

**IEEE 802.4L Submission on Microwave Oven Interference
Measurement**

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Synopsis:

Measurements were made on the radiation characteristics of microwave ovens. The interpretation of the results obtained in these measurements led to the belief that the radiation had basically a random and piece-meal contiguous frequency content over approximately 100 Mhz bandwidth with specific amplitude envelope distributions.

The results obtained in time domain power measurements showed abrupt amplitude variations over time. It was hypothesized that the abruptness of the amplitude behaviour contributed significantly to the frequency spectra observed.

The results and the observations during the measurement process led to the assertion that there was no evidence that the interference potential from the microwave ovens resembles an unique frequency line interferer, within the observation time and frequency constraints.

The absence of a clearly observable fundamental frequency from the magnetron output indicates that this may have been an intentional design feature for an oven. The measurement results suggested that the magnetron was operating in a spurious moding condition with abrupt amplitude variations. This operating mode may presents a severe channel interference problem.

PS: Full submission will be presented at the March meeting with supporting test results.

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