

9.3 Epitaxial Layers

9.3.1 General Remarks

Epitaxial layers play a very big role in compound semiconductor technology, while in **Si** it was only used for the bipolar technology. **MOS** and **CMOS** technologies for many generations could do with the (for **Si** expensive) epitaxial layer deposition techniques. In compound technology it is different for several reasons:

- The substrates are far less perfect than **Si** single crystals, and epitaxial layers usually have a better crystal quality than the substrates (this was also a main driving force behind **Si** epitaxy in the early days of **Si** technology in the seventies).
- There are more (and sometimes relatively cheap) methods to grow epitaxial layers of compound semiconductors.