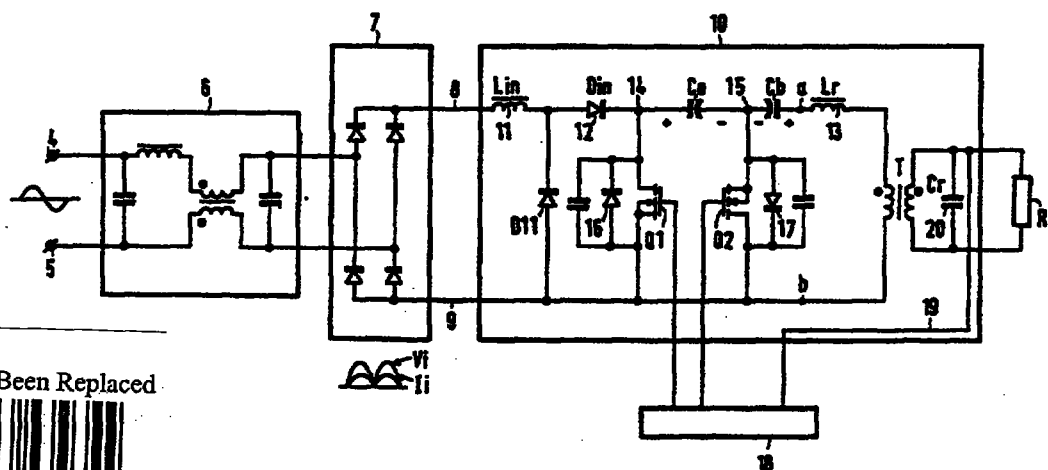




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(54) Title: HIGH FREQUENCY AC/AC CONVERTER WITH POWER FACTOR CORRECTION


This Sheet Has Been Replaced

**(57) Abstract**

A high frequency AC/AC converter apparatus with power factor correction includes an AC/DC converter circuit part to provide power factor correction and a DC/AC inverter circuit part to produce a high frequency AC signal for operation of a load, such as a discharge lamp. The AC/DC converter circuit part includes a diode and an inductor. The converter apparatus utilizes first and second semiconductor controlled switching devices, one of which is common to each part of the overall converter apparatus. A single control circuit controls both parts of the converter apparatus by controlling the switching of the first and second semiconductor switching devices. There are two possible control techniques, constant duty ratio control or duty ratio sweeping control. A voltage clamp circuit inhibits undesired oscillation of the diode voltage.