.5	PASS
2484.975000	-46.4	20.9	-25.5	PASS
2487.525000	-46.4	20.9	-25.5	PASS
2487.625000	-46.5	21.0	-25.5	PASS
2487.575000	-46.5	21.0	-25.5	PASS
2498.875000	-46.6	21.1	-25.5	PASS
2497.325000	-46.6	21.2	-25.5	PASS

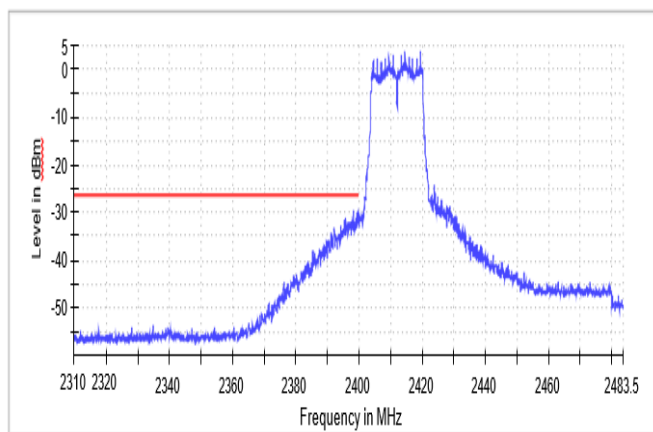


Band Edge Low (802.11g 6Mbps 2412MHz)

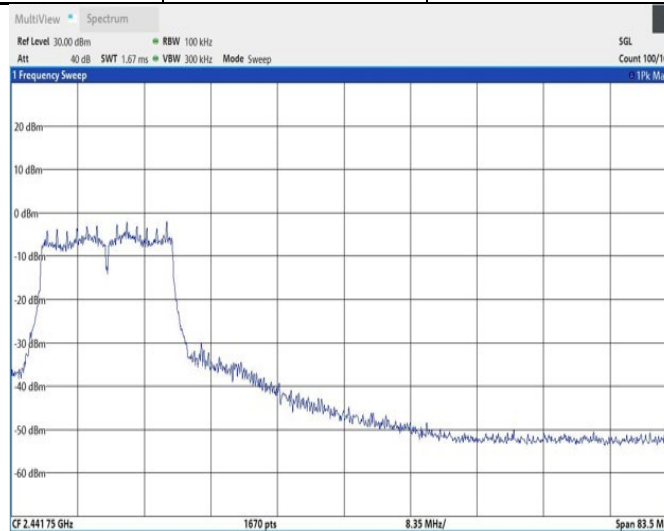
Frequency (MHz)	Level (dBm)
2419.475000	3.6

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2398.225000	-29.5	3.2	-26.4	PASS
2398.275000	-29.8	3.4	-26.4	PASS
2399.175000	-29.9	3.5	-26.4	PASS
2399.525000	-29.9	3.5	-26.4	PASS
2399.475000	-29.9	3.6	-26.4	PASS
2398.175000	-30.0	3.6	-26.4	PASS
2399.225000	-30.0	3.6	-26.4	PASS
2399.125000	-30.8	4.4	-26.4	PASS
2399.775000	-30.8	4.5	-26.4	PASS
2399.575000	-31.0	4.6	-26.4	PASS
2399.425000	-31.0	4.6	-26.4	PASS
2399.725000	-31.2	4.8	-26.4	PASS
2398.875000	-31.2	4.9	-26.4	PASS
2399.825000	-31.3	4.9	-26.4	PASS
2395.775000	-31.3	5.0	-26.4	PASS

Band Edge



— Limit — Sum Level X Fail

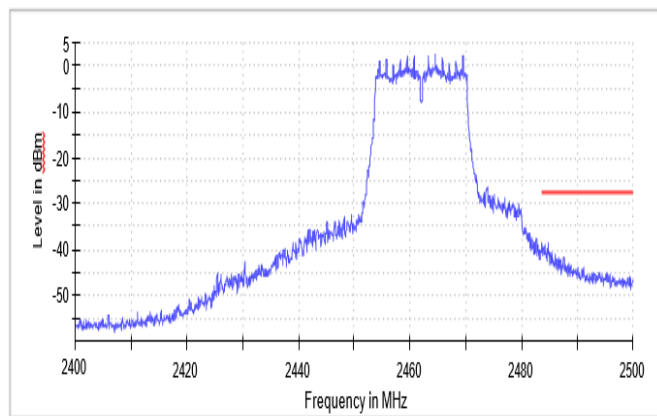


Band Edge High (802.11g 6Mbps 2462MHz)

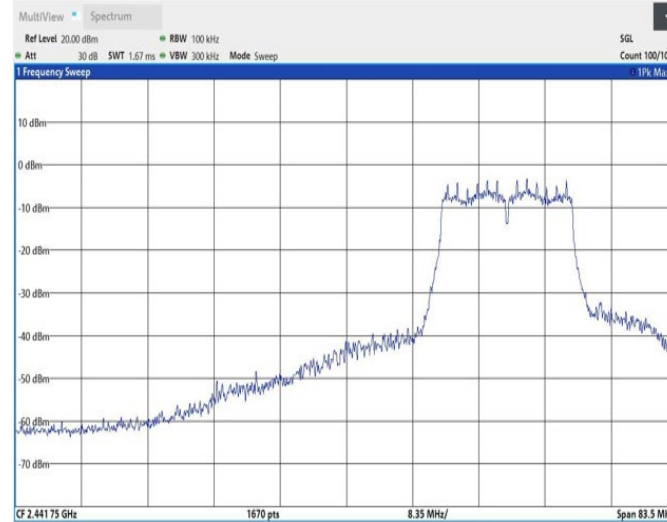
Frequency (MHz)	Level (dBm)
2464.475000	2.5

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2484.825000	-38.6	11.1	-27.5	PASS
2483.675000	-38.6	11.2	-27.5	PASS
2483.625000	-38.9	11.4	-27.5	PASS
2484.225000	-39.0	11.5	-27.5	PASS
2484.775000	-39.1	11.6	-27.5	PASS
2483.525000	-39.2	11.8	-27.5	PASS
2483.975000	-39.3	11.8	-27.5	PASS
2483.925000	-39.4	11.9	-27.5	PASS
2483.575000	-39.7	12.2	-27.5	PASS
2484.675000	-39.8	12.3	-27.5	PASS
2484.175000	-40.0	12.5	-27.5	PASS
2484.275000	-40.1	12.6	-27.5	PASS
2483.875000	-40.2	12.7	-27.5	PASS
2484.875000	-40.2	12.7	-27.5	PASS
2485.425000	-40.3	12.8	-27.5	PASS

Band Edge



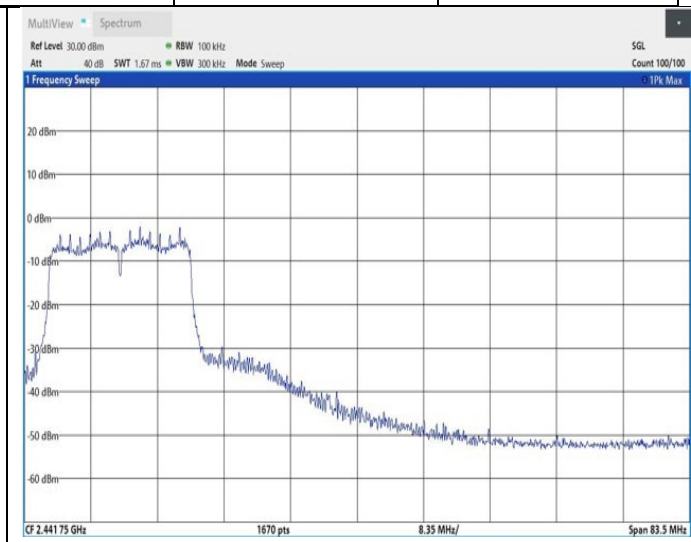
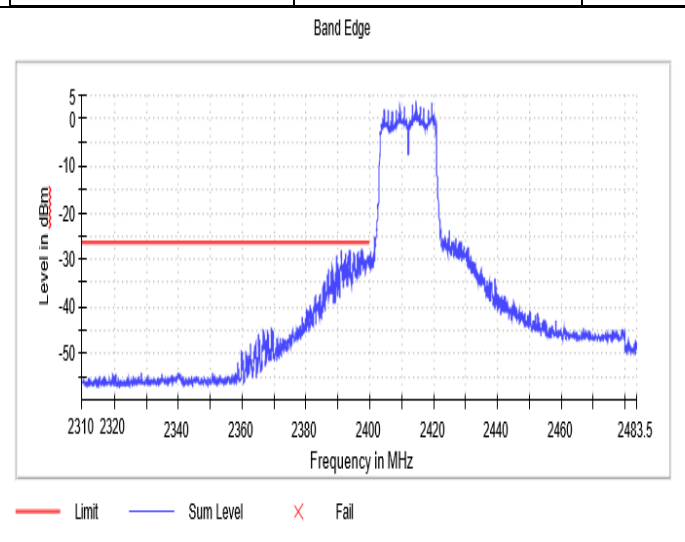
— Limit — Sum Level × Fail



Band Edge Low (802.11n (HT20) MCS0 2412MHz)

Frequency (MHz)	Level (dBm)
2414.475000	3.7

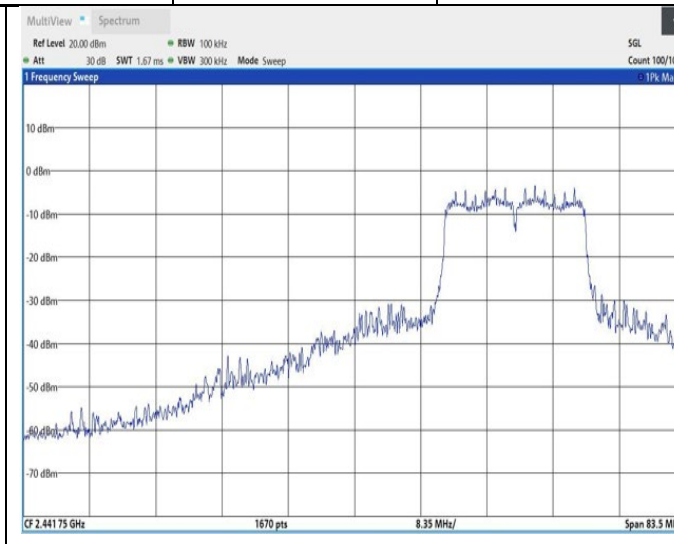
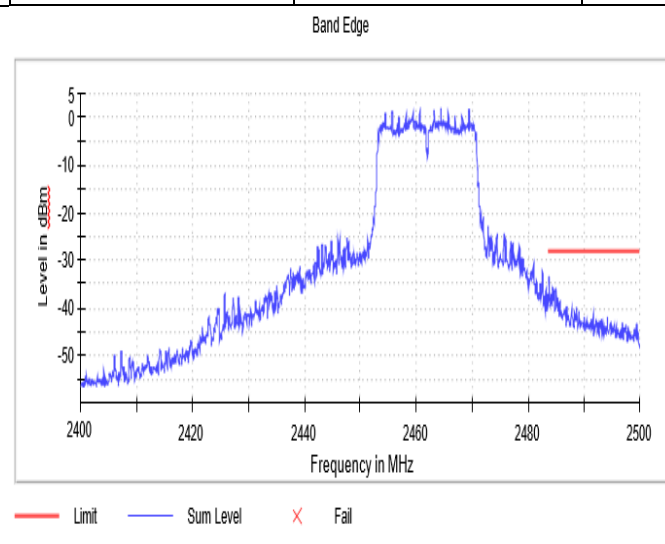
Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2391.025000	-27.8	1.5	-26.3	PASS
2391.075000	-27.8	1.5	-26.3	PASS
2393.575000	-27.9	1.6	-26.3	PASS
2397.325000	-27.9	1.6	-26.3	PASS
2393.525000	-27.9	1.6	-26.3	PASS
2393.875000	-28.0	1.6	-26.3	PASS
2397.625000	-28.1	1.8	-26.3	PASS
2397.575000	-28.1	1.8	-26.3	PASS
2396.375000	-28.2	1.8	-26.3	PASS
2393.825000	-28.3	2.0	-26.3	PASS
2397.275000	-28.3	2.0	-26.3	PASS
2397.675000	-28.3	2.0	-26.3	PASS
2396.425000	-28.3	2.0	-26.3	PASS
2396.325000	-28.4	2.1	-26.3	PASS
2393.625000	-28.4	2.1	-26.3	PASS



Band Edge High (802.11n (HT20) MCS0 2462MHz)

Frequency (MHz)	Level (dBm)
2464.475000	2.3

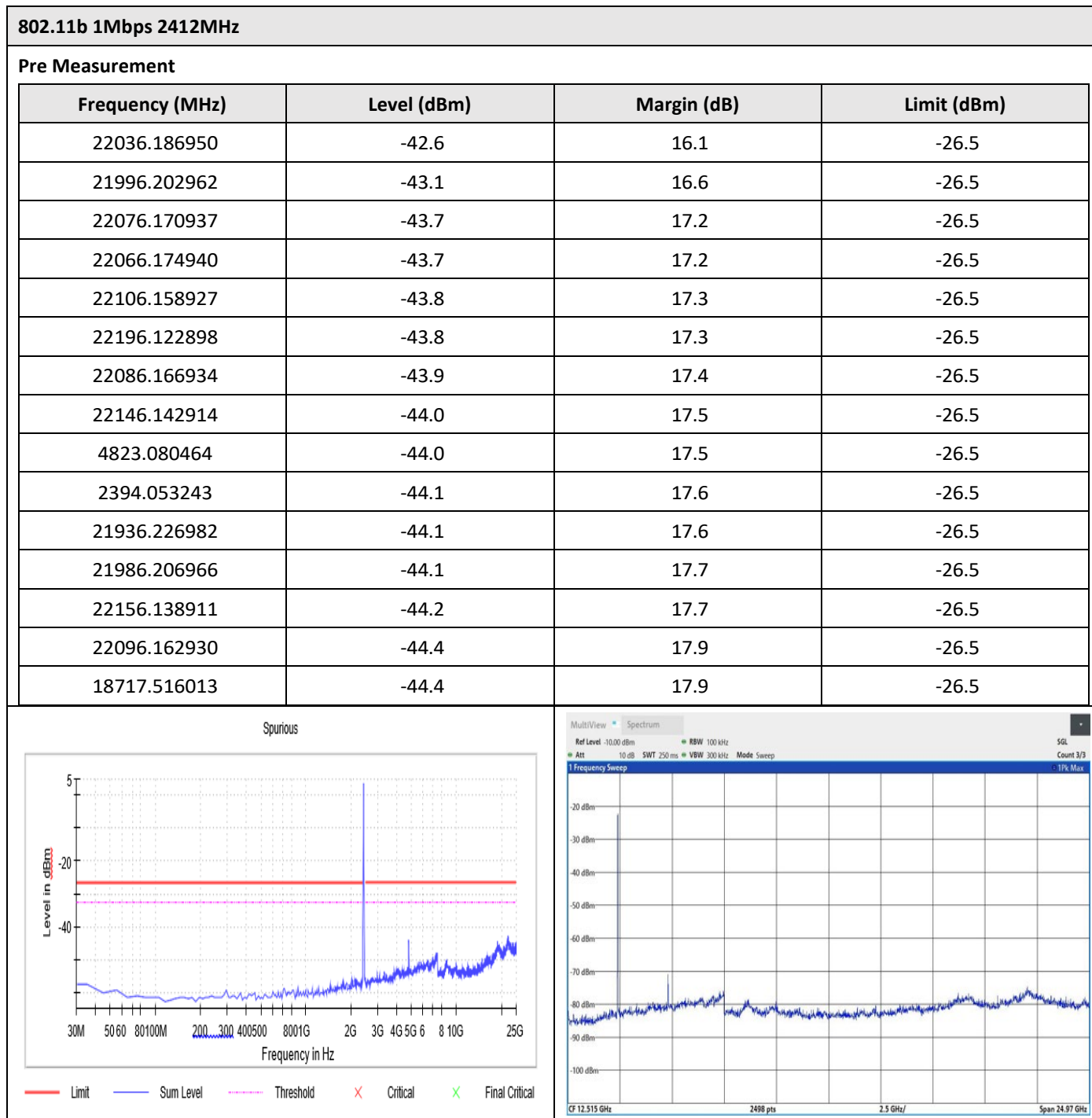
Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2483.825000	-33.1	5.4	-27.7	PASS
2483.875000	-34.2	6.5	-27.7	PASS
2483.775000	-34.5	6.8	-27.7	PASS
2485.025000	-35.6	7.9	-27.7	PASS
2484.625000	-35.7	7.9	-27.7	PASS
2484.475000	-35.7	8.0	-27.7	PASS
2485.075000	-35.8	8.1	-27.7	PASS
2484.775000	-35.9	8.2	-27.7	PASS
2484.725000	-36.0	8.3	-27.7	PASS
2484.525000	-36.4	8.7	-27.7	PASS
2484.575000	-36.4	8.7	-27.7	PASS
2484.175000	-37.0	9.3	-27.7	PASS
2483.525000	-37.0	9.3	-27.7	PASS
2484.125000	-37.1	9.4	-27.7	PASS
2484.425000	-37.2	9.5	-27.7	PASS



Tx Spurious Emissions

Test according to FCC title 47 part 15 §15.247(d), KDB 558074 D01 DTS Meas Guidance v05 8.5 and ANSI C63.10-2013 11.11.2 & 11.11.3

Measurement uncertainty calculated in accordance with ETSI TR 100 028-1. Expanded Uncertainty (K=2) < 1.8 dB

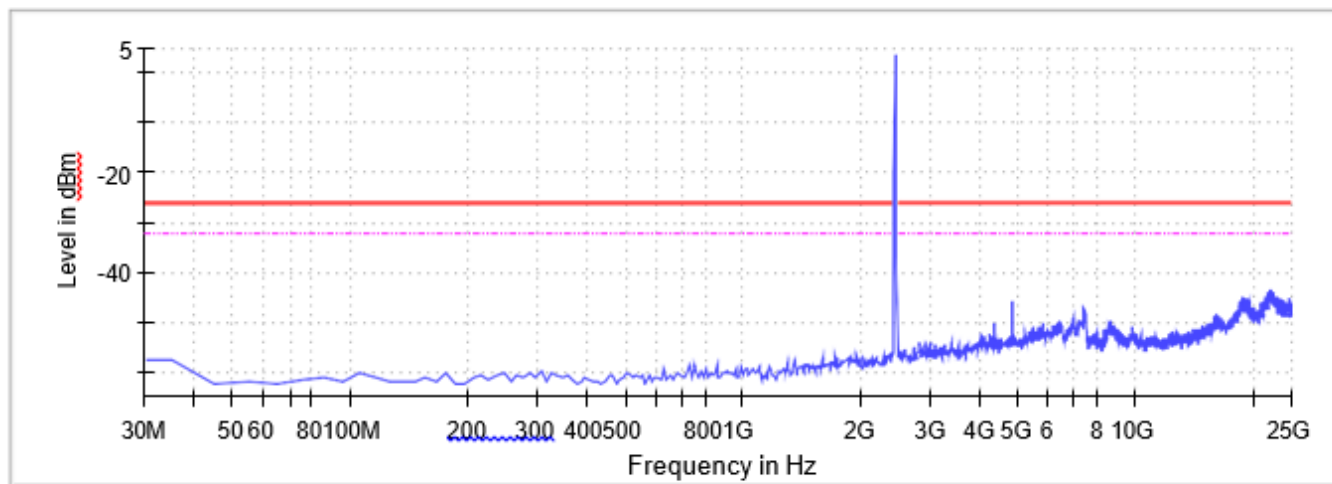


802.11b 1Mbps 2437MHz

Pre Measurement

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
22076.170937	-43.4	17.2	-26.2
22016.194956	-43.4	17.2	-26.2
22046.182946	-43.6	17.4	-26.2
21956.218975	-43.6	17.4	-26.2
22206.118895	-43.8	17.6	-26.2
22216.114892	-43.8	17.6	-26.2
22056.178943	-43.8	17.6	-26.2
22306.078863	-43.8	17.6	-26.2
22036.186950	-44.0	17.8	-26.2
21966.214972	-44.1	17.9	-26.2
22106.158927	-44.1	17.9	-26.2
22346.062850	-44.1	17.9	-26.2
21746.303042	-44.2	18.0	-26.2
21996.202962	-44.2	18.0	-26.2
22356.058847	-44.2	18.0	-26.2

Spurious



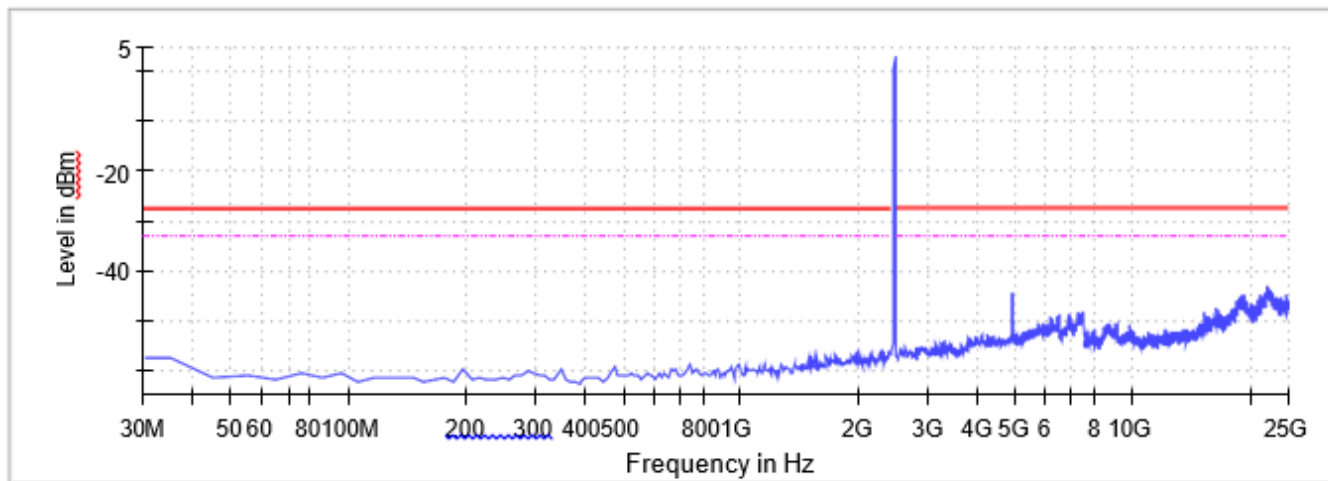
— Limit — Sum Level - - - - Threshold × Critical × Final Critical

802.11b 1Mbps 2462MHz

Pre Measurement

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
22056.178943	-43.2	16.0	-27.2
21956.218975	-43.3	16.2	-27.2
22086.166934	-43.6	16.4	-27.2
22126.150921	-43.8	16.6	-27.2
22236.106886	-43.8	16.6	-27.2
22505.998799	-43.9	16.7	-27.2
22186.126902	-44.0	16.8	-27.2
22106.158927	-44.0	16.9	-27.2
22076.170937	-44.0	16.9	-27.2
22316.074860	-44.1	16.9	-27.2
22296.082866	-44.1	16.9	-27.2
22016.194956	-44.1	16.9	-27.2
22166.134908	-44.1	17.0	-27.2
22306.078863	-44.1	17.0	-27.2
22156.138911	-44.2	17.0	-27.2

Spurious



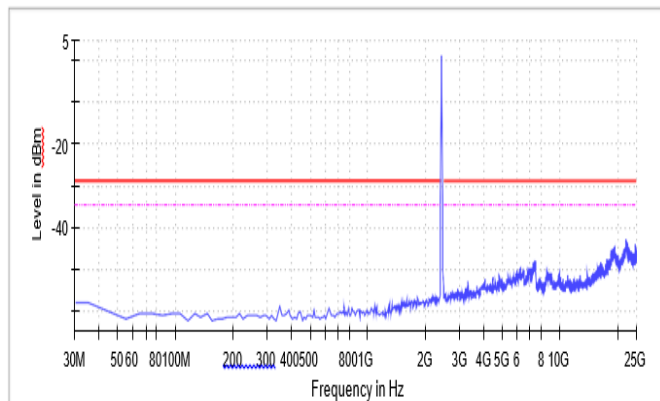
— Limit — Sum Level - - - Threshold × Critical × Final Critical

802.11g 6Mbps 2412MHz

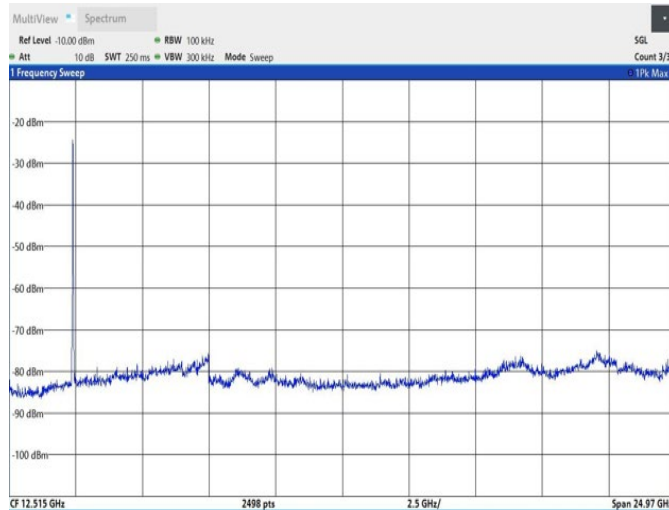
Pre Measurement

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2394.053243	-35.5	6.9	-28.6
2384.057246	-42.5	13.9	-28.6
22036.186950	-42.7	14.2	-28.6
22046.182946	-43.2	14.6	-28.6
22066.174940	-43.2	14.7	-28.6
22146.142914	-43.5	15.0	-28.6
22505.998799	-43.6	15.0	-28.6
22136.146918	-43.7	15.1	-28.6
22176.130905	-43.8	15.2	-28.6
22076.170937	-43.8	15.3	-28.6
24705.118094	-43.9	15.3	-28.6
22106.158927	-43.9	15.4	-28.6
22096.162930	-44.0	15.4	-28.6
22346.062850	-44.0	15.5	-28.6
22086.166934	-44.1	15.5	-28.6

Spurious



— Limit — Sum Level — Threshold X Critical X Final Critical

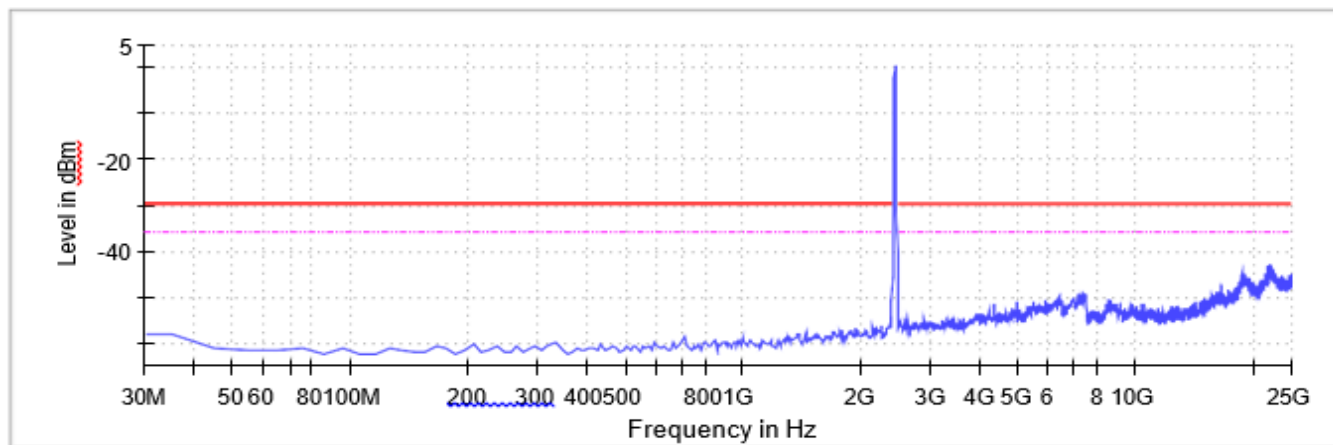


802.11g 6Mbps 2437MHz

Pre Measurement

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
22016.194956	-42.8	13.2	-29.6
22076.170937	-43.0	13.4	-29.6
22046.182946	-43.0	13.4	-29.6
21886.246998	-43.3	13.7	-29.6
22106.158927	-43.4	13.9	-29.6
22066.174940	-43.7	14.1	-29.6
22116.154924	-43.7	14.2	-29.6
22026.190953	-43.9	14.4	-29.6
22246.102882	-44.1	14.6	-29.6
22326.070857	-44.1	14.6	-29.6
22166.134908	-44.2	14.6	-29.6
22336.066853	-44.2	14.6	-29.6
22126.150921	-44.2	14.7	-29.6
21916.234988	-44.3	14.7	-29.6
21996.202962	-44.4	14.8	-29.6

Spurious



— Limit — Sum Level - - - Threshold × Critical × Final Critical

802.11g 6Mbps 2462MHz

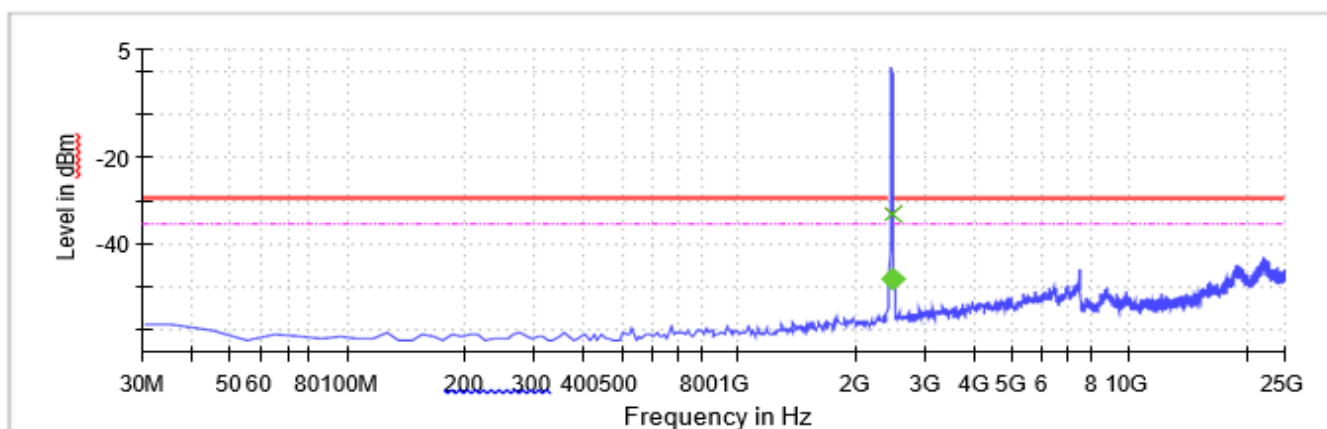
Final Measurement

Frequency (MHz)	Level Pre Measurement (dBm)	Level (dBm)	Margin (dB)	Limit (dBm)
2483.817713	-32.3	-48.3	19.1	-29.2

Pre Measurement

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2484.017214	-32.9	3.7	-29.2
21956.218975	-43.0	13.8	-29.2
22176.130905	-43.6	14.4	-29.2
21926.230985	-43.7	14.5	-29.2
22016.194956	-43.7	14.5	-29.2
22116.154924	-43.8	14.5	-29.2
21986.206966	-43.9	14.6	-29.2
22456.018815	-43.9	14.7	-29.2
22196.122898	-43.9	14.7	-29.2
22156.138911	-43.9	14.7	-29.2
22336.066853	-44.0	14.8	-29.2
22655.938751	-44.1	14.9	-29.2
22086.166934	-44.1	14.9	-29.2
22026.190953	-44.1	14.9	-29.2
22036.186950	-44.1	14.9	-29.2

Spurious



— Limit
— Sum Level
— Threshold
x Final Critical
◆ Sum Level Fail
◆ Threshold Pass
x Critical

802.11n (HT20) MCS0 2412MHz

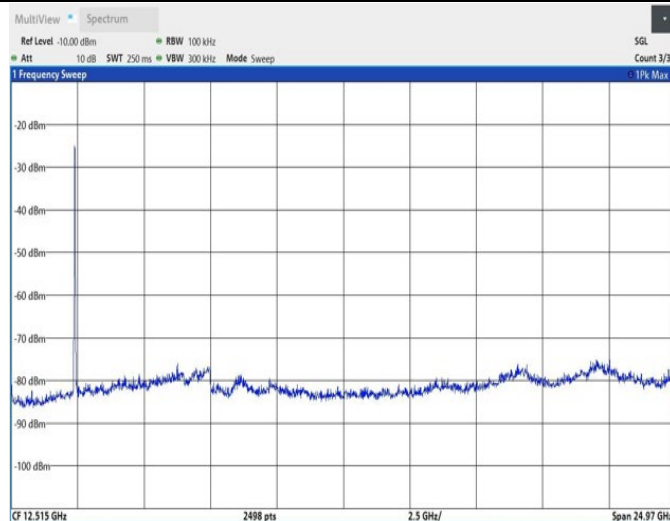
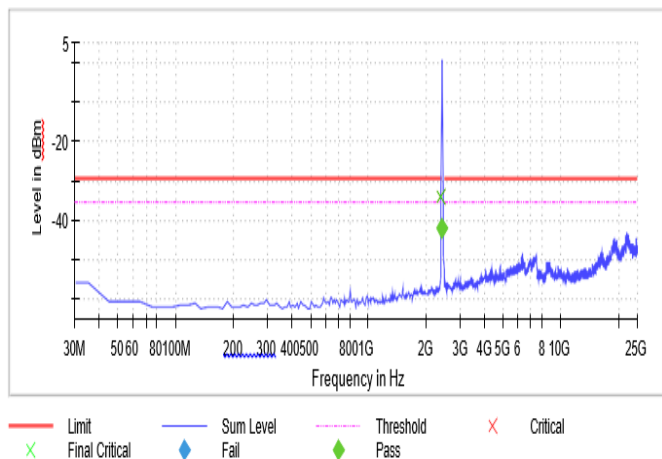
Final Measurement

Frequency (MHz)	Level Pre Measurement (dBm)	Level (dBm)	Margin (dB)	Limit (dBm)
2399.788904	-14.1	-42.0	12.8	-29.2

Pre Measurement

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2394.053243	-34.1	4.9	-29.2
2384.057246	-42.3	13.1	-29.2
22026.190953	-43.0	13.7	-29.2
22066.174940	-43.2	14.0	-29.2
22525.990793	-43.2	14.0	-29.2
22036.186950	-43.4	14.2	-29.2
22086.166934	-43.5	14.3	-29.2
22236.106886	-43.6	14.4	-29.2
21806.279023	-43.7	14.5	-29.2
22106.158927	-43.8	14.6	-29.2
22436.026821	-43.9	14.7	-29.2
22056.178943	-44.0	14.8	-29.2
22326.070857	-44.0	14.8	-29.2
21876.251001	-44.1	14.9	-29.2
21936.226982	-44.2	15.0	-29.2

Spurious

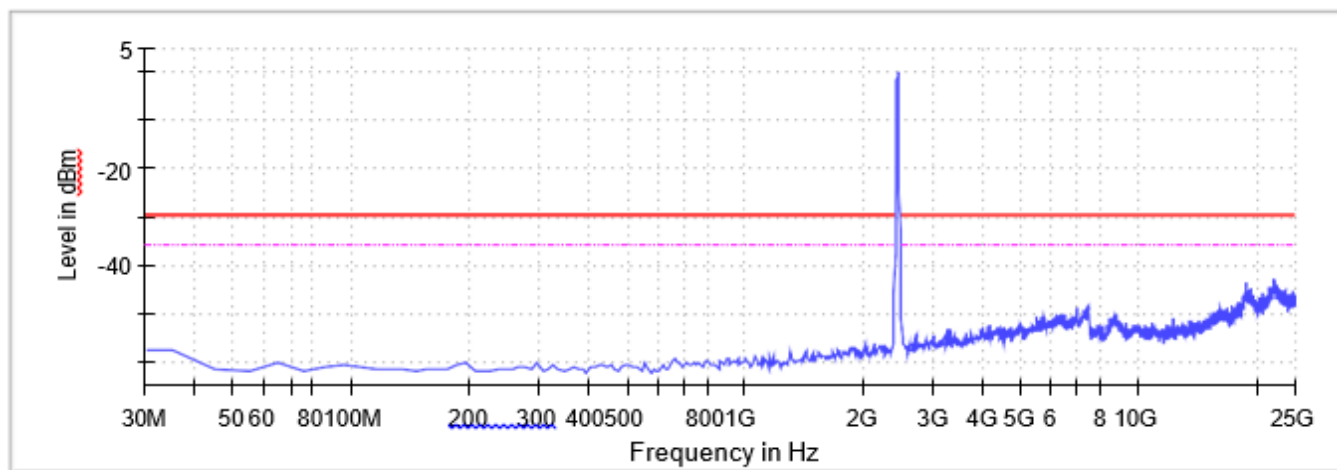


802.11n (HT20) MCS0 2437MHz

Pre Measurement

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
22176.130905	-42.6	13.0	-29.6
22146.142914	-43.2	13.6	-29.6
18737.508006	-43.8	14.2	-29.6
22046.182946	-43.9	14.3	-29.6
22006.198959	-43.9	14.3	-29.6
22446.022818	-44.0	14.4	-29.6
22096.162930	-44.0	14.4	-29.6
22206.118895	-44.0	14.5	-29.6
22156.138911	-44.1	14.5	-29.6
2484.017214	-44.1	14.5	-29.6
22076.170937	-44.2	14.6	-29.6
22086.166934	-44.2	14.6	-29.6
22036.186950	-44.3	14.7	-29.6
21846.263010	-44.3	14.7	-29.6
21596.363090	-44.3	14.7	-29.6

Spurious



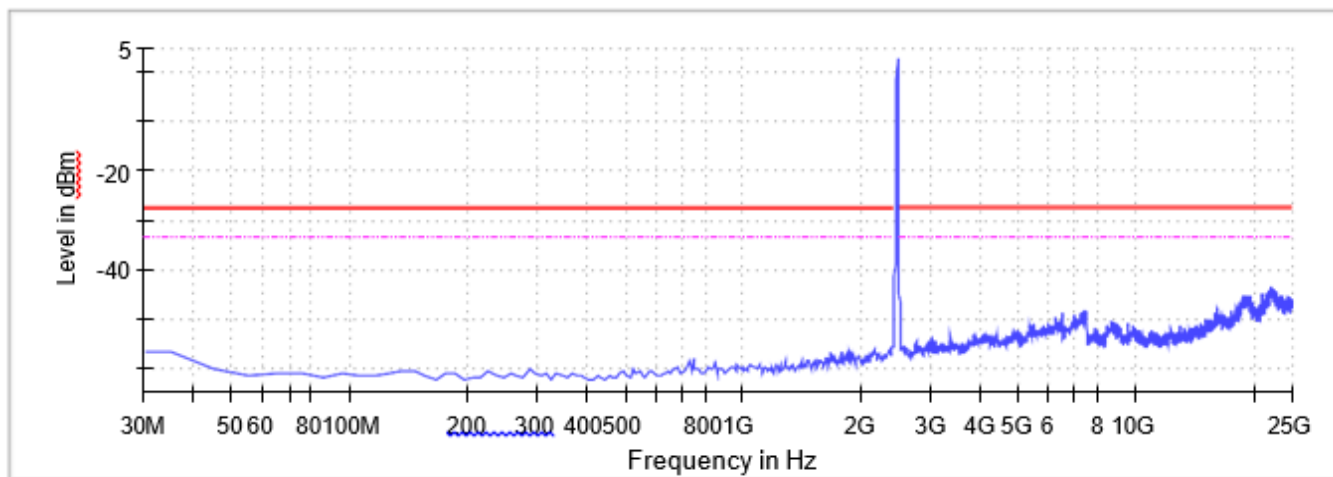
— Limit
 — Sum Level
 - - - Threshold
 × Critical
 × Final Critical

802.11n (HT20) MCS0 2462MHz

Pre Measurement

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)
2484.017214	-35.9	8.5	-27.4
22036.186950	-43.7	16.3	-27.4
22026.190953	-43.7	16.3	-27.4
21946.222978	-43.9	16.5	-27.4
22086.166934	-44.0	16.6	-27.4
22286.086869	-44.0	16.6	-27.4
22106.158927	-44.0	16.6	-27.4
22096.162930	-44.1	16.7	-27.4
22186.126902	-44.1	16.7	-27.4
22126.150921	-44.1	16.7	-27.4
22046.182946	-44.1	16.7	-27.4
22226.110889	-44.2	16.8	-27.4
22076.170937	-44.3	16.9	-27.4
22006.198959	-44.3	16.9	-27.4
22535.986789	-44.3	16.9	-27.4

Spurious



— Limit — Sum Level - - - - Threshold × Critical × Final Critical

• Radiated Testing

Test Summary

Start: 03/08/2022	End: 03/19/2022	Temperature: 23.0°C	Initials: RP/AB
		Humidity:20.8 %R.H.	

DUT S/N	AH22021401-HAR-004#03	DUT Operating Mode	2.4GHz WLAN		
Comment	802.11b 1Mbps, 802.11g 6Mbps, 802.11n MCS0				
Antenna	Frequency Range	Polarization	Result Over/Under Limit		Notes
Loop	9kHz-30MHz	Parallel	<input type="checkbox"/> Over	<input checked="" type="checkbox"/> Under	√
		Perpendicular	<input type="checkbox"/> Over	<input checked="" type="checkbox"/> Under	√
		Ground-Parallel	<input type="checkbox"/> Over	<input checked="" type="checkbox"/> Under	√
Log Periodic	30MHz-1GHz	Horizontal	<input type="checkbox"/> Over	<input checked="" type="checkbox"/> Under	√
		Vertical	<input type="checkbox"/> Over	<input checked="" type="checkbox"/> Under	√
Horn	1GHz-18GHz	Horizontal	<input type="checkbox"/> Over	<input checked="" type="checkbox"/> Under	√
		Vertical	<input type="checkbox"/> Over	<input checked="" type="checkbox"/> Under	√
Horn	18GHz-27.5GHz	Horizontal	<input type="checkbox"/> Over	<input checked="" type="checkbox"/> Under	√
		Vertical	<input type="checkbox"/> Over	<input checked="" type="checkbox"/> Under	√

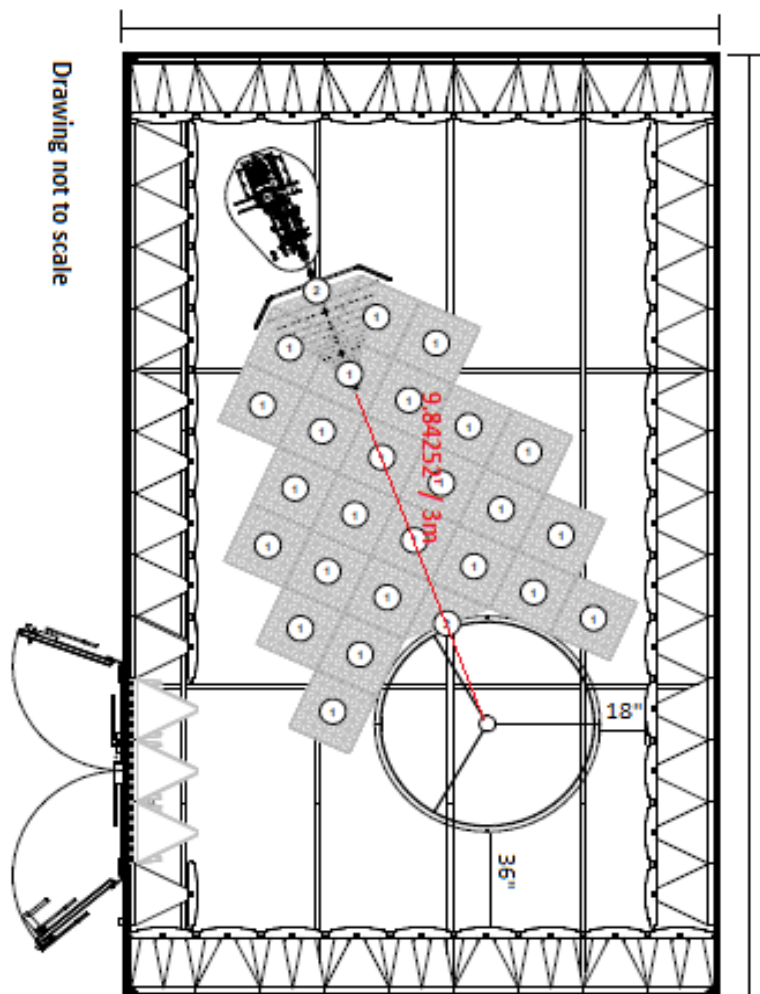
Notes: √ meets the requirements of the acceptance criteria.

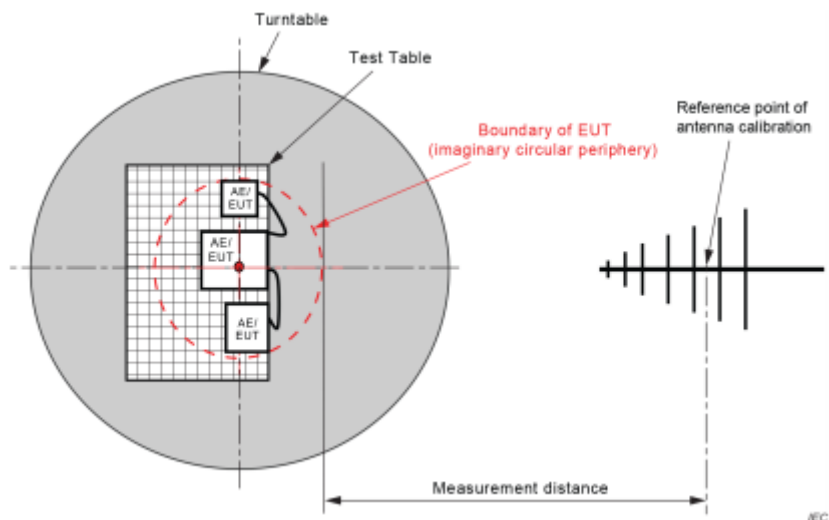
Test Setup

Semi-Anechoic Chamber Test Site-3 meter

Chamber Location	815 N Opdyke Rd Auburn Hills, Michigan 48326
Chamber Manufacturer:	ETS-Lindgren
Chamber Type	Semi-Anechoic
Model	FACT™ 3-2.0 Plus
Chamber Dimensions (L x W x H)	18'x18'x30'
Quiet Zone Diameter	2.0 meters
Quiet Zone Test Heights	1 & 2 meters (front only)
Test Distance	3.0 meters
Test Frequency Range	1-40 GHz
Measured Performance	4.87 dB Site sVSWR

Chamber Dimensions





Test Equipment Used

ID #	Equipment	Manufacturer	Model	Serial #	Cal Due
BVD0217	Receiver 2Hz-44GHz	Rohde & Schwarz	ESW44	101871	04/16/2022
BVD0398	Double Shielded N-Type Cable 2 Meter	Rohde & Schwarz	N-Type	N/A	12/29/2022
BVD0407	Double Shielded N-Type Cable 410mm (For PreAmp)	Rohde & Schwarz	N-Type	N/A	08/05/2022
BVD0394	Double Shielded N-Type Cable 6.9 Meter	Rohde & Schwarz	N-Type	N/A	03/04/2023
BVD0184	Preamplifier 29dB 1-18GHz	Rohde & Schwarz	TS-PR18	101646	04/26/2022
BVD0480	Band Reject Filter 50dB from 2400 to 2500MHz	Micro-Tronics	BRM50702	G482	05/27/2022
BVD0267	Double Ridge Waveguide 800MHz- 18GHz	Rohde & Schwarz	HF907	102832	09/09/2022
BVD0486	Sucoflex K-Type Coaxial Cable 5 Meter	Huber+Suhner, inc	K-Type Coaxial	474343	03/07/2023
BVD0185	Preamplifier 45dB 18-40GHz	Rohde & Schwarz	TS-PR1840	100064	03/22/2022
BVD0320	18-40GHz Horn Antenna	L3 Narda ATM	PNR 180-442- KF	136164-01	04/08/2022
BVD0186	Preamplifier 25dB cal to 100kHz-1GHz	Rohde & Schwarz	TS-PR1	102080	04/05/2022
BVD0405	Double Shielded N-Type Cable 440mm (For PreAmp)	Rohde & Schwarz	N-Type	N/A	08/10/2022
BVD0021	UltraLog Antenna 30-6000 MHz	Rohde & Schwarz	HL562E	101113	07/23/2022
BVD0118	Antenna Mast Position Controller	ETS	7006-001	00214778/0 0214648	N/A
BVD0112	Equipment Chamber for 3 Meter Chamber	ETS	N/A	N/A	N/A
BVD0111	3 Meter Anechoic Chamber	ETS	N/A	N/A	10/16/2022
BVD0247	Turn Table	ETS	920250	N/A	N/A
BVD0323	Foam Test Table For 3 Meter Chamber	ETS-Lindgren	LDT-1.5	N/A	N/A
BVD0069	Bore Sight Tower	ETS	2171B	226732	N/A
BVD0258	Optima 12V Blue top Marine battery	Optima	D34M	N/A	N/A
BVD0011	Loop Antenna 9kHz-30MHz	Rohde & Schwarz	FMZB1519B	145	03/23/2022
BVD0341	Temp and Humidity Chart Recorder	Omega	ITHX-SD	M20150306	N/A
BVD0394	Double Shielded N-Type Cable 6.9 Meter	Rohde & Schwarz	N-Type	N/A	03/04/2023

Equipment List (Software)

Equipment	Manufacturer	Model	Version No.
EMC Test Software	Nexio	BAT-EMC	3.21.0.18

Customer Supplied Equipment

ID #	Equipment	Manufacturer	Model	Serial #	Version No.
N/A	Cable Harness	Harman	1.7m	N/A	N/A
N/A	USB Hub	Harman	N/A	3526408	N/A
N/A	USB 2.0 Ethernet Adapter	Trendnet	TU2-ET100	RA0JU56004466	V6.0R

Test Plots

Uncertainty

Radiated Emissions (30MHz to 18GHz)

Test Engineer: Ryan Phillips

The test is to measure the radiated emissions of the EUT. Some error sources that can contribute to the total uncertainty:

- Uncertainty of the receiver
- Uncertainty of the antenna
- Uncertainty of cables
- Uncertainty due to the mismatches
- NSA Calibration
- Etc., details see the below table

30MHz to 1GHZ

Source of Uncertainty	Value (dB)	ProbabilityDistribution	Division	Sensitivity Coefficient	Expanded Uncertainty
Receiver Reading	0.12	Rectangular	1.732	1	0.069284
Cable Insertion Loss	0.21	Normal	2	1	0.105
Filter Insertion Loss	0.25	Normal	2	1	0.125
Antenna Factor	0.65	Normal	2	1	0.325
Receiver CW accuracy	0.5	Rectangular	1.732	1	0.2886836
Pulse Amplitude Response	1.5	Rectangular	1.732	1	0.86605081
PRF Response	1.5	Rectangular	1.732	1	0.86605081
Mismatch Filter – Receiver	0.25	U-Shape	2.449	1	0.1768033
NSA Calibration	4.0	Triangular	1.414	1	1.633332
ETS Foam Table (LDT-1.5)	1.8	Rectangular	1.732	1	1.039261
Combined Standard Uncertainty (square root of the sum of the squares)					2.113781
Expanded Uncertainty (K=2)					4.227562

The total derived measurement uncertainty is +/- 4.228 dB

1GHz to 40GHz

Source of Uncertainty	Value (dB)	Probability Distribution	Division	Sensitivity Coefficient	Expanded Uncertainty
Receiver Reading	0.12	Rectangular	1.732	1	0.069284
Cable Insertion Loss	0.21	Normal	2	1	0.105000
Filter Insertion Loss	0.25	Normal	2	1	0.125000
Antenna Factor	0.65	Normal	2	1	0.325000
Receiver CW accuracy	0.5	Rectangular	1.732	1	0.2886836
Pulse Amplitude Response	1.5	Rectangular	1.732	1	0.866051
PRF Response	1.5	Rectangular	1.732	1	0.866051
Mismatch Filter – Receiver	0.25	U-Shape	1.414	1	0.176803
VSWR Calibration	2.0	Triangular	2.449	1	0.816659
ETS Foam Table (LDT-1.5)	1.8	Rectangular	1.732	1	1.039261
Combined Standard Uncertainty (square root of the sum of the squares)					1.869213
Expanded Uncertainty (K=2)					3.738426

The total derived measurement uncertainty is +/- 3.738 dB.

Remarks:

1. Level Q-Peak Reading (dBµV/m) = Raw Q-Peak Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Q-Peak Reading – Limit

Remarks:

1. Level Peak Reading (dBµV/m) = Raw Peak Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Peak Reading – Limit

Remarks:

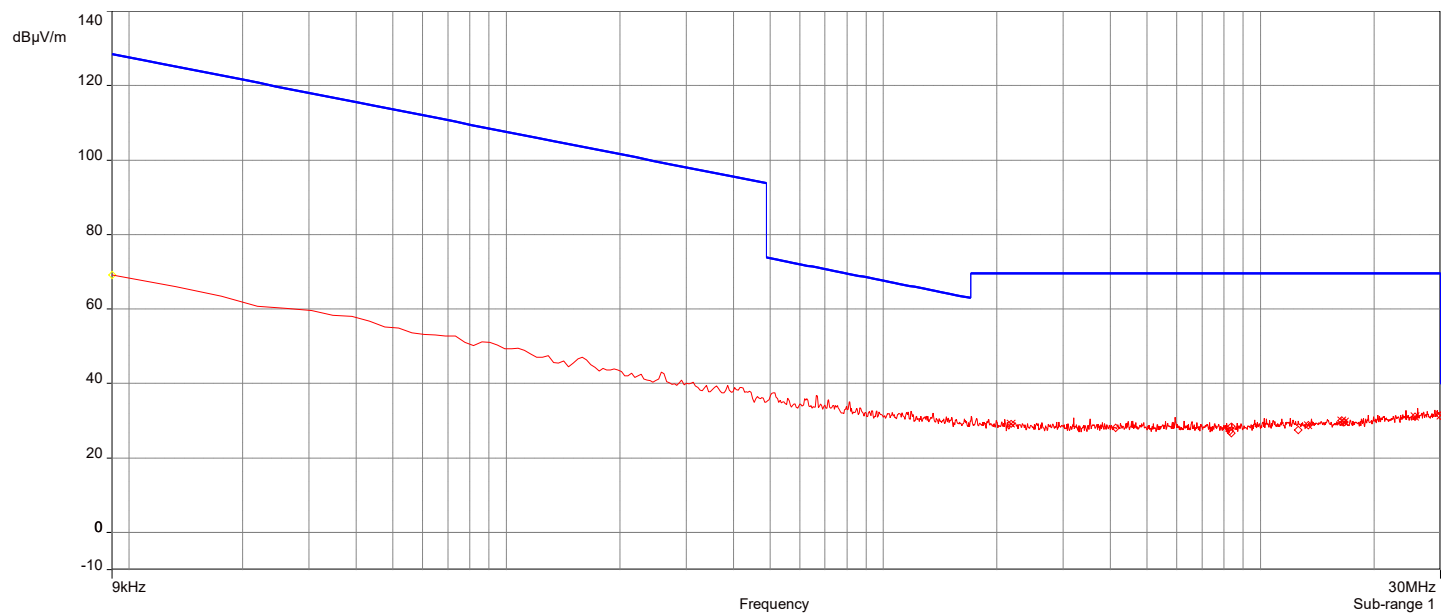
1. Level Average Reading (dBµV/m) = Raw Average Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Average Reading – Limit

AH22021401-HAR-004#3_2.4G 802.11b_Ch 6_9kHz-30MHz_Ground-Parallel

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No	Frequency (MHz)	Level Q-Peak Reading (dBμV/m)	Correction Factor (dB)	Limit dBμV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1.	2.181516MHz	29.17	19.21	69.54	-40.37	1.00	17.40	H/V	Passed
2.	13.378327MHz	28.82	19.85	69.54	-40.72	1.00	54.30	H/V	Passed
3.	16.420706MHz	30.03	19.84	69.54	-39.51	1.00	335.20	H/V	Passed
4.	16.694949MHz	29.68	19.85	69.54	-39.86	1.00	326.60	H/V	Passed
5.	25.650684MHz	31.10	20.89	69.54	-38.44	1.00	223.20	H/V	Passed
6.	30MHz	31.43	21.95	40.00	-8.57	1.00	356.20	H/V	Passed

Overall Graphs:



Remarks:

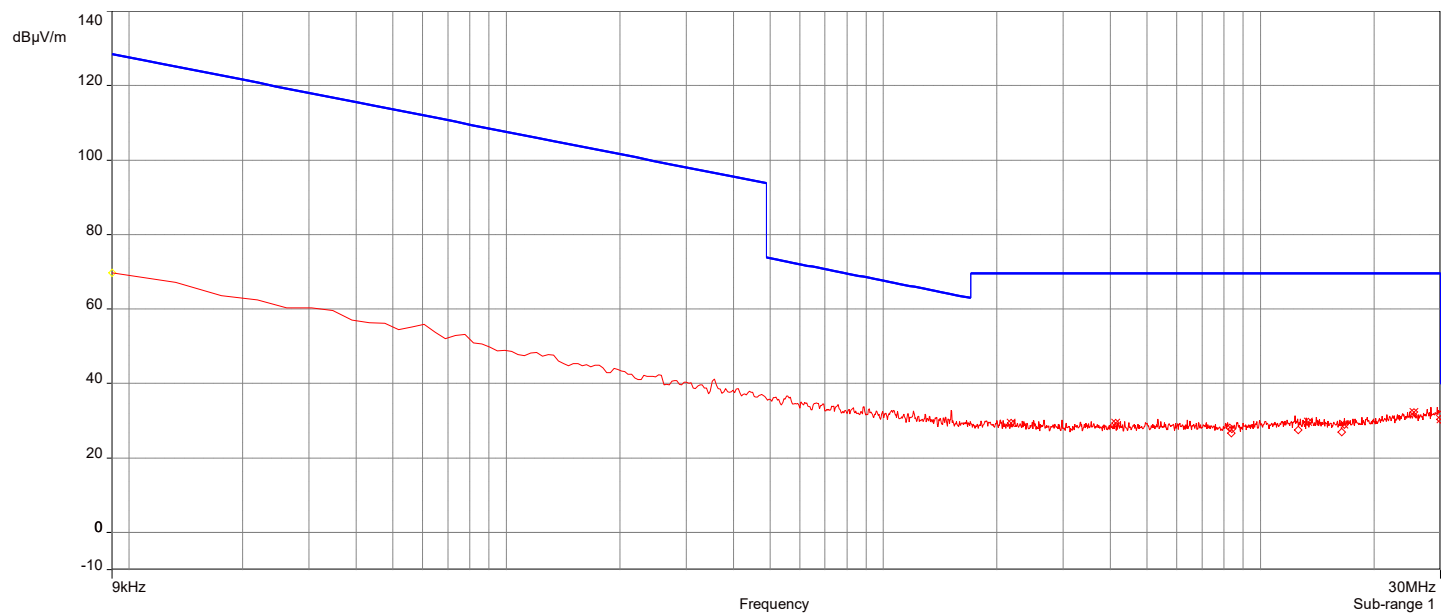
1. Level Q-Peak Reading (dBμV/m) = Raw Q-Peak Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Q-Peak Reading – Limit

AH22021401-HAR-004#3_2.4G 802.11b_Ch 6_9kHz-30MHz_Parallel

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No	Frequency (MHz)	Level Q-Peak Reading (dBμV/m)	Correction Factor (dB)	Limit dBμV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1	2.177231MHz	29.31	19.21	69.54	-40.23	1.00	103.70	H/V	Passed
2	4.126924MHz	29.40	19.39	69.54	-40.14	1.00	177.90	H/V	Passed
3	13.404037MHz	29.65	19.85	69.54	-39.89	1.00	73.90	H/V	Passed
4	16.694949MHz	28.95	19.85	69.54	-40.59	1.00	0.10	H/V	Passed
5	25.513562MHz	32.40	20.88	69.54	-37.14	1.00	35.50	H/V	Passed
6	30MHz	30.36	21.95	40.00	-9.64	1.00	29.20	H/V	Passed

Overall Graphs:



Remarks:

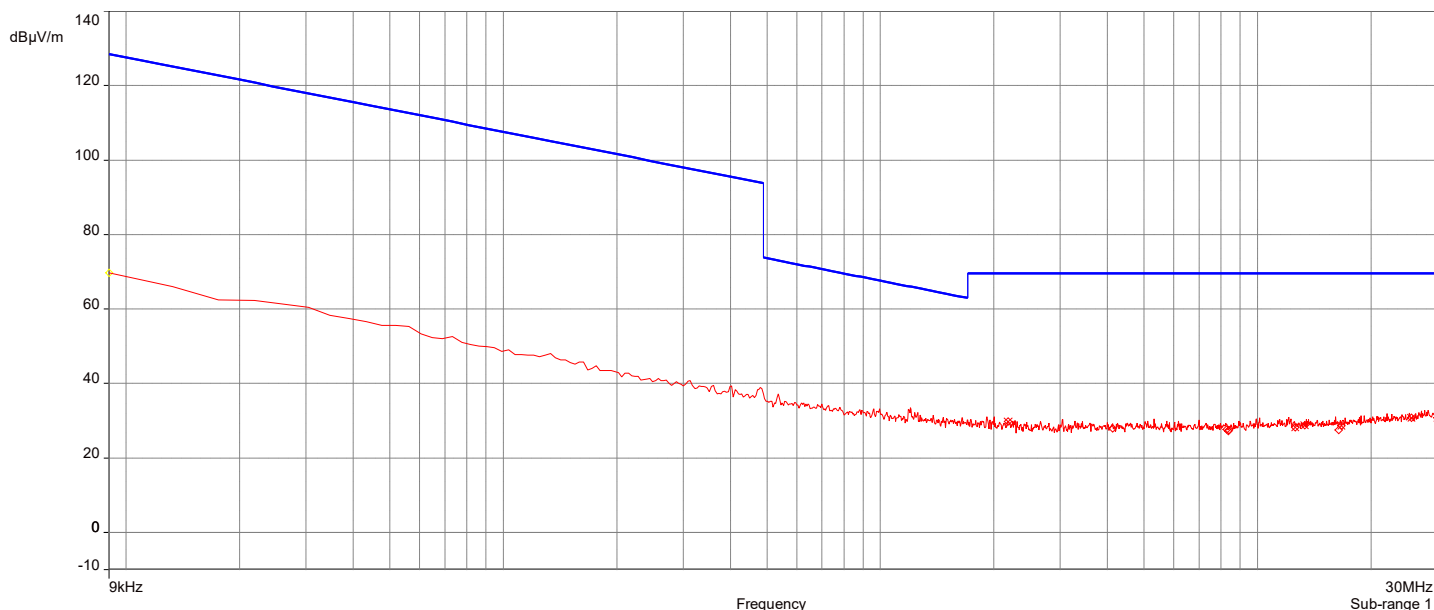
1. Level Q-Peak Reading (dBμV/m) = Raw Q-Peak Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Pre-amplifier Gain
3. Margin = Level Q-Peak Reading – Limit

AH22021401-HAR-004#3_2.4G 802.11b_Ch 6_9kHz-30MHz_Perpendicular

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No	Frequency (MHz)	Level Q-Peak Reading (dBμV/m)	Correction Factor (dB)	Limit dBμV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1	2.177231MHz	29.86	19.21	69.54	-39.68	1.00	287.80	H/V	Passed
2	12.577024MHz	28.27	19.83	69.54	-41.27	1.00	171.70	H/V	Passed
3	13.361187MHz	28.75	19.85	69.54	-40.79	1.00	275.10	H/V	Passed
4	16.694949MHz	28.64	19.85	69.54	-40.90	1.00	149.40	H/V	Passed
5	25.590693MHz	30.80	20.89	69.54	-38.74	1.00	0.30	H/V	Passed
6	30MHz	30.78	21.95	40.00	-9.22	1.00	101.40	H/V	Passed

Overall Graphs:



Remarks:

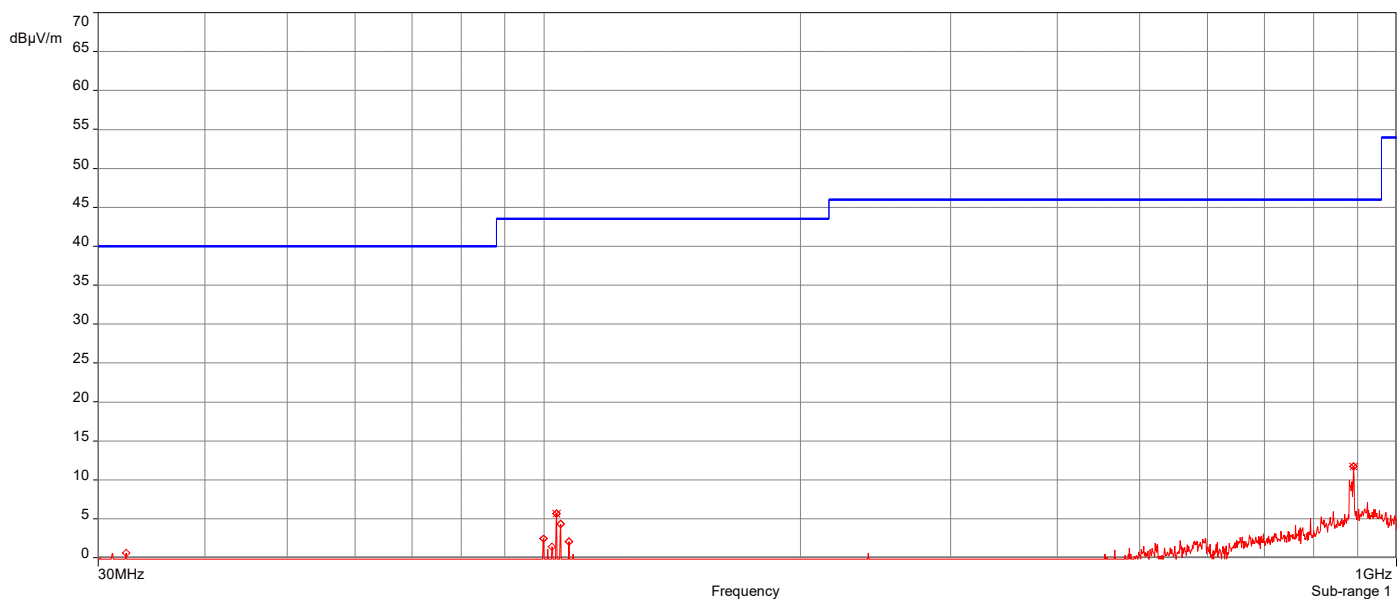
1. Level Q-Peak Reading (dBμV/m) = Raw Q-Peak Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Q-Peak Reading – Limit

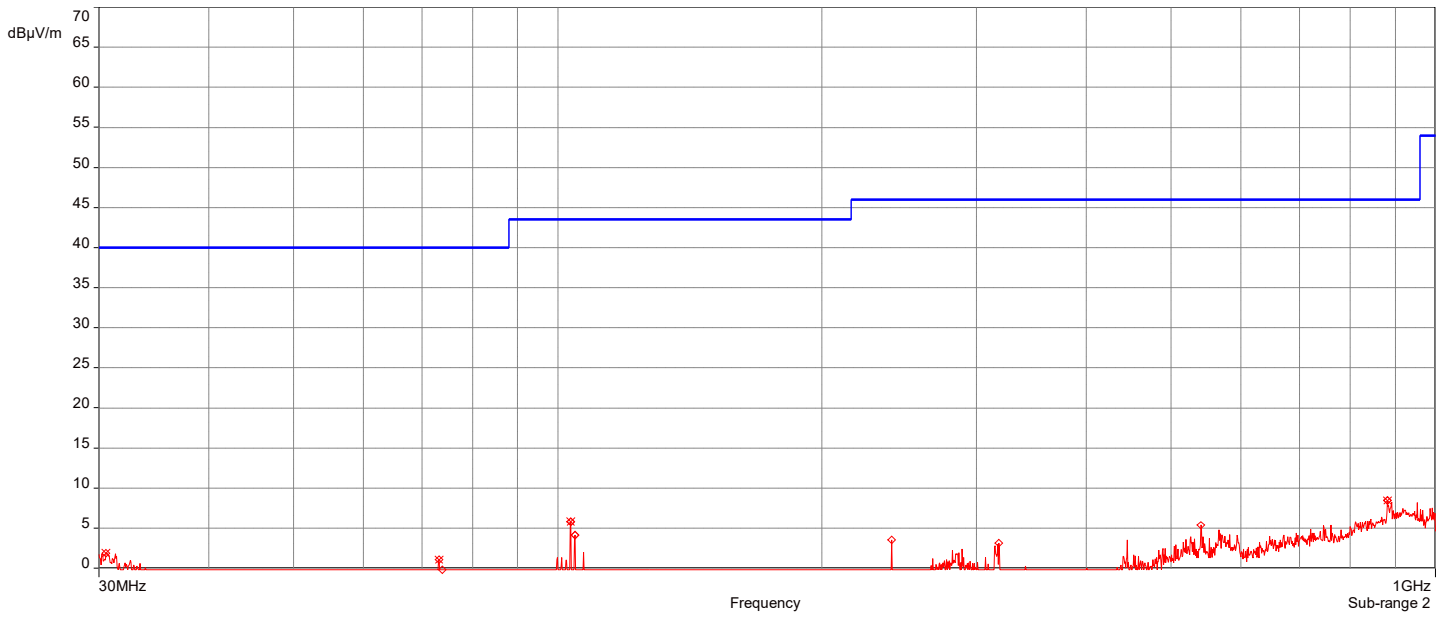
AH22021401-HAR-004#3_2.4G 802.11b_Ch 1_30MHz-1GHz

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No	Frequency (MHz)	Level Q-Peak Reading (dBμV/m)	Correction Factor (dB)	Limit dBμV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1.	103.38196MHz	5.68	-12.88	43.50	-37.82	1.00	274.10	Vertical	Passed
2.	890.55474MHz	11.72	-1.35	46.00	-34.28	2.00	196.00	Vertical	Passed
3.	30.570622MHz	1.90	-5.19	40.00	-38.10	4.00	278.50	Horizontal	Passed
4.	73.19607MHz	1.09	-15.32	40.00	-38.91	3.00	358.90	Horizontal	Passed
5.	103.38196MHz	5.80	-13.58	43.50	-37.70	2.50	38.10	Horizontal	Passed
6.	881.19654MHz	8.44	-0.30	46.00	-37.56	2.00	219.70	Horizontal	Passed

Overall Graphs:





Remarks:

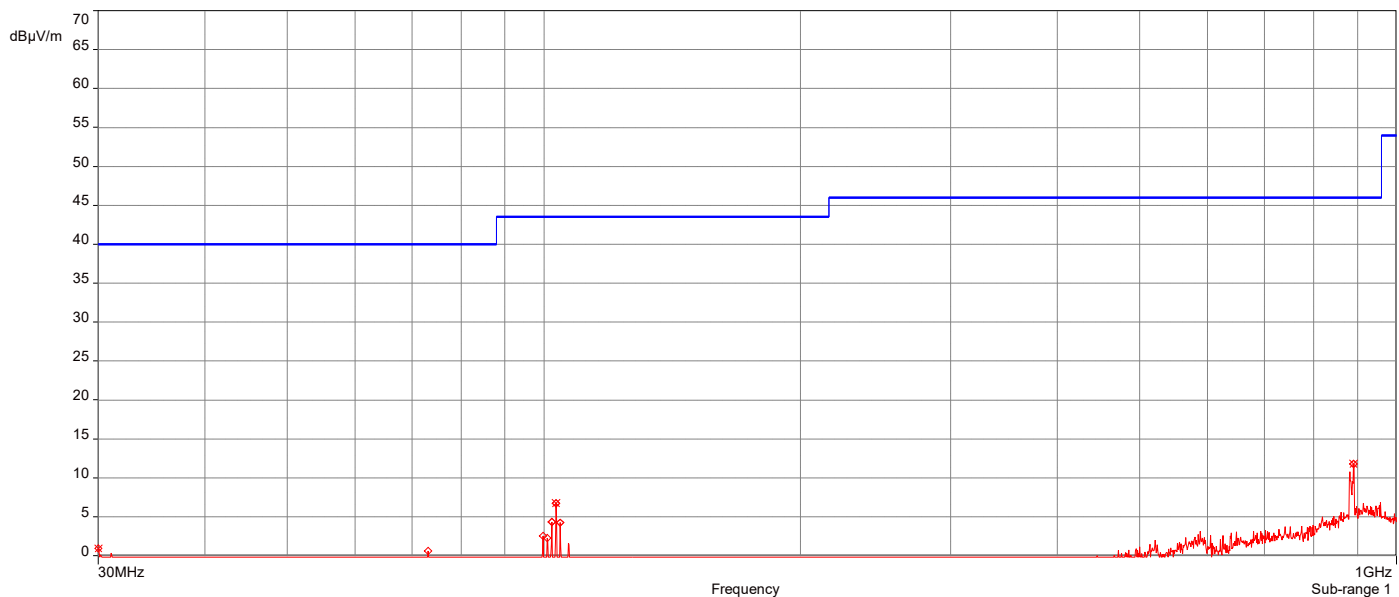
1. Level Q-Peak Reading (dBµV/m) = Raw Q-Peak Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Q-Peak Reading – Limit

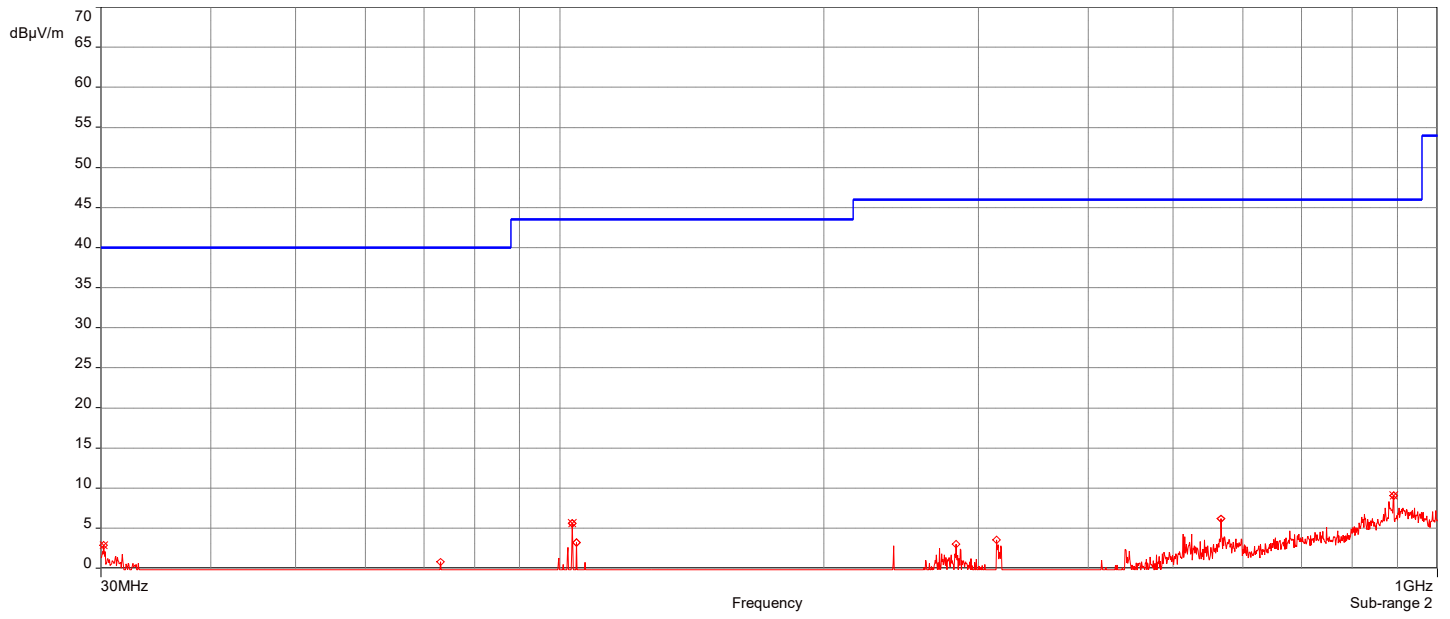
AH22021401-HAR-004#3_2.4G 802.11b_Ch 6_30MHz-1GHz

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No	Frequency (MHz)	Level Q-Peak Reading (dBμV/m)	Correction Factor (dB)	Limit dBμV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1.	30MHz	0.94	-6.62	40.00	-39.06	1.00	182.90	Vertical	Passed
2.	103.3249MHz	6.74	-12.88	43.50	-36.76	1.00	323.40	Vertical	Passed
3.	890.78299MHz	11.78	-1.35	46.00	-34.22	2.00	191.30	Vertical	Passed
4.	30.228249MHz	2.85	-4.96	40.00	-37.15	3.50	64.20	Horizontal	Passed
5.	103.3249MHz	5.62	-13.58	43.50	-37.88	3.50	12.20	Horizontal	Passed
6.	891.5248MHz	9.03	-0.10	46.00	-36.97	1.50	211.80	Horizontal	Passed

Overall Graphs:





Remarks:

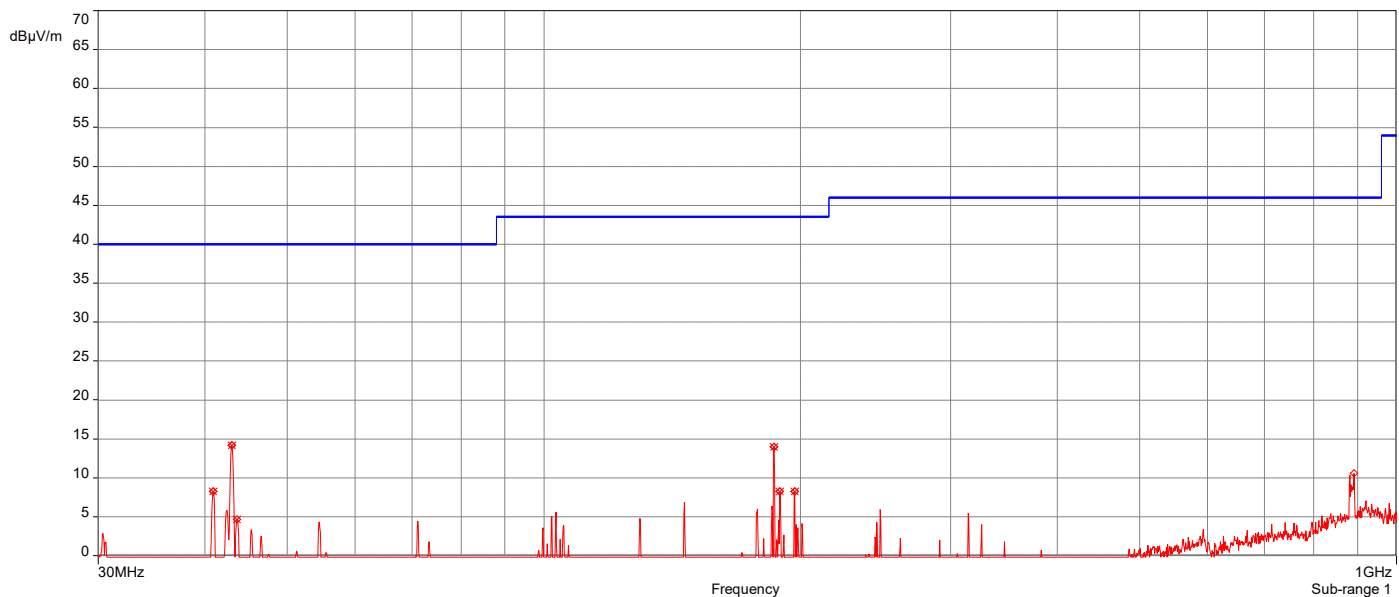
1. Level Q-Peak Reading (dBµV/m) = Raw Q-Peak Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Q-Peak Reading – Limit

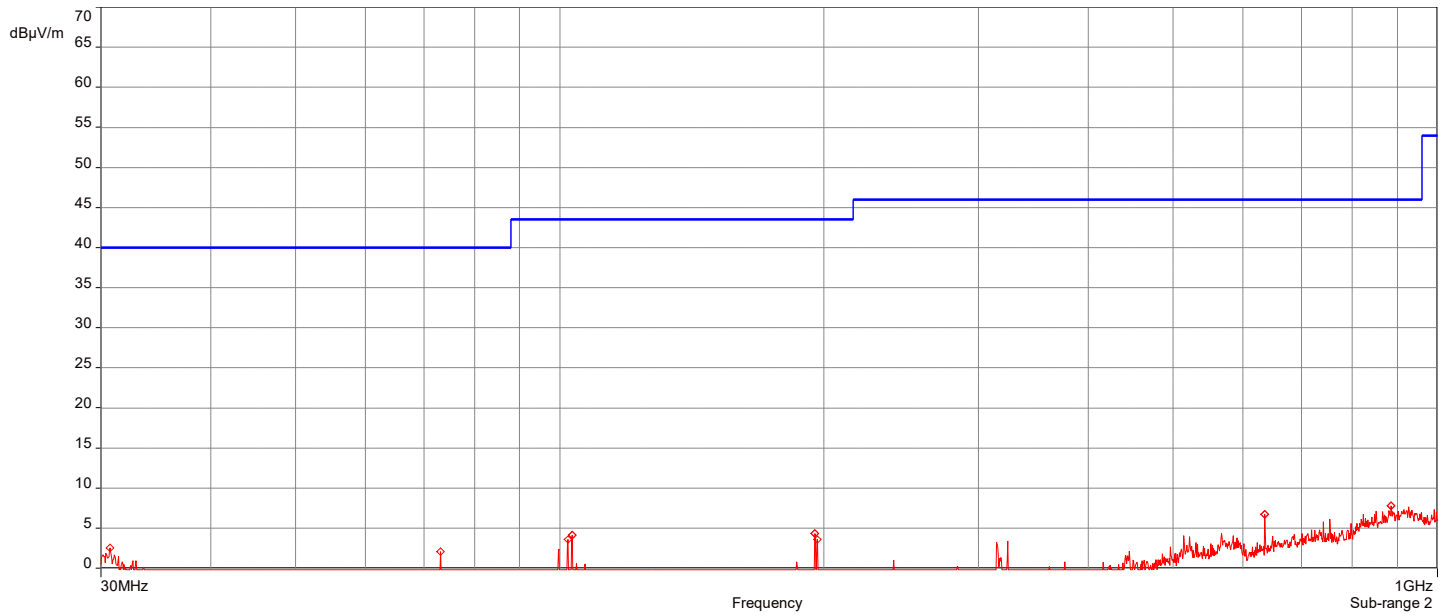
AH22021401-HAR-004#3_2.4G 802.11b_Ch 11_30MHz-1GHz

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No	Frequency (MHz)	Level Q-Peak Reading (dBμV/m)	Correction Factor (dB)	Limit dBμV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1.	40.898876MHz	8.24	-12.87	40.00	-31.76	2.00	207.00	Vertical	Passed
2.	43.010177MHz	14.20	-14.16	40.00	-25.80	1.50	205.20	Vertical	Passed
3.	43.637861MHz	4.63	-14.56	40.00	-35.37	1.00	260.60	Vertical	Passed
4.	186.12213MHz	14.01	-15.53	43.50	-29.49	1.00	114.20	Vertical	Passed
5.	189.14642MHz	8.23	-15.50	43.50	-35.27	1.00	126.90	Vertical	Passed
6.	196.73569MHz	8.24	-15.28	43.50	-35.26	1.00	43.70	Vertical	Passed

Overall Graphs:





Remarks:

1. Level Q-Peak Reading (dBµV/m) = Raw Q-Peak Level + Correction Factor
2. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
3. Margin = Level Q-Peak Reading – Limit

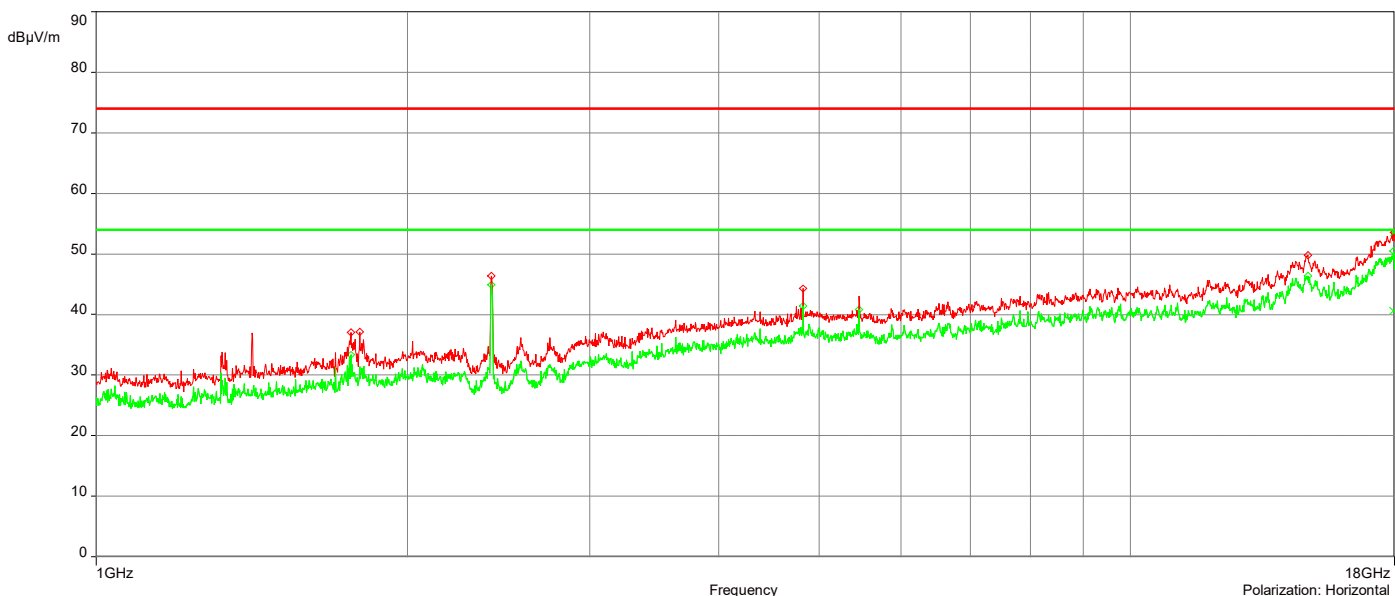
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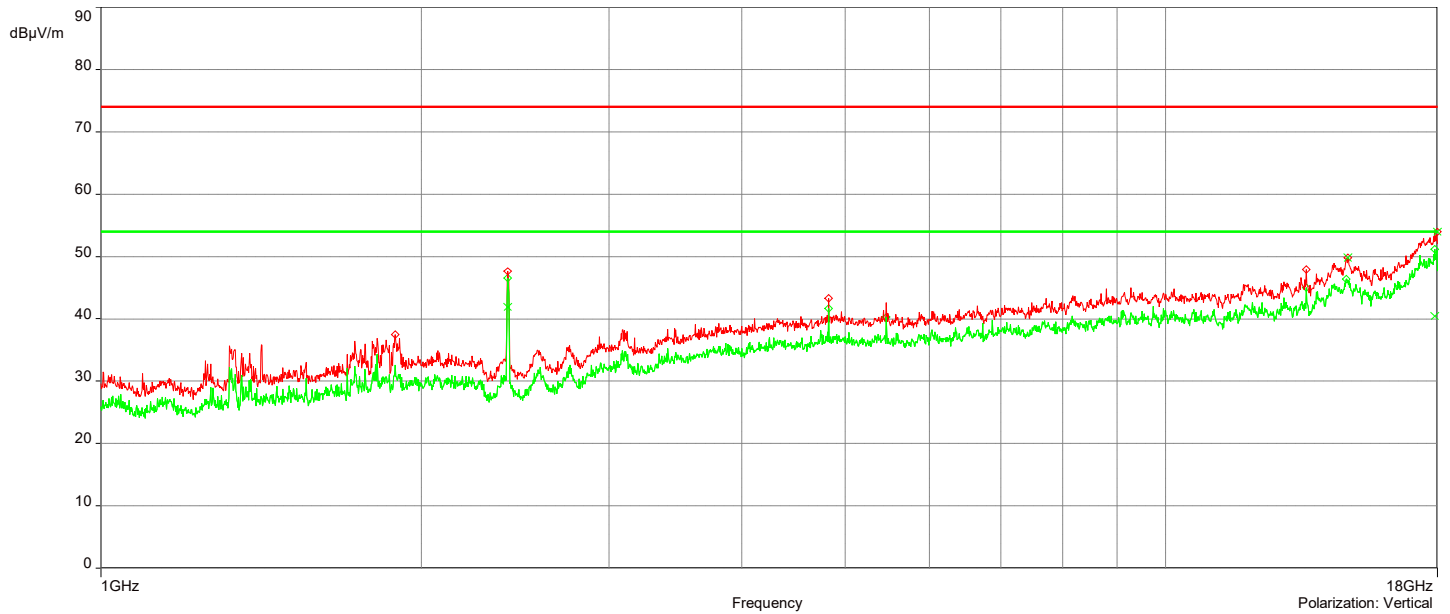
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No	Frequency (MHz)	Level Peak Reading (dBμV/m)	Correction Factor (dB)	Limit dBμV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1.	14.830407GHz	49.83	15.08	74.00	-24.17	4.00	0.10	Vertical	Passed
2.	17.9915GHz	54.01	19.61	74.00	-19.99	2.00	213.40	Vertical	Passed
3.	17.988GHz	53.54	19.48	74.00	-20.46	1.00	359.90	Horizontal	Passed

No	Frequency (MHz)	Level Average Reading (dBμV/m)	Correction Factor (dB)	Limit dBμV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgment
1.	2.4110415GHz	41.96	-3.15	54.00	-12.04	1.50	315.90	Vertical	Passed
2.	17.892997GHz	40.47	18.37	54.00	-13.53	2.50	336.90	Vertical	Passed
3.	17.956499GHz	40.66	19.04	54.00	-13.34	1.00	219.10	Horizontal	Passed

Overall Graphs:





Remarks:

4. Level Peak Reading (dBµV/m) = Raw Peak Level + Correction Factor
5. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
6. Margin = Level Peak Reading – Limit

Remarks:

4. Level Average Reading (dBµV/m) = Raw Average Level + Correction Factor
5. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
6. Margin = Level Average Reading – Limit

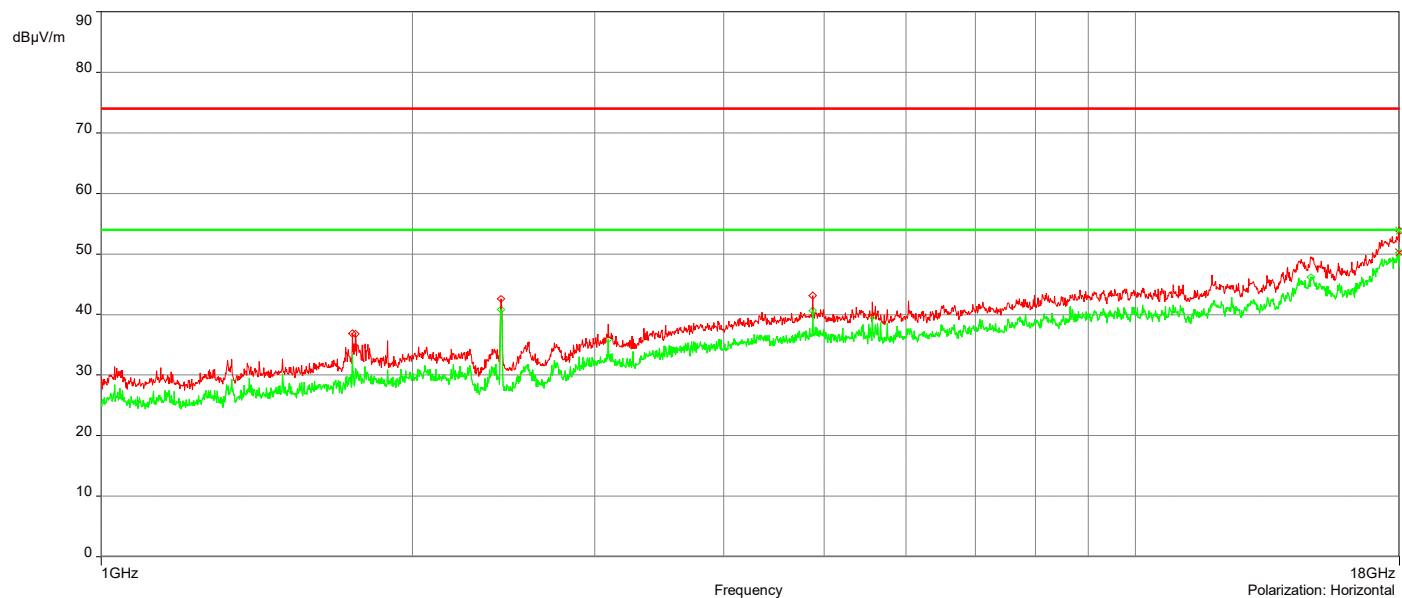
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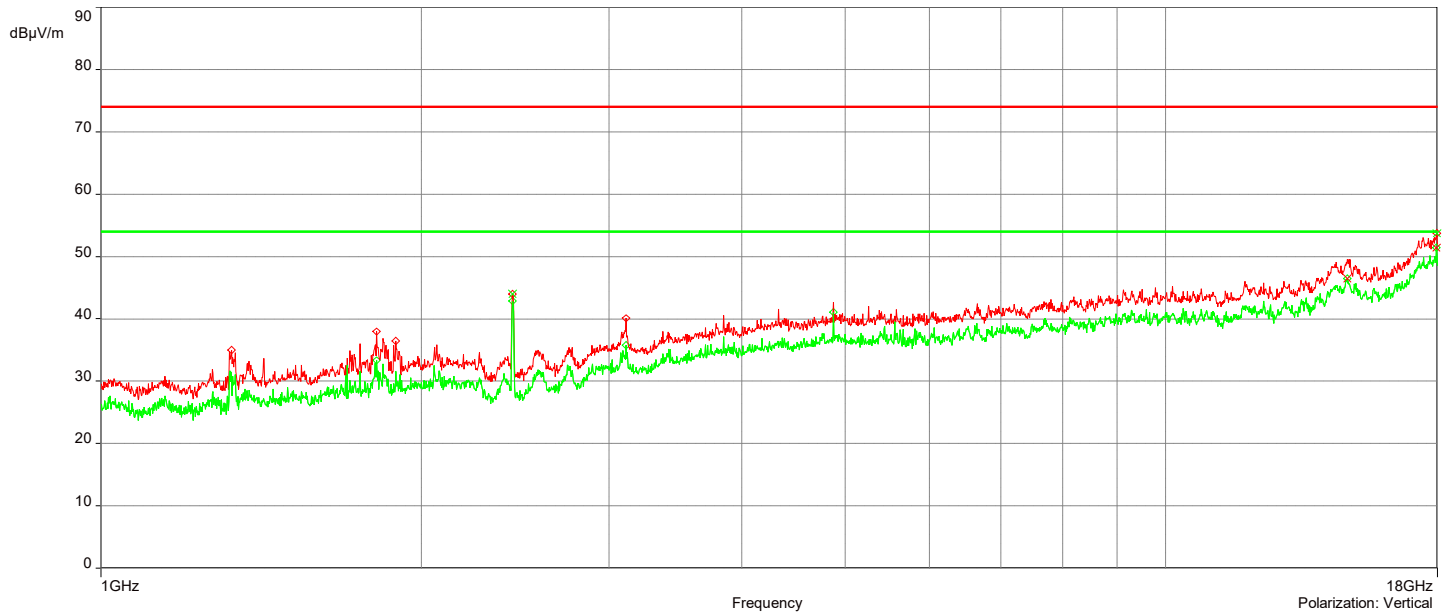
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No	Frequency (MHz)	Level Peak Reading (dBμV/m)	Correction Factor (dB)	Limit dBμV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1	2.4355422GHz	44.00	-2.95	74.00	-30.00	1.00	269.40	Vertical	Passed
2	17.977499GHz	53.74	19.28	74.00	-20.26	3.50	336.90	Vertical	Passed
3	17.9975GHz	53.83	19.76	74.00	-20.17	4.00	344.40	Horizontal	Passed

No	Frequency (MHz)	Level Average Reading (dBμV/m)	Correction Factor (dB)	Limit dBμV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgment
1	14.813406GHz	46.44	14.95	54.00	-7.56	2.50	359.90	Vertical	Passed
2	17.959999GHz	51.44	19.08	54.00	-2.56	4.00	15.60	Vertical	Passed
3	17.9975GHz	50.23	19.76	54.00	-3.77	4.00	344.40	Horizontal	Passed

Overall Graphs:





Remarks:

7. Level Peak Reading (dBµV/m) = Raw Peak Level + Correction Factor
8. Correction Factor (dB) = Antenna Factor + Cable Loss – Pre-amplifier Gain
9. Margin = Level Peak Reading – Limit

Remarks:

7. Level Average Reading (dBµV/m) = Raw Average Level + Correction Factor
8. Correction Factor (dB) = Antenna Factor + Cable Loss – Pre-amplifier Gain
9. Margin = Level Average Reading – Limit

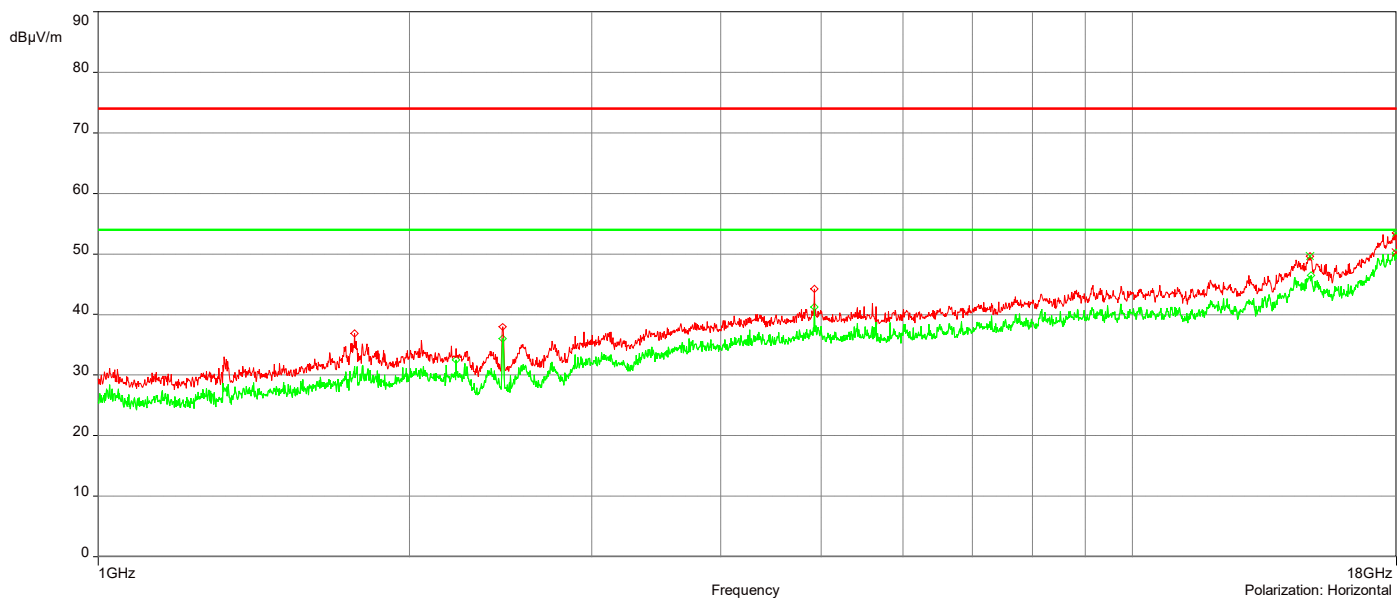
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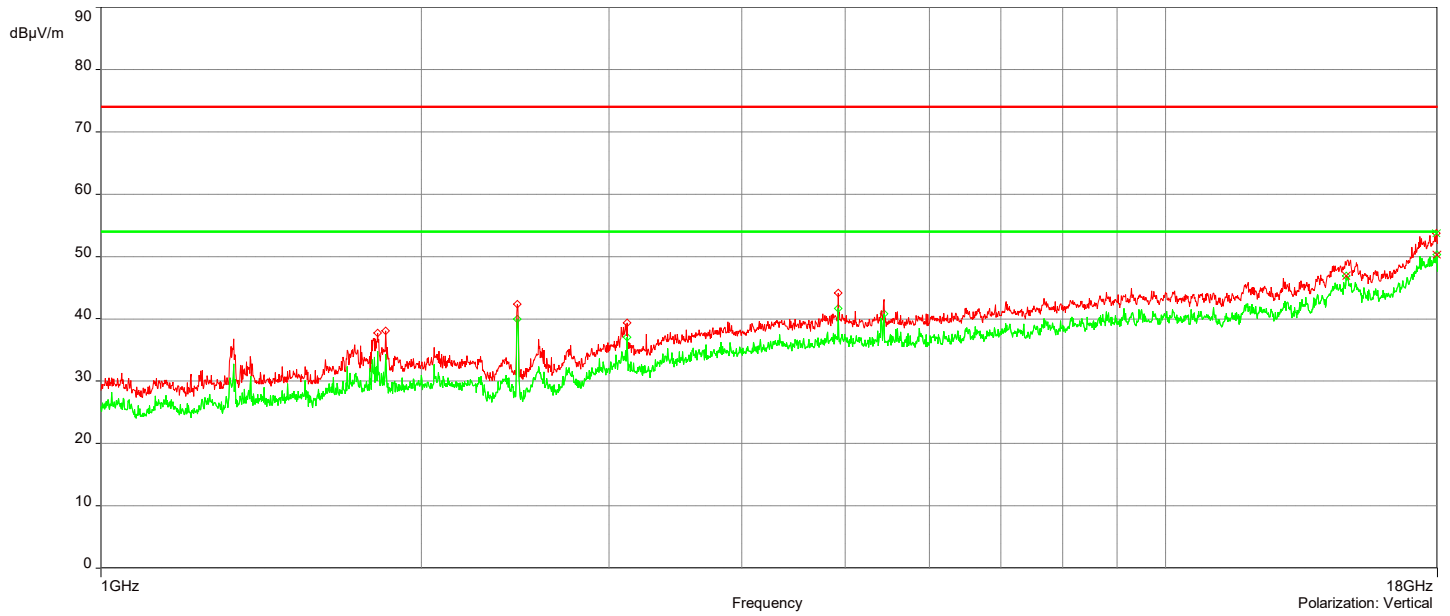
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No	Frequency (MHz)	Level Peak Reading (dBμV/m)	Correction Factor (dB)	Limit dBμV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1	17.957499GHz	53.70	19.05	74.00	-20.30	1.50	81.40	Vertical	Passed
2	14.845907GHz	49.60	14.95	74.00	-24.40	1.00	164.80	Horizontal	Passed
3	17.982999GHz	53.47	19.34	74.00	-20.53	3.50	121.20	Horizontal	Passed

No	Frequency (MHz)	Level Average Reading (dBμV/m)	Correction Factor (dB)	Limit dBμV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgment
1	14.783405GHz	46.90	14.61	54.00	-7.10	2.50	215.60	Vertical	Passed
2	17.988GHz	50.33	19.52	54.00	-3.67	1.00	278.80	Vertical	Passed
3	17.988GHz	50.19	19.48	54.00	-3.81	4.00	1.10	Horizontal	Passed

Overall Graphs:





Remarks:

10. Level Peak Reading (dBµV/m) = Raw Peak Level + Correction Factor
11. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
12. Margin = Level Peak Reading – Limit

Remarks:

10. Level Average Reading (dBµV/m) = Raw Average Level + Correction Factor
11. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
12. Margin = Level Average Reading – Limit

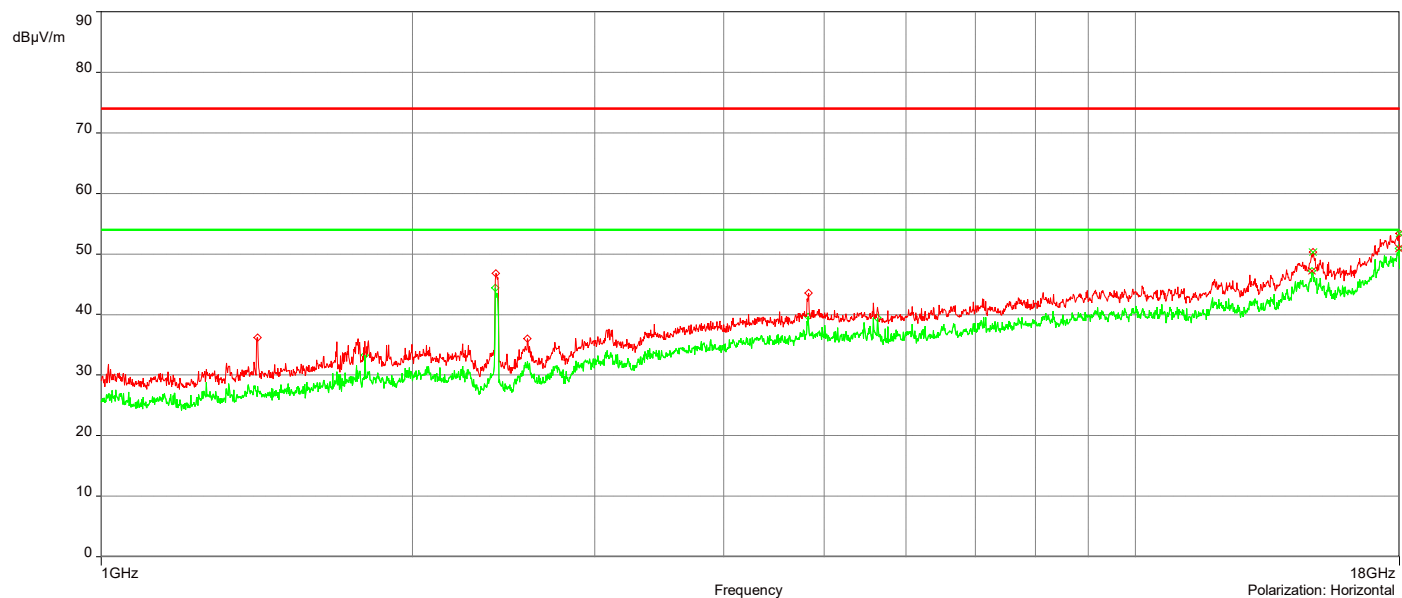
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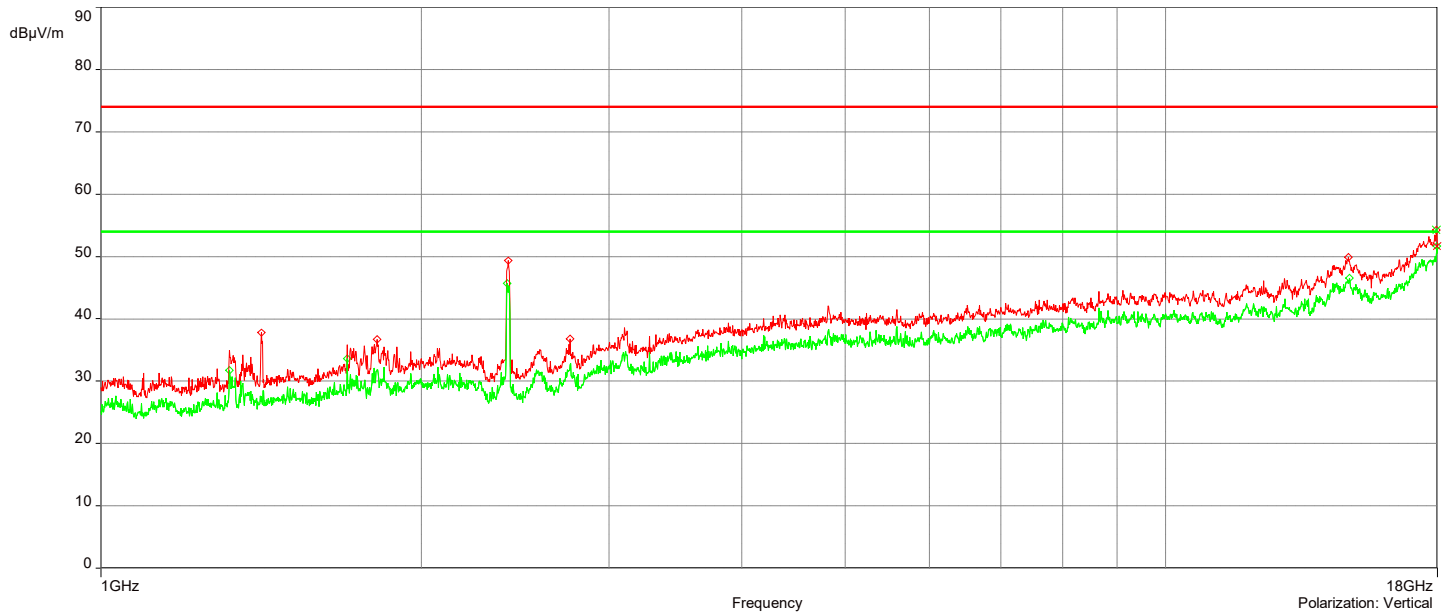
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No	Frequency (MHz)	Level Peak Reading (dBμV/m)	Correction Factor (dB)	Limit dBμV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1	17.959999GHz	54.29	19.08	74.00	-19.71	1.50	359.90	Vertical	Passed
2	14.849907GHz	50.34	14.89	74.00	-23.66	2.00	90.70	Horizontal	Passed
3	17.9975GHz	53.38	19.76	74.00	-20.62	1.00	105.00	Horizontal	Passed

No	Frequency (MHz)	Level Average Reading (dBμV/m)	Correction Factor (dB)	Limit dBμV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgment
1	17.980999GHz	51.72	19.33	54.00	-2.28	4.00	0.10	Vertical	Passed
2	14.819406GHz	47.20	15.11	54.00	-6.80	3.00	304.20	Horizontal	Passed
3	17.985GHz	50.92	19.40	54.00	-3.08	3.50	189.60	Horizontal	Passed

Overall Graphs:





Remarks:

- 13. Level Peak Reading (dBµV/m) = Raw Peak Level + Correction Factor
- 14. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
- 15. Margin = Level Peak Reading – Limit

Remarks:

- 13. Level Average Reading (dBµV/m) = Raw Average Level + Correction Factor
- 14. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
- 15. Margin = Level Average Reading – Limit

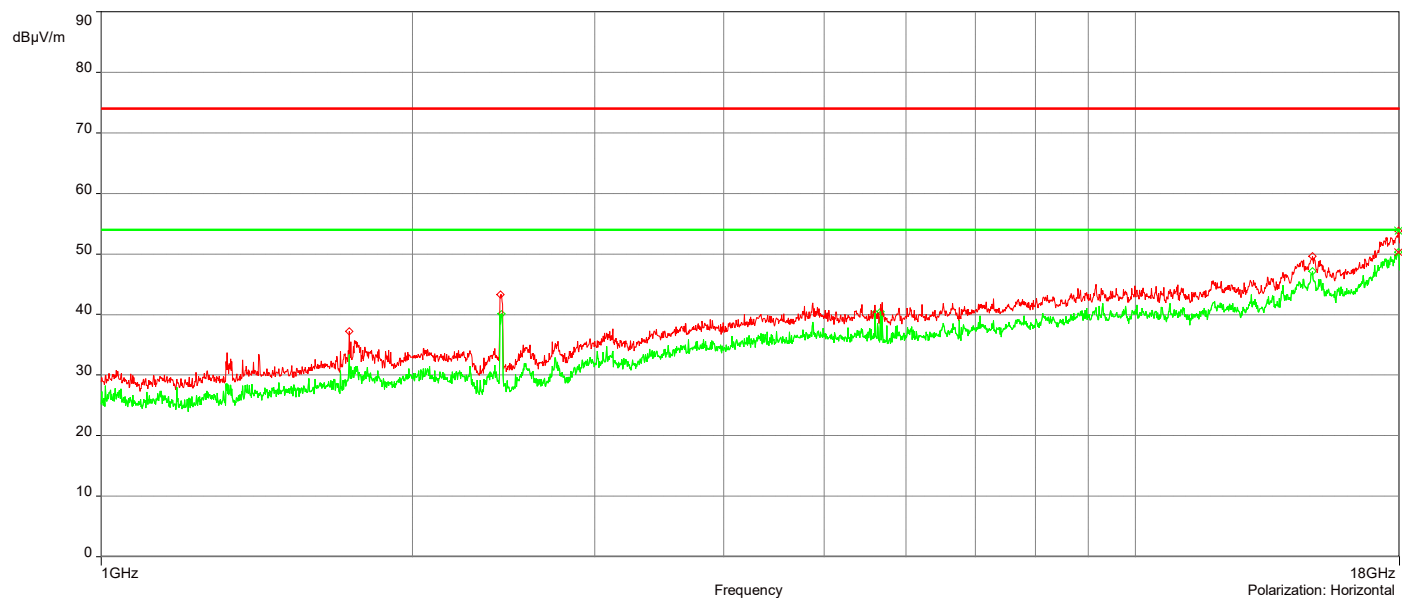
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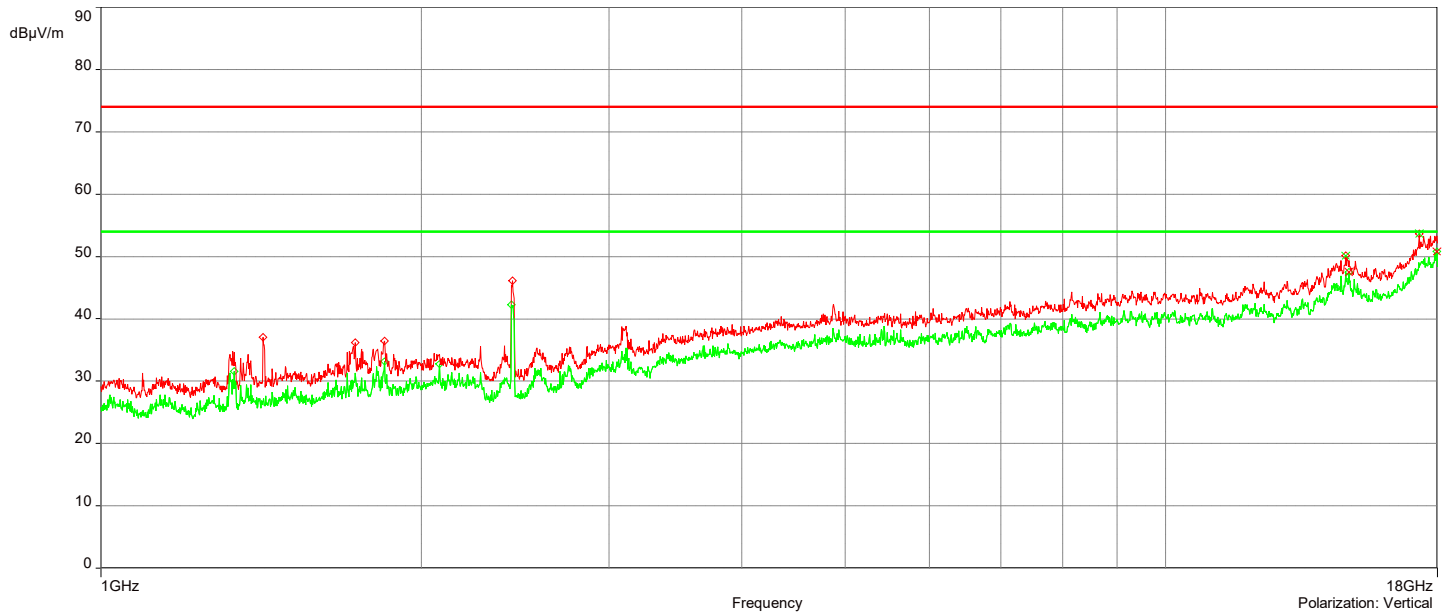
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No	Frequency (MHz)	Level Peak Reading (dBμV/m)	Correction Factor (dB)	Limit dBμV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1	14.769905GHz	50.13	14.44	74.00	-23.87	2.50	117.50	Vertical	Passed
2	17.301479GHz	53.65	16.66	74.00	-20.35	3.50	177.70	Vertical	Passed
3	17.957999GHz	53.83	18.96	74.00	-20.17	1.50	237.70	Horizontal	Passed

No	Frequency (MHz)	Level Average Reading (dBμV/m)	Correction Factor (dB)	Limit dBμV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgment
1	14.869408GHz	47.47	14.46	54.00	-6.53	4.00	163.90	Vertical	Passed
2	17.972499GHz	50.79	19.22	54.00	-3.21	3.50	95.00	Vertical	Passed
3	17.958999GHz	50.31	18.97	54.00	-3.69	2.00	132.60	Horizontal	Passed

Overall Graphs:





Remarks:

- 16. Level Peak Reading (dBµV/m) = Raw Peak Level + Correction Factor
- 17. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
- 18. Margin = Level Peak Reading – Limit

Remarks:

- 16. Level Average Reading (dBµV/m) = Raw Average Level + Correction Factor
- 17. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
- 18. Margin = Level Average Reading – Limit

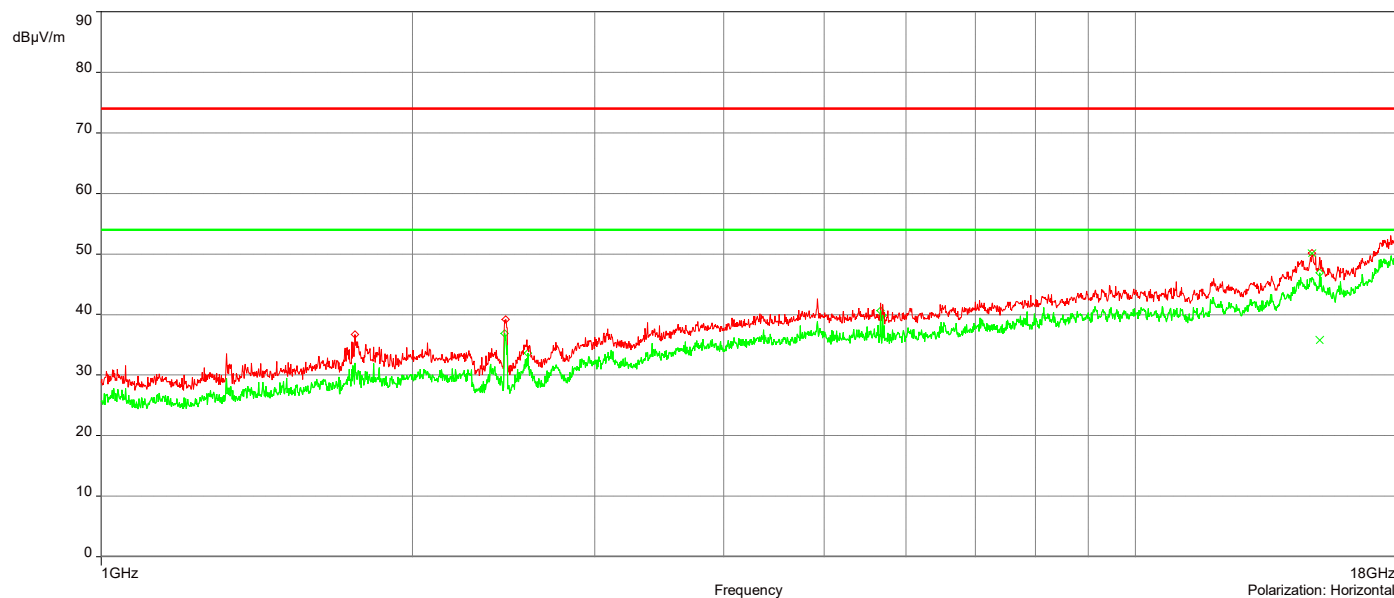
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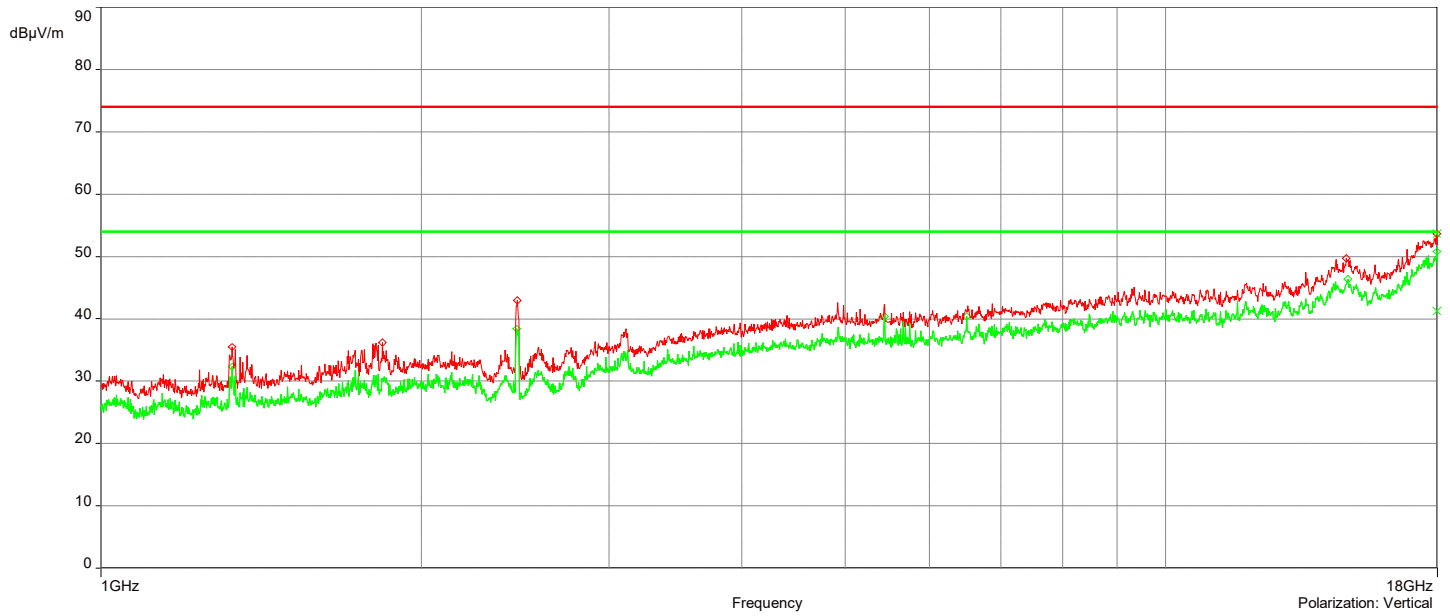
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No	Frequency (MHz)	Level Peak Reading (dBμV/m)	Correction Factor (dB)	Limit dBμV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1	17.971499GHz	53.64	19.21	74.00	-20.36	1.50	356.90	Vertical	Passed
2	14.817906GHz	50.13	15.09	74.00	-23.87	1.00	320.60	Horizontal	Passed
3	17.955999GHz	53.85	18.93	74.00	-20.15	3.50	37.30	Horizontal	Passed

No	Frequency (MHz)	Level Average Reading (dBμV/m)	Correction Factor (dB)	Limit dBμV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgment
1	17.986GHz	41.25	19.47	54.00	-12.75	2.00	273.10	Vertical	Passed
2	15.075914GHz	35.73	13.50	54.00	-18.27	4.00	160.10	Horizontal	Passed
3	17.963999GHz	40.77	19.12	54.00	-13.23	4.00	168.90	Horizontal	Passed

Overall Graphs:





Remarks:

19. Level Peak Reading (dBµV/m) = Raw Peak Level + Correction Factor
20. Correction Factor (dB) = Antenna Factor + Cable Loss – Pre-amplifier Gain
21. Margin = Level Peak Reading – Limit

Remarks:

19. Level Average Reading (dBµV/m) = Raw Average Level + Correction Factor
20. Correction Factor (dB) = Antenna Factor + Cable Loss – Pre-amplifier Gain
21. Margin = Level Average Reading – Limit

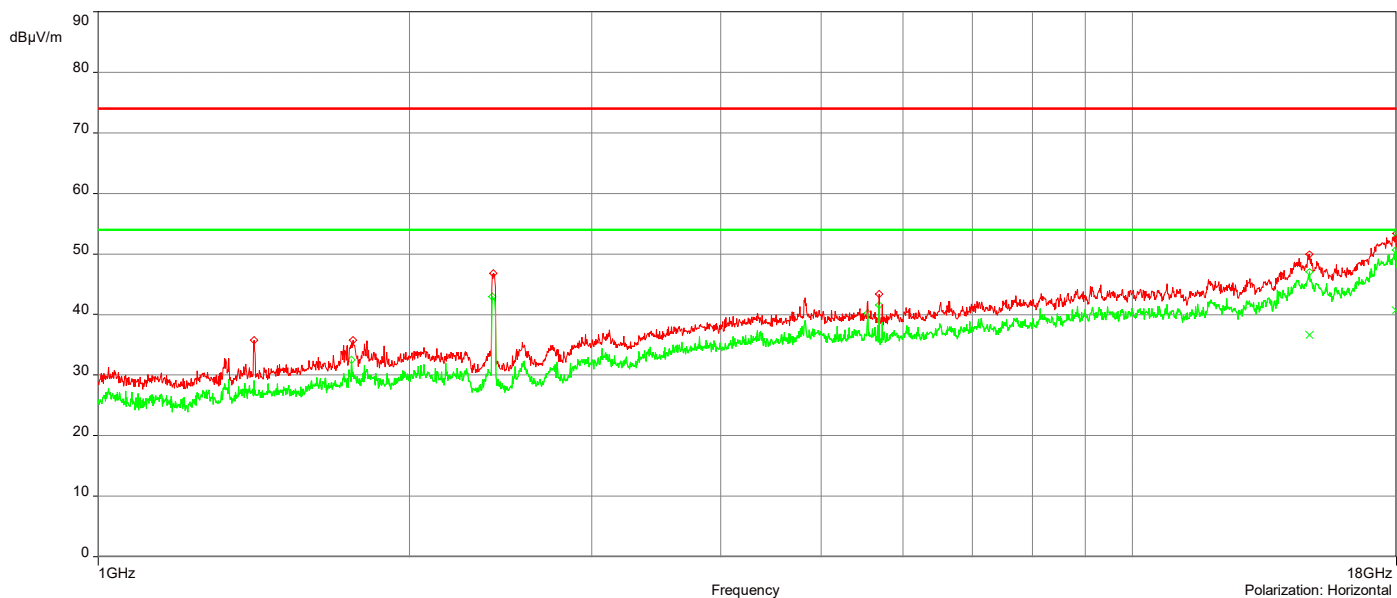
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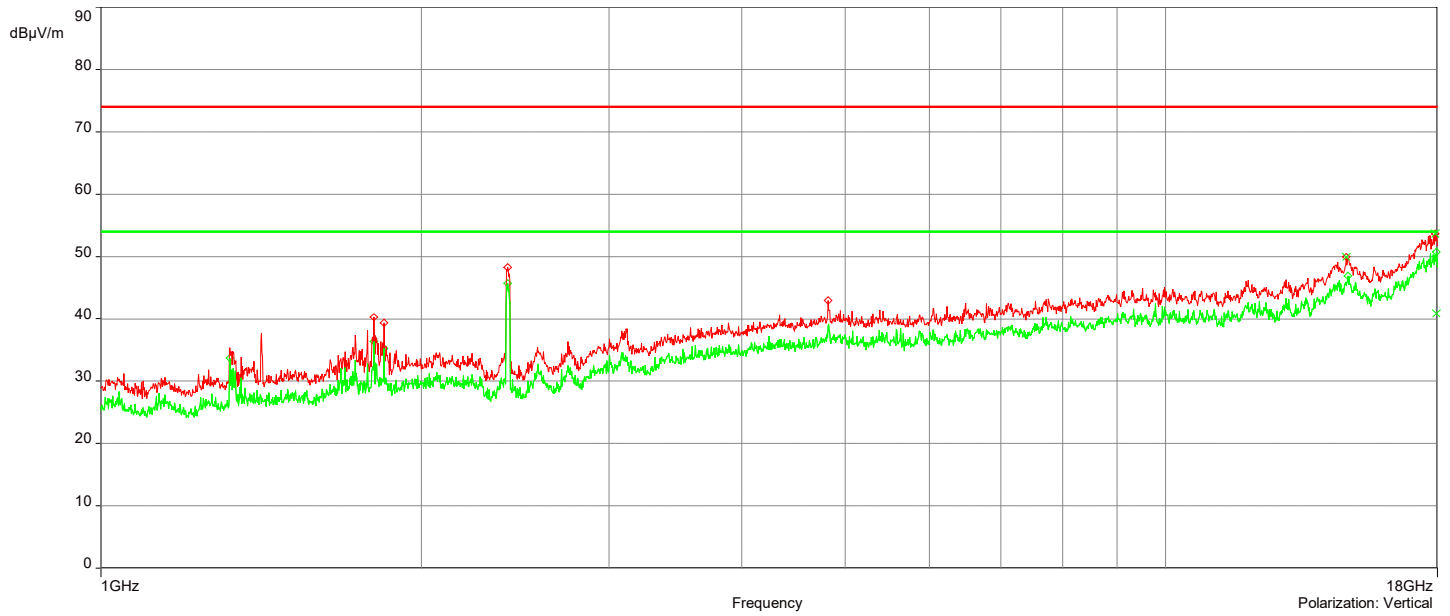
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No	Frequency (MHz)	Level Peak Reading (dBμV/m)	Correction Factor (dB)	Limit dBμV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1	14.780905GHz	50.00	14.57	74.00	-24.00	4.00	85.80	Vertical	Passed
2	17.922998GHz	53.69	18.62	74.00	-20.31	1.00	225.50	Vertical	Passed
3	17.994GHz	53.41	19.65	74.00	-20.59	2.50	86.70	Horizontal	Passed

No	Frequency (MHz)	Level Average Reading (dBμV/m)	Correction Factor (dB)	Limit dBμV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgment
1	17.957499GHz	40.92	19.05	54.00	-13.08	1.00	35.90	Vertical	Passed
2	14.825407GHz	36.60	15.08	54.00	-17.40	3.50	251.90	Horizontal	Passed
3	17.981499GHz	40.69	19.35	54.00	-13.31	4.00	56.90	Horizontal	Passed

Overall Graphs:





Remarks:

- 22. Level Peak Reading (dBµV/m) = Raw Peak Level + Correction Factor
- 23. Correction Factor (dB) = Antenna Factor + Cable Loss – Pre-amplifier Gain
- 24. Margin = Level Peak Reading – Limit

Remarks:

- 22. Level Average Reading (dBµV/m) = Raw Average Level + Correction Factor
- 23. Correction Factor (dB) = Antenna Factor + Cable Loss – Pre-amplifier Gain
- 24. Margin = Level Average Reading – Limit

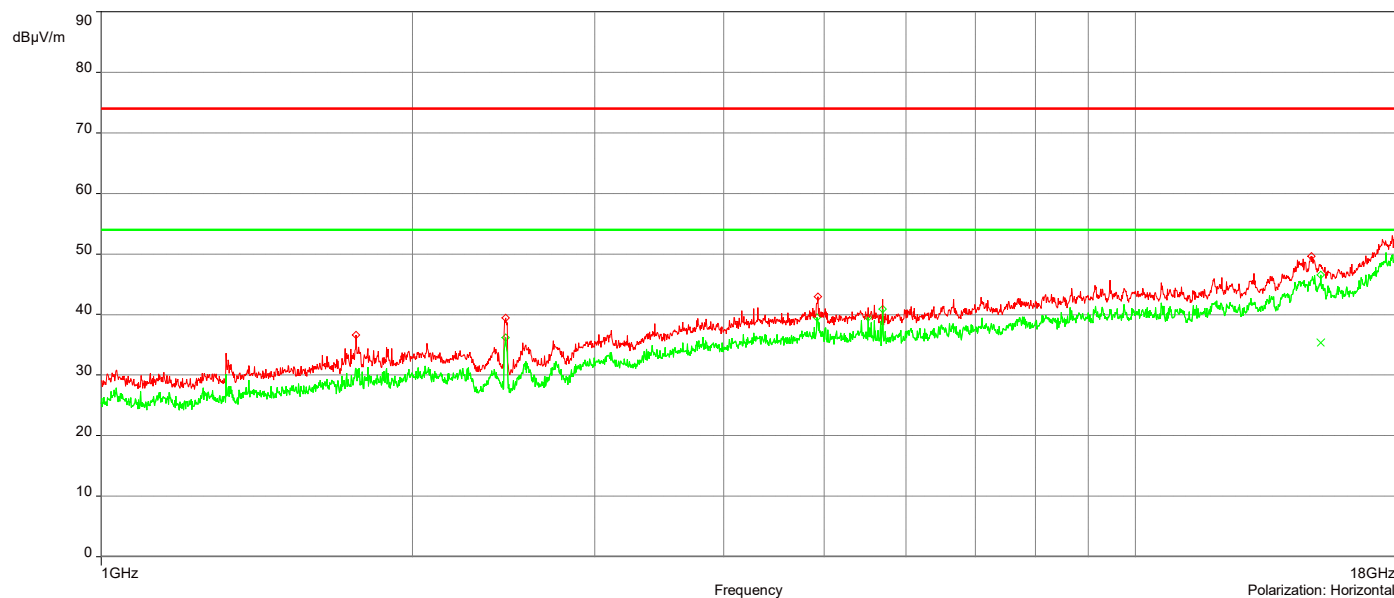
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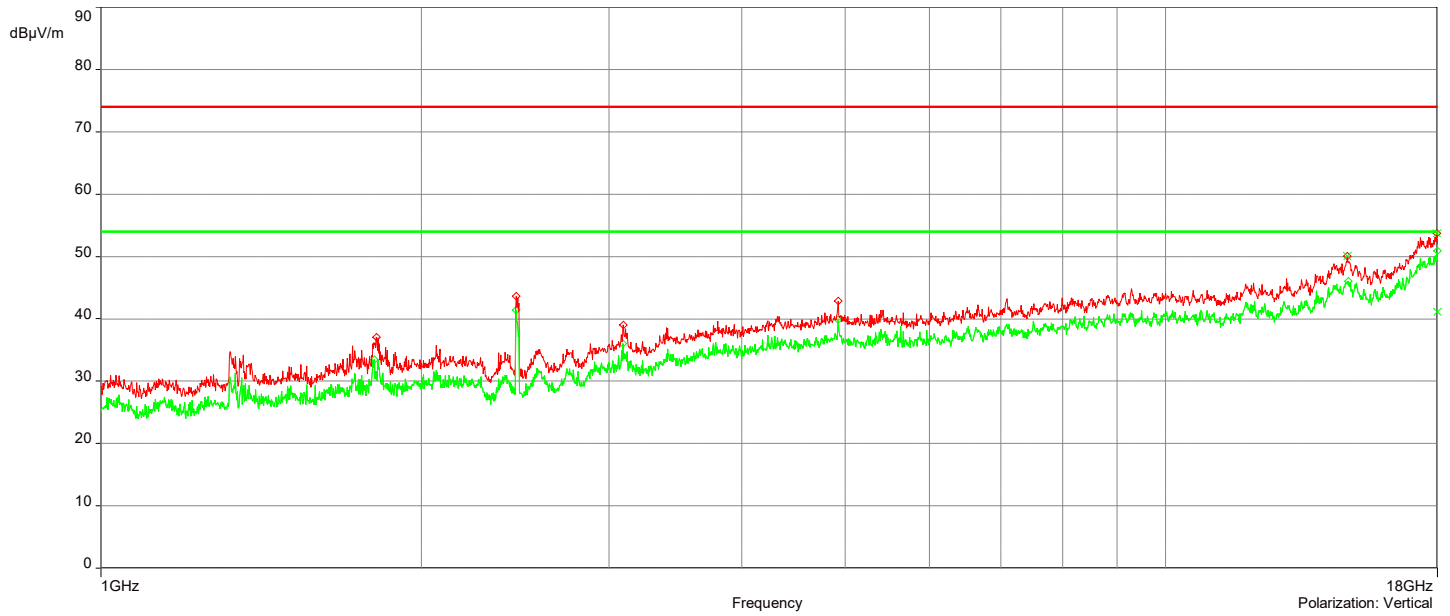
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No	Frequency (MHz)	Level Peak Reading (dBμV/m)	Correction Factor (dB)	Limit dBμV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1	14.805906GHz	50.03	14.87	74.00	-23.97	4.00	301.50	Vertical	Passed
2	17.9835GHz	53.76	19.40	74.00	-20.24	4.00	30.70	Vertical	Passed
3	17.9895GHz	54.01	19.52	74.00	-19.99	1.00	169.30	Horizontal	Passed

No	Frequency (MHz)	Level Average Reading (dBμV/m)	Correction Factor (dB)	Limit dBμV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgment
1	17.991GHz	41.19	19.60	54.00	-12.81	1.50	104.10	Vertical	Passed
2	15.110915GHz	35.31	13.54	54.00	-18.69	1.50	291.90	Horizontal	Passed
3	17.9895GHz	40.85	19.52	54.00	-13.15	1.00	169.30	Horizontal	Passed

Overall Graphs:





Remarks:

- 25. Level Peak Reading (dBµV/m) = Raw Peak Level + Correction Factor
- 26. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
- 27. Margin = Level Peak Reading – Limit

Remarks:

- 25. Level Average Reading (dBµV/m) = Raw Average Level + Correction Factor
- 26. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
- 27. Margin = Level Average Reading – Limit

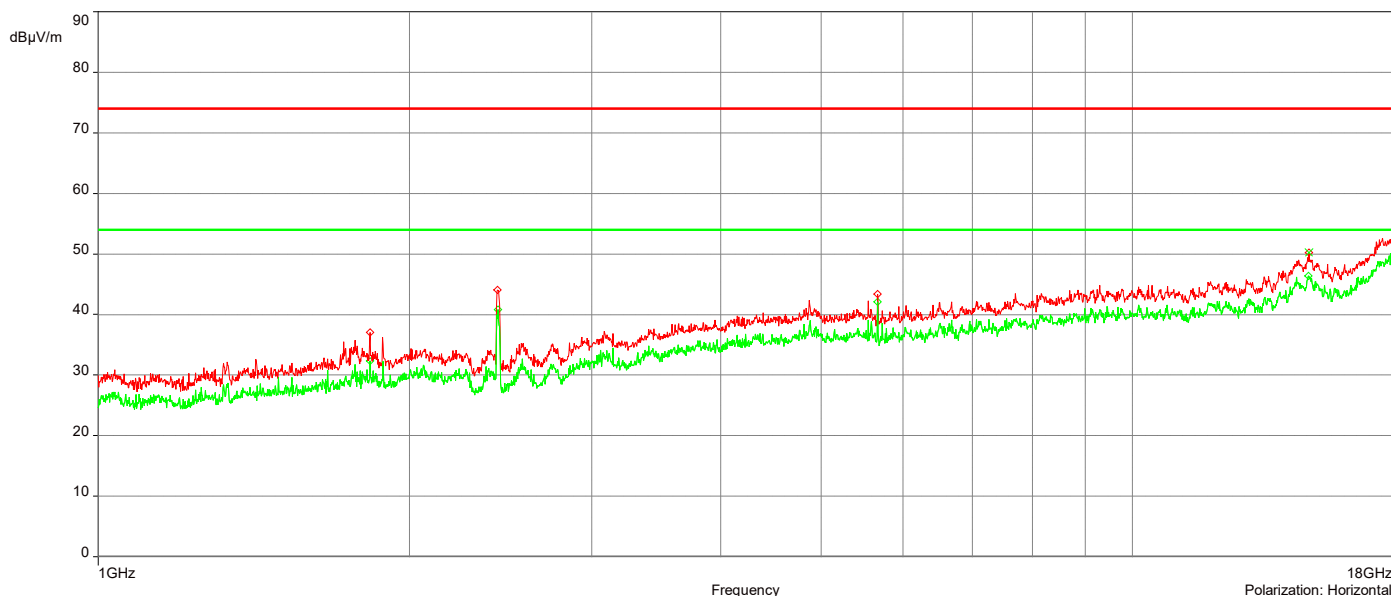
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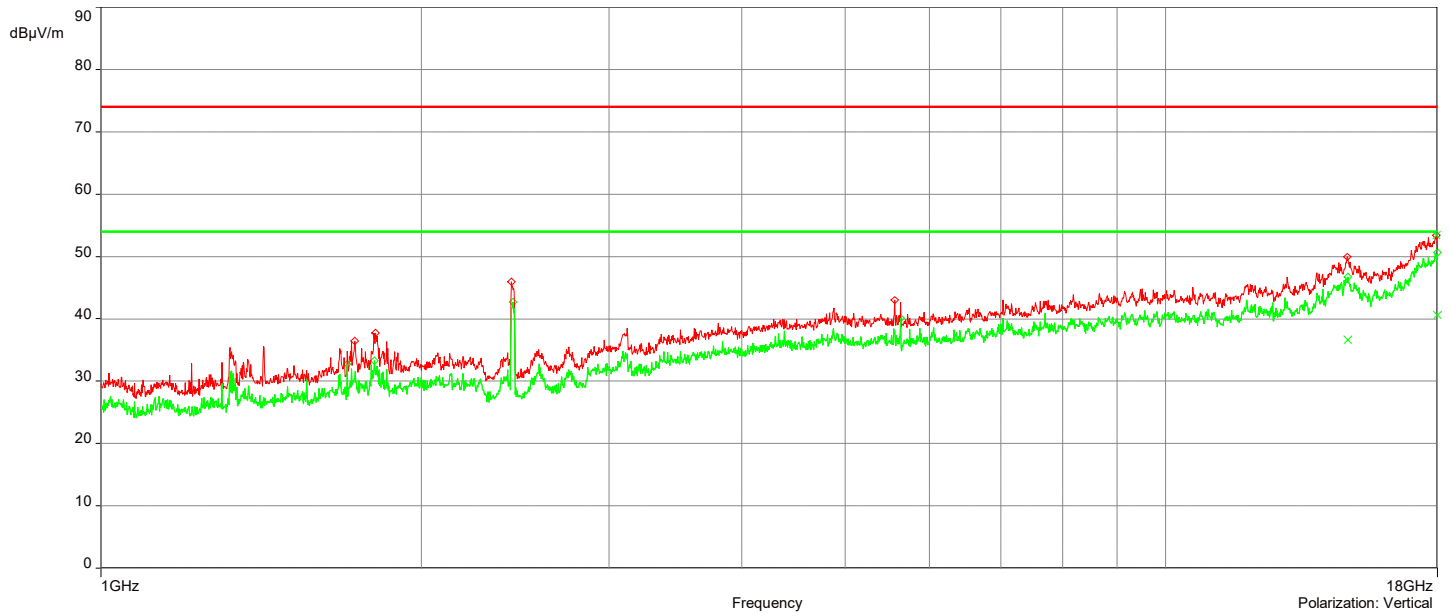
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No	Frequency (MHz)	Level Peak Reading (dBμV/m)	Correction Factor (dB)	Limit dBμV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1	17.950499GHz	53.37	18.97	74.00	-20.63	4.00	109.00	Vertical	Passed
2	14.820906GHz	50.24	15.13	74.00	-23.76	3.50	34.50	Horizontal	Passed
3	17.9875GHz	53.99	19.47	74.00	-20.01	1.50	260.40	Horizontal	Passed

No	Frequency (MHz)	Level Average Reading (dBμV/m)	Correction Factor (dB)	Limit dBμV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgment
1	14.825407GHz	36.59	15.18	54.00	-17.41	1.00	237.90	Vertical	Passed
2	17.993GHz	40.62	19.63	54.00	-13.38	2.00	150.10	Vertical	Passed
3	17.970499GHz	40.76	19.12	54.00	-13.24	2.00	302.10	Horizontal	Passed

Overall Graphs:





Remarks:

- 28. Level Peak Reading (dBµV/m) = Raw Peak Level + Correction Factor
- 29. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
- 30. Margin = Level Peak Reading – Limit

Remarks:

- 28. Level Average Reading (dBµV/m) = Raw Average Level + Correction Factor
- 29. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
- 30. Margin = Level Average Reading – Limit

AH22021401-HAR-004#3_2.4G 802.11b_Ch 1_18-27.5GHz

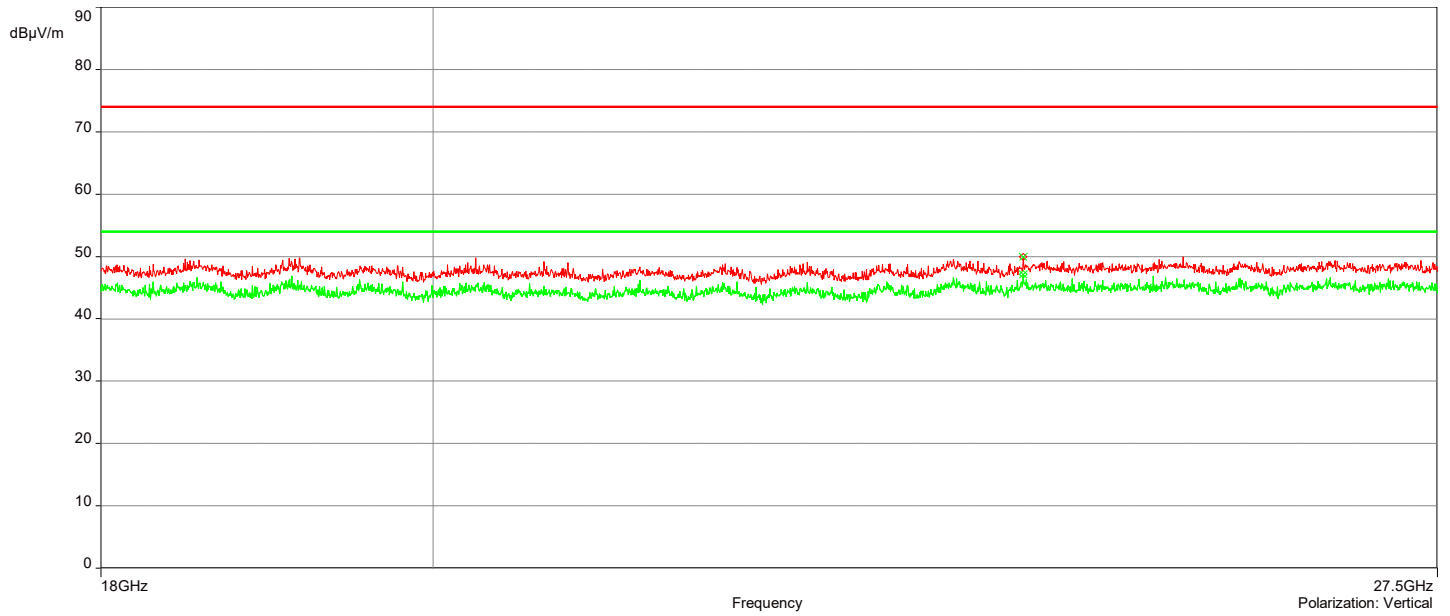
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No	Frequency (MHz)	Level Peak Reading (dBμV/m)	Correction Factor (dB)	Limit dBμV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1	24.115931GHz	49.94	2.33	74.00	-24.06	1.39	0	Vertical	Passed
2	25.455973GHz	50.04	3.24	74.00	-23.96	3.02	89.90	Horizontal	Passed

No	Frequency (MHz)	Level Average Reading (dBμV/m)	Correction Factor (dB)	Limit dBμV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgment
1	24.115931GHz	47.12	2.33	54.00	-6.88	1.39	0	Vertical	Passed
2	19.164283GHz	46.87	-0.25	54.00	-7.13	1.84	292.40	Horizontal	Passed

Overall Graphs:





Remarks:

- 31. Level Peak Reading (dBµV/m) = Raw Peak Level + Correction Factor
- 32. Correction Factor (dB) = Antenna Factor + Cable Loss – Pre-amplifier Gain
- 33. Margin = Level Peak Reading – Limit

Remarks:

- 31. Level Average Reading (dBµV/m) = Raw Average Level + Correction Factor
- 32. Correction Factor (dB) = Antenna Factor + Cable Loss – Pre-amplifier Gain
- 33. Margin = Level Average Reading – Limit

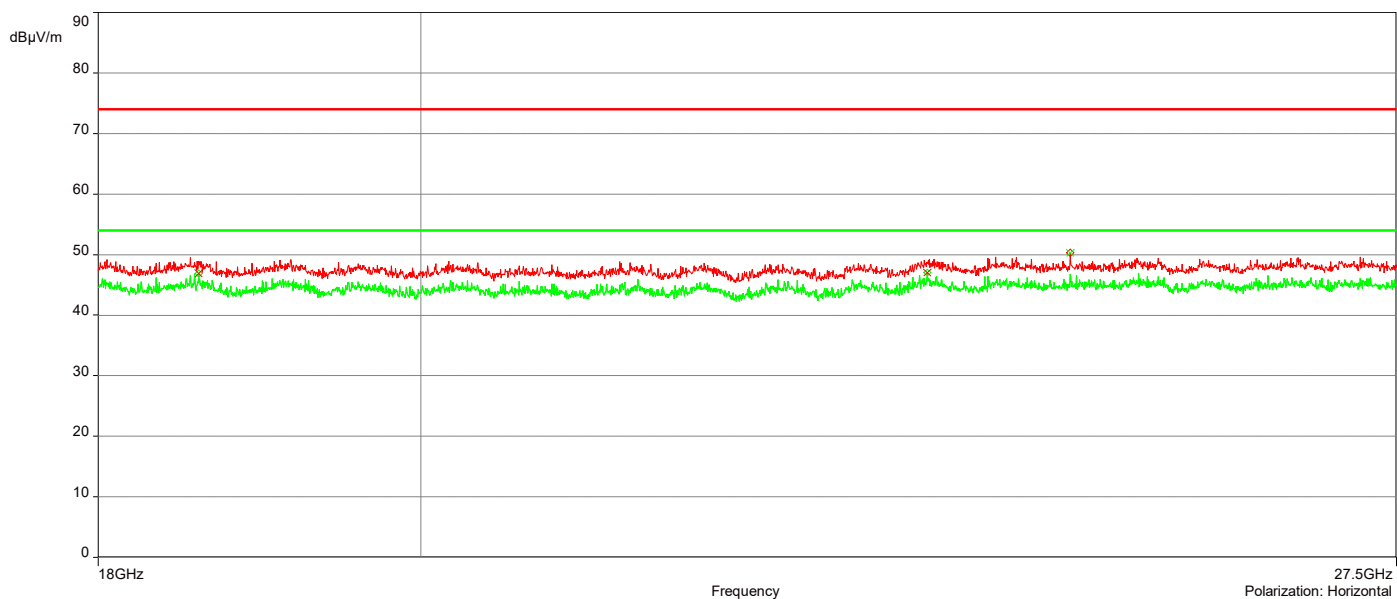
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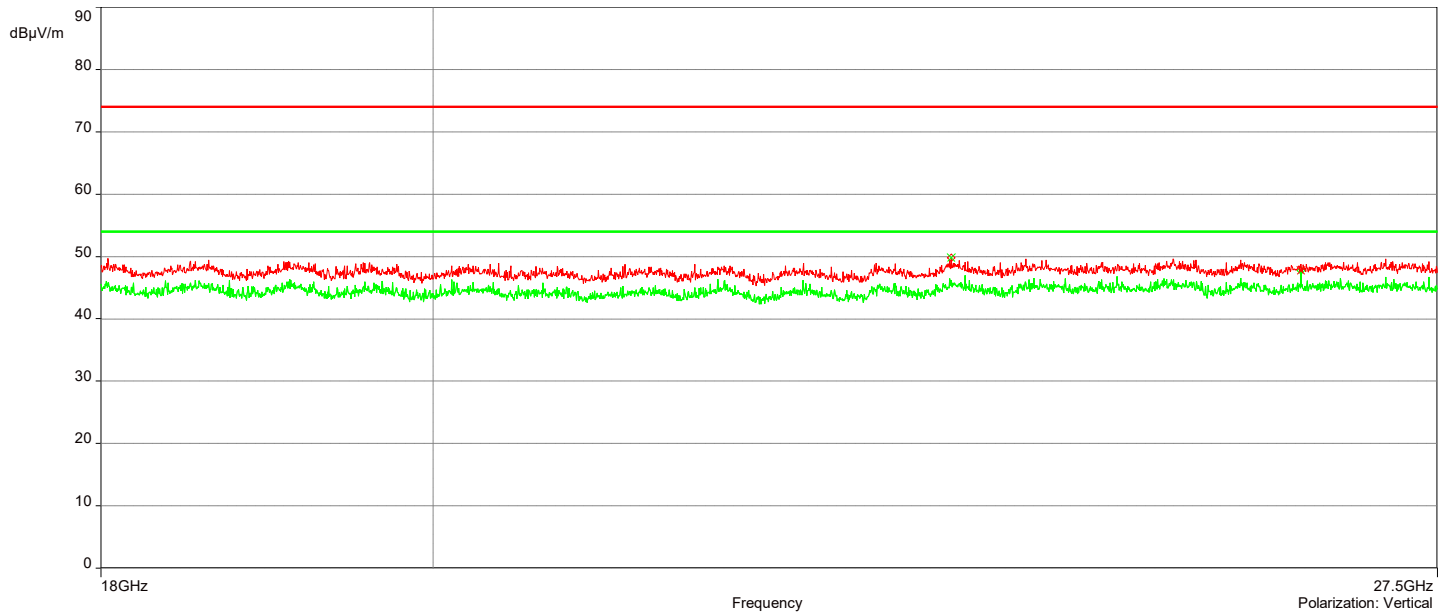
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No	Frequency (MHz)	Level Peak Reading (dBμV/m)	Correction Factor (dB)	Limit dBμV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1	23.572979GHz	49.79	2.29	74.00	-24.21	3.82	157.70	Vertical	Passed
2	24.722061GHz	50.27	2.50	74.00	-23.73	2.67	315.10	Horizontal	Passed

No	Frequency (MHz)	Level Average Reading (dBμV/m)	Correction Factor (dB)	Limit dBμV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgment
1	26.334767GHz	47.72	3.92	54.00	-6.28	1.41	225.10	Vertical	Passed
2	18.599005GHz	46.85	-0.34	54.00	-7.15	2.55	225.10	Horizontal	Passed
3	23.594355GHz	47.03	2.33	54.00	-6.97	3.28	315.10	Horizontal	Passed

Overall Graphs:





Remarks:

- 34. Level Peak Reading (dBµV/m) = Raw Peak Level + Correction Factor
- 35. Correction Factor (dB) = Antenna Factor + Cable Loss – Pre-amplifier Gain
- 36. Margin = Level Peak Reading – Limit

Remarks:

- 34. Level Average Reading (dBµV/m) = Raw Average Level + Correction Factor
- 35. Correction Factor (dB) = Antenna Factor + Cable Loss – Pre-amplifier Gain
- 36. Margin = Level Average Reading – Limit

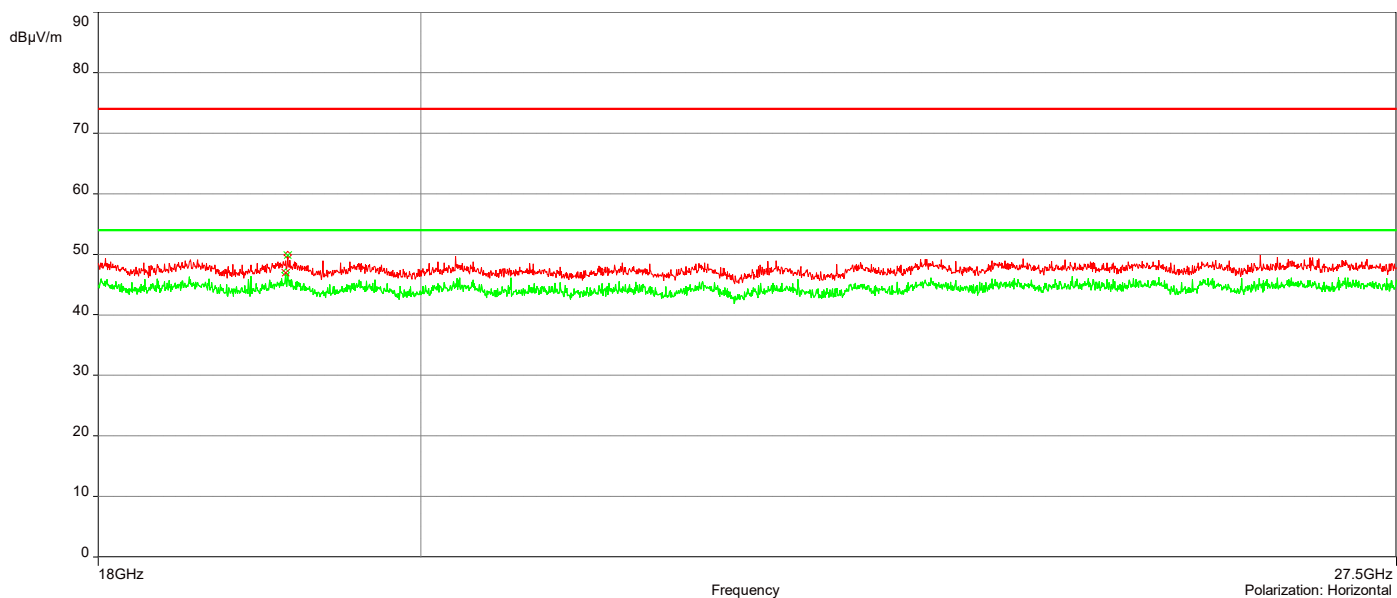
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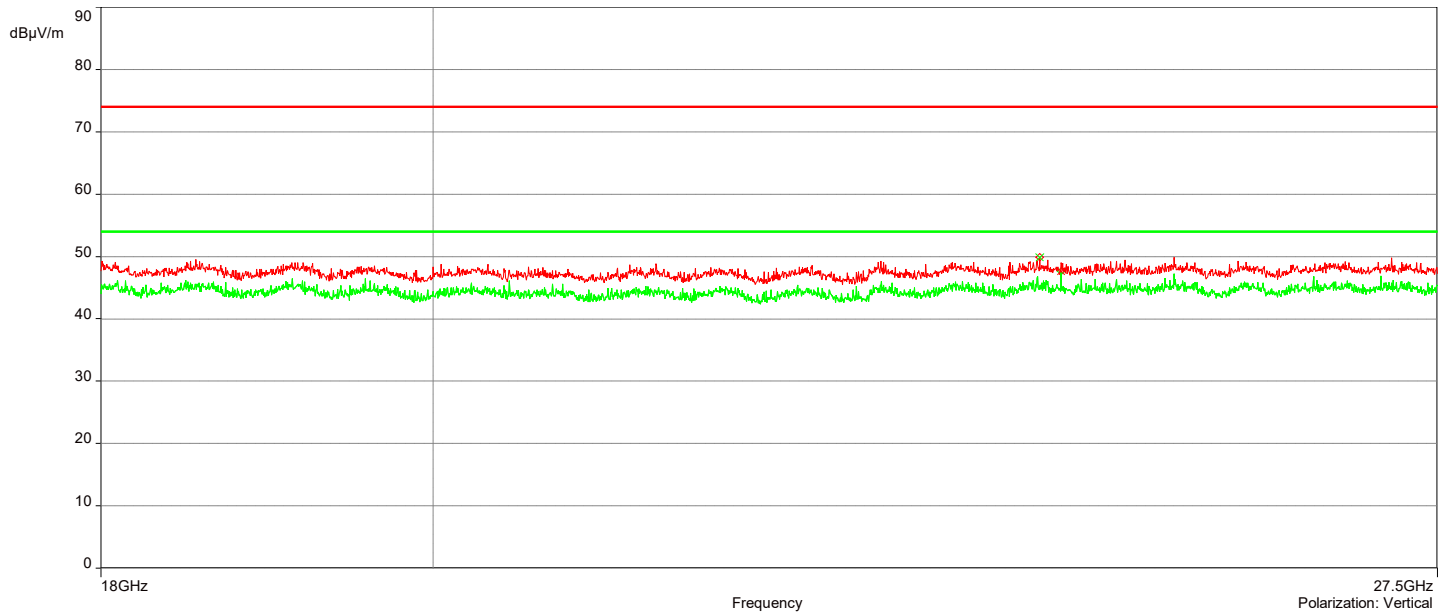
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No	Frequency (MHz)	Level Peak Reading (dBμV/m)	Correction Factor (dB)	Limit dBμV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1	24.242287GHz	49.87	2.39	74.00	-24.13	3.17	0	Vertical	Passed
2	19.149557GHz	49.89	-0.25	74.00	-24.11	1.59	22.40	Horizontal	Passed

No	Frequency (MHz)	Level Average Reading (dBμV/m)	Correction Factor (dB)	Limit dBμV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgment
1	24.404745GHz	47.68	2.45	54.00	-6.32	1.72	179.90	Vertical	Passed
2	19.134832GHz	46.93	-0.26	54.00	-7.07	2.17	179.90	Horizontal	Passed

Overall Graphs:





Remarks:

- 37. Level Peak Reading (dBµV/m) = Raw Peak Level + Correction Factor
- 38. Correction Factor (dB) = Antenna Factor + Cable Loss – Pre-amplifier Gain
- 39. Margin = Level Peak Reading – Limit

Remarks:

- 37. Level Average Reading (dBµV/m) = Raw Average Level + Correction Factor
- 38. Correction Factor (dB) = Antenna Factor + Cable Loss – Pre-amplifier Gain
- 39. Margin = Level Average Reading – Limit

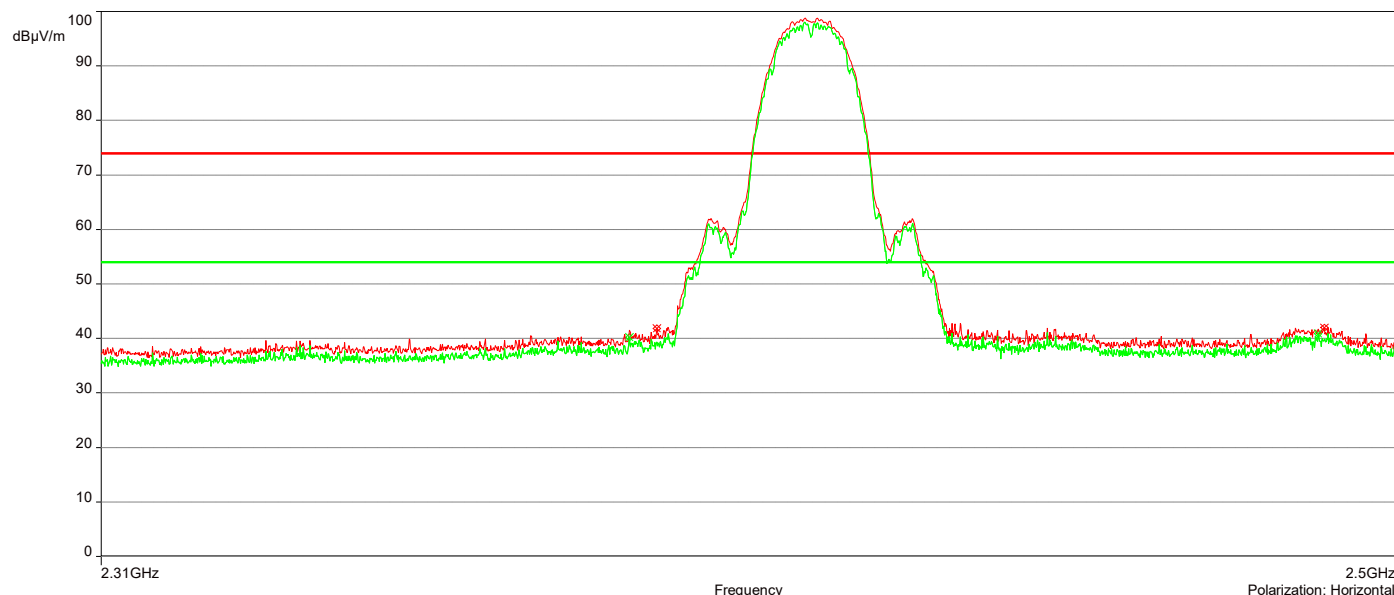
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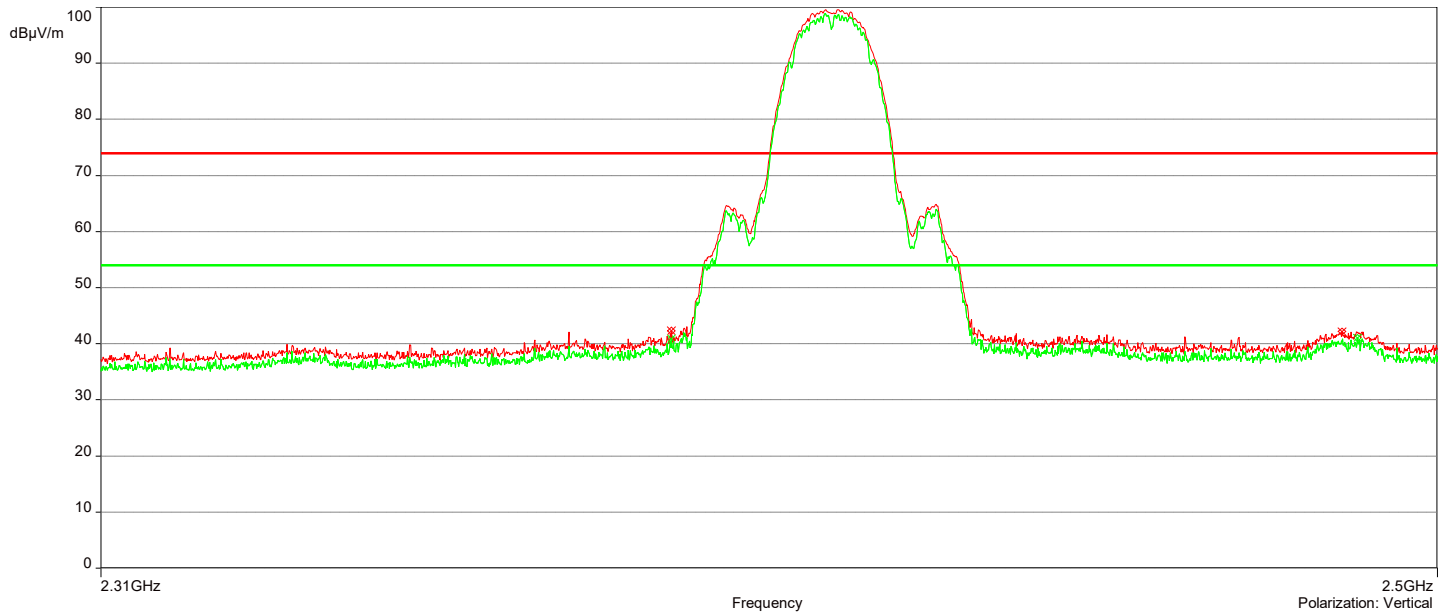
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No	Frequency (MHz)	Level Peak Reading (dBuV/m)	Correction Factor (dB)	Limit dBµV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1.	2.3892696GHz	42.28	-3.35	74.00	-31.72	1.00	285.40	Vertical	Passed
2.	2.485933GHz	42.23	-2.92	74.00	-31.77	3.50	270.80	Vertical	Passed
3.	2.3894597GHz	41.87	-3.44	74.00	-32.13	1.50	29.20	Horizontal	Passed
4.	2.4885943GHz	42.02	-2.91	74.00	-31.98	1.00	218.00	Horizontal	Passed

No	Frequency (MHz)	Level Average Reading (dBuV/m)	Correction Factor (dB)	Limit dBµV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgment
1.	2.3892696GHz	40.87	-3.35	54.00	-13.13	1.00	285.40	Vertical	Passed
2.	2.4882141GHz	41.09	-2.96	54.00	-12.91	1.50	82.40	Vertical	Passed
3.	2.3854677GHz	40.19	-3.47	54.00	-13.81	1.00	341.60	Horizontal	Passed
4.	2.4876438GHz	40.85	-2.91	54.00	-13.15	4.00	318.60	Horizontal	Passed

Overall Graphs:





Remarks:

- 40. Level Peak Reading (dBµV/m)= Raw Peak Level + Correction Factor
- 41. Correction Factor (dB) = Antenna Factor + Cable Loss – Pre-amplifier Gain
- 42. Margin = Level Peak Reading – Limit

Remarks:

- 40. Level Average Reading (dBµV/m)= Raw Average Level + Correction Factor
- 41. Correction Factor (dB) = Antenna Factor + Cable Loss – Pre-amplifier Gain
- 42. Margin = Level Average Reading – Limit

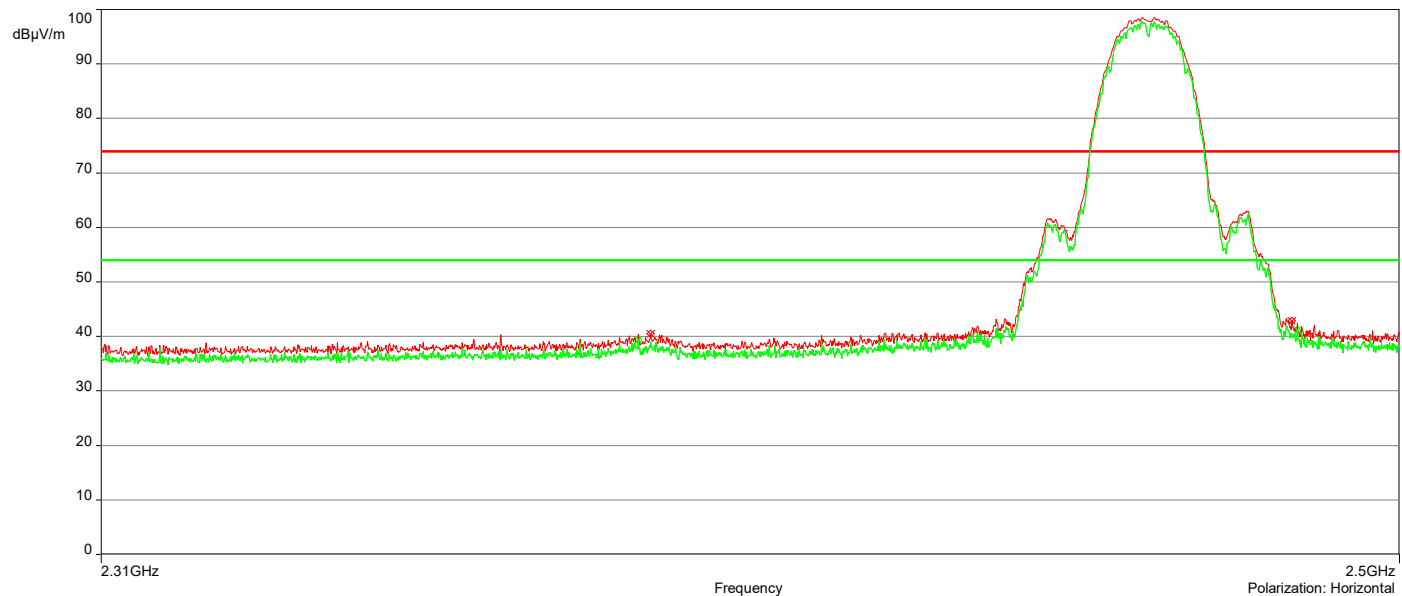
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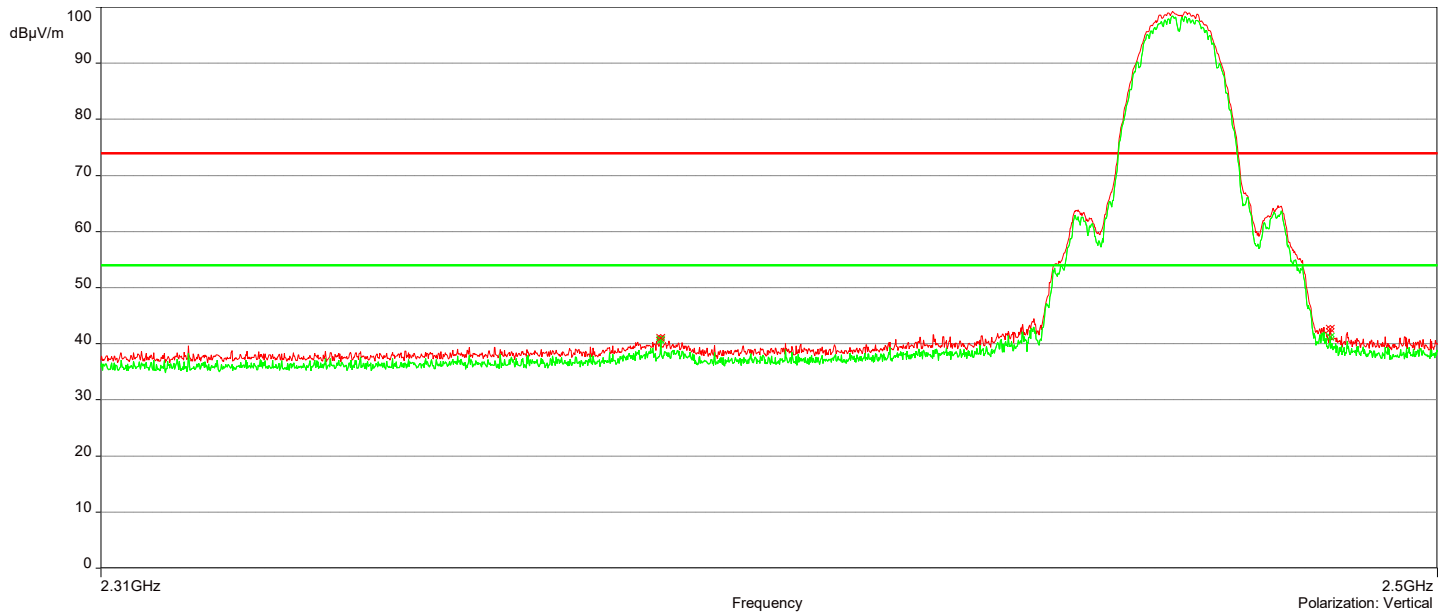
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No	Frequency (MHz)	Level Peak Reading (dBuV/m)	Correction Factor (dB)	Limit dBuV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1	2.3877489GHz	41.03	-3.36	74.00	-32.97	1.00	296.70	Vertical	Passed
2	2.4842221GHz	42.68	-2.90	74.00	-31.32	3.50	266.90	Vertical	Passed
3	2.3886043GHz	40.52	-3.45	74.00	-33.48	2.50	221.30	Horizontal	Passed
4	2.4836518GHz	42.89	-2.91	74.00	-31.11	1.00	312.70	Horizontal	Passed

No	Frequency (MHz)	Level Average Reading (dBuV/m)	Correction Factor (dB)	Limit dBuV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgment
1	2.3877489GHz	40.70	-3.36	54.00	-13.30	1.00	296.70	Vertical	Passed
2	2.4842221GHz	41.29	-2.90	54.00	-12.71	3.50	266.90	Vertical	Passed
3	2.3867984GHz	39.36	-3.46	54.00	-14.64	1.00	329.00	Horizontal	Passed
4	2.4845073GHz	41.21	-2.91	54.00	-12.79	1.00	316.90	Horizontal	Passed

Overall Graphs:





Remarks:

- 43. Level Peak Reading (dBµV/m)= Raw Peak Level + Correction Factor
- 44. Correction Factor (dB) = Antenna Factor + Cable Loss – Pre-amplifier Gain
- 45. Margin = Level Peak Reading – Limit

Remarks:

- 43. Level Average Reading (dBµV/m)= Raw Average Level + Correction Factor
- 44. Correction Factor (dB) = Antenna Factor + Cable Loss – Pre-amplifier Gain
- 45. Margin = Level Average Reading – Limit

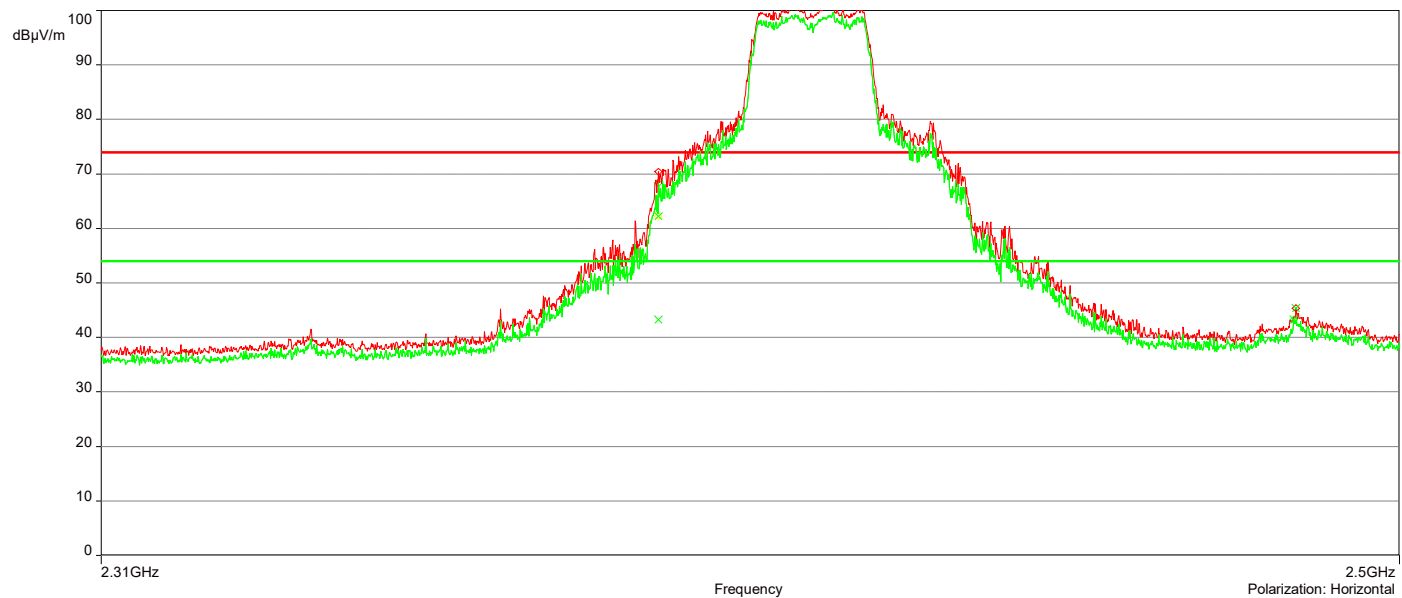
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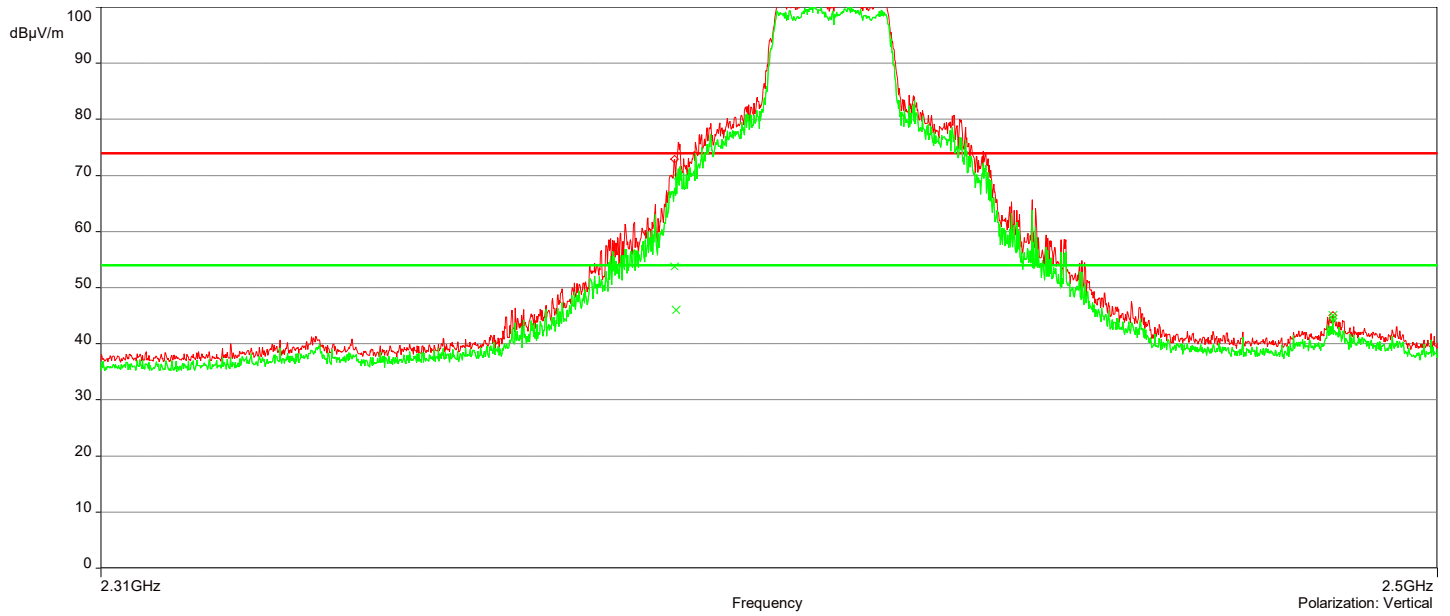
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No	Frequency (MHz)	Level Peak Reading (dBuV/m)	Correction Factor (dB)	Limit dBμV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1	2.3897449GHz	53.78	-3.35	74.00	-20.22	1.50	270.90	Vertical	Passed
2	2.4846023GHz	45.04	-2.91	74.00	-28.96	1.00	271.50	Vertical	Passed
3	2.3897449GHz	62.24	-3.35	74.00	-11.76	1.00	30.10	Horizontal	Passed
4	2.4843172GHz	45.31	-2.91	74.00	-28.69	1.00	310.00	Horizontal	Passed

No	Frequency (MHz)	Level Average Reading (dBuV/m)	Correction Factor (dB)	Limit dBμV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgment
1	2.389935GHz	45.97	-3.35	54.00	-8.03	1.50	279.90	Vertical	Passed
2	2.4846023GHz	44.51	-2.91	54.00	-9.49	1.00	271.50	Vertical	Passed
3	2.3897449GHz	43.22	-3.35	54.00	-10.78	1.00	30.10	Horizontal	Passed
4	2.483937GHz	43.28	-2.91	54.00	-10.72	1.50	310.50	Horizontal	Passed

Overall Graphs:





Remarks:

- 46. Level Peak Reading (dBµV/m)= Raw Peak Level + Correction Factor
- 47. Correction Factor (dB) = Antenna Factor + Cable Loss – Pre-amplifier Gain
- 48. Margin = Level Peak Reading – Limit

Remarks:

- 46. Level Average Reading (dBµV/m)= Raw Average Level + Correction Factor
- 47. Correction Factor (dB) = Antenna Factor + Cable Loss – Pre-amplifier Gain
- 48. Margin = Level Average Reading – Limit

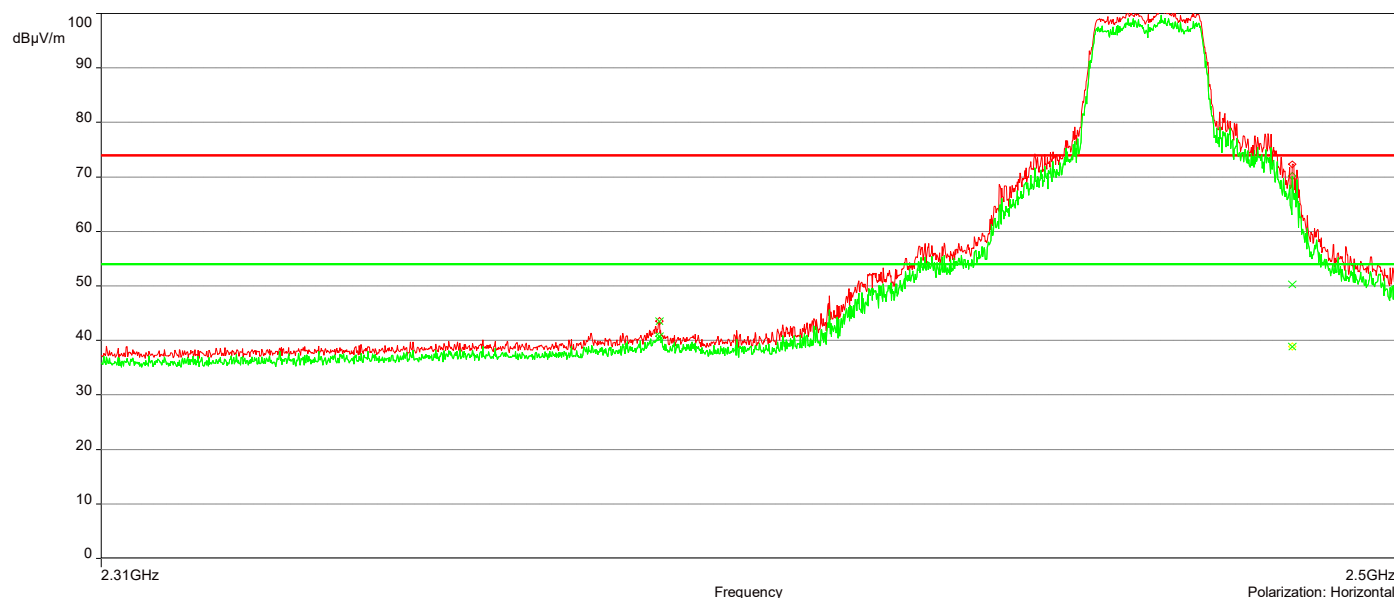
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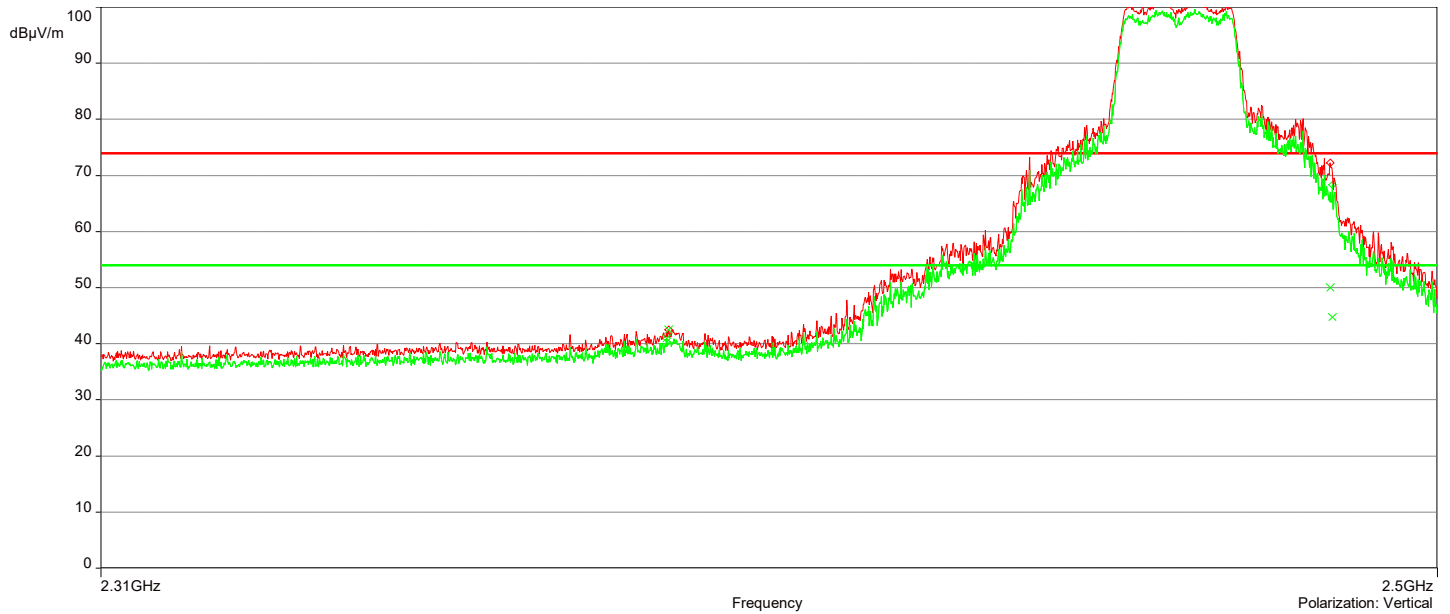
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No	Frequency (MHz)	Level Peak Reading (dBuV/m)	Correction Factor (dB)	Limit dBuV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1	2.3888894GHz	42.52	-3.35	74.00	-31.48	3.00	284.60	Vertical	Passed
2	2.4842221GHz	50.02	-2.91	74.00	-23.98	1.00	274.10	Vertical	Passed
3	2.3898399GHz	43.50	-3.44	74.00	-30.50	2.50	41.00	Horizontal	Passed
4	2.4837469GHz	50.27	-2.91	74.00	-23.73	1.50	330.90	Horizontal	Passed

No	Frequency (MHz)	Level Average Reading (dBuV/m)	Correction Factor (dB)	Limit dBuV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgment
1	2.3886043GHz	41.00	-3.36	54.00	-13.00	3.00	304.20	Vertical	Passed
2	2.4845073GHz	44.82	-2.91	54.00	-9.18	3.50	258.10	Vertical	Passed
3	2.3898399GHz	40.80	-3.44	54.00	-13.20	2.50	41.00	Horizontal	Passed
4	2.4837469GHz	38.88	-2.91	54.00	-15.12	1.50	330.90	Horizontal	Passed

Overall Graphs:





Remarks:

- 49. Level Peak Reading (dBµV/m)= Raw Peak Level + Correction Factor
- 50. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
- 51. Margin = Level Peak Reading – Limit

Remarks:

- 49. Level Average Reading (dBµV/m)= Raw Average Level + Correction Factor
- 50. Correction Factor (dB) = Antenna Factor + Cable Loss – Preamplifier Gain
- 51. Margin = Level Average Reading – Limit

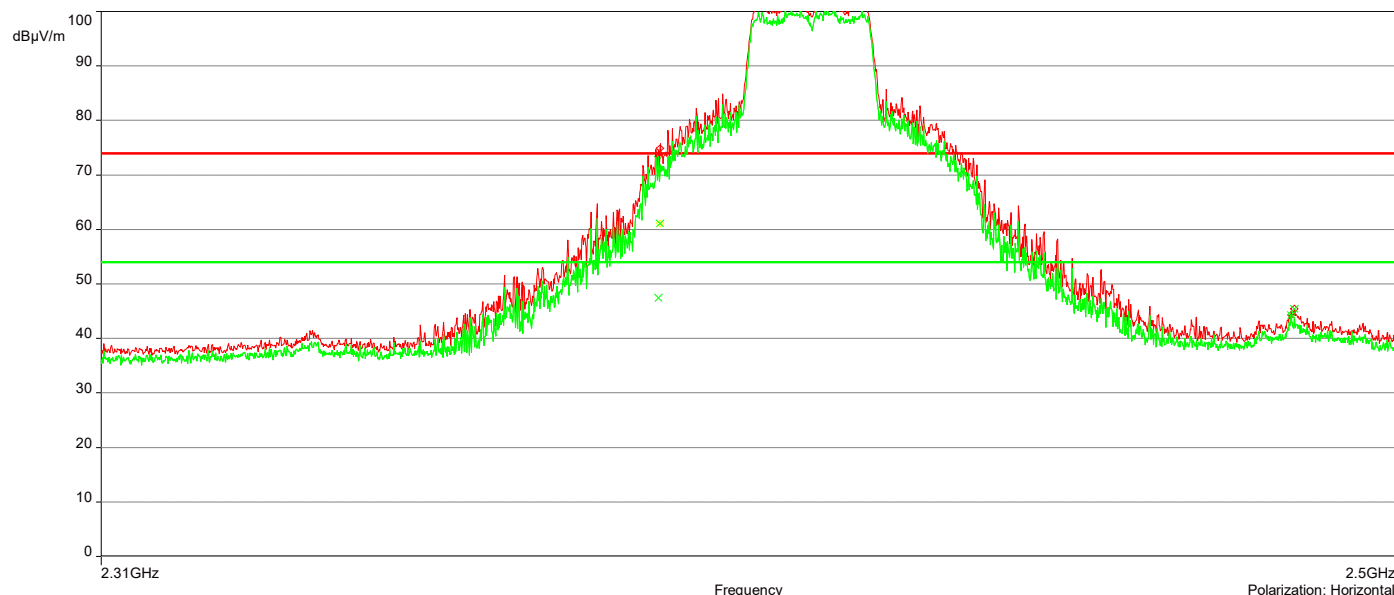
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1	2.389935GHz	65.81	-3.44	74.00	-8.19	1.00	300.90	Vertical	Passed
2	2.4841271GHz	45.19	-2.90	74.00	-28.81	3.50	263.60	Vertical	Passed
3	2.389935GHz	61.11	-3.44	74.00	-12.89	2.50	235.10	Horizontal	Passed
4	2.484032GHz	45.41	-2.91	74.00	-28.59	1.50	334.60	Horizontal	Passed

No	Frequency (MHz)	Level Average Reading (dBuV/m)	Correction Factor (dB)	Limit dBuV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgment
1	2.389935GHz	46.02	-3.44	54.00	-7.98	1.00	300.90	Vertical	Passed
2	2.4837469GHz	43.65	-2.89	54.00	-10.35	1.00	271.60	Vertical	Passed
3	2.3897449GHz	47.46	-3.44	54.00	-6.54	2.50	240.10	Horizontal	Passed
4	2.4835568GHz	44.35	-2.91	54.00	-9.65	3.50	306.60	Horizontal	Passed

Overall Graphs:





Remarks:

- 52. Level Peak Reading (dBµV/m)= Raw Peak Level + Correction Factor
- 53. Correction Factor (dB) = Antenna Factor + Cable Loss – Pre-amplifier Gain
- 54. Margin = Level Peak Reading – Limit

Remarks:

- 52. Level Average Reading (dBµV/m)= Raw Average Level + Correction Factor
- 53. Correction Factor (dB) = Antenna Factor + Cable Loss – Pre-amplifier Gain
- 54. Margin = Level Average Reading – Limit

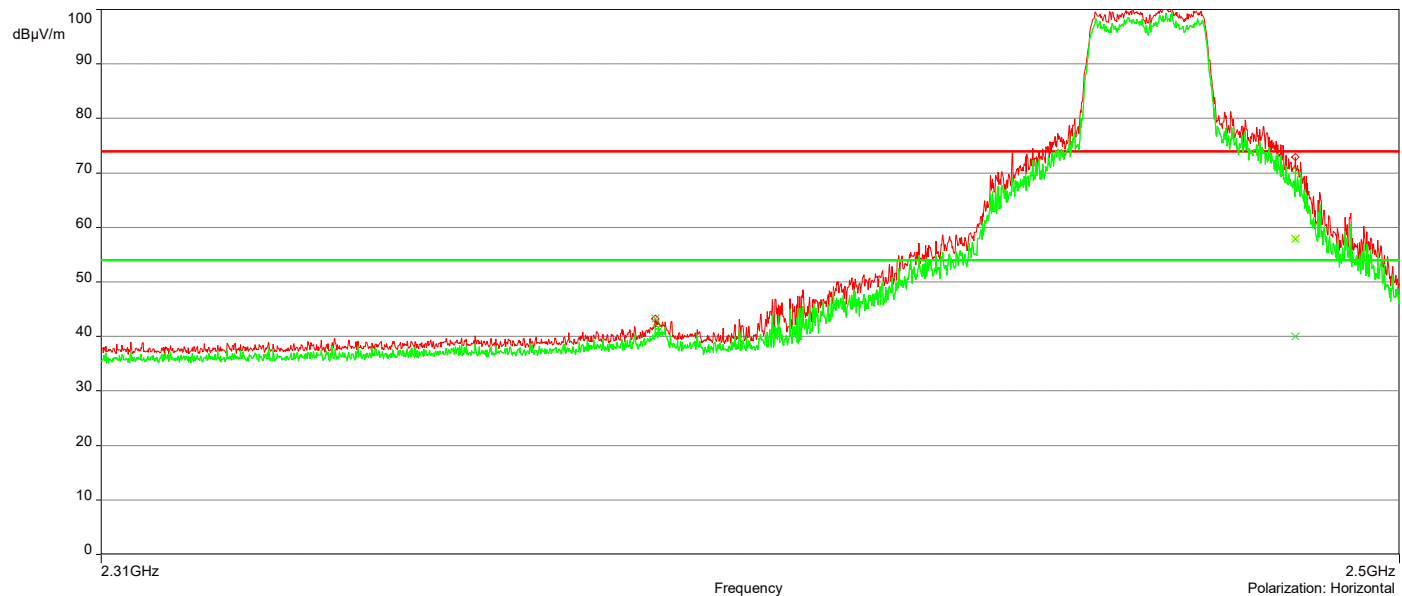
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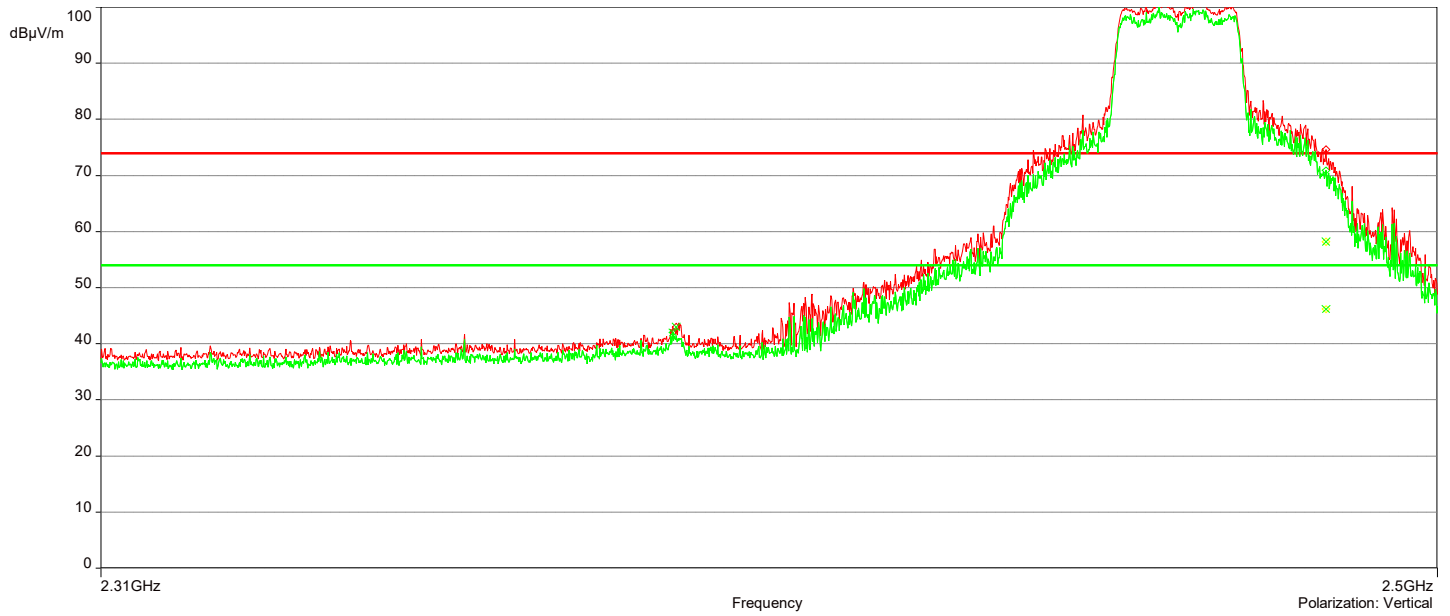
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No	Frequency (MHz)	Level Peak Reading (dBuV/m)	Correction Factor (dB)	Limit dBuV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgement
1	2.389935GHz	43.02	-3.35	74.00	-30.98	3.00	265.00	Vertical	Passed
2	2.4835568GHz	58.21	-2.89	74.00	-15.79	3.50	293.10	Vertical	Passed
3	2.3892696GHz	43.28	-3.44	74.00	-30.72	2.50	39.80	Horizontal	Passed
4	2.4842221GHz	57.94	-2.90	74.00	-16.06	2.00	324.90	Horizontal	Passed

No	Frequency (MHz)	Level Average Reading (dBuV/m)	Correction Factor (dB)	Limit dBuV/m	Margin (dB)	Height (m)	Angle (°)	Polarization	Judgment
1	2.3894597GHz	42.05	-3.35	54.00	-11.95	3.00	282.30	Vertical	Passed
2	2.4835568GHz	46.20	-2.89	54.00	-7.80	3.50	293.10	Vertical	Passed
3	2.3897449GHz	41.70	-3.44	54.00	-12.30	2.50	248.40	Horizontal	Passed
4	2.4842221GHz	39.98	-2.90	54.00	-14.02	2.00	324.90	Horizontal	Passed

Overall Graphs:





Remarks:

- 55. Level Peak Reading (dBµV/m)= Raw Peak Level + Correction Factor
- 56. Correction Factor (dB) = Antenna Factor + Cable Loss – Pre-amplifier Gain
- 57. Margin = Level Peak Reading – Limit

Remarks:

- 55. Level Average Reading (dBµV/m)= Raw Average Level + Correction Factor
- 56. Correction Factor (dB) = Antenna Factor + Cable Loss – Pre-amplifier Gain
- 57. Margin = Level Average Reading – Limit

Document Revisions

Version	Date	Modifier	Changes
1.0	04/11/2022	Aravind Buddana Ryan Philips	<ul style="list-style-type: none">Initial Release
2.0	05/31/2022	Aravind Buddana	<ul style="list-style-type: none">Updated the FCC IDUpdated EUT Antenna Type description.

End of Report