LICENSE TO COVER
Translator Construction Permit 0000202837
K246DC Kimberly ID
FACID 146174

TECHNICAL STATEMENTS

TRANSMITTER POWER OUTPUT

TRANSMITTER POWER OUTPUT = 438 WATTS
COMBINER = -1.15 dB
COAX = -1.16 dB
TWO-BAY BEXT TFC-2K = -0.0 dB
EFFECTIVE RADIATED POWER = 250 WATTS.

(Detailed TPO Sheet Attached)

SPECIAL OPERATING CONDITIONS:

- KXCD has filed license application LMS- 0000204878 which allows this translator to begin operation and file this license application.

- This application is being filed prior to commencement of program operations.

- The facility is combined with that of translator K234CT. Attached is the proof of performance measurements from the installing engineer certifying compliance with the spurious emissions requirements of 47 C.F.R. Sections 73.317(b) through 73.317(d).

ERP / TPO Calculation Sheet

K246DC - Kimberly, ID

Entered by: D. Pamplona	Date: 12/10/2022	Calculations: Final		Watts
MHz: 97.1	Mounting Offset:			250 ERP
	Qty/Lgth (or disc)	Loss @foot or item	total loss or gain	
Select Antenna from list --->	Select Antenna	0.0000	0.0000	
(Enter Non Listed Antenna)--->	*TFC2K-2*	*0.0000*	0.0000	
FSJ-50B Ant jumper	0	0.01022	0.0000	
LDF4-50A Ant. Jumper	0	0.00651	0.0000	
LDF4-50A Main Line	0	0.00651	0.0000	
LDF5-50A (7/8" foam)	290	0.00358	1.0382	
(Model/Desc of Non Listed Coax)	*(Number of Feet)*	*(Loss per Foot)*	0.0000	
Connectors	6	0.0160	0.0960	
Polyphaser Loss	0	0.1000	0.0000	
FSJ-50B Tx jumper	6	0.01022	0.0613	
other FSJ-50B jumper(s)	6	0.01022	0.0613	
Other		0	0.0000	
Bandpass Filter			0.0000	
Combiner	Shively 2930-2/4-06	1.15	1.1500	
Isolator		0	0.0000	

Special Notes:

TPO 435 Watts

Occupied Bandwidth Measurements
(FCC Rule 73.317)

K234CT 94.7 MHz Twin Falls, ID
K246DC 97.1 MHz Kimberly, ID

Common Antenna and Combiner System
Flat Top Butte, Jerome, ID

On December 10, 2022, RF Technical, LLC made measurements of K234CT and K246DC, to show compliance with Special Operation Conditions regarding spurious emission measurements. The measurements described here were made following the displacement of K288FL to channel 246 requiring the combining system to be moved to a different antenna on the Lee Family Broadcasting tower facility on Flat Top Butte in Jerome, ID. Both stations using this common antenna system were operating at the time of these measurements.

All measurements were made utilizing a Bird 4275 Variable Signal Sampler which was temporarily placed in line following the multi-station combining system and prior to the facility's common antenna system. The coupler exhibits a rising output level versus frequency characteristic. The amount of increase is approximately equivalent to 20 X Log of the observed frequency divided by the carrier frequency.

An Anritsu MS2721B spectrum analyzer was used for the measurements in this report.

Eagle TNF412-4 Notch Filters tuned to 94.7 MHz and 97.1 MHz were used for measurements of the FM broadcast band (88 to 108 MHz) ahead of the spectrum analyzer to prevent signal overload and subsequent erroneous intermodulation products. The amplitude versus frequency response of these filters is shown on page four.

A Microwave Filter Company 3367 FM Bandstop Filter was inserted ahead of the spectrum analyzer to observe the spectrum from 30 to 88 MHz and from 108 to 1000MHz. The amplitude versus frequency response of this filter is shown on page five.

The reference plots were observed for an approximate 10-minute period. Other measurements were observed for several minutes each. This was done to observe possible short duration signals. These plots are show on page six through twelve.

Although a number of signals were observed. Most of these signals were identified. The signals observed were from other broadcast stations near this site and are believed to be coming back down the transmission line from the common antenna. When a signal could not be identified the transmitters were turned off to show that the signal was not a product from the K234CT or K246DC transmitter.

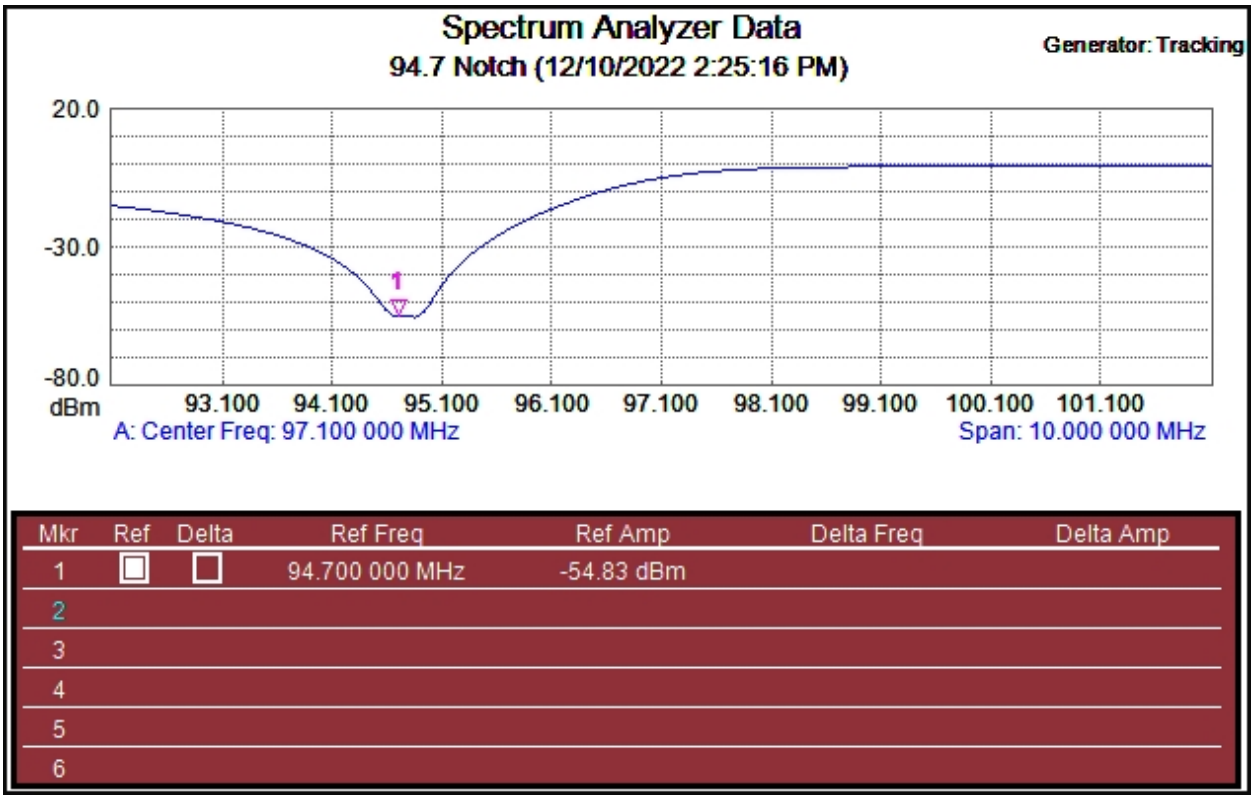
The Bird 4275 Variable Signal Sampler was adjusted to establish the absolute carrier level at 0.0dBm for the reference plot. The transmitter power output levels for both K234CT and K246DC are 435 watts. Hence all spurious emissions must be 69.5 dB below the carrier level (43 + 10 X Log of the power in watts)

No harmonic emissions, intermodulation products, or other spurious emissions from K234CT or K246DC at levels less than 69.5 dB below the fundamental carrier frequency were observed. It is believed that K234CT and K246DC are in full compliance with section 73.317 of the commission's rules.

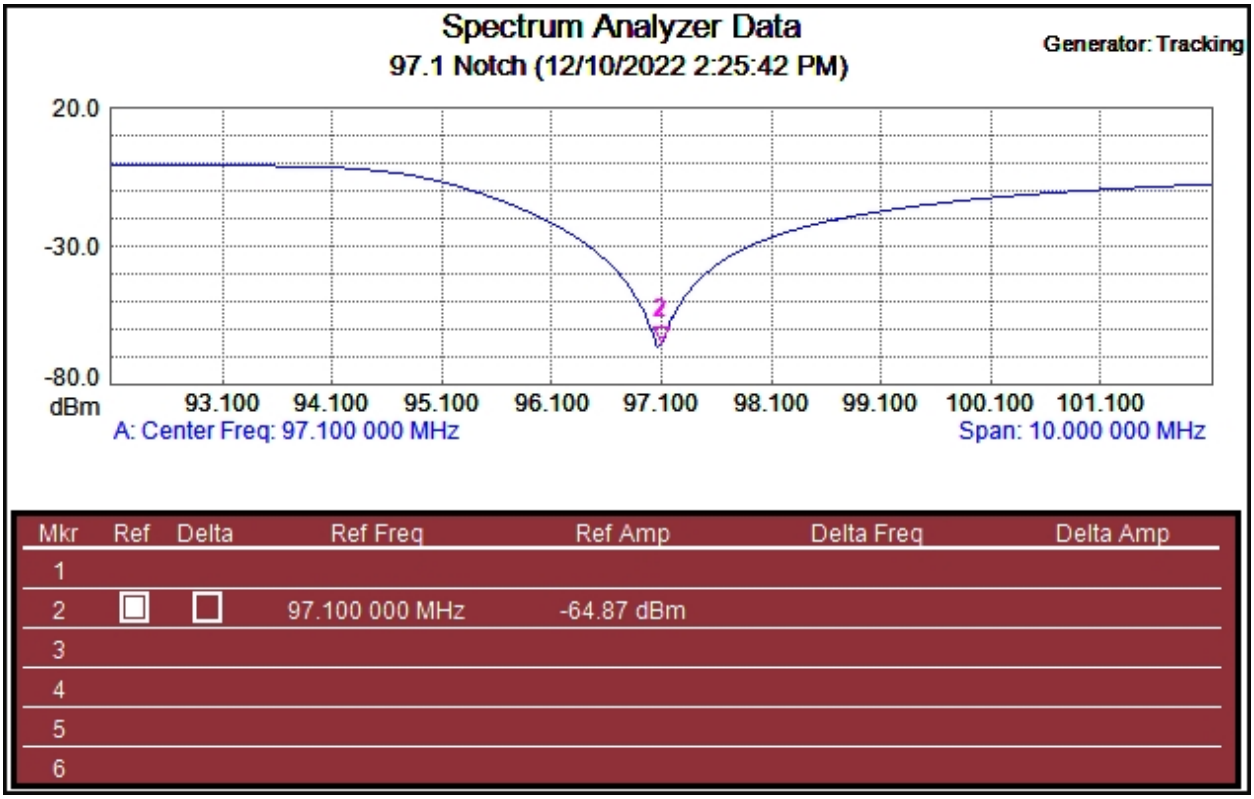
All information contained in this report was gathered by the undersigned. I certify that the preceding is true and correct to the best of my knowledge and ability.

Respectfully,

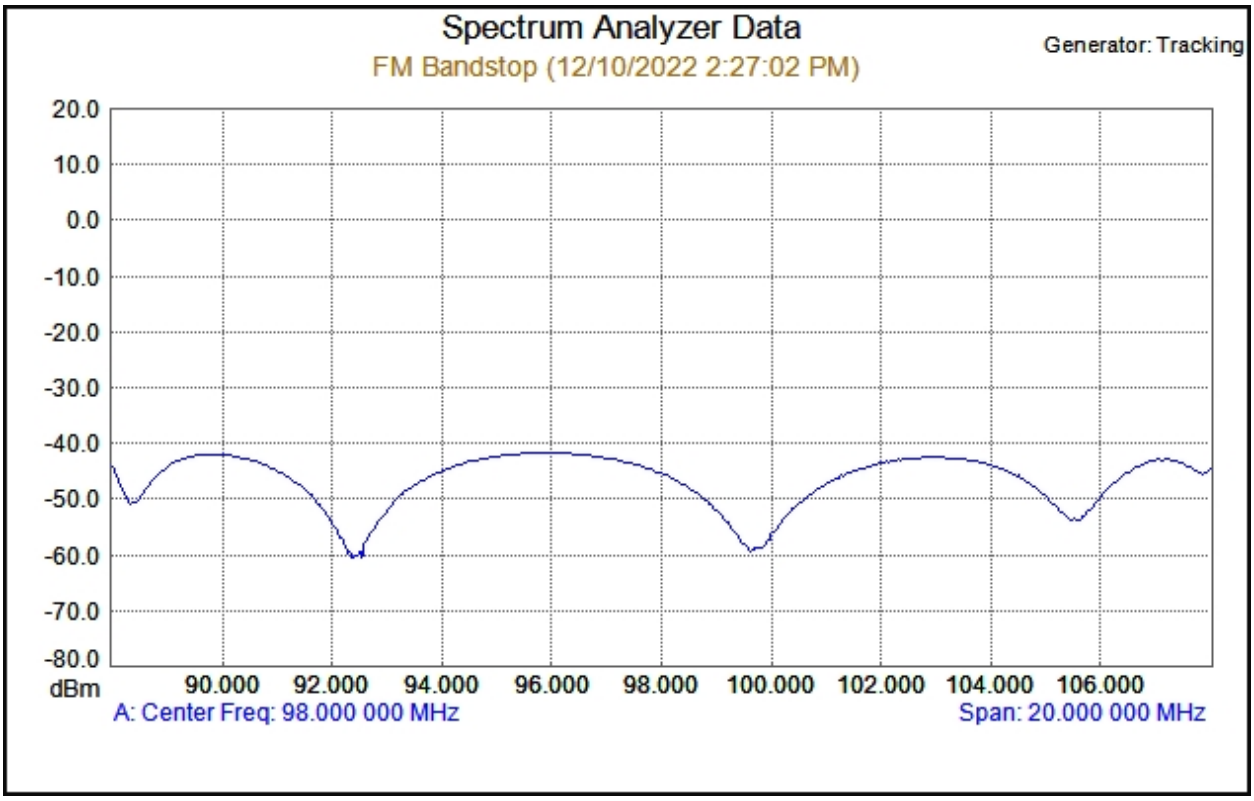
Dustin Pamplona
RF Technical, LLC
865 Chase Drive
Twin Falls, ID 83301
(208)358-0456



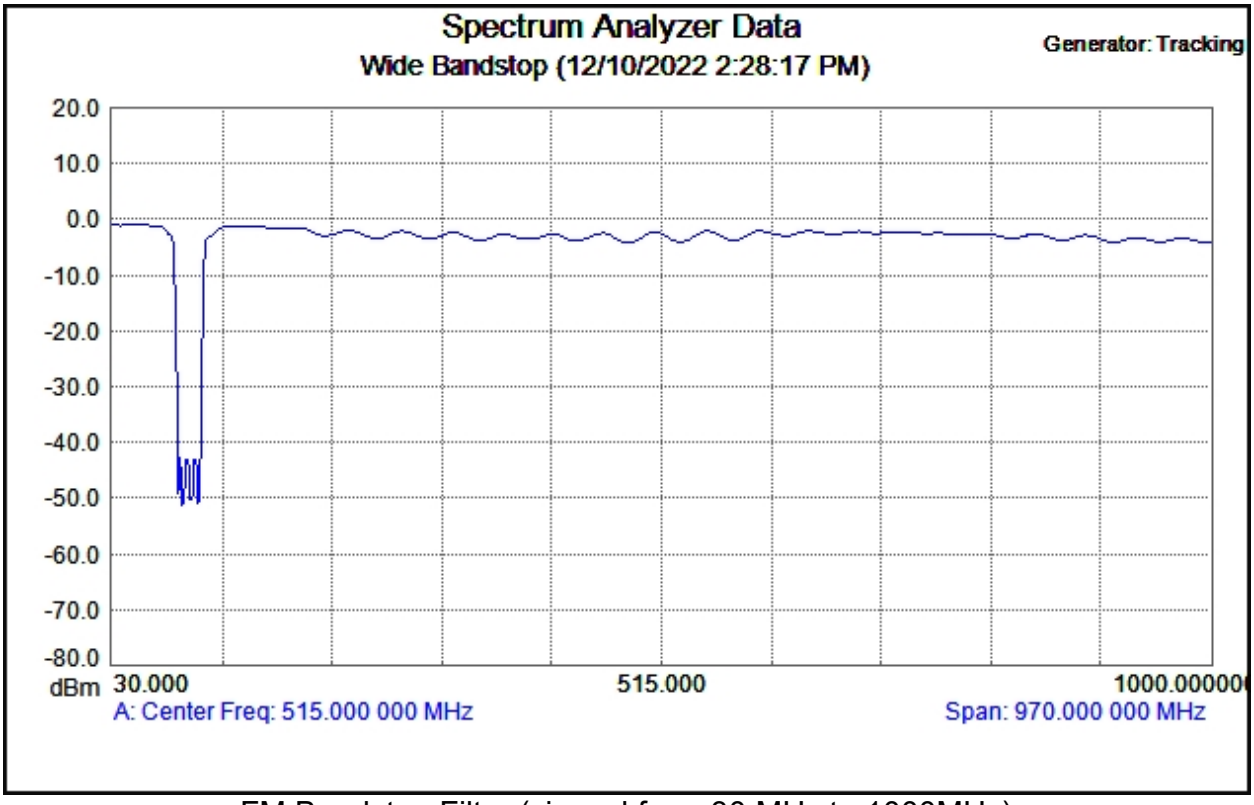
94.7 MHz Notch Filter



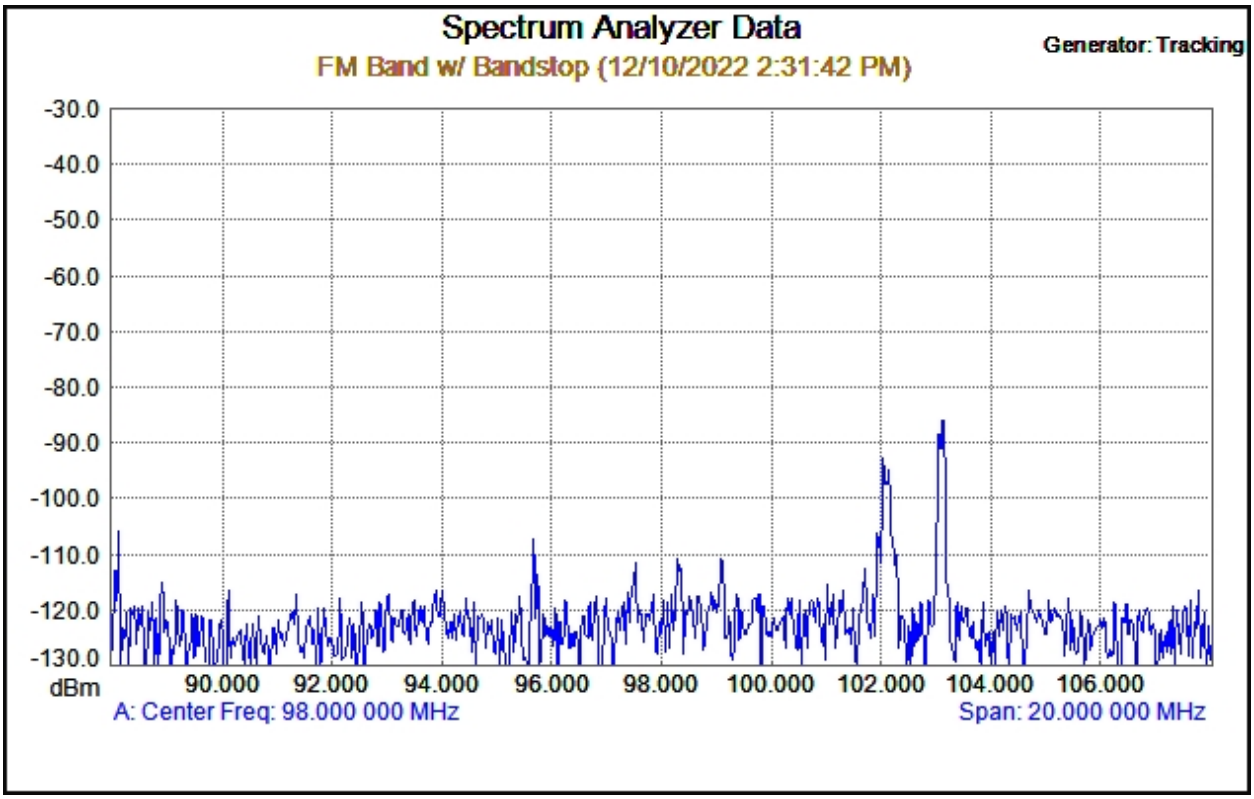
97.1 MHz Notch Filter



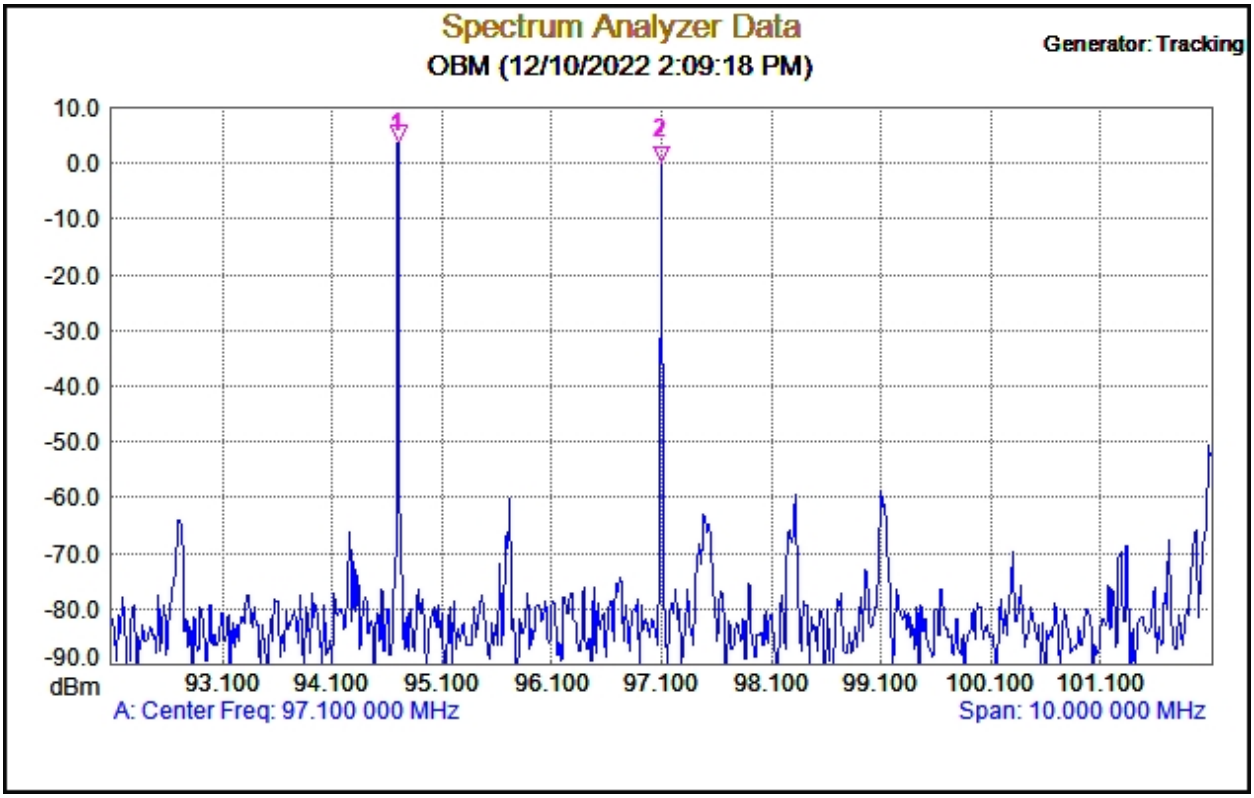
FM Bandstop Filter (viewed from 88 to 108 MHz)



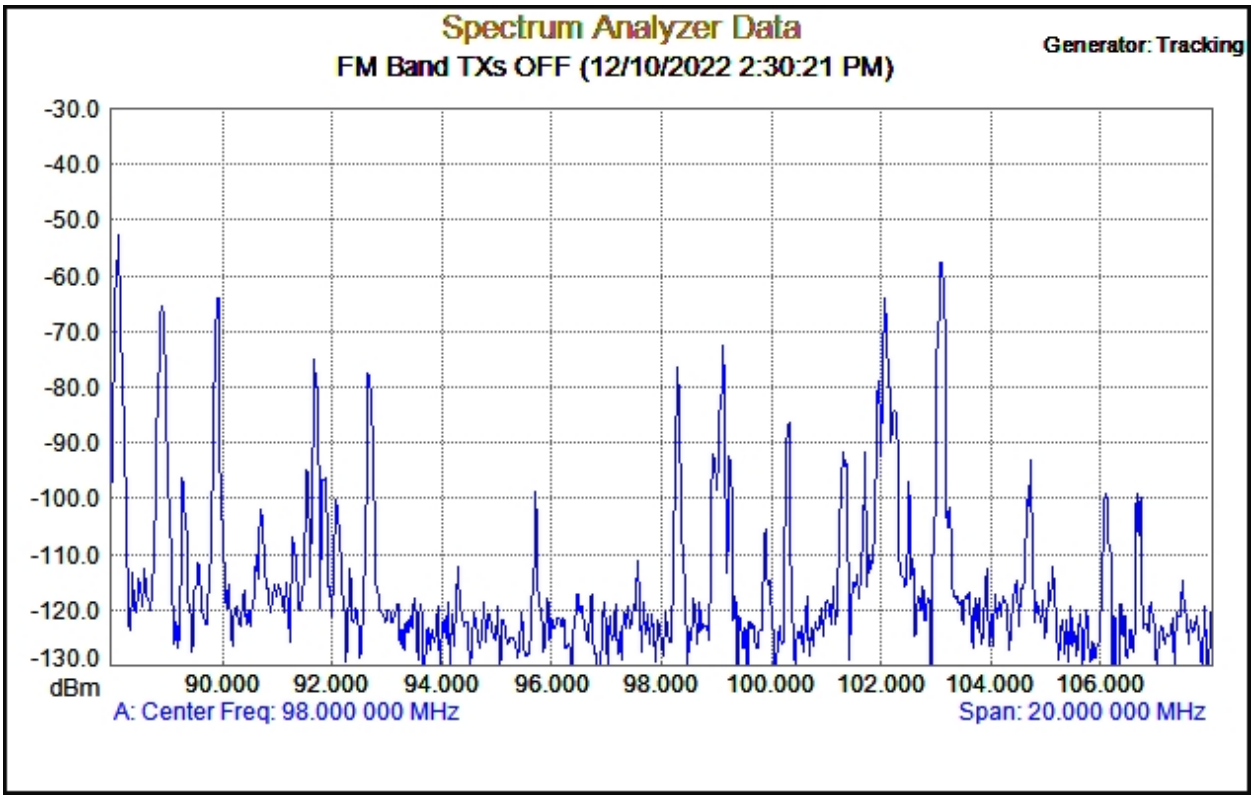
FM Bandstop Filter (viewed from 30 MHz to 1000MHz)



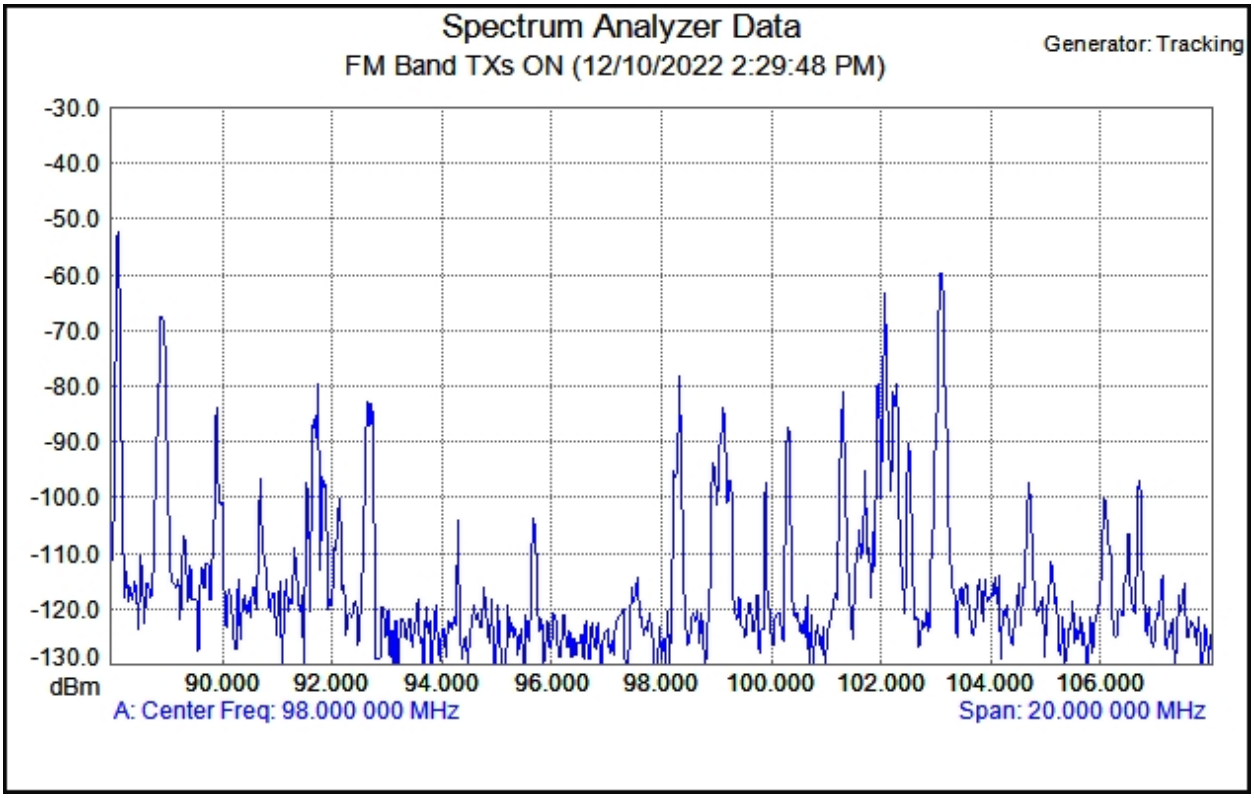
FM Band with Bandstop Installed



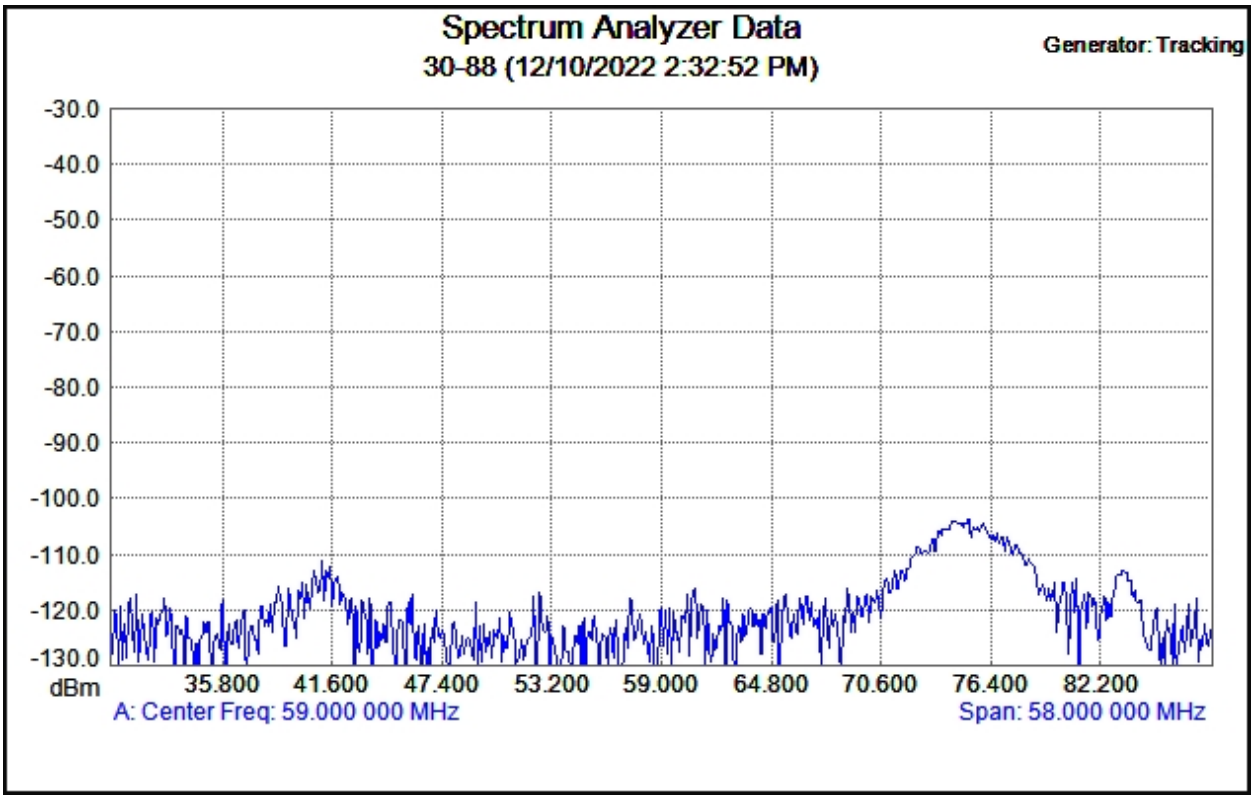
K234CT and K246DC Reference



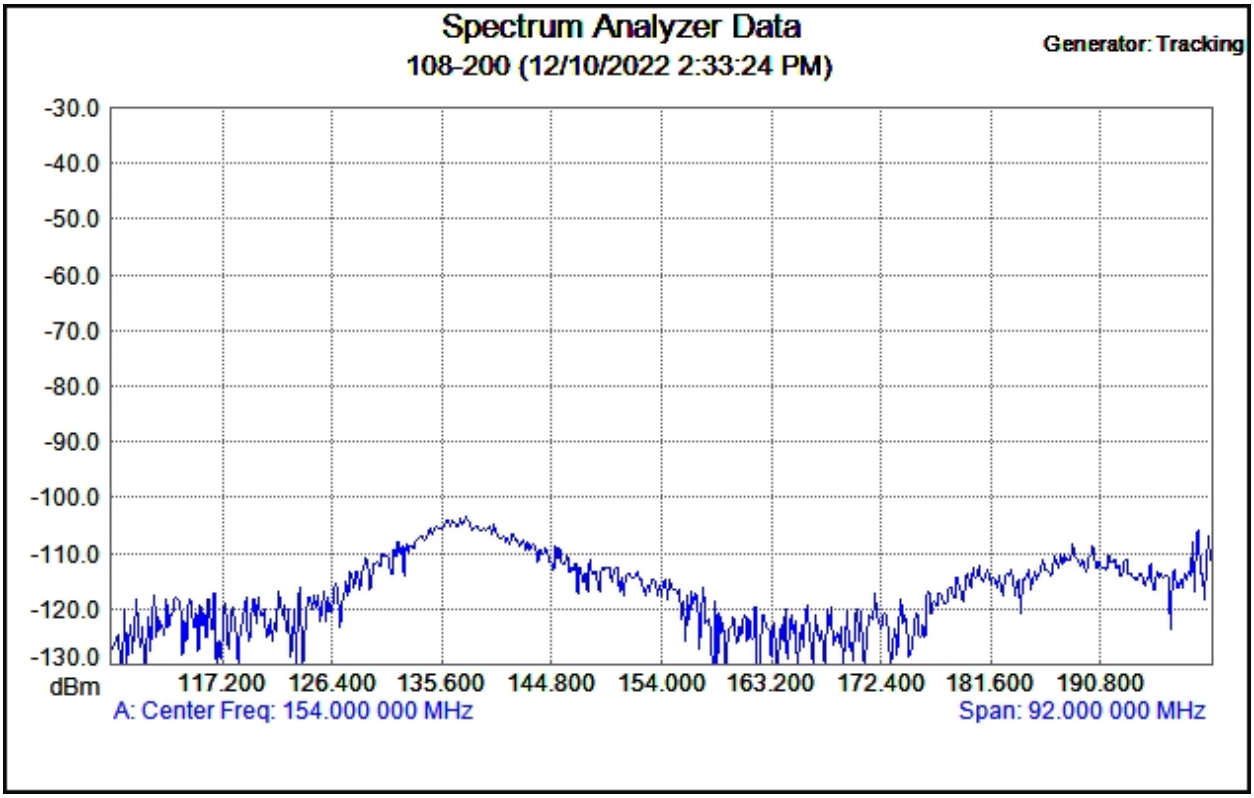
FM Broadcast Band 88 to 108MHz Reference



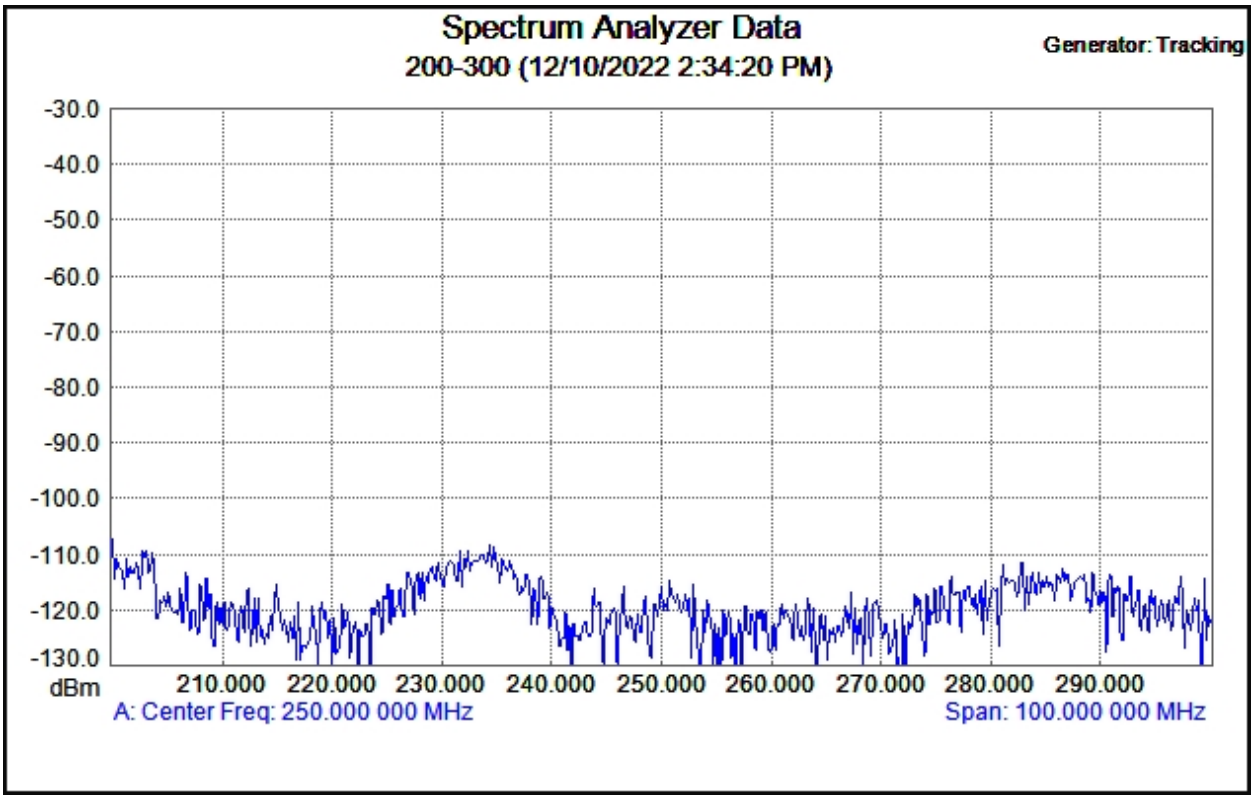
FM Broadcast Band 88 to 108 MHz with both translators operating (All signals were identified. No spurious emissions)



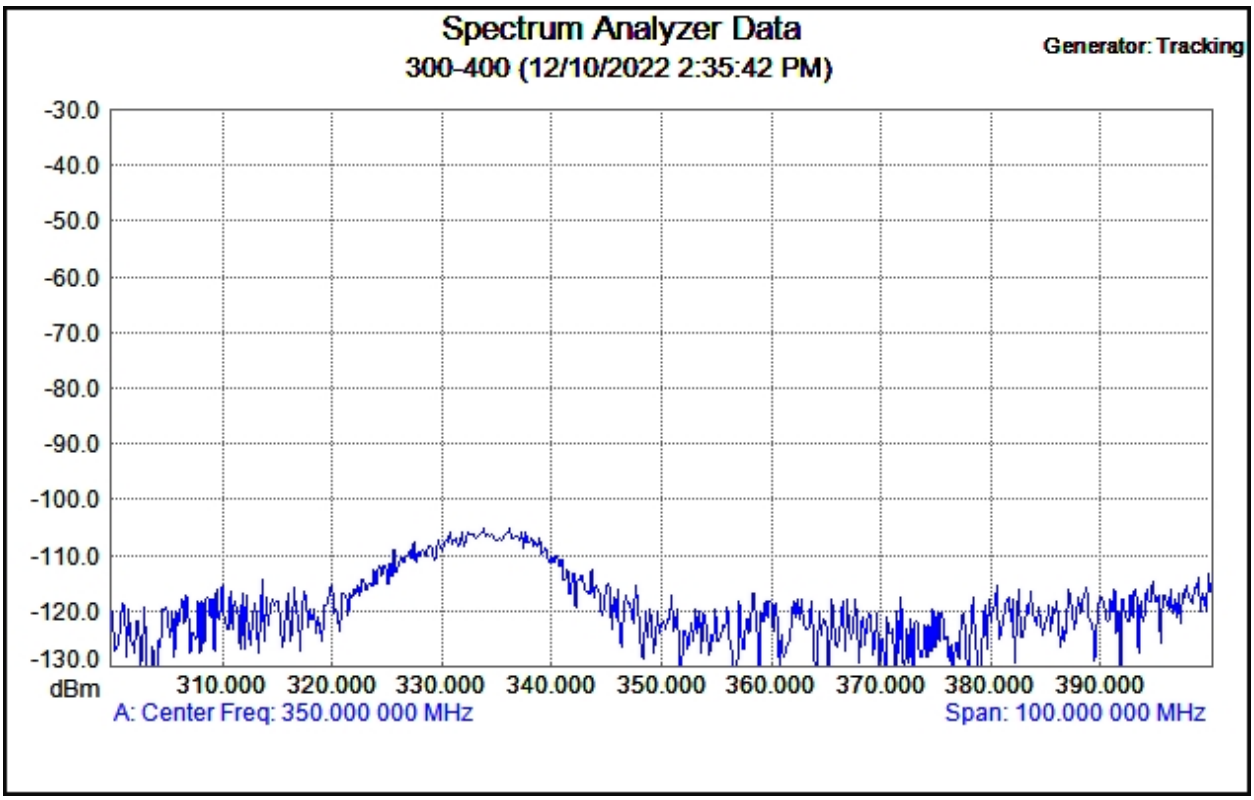
30 to 88MHz



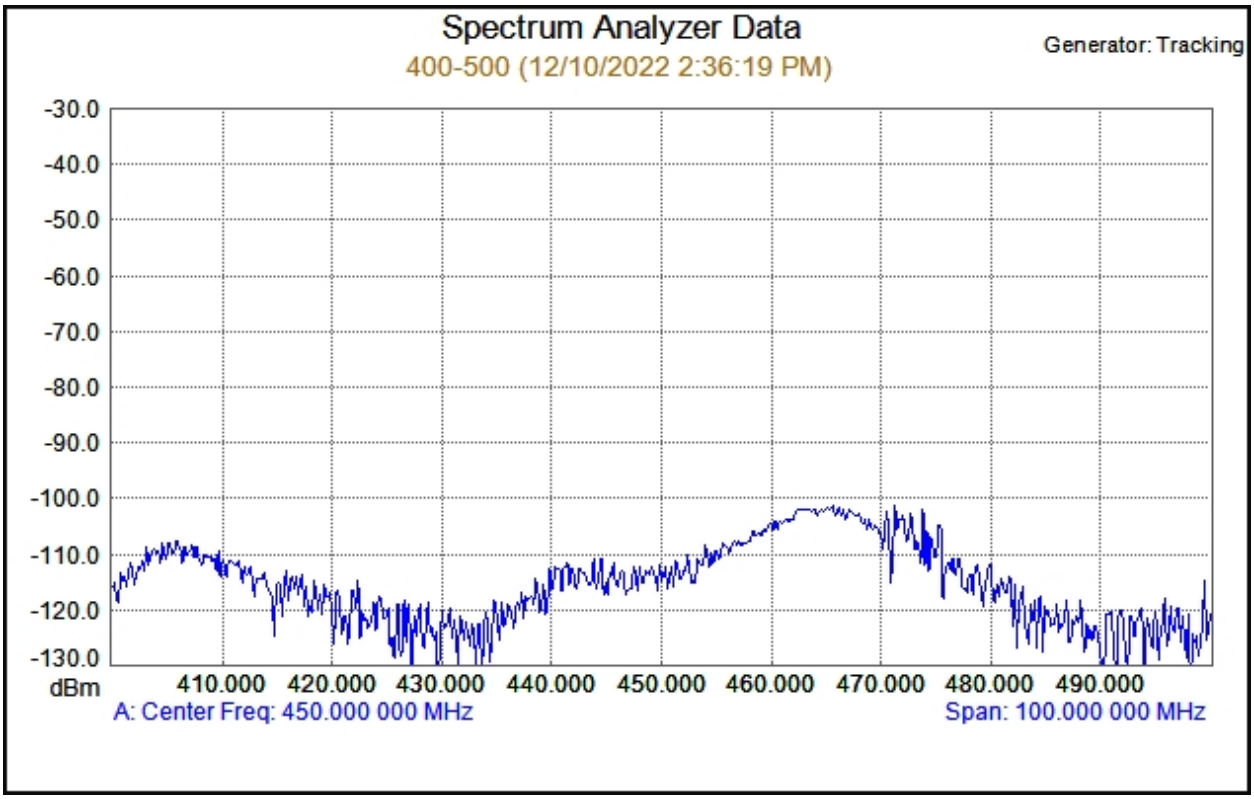
108-200MHz



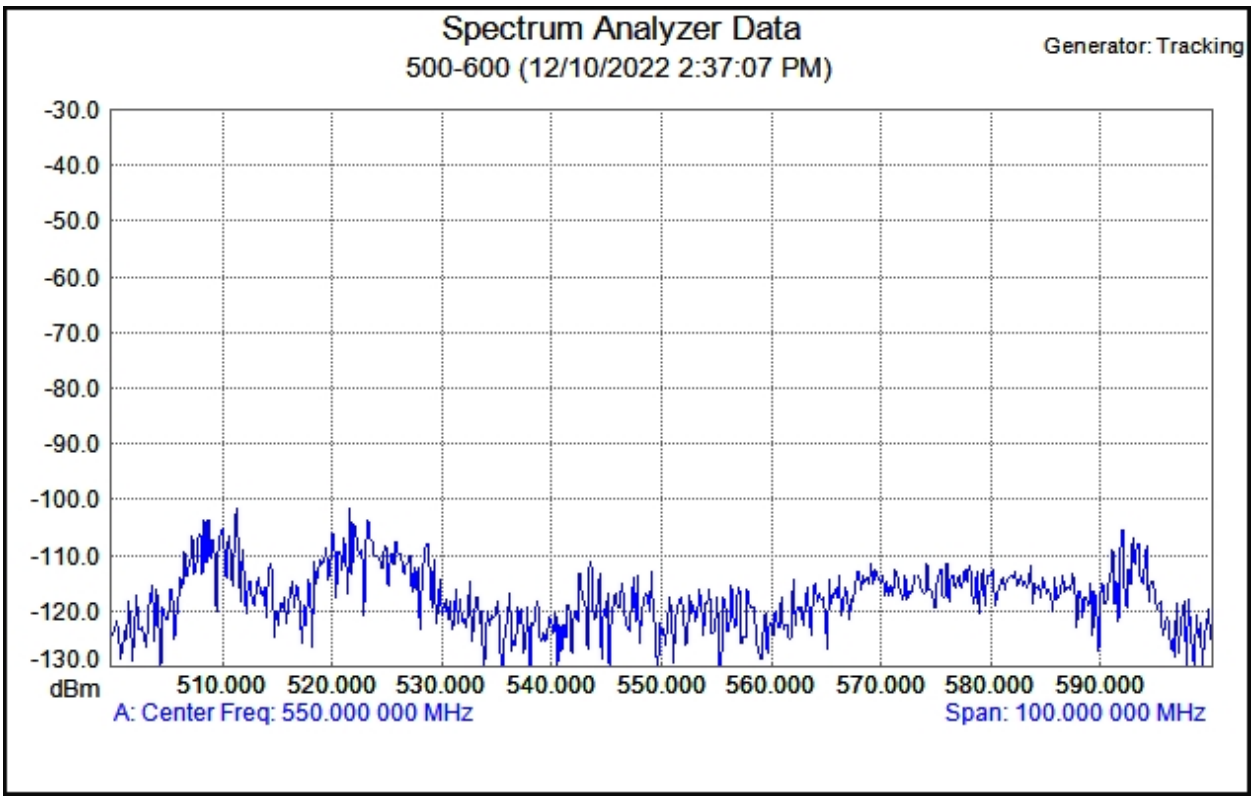
200-300MHz



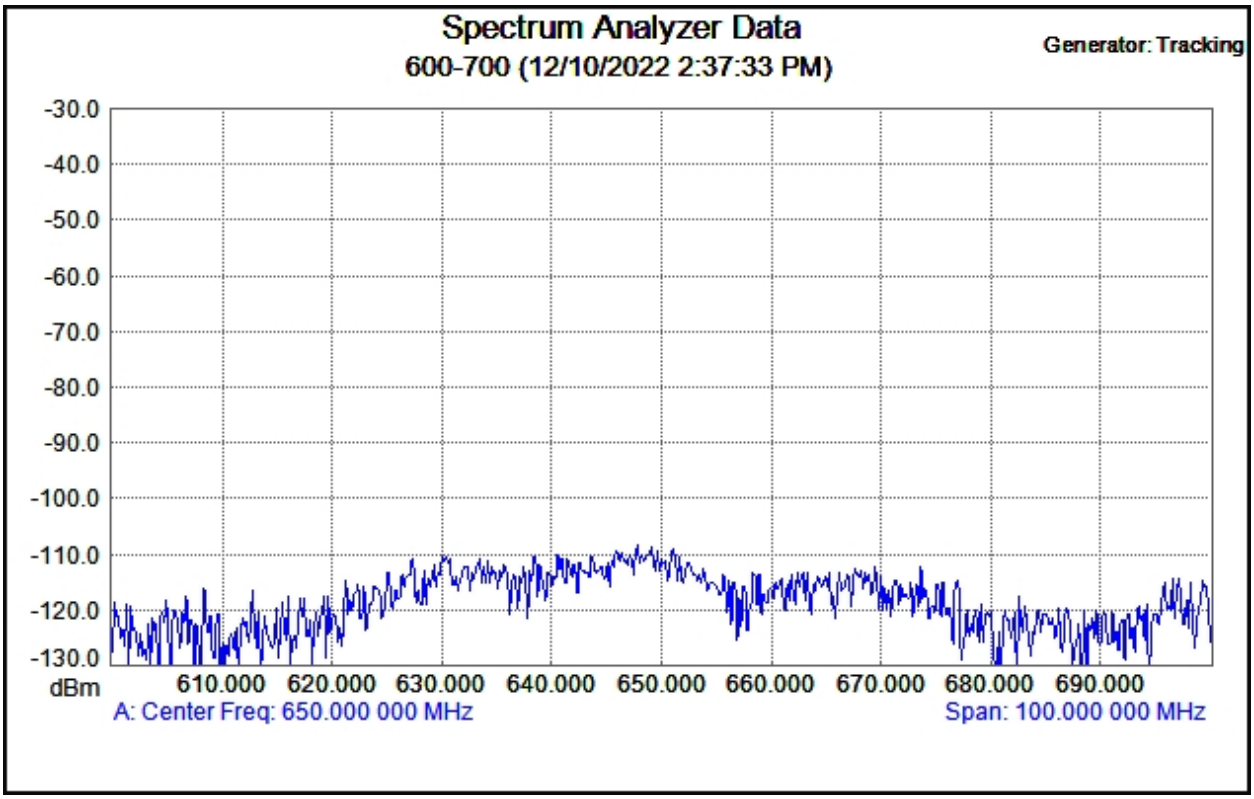
300-400MHz



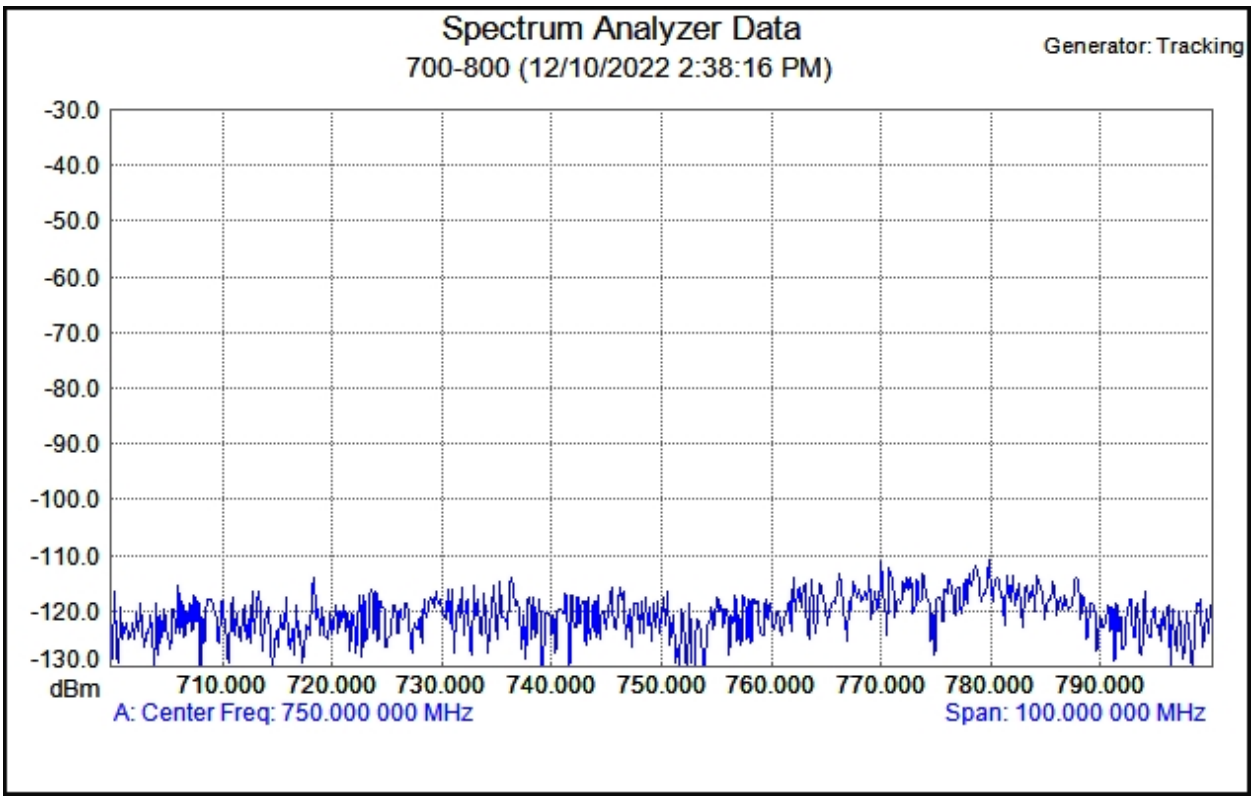
400-500MHz



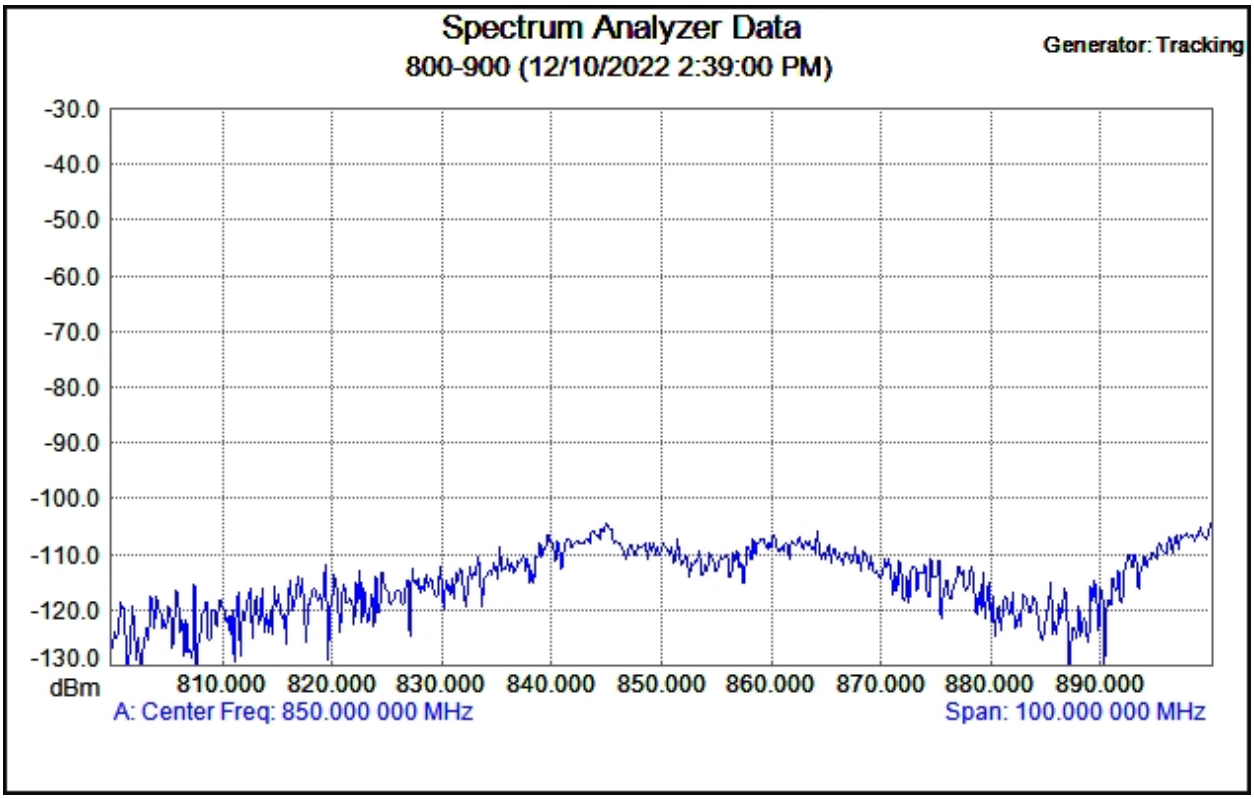
500-600MHz



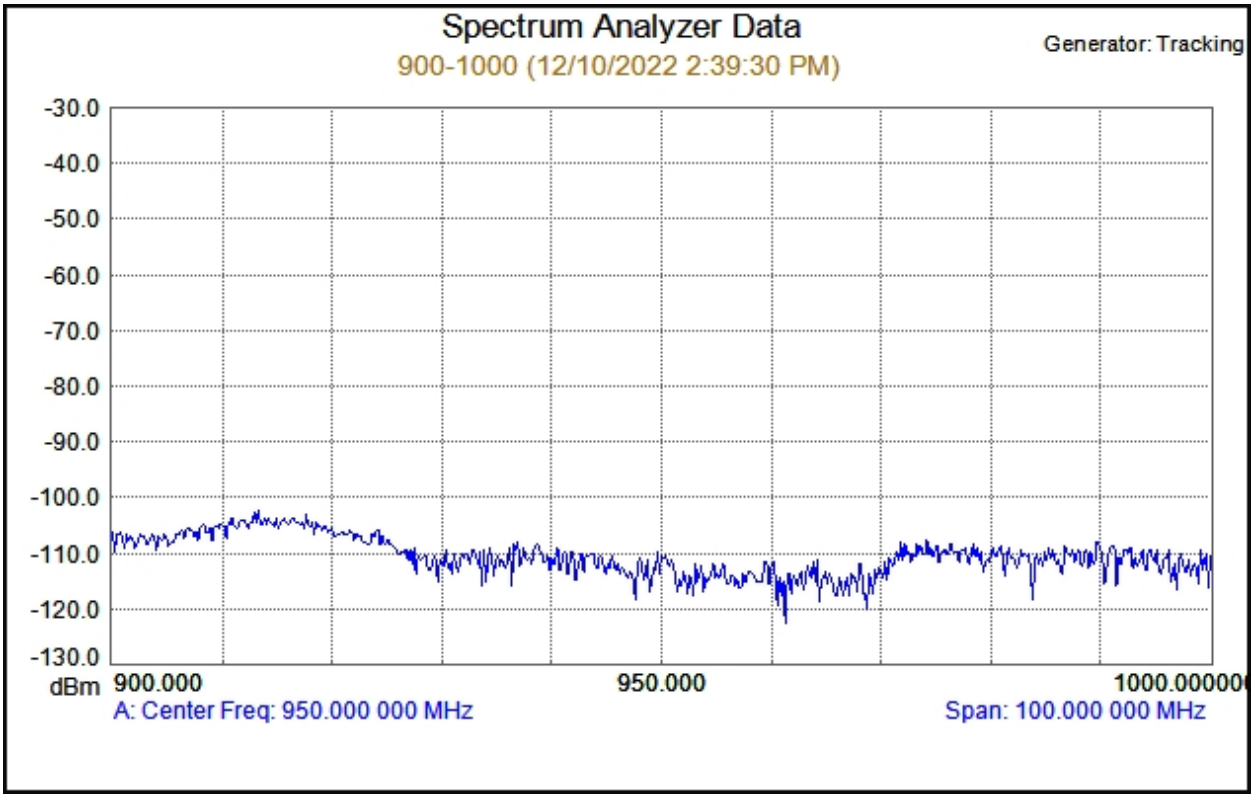
600-700MHz



700-800MHz



800-900MHz



900-1000MHz