



Appendix B

RF Test Data for 2.4GWIFI (Conducted Measurement)

Product Name: Sample Demo CART 2D/S

Test Model: CART 2D/S

Environmental Conditions

Temperature:	23.8° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Ling Zhu
Supervised by:	Li Huan

B.1 -6dB Bandwidth

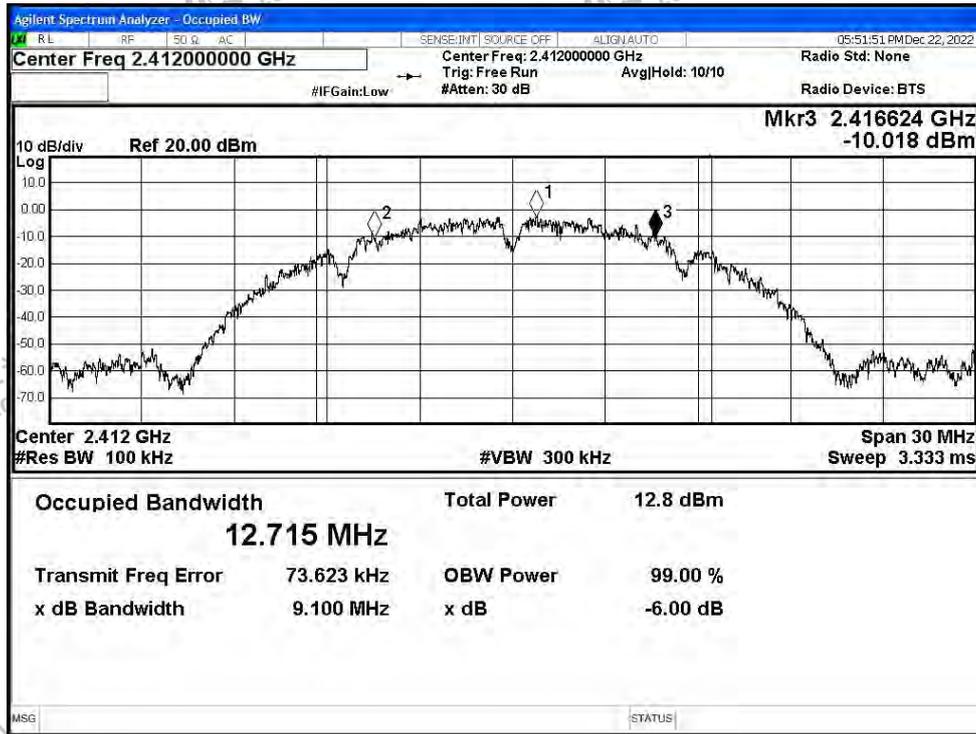
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant1	9.1	0.5	Pass
NVNT	b	2437	Ant1	9.094	0.5	Pass
NVNT	b	2462	Ant1	8.06	0.5	Pass
NVNT	g	2412	Ant1	16.331	0.5	Pass
NVNT	g	2437	Ant1	15.806	0.5	Pass
NVNT	g	2462	Ant1	13.795	0.5	Pass
NVNT	n20	2412	Ant1	15.419	0.5	Pass
NVNT	n20	2437	Ant1	17.584	0.5	Pass
NVNT	n20	2462	Ant1	13.611	0.5	Pass
NVNT	n40	2422	Ant1	35.039	0.5	Pass
NVNT	n40	2437	Ant1	35.041	0.5	Pass
NVNT	n40	2452	Ant1	35.096	0.5	Pass





Test Graphs

-6dB Bandwidth NVNT b 2412MHz Ant1

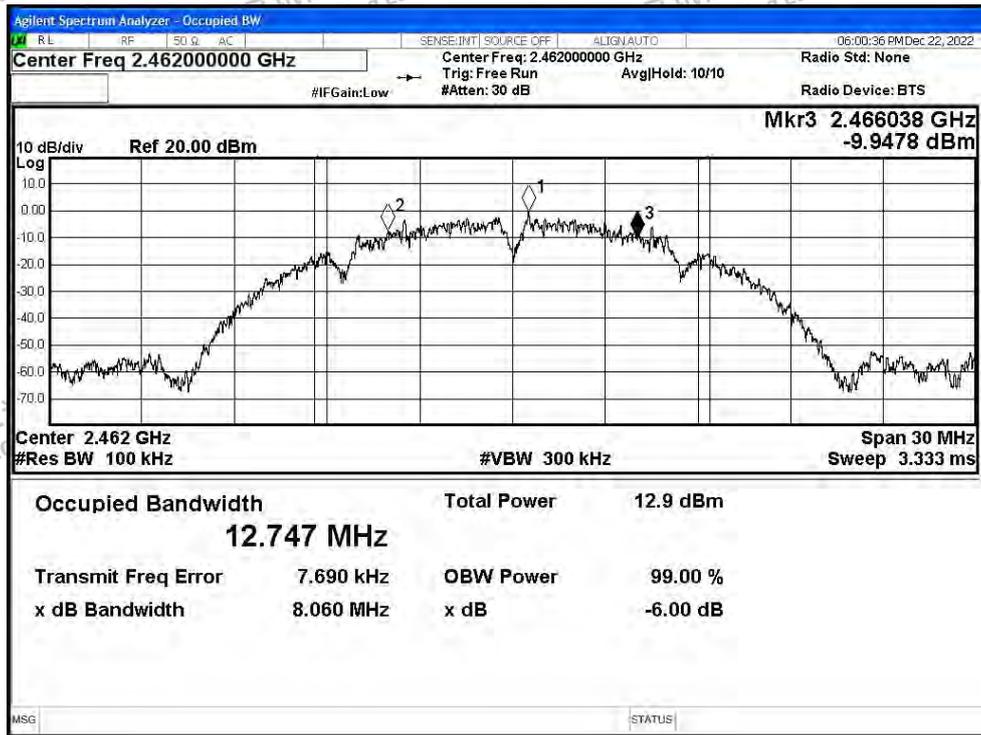


-6dB Bandwidth NVNT b 2437MHz Ant1

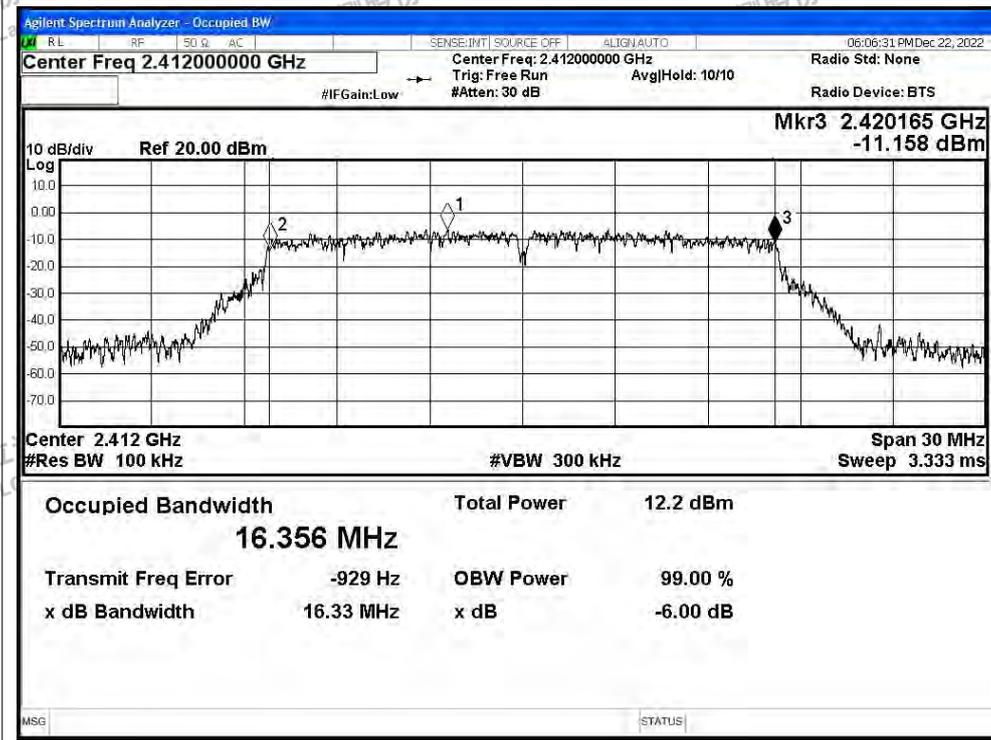




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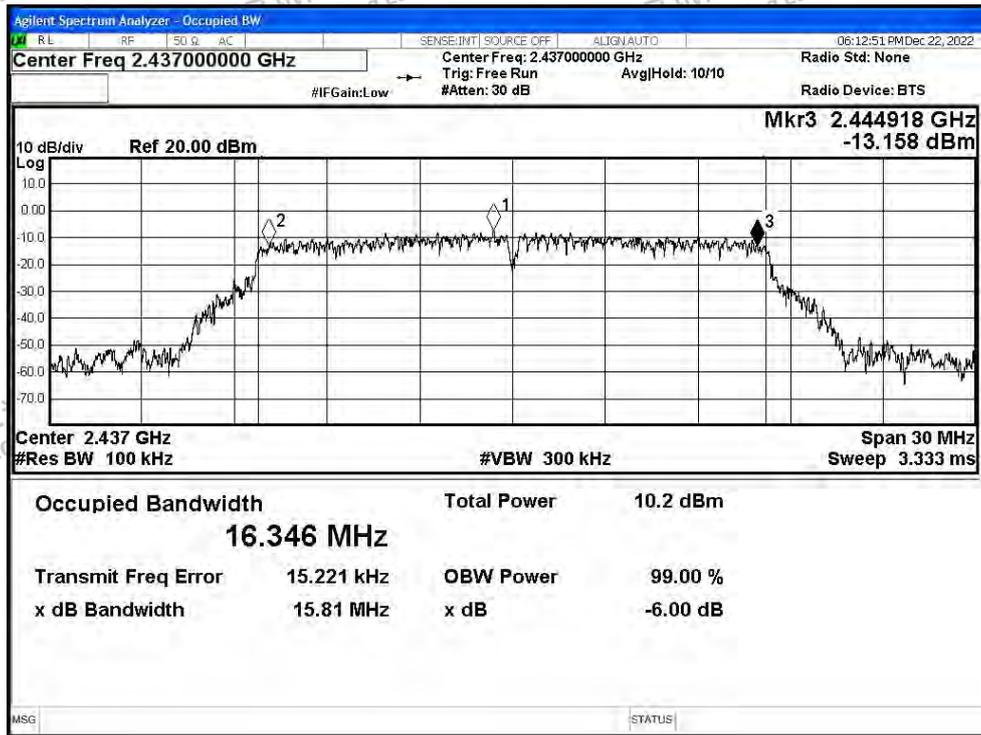


-6dB Bandwidth NVNT g 2412MHz Ant1

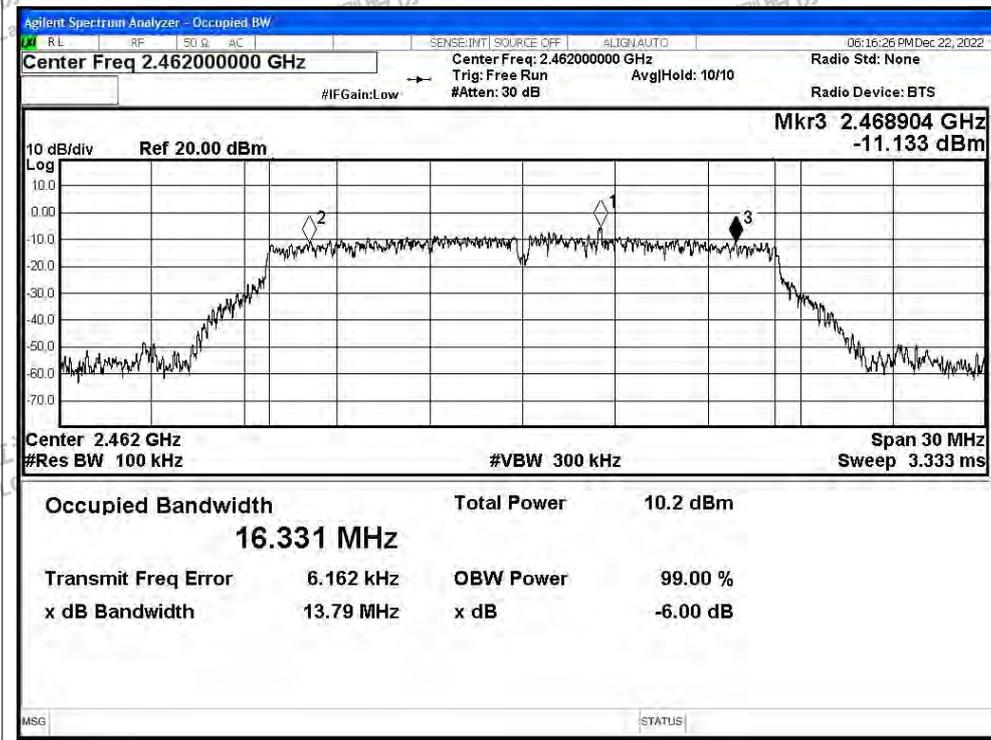




-6dB Bandwidth NVNT g 2437MHz Ant1

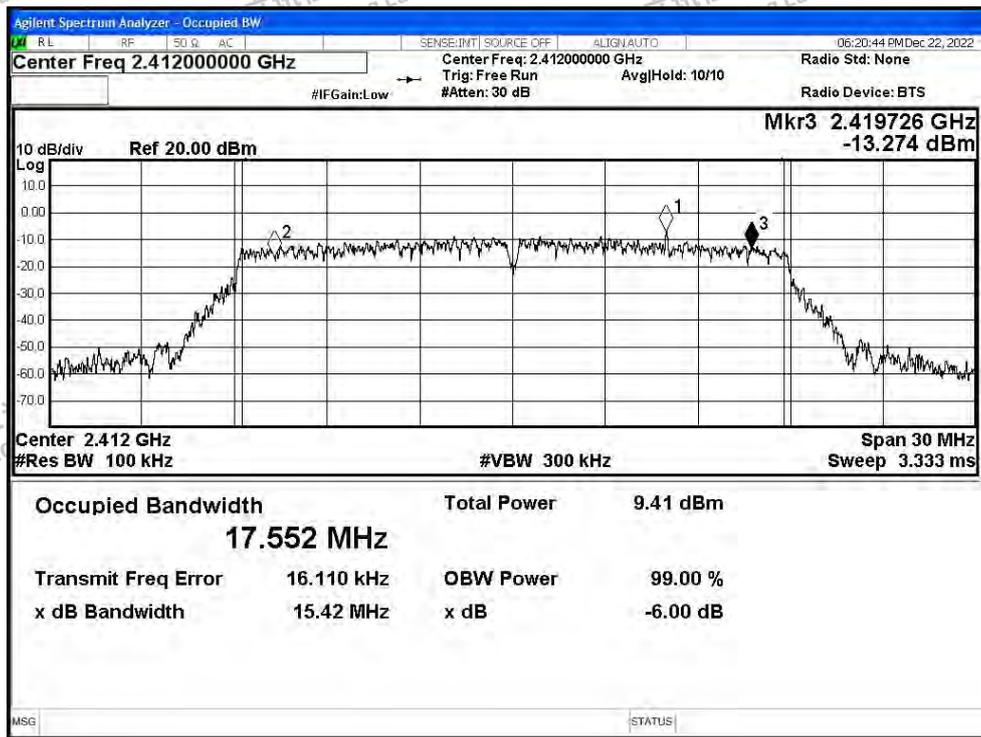


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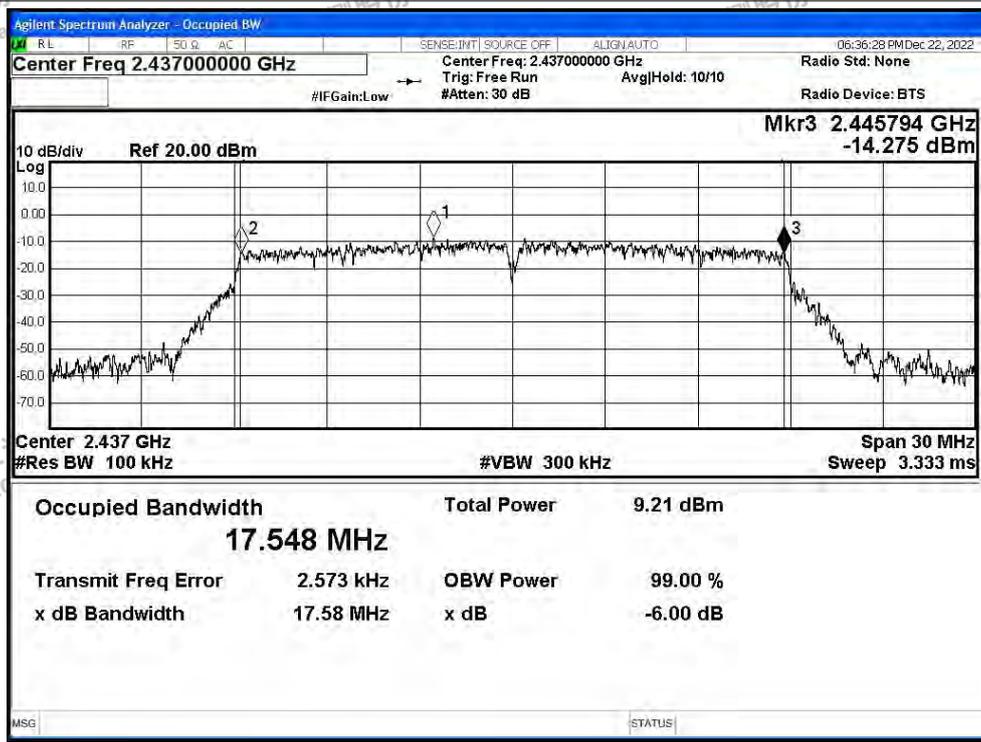




-6dB Bandwidth NVNT n20 2412MHz Ant1

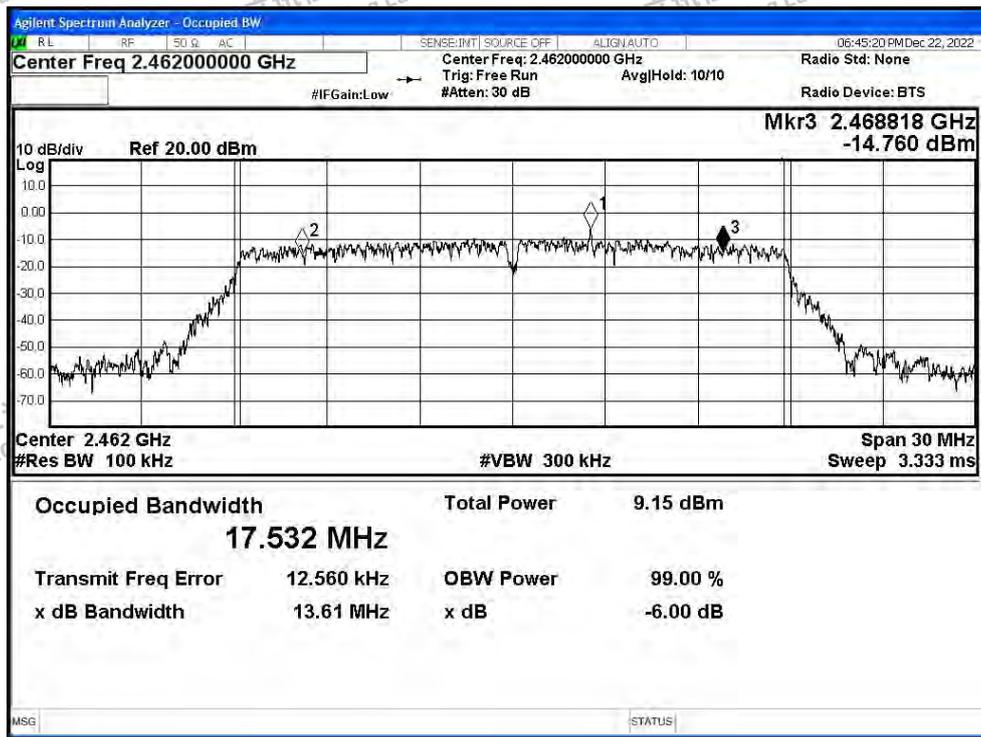


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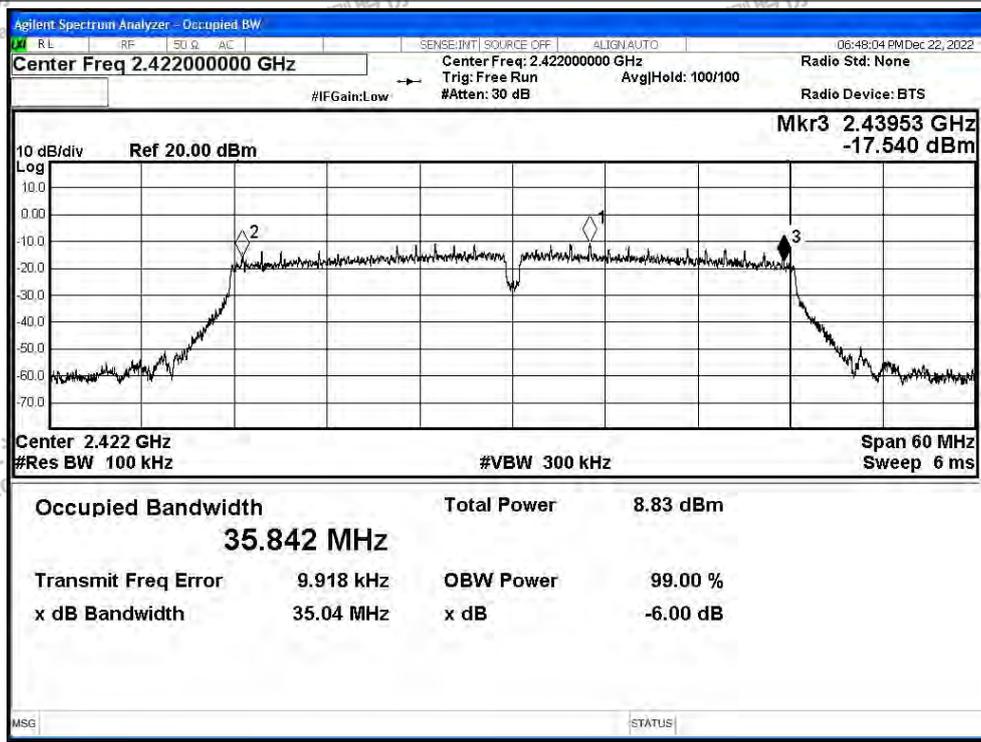




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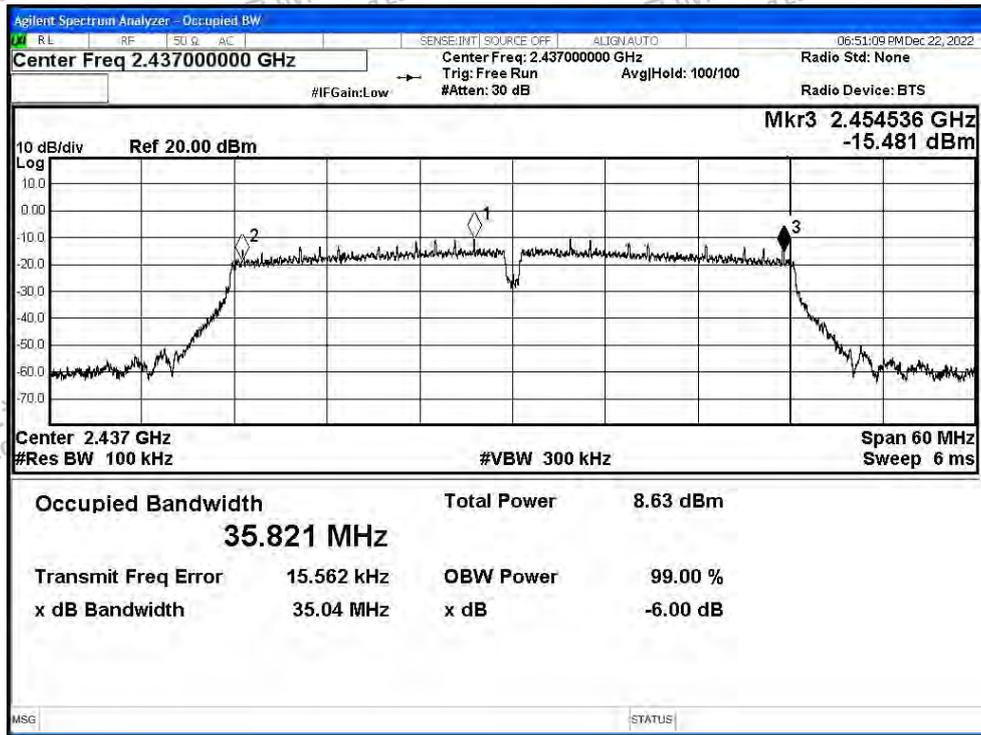


-6dB Bandwidth NVNT n40 2422MHz Ant1

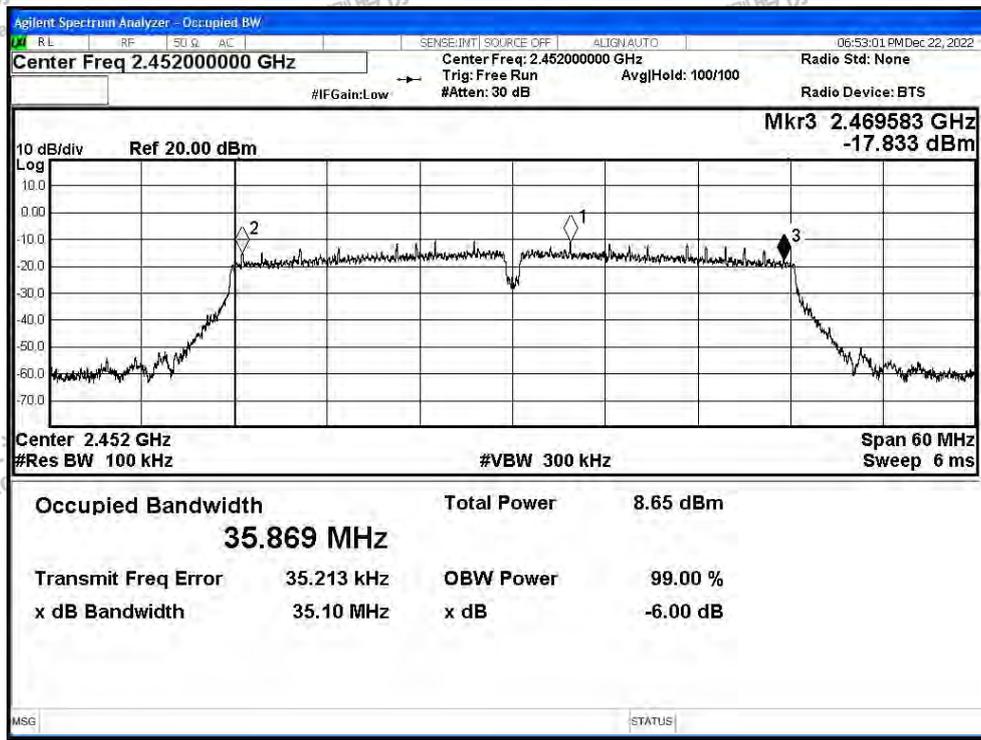




-6dB Bandwidth NVNT n40 2437MHz Ant1



-6dB Bandwidth NVNT n40 2452MHz Ant1





B.2 Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	8.57	30	Pass
NVNT	b	2437	Ant1	8.28	30	Pass
NVNT	b	2462	Ant1	8.38	30	Pass
NVNT	g	2412	Ant1	8.36	30	Pass
NVNT	g	2437	Ant1	8.67	30	Pass
NVNT	g	2462	Ant1	8.49	30	Pass
NVNT	n20	2412	Ant1	8.25	30	Pass
NVNT	n20	2437	Ant1	8.54	30	Pass
NVNT	n20	2462	Ant1	8.62	30	Pass
NVNT	n40	2422	Ant1	7.34	30	Pass
NVNT	n40	2437	Ant1	7.14	30	Pass
NVNT	n40	2452	Ant1	7.09	30	Pass



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B.3 Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	b	2412	Ant1	-14.61	8	Pass
NVNT	b	2437	Ant1	-12.85	8	Pass
NVNT	b	2462	Ant1	-14.07	8	Pass
NVNT	g	2412	Ant1	-16.56	8	Pass
NVNT	g	2437	Ant1	-18.53	8	Pass
NVNT	g	2462	Ant1	-18.67	8	Pass
NVNT	n20	2412	Ant1	-19.76	8	Pass
NVNT	n20	2437	Ant1	-18.97	8	Pass
NVNT	n20	2462	Ant1	-17.4	8	Pass
NVNT	n40	2422	Ant1	-25.24	8	Pass
NVNT	n40	2437	Ant1	-24.81	8	Pass
NVNT	n40	2452	Ant1	-24.74	8	Pass



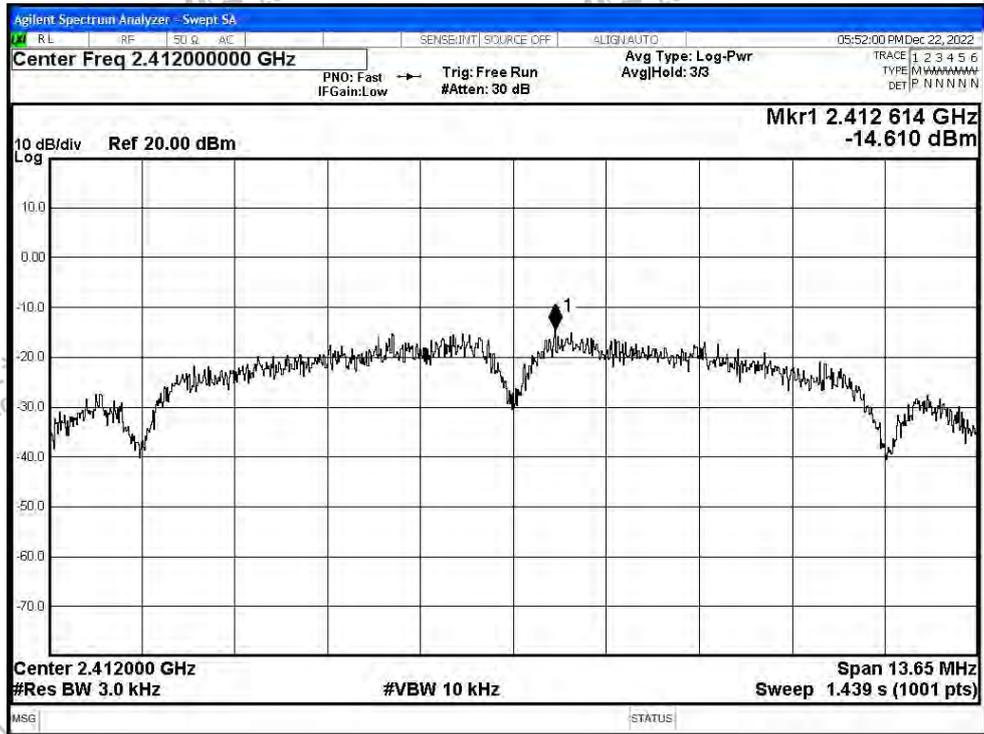
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 Scan code to check authenticity



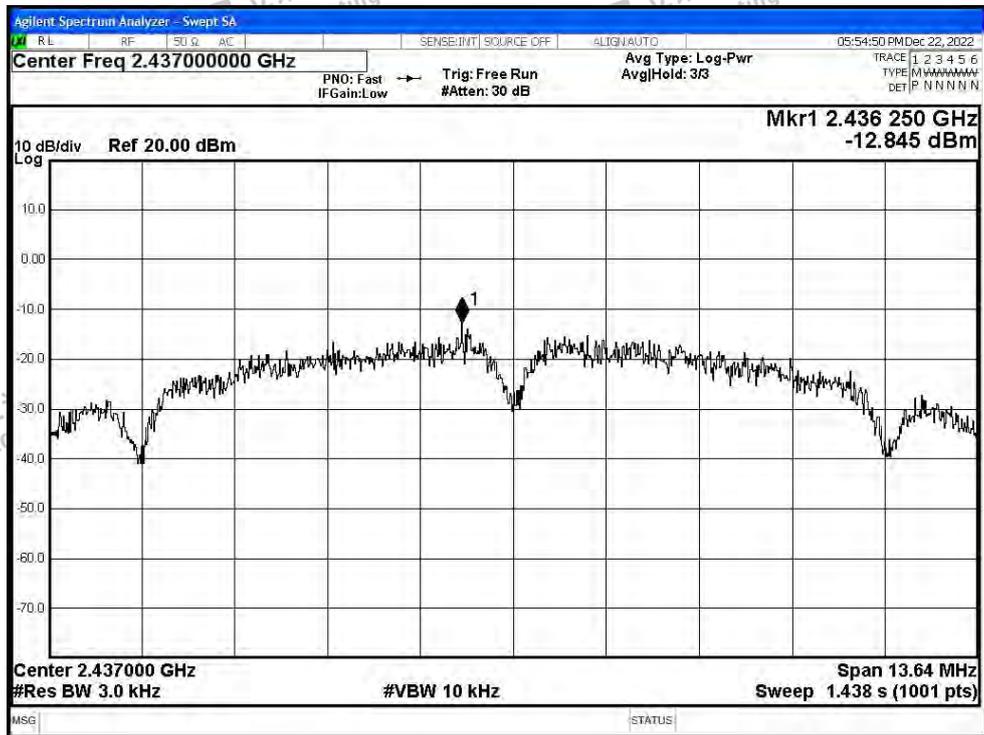
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Test Graphs

PSD NVNT b 2412MHz Ant1



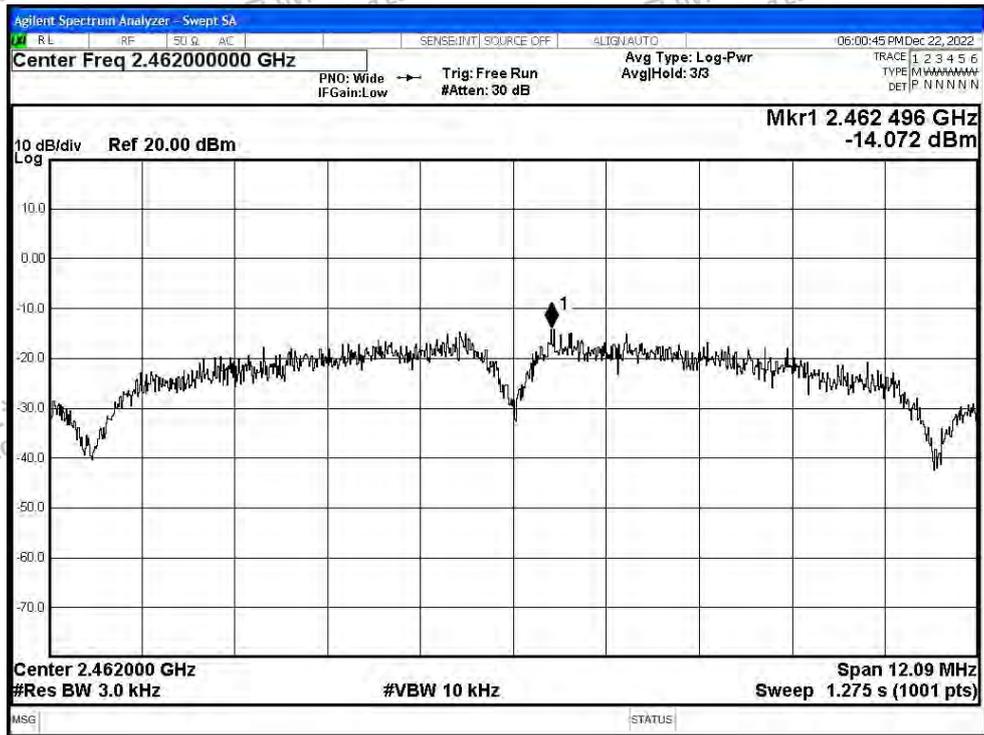
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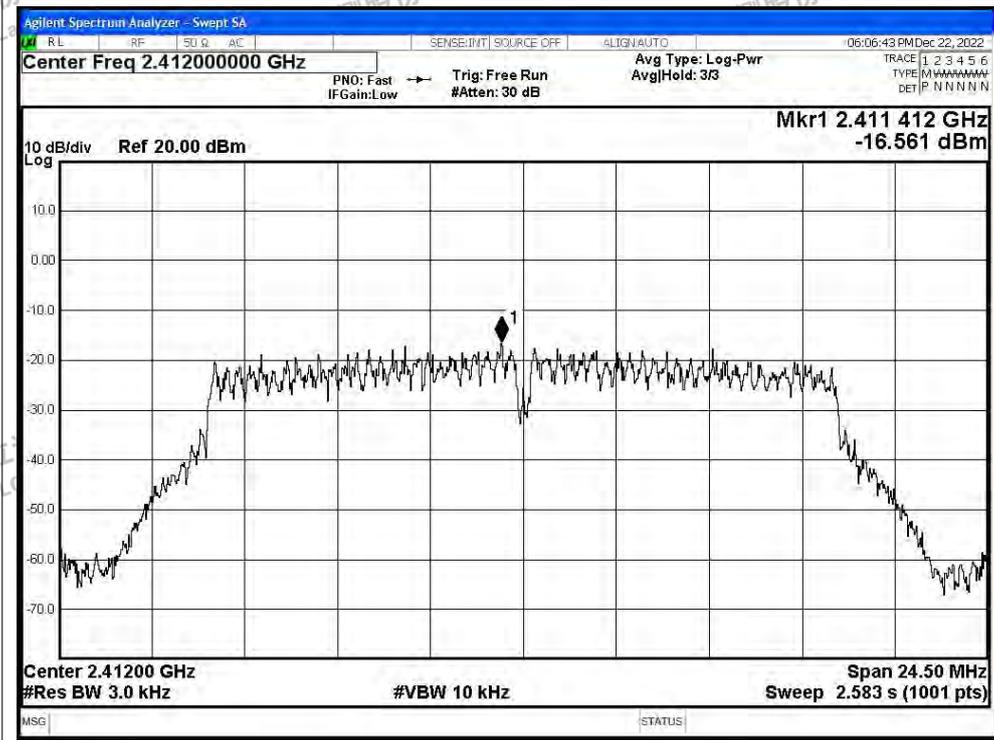


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PSD NVNT b 2462MHz Ant1



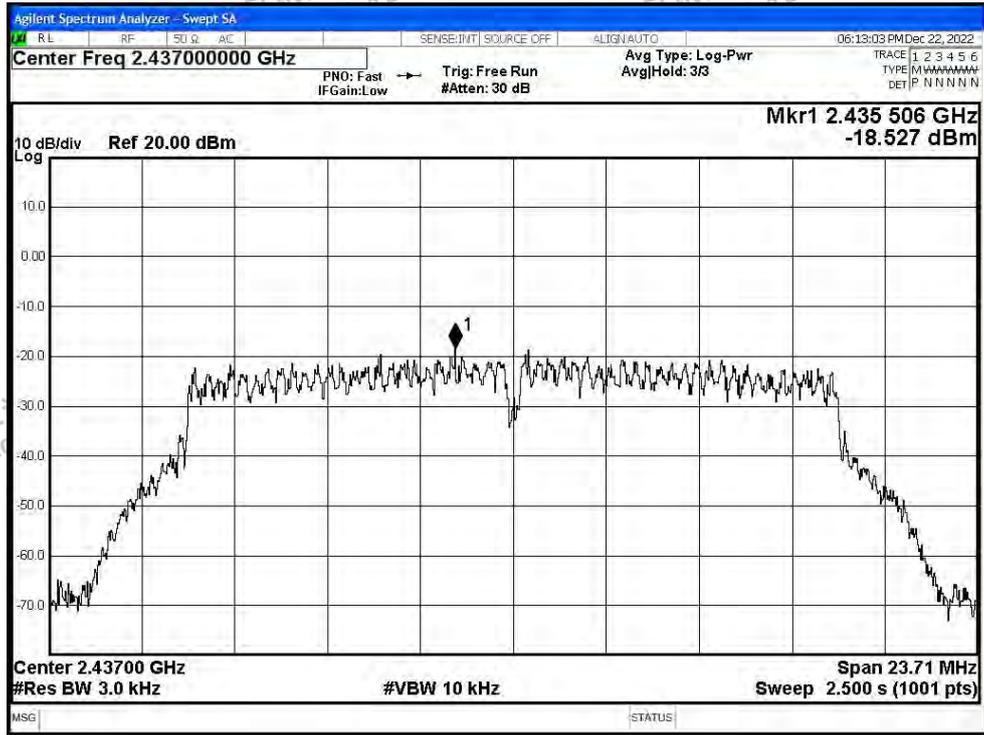
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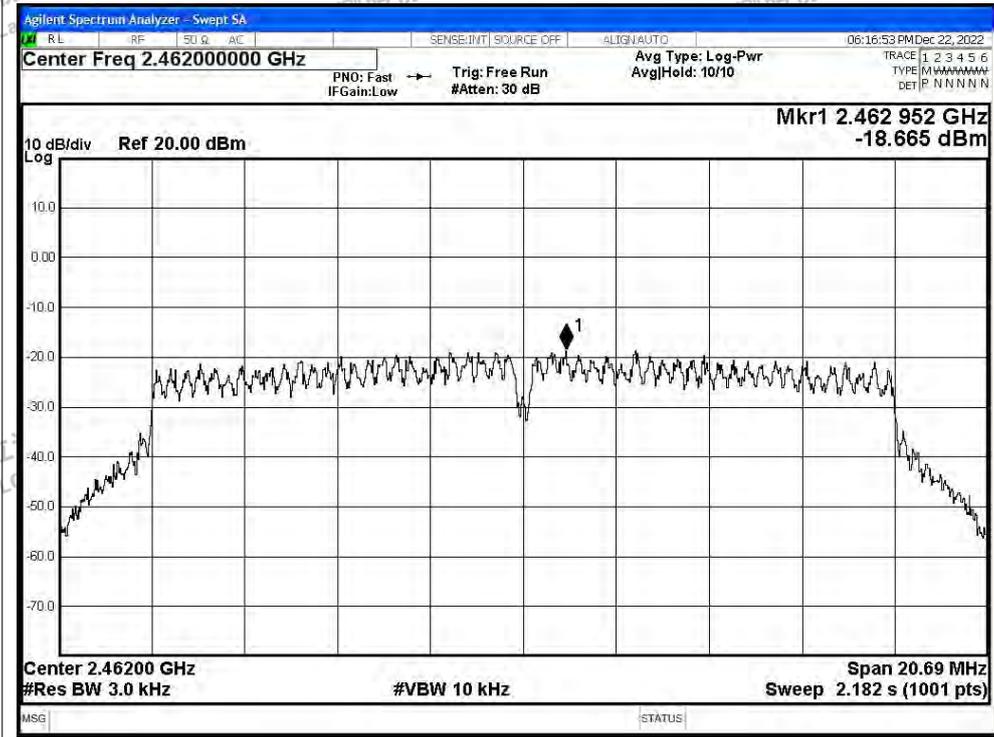


LCSA19022058EC

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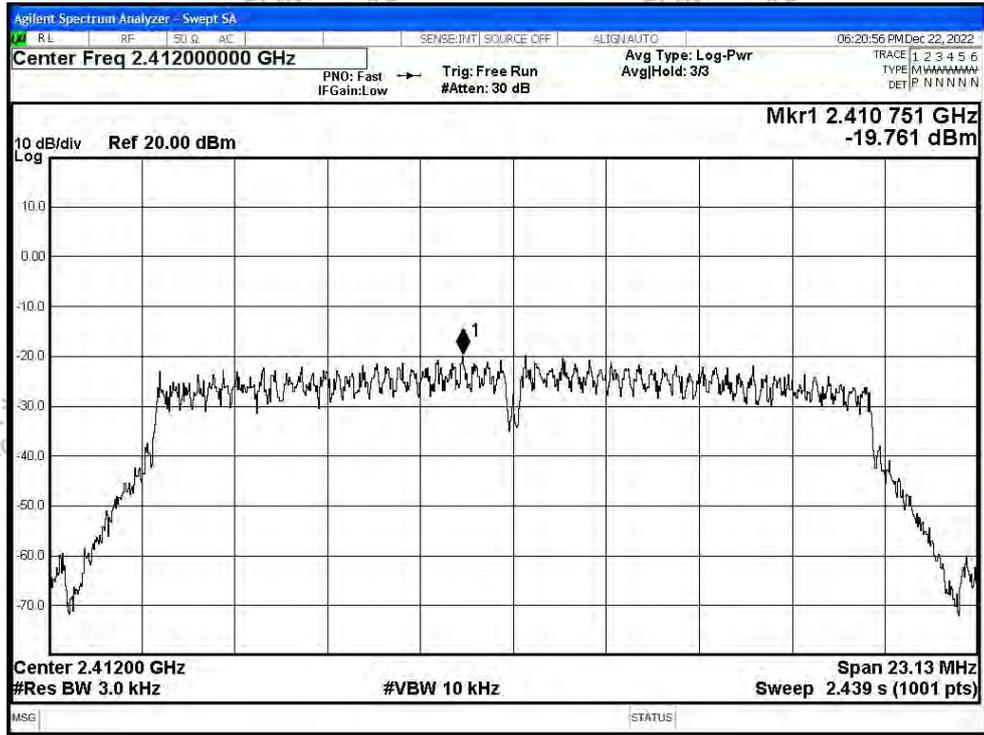
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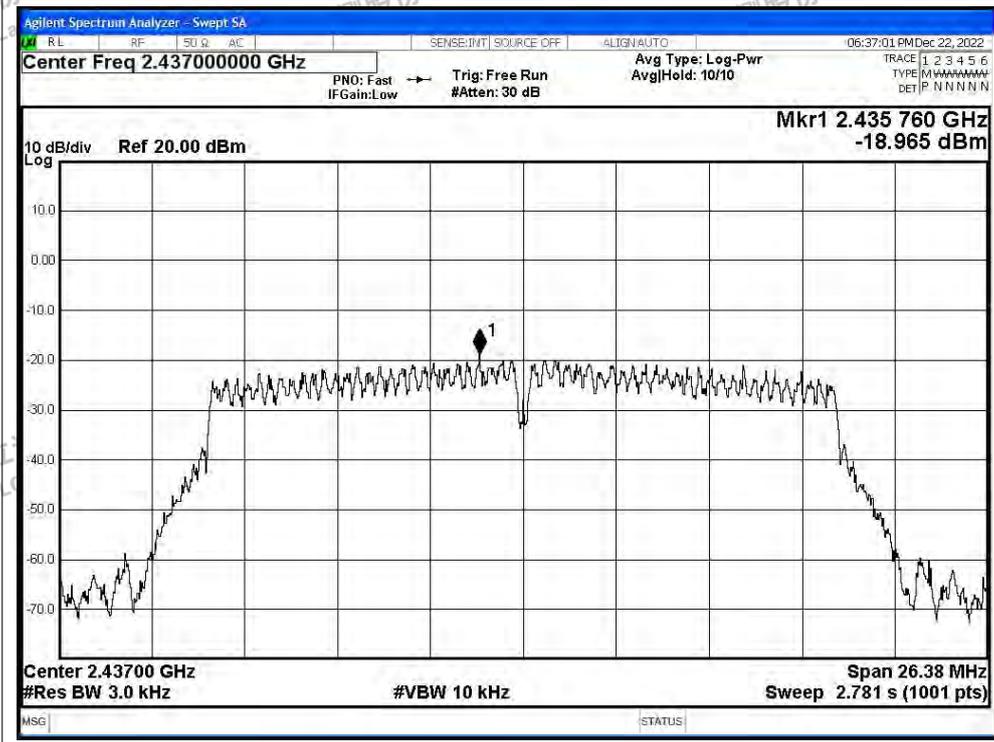


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PSD NVNT n20 2412MHz Ant1



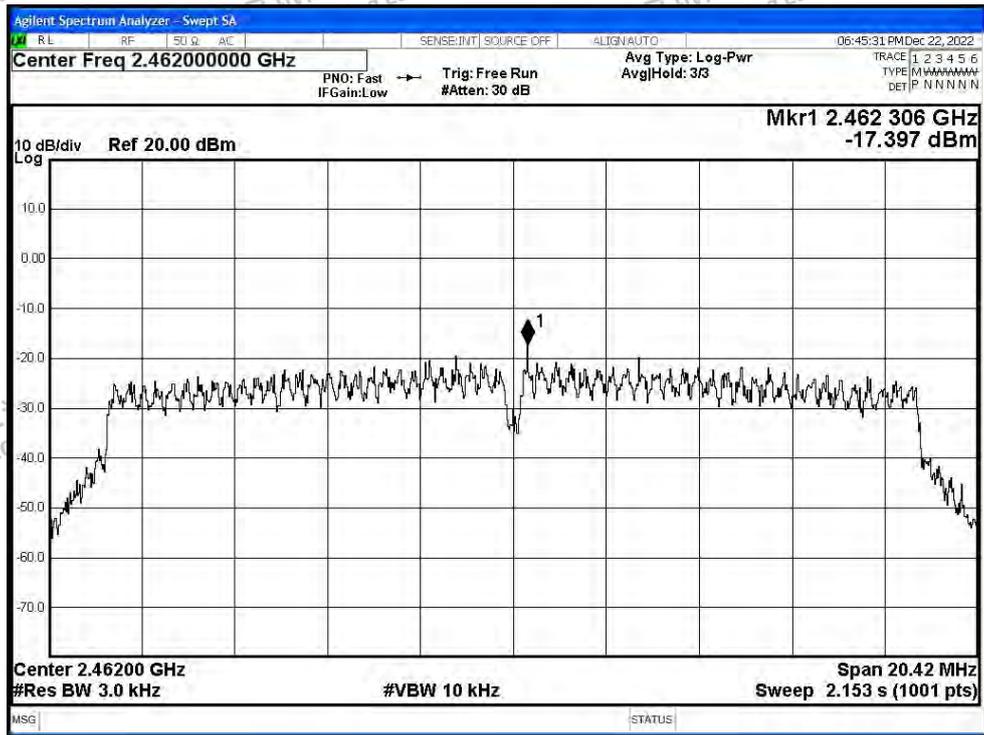
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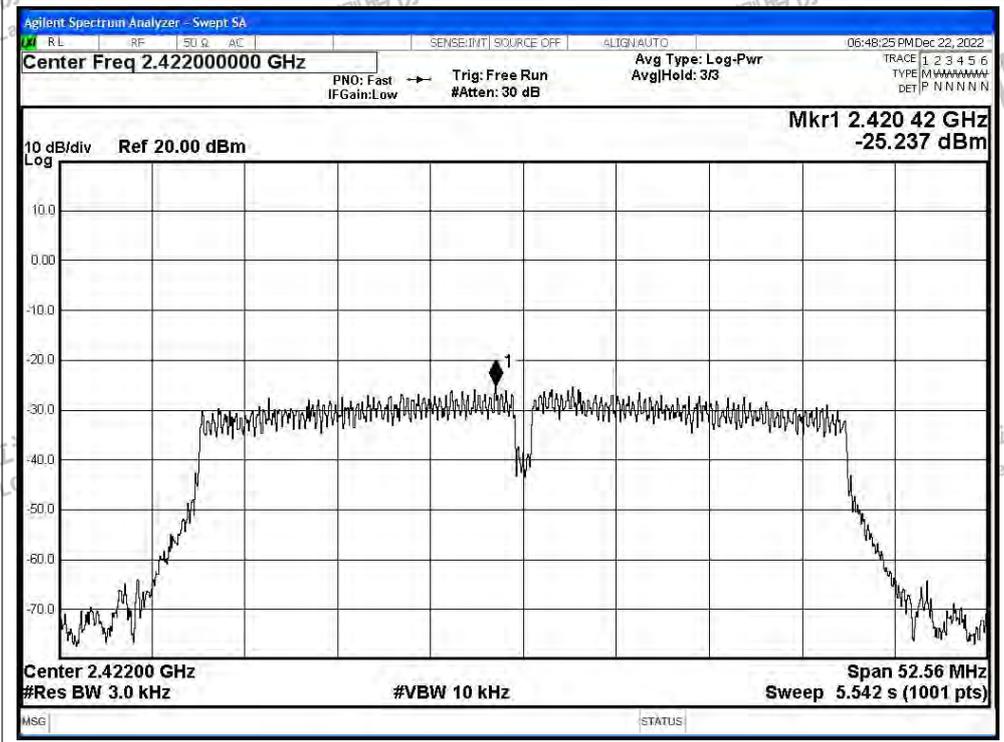


LCSA1022058EC

PSD NVNT n20 2462MHz Ant1



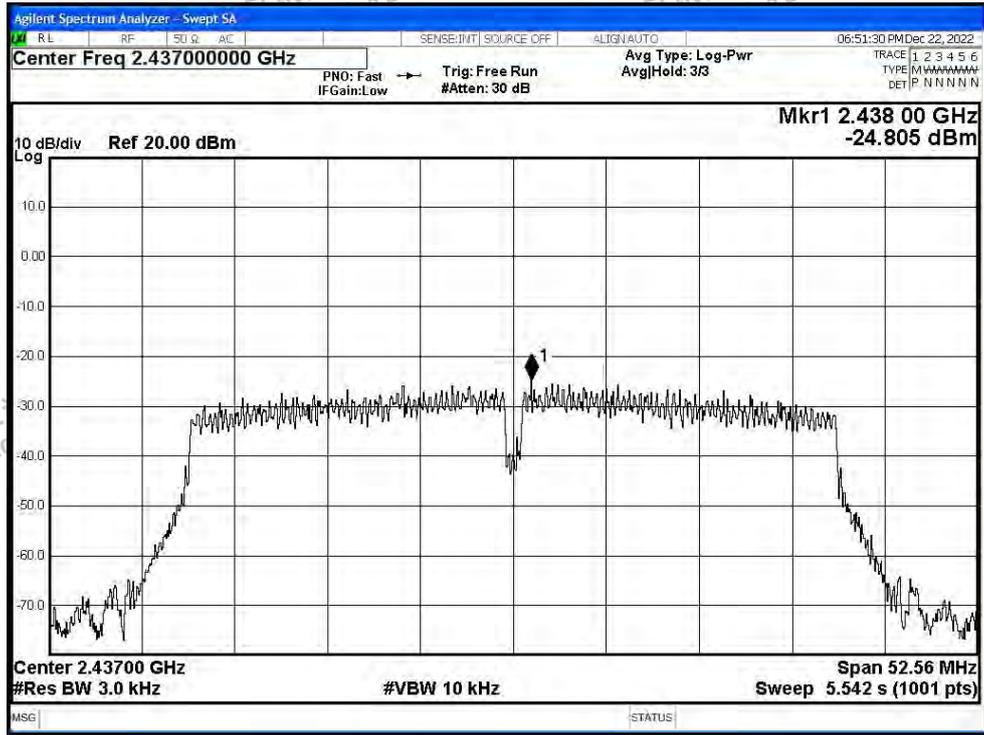
PSD NVNT n40 2422MHz Ant1



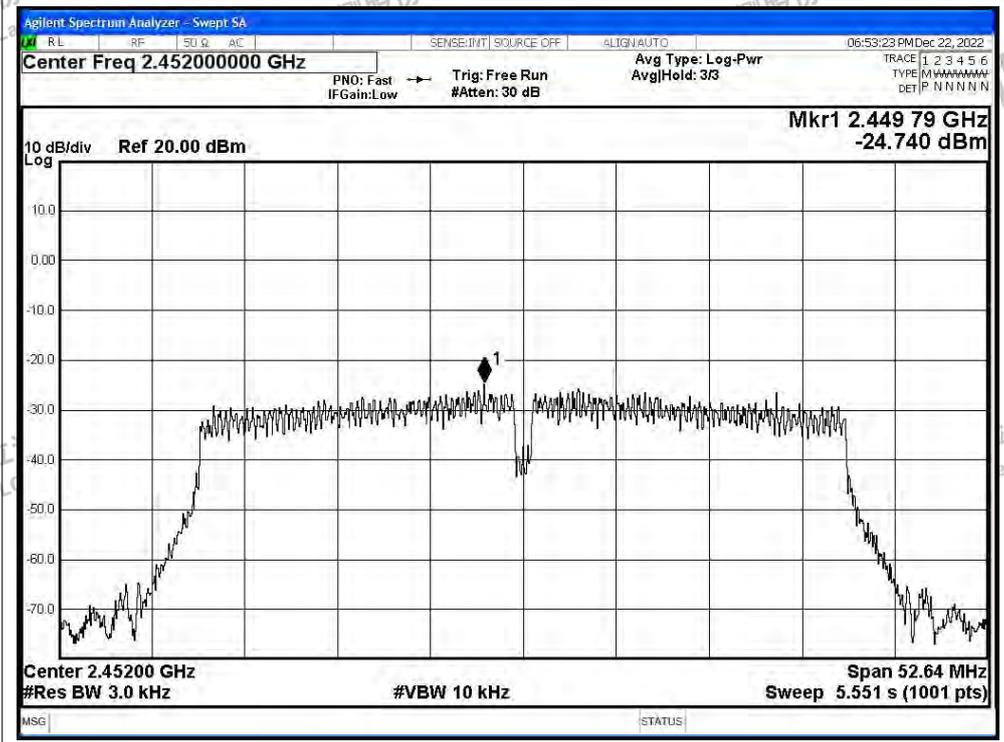


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PSD NVNT n40 2437MHz Ant1



PSD NVNT n40 2452MHz Ant1





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B.4 Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-53.08	-20	Pass
NVNT	b	2462	Ant1	-57.72	-20	Pass
NVNT	g	2412	Ant1	-41.57	-20	Pass
NVNT	g	2462	Ant1	-52.06	-20	Pass
NVNT	n20	2412	Ant1	-45.9	-20	Pass
NVNT	n20	2462	Ant1	-52.19	-20	Pass
NVNT	n40	2422	Ant1	-39.84	-20	Pass
NVNT	n40	2452	Ant1	-46.72	-20	Pass

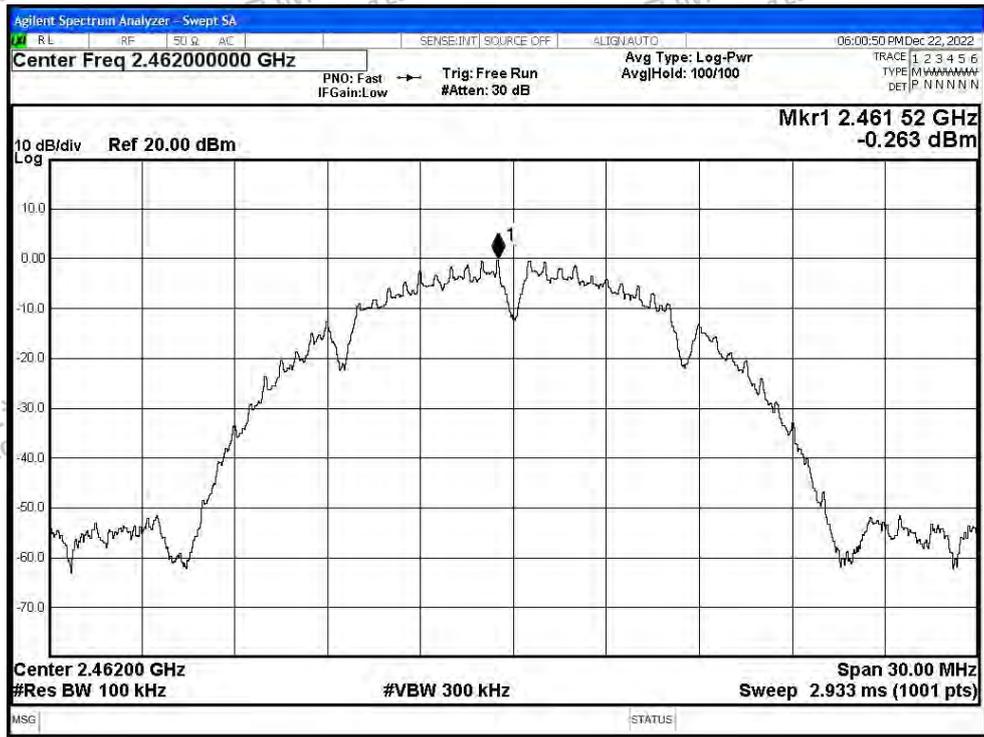


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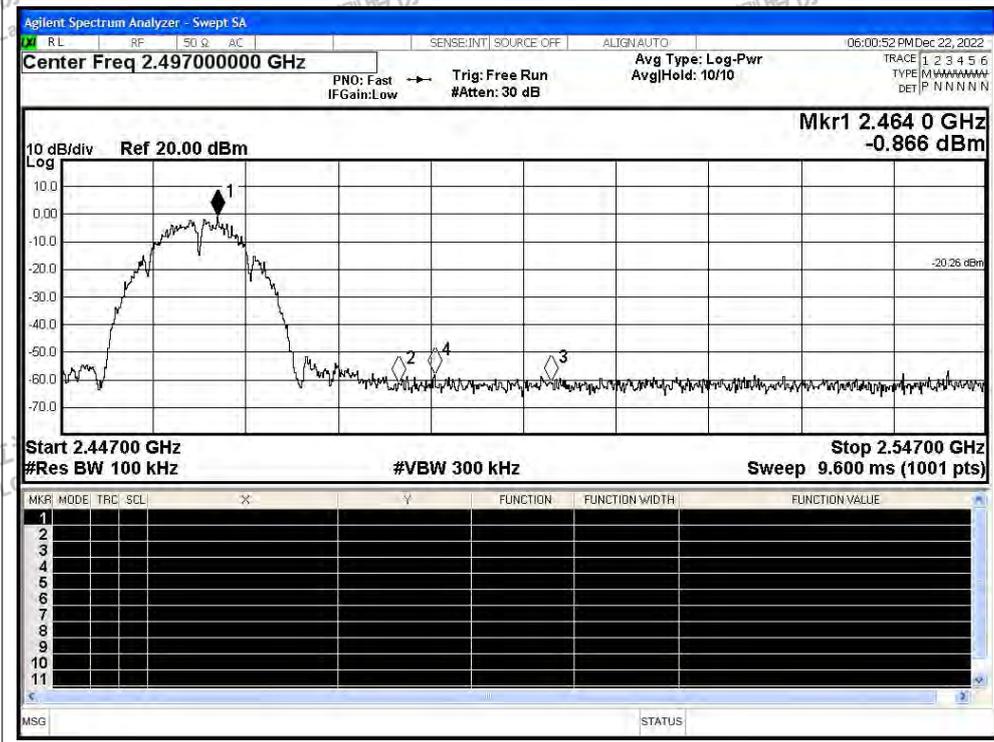


LCSA19022058EC

Band Edge NVNT b 2462MHz Ant1 Ref



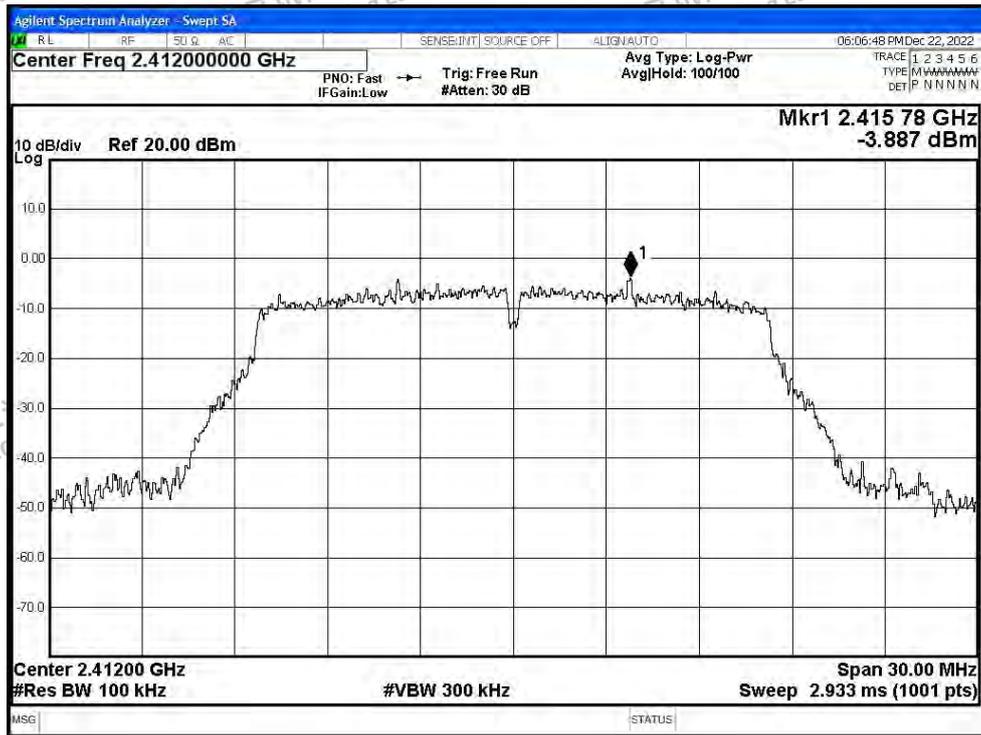
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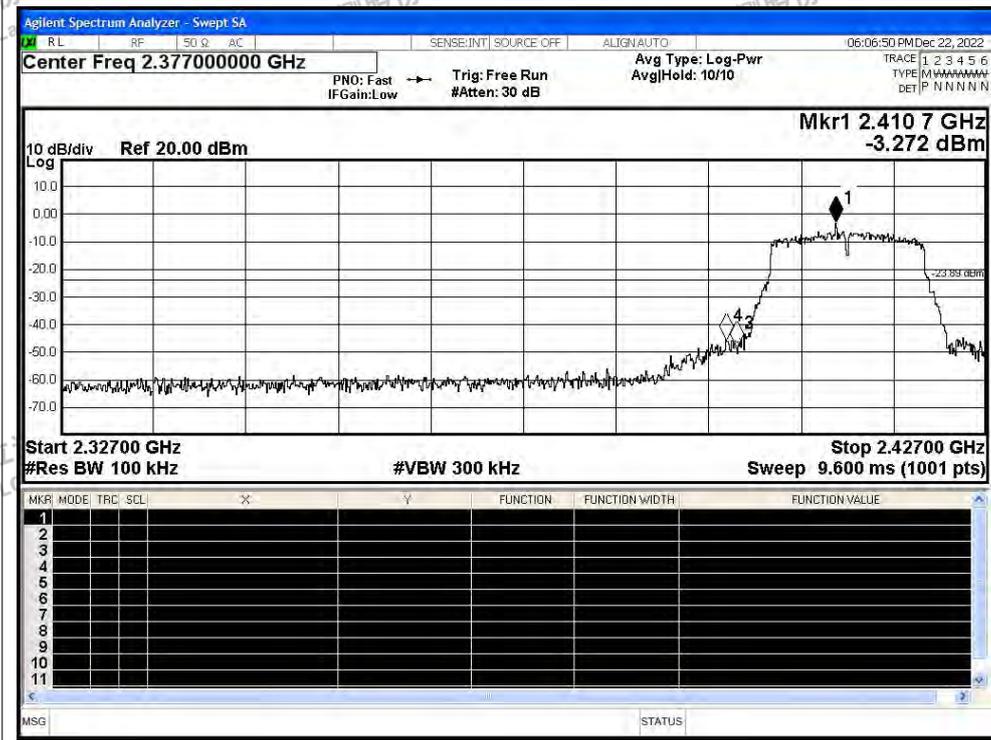


LCSA19022058EC

Band Edge NVNT g 2412MHz Ant1 Ref



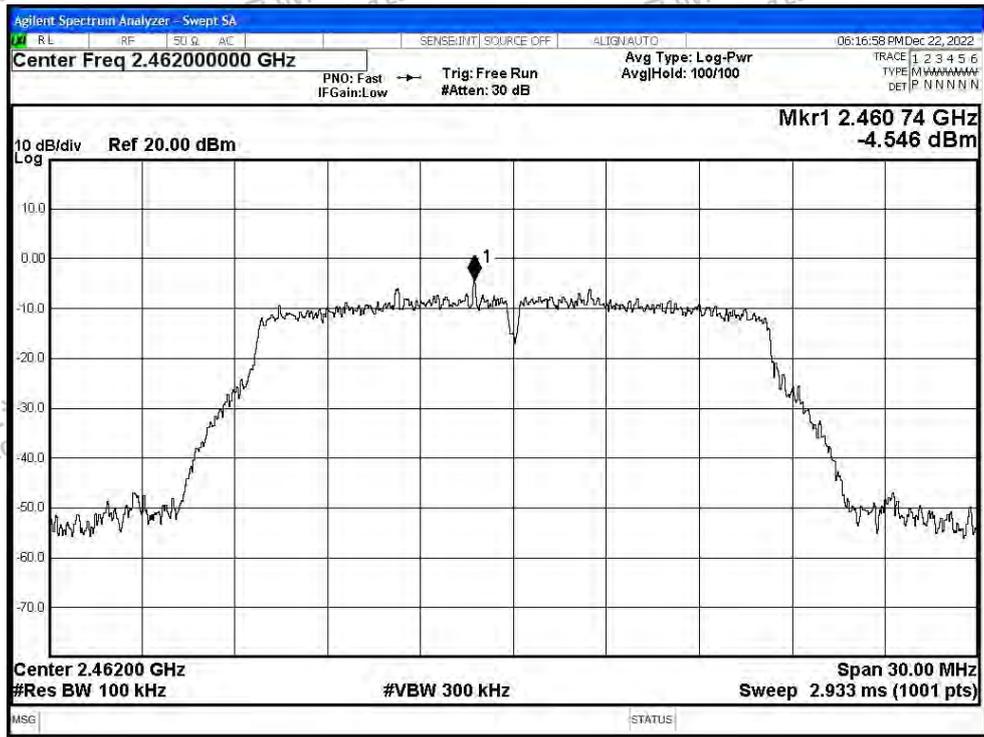
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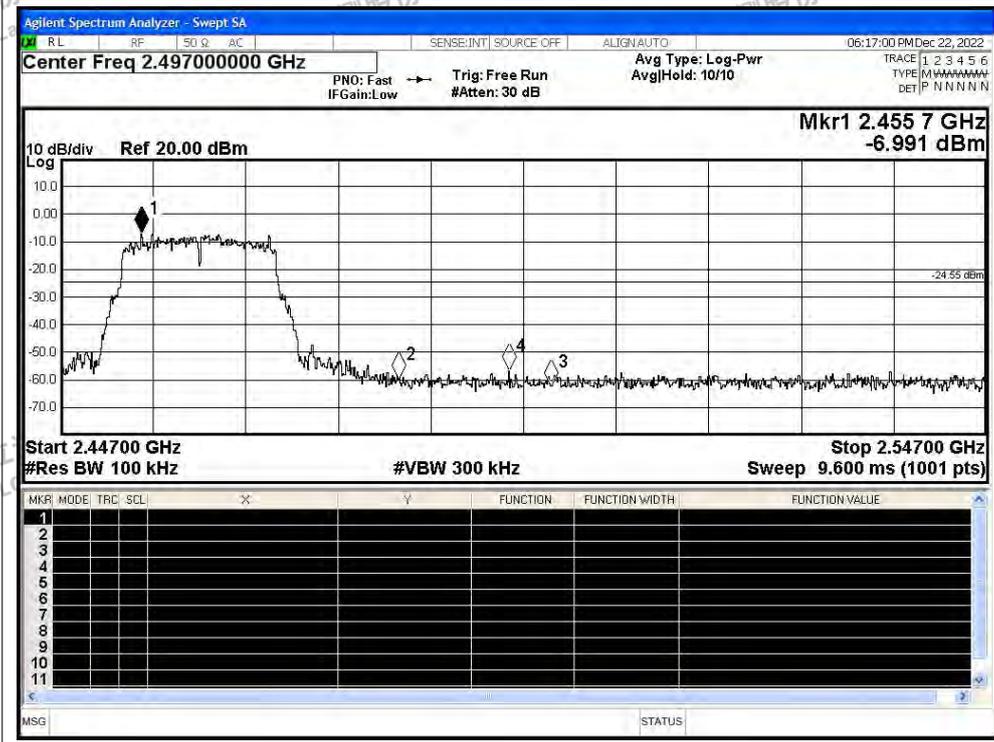


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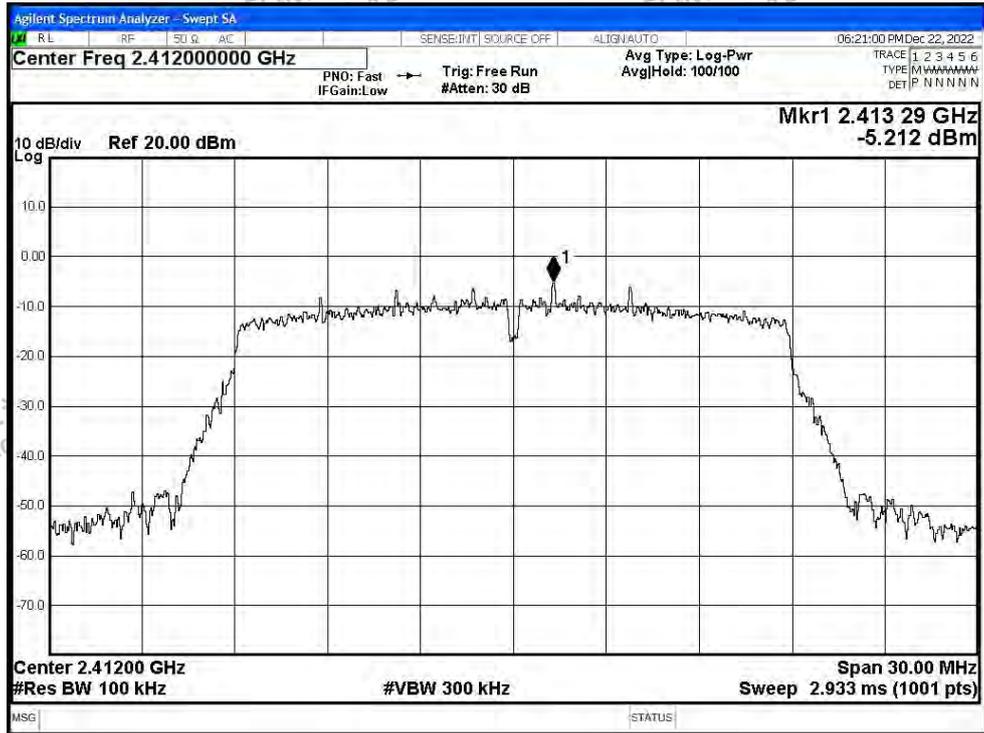
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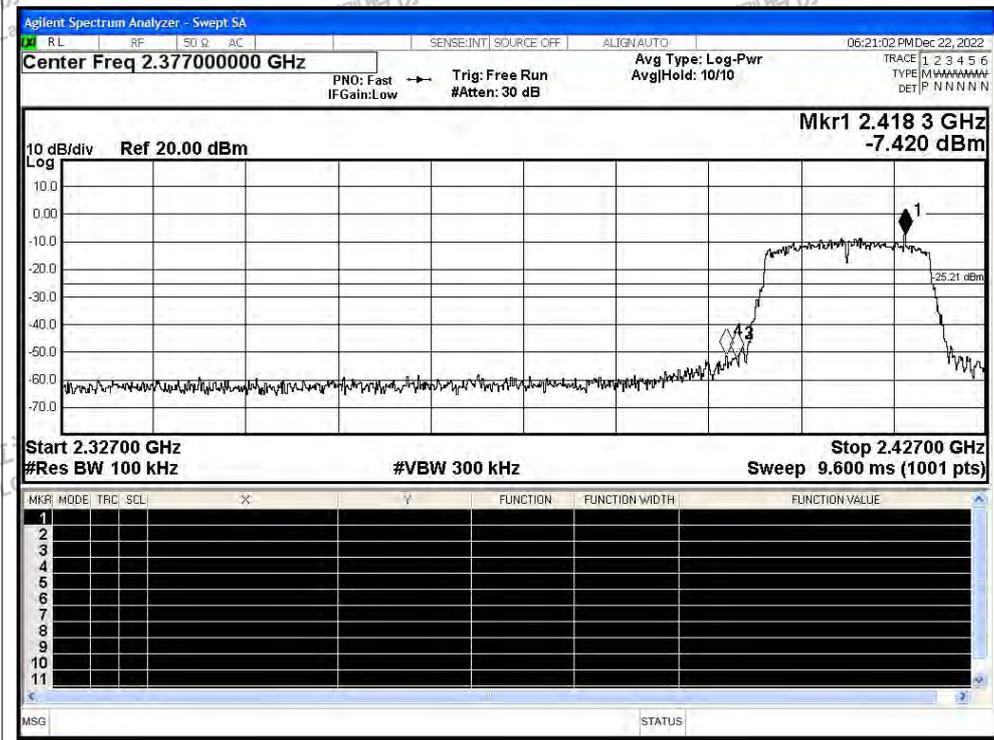


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Band Edge NVNT n20 2412MHz Ant1 Ref



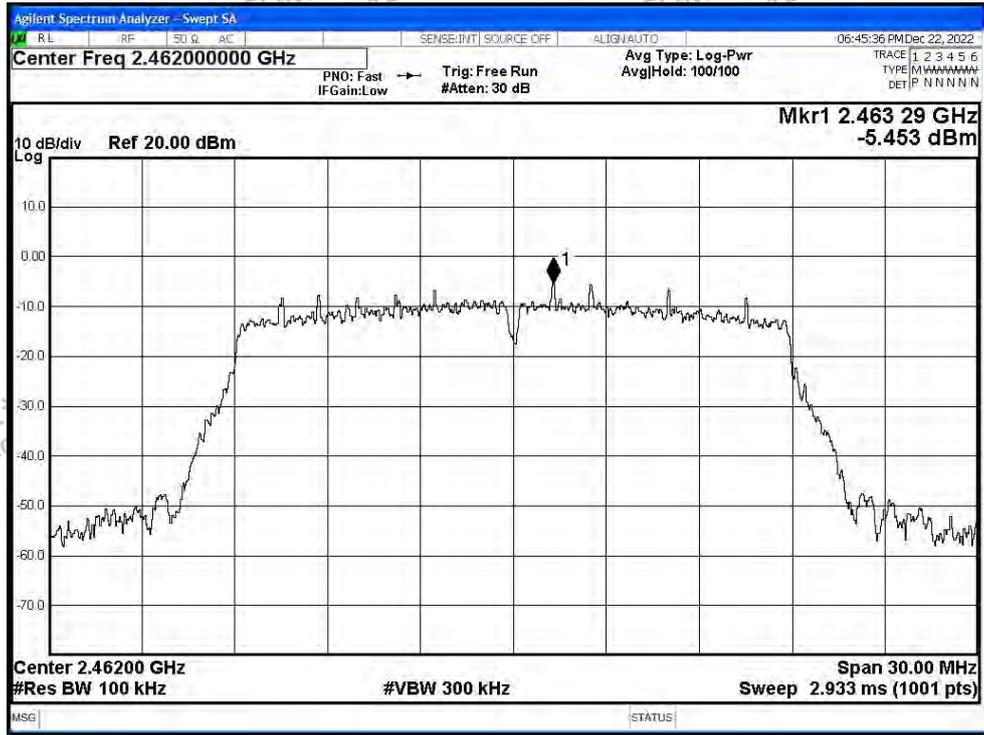
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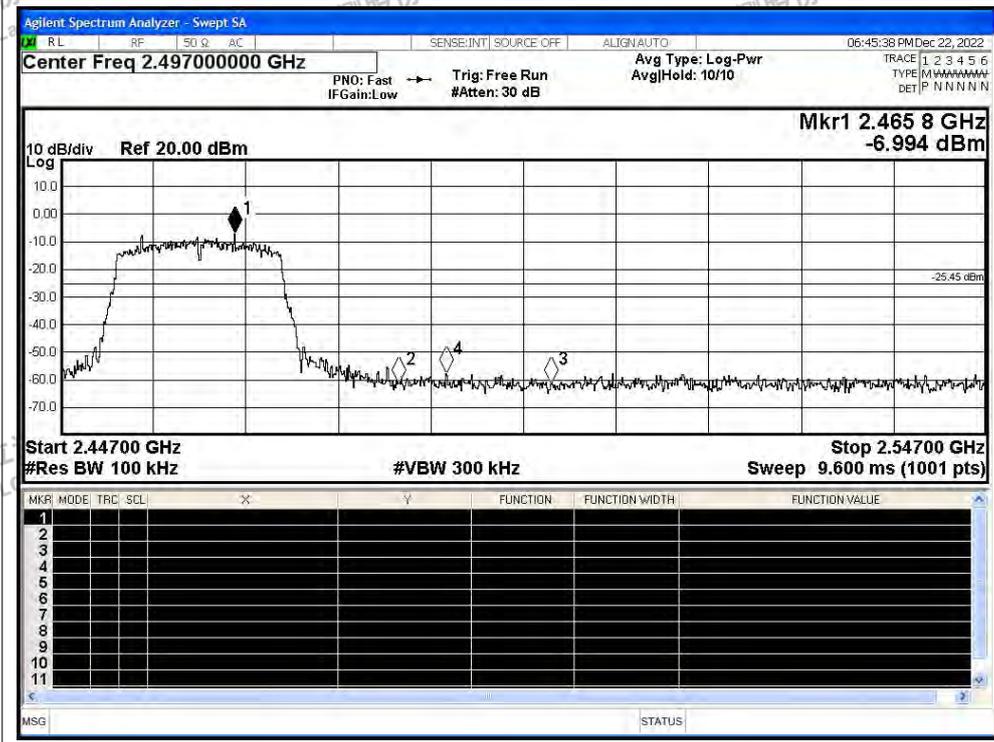


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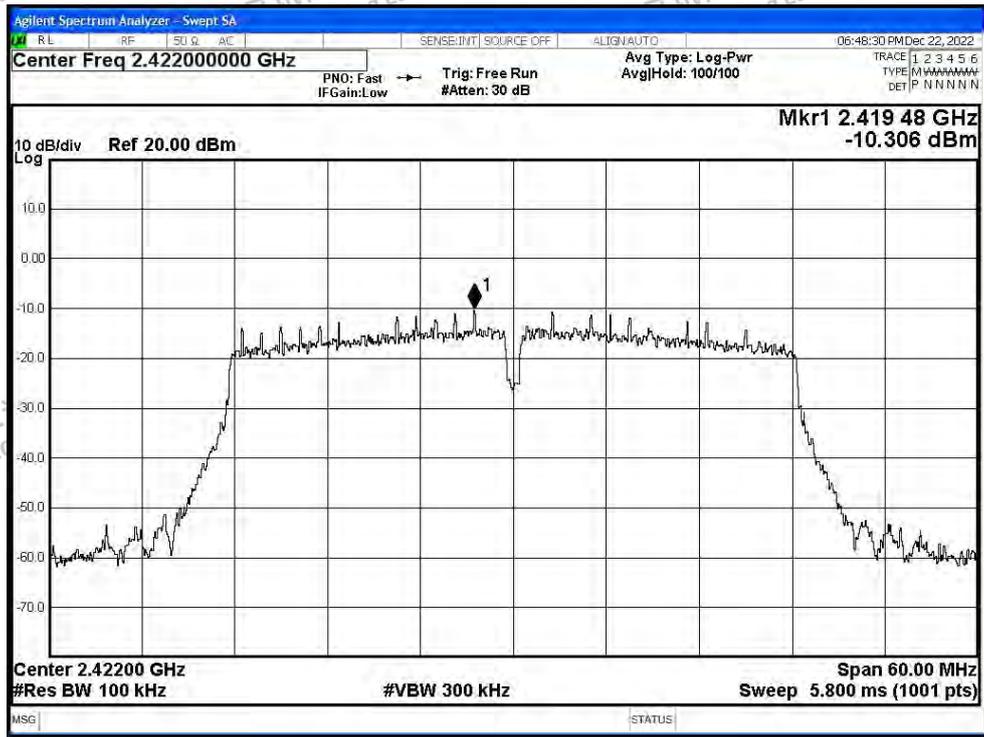
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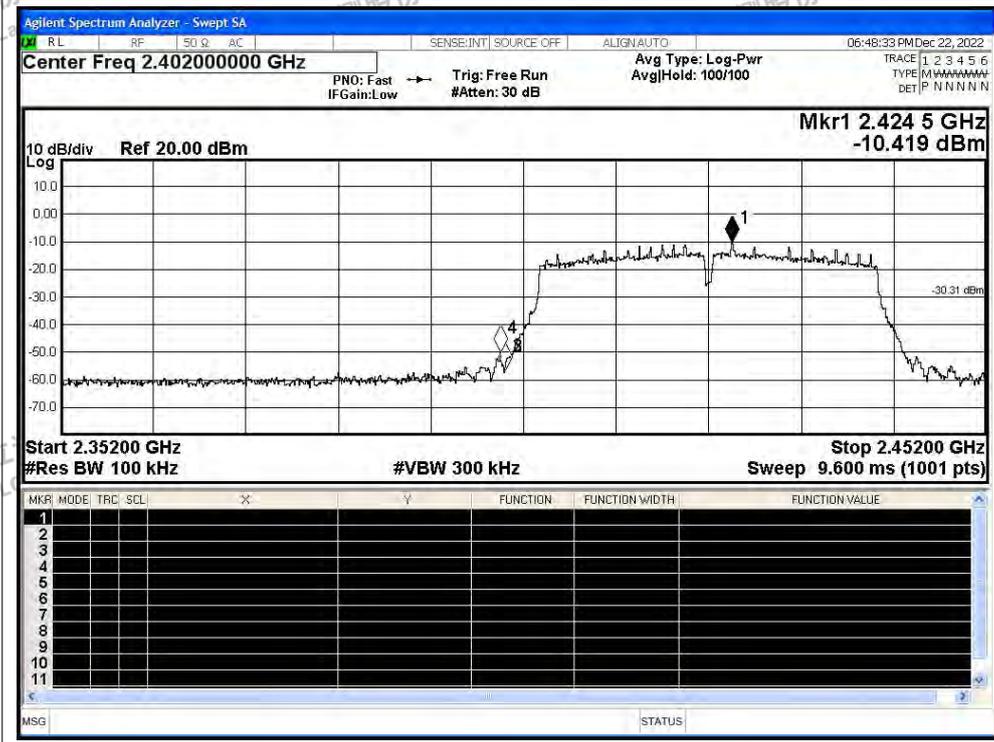


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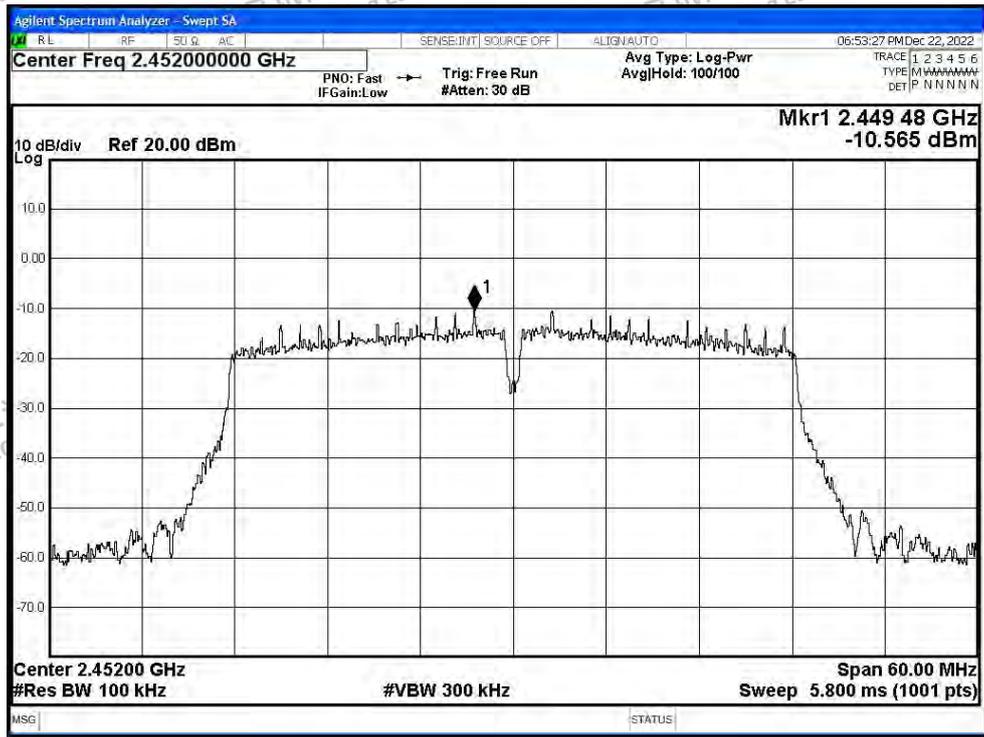
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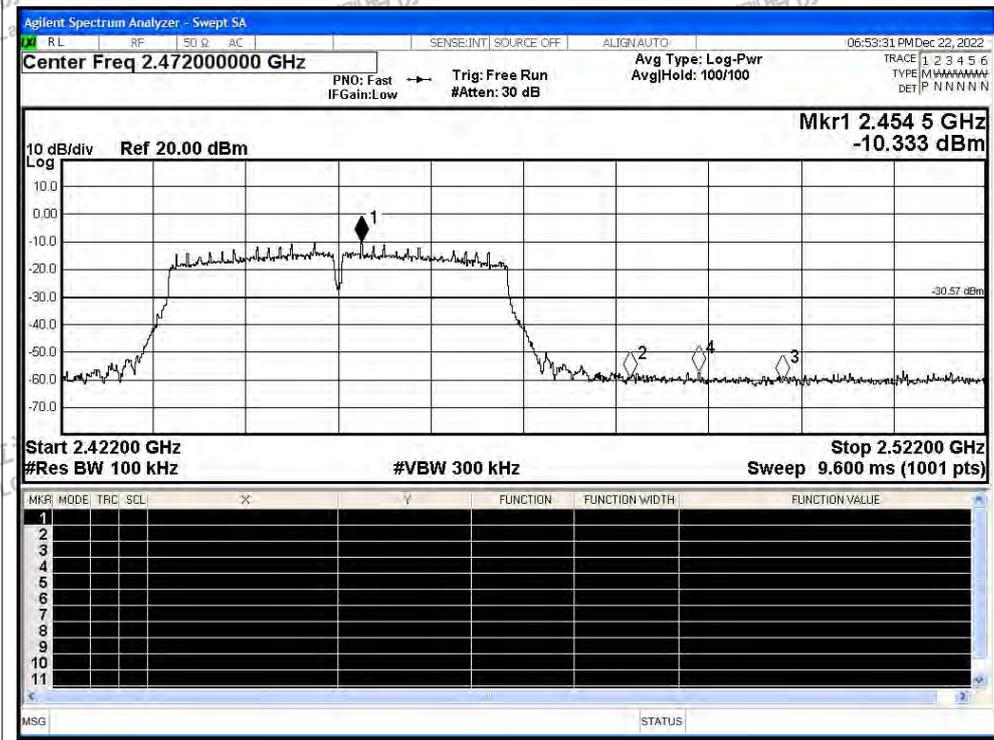
Band Edge NVNT n40 2422MHz Ant1 Emission



Band Edge NVNT n40 2452MHz Ant1 Ref



Band Edge NVNT n40 2452MHz Ant1 Emission





B.5 Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-46.73	-20	Pass
NVNT	b	2437	Ant1	-47.46	-20	Pass
NVNT	b	2462	Ant1	-47.26	-20	Pass
NVNT	g	2412	Ant1	-44.64	-20	Pass
NVNT	g	2437	Ant1	-43.42	-20	Pass
NVNT	g	2462	Ant1	-42.91	-20	Pass
NVNT	n20	2412	Ant1	-41.8	-20	Pass
NVNT	n20	2437	Ant1	-42.76	-20	Pass
NVNT	n20	2462	Ant1	-42.96	-20	Pass
NVNT	n40	2422	Ant1	-37.4	-20	Pass
NVNT	n40	2437	Ant1	-36.44	-20	Pass
NVNT	n40	2452	Ant1	-37.36	-20	Pass



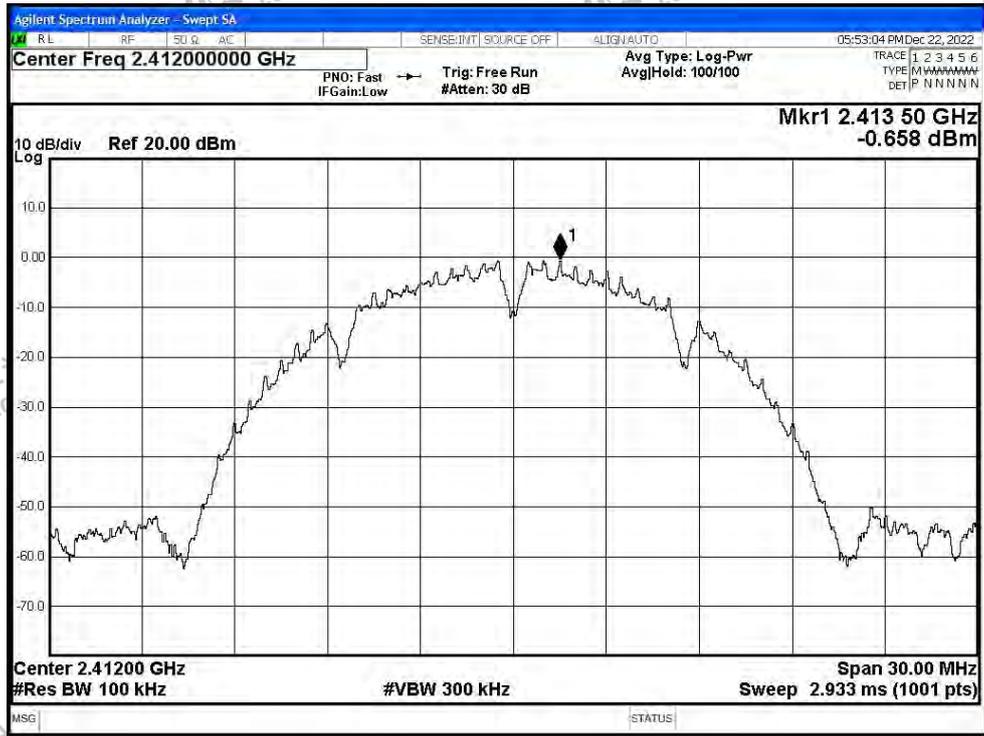
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 Scan code to check authenticity



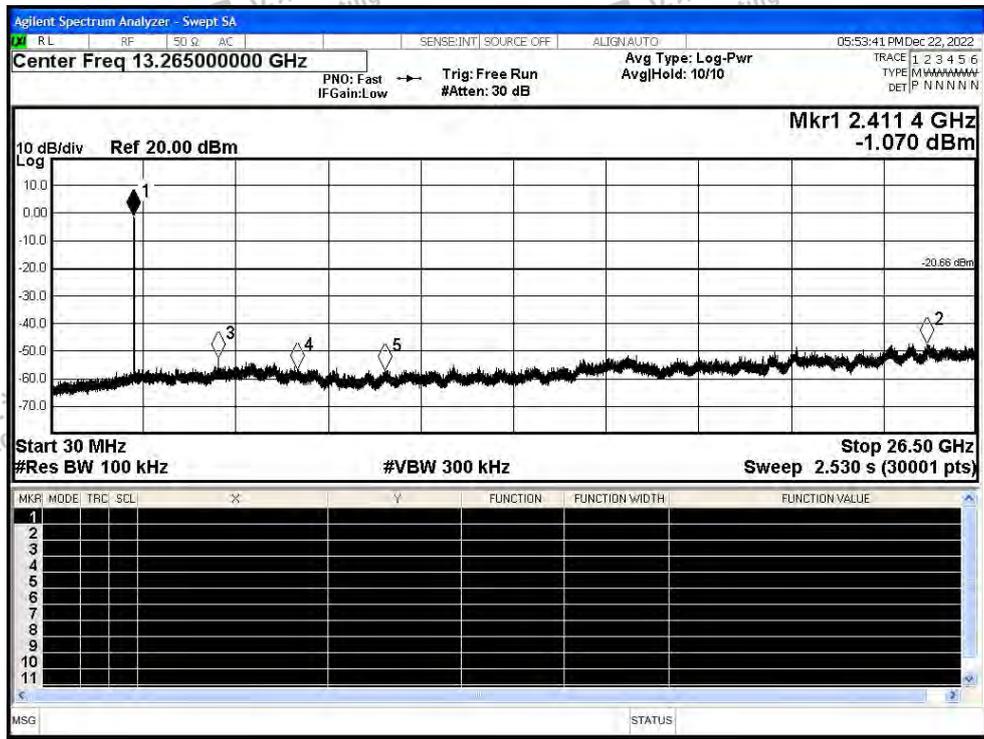
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Test Graphs

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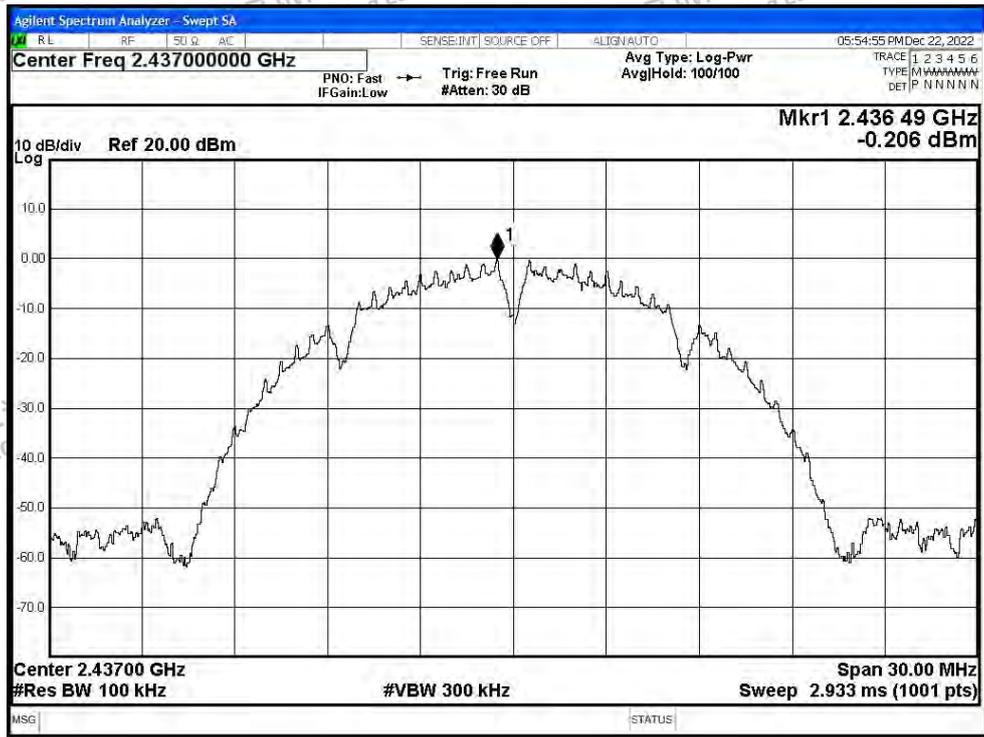
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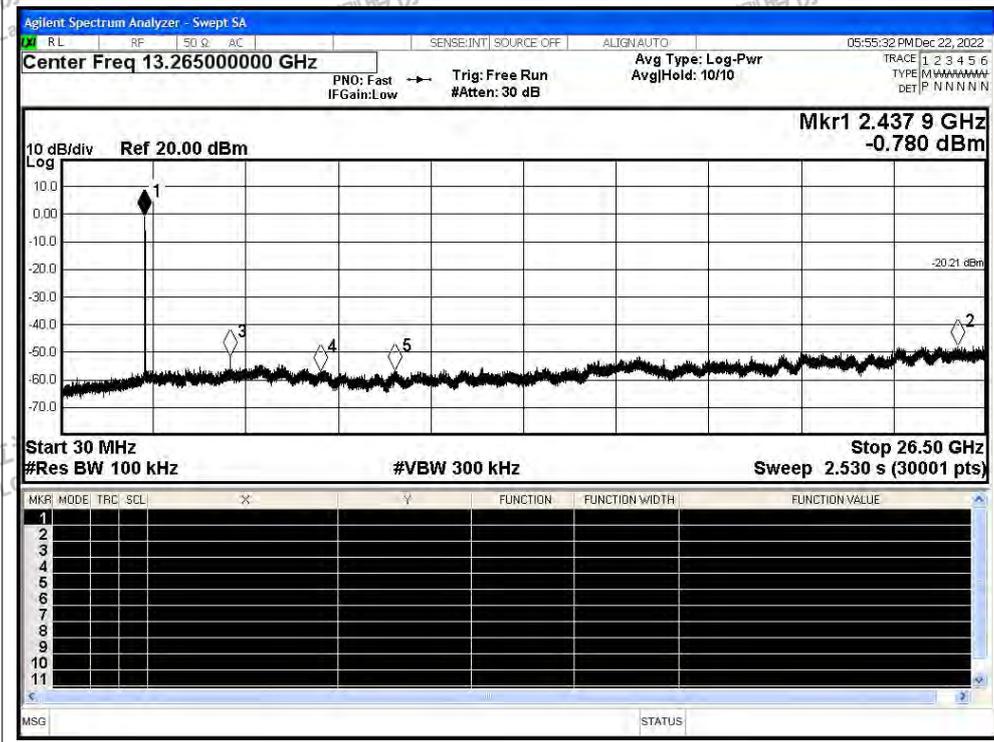


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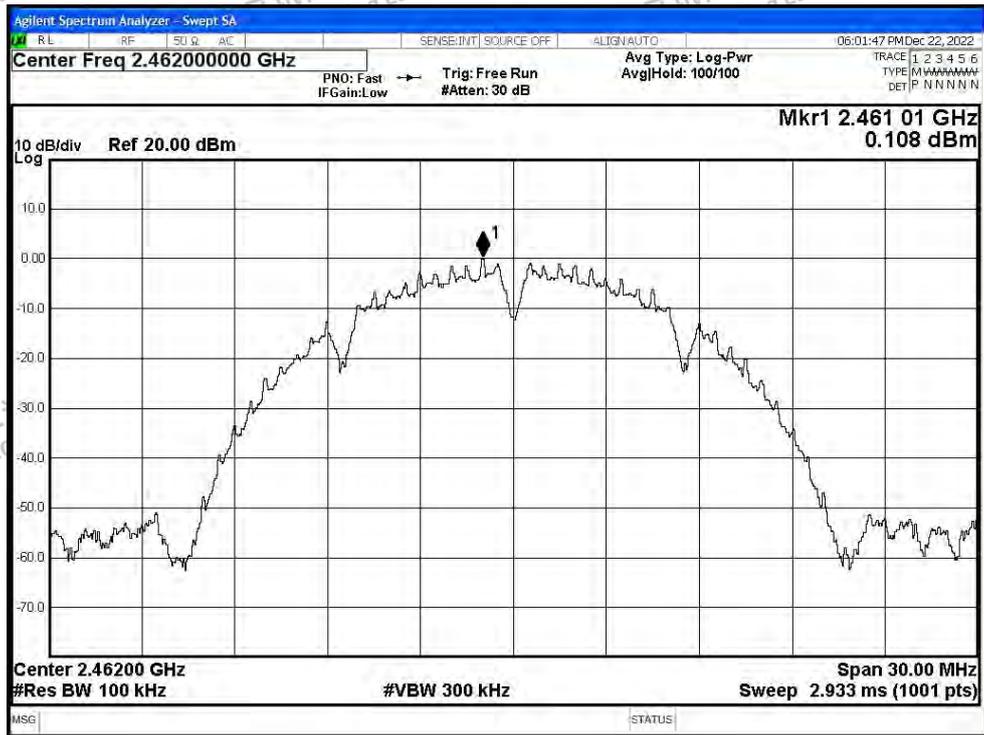
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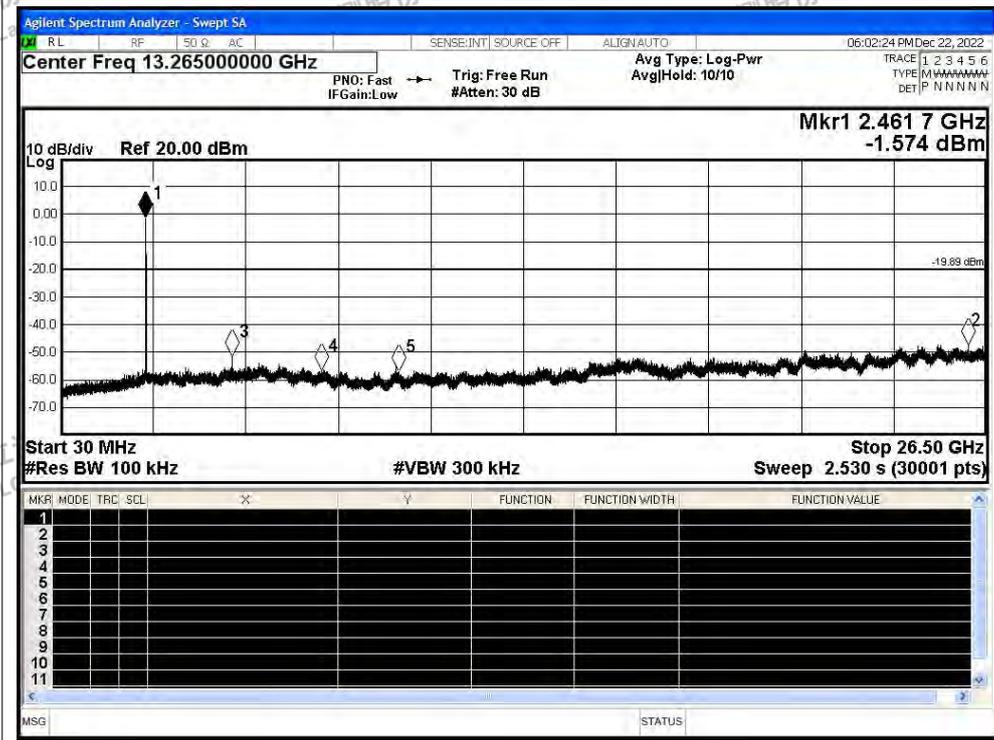


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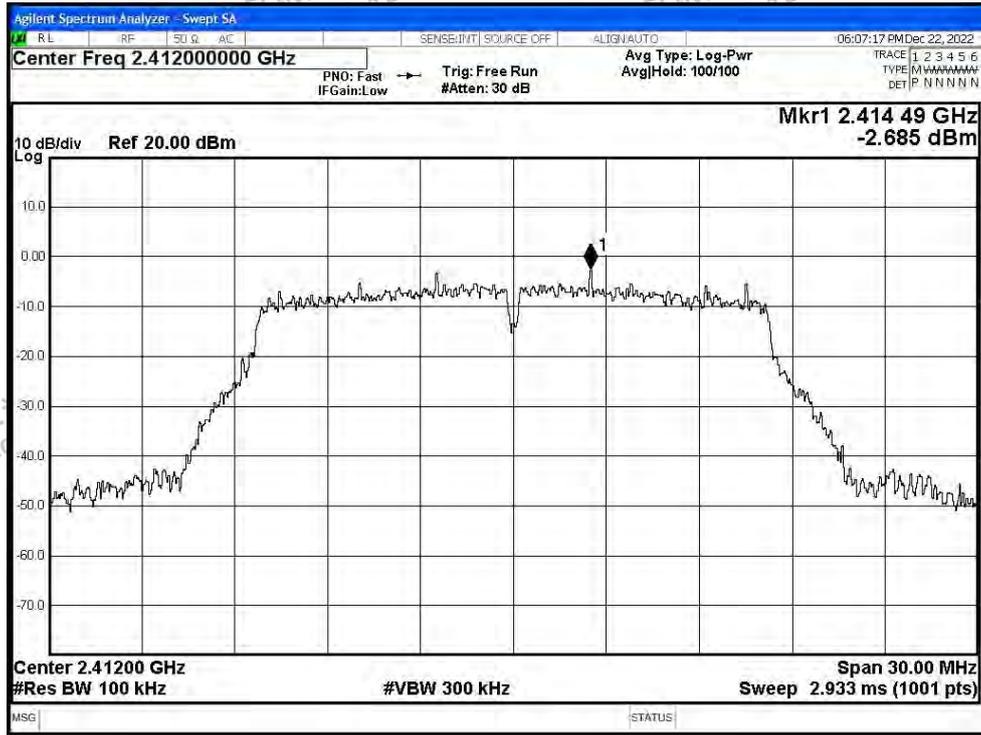
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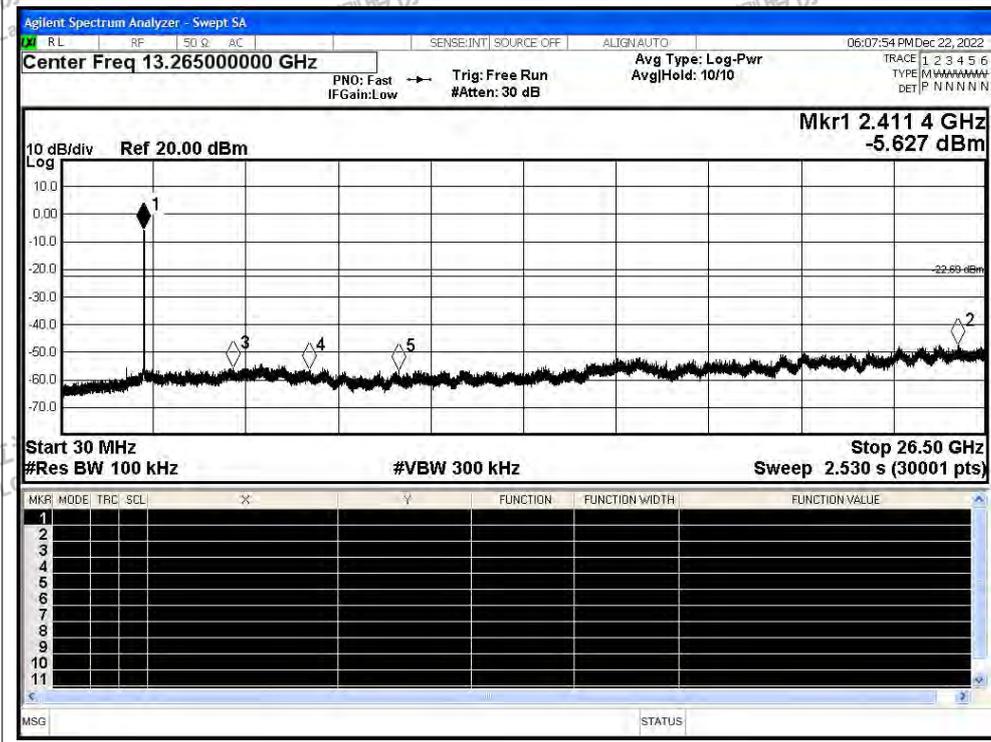
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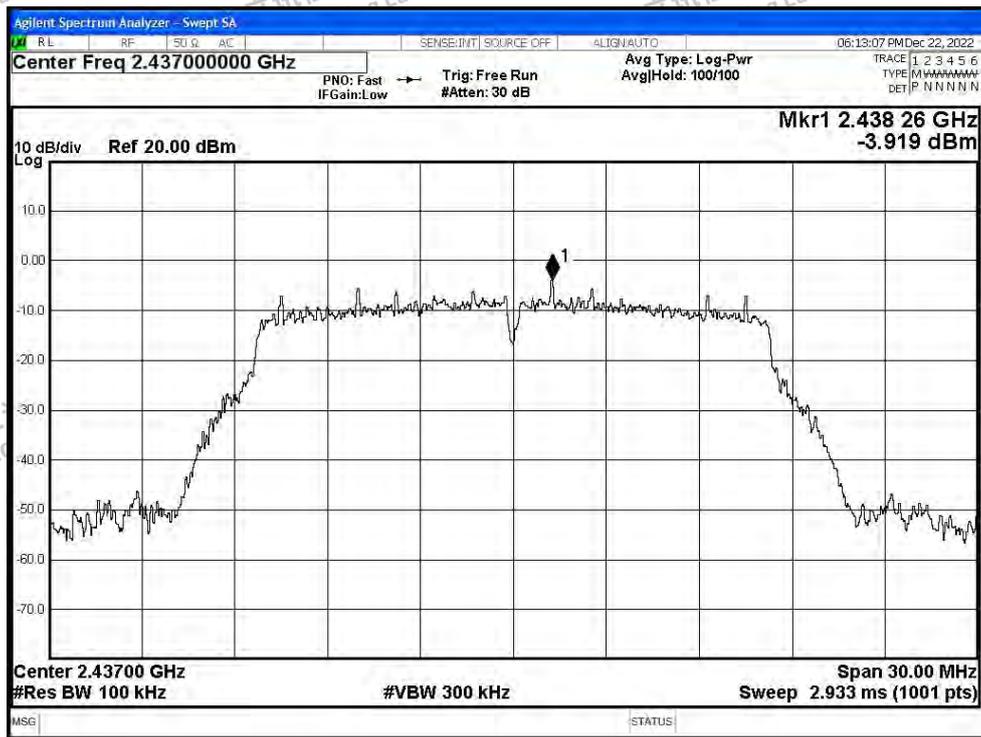
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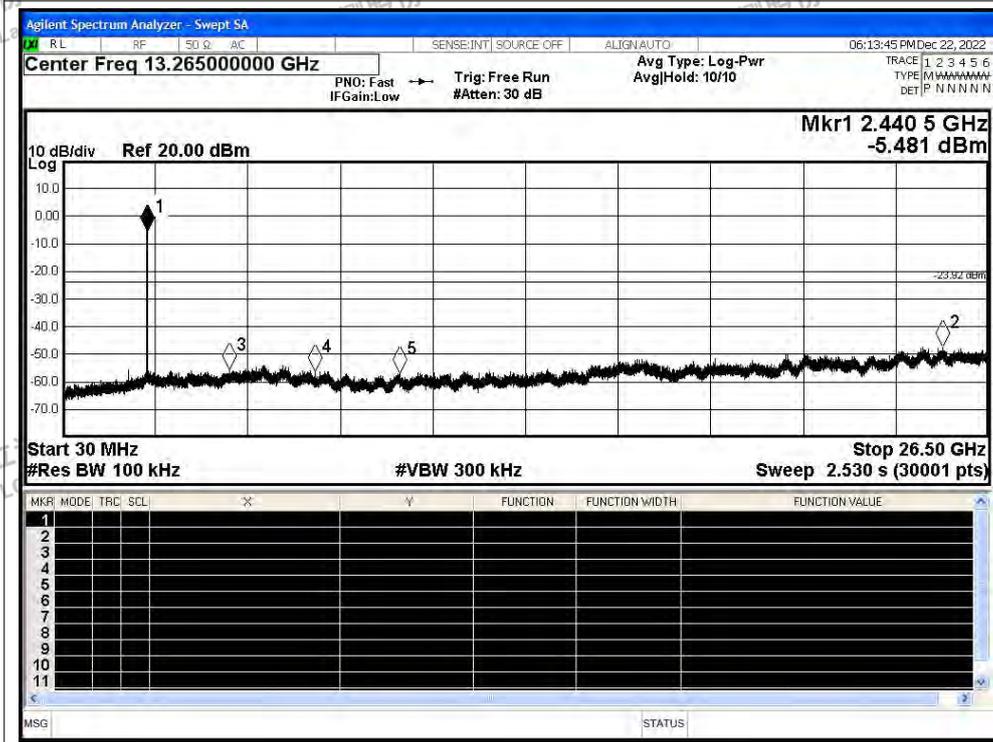


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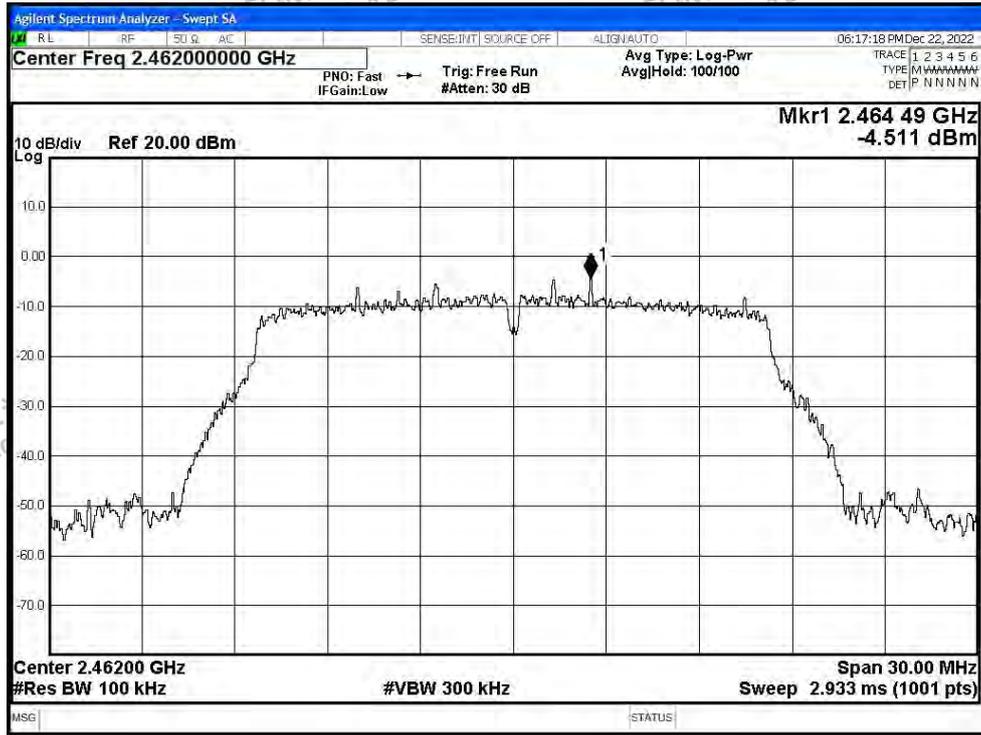
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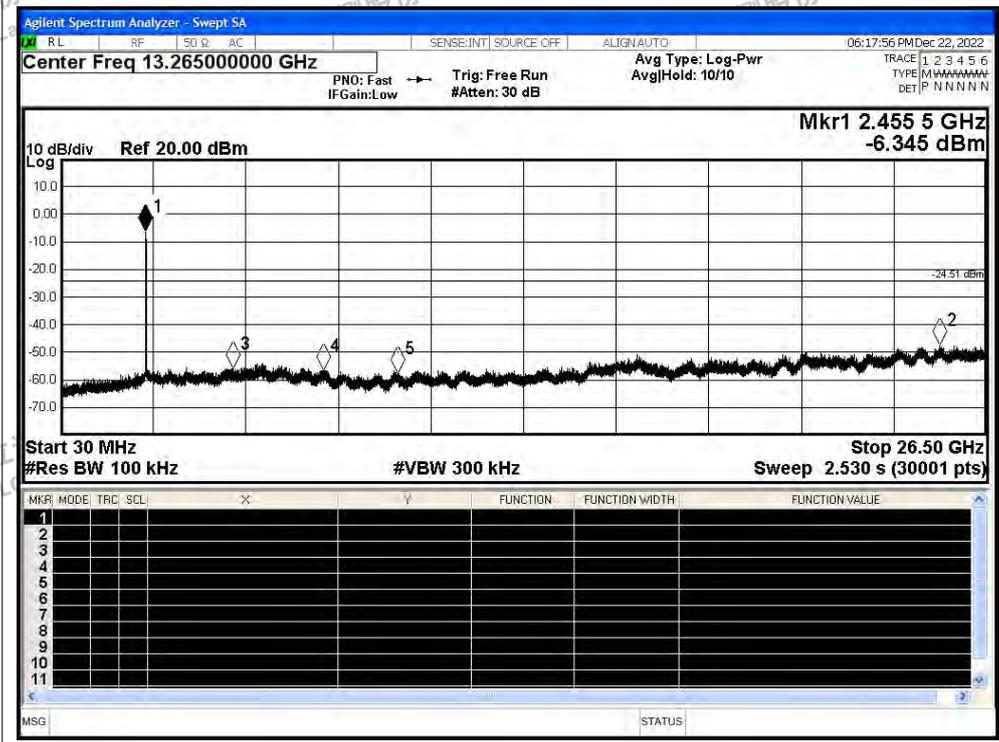


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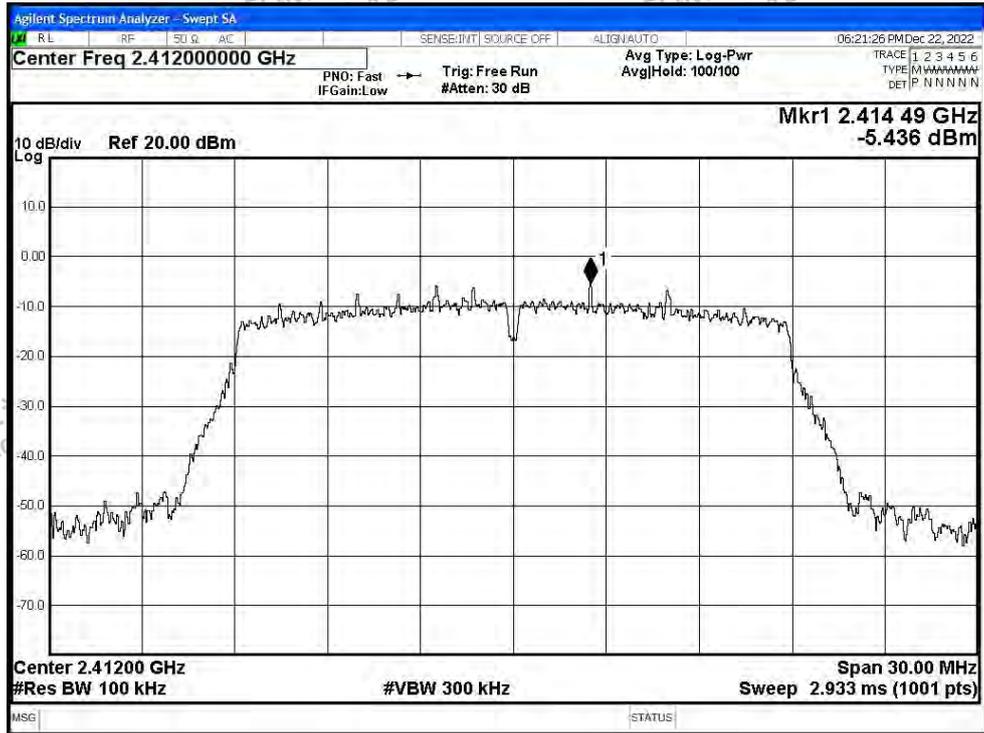
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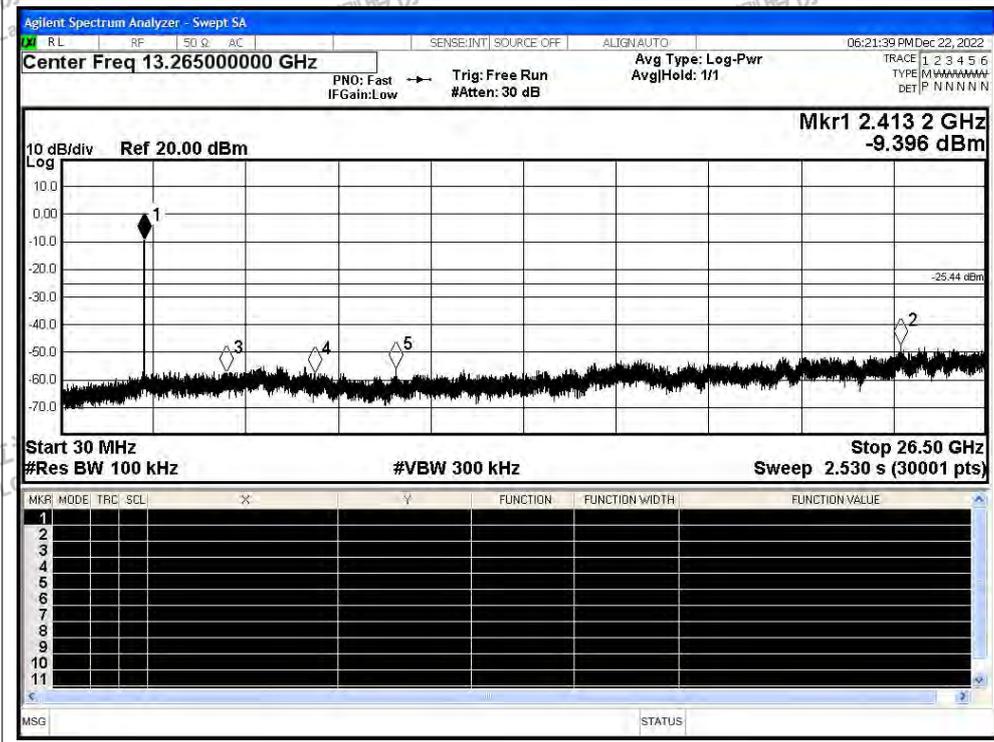


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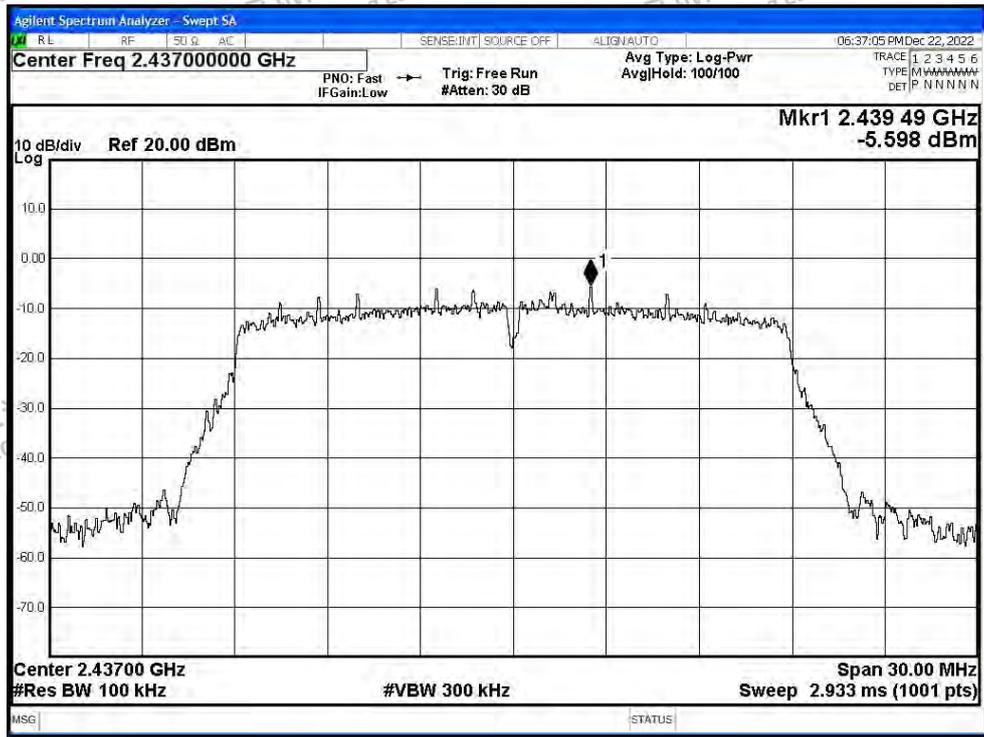
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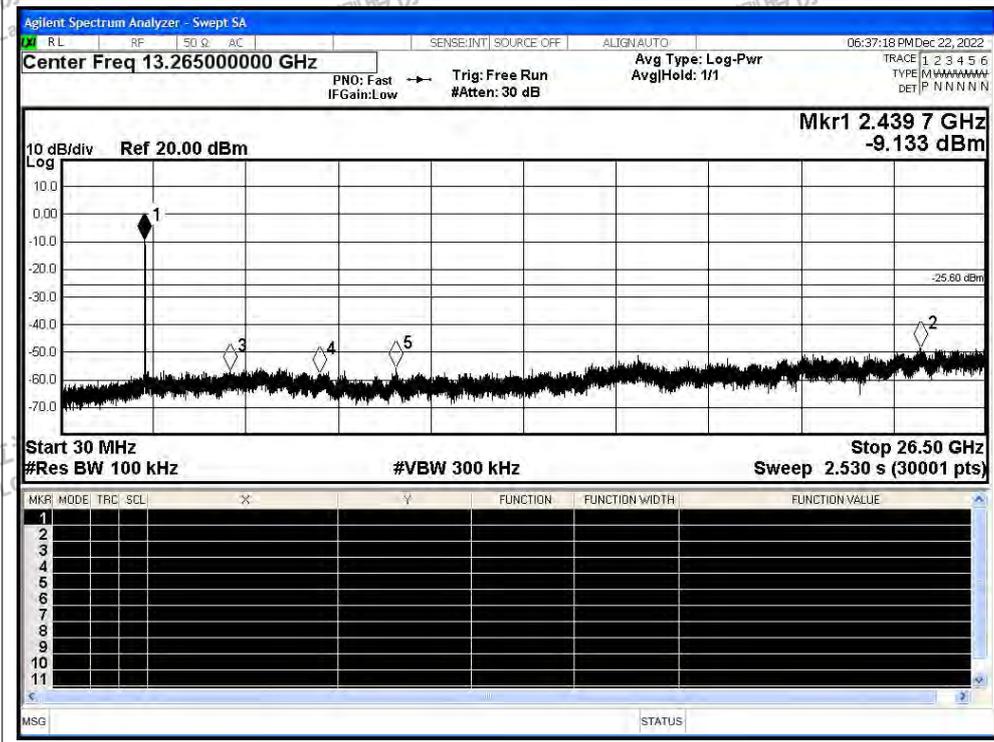


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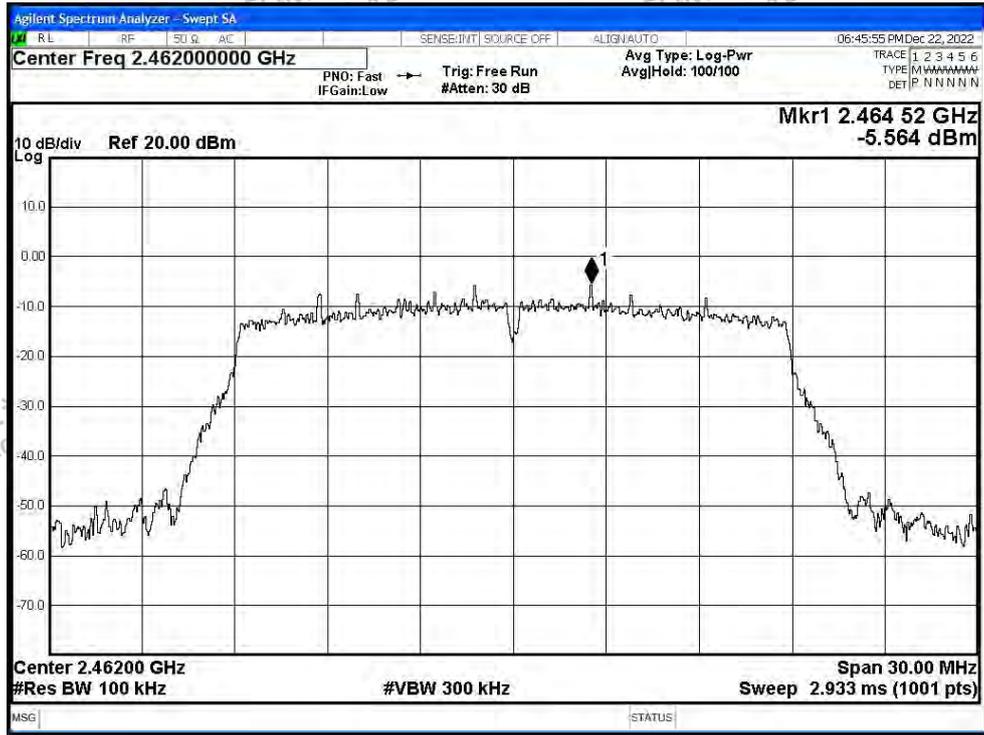
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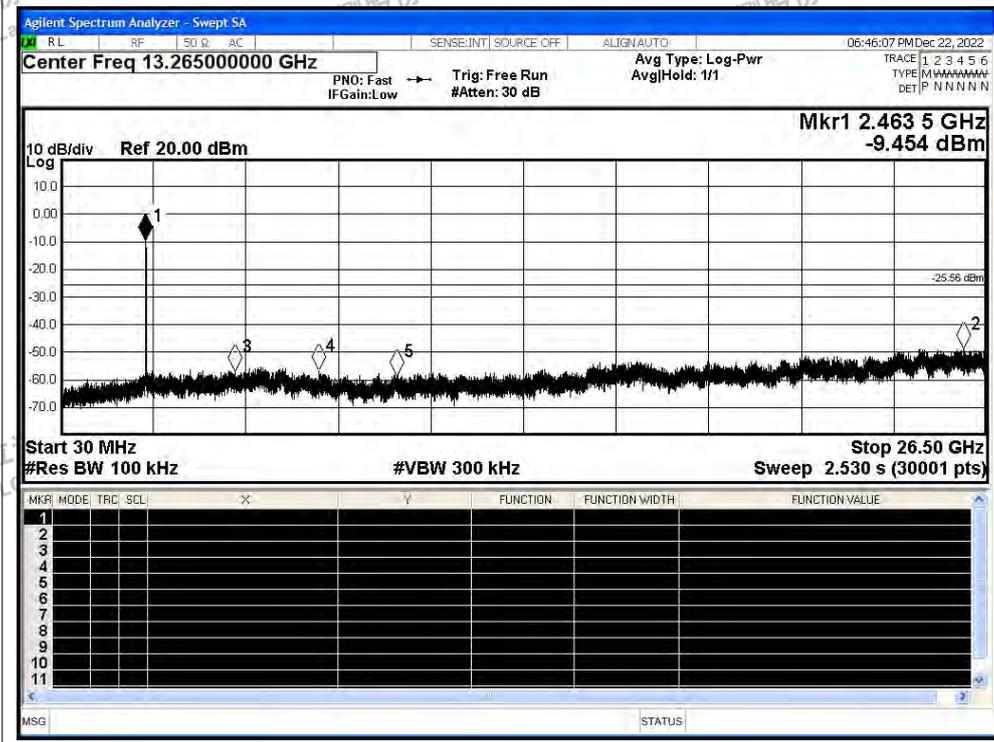


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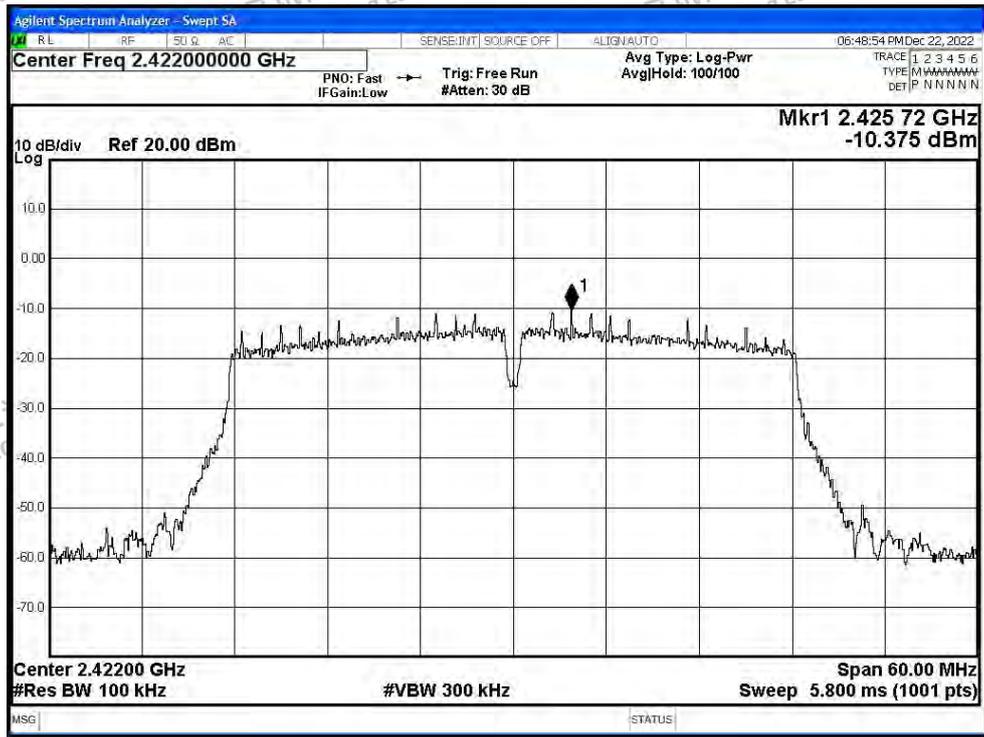
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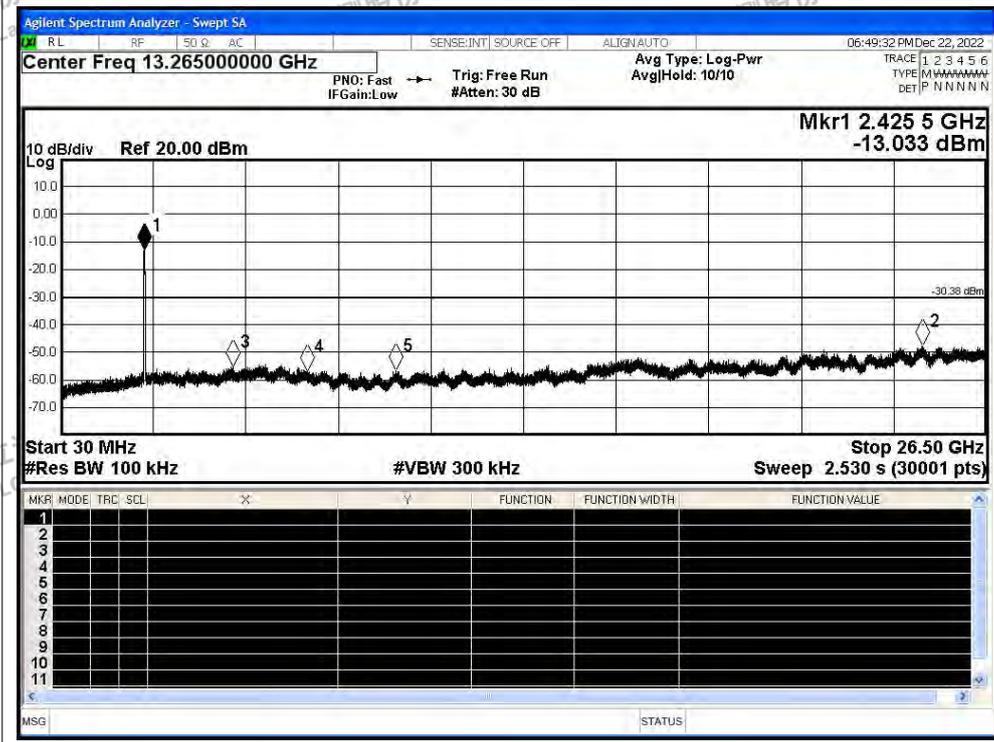


LCSA19022058EC

Tx. Spurious NVNT n40 2422MHz Ant1 Ref



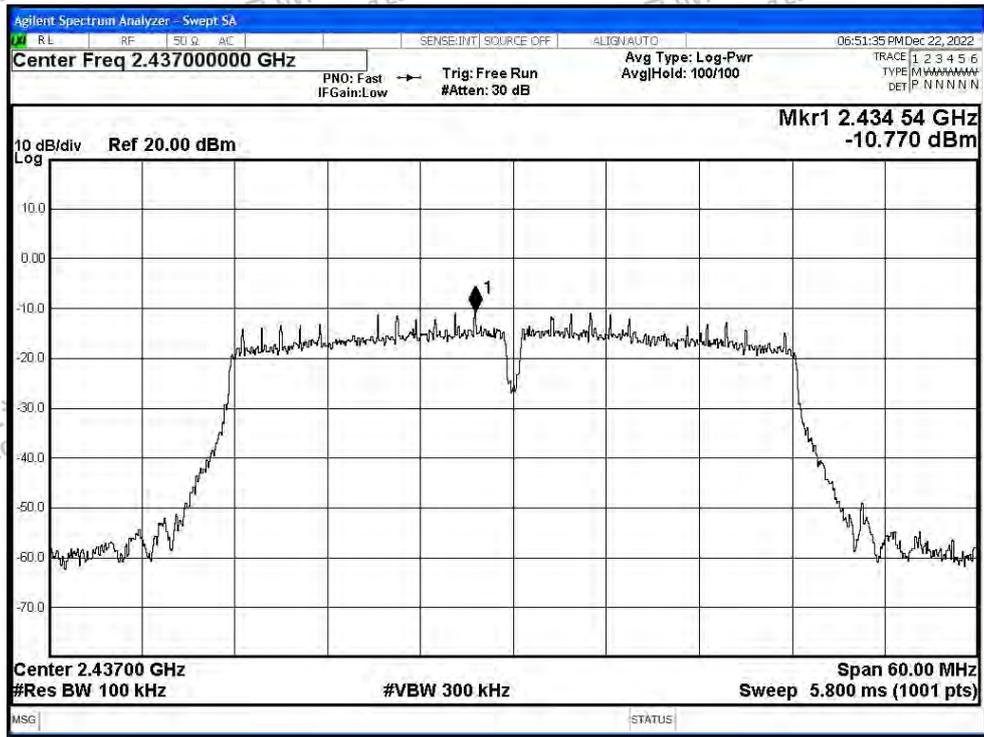
Tx. Spurious NVNT n40 2422MHz Ant1 Emission



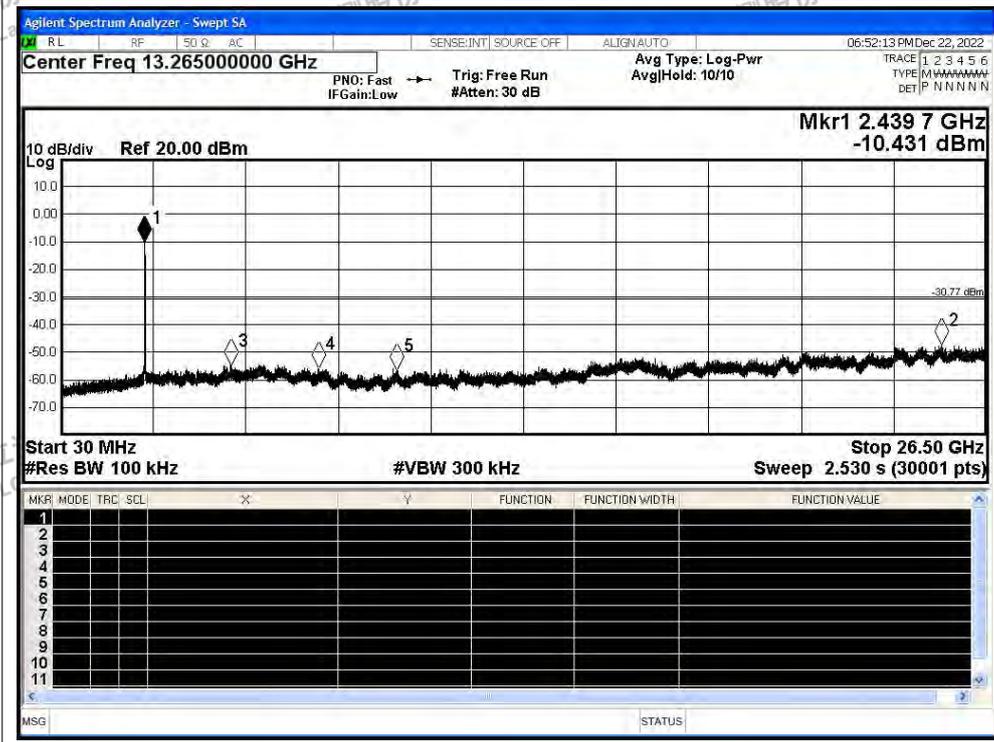


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Tx. Spurious NVNT n40 2437MHz Ant1 Ref



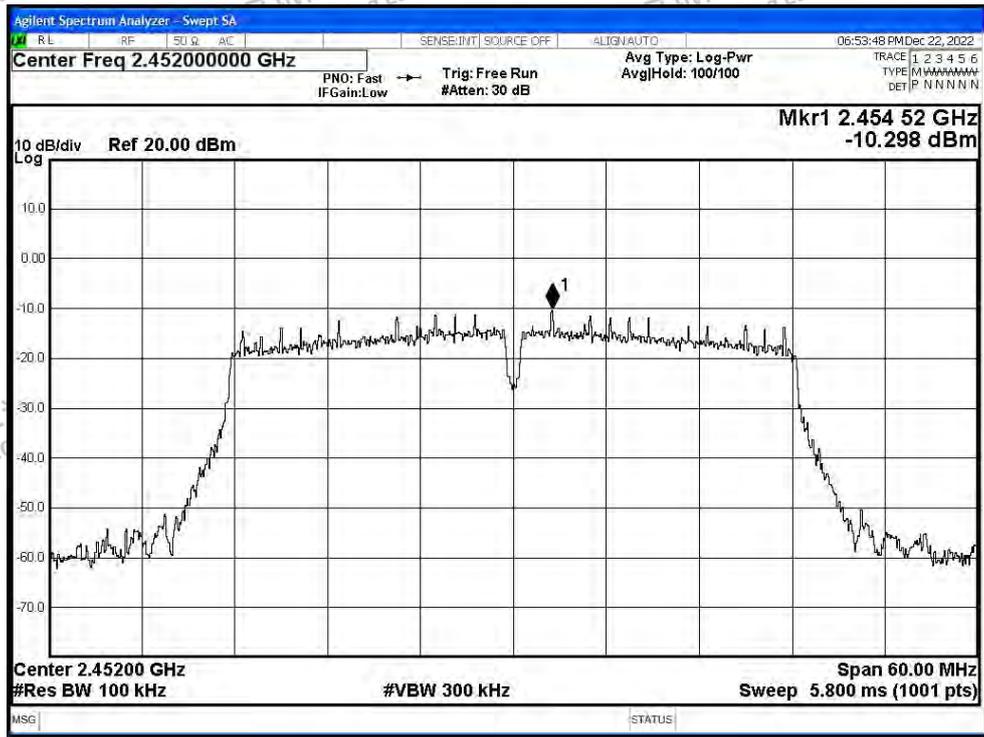
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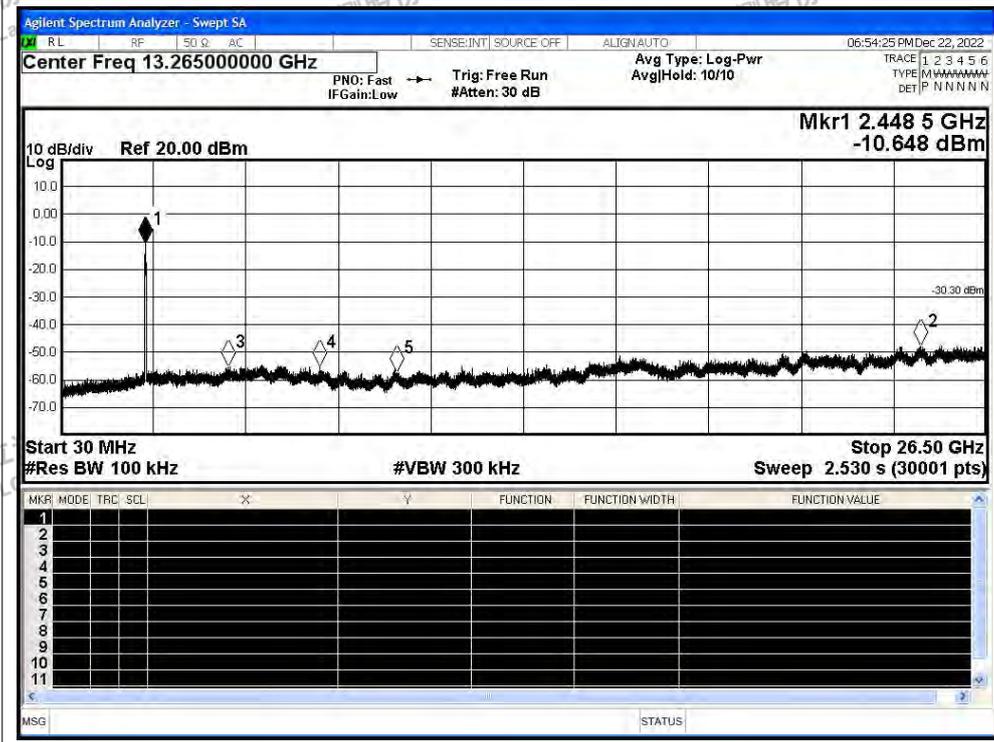


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Tx. Spurious NVNT n40 2452MHz Ant1 Ref



Tx. Spurious NVNT n40 2452MHz Ant1 Emission





B.6 Duty Cycle

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	b	2412	Ant1	99.55	0	0.12
NVNT	b	2437	Ant1	99.57	0	0.12
NVNT	b	2462	Ant1	99.55	0	0.12
NVNT	g	2412	Ant1	96.94	0.13	0.72
NVNT	g	2437	Ant1	96.94	0.13	0.72
NVNT	g	2462	Ant1	96.94	0.13	0.72
NVNT	n20	2412	Ant1	96.55	0.15	0.78
NVNT	n20	2437	Ant1	96.7	0.15	0.78
NVNT	n20	2462	Ant1	96.7	0.15	0.78
NVNT	n40	2422	Ant1	93.82	0.28	1.57
NVNT	n40	2437	Ant1	93.53	0.29	1.57
NVNT	n40	2452	Ant1	93.53	0.29	1.57

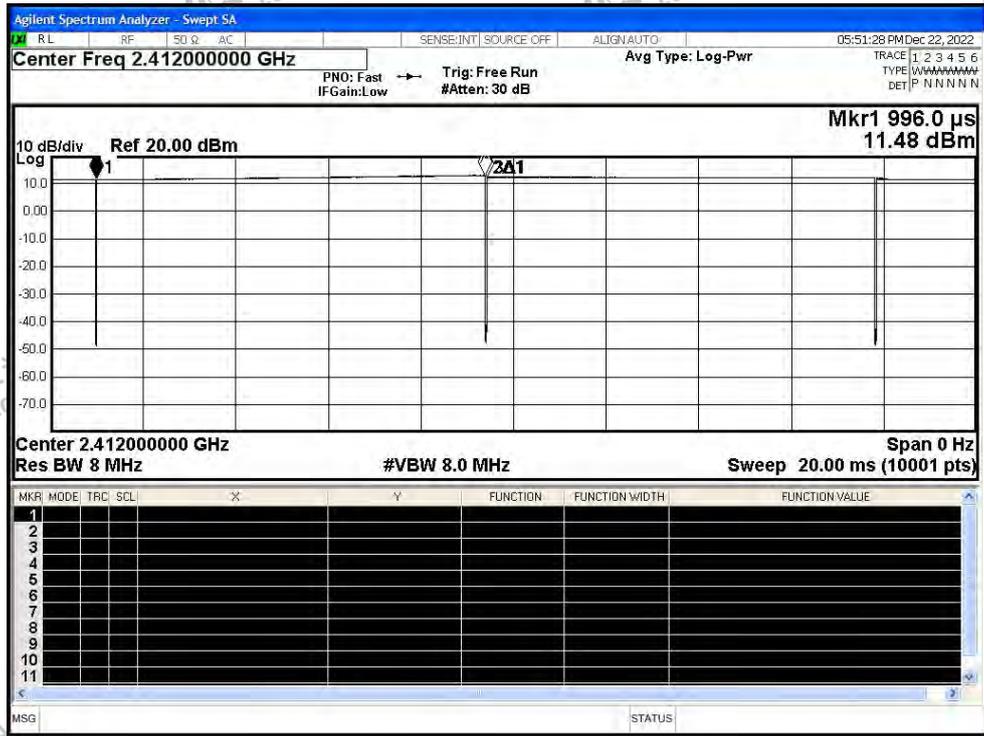




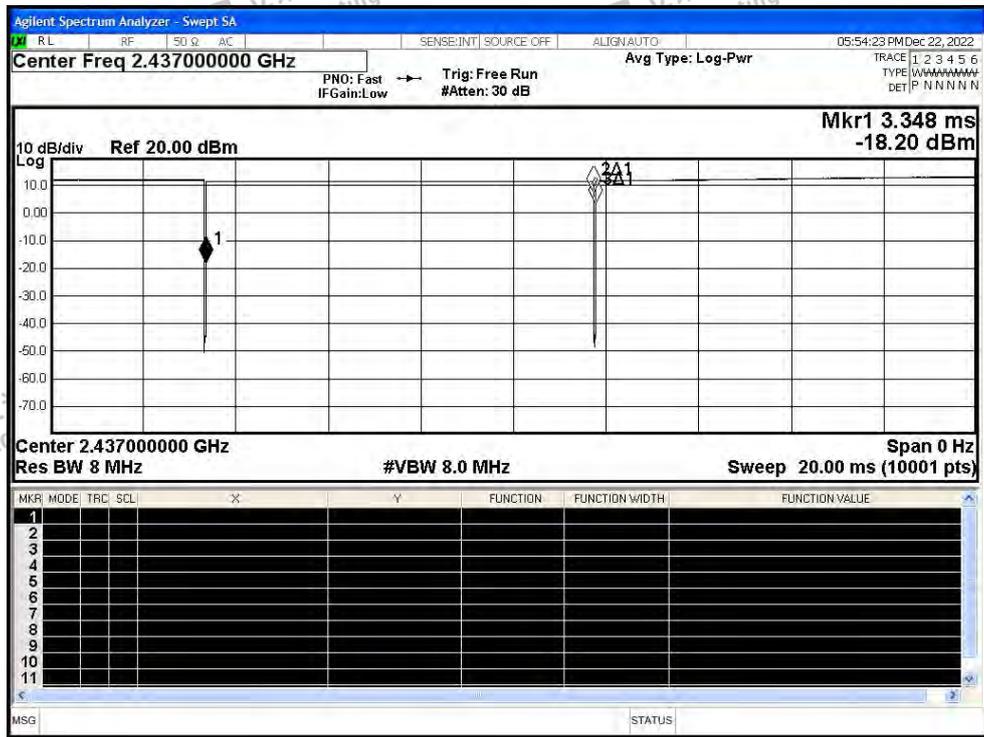
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Test Graphs

Duty Cycle NVNT b 2412MHz Ant1



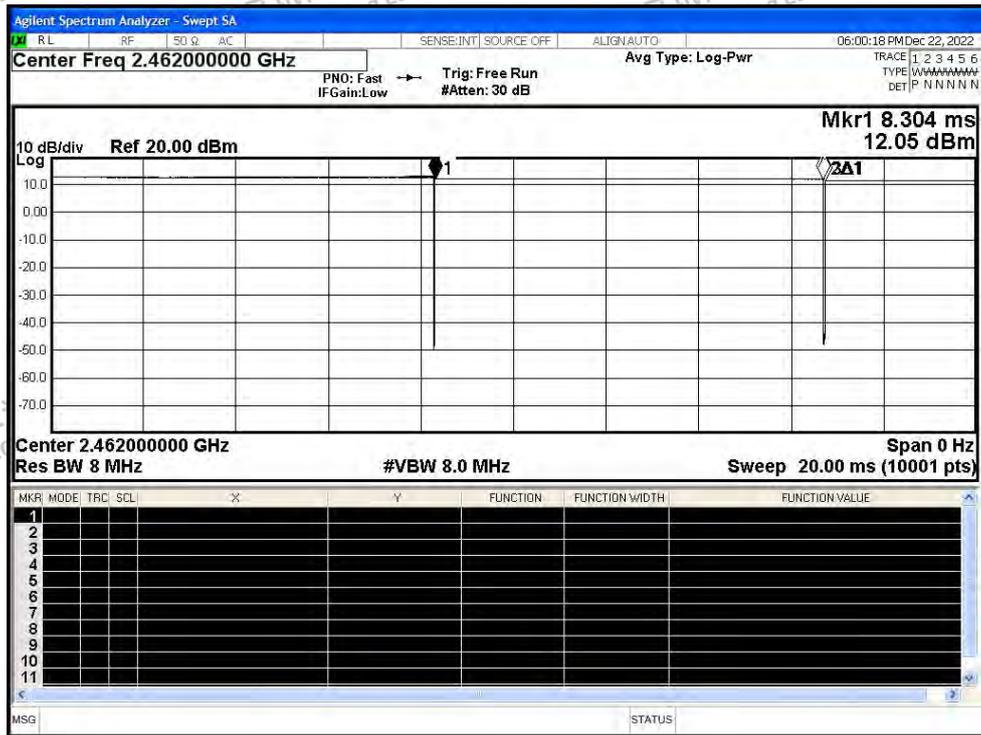
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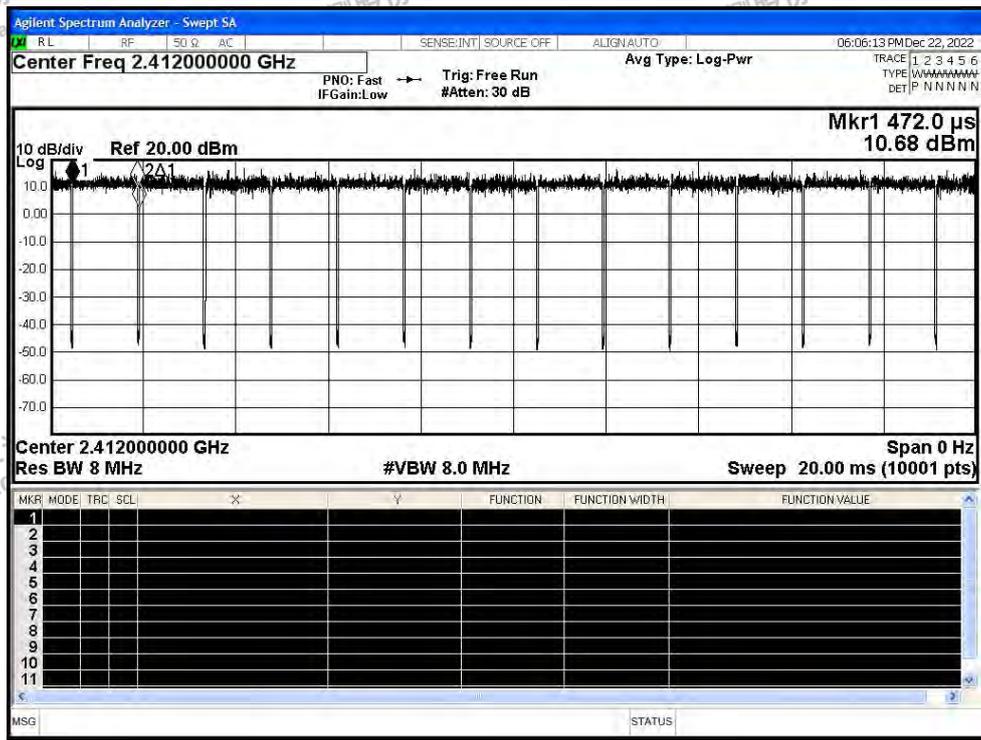


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Duty Cycle NVNT b 2462MHz Ant1



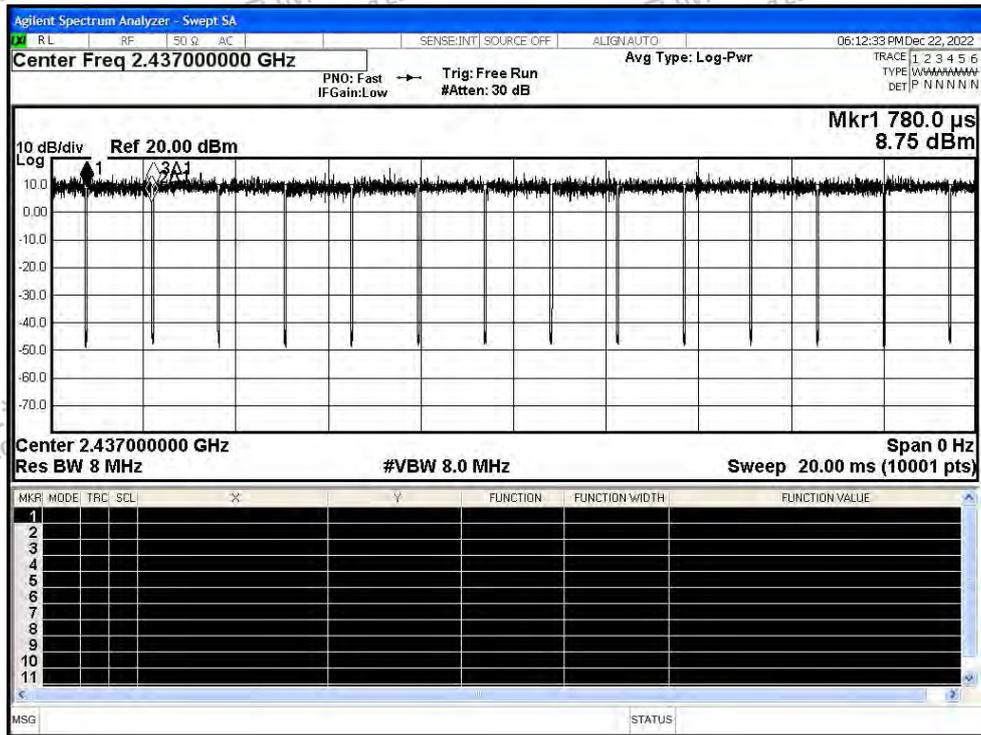
Duty Cycle NVNT g 2412MHz Ant1



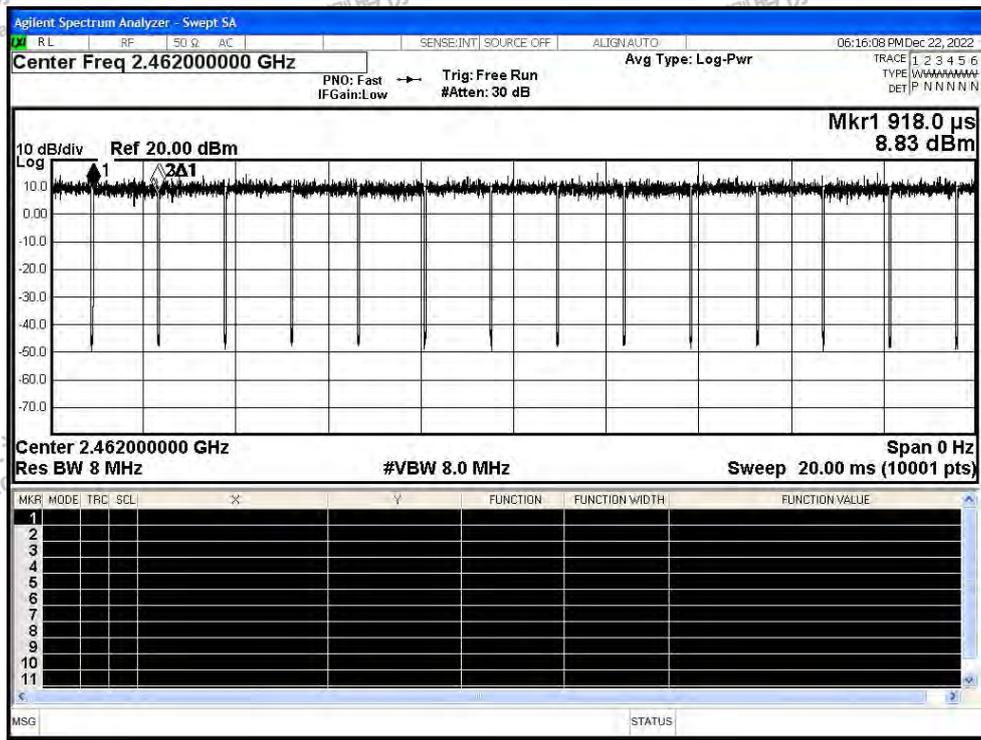


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Duty Cycle NVNT g 2437MHz Ant1



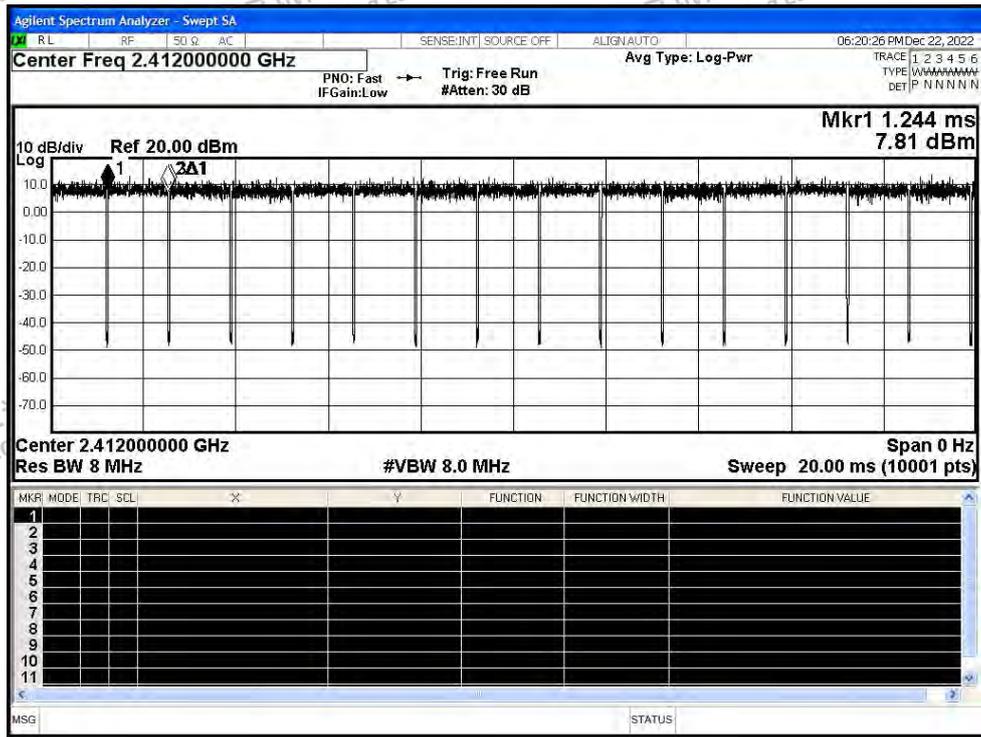
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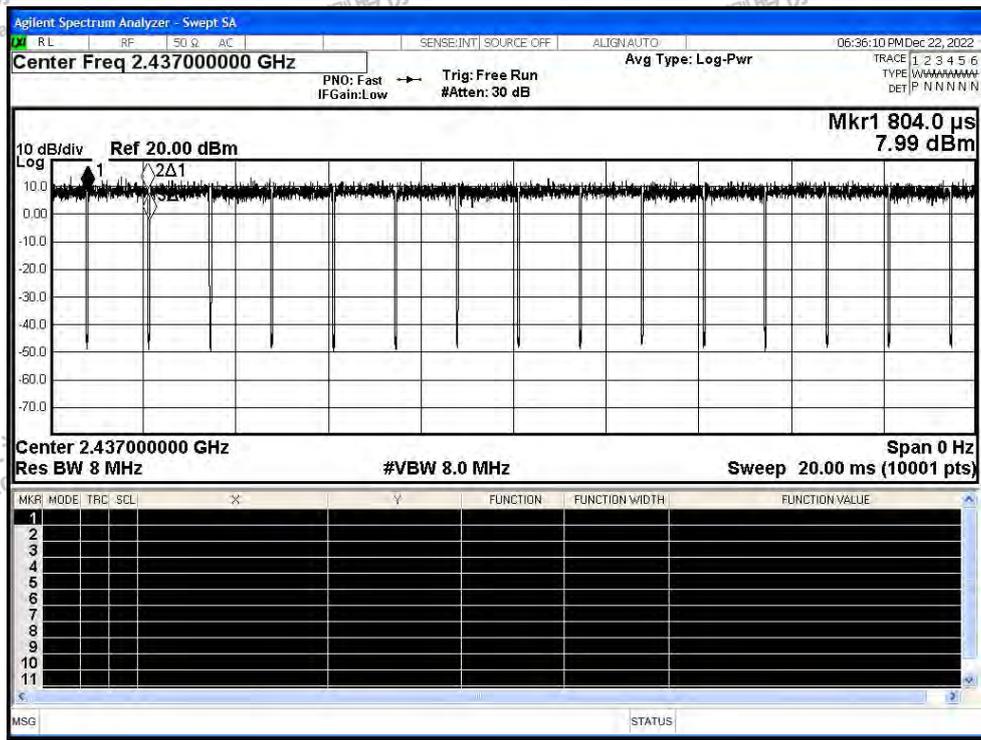


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Duty Cycle NVNT n20 2412MHz Ant1



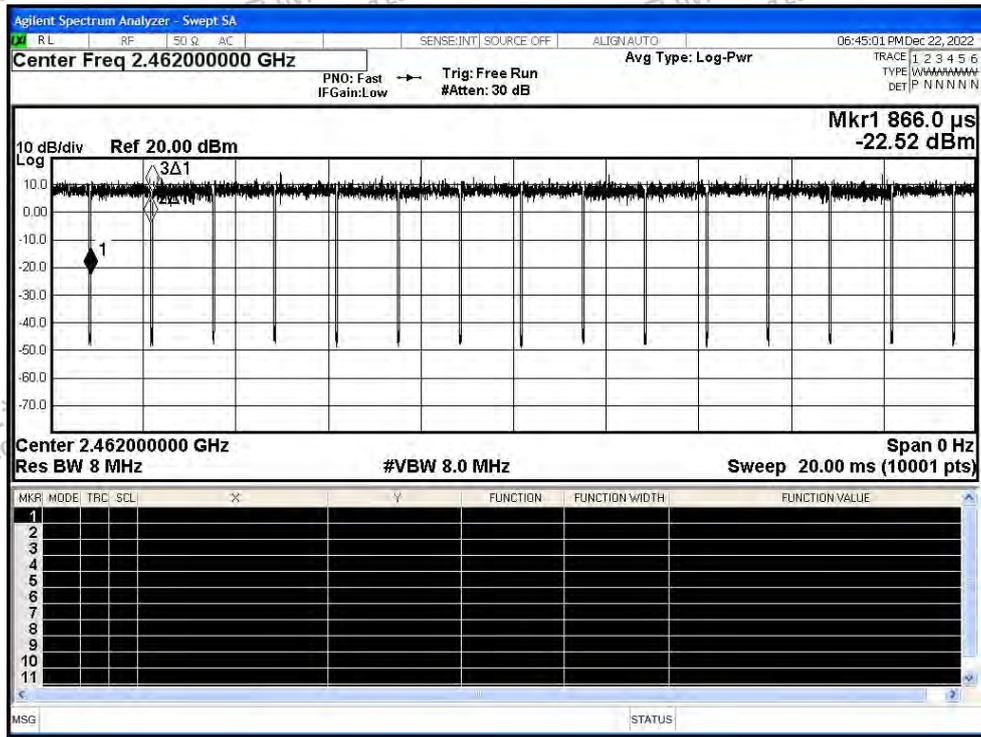
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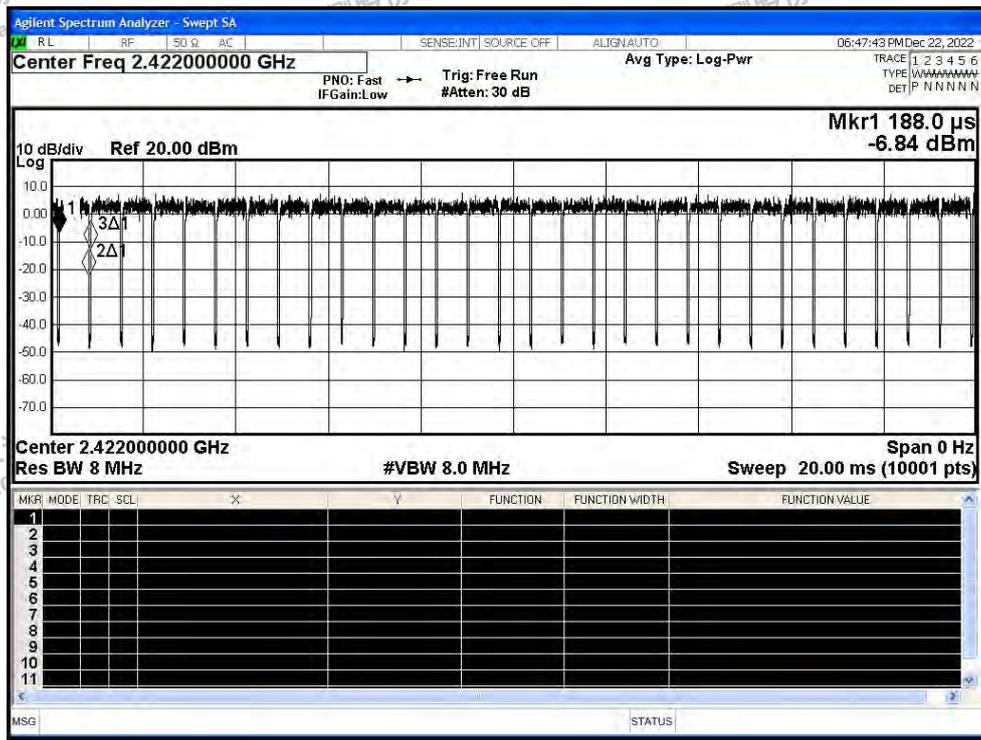


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Duty Cycle NVNT n20 2462MHz Ant1



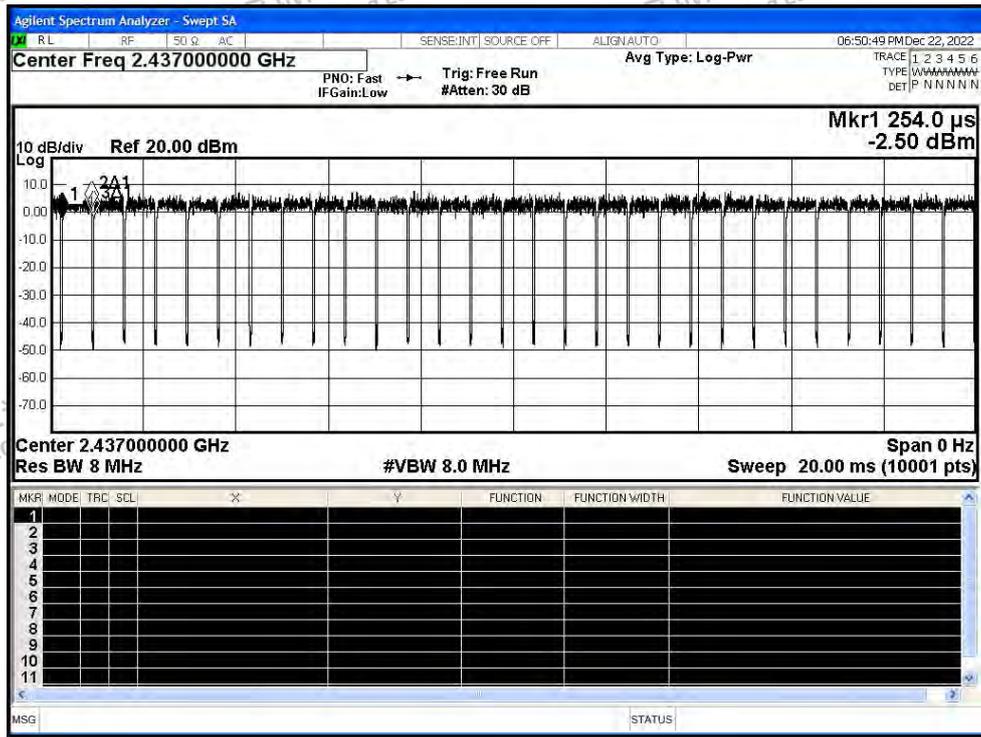
Duty Cycle NVNT n40 2422MHz Ant1



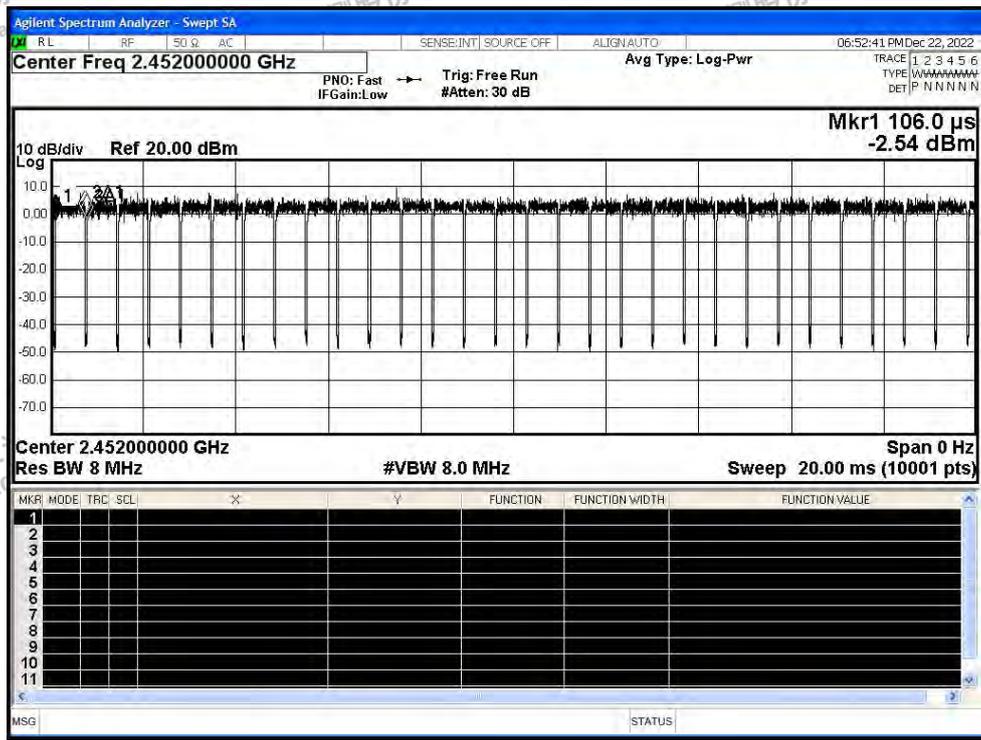


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Duty Cycle NVNT n40 2437MHz Ant1



Duty Cycle NVNT n40 2452MHz Ant1





B.7 Restrict Band

Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBUV/m)	Detector	Limit (dBUV/m)	Verdict
NVNT	b	2412	Ant1	2310	-49.47	2.5	48.29	Peak	74	Pass
NVNT	b	2412	Ant1	2310	-57.83	2.5	39.93	Average	54	Pass
NVNT	b	2412	Ant1	2328.018	-45.99	2.5	51.77	Peak	74	Pass
NVNT	b	2412	Ant1	2387.103	-56.72	2.5	41.04	Average	54	Pass
NVNT	b	2412	Ant1	2390	-48.43	2.5	49.33	Peak	74	Pass
NVNT	b	2412	Ant1	2390	-56.96	2.5	40.80	Average	54	Pass
NVNT	b	2462	Ant1	2483.5	-50.31	2.5	47.45	Peak	74	Pass
NVNT	b	2462	Ant1	2483.5	-56.43	2.5	41.33	Average	54	Pass
NVNT	b	2462	Ant1	2497.032	-45.91	2.5	51.85	Peak	74	Pass
NVNT	b	2462	Ant1	2500	-56.31	2.5	41.45	Average	54	Pass
NVNT	b	2462	Ant1	2500	-49.09	2.5	48.67	Peak	74	Pass
NVNT	g	2412	Ant1	2310	-50.56	2.5	47.20	Peak	74	Pass
NVNT	g	2412	Ant1	2310	-57.05	2.5	40.71	Average	54	Pass
NVNT	g	2412	Ant1	2389.209	-43.22	2.5	54.54	Peak	74	Pass
NVNT	g	2412	Ant1	2389.911	-53.15	2.5	44.61	Average	54	Pass
NVNT	g	2412	Ant1	2390	-40.6	2.5	57.16	Peak	74	Pass
NVNT	g	2412	Ant1	2390	-52.82	2.5	44.94	Average	54	Pass
NVNT	g	2462	Ant1	2483.5	-45.44	2.5	52.32	Peak	74	Pass
NVNT	g	2462	Ant1	2483.5	-52.01	2.5	45.75	Average	54	Pass
NVNT	g	2462	Ant1	2485.319	-42.5	2.5	55.26	Peak	74	Pass
NVNT	g	2462	Ant1	2483.517	-52.01	2.5	45.75	Average	54	Pass
NVNT	g	2462	Ant1	2500	-46.9	2.5	50.86	Peak	74	Pass
NVNT	g	2462	Ant1	2500	-54.14	2.5	43.62	Average	54	Pass
NVNT	n20	2412	Ant1	2310	-49.27	2.5	48.49	Peak	74	Pass
NVNT	n20	2412	Ant1	2310	-57.07	2.5	40.69	Average	54	Pass
NVNT	n20	2412	Ant1	2388.858	-40.94	2.5	56.82	Peak	74	Pass
NVNT	n20	2412	Ant1	2389.911	-51.92	2.5	45.84	Average	54	Pass
NVNT	n20	2412	Ant1	2390	-45.14	2.5	52.62	Peak	74	Pass
NVNT	n20	2412	Ant1	2390	-51.86	2.5	45.90	Average	54	Pass
NVNT	n20	2462	Ant1	2483.5	-44.68	2.5	53.08	Peak	74	Pass
NVNT	n20	2462	Ant1	2483.5	-51.2	2.5	46.56	Average	54	Pass
NVNT	n20	2462	Ant1	2484.895	-40.59	2.5	57.17	Peak	74	Pass
NVNT	n20	2462	Ant1	2483.57	-51.09	2.5	46.67	Average	54	Pass
NVNT	n20	2462	Ant1	2500	-45.95	2.5	51.81	Peak	74	Pass
NVNT	n20	2462	Ant1	2500	-54.14	2.5	43.62	Average	54	Pass
NVNT	n40	2422	Ant1	2310	-49.69	2.5	48.07	Peak	74	Pass
NVNT	n40	2422	Ant1	2310	-56.81	2.5	40.95	Average	54	Pass



Shenzhen LCS Compliance Testing Laboratory Ltd.
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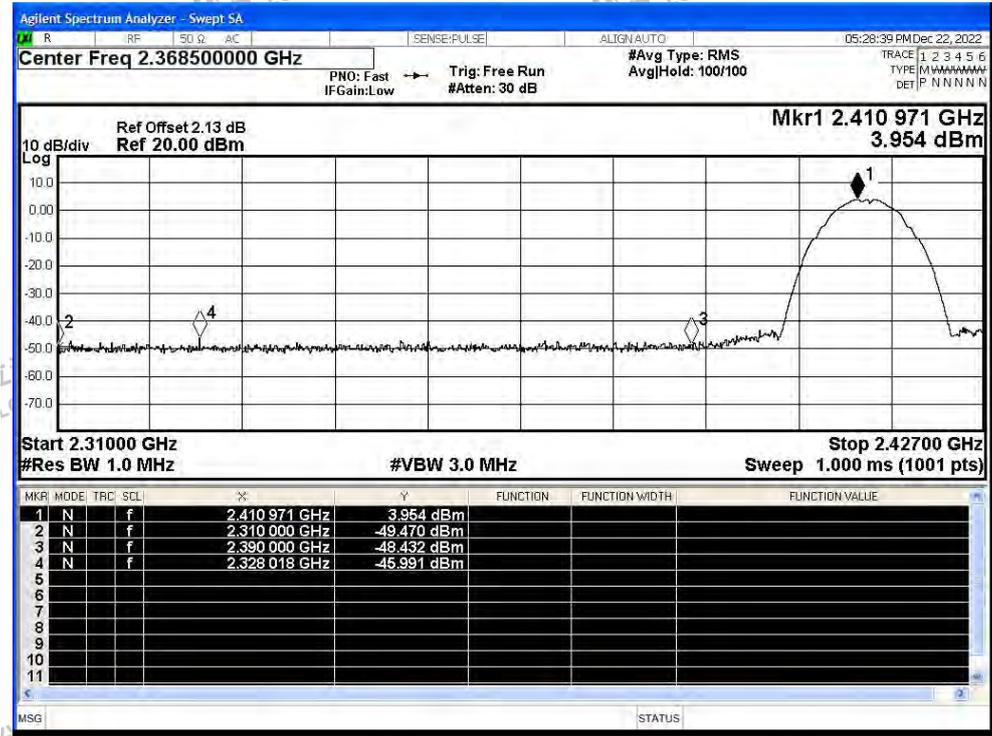
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NVNT	n40	2422	Ant1	2390	-38.55	2.5	59.21	Peak	74	Pass
NVNT	n40	2422	Ant1	2390	-45.93	2.5	51.83	Average	54	Pass
NVNT	n40	2452	Ant1	2483.5	-30.64	2.5	67.12	Peak	74	Pass
NVNT	n40	2452	Ant1	2483.5	-46.79	2.5	50.97	Average	54	Pass
NVNT	n40	2452	Ant1	2484.088	-30.9	2.5	66.86	Peak	74	Pass
NVNT	n40	2452	Ant1	2484.322	-46.36	2.5	51.40	Average	54	Pass
NVNT	n40	2452	Ant1	2500	-46.95	2.5	50.81	Peak	74	Pass
NVNT	n40	2452	Ant1	2500	-53.13	2.5	44.63	Average	54	Pass



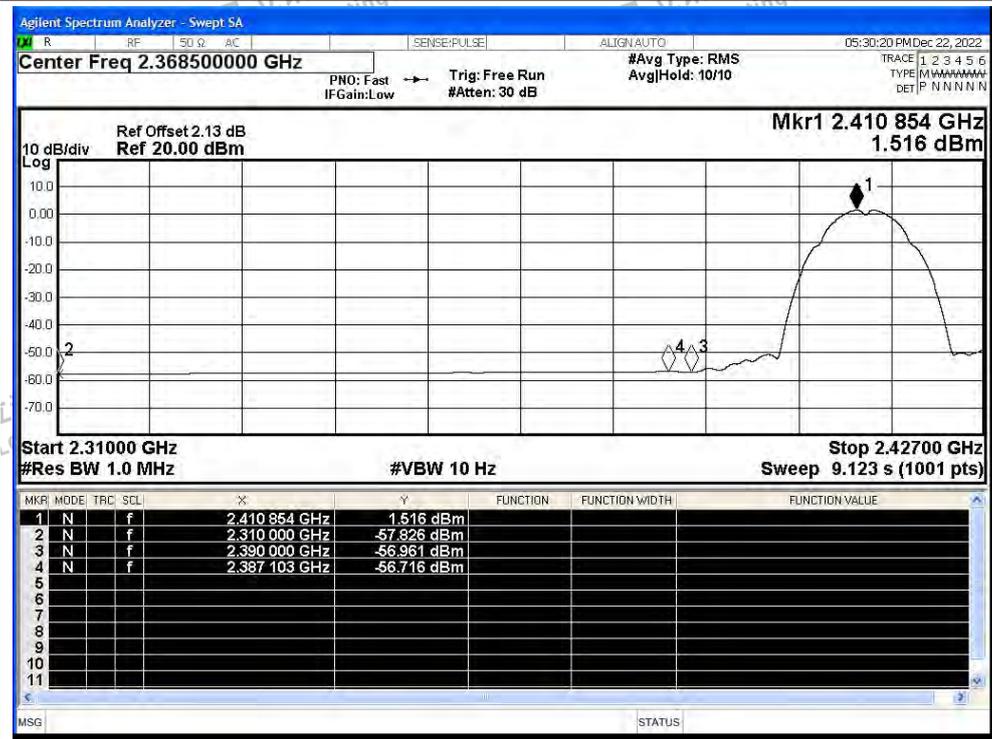
Shenzhen LCS Compliance Testing Laboratory Ltd.
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 Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com
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Test Graphs

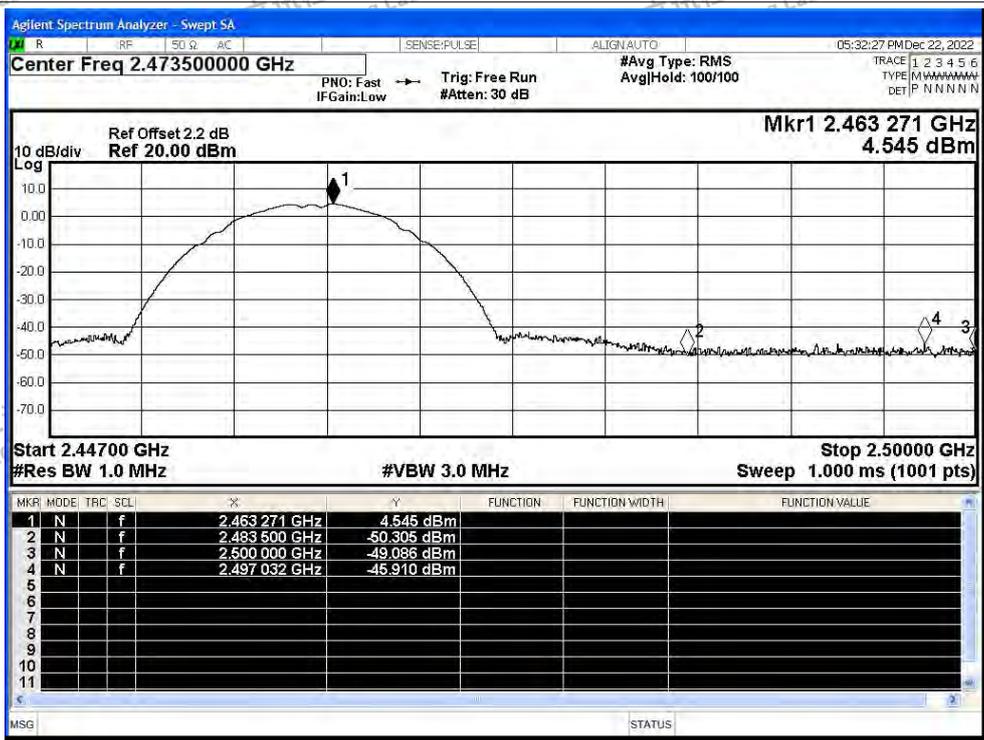
Restrict Band NVNT b 2412MHz Ant1 Peak



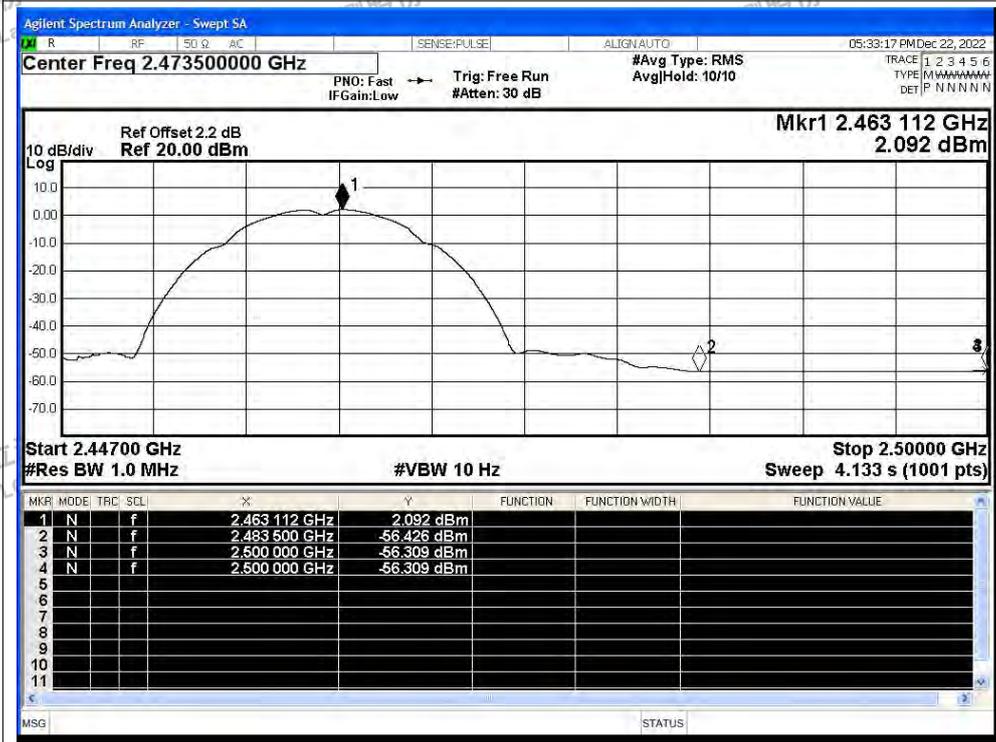
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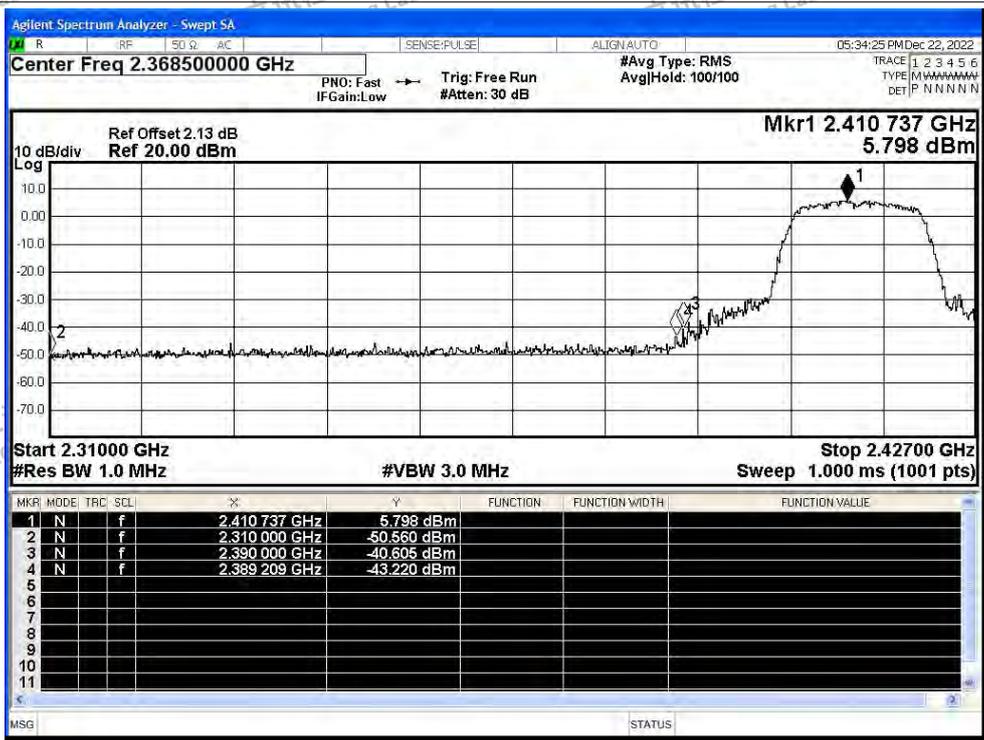
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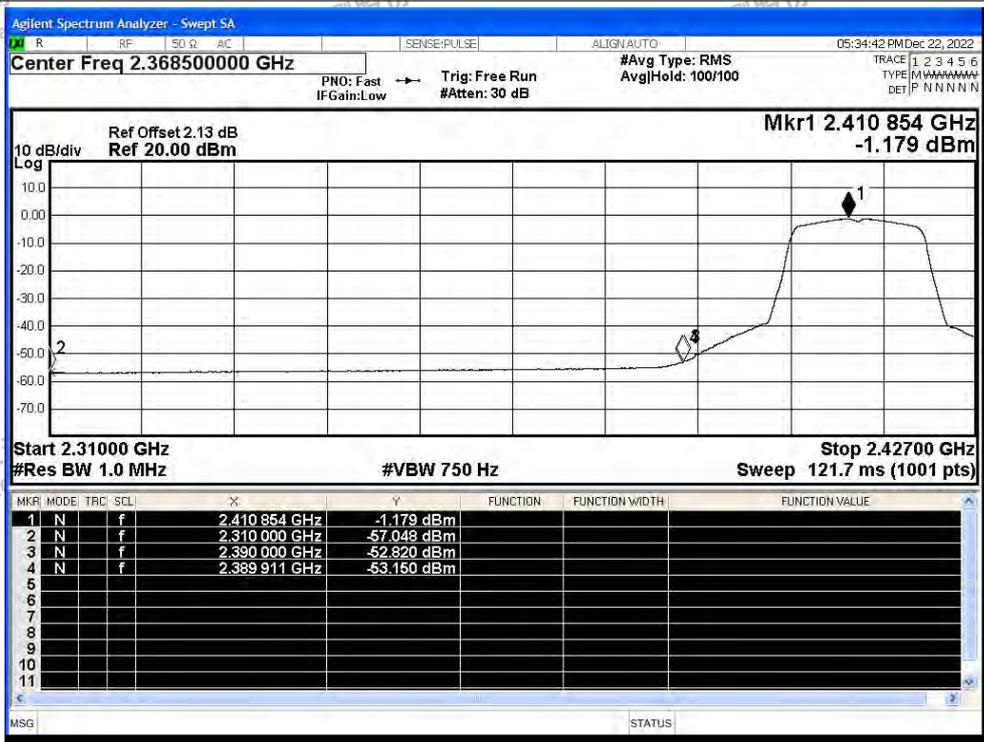
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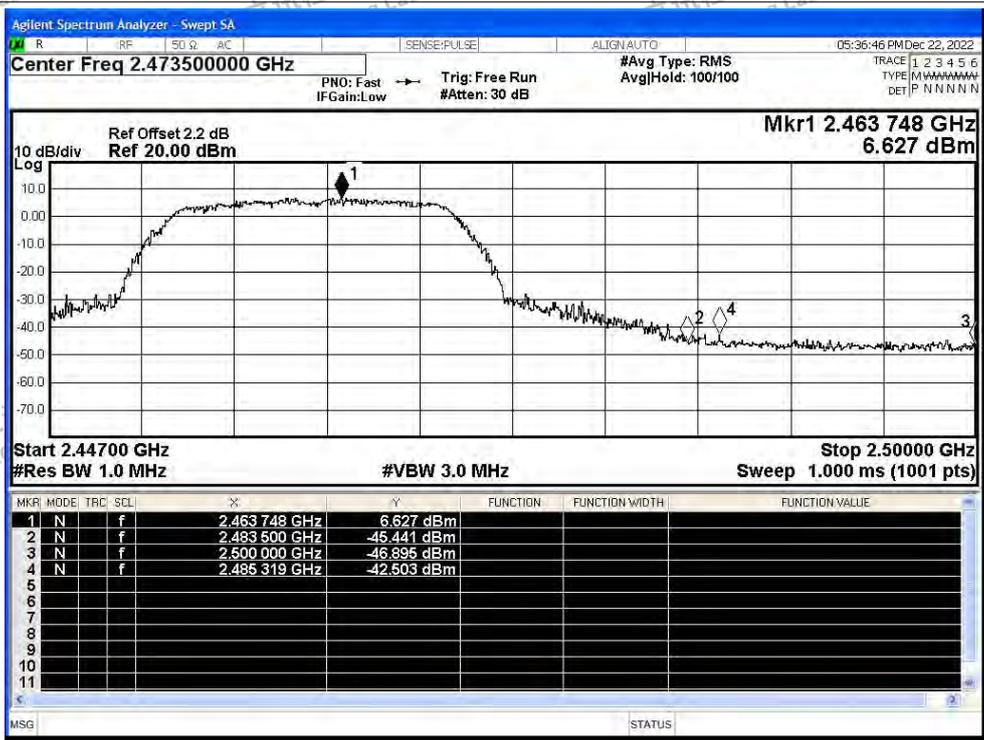
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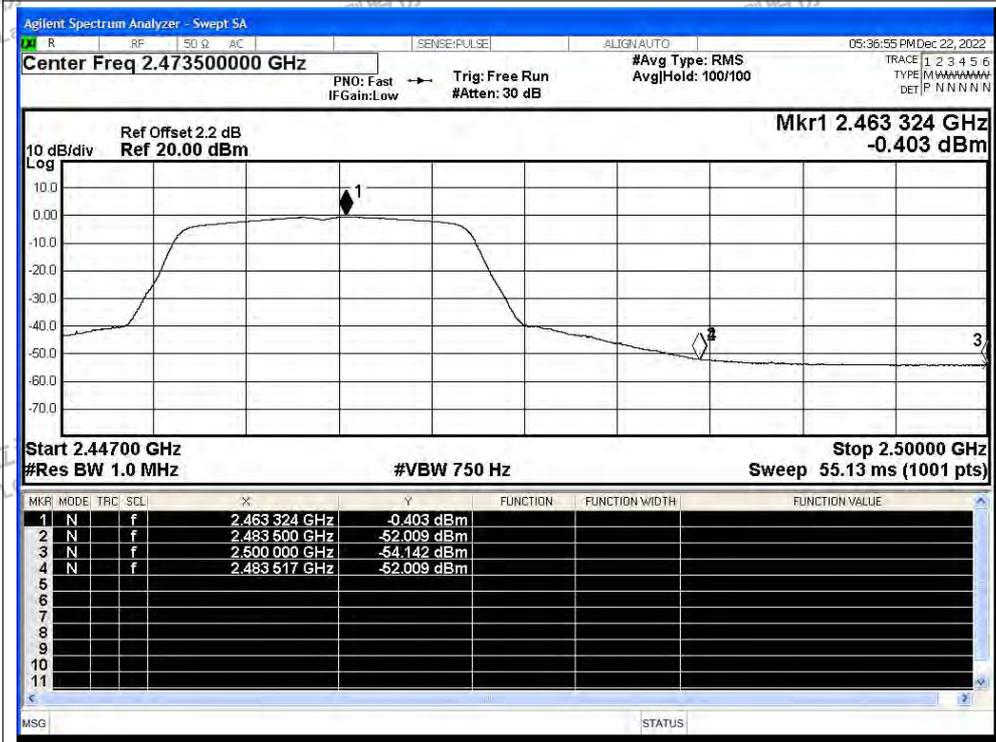
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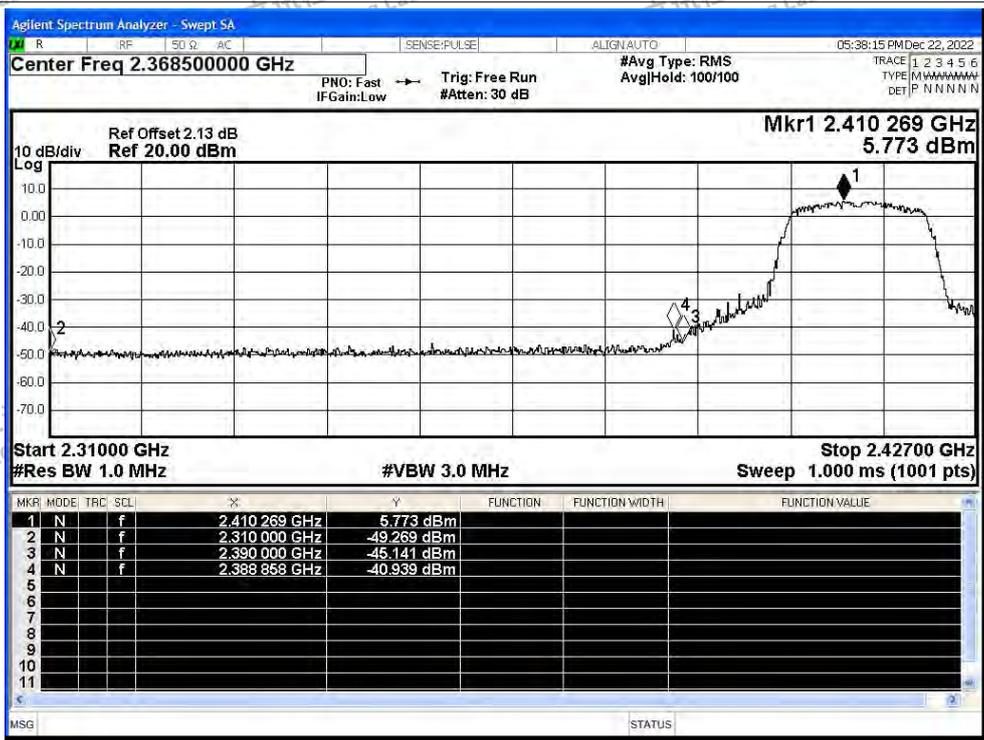
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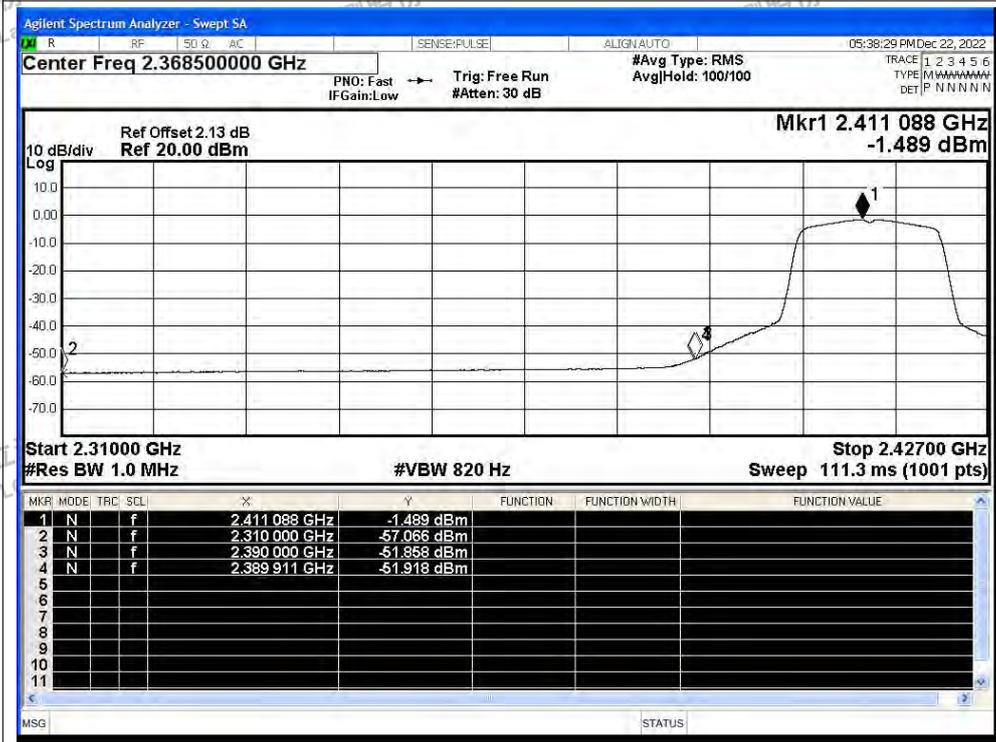
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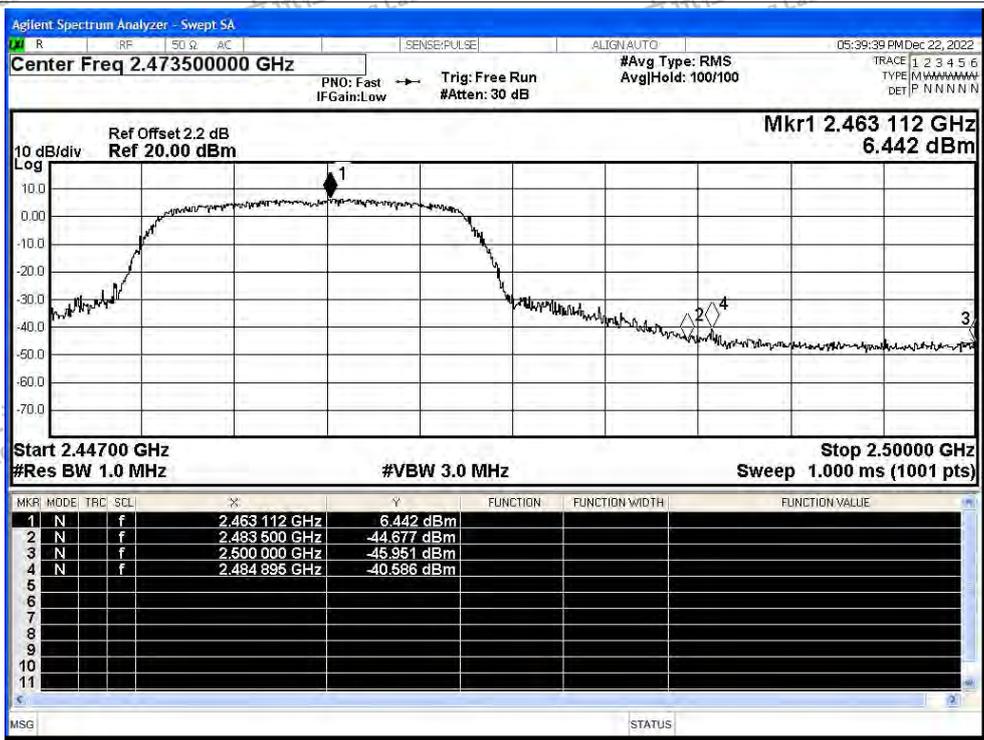
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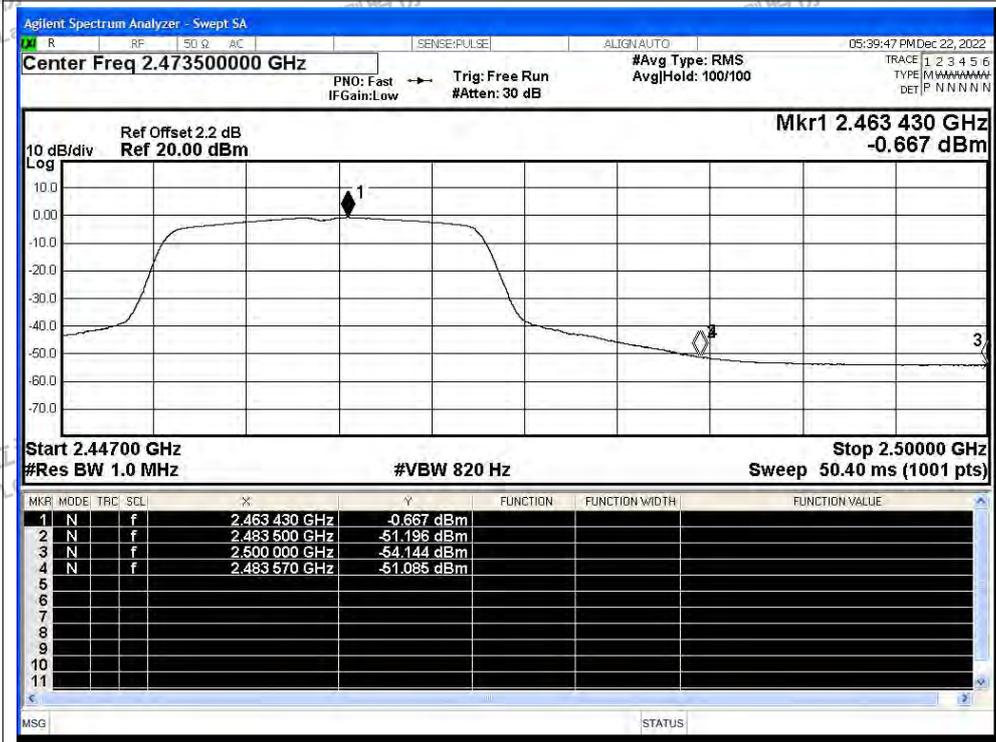
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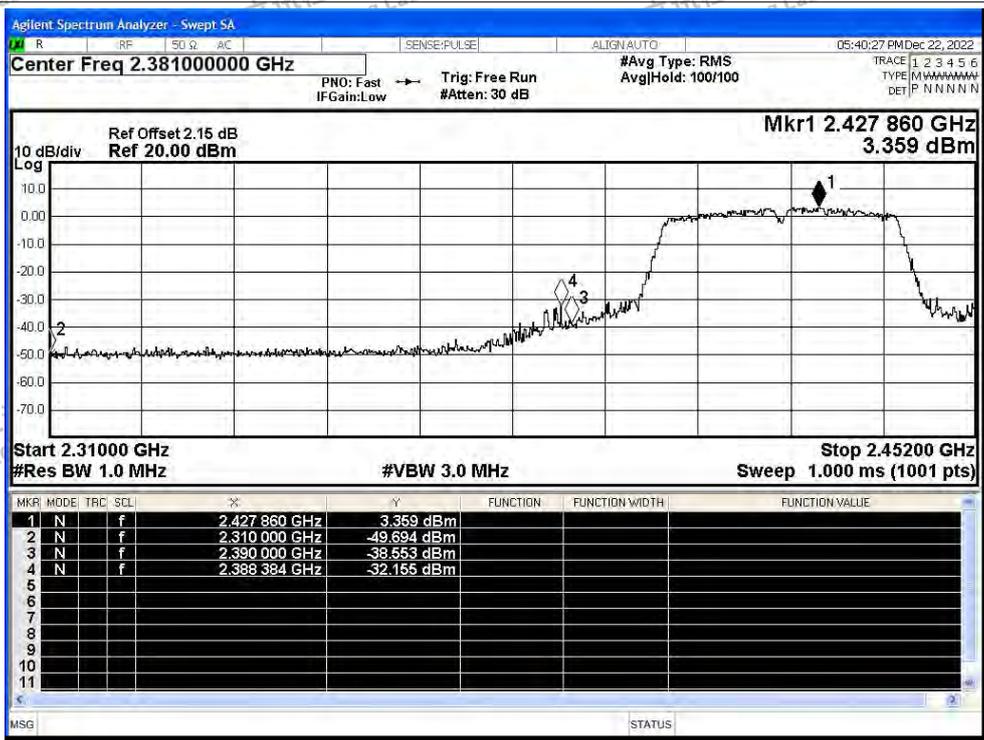
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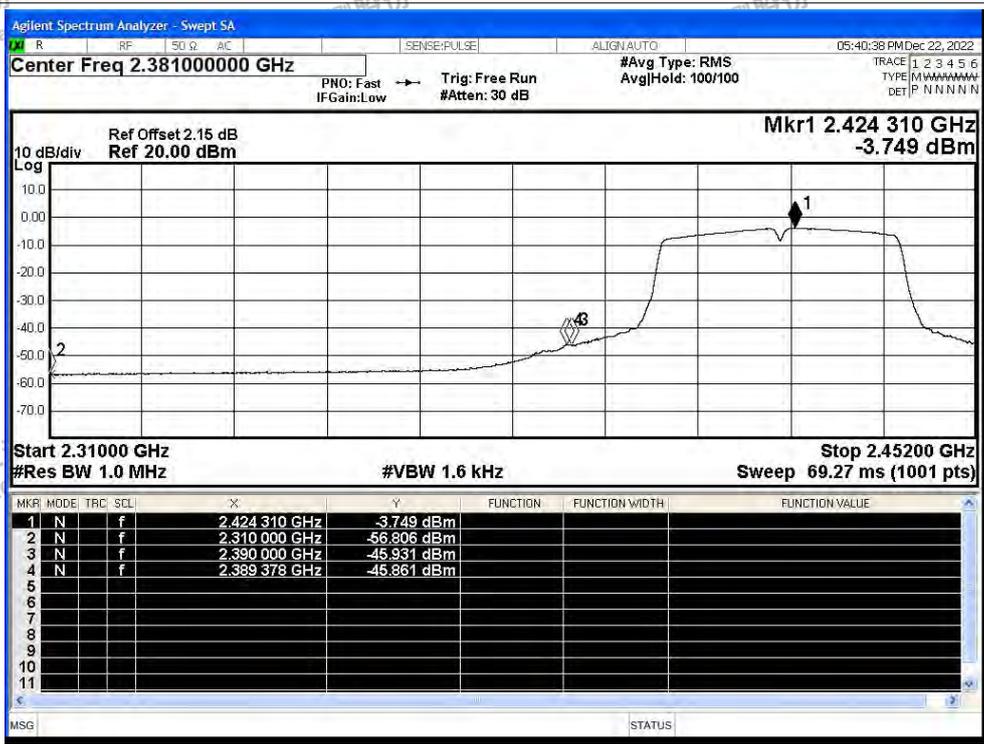


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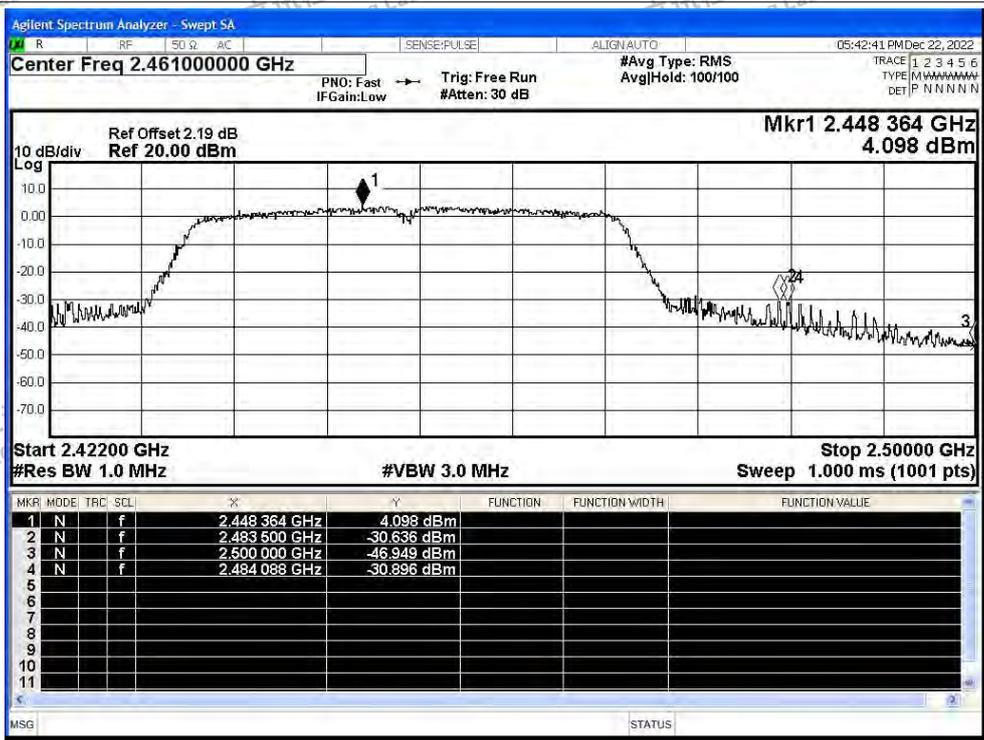
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