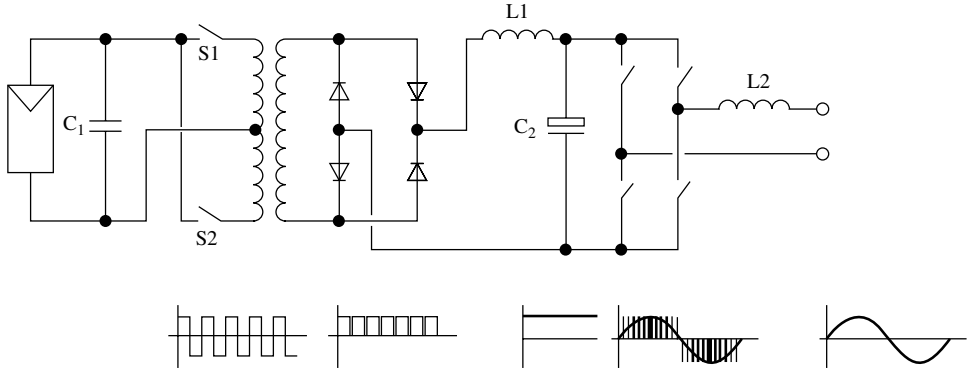

Figure 19.42 HF transformer combined with PWM H-type bridge inverter

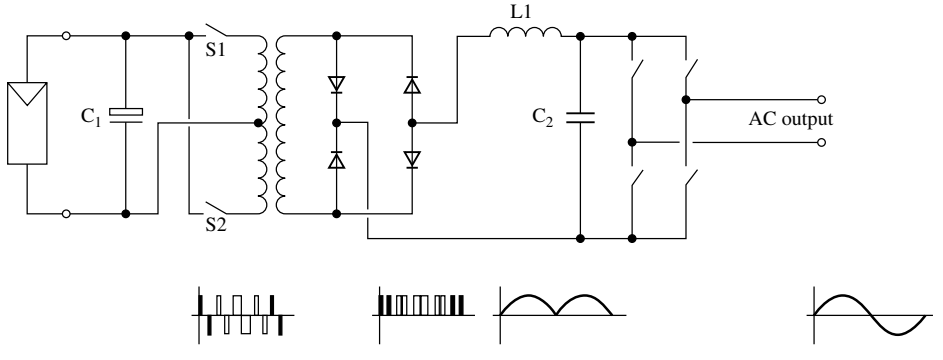

Figure 19.43 HF transformer combined with PWM high-frequency generator at the input side and a low-frequency H-type bridge at the output side

Figure 19.43 has been replaced by active switches combining the functions of rectification and inversion. This configuration is shown in Figure 19.44. It should be noted that in this case, the switches in the H-type bridge have to be operated in the rhythm of the high frequency in contrast to the configuration according to the topology shown in Figure 19.43. Since transistors switched with higher frequencies have higher losses as well as higher investment costs, the benefit of saving the passive rectifier used in the concept given in Figure 19.43 might be compensated by these facts to a certain extent.

19.2.5 Power Quality of Inverters

When dealing with power quality, a distinction has to be made between stand-alone and grid-connected applications.

In a stand-alone operation, the output waveform becomes important for many applications. Square-wave inverters, according to the working principle shown in Figure 19.21 or Figure 19.22, may be used to power resistive-type loads such as light bulbs or similar objects. When feeding power to reactive-type loads such as motors, proper operation