



Appendix A

RF Test Data for 915MHz (Conducted Measurement)

Product Name: Smart Radio

Test Model: RM-915-2J

Environmental Conditions

Temperature:	23.8 ° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	<i>mening su</i> Mening Su
Supervised by:	<i>Li</i> Li Huan





A.1 -6dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	g	907	Ant0	7.885	≥ 0.5	Pass
NVNT	g	915	Ant0	7.95	≥ 0.5	Pass
NVNT	g	923	Ant0	8.162	≥ 0.5	Pass
NVNT	n	907	Ant0	7.982	≥ 0.5	Pass
NVNT	n	915	Ant0	8.581	≥ 0.5	Pass
NVNT	n	923	Ant0	8.078	≥ 0.5	Pass

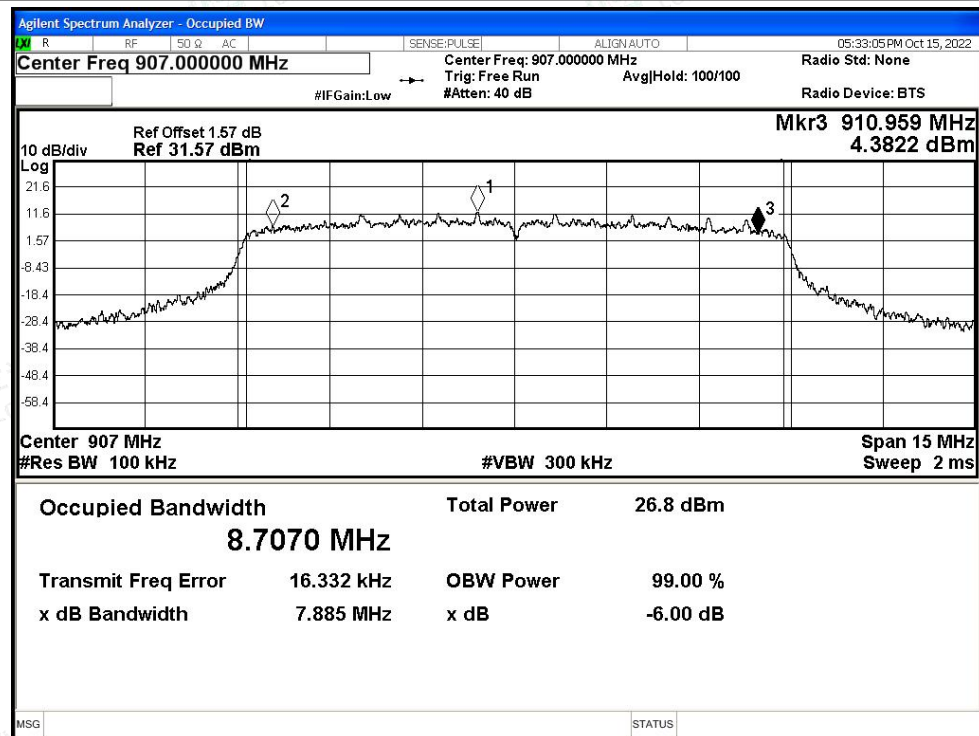


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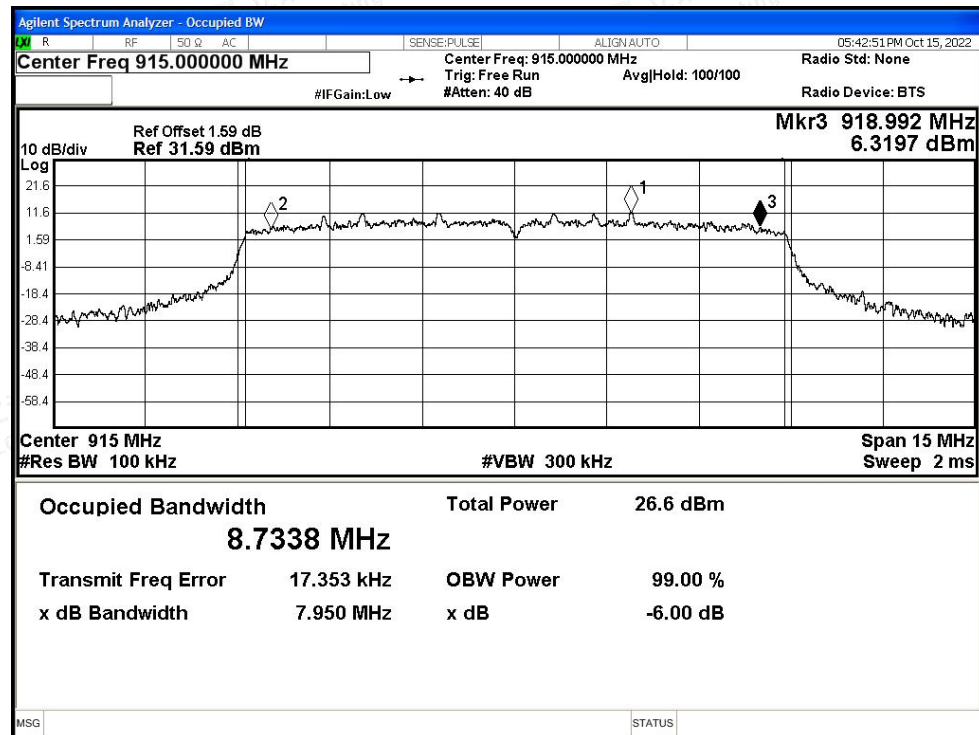


Test Graphs

-6dB Bandwidth NVNT g 907MHz Ant0



-6dB Bandwidth NVNT g 915MHz Ant0



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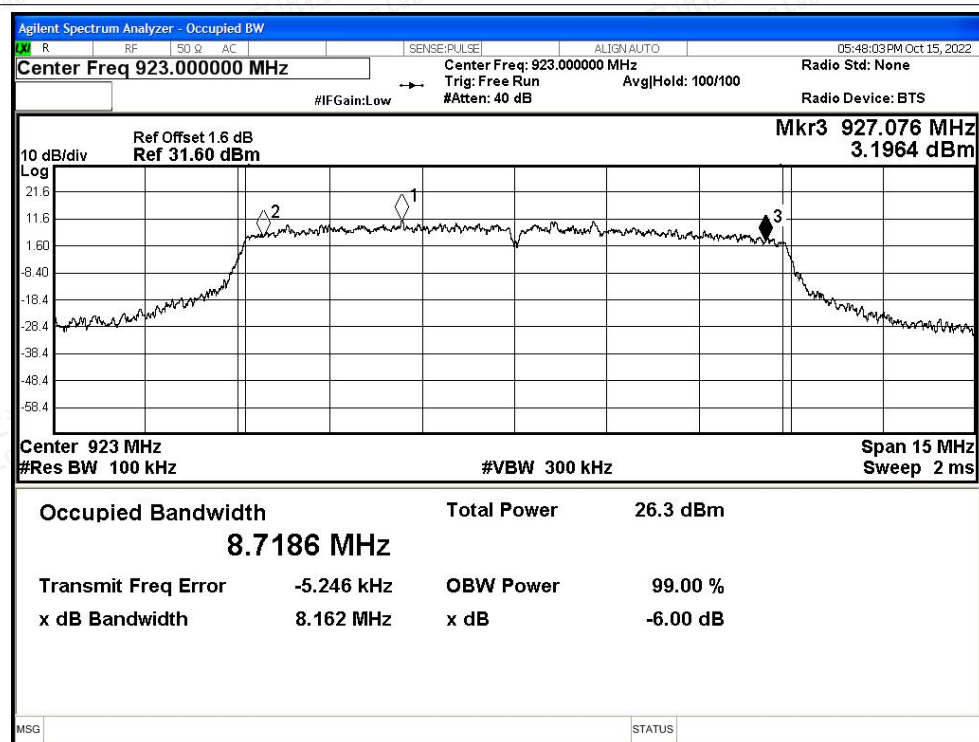
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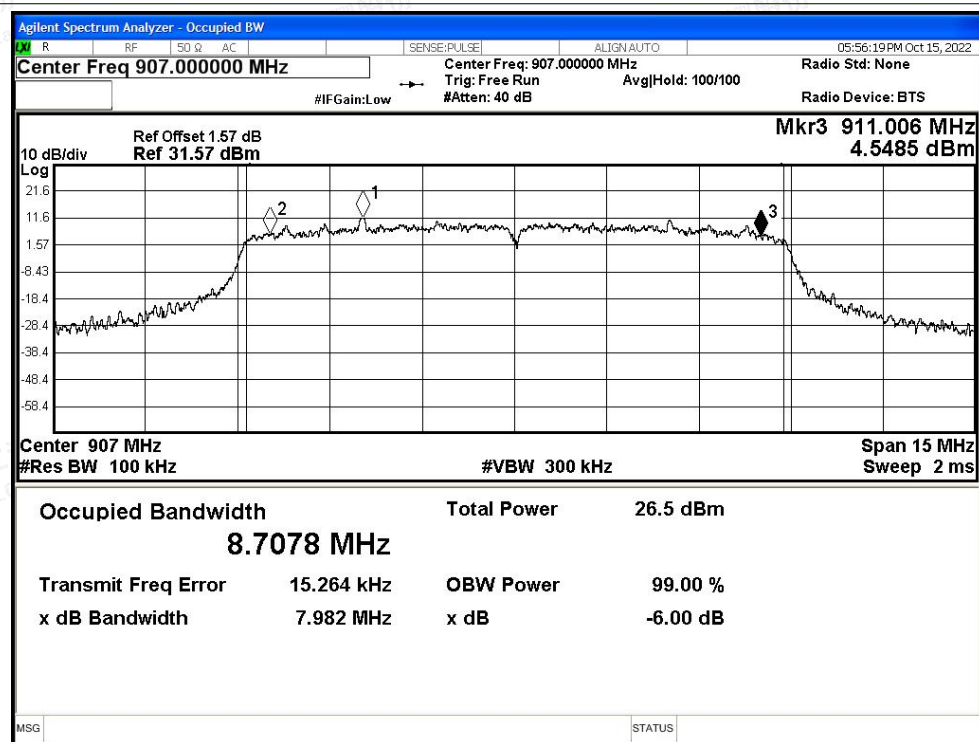
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-6dB Bandwidth NVNT g 923MHz Ant0

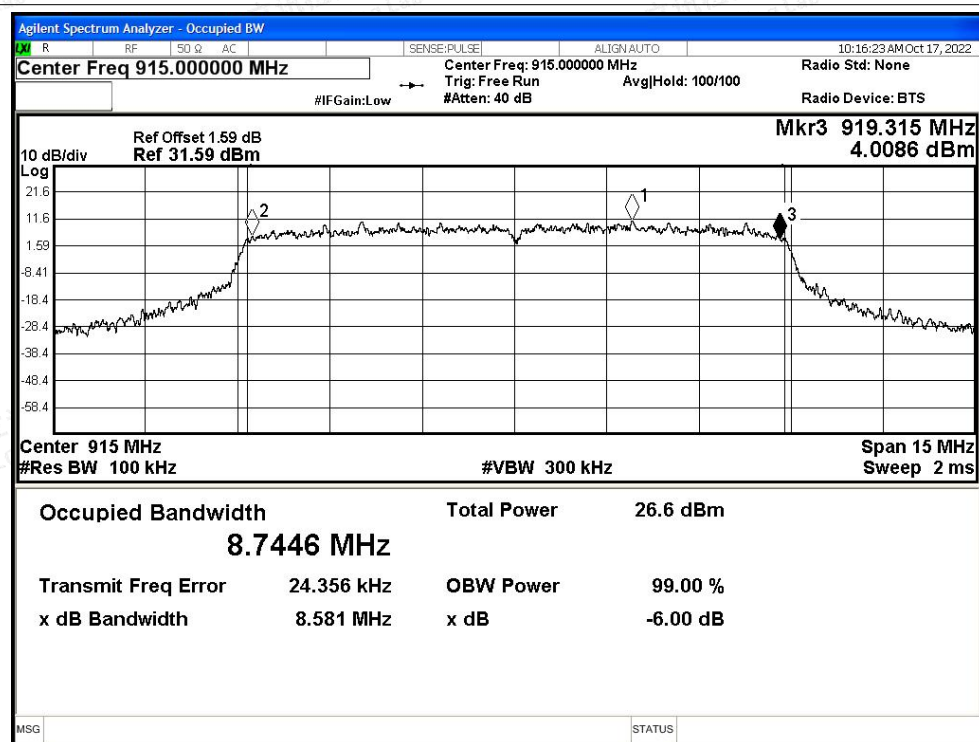


-6dB Bandwidth NVNT n 907MHz Ant0

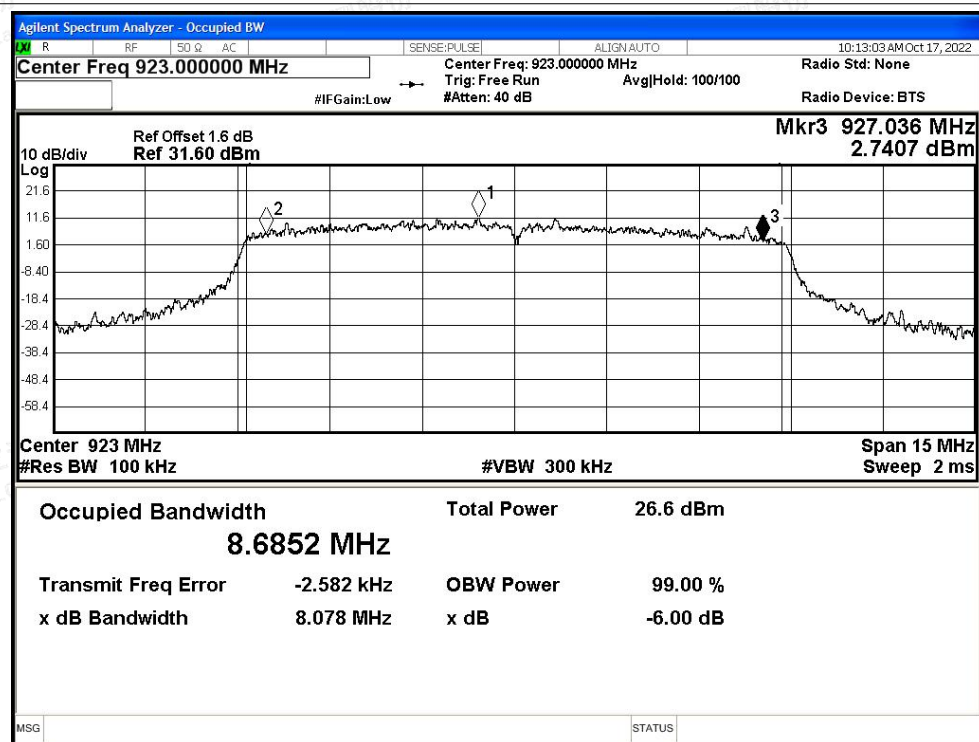




-6dB Bandwidth NVNT n 915MHz Ant0



-6dB Bandwidth NVNT n 923MHz Ant0



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Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	g	907	Ant1	7.737	≥ 0.5	Pass
NVNT	g	915	Ant1	8.084	≥ 0.5	Pass
NVNT	g	923	Ant1	8.061	≥ 0.5	Pass
NVNT	n	907	Ant1	7.756	≥ 0.5	Pass
NVNT	n	915	Ant1	8.368	≥ 0.5	Pass
NVNT	n	923	Ant1	7.791	≥ 0.5	Pass

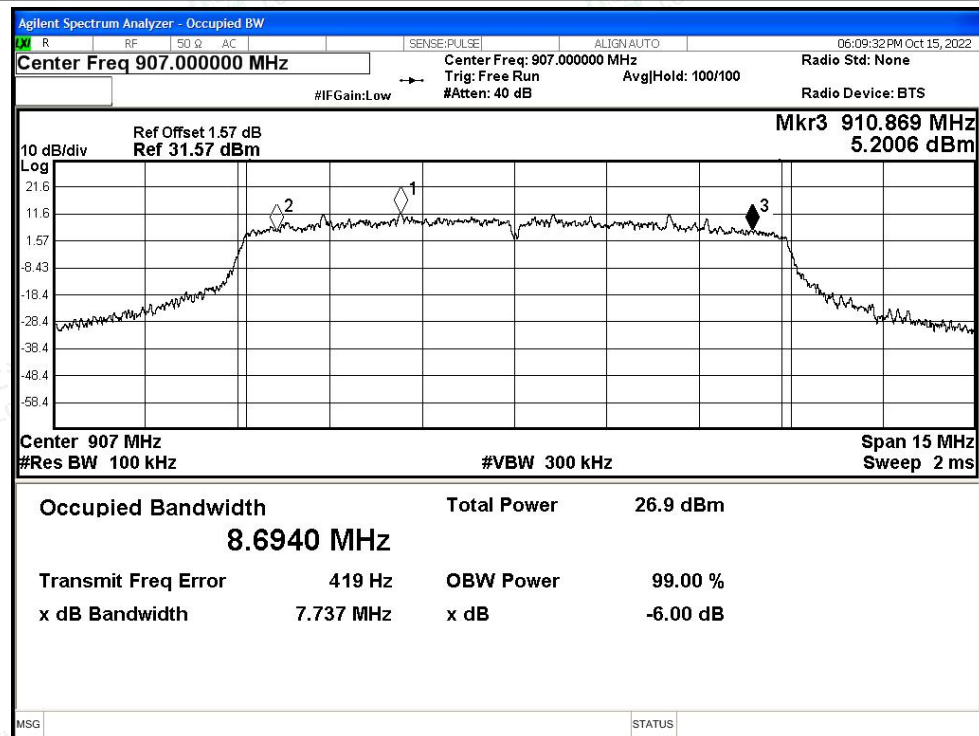


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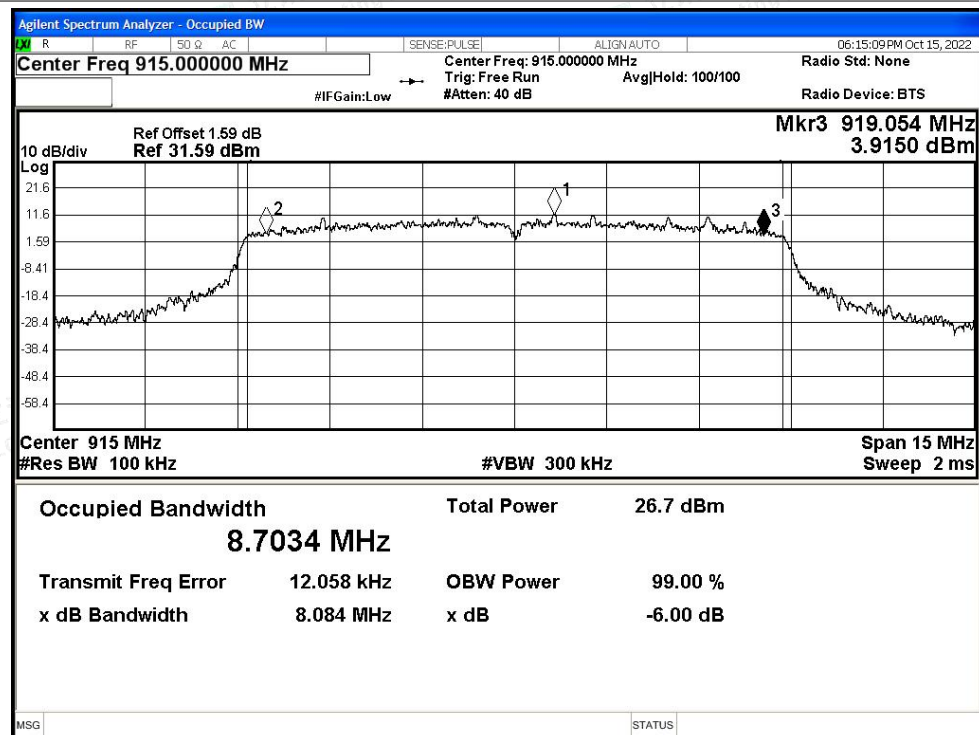


Test Graphs

-6dB Bandwidth NVNT g 907MHz Ant1



-6dB Bandwidth NVNT g 915MHz Ant1

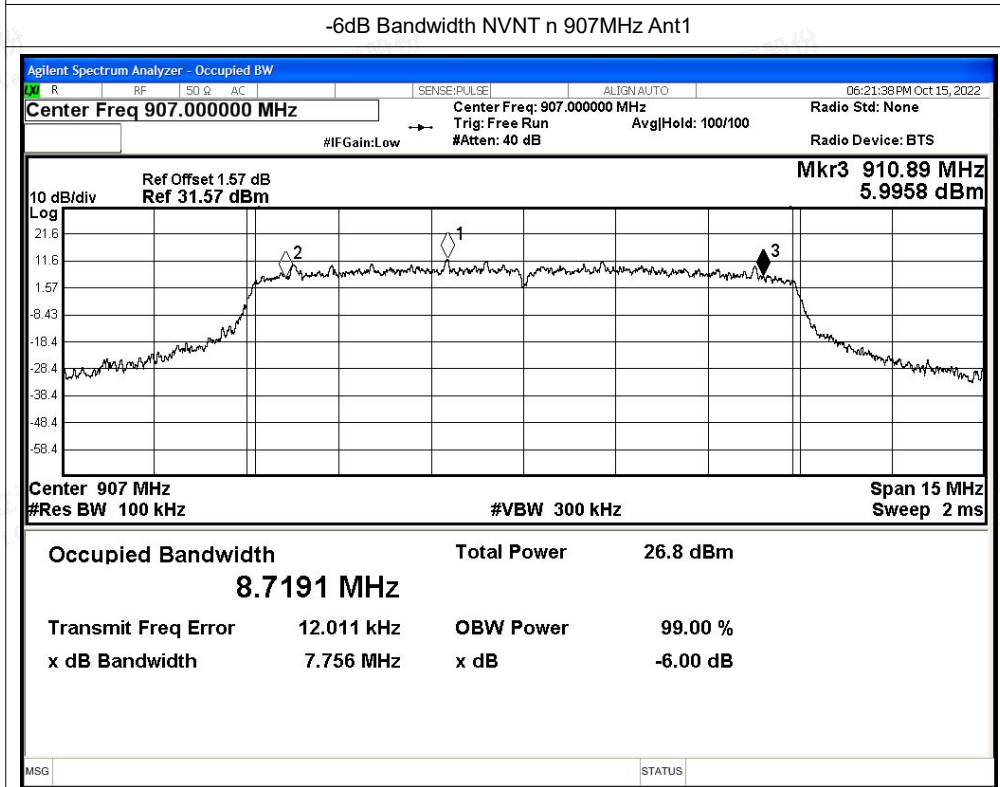
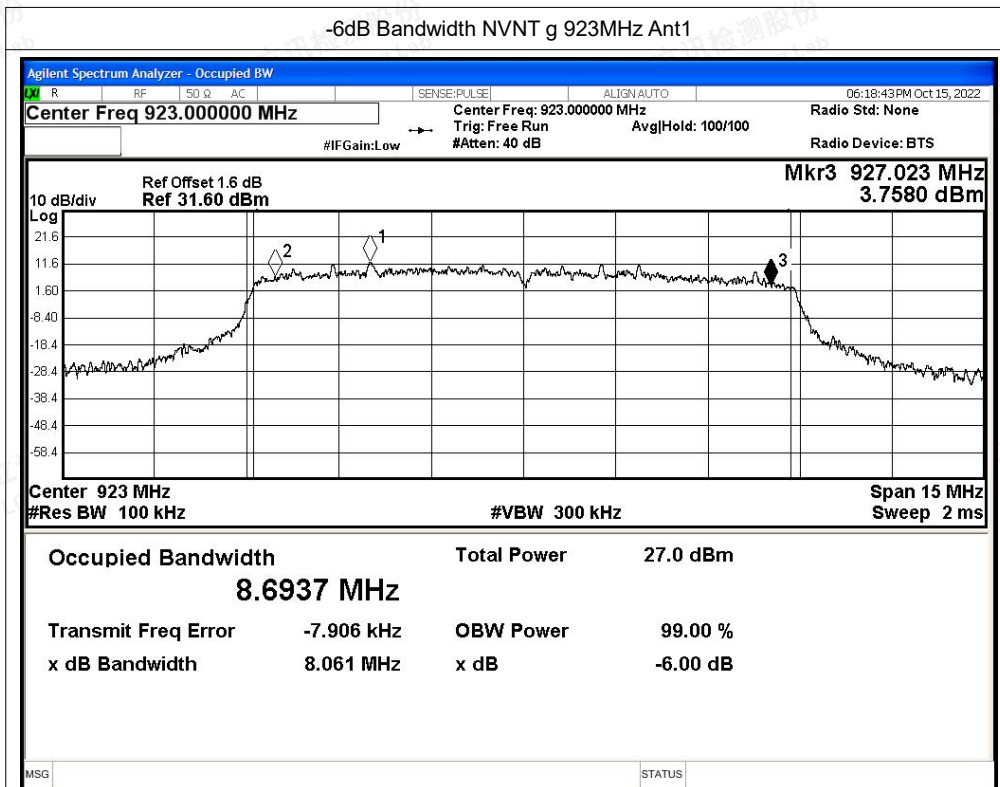


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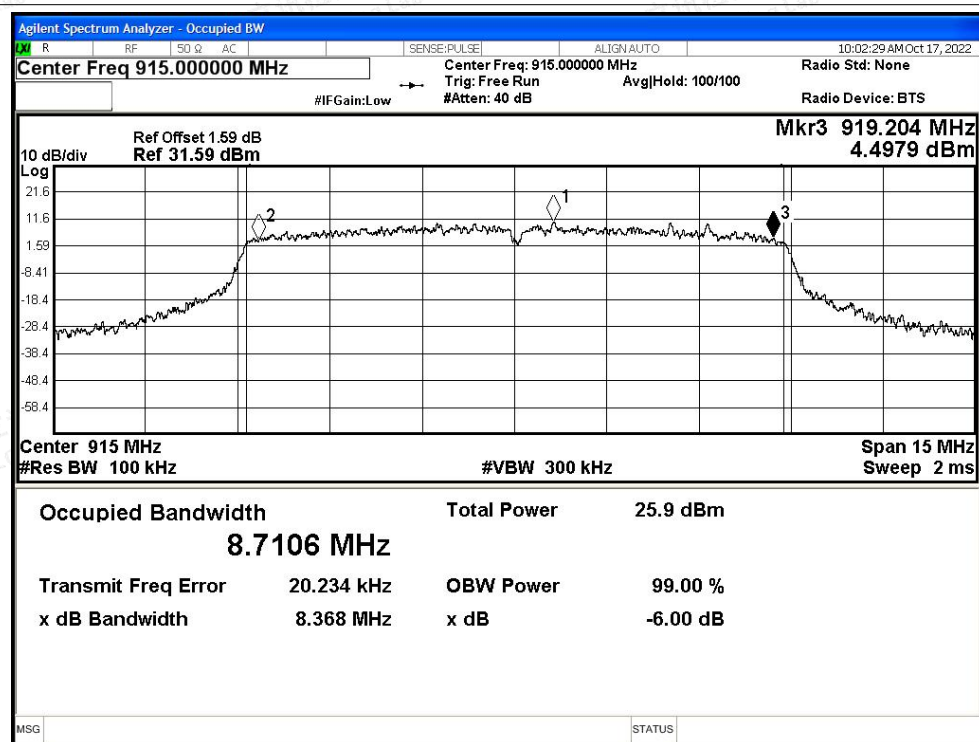
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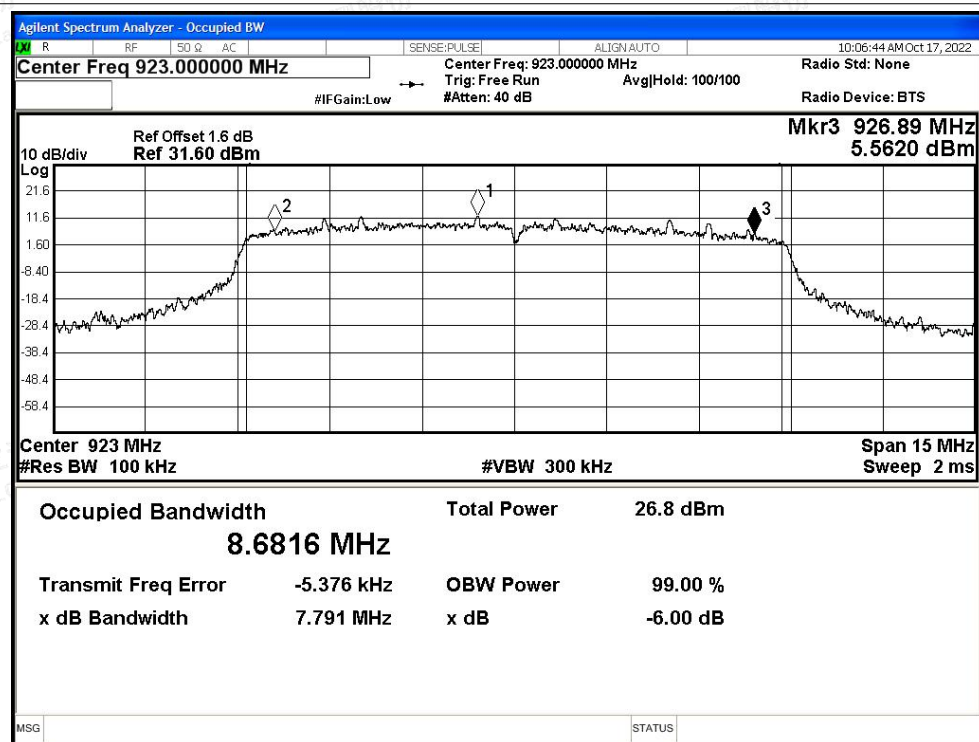




-6dB Bandwidth NVNT n 915MHz Ant1



-6dB Bandwidth NVNT n 923MHz Ant1



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A.2 Occupied Channel Bandwidth

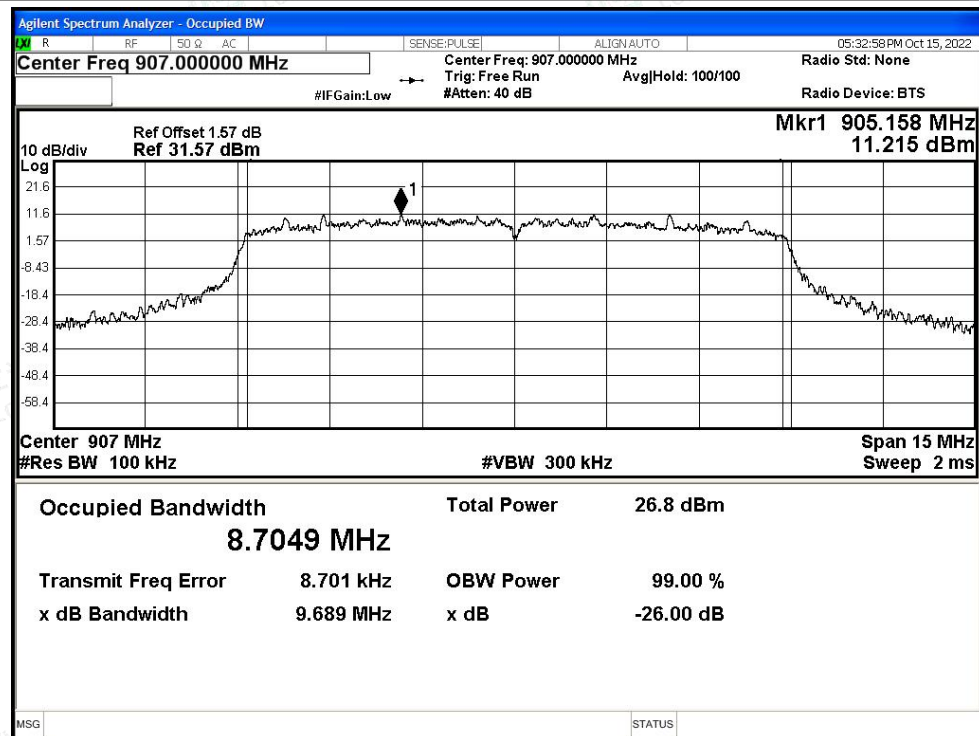
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	g	907	Ant0	8.705
NVNT	g	915	Ant0	8.743
NVNT	g	923	Ant0	8.716
NVNT	n	907	Ant0	8.708
NVNT	n	915	Ant0	8.731
NVNT	n	923	Ant0	8.693



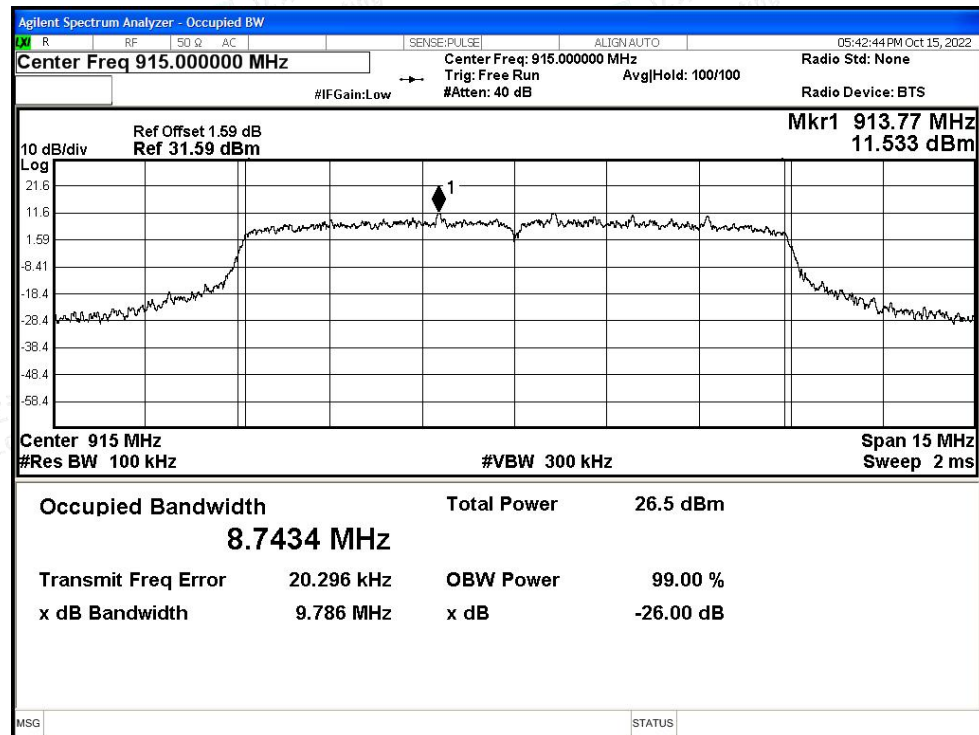


Test Graphs

OBW NVNT g 907MHz Ant0



OBW NVNT g 915MHz Ant0



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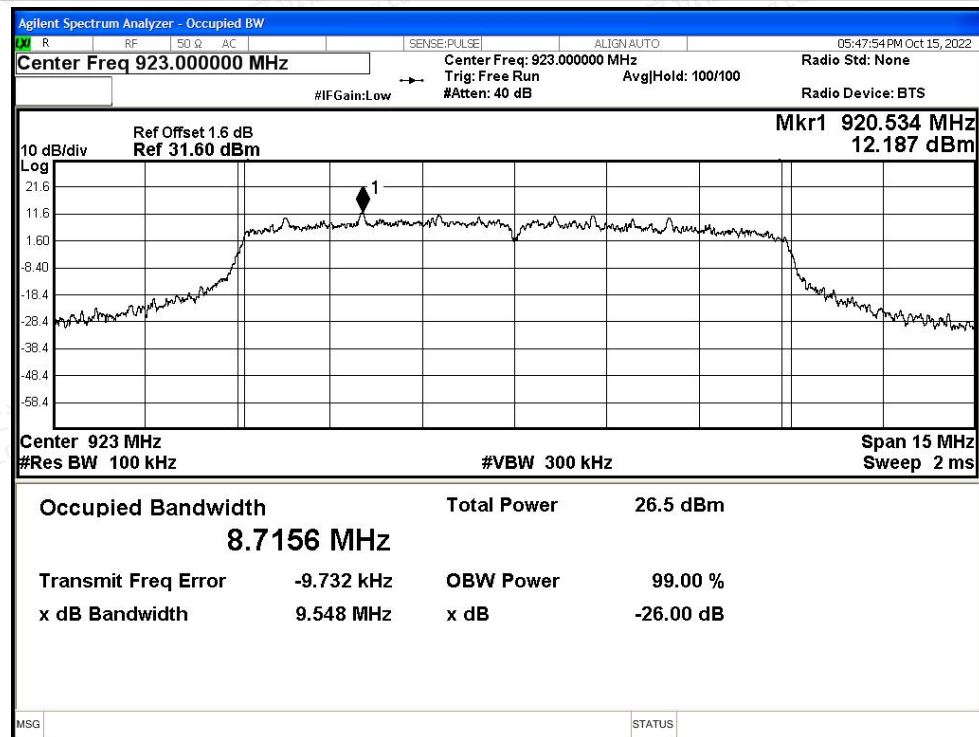
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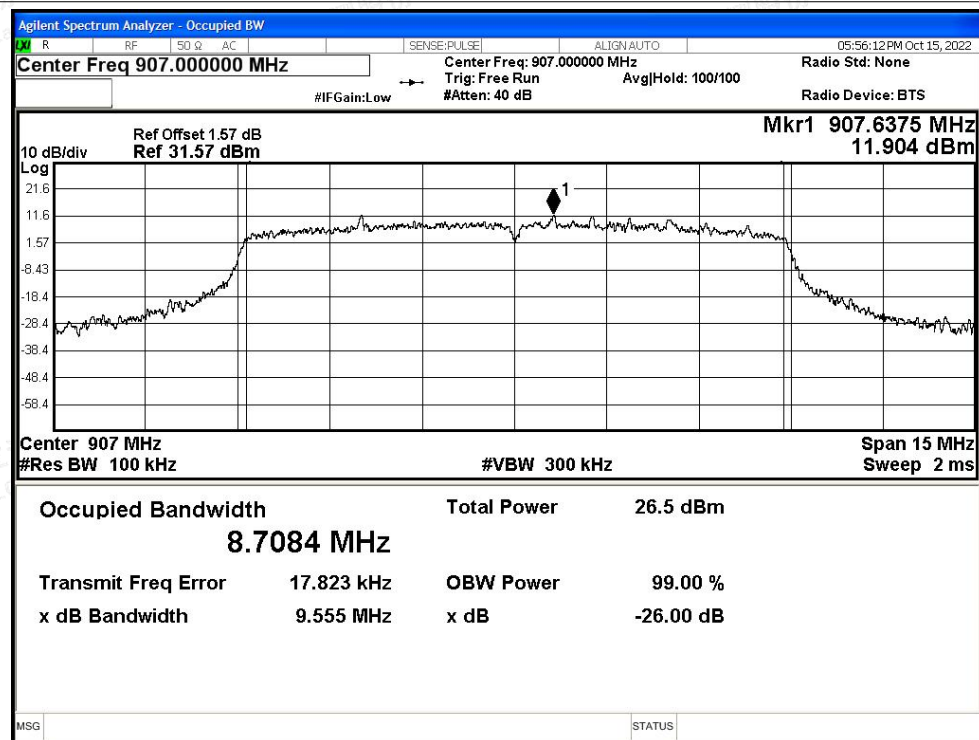
Scan code to check authenticity



OBW NVNT g 923MHz Ant0



OBW NVNT n 907MHz Ant0



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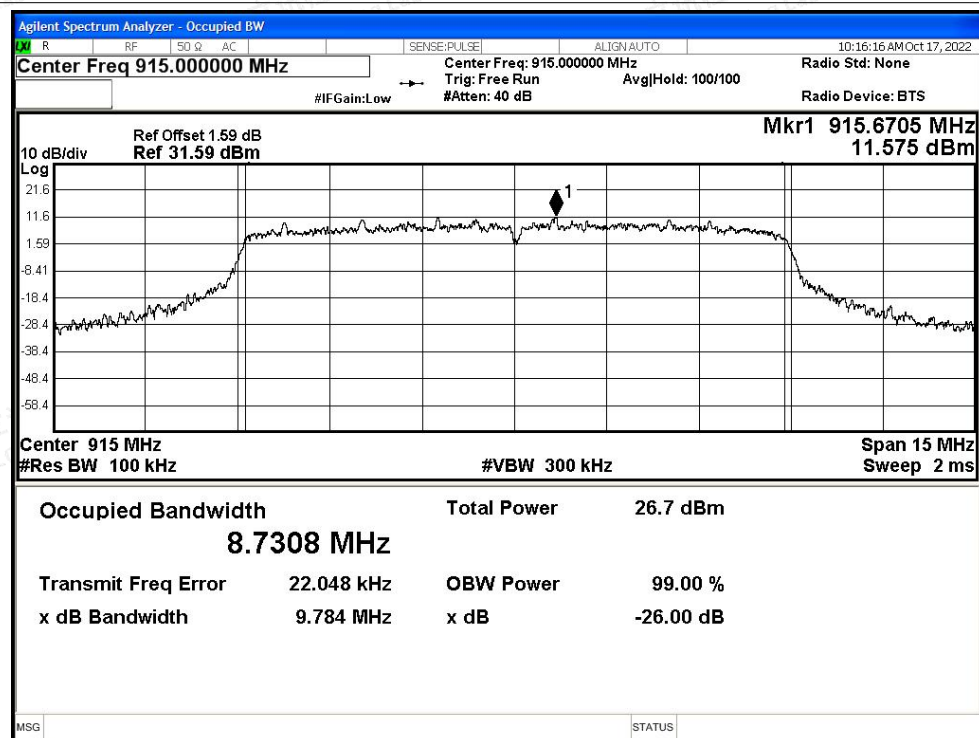
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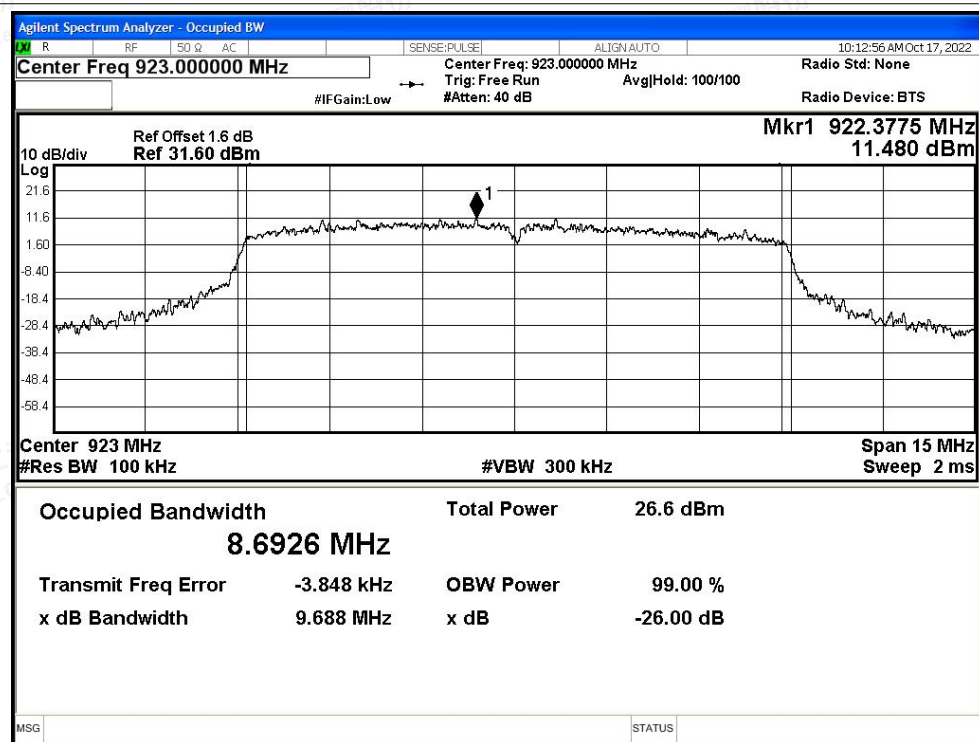
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OBW NVNT n 915MHz Ant0



OBW NVNT n 923MHz Ant0





Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	g	907	Ant1	8.683
NVNT	g	915	Ant1	8.712
NVNT	g	923	Ant1	8.702
NVNT	n	907	Ant1	8.73
NVNT	n	915	Ant1	8.711
NVNT	n	923	Ant1	8.694

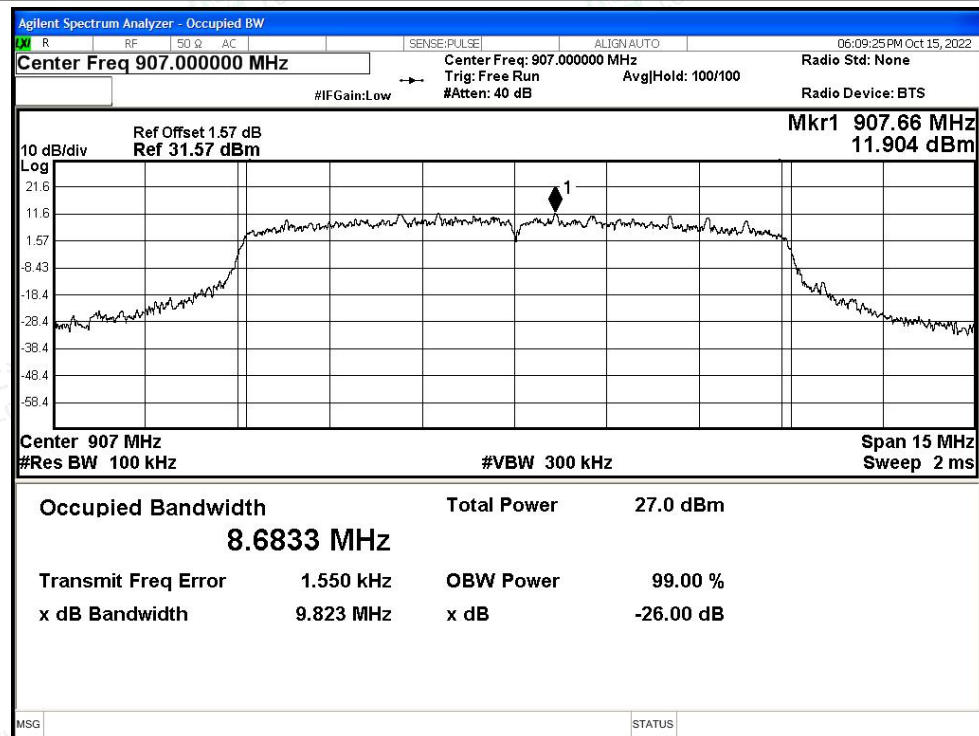


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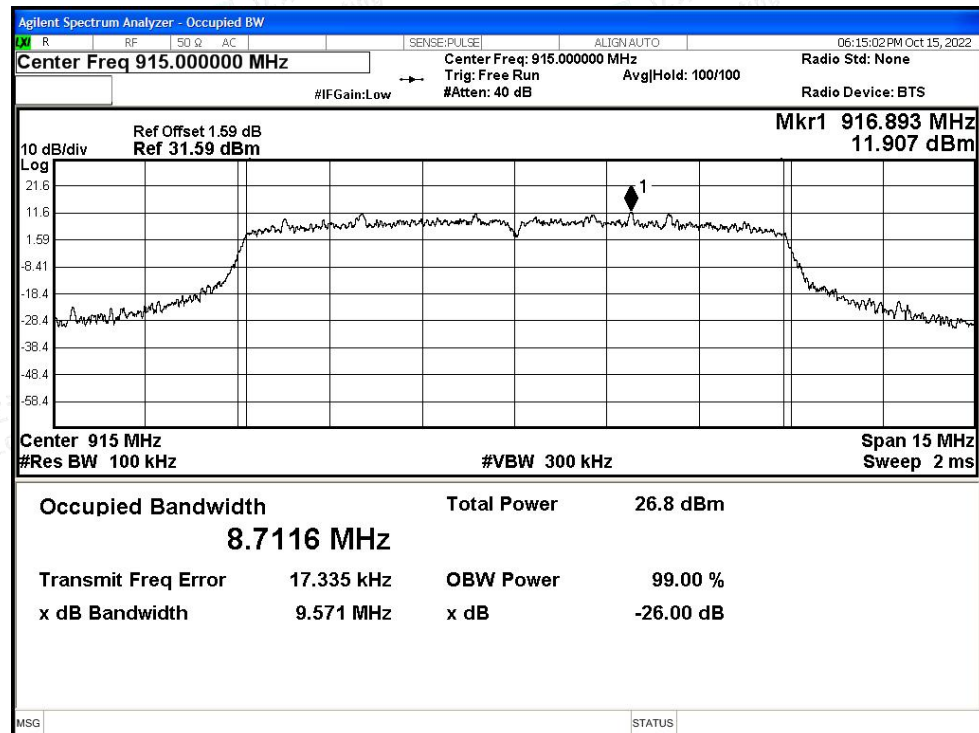


Test Graphs

OBW NVNT g 907MHz Ant1



OBW NVNT g 915MHz Ant1



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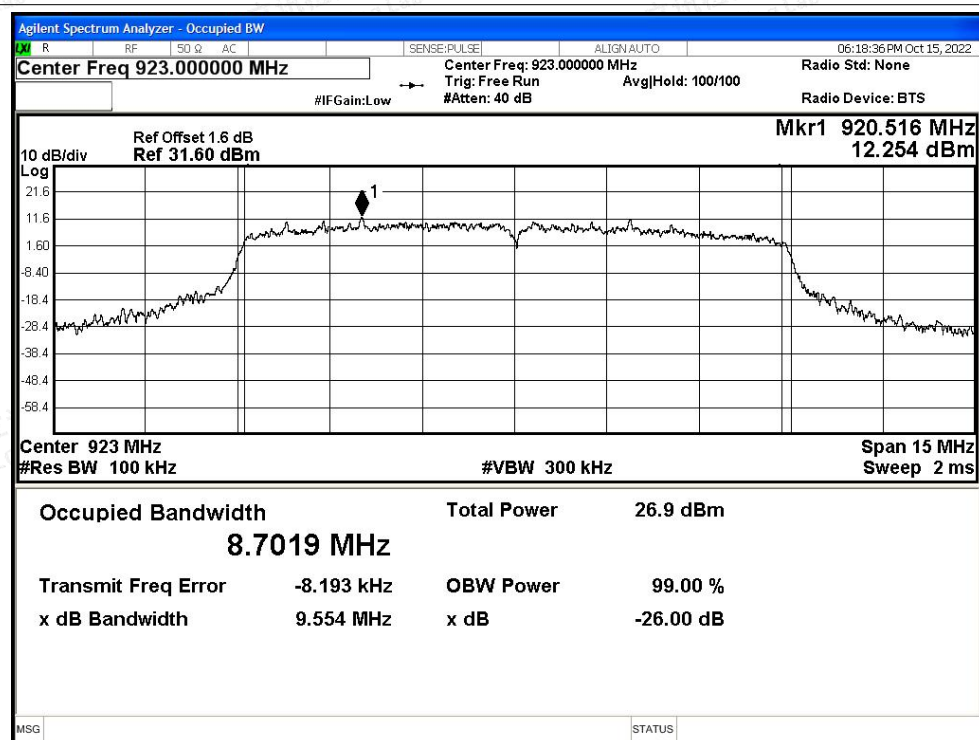
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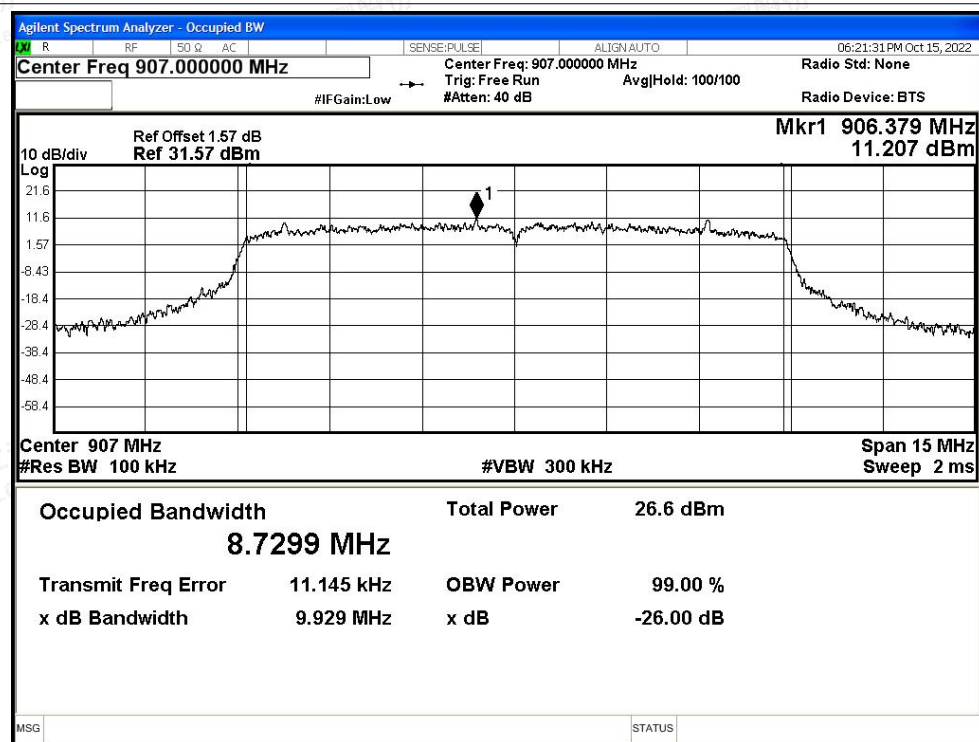
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OBW NVNT g 923MHz Ant1

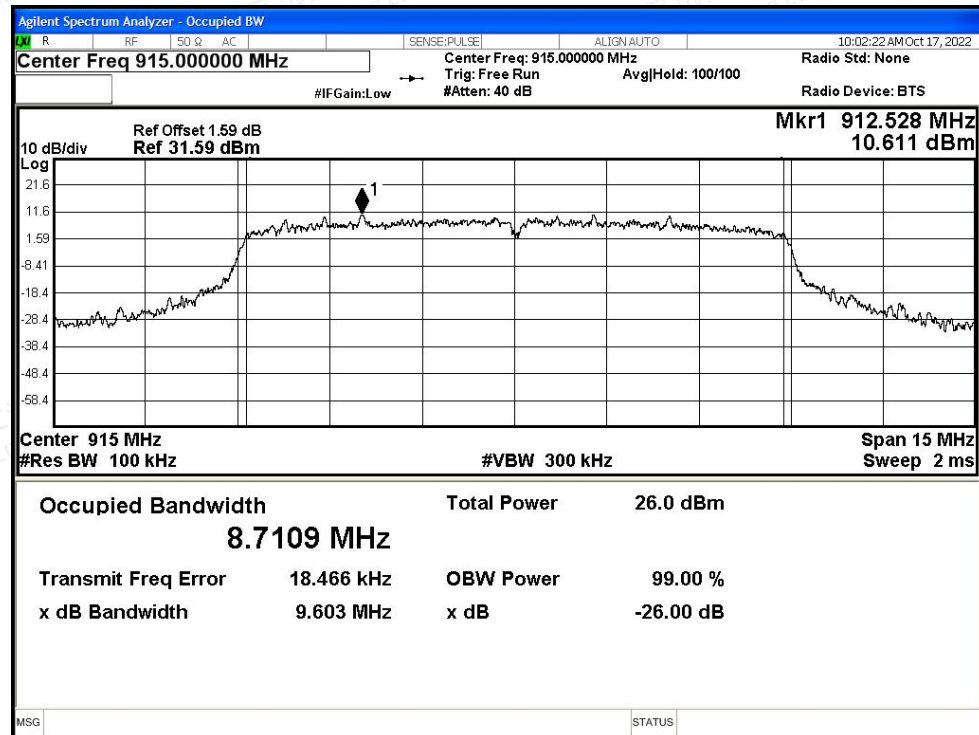


OBW NVNT n 907MHz Ant1

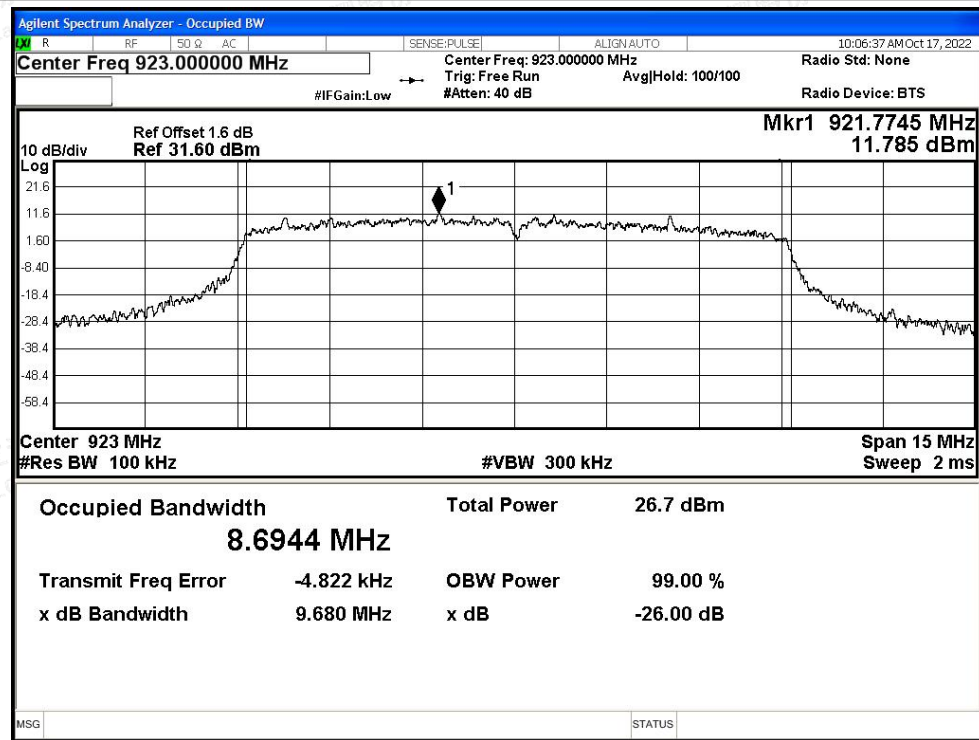




OBW NVNT n 915MHz Ant1



OBW NVNT n 923MHz Ant1





A.3 Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	g	907	Ant0	26.49	≤30	Pass
NVNT	g	915	Ant0	26.20	≤30	Pass
NVNT	g	923	Ant0	26.03	≤30	Pass
NVNT	n	907	Ant0	26.12	≤30	Pass
NVNT	n	915	Ant0	26.09	≤30	Pass
NVNT	n	923	Ant0	25.99	≤30	Pass

EIRP

Condition	Mode	Frequency (MHz)	Antenna	Maximum Peak Output Power [dBm]	Antenna Gain	Report EIRP Power(dBm)	Limit (dBm)	Verdict
NVNT	g	907	Ant0	26.49	2.0	28.49	≤36	Pass
NVNT	g	915	Ant0	26.20	2.0	28.2	≤36	Pass
NVNT	g	923	Ant0	26.03	2.0	28.03	≤36	Pass
NVNT	n	907	Ant0	26.12	2.0	28.12	≤36	Pass
NVNT	n	915	Ant0	26.09	2.0	28.09	≤36	Pass
NVNT	n	923	Ant0	25.99	2.0	27.99	≤36	Pass

Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	g	907	Ant1	26.37	≤30	Pass
NVNT	g	915	Ant1	26.14	≤30	Pass
NVNT	g	923	Ant1	26.49	≤30	Pass
NVNT	n	907	Ant1	26.19	≤30	Pass
NVNT	n	915	Ant1	26.14	≤30	Pass
NVNT	n	923	Ant1	26.39	≤30	Pass

EIRP

Condition	Mode	Frequency (MHz)	Antenna	Maximum Peak Output Power [dBm]	Antenna Gain	Report EIRP Power(dBm)	Limit (dBm)	Verdict
NVNT	g	907	Ant1	26.37	2.0	28.37	≤36	Pass
NVNT	g	915	Ant1	26.14	2.0	28.14	≤36	Pass
NVNT	g	923	Ant1	26.49	2.0	28.49	≤36	Pass
NVNT	n	907	Ant1	26.19	2.0	28.19	≤36	Pass
NVNT	n	915	Ant1	26.14	2.0	28.14	≤36	Pass
NVNT	n	923	Ant1	26.39	2.0	28.39	≤36	Pass





MIMO

Condition	Mode	Frequency (MHz)	Total Power (dBm)			Limit (dBm)	Verdict
			Ant0	Ant1	Ant0+Ant1		
NVNT	g	907	26.49	26.37	29.44	≤30	Pass
NVNT	g	915	26.20	26.14	29.18	≤30	Pass
NVNT	g	923	26.03	26.49	29.28	≤30	Pass
NVNT	n	907	26.12	26.19	29.17	≤30	Pass
NVNT	n	915	26.09	26.14	29.13	≤30	Pass
NVNT	n	923	25.99	26.39	29.20	≤30	Pass

MIMO EIRP

Condition	Mode	Frequency (MHz)	Total Power (dBm)			Limit (dBm)	Verdict
			Ant0	Ant1	Ant0+Ant1		
NVNT	g	907	28.49	28.37	31.44	≤36	Pass
NVNT	g	915	28.20	28.14	31.18	≤36	Pass
NVNT	g	923	28.03	28.49	31.28	≤36	Pass
NVNT	n	907	28.12	28.19	31.17	≤36	Pass
NVNT	n	915	28.09	28.14	31.13	≤36	Pass
NVNT	n	923	27.99	28.39	31.20	≤36	Pass



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A.4 Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	g	907	Ant0	-0.77	≤ 8	Pass
NVNT	g	915	Ant0	-0.48	≤ 8	Pass
NVNT	g	923	Ant0	-1.21	≤ 8	Pass
NVNT	n	907	Ant0	-1.81	≤ 8	Pass
NVNT	n	915	Ant0	-1.77	≤ 8	Pass
NVNT	n	923	Ant0	-1.42	≤ 8	Pass

Condition	Mode	Frequency (MHz)	Antenna	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	g	907	Ant1	-1.36	≤ 8	Pass
NVNT	g	915	Ant1	-0.77	≤ 8	Pass
NVNT	g	923	Ant1	-0.91	≤ 8	Pass
NVNT	n	907	Ant1	-0.38	≤ 8	Pass
NVNT	n	915	Ant1	-1.45	≤ 8	Pass
NVNT	n	923	Ant1	-0.94	≤ 8	Pass

MIMO

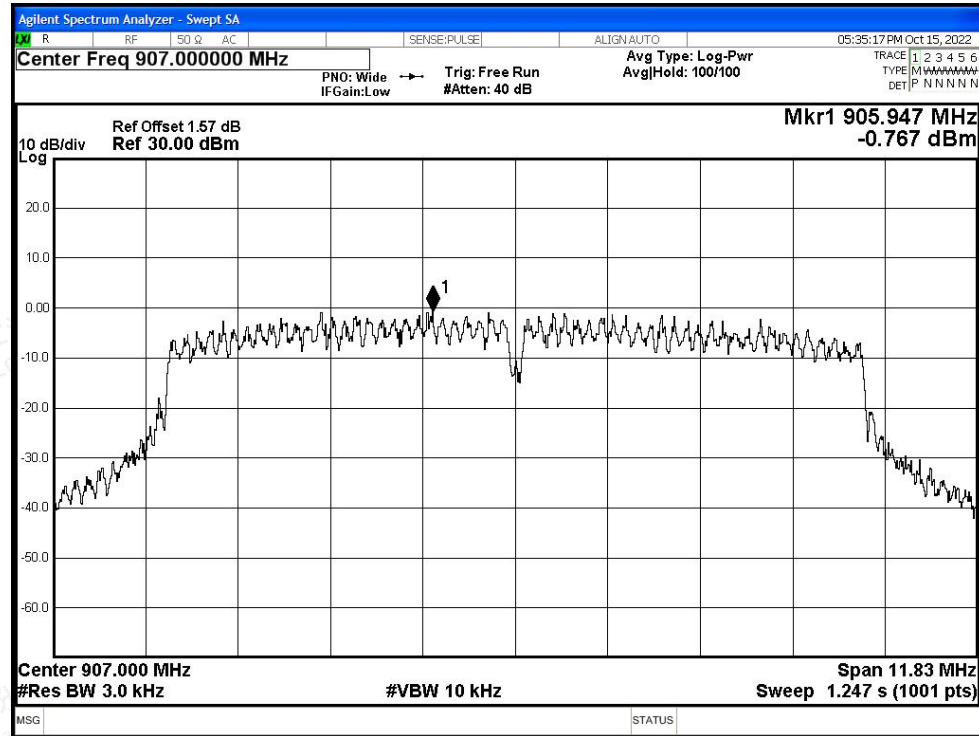
Condition	Mode	Frequency (MHz)	Total PSD(dBm/3kHz)			Limit (dBm/3kHz)	Verdict
			Ant0	Ant1	Ant0+Ant1		
NVNT	g	907	-0.77	-1.36	1.96	≤ 8	Pass
NVNT	g	915	-0.48	-0.77	2.39	≤ 8	Pass
NVNT	g	923	-1.21	-0.91	1.95	≤ 8	Pass
NVNT	n	907	-1.81	-0.38	1.97	≤ 8	Pass
NVNT	n	915	-1.77	-1.45	1.40	≤ 8	Pass
NVNT	n	923	-1.42	-0.94	1.84	≤ 8	Pass



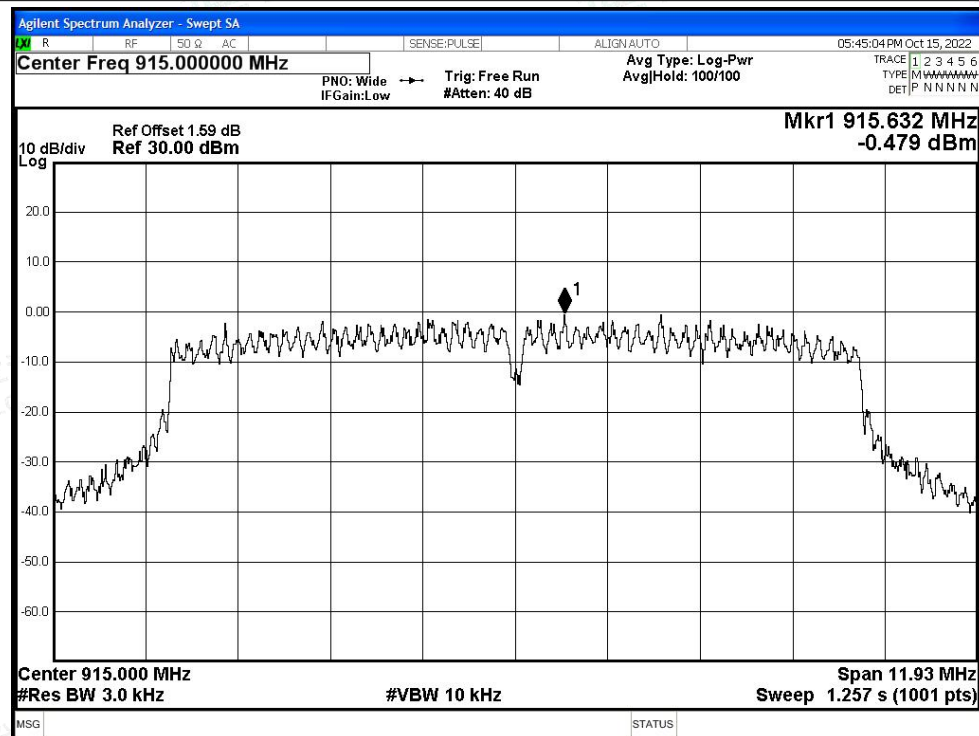


Test Graphs

PSD NVNT g 907MHz Ant0

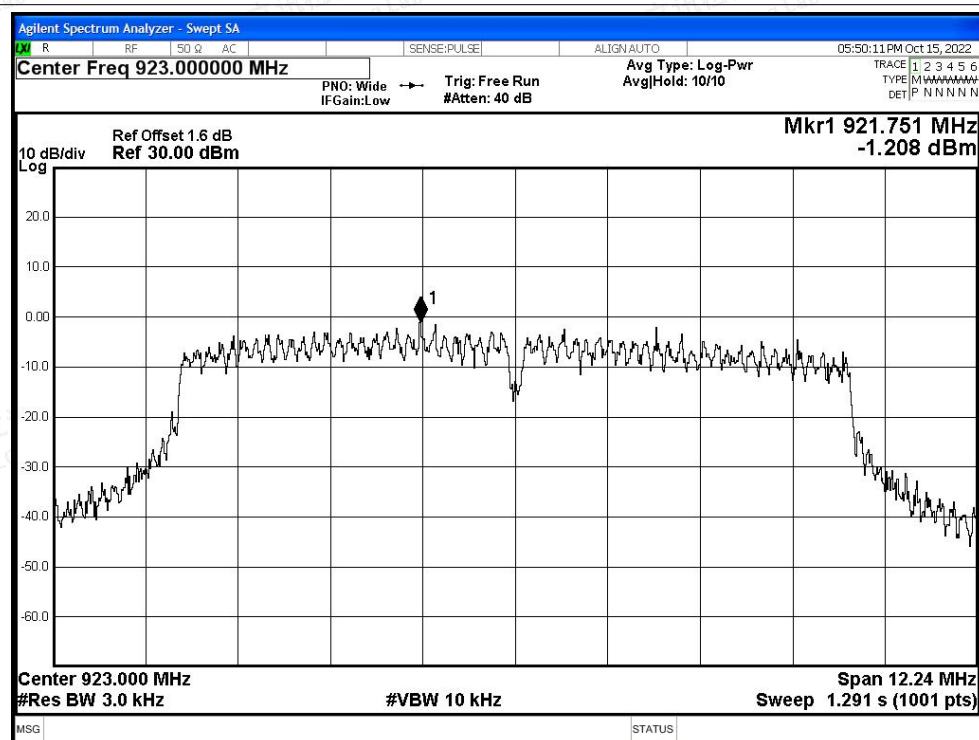


PSD NVNT g 915MHz Ant0

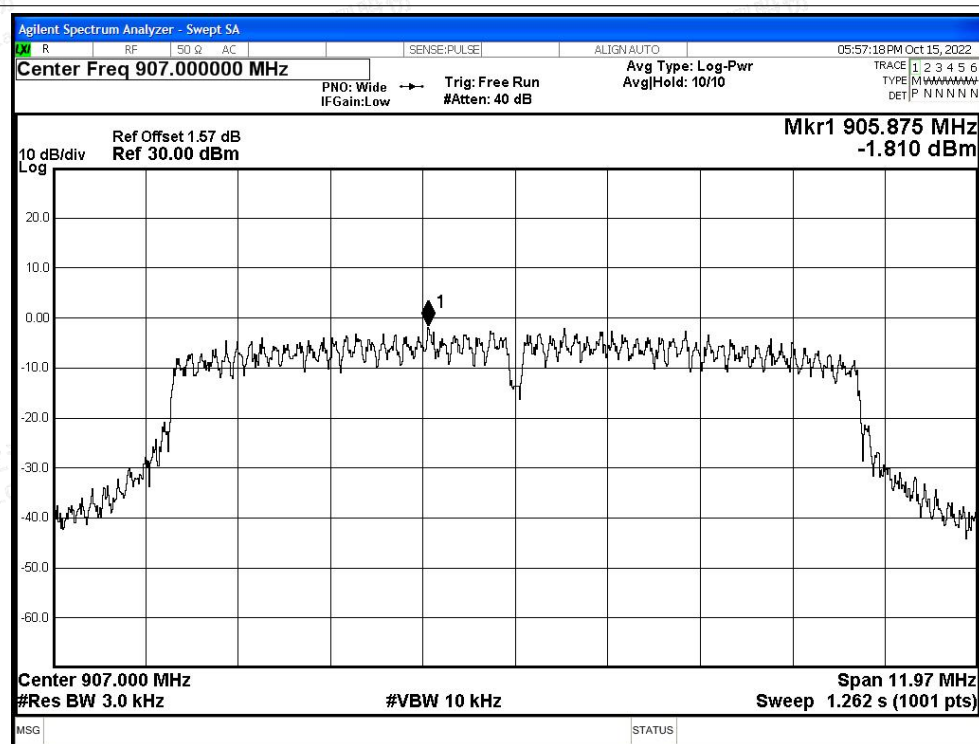


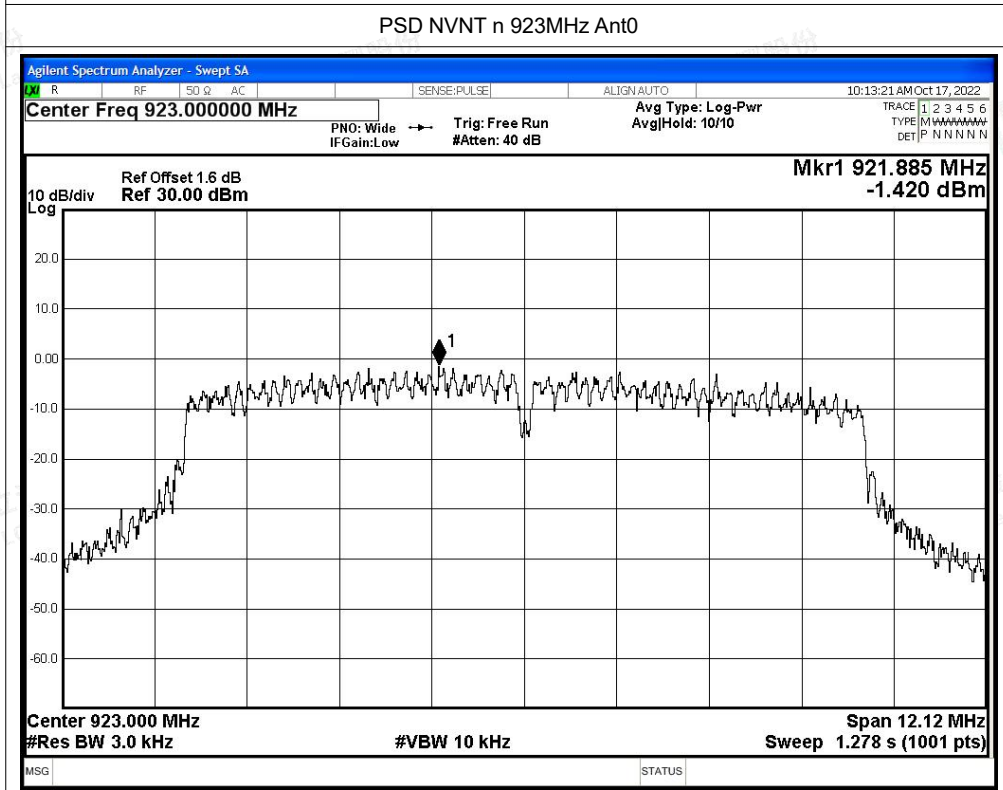
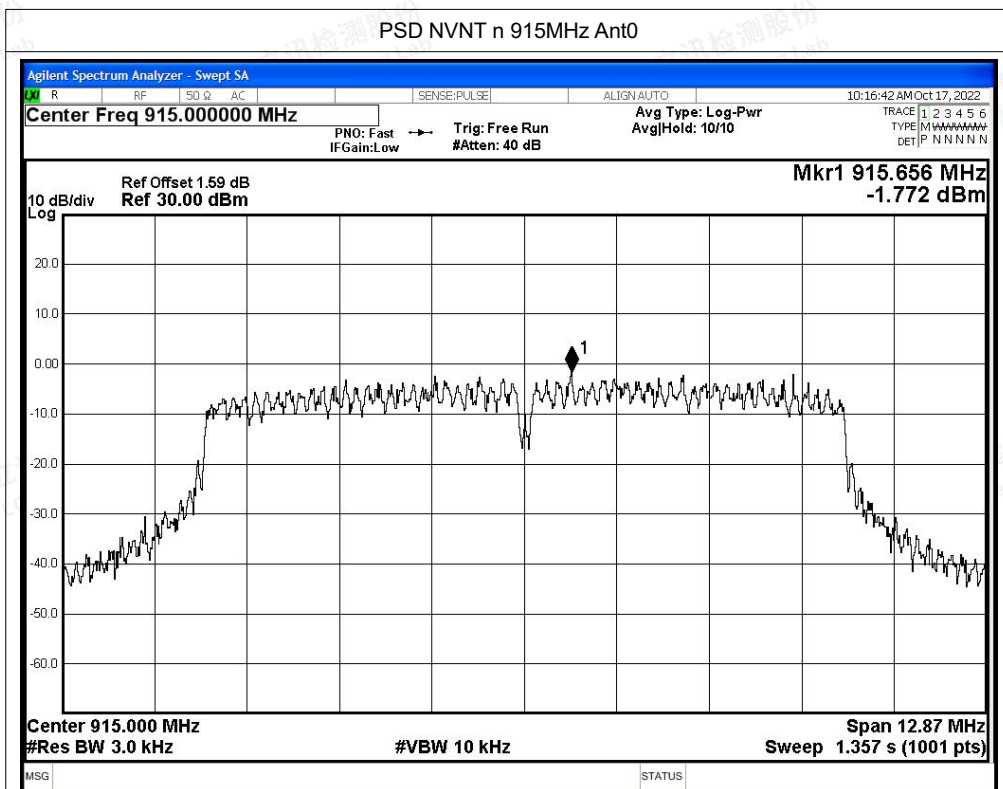


PSD NVNT g 923MHz Ant0



PSD NVNT n 907MHz Ant0

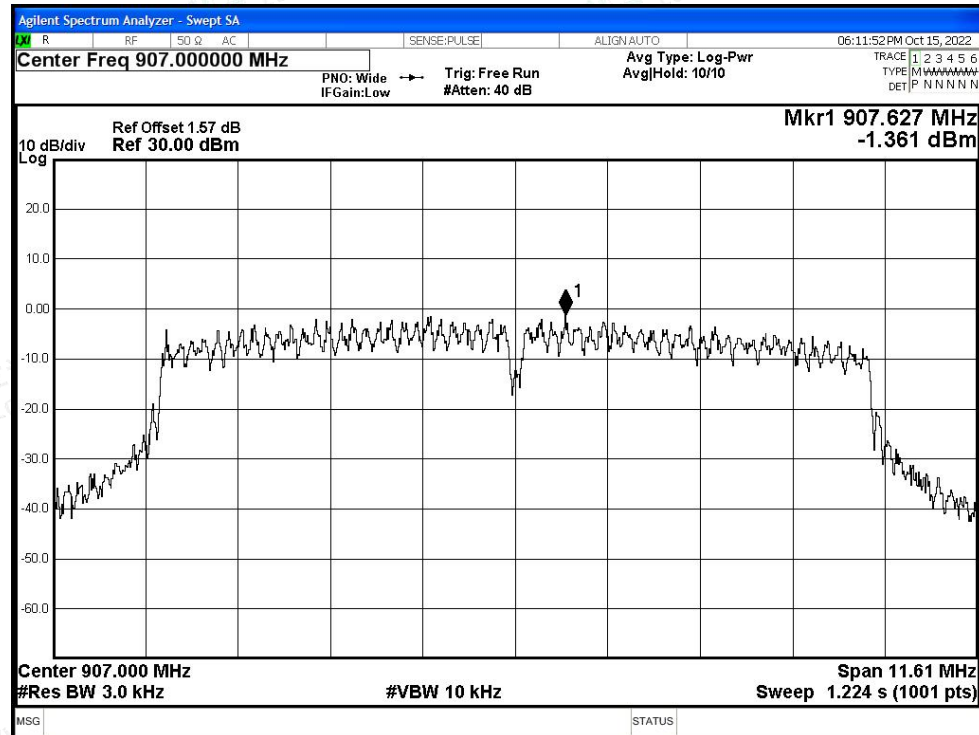




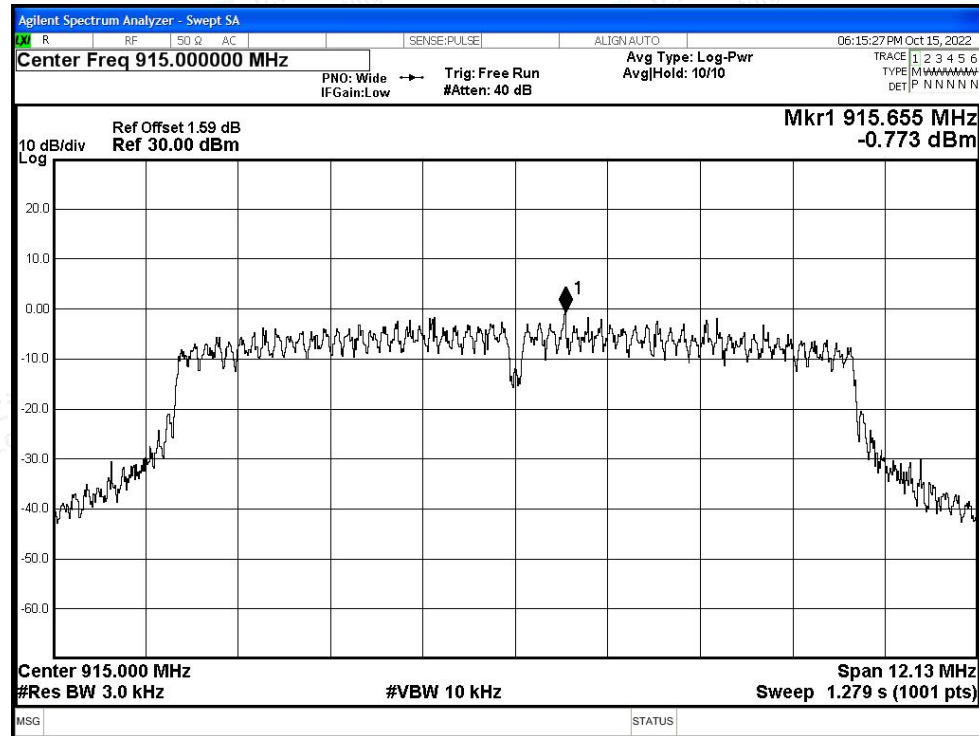


Test Graphs

PSD NVNT g 907MHz Ant1

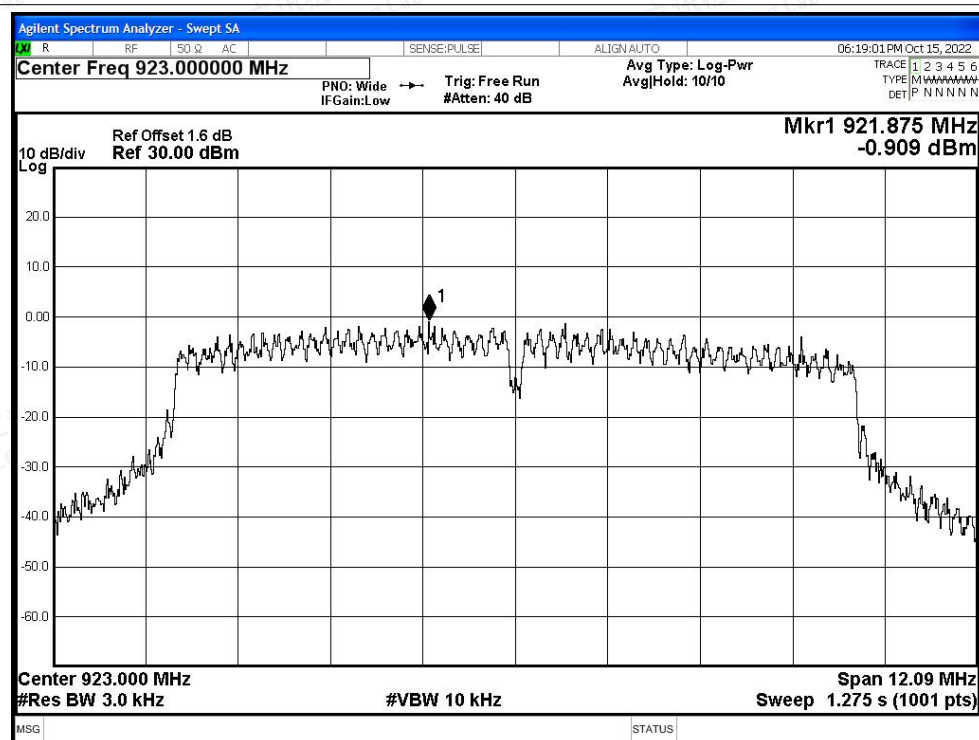


PSD NVNT g 915MHz Ant1

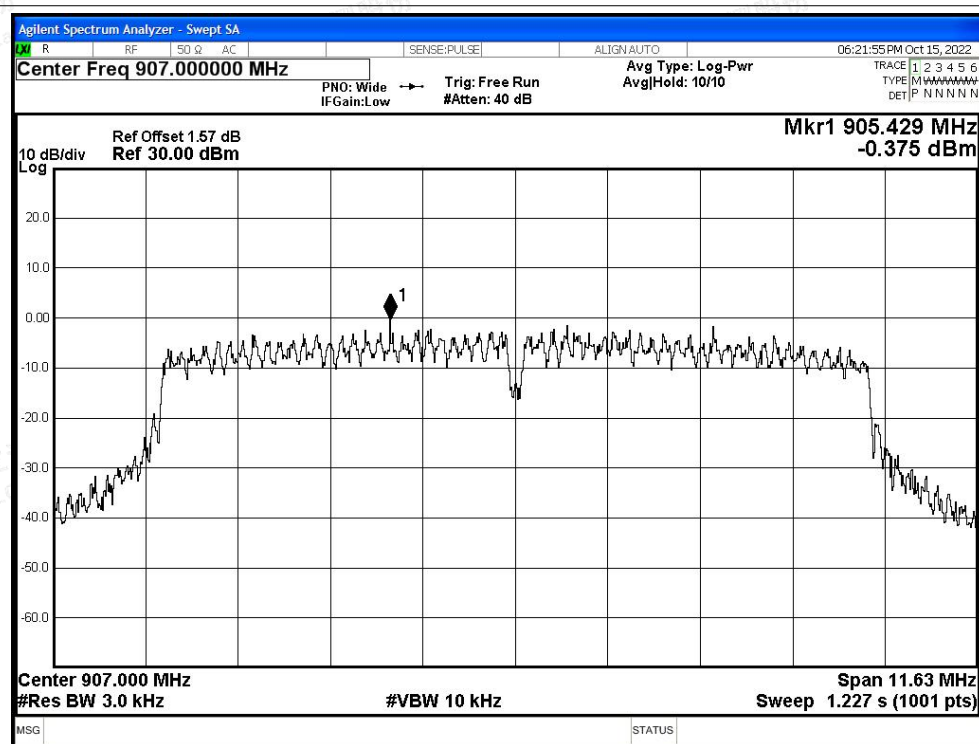


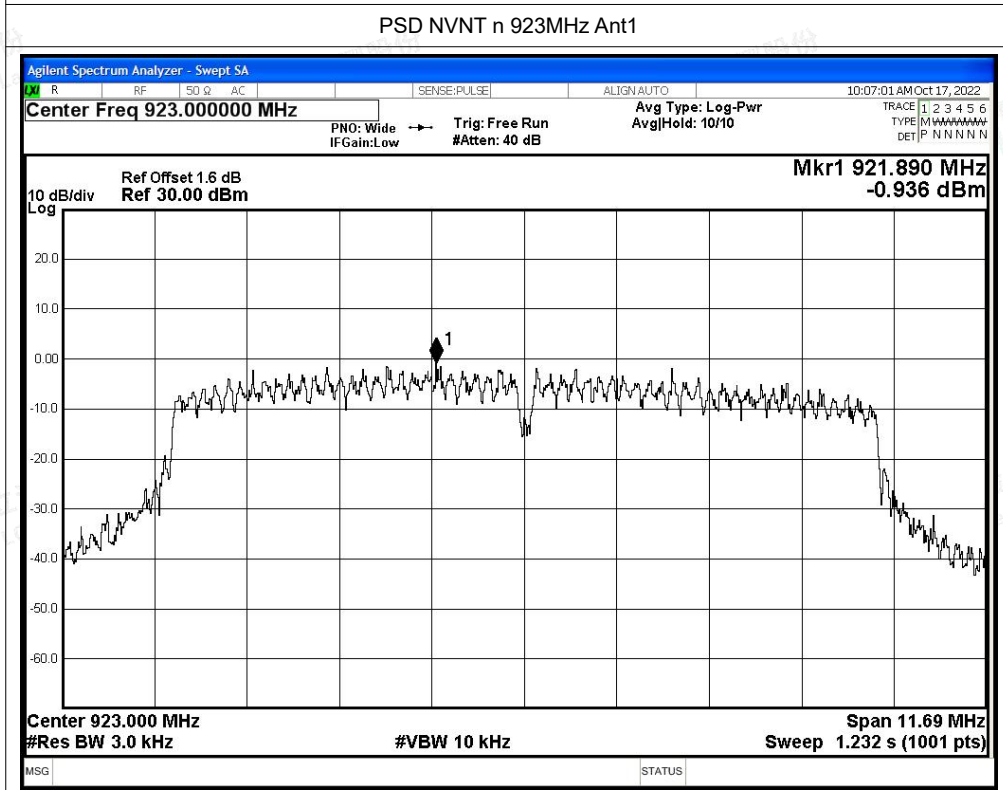
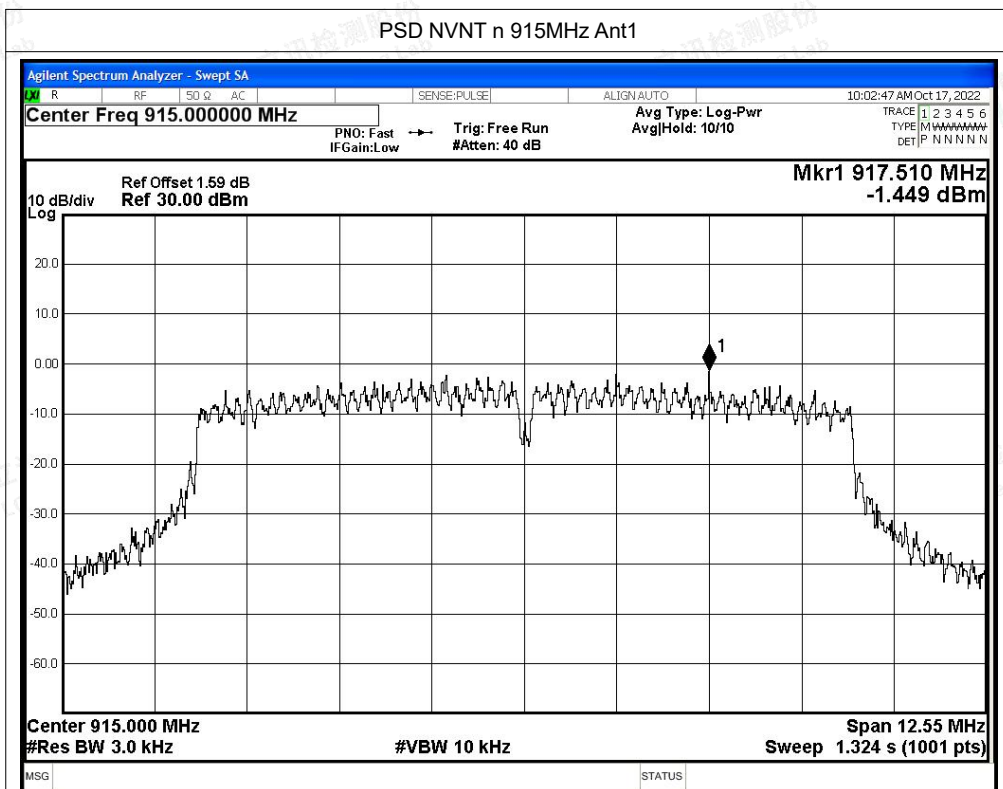


PSD NVNT g 923MHz Ant1



PSD NVNT n 907MHz Ant1





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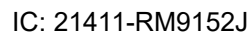


A.5 Band Edge

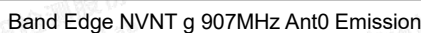
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	g	907	Ant0	-24.777	≤ -20	PASS
NVNT	g	923	Ant0	-23.35	≤ -20	PASS
NVNT	n	907	Ant0	-24.558	≤ -20	PASS
NVNT	n	923	Ant0	-25.575	≤ -20	PASS



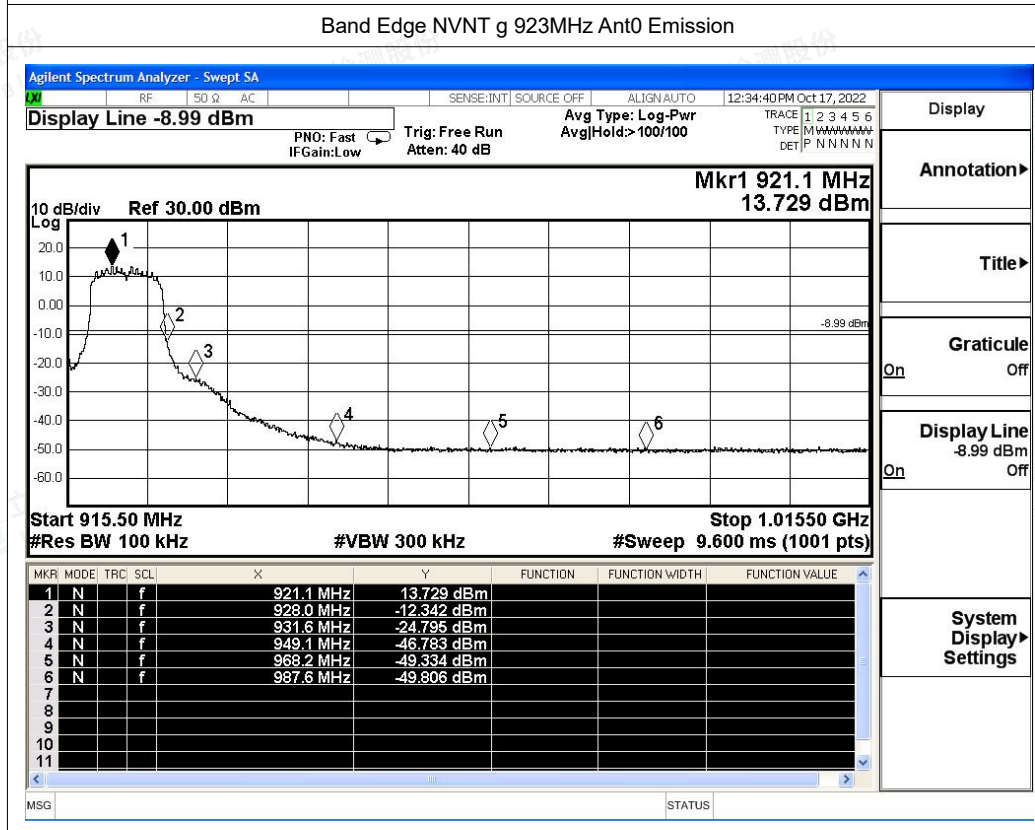
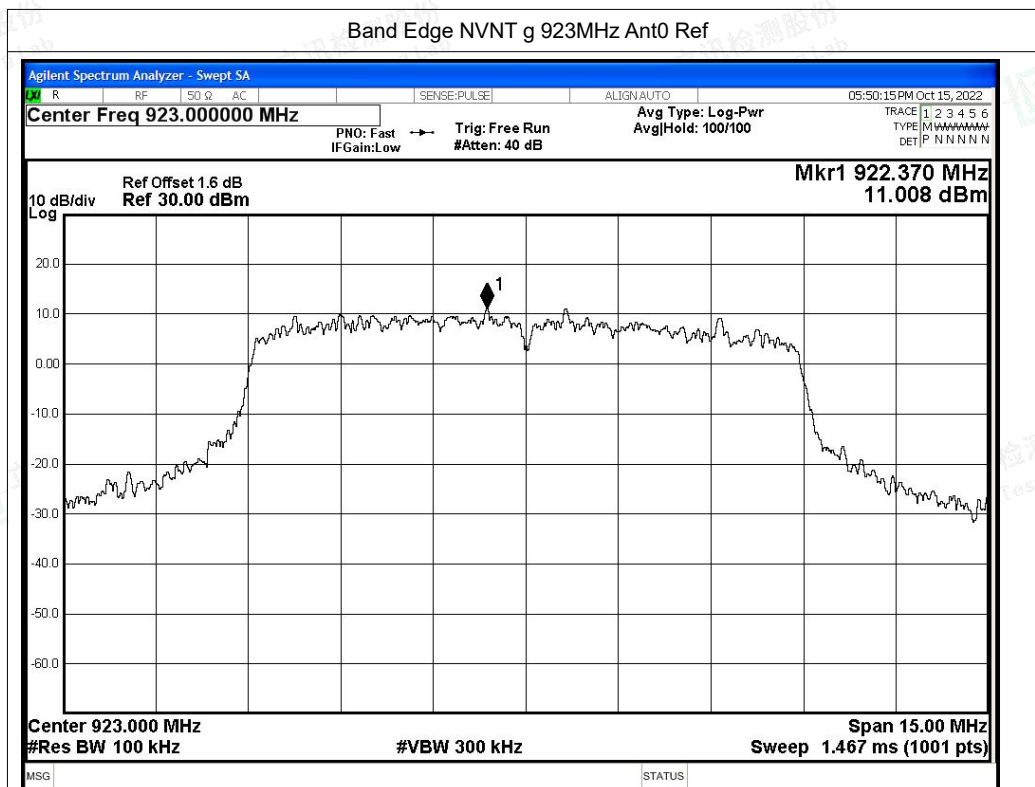
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Band Edge NVNT q 907MHz Ant0 Ref



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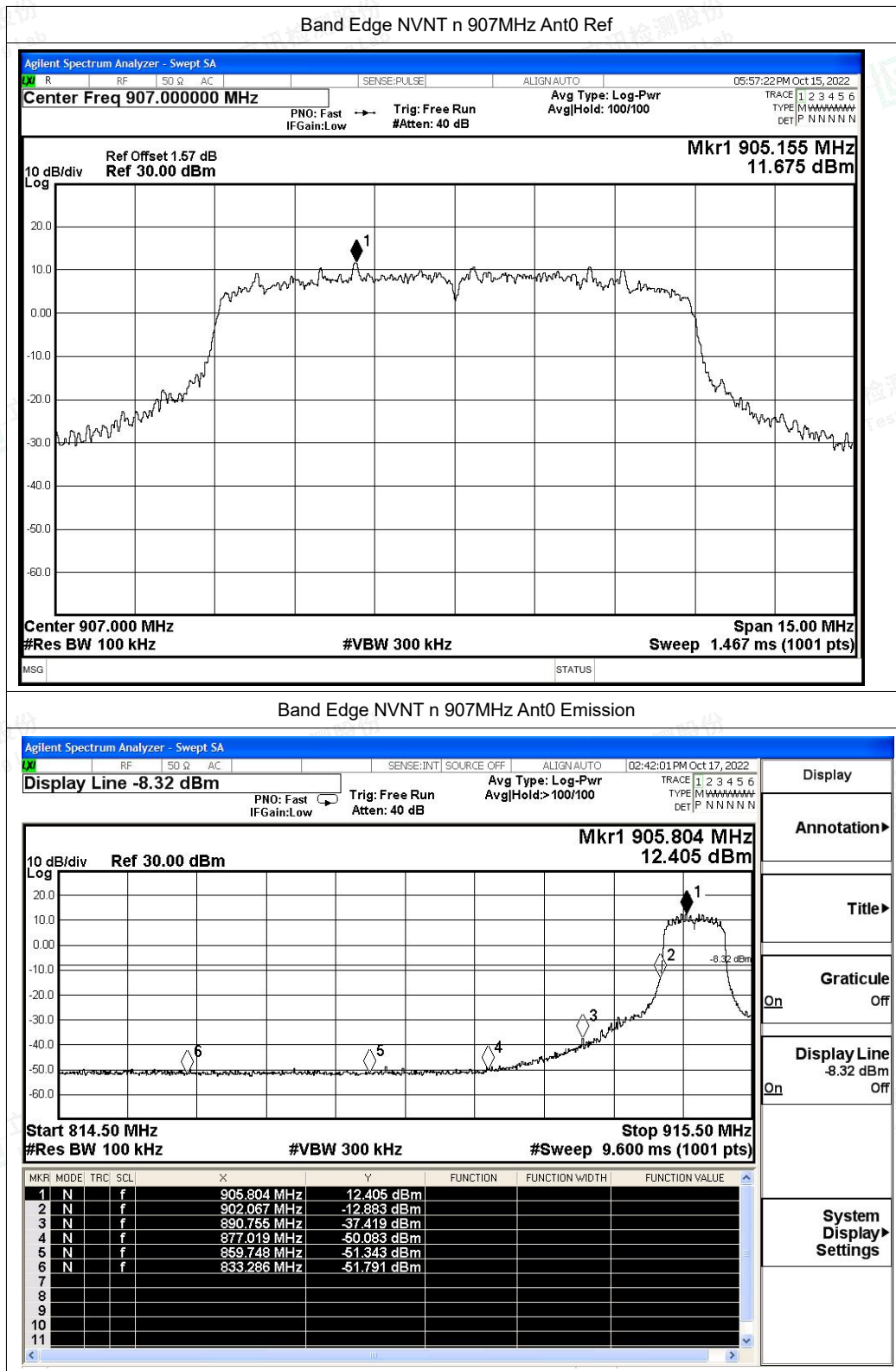


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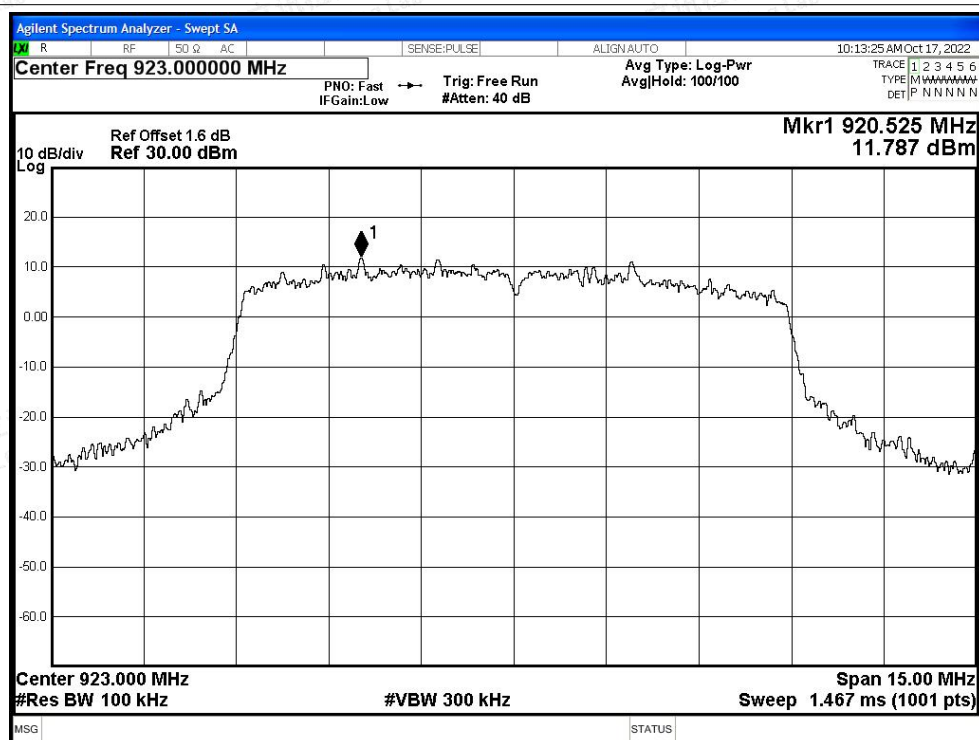
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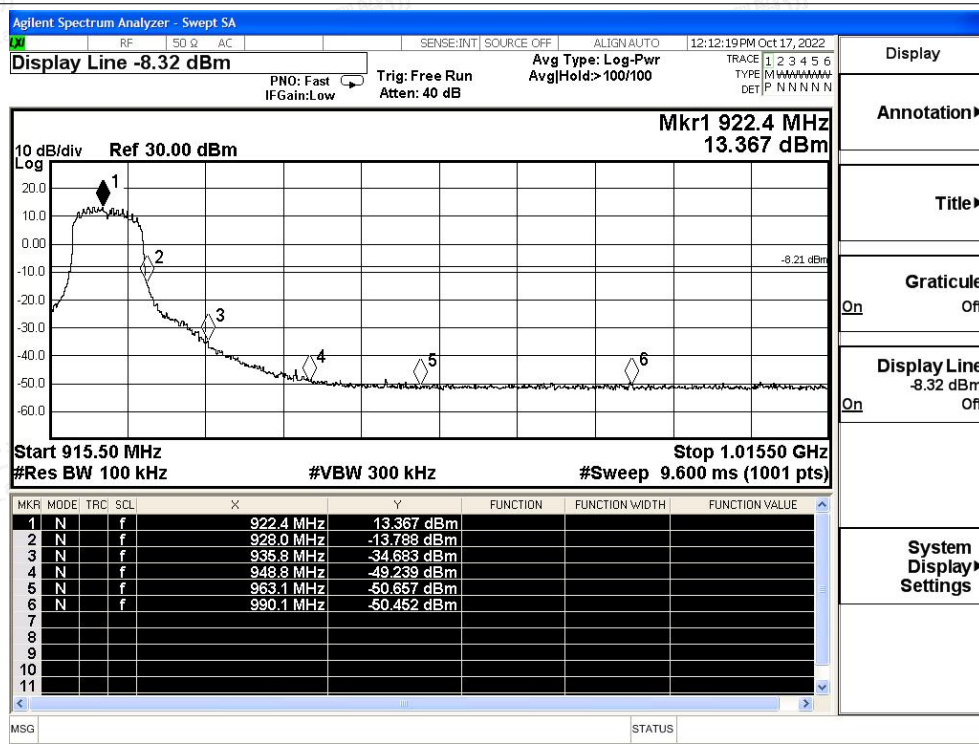




Band Edge NVNT n 923MHz Ant0 Ref



Band Edge NVNT n 923MHz Ant0 Emission



Shenzhen LCS Compliance Testing Laboratory Ltd.

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Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	g	907	Ant1	-24.456	≤ -20	PASS
NVNT	g	923	Ant1	-26.088	≤ -20	PASS
NVNT	n	907	Ant1	-24.862	≤ -20	PASS
NVNT	n	923	Ant1	-24.791	≤ -20	PASS

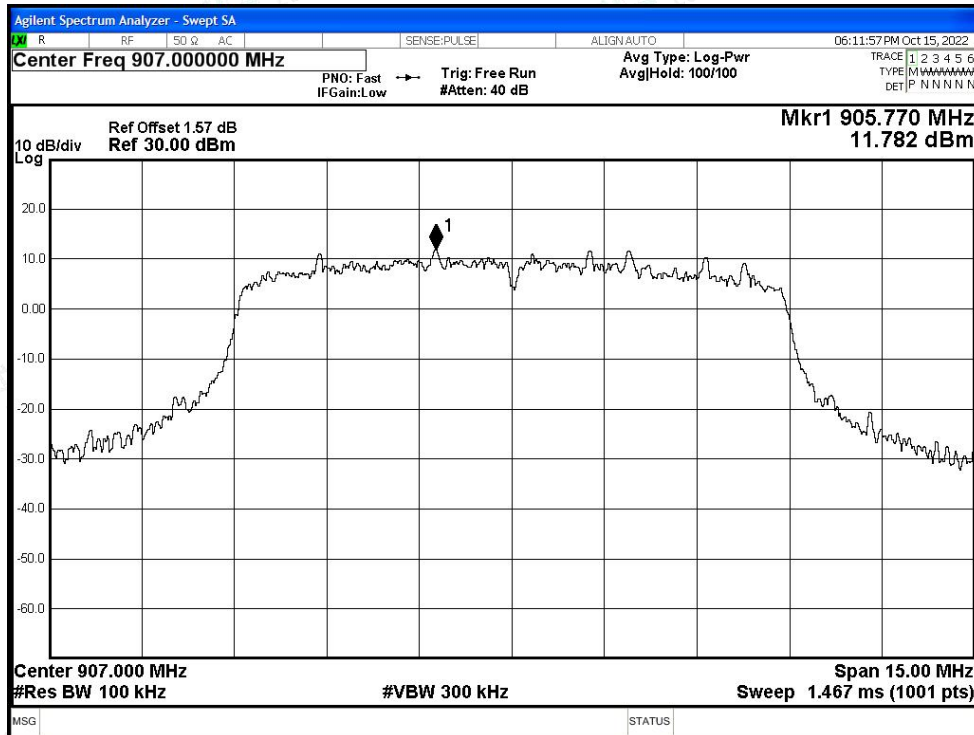


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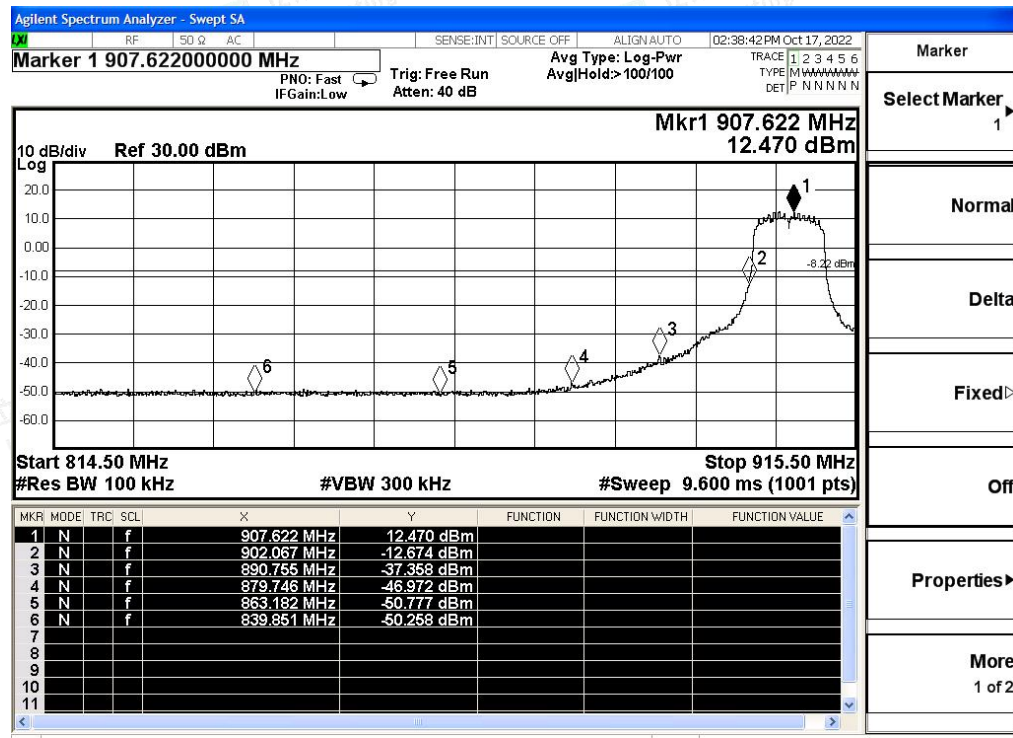


Test Graphs

Band Edge NVNT g 907MHz Ant1 Ref



Band Edge NVNT g 907MHz Ant1 Emission



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