Voltage loss compensation for dc-dc converters

A DC-DC converter (100) having an input node receiving an input voltage \( V_{IN} \) and an output that provides power to a load circuit. A pulse width modulation (PWM) unit (201) is coupled to chop \( V_{IN} \) into a square wave under control of a \( V_{DRIVE} \) signal. An output stage (207) converts the chopped \( V_{IN} \) to an output voltage \( V_{OUT} \) coupled to an output node (203). A parasitic impedance is coupled between the output node (203) and the load circuit as a result of resistance in the circuit board wiring and\( I/O \) pins. A reference voltage generator provides a voltage \( V_{REF} \) while an offset voltage generator provides a compensation voltage representing a voltage drop across the parasitic impedance \( V_{LDR} \). A comparator unit receives \( V_{OUT} \), \( V_{REF} \), and \( V_{LDR} \) and is coupled to the PWM unit to provide the \( V_{DRIVE} \) signal.