

Product Details:

- ❖ Integrated Passive Device Networks.
- ❖ The Customer began operations with foil resistors and strain gages as its initial product offerings and later moved onto thin film manufacturing of the passives in Silicon form.
- ❖ The Customer is one of the world's leading manufacturers of all passive original products and provides "one-stop shop" service to their Customers.
- ❖ The products are used in virtually all types of electronic devices and equipment, in the industrial, computer, automotive, consumer, telecom, military, aerospace, and medical markets.

Project Details:

- ❖ The Customer wanted to have a cost effective test solution for manual socket level verification of all their products.
- ❖ They did not prefer to have the solution in any complex ATE system as it was felt that it will be difficult to maintain the system intended just for doing sample testing.
- ❖ A simple user friendly automated test program was required for testing all their products and storing the data for further analysis.
- ❖ It was also required to transfer the data into a suitable database for statistical processing and for the performance evaluation after doing the reliability tests.
- ❖ The products had very low capacitance and resistance value elements in a loop which have to be accurately tested for their tolerance. Some of them needed Active Guarding Technique to measure the individual elements.

Key Highlights:

- ❖ The foremost challenge was to provide a solution which could fit into the budget and still be able to perform the job accurately. The meters from Agilent with appropriate MUX resources and Labview software were used.
- ❖ The Customer wanted the solution to be extremely user friendly with selection of values by simple graphical icons & menus. This necessitated a more detailed programming that should cover all aspects of interfacing with the user in a simple graphical form that is self-explanatory for data capturing & reporting.
- ❖ The program has to take care of all the possible errors that can be induced by the user and ensure that correct data is fed in for performing the required functional tests.
- ❖ The hardware has to be a more general purpose one which means that the program has to be accordingly coded for testing different product families.
- ❖ The criticality on the value & accuracy of the measurement required a correlation routine to be incorporated in the program, to be executed at the time of set-up. Also the coding was required to be secured and hence a loadable file was created for each program type, which will make the source code invisible to the user under operator mode. Higher levels of security management features were incorporated in the solution.

Equipments Used:

Meters : Agilent LCR meter & Multiplexers
Communication : GPIB BUS / Serial Interface
Tester : PC based