



Appendix B

RF Test Data for 2.4GWIFI (Conducted Measurement)

Product Name: Wi-Fi Smart Fingerprint Lock

Test Model: WFP-F

Environmental Conditions

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



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B.1 -6dB Bandwidth

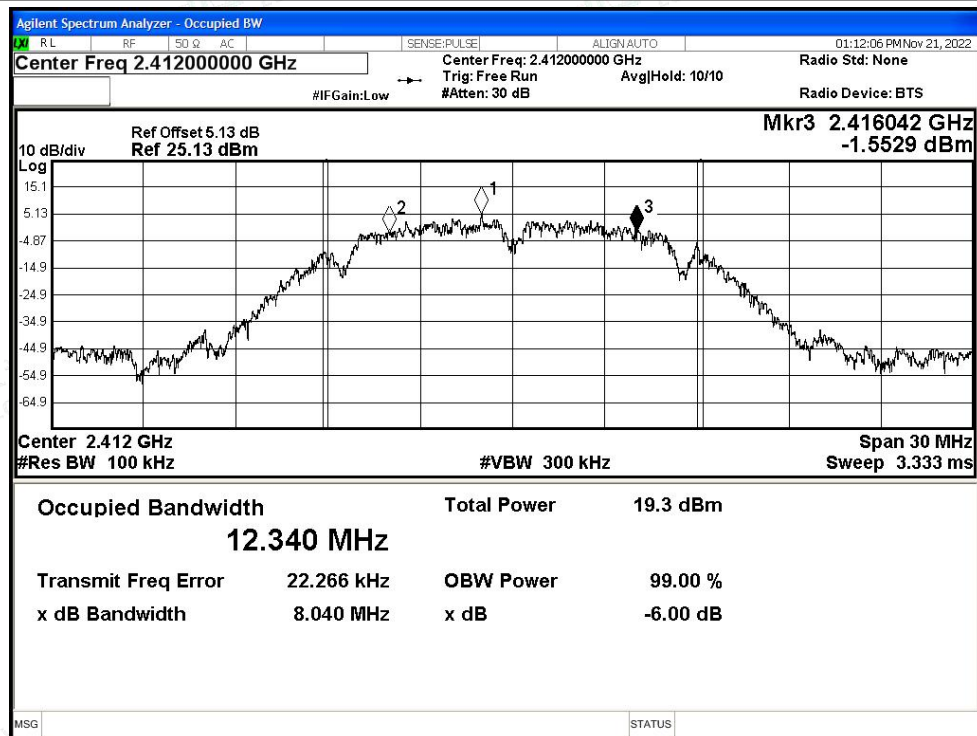
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant1	8.04	≥ 0.5	Pass
NVNT	b	2437	Ant1	8.737	≥ 0.5	Pass
NVNT	b	2462	Ant1	9.039	≥ 0.5	Pass
NVNT	g	2412	Ant1	16.456	≥ 0.5	Pass
NVNT	g	2437	Ant1	16.422	≥ 0.5	Pass
NVNT	g	2462	Ant1	16.368	≥ 0.5	Pass
NVNT	n20	2412	Ant1	17.675	≥ 0.5	Pass
NVNT	n20	2437	Ant1	17.791	≥ 0.5	Pass
NVNT	n20	2462	Ant1	17.607	≥ 0.5	Pass



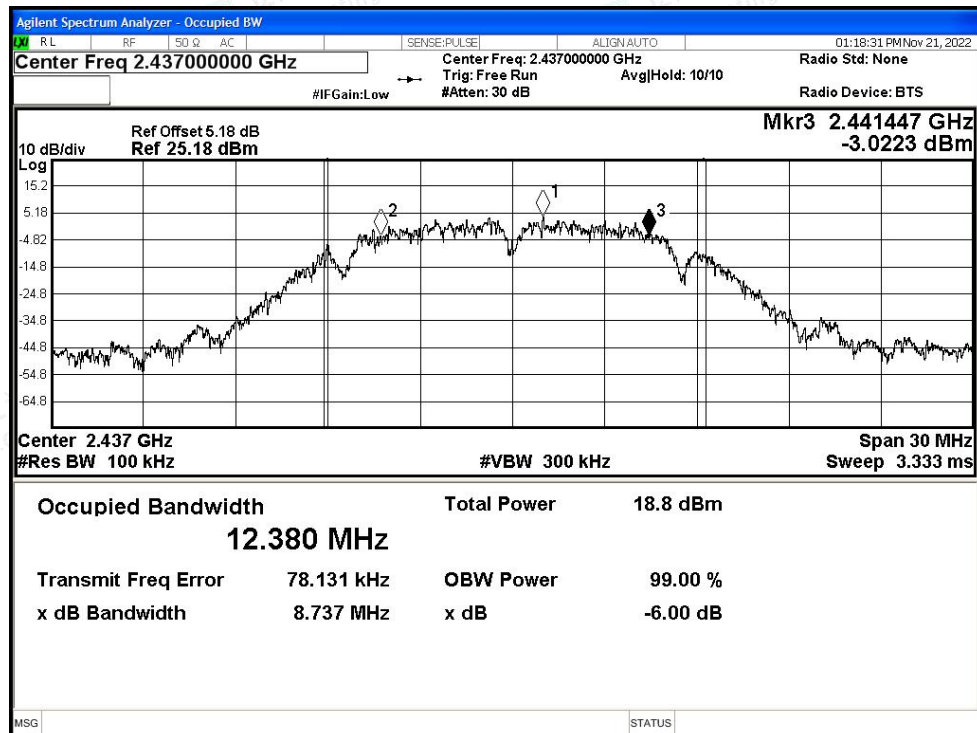


Test Graphs

-6dB Bandwidth NVNT b 2412MHz Ant1



-6dB Bandwidth NVNT b 2437MHz Ant1



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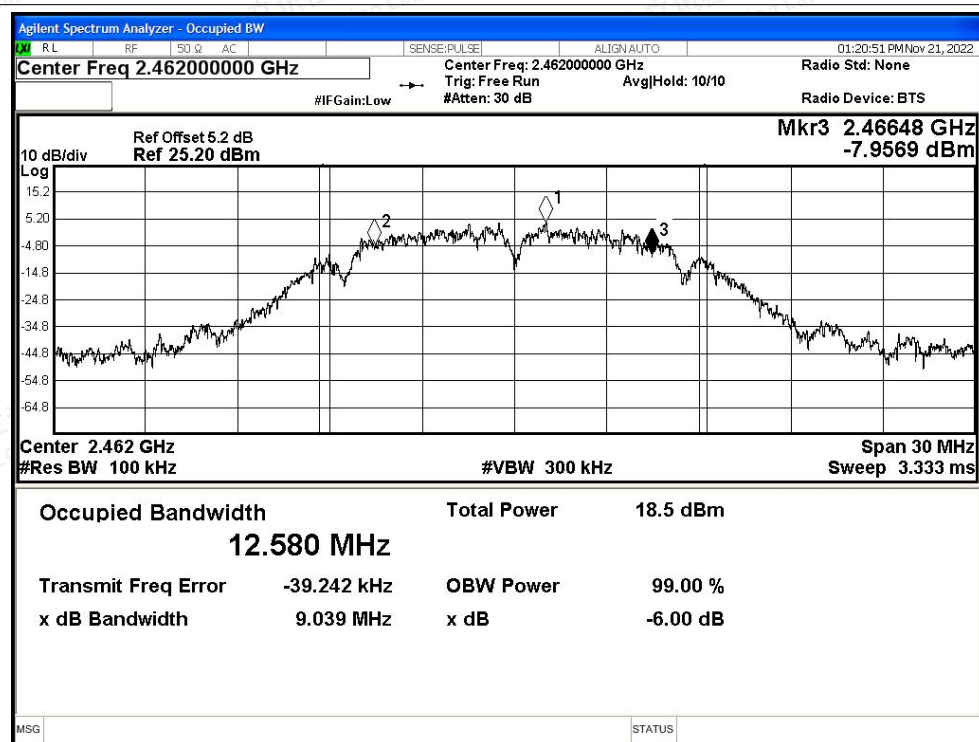
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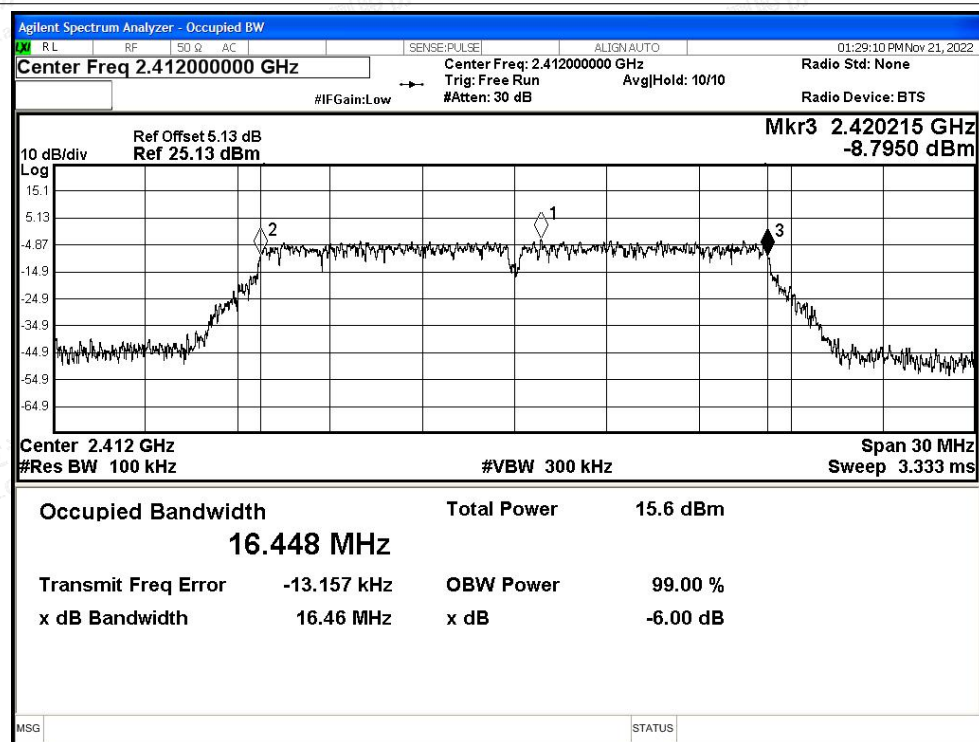
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-6dB Bandwidth NVNT b 2462MHz Ant1

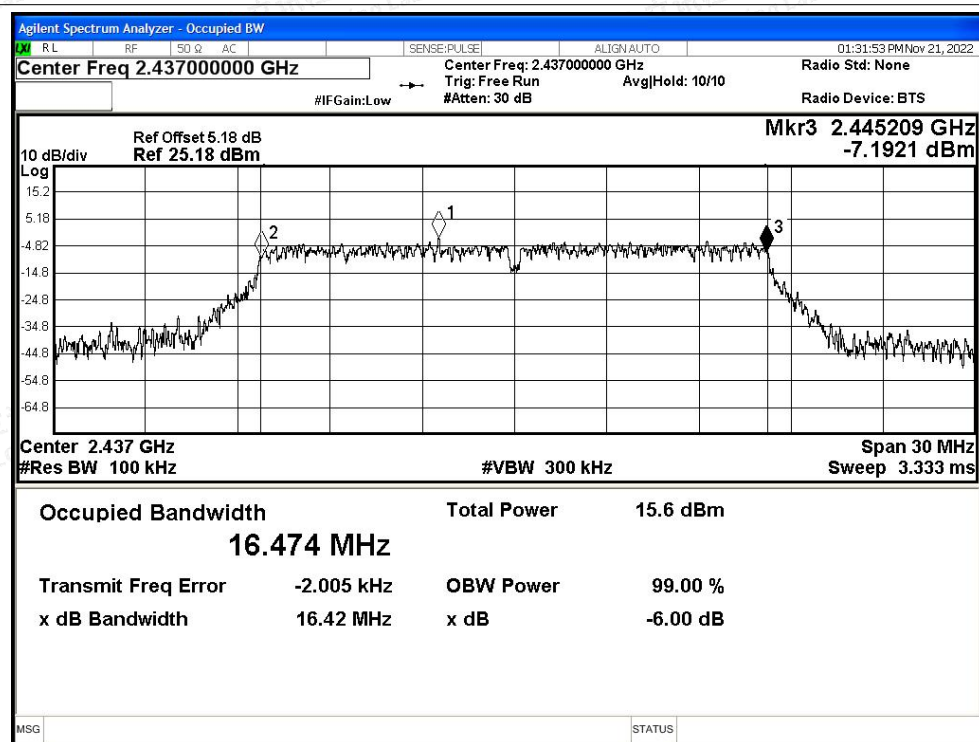


-6dB Bandwidth NVNT g 2412MHz Ant1

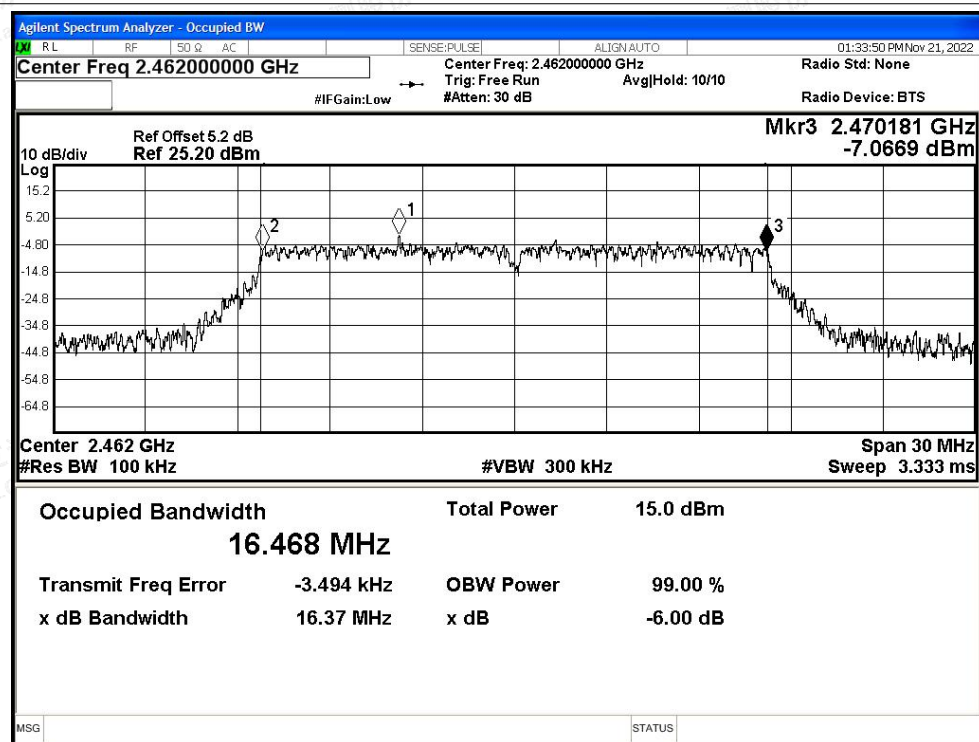




-6dB Bandwidth NVNT g 2437MHz Ant1

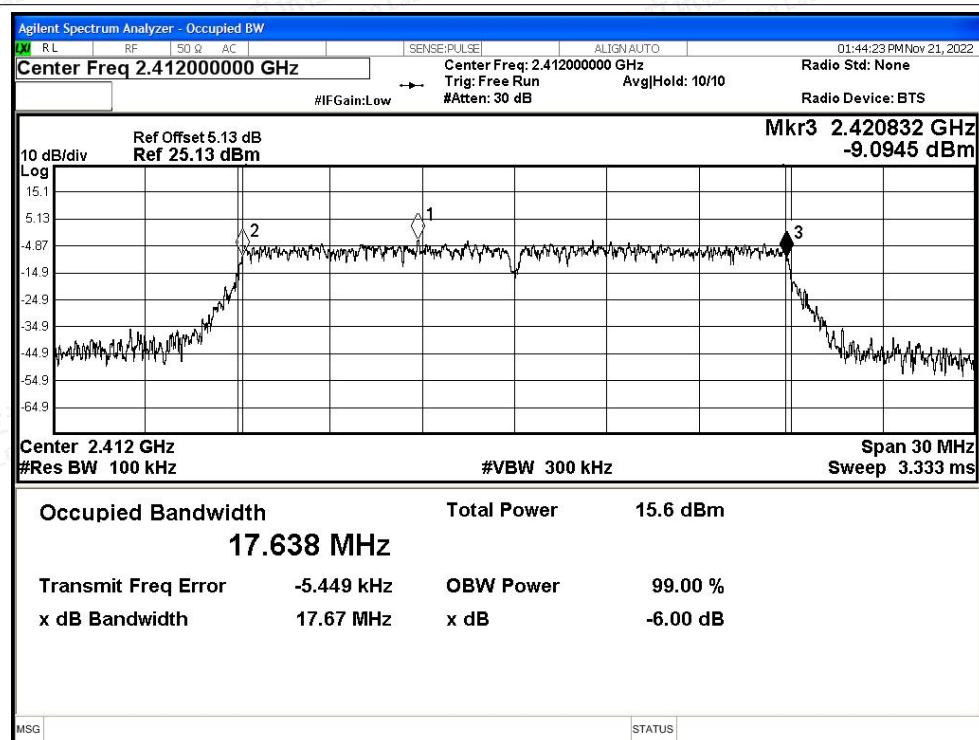


-6dB Bandwidth NVNT g 2462MHz Ant1

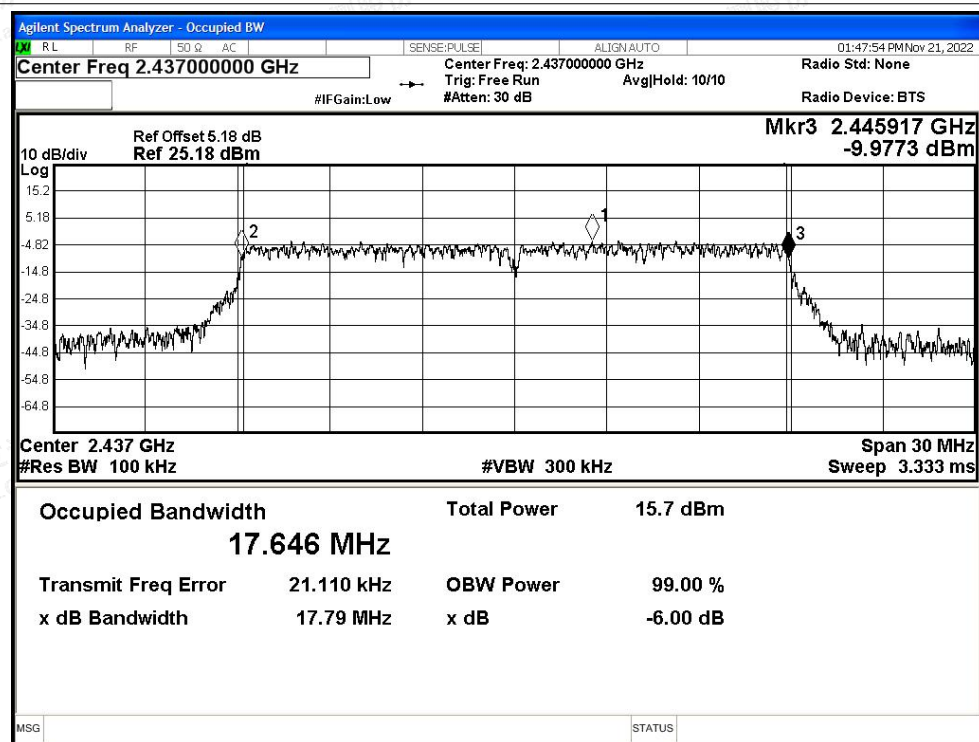




-6dB Bandwidth NVNT n20 2412MHz Ant1



-6dB Bandwidth NVNT n20 2437MHz Ant1





B.2 Occupied Channel Bandwidth

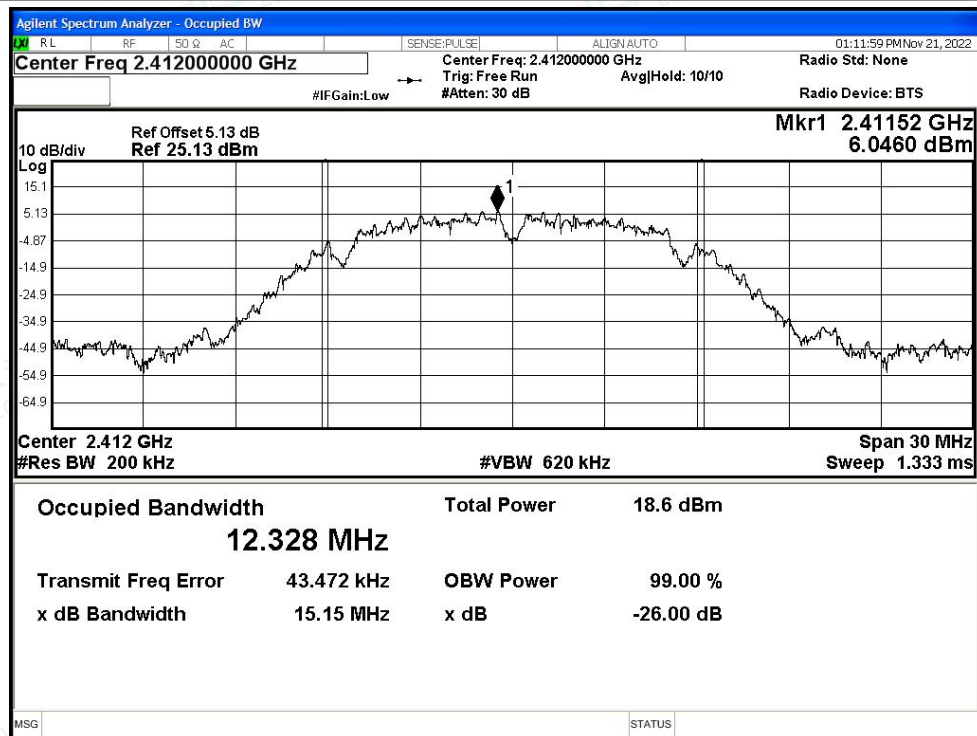
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	b	2412	Ant1	12.328
NVNT	b	2437	Ant1	12.426
NVNT	b	2462	Ant1	12.523
NVNT	g	2412	Ant1	16.538
NVNT	g	2437	Ant1	16.58
NVNT	g	2462	Ant1	16.566
NVNT	n20	2412	Ant1	17.665
NVNT	n20	2437	Ant1	17.698
NVNT	n20	2462	Ant1	17.718



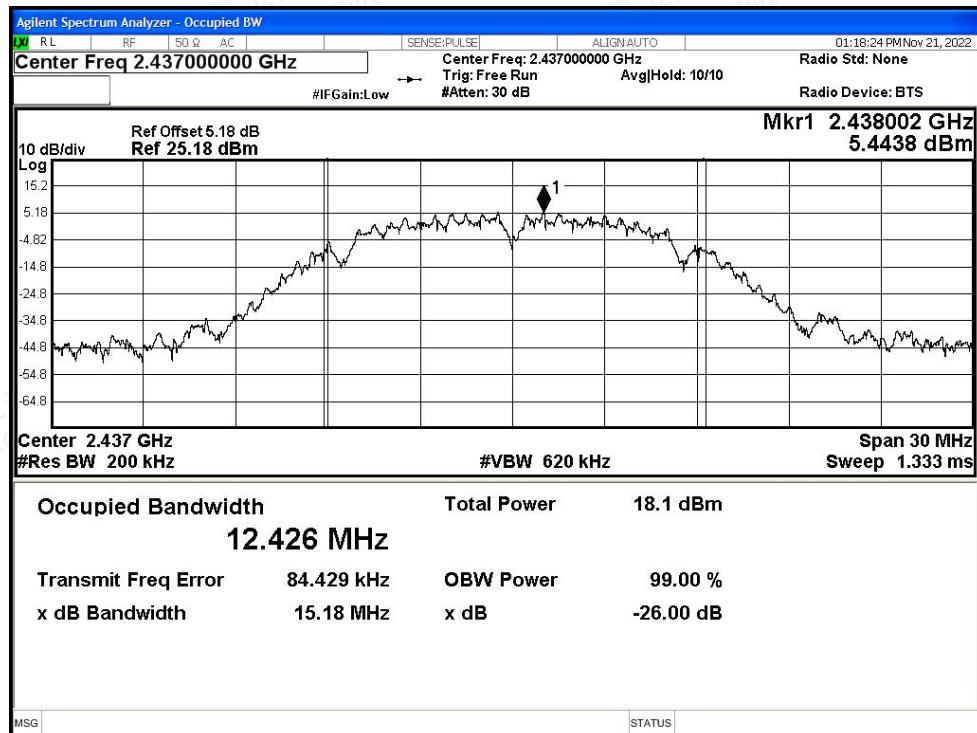


Test Graphs

OBW NVNT b 2412MHz Ant1

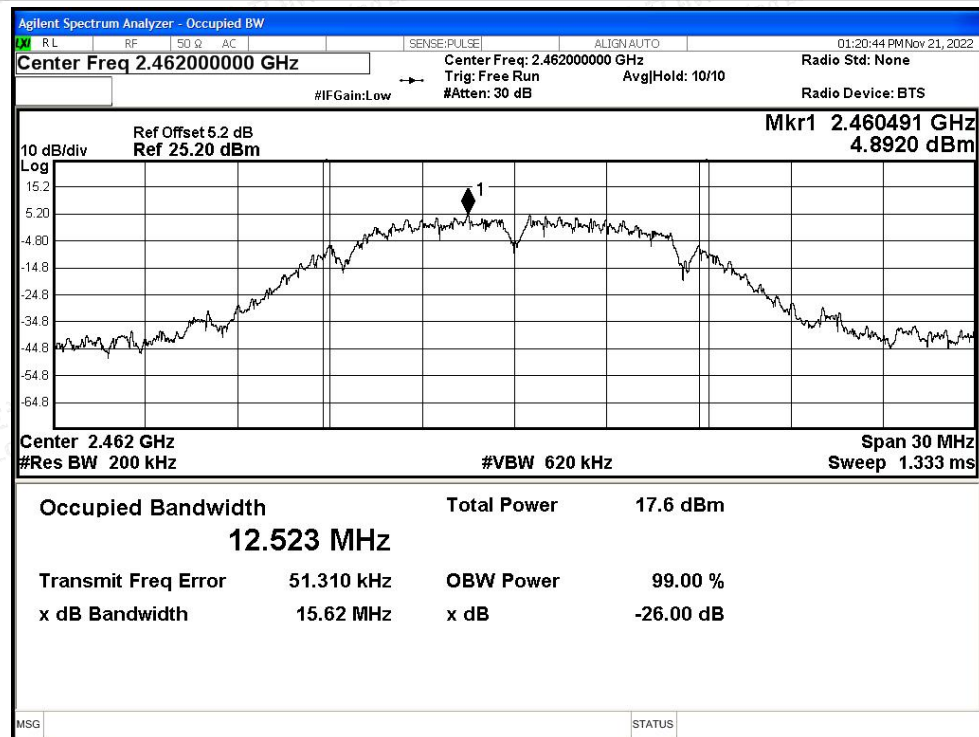


OBW NVNT b 2437MHz Ant1

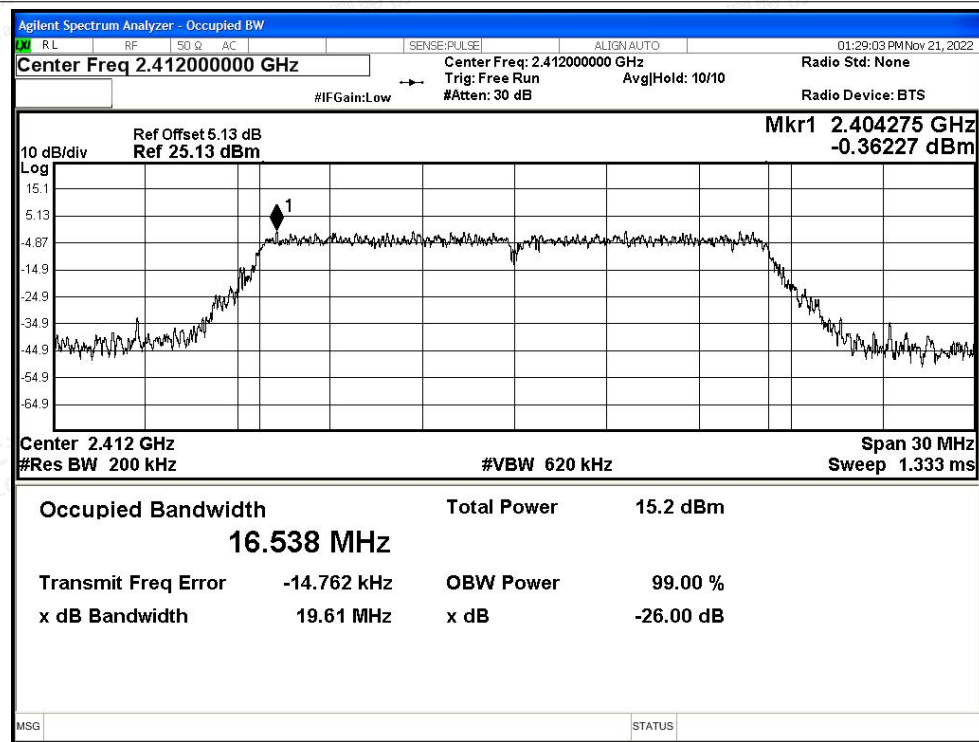




OBW NVNT b 2462MHz Ant1

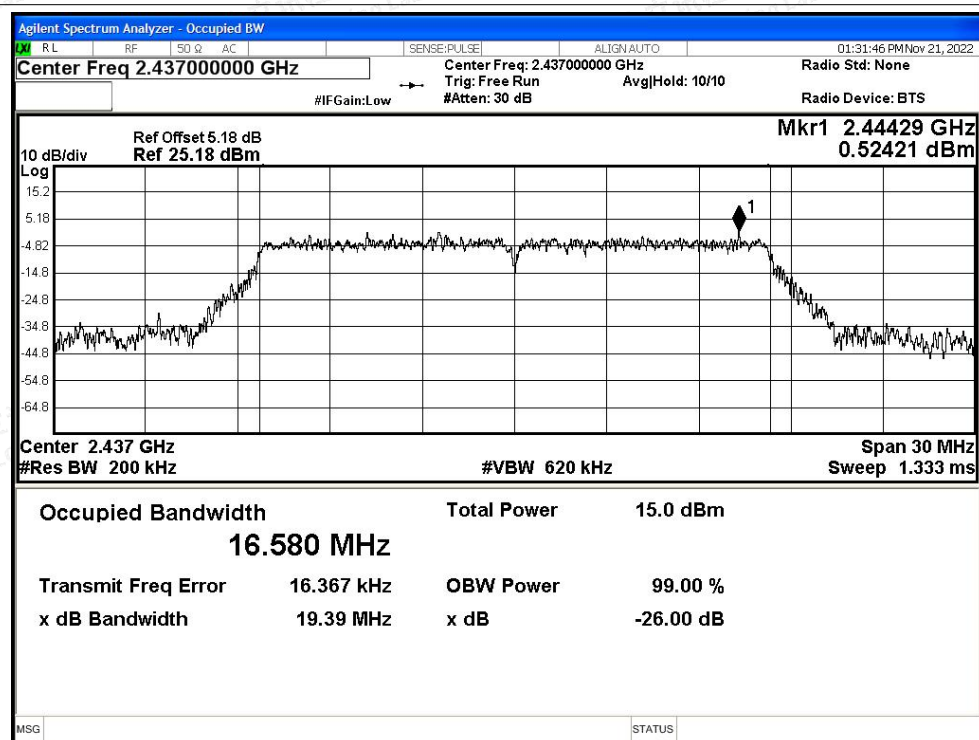


OBW NVNT g 2412MHz Ant1

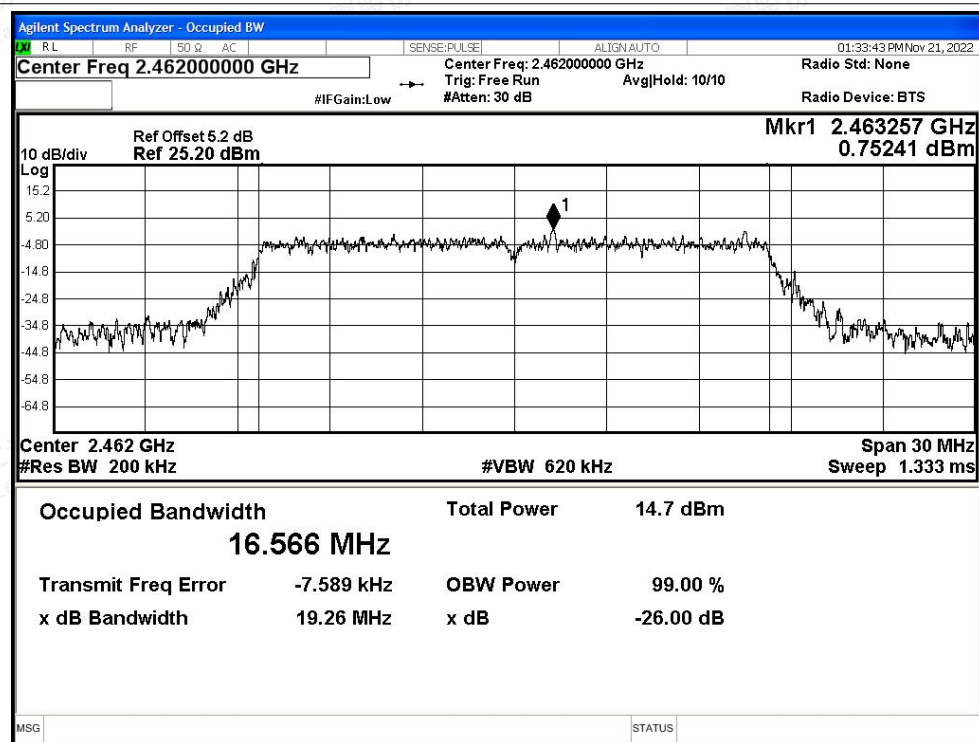




OBW NVNT g 2437MHz Ant1

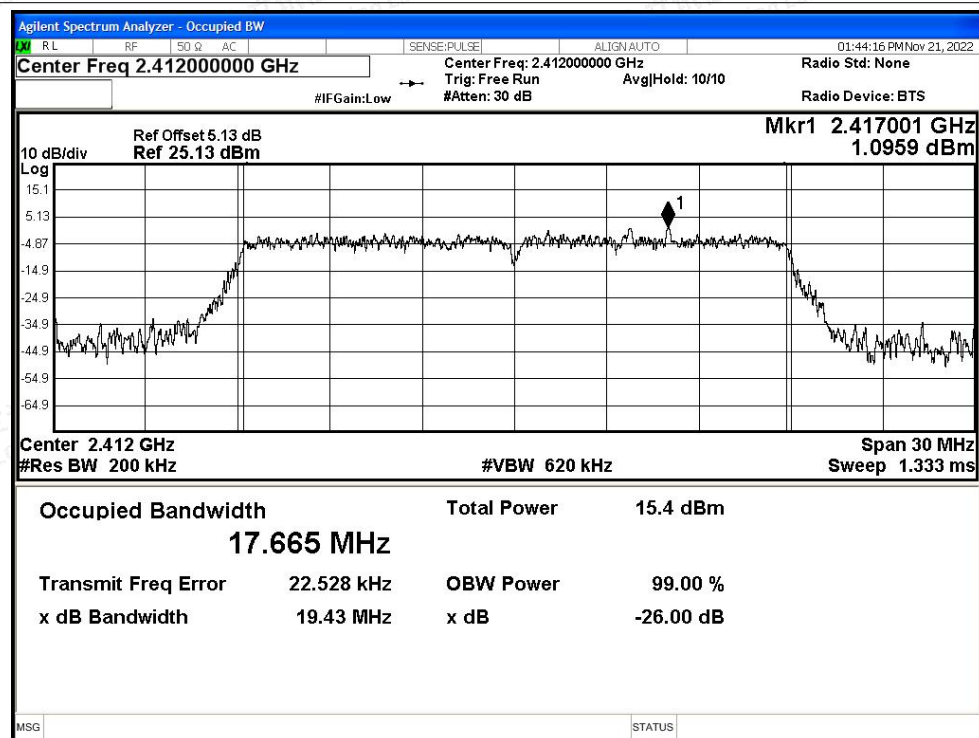


OBW NVNT g 2462MHz Ant1

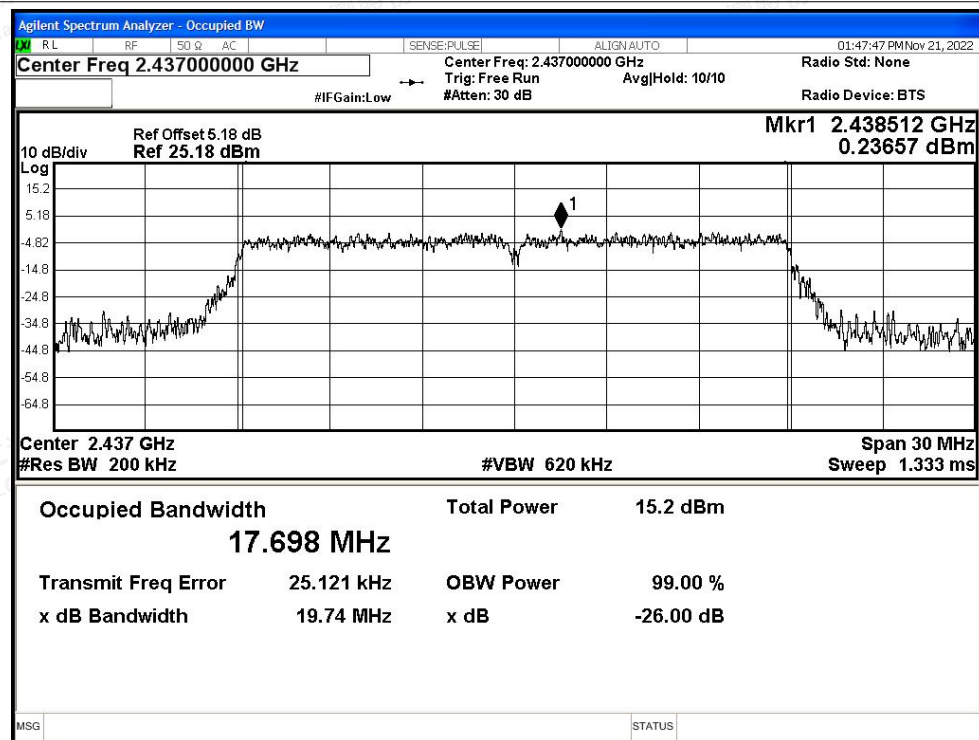




OBW NVNT n20 2412MHz Ant1



OBW NVNT n20 2437MHz Ant1

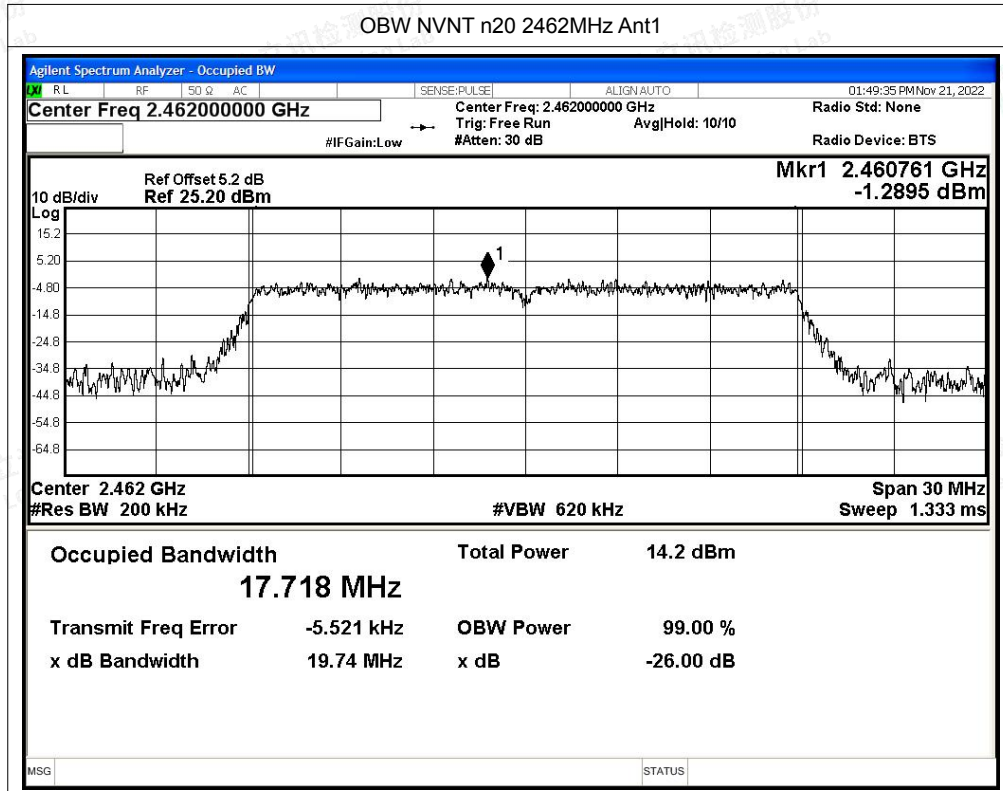


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B.3 Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	15.61	30	Pass
NVNT	b	2437	Ant1	15.32	30	Pass
NVNT	b	2462	Ant1	15.11	30	Pass
NVNT	g	2412	Ant1	14.29	30	Pass
NVNT	g	2437	Ant1	14.37	30	Pass
NVNT	g	2462	Ant1	13.82	30	Pass
NVNT	n20	2412	Ant1	14.57	30	Pass
NVNT	n20	2437	Ant1	14.39	30	Pass
NVNT	n20	2462	Ant1	15.14	30	Pass

EIRP

TestMode	Antenna	Frequency (MHz)	Maximum Peak Output Power [dBm]	Antenna Gain	Report EIRP Power(dBm)	Conducted Limit[dBm]	Verdict
b	Ant0	2412	15.61	2.82	18.43	≤36.00	PASS
		2437	15.32	2.82	18.14	≤36.00	PASS
		2462	15.11	2.82	17.93	≤36.00	PASS
g	Ant0	2412	14.29	2.82	17.11	≤36.00	PASS
		2437	14.37	2.82	17.19	≤36.00	PASS
		2462	13.82	2.82	16.64	≤36.00	PASS
n20	Ant0	2412	14.57	2.82	17.39	≤36.00	PASS
		2437	14.39	2.82	17.21	≤36.00	PASS
		2462	15.14	2.82	17.96	≤36.00	PASS





B.4 Maximum Power Spectral Density Level

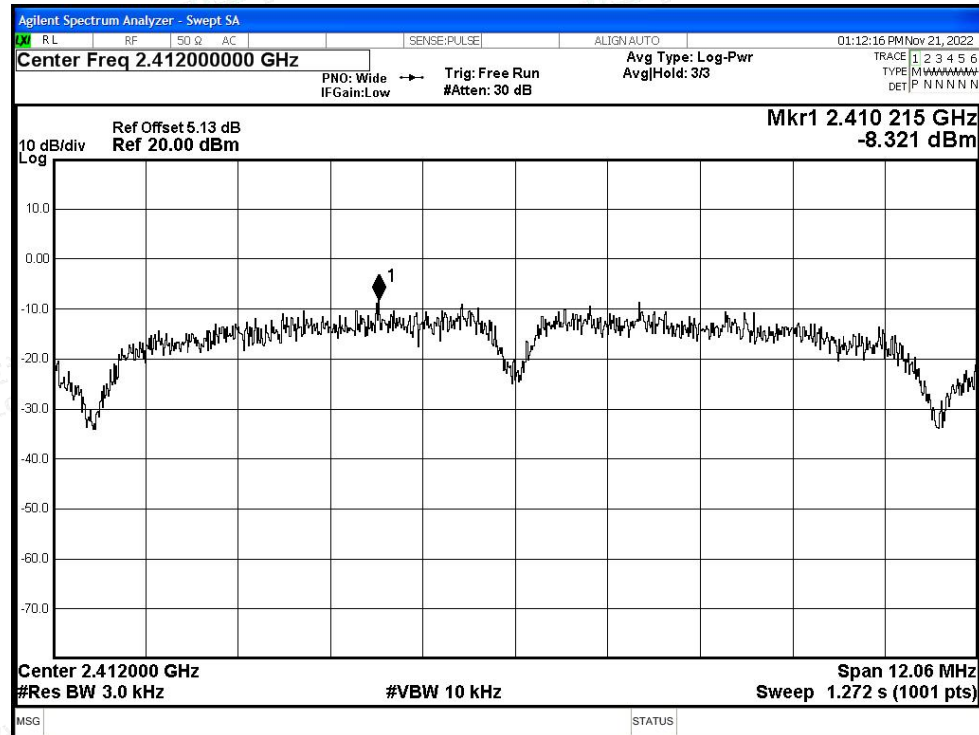
Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3kHz)	Duty Factor (dB)	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	b	2412	Ant1	-8.32	0	-8.32	8	Pass
NVNT	b	2437	Ant1	-8.9	0	-8.9	8	Pass
NVNT	b	2462	Ant1	-10.27	0	-10.27	8	Pass
NVNT	g	2412	Ant1	-14.17	0	-14.17	8	Pass
NVNT	g	2437	Ant1	-14.07	0	-14.07	8	Pass
NVNT	g	2462	Ant1	-12.74	0	-12.74	8	Pass
NVNT	n20	2412	Ant1	-13.69	0	-13.69	8	Pass
NVNT	n20	2437	Ant1	-12.72	0	-12.72	8	Pass
NVNT	n20	2462	Ant1	-15.18	0	-15.18	8	Pass



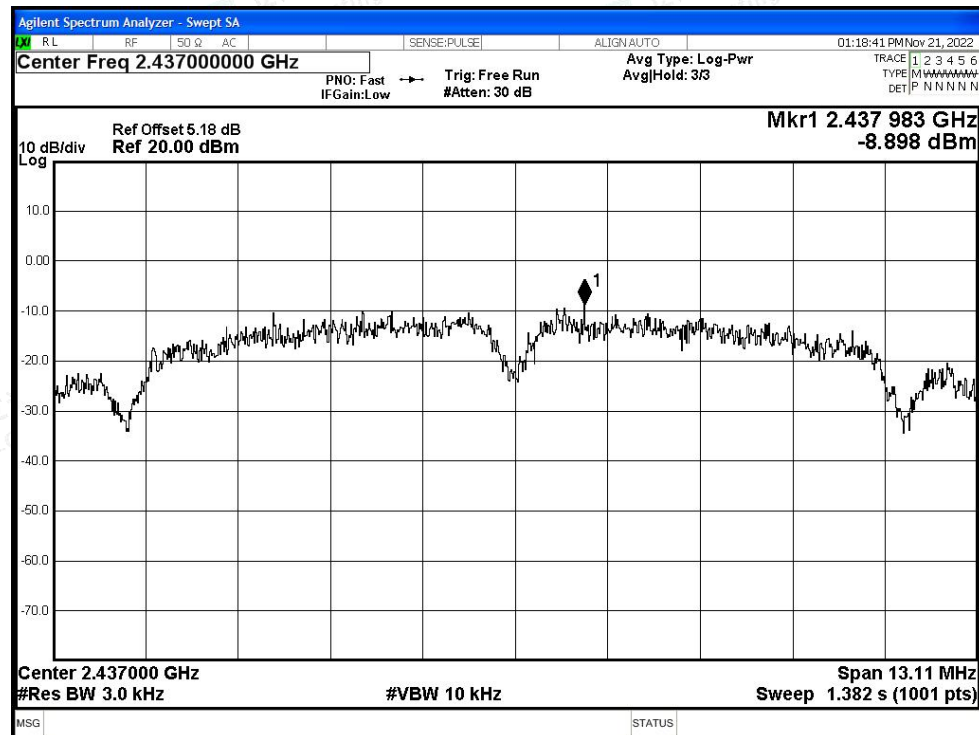


Test Graphs

PSD NVNT b 2412MHz Ant1

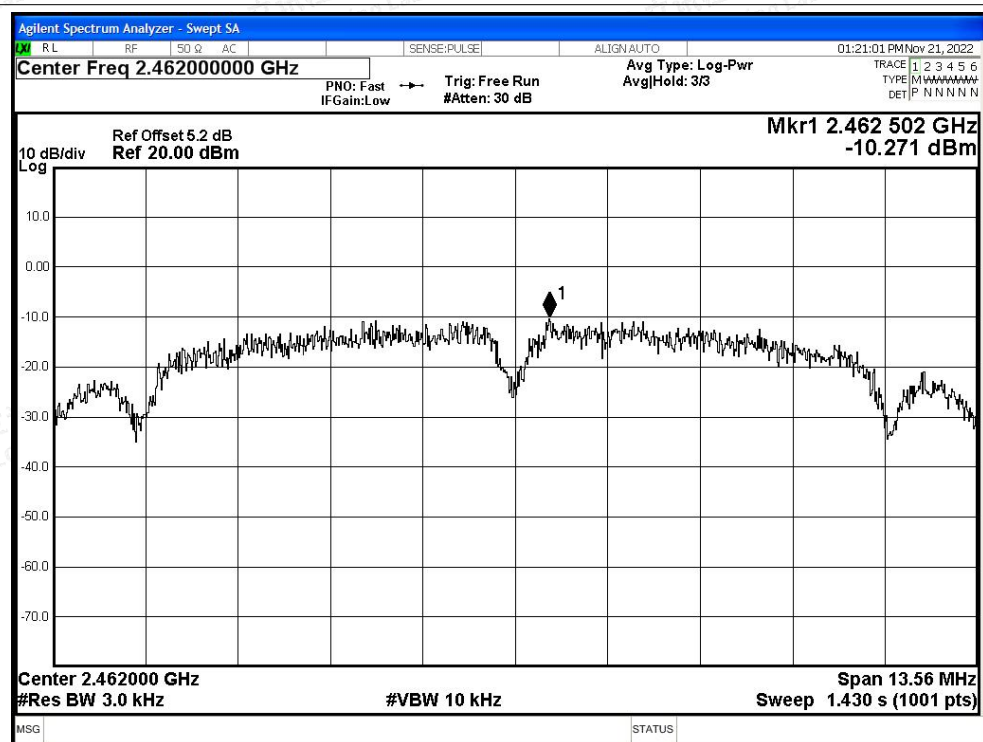


PSD NVNT b 2437MHz Ant1

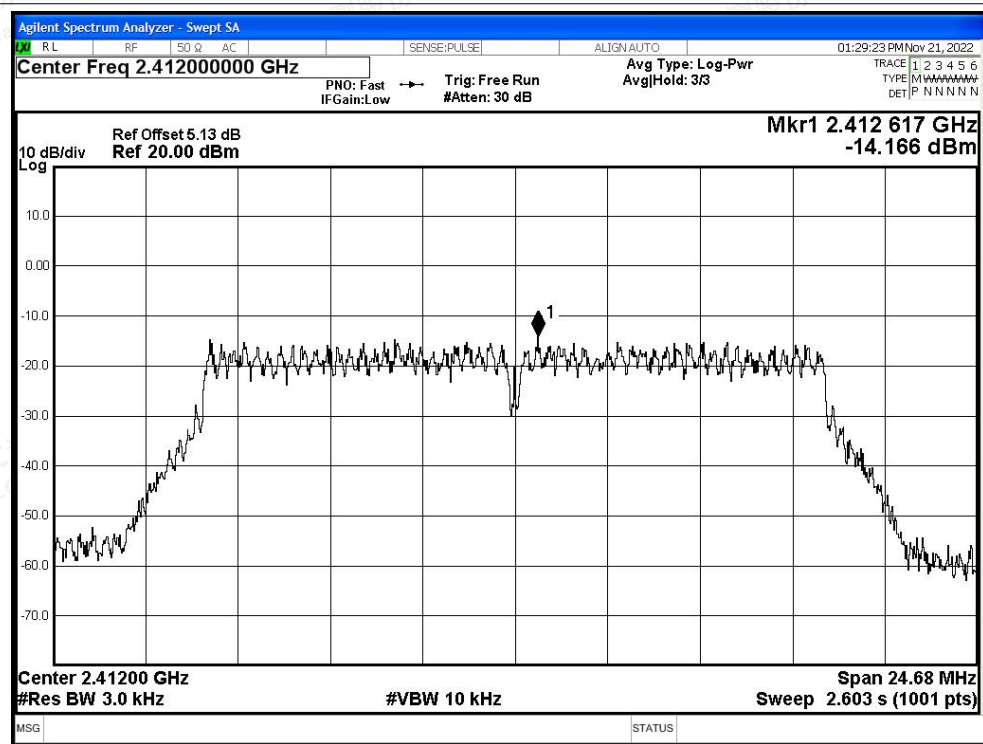




PSD NVNT b 2462MHz Ant1

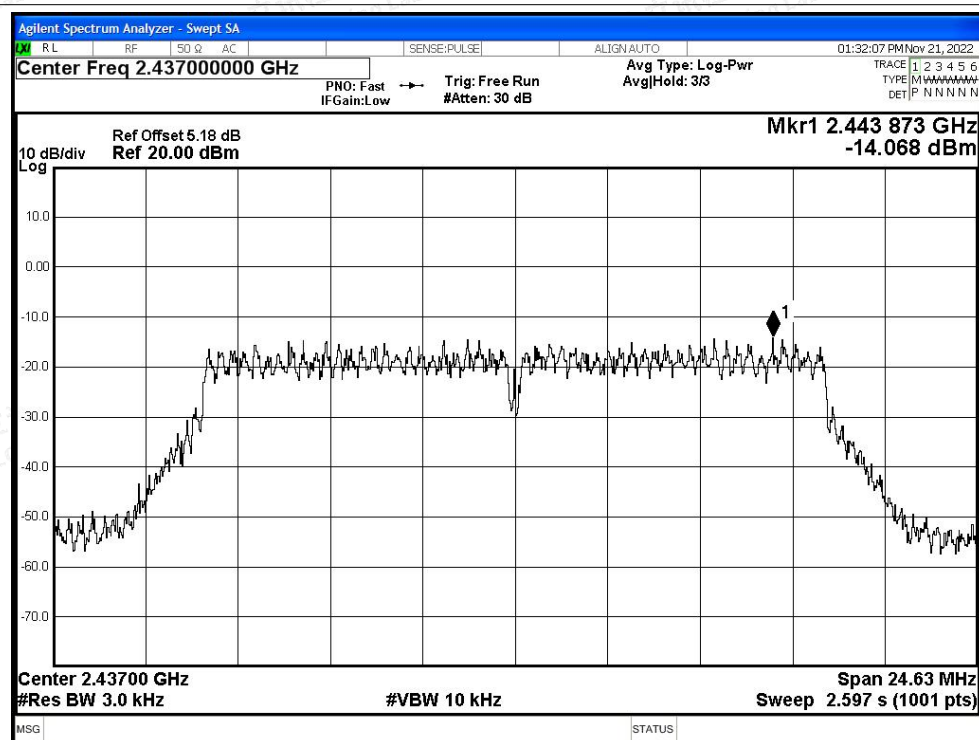


PSD NVNT g 2412MHz Ant1

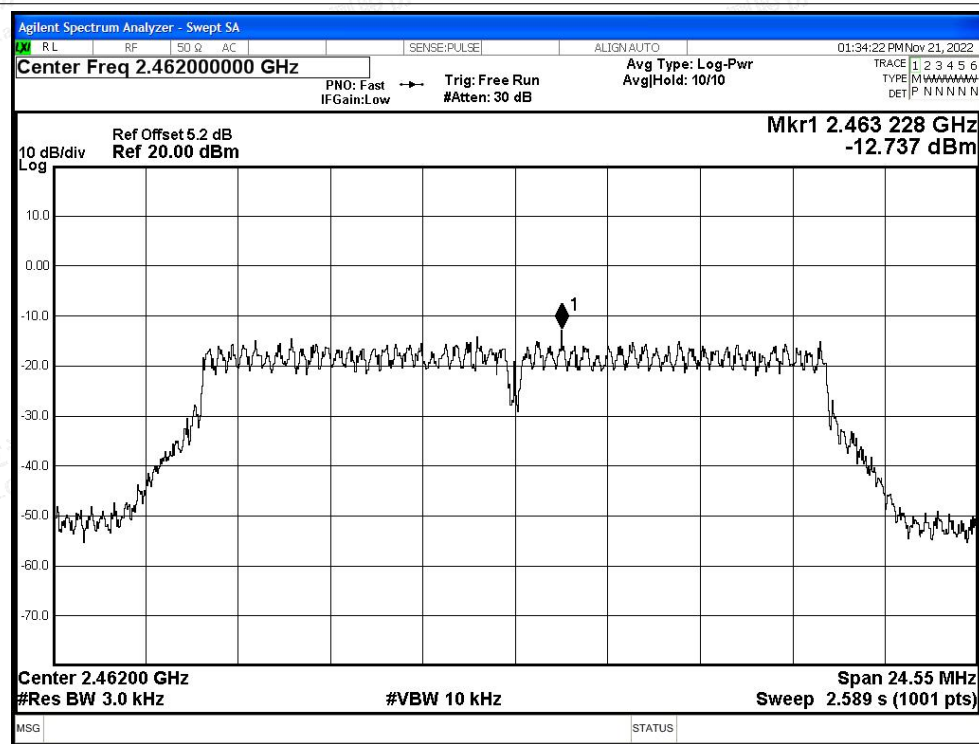


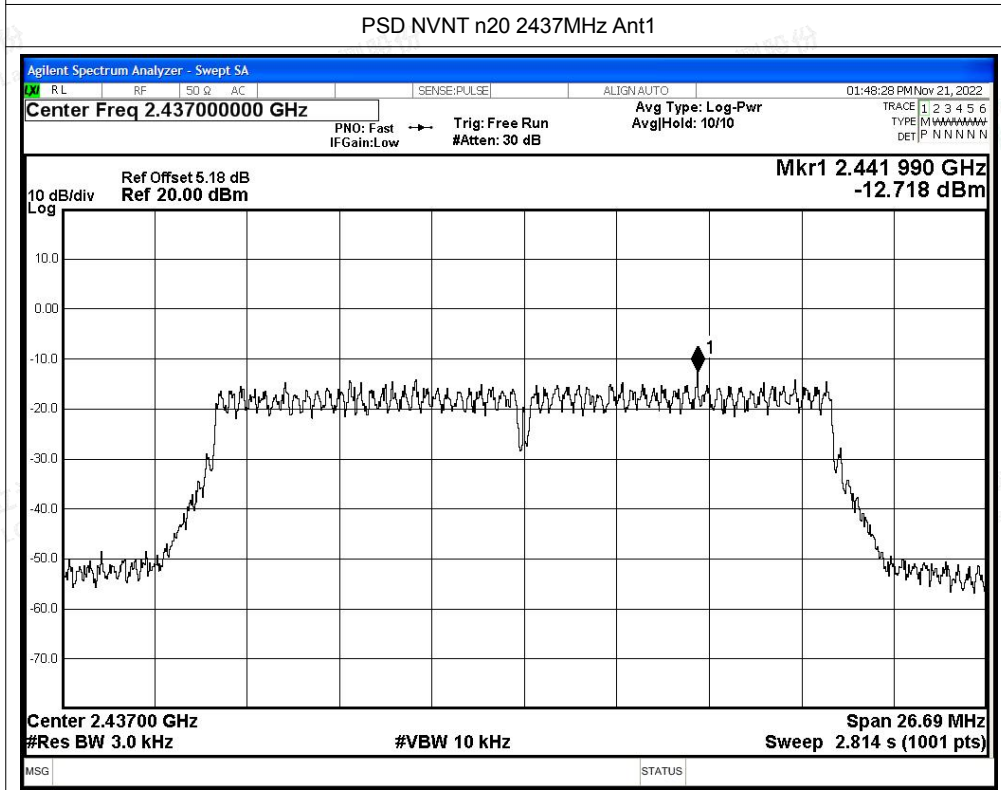
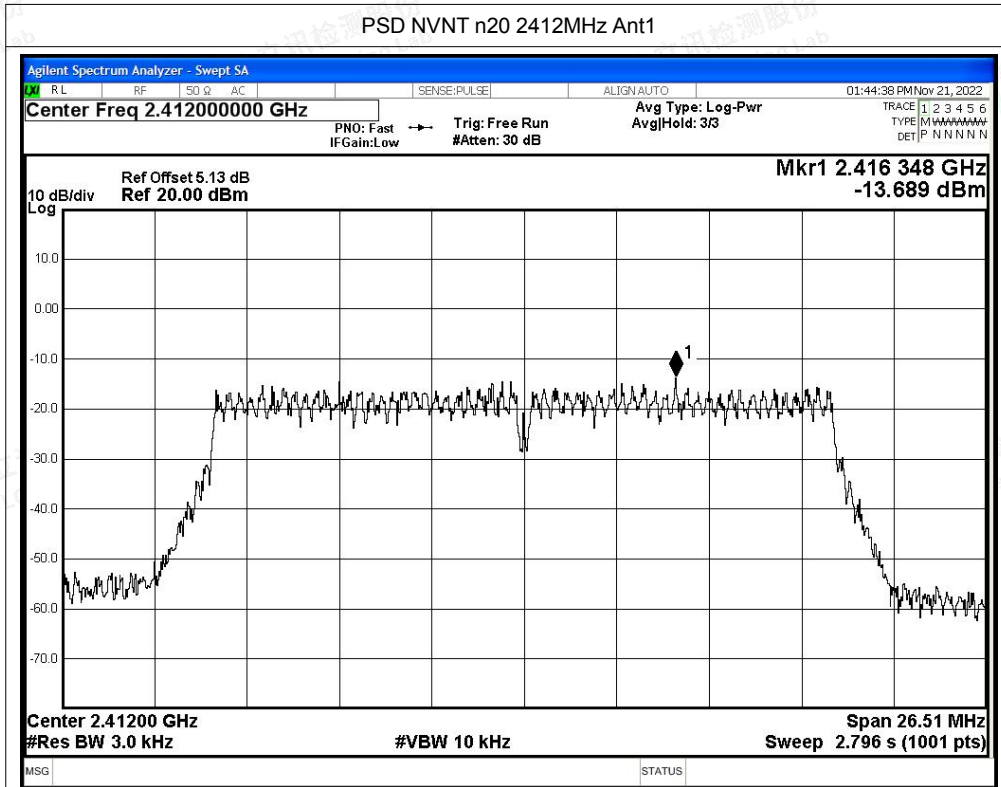


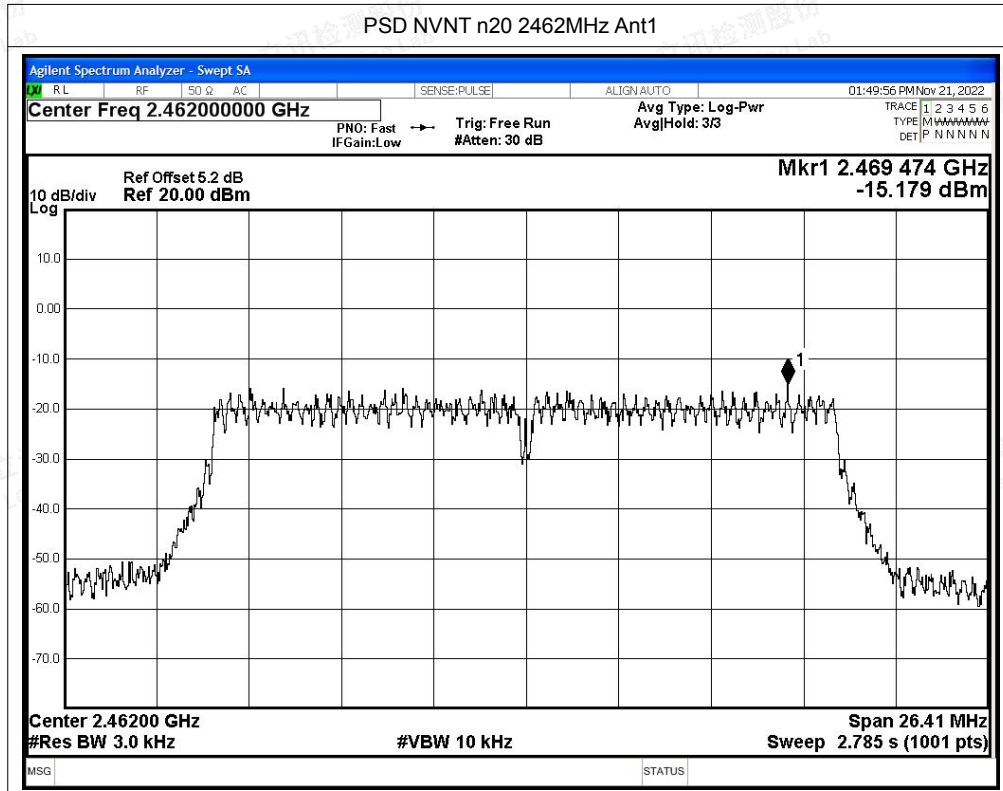
PSD NVNT g 2437MHz Ant1



PSD NVNT g 2462MHz Ant1









B.5 Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-48.55	-20	Pass
NVNT	b	2462	Ant1	-59.12	-20	Pass
NVNT	g	2412	Ant1	-39.37	-20	Pass
NVNT	g	2462	Ant1	-45.24	-20	Pass
NVNT	n20	2412	Ant1	-37.76	-20	Pass
NVNT	n20	2462	Ant1	-43.99	-20	Pass

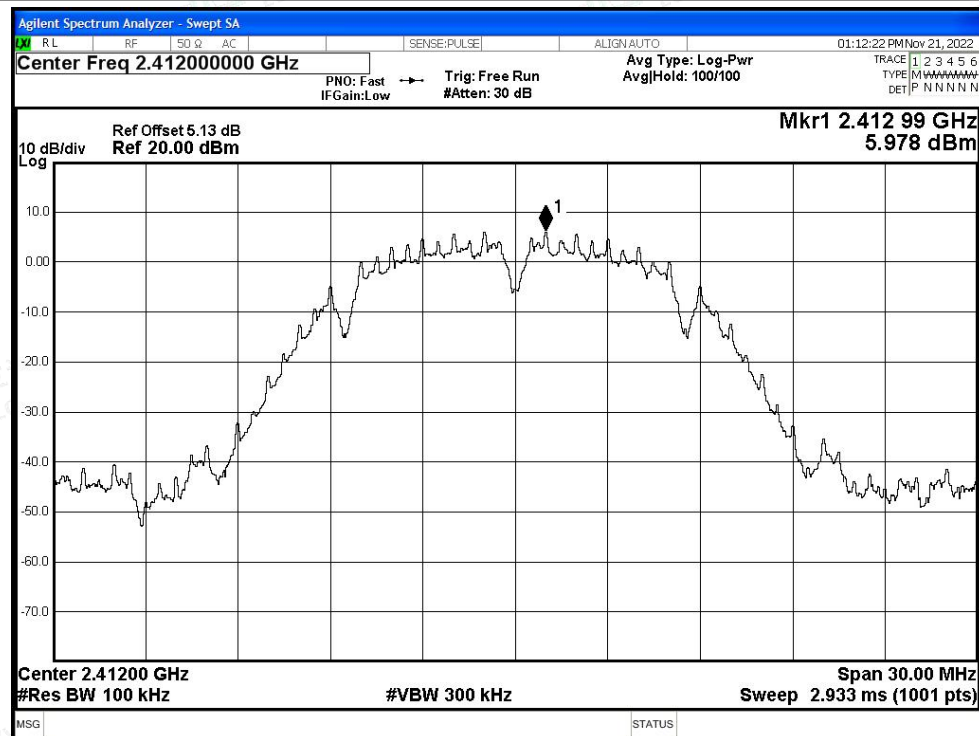


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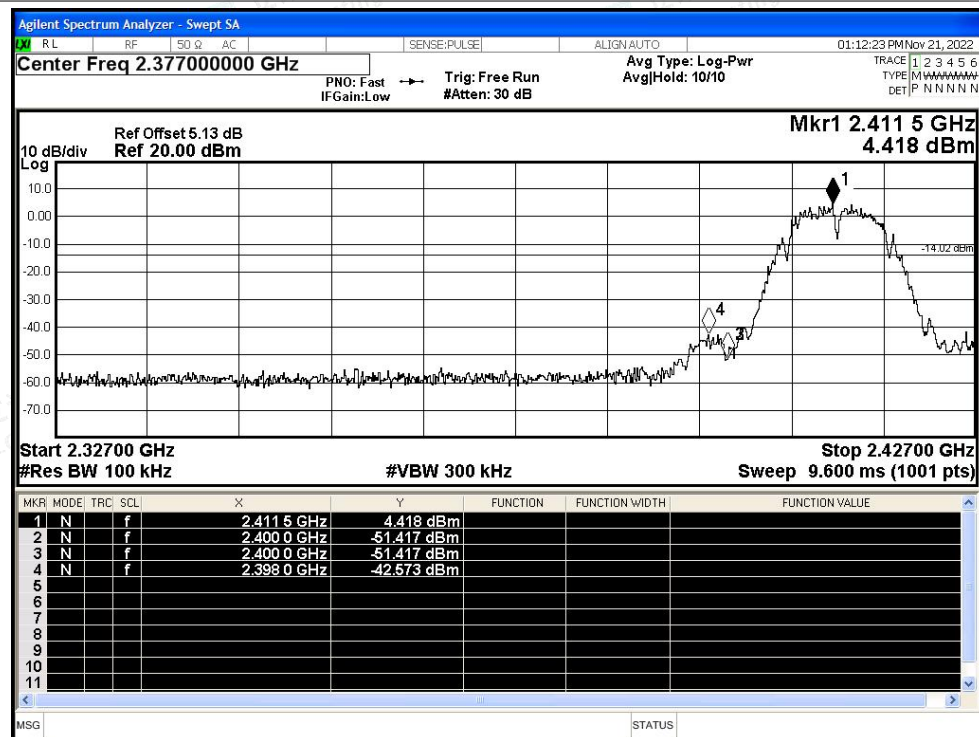


Test Graphs

Band Edge NVNT b 2412MHz Ant1 Ref



Band Edge NVNT b 2412MHz Ant1 Emission



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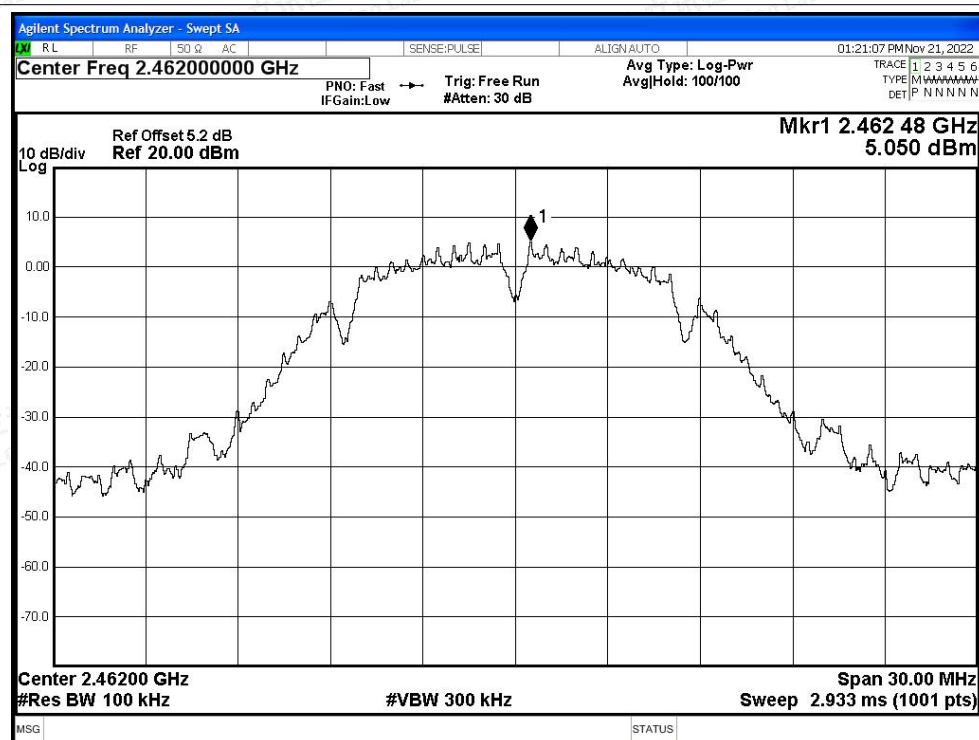
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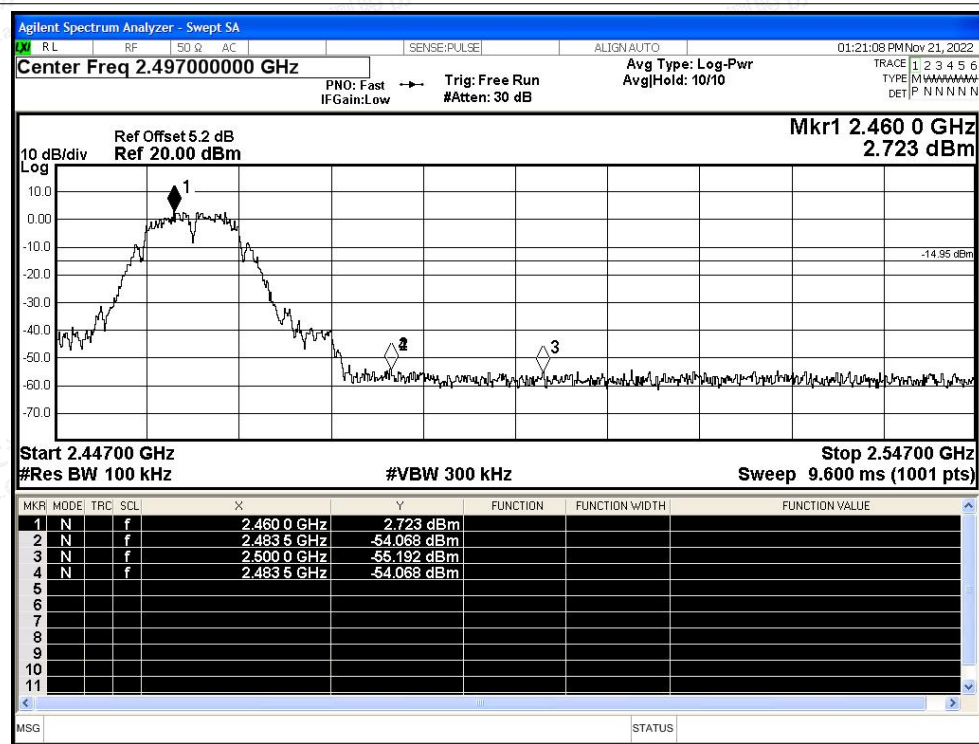
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Band Edge NVNT b 2462MHz Ant1 Ref

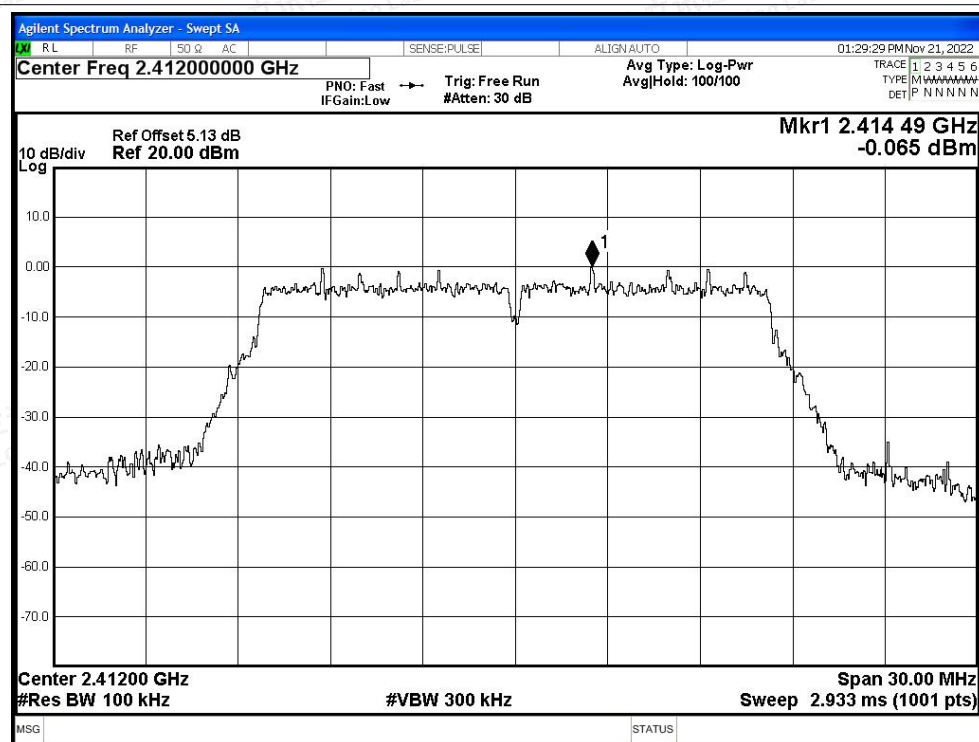


Band Edge NVNT b 2462MHz Ant1 Emission

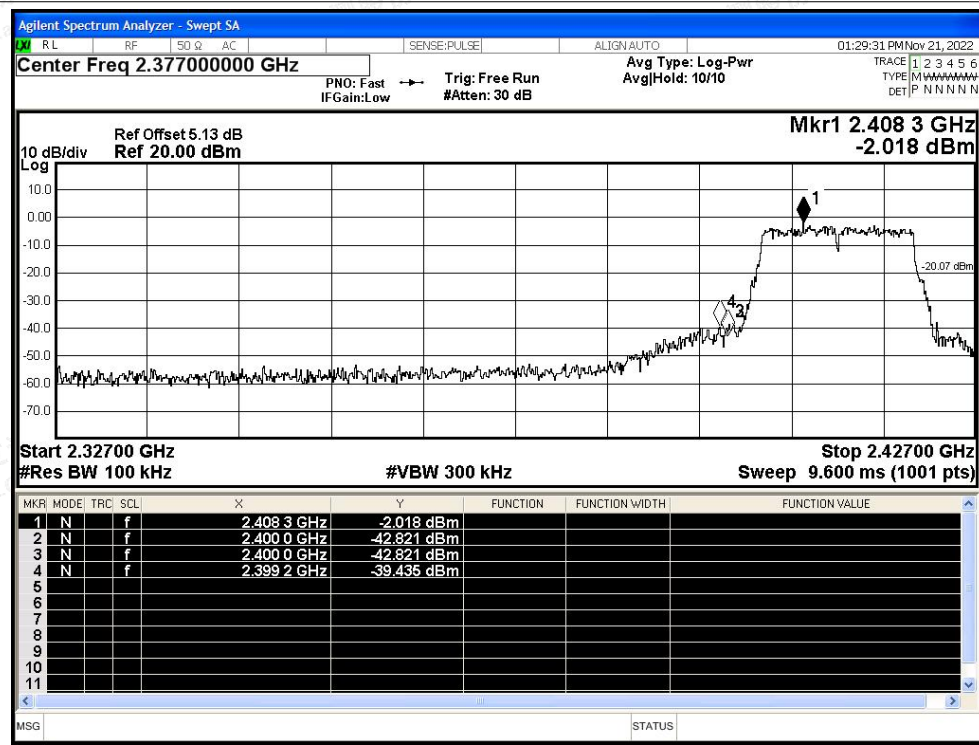




Band Edge NVNT g 2412MHz Ant1 Ref

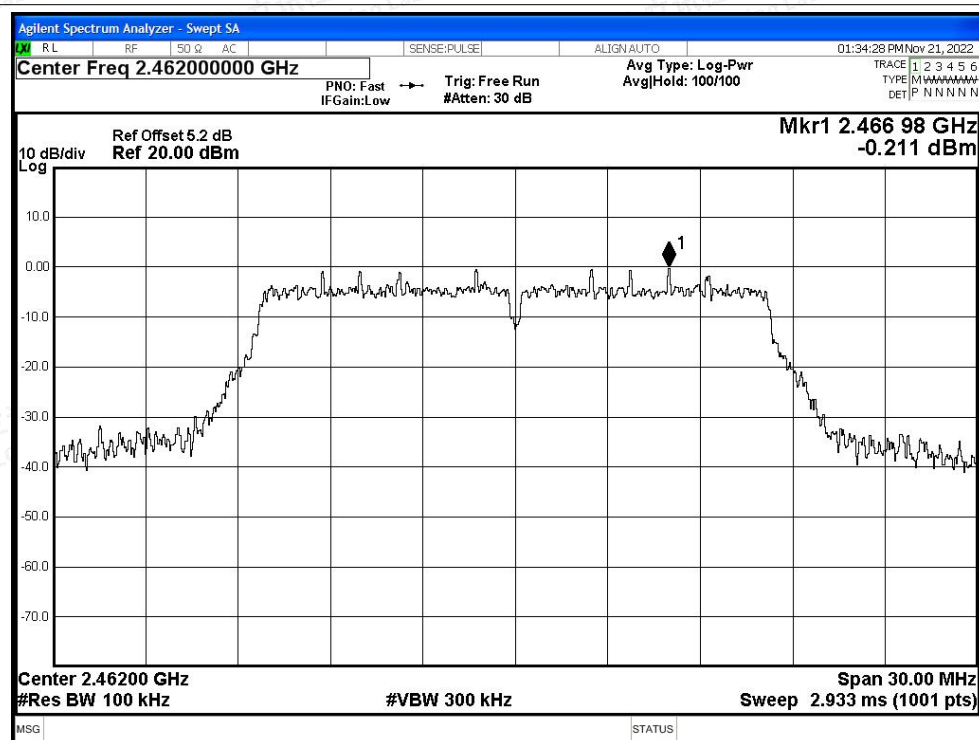


Band Edge NVNT g 2412MHz Ant1 Emission

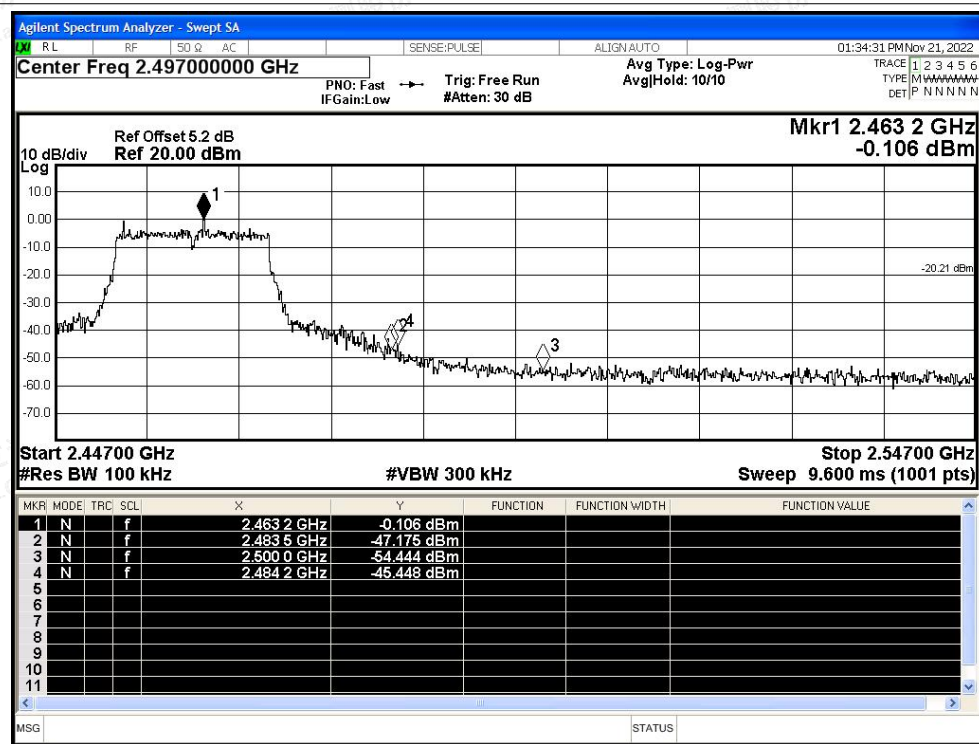




Band Edge NVNT g 2462MHz Ant1 Ref

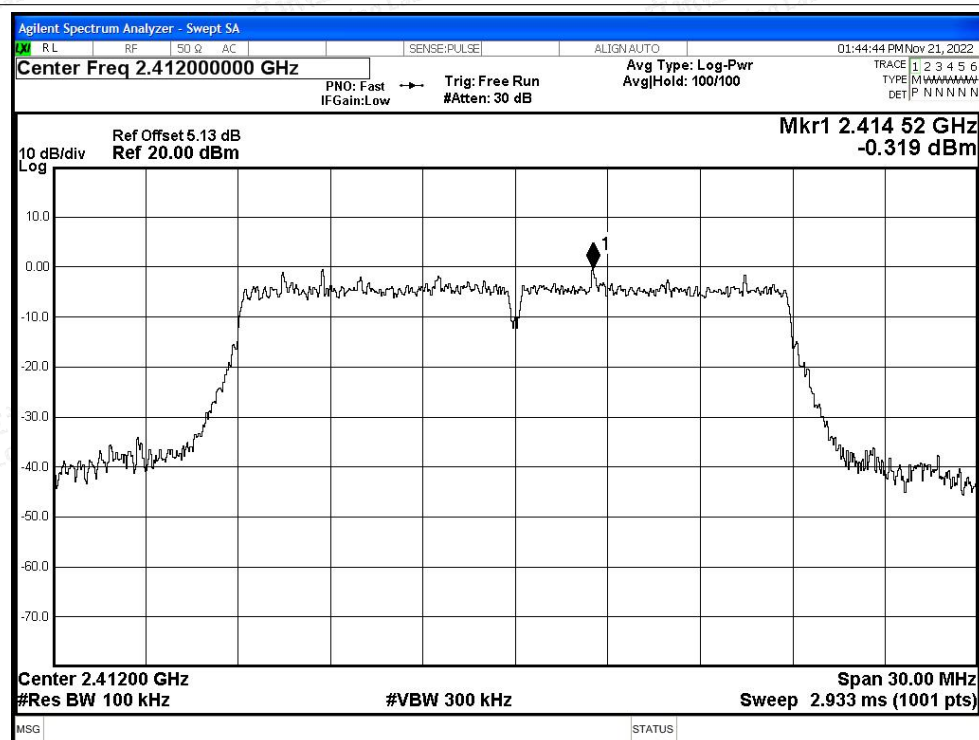


Band Edge NVNT g 2462MHz Ant1 Emission

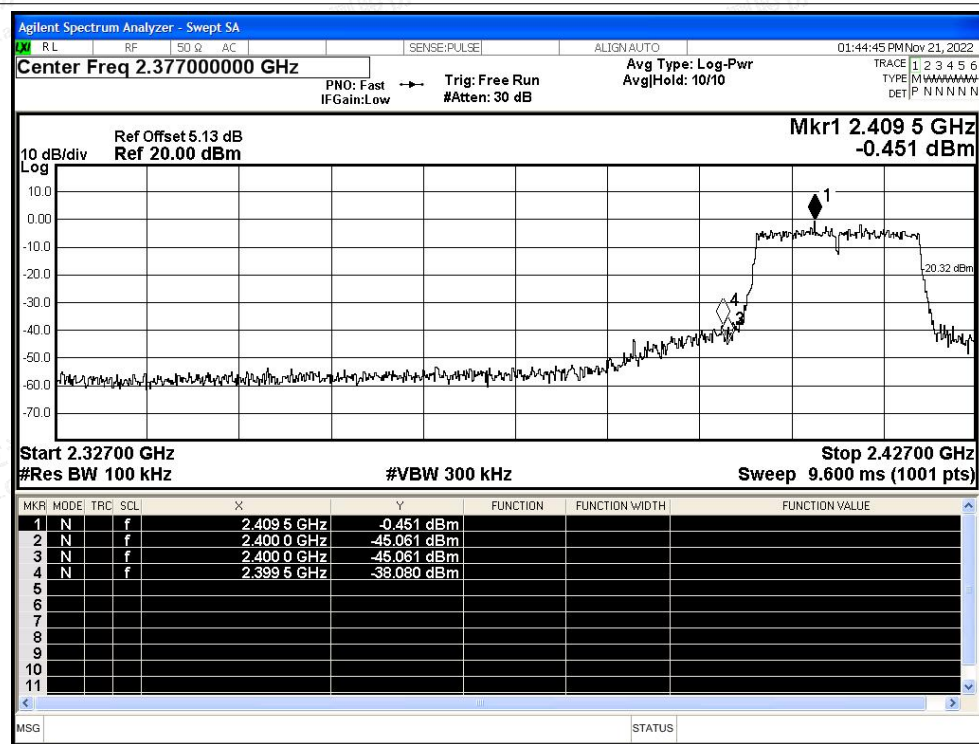




Band Edge NVNT n20 2412MHz Ant1 Ref

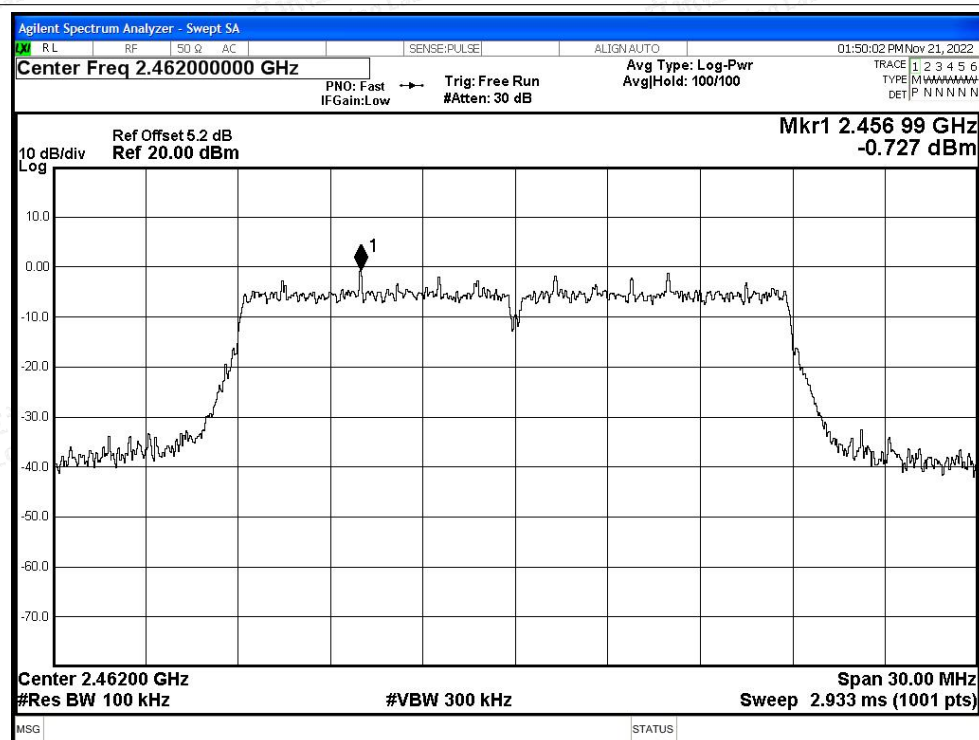


Band Edge NVNT n20 2412MHz Ant1 Emission

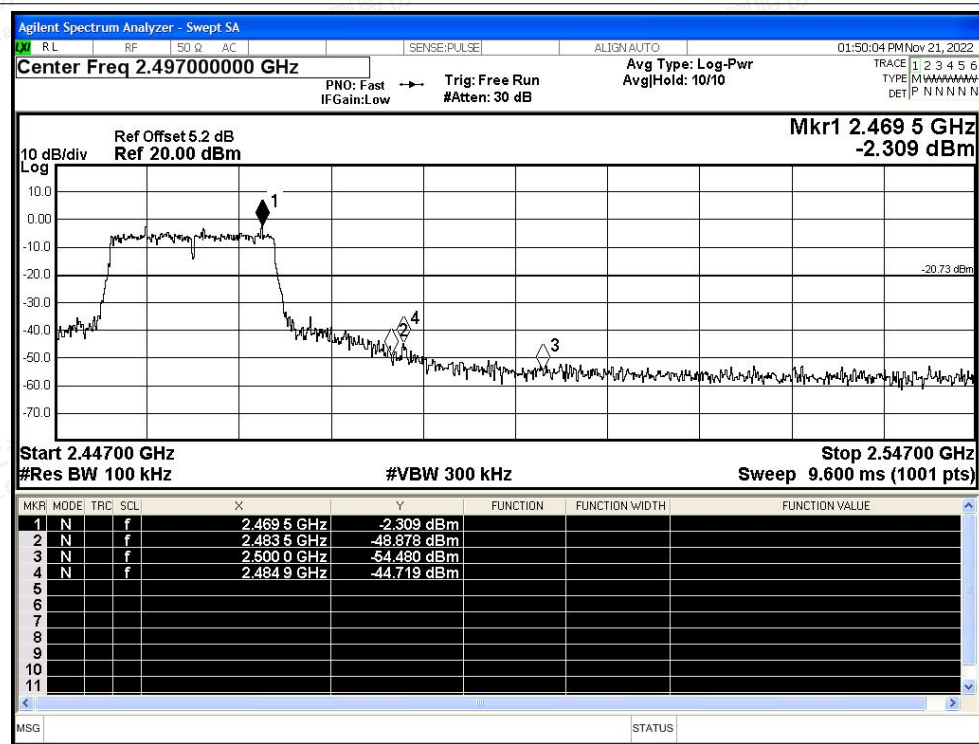




Band Edge NVNT n20 2462MHz Ant1 Ref



Band Edge NVNT n20 2462MHz Ant1 Emission





B.6 Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-47.33	-20	Pass
NVNT	b	2437	Ant1	-48.03	-20	Pass
NVNT	b	2462	Ant1	-47.45	-20	Pass
NVNT	g	2412	Ant1	-42.63	-20	Pass
NVNT	g	2437	Ant1	-42.32	-20	Pass
NVNT	g	2462	Ant1	-41.05	-20	Pass
NVNT	n20	2412	Ant1	-42.32	-20	Pass
NVNT	n20	2437	Ant1	-43.04	-20	Pass
NVNT	n20	2462	Ant1	-42.81	-20	Pass

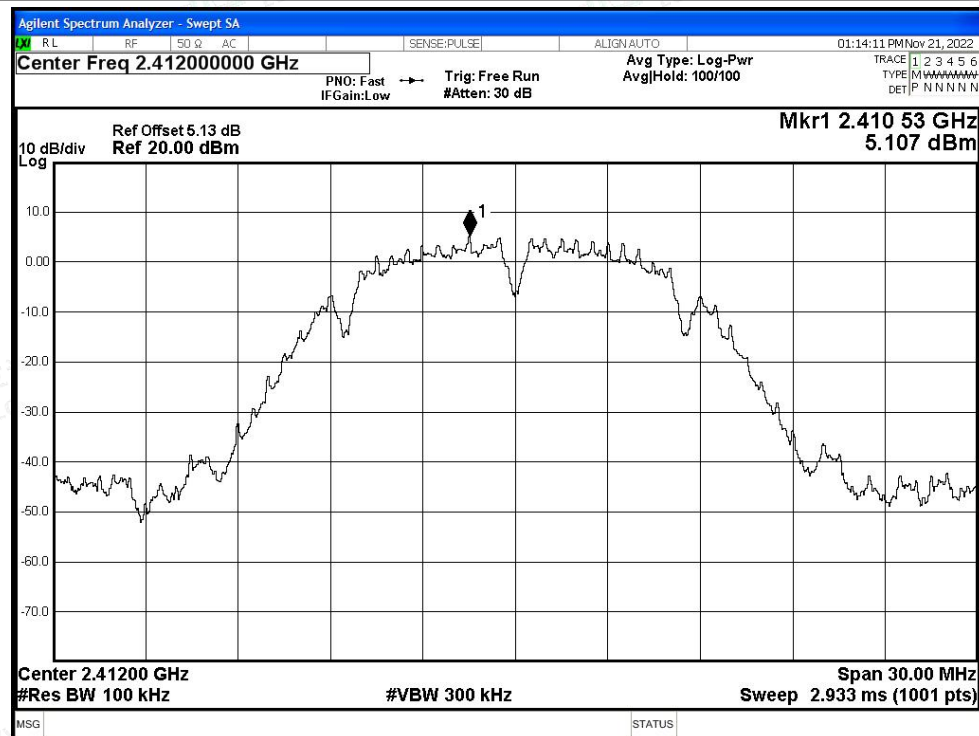


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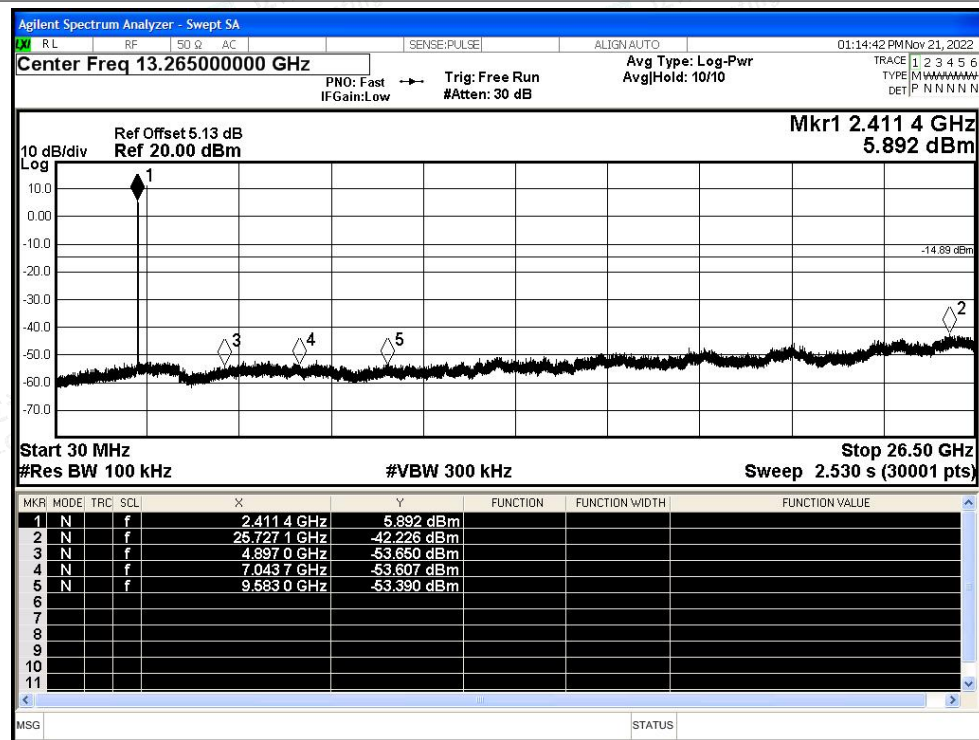


Test Graphs

Tx. Spurious NVNT b 2412MHz Ant1 Ref



Tx. Spurious NVNT b 2412MHz Ant1 Emission



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