

TECHNICAL EXHIBIT

APPLICATION FOR A LICENSE TO COVER
A CONSTRUCTION PERMIT
FOR NON-RESERVED CHANNEL
TRANSLATOR STATION
K245BD

SPEARFISH, SD
CH 245D 27 WATTS 118 M

JUNE 6, 2010

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INTRODUCTION

This technical exhibit has been prepared on behalf of Phasor Physics, Inc., in support of an application for a license to cover a construction permit for FM translator station K223BT, Spearfish, SD.

Figure 1 shows the frequency domain display of a “post combiner” sample of K223BT and K245BD operating as described in the construction permits. Figure 2 shows a frequency domain display of K223BT operating at 92.5 MHz. The overlay shows the spurious emissions mask defined by 47 CFR 73.317. Figure 3 shows a frequency domain display of K245BD operating at 96.9 MHz. The overlay on figures 2 and 3 show the emissions mask defined by 47 CFR 73.317.

Figure 4 shows a block diagram of the test setup.

Frequency domain measurements were made with the following instruments:

HP 8591A Spectrum Analyzer Serial Number 3045V61127

Bird 4725 variable Signal Sampler

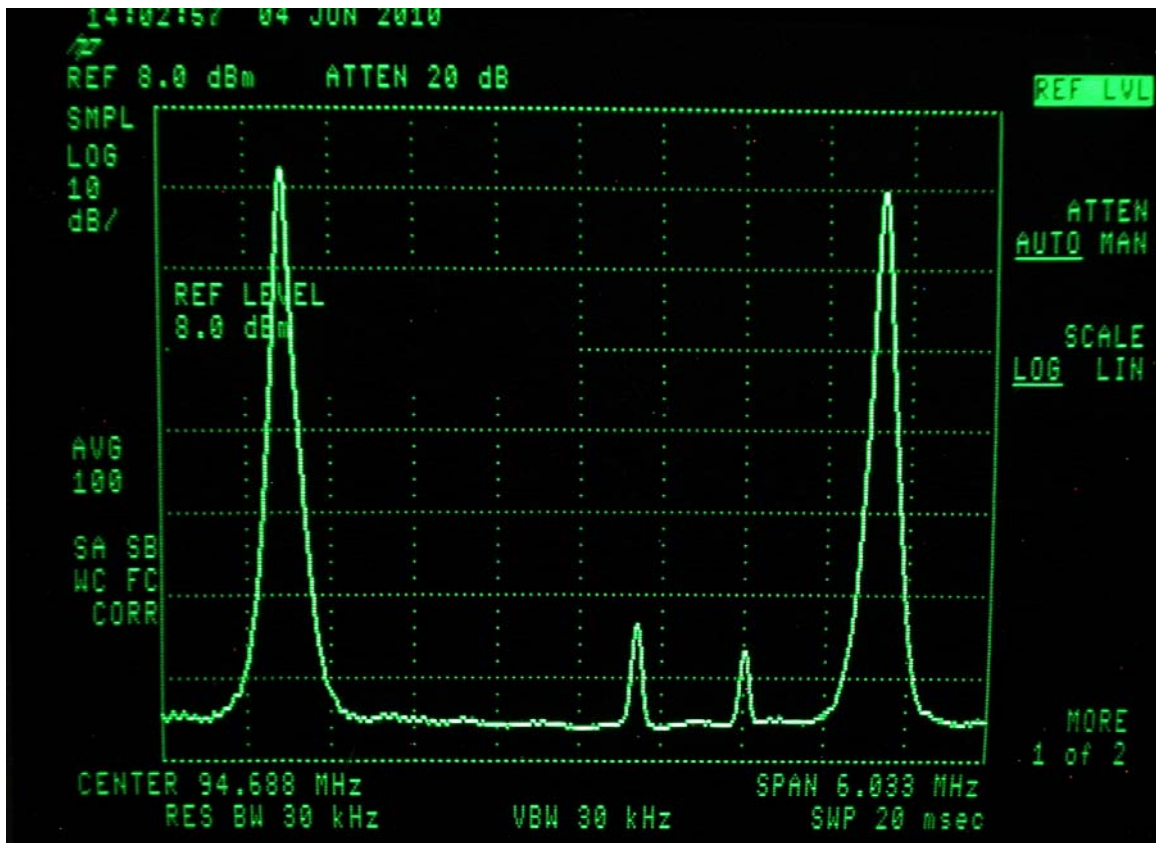


Figure 1. Frequency domain display of a “post combiner” sample of K223BT and K245BD operating as described in the construction permits.

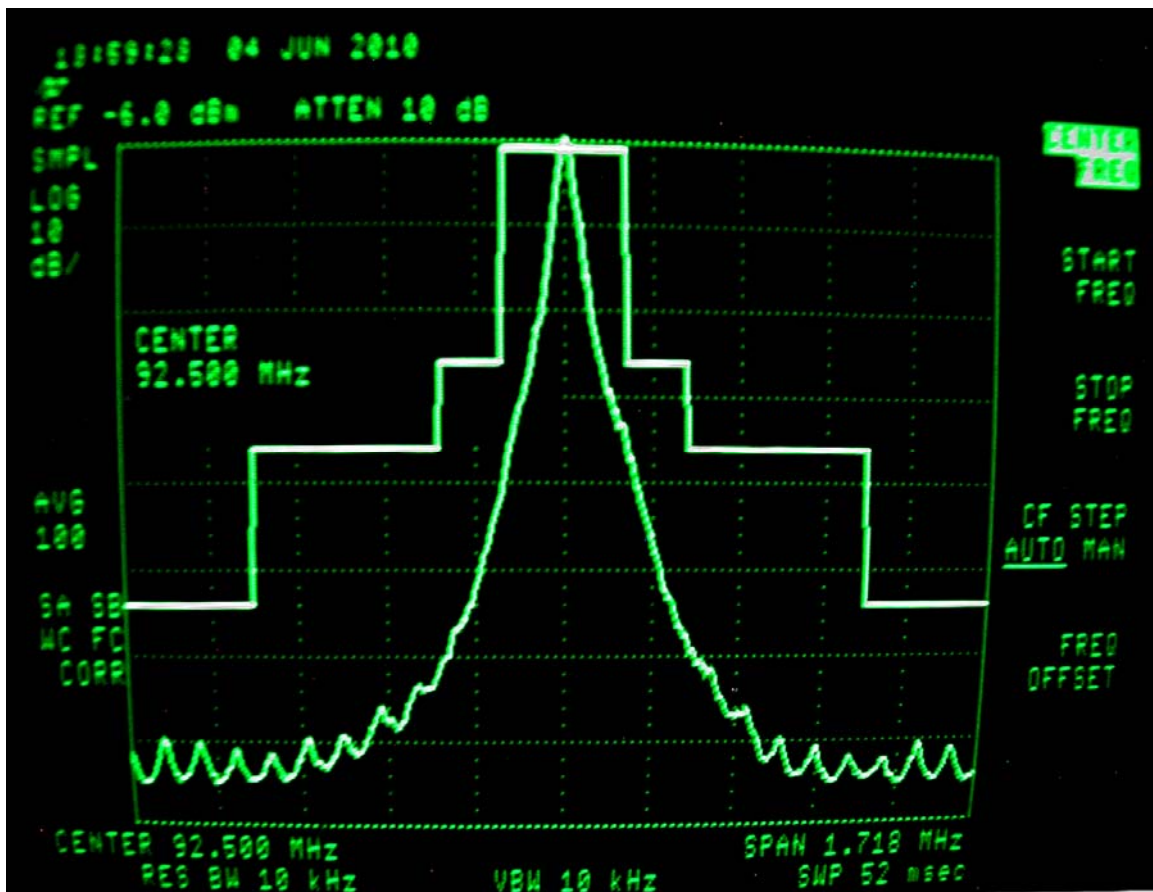


Figure 2. Frequency domain display of K223BT operating at 92.5 MHz

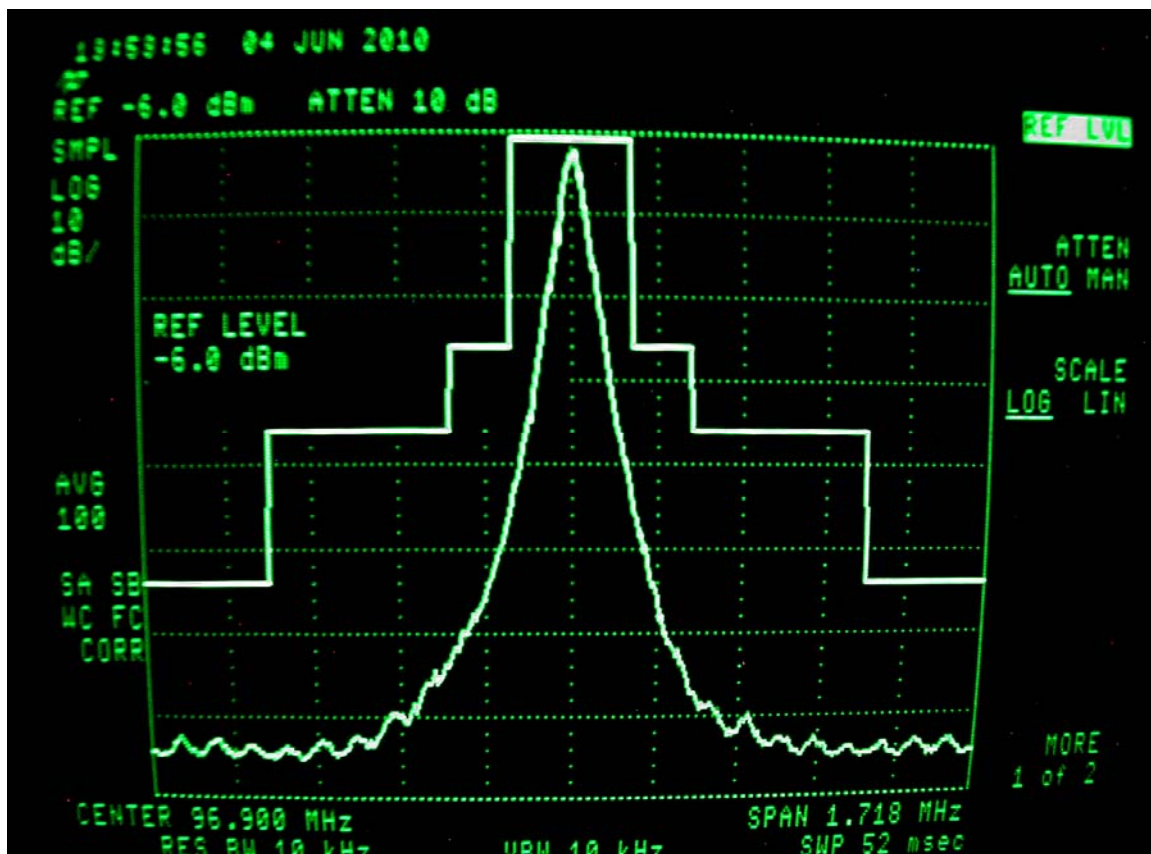


Figure 3. Frequency domain display of K245BD operating at 96.9 MHz.

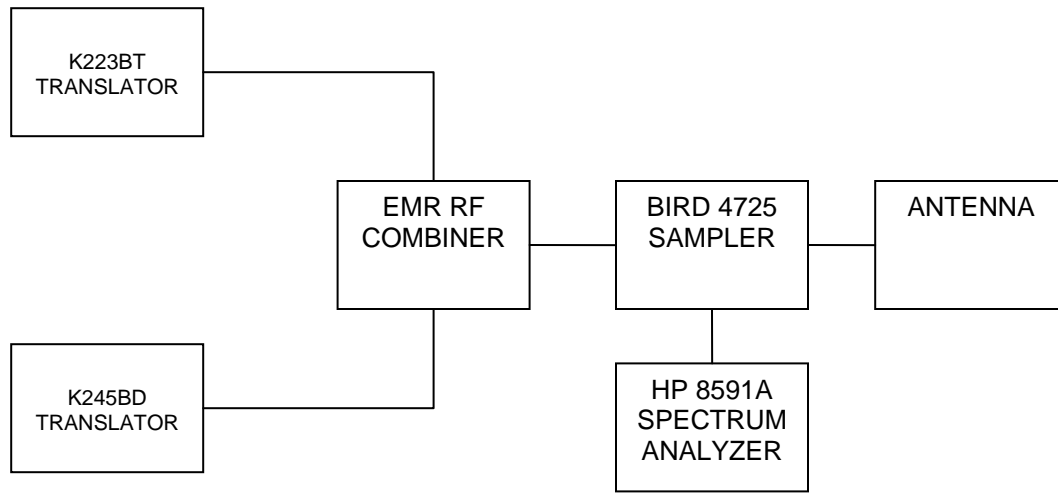


Figure 4. Block diagram of spurious emissions test setup.

RFR TESTING

DATE/TIME: June 6, 2010 4:00 PM

METER: Narda 8718B

SERIAL NUMBER: 1205

CALIBRATED: 4/11/06

PROBE: Isotropic E probe

SERIAL NUMBER: 11001

CALIBRATED: 4/06

CORRECTION FACTOR: 1.07

PROBE BANDWIDTH: 300 kHz. – 3 GHz.

The maximum peak reading taken at the site, with all stations operating at full power, was $79 \mu\text{W}/\text{cm}^2$ or 39% of the General Population Exposure limit of $200 \mu\text{W}/\text{cm}^2$. The stations are therefore in compliance with non-ionizing radiation requirements of OET Bulletin 65.

RFR warning signs have been posted as shown in Figure 5.



Figure 5. RFR warning sign.