

Spectrum Emission Compliance

K232EY

Tests were conducted to determine compliance with 47 C.F.R. §73.317(b) through §73.317(d) for KFHM, Big Bear, CA FAC# 175096 and K243BQ, Big Bear, CA FAC# 142098 sharing a common transmit antenna using a transmit combiner.

Method Used for Gathering Data

Signals were measured with a transmitter for each station connected to the proper port of a Bext Combiner designated for each proper operating frequency. A Bird Wattmeter model 43, serial number 213142 was connected directly between the antenna port of the combiner and the antenna feed line for the antenna system. A Coaxial Dynamics 50 dB sample port element (-50db 25MHz to 1000MHz) was used for obtaining a test signal for making measurements.

The measurement data were gathered using an Anritsu model MS2713E Spectrum Analyzer, serial number 09388127.

KFHM 88.7 MHz

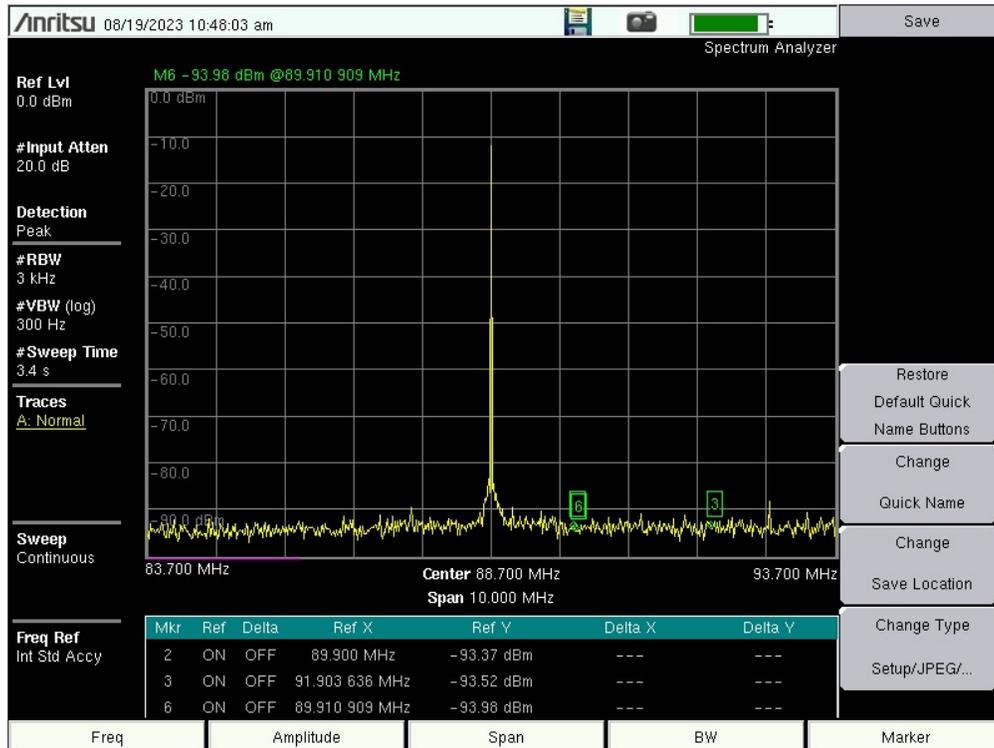


Figure 1 88.7MHz KFHM

According to 47 C.F.R. 73.317(d) the limits for emissions more than 600 KHz from the assigned carrier frequency is equal to “43 + 10 Log 10 (Power, in watts) dB below the level of the unmodulated carrier, or 80 dB, whichever is the lesser attenuation.” Therefore, the limit is $43 + 10 \text{ Log } 7 (7 \text{ Watts}) = 43 + 8.5 = 51.5 \text{ dB}$ below the unmodulated reference carrier.

Refer to Figure 1 above.

K243BQ 96.5 MHz

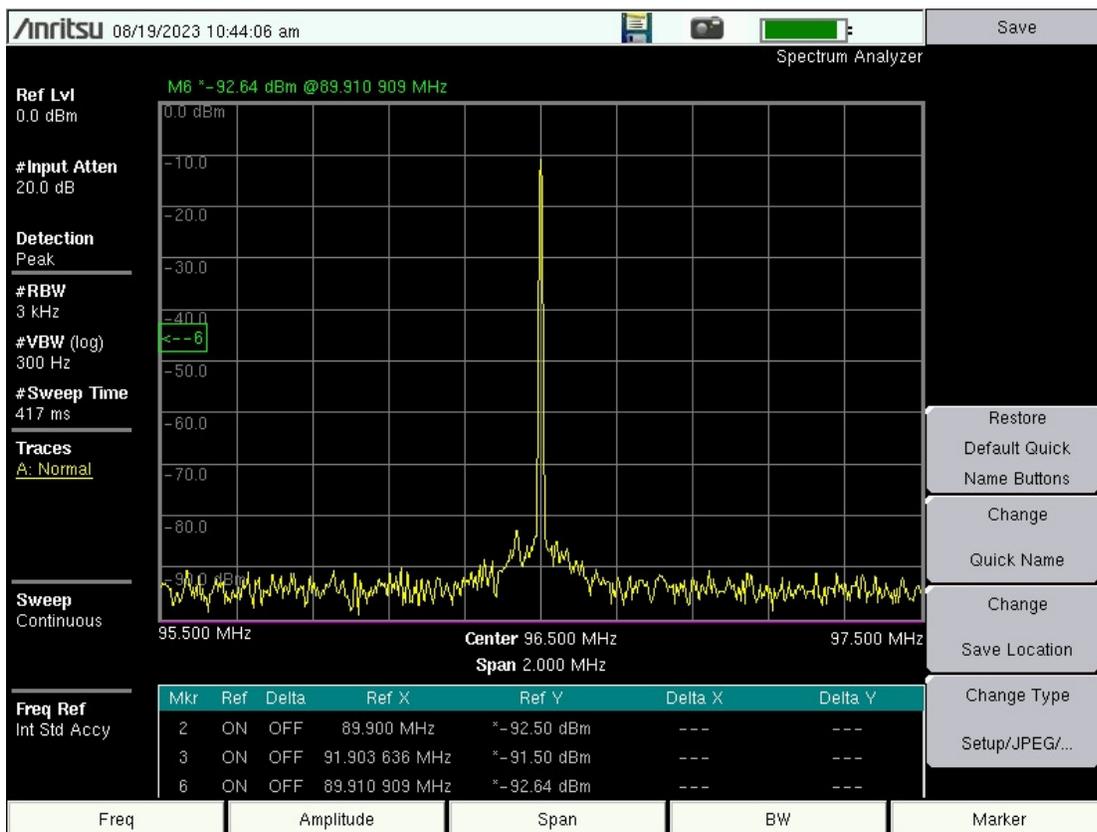


Figure 2 96.5 MHz K243BQ

According to 47 C.F.R. 73.317(d) the limits for emissions more than 600 KHz from the assigned carrier frequency is equal to “43 + 10 Log10 (Power, in watts) dB below the level of the unmodulated carrier, or 80 dB, whichever is the lesser attenuation.” Therefore the limit is $43 + 10 \text{ Log } 10 (10 \text{ Watts}) = 43 + 10 = 53 \text{ dB}$ below the unmodulated reference carrier.

Refer to Figure 2 above.

Conclusion

Per §73.317, measurements were made for any spurious emissions at between 120 kHz and 240 kHz either side of the stations operating frequency. Further measurements were made at between 240 kHz and 600 kHz either side of the carrier frequency. These measurements were conducted with no modulation present; and no spurious emissions were noted. Measurements were then made at the second and third harmonic frequencies of the described stations operating frequency. Again, no spurious signals were present. A close scan of Aviation spectrum between 118 MHz & 136 MHz also showed no signs of spurious emissions. A scan of the spectrum, up to and including 500 MHz, was made to look for any other spurious emissions from the KFHM & K243BQ combined transmission system; and none could be found. According to all measurements observed, including but not limited to that presented herein, KFHM & K243BQ are in full compliance with all FCC requirements of 47 C.F.R. §73.317(b) through §73.317(d).



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