

Description

The Enpirion EC2630QI is a high density DC-DC Intermediate Voltage Bus Converter which generates a highly efficient output voltage. EC2630QI tracks one half the input voltage and is designed to work with Enpirion's highly integrated DC to DC point-of-load converter products for a complete 12V solution. EC2630QI provides the means to condition power from a 12V input, to supply multiple lower voltage converters while enabling high efficiency and small PCB area. Due to its extremely high efficiency, it avoids the common two stage power conversion penalty and is equivalent or better than direct regulation.

This Enpirion solution significantly helps in system design and productivity by offering greatly simplified board design, layout and manufacturing requirements. In addition, a reduction in the number of vendors required for the complete power solution helps to enable an overall system cost savings. All Enpirion products are RoHS compliant and use a lead-free manufacturing environment.

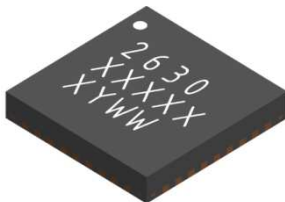


Figure 1: ~140mm² solution footprint with low package profile permitting back side PCB mounting.

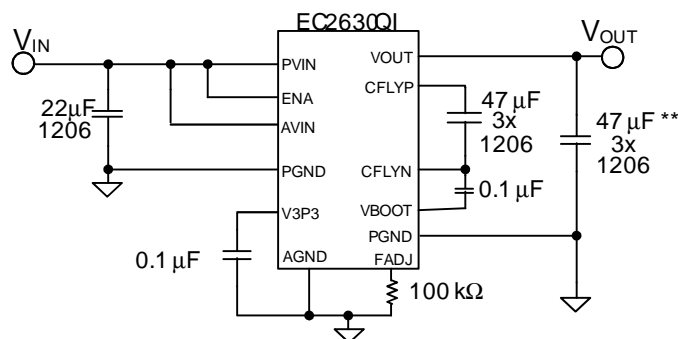
Features

- Complete power conditioning solution from a 12 volt power bus.
- Wide system input voltage range of 6V to 13.6V.
- High and flat efficiency, up to 97.5%.
- 4A Continuous Output Current Capability
- Adjustable operating frequency with optional external clock input.
- Master/Slave Mode for Parallel Operation
- Load-based dynamic clock scaling
- Output Enable pin, VoutOK, VinOK
- Pre-programmed soft-start time.
- Thermal shutdown, short circuit, Overload, OVLO and UVLO protection.
- RoHS compliant, MSL level 3, 260C reflow.

Application

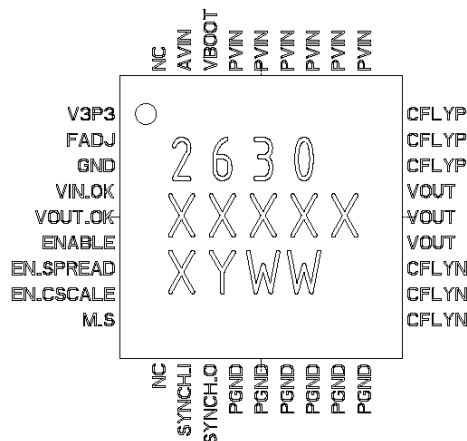
- Applications requiring down converting from a 12V bus to a well regulated output voltage with high efficiency, in a compact foot print (Note: The total system application involves two or more Enpirion products.)
- Enterprise, Industrial, Embedded, and Telecommunication applications
- Multi-rail compute & network interface applications such as PCIe and ATCA AMC cards.
- 12V Industrial and Consumer Applications such as Audio/Video Home Theater, Tuners

Application Schematic

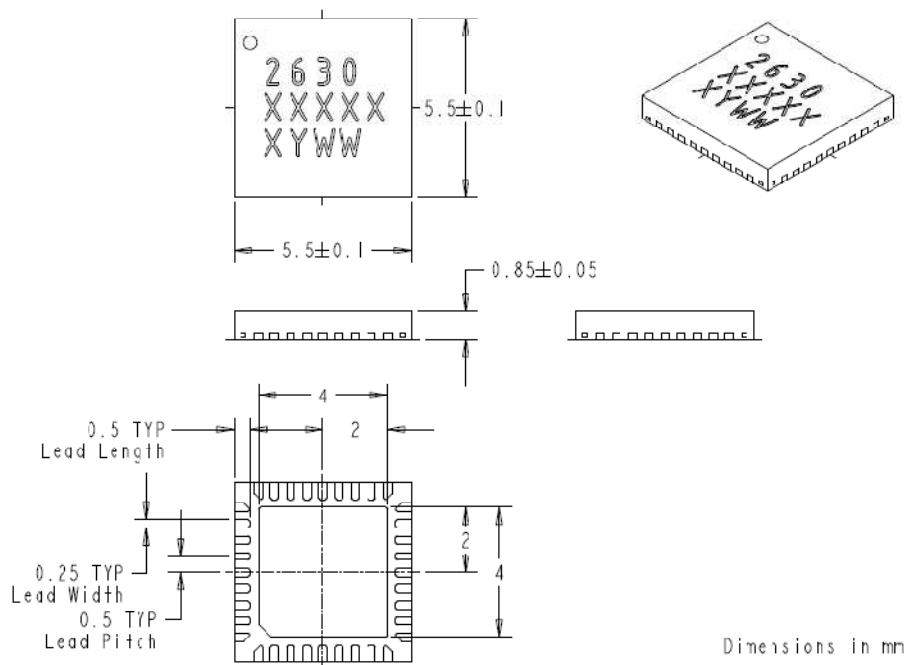


** 1-2 of Cout can be eliminated due to downstream input bypass capacitance (e.g. PoL converters).

Pin Assignments (Top View)



Package Dimensions



Contact Information

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