

TECHNICAL EXHIBIT

APPLICATION FOR A LICENSE TO COVER  
A CONSTRUCTION PERMIT  
FOR  
TRANSLATOR STATION  
K223BT

SPEARFISH, SD  
CH 223D 53 WATTS -55 M

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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.

## MEASUREMENTS

Figure 1 shows the frequency domain display of a “post combiner” sample of K223BT operating as described in the construction permits. The overlay shows the spurious emissions mask defined by 47 CFR 73.317. Figures 2 and 3 show the frequency domain display of the post combiner sample of K245BD and K252DN, the two other translator stations on the combiner.

Figure 4 shows a block diagram of the test setup.

Frequency domain measurements were made with the following instruments:

Agilent N9340B Spectrum Analyzer, Serial Number CN0348000208

Bird 4725 variable Signal Sampler

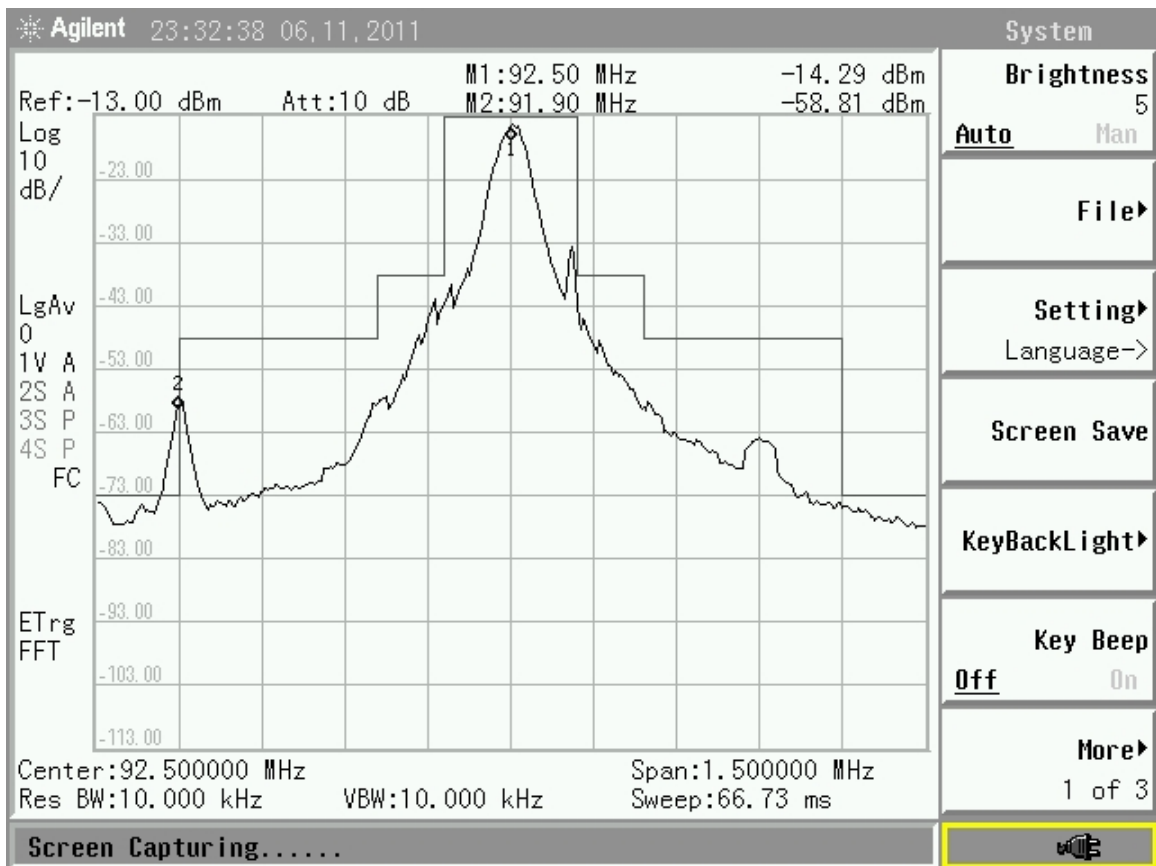


Figure 1. Frequency domain display of a “post combiner” sample of K223BT.

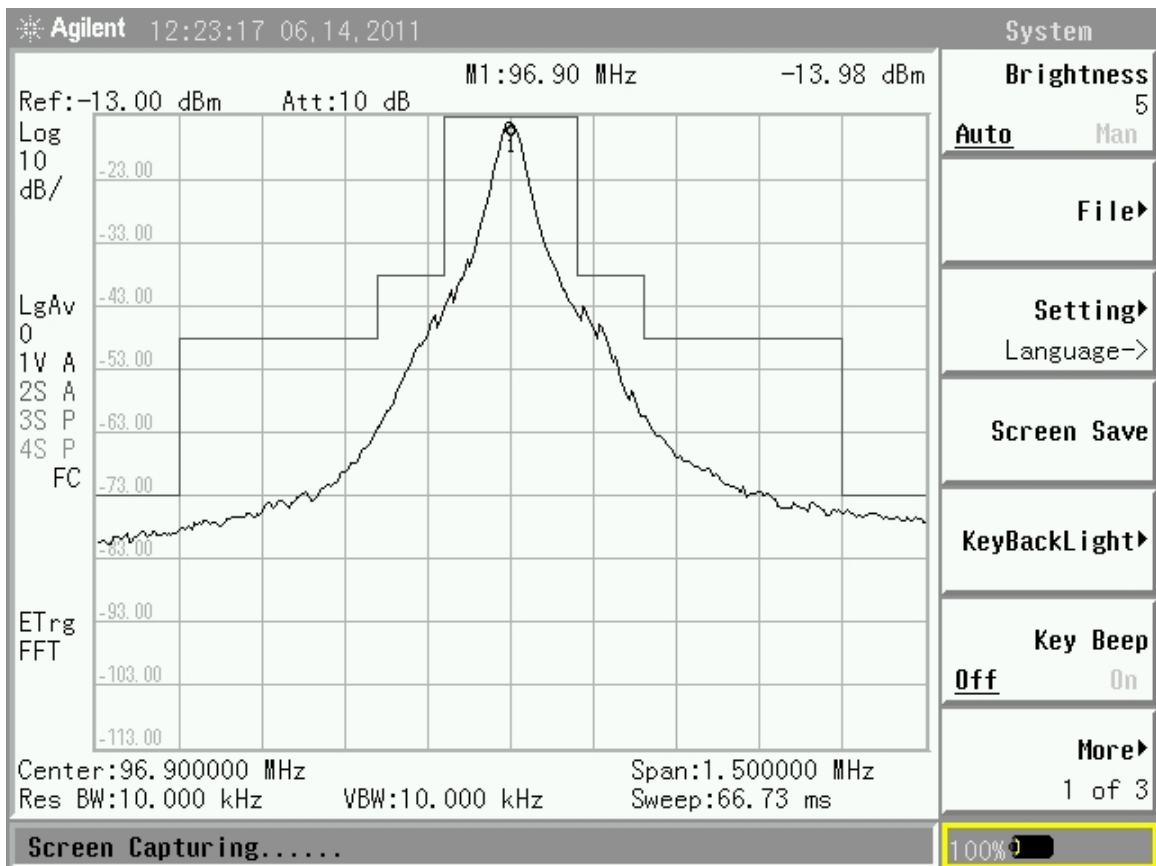


Figure 2. Frequency domain display of a “post combiner” sample of K245BD.

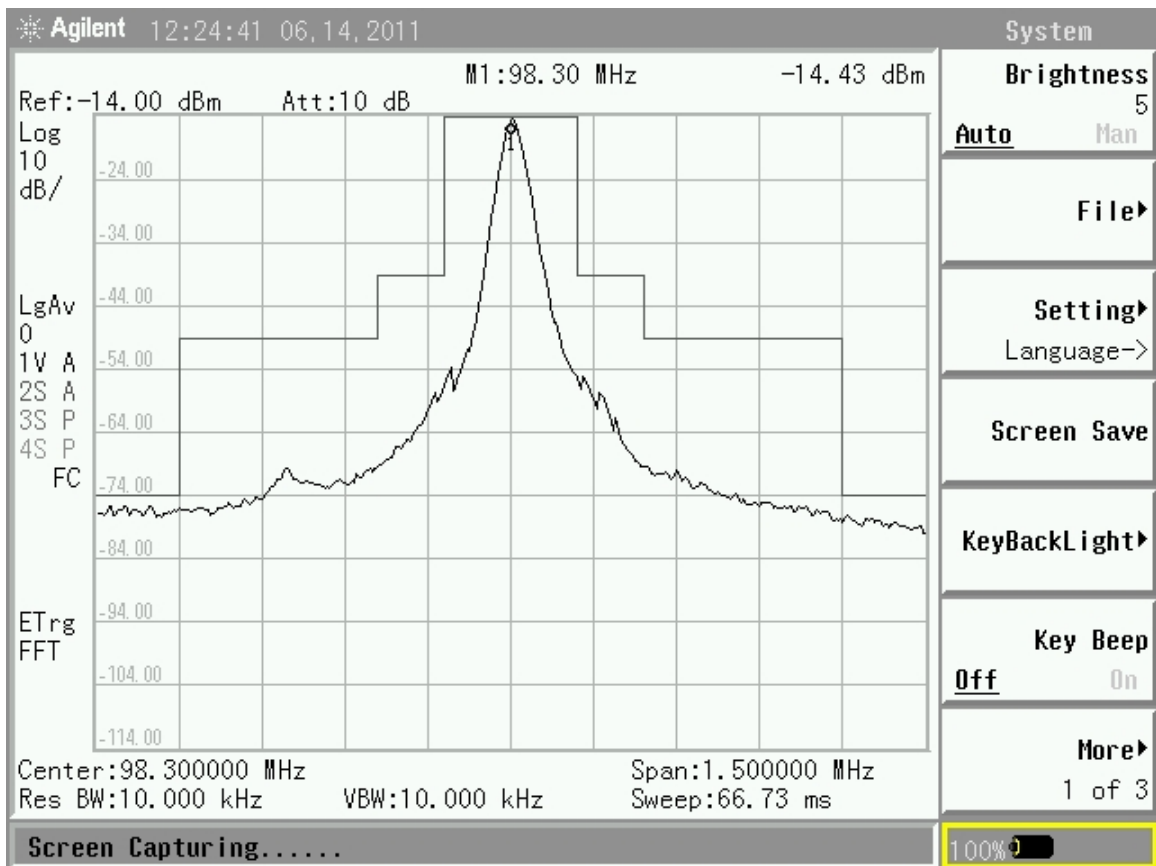


Figure 3. Frequency domain display of a “post combiner” sample of K252DN.

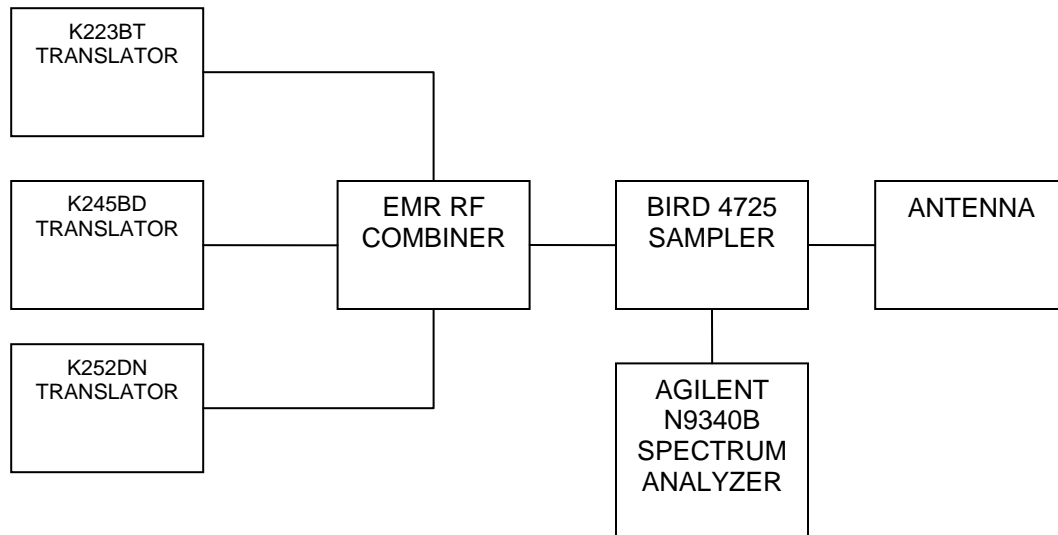


Figure 4. Block diagram of spurious emissions test setup.

## RFR TESTING

DATE/TIME: June 4, 2011, 4:00 PM

METER: Narda 8718B

SERIAL NUMBER: 02026

PROBE: Narda Model A8732D

SERIAL NUMBER: 1009

CORRECTION FACTOR: 0.710

PROBE BANDWIDTH: 300 kHz. – 200 MHz.

The maximum peak reading taken at the site, with all stations operating at full power, was  $79 \mu\text{W}/\text{cm}^2$  or 10.2% 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.