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[54] **APPARATUS AND METHOD FOR DIFFERENTIAL ANALYSIS USING REAL AND IMAGINARY SIGNAL COMPONENTS**

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[52] **U.S. Cl.** **374/10**; 374/31; 364/557

[58] **Field of Search** 374/10, 11, 12, 374/31; 364/557

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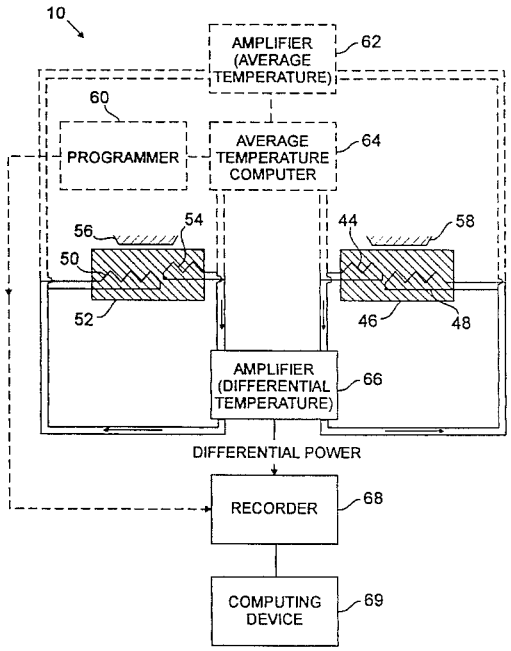
[57] **ABSTRACT**

The invention is directed to a differential analysis method and apparatus wherein a sample and reference are subjected to an externally applied disturbance, such as temperature change, in accord with a prescribed function comprising the sum of a linearly changing part and a periodically changing part, and the measured differential signal is processed into real and imaginary components relating, respectively, to the energy storage and energy loss portions of the signal.

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