CMOS LAMBDA BASED DESIGN RULES

Till now we have studied the design rules wrt only NMOS, what are the rules to be followed if we have the both p and n transistor on the same chip will be made clear with the diagram. Figure 16 shows the rules to be followed in CMOS well processes to accommodate both n and p transistors.

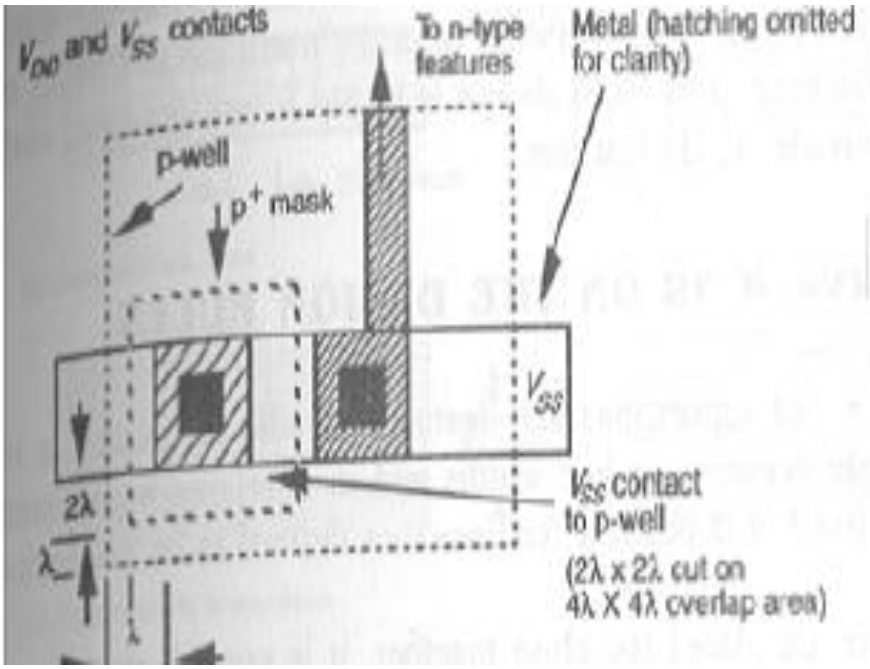

Figure 16: CMOS design rules.

Orbit 2μm CMOS process:

In this process all the spacing between each layers and dimensions will be in terms micrometer. The 2^m here represents the feature size. All the design rules whatever we have seen will not have lambda instead it will have the actual dimension in micrometer.

In one way lambda based design rules are better compared micrometer based design rules, that is lambda based rules are feature size independent.

Figure 17 shows the design rule for BiCMOS process using orbit 2um process.

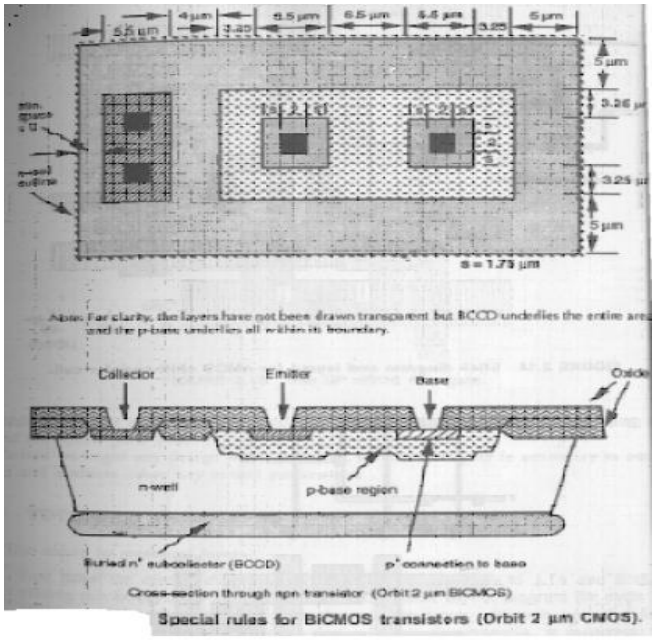

Figure 17: BiCMOS design rules.

The following is the example stick and layout for 2way selector with enable (2:1 MUX).

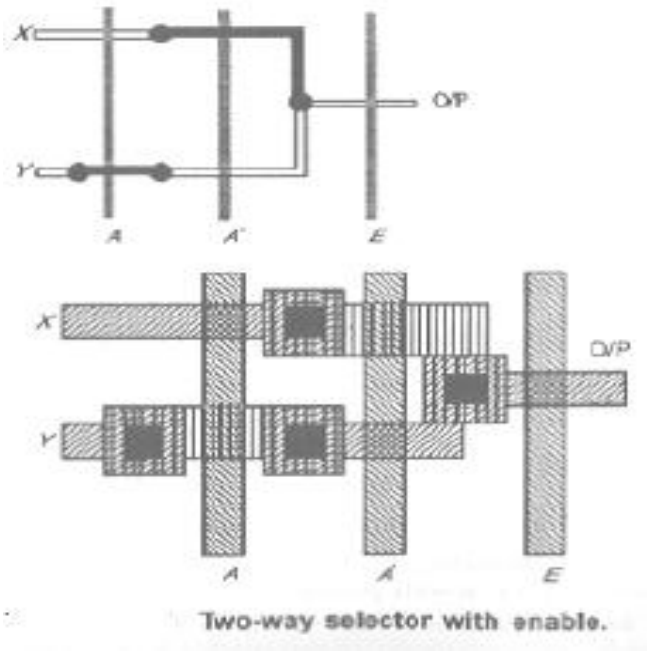

Figure 18: Two way selector stick and layout

Source : http://elearningatria.files.wordpress.com/2013/10/ece-v-fundamentals-of-cmos-vlsi-10ec56-notes.pdf