

## **Conducted EMI**

The EUT was arranged in a typical equipment configuration and placed on a 1 x 1.5-meter wooden bench 80 cm above the conducting ground plane, floor of a screen room. The bench was positioned 40 cm away from the wall of the screen room. The LISN was positioned on the floor of the screen room 80-cm from the rear of the EUT. The power cord of the EUT was connected to the LISN. EMI was coupled to the spectrum analyzer through a 0.1  $\mu$ F capacitor, internal to the LISN. Power line conducted emissions testing was carried out individually for each current carrying conductor of the EUT. The excess length of lead between the system and the LISN receptacle was folded back and forth to form a bundle not exceeding 40 cm in length. The screen room, conducting ground plane, analyzer, and LISN were bonded together to the protective earth ground. Preliminary testing was performed to identify the frequencies of the emissions, which had the highest amplitudes. The cables were repositioned to obtain maximum amplitude of measured EMI level. Once the worst-case configuration was identified, plots were made of the EMI from 0.15 MHz to 30 MHz then the data was recorded with maximum conducted emissions levels. Refer to Figures 1 and 2 for plots of the spectrum analyzer display reflecting the conducted emissions.

MARKER  
16.72 MHz  
47.51 dB $\mu$ V

ACTV DET: PEAK  
MEAS DET: PEAK QP AVG  
MKR 16.72 MHz  
47.51 dB $\mu$ V

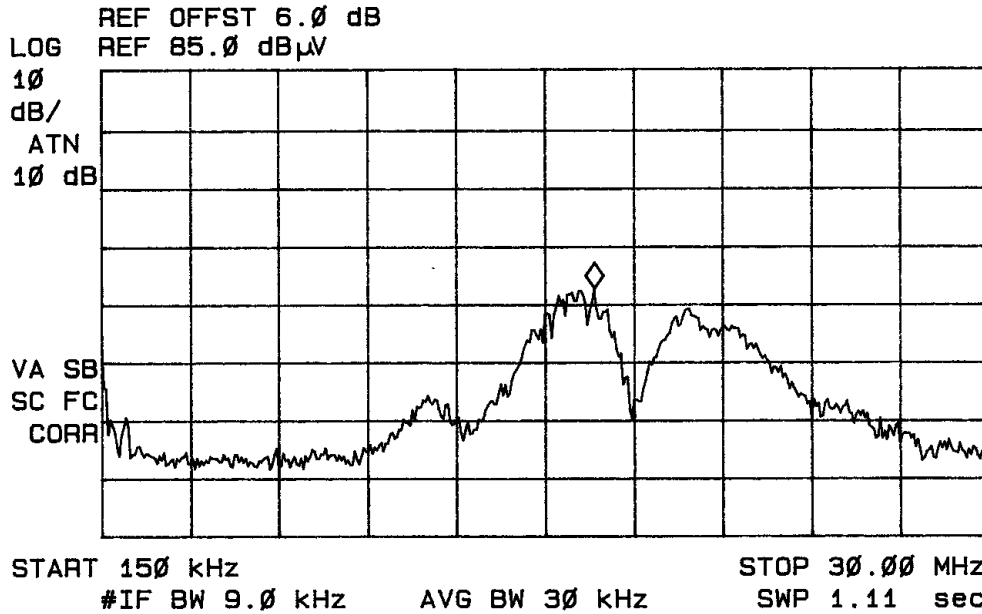


Figure one Line Conducted Emissions for (L1).

MARKER  
16.72 MHz  
49.74 dB $\mu$ V

ACTV DET: PEAK  
MEAS DET: PEAK QP AVG  
MKR 16.72 MHz  
49.74 dB $\mu$ V

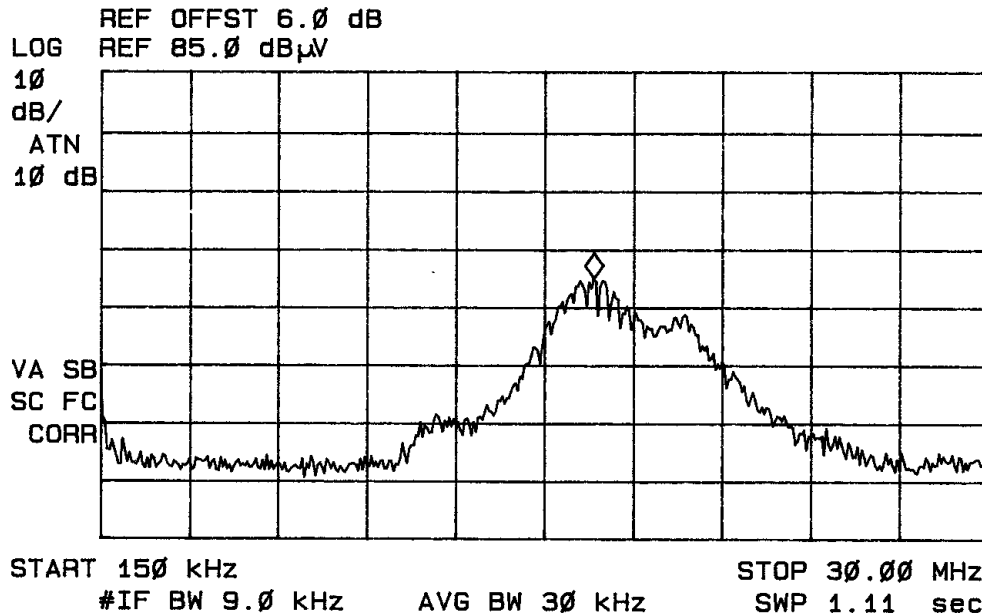


Figure two Line Conducted Emissions for (L2).

### **Conducted (6 Highest Emissions)**

| Frequency band (MHz) | L1 Level (dBµV) |      |      | L2 Level (dBµV) |      |      | FCC Limit Quasi Peak (dBµV) |
|----------------------|-----------------|------|------|-----------------|------|------|-----------------------------|
|                      | Peak            | Q.P. | AVE  | Peak            | Q.P. | AVE  |                             |
| 0.15 - 0.5           | 41.4            | 40.3 | 40.0 | 41.8            | 41.0 | 40.8 | --                          |
| 0.5 - 5              | 28.6            | 26.7 | 25.1 | 29.5            | 26.8 | 25.4 | 48                          |
| 5 - 10               | 23.3            | 18.8 | 14.8 | 18.4            | 14.2 | 8.0  | 48                          |
| 10 - 15              | 37.1            | 35.9 | 35.0 | 38.1            | 37.0 | 34.3 | 48                          |
| 15 - 20              | 46.3            | 45.1 | 43.2 | 48.0            | 46.5 | 44.3 | 48                          |
| 20 - 25              | 38.0            | 36.3 | 35.0 | 47.9            | 47.1 | 45.5 | 48                          |
| 25 - 30              | 35.5            | 33.1 | 28.8 | 34.6            | 31.8 | 27.0 | 48                          |

Other emissions present had amplitudes at least 10 dB below the limit.

### **Conducted Emissions Results**

The conducted emissions for the EUT meet the requirements for FCC Part 15.207. The AR 2200 had a 15 dB minimum margin below the FCC quasi-peak limit. Other emissions were present with amplitudes at least 10.0 dB below the limit.