

**Occupied Bandwidth Measurements
(FCC Rule 73.317)**

K232FO 94.3 MHz Jerome, ID
K267AE 101.3 MHz Jerome, ID

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

On September 16, 2017, RF Technical, LLC made measurements of K232FO and K267AE, Jerome, ID to show compliance with Special Operation Conditions regarding spurious emission measurements . The measurements described here were made following the addition of K232FO and installation of a common antenna and combining system for both K232FO and K267AE at the CBoI 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 $20 \times \text{Log}$ of the observed frequency divided by the carrier frequency.

A Tektronix 2712 spectrum analyzer was used for the measurements in this report. An external 20dB coaxial attenuator was used to make a reference measurement at carrier frequency. The amplitude calibration of the instrument was electronically adjusted to account for this attenuation. The attenuator was removed for all other measurements. This reduction in the amount of attenuation provides added dynamic range for all other measurements.

Eagle TNF412-4 Notch Filters tuned to 94.3 MHz and 101.3 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 (Measured with a Rigol DSA815) 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 1100MHz. The amplitude versus frequency response of this filter (Measured with a Rigol DSA815) 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, seven, and eight.

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 K232FO or K267AE 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 K232FO and K267AE are 354 watts and 352 watts respectively. Hence all spurious emissions must be 68.5 dB below the carrier level ($43 + 10 \times \text{Log}$ of the power in watts)

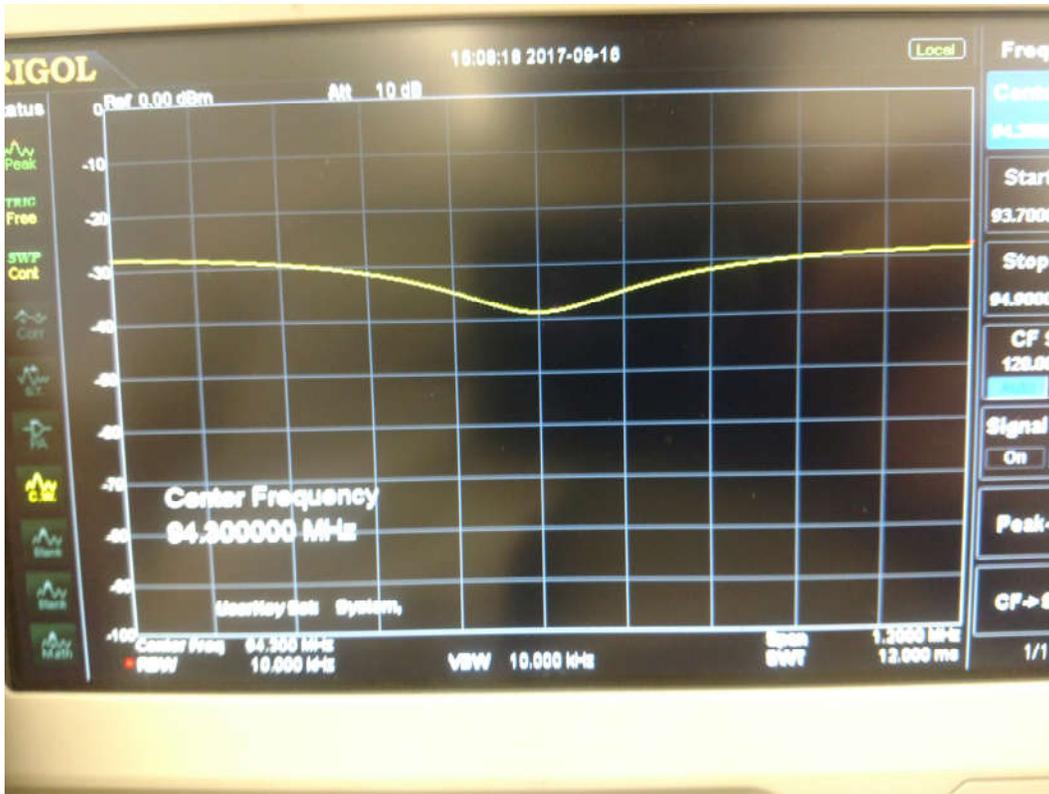
No harmonic emissions, intermodulation products, or other spurious emissions from K232FO or K267AE at levels less than 68.5 dB below the fundamental carrier frequency were observed. It is believed that K232FO and K267AE are in full compliance with section 73.317 of the commission's rules.

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.

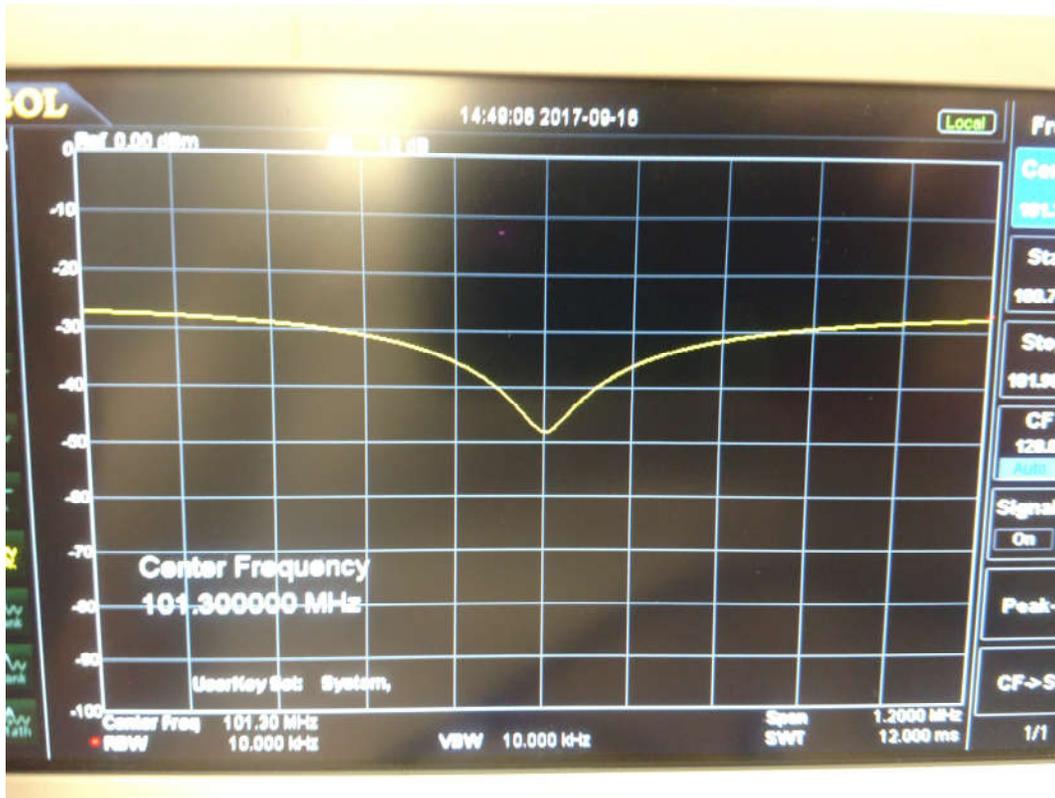
Respectfully,

A handwritten signature in black ink, appearing to read 'Dustin Pamplona', with a long horizontal flourish extending to the right.

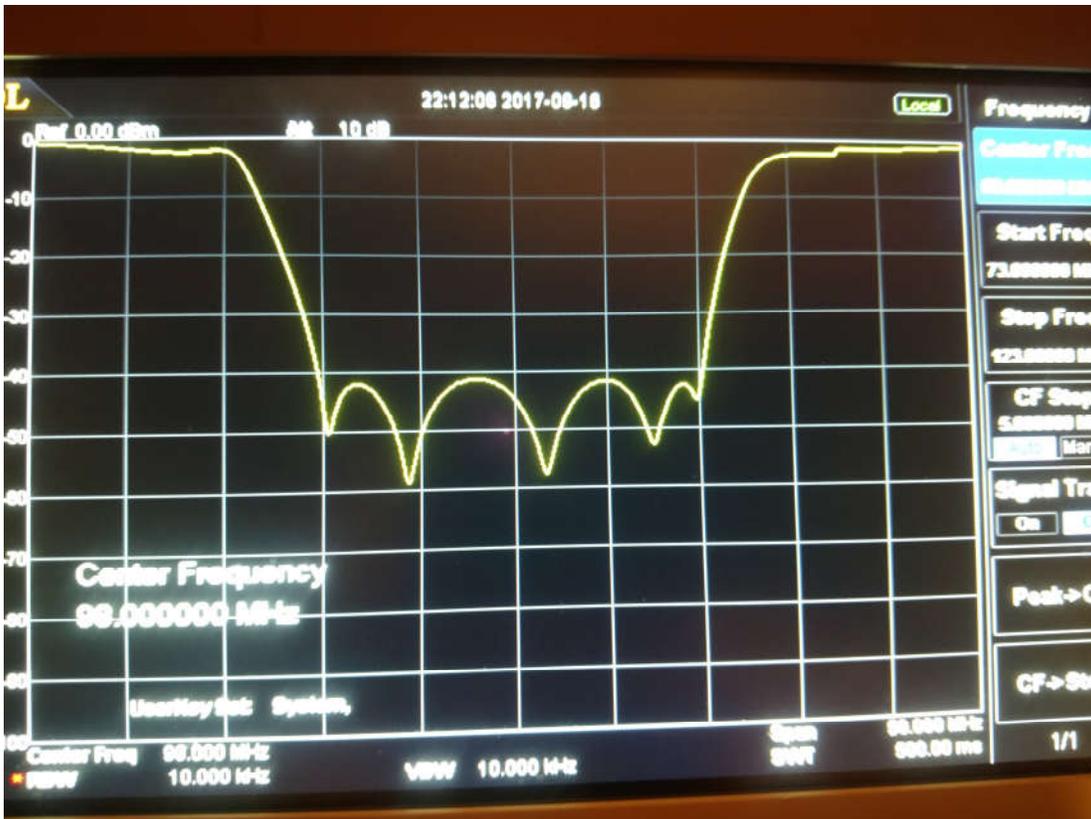
Dustin Pamplona
RF Technical, LLC
865 Chase Drive
Twin Falls, ID 83301
(208)358-0456



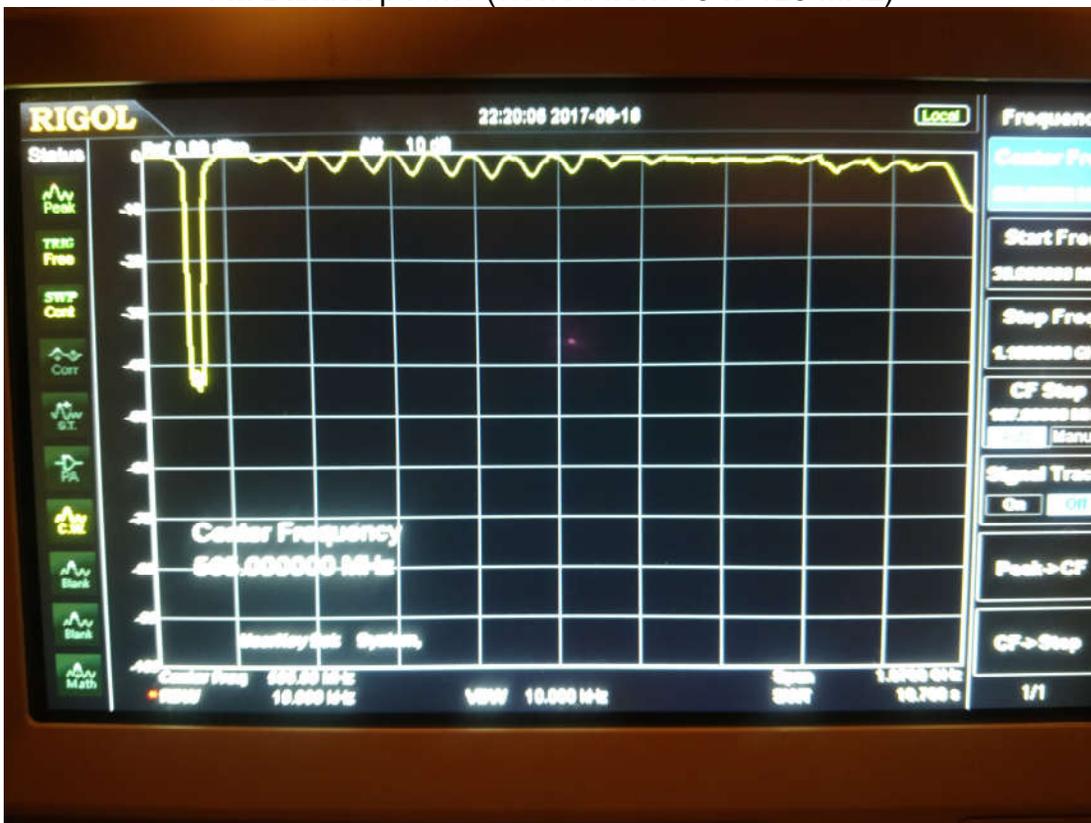
94.3 MHz Notch Filter



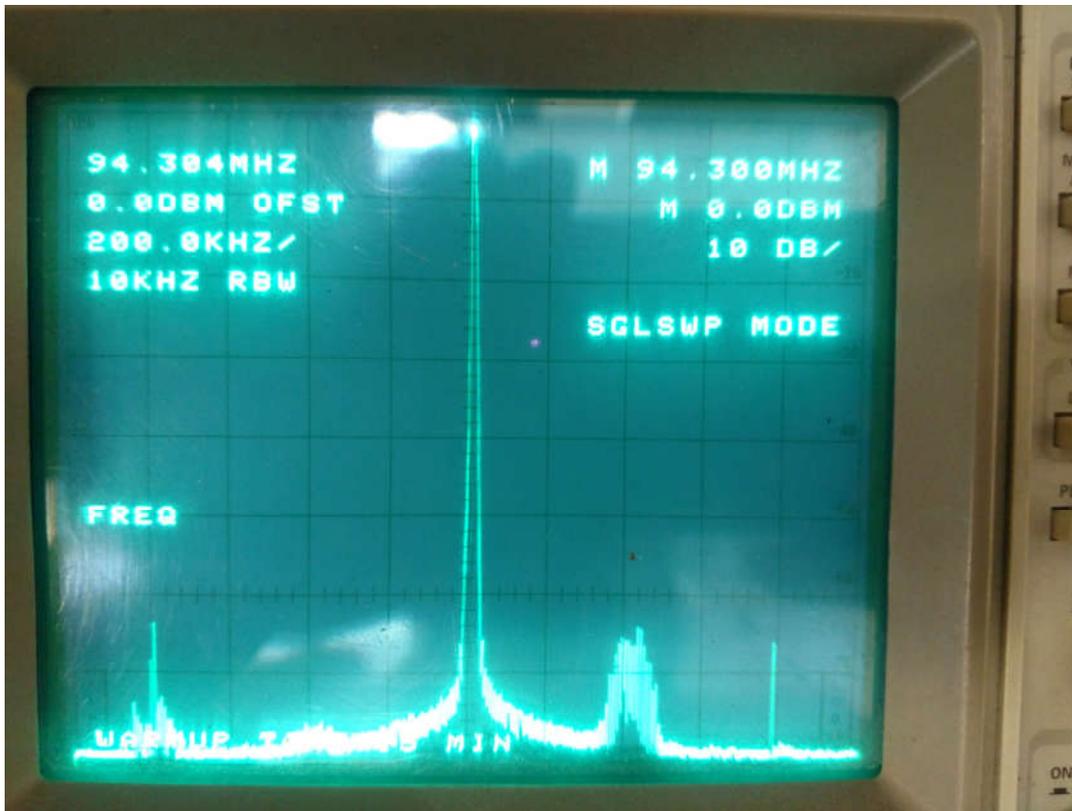
101.3 MHz Notch Filter



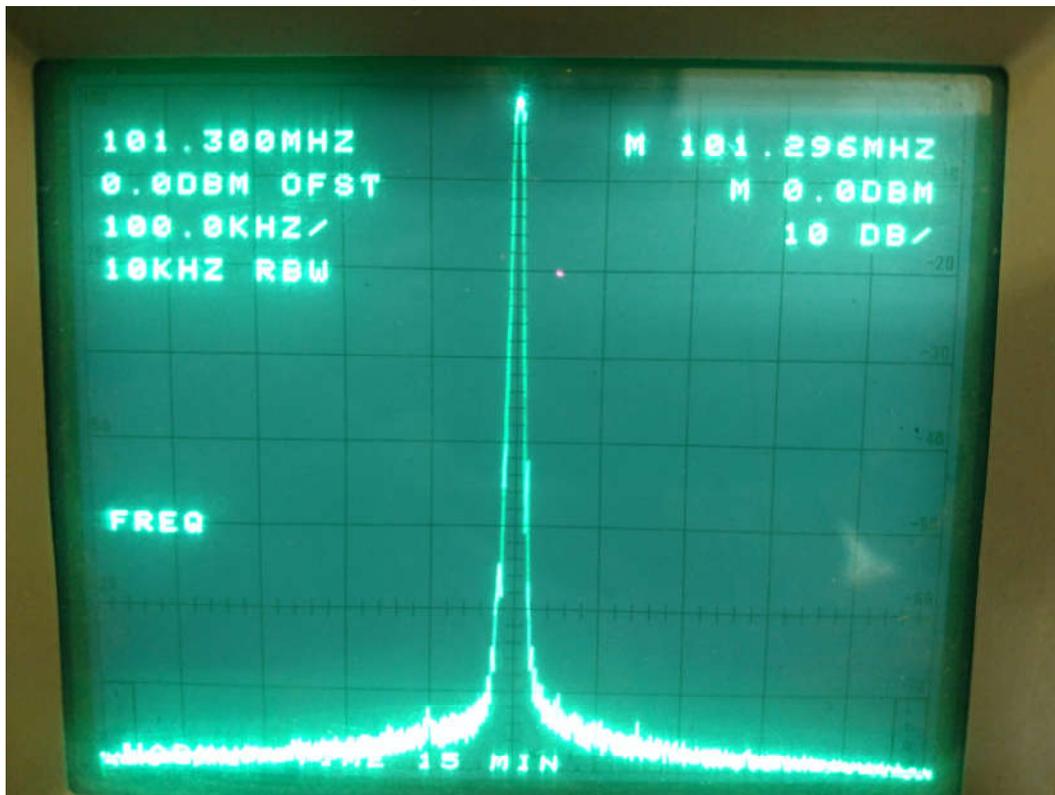
FM Bandstop Filter (viewed from 73 to 123 MHz)



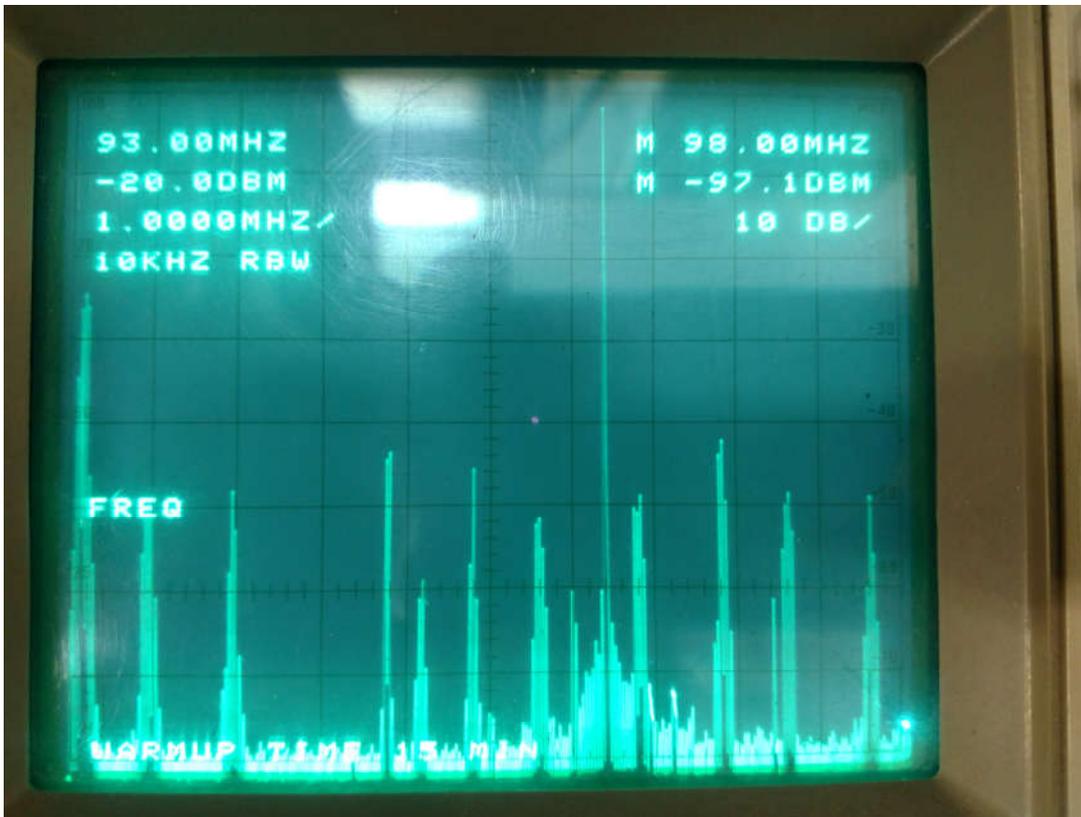
FM Bandstop Filter (viewed from 30 MHz to 1100MHz)



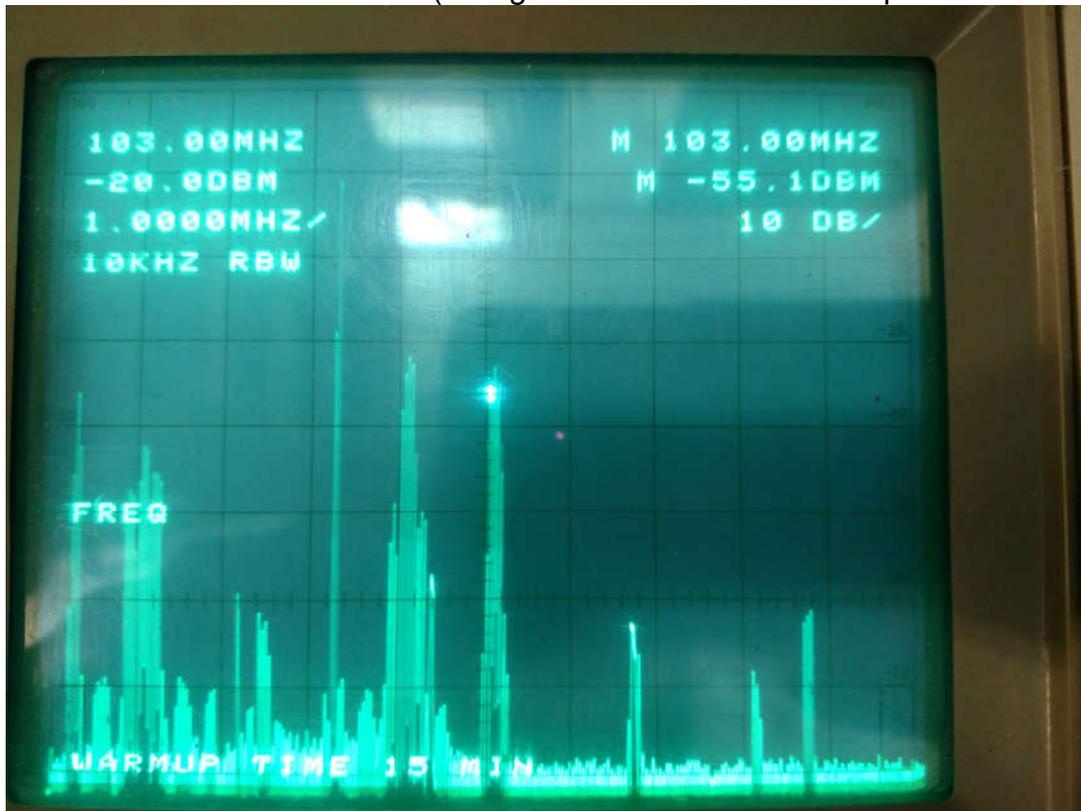
K232FO Reference Plot



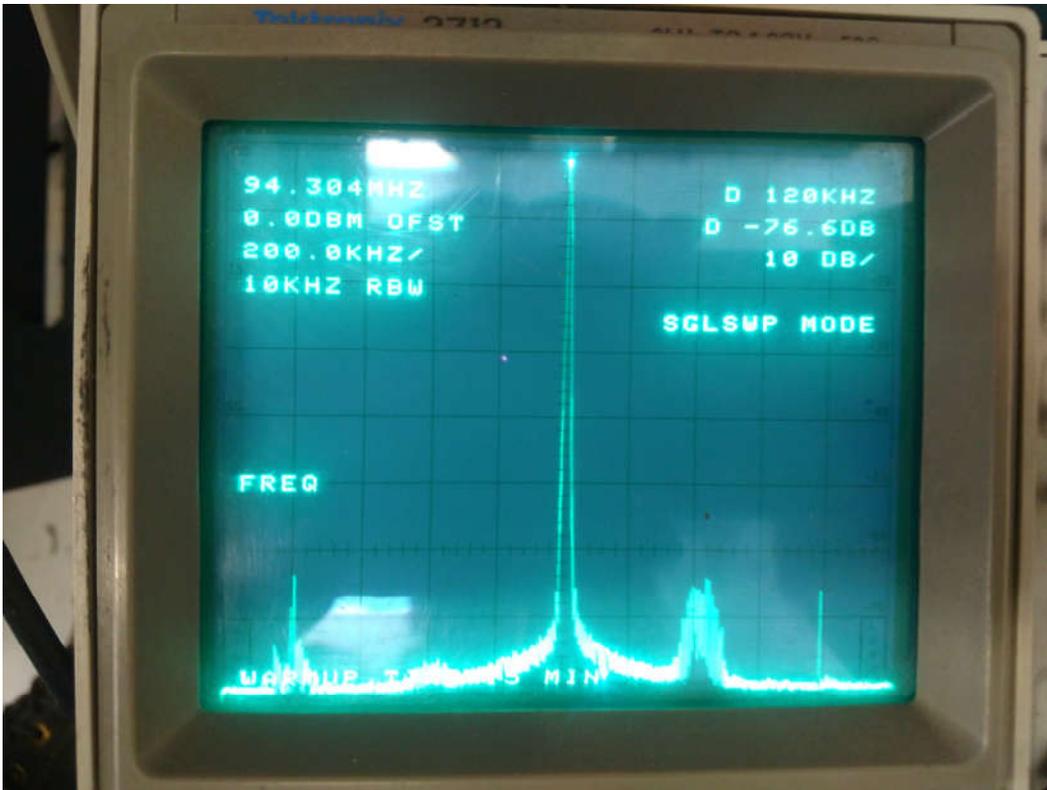
K267AE Reference Plot



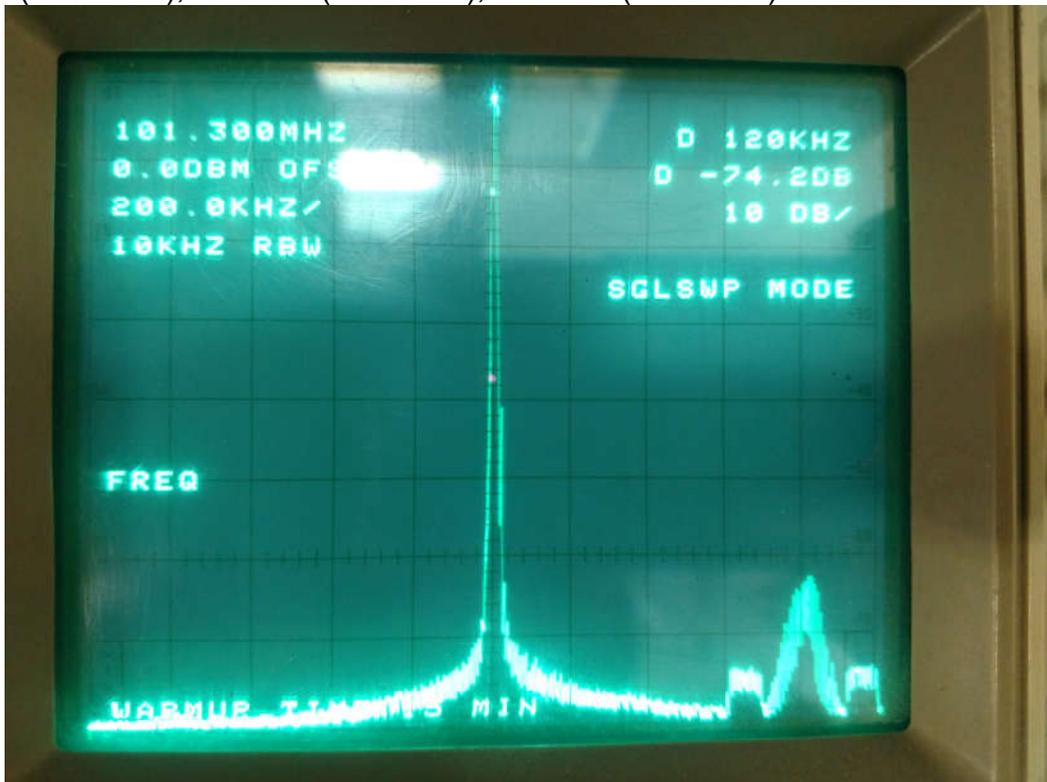
FM Broadcast Band 88 to 98 MHz (All signals were identified. No spurious emissions)



FM Broadcast Band 98 to 108 MHz (All signals were identified. No spurious emissions)



K232FO plot showing occupied bandwidth well within limits. Nearby Stations K228FL (93.5 MHz), K234CT (94.7 MHz), K236BS (95.1 MHz) can also be seen.



K267AE plot showing occupied bandwidth well within limits. Nearby Station KYUN (102.1 MHz) can also be seen.