

Spectrum Emission Compliance

K263BM

Tests were conducted to determine compliance with 47 C.F.R. §73.317(b) through §73.317(d) for K248BJ, Mohave Valley, AZ FAC# 147059 and K263BM, Riviera, AZ FAC# 146554 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 Telewave 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 Bird 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.

K248BJ 97.5 MHz

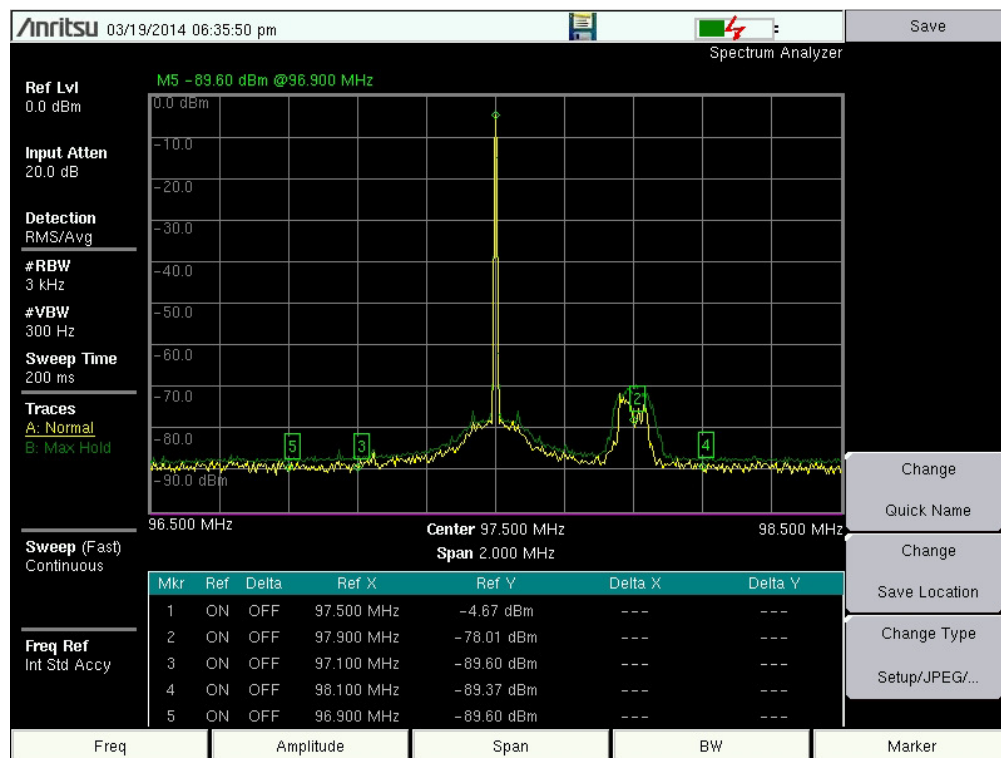


Figure 1 97.5MHz K248BJ

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 Log 63 (63 Watts) = 43 + 18.0 = 61.0 dB below the unmodulated reference carrier.

The signal at 97.9 MHz, up 400 KHz from the unmodulated carrier (noted by marker #2) is from FM station KLUK and is not a product of this transmitter, combiner and antenna system.

Refer to Figure 1 above.

K263BM 100.5 MHz

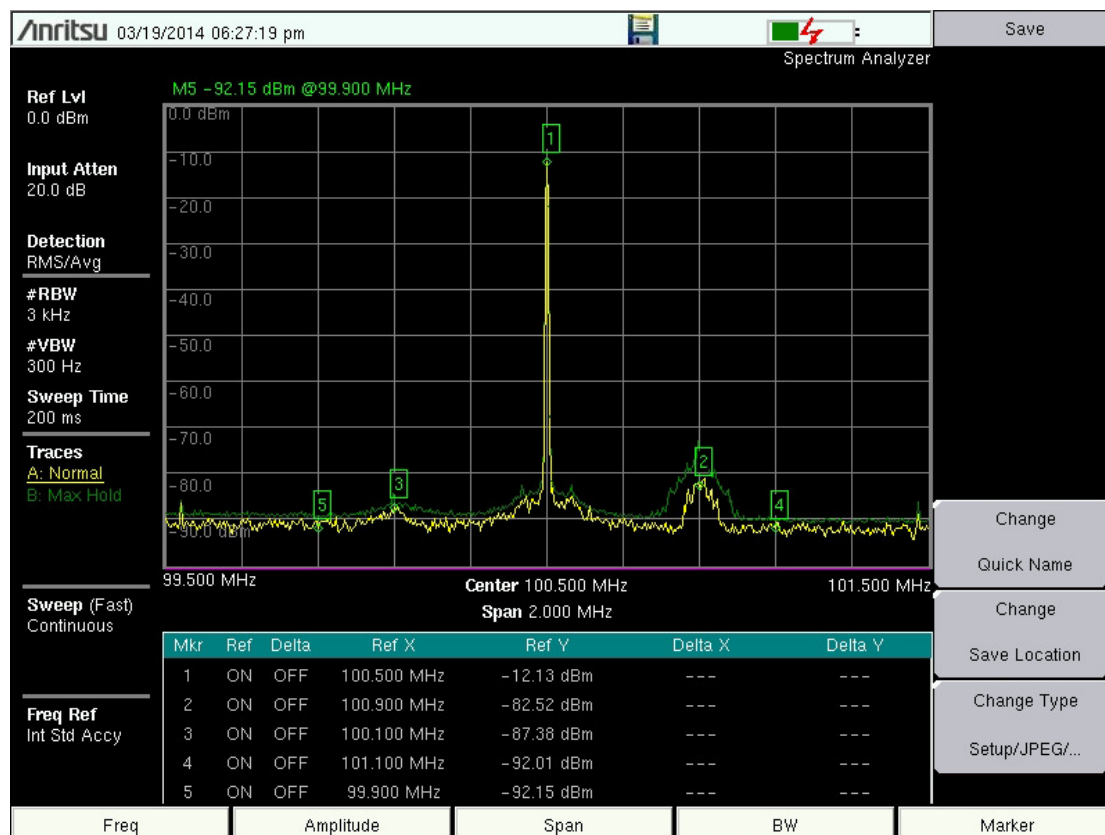


Figure 2 100.5 MHz K263BM

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 $43 + 10 \log 9(9 \text{ Watts}) = 43 + 9.5 = 52.5 \text{ dB}$ below the unmodulated reference carrier.

The signal at 100.9 MHz, up 400 KHz from the unmodulated carrier (noted by marker #2) is from nearby FM translator K265CJ and is not a product of this transmitter, combiner and antenna system.

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 K248BJ & K263BM combined transmission system; and none could be found. According to all measurements observed, including but not limited to that presented herein, K248BJ & K263BM are in full compliance with all FCC requirements of 47 C.F.R. §73.317(b) through §73.317(d).



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