



Appendix C

RF Test Data for 2.4GWIFI (Conducted Measurement)

Product Name: Ambient Monitoring Sensor

Test Model: AMS-R2O-C

Environmental Conditions

Temperature:	23.8°C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Jay Luo
Supervised by:	Nick Peng





C.1 -6dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant1	7.971	>=0.5	Pass
NVNT	b	2437	Ant1	8.562	>=0.5	Pass
NVNT	b	2462	Ant1	7.015	>=0.5	Pass
NVNT	g	2412	Ant1	12.874	>=0.5	Pass
NVNT	g	2437	Ant1	15.92	>=0.5	Pass
NVNT	g	2462	Ant1	12.735	>=0.5	Pass
NVNT	n20	2412	Ant1	14.07	>=0.5	Pass
NVNT	n20	2437	Ant1	16.25	>=0.5	Pass
NVNT	n20	2462	Ant1	8.835	>=0.5	Pass
NVNT	n40	2422	Ant1	26.264	>=0.5	Pass
NVNT	n40	2437	Ant1	35.712	>=0.5	Pass
NVNT	n40	2452	Ant1	13.795	>=0.5	Pass

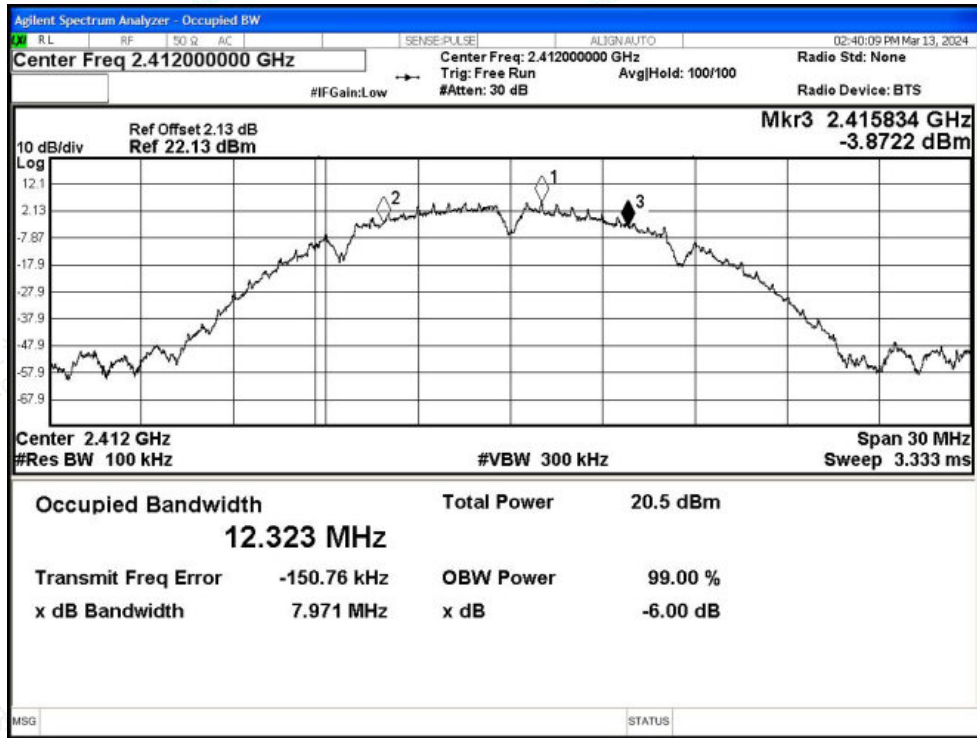


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 Scan code to check authenticity

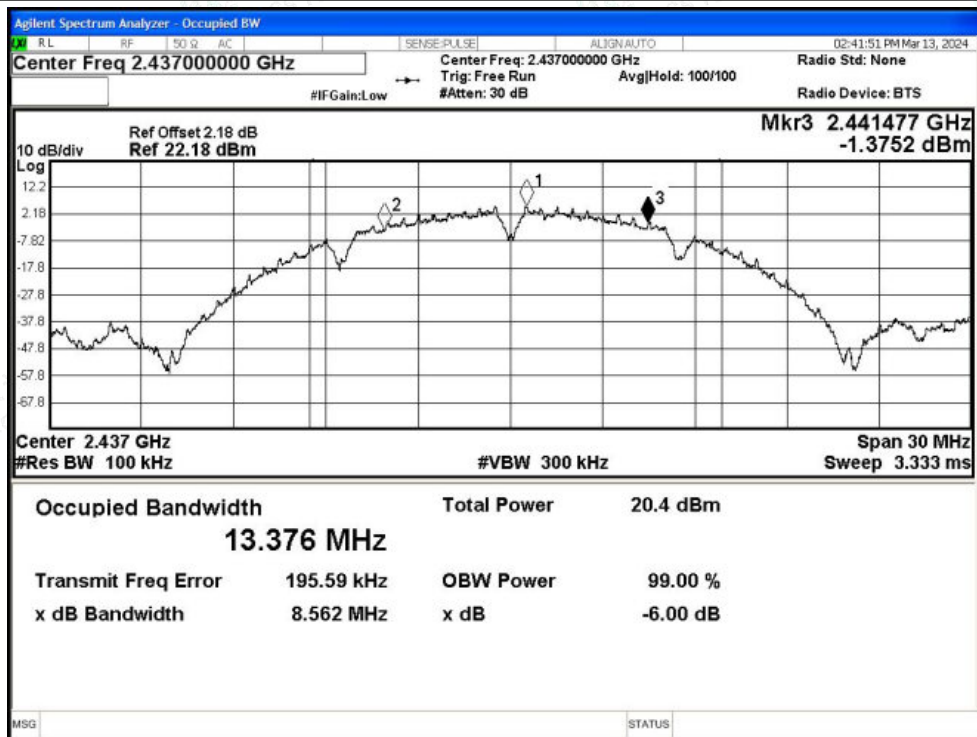


Test Graphs

-6dB Bandwidth NVNT b 2412MHz Ant1

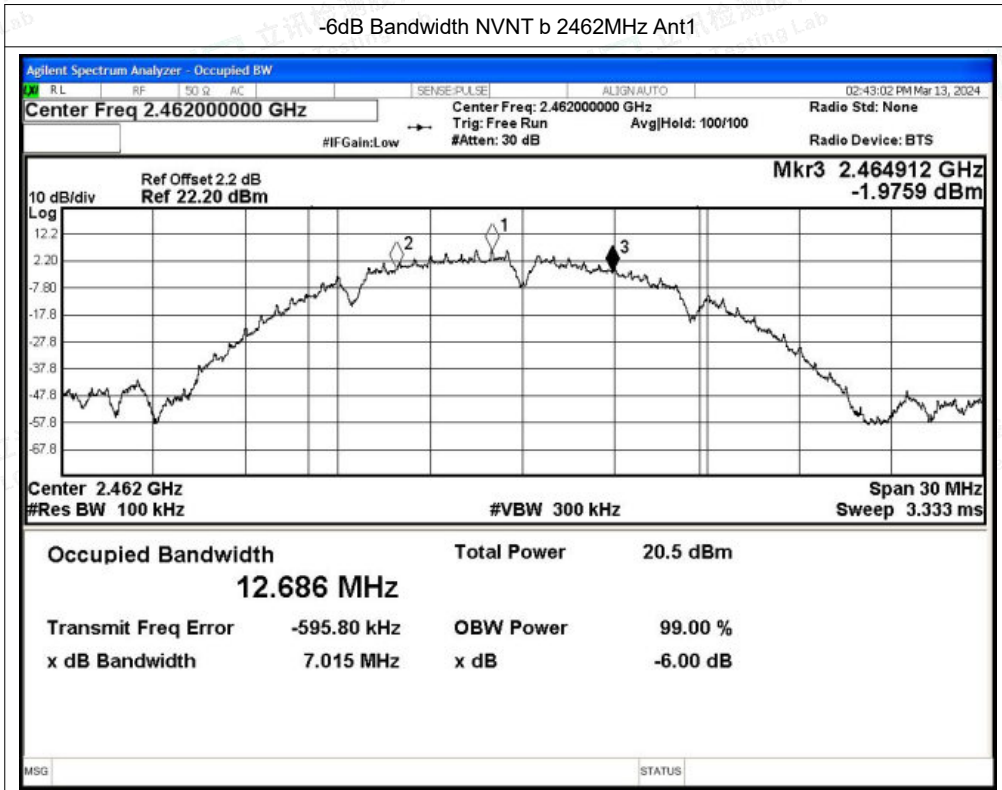


-6dB Bandwidth NVNT b 2437MHz Ant1

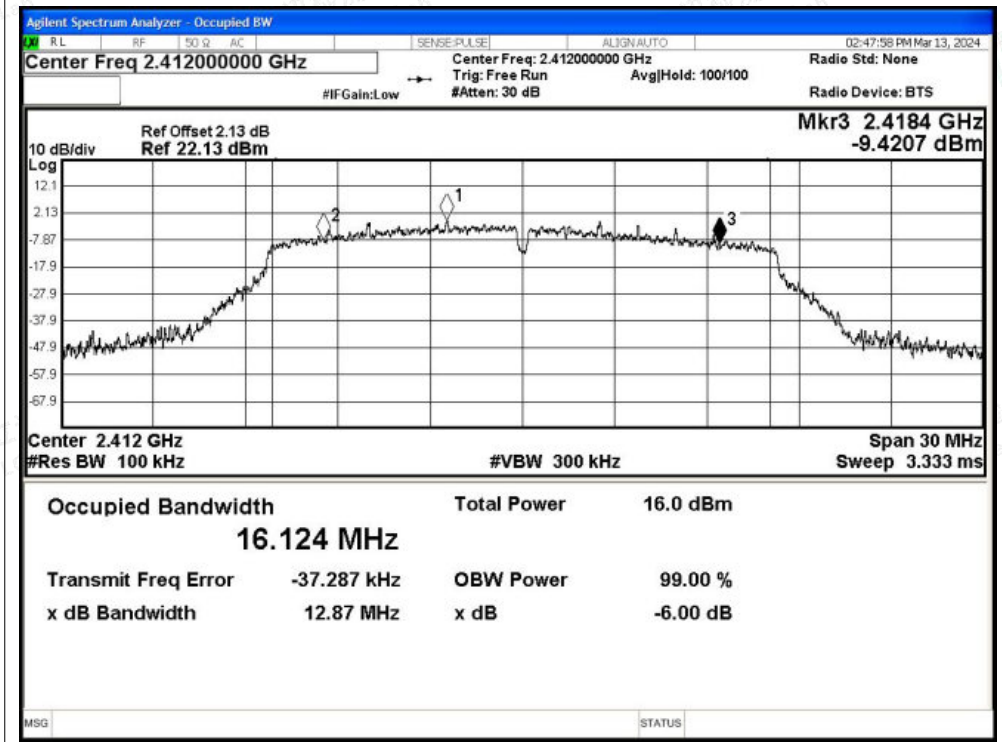




-6dB Bandwidth NVNT b 2462MHz Ant1

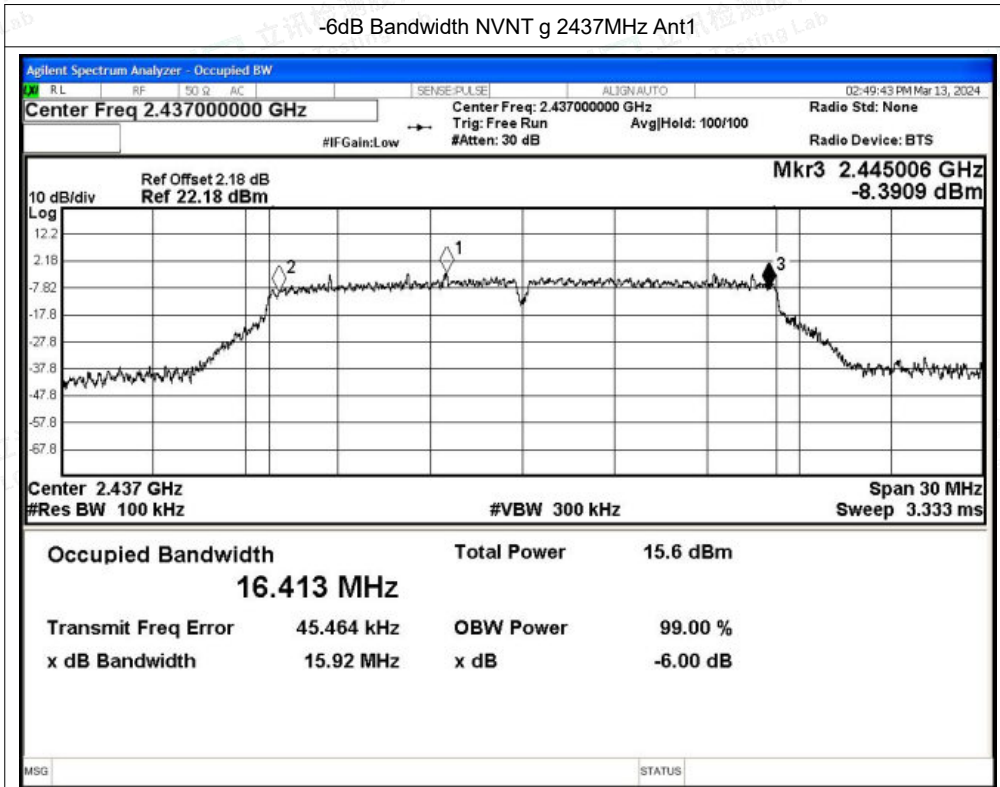


-6dB Bandwidth NVNT g 2412MHz Ant1

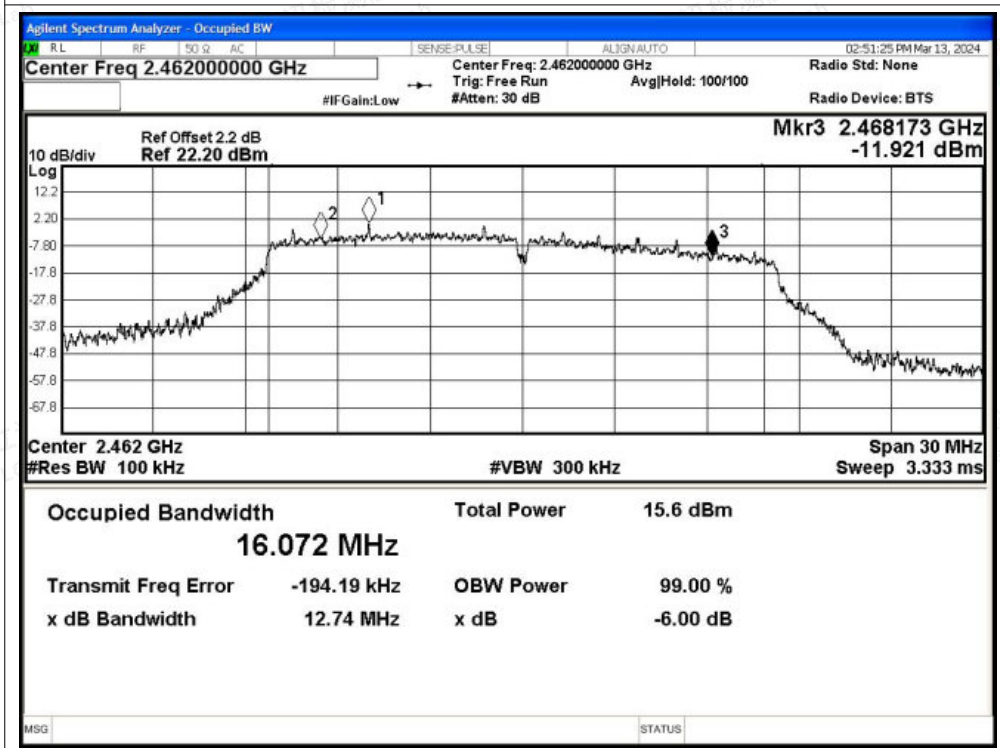




-6dB Bandwidth NVNT g 2437MHz Ant1

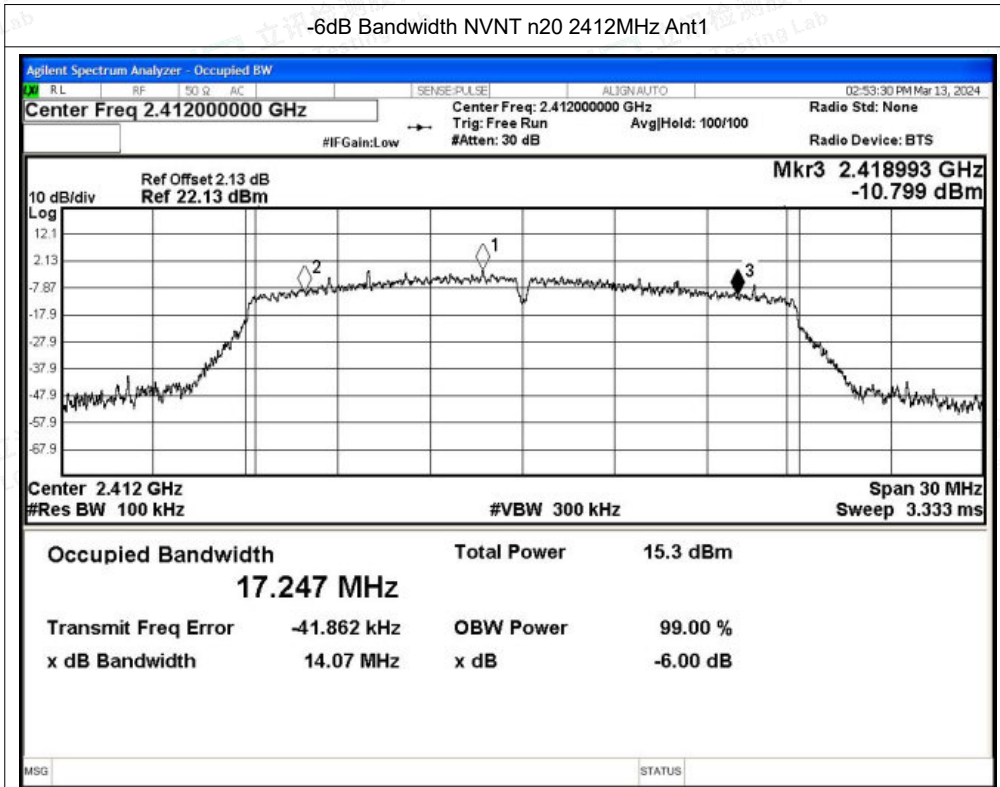


-6dB Bandwidth NVNT g 2462MHz Ant1

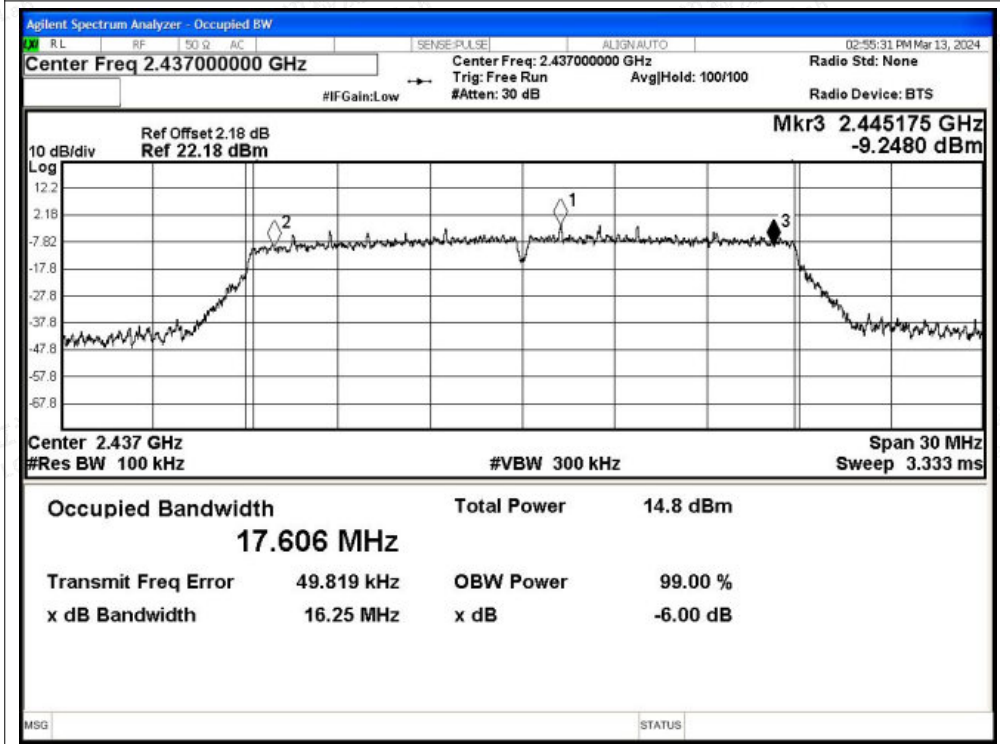




-6dB Bandwidth NVNT n20 2412MHz Ant1

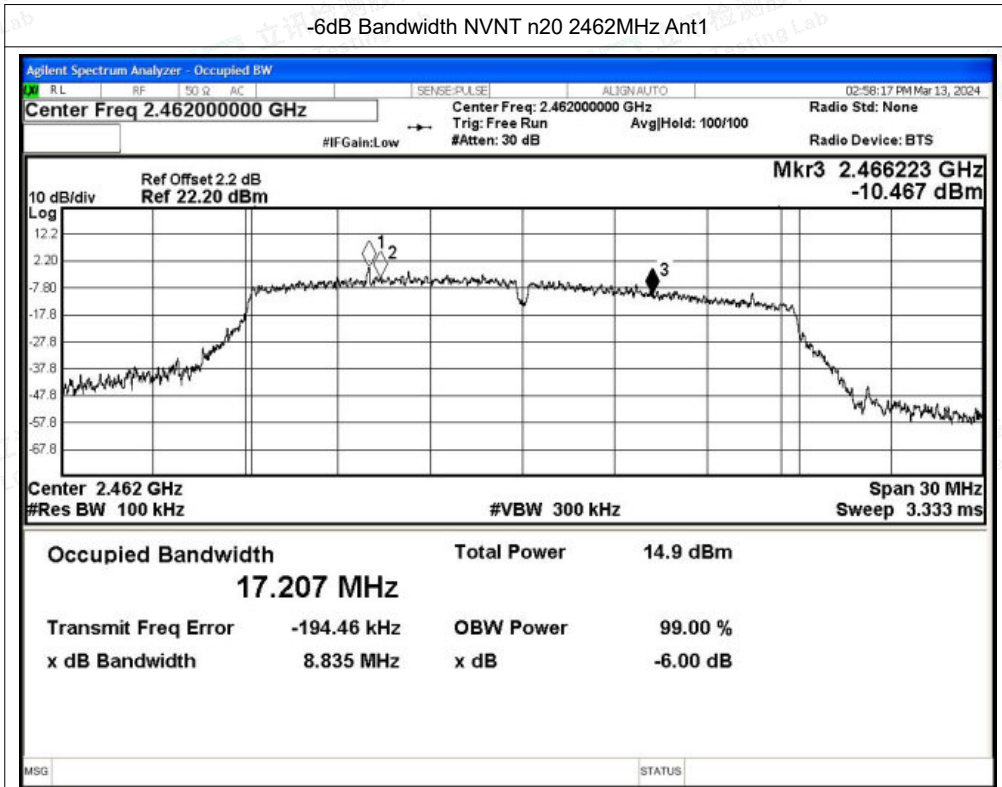


-6dB Bandwidth NVNT n20 2437MHz Ant1

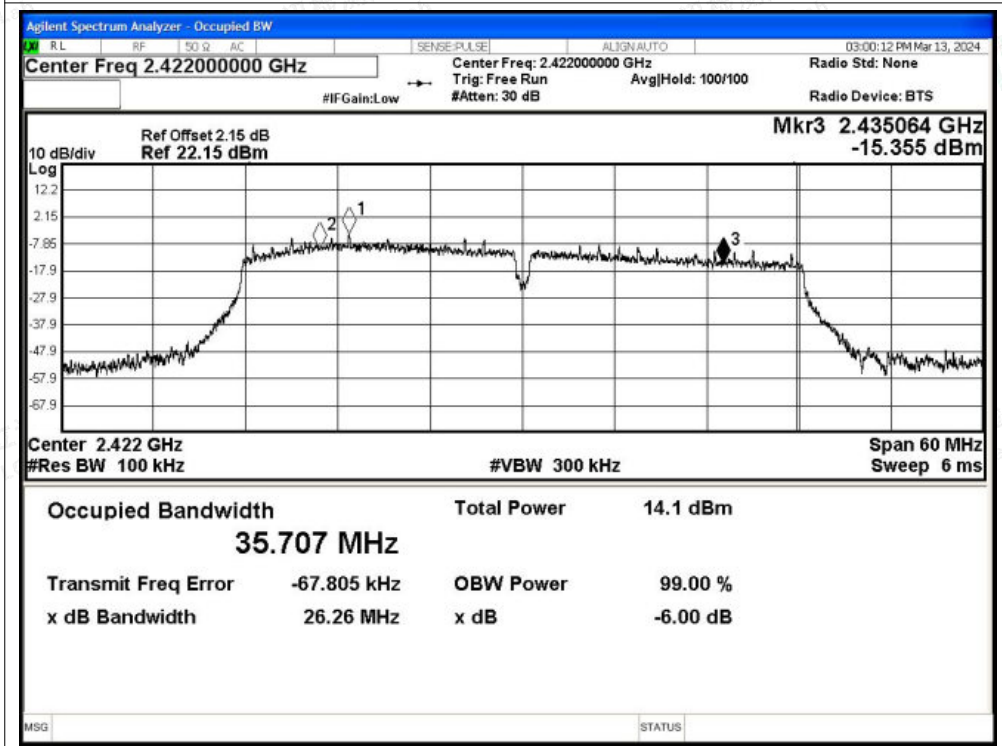




-6dB Bandwidth NVNT n20 2462MHz Ant1

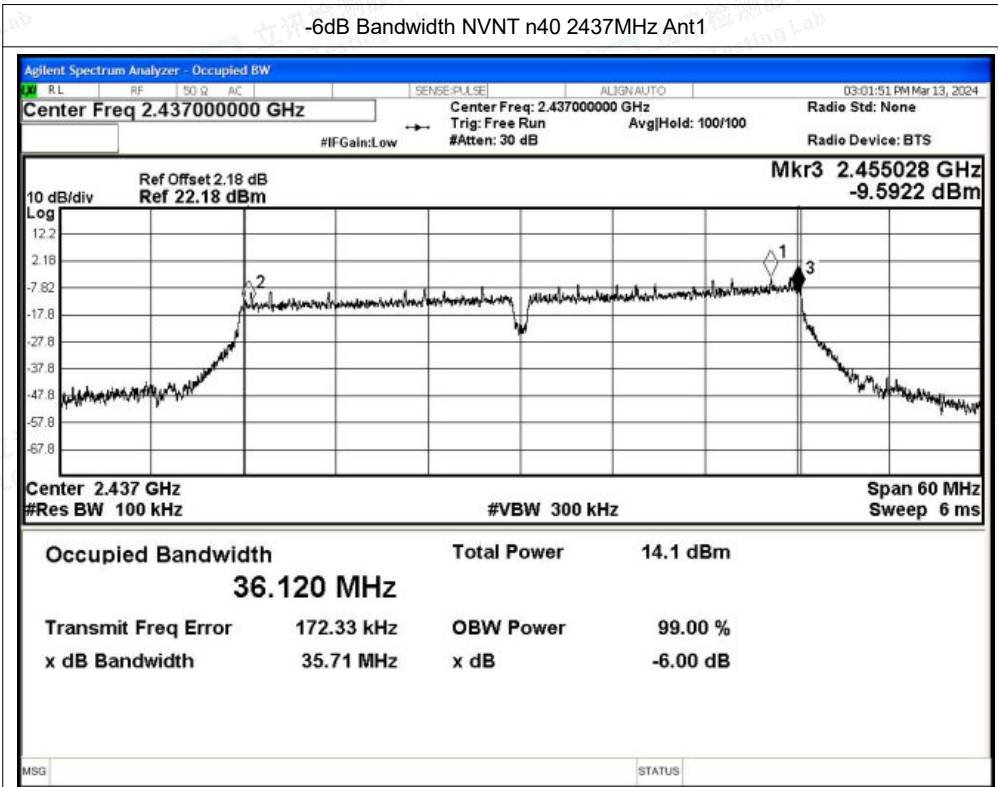


-6dB Bandwidth NVNT n40 2422MHz Ant1

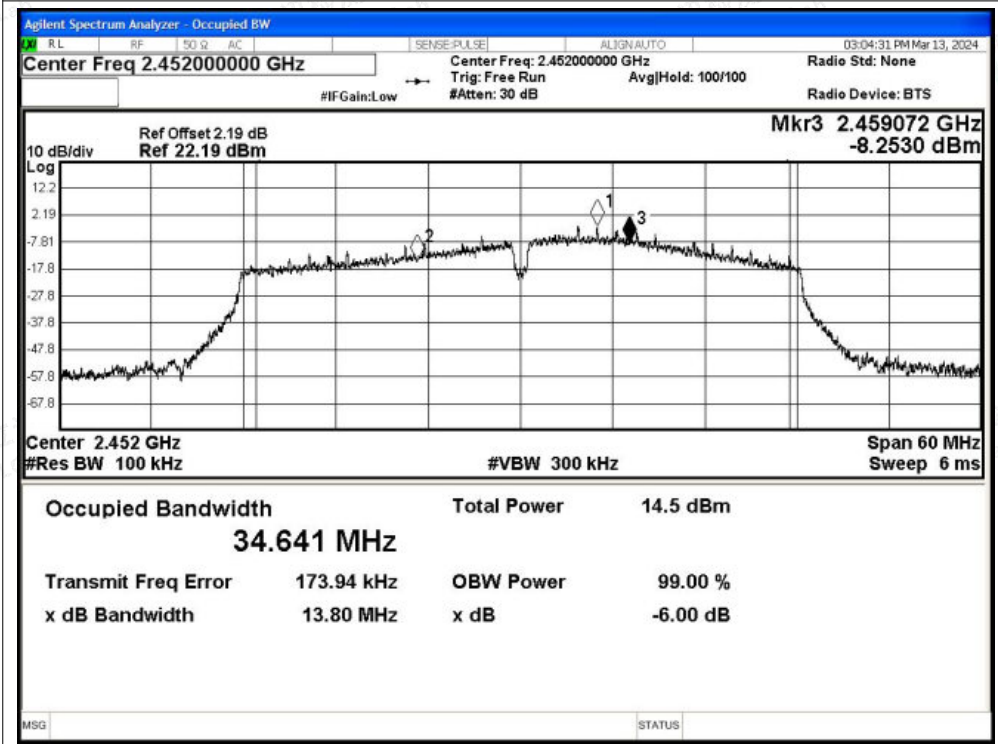




-6dB Bandwidth NVNT n40 2437MHz Ant1



-6dB Bandwidth NVNT n40 2452MHz Ant1





Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant2	7.557	>=0.5	Pass
NVNT	b	2437	Ant2	8.072	>=0.5	Pass
NVNT	b	2462	Ant2	7.051	>=0.5	Pass
NVNT	g	2412	Ant2	13.793	>=0.5	Pass
NVNT	g	2437	Ant2	14.664	>=0.5	Pass
NVNT	g	2462	Ant2	12.764	>=0.5	Pass
NVNT	n20	2412	Ant2	11.653	>=0.5	Pass
NVNT	n20	2437	Ant2	15.099	>=0.5	Pass
NVNT	n20	2462	Ant2	12.533	>=0.5	Pass
NVNT	n40	2422	Ant2	28.823	>=0.5	Pass
NVNT	n40	2437	Ant2	34.436	>=0.5	Pass
NVNT	n40	2452	Ant2	15.061	>=0.5	Pass



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 Scan code to check authenticity

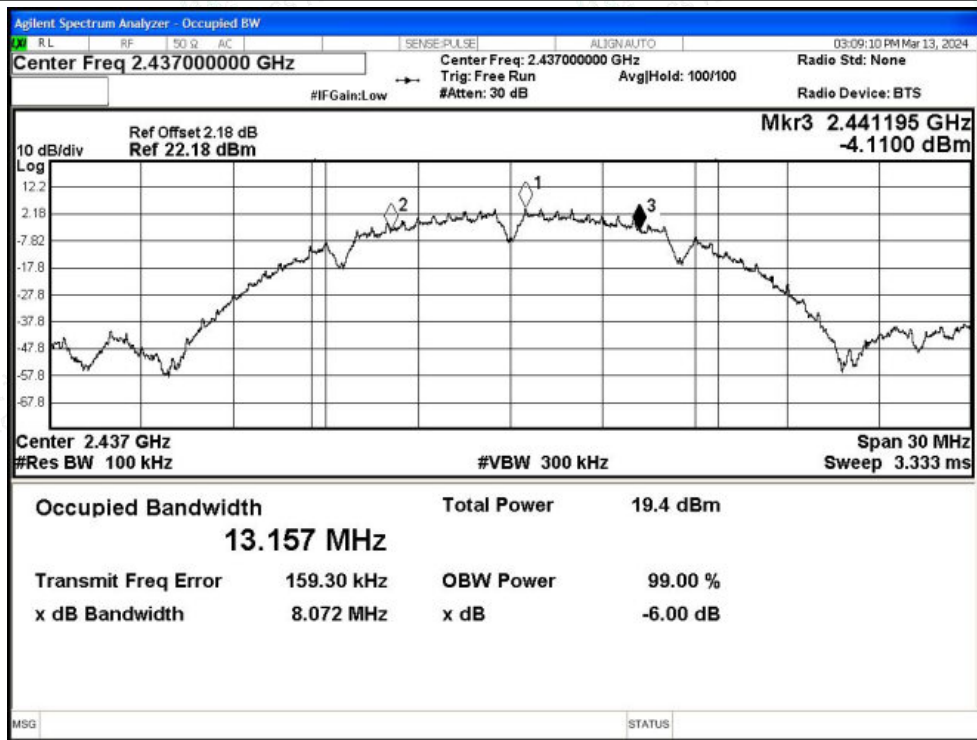


Test Graphs

-6dB Bandwidth NVNT b 2412MHz Ant2

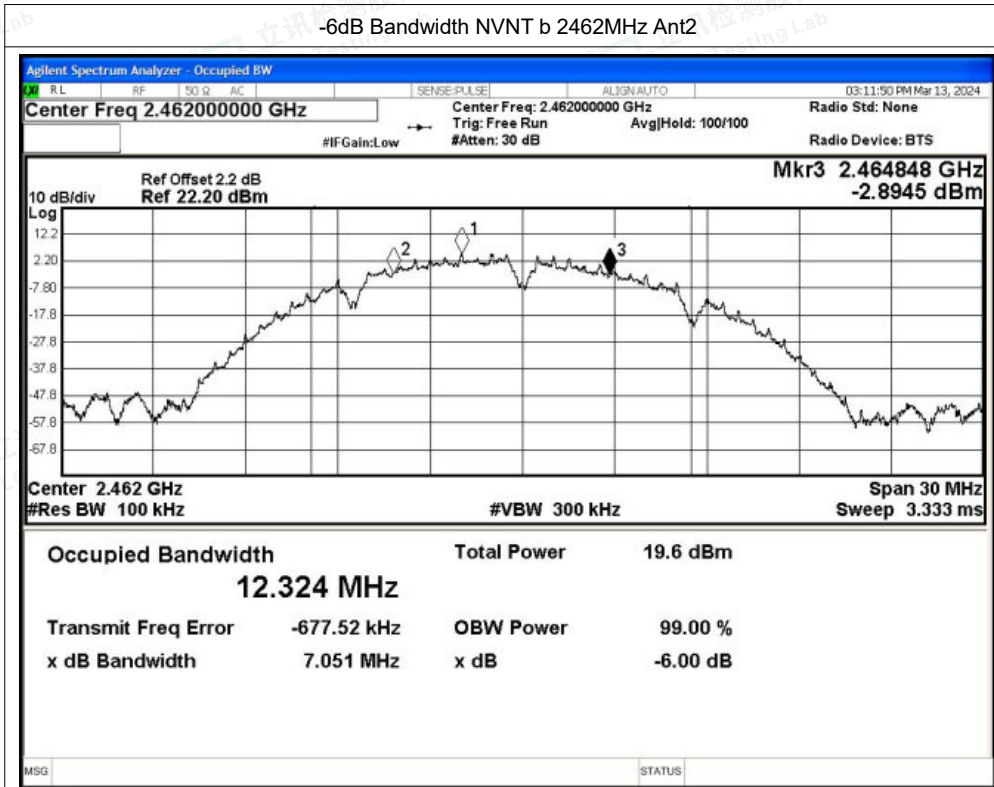


-6dB Bandwidth NVNT b 2437MHz Ant2

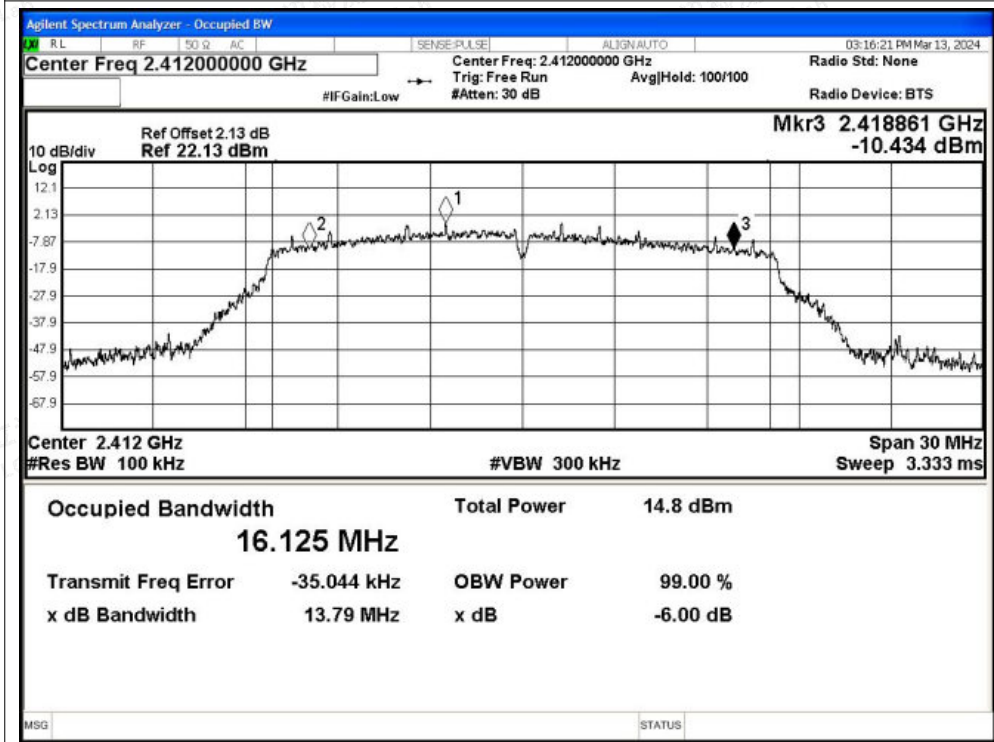




-6dB Bandwidth NVNT b 2462MHz Ant2

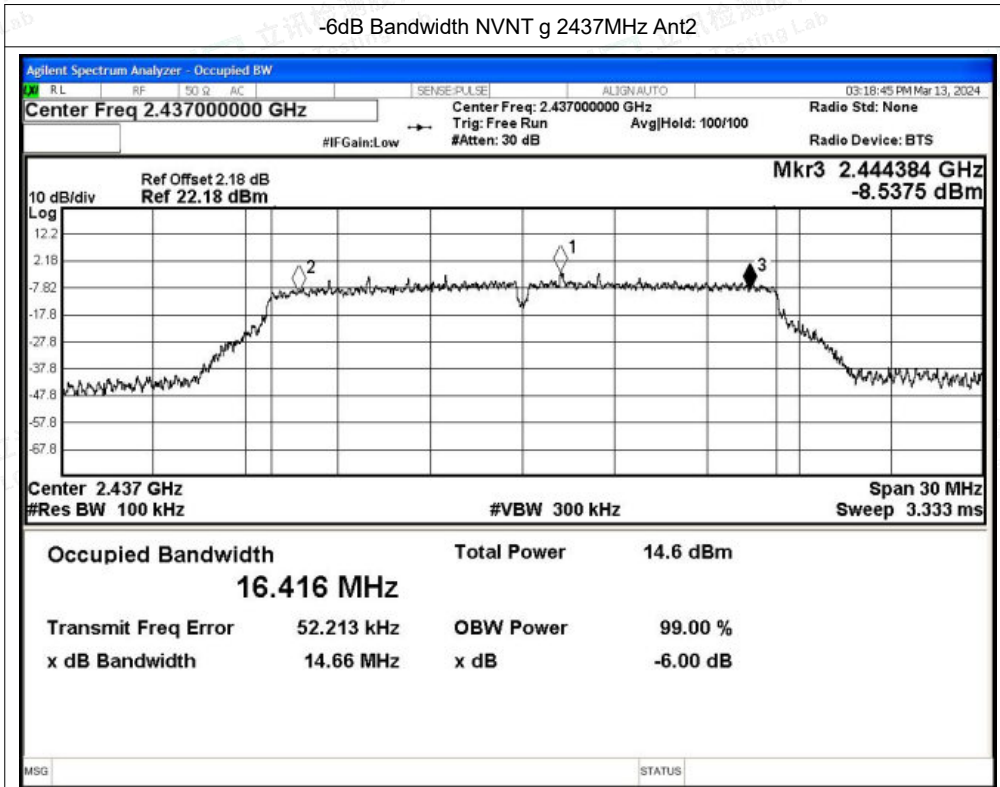


-6dB Bandwidth NVNT g 2412MHz Ant2

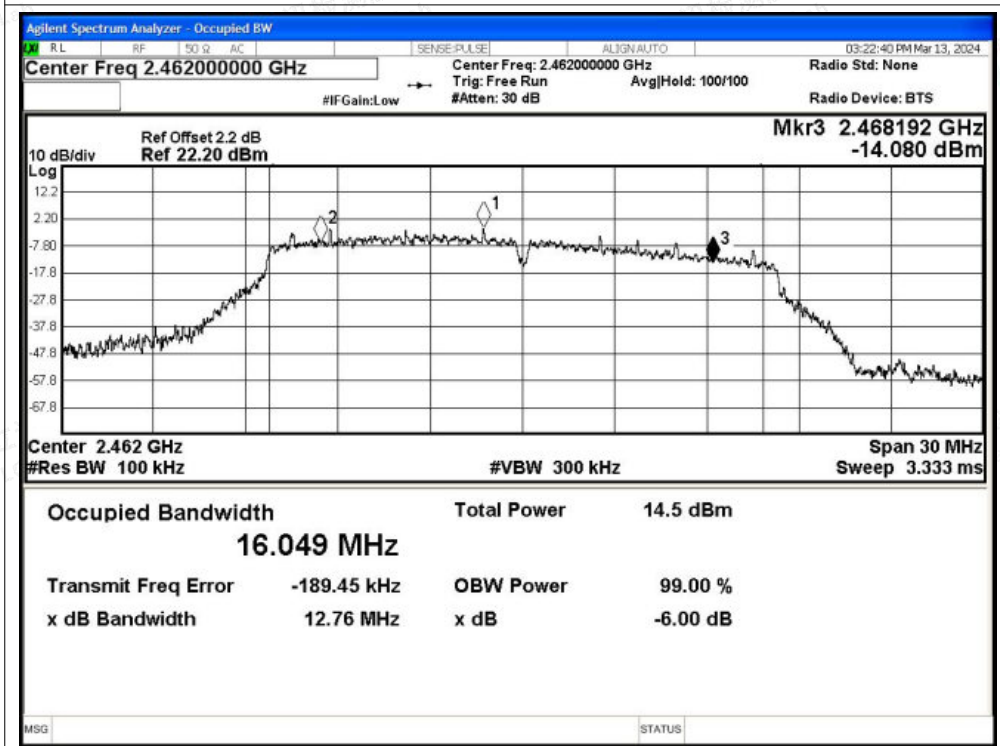




-6dB Bandwidth NVNT g 2437MHz Ant2

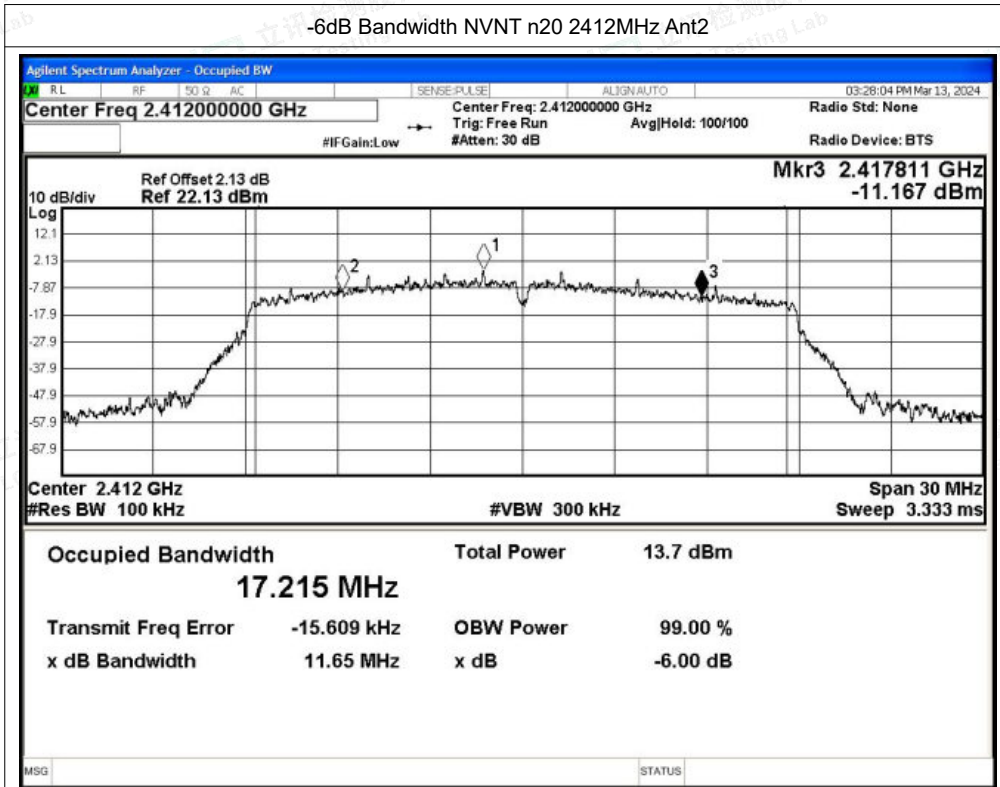


-6dB Bandwidth NVNT g 2462MHz Ant2

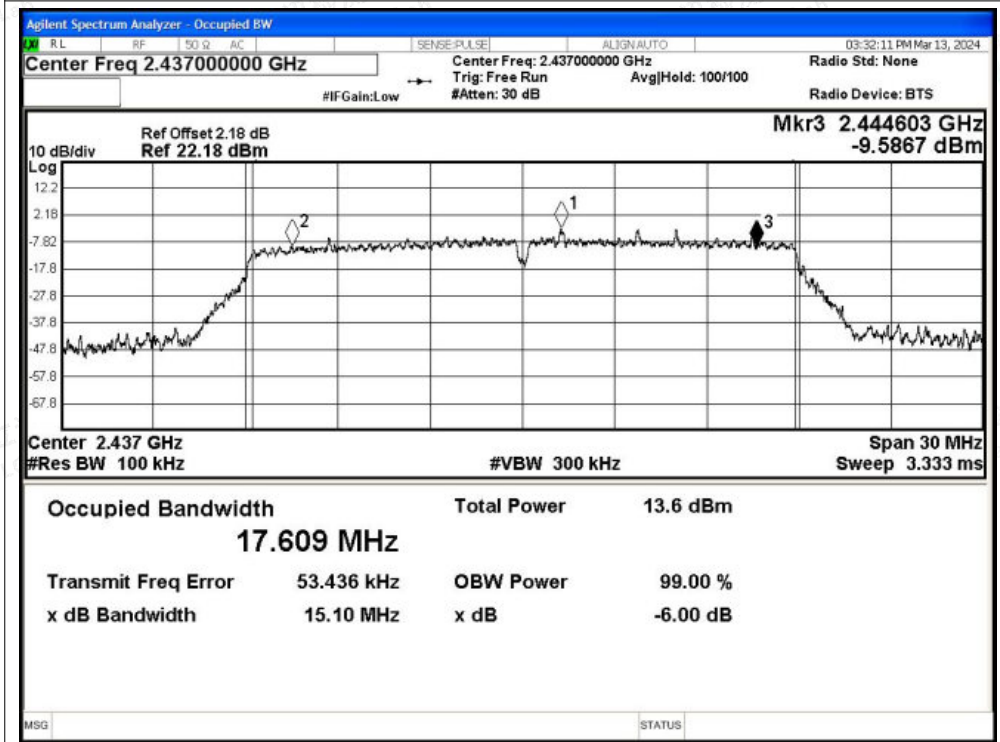




-6dB Bandwidth NVNT n20 2412MHz Ant2

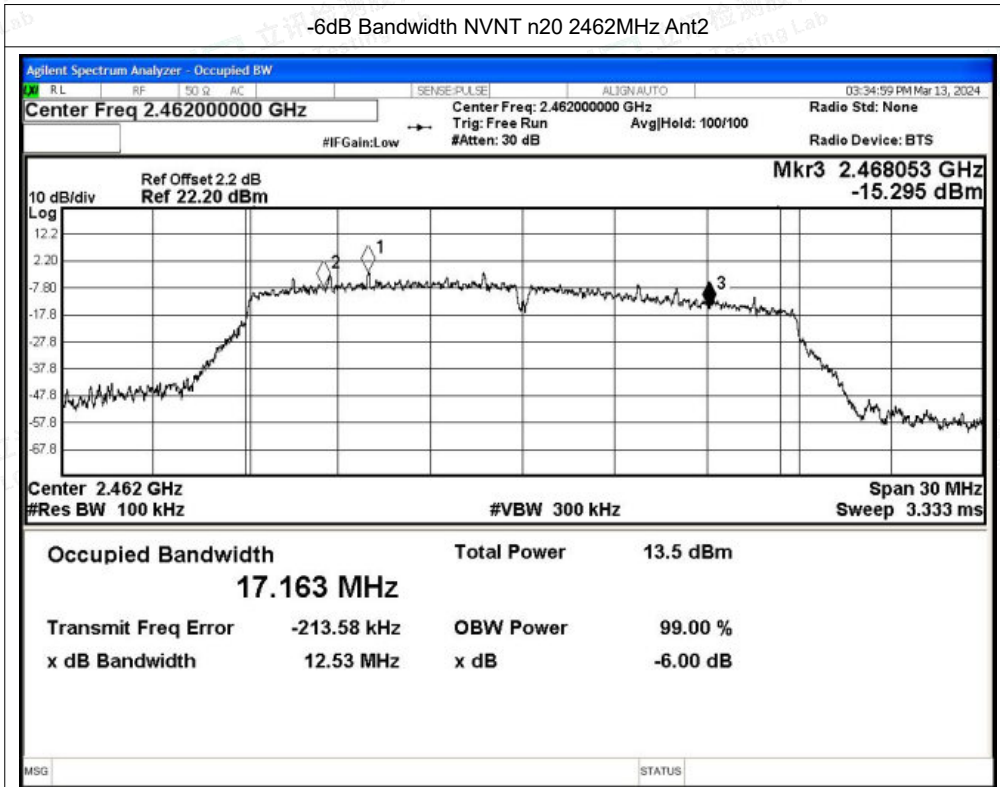


-6dB Bandwidth NVNT n20 2437MHz Ant2

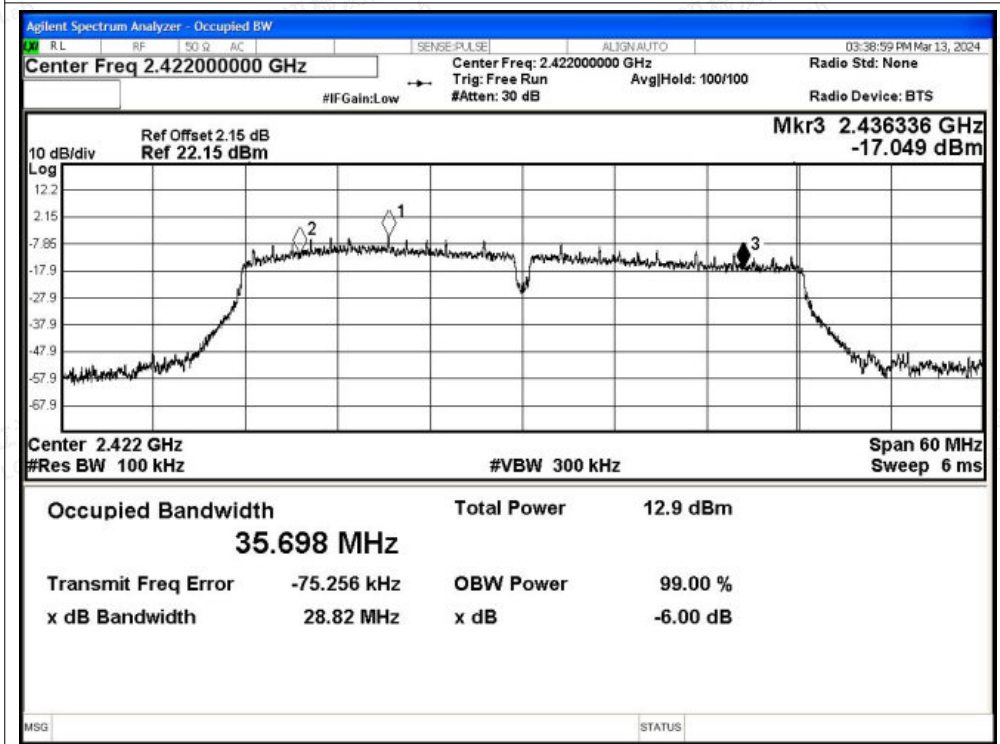




-6dB Bandwidth NVNT n20 2462MHz Ant2

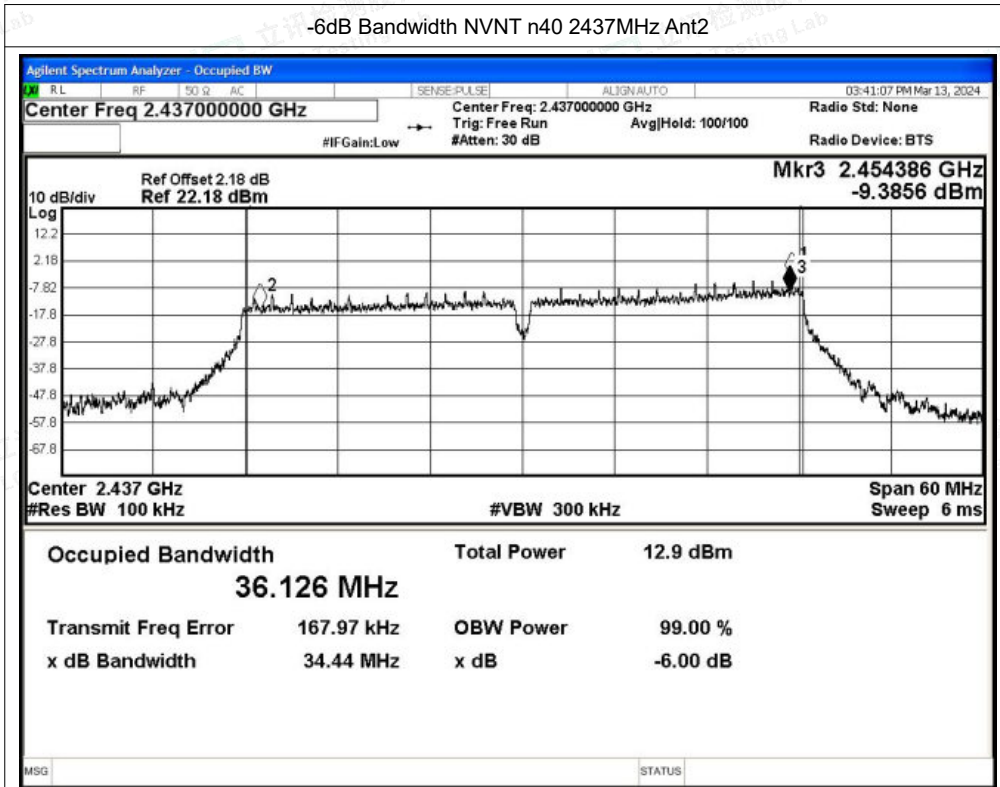


-6dB Bandwidth NVNT n40 2422MHz Ant2

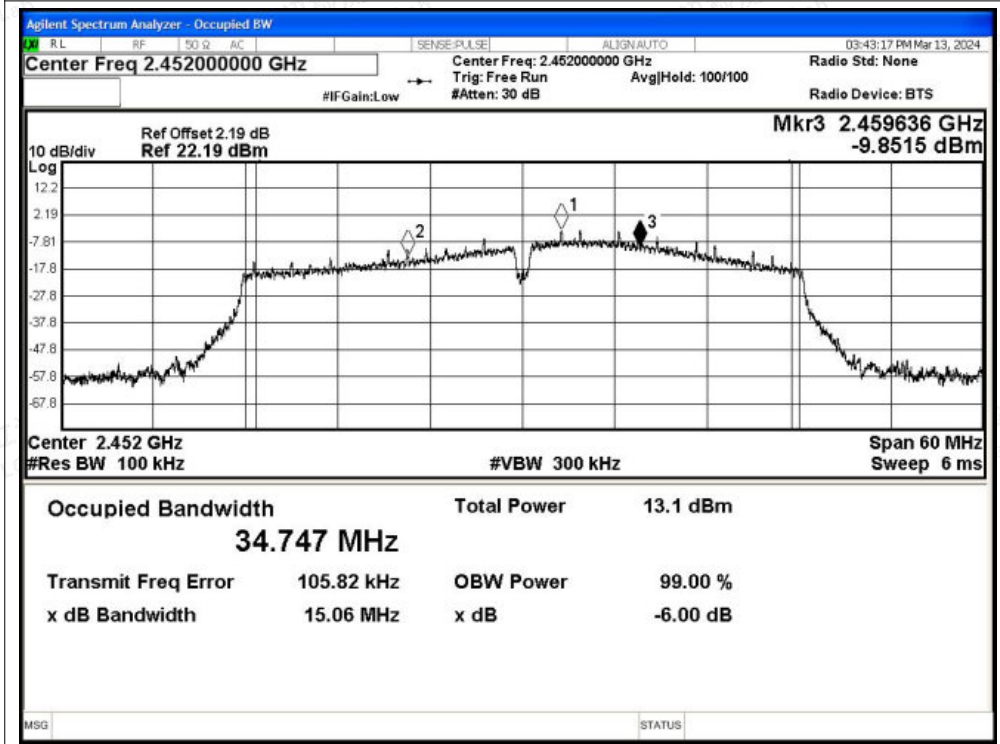




-6dB Bandwidth NVNT n40 2437MHz Ant2



-6dB Bandwidth NVNT n40 2452MHz Ant2





C.2 Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	15.39	30	Pass
NVNT	b	2437	Ant1	15.4	30	Pass
NVNT	b	2462	Ant1	15.35	30	Pass
NVNT	g	2412	Ant1	14.54	30	Pass
NVNT	g	2437	Ant1	14.43	30	Pass
NVNT	g	2462	Ant1	14.4	30	Pass
NVNT	n20	2412	Ant1	13.84	30	Pass
NVNT	n20	2437	Ant1	13.39	30	Pass
NVNT	n20	2462	Ant1	13.68	30	Pass
NVNT	n40	2422	Ant1	12.59	30	Pass
NVNT	n40	2437	Ant1	12.56	30	Pass
NVNT	n40	2452	Ant1	12.77	30	Pass

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant2	14.55	30	Pass
NVNT	b	2437	Ant2	14.36	30	Pass
NVNT	b	2462	Ant2	14.46	30	Pass
NVNT	g	2412	Ant2	13.35	30	Pass
NVNT	g	2437	Ant2	13.2	30	Pass
NVNT	g	2462	Ant2	13.17	30	Pass
NVNT	n20	2412	Ant2	12.1	30	Pass
NVNT	n20	2437	Ant2	12.17	30	Pass
NVNT	n20	2462	Ant2	12.14	30	Pass
NVNT	n40	2422	Ant2	11.36	30	Pass
NVNT	n40	2437	Ant2	11.32	30	Pass
NVNT	n40	2452	Ant2	11.69	30	Pass

MIMO

Condition	Mode	Frequency (MHz)	Total Power (dBm)			Limit (dBm)	Verdict
			Ant1	Ant2	Ant1+Ant2		
NVNT	n20	2412	13.84	12.1	16.07	27.19	Pass
NVNT	n20	2437	13.39	12.17	15.83	27.19	Pass
NVNT	n20	2462	13.68	12.14	15.99	27.19	Pass
NVNT	n40	2422	12.59	11.36	15.03	27.19	Pass
NVNT	n40	2437	12.56	11.32	14.99	27.19	Pass
NVNT	n40	2452	12.77	11.69	15.27	27.19	Pass





C.3 Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	b	2412	Ant1	-8.56	8	Pass
NVNT	b	2437	Ant1	-9.43	8	Pass
NVNT	b	2462	Ant1	-7.78	8	Pass
NVNT	g	2412	Ant1	-13.42	8	Pass
NVNT	g	2437	Ant1	-13.45	8	Pass
NVNT	g	2462	Ant1	-14.72	8	Pass
NVNT	n20	2412	Ant1	-14.14	8	Pass
NVNT	n20	2437	Ant1	-15.47	8	Pass
NVNT	n20	2462	Ant1	-15.1	8	Pass
NVNT	n40	2422	Ant1	-18.6	8	Pass
NVNT	n40	2437	Ant1	-18.44	8	Pass
NVNT	n40	2452	Ant1	-17.25	8	Pass

Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	b	2412	Ant2	-8.99	8	Pass
NVNT	b	2437	Ant2	-8.71	8	Pass
NVNT	b	2462	Ant2	-9.29	8	Pass
NVNT	g	2412	Ant2	-15.28	8	Pass
NVNT	g	2437	Ant2	-15.41	8	Pass
NVNT	g	2462	Ant2	-15.31	8	Pass
NVNT	n20	2412	Ant2	-16.73	8	Pass
NVNT	n20	2437	Ant2	-17.21	8	Pass
NVNT	n20	2462	Ant2	-17.29	8	Pass
NVNT	n40	2422	Ant2	-20.22	8	Pass
NVNT	n40	2437	Ant2	-19.37	8	Pass
NVNT	n40	2452	Ant2	-18.06	8	Pass

MIMO

Condition	Mode	Frequency (MHz)	Total PSD (dBm/3kHz)			Limit (dBm)	Verdict
			Ant1	Ant2	Ant1+Ant2		
NVNT	n20	2412	-14.14	-16.73	-12.23	5.19	Pass
NVNT	n20	2437	-15.47	-17.21	-13.24	5.19	Pass
NVNT	n20	2462	-15.1	-17.29	-13.05	5.19	Pass
NVNT	n40	2422	-18.6	-20.22	-16.32	5.19	Pass
NVNT	n40	2437	-18.44	-19.37	-15.87	5.19	Pass
NVNT	n40	2452	-17.25	-18.06	-14.63	5.19	Pass



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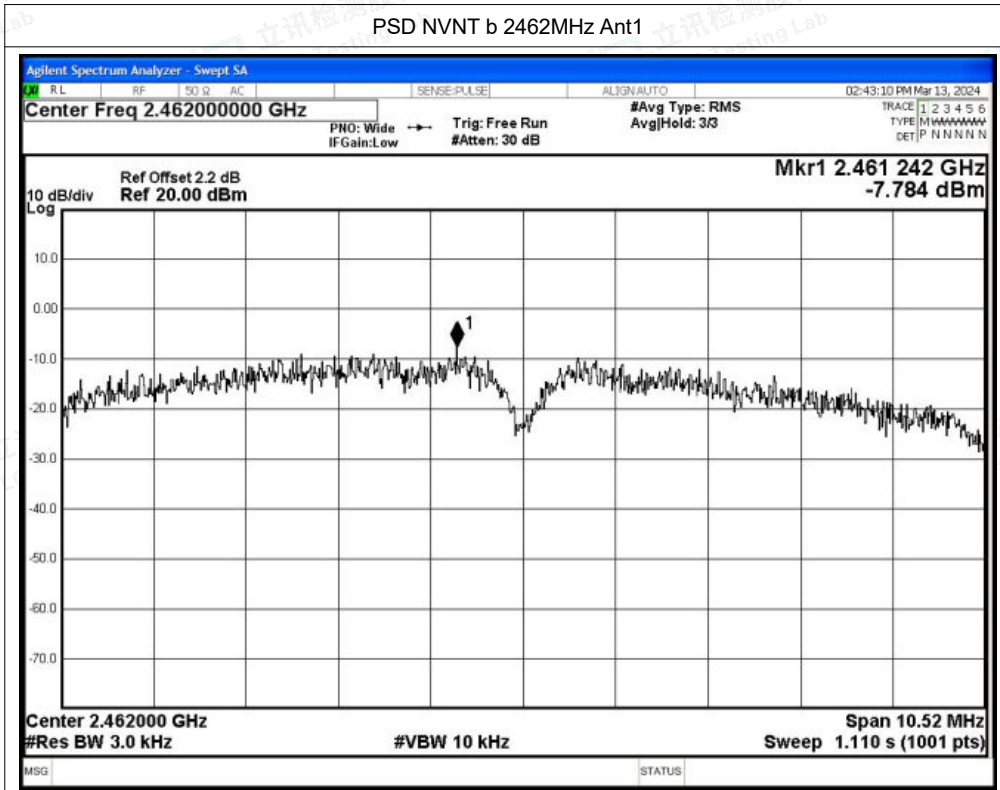
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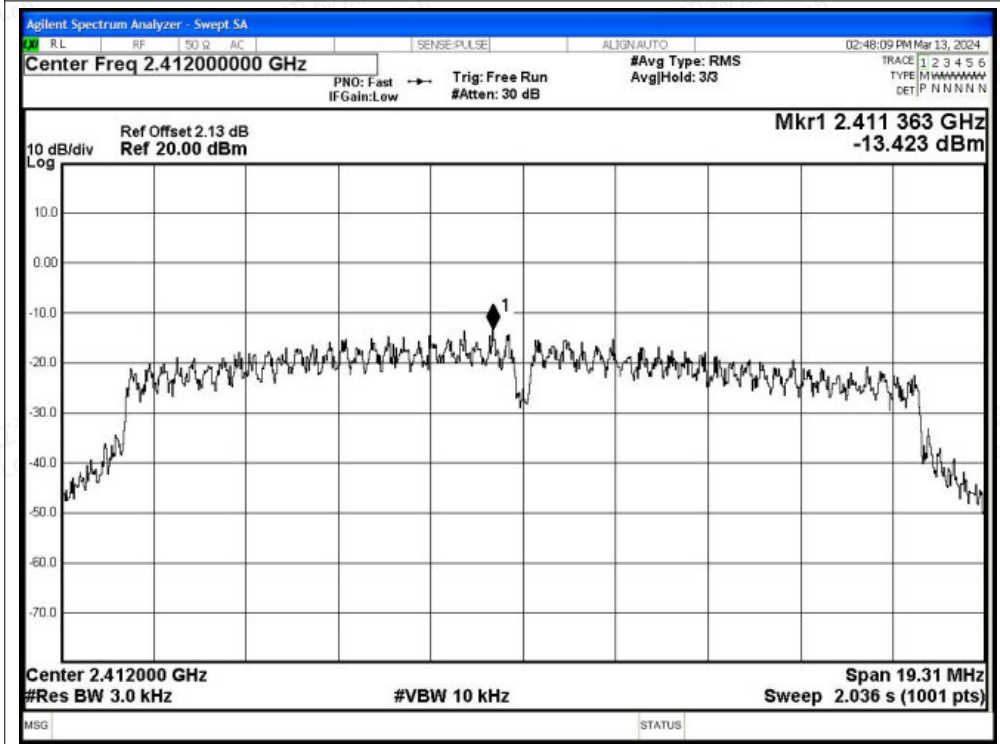
Scan code to check authenticity



PSD NVNT b 2462MHz Ant1

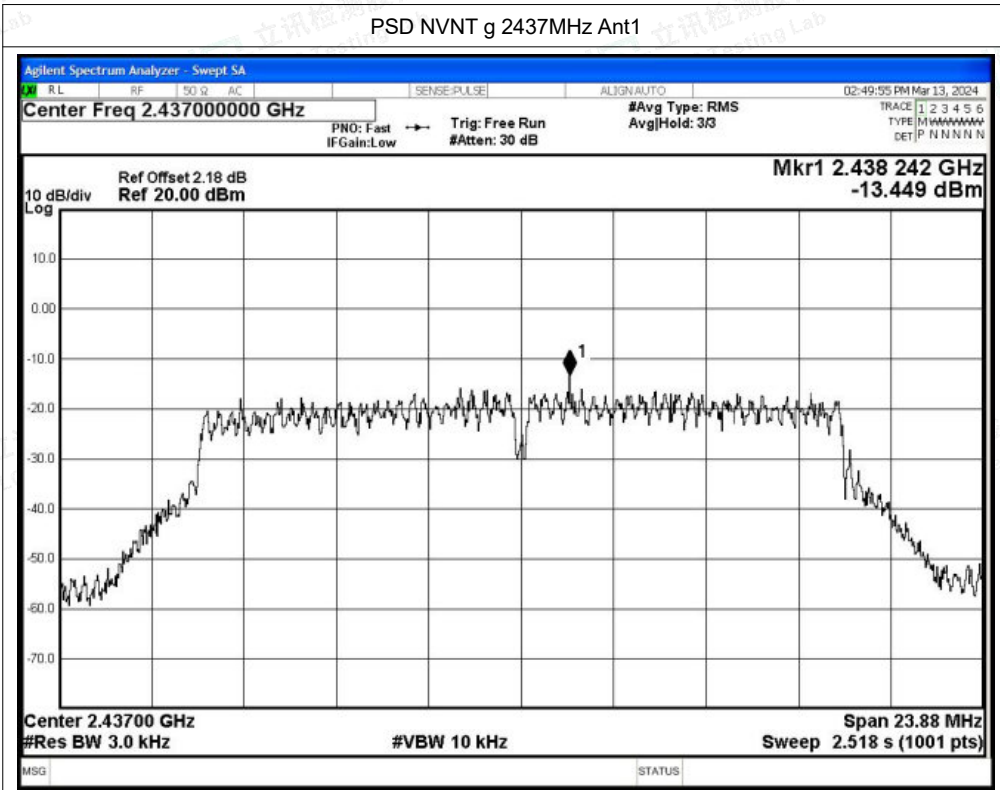


PSD NVNT g 2412MHz Ant1

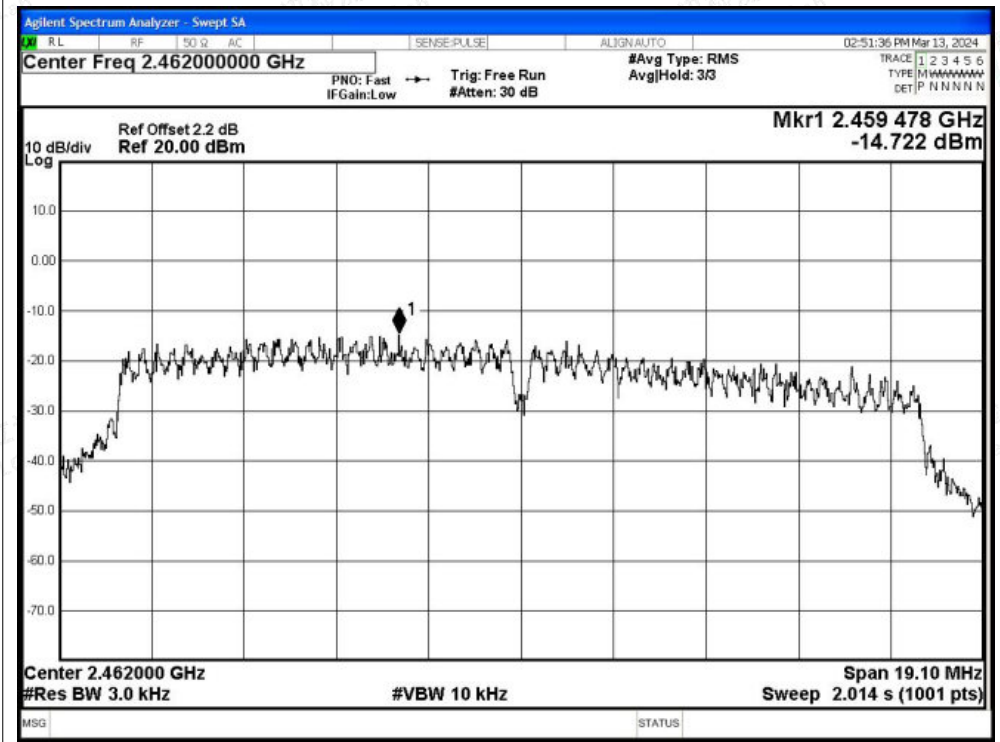




PSD NVNT g 2437MHz Ant1

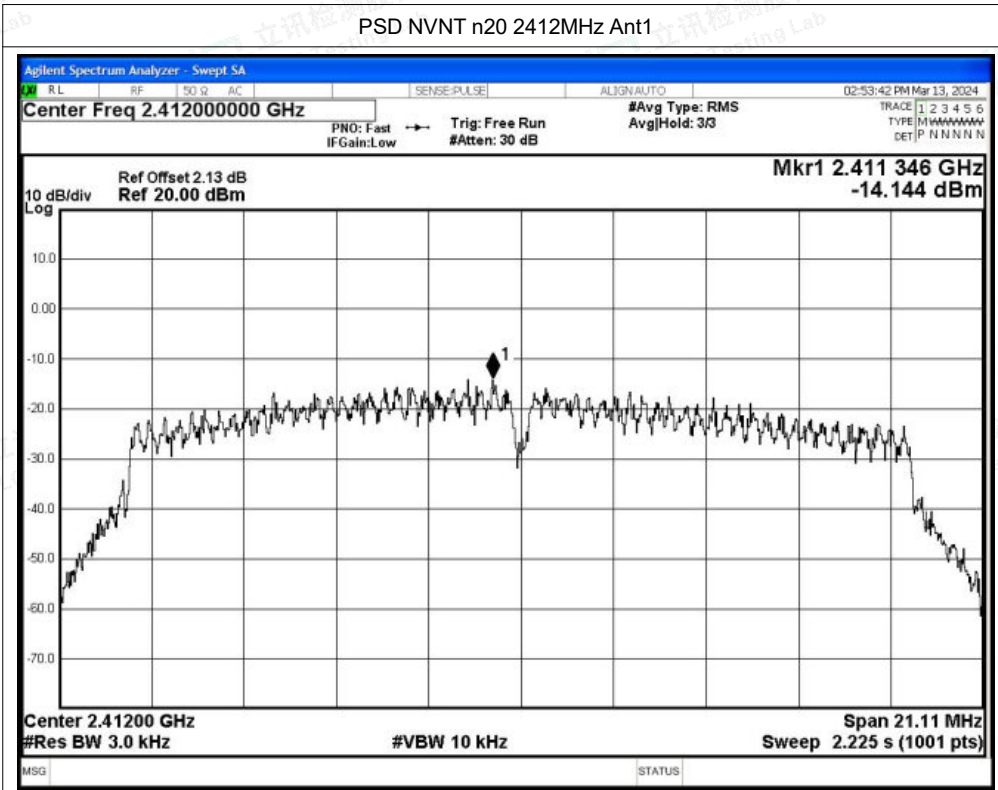


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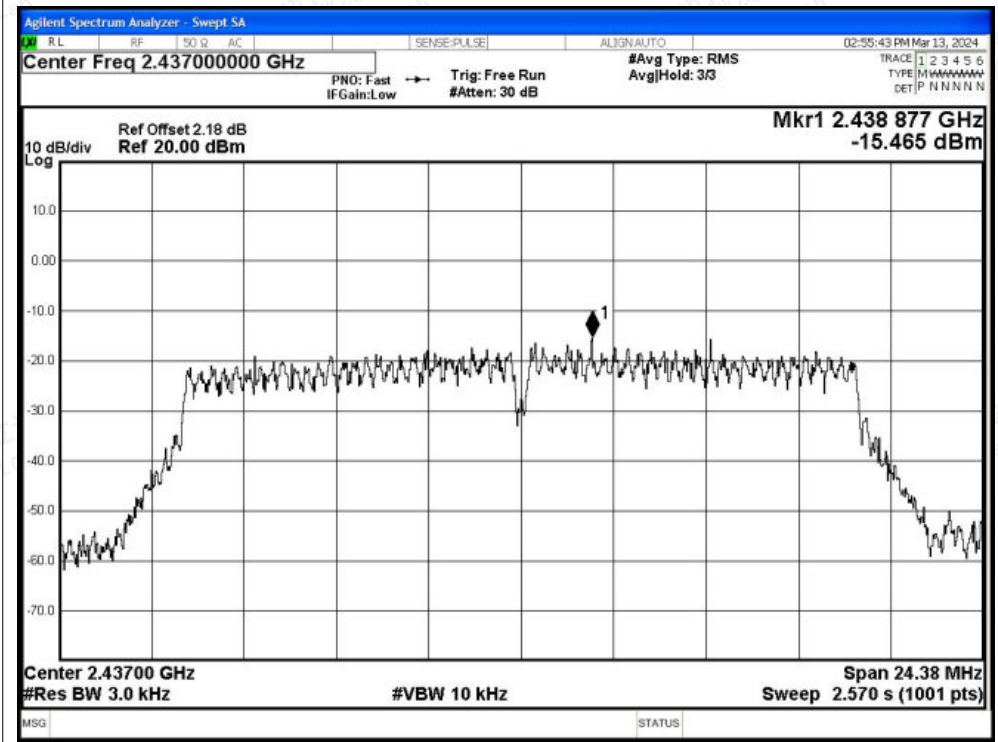




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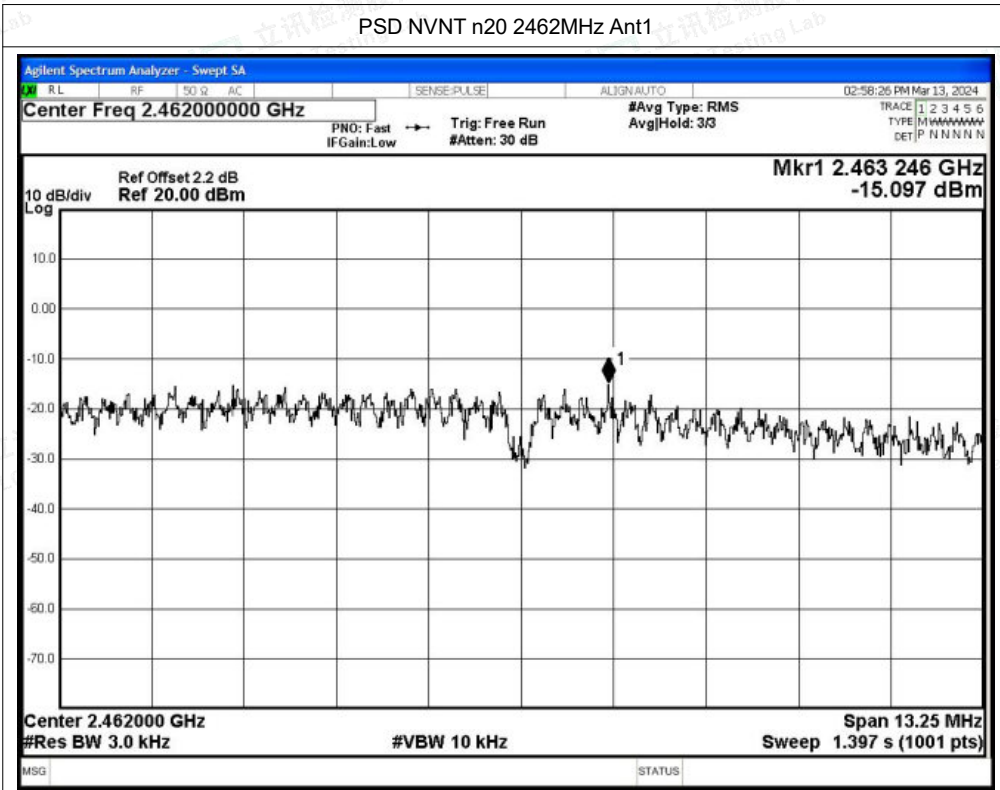


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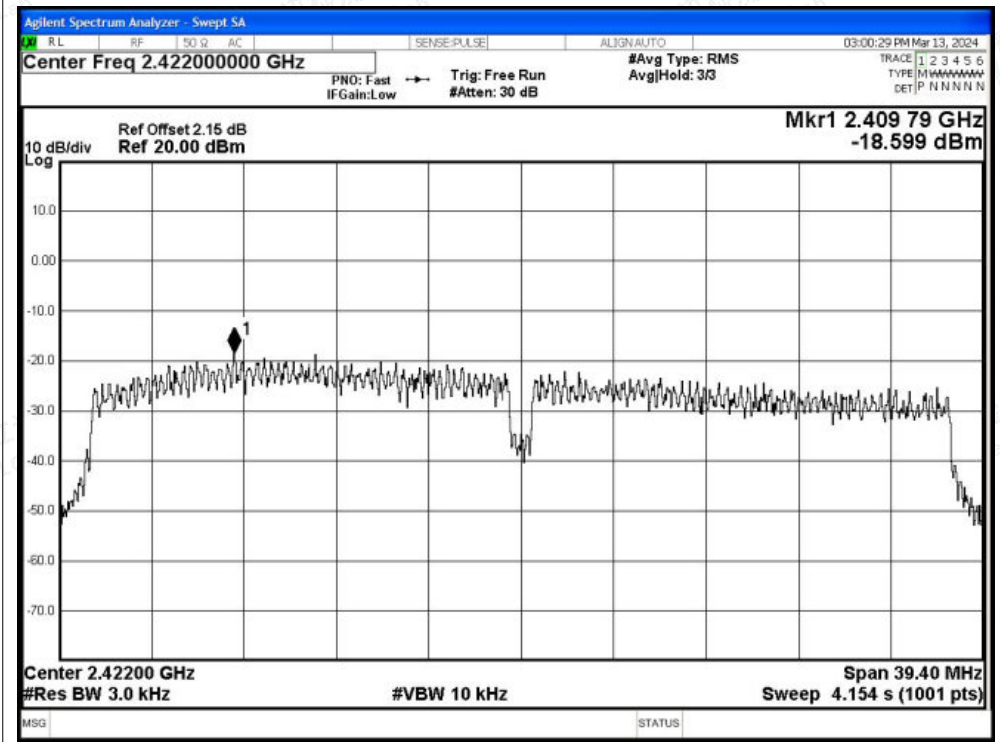




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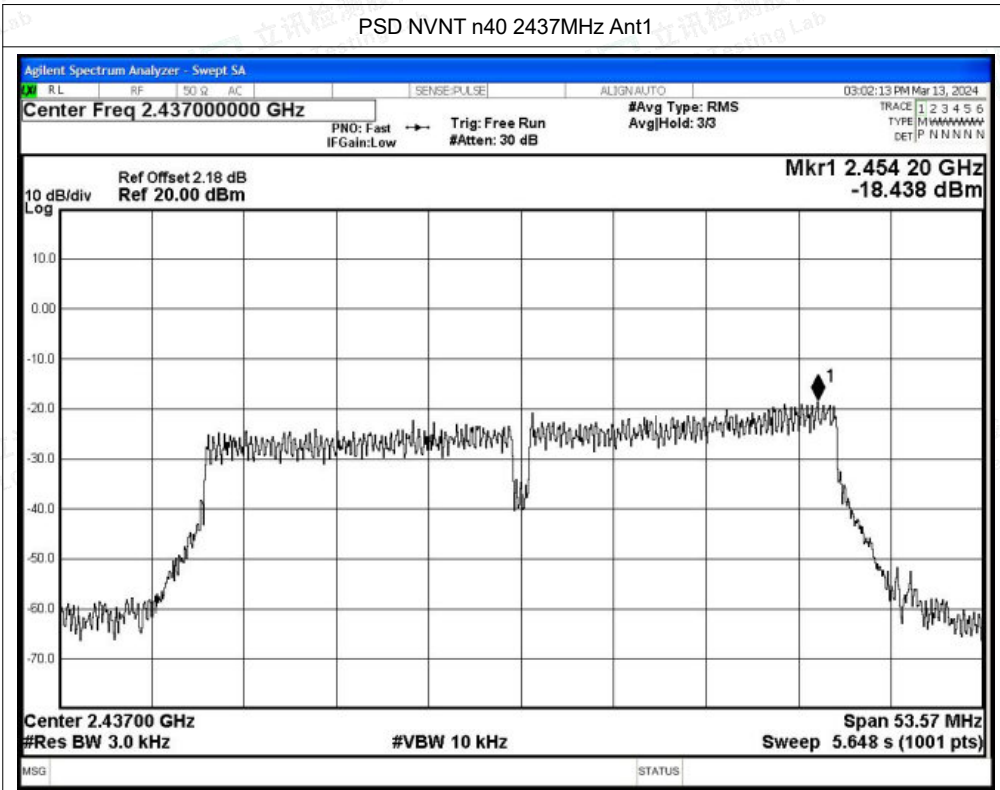


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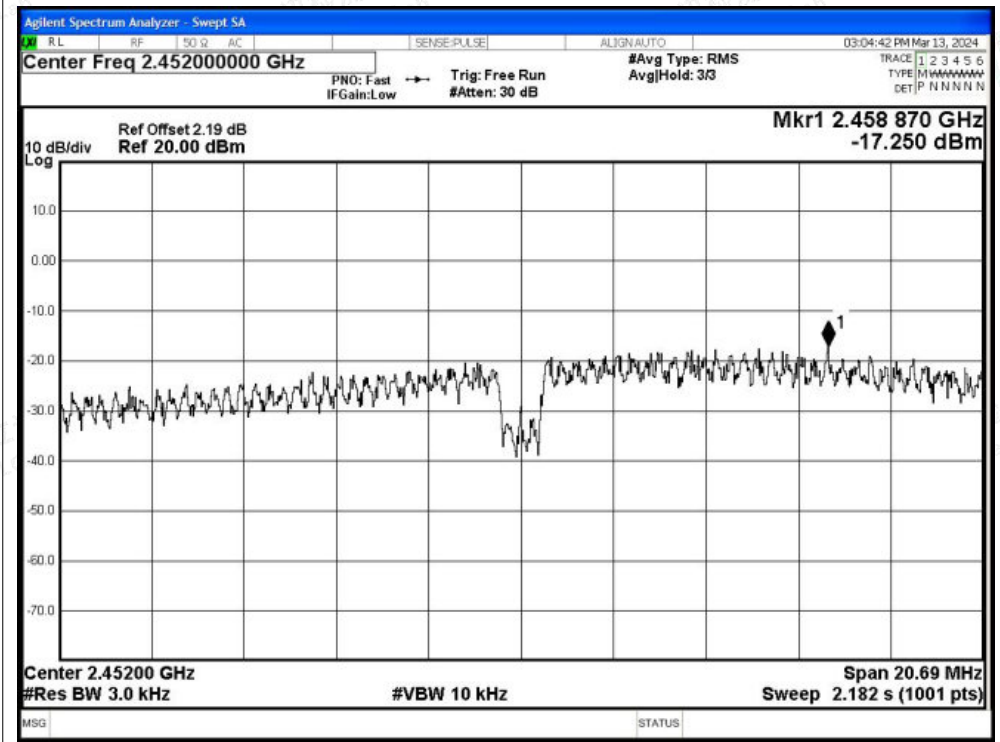




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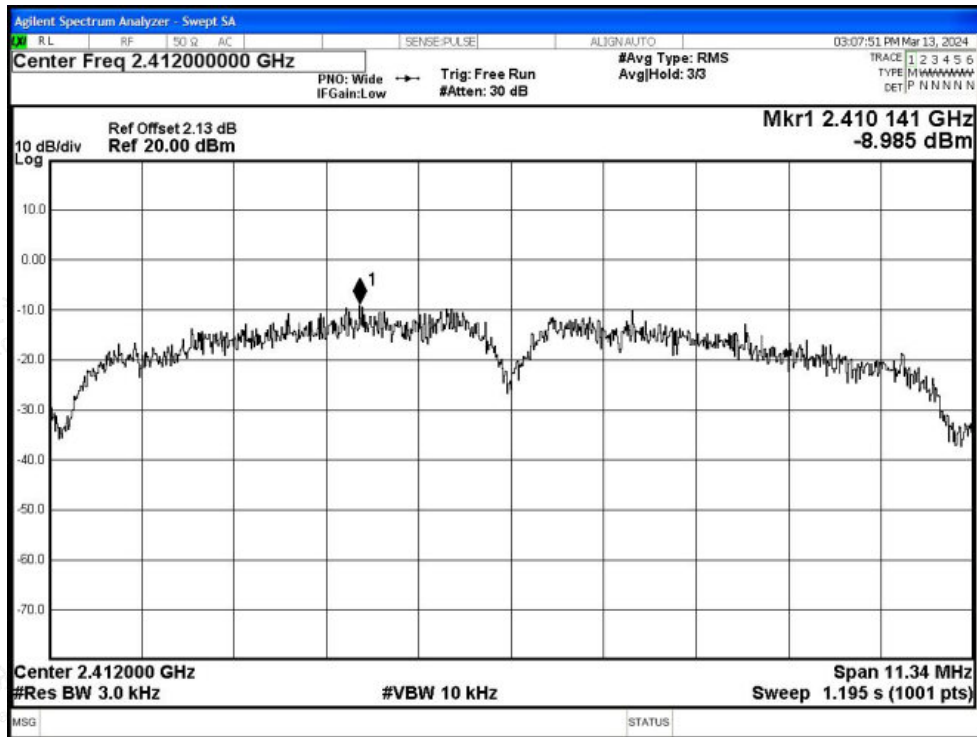
PSD NVNT n40 2452MHz Ant1



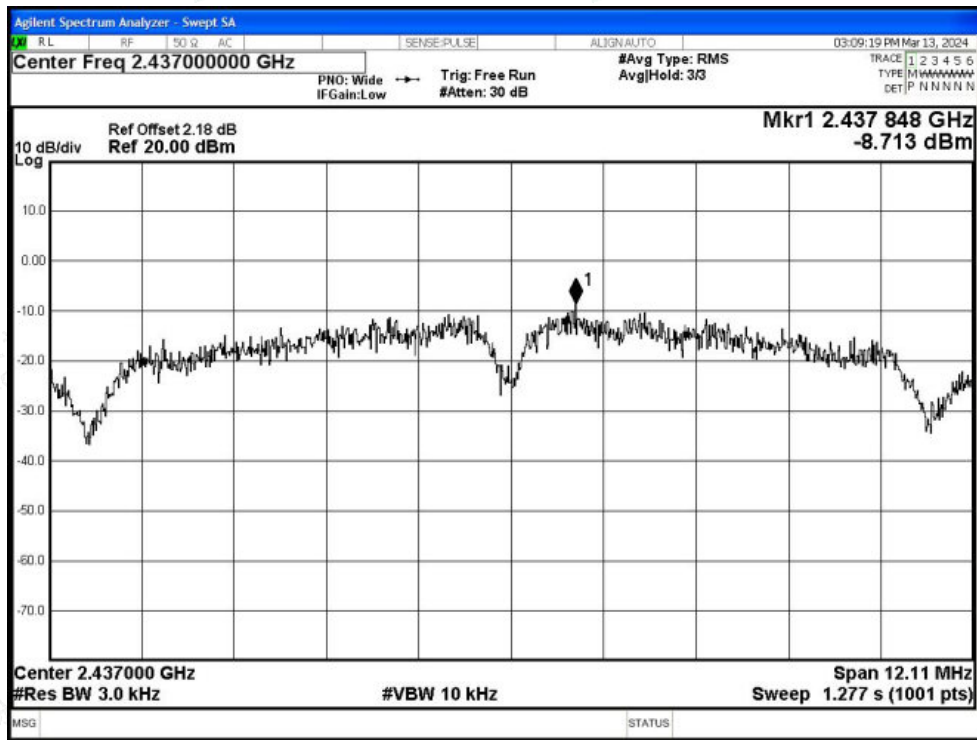


Test Graphs

PSD NVNT b 2412MHz Ant2

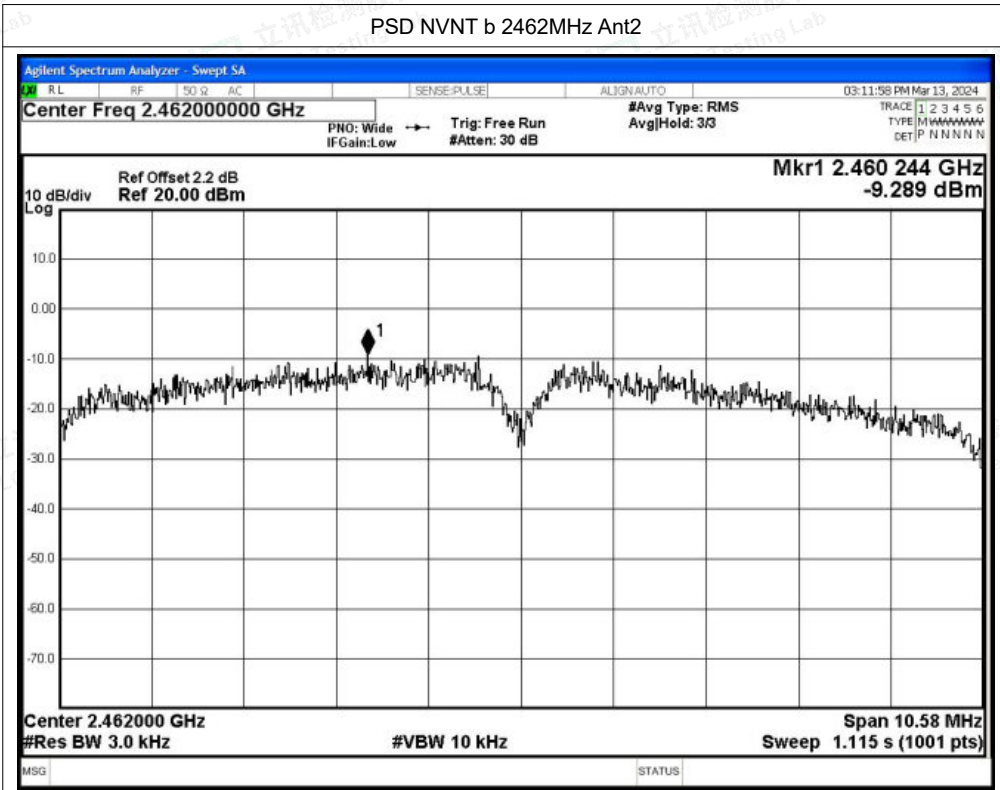


PSD NVNT b 2437MHz Ant2

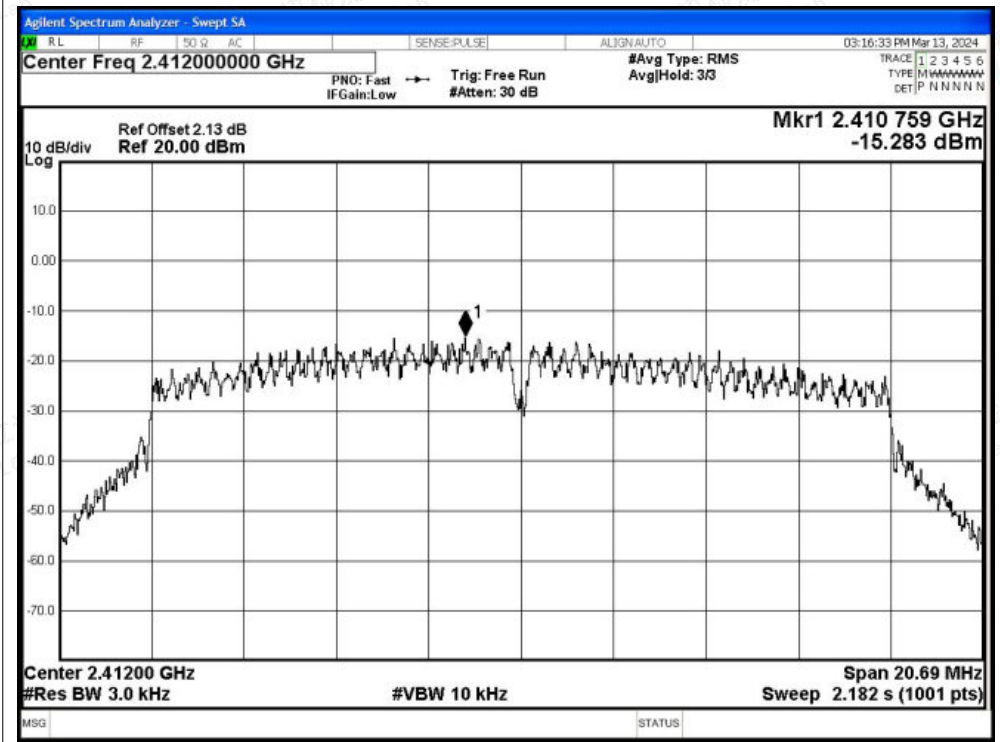




PSD NVNT b 2462MHz Ant2

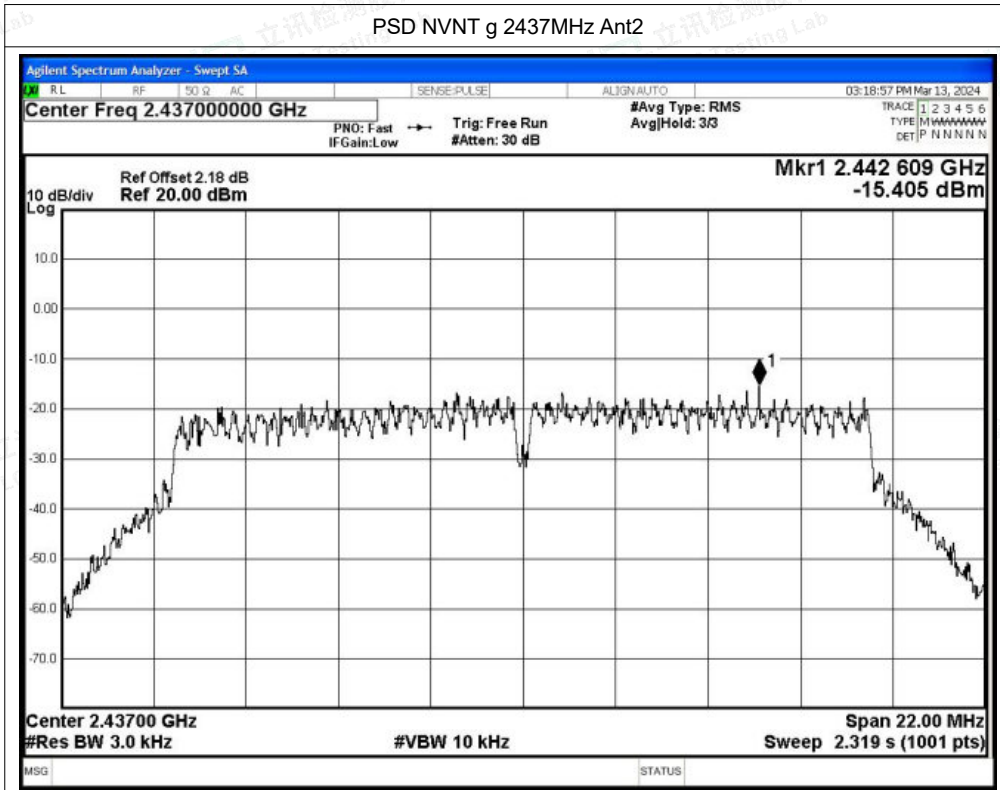


PSD NVNT g 2412MHz Ant2

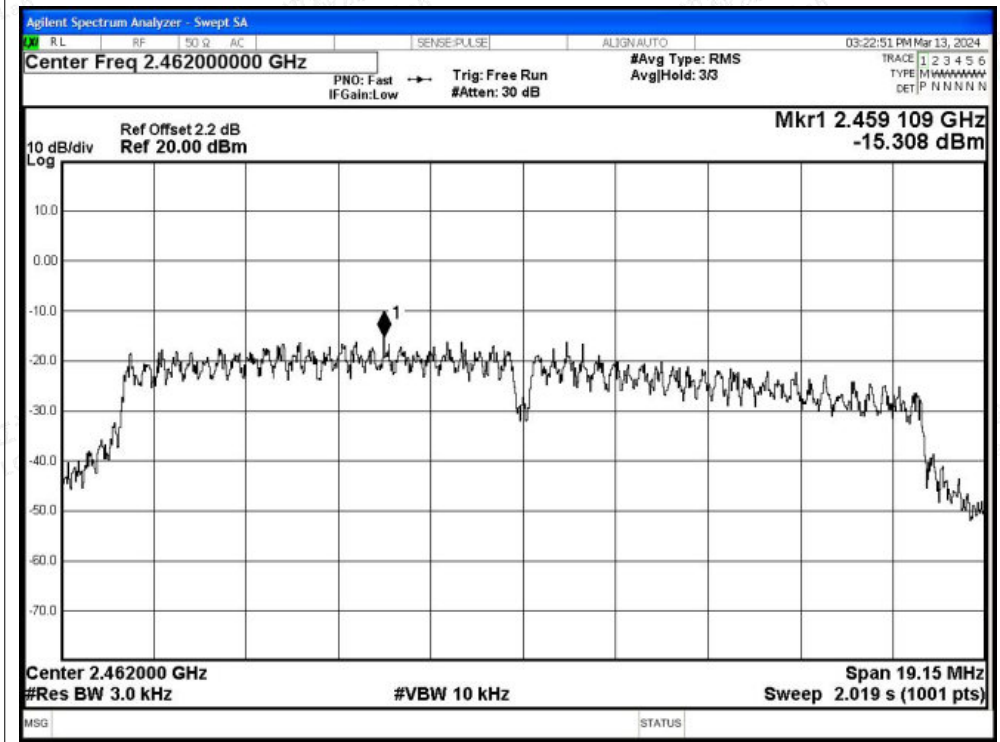




PSD NVNT g 2437MHz Ant2

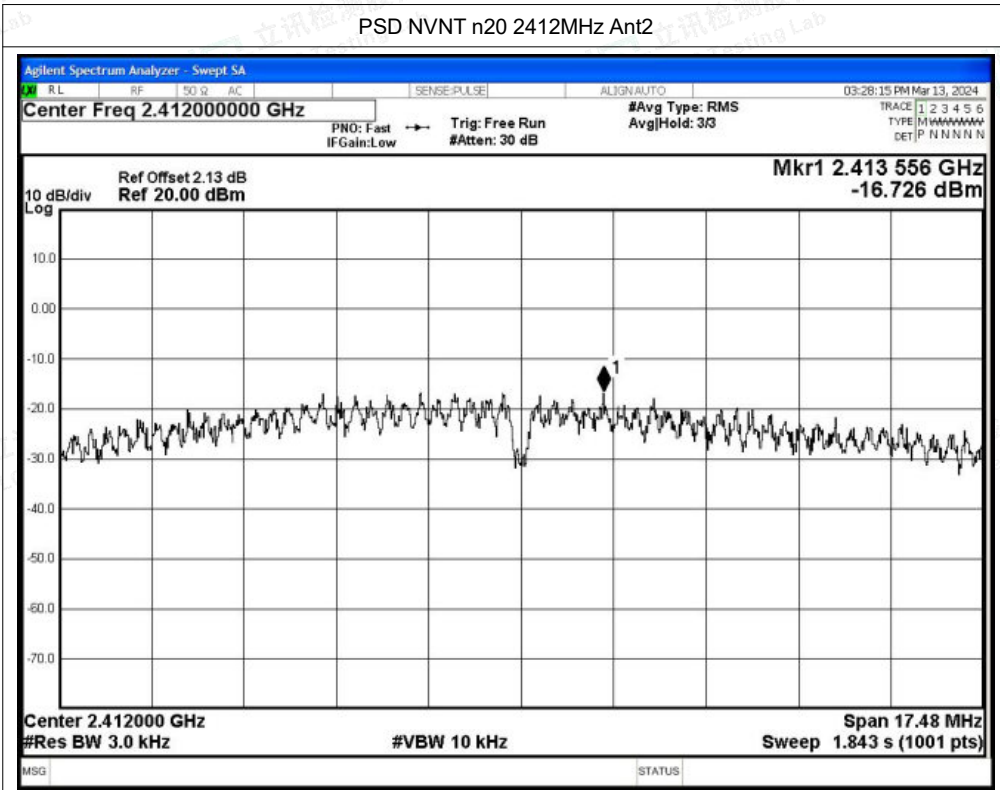


PSD NVNT g 2462MHz Ant2

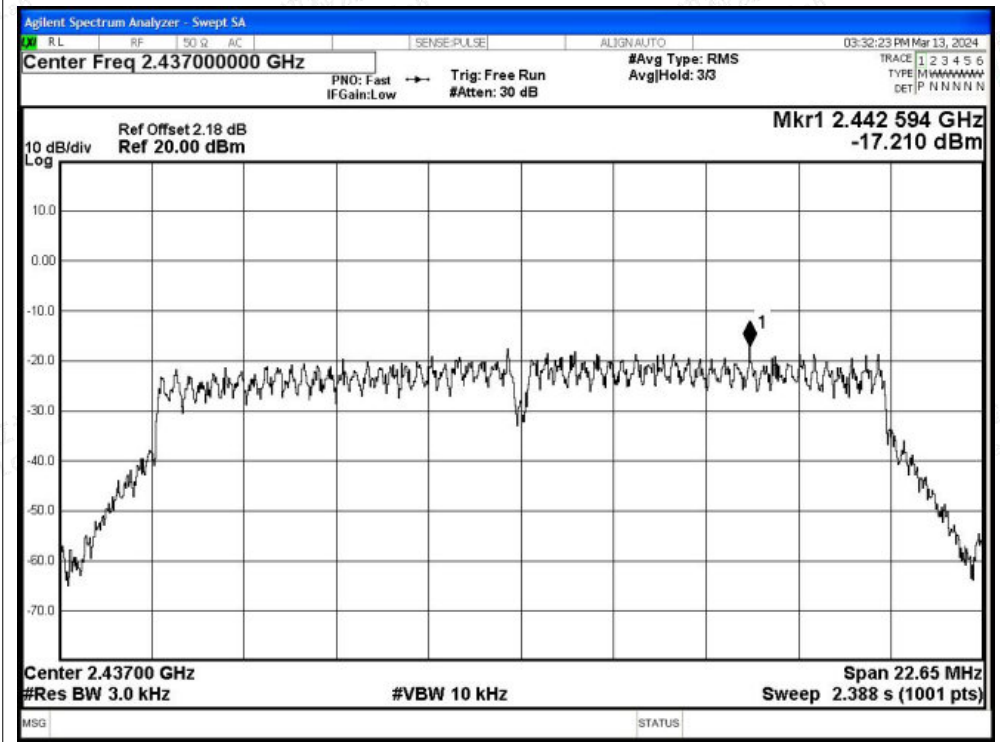




PSD NVNT n20 2412MHz Ant2

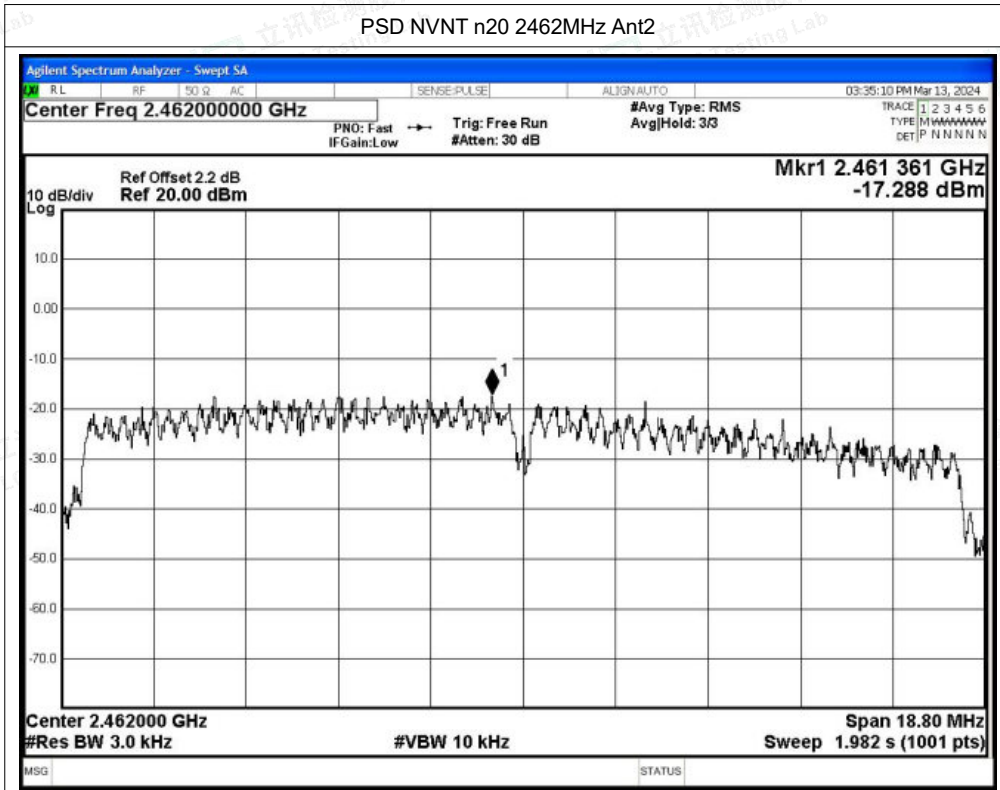


PSD NVNT n20 2437MHz Ant2

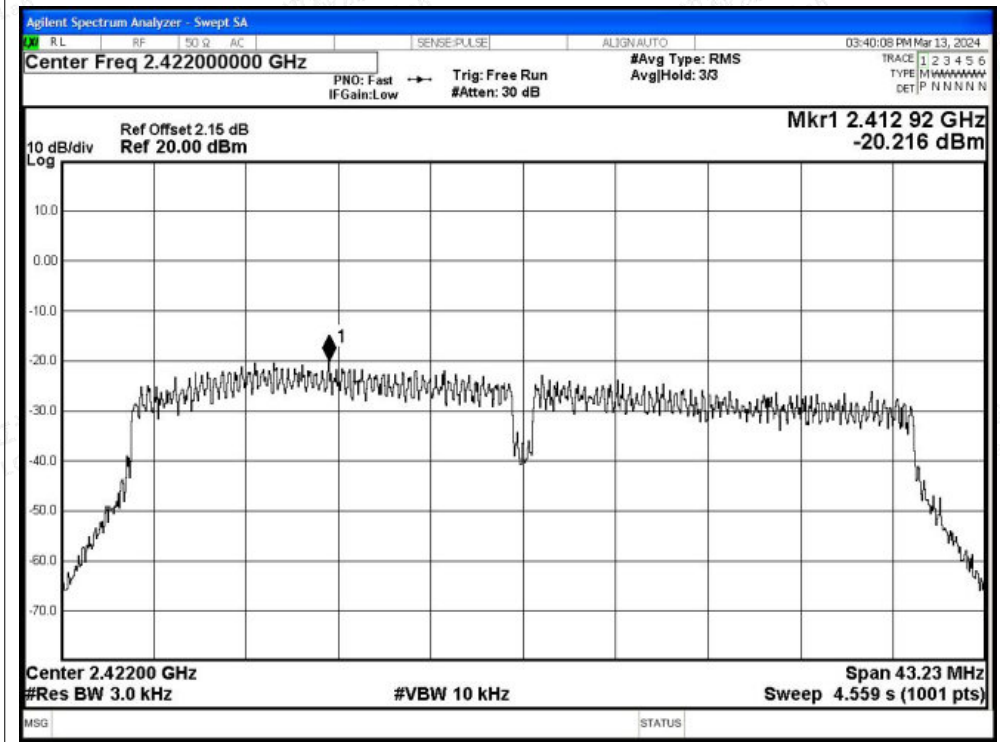




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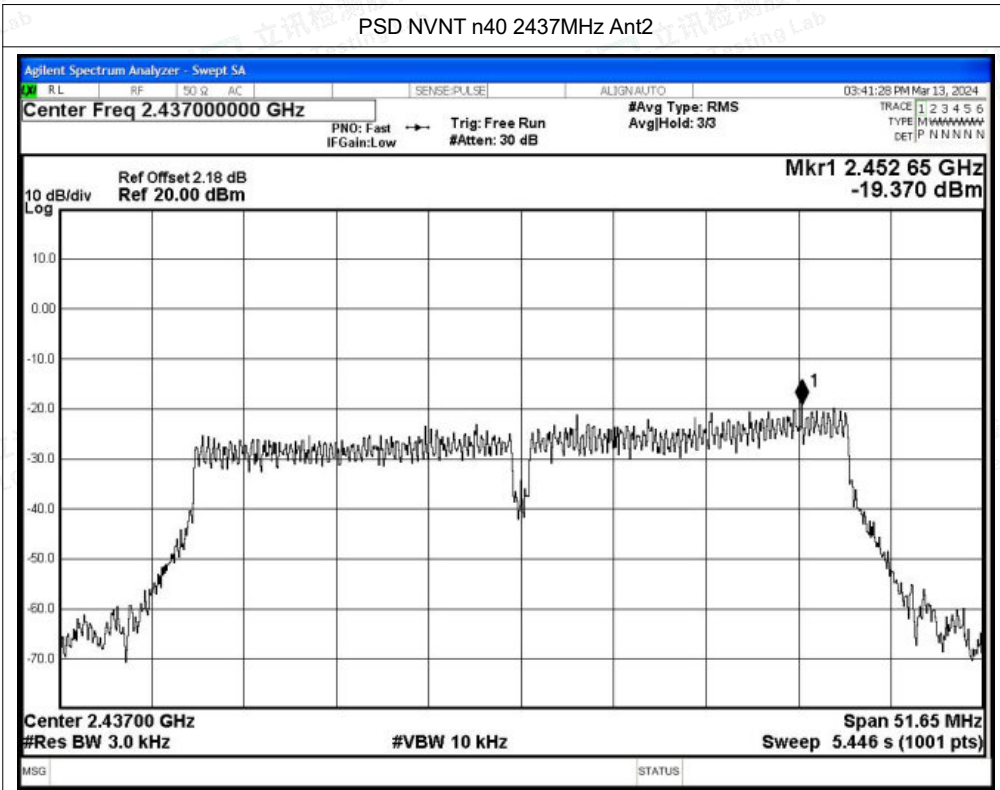


PSD NVNT n40 2422MHz Ant2

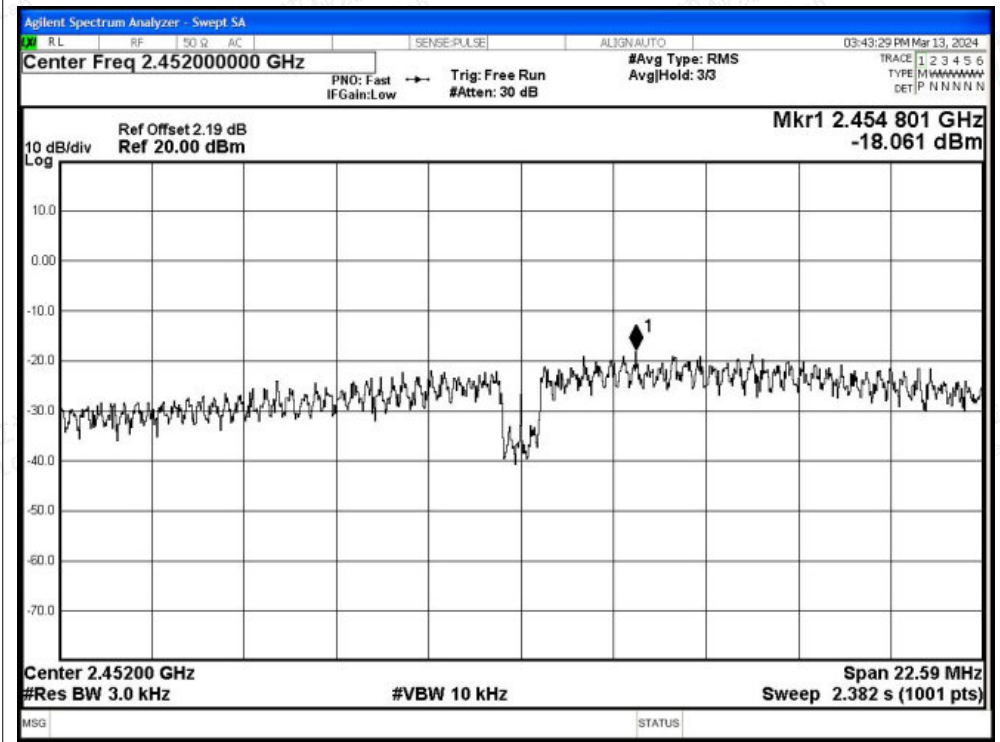




PSD NVNT n40 2437MHz Ant2



PSD NVNT n40 2452MHz Ant2





C.4 Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-55.14	-20	Pass
NVNT	b	2462	Ant1	-58.02	-20	Pass
NVNT	g	2412	Ant1	-40.79	-20	Pass
NVNT	g	2462	Ant1	-53.24	-20	Pass
NVNT	n20	2412	Ant1	-41.05	-20	Pass
NVNT	n20	2462	Ant1	-52.29	-20	Pass
NVNT	n40	2422	Ant1	-42.66	-20	Pass
NVNT	n40	2452	Ant1	-48.23	-20	Pass

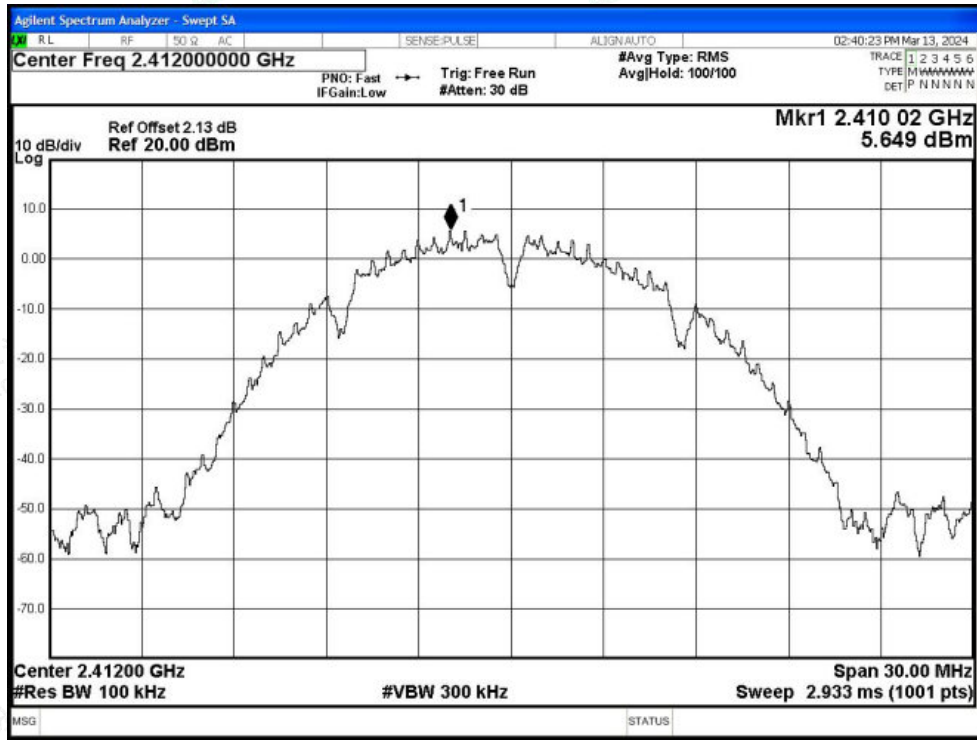


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Scan code to check authenticity

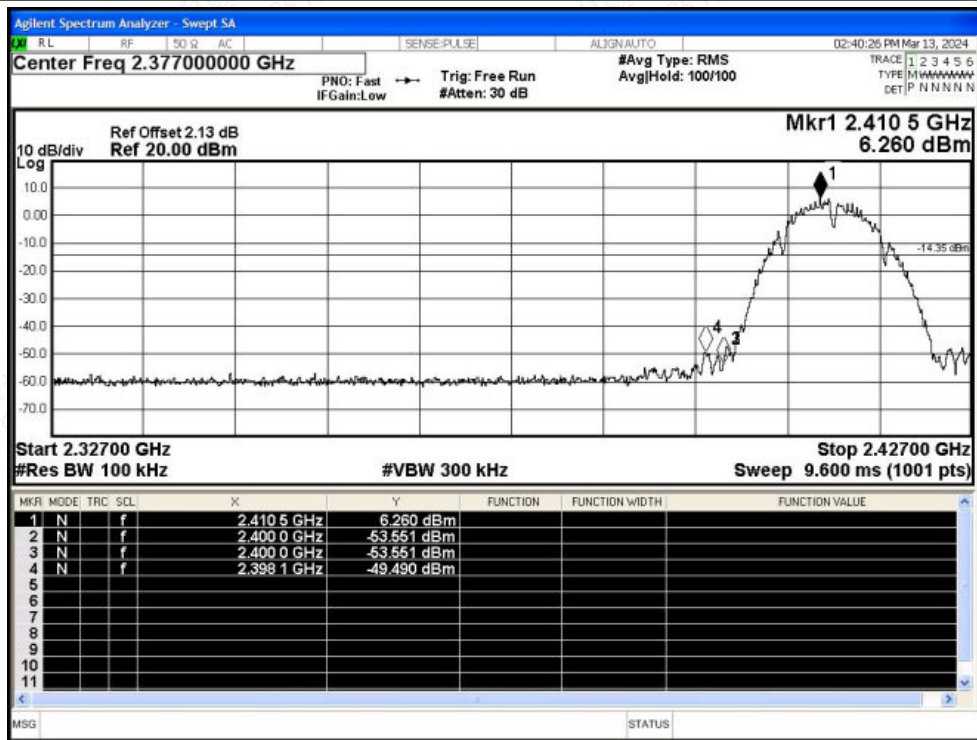


Test Graphs

Band Edge NVNT b 2412MHz Ant1 Ref

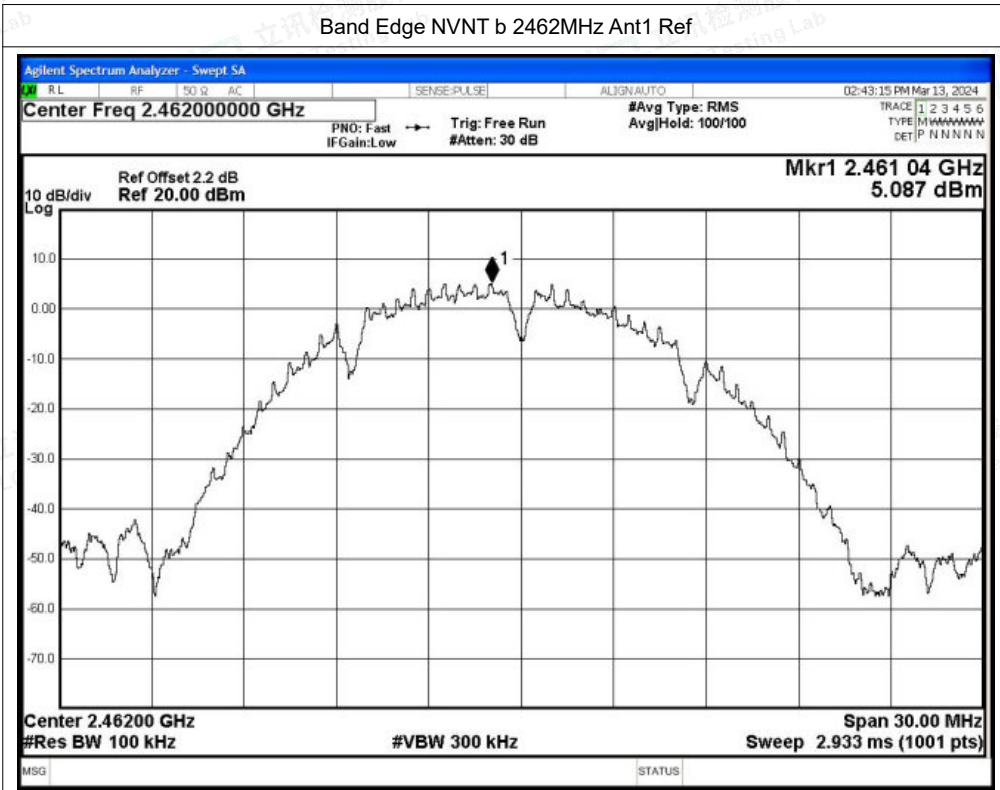


Band Edge NVNT b 2412MHz Ant1 Emission

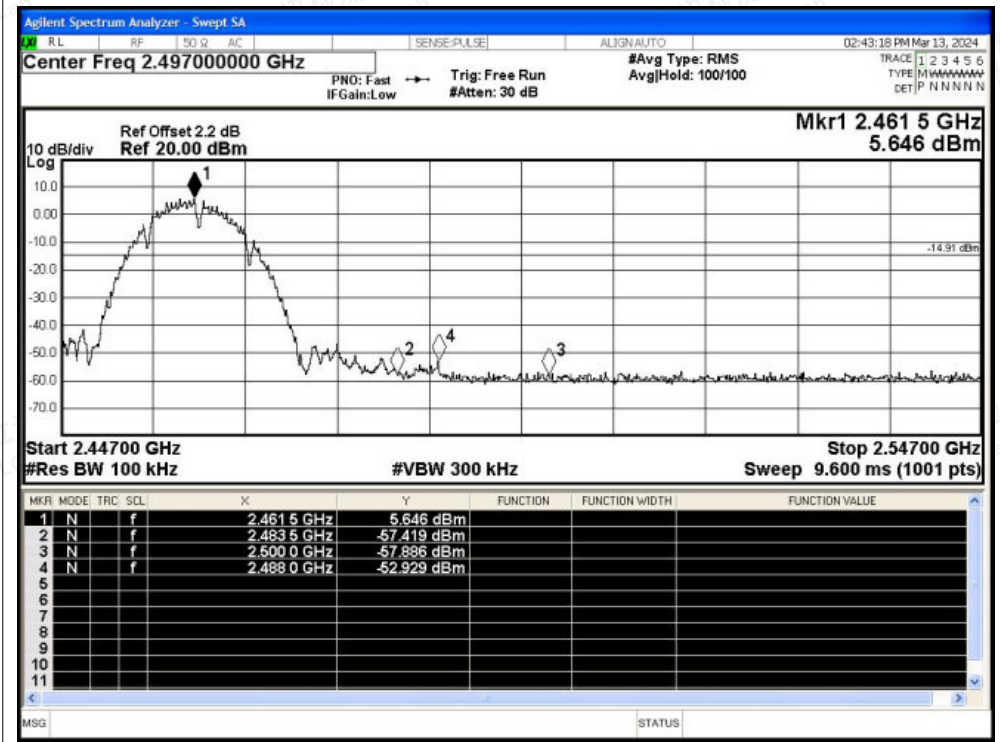




Band Edge NVNT b 2462MHz Ant1 Ref

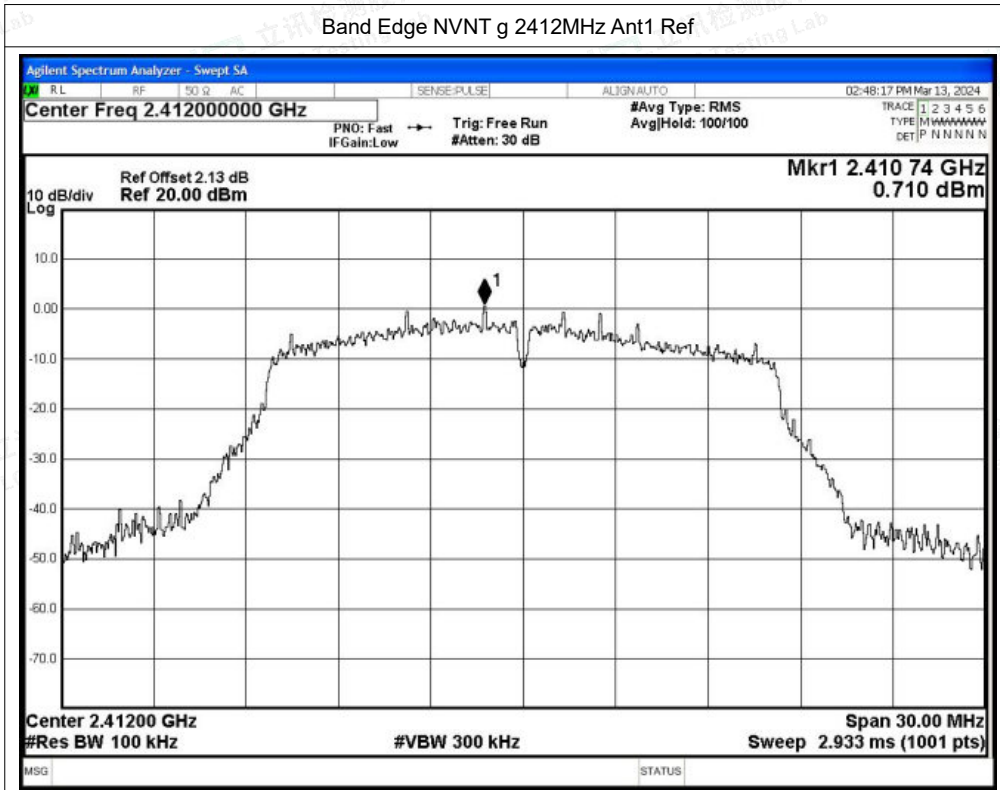


Band Edge NVNT b 2462MHz Ant1 Emission

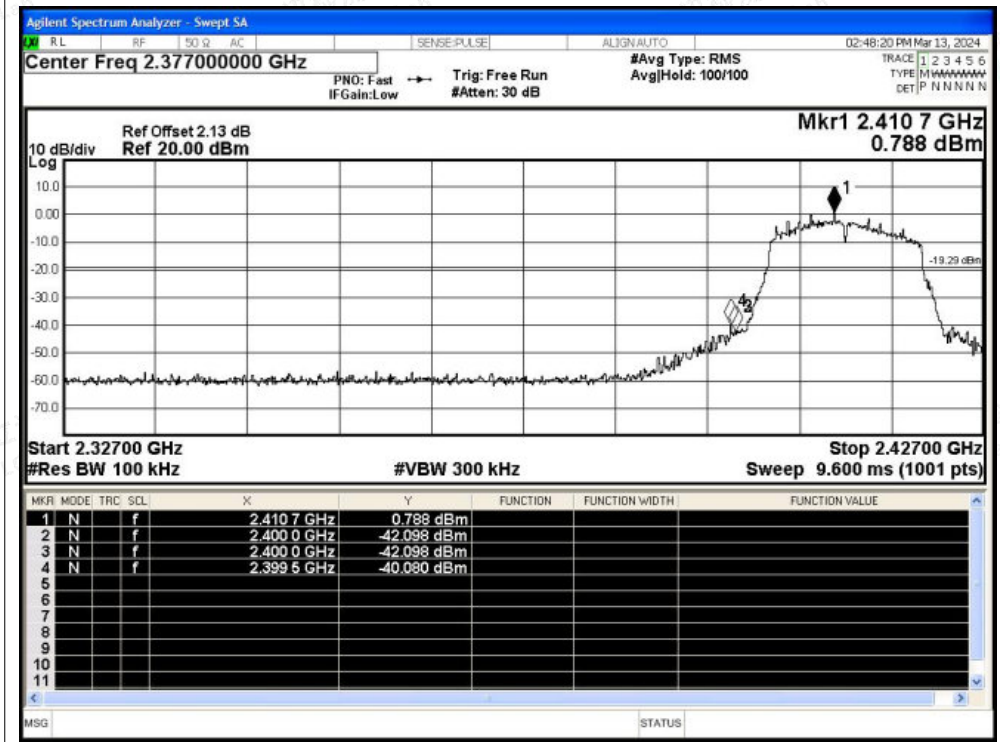




Band Edge NVNT g 2412MHz Ant1 Ref

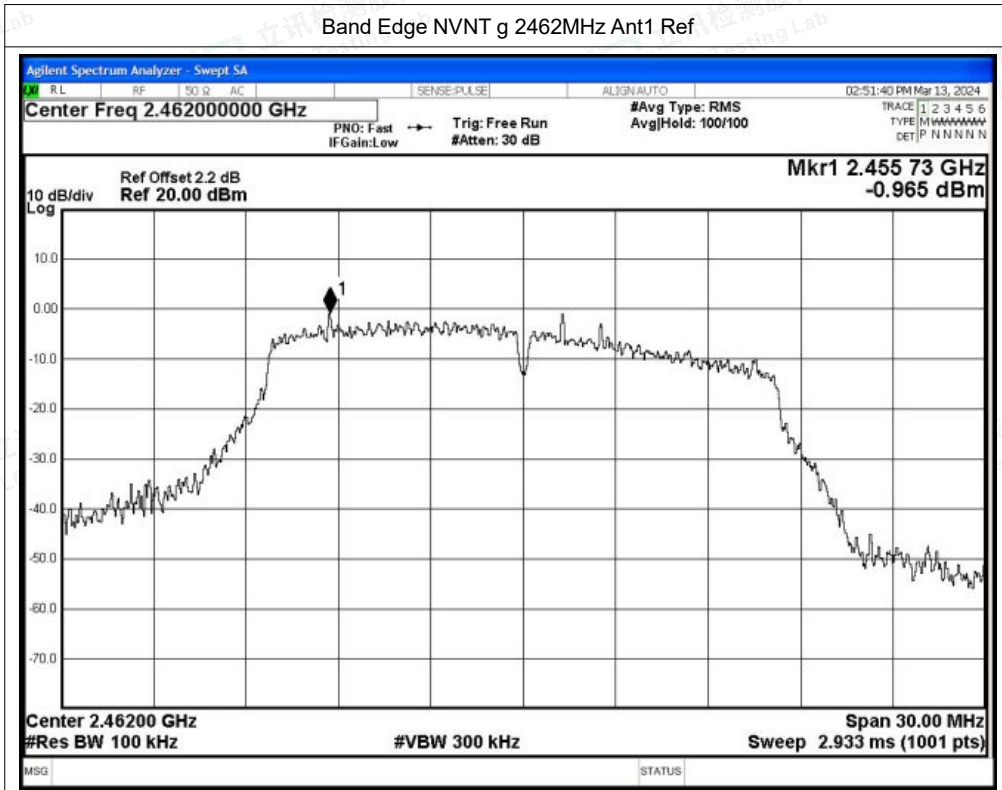


Band Edge NVNT g 2412MHz Ant1 Emission

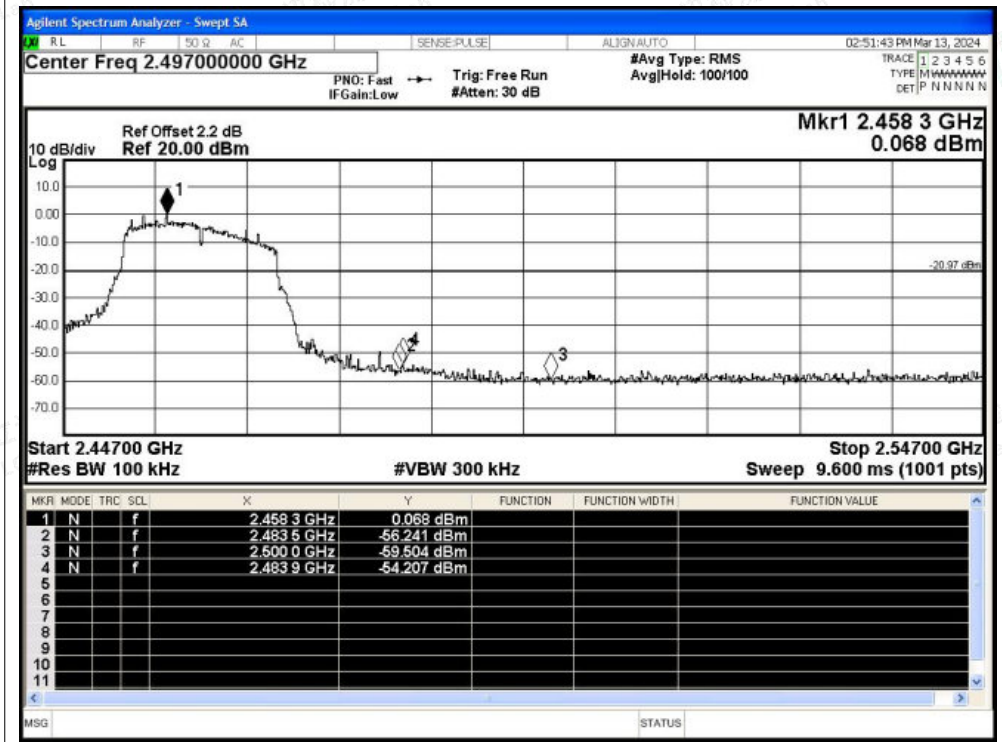




Band Edge NVNT g 2462MHz Ant1 Ref

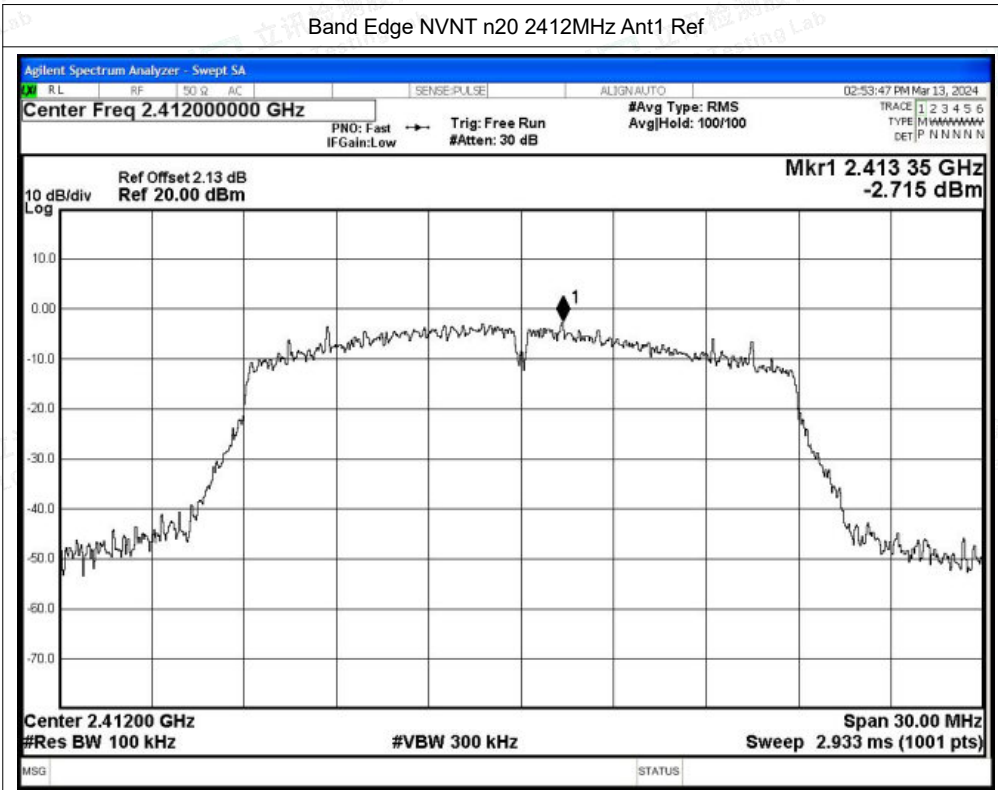


Band Edge NVNT g 2462MHz Ant1 Emission

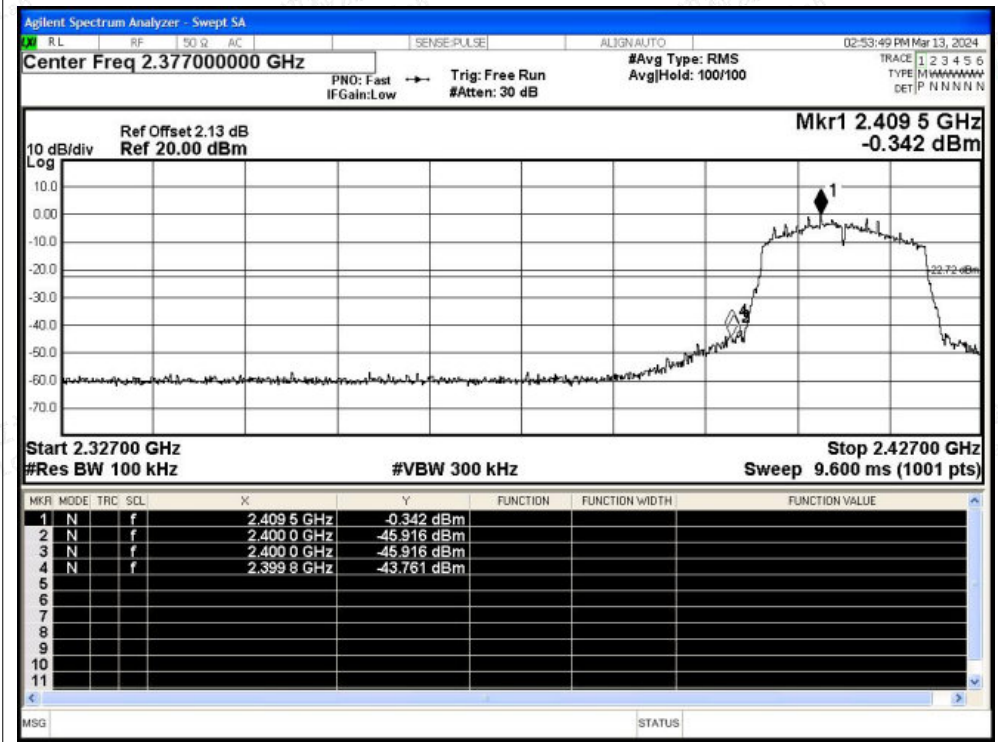




Band Edge NVNT n20 2412MHz Ant1 Ref

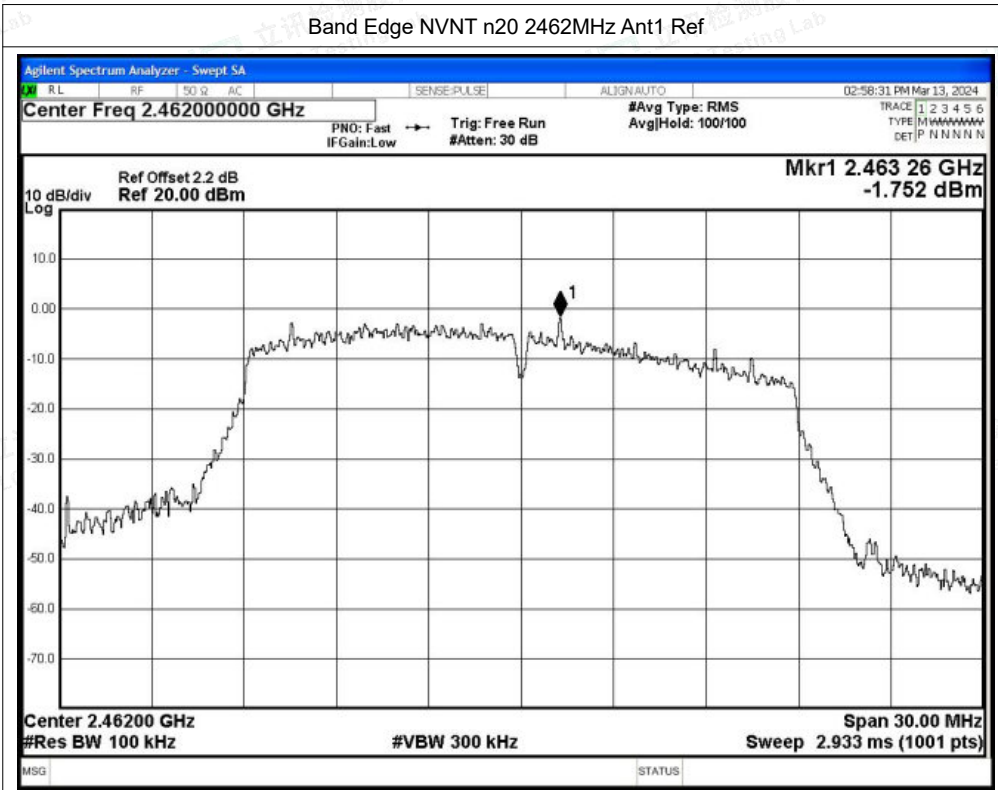


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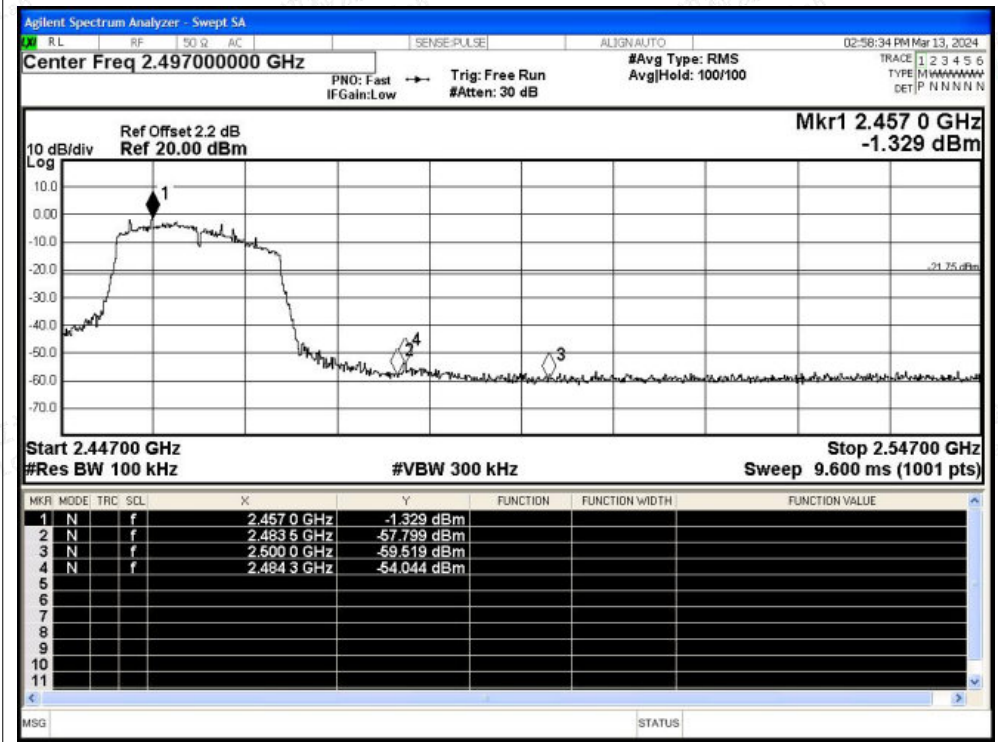




Band Edge NVNT n20 2462MHz Ant1 Ref

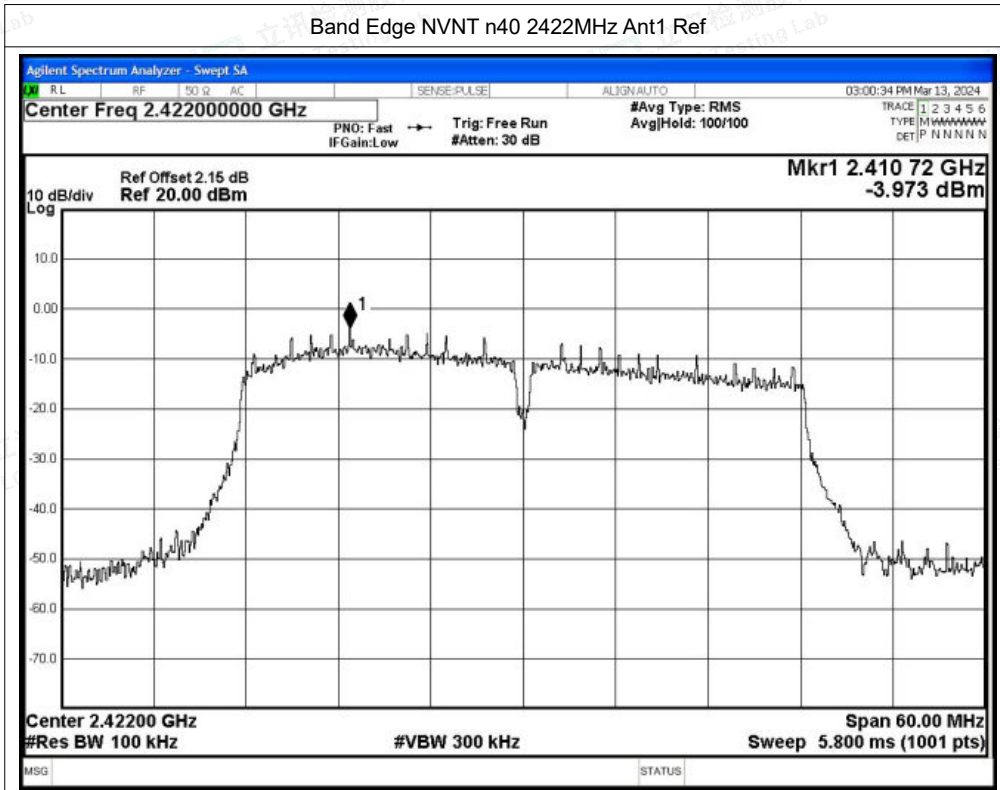


Band Edge NVNT n20 2462MHz Ant1 Emission

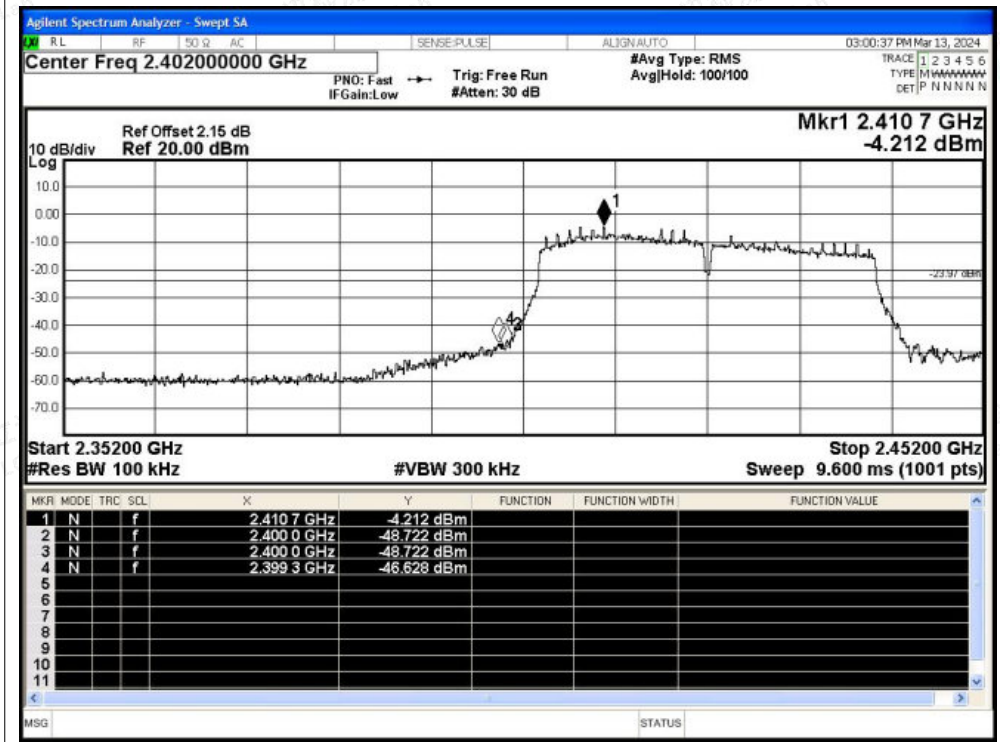




Band Edge NVNT n40 2422MHz Ant1 Ref

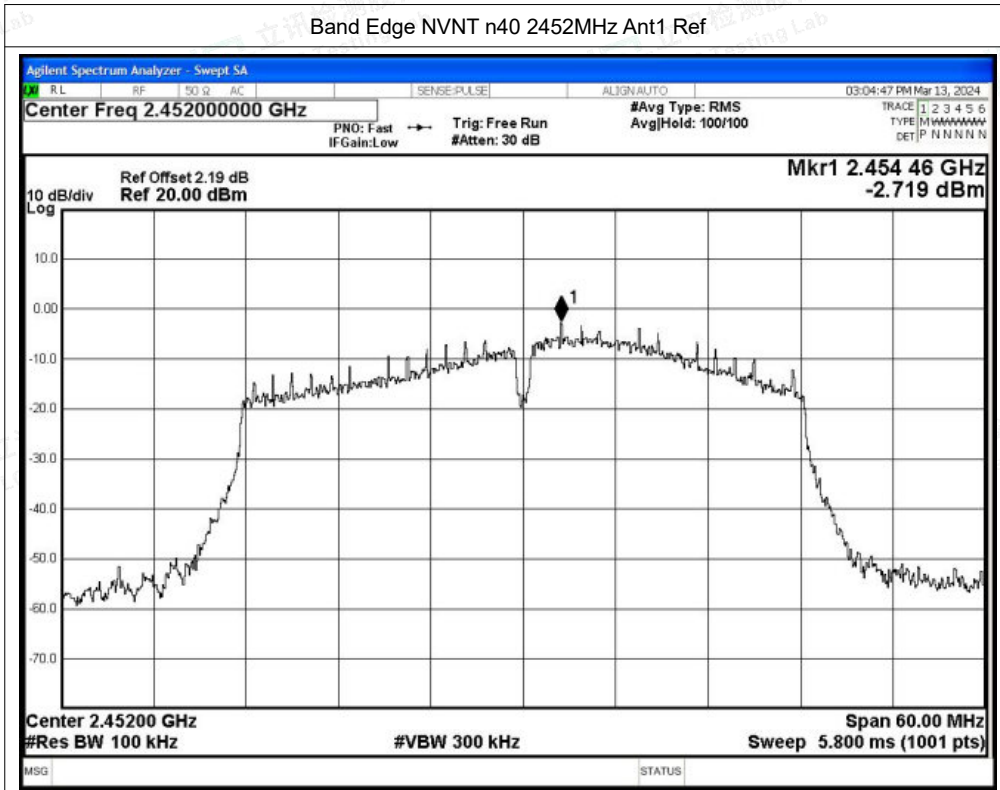


Band Edge NVNT n40 2422MHz Ant1 Emission

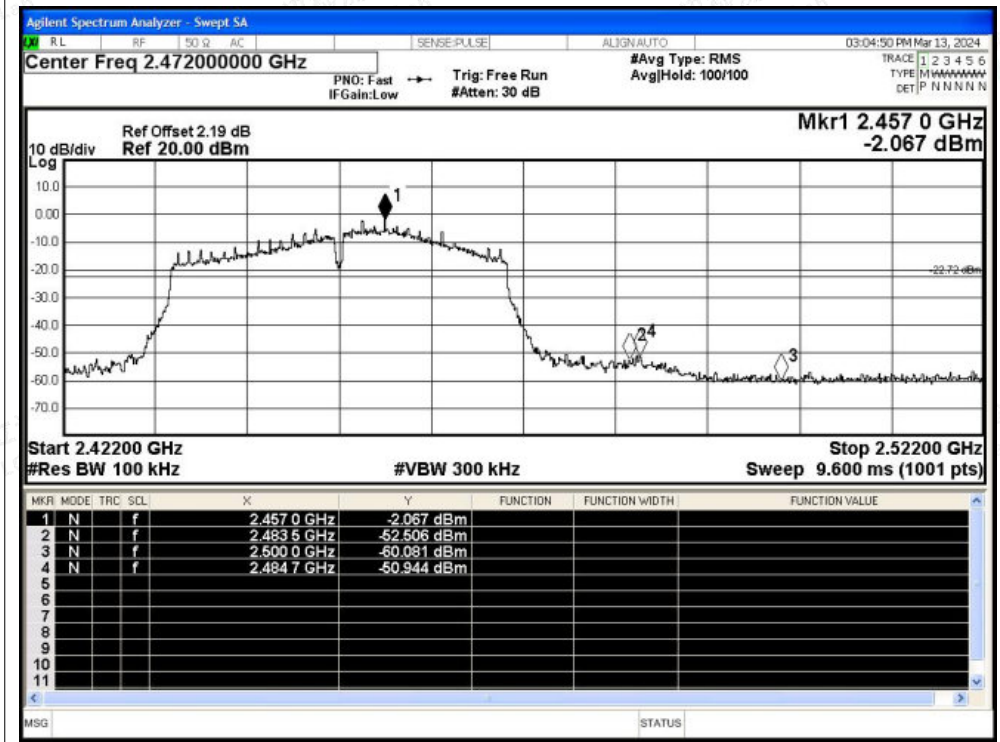




Band Edge NVNT n40 2452MHz Ant1 Ref



Band Edge NVNT n40 2452MHz Ant1 Emission





Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant2	-55.53	-20	Pass
NVNT	b	2462	Ant2	-60.21	-20	Pass
NVNT	g	2412	Ant2	-45.17	-20	Pass
NVNT	g	2462	Ant2	-53.01	-20	Pass
NVNT	n20	2412	Ant2	-48.15	-20	Pass
NVNT	n20	2462	Ant2	-51.99	-20	Pass
NVNT	n40	2422	Ant2	-43.36	-20	Pass
NVNT	n40	2452	Ant2	-50.13	-20	Pass

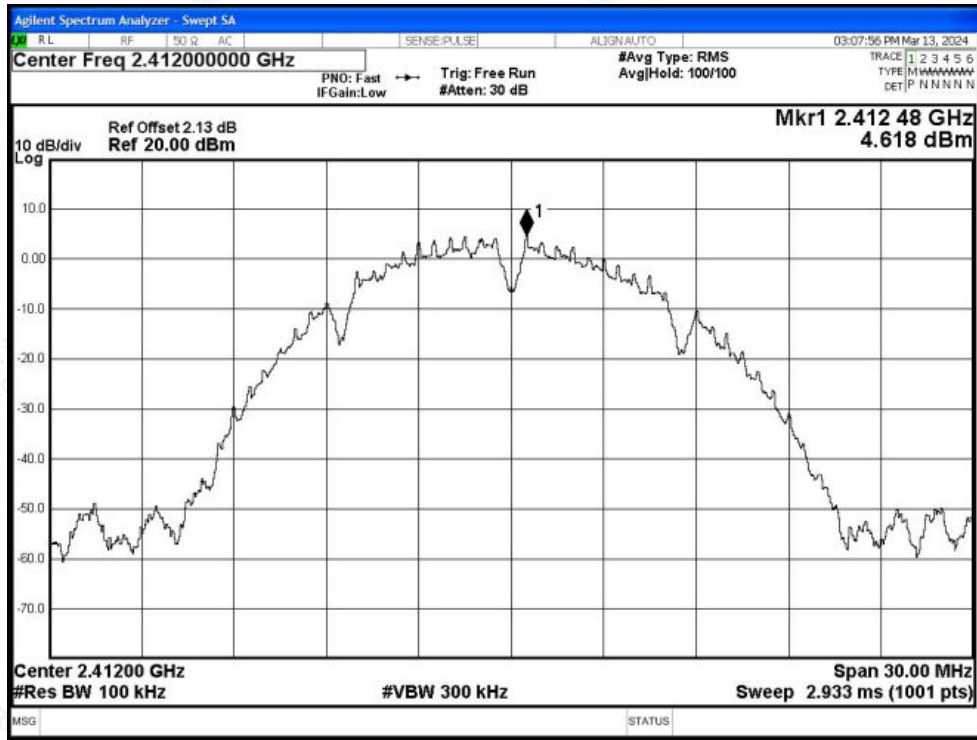


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Scan code to check authenticity



Test Graphs

Band Edge NVNT b 2412MHz Ant2 Ref



Band Edge NVNT b 2412MHz Ant2 Emission

