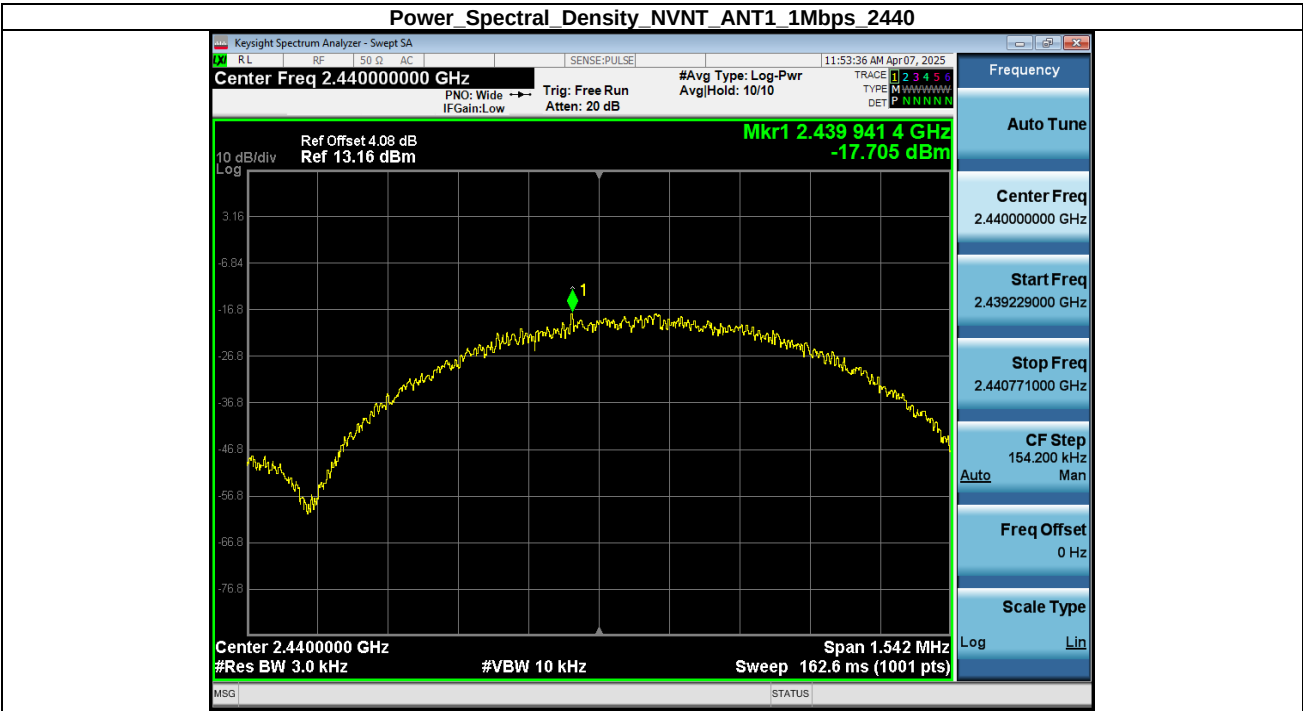
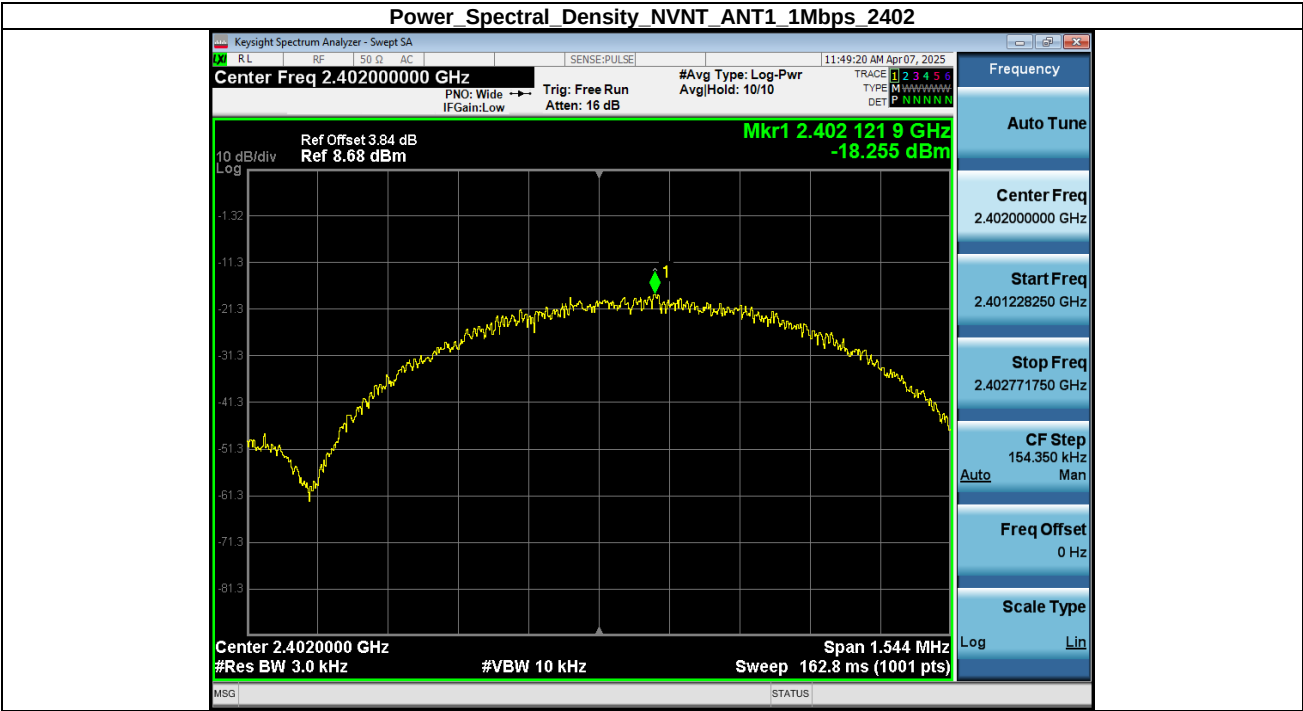


Appendix A: Test Results of Bluetooth LE

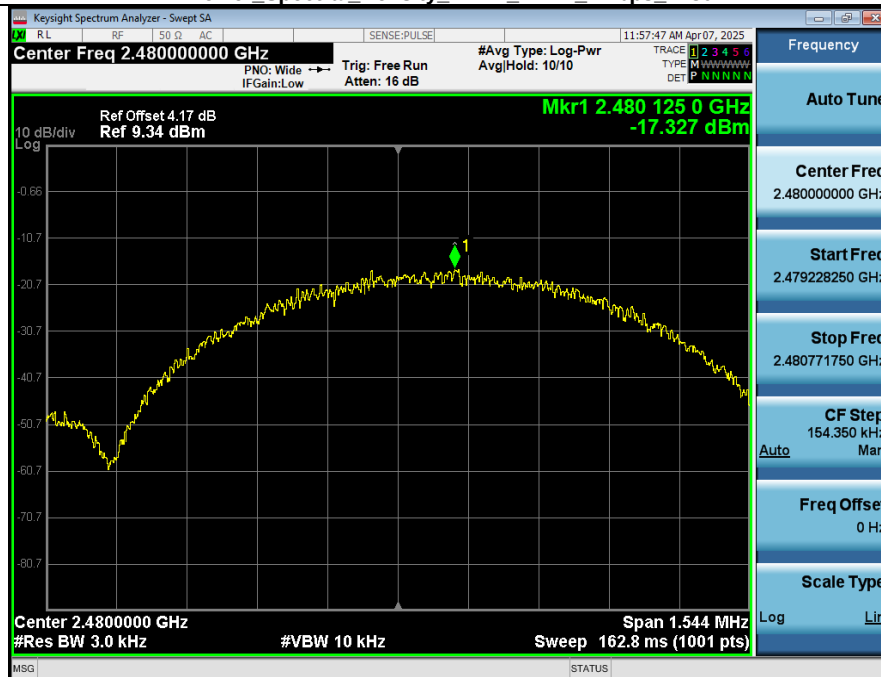
APPENDIX A: TEST RESULTS OF BLUETOOTH LE	1
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Appendix A.1: Test Results of Conducted Power Spectral Density

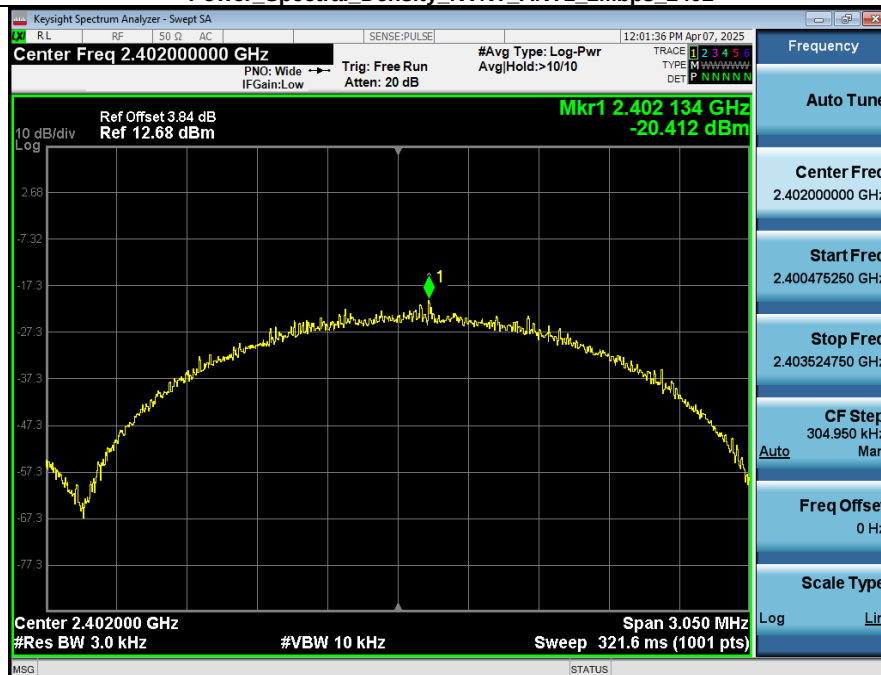
Rate	Frequency (MHz)	Power Spectral Density(dBm/3kHz)	Limit(dBm/3kHz)	Result
1Mbps	2402.00	-18.25	8	Pass
1Mbps	2440.00	-17.70	8	Pass
1Mbps	2480.00	-17.33	8	Pass
2Mbps	2402.00	-20.41	8	Pass
2Mbps	2440.00	-20.64	8	Pass
2Mbps	2480.00	-19.46	8	Pass



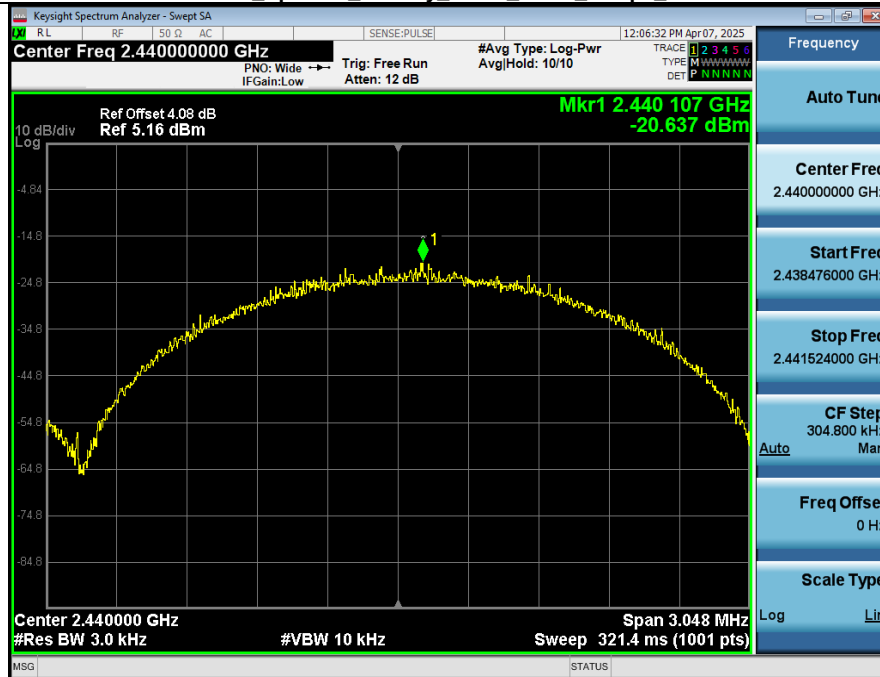
Power Spectral Density NVNT ANT1 1Mbps 2480



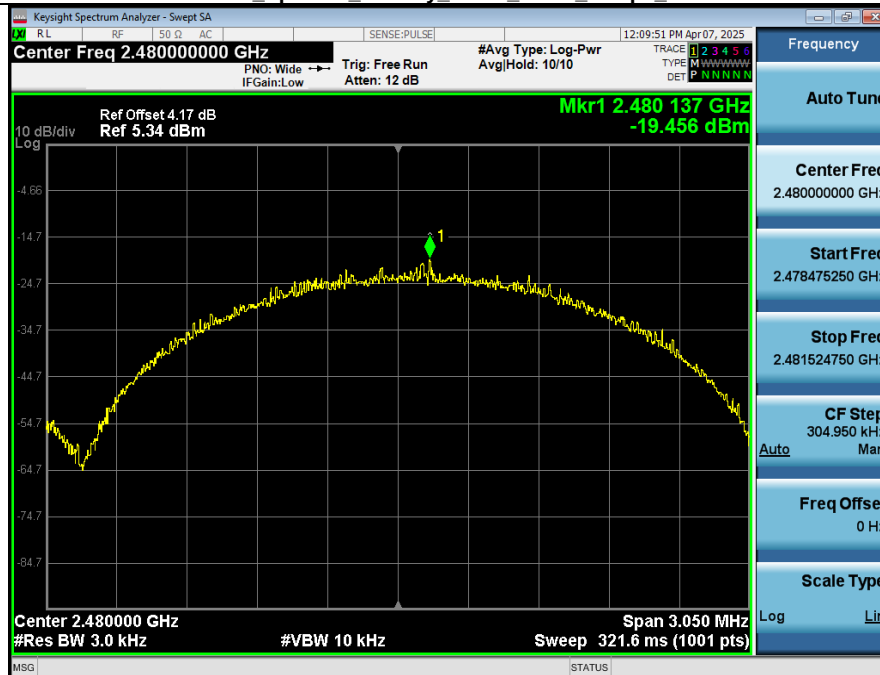
Power Spectral Density NVNT ANT1 2Mbps 2402



Power Spectral Density NVNT ANT1 2Mbps 2440



Power Spectral Density NVNT ANT1 2Mbps 2480



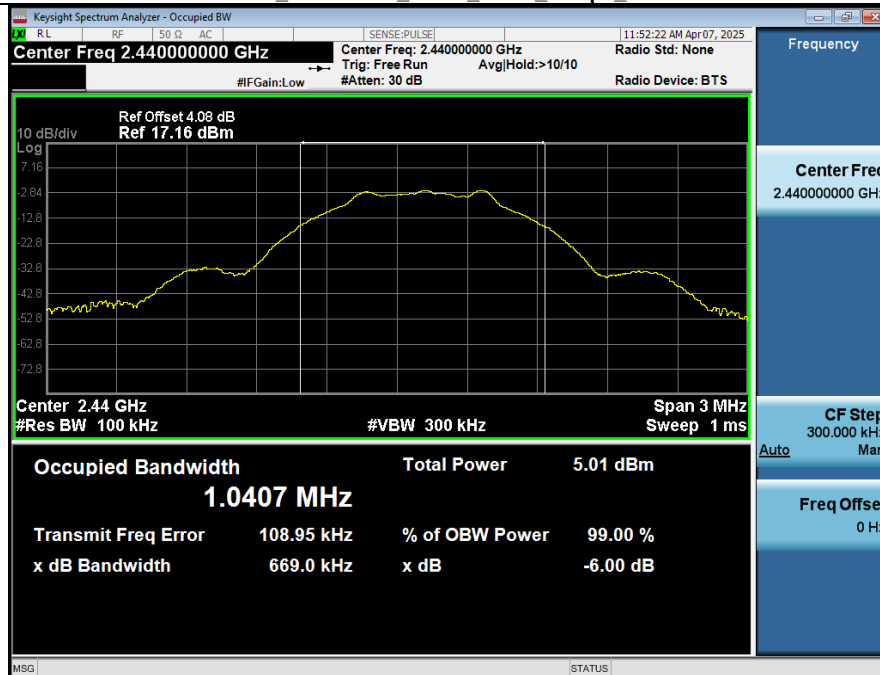
Appendix A.2: Test Results of 6dB Bandwidth

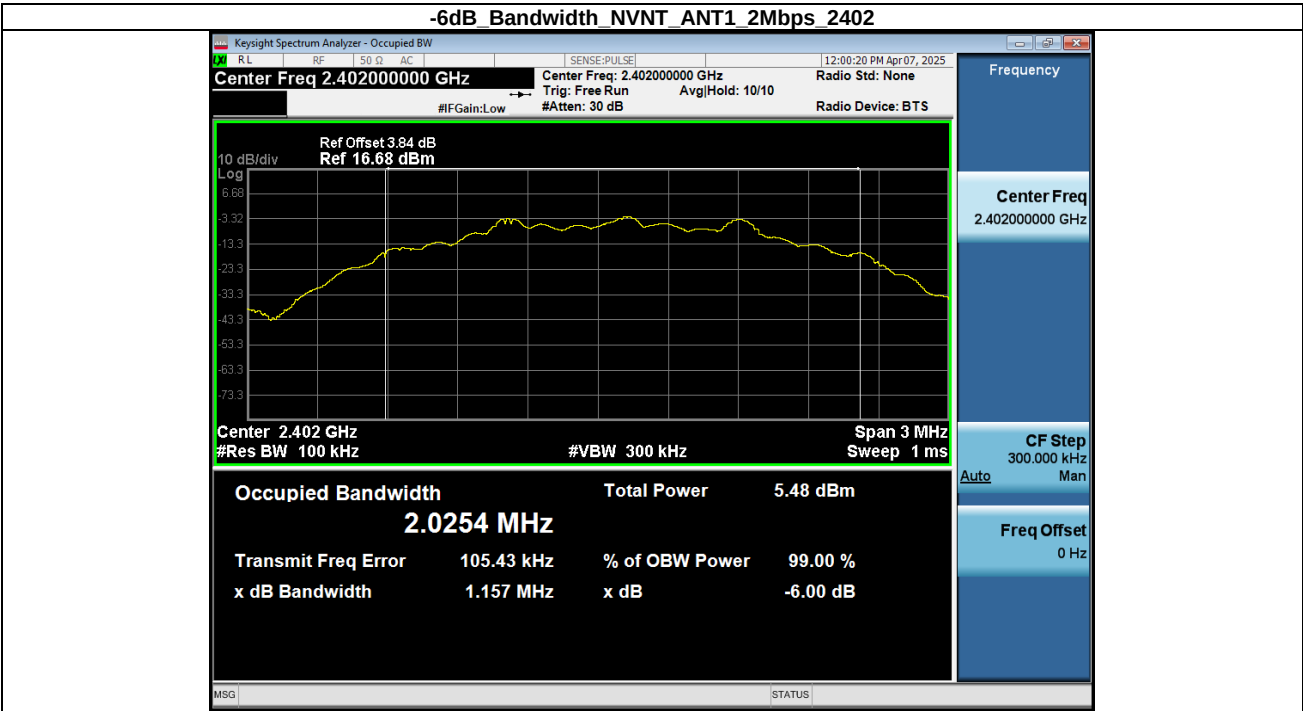
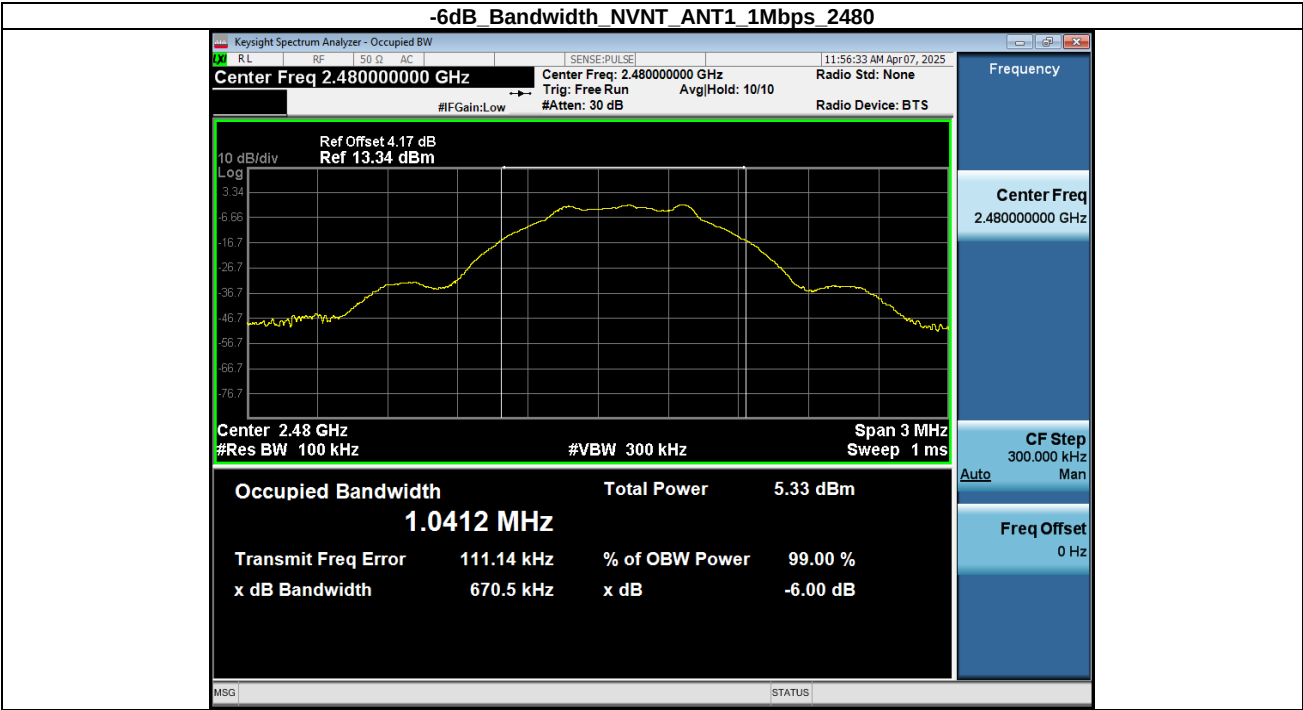
Rate	Frequency (MHz)	-6dB BW(kHz)	limit(kHz)	Result
1Mbps	2402.00	673.36	500	Pass
1Mbps	2440.00	669.04	500	Pass
1Mbps	2480.00	670.54	500	Pass
2Mbps	2402.00	1156.74	500	Pass
2Mbps	2440.00	1160.15	500	Pass
2Mbps	2480.00	1153.64	500	Pass

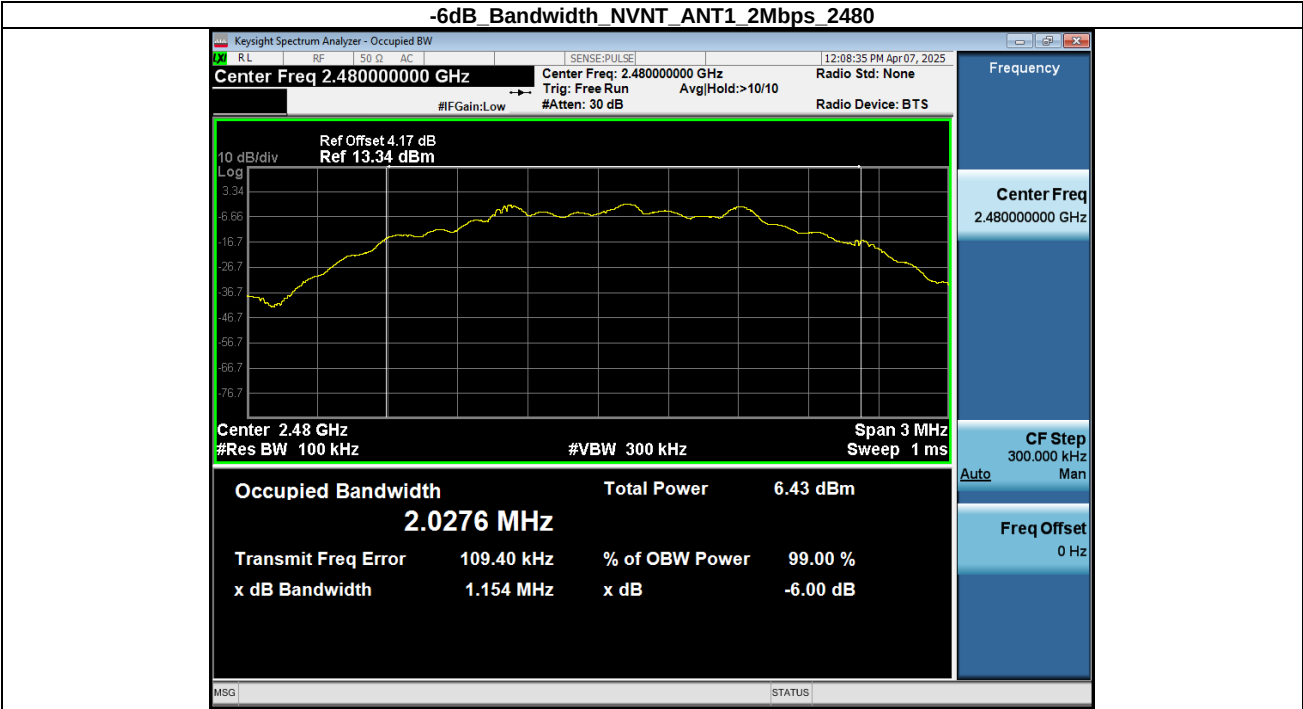
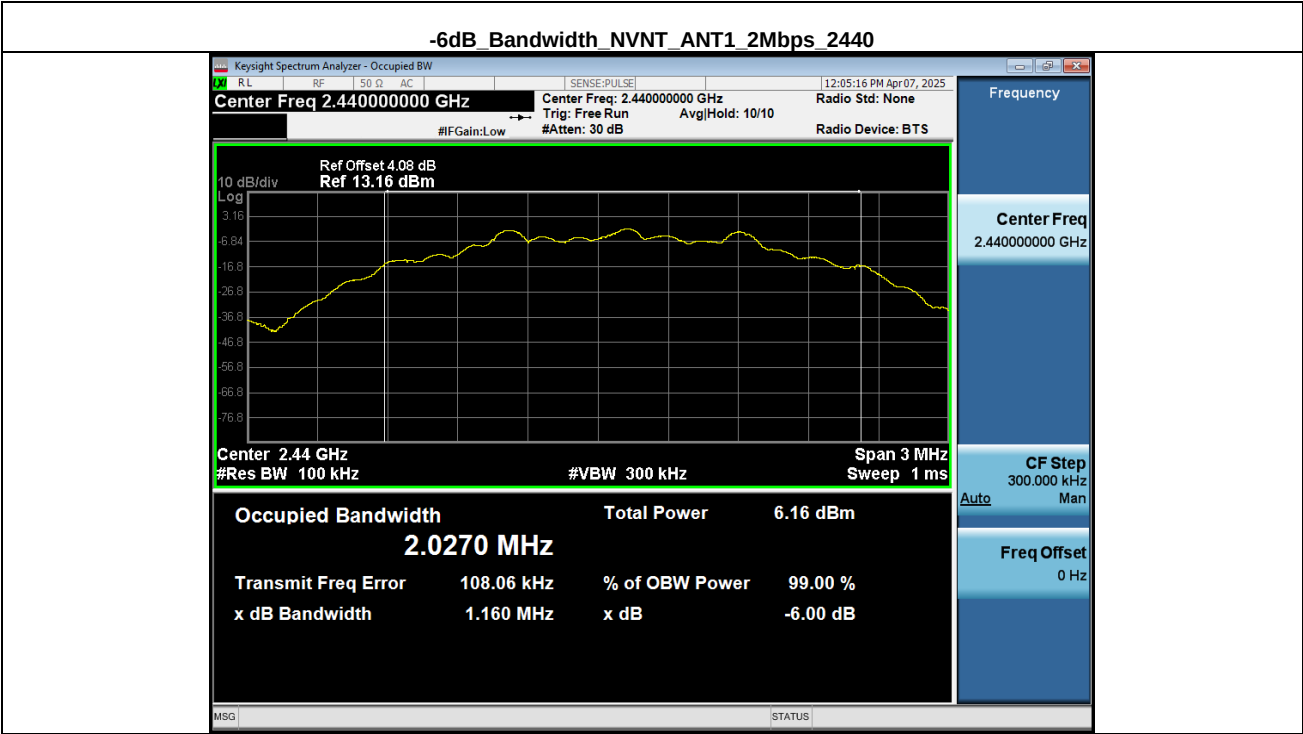
-6dB_Bandwidth_NVNT_ANT1_1Mbps_2402



-6dB_Bandwidth_NVNT_ANT1_1Mbps_2440

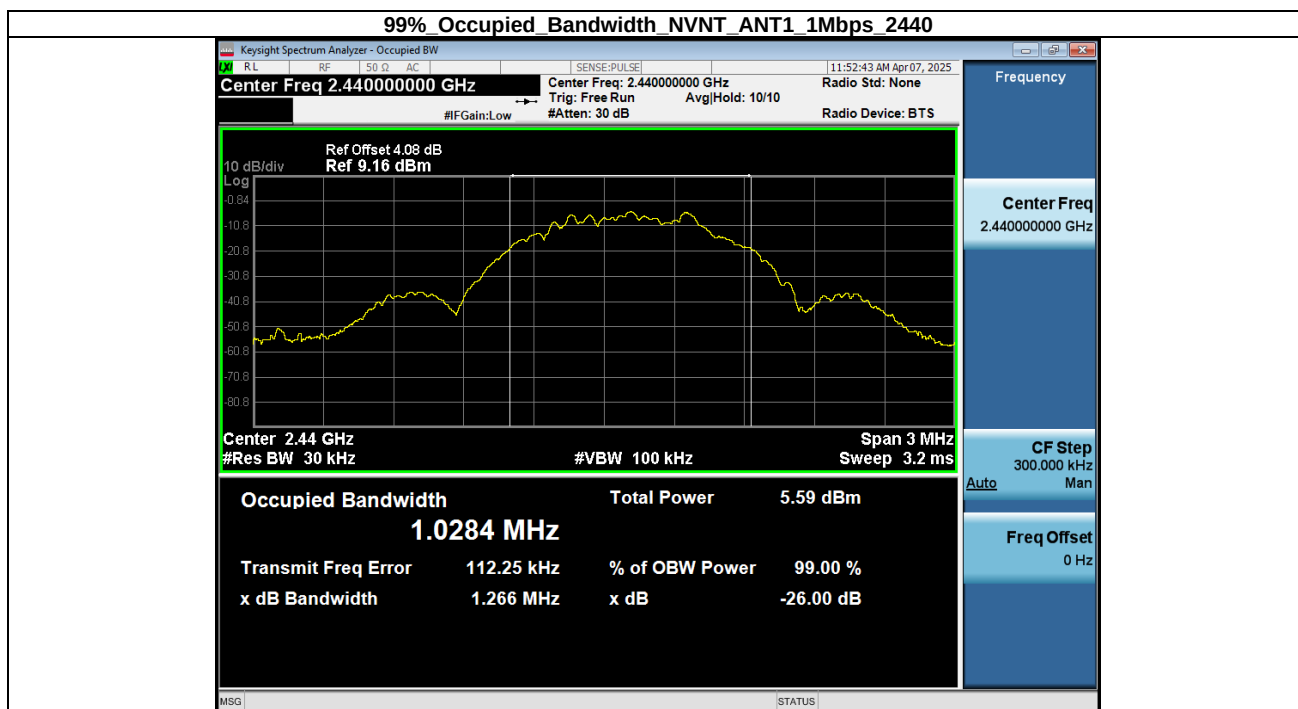
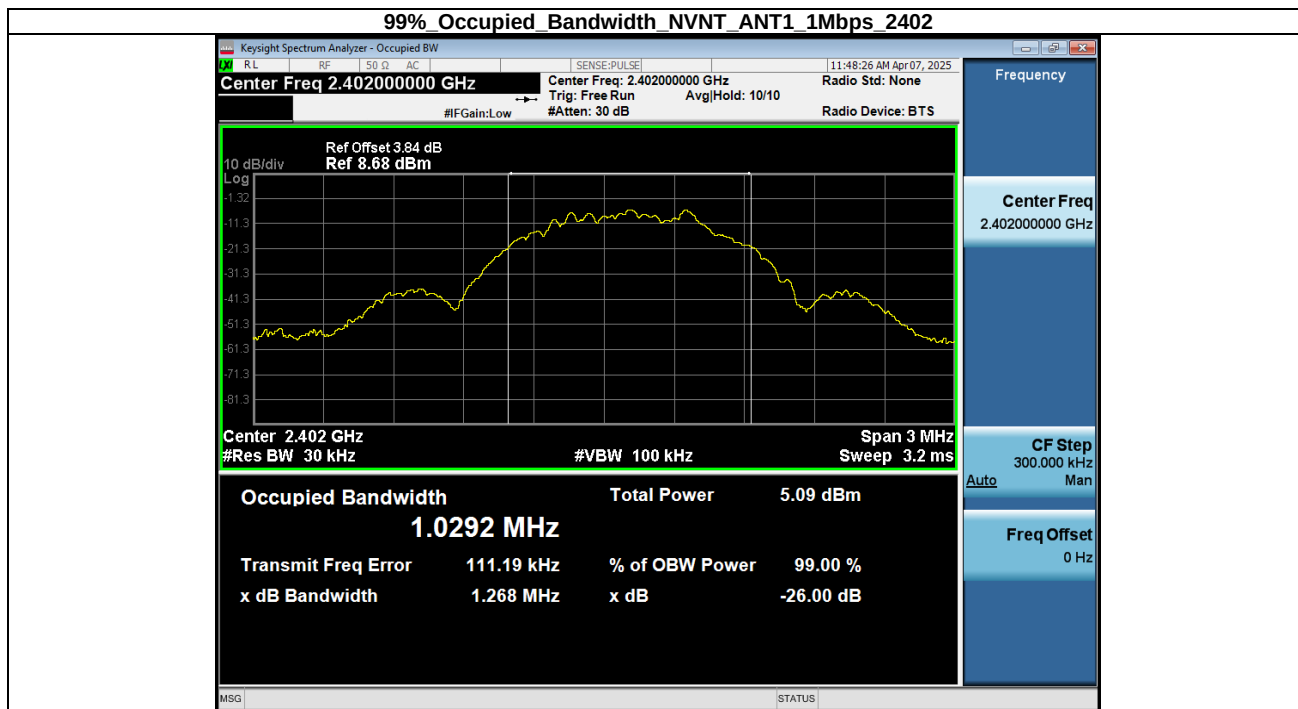


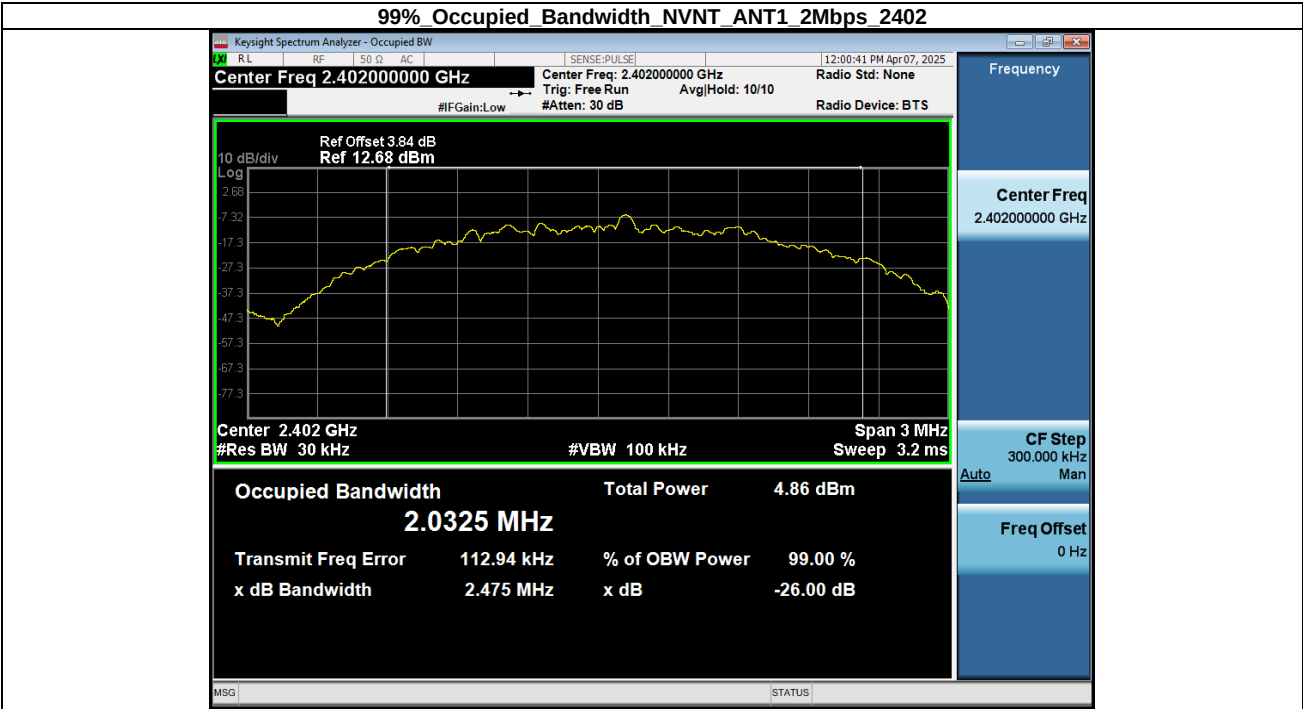
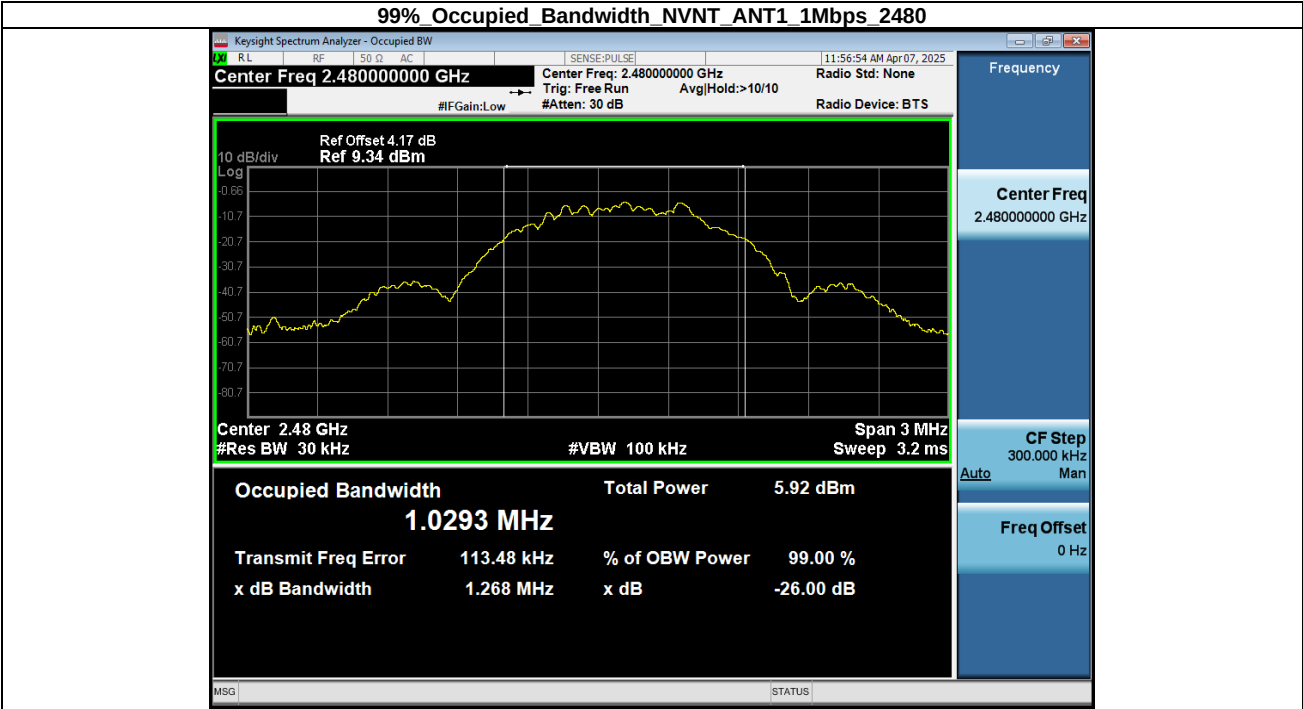


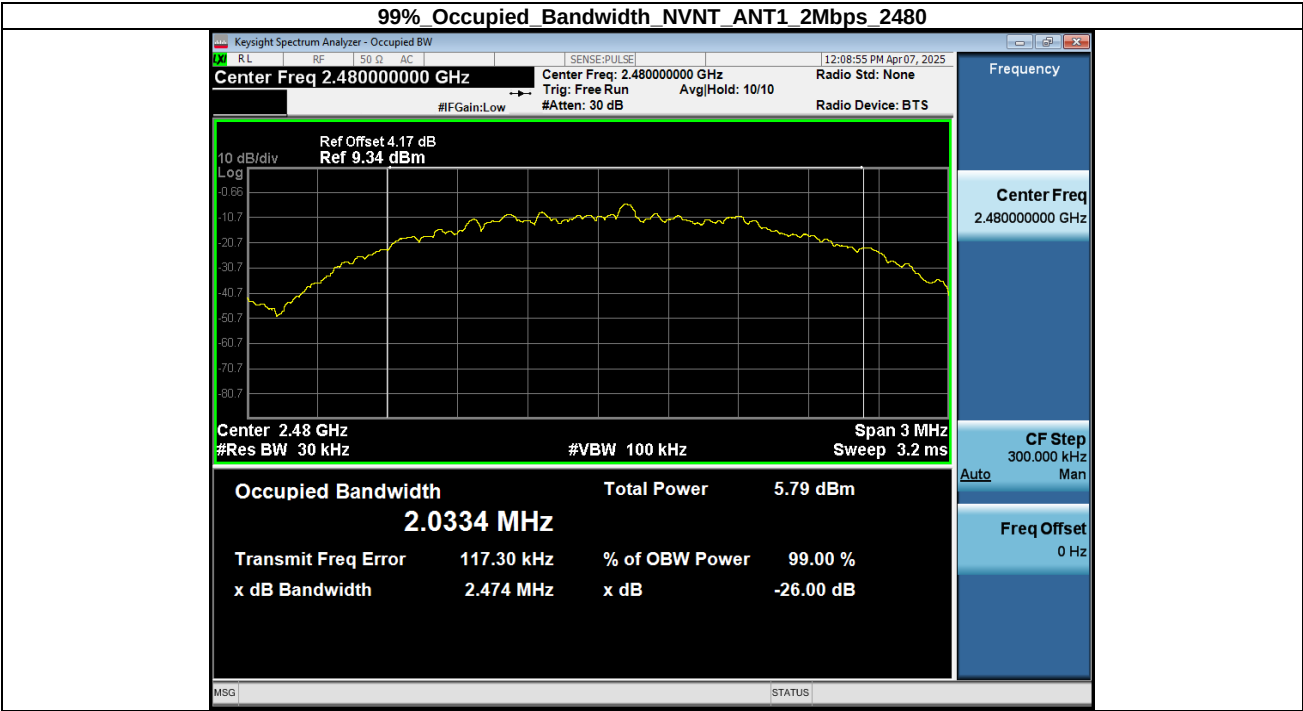
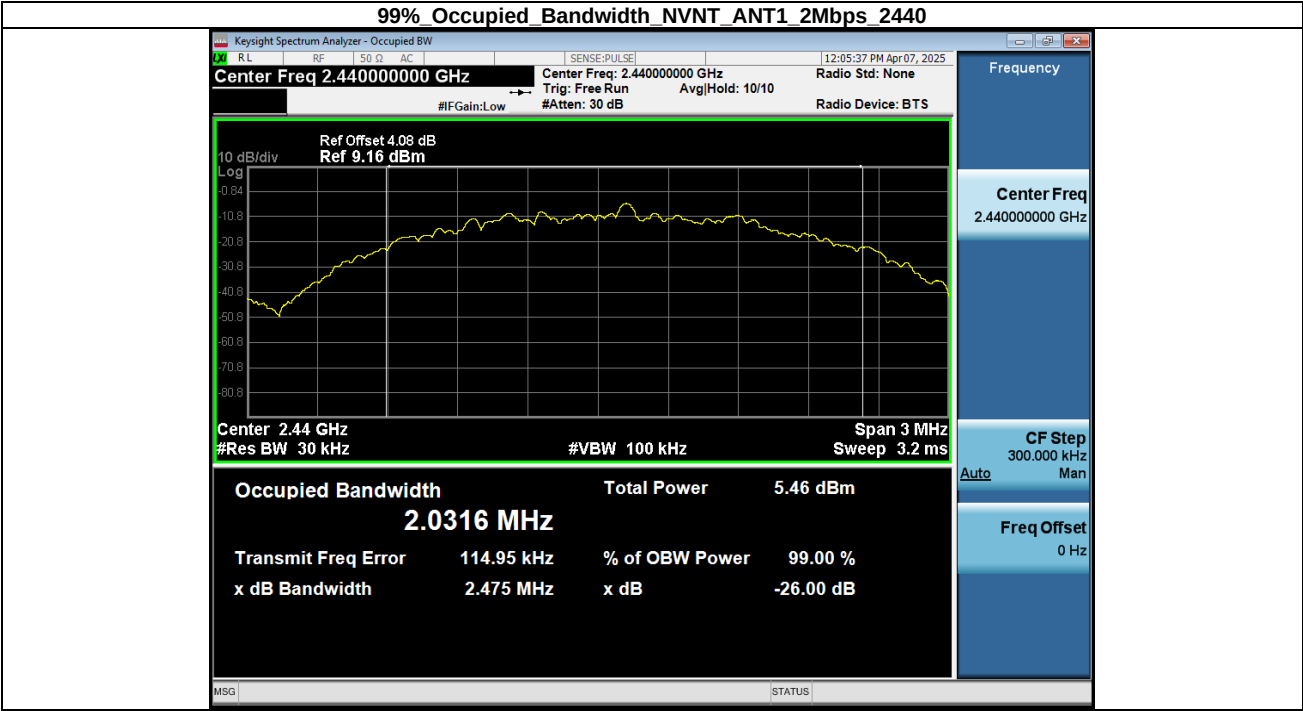


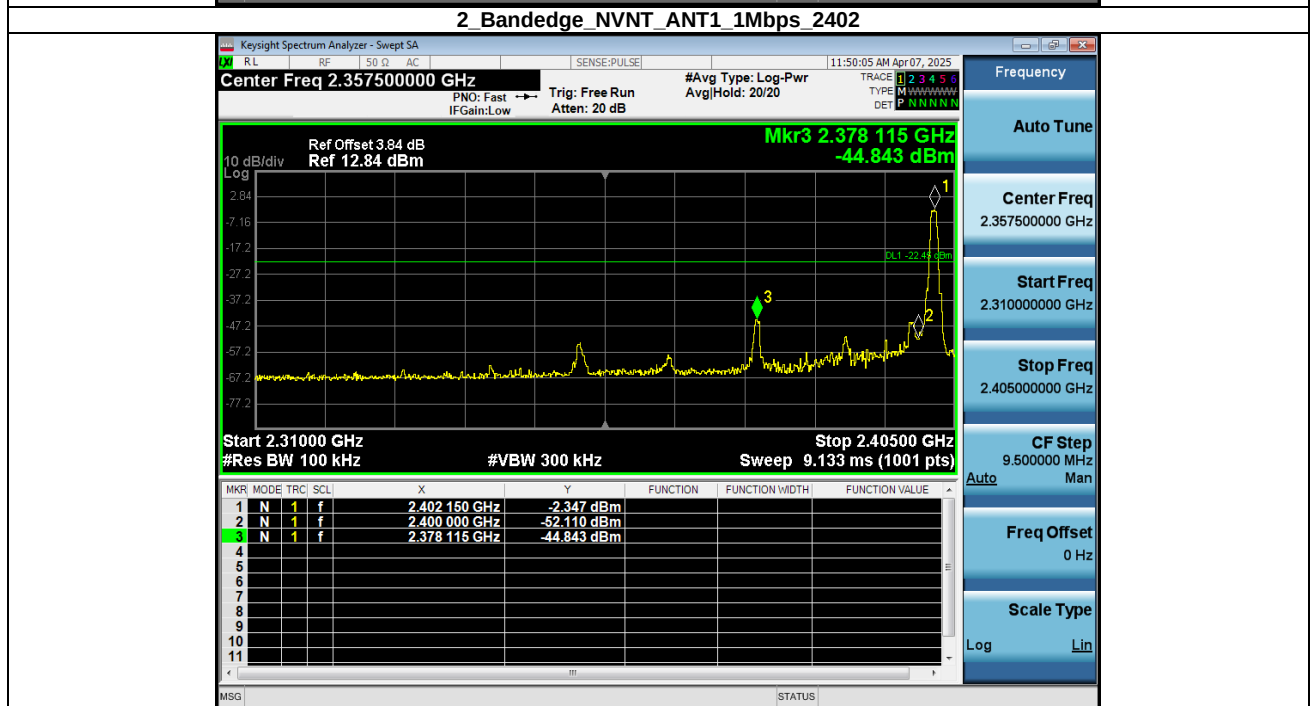
Appendix A.3: Test Results of 99% Bandwidth

Rate	Frequency (MHz)	99%BW(MHz)
1Mbps	2402.00	1.029
1Mbps	2440.00	1.028
1Mbps	2480.00	1.029
2Mbps	2402.00	2.033
2Mbps	2440.00	2.032
2Mbps	2480.00	2.033





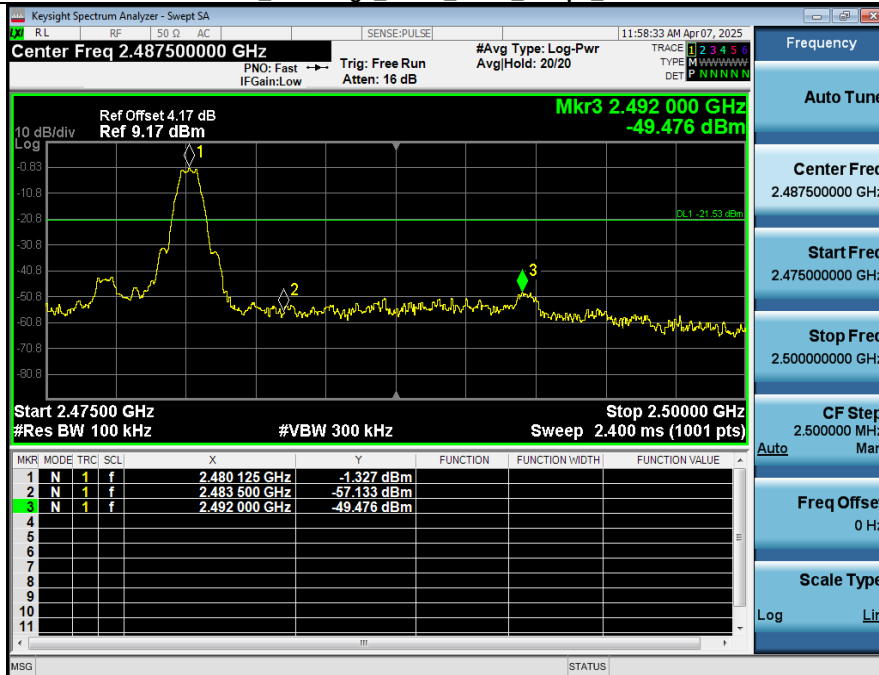




1 Reference Level NVNT ANT1 1Mbps 2480



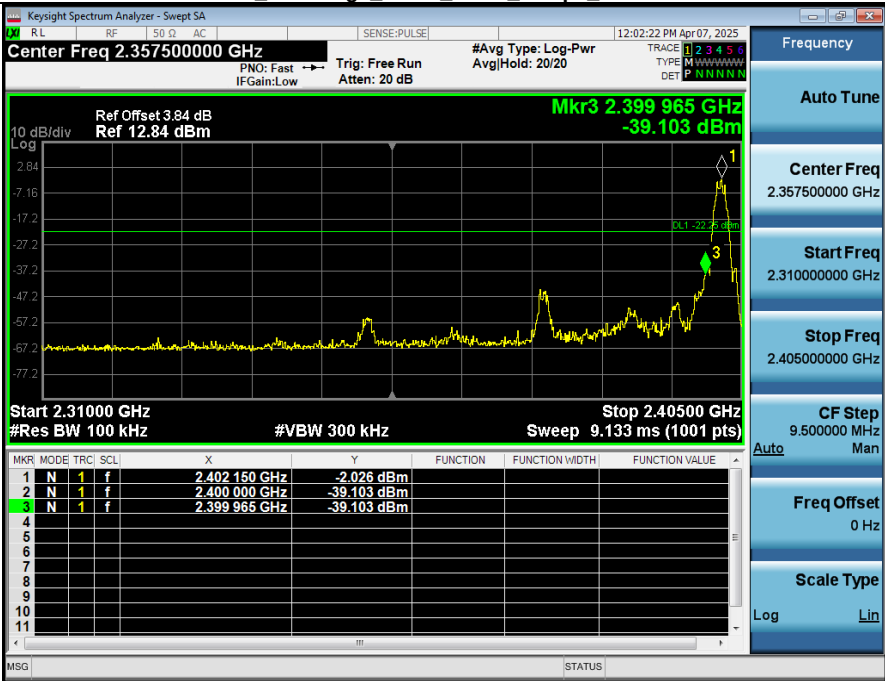
2 Bandedge NVNT ANT1 1Mbps 2480



1 Reference Level NVNT ANT1 2Mbps 2402



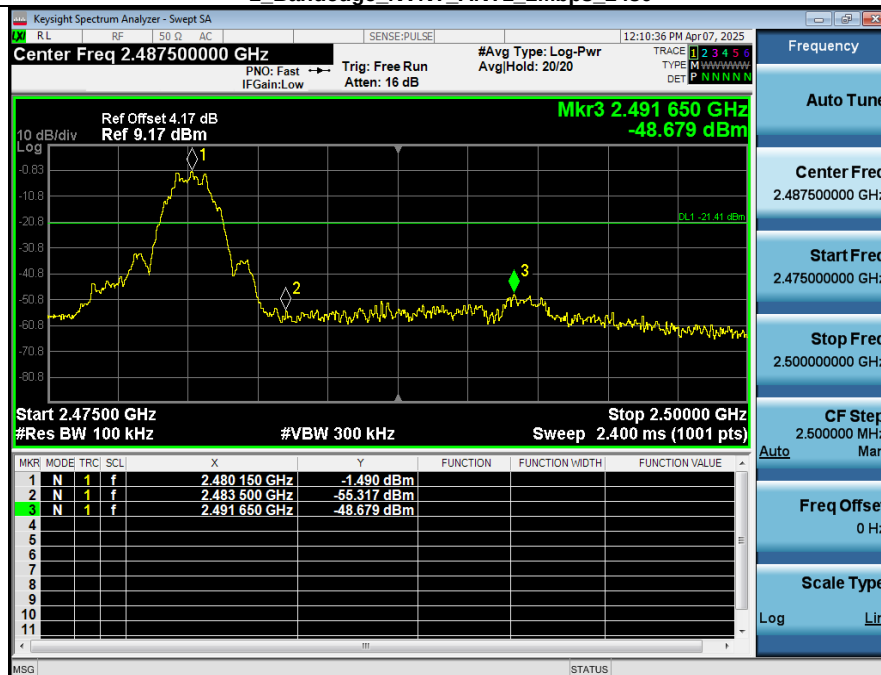
2 Bandedge NVNT ANT1 2Mbps 2402



1 Reference Level NVNT ANT1 2Mbps 2480



2 Bandedge NVNT ANT1 2Mbps 2480



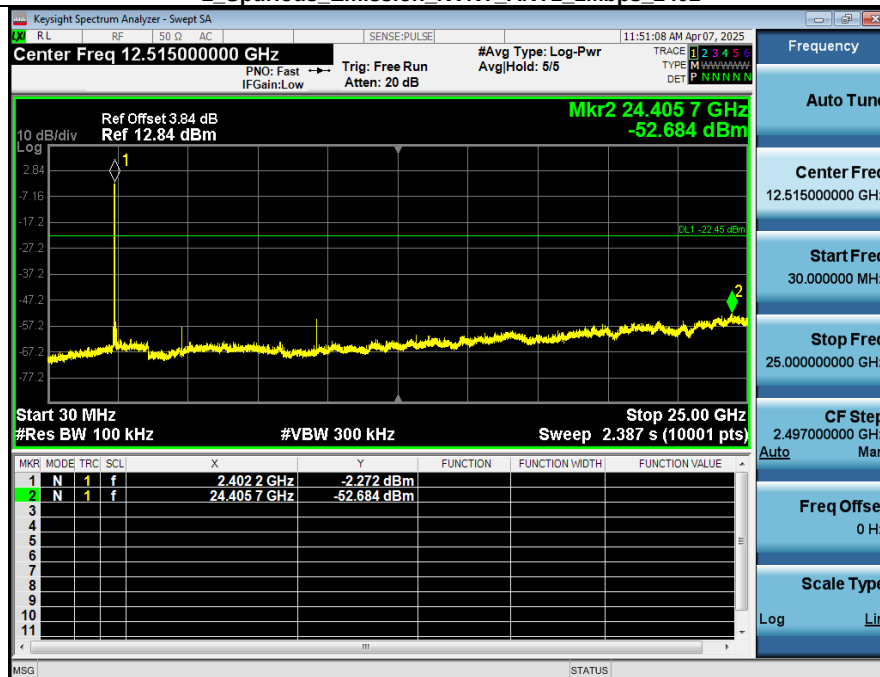
Conducted Spurious Emission

Modulation	TX Frequency (MHz)	Ref_level(dBm)	Spurious level(dBm)	limit(dBm)	Result
1Mbps	2402.00	-2.446	-52.684	-22.446	Pass
1Mbps	2440.00	-2.050	-52.373	-22.050	Pass
1Mbps	2480.00	-1.534	-46.309	-21.534	Pass
2Mbps	2402.00	-2.252	-52.351	-22.252	Pass
2Mbps	2440.00	-1.753	-53.252	-21.753	Pass
2Mbps	2480.00	-1.408	-39.192	-21.408	Pass

1 Reference Level NVNT_ANT1_1Mbps_2402



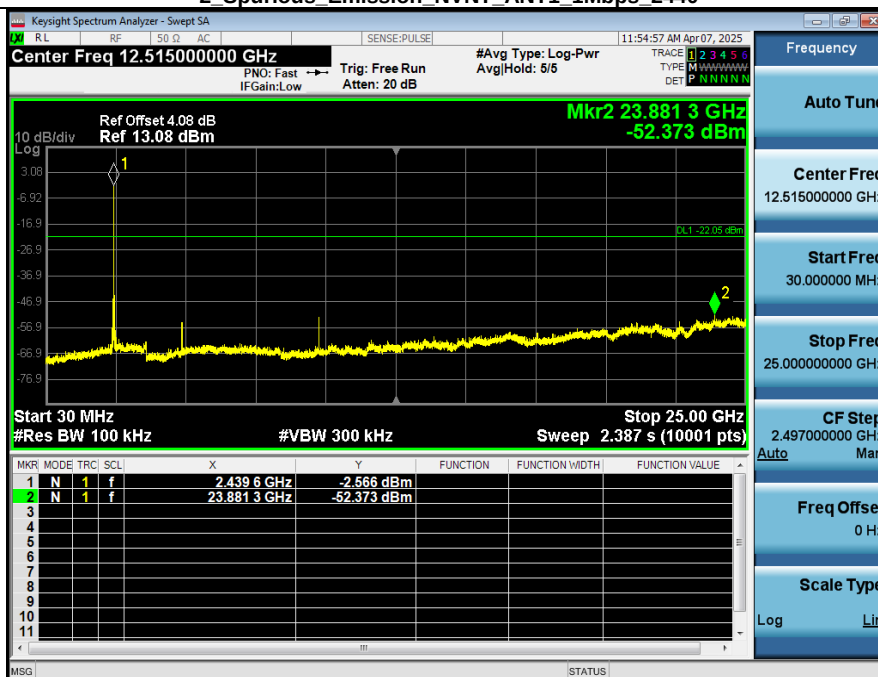
2 Spurious Emission NVNT_ANT1_1Mbps_2402



1	Reference	Level	NVNT	ANT1	1Mbps	2440
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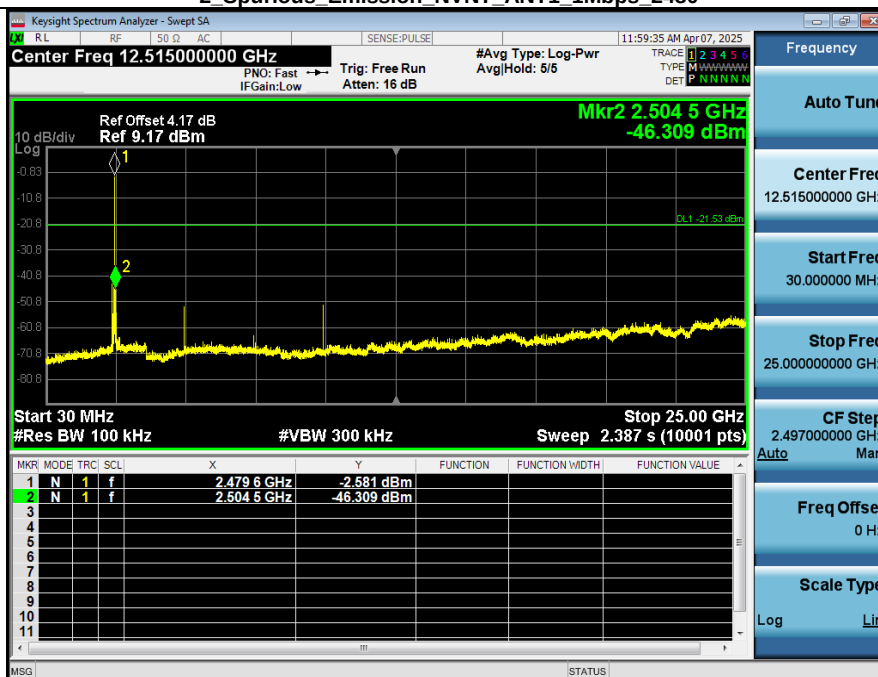
2 Spurious Emission NVNT ANT1 1Mbps 2440

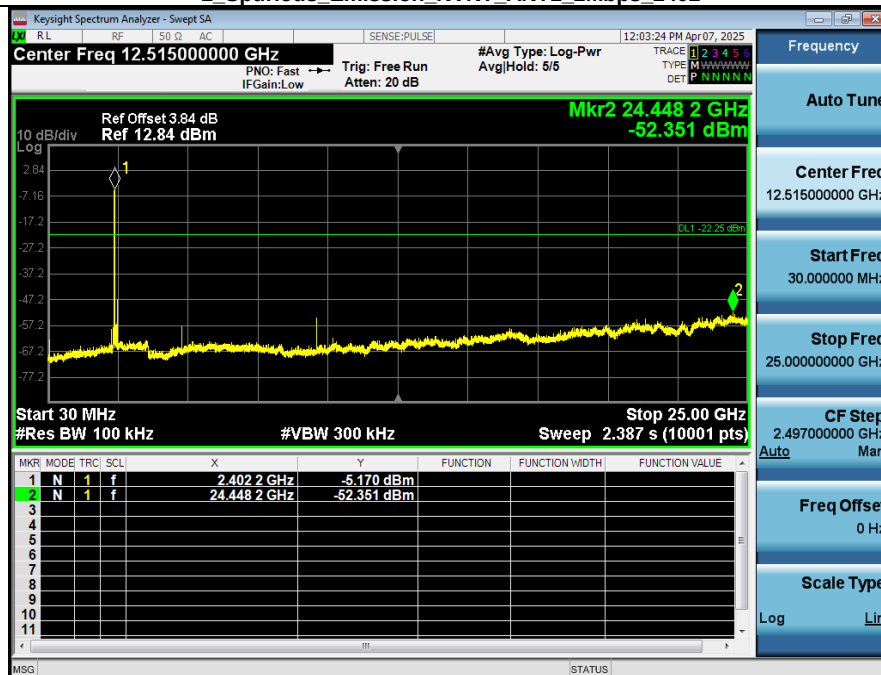


1	Reference	Level	NVNT	ANT1	1Mbps	2480
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2 Spurious Emission NVNT ANT1 1Mbps 2480

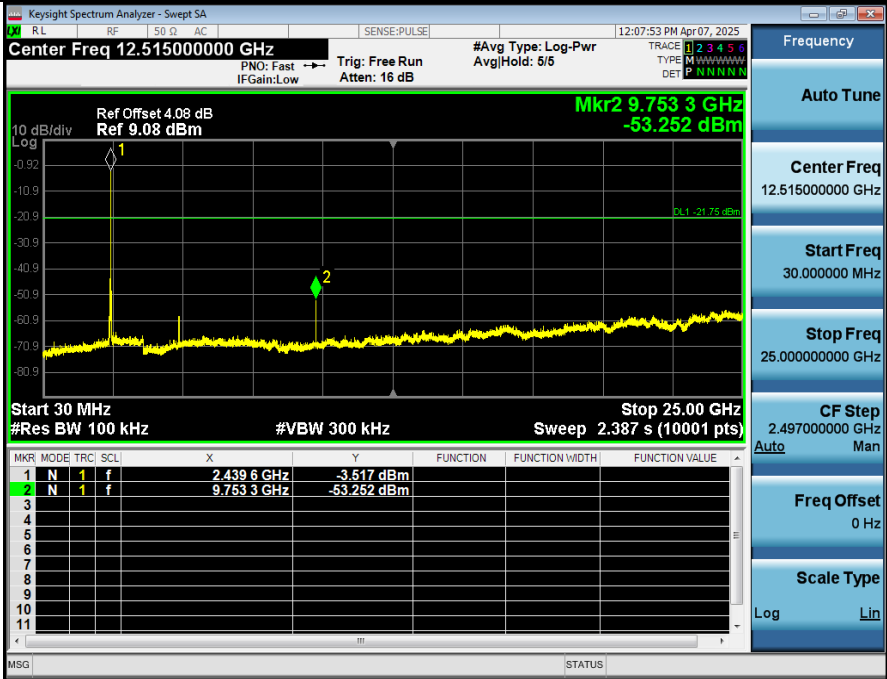




1 Reference Level NVNT ANT1 2Mbps 2440



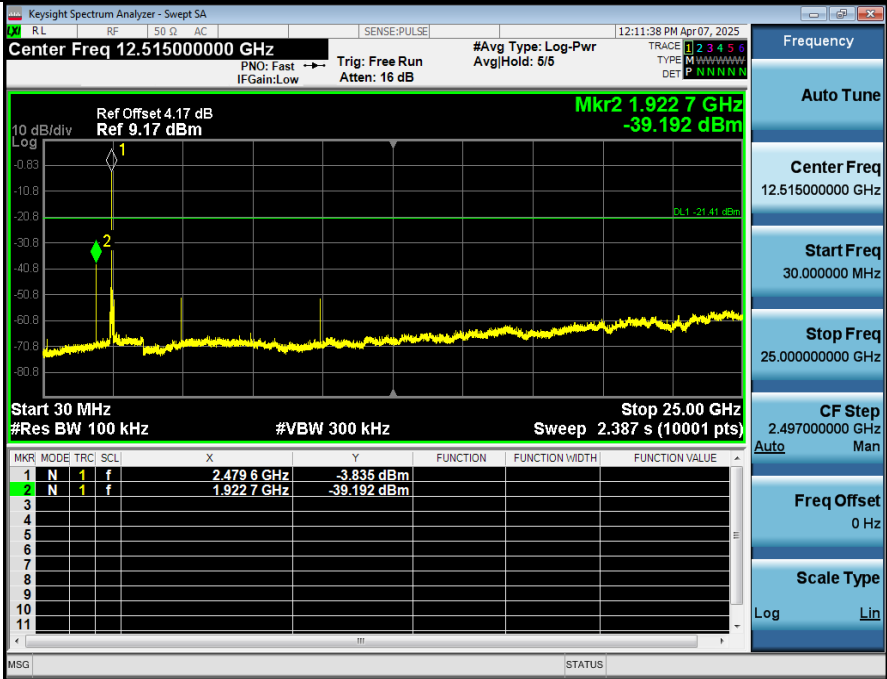
2 Spurious Emission NVNT ANT1 2Mbps 2440



1 Reference Level NVNT ANT1 2Mbps 2480



2 Spurious Emission NVNT ANT1 2Mbps 2480



Appendix A.5: Test Results of Radiated Spurious Emissions

Note:

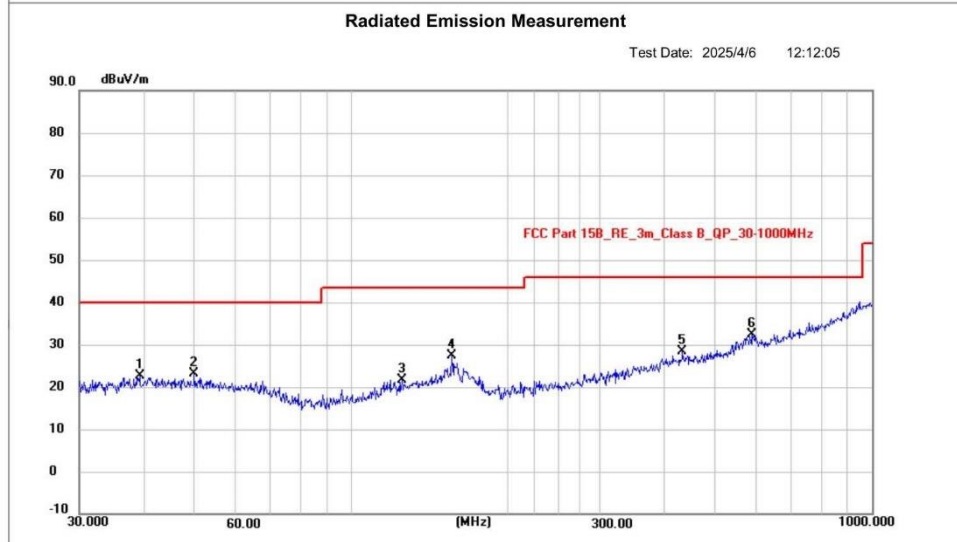
- 1) This testing was carried out on different modulations, but only the worst case was presented in this report.
- 2) Testing was carried out within frequency range 9kHz to the tenth harmonics. The measurement results below 30MHz and 18GHz - 26.5GHz were greater than 20dB below the limit, so only the radiated spurious emissions from 30MHz to 18GHz were reported.

30 MHz - 1GHz



Shenzhen PSI Testing Co., Ltd.
1-2F, Building 5, Yudafu Industrial Park, No. 10, Xingye West Road,
Shajing Street, Bao'an District, Shenzhen, Guangdong, China 518104

Test Site: PSI EMC Lab-3m Chamber	Polarization: Vertical	Temperature: 26 °C
EUT: Bluetooth module	Distance: 3m	Humidity: 54 %RH
M/N:	Test Engineer: Felix Pang	
Test Mode: LE 1M 2402MHz		
Test Voltage: DC 3.3V		
Note:		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	39.1616	8.13	14.45	22.58	40.00	-17.42	peak	100	124	P	
2	49.8814	8.87	14.15	23.02	40.00	-16.98	peak	100	247	P	
3	125.0066	8.72	12.89	21.61	43.50	-21.89	peak	100	106	P	
4	155.9101	13.23	14.26	27.49	43.50	-16.01	peak	100	207	P	
5	432.5457	9.84	18.52	28.36	46.00	-17.64	peak	100	225	P	
6 *	588.9051	9.90	22.58	32.48	46.00	-13.52	peak	100	98	P	

Note: *:Maximum data x:Over limit !:over margin Level = Reading + Factor Margin = Level - Limit



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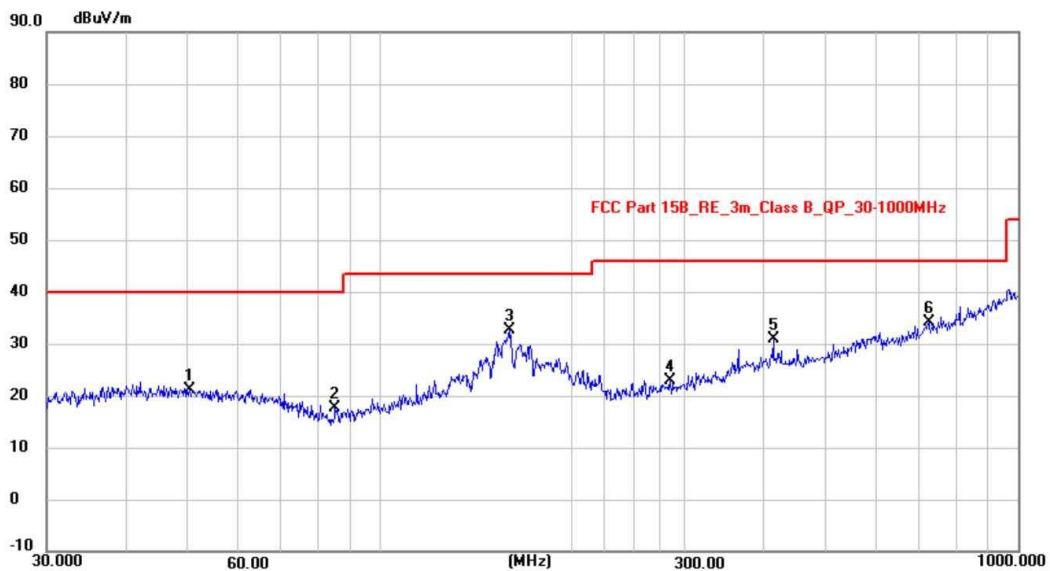
Test Site: PSI EMC Lab-3m Chamber
EUT: Bluetooth module
M/N:
Test Mode: LE 1M 2402MHz
Test Voltage: DC 3.3V
Note:

Polarization: **Horizontal**
Distance: 3m
Test Engineer: Felix Pang

Temperature: 26 °C
Humidity: 54 %RH

Radiated Emission Measurement

Test Date: 2025/4/6 12:08:30



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	50.2323	7.03	14.11	21.14	40.00	-18.86	peak	200	206	P	
2	84.9993	8.04	9.59	17.63	40.00	-22.37	peak	200	115	P	
3 *	159.2250	18.37	14.33	32.70	43.50	-10.80	peak	200	320	P	
4	284.9766	8.36	14.63	22.99	46.00	-23.01	peak	200	156	P	
5	413.2706	12.77	18.06	30.83	46.00	-15.17	peak	200	189	P	
6	724.2610	9.20	24.96	34.16	46.00	-11.84	peak	200	208	P	

Note: *:Maximum data x:Over limit !:over margin Level = Reading + Factor Margin = Level - Limit

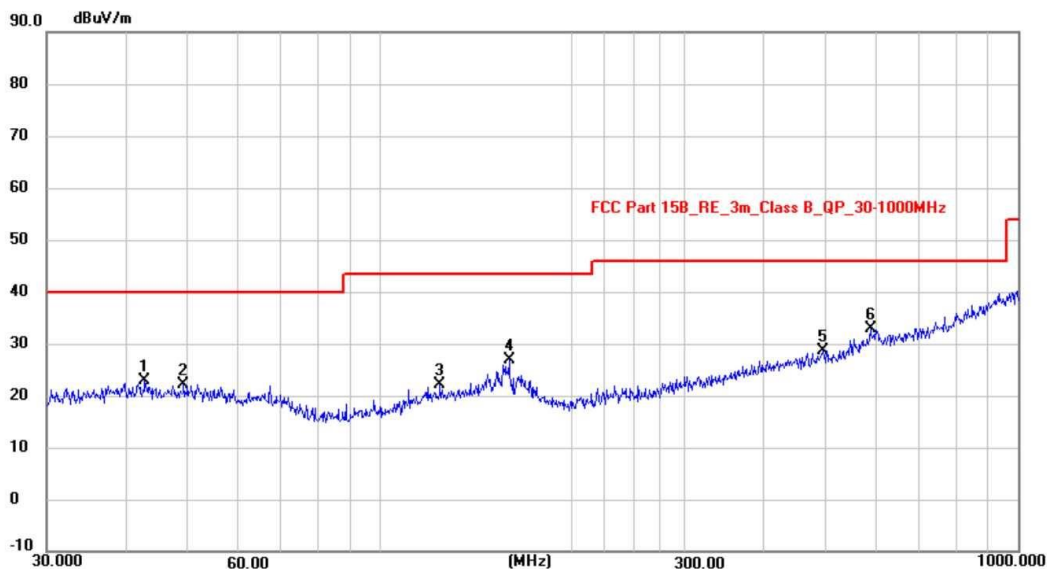


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Shajing Street, Bao'an District, Shenzhen, Guangdong, China 518104

Test Site: PSI EMC Lab-3m Chamber	Polarization: Vertical	Temperature: 26 °C
EUT: Bluetooth module	Distance: 3m	Humidity: 54 %RH
M/N:	Test Engineer: Felix Pang	
Test Mode: LE 1M 2440MHz		
Test Voltage: DC 3.3V		
Note:		

Radiated Emission Measurement

Test Date: 2025/4/6 12:15:24



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	42.7496	8.32	14.45	22.77	40.00	-17.23	peak	100	78	P	
2	49.1865	8.05	14.18	22.23	40.00	-17.77	peak	100	154	P	
3	124.1330	9.33	12.83	22.16	43.50	-21.34	peak	100	265	P	
4	159.2251	12.55	14.33	26.88	43.50	-16.62	peak	100	214	P	
5	494.1984	8.68	20.01	28.69	46.00	-17.31	peak	100	207	P	
6 *	586.8437	10.42	22.53	32.95	46.00	-13.05	peak	100	108	P	

Note: *:Maximum data x:Over limit !:over margin Level = Reading + Factor Margin = Level - Limit

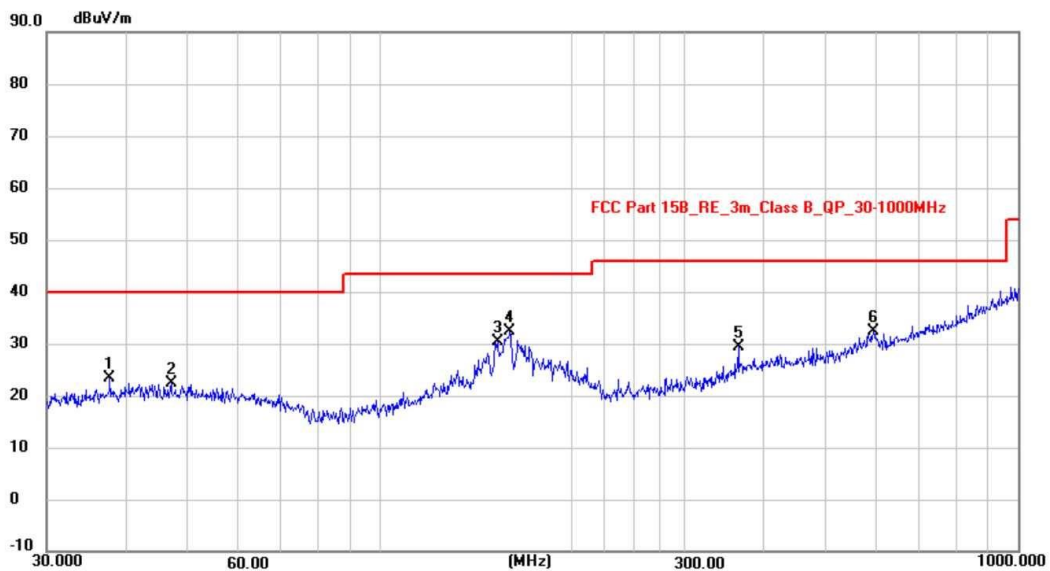


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Test Site: PSI EMC Lab-3m Chamber Polarization: **Horizontal** Temperature: 26 °C
EUT: Bluetooth module Distance: 3m Humidity: 54 %RH
M/N: Test Engineer: Felix Pang
Test Mode: LE 1M 2440MHz
Test Voltage: DC 3.3V
Note:

Radiated Emission Measurement

Test Date: 2025/4/6 12:18:49



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	37.6798	9.03	14.23	23.26	40.00	-16.74	peak	200	21	P	
2	46.9948	8.09	14.27	22.36	40.00	-17.64	peak	200	54	P	
3	152.6641	16.22	14.18	30.40	43.50	-13.10	peak	200	215	P	
4 *	159.7844	18.04	14.35	32.39	43.50	-11.11	peak	200	124	P	
5	364.2595	12.70	16.72	29.42	46.00	-16.58	peak	200	324	P	
6	593.0497	9.68	22.70	32.38	46.00	-13.62	peak	200	214	P	

Note: *:Maximum data x:Over limit !:over margin Level = Reading + Factor Margin = Level - Limit

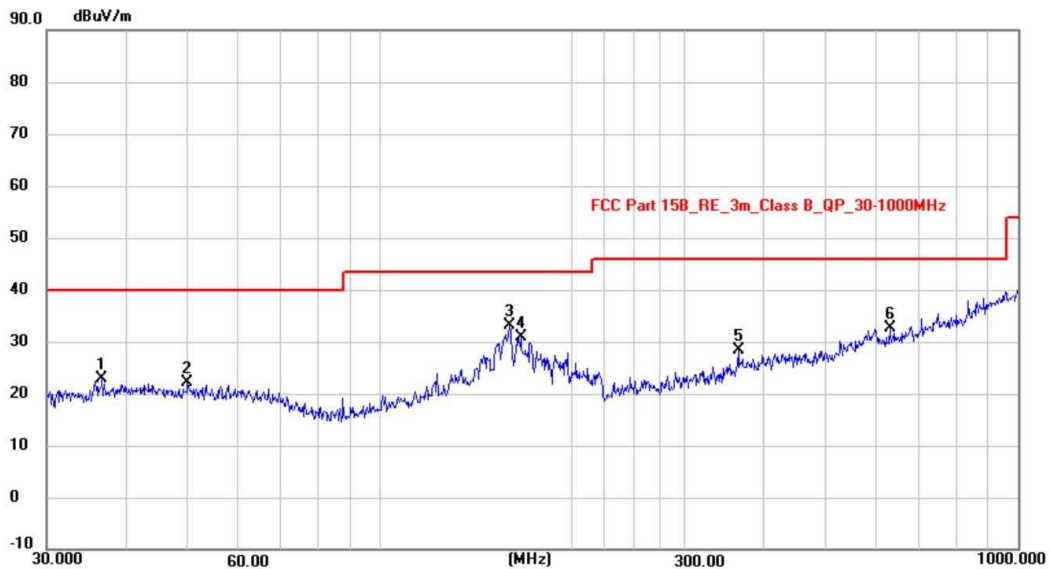


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Shajing Street, Bao'an District, Shenzhen, Guangdong, China 518104

Test Site: PSI EMC Lab-3m Chamber	Polarization: Horizontal	Temperature: 26 °C
EUT: Bluetooth module	Distance: 3m	Humidity: 54 %RH
M/N:	Test Engineer: Felix Pang	
Test Mode: LE 1M 2480MHz		
Test Voltage: DC 3.3V		
Note:		

Radiated Emission Measurement

Test Date: 2025/4/6 12:21:12



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	36.6375	8.76	14.08	22.84	40.00	-17.16	peak	200	254	P	
2	49.8814	8.05	14.15	22.20	40.00	-17.80	peak	200	126	P	
3 *	159.7844	18.66	14.35	33.01	43.50	-10.49	peak	200	217	P	
4	166.0680	17.04	13.76	30.80	43.50	-12.70	peak	200	105	P	
5	364.2595	11.71	16.72	28.43	46.00	-17.57	peak	200	304	P	
6	629.4772	9.32	23.36	32.68	46.00	-13.32	peak	200	57	P	

Note: *:Maximum data x:Over limit !:over margin Level = Reading + Factor Margin = Level - Limit

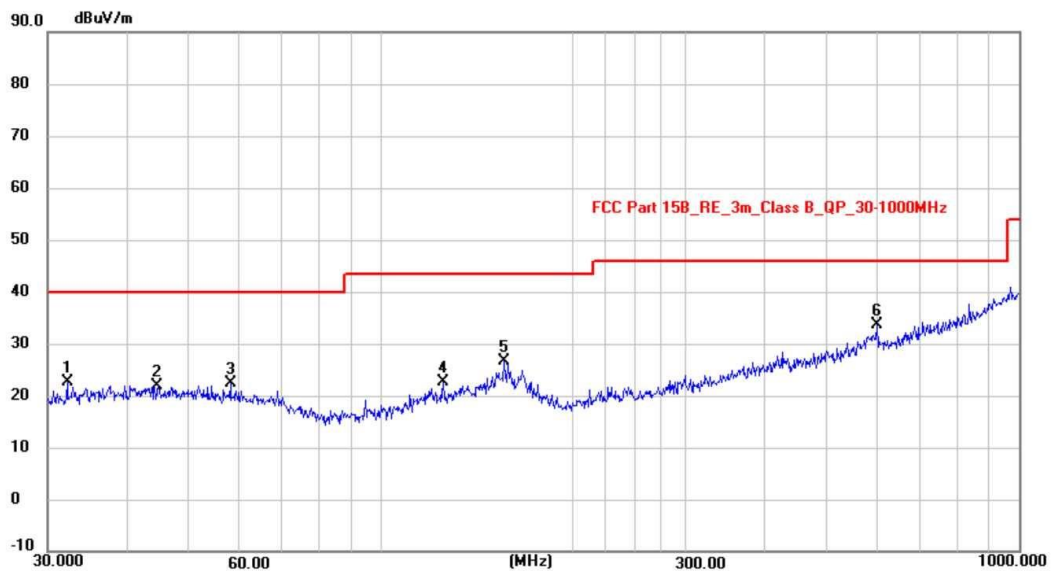


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Shajing Street, Bao'an District, Shenzhen, Guangdong, China 518104

Test Site: PSI EMC Lab-3m Chamber Polarization: **Vertical** Temperature: 26 °C
EUT: Bluetooth module Distance: 3m Humidity: 54 %RH
M/N: Test Engineer: Felix Pang
Test Mode: LE 1M 2480MHz
Test Voltage: DC 3.3V
Note:

Radiated Emission Measurement

Test Date: 2025/4/6 12:23:43



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	32.1795	9.28	13.37	22.65	40.00	-17.35	peak	100	45	P	
2	44.7433	7.49	14.37	21.86	40.00	-18.14	peak	100	127	P	
3	57.9993	9.13	13.32	22.45	40.00	-17.55	peak	100	42	P	
4	125.0066	9.73	12.89	22.62	43.50	-20.88	peak	100	205	P	
5	155.9101	12.33	14.26	26.59	43.50	-16.91	peak	100	308	P	
6 *	599.3212	10.87	22.86	33.73	46.00	-12.27	peak	100	336	P	

Note: *:Maximum data x:Over limit !:over margin Level = Reading + Factor Margin = Level - Limit



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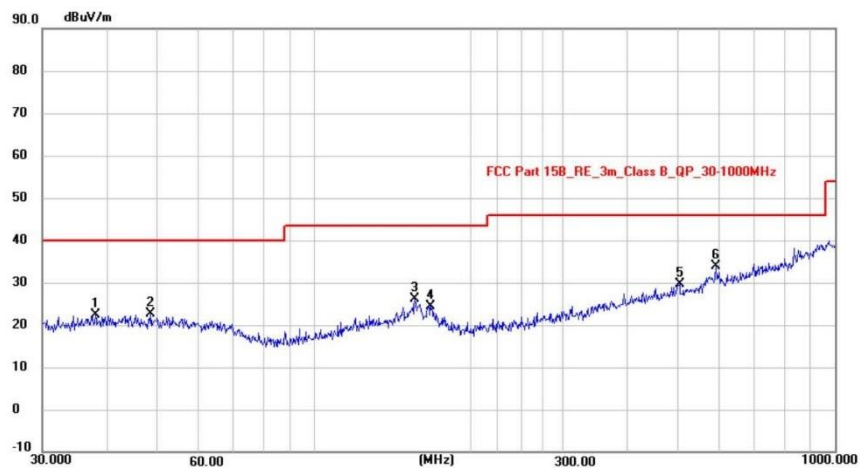
Test Site: PSI EMC Lab-3m Chamber
EUT: Bluetooth module
M/N:
Test Mode: LE 2M 2402MHz
Test Voltage: DC 3.3V
Note:

Polarization: **Vertical**
Distance: 3m
Test Engineer: Felix Pang

Temperature: 26 °C
Humidity: 54 %RH

Radiated Emission Measurement

Test Date: 2025/4/6 12:26:08



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	37.9450	8.16	14.27	22.43	40.00	-17.57	peak	100	125	P	
2	48.5016	8.32	14.20	22.52	40.00	-17.48	peak	100	214	P	
3	155.9101	11.94	14.26	26.20	43.50	-17.30	peak	100	59	P	
4	167.2368	10.78	13.65	24.43	43.50	-19.07	peak	100	78	P	
5	502.9395	9.51	20.24	29.75	46.00	-16.25	peak	100	302	P	
6 *	590.9737	11.16	22.64	33.80	46.00	-12.20	peak	100	154	P	

Note: *:Maximum data x:Over limit !:over margin Level = Reading + Factor Margin = Level - Limit

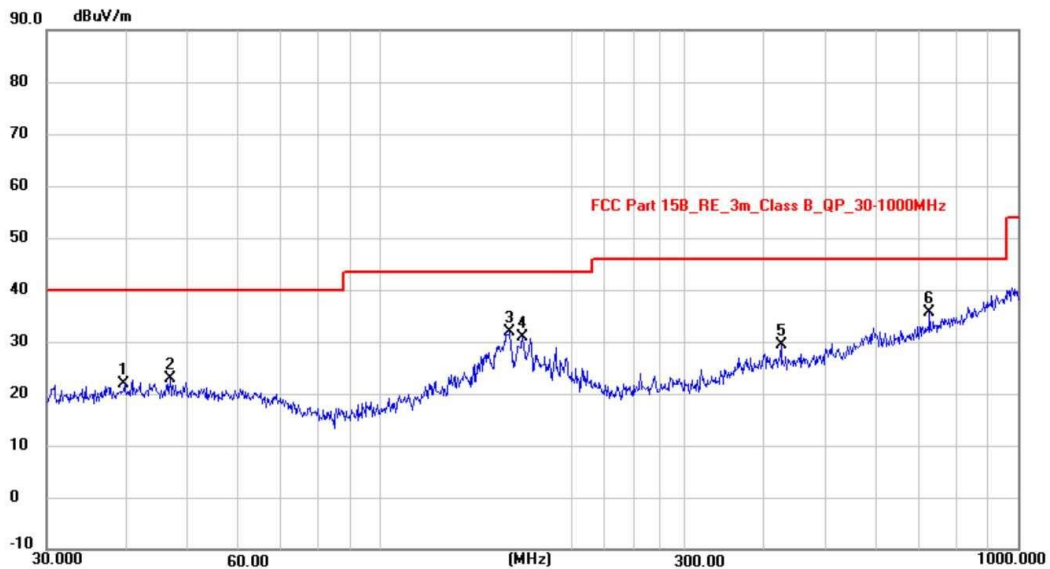


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Shajing Street, Bao'an District, Shenzhen, Guangdong, China 518104

Test Site: PSI EMC Lab-3m Chamber	Polarization: Horizontal	Temperature: 26 °C
EUT: Bluetooth module	Distance: 3m	Humidity: 54 %RH
M/N:	Test Engineer: Felix Pang	
Test Mode: LE 2M 2402MHz		
Test Voltage: DC 3.3V		
Note:		

Radiated Emission Measurement

Test Date: 2025/4/6 12:29:56



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	39.7146	7.35	14.53	21.88	40.00	-18.12	peak	200	210	P	
2	46.8303	8.60	14.28	22.88	40.00	-17.12	peak	200	124	P	
3	159.7844	17.53	14.35	31.88	43.50	-11.62	peak	200	257	P	
4	167.2368	17.14	13.65	30.79	43.50	-12.71	peak	200	59	P	
5	425.0280	11.04	18.34	29.38	46.00	-16.62	peak	200	68	P	
6 *	726.8052	10.67	25.01	35.68	46.00	-10.32	peak	200	201	P	

Note: *:Maximum data x:Over limit !:over margin Level = Reading + Factor Margin = Level - Limit

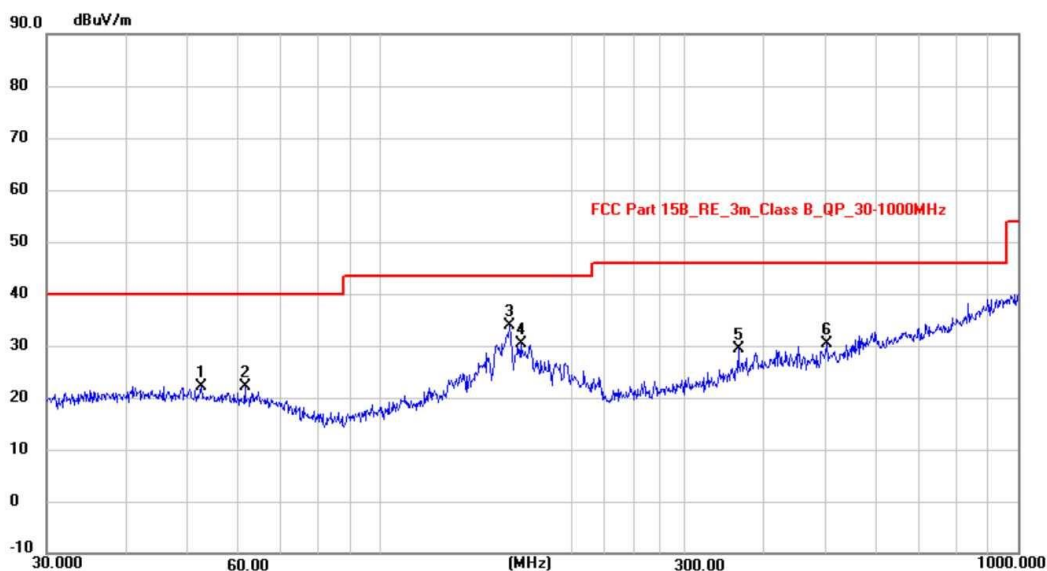


Shenzhen PSI Testing Co., Ltd.
1-2F, Building 5, Yudafu Industrial Park, No. 10, Xingye West Road,
Shajing Street, Bao'an District, Shenzhen, Guangdong, China 518104

Test Site: PSI EMC Lab-3m Chamber	Polarization: Horizontal	Temperature: 26 °C
EUT: Bluetooth module	Distance: 3m	Humidity: 54 %RH
M/N:	Test Engineer: Felix Pang	
Test Mode: LE 2M 2440MHz		
Test Voltage: DC 3.3V		
Note:		

Radiated Emission Measurement

Test Date: 2025/4/6 12:32:17



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	52.3912	8.24	13.90	22.14	40.00	-17.86	peak	200	201	P	
2	61.3463	9.26	12.97	22.23	40.00	-17.77	peak	200	154	P	
3 *	159.2251	19.44	14.33	33.77	43.50	-9.73	peak	200	230	P	
4	166.0680	16.53	13.76	30.29	43.50	-13.21	peak	200	215	P	
5	364.2595	12.73	16.72	29.45	46.00	-16.55	peak	200	36	P	
6	501.1790	10.31	20.19	30.50	46.00	-15.50	peak	200	98	P	

Note: *:Maximum data x:Over limit !:over margin Level = Reading + Factor Margin = Level - Limit

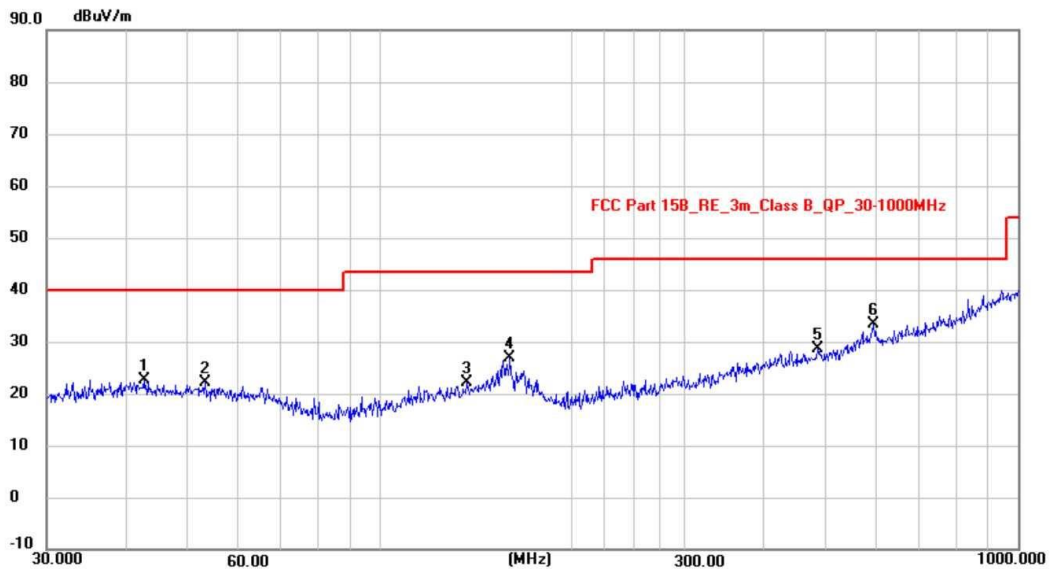


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Shajing Street, Bao'an District, Shenzhen, Guangdong, China 518104

Test Site: PSI EMC Lab-3m Chamber	Polarization: Vertical	Temperature: 26 °C
EUT: Bluetooth module	Distance: 3m	Humidity: 54 %RH
M/N:	Test Engineer: Felix Pang	
Test Mode: LE 2M 2440MHz		
Test Voltage: DC 3.3V		
Note:		

Radiated Emission Measurement

Test Date: 2025/4/6 12:35:55



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	42.6000	8.19	14.46	22.65	40.00	-17.35	peak	100	15	P	
2	53.1313	8.42	13.83	22.25	40.00	-17.75	peak	100	47	P	
3	136.9391	8.38	13.69	22.07	43.50	-21.43	peak	100	58	P	
4	159.7844	12.65	14.35	27.00	43.50	-16.50	peak	100	201	P	
5	485.6093	8.73	19.81	28.54	46.00	-17.46	peak	100	125	P	
6 *	593.0497	10.71	22.70	33.41	46.00	-12.59	peak	100	335	P	

Note: *:Maximum data x:Over limit !:over margin Level = Reading + Factor Margin = Level - Limit

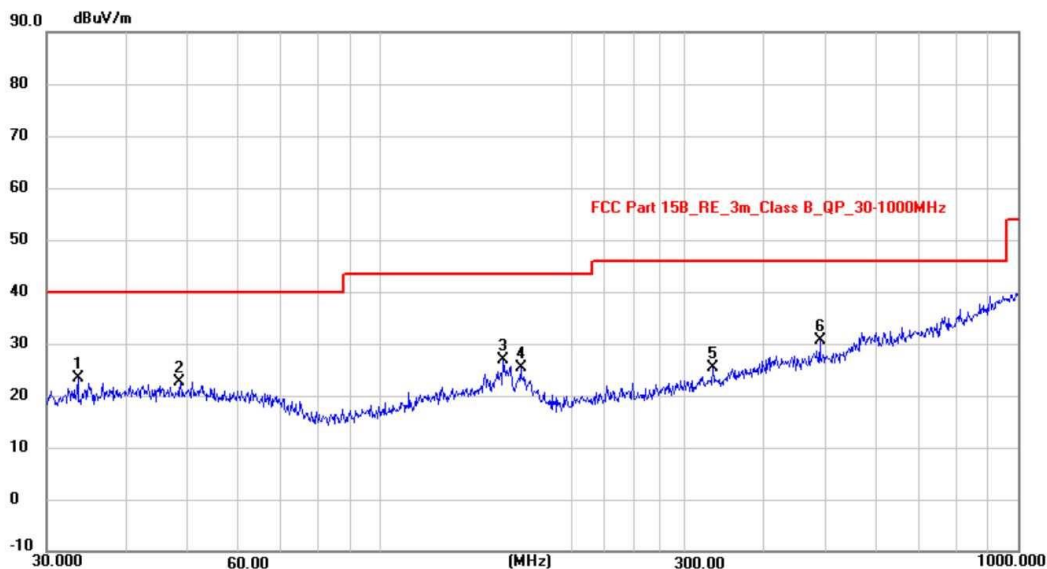


Shenzhen PSI Testing Co., Ltd.
1-2F, Building 5, Yudafu Industrial Park, No. 10, Xingye West Road,
Shajing Street, Bao'an District, Shenzhen, Guangdong, China 518104

Test Site: PSI EMC Lab-3m Chamber	Polarization: Vertical	Temperature: 26 °C
EUT: Bluetooth module	Distance: 3m	Humidity: 54 %RH
M/N:	Test Engineer: Felix Pang	
Test Mode: LE 2M 2480MHz		
Test Voltage: DC 3.3V		
Note:		

Radiated Emission Measurement

Test Date: 2025/4/6 12:39:15



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	33.5624	9.82	13.60	23.42	40.00	-16.58	peak	100	159	P	
2	48.6719	8.35	14.20	22.55	40.00	-17.45	peak	100	68	P	
3	155.9101	12.67	14.26	26.93	43.50	-16.57	peak	100	45	P	
4	166.0680	11.71	13.76	25.47	43.50	-18.03	peak	100	201	P	
5	332.5187	9.66	15.82	25.48	46.00	-20.52	peak	100	305	P	
6 *	489.0269	10.84	19.89	30.73	46.00	-15.27	peak	100	62	P	

Note: *:Maximum data x:Over limit !:over margin Level = Reading + Factor Margin = Level - Limit



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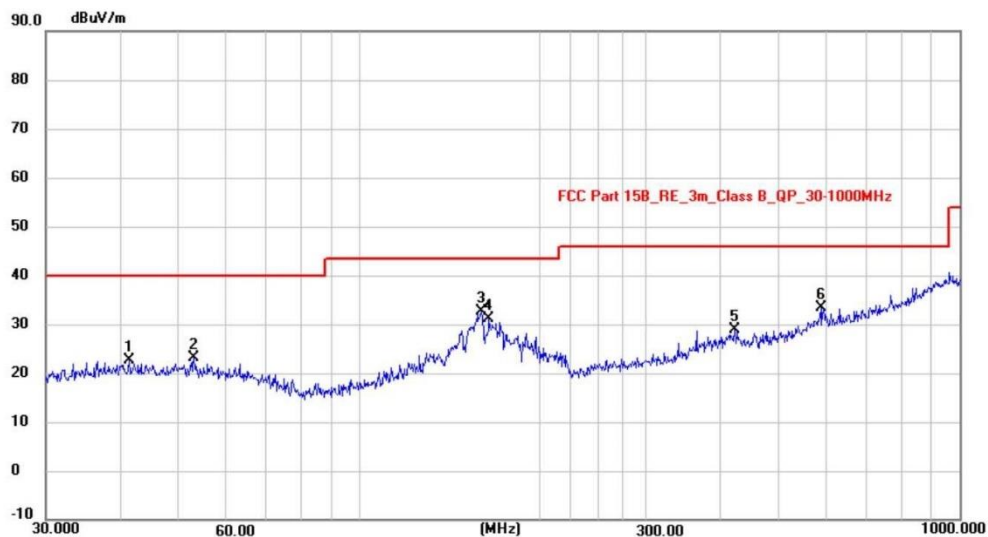
Test Site: PSI EMC Lab-3m Chamber
EUT: Bluetooth module
M/N:
Test Mode: LE 2M 2480MHz
Test Voltage: DC 3.3V
Note:

Polarization: **Horizontal**
Distance: 3m
Test Engineer: Felix Pang

Temperature: 26 °C
Humidity: 54 %RH

Radiated Emission Measurement

Test Date: 2025/4/6 12:42:44



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	41.2765	8.15	14.52	22.67	40.00	-17.33	peak	200	215	P	
2	52.9453	9.38	13.84	23.22	40.00	-16.78	peak	200	58	P	
3 *	159.2251	18.41	14.33	32.74	43.50	-10.76	peak	200	69	P	
4	164.3301	17.18	13.93	31.11	43.50	-12.39	peak	200	320	P	
5	422.0577	10.74	18.26	29.00	46.00	-17.00	peak	200	157	P	
6	586.8437	10.87	22.53	33.40	46.00	-12.60	peak	200	42	P	

Note: *:Maximum data x:Over limit !:over margin Level = Reading + Factor Margin = Level - Limit