

July 27, 2001

Mr. Joe Dichoso  
FCC Application Processing Branch  
Federal Communications Commission  
7435 Oakland Mills Road  
Columbia, MD 21046

Subject: Applicant: Kohler Company  
FCC ID: N82PNA1  
Confirmation Number: EA93436  
Correspondence Ref. No. 20034

Reference: Kohler Waiver Request submitted June 16, 2000.

Dear Mr. Dichoso:

I received your email Monday, and would like to answer the questions you pose in it. We performed additional tests on another sample unit, at Compliance Certification Services, on July 26, 2001. The unit tested (S/N 08.10) is identical in design to the one tested on June 28, 2001, and from the same batch of prototypes. On 08.10, the center frequency measured 5.66 GHz, and the pulse length 2.02 nsec. Therefore, the main lobe in unit 08.10 extends from 5.16 to 6.15 GHz.

In answer to your questions:

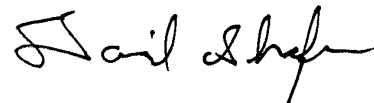
1. For the unit tested for the certification report (S/N 08.02), the center frequency is 5.64 GHz, and the pulse length has been changed from 1.1 to 2.2 nsec by the added filter. The main lobe extends in this sample from 5.18 to 6.10 GHz (the center frequency +/- half the main lobe width). Although the center frequency of the emission and the width of the main lobe will vary somewhat in production units, the main lobe will always lie entirely within the range from 5.0 to 6.6 GHz.
2. Since the RBW is a small fraction (0.1%) of the PRF, there is no difference between peak and average detector measurements. We verified this on S/N 08.10, obtaining readings 0.04 dB apart on the level of the spectral line at the peak frequency. These readings were obtained using a RBW of 1 kHz, VBWs of 100 kHz (peak detect) and 100 Hz (average). No pulse desensitization factor has been applied to the average measurements.
- 2B. The average level of the fundamental, by the line spectrum method, is 40.8 dB $\mu$ V/m @ 3m, so the peak level is 93.7 dB $\mu$ V/m @ 3m with full pulse desensitization of 52.9 dB applied.
- C. We scanned from 1-40 GHz using the following settings: 3 MHz RBW, 3 MHz VBW, peak detect and linear mode. No emissions from the DUT were observed, outside the area around the fundamental. On S/N 08.10, we measured the average emissions at the calculated edges of the main lobe to be 33.8 dB $\mu$ V/m @ 3m (5.16 GHz) and 35.9 dB $\mu$ V/m @ 3m (6.15 GHz), and peak emissions of 45.4 dB $\mu$ V/m @ 3m (5.16 GHz) and 48.5 dB $\mu$ V/m @ 3m (6.15 GHz). The average readings were obtained with RBW of 3 MHz, VBW of 10 Hz, linear mode and

peak detection. The peak readings were obtained with RBW of 3 MHz, VBW of 3 MHz, linear mode and peak detection. No emissions were detected into any restricted bands other than the ones from 4.5 – 5.25 GHz and 5.35 – 5.46 GHz, which are the subject of the waiver request.

- D. We made measurements at each harmonic frequency on S/N 08.10 using an RBW of 300 kHz, a VBW of 300 kHz, and peak detection. No line structure was visible on any harmonics up to 40 GHz, and the measurement noise floor was at least 3.8 dB below the Section 15.209 average limit of 54 dB $\mu$ V/m at 3 m at all frequencies. We also scanned for broadband emissions using an RBW of 3 MHz, a VBW of 3 MHz, and peak detection, and also found no emissions. The distance used was the minimum possible (the Rayleigh distance for the search antennas). This was 113 cm for the second harmonic (11.32 GHz), 170 cm for the third (16.98 GHz), 46 cm for the fourth (22.64 GHz), and 6 cm for harmonics five through seven (28.30, 33.96 and 39.62 GHz).

I hope these data provide you with the information you need to process the referenced application. If there are any other technical questions, please don't hesitate to contact me.

Sincerely,



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