

# MobileyeEyeQ6L – Semi Discrete Power Tree



This document is an abstract of the test report of our semi-discrete power tree for the Mobileye EyeQ6Lite® SoC. Automotive applications such as Autonomous Driving Assist Systems (ADAS) use ADAS Domain Controller processors such as the Mobileye EyeQ6L®. These are sophisticated processors which require a very high amount of current at very low voltages. These processors also require very fast transient response of the output voltage for step changes in processor load current.

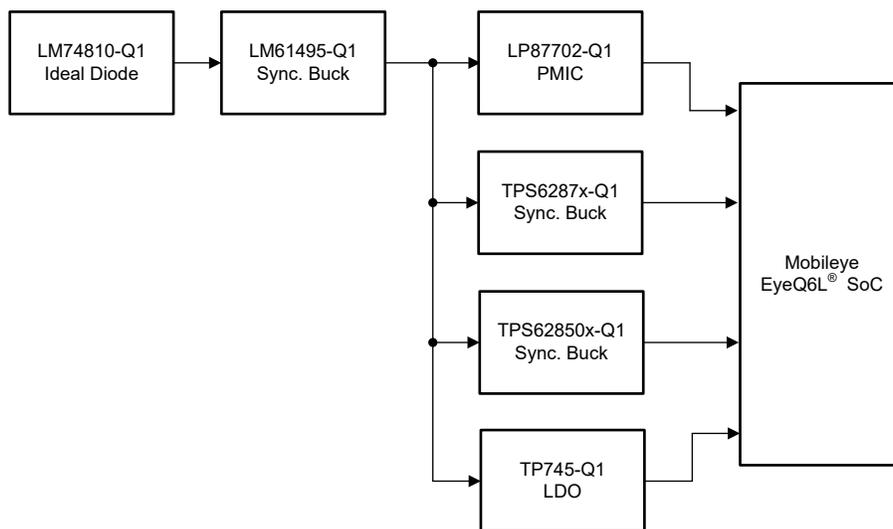
This Texas Instruments solution meets the strict requirements on fast transient response in an efficient, cost-effective manner. The semi-discrete approach shown below, consisting of a PMIC together with discrete regulators, enables optimal placement of point of load converters while still offering a small solution size with minimal output capacitance.

The PMIC is also used to handle the power up and power down sequence, which is timing based in this implementation. All power rails are monitored by the combination of the PMIC together with a functional safety capable voltage supervisor, both configured to the required monitoring windows for each individual rail.

The PCB layout of this power solution was kept as close as possible to a real-world application, including recommended layer count, stack up, and component footprints to provide reliable performance data measured under realistic conditions.

All supply voltages in this design as well as the power sequence are tested to meet the requirements of the Mobileye EyeQ6L® SoC.

Please contact our local Texas Instruments representative to access the complete test report.



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Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265  
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