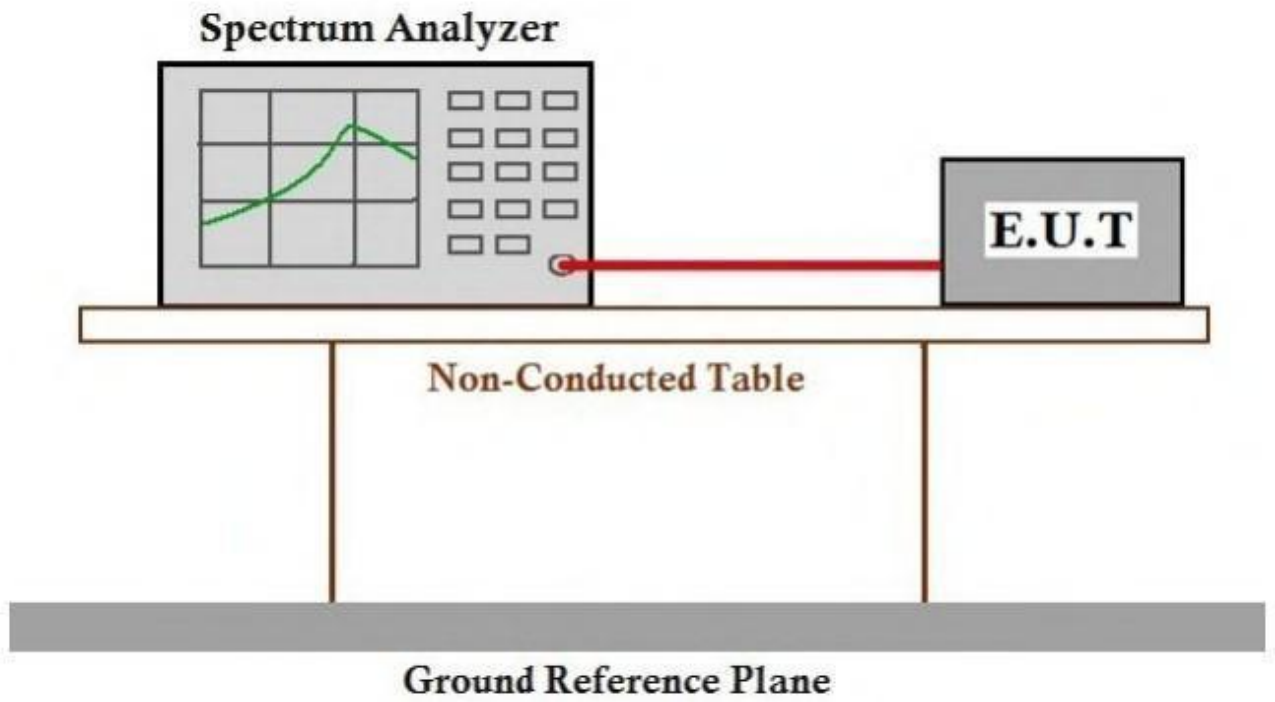
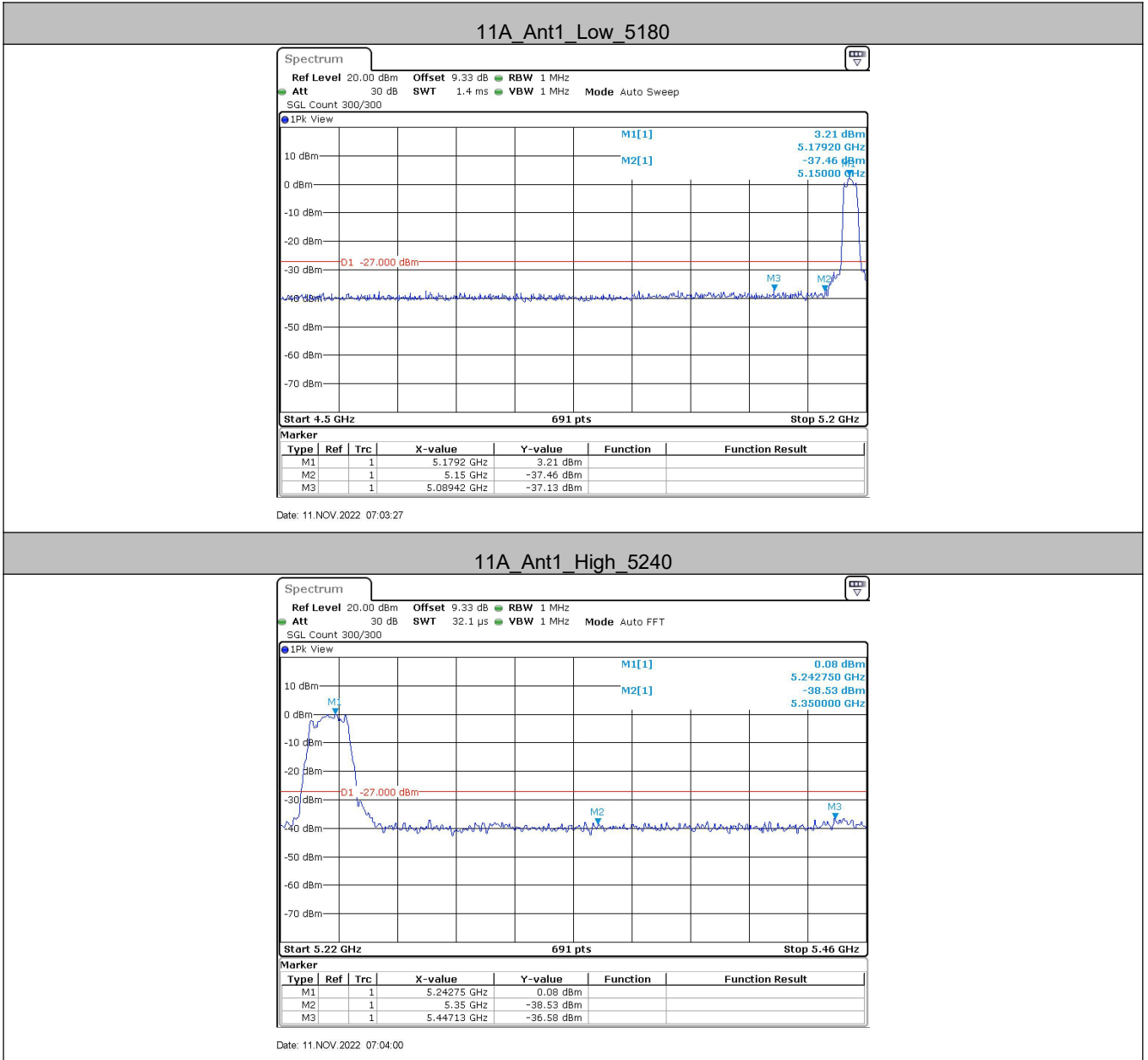


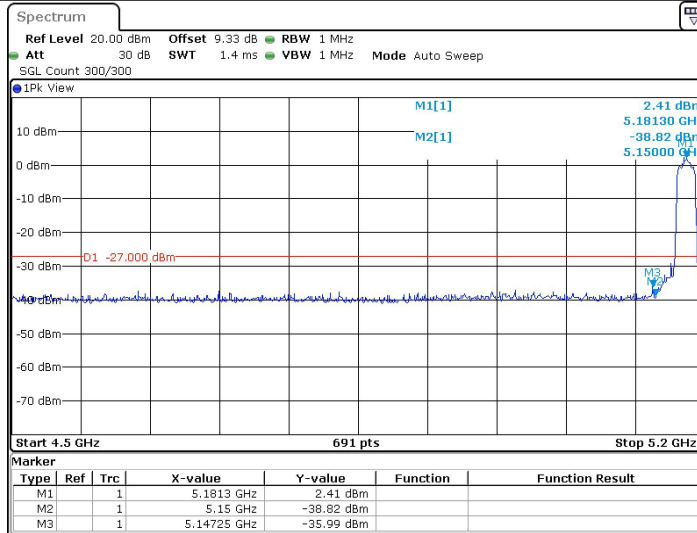
Test Setup Diagram



Test Graphs

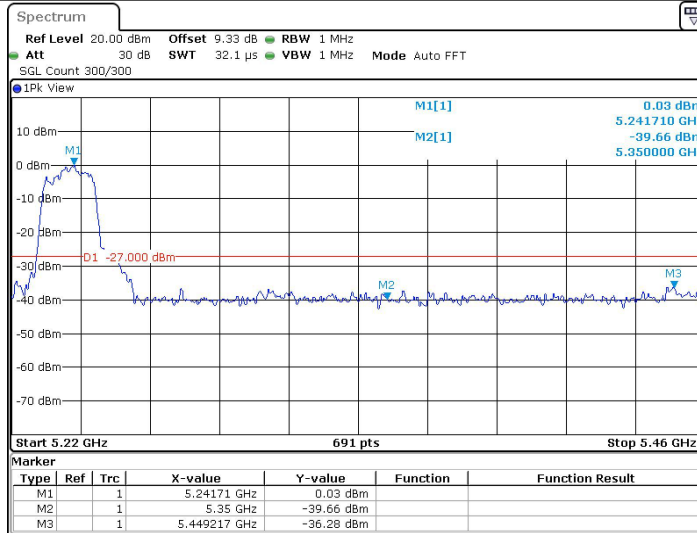


11N20SISO_Ant1_Low_5180



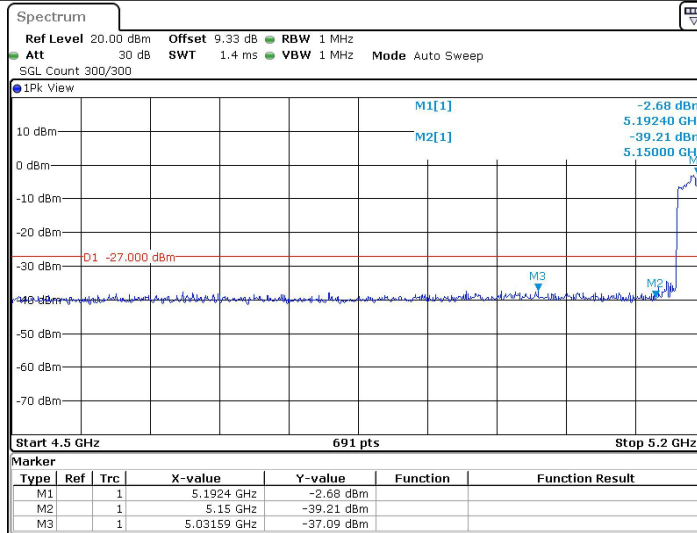
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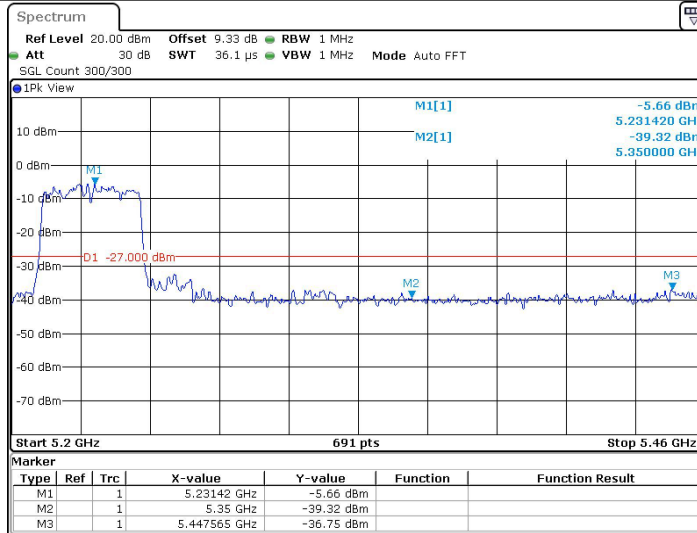


Date: 11.NOV.2022 07:07:00

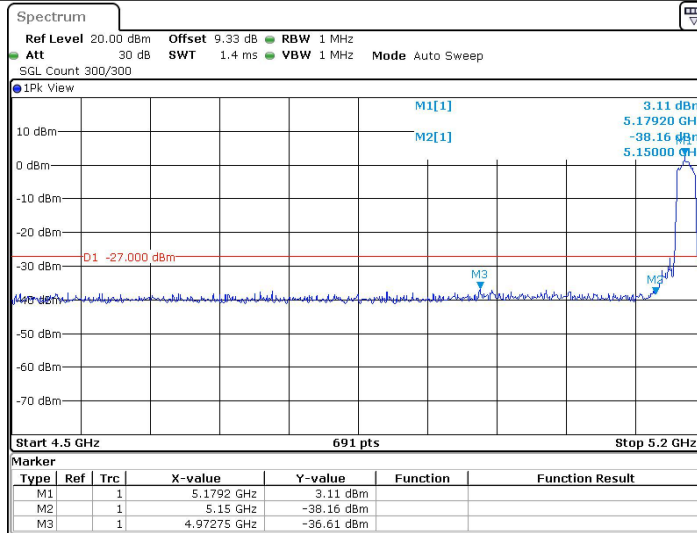
11N40SISO_Ant1_Low_5190



11N40SISO_Ant1_High_5230

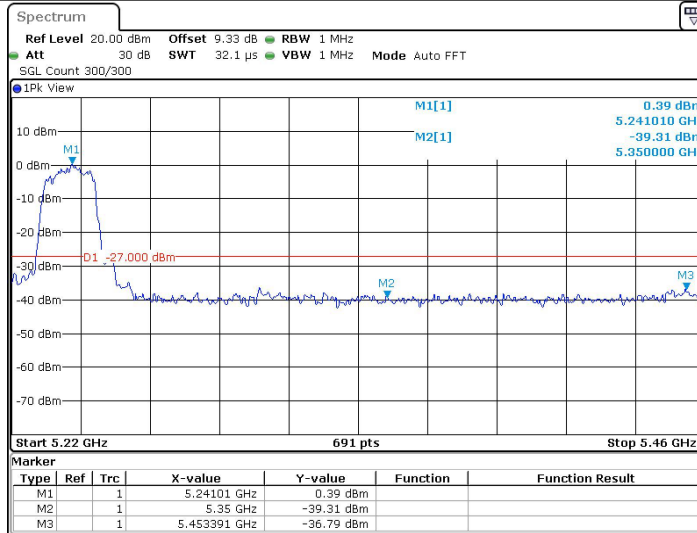


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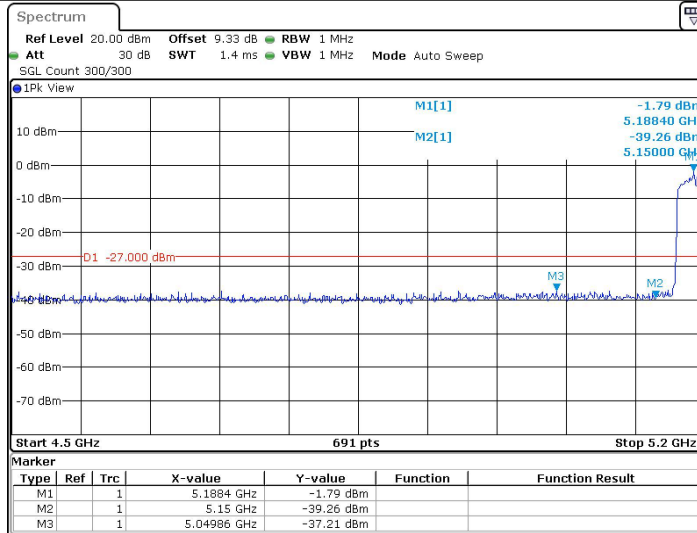
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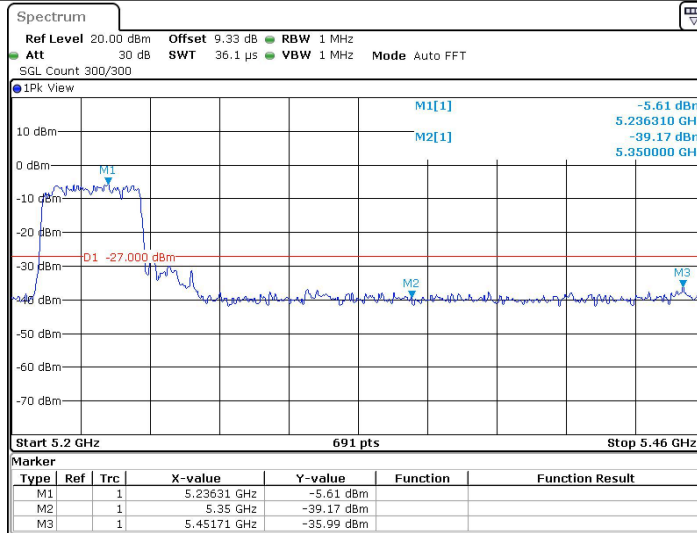
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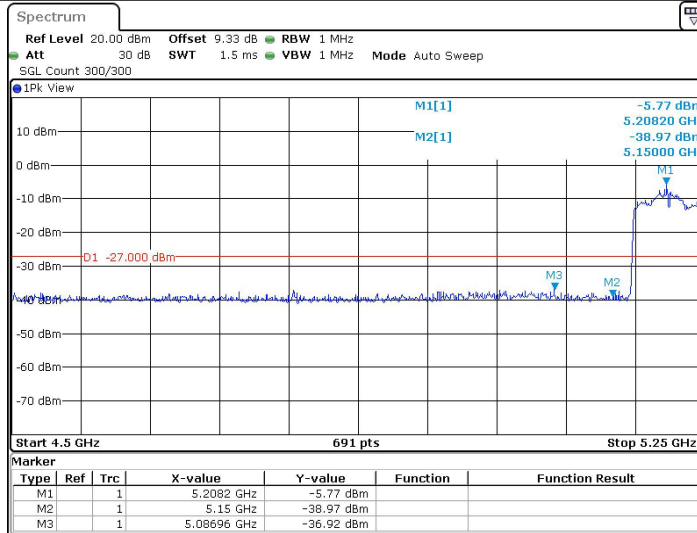
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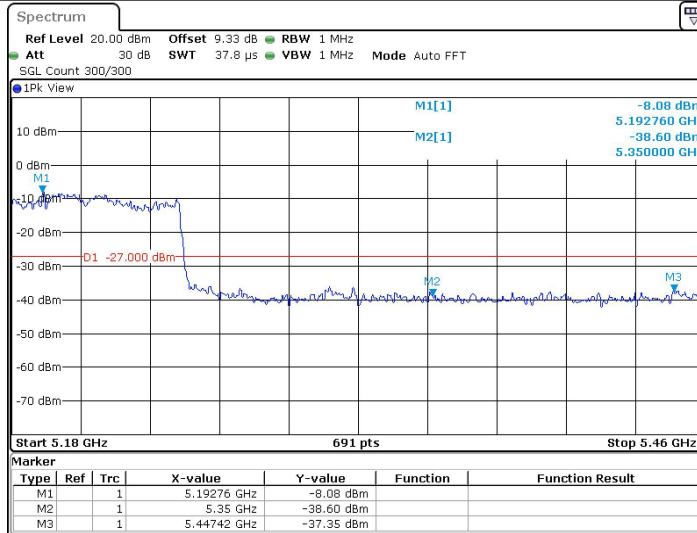
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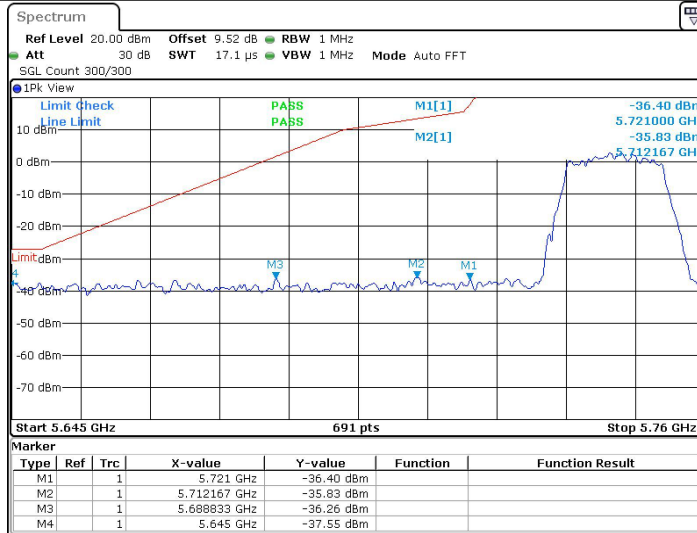
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11AC80SISO_Ant1_High_5210



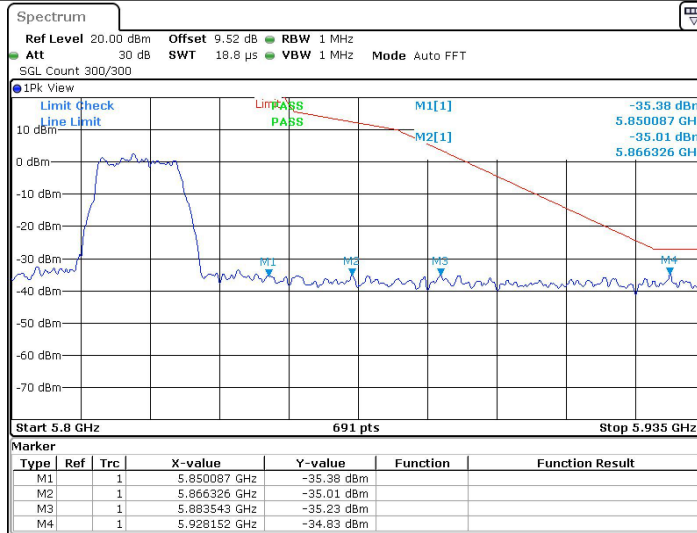
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11A_Ant1_Low_5745



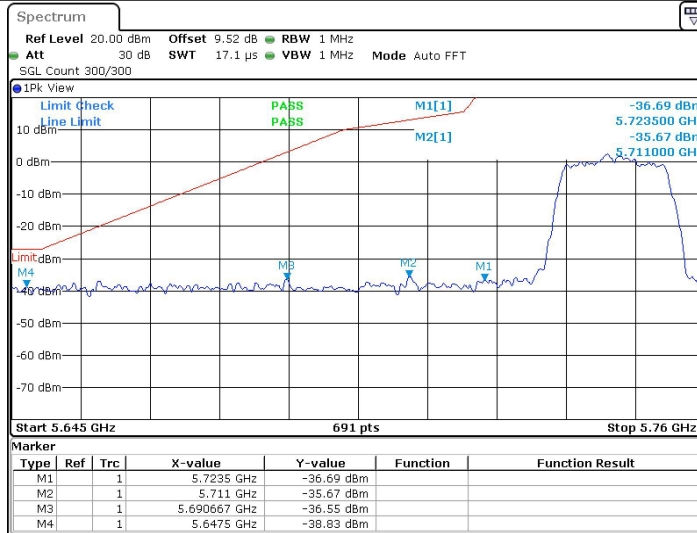
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11A_Ant1_High_5825



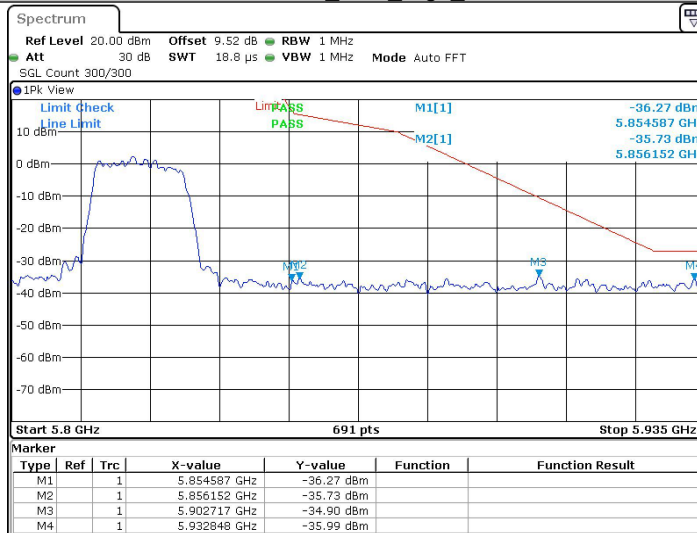
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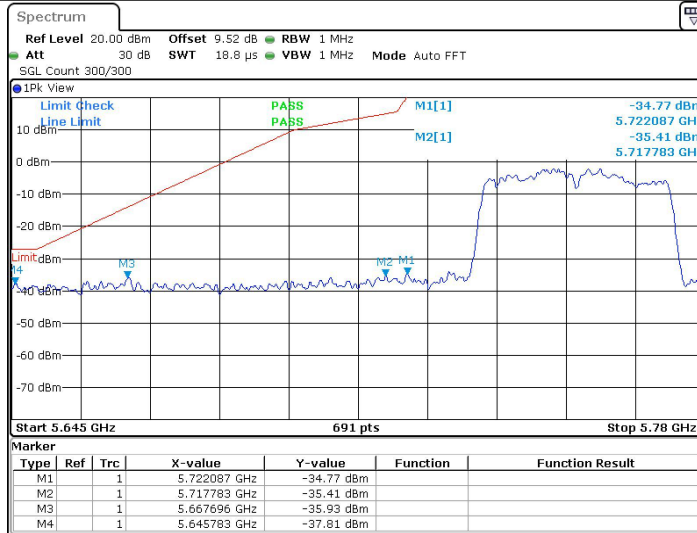
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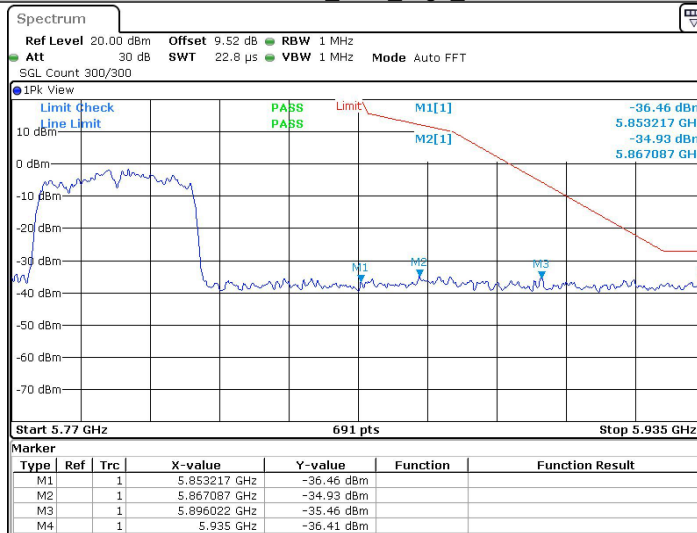
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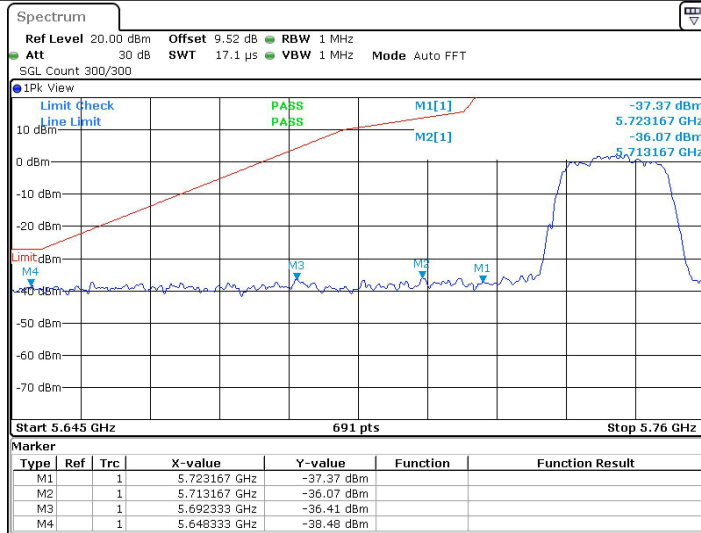
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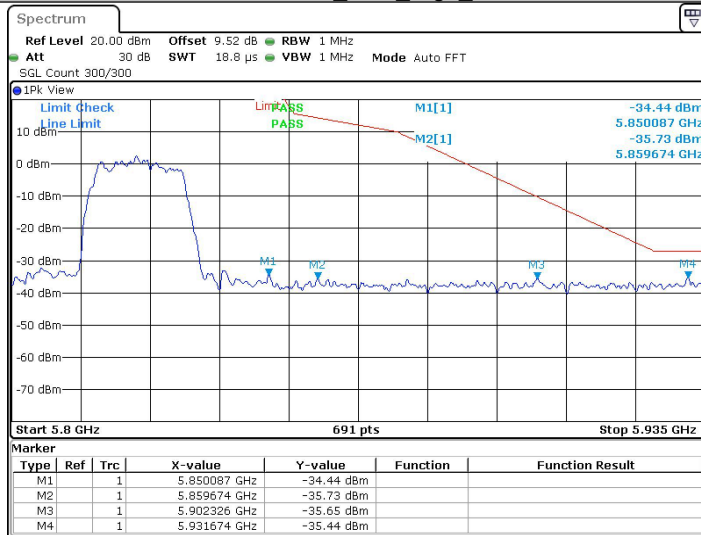
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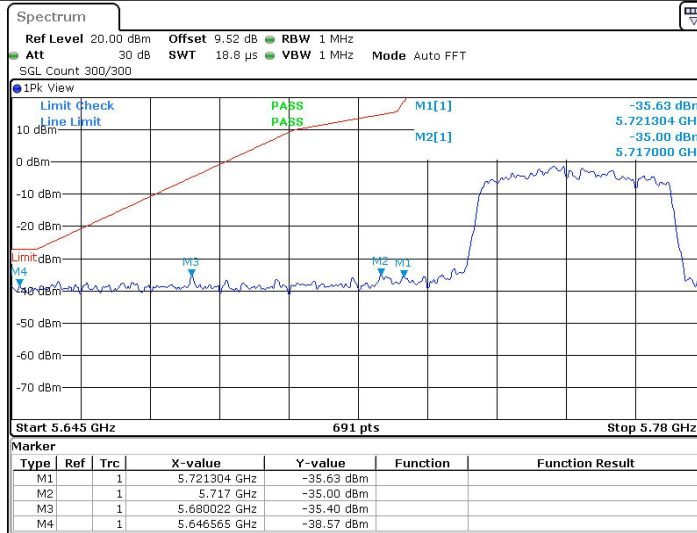
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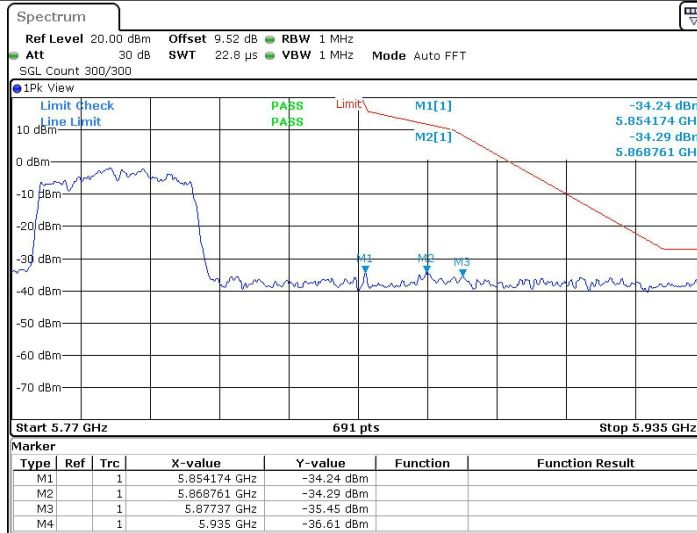
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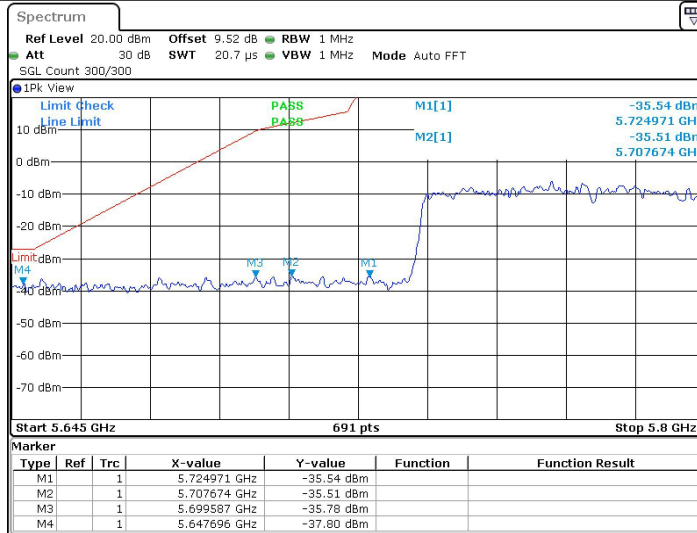
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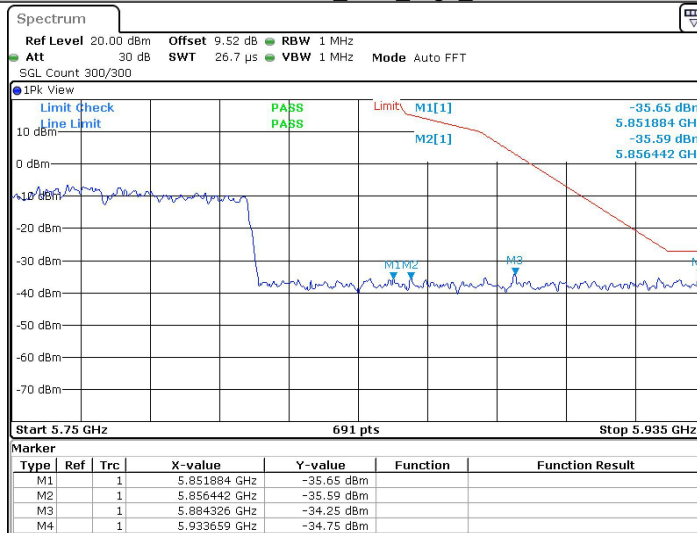
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11AC80SISO_Ant1_Low_5775



Date: 11.NOV.2022 07:46:33

11AC80SISO_Ant1_High_5775



Date: 11.NOV.2022 07:46:50

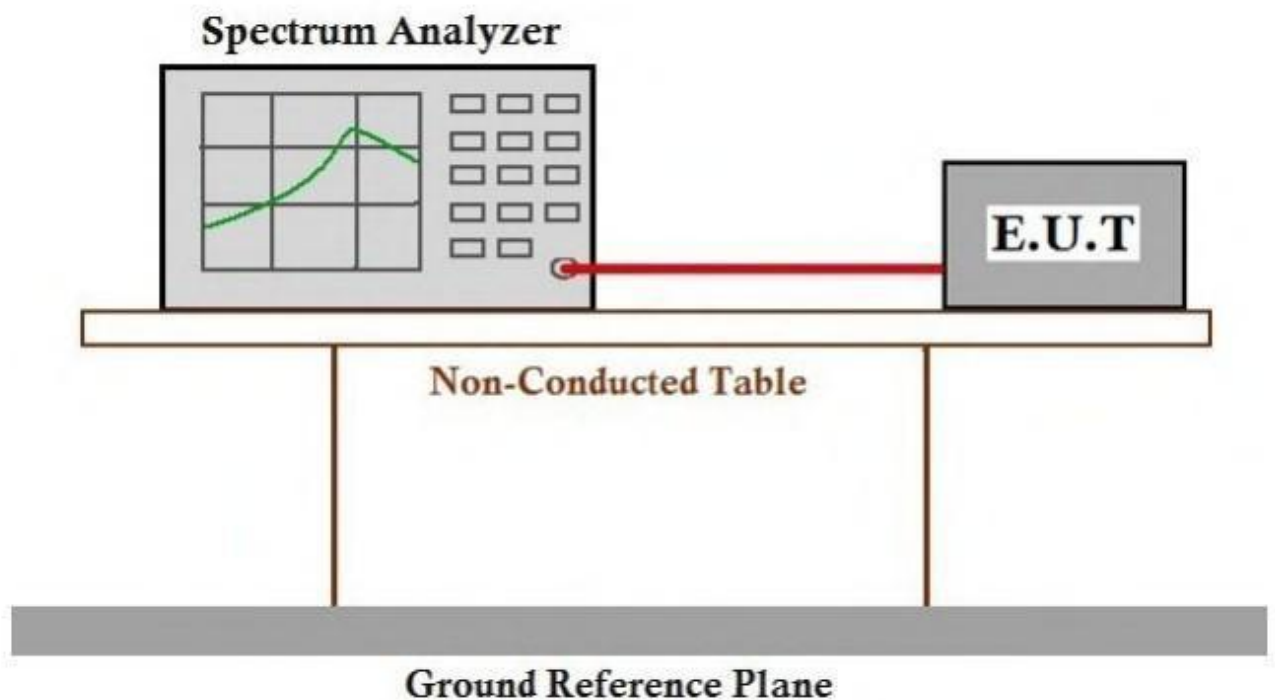
Appendix E): Frequency Stability

Test Requirement 47 CFR Part 15, Subpart C 15.407 (g)

Test Method: ANSI C63.10 (2013) Section 6.8

Limit: The frequency tolerance shall be maintained within the band of operation frequency over a temperature variation of 0 degrees to 35 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C.

Test Setup Diagram



Measurement Data

Frequency Stability Versus Temp.			
Operating Frequency: 5240 MHz			
Temp	Voltage	Measured Frequency	Frequency Drift
(°C)		(MHz)	(ppm)
50	VN	5240.05	9.54
40		5240.06	11.45
30		5240.03	5.73
20		5240.04	7.63
10		5240.05	9.54
0		5240.06	1.45
-10		5240.02	3.82
-20		5240.06	1.45

Frequency Stability Versus Temp.			
Operating Frequency: 5210 MHz			
Temp.	Voltage	Measured Frequency	Frequency Drift
		(MHz)	(ppm)
TN	VL	5210.03	5.76
	VN	5210.01	1.92
	VH	5210.02	3.84

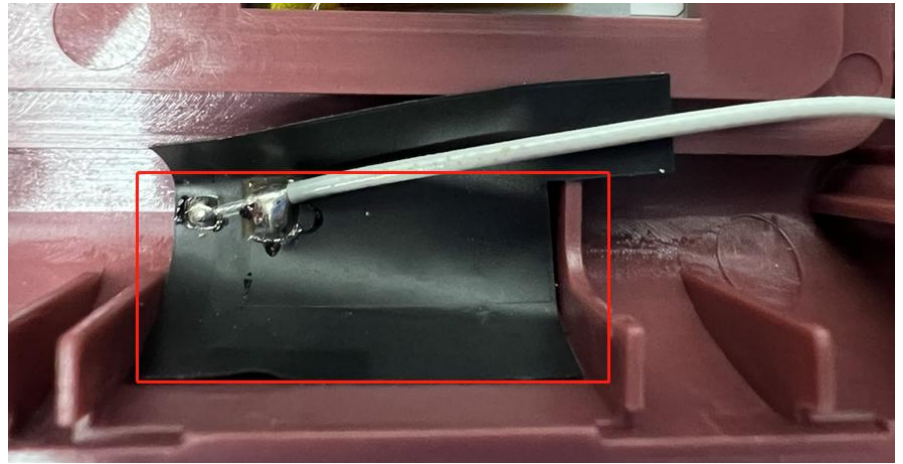
Note: All the modulation and channels had been tested, but only the worst data recorded in the report.

Appendix F): Antenna Requirement

15.203 requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

EUT Antenna:



The antenna is FPC antenna.Band1:4.34dBi;Band4:4.19dBi

Appendix G): Operation in the absence of information to the transmit

15.407(c) requirement:

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signaling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals. Applicants shall include in their application for equipment authorization a description of how this requirement is met.

Operation in the absence of information to the transmit

While the EUT is not transmitting any information, the EUT can automatically discontinue transmission and become standby mode for power saving. The EUT can detect the controlling signal of ASK message transmitting from remote device and verify whether it shall resend or discontinue transmission. (manufacturer declare)

Appendix H): AC Power Line Conducted Emission

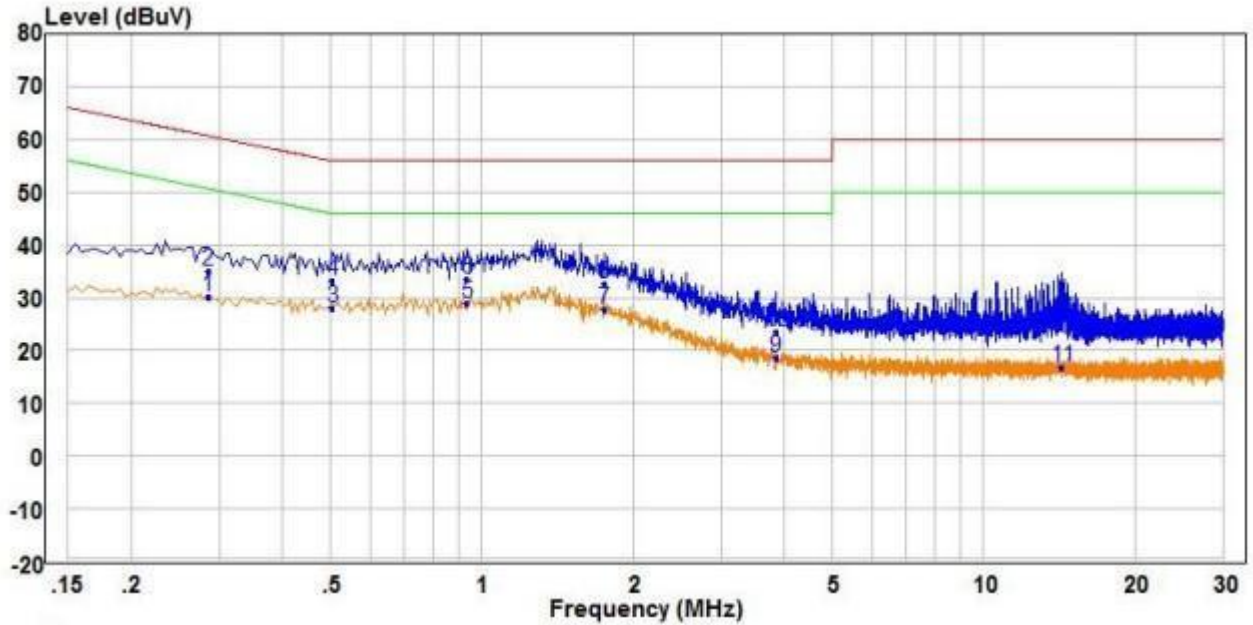
<p>Test Procedure:</p>	<p>Test frequency range :150KHz-30MHz</p> <ol style="list-style-type: none"> 1)The mains terminal disturbance voltage test was conducted in a shielded room. 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50Ω/50μH + 5Ω linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded. 3)The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane, 4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2. 5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement. 														
<p>Limit:</p>	<table border="1" data-bbox="497 1037 1366 1256"> <thead> <tr> <th rowspan="2">Frequency range (MHz)</th> <th colspan="2">Limit (dBμV)</th> </tr> <tr> <th>Quasi-peak</th> <th>Average</th> </tr> </thead> <tbody> <tr> <td>0.15-0.5</td> <td>66 to 56*</td> <td>56 to 46*</td> </tr> <tr> <td>0.5-5</td> <td>56</td> <td>46</td> </tr> <tr> <td>5-30</td> <td>60</td> <td>50</td> </tr> </tbody> </table> <p>* The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz. NOTE : The lower limit is applicable at the transition frequency</p>	Frequency range (MHz)	Limit (dBμV)		Quasi-peak	Average	0.15-0.5	66 to 56*	56 to 46*	0.5-5	56	46	5-30	60	50
Frequency range (MHz)	Limit (dBμV)														
	Quasi-peak	Average													
0.15-0.5	66 to 56*	56 to 46*													
0.5-5	56	46													
5-30	60	50													

Measurement Data

An initial pre-scan was performed on the live and neutral lines with peak detector.

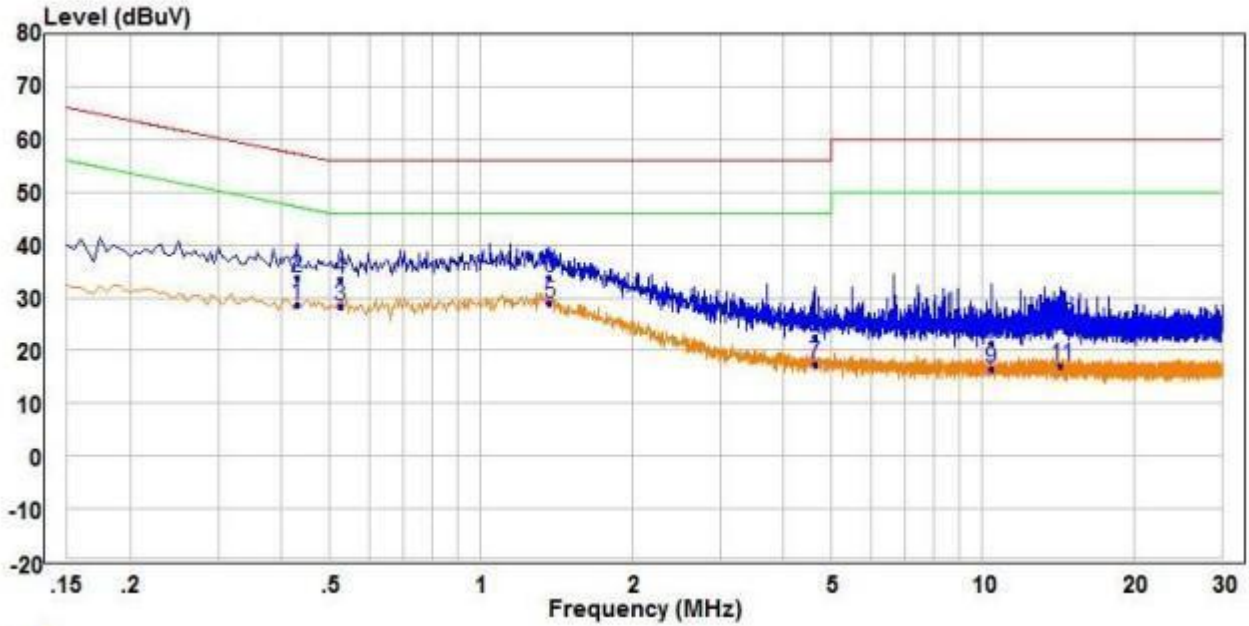
Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

Live line:



	Read Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB		
1	0.285	20.76	9.51	30.27	50.67	-20.40	Average	Line
2	0.285	25.44	9.51	34.95	60.67	-25.72	QP	Line
3	0.505	18.43	9.71	28.14	46.00	-17.86	Average	Line
4	0.505	23.44	9.71	33.15	56.00	-22.85	QP	Line
5 PP	0.935	19.10	9.74	28.84	46.00	-17.16	Average	Line
6 QP	0.935	23.88	9.74	33.62	56.00	-22.38	QP	Line
7	1.755	16.41	11.28	27.69	46.00	-18.31	Average	Line
8	1.755	21.26	11.28	32.54	56.00	-23.46	QP	Line
9	3.850	8.36	10.27	18.63	46.00	-27.37	Average	Line
10	3.850	13.18	10.27	23.45	56.00	-32.55	QP	Line
11	14.360	7.05	9.75	16.80	50.00	-33.20	Average	Line
12	14.360	14.63	9.75	24.38	60.00	-35.62	QP	Line

Neutral line:



	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase
	MHz	dBuV	dB	dBuV	dBuV	dB		
1	0.430	19.02	9.64	28.66	47.25	-18.59	Average	Neutral
2	0.430	24.03	9.64	33.67	57.25	-23.58	QP	Neutral
3	0.525	18.59	9.72	28.31	46.00	-17.69	Average	Neutral
4	0.525	23.65	9.72	33.37	56.00	-22.63	QP	Neutral
5 PP	1.370	19.13	9.72	28.85	46.00	-17.15	Average	Neutral
6 QP	1.370	24.18	9.72	33.90	56.00	-22.10	QP	Neutral
7	4.630	7.72	9.81	17.53	46.00	-28.47	Average	Neutral
8	4.630	12.85	9.81	22.66	56.00	-33.34	QP	Neutral
9	10.410	6.61	9.88	16.49	50.00	-33.51	Average	Neutral
10	10.410	11.57	9.88	21.45	60.00	-38.55	QP	Neutral
11	14.360	7.30	9.75	17.05	50.00	-32.95	Average	Neutral
12	14.360	14.85	9.75	24.60	60.00	-35.40	QP	Neutral

Notes:

1. The following Quasi-Peak and Average measurements were performed on the EUT:
2. Final Test Level = Receiver Reading + LISN Factor + Cable Loss.
3. The 6Mbps of rate of 802.11A_5240 is the worst case, only the worst data recorded in the report.