11 - The DC-DC converter block according to one of claims 1 to 10, characterized in that the HEMT transistors (T3, T6) of the step-down power circuit and the HEMT transistors (T1,T2; T4,T5) of the driving circuit are made of any one of gallium nitride (GaN), gallium arsenide (GaAs) or any other semiconductor material with materials of the group III-V.

12 - The DC-DC converter block according to one of claims 2 and 5 to 7, characterized in that the diodes (D1,D2,D3) are of Schottky type and made of Si, SiC, GaAs, GaN or any other semiconductor material with materials of the group III-V.

13 - A high-power and high-frequency DC-DC converter for the envelope tracking technique, characterized in that it comprises a DC-DC converter block according to one of claims 1 to 12 and an output filter connected to the output of the step-down power circuit of the DC-DC converter block, the filter preferably comprising capacitors and inductors, the output of the output filter constituting the output of the high-power and high-frequency DC-DC converter.

14 - The high-power and high-frequency multi-phase DC-DC converter for the envelope tracking technique, characterized in that it comprises at least two DC-DC converters according to claim 13 mounted in parallel and supplied by the same power supply voltages (VDD1) and (VDD2).

15 - A system for the envelope tracking technique comprising a DC-DC converter for the envelope tracking technique according to claim 13 or a multi-phase DC-DC converter for the envelope tracking technique according to claim 14, a radio frequency (RF) power amplifier and an envelope tracking processing digital circuit, the envelope

tracking processing digital circuit controlling the DC-DC converter and the RF power amplifier, and the output of the DC-DC converter being connected to the power supply voltage input of the RF power amplifier.