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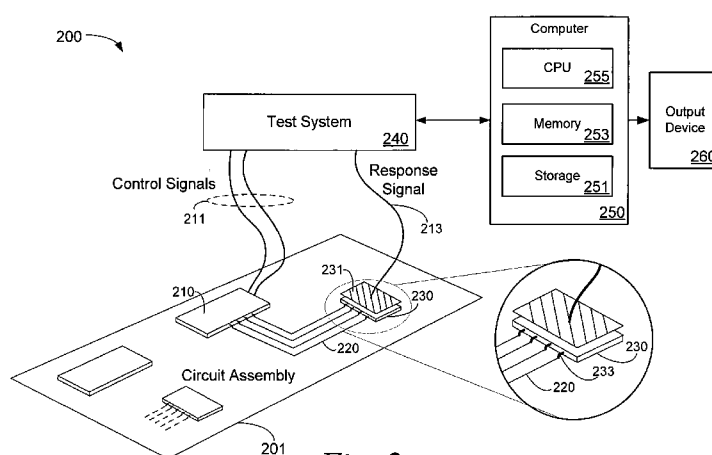


Fig. 2

(57) Abstract: A test system and method for identifying open and shorted connections on a printed circuit board (PCB). An integrated circuit (IC) unit on the PCB is configured to generate a test signal on an output pin connected to a test pin on a second device, connector, or socket on the PCB. For a connection, the test signal is capacitively coupled to a detector plate proximal the second device. Based on the signal coupled to the detector, time domain analysis is performed on the coupled signal to determine if the test pin has a good connection to the PCB or if the pin is open or shorted. Analysis may include cross-correlating the coupled signal with a learned signal obtained from a known "good" PCB. The test pin may pass the test if the cross-correlation is within a specified threshold window. If the test fails, additional tests may be performed to troubleshoot the cause of the testing failure.