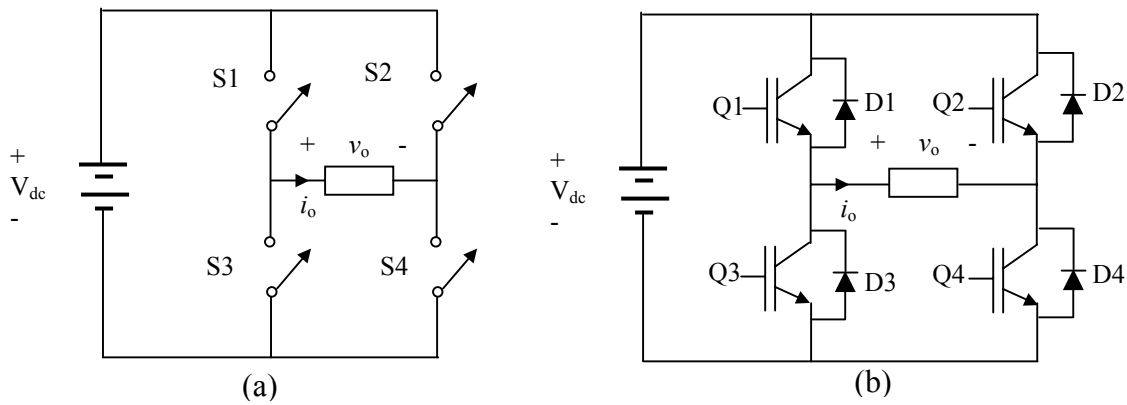


Topology: Full Bridge

Circuit diagrams:



Switching states possibilities for full bridge inverter

Mode	S1	S2	v_o	Notes
I	OFF	OFF	0	Freewheeling
II	OFF	ON	-Vdc	-
III	ON	OFF	+Vdc	-
IV	ON	ON	0	Freewheeling

(c)

Figure 4-2-1 Full bridge inverter (a) using ideal switches, (b) using IGBTs and antiparallel diodes, (c) switching states.

Switching schemes:

(i) Square Wave (SW)

Circuit Operation and key waveforms:

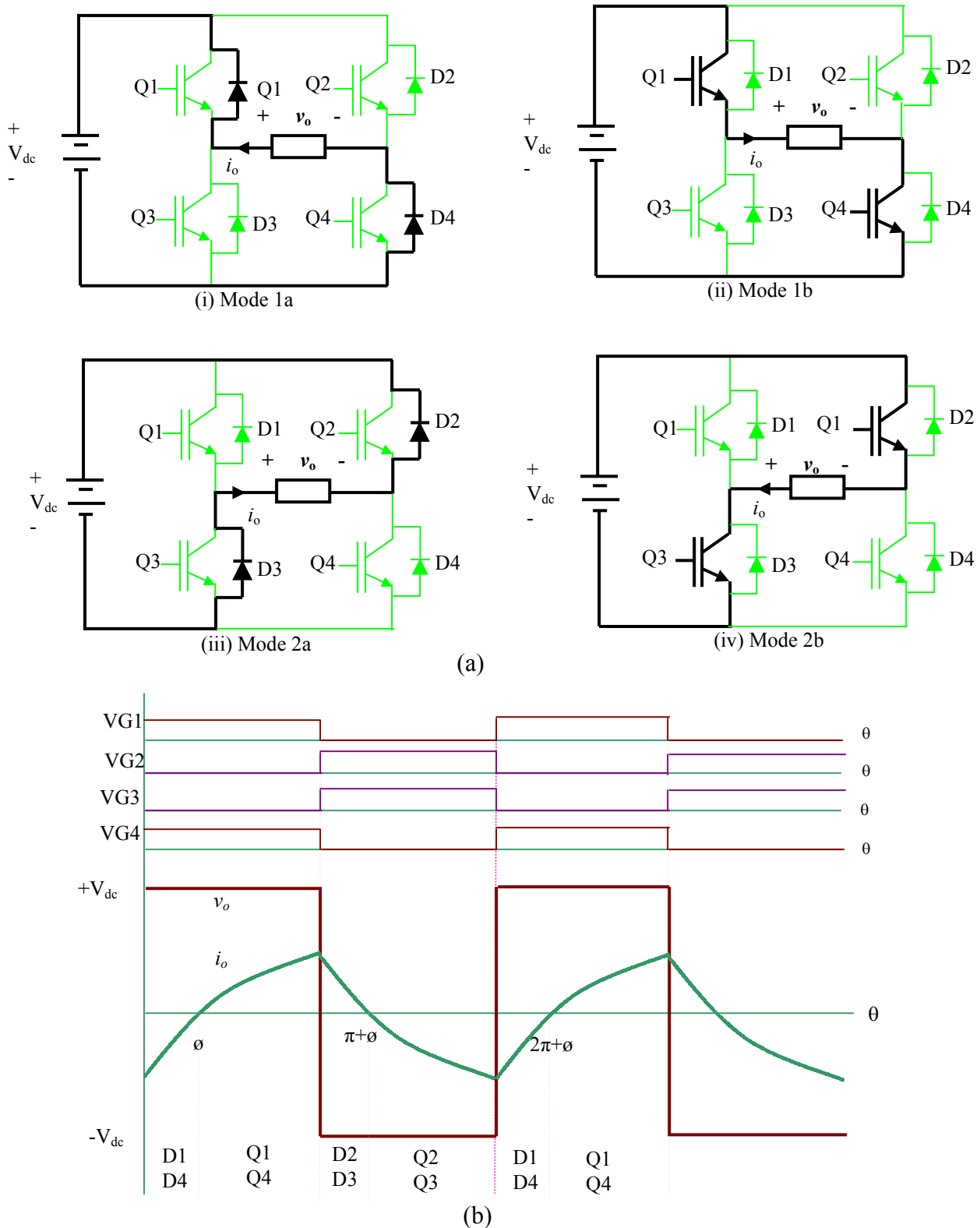
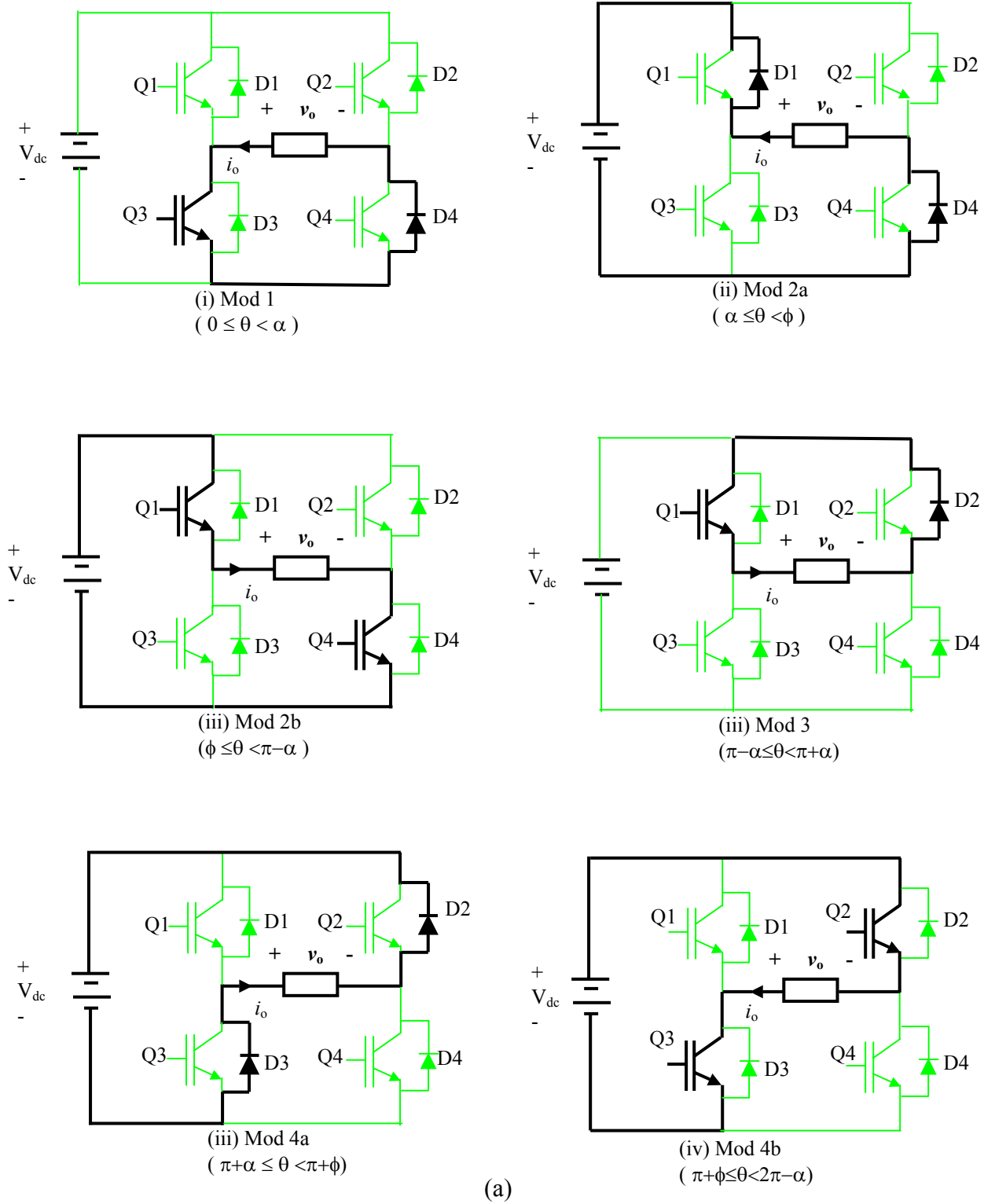


Figure 4-2-2 Full bridge inverter with square wave switching scheme, a) circuit for each mode of conduction, b) v_o and i_o waveforms.

(ii) Quasi-square Wave (QSW)

Circuit Operation and key waveforms:



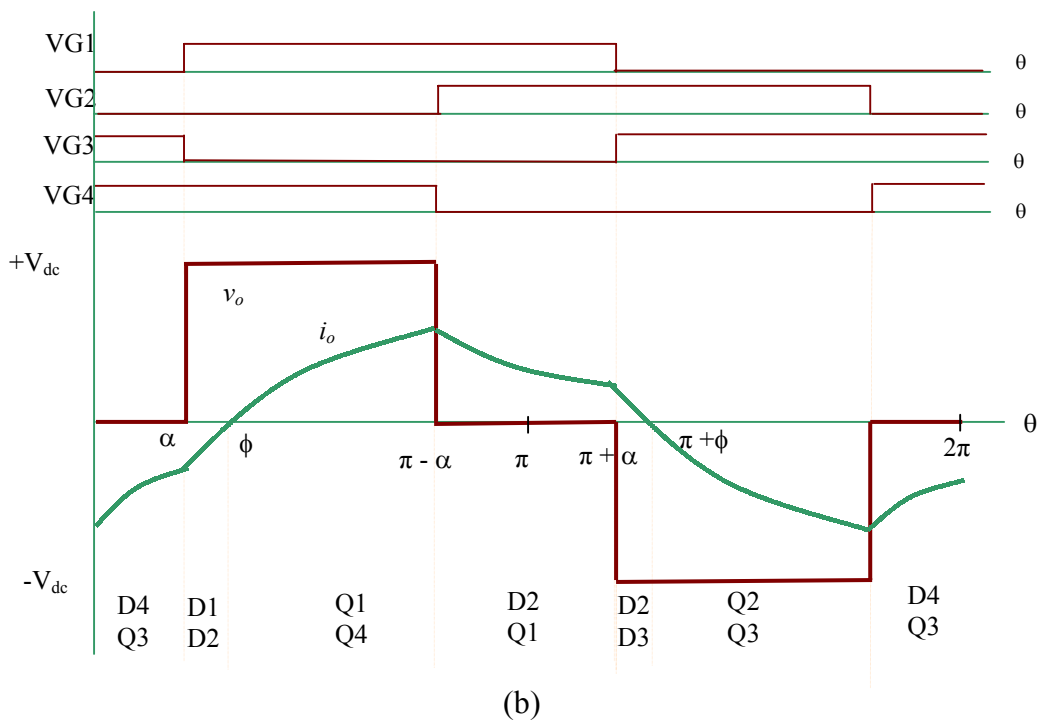


Figure 4-2-3 Full bridge inverter with quasi square wave output voltage, a) circuits for each conduction modes, b) output voltage and current.

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