

## **Breadboard-System**

When developing integrated circuits, simulation is a necessary step to avoid time consuming and expensive experiments.

Computer simulation allows to describe the performance of a circuit within a wide range of temperature and frequency. But as the so-called "parasitics" of individual IC components are mostly disregarded, usually the performance of the finished analog ICs differs considerable from the simulation.

The "Breadboard Simulation" uses individually extracted and in IC-housings packaged IC-components, socalled "kitparts". These can now be wired in experimental breadboards or connected on wirewrap cards. This is state of the art for the analog IC development. At any rate the disadvantage is that the plugged and wired circuit is not clearly arranged, as for example the collector of a certain transistor can only be found by searching the right housing and laborious counting of pins.

## This problem is conveniently solved by the Breadboard System of ASIC.

- In addition to standard kitparts (e.g. three or four PNP- or NPN-transistors in one IC-housing) there are also kitparts available which especially consider the simulation problem of parasitic effects.
- For every kitpart the symbols with all connections are clearly displayed on an exchangeable and labelled tag.

As there are also blank tags available this system is not limited to ASIC kitparts. It is also possible to use and label more complex IC's or kitparts of other processes. Kitpart and tags are one device and can be accommodated in small "system boxes" with each 5 spots (IC socket). Wiring is made by different longflexible cables with small connectors. A fitting frame ensures the necessary mechanical stability.

Due to the simple handling a very powerful tool is available for the analog IC. Together with computer simulation the design reliability is considerably improved.

It was developed by professionals for simulating customer specific linear circuits. But it is not limited to this. Using 18-pole DIL-housings it is suitable in a concise way for designing user-defined test and measurement circuits.

We are convinced that this system will provide excellent services for the whole electronics area for developing test circuits.

We produced a small production run and are now offering its components. The system consists of one frame, which accommodates eight "system boxes". This frame protects the assembly and allows to transport the designed circuit. The "system box" comprises five 18-pole sockets for five user-defined (maximum 18-pole) IC's in a DIL-housing.

For this system kitparts with appropriate tags for ASIC 24 V / 36 V / 40 V bipolar processes, for GX3 analog / digital / EEPROM processes and for BSD MP processes (110 V) are available.

Further information are available for you. Please contact us.