LM74610QDGKTQ1 ideal diode is not proper for the application required. The

voltage OR concept provides. In particular the IC works in two temporal steps:

◦ T0: during T0, When power is initially applied, the load current (ID) will flow

through the body diode of the MOSFET and produce a voltage drop (Vf)

during T0 in Figure 9. This forward voltage drop (Vf) across the body diode

of the MOSFET is used to charge up the charge pump capacitor Vcap.

During this time, the charge pump capacitor Vcap is charged to a higher

threshold of 6.3V (typical);

◦ T1: Once the voltage on the capacitor reaches the higher voltage level of

6.3V (typical), the charge pump is disabled and the MOSFET turns ON.

During the acquisition the values on the output were modified by this

behavior in every single power rails: 3v3, 3v3\_aux, 5v, 28V. Down below

some acquisitions are related to the current application. full test under load

have been done.



Table

Description automatically generated

A screenshot of a computer

Description automatically generated

Graphical user interface

Description automatically generated

A screenshot of a computer

Description automatically generated with medium confidence