

EVALUATION KIT FOR CHARGE PUMP TC7660X, TC7662X, TC660, TC962, TCM680, TC682, TC1044S

GENERAL DESCRIPTION

The charge pump evaluation kit provides a means for evaluating TelCom's entire family of charge pump DC-to-DC converters on a single board. The evaluation kit allows one to evaluate the TC660, TC962, TC1044S, TC7660, TC7660H, TC7660S, TC7662A and TC7662B in both voltage inverter and voltage doubler configurations. The evaluation kit also allows one to evaluate the TCM680 (positive and inverting voltage doubler), the TC682 (inverting voltage doubler), and the TCM850 products (regulated voltage inverter).

DETAILED DESCRIPTION

The evaluation board provides four different circuit configurations for evaluating the various charge pump converters.

The TC660, TC962, TC1044S, TC7660, TC7660H, TC7660S, TC7662A, and TC7662B function in the S1 and S2 sockets. Sockets S1 and S2 are configured as a voltage inverter and a voltage doubler, respectively.

The TCM680 functions in the S3 socket as a positive and inverting voltage doubler. The V^+ and V^- outputs provide output voltages equal to $2 \times V_{IN}$ and $-2 \times V_{IN}$, respectively.

The TC682 also functions in the S3 socket as an inverting voltage doubler. The TC682 only uses three $4.7\mu\text{F}$ capacitors (C7, C8 and C10) to generate the V^- output. The V^- output provides a voltage equal to $-2 \times V_{IN}$. The V_{OUT}^+ output is floating in this configuration.

The TCM850 is configured as a regulated inverter. The NEGOUT terminal is a non-regulated output (which is equal to V_{IN}^-). The OUT pin is a regulated inverted output. The voltage on the OUT pin can be set to a fixed -4.1V or adjusted with a resistor divider tied to the pin 5 (FB).



Schematic Diagram

