

DIGITAL AND LARGE INTEGRATED CIRCUITS, ELECTRONIC HALF CONDUCTIVE DEVICES DESIGN COMMON CASES

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Abstract : This in the article digital integrated circuits , large integrated circuits and electron half conductive devices work principles and when designing common cases seeing developed .

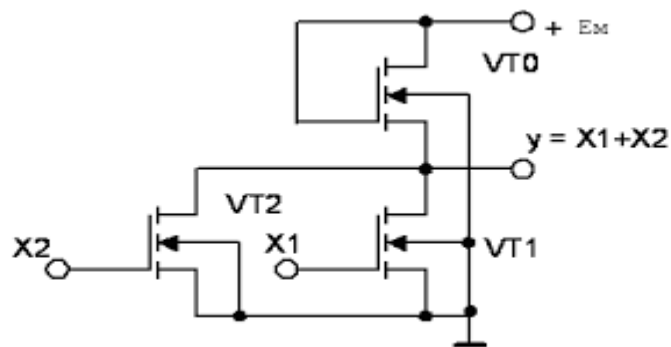
Key words: Integrated circuits, transistors, diodes, capacitors resistors, electric signals, discrete components, microelectronics, crystal field, electromagnetic, arithmetic makes sense devices .

Introduction: Digital Integrated Circuits. An integrated circuit (IMS) is mutually connected one how many transistors , diodes , capacitors . Resistors sum is considered and he is the only one technological in the cycle prepared (i.e one while), electricity signals in the change known functions performs _

In IMS entered components from him independent separate taken and independent item as use possible it's not . They are called integral elements . Of them different dying to them constructive customized detail and devices discrete called components. They are based on Created blocks while discrete are called schemes .

High cleanliness and quality, compactness, lightness, cheap integrated circuits the people household all in the fields wide to use reason is happening. Modern microelectronics basis Semiconductor integrated microcircuits organize is doing Modern semiconductor IMS crystals dimensions are 1.5x1.5 from to 6x6 mm .

Figure 1: Half conductive static digital integrated circuits circuit engineering



Crystal area how much big if to him that's all a lot element integrated circuit placing possible will be

integrated circuits transistors known connections based on resistor and condenser harvest to do can .

Semiconductor IMS feature from that consists of them elements between inductance reel no, because that's it until then hard in bodies electromagnetic induction equivalent was physicist event get opportunity did not happen.

A large integrated microcircuit is a lot numerous one different from the cells organize found a lot sized semiconductor to the device it is said. It is complicated functional to the scheme united will be.

Current in the day work issuing large integrated circuits (KIMS) 10 thousand and from him more than logic from the elements organize finds.

All KIMS three to class is divided .

1) counters, resistors, accumulators, arithmetic-logic devices type functional blocks :

2) memory devices (XQ):

3) microprocessors (MP).

The first KIMS are MDP (metal dielectric semiconductors) structure based on built Current in the day to the KIMS element database bipolar structures are also included .

Electronic and semiconductor devices design common cases.

That's right electron and semiconductor devices structural and principle electricity schemes them work principles analysis to do teaches . But this electricity schemes electricity and semiconductor devices construction mark maybe not them make up for basis be takes only Such devices design main principles about concepts them work only on release it's not . Maybe of them use also needed for will be Electronic and **semiconductor devices elements asset and passive is divided.**

Active to the elements the following includes: semiconductor and electrovacuum tools

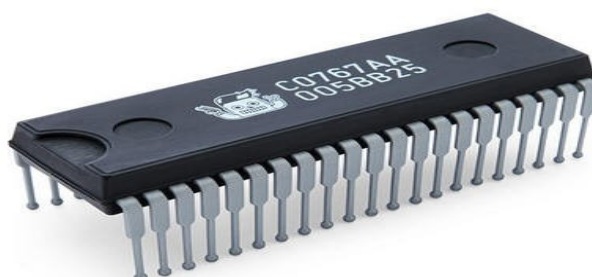


Figure 2 : Microcontroller

Integral electronic. Integral scheme the first integrated circuit appear it has been .

Passive to the elements and: resistors, capacitors, transformers, inductance coils, relays, connectors, indicators, wire and cables.

Device elements are in optimal condition placement and fastening should, one briars with principle scheme based on connection need.

Modern electron and semiconductor devices many part print to the boards placed Such boards dielectric basis considered holes there is and drawings shown . 0.3-1.5 mm in diameter harvest done holes suspension elements (integrated circuits, transistors, resistors, capacitors). posting , printing sycamore fasten and reverse on the side placed elements connect for is used . A hole walls metalized .

Suspension elements ends in holes because it is tinned to them pressure wires came So by doing print uzel (knot) is produced will be done .

Print boards surface shorten for multi -layered boards (KQP) are used , they exchanger dielectric from layers Created will be KQP in layers print wires distribution print boards dimensions sharp to shorten take it comes _ thing a lot to exits have was _ from microcircuits is used .

Electronic and semiconductor devices (NO). design and in use **aggregation** use big benefit will give . Aggregation-reciprocal interchangeable node and from the blocks Created devices **konpanovka** is a method.

Aggregated complexes in making to him entered all node and blocks full electricity and constructive exchange in the eye is caught . Main typical blocks and subblocks unified , this condition new equipment work exit and work to issue application reach the time sharp shortens .

Aggregate to complexes standard to the dimensions have was constructive elements collection enters.

Aggregate complexes nomenclature so is constructed so that, relatively little blocks the total known in number different to complexity to the task have was device and systems to see possible let it be Aggregate to the complex example by doing indestructible control device complex get can. Him to the composition car, specified frequency generator, analog- discrete switch and one channeled himself writes resistors subblocks and some one another blocks enters.

Electronic and semiconductor devices constructive execution very hilma character and them duties use field with is determined.

For example stationary in the circumstances work for intended electron hardware plane on board or space on the ship used from the hardware difference big.

Conclusion by doing that's it to say possible: present in the day electronic, semiconductor and electromagnets based on different devices, automated industry robots and manipulators is being built. They are using technological processes management, control and information systems is improving .

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