

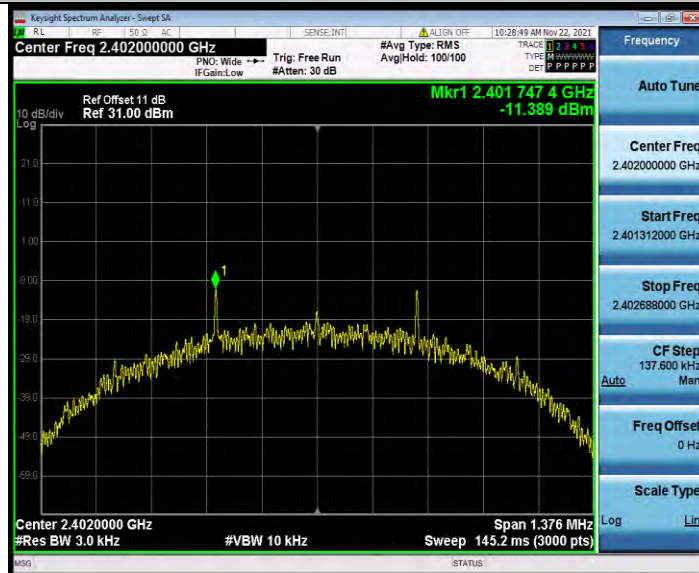


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Test Report No.: W7L-P21100026RF11



BLE_500K_Ant1_2402

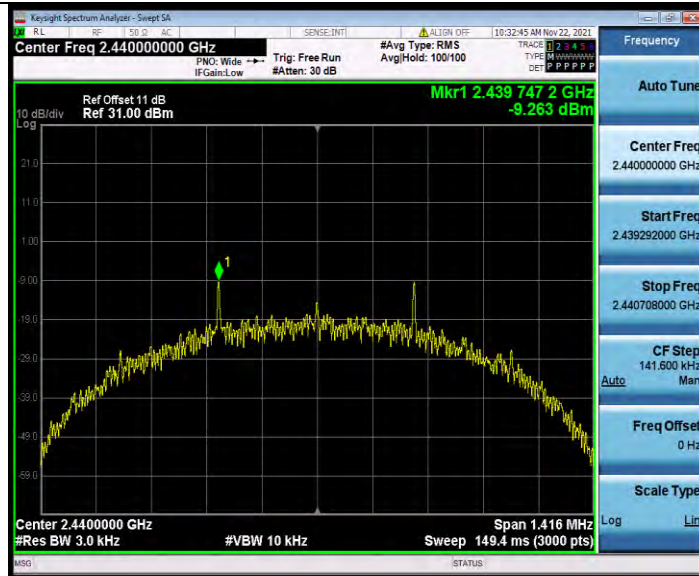


BLE_500K_Ant1_2440

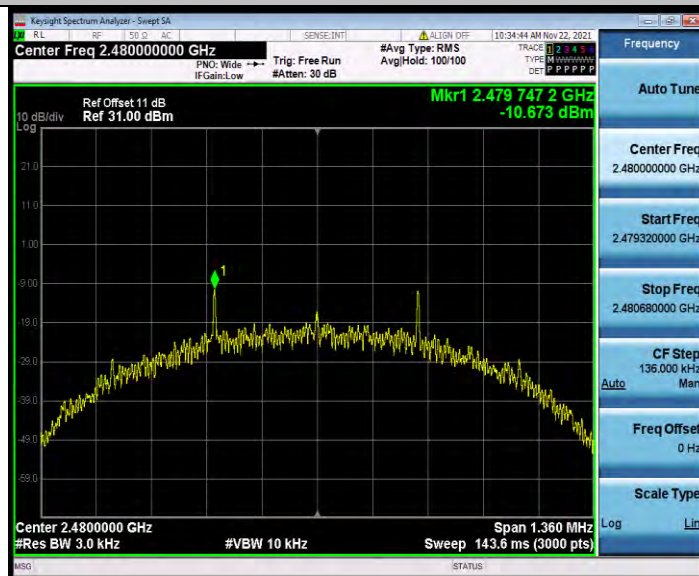


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Test Report No.: W7L-P21100026RF11



BLE_500K_Ant1_2480



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BAND EDGE MEASUREMENTS

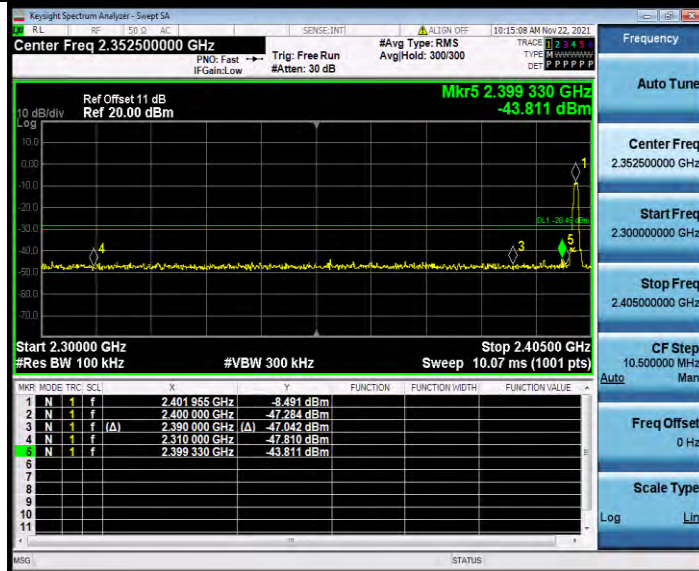
TEST RESULT

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_125K	Ant1	Low	2402	-8.49	-43.81	≤-28.49	PASS
		High	2480	-7.79	-44.19	≤-27.79	PASS
BLE_1M	Ant1	Low	2402	-5.74	-44.56	≤-25.74	PASS
		High	2480	-4.82	-44.49	≤-24.82	PASS
BLE_2M	Ant1	Low	2402	-5.77	-37.16	≤-25.77	PASS
		High	2480	-5.17	-43.77	≤-25.17	PASS
BLE_500K	Ant1	Low	2402	-5.30	-44.62	≤-25.3	PASS
		High	2480	-4.76	-43.55	≤-24.76	PASS

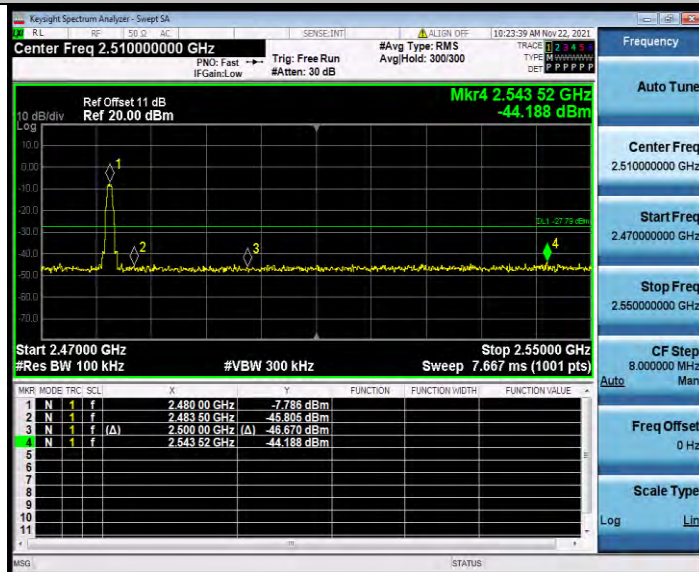


TEST GRAPHS

BLE_125K_Ant1_Low_2402



BLE_125K_Ant1_High_2480

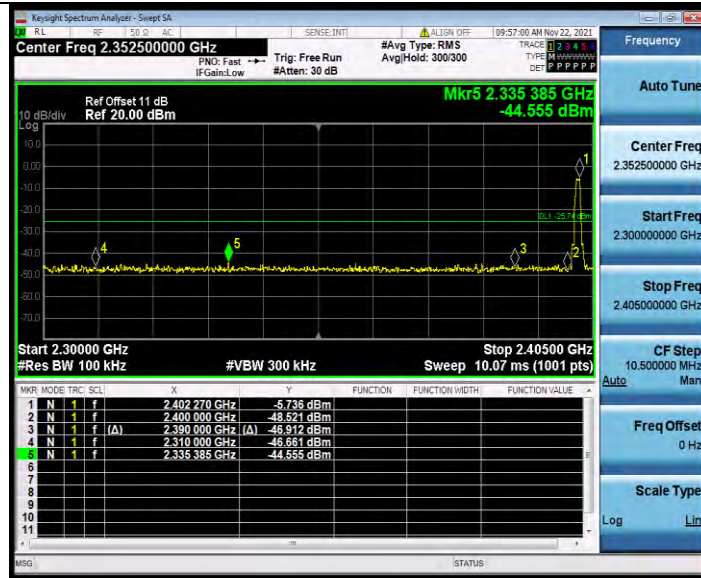


BLE_1M_Ant1_Low_2402

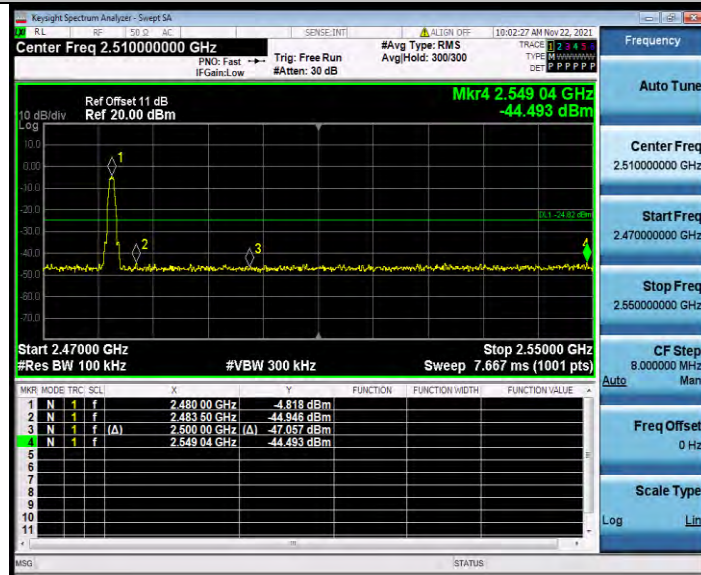


BUREAU VERITAS

Test Report No.: W7L-P21100026RF11



BLE_1M_Ant1_High_2480



BLE_2M_Ant1_Low_2402

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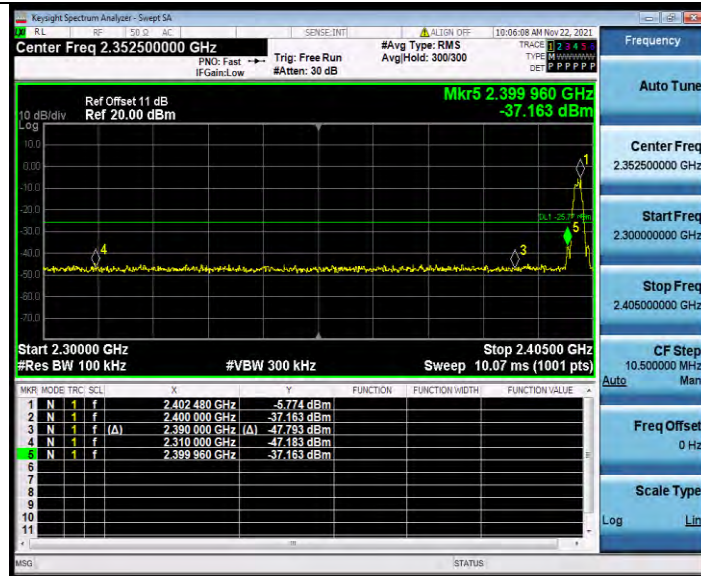
No.B102, Dazu Chuangxin Mansion, North of Beihuan Avenue, North Area, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, China

Tel: +86 755 8869 6566
Fax: +86 755 8869 6577
Email: customerservice.sw@bureauveritas.com

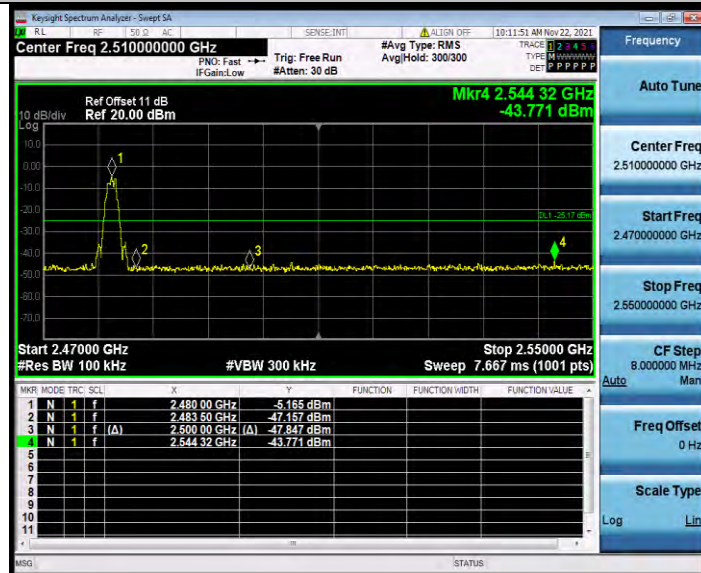


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VERITAS**

Test Report No.: W7L-P21100026RF11



BLE_2M_Ant1_High_2480

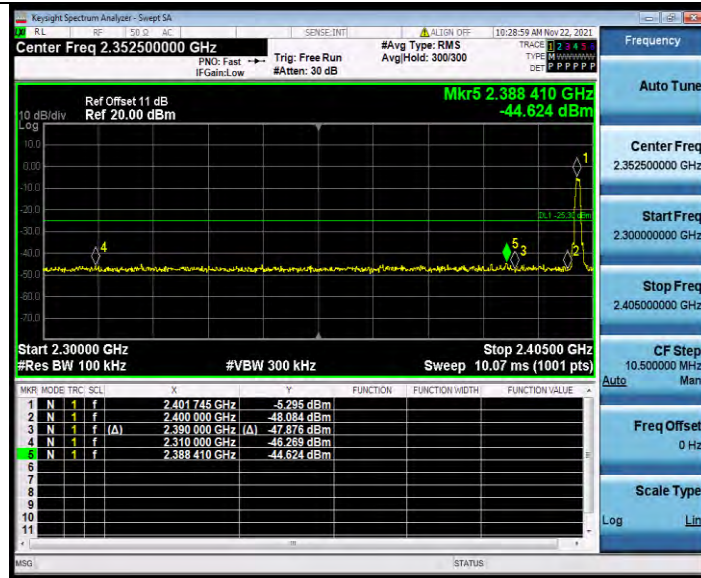


BLE_500K_Ant1_Low_2402

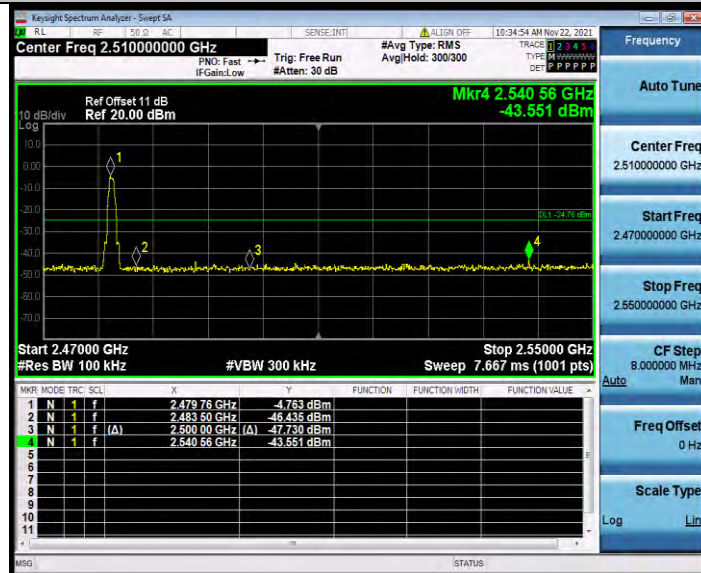


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Test Report No.: W7L-P21100026RF11



BLE_500K_Ant1_High_2480





CONDUCTED SPURIOUS EMISSION TEST RESULT

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_125K	Ant1	2402	Reference	-8.58	-8.58	---	PASS
			30~1000	-8.58	-54.39	≤-28.58	PASS
			1000~26500	-8.58	-38.81	≤-28.58	PASS
		2440	Reference	-6.44	-6.44	---	PASS
			30~1000	-6.44	-54.29	≤-26.44	PASS
			1000~26500	-6.44	-38.74	≤-26.44	PASS
		2480	Reference	-7.97	-7.97	---	PASS
			30~1000	-7.97	-54.17	≤-27.97	PASS
			1000~26500	-7.97	-38.8	≤-27.97	PASS
BLE_1M	Ant1	2402	Reference	-5.39	-5.39	---	PASS
			30~1000	-5.39	-54.39	≤-25.39	PASS
			1000~26500	-5.39	-38.43	≤-25.39	PASS
		2440	Reference	-4.81	-4.81	---	PASS
			30~1000	-4.81	-54.1	≤-24.81	PASS
			1000~26500	-4.81	-38.65	≤-24.81	PASS
		2480	Reference	-5.41	-5.41	---	PASS
			30~1000	-5.41	-54.45	≤-25.41	PASS
			1000~26500	-5.41	-37.69	≤-25.41	PASS
BLE_2M	Ant1	2402	Reference	-7.62	-7.62	---	PASS
			30~1000	-7.62	-54.1	≤-27.62	PASS
			1000~26500	-7.62	-38.05	≤-27.62	PASS
		2440	Reference	-6.25	-6.25	---	PASS
			30~1000	-6.25	-54.56	≤-26.25	PASS
			1000~26500	-6.25	-38.49	≤-26.25	PASS
		2480	Reference	-7.78	-7.78	---	PASS
			30~1000	-7.78	-54.25	≤-27.78	PASS
			1000~26500	-7.78	-38.53	≤-27.78	PASS



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VERITAS**

Test Report No.: W7L-P21100026RF11

BLE_500K	Ant1	2402	Reference	-6.72	-6.72	---	PASS
			30~1000	-6.72	-53.2	≤ -26.72	PASS
			1000~26500	-6.72	-38.21	≤ -26.72	PASS
		2440	Reference	-4.68	-4.68	---	PASS
			30~1000	-4.68	-54.21	≤ -24.68	PASS
			1000~26500	-4.68	-38.09	≤ -24.68	PASS
		2480	Reference	-6.31	-6.31	---	PASS
			30~1000	-6.31	-53.96	≤ -26.31	PASS
			1000~26500	-6.31	-37.52	≤ -26.31	PASS



BUREAU
VERITAS

Test Report No.: W7L-P21100026RF11

TEST GRAPHS

BLE_125K_Ant1_2402_0~Reference



BLE_125K_Ant1_2402_30~1000

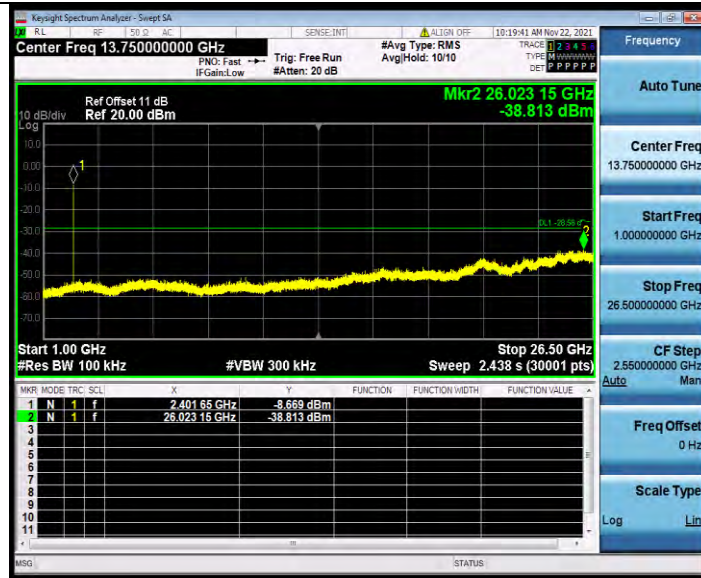


BLE_125K_Ant1_2402_1000~26500



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Test Report No.: W7L-P21100026RF11



BLE_125K_Ant1_2440_0~Reference



BLE_125K_Ant1_2440_30~1000



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Test Report No.: W7L-P21100026RF11



BLE_125K_Ant1_2440_1000~26500



BLE_125K_Ant1_2480_0~Reference

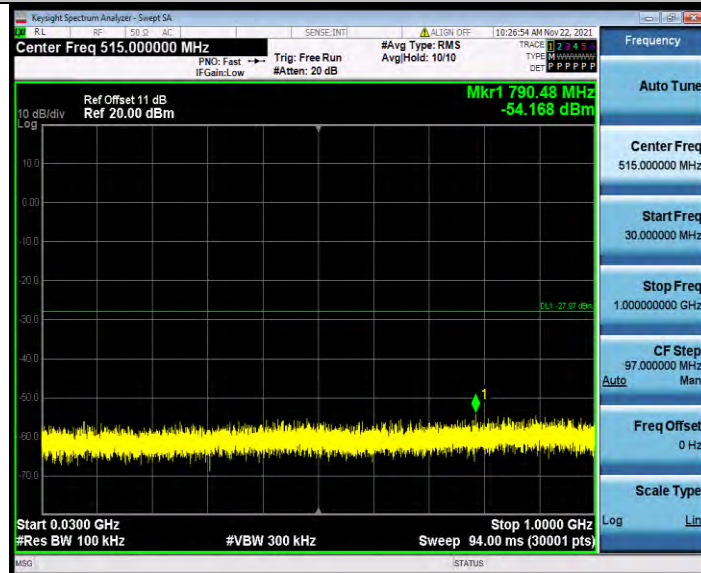


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Test Report No.: W7L-P21100026RF11



BLE_125K_Ant1_2480_30~1000

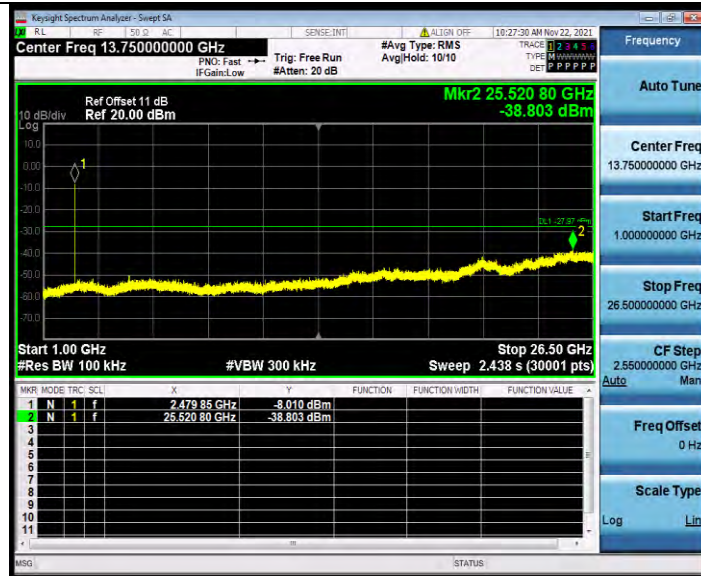


BLE_125K_Ant1_2480_1000~26500



BUREAU VERITAS

Test Report No.: W7L-P21100026RF11



BLE_1M_Ant1_2402_0~Reference

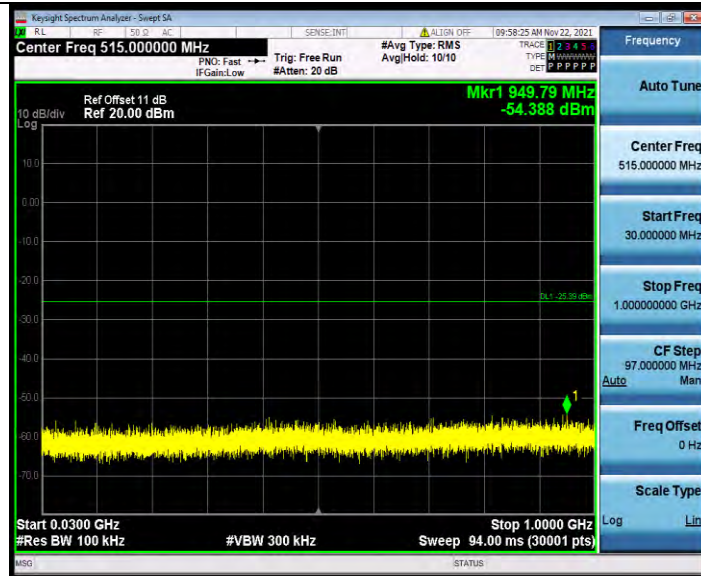


BLE_1M_Ant1_2402_30~1000



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Test Report No.: W7L-P21100026RF11



BLE_1M_Ant1_2402_1000~26500



BLE_1M_Ant1_2440_0~Reference

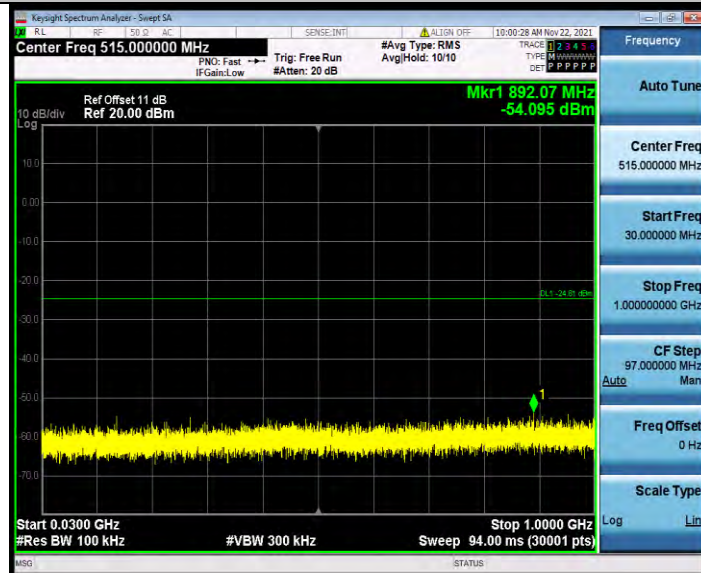


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Test Report No.: W7L-P21100026RF11



BLE_1M_Ant1_2440_30~1000



BLE_1M_Ant1_2440_1000~26500

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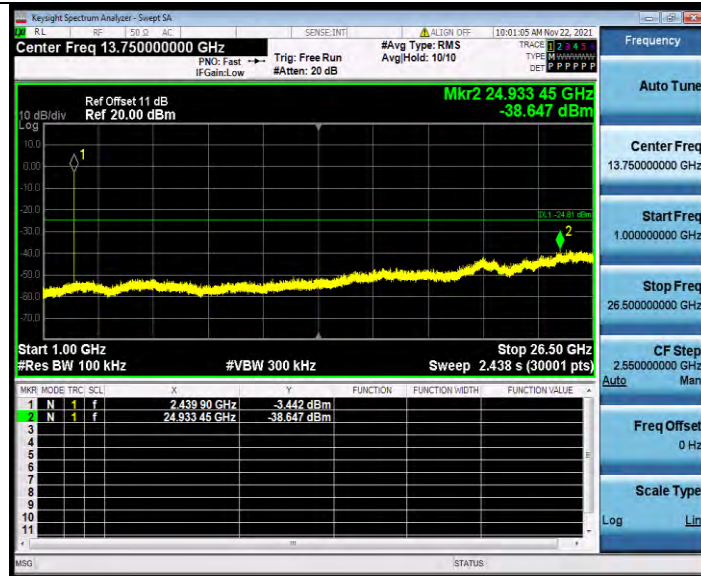
No.B102, Dazu Chuangxin Mansion, North of Beihuan
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Test Report No.: W7L-P21100026RF11



BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000

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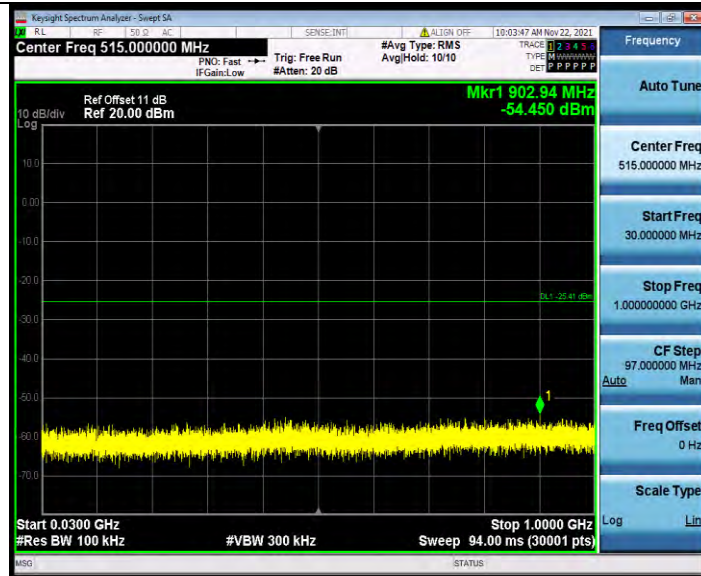
No.B102, Dazu Chuangxin Mansion, North of Beihuan
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BLE_1M_Ant1_2480_1000~26500



BLE_2M_Ant1_2402_0~Reference

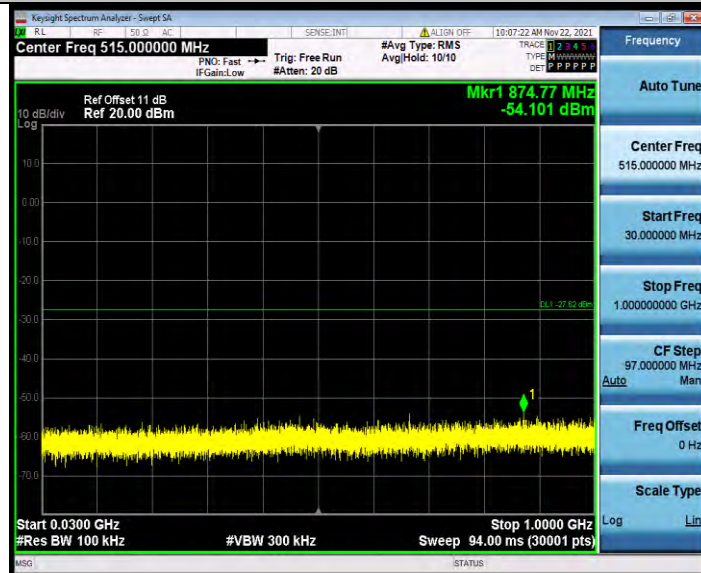


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VERITAS**

Test Report No.: W7L-P21100026RF11



BLE_2M_Ant1_2402_30~1000

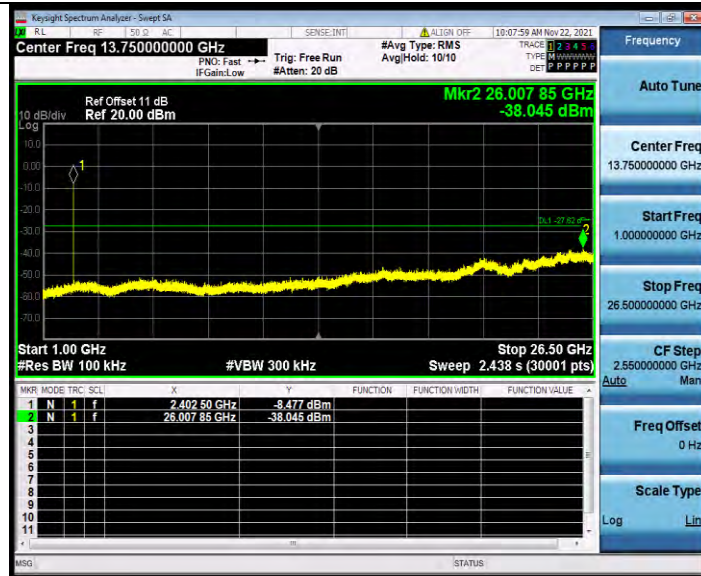


BLE_2M_Ant1_2402_1000~26500



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Test Report No.: W7L-P21100026RF11



BLE_2M_Ant1_2440_0~Reference



BLE_2M_Ant1_2440_30~1000

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Test Report No.: W7L-P21100026RF11



BLE_2M_Ant1_2440_1000~26500



BLE_2M_Ant1_2480_0~Reference

BV 7Layers Communications Technology (Shenzhen) Co. Ltd

No.B102, Dazu Chuangxin Mansion, North of Beihuan Avenue, North Area, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong, China

Tel: +86 755 8869 6566
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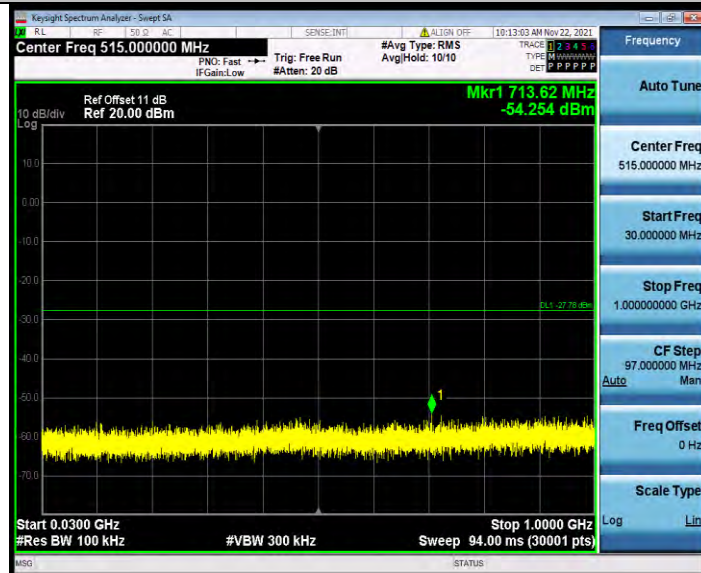


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VERITAS**

Test Report No.: W7L-P21100026RF11



BLE_2M_Ant1_2480_30~1000

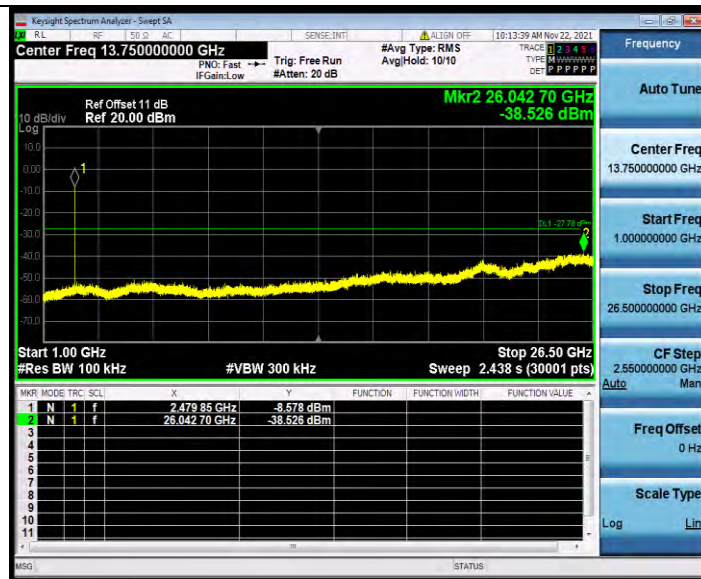


BLE_2M_Ant1_2480_1000~26500



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Test Report No.: W7L-P21100026RF11



BLE_500K_Ant1_2402_0~Reference

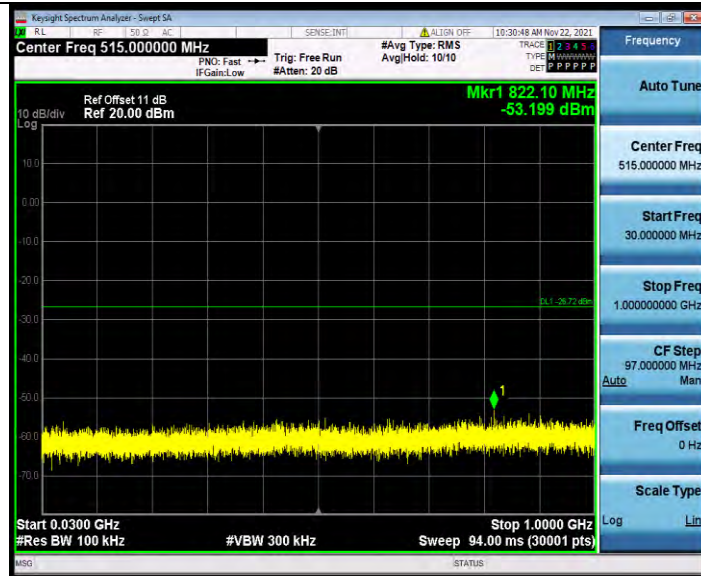


BLE_500K_Ant1_2402_30~1000



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Test Report No.: W7L-P21100026RF11



BLE_500K_Ant1_2402_1000~26500



BLE_500K_Ant1_2440_0~Reference



**BUREAU
VERITAS**

Test Report No.: W7L-P21100026RF11



BLE_500K_Ant1_2440_30~1000

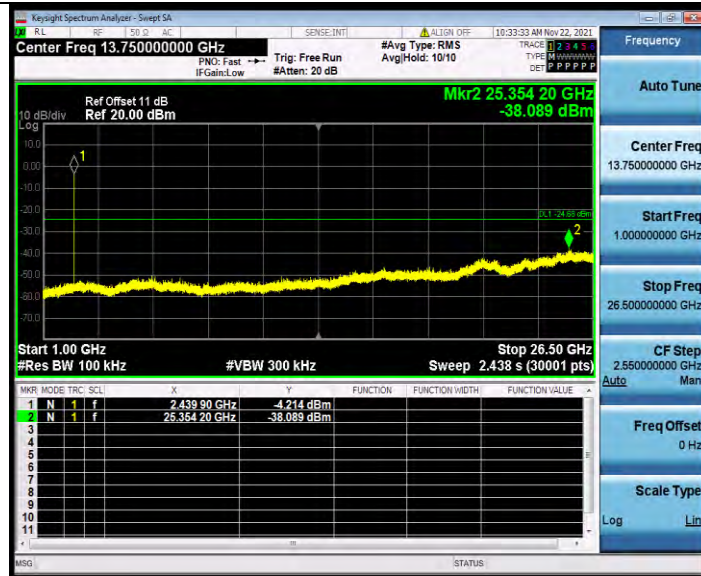


BLE_500K_Ant1_2440_1000~26500



**BUREAU
VERITAS**

Test Report No.: W7L-P21100026RF11



BLE_500K_Ant1_2480_0~Reference

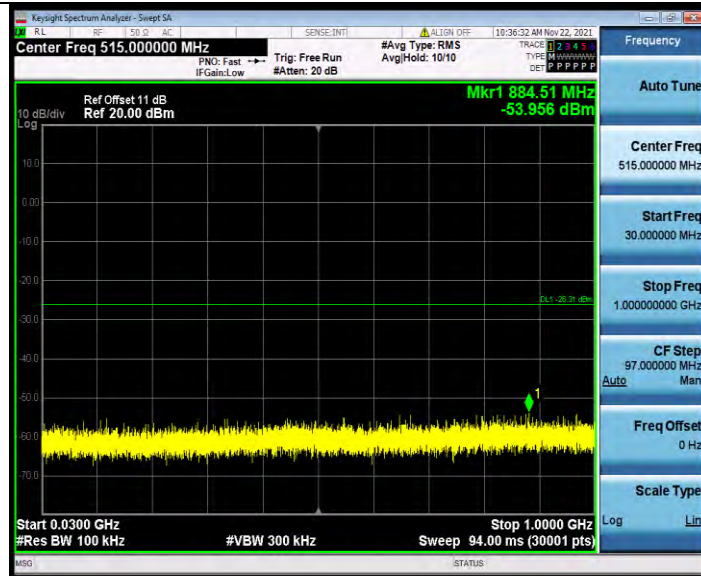


BLE_500K_Ant1_2480_30~1000



**BUREAU
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Test Report No.: W7L-P21100026RF11



BLE_500K_Ant1_2480_1000~26500



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DUTY CYCLE

TEST RESULT

TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_125K	Ant1	2402	17.04	17.50	0.9737	97.37	0.12	---	PASS
		2440	17.06	17.50	0.9749	97.49	0.11	---	PASS
		2480	17.06	17.50	0.9749	97.49	0.11	---	PASS
BLE_1M	Ant1	2402	2.13	2.50	0.8520	85.20	0.70	---	PASS
		2440	2.13	2.50	0.8520	85.20	0.70	---	PASS
		2480	2.13	2.50	0.8520	85.20	0.70	---	PASS
BLE_2M	Ant1	2402	1.07	1.88	0.5691	56.91	2.45	---	PASS
		2440	1.07	1.87	0.5722	57.22	2.42	---	PASS
		2480	1.07	1.88	0.5691	56.91	2.45	---	PASS
BLE_500K	Ant1	2402	4.55	5.00	0.9100	91.00	0.41	---	PASS
		2440	4.55	5.00	0.9100	91.00	0.41	---	PASS
		2480	4.55	5.00	0.9100	91.00	0.41	---	PASS

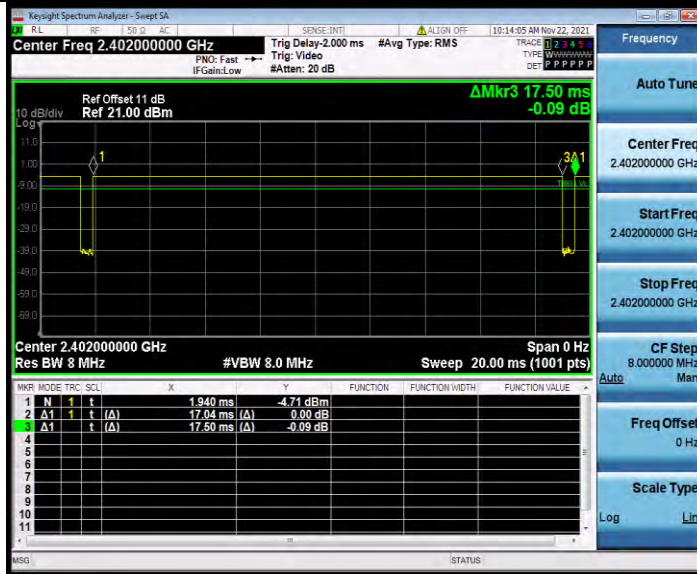


BUREAU VERITAS

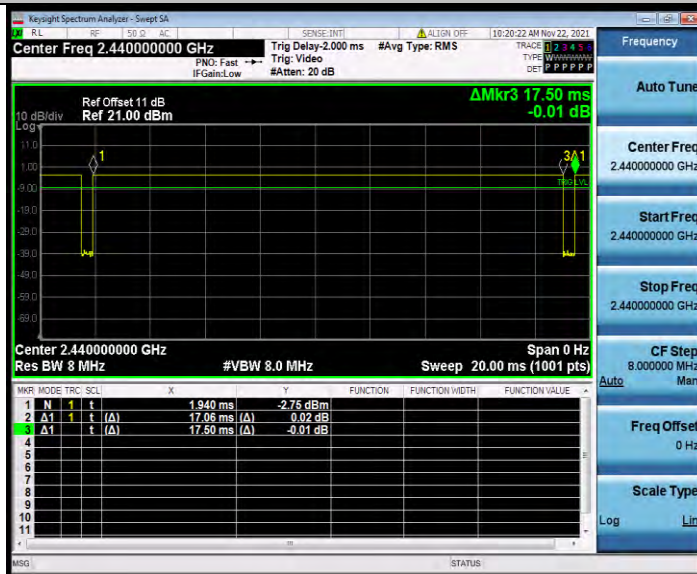
Test Report No.: W7L-P21100026RF11

TEST GRAPHS

BLE_125K_Ant1_2402



BLE_125K_Ant1_2440

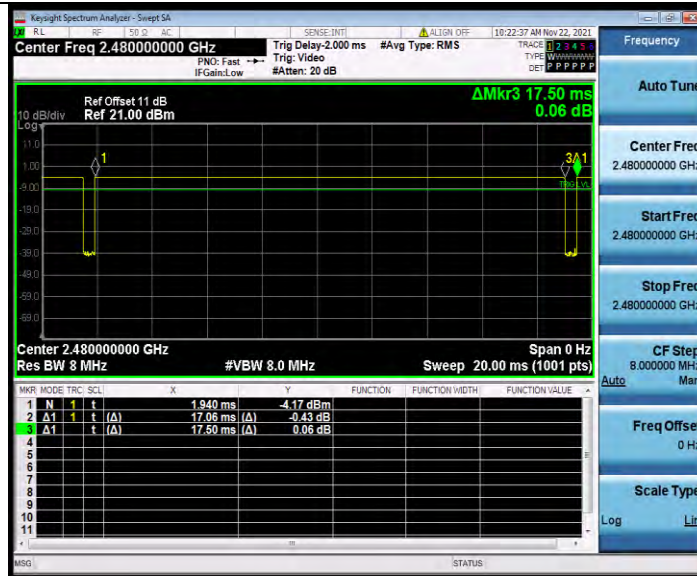


BLE_125K_Ant1_2480

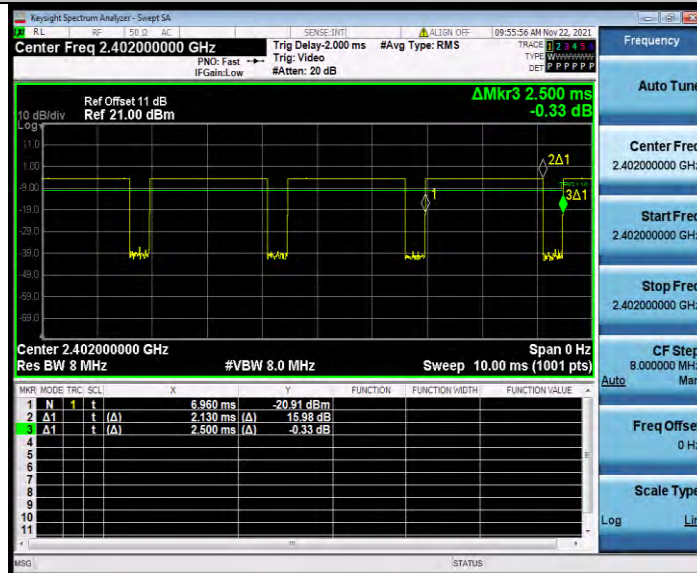


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Test Report No.: W7L-P21100026RF11



BLE_1M_Ant1_2402

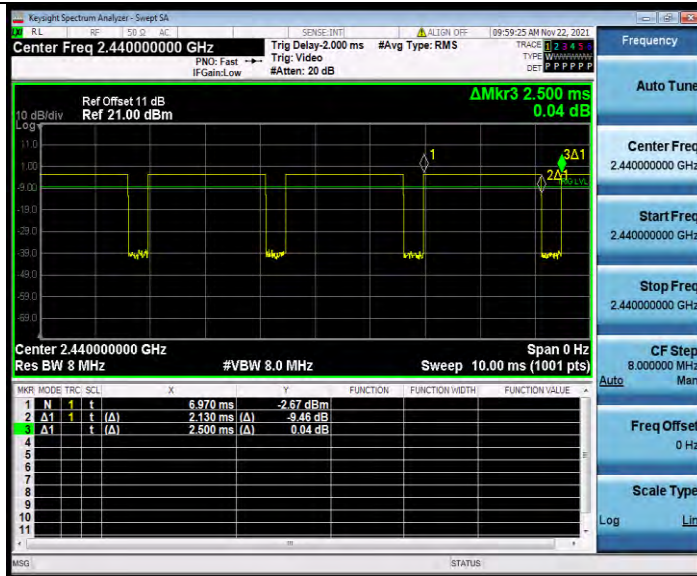


BLE_1M_Ant1_2440

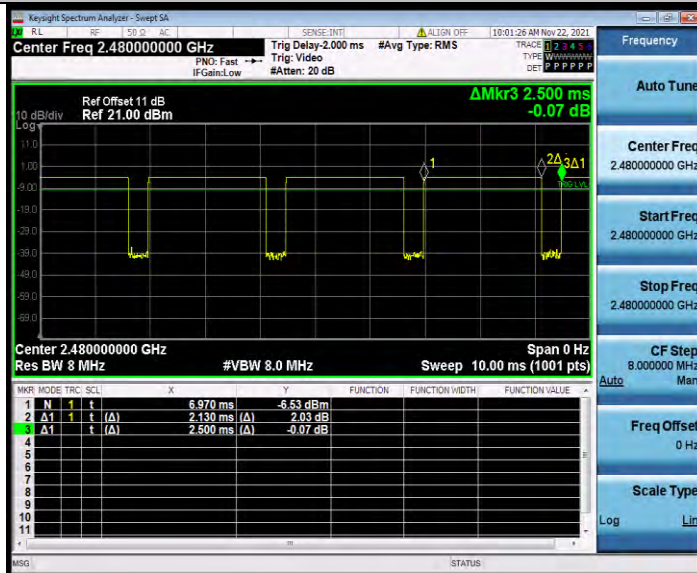


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VERITAS**

Test Report No.: W7L-P21100026RF11



BLE_1M_Ant1_2480

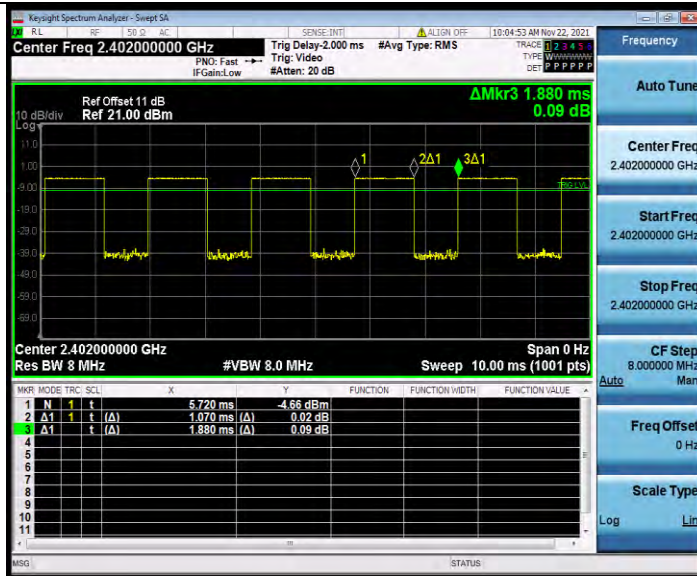


BLE_2M_Ant1_2402

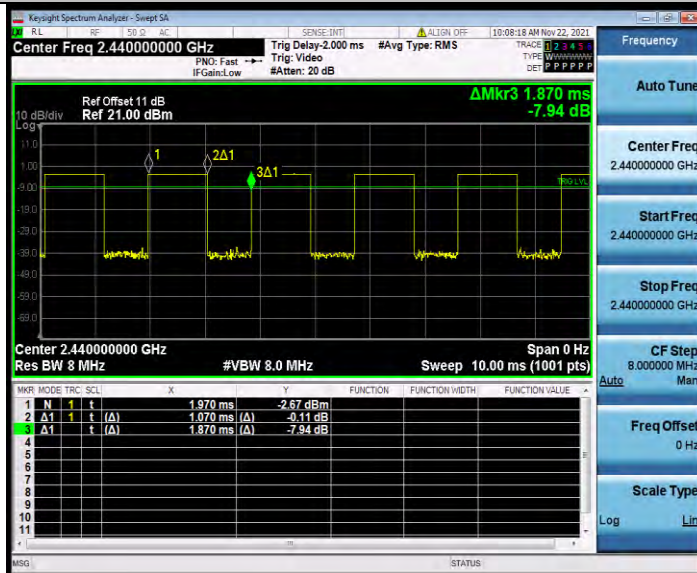


BUREAU VERITAS

Test Report No.: W7L-P21100026RF11



BLE_2M_Ant1_2440

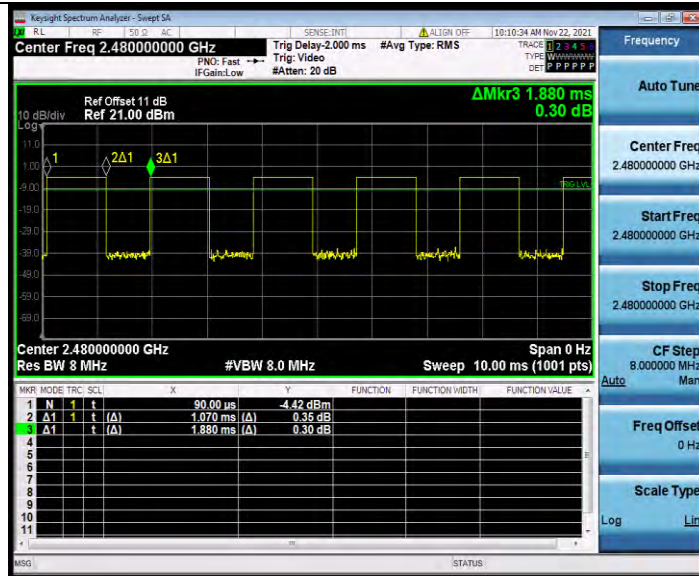


BLE_2M_Ant1_2480

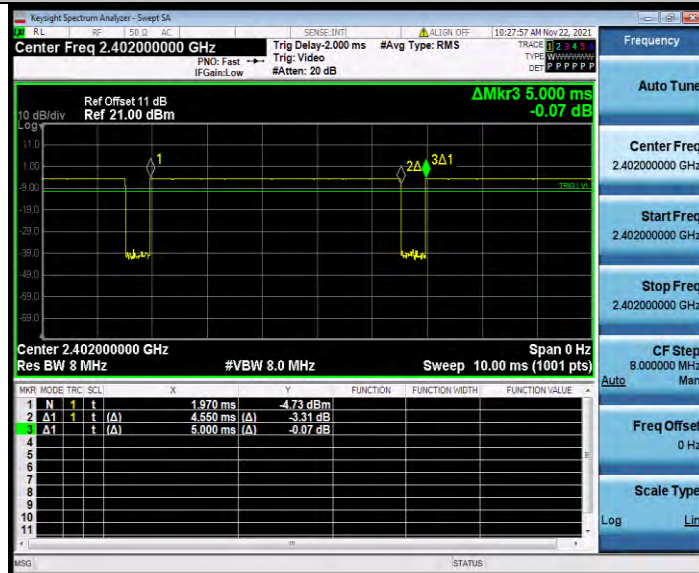


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VERITAS**

Test Report No.: W7L-P21100026RF11



BLE_500K_Ant1_2402

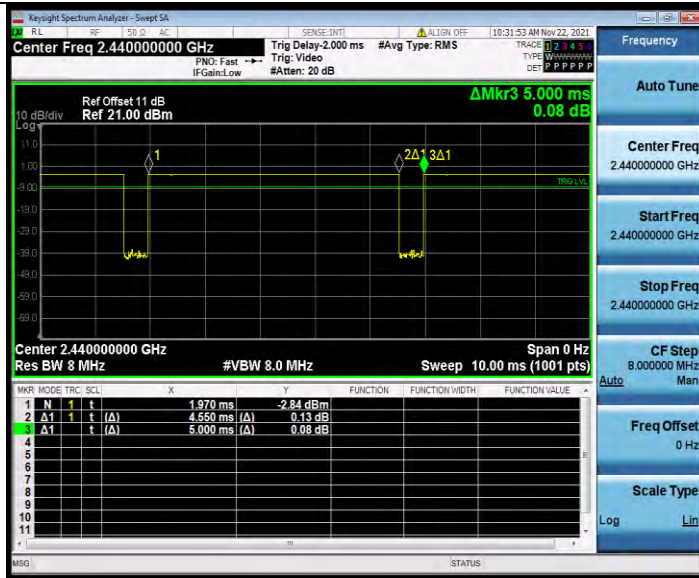


BLE_500K_Ant1_2440

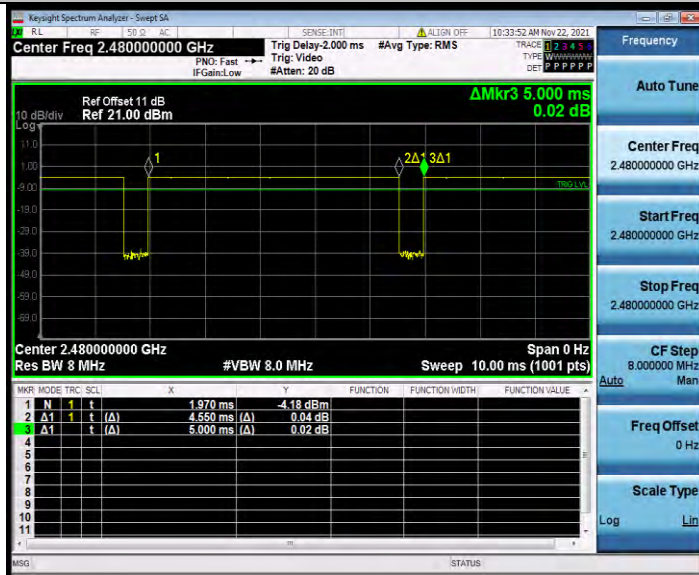


BUREAU VERITAS

Test Report No.: W7L-P21100026RF11



BLE_500K_Ant1_2480





APPENDIX C:

DTS BANDWIDTH

TEST RESULT

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	7.560	2408.440	2416.000	0.5	PASS
		2437	7.560	2433.440	2441.000	0.5	PASS
		2462	7.080	2458.440	2465.520	0.5	PASS
11G	Ant1	2412	12.640	2406.000	2418.640	0.5	PASS
		2437	15.120	2429.440	2444.560	0.5	PASS
		2462	14.120	2455.440	2469.560	0.5	PASS
11N20SISO	Ant1	2412	15.040	2404.480	2419.520	0.5	PASS
		2437	14.440	2429.440	2443.880	0.5	PASS
		2462	16.480	2453.880	2470.360	0.5	PASS

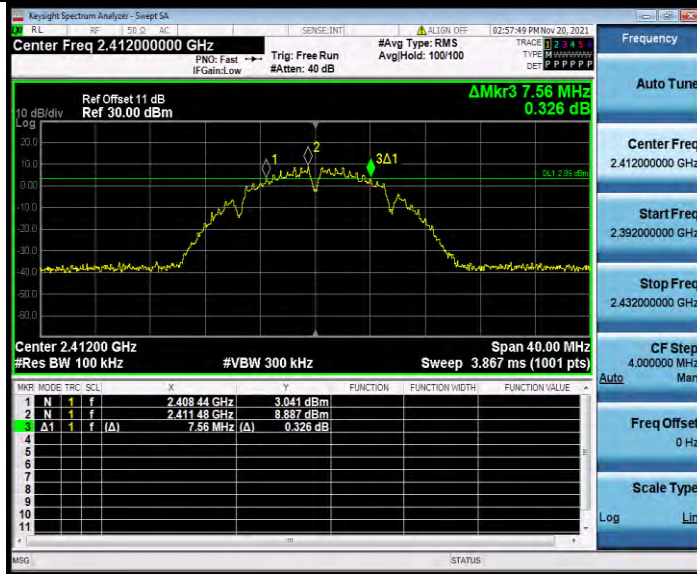


BUREAU VERITAS

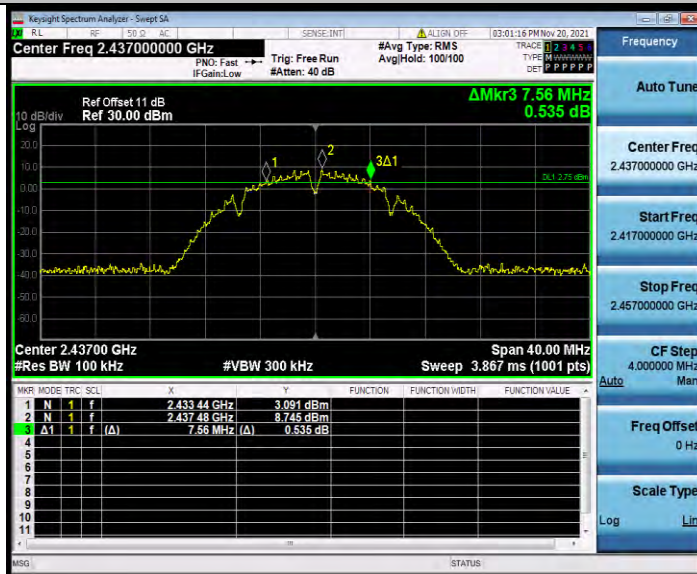
Test Report No.: W7L-P21100026RF11

TEST GRAPHS

11B_Ant1_2412



11B_Ant1_2437

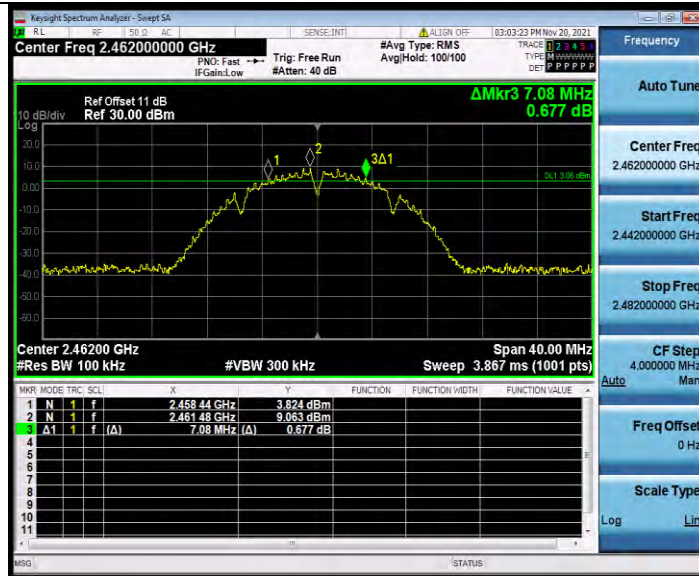


11B_Ant1_2462



BUREAU VERITAS

Test Report No.: W7L-P21100026RF11



11G_Ant1_2412

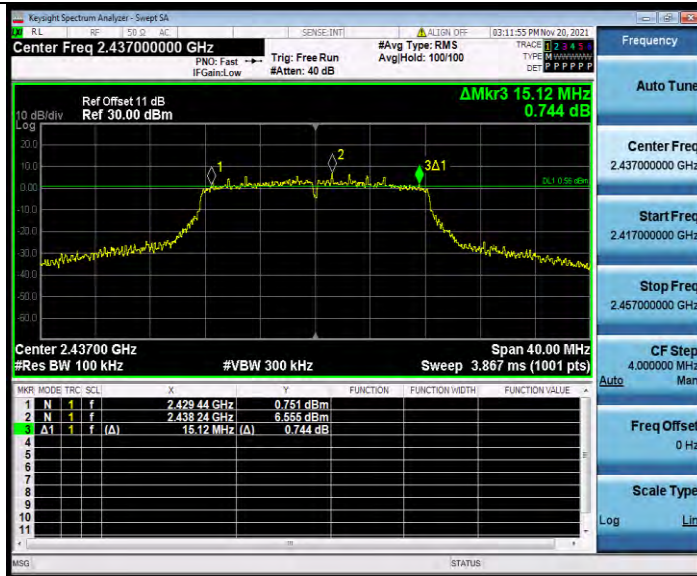


11G_Ant1_2437



BUREAU VERITAS

Test Report No.: W7L-P21100026RF11



11G_Ant1_2462

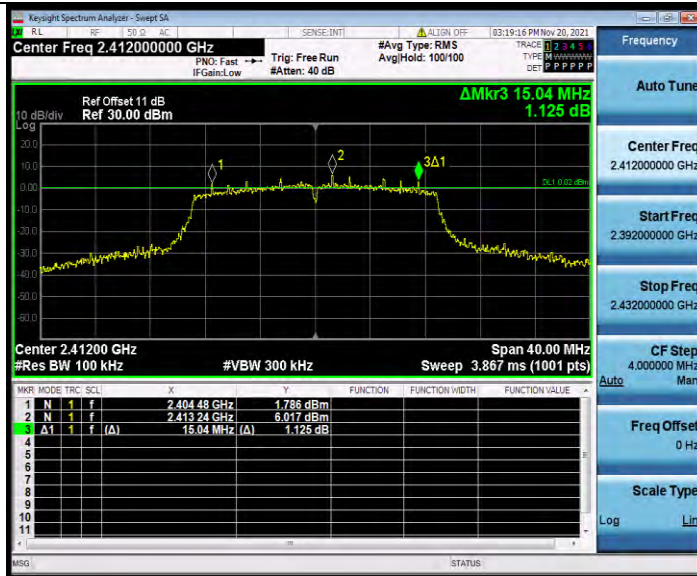


11N20SISO_Ant1_2412

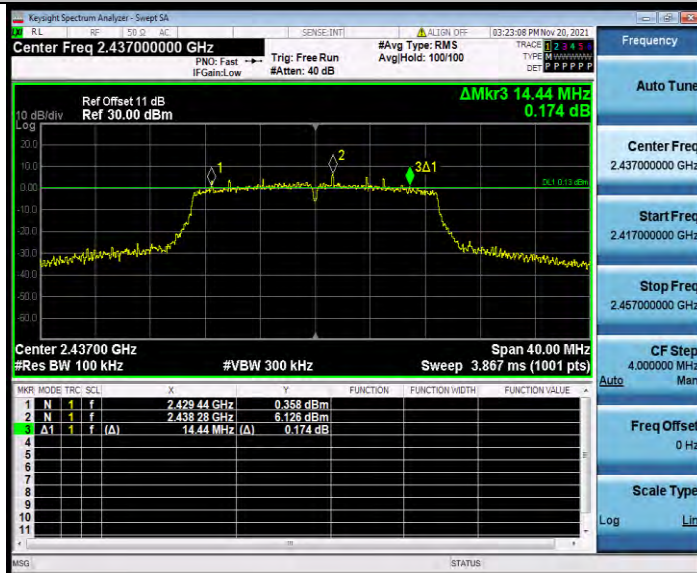


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11N20SISO_Ant1_2437

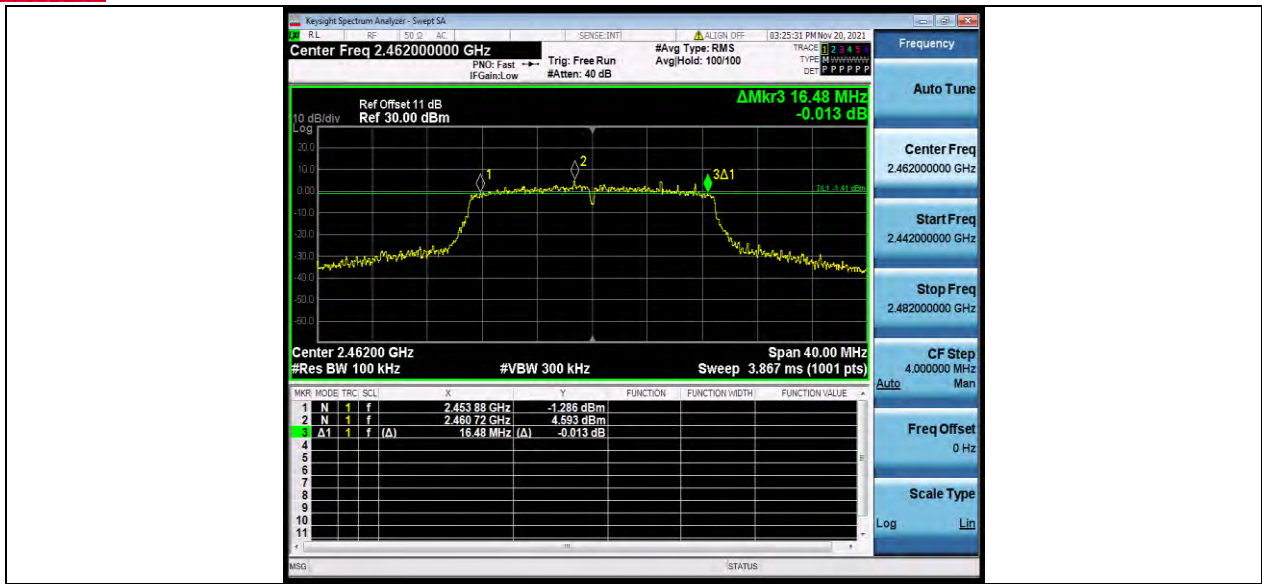


11N20SISO_Ant1_2462



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99%OCCUPIED CHANNEL BANDWIDTH TEST RESULT

TestMode	Antenna	Channel	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	12.692	2405.826	2418.518	---	PASS
		2437	13.010	2430.520	2443.530	---	PASS
		2462	13.109	2455.473	2468.582	---	PASS
11G	Ant1	2412	16.985	2403.576	2420.561	---	PASS
		2437	16.921	2428.459	2445.380	---	PASS
		2462	16.957	2453.502	2470.459	---	PASS
11N20SISO	Ant1	2412	17.885	2403.129	2421.014	---	PASS
		2437	17.881	2428.053	2445.934	---	PASS
		2462	17.873	2453.083	2470.956	---	PASS



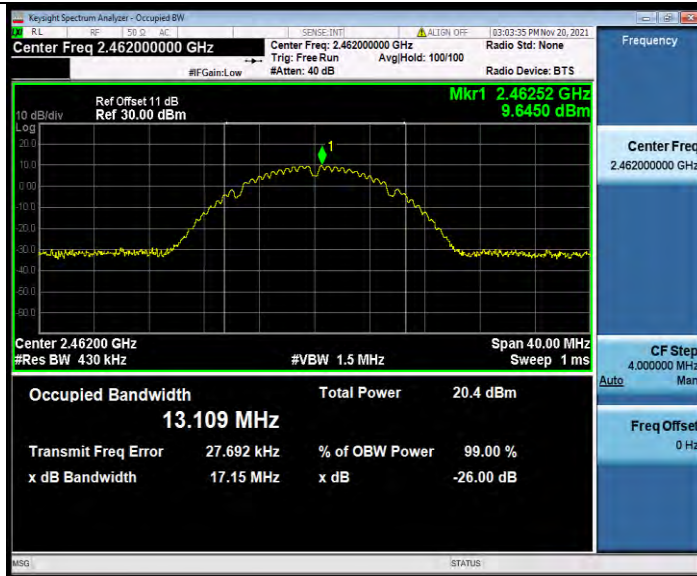
TEST GRAPHS



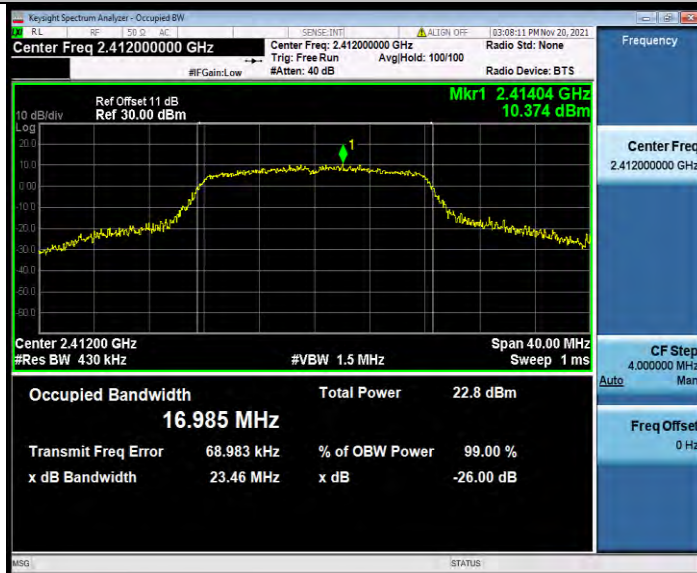


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11G_Ant1_2412

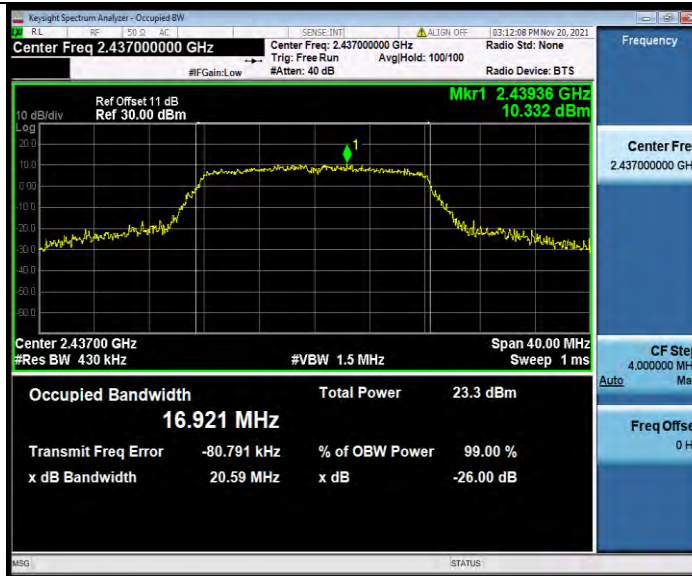


11G_Ant1_2437

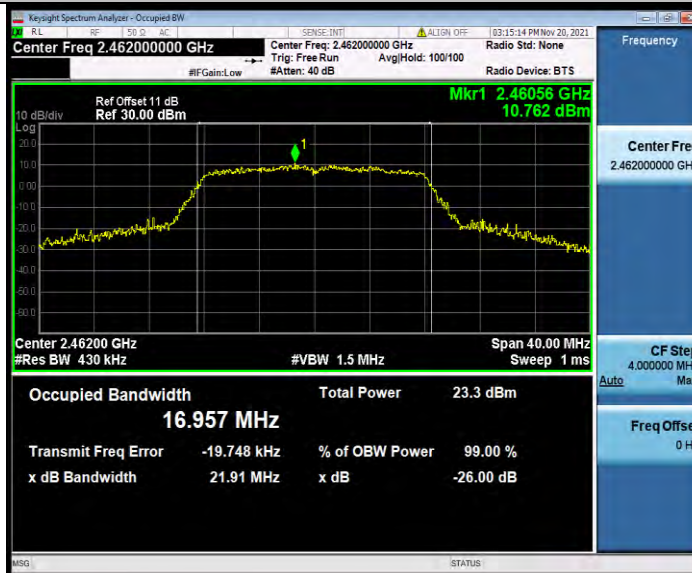


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Test Report No.: W7L-P21100026RF11



11G_Ant1_2462

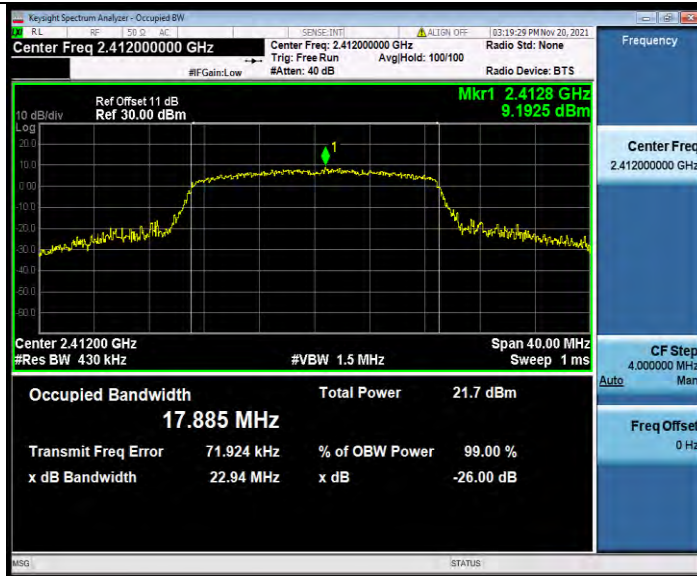


11N20SISO_Ant1_2412

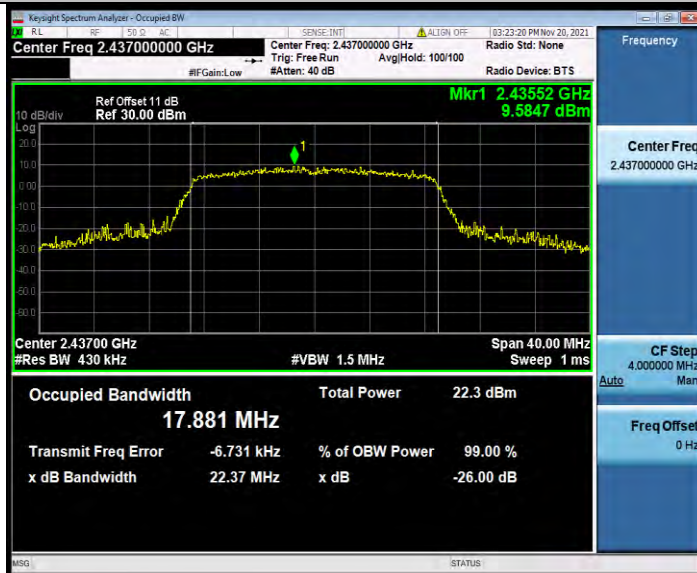


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11N20SISO_Ant1_2437



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MAXIMUM CONDUCTED OUTPUT POWER

PEAK POWER TEST RESULT

TestMode	Antenna	Channel	Result[dBm]	Result[mw]	Limit[dBm]	Verdict
11B	Ant1	2412	19.33	85.70	≤30	PASS
		2437	19.52	89.54	≤30	PASS
		2462	19.56	90.36	≤30	PASS
11G	Ant1	2412	23.18	207.97	≤30	PASS
		2437	24.10	257.04	≤30	PASS
		2462	23.92	246.60	≤30	PASS
11N20SISO	Ant1	2412	22.44	175.39	≤30	PASS
		2437	22.75	188.36	≤30	PASS
		2462	23.16	207.01	≤30	PASS

AVERAGE POWER TEST RESULT

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	2412	17.82	/	PASS
		2437	17.84	/	PASS
		2462	18.01	/	PASS
11G	Ant1	2412	15.17	/	PASS
		2437	15.15	/	PASS
		2462	15.21	/	PASS
11N20SISO	Ant1	2412	13.89	/	PASS
		2437	13.78	/	PASS
		2462	13.84	/	PASS



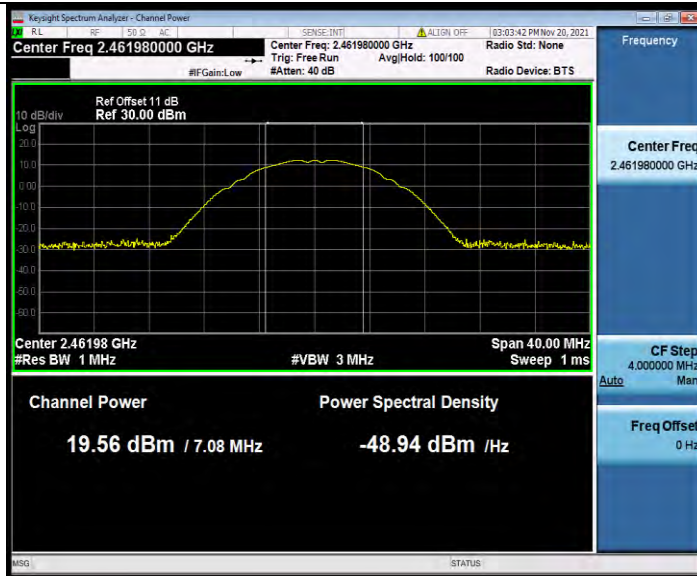
TEST GRAPHS



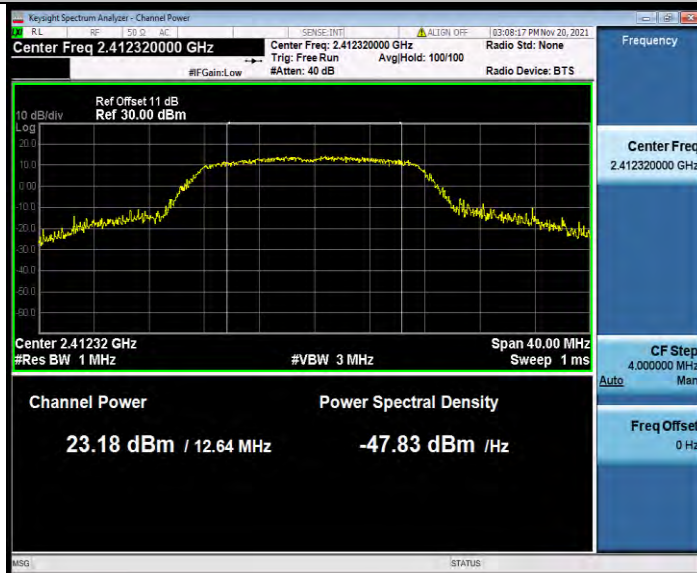


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11G_Ant1_2412

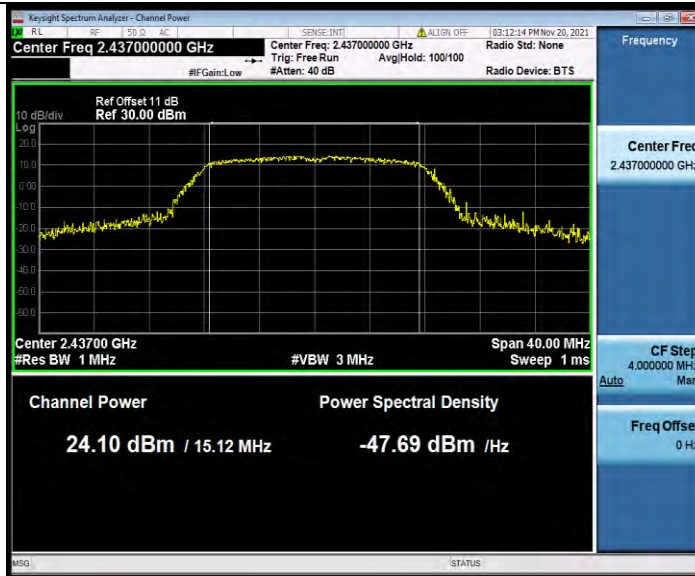


11G_Ant1_2437

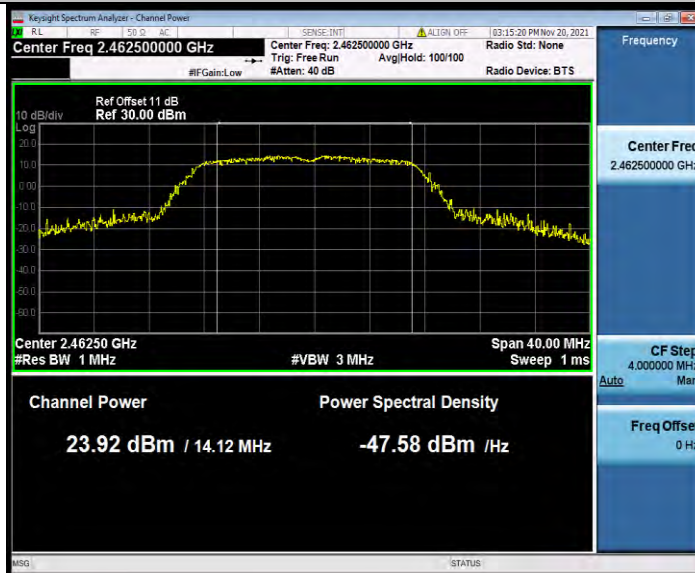


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11G_Ant1_2462

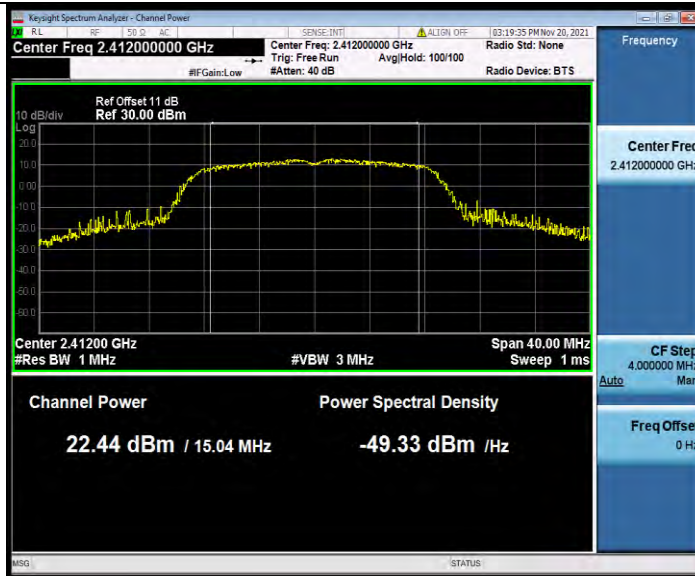


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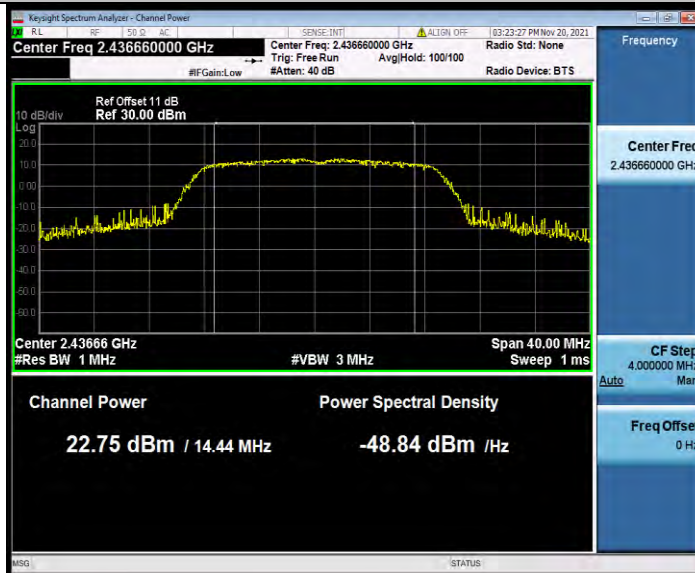


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11N20SISO_Ant1_2437

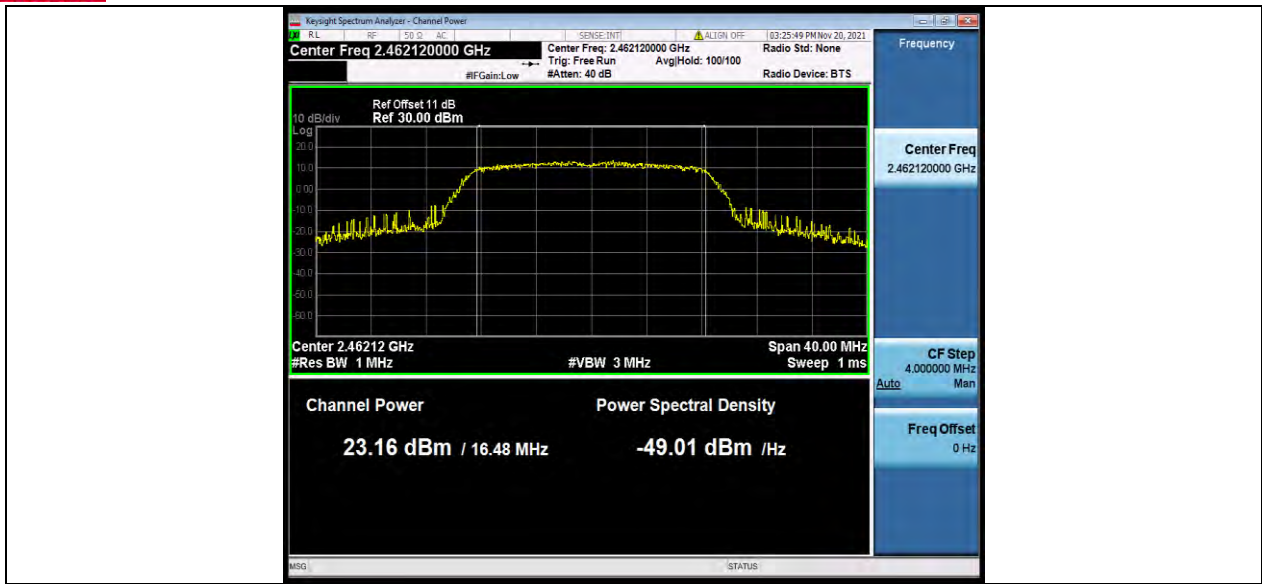


11N20SISO_Ant1_2462



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MAXIMUM POWER SPECTRAL DENSITY

TEST RESULT

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-5.04	≤8	PASS
		2437	-4.41	≤8	PASS
		2462	-5.09	≤8	PASS
11G	Ant1	2412	-7.15	≤8	PASS
		2437	-5.94	≤8	PASS
		2462	-4.2	≤8	PASS
11N20SISO	Ant1	2412	-9.19	≤8	PASS
		2437	-8.57	≤8	PASS
		2462	-8.31	≤8	PASS



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TEST GRAPHS

11B_Ant1_2412



11B_Ant1_2437



11B_Ant1_2462

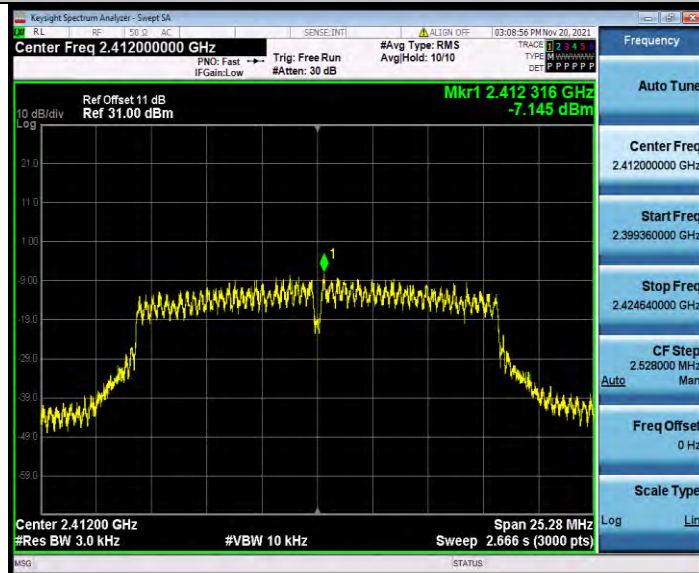


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Test Report No.: W7L-P21100026RF11



11G_Ant1_2412



11G_Ant1_2437



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11G_Ant1_2462



11N20SISO_Ant1_2412



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11N20SISO_Ant1_2437

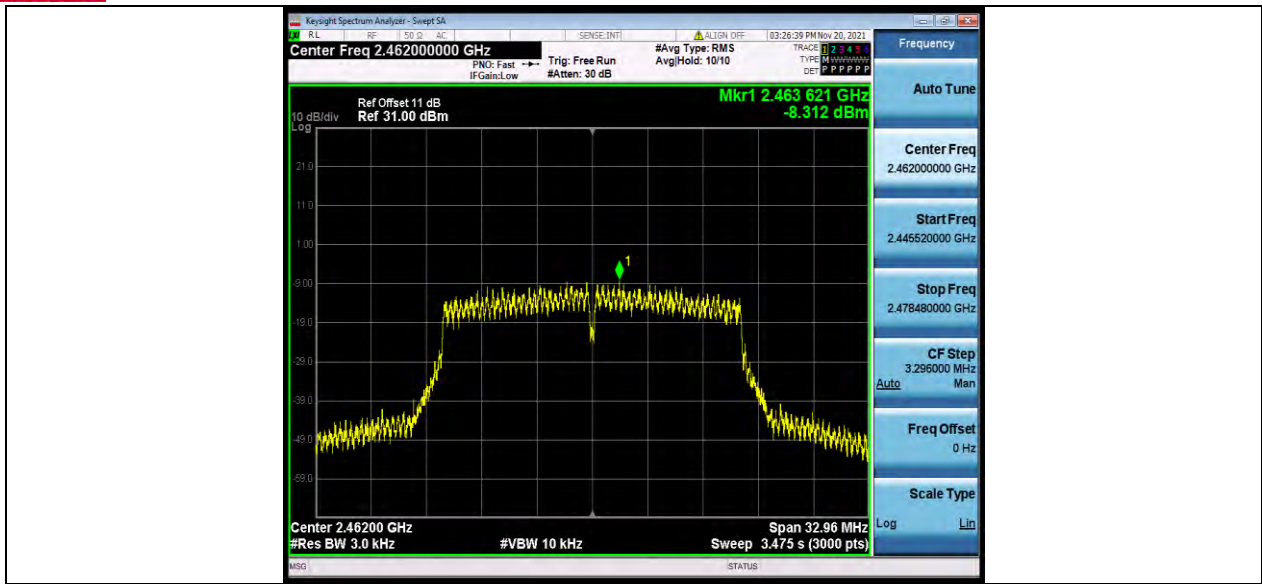


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BAND EDGE MEASUREMENTS

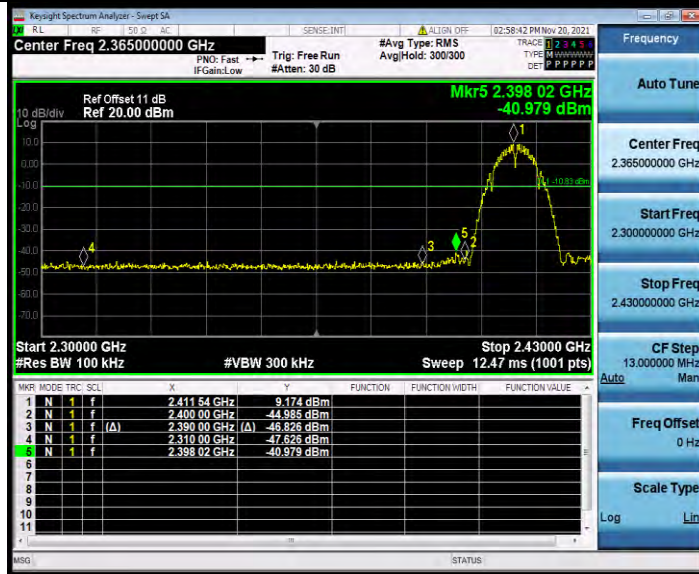
TEST RESULT

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	9.17	-40.98	≤-10.83	PASS
		High	2462	9.05	-44.02	≤-10.95	PASS
11G	Ant1	Low	2412	6.47	-23.8	≤-13.53	PASS
		High	2462	6.58	-38.82	≤-13.42	PASS
11N20SISO	Ant1	Low	2412	6.06	-26.47	≤-13.94	PASS
		High	2462	6.25	-41	≤-13.75	PASS

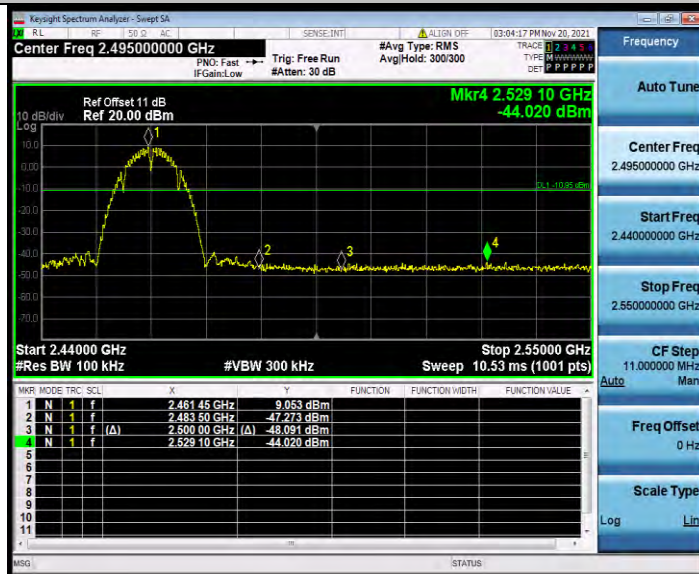


TEST GRAPHS

11B_Ant1_Low_2412



11B_Ant1_High_2462

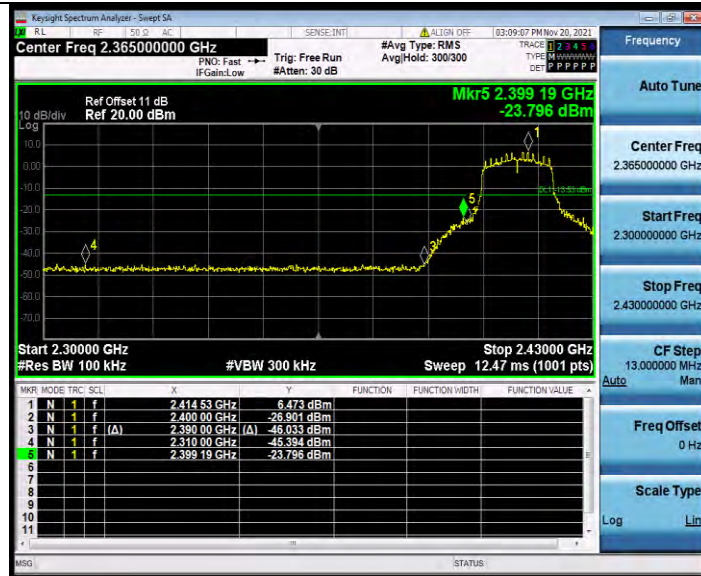


11G_Ant1_Low_2412



BUREAU VERITAS

Test Report No.: W7L-P21100026RF11



11G_Ant1_High_2462



11N20SISO_Ant1_Low_2412