

PRELIMINARY STUDY ON LOCK-IN THERMOGRAPHY USING AN INVERSE DYNAMIC SYSTEM DESIGN

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ABSTRACT

We adopted an inverse dynamical system(IDS) into the Lock-in Thermography(LIT) to increase the sensitivity of the semiconductor inspection system. IDS was designed to obtain the maximum signal to noise ratio(SNR) of LIT image by applying an optimized signal to the semiconductor chip to be inspected using a programmable voltage generator. In addition, we introduce some user friendly features such as monitoring the state of the system and the flexible control of Lock-in frequency and source voltage.

KEYWORDS: Infrared, Semiconductor Inspection Equipment, Lock-in Thermography