Abstracts

Prediction and Measurement of Oscillator Frequency Modulation under Random Vibration

J.R. Ashley and C.B. Searles. "Prediction and Measurement of Oscillator Frequency Modulation under Random Vibration." 1965 G-MTT Symposium Program and Digest 65.1 (1965 [MWSYM]): 217-221.

Many microwave oscillators operate in a vibrating environment and the effect of this vibration on performance must be known. Test data have shown the vibration in missiles and jet aircraft is not sinusoidal; indeed, the spectrum analysis of vibration shown in Figure 1 indicates that the vibration is better simulated by band limited random noise than by sinusoidal vibration. Diagnosis of trouble is easier to perform and understand if sinusoidal vibration is used. Therefore, it is desirable to predict the frequency modulation of an oscillator operating under random vibration, on the basis of tests made with sinusoidal vibration.

❑ Return to main document.